RHI JUNE 2020

PROJECT ID: 1009-47-60

WITH: 9110-10-61

COUNTY: FLORENCE

ORDER OF SHEETS

TOTAL SHEETS = 64

11

N

DESIGN DESIGNATION 100-47-60

A.A.D.T.	2022	=	510
A.A.D.T.	2042	=	650
D.H.V.		=	70
D.D.		=	61/39
T.		=	22.9
DESIGN SPEED		=	60 MPH
ESALS		=	N/A

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE	100'E	ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
		TELEPHONE	T
MARSH AREA		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
WOODED OR SHRUB AREA		TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

ARMSTRONG CREEK - FLORENCE

POPPLE RIVER BRIDGE B-19-0001

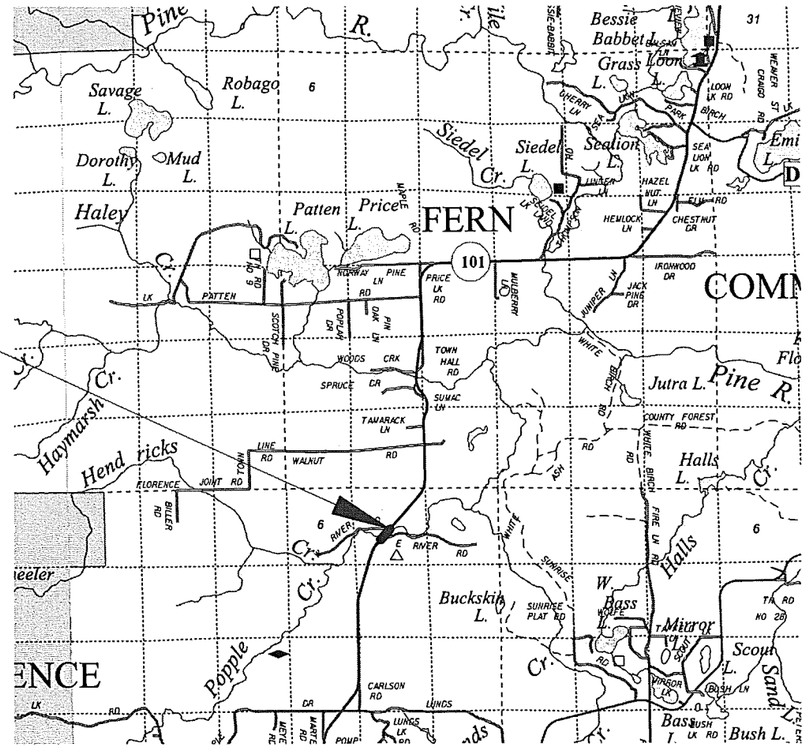
STH 101

FLORENCE COUNTY

STATE PROJECT NUMBER
1009-47-60

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1009-47-60	WISC 2020361	1

STH 101
STRUCTURE B-19-0001



LAYOUT

SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = N/A

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, FLORENCE COUNTY, NAD83 (YEAR), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

VERTICAL DATUM IS NAVD 88.

ORIGINAL PLANS PREPARED BY

OMNNI ASSOCIATES

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER

2/1/19

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	OMNNI ASSOCIATES INC
Designer	OMNNI ASSOCIATES INC
Project Manager	STACY HAGENBUCHER
Regional Examiner	
Regional Supervisor	MIKE WENDT

APPROVED FOR THE DEPARTMENT

DATE: 2/1/19 (Signature)

E

FILE NAME : F:\TR\JOBS\E2297A17\CIVIL 3D 2014 B-19-1\SHEETSPLAN\10094760-010101-TI.DWG PLOT DATE : 1/2/2019 11:13 AM PLOT BY : MATT TOMSOVIC PLOT NAME :

GENERAL NOTES

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

WHEN THE QUANTITY OF THE ITEM OF BASE OR ASPHALT PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

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

UTILITIES - PROJECT ID 1009-47-60

ELECTRICITY

WISCONSIN PUBLIC SERVICE CORPORATION
700 N ADAMS ST
P.O. BOX 19001
GREEN BAY, WI 54307-9001
ATTN: LORI BUTRY
(920) 433-1703
LABUTRY@INTEGRYSGROUP.COM

COMMUNICATIONS

NIGHT TEL SERVICES
450 SECURITY BLVD
P.O. BOX 19079
GREEN BAY, WI 54307-9079
ATTN: RICK VINCENT
(920) 617-7316
RICK.VINCENT@NSIGHT.COM

OTHER CONTACTS

DNR LIAISON

DEPARTMENT OF NATURAL RESOURCES
NORTHERN REGION HEADQUARTERS
107 SUTLIFF AVE
RHINELANDER, WI 54501
ATTN: JON SIMONSEN
TELEPHONE: 715-367-1936

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	0.08	0.16	0.22	0.12	0.20	0.27	0.15	0.24	0.33	0.19	0.28	0.38
	0.22	0.30	0.38	0.26	0.34	0.44	0.30	0.37	0.50	0.34	0.41	0.56
MEDIAN STRIP -	0.19	0.20	0.24	0.19	0.22	0.26	0.20	0.23	0.30	0.20	0.25	0.30
TURF	0.24	0.26	0.30	0.25	0.28	0.33	0.26	0.30	0.37	0.27	0.32	0.40
SIDE SLOPE -			0.25			0.27			0.28			0.30
TURF			0.32			0.34			0.36			0.38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

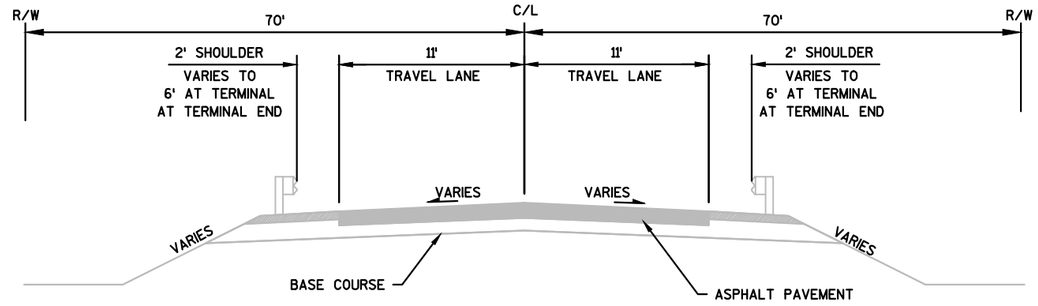
EROSION CONTROL NOTES

RUNOFF COEFFICIENT FOR THIS PROJECT: EXISTING PAVEMENT 0.95, EXISTING SLOPES 0.30, NEW PAVEMENT 0.95, NEW SLOPES 0.30.

TOTAL PROJECT AREA = 2.410 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.310 ACRES

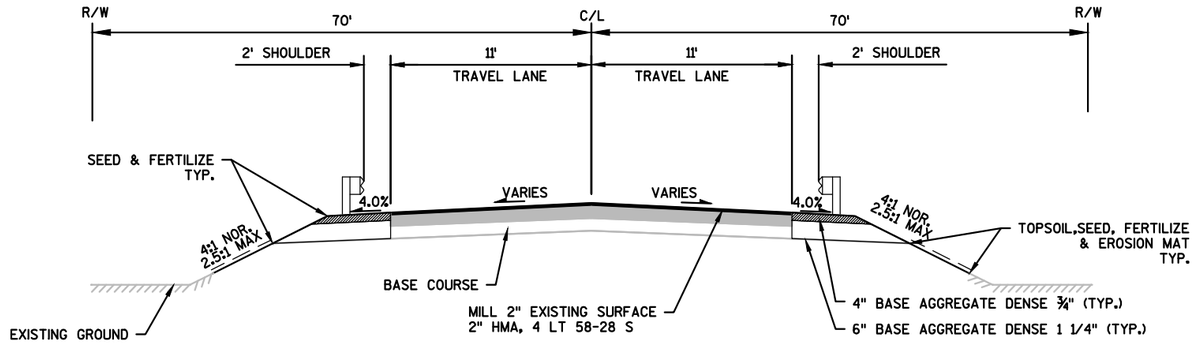
THE CONTRACTOR SHALL NOTIFY DIGGER'S HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY UTILITY WHICH IS NOT A MEMBER OF DIGGER'S HOTLINE MUST BE CONTACTED SEPERATELY.

DIGGERS HOTLINE
Dial 811 or (800) 242-8511



EXISTING TYPICAL SECTION STH 101

STA. 1002+93 TO STA. 1003+50
STA. 1004+18.32 TO STA. 1004+74

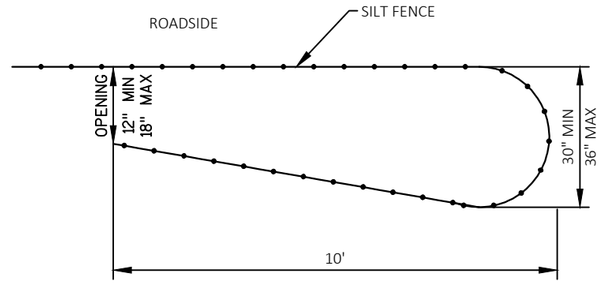


FINISHED TYPICAL SECTION STH 101

STA. 1003+00 TO STA. 1003+28.12
STA. 1004+40.12 TO STA. 1004+67

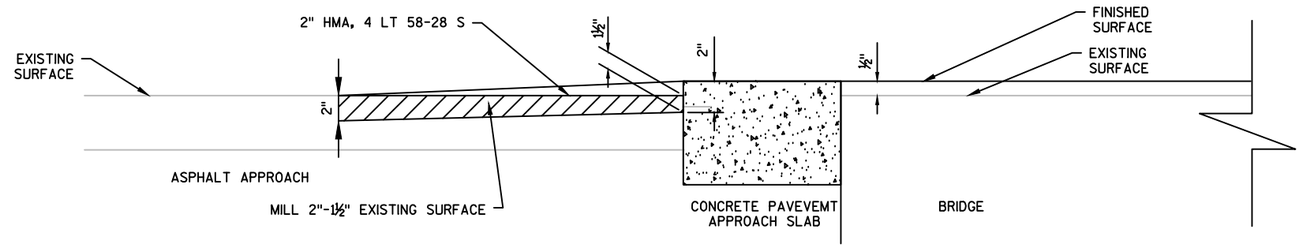
PROJECT NO: 1009-47-60	HWY: STH 101	COUNTY: FLORENCE	TYPICAL SECTIONS	SHEET 3	E

2



TEMPORARY SMALL ANIMAL BARRIER

NOTES:
SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND AND TRENCHED IN ACCORDING TO SILT FENCE REQUIREMENTS.



APPROACH MATCH DETAIL STH 101

B-19-1

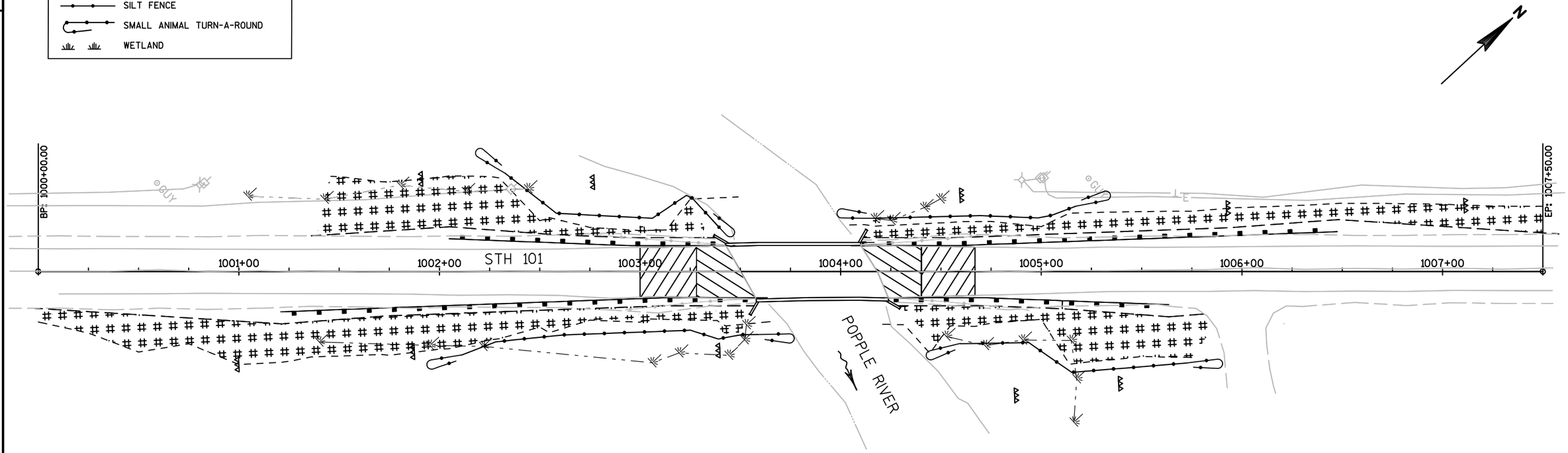
PROJECT NO: 1009-47-60	HWY: STH 101	COUNTY: FLORENCE	CONSTRUCTION DETAILS	SHEET 4	E

2

2

EROSION CONTROL LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- TEMPORARY DITCH CHECK
- SILT FENCE
- SMALL ANIMAL TURN-A-ROUND
- WETLAND



PROJECT NO: 1009-47-60	HWY: STH 101	COUNTY: FLORENCE	EROSION CONTROL	SHEET 5	E

2

TRAFFIC CONTROL GENERAL NOTES

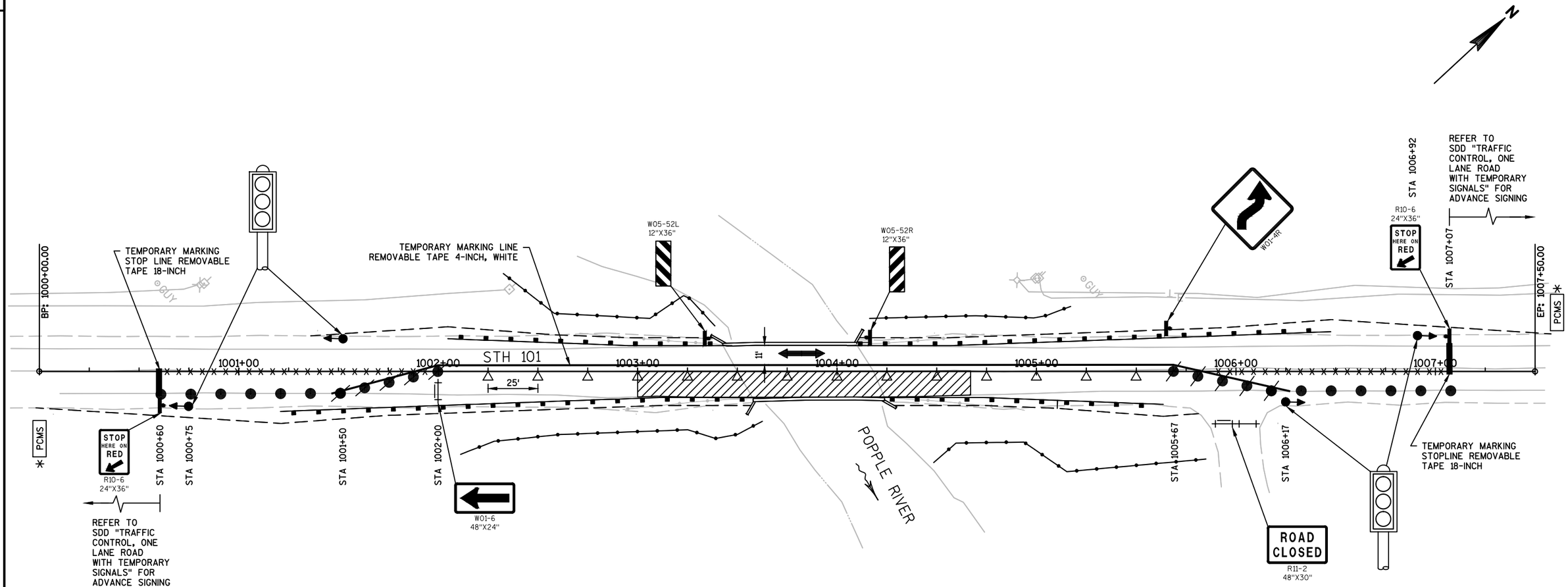
1. DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON METHODS OR SEQUENCE OF OPERATIONS.
2. ADJUST SIGN SPACING TO AVOID CONFLICT WITH AND TO PROVIDE A MINIMUM SPACING OF 200 FEET (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.
3. ALL SIGNS SHALL BE 48" x 48" UNLESS OTHERWISE NOTED.
4. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
5. ALL DETOUR ASSEMBLIES SHALL HAVE ORANGE DIRECTIONAL ARROWS.
6. ALL TRAFFIC CONTROL SIGNING WILL CONFORM TO THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
7. CONSIDER GEOMETRICS WHEN LOCATING SIGNS SO THE DRIVER HAS A CLEAR VIEW OF THE LANE CLOSURE DRUMS FOR A MINIMUM OF 1500 FEET IN FRONT OF DRUMS.
8. IF LANE CLOSURES ARE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.
9. WARNING LIGHTS SHALL NOT BE WORKING ON "COVERED" OR "DOWNED" SIGN OR BARRICADE.
10. DURING HOURS OF DARKNESS, ALL BARRICADES USED TO SHIELD A HAZARD SHALL BE EQUIPPED WITH TYPE "A" LIGHTS.
11. FOR NIGHTTIME OPERATION, ALL DRUMS IN TAPERS SHALL HAVE A TYPE C WARNING LIGHT.
12. PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE PLACED APPROXIMATELY AT THE PROJECT LOCATION, ONE WEEK IN ADVANCE OF INITIAL LANE CLOSURE AND AS NEEDED THROUGHOUT THE PROJECT.
13. LAYOUT INFORMATION PROVIDED IS NOT INTENDED TO REPLACE WHAT IS PROVIDED IN APPLICABLE STANDARD DETAIL DRAWINGS.
14. SEE ADDITIONAL TRAFFIC CONTROL DETAIL SHEETS AND STANDARD DETAIL DRAWINGS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
15. ALL TRAFFIC TO BE DETOURED DURING DECK PREP AND POURING.

PORTABLE CHANGEABLE MESSAGE SIGNS

			PRIOR TO CONSTRUCTION		STAGE 1		STAGE 2	
SITE NO	LOCATION	ROADWAY CONDITION/ CONSTRUCTION	PHASE I (2 SEC)	PHASE II (2 SEC)	PHASE I (2 SEC)	PHASE II (2 SEC)	PHASE I (2 SEC)	PHASE II (2 SEC)
PCMS 1	ON NB STH 101	GENERAL	STH 101 ROAD WORK	BEGINS XX/XX/XX	STH 101 TO CLOSE	XX/XX/XX	STH 101 TO CLOSE	XX/XX/XX
PCMS 2	ON SB STH 101	GENERAL	STH 101 ROAD WORK	BEGINS XX/XX/XX	STH 101 TO CLOSE	XX/XX/XX	STH 101 TO CLOSE	XX/XX/XX
PCMS 3	ON EB USH 8 AT STH 101	GENERAL	STH 101 TO CLOSE	XX/XX/XX	STH 101 CLOSED 10 MILES	FOLLOW DETOUR	STH 101 CLOSED 10 MILES	FOLLOW DETOUR
PCMS 4	ON WB USH 8 AT STH 101	GENERAL	STH 101 TO CLOSE	XX/XX/XX	STH 101 CLOSED 10 MILES	FOLLOW DETOUR	STH 101 CLOSED 10 MILES	FOLLOW DETOUR
PCMS 5	ON EB USH 8 AT STH 139	GENERAL	(NO MESSAGE)		STH 101 CLOSED 20 MILES	USE STH 139	STH 101 CLOSED 20 MILES	USE STH 139
PCMS 6	ON EB STH 70 AT STH 101	GENERAL	STH 101 TO CLOSE	XX/XX/XX	STH 101 CLOSED 10 MILES	FOLLOW DETOUR	STH 101 CLOSED 10 MILES	FOLLOW DETOUR
PCMS 7	ON WB STH 70 AT STH 101	GENERAL	STH 101 TO CLOSE	XX/XX/XX	STH 101 CLOSED 10 MILES	FOLLOW DETOUR	STH 101 CLOSED 10 MILES	FOLLOW DETOUR

PCMS TO BE INSTALLED SEVEN DAYS IN ADVANCE OF CONSTRUCTION AND SEVEN DAYS IN ADVANCE OF ROAD CLOSURES

2



NOTE:
WIDTH RESTRICTION SIGNS TO SHOW MAX 10' WIDTH. INSTALLED PER SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS. SIGNS TO BE INSTALLED ON BOTH APPROACHES AT STH 70 AND USH 8

W12-52
48" X 48"

W057-52
36" X 24"

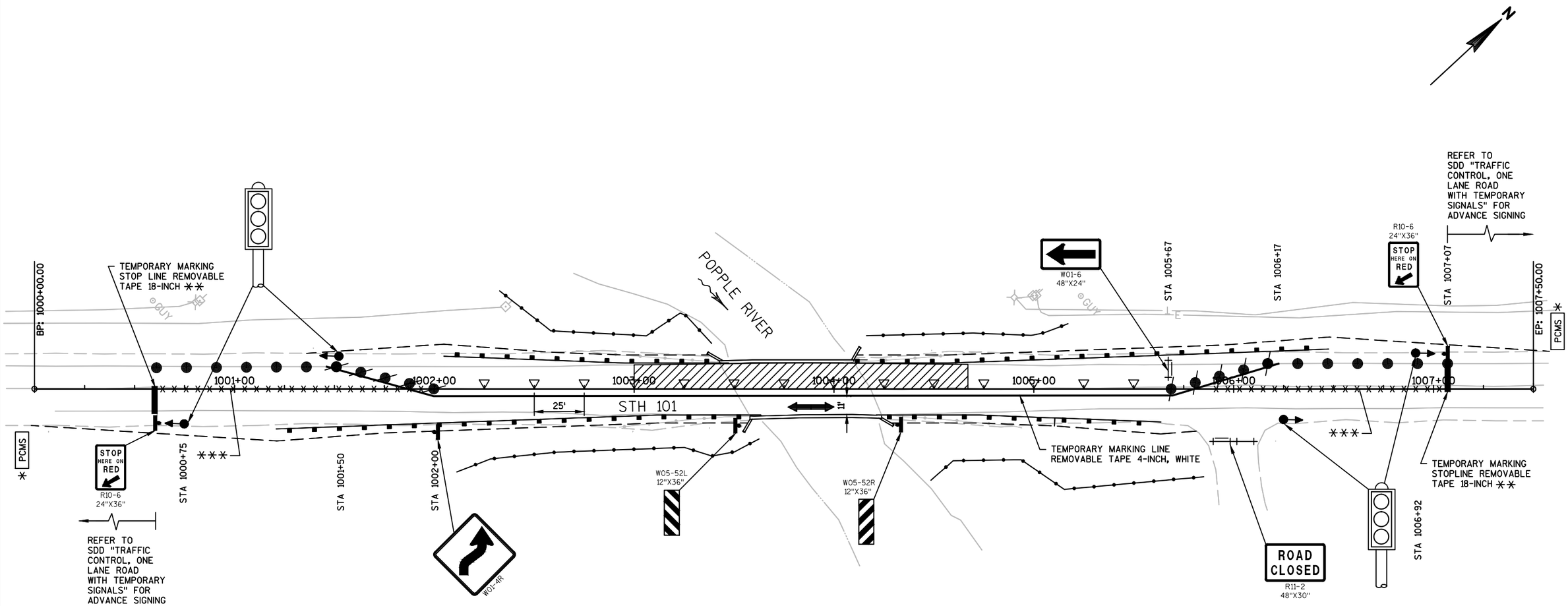
LEGEND

- WORK AREA
- X X X REMOVE EXISTING PAVEMENT MARKING
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL CONE 42-INCH
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE WITHOUT/ WITH SIGN
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY TRAFFIC SIGNAL
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN

✳ PCMS INSTALLED 7 DAYS IN ADVANCE OF CONSTRUCTION AND 7 DAYS PRIOR TO FULL ROAD CLOSURES

PROJECT NO: 1009-47-60	HWY: STH 101	COUNTY: FflorENCE	TRAFFIC CONTROL - STAGE 1	SHEET 7	E

2



NOTE:
WIDTH RESTRICTION SIGNS TO SHOW MAX 10' WIDTH. INSTALLED PER SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS. SIGNS TO BE INSTALLED ON BOTH APPROACHES AT STH 70 AND USH 8

LEGEND

- WORK AREA
- X X X REMOVE EXISTING PAVEMENT MARKING
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL CONE 42-INCH
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE WITHOUT/ WITH SIGN
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY TRAFFIC SIGNAL
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN
- * PCMS INSTALLED 7 DAYS PRIOR TO FULL ROAD CLOSURES
- ** PLACED IN STAGE 1
- *** REMOVED IN STAGE 1

PROJECT NO: 1009-47-60	HWY: STH 101	COUNTY: FLORENCE	TRAFFIC CONTROL - STAGE 2	SHEET 8	E

FILE NAME : F:\TR\JOBS\E2297A17\CIVIL 3D 2014 B-19-1\SHEETSPLAN\10094760-026002-S2.DWG
LAYOUT NAME - ****
PLOT DATE : 1/28/2019 1:48 PM PLOT BY : JAIRO MAZARIEGOS PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

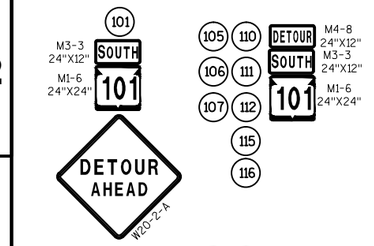
SEQUENCE OF OPERATIONS				
STRUCTURE: B-19-01 STH 101				
PRE - TIMED CYCLE 1 = 84 seconds				
TIME: 8:00 AM - 6:00 PM				
INTERVAL	EB	WB	INTERVAL LENGTH (SEC)	% OF CYCLE
PHASE A	G	R	16	19.0%
CLEARANCE	Y	R	5	6.0%
CLEARANCE	R	R	21	25.0%
PHASE B	R	G	16	19.0%
CLEARANCE	R	Y	5	6.0%
CLEARANCE	R	R	21	25.0%
			84	100.0%

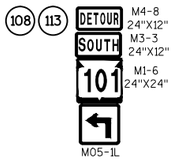
SEQUENCE OF OPERATIONS				
STRUCTURE: B-19-01 STH 101				
PRE - TIMED CYCLE 2 = 74 seconds				
TIME: 6:00 PM - 8:00 AM				
INTERVAL	EB	WB	INTERVAL LENGTH (SEC)	% OF CYCLE
PHASE A	G	R	11	14.9%
CLEARANCE	Y	R	5	6.8%
CLEARANCE	R	R	21	28.4%
PHASE B	R	G	11	14.9%
CLEARANCE	R	Y	5	6.8%
CLEARANCE	R	R	21	28.4%
			74	100.0%

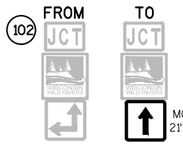
NOTES:

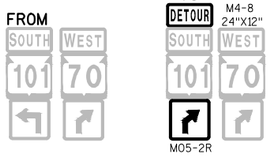
1. G = GREEN, Y = YELLOW, R = RED

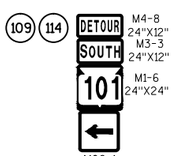
2. THE ALL-RED CLEARANCE (INTERVAL 3 & 6) IS BASED ON A STOPLINE TO STOPLINE DISTANCE = 650 FT. IF THIS DISTANCE IS MODIFIED IN THE FIELD, CONTACT CHRIS DROES, NC REGION, AT 715-365-5749 FOR TRAFFIC TIMING MODIFICATIONS.

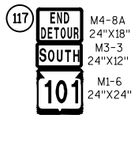


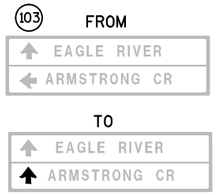


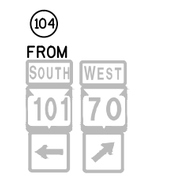


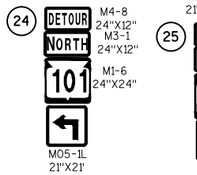


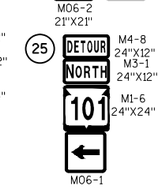


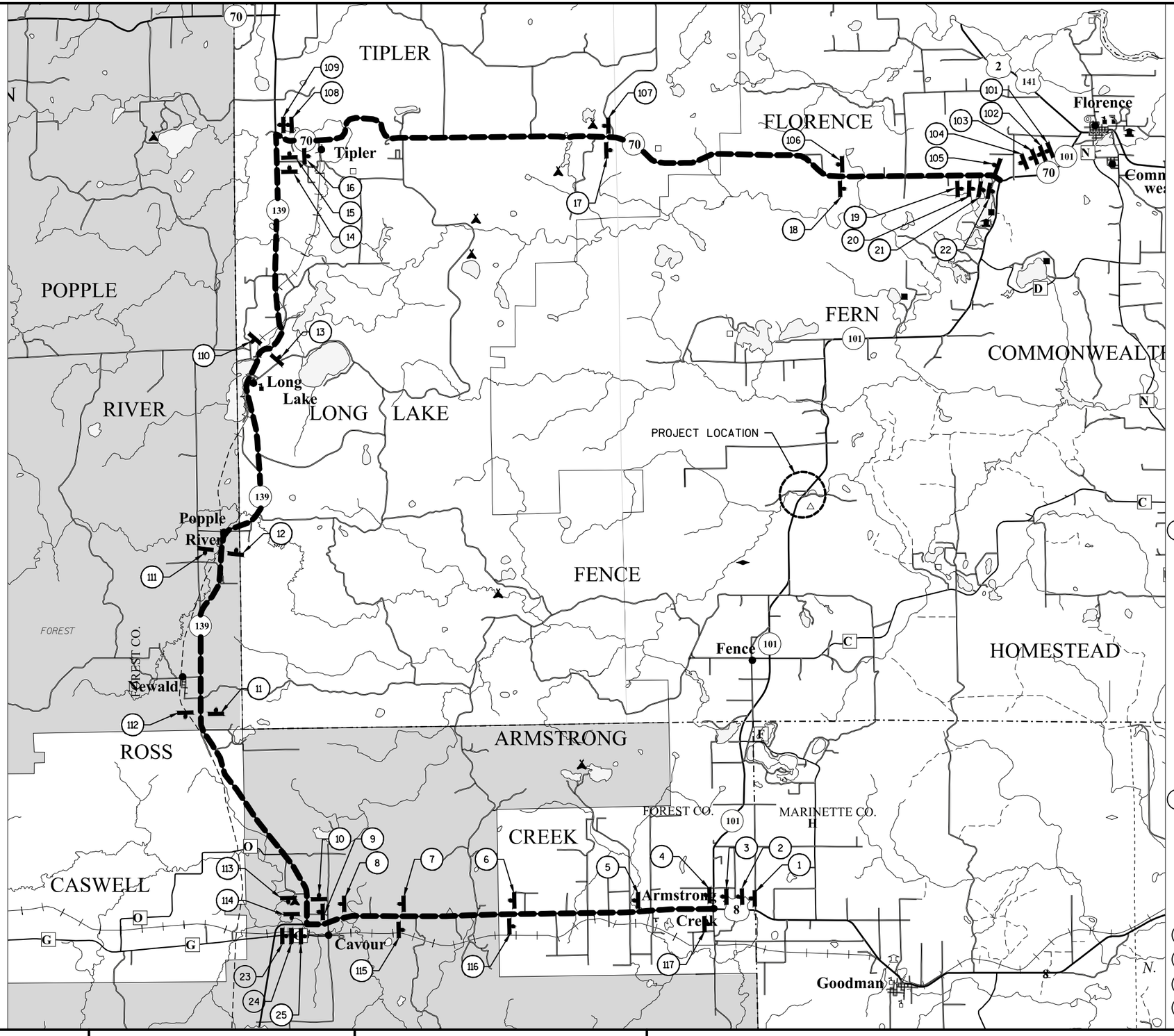


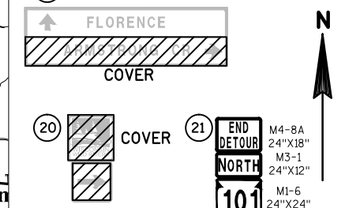


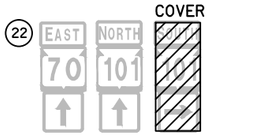


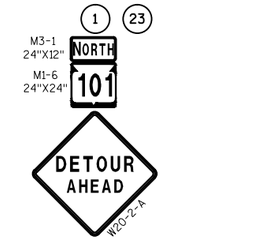


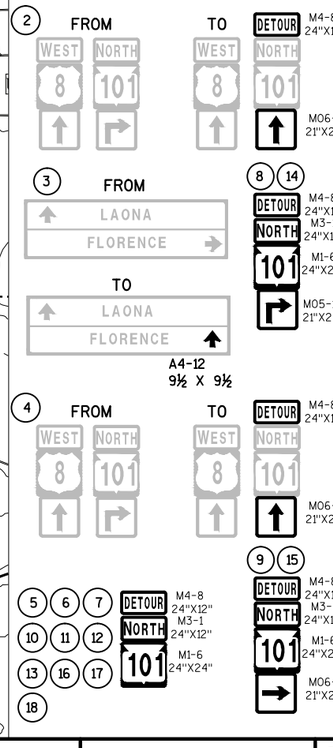






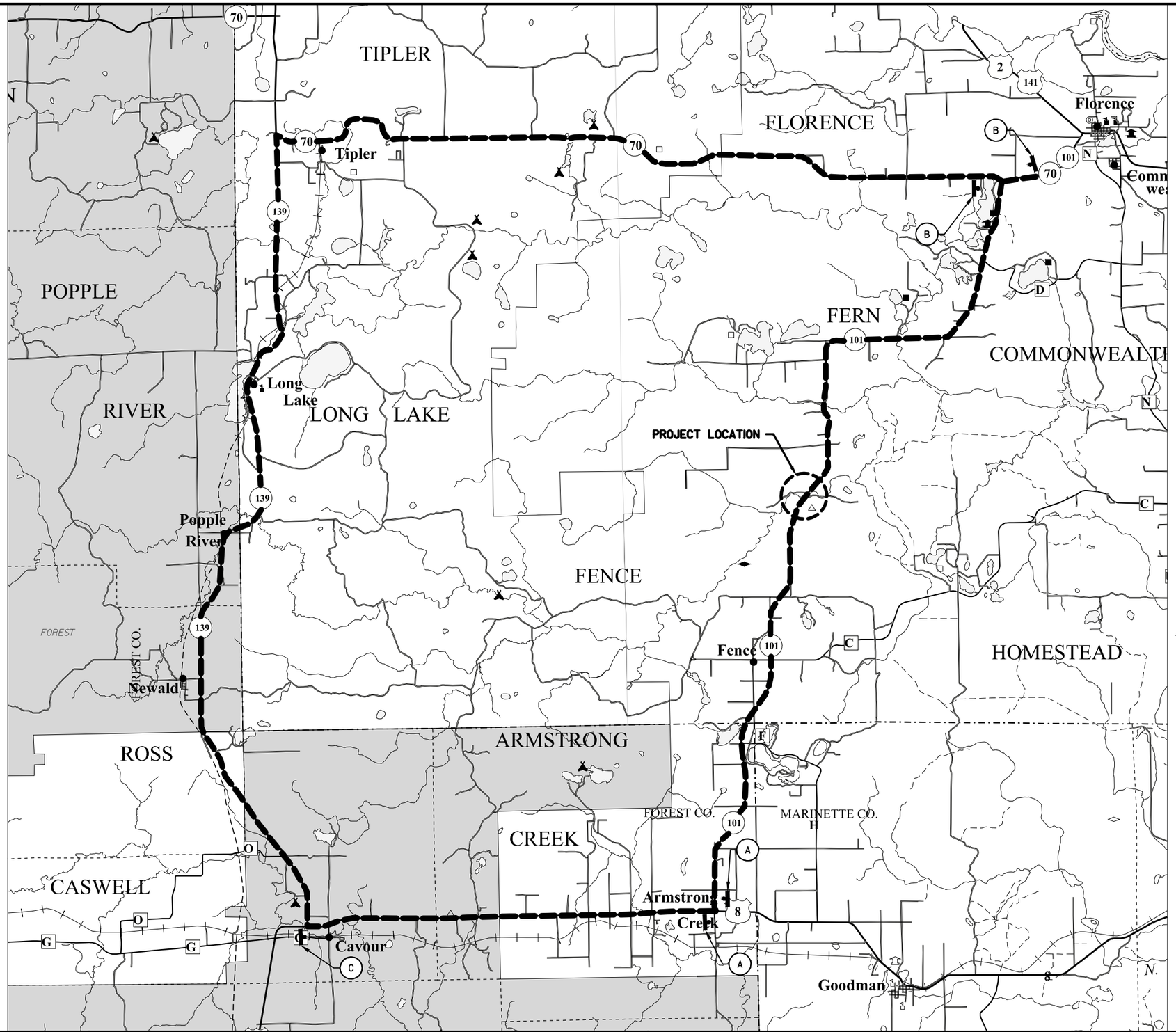






PROJECT NO: 1009-47-60	HWY: STH 101	COUNTY: FLORENCE	DETOUR PLAN	SHEET 10	E

FILE NAME : F:\TR\JOBS\E2297A17\CIVIL 3D 2014 B-19-1\SHEETSPLAN\10094760-027001-DT.DWG
LAYOUT NAME - 90000560-027001-DT
PLOT DATE : 1/28/2019 1:29 PM
PLOT BY : JAIRO MAZARIEGOS
PLOT NAME :
PLOT SCALE : *********
WISDOT/CADDS SHEET 42



M3-3 24"X12" / M1-6 24"X24": B — SOUTH 101

W12-52 48"X48": MAX. 10' WIDTH

W057-52 36"X24": 10 MILES AHEAD

N

LEGEND

(00) SIGN NUMBER

POST MOUNTED SIGN

M3-1 24"X12" / M1-6 24"X24": A — NORTH 101

W12-52 48"X48": MAX. 10' WIDTH

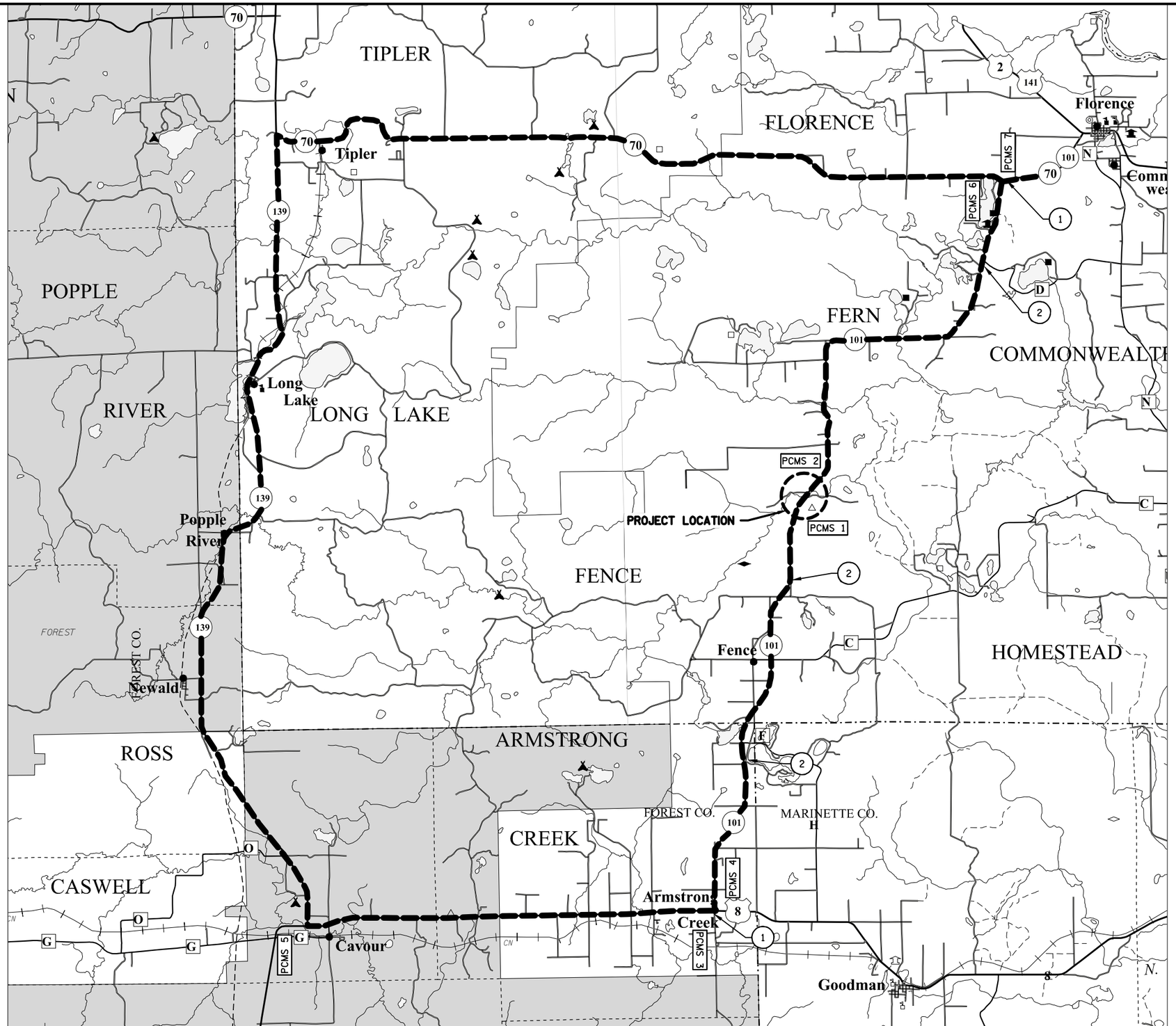
W057-52 36"X24": 11 MILES AHEAD

M3-1 24"X12" / M1-6 24"X24": C — NORTH 101

W12-52 48"X48": MAX. 10' WIDTH

W057-52 36"X24": 20 MILES AHEAD

PROJECT NO: 1009-47-60	HWY: STH 101	COUNTY: FLORENCE	TRAFFIC CONTROL OVERVIEW - STH 101	SHEET 11	E



N

LEGEND

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

NOTES:

1. USE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURE DETAILS A AND D.
2. USE SDD "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES, DETAIL 3

PROJECT NO: 1009-47-60	HWY: STH 101	COUNTY: FLORENCE	TRAFFIC CONTROL OVERVIEW - STH 101 ROAD CLOSURE	SHEET 12	E

1009-47-60

Line	Item	Item Description	Unit	Total	Qty
0002	204.0120	Removing Asphaltic Surface Milling	SY	180.000	180.000
0004	204.0165	Removing Guardrail	LF	287.000	287.000
0006	205.0100	Excavation Common	CY	418.000	418.000
0008	208.0100	Borrow	CY	476.000	476.000
0010	213.0100	Finishing Roadway (project) 01. 1009-47-60	EACH	1.000	1.000
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	325.000	325.000
0016	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	365.000	365.000
0018	415.0410	Concrete Pavement Approach Slab	SY	143.000	143.000
0020	455.0605	Tack Coat	GAL	20.000	20.000
0022	460.2000	Incentive Density HMA Pavement	DOL	20.000	20.000
0024	460.5224	HMA Pavement 4 LT 58-28 S	TON	30.000	30.000
0026	465.0110	Asphaltic Surface Patching	TON	25.000	25.000
0028	502.3101	Expansion Device	LF	64.000	64.000
0030	502.3200	Protective Surface Treatment	SY	193.000	193.000
0032	502.3210	Pigmented Surface Sealer	SY	52.000	52.000
0034	502.4205	Adhesive Anchors No. 5 Bar	EACH	136.000	136.000
0036	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	3,950.000	3,950.000
0038	505.0904	Bar Couplers No. 4	EACH	20.000	20.000
0040	505.0905	Bar Couplers No. 5	EACH	16.000	16.000
0042	509.0301	Preparation Decks Type 1	SY	10.000	10.000
0044	509.0302	Preparation Decks Type 2	SY	5.000	5.000
0046	509.0500	Cleaning Decks	SY	193.000	193.000
0050	509.1000	Joint Repair	SY	35.000	35.000
0054	509.2000	Full-Depth Deck Repair	SY	1.000	1.000
0056	509.2500	Concrete Masonry Overlay Decks	CY	33.000	33.000
0060	509.9050.S	Cleaning Parapets	LF	134.000	134.000
0066	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0070	614.2300	MGS Guardrail 3	LF	94.000	94.000
0072	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600
0074	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0076	619.1000	Mobilization	EACH	0.670	0.670
0078	624.0100	Water	MGAL	4.000	4.000
0080	625.0100	Topsoil	SY	1,850.000	1,850.000
0082	628.1504	Silt Fence	LF	760.000	760.000
0084	628.1520	Silt Fence Maintenance	LF	760.000	760.000
0086	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0088	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0090	628.2008	Erosion Mat Urban Class I Type B	SY	1,800.000	1,800.000
0092	628.7504	Temporary Ditch Checks	LF	144.000	144.000
0094	628.7570	Rock Bags	EACH	50.000	50.000

1009-47-60

Line	Item	Item Description	Unit	Total	Qty
0096	629.0210	Fertilizer Type B	CWT	1.000	1.000
0098	630.0130	Seeding Mixture No. 30	LB	30.000	30.000
0100	642.5001	Field Office Type B	EACH	0.500	0.500
0102	643.0300	Traffic Control Drums	DAY	1,089.000	1,089.000
0104	643.0420	Traffic Control Barricades Type III	DAY	270.000	270.000
0106	643.0705	Traffic Control Warning Lights Type A	DAY	484.000	484.000
0108	643.0715	Traffic Control Warning Lights Type C	DAY	495.000	495.000
0110	643.0900	Traffic Control Signs	DAY	3,696.000	3,696.000
0112	643.0920	Traffic Control Covering Signs Type II	EACH	6.000	6.000
0116	643.1050	Traffic Control Signs PCMS	DAY	120.000	120.000
0118	643.1070	Traffic Control Cones 42-Inch	DAY	693.000	693.000
0120	643.5000	Traffic Control	EACH	0.600	0.600
0122	646.1020	Marking Line Epoxy 4-Inch	LF	1,713.000	1,713.000
0124	646.9000	Marking Removal Line 4-Inch	LF	210.000	210.000
0126	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	960.000	960.000
0128	649.0850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	22.000	22.000
0130	650.4500	Construction Staking Subgrade	LF	597.000	597.000
0132	650.5000	Construction Staking Base	LF	597.000	597.000
0134	650.9910	Construction Staking Supplemental Control (project) 01. 1009-47-60	LS	1.000	1.000
0136	650.9920	Construction Staking Slope Stakes	LF	597.000	597.000
0138	661.0100	Temporary Traffic Signals for Bridges (structure) 01. B-19-1	LS	1.000	1.000
0142	690.0150	Sawing Asphalt	LF	50.000	50.000
0144	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000

3

EARTHWORK - STH 101

Division	From/To Station	205.0100 Common Excavation		Available Material	Unexpanded Fill	Expanded Fill	Mass Ordinate +/- (14)	Waste	208.0100 Borrow
Division 1		Cut	EBS Excavation			Factor 1.25			
STH 101	1000+00/1007+50	418	0	418	716	894	-476	0	476
	Total Common Exc	418							

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

REMOVING ASPHALTIC SURFACE MILLING

PROJECT	STATION TO STATION	LOCATION	204.0120 SY
1009-47-60	1003+00 - 1003+28.12	STH 101	90
	1004+40.20 - 1004+67	STH 101	90
		TOTAL	**180**

REMOVING GUARDRAIL

PROJECT	STATION TO STATION	LOCATION	204.0165 LF
1009-47-60	1002+93 - 1003+63, RT	STH 101	70
	1002+71 - 1003+46, LT	STH 101	75
	1004+22 - 1004+94, RT	STH 101	73
	1004+05 - 1004+74, LT	STH 101	69
		TOTAL	**287**

SAWING ASPHALT

PROJECT	STATION	LOCATION	690.0150 SAWING ASPHALT LF
1009-47-60	1003+00	STH 101	25
	1004+67	STH 101	25
		TOTAL	**50**

3

BASE AGGREGATE DENSE

PROJECT	STATION TO STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL
1009-47-60	1000+36 - 1003+42.58 LT	STH 101	50	60	1.0
	1000+00 - 1003+57.94 RT	STH 101	100	110	1.0
	1004+23.81 - 1005+81.29 RT	STH 101	50	60	1.0
	1004+09.88 - 1007+50 LT	STH 101	100	110	1.0
	UNDISTRIBUTED *	STH 101	25	25	0.0
		TOTAL	**325**	**365**	**4.0**

* INCLUDED QUANTITY FOR PCMS PAD IF NECESSARY

ASPHALTIC ITEMS

PROJECT	STATION TO STATION	LOCATION	455.0605 TACK COAT GAL	465.5224 HMA PAVEMENT 4 LT 58-28 S TON	465.0110 ASPHALTIC SURFACE PATCHING TON
1009-47-60	1003+00 - 1003+28.12, LT & RT	STH 101	10	15	---
	1004+40.12 - 1004+67, LT & RT	STH 101	10	15	---
	UNDISTRIBUTED		---	---	25
		TOTAL	**20**	**30**	**25**

STEEL PLATE BEAM GUARD

PROJECT	STATION TO STATION	LOCATION	614.2300 MGS GUARDRAIL 3 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
1009-47-60	1002+04.75 - 1003+47.30, LT	STH 101	50	39.4	1
	1001+20.82 - 1003+63.35, RT	STH 101	150	39.4	1
	1004+21.05 - 1005+63.58, RT	STH 101	50	39.4	1
	1004+04.98 - 1006+47.51, LT	STH 101	150	39.4	1
		TOTAL	**94**	**157.6**	**4**

CONCRETE PAVEMENT

PROJECT	STATION	LOCATION	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY
1009-47-60	1003+28.12 - 1003+50	STH 101	78
	1004+18.31 - 1004+40.12	STH 101	65
		TOTAL	**143**

EROSION CONTROL ITEMS

PROJECT	STATION TO STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7570 ROCK BAGS EACH
1009-47-60	1000+36 - 1003+42.58 LT	STH 101	140	140			400	24	
	1000+00 - 1003+57.94 RT	STH 101	175	175			575	36	
	1004+23.81 - 1005+81.29 RT	STH 101	175	175			300	24	
	1004+09.88 - 1007+50 LT	STH 101	120	120			375	36	
	UNDISTRIBUTED	STH 101	150	150	2	1	150	24	50
		TOTAL	**760**	**760**	**2**	**1**	**1,800**	**144**	**50**

LANDSCAPING ITEMS

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

PROJECT	STATION TO STATION	LOCATION	625.0100 TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO.30 LB
1009-47-60	1000+36 - 1003+42.58 LT	STH 101	400	0.25	7
	1000+00 - 1003+57.94 RT	STH 101	575	0.36	10
	1004+23.81 - 1005+81.29 RT	STH 101	300	0.19	5
	1004+09.88 - 1007+50 LT	STH 101	375	0.24	7
	UNDISTRIBUTED	STH 101	200	---	---
		TOTAL	**1,850**	**1**	**30**

COVERING SIGNS

LOCATION	STAGE	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II		
		EACH	NUMBER OF CYCLES	NUMBER OF SIGNS
STH 101 DETOUR	1	3	1	3
	2	3	1	3

PROJECT TOTALS 6

TRAFFIC CONTROL

STAGE	LOCATION	APPROX. SERVICE PERIOD DAYS	643.0300 DRUMS NO.	DAYS	643.0420 BARRICADES TYPE III NO.	DAYS	643.0705 WARNING LIGHTS TYPE A NO.	DAYS	643.0715 WARNING LIGHTS TYPE C NO.	DAYS	643.0900 SIGNS NO.	DAYS	643.1050 SIGNS PCMS NO.	DAYS	643.1070 CONES 42-INCH NO.	DAYS
1	STH 101	25	22	550	1	25	--	--	10	250	22	550	2	14	14	350
	WIDTH WARNING SIGNS AT USH 8, STH 70, STH 139	25	--	--	--	--	--	--	--	--	20	500	--	--	--	--
	STH 101 ROAD CLOSURE	5	--	--	20	100	40	200	--	--	28	140	6	42	--	--
	STH 101 DETOUR	5	--	--		0		0	--	--	119	595	5	25	--	--
SUBTOTALS				550		125		200		250		1,785		81		350
2	STH 101	20	22	440	1	20	2	40	10	200	22	440	--	--	14	280
	WIDTH WARNING SIGNS AT USH 8, STH 70, STH 139	20	--	--	--	--	--	--	--	--	20	400	--	--	--	--
	STH 101 ROAD CLOSURE	5	--	--	20	100	40	200	--	--	28	140	6	14	--	--
	STH 101 DETOUR	5	--	--	--	--	--	--	--	--	119	595	5	25	--	--
SUBTOTALS				440		120		240		200		1,575		39		280
PROJECT SUBTOTALS				990		245		440		450		3,360		120		630
UNDISTRIBUTED				99		25		44		45		336		0		63
TOTALS				1,089		270		484		495		3,696		120		693

PCMS TO BE PLACED 7 DAYS IN ADVANCE OF CONSTRUCTION AND 7 DAYS IN ADVANCE OF EACH FULL ROAD CLOSURE

PAVEMENT MARKING

STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH WHITE LF	646.1020 MARKING LINE EPOXY 4-INCH YELLOW LF	REMARKS
1000+60	-	1004+50	STH 101	780	98	SKIP DASH
1004+50	-	1007+07	STH 101	514	321	SKIP DASH, SOLID
		SUB TOTALS		1,294	419	
		PROJECT TOTALS			1,713	

REMOVING PAVEMENT MARKINGS

STATION	TO	STATION	LOCATION	646.9000 MARKING REMOVAL LINE 4-INCH LF	
1000+60	-	1002+00	STH 101	35	SKIP DASH
1005+67	-	1007+07	STH 101	175	SKIP DASH, SOLID
			TOTALS	210	

TEMPORARY PAVEMENT MARKING

STAGE	LOCATION	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE) LF	649.0850 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE) LF
1	STH 101	480	22
2	STH 101	480	--
	SUBTOTALS	960	22
	TOTALS	960	22

TEMPORARY SIGNALS

LOCATION	661.0100 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (STRUCTURE B-19-01) LS
STH 101	1
PROJECT TOTAL	1

CONSTRUCTION STAKING

PROJECT	STATION TO STATION	LOCATION	650.4500 CONST. STAKING SUBGRADE LF	650.5000 CONST. STAKING BASE LF	650.9920 CONST. STAKING SLOPE STAKES LF
1620-02-61	1000+00 - 1003+57	STH 101	257	257	257
	1004+10 - 1007+50	STH 101	340	340	340
		TOTAL	**597**	**597**	**597**

3

LEGEND

△ MGS THRIE BEAM TRANSITION

MGS MGS GUARDRAIL 3

EAT MGS GUARDRAIL ENERGY ABSORBING TERMINAL

BENCH MARKS			
	NO. STATION	DESCRIPTION	ELEV.
BM1	1003+63.63, 14.34' RT	******ON TOP OF PARAPET	1320.67
		SE CORNER OF BRIDGE.	
BM2	1004+04.79, 14.28'LT	******ON TOP OF PARAPET	1320.76
		NW CORNER OF BRIDGE.	

UTILITY LOCATIONS ARE APPROXIMATE.
ACTUAL LOCATIONS MUST BE FIELD VERIFIED.

SLOPE INTERCEPT

53.125' EAT | 50' MGS | 39.4' △ | * CONCRETE PAVEMENT APPROACH SLAB | 39.4' △ | 150' MGS | 53.125' EAT

MILL AND OVERLAY (TYP.)

REMOVE EXIST GUARDRAIL TYP.

+04.75 -16.44' LT | +57.88 -14.44' LT | +85.38 -13.00' LT | +07.88 -13.00' LT | +47.30 -13.00' LT | +04.98 -13.00' LT | +44.38 -13.00' LT | +56.88 -13.00' LT | +94.38 -18.00' LT | +47.51 -20.00' LT

15:1

ASPHALT

1001+00 | 1002+00 | 1003+00 | 1004+00 | 1005+00 | N42° 45' 10"E | 1006+00 | 1007+00

STH 101

750.00'

ASPHALT

15:1

+20.82 20.00' RT | +73.95 18.00' RT | +11.45 13.00' RT | +83.95 13.00' RT | +63.35 13.00' RT | +21.05 13.00' RT | +60.45 13.00' RT | +72.95 13.00' RT | +10.45 14.44' RT | +63.58 16.44' RT

POPPLE RIVER

BEGIN CONSTRUCTION
STA. 1000+00

END CONSTRUCTION
STA. 1007+50

53.125' EAT | 150' MGS | 39.4' △ | 39.4' △ | 50' MGS | 53.125' EAT

SLOPE INTERCEPT

BEGIN PROJECT
STA. 1003+00
SAWCUT & MATCH EXISTING
Y = 131781.31
X = 372568.53

EXISTING BRIDGE B-19-01
CONCRETE MASONRY OVERLAY

END PROJECT
STA. 1004+67
SAWCUT & MATCH EXISTING

PROPOSED STH 101 PROFILE

EXIST STH 101 PROFILE

PVI STA = 1003+00.00
PVI ELEV = 1318.47

PVI STA = 1003+50.16
PVI ELEV = 1318.28

PVI STA = 1004+16.91
PVI ELEV = 1318.36

PVI STA = 1004+67.00
PVI ELEV = 1319.23

28.12' MILL AND OVERLAY *

* 26.80' MILL AND OVERLAY

EXIST BRIDGE B-19-01

1330 | 1325 | 1320 | 1315 | 1310

1319.6 | 1319.3 | 1319.1 | 1318.9 | 1318.8 | 1318.6 | 1318.5 1318.47 | 1318.2 1318.28 | 1318.3 1318.34 | 1318.9 1318.94 | 1319.9 | 1321.0 | 1322.3 | 1323.7 | 1325.3 | 1326.9

1000+00 | 1000+50 | 1001+00 | 1001+50 | 1002+00 | 1002+50 | 1003+00 | 1003+50 | 1004+00 | 1004+50 | 1005+00 | 1005+50 | 1006+00 | 1006+50 | 1007+00 | 1007+50

PROJECT NO: 1009-47-60	HWY: STH 101	COUNTY: FLORENCE	PLAN AND PROFILE: STH 101	SHEET 19	E

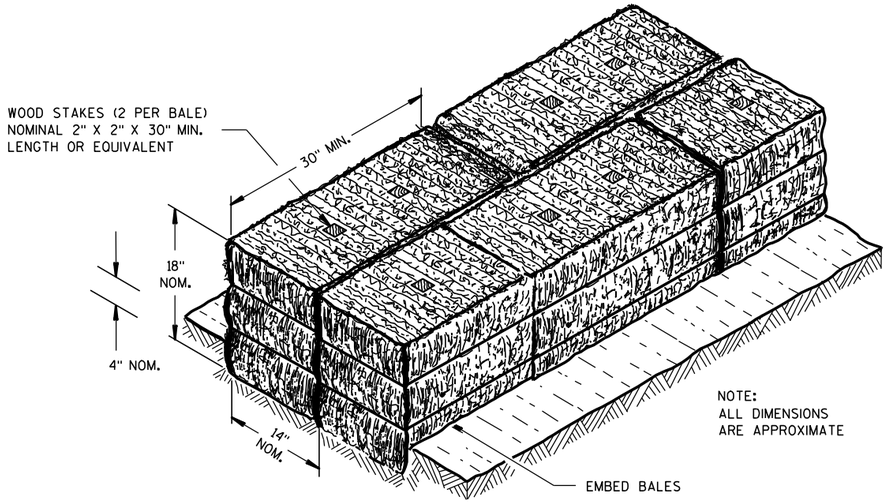
FILE NAME : F:\TR\JOBS\E2297A17\CIVIL 3D 2014 B-19-1\SHEETSPLAN\10094760-050101-PP.DWG
LAYOUT NAME - 10094760-50101-PP

PLOT DATE : 11/15/2018 11:23 AM PLOT BY : MATT TOMSOVIC PLOT NAME : PLOT SCALE : **********

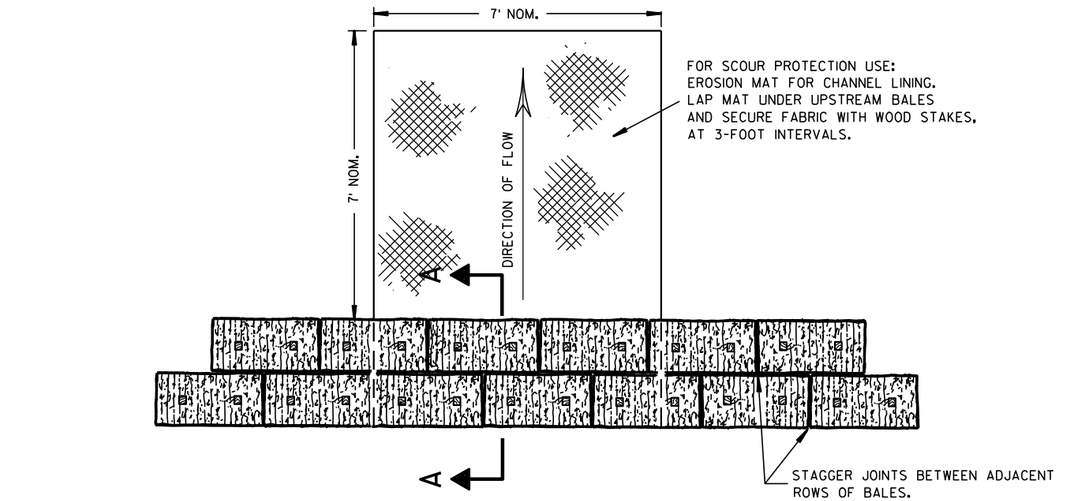
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

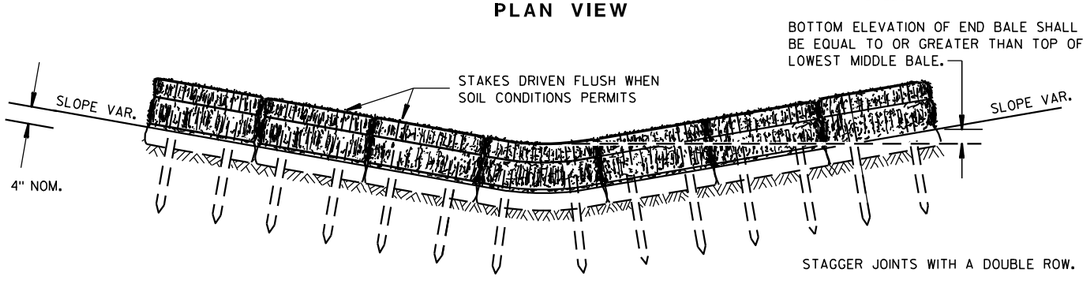
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
09G02-05A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
12A03-10	NAME PLATE (STRUCTURES)
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-07C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15D33-06	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



SECTION A-A



PLAN VIEW



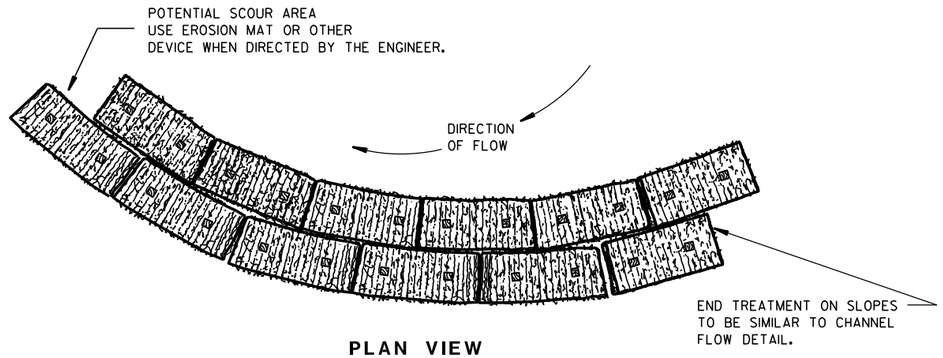
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

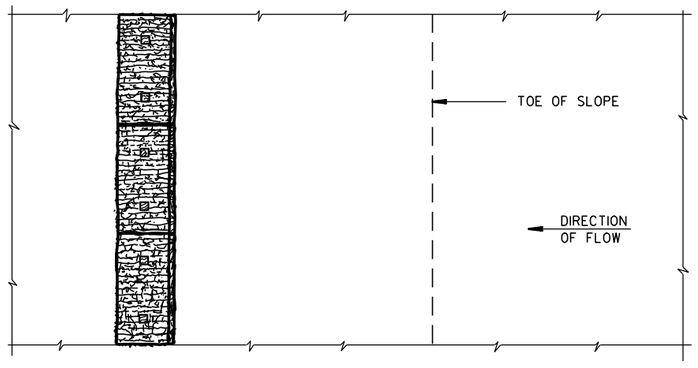
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

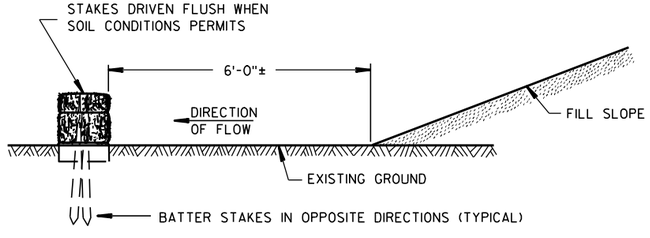


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 E 8-3

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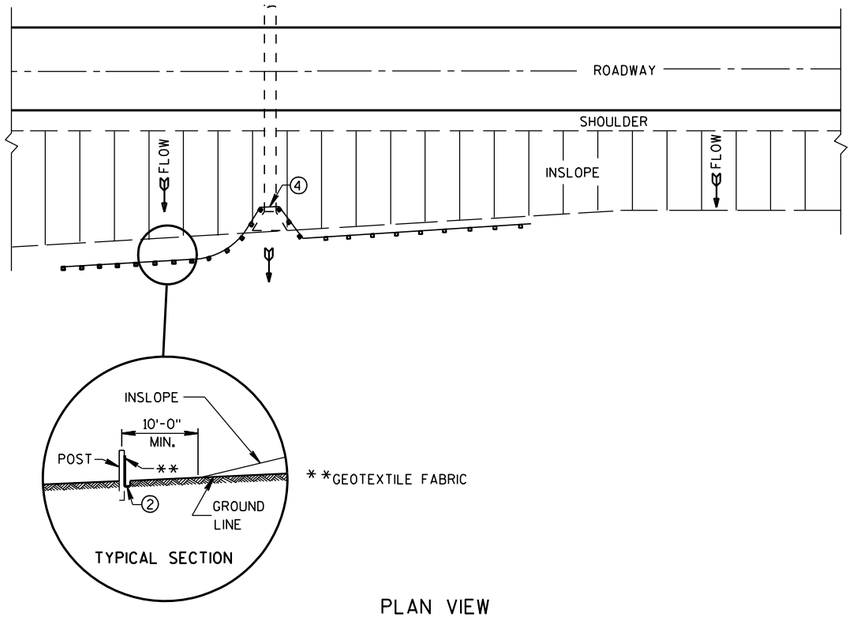
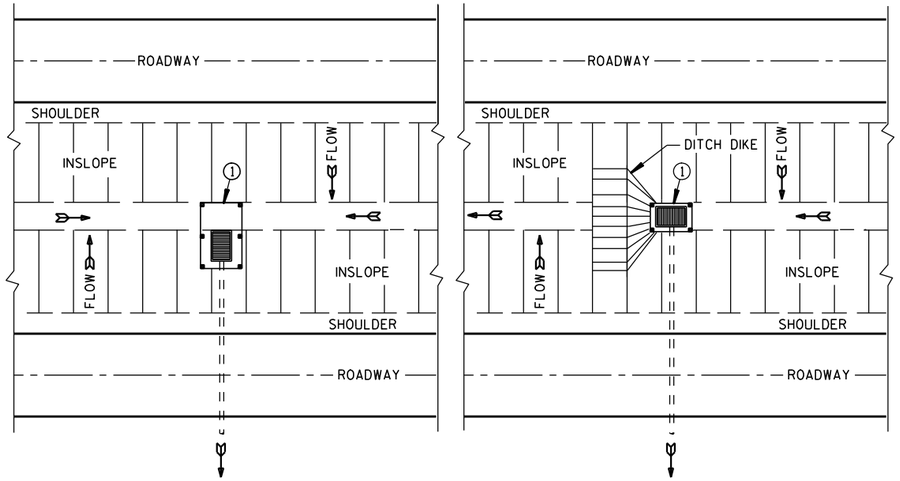


PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



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.

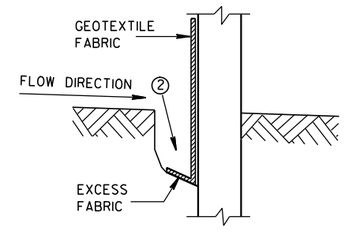
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

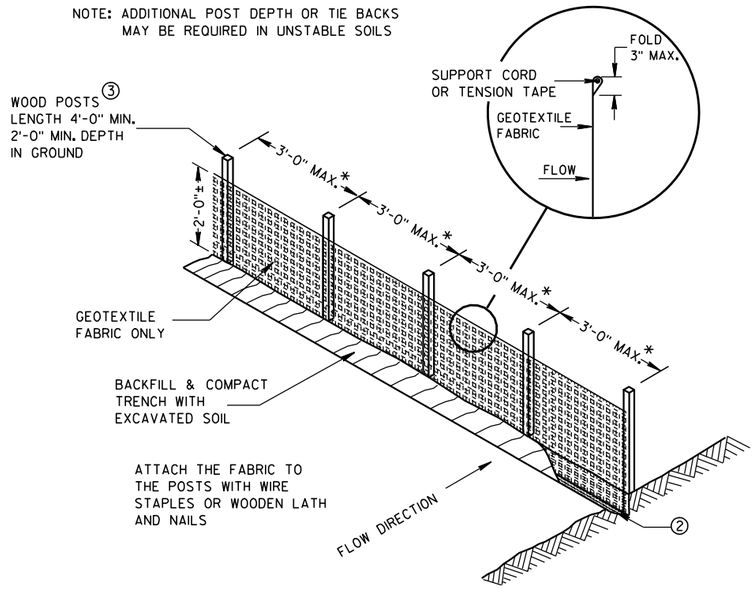
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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.

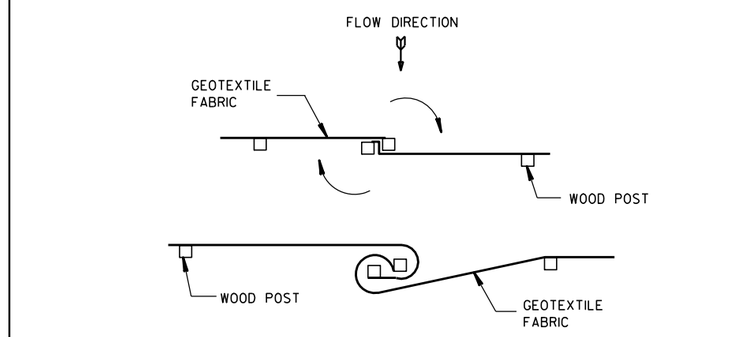


TRENCH DETAIL

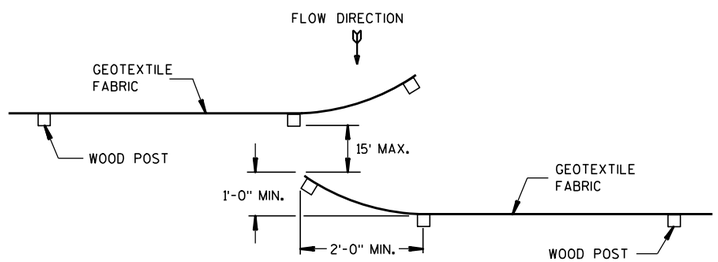


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

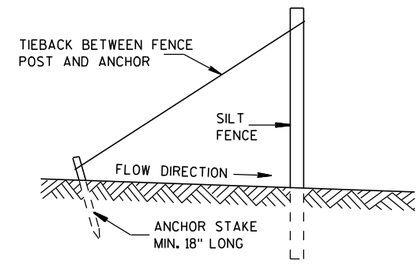


TWIST METHOD



HOOK METHOD

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
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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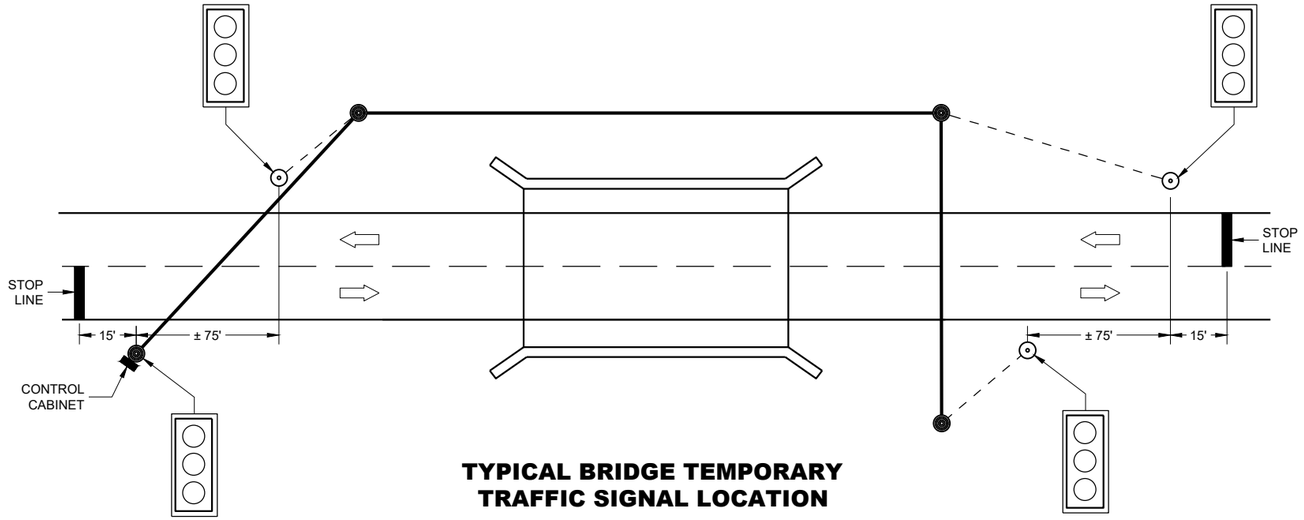
S.D.D. 8 E 9-6



TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION

LEGEND

- WOOD POLE (NON-BREAKAWAY)
- WOOD POST (BREADAWAY)
- 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.).

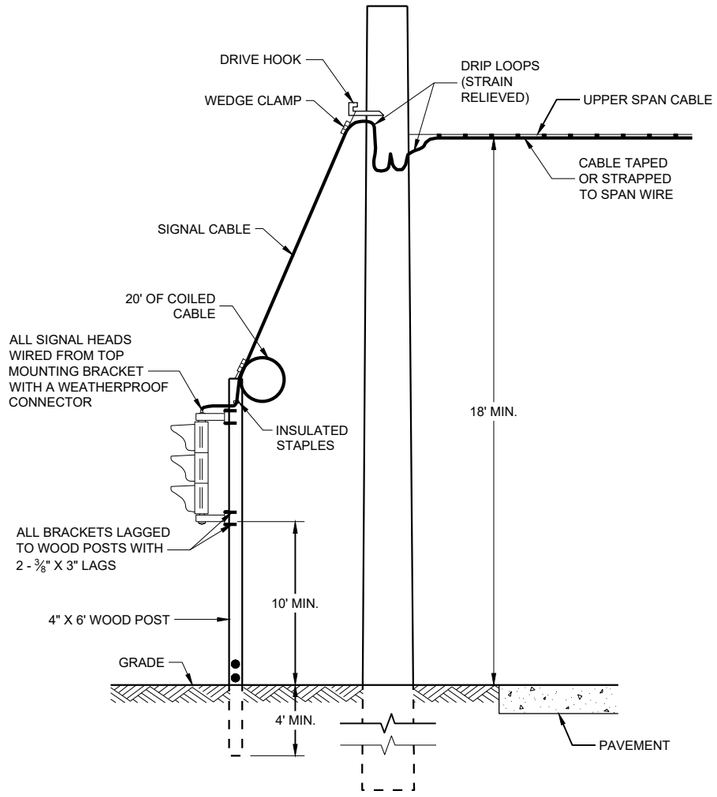
WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

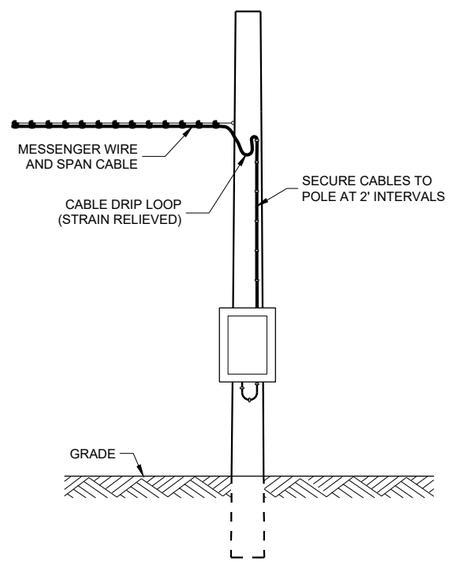
TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

EACH TRAFFIC SIGNAL SHALL HAVE A BACKPLATE.

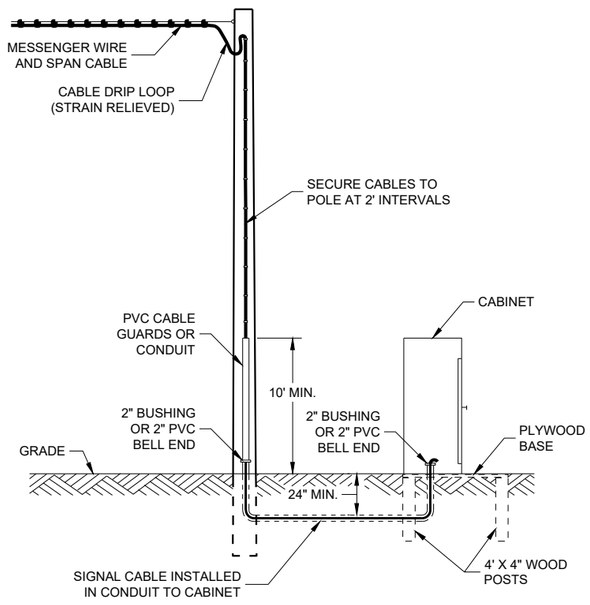
SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



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 — DATE
/S/ Ahmet Demirbilek — ROADWAY STANDARDS DEVE ENGINEER

FHWA

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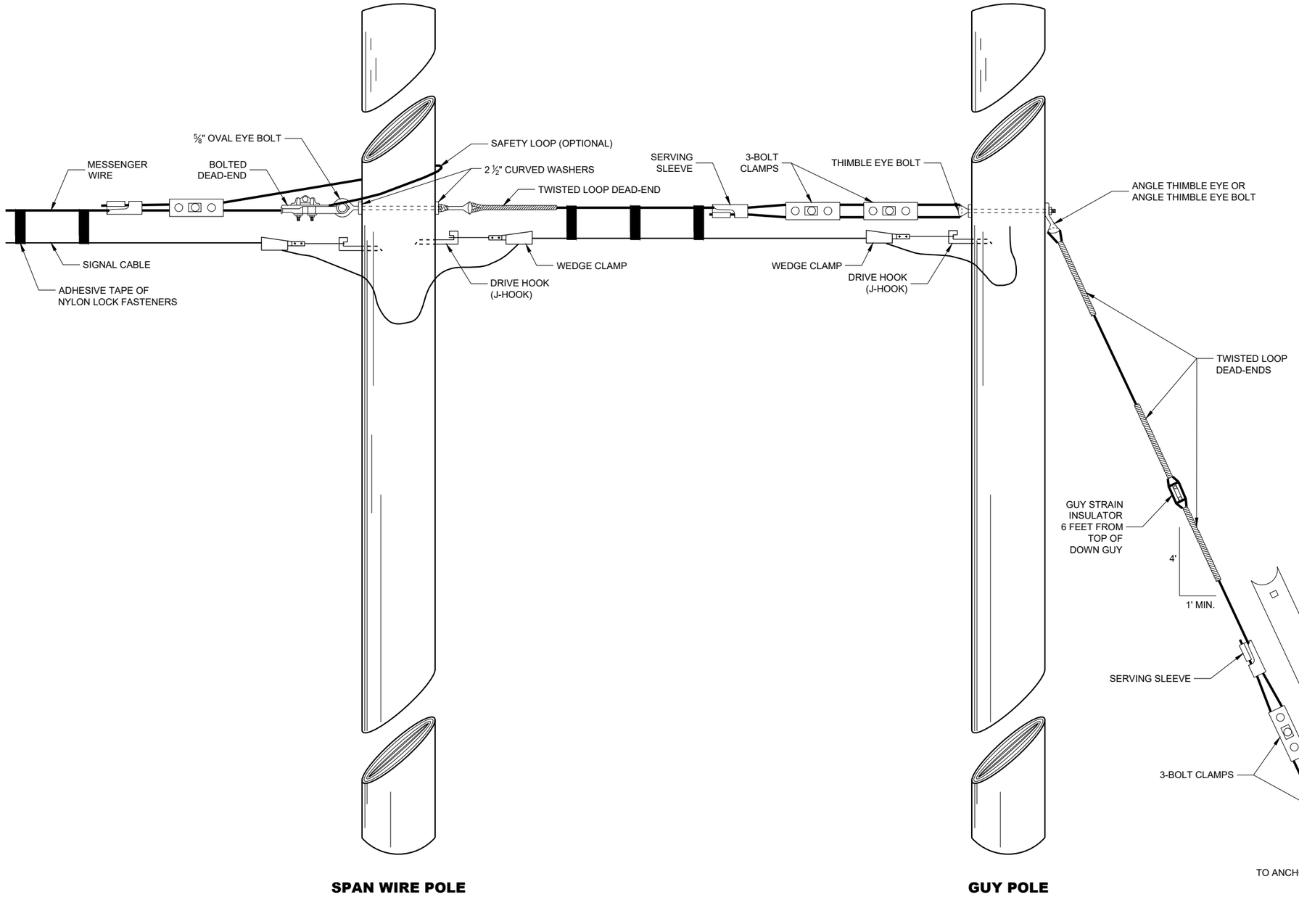
SDD09G02 - 05a

SDD09G02 - 05a

GENERAL NOTES

USE ¾" DRILL IN WOOD POLE TO PROVIDE FOR ⅝" 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
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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SDD09G02 - 05b

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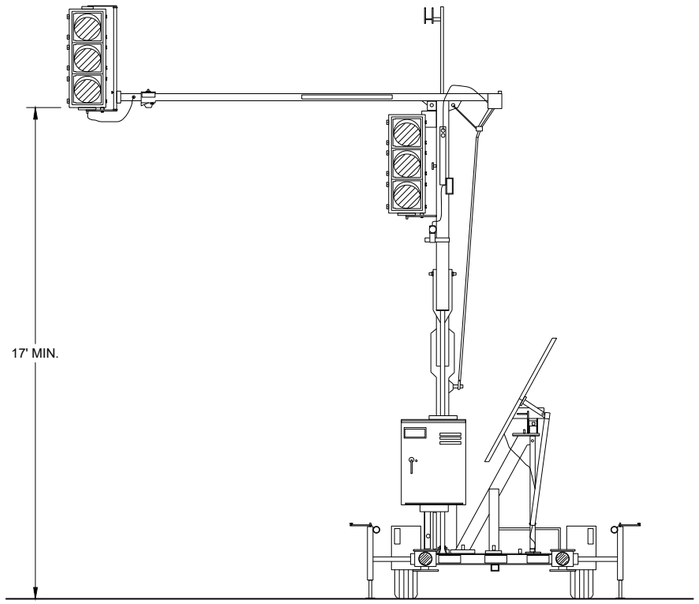
SDD09G02 - 05b

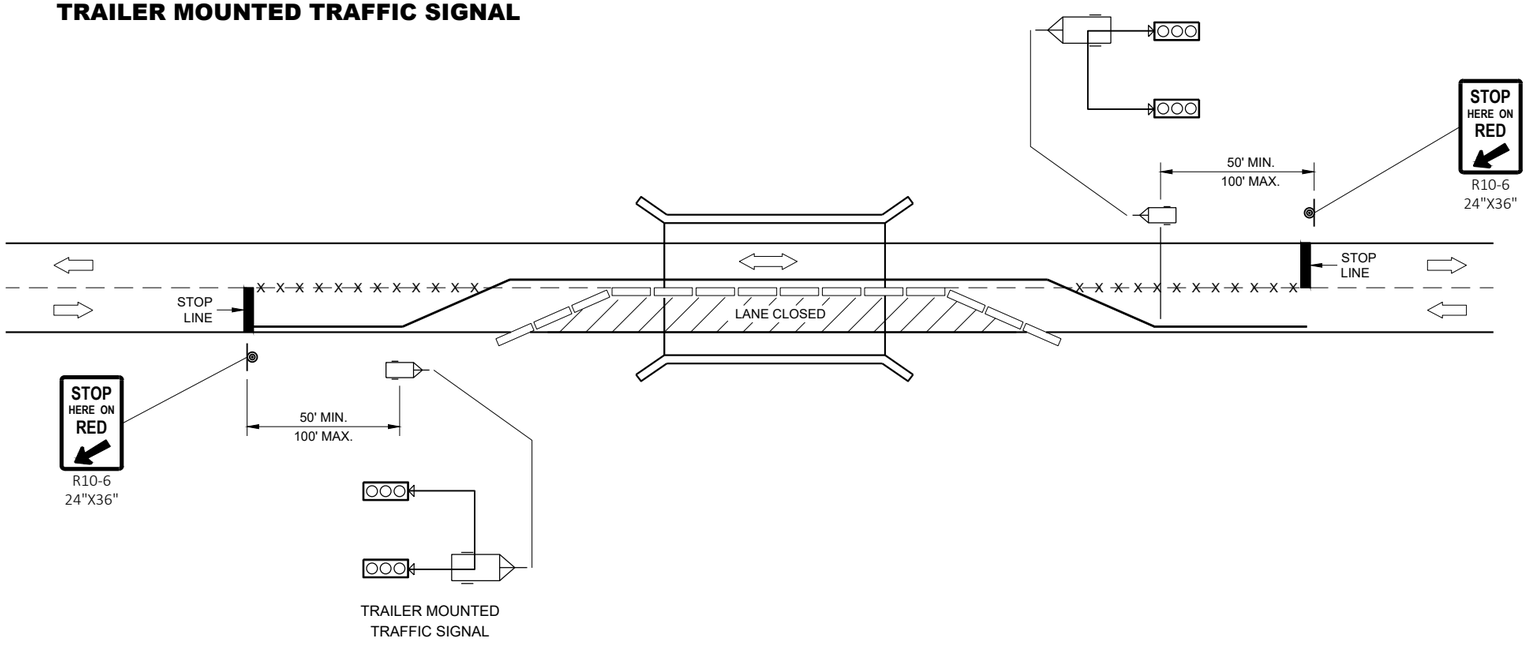


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

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

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



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

LEGEND

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

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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SDD09G02 - 05c

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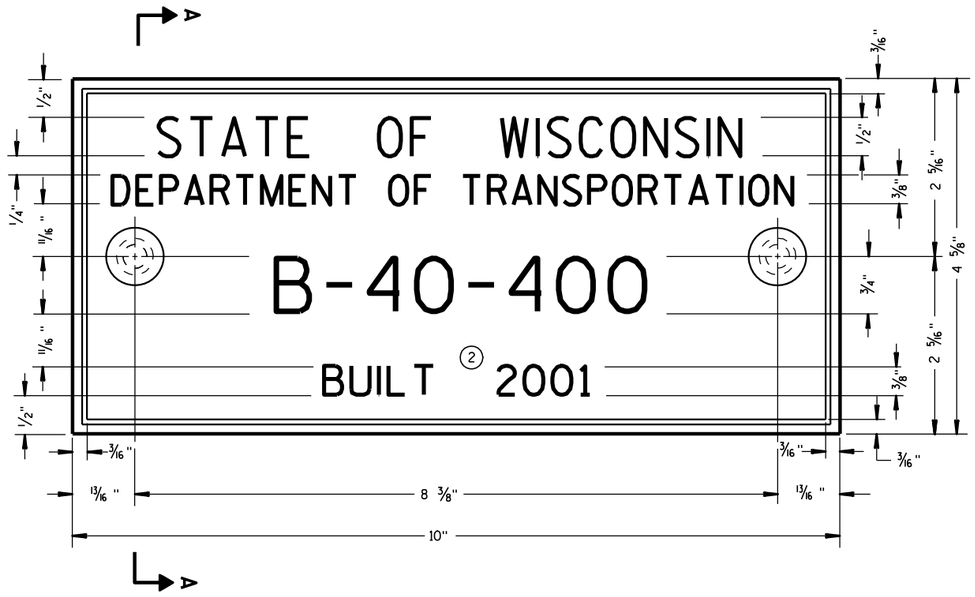
SDD09G02 - 05c



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

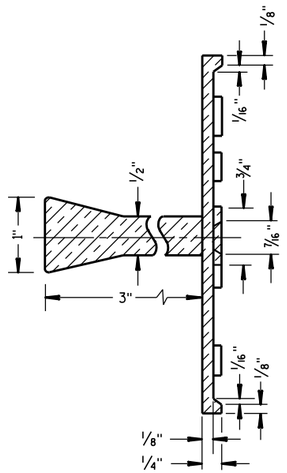
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

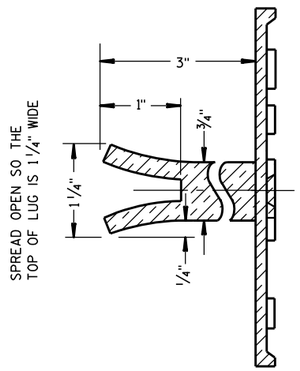
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

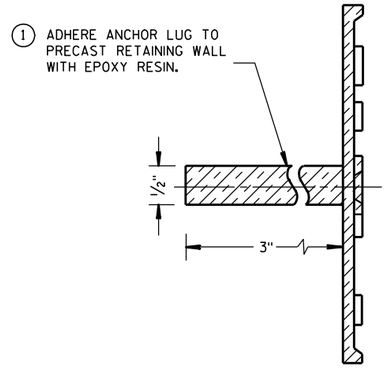
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

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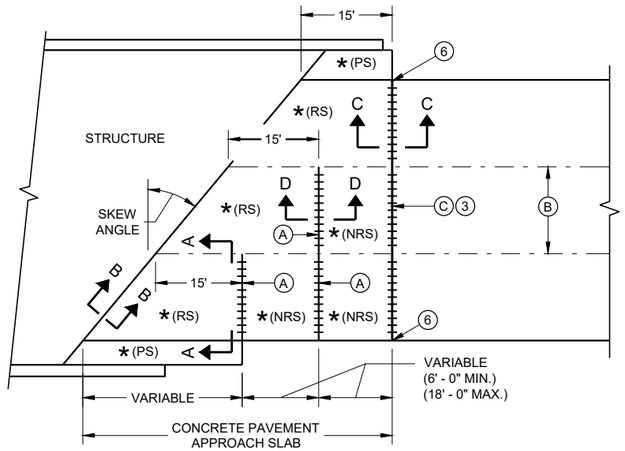
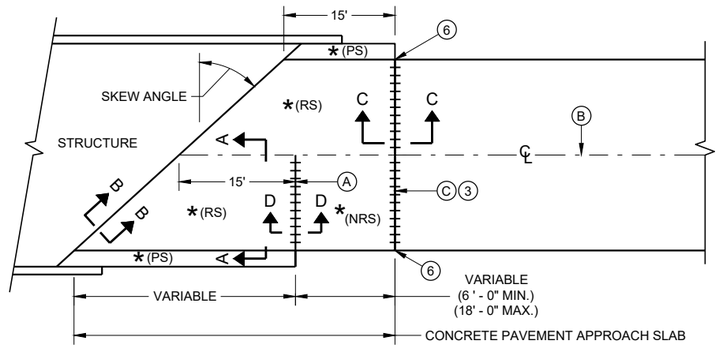
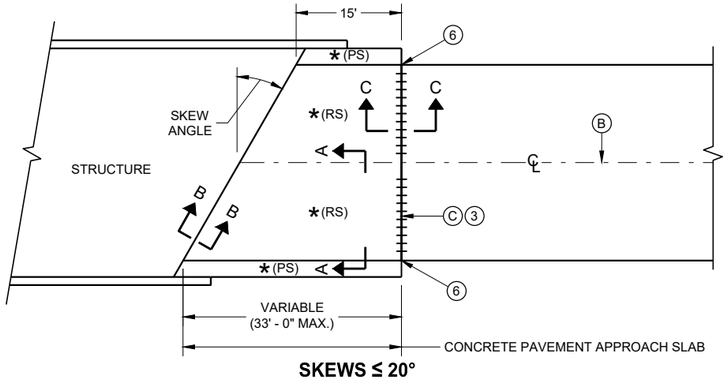


SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)



SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

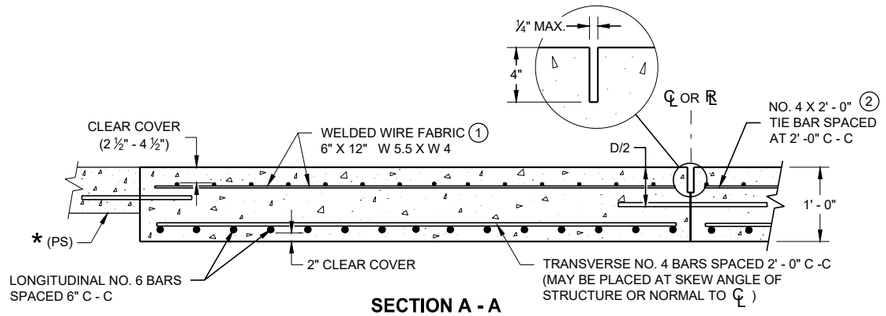
APPROACH SLAB AND ADJACENT PAVEMENT

* (RS) = REINFORCED CONCRETE SLAB

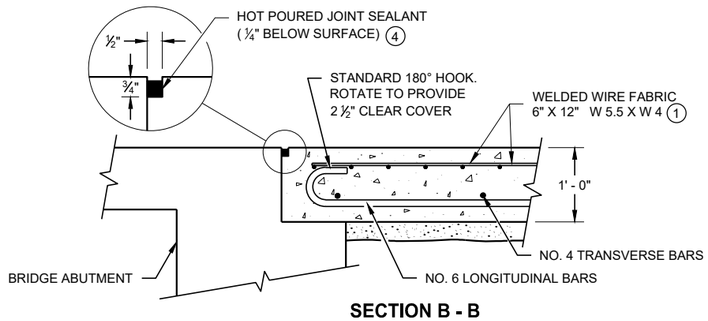
* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

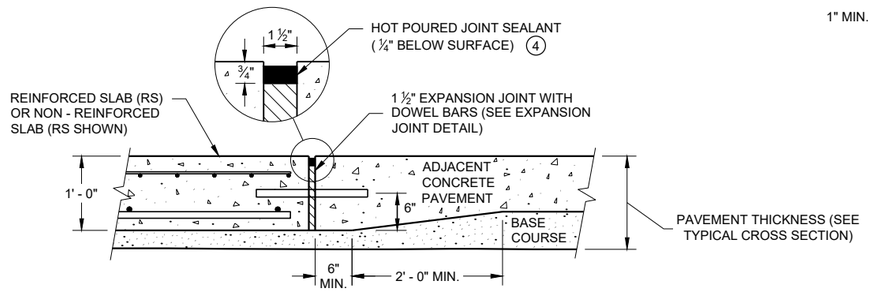
*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



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 MEETING THE REQUIREMENTS OF ASTM D6690.

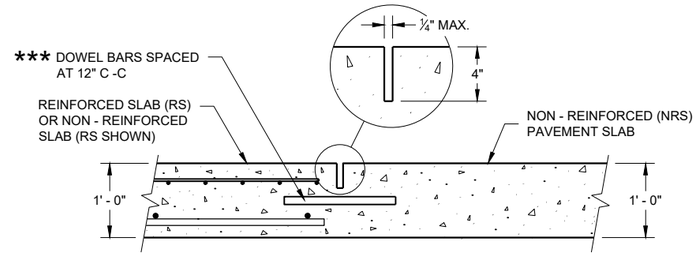
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

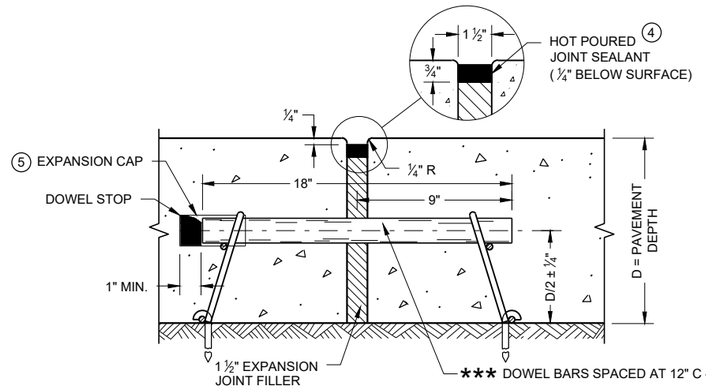
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞



SECTION D - D
CONTRACTION JOINT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVISI

FHWA

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SDD 13B02 - 09a

(1) WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

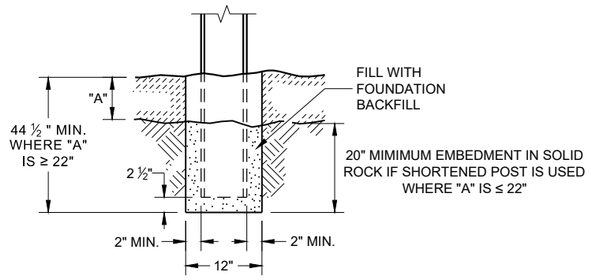
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

(4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

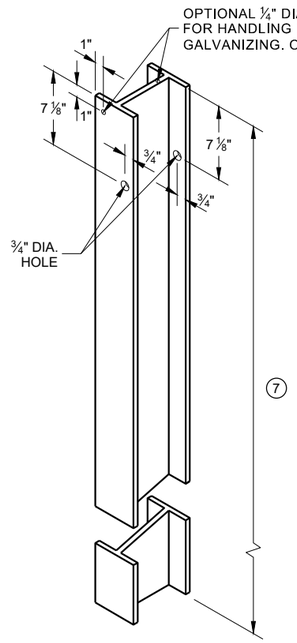
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS +1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

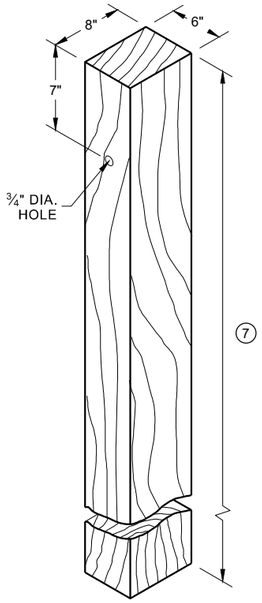
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



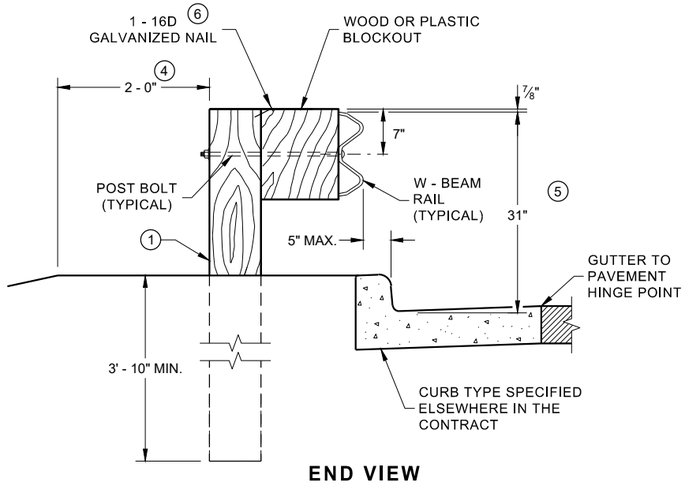
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



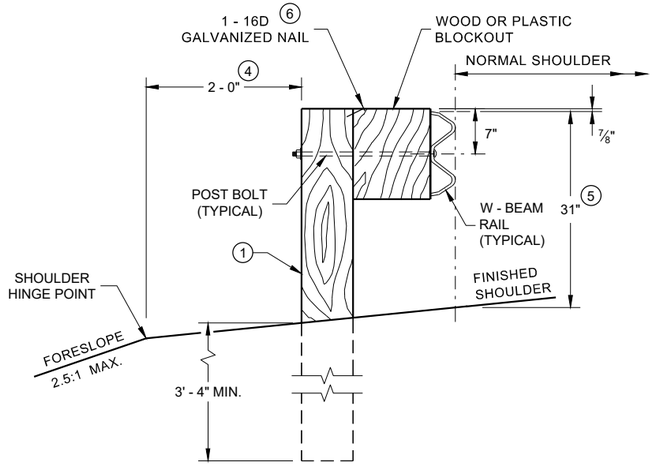
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



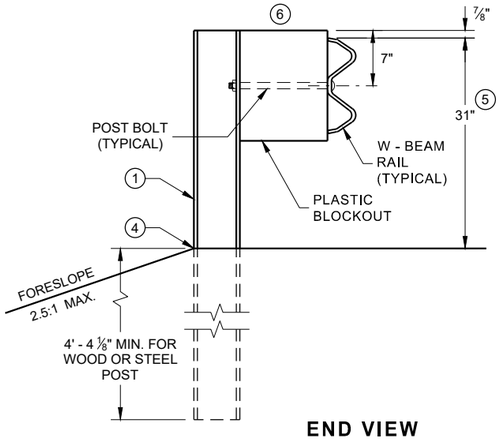
WOOD POST (6" X 8") NOMINAL (1)



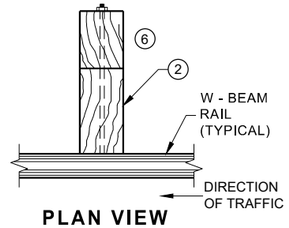
END VIEW
LOCATED ALONG A CURBED ROADWAY



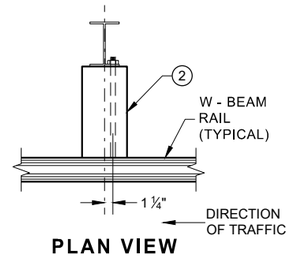
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



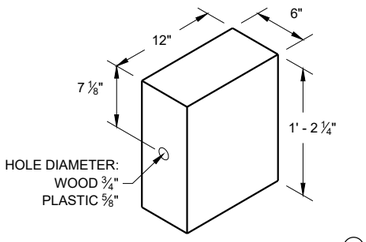
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



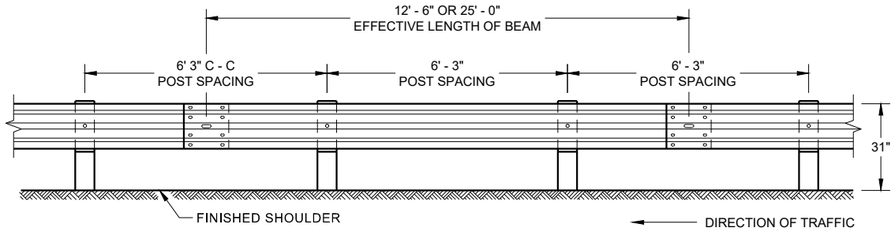
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

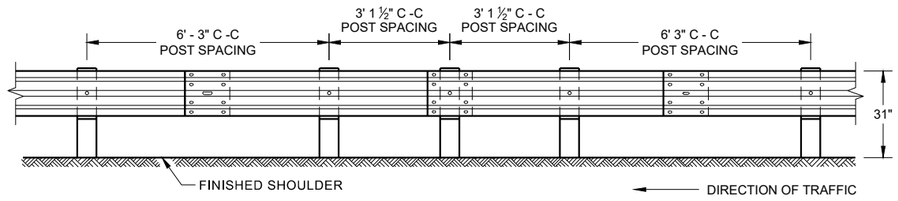
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B42 - 06a

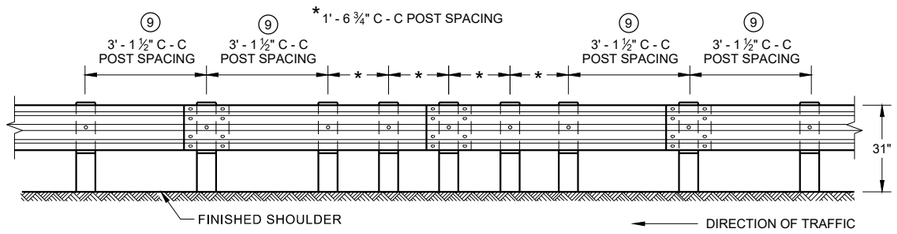
SDD 14B42 - 06a



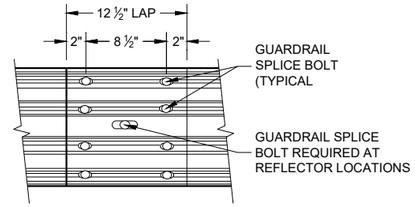
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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



FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE

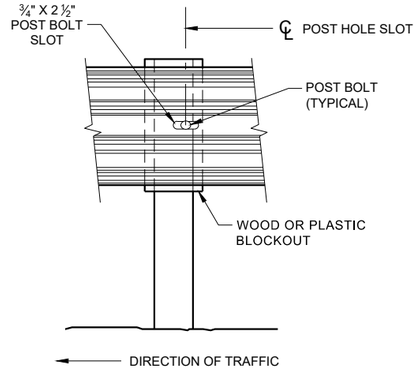
GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

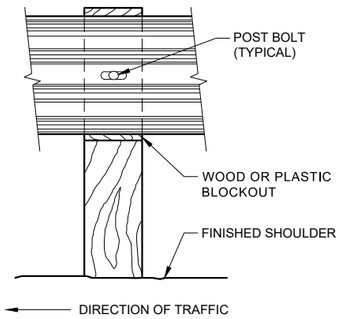
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

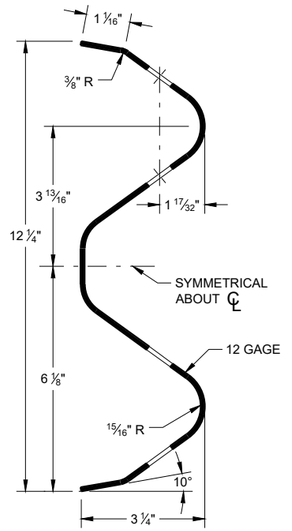
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



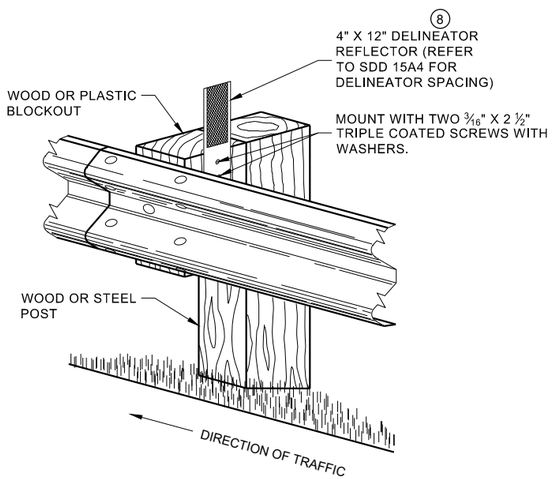
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



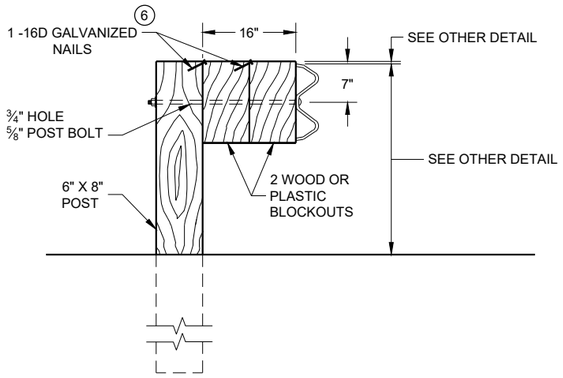
ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 06b

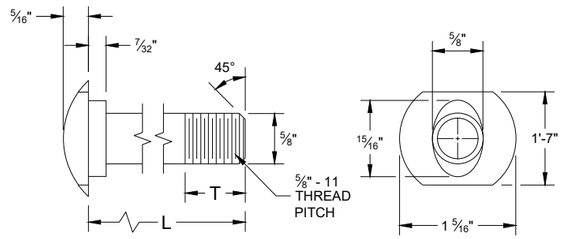


DETAIL FOR 16" BLOCKOUT DEPTH

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.

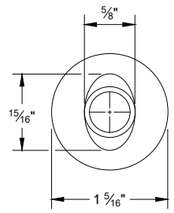
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3⁄16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

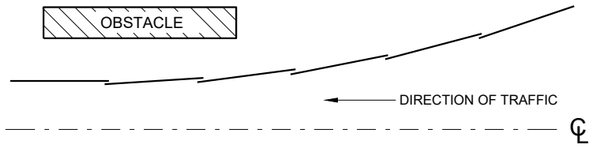


POST BOLT TABLE

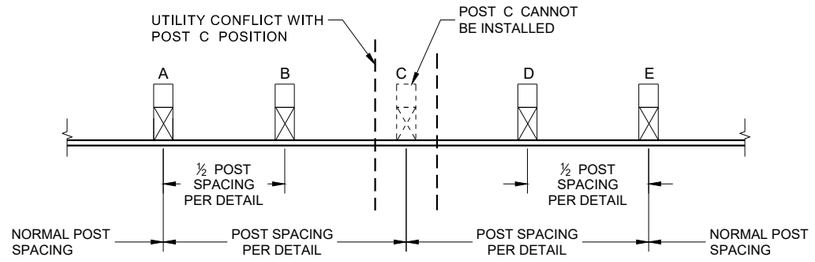
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



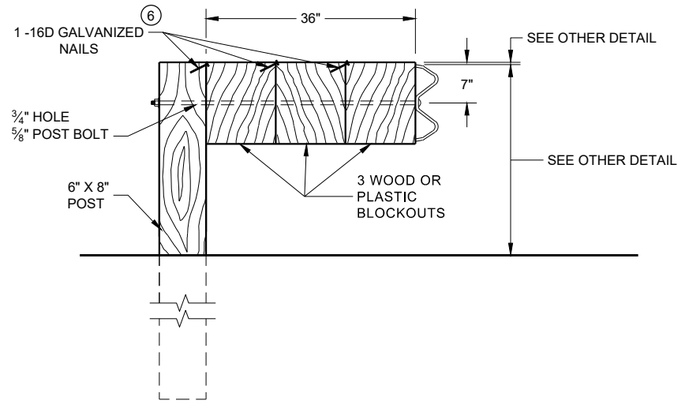
ALTERNATE BOLT HEAD



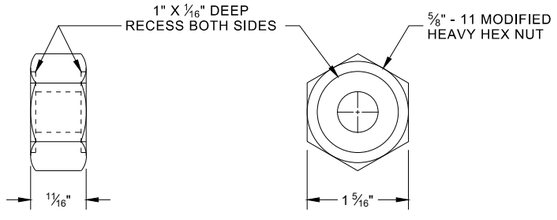
PLAN VIEW
BEAM LAPPING DETAIL



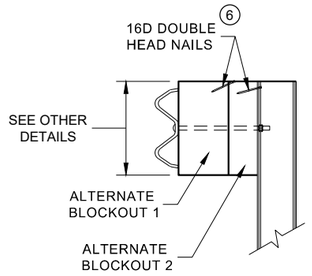
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



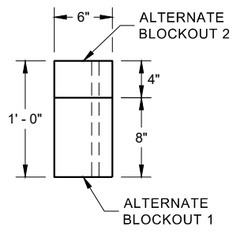
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

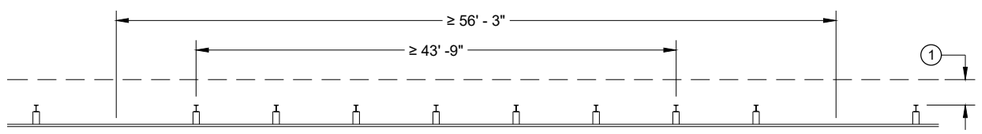
ALTERNATE WOOD BLOCKOUT DETAIL

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

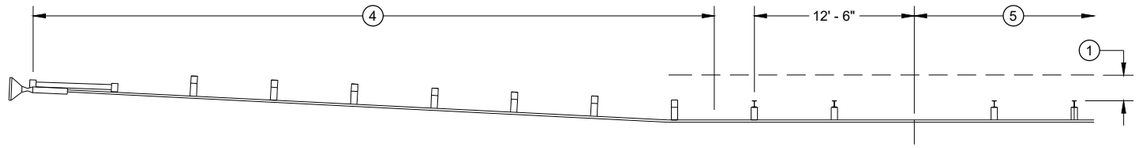
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

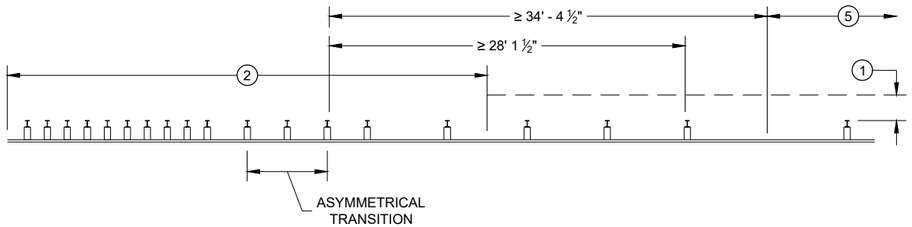
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



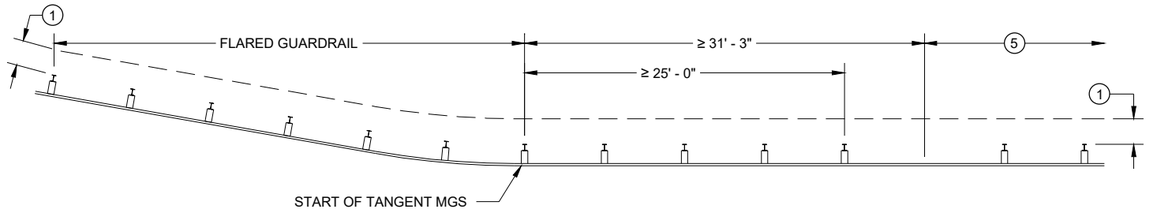
MISSING POST IN NORMAL BEAM GUARD RUN



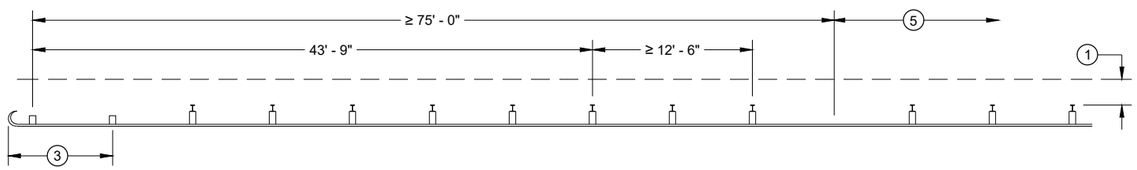
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



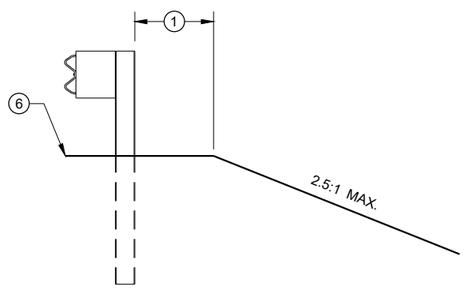
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

SDD 14B42 - 06d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

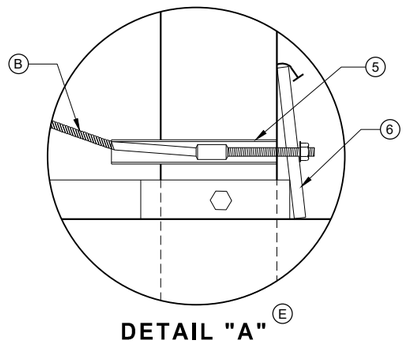
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

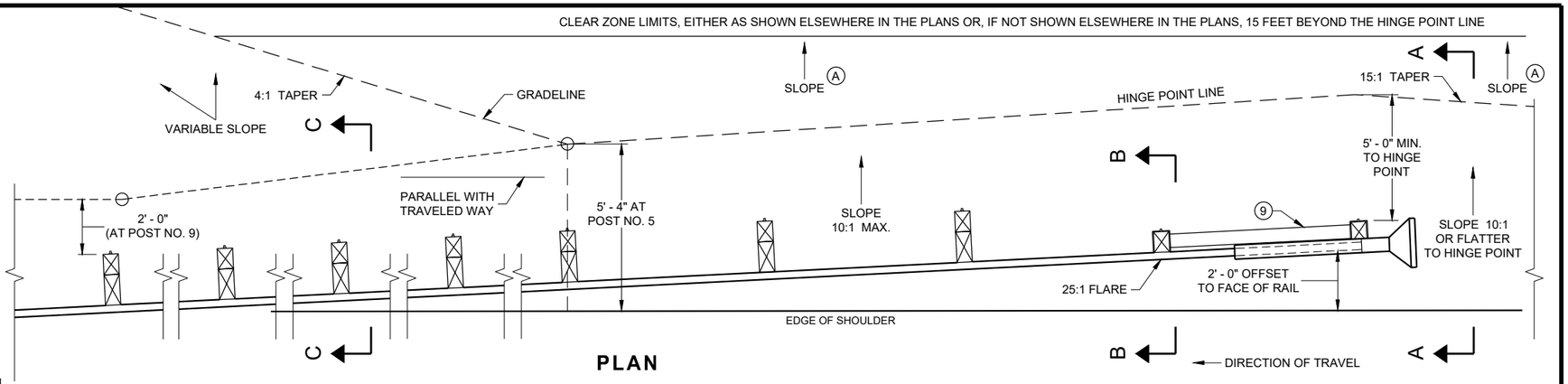
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

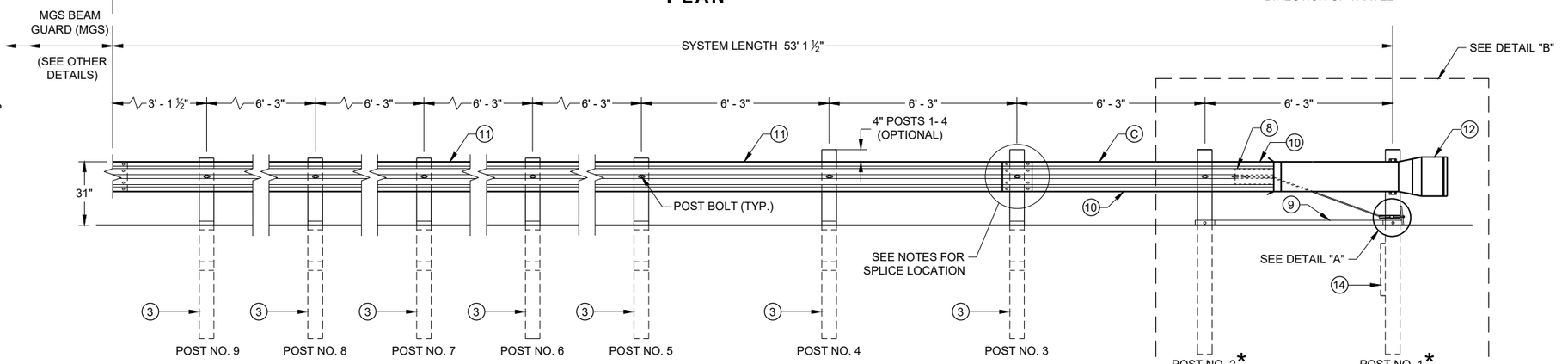
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



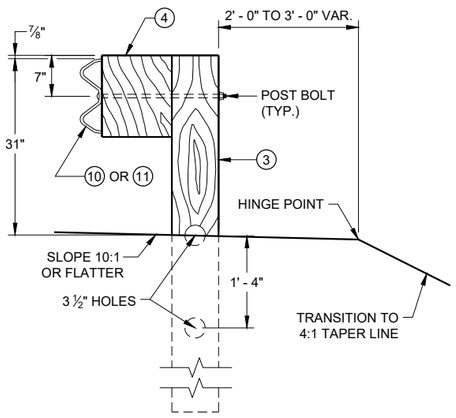
DETAIL "A" (E)



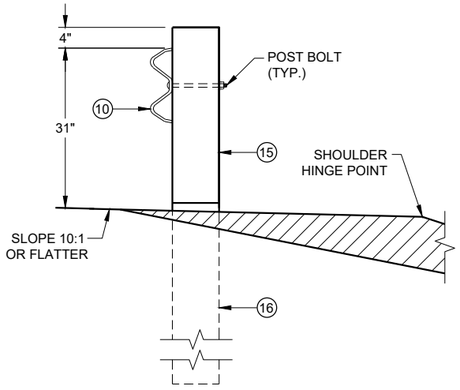
PLAN



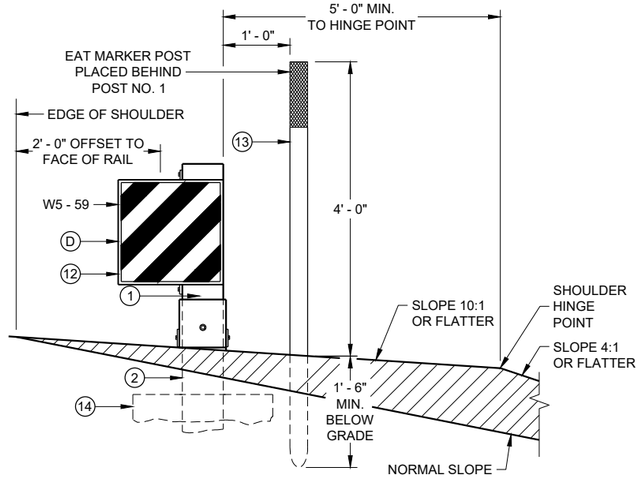
ELEVATION



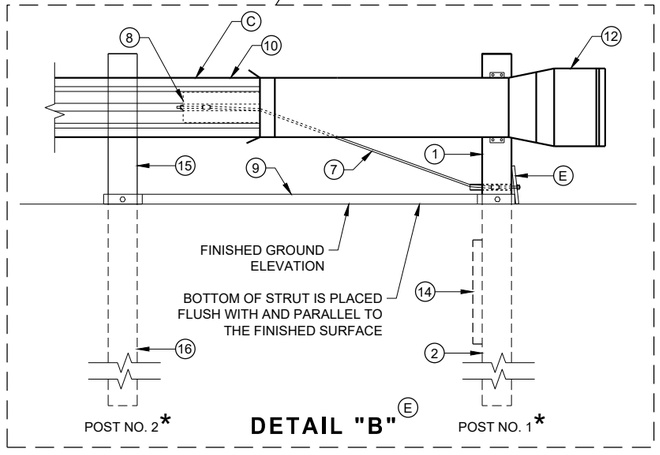
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



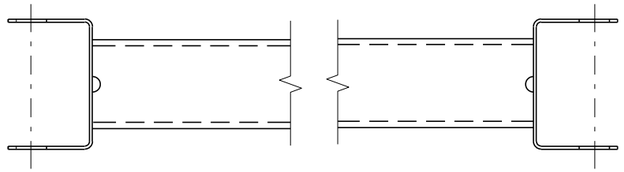
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

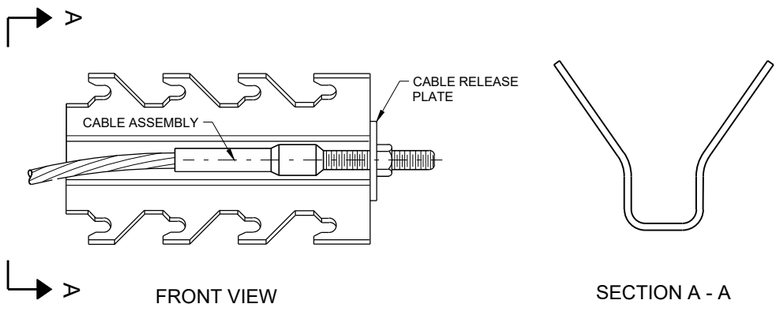
SDD 14B44 - 04a



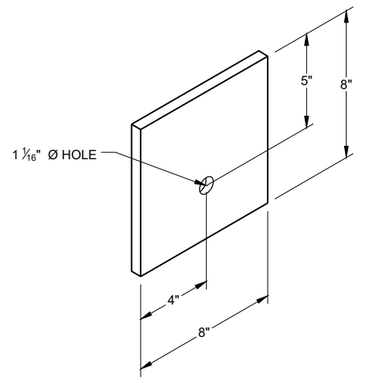
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

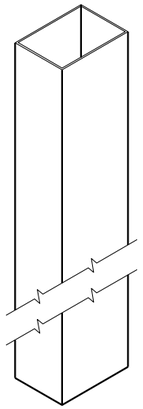
6

SDD 14B44 - 04b

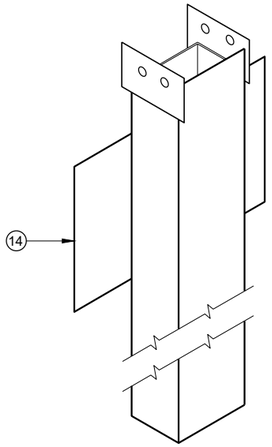
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

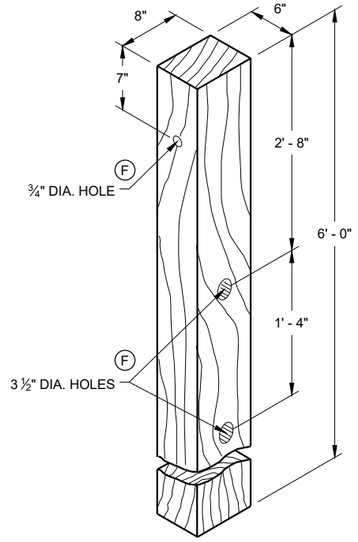
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



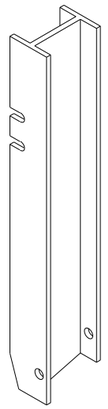
UPPER POST NO. 1 (1) (E)



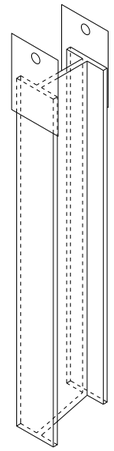
LOWER POST NO. 1 (2) (E)



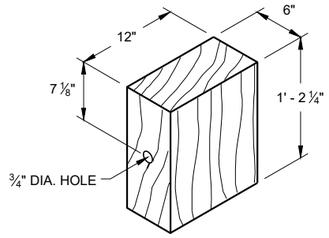
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



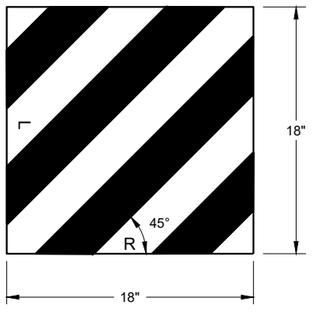
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

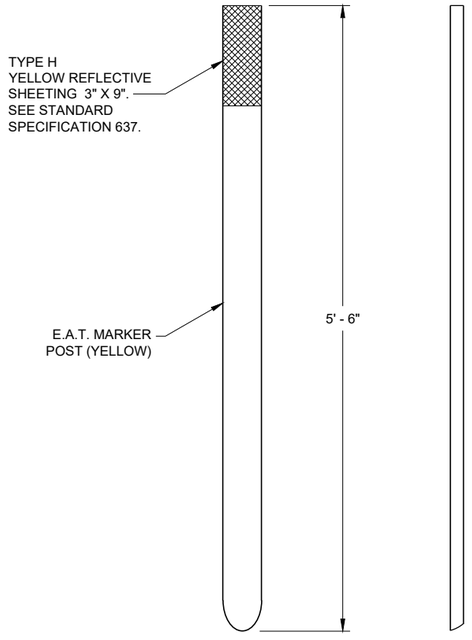


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



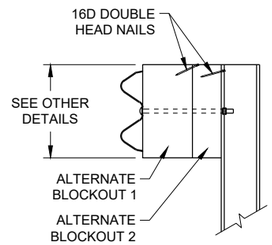
W5 - 59

REFLECTIVE SHEETING DETAIL (E)

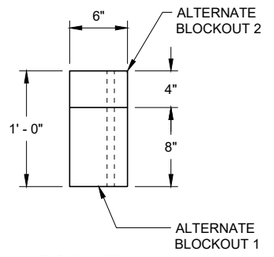


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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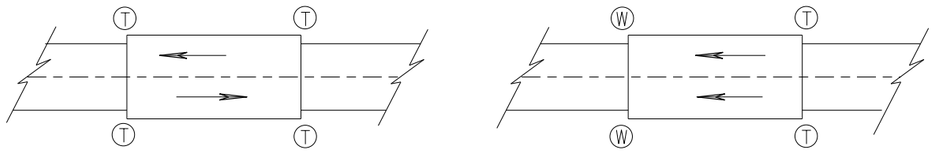
SDD 14B44 - 04c



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 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

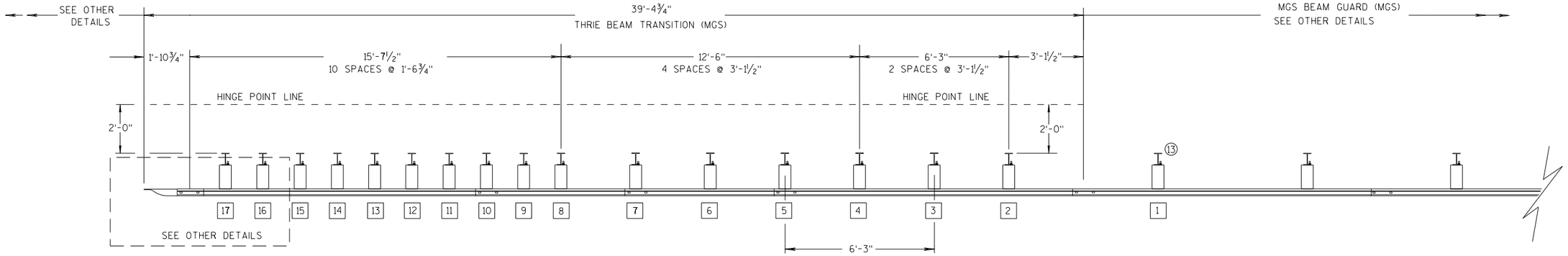
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

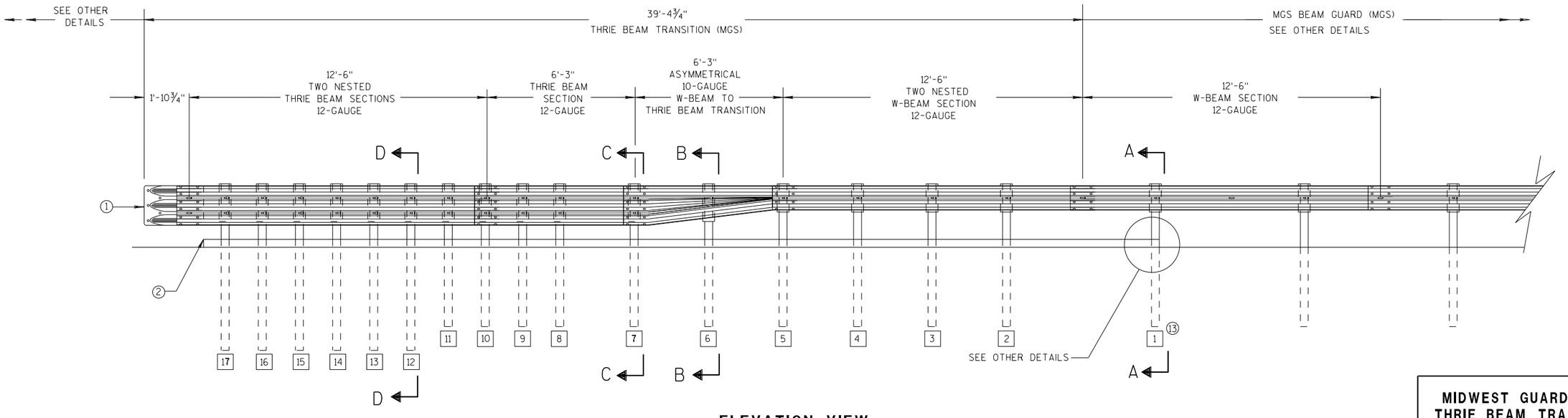
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(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 TRANSPOR

6
S.D.D. 14 B 45-5a

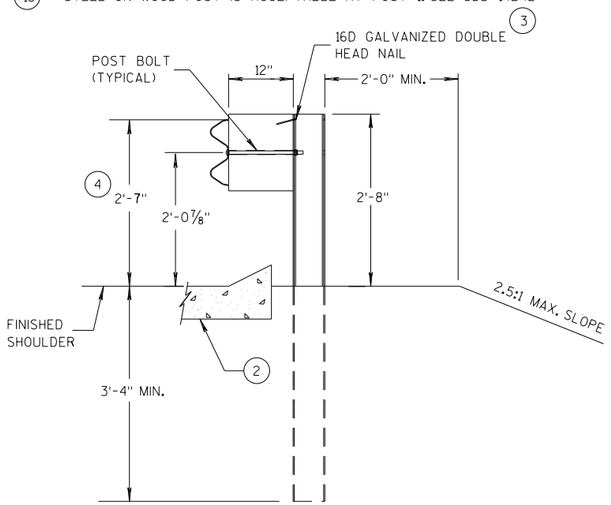
GENERAL NOTES

(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.

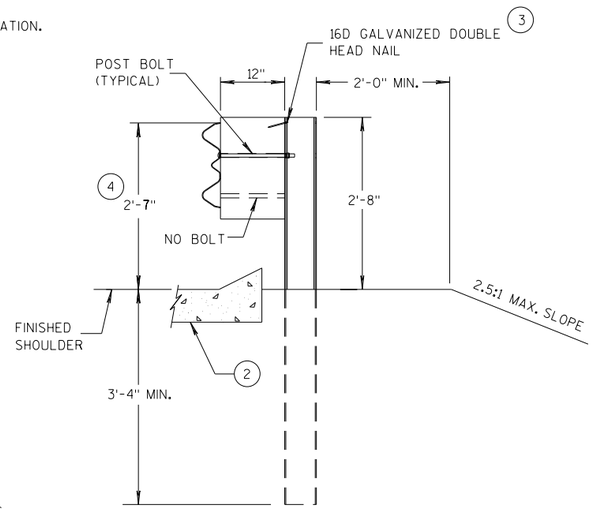
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



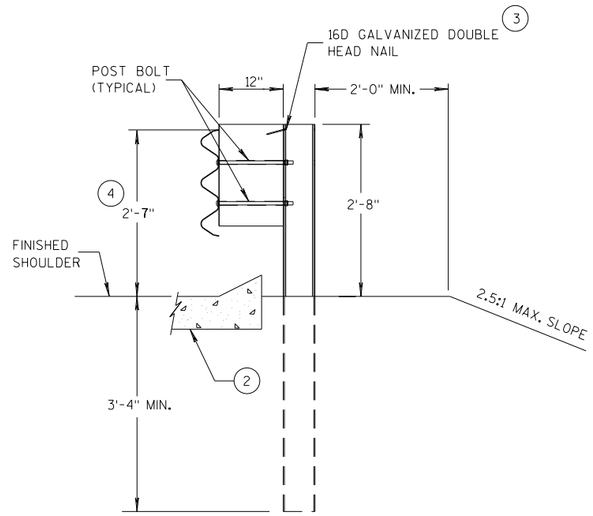
SECTION A-A (13)

POSTS 1-5



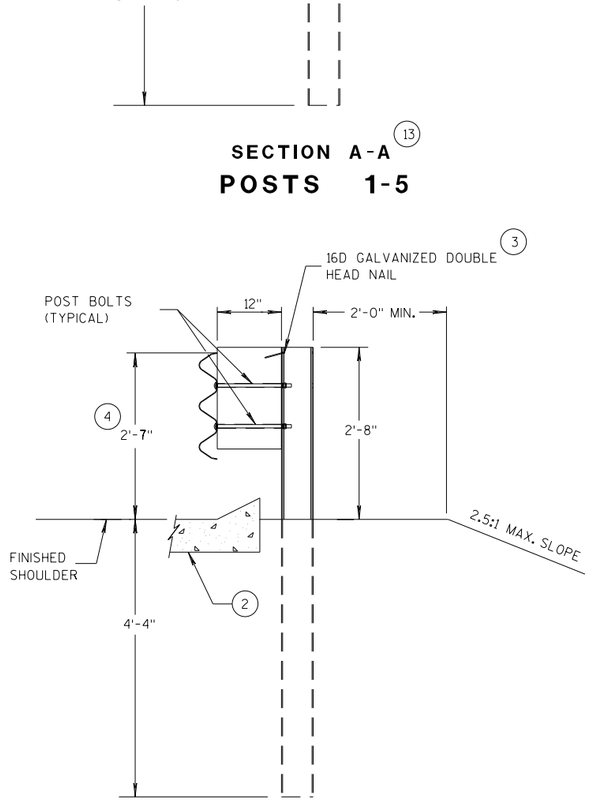
SECTION B-B

POST 6



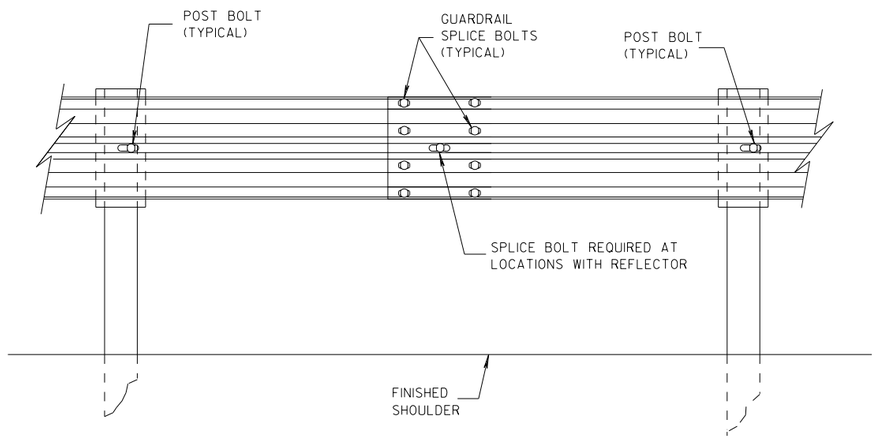
SECTION C-C

POSTS 7-11



SECTION D-D

POSTS 12-17



SPLICE DETAIL

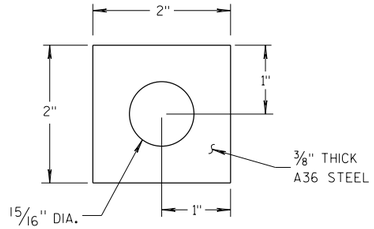
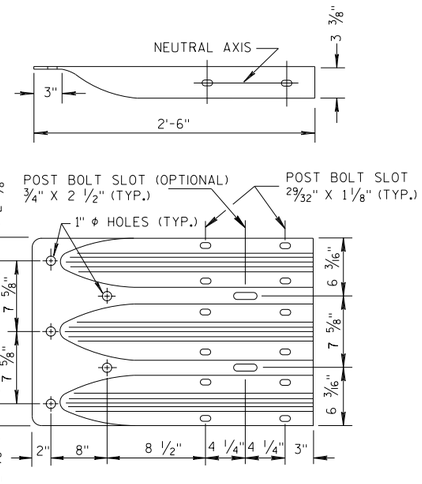
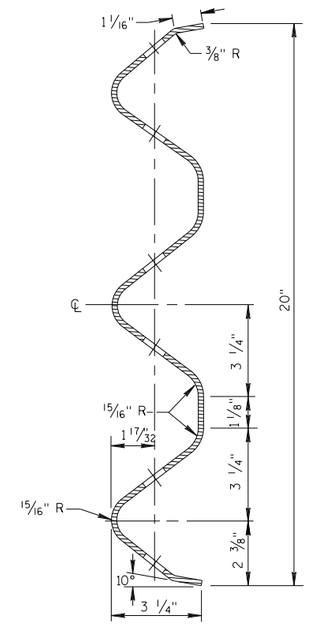


PLATE WASHER DETAIL



THRIE BEAM TERMINAL CONNECTOR



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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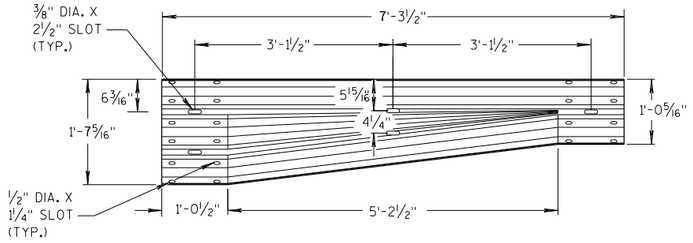
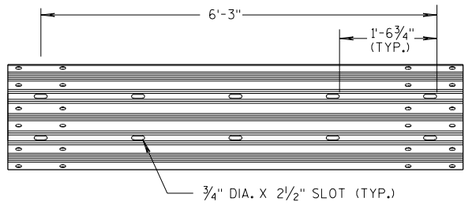
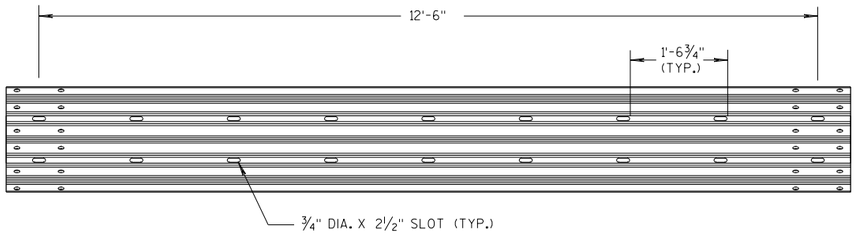
S.D.D. 14 B 45-5b



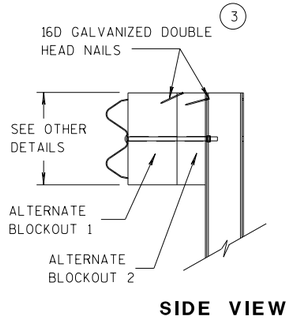
W-BEAM TO THRIE BEAM TRANSITION SECTION



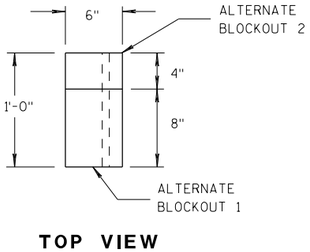
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

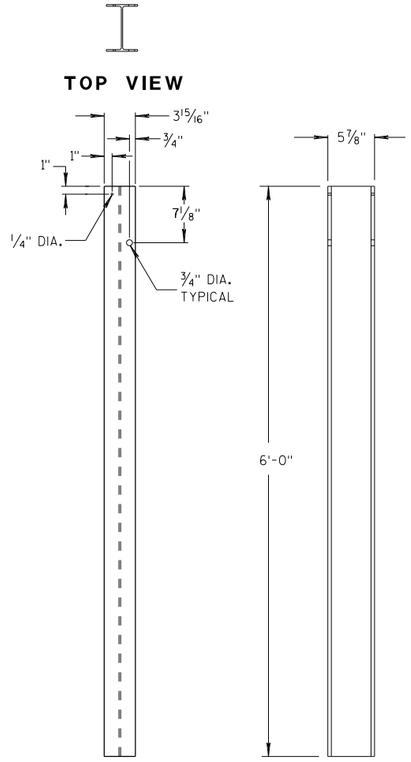


SIDE VIEW



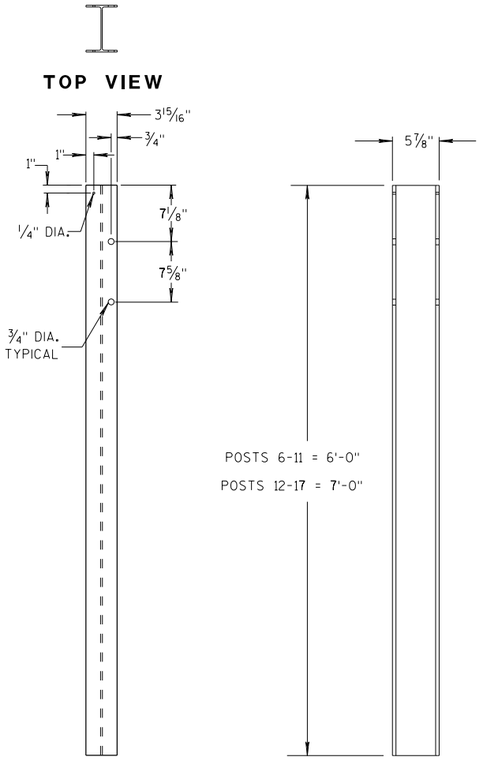
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



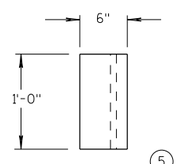
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

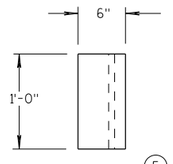


FRONT VIEW SIDE VIEW

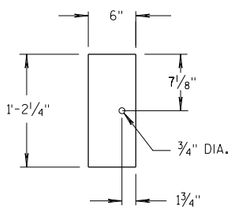
STEEL POSTS 6-17



TOP VIEW (5)

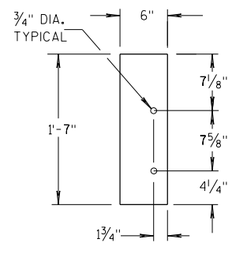


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



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.

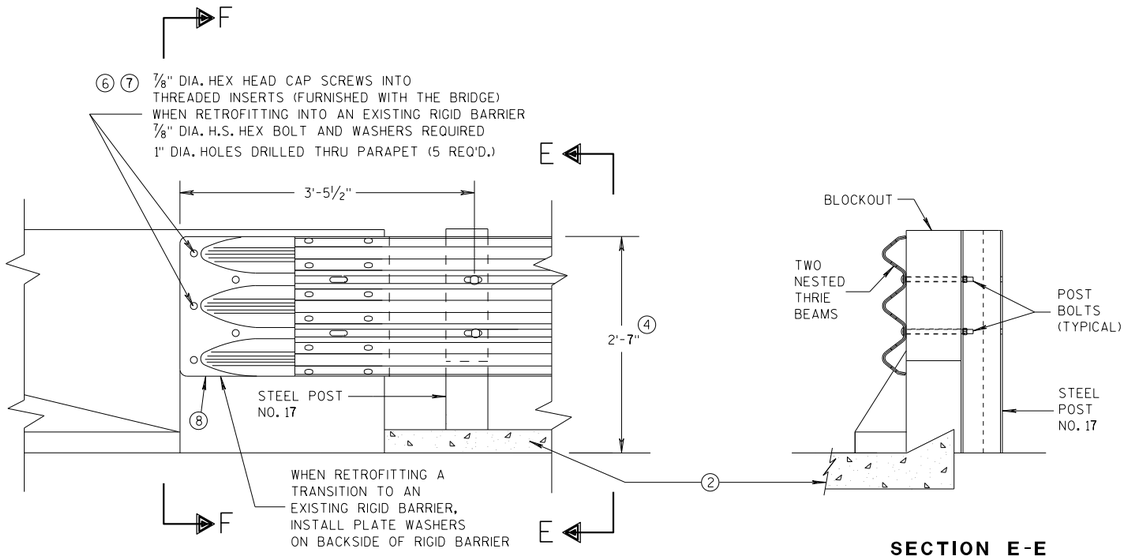
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

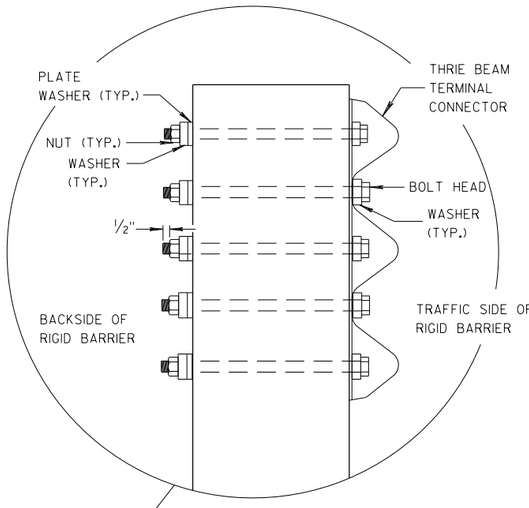
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

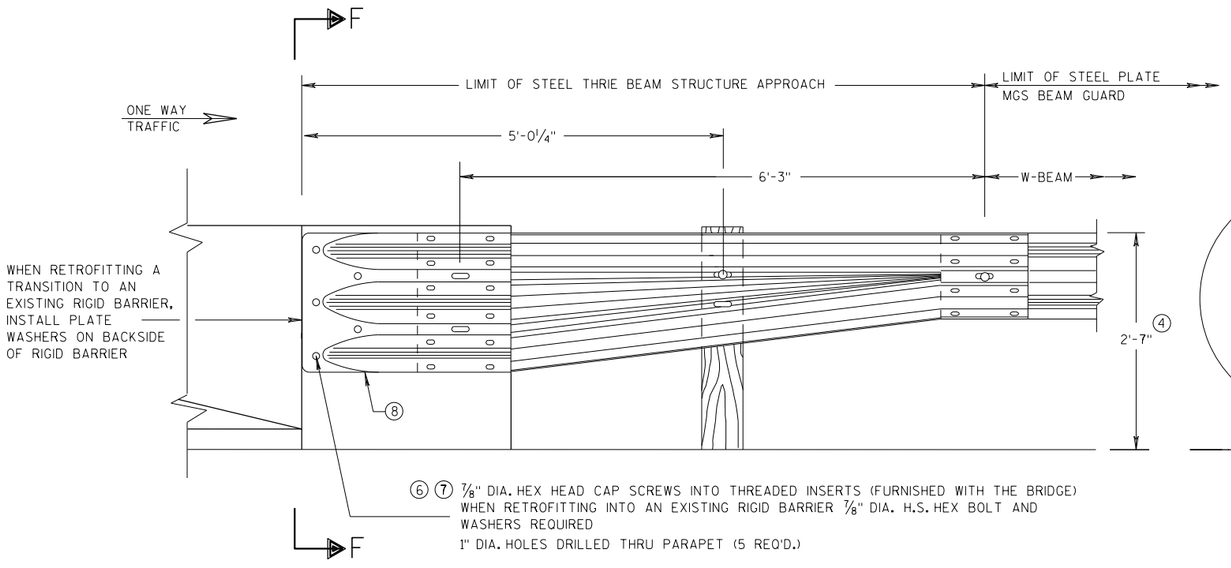
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

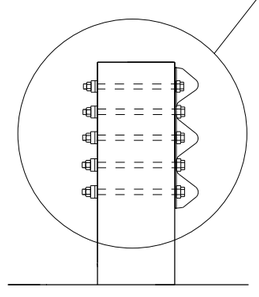
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" 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".

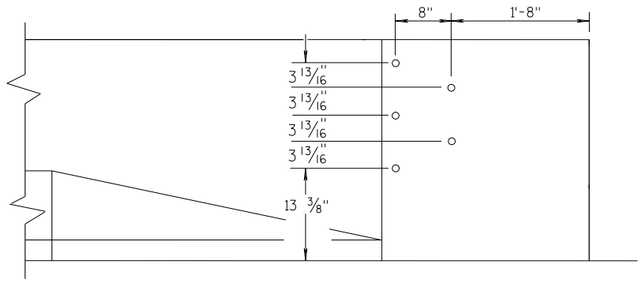




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(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
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D[UNIT SUPERVI[— NT
FHWA

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

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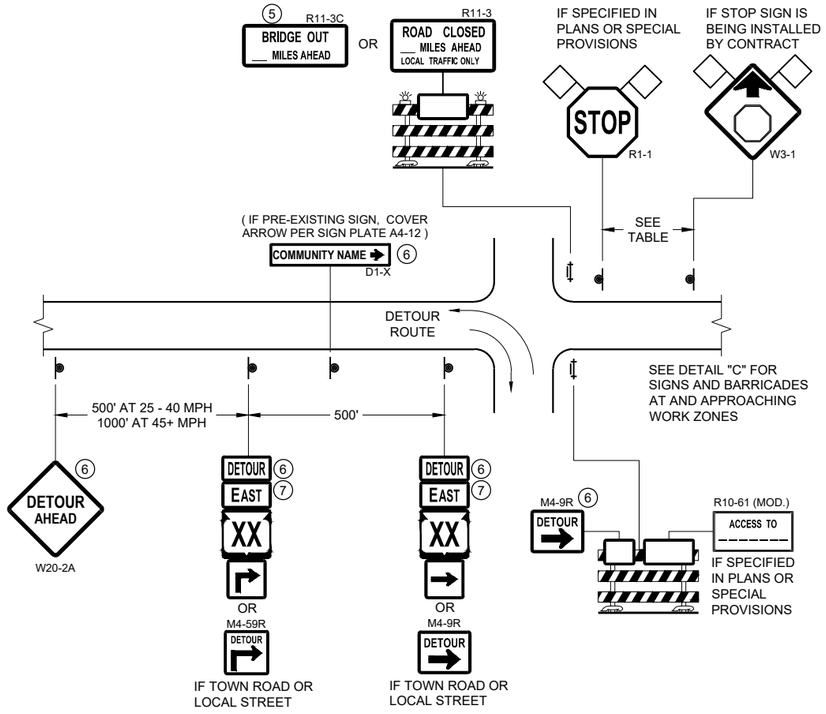
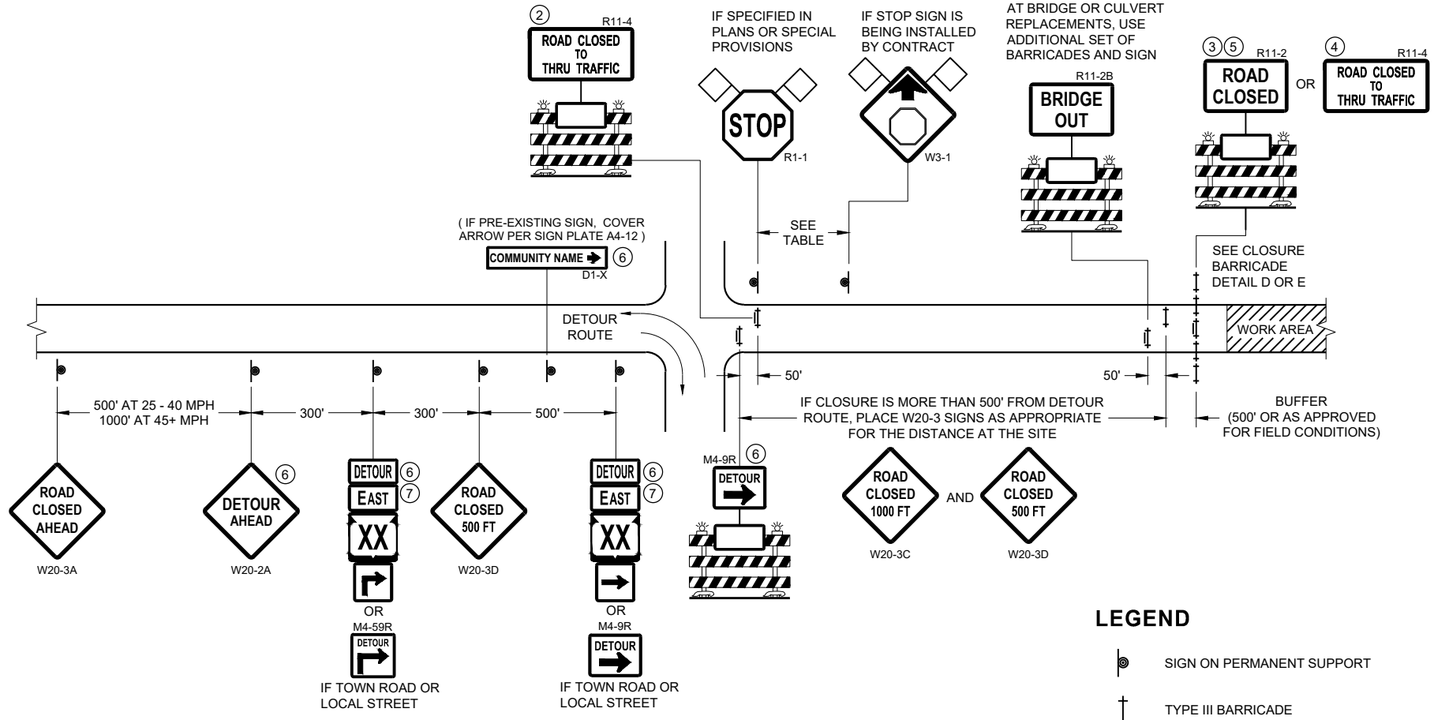
S.D.D. 14 B 45-5d





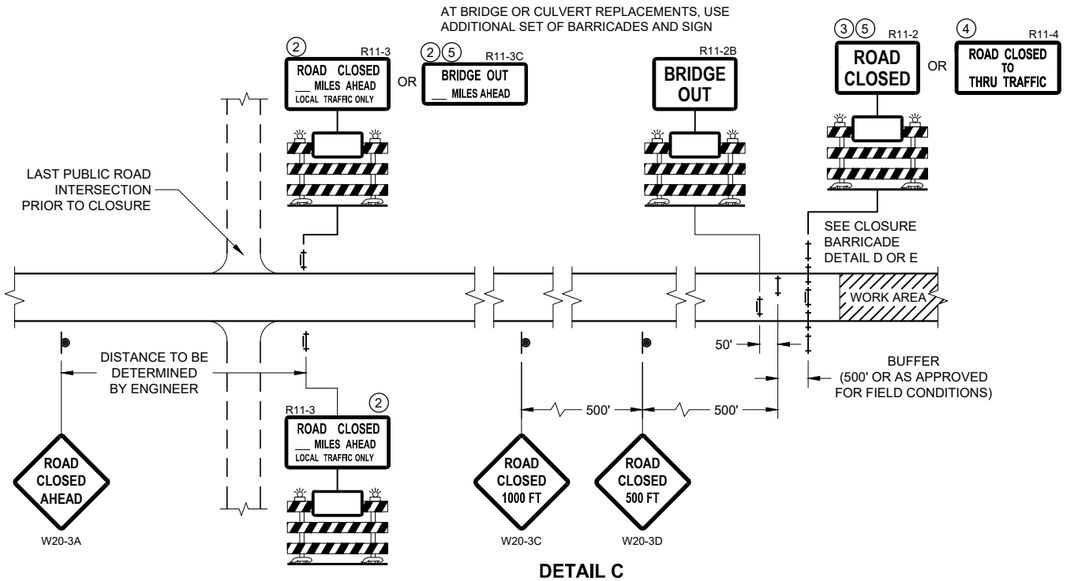
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

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

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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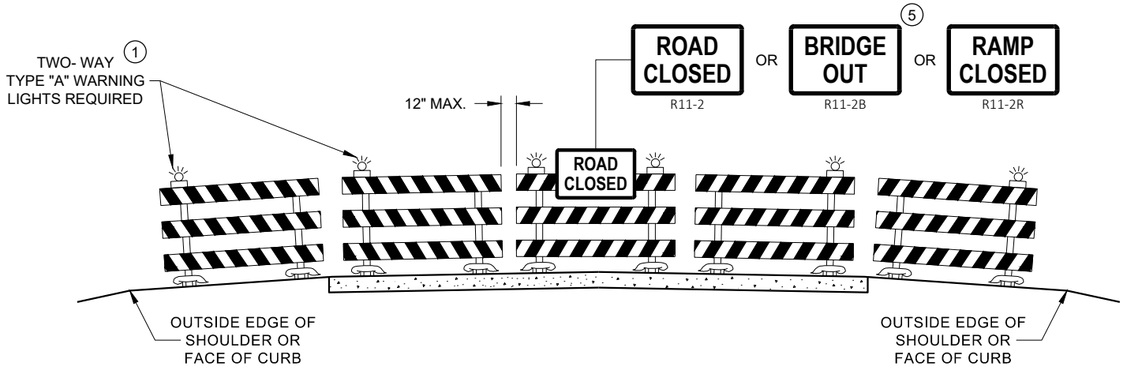
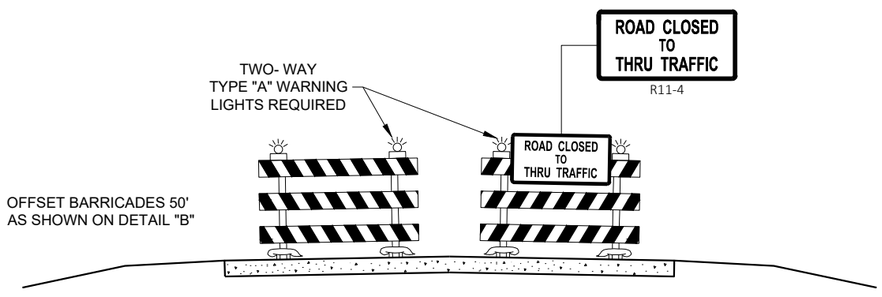
SDD 15C02 - 07a

SDD 15C02 - 07a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

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

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA

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SDD 15C02 - 07b

6

SDD 15C02 - 07b

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

500' AT 25-40 MPH
1000' AT 45+ MPH

500'

DETOUR EAST XX *
D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

M4-8a END DETOUR WEST XX *

DETOUR EAST XX / WEST XX

DETOUR ROUTE

WORK AREA

DETOUR EAST XX

WEST XX OR M4-9L DETOUR ** IF TOWN ROAD OR LOCAL STREET

500'

DETOUR NEXT X MILES * G20-51

DETOUR WEST XX * OR M4-59L DETOUR ** IF TOWN ROAD OR LOCAL STREET

MATCH POINT

* M4-59L DETOUR ** OR DETOUR EAST XX * IF TOWN ROAD OR LOCAL STREET

D1-X COMMUNITY NAME * (IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

M4-9L DETOUR ** OR DETOUR EAST XX IF TOWN ROAD OR LOCAL STREET

500'

DETOUR WEST XX

DETOUR WEST XX OR M4-9R DETOUR ** IF TOWN ROAD OR LOCAL STREET

DETOUR WEST XX * OR M4-59R * DETOUR ** IF TOWN ROAD OR LOCAL STREET

500'

DETOUR ROUTE

500' AT 25 - 40 MPH
1000' AT 45+ MPH

500'

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

DETOUR EAST XX *
D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

DETOUR EAST XX

500'

DETOUR EAST XX

DETOUR EAST XX *
D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

DETOUR EAST XX *

PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA)

500' AT 25 - 40 MPH
1000' AT 45+ MPH

DETOUR EAST XX *

EAST XX M3-X 24" X 12" M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C02 - 07c

SDD 15C02 - 07c

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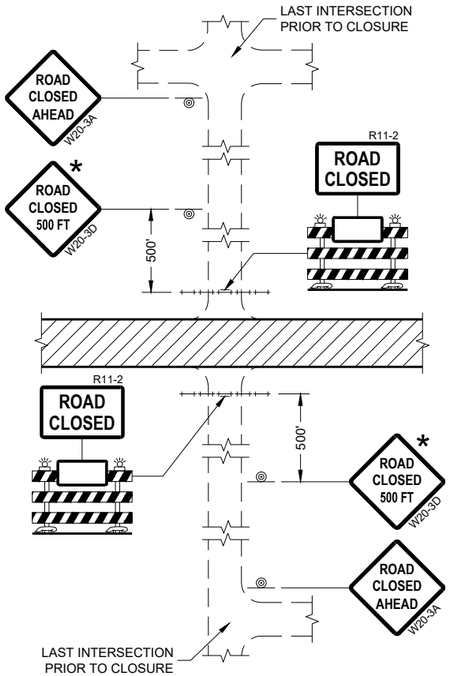
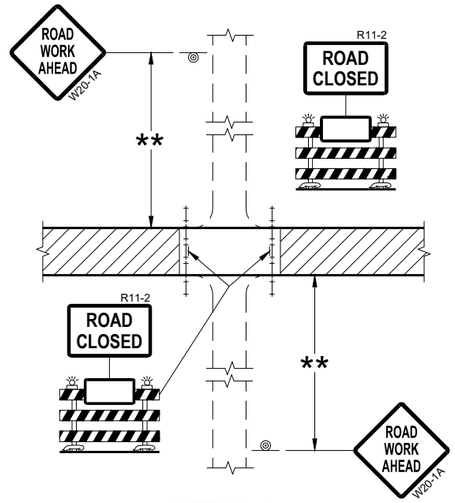
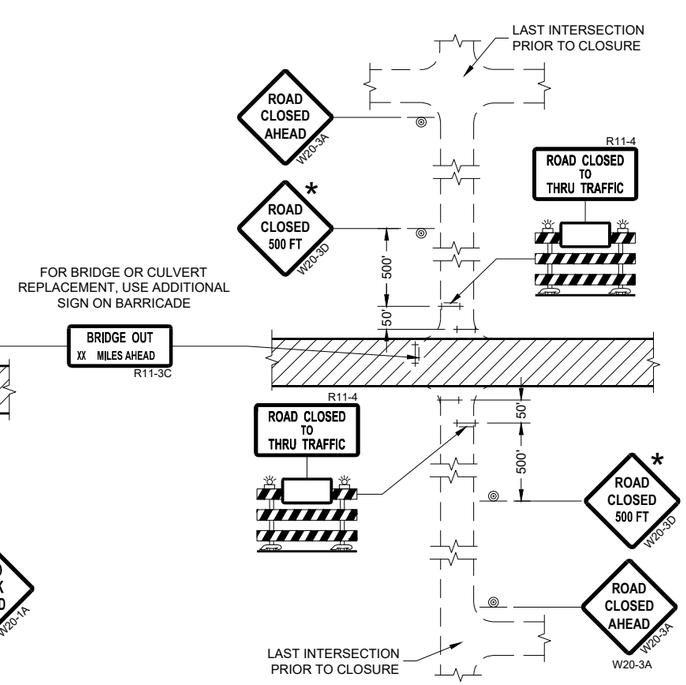


DETAIL 1
(NO ACCESS TO PROJECT)



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

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



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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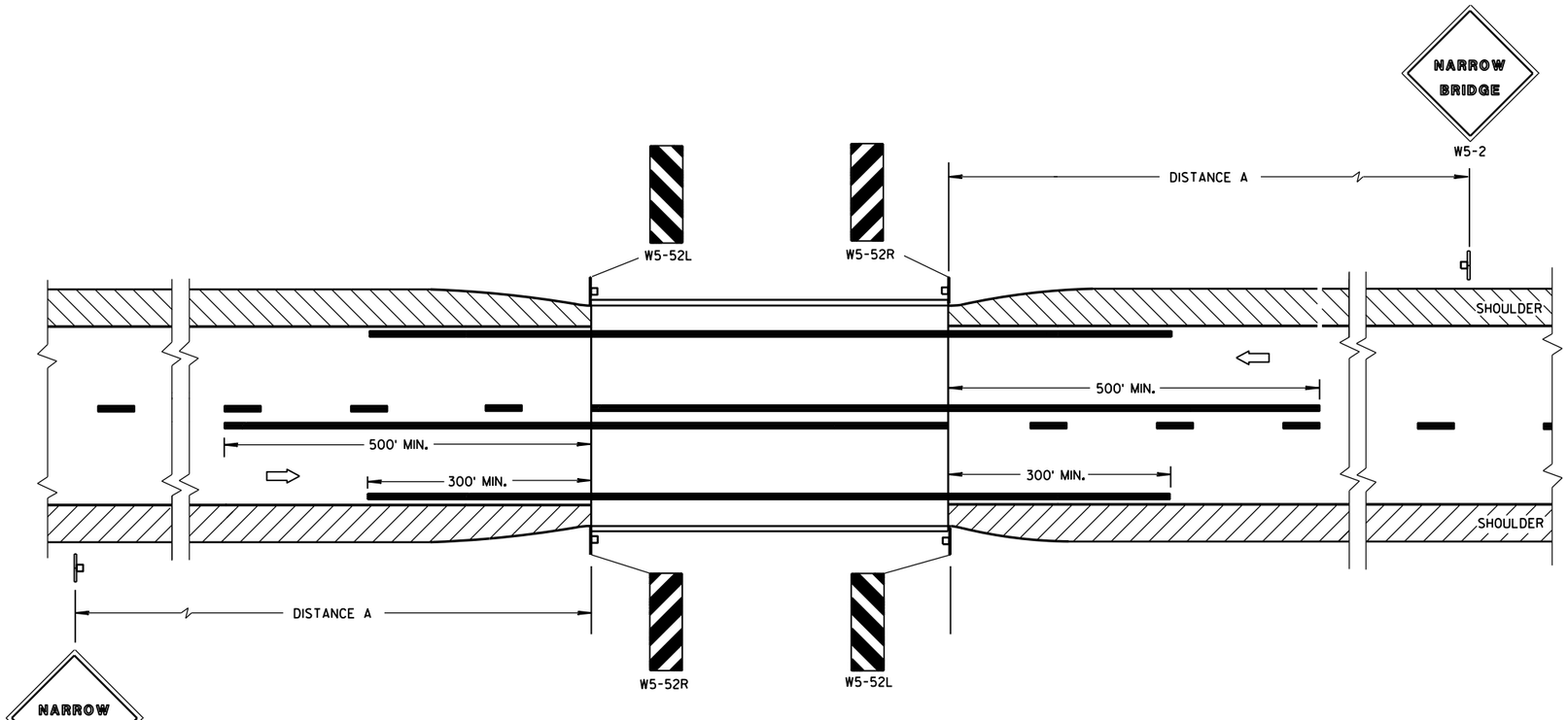
SDD 15C03 - 05

SDD 15C03 - 05



SITUATION 1

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

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'

GENERAL NOTES

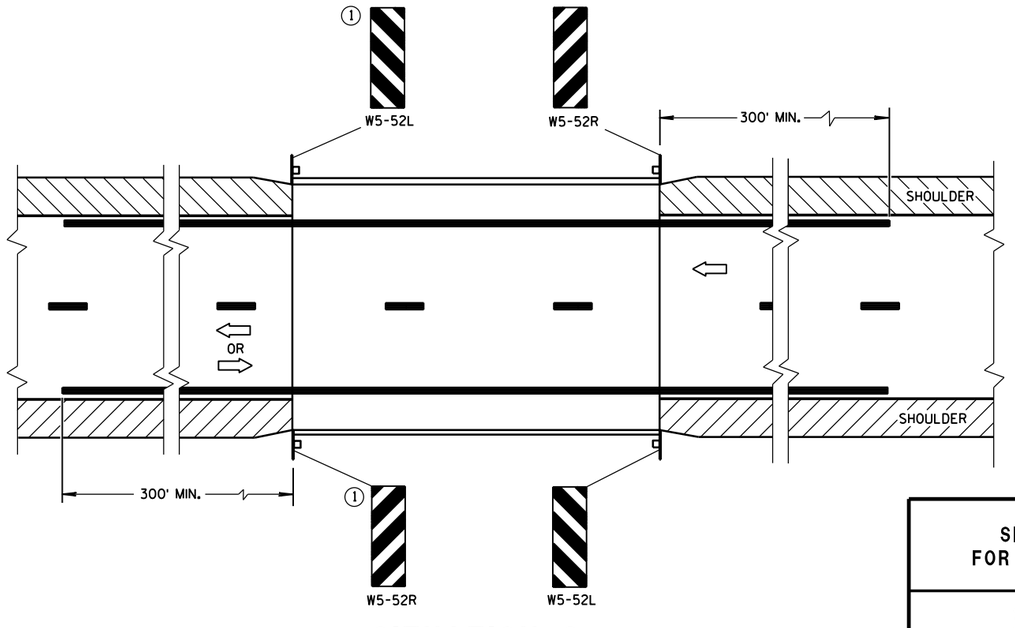
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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.

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET.

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

6

S.D.D. 15 C 6-9

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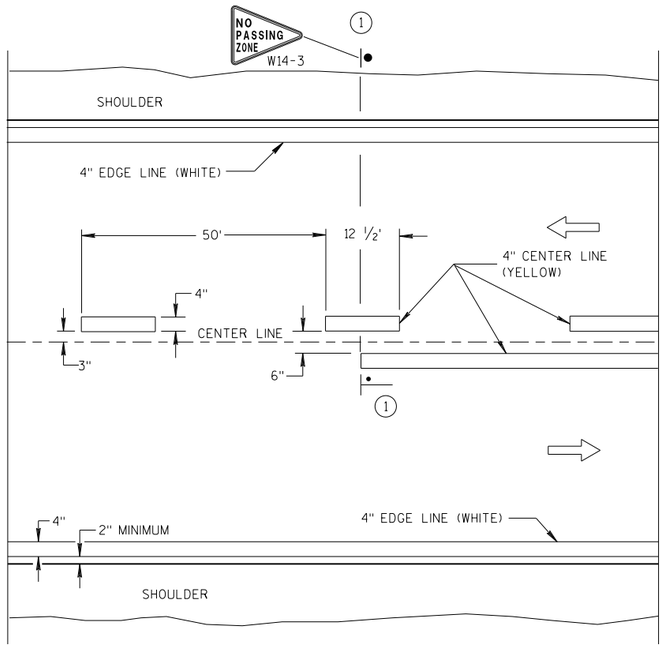
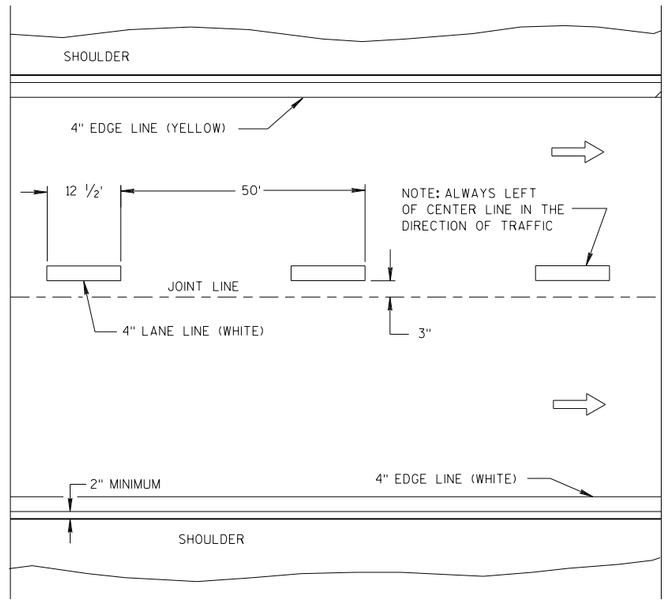
S.D.D. 15 C 6-9



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

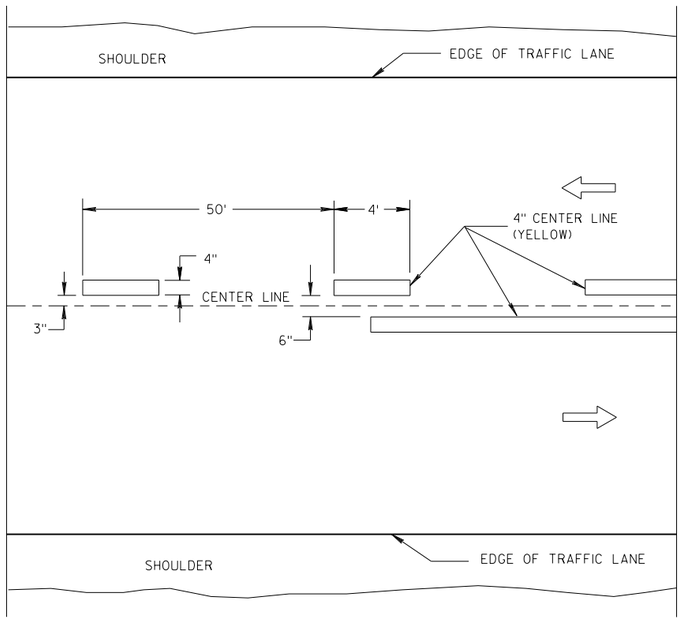
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

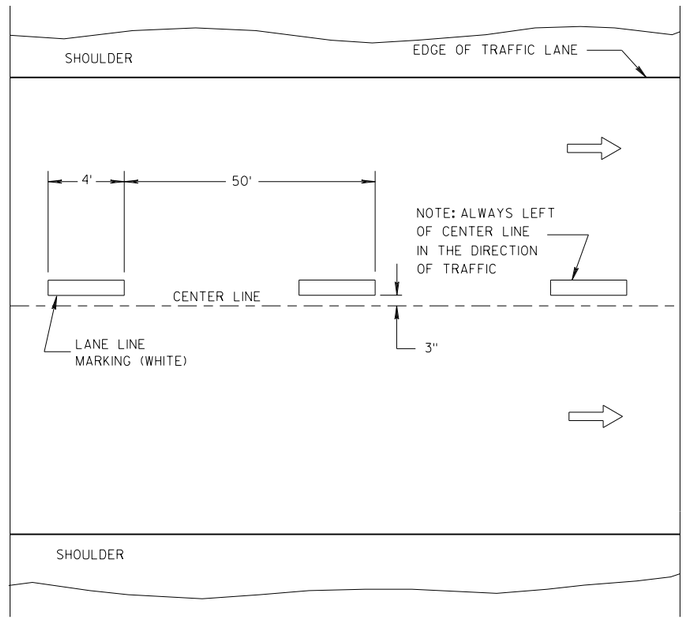
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 — DATE

/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER

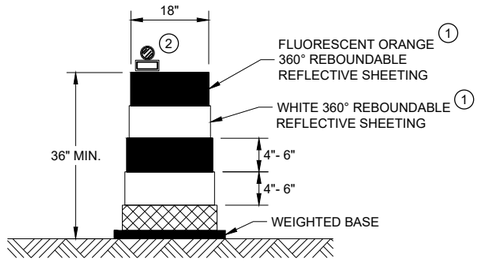
FHWA

6

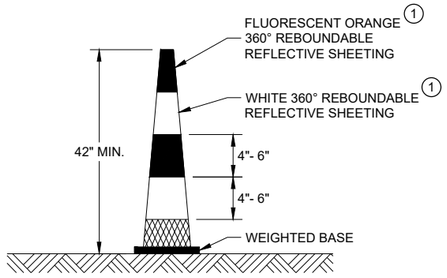
S.D.D. 15 C 8-19a

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.

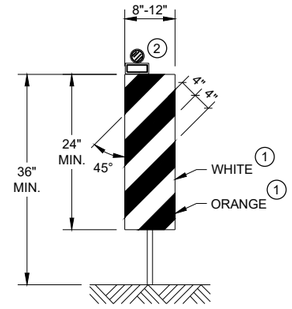


DRUM



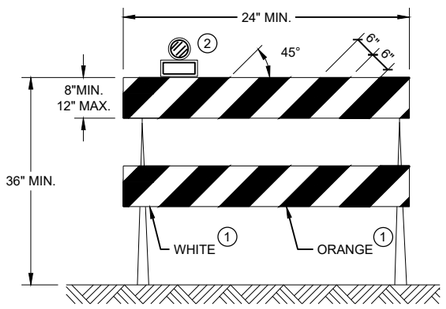
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



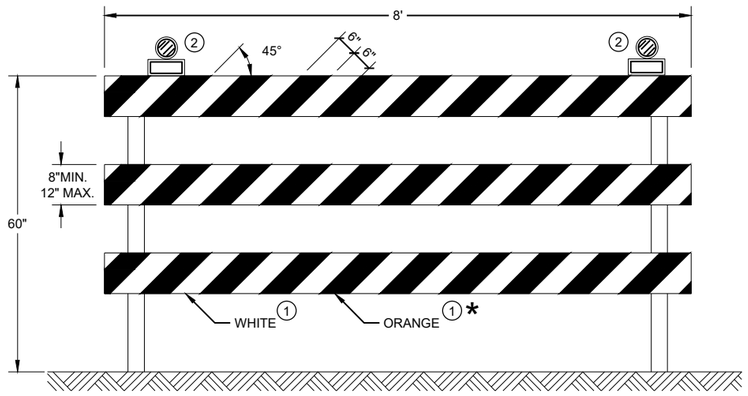
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 07b

6

SDD 15C11 - 07b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

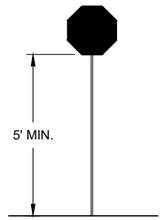
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



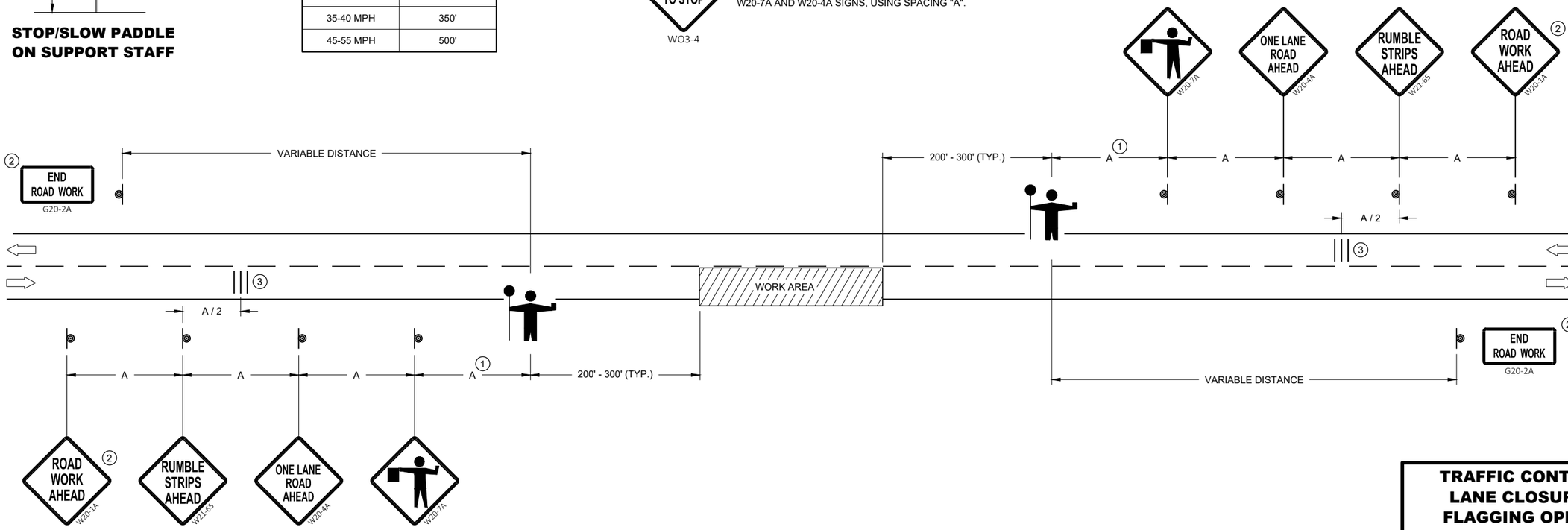
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

WO3-4

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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C12 - 07

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)

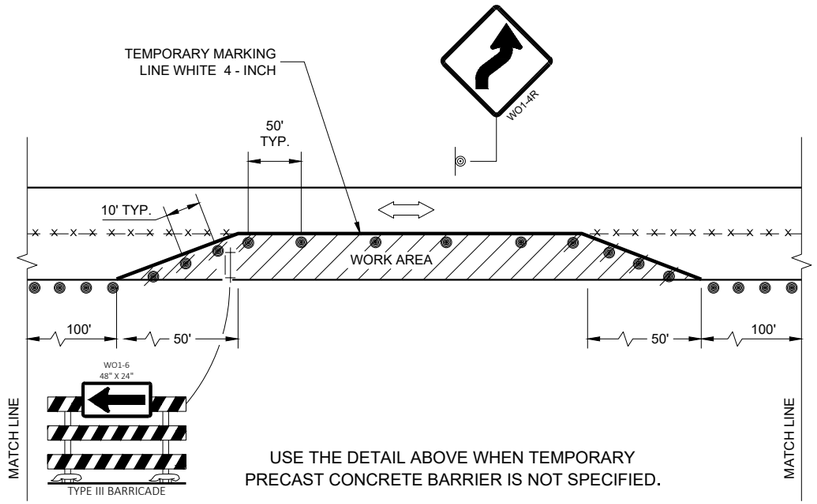
REMOVING PAVEMENT MARKING

DIRECTION OF TRAFFIC

ASPHALTIC PAVEMENT WIDENING

CONCRETE BARRIER TEMPORARY PRECAST

TEMPORARY SIGNAL. SEE SDD 09G02 FOR EXACT PLACEMENT



USE THE DETAIL ABOVE WHEN TEMPORARY PRECAST CONCRETE BARRIER IS NOT SPECIFIED.

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.

PLACE TEMPORARY PAVEMENT MARKING EDGELINE AND CENTERLINE AND REMOVE EXISTING PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS OR AS NOTED ON DETAIL.

(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.

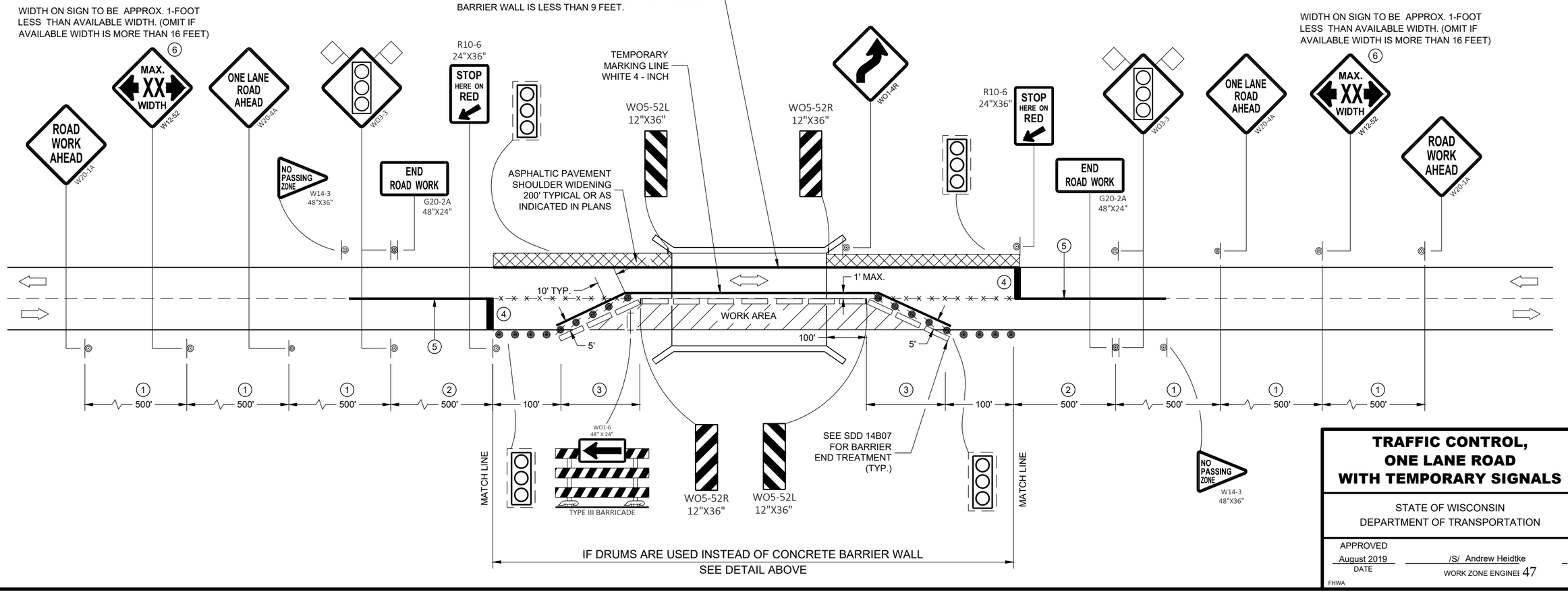
(2) USE 300 FOOT SPACING IF THE PRE - CONSTRUCTION REGULATORY SPEED IS 35 MPH OR LESS.

(3) DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.

(4) TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18 - INCH.

(5) 700 FOOT TEMPORARY MARKING LINE, DOUBLE YELLOW 4 - INCH . 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.



TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

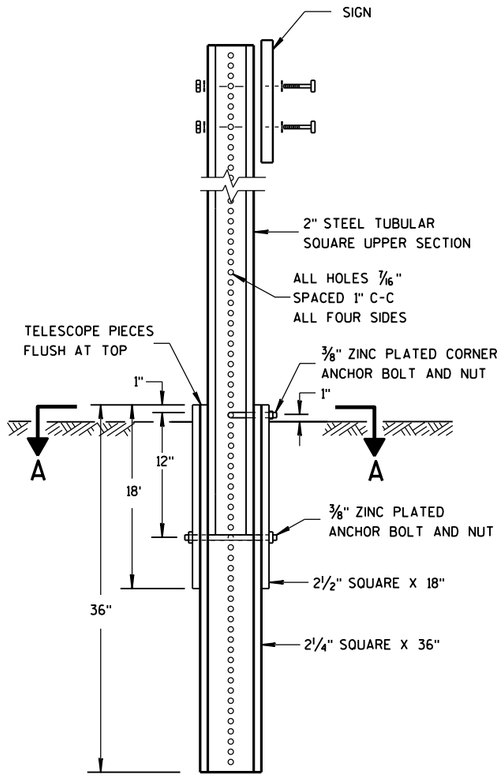
APPROVED
August 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

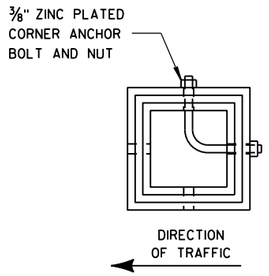
FHWA

SDD 15D33 - 06

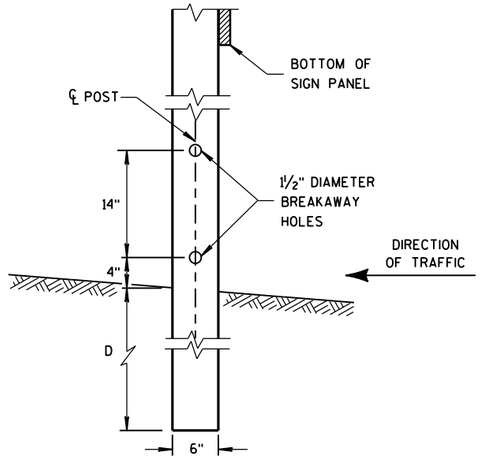
SDD 15D33 - 06



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



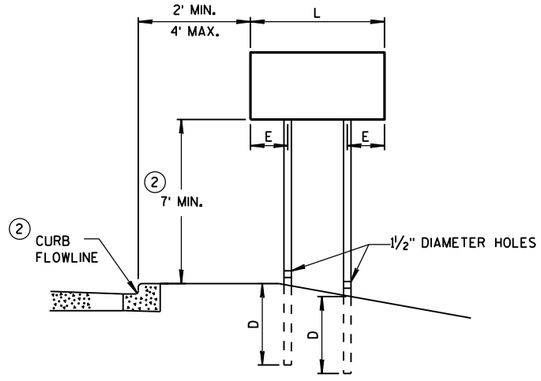
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

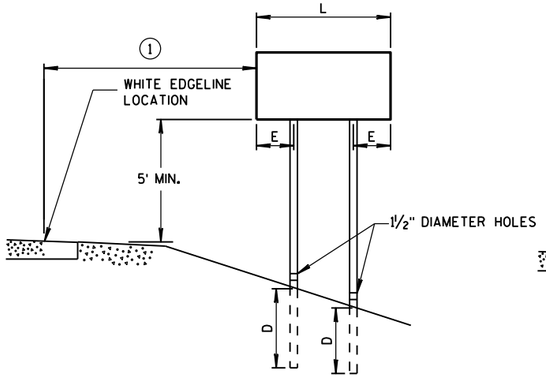
1. 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

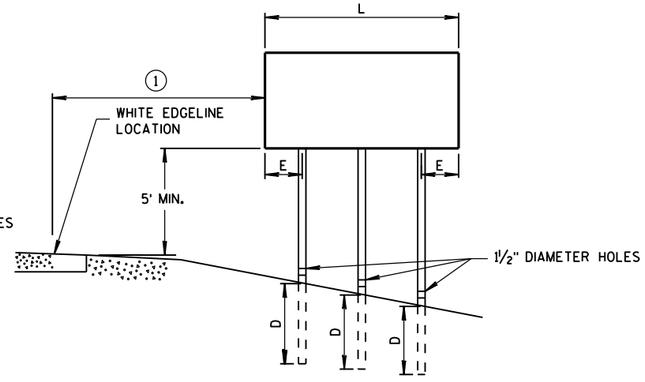
2. THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

3. FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

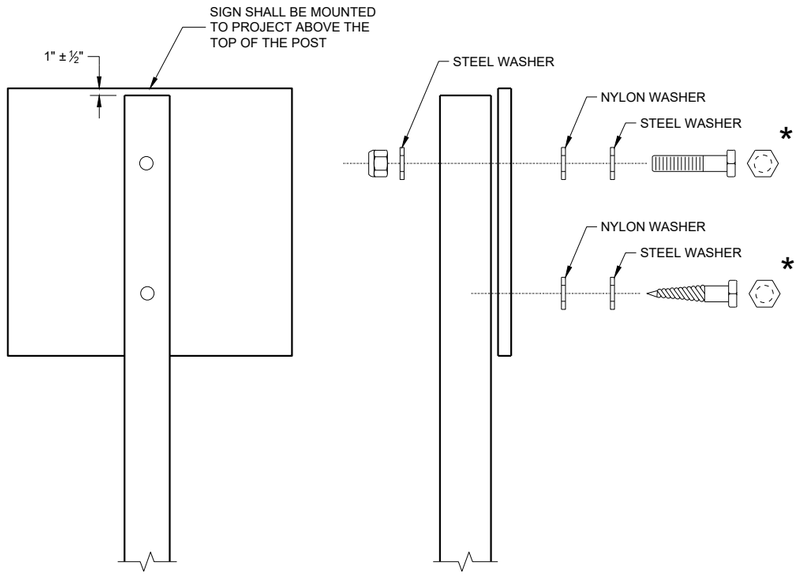
POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE 3

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 15 D 38-2a



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POST (4" x 6")
LAG SCREWS - ⅜" x 3"
MACHINE BOLTS - 5/16" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ⅜" x 3 ¼" LENGTH W/NUTS
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH, GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x 1/16" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

SDD 15D38 - 02b

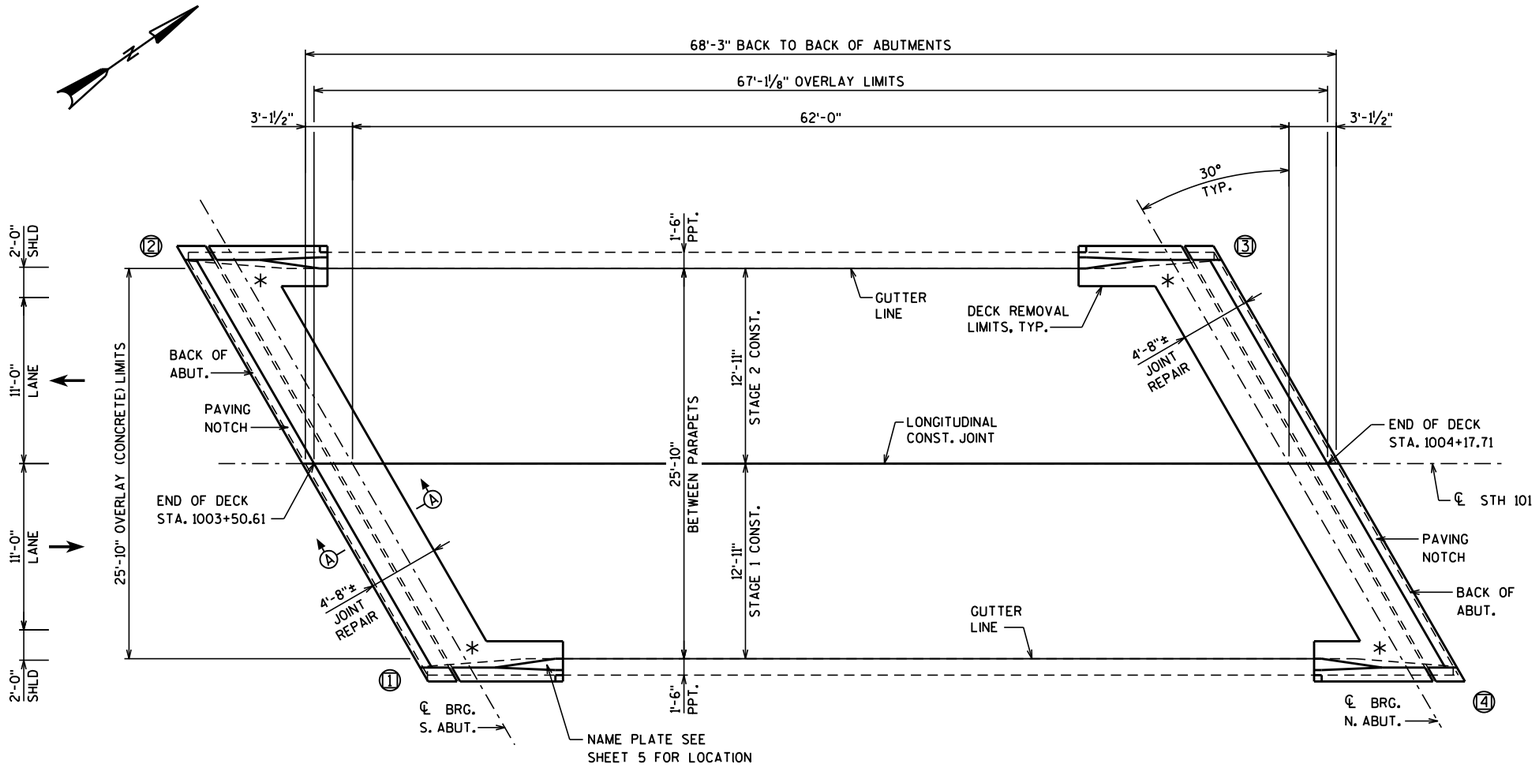
SDD15D38 - 02b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

STATE PROJECT NUMBER
1009-47-60

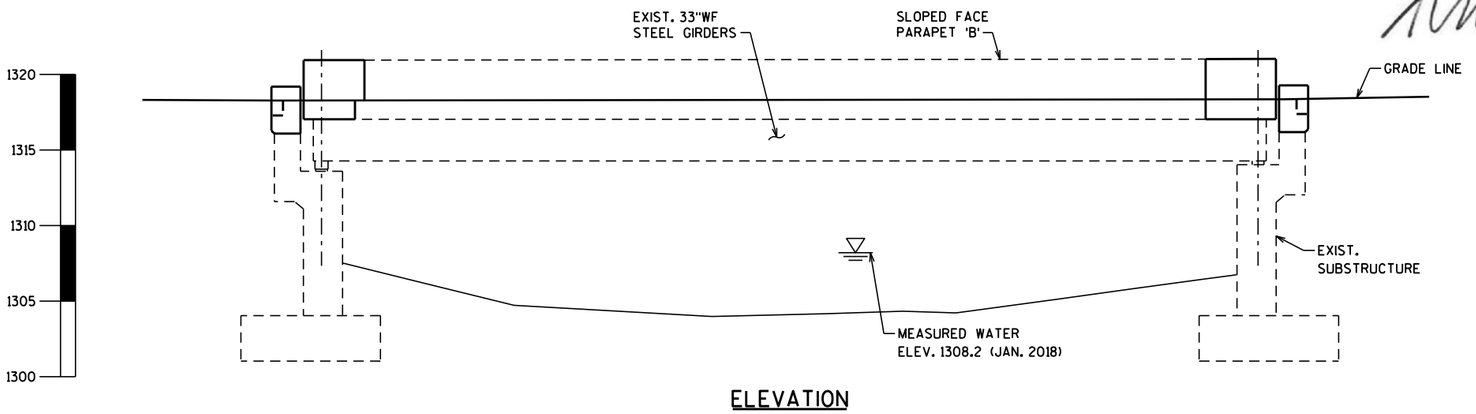


* STEEL THRIE BEAM ATTACHMENT REQUIRED.

Ⓧ INDICATES WING NUMBER

PLAN

TOP OF DECK SHOWN



ELEVATION

DESIGN DATA

LIVE LOAD:

DESIGN LOADING	H-15
INVENTORY RATING	HS-15
OPERATING RATING	HS-26
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV)	230 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY OVERLAY DECKS	f'c = 4,000 P.S.I.
BAR STEEL REINFORCEMENT GRADE 60	fy = 60,000 P.S.I.

TRAFFIC DATA

ADT = 510 (2022)
650 (2042)
RDS = 60 M.P.H.

LIST OF DRAWINGS

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER

3/17/20

CONSULTANT CONTACT

KRISTOFER OLSON
OMNNI ASSOCIATES, INC.
(920) 735-6900

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 03/17/20
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-19-1

STH 101 OVER POPPLE RIVER

COUNTY	TOWN
FLORENCE	FENCE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
BRE	KRO	BRE	KRO

GENERAL PLAN

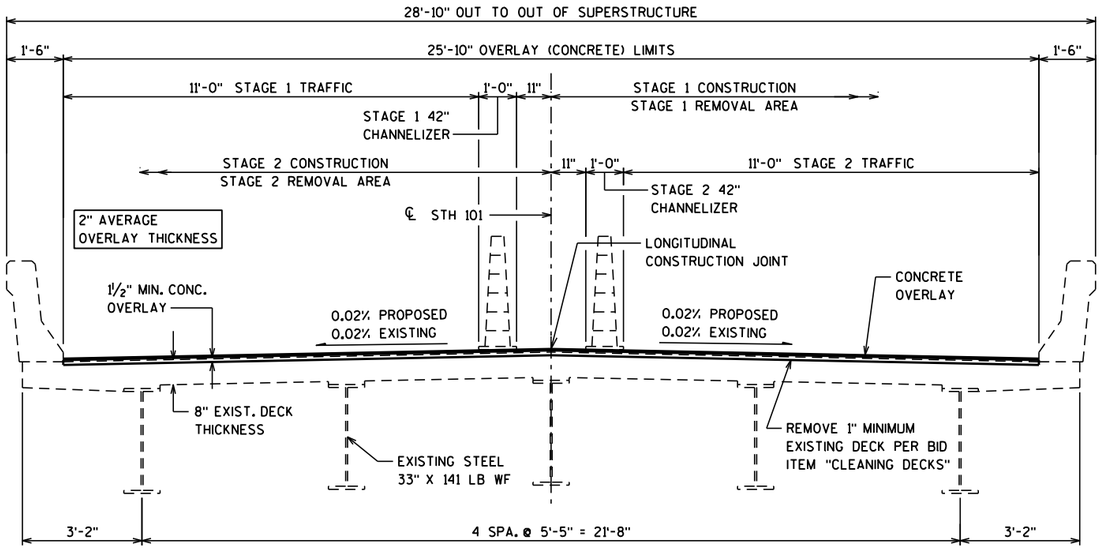
SHEET 1 OF 6

50

8

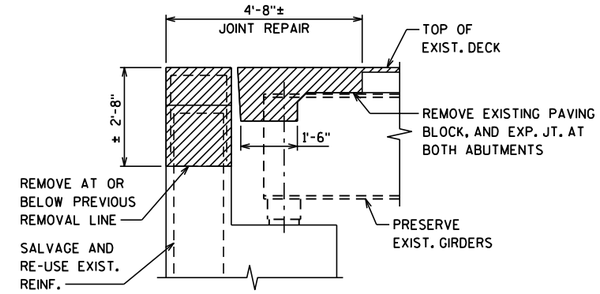
8

STATE PROJECT NUMBER
1009-47-60



CROSS SECTION THRU ROADWAY

LOOKING NORTH



SECTION A-A

(SIMILAR AT BOTH ABUTMENTS)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

USE EXSTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY. PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE ENTIRE FRONT FACES AND TOPS OF BOTH WING & DECK PARAPETS.

A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AREAS ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION AND FULL-DEPTH DECK REPAIRS SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS".

ANY EXCAVATION REQUIRED TO COMPLETE THE OVERLAY OR JOINT REPAIRS AT THE ABUTMENTS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER SURFACE PREPARATION. EXPECTED AVERAGE OVERLAY THICKNESS IS 2" (OR AS GIVEN ON THE PLANS). IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

APPLY BRIDGE SEAT PROTECTION, AS PER SECTION 502.3.12 OF THE STANDARD SPECIFICATIONS, TO THE TOP SURFACE OF THE NORTH ABUTMENT BELOW EXPANSION DEVICE. POWER WASH AND ADEQUATELY DRY SURFACES BEFORE APPLICATION. WORK TO BE INCIDENTAL TO "JOINT REPAIR".

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR.

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
502.3101	EXPANSION DEVICE	LF	64
502.3200	PROTECTIVE SURFACE TREATMENT	SY	193
502.3210	PIGMENTED SURFACE SEALER	SY	52
502.4205	ADHESIVE ANCHORS NO.5 BARS	EACH	136
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	3,950
505.0904	BAR COUPLERS NO. 4	EACH	20
505.0905	BAR COUPLERS NO. 5	EACH	16
509.0301	PREPARATION DECKS TYPE 1	SY	10
509.0302	PREPARATION DECKS TYPE 2	SY	5
509.0500	CLEANING DECKS	SY	193
509.1000	JOINT REPAIR	SY	35
509.2000	FULL-DEPTH DECK REPAIR	SY	1
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	33
509.9050.S	CLEANING PARAPETS	LF	134
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EA	4

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-19-1

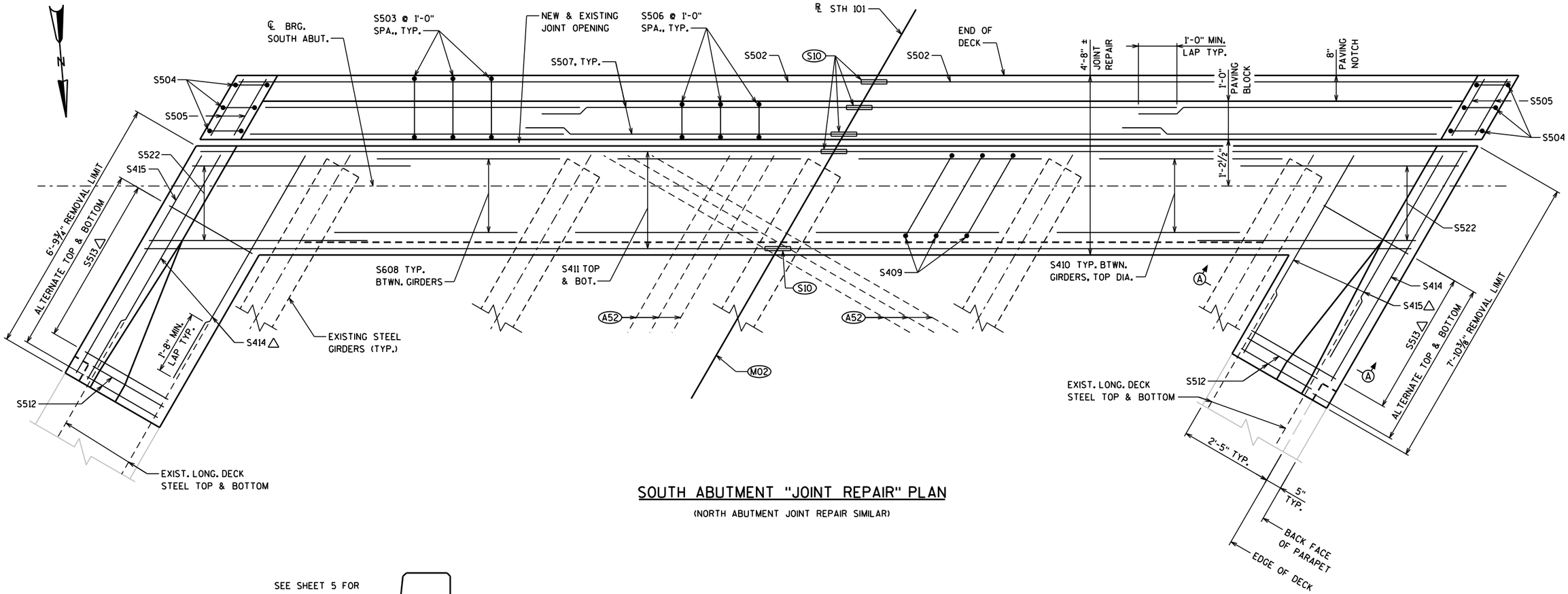
DRAWN BY BRE | PLANS CK'D. KRO

CROSS SECTION & QUANTITIES

SHEET 2 OF 6

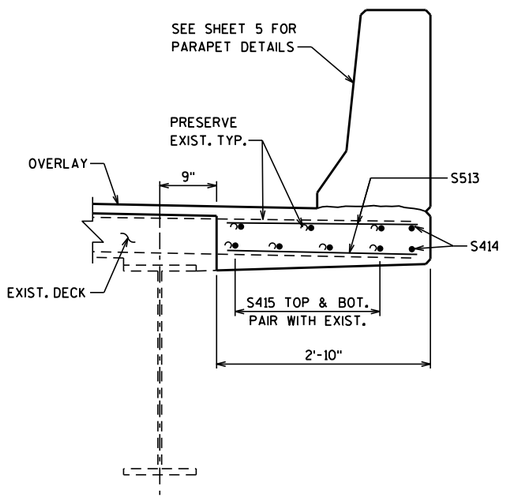
51

STATE PROJECT NUMBER
1009-47-60



SOUTH ABUTMENT "JOINT REPAIR" PLAN

(NORTH ABUTMENT JOINT REPAIR SIMILAR)



SECTION A-A

NOTES:

SEE SHEET 5 FOR PARAPET DETAILS, BILL OF BARS, AND BENDING DIAGRAMS.

(A52) SALVAGE EXIST. LONGITUDINAL REINFORCEMENT AND EXTEND FULL LENGTH INTO NEW WORK.

(S10) BAR COUPLERS USED. BAR LENGTH COMPUTED TO ℄ OF LONGIT. JOINT & SHALL BE MODIFIED TO THE BAR COUPLER MANUFACTURERS RECOMMENDATIONS.

(M02) LONGIT. CONST. JOINT IN JOINT REPAIR. TRAFFIC TO BE MAINTAINED DURING CONSTRUCTION.

△ LAP WITH EXISTING DECK BARS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-19-1

DRAWN BY BRE | PLANS CK'D. KRO

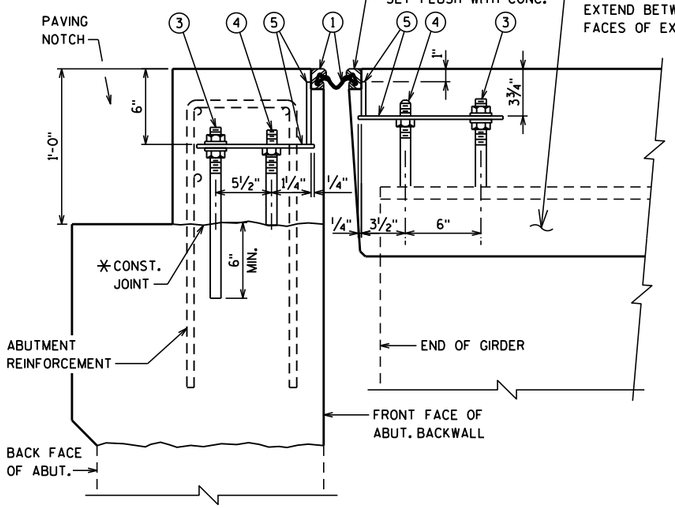
JOINT REPAIR

SHEET 3 OF 6

52

8

8

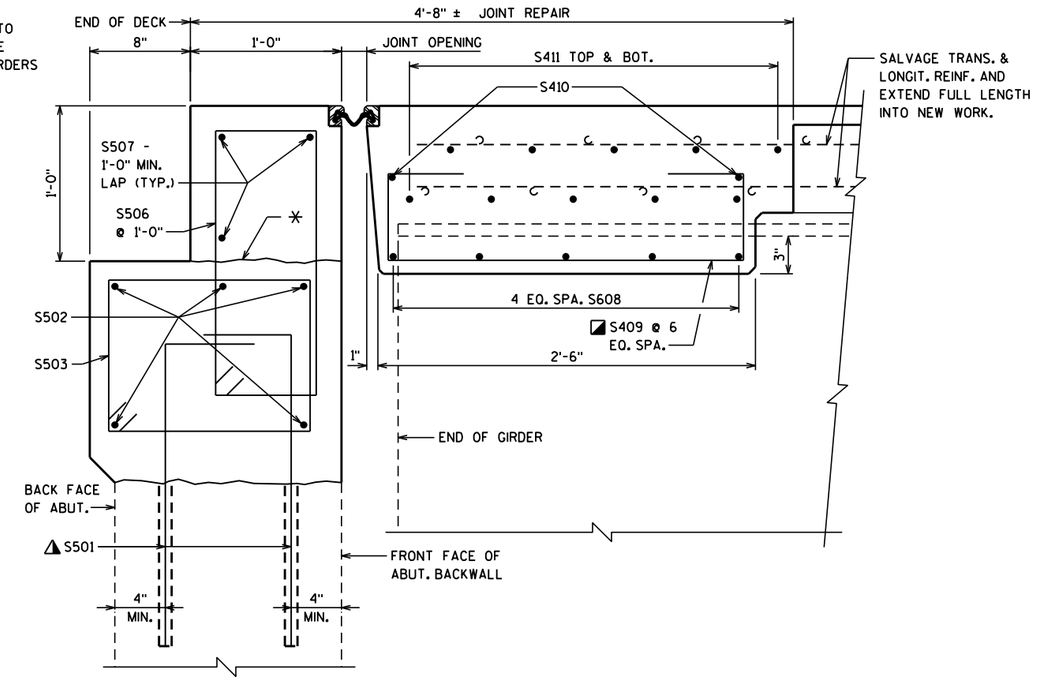


SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE

◪ BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO ℄ GIRDERS.

✳ POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.



SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE

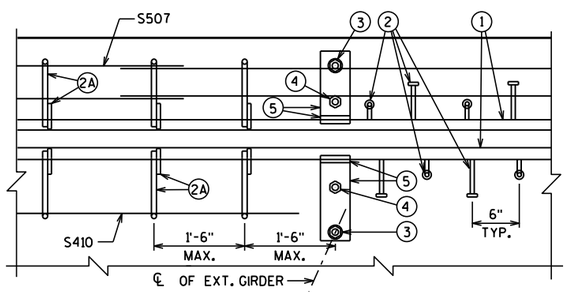
LEGEND

1. NEOPRENE STRIP SEAL (4-INCH) AND STEEL EXTRUSIONS.
2. STUDS ⅝" DIA. X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
2A. ½" THICK ANCHOR PLATE WITH ⅝" DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE. WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
3. ¾" DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. ¾" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.
6. GALVANIZED PLATE ⅜" X 7⅜" X 2'-2" LONG WITH HOLES FOR NO. 7. BEND AS SHOWN.
7. ¾" DIA. X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾" DIA. X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. ¾" DIA. X 2¼" GALVANIZED THREADED COUPLING.
10. 1" x 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

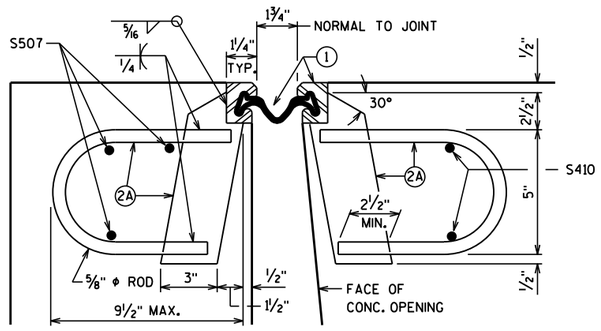
SEE SHEET 5 FOR PARAPET DETAILS, BILL OF BARS AND BENDING DIAGRAMS.

SEE SHEET 6 FOR COVER PLATE DETAILS.

⚠ ADHESIVE ANCHORS NO. 5 BAR. EMBED 1'-6" IN CONCRETE. SPACE AT 1'-0". TURN 10" LEG AS NECESSARY TO FIT.

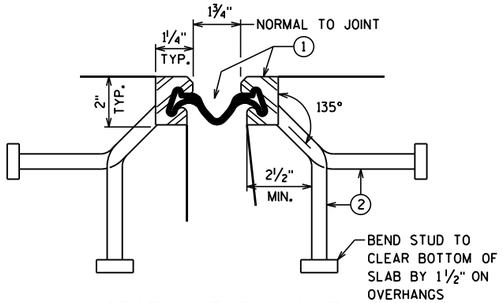


PART PLAN



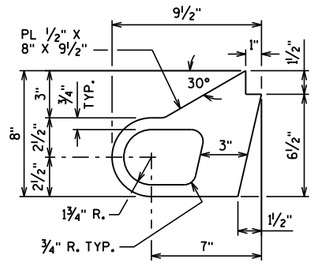
SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS, MEDIANS AND SIDEWALKS



ALTERNATE STRIP SEAL ANCHOR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-19-1

DRAWN BY: BRE | PLANS CK'D.: KRO

EXPANSION DEVICE

SHEET 4 OF 6

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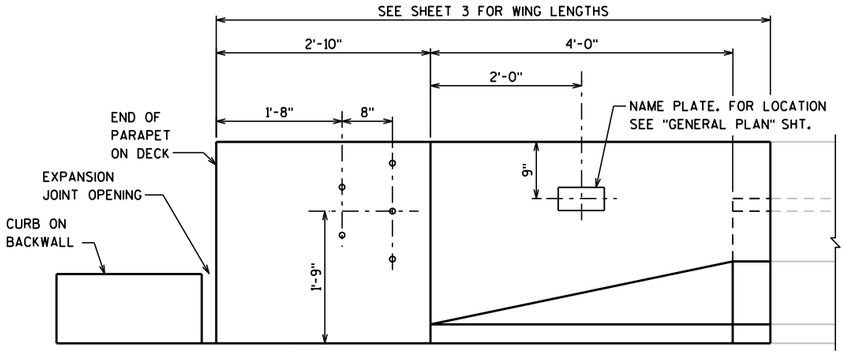
STATE PROJECT NUMBER
1009-47-60

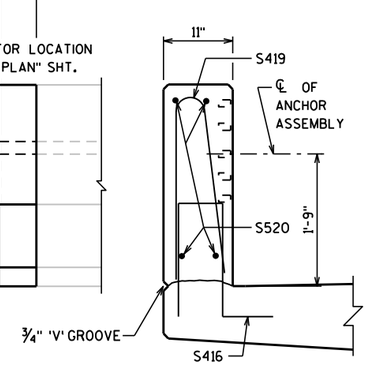
8

8

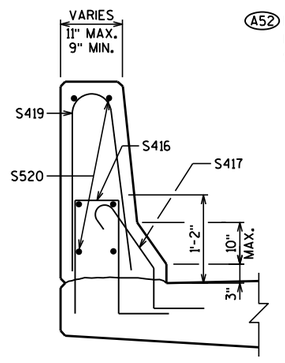
STATE PROJECT NUMBER
1009-47-60



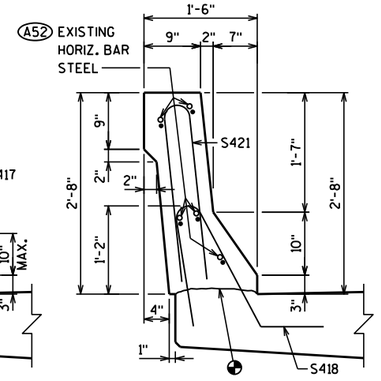
INSIDE ELEVATION



SECTION A



SECTION B

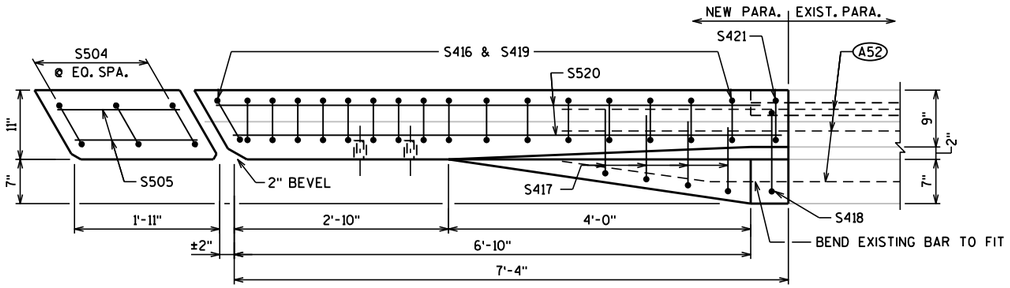


SECTION C

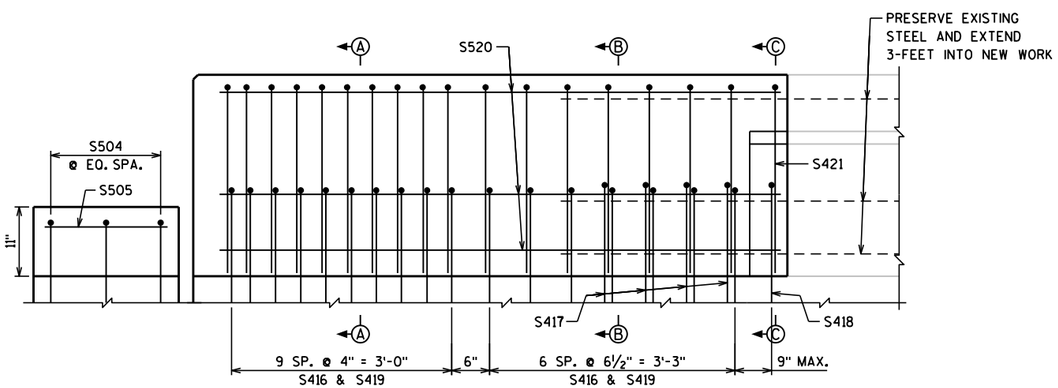
BILL OF BARS

BAR MARK	COAT	SOUTH ABUT.	NORTH ABUT.	LENGTH	BENT	LOCATION
S501	X	68	68	3'-6"	X	ABUT. BACKWALL ANCHOR
☆ S502	X	10	10	16'-5"		ABUT. BACKWALL HORIZ.
S503	X	34	34	5'-4"	X	ABUT. BACKWALL VERT.
S504	X	6	6	6'-5"	X	CURB VERT.
S505	X	4	4	1'-6"		ABUT. BACKWALL HORIZ.
S506	X	34	34	5'-6"	X	PAVING BLOCK
☆ S507	X	12	12	8'-3"		PAVING BLOCK
S608	X	20	20	4'-9"		DECK - DIAPHRAGM
S409	X	28	28	4'-3"	X	DECK - DIAPHRAGM
S410	X	16	16	4'-9"		DECK - DIAPHRAGM
☆ S411	X	20	20	16'-5"		DECK - TRANSVERSE
S512	X	4	4	2'-1"		DECK - TRANSVERSE
S513	X	28	28	2'-6"		DECK - TRANSVERSE
S414	X	9	9	6'-10"		DECK - LONGITUDINAL
S415	X	9	9	6'-0"		DECK - LONGITUDINAL
S416	X	34	34	4'-2"	X	PARAPET - VERT.
S417	X	8	8	2'-11"	X	PARAPET - VERT.
S418	X	2	2	4'-3"	X	PARAPET - VERT.
S419	X	34	34	4'-9"	X	PARAPET - VERT.
S520	X	12	12	6'-6"		PARAPET - HORIZ.
S421	X	2	2	4'-10"	X	PARAPET - VERT.
S522	X	10	10	5'-9"		DECK OVERHANG

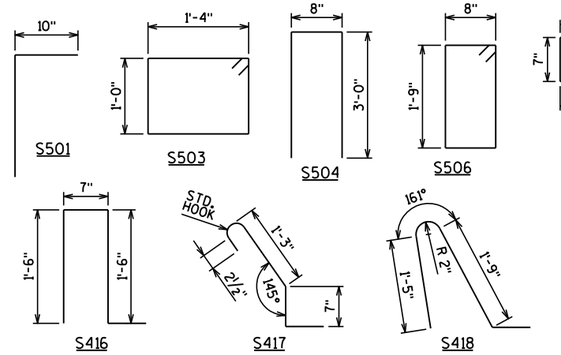
☆ COUPLED BAR LENGTHS ARE GIVEN AS END TO END AND MAKE NO ALLOWANCE FOR GAPS REQUIRED BY THE COUPLER CHOSEN. ADJUST LENGTH AS REQUIRED FOR COUPLER PLACEMENT.



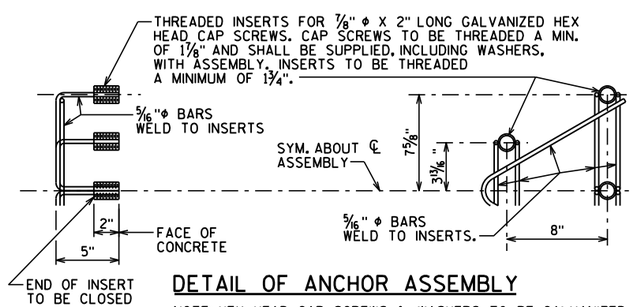
PLAN



OUTSIDE ELEVATION



BAR BENDING DIAGRAMS



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

LEGEND

SEE SHEET 4 FOR SECTION THROUGH JOINT AT ABUTMENT.

(A52) SALVAGE EXIST. LONGITUDINAL REINFORCEMENT AND EXTEND INTO NEW WORK. MINIMUM 2'-7" LAP WITH S520

CONST. JOINT - STRIKE OFF AS SHOWN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-19-1

DRAWN BY BRE | PLANS CK'D. KRO

PARAPET DETAILS

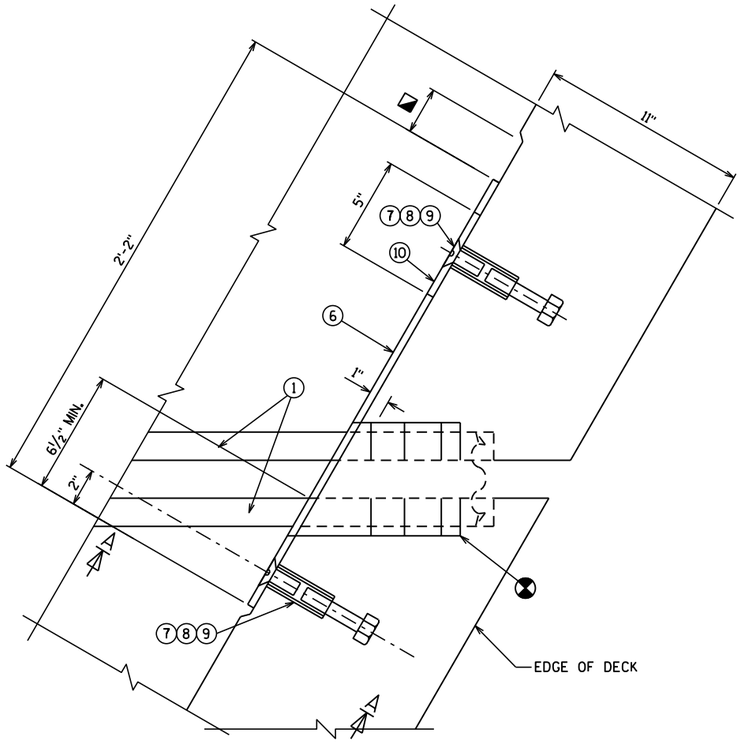
SHEET 5 OF 6

54

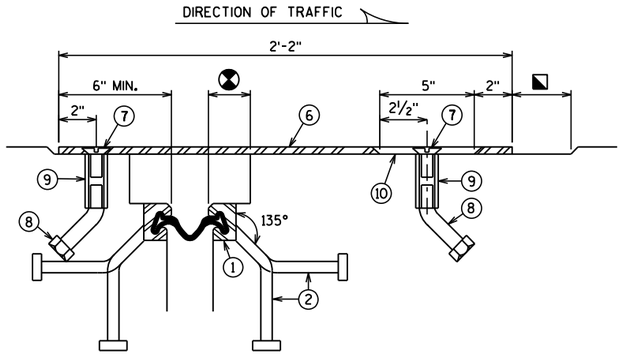
8

8

STATE PROJECT NUMBER
1009-47-60



PLAN

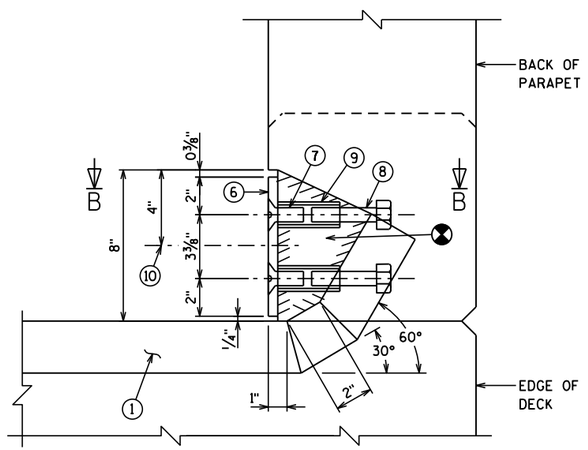


SECTION B-B

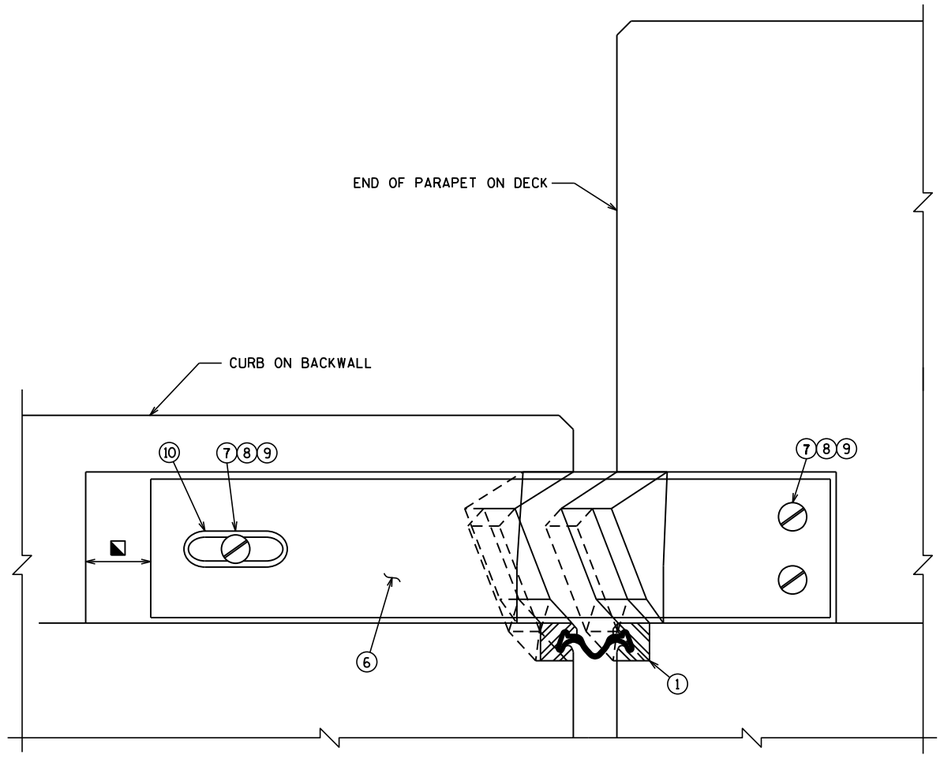
SEE SHEET 4 FOR LEGEND AND NOTES.

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION ALONG SKEW PLUS ½".



SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-19-1

DRAWN BY BRE | PLANS CK'D. KRO

COVER PLATE DETAILS

SHEET 6 OF 6

55

8

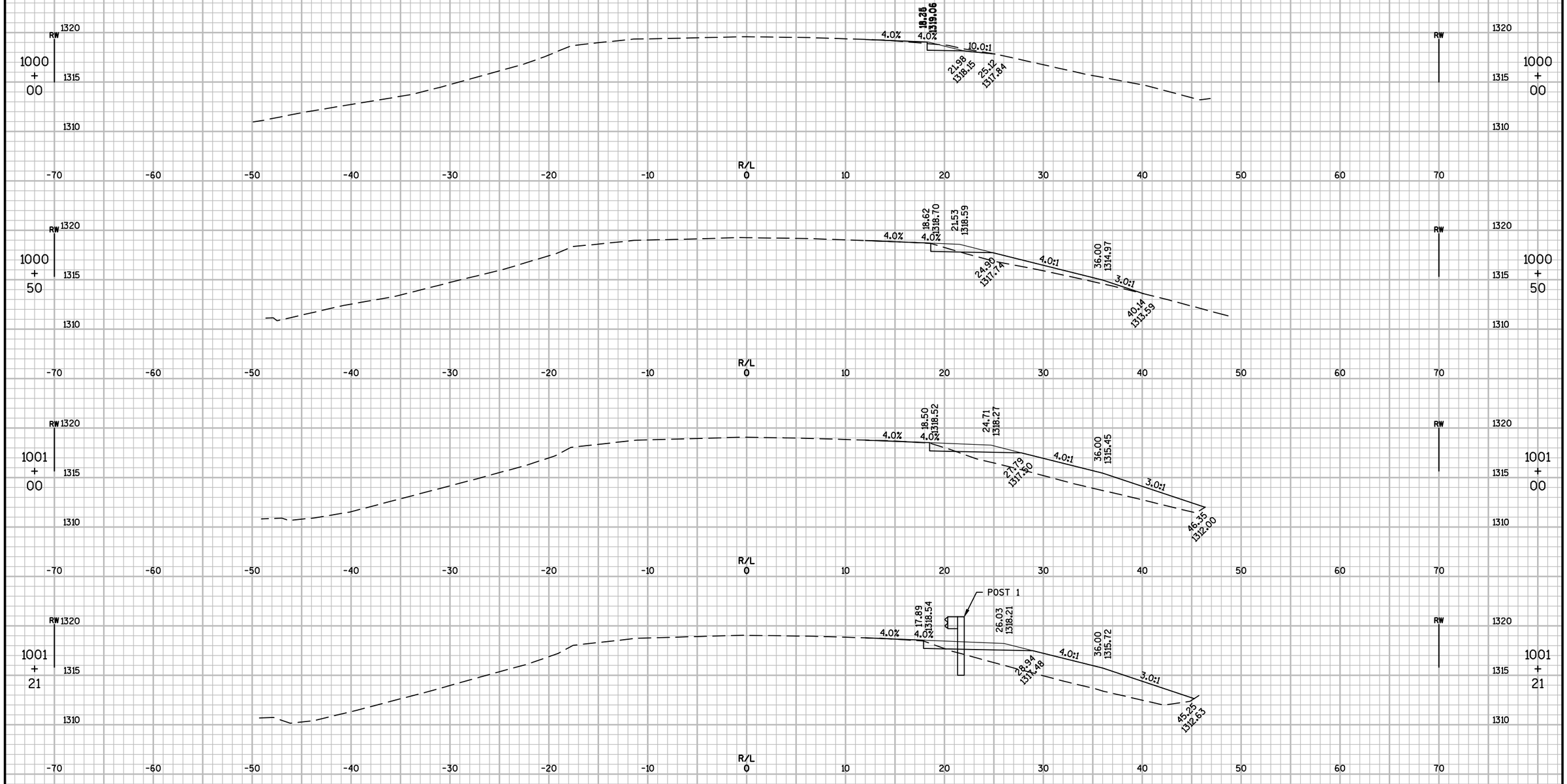
8

EARTHWOK - STH 101

STATION	AREA (SF)		Incremental Vol (CY) (Unadjusted		Cumulative Vol (CY)		
	Cut	Fill	Cut Note 1	Fill Note 3	Cut 1.00 Note 1	Expanded Fill 1.00	Mass Ordinate Note 8
1000+00	2.24	0.29	0	0	0	0	0
1000+50	1.24	8.46	3	8	3	8	-5
1001+00	1.19	33.55	2	39	5	47	-42
1001+20.88	0.87	41.87	1	29	6	76	-70
1001+45.86	1.13	66.76	1	50	7	126	-119
1001+70.85	1.08	59.56	1	58	8	185	-177
1002+04.81	1.15	62.07	1	77	10	261	-252
1002+29.79	1.63	36.44	1	46	11	307	-296
1002+54.78	4.70	2.16	3	18	14	325	-311
1003+00	66.91	0.14	60	2	74	327	-253
1003+25	49.16	20.71	54	10	128	336	-209
1004+50	51.38	11.70	233	75	360	411	-51
1005+00	5.68	0.91	53	12	413	423	-10
1005+14.05	2.82	23.71	2	6	415	429	-14
1005+39.04	0.52	59.11	2	38	417	468	-51
1005+64.02	0.52	56.45	0	53	417	521	-104
1005+98.04	0.10	17.95	0	47	418	568	-150
1006+23.02	0.02	28.45	0	21	418	590	-172
1006+48	0.11	28.21	0	26	418	616	-198
1007+00	0.15	27.03	0	53	418	669	-251
1007+50	0.15	23.17	0	46	418	716	-297

9

9

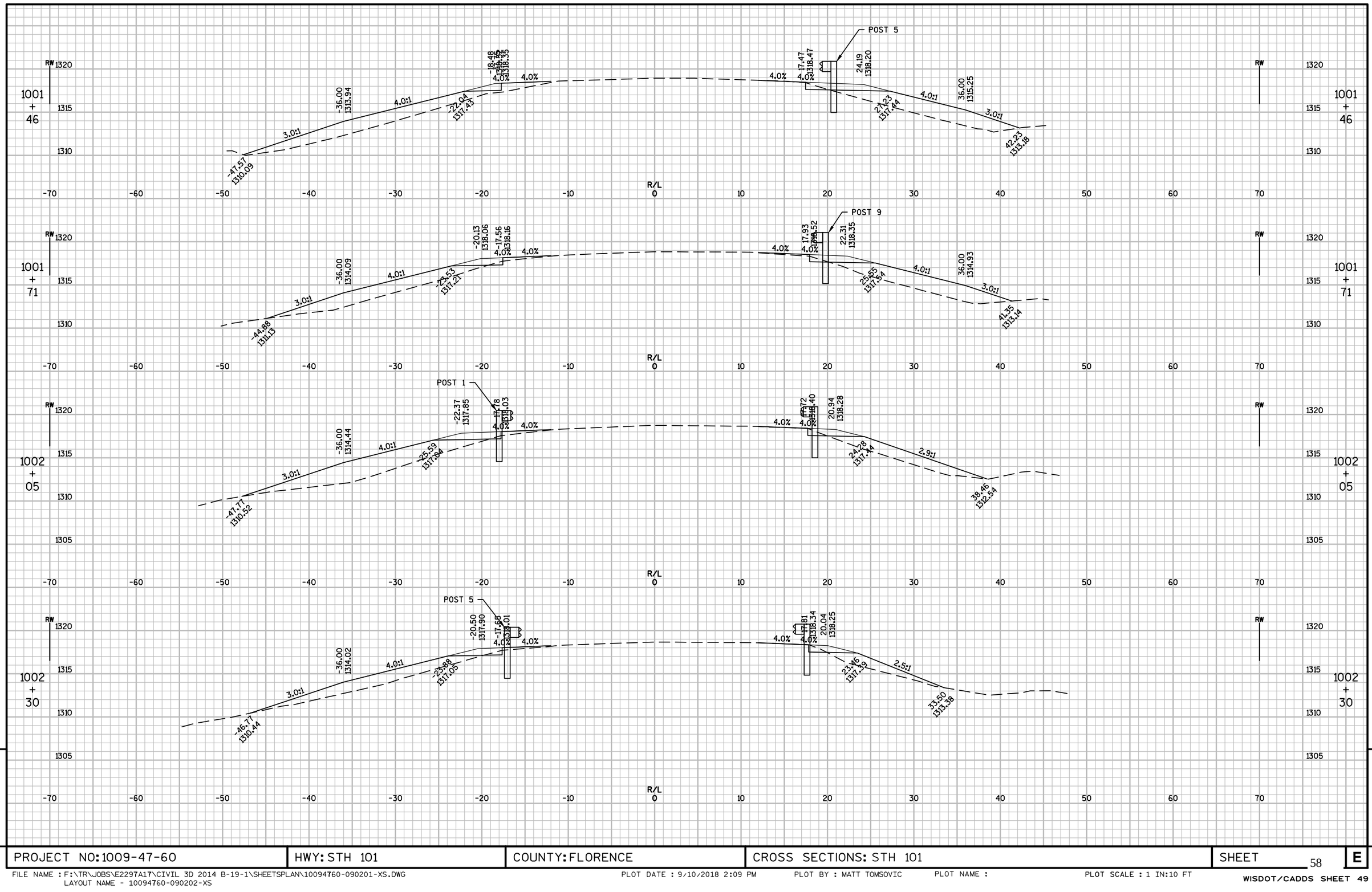


9

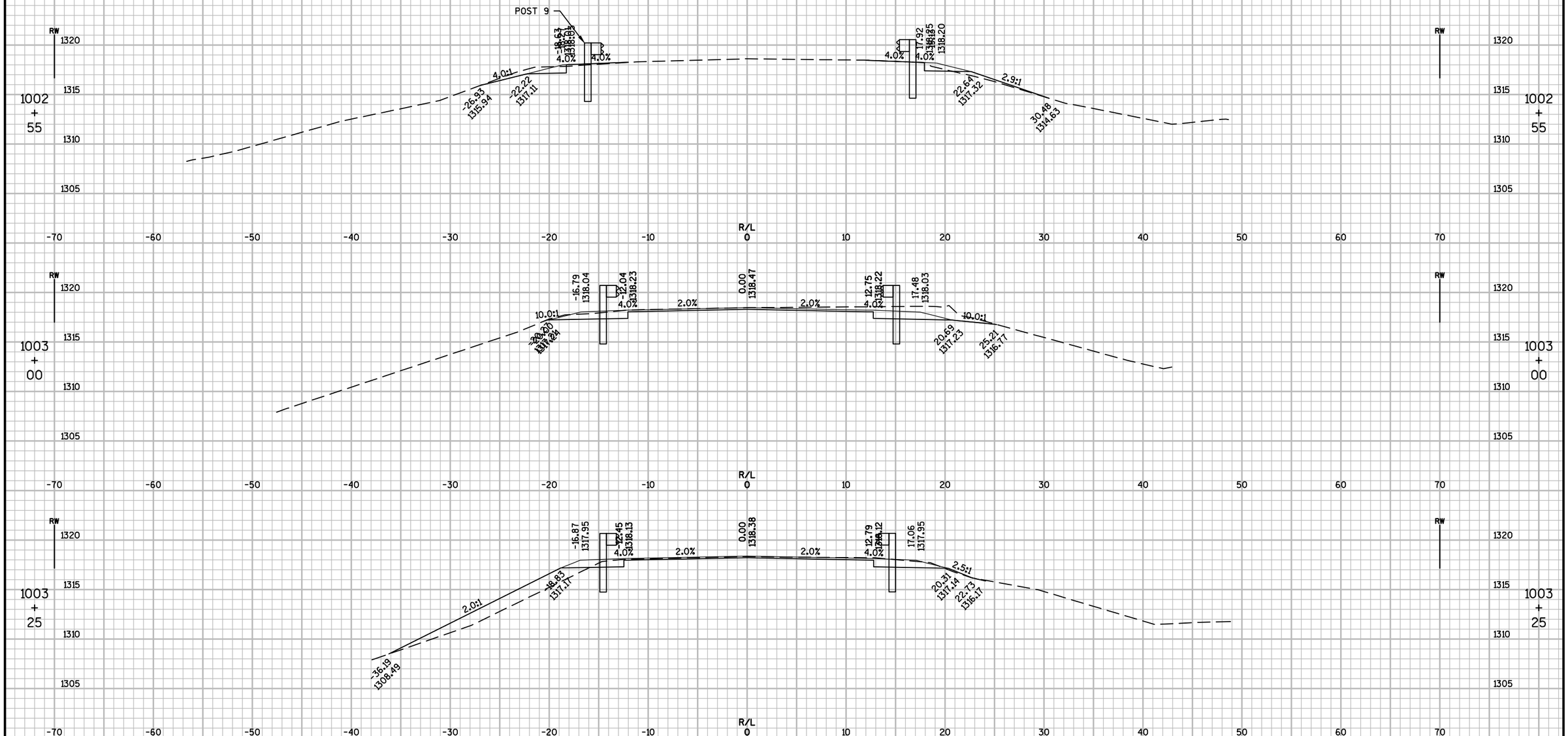
9

PROJECT NO: 1009-47-60	HWY: STH 101	COUNTY: FLORENCE	CROSS SECTIONS: STH 101	SHEET 57	E

FILE NAME : F:\TR\JOBS\E2297A17\CIVIL 3D 2014 B-19-1\SHEETSPLAN\10094760-090201-XS.DWG
LAYOUT NAME - 10094760-090201-XS
PLOT DATE : 9/10/2018 2:09 PM PLOT BY : MATT TOMSOVIC PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49



PROJECT NO: 1009-47-60	HWY: STH 101	COUNTY: FLORENCE	CROSS SECTIONS: STH 101	SHEET 58	E



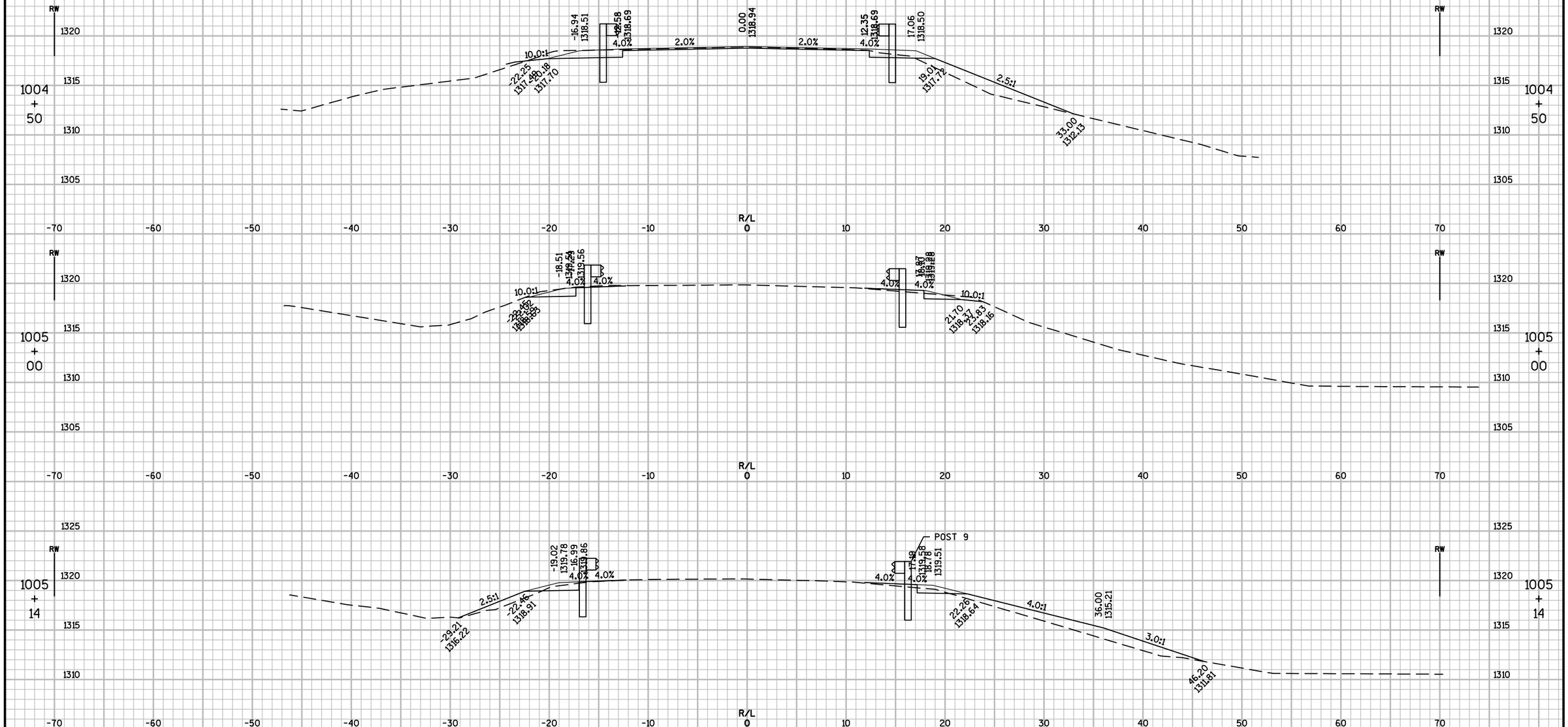
9

9

PROJECT NO: 1009-47-60	HWY: STH 101	COUNTY: FLORENCE	CROSS SECTIONS: STH 101	SHEET 59	E

FILE NAME : F:\TR\JOBS\E2297A17\CIVIL 3D 2014 B-19-1\SHEETSPLAN\10094760-090201-XS.DWG
LAYOUT NAME - 10094760-090203-XS

PLOT DATE : 9/10/2018 2:09 PM PLOT BY : MATT TOMSOVIC PLOT NAME : PLOT SCALE : 1 IN:10 FT

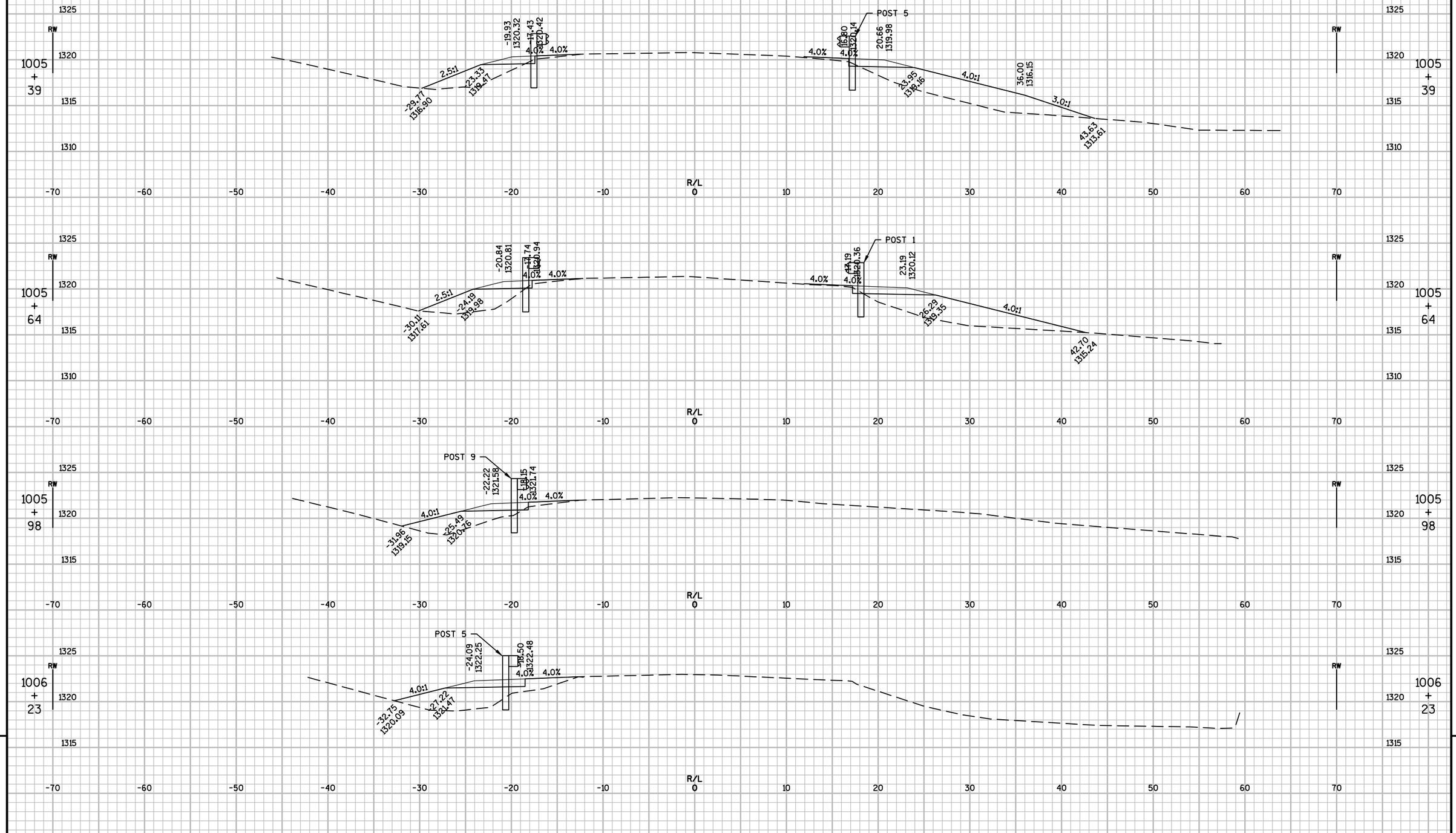


9

PROJECT NO: 1009-47-60	HWY: STH 101	COUNTY: FLORENCE	CROSS SECTIONS: STH 101	SHEET 60	E

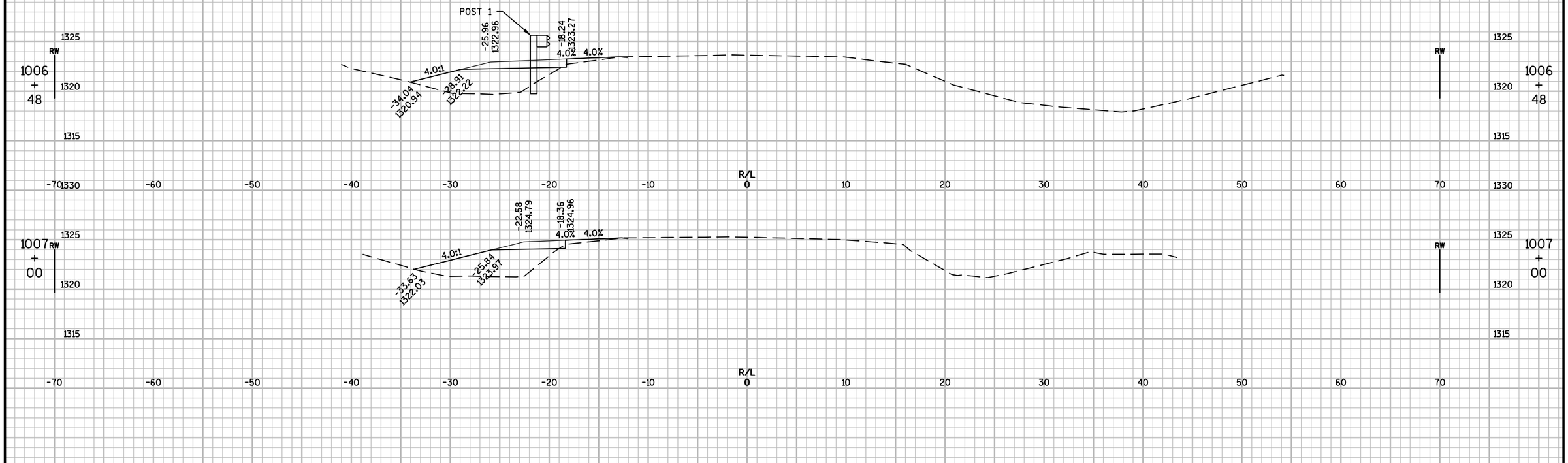
FILE NAME : F:\TR\JOBS\E2297A17\CIVIL 3D 2014 B-19-1\SHEETSPLAN\10094760-090201-XS.DWG
LAYOUT NAME - 10094760-090204-XS

PLOT DATE : 9/10/2018 2:09 PM PLOT BY : MATT TOMSOVIC PLOT NAME : PLOT SCALE : 1 IN:10 FT



9

PROJECT NO: 1009-47-60	HWY: STH 101	COUNTY: FLORENCE	CROSS SECTIONS: STH 101	SHEET 61	E



9

PROJECT NO: 1009-47-60	HWY: STH 101	COUNTY: FLORENCE	CROSS SECTIONS: STH 101	SHEET 62	E

FILE NAME : F:\TR\JOBS\E2297A17\CIVIL 3D 2014 B-19-1\SHEETSPLAN\10094760-090201-XS.DWG
LAYOUT NAME - 10094760-090206-XS

PLOT DATE : 9/10/2018 2:09 PM PLOT BY : MATT TOMSOVIC PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

RHI

JUNE 2020

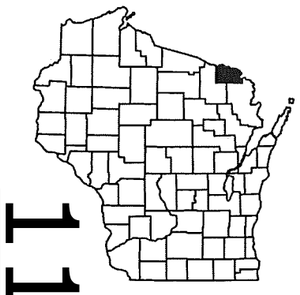
PROJECT ID: 9110-10-61

WITH: 1009-47-60

COUNTY: Fflorence

ORDER OF SHEETS

TOTAL SHEETS = 44



11

N

DESIGN DESIGNATION 9110-01-61

A.A.D.T.	2019	=	940
A.A.D.T.	2039	=	1,100
D.H.V.		=	100
D.D.		=	60/40
T.		=	18.4
DESIGN SPEED		=	60 MPH
ESALS		=	N/A

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE	300'EB'	ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
MARSH AREA		TELEPHONE	T
		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
WOODED OR SHRUB AREA		TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CAVOUR - BRULE RIVER

PINE RIVER BRIDGE B-19-007

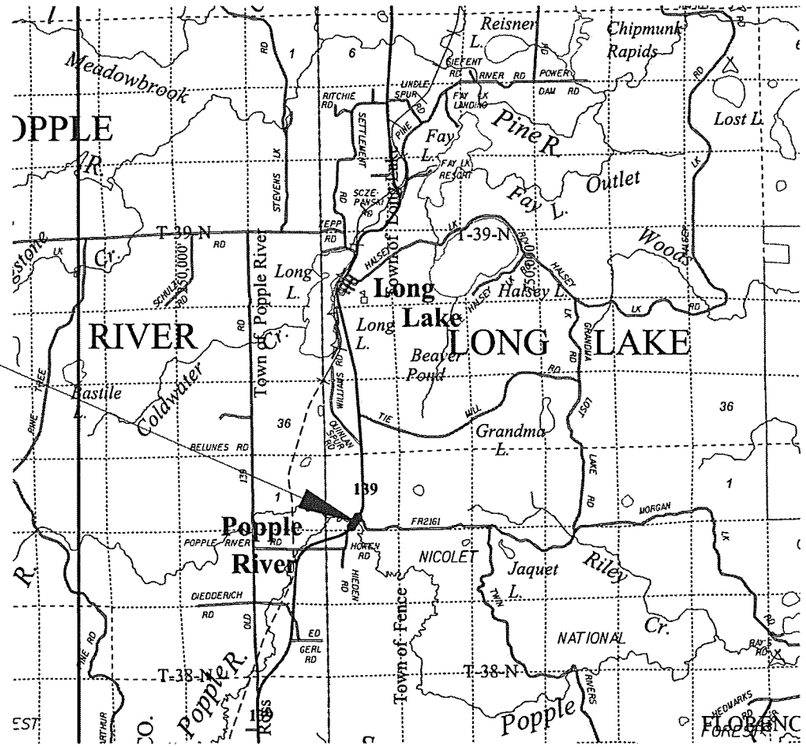
STH 139

FLORENCE COUNTY

STATE PROJECT NUMBER
9110-10-61

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9110-10-61	WISC 2020362	1

STH 139
STRUCTURE B-19-0007



LAYOUT

SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = N/A

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, FLORENCE COUNTY, NAD83 (YEAR), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

VERTICAL DATUM IS NAVD 88.

ORIGINAL PLANS PREPARED BY

OMNNI ASSOCIATES

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER

2/1/19

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	OMNNI ASSOCIATES INC
Designer	OMNNI ASSOCIATES INC
Project Manager	STACY HAGENBUCHER
Regional Examiner	
Regional Supervisor	MIKE WENDT

APPROVED FOR THE DEPARTMENT

DATE: 2/1/19 (Signature)

E

FILE NAME : F:\TR\JOBS\E2297A17\CIVIL 3D 2014 B-19-7\SHEETSPLAN\91101061-010101-TI.DWG

PLOT DATE : 1/2/2019 11:14 AM

PLOT BY : MATT TOMSOVIC

PLOT NAME :

GENERAL NOTES

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

WHEN THE QUANTITY OF THE ITEM OF BASE OR ASPHALT PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

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

UTILITIES - PROJECT ID 9110-10-61

COMMUNICATIONS	CENTURYLINK 224 INDUSTRIAL DR NORTH PRAIRIE, WI 53153 ATTN: KEVIN ZICKERT (262) 392-5200 KEVIN.ZICKERT@CENTURYLINK.COM

OTHER CONTACTS

DNR LIAISON	DEPARTMENT OF NATURAL RESOURCES NORTHERN REGION HEADQUARTERS 107 SUTLIFF AVE RHINELANDER, WI 54501 ATTN: JON SIMONSEN TELEPHONE: 715-367-1936

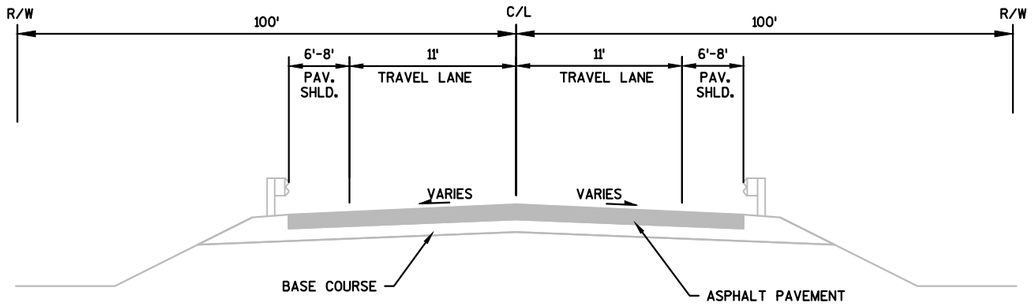
THE CONTRACTOR SHALL NOTIFY DIGGER'S HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY UTILITY WHICH IS NOT A MEMBER OF DIGGER'S HOTLINE MUST BE CONTACTED SEPERATELY.

DIGGERS HOTLINE

Dial 811 or (800) 242-8511

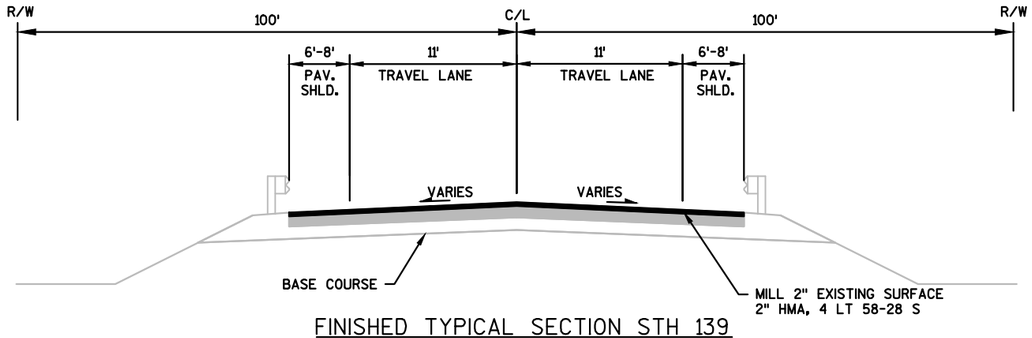
www.DiggersHotline.com

2



EXISTING TYPICAL SECTION STH 139

STA. 1030+87 TO STA. 1032+30.68
STA. 1033+18.24 TO STA. 1034+61



FINISHED TYPICAL SECTION STH 139

STA. 1031+80.66 TO STA. 1032+30.68
STA. 1033+18.24 TO STA. 1033+68.33

PROJECT NO: 9110-10-61	HWY: STH 139	COUNTY: FLORENCE	TYPICAL SECTIONS	SHEET 3	E

2

TRAFFIC CONTROL GENERAL NOTES

1. DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON METHODS OR SEQUENCE OF OPERATIONS.

2. ADJUST SIGN SPACING TO AVOID CONFLICT WITH AND TO PROVIDE A MINIMUM SPACING OF 200 FEET (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

3. ALL SIGNS SHALL BE 48" x 48" UNLESS OTHERWISE NOTED.

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

5. ALL DETOUR ASSEMBLIES SHALL HAVE ORANGE DIRECTIONAL ARROWS.

6. ALL TRAFFIC CONTROL SIGNING WILL CONFORM TO THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

8. IF LANE CLOSURES ARE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

9. WARNING LIGHTS SHALL NOT BE WORKING ON "COVERED" OR "DOWNED" SIGN OR BARRICADE.

10. DURING HOURS OF DARKNESS, ALL BARRICADES USED TO SHIELD A HAZARD SHALL BE EQUIPPED WITH TYPE "A" LIGHTS.

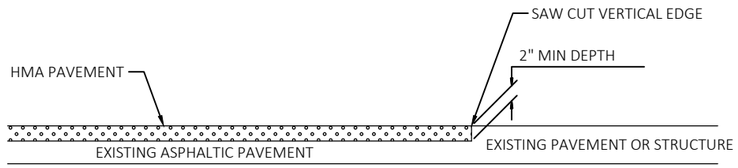
11. FOR NIGHTTIME OPERATION, ALL DRUMS IN TAPERS SHALL HAVE A TYPE C WARNING LIGHT.

12. FIXED MESSAGE SIGNS SHALL BE PLACED APPROXIMATELY AT THE PROJECT LOCATION, ONE WEEK IN ADVANCE OF INITIAL LANE CLOSURE AND AS NEEDED THROUGHOUT THE PROJECT.

13. LAYOUT INFORMATION PROVIDED IS NOT INTENDED TO REPLACE WHAT IS PROVIDED IN APPLICABLE STANDARD DETAIL DRAWINGS.

14. SEE ADDITIONAL TRAFFIC CONTROL DETAIL SHEETS AND STANDARD DETAIL DRAWINGS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.

2



JOINT DETAIL FOR ASPHALTIC PAVEMENTS (NO PROFILE CHANGE)

PROJECT NO: 9110-10-61	HWY: STH 139	COUNTY: FLORENCE	CONSTRUCTION DETAILS	SHEET 5	E

FILE NAME : F:\TR\JOBS\E2297A17\CIVIL 3D 2014 B-19-7\SHEETSPLAN\91101061-021100-CD.DWG PLOT DATE : 4/8/2020 1:51 PM PLOT BY : ANDY WESTBROOK PLOT NAME : _____ PLOT SCALE : ********

WISDOT/CADDS SHEET 42

2

N

HWY 139
ROAD WORK
BEGINS XXX-XX
G20-57
72X36
PLACE 7 DAYS IN
ADVANCE OF CONSTRUCTION

W01-4R

R10-6
24"X36"
STOP
HERE ON
RED

W05-52L
12"X36"

EXISTING BRIDGE B-19-07
CONCRETE MASONRY OVERLAY

W05-52R
12"X36"

BP: 1029+00.00

TEMPORARY MARKING
STOP LINE REMOVABLE
TAPE 18-INCH

TEMPORARY MARKING LINE
REMOVABLE TAPE 4-INCH, WHITE

STA. 1033+68.33
STH 139

1034+75

1035+25

TEMPORARY MARKING
STOPLINE REMOVABLE
TAPE 18-INCH

EP: 1036+00.00

ASPHALT

STH 139

1030+00 1031+00 1032+00 1033+00 1034+00 1035+00 1036+00

14'

N5° 13' 21"E
700.00'

CC

1029+90 1030+30 1030+80 1031+80 1033+69 1034+19

1029+40

STOP
HERE ON
RED
R10-6
24"X36"

REFER TO
SDD "TRAFFIC
CONTROL, ONE
LANE ROAD
WITH TEMPORARY
SIGNALS" FOR
ADVANCE SIGNING

W05-52R
12"X36"

W01-6
48"X24"

STA. 1031+80.66 STH 139

PINE RIVER

W05-52L
12"X36"

ACCESS FOR
CONSTRUCTION
EQUIPMENT

LANE
CLOSED
R11-2-L
48"X30"

1035+19

REFER TO
SDD "TRAFFIC
CONTROL, ONE
LANE ROAD
WITH TEMPORARY
SIGNALS" FOR
ADVANCE SIGNING

HWY 139
ROAD WORK
BEGINS XXX-XX
G20-57
72X36
PLACE 7 DAYS IN
ADVANCE OF CONSTRUCTION

MAX.
13'
WIDTH
W12-52
48" X 48"

MILES
AHEAD
W057-52
36" X 24"

NOTES:
1. TRAILER MOUNTED SIGNALS REQUIRED AT THIS LOCATION.

2. WIDTH RESTRICTION SIGNS TO SHOW MAX 13' WIDTH. INSTALLED PER SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS. SIGNS TO BE INSTALLED ON BOTH APPROACHES AT STH 70 AND USH 8

LEGEND

- WORK AREA
- X X X REMOVE EXISTING PAVEMENT MARKING
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAILER MOUNTED TRAFFIC SIGNAL
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE WITHOUT/ WITH SIGN
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY PRECAST CONCRETE BARRIER
- CC CRASH CUSHION TEMPORARY

PROJECT NO: 9110-10-61	HWY: STH 139	COUNTY: FLORENCE	TRAFFIC CONTROL - STAGE 1	SHEET 6	E

2

N

ACCESS FOR CONSTRUCTION EQUIPMENT

EXISTING BRIDGE B-19-07
CONCRETE MASONRY OVERLAY

W01-6
48"X24"

W05-52R
12"X36"

STA. 1033+68.33
STH 139

R10-6
24"X36"

STOP
HERE ON
RED

TEMPORARY MARKING
STOPLINE REMOVABLE
TAPE 18-INCH *

BP: 1029+00.00

EP: 1036+00.00

ASPHALT

STH 139

1030+00

CC 1031+00

1032+00

1033+00

1034+00

1035+00

1036+00

1034+19

1034+75

1035+25

14"

**

**

1029+90

1030+30

1030+80

1031+80

1033+69

1034+19

1029+40

TEMPORARY MARKING
STOPLINE REMOVABLE
TAPE 18-INCH *

STOP
HERE ON
RED

R10-6
24"X36"

REFER TO
SDD "TRAFFIC
CONTROL, ONE
LANE ROAD
WITH TEMPORARY
SIGNALS" FOR
ADVANCE SIGNING

W05-52L
12"X36"

W01-4R

STA. 1031+80.66 STH 139

W05-52R
12"X36"

PINE RIVER

W05-52L
12"X36"

TEMPORARY MARKING LINE
REMOVABLE TAPE 4-INCH, WHITE

LANE
CLOSED

R11-2-L
48"X30"

REFER TO
SDD "TRAFFIC
CONTROL, ONE
LANE ROAD
WITH TEMPORARY
SIGNALS" FOR
ADVANCE SIGNING

MAX.
13'
WIDTH

W12-52
48" X 48"

MILES
AHEAD

W057-52
36" X 24"

NOTES:
1. TRAILER MOUNTED SIGNALS REQUIRED AT THIS LOCATION.

2. WIDTH RESTRICTION SIGNS TO SHOW MAX 13' WIDTH. INSTALLED PER SDD "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS. SIGNS TO BE INSTALLED ON BOTH APPROACHES AT STH 70 AND USH 8

LEGEND

- WORK AREA
- X X X REMOVE EXISTING PAVEMENT MARKING
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAILER MOUNTED TRAFFIC SIGNAL
- DIRECTION OF TRAFFIC
- * PLACED IN STAGE 1
- ** REMOVED IN STAGE 1
- TYPE III BARRICADE WITHOUT/ WITH SIGN
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY PRECAST CONCRETE BARRIER
- CC CRASH CUSHION TEMPORARY

PROJECT NO: 9110-10-61	HWY: STH 139	COUNTY: FLORENCE	TRAFFIC CONTROL - STAGE 2	SHEET 7	E

FILE NAME : F:\TR\JOBS\E2297A17\CIVIL 3D 2014 B-19-7\SHEETSPLAN\91101061-026002-S2.DWG
LAYOUT NAME - 91101061-026002-s2.dwg
PLOT DATE : 1/28/2019 1:51 PM PLOT BY : JAIRO MAZARIEGOS PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

2

SEQUENCE OF OPERATIONS				
STRUCTURE: B-19-07 STH 139				
PRE - TIMED CYCLE 1 = 80 seconds				
TIME: 8:00 AM - 6:00 PM				
INTERVAL	EB	WB	INTERVAL LENGTH (SEC)	% OF CYCLE
PHASE A	G	R	15	18.8%
CLEARANCE	Y	R	5	6.3%
CLEARANCE	R	R	20	25.0%
PHASE B	R	G	15	18.8%
CLEARANCE	R	Y	5	6.3%
CLEARANCE	R	R	20	25.0%
			80	100.0%

SEQUENCE OF OPERATIONS				
STRUCTURE: B-19-07 STH 139				
PRE - TIMED CYCLE 2 = 72 seconds				
TIME: 6:00 PM - 8:00 AM				
INTERVAL	EB	WB	INTERVAL LENGTH (SEC)	% OF CYCLE
PHASE A	G	R	11	15.3%
CLEARANCE	Y	R	5	6.9%
CLEARANCE	R	R	20	27.8%
PHASE B	R	G	11	15.3%
CLEARANCE	R	Y	5	6.9%
CLEARANCE	R	R	20	27.8%
			72	100.0%

NOTES:

1. G = GREEN, Y = YELLOW, R = RED

2. THE ALL-RED CLEARANCE (INTERVAL 3 & 6) IS BASED ON A STOPLINE TO STOPLINE DISTANCE = 585 FT. IF THIS DISTANCE IS MODIFIED IN THE FIELD, CONTACT CHRIS DROES, NC REGION, AT 715-365-5749 FOR TRAFFIC TIMING MODIFICATIONS.

9110-10-61

Line	Item	Item Description	Unit	Total	Qty
0002	204.0120	Removing Asphaltic Surface Milling	SY	380.000	380.000
0012	213.0100	Finishing Roadway (project) 02. 9110-10-61	EACH	1.000	1.000
0020	455.0605	Tack Coat	GAL	30.000	30.000
0022	460.2000	Incentive Density HMA Pavement	DOL	40.000	40.000
0024	460.5224	HMA Pavement 4 LT 58-28 S	TON	50.000	50.000
0026	465.0110	Asphaltic Surface Patching	TON	25.000	25.000
0030	502.3200	Protective Surface Treatment	SY	332.000	332.000
0032	502.3210	Pigmented Surface Sealer	SY	88.000	88.000
0042	509.0301	Preparation Decks Type 1	SY	36.000	36.000
0044	509.0302	Preparation Decks Type 2	SY	18.000	18.000
0048	509.0505.S	Cleaning Decks to Reapply Concrete Masonry Overlay	SY	332.000	332.000
0052	509.1500	Concrete Surface Repair	SF	14.000	14.000
0054	509.2000	Full-Depth Deck Repair	SY	1.000	1.000
0056	509.2500	Concrete Masonry Overlay Decks	CY	21.000	21.000
0058	509.9005.S	Removing Concrete Masonry Deck Overlay (structure) 01. B-19-0007	SY	332.000	332.000
0060	509.9050.S	Cleaning Parapets	LF	226.000	226.000
0062	603.8000	Concrete Barrier Temporary Precast Delivered	LF	399.000	399.000
0064	603.8125	Concrete Barrier Temporary Precast Installed	LF	678.000	678.000
0068	614.0905	Crash Cushions Temporary	EACH	2.000	2.000
0076	619.1000	Mobilization	EACH	0.330	0.330
0100	642.5001	Field Office Type B	EACH	0.500	0.500
0102	643.0300	Traffic Control Drums	DAY	722.000	722.000
0104	643.0420	Traffic Control Barricades Type III	DAY	35.000	35.000
0108	643.0715	Traffic Control Warning Lights Type C	DAY	352.000	352.000
0110	643.0900	Traffic Control Signs	DAY	1,373.000	1,373.000
0114	643.1000	Traffic Control Signs Fixed Message	SF	36.000	36.000
0120	643.5000	Traffic Control	EACH	0.400	0.400
0122	646.1020	Marking Line Epoxy 4-Inch	LF	1,316.000	1,316.000
0124	646.9000	Marking Removal Line 4-Inch	LF	74.000	74.000
0126	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	820.000	820.000
0128	649.0850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	22.000	22.000
0140	661.0100	Temporary Traffic Signals for Bridges (structure) 02. B-19-0007	LS	1.000	1.000
0142	690.0150	Sawing Asphalt	LF	268.000	268.000

3

3

REMOVING ASPHALTIC SURFACE MILLING

PROJECT	STATION TO STATION	LOCATION	204.0120 SY
9110-10-61	1031+80.66 - 1032+30.68	STH 139	190
	1033+18.24 - 1033+68.33	STH 139	190
		TOTAL	**380**

SAWING ASPHALT

PROJECT	STATION	LOCATION	690.0150 SAWING ASPHALT LF
9110-10-61	1031+80.66	STH 139	34
	1033+68.33	STH 139	34
	UNDISTRIBUTED	STH 139	200
		TOTAL	**268**

ASPHALTIC ITEMS

PROJECT	STATION TO STATION	LOCATION	455.0605 TACK COAT GAL	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	465.0110 ASPHALTIC SURFACE PATCHING TON
1009-47-60	1003+00 - 1003+28.12, LT & RT	STH 139	15	25	
	1004+40.12 - 1004+67, LT & RT	STH 139	15	25	
	UNDITRIBUTED	STH 139			25
		TOTAL	**30**	**50**	**25**

CONCRETE BARRIER

STATION	TO	STATION	LOCATION	CONSTRUCTION STAGING	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF
1030+30	-	1033+69	STH 139	1	339	339
1030+80	-	1034+19	STH 139	2	60	339
			PROJECT TOTALS		399	678

CRASH CUSHIONS TEMPORARY

STATION	LOCATION	CONSTRUCTION STAGING	614.0905 CRASH CUSHIONS TEMPORARY ** EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS
1033+69 RT	STH 139	1	1	2	OM-3R	TL-3	BIDIRECTIONAL	LT	TEMPORARY BARRIER END
1030+80 LT	STH 139	2	1	2	OM-3L	TL-3	BIDIRECTIONAL	RT	TEMPORARY BARRIER END
	PROJECT TOTAL		2						

** CRASH CUSHION DESIGN PARAMETERS
AREA REQUIREMENTS L = 22', N = 6', F = 2'

3

3

TRAFFIC CONTROL

STAGE	LOCATION	APPROX. SERVICE PERIOD	643.0300 DRUMS		643.0420 BARRICADES TYPE III		643.0715 WARNING LIGHTS TYPE C		643.0900 SIGNS		643.1000 SIGNS FIXED MESSAGE
		DAYS	NO.	DAYS	NO.	DAYS	NO.	DAYS	NO.	DAYS	SF
1	STH 139	16	23	368	1	16	10	160	23	368	36
2	STH 139	16	18	288	1	16	10	160	23	368	--
ALL	WIDTH WARNING SIGNS AT USH 8 AND STH 70	32	0	0	0	0	0	0	16	512	--
	PROJECT SUBTOTALS			656		32		320		1,248	36
	UNDISTRIBUTED			66		3		32		125	0
	TOTALS			722		35		352		1,373	36

PAVEMENT MARKING

STATION		TO STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH		REMARKS
				WHITE LF	YELLOW LF	
1029+40	-	1035+25	STH 139	1,170	146	SKIP DASH
			SUB TOTALS	1,170	146	
			PROJECT TOTAL	1,316		

REMOVING PAVEMENT MARKINGS

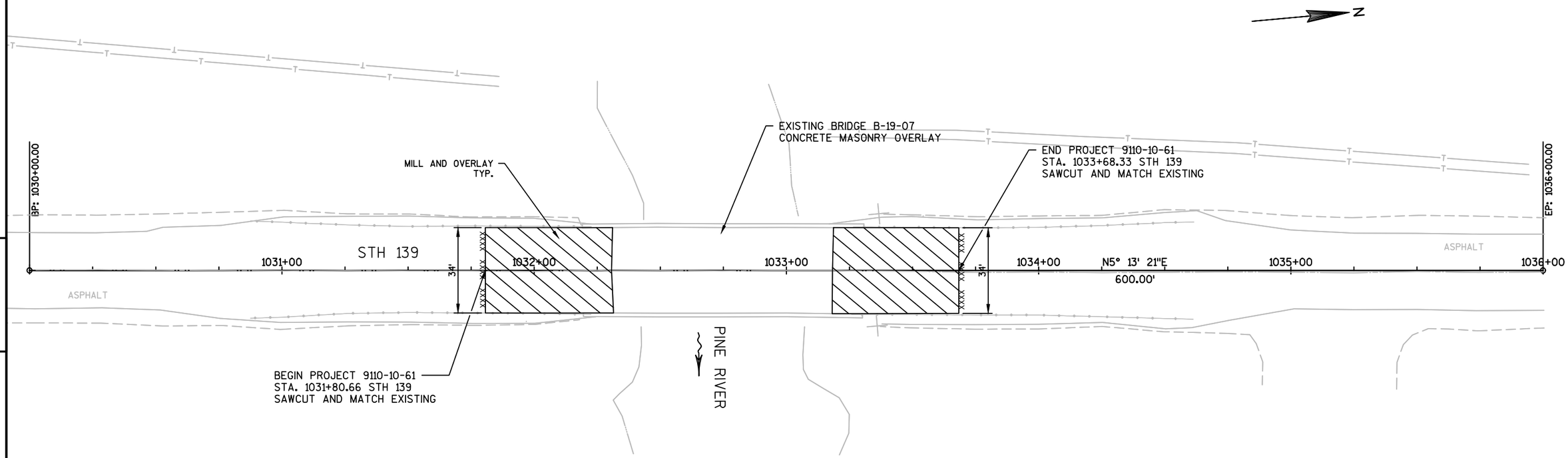
STATION	TO	STATION	LOCATION	646.9000 MARKING REMOVAL LINE 4-INCH LF	
1029+40	-	1030+80	STH 139	35	SKIP DASH
1033+69	-	1035+25	STH 139	39	SKIP DASH
			TOTALS	74	

TEMPORARY PAVEMENT MARKING

STAGE	LOCATION	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE) LF	649.0850 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE) LF
1	STH 139	410	22
2	STH 139	410	--
	TOTALS	820	22

TEMPORARY SIGNALS

LOCATION	661.0100 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (STRUCTURE B-19-07) LS
STH 139	1
PROJECT TOTAL	1



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PROJECT NO: 9110-10-61	HWY: STH 139	COUNTY: FLORENCE	PLAN	SHEET 12	E

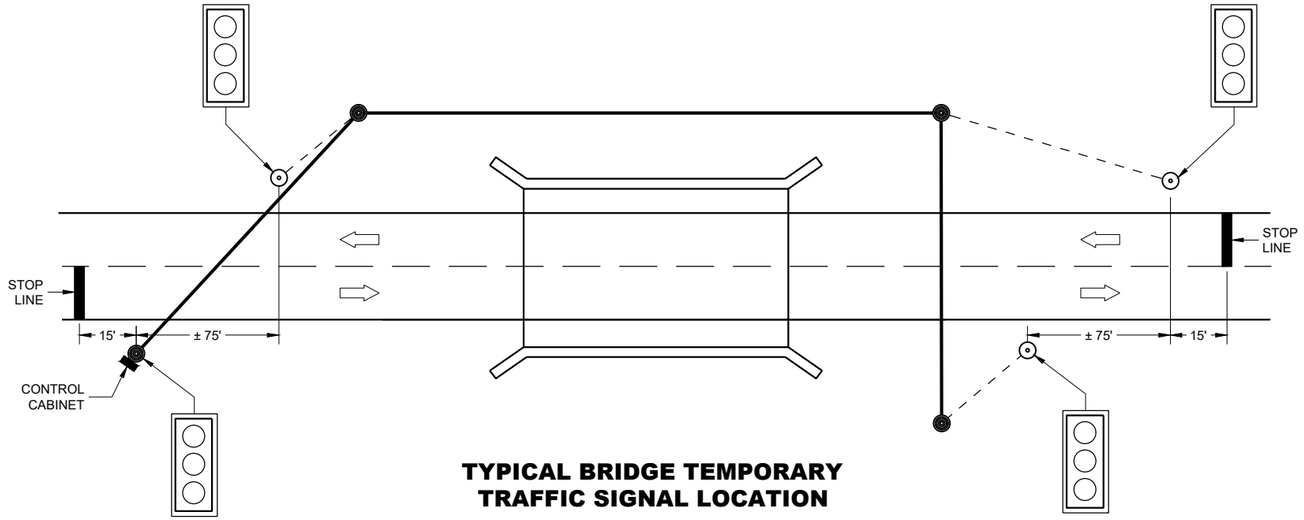
FILE NAME : F:\TR\JOBS\E2297A17\CIVIL 3D 2014 B-19-7\SHEETSPLAN\91101061-050202-PL.DWG
LAYOUT NAME - ****

PLOT DATE : 4/23/2018 3:51 PM PLOT BY : OSVALDO FALCON PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

Standard Detail Drawing List

09G02-05A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
14B07-15A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-07C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15D33-06	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION

LEGEND

- WOOD POLE (NON-BREAKAWAY)
- WOOD POST (BREADAWAY)
- 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.).

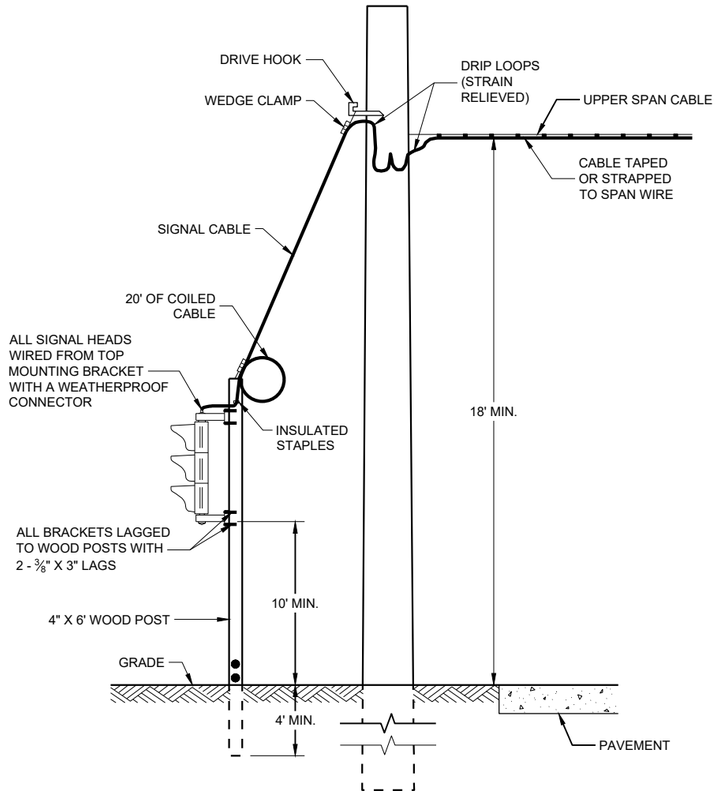
WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

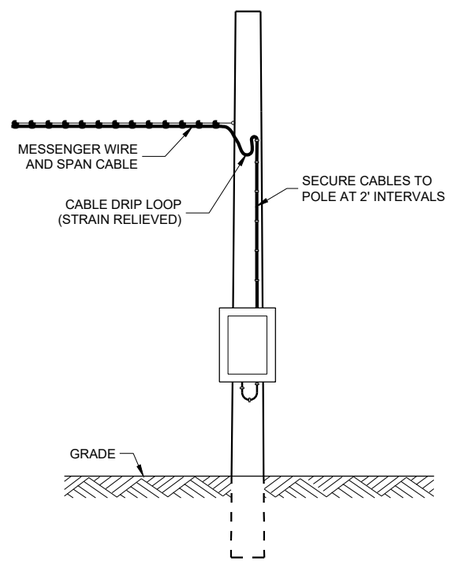
TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

EACH TRAFFIC SIGNAL SHALL HAVE A BACKPLATE.

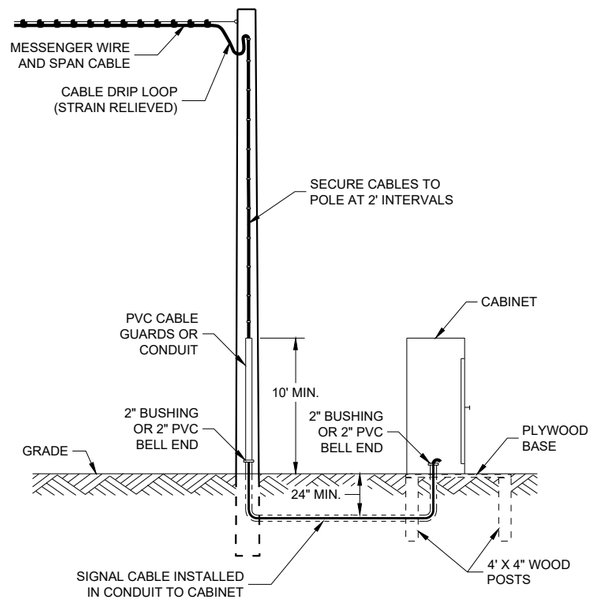
SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



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 — DATE
/S/ Ahmet Demirbilek — ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD09G02 - 05a

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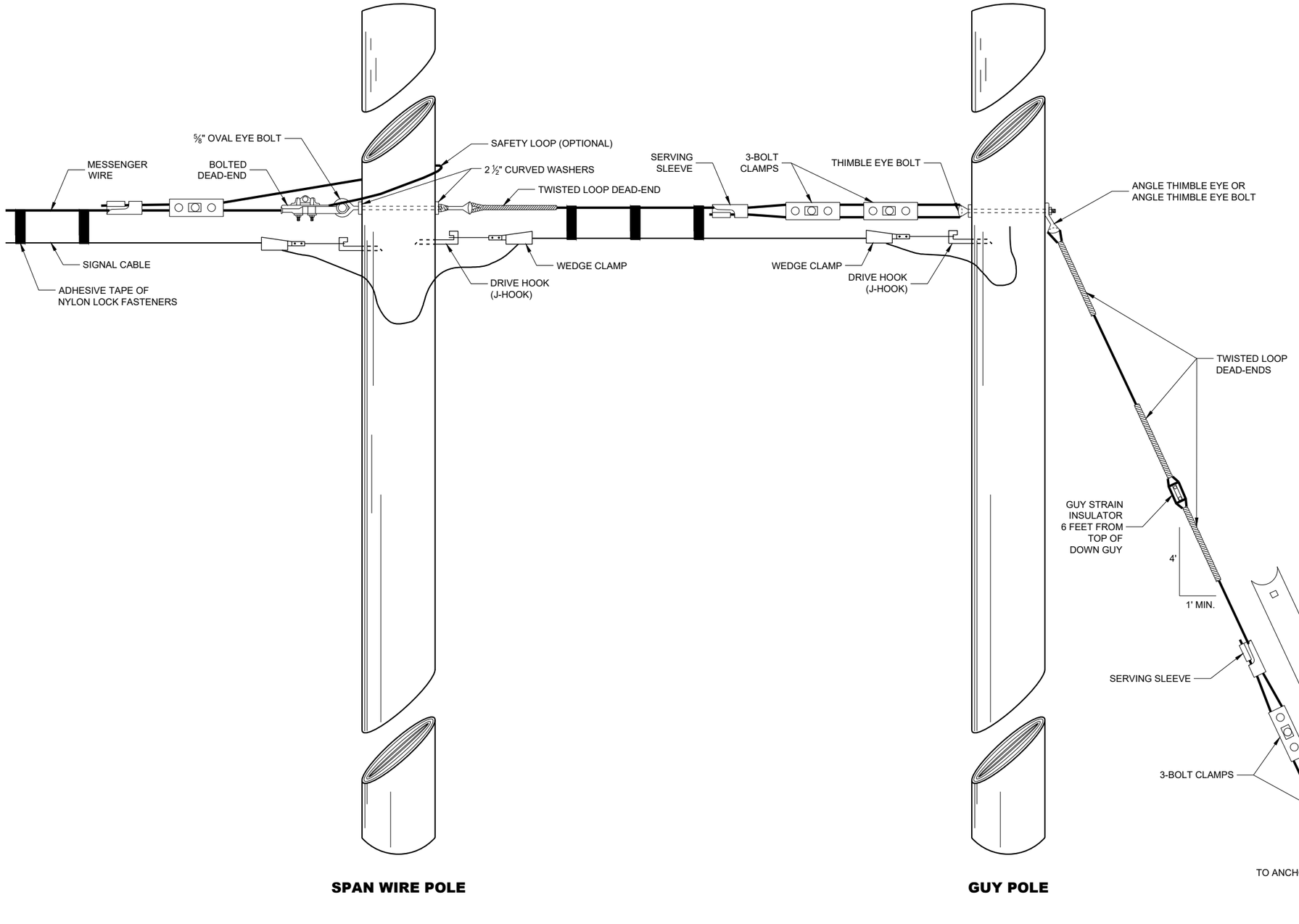
SDD09G02 - 05a

GENERAL NOTES

USE ¾" DRILL IN WOOD POLE TO PROVIDE FOR ⅝" BOLTS.



SPAN WIRE POLE

GUY POLE

TYPICAL DEAD-ENDINGS OR GUYING

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

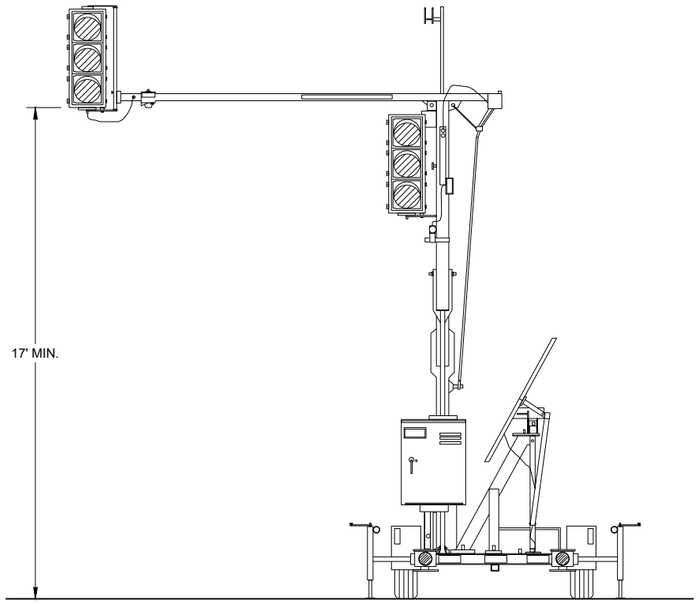
APPROVED
June 2015 — DATE
/S/ Ahmet Demerbilek — ROADWAY STANDARDS DEVE ENGINEER
FHWA

6

SDD09G02 - 05b

6

SDD09G02 - 05b

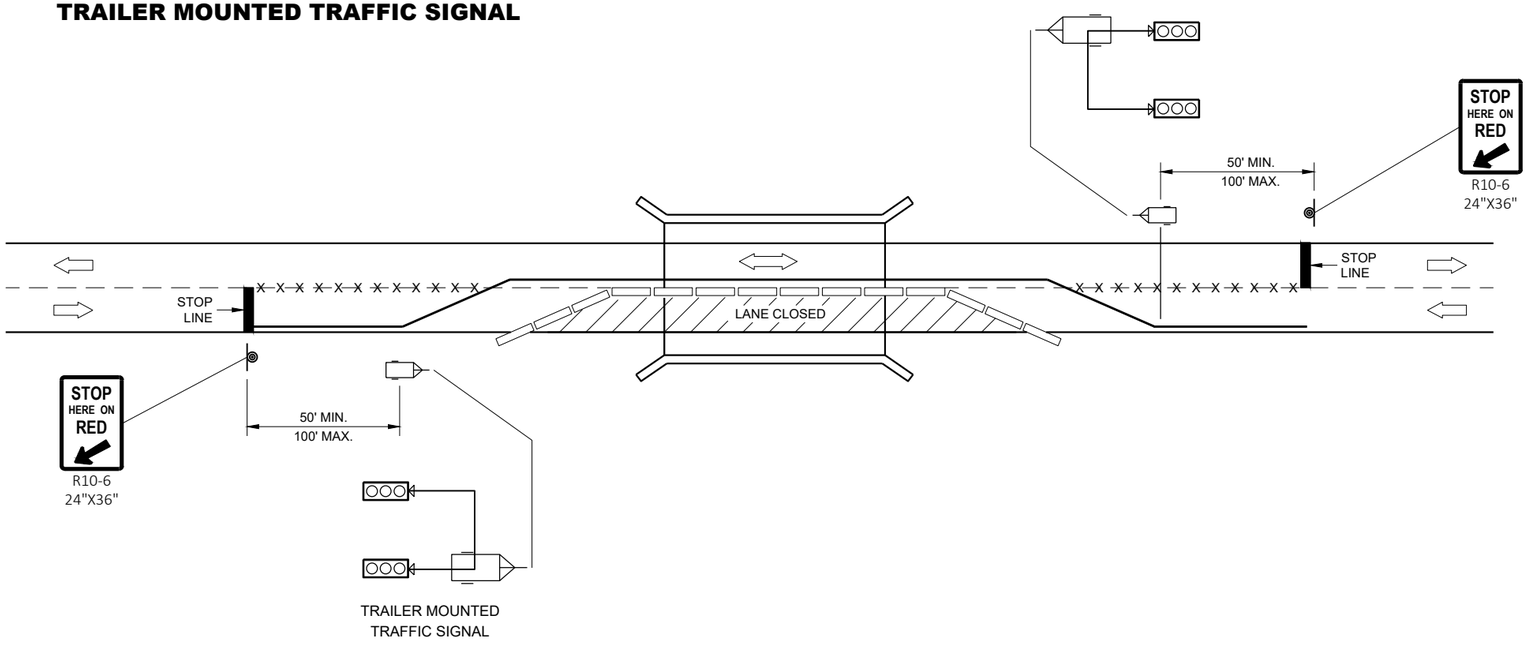


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

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

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



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

LEGEND

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

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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SDD09G02 - 05c

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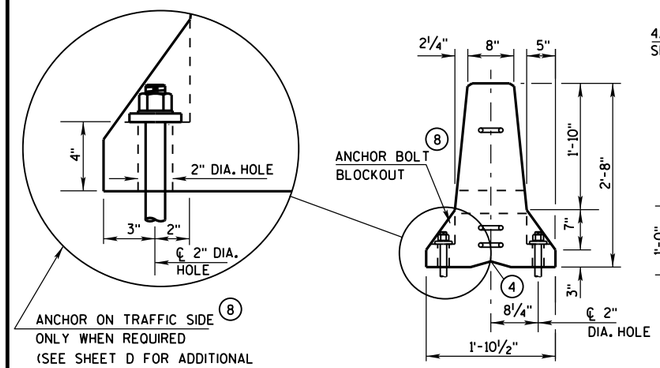
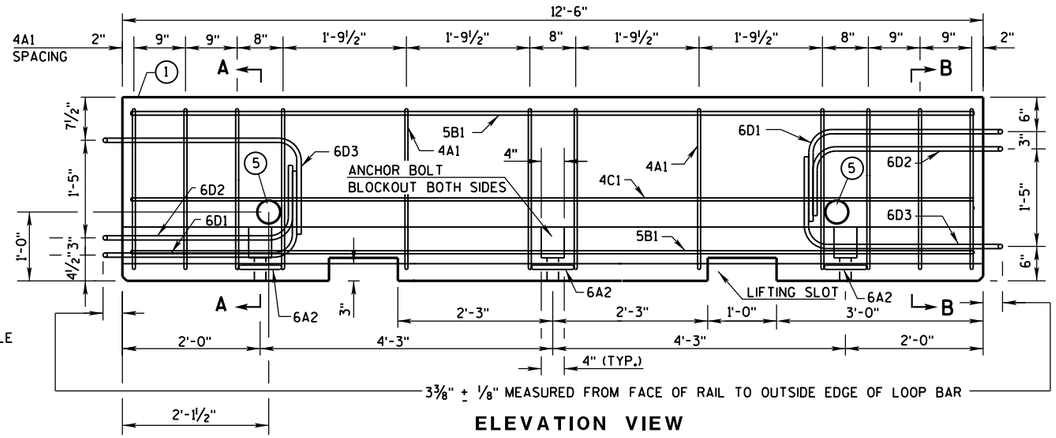
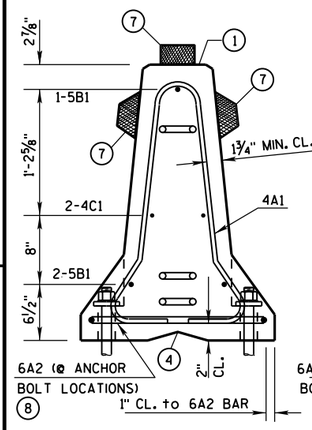
SDD09G02 - 05c



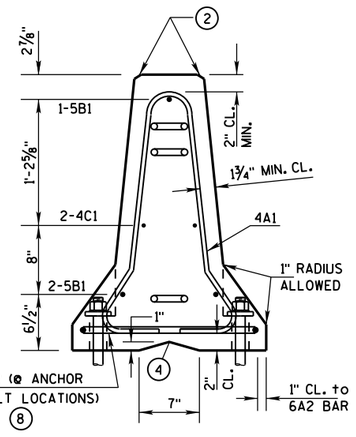
END VIEW



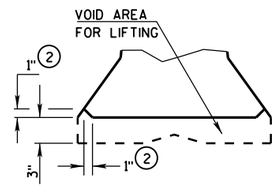
ELEVATION VIEW



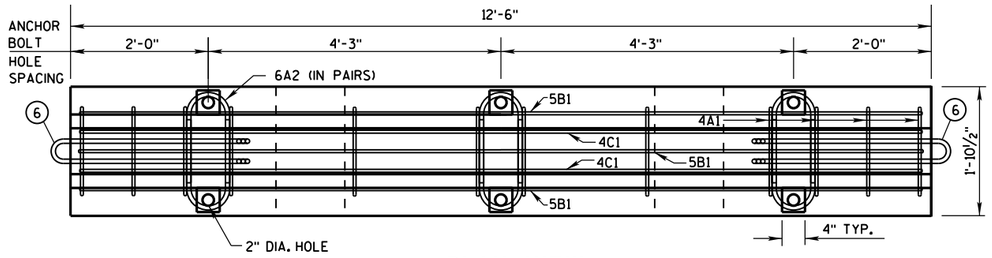
SECTION A-A
(STIRRUP PLACEMENT)



SECTION B-B
(STIRRUP PLACEMENT)

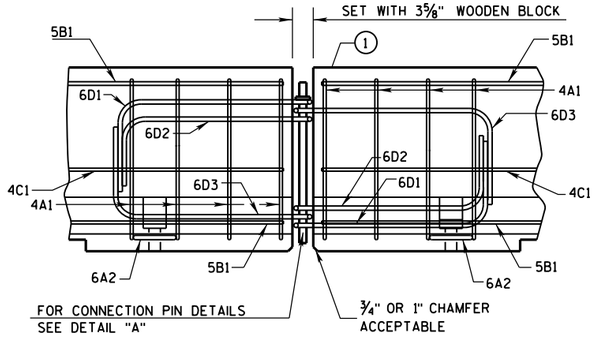


DETAIL "B"
LIFTING SLOT DETAIL

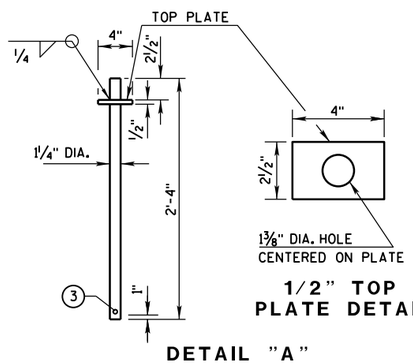


PLAN VIEW

DETAILS OF BARRIER SECTION

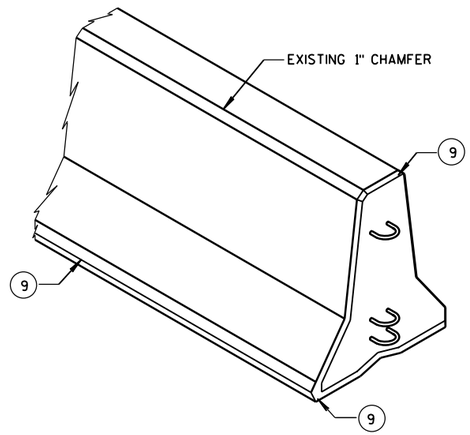


DETAILS OF BARRIER CONNECTION



1/2" TOP
PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-15(a) THRU 14B7-15(i).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

(8) SEE SHEET D FOR HOW TO ANCHOR BARRIER. SEE SHEET E FOR WHEN TO ANCHOR BARRIER.

(9) 1" CHAMFER OPTIONAL.

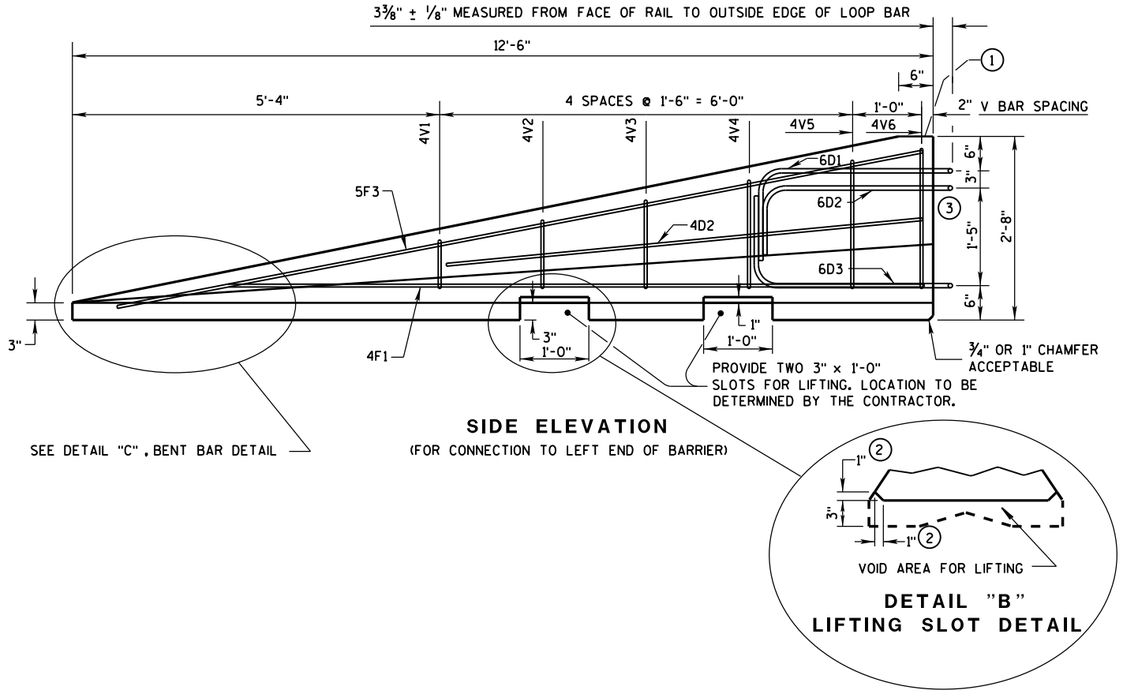
f'c = 4,000 psi

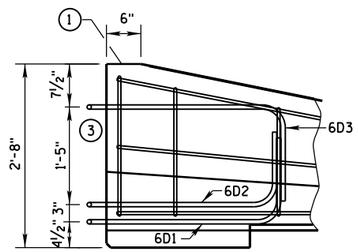
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

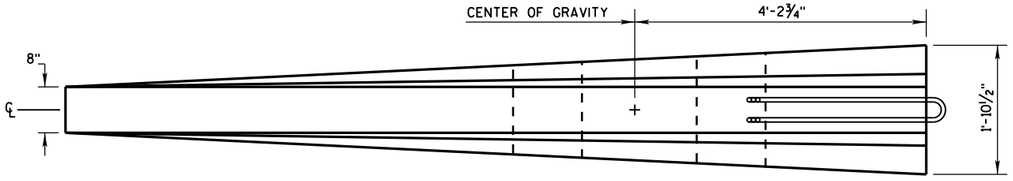
S.D.D. 14 B 7-15a

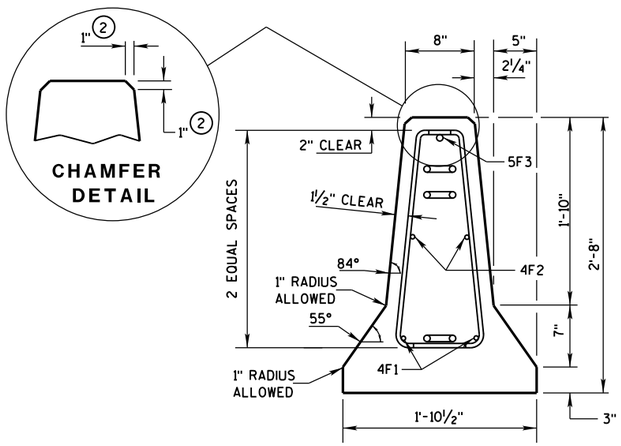


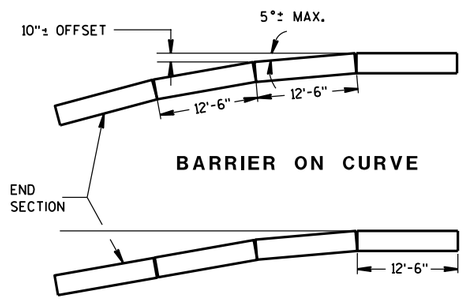


GENERAL NOTES

1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.







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

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

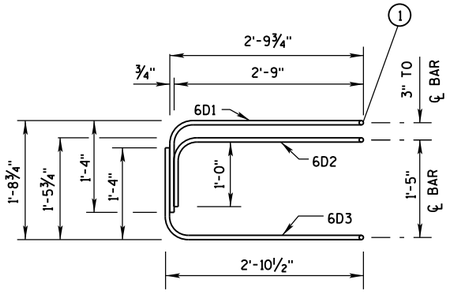
6

S.D.D. 14 B 7-15b

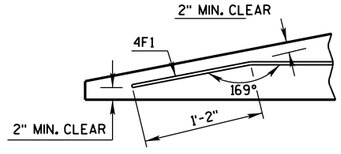
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

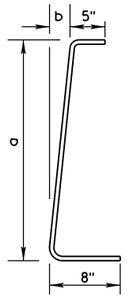
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

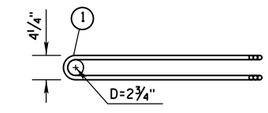
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

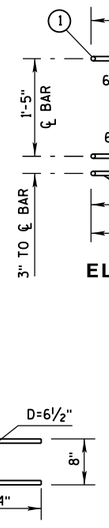
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"

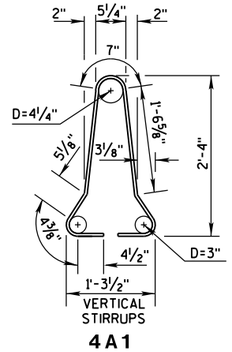


PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2

ELEVATION VIEW



4A1

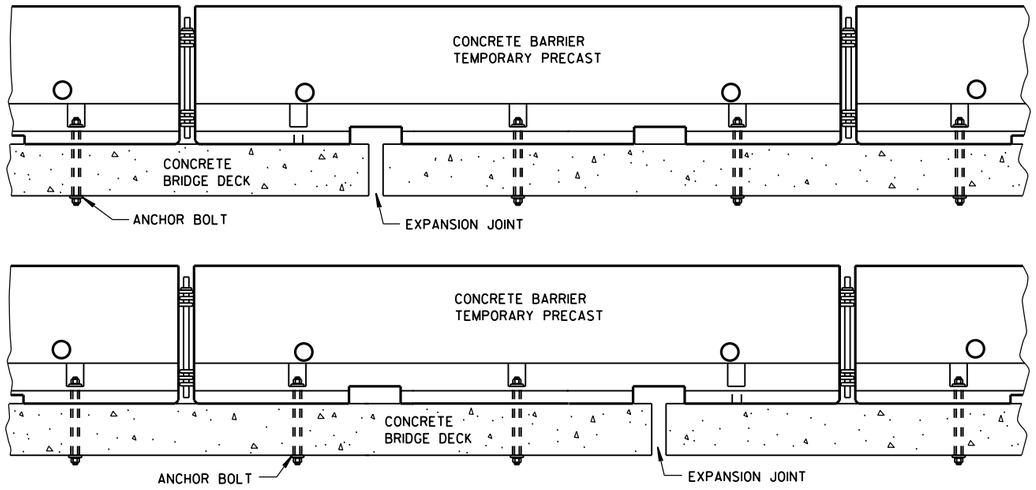
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 7-15c



TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)

GENERAL NOTES

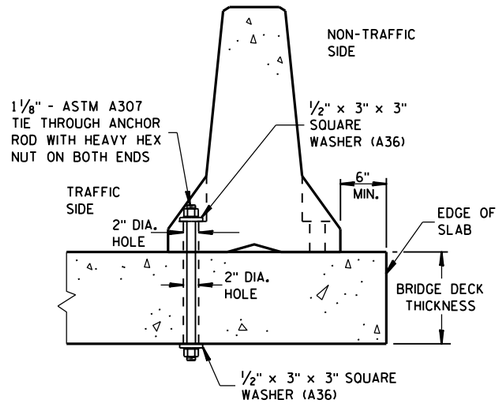
SEE SHEET E FOR WHEN TO ANCHOR. OTHER PARTS OF THE PLAN MAY SHOW ADDITIONAL LOCATIONS REQUIRING ANCHORING.

REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERICAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

(1) 1⅛" DIAMENTER A307 THREADED ROD. ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL. ASTM A563A HEAVY HEX NUT.

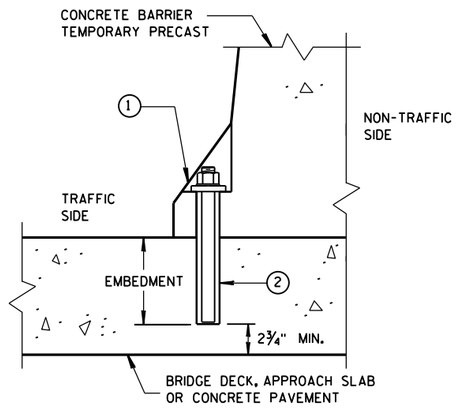
(2) ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

(3) ASPHALT SURFACE SHOWN. CONTRACTOR MAY DRILL THROUGH CONCRETE PAVEMENT AND THAN DRIVE ASPHALT ANCHOR PIN.



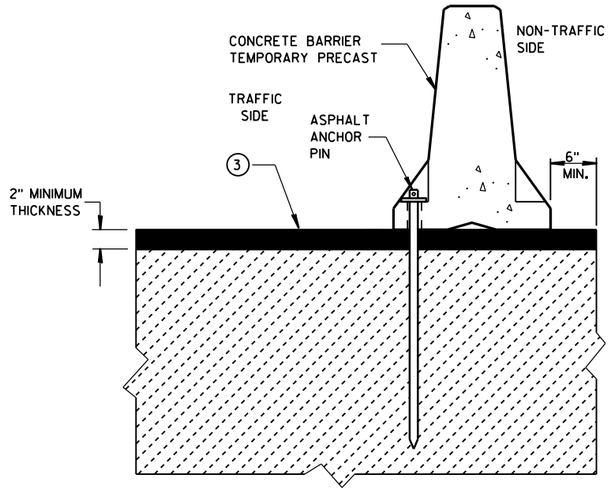
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)

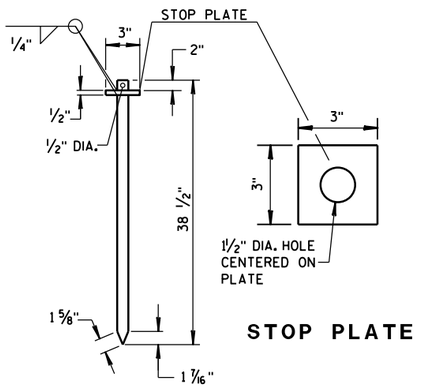


REMOVABLE ADHESIVE ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



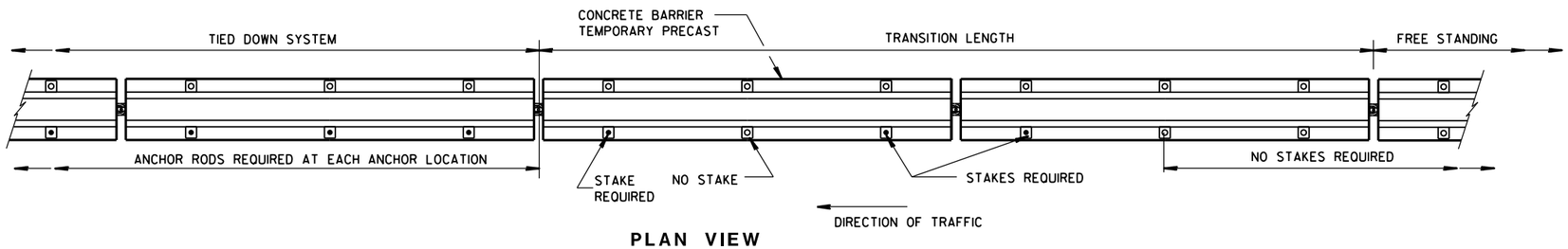
STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE



STOP PLATE

ASPHALT ANCHOR PIN

(ASTM A36 STEEL)



PLAN VIEW

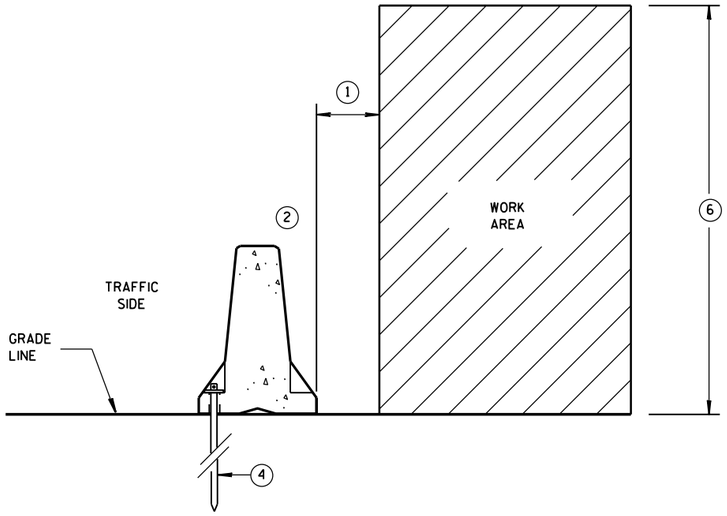
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

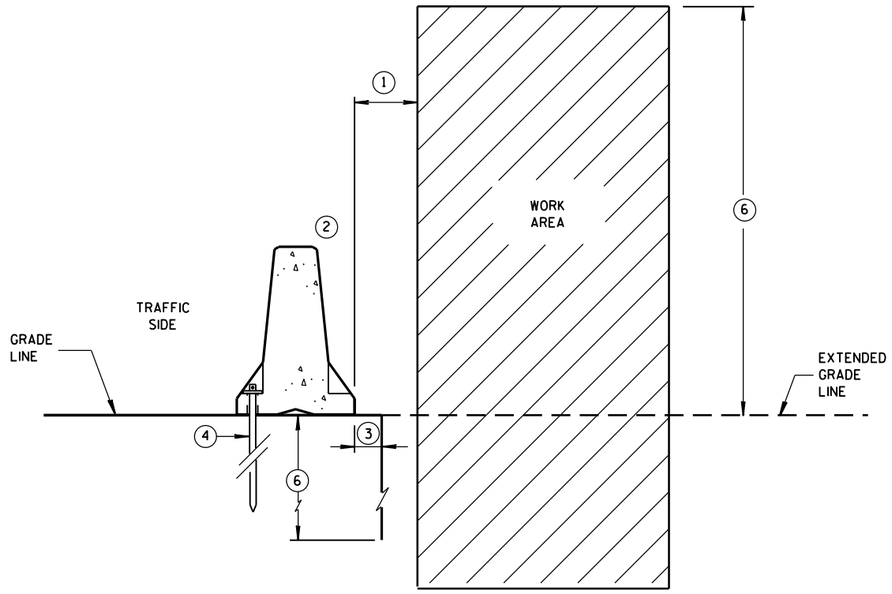
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-15d



ANCHORED BARRIER SPACE REQUIREMENTS FOR HAZARDS EXTENDED ABOVE THE GRADE LINE

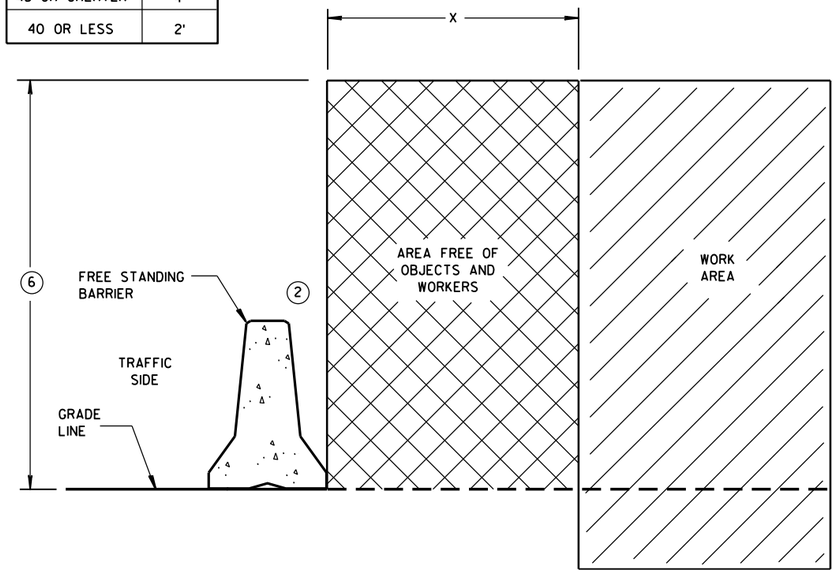


ANCHORED BARRIER SPACE REQUIREMENTS ON VERTICAL DROP OFFS

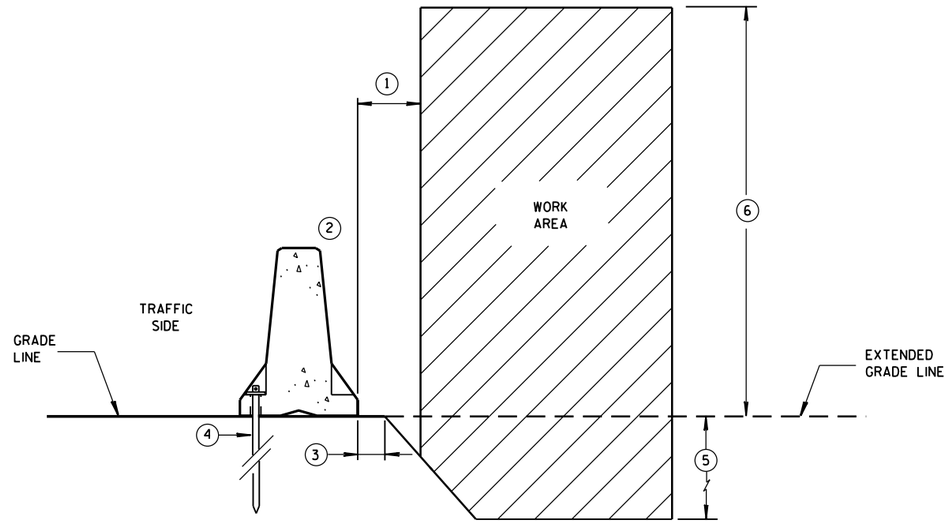
GENERAL NOTES

1. WHEN OBJECTS EXTEND ABOVE THE GRADE, A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT. SEE OTHER DETAILS FOR FOR THE MINIMUM OFFSET FROM BACK OF BARRIER TO SLOPES OR VERTICAL DROPS.
2. OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR LEANED AGAINST THE BARRIER WITHOUT PERMISSION OF THE PROJECT ENGINEER.
3. SEE OTHER DETAIL ON SHEET "D" FOR SPACE REQUIREMENTS.
4. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR A STAKE DOWN FOR ASPHALTIC SURFACE TREATMENT DETAILS. ASPHALTIC ANCHOR SHOWN.
5. DEPTH OF 3 FEET OR MORE.
6. Y = 6'-6".

POSTED SPEED MPH	X
45 OR GREATER	4'
40 OR LESS	2'



FREE STANDING BARRIER SPACE REQUIREMENTS



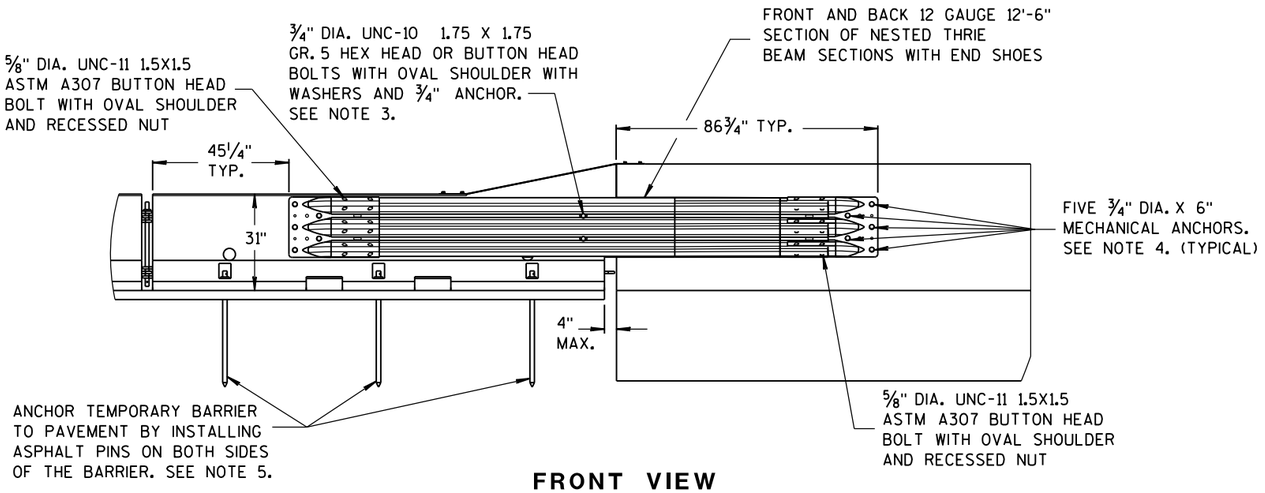
ANCHORED BARRIER SPACE REQUIREMENTS ON SLOPES

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

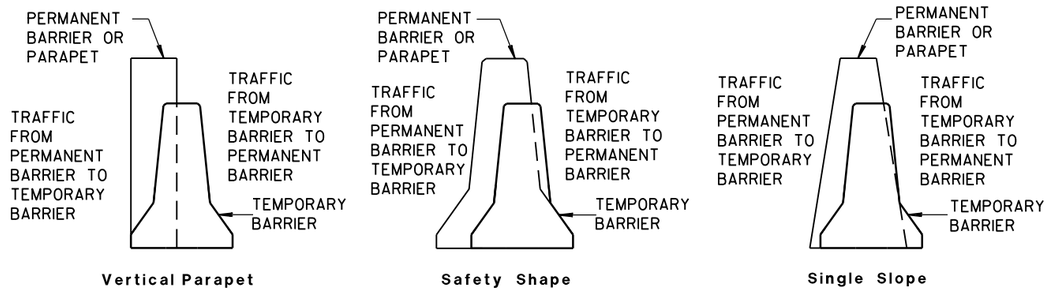
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-15e



FRONT VIEW

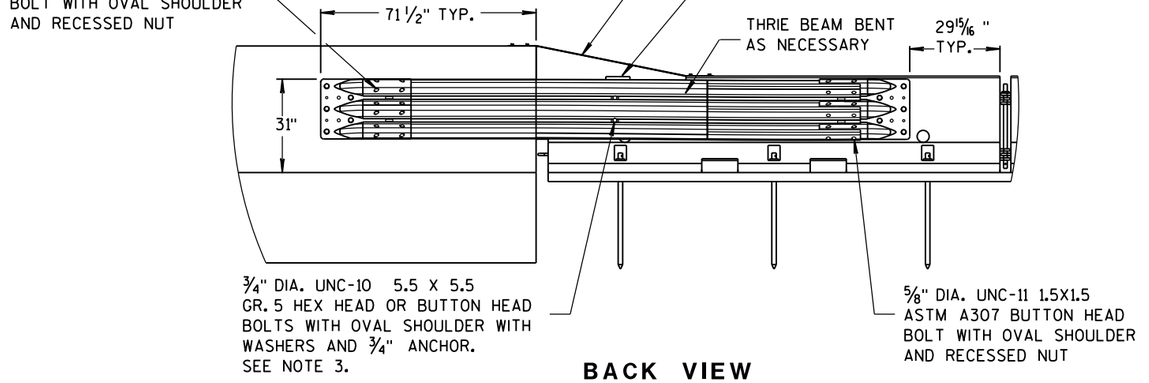


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

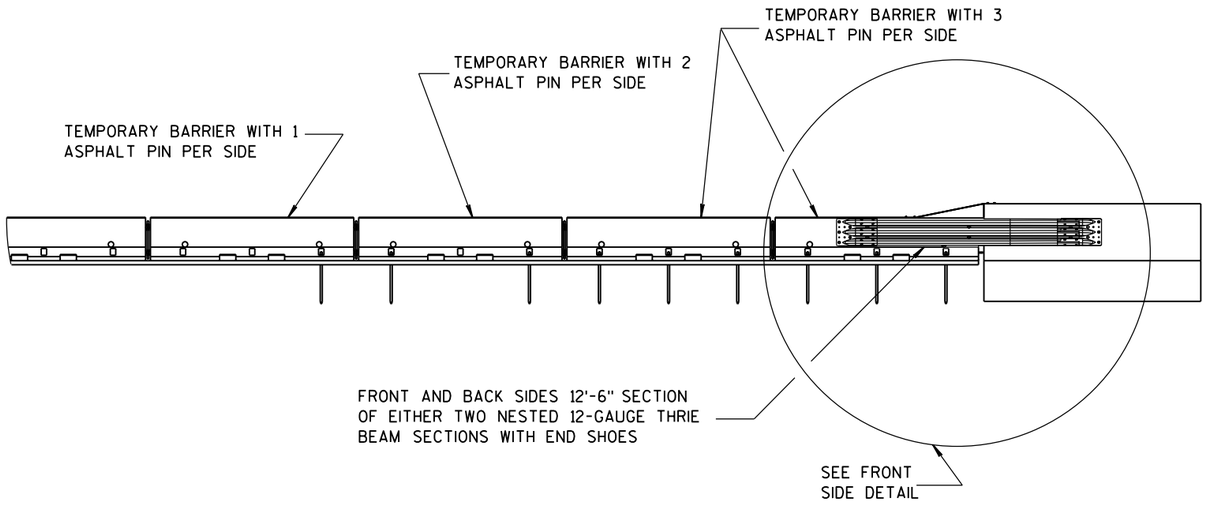
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS REGARDLESS OF TRAFFIC.

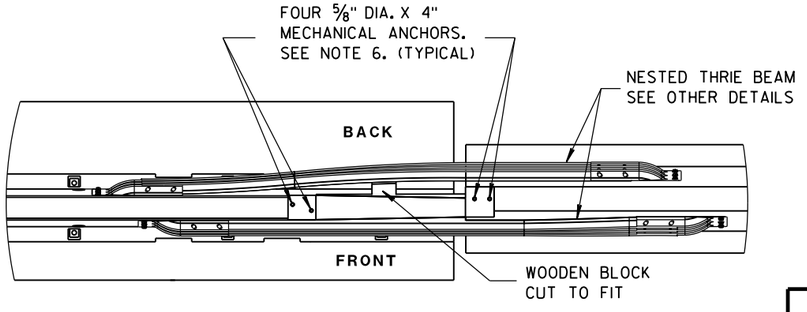
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



BACK VIEW



FRONT VIEW



PLAN VIEW

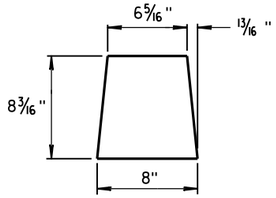
BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

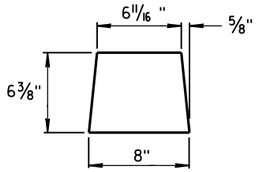
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

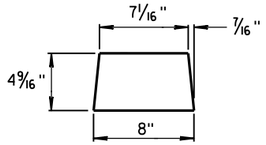
S.D.D. 14 B 7-15f



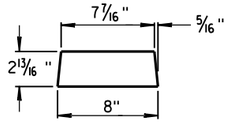
GUSSET 1



GUSSET 2

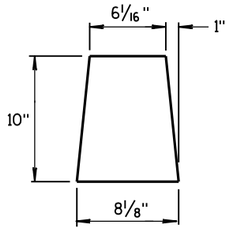


GUSSET 3

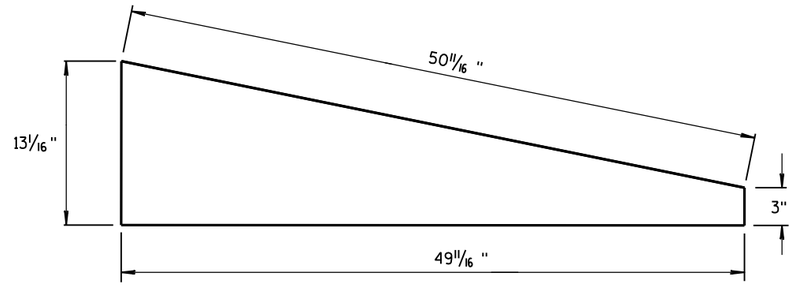


GUSSET 4

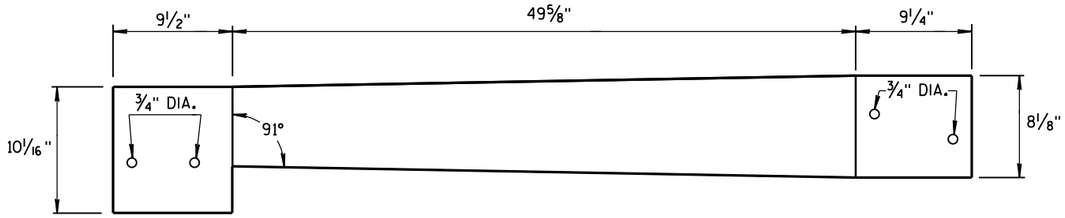
GUSSETS

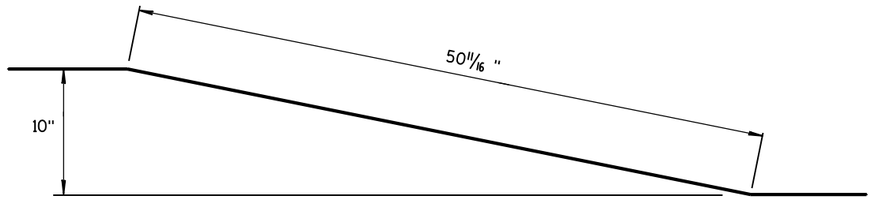


END PLATE



SIDE PLATE

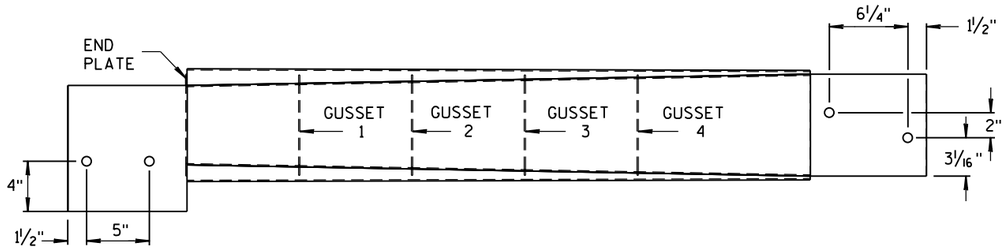


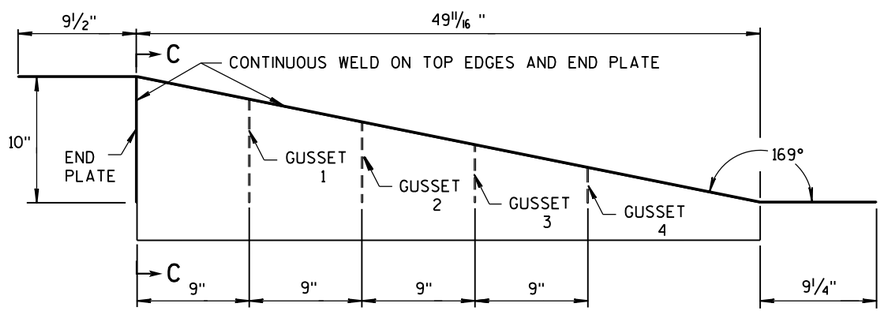


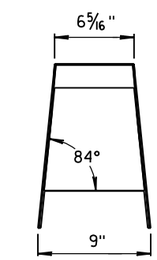
TOP PLATE

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.







SECTION C-C

NOTES

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

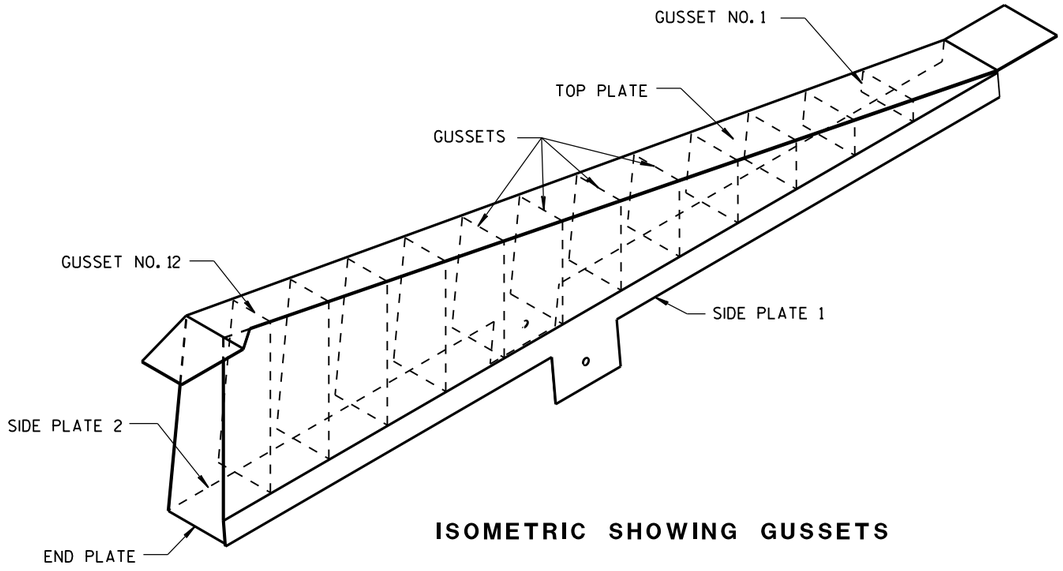
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

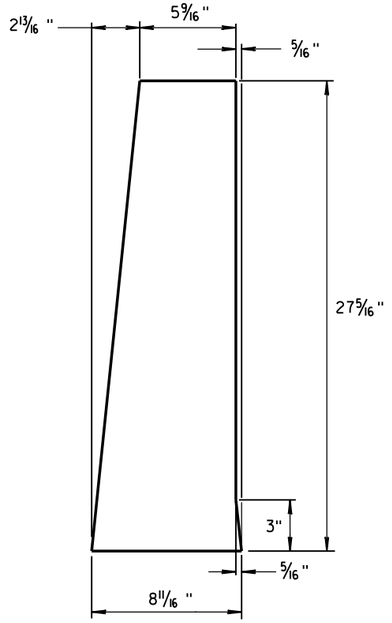
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-15g

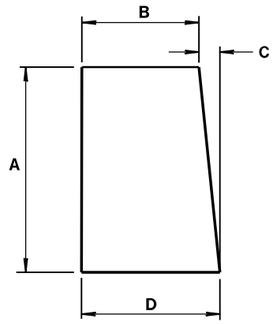


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



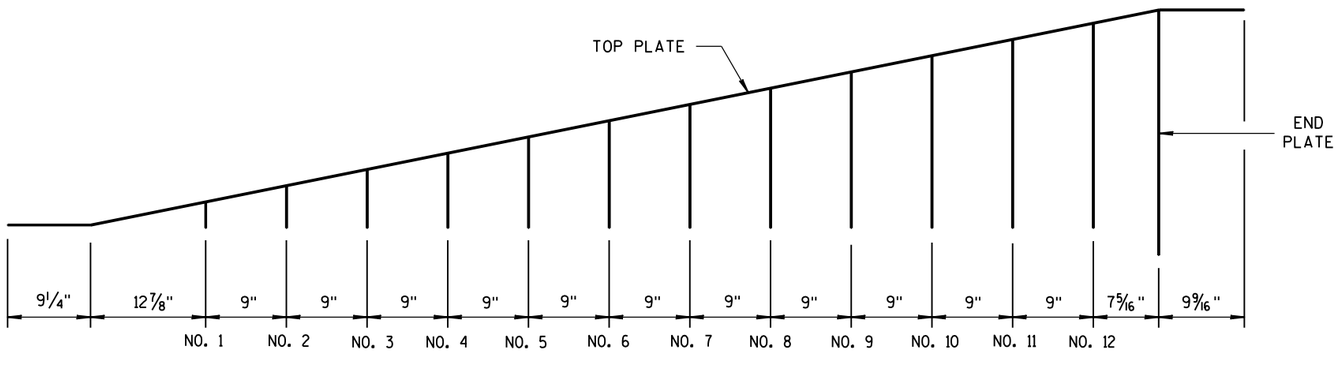
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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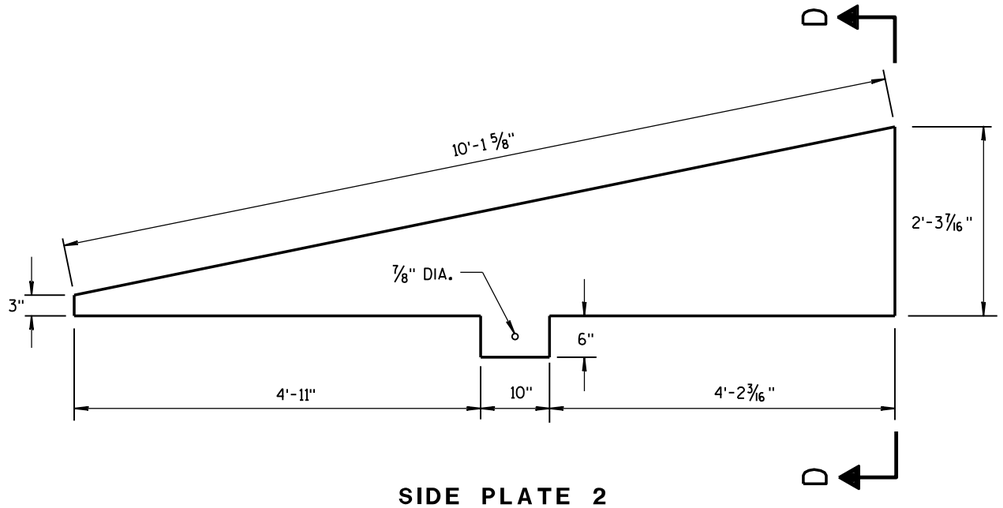
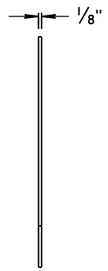
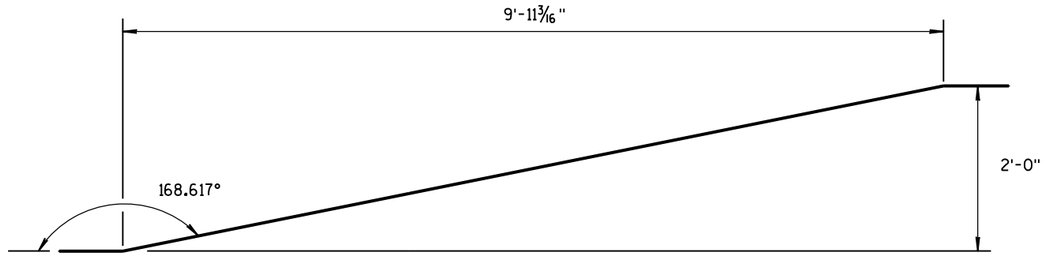
S.D.D. 14 B 7-15h



SIDE PLATE 2

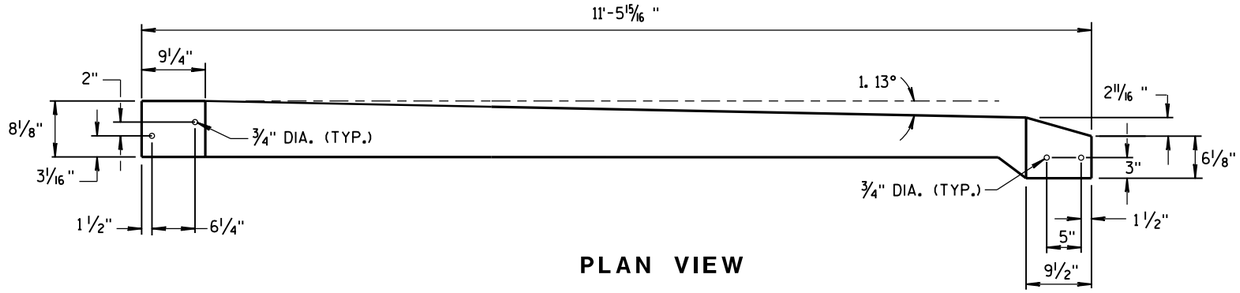


END VIEW



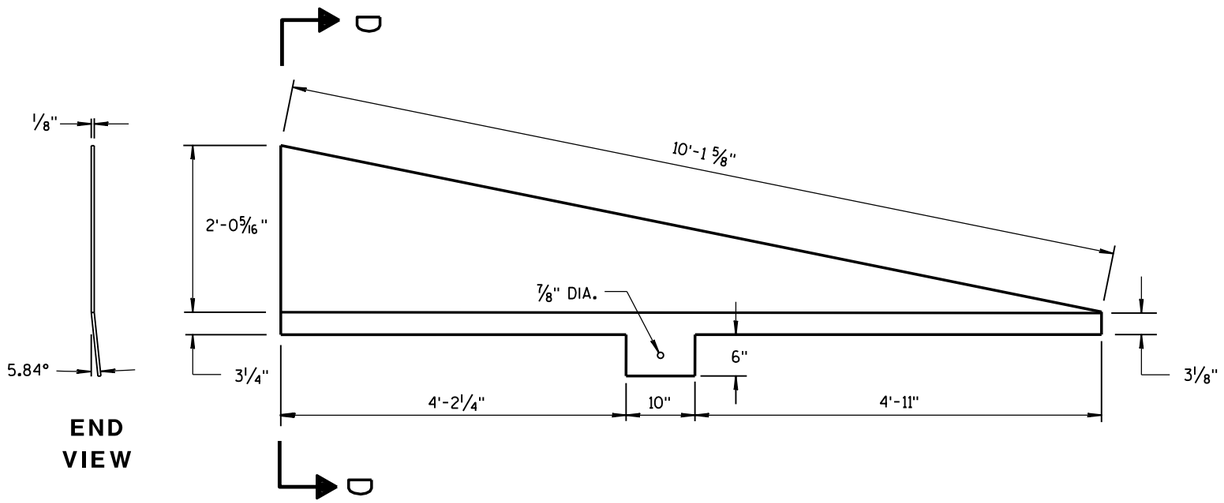
SIDE VIEW

TOP PLATE



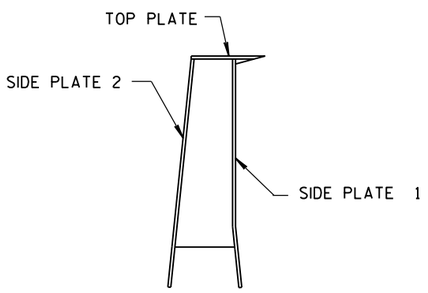
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

25

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S.D.D. 14 B 7-15i

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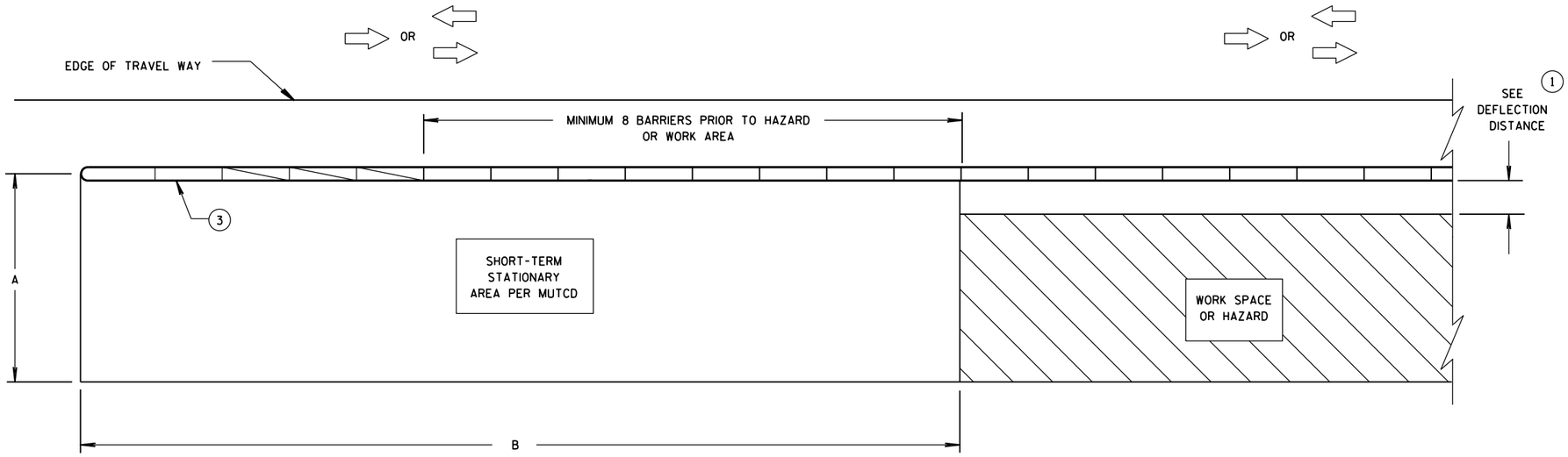
S.D.D. 14 B 7-15i



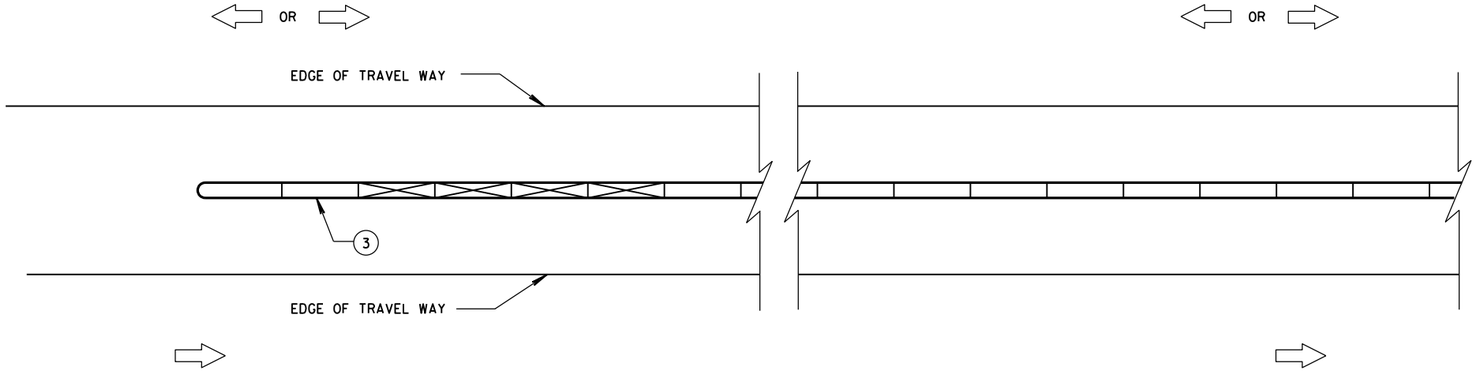
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

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

DIMENSION B TABLE (2)

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



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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

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

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

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

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

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

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

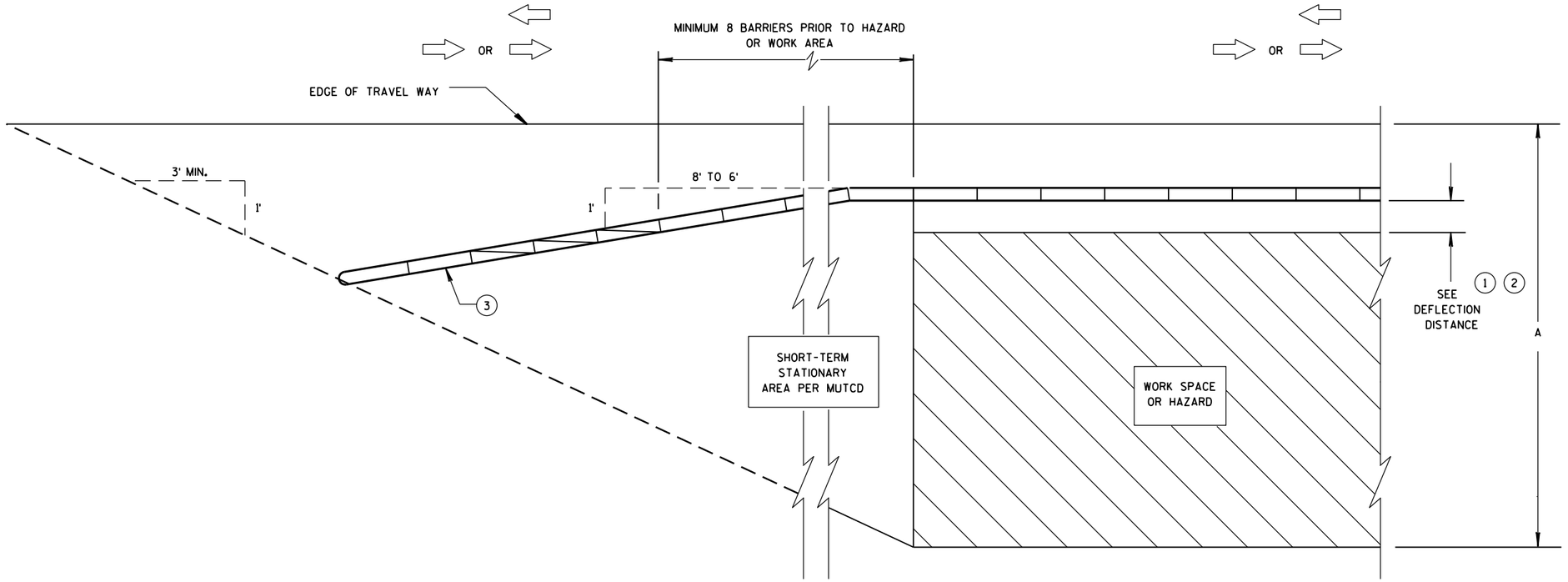
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

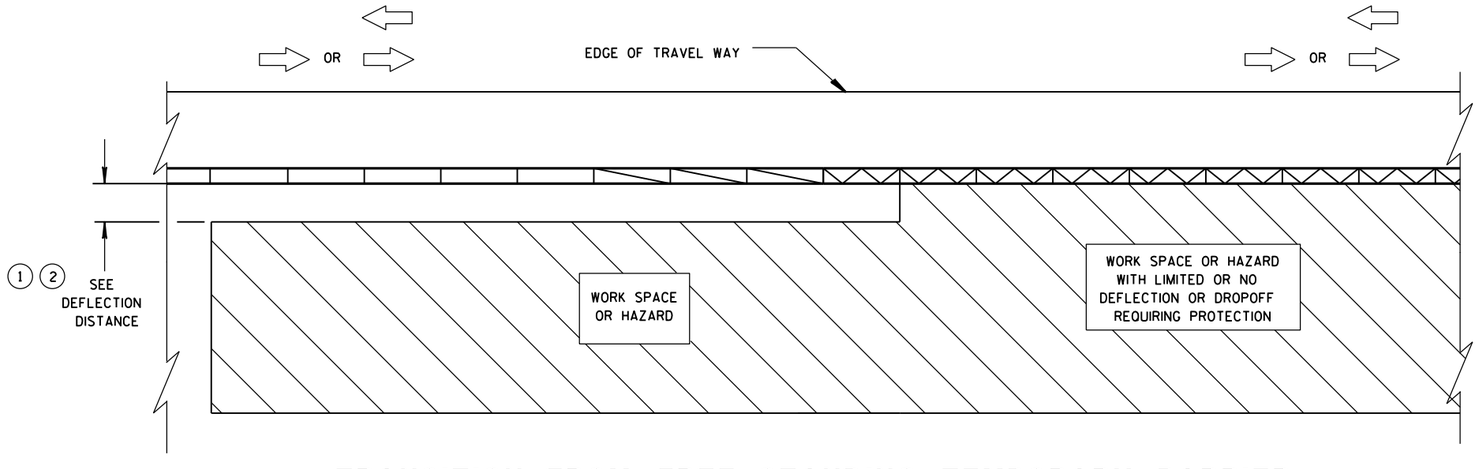
6

S.D.D. 14 B 8-2a

S.D.D. 14 B 8-2a



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



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 8-2b

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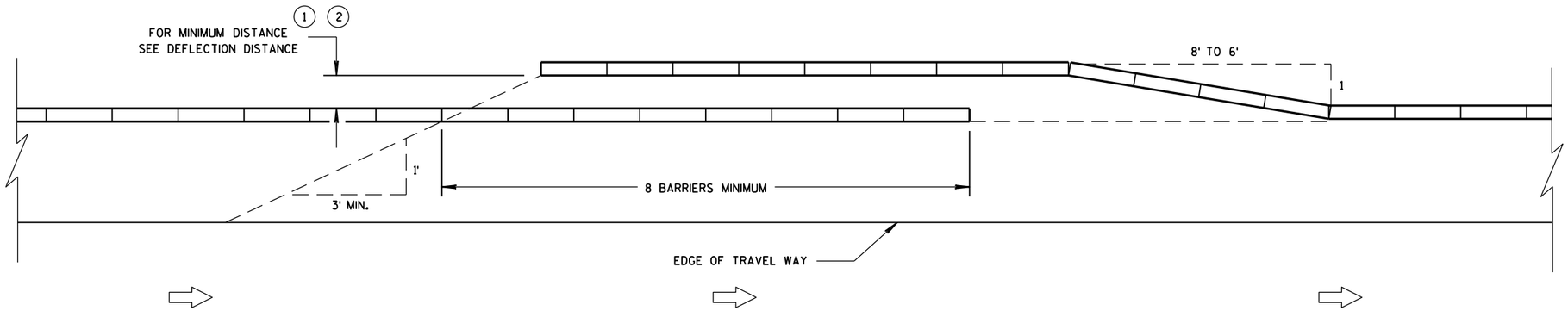
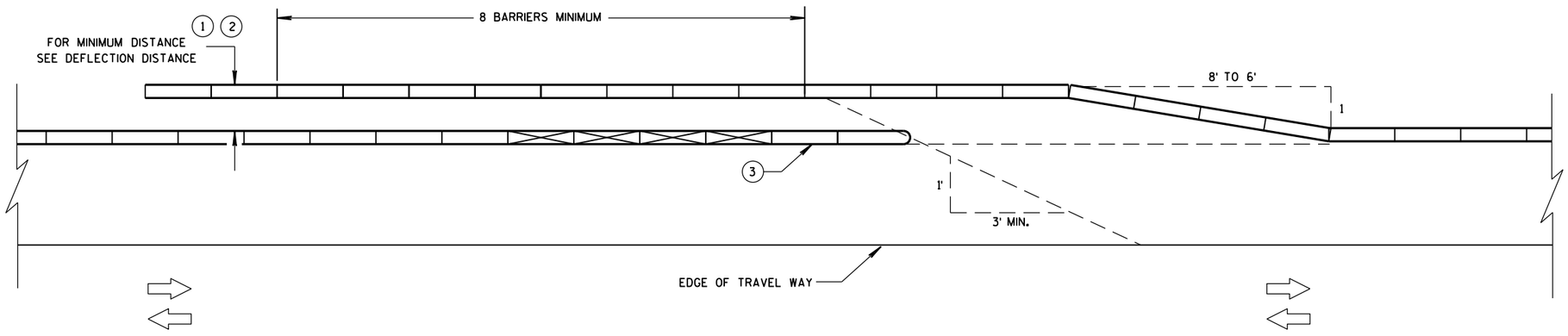
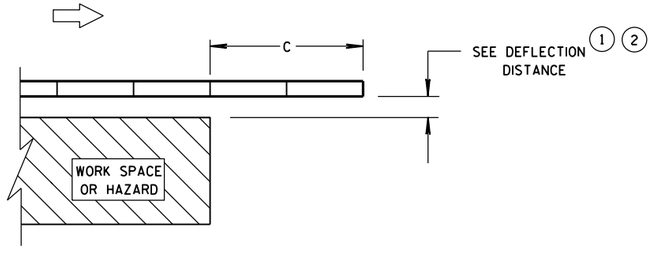
S.D.D. 14 B 8-2b



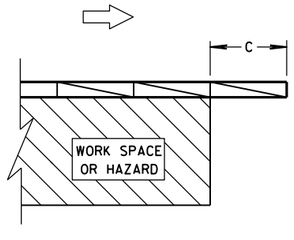
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

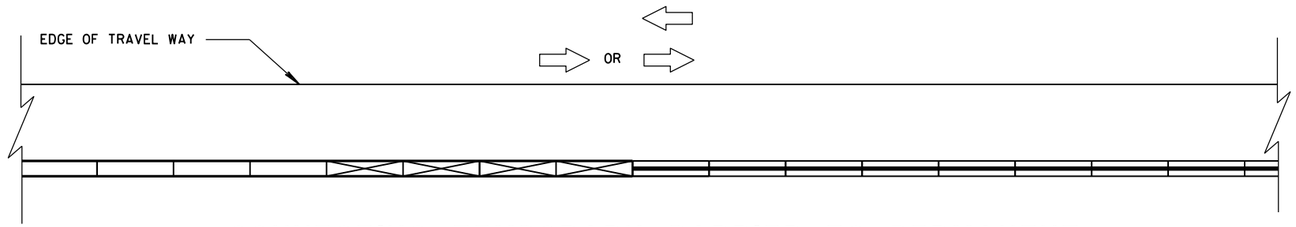
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

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

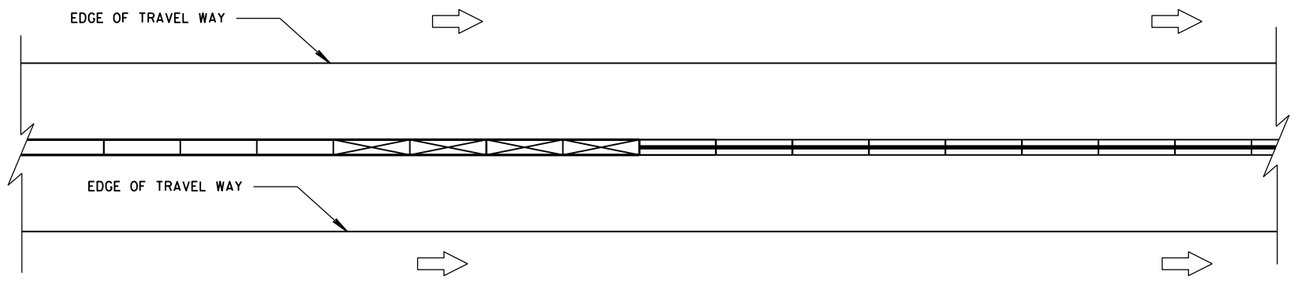
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

S.D.D. 14 B 8-2c



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



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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

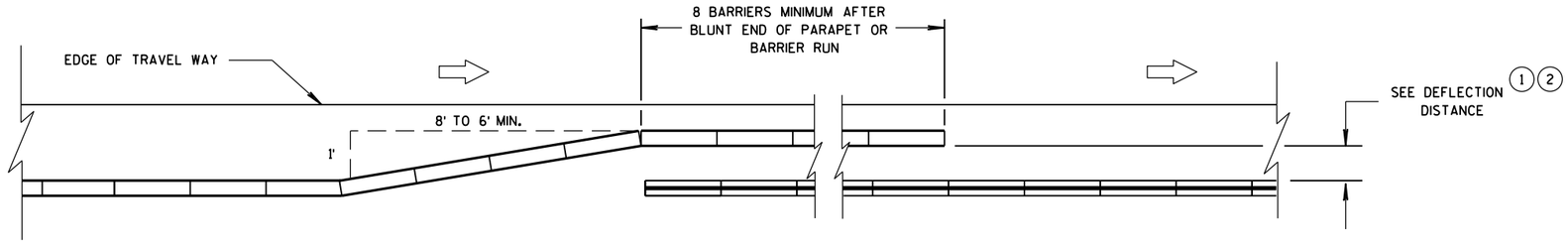
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

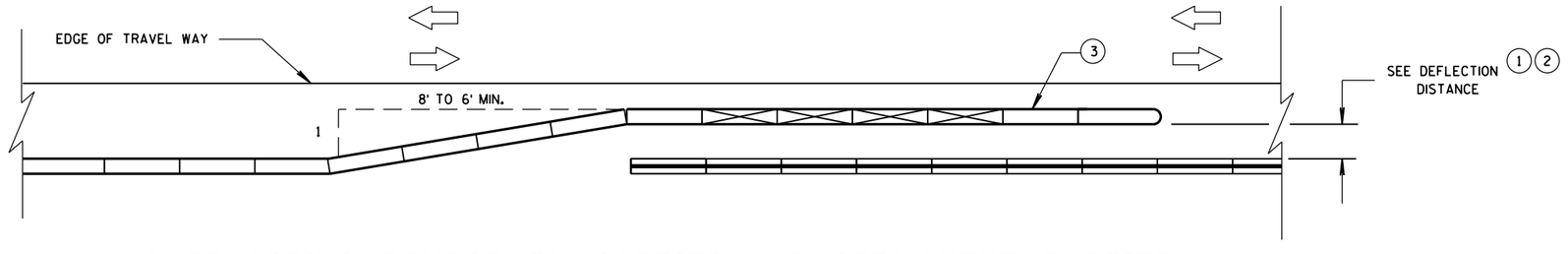
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER
OR CONCRETE PARAPET

FREE STANDING TEMPORARY
BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 8-2d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

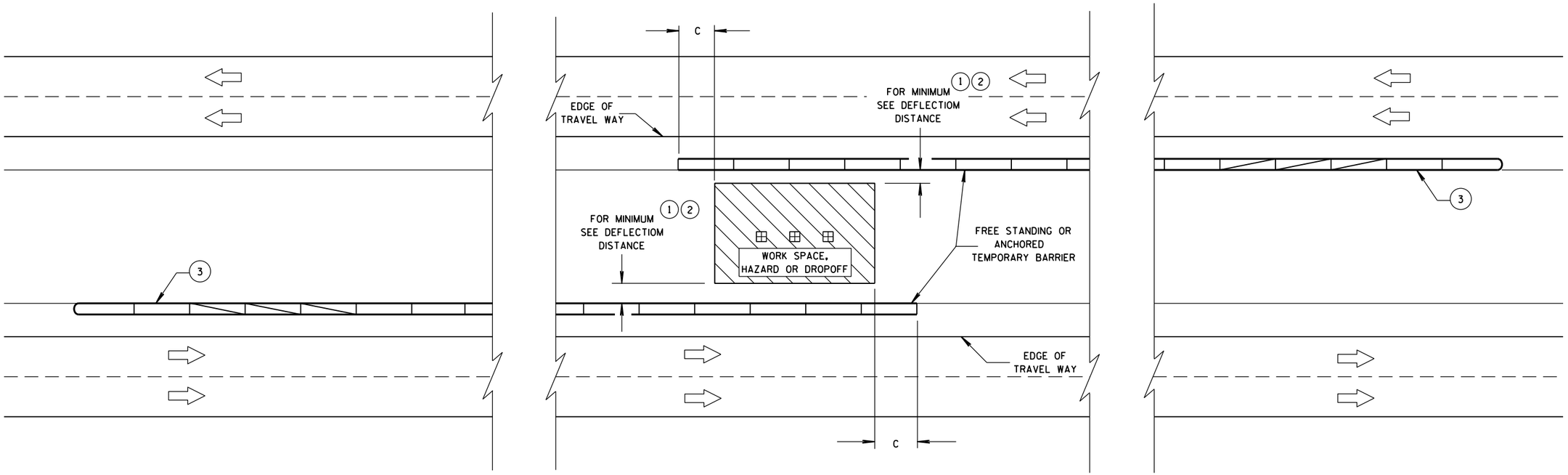
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

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



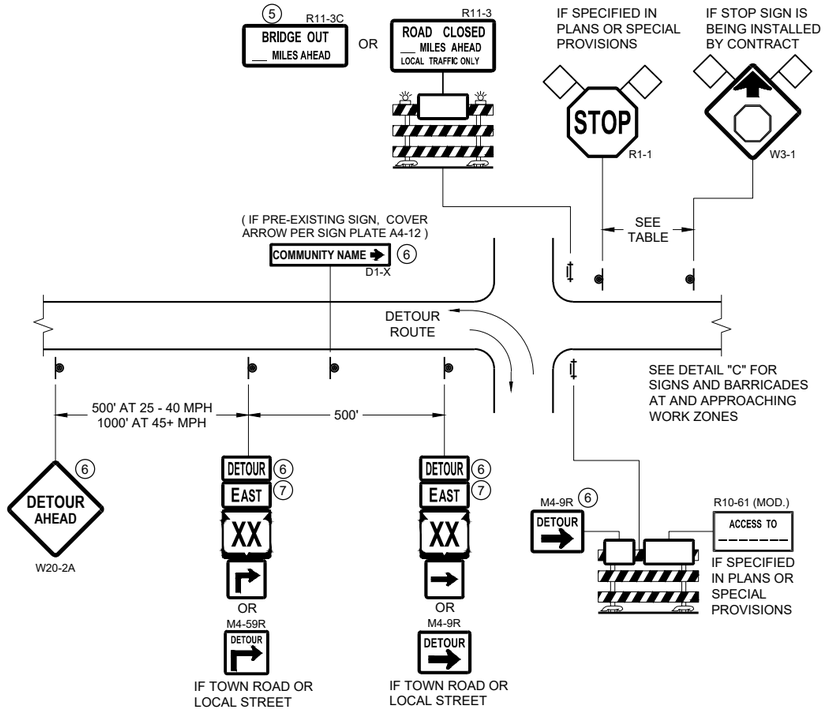
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

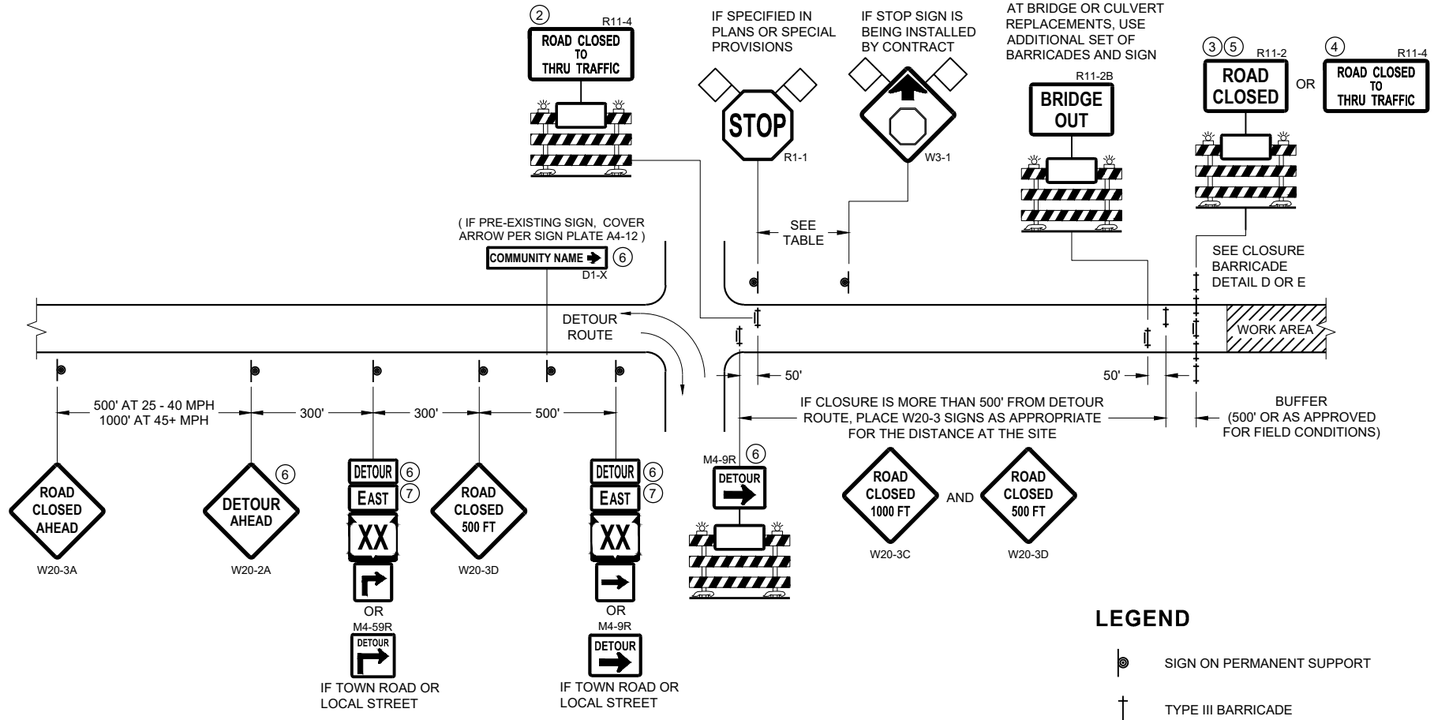
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER
FHWA

6

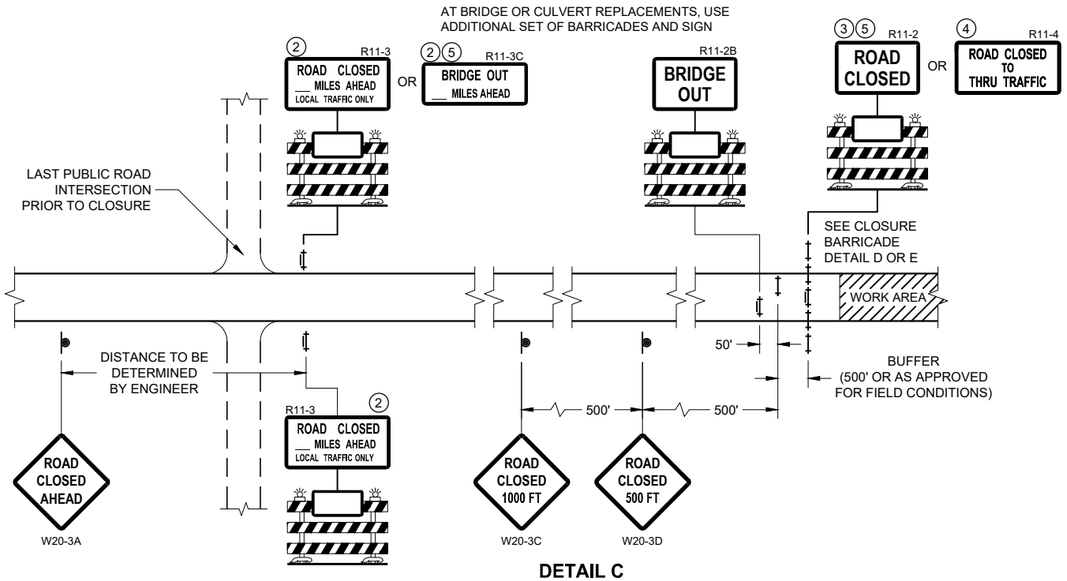
S.D.D. 14 B 8-2e





DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

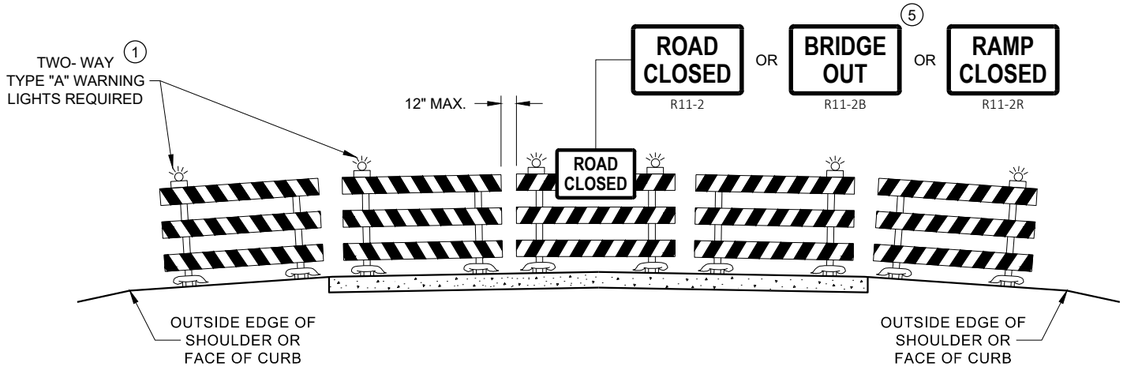
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

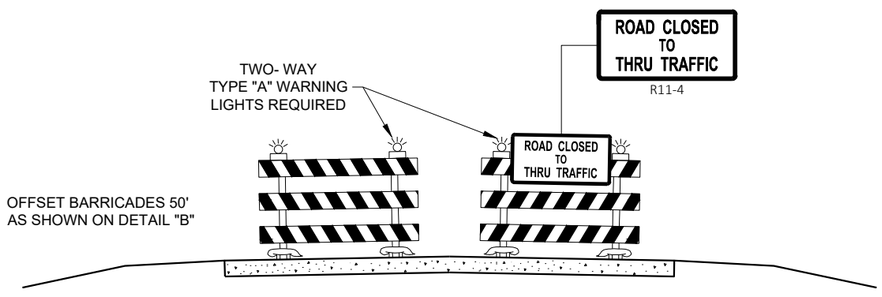
APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C02 - 07a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

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

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA

6

SDD 15C02 - 07b

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

500' AT 25-40 MPH
1000' AT 45+ MPH

500'

DETOUR EAST XX *
D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

M4-8a END DETOUR WEST XX *

DETOUR EAST XX / WEST XX

DETOUR ROUTE

WORK AREA

DETOUR EAST XX

WEST XX OR M4-9L DETOUR ** IF TOWN ROAD OR LOCAL STREET

500'

DETOUR NEXT X MILES * G20-51

DETOUR WEST XX * OR M4-59L DETOUR ** IF TOWN ROAD OR LOCAL STREET

MATCH POINT

** M4-59L DETOUR OR DETOUR EAST XX * IF TOWN ROAD OR LOCAL STREET

D1-X COMMUNITY NAME * (IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

** M4-9L DETOUR OR DETOUR EAST XX 500' IF TOWN ROAD OR LOCAL STREET

500' AT 25 - 40 MPH
1000' AT 45+ MPH

500'

M3-X 24" X 12"
M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

DETOUR EAST XX *

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

DETOUR WEST XX

DETOUR WEST XX M4-9R DETOUR ** OR IF TOWN ROAD OR LOCAL STREET

DETOUR WEST XX * M4-59R DETOUR ** OR IF TOWN ROAD OR LOCAL STREET

500'

DETOUR ROUTE

DETOUR EAST XX

DETOUR EAST XX

DETOUR EAST XX *

PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA)

D1-X COMMUNITY NAME *
(IF PRE-EXISTING SIGN, COVER ARROW PER SIGN PLATE A4-12)

500' AT 25 - 40 MPH
1000' AT 45+ MPH

DETOUR EAST XX *

EAST XX M3-X 24" X 12" M1-X 24" X 24"
DETOUR AHEAD
W20-2A
USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C02 - 07c

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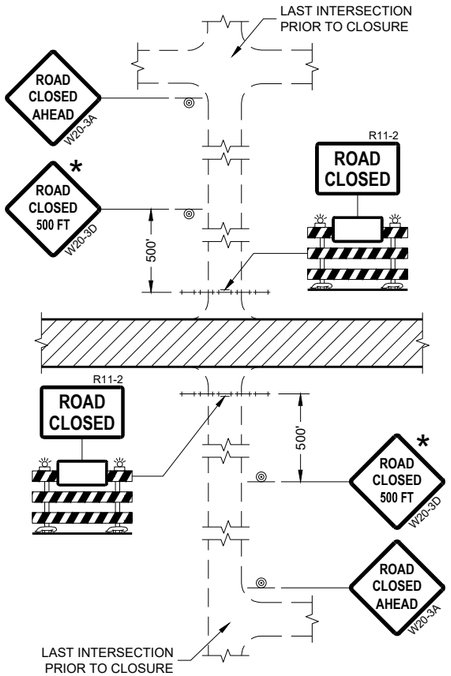
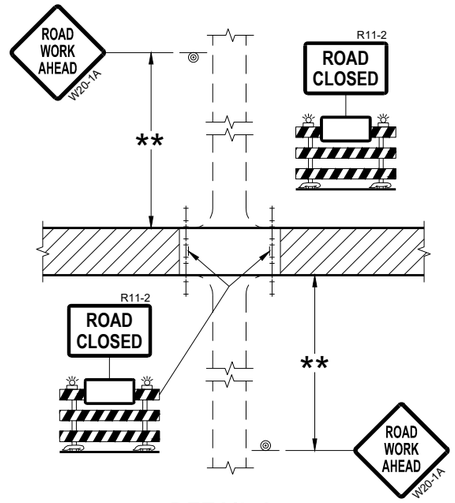
SDD 15C02 - 07c



DETAIL 1
(NO ACCESS TO PROJECT)



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

GENERAL NOTES

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

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

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

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

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

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

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

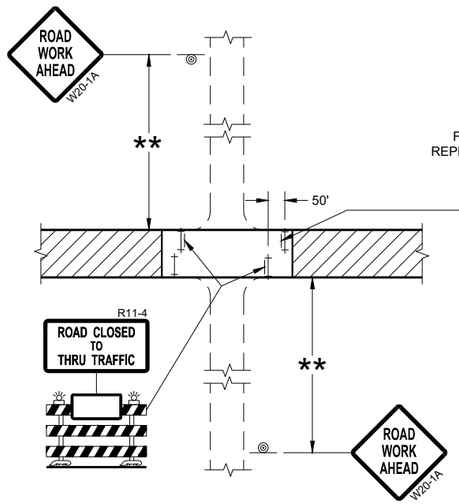
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

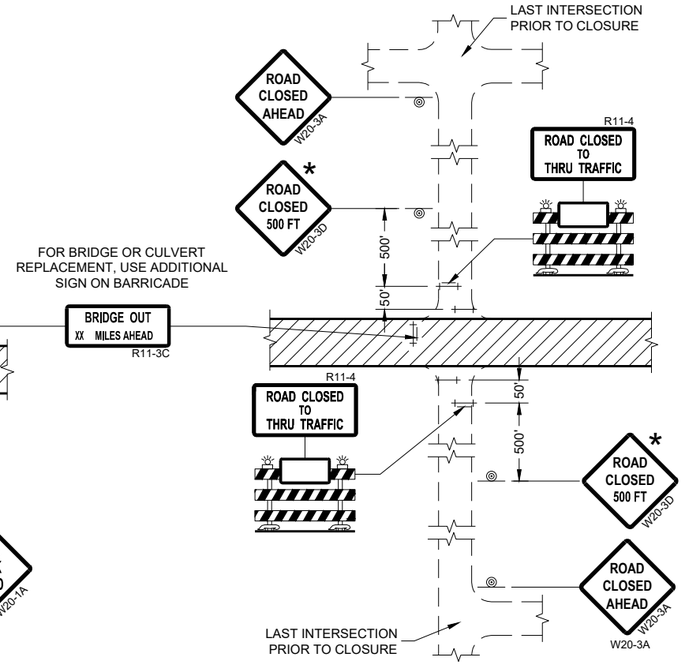
THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.





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

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

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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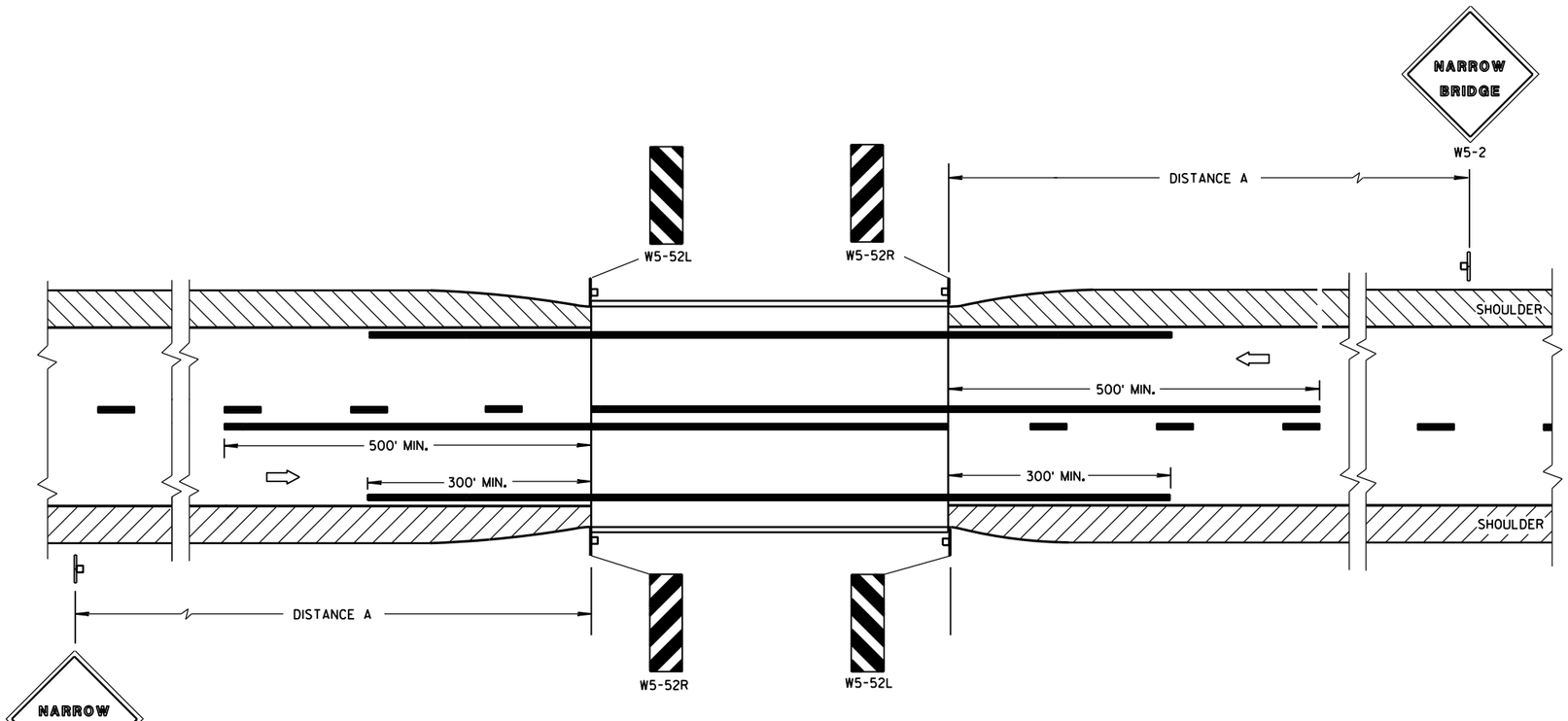
SDD 15C03 - 05

SDD 15C03 - 05



SITUATION 1

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

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'

GENERAL NOTES

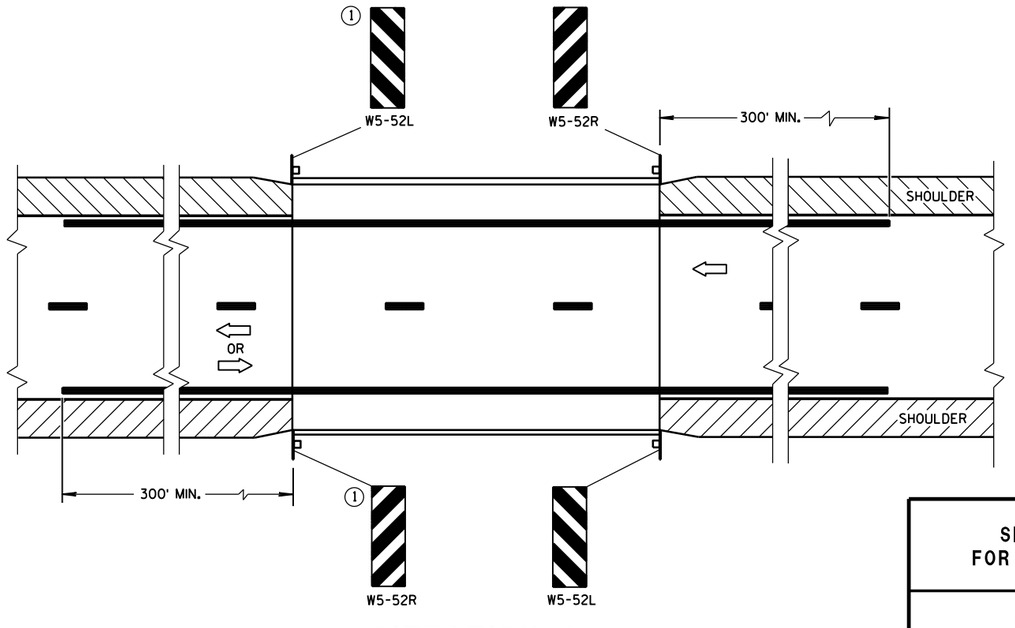
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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.

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET.

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

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S.D.D. 15 C 6-9

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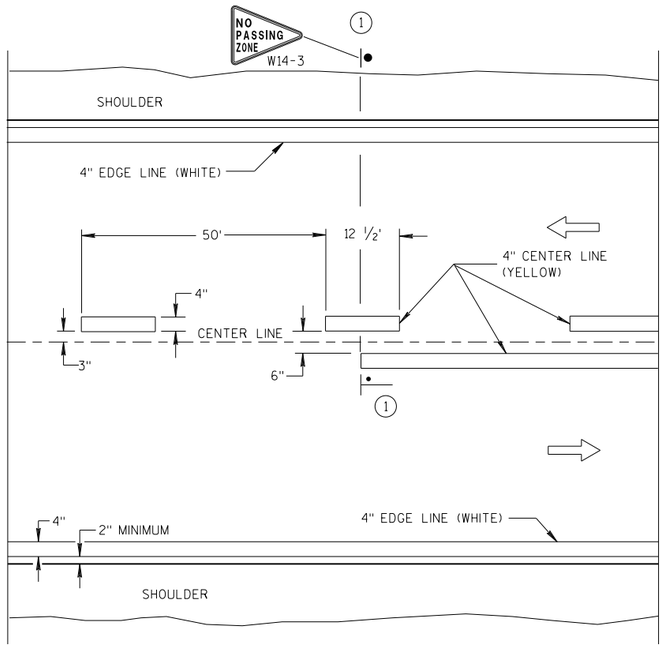
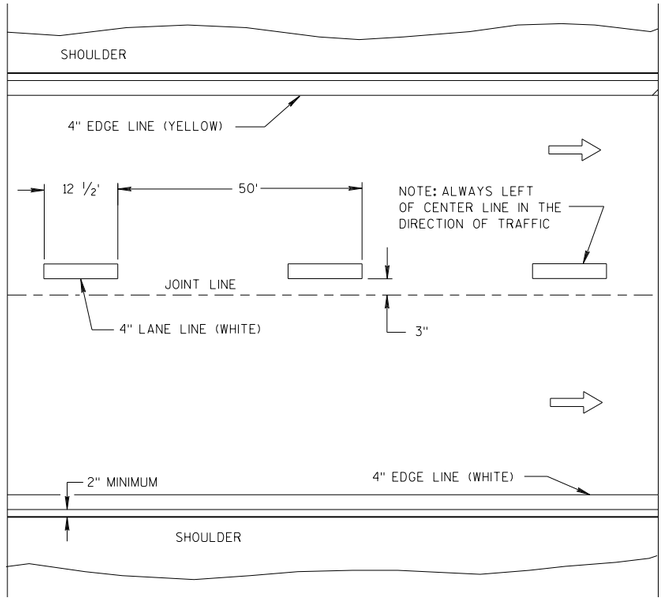
S.D.D. 15 C 6-9



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

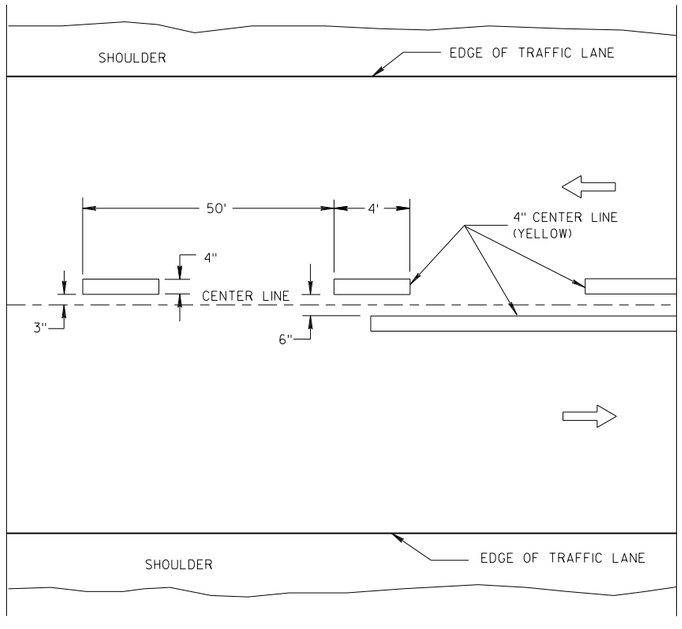
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

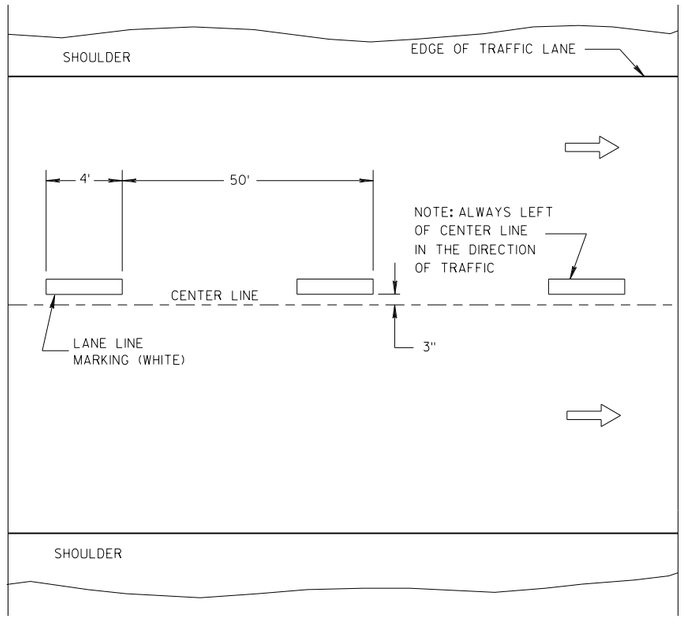
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 — DATE

/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER

FHWA

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S.D.D. 15 C 8-19a

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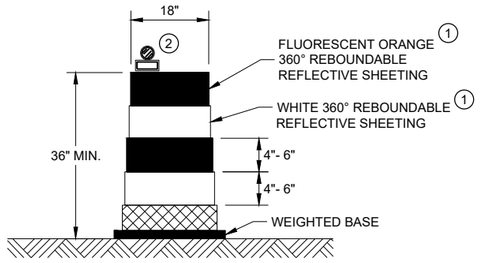
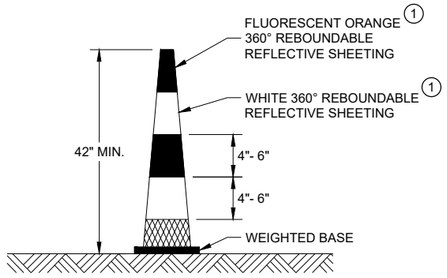
S.D.D. 15 C 8-19a

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.

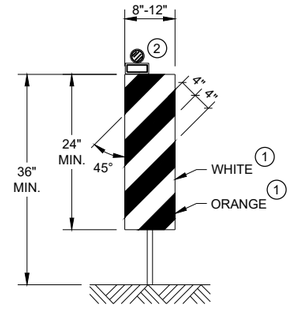


DRUM



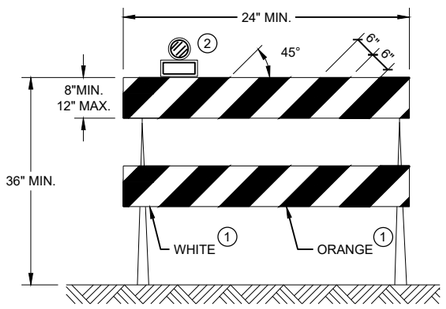
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



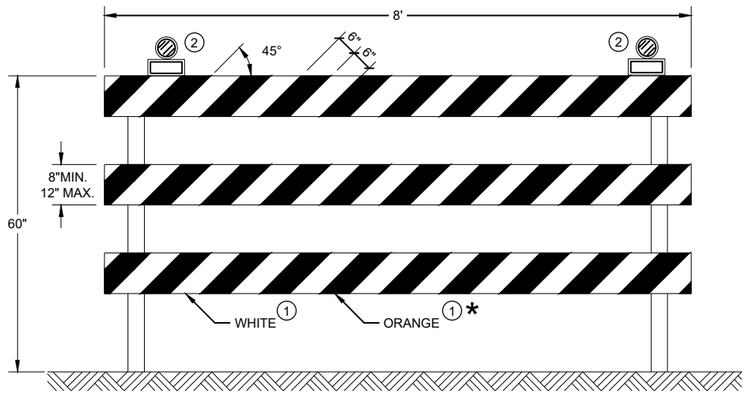
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 07b

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SDD 15C11 - 07b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

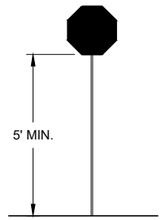
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



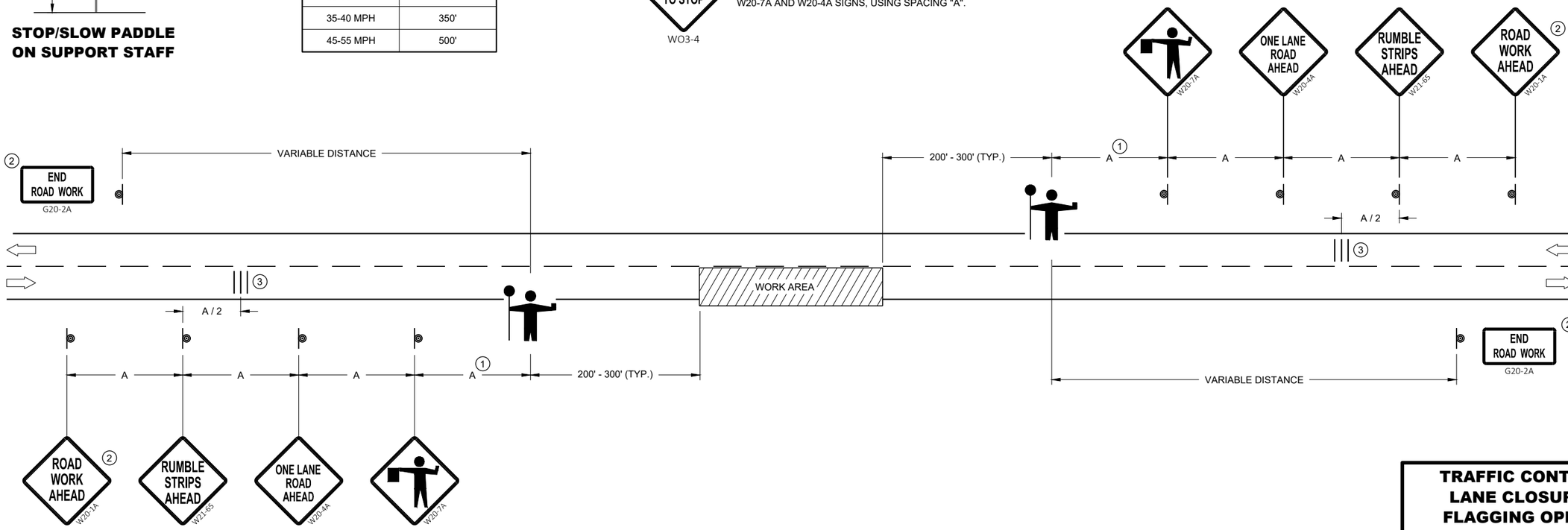
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

WO3-4

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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15C12 - 07

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)

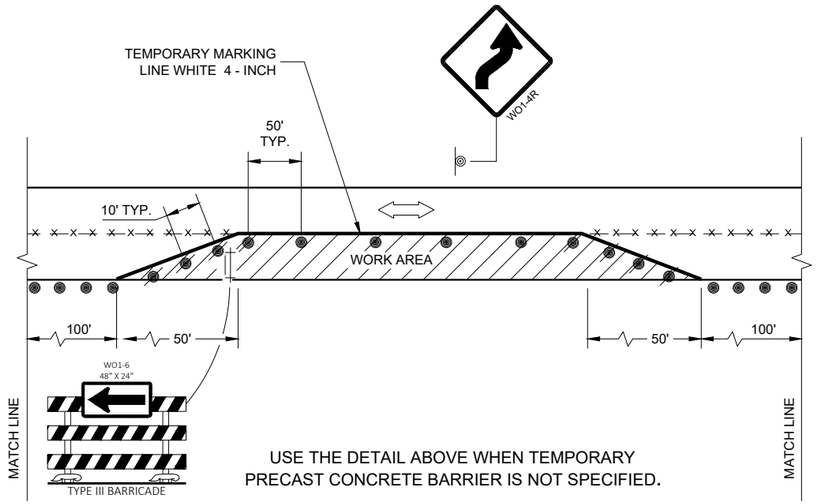
REMOVING PAVEMENT MARKING

DIRECTION OF TRAFFIC

ASPHALTIC PAVEMENT WIDENING

CONCRETE BARRIER TEMPORARY PRECAST

TEMPORARY SIGNAL. SEE SDD 09G02 FOR EXACT PLACEMENT



USE THE DETAIL ABOVE WHEN TEMPORARY PRECAST CONCRETE BARRIER IS NOT SPECIFIED.

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.

PLACE TEMPORARY PAVEMENT MARKING EDGELINE AND CENTERLINE AND REMOVE EXISTING PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS OR AS NOTED ON DETAIL.

(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.

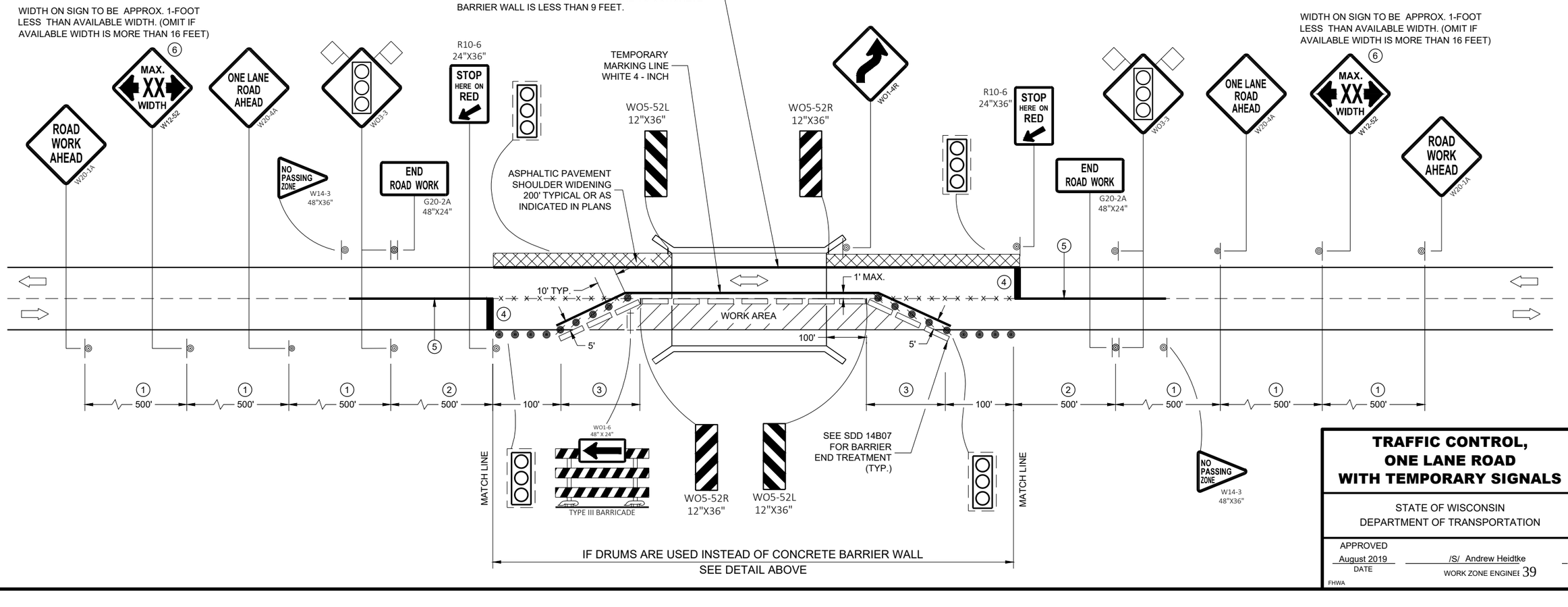
(2) USE 300 FOOT SPACING IF THE PRE - CONSTRUCTION REGULATORY SPEED IS 35 MPH OR LESS.

(3) DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.

(4) TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18 - INCH.

(5) 700 FOOT TEMPORARY MARKING LINE, DOUBLE YELLOW 4 - INCH . 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.



TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

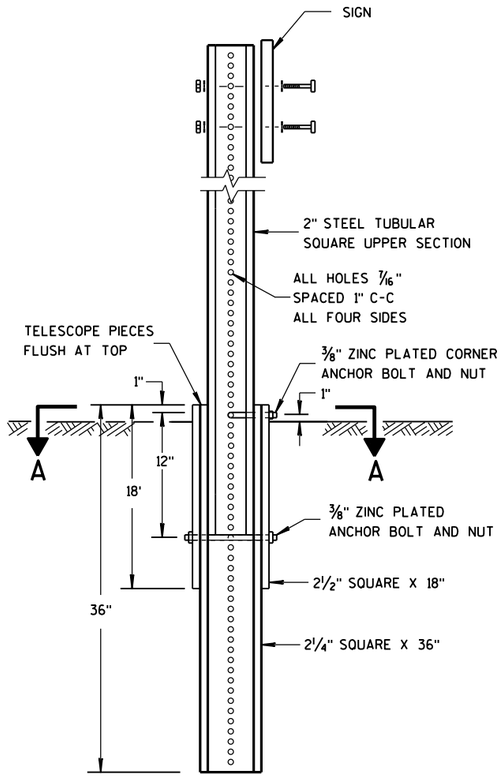
APPROVED
August 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

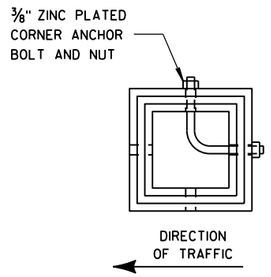
FHWA

SDD 15D33 - 06

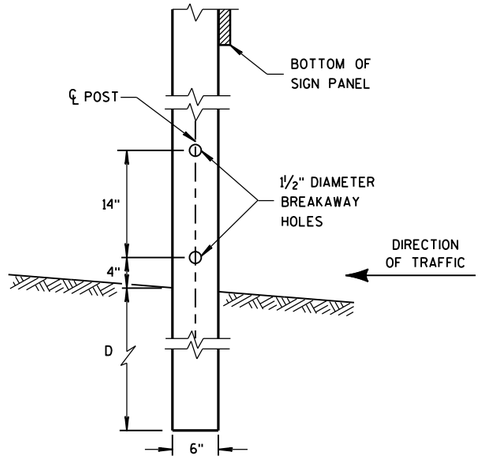
SDD 15D33 - 06



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



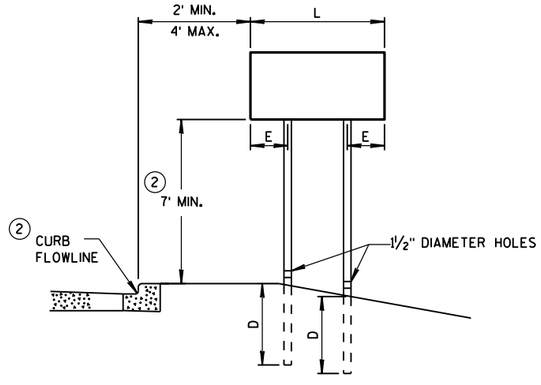
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

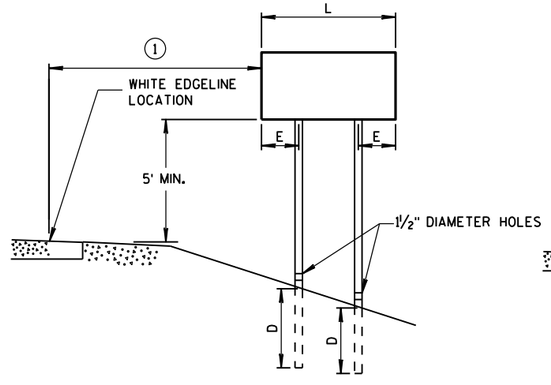
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

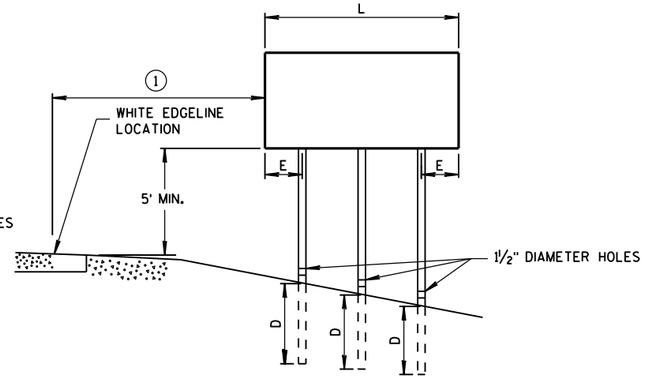
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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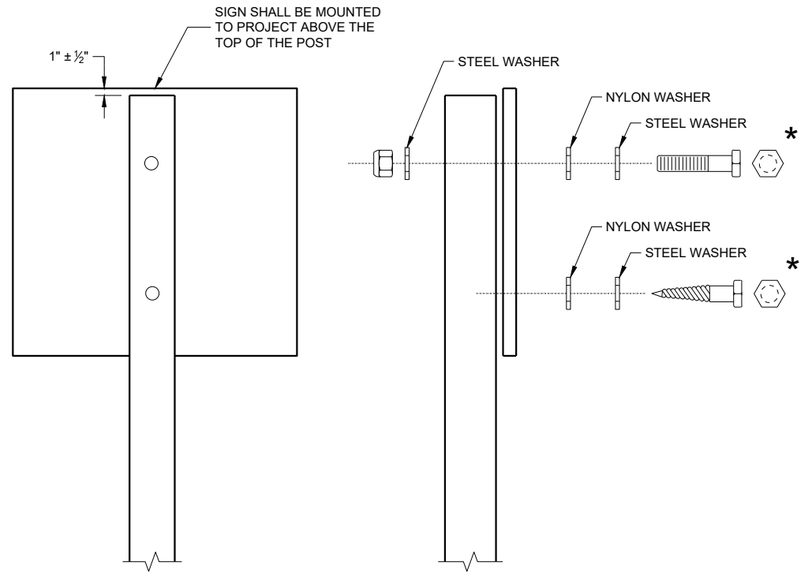
S.D.D. 15 D 38-2a



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POST (4" x 6")
LAG SCREWS - ⅜" x 3"
MACHINE BOLTS - 5/16" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ⅜" x 3 ¼" LENGTH W/NUTS
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH, GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x 1/16" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

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SDD 15D38 - 02b

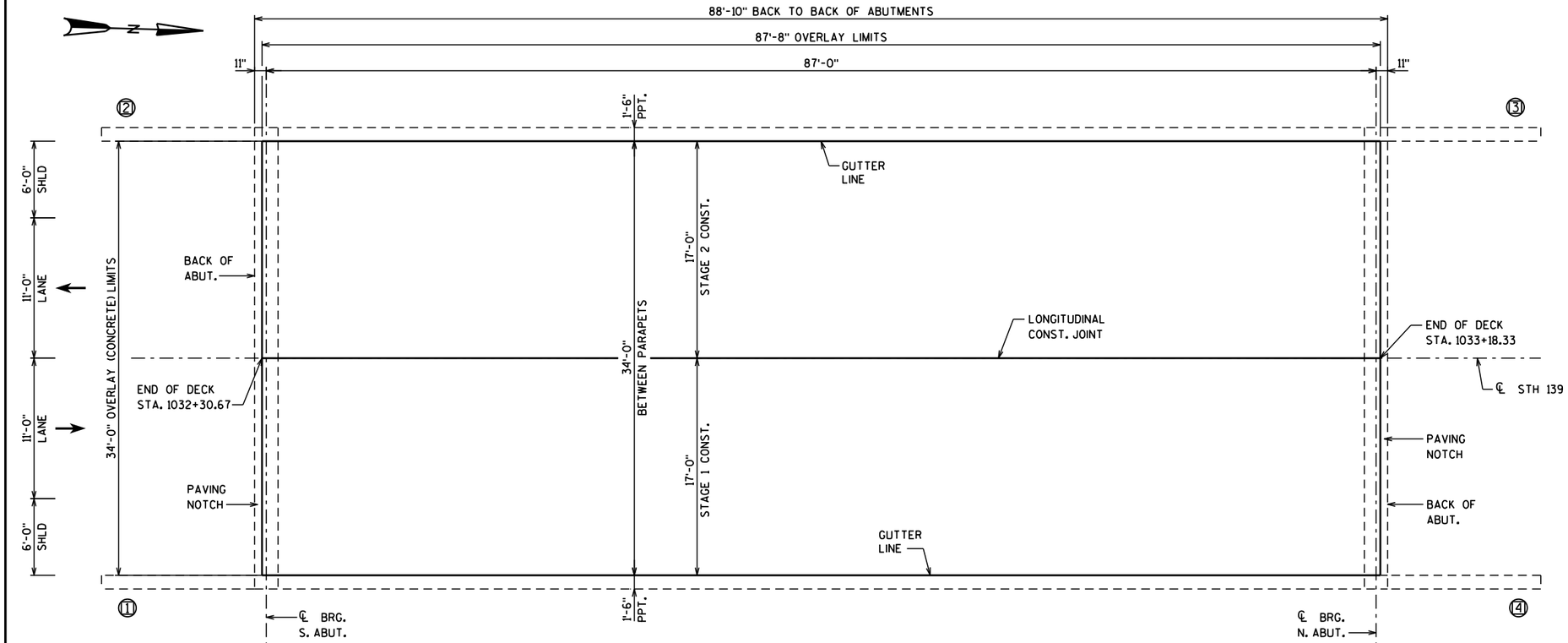
SDD15D38 - 02b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

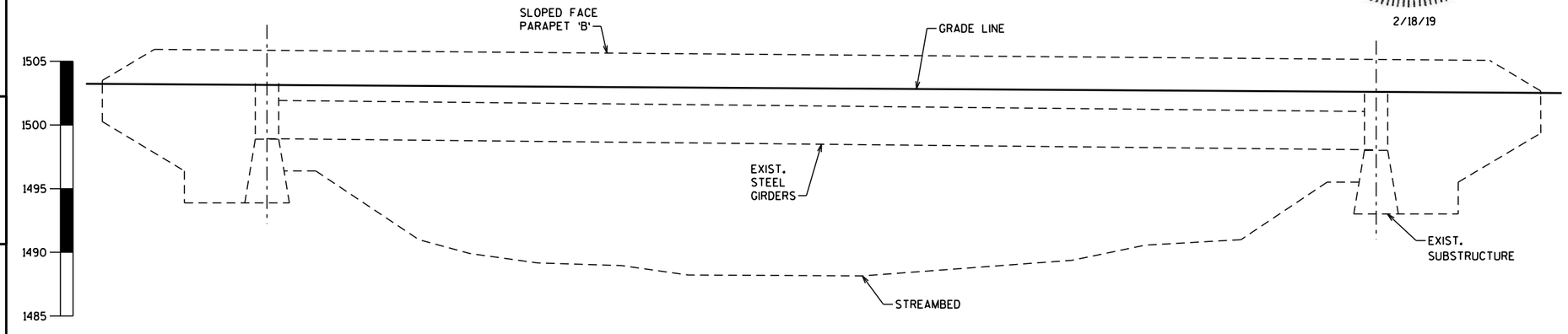
FHWA



PLAN

TOP OF DECK SHOWN

Ⓧ INDICATES WING NUMBER



ELEVATION

STATE PROJECT NUMBER

9110-10-61

DESIGN DATA

LIVE LOAD:

DESIGN LOADING	HS-20
INVENTORY RATING	HS-26
OPERATING RATING	HS-44
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV)	250 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY

OVERLAY DECKS — f'c = 4,000 P.S.I.

TRAFFIC DATA

ADT = 940 (2019)
1,100 (2039)

RDS = 60 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER

2/18/19

CONSULTANT CONTACT

KRISTOFER OLSON
OMNNI ASSOCIATES, INC.
(920) 735-6900

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

OMNNI ASSOCIATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 03/07/19
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-19-7

STH 139 OVER PINE RIVER

COUNTY	TOWN
FLORENCE	LONG LAKE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
BRE	KRO	BRE	KRO

GENERAL PLAN

SHEET 1 OF 2

42

8

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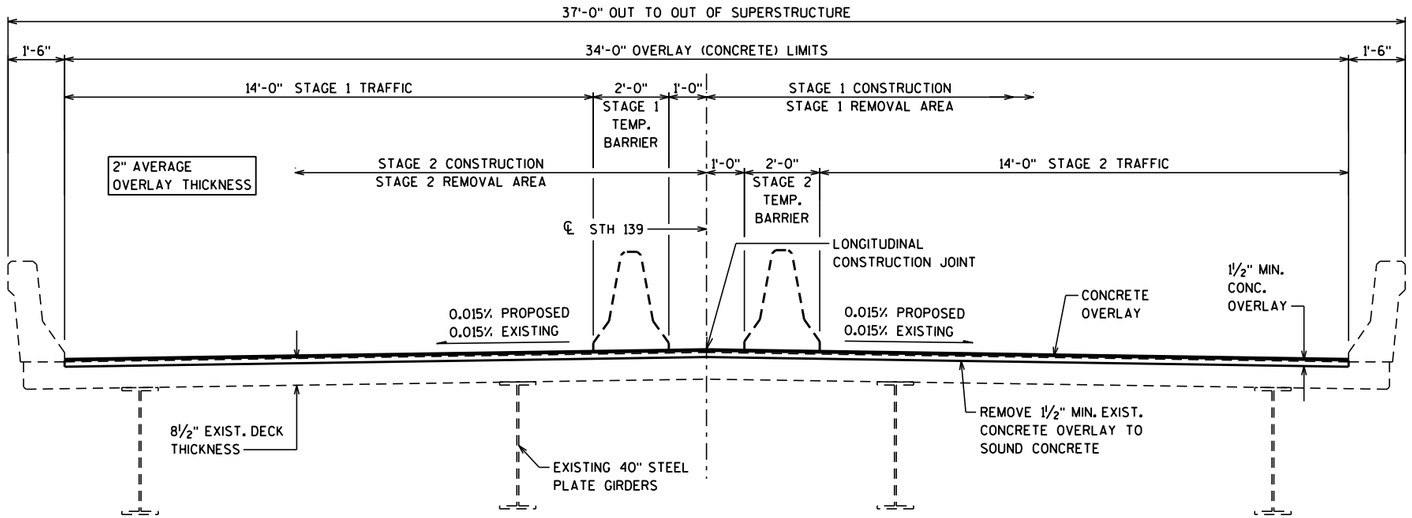
STATE PROJECT NUMBER
9110-10-61



CROSS SECTION THRU ROADWAY

LOOKING NORTH

NOTES

DRAWINGS SHALL NOT BE SCALED

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY.

SEAL OVERLAY CONSTRUCTION JOINTS ACCORDING TO SECTION 502.3.13.1 OF THE STANDARD SPECIFICATIONS. COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE ENTIRE FRONT FACES AND TOPS OF BOTH WING & DECK PARAPETS.

THE AVERAGE OVERLAY THICKNESS IS BASED ON THE MINIMUM OVERLAY THICKNESS PLUS ½-INCH TO ACCOUNT FOR VARIATIONS IN THE DECK SURFACE.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, CONCRETE SURFACE REPAIR, AND FULL-DEPTH DECK REPAIR AREAS ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION AND FULL-DEPTH DECK REPAIRS SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS".

ANY EXCAVATION REQUIRED TO COMPLETE THE OVERLAY AT THE ABUTMENTS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER SURFACE PREPARATION. EXPECTED AVERAGE OVERLAY THICKNESS IS 2" (OR AS GIVEN ON THE PLANS). IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

REMOVAL OF THE EXISTING CONCRETE OVERLAY SHALL BE INCLUDED IN THE BID ITEM "REMOVING CONCRETE MASONRY DECK OVERLAY".

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
502.3200	PROTECTIVE SURFACE TREATMENT	SY	332
502.3210	PIGMENTED SURFACE SEALER	SY	88
509.0301	PREPARATION DECKS TYPE 1	SY	36
509.0302	PREPARATION DECKS TYPE 2	SY	18
509.0505.S	CLEANING DECKS TO REAPPLY CONCRETE MASONRY OVERLAY	SY	332
509.1500	CONCRETE SURFACE REPAIR	SF	14
509.2000	FULL-DEPTH DECK REPAIR	SY	1
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	21
509.9005.S	REMOVING CONCRETE MASONRY DECK OVERLAY B-19-7	SY	332
509.9050.S	CLEANING PARAPETS	LF	226

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-19-7

DRAWN BY BRE | PLANS CK'D. KRO

CROSS SECTION & QUANTITIES

SHEET 2 OF 2

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Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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