

WIS

PROJECT ID:  
WITH: N/A

6626-01-70

COUNTY:

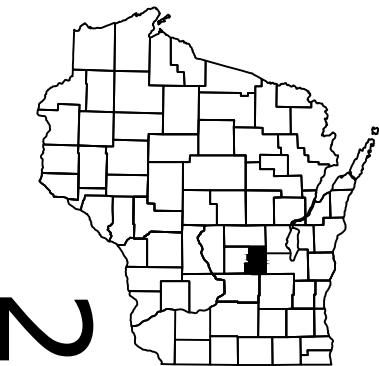
GREEN LAKE

JANUARY 2026

ORDER OF SHEETS

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

TOTAL SHEETS = 84



DESIGN DESIGNATION 6626-01-00

A.A.D.T.	2026	=	1620
A.A.D.T.	2046	=	1703
D.H.V.		=	492
D.D.		=	60 / 40
T.		=	7.7 %
DESIGN SPEED		=	30 MPH
ESALS		=	230,000

CONVENTIONAL SYMBOLS

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

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

# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

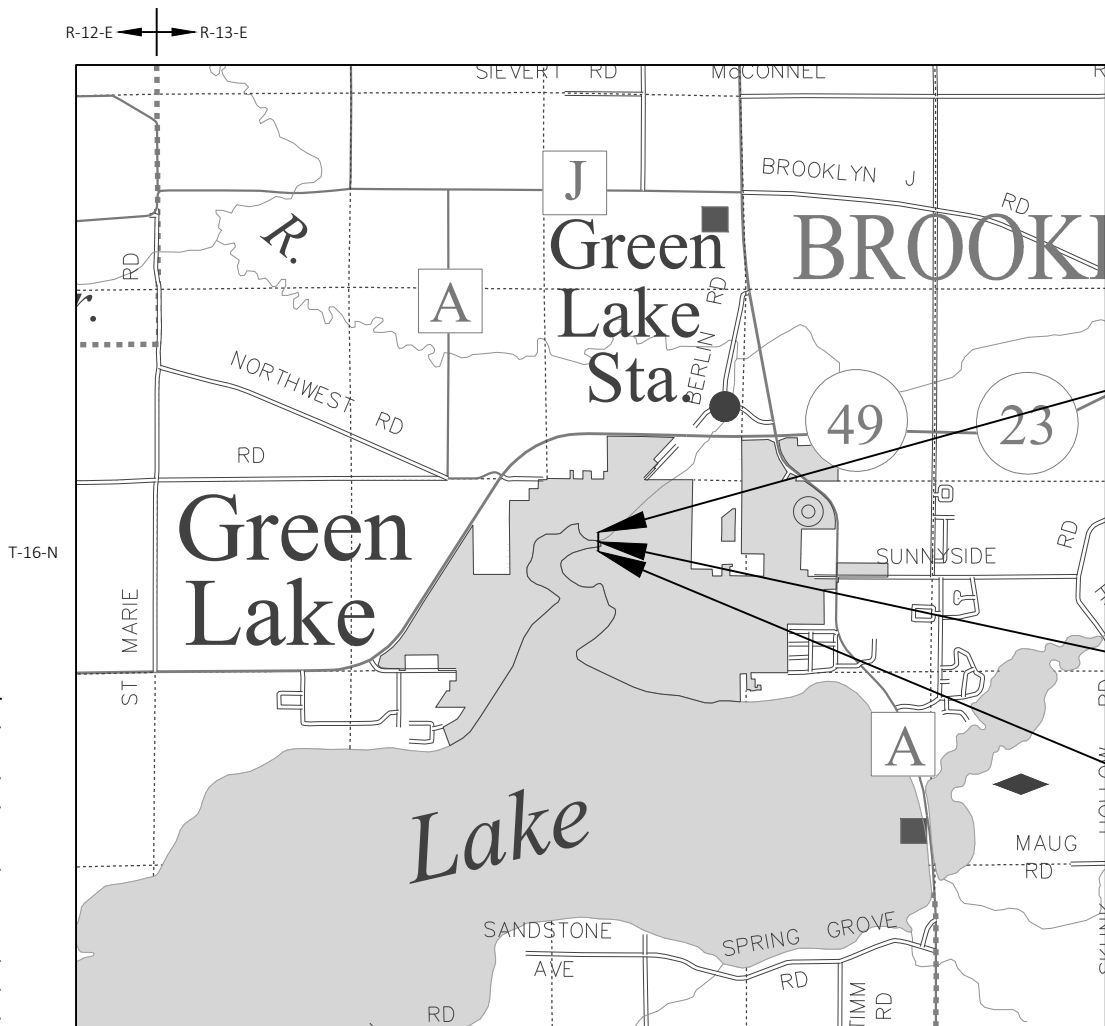
## C GREEN LAKE, MILL STREET

PUCHYAN RIVER BRIDGE, B-24-0046

LOC STR

GREEN LAKE COUNTY

STATE PROJECT NUMBER
6626-01-70



TOTAL NET LENGTH OF CENTERLINE = 0.031 MI

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

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

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6626-01-70	WISC 2026150	1

ACCEPTED FOR

CITY OF GREEN LAKE

7.28.25  
Date  
Mayor  
(Signature and Title of Official)

ORIGINAL PLANS PREPARED BY

**WESTBROOK**  
Associated Engineers, Inc.  
619 EAST HOXIE STREET  
P.O. BOX 429  
SPRING GREEN, WISCONSIN 53588  
PHONE (608) 588-7866  
FAX (608) 588-7954



DATE: 7/17/25  
(Professional Engineer Signature)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	WESTBROOK ASSOCIATED ENGINEERS, INC.
Designer	WESTBROOK ASSOCIATED ENGINEERS, INC.
Project Manager	JASON SCHAEFFER
Regional Examiner	NORTH CENTRAL REGION
Regional Supervisor	DAN ERVA, P.E.

APPROVED FOR THE DEPARTMENT  
DATE: 7/28/2025  
(Signature)

E

STANDARD ABBREVIATIONS

ABUT	ABUTMENT	LS	LUMP SUM
AC	ACRE	MGAL	ONE THOUSAND GALLONS
AGG	AGGREGATE	ML OR M/L	MATCH LINE
∠	ANGLE	NOM	NOMINAL
AADT	ANNUAL AVERAGE DAILY TRAFFIC	NC	NORMAL CROWN
AEW	APRON ENDWALL	NO	NUMBER
ASPH	ASPHALTIC	OD	OUTSIDE DIAMETER
BK	BACK	PAVT	PAVEMENT
BAD	BASE AGGREGATE DENSE	PC	POINT OF CURVATURE
BL OR B/L	BASE LINE	PI	POINT OF INTERSECTION
BM	BENCH MARK	PT	POINT OF TANGENCY
CL OR C/L	CENTER LINE	PCC	PORTLAND CEMENT CONCRETE
Δ	CENTRAL ANGLE OR DELTA	LB	POUND
CONC	CONCRETE	PSI	POUNDS PER SQUARE INCH
CONST	CONSTRUCTION	PE	PRIVATE ENTRANCE
CP	CONTROL POINT	PROJ	PROJECT
CO	COUNTY	PL	PROPERTY LINE
CY	CUBIC YARD	PRW	PROPOSED RIGHT OF WAY
D	DEGREE OF CURVE	R	RADIUS
DHV	DESIGN HOUR VOLUME	RL OR R/L	REFERENCE LINE
DIA	DIAMETER	REQD	REQUIRED
DD	DIRECTIONAL DISTRIBUTION	RT	RIGHT
DWY	DRIVEWAY	R/W	RIGHT OF WAY
EA	EACH	RD	ROAD
EL OR ELEV	ELEVATION	RDWY	ROADWAY
EMB	EMBANKMENT	SHLDR	SHOULDER
EAT	ENERGY ABSORBING TERMINAL	SW	SIDEWALK
ESALS	EQUIVALENT SINGLE AXLE LOADS	SPECS	SPECIFICATIONS
EXC	EXCAVATION	SF	SQUARE FEET
EBS	EXCAVATION BELOW SUBGRADE	SY	SQUARE YARD
EXIST	EXISTING	SDD	STANDARD DETAIL DRAWINGS
FERT	FERTILIZER	STA	STATION
FE	FIELD ENTRANCE	SE	SUPERELEVATION
FL OR F/L	FLOW LINE	SL OR S/L	SURVEY LINE
FT	FOOT	TEMP	TEMPORARY
CWT	HUNDRED WEIGHT	TLE	TEMPORARY LIMITED EASEMENT
IN DIA	INCH DIAMETER	T	TRUCKS (PERCENT OF)
ID	INSIDE DIAMETER	TYP	TYPICAL
INTERS	INTERSECTION	VAR	VARIABLE
INV	INVERT	VC	VERTICAL CURVE
JT	JOINT	VPC	VERTICAL POINT OF CURVATURE
LT	LEFT	VPI	VERTICAL POINT OF INTERSECTION
L	LENGTH OF CURVE	VPT	VERTICAL POINT OF TANGENCY
LF	LINEAR FOOT	W	WEST
LC	LONG CHORD OF CURVE		

WISCONSIN DNR LIAISON

MARTY DILLENBURG  
OSHKOSH SERVICE CENTER  
625 E COUNTY ROAD Y, SUITE 70  
OSHKOSH, WI 54901  
PHONE: (920) 410-7428  
EMAIL: Marty.Dillenburg@wisconsin.gov

CITY OF GREEN LAKE

RAYMOND RADIS  
MAYOR  
534 MILL STREET  
GREEN LAKE, WI 54941  
PHONE: (920) 294-6912  
EMAIL: mayor@ci.greenlake.wi.gov

DESIGN PROJECT MANAGER

JASON SCHAEFFER  
NORTH CENTRAL REGION  
510 HANSON LAKE RD  
RHINELANDER, WI 54501  
PHONE: (715) 421-7309  
EMAIL: Jason.Schaeffer@dot.wi.gov

CONSULTANT LIAISON

AARON PALMER, P.E.  
WESTBROOK ASSOCIATED ENGINEERS, INC.  
619 EAST HOXIE STREET  
SPRING GREEN, WI 53588  
PHONE: (608) 588-7866  
EMAIL: apalmer@westbrookeng.com

UTILITIES CONTACTS

ALLIANT ENERGY  
ELECTRIC  
CODY JACKSON  
1115 N DOUGLAS STREET  
RIPON, WI 54971  
PHONE: (920) 748-4013  
EMAIL: codyjackson@alliantenergy.com

CHARTER COMMUNICATIONS  
COMMUNICATIONS  
JONNY LEHOLM  
165 KNIGHTS WAY STE  
FOND DU LAC, WI 54935  
PHONE: (608) 286-8203  
EMAIL: Johnny.Leholm@charter.com

ALLIANT ENERGY  
GAS  
JESSE VOLMER  
1115 N DOUGLAS STREET  
RIPON, WI 54971  
PHONE: (920) 948-0442  
EMAIL: jessevolmer@alliantenergy.com

CITY OF GREEN LAKE  
WATER & SEWER  
JASON CARLEY  
534 MILL ST  
GREEN LAKE, WI 54941  
PHONE: (920) 294-6912  
EMAIL: JCarley@ci.greenlake.wi.gov

GENERAL NOTES

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

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

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

APPLY TACK COAT BETWEEN LAYERS OF HMA PAVEMENT AT A RATE OF 0.07 GAL/SY.

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

RIGHT OF WAY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE.

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

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

THE CONTRACTOR SHALL PREPARE AN EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND SUBMIT THE PLAN TO WISDOT AND WDNR FOR REVIEW AT LEAST 14 DAYS PRIOR TO THE PRECONSTRUCTION CONFERENCE.

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

APPLY SEED, EROSION MAT, AND FERTILIZER TO ALL DISTURBED AREAS WITHIN 7 WORKING DAYS AFTER GRADING WORK IS COMPLETE.

SLOPES STEEPER THAN 3:1 REQUIRE EROSION MAT.

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

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

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

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

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

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 0.252 ACRES  
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.227 ACRES

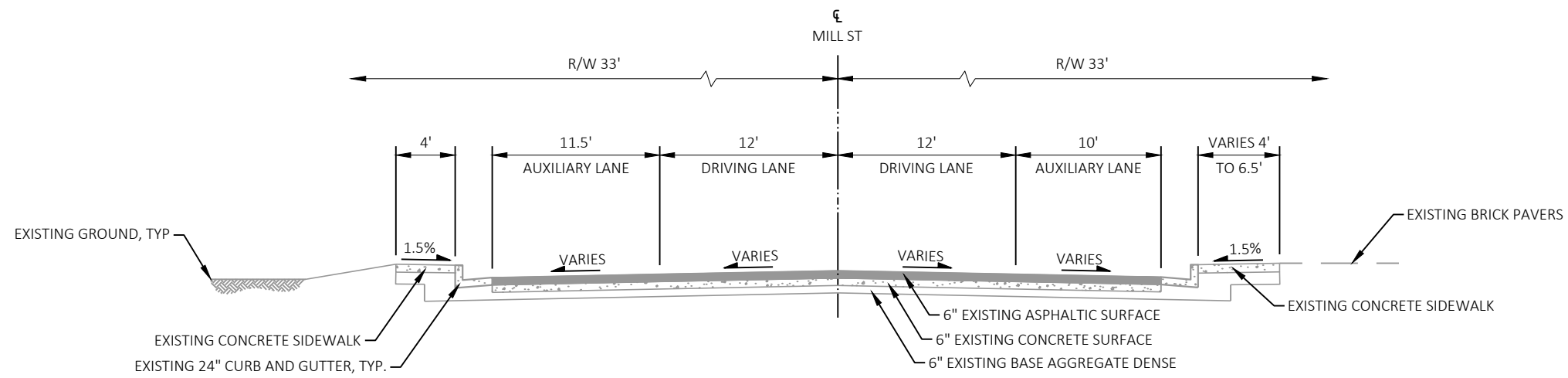
ORDER OF SECTION 2 DETAIL SHEETS

- GENERAL NOTES
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- PLAN DETAILS
- STORM SEWER
- DETOUR ROUTE
- TRAFFIC CONTROL PLAN
- ALIGNMENT DETAILS AND CONTROL POINTS

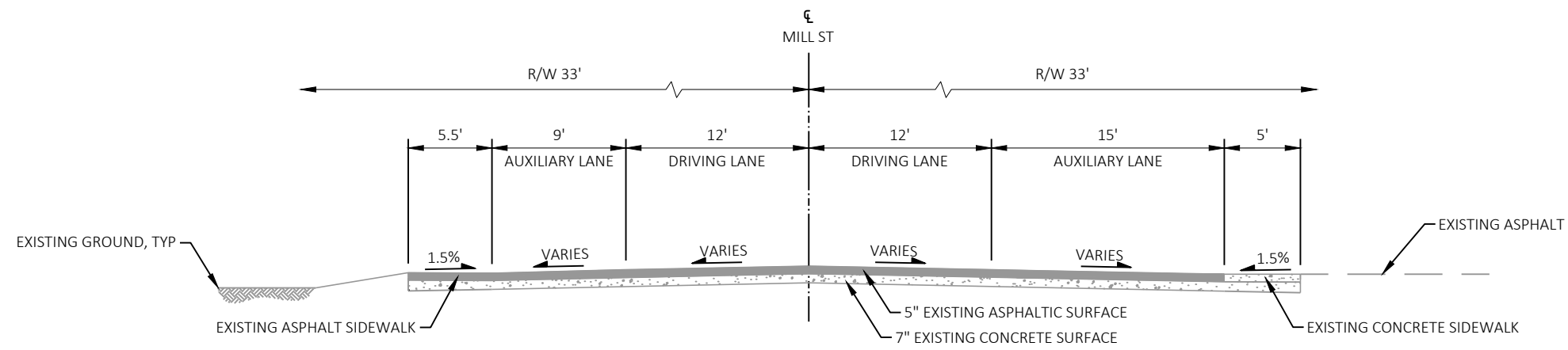
DIGGERSHOTLINE

Dial 811 or (800)242-8511

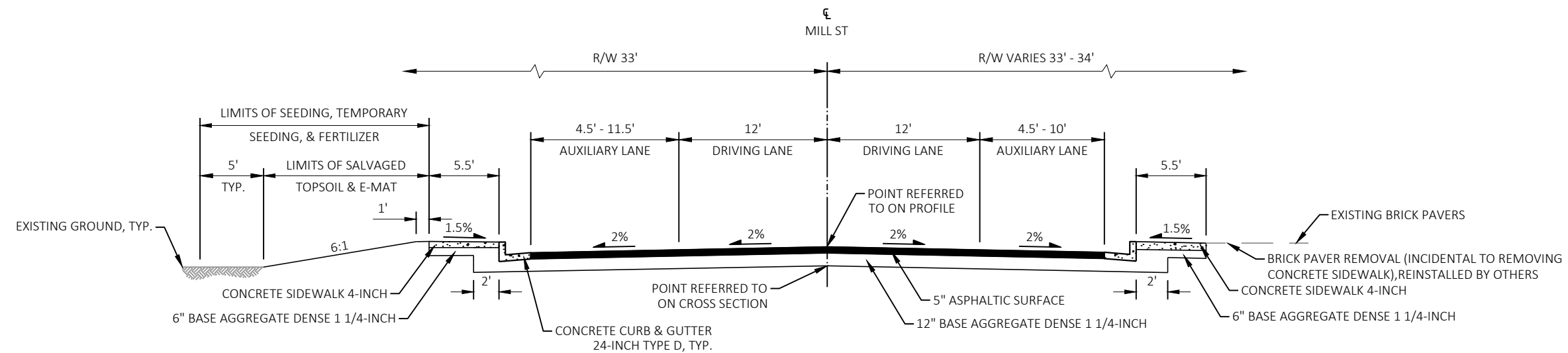
www.DiggersHotline.com



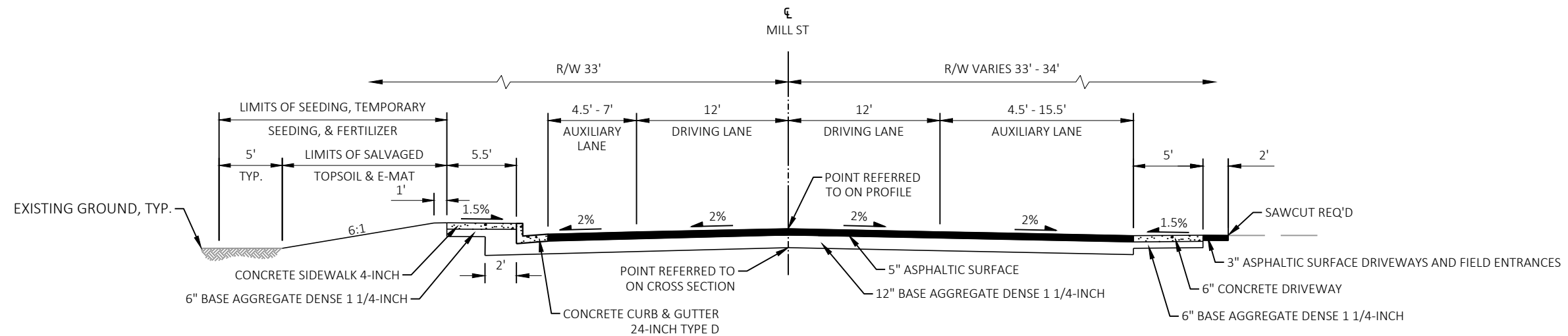
**EXISTING TYPICAL SECTION**  
STA 10+85.00 - STA 11+48.75



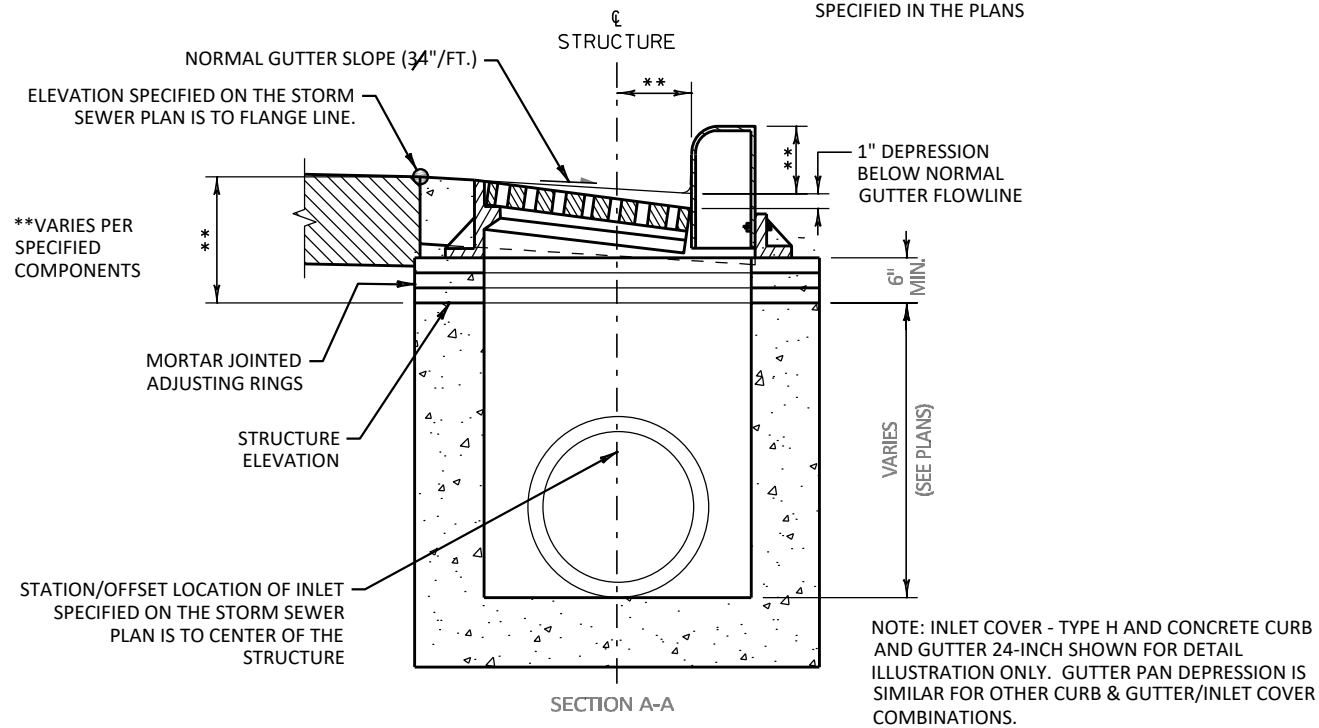
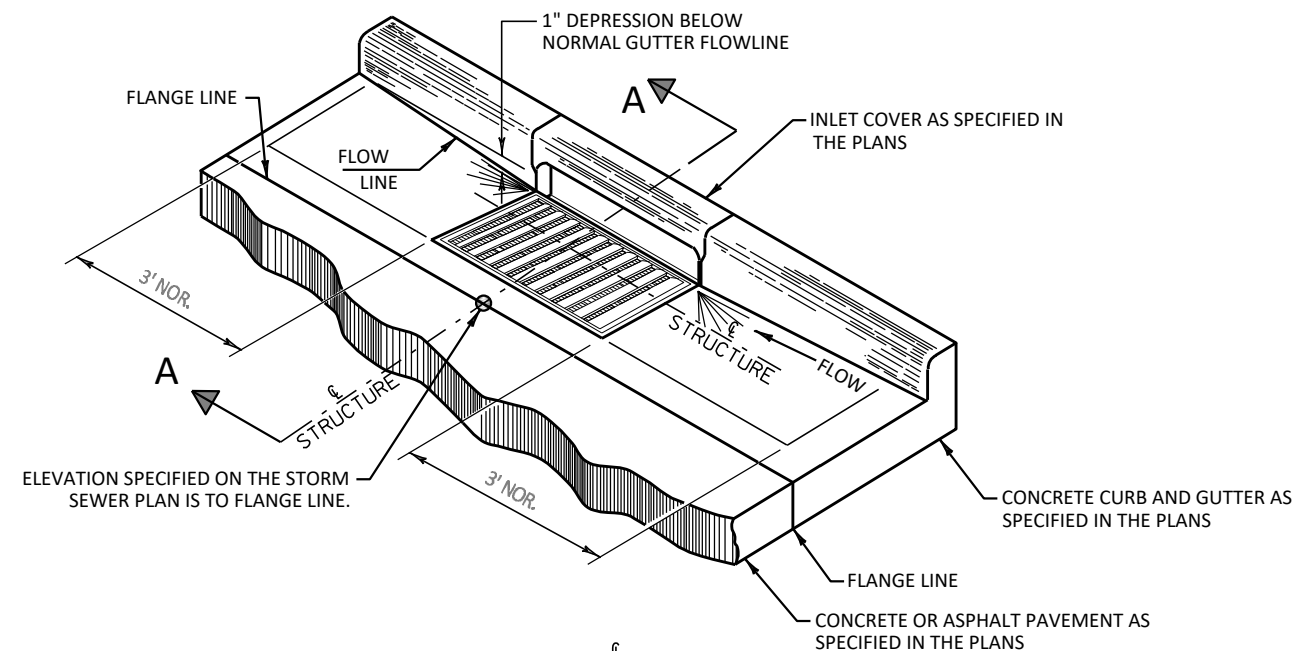
**EXISTING TYPICAL SECTION**  
STA 12+01.25 - STA 12+51.25



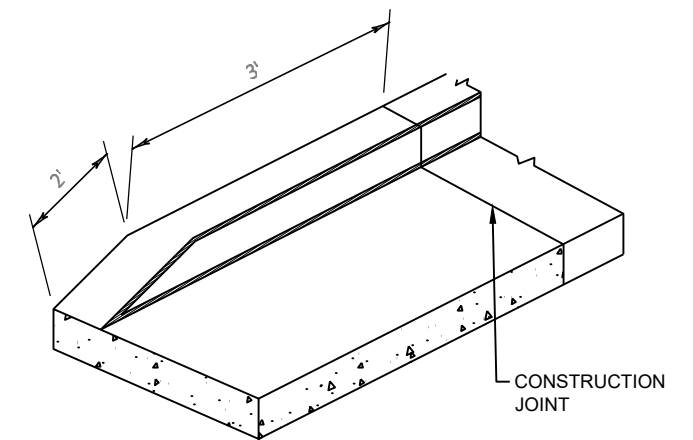
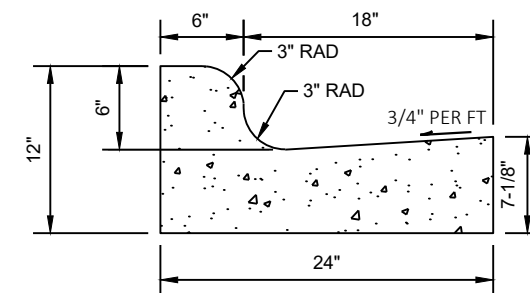
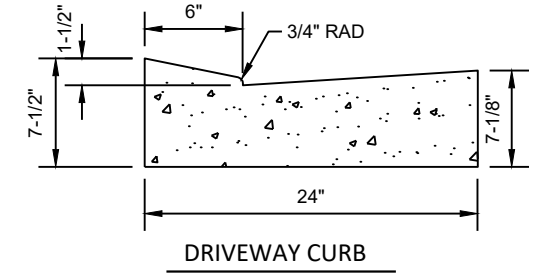
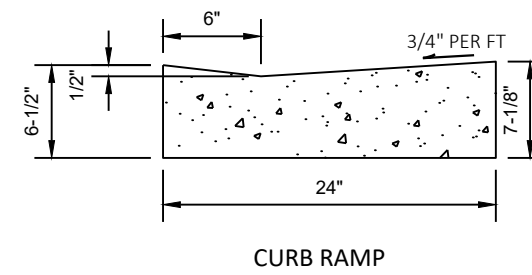
**FINISHED TYPICAL SECTION**  
STA 10+85.00 - STA 11+48.75

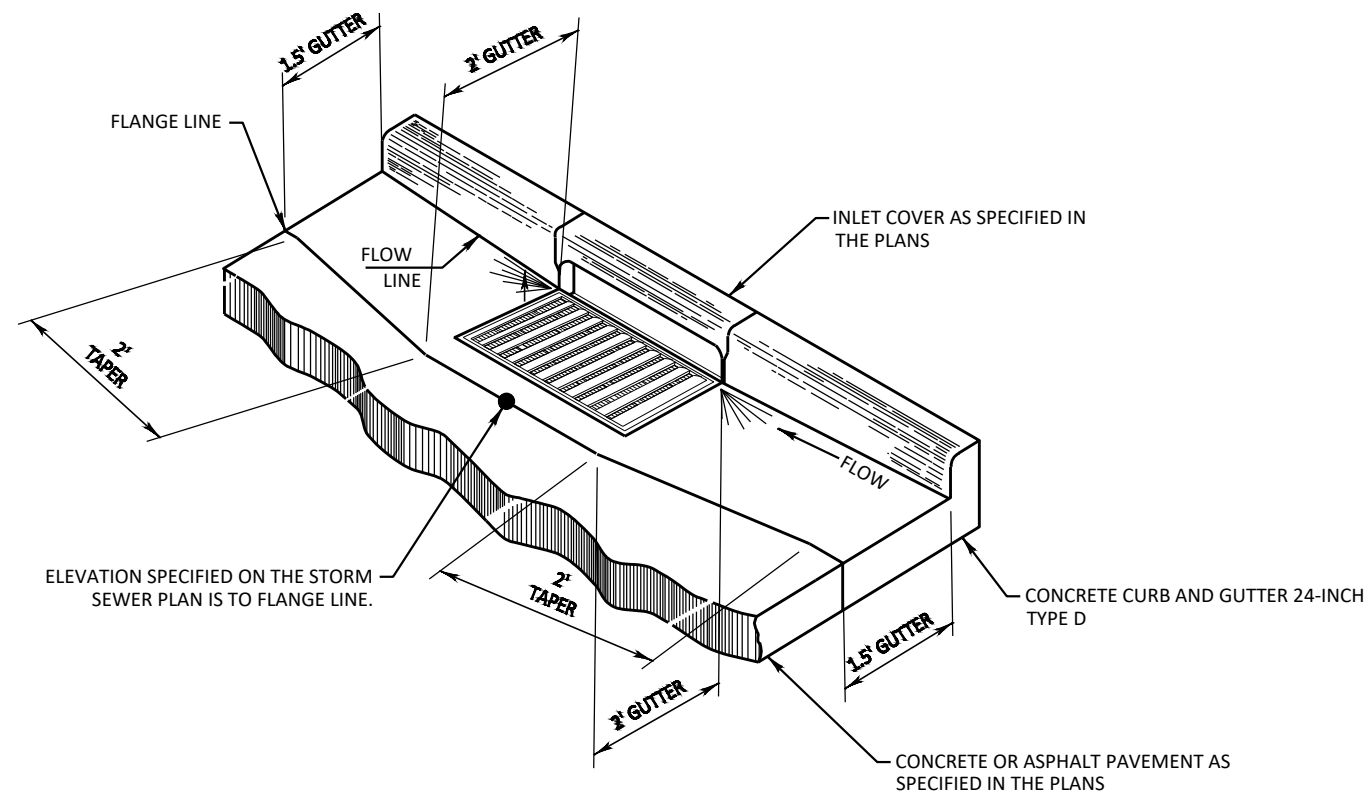


**FINISHED TYPICAL SECTION**  
STA 12+01.25 - STA 12+51.25

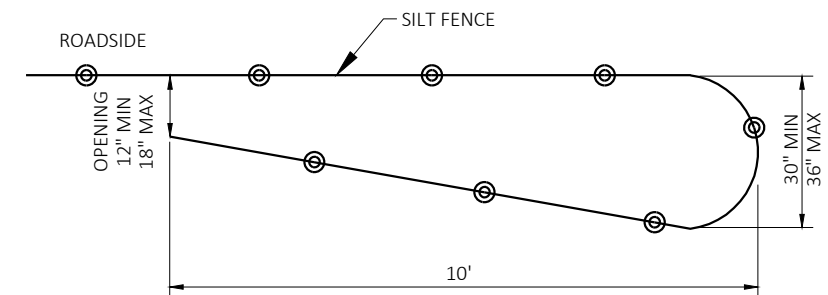


TYPICAL GUTTER PAN DEPRESSION AT INLETS



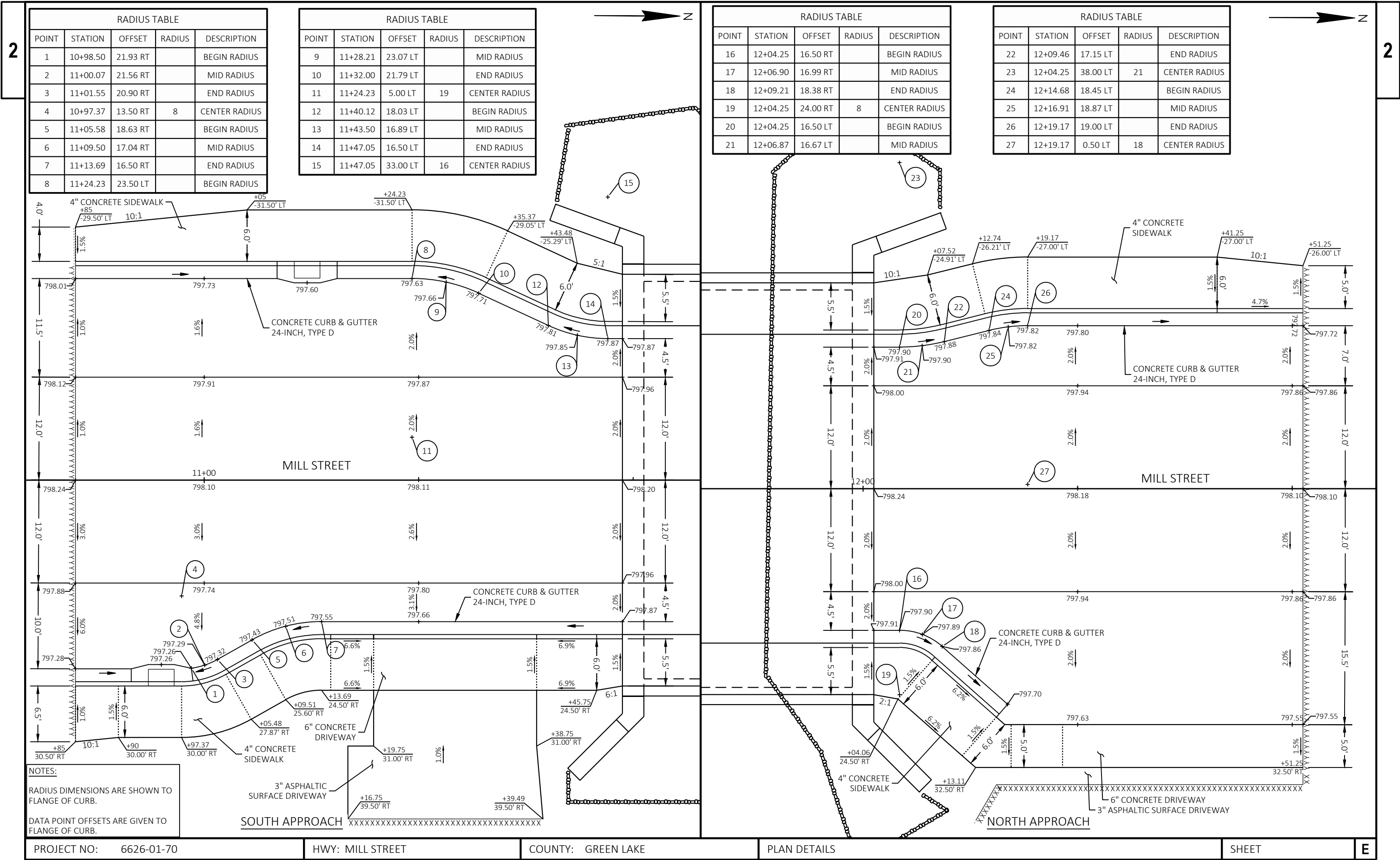


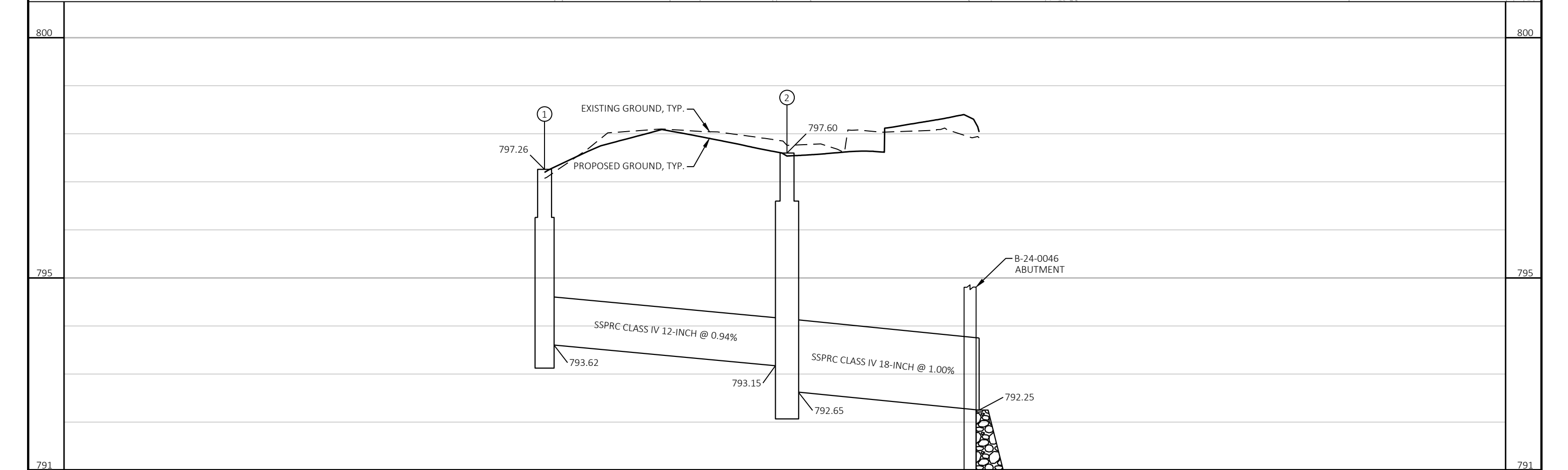
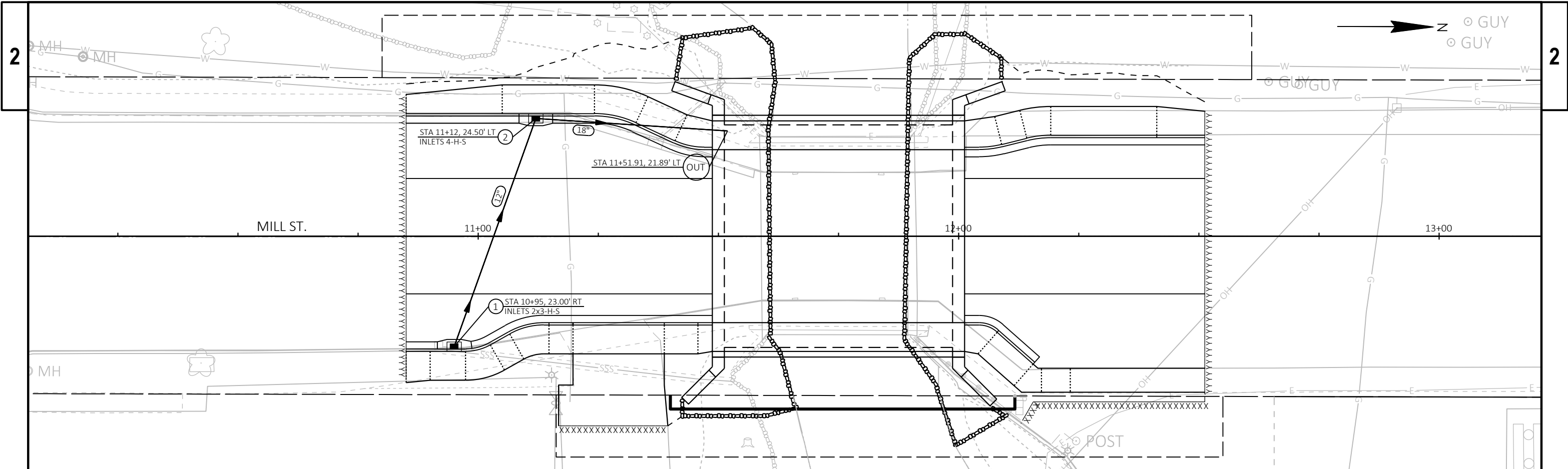
CURB AND GUTTER 24-INCH TYPE D TRANSITION AT INLETS



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

ANIMAL EXCLUSION FENCING TURN-AROUND







 DETOUR ROUTE

X SIGN NUMBER

 PROPOSED SIGN MOUNTED ON TEMPORARY POSTS

 BARRICADE TYPE III WITH SIGN

MB PCMS BOARD

 EXISTING SIGN

PCMS MESSAGE	
7 DAYS PRIOR TO CONSTRUCTION	
PHASE 1	MILL ST CLOSED
PHASE 2	STARTING XX/XX/XXXX

「SEE DETAIL 2」

~~SEE DETAIL 3~~

SEE DETAIL 4

— SEE TRAFFIC CONTROL  
PLAN FOR ADDITIONAL  
SIGNS AND BARRICADES.

SEE DETAIL 1

NOTES

- SEE THE FOLLOWING STANDARD DETAIL DRAWINGS FOR ADDITIONAL INFORMATION NOT SHOWN ON DETOUR SHEETS, INCLUDING SIGN CODES, SIGN SIZES AND SPACING REQUIREMENTS:
  - SDD 15C2-A "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
  - SDD 15C2-B "BARRICADES AND SIGNS FOR VARIOUS MAINLINE CLOSURES"
  - SDD 15C2-C "DETOUR SIGNING FOR MAINLINE CLOSURES"
- EXACT NUMBER, LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
- SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS, UNLESS OTHERWISE PROVIDED IN THE PLAN.
- SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER THE ITEM 'TRAFFIC CONTROL COVERING SIGNS.'
- USE SIGN SIZE 2 ON LOCAL HIGHWAYS AND RAMPS.
- IF THERE ARE EXISTING ROUTE MARKERS THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR SIGNS TO CORRESPOND WITH EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE.

1.1

1.2

PROJECT NO:	6626-01-70
-------------	------------

HWY: MILL STREET

COUNTY: GREEN LAKE

## DETOUR ROUTE

SHEET

1

## DETAIL 1

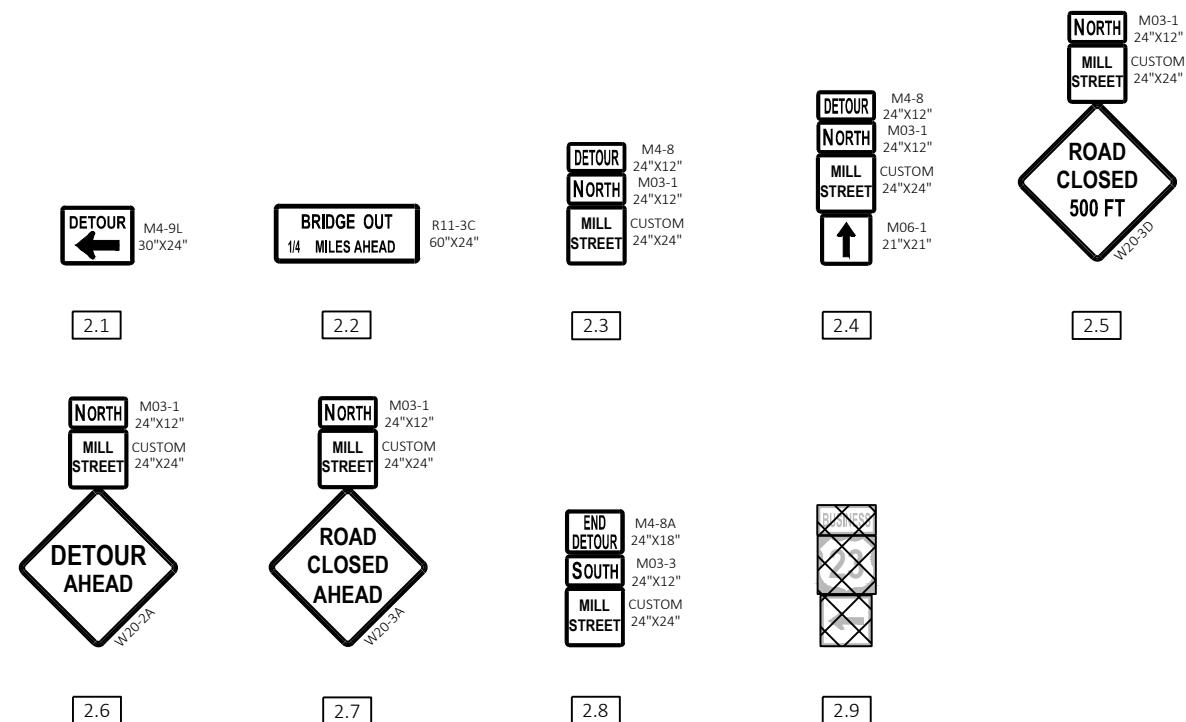


## LEGEND

- WORK ZONE
- DETOUR ROUTE
- SIGN NUMBER
- PROPOSED SIGN MOUNTED ON TEMPORARY POSTS
- BARRICADE TYPE III WITH SIGN
- PCMS BOARD
- EXISTING SIGN

## NOTES

- SEE THE FOLLOWING STANDARD DETAIL DRAWINGS FOR ADDITIONAL INFORMATION NOT SHOWN ON DETOUR SHEETS, INCLUDING SIGN CODES, SIGN SIZES AND SPACING REQUIREMENTS:
  - SDD 15C2-A "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
  - SDD 15C2-B "BARRICADES AND SIGNS FOR VARIOUS MAINLINE CLOSURES"
  - SDD 15C2-C "DETOUR SIGNING FOR MAINLINE CLOSURES"
- EXACT NUMBER, LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
- SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS, UNLESS OTHERWISE PROVIDED IN THE PLAN.
- SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER THE ITEM 'TRAFFIC CONTROL COVERING SIGNS.'
- USE SIGN SIZE 2 ON LOCAL HIGHWAYS AND RAMPS.
- IF THERE ARE EXISTING ROUTE MARKERS THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR SIGNS TO CORRESPOND WITH EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE.



PROJECT NO: 6626-01-70

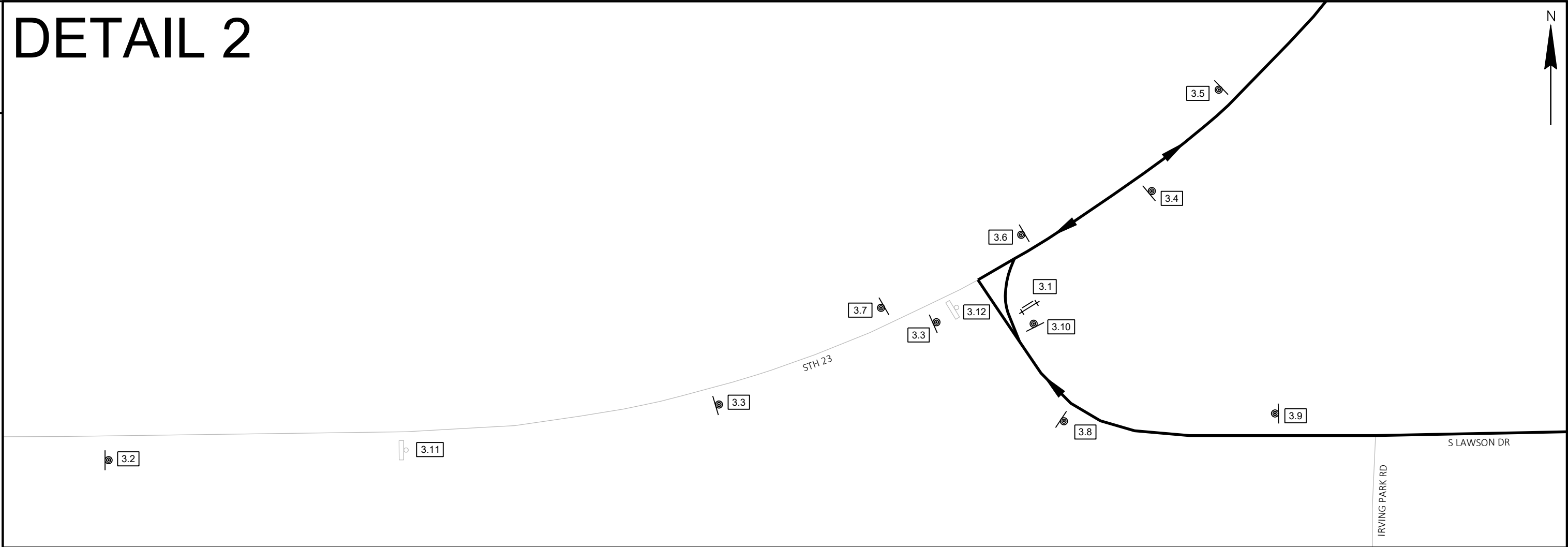
HWY: MILL STREET

COUNTY: GREEN LAKE

DETOUR ROUTE

SHEET

E



LEGEND

WORK ZONE

DETOUR ROUTE

X

SIGN NUMBER

PROPOSED SIGN MOUNTED ON TEMPORARY POSTS

BARRICADE TYPE III WITH SIGN

MB

PCMS BOARD

EXISTING SIGN

NOTES

-

SEE THE FOLLOWING STANDARD DETAIL DRAWINGS FOR ADDITIONAL INFORMATION NOT SHOWN ON DETOUR SHEETS, INCLUDING SIGN CODES, SIGN SIZES AND SPACING REQUIREMENTS:

- SDD 15C2-A "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
- SDD 15C2-B "BARRICADES AND SIGNS FOR VARIOUS MAINLINE CLOSURES"
- SDD 15C2-C "DETOUR SIGNING FOR MAINLINE CLOSURES"

-

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

-

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS, UNLESS OTHERWISE PROVIDED IN THE PLAN.

-

SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER THE ITEM 'TRAFFIC CONTROL COVERING SIGNS.'

-

USE SIGN SIZE 2 ON LOCAL HIGHWAYS AND RAMPS.

-

IF THERE ARE EXISTING ROUTE MARKERS THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR SIGNS TO CORRESPOND WITH EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE.

BRIDGE OUT

1 1/2 MILES AHEAD

MILL STREET

CUSTOM 24"x24"

3.1

3.7

DETOUR AHEAD

W20-2A

3.2

3.8

DETOUR NORTH

MILL STREET

UP

M03-1 24"x12"

CUSTOM 24"x24"

M06-1 21"x21"

3.3

3.9

DETOUR NORTH

MILL STREET

RIGHT

M4-8 24"x12"

M03-1 24"x12"

CUSTOM 24"x24"

M06-1R 21"x21"

3.10

DETOUR SOUTH

MILL STREET

LEFT

M4-8 24"x12"

M03-3 24"x12"

CUSTOM 24"x24"

M05-1L 21"x21"

3.11

DETOUR SOUTH

MILL STREET

LEFT

M4-8 24"x12"

M03-3 24"x12"

CUSTOM 24"x24"

M06-1 21"x21"

3.12

PROJECT NO: 6626-01-70

HWY: MILL STREET

COUNTY: GREEN LAKE

DETOUR ROUTE

SHEET E

FILE NAME : G:\00-PROJECT FILES\2024\24016 ID 6626-01-00 C GREEN LAKE - MILL STREET PUCHYAN RIVER BRIDGE B-24-0437\0-CAD\0-SHEETS\027001\_DT.DWG

LAYOUT NAME - 027003\_dt

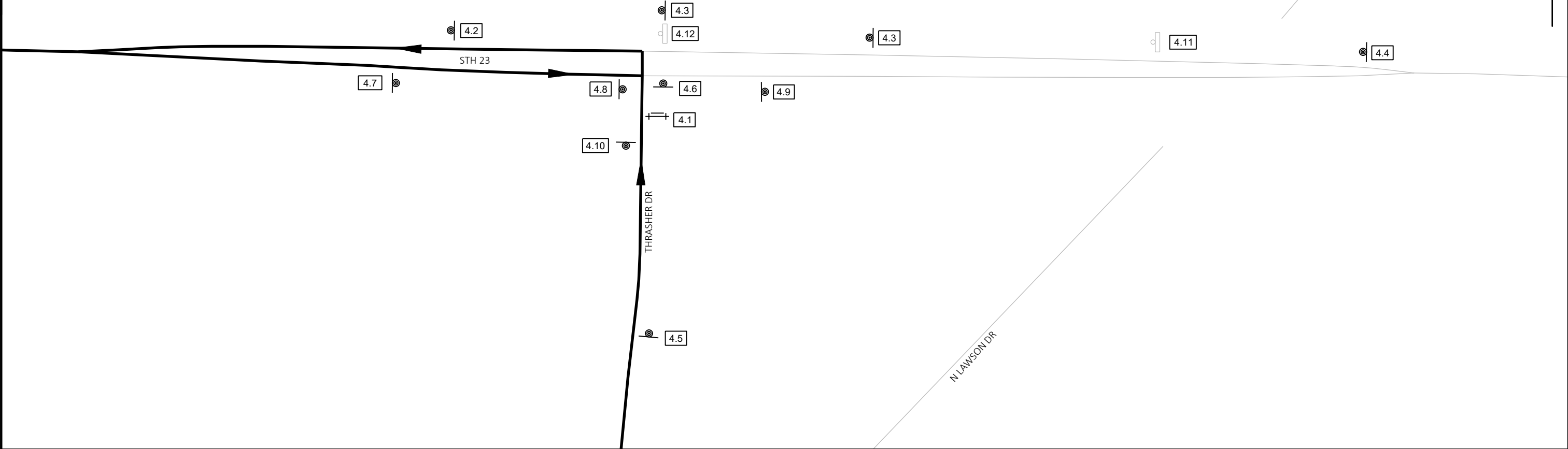
PLOT DATE : 2/27/2025 8:00 AM

PLOT BY : GAVIN WIPPERFURTH








PLOT NAME :

PLOT SCALE : 1 IN=200 FT

WISDOT/CADDs SHEET 42

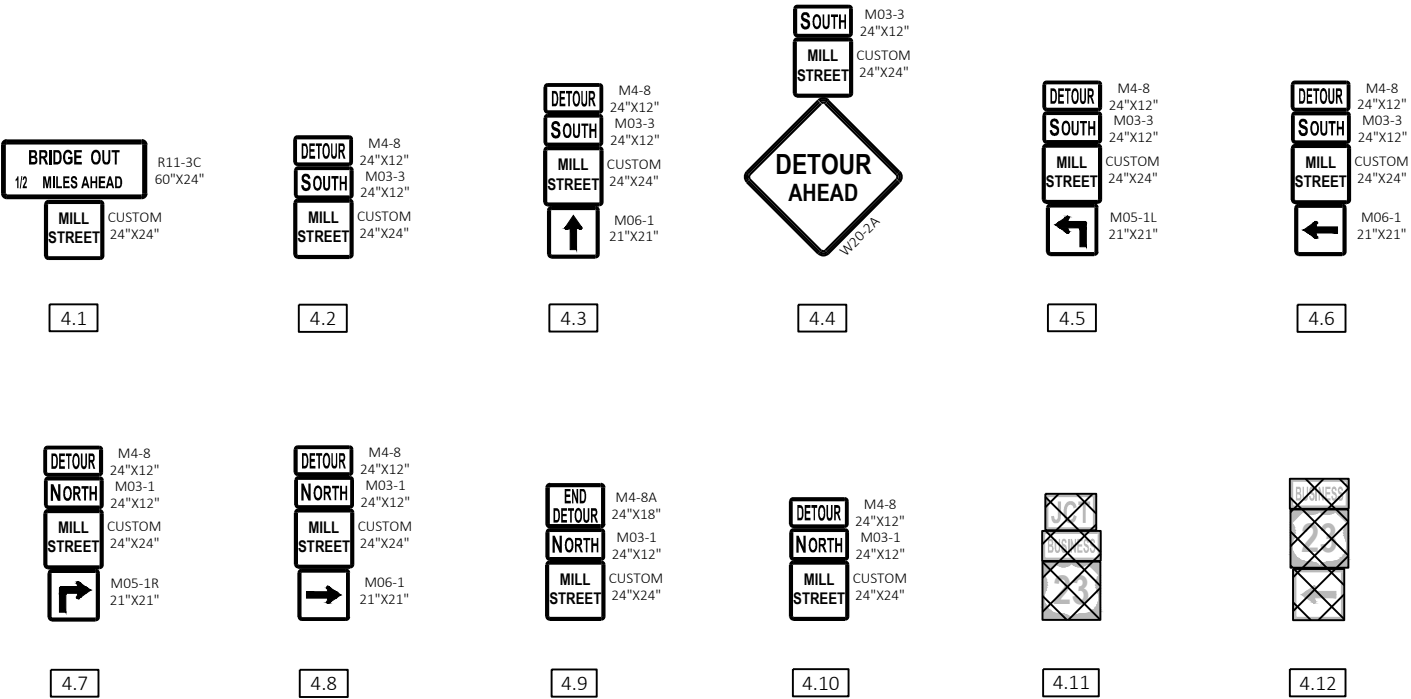


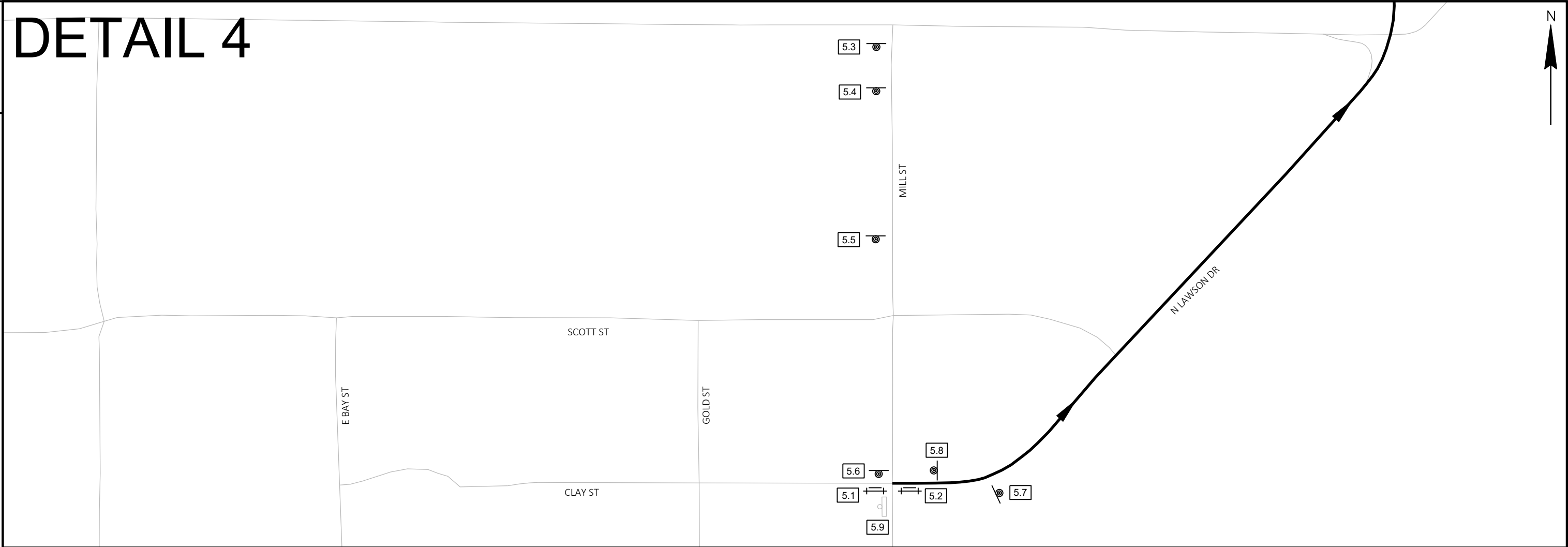
LEGEND

-  WORK ZONE
-  DETOUR ROUTE
-  SIGN NUMBER
-  PROPOSED SIGN MOUNTED ON TEMPORARY POSTS
-  BARRICADE TYPE III WITH SIGN
-  PCMS BOARD
-  EXISTING SIGN


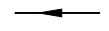





NOTES

- SEE THE FOLLOWING STANDARD DETAIL DRAWINGS FOR ADDITIONAL INFORMATION NOT SHOWN ON DETOUR SHEETS, INCLUDING SIGN CODES, SIGN SIZES AND SPACING REQUIREMENTS:
  - SDD 15C2-A "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
  - SDD 15C2-B "BARRICADES AND SIGNS FOR VARIOUS MAINLINE CLOSURES"
  - SDD 15C2-C "DETOUR SIGNING FOR MAINLINE CLOSURES"
- EXACT NUMBER, LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
- SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS, UNLESS OTHERWISE PROVIDED IN THE PLAN.
- SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER THE ITEM 'TRAFFIC CONTROL COVERING SIGNS.'
- USE SIGN SIZE 2 ON LOCAL HIGHWAYS AND RAMPS.
- IF THERE ARE EXISTING ROUTE MARKERS THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR SIGNS TO CORRESPOND WITH EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE.



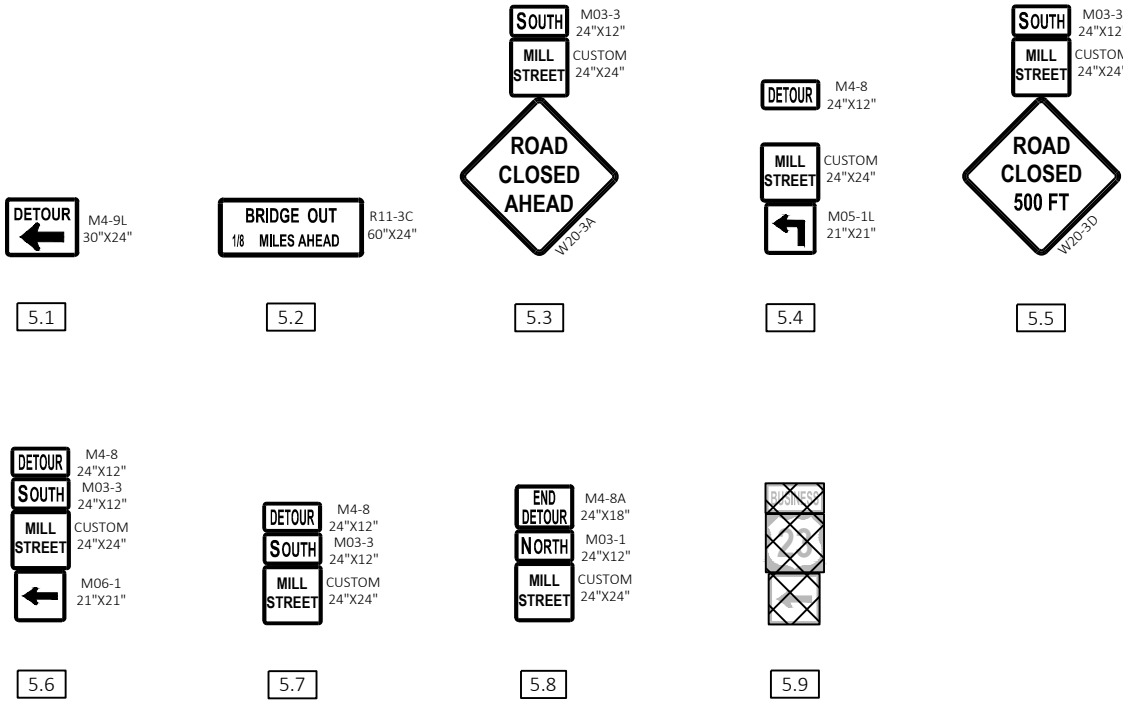


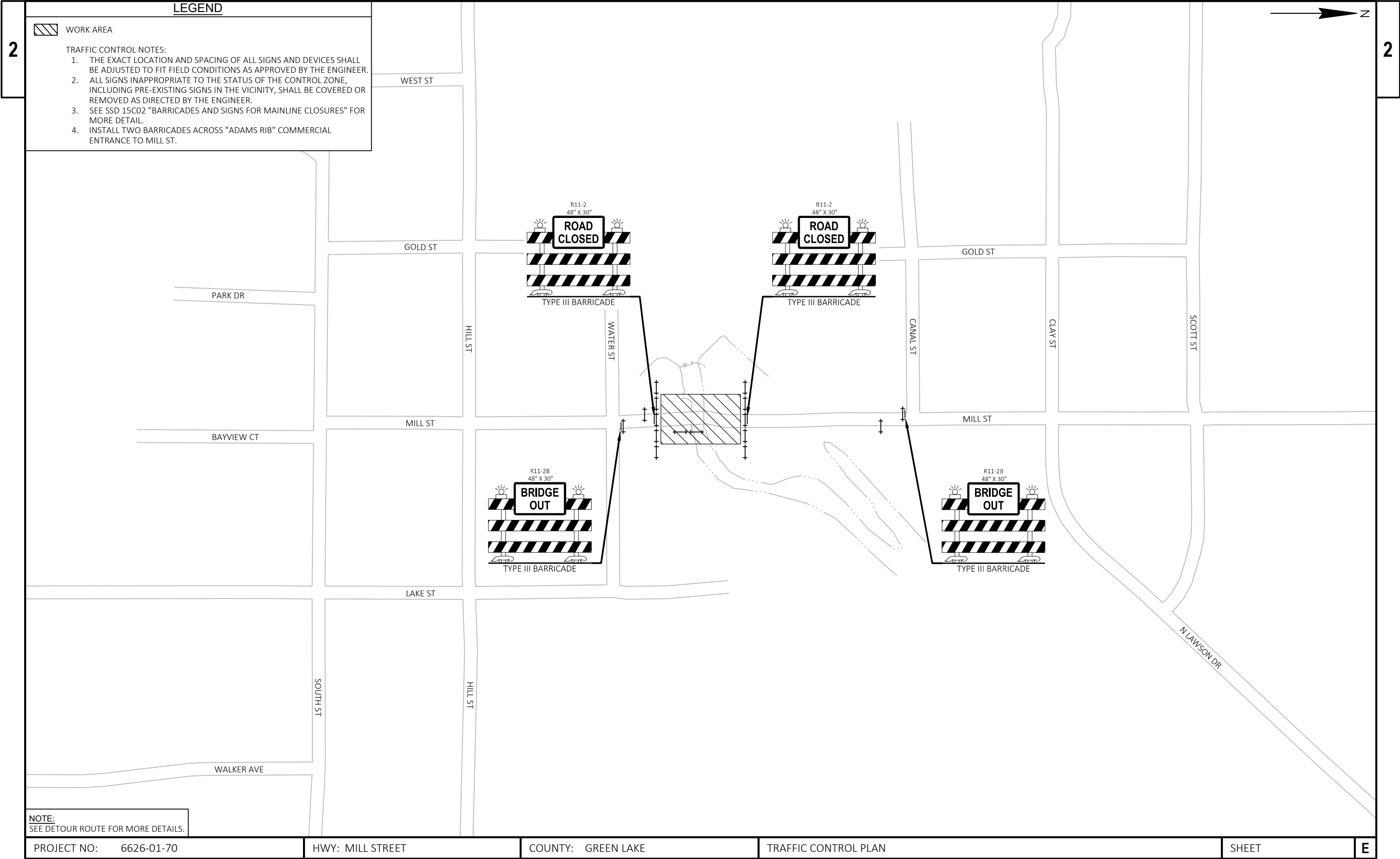
LEGEND

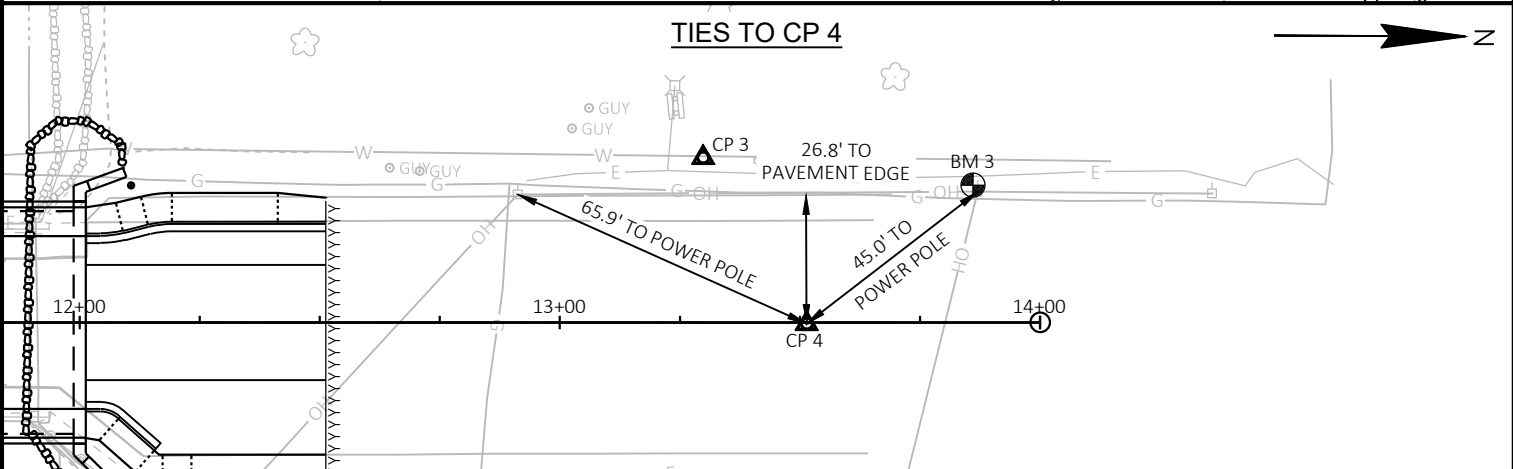
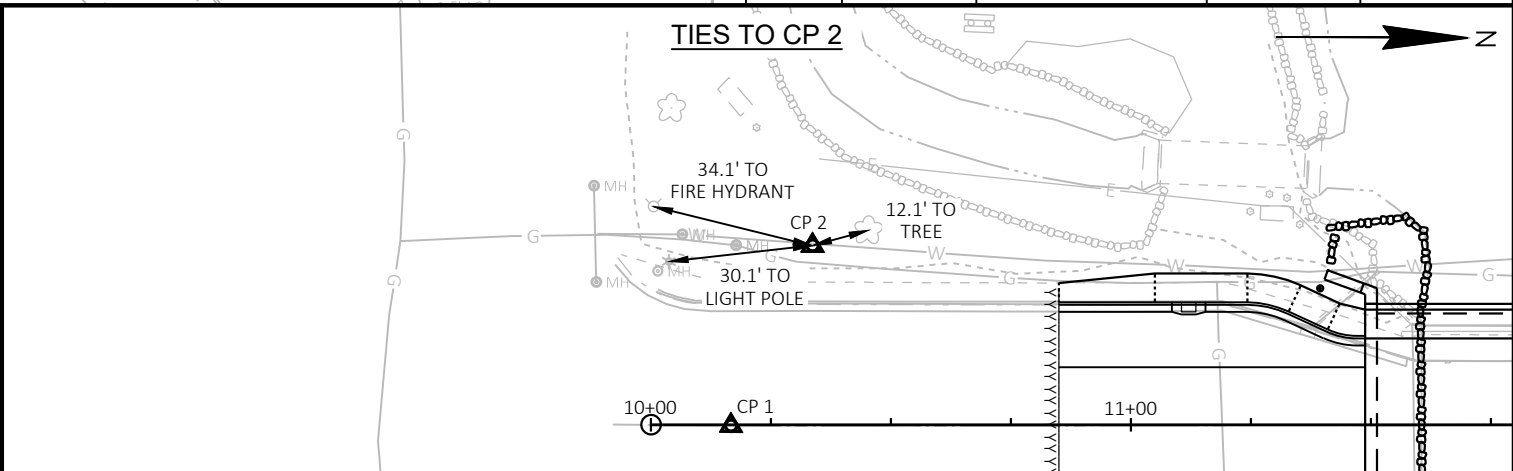
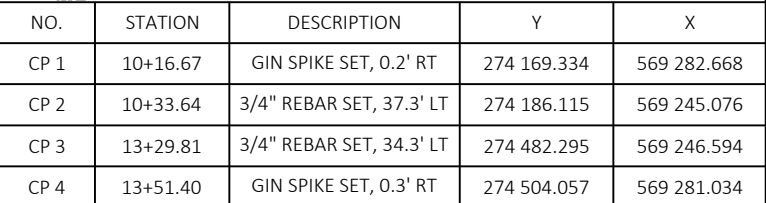
-  WORK ZONE
-  DETOUR ROUTE
-  SIGN NUMBER
-  PROPOSED SIGN MOUNTED ON TEMPORARY POSTS
-  BARRICADE TYPE III WITH SIGN
-  PCMS BOARD
-  EXISTING SIGN

NOTES

- SEE THE FOLLOWING STANDARD DETAIL DRAWINGS FOR ADDITIONAL INFORMATION NOT SHOWN ON DETOUR SHEETS, INCLUDING SIGN CODES, SIGN SIZES AND SPACING REQUIREMENTS:
  - SDD 15C2-A "BARRICADES AND SIGNS FOR MAINLINE CLOSURES"
  - SDD 15C2-B "BARRICADES AND SIGNS FOR VARIOUS MAINLINE CLOSURES"
  - SDD 15C2-C "DETOUR SIGNING FOR MAINLINE CLOSURES"
- EXACT NUMBER, LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
- SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS, UNLESS OTHERWISE PROVIDED IN THE PLAN.
- SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER THE ITEM 'TRAFFIC CONTROL COVERING SIGNS.'
- USE SIGN SIZE 2 ON LOCAL HIGHWAYS AND RAMP.
- IF THERE ARE EXISTING ROUTE MARKERS THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR SIGNS TO CORRESPOND WITH EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE.







Estimate Of Quantities

6626-01-70

Line	Item	Item Description	Unit	Total	Qty
0002	203.0250	Removing Structure Over Waterway Remove Debris (structure) 01. B-24-437	EACH	1.000	1.000
0004	204.0100	Removing Concrete Pavement	SY	720.000	720.000
0006	204.0110	Removing Asphaltic Surface	SY	38.000	38.000
0008	204.0155	Removing Concrete Sidewalk	SY	119.000	119.000
0010	204.0165	Removing Guardrail	LF	28.000	28.000
0012	204.0220	Removing Inlets	EACH	2.000	2.000
0014	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	19.000	19.000
0016	204.0245	Removing Storm Sewer (size) 02. 18-Inch	LF	61.000	61.000
0018	205.0100	Excavation Common	CY	306.000	306.000
0020	206.1001	Excavation for Structures Bridges (structure) 01. B-24-46	EACH	1.000	1.000
0022	210.1500	Backfill Structure Type A	TON	560.000	560.000
0024	213.0100	Finishing Roadway (project) 01. 6626-01-70	EACH	1.000	1.000
0026	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	479.000	479.000
0028	455.0605	Tack Coat	GAL	37.000	37.000
0030	465.0105	Asphaltic Surface	TON	148.000	148.000
0032	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	9.000	9.000
0034	502.0100	Concrete Masonry Bridges	CY	309.000	309.000
0036	502.3200	Protective Surface Treatment	SY	286.000	286.000
0038	502.3210	Pigmented Surface Sealer	SY	57.000	57.000
0040	505.0400	Bar Steel Reinforcement HS Structures	LB	7,200.000	7,200.000
0042	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	46,340.000	46,340.000
0044	513.8021	Railing Steel Pedestrian Type C4	LF	48.000	48.000
0046	516.0500	Rubberized Membrane Waterproofing	SY	23.000	23.000
0048	550.0020	Pre-Boring Rock or Consolidated Materials	LF	240.000	240.000
0050	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	300.000	300.000
0052	602.0405	Concrete Sidewalk 4-Inch	SF	1,040.000	1,040.000
0054	602.0810	Concrete Driveway 6-Inch	SY	35.000	35.000
0056	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	51.000	51.000
0058	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	40.000	40.000
0060	611.0639	Inlet Covers Type H-S	EACH	2.000	2.000
0062	611.3004	Inlets 4-FT Diameter	EACH	1.000	1.000
0064	611.3230	Inlets 2x3-FT	EACH	1.000	1.000
0066	611.8120.S	Cover Plates Temporary	EACH	2.000	2.000
0068	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	200.000	200.000
0070	618.0100	Maintenance and Repair of Haul Roads (project) 01. 6626-01-70	EACH	1.000	1.000
0072	619.1000	Mobilization	EACH	1.000	1.000
0074	624.0100	Water	MGAL	12.400	12.400
0076	625.0500	Salvaged Topsoil	SY	100.000	100.000
0078	628.1504	Silt Fence	LF	190.000	190.000
0080	628.1520	Silt Fence Maintenance	LF	300.000	300.000
0082	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0084	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0086	628.2008	Erosion Mat Urban Class I Type B	SY	100.000	100.000
0088	628.6005	Turbidity Barriers	SY	175.000	175.000
0090	628.7015	Inlet Protection Type C	EACH	6.000	6.000
0092	629.0210	Fertilizer Type B	CWT	0.100	0.100
0094	630.0140	Seeding Mixture No. 40	LB	10.000	10.000
0096	630.0200	Seeding Temporary	LB	10.000	10.000
0098	630.0500	Seed Water	MGAL	3.900	3.900



Estimate Of Quantities

6626-01-70

Line	Item	Item Description	Unit	Total	Qty
0100	633.5100	Markers ROW	EACH	3.000	3.000
0102	642.5001	Field Office Type B	EACH	1.000	1.000
0104	643.0300	Traffic Control Drums	DAY	555.000	555.000
0106	643.0420	Traffic Control Barricades Type III	DAY	2,619.000	2,619.000
0108	643.0705	Traffic Control Warning Lights Type A	DAY	5,238.000	5,238.000
0110	643.0900	Traffic Control Signs	DAY	16,005.000	16,005.000
0112	643.0920	Traffic Control Covering Signs Type II	EACH	25.000	25.000
0114	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0116	643.5000	Traffic Control	EACH	1.000	1.000
0118	645.0111	Geotextile Type DF Schedule A	SY	104.000	104.000
0120	645.0120	Geotextile Type HR	SY	301.000	301.000
0122	650.4000	Construction Staking Storm Sewer	EACH	2.000	2.000
0124	650.4500	Construction Staking Subgrade	LF	114.000	114.000
0126	650.5000	Construction Staking Base	LF	114.000	114.000
0128	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	198.000	198.000
0130	650.6501	Construction Staking Structure Layout (structure) 01. B-24-0046	EACH	1.000	1.000
0132	650.8501	Construction Staking Electrical Installations (project) 01. 6626-01-70	EACH	1.000	1.000
0134	650.9500	Construction Staking Sidewalk (project) 01. 6626-01-70	EACH	1.000	1.000
0136	650.9911	Construction Staking Supplemental Control (project) 01. 6626-01-70	EACH	1.000	1.000
0138	650.9920	Construction Staking Slope Stakes	LF	114.000	114.000
0140	652.0125	Conduit Rigid Metallic 2-Inch	LF	8.000	8.000
0142	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	67.000	67.000
0144	653.0105	Pull Boxes Steel 12x24-Inch	EACH	2.000	2.000
0146	680.0100	Public Land Reference Monument Verify and Reset	EACH	1.000	1.000
0148	690.0150	Sawing Asphalt	LF	66.000	66.000
0150	690.0250	Sawing Concrete	LF	120.000	120.000
0152	715.0502	Incentive Strength Concrete Structures	DOL	1,854.000	1,854.000
0154	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0156	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0158	SPV.0035	Special 01. Rounded River Rock	CY	170.000	170.000
0160	SPV.0090	Special 01. Concrete Curb & Gutter 24-Inch Type D	LF	198.000	198.000
0162	SPV.0090	Special 02. Parapet Concrete Type "TX"	LF	105.000	105.000

3

ALL ITEMS CATEGORY 0010 UNLESS NOTED OTHERWISE

REMOVING CONCRETE PAVEMENT

STATION	TO	STATION	LOCATION	204.0100 SY
10+85	-	11+59	SOUTH APPROACH	350
11+91	-	12+51	NORTH APPROACH	370
			TOTAL	720

NOTE: INCLUDES CURB AND GUTTER REMOVAL ADJACENT TO CONCRETE PAVEMENT.

REMOVING ASPHALTIC SURFACE

STATION	LOCATION	204.0110 SY	
11+28	C.E., RT	38	
		TOTAL	38

REMOVING CONCRETE SIDEWALK

STATION	TO	STATION	LOCATION	204.0155 SY
10+85	-	11+59	SOUTH APPROACH, LT	34
10+85	-	11+59	SOUTH APPROACH, RT	41
11+91	-	12+02	NORTH APPROACH, LT	8
11+91	-	12+51	NORTH APPROACH, RT	36
			TOTAL	119

REMOVING GUARDRAIL

STATION	TO	STATION	LOCATION	204.0165 LF
11+91	-	12+13	NORTH APPROACH, RT	28
			TOTAL	28

REMOVING INLETS

STATION	LOCATION	204.0220 EACH	
10+92	SOUTH APPRAOCH, RT	1	
11+37	SOUTH APPRAOCH, LT	1	
		TOTAL	2

REMOVING STORM SEWER

STATION	TO	STATION	LOCATION	204.0245.01 REMOVING STORM SEWER 01. 12-INCH LF	204.0245.02 REMOVING STORM SEWER 02. 18-INCH LF
10+93	-	11+53	SOUTH APPROACH, RT	---	61
11+37	-	11+51	SOUTH APPROACH, LT	19	---
			TOTAL	19	61

BASE AGGREGATE DENSE

STATION	TO	STATION	LOCATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL
10+85	-	11+49	SOUTH APPROACH	255	2.6
12+01	-	12+51	NORTH APPROACH	195	2.0
			TOTAL	450	4.6

\* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

DRIVEWAYS

STATION	TO	STATION	LOCATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	602.0810 CONCRETE DRIVEWAY 6-INCH SY	624.0100 WATER MGAL	
			11+28	SOUTH APPROACH, RT	16	6	13	4.3
12+16	-	12+51	NORTH APPROACH, RT	13	3	22	3.5	
			TOTAL	29	9	35	7.8	

\* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

EARTHWORK

DIVISION	FROM/TO STATION	205.0100 EXCAVATION COMMON (1)  CUT (2)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (3)	AVAILABLE MATERIAL (4)	UNEXPANDED FILL	EXPANDED FILL (5)  FACTOR 1.25	MASS ORDINATE +/- (6)	WASTE (7)
SOUTH APPROACH	10+85.00/11+48.75	184	96	88	10	13	76	
NORTH APPROACH	12+01.25/12+51.25	122	81	41	7	9	32	
SUBTOTAL		306	177	129	17	21	108	108
GRAND TOTAL		306	177	129	17	21	108	108

NOTES:  
(1) EXCAVATION COMMON IS THE SUM OF THE CUT.  
(2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.  
(3) SALVAGED/UNUSABLE PAVEMENT MATERIAL CONSISTS OF EXISTING ASPHALTIC PAVEMENT.  
(4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL  
(5) EXPANDED FILL FACTOR = 1.25, EXPANDED FILL = UNEXPANDED FILL \* FILL FACTOR  
(6) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION.  
MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.  
(7) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

ASPHALTIC SURFACE

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
10+85	-	11+49	SOUTH APPROACH	20	80
12+01	-	12+51	NORTH APPROACH	17	68
			TOTAL	37	148

CONCRETE SIDEWALK 4-INCH

STATION	TO	STATION	LOCATION	602.0405 SF
10+85	-	11+49	SOUTH APPROACH, LT	370
10+85	-	11+20	SOUTH APPROACH, RT	220
11+39	-	11+49	SOUTH APPROACH, RT	60
12+01	-	12+51	NORTH APPROACH, LT	300
12+01	-	12+16	NORTH APPROACH, RT	90
			TOTAL	1,040

PROJECT NO: 6626-01-70

HWY: MILL STREET

COUNTY: GREEN LAKE

MISCELLANEOUS QUANTITIES

SHEET

E

FILE NAME : G:\00-PROJECT FILES\2024\24016 ID 6626-01-00 C GREEN LAKE - MILL STREET PUCHYAN RIVER BRIDGE B-24-0437\0-CAD\SHEETS\030201\_MQ.DWG

LAYOUT NAME - 030201\_mq

PLOT DATE : 11/18/2025 11:07 PM

PLOT BY : ERIK MEYER

PLOT NAME :

PLOT SCALE : 1" = 1'

WISDOT/CADDs SHEET 42

ALL ITEMS CATEGORY 0010 UNLESS NOTED OTHERWISE

STORM SEWER SUMMARY

FROM		TO		LOCATION	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH	* JOINT TIES	INLET ELEVATION	OUTLET ELEVATION	SLOPE FT/FT
STRUCTURE		STRUCTURE			LF	LF	EACH			
1	-	2		SOUTH APPROACH	51	---	---	793.62	793.15	0.0094
2	-		OUTFALL	SOUTH APPROACH	---	40	3	792.65	792.25	0.0100
TOTAL					51	40				

\*NON-BID ITEM: FOR INFORMATION ONLY  
PIPE LENGTHS INDICATED ARE TO THE CENTER OF STRUCTURE TO THE NEAREST FOOT.  
SLOPES AND ELEVATIONS ARE BASED ON ACTUAL PIPE LENGTH BETWEEN STRUCTURE WALLS OR OUTFALL AS APPLICABLE.

STORM SEWER STRUCTURES

STRUCTURE	STATION *	OFFSET *	LOCATION	611.0639 INLET COVERS TYPE H-S	611.3004 INLETS 4-FT DIAMETER	611.3230 INLETS 2X3-FT	611.8120.S COVER PLATES TEMPORARY	650.4000 CONSTRUCTION STAKING STORM SEWER	RIM **	INVERT ***	DEPTH ****
				EACH	EACH	EACH	EACH	EACH	ELEVATION	ELEVATION	FT
1	10+95	23.00' RT	SOUTH APPROACH	1	---	1	1	1	797.26	793.54	4.14
2	11+12	24.50' LT	SOUTH APPROACH	1	1	---	1	1	797.60	792.57	5.53
TOTAL				2	1	1	2	2			

\*STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE.  
\*\*RIM ELEVATION IS AT THE INLET COVER FLANGE LOCATION.  
\*\*\*FOR STRUCTURES WITH SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE SUMP. FOR STRUCTURES WITHOUT SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE LOWEST PIPE FLOW LINE.  
\*\*\*\* DEPTH = RIM ELEVATION - TOP OF STRUCTURE BASE ELEVATION - COVER HEIGHT - 6-INCH ADJUSTMENT RING HEIGHT.

PUBLIC LAND REFERENCE MONUMENT VERIFY AND RESET

POINT NO.	STATION	OFFSET	680.0100 EACH
105	12+11.72	33.28' RT	1
TOTAL			1

FINISHING ITEMS

STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL	628.2008 EROSION MAT URBAN CLASS I TYPE B	629.0210 FERTILIZER TYPE B	630.0140 SEEDING MIXTURE NO. 40	630.0200 SEEDING TEMPORARY	630.0500 SEED WATER
				SY	SY	CWT	LB	LB	MGAL
10+85	-	11+49	SOUTH APPROACH, LT	36	36	0.04	3	2	1.4
11+39	-	11+49	SOUTH APPROACH, RT	10	10	0.01	1	1	0.3
12+01	-	12+51	NORTH APPROACH, LT	35	35	0.04	3	2	1.4
UNDISTRIBUTED				19	19	0.01	3	5	0.8
TOTAL				100	100	0.10	10	10	3.9

SILT FENCE

STATION	TO	STATION	LOCATION	628.1504 SILT FENCE	628.1520 SILT FENCE MAINTENANCE
				LF	LF
10+80	-	11+38	SOUTH APPROACH, LT	75	150
12+02	-	12+61	NORTH APPROACH, LT	75	150
UNDISTRIBUTED				40	---
TOTAL				190	300

MOBILIZATION EROSION CONTROL

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL
	EACH	EACH
PROJECT	5	4
TOTAL	5	4

TURBIDITY BARRIERS

LOCATION	628.6005 SY
SOUTH APPROACH	72
NORTH APPROACH	77
UNDISTRIBUTED	26
TOTAL	175

INLET PROTECTION TYPE C

STATION	LOCATION	628.7015 EACH	REMARKS
10+92	RT	1	EXISTING INLET
10+95	RT	1	PROPOSED INLET
11+12	LT	1	PROPOSED INLET
11+37	LT	1	EXISTING INLET
UNDISTRIBUTED		2	
TOTAL		6	

MARKERS ROW

POINT NO.	STATION	OFFSET	633.5100 EACH
102	11+40.00	33.11' RT	1
103	11+40.00	36.00' RT	1
104	12+11.72	36.00' RT	1
TOTAL			3

TRAFFIC CONTROL

LOCATION	DURATION DAY	643.0300 TRAFFIC CONTROL DRUMS		643.0420 TRAFFIC CONTROL BARRICADES TYPE III		643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0900 TRAFFIC CONTROL SIGNS		643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II		643.1050 TRAFFIC CONTROL SIGNS PCMS		643.5000 TRAFFIC CONTROL
		NO.	DAY	NO.	DAY	NO.	DAY	NO.	DAY	EACH		NO.	DAY	EACH
CLOSURE	97	---	---	18	1746	36	3492	18	1746	6	---	---	---	---
DETOUR	97	10	70	4	388	8	776	114	11058	12	2	14	---	---
UNDISTRIBUTED	97	5	485	5	485	10	970	33	3201	7	---	---	---	---
PROJECT	---	---	---	---	---	---	---	---	---	---	---	---	---	1
TOTAL		15	555	27	2,619	54	5,238	165	16,005	25	2	14	1	

PLACE TRAFFIC CONTROL IN ACCORDANCE WITH SDD 15C2 "BARRICADES AND SIGNS FOR MAINLINE, BARRICADES AND SIGNS FOR VARIOUS CLOSURES, DETOUR SIGNING FOR MAINLINE CLOSURES".  
PLACEMENT SUBJECT TO ENGINEER APPROVAL.

CONSTRUCTION STAKING

STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE	650.5000 CONSTRUCTION STAKING BASE	650.6501.01 CONSTRUCTION STAKING STRUCTURE LAYOUT 01. B-24-0046	650.8501.01 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS 01. 6626-01-70	650.9500.01 CONSTRUCTION STAKING SIDEWALK 01. 6626-01-70	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 01. 6626-01-70	650.9920 CONSTRUCTION STAKING SLOPE STAKES
				LF	LF	EACH	EACH	EACH	EACH	LF
10+85	-	11+49	SOUTH APPROACH	64	64	---	---	---	---	64
12+01	-	12+51	NORTH APPROACH	50	50	---	---	---	---	50
PROJECT				---	---	1	1	1	1	---
TOTAL				114	114	1*	1	1	1	114

\* CATEGORY 0020

PROJECT NO: 6626-01-70

HWY: MILL STREET

COUNTY: GREEN LAKE

MISCELLANEOUS QUANTITIES

SHEET

E

3

PULL BOXES STEEL 12X24-INCH

STATION	OFFSET	LOCATION	653.0105 EACH
11+39.39	28.43' LT	SOUTH APPROACH	1
12+10.68	28.51' LT	NORTH APPROACH	1
TOTAL			2

3

SAWING

STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
10+85	SOUTH APPROACH	---	60
12+28	SOUTH APPROACH, RT	23	---
12+33	NORTH APPROACH, RT	43	---
12+51	NORTH APPROACH	---	60
TOTAL		66	120

CONCRETE CURB AND GUTTER

STATION	TO	STATION	LOCATION	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	SPV.0090.01 CONCRETE CURB & GUTTER 24-INCH TYPE D LF
10+85	-	11+49	SOUTH APPROACH, LT	65	65
10+85	-	11+49	SOUTH APPROACH, RT	65	65
12+01	-	12+51	NORTH APPROACH, LT	50	50
12+01	-	12+16	NORTH APPROACH, RT	18	18
TOTAL				198	198



SCHEDULE OF LANDS AND INTERESTS REQUIRED						
PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W REQUIRED ACRES			TLE ACRES REQUIRED
			NEW	EXISTING	TOTAL	
1	CITY OF GREEN LAKE	TLE	---	---	---	0.055
2	RACHEL NITZ	FEE & TLE	0.002	---	0.002	0.013
3	GREEN LAKE CHAMBER OF COMMERCE	FEE & TLE	0.001	---	0.001	0.016
100	CITY OF GREEN LAKE (ELECTRIC)	RELEASE OF RIGHTS	---	---	---	---
200	CITY OF GREEN LAKE (WATER)	RELEASE OF RIGHTS	---	---	---	---
300	ALLIANT ENERGY (ELECTRIC)	RELEASE OF RIGHTS	---	---	---	---
400	CHARTER COMMUNICATIONS (COMMUNICATION)	RELEASE OF RIGHTS	---	---	---	---

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO CITY OF GREEN LAKE.

R/W COURSE TABLE		
COURSE	BEARING	DISTANCE
101-102	N89°42'26"E	33.11'
102-103	N89°42'26"E	2.89'
103-104	N0°17'34"W	71.72'
104-105	S89°42'15"W	2.72'
105-102	S0°09'39"E	71.72'

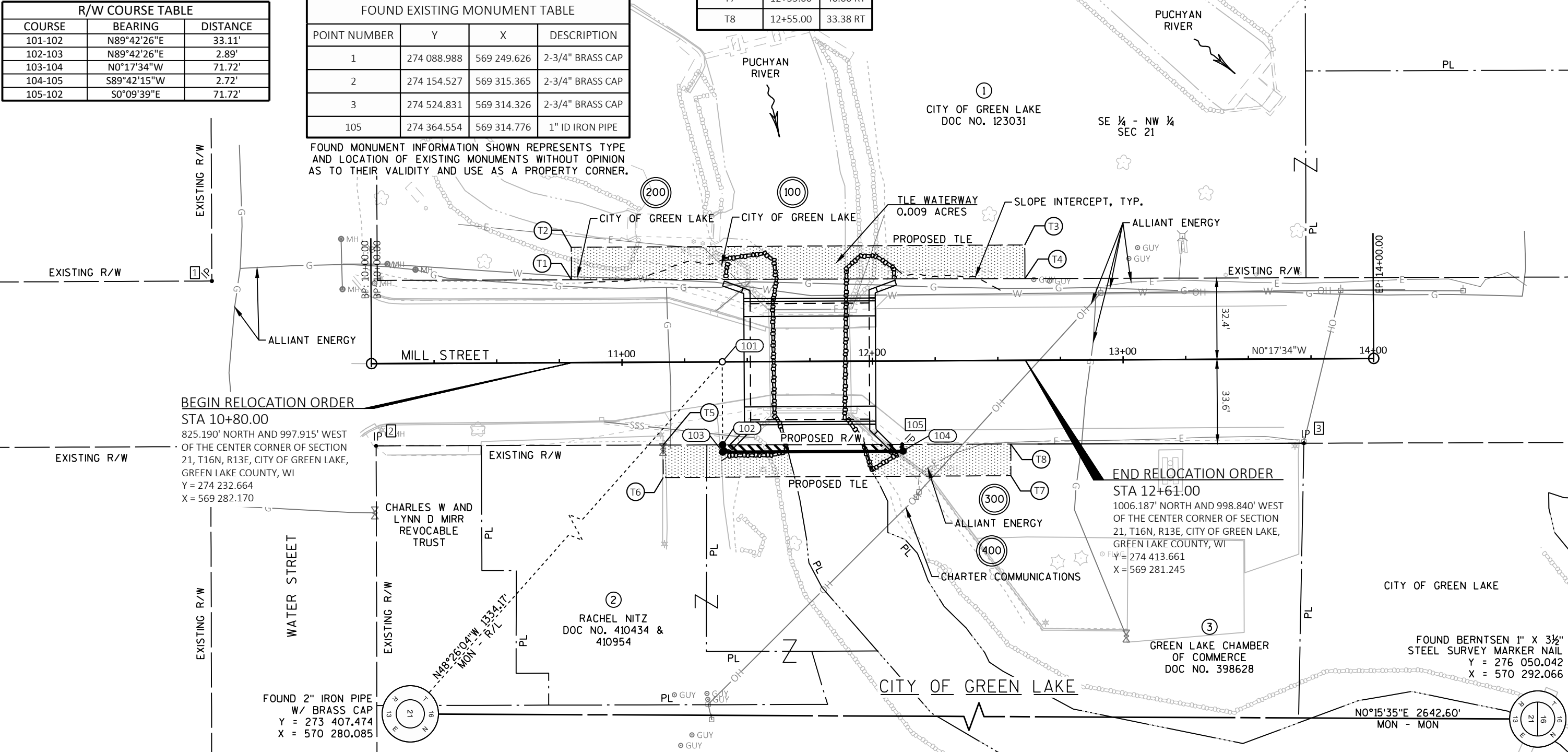
FOUND EXISTING MONUMENT TABLE			
POINT NUMBER	Y	X	DESCRIPTION
1	274 088.988	569 249.626	2-3/4" BRASS CAP
2	274 154.527	569 315.365	2-3/4" BRASS CAP
3	274 524.831	569 314.326	2-3/4" BRASS CAP
105	274 364.554	569 314.776	1" ID IRON PIPE

FOUND MONUMENT INFORMATION SHOWN REPRESENTS TYPE AND LOCATION OF EXISTING MONUMENTS WITHOUT OPINION AS TO THEIR VALIDITY AND USE AS A PROPERTY CORNER.

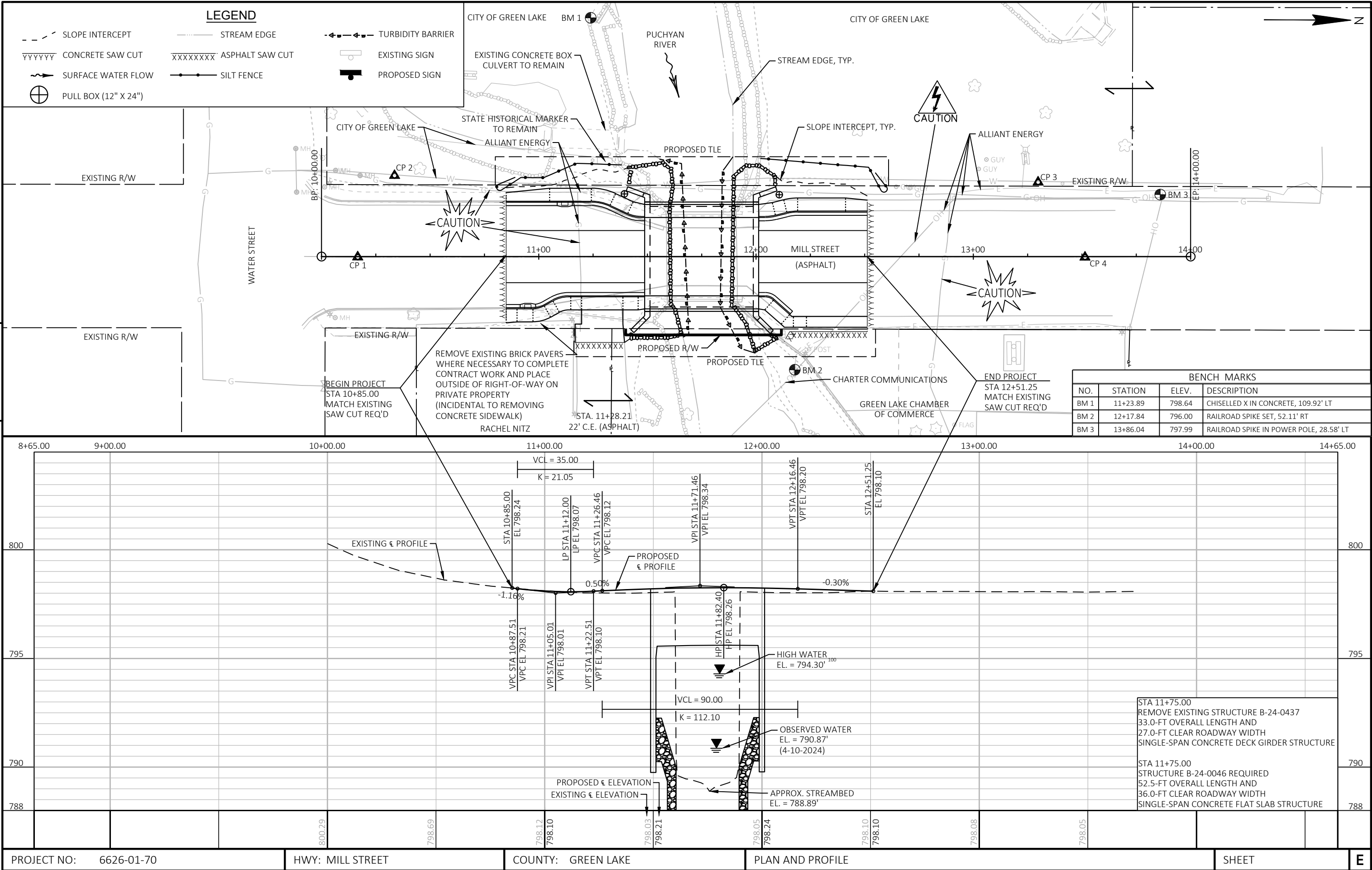
TLE TABLE		
TLE POINT	STATION	OFFSET
T1	10+80.00	33.02 LT
T2	10+80.00	46.00 LT
T3	12+61.00	46.00 LT
T4	12+61.00	32.61 LT
T5	11+16.25	33.06 RT
T6	11+16.25	46.00 RT
T7	12+55.00	46.00 RT
T8	12+55.00	33.38 RT

POINT TABLE				
POINT NUMBER	STATION	OFFSET	Y	X
101	11+40.00	0.00 RT	274 292.663	569 281.863
102	11+40.00	33.11 RT	274 292.832	569 314.977
103	11+40.00	36.00 RT	274 292.847	569 317.863
104	12+11.72	36.00 RT	274 364.568	569 317.496
105	12+11.72	33.28 RT	274 364.554	569 314.776

EXISTING RIGHT-OF-WAY FOR MILL STREET IS BASED ON CSM 99, CSM 1974, CSM 2476, AND THE ORIGINAL PLAT OF THE VILLAGE OF GREEN LAKE.



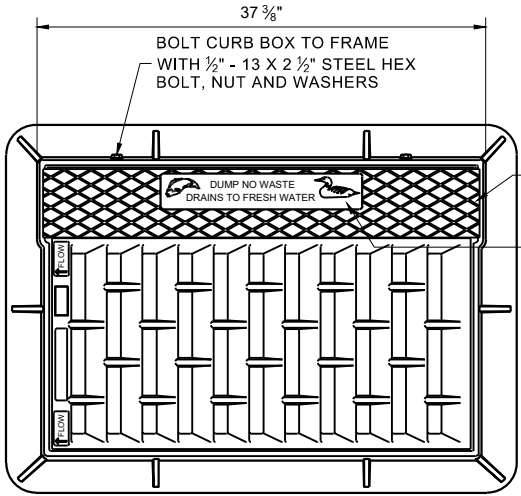
REVISION DATE	DATE 04/16/2025	SCALE, FEET	HWY: MILL STREET	STATE R/W PROJECT NUMBER 6626-01-00	PLAT SHEET 4.02
	GRID FACTOR N/A	0 20 40	COUNTY: GREEN LAKE	CONSTRUCTION PROJECT NUMBER 6626-01-70	PS&E SHEET



Standard Detail Drawing List

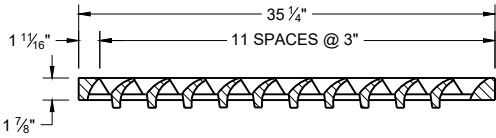
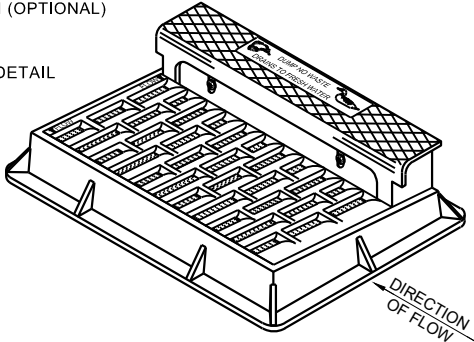
08A05-21A	INLET COVERS TYPE A, H, A-S, H-S & Z
08C06-03	INLETS 3-FT AND 4-FT DIAMETER
08C07-03	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT
08D01-24A	CONCRETE CURB & GUTTER
08D01-24B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D18-05	DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E11-02	TURBIDITY BARRIER
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B04-13	PULL BOX
12A03-10	NAME PLATE (STRUCTURES)
13C19-03	HMA LONGITUDINAL JOINTS
15A01-13A	MARKER POST FOR RIGHT-OF-WAY
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS



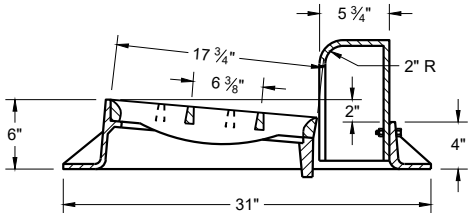
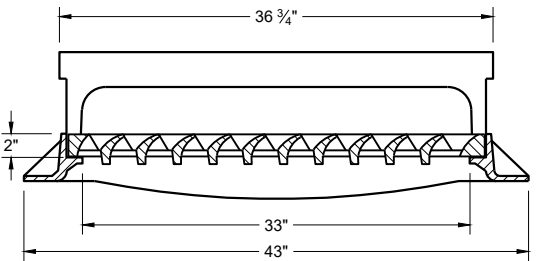
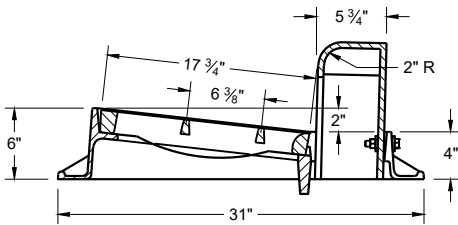
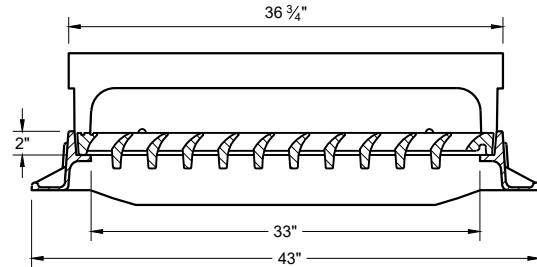


NOTE: EITHER CASTING IS ACCEPTABLE

TYPE "C" CHECKERED TOP DESIGN (OPTIONAL)  
SEE LOGO DETAIL



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

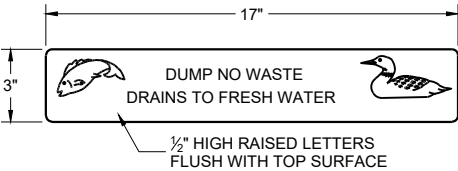


TYPE "H"

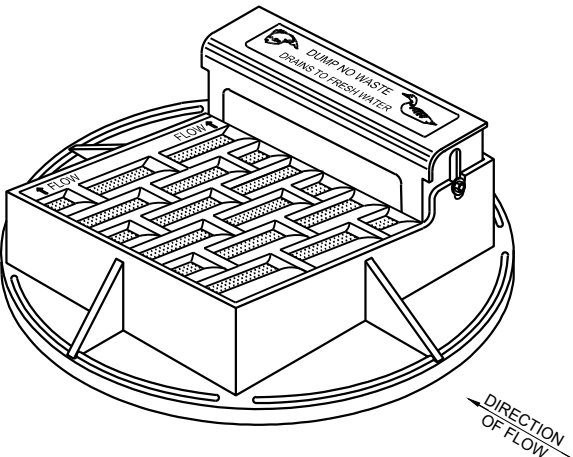
NOTE: EITHER CASTING IS ACCEPTABLE



**SPECIAL GRATE FOR TYPE "H" COVER**  
(MEASURES 35" X 17 3/4" X 2")  
(NOTED AS TYPE H-S ON DRAINAGE TABLE)

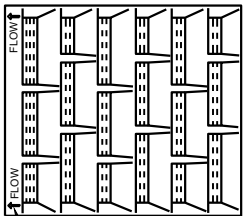


LOGO DETAIL

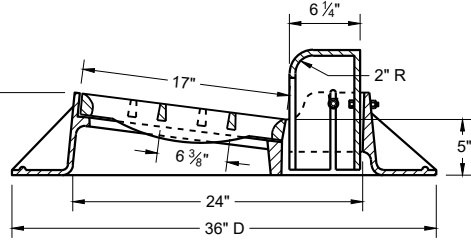
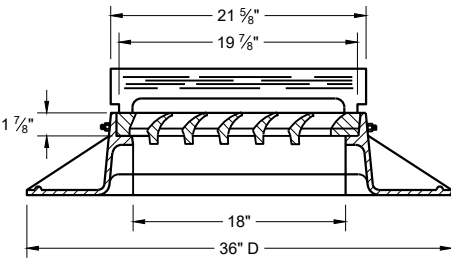
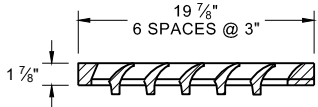


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

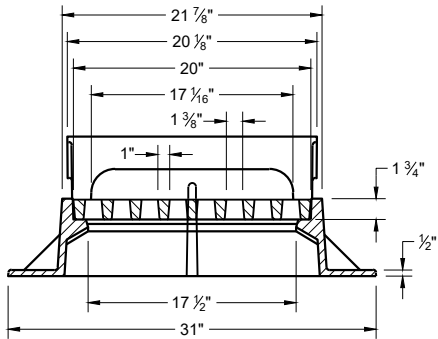
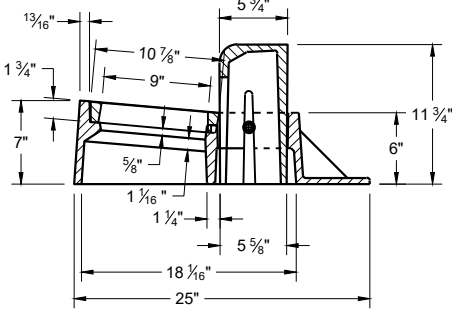
NOTE: EITHER CASTING IS ACCEPTABLE



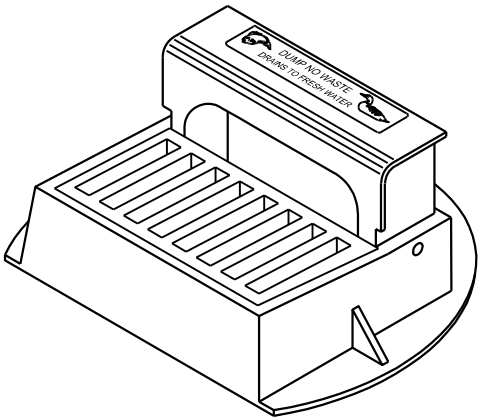
DIRECTION OF FLOW ARROWS



TYPE "A"



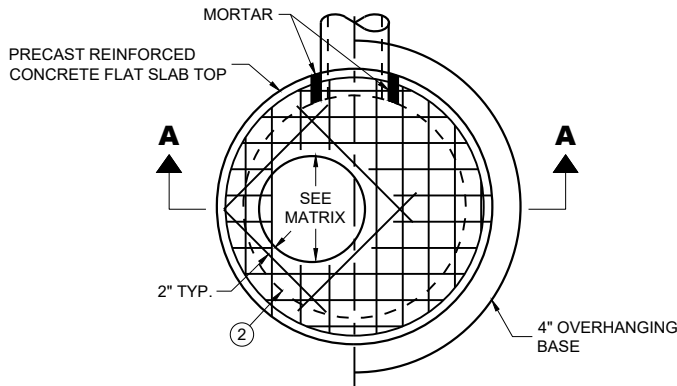
TYPE "Z"



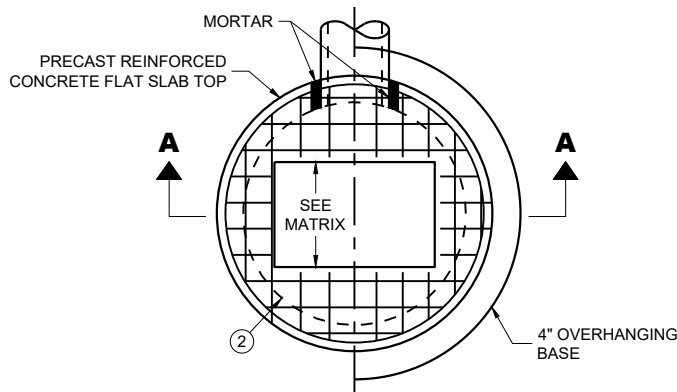
**INLET COVERS  
TYPES A, H, A-S, H-S AND Z**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

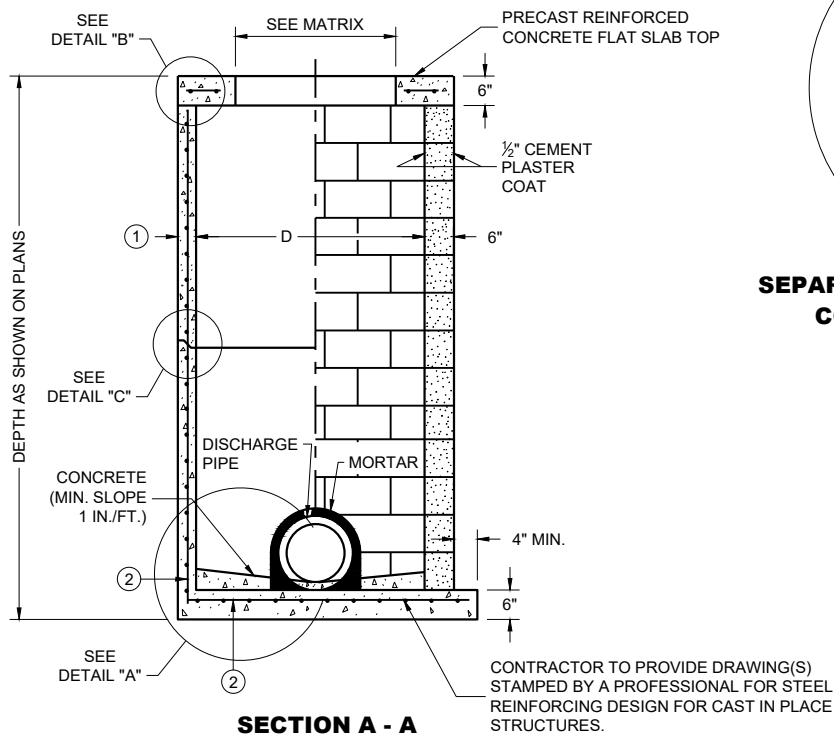
APPROVED  
December 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR



PLAN VIEW CIRCULAR OPENING



PLAN VIEW RECTANGULAR OPENING



SECTION A - A

**PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE**

**CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE** ②

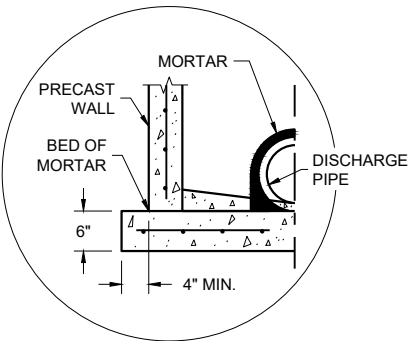
CIRCULAR INLETS WITH FLAT TOP

CATCH BASIN COVER OPENING MATRIX

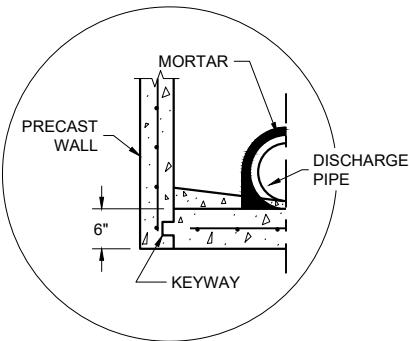
INLET SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V V-B	WM	Z
	OPENING SIZE (FT.)											
3-FT	2 DIA.				X							X
	2 X 2	X	X					X		X		
4-FT	2 DIA.				X							X
	2 X 2	X	X					X		X		
	2 X 2.5			X				X	X	X	X	
	2 X 3						X					
	2.5 X 3					X						

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

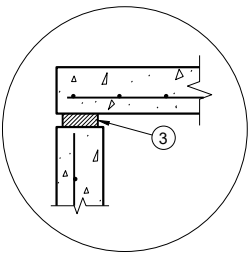


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

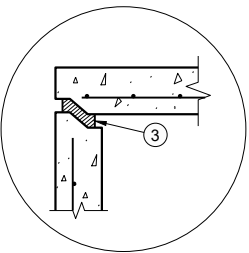


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

DETAIL "A"

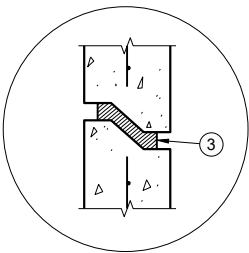


TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT

DETAIL "B"



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "C"

INLETS 3-FT AND 4-FT DIAMETER

GENERAL NOTES

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

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

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

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

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

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

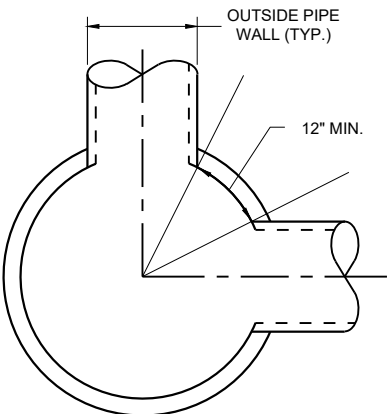
ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

- ① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT DIAMETER AND 5 INCHES FOR 4-FT DIAMETER PRECAST INLETS.
- ② FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 OR RUBBER GASKETS CONFORMING TO ASTM C443.

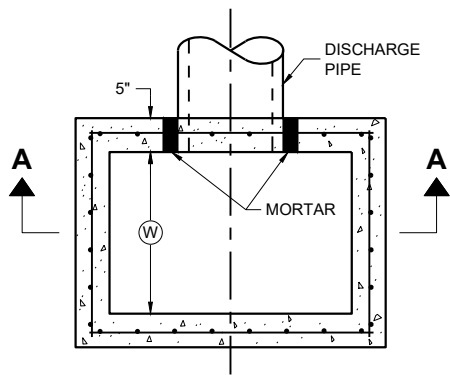


MINIMUM HORIZONTAL PIPE SEPARATION  
DETAIL "D"

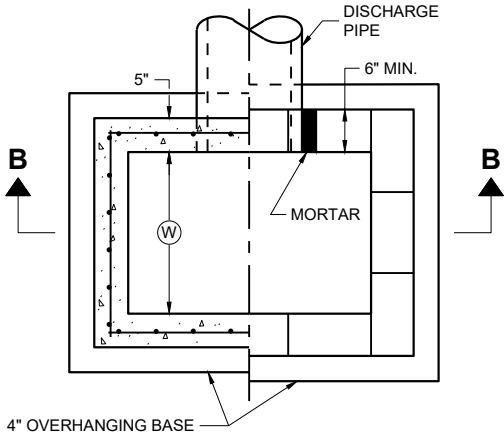
**INLETS 3-FT AND 4-FT DIAMETER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

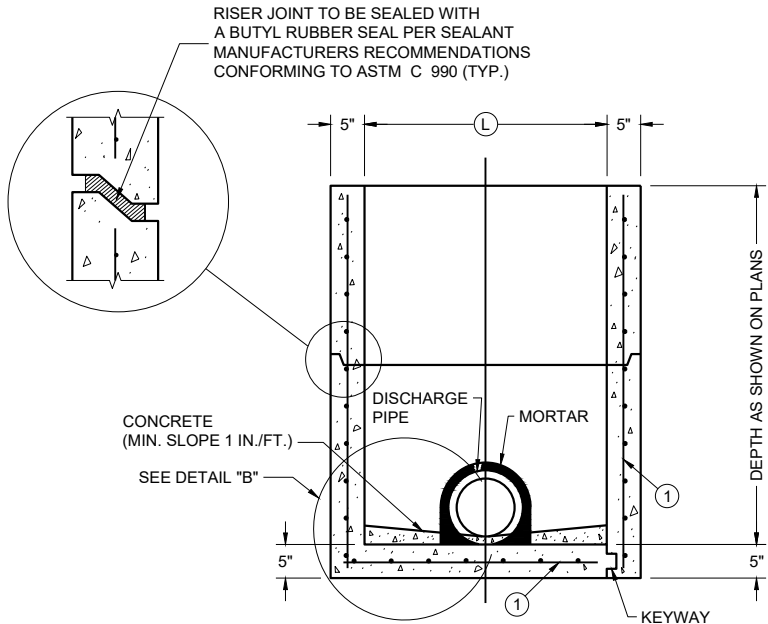
APPROVED  
December 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR



PLAN VIEW



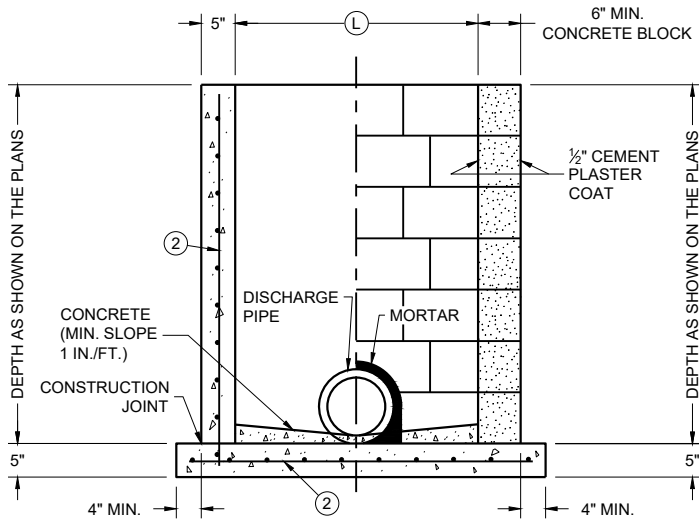
PLAN VIEW



PRECAST REINFORCED  
CONCRETE WITH  
MONOLITHIC BASE

PRECAST REINFORCED  
CONCRETE WITH  
INTEGRAL BASE

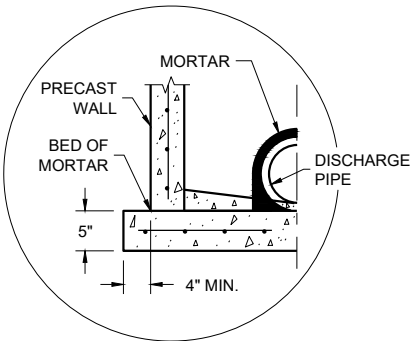
SECTION A - A



CAST IN PLACE  
REINFORCED  
CONCRETE

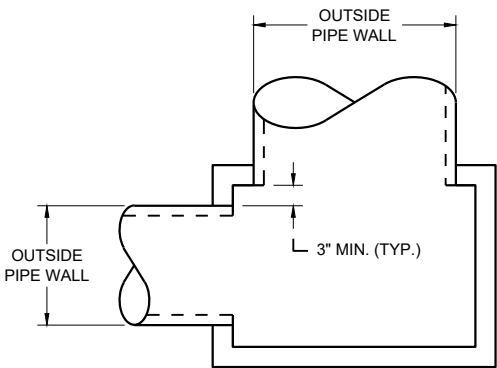
CONCRETE BLOCK WITH  
CAST IN PLACE OR  
PRECAST REINFORCED  
CONCRETE BASE ①

SECTION B - B



SEPARATE PRECAST REINFORCED  
CONCRETE BASE OPTION

DETAIL "B"



DETAIL "A"

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

CATCH BASIN COVER MATRIX

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

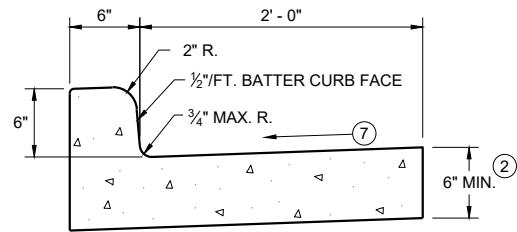
PIPE MATRIX

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

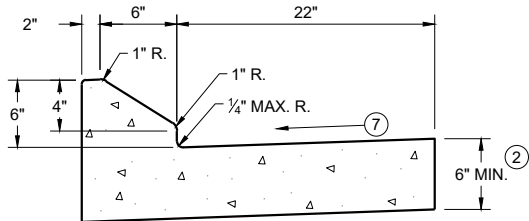
INLETS 2 X 2-FT, 2 X 2.5-FT,  
2 X 3-FT, 2.5 X 3-FT  
AND 2 X 3.5-FT

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

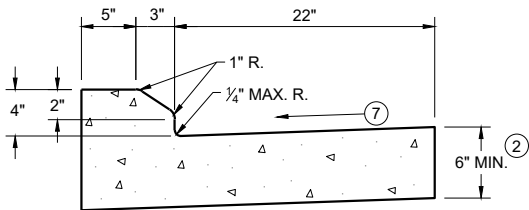
APPROVED  
December 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR



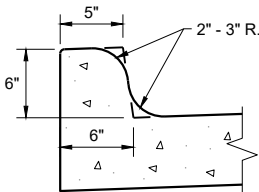
TYPES A<sup>①</sup> & D



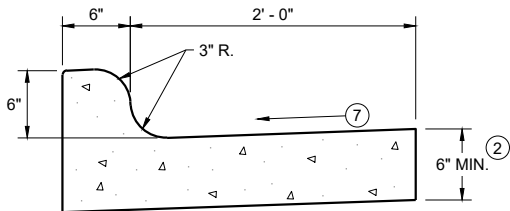
6" SLOPED CURB TYPES G<sup>①</sup> & J



4" SLOPED CURB TYPES G<sup>①</sup> & J

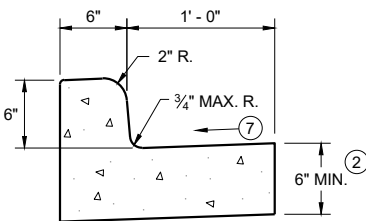


TYPES K<sup>①</sup> & L  
(OPTIONAL CURB SHAPE)



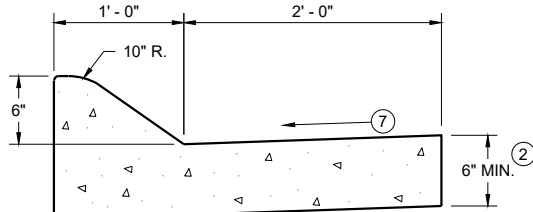
TYPES K<sup>①</sup> & L

CONCRETE CURB AND GUTTER 30"

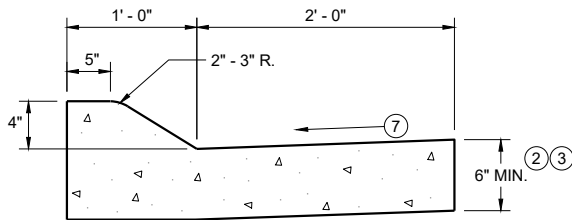


TYPES A<sup>①</sup> & D

CONCRETE CURB AND GUTTER 18"

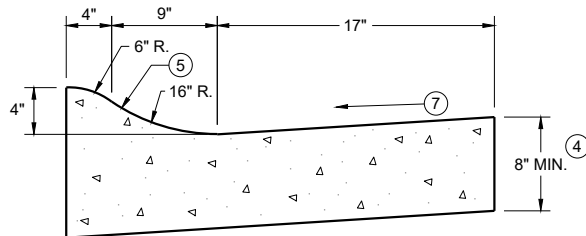


6" SLOPED CURB TYPES A<sup>①</sup> & D



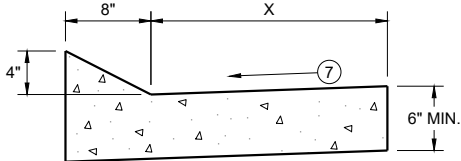
4" SLOPED CURB TYPES A<sup>①</sup> & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R<sup>①</sup> & T  
CONCRETE CURB AND GUTTER 30"

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

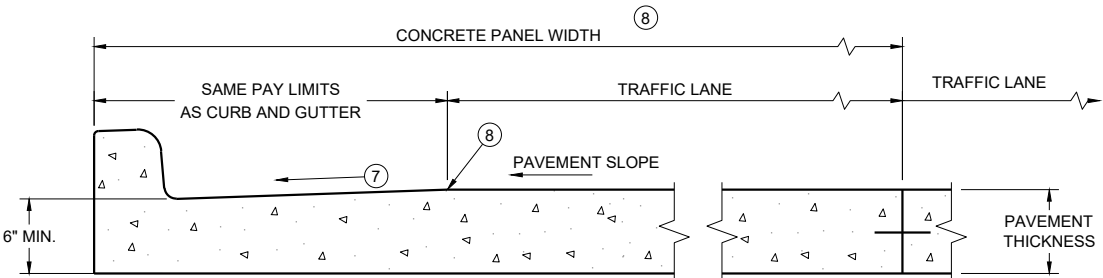


TYPES TBT & TBTT<sup>①</sup>

CONCRETE CURB AND GUTTER

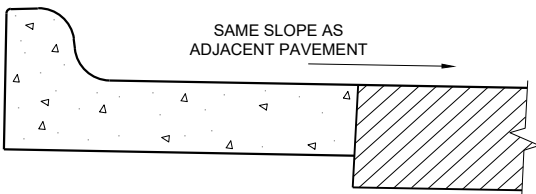
PAVEMENT THICKNESS  
AND MAXIMUM CONCRETE  
PANEL WIDTH TABLE

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

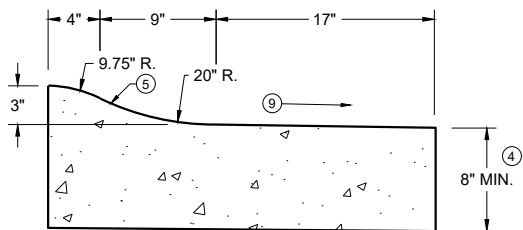


PARTIAL SECTION OF PAVEMENT  
WITH INTEGRAL CURB AND GUTTER

\* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER<sup>⑥</sup>  
(TYPICAL FOR ALL CURB & GUTTER TYPES)



3" SLOPED CURB TYPES R<sup>①</sup> & T

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

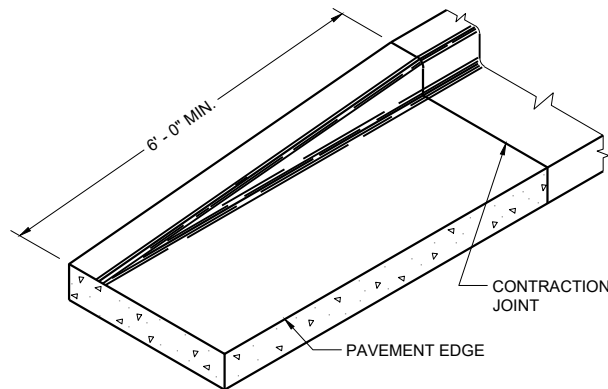
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

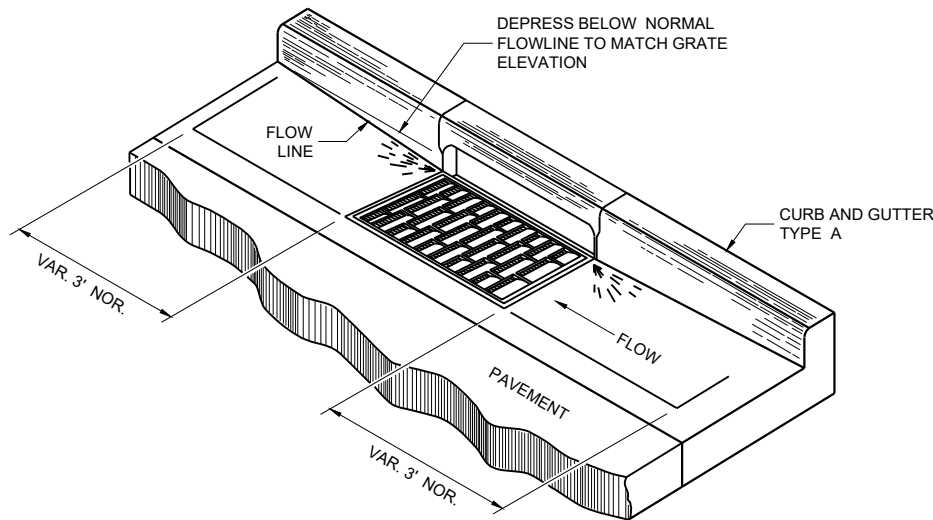
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

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

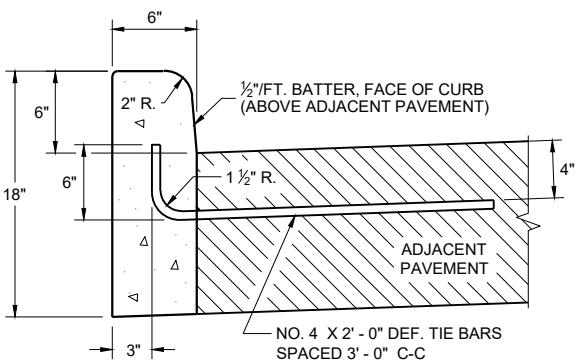


END SECTION CURB AND GUTTER

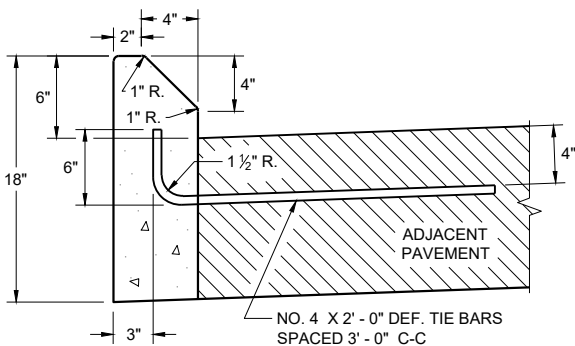


DETAIL OF CURB AND GUTTER AT INLETS

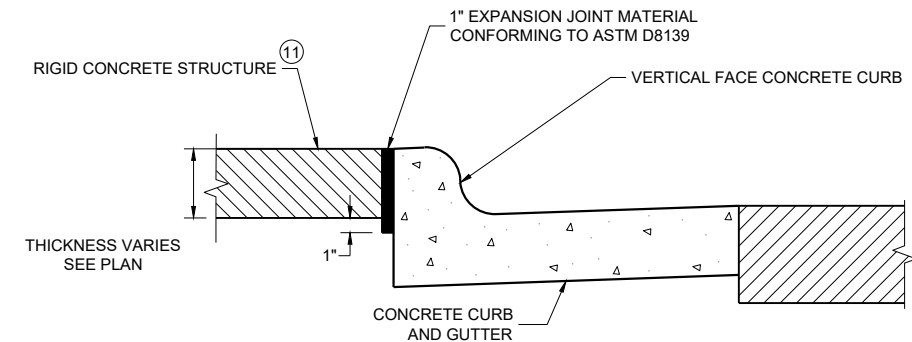
(TYPICAL H INLET COVER SHOWN)



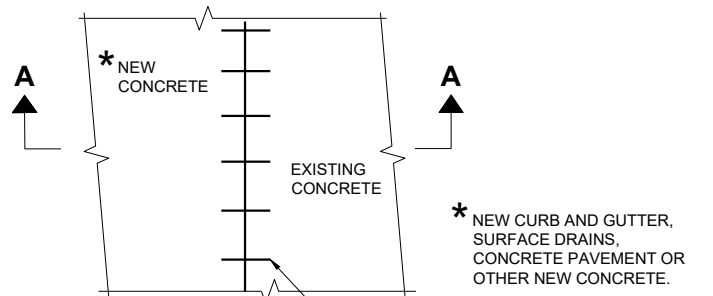
TYPES A<sup>①</sup> & D



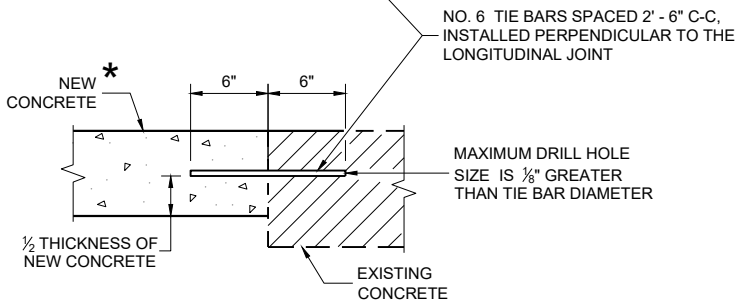
TYPES G<sup>①</sup> & J  
CONCRETE CURB



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE<sup>⑪</sup>



PLAN VIEW



SECTION A - A  
TIE BARS DRILLED INTO EXISTING PAVEMENT

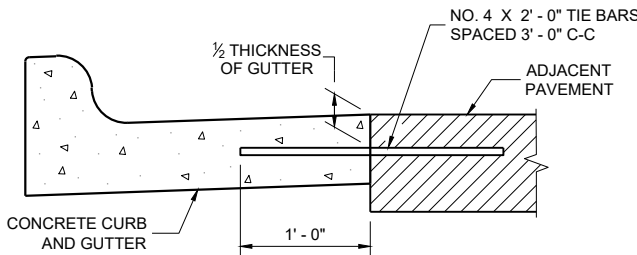
GENERAL NOTES

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

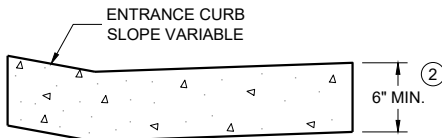
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

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



TYPICAL TIE BAR LOCATION<sup>①</sup>



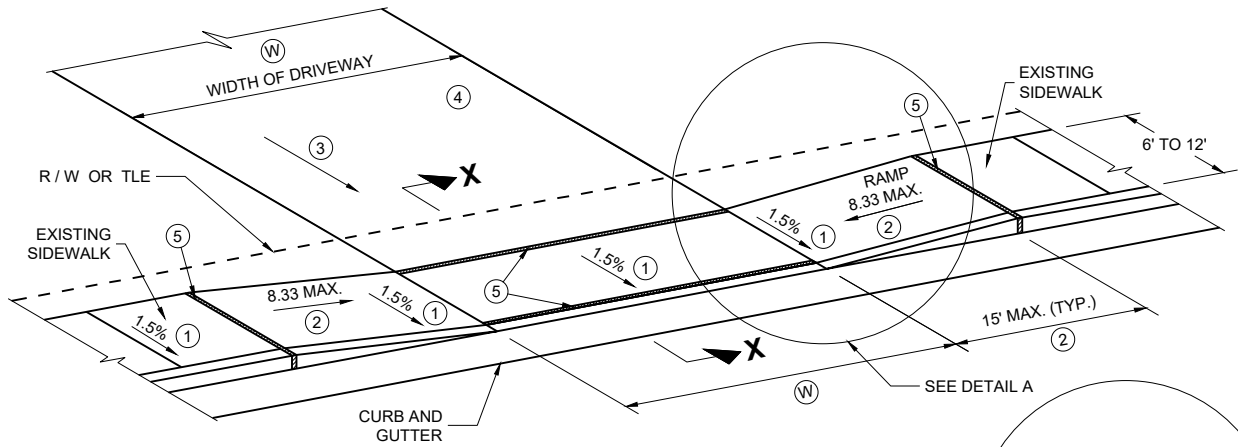
DRIVEWAY ENTRANCE CURB<sup>⑩</sup>  
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES  
AND CURB AND GUTTER  
APPLICATIONS

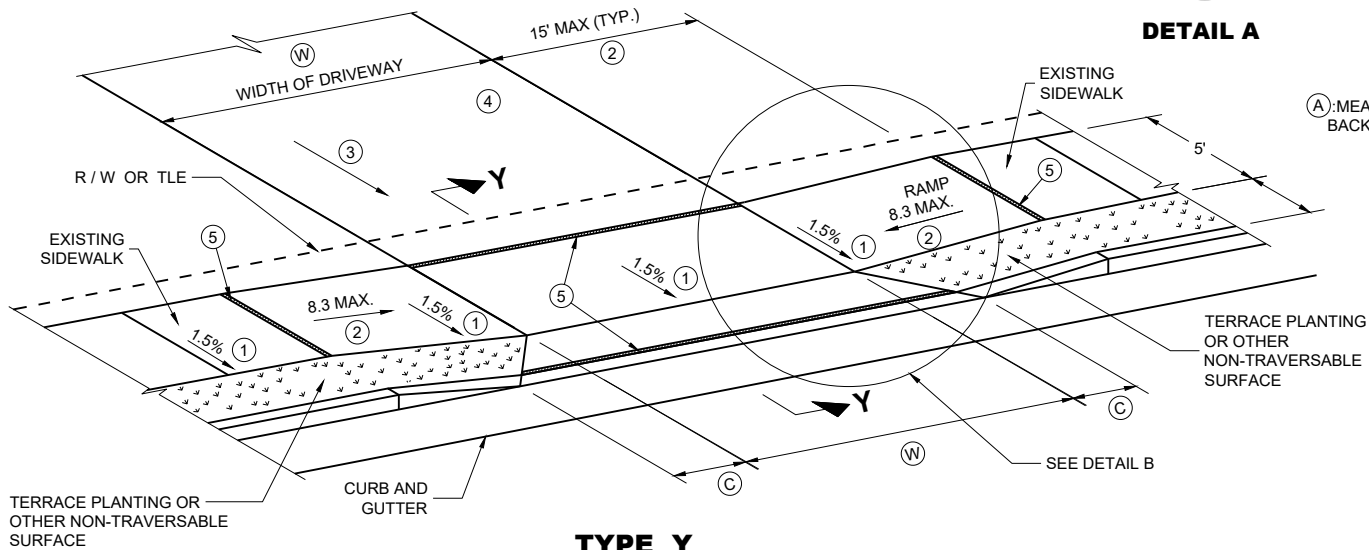
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA



**TYPE X**  
**SIDEWALK ABUTS CURB AND GUTTER**  
**TERRACE VARIES 0 TO 3 FEET**



**TYPE Y**  
**SIDEWALK WITH NARROWER TERRACE**  
**TERRACE VARIES 4 TO 6 FEET**

**GENERAL NOTES**

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

(W) IS SHOWN ON PLAN AND PROFILE SHEETS.

OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

① CONSTRUCTION TOLERANCE OF 0.5%± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1%.

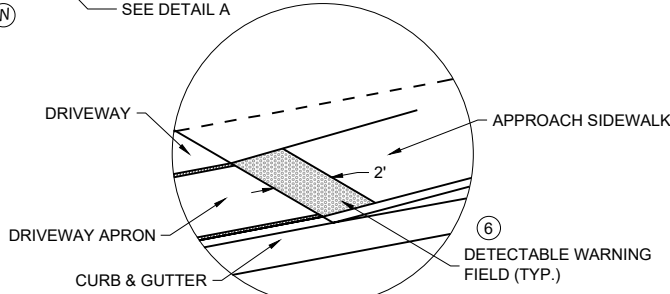
② THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY. SLOPE SIDEWALK RAMP TOWARD APRON AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

③ **DRIVEWAY SLOPES: DESIRABLE MAXIMUM**  
10.5% UP AWAY FROM SIDEWALK (SAG)  
8.5% DOWN AWAY FROM SIDEWALK (CREST)  
ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

④ **DRIVEWAY TYPES**  
\* 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE  
\* 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE  
\* 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES.)

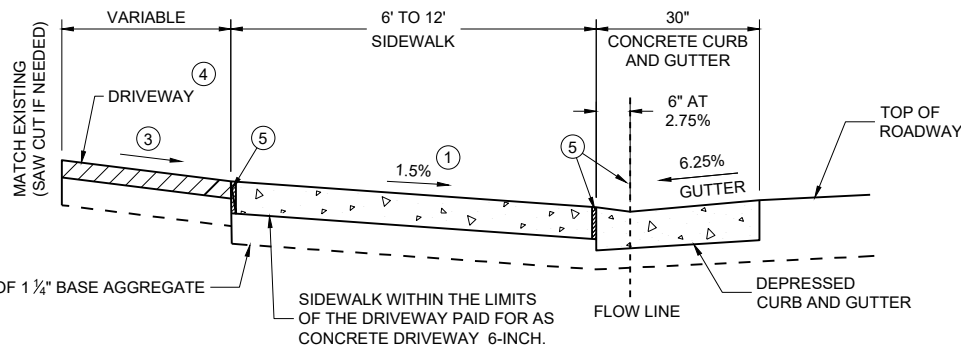
⑤ 1/2" EXPANSION JOINT FILLER

⑥ DETECABLE WARNING FIELDS ARE REQUIRED WHEN A PEDESTRIAN CIRCULATION ROUTE CROSSES A DRIVEWAY THAT IS TRAFFIC SIGNAL, STOP, OR YIELD SIGN CONTROLLED. DETECABLE WARNING FIELDS TO BE 2 FT DEEP AND EXTEND THE WIDTH OF THE PEDESTRIAN CIRCULATION ROUTE.



**DETAIL A**

(A): MEASURE FROM BACK OF CURB

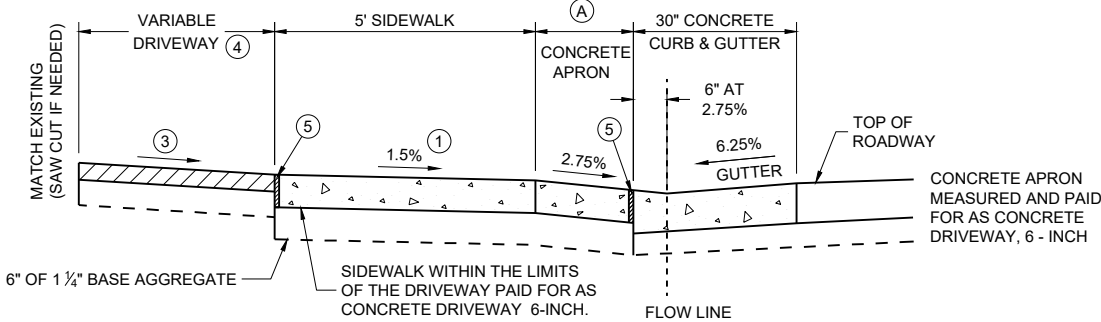


**SECTION X - X**

(W): 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)  
16' MIN. - 35' MAX. COMMERCIAL (CE)

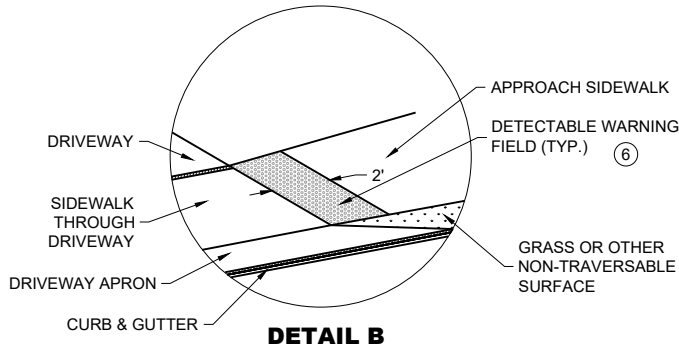
**TABLE Y**

(A) FEET	(C) FEET
3.5'	2.0'
4.5'	3.0'
5.5'	3.5'

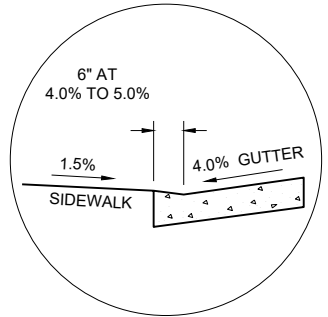


NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS

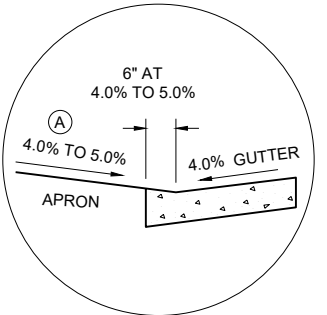
**SECTION Y - Y**  
**DRIVEWAY DETAIL WITH CONCRETE CURB AND GUTTER**  
**(URBAN AND SUBURBAN)**



**DETAIL B**



**SECTION X - X**  
**4% GUTTER SLOPE**



**SECTION Y - Y**  
**4% GUTTER SLOPE**

**DRIVEWAY AND SIDEWALK RAMPS**  
**TYPES X AND Y**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2025 /S/ Rodney Taylor  
DATE

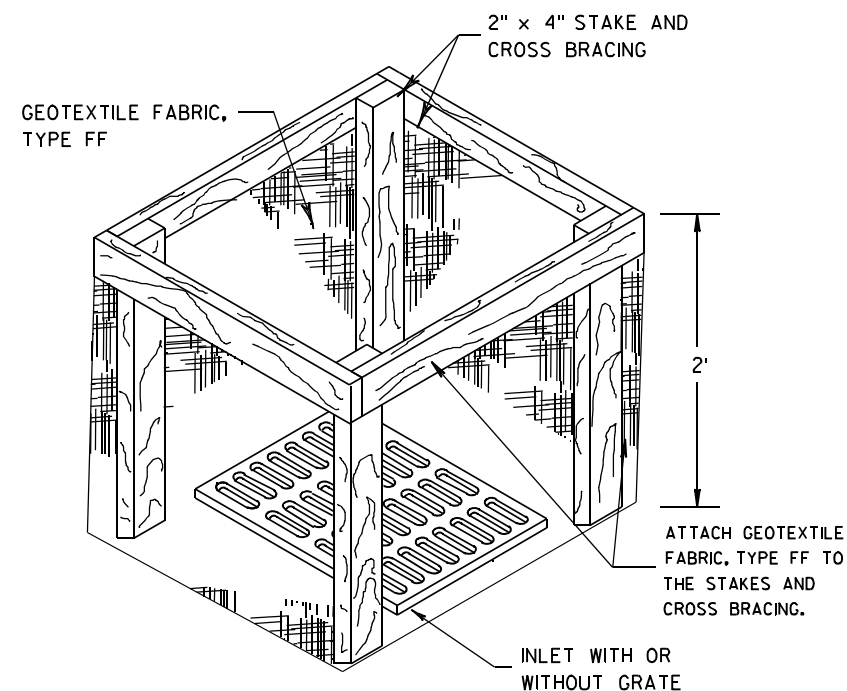
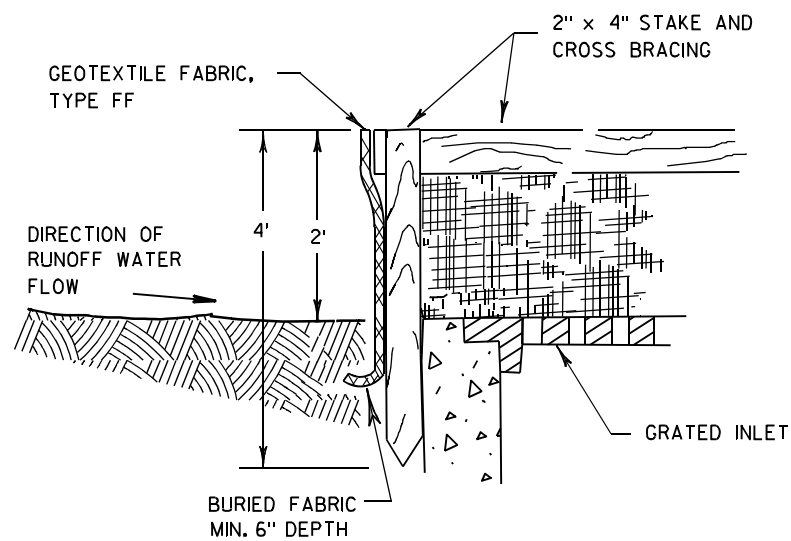
FHWA



- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



<b>SILT FENCE</b>	
<b>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</b>	
<b>APPROVED</b> <u>4-29-05</u> DATE	<u>/S/ Beth Cannestra</u> CHIEF ROADWAY DEVELOPMENT ENGINEER



**INLET PROTECTION, TYPE A**

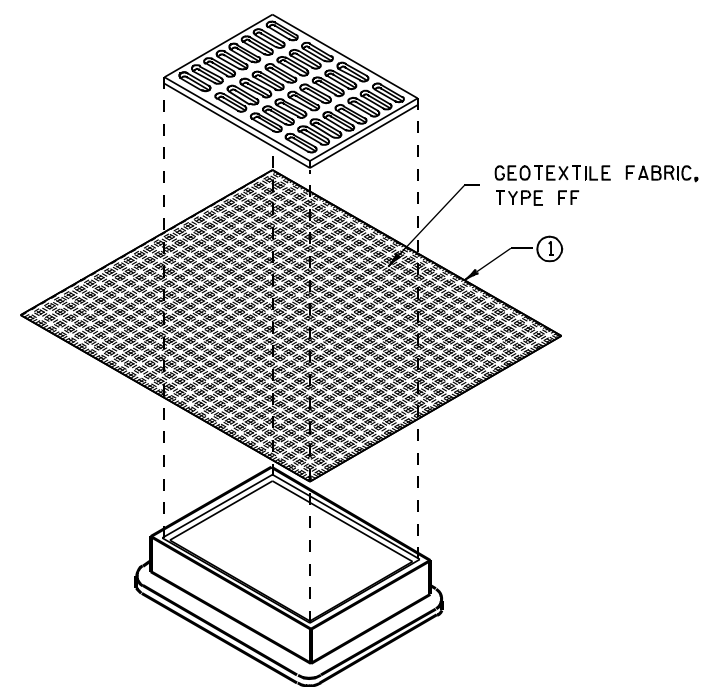
**GENERAL NOTES**

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

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

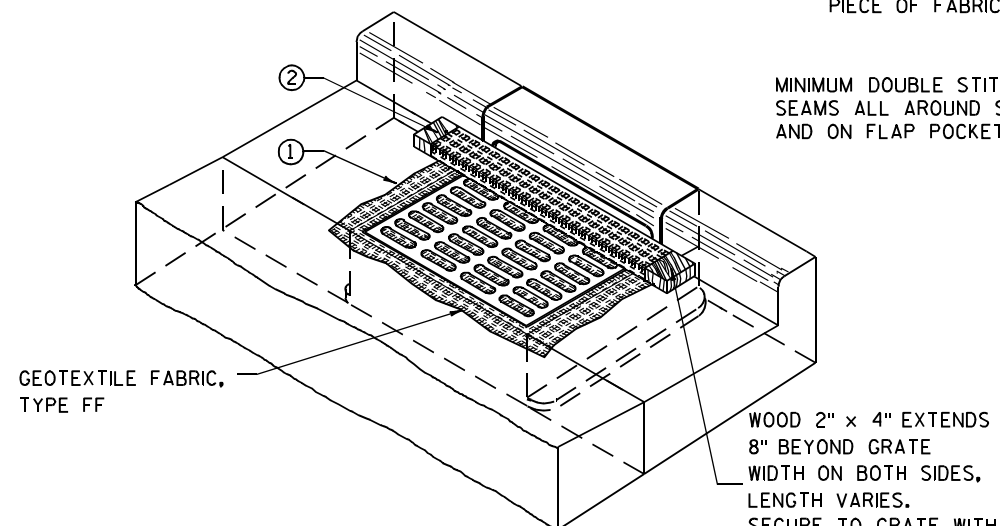
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

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



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

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



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

**INSTALLATION NOTES**

**TYPE B & C**

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

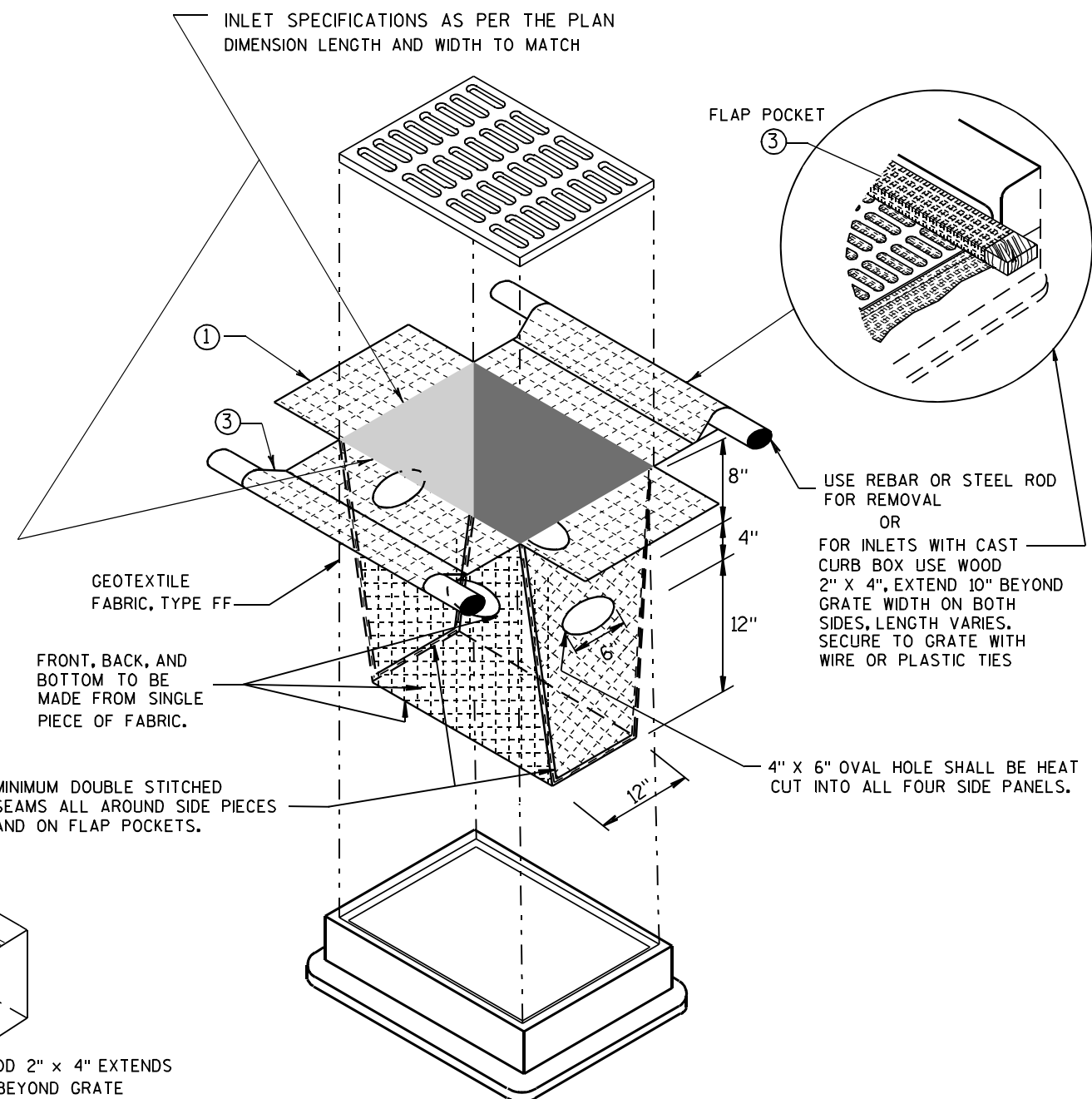
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

**TYPE D**

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

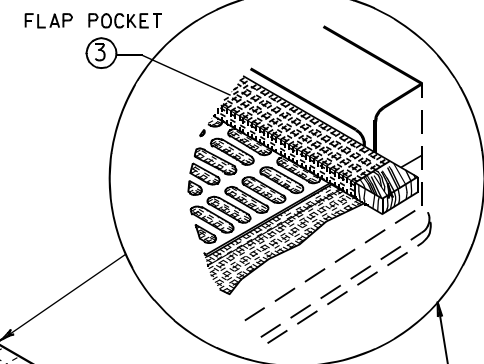
TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

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



**INLET PROTECTION, TYPE D**

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



USE REBAR OR STEEL ROD FOR REMOVAL OR  
FOR INLETS WITH CAST CURB BOX USE WOOD 2" X 4", EXTEND 10" BEYOND GRATE WIDTH ON BOTH SIDES, LENGTH VARIES. SECURE TO GRATE WITH WIRE OR PLASTIC TIES

MINIMUM DOUBLE STITCHED SEAMS ALL AROUND SIDE PIECES AND ON FLAP POCKETS.

WOOD 2" X 4" EXTENDS 8" BEYOND GRATE WIDTH ON BOTH SIDES, LENGTH VARIES. SECURE TO GRATE WITH WIRE OR PLASTIC TIES

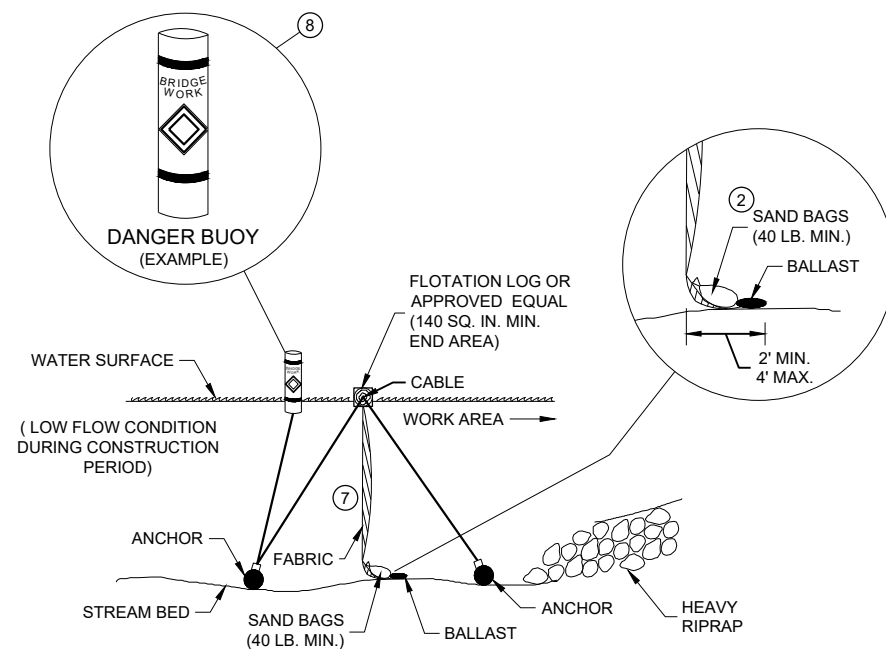
4" X 6" OVAL HOLE SHALL BE HEAT CUT INTO ALL FOUR SIDE PANELS.

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

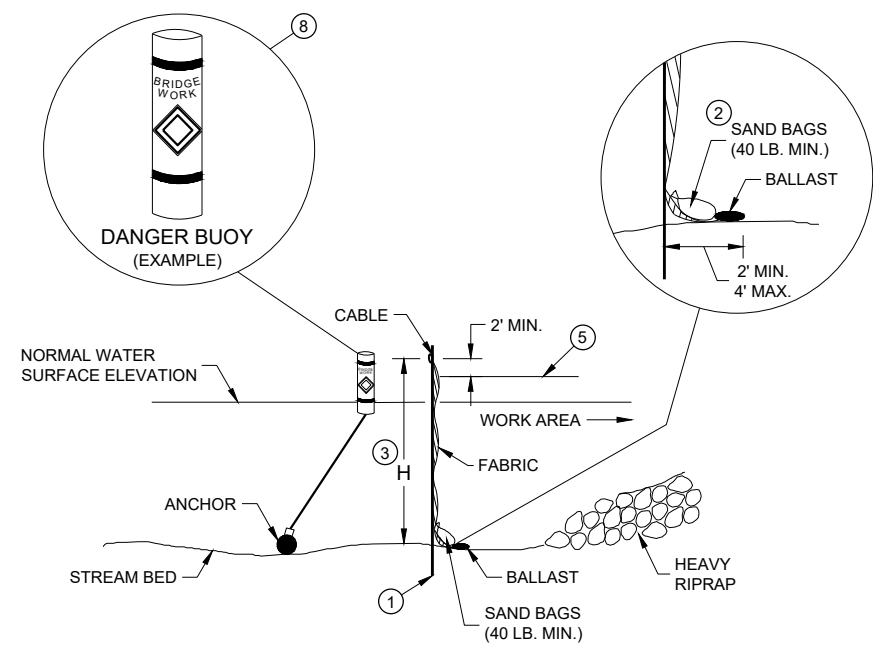
APPROVED  
10/16/02 /S/ Beth Cannestra  
DATE  
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER





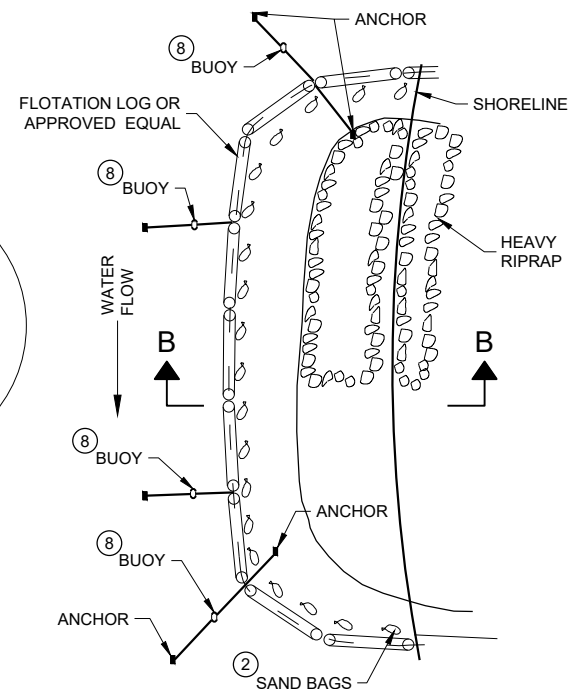
SECTION B - B

### TURBIDITY BARRIER - FLOAT ALTERNATIVE CAUTION - SEE NOTE 6

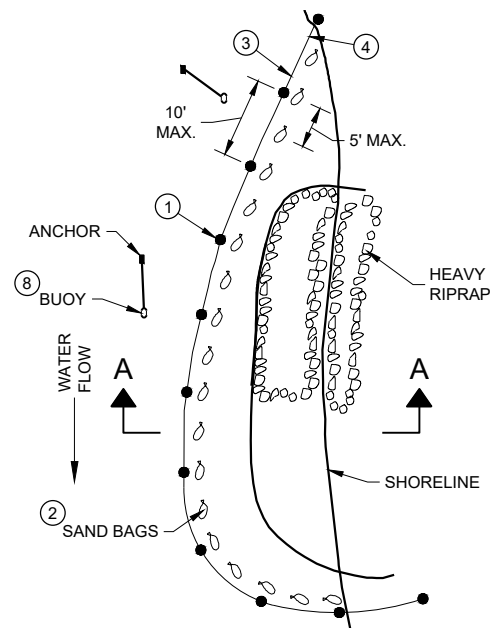


SECTION A - A

### TURBIDITY BARRIER - STANDARD POST INSTALLATION



PLAN VIEW



PLAN VIEW

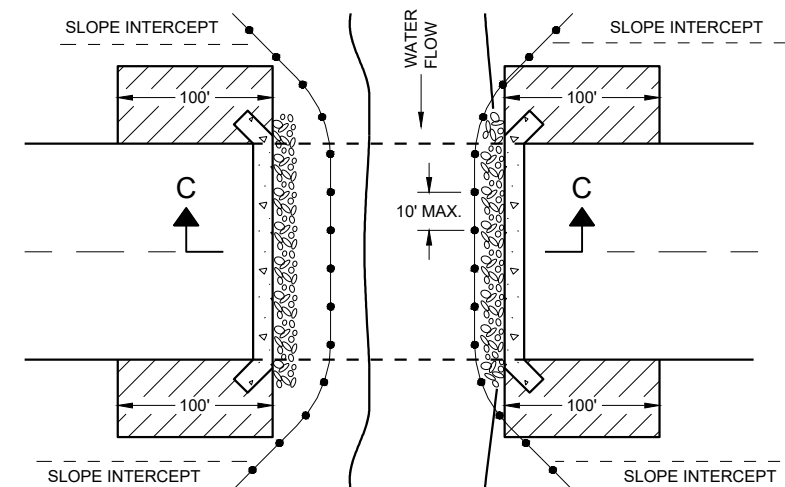
### TURBIDITY BARRIER PLACEMENT DETAILS

### GENERAL NOTES

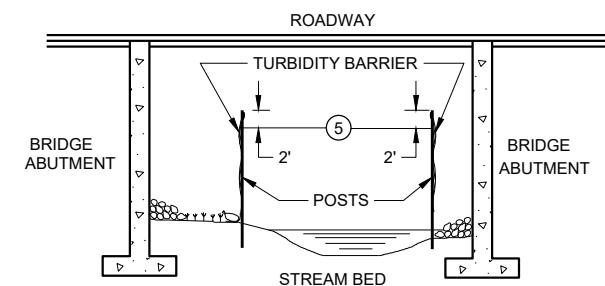
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

- 1 DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
- 2 SAND BAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
- 3 WHEN BARRIER HEIGHT "H" EXCEEDS 8 FEET, POST SPACING MAY NEED TO BE DECREASED.
- 4 IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
- 5 ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
- 6 FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.
- 7 ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
- 8 USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C - C

### TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

### TURBIDITY BARRIER

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

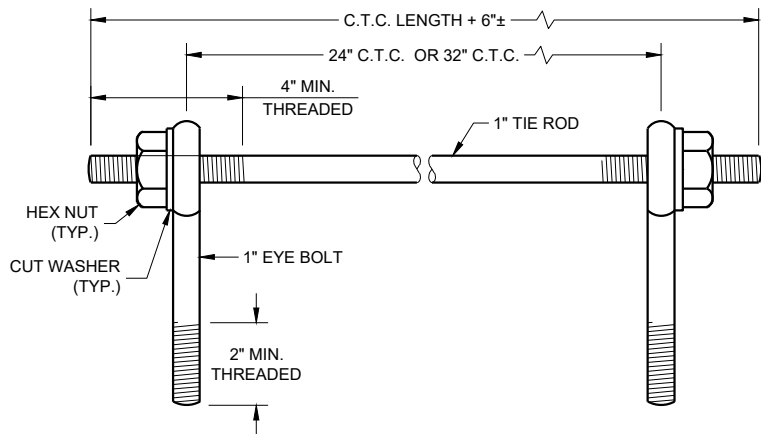
APPROVED

6/4/02

DATE

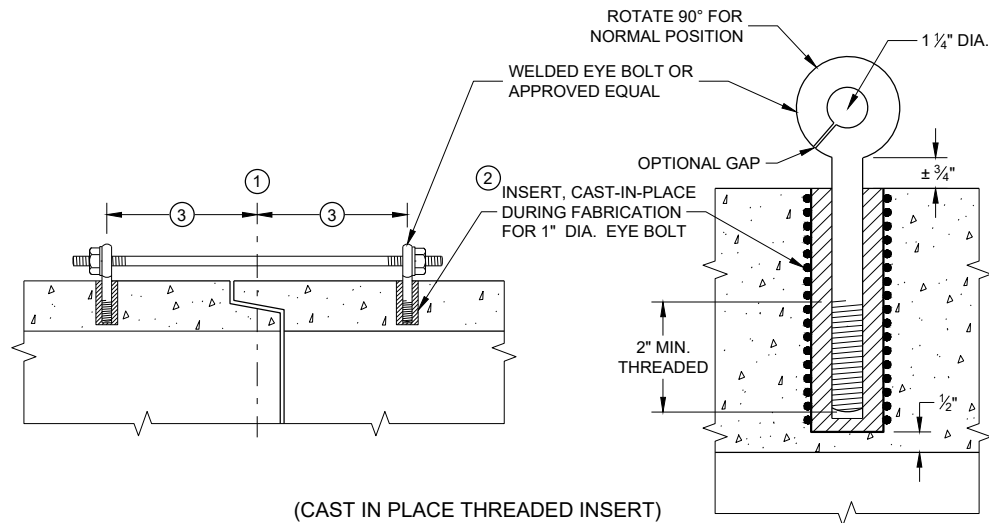
FHWA

/S/ Beth Cannestra  
CHIEF ROADWAY DEVELOPMENT  
ENGINEER



EYE BOLTS AND TIE ROD

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



(CAST IN PLACE THREADED INSERT)  
LONGITUDINAL SECTIONS

## GENERAL NOTES

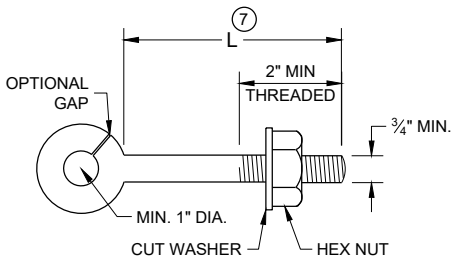
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

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

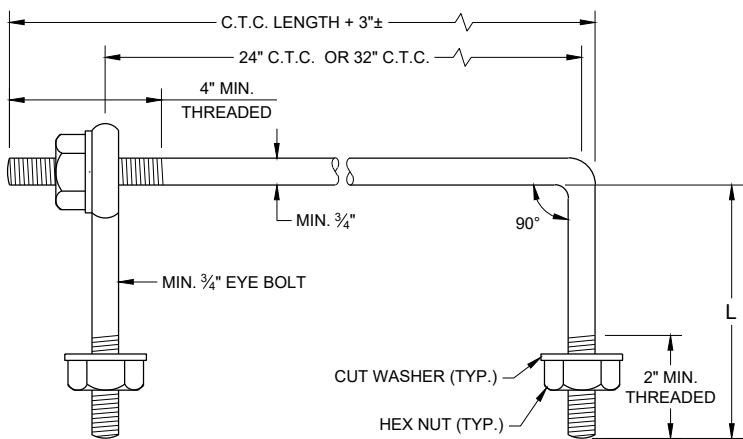
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

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

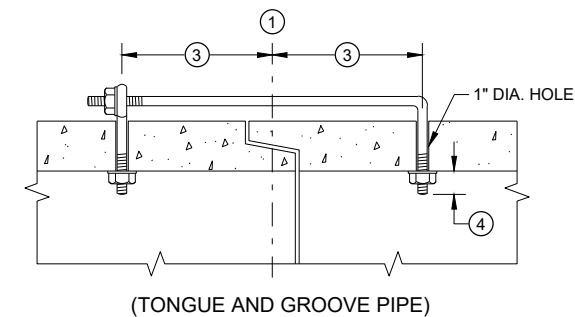


EYE BOLT 7

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



EYE BOLT AND TIE ROD

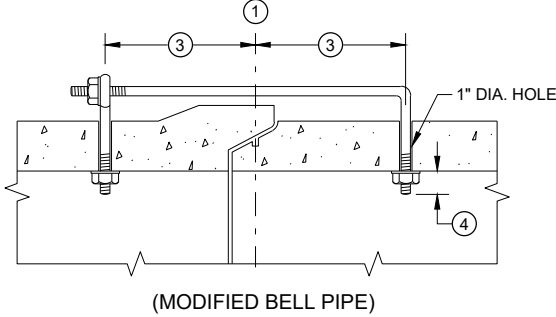


(TONGUE AND GROOVE PIPE)

LONGITUDINAL SECTION

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

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

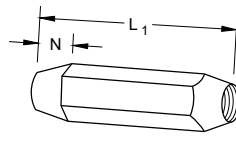


(MODIFIED BELL PIPE)

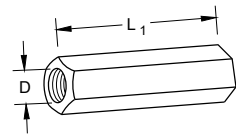
ADJUSTABLE TIE ROD TABLE

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

DIMENSIONS SHOWN ARE IN INCHES

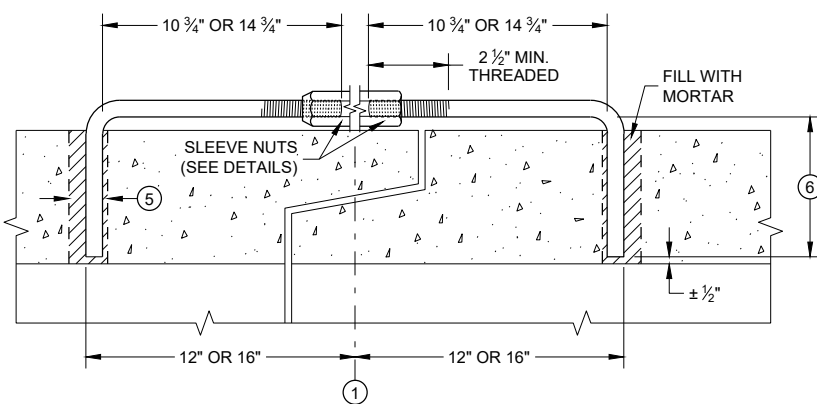


TAPERED



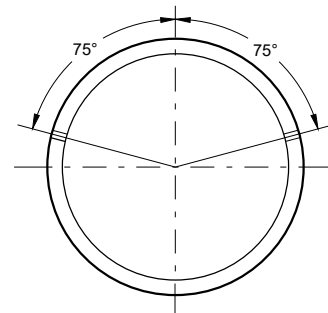
PLAIN

RIGHT AND LEFT THREADS  
SLEEVE NUTS



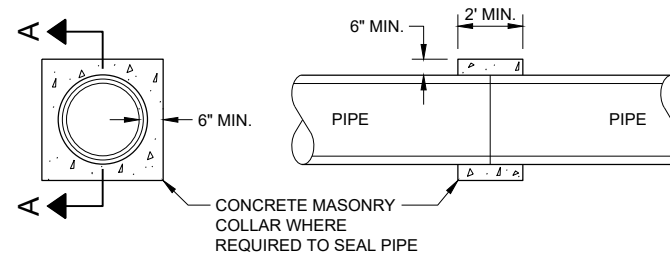
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



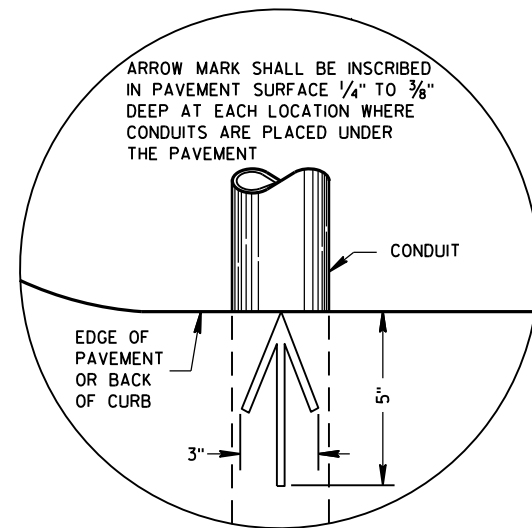
SECTION A - A

CONCRETE COLLAR DETAIL

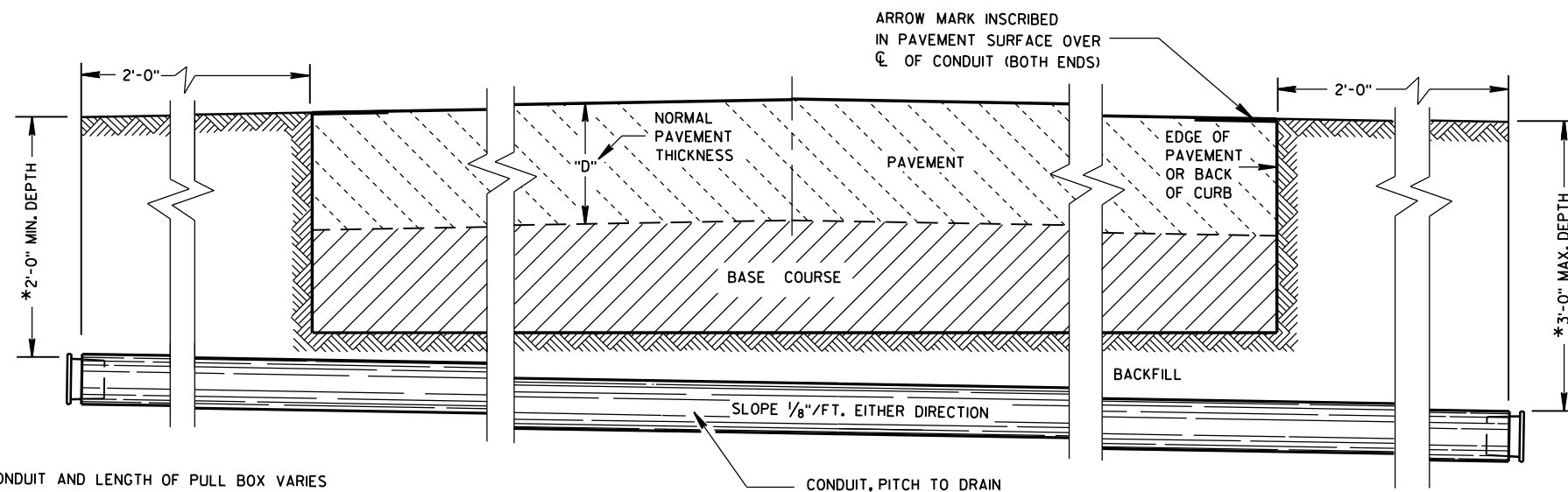
## JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW  
ARROW MARK



SIDE ELEVATION  
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

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

## GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

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

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

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

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

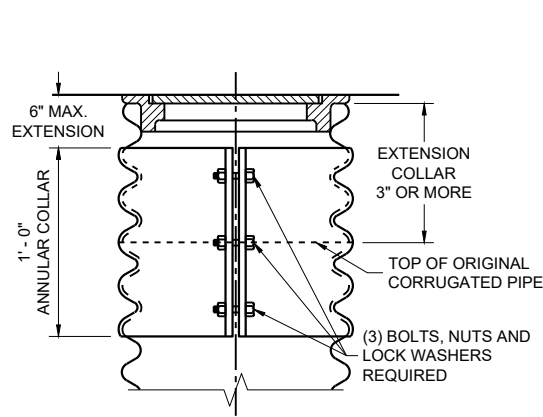
ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

## CONDUIT

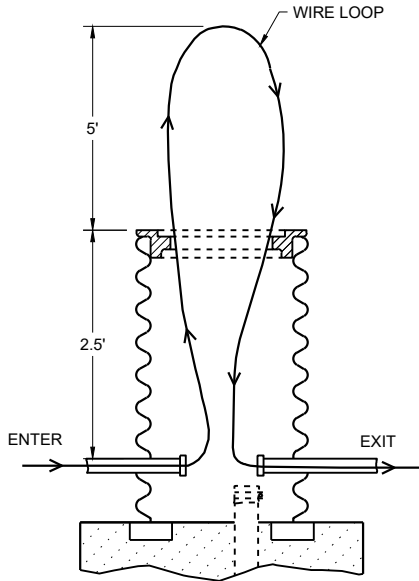
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March, 2017 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER  
FHWA

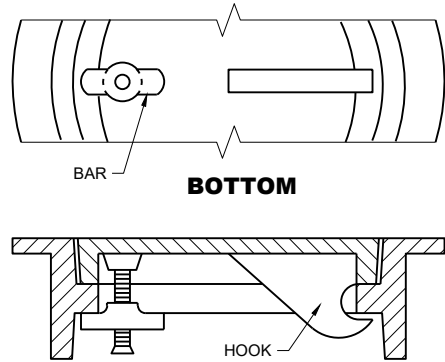
CORRUGATED PIPE EXTENDER



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



ALTERNATE COVER (LOCKING)  
TIGHTENING BAR TYPE



GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

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

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

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

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

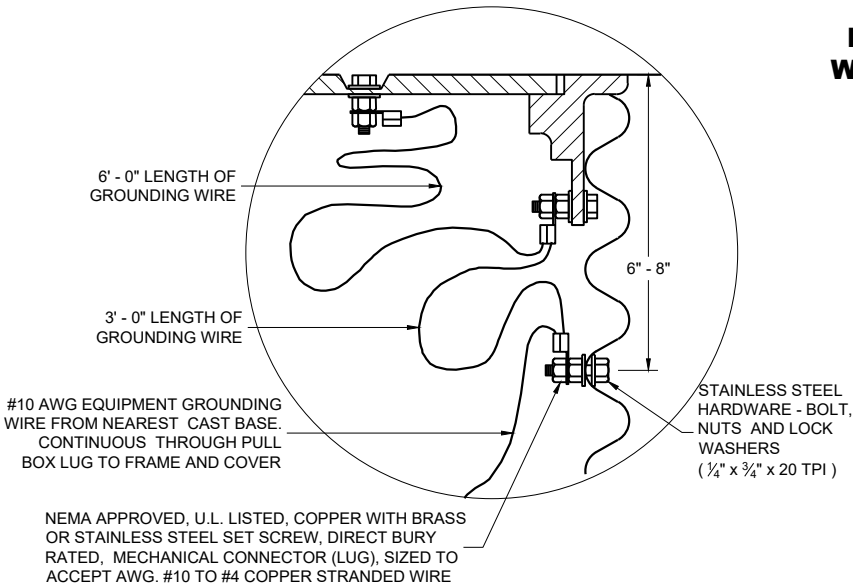
TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

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

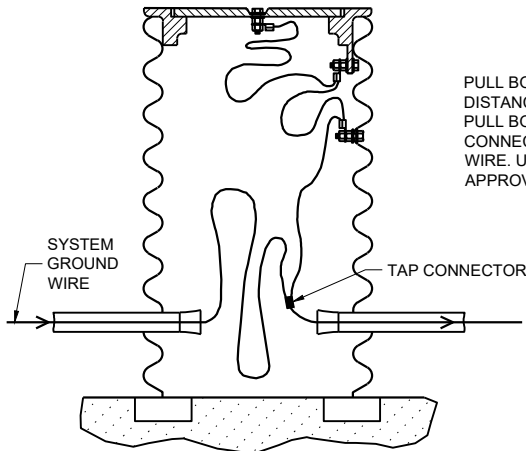
\*THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

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

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

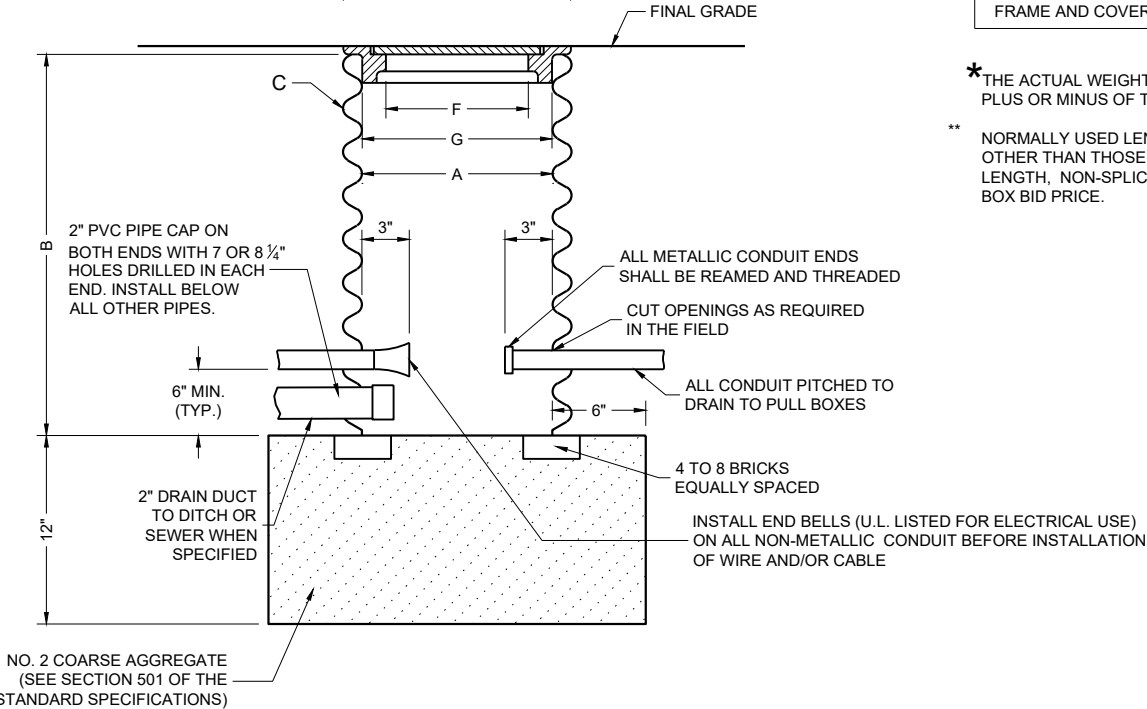


EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

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



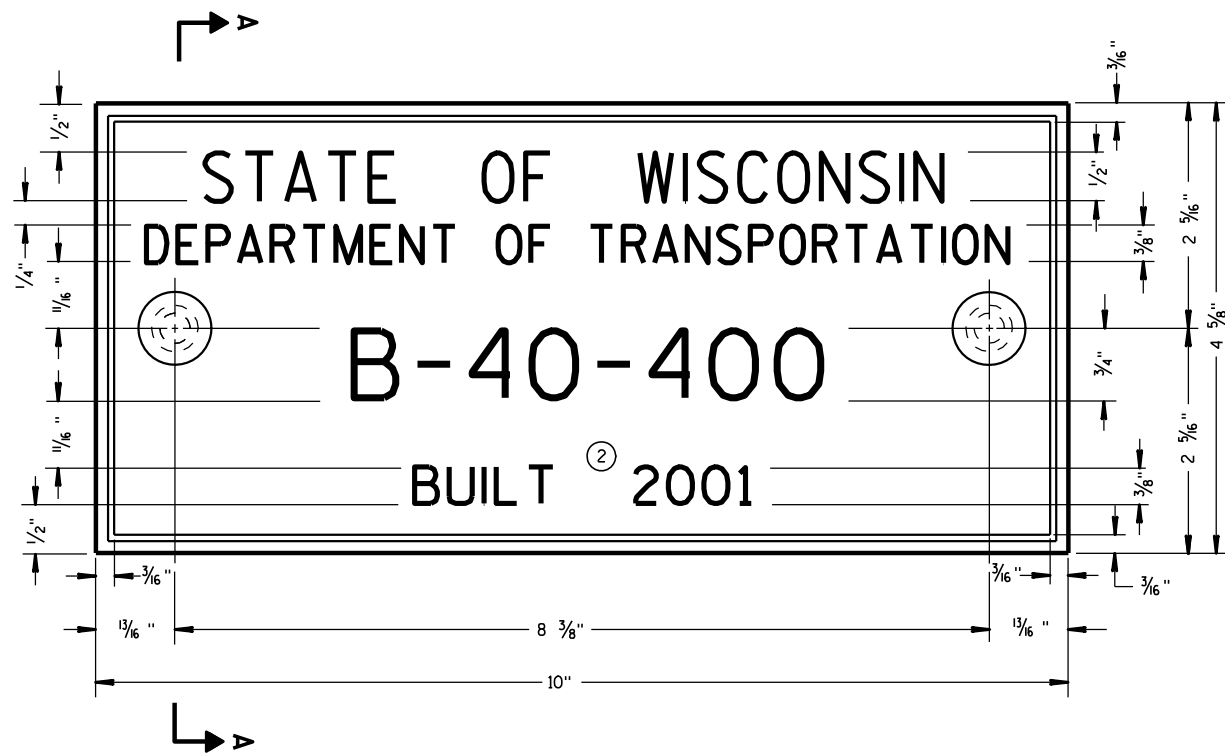
PULL BOX

PULL BOX

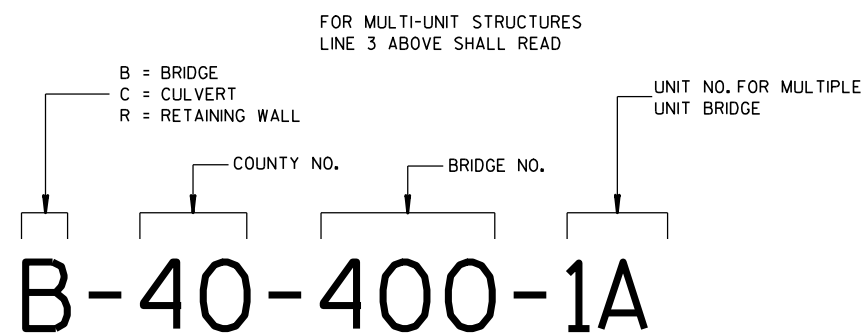
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA



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



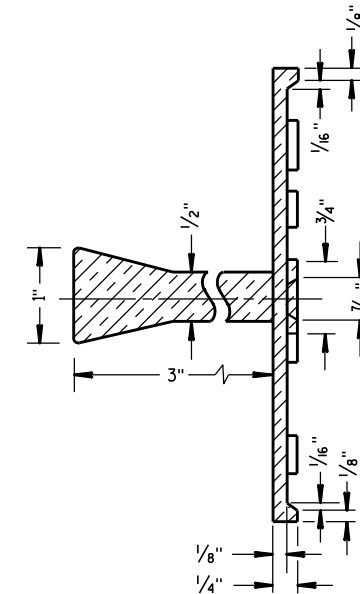
**NUMBERING DESIGNATION  
MULTI-UNIT STRUCTURES**

## GENERAL NOTES

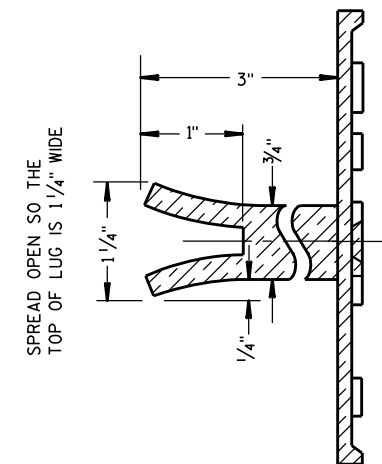
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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.

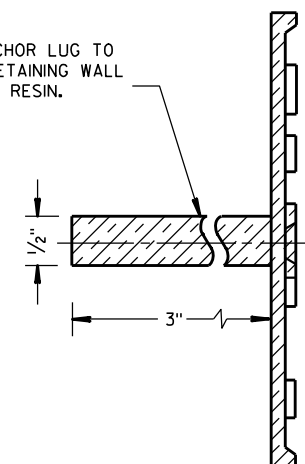


**SECTION A-A**



**ALTERNATE LUG**

- ① ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.



**ALTERNATE LUG**  
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE  
(STRUCTURES)**

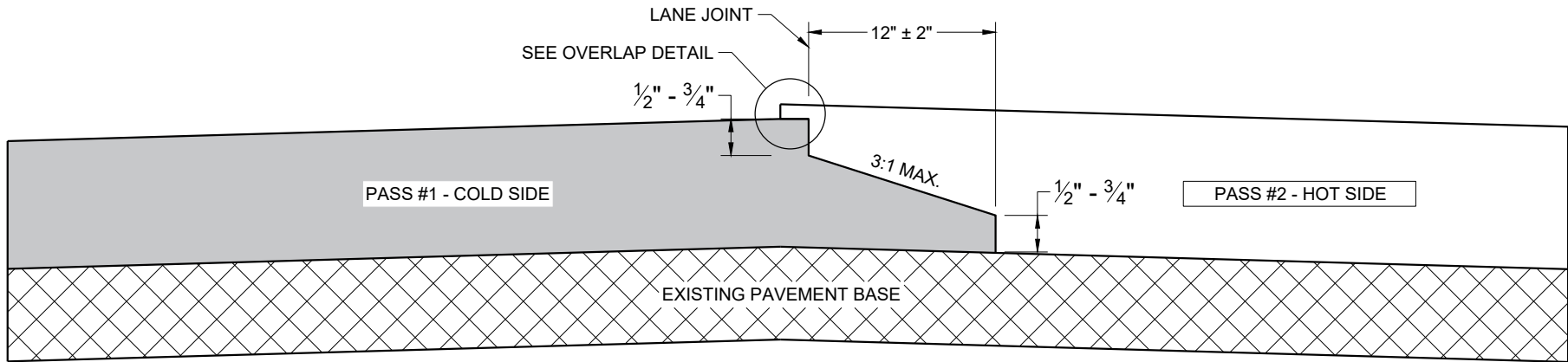
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

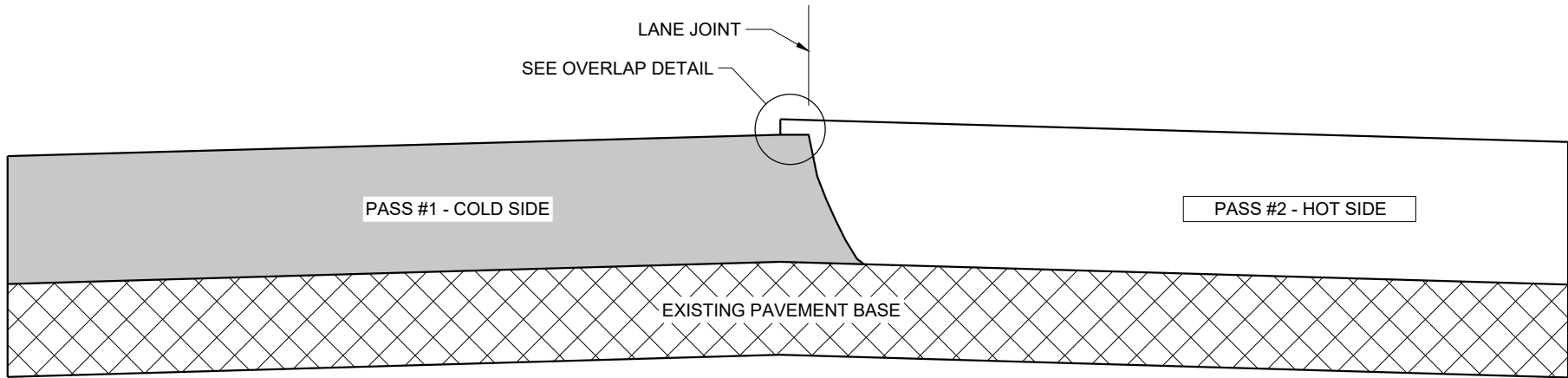
3/26/10  
DATE

FHWA

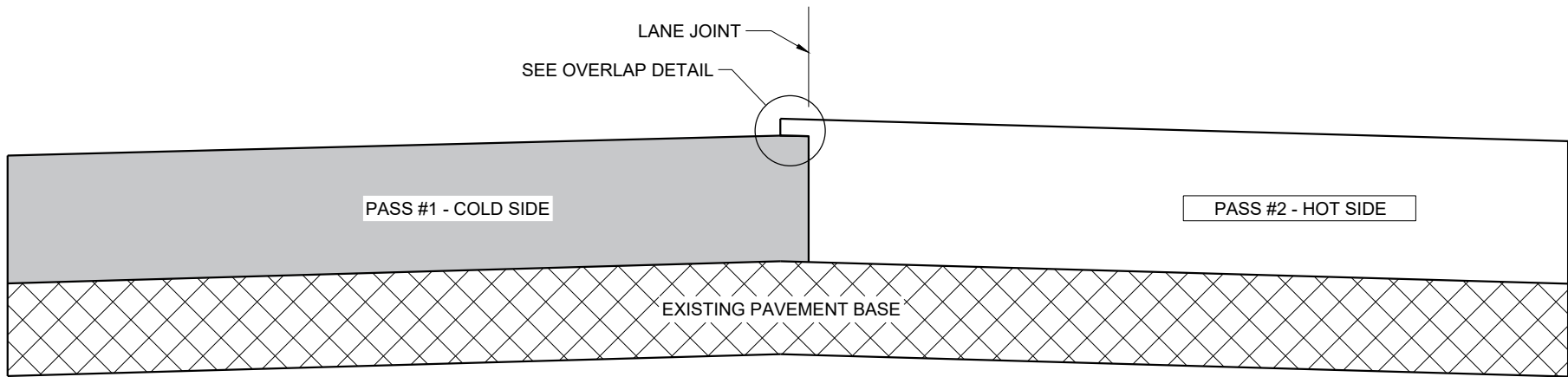
/S/ Scot Becker  
CHIEF STRUCTURAL DEVELOPMENT ENGINEER



TYPICAL PAVEMENT CROSS SECTION  
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT (MILLED)

GENERAL NOTES

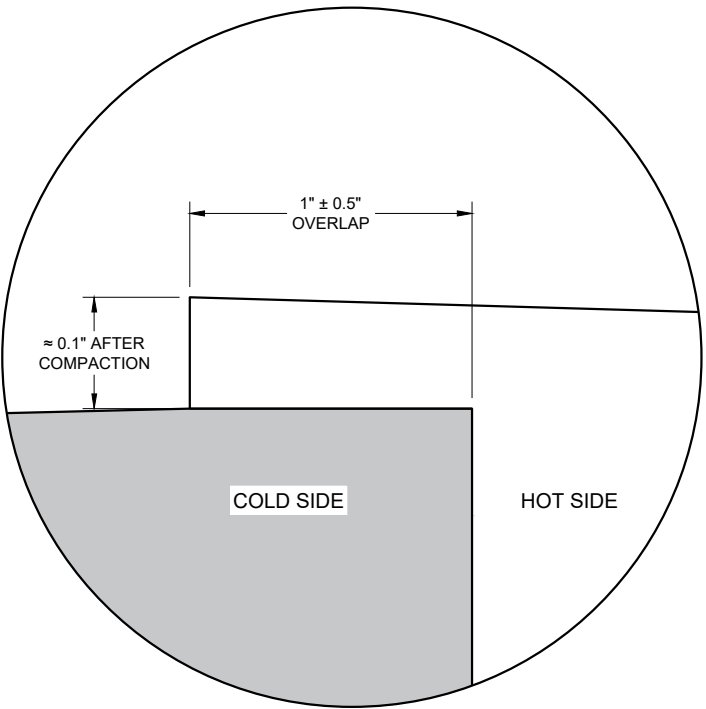
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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

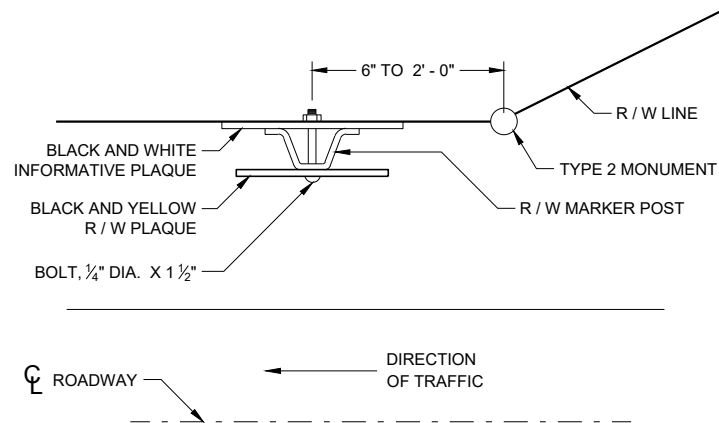


OVERLAP DETAIL (TYPICAL)

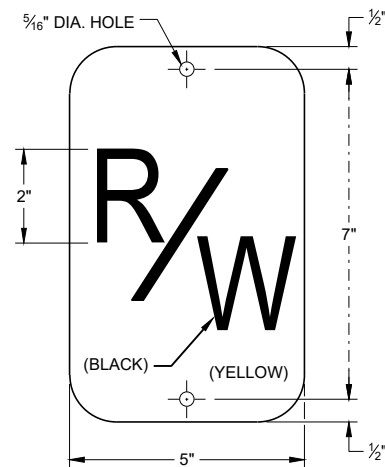
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2020 /S/ Steven Hefel  
DATE HMA PAVEMENT ENGINEER  
FHWA

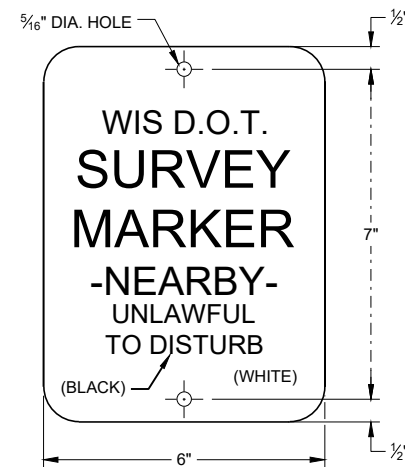


**PLAN VIEW  
STEEL MARKER POST**



**R / W PLAQUE**

THE RIGHT-OF-WAY PLAQUE AND INFORMATIVE PLAQUE WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.



**INFORMATIVE PLAQUE**

## GENERAL NOTES

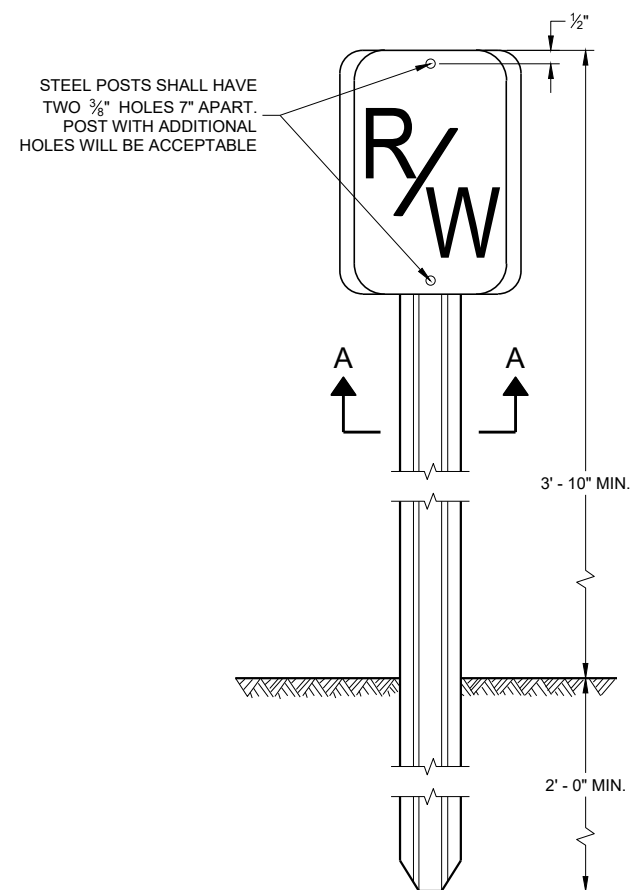
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

A STEEL MARKER POST FOR RIGHT -OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

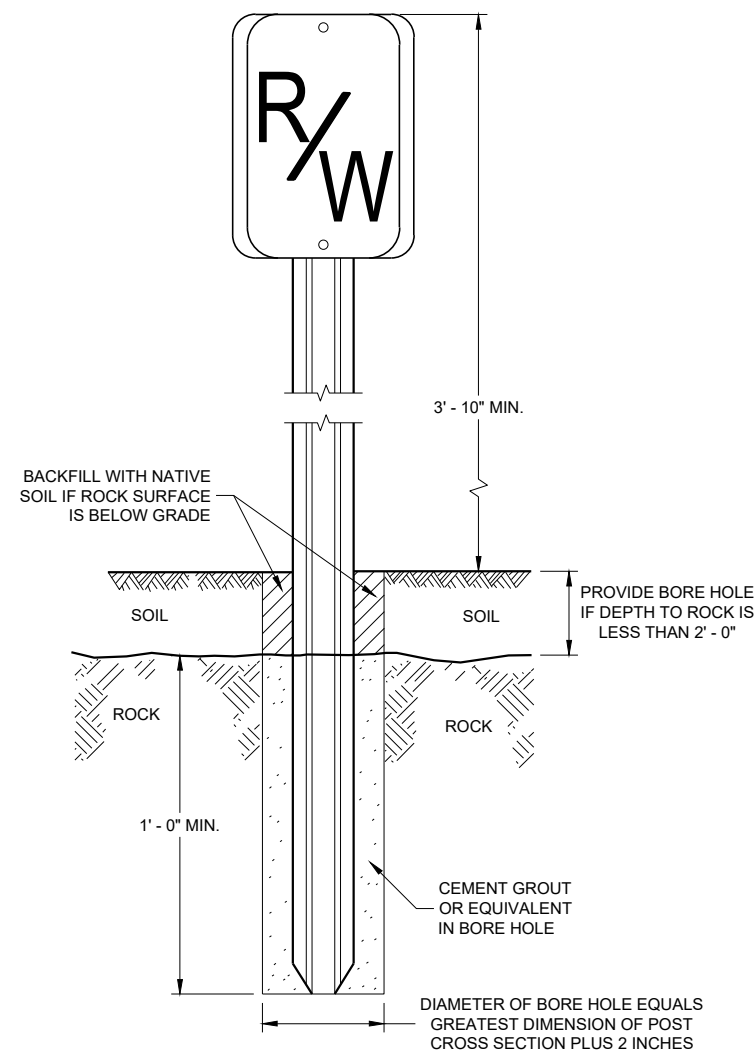
THE "R/W" PLAQUE SHALL FACE THE ROADWAY AND THE INFORMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. "R/W" AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

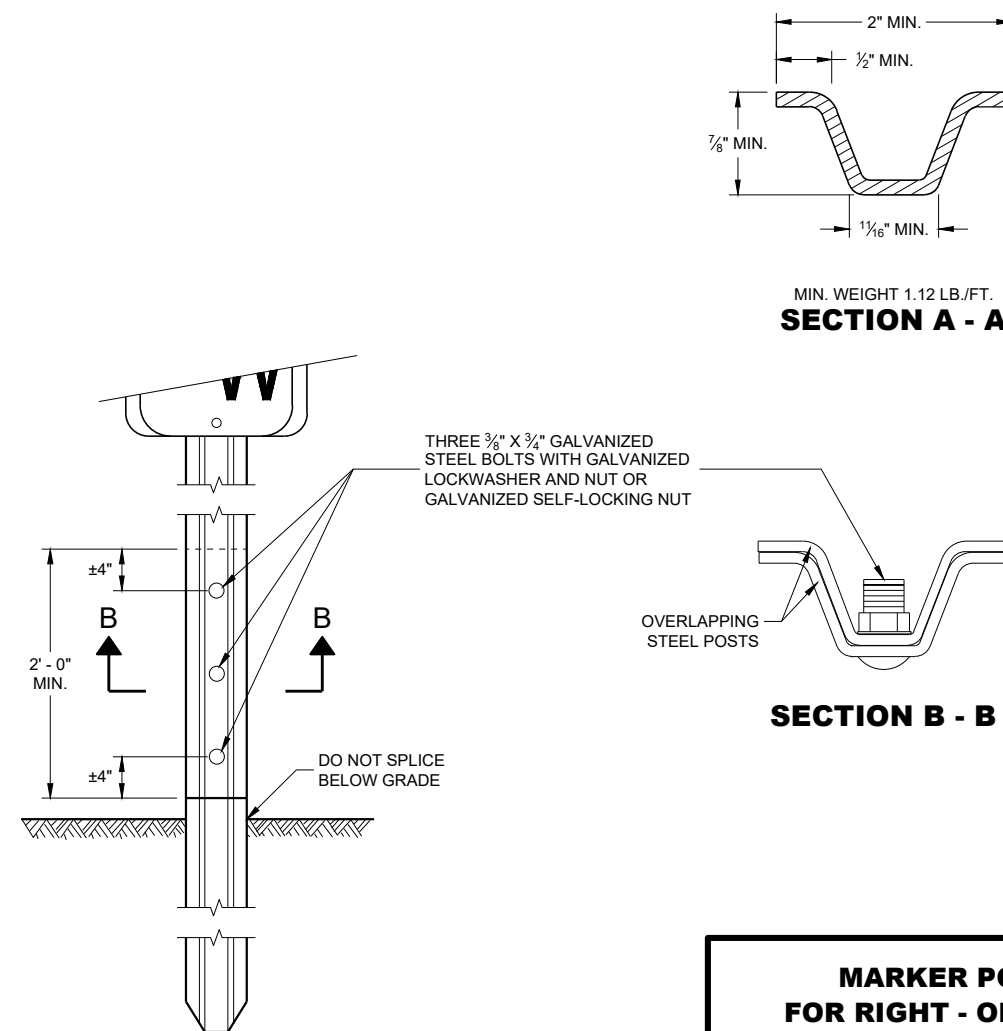
- ① IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3' - 10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR. FILL THE BORE HOLE WITH CEMENT GROUT OR EQUIVALENT, DEPENDING ON THE STABILITY OF THE ROCK.



**FRONT VIEW  
STEEL MARKER POST**



**FRONT VIEW  
ROCK INSTALLATION ①**



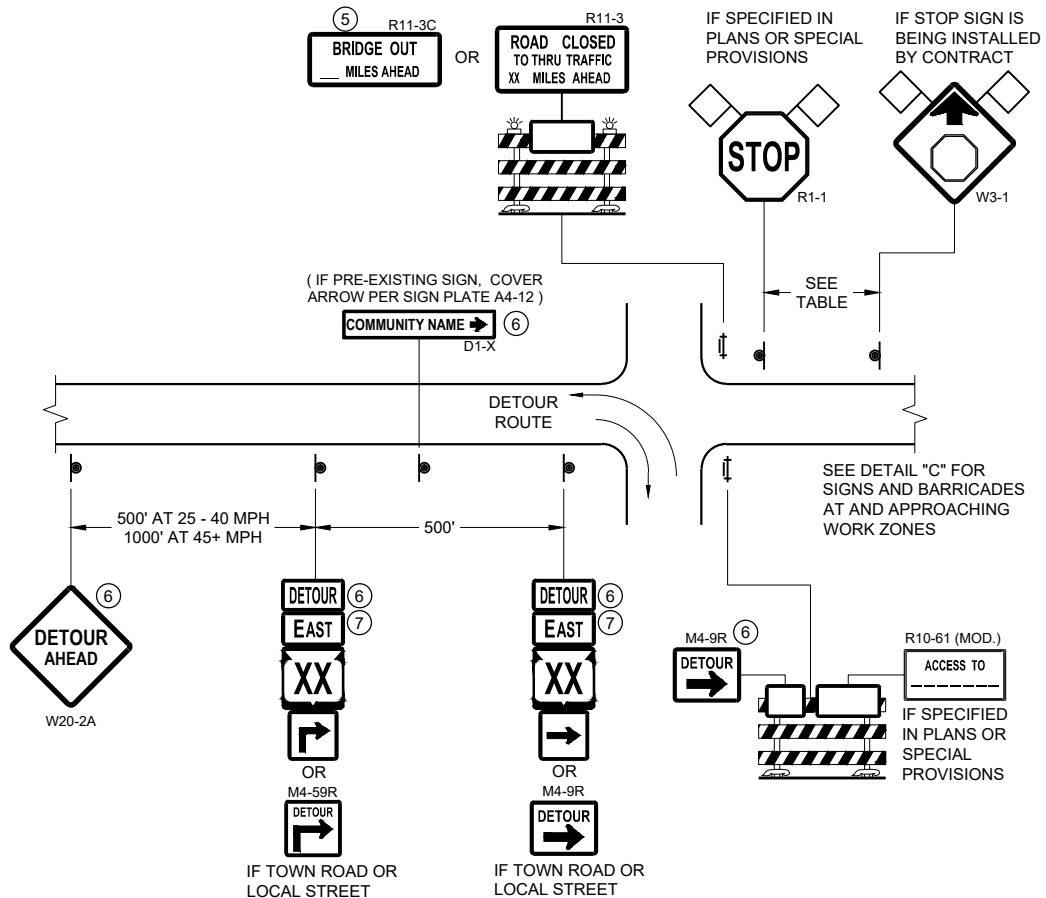
**FRONT VIEW  
SPLICE DETAIL**

## MARKER POST FOR RIGHT - OF - WAY

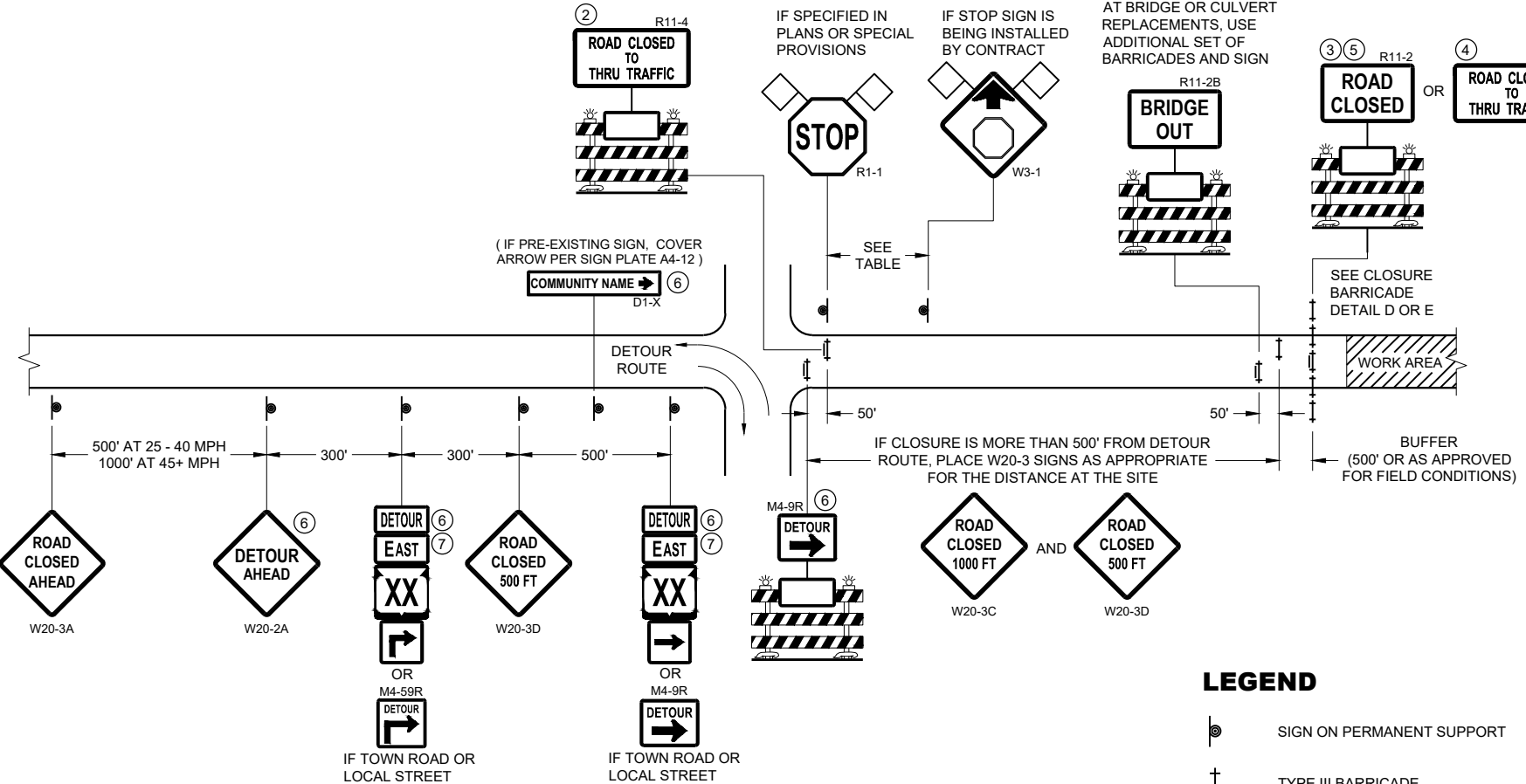
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
2/18/2016  
DATE  
/S/ Ray Kumapayi  
CHIEF SURVEYING AND MAPPING  
ENGINEER

FHWA



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



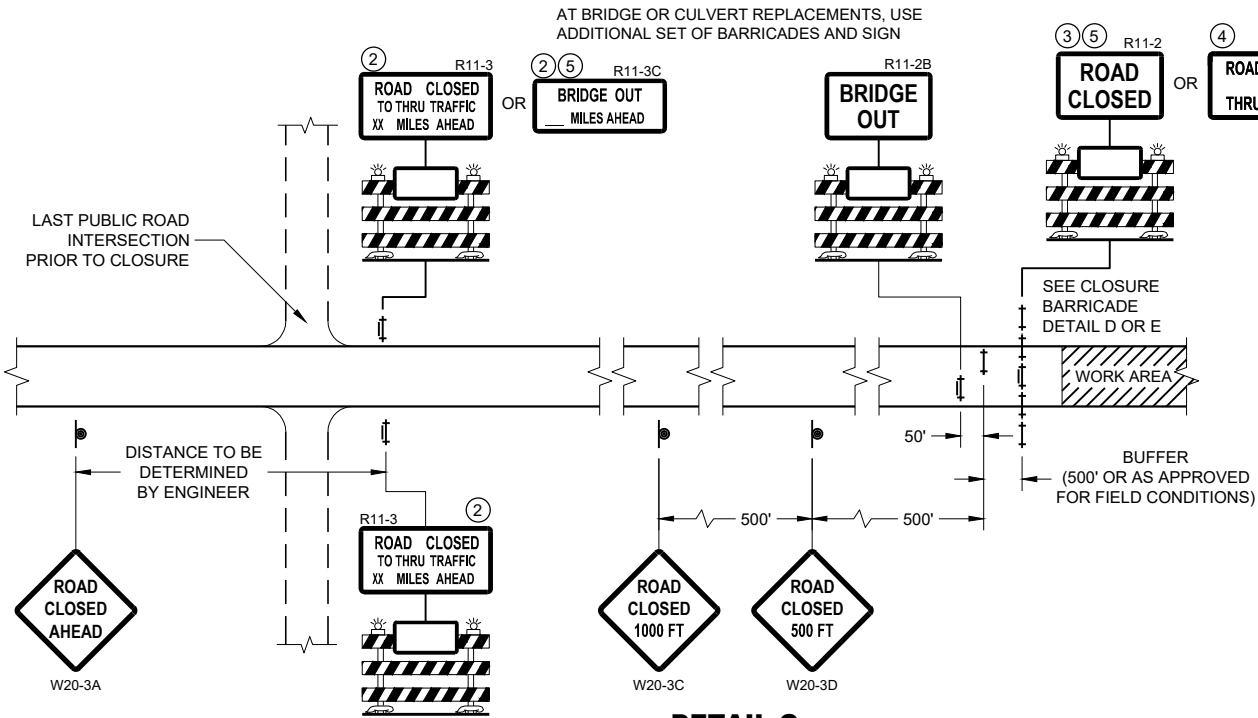
**DETAIL B**  
**MAINLINE CLOSURE WITH POSTED DETOUR**  
WORK ZONE LESS THAN ½ MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

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

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

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

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



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

**BARRICADES AND SIGNS  
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA





SEE SDD 15C2 - SHEET "a" FOR LEGEND

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.

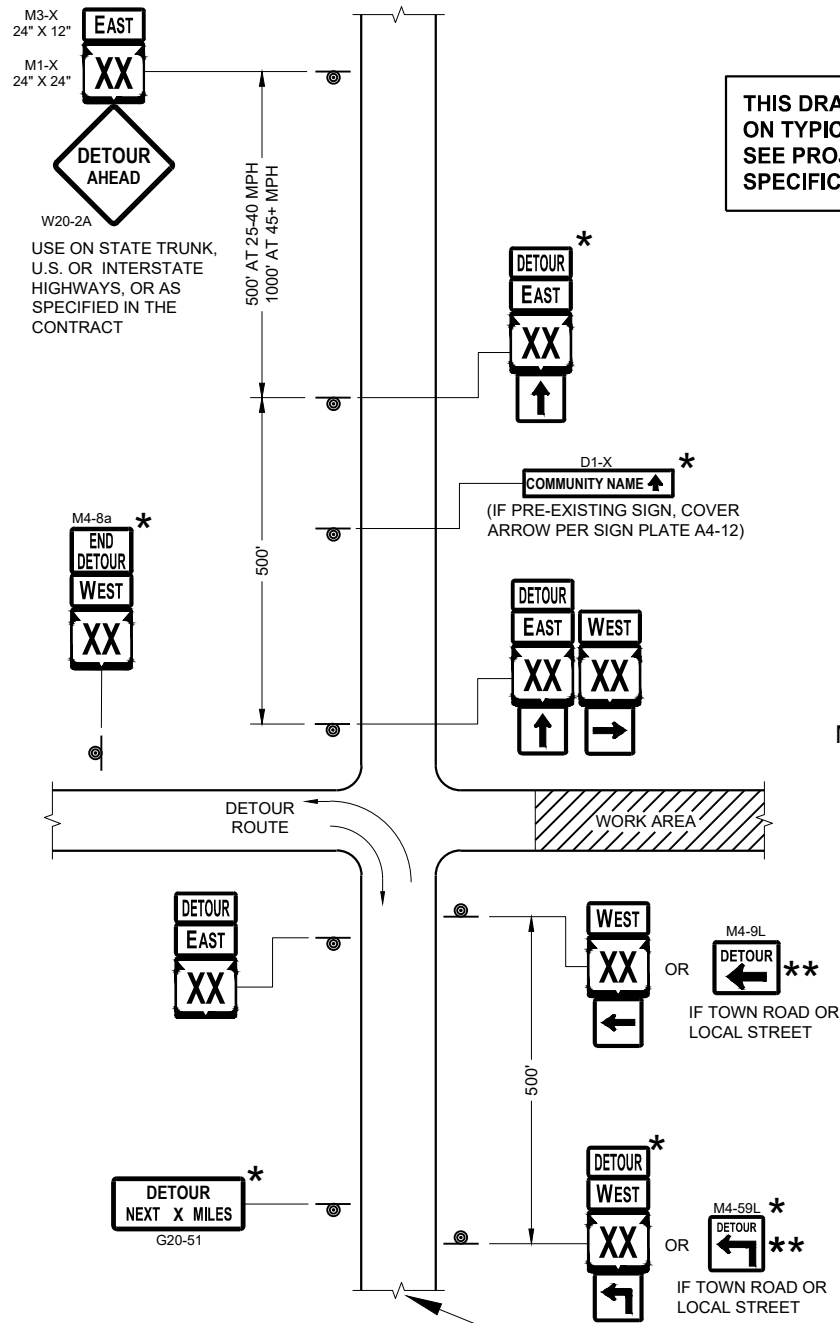
THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

"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"

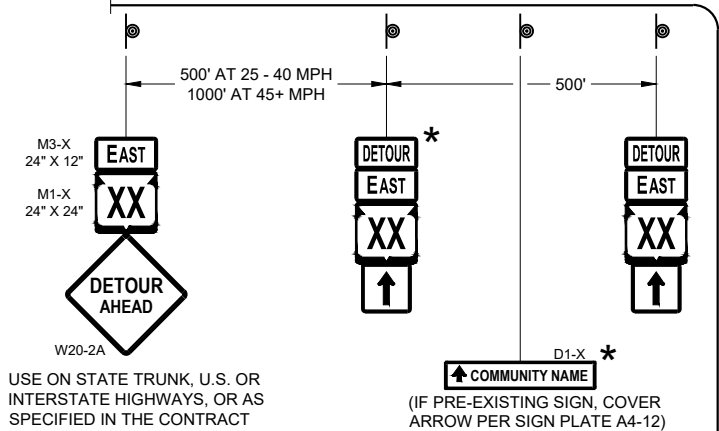
- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS 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.



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

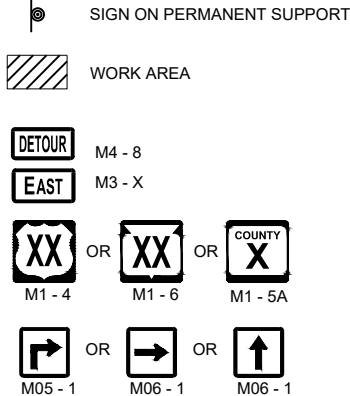
THIS DRAWING PROVIDES GENERAL GUIDANCE  
ON TYPICAL DETOUR SIGN LAYOUT AND SPACING.  
SEE PROJECT DETOUR SIGNING SHEETS FOR  
SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT



DETAIL F  
DETOUR SIGNING

LEGEND



GENERAL NOTES

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

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

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

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

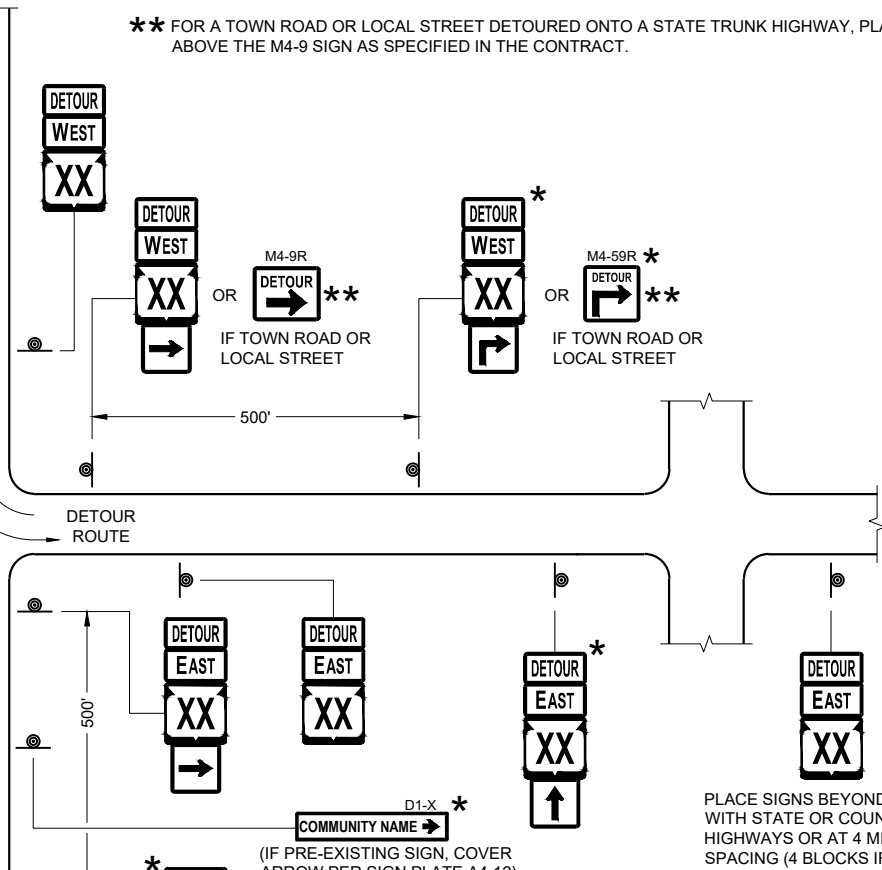
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

SIGN SIZES SHALL BE AS FOLLOWS:

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

- \* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- \*\* FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



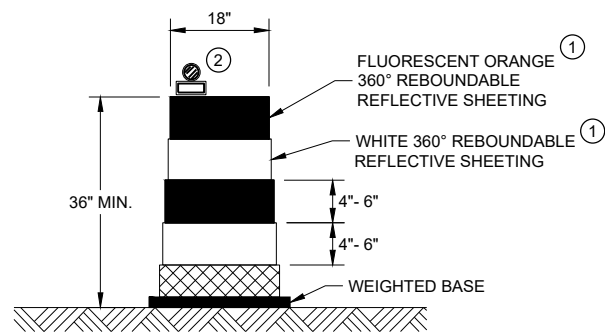
PLACE SIGNS BEYOND INTERSECTIONS  
WITH STATE OR COUNTY TRUNK  
HIGHWAYS OR AT 4 MILE MAXIMUM  
SPACING (4 BLOCKS IF URBAN AREA)

DETOUR SIGNING  
FOR MAINLINE CLOSURES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

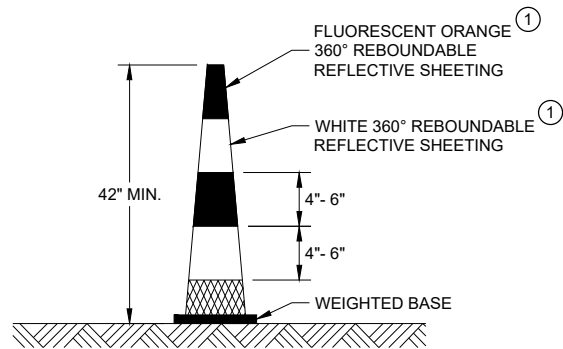
APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA



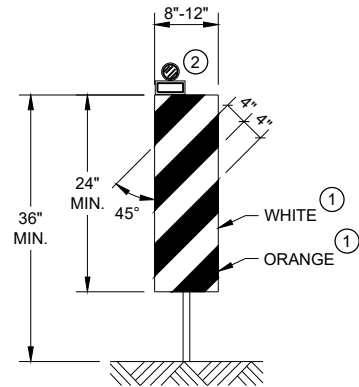
**DRUM**

BALLAST WIDTHS  
RANGE FROM 24"-36"



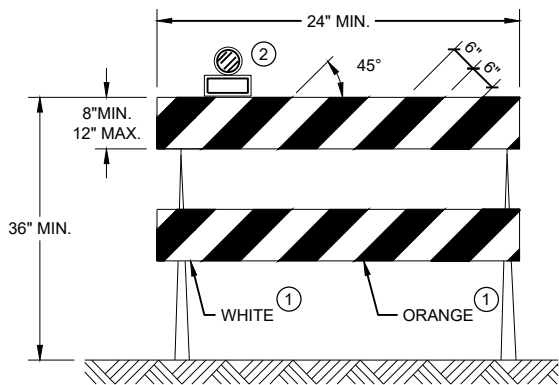
**42" CONE**

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



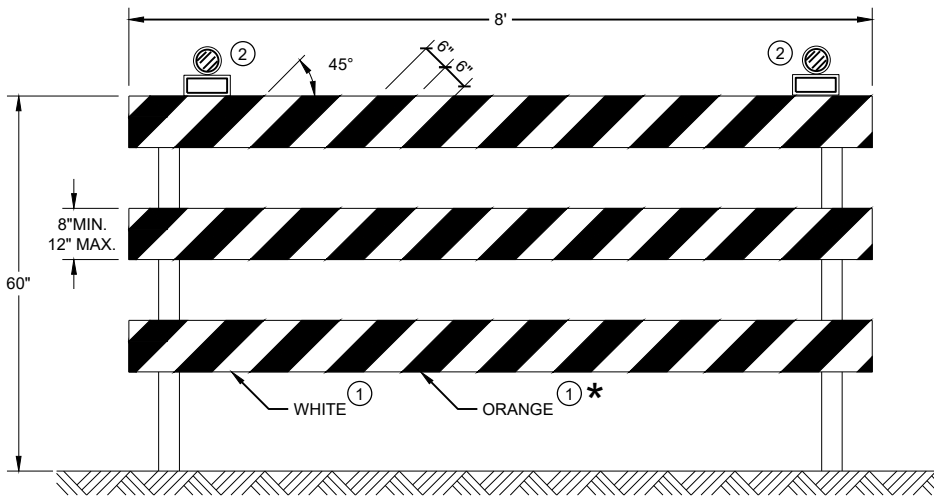
**VERTICAL PANEL**

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



**TYPE II BARRICADE**

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



**TYPE III BARRICADE**

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

\* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

**GENERAL NOTES**

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

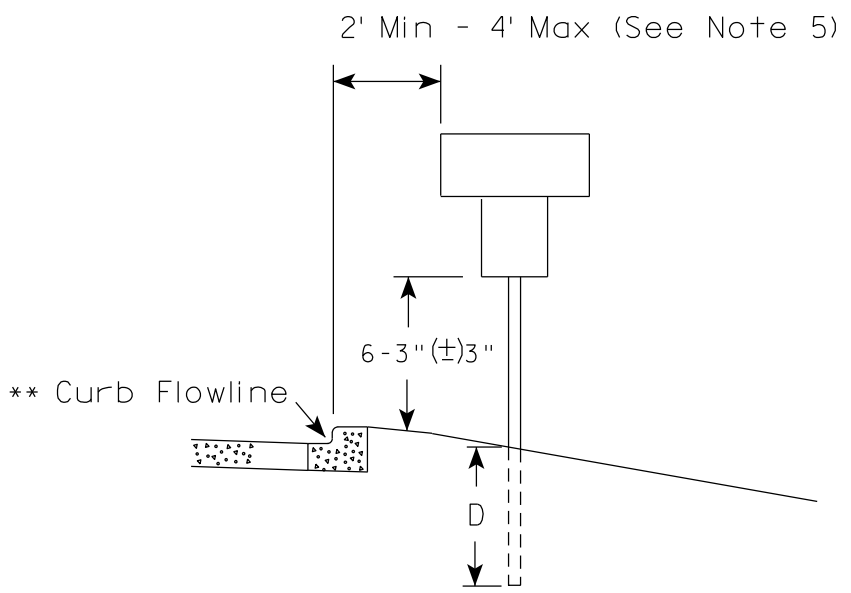
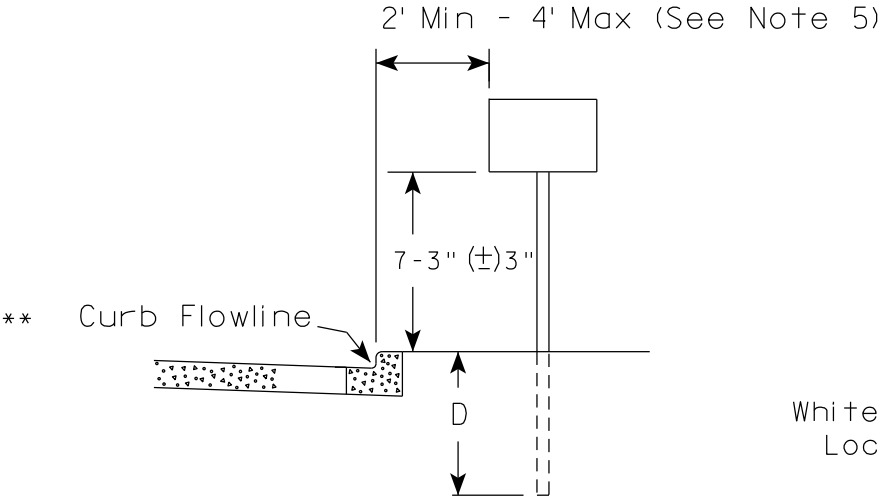
**CHANNELIZING DEVICES  
DRUMS, CONES, BARRICADES  
AND VERTICAL PANELS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

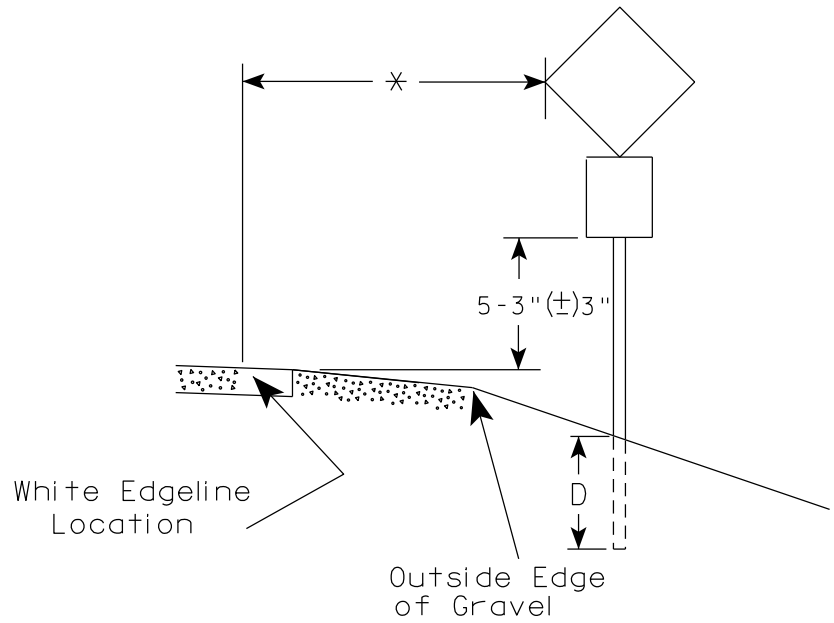
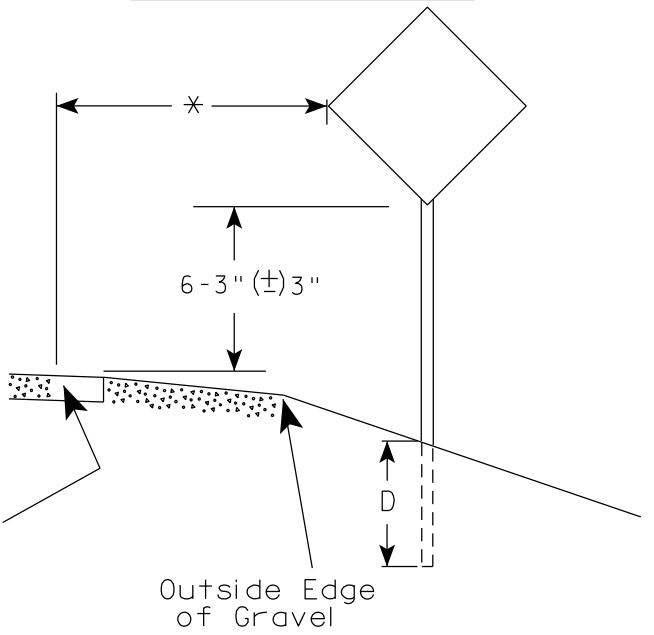
APPROVED  
November 2022 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.  
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±) 3".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the Engineer.

POST EMBEDMENT DEPTH

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

\* \* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

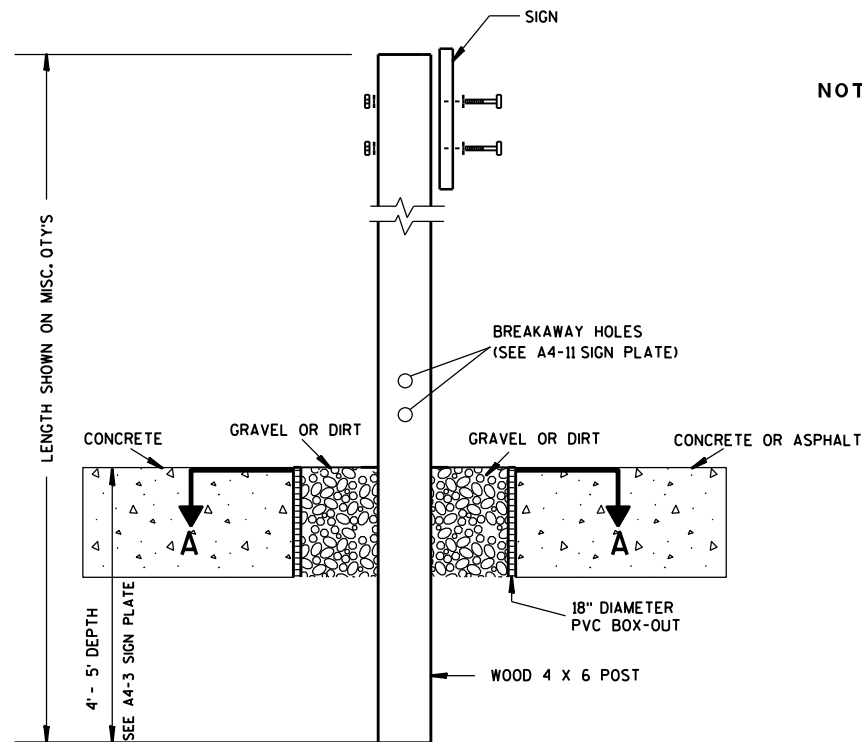
\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION  
OF PERMANENT TYPE II  
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

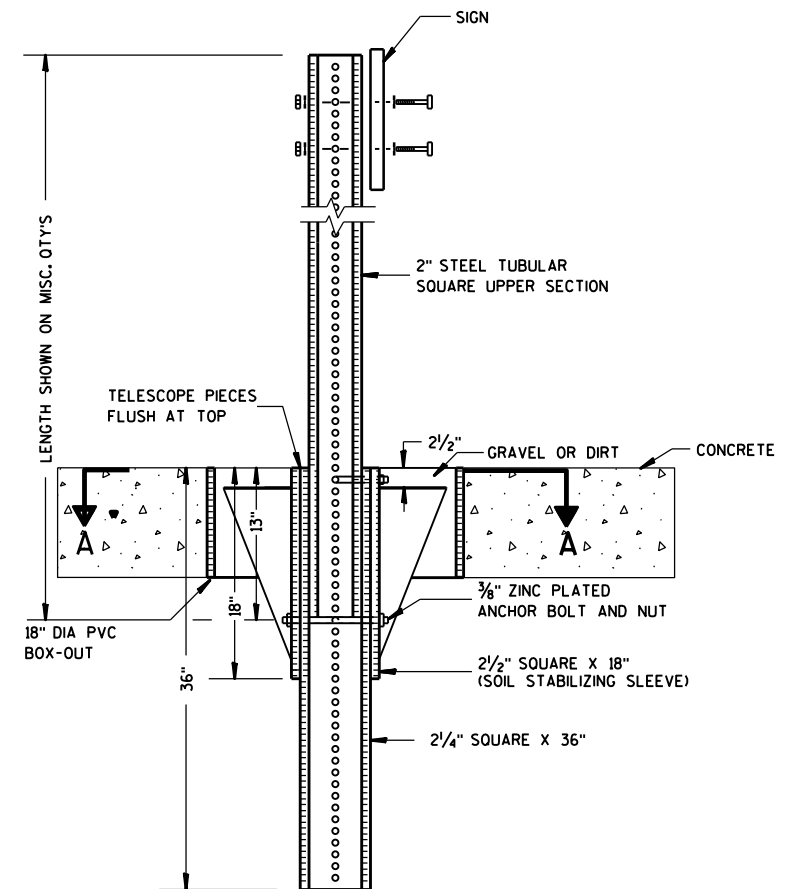
DATE 12/6/23 PLATE NO. A4-3.23



### ELEVATION VIEW

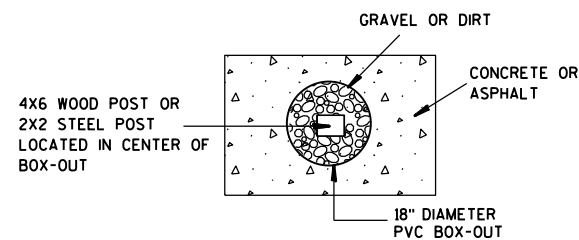
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



### ELEVATION VIEW

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



### PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST  
BOX-OUTS  
A4-3B

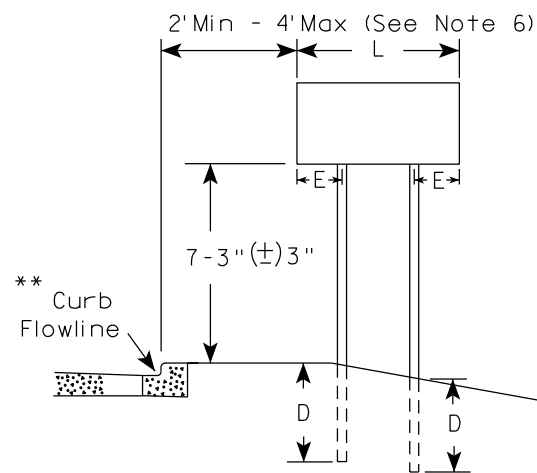
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

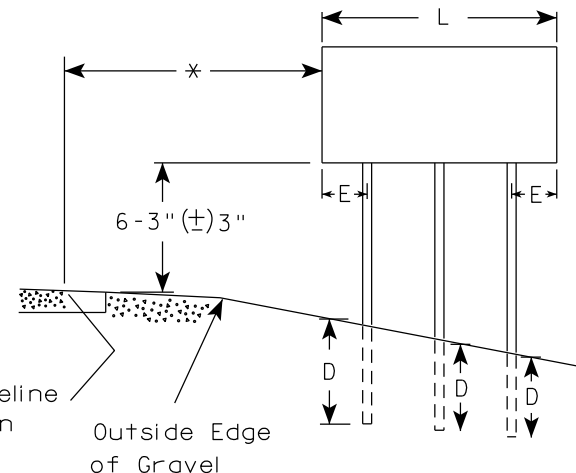
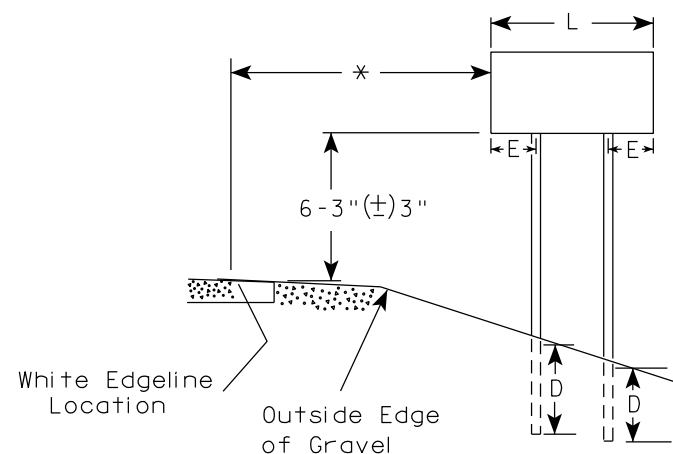
DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO: HWY: COUNTY: SHEET NO: E

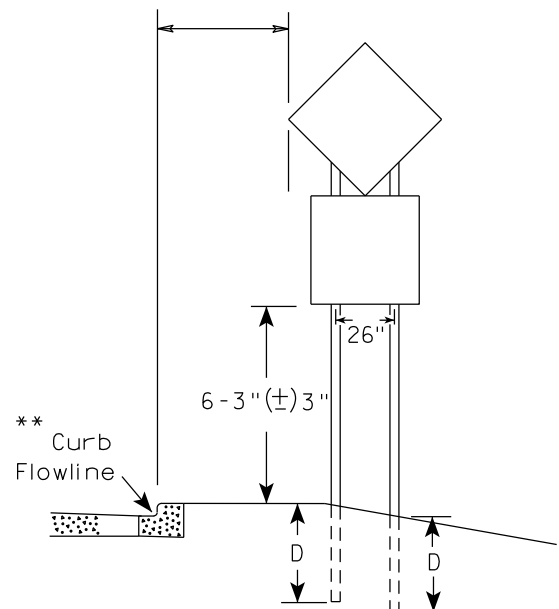
URBAN AREA



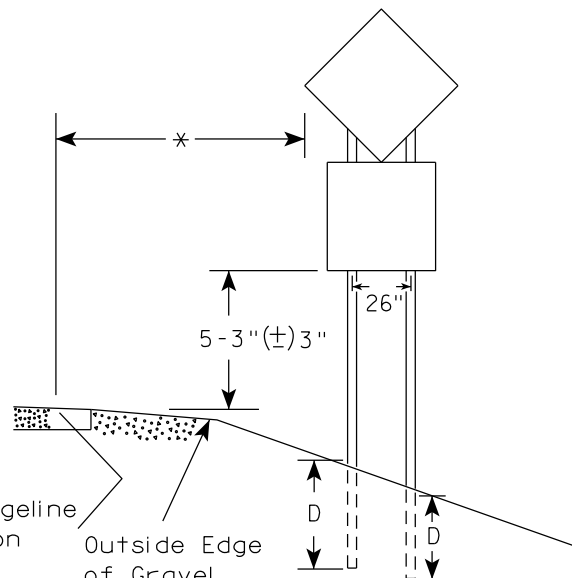
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

\*\*\*

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

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

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION  
OF TYPE II SIGNS  
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Matthew R. Rauch*  
for State Traffic Engineer

DATE 12/6/23

PLATE NO. A4-4.16

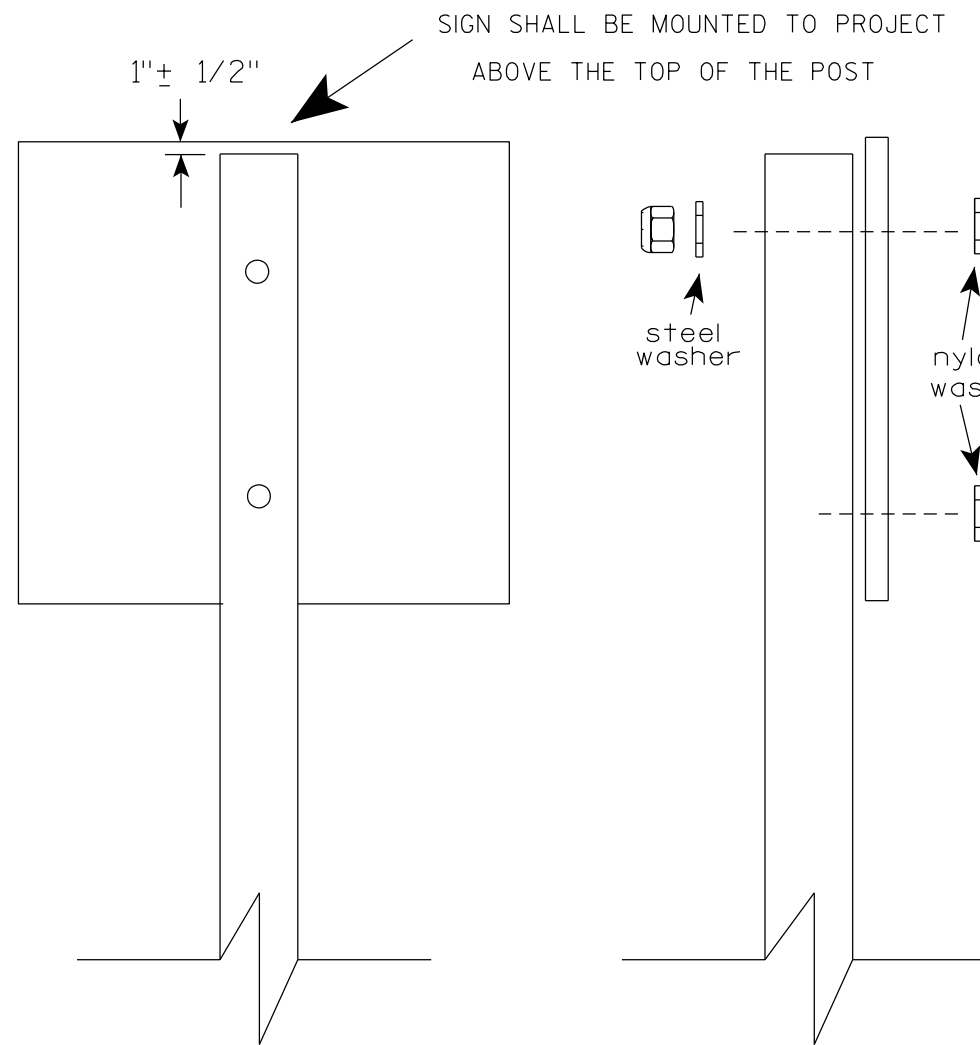
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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

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

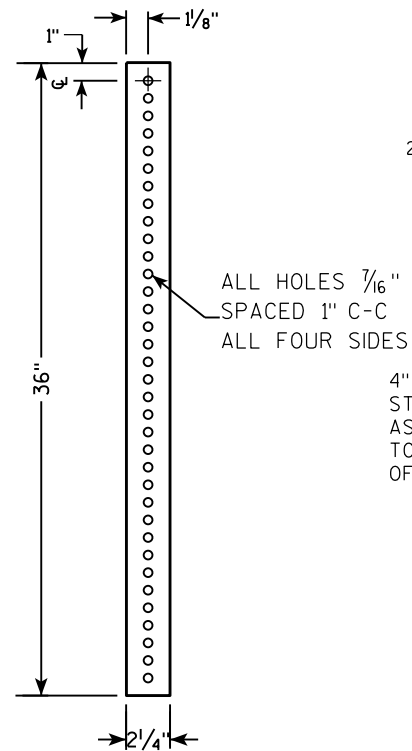
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS -  $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS -  $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)  
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS -  $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)  
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS -  $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL  
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X  $\frac{1}{16}$ " STEEL
- 1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X .080 NYLON

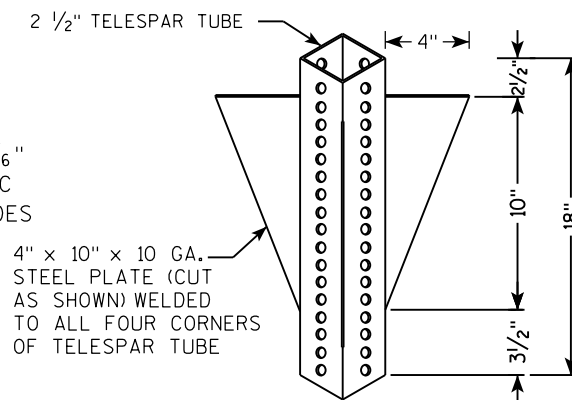
\* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

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



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



LENGTH SHOWN ON MISC. QTY'S  
 18" DIA SCHEDULE 40 PVC BOX-OUT  
 TELESCOPE PIECES FLUSH AT TOP  
 2" STEEL TUBULAR SQUARE UPPER SECTION  
 ALL HOLES  $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES  
 $\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT  
 2" GRAVEL OR DIRT  
 $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT  
 2" SQUARE X 18" (SOIL STABILIZING SLEEVE)  
 2" SQUARE X 36"  
 SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL  
 SIGN

LENGTH SHOWN ON MISC. QTY'S

SIGN

SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES  $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES

$\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT

TELESCOPE PIECES FLUSH AT TOP

1"

$\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT

2 $\frac{1}{2}$ " SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 $\frac{1}{4}$ " SQUARE X 36"

36"

18"

12"

A

B

DIRECTION  
OF TRAFFIC

SECTION A-A

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

TUBULAR STEEL  
SIGN POST  
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

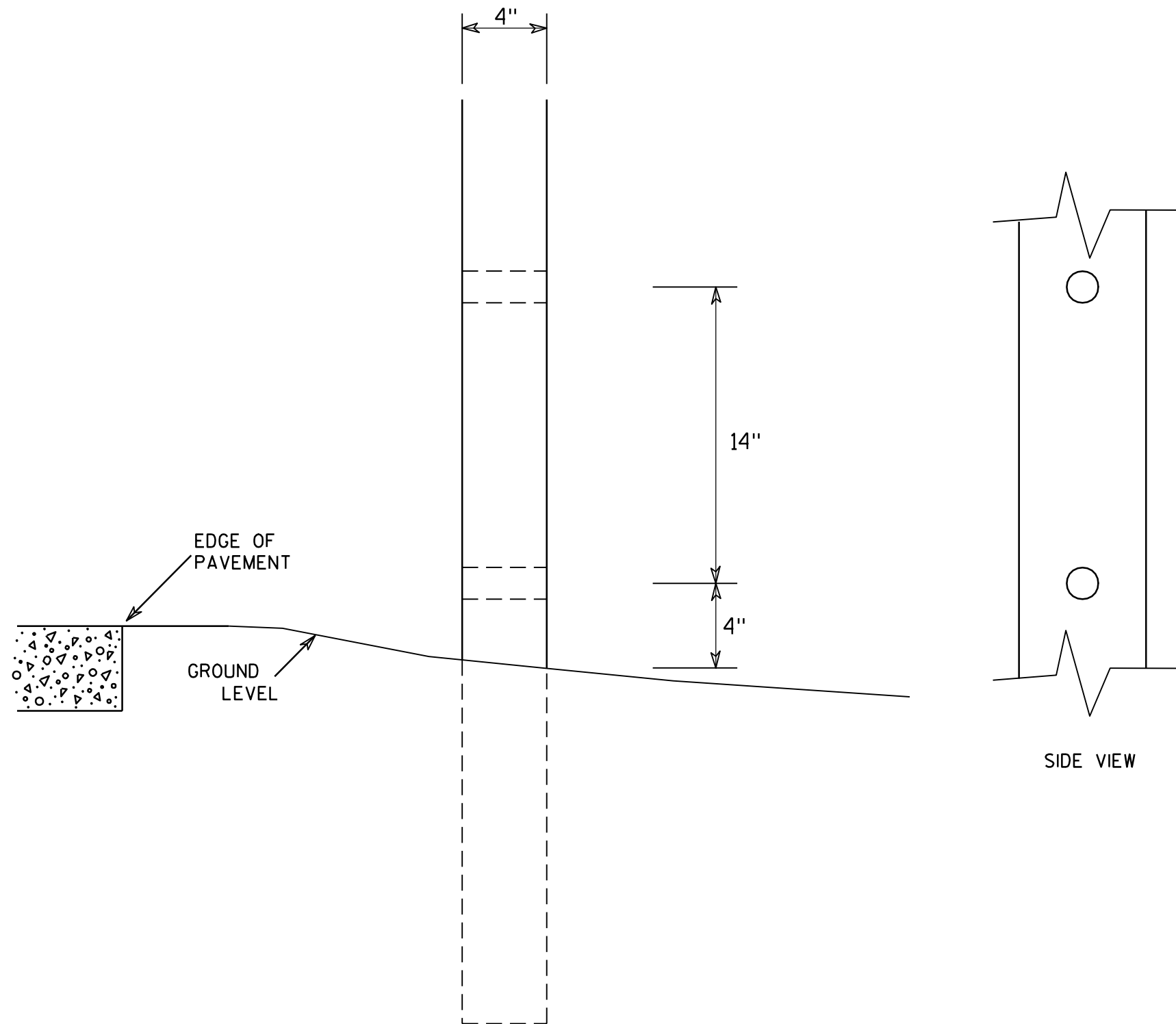
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
-------------	------	---------	-----------	---



7



GENERAL NOTES

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

7

4 X 6 WOOD POST  
MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

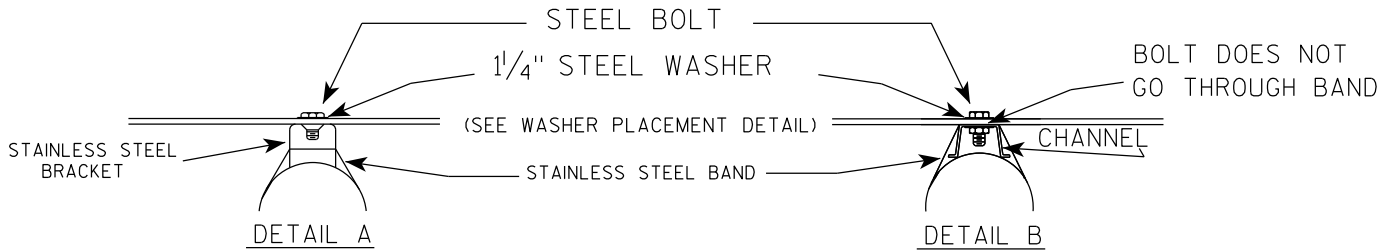
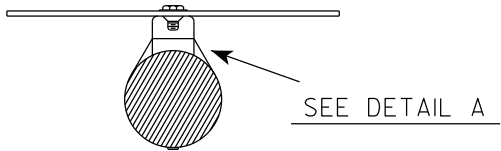
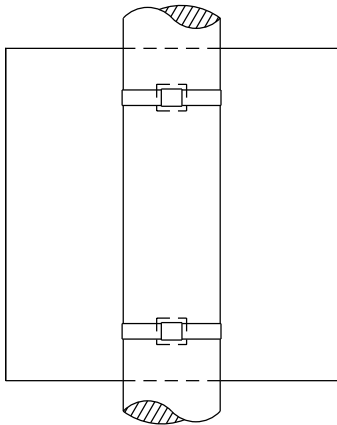
APPROVED *Chester J. Spang*  
for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

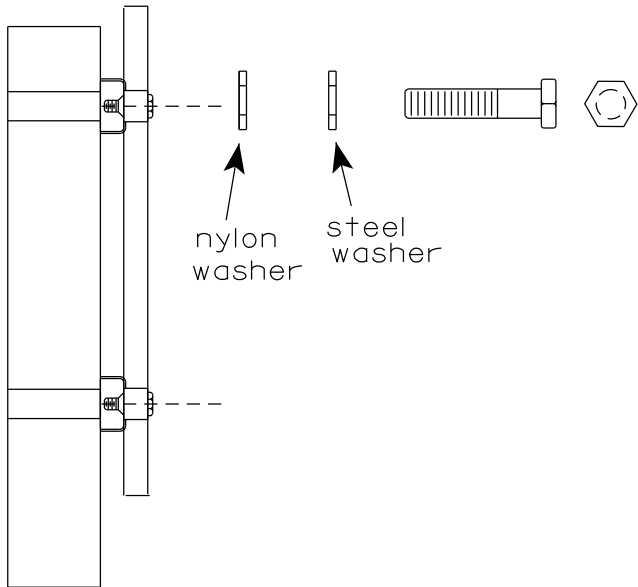
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
-------------	------	---------	-----------	---

BANDING

SINGLE SIGN



WASHER PLACEMENT

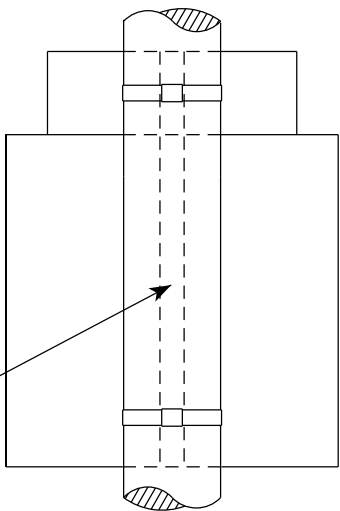


WASHERS (ALL POSTS) -  
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL  
1-1/4" O.D. X 3/8" I.D. X .080 NYLON  
FOR ALL TYPE H SIGNS

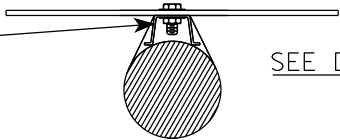
GENERAL NOTES

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

"J" ASSEMBLY



CHANNEL  
SEE TYPICAL PANEL  
INSTALLATION SHEET

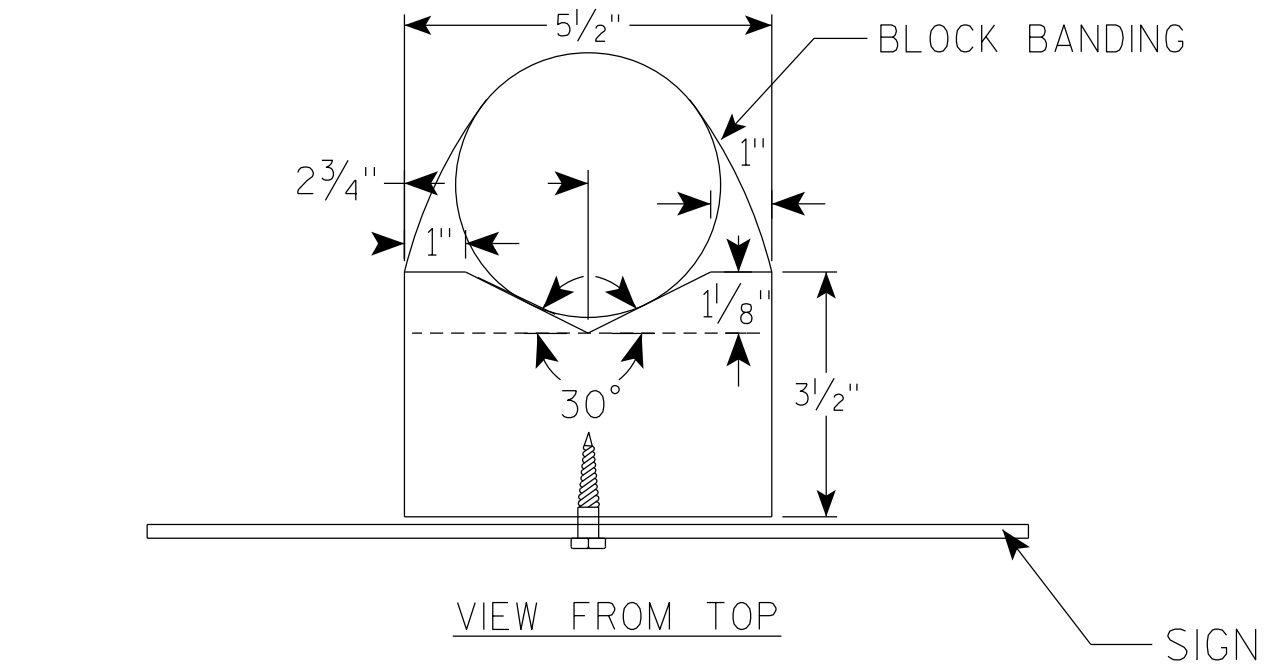
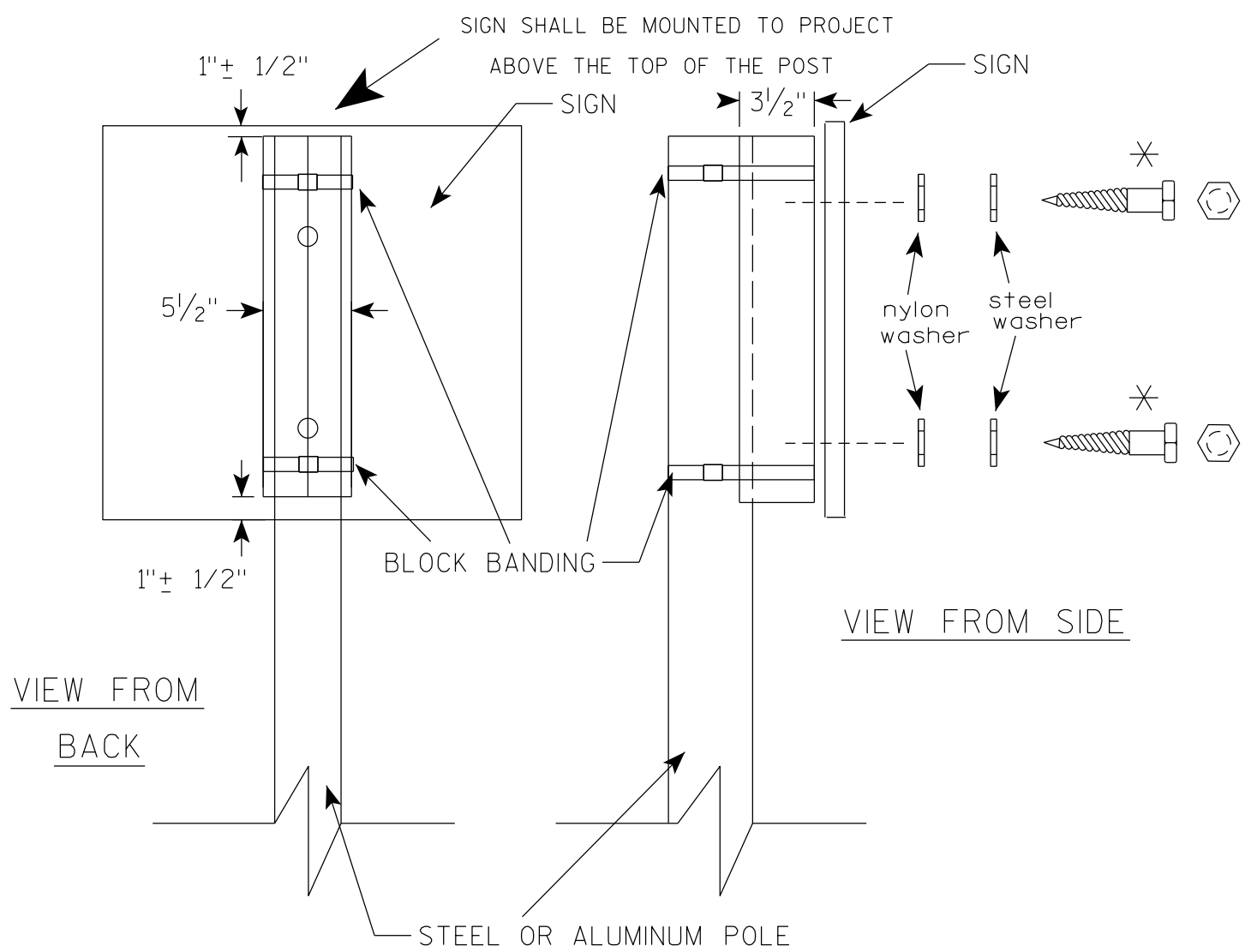


STANDARD SIGN  
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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

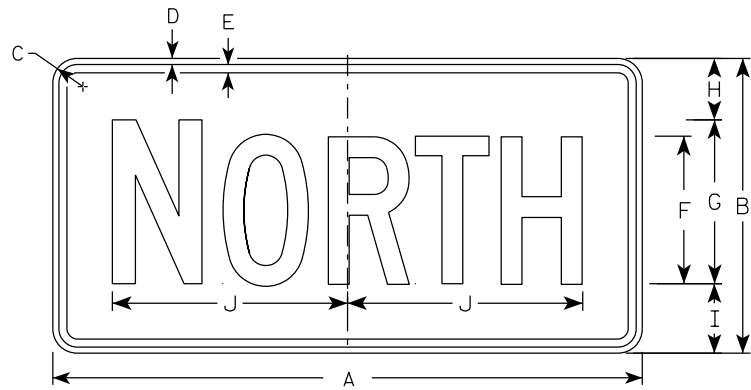


## GENERAL NOTES

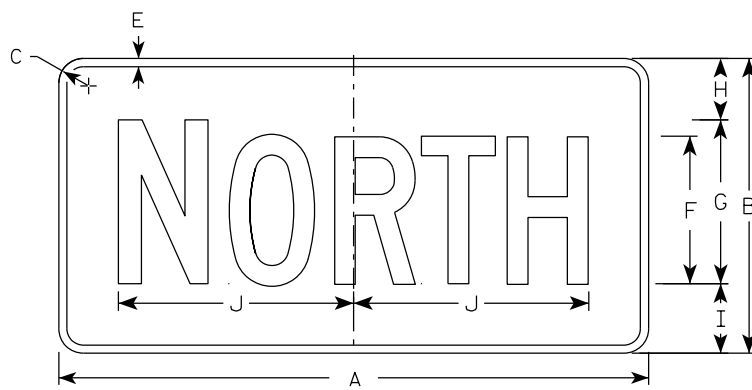
1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL,  $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS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

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

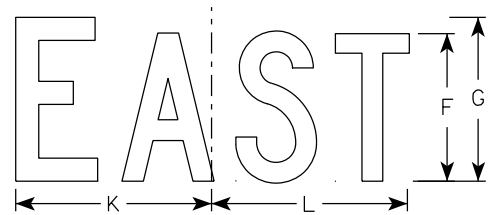
BLOCK BANDING DETAIL ( V-BLOCK OPTION )	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 4/19/2022	PLATE NO. A5-10.3



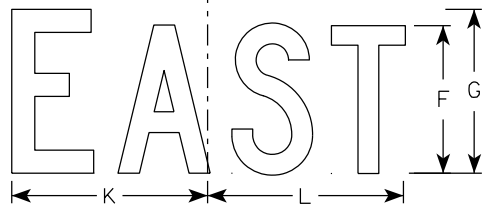
M3-1  
MM3-1  
MP3-1



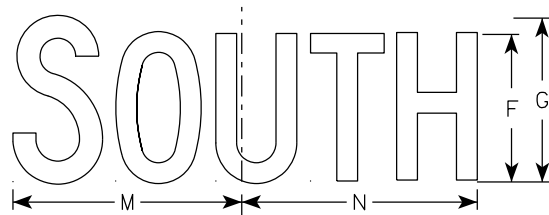
MB3-1  
MK3-1  
MN3-1



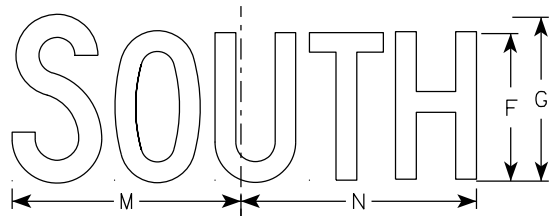
M3-2  
MM3-2  
MP3-2



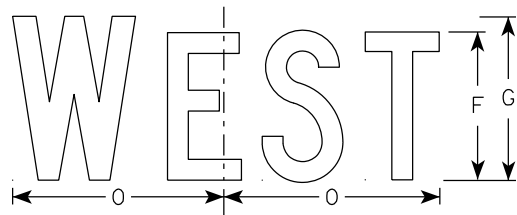
MB3-2  
MK3-2  
MN3-2



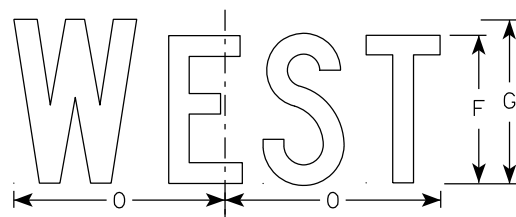
M3-3  
MM3-3  
MP3-3



MB3-3  
MK3-3  
MN3-3



M3-4  
MM3-4  
MP3-4



MB3-4  
MK3-4  
MN3-4

## NOTES

- All Signs Type II - Type H Reflective
- Color:  
Background - See note 5  
Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4 Background - White  
Message - Black  
MB3-1 thru MB3-4 Background - Blue  
Message - White  
MK3-1 thru MK3-4 Background - Green  
Message - White  
MM3-1 thru MM3-4 Background - White  
Message - Green  
MN3-1 thru MN3-4 Background - Brown  
Message - White  
MP3-1 thru MP3-4 Background - White  
Message - Blue
- Note the first letter of each direction is larger than the remainder of the message.

7

7

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

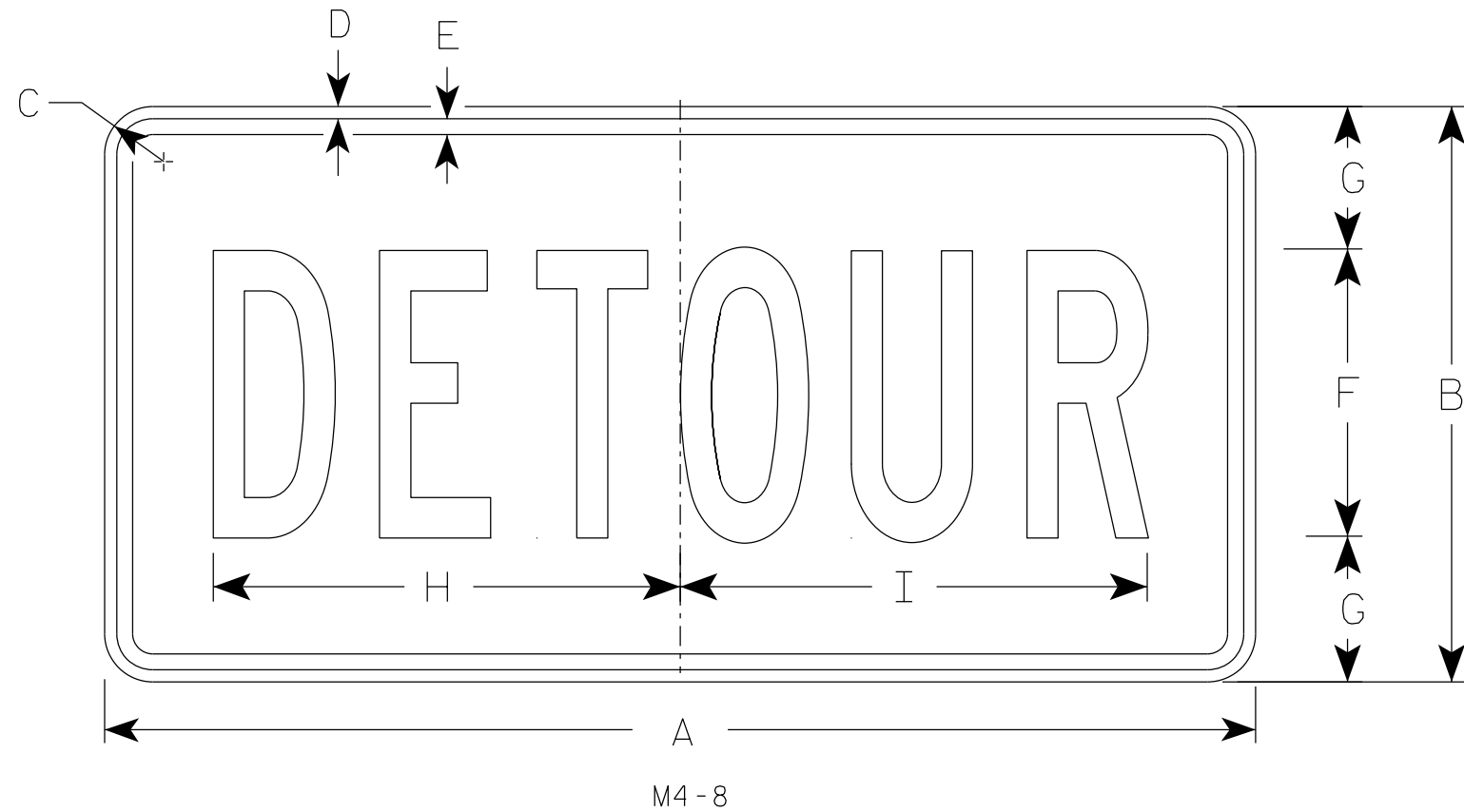
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
-------------	------	---------	-----------	---

7

7

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - B
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
2M	24	12	1 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
5	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5

STANDARD SIGN

M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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

PROJECT NO:

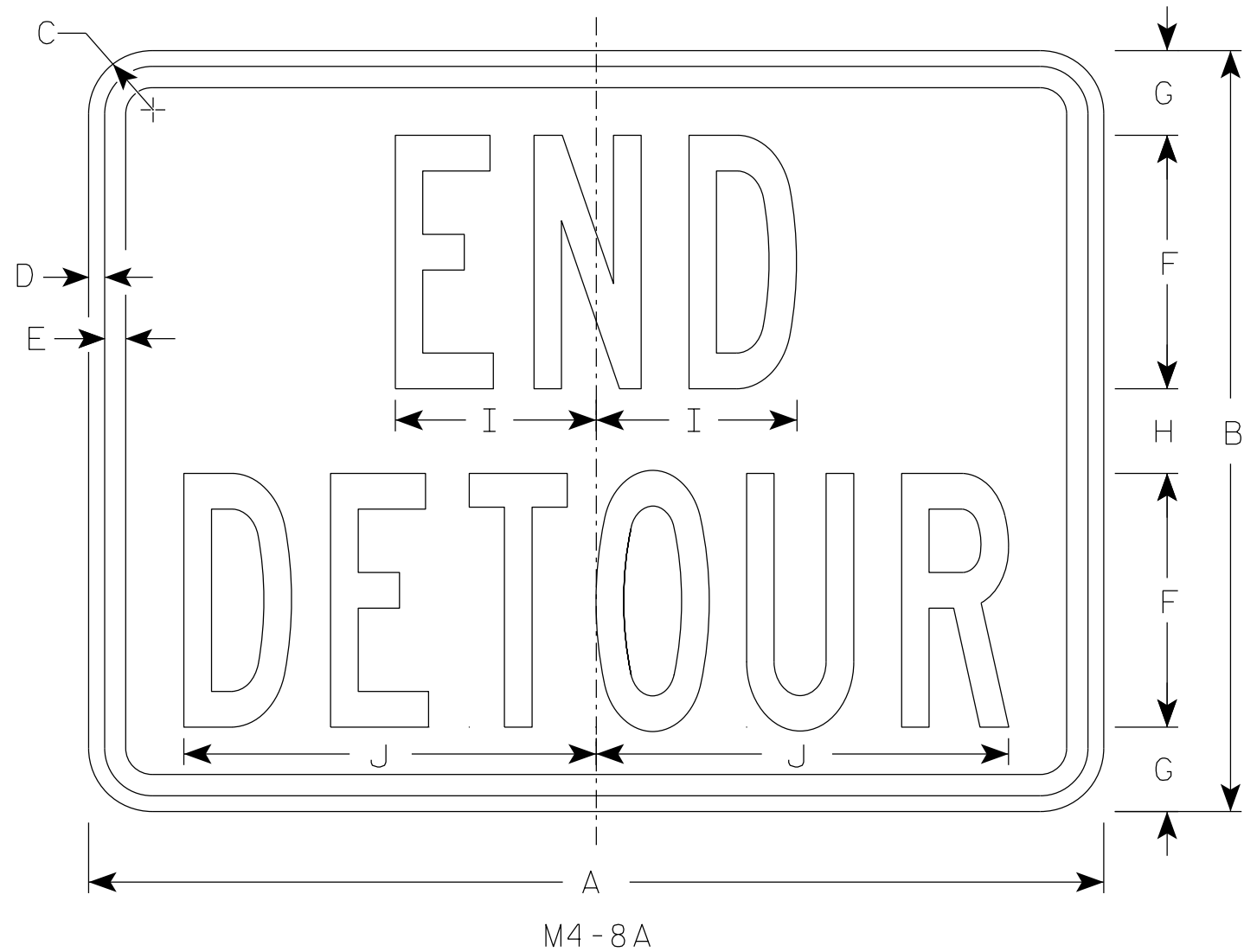
HWY:

COUNTY:

SHEET NO:

E

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
  - Background - Orange
  - Message - Black
- 3. Message Series - B
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

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

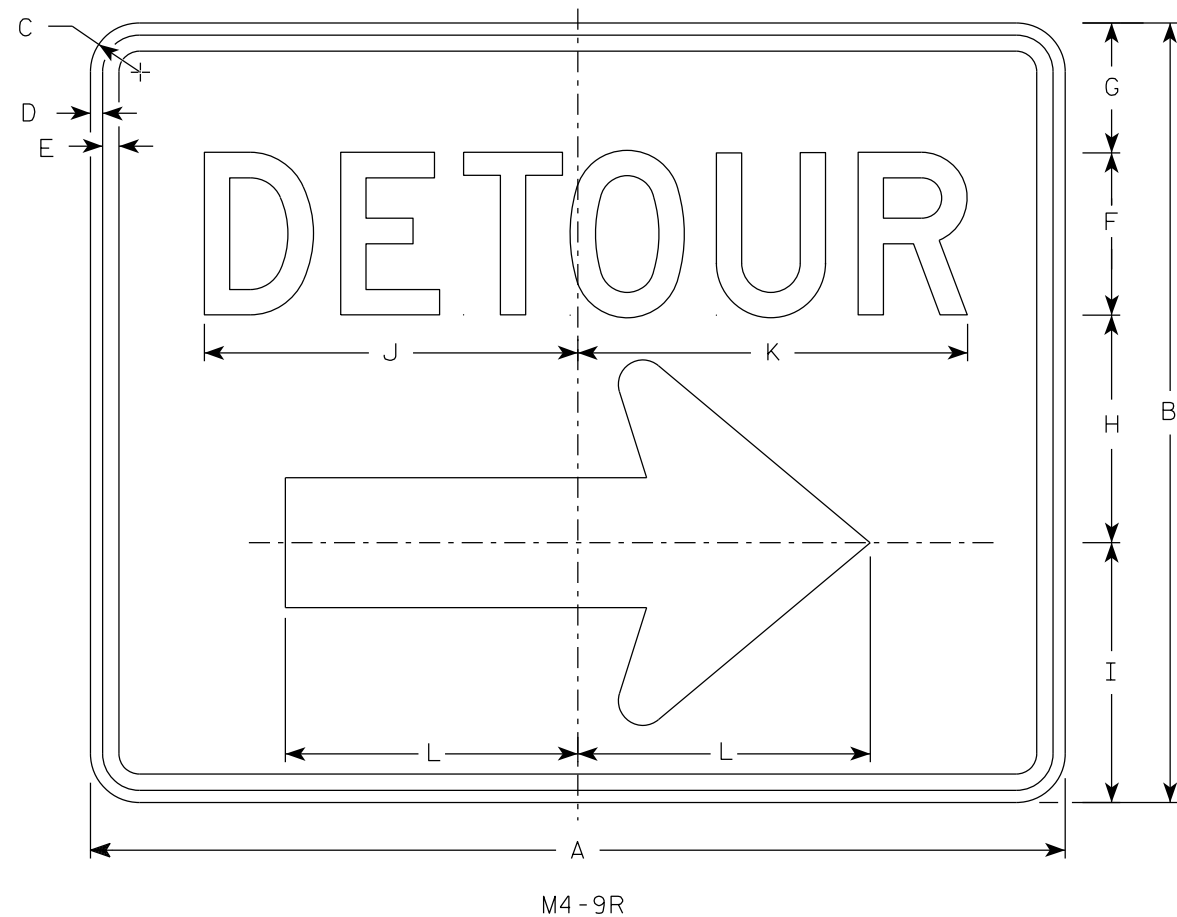
STANDARD SIGN

M4-8A

WISCONSIN DEPT OF TRANSPORTATION

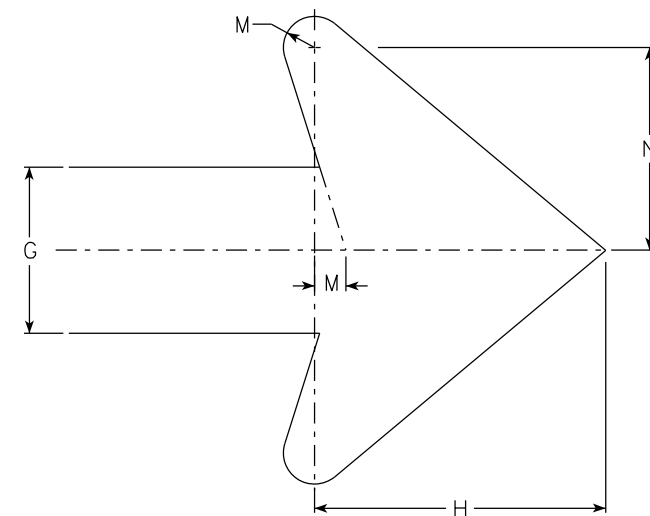
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

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



NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
2M	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 7/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 7/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

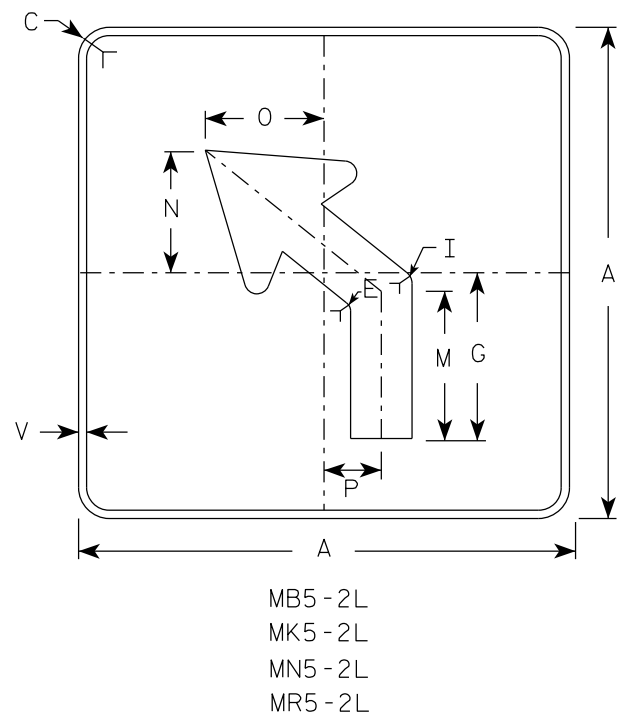
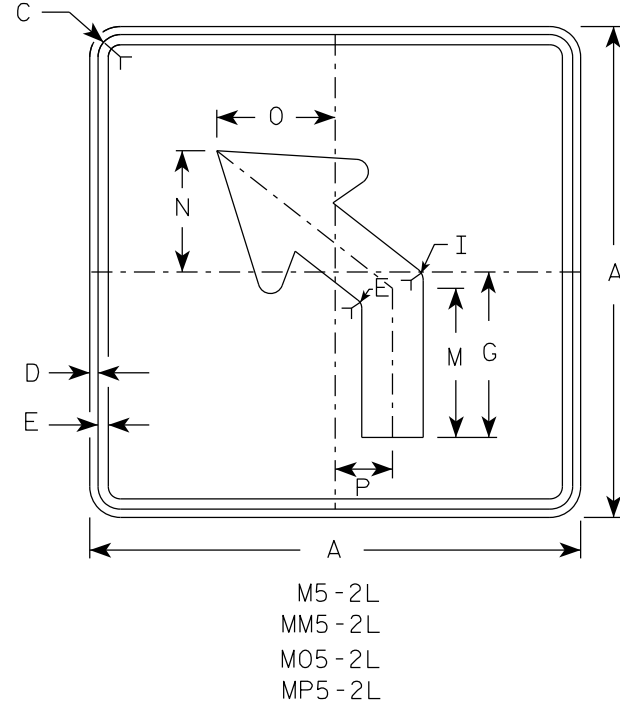
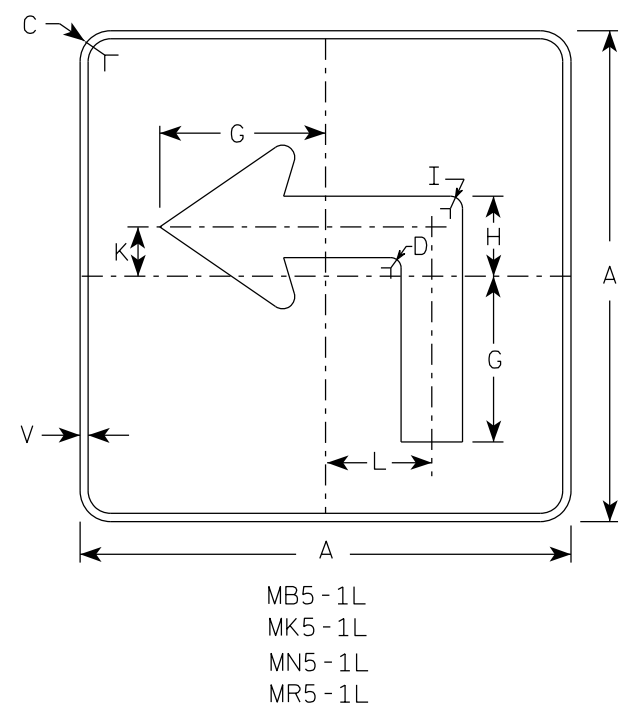
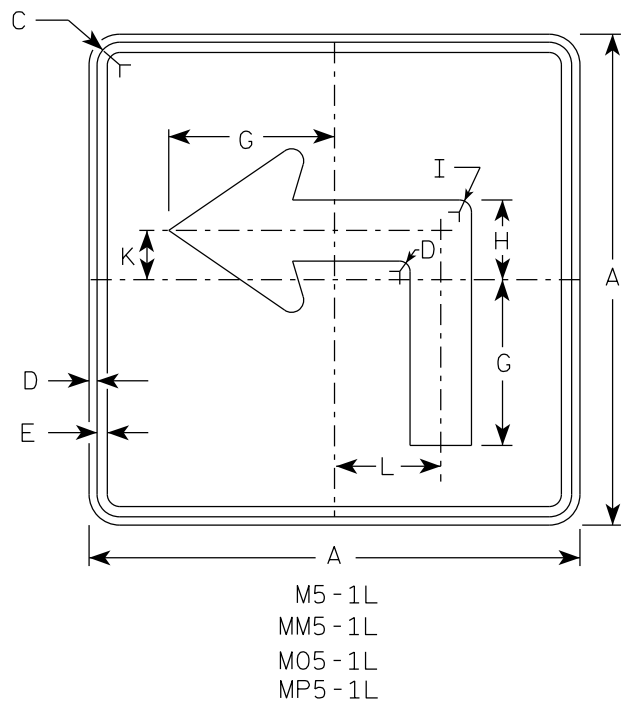
STANDARD SIGN  
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-9R.6

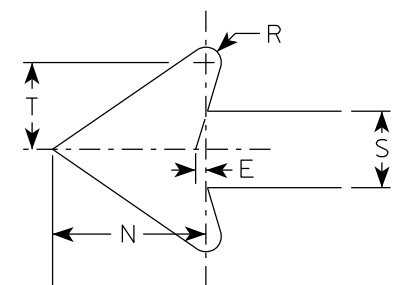
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
-------------	------	---------	-----------	---



NOTES

- Signs are Type II - Type H reflective except as shown
- Color:  
Background - See note 4  
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- |           |       |   |
|-----------|-------|---|
| M5-1 and  | M5-2  | Background - White                      |
|           |       | Message - Black                         |
| MB5-1 and | MB5-2 | Background - Blue                       |
|           |       | Message - White                         |
| MK5-1 and | MK5-2 | Background - Green                      |
|           |       | Message - White                         |
| MM5-1 and | MM5-2 | Background - White                      |
|           |       | Message - Green                         |
| MN5-1 and | MN5-2 | Background - Brown                      |
|           |       | Message - White                         |
| M05-1 and | M05-2 | Background - Orange - Type F Reflective |
|           |       | Message - Black                         |
| MP5-1 and | MP5-2 | Background - White                      |
|           |       | Message - Blue                          |
| MR5-1 and | MR5-2 | Background - Brown                      |
|           |       | Message - Yellow                        |
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

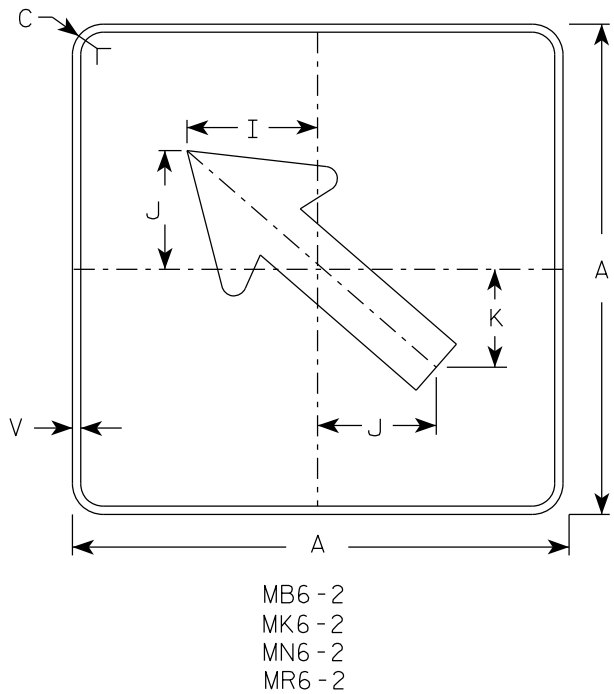
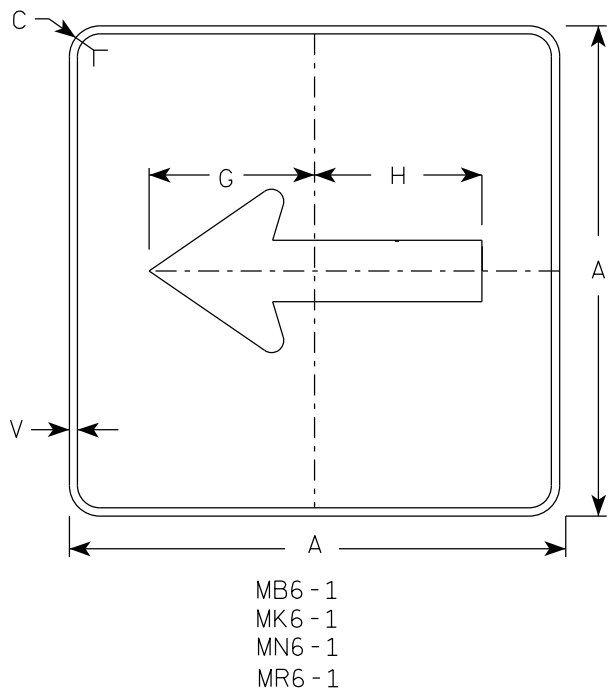
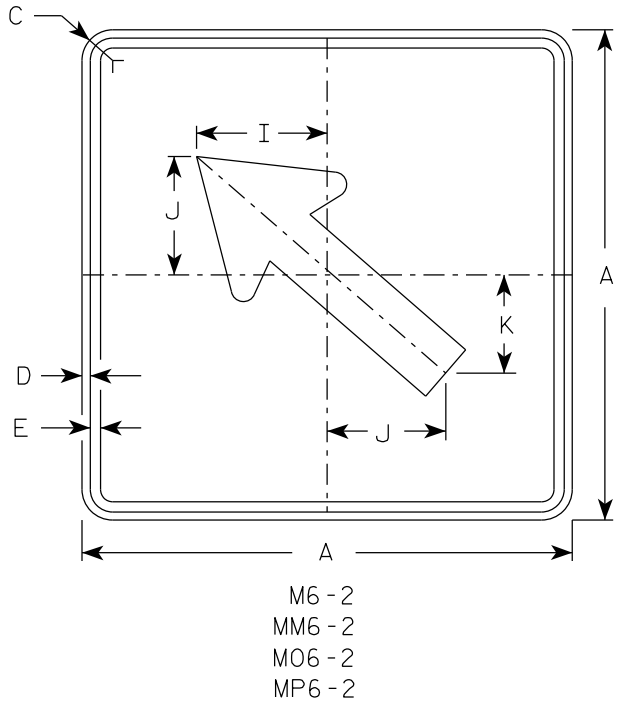
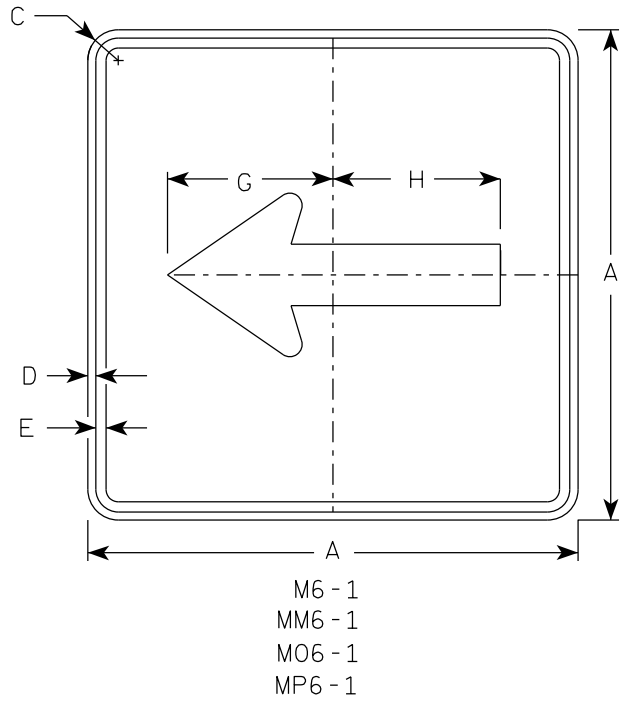
ARROW DETAIL



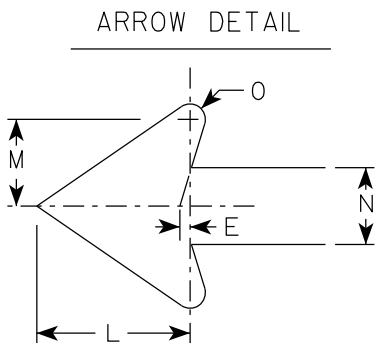
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
2M	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
3	30		1 7/8	1/2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

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
-------------	------	---------	-----------	---



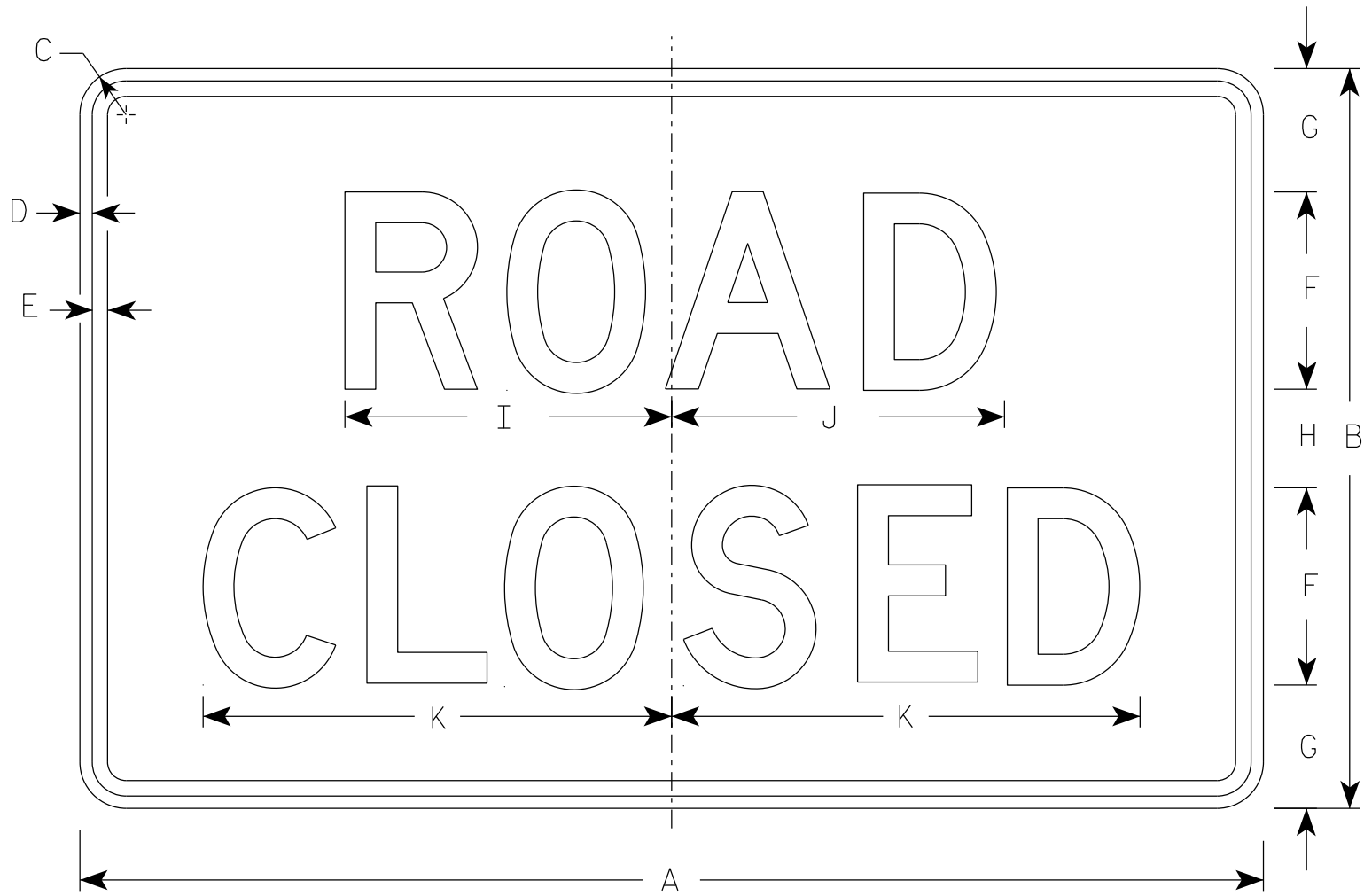


- NOTES**
- Signs are Type II - Type H Reflective except as Shown
  - Color:  
Background - See note 4  
Message - See note 4
  - Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
  - M6-1 and M6-2 Background - White  
Message - Black  
MB6-1 and MB6-2 Background - Blue  
Message - White  
MK6-1 and MK6-2 Background - Green  
Message - White  
MM6-1 and MM6-2 Background - White  
Message - Green  
MN6-1 and MN6-2 Background - Brown  
Message - White  
M06-1 and M06-2 Background - Orange - Type F Reflective  
Message - Black  
MP6-1 and MP6-2 Background - White  
Message - Blue  
MR6-1 and MR6-2 Background - Brown  
Message - Yellow



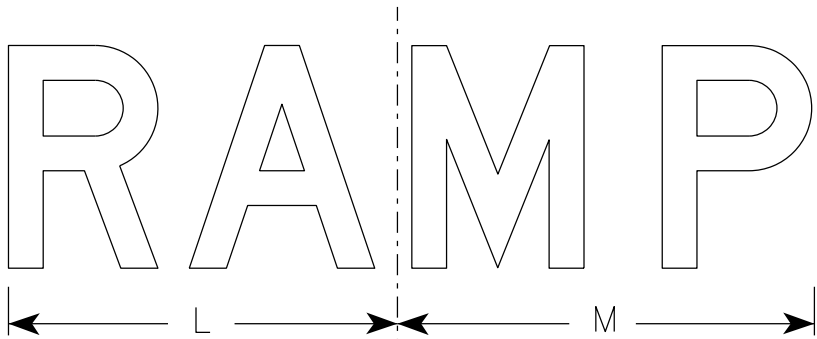
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
2M	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
3	30		1 7/8	1/2	5/8		10 3/4	10 1/4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

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
-------------	------	---------	-----------	---

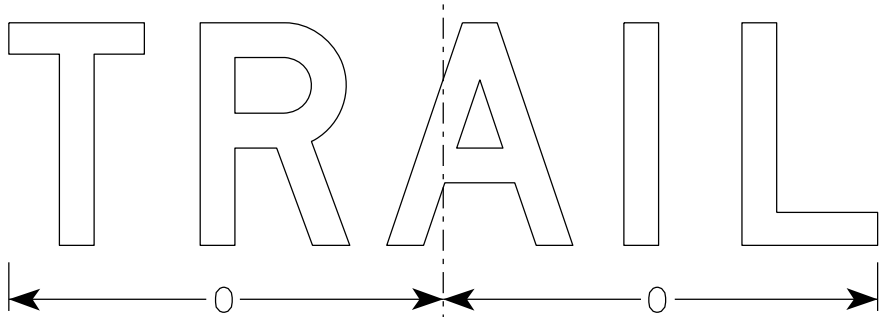


R11-2

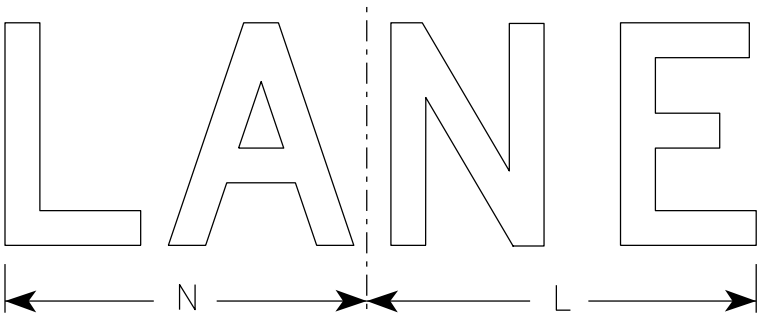
- NOTES
1. Sign is Type II - Type H Reflective
  2. Color:  
Background - White  
Message - Black
  3. Message Series - D
  4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
  5. Modify the message as required.



R11-2R



R11-2T

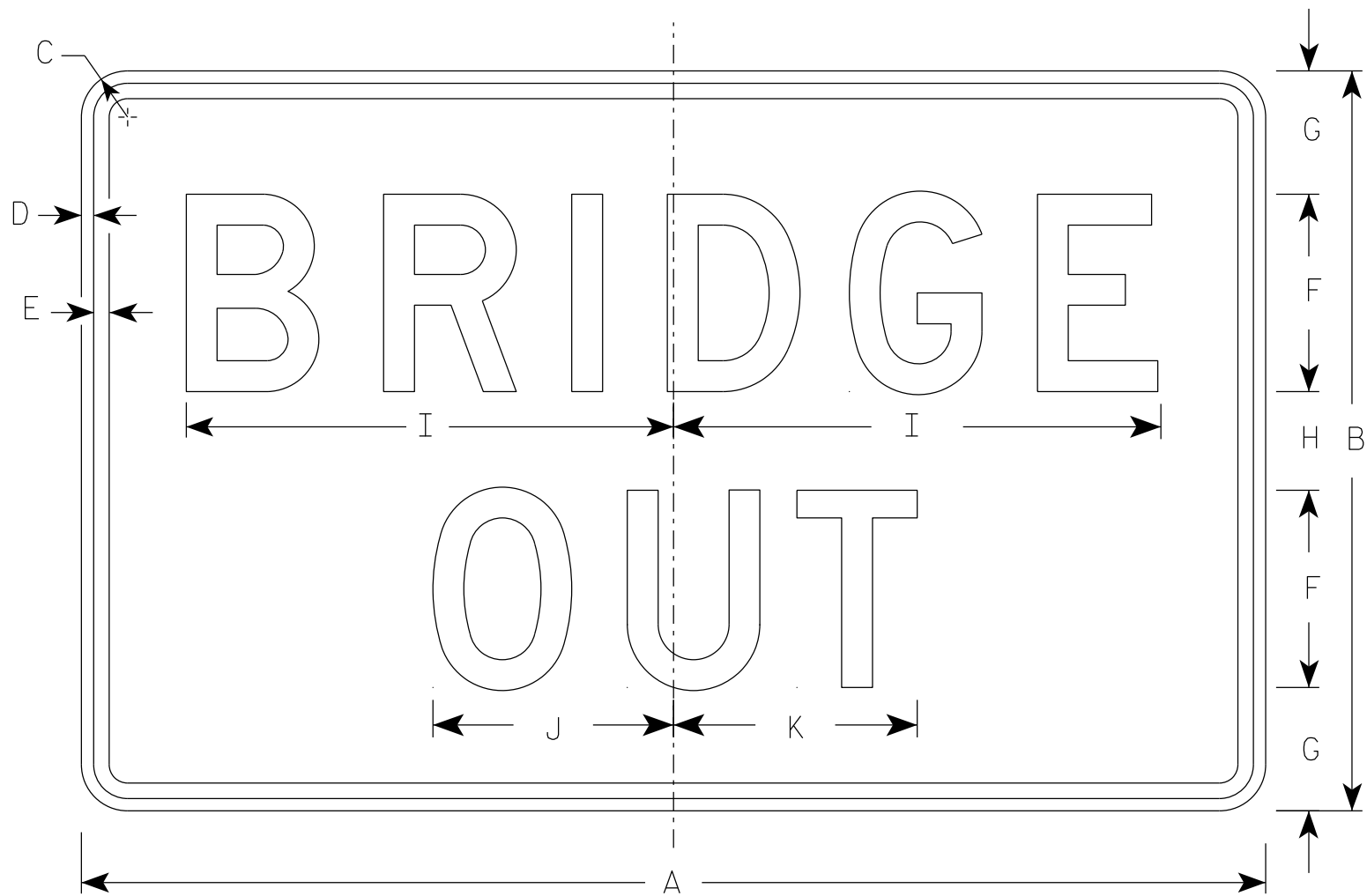


R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

STANDARD SIGN R11-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 2/5/24	PLATE NO. R11-2.12

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
-------------	------	---------	-----------	---



R11-2B

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:  
Background - White  
Message - Black
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

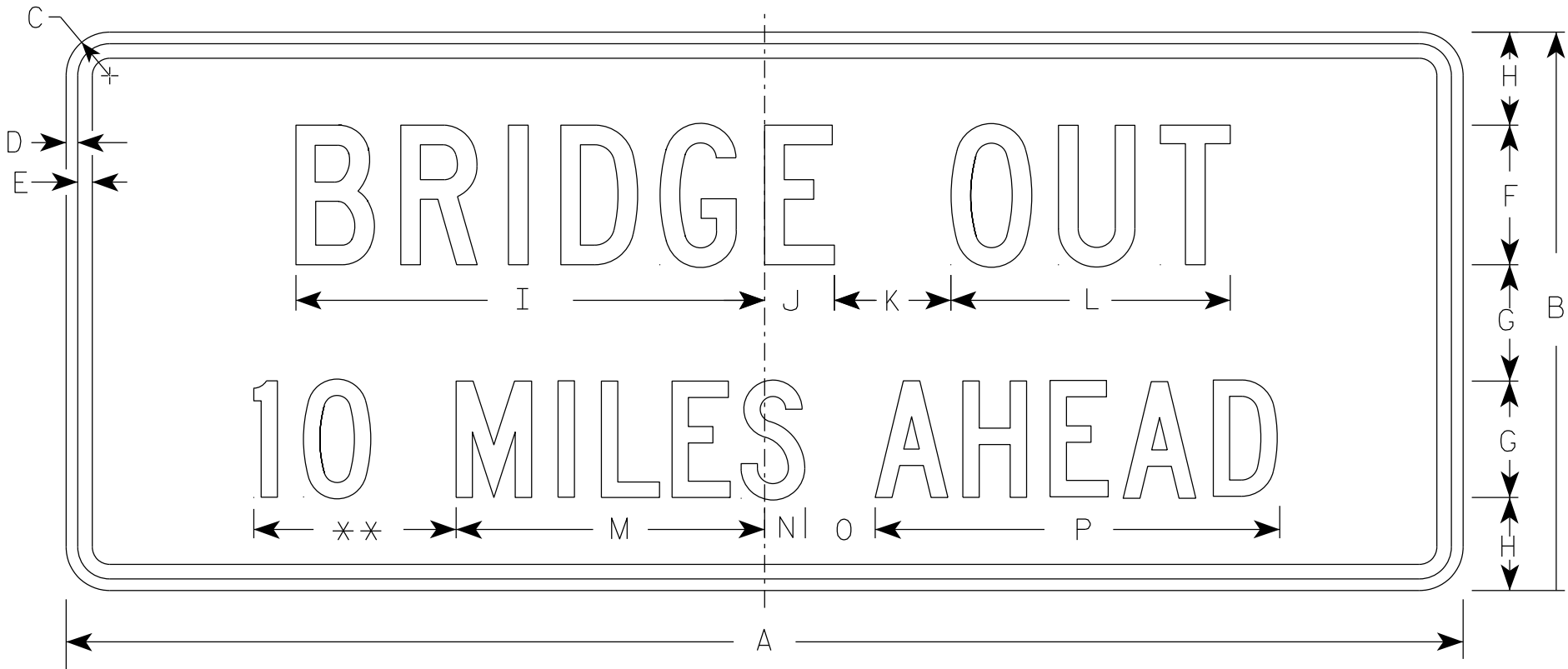
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

NOTES

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

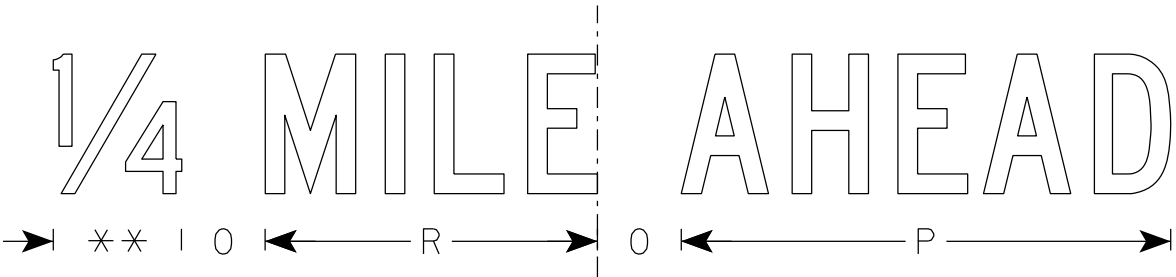
Background - White

Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3C

\*\* See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	15	1 1/2	1/2	5/8	4	3	2 1/2	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4		7 1/8									3.75
2S	60	24	1 7/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8									10.0
2M	60	24	1 7/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8									10.0
3																											
4																											
5																											

STANDARD SIGN  
R11-3C

WISCONSIN DEPT OF TRANSPORTATION

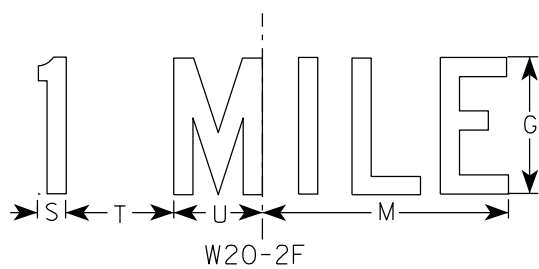
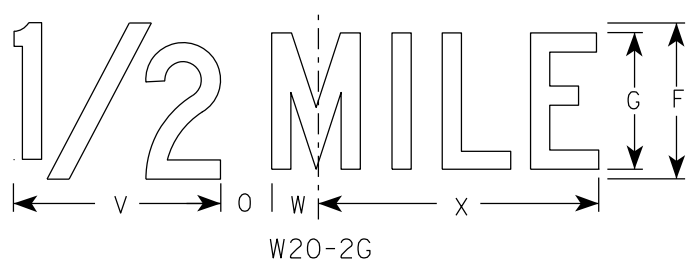
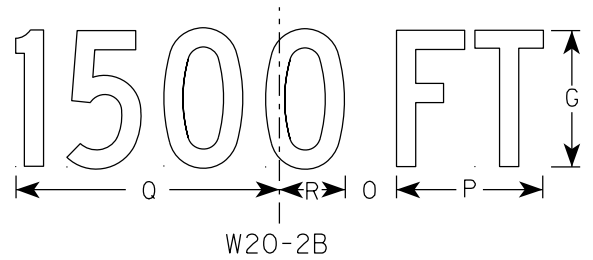
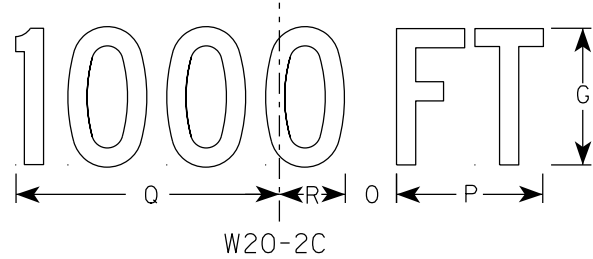
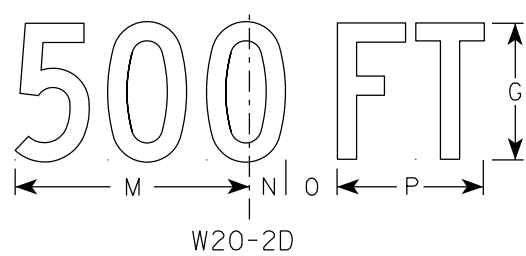
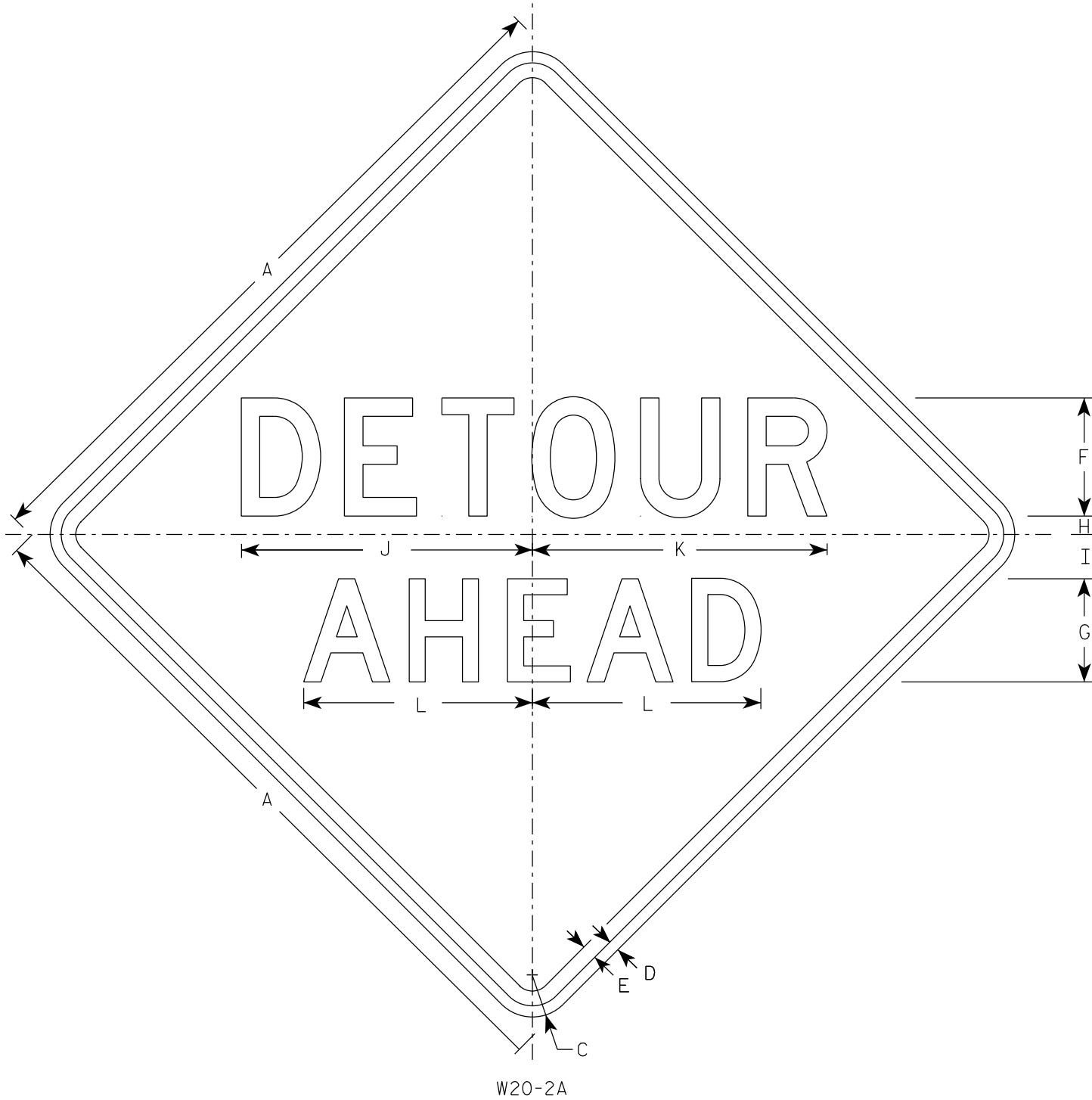
APPROVED  
*Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-3C.4

PROJECT NO:

SHEET NO:

E



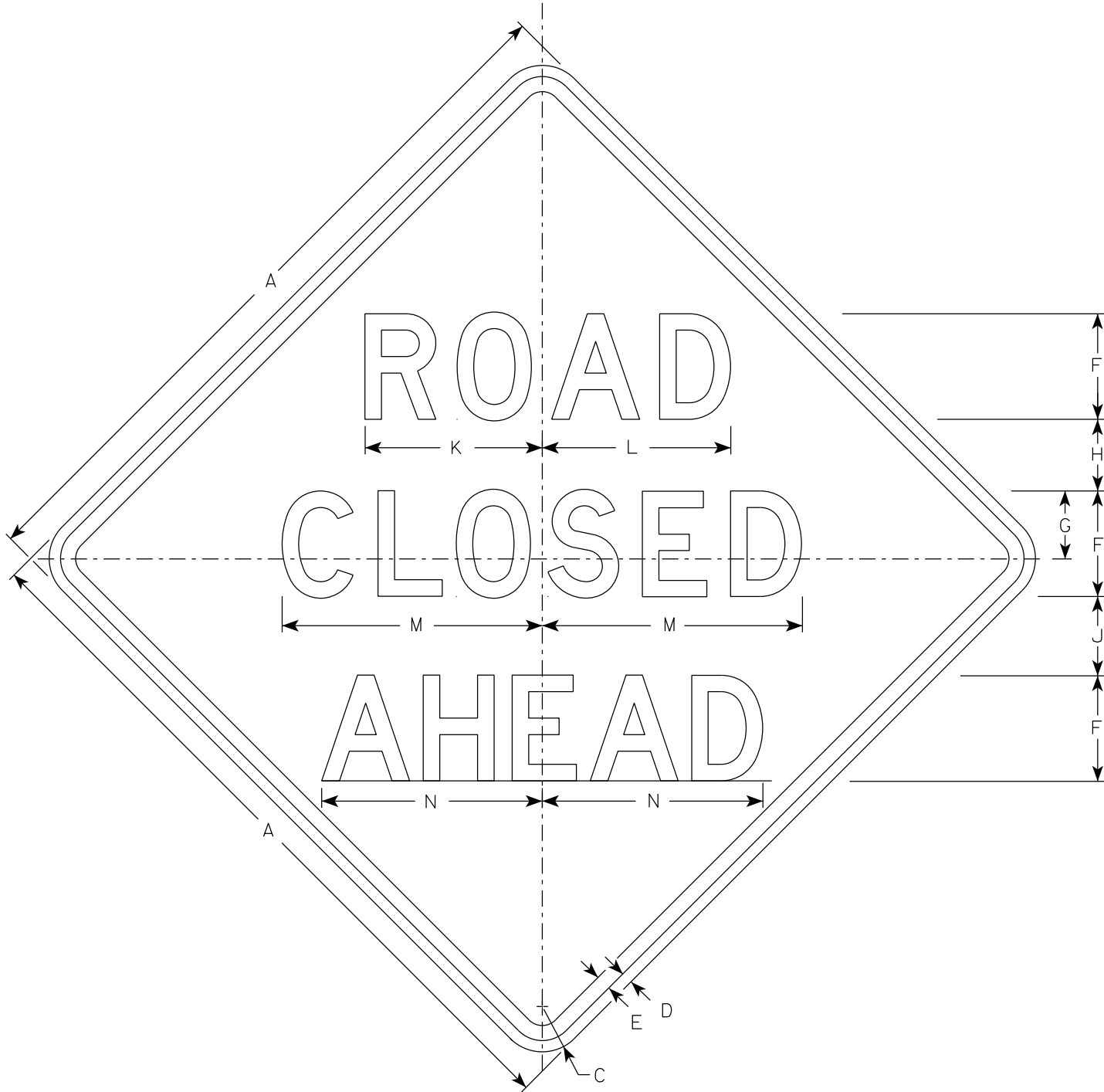
NOTES

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

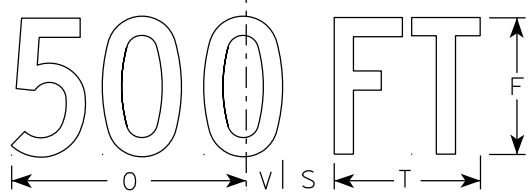
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8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

STANDARD SIGN W20-2A,B,C,D,F & G	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 1/10/2024	PLATE NO. W20-2.7

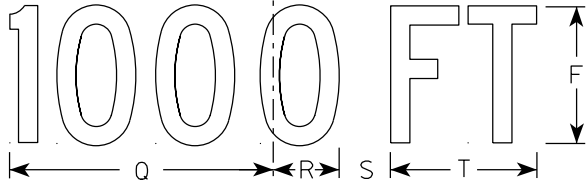
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
-------------	------	---------	-----------	---



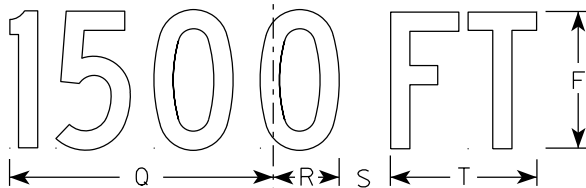
W20-3A



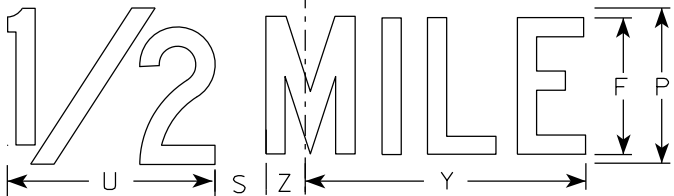
W20-3D



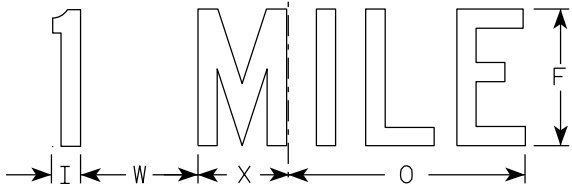
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.  
Line 3 is Series D for AHEAD and Series C for all other distances.

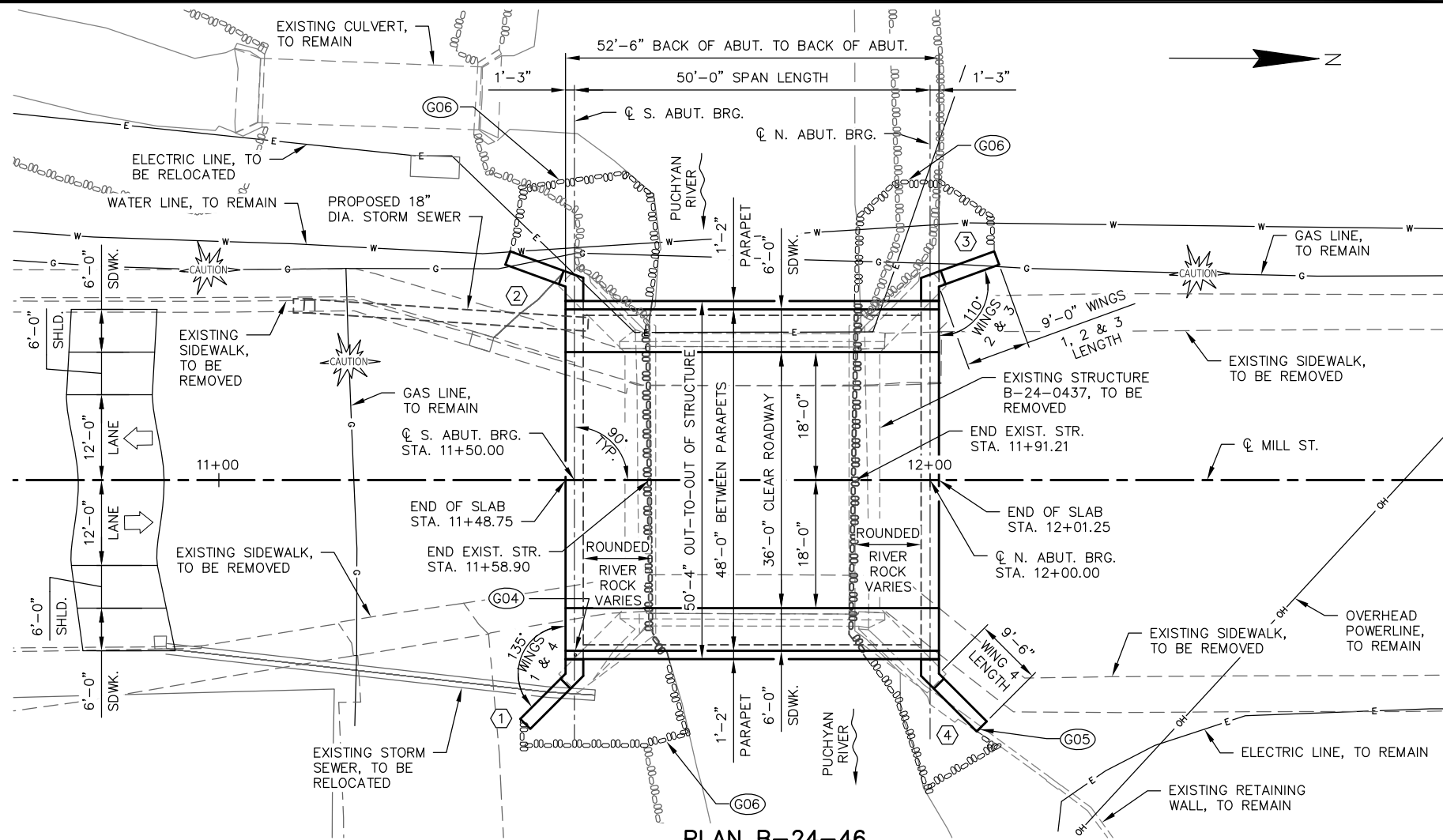
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN  
W20-3A, B, C, D, F & G

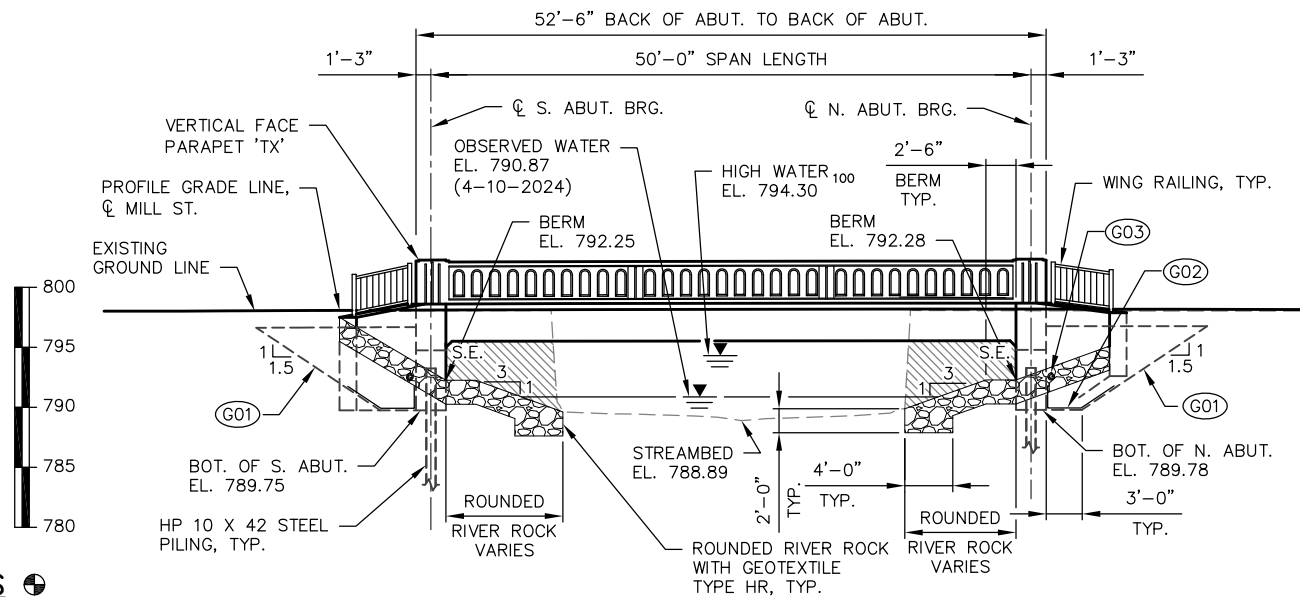
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-3.8



PLAN B-24-46  
(SINGLE SPAN CONCRETE FLAT SLAB BRIDGE)



ELEVATION

(THRU PUCHYAN RIVER, LOOKING WEST)

TRAFFIC DATA:

MILL ST.  
A.A.D.T. (2026) 1,620  
A.A.D.T. (2046) 1,703  
DESIGN SPEED 30 M.P.H.

BRIDGE OFFICE CONTACT  
AARON BONK, P.E.  
(608) 261-0261

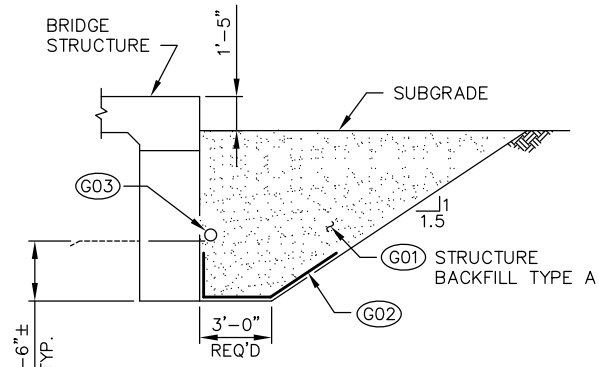
CONSULTANT CONTACT  
ANDY KNUTSON, P.E., S.E.  
(608) 588-7866

NOTES

- EXCAVATION AS INDICATED IN THE HATCH AREAS, TO BE INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-24-46".
- G01 BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCLUDED WITH BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-24-46". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- G02 "GEOTEXTILE TYPE DF SCHEDULE A" LIMITS. EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT FOR THE ENTIRE ABUTMENT BODY LENGTH.
- G03 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED IN "SOUTH ABUT. REINFORCEMENT" SHEET.
- G04 NAME PLATE REQUIRED AND BENCH MARK CAP (WHEN SUPPLIED) NEAR WING 1. FOR LOCATION SEE "VERTICAL FACE PARAPET 'TX'" SHEET.
- G05 REMOVE PORTION OF EXISTING RETAINING WALL (COST TO BE INCLUDED IN BID ITEM "REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS B-24-437"). PLACE 1" FILLER BETWEEN EXISTING RETAINING WALL AND END OF WING 4.
- G06 MATCH NEW ROUNDED RIVER ROCK INTO EXISTING ROUNDED RIVER ROCK. SEE "ROUNDED RIVER ROCK LAYOUT" SHEET.
- INDICATES WING NUMBER

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION, GENERAL NOTES & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT WING DETAILS
6. SOUTH ABUT. REINFORCEMENT
7. NORTH ABUTMENT
8. NORTH ABUTMENT WING DETAILS
9. NORTH ABUT. REINFORCEMENT
10. STEEL RAILING ON WINGS
11. STEEL RAILING ON WING PLANS
12. SUPERSTRUCTURE
13. SUPERSTRUCTURE DETAILS
14. SIDEWALK DETAILS & SUPER. REINF.
15. VERTICAL FACE PARAPET 'TX'
16. CONDUIT DETAILS
17. ROUNDED RIVER ROCK LAYOUT
18. ALTERNATE CONSTRUCTION JOINT



ABUTMENT BACKFILL DETAIL  
(TYPICAL AT BOTH ABUTMENTS)

STATE PROJECT NUMBER

6626-01-70

DESIGN DATA

LIVE LOAD:

DESIGN LOADING HL-93  
INVENTORY RATING FACTOR RF=1.28  
OPERATING RATING FACTOR RF=1.66  
WISCONSIN STANDARD PERMIT  
VEHICLE RATING (WIS.-SPV): 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY, SLAB  $f'_c = 4,000$  P.S.I.  
ALL OTHER  $f'_c = 3,500$  P.S.I.  
HIGH-STRENGTH BAR STEEL  
REINFORCEMENT  $f_y = 60,000$  P.S.I.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING SEATED IN PREBORED HOLES CORED 3 FT MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS 180 TONS AT THE SOUTH ABUTMENT AND 170 TONS AT THE NORTH ABUTMENT MULTIPLIED BY A RESISTANCE FACTOR OF 0.5. ESTIMATED 15 FT PILE LENGTHS AT ABUTMENTS.

HYDRAULIC DATA:

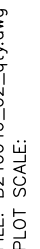
100 YEAR DESIGN FREQUENCY:  
Q<sub>100</sub> 1,300 C.F.S.  
Q<sub>100</sub> (THRU BRIDGE) 1,050 C.F.S.  
Q<sub>100</sub> (SIDE CHANNEL) 250 C.F.S.  
DRAINAGE AREA 103 SQ. MI.  
BRIDGE WATER AREA 170 SQ. FT.  
BRIDGE VELOCITY 6.17 F.P.S.  
HIGH WATER<sub>100</sub> EL. 794.30 FT.  
ROADWAY OVERTOPPING NA  
SCOUR CRITICAL CODE 5  
Q<sub>2</sub> 500 C.F.S.  
Q<sub>2</sub> (THRU BRIDGE) 400 C.F.S.  
Q<sub>2</sub> (SIDE CHANNEL) 100 C.F.S.  
Q<sub>2</sub> ELEVATION 792.25 FT.  
Q<sub>2</sub> VELOCITY 5.20 F.P.S.

BENCH MARKS

NO.	STATION/OFFSET	DESCRIPTION	ELEVATION
BM #1	11+23.89, 109.92' LT.	CHISELED X IN CONCRETE	798.64
BM #2	12+17.84, 52.11' RT.	RAILROAD SPIKE SET	796.00
BM #3	13+86.04, 28.58' LT.	RAILROAD SPIKE IN POWER POLE	797.99

HORIZONTAL DATUM AND ADJUSTMENT: NAD 83 (2011)  
VERTICAL DATUM AND ADJUSTMENT: NAVD 88 (2012)  
COORDINATE REFERENCE SYSTEM: WISCRS GREEN LAKE CO.

NO.	DATE	REVISION	BY
<b>WESTBROOK</b> Associated Engineers, Inc. 619 EAST HOXIE STREET P.O. BOX 429 SPRING GREEN, WI 53588 PHONE (608) 588-7866 FAX (608) 588-7954			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED		JLR CHIEF STRUCTURES DESIGN ENGINEER DATE 08/18/25	
<b>STRUCTURE B-24-46</b>			
MILL ST OVER PUCHYAN RIVER			
COUNTY	GREEN LAKE	TOWN/CITY/VILLAGE	GREEN LAKE
DESIGN SPEC. AASHTO LRFD DESIGN SPEC.			
DESIGNED BY	JDO	DESIGN CK'D.	CDS
DRAWN BY	JDO	PLANS CK'D.	ACK
GENERAL PLAN			SHEET 1 OF 18



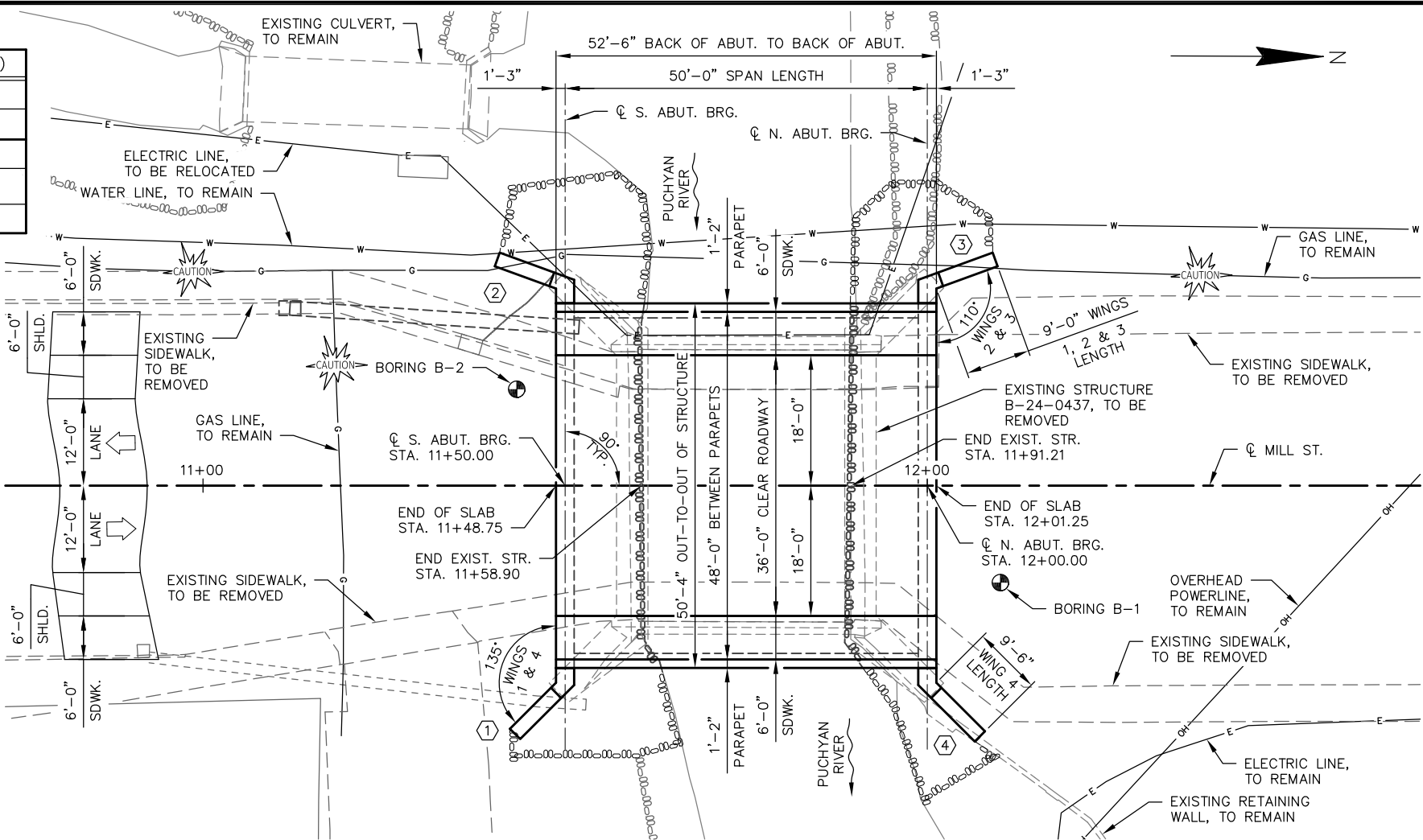


B-24-46 BORINGS

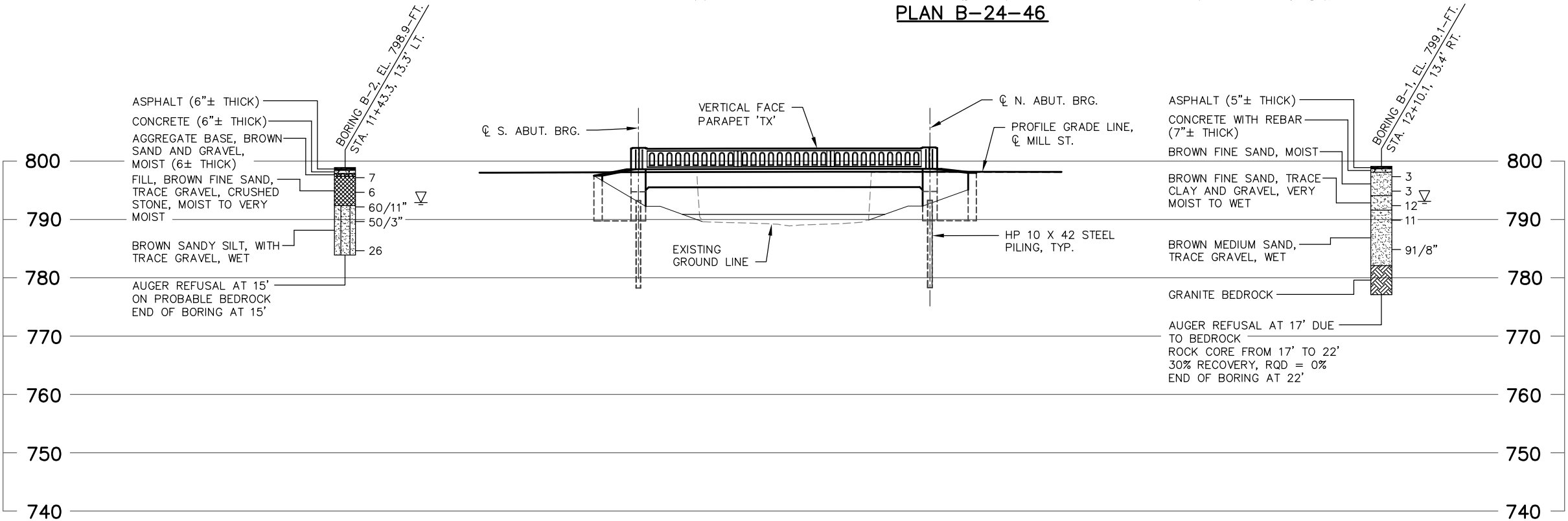
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
BORING B-1	5/9/2024	274362.8	569294.9
BORING B-2	5/9/2024	274295.9	569268.5
BORINGS COMPLETED BY: GROUNDBREAKING EXPLORATION INC.			
SUBSURFACE INVESTIGATION REPORT: P.S.I., INC.			
ALL COORDINATES REFERENCED TO WISCRS, GREEN LAKE COUNTY			

NOTE

⬡ INDICATES WING NUMBER



PLAN B-24-46



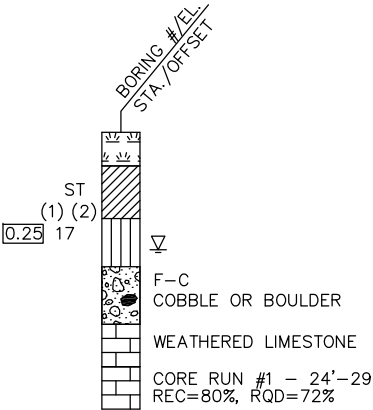
STATE PROJECT NUMBER

6626-01-70

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



- (1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)
- (2) UNLESS OTHERWISE SPECIFIED, THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▼ AFTER DRILLING

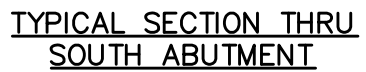
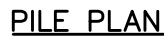
ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

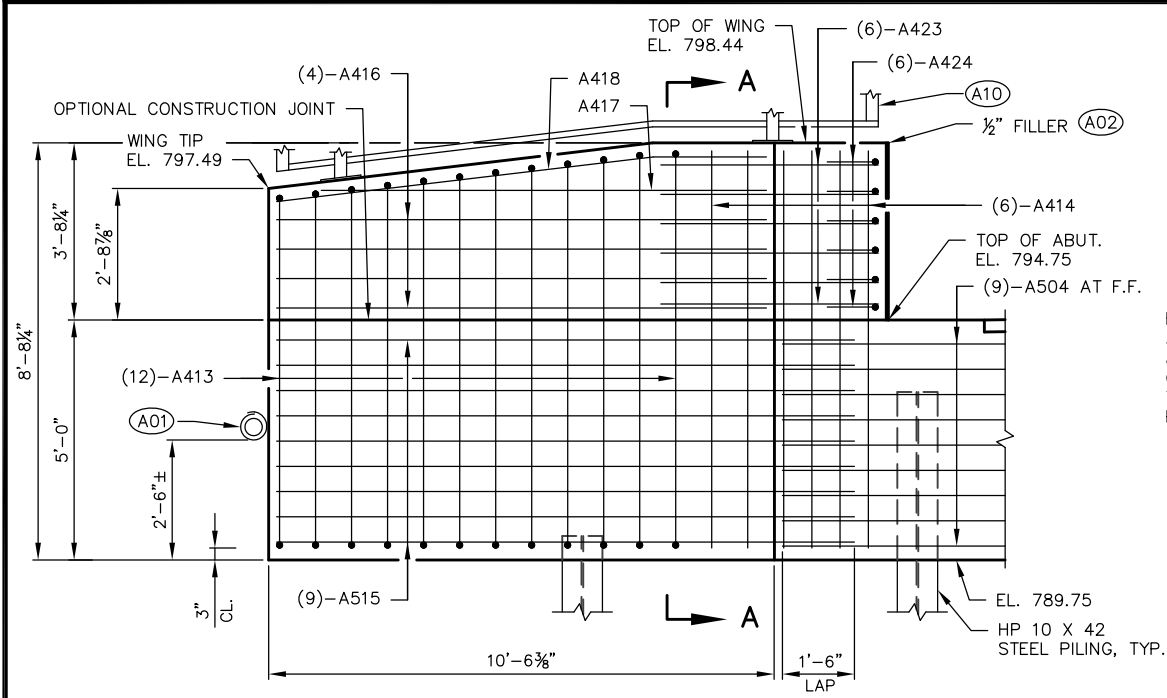
BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-24-46			
DRAWN BY JDO		PLANS CK'D ACK	
SUBSURFACE EXPLORATION		SHEET 3 OF 18	

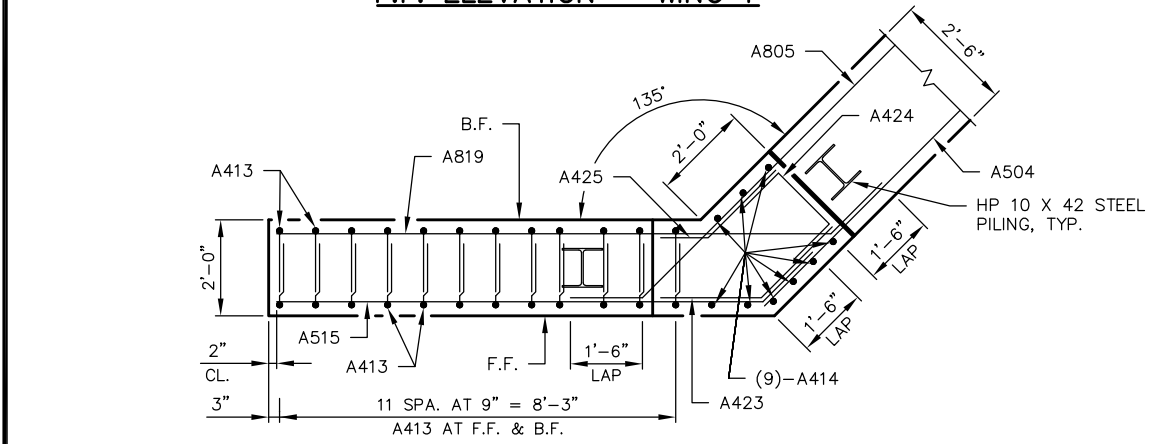


DETAIL A  
(ABUTMENT NOTCH)

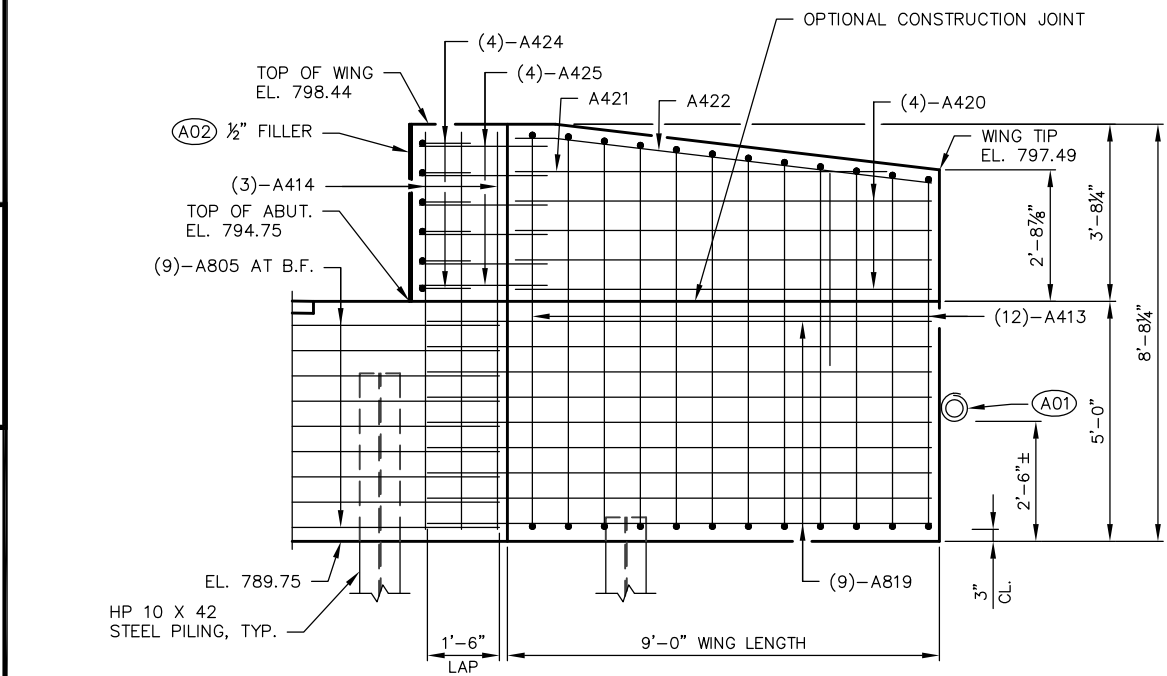
NO.	DATE	REVISION	B
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-24-46			
DRAWN BY		JDO	PLANS CK'D      ACK
SOUTH ABUTMENT		SHEET 4 OF 1	



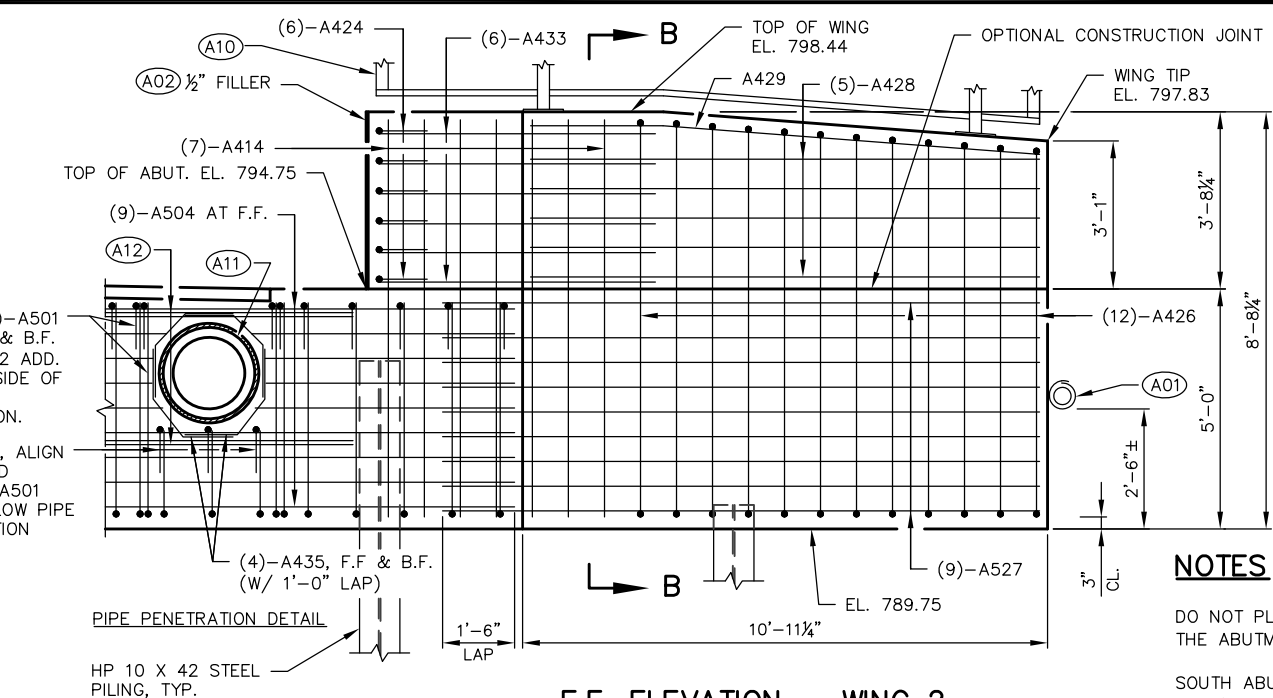
F.F. ELEVATION - WING 1



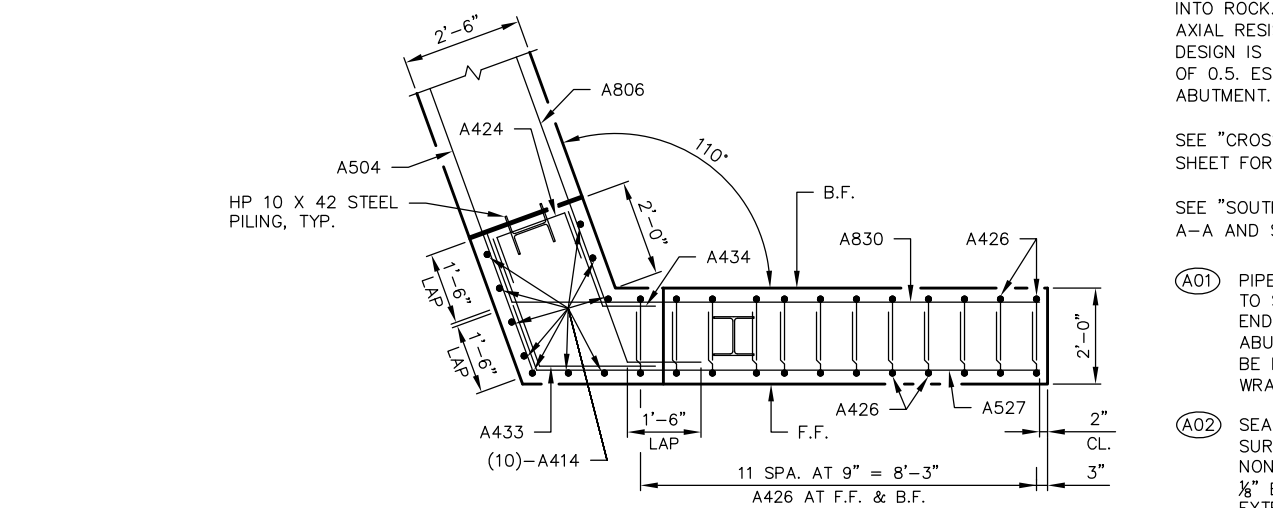
PLAN - WING 1



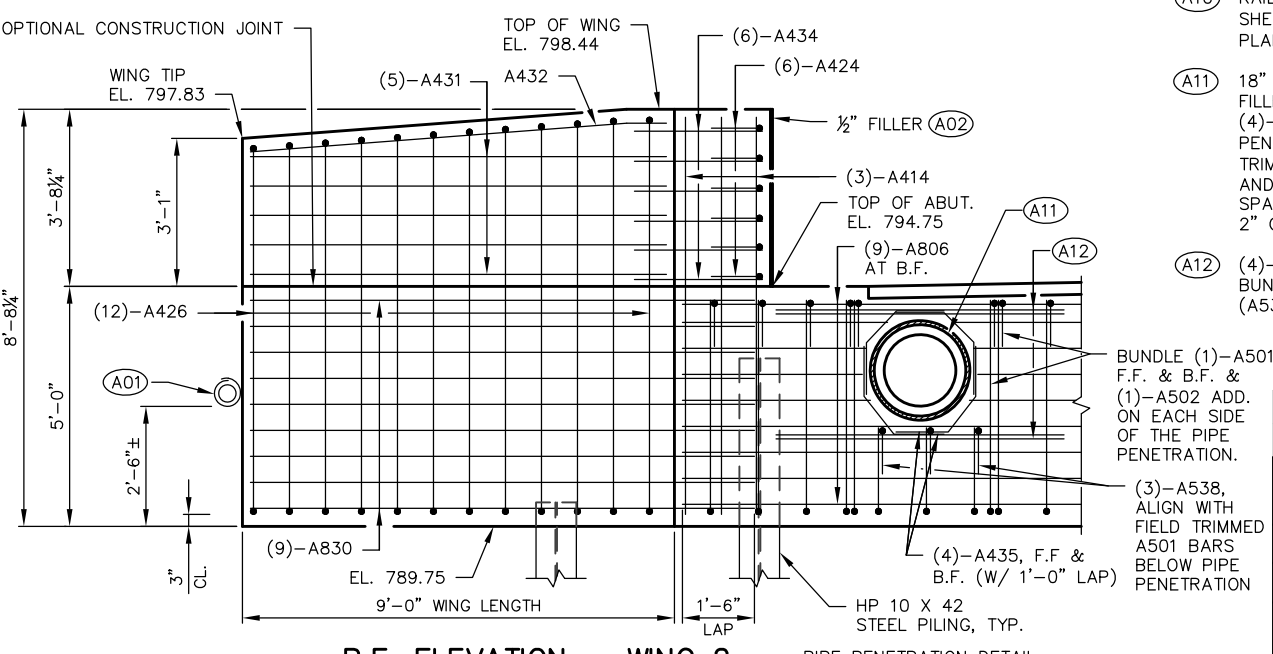
B.F. ELEVATION - WING 1



F.F. ELEVATION - WING 2



PLAN - WING 2



B.F. ELEVATION - WING 2

NOTES

DO NOT PLACE FILL ABOVE 3'-0" FROM THE BOTTOM OF THE ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

SOUTH ABUTMENT TO BE SUPPORTED ON HP 10 X 42 STEEL PILING SEATED IN PREBORED HOLES CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS 180 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5. ESTIMATED 15 FT PILE LENGTHS AT THE SOUTH ABUTMENT.

SEE "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET FOR PILE SPLICE DETAILS.

SEE "SOUTH ABUT. REINFORCEMENT" SHEET FOR SECTION A-A AND SECTION B-B.

- (A01) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON "SOUTH ABUT. REINFORCEMENT" SHEET. RODENT SHIELD SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".
- (A02) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.) 1/2" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.
- (A10) RAILING ON WINGS, SEE "STEEL RAILING ON WINGS" SHEET FOR DETAILS AND SEE "STEEL RAILING ON WING PLANS" SHEET FOR RAILING SPACING AND LAYOUT.
- (A11) 18" DIA. STORM SEWER PIPE. WRAP PIPE WITH 1" THK. FILLER AND CAST PIPE INTO ABUT. FIELD TRIM (4)-A504 & (4)-A806 HORIZ. BARS AT PIPE PENETRATION AND MAINTAIN 2" CLEAR COVER. FIELD TRIM (3)-A501 & (3)-A502 BARS 2" CLEAR ON F.F. AND B.F. IN CONFLICT WITH PIPE PENETRATION. ADJUST SPACING OF OTHER A501 & A502 BARS TO MAINTAIN 2" CLEAR.
- (A12) (4)-A536, F.F. & (4)-A837, B.F. ADD (2) BARS BUNDLED ON TOP & BOT. OF THE PIPE PENETRATION. (A536, 6'-0" LONG BARS & A837, 10'-0" LONG BARS).

STATE PROJECT NUMBER

6626-01-70

F.F. - FRONT FACE  
B.F. - BACK FACE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-24-46			
DRAWN BY JDO		PLANS CK'D	ACK
SOUTH ABUTMENT WING DETAILS			SHEET 5 OF 18

FILE: B240046\_04-06\_Sabut.dwg  
PLOT SCALE:

BILL OF BARS  
SOUTH ABUTMENT

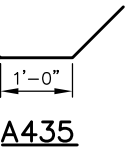
COATED = 1,520 LBS.  
UNCOATED = 3,690 LBS.

MARK	NUMBER		LENGTH	BENT	BAR SERIES	LOCATION
	COATED	UNCOATED				
A501		116	5'-8"	X		BODY - STIRRUP - F.F. & B.F. VERT.
A502		58	6'-1"	X		BODY - STIRRUP - TOP VERT.
A403		42	3'-1"	X		BODY - TIES HORIZ.
A504		18	29'-2"			BODY - F.F. HORIZ.
A805		9	33'-5"	X		BODY - B.F. (WEST) HORIZ.
A806		9	33'-5"	X		BODY - B.F. (EAST) HORIZ.
A407		4	26'-0"			BODY - B.F. HORIZ.
A408		31	3'-3"	X		BODY - STIRRUP - B.F. VERT.
A409		4	4'-6"	X		BODY - STIRRUP - AT ENDS VERT.
A410		2	1'-8"			BODY - F.F. - TOP AT ENDS HORIZ.
A411		3	14'-0"			BODY - ADDITIONAL REINF. - TOP HORIZ.
A512		14	4'-9"	X		BODY - ADDITIONAL REINF. - STIRRUP VERT.
A413	24		10'-4"	X	▲	WING 1 - STIRRUP - F.F. & B.F. VERT.
A414	19		8'-3"			WINGS 1 & 2 - F.F. & B.F. VERT.
A515	9		11'-9"	X		WING 1 - F.F. HORIZ.
A416	4		10'-2"			WING 1 - F.F. HORIZ.
A417	1		9'-3"			WING 1 - F.F. HORIZ.
A418	1		10'-3"	X		WING 1 - F.F. - TOP HORIZ.
A819	9		13'-3"	X		WING 1 - B.F. HORIZ.
A420	4		8'-8"			WING 1 - B.F. HORIZ.
A421	1		7'-8"			WING 1 - B.F. HORIZ.
A422	1		8'-8"	X		WING 1 - B.F. - TOP HORIZ.
A423	6		4'-2"	X		WING 1 - F.F. CORNER HORIZ.
A424	12		3'-11"	X		WINGS 1 & 2 - TOP CORNER HORIZ.
A425	6		2'-10"	X		WING 1 - B.F. CORNER HORIZ.
A426	24		10'-6"	X	▲	WING 2 - STIRRUP - F.F. & B.F. VERT.
A527	9		11'-11"	X		WING 2 - F.F. HORIZ.
A428	5		10'-7"			WING 2 - F.F. HORIZ.
A429	1		10'-7"	X		WING 2 - F.F. - TOP HORIZ.
A830	9		12'-4"	X		WING 2 - B.F. HORIZ.
A431	5		8'-8"			WING 2 - B.F. HORIZ.
A432	1		8'-7"	X		WING 2 - B.F. - TOP HORIZ.
A433	6		5'-4"	X		WING 2 - F.F. CORNER HORIZ.
A434	6		2'-11"	X		WING 2 - B.F. CORNER HORIZ.
A435		8	3'-0"	X		BODY - F.F. & B.F. - PIPE PENETRATION VERT.
A536		4	6'-0"			BODY - F.F. - PIPE PENETRATION HORIZ.
A837		4	10'-0"			BODY - B.F. - PIPE PENETRATION HORIZ.
A538		3	3'-11"	X		BODY - STIRRUP - PIPE PENETRATION VERT.

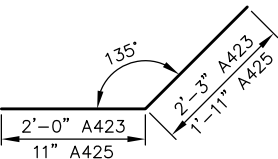
THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

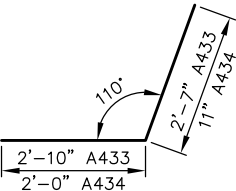
▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE "BAR SERIES TABLE" FOR ACTUAL LENGTHS.



A435



A423 & A425



A433 & A434

BAR BEND DIMENSIONS

MARK	"A"	"B"	"C"
A418	7'-11"	2'-4"	173'
A422	7'-11"	0'-9"	173'
A429	7'-10"	2'-9"	175'
A432	7'-10"	0'-9"	175'

BAR SERIES TABLE

MARK	NO. REQ'D	LENGTH
A413	2 SERIES OF 12	9'-10" TO 10'-9"
A426	2 SERIES OF 12	10'-2" TO 10'-9"

BUNDLE AND TAG EACH SERIES SEPARATELY.

NOTES

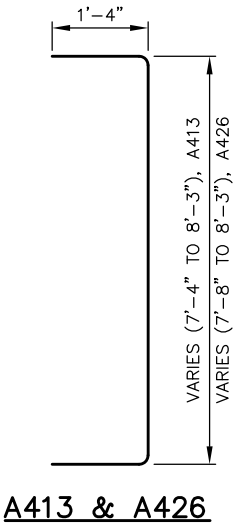
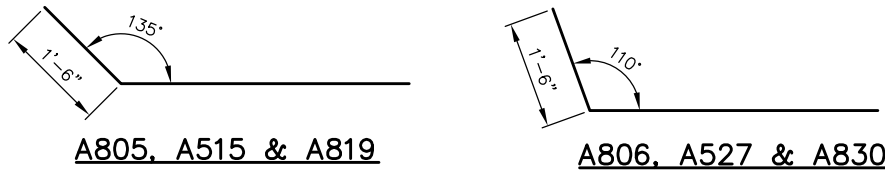
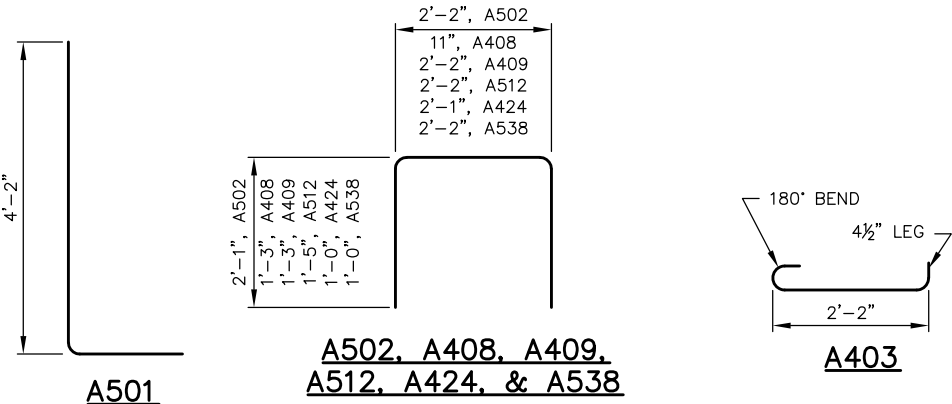
DO NOT PLACE FILL ABOVE 3'-0" FROM THE BOTTOM OF THE ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

SOUTH ABUTMENT TO BE SUPPORTED ON HP 10 X 42 STEEL PILING SEATED IN PREBORED HOLES CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS 180 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5. ESTIMATED 15 FT PILE LENGTHS AT THE SOUTH ABUTMENT.

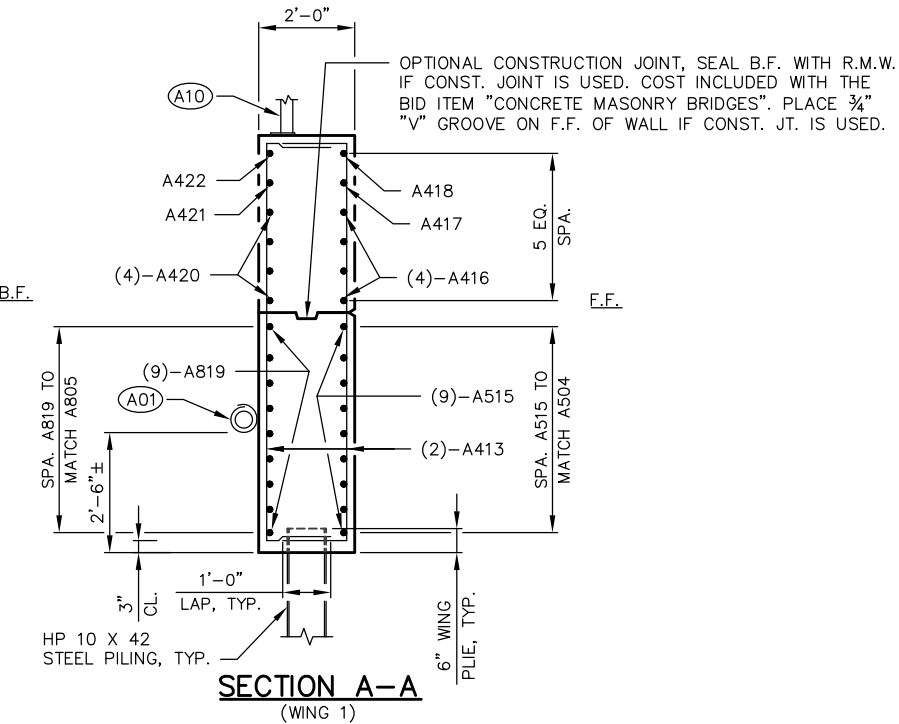
SEE "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET FOR PILE SPLICE DETAILS.

(A01) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THIS SHEET. RODENT SHIELD SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

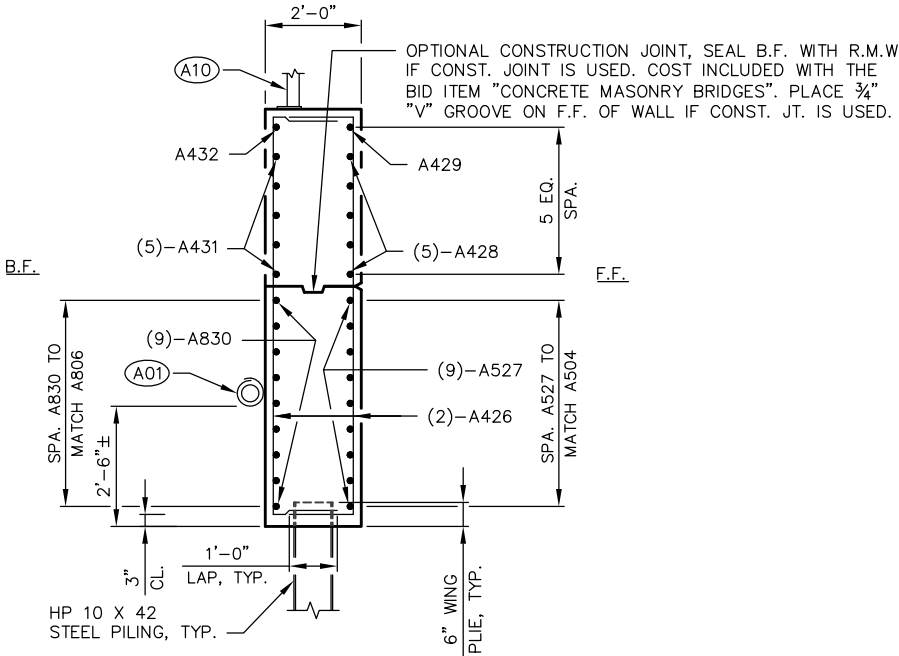
(A10) RAILING ON WINGS, SEE "STEEL RAILING ON WINGS" SHEET FOR DETAILS AND SEE "STEEL RAILING ON WING PLANS" SHEET FOR RAILING SPACING AND LAYOUT.



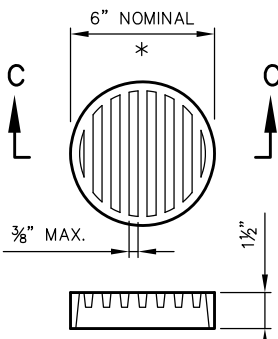
A413 & A426



SECTION A-A  
(WING 1)



SECTION B-B  
(WING 2)



SECTION C-C

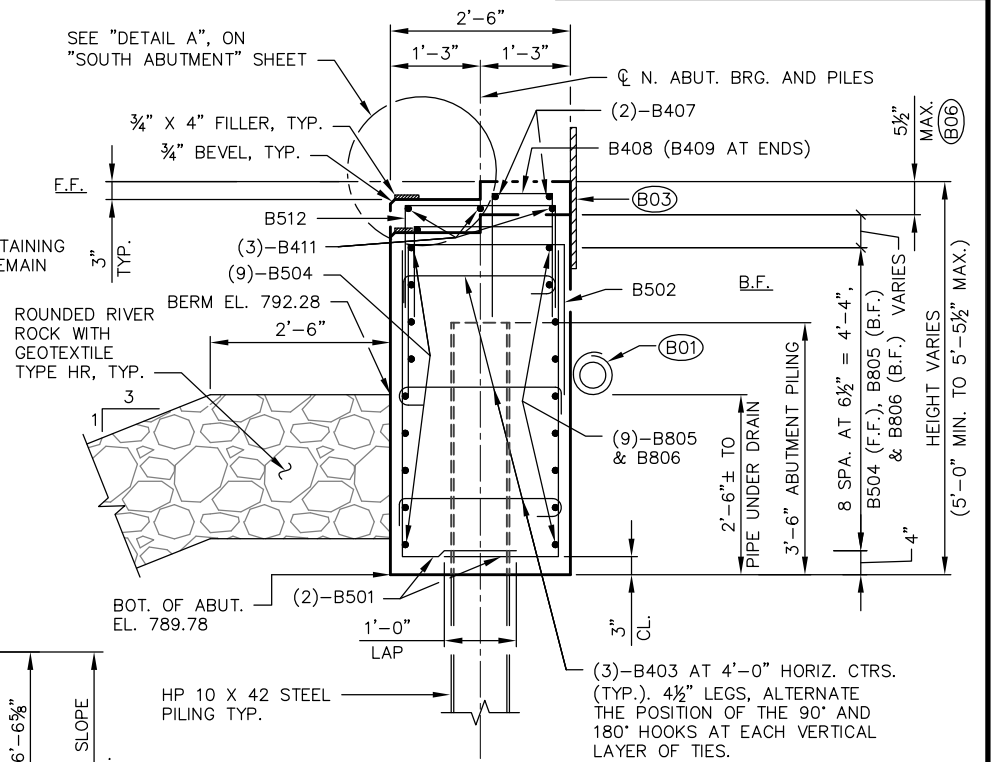
RODENT SHIELD DETAIL

\* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SHIELD SO SLOTS ARE VERTICAL.

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-24-46			
DRAWN BY JDO		PLANS CK'D	ACK
SOUTH ABUT. REINFORCEMENT			SHEET 6 OF 18



## NOTES

NORTH ABUTMENT TO BE SUPPORTED ON HP 10 X 42 STEEL PILING SEATED IN PREBORED HOLES CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS 170 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5. ESTIMATED 15 FT PILE LENGTHS AT THE NORTH ABUTMENT.

(B01) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON "SOUTH ABUT. REINFORCEMENT" SHEET. RODENT SHIELD SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

(B02) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). 1/2" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.

(B03) 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W.), SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE AND BETWEEN WING 4 AND EXISTING RETAINING WALL.

(B04) VERTICAL CONSTRUCTION JOINT KEYWAY FORMED BY BEVELED 2" X 8" (CENTER IN ABUT.). RUN BAR STEEL THRU JOINT. FOR OPTIONAL DETAIL SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(B05) OPTIONAL KEYED CONST. JT. FORMED BY BEVELED 2 X 6, TYP.

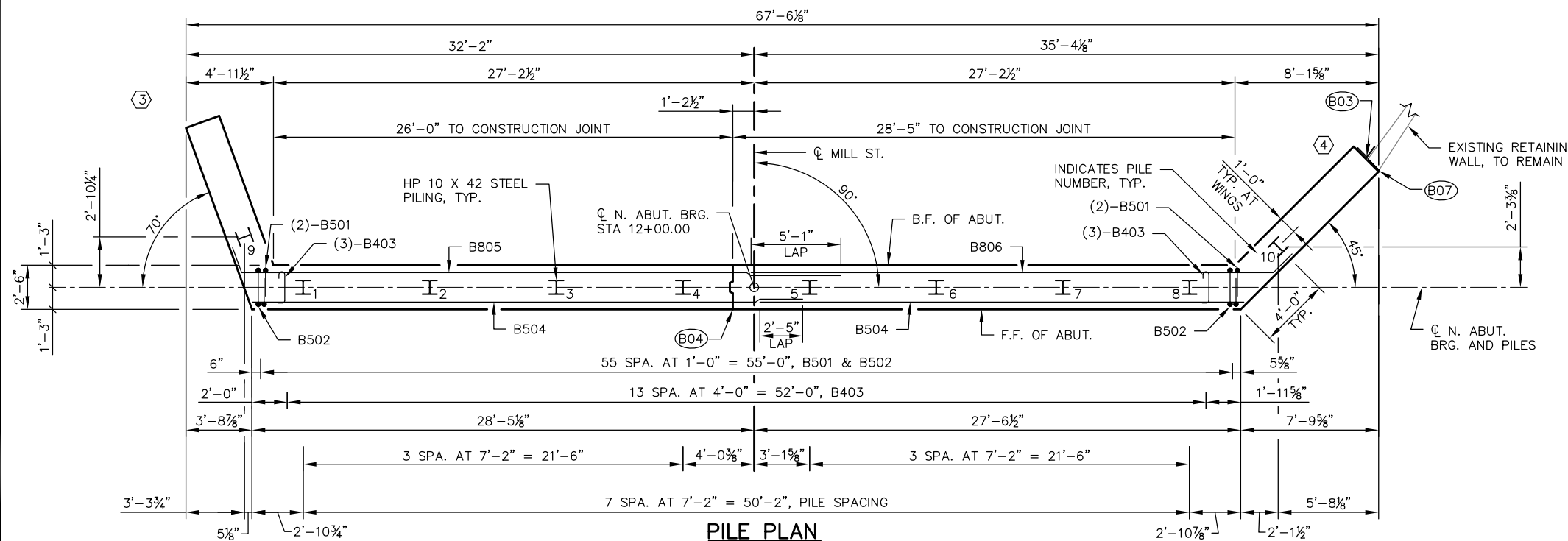
(B06) BARS B411 & B512 REQUIRED ONCE DIM. EXCEEDS 4".

(B07) PLACE 1" FILLER BETWEEN EXISTING RETAINING WALL AND END OF WING 4. SEAL WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

(B08) TOP OF ABUTMENT TO BE LEVEL  
IN LAST 2'-0½" OF BEAM SEAT.

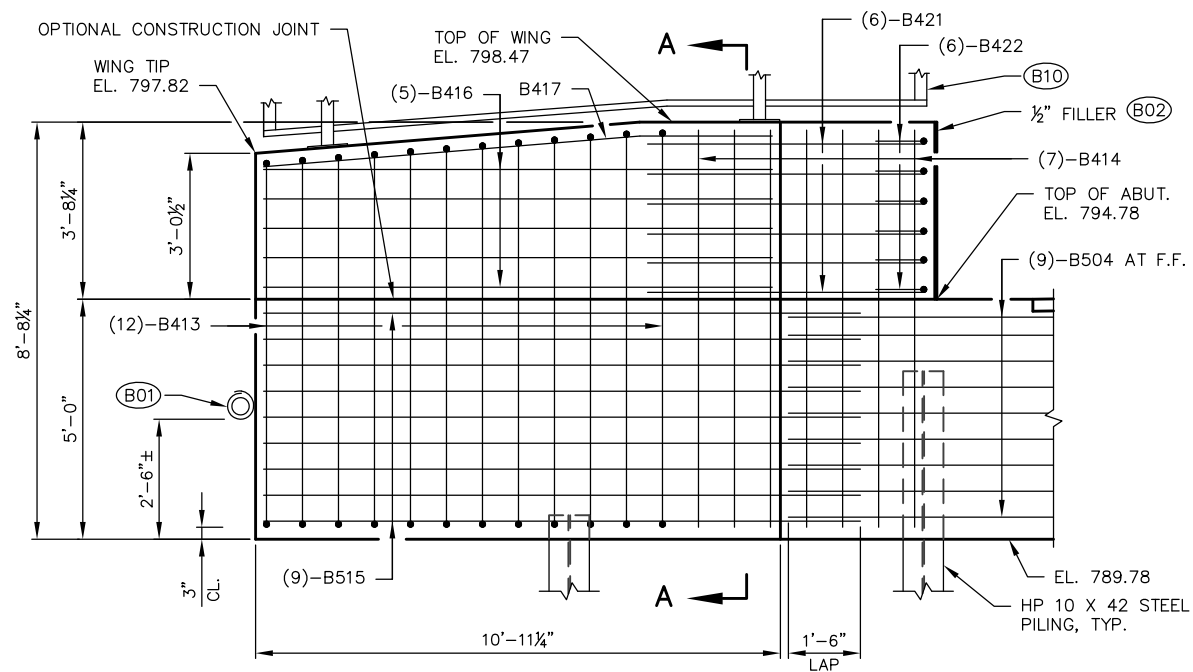
(B09) 3/4" CORK FILLER ON VERTICAL  
FACE ONLY.

 INDICATES WING NUMBER

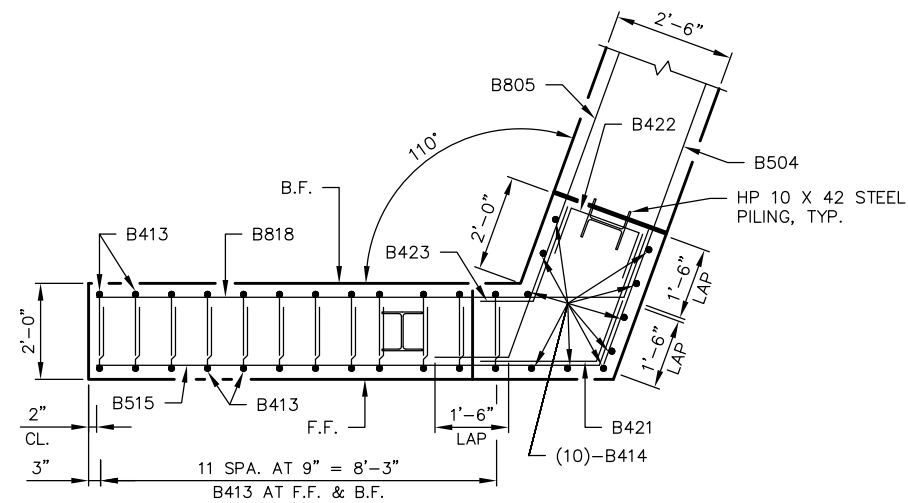


## PILE PLAN

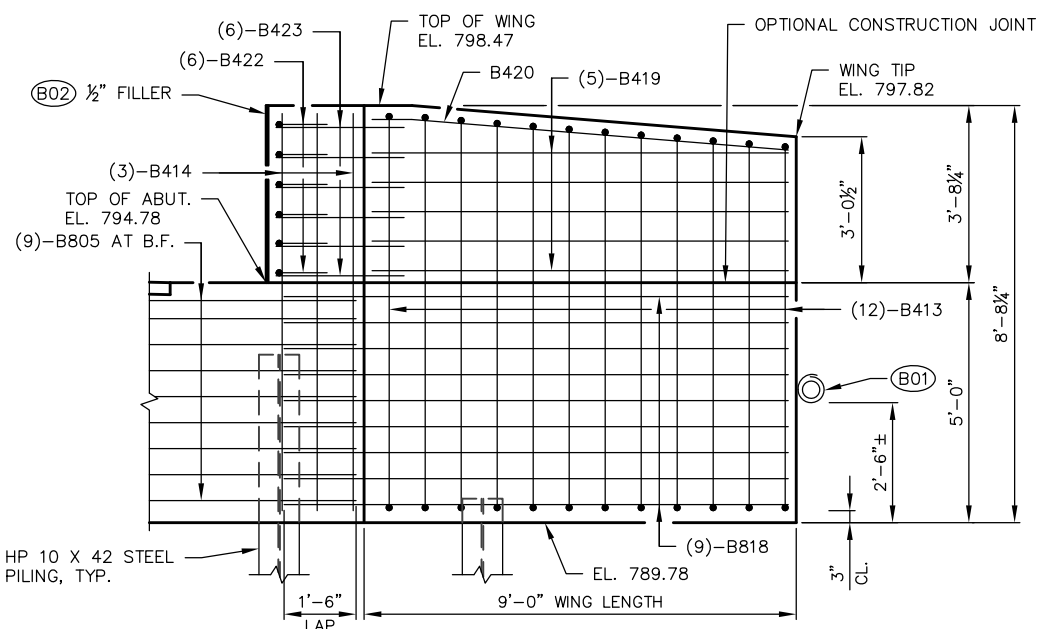
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-24-46			
DRAWN BY		JDO	PLANS CKD ACK
NORTH ABUTMENT		SHEET 7 OF 18	



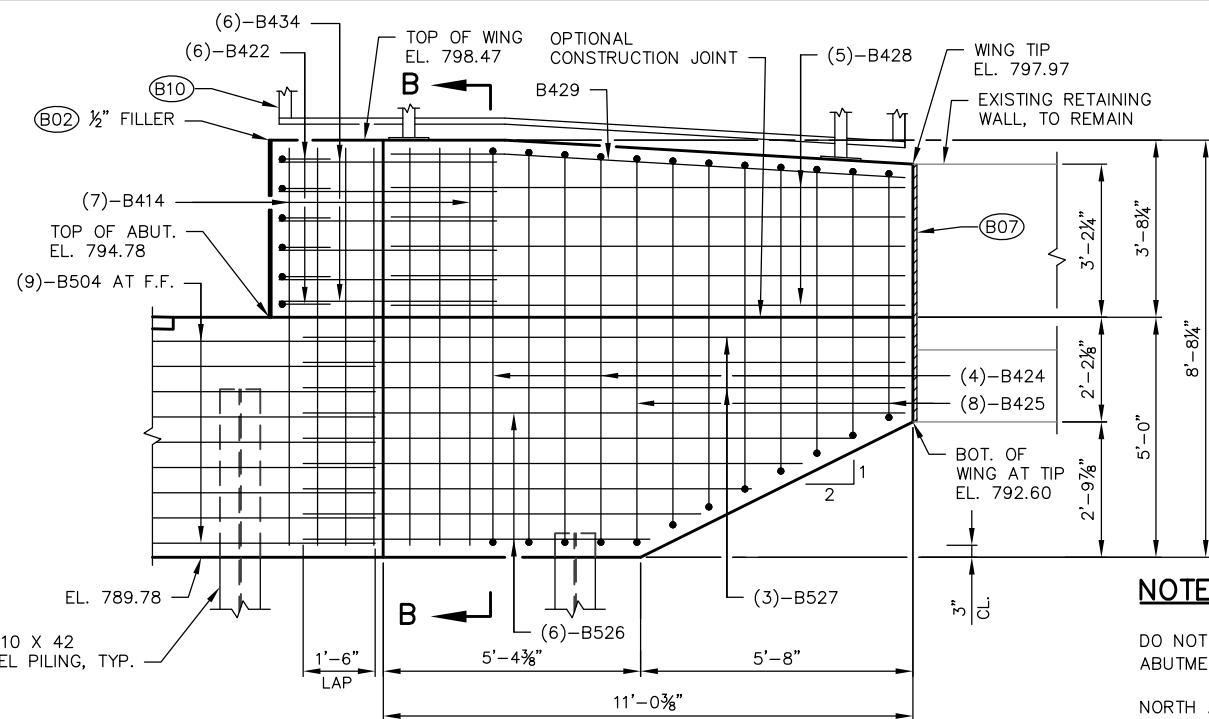
F.F. ELEVATION - WING 3



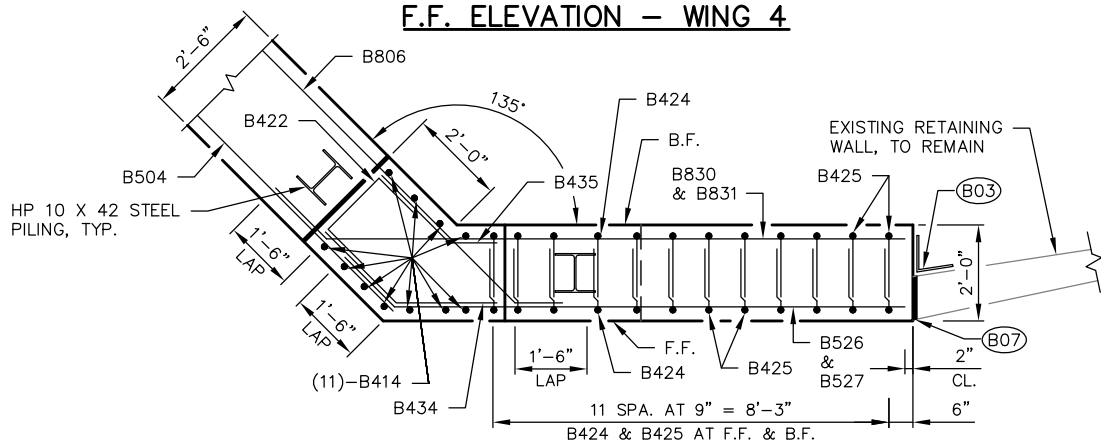
PLAN - WING 3



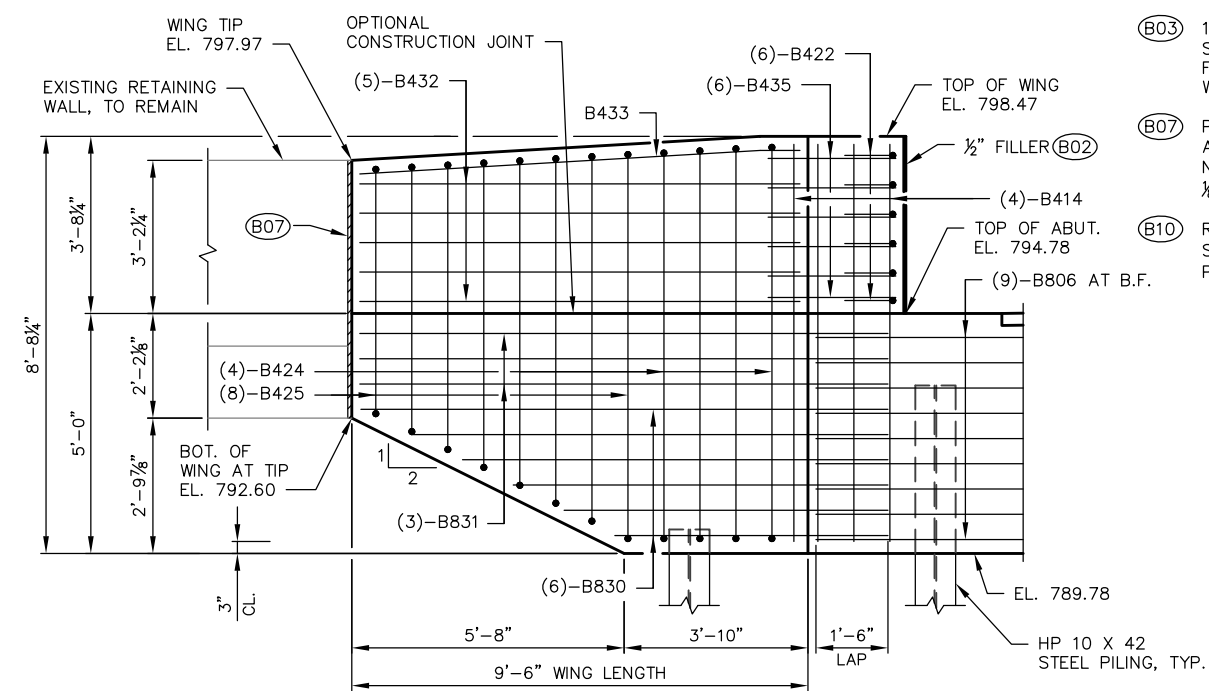
B.F. ELEVATION - WING 3



F.F. ELEVATION - WING 4



PLAN - WING 4



B.F. ELEVATION - WING 4

## NOTES

DO NOT PLACE FILL ABOVE 3'-0" FROM THE BOTTOM OF THE ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

NORTH ABUTMENT TO BE SUPPORTED ON HP 10 X 42 STEEL PILING SEATED IN PREBORED HOLES CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS 170 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5. ESTIMATED 15 FT PILE LENGTHS AT THE NORTH ABUTMENT.

SEE "CROSS SECTION, GENERAL NOTES & QUANTITIES" SHEET FOR PILE SPLICE DETAILS.

SEE "NORTH ABUT. REINFORCEMENT" SHEET FOR SECTION A-A AND SECTION B-B.

(B01) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON "SOUTH ABUT. REINFORCEMENT" SHEET. RODENT SHIELD SHALL BE INCLUDED WITH THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

(B02) SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.) 1/2" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.

(B03) 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W.), SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE AND BETWEEN WING 4 AND EXISTING RETAINING WALL.

(B07) PLACE 1" FILLER BETWEEN EXISTING RETAINING WALL AND END OF WING 4. SEAL WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.)

(B10) RAILING ON WINGS, SEE "STEEL RAILING ON WINGS" SHEET FOR DETAILS AND SEE "STEEL RAILING ON WING PLANS" SHEET FOR RAILING SPACING AND LAYOUT.

F.F. - FRONT FACE  
B.F. - BACK FACE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-24-46			
DRAWN BY JDO		PLANS CK'D	ACK
NORTH ABUTMENT WING DETAILS			SHEET 8 OF 18



NOTES

BID ITEM SHALL BE "RAILING STEEL PEDESTRIAN TYPE C4", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED AND USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

CAULK AROUND PERIMETER OF BASE PLATES, NO. 1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

ALL MATERIAL (EXCEPT NO. 3) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED AMS STD. COLOR NO. 27038 (BLACK).

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

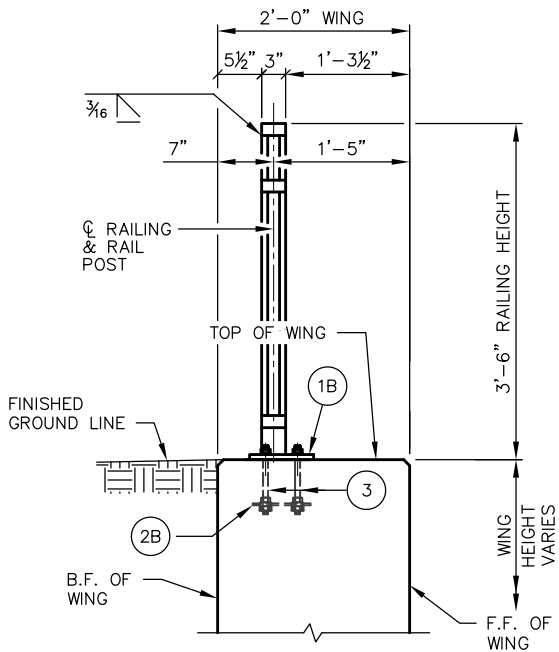
EACH RAILING ON WING SHALL BE FABRICATED FULL LENGTH. NO JOINTS ALLOWED.

LEGEND

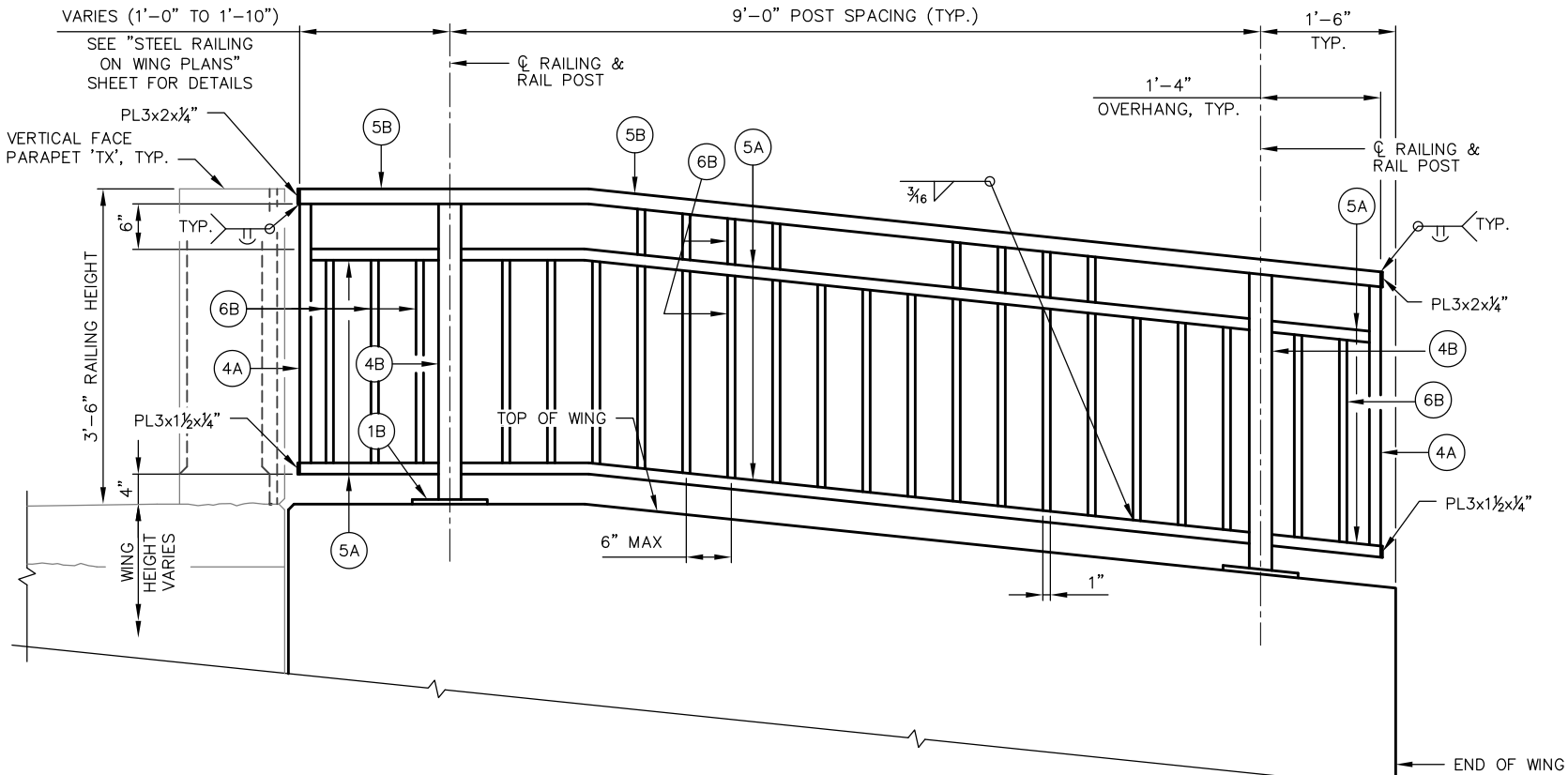
- 1B PLATE  $\frac{5}{8}$ " X 8" X 10" WITH HOLES. ■
- 2B  $\frac{1}{4}$ " X 6" X  $9\frac{3}{4}$ " ANCHOR PLATE WITH  $\frac{1}{16}$ " DIA. HOLES FOR THR'D. RODS NO. 3.
- 3  $\frac{5}{8}$ " DIA. X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS  $\frac{5}{8}$ -INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 & 502.3.14 OF THE STANDARD SPECIFICATIONS.
- 4A STRUCTURAL TUBING 3" X  $1\frac{1}{2}$ " X  $\frac{3}{16}$ ". PLACE VERTICAL. WELD TO NO. 5.
- 4B STRUCTURAL TUBING 3" X 3" X  $\frac{3}{16}$ ". PLACE VERTICAL. WELD TO NO. 1 & 5.
- 5A STRUCTURAL TUBING 3" X  $1\frac{1}{2}$ " X  $\frac{3}{16}$ ". RAILS. WELD TO NO. 4.
- 5B STRUCTURAL TUBING 3" X 2" X  $\frac{3}{16}$ ". RAILS. WELD TO NO. 4.
- 6B BAR 1" X  $1\frac{1}{2}$ " PICKETS. WELD TO NO. 5. (SPACE AT 6" MAX.  $\phi$  TO  $\phi$  SPACING). PLACE VERTICAL.
- 9A RECTANGULAR SLEEVE FABRICATED FROM  $\frac{3}{16}$ " PLATES. PROVIDE "SLIDING FIT".
- $\frac{3}{4}$ " DIA. HOLES FOR ADHESIVE ANCHORS.  $\frac{3}{4}$ " DIA. X  $1\frac{1}{2}$ " SLOTTED HOLES FOR CAST-IN-PLACE ANCHORS.

F.F. - FRONT FACE  
B.F. - BACK FACE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-24-46			
DRAWN BY JDO		PLANS CK'D	ACK
STEEL RAILING ON WINGS			SHEET 10 OF 18

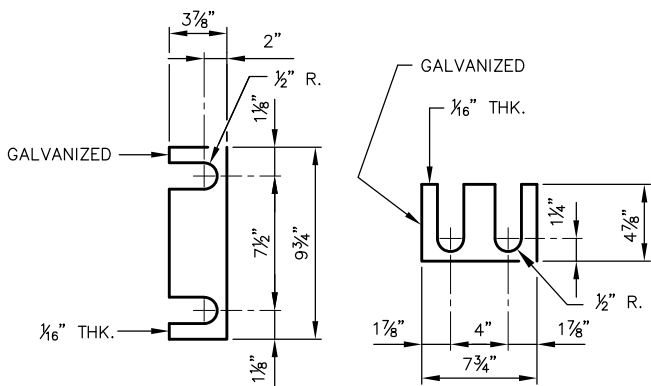


TYPICAL SECTION  
THRU WING & RAILING



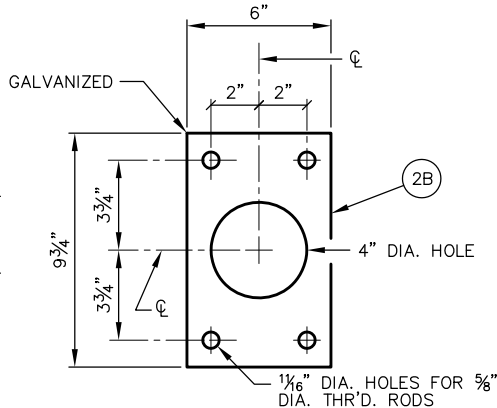
ELEVATION OF FRONT FACE OF ABUTMENT WINGS

(WING 4 SHOWN, ALL WINGS SIMILAR)



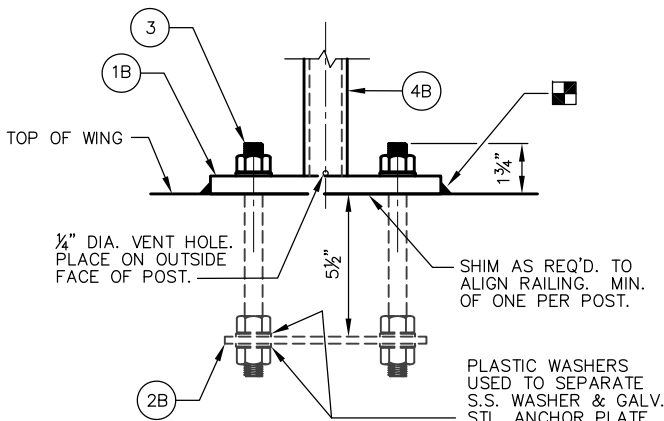
RAIL POST SHIM DETAIL

(2 SETS PER POST)



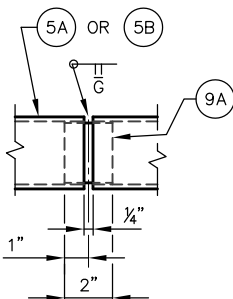
ANCHOR PLATE

FOR 3" X 3" X 3/16" POSTS 4B



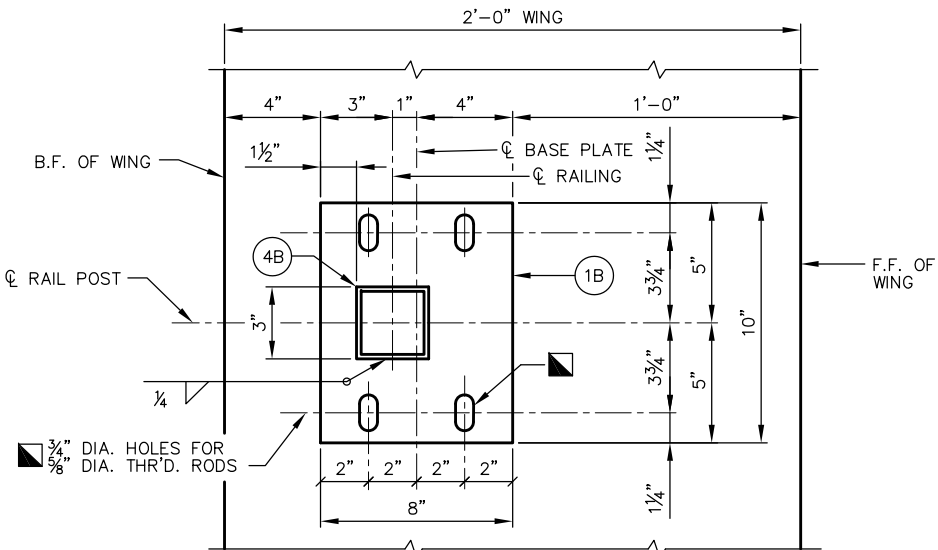
ANCHORAGE FOR RAIL POSTS

NOTE: ANCHOR PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.



SHOP RAIL  
SPLICE DETAIL

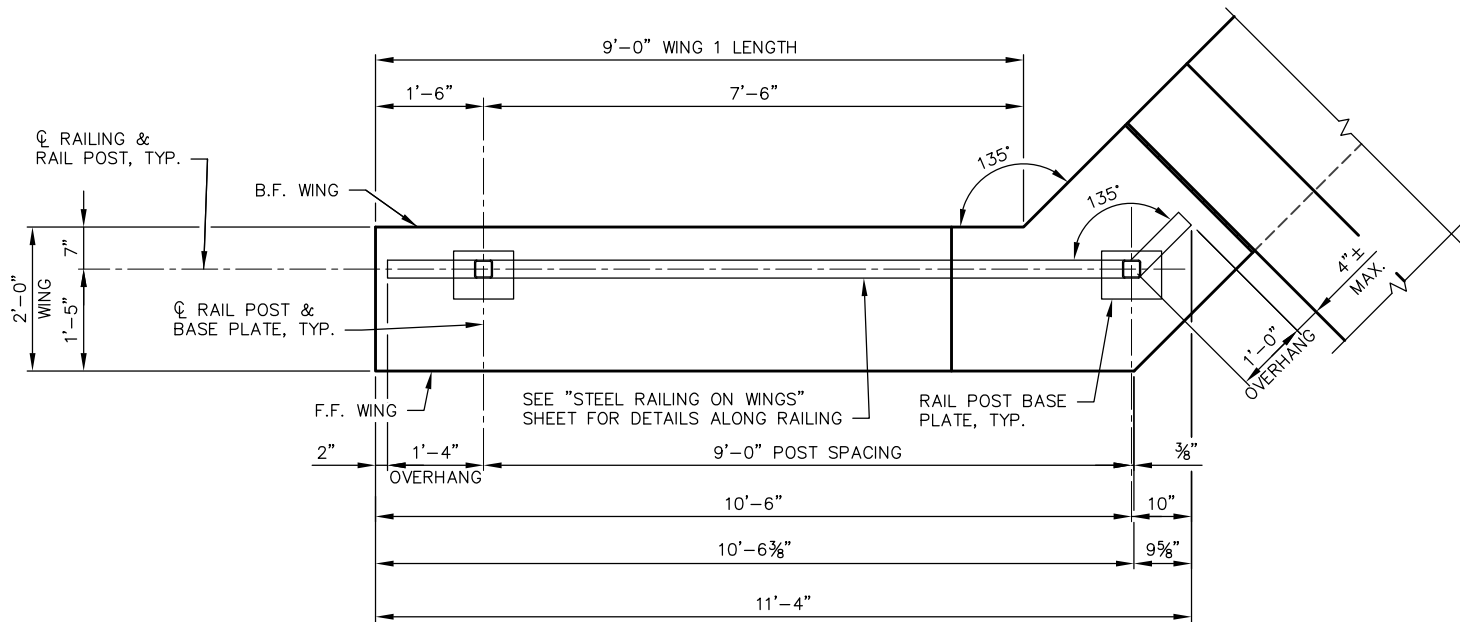
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



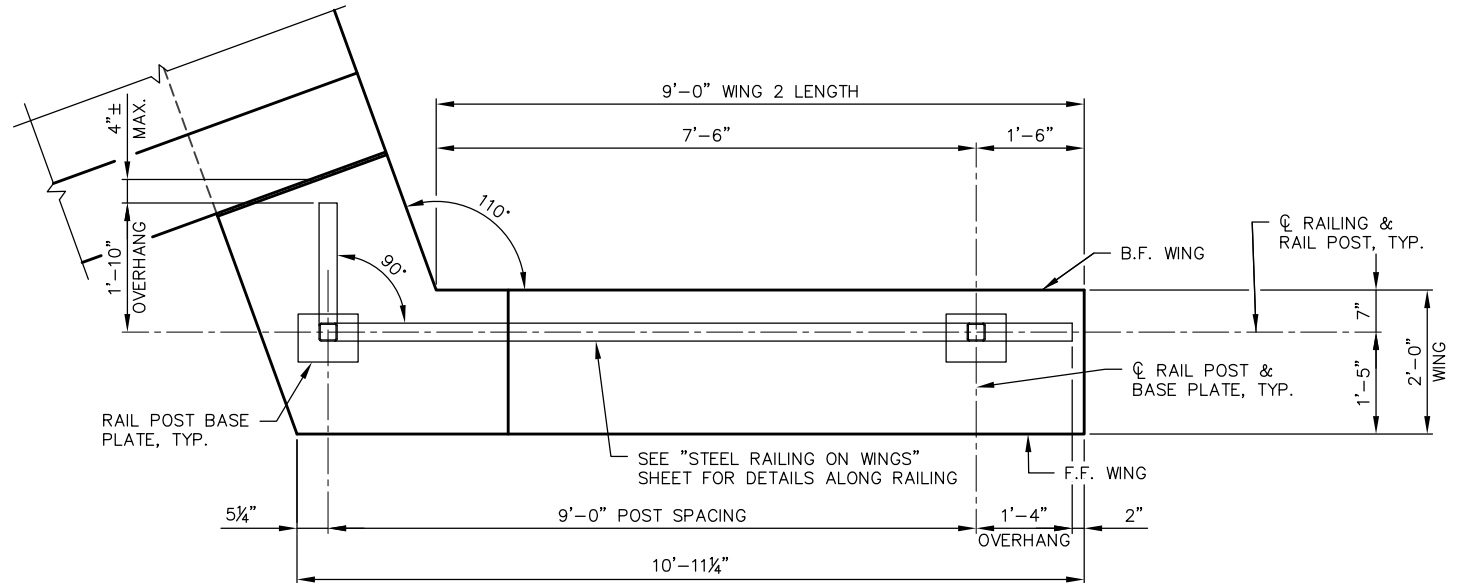
TYPICAL RAIL POST BASE PLATE

FOR 3" X 3" X 3/16" POSTS 4B

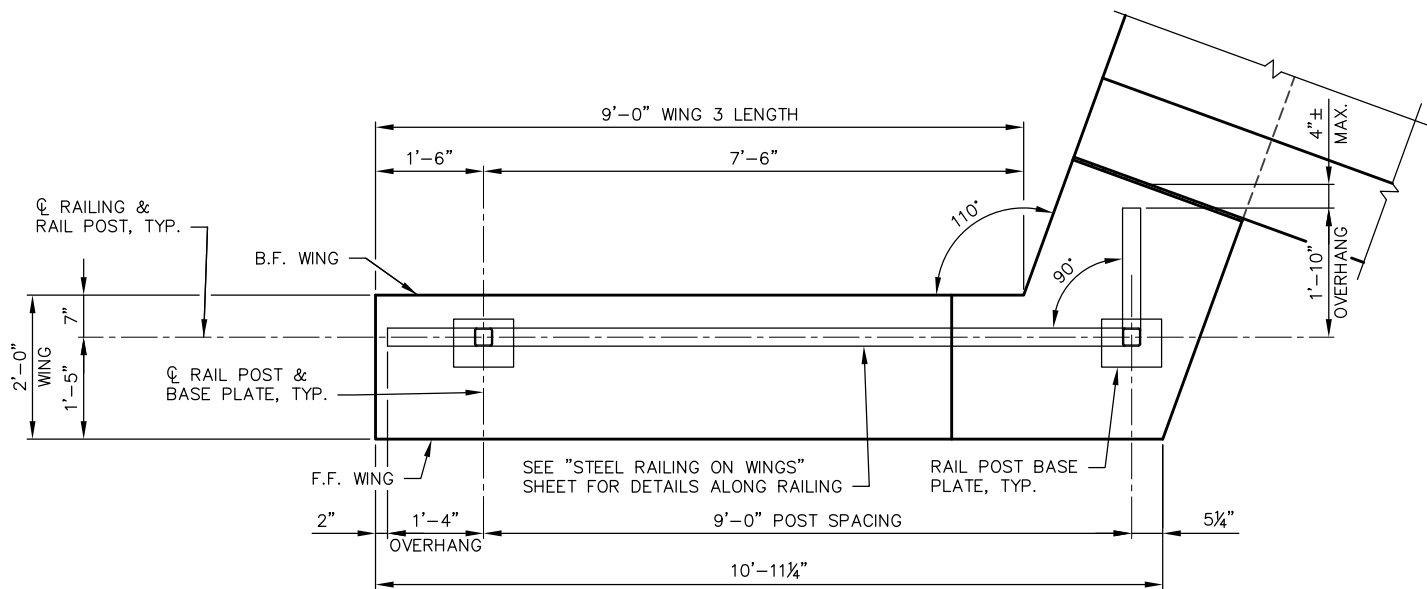




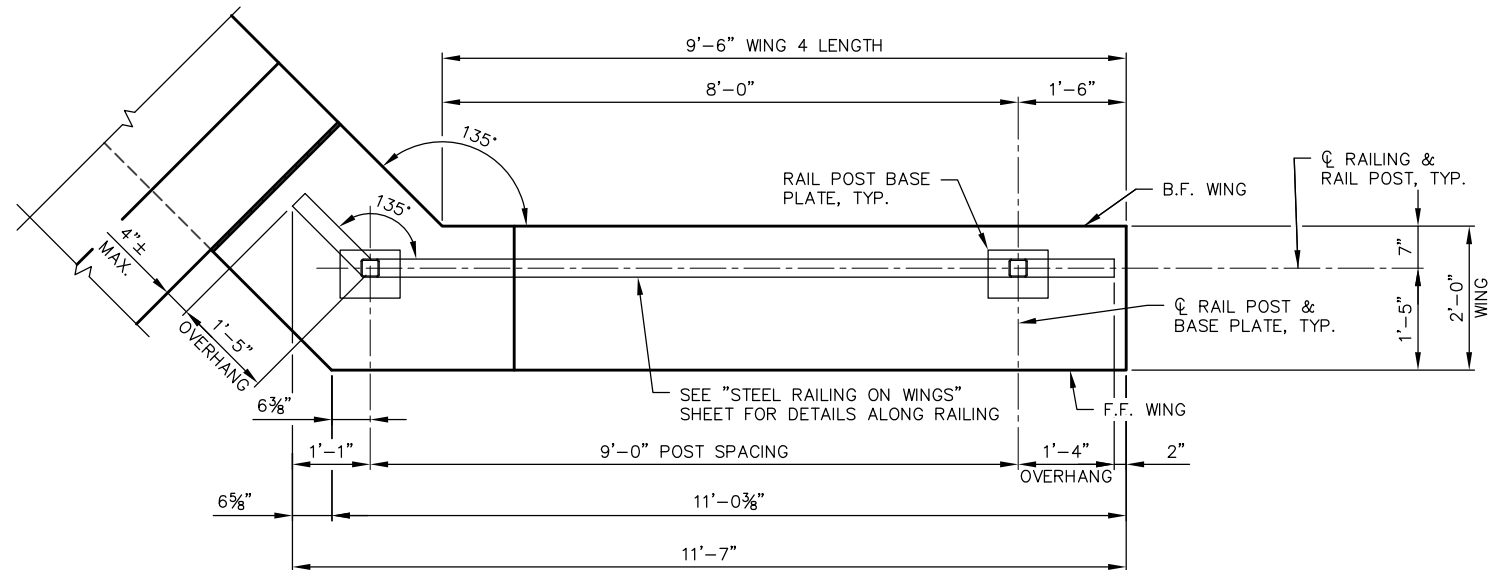
WING 1 LAYOUT



WING 2 LAYOUT



WING 3 LAYOUT



WING 4 LAYOUT

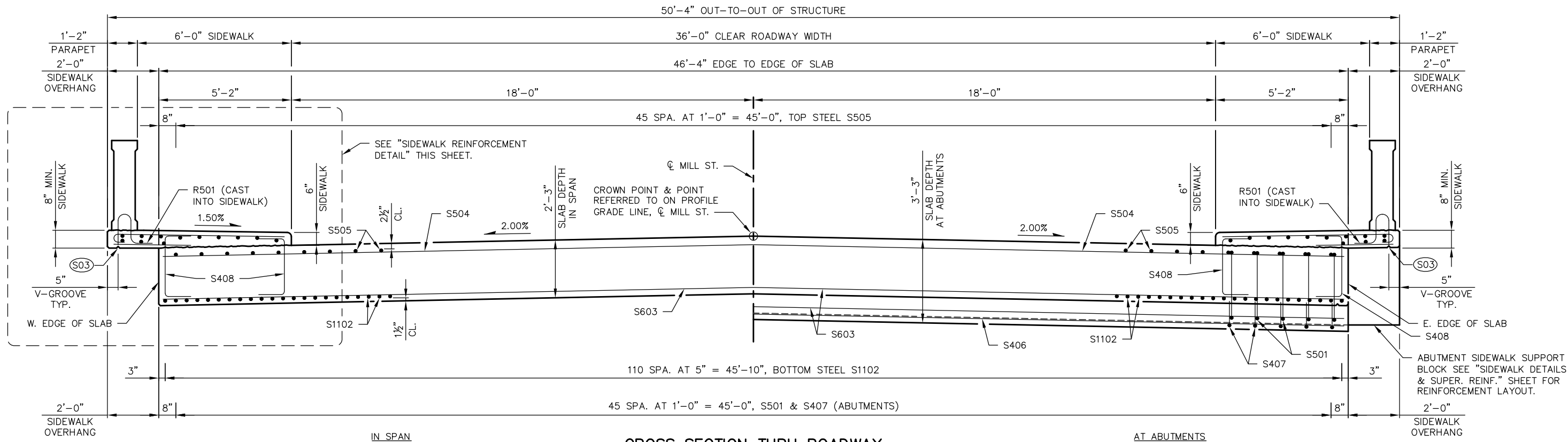
F.F. - FRONT FACE  
B.F. - BACK FACE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-24-46			
DRAWN BY JDO		PLANS CK'D	ACK
STEEL RAILING ON WING PLANS			SHEET 11 OF 18



 INDICATES WING NUMBER

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-24-46			
DRAWN BY		JDO	PLANS CK'D ACK
SUPERSTRUCTURE			SHEET 12 OF 18

**CROSS SECTION THRU ROADWAY**

(LOOKING NORTH)

(CONDUIT NOT SHOWN FOR CLARITY)

**NOTES**

CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

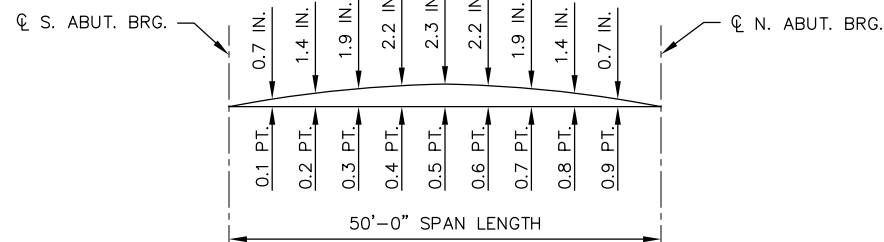
(S03) 3/4" V-GROOVE. EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT BODY. V-GROOVES ARE REQUIRED.

(S04) SEE "VERTICAL FACE PARAPET 'TX'" SHEET FOR DETAILS.

(S05) INSIDE FACE OF SIDEWALK CURB

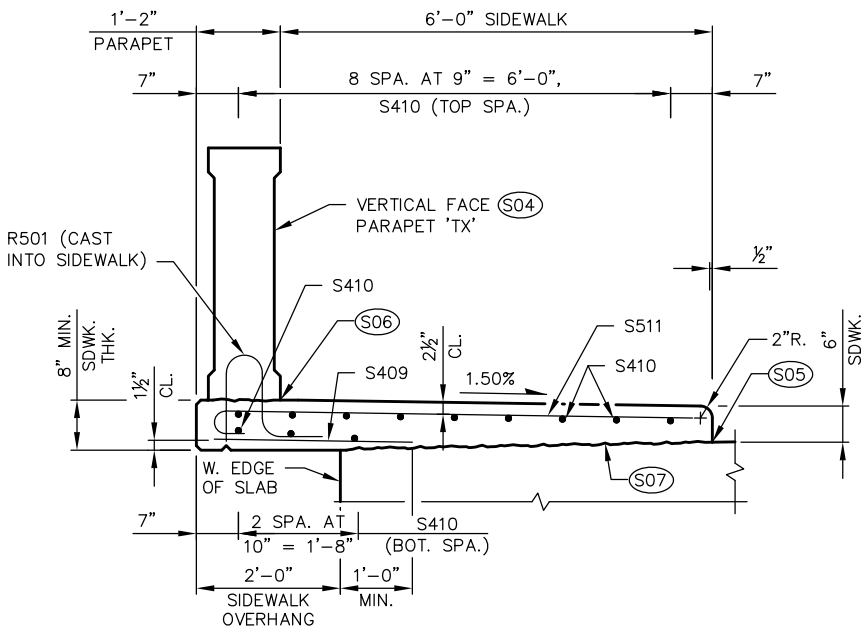
(S06) TOP OF SIDEWALK (AT INSIDE FACE OF PARAPET)

(S07) CONSTRUCTION JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. MATCH BRIDGE SLAB CROSS SLOPE OF 2%.

**SLAB CAMBER DIAGRAM**

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

LESS TOP OF SLAB ELEVATION AT FINAL GRADE  
PLUS SLAB THICKNESS  
PLUS CAMBER  
PLUS FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)  
EQUALS TOP OF SLAB FALSEWORK ELEVATION.

**SIDEWALK REINFORCEMENT DETAIL**

(SLAB REINFORCEMENT NOT SHOWN FOR CLARITY)

(SEE "SIDEWALK DETAILS & SUPER. REINF." SHEET FOR BAR SPACING & ADDITIONAL DETAILS)  
(W. SIDEWALK SHOWN, E. SIDEWALK SIMILAR)

**TOP OF SLAB/SIDEWALK ELEVATIONS**

SPAN PT	W. SDWK. (INSIDE FACE OF PARAPET)	W. SLAB EDGE *	INSIDE FACE OF W. SDWK. CURB	CL MILL ST.	INSIDE FACE OF E. SDWK. CURB	E. SLAB EDGE *	E. SDWK. (INSIDE FACE OF PARAPET)
CL S. ABUT.	798.44	797.75	797.85	798.21	797.85	797.75	798.44
0.1	798.45	797.76	797.86	798.22	797.86	797.76	798.45
0.2	798.46	797.77	797.87	798.23	797.87	797.77	798.46
0.3	798.47	797.78	797.88	798.24	797.88	797.78	798.47
0.4	798.48	797.79	797.89	798.25	797.89	797.79	798.48
0.5	798.48	797.79	797.89	798.25	797.89	797.79	798.48
0.6	798.48	797.79	797.89	798.25	797.89	797.79	798.48
0.7	798.48	797.79	797.89	798.25	797.89	797.79	798.48
0.8	798.48	797.79	797.89	798.25	797.89	797.79	798.48
0.9	798.48	797.79	797.89	798.25	797.89	797.79	798.48
CL N. ABUT.	798.47	797.78	797.88	798.24	797.88	797.78	798.47

\* ELEVATION AT TOP OF SLAB EDGE WITHOUT SIDEWALK AND WITH CONTINUED 2% CROSS SLOPE FROM CROWN POINT.

**SURVEY TOP OF SLAB ELEVATIONS**

	CL S. ABUT. BRG.	5/10 PT.	CL N. ABUT. BRG.
WEST SLAB EDGE			
CL MILL ST.			
EAST SLAB EDGE			

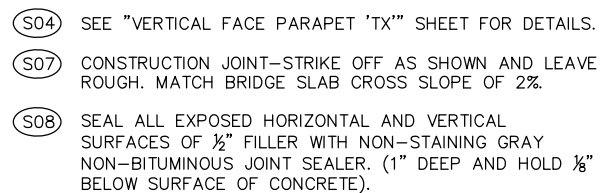
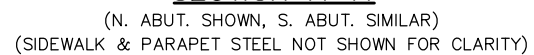
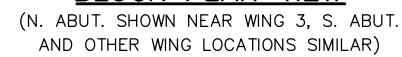
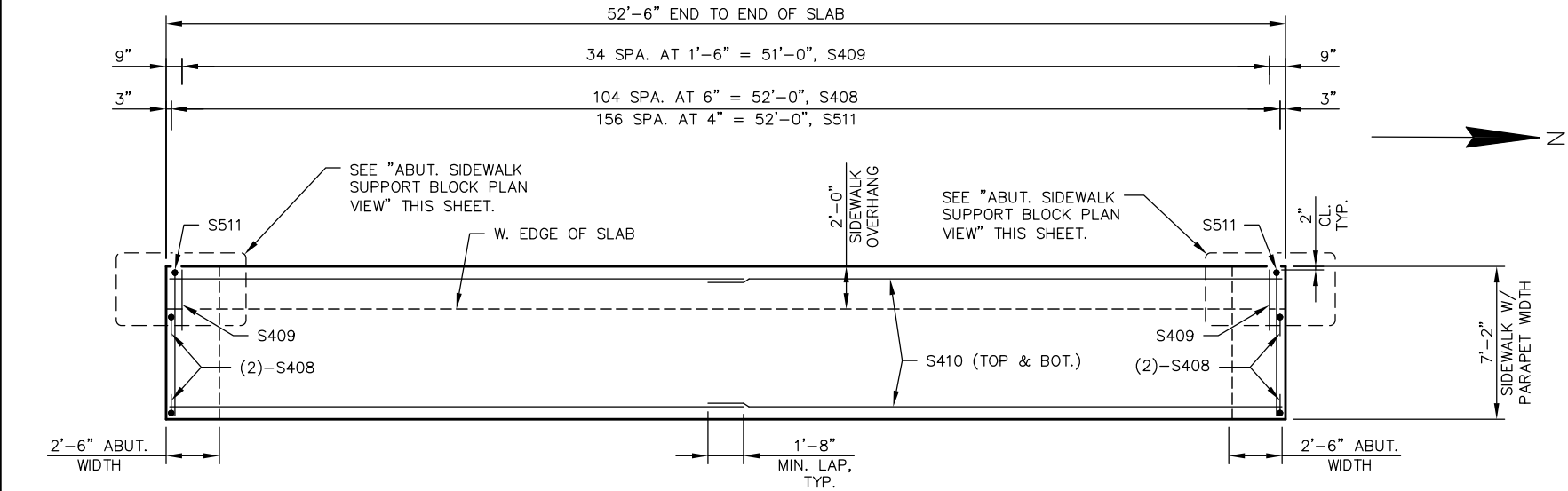
PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE CL OF ABUTMENTS, CL OF PIER AND AT 5/10 POINTS TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND REFERENCE LINE. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-24-46			
DRAWN BY JDO		PLANS CK'D	ACK
SUPERSTRUCTURE DETAILS			SHEET 13 OF 18

MARK	NUMBER		LENGTH	BENT	BAR SERIES	LOCATION
	COATED	UNCOATED				
S501	92		7'-10"	X		SLAB AT ABUTMENTS - TIES LONGIT.
S1102	111		46'-1"			SLAB - BOTTOM LONGIT.
S603	74		46'-0"			SLAB - BOTTOM & ABOVE ABUTMENTS TRANS.
S504	53		46'-0"			SLAB - TOP TRANS.
S505	46		52'-2"			SLAB - TOP LONGIT.
S406	8		23'-10"			SLAB - AT ABUTMENT NOTCH TRANS.
S407	92		3'-3"	X		SLAB - STIRRUP ABOVE ABUTMENT NOTCH VERT.
S408	420		4'-1"	X		SLAB - SIDEWALK - STIRRUP VERT.
S409	70		2'-10"			SIDEWALK BOT. - EDGE TRANS.
S410	48		26'-11"			SIDEWALK TOP & BOT. TRANS.
S511	314		7'-4"	X		SIDEWALK OVERHANG TRANS.
S612	12		9'-6"	X		ABUT. SDWK. SUPPORT BLOCK - TRANS. TRANS.
S513	16		11'-6"	X		ABUT. SDWK. SUPPORT BLOCK - LONGIT. VERT.

ALL BAR BEND DIMENSIONS ARE OUT TO OUT OF BAR.

F.F. — FRONT FACE  
B.F. — BACK FACE





PLOT SCALE:

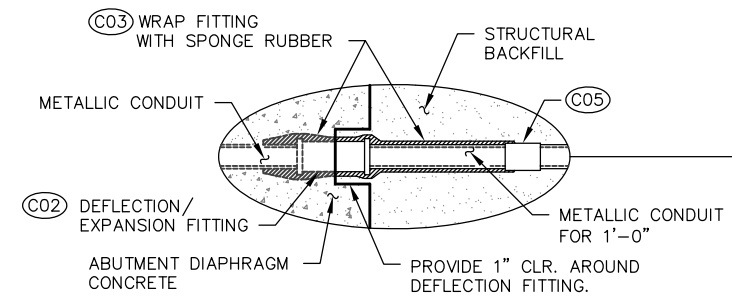
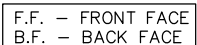


Diagram illustrating the cross-section of a sidewalk and its connection to a concrete slab. The diagram shows the following dimensions and components:

- 1'-2"**: Dimension for the sidewalk width from the parapet to the edge of the sidewalk.
- 6'-0" SIDEWALK**: Total width of the sidewalk.
- PARAPET**: The vertical wall on the left side of the sidewalk.
- 2'-0"**: Dimension for the sidewalk overhang from the parapet to the edge of the sidewalk.
- 5'-2"**: Dimension for the sidewalk width from the edge of the sidewalk to the centerline of the road.
- SIDEWALK OVERHANG**: The portion of the sidewalk that extends beyond the edge of the concrete slab.
- 6" (MIN.) SIDEWALK**: Minimum thickness of the sidewalk.
- 1'-6" MIN.**: Minimum depth of the concrete slab below the sidewalk.
- 1'-3" MAX.**: Maximum depth of the concrete slab below the sidewalk.
- W. EDGE OF SLAB**: The left edge of the concrete slab.
- 2" DIA. CONDUIT**: A 2-inch diameter conduit passing through the concrete slab.
- 2'-0"**: Dimension for the width of the concrete slab.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-24-46			
DRAWN BY		JDO	PLANS CK'D      ACK
CONDUIT DETAILS			SHEET 16 OF 18

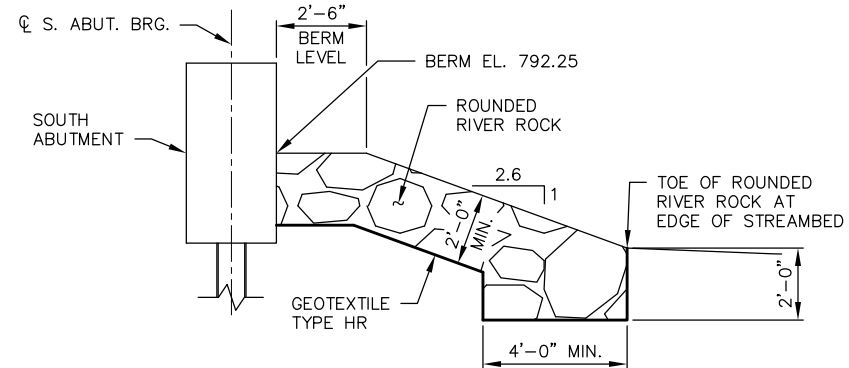
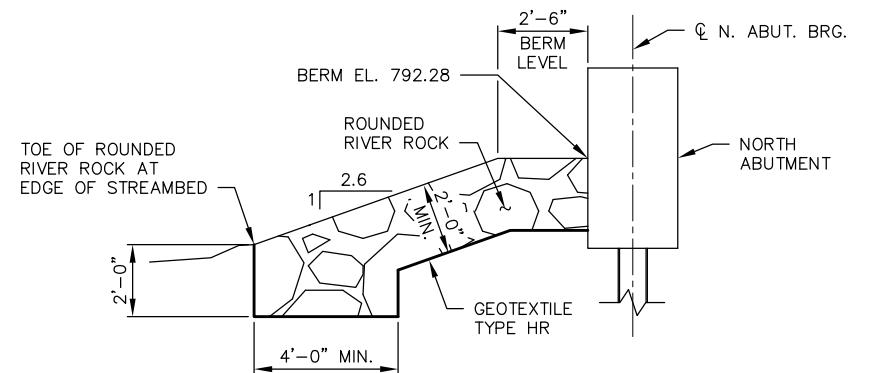
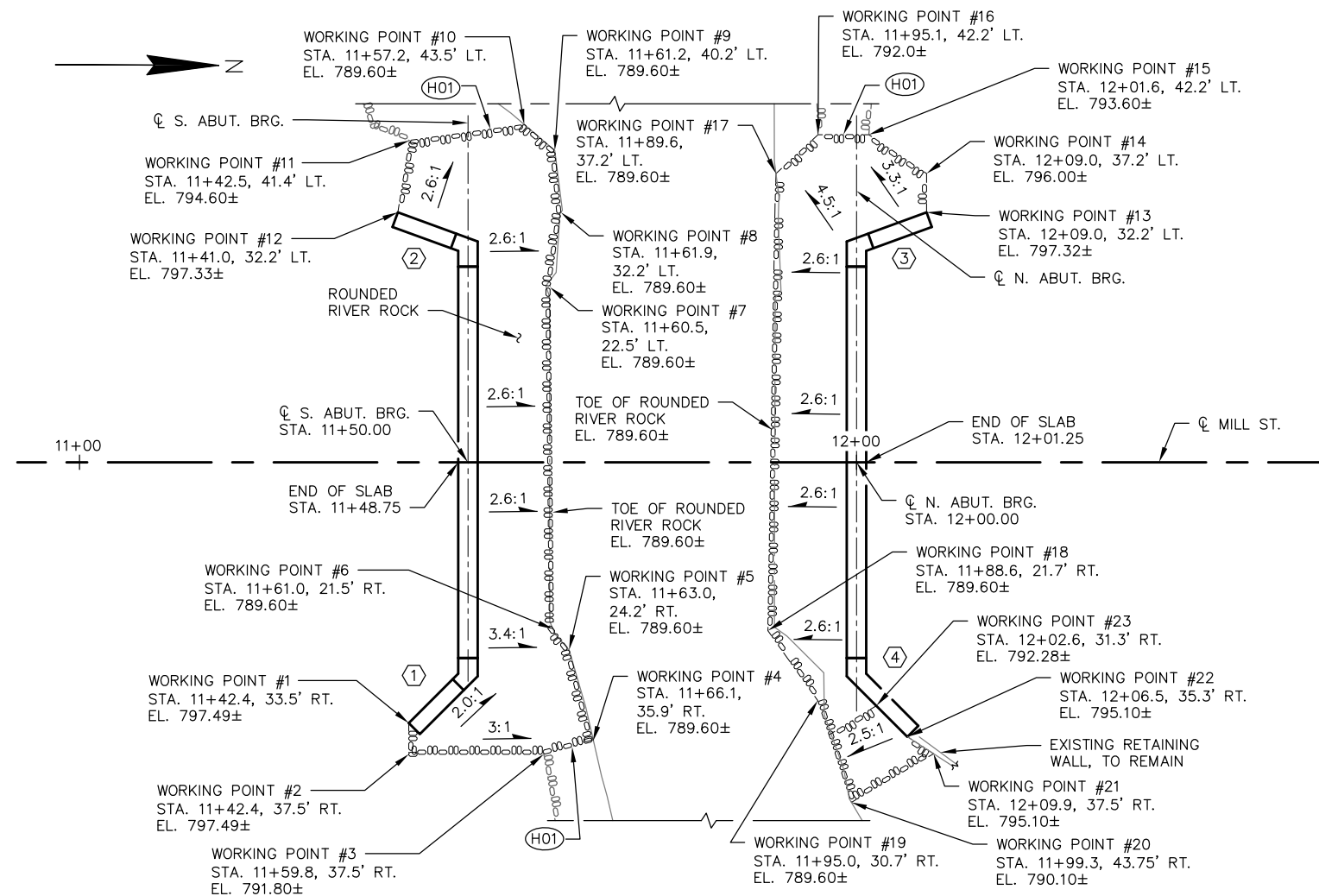
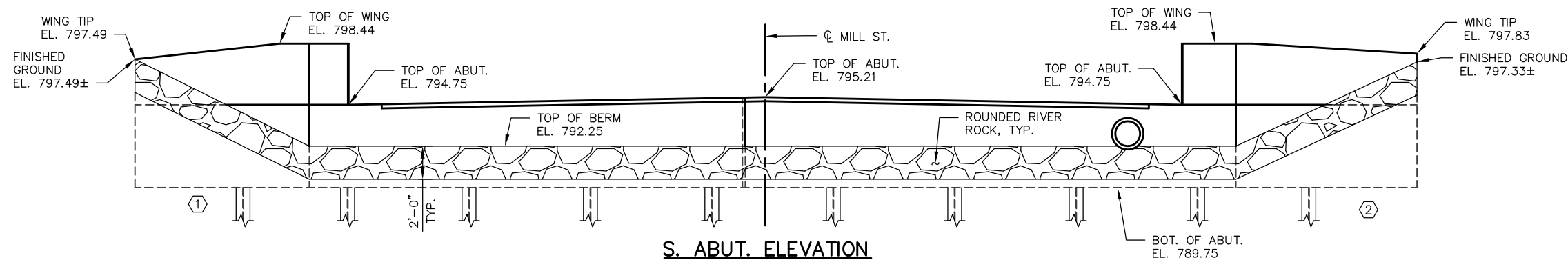
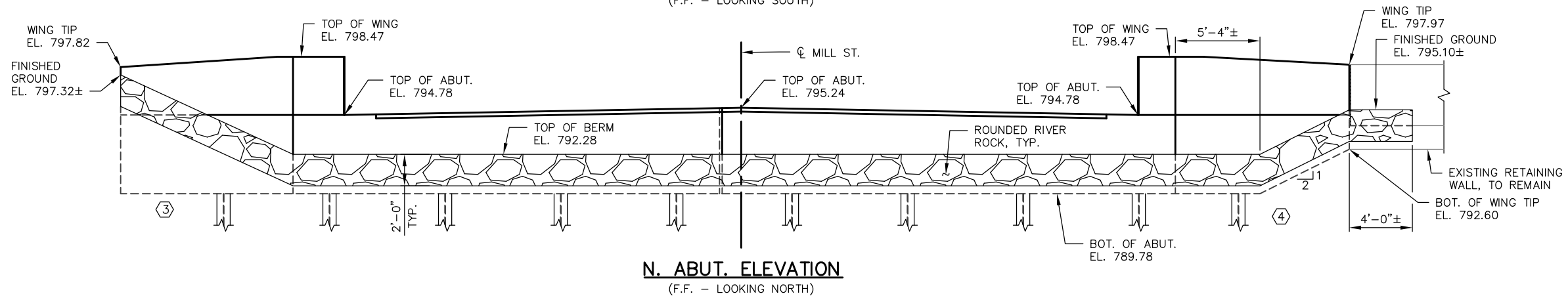


**NOTES**

PLACE GEOTEXTILE TYPE HR BELOW ROUNDED RIVER ROCK.

(H01) TIE NEW ROUNDED RIVER ROCK INTO EXISTING ROUNDED RIVER ROCK NEAR WINGS 1, 2, &amp; 3.

⬡ INDICATES WING NUMBER

**TYPICAL SECTION THRU  
SOUTH ABUTMENT**  
(LOOKING WEST)**TYPICAL SECTION THRU  
NORTH ABUTMENT**  
(LOOKING WEST)**ROUNDED RIVER ROCK PLAN****S. ABUT. ELEVATION**  
(F.F. - LOOKING SOUTH)**N. ABUT. ELEVATION**  
(F.F. - LOOKING NORTH)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-24-46			
DRAWN BY JDO		PLANS CK'D	ACK
ROUNDED RIVER ROCK LAYOUT			SHEET 17 OF 18



### ALTERNATE CONSTRUCTION JOINT AT ABUTMENT



\* BENT ZINC OR PLASTIC STRIP.

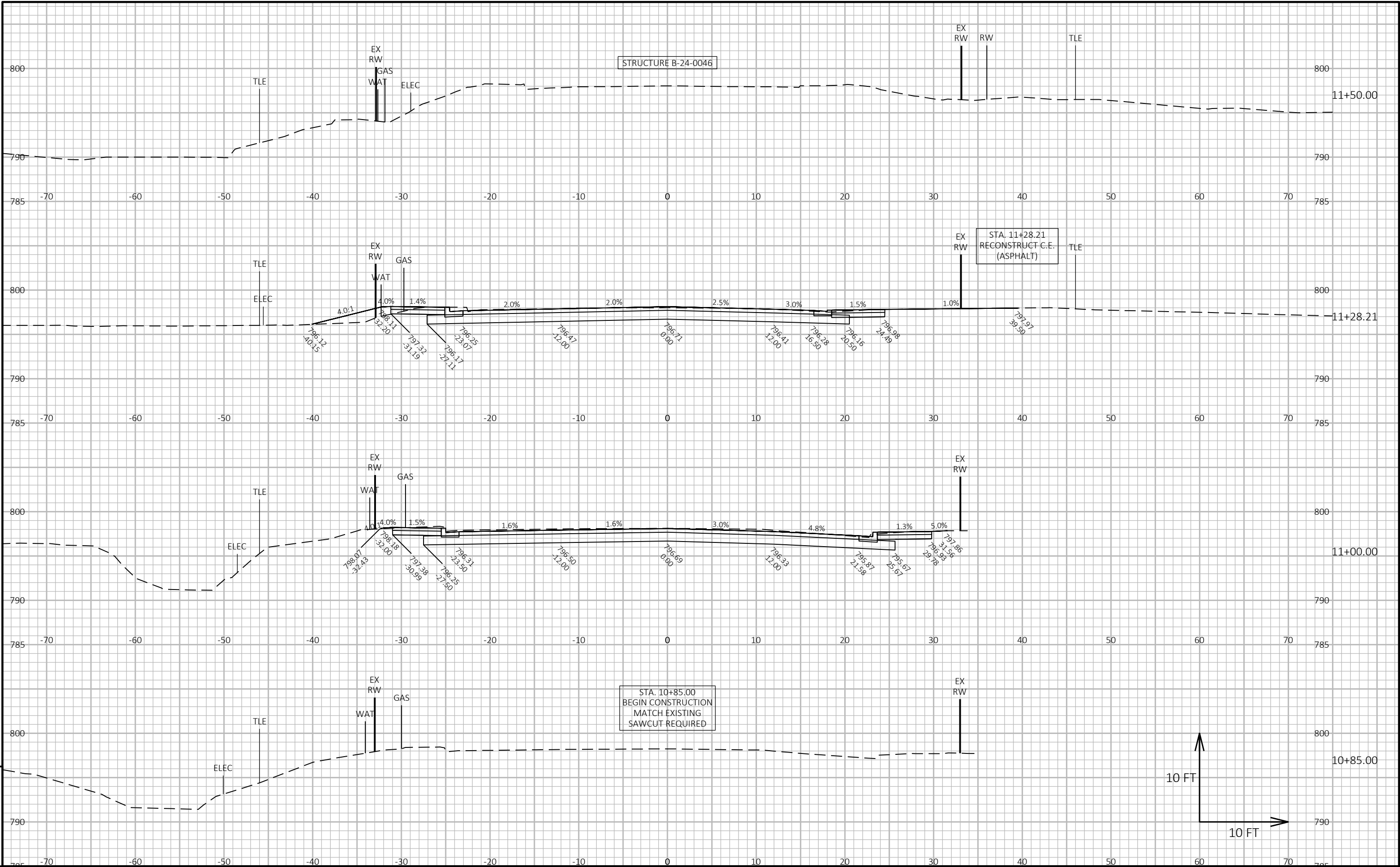
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-24-46			
DRAWN BY		JDO	PLANS CK'D ACK
ALTERNATE CONSTRUCTION JOINT			SHEET 18 OF 18

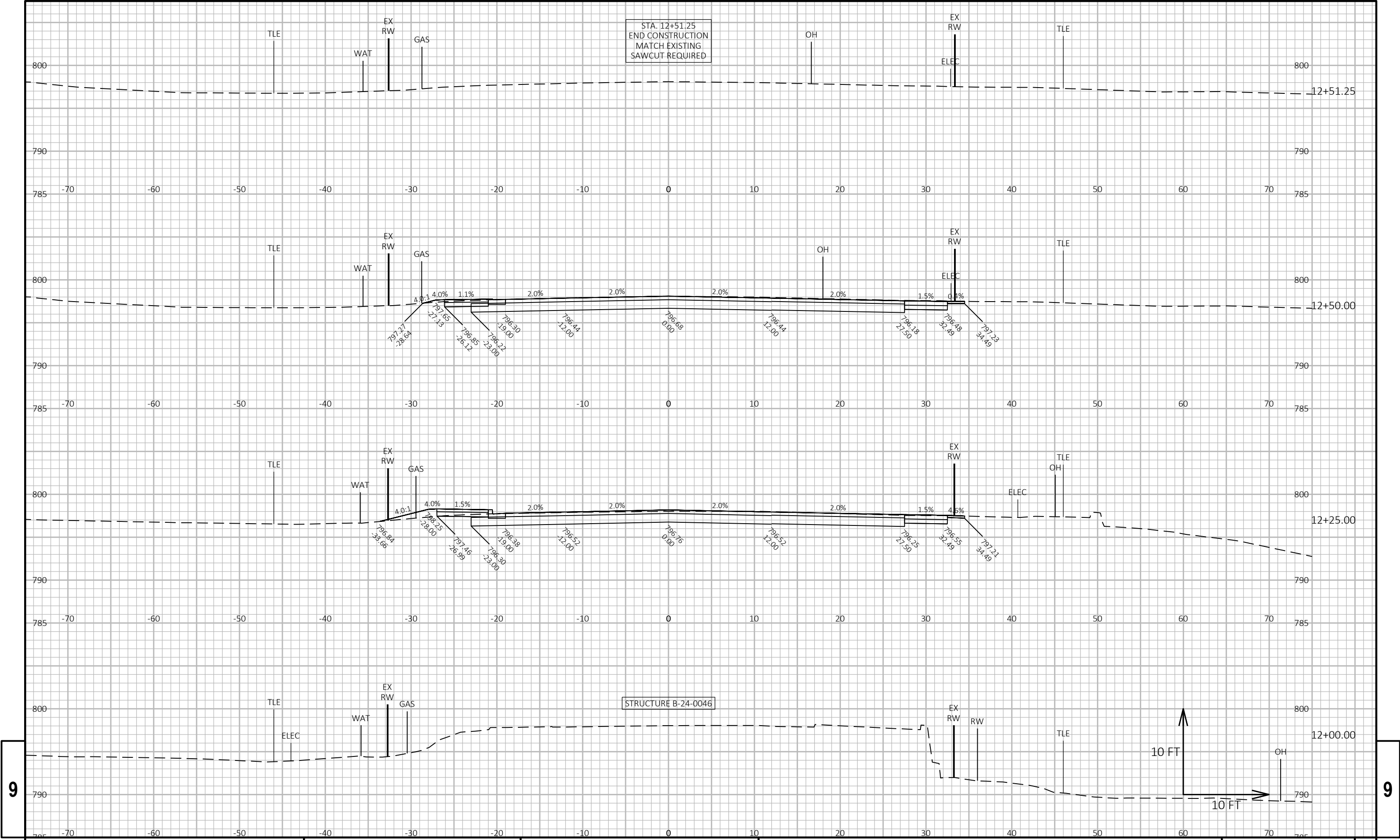


STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL NOTE 3	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	MASS ORDINATE NOTE 4
105.00	0.00	5.42	4.00	0.35	0	0	0	0	0	0
1100.00	15.00	.04	4.00	0.0	4	2	0	4	0	22
112.21	2.21	3.5	3.00	.2	5	44	4	133	5	5
114.5	20.54	5.4	30.00	.2	51	2	6	14	13	76
STRUCTURE B24004										
DIVISION 1 TOTALS					14.00	96	10			

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL NOTE 3	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	MASS ORDINATE NOTE 4
STRUCTURE B-24-0046										
12+01.25	0.00	49.43	32.00	6.82	0	0	0	0	0	0
12+50.00	48.75	80.88	54.00	0.44	118	..	7	11	9	31
1251.25	1.25	1.4	54.00	0.24	4	3	0	122	9	32
		DIVISION 2 TOTALS			122	1	7			
		PROJECT TOTAL			30	1	1			

NOTES	
1 CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 SALVAGED/UNUSABLE PAVEMENT MATERIAL	TIS DOES NOT SO UP IN CROSS SECTIONS
3 FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 MASS ORDINATE	(CUT) (FILLFILL FACTOR) (SALVAGED/UNUSABLE PAVEMENT MATERIAL)
	PLUS UANTITIY INDICATES AN EXCESS OF MATERIAL ITIN TE DIVISION. MINUS UANTITY INDICATES A SORTAGE OF MATERIAL ITIN TE DIVISION.

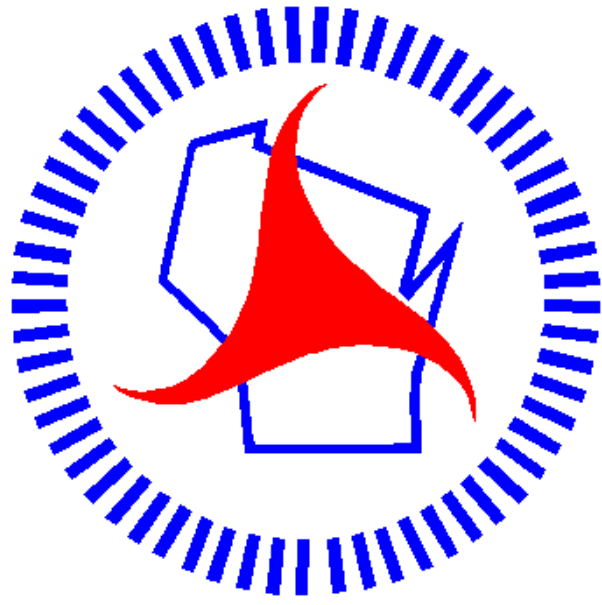




9

9

PROJECT NO: 6626-01-70	HWY: MILL STREET	COUNTY: GREEN LAKE	CROSS SECTIONS: MILL STREET	SHEET E
------------------------	------------------	--------------------	-----------------------------	---------



## ***Wisconsin Department of Transportation***

Dedicated people creating transportation solutions  
through innovation and exceptional service.

<http://www.dot.wisconsin.gov>