MAD

PROJECT ID: 1007-09-82

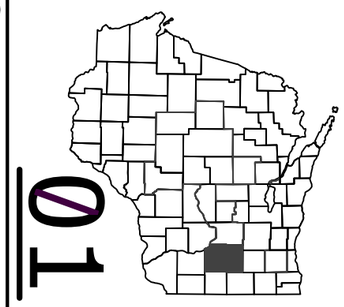
COUNTY: DANE

DECEMBER 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 = 60



N

DESIGN DESIGNATION

A.A.D.T.	2025	=	33,600
A.A.D.T.		=	
D.H.V.		=	
D.D.		=	
T.		=	12.6
DESIGN SPEED		=	50
ESALS		=	

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 (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

JANESVILLE - PORTAGE

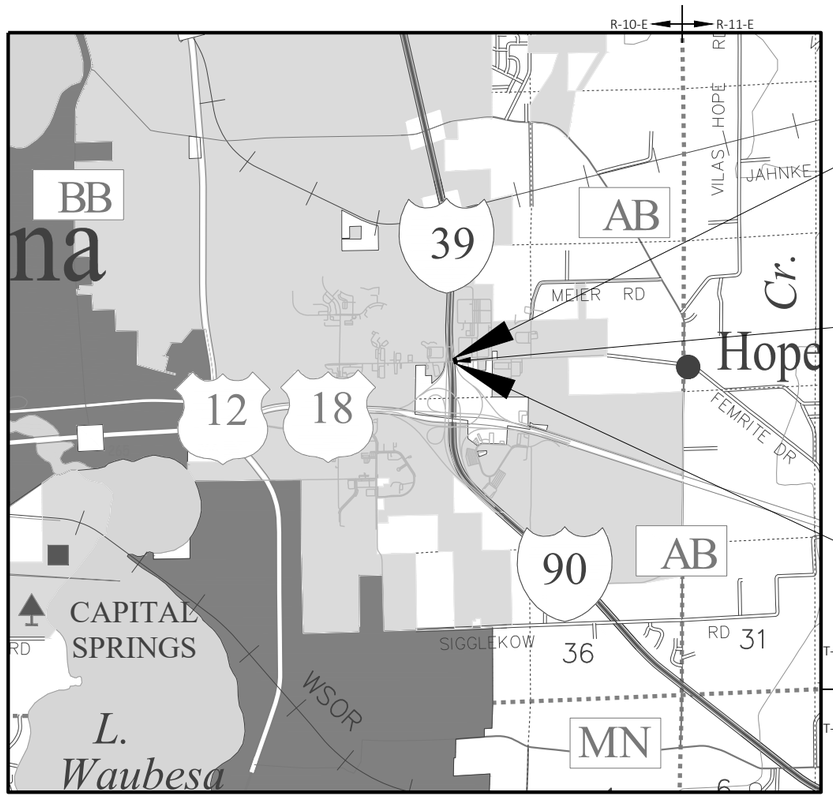
BR OVER FEMRITE DR B-13-463

IH 39

DANE COUNTY

STATE PROJECT NUMBER
1007-09-82

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1007-09-82		



END PROJECT
STA 1582+81 'BCN'
Y=474579.0758'
X=849920.0675'

STRUCTURE B-13-0463
STA 1581+77 'BCN' - STA 1583+26 'BCN'

BEGIN PROJECT
STA 1582+03 'BCN'
Y= 474502.9276'
X=849936.9617'

LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = .021 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), DANE 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).

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	LUCAS KLUEVER
Project Manager	LOGAN STEVENS, P.E.
Regional Examiner	SW REGION
Regional Supervisor	STEVE PORTER, P.E.

APPROVED FOR THE DEPARTMENT

DATE: 10/21/2026 Logan Stevens (Signature)

E

UTILITIES CONTACTS

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ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL
TRAFFIC CONTROL

GENERAL NOTES

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

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

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

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

RIGHT OF WAY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE.

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

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

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

CURVE DATA IS BASED ON THE RADIUS DEFINITION.

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.

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

BEARINGS SHOWN ON THE PLAN ARE TRUE BEARINGS.

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

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

2

STANDARD ABBREVIATIONS

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

2

N

IH 39 SB

IH 39 NB

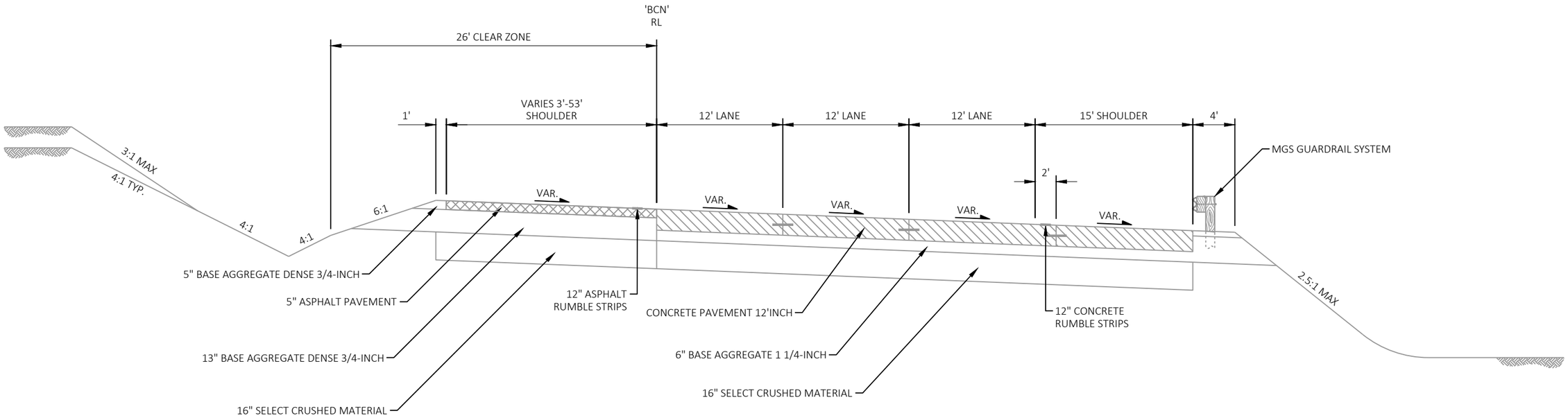
FEMRITE DR

BEGIN PROJECT
STA 1582+03 'BCN'

END PROJECT
STA 1582+81 'BCN'

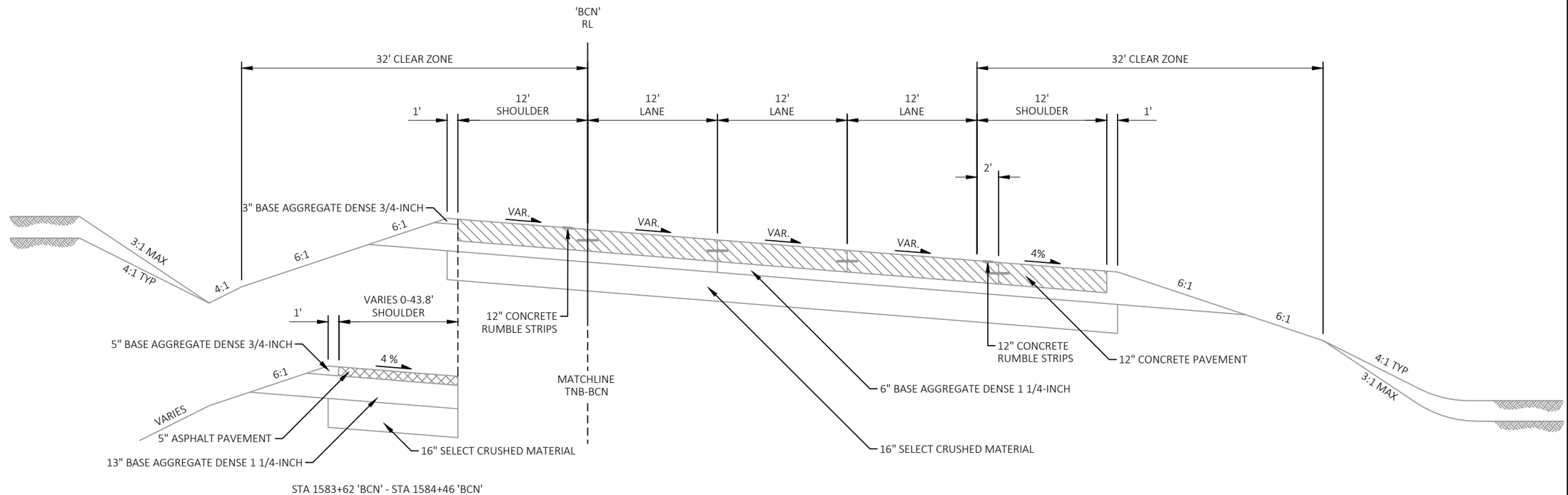
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FILE NAME : N:\PDS\C3D\10070902\SHEETS\020201-PO.DWG
LAYOUT NAME - 01
PLOT DATE : 7/7/2026 1:50 PM
PLOT BY : KLUEVER, LUCAS W
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



EXISTING TYPICAL SECTION

STA 1578+90 'BCN' - STA 1581+76 'BCN'



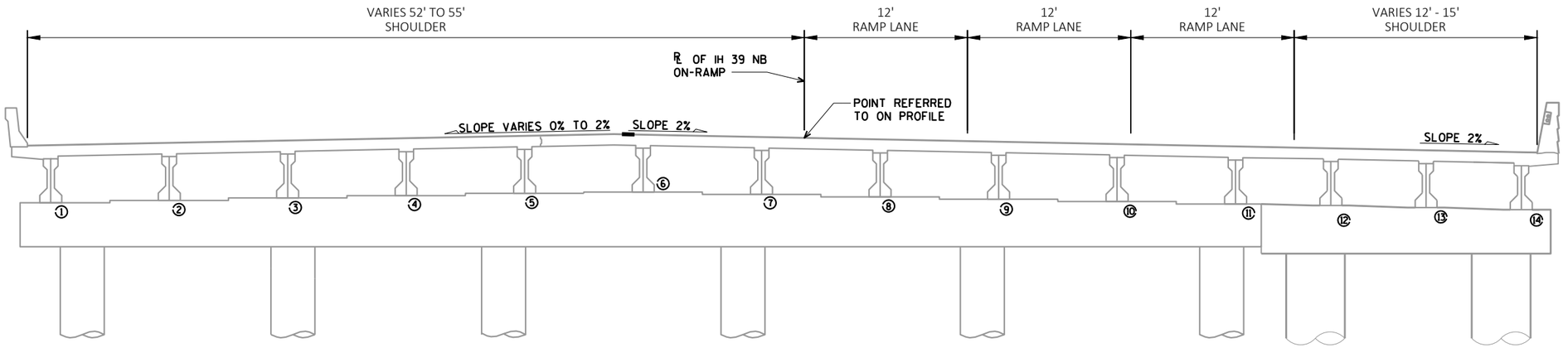
STA 1583+62 'BCN' - STA 1584+46 'BCN'

EXISTING TYPICAL SECTION

STA 1583+27 'BCN' - STA 1593+66 'BCN'

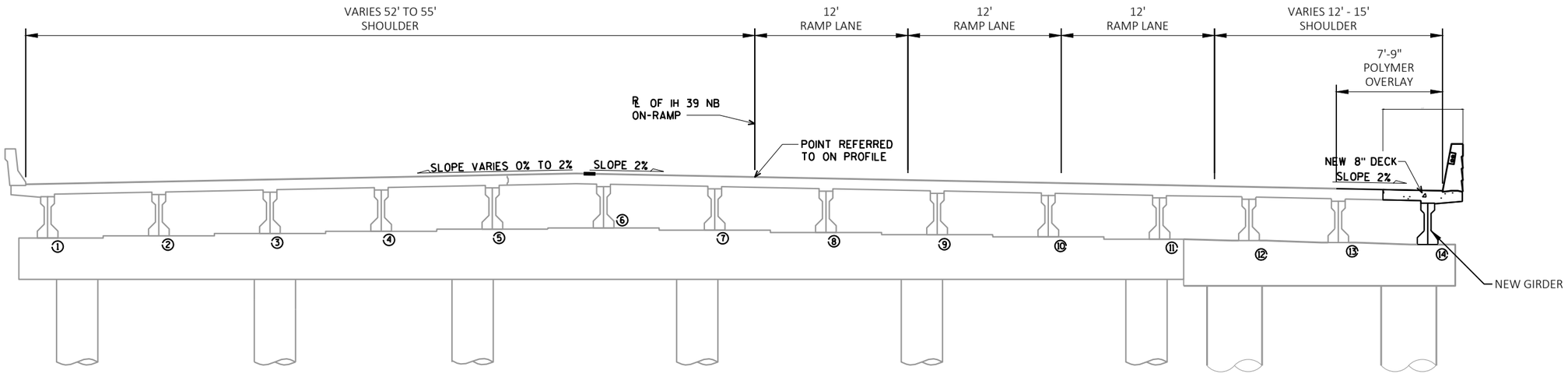
PROJECT NO: 1007-09-82	HWY: IH 39	COUNTY: DANE	TYPICAL SECTIONS	SHEET 5	E

2



EXISTING TYPICAL SECTION

STA 1581+76 'BCN' - STA 1583+27 'BCN'

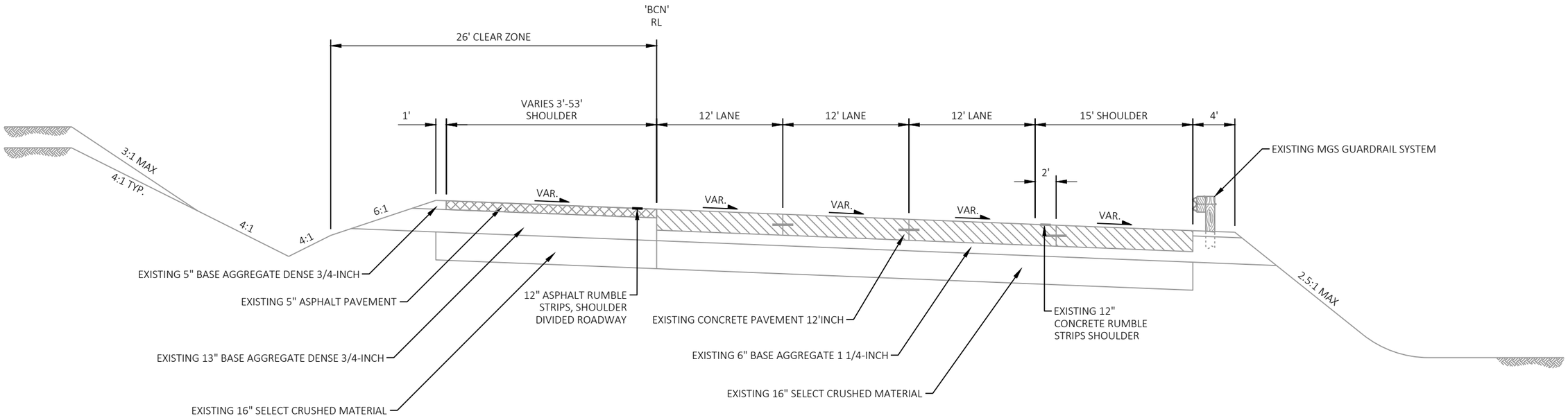


FINISHED TYPICAL SECTION

STA 1581+76 'BCN' - STA 1583+27 'BCN'

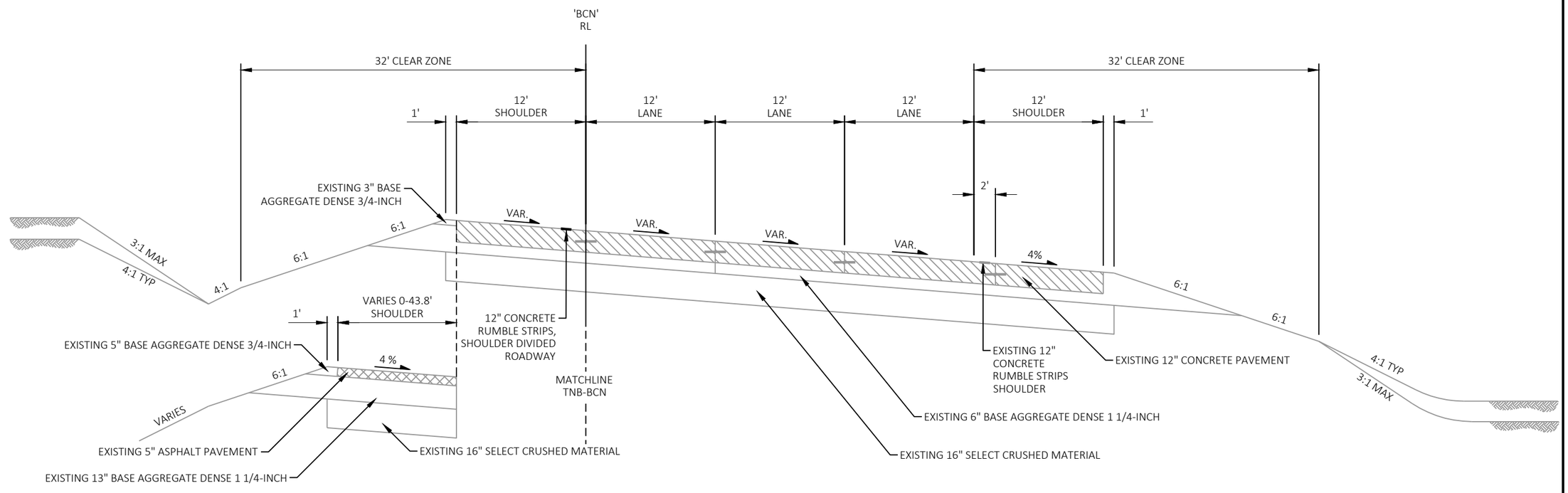
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2



FINISHED TYPICAL SECTION

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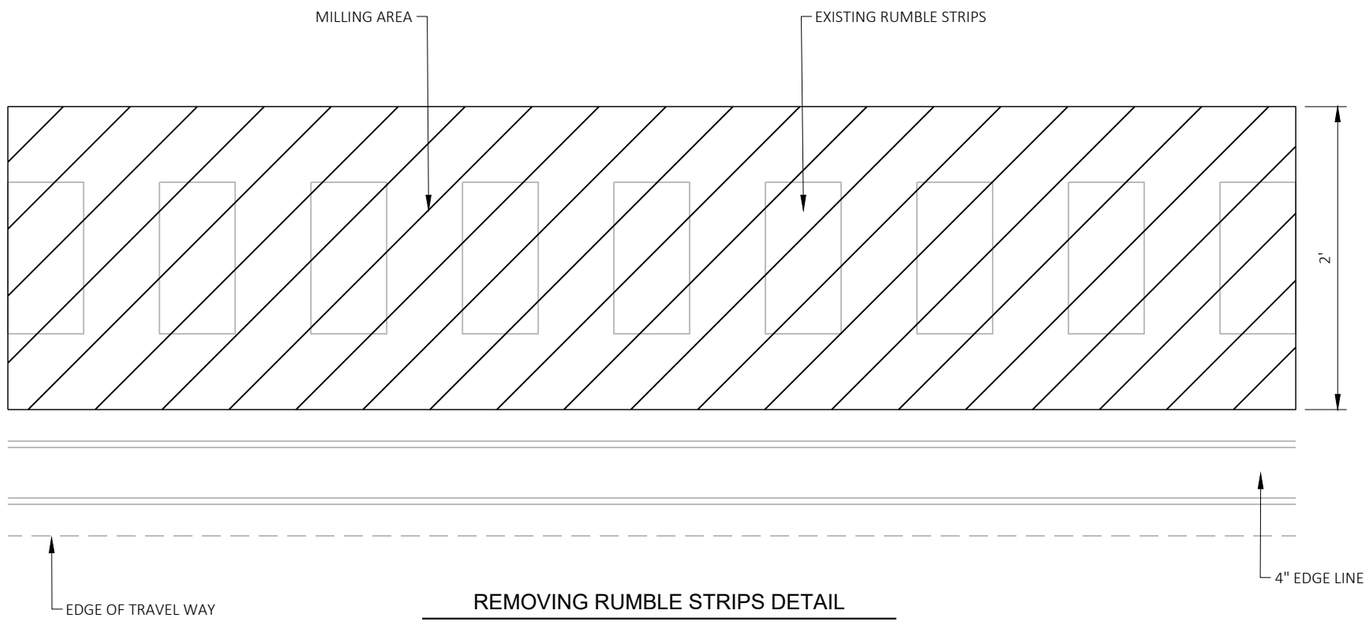
STA 1583+62 'BCN' - STA 1584+46 'BCN'

FINISHED TYPICAL SECTION

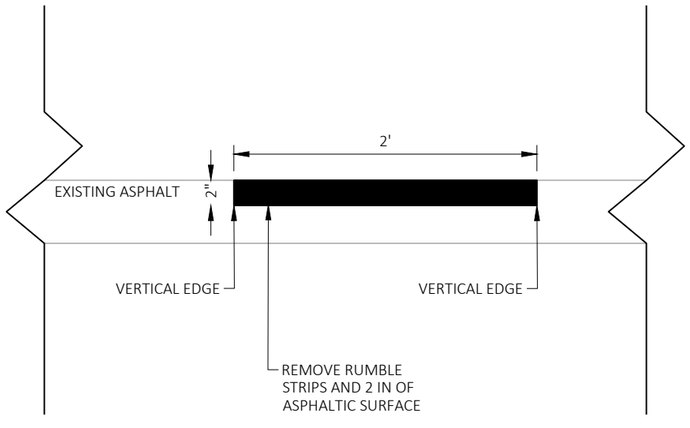
STA 1583+27 'BCN' - STA 1593+66 'BCN'

PROJECT NO: 1007-09-82	HWY: IH 39	COUNTY: DANE	TYPICAL SECTIONS	SHEET 7	E

2



REMOVING RUMBLE STRIPS DETAIL

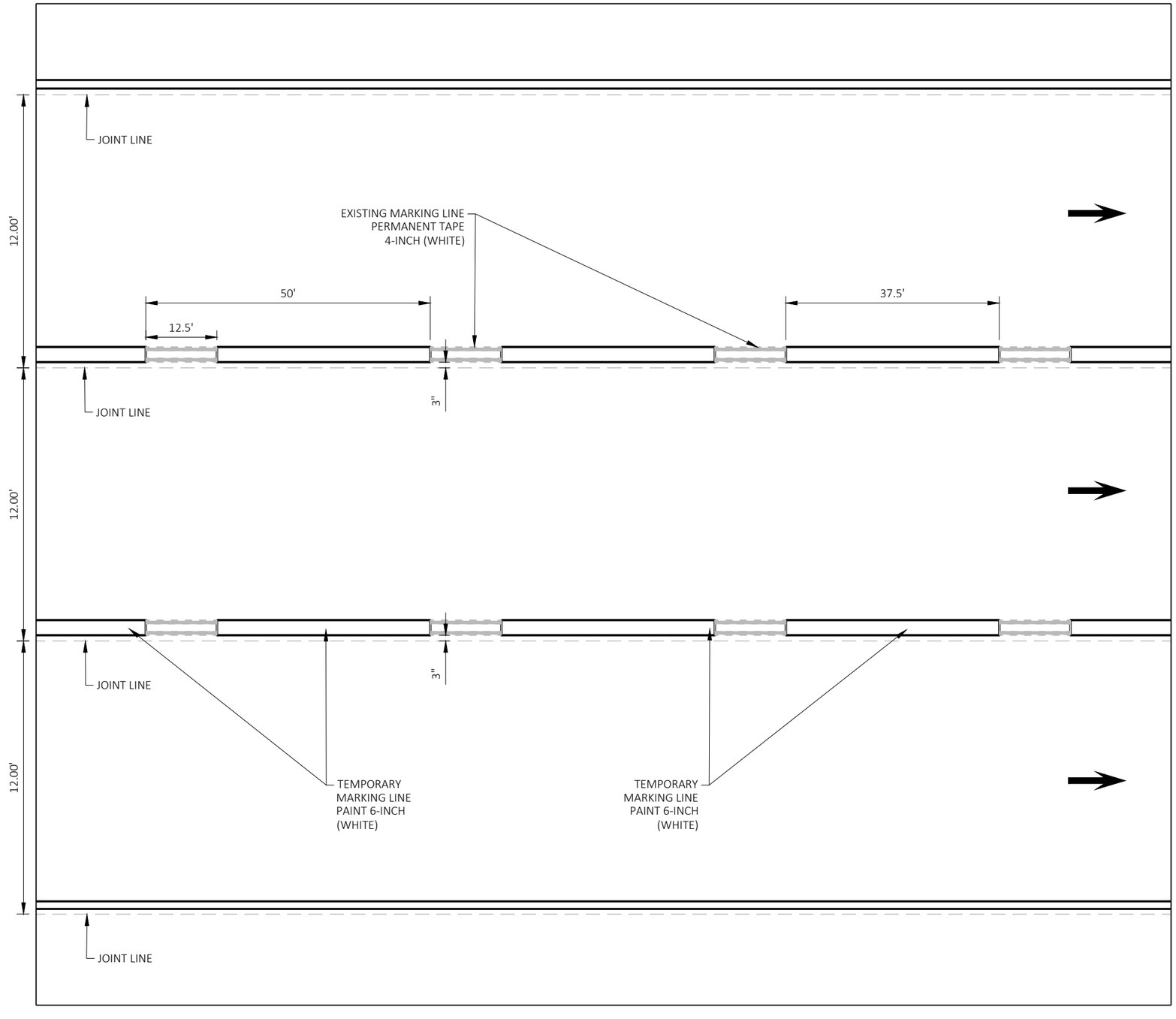


REMOVING RUMBLE STRIPS DETAIL

GENERAL NOTES:

APPLY TACK COAT ON ALL VERTICAL EDGES
APPLY TACK COAT ON HORIZONTAL SURFACE
0.07 GAL/SY TACK RATE
PAVE 2 INCHES OF 4HT-H ASPHALT
DO NOT MILL ON OR OVER EDGE OF TRAVEL WAY JOINT

2



PAINTING BETWEEN LANE LINE SKIPS DETAIL

PROJECT NO: 1007-09-82	HWY: IH 39	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET 9	E

2

2

N

36+00
37+00
38+00
39+00
40+00
41+00
42+00
43+00

1584+00
1583+00
1582+00
1581+00

IH-39 SB
IH-39 NB
IH-39 NB RAMP
FEMRITE DR

R

LEGEND

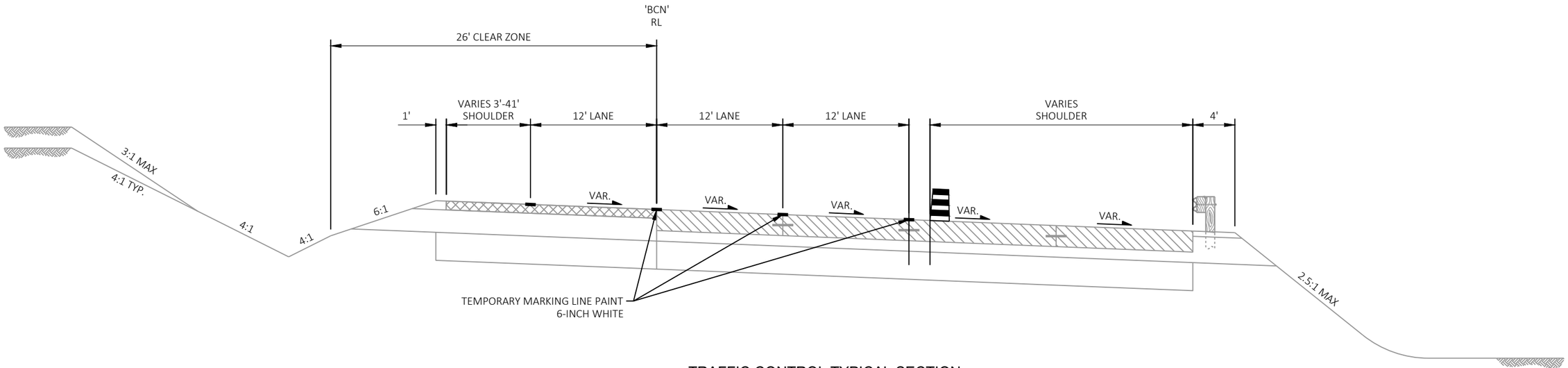
R ROCK BAGS

PROJECT NO: 1007-09-82	HWY: IH 39	COUNTY: DANE	EROSION CONTROL	SHEET 10	E

FILE NAME : N:\PDS\C3D\10070902\SHEETS\022001-EC.DWG
LAYOUT NAME - 01

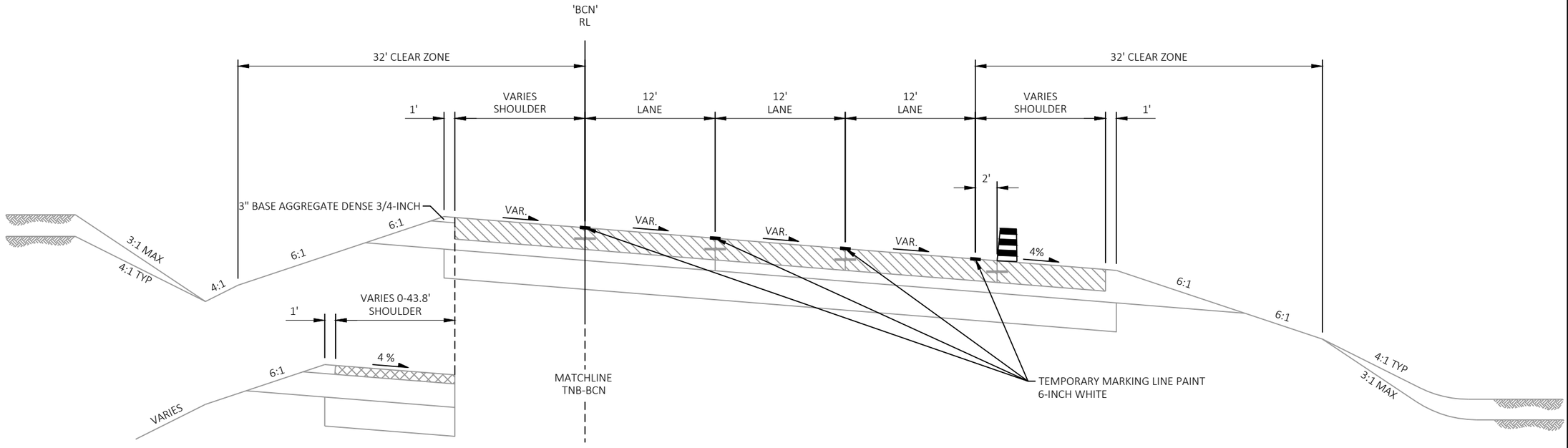
PLOT DATE : 6/4/2026 9:14 AM PLOT BY : KLUEVER, LUCAS W PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42



TRAFFIC CONTROL TYPICAL SECTION

STA 1578+90 'BCN' - STA 1581+76 'BCN'

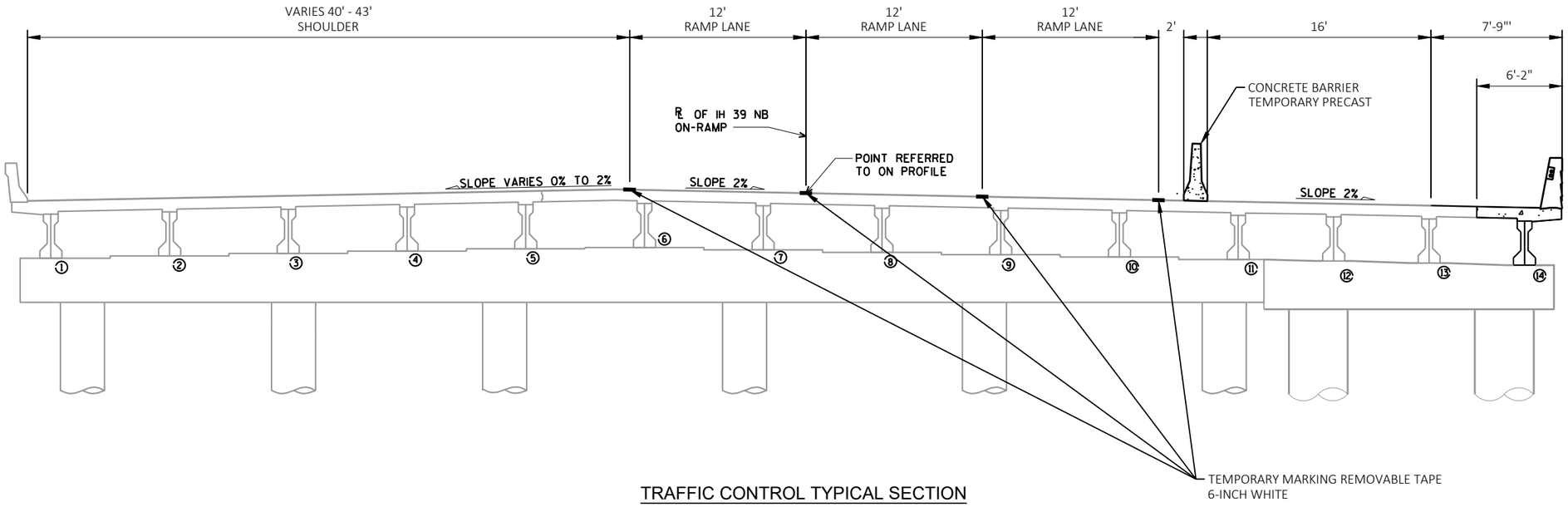


STA 1583+62 'BCN' - STA 1584+46 'BCN'

TRAFFIC CONTROL TYPICAL SECTION

STA 1583+27 'BCN' - STA 1593+66 'BCN'

PROJECT NO: 1007-09-82	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL TYPICAL SECTIONS	SHEET 11	E



TRAFFIC CONTROL TYPICAL SECTION

STA 1581+76 'BCN' - STA 1583+27 'BCN'

TRAFFIC CONTROL LEGEND

I/‡	TYPE II / III BARRICADE
I/‡	TYPE II / III BARRICADE WTH ATTACHED SIGN
●	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	CONNECTED FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
Ⓐ	TYPE A WARNING LIGHT (FLASHING)
Ⓑ	TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
Ⓒ	TYPE C WARNING LIGHT (STEADY BURN)
	CONCRETE BARRIER TEMPORARY PRECAST
	WORK AREA
	DIRECTION OF TRAFFIC
MB	PORTABLE CHANGEABLE MESSAGE BOARD
CC	CRASH CUSHION TEMPORARY

2



2

PROJECT NO: 1007-09-82	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL	SHEET 13	E

2

2

W24-1BL

STAY IN LANE
R4-9
24"X30"

TEMPORARY MARKING LINE PAINT 6-INCH (WHITE)
(PAINT BETWEEN SKIPS)

STA 1573+71 - STA 1581+50
MILL AND PAVE RUMBLE STRIPS
(SEE CONSTRUCTION DETAIL)

STA 1573+71 - 1577+00
MARKING REMOVAL LINE 6-INCH

TEMPORARY MARKING LINE PAINT 6-INCH (YELLOW)

STA 1573+71, 0.00'

YOUR SPEED 45
W13-20

330' TAPER

1568+00
1569+00
1570+00
1571+00
1572+00
1573+00
1574+00
1575+00

12'
12'
12'

IH-39 NB RAMP

WB TO NB RAMP

N

255'

W01-6
48"X24"

STAY IN LANE
R4-9
24"X30"

STA 1571+16.26, 36.00' RT

YOUR SPEED 45
W13-20

TEMPORARY MARKING LINE PAINT 6-INCH (WHITE)

W24-1BL

STA 1577+01, -12.00' LT

TEMPORARY MARKING LINE PAINT 6-INCH (YELLOW)

TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (YELLOW)

STA. 1581+76'BCN' - STA 1583+27'BCN'
TEMPORARY MARKING LINE REMOVABLE TAPE
6-INCH (WHITE)

STA 1581+96, 0.00'

IH-39 NB

N

495' BUFFER SPACE

1576+00
1577+00
1578+00
1579+00
1580+00
1581+00
1582+00
1583+00

IH-39 NB RAMP

STA 1583+07, 0.00'

FILLING CONCRETE

12'
12'
12'

CC

TEMPORARY MARKING LINE PAINT 6-INCH (WHITE)

STA 1580+96, 27.00' RT

18'

WORK ZONE

SEE S.D.D. "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES" FOR FEMRITE DRIVE TRAFFIC CONTROL

PROJECT NO: 1007-09-82	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL	SHEET 14	E

FILE NAME : N:\PDS\C3D\10070902\SHEETS\025101-TC.DWG
LAYOUT NAME - 02

PLOT DATE : 10/19/2026 9:01 AM PLOT BY : KLUEVER, LUCAS W PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

2

2

TEMPORARY MARKING LINE
REMOVABLE TAPE 6-INCH (YELLOW)

STA. 1581+76'BCN' - STA 1583+27'BCN'
TEMPORARY MARKING LINE
REMOVABLE TAPE
6-INCH (WHITE)

IH-39 NB

STA 1581+96, 0.00'

STA 1583+07, 0.00'

STA 1583+07 - 1586+37
FILLING CONCRETE SHOULDER RUMBLE STRIPS

TEMPORARY MARKING LINE PAINT 6-INCH (YELLOW)

STA 1586+37, 0.00'

330' TAPER

1581+00 1582+00 1583+00 1584+00 1585+00 1586+00 1587+00 1588+00

12' 12' 12' 18'

CC

IH-39 NB RAMP

END
ROAD WORK
G20-2A
48"X24"

WORK ZONE

TEMPORARY MARKING LINE
PAINT 6-INCH (WHITE)

SEE S.D.D. "BARRICADES AND
SIGNS FOR SIDEROAD
CLOSURES" FOR FEMRITE
DRIVE TRAFFIC CONTROL

N

ROAD
WORK
1/2 MILE
W20-1G

W13-2
24"X30"
EXIT
45
MPH
50
MPH

COVERING SIGNS
TYPE 2

WB TO NB RAMP

USH 12/18 WB

PROJECT NO: 1007-09-82	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL	SHEET 15	E

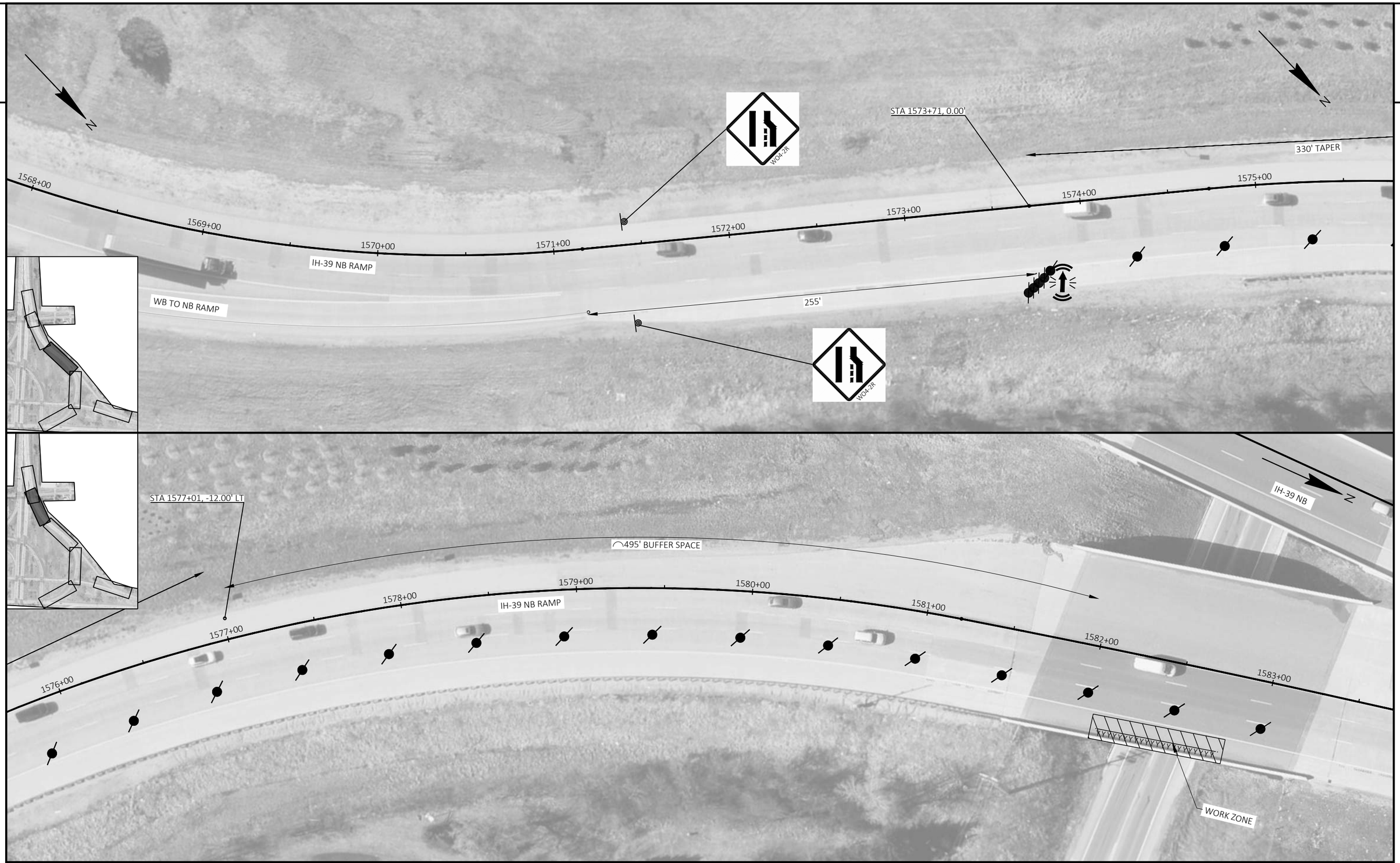
FILE NAME : N:\PDS\C3D\10070902\SHEETS\025101-TC.DWG
LAYOUT NAME - 03

PLOT DATE : 10/19/2026 9:01 AM PLOT BY : KLUEVER, LUCAS W PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1007-09-82	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - POLYMER OVERLAY	SHEET 16	E



PROJECT NO: 1007-09-82	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - POLYMER OVERLAY	SHEET 17	E

FILE NAME : N:\PDS\C3D\10070902\SHEETS\025102-TC.DWG
LAYOUT NAME - 02

PLOT DATE : 7/6/2026 1:20 PM PLOT BY : KLUEVER, LUCAS W PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

IH-39 NB

N

STA 1586+37, 0.00'

1581+00 1582+00 1583+00 1584+00 1585+00 1586+00 1587+00 1588+00

IH-39 NB RAMP

WORK ZONE

END ROAD WORK
G20-2A
48"X24"

RIGHT LANE CLOSED 1500 FT
W20-5B

N

ROAD WORK 1/2 MILE
W20-1G

WB TO NB RAMP

USH 12/18 WB

PROJECT NO: 1007-09-82	HWY: IH 39	COUNTY: DANE	TRAFFIC CONTROL - POLYMER OVERLAY	SHEET 18	E

FILE NAME : N:\PDS\C3D\10070902\SHEETS\025102-TC.DWG
LAYOUT NAME - 03

PLOT DATE : 7/6/2026 1:20 PM PLOT BY : KLUEVER, LUCAS W PLOT NAME : PLOT SCALE : 1 IN:50 FT

Estimate Of Quantities

1007-09-82

Line	Item	Item Description	Unit	Total	Qty
0002	203.0220	Removing Structure (structure) 01. B-13-463	EACH	1.000	1.000
0004	204.0120	Removing Asphaltic Surface Milling	SY	171.000	171.000
0006	213.0100	Finishing Roadway (project) 01. 1007-09-82	EACH	1.000	1.000
0008	416.9112.S	Filling Concrete Shoulder Rumble Strips 12-Inch	LF	260.000	260.000
0010	455.0605	Tack Coat	GAL	9.000	9.000
0012	465.0105	Asphaltic Surface	TON	24.000	24.000
0014	465.0510	Asphaltic Rumble Strips, Shoulder Divided Roadway	LF	767.000	767.000
0016	501.1000.S	Ice Hot Weather Concreting	LB	173.000	173.000
0018	502.3210	Pigmented Surface Sealer	SY	35.000	35.000
0020	503.0136	Prestressed Girder Type I 36-Inch	LF	61.000	61.000
0022	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	4,600.000	4,600.000
0024	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	2.000	2.000
0026	506.4000	Steel Diaphragms (structure) 01. B-13-463	EACH	1.000	1.000
0028	509.1500	Concrete Surface Repair	SF	1.000	1.000
0030	509.5100.S	Polymer Overlay	SY	65.000	65.000
0032	509.9015.S	Removing Polymer Overlay (structure) 01. B-13-463	SY	28.000	28.000
0034	517.1010.S	Concrete Staining (structure) 01. B-13-463	SF	751.000	751.000
0036	602.3210	Concrete Rumble Strips, Shoulder Divided Roadway	LF	260.000	260.000
0038	603.8000	Concrete Barrier Temporary Precast Delivered	LF	213.000	213.000
0040	603.8125	Concrete Barrier Temporary Precast Installed	LF	213.000	213.000
0042	614.0905	Crash Cushions Temporary	EACH	1.000	1.000
0044	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1007-09-82	EACH	1.000	1.000
0046	619.1000	Mobilization	EACH	1.000	1.000
0048	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0050	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0052	628.7570	Rock Bags	EACH	4.000	4.000
0054	642.5001	Field Office Type B	EACH	1.000	1.000
0056	643.0300	Traffic Control Drums	DAY	1,483.000	1,483.000
0058	643.0420	Traffic Control Barricades Type III	DAY	589.000	589.000
0060	643.0705	Traffic Control Warning Lights Type A	DAY	1,178.000	1,178.000
0062	643.0715	Traffic Control Warning Lights Type C	DAY	1,483.000	1,483.000
0064	643.0810	Traffic Control Connected Arrow Boards	DAY	2.000	2.000
0066	643.0900	Traffic Control Signs	DAY	1,247.000	1,247.000
0068	643.0920	Traffic Control Covering Signs Type II	EACH	1.000	1.000
0070	643.1050	Traffic Control Signs PCMS	DAY	63.000	63.000
0072	643.3165	Temporary Marking Line Paint 6-Inch	LF	5,243.000	5,243.000
0074	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	608.000	608.000
0076	643.5000	Traffic Control	EACH	1.000	1.000
0078	646.1555	Marking Line Grooved Contrast Permanent Tape 4-Inch	LF	150.000	150.000
0080	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	1,593.000	1,593.000
0082	646.9002	Marking Removal Line 6-Inch	LF	1,587.000	1,587.000
0084	650.6501	Construction Staking Structure Layout (structure) 01. B-13-463	EACH	1.000	1.000
0086	650.8000	Construction Staking Resurfacing Reference	LF	1,023.000	1,023.000
0088	650.9911	Construction Staking Supplemental Control (project) 01. 1007-09-82	EACH	1.000	1.000
0090	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	138.000	138.000
0092	715.0502	Incentive Strength Concrete Structures	DOL	132.000	132.000
0094	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. B-13-463	EACH	1.000	1.000
0096	SPV.0035	Special 01. HPC Masonry Structures	CY	23.000	23.000
0098	SPV.0060	Special 01. Emergency Response to Traffic Incident Involving Concrete Barrier	EACH	1.000	1.000

1007-09-82

Line	Item	Item Description	Unit	Total	Qty
		Temporary			
0100	SPV.0060	Special 02. Emergency Response to Pavement Repairs	EACH	1.000	1.000
0102	SPV.0060	Special 03. Emergency Response to Traffic Incident Involving Crash Cushion Temporary	EACH	1.000	1.000
0104	SPV.0165	Special 01. Fiber Wrap Reinforcing Non-Structural	SF	8.000	8.000

3

RUMBLE STRIPS

CATEGORY	STATION	TO	STATION	LOCATION	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	416.9112.S FILLING CONCRETE SHOULDER RUMBLE STRIPS 12-INCH LF	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON	465.0510 ASPHALTIC RUMBLE STRIPS, SHOULDER DIVIDED ROADWAY LF	602.3210 CONCRETE RUMBLE STRIPS, SHOULDER DIVIDED ROADWAY LF
0010	1573+71	-	1586+37	LT	171	260	9	24	767	260
				TOTAL 0010	**171**	**260**	**9**	**24**	**767**	**260**

CONCRETE BARRIER TEMPORARY

CATEGORY	STATION	TO	STATION	LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF
0010	1580+96	-	1583+07	RT	213	213
				TOTAL 0010	**213**	**213**

3

CRASH CUSHION

CATEGORY	STATION	LOCATION	614.0905 CRASH CUSHIONS TEMPORARY EACH
0010	1580+76	RT	1
		TOTAL 0010	**1**

EC MOBILIZATION

CATEGORY	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010	PROJECT WIDE	1	3
	TOTAL 0010	**1**	**3**

EROSION CONTROL

CATEGORY	LOCATION	628.7570 ROCK BAGS EACH
0010	FEMRITE DRIVE	4
	TOTAL 0010	**4**

TRAFFIC CONTROL

CATEGORY	LOCATION	DAYS	DRUMS NO. DEVICES	643.0300 TRAFFIC CONTROL DRUMS DAY	BARRICADES NO. DEVICES	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	WARNING LIGHTS TYPE A NO. DEVICES	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	WARNING LIGHTS TYPE C NO. DEVICES	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	ARROW BOARDS NO. DEVICES	643.0810 TRAFFIC CONTROL CONNECTED ARROW BOARDS DAY	SIGNS NO. DEVICES	643.0900 TRAFFIC CONTROL SIGNS DAY	PCMS NO. DEVICES	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY
0010	PROJECT WIDE	49	27	1,323	11	539	22	1,078	27	1,323	-	-	23	1,137	2	28
0010	POLYMER OVERLAY	1	25	25	-	-	-	-	25	25	1	1	10	10	2	28
0010	Undistributed			135		50		100		135		1		100		7
	TOTAL 0010			**1,483**		**589**		**1,178**		**1,483**		**2**		**1,247**		**63**

3

COVERING SIGNS

CATEGORY	LOCATION	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	REMARKS
0010	USH 12/18 WB to IH 39 NB Ramp	1	Advisory Speed 50 MPH
	TOTAL 0010	**1**	

PAVEMENT MARKING

CATEGORY	STATION	TO	STATION	LOCATION	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH LF	643.3180 TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH LF	646.1555 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW) LF	646.2040 (WHITE) LF	646.9002 MARKING REMOVAL LINE 6-INCH LF
0010	1571+03	-	1581+76	LT & RT	3,999	-	-	805	163	968
0010	1581+76	-	1583+27	LT & RT	-	608	-	152	-	152
0010	1583+27	-	1583+37	LT & RT	1,244	-	150	310	163	467
				TOTAL 0010	**5,243**	**608**	**150**	**1,593**		**1,587**

STAKING

CATEGORY	LOCATION	650.6501.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-14-463) EACH	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 1007-09-82) EACH
0010	PROJECT WIDE	1	1,023	1
	TOTAL 0010	**1**	**1,023**	**1**

BIRD DETERRENT

CATEGORY	LOCATION	999.2000.S.01 INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM (STATION) (01. B-13-463) EACH
0010	B-13-463	1
	TOTAL 0010	**1**

EMERGENCY RESPONSE

CATEGORY	LOCATION	SPV.0060.01 SPECIAL (01. EMERGENCY RESPONSE TO TRAFFIC INVOLVING CONCRETE BARRIER TEMPORARY) EACH	SPV.0060.02 SPECIAL (02. MOBILIZATIONS EMERGENCY PAVEMENT REPAIR) EACH	SPV.0060.03 SPECIAL (03. EMERGENCY RESPONSE TO TRAFFIC INVOLVING CRASH CUSHION TEMPORARY) EACH
0010	PROJECT WIDE	1	1	1
	TOTAL 0010	**1**	**1**	**1**

Standard Detail Drawing List

13A05-06A	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A05-06B	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A10-03A	SHOULDER RUMBLE STRIPS ASPHALT
13A10-03B	SHOULDER RUMBLE STRIPS - CONCRETE
13A10-03G	SHOULDER AND EDGE LINE RUMBLE STRIPS - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
14B07-16A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-24B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-11B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D41-07A	TRAFFIC CONTROL, MULTIPLE LANE SHIFT, MULTILANE DIVIDED ROAD

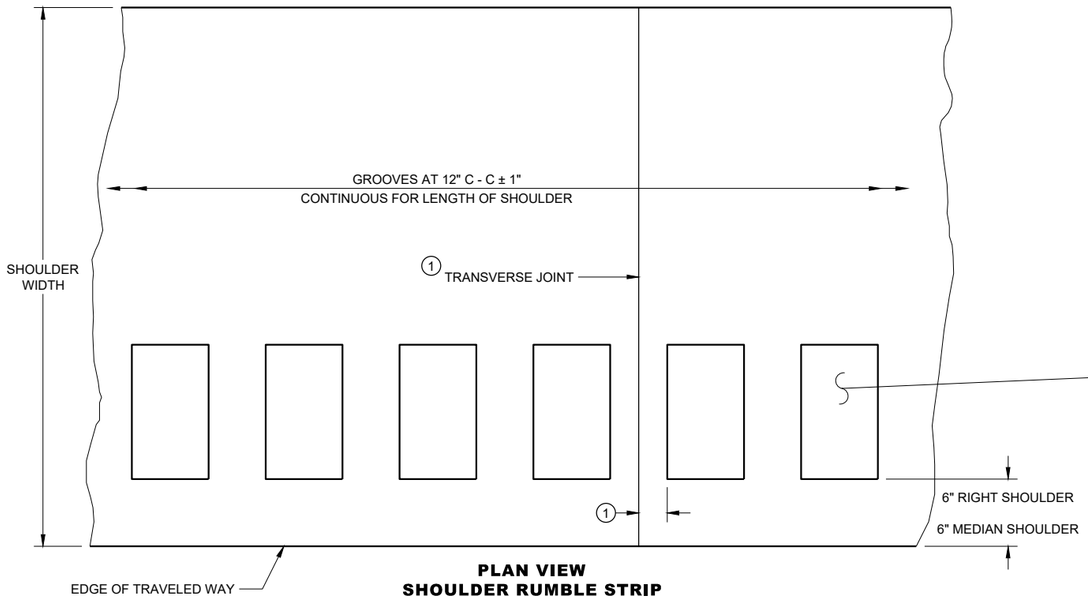
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GENERAL NOTES

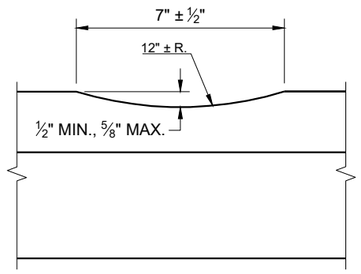
SDD 13A5, SHEET "b" SHOWS THE LOCATION OF THE RUMBLE STRIPS AT RAMP AND GORE LOCATIONS.

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

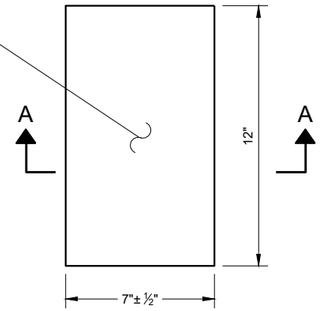
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6 INCHES AWAY FROM TRANSVERSE JOINTS.



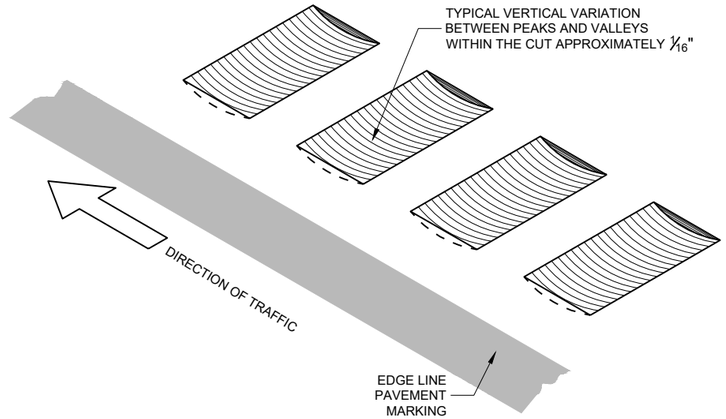
PLAN VIEW
SHOULDER RUMBLE STRIP



SECTION A - A

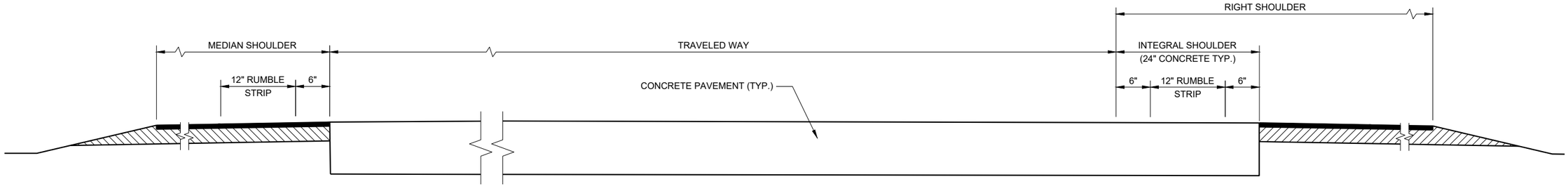


PLAN VIEW
(SINGLE GROOVE)



ISOMETRIC

PLACEMENT DETAIL FOR RUMBLE STRIP



SECTION VIEW

TYPICAL SHOULDER RUMBLE STRIPS
(ONE ROADWAY IS SHOWN)

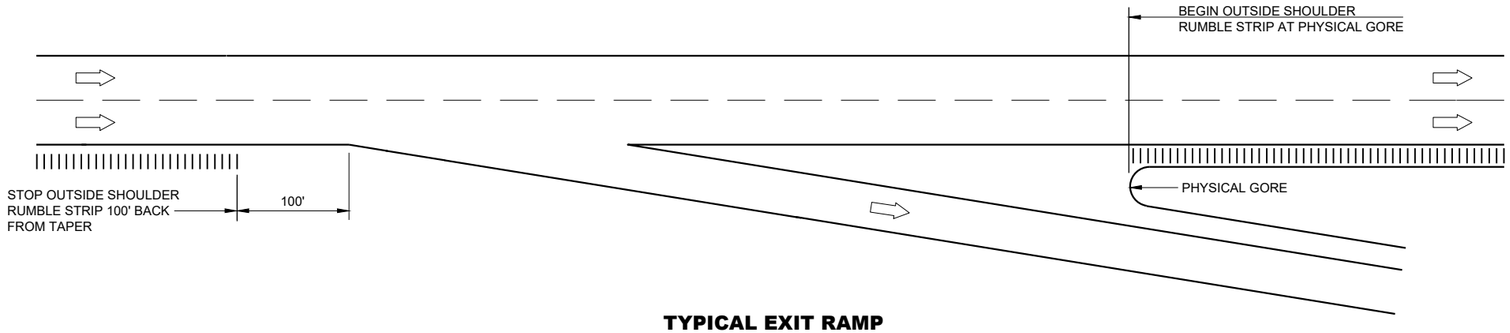
SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13A05-06a

SDD 13A05-06a



TYPICAL EXIT RAMP

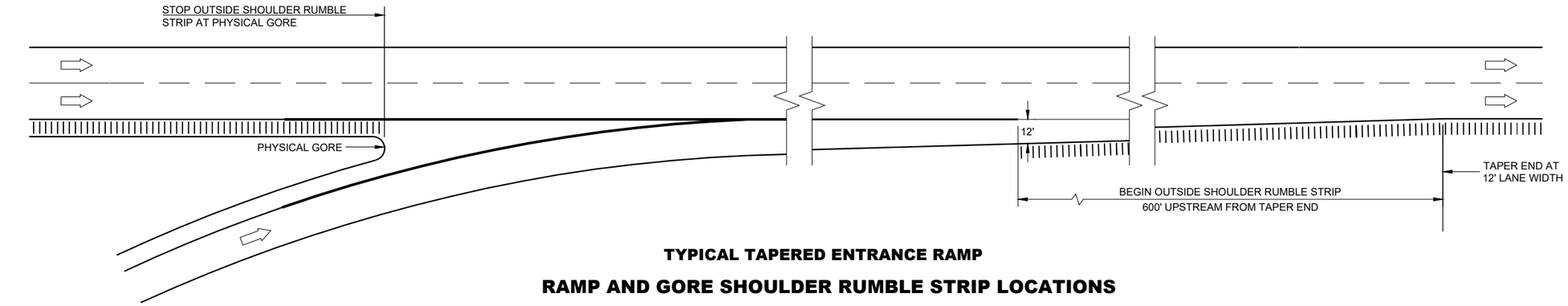
GENERAL NOTES

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

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

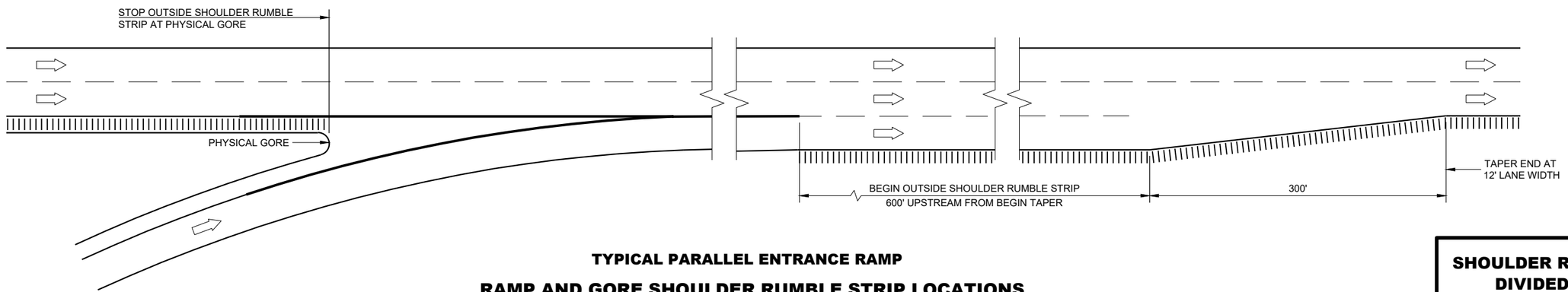
LEGEND

DIRECTION OF TRAFFIC



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

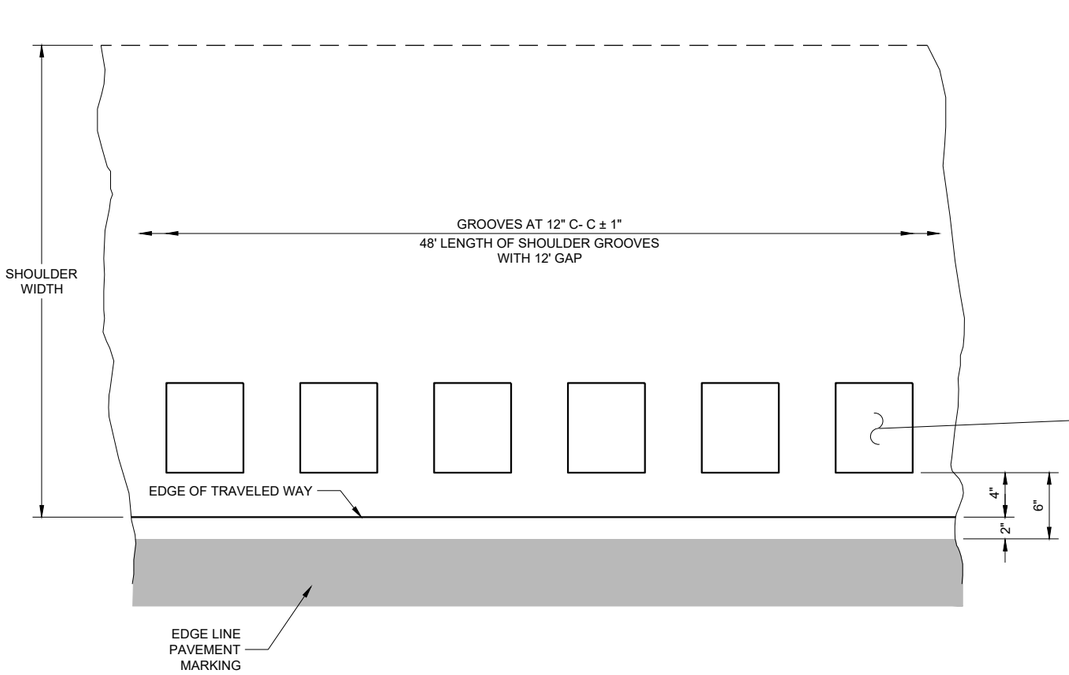
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

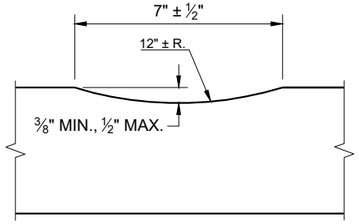
/S/ Rodney Taylor
ROADWAY DESIGN STANI
UNIT SUPERVISOR

FHWA

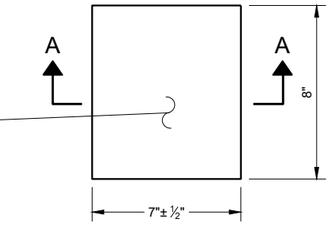
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SDD 13A05-06b



PLAN DETAIL VIEW
SHOULDER WITH GROOVES



SECTION A - A

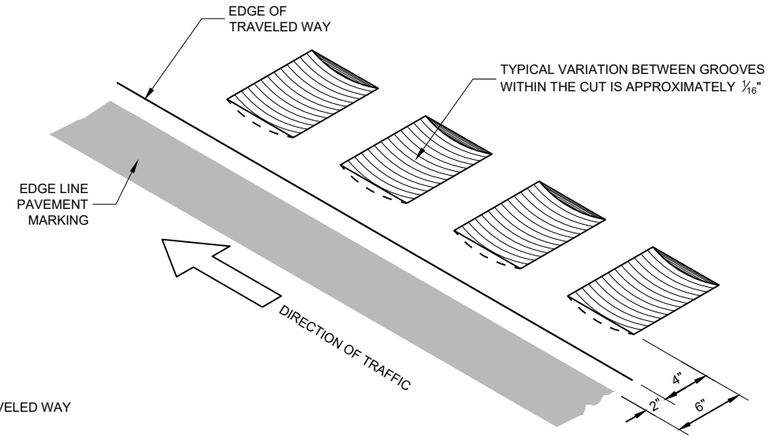


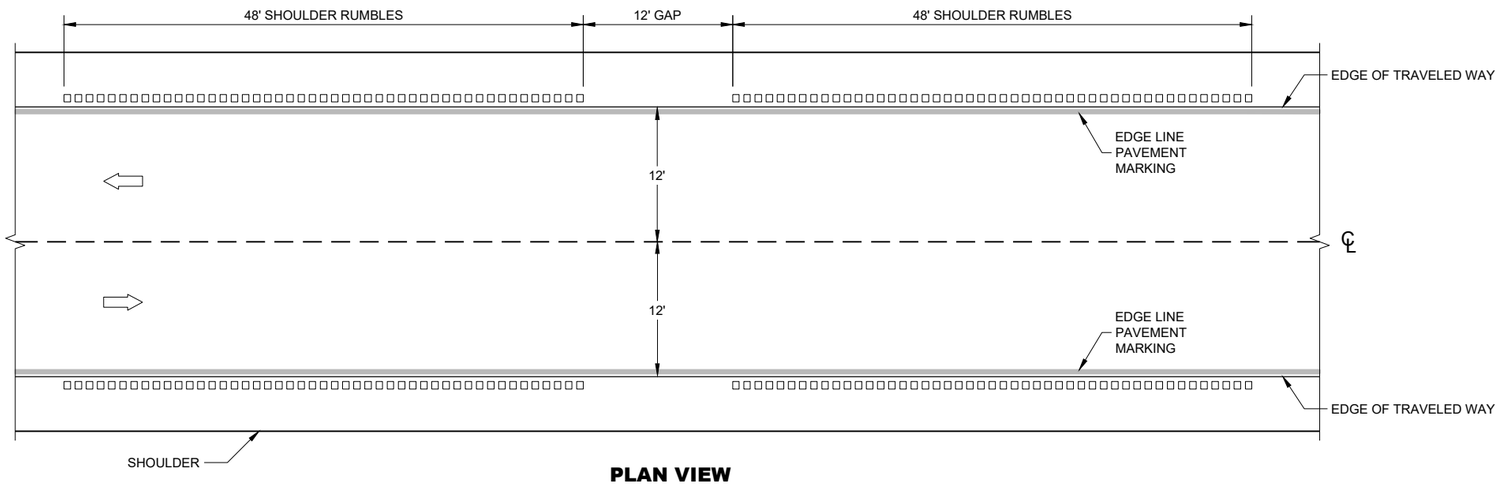
PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A10 SHEETS "g" AND "h".

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





PLAN VIEW

SHOULDER RUMBLE STRIPS - ASPHALT

6

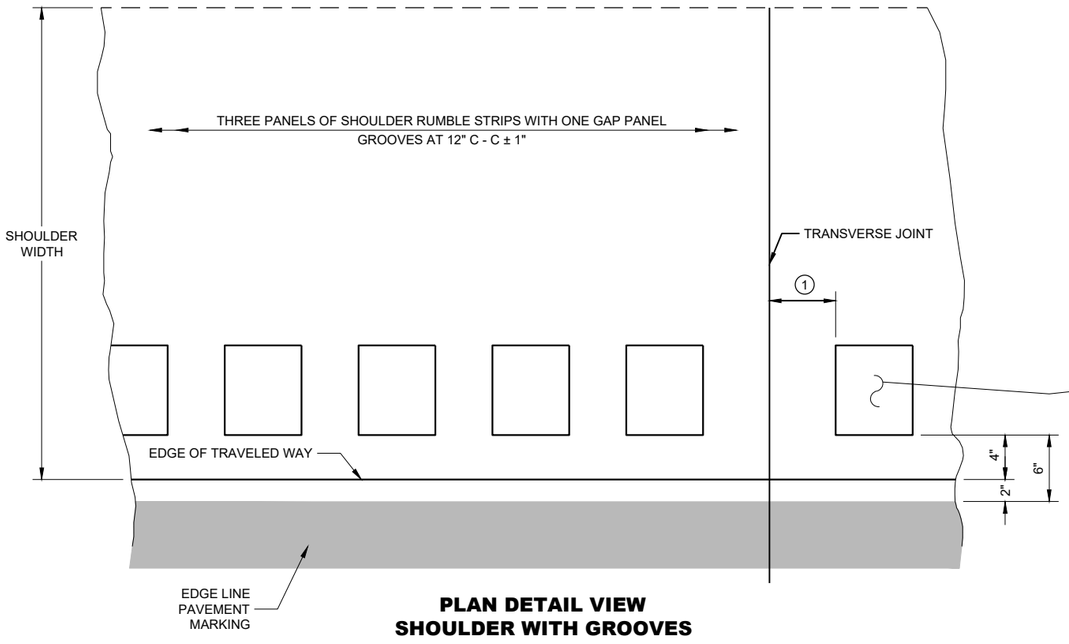
SDD 13A10 - 03a

SHOULDER RUMBLE STRIPS ASPHALT

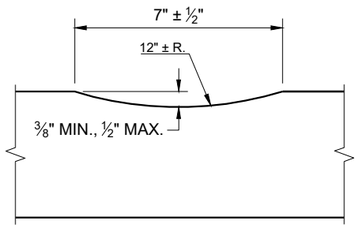
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

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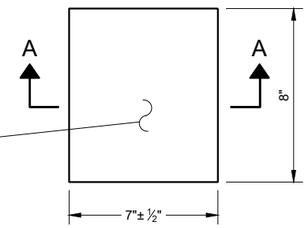
SDD 13A10 - 03a



PLAN DETAIL VIEW
SHOULDER WITH GROOVES



SECTION A - A



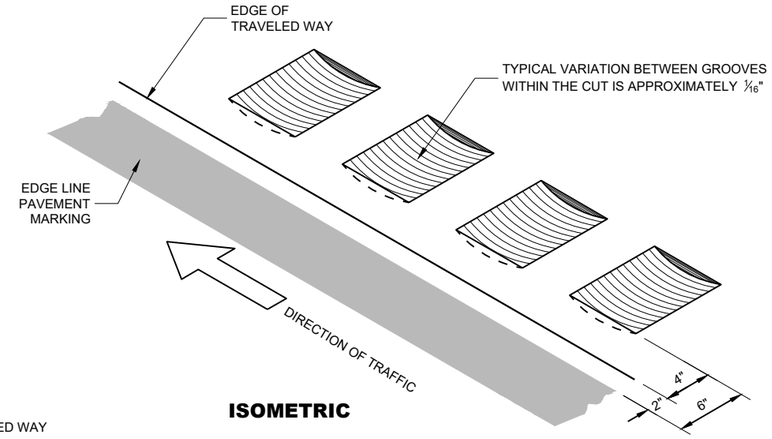
PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

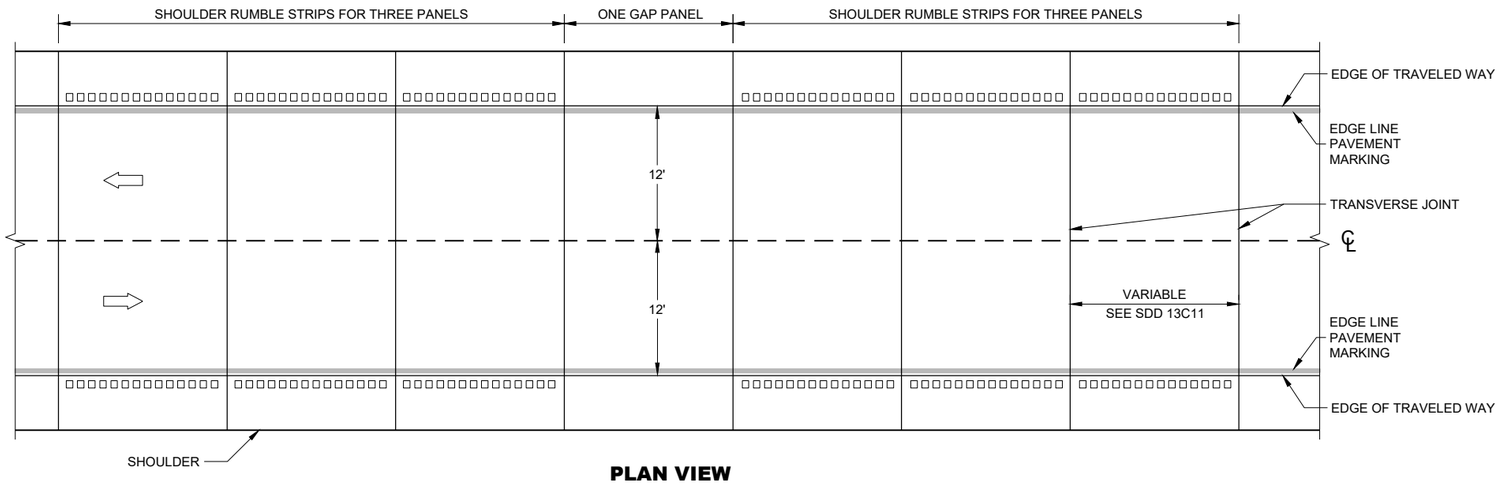
DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A10 SHEETS "g" AND "h".

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

(1) FOR CONCRETE PAVEMENTS, RUMBLE STRIPS SHALL BE A MINIMUM OF 6 INCHES FROM TRANSVERSE JOINTS.



ISOMETRIC



PLAN VIEW

SHOULDER RUMBLE STRIPS - CONCRETE

6

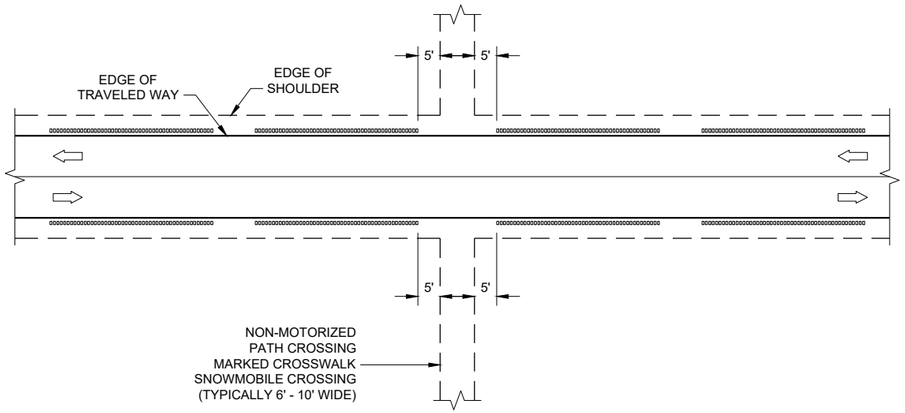
SDD 13A10 - 03b

6

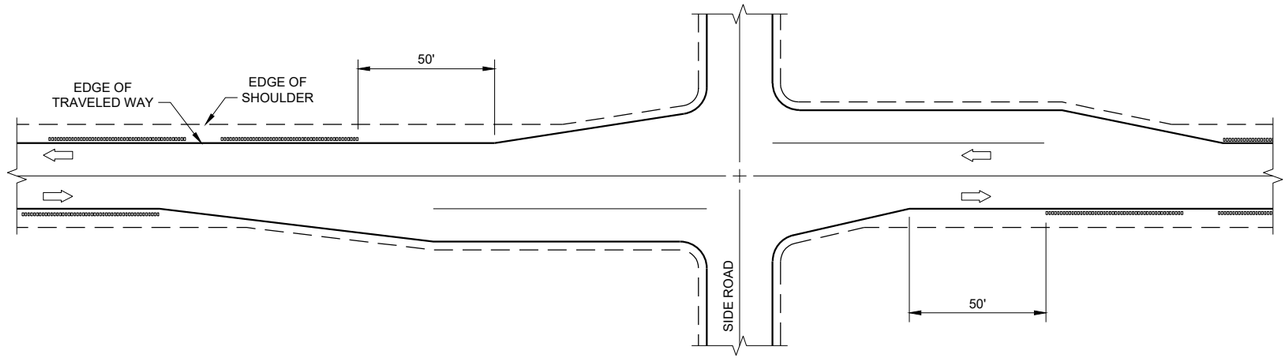
SDD 13A10 - 03b

SHOULDER RUMBLE STRIPS - CONCRETE

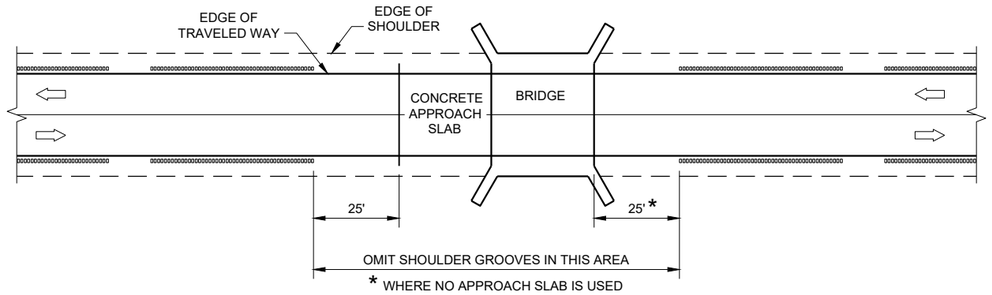
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DEPARTMENT OF TRANSPORTA



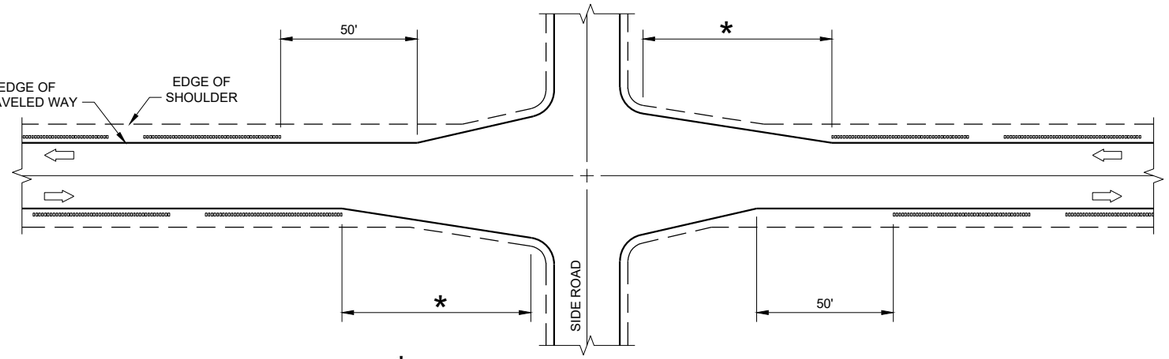
GROOVES AT MISCELLANEOUS CROSSINGS



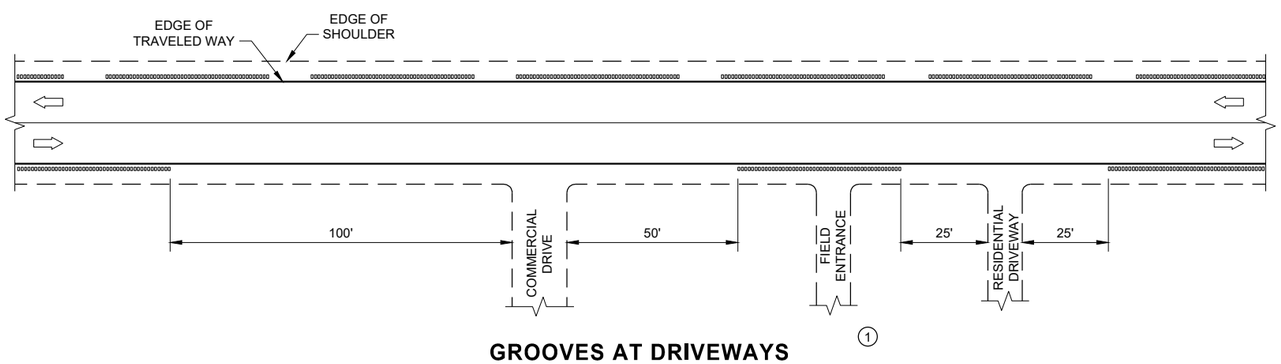
GROOVES AT RIGHT TURN LANE



GROOVES AT BRIDGES



GROOVES AT INTERSECTIONS WITH APPROACH TAPER



GROOVES AT DRIVEWAYS ①

GENERAL NOTES

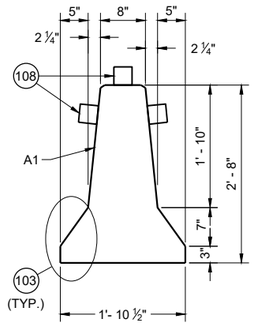
① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

SHOULDER AND EDGE LINE RUMBLE STRIPS CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS

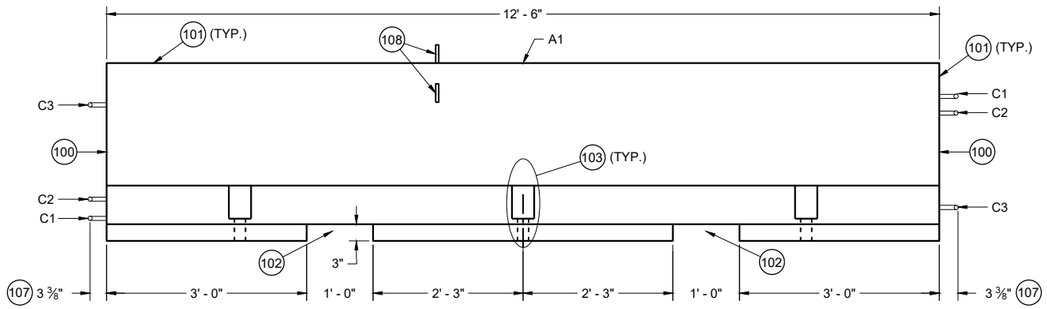
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 13A10 - 03g
SDD 13A10 - 03g



CROSS SECTION



PROFILE VIEW

GENERAL NOTES

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

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

(100) PERMANENTLY FORM INTO ONE END OF BARRIER THE FOLLOWING INFORMATION:
- A. TYPE OF BARRIER: WI-CBTP
- B. MANUFACTURER
- C. DATE OF MANUFACTURE (MONTH AND YEAR)

(101) 1" OPTIONAL CHAMFER

(102) SEE LIFTING SLOT DETAIL

(103) SEE ANCHOR BLOCK DETAIL

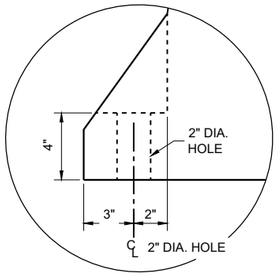
(104) 1 ¾" MIN. CLEAR COVER

(105) 2" MIN. CLEAR COVER

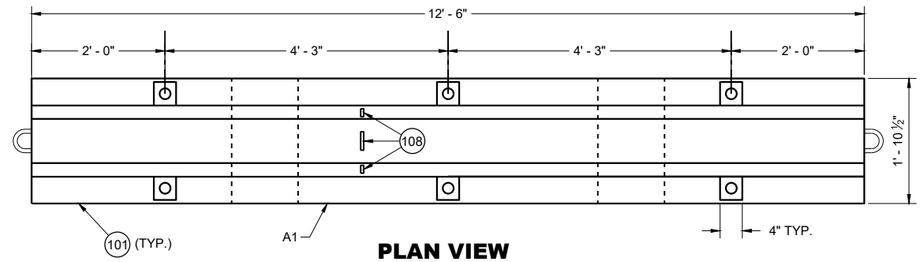
(106) 1" MIN. CLEAR COVER

(107) ± ⅛" MEASURED FROM FACE OF CONCRETE BARRIER TO OUTSIDE OF LOOP BAR (TYP.)

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

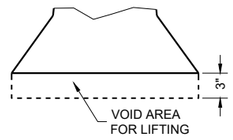


ANCHOR BLOCK DETAIL

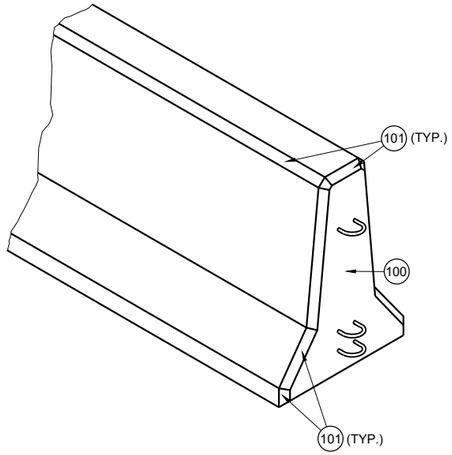


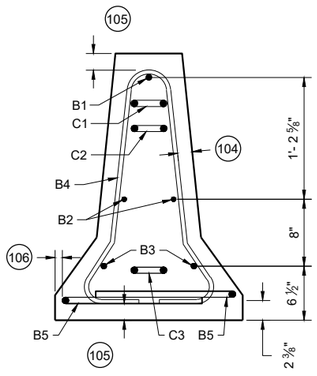
PLAN VIEW

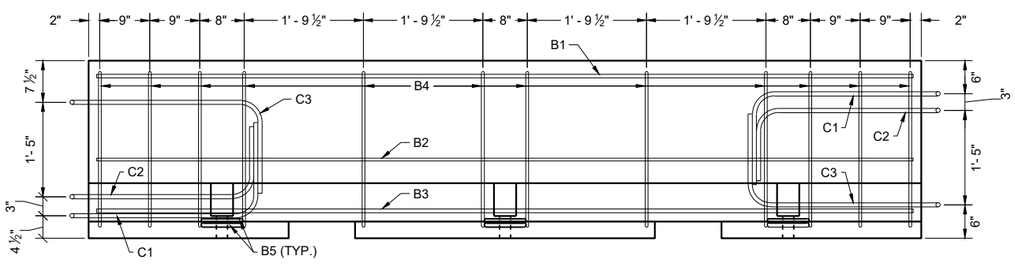
TEMPORARY BARRIER



LIFTING SLOT DETAIL (TYP.)







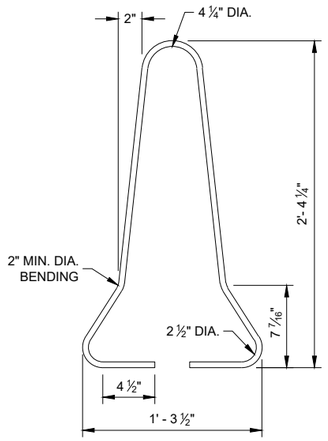
PROFILE VIEW

TEMPORARY BARRIER REINFORCEMENT

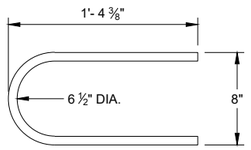
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
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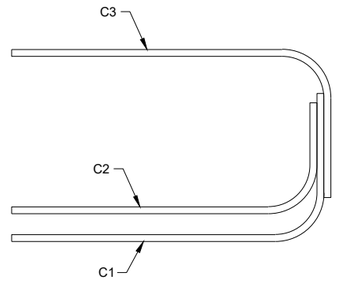
6
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B4 BAR DETAIL

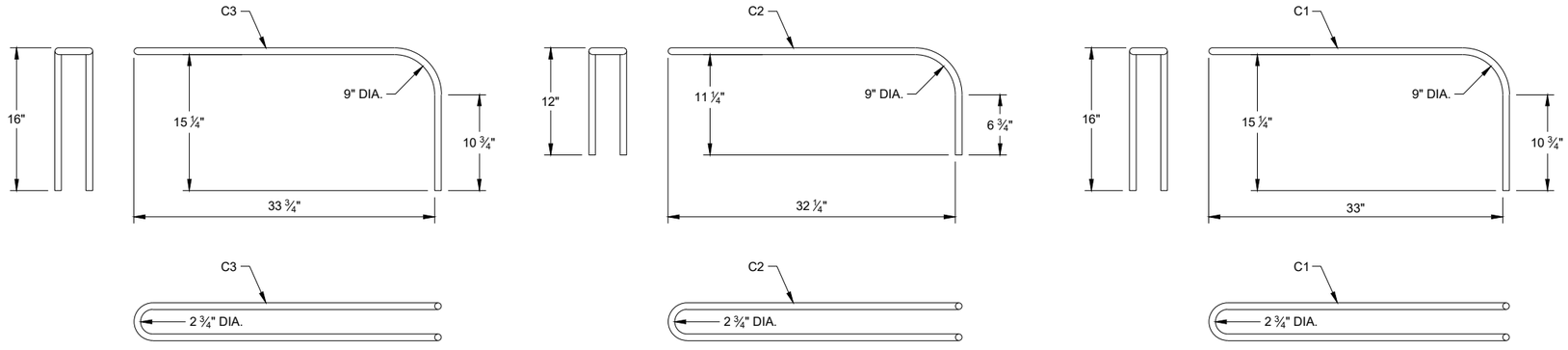


B5 BAR DETAIL



PROFILE VIEW

LOOP BAR ASSEMBLY



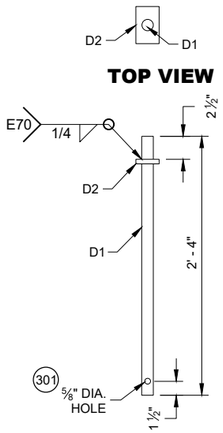
C BAR DETAILS

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

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DEPARTMENT OF TRANSPORTATION

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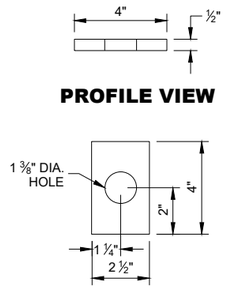
SDD 14B07-16b



TOP VIEW

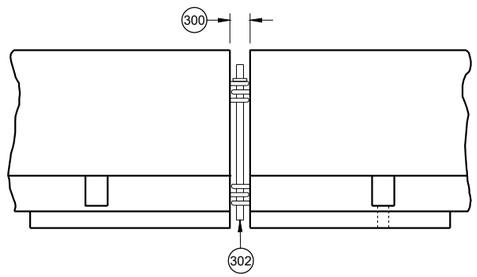
PROFILE VIEW

CONNECTOR PIN ASSEMBLY



PROFILE VIEW

TOP VIEW D2



CONNECTING TEMPORARY BARRIER SECTIONS

GENERAL NOTES

300 SET WITH 3 ⅝" WOOD BLOCK.

301 HOLE IS OPTIONAL.

302 CONNECTOR PIN ASSEMBLY.

303 CONCRETE PAVEMENT, APPROACH SLAB, OR DECK.

304 CONCRETE DECK.

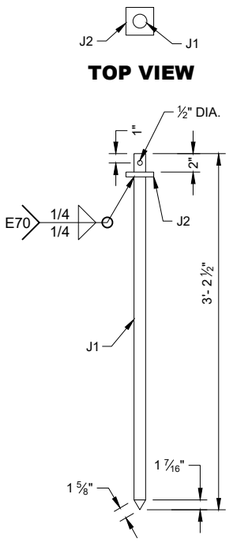
305 DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.

306 MINIMUM OF 2" OF ASPHALT.

307 ASPHALT ANCHOR PIN ASSEMBLY

308 IF DRILLING A PILOT HOLE, THE MAX, DIA. OF THE HOLE IS 3/4"

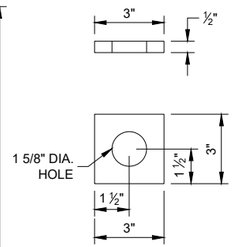
309 WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.



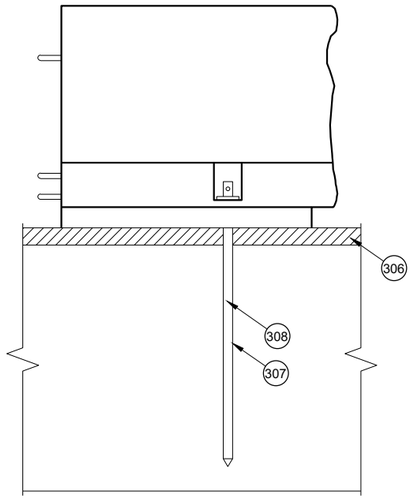
TOP VIEW

PROFILE VIEW

ASPHALT ANCHOR PIN ASSEMBLY

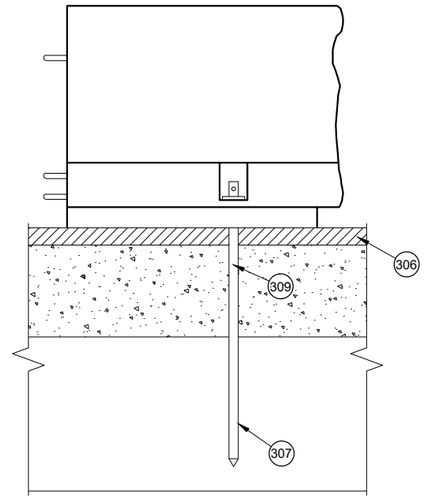


TOP VIEW J2



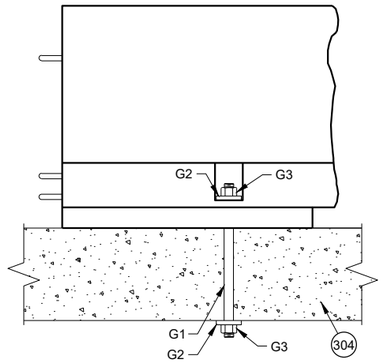
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT PAVEMENT



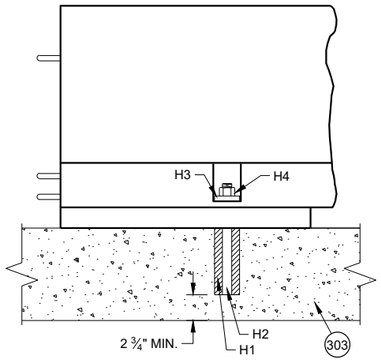
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT OVERLAY ON TOP OF CONCRETE PAVEMENT



SIDE VIEW

THROUGH BOLT ANCHOR INSTALLATION (305)



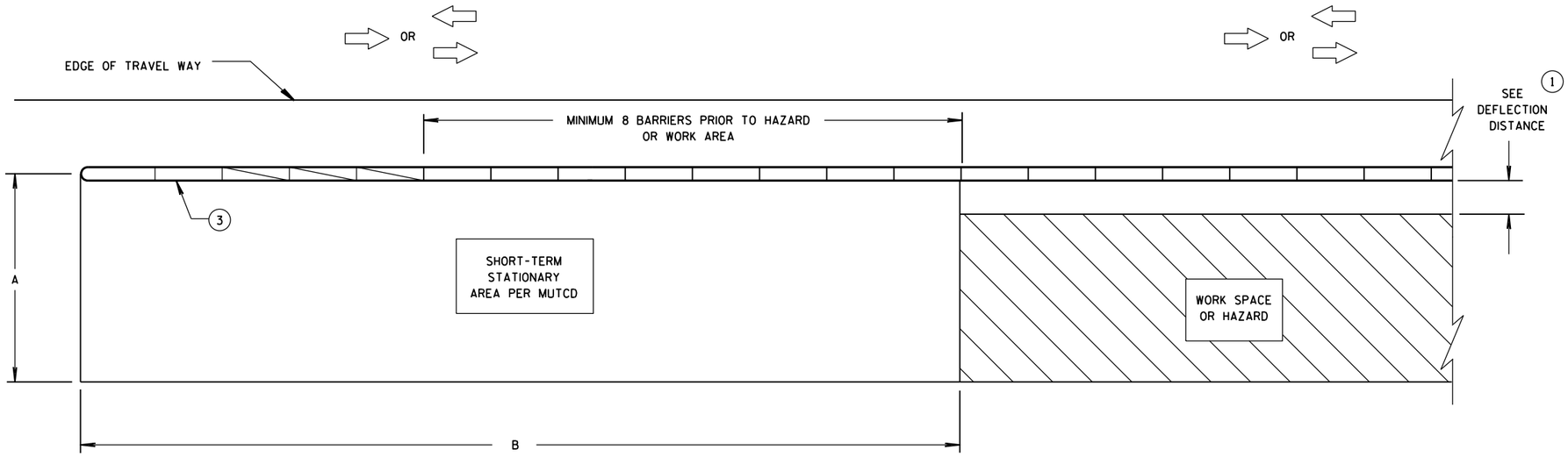
SIDE VIEW

ADHESIVE ANCHOR INSTALLATION (305)

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

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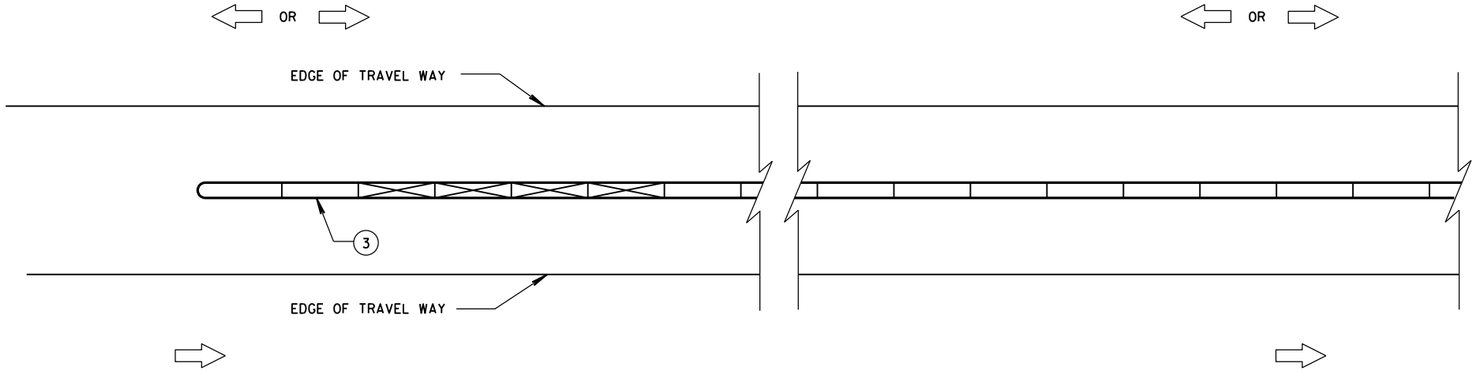
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

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

DIMENSION B TABLE (2)

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



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

LEGEND

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

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

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

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

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

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

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

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

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

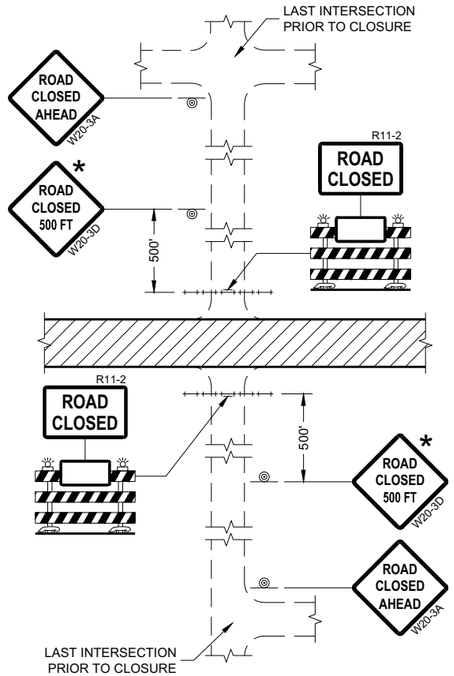
(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

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

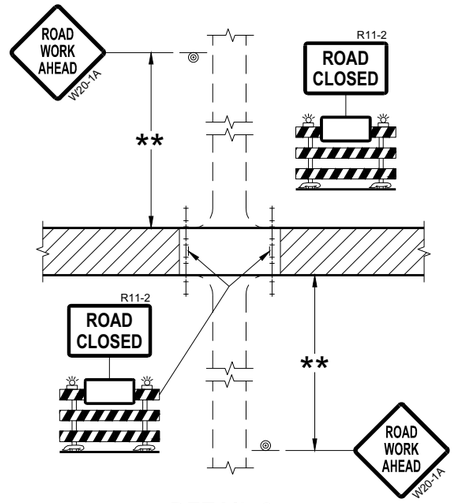
STATE OF WISCONSIN
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S.D.D. 14 B 8-2a
S.D.D. 14 B 8-2a



DETAIL 1
(NO ACCESS TO PROJECT)



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

GENERAL NOTES

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

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

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

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

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

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

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

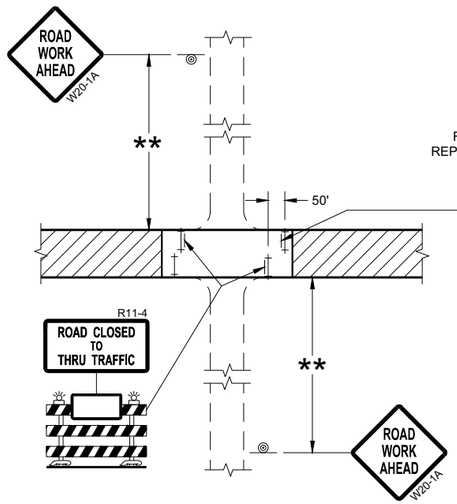
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

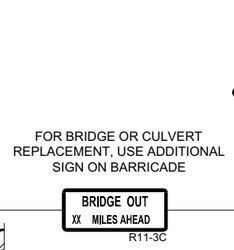
THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

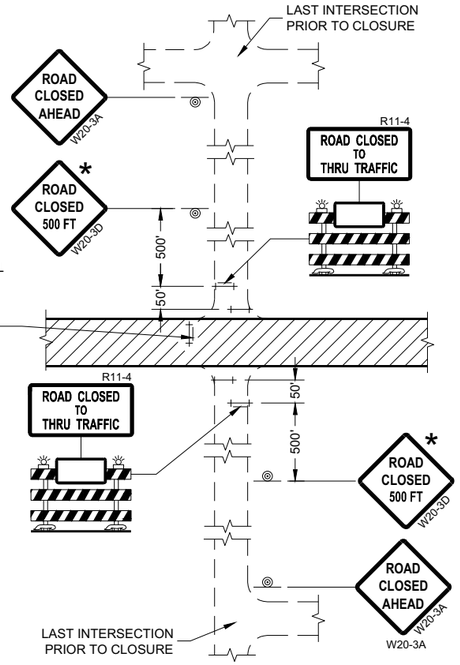
ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

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

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







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

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

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 15C03 - 05

6

SDD 15C03 - 05

GENERAL NOTES

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

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

(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

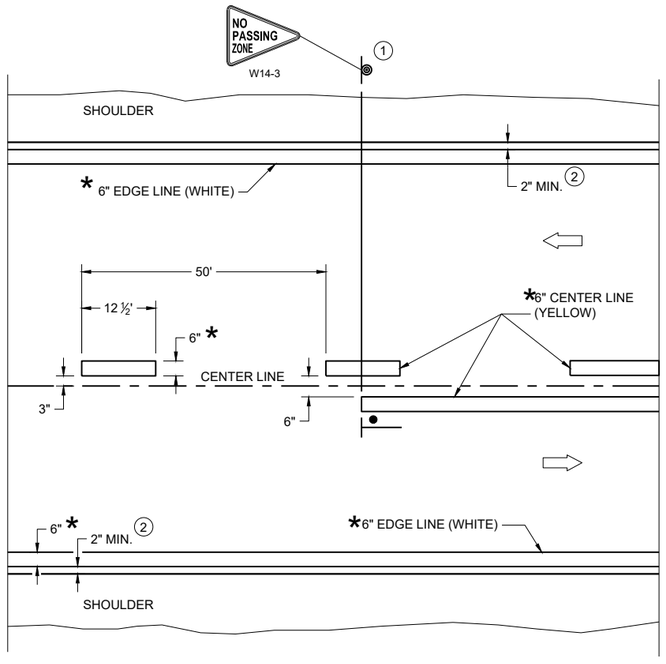
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

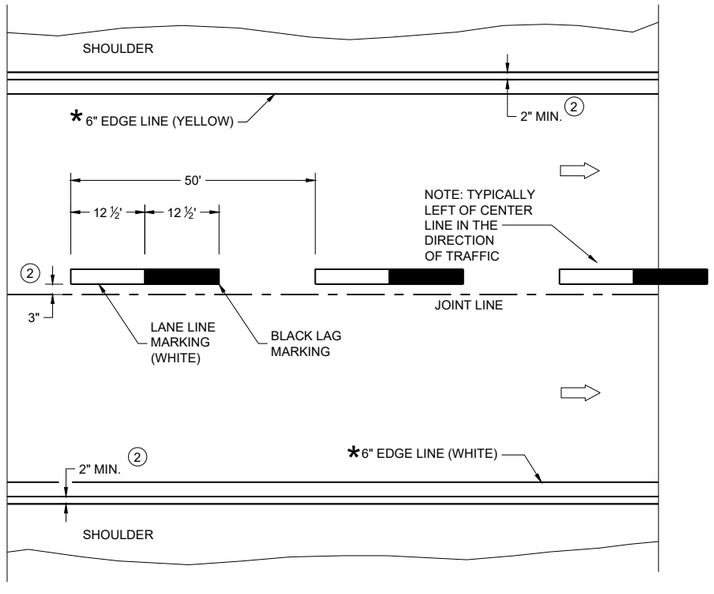
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

6

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

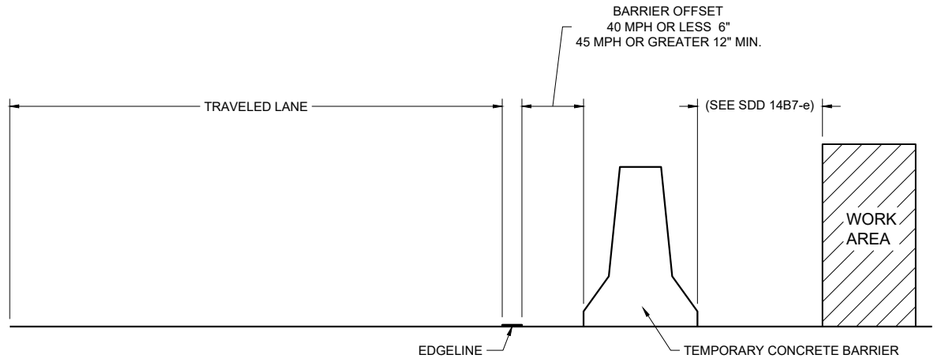
APPROVED
December 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

SDD 15C08-24a

SDD 15C08-24a



TEMPORARY BARRIER OFFSET FROM EDGELINE

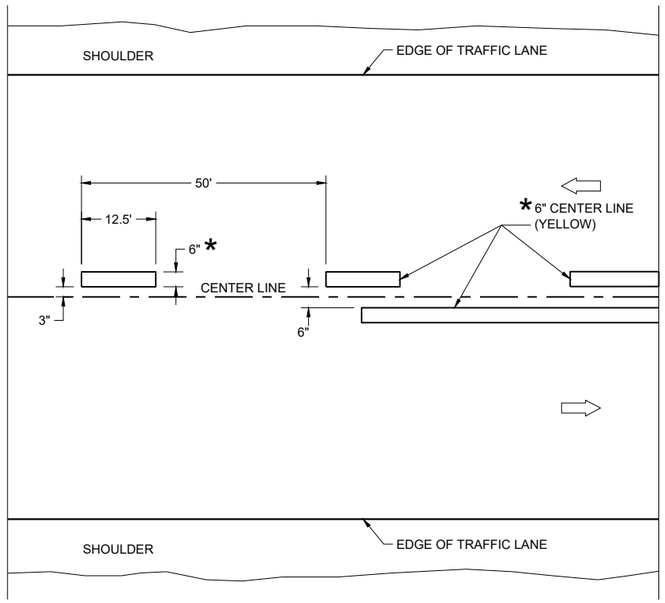
GENERAL NOTES

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

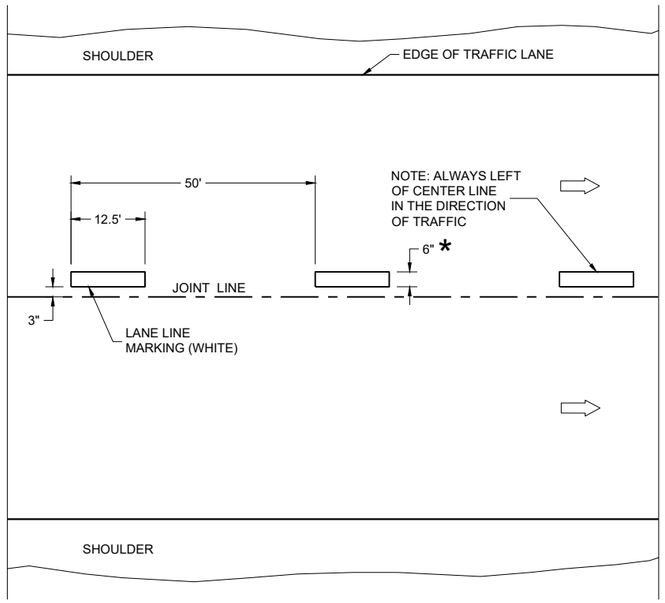
LEGEND

DIRECTION OF TRAFFIC

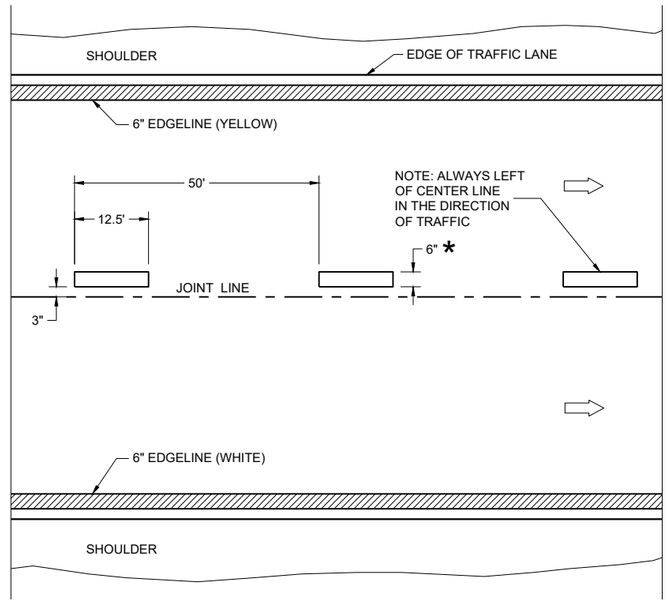
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 15C08-24b

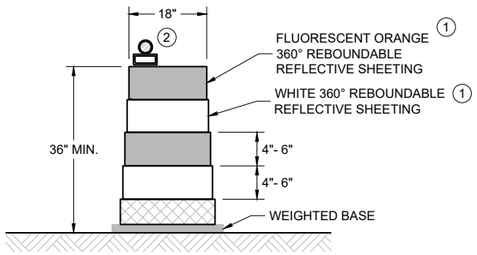
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SDD 15C08-24b

GENERAL NOTES

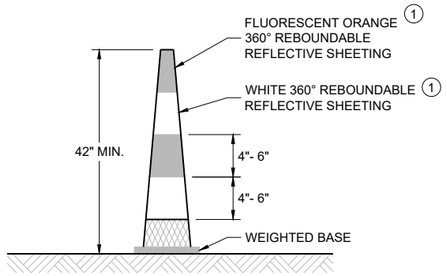
(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

(2) LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



DRUM

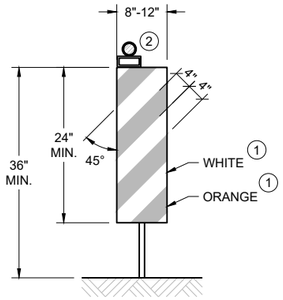
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

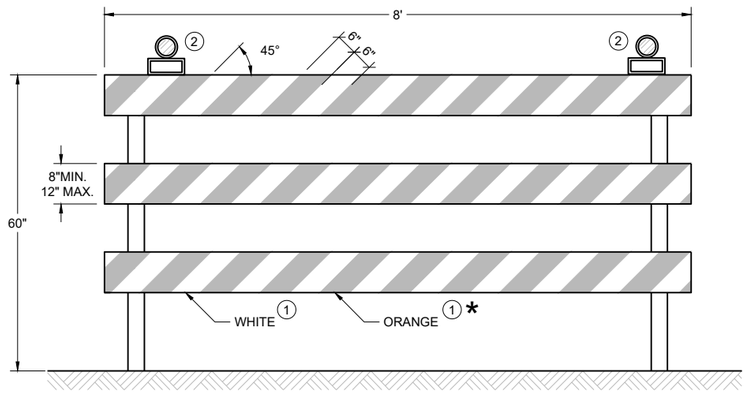
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



VERTICAL PANEL

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2026 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

6
SDD 15C11-11b

LEGEND

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

CONCRETE BARRIER TEMPORARY PRECAST

TYPE "A" WARNING LIGHT (FLASHING)

WORK AREA

SPEED LIMIT 60 / W03-5

OR

SPEED LIMIT 55 / W03-5

LOCATED
3000 FEET BEYOND THE
"ROAD WORK 1 MILE"
(W20-1F) SIGN

SPEED LIMIT 60
R2-1
48"X60"

OR

SPEED LIMIT 55
R2-1
48"X60"

(BLACK AND WHITE)
LOCATED
700 FEET BEYOND THE
W03-5 SIGN

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 3 MILES.

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT RIGHT - REVERSE FOR SHIFTING LEFT.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

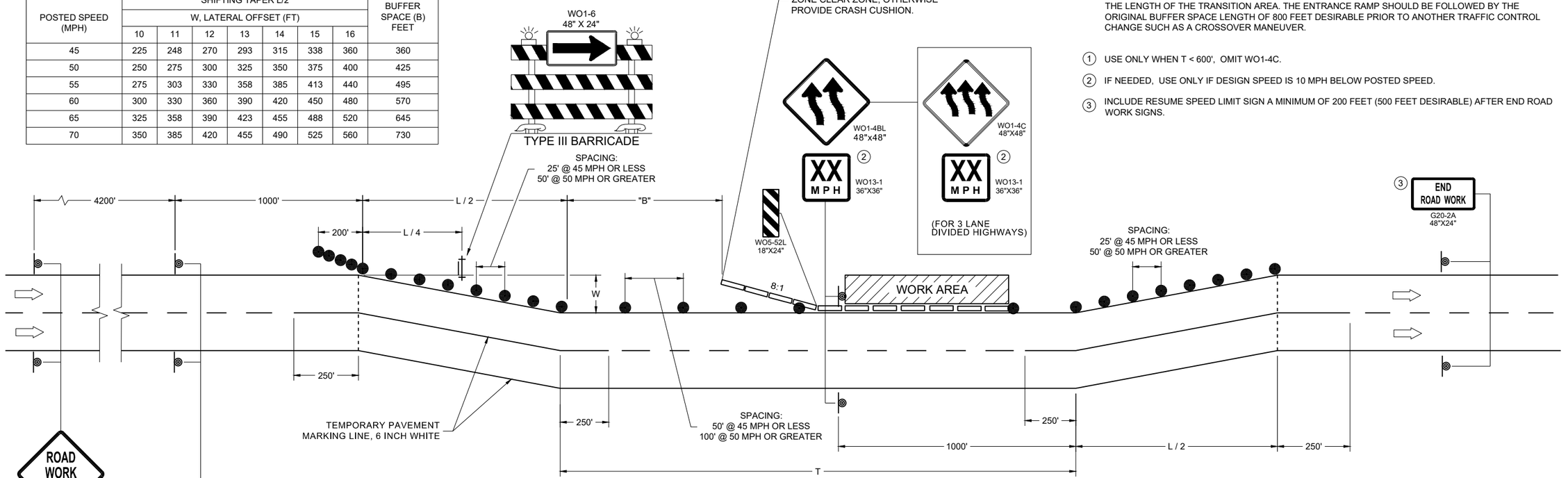
(1) USE ONLY WHEN T < 600', OMIT WO1-4C.

(2) IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.

(3) INCLUDE RESUME SPEED LIMIT SIGN A MINIMUM OF 200 FEET (500 FEET DESIRABLE) AFTER END ROAD WORK SIGNS.

FULL SHIFT

POSTED SPEED (MPH)	SHIFTING TAPER L/2 W, LATERAL OFFSET (FT)							BUFFER SPACE (B) FEET
	10	11	12	13	14	15	16	
45	225	248	270	293	315	338	360	360
50	250	275	300	325	350	375	400	425
55	275	303	330	358	385	413	440	495
60	300	330	360	390	420	450	480	570
65	325	358	390	423	455	488	520	645
70	350	385	420	455	490	525	560	730



PARTIAL SHIFT

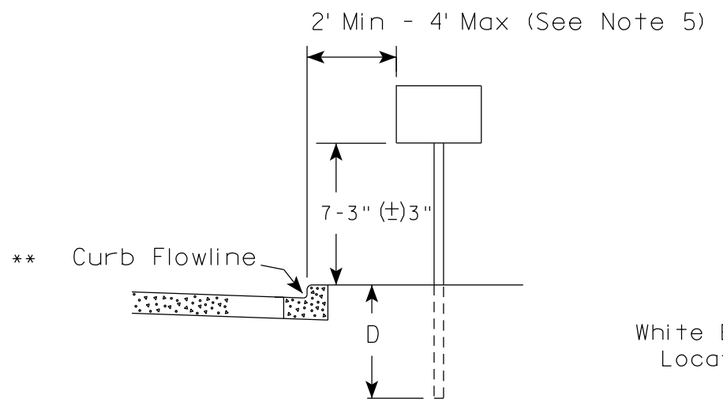
POSTED SPEED PRIOR TO WORK STARTING (MPH)	SHIFTING TAPER L/2 W, LATERAL OFFSET (FT)									BUFFER SPACE (B) FEET
	1	2	3	4	5	6	7	8	9	
45	23	45	68	90	113	135	158	180	203	360
50	25	50	75	100	125	150	175	200	225	425
55	28	55	83	110	138	165	193	220	248	495
60	30	60	90	120	150	180	210	240	270	570
65	33	65	98	130	163	195	228	260	293	645
70	35	70	105	140	175	210	245	280	315	730

TRAFFIC CONTROL
MULTIPLE LANE SHIFT
MULTILANE DIVIDED ROAD

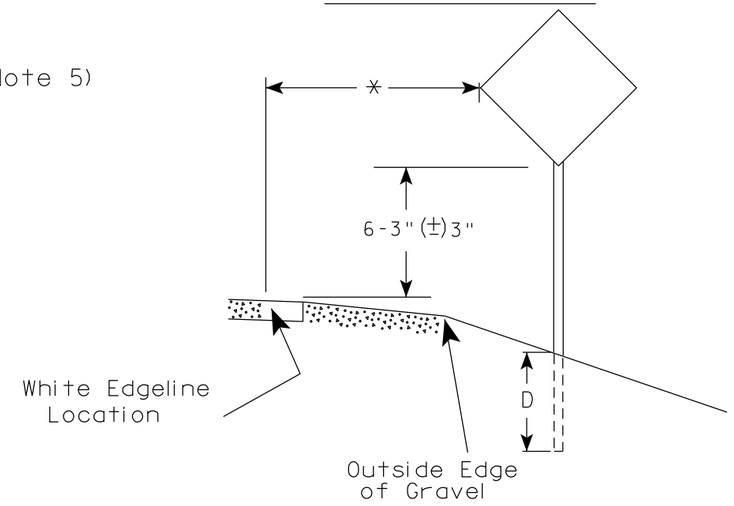
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

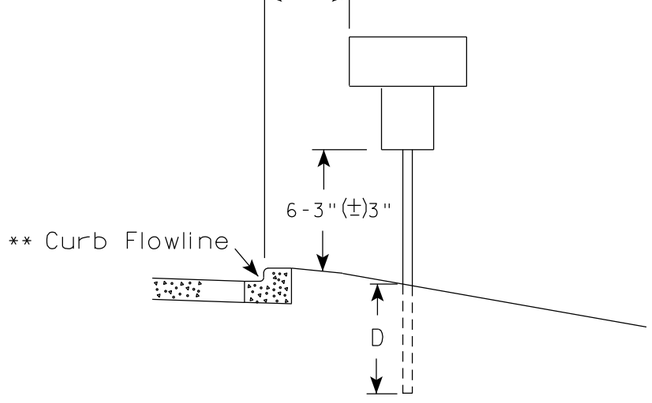
6
SDD 15D41-07a

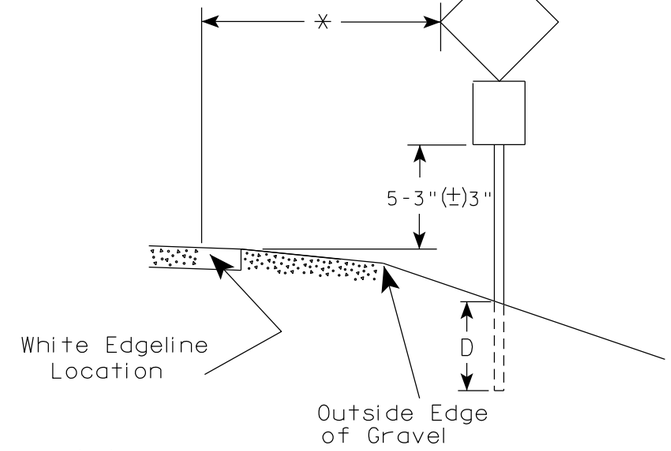
URBAN AREA



RURAL AREA (See Note 2)







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

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 directd by the Engineer.

POST EMBEDMENT DEPTH

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

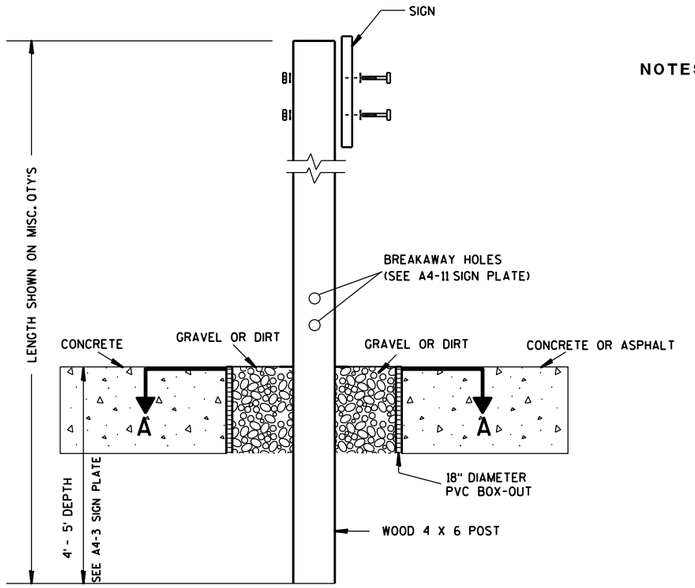
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

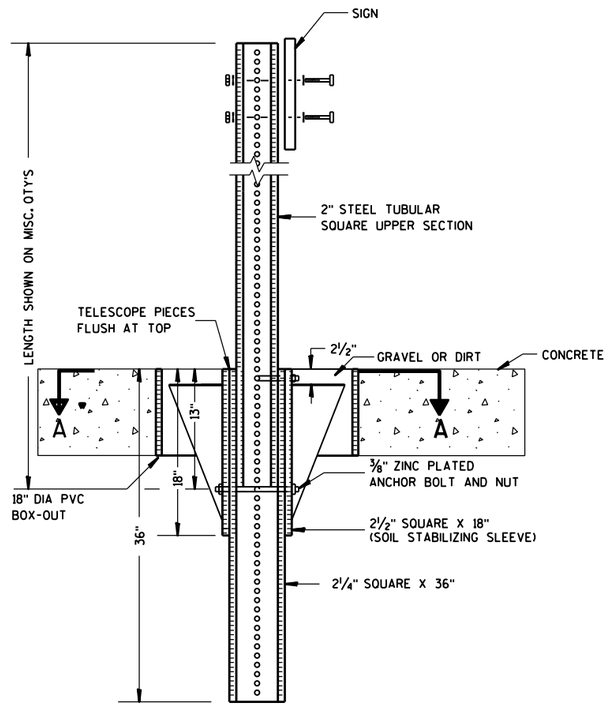
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 38	E



ELEVATION VIEW

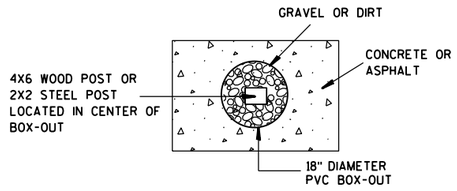
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

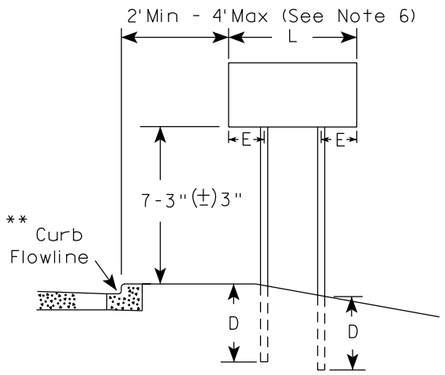
APPROVED Matthew R Rauch
for State Traffic Engineer

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

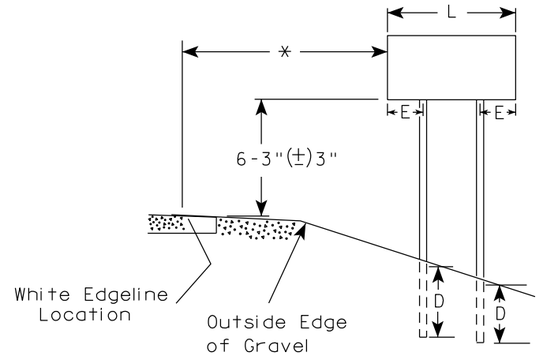
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

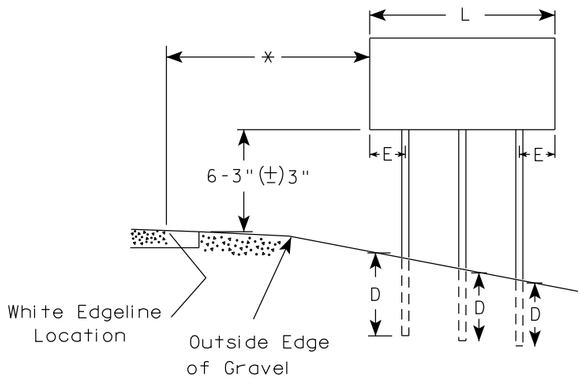
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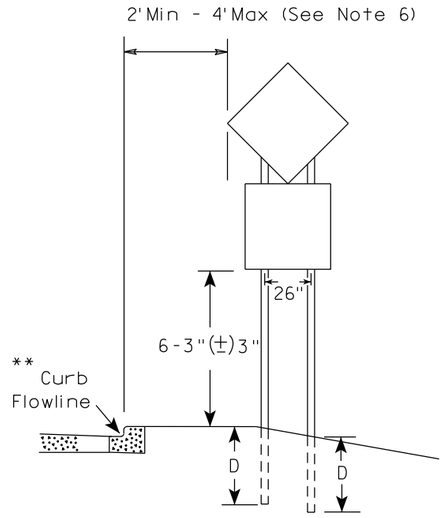
URBAN AREA



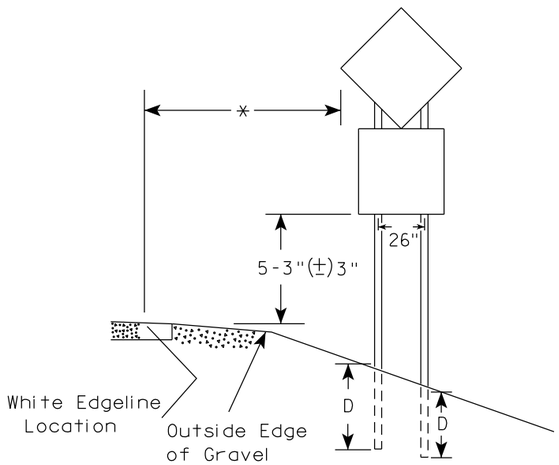
RURAL AREA (See Note 3)







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"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) 3" or 6'-3" (±) 3" depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±) 3".

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

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

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

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

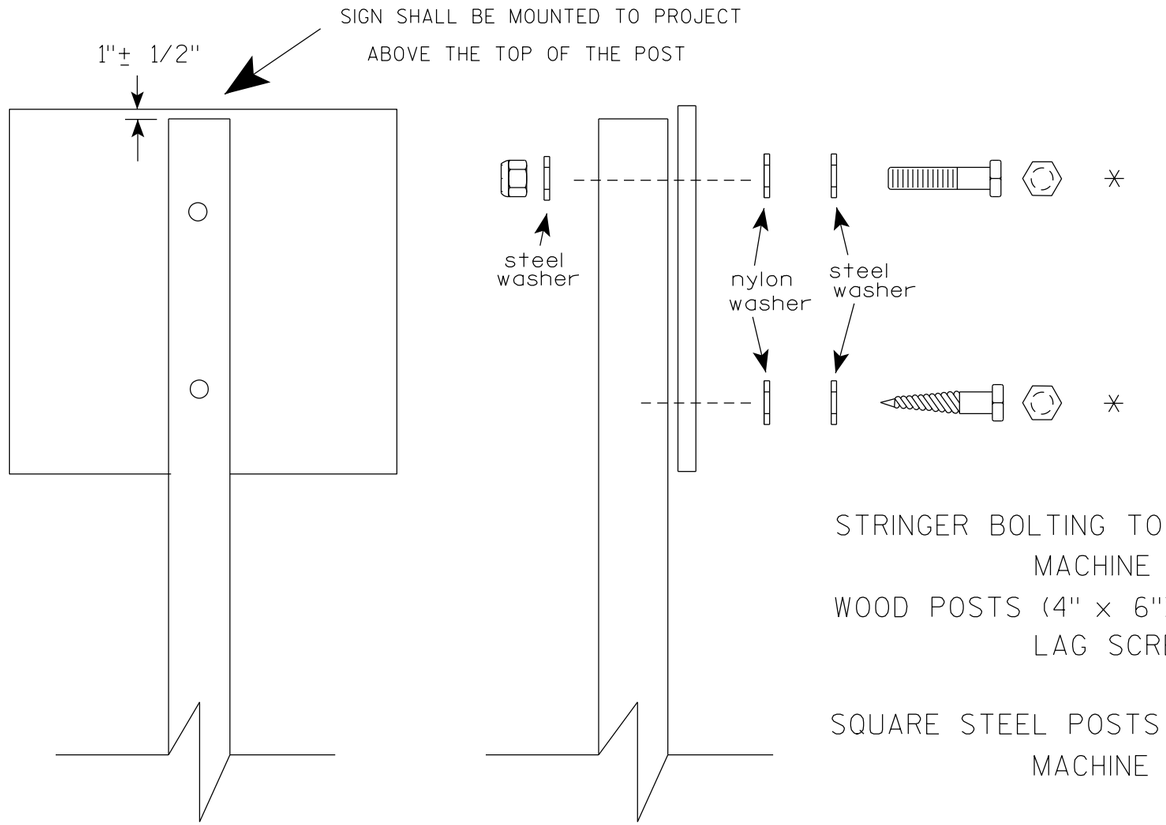
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 40	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 - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

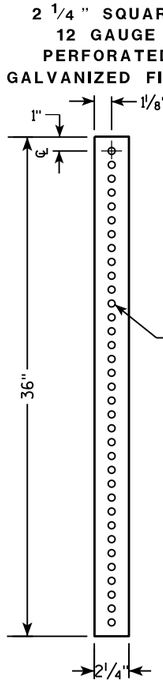
DATE 4/1/2020 PLATE NO. A4-8.9

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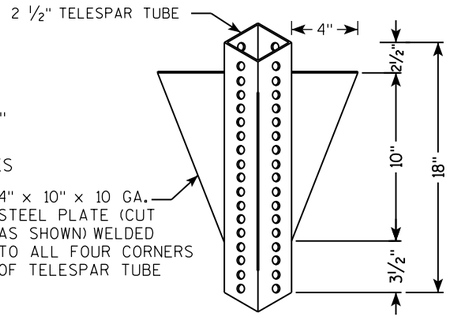
SHEET NO: 41 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

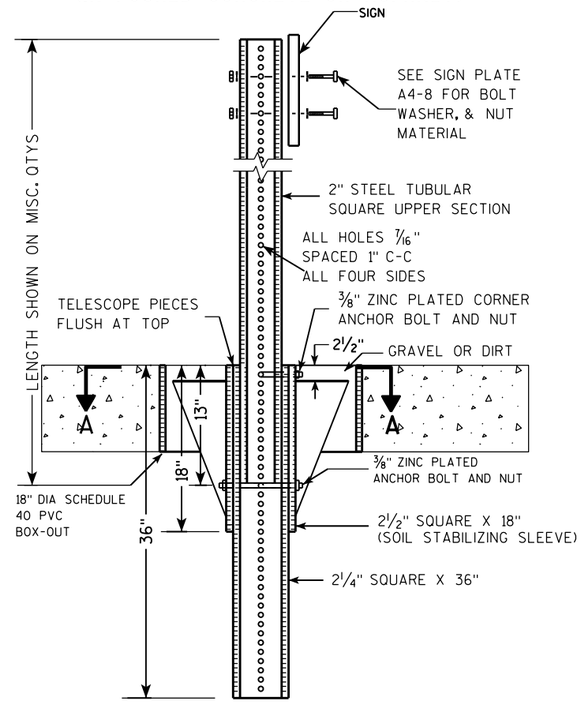
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



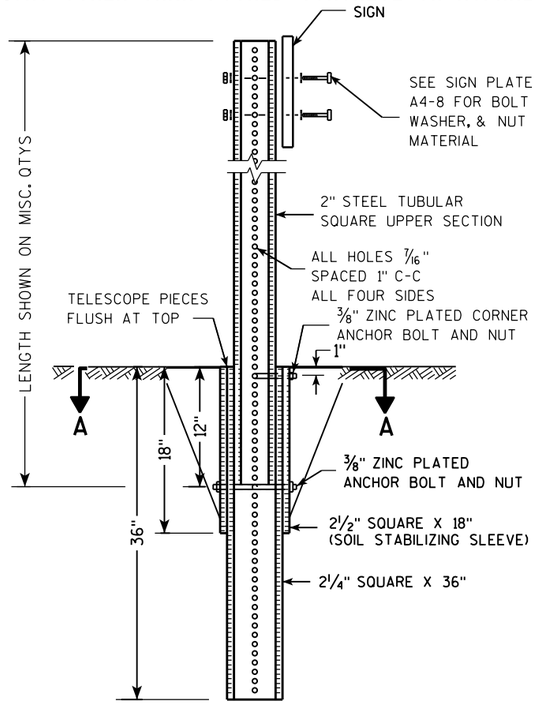
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

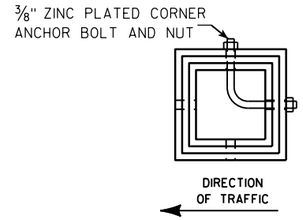


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

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

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

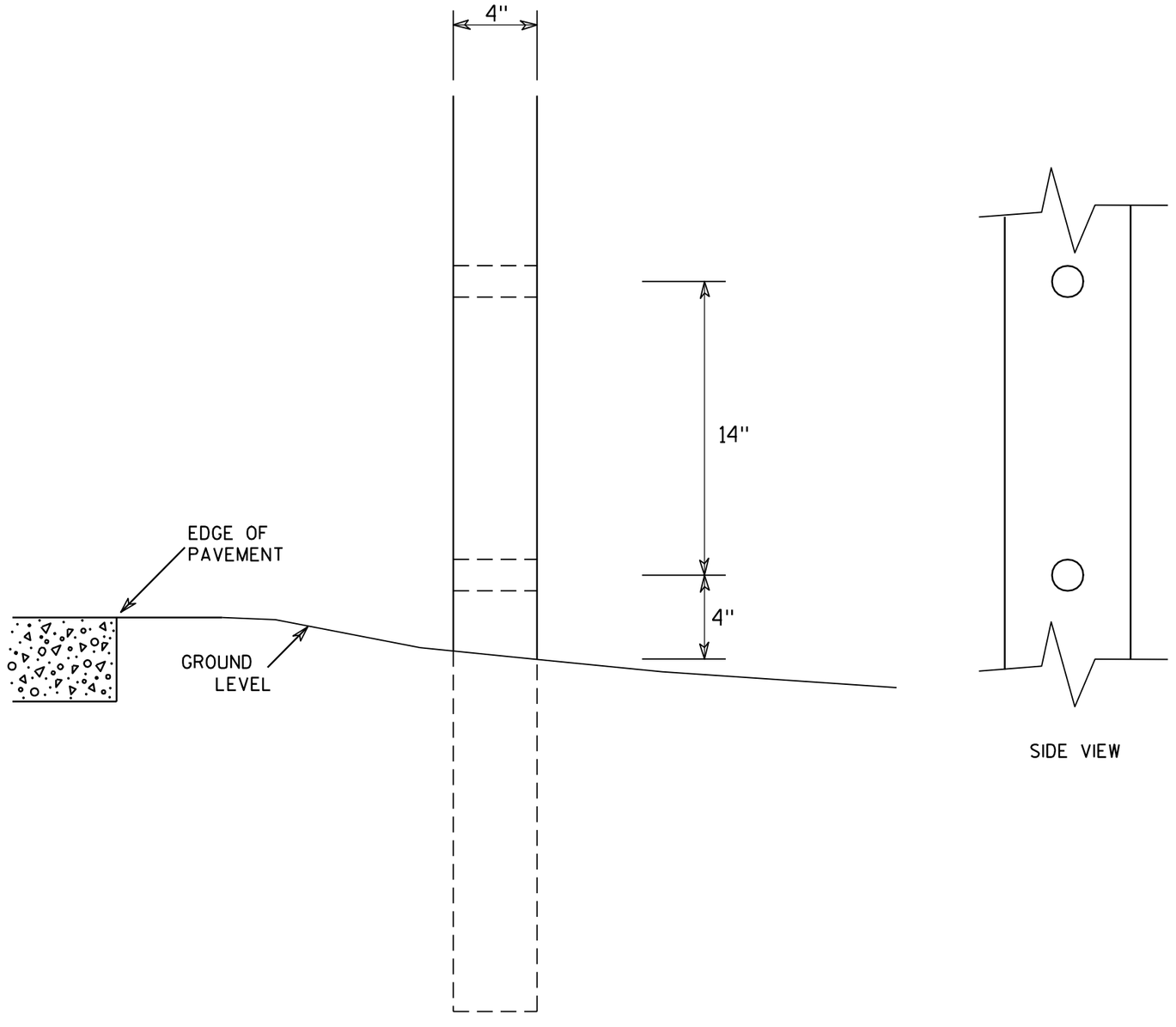
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 42 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

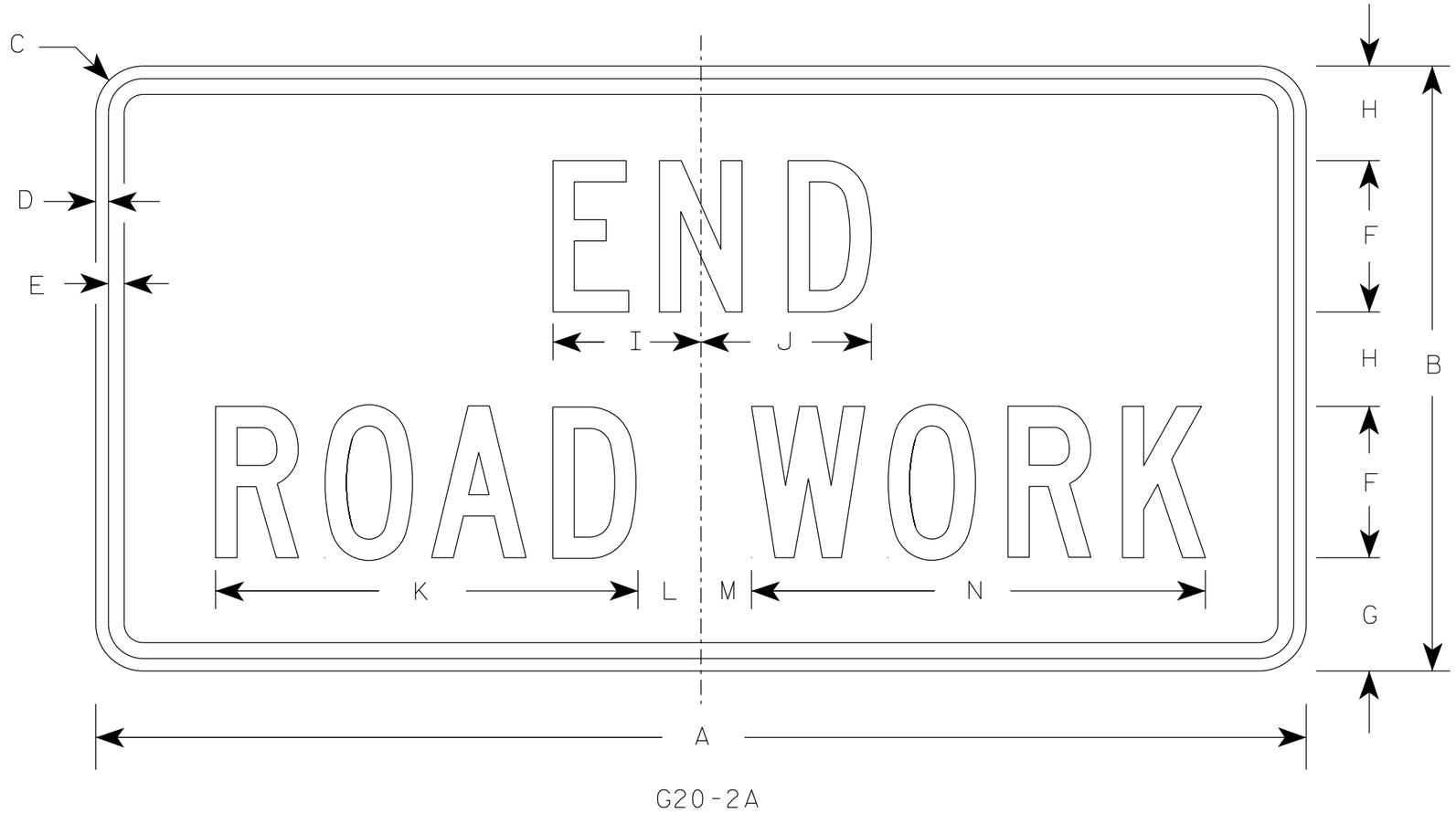
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 43	E



G20-2A

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5
2	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
2M	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
3	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
4	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
5	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0

STANDARD SIGN

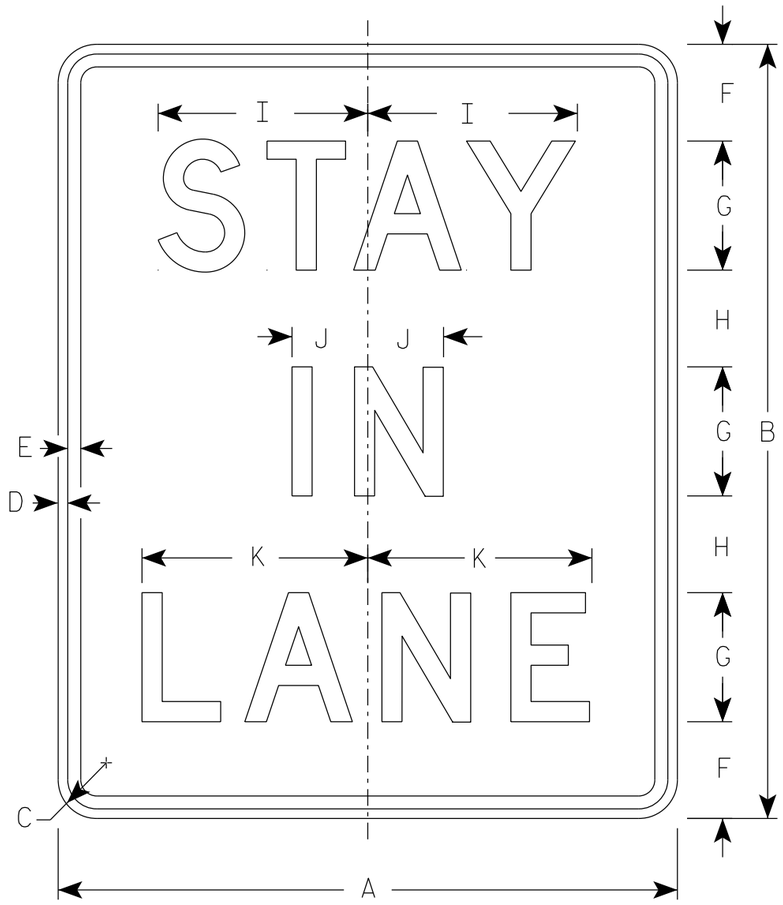
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-2A.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 44 E



R4-9

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/2	3/8	3/8	3	4	3	6 1/2	2 3/8	7																3.0
2S	24	30	1 1/2	3/8	1/2	3 5/8	5	3 7/8	8 1/8	3	8 3/4																5.0
2M	24	30	1 1/2	3/8	1/2	3 5/8	5	3 7/8	8 1/8	3	8 3/4																5.0
3	36	48	1 7/8	1/2	5/8	8 1/4	7	5 1/4	11 3/8	4 1/8	12 1/4																12.0
4	36	48	1 7/8	1/2	5/8	8 1/4	7	5 1/4	11 3/8	4 1/8	12 1/4																12.0
5	48	60	3	3/4	1	7 1/2	10	7 1/2	16 1/4	5 7/8	17 1/2																20.0

STANDARD SIGN
R4-9

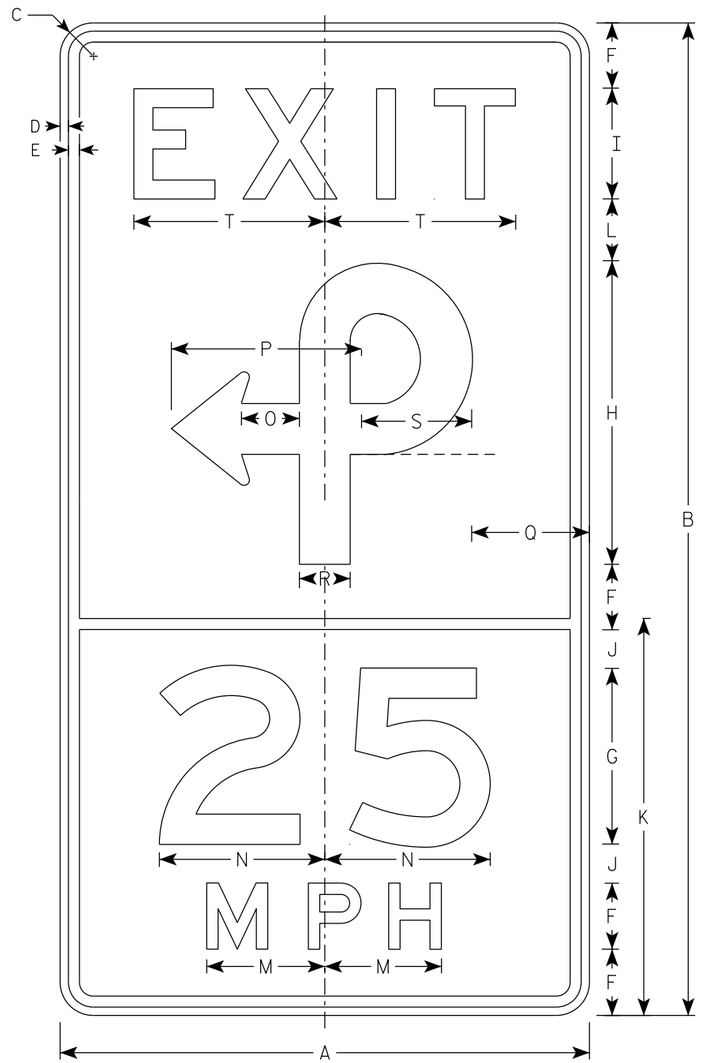
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/17/23 PLATE NO. R4-9.3

PROJECT NO:

SHEET NO: 45 E



W13-2B

NOTES

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

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	90	3	3/4	1	6	16	27 1/2	10	3 1/2	36	5 1/2	10 3/4	15	5 1/4	17 1/4	10 3/4	4 5/8	10	17 3/8							30
2M	48	90	3	3/4	1	6	16	27 1/2	10	3 1/2	36	5 1/2	10 3/4	15	5 1/4	17 1/4	10 3/4	4 5/8	10	17 3/8							30
3	48	90	3	3/4	1	6	16	27 1/2	10	3 1/2	36	5 1/2	10 3/4	15	5 1/4	17 1/4	10 3/4	4 5/8	10	17 3/8							30
4	48	90	3	3/4	1	6	16	27 1/2	10	3 1/2	36	5 1/2	10 3/4	15	5 1/4	17 1/4	10 3/4	4 5/8	10	17 3/8							30
5	48	90	3	3/4	1	6	16	27 1/2	10	3 1/2	36	5 1/2	10 3/4	15	5 1/4	17 1/4	10 3/4	4 5/8	10	17 3/8							30

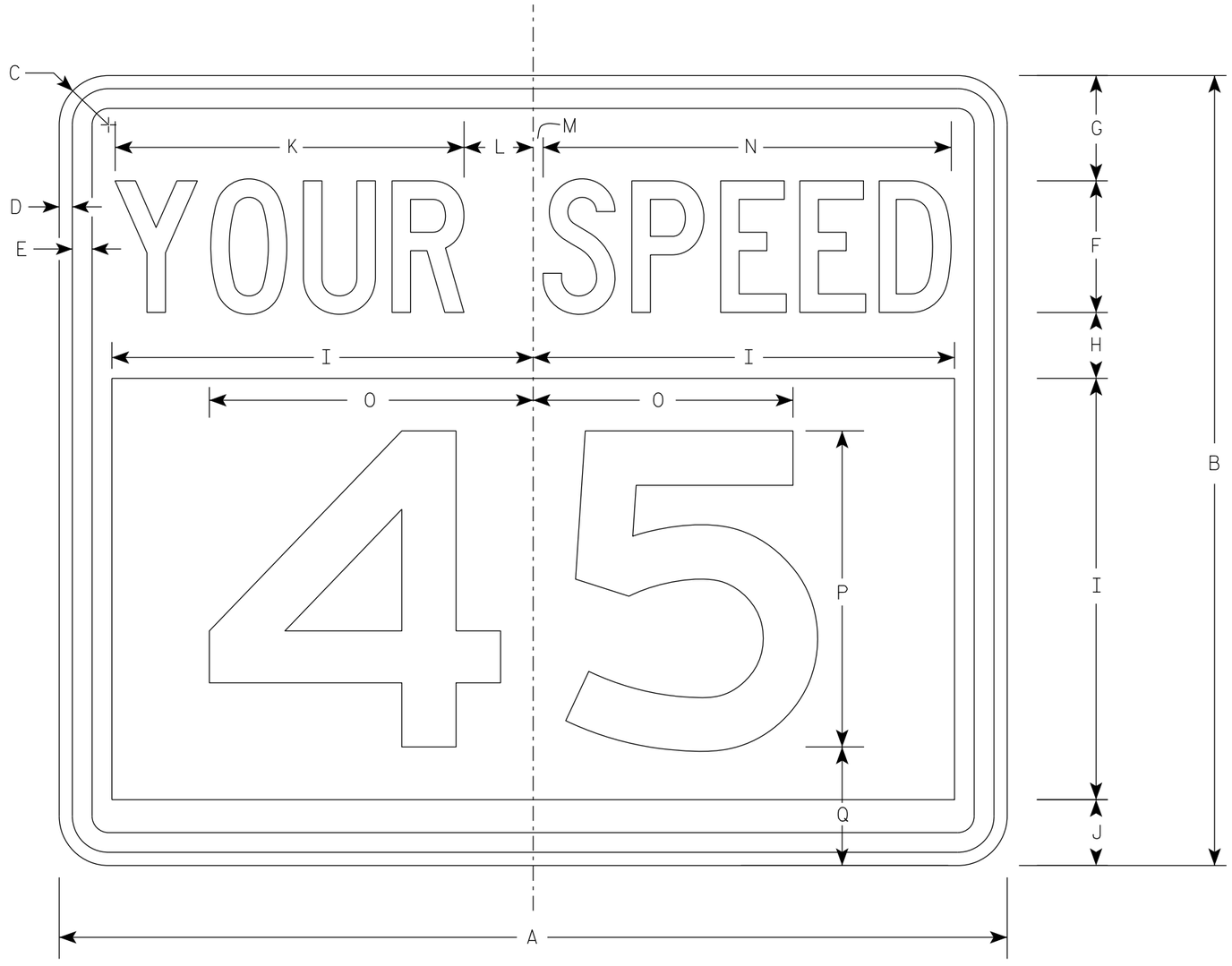
STANDARD SIGN
W13-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/12/2024 PLATE NO. W13-2B.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 46 E



W13-20A

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - Line 1 is series C
   Line 2 is series E
4. Variable speed screen allows minor modifications to accommodate manufacture specifications.

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	18	1 1/2	3/8	1/2	3	2 1/4	1 1/2	10	1 3/8	8 3/8	1 5/8	3/8	9 5/8	VARIES	8	2 1/2										3.0
2M	30	24	1 1/2	3/8	1/2	4	3	2	13	2	10 7/8	2 1/8	3/8	12 3/4	VARIES	10	3 1/2										5.0
3	36	30	1 7/8	1/2	3/4	5	4	2 1/2	16	2 1/2	13 1/4	2 5/8	3/8	15 1/2	VARIES	12	4 1/2										7.5
4	36	30	1 7/8	1/2	3/4	5	4	2 1/2	16	2 1/2	13 1/4	2 5/8	3/8	15 1/2	VARIES	12	4 1/2										7.5
5	48	36	2 1/4	5/8	7/8	6	4 1/4	3	20	2 3/4	17	3 1/4	3/4	19 5/8	VARIES	14	5 3/4										12.0

STANDARD SIGN
W13-20A

WISCONSIN DEPT OF TRANSPORTATION

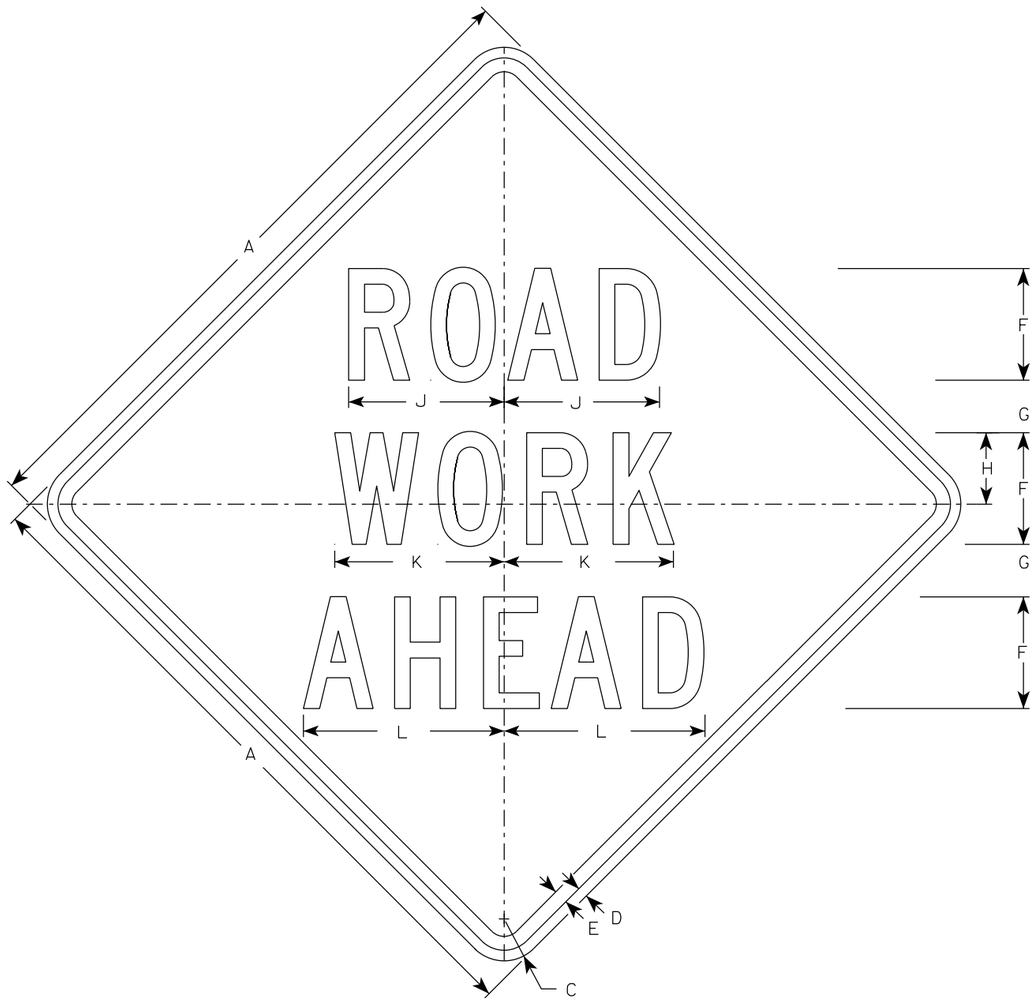
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 3/13/2025 PLATE NO. W13-20A.1

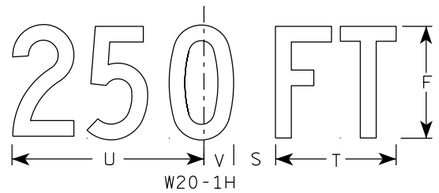
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

NOTES

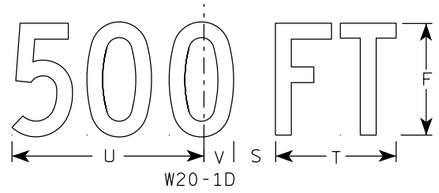
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1A



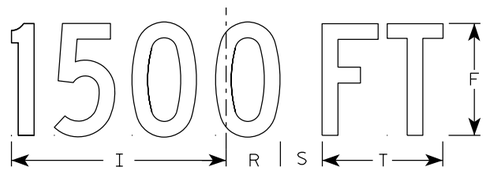
W20-1H



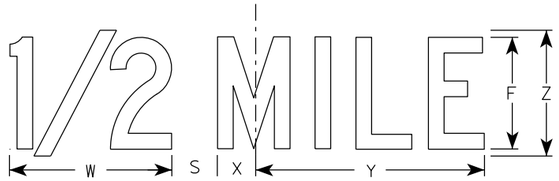
W20-1D



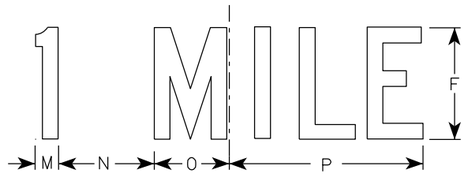
W20-1C



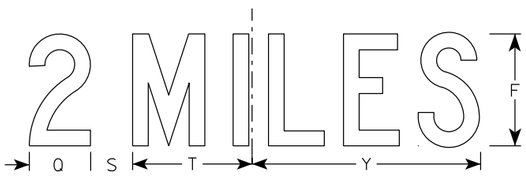
W20-1B



W20-1G



W20-1F



W20-1E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-1.12

PROJECT NO:

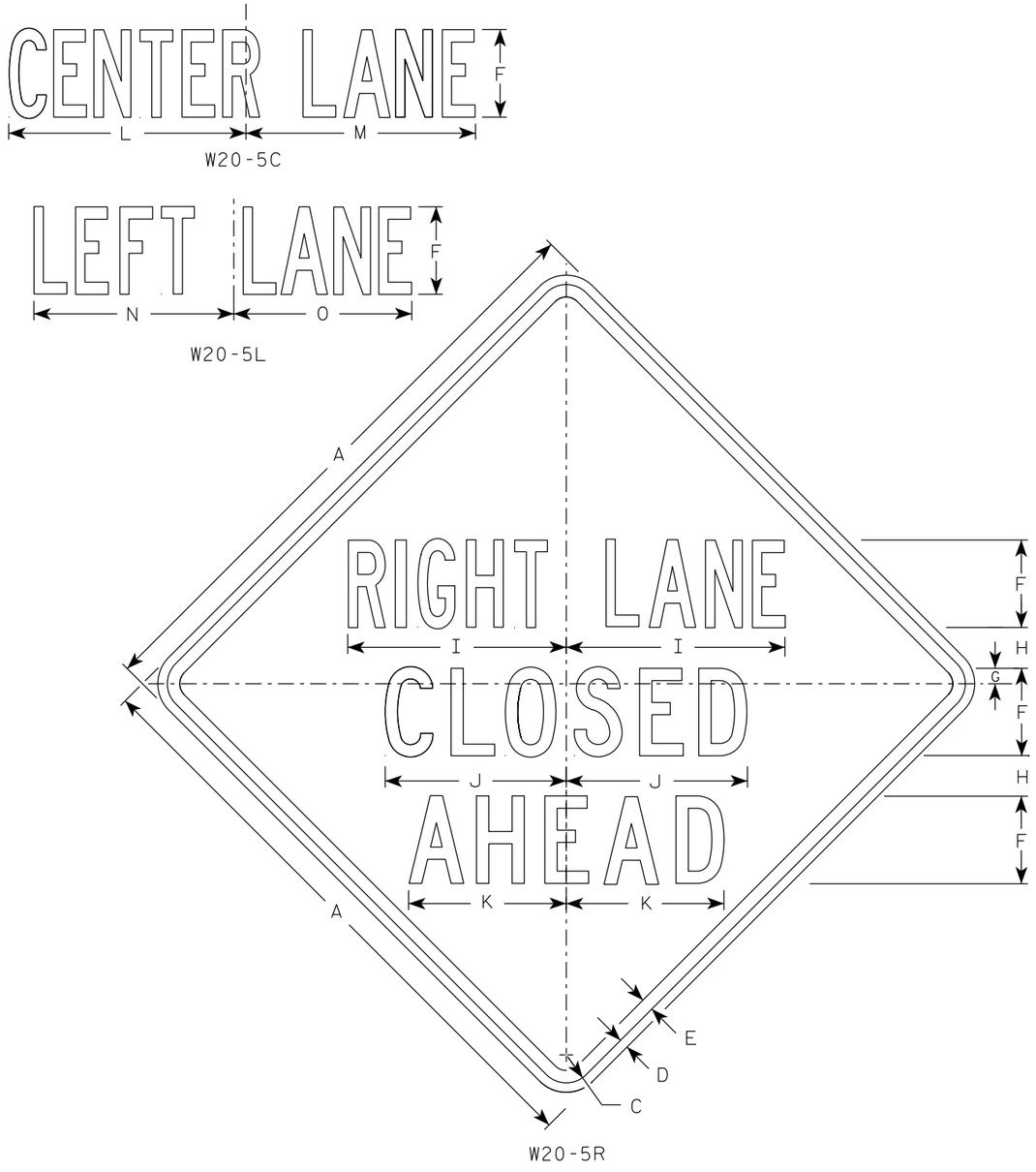
SHEET NO: 48 E

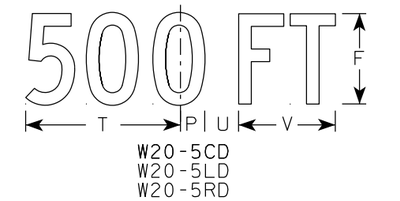
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 10-JAN 2024 11:16 PLOT BY : dotc4c

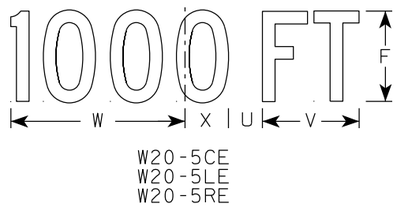
WISDOT/CADDS SHEET 42

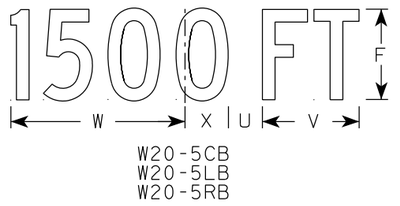
7

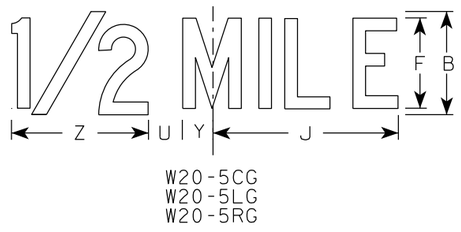
7

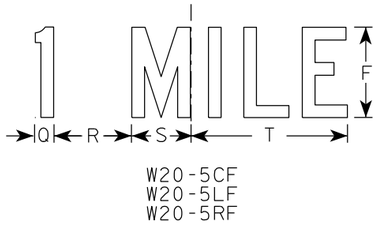












NOTES

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. " _____ LANE" is Series B.
   All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	2 1/4	5/8	3/4	5	7/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

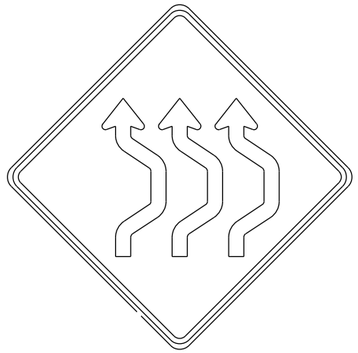
STANDARD SIGN
W20-5C,L,R

WISCONSIN DEPT OF TRANSPORTATION

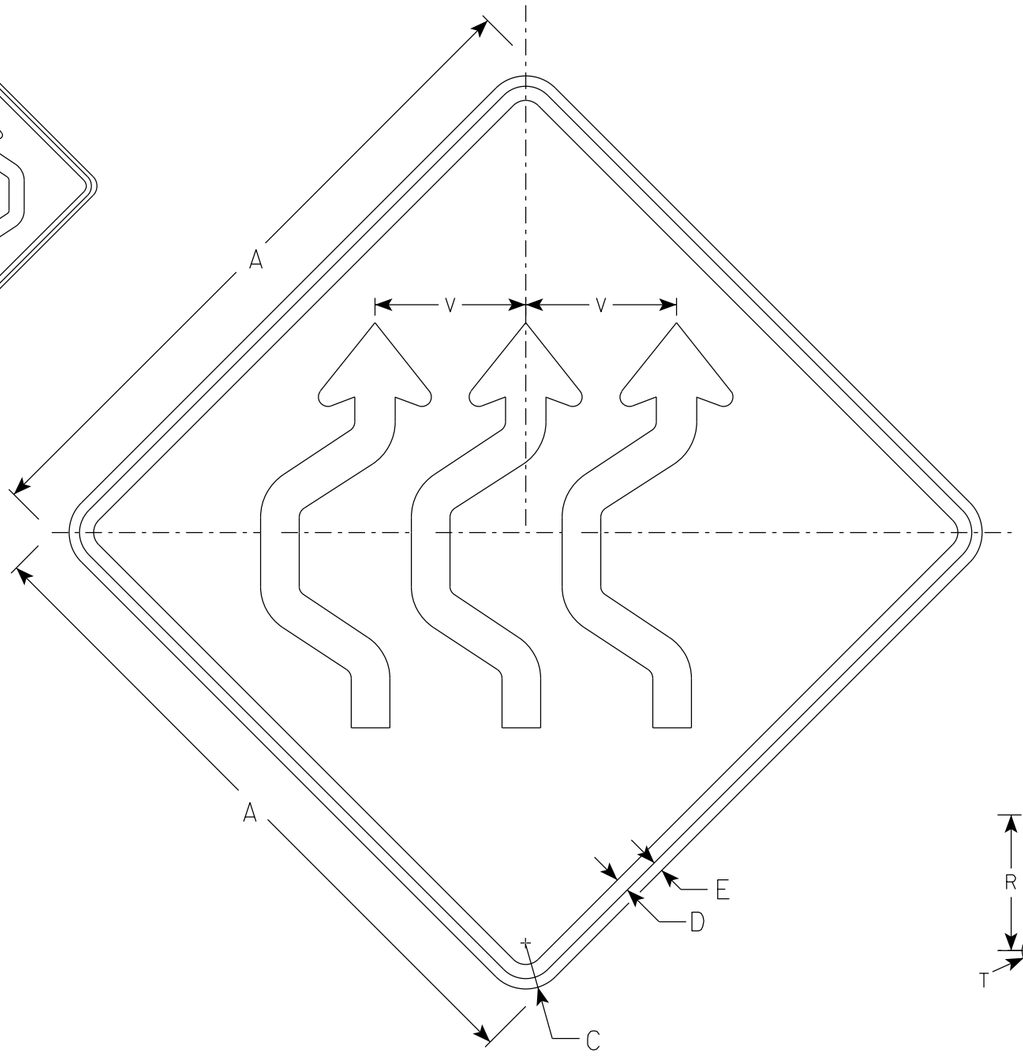
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/26 PLATE NO. W20-5.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 49 E



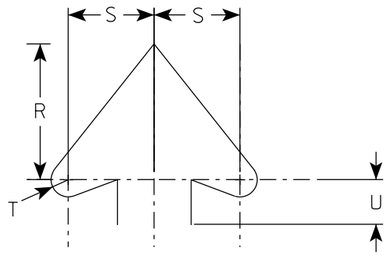
W24-1BR



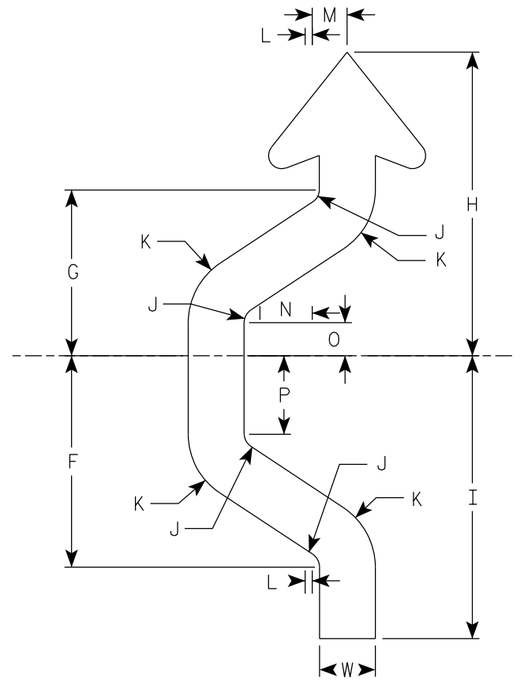
W24-1BL

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. W24-1BR is the same as W24-1BL except reversed along the vertical centerline.



Arrow Detail



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	36		2 1/4	5/8	1/2	7 7/8	6 1/4	11 3/8	10 5/8	1/2	2 5/8	1/4	1 1/4	2	1 1/4	3		4	2 1/2	1/2	1 1/4	8 1/8	2 1/8				9.0
2S	48		3	1	3/4	10 1/2	8 1/4	15	14	3/4	3 1/2	3/8	1 3/4	2 5/8	1 5/8	3 7/8		5 3/8	3 3/8	5/8	1 3/4	10 3/4	2 3/4				16.0
2M	48		3	1	3/4	10 1/2	8 1/4	15	14	3/4	3 1/2	3/8	1 3/4	2 5/8	1 5/8	3 7/8		5 3/8	3 3/8	5/8	1 3/4	10 3/4	2 3/4				16.0
3	48		3	1	3/4	10 1/2	8 1/4	15	14	3/4	3 1/2	3/8	1 3/4	2 5/8	1 5/8	3 7/8		5 3/8	3 3/8	5/8	1 3/4	10 3/4	2 3/4				16.0
4	48		3	1	3/4	10 1/2	8 1/4	15	14	3/4	3 1/2	3/8	1 3/4	2 5/8	1 5/8	3 7/8		5 3/8	3 3/8	5/8	1 3/4	10 3/4	2 3/4				16.0
5	48		3	1	3/4	10 1/2	8 1/4	15	14	3/4	3 1/2	3/8	1 3/4	2 5/8	1 5/8	3 7/8		5 3/8	3 3/8	5/8	1 3/4	10 3/4	2 3/4				16.0

STANDARD SIGN
W24-1BL

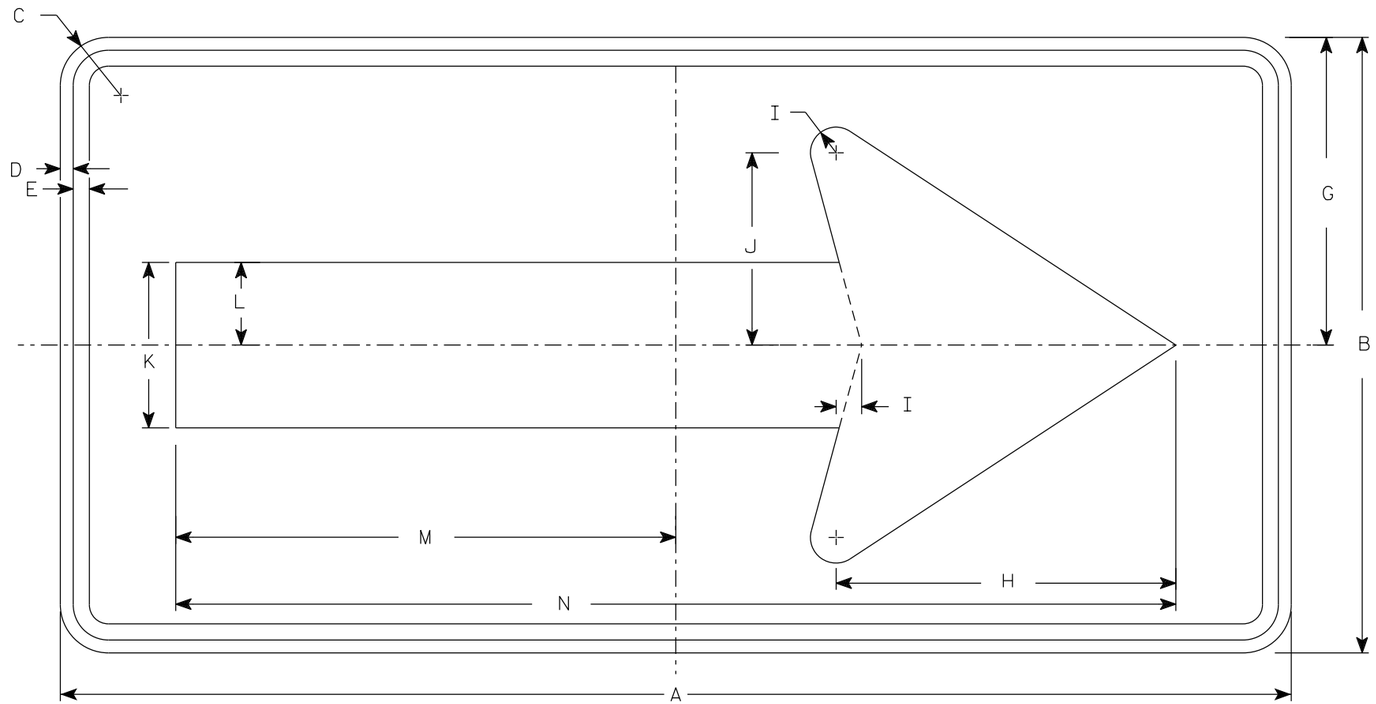
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/22/2024 PLATE NO. W24-1BL.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : FILE NAME :C:\CAEfiles\Projects\tr_stdplate\W241BL.DGN PLOT DATE : 23-JAN 2024 7:04 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



WO1-6

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

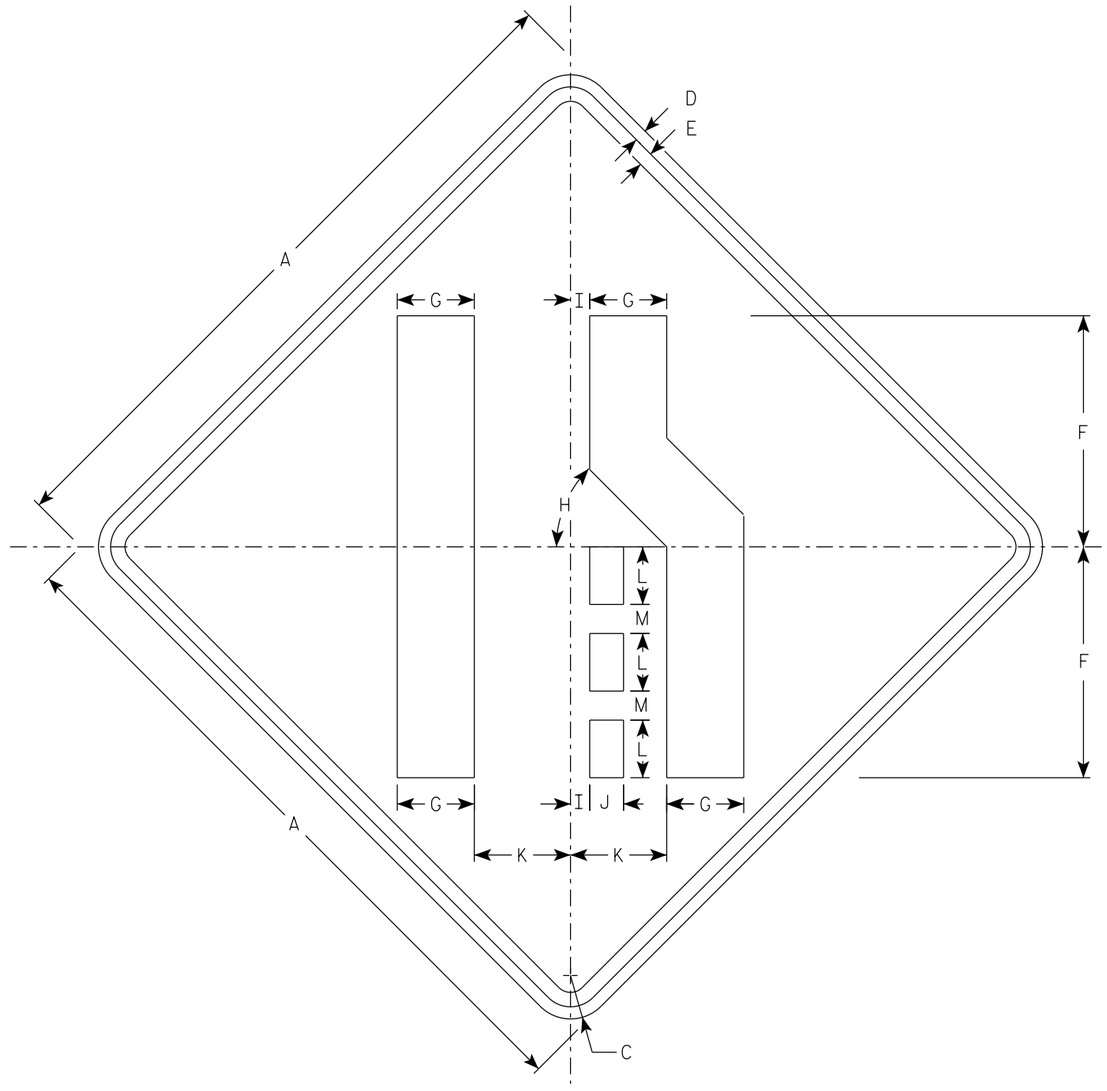
STANDARD SIGN
WO1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. WO1-6.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



W04-2R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

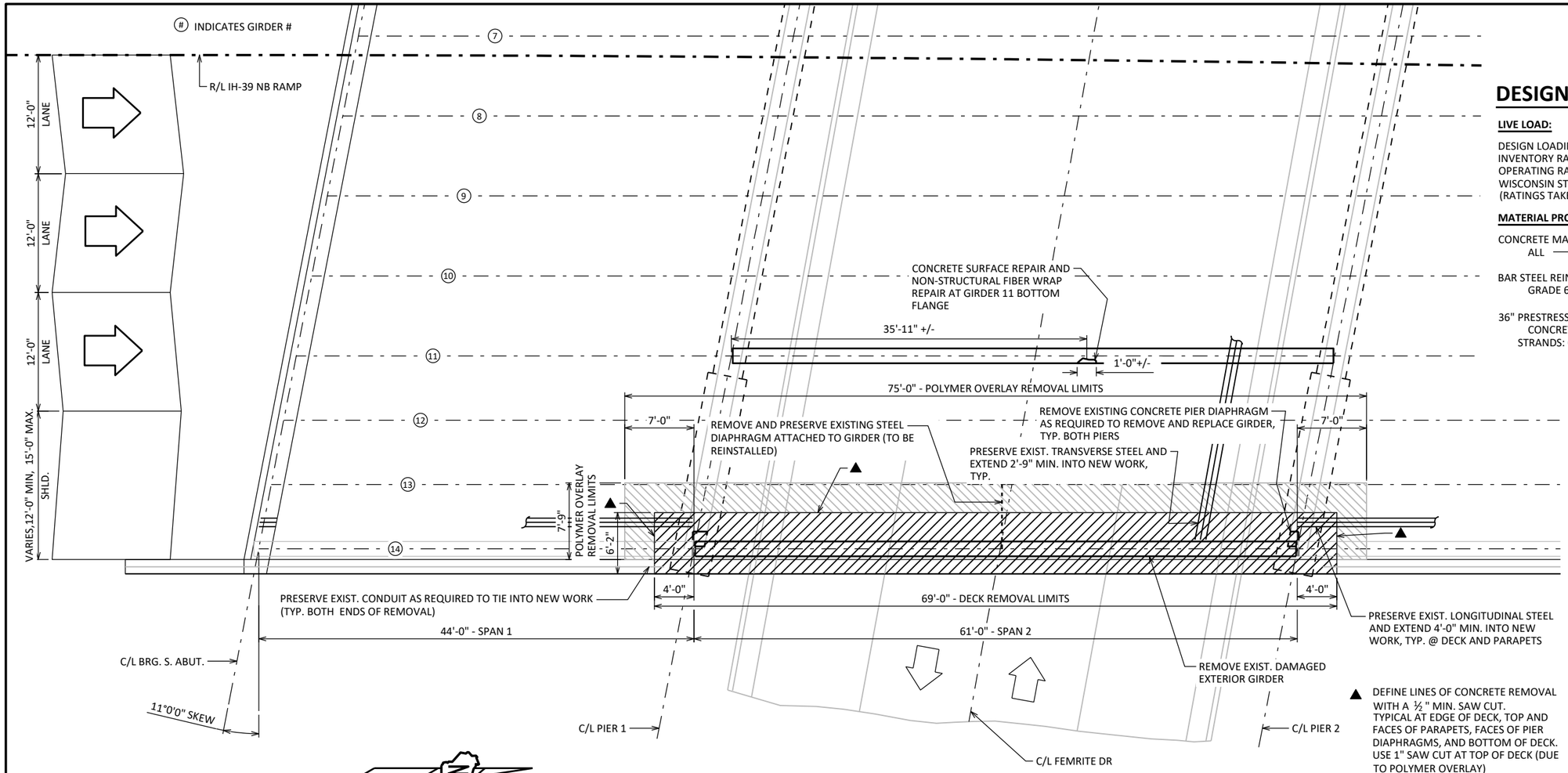
DATE 1/25/2024 PLATE NO. W04-2.2

PROJECT NO:

SHEET NO: 52 E

STATE PROJECT NUMBER

1007-09-82



▲ DEFINE LINES OF CONCRETE REMOVAL WITH A ½ " MIN. SAW CUT. TYPICAL AT EDGE OF DECK, TOP AND FACES OF PARAPETS, FACES OF PIER DIAPHRAGMS, AND BOTTOM OF DECK. USE 1" SAW CUT AT TOP OF DECK (DUE TO POLYMER OVERLAY)

REMOVAL PLAN

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-23
OPERATING RATING: HS-39
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 230 (KIPS)
(RATINGS TAKEN FROM HSIS, 6/26/26)

MATERIAL PROPERTIES:

CONCRETE MASONRY:
ALL — = 4,000 PSI

BAR STEEL REINFORCEMENT
GRADE 60 — f_y = 60,000 PSI

36" PRESTRESSED GIRDERS:
CONCRETE MASONRY — f'_c = 8,000 PSI
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

TRAFFIC DATA

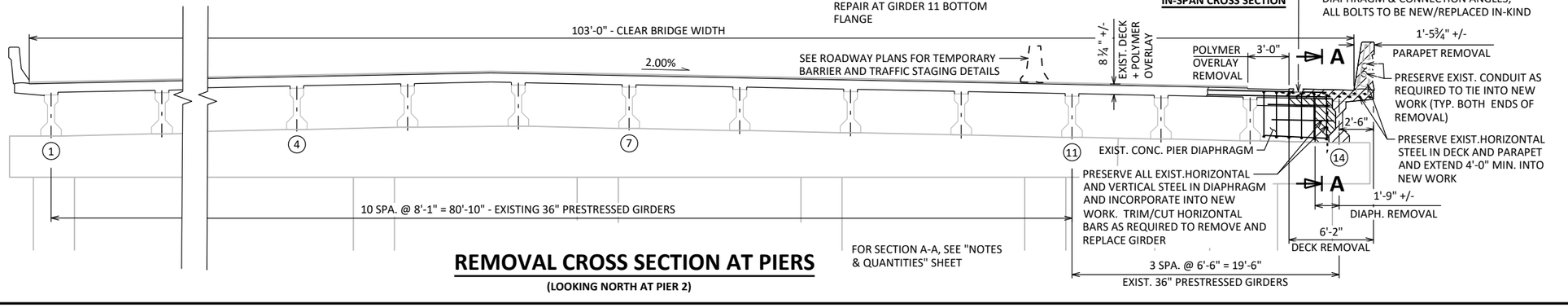
FEATURE ON (IH-39):
ADT = 33,600 (2026)
R.D.S. = 50 MPH

FEATURE UNDER (FEMRITE DR):
ADT = 3,800 (2026)
R.D.S. = 40 MPH

LIST OF DRAWINGS:

1. HIT GIRDER REPLACEMENT
2. NOTES & QUANTITIES
3. 36" PRESTRESSED GIRDER DETAILS
4. STEEL DIAPHRAGM DETAILS
5. DECK REPLACEMENT
6. SUPERSTRUCTURE DETAILS

STRUCTURE DESIGN CONTACTS:
CHRISTOPHER DOLL 608-266-3229
DOMINIQUE BECHLE 608-261-8205



REMOVAL CROSS SECTION AT PIERS

(LOOKING NORTH AT PIER 2)

FOR SECTION A-A, SEE "NOTES & QUANTITIES" SHEET

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION — BUREAU OF STRUCTURES

ACCEPTED DMB 08/02/26
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-13-463

IH-39 NB ON-RAMP OVER FEMRITE DR

COUNTY	CITY
DANE	MADISON

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
CAD	DLM	CAD	DLM

HIT GIRDER REPLACEMENT

SHEET 1 OF 6
53

I.D. 1007-09-02 DATE: JUNE 2026

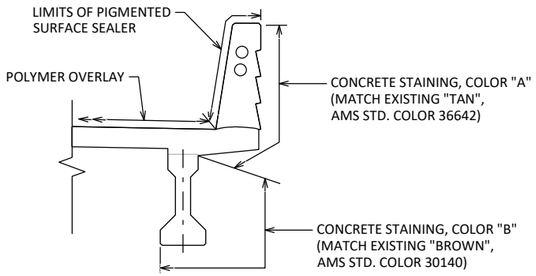
8 8

STATE PROJECT NUMBER

1007-09-82

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0220	REMOVING STRUCTURE B-13-463	EACH	1
501.1000.S	ICE HOT WEATHER CONCRETING	LB	173
502.3210	PIGMENTED SURFACE SEALER	SY	35
503.0136	PRESTRESSED GIRDER TYPE I 36-INCH	LF	61
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	4600
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	2
506.4000	STEEL DIAPHRAGMS B-13-463	EACH	1
509.1500	CONCRETE SURFACE REPAIR	SF	1
509.5100.S	POLYMER OVERLAY	SY	65
509.9015.S	REMOVING POLYMER OVERLAY B-13-463	SY	28
517.1010.S	CONCRETE STAINING B-13-463	SF	751
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	138
SPV.0035	HPC MASONRY STRUCTURES	CY	23
SPV.0165	FIBER WRAP REINFORCING NON-STRUCTURAL	SF	8
	NON-BID ITEMS		
	FILLER	SIZE	½"



POLYMER OVERLAY, PIGMENTED SURFACE SEALER, AND CONCRETE STAINING DETAILS

DETAIL APPLIES TO REPLACED SECTIONS OF DECK/PARAPET/POLYMER OVERLAY/GIRDERS ONLY. SEE PLANS FOR REPLACEMENT LIMITS.

GENERAL NOTES

PRIOR TO REMOVAL, SURVEY AND RECORD EXISTING TOP OF DECK ELEVATIONS ALONG CENTERLINE OF THE GIRDER TO BE REPLACED AT C/L PIERS AND SPAN 1/10TH POINTS. THESE VALUES TO BE USED IN DETERMINING HAUNCH 'T' VALUES AS SHOWN IN THE "36" PRESTRESSED GIRDER DETAILS" SHT.

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS WITHIN THE REPAIR AREA.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "36 PRESTRESSED GIRDER DETAILS" SHEET.

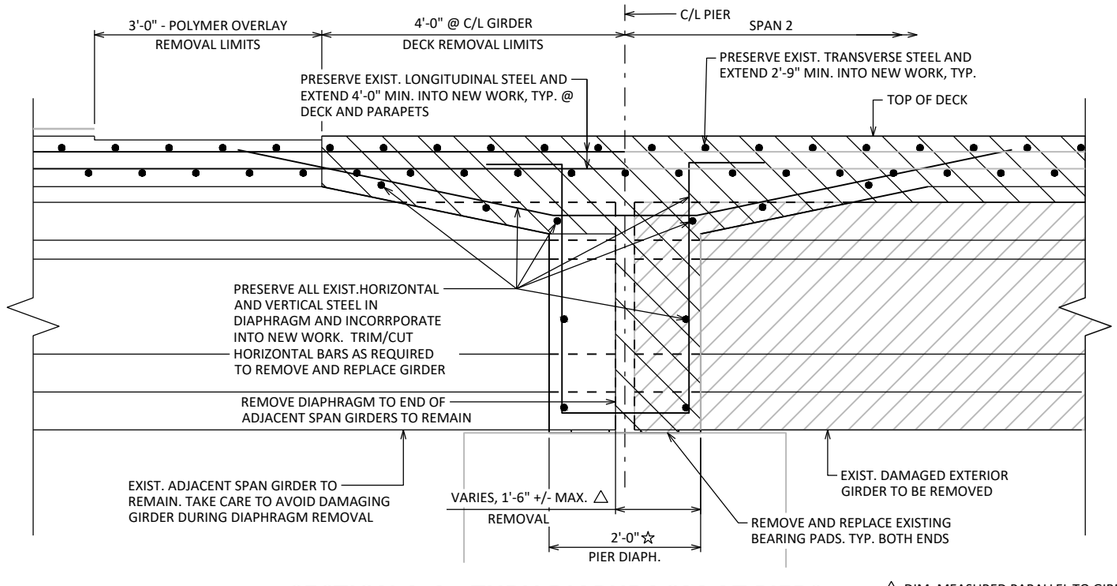
DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS AND 2020 REHABILITATION PLANS.

REMOVAL OF THE EXISTING POLYMER OVERLAY OUTSIDE OF THE DECK REMOVAL AREAS SHALL BE REMOVED FROM THE BRIDGE DECK UNDER BID ITEM "REMOVING POLYMER OVERLAY STRUCTURE B-13-463".

REMOVE AND RE-USE EXISTING IN-SPAN STEEL DIAPHRAGM AND ASSOCIATED CONNECTION HARDWARE BETWEEN EXTERIOR GIRDER TO BE REPLACED AND ADJACENT GIRDER. WORK TO BE INCLUDED IN "STEEL DIAPHRAGMS B-13-463". SEE "STEEL DIAPHRAGM DETAILS" SHEET.

ALL SUPERSTRUCTURE CONCRETE IN DECK AND PARAPETS IS INCLUDED UNDER BID ITEM "HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES".

SHOT BLASTING AND DECK SURFACE PREPARATIONS ARE INCLUDED IN THE BID ITEM "POLYMER OVERLAY"

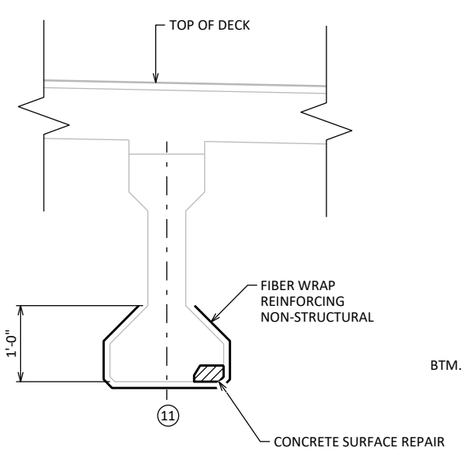


SECTION A-A - THRU DIAPHRAGM AT PIERS

PIER 2 SHOWN, PIER 1 SIMILAR/MIRRORED
(LOOKING EAST)

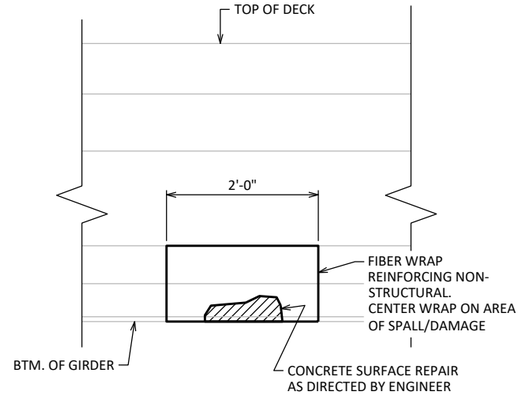
△ DIM. MEASURED PARALLEL TO GIRDER C/L

☆ DIM. MEASURED NORMAL TO C/L OF SUBSTRUCTURE/PIER



SECTION THRU GIRDER #11

(LOOKING NORTH)
SEE "36" PRESTRESSED GIRDER DETAILS" SHEET FOR DETAILED DIMENSIONS OF GIRDER



ELEVATION OF GIRDER #11

GIRDER SURFACE REPAIR NOTES

WORK PERFORMED FOR GIRDER REPAIR SHALL BE INCLUDED IN THE BID ITEMS "CONCRETE SURFACE REPAIR" AND "FIBER WRAP REINFORCING NON-STRUCTURAL".

PERFORM "CONCRETE SURFACE REPAIR" PRIOR TO INSTALLATION OF "FIBER WRAP REINFORCING NON-STRUCTURAL" AS DIRECTED BY THE FIELD ENGINEER AT THE LOCATION INDICATED ON THE PLANS.

FIBER WRAP GIRDER REINFORCING SHALL BE IN ACCORDANCE WITH THE "FIBER WRAP REINFORCING NON-STRUCTURAL" SPECIAL PROVISION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-463

DRAWN BY CAD | PLANS CK'D DLM

NOTES & QUANTITIES

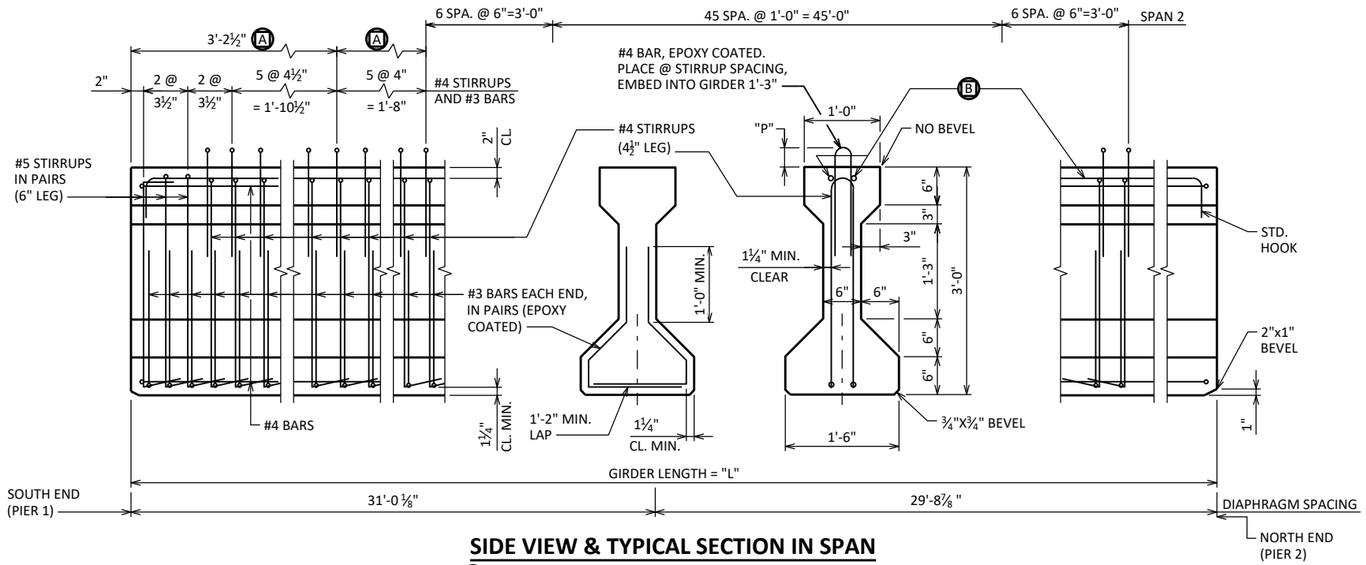
SHEET 2
54

8

8

STATE PROJECT NUMBER

1007-09-82



SIDE VIEW & TYPICAL SECTION IN SPAN

A DETAIL TYP. AT EACH END

B 2 #5 BARS, FULL LENGTH, MIN. LAP = 2'-11" , STD. HOOK AT ENDS

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 2" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

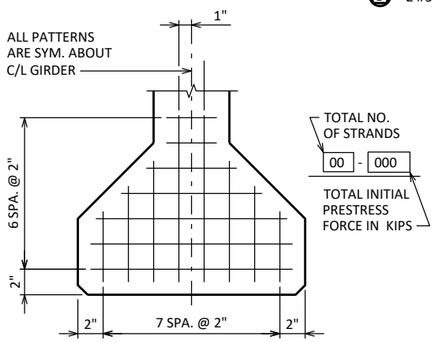
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DESIGN SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO SHOP DRAWING SUBMITTAL.

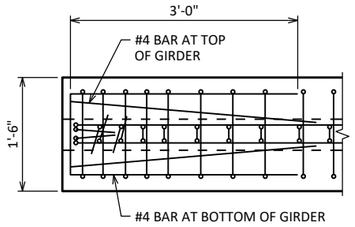
PRESTRESSING STRANDS SHALL BE 0.6" DIA. -7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

BEND EACH END OF #4 STIRRUPS 4 ½" AND #5 STIRRUPS 6".

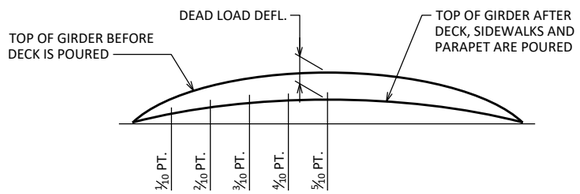
FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM DETAILS" SHEET.



TYP. STRAND PATTERN



TOP VIEW OF GIRDER ENDS

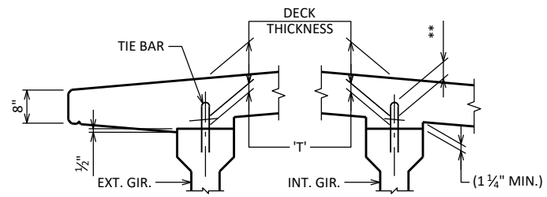


DEAD LOAD DEFLECTION DIAGRAM

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
2	1.2

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.
THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



DECK HAUNCH DETAIL

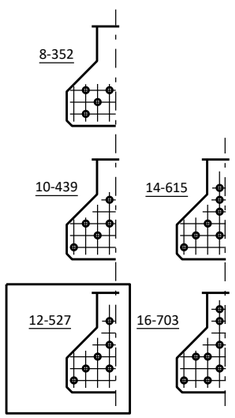
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT C/L OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE (FROM SURVEY PRIOR TO REMOVAL)
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
- POLYMER OVERLAY THICKNESS
+ OVERLAY SURFACE PREPARATION REMOVAL THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 2.4" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



UNDRAPED PATTERN

0.6" DIA. STRANDS

⚹ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L" (FEET)	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (P.S.I.)	"P" (IN.) 1ST ⅓ OF GIRDER	MID ⅓ OF GIRDER	END ⅓ OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ⚹	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	f'ci (P.S.I.) ⚹
2	14	60'-9"	0.2	0.3	0.5	0.5	0.6	0.5	0.5	0.3	0.2	8000	7	7	7	0.6							12	6400

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-463

DRAWN BY CAD | PLANS CK'D DLM

36" PRESTRESSED GIRDER DETAILS

SHEET 3
55

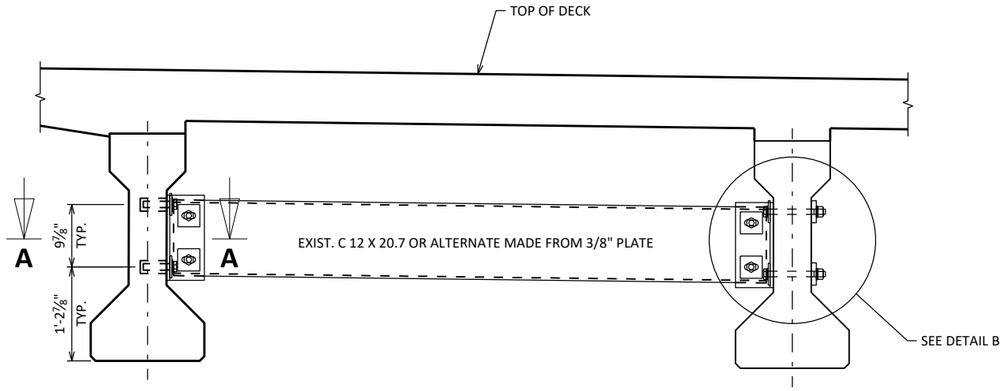
SCALE = 2.00

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STATE PROJECT NUMBER

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NEW EXTERIOR GIRDER **EXISTING INTERIOR GIRDER**

PART TRANSVERSE SECTION AT DIAPHRAGM

NOTES

REMOVE AND RE-USE EXISTING DIAPHRAGM, CONNECTION ANGLES, AND WASHERS. PROVIDE NEW ⅞" DIAMETER BOLTS AND NUTS TO MATCH EXISTING. ALL COST ASSOCIATED WITH STEEL DIAPHRAGM WORK IS INCLUDED IN "STEEL DIAPHRAGMS B-13-463"

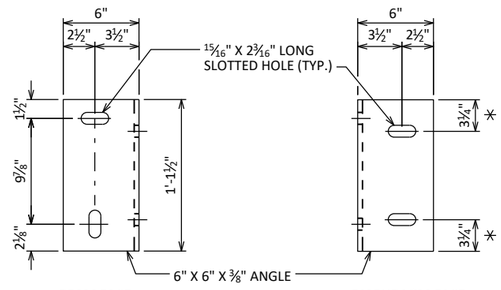
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-13-463", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL NEW BOLTS AND NUTS SHALL BE GALVANIZED AFTER FABRICATION.

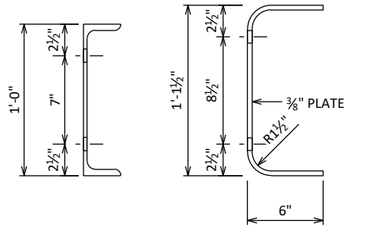
STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.



BEAM FACE **DIAPHRAGM FACE**

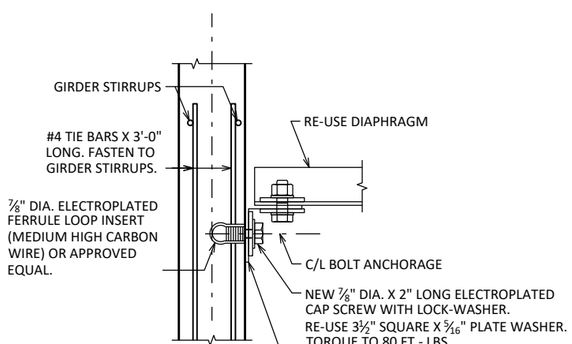
EXISTING DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM



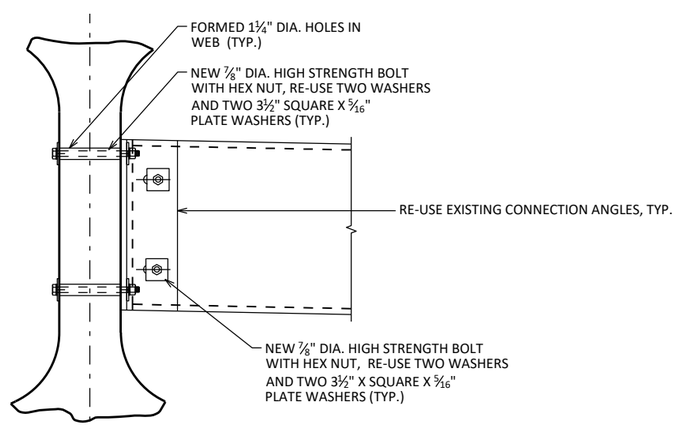
C12X20.7 **ALTERNATE DIAPHRAGM**

SECTION THRU EXIST. DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)



(FOR STAGGERED DIAPHRAGM)

DETAIL B

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-463

DRAWN BY CAD | PLANS CK'D DLM

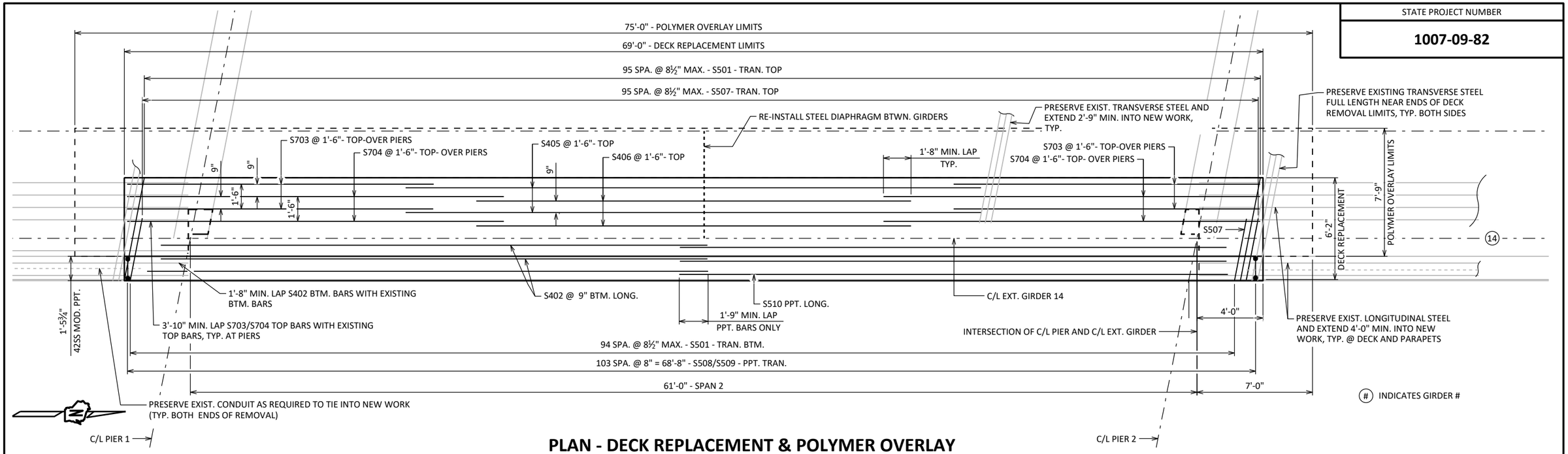
STEEL DIAPHRAGM DETAILS

SHEET 4
56

SCALE = 2.00

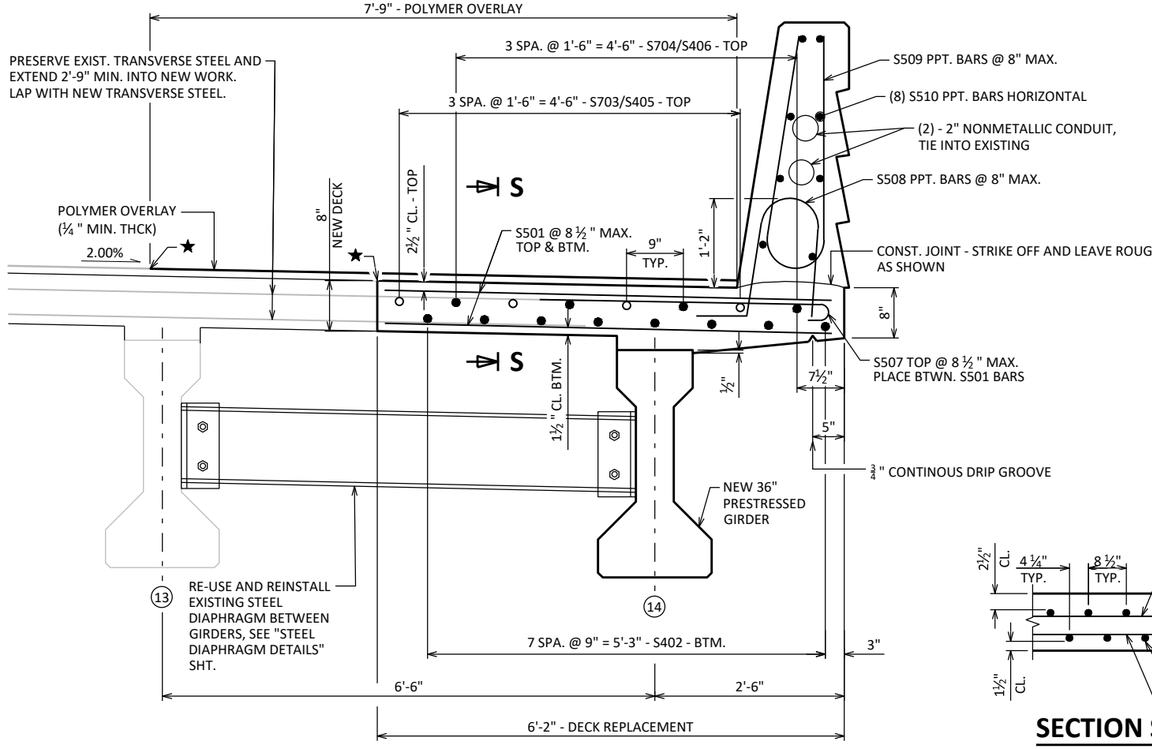
STATE PROJECT NUMBER

1007-09-82



PLAN - DECK REPLACEMENT & POLYMER OVERLAY

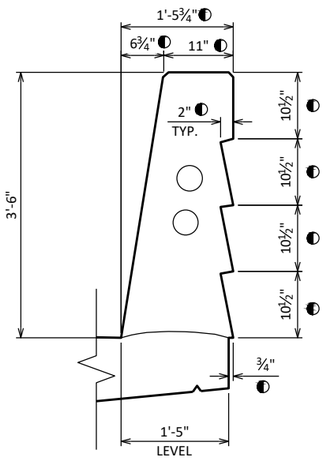
NOTE: TRANSVERSE BARS ARE PLACED PARALLEL TO SKEW



DECK REPLACEMENT CROSS SECTION

★ MATCH/TIE INTO TOP OF EXISTING POLYMER OVERLAY AND TOP OF EXISTING DECK

SECTION S-S



42SS PARAPET MODIFIED DETAIL

◐ ADJUST DIMENSIONS AS REQ'D TO MATCH EXISTING ADJACENT PARAPET SECTIONS IN SPANS 1 & 3

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-463

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DECK REPLACEMENT

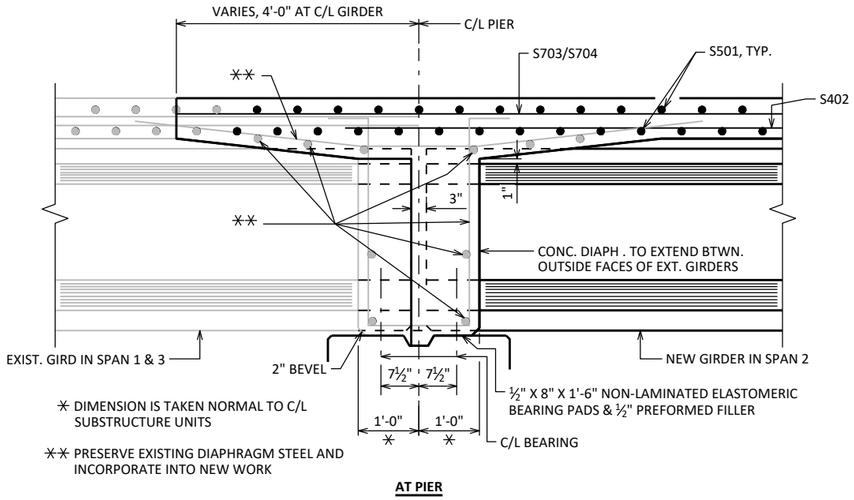
SHEET 5
57

8

8

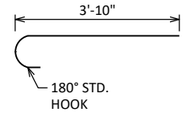
STATE PROJECT NUMBER

1007-09-82

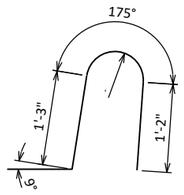


AT PIER

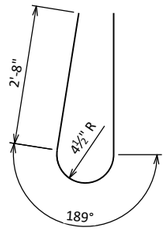
PART. LONGIT. SECTION



S507



S508

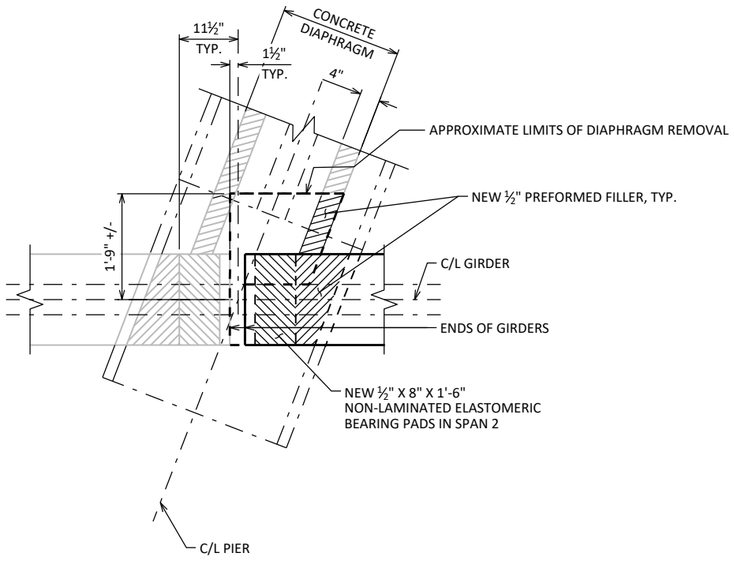


S509

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	191	6'-0"			DECK TRANSVERSE - TOP & BTM.
S402	X	16	33'-3"			DECK LONGITUDINAL - BTM.
S703	X	8	18'-7"			DECK LONGITUDINAL - TOP - OVER PIERS
S704	X	8	22'-10"			DECK LONGITUDINAL - TOP - OVER PIERS
S405	X	4	35'-0"			DECK LONGITUDINAL - TOP
S406	X	4	26'-5"			DECK LONGITUDINAL - TOP
S507	X	96	4'-5"	X		DECK TRANSVERSE- TOP- OVERHANG
S508	X	104	4'-5"	X		PARAPET VERT.
S509	X	104	6'-8"	X		PARAPET VERT.
S510	X	16	34'-0"			PARAPET HORIZ.



AT PIER

BEARING PAD DETAIL

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-463

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SUPERSTRUCTURE DETAILS

SHEET 6
58

SCALE = 1:30

Notes

Wisconsin Department of Transportation

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