wke Dec 12, 2023

PROJECT ID: 2290-03-73

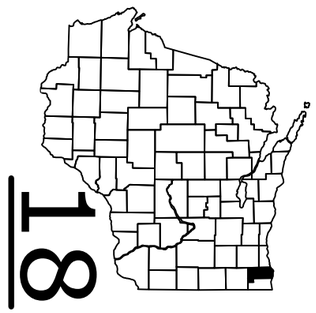
WITH: N/A

COUNTY: RACINE

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 = 444



N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

RACINE - MILWAUKEE

BRIDGE OVER ROOT RIVER B-51-0012

STH 38

RACINE COUNTY

STATE PROJECT NUMBER
2290-03-73

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2290-03-73	WISC 2024105	1

DESIGN DESIGNATION

		STH 38	RAPIDS DR
A.A.D.T.	2016	= 30,700	24,700
A.A.D.T.	2042	= 34,700	27,900
D.H.V.		= 4,200	3,380
D.D.		= 59/41	59/41
T.		= 5.3%	5.3%
DESIGN SPEED		= 40 MPH	40 MPH
ESALS		= 5,800,000	5,800,000

CONVENTIONAL SYMBOLS

PLAN

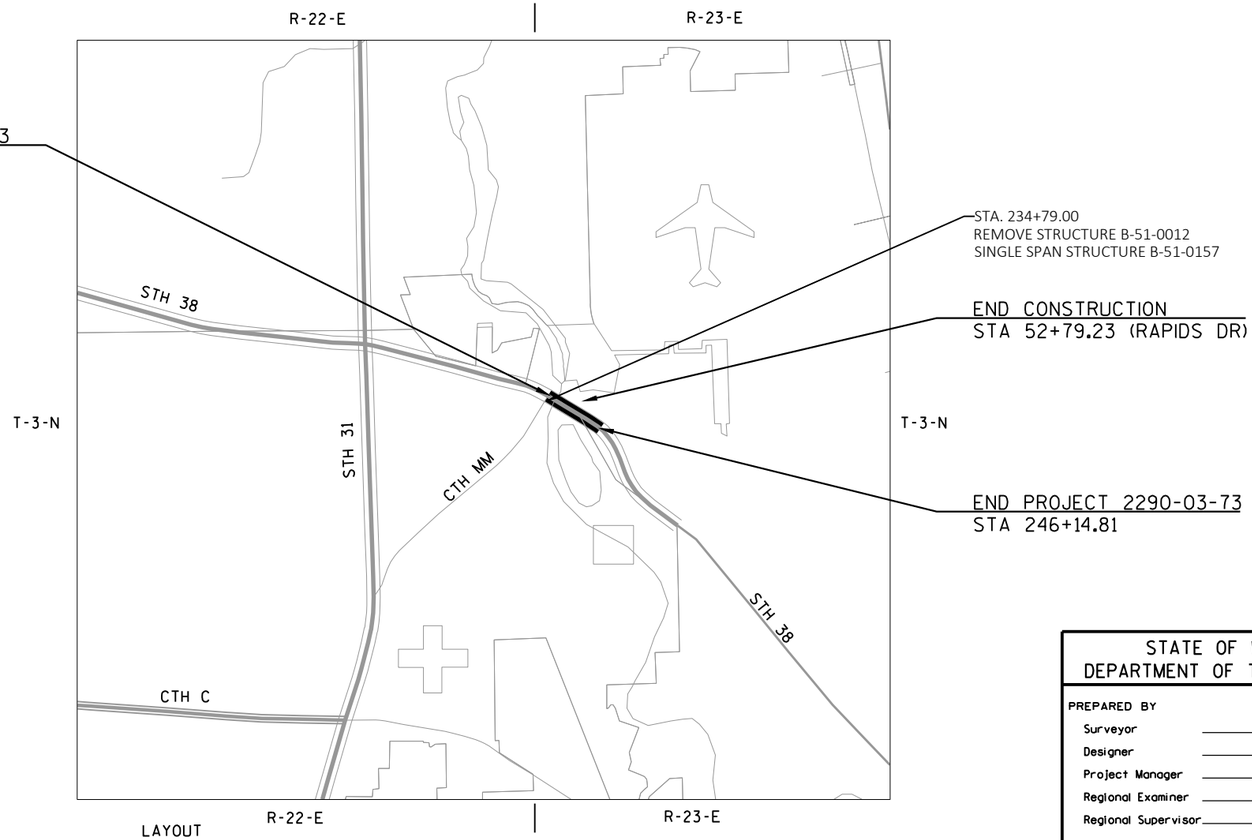
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

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



TOTAL NET LENGTH OF CENTERLINE = 0.258 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, RACINE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF NAVD88 (2012).

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	GRAEF
Designer	MALATHI KARRI
Project Manager	JUSTIN SUYDAM
Regional Examiner	
Regional Supervisor	JANET CANNON

APPROVED FOR THE DEPARTMENT

DATE: 7/31/23 Justin W Suydam (Signature)

E

GENERAL NOTES

VERIFY LIMITS OF TREE OR SHRUB REMOVAL WITH THE ENGINEER BEFORE GRUBBING.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM THE ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES OR FROM GRUBBING OF TREES OR STUMPS SHALL BE BACKFILLED WITH GRANULAR BACKFILL. GRANULAR BACKFILL MATERIAL IS INCIDENTAL TO THE REMOVAL ITEM.

ALL RADIUS DIMENSIONS FOR CURB & GUTTER ARE GIVEN TO THE FLANGE.
ALL ELEVATIONS ALONG CURB & GUTTER ARE GIVEN TO THE FLANGE.
OFFSETS NOTED ARE TO THE FLANGE OR EDGE OF LANE IF NO CURB, UNLESS OTHERWISE NOTED.

THE LOCATION OF KNOWN EXISTING UTILITIES IN THE VICINITY OF THE PROJECT ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITIES IN THE AREA THAT ARE NOT SHOWN.

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

INLET PROTECTION IS REQUIRED AT ALL INLETS AS PER DETAIL OR AS DIRECTED BY THE ENGINEER.

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

CONCRETE JOINTS SHALL MATCH ABUTTING PAVEMENT AND CURB AND GUTTER JOINTS UNLESS OTHERWISE DESIGNATED BY THE ENGINEER.

HMA PAVEMENT WHERE INDICATED ON THE PLANS SHALL CONSIST OF LAYERS AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER:

2" DEPTH	2" OF HMA PAVEMENT 4 MT 58-28 S
4" DEPTH	2" OF HMA PAVEMENT 4 MT 58-28 S AS THE UPPER LAYER 2" OF HMA PAVEMENT 4 MT 58-28 S AS THE LOWER LAYER

RE-TOPSOIL OF GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED AND MULCH.

STOCKPILE LOCATIONS SHALL BE SUBMITTED AND APPROVED BY THE ENGINEER PRIOR TO USE TO CONFIRM THE SIZE AND LOCATION WILL NOT BE A NUISANCE TO THE PUBLIC.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED AND MULCH.

USGS GAGING STATION TO REMAIN FULLY OPERATIONAL THROUGHOUT CONSTRUCTION. CONTACT ROB WASCHBUSCH WITH THE USGS TWO WEEKS PRIOR TO EXCAVATION NEAR THE GAGE STATION.

ORDER OF SECTION 2 SHEETS

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLAN
CURB RAMP DETAILS
PLAN DETAILS
JOINTING DETAILS
EROSION CONTROL
STORM SEWER PLAN
PLANTING PLAN
SIGNING REMOVAL PLAN
PERMANENT SIGNING
LIGHTING REMOVAL
TRAFFIC SIGNAL
PAVEMENT MARKING
TRAFFIC CONTROL
ALTERNATE ROUTE
ALIGNMENT

STANDARD ABBREVIATIONS

AEW	APRON END WALL
AGG	AGGREGATE
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CONC	CONCRETE
CP	CULVERT PIPE
CPCM	CULVERT PIPE CORRUGATED METAL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CSCP	CORRUGATED STEEL CULVERT PIPE
CSPA	CORRUGATED STEEL PIPE ARCH
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC-YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
FE	FIELD ENTRANCE
HERCP	HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE
HMA	HOT MIX ASPHALT
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
NTS	NOT TO SCALE
PAVT	PAVEMENT
PB	PULL BOX
PC	POINT-OF-CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RAD	RADIUS
RC	REVERSE CROWN
RCAEW	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
RCHESS	REINFORCED CONCRETE HORIZONTAL ELLIPTICAL STORM SEWER
RCPSS	REINFORCED CONCRETE PIPE - STORM SEWER
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RT	RIGHT
SALV	SALVAGED
SB	SOUTHBOUND / SIGNAL BASE
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TC	TOP OF CURB
TLE	TEMPORARY LIMITED EASEMENT

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

AGENCIES

RACINE COUNTY
ENGINEERING MANAGER
MR. ROLEY BEHM
14200 WASHINGTON AVENUE
STURTEVANT, WI 53177
(262) 886-8442
ROLAND.BEHM@RACINECOUNTY.COM

VILLAGE OF MOUNT PLEASANT
MR. ANTHONY BEYER
8811 CAMPUS DRIVE
MOUNT PLEASANT, WI 53406
(262) 664-7849
TBEYER@MTPLEASANTWI.GOV

CITY OF RACINE
COMMISSIONER OF PUBLIC WORKS
MR. JOHN ROONEY
730 WASHINGTON AVENUE, ROOM 304
RACINE, WI 53403
(262) 636-9460
JOHN.ROONEY@CITYOFRACINE.ORG

DNR CONTACT

WISCONSIN DEPT. OF NATURAL RESOURCES
MR. BENTON STELZEL
141 NW BARSTOW ROOM 180
WAUKESHA, WI 53188
(262) 623-0194
BENTON.STELZEL@WISCONSIN.GOV

WISDOT CONTACT

WISCONSIN DEPARTMENT OF TRANSPORTATION
SE REGION
MR. JUSTIN SUYDAM
141 NW BARSTOW STREET
P.O. BOX 798
WAUKESHA, WI 53187
(262) 548-8745
JUSTIN.SUYDAM@DOT.WI.GOV

PUBLIC TRANSPORTATION

THE BELLE URBAN SYSTEM (BUS)
MR. WILLIE MCDONALD
1900 KENTUCKY STREET
RACINE, WI 53405
(262) 619-2443
WILLIE.MCDONALD@CITYOFRACINE.ORG

RACINE UNIFIED SCHOOL DISTRICT (BUS)
ADMINISTRATIVE SERVICE CAMPUS
3109 MT. PLEASANT STREET
RACINE, WI 53404
(262) 631-7138
TRANSPORTATION.DEPARTMENT @RUSD.COR

US GEOLOGICAL SURVEY

UPPER MIDWEST WATER SCIENCE CENTER
MR. ROB WASCHBUSCH
8505 RESEARCH WAY
MIDDLETON, WI 53562-3581
(608) 821-3868
RJWASCHB@USGS.GOV

OTHER CONTACTS

SOUTH SHORE FIRE DEPARTMENT
ROBERT STEDMAN
3900 OLD GREEN BAY ROAD
MT. PLEASANT, WI 53406
(262) 995-1200

MOUNT PLEASANT POLICE DEPARTMENT
MATT SOENS
8811 CAMPUS DRIVE
MOUNT PLEASANT, WI 53406
(262) 664-7929

BATTEN INTERNATIONAL AIRPORT
DAVID MANN
3239 N GREEN BAY RD
RACINE, WI 53404
(262) 631-5620
NDMANN@BATTENAIRPORT.AERO

WISDOT LIGHTING
ERIC PEREA
935 S. 60TH STREET
WEST ALLIS, WI 53214
(414) 750-0935
ERIC.PEREA@DOT.WI.GOV

CITY OF RACINE FIRE DEPARTMENT
CHIEF STEVE HANSEN
810 8TH STREET
RACINE, WI 53403
(262) 635-7911

RACINE POLICE DEPARTMENT
CHIEF MAURICE ROBINSON
730 CENTER STREET
RACINE, WI 53403
(262) 635-7710

CITY OF RACINE - LIGHTING
ARA MOLITOR
730 WASHINGTON AVE, ROOM 304
RACINE, WI 53403
(262) 636-9487
MOBILE: (262) 770-7242
ARA.MOLITOR@CITYOFRACINE.ORG

WISDOT SIGNALS
WISDOT SIGNAL OPERATIONS
141 NW BARSTOW ST
WAUKESHA, WI 53187
(414) 750-2605

WISDOT ELECTRICAL FIELD UNIT
935 S. 60TH STREET
WEST ALLIS, WI 53214
(414) 266-1170

UTILITIES

AT&T WISCONSIN
MICHAEL VANBOVEN
411 7TH STREET
RACINE, WI 53403
(262) 676-3958
MV3658@ATT.COM

UTILITIES CONTINUED

CITY OF RACINE - SEWER
ARA MOLITOR
730 WASHINGTON AVE, ROOM 304
RACINE, WI 53403
(262) 636-9487
MOBILE: (262) 770-7242
ARA.MOLITOR@CITYOFRACINE.ORG

RACINE WASTEWATER UTILITY
AMANDA KAMINSKI
2310 CENTER ST
RACINE, WI 53403
(262) 636-9528
MOBILE: (262) 497-5202
AMANDA.KAMINSKI@CITYOFRACINE.ORG

RACINE WATER WORKS COMMISSION
CHAD REGALIA
100 HUBBARD STREET
RACINE, WI 53403
(262) 497-4611
CHAD.REGALIA@CITYOFRACINE.ORG

SPECTRUM COMMUNICATIONS
BEAU ABUYA
1320 N. MARTIN LUTHER KING JR. DRIVE
MILWAUKEE, WI 53212
(414) 758-9241
BEAU.ABUYA@CHARTER.COM

VILLAGE OF MOUNT PLEASANT - SANITARY SEWER
TONY BEYER
8811 CAMPUS DR
MOUNT PLEASANT, WI 53406
(262) 664-7849
TBEYER@MTPLEASANTWI.GOV

WE ENERGIES - ELECTRIC
WE ENERGIES UTILITY COORDINATOR
500 S. 116TH STREET
WEST ALLIS, WI 53214
(414) 221-2738
WE-UTILITY-RELOCATIONS@WE-ENERGIES.COM

CONSTRUCTION CONTACT:
JAMES NELSON
7815 NORTHWESTERN AVENUE
RACINE, WI 53406
(262) 884-6734
MOBILE: (414) 315-1189
JAMES.NELSON@WE-ENERGIES.COM

WE ENERGIES - GAS
WE ENERGIES UTILITY COORDINATOR
500 S. 116TH STREET
WEST ALLIS, WI 53214
(414) 221-2738
WE-UTILITY-RELOCATIONS@WE-ENERGIES.COM

CONSTRUCTION CONTACT
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RACINE, WI 53406
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MOBILE: (262) 939-9814
CHRIS.DEGRAVE@WE-ENERGIES.COM

WINDSTEAM KDL, LLC
LORI KETTER
314 N DANZ AVE
GREEN BAY, WI 54302
(414) 274-9215
LORI.KETTER@WINDSTREAM.COM

2

2

N

BEGIN CONSTRUCTION
STA. 220+56.47, STH 38

220+00

222+00

224+00

226+00

228+00

230+00

PI: 223+83.61

PI: 227+80.83

PC: 228+09.96

SIGNALIZED
INTERSECTION

PI: 232+16.03

BEGIN CONSTRUCTION
STA. 22+50.00 (NB STH 38)

EXISTING STRUCTURE ID: B-51-0012
NEW STRUCTURE ID: B-51-0157

VILLAGE OF MOUNT PLEASANT
CITY OF RACINE

RAPIDS COURT

BEGIN PROJECT 2290-03-73
STA. 232+50.00

CTH MM

WETLANDS (TYP.)

ROOT RIVER

S-51-607 REPLACE POLE

S-51-263 FULL SPAN
SIGN STRUCTURE

CONNECTING HIGHWAY LIMIT

STH 38 (NORTHWESTERN AVENUE)

S-51-262 FULL SPAN
SIGN STRUCTURE

S-51-616 CANTILEVER
SIGN STRUCTURE

55+00

56+00

57+00

54+00

53+00

RAPIDS DR

END CONSTRUCTION
STA 52+79.23

PC: 242+43.20

CITY OF RACINE

SIGNALIZED
INTERSECTION

VILLAGE OF MOUNT PLEASANT

MUNICIPAL BOUNDARY

S-51-615 FULL SPAN
SIGN STRUCTURE

END CONSTRUCTION 2290-03-73
STA 24+33.17 (SB STH 38)

END PROJECT 2290-03-73
STA 246+14.81

KAREN A. NELSON
MEMORIAL DOG PARK

248+00

PT: 248+97.43

250+00

END CONSTRUCTION
STA 252+11.81, STH 38

PC: 252+09.49

CITY OF RACINE
VILLAGE OF MOUNT PLEASANT

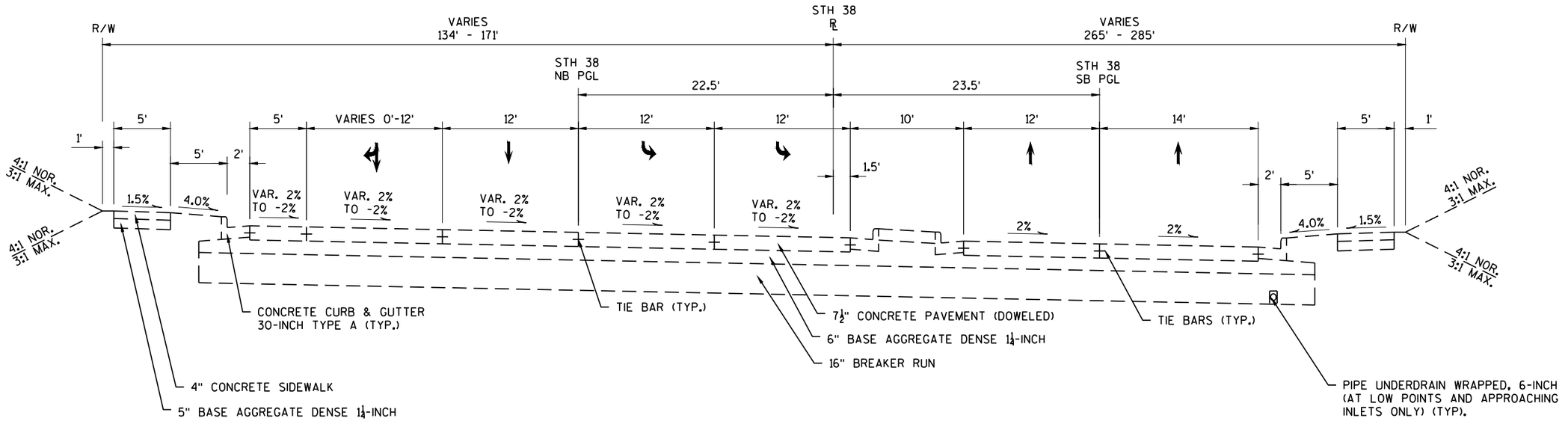
QUARRY LAKE

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - 01

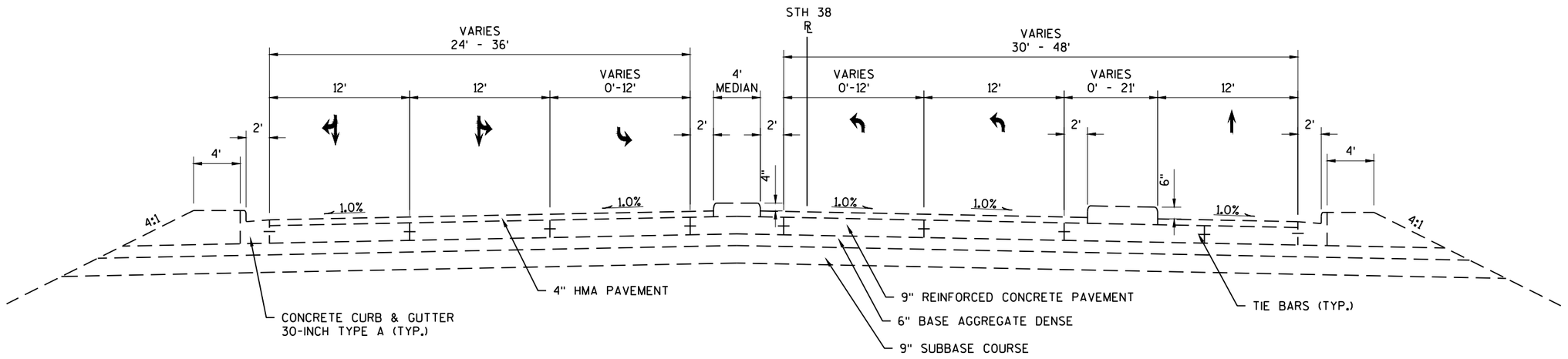
PLOT DATE : 7/31/2023 1:22 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42



EXISTING TYPICAL SECTION - STH 38

STA. 22+50 - STA. 24+01.19 (NB STH 38)
STA. 13+45.12 - STA. 14+09.30 (SB STH 38)

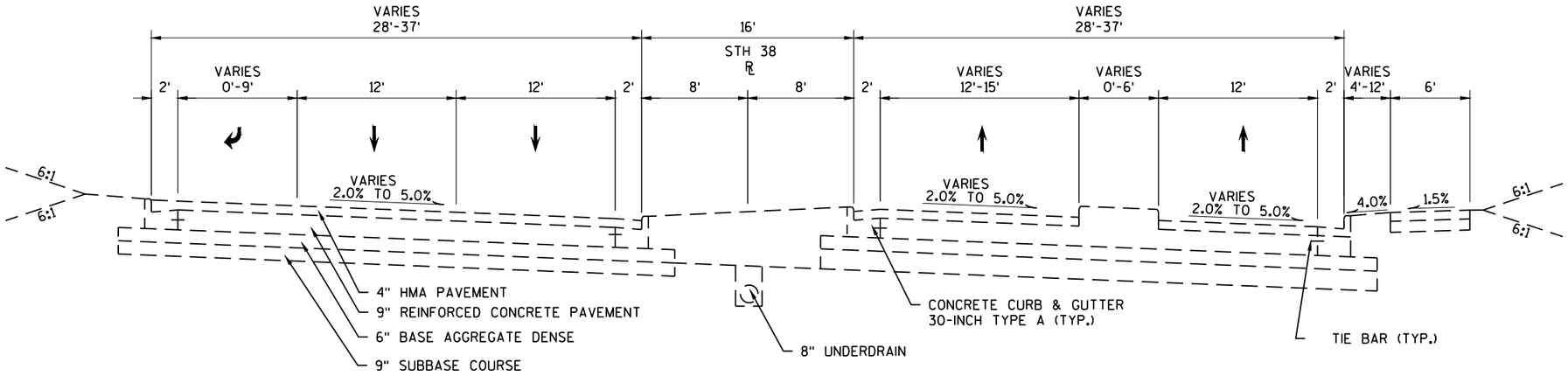


EXISTING TYPICAL SECTION - STH 38

STA. 25+48.73 - STA. 30+40 (NB STH 38)
STA. 15+56.84 - STA. 20+40 (SB STH 38)

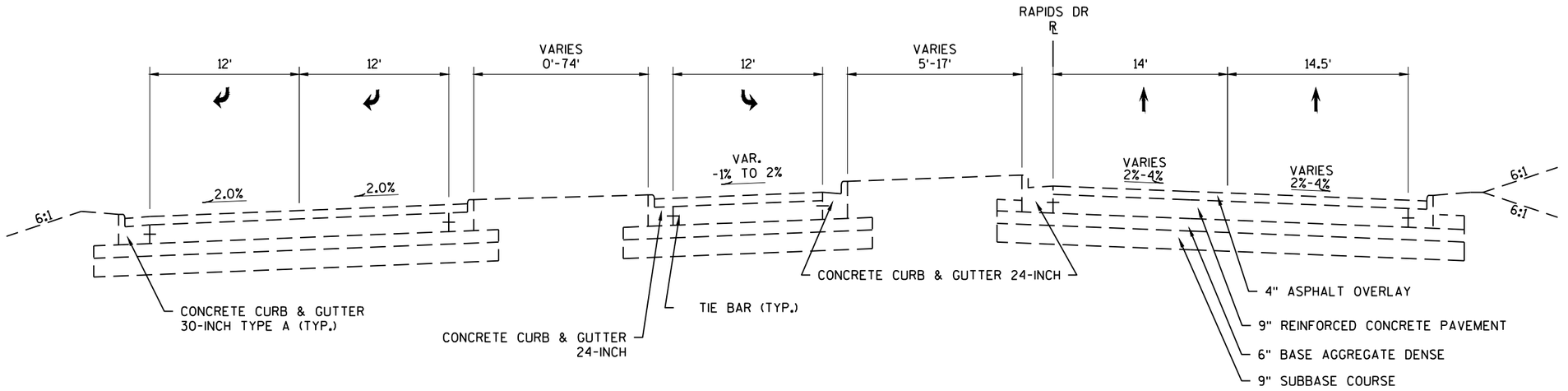
PROJECT NO:2290-03-73	HWY: STH 38	COUNTY:RACINE	STH 38 TYPICAL SECTIONS	SHEET 4 E

2



EXISTING TYPICAL SECTION - STH 38

STA. 30+40 - STA. 36+19 (NB STH 38)
STA. 20+40 - STA. 24+33 (SB STH 38)

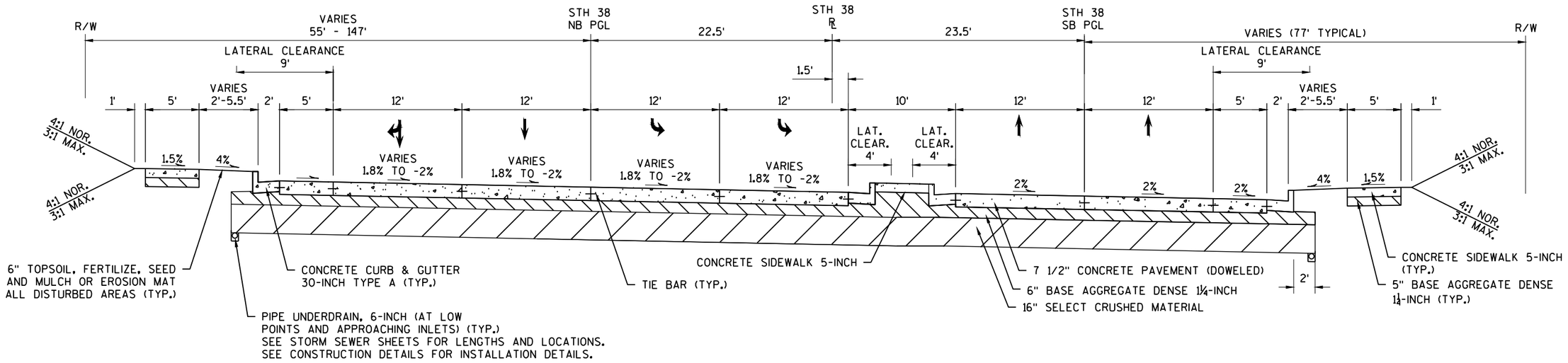


EXISTING TYPICAL SECTION - RAPIDS DRIVE

STA. 50+47 - STA. 52+79.23

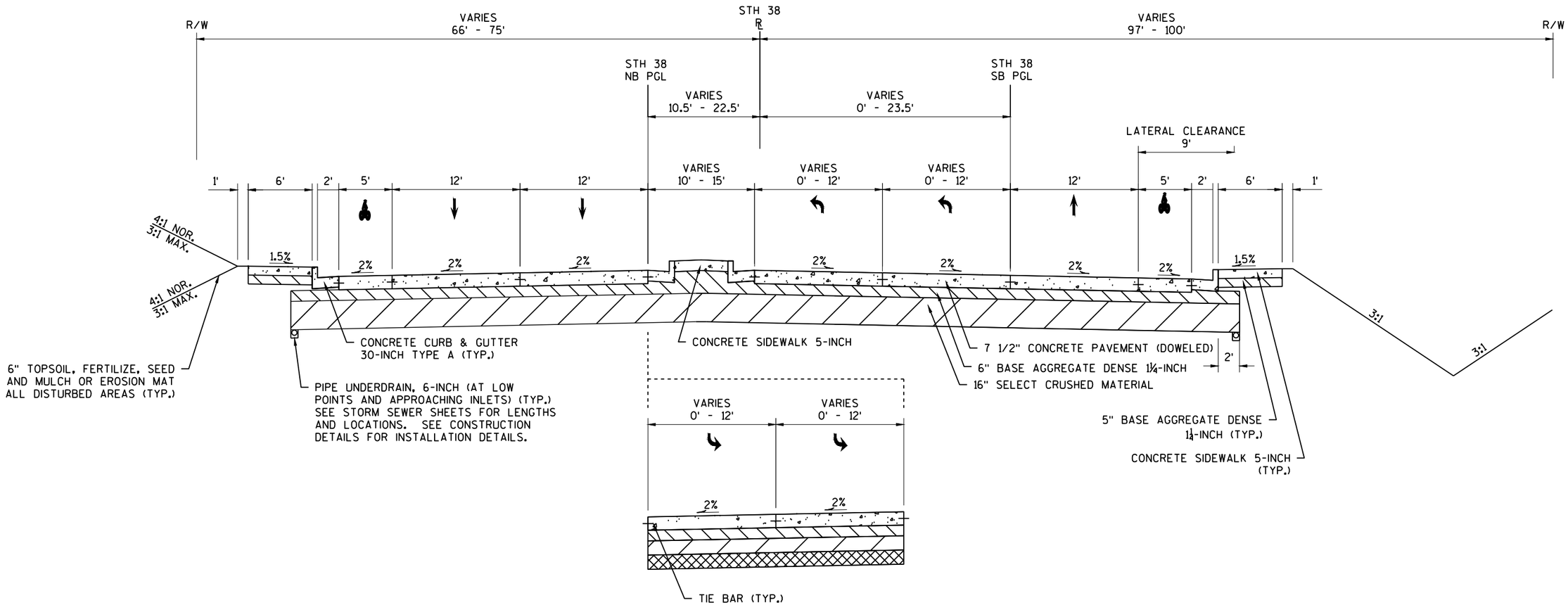
PROJECT NO:2290-03-73	HWY: STH 38	COUNTY:RACINE	STH 38 TYPICAL SECTIONS	SHEET 5 E

2



TYPICAL FINISHED SECTION - STH 38

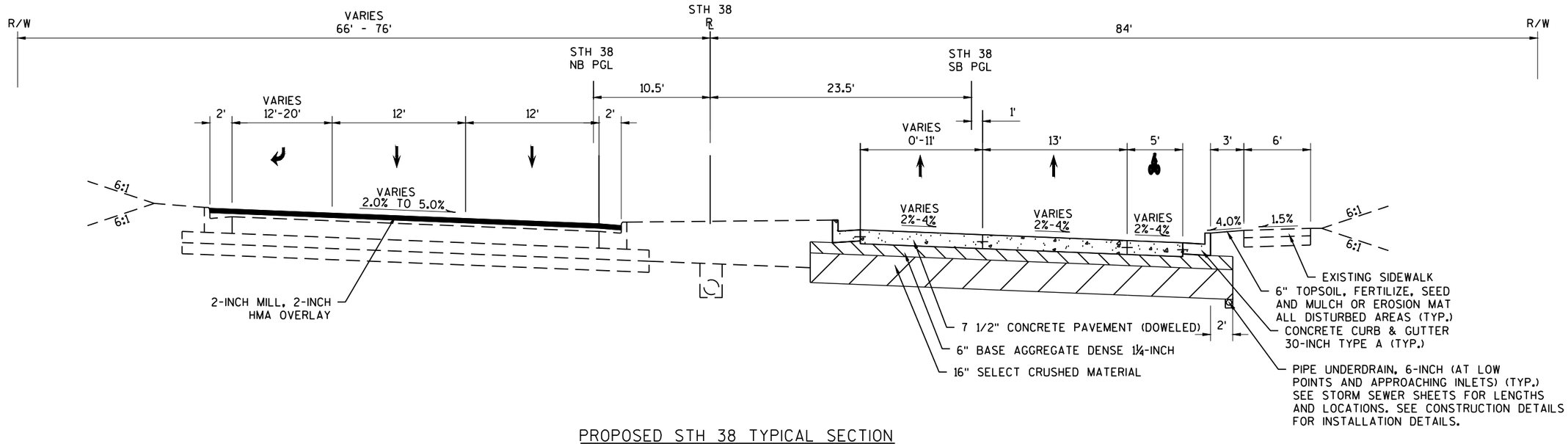
STA. 22+50 - STA. 24+01.19 (NB STH 38)
STA. 13+45.12 - STA. 14+09.30 (SB STH 38)



STA. 25+48.73 - STA. 27+62 (NB STH 38)

TYPICAL FINISHED SECTION - STH 38

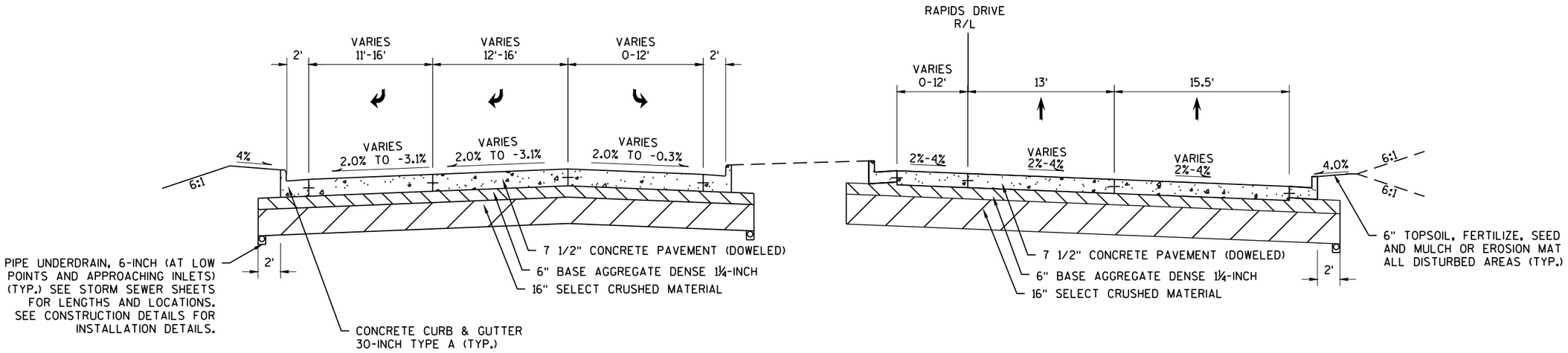
STA. 25+48.73 - STA. 32+28 (NB STH 38)
STA. 15+56.84 - STA. 21+47 (SB STH 38)



PROPOSED STH 38 TYPICAL SECTION

STA. 32+28 - STA. 36+19 (NB STH 38)
STA. 21+47 - STA. 24+33 (SB STH 38)

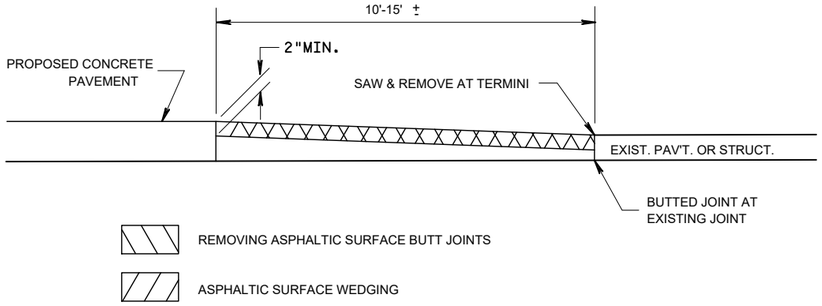
*MATCH EXISTING CURB AT STA 243+71



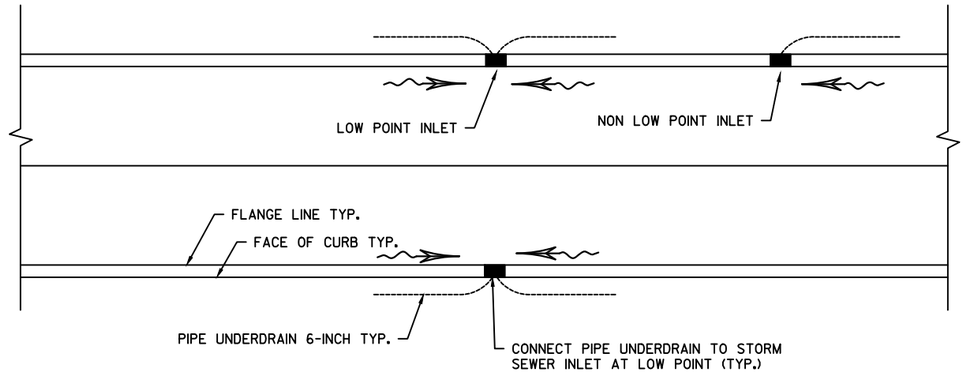
PROPOSED RAPIDS DRIVE TYPICAL SECTION

STA. 50+47 - STA. 52+79

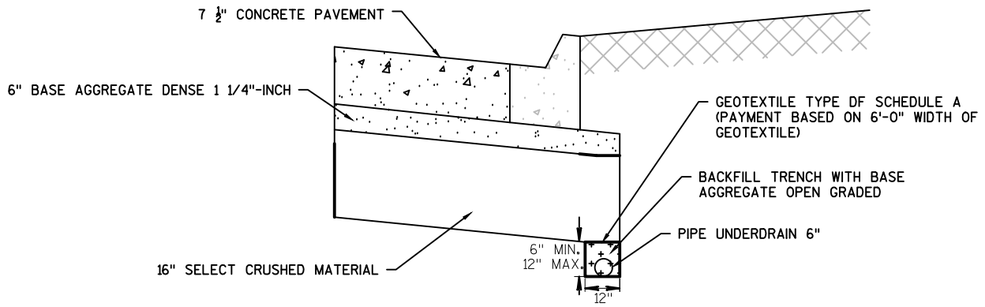
PROJECT NO:2290-03-73	HWY: STH 38	COUNTY:RACINE	STH 38 TYPICAL SECTIONS	SHEET 8 E



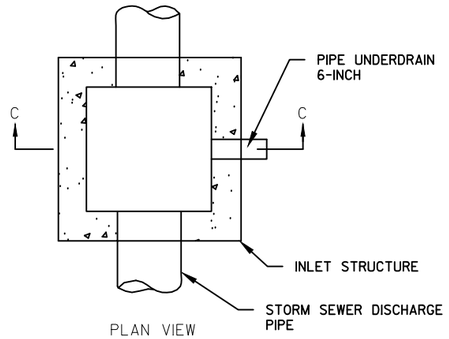
OVERLAP JOINT, BUTTED DETAIL



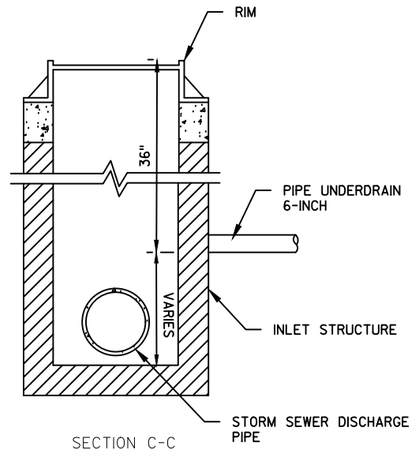
PLAN



UNDERDRAIN TRENCH DETAIL



PLAN VIEW



SECTION C-C

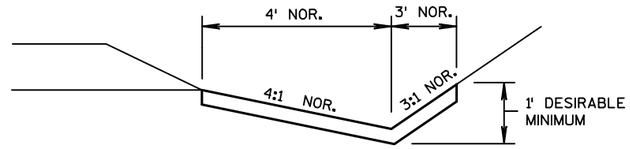
UNDERDRAIN OUTFALL AT INLET

NOTES:

1. CONNECTIONS TO INLETS OR MANHOLES IN MEDIAN SHALL USE PIPE UNDERDRAIN, 6-INCH

2. PROVIDE 6" DIA. OPENINGS FOR UNDERDRAIN PIPE A MINIMUM OF 36" BELOW THE RIM ELEVATION. CORE INTO EXISTING INLETS TO REMAIN.

3. SEE STORM SEWER PLAN FOR PIPE UNDERDRAIN LOCATIONS.



EROSION MAT DETAIL FOR DITCHES

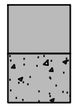
2

EXCAVATING, PREPARING THE FOUNDATION AND SHIMMING ARE INCIDENTAL TO THE MANHOLE BID ITEMS.

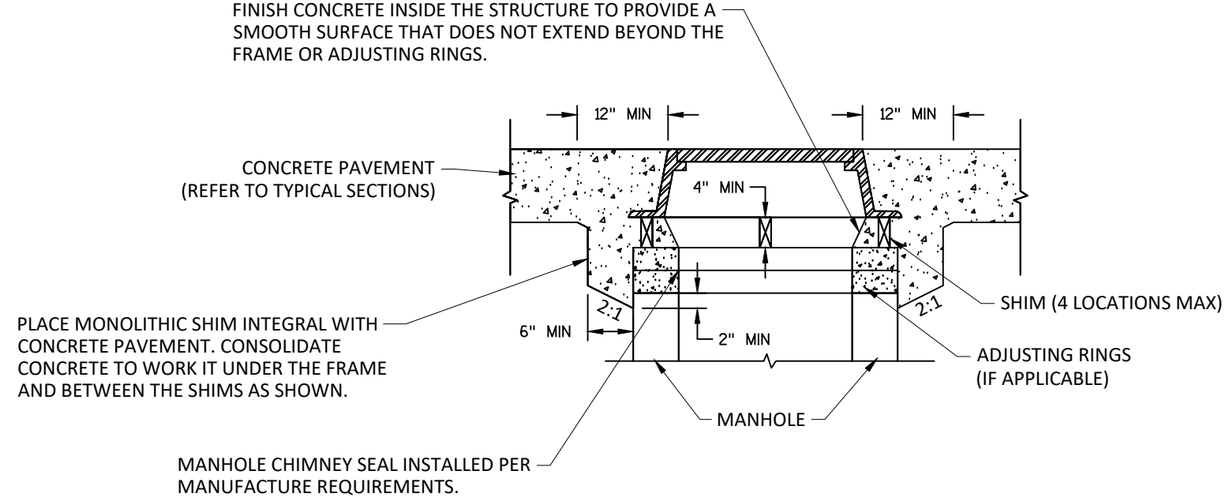
MONOLITHIC SHIM CONCRETE, CONCRETE PLACEMENT AND FINISHING IS INCIDENTAL TO THE CONCRETE PAVEMENT BID ITEMS.

PREVENT CONCRETE AND OTHER DEBRIS FROM FALLING INTO STRUCTURE.

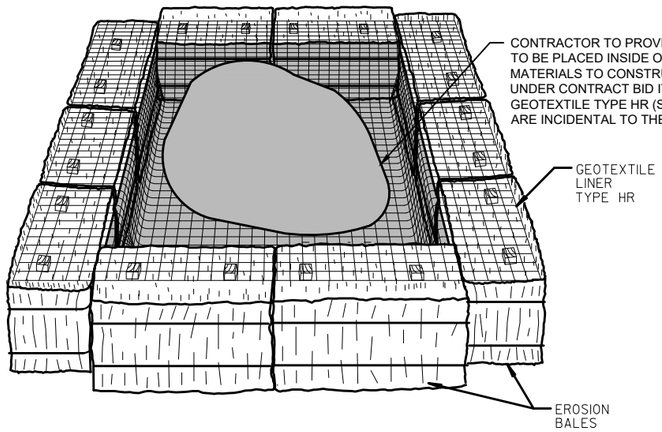
REFER TO PLAN DETAILS AND MISCELLANEOUS QUANTITIES FOR ADDITIONAL INFORMATION.



MONOLITHIC CONCRETE



ADJUSTING / RECONSTRUCTING SANITARY MANHOLE - MONOLITHIC SHIM



CONTRACTOR TO PROVIDE A SEDIMENT BAG OR APPROVED EQUAL TO BE PLACED INSIDE OF BASIN. THE COST OF ALL WORK AND MATERIALS TO CONSTRUCT THE SETTLING BASIN WILL BE PAID UNDER CONTRACT BID ITEMS EROSION BALES (EACH) AND GEOTEXTILE TYPE HR (SY). SEDIMENT FILTER BAG AND DEWATERING ARE INCIDENTAL TO THE BID ITEMS THE WORK IS ASSOCIATED WITH.

(SIZE TO BE DETERMINED IN FIELD AS INDICATED BELOW:)

STORAGE VOLUME (C.F.) = 16 X GPM (PUMP RATE)

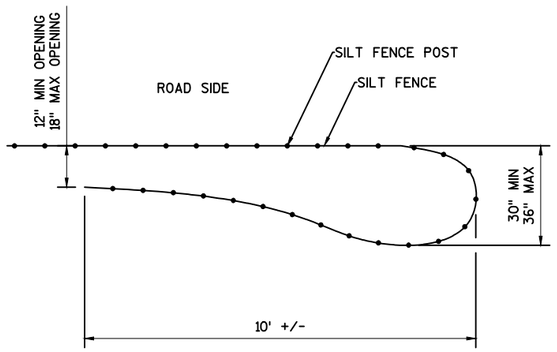
EXAMPLE:
CONTRACTOR INDICATES PUMP CAPABLE OF 50 GPM
HEIGHT OF BALES = 1.5 FT.

SOLUTION:
SV (C.F.) = 16 X 50
SV = 800 C.F.

$\frac{800\ C.F.}{1.5\ FT.}$ = 533 S.F.

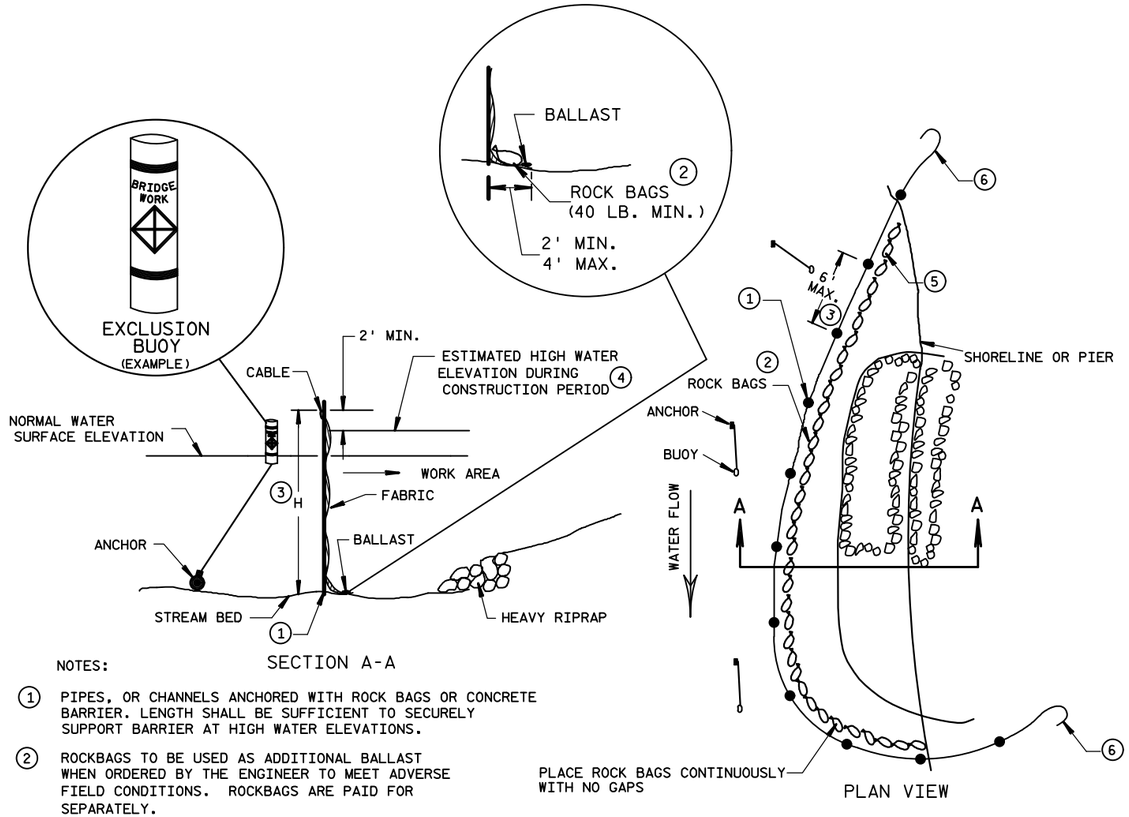
USE A 20 FT. X 27 FT. BASIN

TEMPORARY SETTLING BASIN



SILT FENCE TURN-AROUND DETAIL

LOCATIONS SHOWN ON EROSION CONTROL
PLANS OR AS DIRECTED BY THE ENGINEER.



NOTES:

1. PIPES, OR CHANNELS ANCHORED WITH ROCK BAGS OR CONCRETE BARRIER. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
2. ROCKBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. ROCKBAGS ARE PAID FOR SEPARATELY.
3. WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.
4. ELEVATION VALUE TO BE ESTABLISHED BY THE CONTRACTOR BASED ON THE TIME OF YEAR AND DURATION OF THE ACTIVITY.
5. CONCRETE BARRIER MAY BE USED IN PLACE OF ROCKBAGS AS A FLOW DEFLECTOR DURING ADVERSE FIELD CONDITIONS. TEMPORARY CONCRETE BARRIER IS INCIDENTAL TO THE TURBIDITARY BARRIER ITEM.
5. TURN-AROUND TO BE PROVIDED AT EACH END OF THE TURBIDITY BARRIER TO REDIRECT ANIMALS FROM THE WORK ZONE. INSTALL PER DIMENSIONS IN THE SILT FENCE TURN-AROUND CONSTRUCTION DETAIL.

TURBIDITY BARRIER DETAIL

NOTES:

A WATERWAY MARKER PERMIT HAS BEEN OBTAINED. COORDINATE WITH WDNR FOR ANY VARIANCE FROM THE PERMIT.

ALL SIGNS SHALL BE MOUNTED ON STEEL POSTS. SIGN LOCATION AND INSTALLATION METHOD VARY BASED ON WATER LEVELS.

BEDROCK AND CONCRETE IS PRESENT IN THE RIVER AND ON THE RIVER BANKS. NON-STANDARD METHODS MAY BE REQUIRED FOR THE PLACEMENT AND ANCHORING OF THE SIGNS. DRILLING OR PINNING OF THE SIGNS INTO THE BEDROCK BELOW THE ORDINARY HIGH WATER MARK IS NOT PERMITTED.

ADJUST FENCE SAFETY LOCATION TO MATCH WATER LEVELS DURING HIGH WATER CONDITIONS.

SIGN LEGEND:

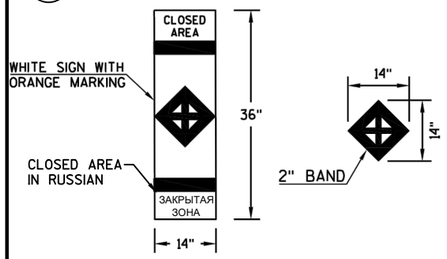
SIGN POST. MOUNT TO FENCE SAFETY IF NO POST SHOWN.

1

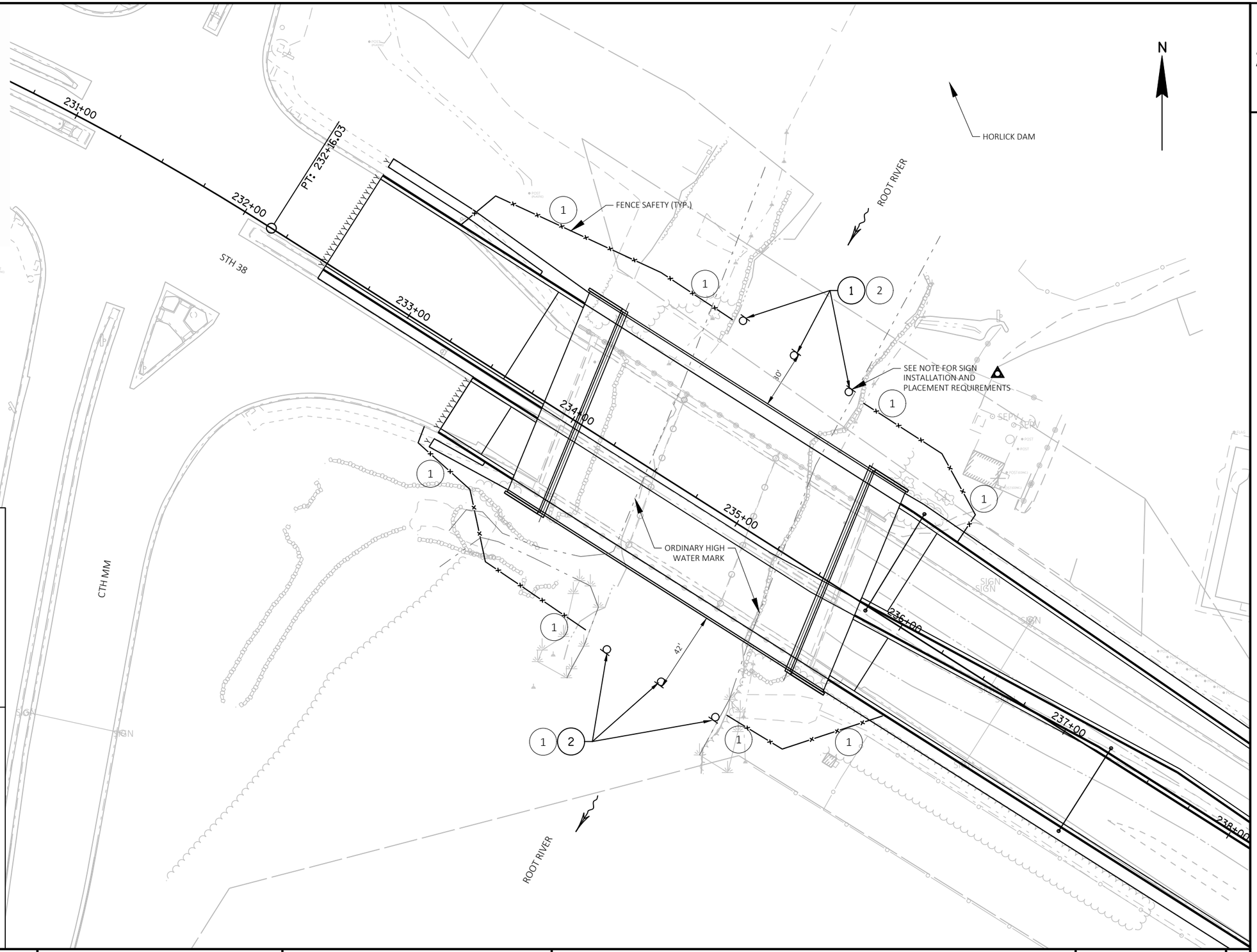
RED COLOR

14"X10"

2



TYPICAL HAZARD WARNING SIGN DETAIL

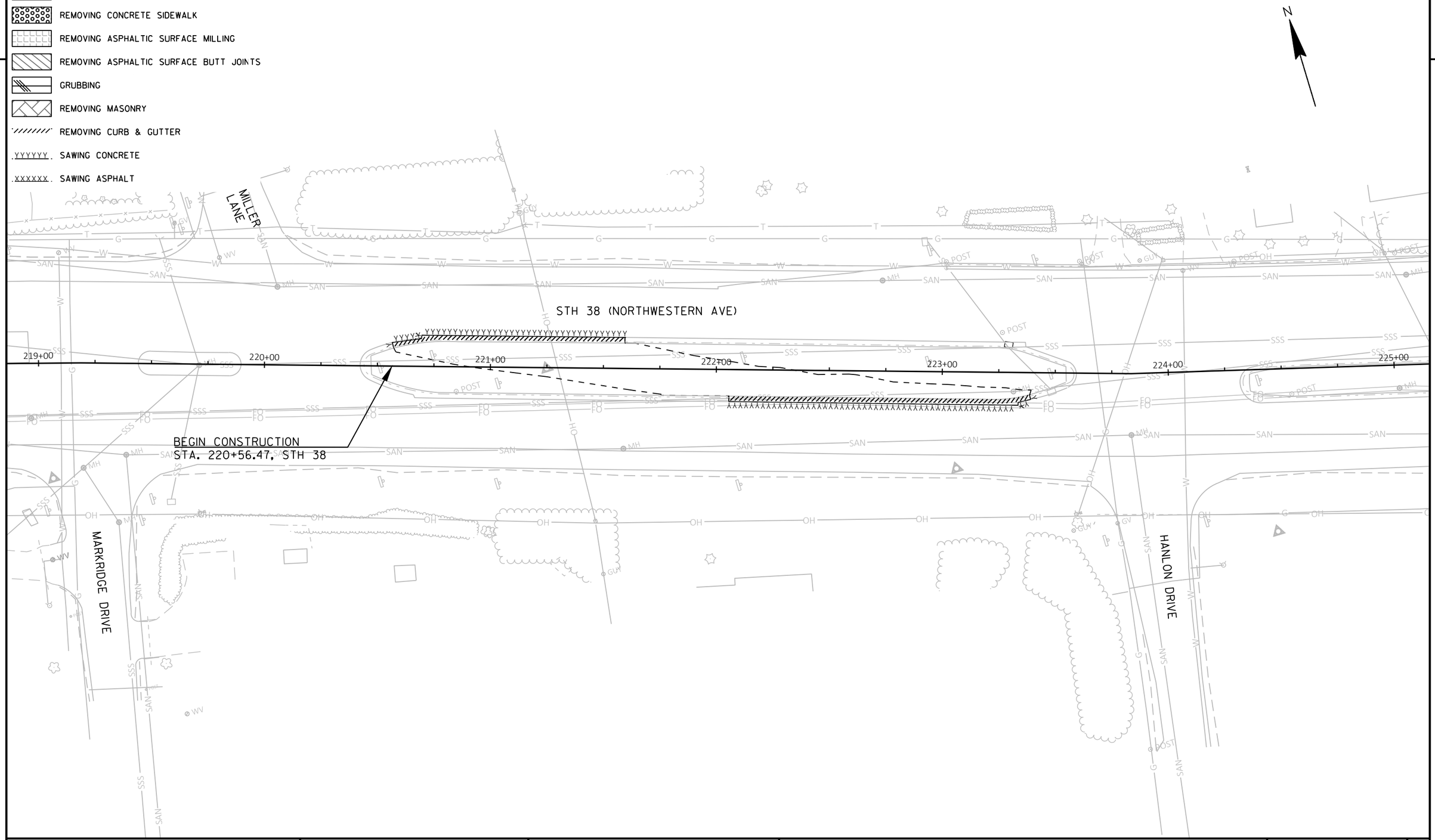


PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CONSTRUCTION DETAILS	SHEET 12	E

2

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING CONCRETE SIDEWALK
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS
- GRUBBING
- REMOVING MASONRY
- REMOVING CURB & GUTTER
- SAWING CONCRETE
- SAWING ASPHALT



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	REMOVAL PLAN	SHEET 13	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\021101_RM.DWG
LAYOUT NAME - 021100_rm

PLOT DATE : 7/31/2023 1:24 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING CONCRETE SIDEWALK
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS
- GRUBBING
- REMOVING MASONRY
- REMOVING CURB & GUTTER
- .YYYYYY. SAWING CONCRETE
- .XXXXXX. SAWING ASPHALT

ORDINARY HIGH WATER MARK

ROOT RIVER

EX R/W

QUEENSNAKE HABITAT OVER 10' FROM EDGE OF PROPOSED BRIDGE. MAINTAIN AT LESS THAN 6" HEIGHT THROUGHOUT CONSTRUCTION

SLOPE INTERCEPT (TYP.)

233+00 234+00 235+00 236+00 237+00 238

STH 38 (NORTHWESTERN AVENUE)

MATCHLINE STA. 238+00

BEGIN PROJECT
2290-03-73
STA. 232+50.00
Y = 195,145.80
X = 628,685.41

REMOVE B-51-012 SEE STRUCTURE PLANS FOR DETAILS

QUEENSNAKE HABITAT OVER 10' FROM EDGE OF PROPOSED BRIDGE. MAINTAIN AT LESS THAN 6" HEIGHT THROUGHOUT CONSTRUCTION

REMOVING FENCE START STA. 236+15, 79.8' RT

WETLANDS (TYP.)

EX R/W

NOTES:

QUEENSNAKE HABITAT IS AREAS WITHIN 20' OF THE ORDINARY HIGH WATER LEVEL OF THE ROOT RIVER IN THE NORTHEAST, SOUTHEAST AND SOUTHWEST QUADRANT OF THE B-51-012 STRUCTURE OVER THE ROOT RIVER.

SEE EROSION CONTROL PLANS FOR DETAILS OF GRUBBING IN AREAS OF QUEENSNAKE HABITAT.

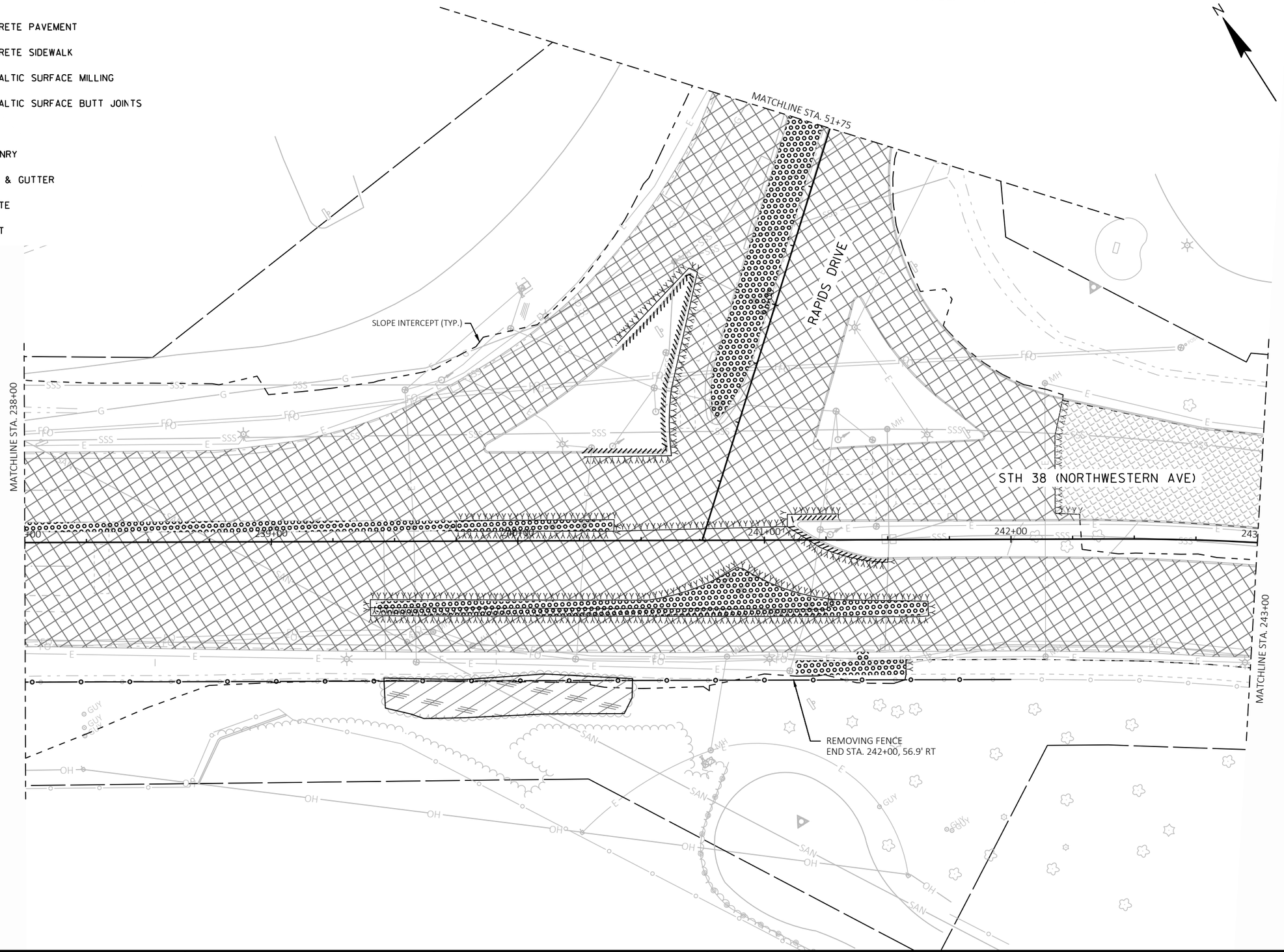
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	REMOVAL PLAN	SHEET 14	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\021101_RM.DWG
LAYOUT NAME - 021101_rm
PLOT DATE : 7/31/2023 1:24 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING CONCRETE SIDEWALK
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS
- GRUBBING
- REMOVING MASONRY
- REMOVING CURB & GUTTER
- SAWING CONCRETE
- SAWING ASPHALT



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PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	REMOVAL PLAN	SHEET 15	E

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LAYOUT NAME - 021102_rm

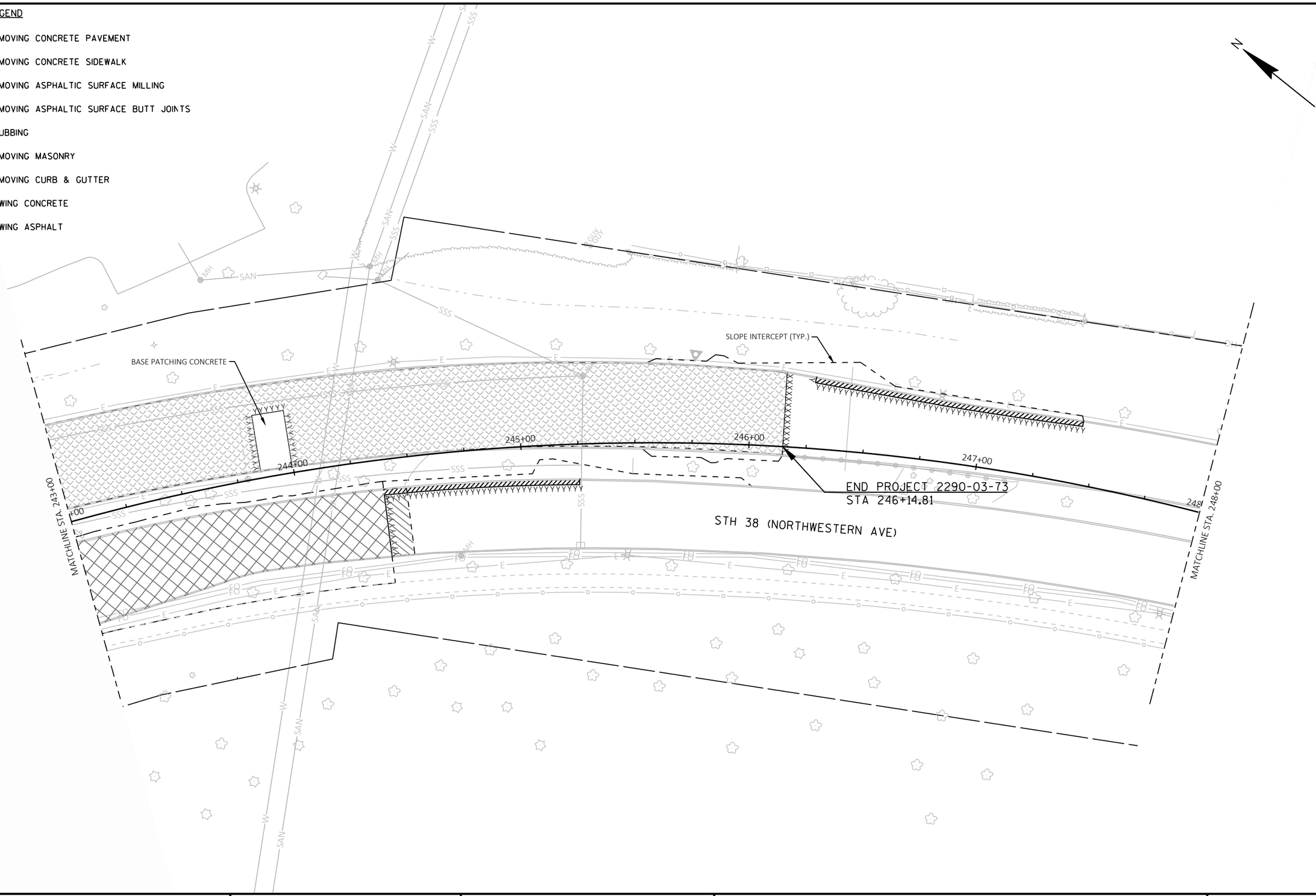
PLOT DATE : 7/31/2023 1:24 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING CONCRETE SIDEWALK
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS
- GRUBBING
- REMOVING MASONRY
- REMOVING CURB & GUTTER
- SAWING CONCRETE
- SAWING ASPHALT



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PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	REMOVAL PLAN	SHEET 16	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\021101_RM.DWG
LAYOUT NAME - 021103_rm

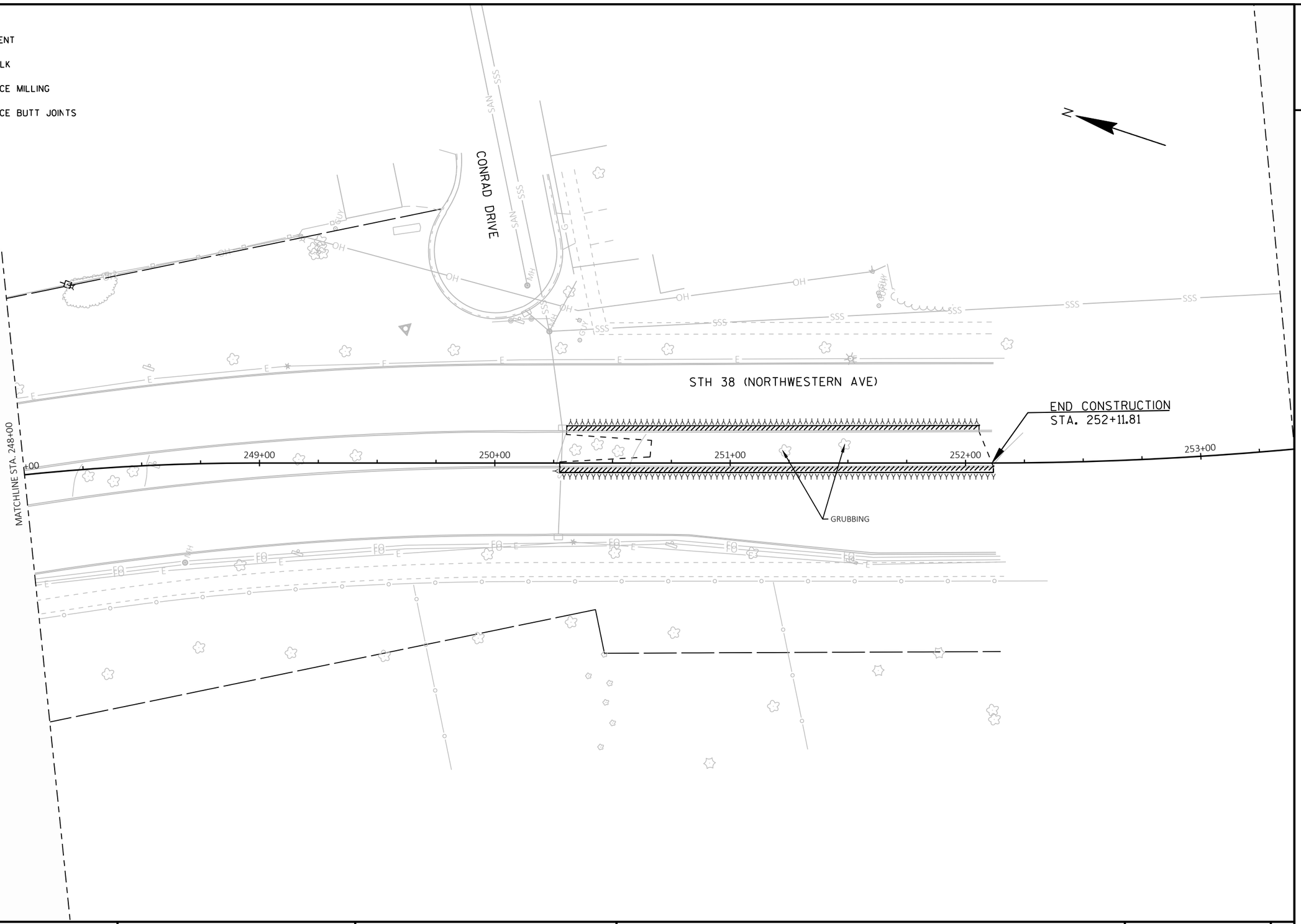
PLOT DATE : 7/31/2023 1:24 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING CONCRETE SIDEWALK
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS
- GRUBBING
- REMOVING MASONRY
- REMOVING CURB & GUTTER
- SAWING CONCRETE
- SAWING ASPHALT



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PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	REMOVAL PLAN	SHEET 17	E

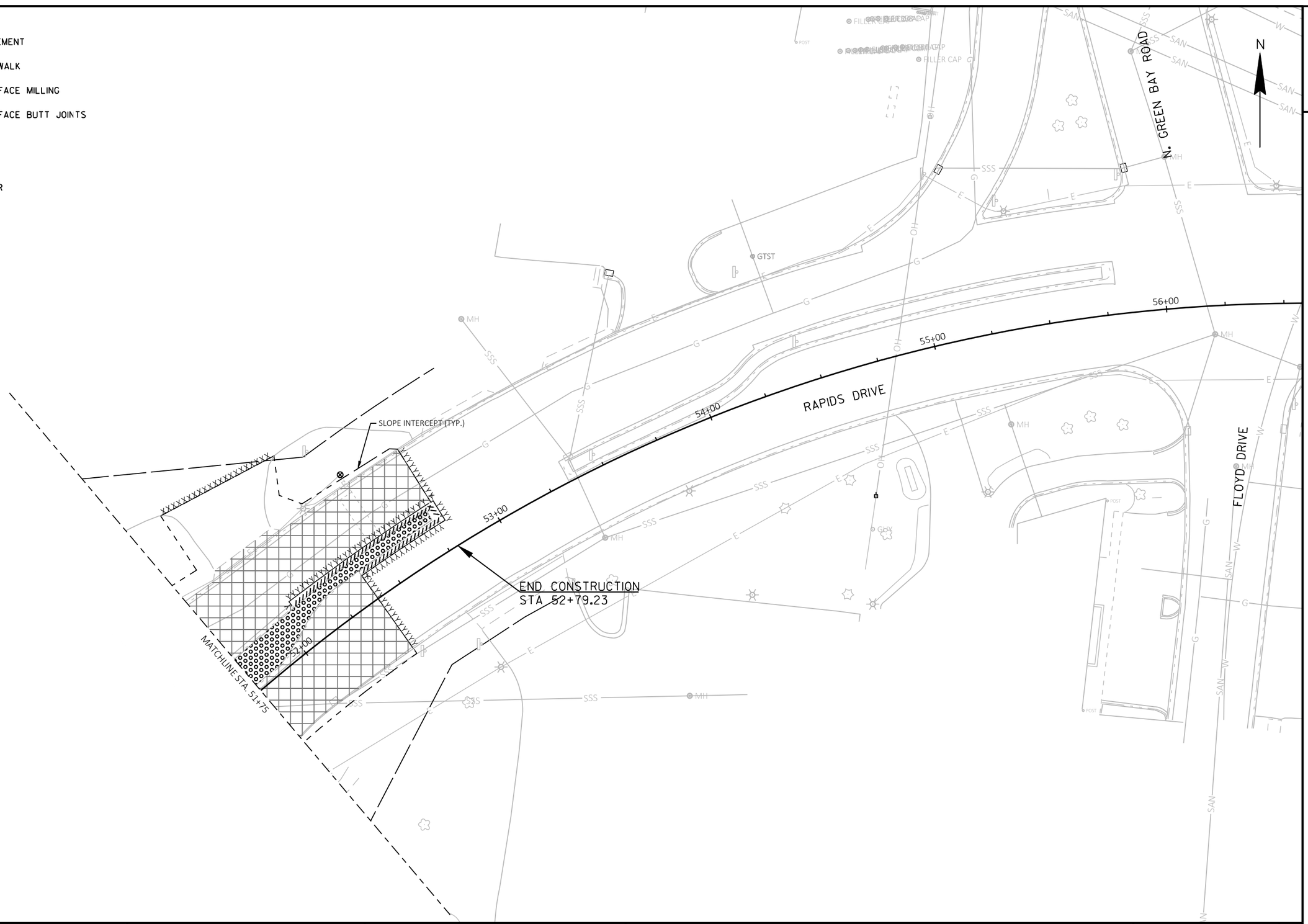
FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\021101_RM.DWG
LAYOUT NAME - 021104_rm

PLOT DATE : 7/31/2023 1:24 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING CONCRETE SIDEWALK
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS
- GRUBBING
- REMOVING MASONRY
- REMOVING CURB & GUTTER
- SAWING CONCRETE
- SAWING ASPHALT



2

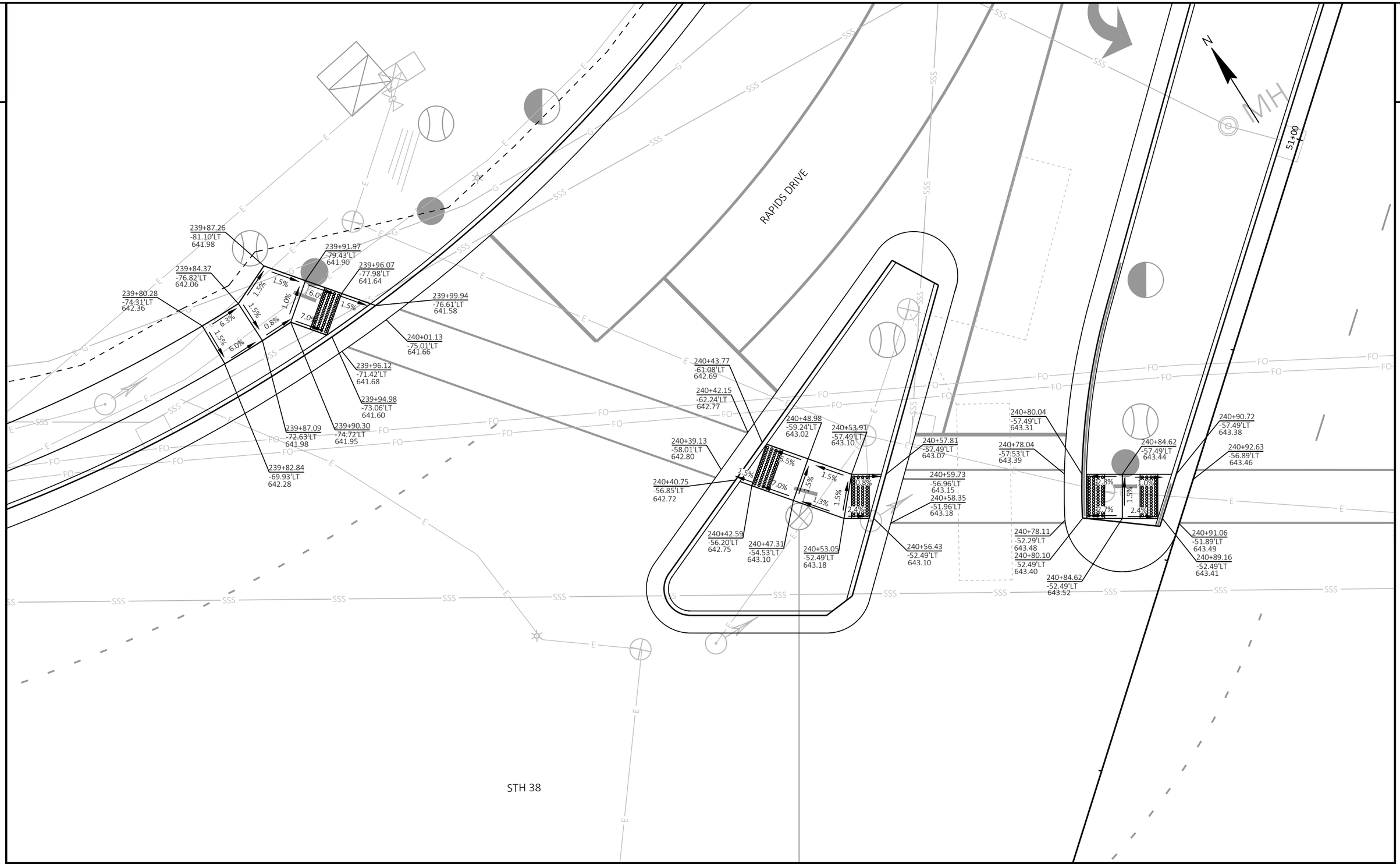
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	REMOVAL PLAN	SHEET 18	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\021101_RM.DWG
LAYOUT NAME - 021105_rm

PLOT DATE : 7/31/2023 1:24 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CURB RAMP DETAIL	SHEET 19	E

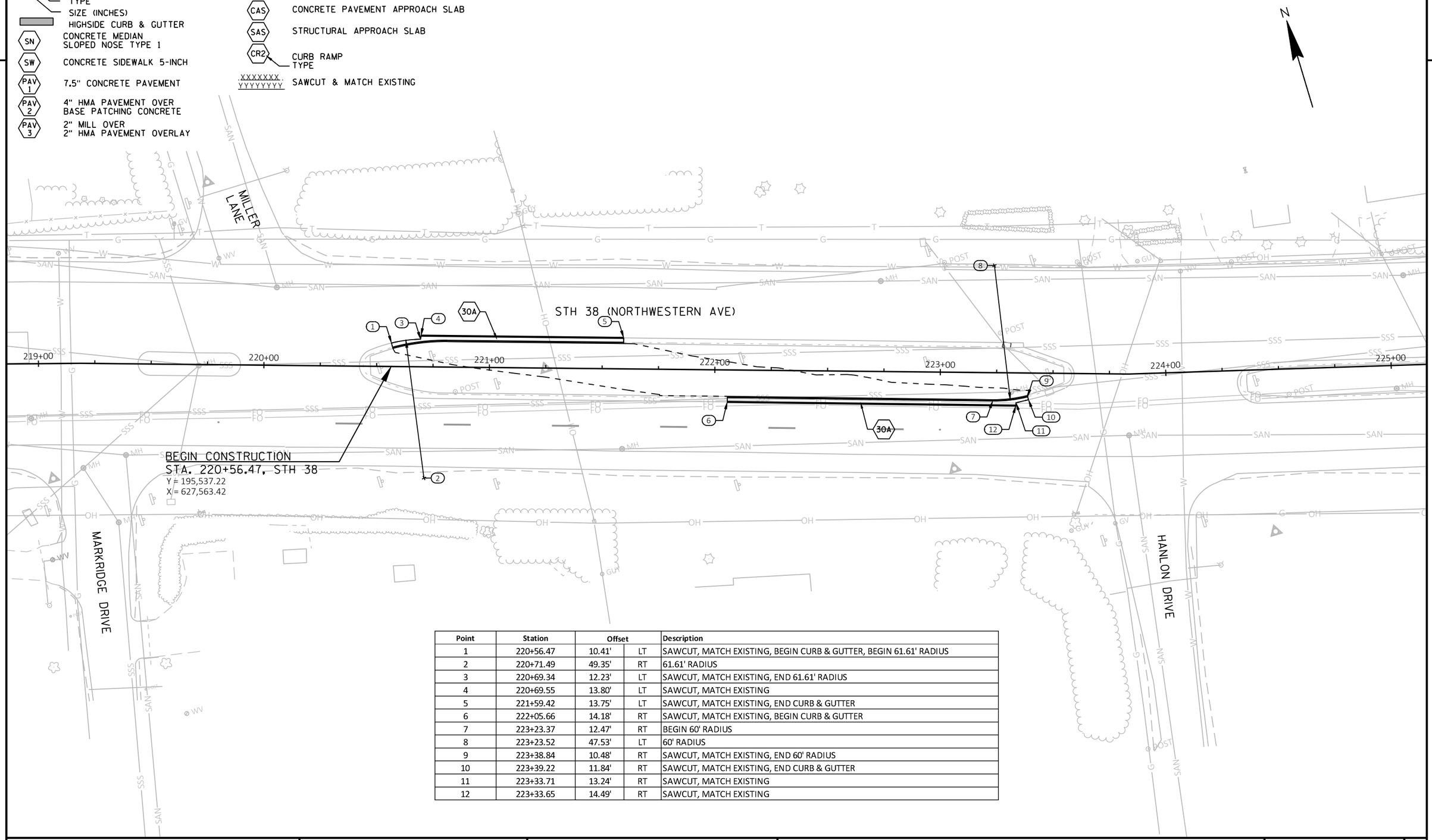
FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\021301-CR.DWG
LAYOUT NAME - 021301-cr

PLOT DATE : 7/31/2023 1:25 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:10 FT

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CURB RAMP DETAIL	SHEET 20	E

LEGEND

- 30A — CONCRETE CURB AND GUTTER TYPE / SIZE (INCHES)
- HIGHSIDE CURB & GUTTER
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW — CONCRETE SIDEWALK 5-INCH
- PAV 1 — 7.5" CONCRETE PAVEMENT
- PAV 2 — 4" HMA PAVEMENT OVER BASE PATCHING CONCRETE
- PAV 3 — 2" MILL OVER 2" HMA PAVEMENT OVERLAY
- BTJ — BUTT JOINT
- CAS — CONCRETE PAVEMENT APPROACH SLAB
- SAS — STRUCTURAL APPROACH SLAB
- CR2 — CURB RAMP TYPE
- XXXXXXX / YYYYYYYY — SAWCUT & MATCH EXISTING



Point	Station	Offset		Description
1	220+56.47	10.41'	LT	SAWCUT, MATCH EXISTING, BEGIN CURB & GUTTER, BEGIN 61.61' RADIUS
2	220+71.49	49.35'	RT	61.61' RADIUS
3	220+69.34	12.23'	LT	SAWCUT, MATCH EXISTING, END 61.61' RADIUS
4	220+69.55	13.80'	LT	SAWCUT, MATCH EXISTING
5	221+59.42	13.75'	LT	SAWCUT, MATCH EXISTING, END CURB & GUTTER
6	222+05.66	14.18'	RT	SAWCUT, MATCH EXISTING, BEGIN CURB & GUTTER
7	223+23.37	12.47'	RT	BEGIN 60' RADIUS
8	223+23.52	47.53'	LT	60' RADIUS
9	223+38.84	10.48'	RT	SAWCUT, MATCH EXISTING, END 60' RADIUS
10	223+39.22	11.84'	RT	SAWCUT, MATCH EXISTING, END CURB & GUTTER
11	223+33.71	13.24'	RT	SAWCUT, MATCH EXISTING
12	223+33.65	14.49'	RT	SAWCUT, MATCH EXISTING

LEGEND

- 30A — CONCRETE CURB AND GUTTER TYPE / SIZE (INCHES) / HIGHSIDE CURB & GUTTER
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW — CONCRETE SIDEWALK 5-INCH
- PAV 1 — 7.5" CONCRETE PAVEMENT
- PAV 2 — 4" HMA PAVEMENT OVER BASE PATCHING CONCRETE
- PAV 3 — 2" MILL OVER 2" HMA PAVEMENT OVERLAY
- BTJ — BUTT JOINT
- CAS — CONCRETE PAVEMENT APPROACH SLAB
- SAS — STRUCTURAL APPROACH SLAB
- CR2 — CURB RAMP TYPE
- XXXXXXX / YYYYYYYY — SAWCUT & MATCH EXISTING

BEGIN CONSTRUCTION
STA. 22+50.00, STH 38 NB
Y = 195,164.79
X = 628,697.47

BEGIN PROJECT
2290-03-73
STA. 232+50.00
Y = 195,145.80
X = 628,685.41

BEGIN CONSTRUCTION
STA. 13+45.12, STH 38 SB
Y = 195,075.00
X = 628,753.14

ROOT RIVER

EXISTING SIGNAL LOOPS TO REMAIN

STRUCTURE B-51-0157

S-51-262 FULL SPAN SIGN STRUCTURE STA. 235+80

S-51-263 FULL SPAN SIGN STRUCTURE STA. 237+25

USGS GAGING STATION TO REMAIN FULLY OPERATIONAL DURING CONSTRUCTION

SLOPE INTERCEPT (TYP.)

STH 38 (NORTHWESTERN AVENUE)

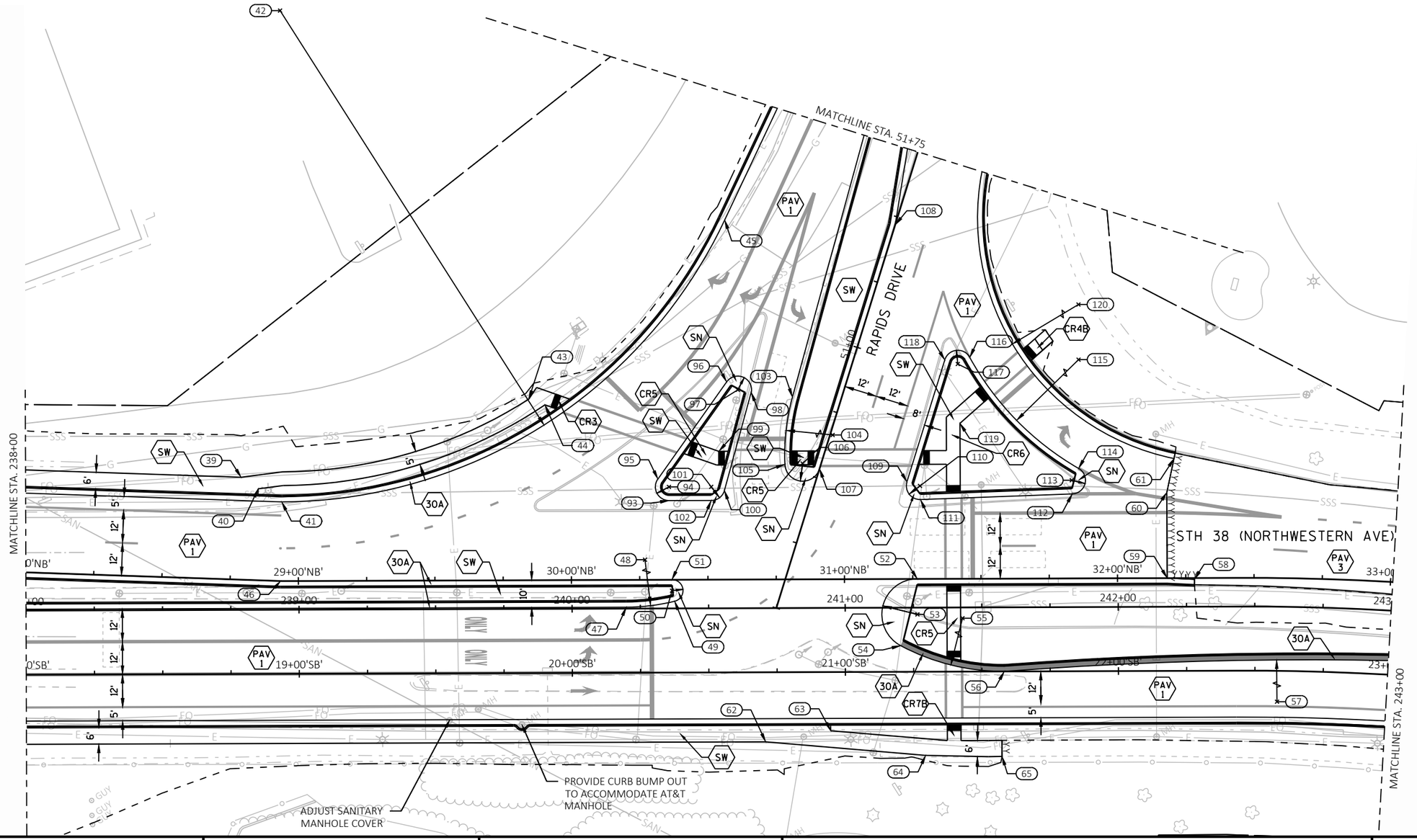
MATCHLINE STA. 238+00

Point	Station	Offset		Description
13	232+50.00	51.50'	LT	SAWCUT, MATCH EXISTING, BEGIN CURB & GUTTER
14	233+45.90	56.00'	LT	SIDEWALK PI
15	233+58.65	51.50'	LT	END PAV1, BEGIN CONCRETE APPROACH SLAB
16	233+73.65	51.50'	LT	END CONCRETE APPROACH SLAB, BEGIN STRUCTURAL APPROACH SLAB
17	232+50.00	1.50'	RT	SAWCUT, MATCH EXISTING, BEGIN CURB & GUTTER
18	233+45.00	11.50'	RT	SAWCUT, MATCH EXISTING, BEGIN CURB & GUTTER
19	233+58.65	1.50'	RT	END PAV1, BEGIN CONCRETE APPROACH SLAB
20	233+69.76	11.50'	RT	END PAV1, BEGIN CONCRETE APPROACH SLAB
21	233+83.00	1.50'	RT	END CONCRETE APPROACH SLAB, BEGIN STRUCTURAL APPROACH SLAB
22	233+84.76	11.50'	RT	END CONCRETE APPROACH SLAB, BEGIN STRUCTURAL APPROACH SLAB
23	233+45.00	40.50'	RT	SAWCUT, MATCH EXISTING, BEGIN CURB & GUTTER
24	233+45.00	51.59'	RT	SIDEWALK PI
25	233+69.76	40.50'	RT	END PAV1, BEGIN CONCRETE APPROACH SLAB

Point	Station	Offset		Description
26	233+73.52	45.00'	RT	SIDEWALK PI
27	233+89.87	40.50'	RT	END CONCRETE APPROACH SLAB, BEGIN STRUCTURAL APPROACH SLAB
28	235+66.19	51.50'	LT	END STRUCTURAL APPROACH SLAB, BEGIN CONCRETE APPROACH SLAB
29	235+73.79	51.50'	LT	CURB & GUTTER PI
30	235+89.88	50.90'	LT	END CONCRETE APPROACH SLAB, BEGIN PAV1
31	235+74.88	2.23'	LT	END STRUCTURAL APPROACH SLAB, BEGIN CONCRETE APPROACH SLAB
32	235+76.97	9.66'	RT	END STRUCTURAL APPROACH SLAB, BEGIN CONCRETE APPROACH SLAB
33	235+89.88	3.30'	LT	END CONCRETE APPROACH SLAB, BEGIN PAV1
34	235+97.41	8.20'	RT	END CONCRETE APPROACH SLAB, BEGIN PAV1
35	237+19.15	0.50'	LT	CURB & GUTTER PI
36	237+60.45	15.48'	LT	BEGIN TAPER
37	235+82.41	40.50'	RT	END STRUCTURAL APPROACH SLAB, BEGIN CONCRETE APPROACH SLAB
38	235+97.41	40.50'	RT	END CONCRETE APPROACH SLAB, BEGIN PAV1

LEGEND

- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- HIGHSIDE CURB & GUTTER
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW — CONCRETE SIDEWALK 5-INCH
- PAV 1 — 7.5" CONCRETE PAVEMENT
- PAV 2 — 4" HMA PAVEMENT OVER BASE PATCHING CONCRETE
- PAV 3 — 2" MILL OVER 2" HMA PAVEMENT OVERLAY
- BTJ — BUTT JOINT
- CAS — CONCRETE PAVEMENT APPROACH SLAB
- SAS — STRUCTURAL APPROACH SLAB
- CR2 — CURB RAMP TYPE
- XXXXXXX / YYYYYYYY — SAWCUT & MATCH EXISTING



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PLAN DETAILS	SHEET 23	E

2

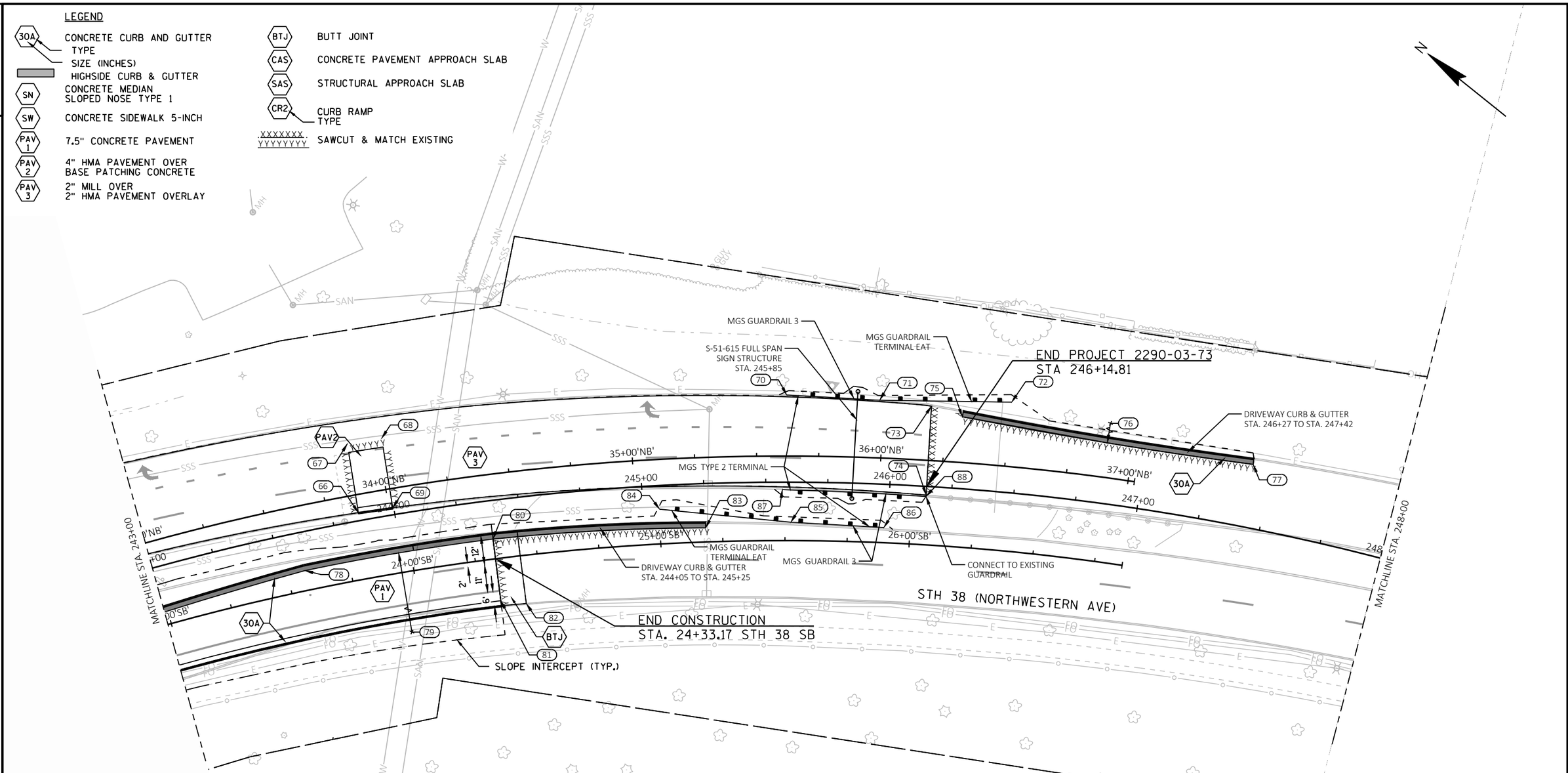
POINT TABLE

Point	Station	Offset		Description
39	238+78.93	48.56'	LT	SIDEWALK PI
40	238+85.19	44.33'	LT	SIDEWALK PI
41	238+93.79	39.50'	LT	BEGIN 180' RADIUS
42	239+89.95	67.34'	LT	180' RADIUS
43	239+84.37	76.83'	LT	SIDEWALK PI
44	239+90.30	74.72'	LT	SIDEWALK PI
45	240+56.36	142.24'	LT	END 180' RADIUS
46	238+93.24	10.50'	LT	CURB & GUTTER PI
47	240+19.87	0.50'	LT	BEGIN 75' RADIUS
48	240+28.77	1.03'	LT	75' RADIUS
49	240+37.54	2.61'	LT	END 75' RADIUS, BEGIN 4' RADIUS
50	240+40.57	6.98'	LT	4' RADIUS
51	240+36.60	10.50'	LT	END 4' RADIUS
52	241+26.45	10.50'	LT	BEGIN 13' RADIUS
53	241+13.84	0.68'	LT	13' RADIUS
54	241+20.29	13.95'	RT	END 13' RADIUS, BEGIN 80' RADIUS
55	241+38.65	21.08'	RT	80' RADIUS
56	241+58.20	23.50'	RT	END 80' RADIUS, BEGIN 1,471' RADIUS
57	242+58.27	19.50'	RT	1,471' RADIUS
58	242+27.97	10.01'	LT	SAWCUT, MATCH EXISTING, BEGIN CURB & GUTTER
59	242+17.97	10.50'	LT	SAWCUT, MATCH EXISTING, CURB & GUTTER PI
60	242+17.97	41.91'	LT	SAWCUT, MATCH EXISTING, PAV1 PI
61	242+20.63	54.29'	LT	SAWCUT, MATCH EXISTING, BEGIN CURB & GUTTER, BEGIN 90' RADIUS
62	240+70.72	49.00'	RT	SIDEWALK PI
63	240+94.53	45.00'	RT	SIDEWALK PI
64	241+29.31	54.16'	RT	SIDEWALK PI
65	241+57.27	54.62'	RT	END SIDEWALK

Point	Station	Offset		Description
93	50+25.96	49.17'	LT	BEGIN 5' RADIUS
94	50+27.22	54.23'	LT	5' RADIUS
95	50+32.28	55.42'	LT	END 5' RADIUS
96	50+73.73	41.91'	LT	BEGIN 5' RADIUS
97	50+77.09	36.24'	LT	5' RADIUS
98	50+72.79	32.20'	LT	END 5' RADIUS
99	50+48.60	37.13'	LT	SIDEWALK PI
100	50+35.53	30.92'	LT	BEGIN 5' RADIUS
101	50+32.47	31.84'	LT	5' RADIUS
102	50+30.59	34.42'	LT	END 5' RADIUS
103	50+75.54	17.26'	LT	BEGIN 80' RADIUS
104	50+63.22	15.88'	LT	80' RADIUS
105	50+51.25	12.62'	LT	END 80' RADIUS, BEGIN 6.5' RADIUS
106	50+47.04	5.39'	LT	6.5' RADIUS
107	50+53.45	0.00'	RT	END 6.5' RADIUS
108	51+46.99	0.00'	RT	BEGIN TAPER
109	50+58.34	32.00'	RT	BEGIN 5' RADIUS
110	50+54.26	34.11'	RT	5' RADIUS
111	50+53.62	38.66'	RT	END 5' RADIUS
112	50+72.07	91.13'	RT	BEGIN 5' RADIUS
113	50+77.07	94.46'	RT	5' RADIUS
114	50+81.66	90.58'	RT	END 5' RADIUS, BEGIN 106' RADIUS
115	50+91.75	63.67'	RT	106' RADIUS
116	51+08.69	40.47'	RT	END 106' RADIUS, BEGIN 5' RADIUS
117	51+09.69	35.04'	RT	5' RADIUS
118	51+05.09	32.00'	RT	END 5' RADIUS
119	50+84.59	44.20'	RT	SIDEWALK PI
120	51+18.02	53.93'	RT	90' RADIUS

LEGEND

- 30A — CONCRETE CURB AND GUTTER (TYPE / SIZE (INCHES))
- HIGHSIDE CURB & GUTTER
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW — CONCRETE SIDEWALK 5-INCH
- PAV 1 — 7.5" CONCRETE PAVEMENT
- PAV 2 — 4" HMA PAVEMENT OVER BASE PATCHING CONCRETE
- PAV 3 — 2" MILL OVER 2" HMA PAVEMENT OVERLAY
- BTJ — BUTT JOINT
- CAS — CONCRETE PAVEMENT APPROACH SLAB
- SAS — STRUCTURAL APPROACH SLAB
- CR2 — CURB RAMP TYPE
- XXXXXXX / YYYYYYYY — SAWCUT & MATCH EXISTING

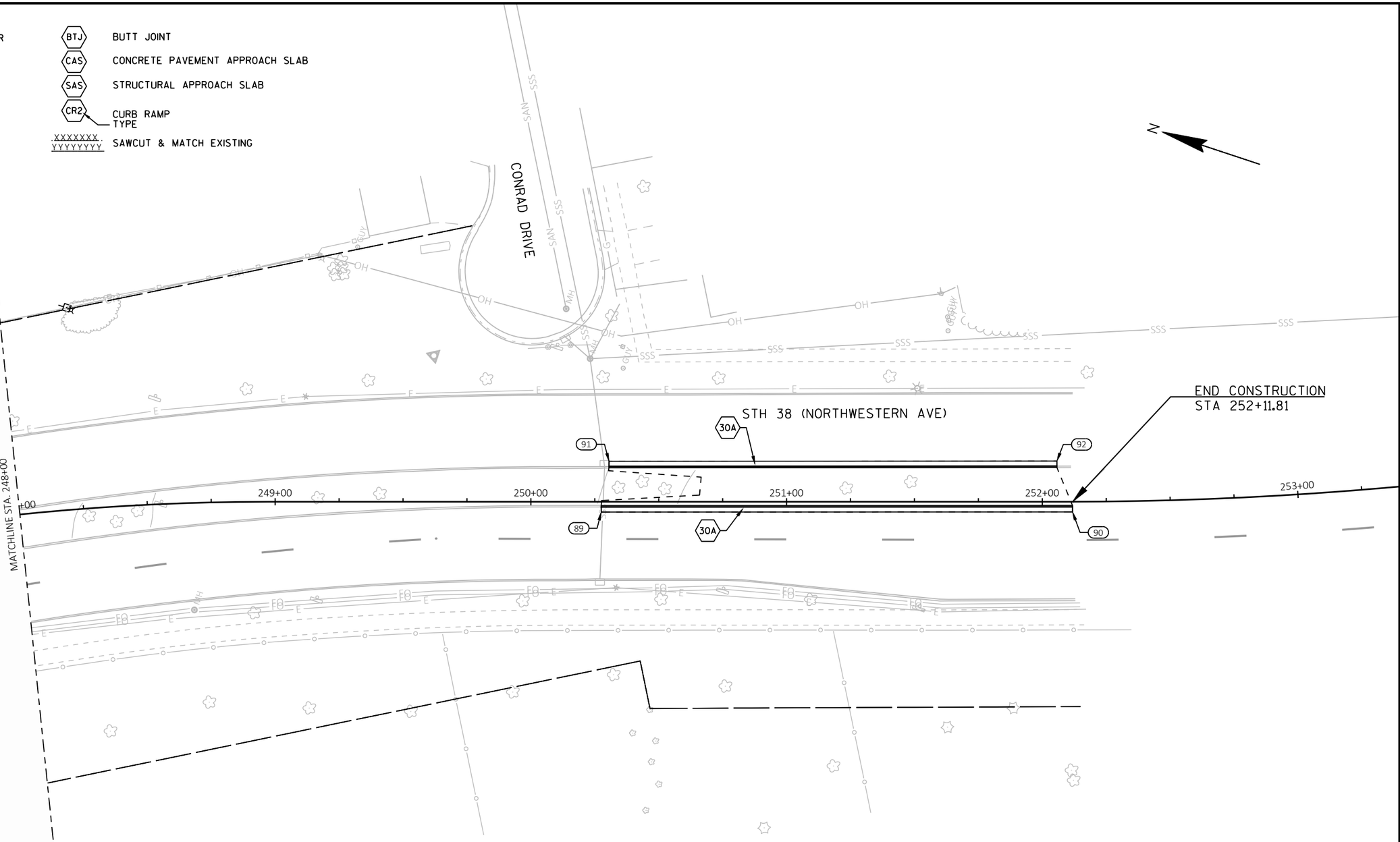


Point	Station	Offset		Description
66	243+85.65	3.25'	LT	PAV2 PI
67	243+86.24	31.26'	LT	PAV2 PI
68	243+99.80	31.07'	LT	PAV2 PI
69	243+99.61	2.81'	LT	PAV2 PI
70	245+58.40	35.06'	LT	BEGIN MGS TYPE 2 TERMINAL
71	245+94.58	33.67'	LT	BEGIN MGS GUARDRAIL TERMINAL EAT
72	246+45.77	36.38'	LT	END MGS GUARDRAIL TERMINAL EAT
73	246+14.81	32.32'	LT	SAWCUT, MATCH EXISTING, END PAV2
74	246+14.81	3.51'	RT	SAWCUT, MATCH EXISTING, END PAV2
75	246+27.07	28.88'	LT	SAWCUT, MATCH EXISTING, BEGIN CURB & GUTTER, BEGIN 1,847' RADIUS
76	246+84.63	24.41'	LT	1,847' RADIUS
77	247+42.45	25.42'	LT	SAWCUT, MATCH EXISTING, END CURB & GUTTER, END 1,847' RADIUS

Point	Station	Offset		Description
78	243+59.93	15.50'	RT	END 1,471' RADIUS, BEGIN 939' RADIUS
79	243+98.95	15.50'	RT	939' RADIUS
80	244+37.97	15.50'	RT	SAWCUT, END 939' RADIUS, END PAV1, BEGIN BUTT JOINT
81	244+37.97	40.50'	RT	SAWCUT, END PAV1, END CURB & GUTTER, BEGIN BUTT JOINT
82	244+48.48	42.83'	RT	END BUTT JOINT, MATCH EXISTING
83	245+25.20	17.82'	RT	SAWCUT, MATCH EXISTING, END CURB & GUTTER
84	245+06.70	9.53'	RT	BEGIN MGS GUARDRAIL TERMINAL TYPE EAT
85	245+60.15	16.13'	RT	END MGS GUARDRAIL TERMINAL TYPE EAT
86	245+98.30	17.41'	RT	END MGS TYPE 2 TERMINAL
87	245+56.66	3.02'	RT	BEGIN MGS TYPE 2 TERMINAL
88	246+14.80	4.05'	RT	MATCH EXISTING, END MGS GUARDRAIL 3

LEGEND

- 30A — CONCRETE CURB AND GUTTER TYPE / SIZE (INCHES)
- HIGHSIDE CURB & GUTTER
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW — CONCRETE SIDEWALK 5-INCH
- PAV 1 — 7.5" CONCRETE PAVEMENT
- PAV 2 — 4" HMA PAVEMENT OVER BASE PATCHING CONCRETE
- PAV 3 — 2" MILL OVER 2" HMA PAVEMENT OVERLAY
- BTJ — BUTT JOINT
- CAS — CONCRETE PAVEMENT APPROACH SLAB
- SAS — STRUCTURAL APPROACH SLAB
- CR2 — CURB RAMP TYPE
- XXXXXXX / YYYYYYYY — SAWCUT & MATCH EXISTING

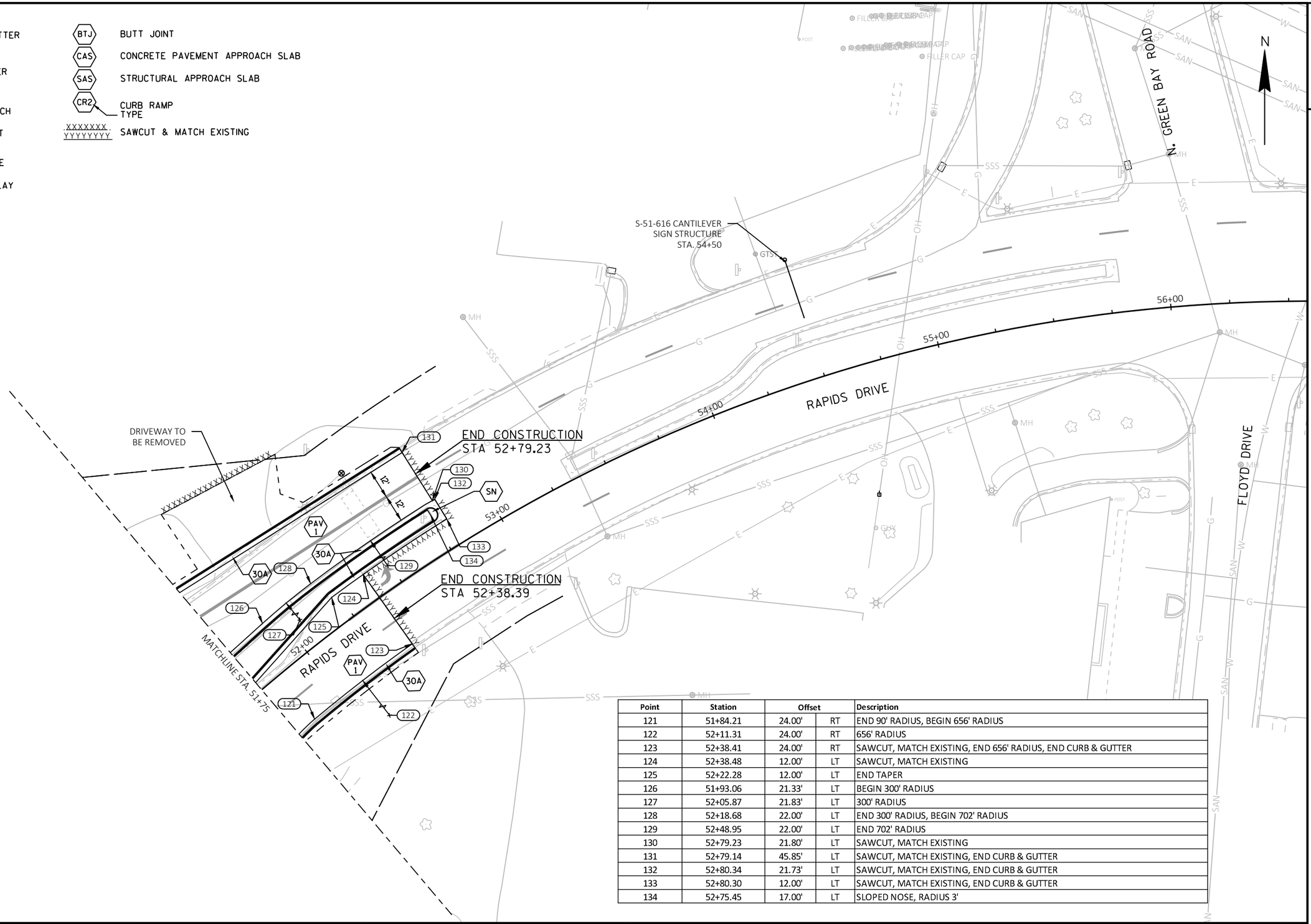


Point	Station	Offset		Description
89	250+27.53	4.04'	RT	SAWCUT, MATCH EXISTING, BEGIN CURB & GUTTER
90	252+11.83	4.00'	RT	SAWCUT, MATCH EXISTING, END CURB & GUTTER
91	250+30.56	15.82'	LT	SAWCUT, MATCH EXISTING, BEGIN CURB & GUTTER
92	252+05.72	15.93'	LT	SAWCUT, MATCH EXISTING, END CURB & GUTTER

2

LEGEND

- 30A — CONCRETE CURB AND GUTTER TYPE (SIZE (INCHES))
- HIGHSIDE CURB & GUTTER
- SN — CONCRETE MEDIAN SLOPED NOSE TYPE 1
- SW — CONCRETE SIDEWALK 5-INCH
- PAV 1 — 7.5" CONCRETE PAVEMENT
- PAV 2 — 4" HMA PAVEMENT OVER BASE PATCHING CONCRETE
- PAV 3 — 2" MILL OVER 2" HMA PAVEMENT OVERLAY
- BTJ — BUTT JOINT
- CAS — CONCRETE PAVEMENT APPROACH SLAB
- SAS — STRUCTURAL APPROACH SLAB
- CR2 — CURB RAMP TYPE
- XXXXXXX / YYYYYYYY — SAWCUT & MATCH EXISTING



Point	Station	Offset		Description
121	51+84.21	24.00'	RT	END 90' RADIUS, BEGIN 656' RADIUS
122	52+11.31	24.00'	RT	656' RADIUS
123	52+38.41	24.00'	RT	SAWCUT, MATCH EXISTING, END 656' RADIUS, END CURB & GUTTER
124	52+38.48	12.00'	LT	SAWCUT, MATCH EXISTING
125	52+22.28	12.00'	LT	END TAPER
126	51+93.06	21.33'	LT	BEGIN 300' RADIUS
127	52+05.87	21.83'	LT	300' RADIUS
128	52+18.68	22.00'	LT	END 300' RADIUS, BEGIN 702' RADIUS
129	52+48.95	22.00'	LT	END 702' RADIUS
130	52+79.23	21.80'	LT	SAWCUT, MATCH EXISTING
131	52+79.14	45.85'	LT	SAWCUT, MATCH EXISTING, END CURB & GUTTER
132	52+80.34	21.73'	LT	SAWCUT, MATCH EXISTING, END CURB & GUTTER
133	52+80.30	12.00'	LT	SAWCUT, MATCH EXISTING, END CURB & GUTTER
134	52+75.45	17.00'	LT	SLOPED NOSE, RADIUS 3'

2

2

LEGEND

XXX.XX PROPOSED ELEVATION

(XXX.XX) EXISTING ELEVATION

HIGHSIDE CURB & GUTTER

BEGIN CONSTRUCTION
STA. 22+50.00, STH 38 NB

STH 38 NB

	23+00'NB'	24+00'NB'	25+00'NB'	26+00'NB'	27+00'NB'
(638.77)	638.46 638.19 637.91 637.63 637.72 637.91 638.10 638.28 638.47 638.66 638.85 639.03 639.22			639.40 639.59 639.77 639.96 640.15 640.33 640.52	
(638.66)	638.38 638.16 637.94 637.73 637.82 638.01 638.20 638.38 638.57 638.76 638.95 639.14 639.32			639.50 639.69 639.88 640.06 640.25 640.43 640.62	
(638.31)	638.17 638.10 638.03 637.97 638.06 638.25 638.44 638.62 638.81 639.00 639.19 639.37 639.56			639.75 639.93 640.12 640.30 640.49 640.68 640.86	
(637.88)	637.96 638.04 638.12 638.21 638.30 638.49 638.68 638.86 639.05 639.24 639.43 639.61 639.80			639.99 640.18 640.36 640.55 640.73 640.92 641.13	
(637.67)	637.82 637.98 638.21 638.45 638.54 638.73 638.92 639.10 639.29 639.48 639.66 639.82 639.97			640.10 640.23 640.47 640.74 640.87 641.00	
(637.41)	637.68 233+00 638.30 638.69 638.78 234+00 639.16 639.34 639.53 235+00 639.90 640.06 640.25			640.34 640.61 640.99 641.21 641.43 641.65 641.84	237+00
	637.92 638.97 639.72			640.54 640.76 640.85 641.03 641.22 641.41 641.60	

	13+00'SB'	14+00'SB'	15+00'SB'	16+00'SB'	17+00'SB'
(638.51)	638.59 638.78 638.97 639.16 639.34 639.53 639.72 639.91 640.09 640.28 640.47 640.66 640.85 641.03 641.22 641.41 641.60				
(638.31)	638.35 638.54 638.73 638.92 639.10 639.29 639.48 639.67 639.85 640.04 640.23 640.42 640.61 640.79 640.98 641.17 641.36				
(638.07)	638.11 638.30 638.49 638.68 638.86 639.05 639.24 639.43 639.61 639.80 639.99 640.18 640.37 640.55 640.74 640.93 641.12				
(638.00)	638.01 638.20 638.39 638.58 638.76 638.95 639.14 639.33 639.51 639.70 639.89 640.08 640.27 640.45 640.64 640.83 641.02				

STH 38 SB

BEGIN PROJECT
2290-03-73
STA. 232+50.00

BEGIN CONSTRUCTION
STA. 13+45.12, STH 38 SB

MATCHLINE STA. 237+50

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	JOINTING PLAN	SHEET 28	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\021301_JD.DWG
LAYOUT NAME - 021301_jd

PLOT DATE : 7/31/2023 1:27 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

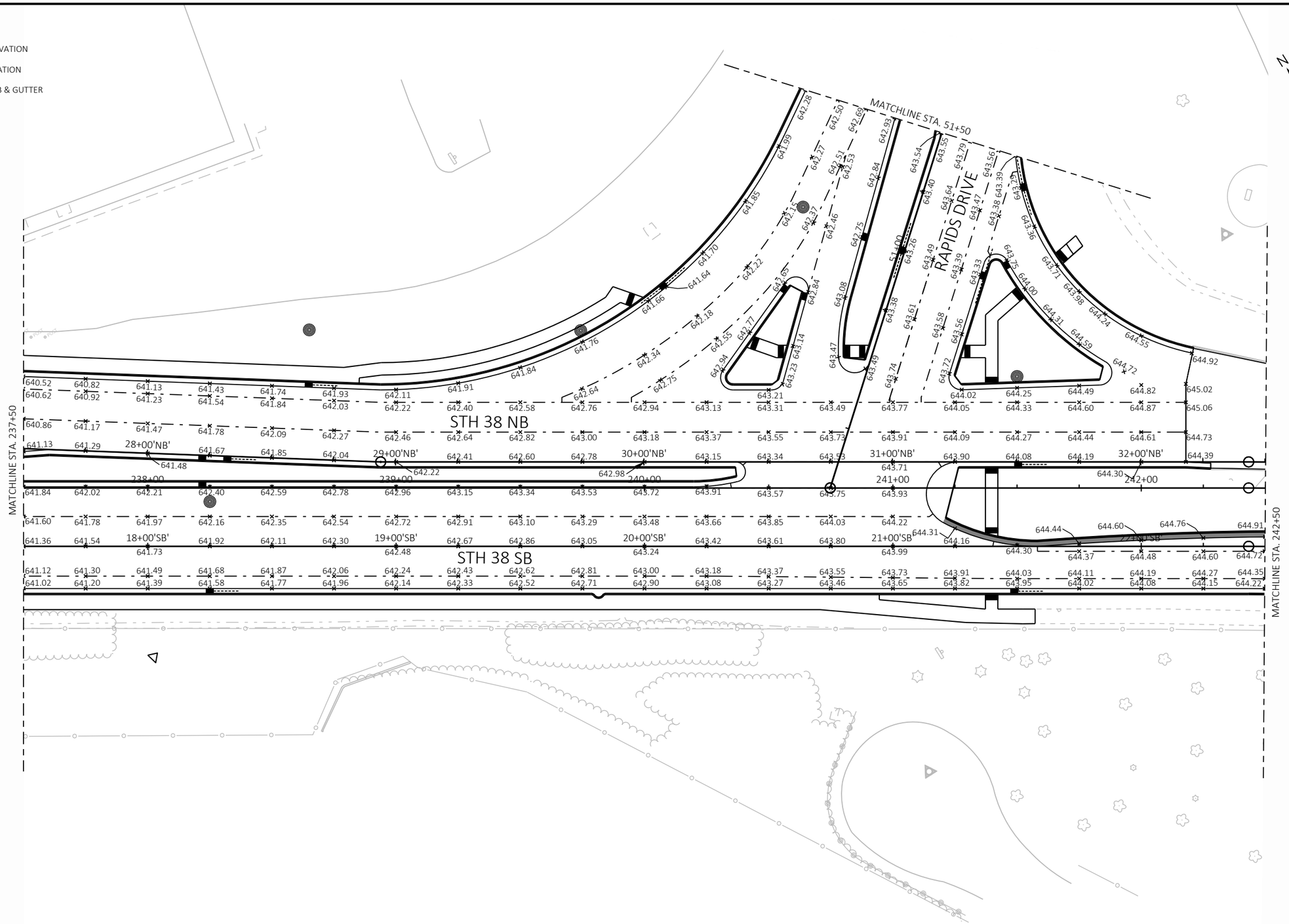
2

LEGEND

XXX.XX PROPOSED ELEVATION

(XXX.XX) EXISTING ELEVATION

HIGHSIDE CURB & GUTTER



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	JOINTING PLAN	SHEET 29	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\021301_JD.DWG
LAYOUT NAME - 021302_jd

PLOT DATE : 7/31/2023 1:27 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

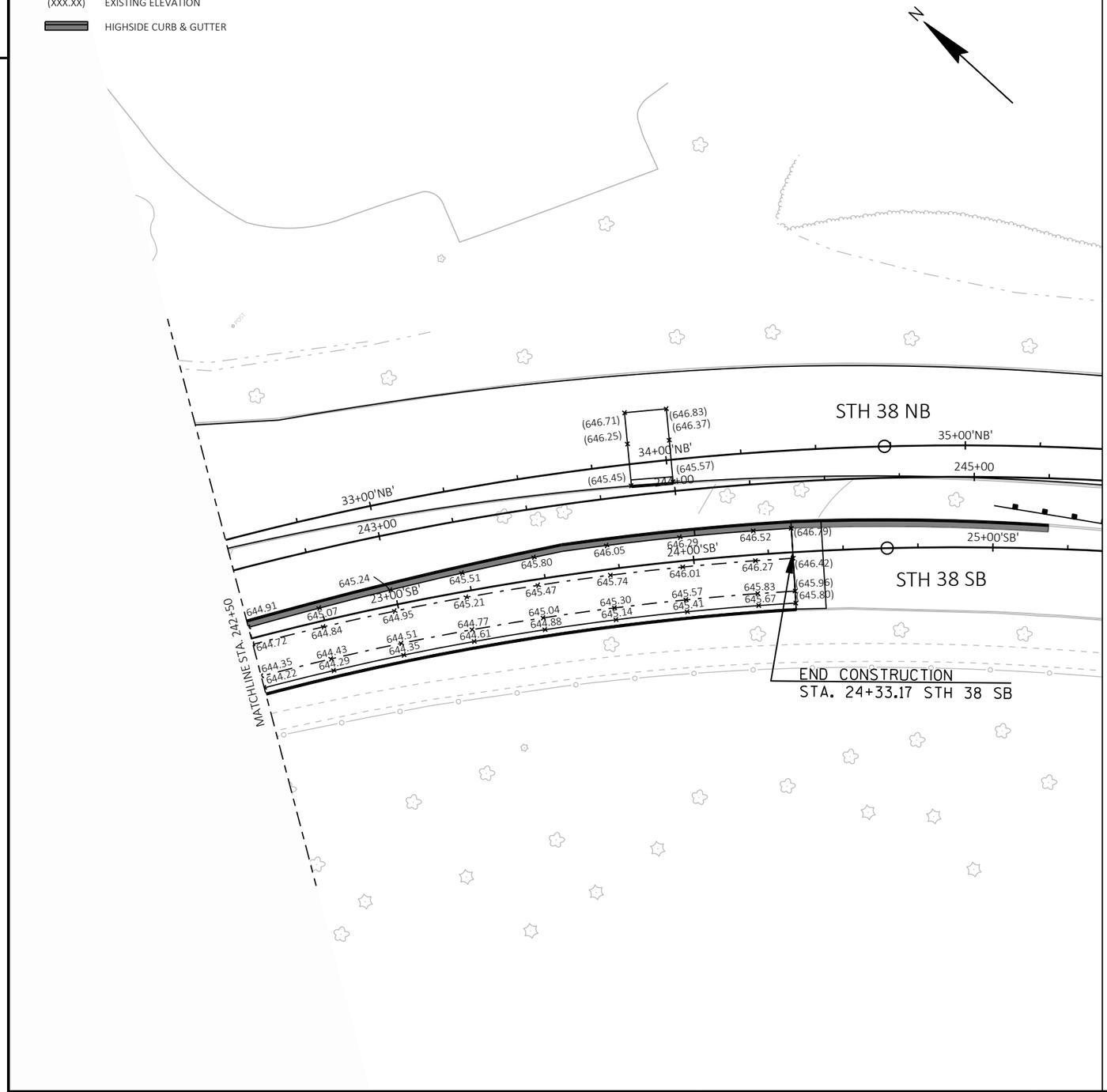
2

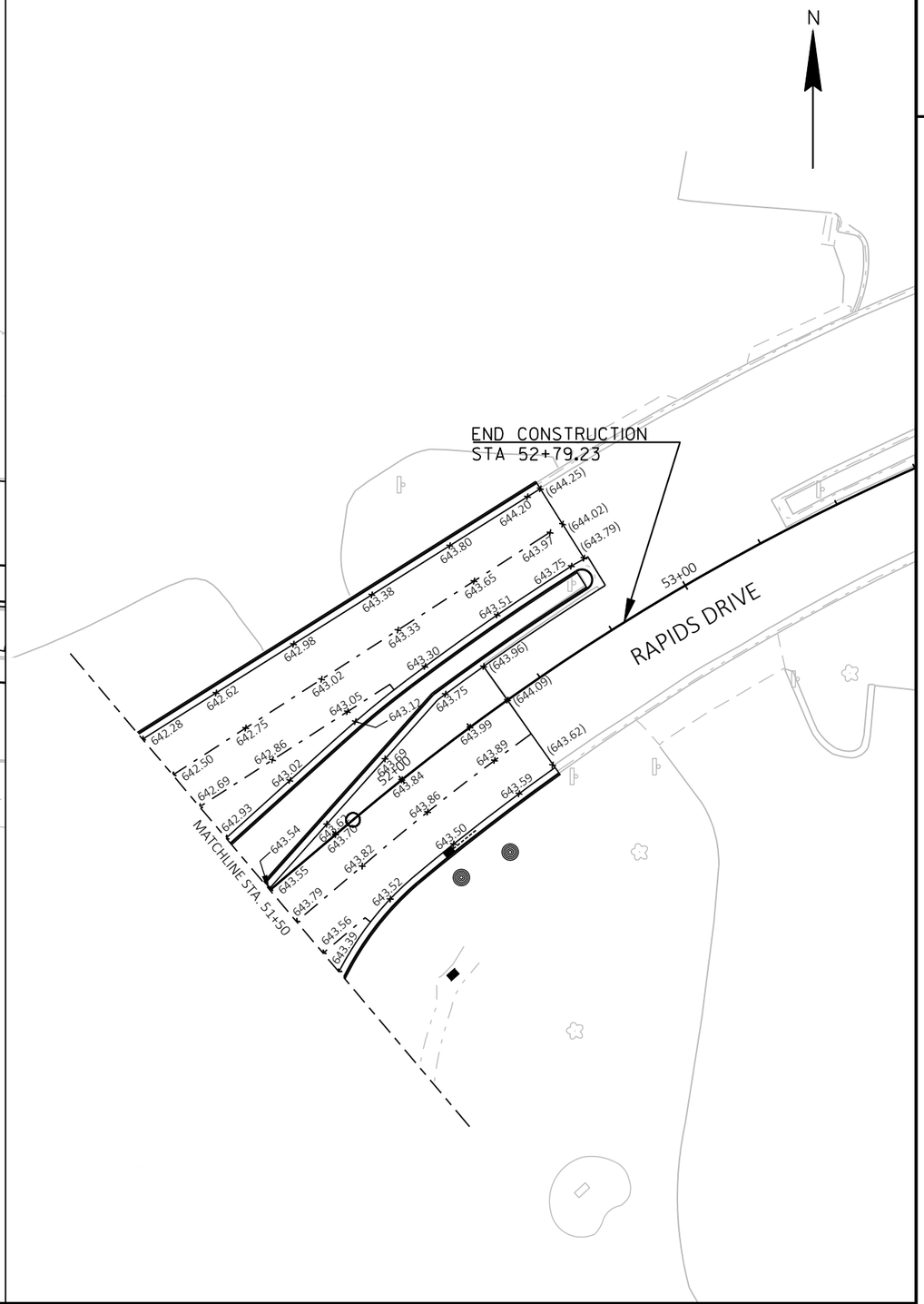
LEGEND

XXX.XX PROPOSED ELEVATION

(XXX.XX) EXISTING ELEVATION

HIGHSIDE CURB & GUTTER





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PROJECT NO: 2290-20-73	HWY: STH 38	COUNTY: RACINE	JOINTING PLAN	SHEET 30	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\021301_JD.DWG
LAYOUT NAME - 021303_jd

PLOT DATE : 7/31/2023 1:27 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- EROSION MAT URBAN CLASS I TYPE A
- EROSION MAT CLASS I TYPE B
- SOD
- SILT FENCE
- TURBIDITY BARRIER
- TEMPORARY CONCRETE BARRIER FLOW DEFLECTOR (INCIDENTAL TO TURBIDITY BARRIER)
- RIP RAP OR STONE DITCH CHECK
- INLET PROTECTION
- INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

ORDINARY HIGH WATER MARK

ROOT RIVER

TURBIDITY BARRIER ANCHORED WITH ROCK BAGS PLACED CONTINUOUS WITH NO GAPS AT THE BASE OF THE BARRIER (TYP.)

QUEENSNAKE HABITAT WITHIN 10' OF CONSTRUCTION LIMITS OR 10' FROM THE EDGE OF THE PROPOSED BRIDGE (TYP.)

QUEENSNAKE HABITAT WITHIN PROPOSED CONSTRUCTION LIMITS (TYP.)

SLOPE INTERCEPT (TYP.)

CONSTRUCTION ACCESS LOCATION FOR ACTIVITIES ON THE WEST SIDE OF THE ROOT RIVER DURING THE QUEENSNAKE INACTIVE SEASON

TEMPORARY SETTLING BASIN. FILTER BAG PLACED INSIDE SETTLING BASIN WITH GEOTEXTILE FABRIC TYPE HR AND EROSION BALES

BEGIN PROJECT
2290-03-73
STA. 232+50.00

232+00 233+00 234+00 235+00 236+00 237+00

TEMPORARY SETTLING BASIN. FILTER BAG PLACED INSIDE SETTLING BASIN WITH GEOTEXTILE FABRIC TYPE HR AND EROSION BALES

ORDINARY HIGH WATER MARK

STH 38 (NORTHWESTERN AVE)

CONSTRUCTION ACCESS LOCATION FOR ACTIVITIES ON THE EAST SIDE OF THE ROOT RIVER DURING THE QUEENSNAKE INACTIVE SEASON

WETLAND BOUNDARY (TYP.)

NOTES:

QUEENSNAKE HABITAT IS AREAS WITHIN 20' OF THE ORDINARY HIGH WATER LEVEL OF THE ROOT RIVER IN THE NORTHEAST, SOUTHEAST AND SOUTHWEST QUADRANT OF B-51-012. THE NORTHWEST QUADRANT AND UNDER B-51-012 IS NOT QUEENSNAKE HABITAT.

AREAS OF QUENSNAKE HABITAT WITHIN THE PROPOSED CONSTRUCTION LIMITS IS TO BE HAND CLEARED BY OTHERS AND GRUBBED.

AREAS OF QUEENSNAKE HABITAT 10' FROM THE EDGE OF THE CONSTRUCTION LIMITS IS TO BE CLEARED BY OTHERS BUT NOT GRUBBED.

EXISTING VEGETATION WITHIN THE AREAS OF QUEENSNAKE HABITAT IDENTIFIED FOR CLEARING, SHALL BE MAINTAINED AT LESS THAN 6" IN HEIGHT UNTIL FINAL RESTORATION AND SHRUB PLANTINGS ARE COMPLETE.

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	EROSION CONTROL PLAN - BRIDGE DEMOLITION - STAGE 1	SHEET 31	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\022000-EC.DWG
LAYOUT NAME - 022101_ec (2)
PLOT DATE : 7/31/2023 1:28 PM
PLOT BY : SCHOWALTER, STEVEN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

LEGEND

- EROSION MAT URBAN CLASS I TYPE A
- EROSION MAT CLASS I TYPE B
- SOD
- SILT FENCE
- TURBIDITY BARRIER
- TEMPORARY CONCRETE BARRIER FLOW DEFLECTOR (INCIDENTAL TO TURBIDITY BARRIER)
- RIP RAP OR STONE DITCH CHECK
- INLET PROTECTION
- INLET PROTECTION TYPE (A)
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

ORDINARY HIGH WATER MARK

ROOT RIVER

TURBIDITY BARRIER ANCHORED WITH ROCK BAGS PLACED CONTINUOUS WITH NO GAPS AT THE BASE OF THE BARRIER (TYP.)

SLOPE INTERCEPT (TYP.)

BEGIN PROJECT
2290-03-73
STA. 232+50.00

232+00 233+00 234+00 235+00 236+00 237+00

TEMPORARY SETTLING BASIN.
FILTER BAG PLACED INSIDE SETTLING BASIN WITH GEOTEXTILE FABRIC TYPE HR AND EROSION BALES

STH 38 (NORTHWESTERN AVE)

ORDINARY HIGH WATER MARK

TEMPORARY SETTLING BASIN.
FILTER BAG PLACED INSIDE SETTLING BASIN WITH GEOTEXTILE FABRIC TYPE HR AND EROSION BALES

CONSTRUCTION ACCESS LOCATION FOR ACTIVITIES ON THE WEST SIDE OF THE ROOT RIVER DURING THE QUEENSNAKE INACTIVE SEASON

CONSTRUCTION ACCESS LOCATION FOR ACTIVITIES ON THE EAST SIDE OF THE ROOT RIVER DURING THE QUEENSNAKE INACTIVE SEASON

QUEENSNAKE HABITAT WITHIN PROPOSED CONSTRUCTION LIMITS (TYP.)

QUEENSNAKE HABITAT WITHIN 10' OF CONSTRUCTION LIMITS OR 10' FROM THE EDGE OF THE PROPOSED BRIDGE (TYP.)

WETLAND BOUNDARY (TYP.)

NOTES:

QUEENSNAKE HABITAT IS AREAS WITHIN 20' OF THE ORDINARY HIGH WATER LEVEL OF THE ROOT RIVER IN THE NORTHEAST, SOUTHEAST AND SOUTHWEST QUADRANT OF B-51-012. THE NORTHWEST QUADRANT AND UNDER B-51-012 IS NOT QUEENSNAKE HABITAT.

AREAS OF QUENSNAKE HABITAT WITHIN THE PROPOSED CONSTRUCTION LIMITS IS TO BE HAND CLEARED BY OTHERS AND GRUBBED.

AREAS OF QUEENSNAKE HABITAT 10' FROM THE EDGE OF THE CONSTRUCTION LIMITS IS TO BE CLEARED BY OTHERS BUT NOT GRUBBED.

EXISTING VEGETATION WITHIN THE AREAS OF QUEENSNAKE HABITAT IDENTIFIED FOR CLEARING, SHALL BE MAINTAINED AT LESS THAN 6" IN HEIGHT UNTIL FINAL RESTORATION AND SHRUB PLANTINGS ARE COMPLETE.

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	EROSION CONTROL PLAN - BRIDGE DEMOLITION - STAGE 2	SHEET 32	E

2

2

LEGEND

EROSION MAT URBAN CLASS I TYPE A

EROSION MAT CLASS I TYPE B

SOD

SILT FENCE

TURBIDITY BARRIER

TEMPORARY CONCRETE BARRIER FLOW DEFLECTOR (INCIDENTAL TO TURBIDITY BARRIER)

RIP RAP OR STONE DITCH CHECK

INLET PROTECTION

INLET PROTECTION TYPE

TEMPORARY DITCH CHECK

CULVERT PIPE DITCH CHECK

SURFACE WATER FLOW

N

MILLER LANE

STH 38 (NORTHWESTERN AVE)

219+00

220+00

221+00

222+00

223+00

224+00

225+00

BEGIN CONSTRUCTION
STA. 220+56.47, STH 38

MARKRIDGE DRIVE

HANLON DRIVE

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	EROSION CONTROL PLAN - PRESTAGE	SHEET 33	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 022100_ec

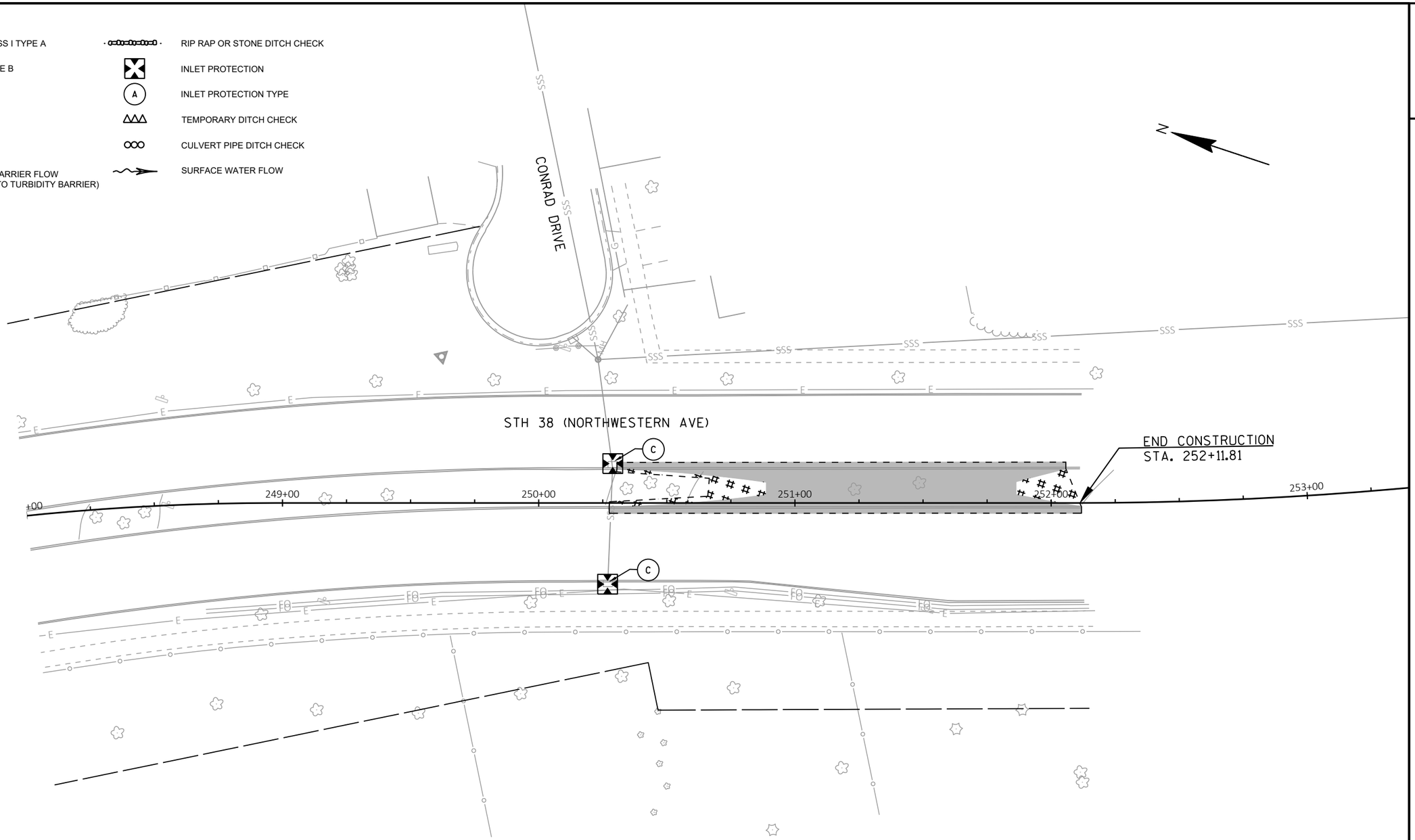
PLOT DATE : 7/31/2023 1:29 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

LEGEND

- EROSION MAT URBAN CLASS I TYPE A
- EROSION MAT CLASS I TYPE B
- SOD
- SILT FENCE
- TURBIDITY BARRIER
- TEMPORARY CONCRETE BARRIER FLOW DEFLECTOR (INCIDENTAL TO TURBIDITY BARRIER)
- RIP RAP OR STONE DITCH CHECK
- INLET PROTECTION
- INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW



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PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	EROSION CONTROL PLAN - PRESTAGE	SHEET 34	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 022104_ec

PLOT DATE : 7/31/2023 1:29 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- EROSION MAT URBAN CLASS I TYPE A
- EROSION MAT CLASS I TYPE B
- SOD
- SILT FENCE
- TURBIDITY BARRIER
- TEMPORARY CONCRETE BARRIER FLOW DEFLECTOR (INCIDENTAL TO TURBIDITY BARRIER)
- RIP RAP OR STONE DITCH CHECK
- INLET PROTECTION
- INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

ORDINARY HIGH WATER MARK

ROOT RIVER

QUEENSNAKE HABITAT WITHIN 10' OF CONSTRUCTION LIMITS OR 10' FROM THE EDGE OF THE PROPOSED BRIDGE (TYP.)

QUEENSNAKE HABITAT WITHIN PROPOSED CONSTRUCTION LIMITS (TYP.)

HEAVY RIPRAP PLACED OUTSIDE OF STREAM ALONG SIDE OF ABUTMENT. SEE STRUCTURE PLANS FOR DETAILS (TYP.)

TURBIDITY BARRIER ANCHORED WITH ROCK BAGS PLACED CONTINUOUS WITH NO GAPS AT THE BASE OF THE BARRIER (TYP.)

SILT FENCE TURN-AROUND

SILT FENCE TURN-AROUND

SILT FENCE TURN-AROUND

SILT FENCE TURN-AROUND

SLOPE INTERCEPTS (TYP.)

BEGIN PROJECT
2290-03-73
STA. 232+50.00

TEMPORARY SETTLING BASIN.
FILTER BAG PLACED INSIDE SETTLING BASIN WITH GEOTEXTILE TYPE HR AND EROSION BALES

TEMPORARY SETTLING BASIN.
FILTER BAG PLACED INSIDE SETTLING BASIN WITH GEOTEXTILE FABRIC TYPE HR AND EROSION BALES

232+00 233+00 234+00 235+00 236+00 237+00

STH 38 (NORTHWESTERN AVE)

WETLAND BOUNDARY TYP.

MATCHLINE STA. 237+50

N

NOTES:

QUEENSNAKE HABITAT IS AREAS WITHIN 20' OF THE ORDINARY HIGH WATER LEVEL OF THE ROOT RIVER IN THE NORTHEAST, SOUTHEAST AND SOUTHWEST QUADRANT OF B-51-012.

AREAS OF QUENSNAKE HABITAT WITHIN THE PROPOSED CONSTRUCTION LIMITS IS TO BE HAND CLEARED BY OTHERS AND GRUBBED.

AREAS OF QUEENSNAKE HABITAT 10' FROM THE EDGE OF THE CONSTRUCTION LIMITS IS TO BE CLEARED BY OTHERS BUT NOT GRUBBED.

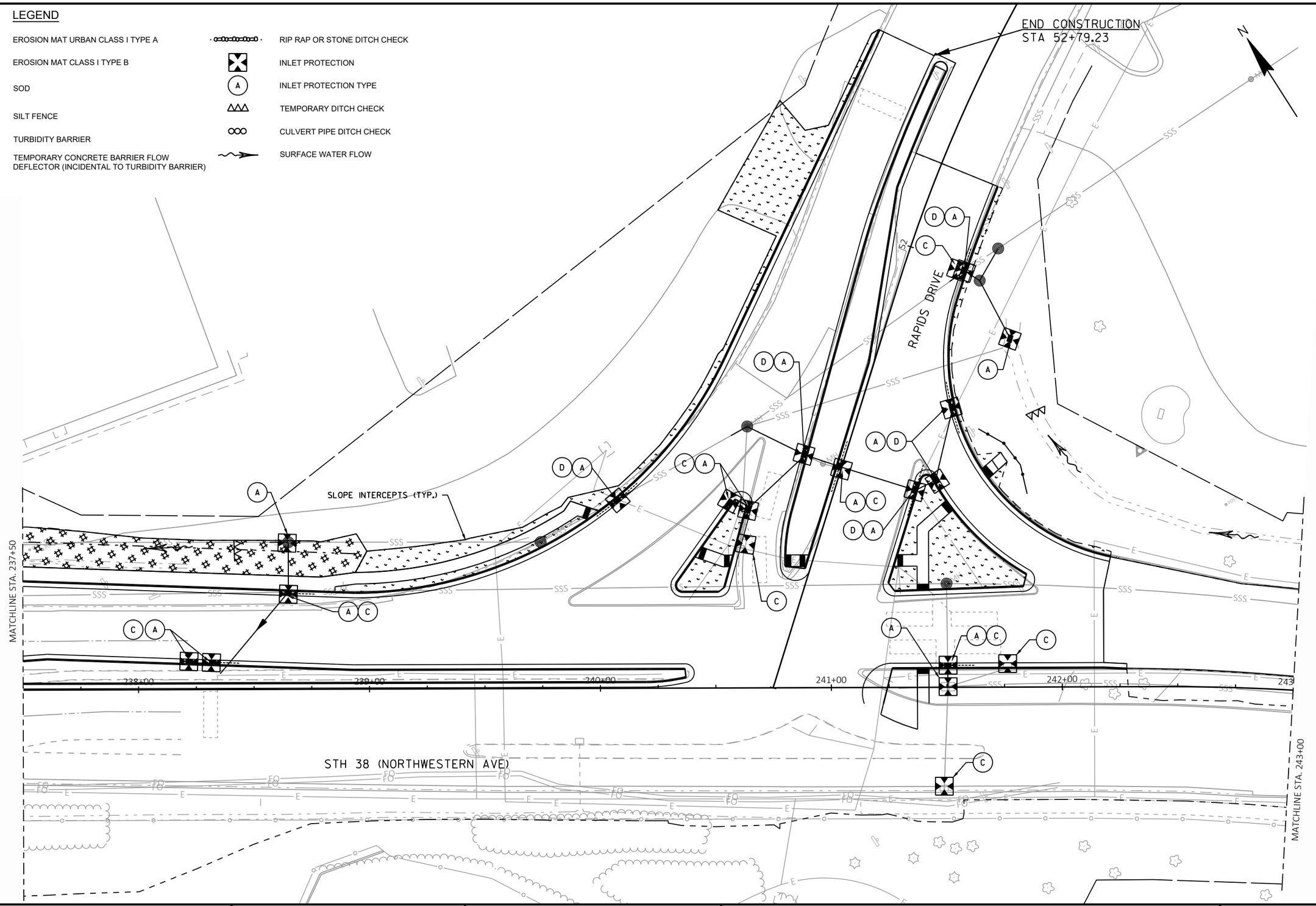
EXISTING VEGETATION WITHIN THE AREAS OF QUEENSNAKE HABITAT IDENTIFIED FOR CLEARING, SHALL BE MAINTAINED AT LESS THAN 6" IN HEIGHT UNTIL FINAL RESTORATION AND SHRUB PLANTINGS ARE IN COMPLETE.

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	EROSION CONTROL PLAN - STAGE 1	SHEET 35	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 022101_ec
PLOT DATE : 8/1/2023 11:33 AM
PLOT BY : SCHOWALTER, STEVEN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

LEGEND

- EROSION MAT URBAN CLASS I TYPE A
- EROSION MAT CLASS I TYPE B
- SOD
- SILT FENCE
- TURBIDITY BARRIER
- TEMPORARY CONCRETE BARRIER FLOW DEFLECTOR (INCIDENTAL TO TURBIDITY BARRIER)
- RIP RAP OR STONE DITCH CHECK
- INLET PROTECTION
- INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW



2

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	EROSION CONTROL PLAN - STAGE 1	SHEET 36	E

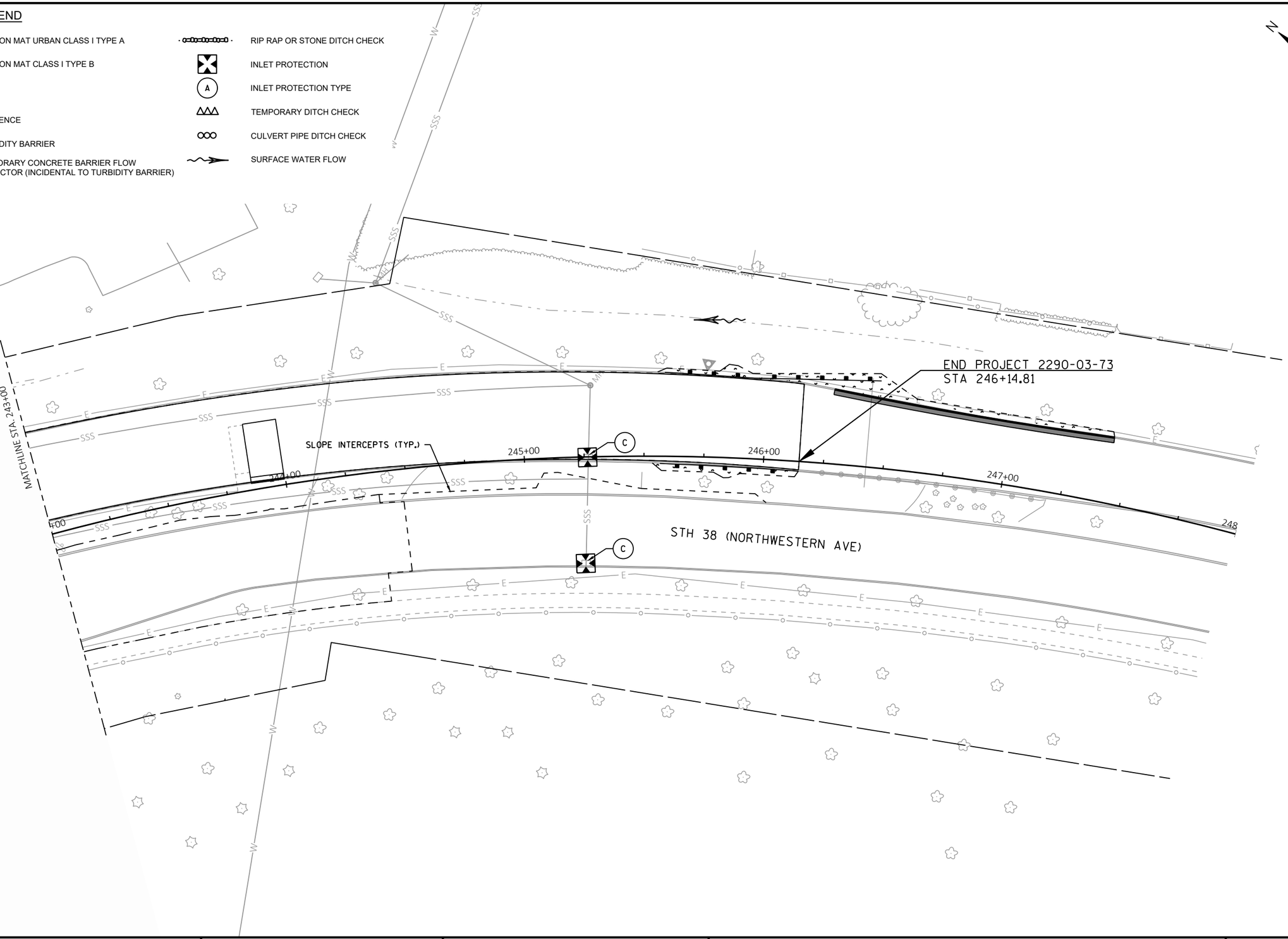
FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 022102_ec
PLOT DATE : 7/31/2023 1:29 PM
PLOT BY : SCHOWALTER, STEVEN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

- EROSION MAT URBAN CLASS I TYPE A
- EROSION MAT CLASS I TYPE B
- SOD
- SILT FENCE
- TURBIDITY BARRIER
- TEMPORARY CONCRETE BARRIER FLOW DEFLECTOR (INCIDENTAL TO TURBIDITY BARRIER)
- RIP RAP OR STONE DITCH CHECK
- INLET PROTECTION
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	EROSION CONTROL PLAN - STAGE 1	SHEET 37	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 022103_ec

PLOT DATE : 7/31/2023 1:29 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- EROSION MAT URBAN CLASS I TYPE A
- EROSION MAT CLASS I TYPE B
- SOD
- SILT FENCE SNAKE EXCLUSION BARRIER
- SILT FENCE
- TURBIDITY BARRIER
- TEMPORARY CONCRETE BARRIER FLOW DEFLECTOR (INCIDENTAL TO TURBIDITY BARRIER)
- RIP RAP OR STONE DITCH CHECK
- INLET PROTECTION
- INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

ORDINARY HIGH WATER MARK

ROOT RIVER

QUEENSNAKE HABITAT WITHIN 10' OF CONSTRUCTION LIMITS OR 10' FROM THE EDGE OF THE PROPOSED BRIDGE (TYP.)

QUEENSNAKE HABITAT WITHIN PROPOSED CONSTRUCTION LIMITS (TYP.)

TURBIDITY BARRIER ANCHORED WITH ROCK BAGS PLACED CONTINUOUS WITH NO GAPS AT THE BASE OF THE BARRIER (TYP.)

HEAVY RIPRAP PLACED OUTSIDE OF STREAM ALONG SIDE OF ABUTMENT. SEE STRUCTURE PLANS FOR DETAILS (TYP.)

BEGIN PROJECT
2290-03-73
STA. 232+50.00

TEMPORARY SETTLING BASIN.
FILTER BAG PLACED INSIDE SETTLING BASIN WITH GEOTEXTILE TYPE HR AND EROSION BALES

232+00 233+00 234+00 235+00 237+00

TEMPORARY SETTLING BASIN.
FILTER BAG PLACED INSIDE SETTLING BASIN WITH GEOTEXTILE FABRIC TYPE HR AND EROSION BALES

STH 38 (NORTHWESTERN AVE)

MATCHLINE STA. 237+50

SILT FENCE TURN-AROUND

WETLAND BOUNDARY TYP.

DISCHARGE AT TOP OF REMAINING CONCRETE FLUME

SILT FENCE TURN-AROUND

SLOPE INTERCEPTS (TYP.)

NOTES:

QUEENSNAKE HABITAT IS AREAS WITHIN 20' OF THE ORDINARY HIGH WATER LEVEL OF THE ROOT RIVER IN THE NORTHEAST, SOUTHEAST AND SOUTHWEST QUADRANT OF B-51-012.

AREAS OF QUENSNAKE HABITAT WITHIN THE PROPOSED CONSTRUCTION LIMITS IS TO BE HAND CLEARED BY OTHERS AND GRUBBED.

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PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	EROSION CONTROL PLAN - STAGE 2	SHEET 38	E

LEGEND

- EROSION MAT URBAN CLASS I TYPE A
- EROSION MAT CLASS I TYPE B
- SOD
- SILT FENCE SNAKE EXCLUSION BARRIER
- SILT FENCE
- TURBIDITY BARRIER
- TEMPORARY CONCRETE BARRIER FLOW DEFLECTOR (INCIDENTAL TO TURBIDITY BARRIER)
- RIP RAP OR STONE DITCH CHECK
- INLET PROTECTION
- INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

END CONSTRUCTION
STA 52+79.23

RAPIDS DRIVE

SLOPE INTERCEPTS (TYP.)

STH 38 (NORTHWESTERN AVE)

MATCHLINE STA. 237+50

MATCHLINE STA. 243+00

238+00 239+00 240+00 241+00 242+00 243

2

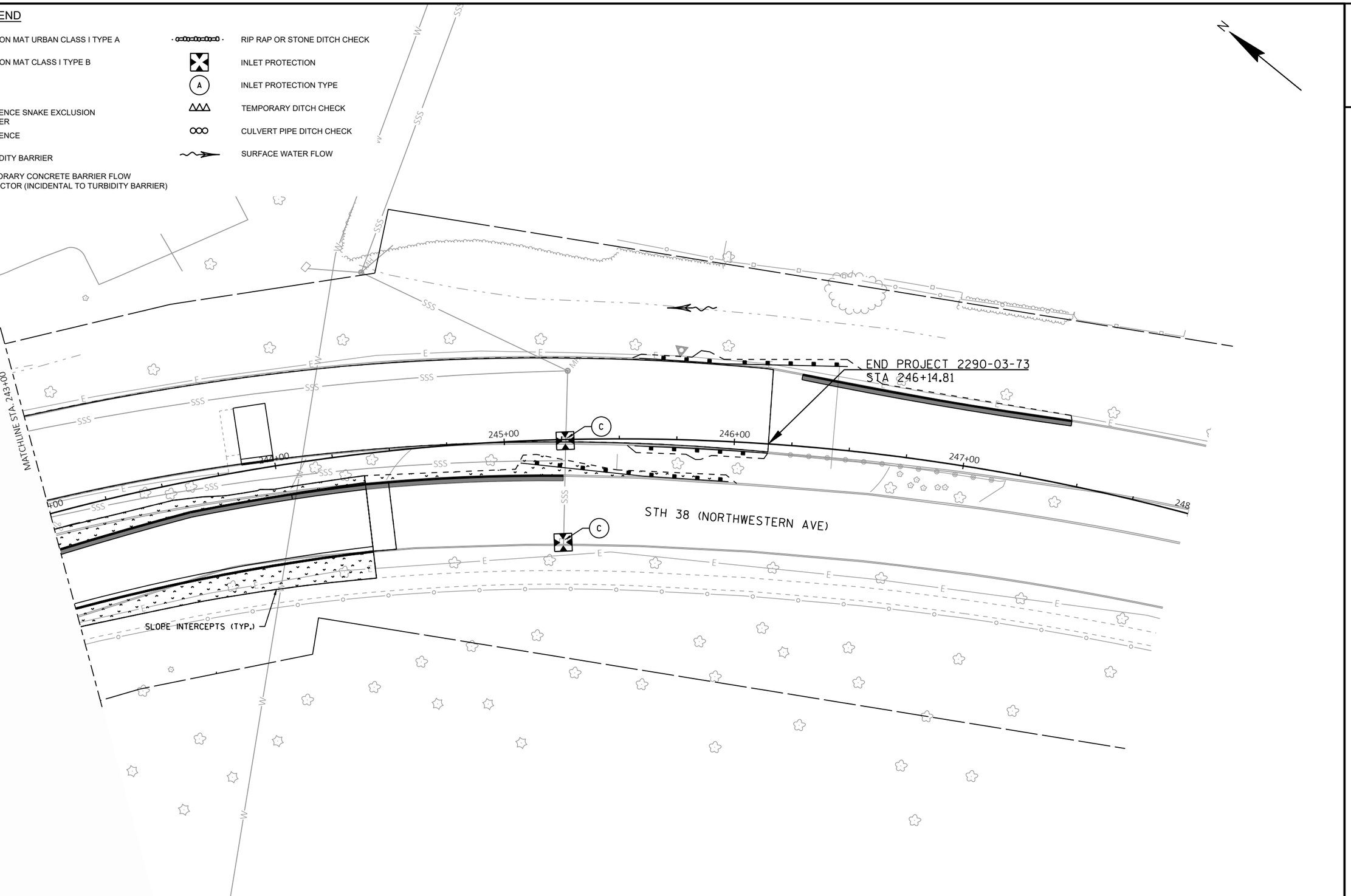
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	EROSION CONTROL PLAN - STAGE 2	SHEET 39	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\022003-EC.DWG
LAYOUT NAME - 022111_ec
PLOT DATE : 7/31/2023 1:30 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- EROSION MAT URBAN CLASS I TYPE A
- EROSION MAT CLASS I TYPE B
- SOD
- SILT FENCE SNAKE EXCLUSION BARRIER
- SILT FENCE
- TURBIDITY BARRIER
- TEMPORARY CONCRETE BARRIER FLOW DEFLECTOR (INCIDENTAL TO TURBIDITY BARRIER)
- RIP RAP OR STONE DITCH CHECK
- INLET PROTECTION
- INLET PROTECTION TYPE (A)
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	EROSION CONTROL PLAN - STAGE 2	SHEET 40	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\022003-EC.DWG
LAYOUT NAME - 022112_ec
PLOT DATE : 7/31/2023 1:30 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

LEGEND

- EROSION MAT URBAN CLASS I TYPE A
- EROSION MAT CLASS I TYPE B
- SOD
- SILT FENCE SNAKE EXCLUSION BARRIER
- SILT FENCE
- TURBIDITY BARRIER
- TEMPORARY CONCRETE BARRIER FLOW DEFLECTOR (INCIDENTAL TO TURBIDITY BARRIER)
- RIP RAP OR STONE DITCH CHECK
- INLET PROTECTION
- INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

N

MILLER LANE

STH 38 (NORTHWESTERN AVE)

219+00 220+00 221+00 222+00 223+00 224+00 225+00

BEGIN CONSTRUCTION
STA. 220+56.47, STH 38

MARKRIDGE DRIVE

HANLON DRIVE

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	EROSION CONTROL PLAN - STAGE 3	SHEET 41	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\022003-EC.DWG
LAYOUT NAME - 022113_ec

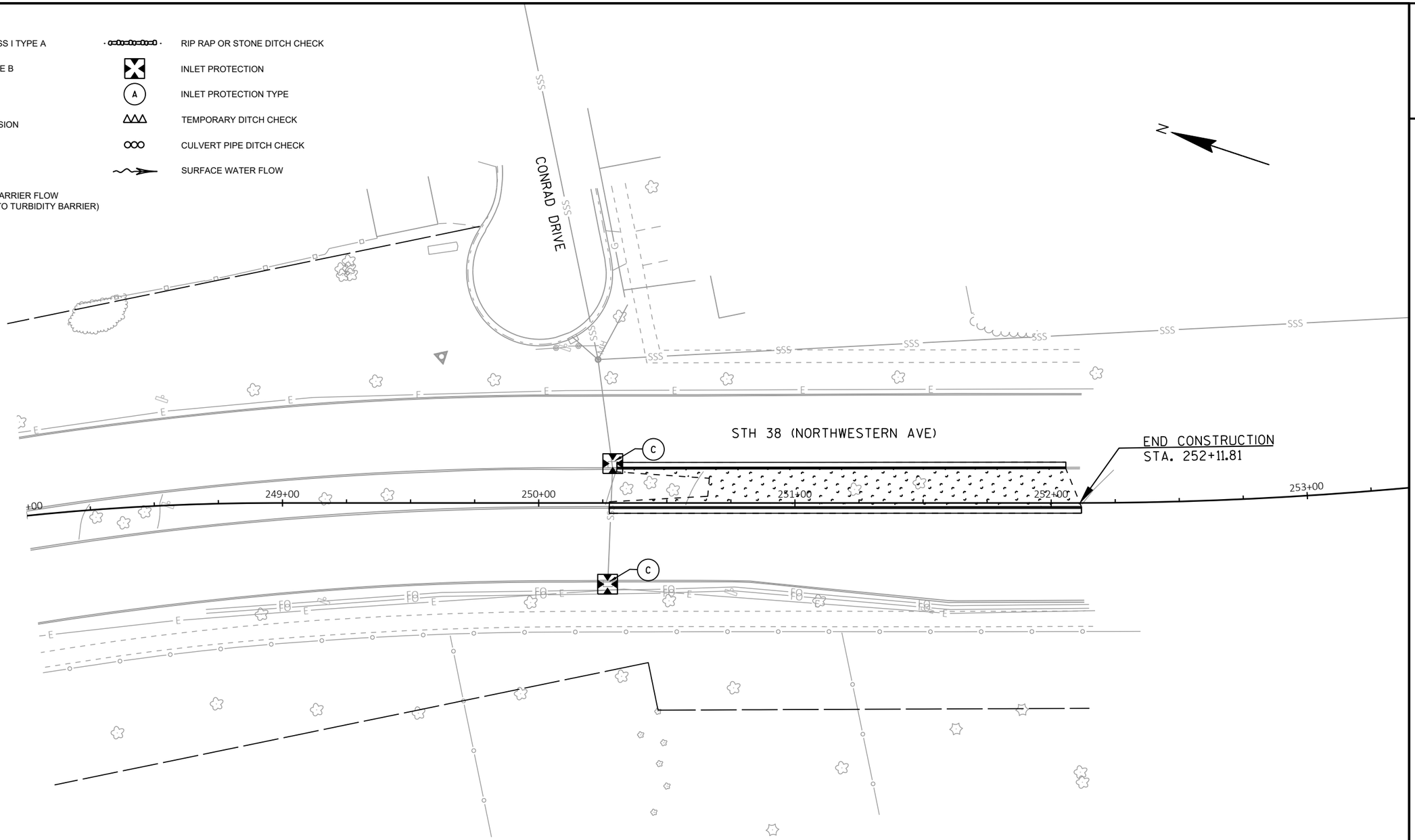
PLOT DATE : 7/31/2023 1:30 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

LEGEND

- EROSION MAT URBAN CLASS I TYPE A
- EROSION MAT CLASS I TYPE B
- SOD
- SILT FENCE SNAKE EXCLUSION BARRIER
- SILT FENCE
- TURBIDITY BARRIER
- TEMPORARY CONCRETE BARRIER FLOW DEFLECTOR (INCIDENTAL TO TURBIDITY BARRIER)
- RIP RAP OR STONE DITCH CHECK
- INLET PROTECTION
- INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW



2

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	EROSION CONTROL PLAN - STAGE 3	SHEET 42	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\022003-EC.DWG
LAYOUT NAME - 022114_ec

PLOT DATE : 7/31/2023 1:30 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

LEGEND

- (XX) PROPOSED DRAINAGE STRUCTURE
- XX EXISTING STRUCTURE TO BE ADJUSTED
- XX EXISTING STRUCTURE TO BE REMOVED
- XX EXISTING STRUCTURE TO BE RECONSTRUCTED
- EXISTING STORM SEWER TO BE REMOVED

N

EXISTING MANHOLE

201

10' PIPE UNDERDRAIN 6-INCH

STA. 233+50.03, 53.0' LT
INLET 2X3-H-S
10

STA. 235+33.00, 68.0' LT
27" AEW
41

40 STA. 235+75.00, 64.4' LT
MANHOLE 4-FT-J

STA. 237+15.00, 64.0' LT
MANHOLE 4-FT-B
11

10' PIPE UNDERDRAIN 6-INCH

202

12 STA. 236+00.00, 52.0' LT
INLET 2X3-H

13 STA. 236+00.00, 2.5' LT
INLET 2X3-H

BEGIN PROJECT
2290-03-73
STA. 232+50.00

232+00 233+00 234+00 235+00 236+00 237+00

MATCHLINE STA. 237+50

14 STA. 236+00.00, 6.5' RT
INLET 4FT-H

203

10' PIPE UNDERDRAIN 6-INCH

15 STA. 236+00.00, 42.0' RT
INLET 2X3-H

42 STA. 236+29.10, 70.1' RT
24" AEW

STA. 235+78.60, 68.0' RT
24" AEW
44

43 STA. 235+90.00, 65.0' RT
MANHOLE 4-FT-J

STH 38 (NORTHWESTERN AVE)

CTH MM

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	STORM SEWER PLAN	SHEET 43	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\022501-SS.DWG
LAYOUT NAME - 022501_ss

PLOT DATE : 7/31/2023 1:31 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

LEGEND

- (XX) PROPOSED DRAINAGE STRUCTURE
- (XX) EXISTING STRUCTURE TO BE ADJUSTED
- (XX) EXISTING STRUCTURE TO BE REMOVED
- [XX] EXISTING STRUCTURE TO BE RECONSTRUCTED
- EXISTING STORM SEWER TO BE REMOVED

STA. 238+65.00, 63.7' LT
MANHOLE 4FT-J (19A)

ABANDON PIPE IN STAGE 3

STA. 238+64.98, 42.1' LT
INLET 4FT-H (19)

WITH NEW MANHOLE COVERS TYPE J (301)

STA. 238+32.00, 11.3' LT
INLET 2X3-H (16)

STA. 238+21.97, 11.7' LT
INLET 2X3-H (17)

10' PIPE UNDERDRAIN 6-INCH

MATCHLINE STA. 237+50

238+00

239+00

240+00

TEMPORARY PIPE CONNECTION
REQUIRED BETWEEN STAGES

STA. 238+22.12, 2.0' LT
INLET 2X3-H (18)

STA. 238+25.00, 5.5' RT
MANHOLE 5FT-J (20)

10' PIPE UNDERDRAIN 6-INCH

STA. 238+25.00, 42.0' RT
INLET 4FT-H (21)

STA. 238+03.92, 66.5' RT
24" ENDWALL (22)

STA. 51+00.00, 1.5' LT
INLET 2X3-H-S (30)

STA. 51+00.36, 16.6' LT
INLET 2X3-H-S (29)

STA. 51+04.67, 44.3' LT
MANHOLE 6FT-J (26)

STA. 50+70.47, 33.6' LT
INLET 2X3-H (28)

STA. 50+70.88, 41.3' LT
INLET 2X3-H (27)

STA. 50+57.70, 88.9' LT
INLET 4FT-H-S (25)

10' PIPE UNDERDRAIN 6-INCH

RAPIDS DRIVE

207

208

209

210

52+00

10' PIPE UNDERDRAIN 6-INCH

10' PIPE UNDERDRAIN 6-INCH

STA. 51+97.54, 25.5' RT
INLET 4FT-H-S (37)

STA. 52+12.14, 36.0' RT
MANHOLE 4FT-J (36)

STA. 51+95.54, 33.0' RT
MANHOLE 4FT-J (35)

STA. 51+75.00, 53.0' RT
INLET 1G-MS (34)

10' PIPE UNDERDRAIN 6-INCH

STA. 51+39.13, 38.3' RT
INLET 2X3-H-S (33)

10' PIPE UNDERDRAIN 6-INCH

STA. 51+06.58, 40.5' RT
INLET 2X3-H (32)

STA. 51+00.00, 33.5' RT
INLET 2X3-H (31)

10' PIPE UNDERDRAIN 6-INCH

101

STA. 241+50.42, 9.0' LT
INLET 2X3-H (24)

10' PIPE UNDERDRAIN 6-INCH

241+00

242+00

243+00

206

204

STH 38 (NORTHWESTERN AVE)

10' PIPE UNDERDRAIN 6-INCH

205

STA. 241+48.83, 42.0' RT
INLET 2X3-H (23)

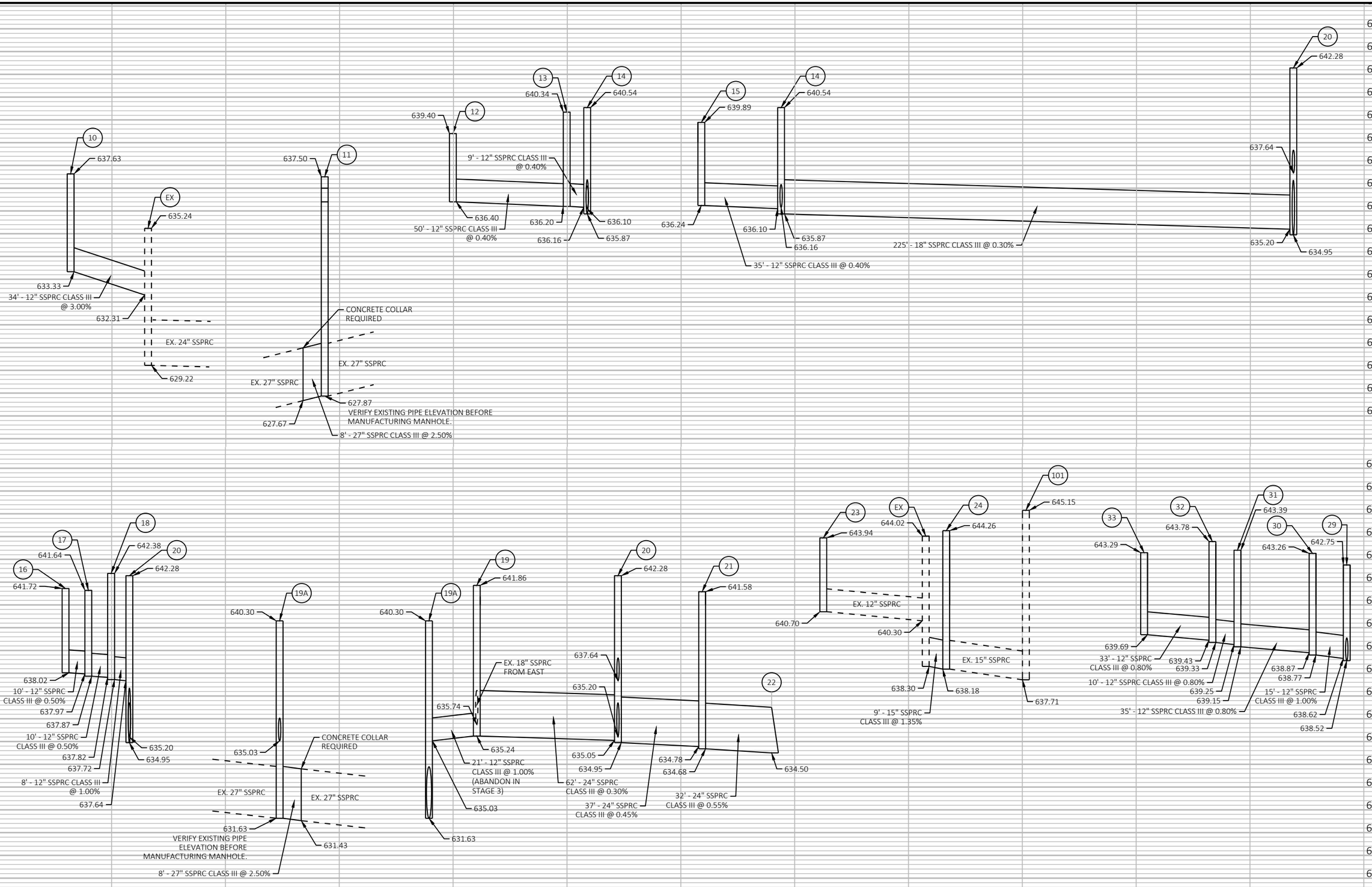
N

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	STORM SEWER PLAN	SHEET 44	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\022501-SS.DWG
LAYOUT NAME - 022502_ss

PLOT DATE : 7/31/2023 1:31 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : ##########

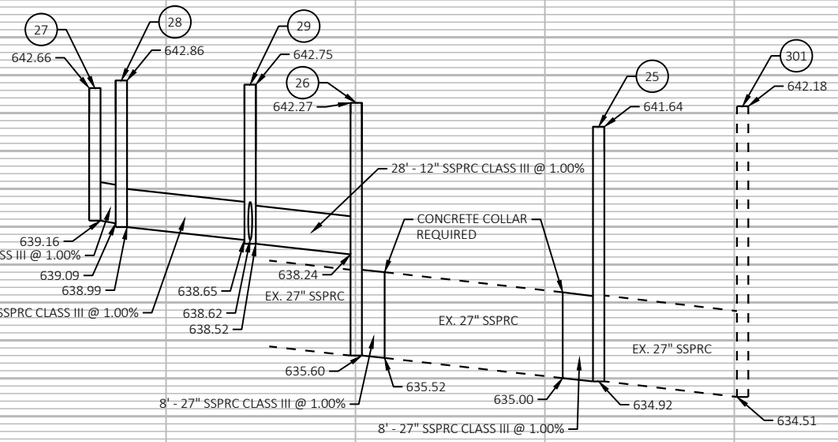
WISDOT/CADDS SHEET 42

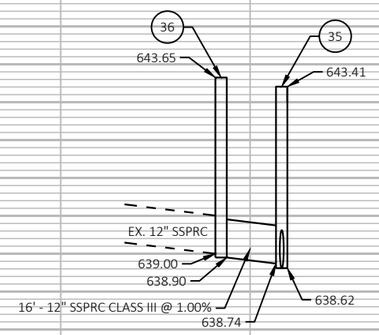


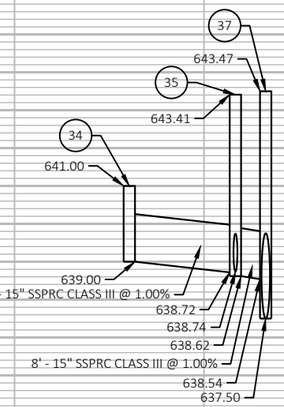
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	STORM SEWER PROFILES	SHEET 45	E

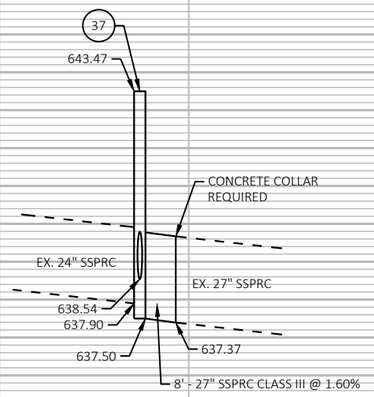
FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\022501-SS.DWG
LAYOUT NAME - 022503_ss

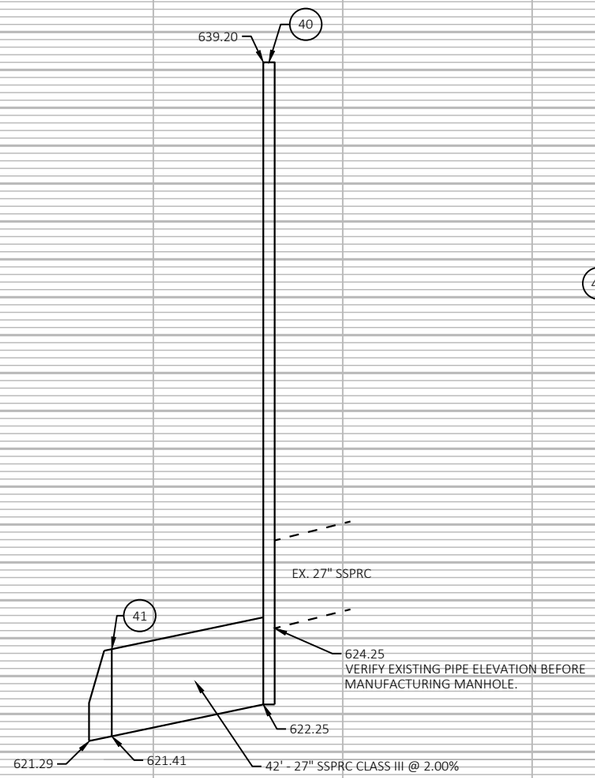
PLOT DATE : 7/31/2023 1:31 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

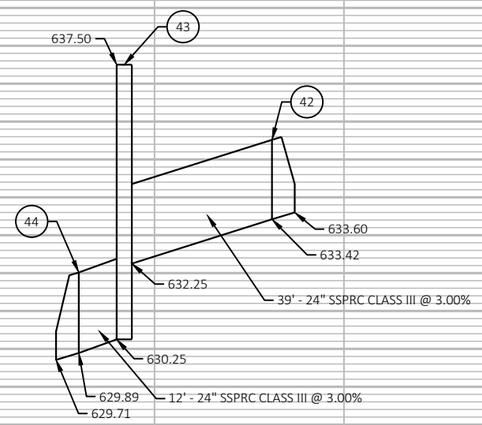












PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	STORM SEWER PROFILES	SHEET 46	E

STRUCT. NO.	STATION	OFFSET	C-C (FT)	TO STRUCT.	INLET TYPE & COVER		MH TYPE & COVER		RIM/GRATE ELEV.	DEPTH (FT)	DISCHARGE PIPE SIZE (IN)	DISCHARGE PIPE INLET ELEV.	DISCHARGE PIPE DISCH. ELEV.	DISCHARGE PIPE LENGTH (FT)	DISCHARGE PIPE SLOPE (%)	DISCHARGE PIPE CLASS	REMARKS	PIPE JOINT TIES
10	233+50.03	53.0' LT	34	EX MH	2X3	H-S	--	--	637.63	4.30	12	633.33	632.31	34.00	3.00	III		
11	237+15.00	64.0' LT	8	40	--	--	4 FT	B	637.50	9.63	27	627.87	627.67	8.00	2.50	III	CONNECT EX. STORM SEWER, 27" E I.E. 627.87. CONCRETE COLLAR REQUIRED.	
12	236+00.00	52.0' LT	50	13	2X3	H	--	--	639.40	3.00	12	636.40	636.20	50.00	0.40	III		
13	236+00.00	2.5' LT	9	14	2X3	H	--	--	640.34	4.14	12	636.20	636.16	9.00	0.40	III		
14	236+00.00	6.5' RT	225	20	4 FT	H	--	--	640.54	4.67	18	635.87	635.20	225.00	0.30	III		
15	236+00.00	42.0' RT	35	14	2X3	H	-	-	639.89	3.65	12	636.24	636.10	35.00	0.40	III		
16	238+32.00	11.3' LT	10	17	2X3	H	--	--	641.72	3.70	12	638.02	637.97	10.00	0.50	III		
17	238+21.97	11.7' LT	10	18	2X3	H	--	--	641.64	3.77	12	637.87	637.82	10.00	0.50	III		
18	238+22.12	2.0' LT	8	20	2X3	H	--	--	642.38	4.66	12	637.72	637.64	8.00	1.00	III		
19	238+64.98	42.1' LT	62	20	4 FT	H	--	--	641.86	6.62	24	635.24	635.05	62.00	0.30	III	CONNECT EX. STORM SEWER, 18" E I.E. 635.74.	
19	238+64.98	42.1' LT	21	19A	--	--	--	--	--	--	12	635.24	635.03	21.00	1.00	III	PIPE TO BE ABANDONED IN STAGE 3	
19A	238+65.00	63.7' LT	8	11	--	--	4 FT	J	640.30	8.67	27	631.63	631.43	8.00	2.50	III	CONNECT EX. STORM SEWER, 27" E I.E. 631.63. CONCRETE COLLAR REQUIRED	
20	238+25.00	5.5' RT	37	21	--	--	5 FT	J	642.28	7.33	24	634.95	634.78	37.00	0.45	III		
21	238+25.00	42.0' RT	32	22	4 FT	H	--	--	641.58	6.90	24	634.68	634.50	32.00	0.55	III		
22	238+03.92	66.5' RT	--	--	--	--	--	--	--	--	24	634.50	--	--	0.55	--	APRON ENDWALL REQUIRED.	X
23	241+48.83	42.0' RT	--	EX INLET	2X3	H	--	--	643.94	3.24	--	640.70	--	--	--	--	CONNECT EX. STORM SEWER, 12" N I.E. 640.70.	
EX INLET	--	--	9	24	--	--	--	--	--	--	15	638.30	638.18	9.00	1.35	III		
24	241+50.42	9.0' LT	--	101	2X3	H	--	--	644.26	6.08	--	638.18	--	--	--	--	CONNECT EX. STORM SEWER, 15" N I.E. 638.18.	
EX PIPE	--	--	8	25	--	--	--	--	--	--	27	635.00	634.92	8.00	1.00	--	CONCRETE COLLAR REQUIRED.	
25	50+57.70	88.9' LT	--	301	4 FT	H-S	--	--	641.64	6.72	27	634.92	--	--	--	III	CONNECT EX. STORM SEWER, 27" W I.E. 634.92	
26	51+04.67	44.3' LT	8	25	--	--	6 FT	J	642.27	6.67	27	635.60	635.52	8.00	1.00	III	CONNECT EX. STORM SEWER, 27" N I.E. 635.60. CONCRETE COLLAR REQUIRED.	
27	50+70.88	41.3' LT	7	28	2X3	H	--	--	642.66	3.50	12	639.16	639.09	7.00	1.00	III		
28	50+70.47	33.6' LT	34	29	2X3	H	--	--	642.86	3.87	12	638.99	638.65	34.00	1.00	III		
29	51+00.36	16.6' LT	28	26	2X3	H-S	--	--	642.75	4.23	12	638.52	638.24	28.00	1.00	III		
30	51+00.00	1.5' LT	15	29	2X3	H-S	--	--	643.26	4.49	12	638.77	638.62	15.00	1.00	III		
31	51+00.00	33.5' RT	35	30	2X3	H	--	--	643.39	4.24	12	639.15	638.87	35.00	0.80	III		
32	51+06.58	40.5' RT	10	31	2X3	H	--	--	643.78	4.45	12	639.33	639.25	10.00	0.80	III		
33	51+39.13	38.3' RT	33	32	2X3	H-S	--	--	643.29	3.60	12	639.69	639.43	33.00	0.80	III		
34	51+75.00	53.0' RT	28	35	1G	MS	--	--	641.00	2.00	15	639.00	638.72	28.00	1.00	III		
35	51+95.54	33.0' RT	8	37	--	--	4 FT	J	643.41	4.79	15	638.62	638.54	8.00	1.00	III		
36	52+12.14	36.0' RT	16	35	--	--	4 FT	J	643.65	14.75	12	628.90	628.74	16.00	1.00	III	CONNECT EX. STORM SEWER, 12" E I.E. 639.00.	
37	51+97.54	25.5' RT	8	26	4 FT	H-S	--	--	643.47	5.97	27	637.50	637.37	8.00	1.60	III	CONCRETE COLLAR REQUIRED.	
40	235+75.00	64.4' LT	42	41	--	--	4 FT	J	639.20	16.95	27	622.25	621.41	42.00	2.00	III	CONNECT EX. STORM SEWER, 27" SE I.E. 624.25.	
41	235+33.00	68.0' LT	--	--	--	--	--	--	--	--	27	621.41	--	--	2.00	--	APRON ENDWALL REQUIRED.	X
42	236+29.10	70.1' RT	39	43	--	--	--	--	--	--	24	633.42	632.25	39.00	3.00	III	APRON ENDWALL REQUIRED.	X
43	235+90.00	65.0' RT	12	44		--	4 FT	J	637.50	7.25	24	630.25	629.89	12.00	3.00	III		
44	235+78.00	68.0' RT	--	--	--	--	--	--	--	--	24	629.89	--	--	3.00	--	APRON ENDWALL REQUIRED.	X

STORM SEWER NOTES:

1. STATION / OFFSETS TO MANHOLES AND FIELD INLETS ARE GIVEN TO THE CENTER OF STRUCTURE.
2. STATION / OFFSETS TO INLETS ARE GIVEN TO THE CENTER OF THE STRUCTURE.
3. STATION / OFFSETS TO ENDWALLS ARE GIVEN TO THE END OF PIPE.
4. MANHOLE AND FIELD INLET RIM/GRATE ELEVATIONS ARE GIVEN TO THE CENTER OF THE STRUCTURE.
5. INLET RIM/GRATE ELEVATIONS ARE GIVEN TO THE FLANGE LINE.
6. DEPTH OF MANHOLES AND INLETS ARE MEASURED FROM THE LOWEST PIPE INVERT OF THE STRUCTURE TO THE RIM/GRATE ELEVATION.
7. PIPE LENGTHS FOR STRUCTURES ARE SHOWN FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
8. CONTRACTOR SHALL VERIFY DEPTH OF ALL EXISTING STORM SEWER STRUCTURES BEFORE BEGINNING WORK AND SHALL REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO BEGINNING WORK.
9. PIPES WITHIN BREAKER RUN SHALL BE SURROUNDED WITH BASE AGGREGATE DENSE 1 1/4-INCH TO PROVIDE BUFFER BETWEEN PIPE AND BREAKER RUN.

2

LEGEND

BB BUTTONBUSH

RD REDOSIER DOGWOOD

ORDINARY HIGH WATER MARK

ROOT RIVER

HEAVY RIPRAP SEE STRUCTURE PLANS FOR DETAILS (TYP.)

ALTERNATE SHRUB SPECIES PLANTINGS RD BB

BEGIN PROJECT
2290-03-73
STA. 232+50.00

232+00 233+00 234+00 235+00 236+00 237+00

STH 38 (NORTHWESTERN AVE)

ALTERNATE SHRUB SPECIES PLANTINGS BB RD

ALTERNATE SHRUB SPECIES PLANTINGS BB RD

SLOPE INTERCEPTS (TYP.)

WETLAND BOUNDARY

PLANT DATA CHART

SYMBOL	COMMON NAME	SCIENTIFIC NAME	AVE. MATURE HEIGHT	SIZE WHEN PLANTED	ROOT TYPE	MINIMUM SIZE				GUY OR BRACE	FERT. PACK REQUIRED	ROTENT PROTECTION REQUIRED	MULCH RING	TOTAL
						MIN. BALL OR POT SIZE		MIN. HOLE SIZE						
						MIN. CONT. SIZE	MIN. CONT. DEPTH	MIN. HOLE DIA.	MIN. HOLE DEPTH					
BB	BUTTON BUSH	EPHALANTHUS OCCIDENTAL	6'-8'	2' HT.	CG	#2 CONTAINER	6"	12"	12"	NO	2	NO	NO	12
RD	DOGWOOD, REDOSIER	CORNUS SERICEA	7'-9'	2' HT.	CG	#2 CONTAINER	6"	12"	12"	NO	2	NO	NO	12

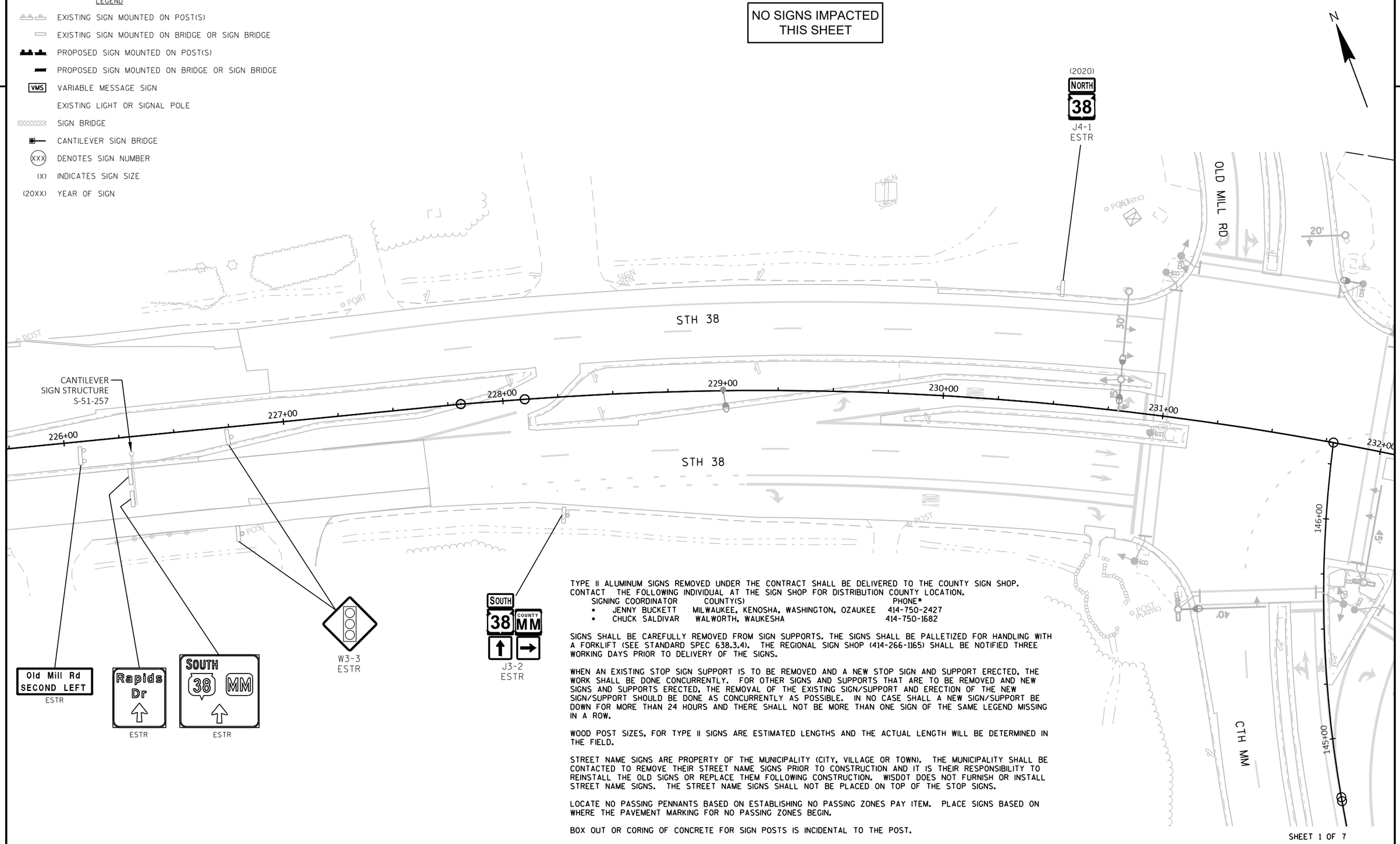
NOTE: EXACT SHRUB LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
SHRUBS TO BE PLACED IN GAPS IN EXISTING ROCK AND BOULDER AREAS.
PLANTINGS TO BE INSTALLED WITHIN 20' OF THE ROOT RIVER.

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- (20XX) — YEAR OF SIGN

NO SIGNS IMPACTED THIS SHEET



TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE COUNTY SIGN SHOP. CONTACT THE FOLLOWING INDIVIDUAL AT THE SIGN SHOP FOR DISTRIBUTION COUNTY LOCATION.

SIGNING COORDINATOR	COUNTY(S)	PHONE#
• JENNY BUCKETT	MILWAUKEE, KENOSHA, WASHINGTON, OZAUKEE	414-750-2427
• CHUCK SALDIVAR	WALWORTH, WAUKESHA	414-750-1682

SIGNS SHALL BE CAREFULLY REMOVED FROM SIGN SUPPORTS. THE SIGNS SHALL BE PALLETIZED FOR HANDLING WITH A FORKLIFT (SEE STANDARD SPEC 638.3.4). THE REGIONAL SIGN SHOP (414-266-1165) SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF THE SIGNS.

WHEN AN EXISTING STOP SIGN SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED, THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POST SIZES, FOR TYPE II SIGNS ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

STREET NAME SIGNS ARE PROPERTY OF THE MUNICIPALITY (CITY, VILLAGE OR TOWN). THE MUNICIPALITY SHALL BE CONTACTED TO REMOVE THEIR STREET NAME SIGNS PRIOR TO CONSTRUCTION AND IT IS THEIR RESPONSIBILITY TO REINSTALL THE OLD SIGNS OR REPLACE THEM FOLLOWING CONSTRUCTION. WISDOT DOES NOT FURNISH OR INSTALL STREET NAME SIGNS. THE STREET NAME SIGNS SHALL NOT BE PLACED ON TOP OF THE STOP SIGNS.

LOCATE NO PASSING PENNANTS BASED ON ESTABLISHING NO PASSING ZONES PAY ITEM. PLACE SIGNS BASED ON WHERE THE PAVEMENT MARKING FOR NO PASSING ZONES BEGIN.

BOX OUT OR CORING OF CONCRETE FOR SIGN POSTS IS INCIDENTAL TO THE POST.

SHEET 1 OF 7

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	SIGNING REMOVAL PLAN	SHEET 49	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIGN\023101_PS_2290-03-03.DWG
LAYOUT NAME - Sht-101R

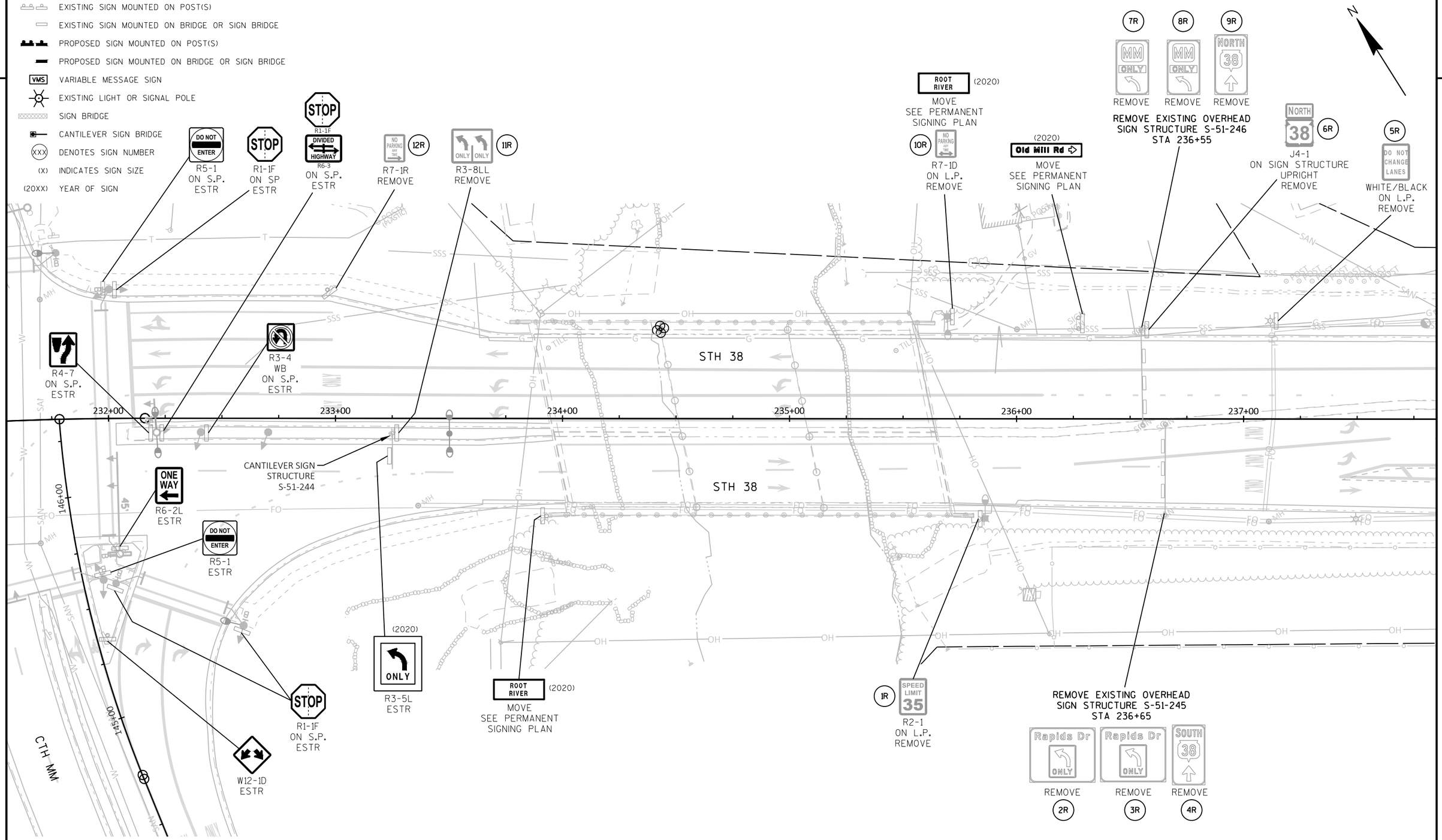
PLOT DATE : 4/11/2022 3:46 PM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- (20XX) — YEAR OF SIGN



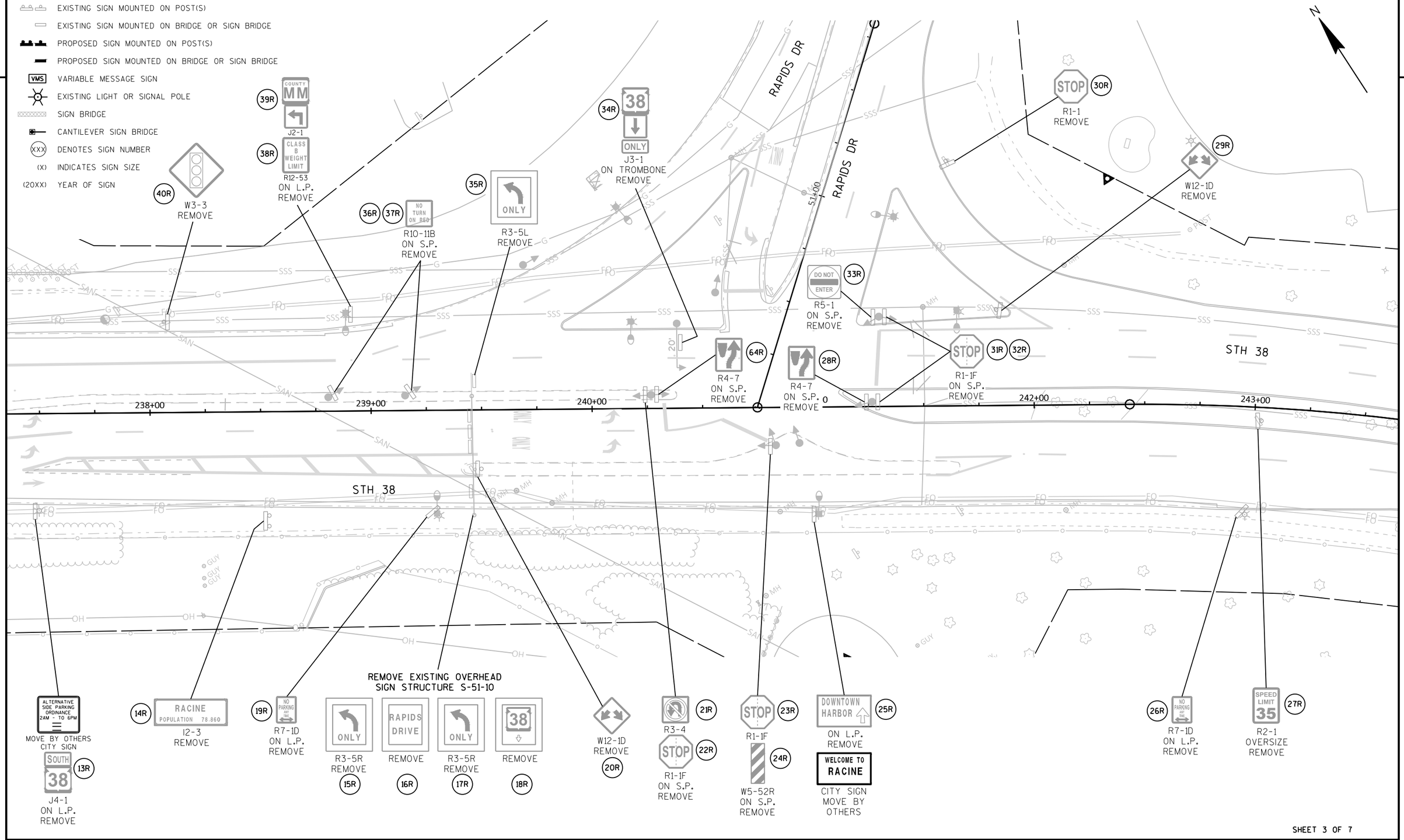
SHEET 2 OF 7

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	SIGNING REMOVAL PLAN	SHEET 50	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- (20XX) — YEAR OF SIGN



SHEET 3 OF 7

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	SIGNING REMOVAL PLAN	SHEET 51	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIGN\023101_PS_2290-03-03.DWG
LAYOUT NAME - Sht-103R

PLOT DATE : 6/6/2022 8:02 AM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- (20XX) — YEAR OF SIGN

I5-1
ESTR
CITY SIGN

49R
R7-1D
ON L.P.
REMOVE

44R
R12-53
REMOVE

48R
CLASS B WEIGHT LIMIT

45R
REMOVE

46R
REMOVE

47R
RAPIDS DRIVE
REMOVE

REMOVE EXISTING OVERHEAD
SIGN STRUCTURE S-51-9

43R
R7-1D
ON UPRIGHT
REMOVE

41R 42R
J2-2
REMOVE

STH 38

244+00 245+00 246+00 247+00 248+00 249+00

RACINE ON THE LAKE
LARGE CITY SIGN
MOVE BY
OTHERS IF
NECESSARY

ALTERNATE SIDE PARKING
CITY SIGN
ON L.P.
ESTR

SHEET 4 OF 7

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	SIGNING REMOVAL PLAN	SHEET 52	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIGN\023101_PS_2290-03-03.DWG
LAYOUT NAME - Sht-104R

PLOT DATE : 6/6/2022 8:02 AM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : 1 IN:40 FT

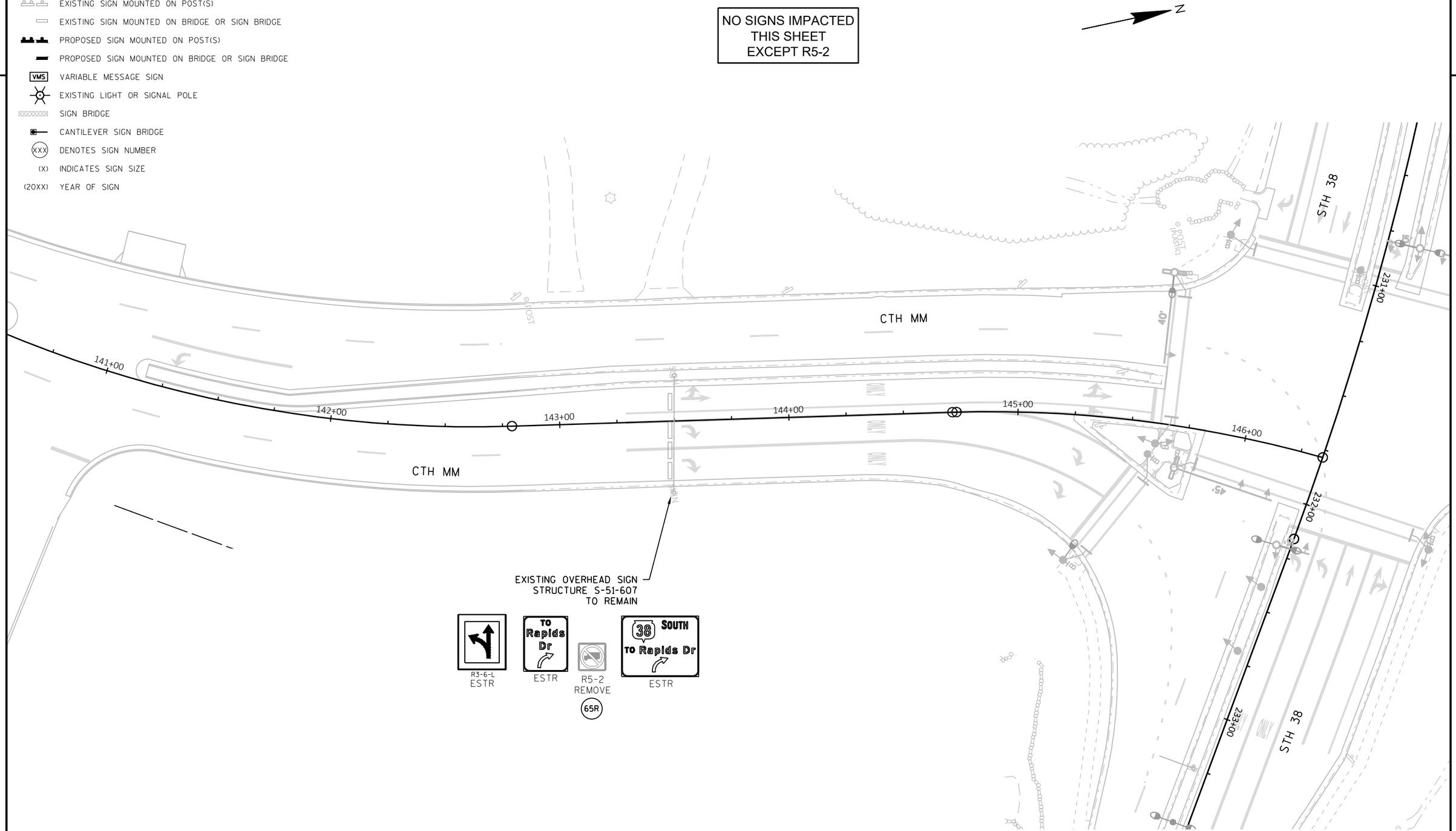
WISDOT/CADDS SHEET 42

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- (20XX) — YEAR OF SIGN

NO SIGNS IMPACTED
THIS SHEET
EXCEPT R5-2



SHEET 5 OF 7

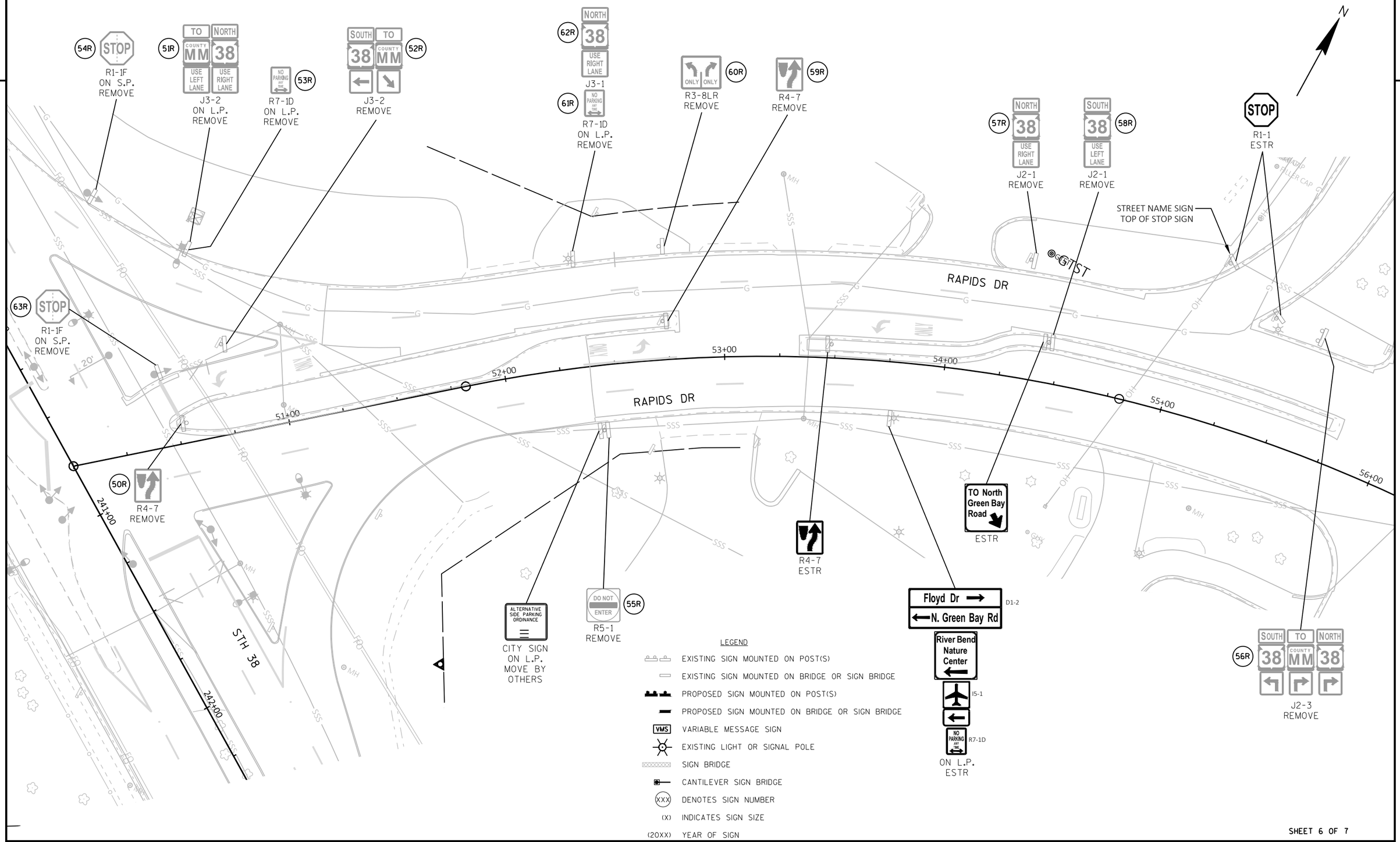
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	SIGNING REMOVAL PLAN	SHEET 53	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIGN\023101_PS_2290-03-03.DWG
LAYOUT NAME - Sht-105R

PLOT DATE : 6/6/2022 8:02 AM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2



SHEET 6 OF 7

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	SIGNING REMOVAL PLAN	SHEET 54	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIGN\023101_PS_2290-03-03.DWG
LAYOUT NAME - Sht-106R
PLOT DATE : 6/6/2022 8:02 AM
PLOT BY : VANDE LEEST, CYNTHIA
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
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- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- (20XX) — YEAR OF SIGN

N

N GREEN BAY RD

STREET NAME SIGN
TOP OF STOP SIGN

STOP
R1-1
ESTR

R4-7
ESTR

RAPIDS DR

57+00

56+00

55+00

STREET NAME SIGN
TOP OF STOP SIGN

STOP
R1-1
ESTR

FLAG

FLOYD DR

SPEED LIMIT 35
R2-1

NO PARKING ANY TIME
R7-1D
ON L.P.
ESTR

SHEET 7 OF 7

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	SIGNING REMOVAL PLAN	SHEET 55	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIGN\023101_PS_2290-03-03.DWG
LAYOUT NAME - Sht-107R

PLOT DATE : 6/6/2022 8:03 AM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
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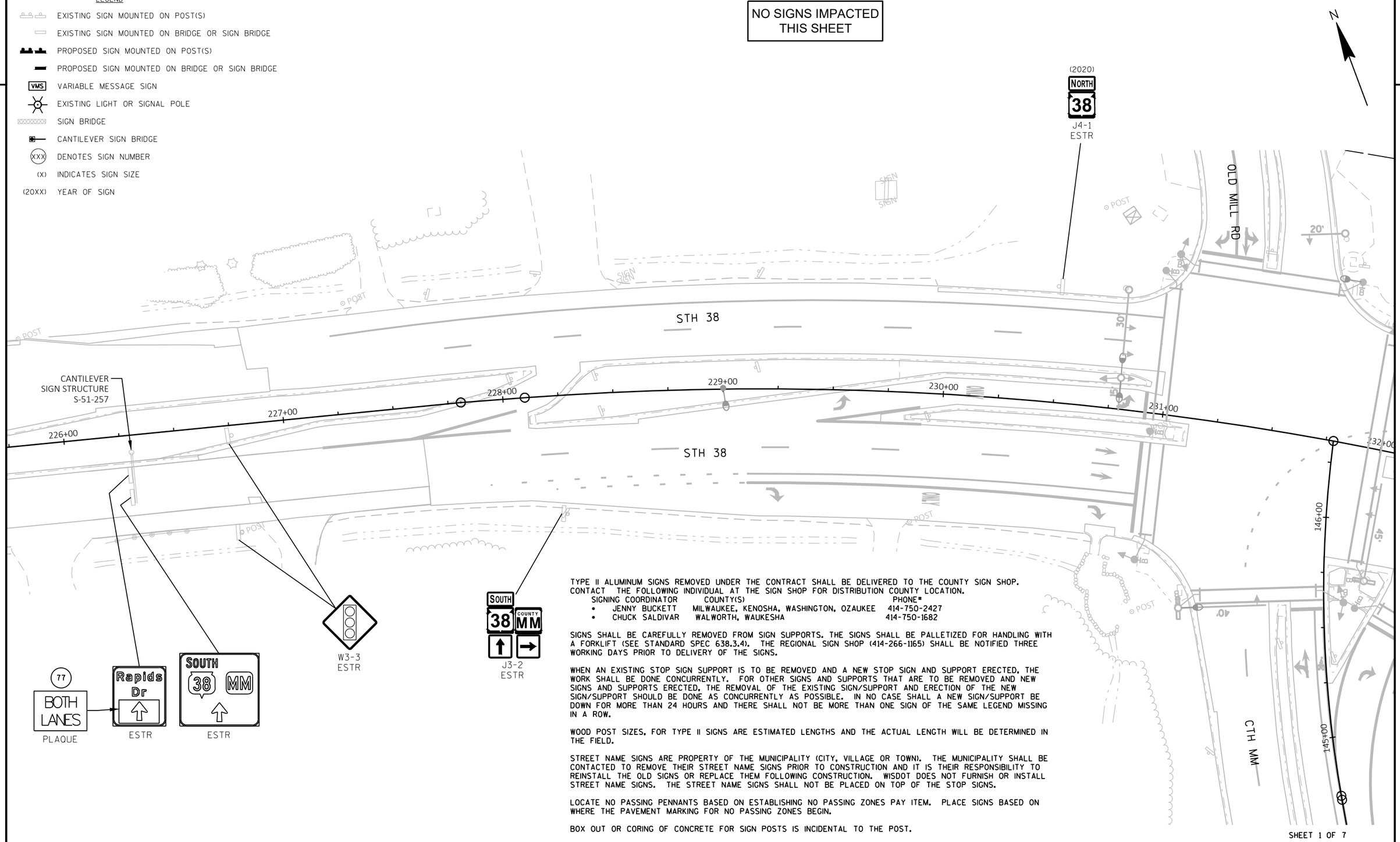
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- (20XX) — YEAR OF SIGN

NO SIGNS IMPACTED THIS SHEET



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SIGNING COORDINATOR	COUNTY(S)	PHONE#
• JENNY BUCKETT	MILWAUKEE, KENOSHA, WASHINGTON, OZAUKEE	414-750-2427
• CHUCK SALDIVAR	WALWORTH, WAUKESHA	414-750-1682

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LOCATE NO PASSING PENNANTS BASED ON ESTABLISHING NO PASSING ZONES PAY ITEM. PLACE SIGNS BASED ON WHERE THE PAVEMENT MARKING FOR NO PASSING ZONES BEGIN.

BOX OUT OR CORING OF CONCRETE FOR SIGN POSTS IS INCIDENTAL TO THE POST.

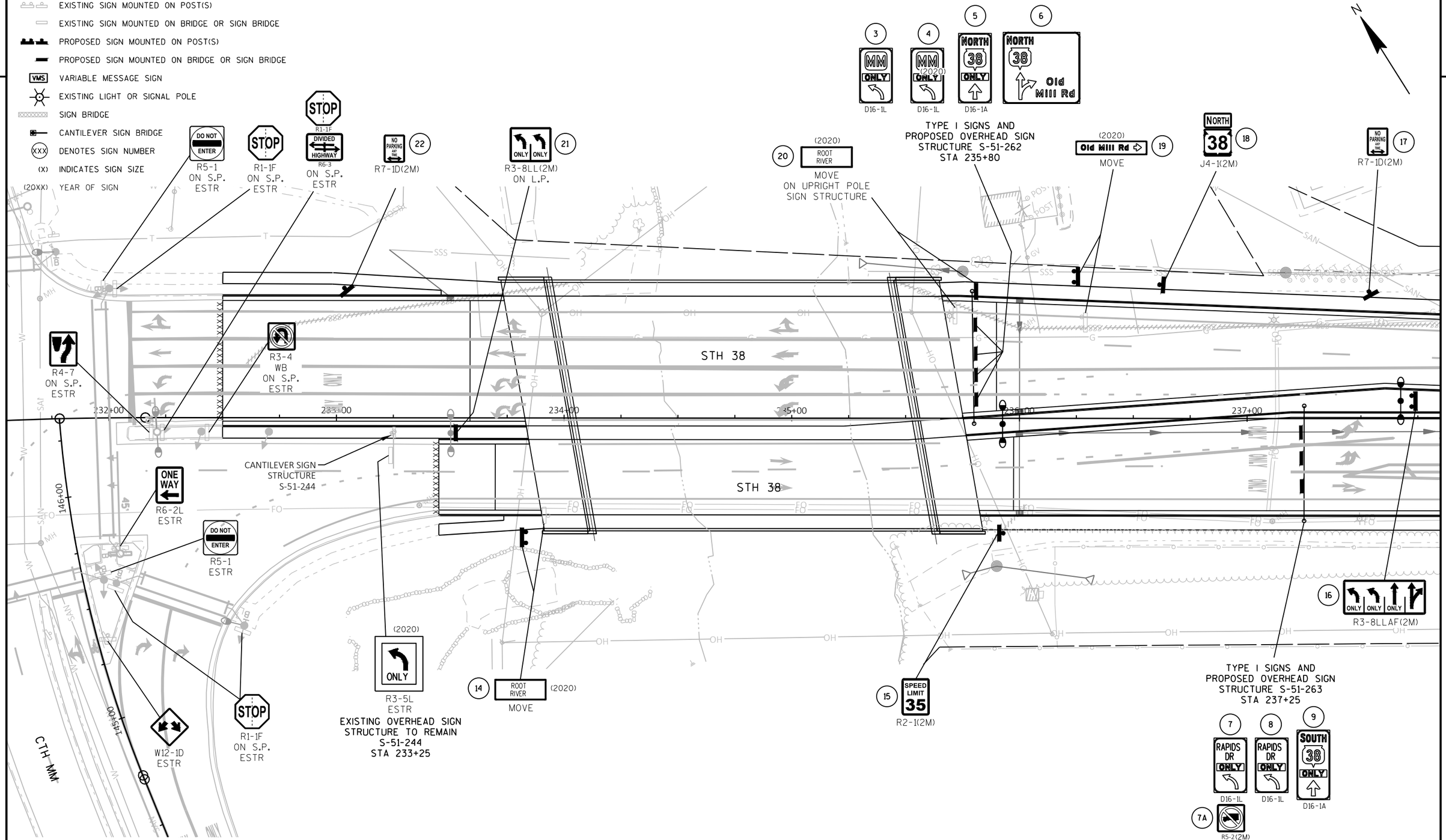
SHEET 1 OF 7

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PERMANENT SIGNING	SHEET 56	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- (20XX) — YEAR OF SIGN



SHEET 2 OF 7

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PERMANENT SIGNING	SHEET 57	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIGN\023201_PS_2290-03-03.DWG
LAYOUT NAME - Sht-202

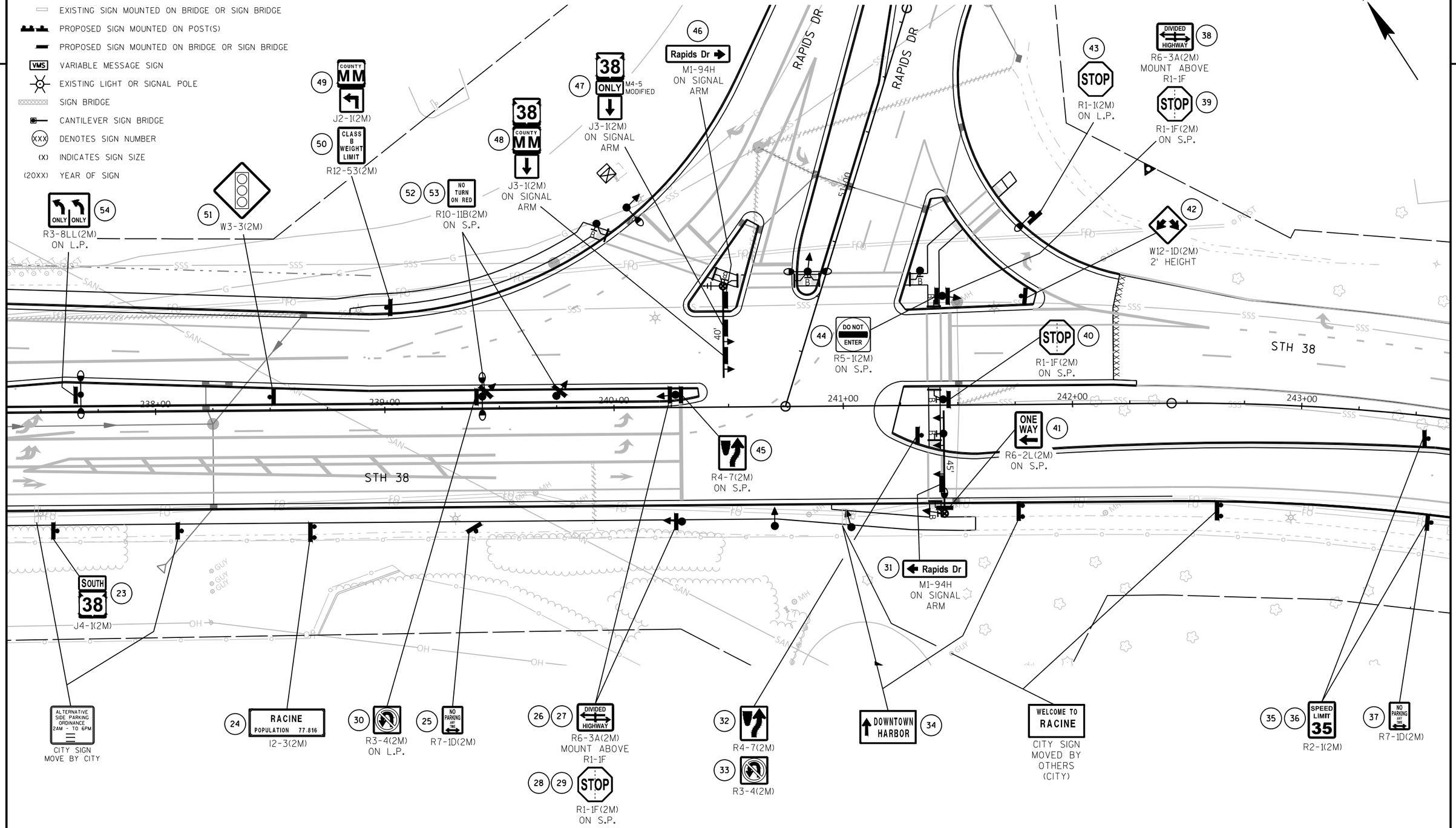
PLOT DATE : 10/16/2023 9:15 AM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- (20XX) — YEAR OF SIGN

2



SHEET 3 OF 7

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PERMANENT SIGNING	SHEET 58	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIGN\023201_PS_2290-03-03.DWG
LAYOUT NAME - Sht-203

PLOT DATE : 9/19/2022 8:03 AM PLOT BY : MARTENS, KAREN L PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- (20XX) — YEAR OF SIGN

I5-1
ESTR
CITY SIGN

60 NO PARKING ANY TIME
R7-1D(2M)
ON L.P.

10 38 MM
D16-1MOD

11 NORTH 38 ONLY
D16-1A

12 RAPIDS DR ONLY
D16-1R

TYPE I SIGNS AND
PROPOSED OVERHEAD SIGN
STRUCTURE S-51-615
STA 245+85

57 NO PARKING ANY TIME
R7-1D(2M)
ON UPRIGHT
OF SIGN
STRUCTURE

58 COUNTY MM
M1-5A(2M)

59 CLASS B WEIGHT LIMIT
R12-53(2M)
ON UPRIGHT
OF SIGN
STRUCTURE

55 56 COUNTY MM 38
M4-20L USE LEFT LANE | USE CENTER LANE M4-20C
J2-2(2M)

N

STH 38

244+00 245+00 246+00 247+00 248+00 249+00

RACINE ON THE LAKE
LARGE CITY SIGN
MOVE BY
OTHERS IF
NECESSARY

ALTERNATE SIDE PARKING
CITY SIGN
ON L.P.
ESTR

SHEET 4 OF 7

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PERMANENT SIGNING TYPE I SIGNS & OVERHEAD SIGN STRUCTURES ONLY	SHEET 59	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIGN\023201_PS_2290-03-03.DWG
LAYOUT NAME - Sht-204
PLOT DATE : 9/19/2022 8:03 AM PLOT BY : MARTENS, KAREN L PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- (20XX) — YEAR OF SIGN

N

CTH MM

141+00 142+00 143+00 144+00 145+00 146+00

STH 38

231+00 232+00 233+00

40' 45'

POST

EXISTING OVERHEAD SIGN
STRUCTURE TO REMAIN
S-51-607

R3-6L ESTR

TO Rapids Dr — ESTR

13 — R5-2(2M) TYPE II SIGN

38 SOUTH TO Rapids Dr — ESTR

SHEET 5 OF 7

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PERMANENT SIGNING	SHEET 60	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIGN\023201_PS_2290-03-03.DWG
LAYOUT NAME - Sht-205

PLOT DATE : 9/19/2022 8:03 AM PLOT BY : MARTENS, KAREN L PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

72 STOP
R1-1F(2M)
ON S.P.

73 NO PARKING ANY TIME
R7-1D(2M)

71
W12-1D(2M)
2' HEIGHT

70 TO COUNTY MM NORTH 38
USE LEFT LANE | USE RIGHT LANE
M4-20L M4-20R
J3-2(2M)

62 SOUTH NORTH TO COUNTY MM
38 38
J3-3(2M)

69 NORTH 38
USE RIGHT LANE M4-20R
J3-1(2M)

68 NO PARKING ANY TIME
R7-1D(2M)
ON L.P.

67 ONLY ONLY ONLY
R3-8LRR(2M)

66
R4-7(2M)

1 38 MM
D16-1MOD

2 NORTH 38 ONLY
D16-1A

PROPOSED OVERHEAD SIGN
STRUCTURE S-51-616
STA 54+50

65 NORTH 38
USE RIGHT LANE M4-20R
J3-1(2M)
ON
UPRIGHT
POLE

STOP
R1-1
ESTR

STREET NAME SIGN
TOP OF STOP SIGN

74 75 STOP
R1-1F(2M)
ON S.P.

40'

RAPIDS DR

51+00 52+00 53+00 54+00 55+00 56+00

241+00 242+00

61
R4-7(2M)
ON S.P.

76 DIVIDED HIGHWAY
R6-3A(2M)
ON S.P.
MOUNT ABOVE
R1-1F

ALTERNATIVE SIDE PARKING ORDINANCE
CITY SIGN
MOVE BY
OTHERS
(CITY)

63 DO NOT ENTER
R5-1(2M)

R4-7
ESTR

TO North Green Bay Road
ESTR

Floyd Dr →
←N. Green Bay Rd
D1-2

River Bend Nature Center
I5-1

NO PARKING ANY TIME R7-1D
ON L.P.
ESTR

64 SOUTH TO COUNTY MM NORTH 38
38
J2-3(2M)

STH 38

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- (20XX) YEAR OF SIGN

SHEET 6 OF 7

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PERMANENT SIGNING	SHEET 61	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIGN\023201_PS_2290-03-03.DWG
LAYOUT NAME - Sht-206

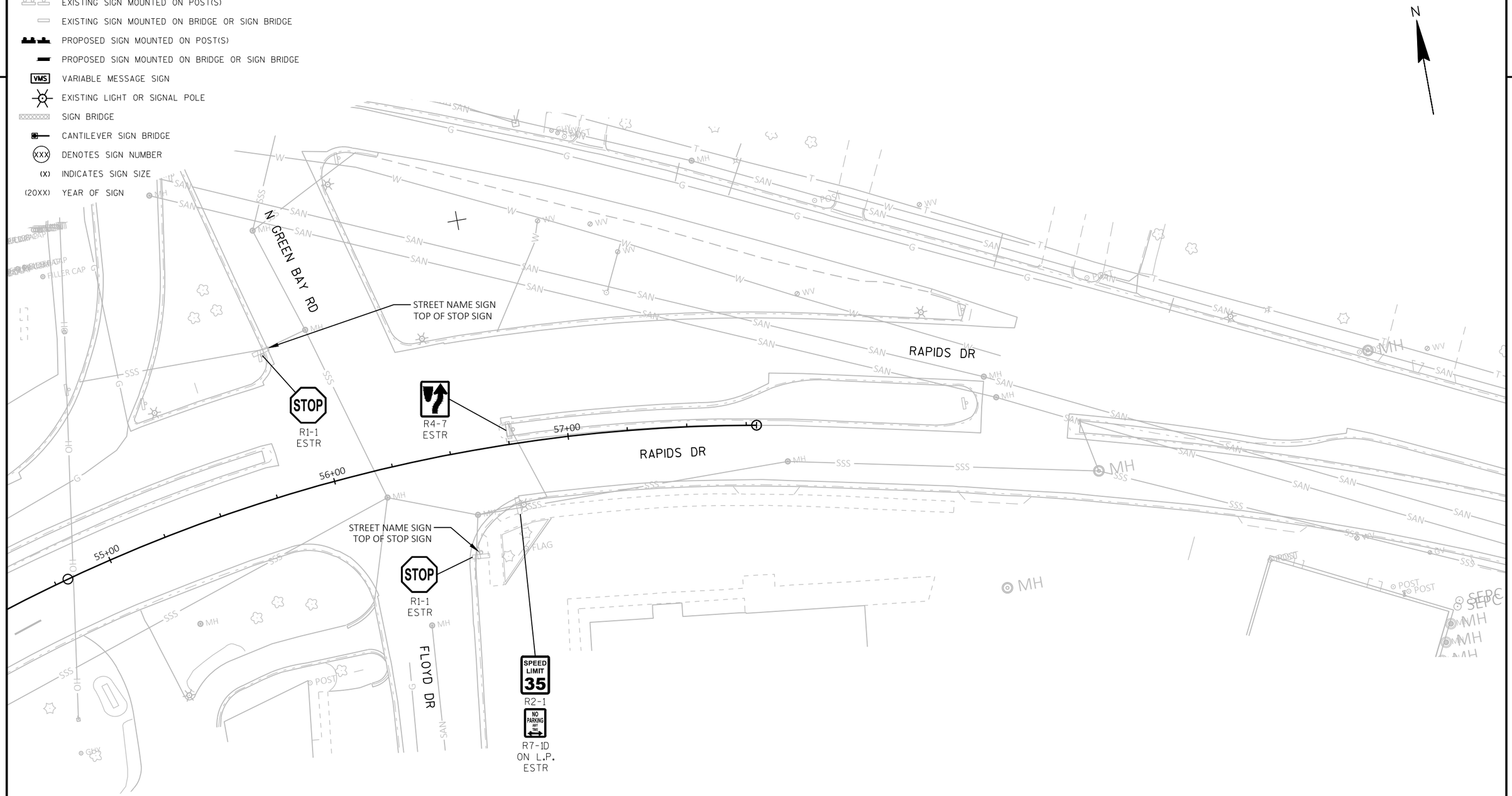
PLOT DATE : 9/19/2022 8:03 AM PLOT BY : MARTENS, KAREN L PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- (20XX) — YEAR OF SIGN



SHEET 7 OF 7

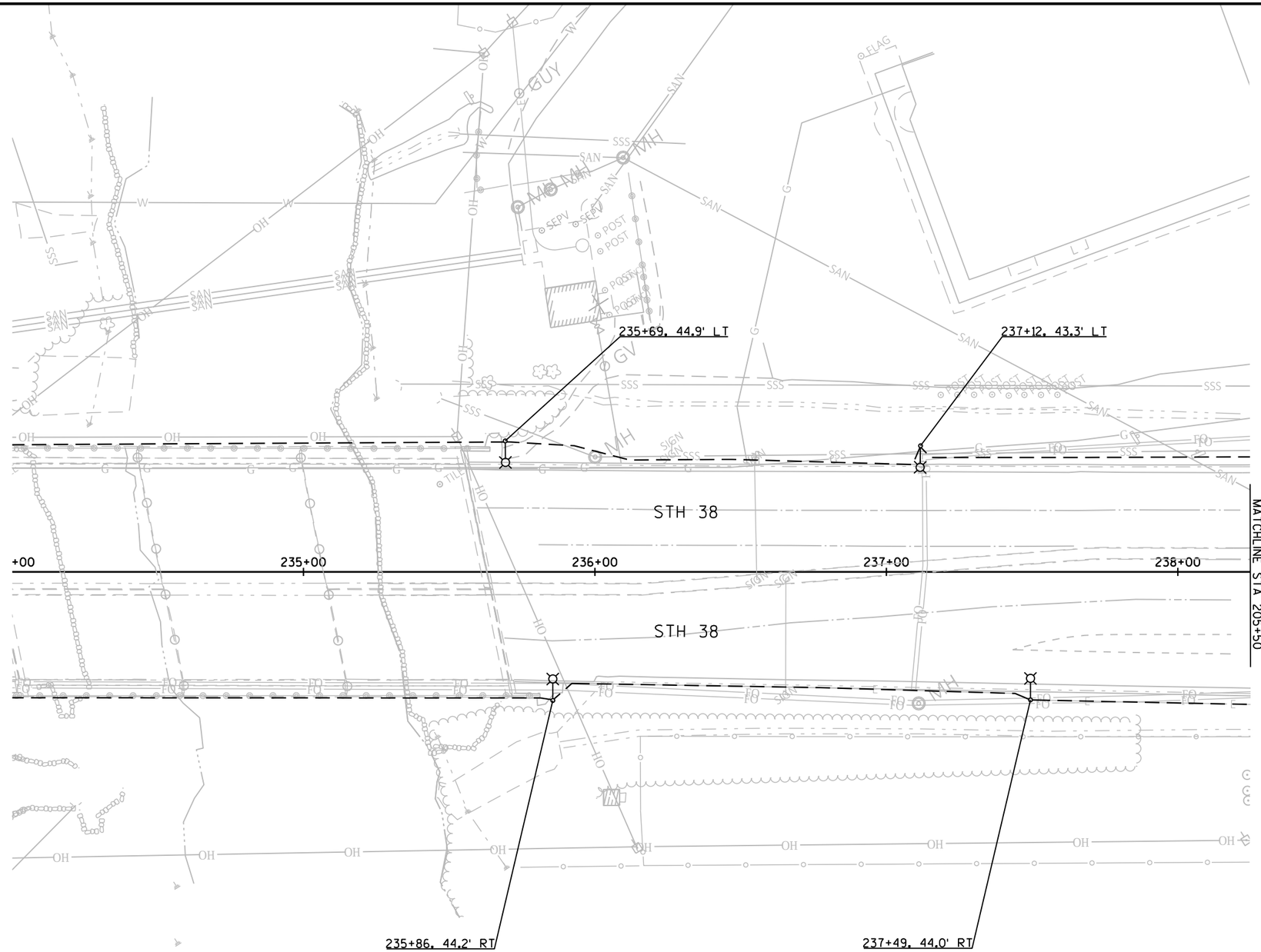
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PERMANENT SIGNING	SHEET 62	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIGN\023201_PS_2290-03-03.DWG
LAYOUT NAME - Sht-207

PLOT DATE : 9/19/2022 8:03 AM PLOT BY : MARTENS, KAREN L PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2



NOTES

1. LIGHTING DISTRIBUTION CENTER XXXX IS LOCATED APPROXIMATELY XXXX
2. EQUIPMENT SHOWN IN BOLD SHALL BE REMOVED UNLESS NOTED OTHERWISE

LEGEND

— — — CONDUIT 2" UNLESS OTHERWISE SHOWN

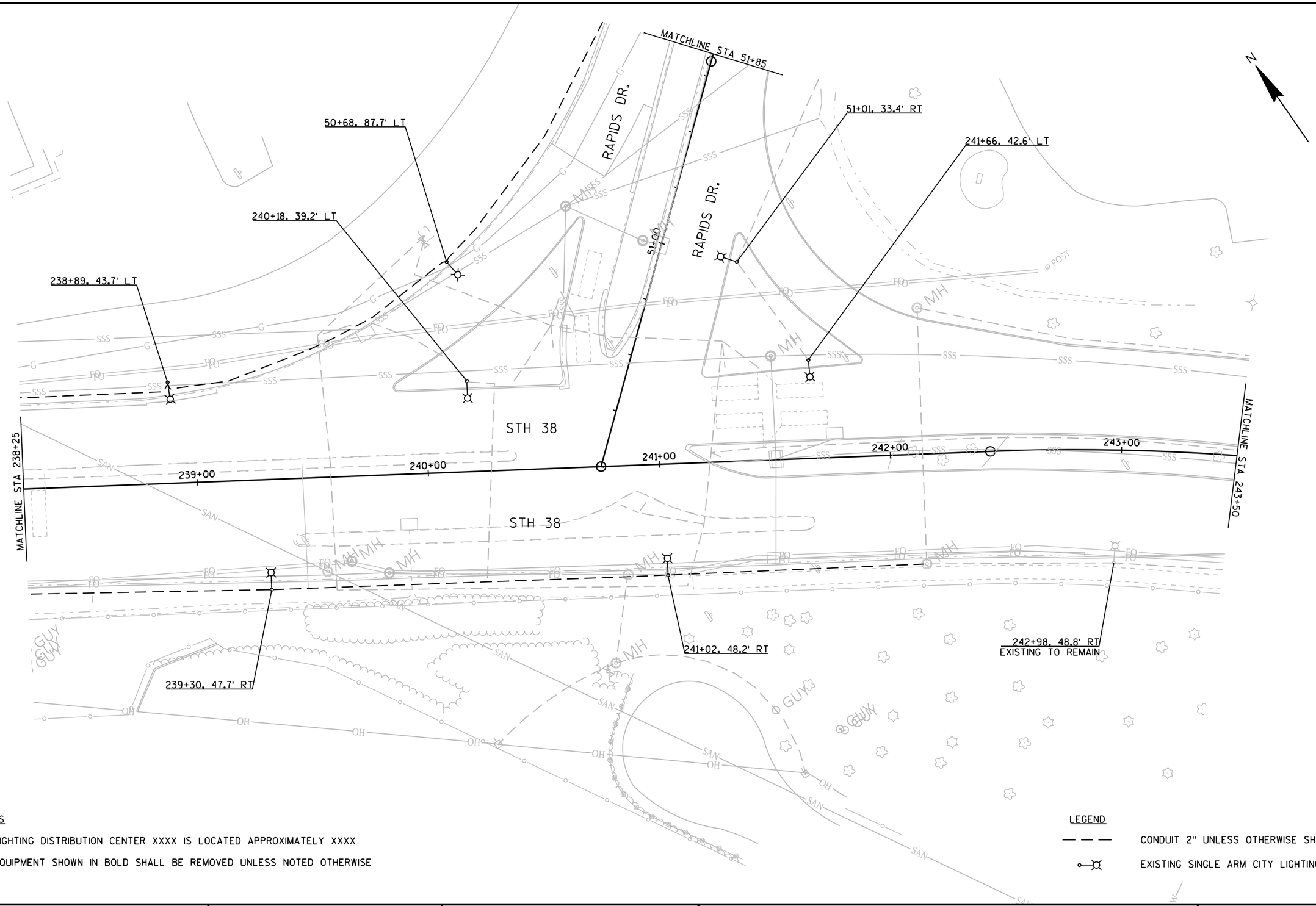
EXISTING SINGLE ARM CITY LIGHTING UNIT

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	LIGHTING PLANS - REMOVALS	SHEET 63	E

FILE NAME : W:\PROJECTS\19254\2290-03-73\05_CADD\CADD DRAWINGS\023401-LR.DWG
LAYOUT NAME - 023401-lr

PLOT DATE : 4/26/2021 1:30 PM PLOT BY : WILLIAM NEAVE PLOT NAME : PLOT SCALE : 1 IN:40 FT

2



NOTES

1. LIGHTING DISTRIBUTION CENTER XXXX IS LOCATED APPROXIMATELY XXXX
2. EQUIPMENT SHOWN IN BOLD SHALL BE REMOVED UNLESS NOTED OTHERWISE

LEGEND

— — — CONDUIT 2" UNLESS OTHERWISE SHOWN

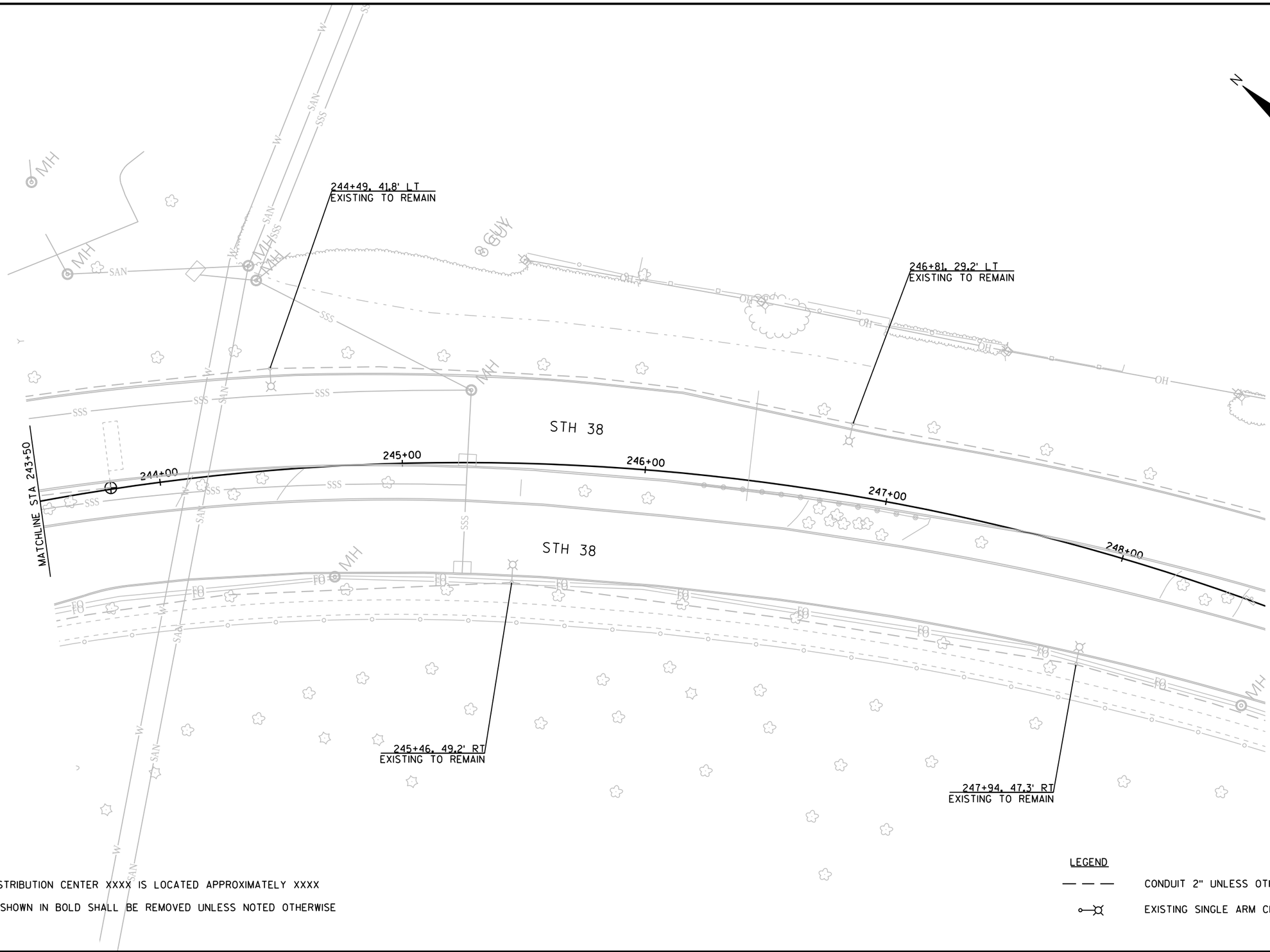
EXISTING SINGLE ARM CITY LIGHTING UNIT

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	LIGHTING PLANS - REMOVALS	SHEET 64	E

FILE NAME : W:\PROJECTS\19254\2290-03-73\05_CADD\CADD DRAWINGS\023401-LR.DWG
LAYOUT NAME - 023402-lr

PLOT DATE : 4/26/2021 1:30 PM PLOT BY : WILLIAM NEAVE PLOT NAME : PLOT SCALE : 1 IN:40 FT

2



NOTES

1. LIGHTING DISTRIBUTION CENTER XXXX IS LOCATED APPROXIMATELY XXXX
2. EQUIPMENT SHOWN IN BOLD SHALL BE REMOVED UNLESS NOTED OTHERWISE

LEGEND

— — — CONDUIT 2" UNLESS OTHERWISE SHOWN

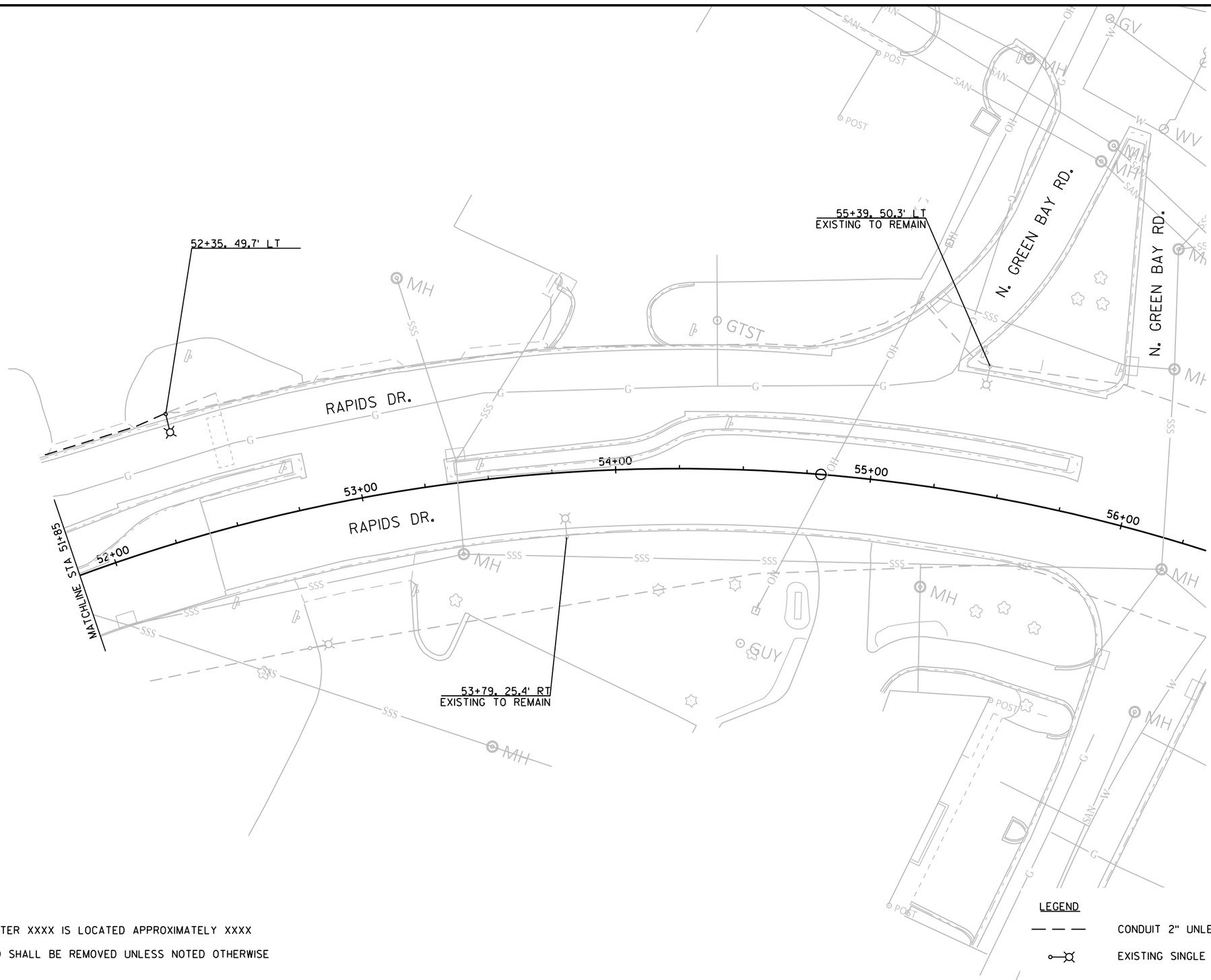
EXISTING SINGLE ARM CITY LIGHTING UNIT

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	LIGHTING PLANS - REMOVALS	SHEET 65	E

FILE NAME : W:\PROJECTS\19254\2290-03-73\05_CADD\CADD DRAWINGS\023401-LR.DWG
LAYOUT NAME - 023403-lr

PLOT DATE : 4/26/2021 1:30 PM PLOT BY : WILLIAM NEAVE PLOT NAME : PLOT SCALE : 1 IN:40 FT

2



NOTES

1. LIGHTING DISTRIBUTION CENTER XXXX IS LOCATED APPROXIMATELY XXXX
2. EQUIPMENT SHOWN IN BOLD SHALL BE REMOVED UNLESS NOTED OTHERWISE

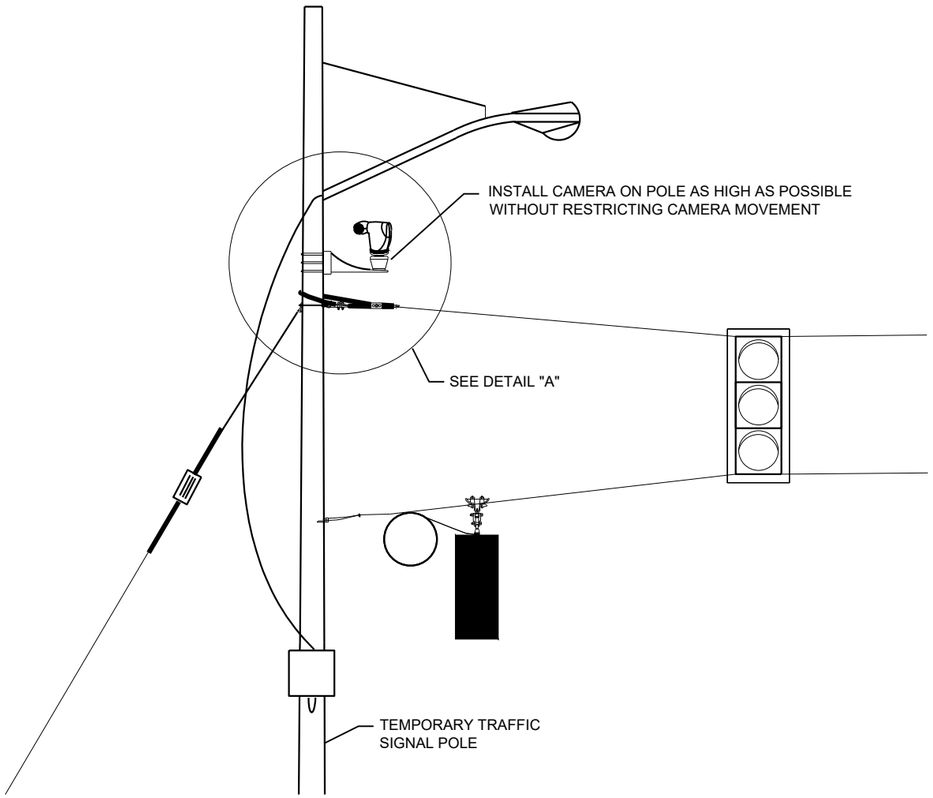
LEGEND

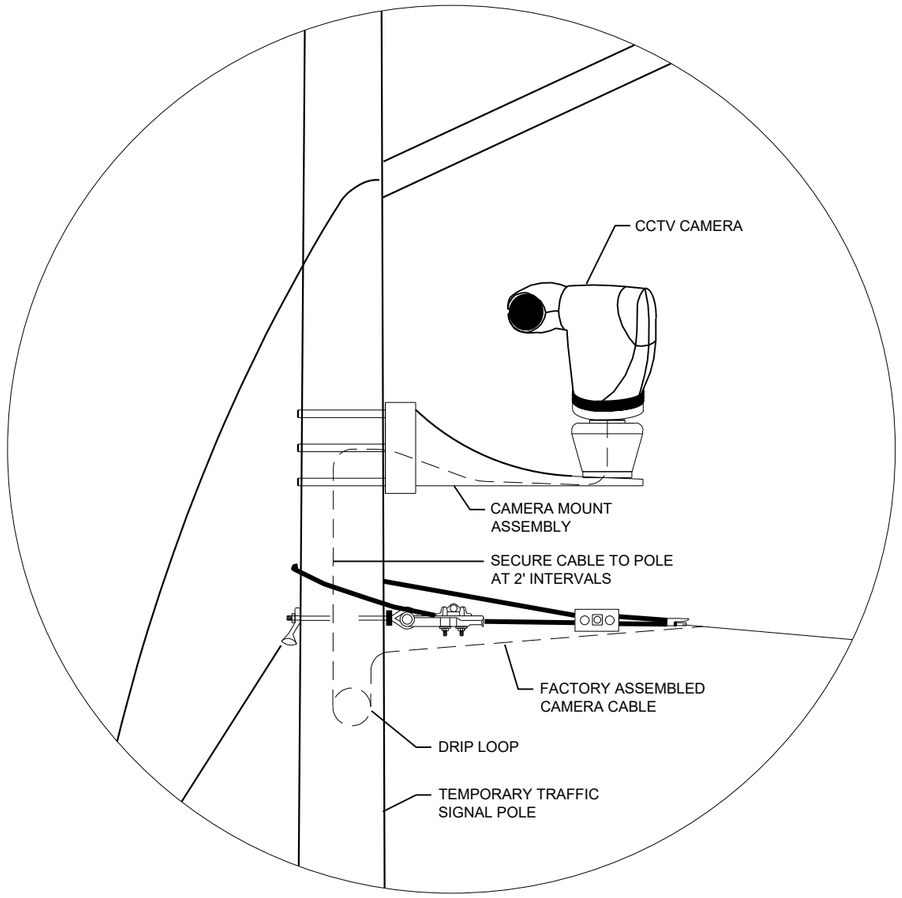
— — — CONDUIT 2" UNLESS OTHERWISE SHOWN

EXISTING SINGLE ARM CITY LIGHTING UNIT

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	LIGHTING PLANS - REMOVALS	SHEET 66	E

2





DETAIL "A"

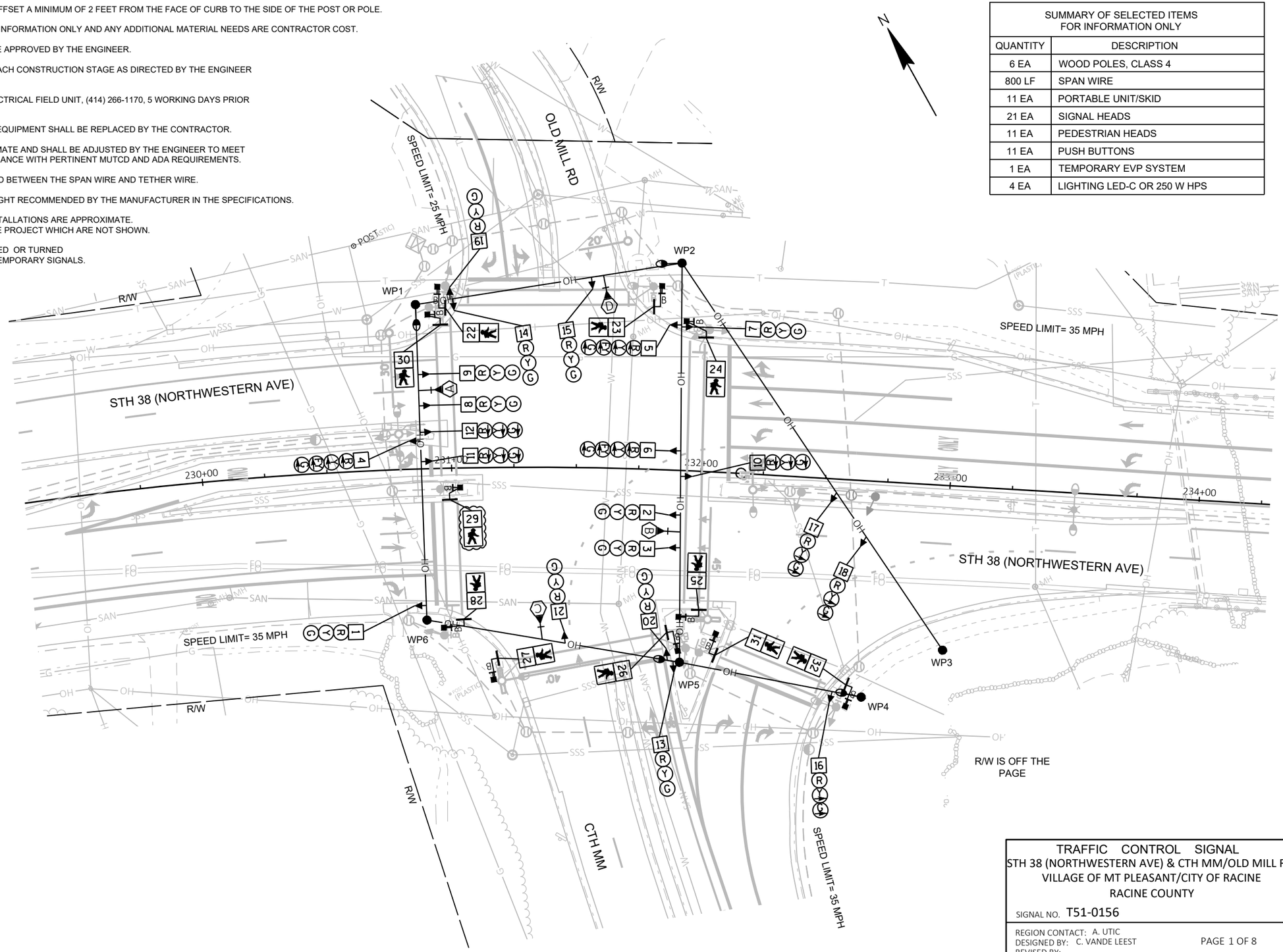
CCTV MOUNTING DETAIL
(TEMPORARY TRAFFIC SIGNAL MOUNT)

NOT TO SCALE

CONSTRUCTION NOTES:

1. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
2. SUMMARY OF MATERIALS AND POLE LOCATIONS ARE FOR INFORMATION ONLY AND ANY ADDITIONAL MATERIAL NEEDS ARE CONTRACTOR COST.
3. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
4. CONTRACTOR TO ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
5. CONTRACTOR SHALL COORDINATE WITH THE WISDOT ELECTRICAL FIELD UNIT, (414) 266-1170, 5 WORKING DAYS PRIOR TO BEGINNING ANY WORK AT THE INTERSECTION.
6. ANY KNOCKDOWNS TO PERMANENT/TEMPORARY SIGNAL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR.
7. LOCATIONS OF PEDESTRIAN SIGNAL POLES ARE APPROXIMATE AND SHALL BE ADJUSTED BY THE ENGINEER TO MEET FIELD CONDITIONS. ALL PLACEMENTS SHALL BE IN COMPLIANCE WITH PERTINENT MUTCD AND ADA REQUIREMENTS.
8. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
9. TEMPORARY DETECTORS SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURER IN THE SPECIFICATIONS.
10. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
11. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
12. WOOD POLES LONGER THAN 45-FEET MAY BE NECESSARY DUE TO ELEVATION DIFFERENCES.

SUMMARY OF SELECTED ITEMS FOR INFORMATION ONLY	
QUANTITY	DESCRIPTION
6 EA	WOOD POLES, CLASS 4
800 LF	SPAN WIRE
11 EA	PORTABLE UNIT/SKID
21 EA	SIGNAL HEADS
11 EA	PEDESTRIAN HEADS
11 EA	PUSH BUTTONS
1 EA	TEMPORARY EVP SYSTEM
4 EA	LIGHTING LED-C OR 250 W HPS



LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- LUMINAIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- PEDESTRIAN HEAD W/PUSH BUTTON ON PORTABLE UNIT/SKID
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- DIRECTION OF TRAFFIC
- WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL
STH 38 (NORTHWESTERN AVE) & CTH MM/OLD MILL RD
VILLAGE OF MT PLEASANT/CITY OF RACINE
RACINE COUNTY

SIGNAL NO. T51-0156

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 1 OF 8

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TEMPORARY TRAFFIC SIGNAL PLAN - PRECONSTRUCTION	SHEET 68	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0156\T51-0156_PRECON.DWG
LAYOUT NAME - T51-0156_Precon
PLOT DATE : 5/23/2023 3:37 PM
PLOT BY : VANDE LEEST, CYNTHIA
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

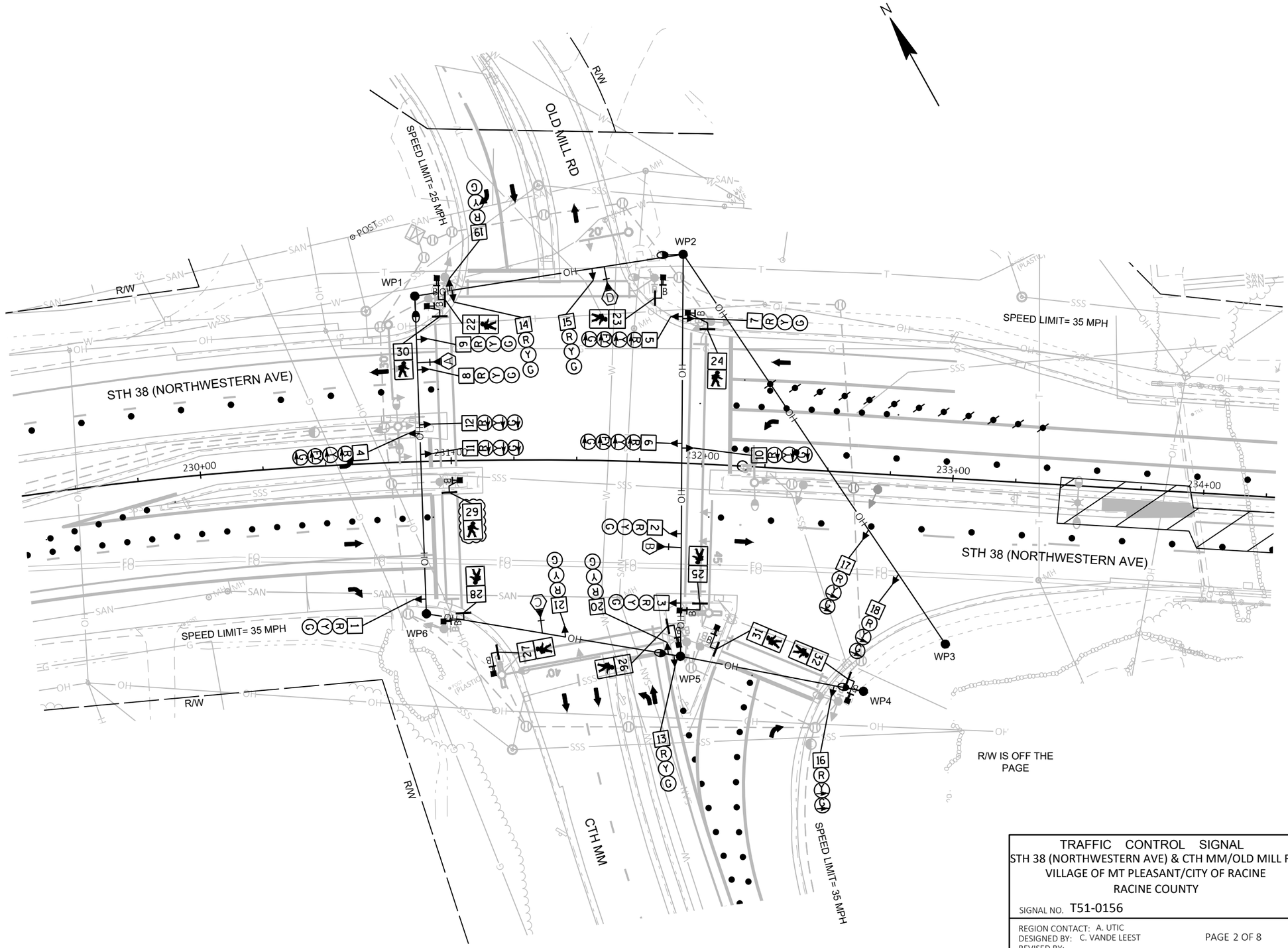
2

LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- LUMINAIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- PEDESTRIAN HEAD W/PUSH BUTTON ON PORTABLE UNIT/SKID
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- R Y Y YELLOW ARROW
- G G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD

- DIRECTION OF TRAFFIC
- WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
STH 38 (NORTHWESTERN AVE) & CTH MM/OLD MILL RD
VILLAGE OF MT PLEASANT/CITY OF RACINE
RACINE COUNTY

SIGNAL NO. T51-0156

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-STAGE 1	SHEET 69	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0156\T51-0156_PRES1.DWG
LAYOUT NAME - T51-0156_PreS1
PLOT DATE : 5/23/2023 3:37 PM
PLOT BY : VANDE LEEST, CYNTHIA
PLOT NAME :
PLOT SCALE : ##########

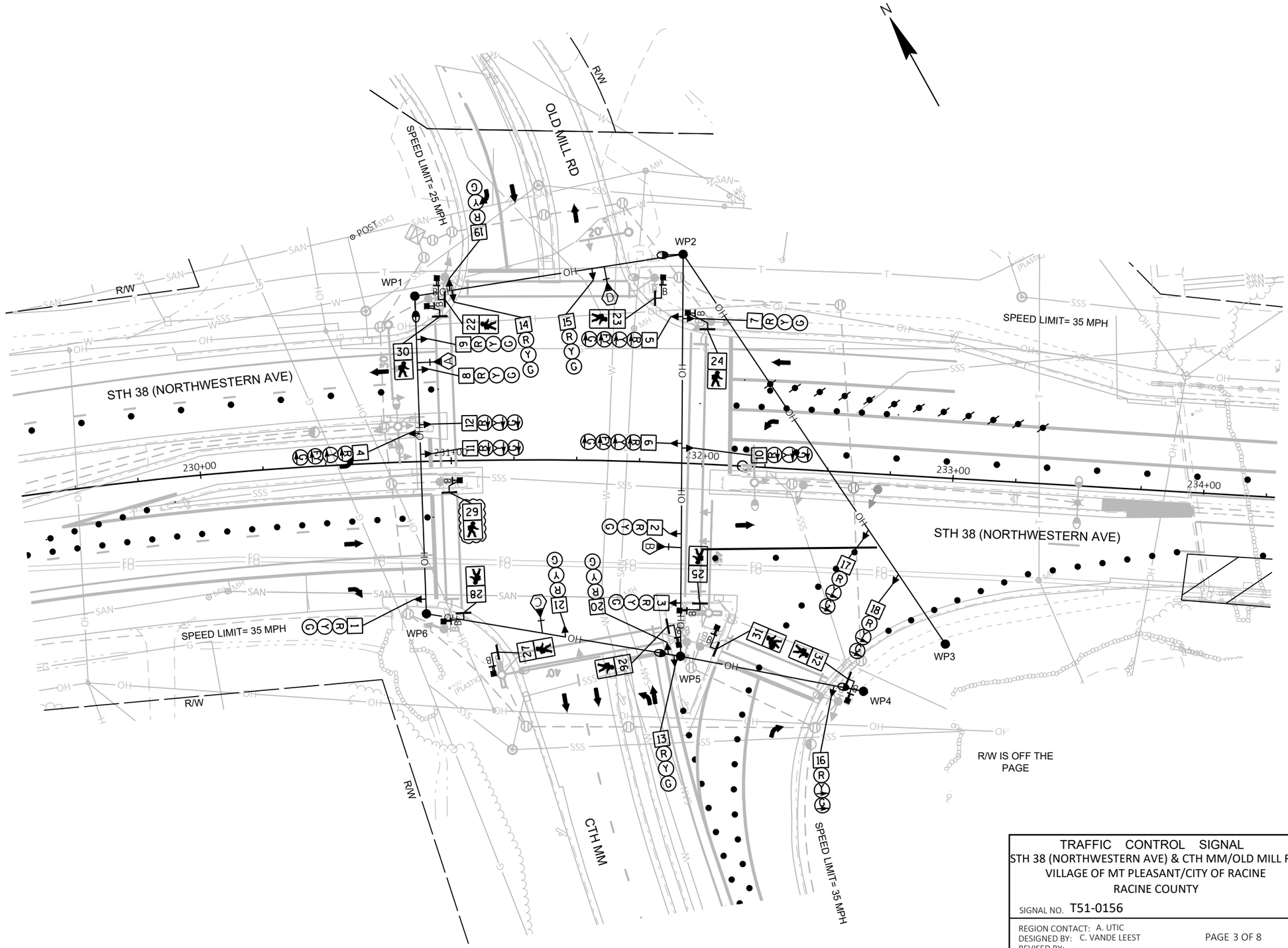
2

LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- LUMINAIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- PEDESTRIAN HEAD W/PUSH BUTTON ON PORTABLE UNIT/SKID
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- R Y Y YELLOW ARROW
- G G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD

- DIRECTION OF TRAFFIC
- WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
STH 38 (NORTHWESTERN AVE) & CTH MM/OLD MILL RD
VILLAGE OF MT PLEASANT/CITY OF RACINE
RACINE COUNTY

SIGNAL NO. T51-0156

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-STAGE 2	SHEET 70	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0156\T51-0156_PRES2.DWG
LAYOUT NAME - T51-0156_PreS2
PLOT DATE : 5/23/2023 3:37 PM
PLOT BY : VANDE LEEST, CYNTHIA
PLOT NAME :
PLOT SCALE : ##########

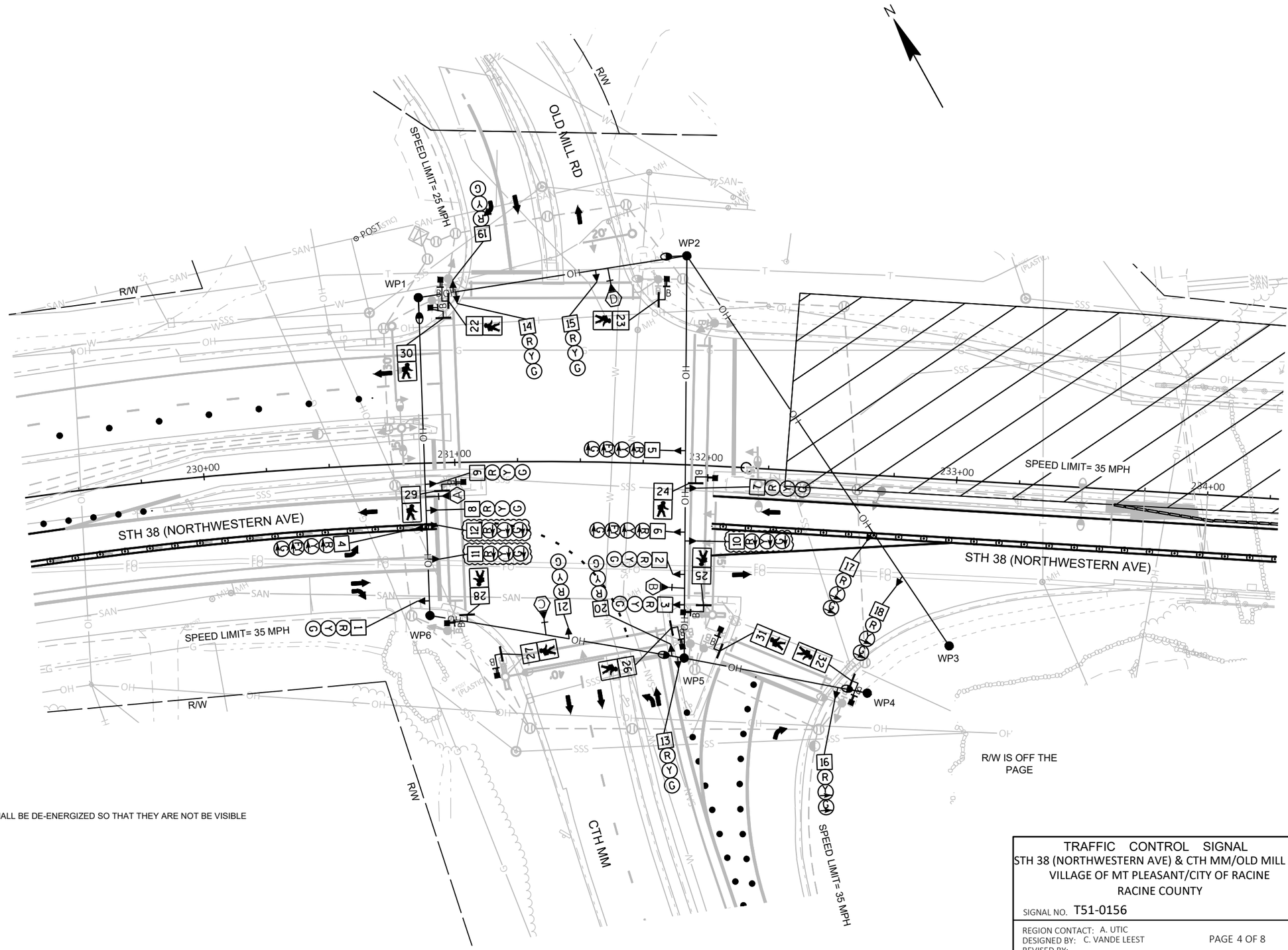
2

LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- LUMINAIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- PEDESTRIAN HEAD W/PUSH BUTTON ON PORTABLE UNIT/SKID
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y Y Y YELLOW ARROW
- G G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD

- DIRECTION OF TRAFFIC
- WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:
1. INDICATIONS ON SIGNAL HEADS 10, 11, AND 12 SHALL BE DE-ENERGIZED SO THAT THEY ARE NOT BE VISIBLE AT ANY TIME.

TRAFFIC CONTROL SIGNAL
STH 38 (NORTHWESTERN AVE) & CTH MM/OLD MILL RD
VILLAGE OF MT PLEASANT/CITY OF RACINE
RACINE COUNTY

SIGNAL NO. T51-0156

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 4 OF 8

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGES 1A & 1B	SHEET 71	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0156\T51-0156_S1A-1B.DWG
LAYOUT NAME - T51-0156_S1A-1B
PLOT DATE : 5/23/2023 3:38 PM
PLOT BY : VANDE LEEST, CYNTHIA
PLOT NAME :
PLOT SCALE : ##########

2

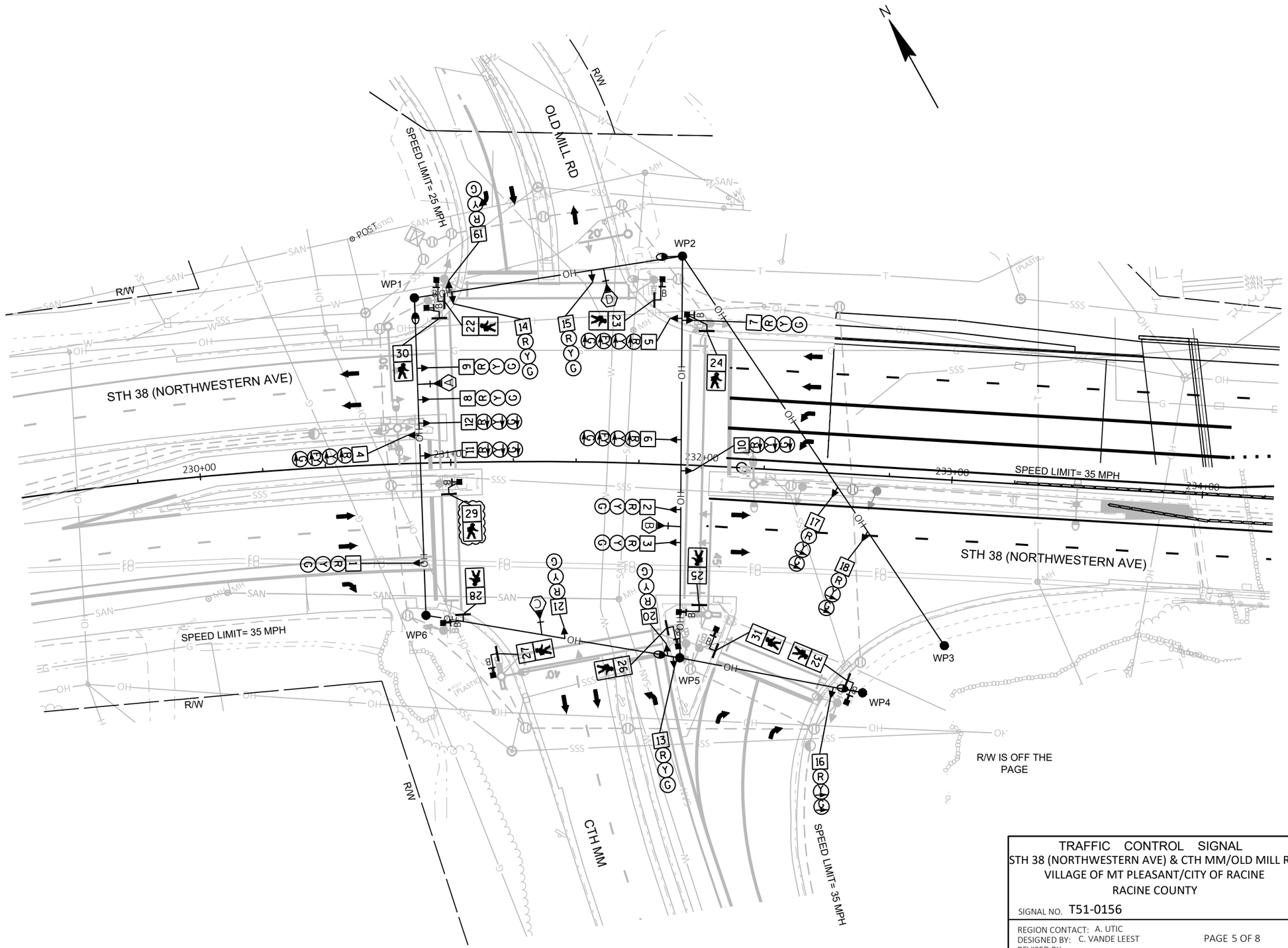
2

LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- LUMINAIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- PEDESTRIAN HEAD W/PUSH BUTTON ON PORTABLE UNIT/SKID
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- DIRECTION OF TRAFFIC
- WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH

GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
STH 38 (NORTHWESTERN AVE) & CTH MM/OLD MILL RD
VILLAGE OF MT PLEASANT/CITY OF RACINE
RACINE COUNTY

SIGNAL NO. T51-0156

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 5 OF 8

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TEMPORARY TRAFFIC SIGNAL PLAN - WINTER SHUTDOWN	SHEET 72	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0156\T51-0156_SWINTER.DWG
LAYOUT NAME - T51-0156_SWinter

PLOT DATE : 5/23/2023 3:38 PM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

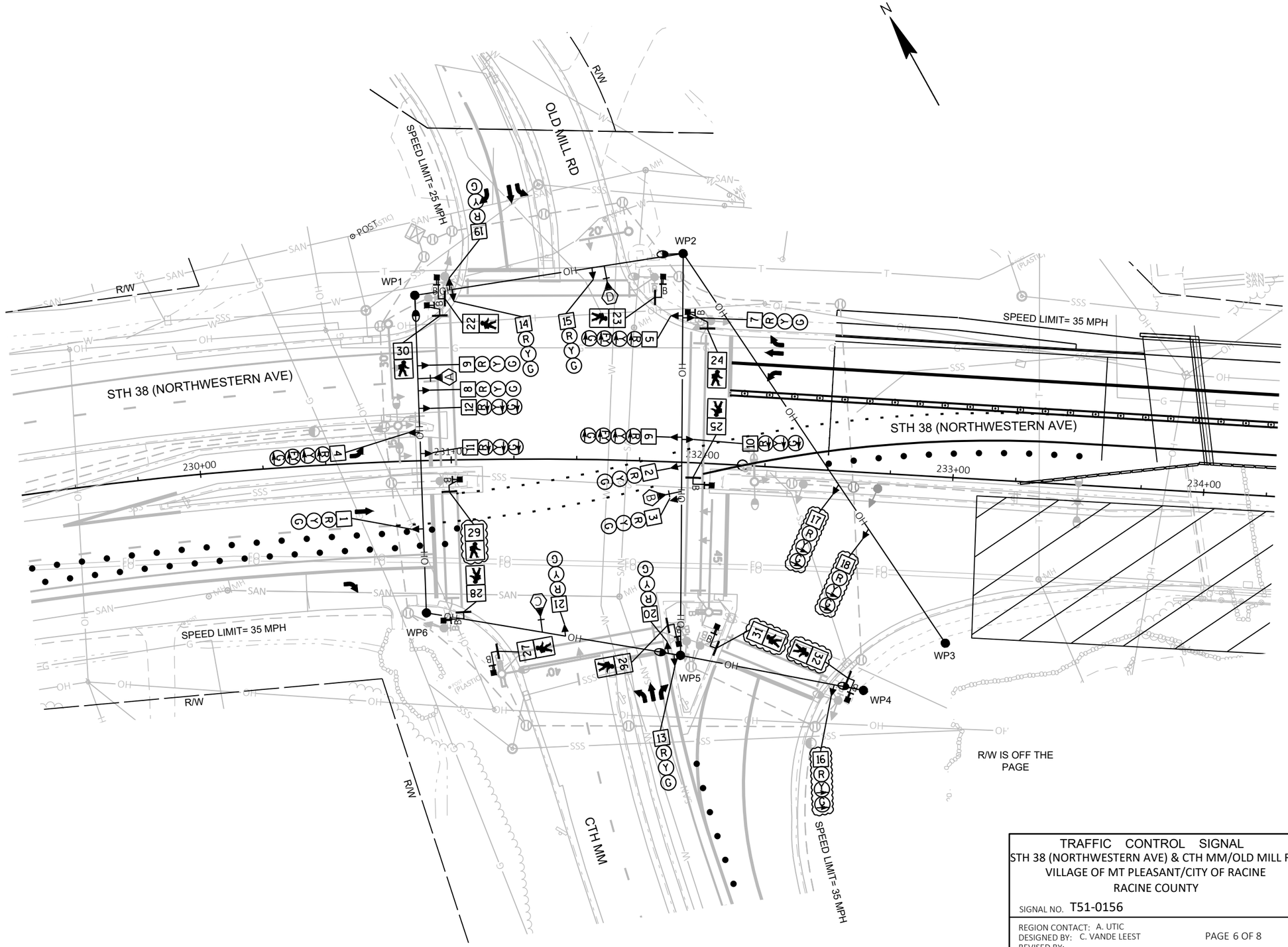
2

LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- LUMINAIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- PEDESTRIAN HEAD W/PUSH BUTTON ON PORTABLE UNIT/SKID
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD

- DIRECTION OF TRAFFIC
- WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
STH 38 (NORTHWESTERN AVE) & CTH MM/OLD MILL RD
VILLAGE OF MT PLEASANT/CITY OF RACINE
RACINE COUNTY

SIGNAL NO. T51-0156

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 6 OF 8

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET 73	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0156\T51-0156_S2.DWG
LAYOUT NAME - T51-0156_S2

PLOT DATE : 7/17/2023 2:44 PM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

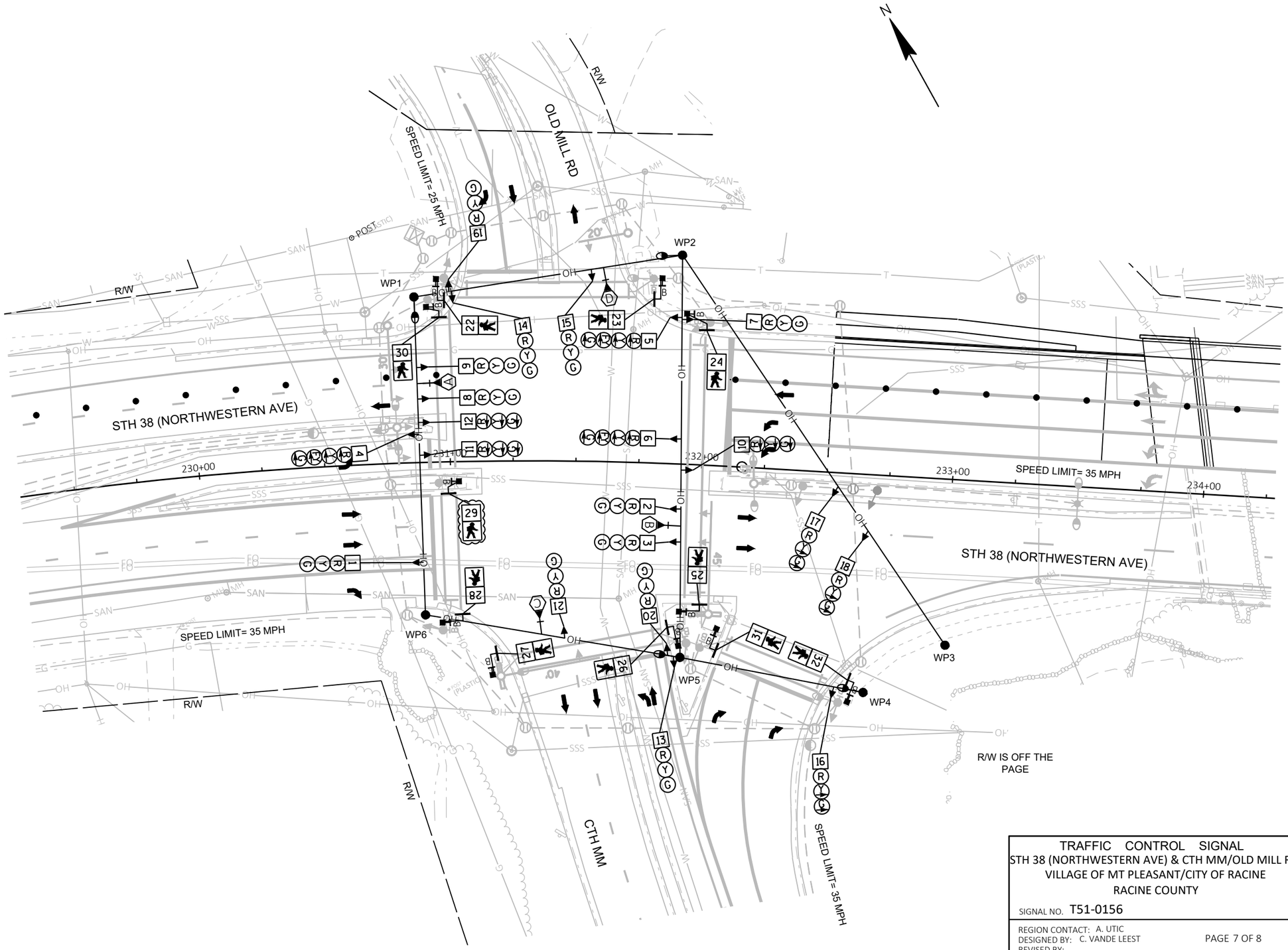
LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- LUMINAIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- PEDESTRIAN HEAD W/PUSH BUTTON ON PORTABLE UNIT/SKID
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD

- DIRECTION OF TRAFFIC
- WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH

GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
STH 38 (NORTHWESTERN AVE) & CTH MM/OLD MILL RD
VILLAGE OF MT PLEASANT/CITY OF RACINE
RACINE COUNTY

SIGNAL NO. T51-0156

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

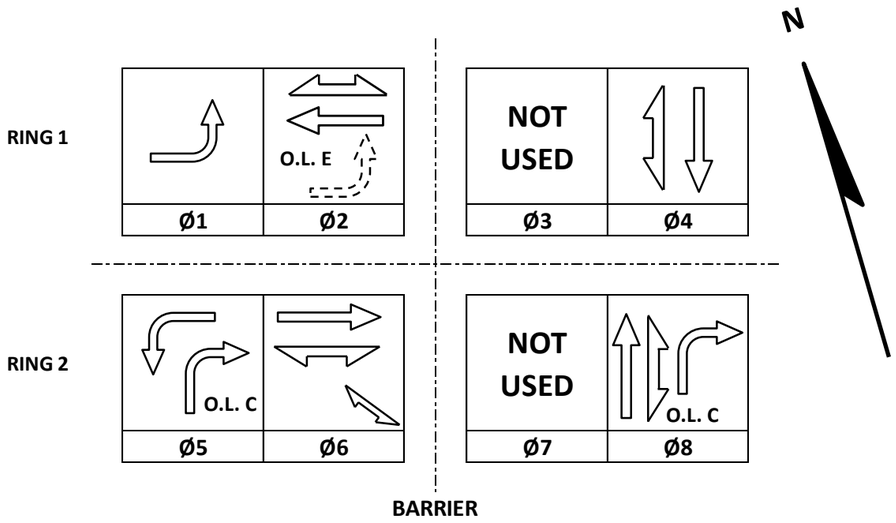
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 3	SHEET 74	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0156\T51-0156_S3.DWG
LAYOUT NAME - T51-0156_S3

PLOT DATE : 5/23/2023 3:38 PM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : ##########

2

	HEAD NUMBERS	FLASH
Ø1	4,5,6	R ←
Ø2	7,8,9	R
Ø3		
Ø4	19,20,21	R
Ø5	10,11,12,16,17,18	R
Ø6	1,2,3	R
Ø7		
Ø8	13,14,15	R
Ø2P	22,23	
Ø4P	28,29,30	
Ø6P	26,27,31,32	
Ø8P	24,25	
OLC	16,17,18	R
OLE	4,5,6	-
OLF		
OLG		
OLH		



TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	
CELL MODEM	X

TYPE OF COORDINATION		
NONE		
TBC		X
TRAFFIC RESPONSIVE		
ADAPTIVE		
*LOCATION OF MASTER CONTROLLER NO:	S-	
SIGNAL SYSTEM NO:	SS-	51-0039

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

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

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1	X	6	MAX	X
2	X	6	MAX	X
3				
4	X	8	MAX	X
5	X	2	MAX	X
6	X	2	MAX	X
7				
8	X	4	MAX	X

GENERAL NOTES:

1. OMIT OVERLAP "C" DURING STAGE 2.

2. SIGNAL HEADS TO BE BAGGED ACCORDING TO THE TEMPORARY TRAFFIC SIGNAL PLAN SHALL ALSO BE DE-ENERGIZED.

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT				
PHASE	2+5	6+1	4+8	8+4

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.
AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

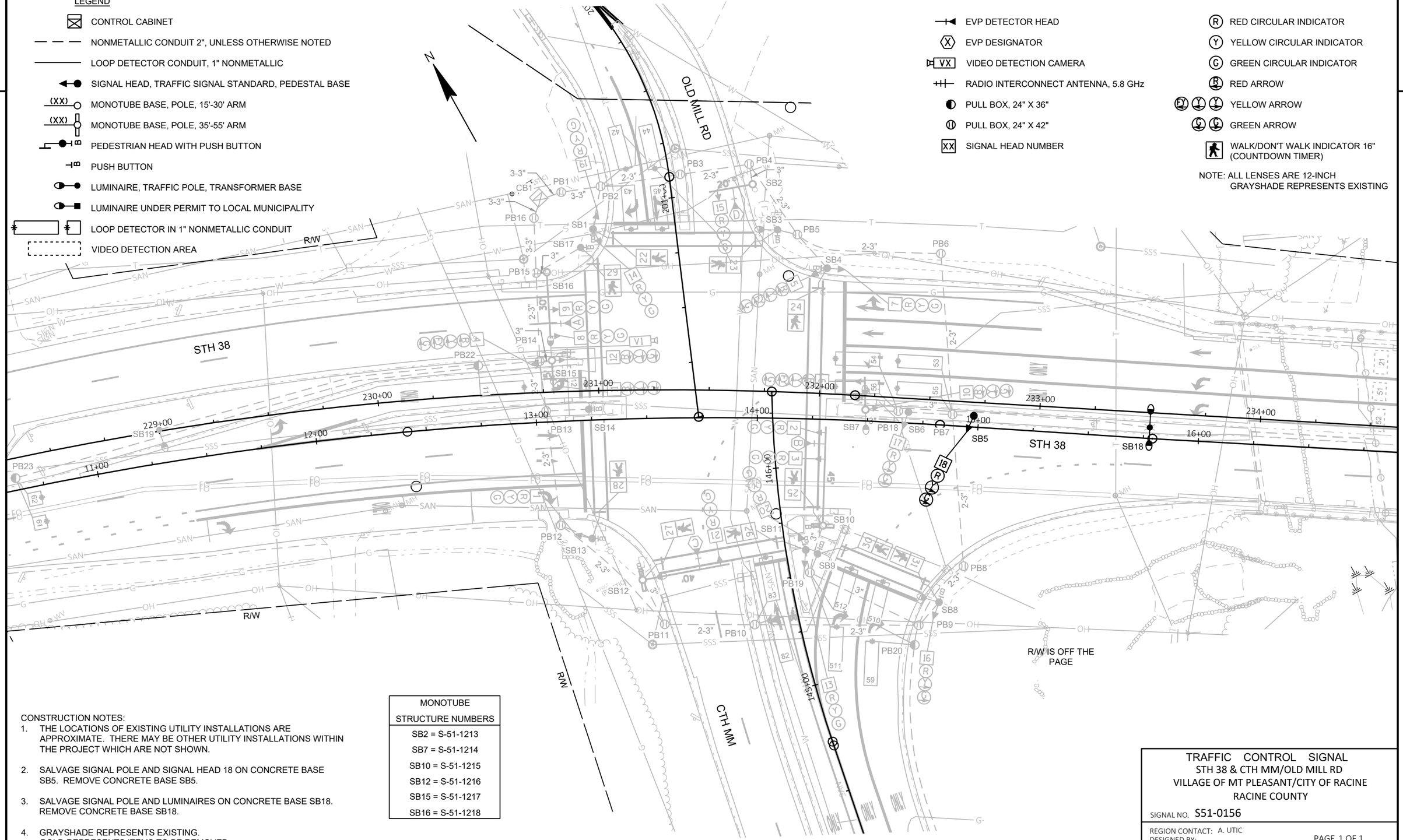
STH 38 & CTH MM/OLD MILL RD
VILLAGE OF MT PLEASANT/CITY OF RACINE
RACINE COUNTY
SIGNAL NO: T51-0156 CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP
DATE: 05/23 PAGE NO. 8 OF 8

2

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT, 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO DETECTION AREA
- EVP DETECTOR HEAD
- EVP DESIGNATOR
- VX VIDEO DETECTION CAMERA
- RADIO INTERCONNECT ANTENNA, 5.8 GHz
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- FY Y Y YELLOW ARROW
- G G GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. SALVAGE SIGNAL POLE AND SIGNAL HEAD 18 ON CONCRETE BASE SB5. REMOVE CONCRETE BASE SB5.
3. SALVAGE SIGNAL POLE AND LUMINAIRES ON CONCRETE BASE SB18. REMOVE CONCRETE BASE SB18.
4. GRAYSHADE REPRESENTS EXISTING.
   BOLD REPRESENTS ITEMS TO BE REMOVED.

MONOTUBE STRUCTURE NUMBERS
SB2 = S-51-1213
SB7 = S-51-1214
SB10 = S-51-1215
SB12 = S-51-1216
SB15 = S-51-1217
SB16 = S-51-1218

TRAFFIC CONTROL SIGNAL
STH 38 & CTH MM/OLD MILL RD
VILLAGE OF MT PLEASANT/CITY OF RACINE
RACINE COUNTY

SIGNAL NO. S51-0156

REGION CONTACT: A. UTIC
DESIGNED BY:
REVISED BY: C. VANDE LEEST

PAGE 1 OF 1

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 76	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0156\S51-0156_REM.DWG
LAYOUT NAME - S51-0156_rem_pg1

PLOT DATE : 5/20/2022 9:32 AM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : ##########

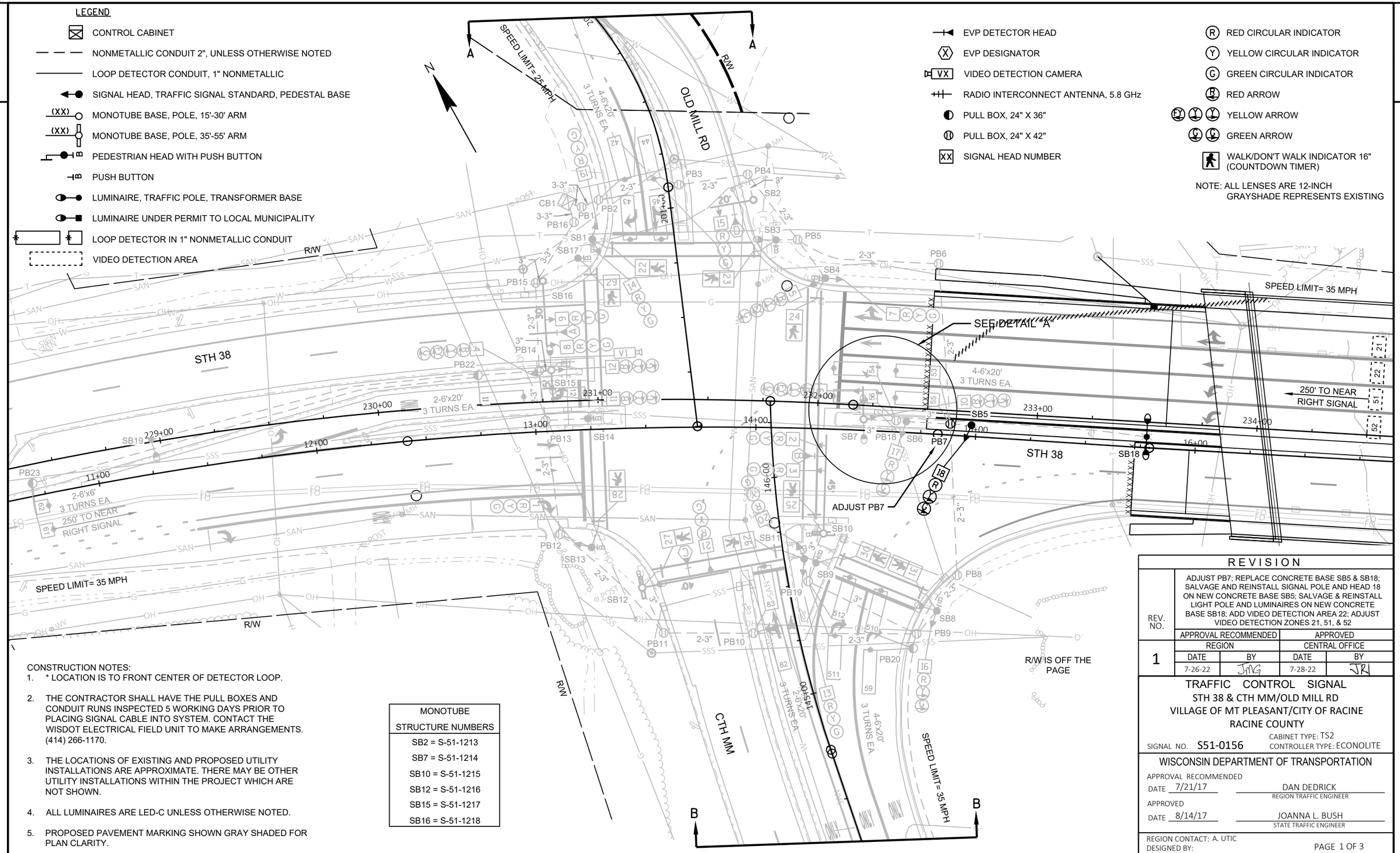
WISDOT/CADDS SHEET 42

2

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT, 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- B PEDESTRIAN HEAD WITH PUSH BUTTON
- B PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO DETECTION AREA
- EVP DETECTOR HEAD
- X EVP DESIGNATOR
- VX VIDEO DETECTION CAMERA
- RADIO INTERCONNECT ANTENNA, 5.8 GHz
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. ALL LUMINAIRES ARE LED-C UNLESS OTHERWISE NOTED.
5. PROPOSED PAVEMENT MARKING SHOWN GRAY SHADED FOR PLAN CLARITY.

MONOTUBE STRUCTURE NUMBERS
SB2 = S-51-1213
SB7 = S-51-1214
SB10 = S-51-1215
SB12 = S-51-1216
SB15 = S-51-1217
SB16 = S-51-1218

REVISION

REV. NO.	ADJUST PB7; REPLACE CONCRETE BASE SB5 & SB18; SALVAGE AND REINSTALL SIGNAL POLE AND HEAD 18 ON NEW CONCRETE BASE SB5; SALVAGE & REINSTALL LIGHT POLE AND LUMINAIRES ON NEW CONCRETE BASE SB18; ADD VIDEO DETECTION AREA 22; ADJUST VIDEO DETECTION ZONES 21, 51, & 52			
	APPROVAL RECOMMENDED		APPROVED	
	REGION		CENTRAL OFFICE	
	DATE	BY	DATE	BY
1	7-26-22	JMG	7-28-22	JRI

7-18-22 ATU

TRAFFIC CONTROL SIGNAL

STH 38 & CTH MM/OLD MILL RD
VILLAGE OF MT PLEASANT/CITY OF RACINE
RACINE COUNTY

SIGNAL NO. S51-0156
CABINET TYPE: TS2
CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
DATE 7/21/17 — DAN DEDRICK, REGION TRAFFIC ENGINEER

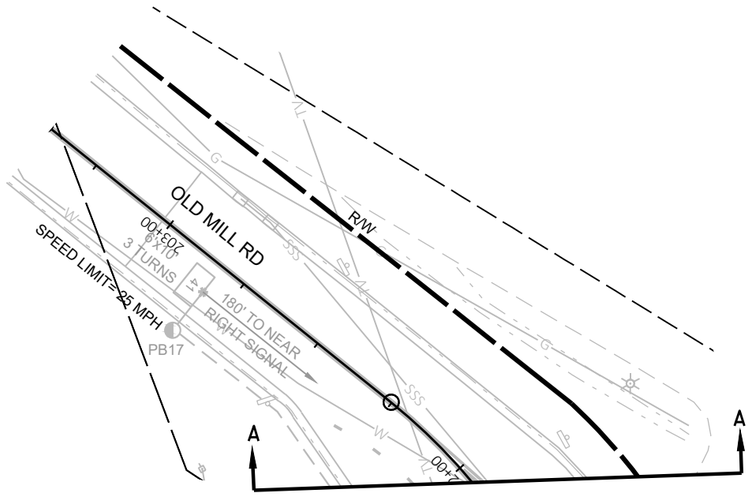
APPROVED
DATE 8/14/17 — JOANNA L. BUSH, STATE TRAFFIC ENGINEER

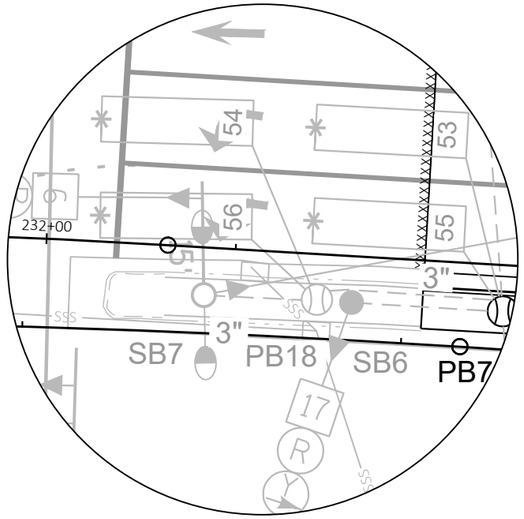
REGION CONTACT: A. UTIC
DESIGNED BY:
REVISED BY: C. VANDE LEEST

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC SIGNAL PLAN	SHEET 77	E

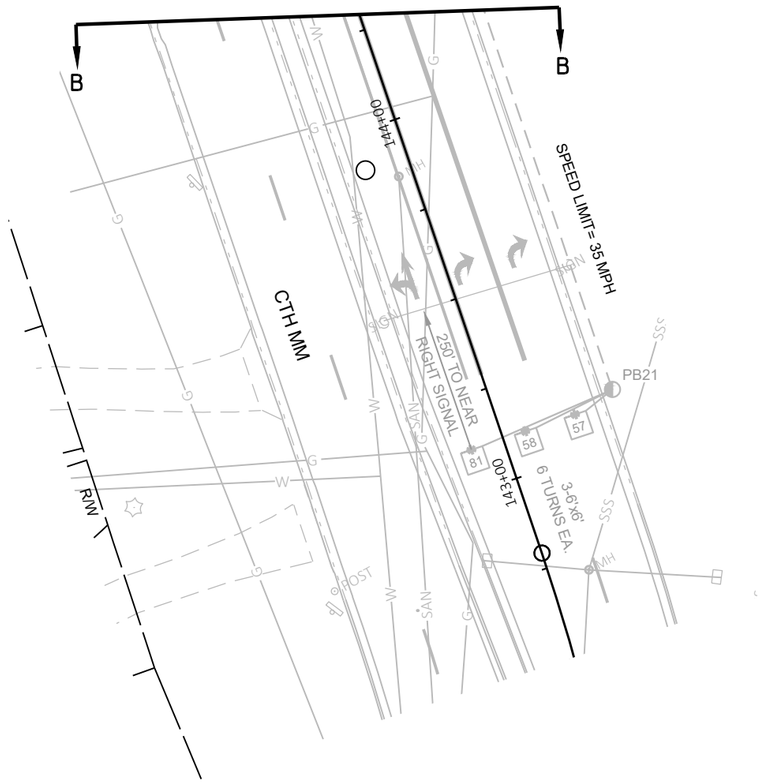
FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0156\S51-0156_R1.DWG
LAYOUT NAME - S51-0156_R1_pg1
PLOT DATE : 5/10/2023 2:46 PM
PLOT BY : VANDE LEEST, CYNTHIA
PLOT NAME :
PLOT SCALE : ##########

2





DETAIL "A"



TRAFFIC CONTROL SIGNAL
STH 38 & CTH MM/OLD MILL RD
VILLAGE OF MT PLEASANT/CITY OF RACINE
RACINE COUNTY

SIGNAL NO. S51-0156

REGION CONTACT: A. UTIC
DESIGNED BY:
REVISED BY: C. VANDE LEEST

PAGE 2 OF 3

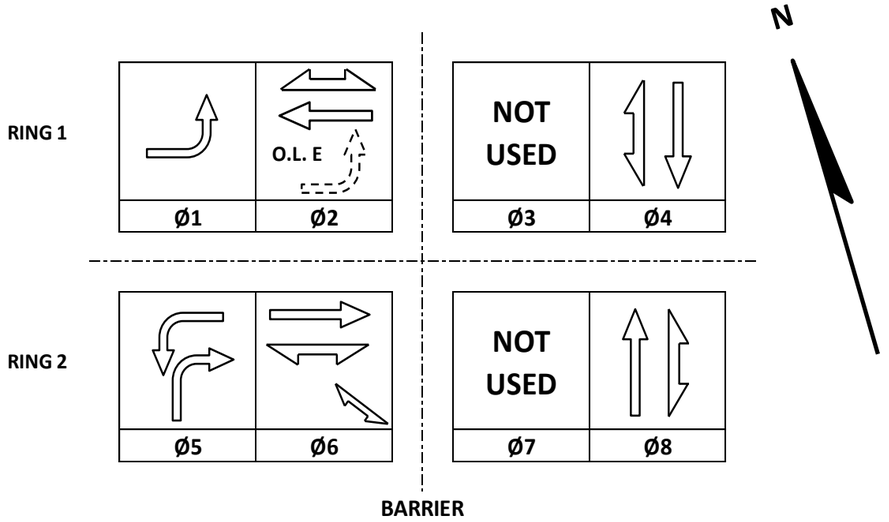
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC SIGNAL PLAN	SHEET 78	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0156\S51-0156_R1.DWG
LAYOUT NAME - S51-0156_R1_pg2

PLOT DATE : 5/10/2023 2:47 PM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	4,5,6	R ←
Ø2	7,8,9	R
Ø3		
Ø4	19,20,21	R
Ø5	10,11,12,16,17,18	R. R ←
Ø6	1,2,3	R
Ø7		
Ø8	13,14,15	R
Ø2P	22,23	
Ø4P	28,29	
Ø6P	26,27,30,31	
Ø8P	24,25	
OLE	4,5,6	-
OLF		
OLG		
OLH		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		X
2	X	6	MIN	X
3				
4		8		X
5		2		X
6	X	2	MIN	X
7				
8		4		X

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT				
PHASE	2+5	6+1	4+8	8+4

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.
AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	X
CELL MODEM	X

TYPE OF COORDINATION		
NONE		
TBC		X
TRAFFIC RESPONSIVE		
ADAPTIVE		
*LOCATION OF MASTER CONTROLLER NO:	S-	
SIGNAL SYSTEM NO:	SS-	51-0039

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13	19	17	23				35	33	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	11	41	43	45	54	56	58	510	512	62	82				21	51	PLAN LOOP DETECTOR*(S)
CALLED PHASE	1	4	4	4	5	5	5	5	5	6	8				2	5	CALLED PHASE
CALL OPTION	X		X	X	X	X		X	X	X	X				X		CALL OPTION
DELAY TIME			X					X	X								DELAY TIME
EXTENTION OPTION	X	X	X	X	X	X	X	X	X	X	X				X	X	EXTENTION OPTION
EXTEND TIME		X					X									X	EXTEND TIME
USE ADDED INITIAL										X					X		USE ADDED INITIAL
CROSS SWITCH PHASE	2																CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14	20	18	24				36	34	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	12	42	44	53	55	57	59	511	61	81	83				22	52	PLAN LOOP DETECTOR*(S)
CALLED PHASE	1	4	4	5	5	5	5	5	6	8	8				2	5	CALLED PHASE
CALL OPTION	X	X	X	X	X		X	X	X		X				X		CALL OPTION
DELAY TIME		X					X	X									DELAY TIME
EXTENTION OPTION	X	X	X	X	X	X	X	X	X	X	X				X	X	EXTENTION OPTION
EXTEND TIME						X				X						X	EXTEND TIME
USE ADDED INITIAL									X						X		USE ADDED INITIAL
CROSS SWITCH PHASE	2																CROSS SWITCH PHASE

STH 38 & CTH MM/OLD MILL RD
VILLAGE OF MT PLEASANT/CITY OF RACINE
RACINE COUNTY

SIGNAL NO: S51-0156 CABINET TYPE: TS2
CONTROLLER TYPE: ECONOLITE
DATE: 08/22 PAGE NO. 3 OF 3

PROJECT ID:	2290-03-73
INTERSECTION:	STH 38 & CTH MM/OLD MILL ROAD

Signal Wire Color Coding	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON	FUTURE APS
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>	D/WALK	WALK		
SB1	12	14	RED	ORG	GRN								
		19	RED/BLK	ORG/BLK	GRN/BLK								
		22								BLK	BLU		
		B										WHT/BLK	BLU/BLK
SB2	7	15	RED	ORG	GRN								
SB3	12	23								BLK	BLU		
		B										WHT/BLK	BLU/BLK
SB4	12	5				RED	ORG	GRN	BLK/WHT				
		7	RED/BLK	ORG/BLK	GRN/BLK								
		24								BLK	BLU		
		B										WHT/BLK	BLU/BLK
SB5	**7**	**18**	**RED**				**ORG**	**GRN**					
SB6	7	17	RED				ORG	GRN					
SB7	12	6				RED	ORG	GRN	BLK/WHT				
		10				RED/BLK	ORG/BLK	GRN/BLK					
SB8	12	16	RED				ORG	GRN					
		31								BLK	BLU		
		B										WHT/BLK	BLU/BLK
SB9	12	30								BLK	BLU		
		B										WHT/BLK	BLU/BLK
SB10	12	2	RED	ORG	GRN								
		3	RED	ORG	GRN								
		25								BLK	BLU		
		B										WHT/BLK	BLU/BLK
SB11	12	13	RED	ORG	GRN								
		20	RED/BLK	ORG/BLK	GRN/BLK								
		26								BLK	BLU		
		B										WHT/BLK	BLU/BLK
SB12	12	21	RED	ORG	GRN								
		27								BLK	BLU		
		B										WHT/BLK	BLU/BLK
SB13	12	1	RED	ORG	GRN								
		28								BLK	BLU		
		B										WHT/BLK	BLU/BLK
SB14	12	B										WHT/BLK	BLU/BLK
SB15	12	4				RED	ORG	GRN	BLK/WHT				
		11				RED/BLK	ORG/BLK	GRN/BLK					
		12				RED/BLK	ORG/BLK	GRN/BLK					
SB16	7	8	RED	ORG	GRN								
		9	RED	ORG	GRN								
SB17	12	29								BLK	BLU		
		B										WHT/BLK	BLU/BLK

***Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications**
***Ensure the grounded conductor in the feeder cable and the pole cables are both 18" longer than the ungrounded conductors.**
***At the signal bases, connect one terminal from the pedestrian push buttons to the color indicated in the chart. Connect the other terminal to the grounded conductor.**
***Reconnect the grounding conductors wherever the circuit has been interrupted to ensure the grounding circuit is complete.**

Equipment Grounding Conductor 10 AWG Green XLP	
From	To
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	**SB5**
SB5	**SB6**
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	SB14
SB14	SB15
SB15	SB16
SB16	SB17
SB17	CB1

Pull Box Bonding Jumper 10 AWG Green XLP	
From	To
PB1	CB1
PB2	SB1
PB3	SB2
PB4	SB2
PB5	SB3
PB6	SB3
PB7	**SB5**
PB8	SB8
PB9	SB8
PB10	SB12
PB11	SB12
PB12	SB13
PB13	SB14
PB14	SB15
PB15	SB16
PB16	CB1
PB18	SB7
PB19	SB9

Lighting UF 2-10 AWG Grounded	
From	To
CB1	SB3
SB3	SB7
SB7	**SB18**
SB7	SB8
CB1	SB15
SB15	SB19
SB15	SB12

EVP Cable	
From	To
CB1	SB16 (HEAD A)
CB1	SB10 (HEAD B)
CB1	SB12 (HEAD C)
CB1	SB2 (HEAD D)

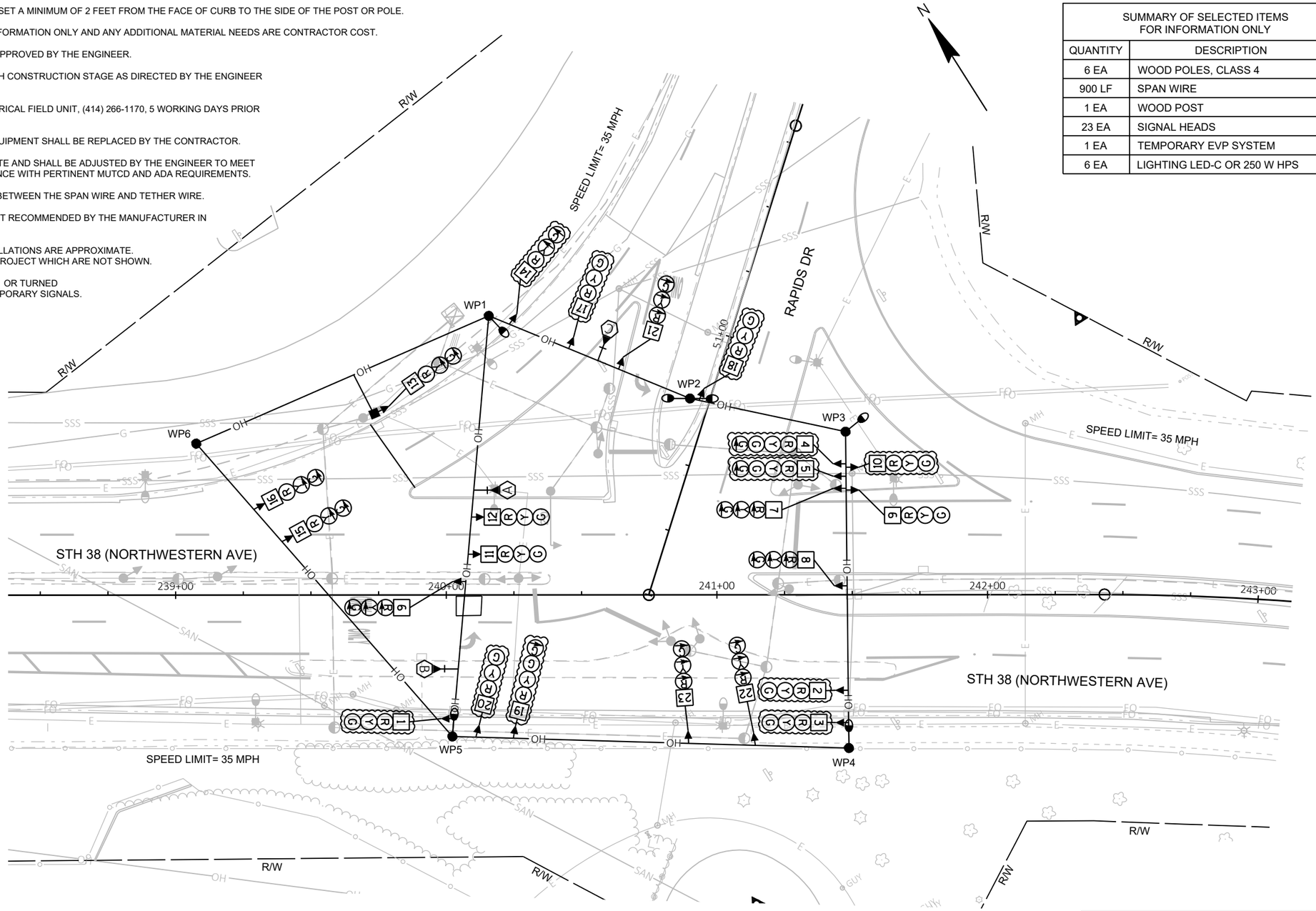
Video Detection Cable	
From	To
CB1	SB15 (V1)

2

CONSTRUCTION NOTES:

1. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
2. SUMMARY OF MATERIALS AND POLE LOCATIONS ARE FOR INFORMATION ONLY AND ANY ADDITIONAL MATERIAL NEEDS ARE CONTRACTOR COST.
3. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
4. CONTRACTOR TO ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
5. CONTRACTOR SHALL COORDINATE WITH THE WISDOT ELECTRICAL FIELD UNIT, (414) 266-1170, 5 WORKING DAYS PRIOR TO BEGINNING ANY WORK AT THE INTERSECTION.
6. ANY KNOCKDOWNS TO PERMANENT/TEMPORARY SIGNAL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR.
7. LOCATIONS OF PEDESTRIAN SIGNAL POLES ARE APPROXIMATE AND SHALL BE ADJUSTED BY THE ENGINEER TO MEET FIELD CONDITIONS. ALL PLACEMENTS SHALL BE IN COMPLIANCE WITH PERTINENT MUTCD AND ADA REQUIREMENTS.
8. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
9. TEMPORARY DETECTORS SHALL BE MOUNTED AT THE HEIGHT RECOMMENDED BY THE MANUFACTURER IN THE SPECIFICATIONS.
10. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
11. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
12. WOOD POLES LONGER THAN 45-FEET MAY BE NECESSARY DUE TO ELEVATION DIFFERENCES.

SUMMARY OF SELECTED ITEMS FOR INFORMATION ONLY	
QUANTITY	DESCRIPTION
6 EA	WOOD POLES, CLASS 4
900 LF	SPAN WIRE
1 EA	WOOD POST
23 EA	SIGNAL HEADS
1 EA	TEMPORARY EVP SYSTEM
6 EA	LIGHTING LED-C OR 250 W HPS



LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- WOOD POST
- LUMINAIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y Y YELLOW ARROW
- G G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- DIRECTION OF TRAFFIC
- WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL

STH 38 (NORTHWESTERN AVE) & RAPIDS DR
CITY OF RACINE
RACINE COUNTY

SIGNAL NO. T51-0157

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TEMPORARY TRAFFIC SIGNAL PLAN - PRECONSTRUCTION	SHEET 82	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0157\T51-0157_PRECON.DWG
LAYOUT NAME - T51-0157_Precon
PLOT DATE : 5/22/2023 1:38 PM
PLOT BY : VANDE LEEST, CYNTHIA
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

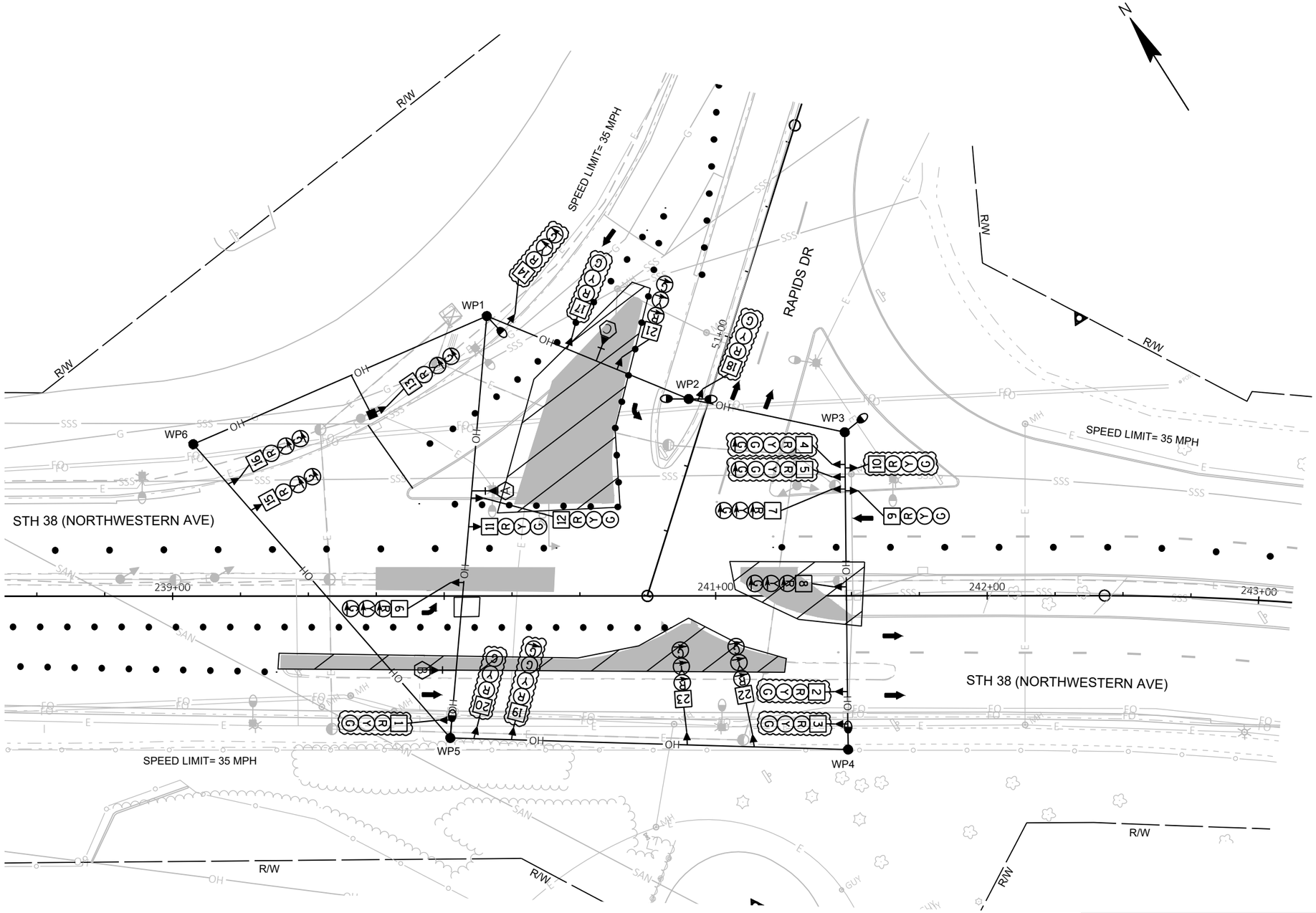
LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- WOOD POST
- LUMINAIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD

- DIRECTION OF TRAFFIC
- WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH

GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
STH 38 (NORTHWESTERN AVE) & RAPIDS DR
CITY OF RACINE
RACINE COUNTY

SIGNAL NO. T51-0157

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 2 OF 9

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-STAGE 1	SHEET 83	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0157\T51-0157_PRES1.DWG
LAYOUT NAME - T51-0157_PreS1

PLOT DATE : 5/22/2023 1:38 PM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

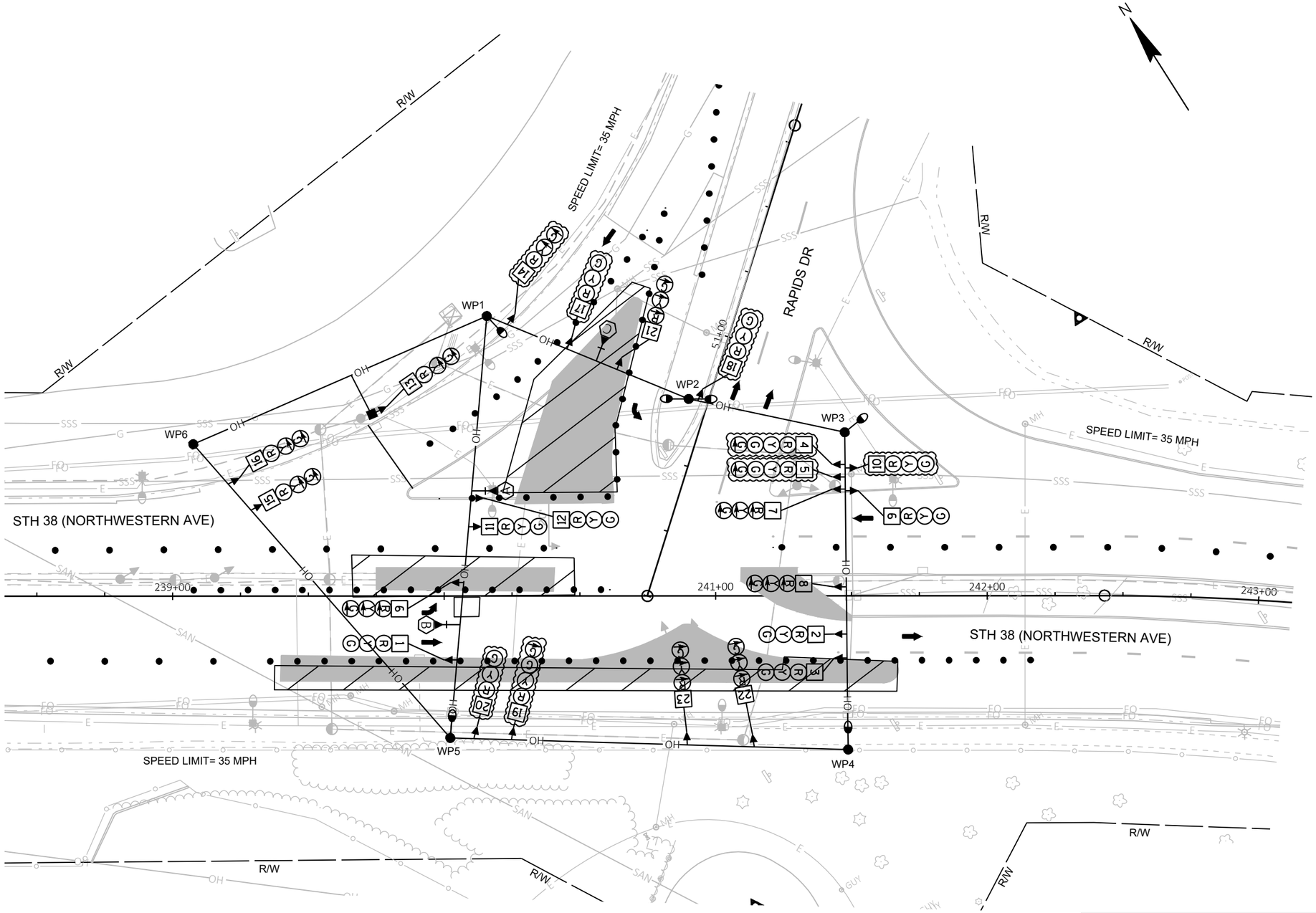
LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- WOOD POST
- LUMINAIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD

- DIRECTION OF TRAFFIC
- WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH

GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
STH 38 (NORTHWESTERN AVE) & RAPIDS DR
CITY OF RACINE
RACINE COUNTY

SIGNAL NO. T51-0157

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 3 OF 9

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TEMPORARY TRAFFIC SIGNAL PLAN - PRE-STAGE 2	SHEET 84	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0157\T51-0157_PRES2.DWG
LAYOUT NAME - T51-0157_PreS2

PLOT DATE : 5/22/2023 1:38 PM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

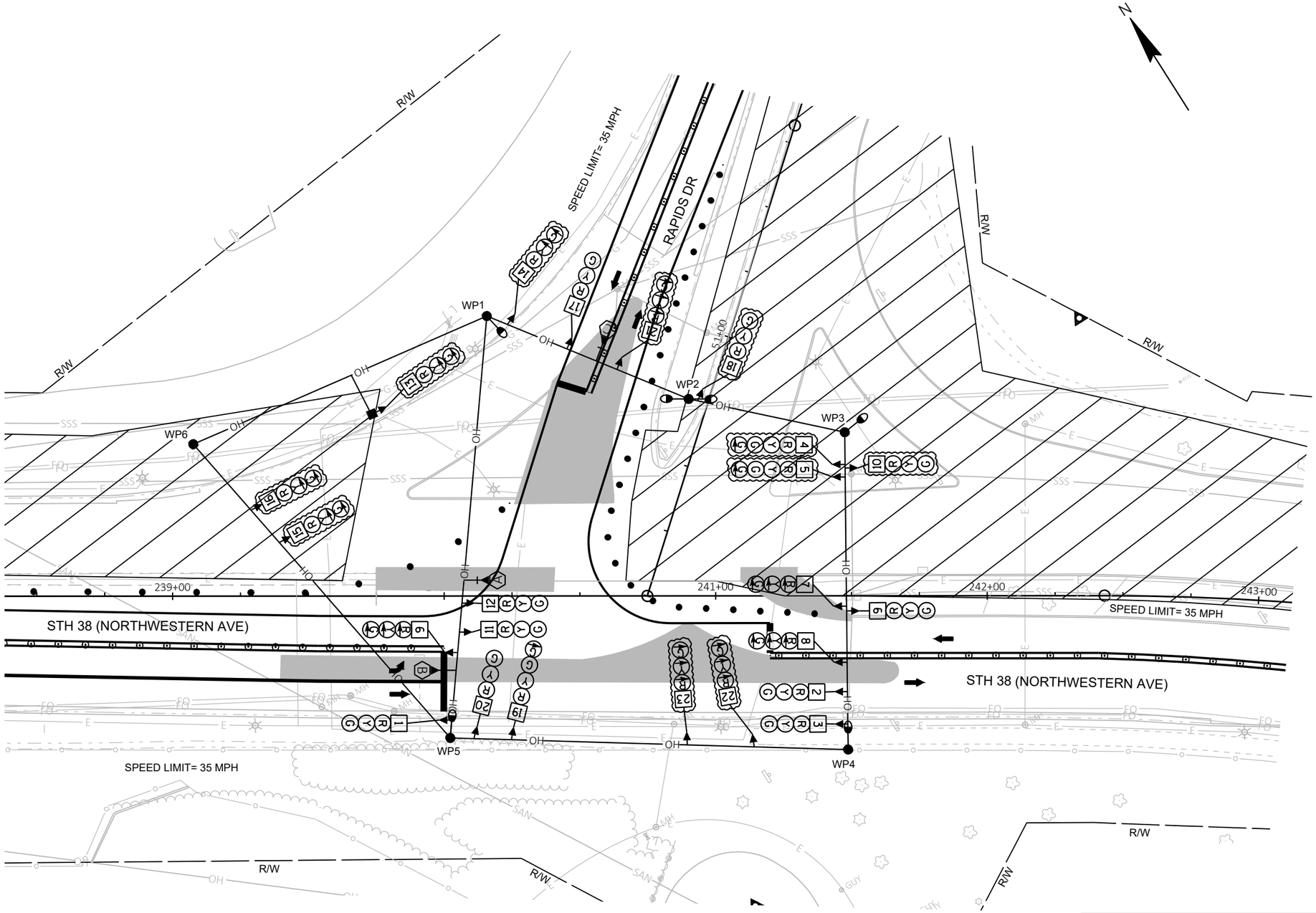
2

LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- WOOD POST
- LUMINAIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- DIRECTION OF TRAFFIC
- WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH

GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
STH 38 (NORTHWESTERN AVE) & RAPIDS DR
CITY OF RACINE
RACINE COUNTY

SIGNAL NO. T51-0157

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 4 OF 9

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET 85	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0157\T51-0157_S1A.DWG
LAYOUT NAME - T51-0157_S1A

PLOT DATE : 5/22/2023 1:38 PM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : ##########

2

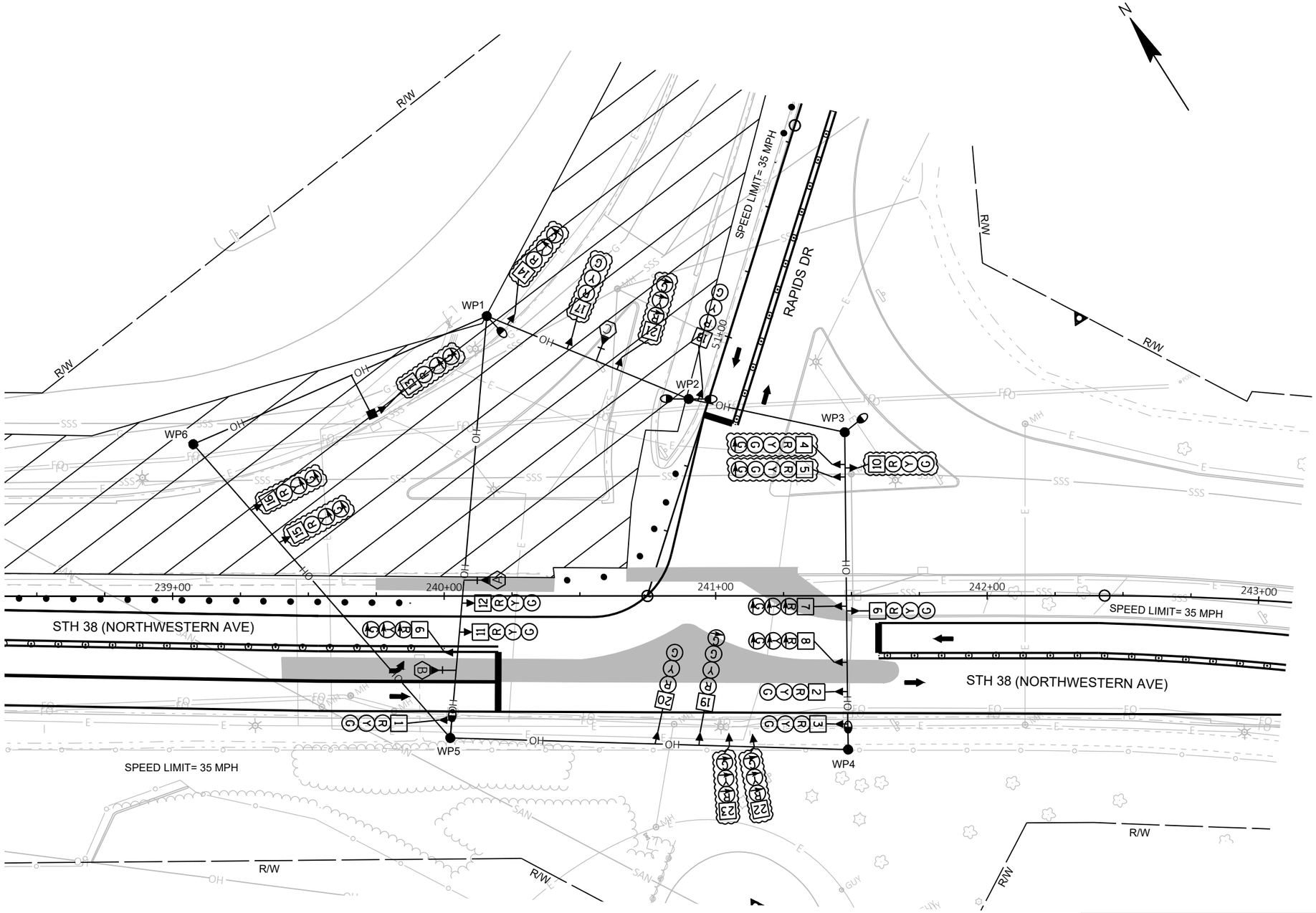
LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- WOOD POST
- LUMINAIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD

- DIRECTION OF TRAFFIC
- WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH

GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
STH 38 (NORTHWESTERN AVE) & RAPIDS DR
CITY OF RACINE
RACINE COUNTY

SIGNAL NO. T51-0157

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 5 OF 9

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1B	SHEET 86	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0157\T51-0157_S1B.DWG
LAYOUT NAME - T51-0157_S1B

PLOT DATE : 5/22/2023 1:39 PM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

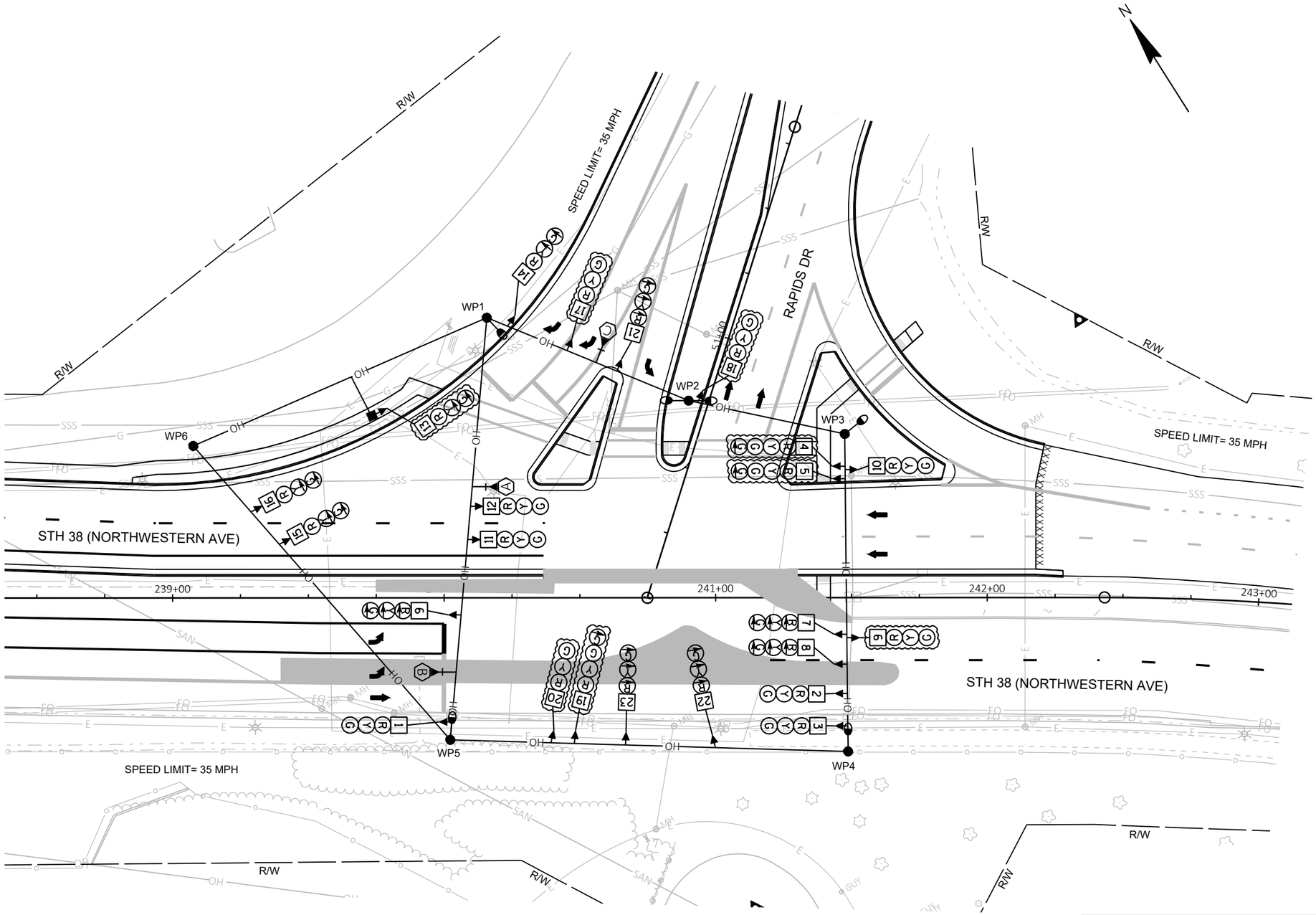
LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- WOOD POST
- LUMINAIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD

- DIRECTION OF TRAFFIC
- WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH

GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
STH 38 (NORTHWESTERN AVE) & RAPIDS DR
CITY OF RACINE
RACINE COUNTY

SIGNAL NO. T51-0157

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 6 OF 9

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TEMPORARY TRAFFIC SIGNAL PLAN - WINTER SHUTDOWN	SHEET 87	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0157\T51-0157_SWINTER.DWG
LAYOUT NAME - T51-0157_SWinter

PLOT DATE : 5/22/2023 1:39 PM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

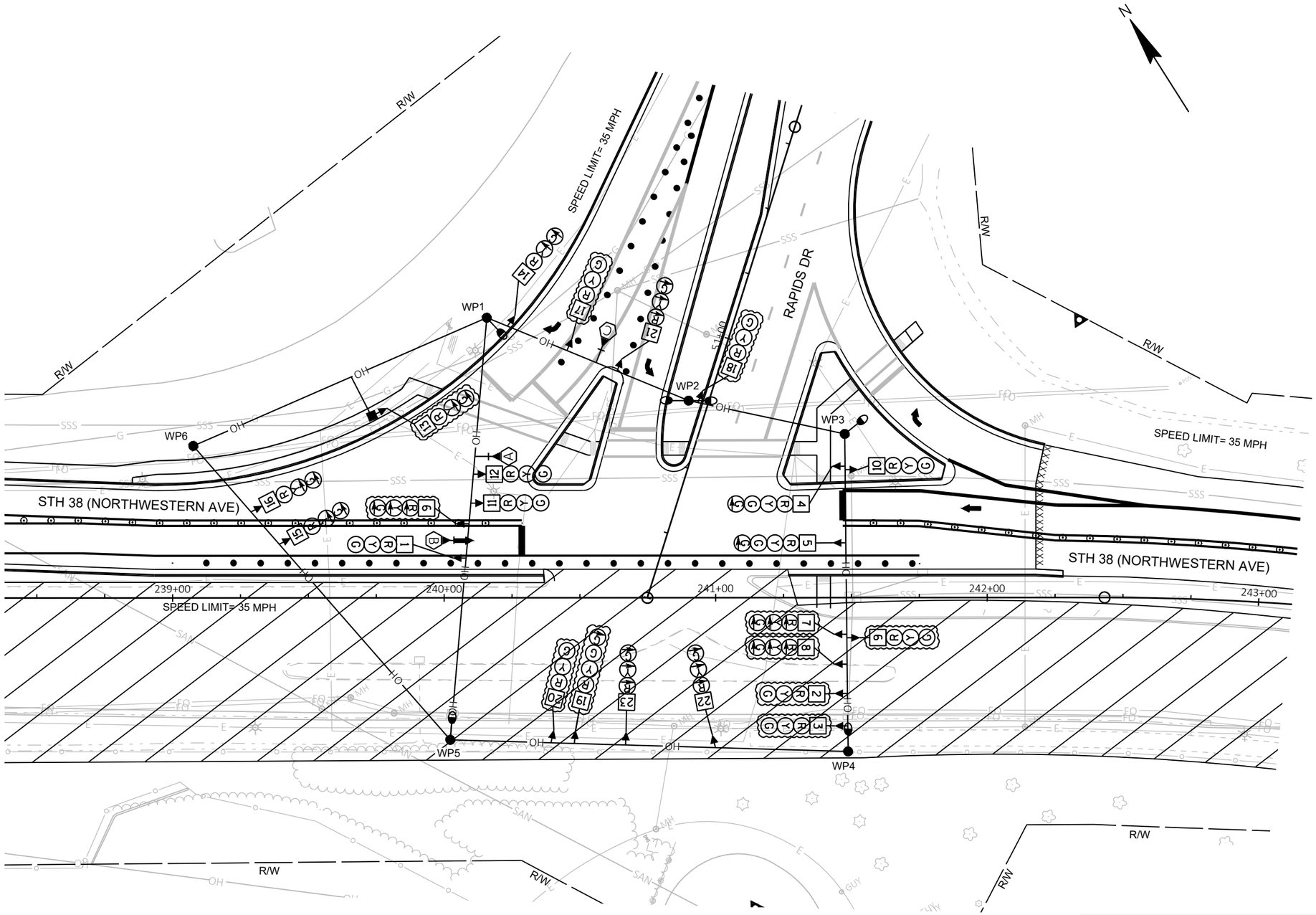
LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- WOOD POST
- LUMINAIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD

- DIRECTION OF TRAFFIC
- WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH

GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
STH 38 (NORTHWESTERN AVE) & RAPIDS DR
CITY OF RACINE
RACINE COUNTY

SIGNAL NO. T51-0157

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 7 OF 9

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET 88	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0157\T51-0157_S2.DWG
LAYOUT NAME - T51-0157_S2

PLOT DATE : 5/22/2023 1:39 PM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

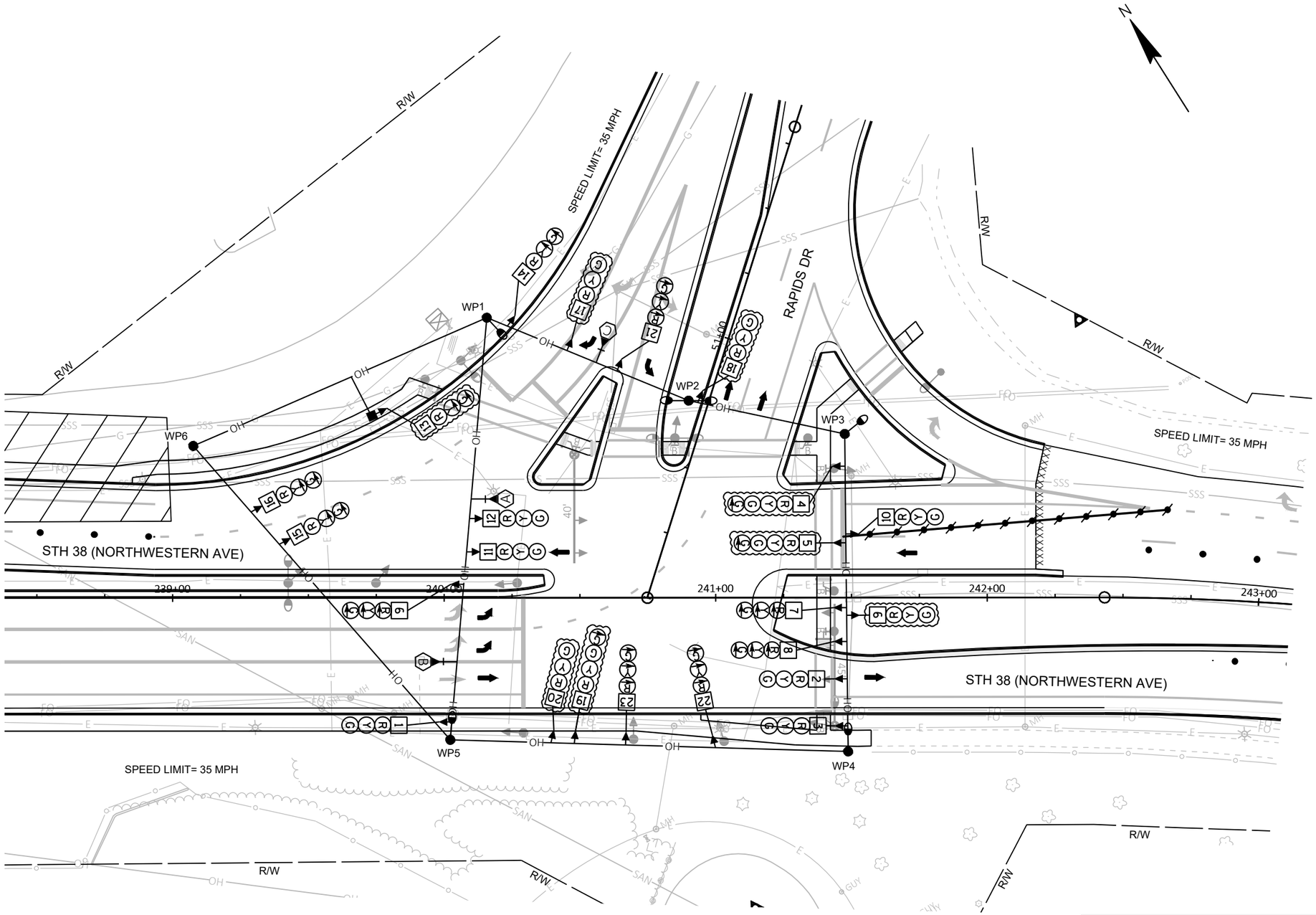
LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- WOOD POST
- LUMINAIRE
- SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD

- DIRECTION OF TRAFFIC
- WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH

GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
STH 38 (NORTHWESTERN AVE) & RAPIDS DR
CITY OF RACINE
RACINE COUNTY

SIGNAL NO. T51-0157

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 8 OF 9

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 3	SHEET 89	E

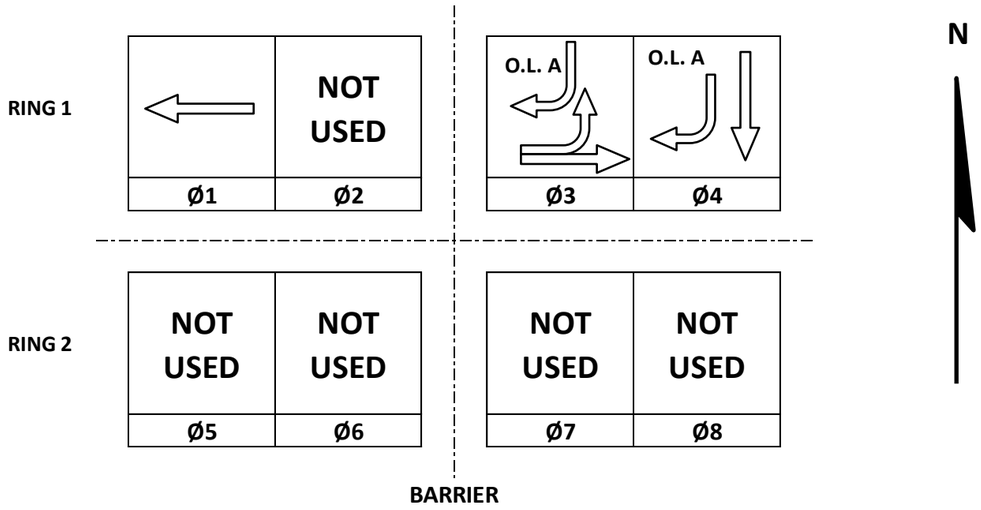
FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0157\T51-0157_S3.DWG
LAYOUT NAME - T51-0157_S3

PLOT DATE : 5/23/2023 4:06 PM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

	HEAD NUMBERS	FLASH
Ø1	9,10,11,12	R
Ø2		
Ø3	1,2,3,4,5,6,7,8	R, R ←
Ø4	17,18,19,20,21,22,23	R, R ←
Ø5		
Ø6		
Ø7		
Ø8		
Ø2P		
Ø4P		
Ø6P		
Ø8P		
OLA	13,14,15,16	R
OLB		
OLC		
OLD		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1	X		MAX	X
2				
3	X		MAX	X
4	X		MAX	X
5				
6				
7				
8				

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	
CELL MODEM	X

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM NO:	SS-

TYPE OF LIGHTING	
BY OTHER AGENCY	X
IN TRAFFIC CABINET	
IN SEPARATE DOT LIGHTING CABINET	

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C
MOVEMENT	←	↱	↓
PHASE	1	3	4

AFTER PREEMPTION SEQUENCE 1, CONTROLLER SHALL RETURN TO PHASE 1.

AFTER PREEMPTION SEQUENCE 3, CONTROLLER SHALL RETURN TO PHASE 3.

AFTER PREEMPTION SEQUENCE 4, CONTROLLER SHALL RETURN TO PHASE 4.

GENERAL NOTES:

1. OMIT OVERLAP "A" DURING STAGE 1A & 1B.
2. SIGNAL HEADS TO BE BAGGED ACCORDING TO THE TEMPORARY TRAFFIC SIGNAL PLAN SHALL ALSO BE DE-ENERGIZED.

STH 38 & RAPIDS DR
CITY OF RACINE
RACINE COUNTY

SIGNAL NO:	T51-0157	CABINET TYPE:	TEMP
		CONTROLLER TYPE:	TEMP
DATE:	5/23	PAGE NUMBER:	9 OF 9

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TEMPORARY SEQUENCE OF OPERATIONS	SHEET NO:	E

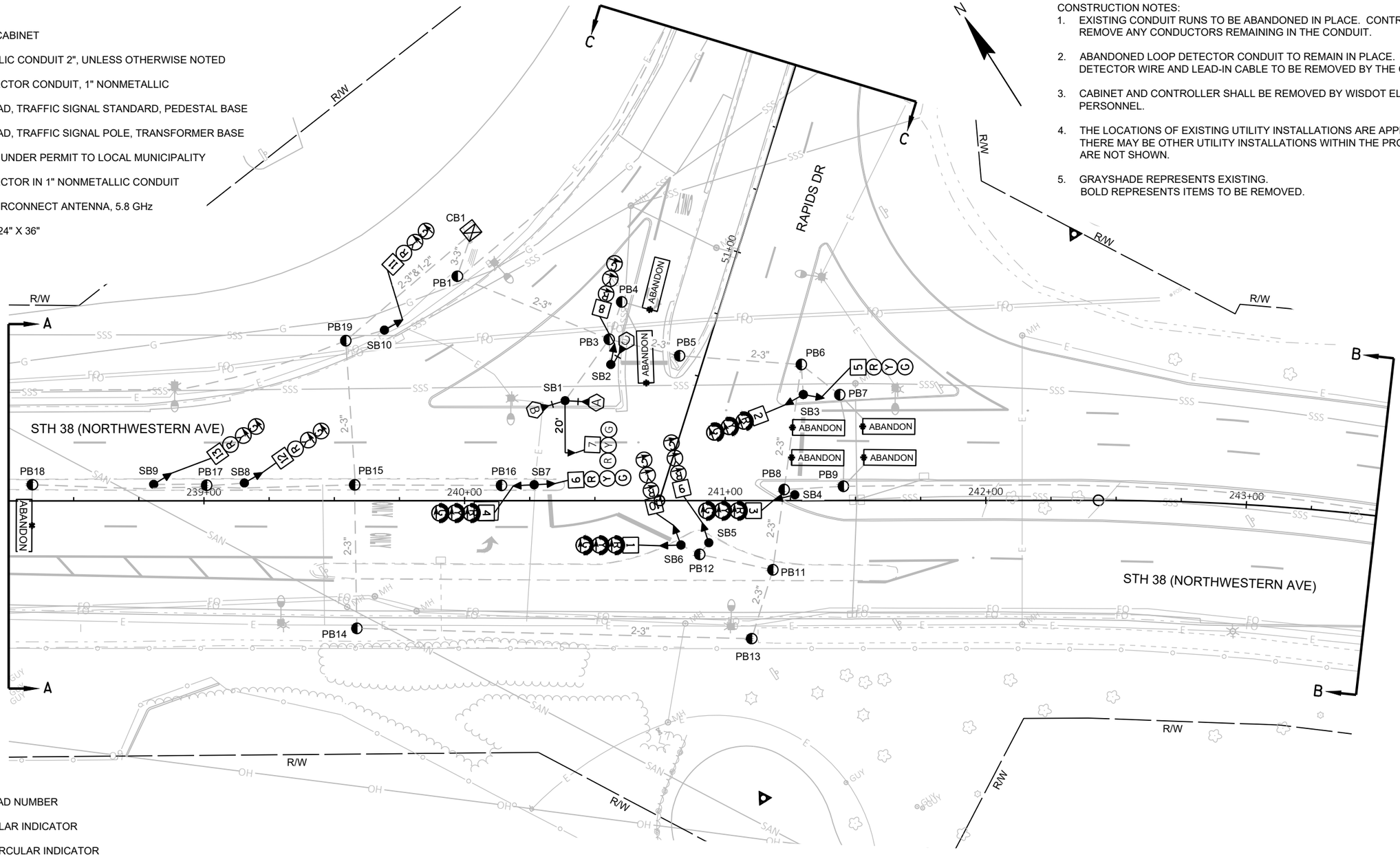
2

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT, 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- RADIO INTERCONNECT ANTENNA, 5.8 GHz
- PULL BOX, 24" X 36"

CONSTRUCTION NOTES:

1. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRE AND LEAD-IN CABLE TO BE REMOVED BY THE CONTRACTOR.
3. CABINET AND CONTROLLER SHALL BE REMOVED BY WISDOT ELECTRICAL PERSONNEL.
4. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
5. GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.



XX SIGNAL HEAD NUMBER
R RED CIRCULAR INDICATOR
Y YELLOW CIRCULAR INDICATOR
G GREEN CIRCULAR INDICATOR
RED ARROW
YELLOW ARROW
GREEN ARROW
TUNNEL VISOR ON CIRCULAR INDICATOR

X EVP DESIGNATOR
EVP DETECTOR HEAD
Y YIELD SIGN

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL
STH 38 (NORTHWESTERN AVE) & RAPIDS DR
CITY OF RACINE
RACINE COUNTY

SIGNAL NO. S51-0157

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 1 OF 2

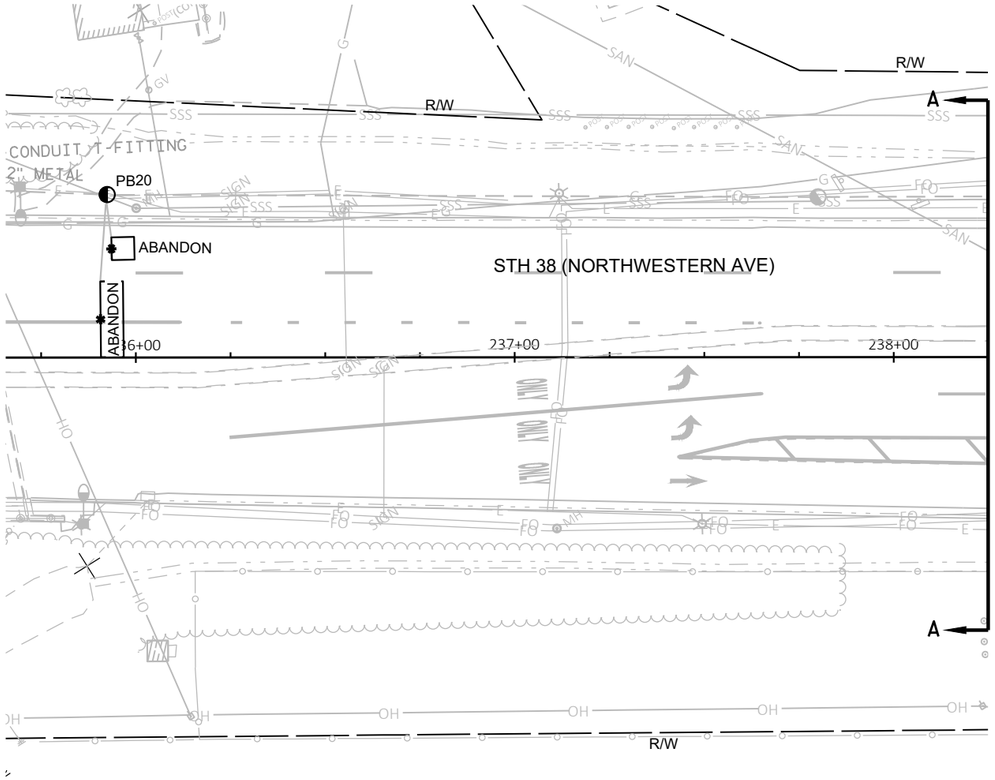
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 91	E

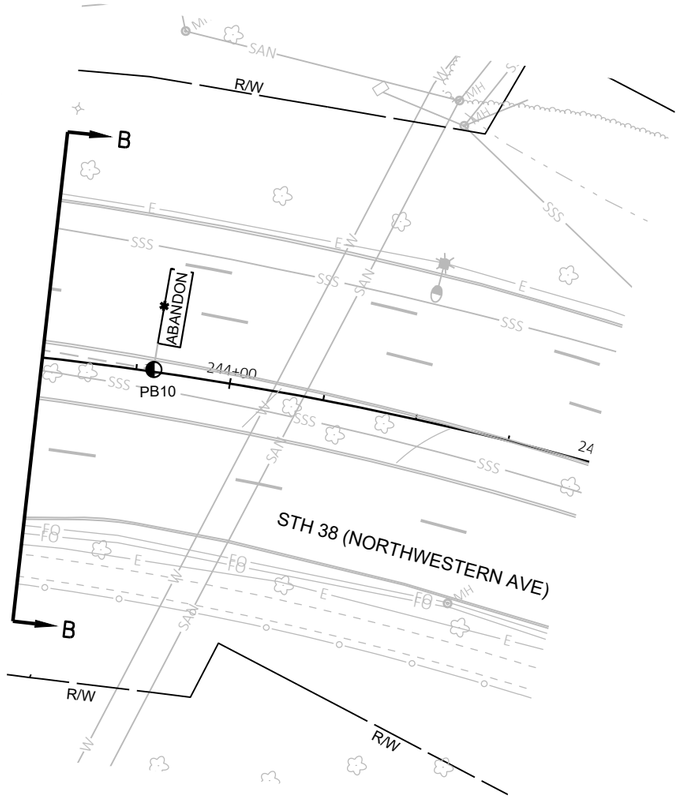
FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0157\S51-0157_REM.DWG
LAYOUT NAME - S51-0157_Rem_pg1

PLOT DATE : 7/19/2022 7:24 AM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2





TRAFFIC CONTROL SIGNAL
STH 38 (NORTHWESTERN AVE) & RAPIDS DR
CITY OF RACINE
RACINE COUNTY

SIGNAL NO. S51-0157

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 92	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0157\S51-0157_REM.DWG
LAYOUT NAME - S51-0157_Rem_pg2

PLOT DATE : 7/19/2022 7:24 AM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : 1 IN:40 FT

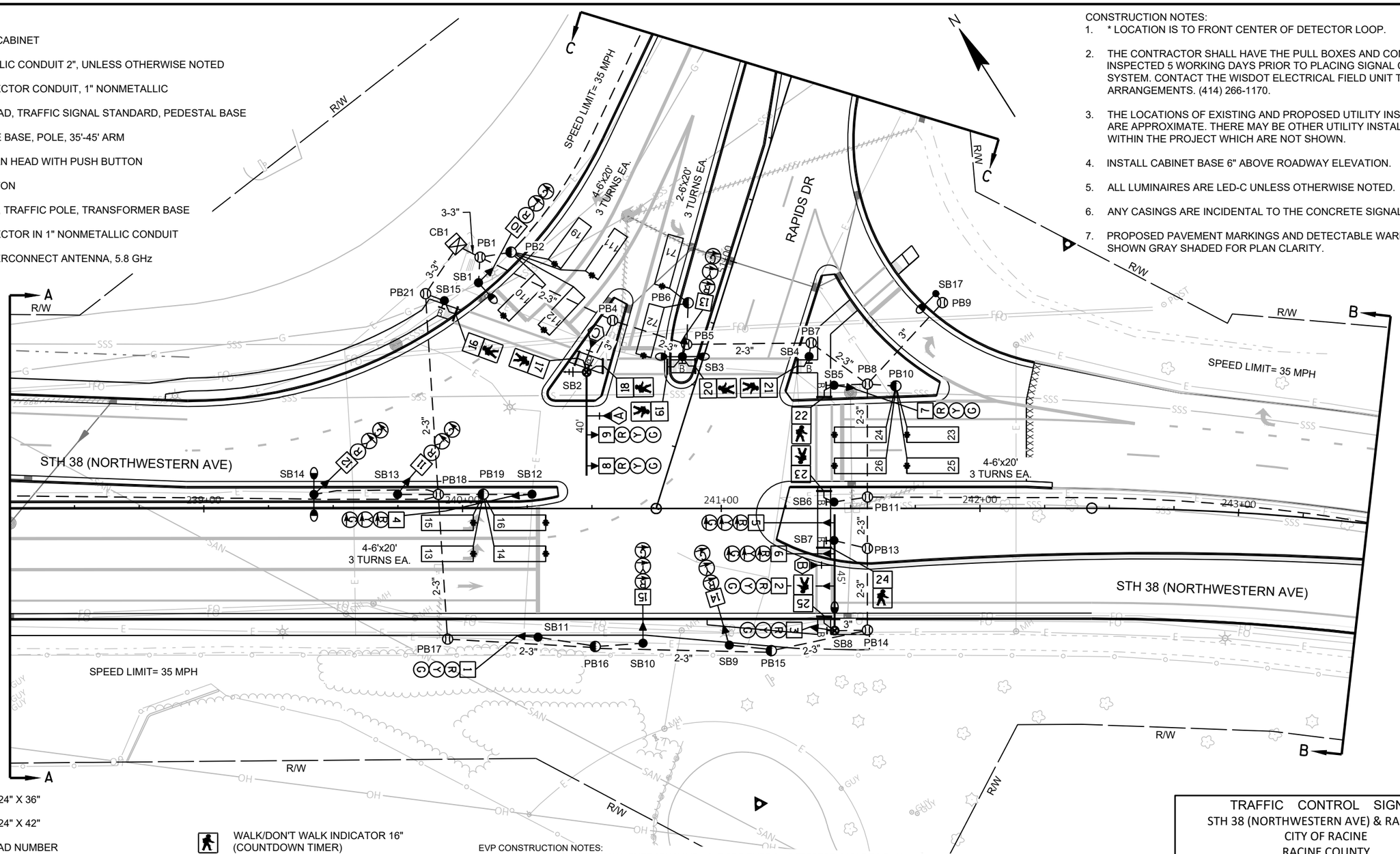
2

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT, 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 35'-45' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- RADIO INTERCONNECT ANTENNA, 5.8 GHz

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
5. ALL LUMINAIRES ARE LED-C UNLESS OTHERWISE NOTED.
6. ANY CASINGS ARE INCIDENTAL TO THE CONCRETE SIGNAL BASE ITEMS.
7. PROPOSED PAVEMENT MARKINGS AND DETECTABLE WARNING FIELDS SHOWN GRAY SHADED FOR PLAN CLARITY.



- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- RA RED ARROW
- YA YELLOW ARROW
- GA GREEN ARROW

- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- Y YIELD SIGN

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

EVP CONSTRUCTION NOTES:

1. INSTALL THE TRAFFIC SIGNAL EMERGENCY VEHICLE PRE-EMPTION DETECTOR CABLE TO RUN CONTINUOUSLY (WITHOUT SPLICES) FROM THE CABINET TO THE DETECTOR HEADS. MOUNT THE EVP DETECTOR HEADS AND WIRE THEM PER MANUFACTURER INSTRUCTIONS.
2. THE DEPARTMENT WILL DETERMINE THE EXACT LOCATION OF THE EVP DETECTORS TO ENSURE THAT THE INSTALLATION DOES NOT CREATE A SIGHT OBSTRUCTION.
3. ALL EVP DETECTOR CABLE SHALL BE ROUTED THROUGH EXISTING SIGNAL BASES, PULL BOXES, AND CONDUIT AS INDICATED. PROVIDE ENOUGH CABLE TO ALLOW 10 FEET OF SLACK IN THE CABINET, IN EACH PULL BOX, AND IN THE SIGNAL POLE HANDHOLE.
4. FOR A CABINET THAT IS NOT OPERATING THE SIGNAL, CABINET WIRING WILL BE DONE BY THE CONTRACTOR. IF THE CABINET IS OPERATING THE SIGNAL, THE CABINET WIRING WILL BE DONE BY THE DEPARTMENT. THE CONTRACTOR SHALL INSTALL AND TERMINATE THE EVP CABLE AS DESCRIBED AND SHALL LABEL EACH CABLE AS NOTED ON THE PLAN SHEETS (I.E. EVP A-B-C-D).

MONOTUBE STRUCTURE NUMBERS
SB2 = S-51-1338-01
SB8 = S-51-1338-02

TRAFFIC CONTROL SIGNAL

STH 38 (NORTHWESTERN AVE) & RAPIDS DR
CITY OF RACINE
RACINE COUNTY

SIGNAL NO. S51-0157
CABINET TYPE: TS2-S
CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
DATE 7-26-22
REGION TRAFFIC ENGINEER

APPROVED
DATE 7-28-22
STATE TRAFFIC ENGINEER

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 1 OF 4

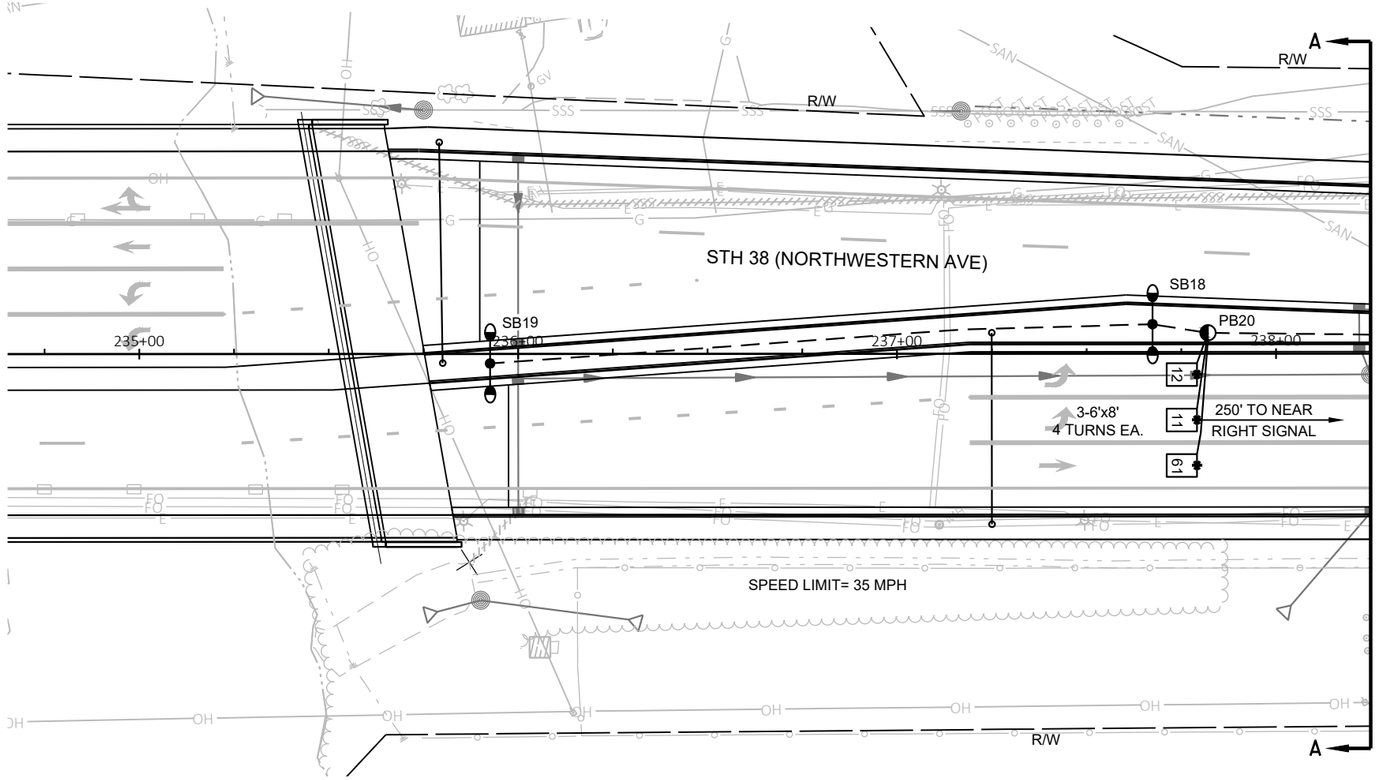
7-18-22 AJV

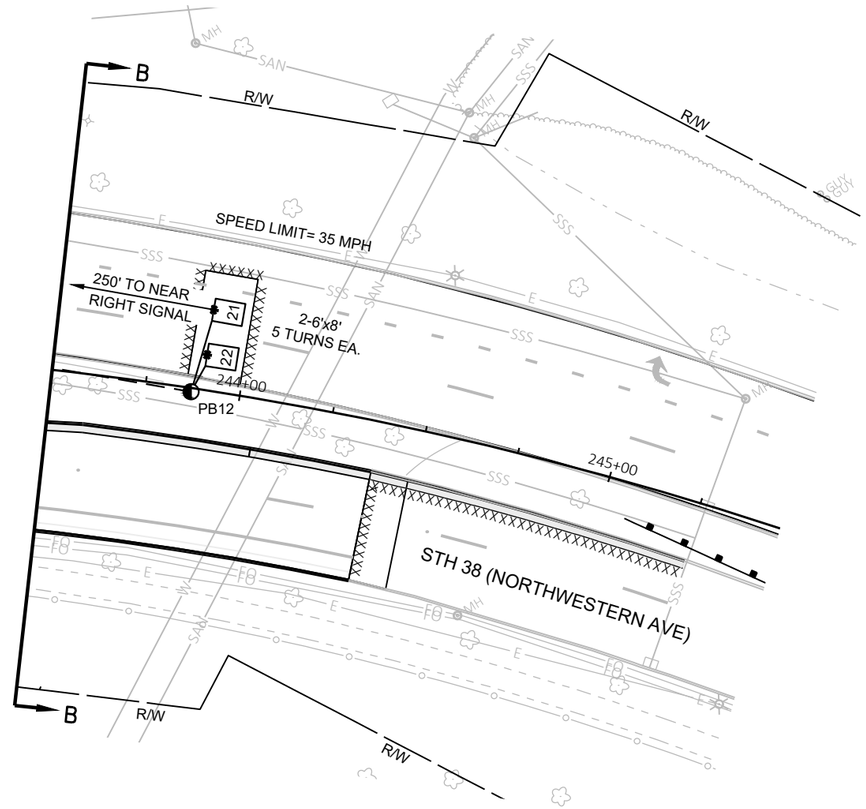
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC SIGNAL PLAN	SHEET 93	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0157\S51-0157.DWG
LAYOUT NAME - S51-0157_pg1
PLOT DATE : 5/10/2023 2:55 PM
PLOT BY : VANDE LEEST, CYNTHIA
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2





TRAFFIC CONTROL SIGNAL
STH 38 (NORTHWESTERN AVE) & RAPIDS DR
CITY OF RACINE
RACINE COUNTY

SIGNAL NO. S51-0157

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

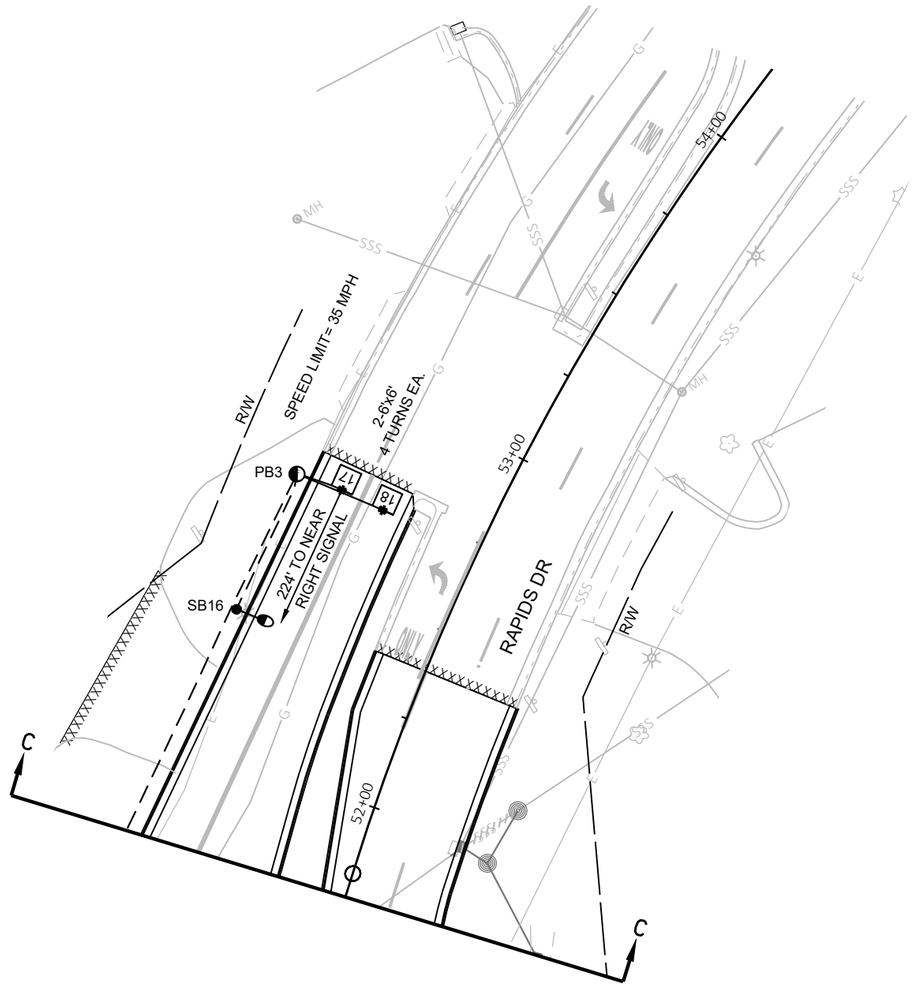
PAGE 2 OF 4

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC SIGNAL PLAN	SHEET 94	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0157\S51-0157.DWG
LAYOUT NAME - S51-0157_pg2

PLOT DATE : 5/10/2023 2:55 PM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : 1 IN:40 FT

2



TRAFFIC CONTROL SIGNAL
STH 38 (NORTHWESTERN AVE) & RAPIDS DR
CITY OF RACINE
RACINE COUNTY

SIGNAL NO. S51-0157

REGION CONTACT: A. UTIC
DESIGNED BY: C. VANDE LEEST
REVISED BY:

PAGE 3 OF 4

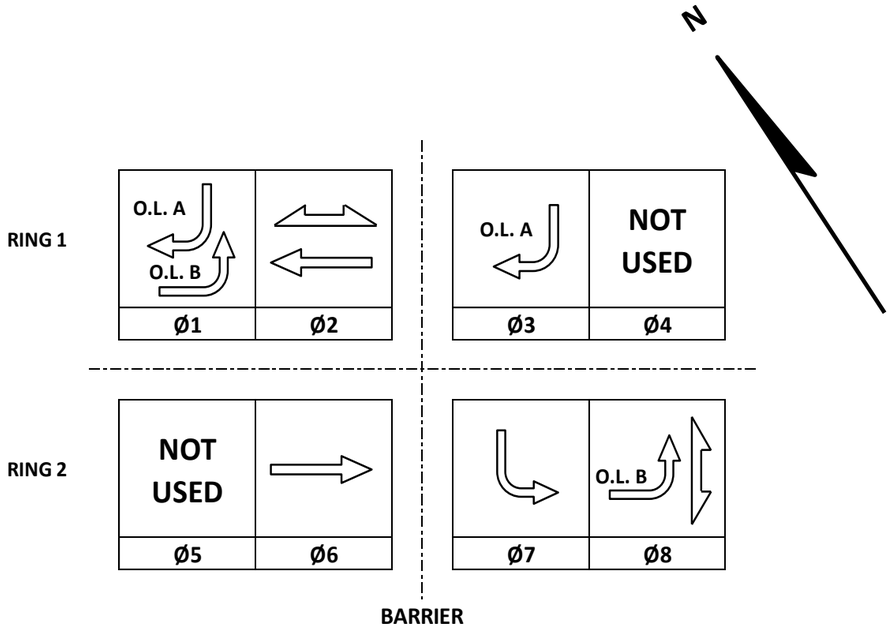
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC SIGNAL PLAN	SHEET 95	E

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0157\S51-0157.DWG
LAYOUT NAME - S51-0157_pg3

PLOT DATE : 5/10/2023 2:55 PM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1		
Ø2	7,8,9	R
Ø3		
Ø4		
Ø5		
Ø6	1,2,3	R
Ø7	13,14,15	R ←
Ø8		
Ø2P	16,17,18,19,20,21	
Ø4P		
Ø6P		
Ø8P	22,23,24,25	
OLA	10,11,12	R
OLB	4,5,6	R ←
OLE		
OLF		
OLG		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6	MIN	X
2	X	6		X
3		7		X
4				
5				
6	X	1	MIN	X
7		3		X
8		3		X

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C
MOVEMENT	← →	OLA	OLA
PHASE	2+6	6+1	3+7

AFTER PREEMPTION SEQUENCE 2+6 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.
AFTER PREEMPTION SEQUENCE 3+7, CONTROLLER SHALL RETURN TO PHASE 3+7.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	X
CELL MODEM	

TYPE OF COORDINATION		
NONE		
TBC		X
TRAFFIC RESPONSIVE		
ADAPTIVE		
*LOCATION OF MASTER CONTROLLER NO:	S-	
SIGNAL SYSTEM NO:	SS-	51-0039

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	13	15	17	19	111	21	23
CALLED PHASE	1	1	1	1	1	1	2	2
CALL OPTION	X	X	X	X	X	X	X	X
DELAY TIME								
EXTENTION OPTION	X	X	X	X	X	X	X	X
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR*(S)	25	61	72					
CALLED PHASE	2	6	7					
CALL OPTION	X	X	X					
DELAY TIME								
EXTENTION OPTION	X	X	X					
EXTEND TIME								
USE ADDED INITIAL		X						
CROSS SWITCH PHASE								

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	12	14	16	18	110	112	22	24
CALLED PHASE	1	1	1	1	1	1	2	2
CALL OPTION	X	X	X	X	X	X	X	X
DELAY TIME								
EXTENTION OPTION	X	X	X	X	X	X	X	X
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR*(S)	26	71						
CALLED PHASE	2	7						
CALL OPTION	X	X						
DELAY TIME								
EXTENTION OPTION	X	X						
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

GENERAL NOTES:

1. START OF OLA TO BE DELAYED AFTER THE TERMINATION OF PHASE 2.
2. PHASE 8 CALLED BY PEDESTRIAN PUSH BUTTONS ON SB5, SB6, SB7, OR SB8.

STH 38 (NORTHWESTERN AVE) & RAPIDS DR
CITY OF RACINE
RACINE COUNTY

SIGNAL NO:	S51-0157	CABINET TYPE:	TS2-S
		CONTROLLER TYPE:	ECONOLITE
DATE:	8/22	PAGE NUMBER:	4 OF 4

PROJECT ID:	2290-03-73
INTERSECTION:	STH 38 (NORTHWESTERN AVE) & RAPIDS DR

Signal Wire Color Coding	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED NEUTRAL	PED INPUT
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>	D/WALK	WALK		
SB1	7	10	RED				ORG	GRN					
SB2	12	8	RED	ORG	GRN								
		9	RED	ORG	GRN								
		17								BLK	BLU		
		18								BLK	BLU		
		B											WHT/BLK
SB3	12	13				RED	ORG	GRN					
		19								BLK	BLU		
		20								BLK	BLU		
		B											WHT/BLK
SB4	7	21								BLK	BLU		
		B											WHT/BLK
SB5	12	7	RED	ORG	GRN								
		22								BLK	BLU		
		B											WHT/BLK
SB6	7	23								BLK	BLU		
		B											WHT/BLK
SB7	7	24								BLK	BLU		
		B											WHT/BLK
SB8	12	2	RED	ORG	GRN								
		3	RED	ORG	GRN								
		5				RED/BLK	ORG/BLK	GRN/BLK					
		6				RED/BLK	ORG/BLK	GRN/BLK					
		25								BLK	BLU		
		B											WHT/BLK
SB9	7	14				RED	ORG	GRN					
SB10	7	15				RED	ORG	GRN					
SB11	7	1	RED	ORG	GRN								
SB12	7	4				RED	ORG	GRN					
SB13	7	11	RED				ORG	GRN					
SB14	7	12	RED				ORG	GRN					
SB15	7	16								BLK	BLU		
		B											WHT/BLK

*Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications
*Ensure the grounded conductor in the feeder cable and the pole cables are both 18" longer than the ungrounded conductors.
*At the signal bases, connect one terminal from the pedestrian push buttons to the color indicated in the chart. Connect the other terminal to the grounded conductor.
*Reconnect the grounding conductors wherever the circuit has been interrupted to ensure the grounding circuit is complete.

PROJECT ID:	2290-03-73
INTERSECTION:	STH 38 (NORTHWESTERN AVE) & RAPIDS DR

Equipment Grounding Conductor 10 AWG Green XLP	
From	To
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	SB14
SB14	SB15
SB15	CB1

Pull Box Bonding Jumper 10 AWG Green XLP	
From	To
PB1	CB1
PB4	SB2
PB5	SB3
PB7	SB4
PB8	SB5
PB11	SB6
PB13	SB7
PB14	SB8
PB15	SB9
PB16	SB10
PB17	SB11
PB18	SB13
PB19	SB12
PB21	SB15

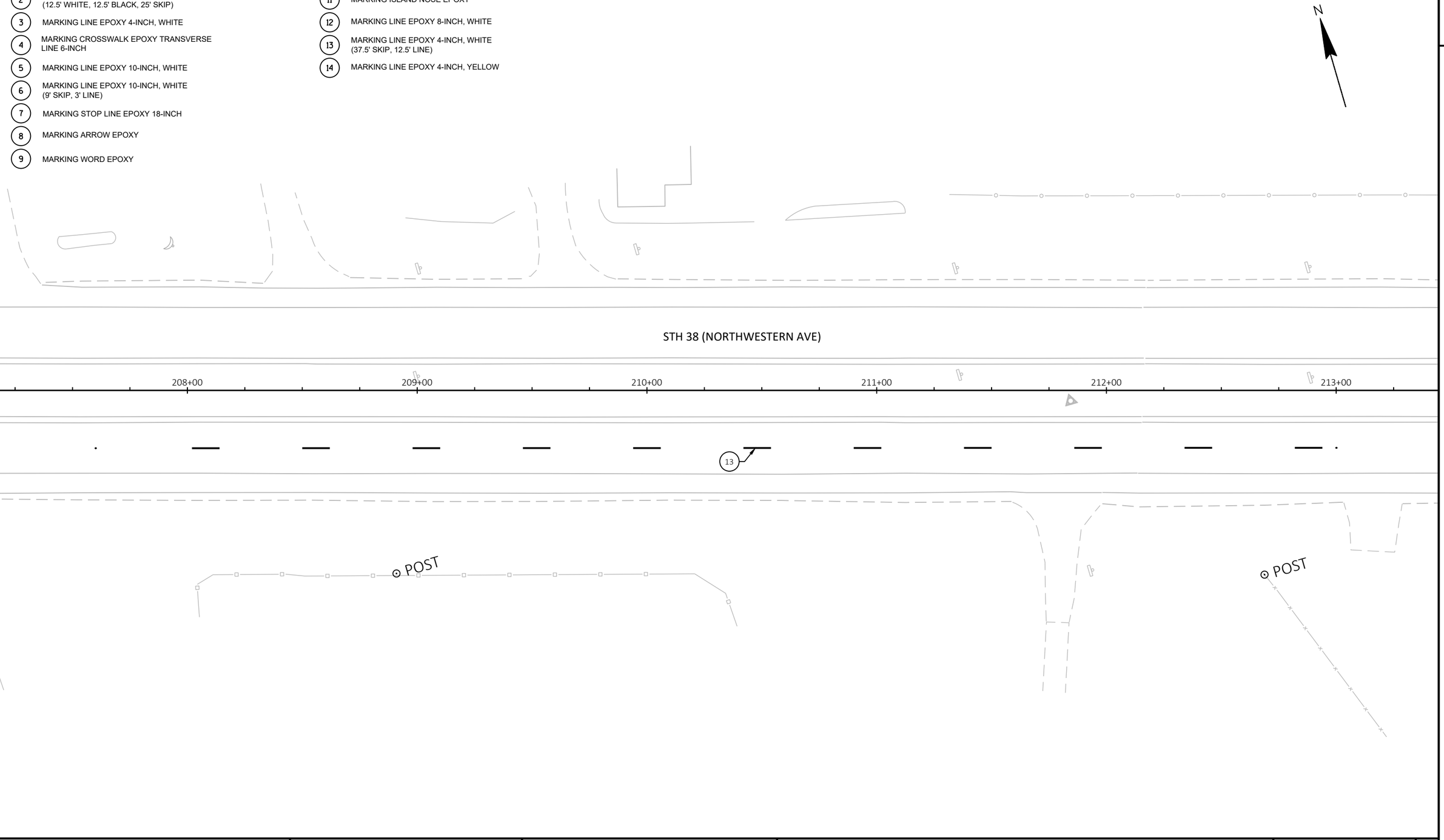
Lighting UF 2-10 AWG Grounded	
From	To
CB1	SB1
SB1	SB16
SB1	SB3
SB3	SB17
SB17	SB8
CB1	SB14
SB14	SB18
SB18	SB19

Emergency Vehicle Preemption	
From	To
CB1	SB2 (HEAD A)
CB1	SB8 (HEAD B)
CB1	SB2 (HEAD C)

2

LEGEND

1. MARKING LINE EPOXY 6-INCH, WHITE
2. MARKING LINE EPOXY 6-INCH (12.5' WHITE, 12.5' BLACK, 25' SKIP)
3. MARKING LINE EPOXY 4-INCH, WHITE
4. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
5. MARKING LINE EPOXY 10-INCH, WHITE
6. MARKING LINE EPOXY 10-INCH, WHITE (9' SKIP, 3' LINE)
7. MARKING STOP LINE EPOXY 18-INCH
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING CURB EPOXY, YELLOW
11. MARKING ISLAND NOSE EPOXY
12. MARKING LINE EPOXY 8-INCH, WHITE
13. MARKING LINE EPOXY 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)
14. MARKING LINE EPOXY 4-INCH, YELLOW



2

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PAVEMENT MARKING PLAN	SHEET 99	E

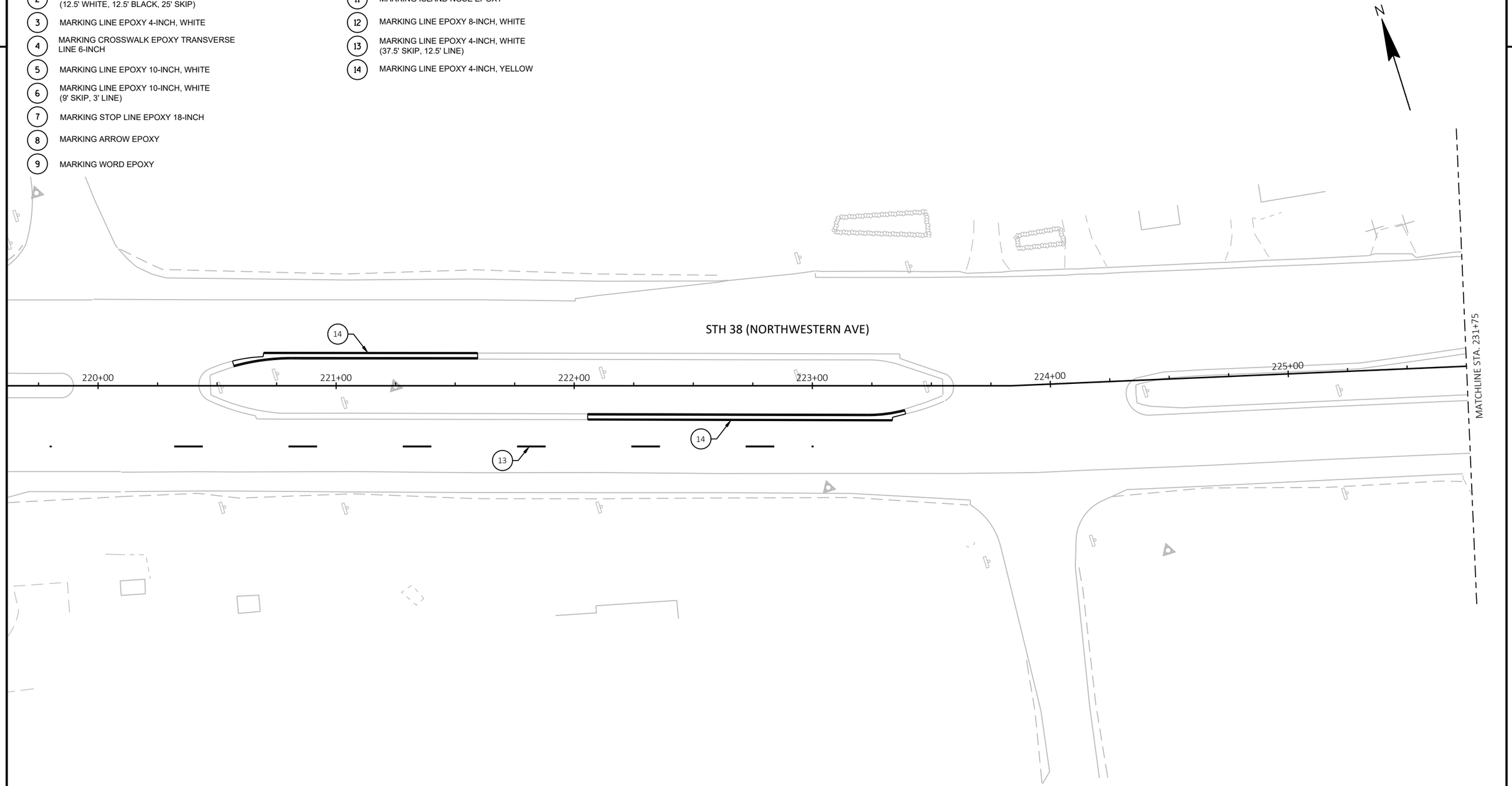
FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024501_pm

PLOT DATE : 7/31/2023 1:32 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : ##########

2

LEGEND

1. MARKING LINE EPOXY 6-INCH, WHITE
2. MARKING LINE EPOXY 6-INCH (12.5' WHITE, 12.5' BLACK, 25' SKIP)
3. MARKING LINE EPOXY 4-INCH, WHITE
4. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
5. MARKING LINE EPOXY 10-INCH, WHITE
6. MARKING LINE EPOXY 10-INCH, WHITE (9' SKIP, 3' LINE)
7. MARKING STOP LINE EPOXY 18-INCH
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING CURB EPOXY, YELLOW
11. MARKING ISLAND NOSE EPOXY
12. MARKING LINE EPOXY 8-INCH, WHITE
13. MARKING LINE EPOXY 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)
14. MARKING LINE EPOXY 4-INCH, YELLOW



2

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PAVEMENT MARKING PLAN	SHEET 100	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024502_pm

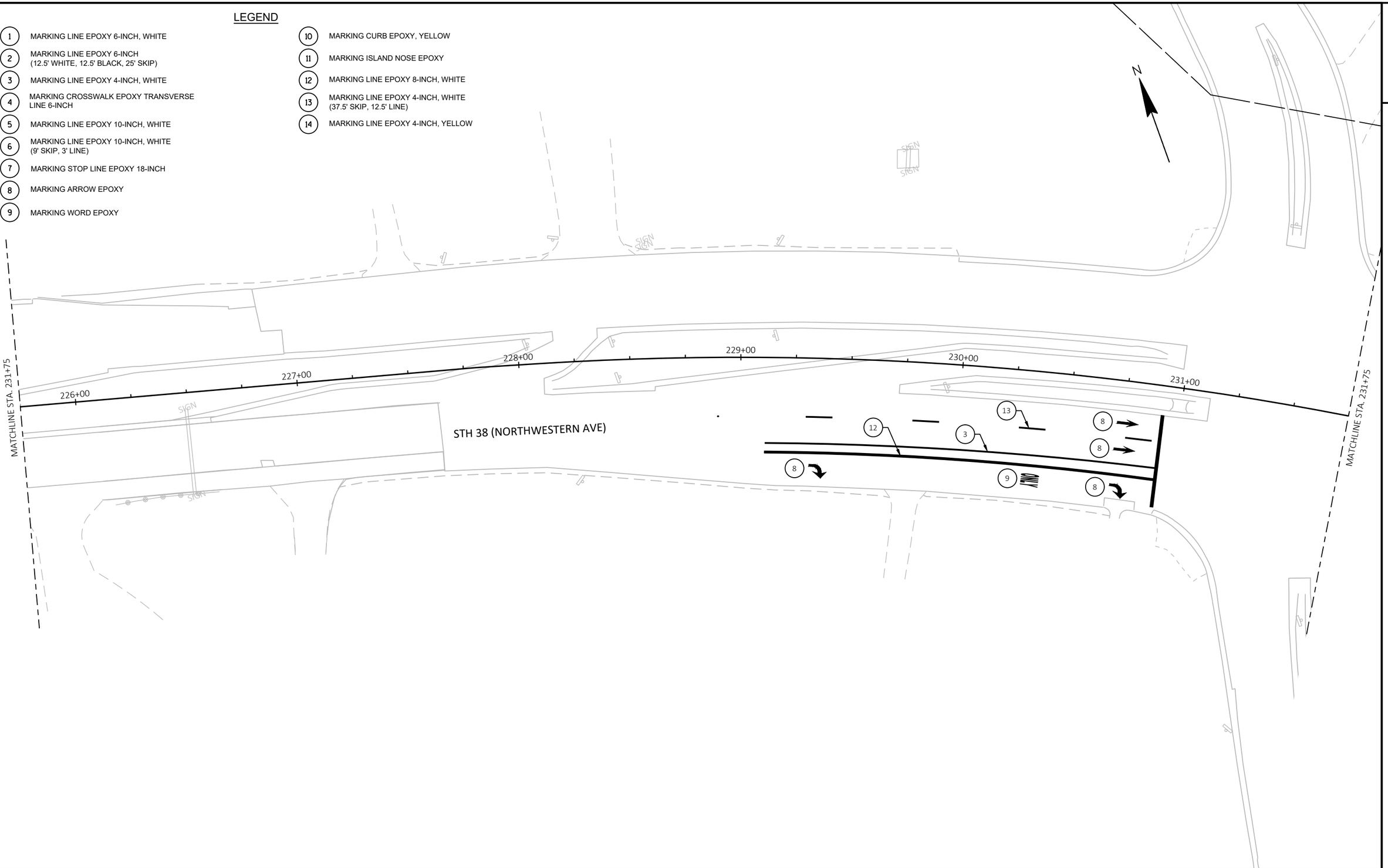
PLOT DATE : 7/31/2023 1:32 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

LEGEND

1. MARKING LINE EPOXY 6-INCH, WHITE
2. MARKING LINE EPOXY 6-INCH (12.5' WHITE, 12.5' BLACK, 25' SKIP)
3. MARKING LINE EPOXY 4-INCH, WHITE
4. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
5. MARKING LINE EPOXY 10-INCH, WHITE
6. MARKING LINE EPOXY 10-INCH, WHITE (9' SKIP, 3' LINE)
7. MARKING STOP LINE EPOXY 18-INCH
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING CURB EPOXY, YELLOW
11. MARKING ISLAND NOSE EPOXY
12. MARKING LINE EPOXY 8-INCH, WHITE
13. MARKING LINE EPOXY 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)
14. MARKING LINE EPOXY 4-INCH, YELLOW

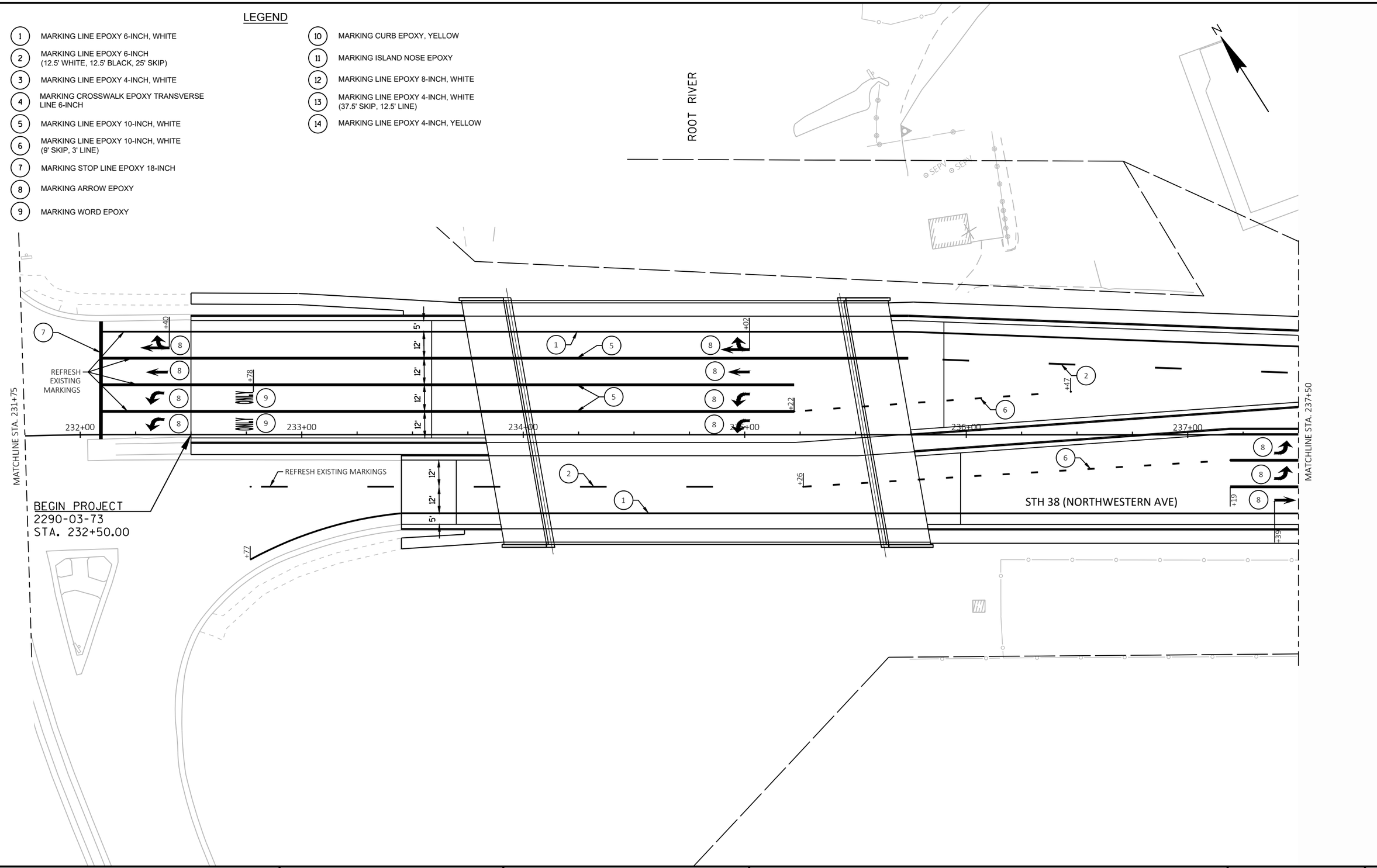


PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PAVEMENT MARKING PLAN	SHEET 101	E

2

LEGEND

1. MARKING LINE EPOXY 6-INCH, WHITE
2. MARKING LINE EPOXY 6-INCH (12.5' WHITE, 12.5' BLACK, 25' SKIP)
3. MARKING LINE EPOXY 4-INCH, WHITE
4. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
5. MARKING LINE EPOXY 10-INCH, WHITE
6. MARKING LINE EPOXY 10-INCH, WHITE (9' SKIP, 3' LINE)
7. MARKING STOP LINE EPOXY 18-INCH
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING CURB EPOXY, YELLOW
11. MARKING ISLAND NOSE EPOXY
12. MARKING LINE EPOXY 8-INCH, WHITE
13. MARKING LINE EPOXY 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)
14. MARKING LINE EPOXY 4-INCH, YELLOW



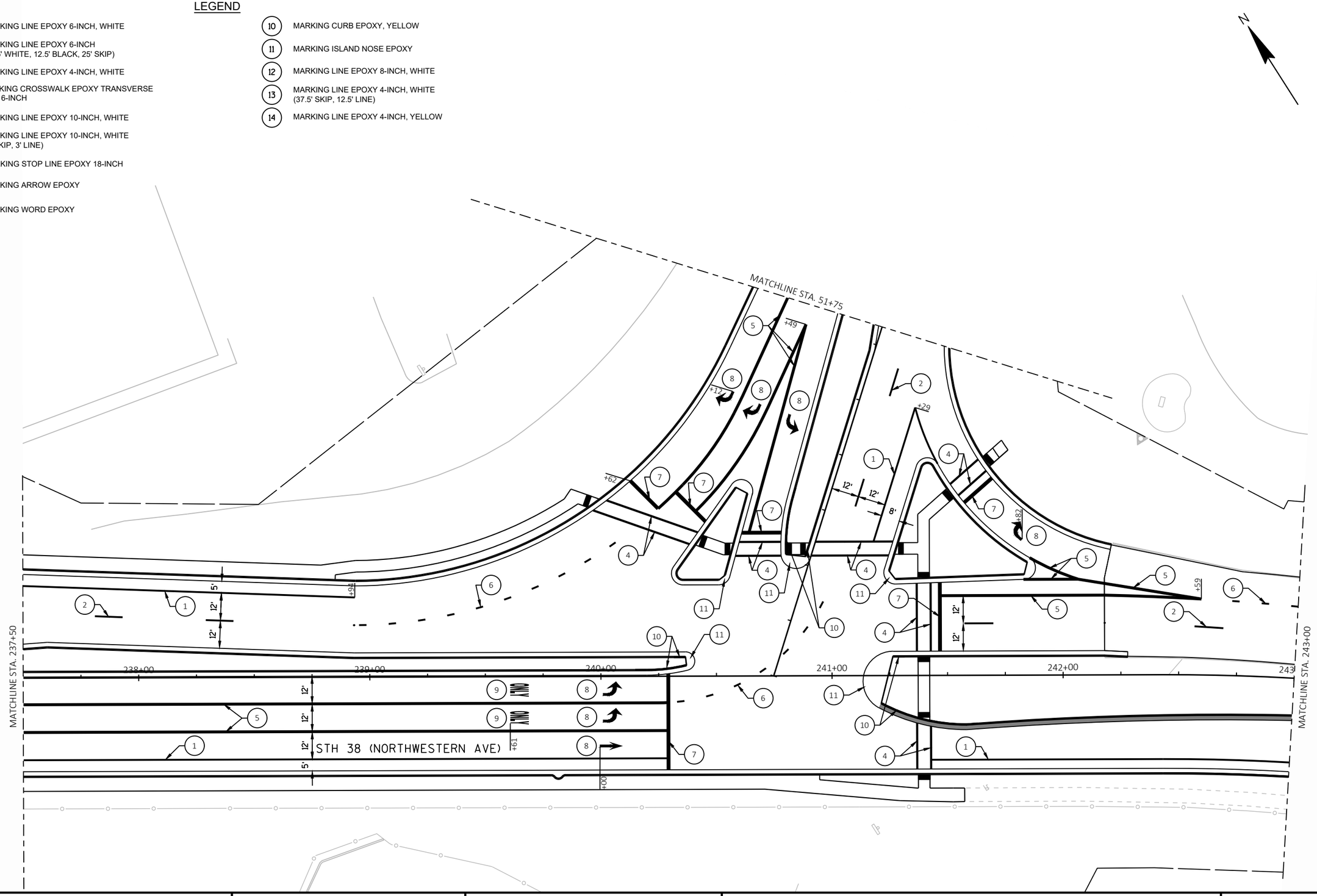
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PAVEMENT MARKING PLAN	SHEET 102	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024504_pm
PLOT DATE : 7/31/2023 1:33 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

1. MARKING LINE EPOXY 6-INCH, WHITE
2. MARKING LINE EPOXY 6-INCH (12.5' WHITE, 12.5' BLACK, 25' SKIP)
3. MARKING LINE EPOXY 4-INCH, WHITE
4. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
5. MARKING LINE EPOXY 10-INCH, WHITE
6. MARKING LINE EPOXY 10-INCH, WHITE (9' SKIP, 3' LINE)
7. MARKING STOP LINE EPOXY 18-INCH
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING CURB EPOXY, YELLOW
11. MARKING ISLAND NOSE EPOXY
12. MARKING LINE EPOXY 8-INCH, WHITE
13. MARKING LINE EPOXY 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)
14. MARKING LINE EPOXY 4-INCH, YELLOW



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PAVEMENT MARKING PLAN	SHEET 103	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024505_pm

PLOT DATE : 7/31/2023 1:33 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

1. MARKING LINE EPOXY 6-INCH, WHITE
2. MARKING LINE EPOXY 6-INCH (12.5' WHITE, 12.5' BLACK, 25' SKIP)
3. MARKING LINE EPOXY 4-INCH, WHITE
4. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
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10. MARKING CURB EPOXY, YELLOW
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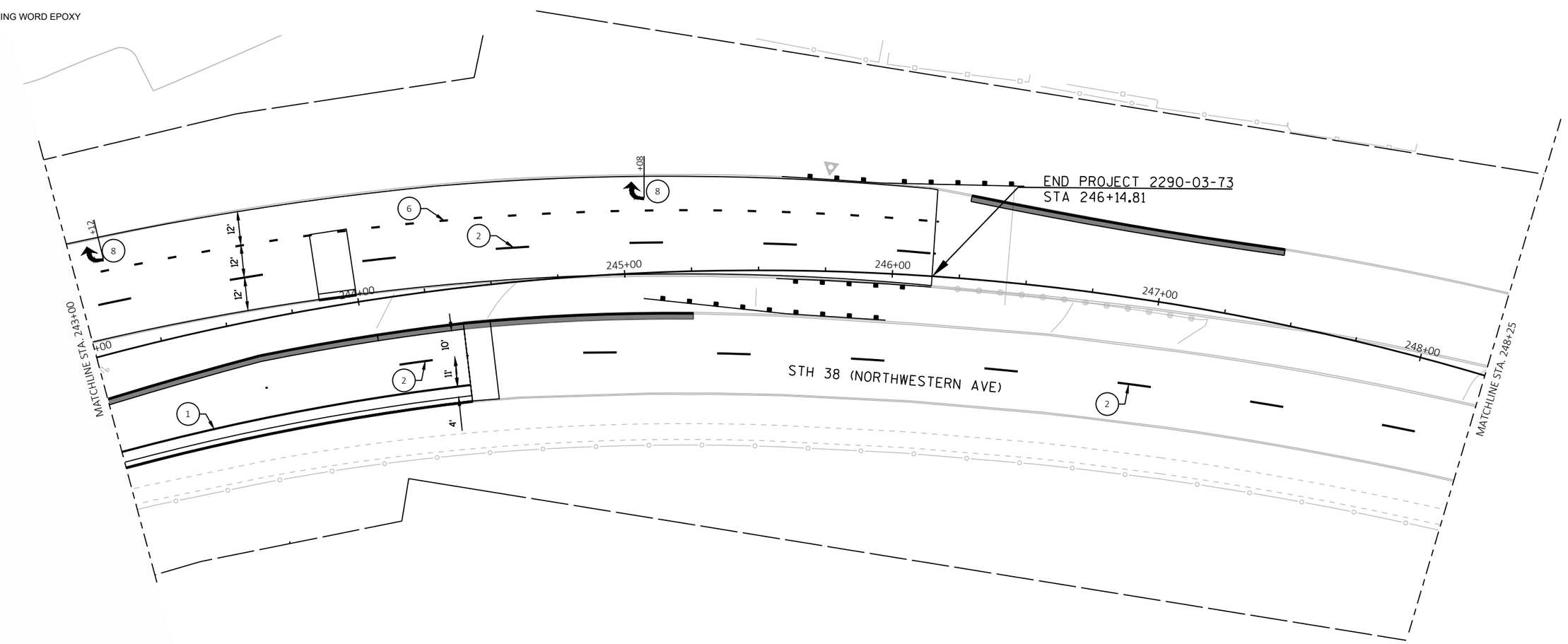

2

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PAVEMENT MARKING PLAN	SHEET 104	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024506_pm

PLOT DATE : 7/31/2023 1:33 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

1. MARKING LINE EPOXY 6-INCH, WHITE
2. MARKING LINE EPOXY 6-INCH (12.5' WHITE, 12.5' BLACK, 25' SKIP)
3. MARKING LINE EPOXY 4-INCH, WHITE
4. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
5. MARKING LINE EPOXY 10-INCH, WHITE
6. MARKING LINE EPOXY 10-INCH, WHITE (9' SKIP, 3' LINE)
7. MARKING STOP LINE EPOXY 18-INCH
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING CURB EPOXY, YELLOW
11. MARKING ISLAND NOSE EPOXY
12. MARKING LINE EPOXY 8-INCH, WHITE
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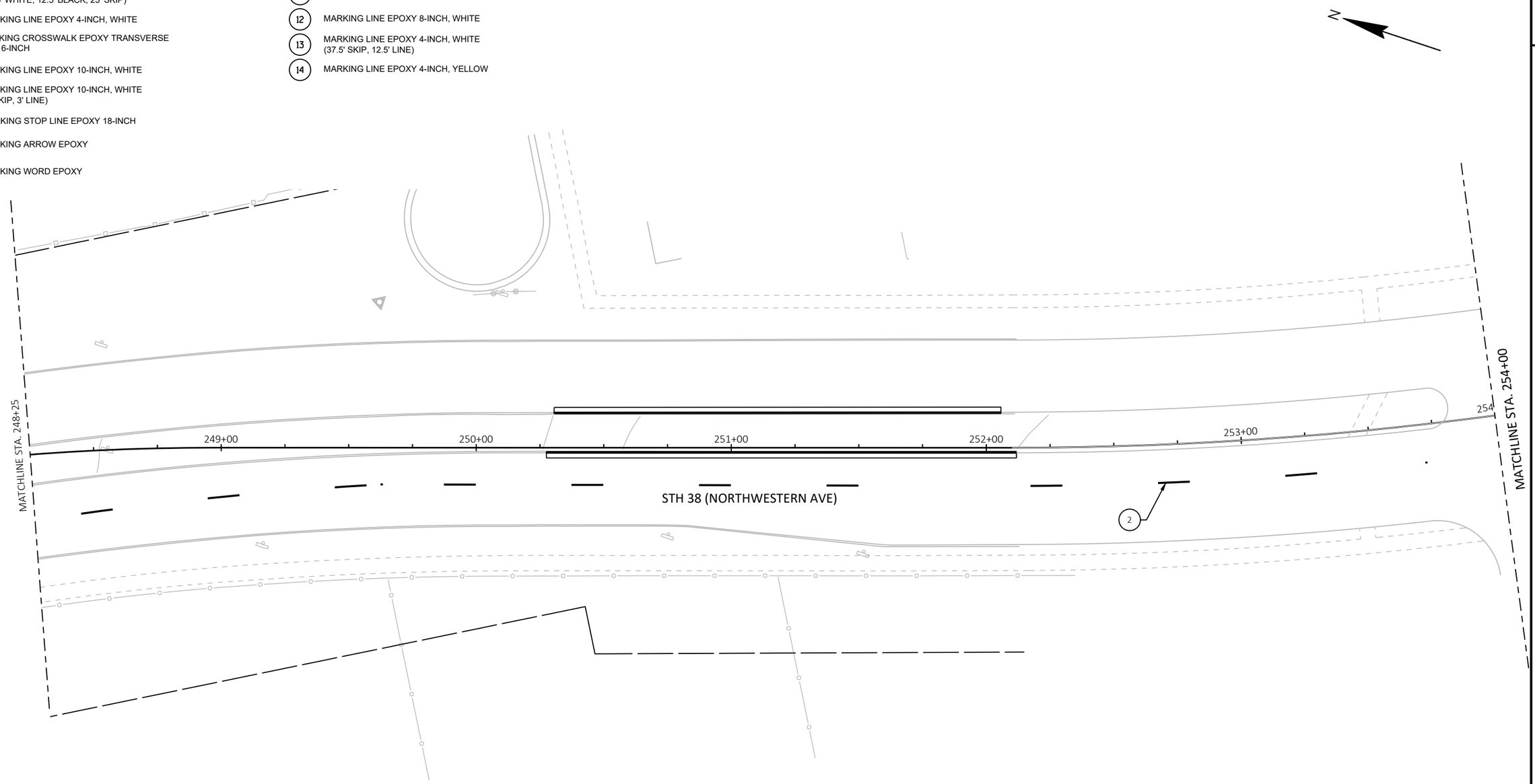

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PAVEMENT MARKING PLAN	SHEET 105	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024507_pm

PLOT DATE : 7/31/2023 1:33 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

LEGEND

1. MARKING LINE EPOXY 6-INCH, WHITE
2. MARKING LINE EPOXY 6-INCH (12.5' WHITE, 12.5' BLACK, 25' SKIP)
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4. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
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6. MARKING LINE EPOXY 10-INCH, WHITE (9' SKIP, 3' LINE)
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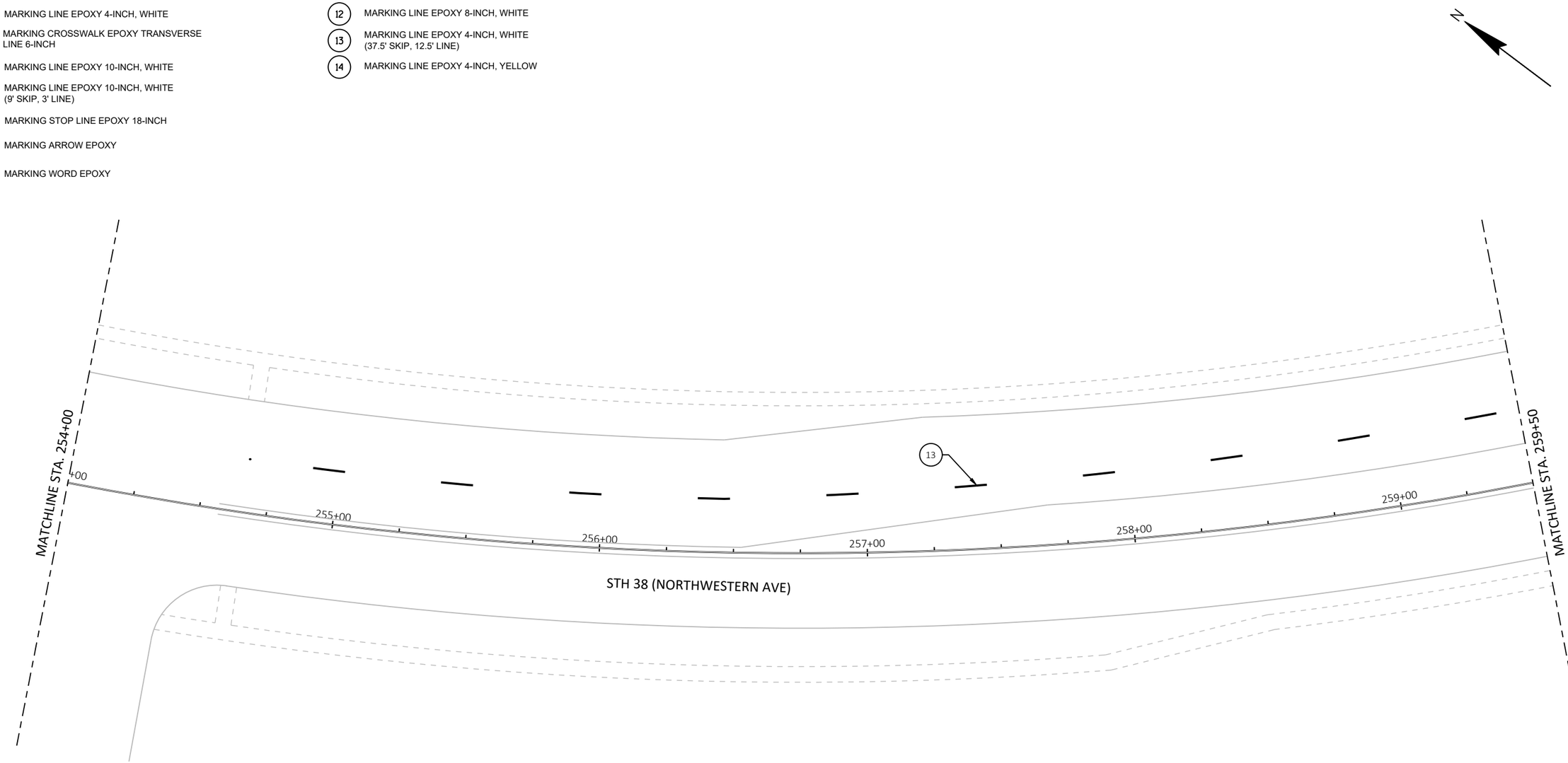
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING CURB EPOXY, YELLOW
11. MARKING ISLAND NOSE EPOXY
12. MARKING LINE EPOXY 8-INCH, WHITE
13. MARKING LINE EPOXY 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)
14. MARKING LINE EPOXY 4-INCH, YELLOW



2

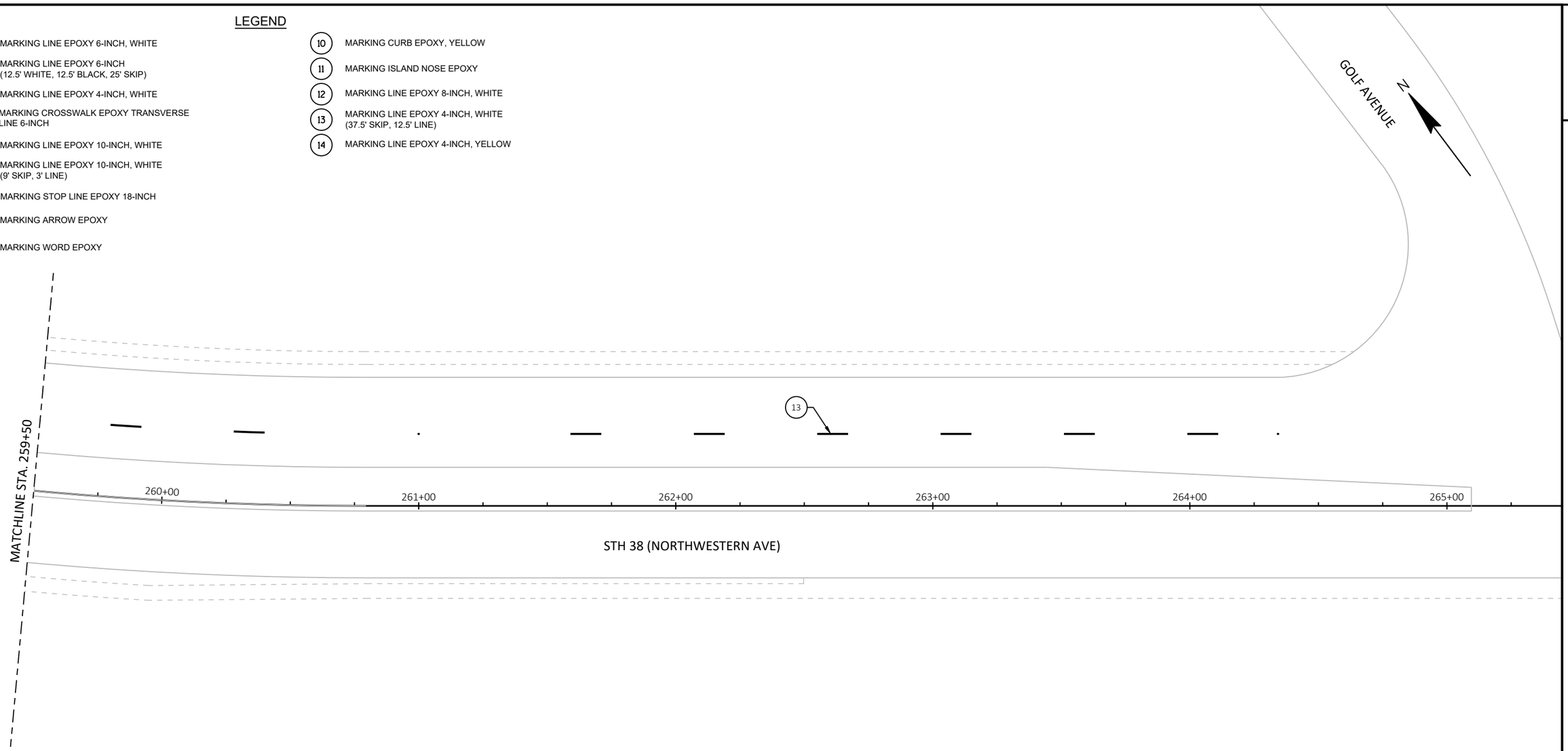
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PAVEMENT MARKING PLAN	SHEET 106	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024508_pm
PLOT DATE : 7/31/2023 1:33 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : ##########

2

LEGEND

1. MARKING LINE EPOXY 6-INCH, WHITE
2. MARKING LINE EPOXY 6-INCH (12.5' WHITE, 12.5' BLACK, 25' SKIP)
3. MARKING LINE EPOXY 4-INCH, WHITE
4. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
5. MARKING LINE EPOXY 10-INCH, WHITE
6. MARKING LINE EPOXY 10-INCH, WHITE (9' SKIP, 3' LINE)
7. MARKING STOP LINE EPOXY 18-INCH
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING CURB EPOXY, YELLOW
11. MARKING ISLAND NOSE EPOXY
12. MARKING LINE EPOXY 8-INCH, WHITE
13. MARKING LINE EPOXY 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)
14. MARKING LINE EPOXY 4-INCH, YELLOW



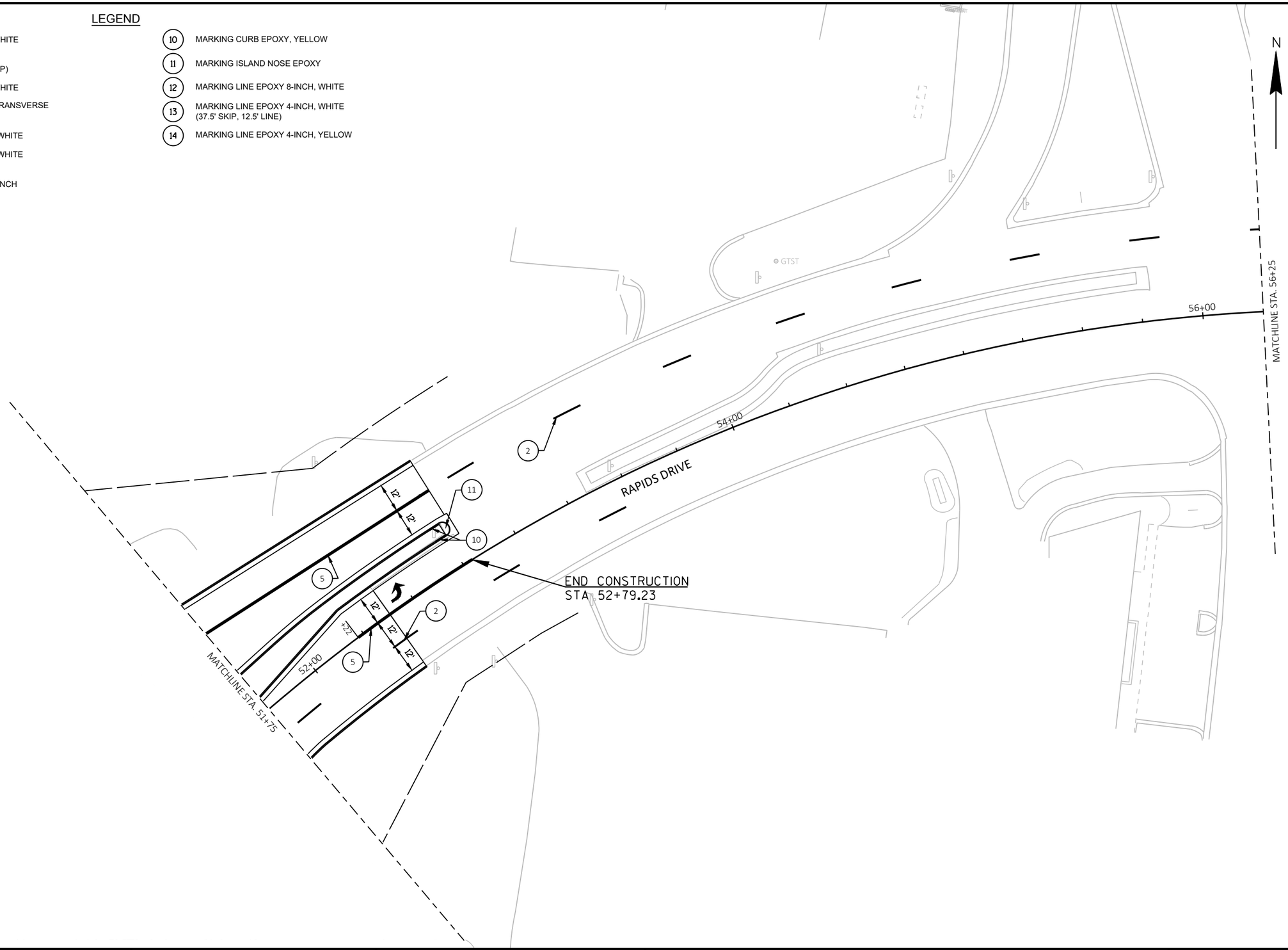
2

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PAVEMENT MARKING PLAN	SHEET 107	E

2

LEGEND

1. MARKING LINE EPOXY 6-INCH, WHITE
2. MARKING LINE EPOXY 6-INCH (12.5' WHITE, 12.5' BLACK, 25' SKIP)
3. MARKING LINE EPOXY 4-INCH, WHITE
4. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
5. MARKING LINE EPOXY 10-INCH, WHITE
6. MARKING LINE EPOXY 10-INCH, WHITE (9' SKIP, 3' LINE)
7. MARKING STOP LINE EPOXY 18-INCH
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING CURB EPOXY, YELLOW
11. MARKING ISLAND NOSE EPOXY
12. MARKING LINE EPOXY 8-INCH, WHITE
13. MARKING LINE EPOXY 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)
14. MARKING LINE EPOXY 4-INCH, YELLOW



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PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PAVEMENT MARKING PLAN	SHEET 108	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024510_pm

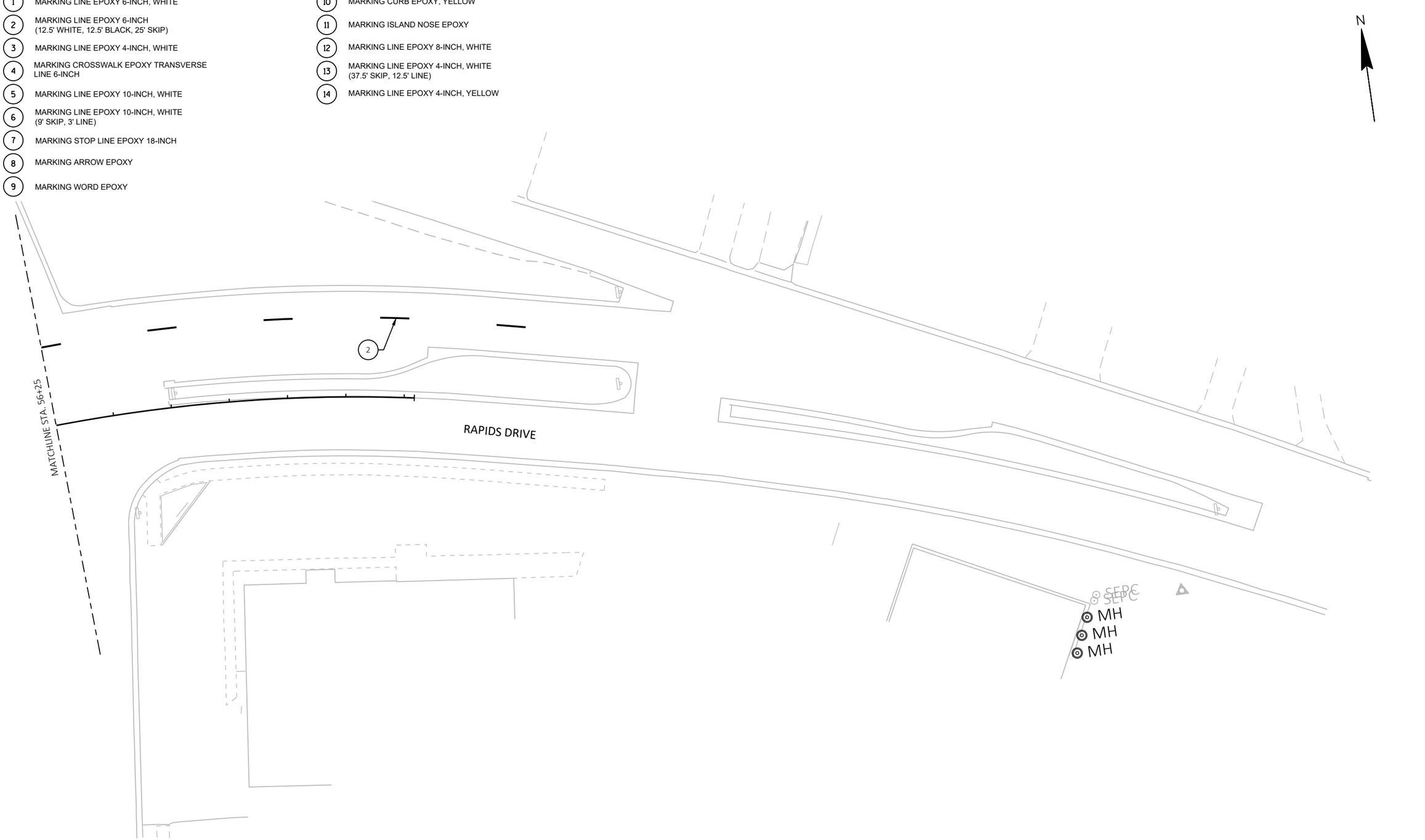
PLOT DATE : 7/31/2023 1:33 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

LEGEND

1. MARKING LINE EPOXY 6-INCH, WHITE
2. MARKING LINE EPOXY 6-INCH (12.5' WHITE, 12.5' BLACK, 25' SKIP)
3. MARKING LINE EPOXY 4-INCH, WHITE
4. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
5. MARKING LINE EPOXY 10-INCH, WHITE
6. MARKING LINE EPOXY 10-INCH, WHITE (9' SKIP, 3' LINE)
7. MARKING STOP LINE EPOXY 18-INCH
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING CURB EPOXY, YELLOW
11. MARKING ISLAND NOSE EPOXY
12. MARKING LINE EPOXY 8-INCH, WHITE
13. MARKING LINE EPOXY 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)
14. MARKING LINE EPOXY 4-INCH, YELLOW



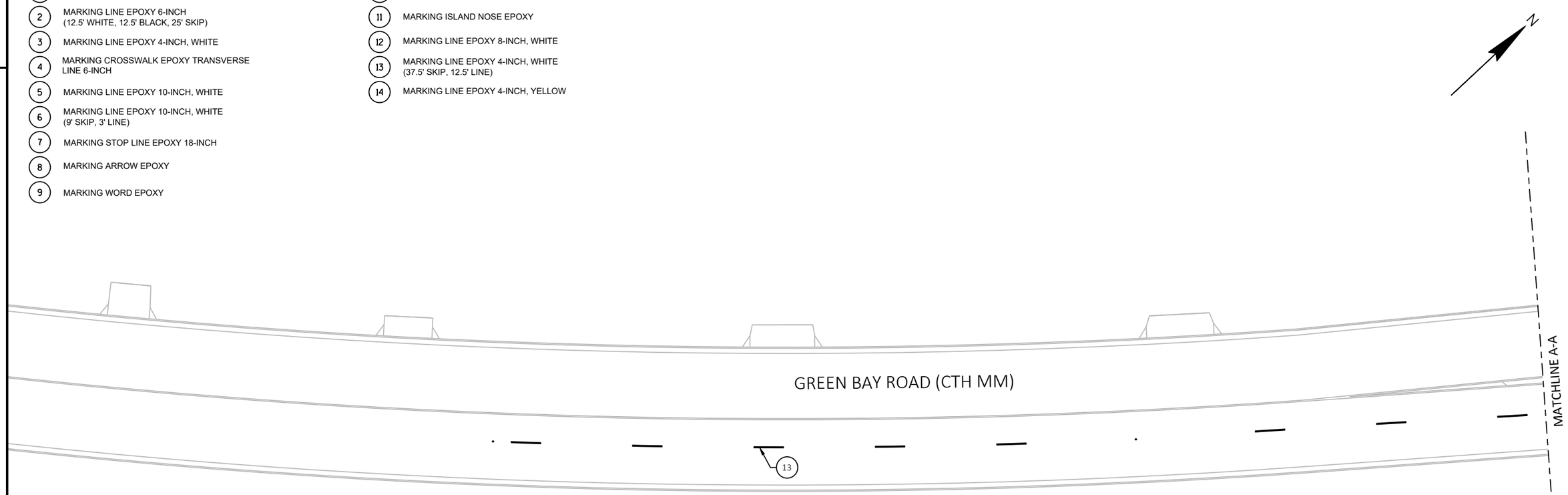
2

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PAVEMENT MARKING PLAN	SHEET 109	E

2

LEGEND

1. MARKING LINE EPOXY 6-INCH, WHITE
2. MARKING LINE EPOXY 6-INCH (12.5' WHITE, 12.5' BLACK, 25' SKIP)
3. MARKING LINE EPOXY 4-INCH, WHITE
4. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
5. MARKING LINE EPOXY 10-INCH, WHITE
6. MARKING LINE EPOXY 10-INCH, WHITE (9' SKIP, 3' LINE)
7. MARKING STOP LINE EPOXY 18-INCH
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING CURB EPOXY, YELLOW
11. MARKING ISLAND NOSE EPOXY
12. MARKING LINE EPOXY 8-INCH, WHITE
13. MARKING LINE EPOXY 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)
14. MARKING LINE EPOXY 4-INCH, YELLOW



2

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PAVEMENT MARKING PLAN	SHEET 110	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024512_pm

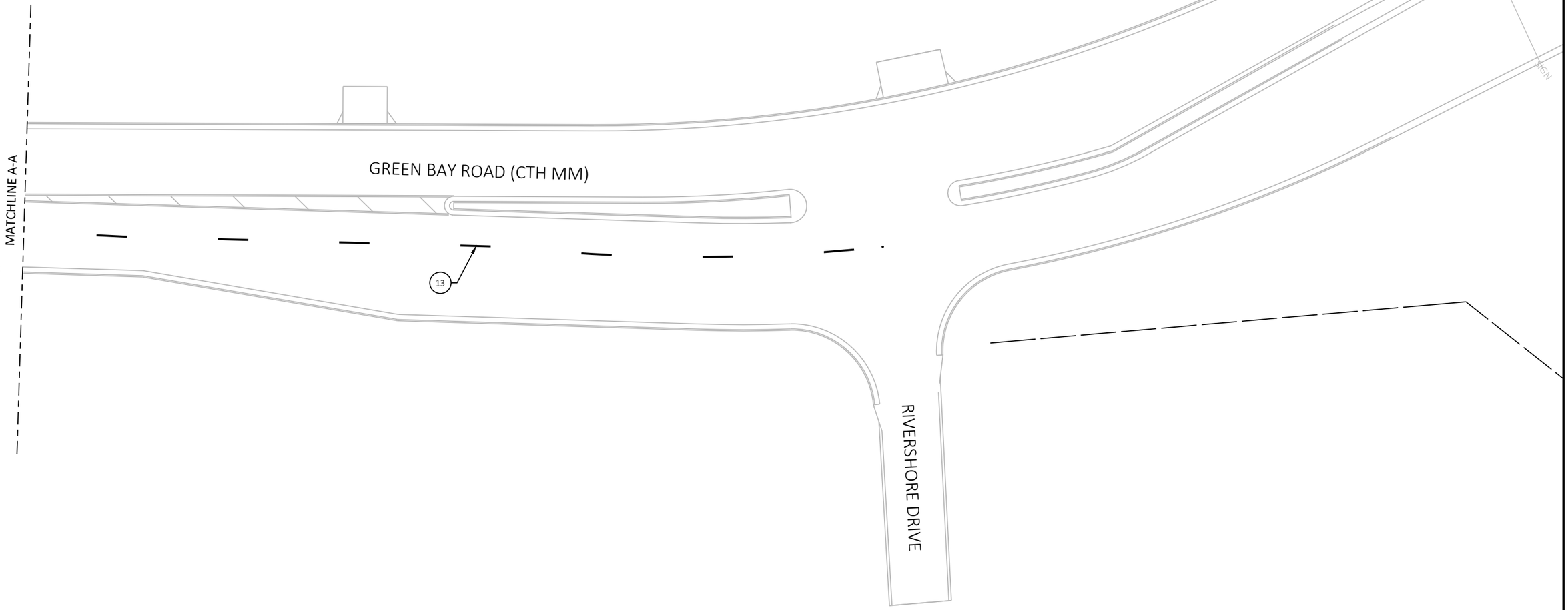
PLOT DATE : 7/31/2023 1:33 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

LEGEND

1. MARKING LINE EPOXY 6-INCH, WHITE
2. MARKING LINE EPOXY 6-INCH (12.5' WHITE, 12.5' BLACK, 25' SKIP)
3. MARKING LINE EPOXY 4-INCH, WHITE
4. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
5. MARKING LINE EPOXY 10-INCH, WHITE
6. MARKING LINE EPOXY 10-INCH, WHITE (9' SKIP, 3' LINE)
7. MARKING STOP LINE EPOXY 18-INCH
8. MARKING ARROW EPOXY
9. MARKING WORD EPOXY
10. MARKING CURB EPOXY, YELLOW
11. MARKING ISLAND NOSE EPOXY
12. MARKING LINE EPOXY 8-INCH, WHITE
13. MARKING LINE EPOXY 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)
14. MARKING LINE EPOXY 4-INCH, YELLOW



2

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PAVEMENT MARKING PLAN	SHEET 111	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024513_pm

PLOT DATE : 7/31/2023 1:33 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

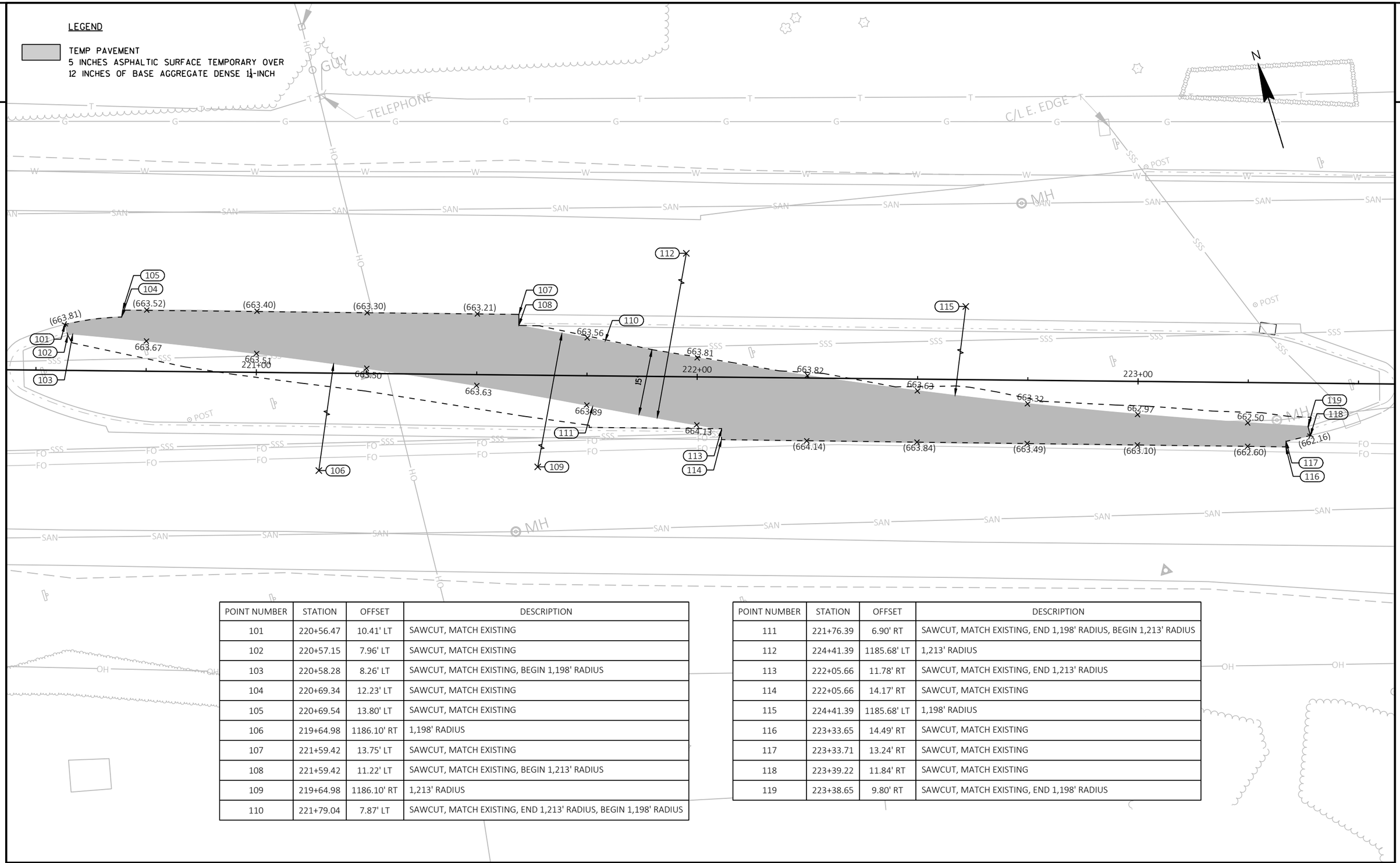
2

TRAFFIC CONTROL NOTES

1. MAINTAIN ONE 11-FOOT MINIMUM LANE AT ALL TIMES.
2. THE CONTRACTOR SHALL COVER ANY SIGN CONFLICTING WITH THE TRAFFIC CONTROL IN OPERATION AS NEEDED OR AS DIRECTED BY THE ENGINEER. COVERING OF SIGNS IS INCLUDED IN THE "TRAFFIC CONTROL COVERING SIGNS TYPE I AND TYPE II" BID ITEM.
3. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY BARRICADES, SIGNS, DIRECTIONAL ARROWS, LIGHTS, TEMPORARY MARKINGS, FLAGMEN, AND SAFETY DEVICES AS CALLED FOR ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
4. DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON CONTRACTOR'S METHOD OR SEQUENCES OF OPERATION.
5. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
6. ALL SIGNS ARE 48" X 48" EXCEPT OTHERWISE NOTED.
7. ANY "STOP" SIGNS THAT ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.
8. THE EXACT LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD LOCATIONS AS APPROVED BY THE ENGINEER IN THE FIELD.
9. BOTH STEADY BURN LIGHTS AND FLASHING LIGHTS SHALL BE ONE WAY WITH THE LIGHT SOURCE SHOWING TOWARDS ADJACENT APPROACHING TRAFFIC.
10. MAINTAIN ACCESS TO DRIVEWAYS DURING CONSTRUCTION. FOR PROPERTIES WITH MULTIPLE DRIVEWAYS, ONLY ONE DRIVEWAY CAN BE CLOSED/WORKED ON AT ANY TIME.

LEGEND

TEMP PAVEMENT
5 INCHES ASPHALTIC SURFACE TEMPORARY OVER
12 INCHES OF BASE AGGREGATE DENSE 1¼-INCH



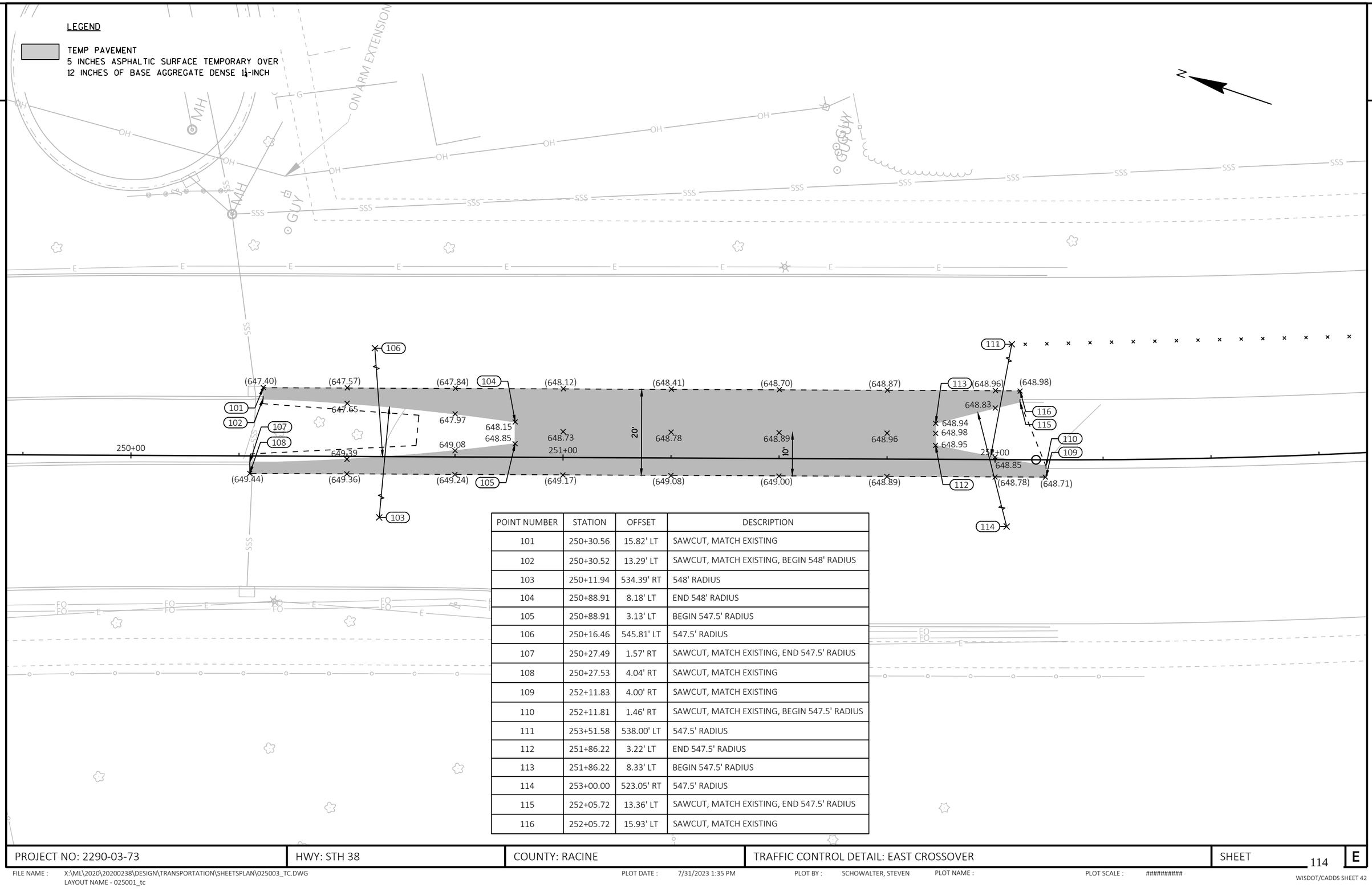
POINT NUMBER	STATION	OFFSET	DESCRIPTION
101	220+56.47	10.41' LT	SAWCUT, MATCH EXISTING
102	220+57.15	7.96' LT	SAWCUT, MATCH EXISTING
103	220+58.28	8.26' LT	SAWCUT, MATCH EXISTING, BEGIN 1,198' RADIUS
104	220+69.34	12.23' LT	SAWCUT, MATCH EXISTING
105	220+69.54	13.80' LT	SAWCUT, MATCH EXISTING
106	219+64.98	1186.10' RT	1,198' RADIUS
107	221+59.42	13.75' LT	SAWCUT, MATCH EXISTING
108	221+59.42	11.22' LT	SAWCUT, MATCH EXISTING, BEGIN 1,213' RADIUS
109	219+64.98	1186.10' RT	1,213' RADIUS
110	221+79.04	7.87' LT	SAWCUT, MATCH EXISTING, END 1,213' RADIUS, BEGIN 1,198' RADIUS

POINT NUMBER	STATION	OFFSET	DESCRIPTION
111	221+76.39	6.90' RT	SAWCUT, MATCH EXISTING, END 1,198' RADIUS, BEGIN 1,213' RADIUS
112	224+41.39	1185.68' LT	1,213' RADIUS
113	222+05.66	11.78' RT	SAWCUT, MATCH EXISTING, END 1,213' RADIUS
114	222+05.66	14.17' RT	SAWCUT, MATCH EXISTING
115	224+41.39	1185.68' LT	1,198' RADIUS
116	223+33.65	14.49' RT	SAWCUT, MATCH EXISTING
117	223+33.71	13.24' RT	SAWCUT, MATCH EXISTING
118	223+39.22	11.84' RT	SAWCUT, MATCH EXISTING
119	223+38.65	9.80' RT	SAWCUT, MATCH EXISTING, END 1,198' RADIUS

2

LEGEND

TEMP PAVEMENT
5 INCHES ASPHALTIC SURFACE TEMPORARY OVER
12 INCHES OF BASE AGGREGATE DENSE 1¼-INCH



POINT NUMBER	STATION	OFFSET	DESCRIPTION
101	250+30.56	15.82' LT	SAWCUT, MATCH EXISTING
102	250+30.52	13.29' LT	SAWCUT, MATCH EXISTING, BEGIN 548' RADIUS
103	250+11.94	534.39' RT	548' RADIUS
104	250+88.91	8.18' LT	END 548' RADIUS
105	250+88.91	3.13' LT	BEGIN 547.5' RADIUS
106	250+16.46	545.81' LT	547.5' RADIUS
107	250+27.49	1.57' RT	SAWCUT, MATCH EXISTING, END 547.5' RADIUS
108	250+27.53	4.04' RT	SAWCUT, MATCH EXISTING
109	252+11.83	4.00' RT	SAWCUT, MATCH EXISTING
110	252+11.81	1.46' RT	SAWCUT, MATCH EXISTING, BEGIN 547.5' RADIUS
111	253+51.58	538.00' LT	547.5' RADIUS
112	251+86.22	3.22' LT	END 547.5' RADIUS
113	251+86.22	8.33' LT	BEGIN 547.5' RADIUS
114	253+00.00	523.05' RT	547.5' RADIUS
115	252+05.72	13.36' LT	SAWCUT, MATCH EXISTING, END 547.5' RADIUS
116	252+05.72	15.93' LT	SAWCUT, MATCH EXISTING

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL DETAIL: EAST CROSSOVER	SHEET 114	E

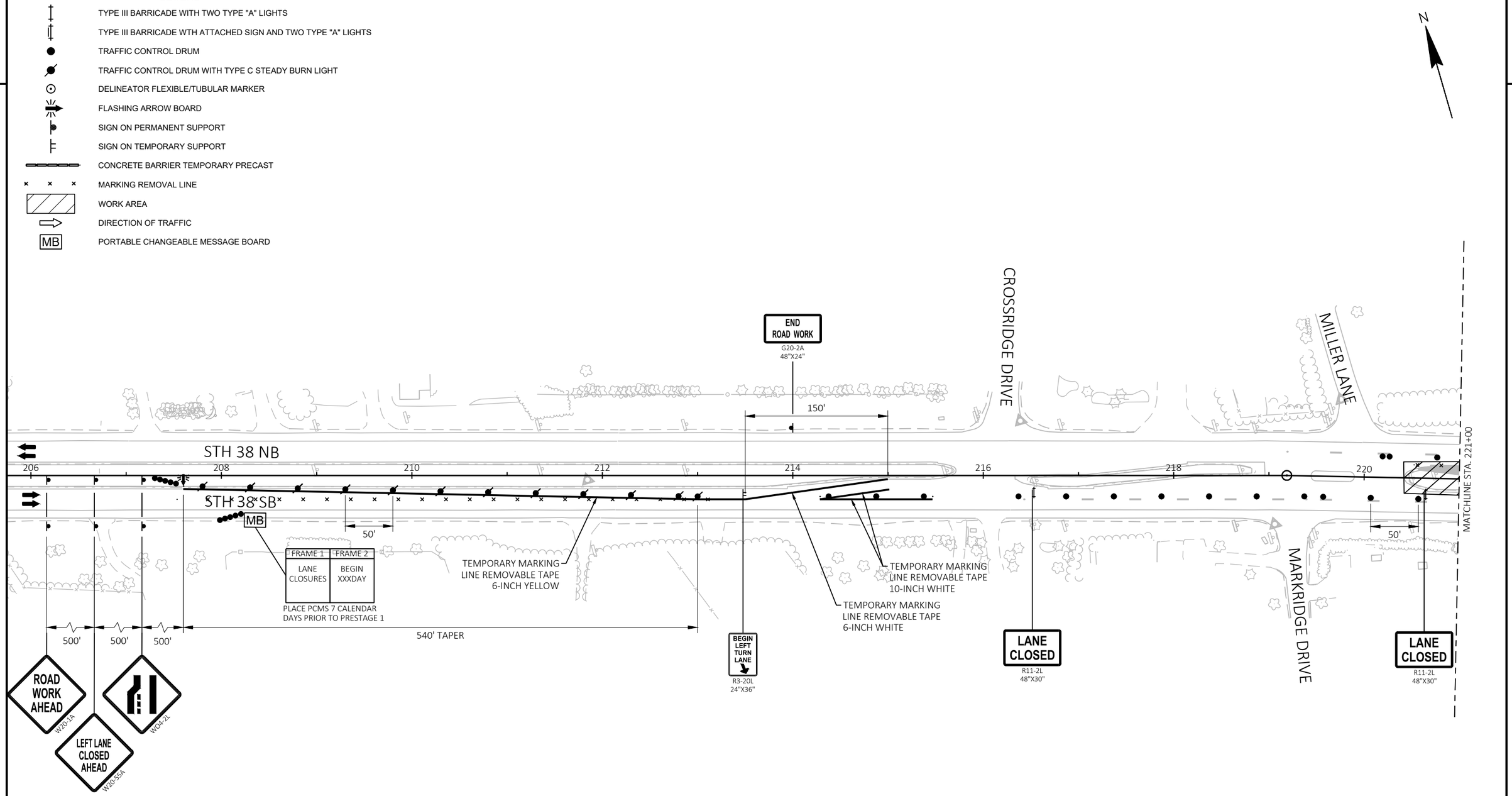
FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\025003_TC.DWG
LAYOUT NAME - 025001_tc
PLOT DATE : 7/31/2023 1:35 PM
PLOT BY : SCHOWALTER, STEVEN
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

2

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD



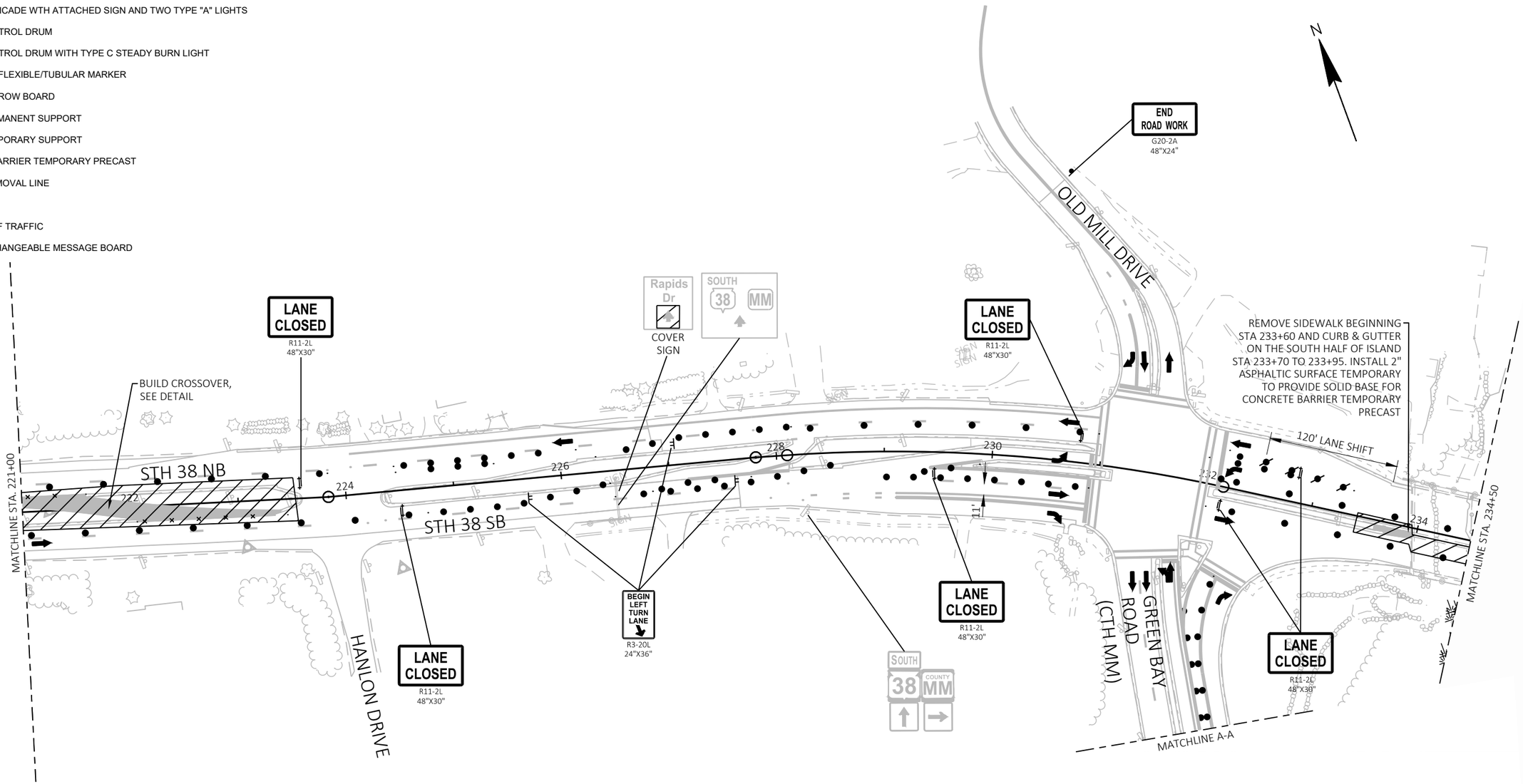
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - PRE-STAGE 1	SHEET 115	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026001_PRE-S1.DWG
LAYOUT NAME - 026001_s1
PLOT DATE : 7/31/2023 1:35 PM
PLOT BY : SCHOWALTER, STEVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD



SEE DETOUR SHEET FOR ADDITIONAL SIGNING

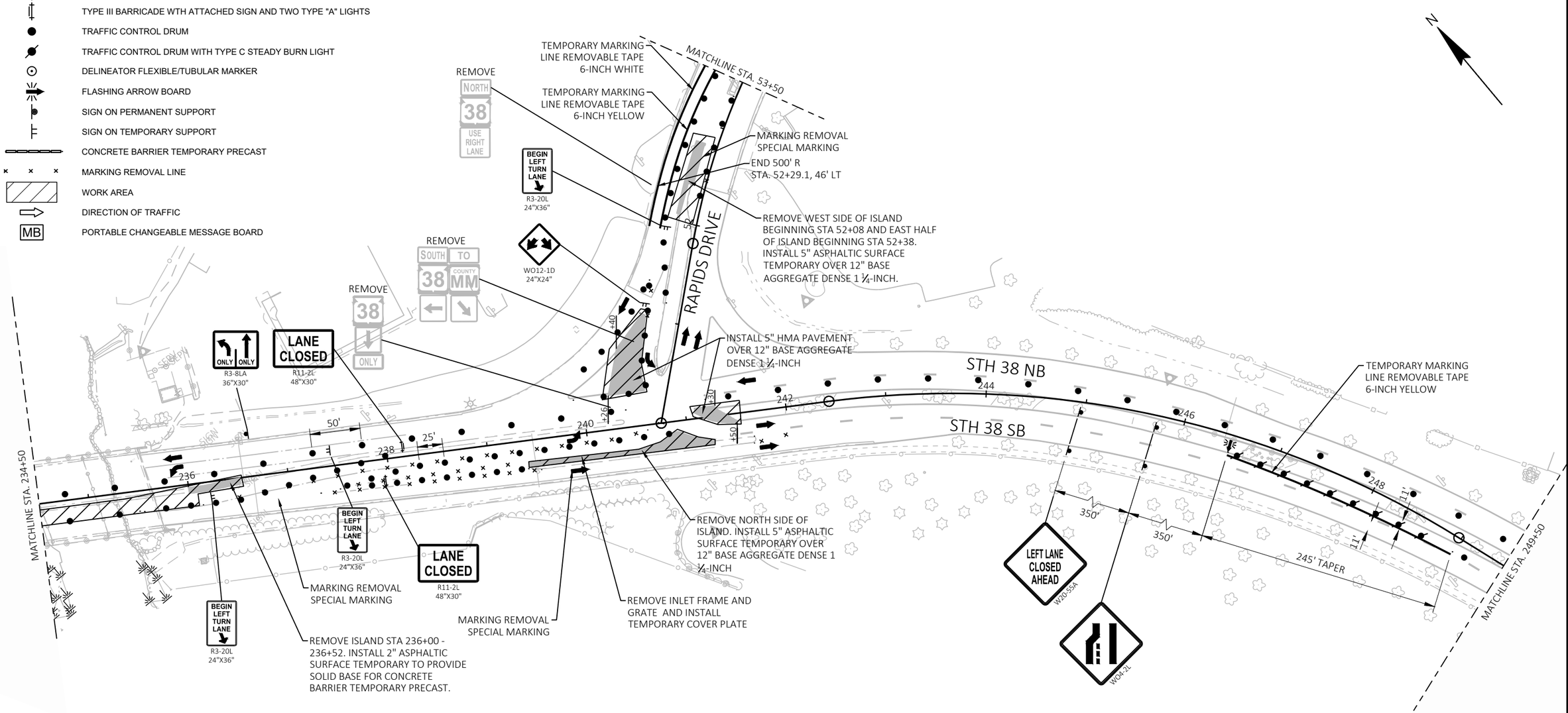
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - PRE-STAGE 1	SHEET 116	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026001_PRE-S1.DWG
LAYOUT NAME - 026002_s1
PLOT DATE : 7/31/2023 1:35 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

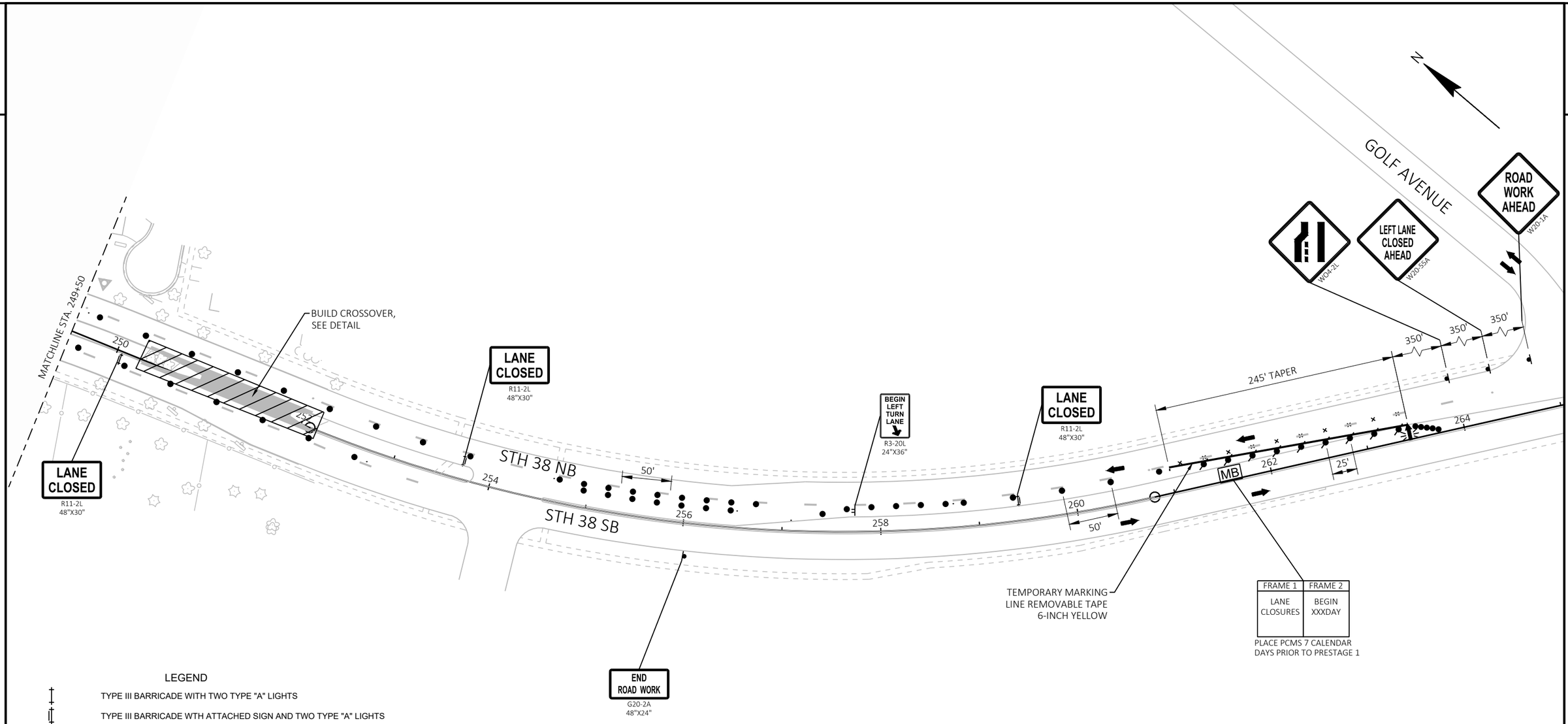
- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - PRE-STAGE 1	SHEET 117	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026001_PRE-S1.DWG
LAYOUT NAME - 026003_s1
PLOT DATE : 7/31/2023 1:35 PM
PLOT BY : SCHOWALTER, STEVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

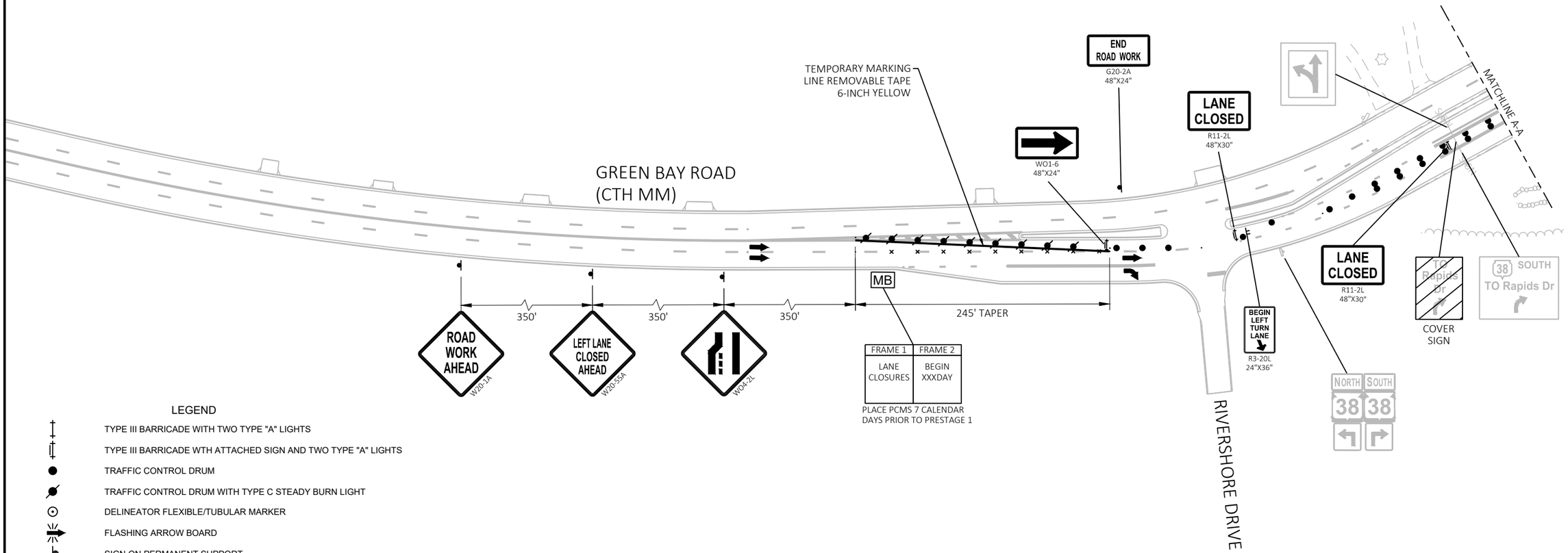


LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - PRE-STAGE 1	SHEET 118	E

2



LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - PRE-STAGE 1	SHEET 119	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026001_PRE-S1.DWG
LAYOUT NAME - 026005_s1
PLOT DATE : 7/31/2023 1:35 PM
PLOT BY : SCHOWALTER, STEVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2

N GREEN BAY ROAD

ROAD WORK AHEAD
W20-1A

SOUTH TO NORTH
38 COUNTY MM 38

FRAME 1	FRAME 2
LANE CLOSURES	BEGIN XXXDAY

PLACE PCMS 7 CALENDAR DAYS PRIOR TO PRESTAGE 1

TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH WHITE

WO1-6
48"X24"

RAPIDS COURT

REMOVE
NORTH 38 USE RIGHT LANE

LANE CLOSED
R11-2L
48"X30"

25'

350'

WO4-2R

350'

RIGHT LANE CLOSED AHEAD
W20-5A

350'

ROAD WORK AHEAD
W20-1A

GOLF AVENUE

245' TAPER

56

MB

RAPIDS DRIVE

END ROAD WORK
G20-2A
48"X24"

54

MATCHLINE STA. 53+50

TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH YELLOW

BEGIN 500' R
STA. 53+84.8, 37.5' LT

TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH WHITE

FLOYD DRIVE

GOLF AVENUE

N

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
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- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - PRE-STAGE 1	SHEET 120	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026001_PRE-S1.DWG
LAYOUT NAME - 026006_s1

PLOT DATE : 7/31/2023 1:35 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

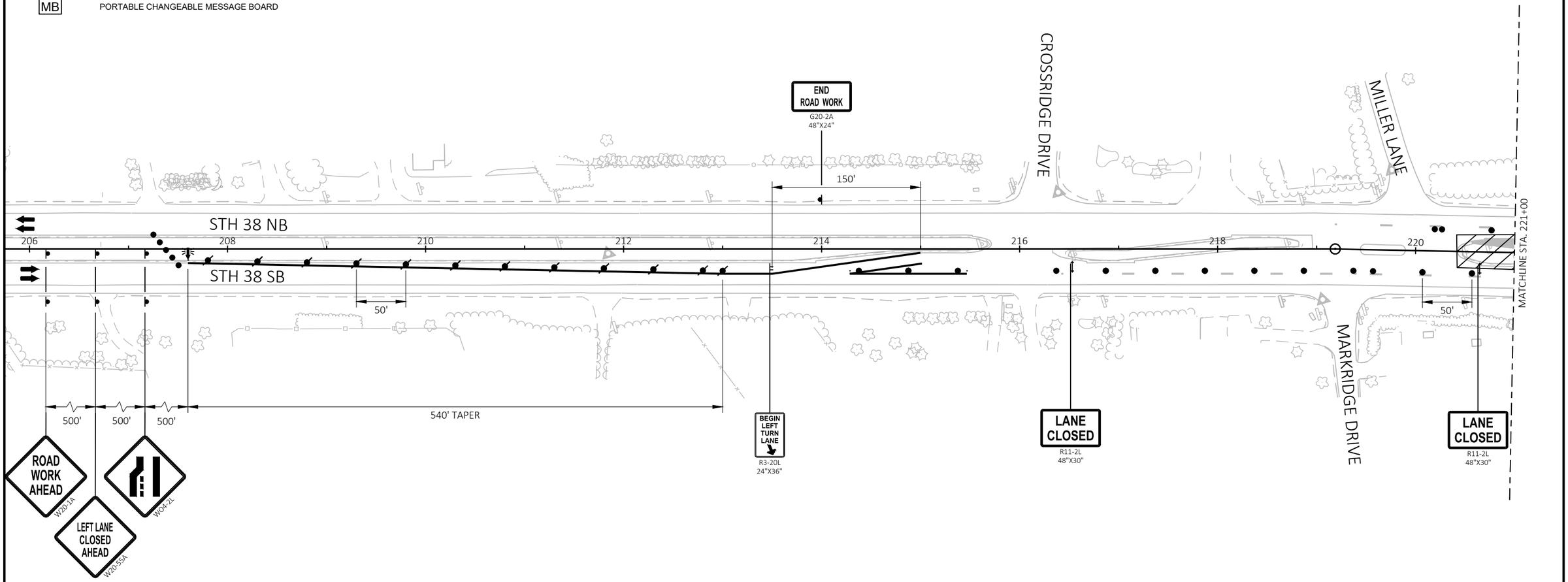
2

2

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

N



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - PRE-STAGE 2	SHEET 121	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026001_PRE-S2.DWG
LAYOUT NAME - 026001_s1

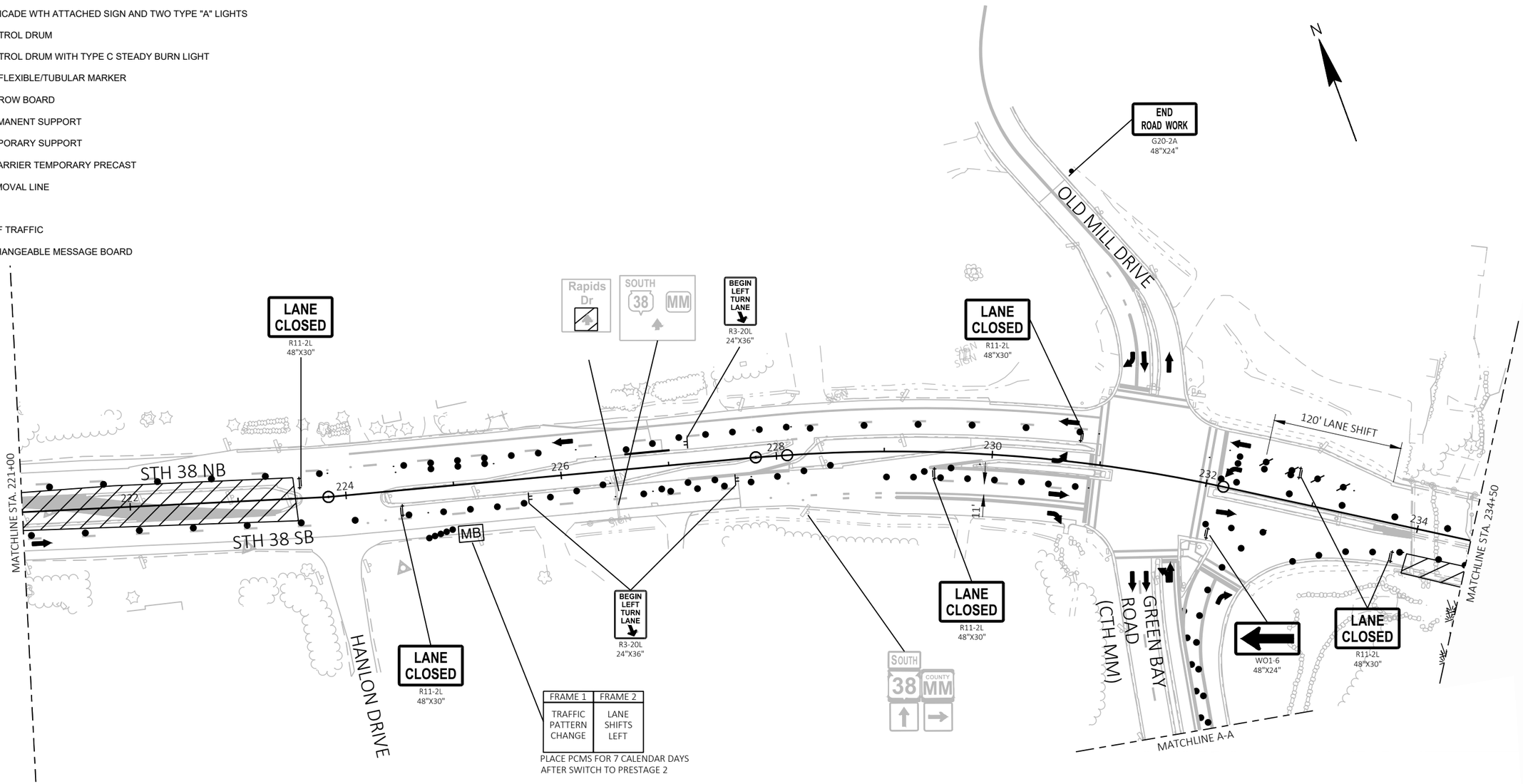
PLOT DATE : 7/31/2023 1:36 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD



SEE DETOUR SHEET FOR ADDITIONAL SIGNING

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - PRE-STAGE 2	SHEET 122	E

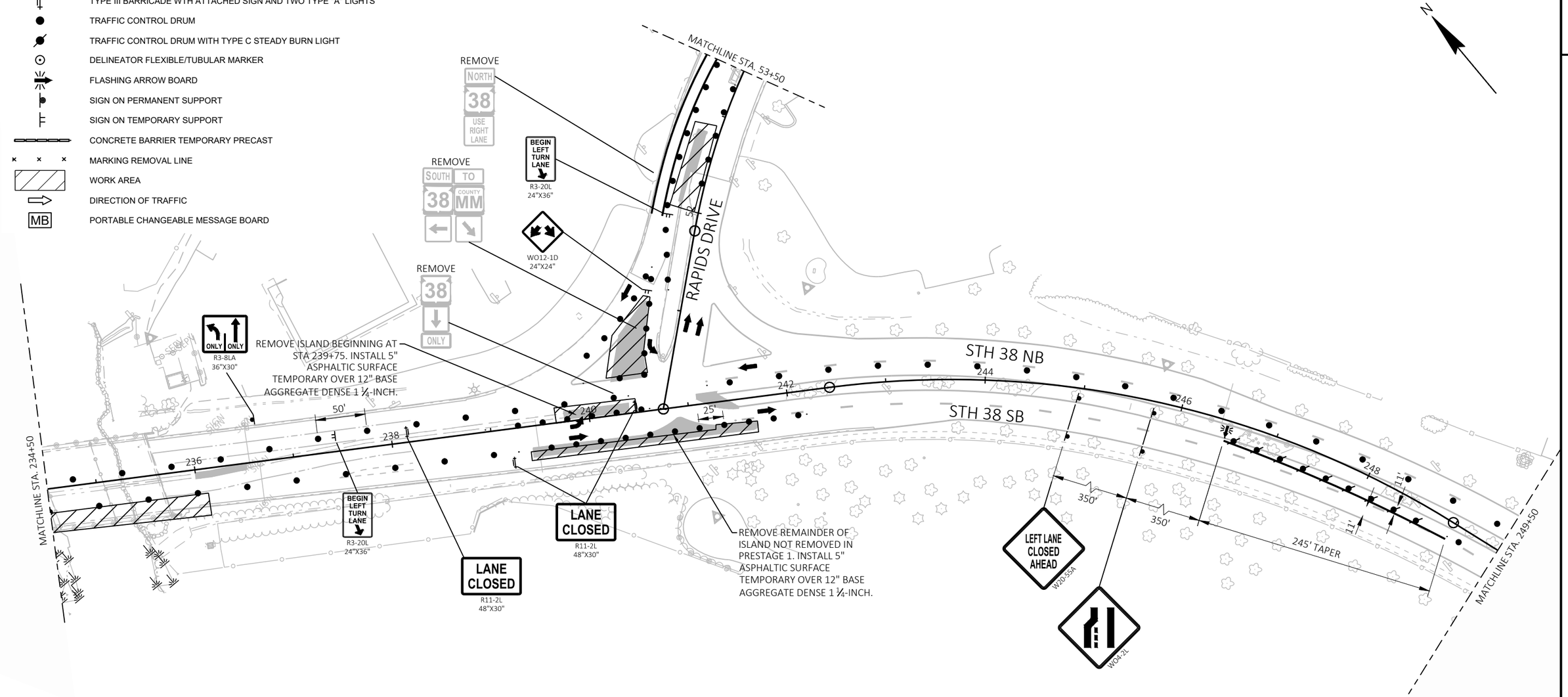
FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026001_PRE-S2.DWG
LAYOUT NAME - 026002_s1

PLOT DATE : 7/31/2023 1:36 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

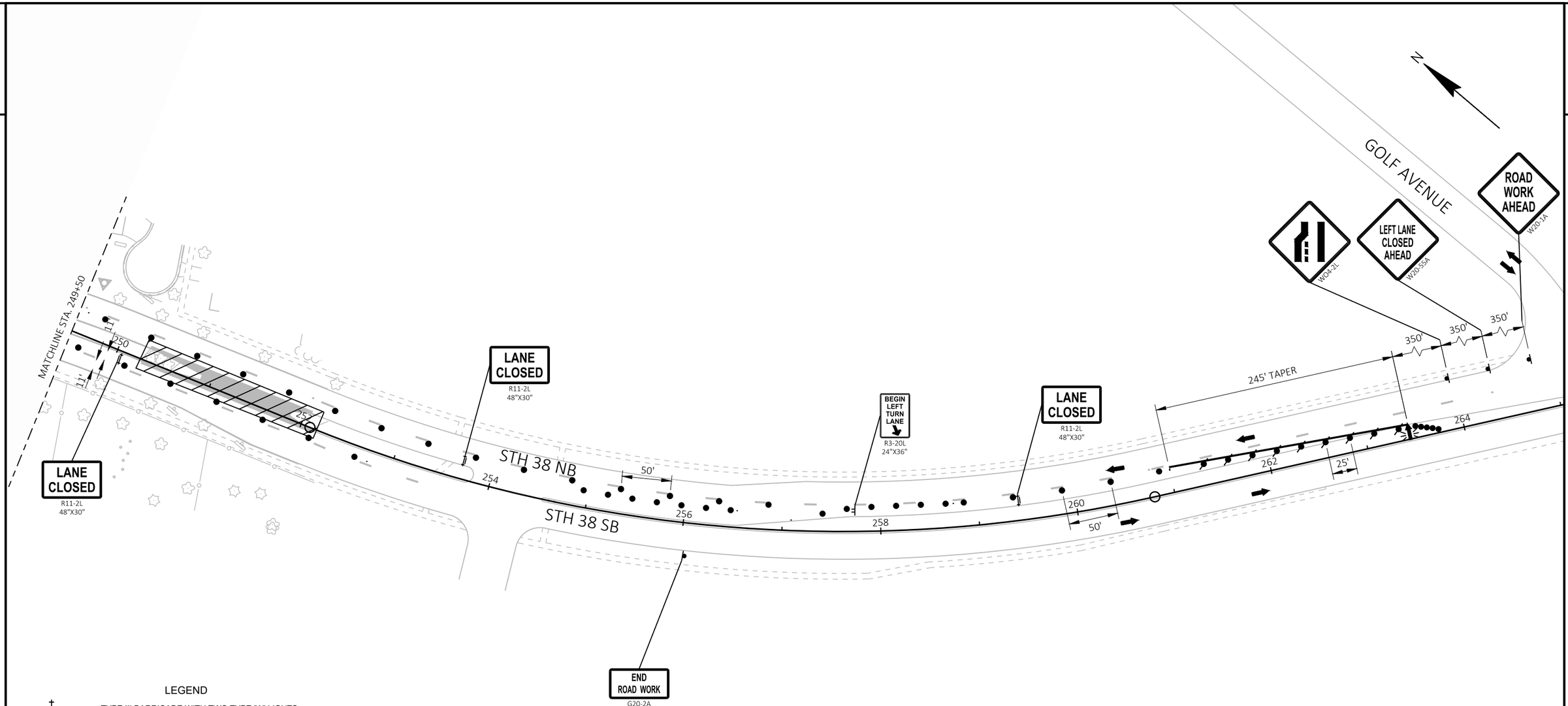


PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - PRE-STAGE 2	SHEET 123	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026001_PRE-S2.DWG
LAYOUT NAME - 026003_s1

PLOT DATE : 7/31/2023 1:36 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

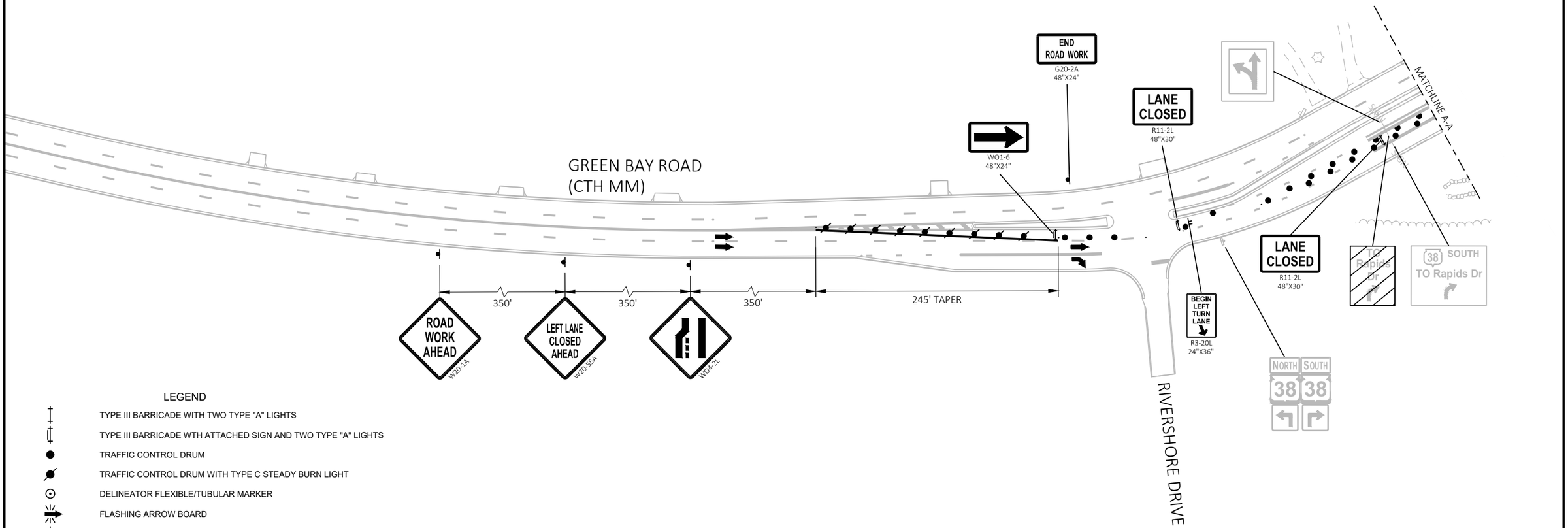


LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - PRE-STAGE 2	SHEET 124	E

2



LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - PRE-STAGE 2	SHEET 125	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026001_PRE-S2.DWG
LAYOUT NAME - 026005_s1
PLOT DATE : 7/31/2023 1:36 PM
PLOT BY : SCHOWALTER, STEVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2

N GREEN BAY ROAD

ROAD WORK AHEAD
W20-1A

SOUTH TO NORTH
38 COUNTY MM 38

RAPIDS COURT

REMOVE
NORTH 38 USE RIGHT LANE

LANE CLOSED
R11-2L
48"X30"

WO1-6
48"X24"

WO4-2R

RIGHT LANE CLOSED AHEAD
W20-5A

ROAD WORK AHEAD
W20-1A

GOLF AVENUE

25'

350'

350'

350'

245' TAPER

56

RAPIDS DRIVE

SEPC

END ROAD WORK
G20-2A
48"X24"

54

MATCHLINE STA. 53+50

FLOYD DRIVE

GOLF AVENUE

N

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - PRE-STAGE 2	SHEET 126	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026001_PRE-S2.DWG
LAYOUT NAME - 026006_s1

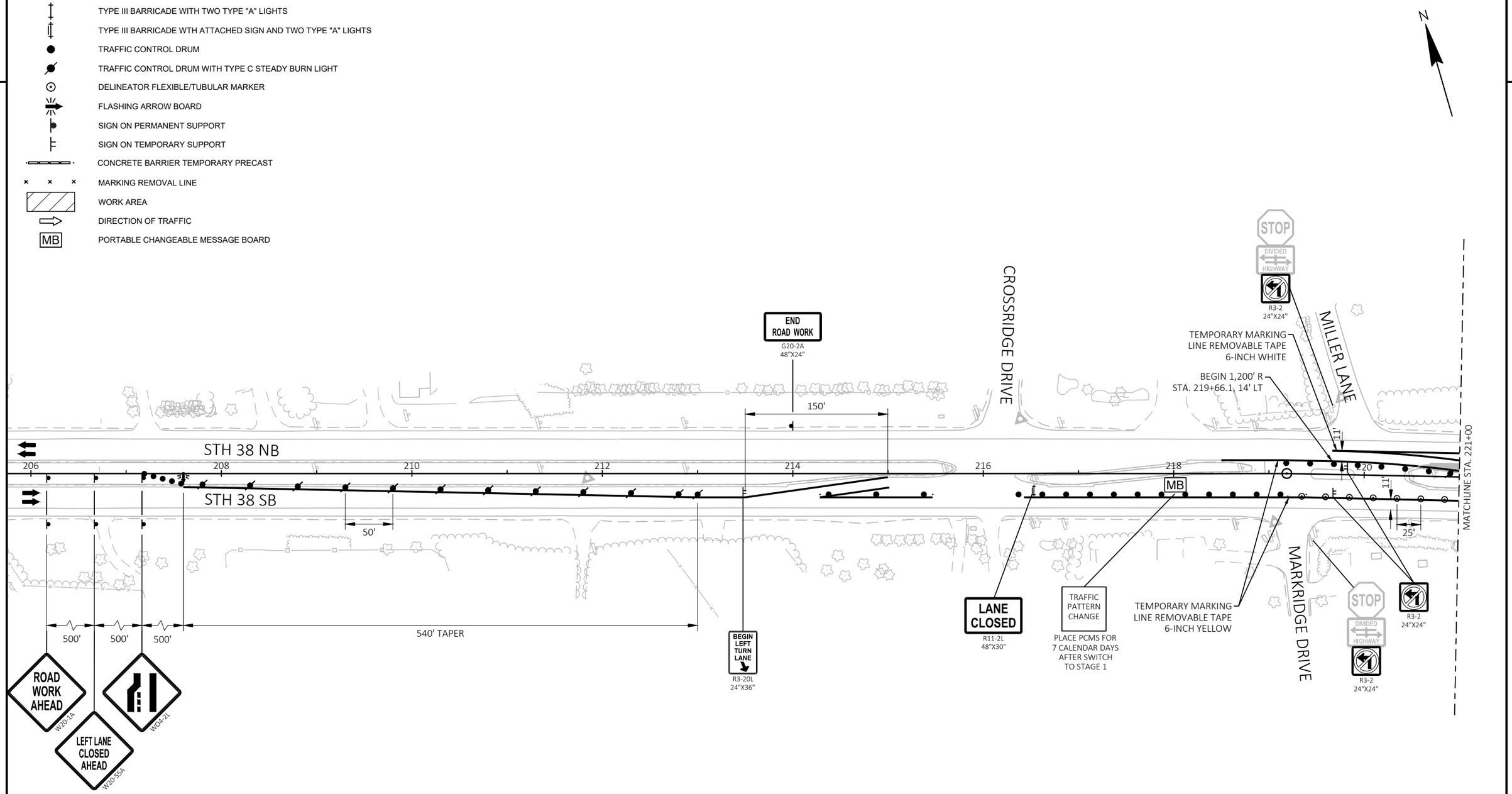
PLOT DATE : 7/31/2023 1:36 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 1	SHEET 127	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026011_S1A.DWG
LAYOUT NAME - 026001_s1

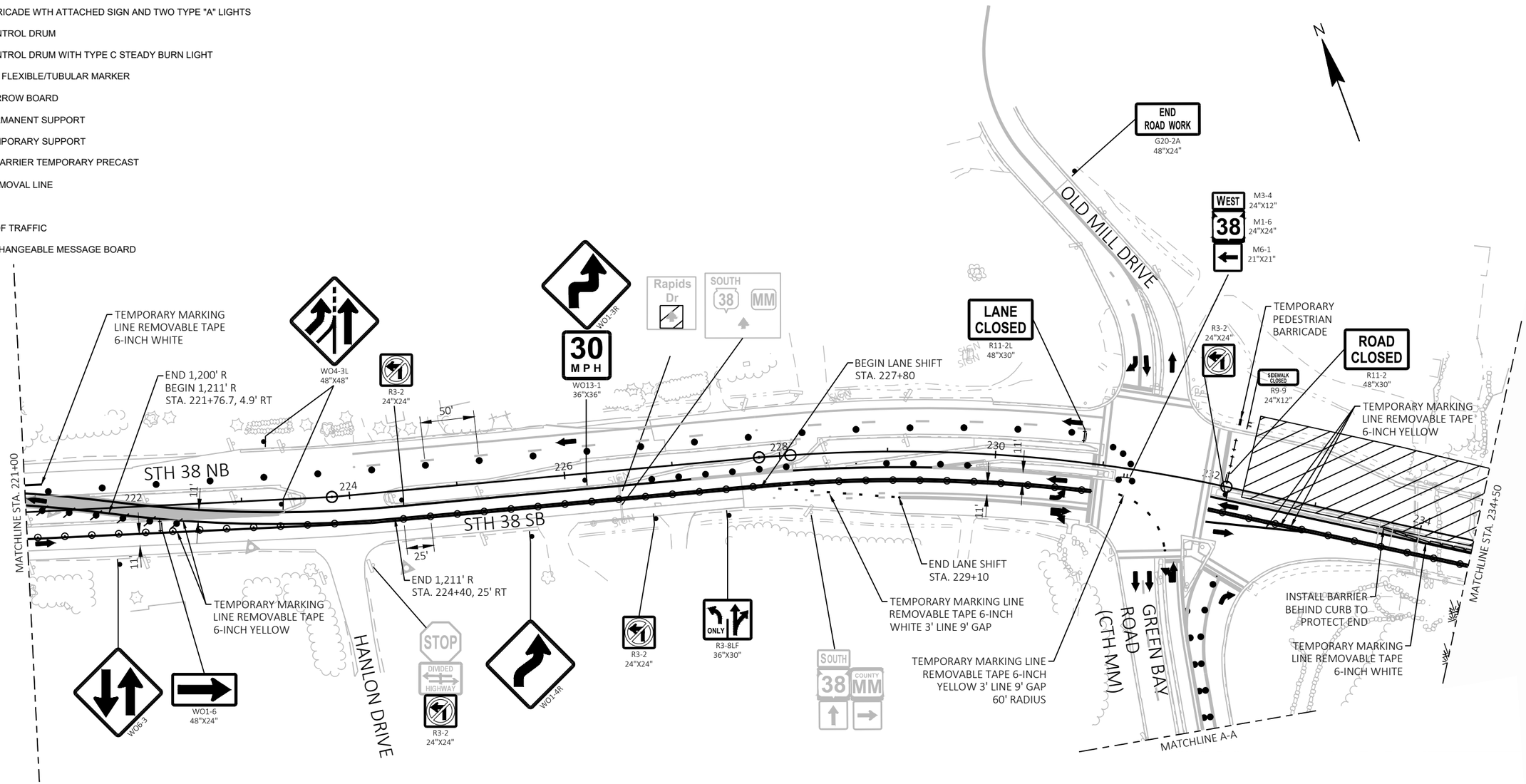
PLOT DATE : 7/31/2023 1:36 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 1	SHEET 128	E

2

2

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
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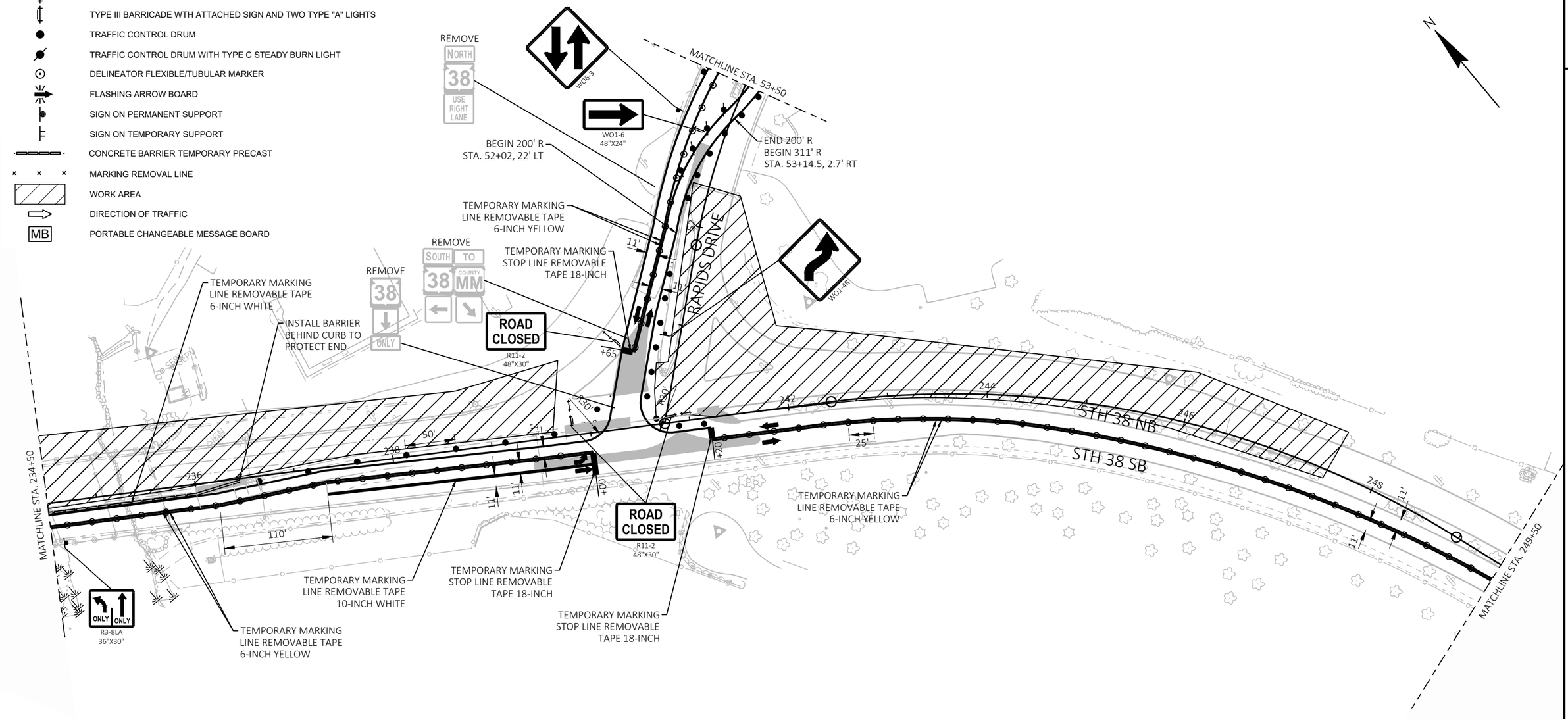
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



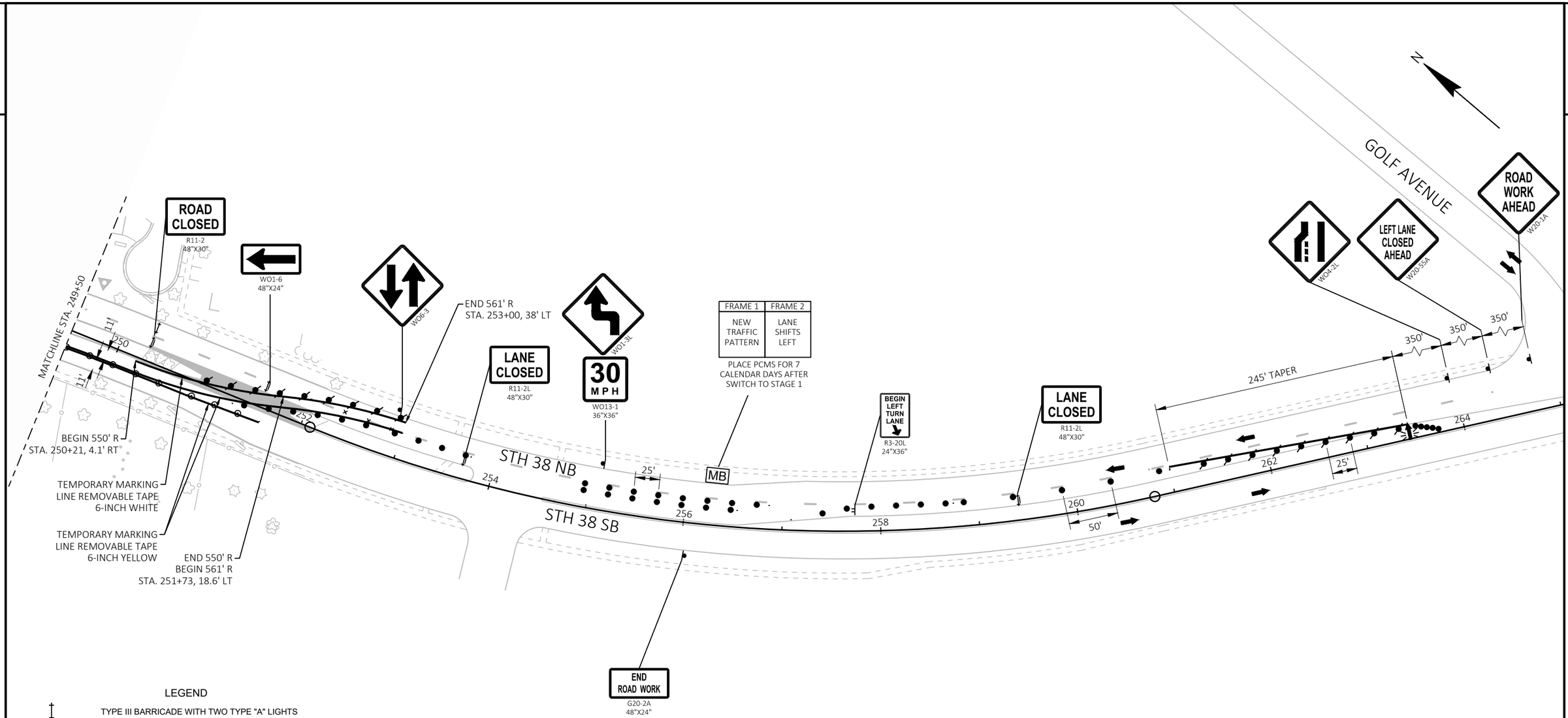
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 1A	SHEET 129	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026011_S1A.DWG
LAYOUT NAME - 026003_s1

PLOT DATE : 7/31/2023 1:36 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

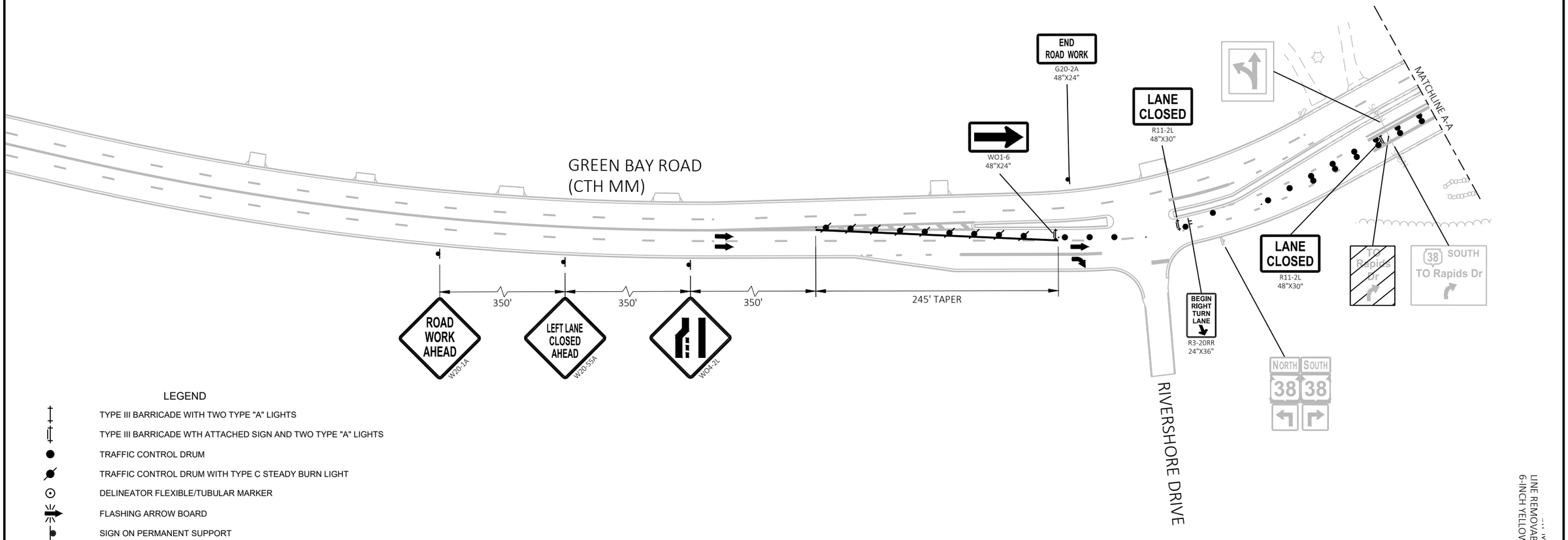


LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 1	SHEET 130	E

2



LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
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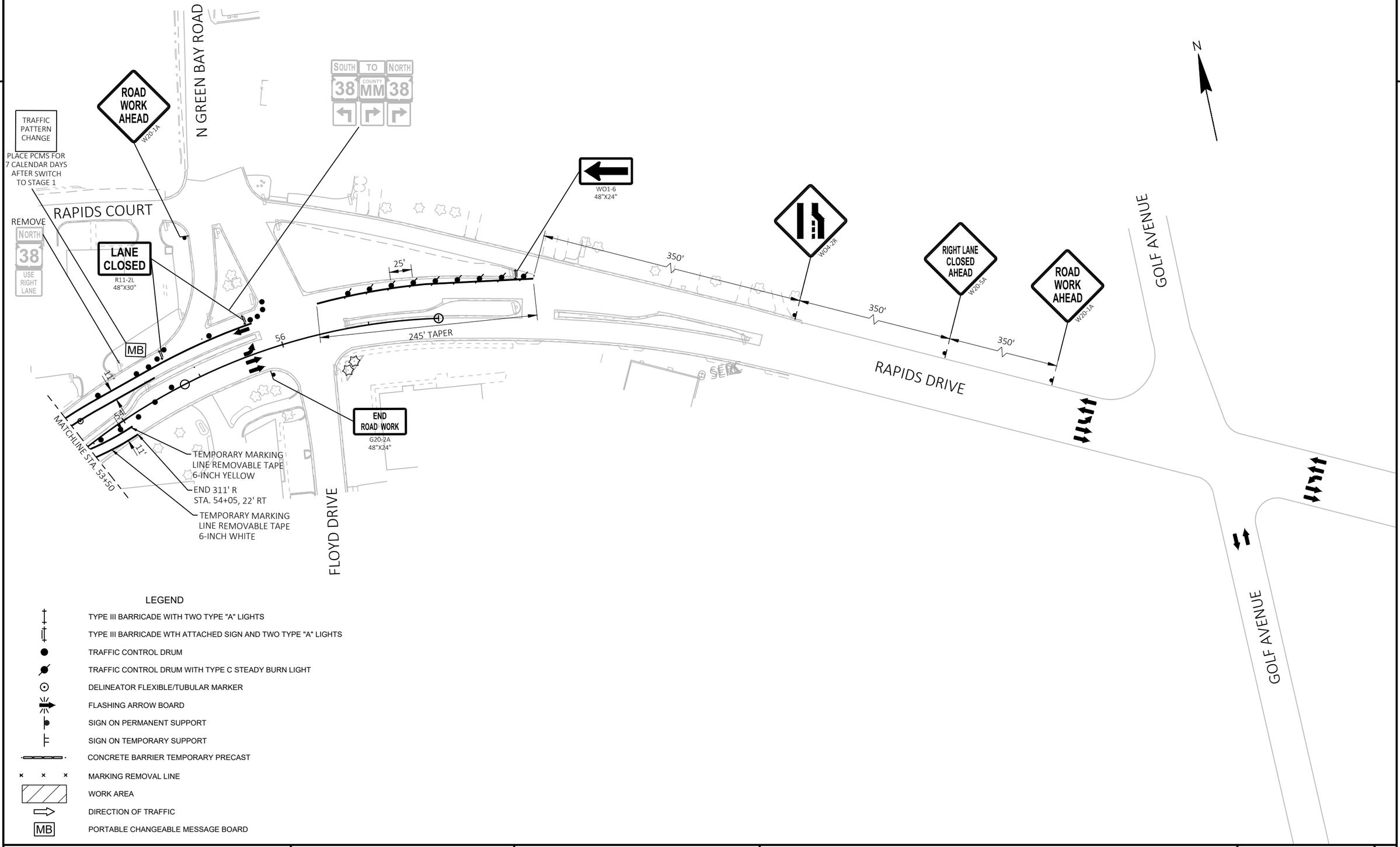
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

LINE REMOVABLE TAPE
6-INCH YELLOW

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 1	SHEET 131	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026011_S1A.DWG
LAYOUT NAME - 026005_s1
PLOT DATE : 7/31/2023 1:36 PM
PLOT BY : SCHOWALTER, STEVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2



LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

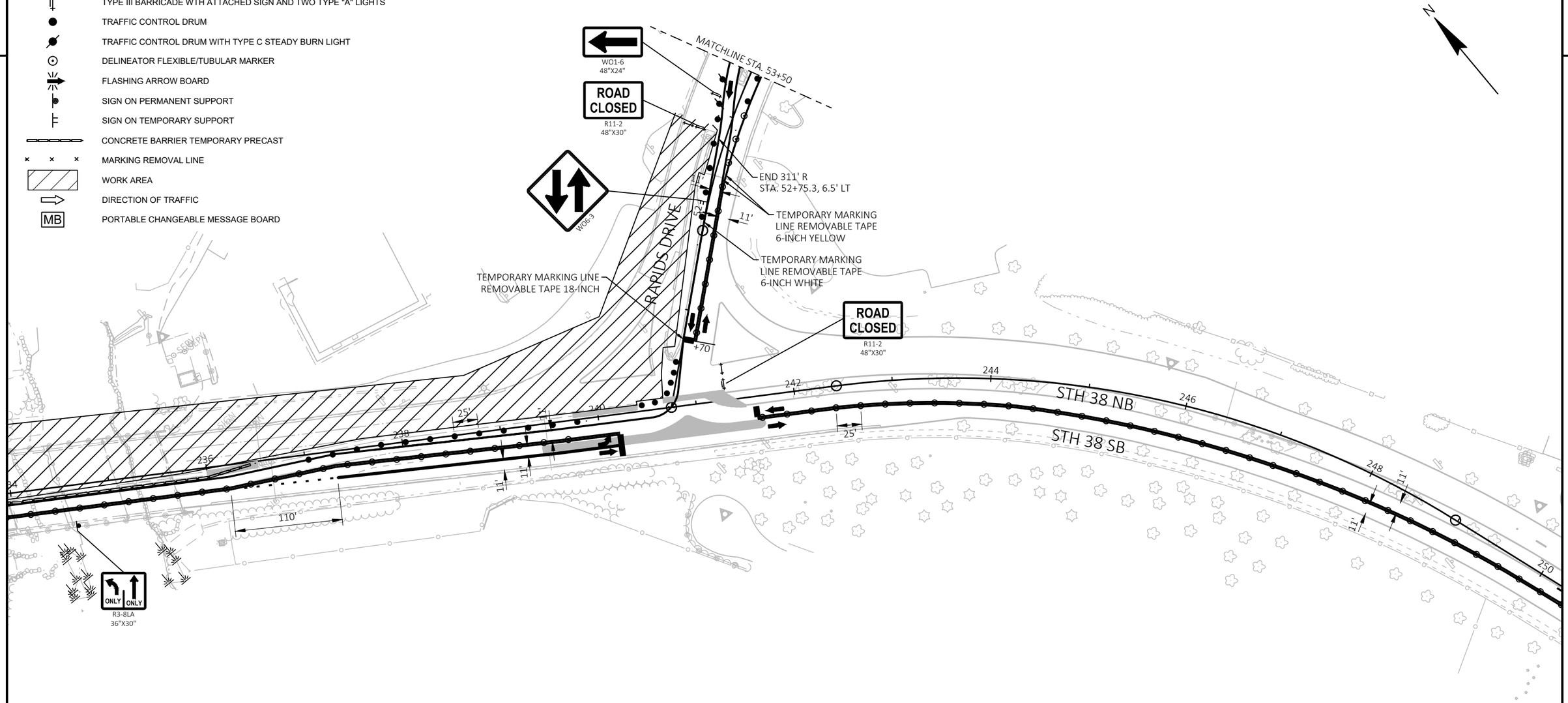
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 1A	SHEET 132	E

2

2

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



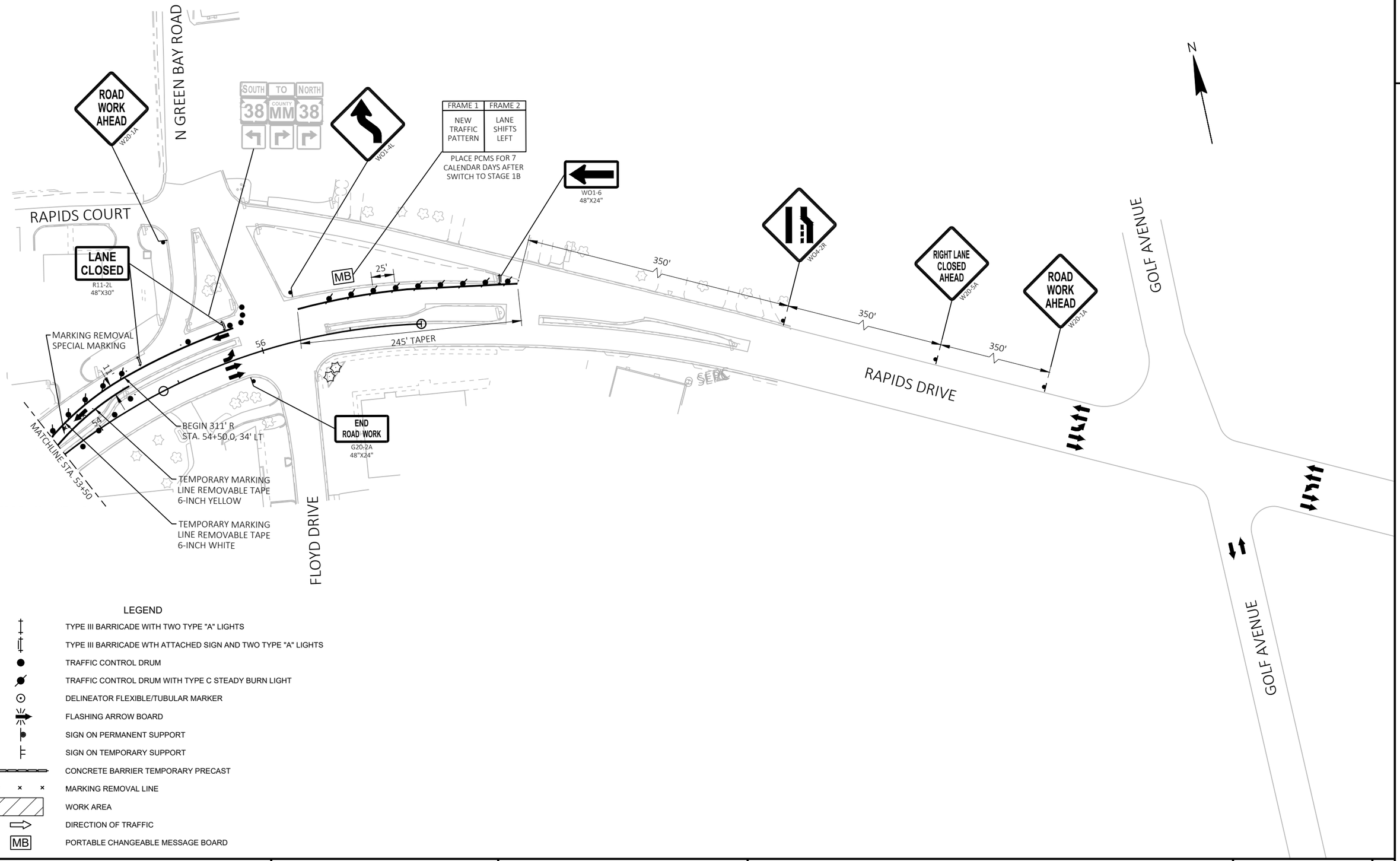
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 1B	SHEET 133	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026011_S1B.DWG
LAYOUT NAME - 026003_s1

PLOT DATE : 7/31/2023 1:37 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2



LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 1B	SHEET 134	E

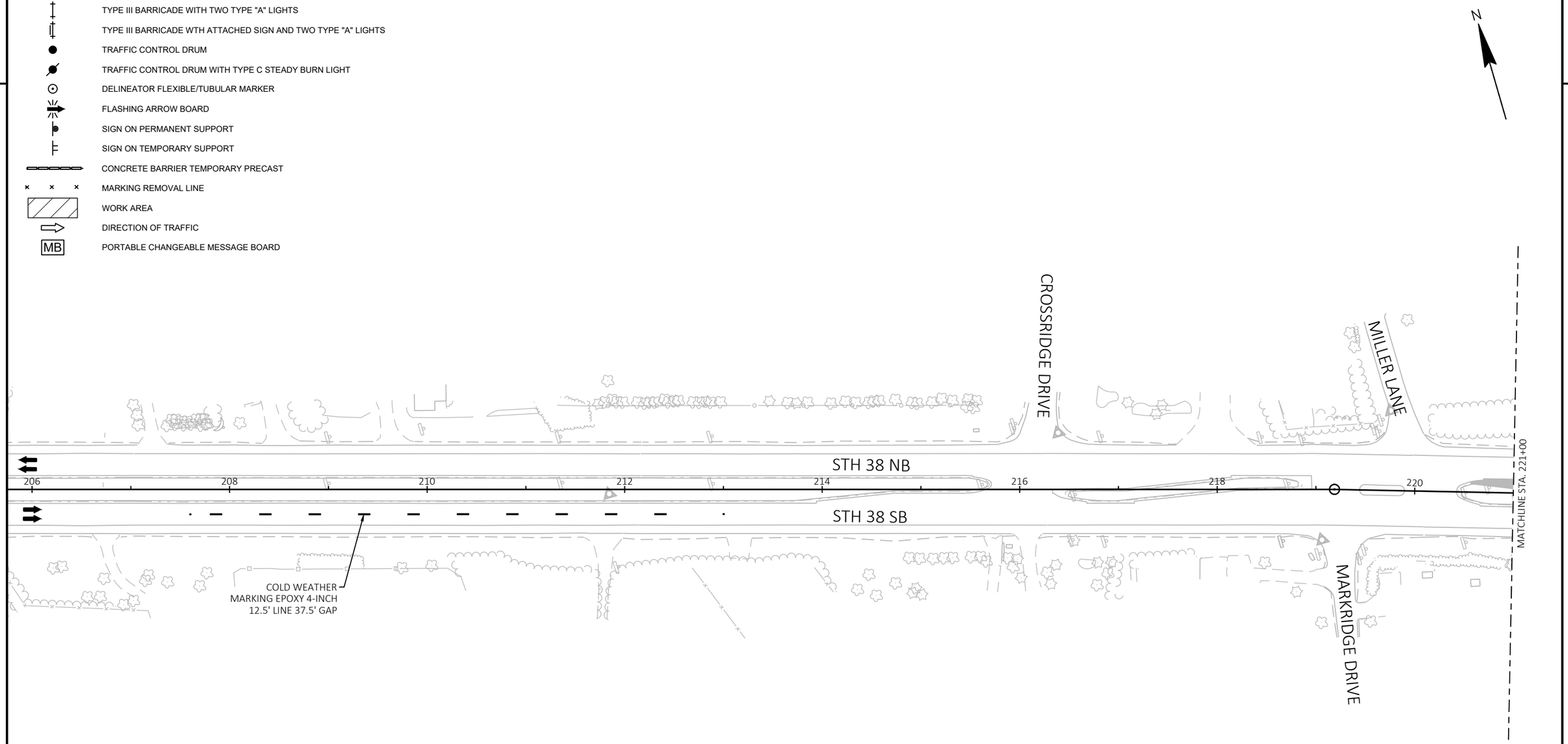
FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026011_S1B.DWG
LAYOUT NAME - 026006_s1
PLOT DATE : 7/31/2023 1:37 PM
PLOT BY : SCHOWALTER, STEVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - WINTER SHUTDOWN	SHEET 135	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026001_WINTER.DWG
LAYOUT NAME - 026001_s1

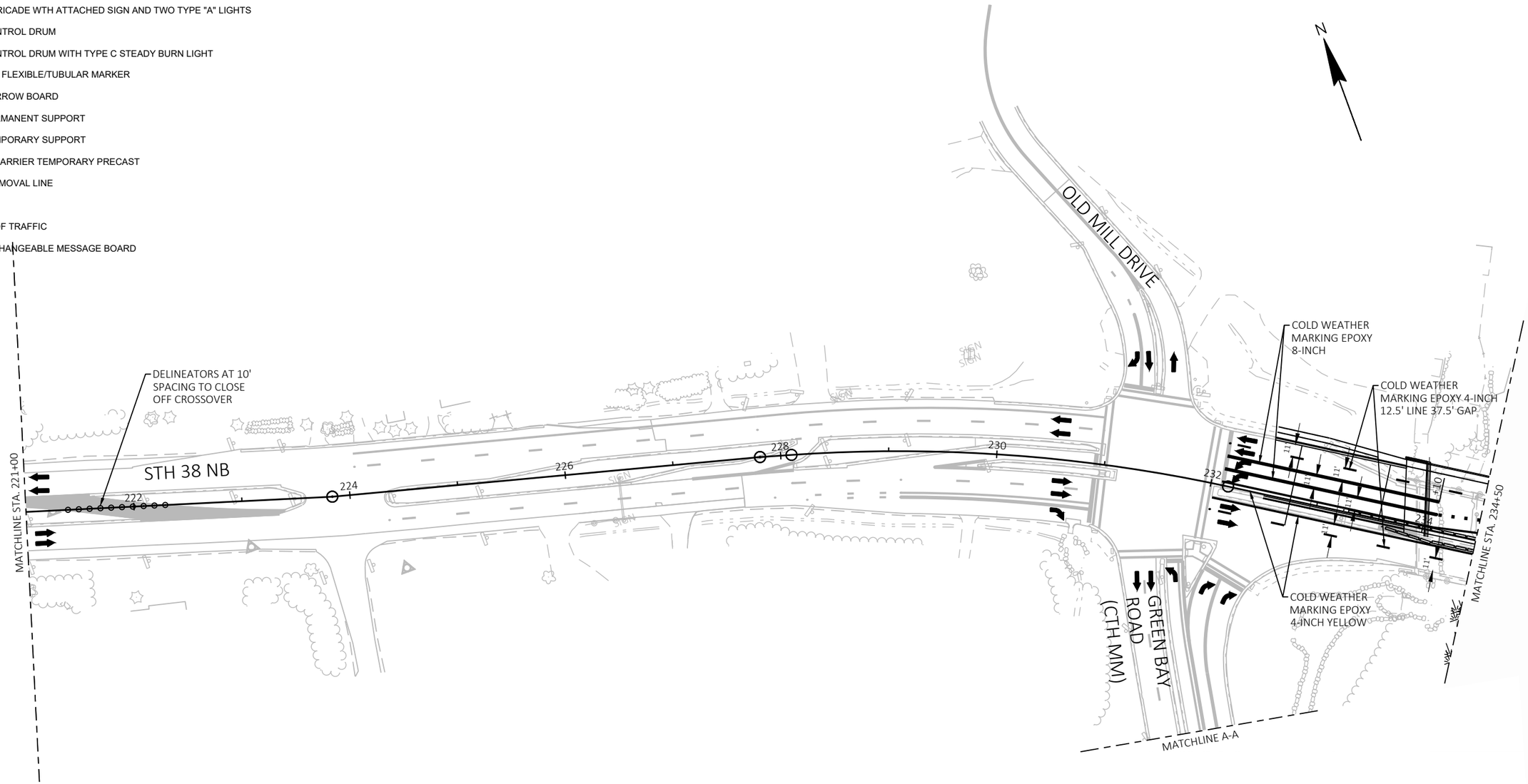
PLOT DATE : 7/31/2023 1:37 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



SEE DETOUR SHEET FOR ADDITIONAL SIGNING

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - WINTER SHUTDOWN	SHEET 136	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026001_WINTER.DWG
LAYOUT NAME - 026002_s1

PLOT DATE : 7/31/2023 1:37 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
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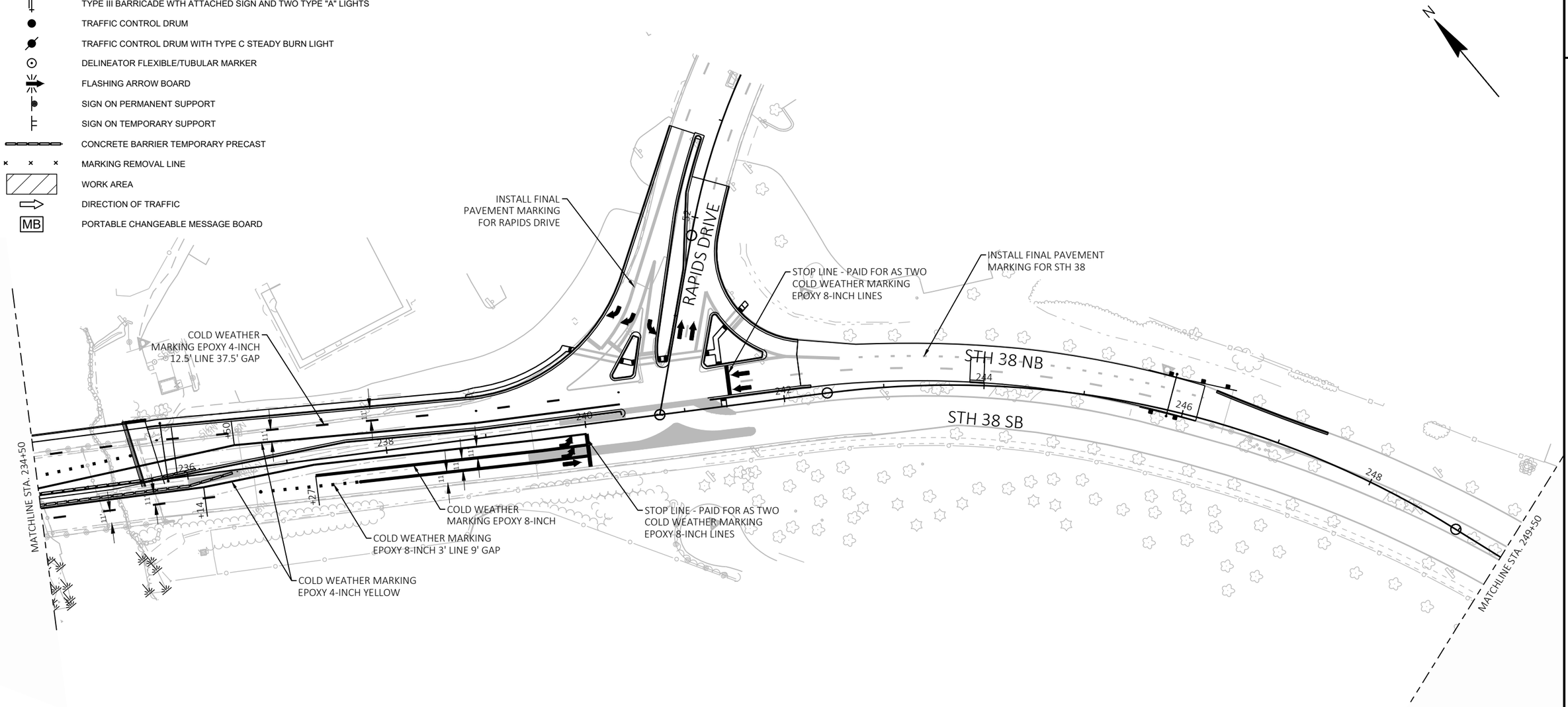
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



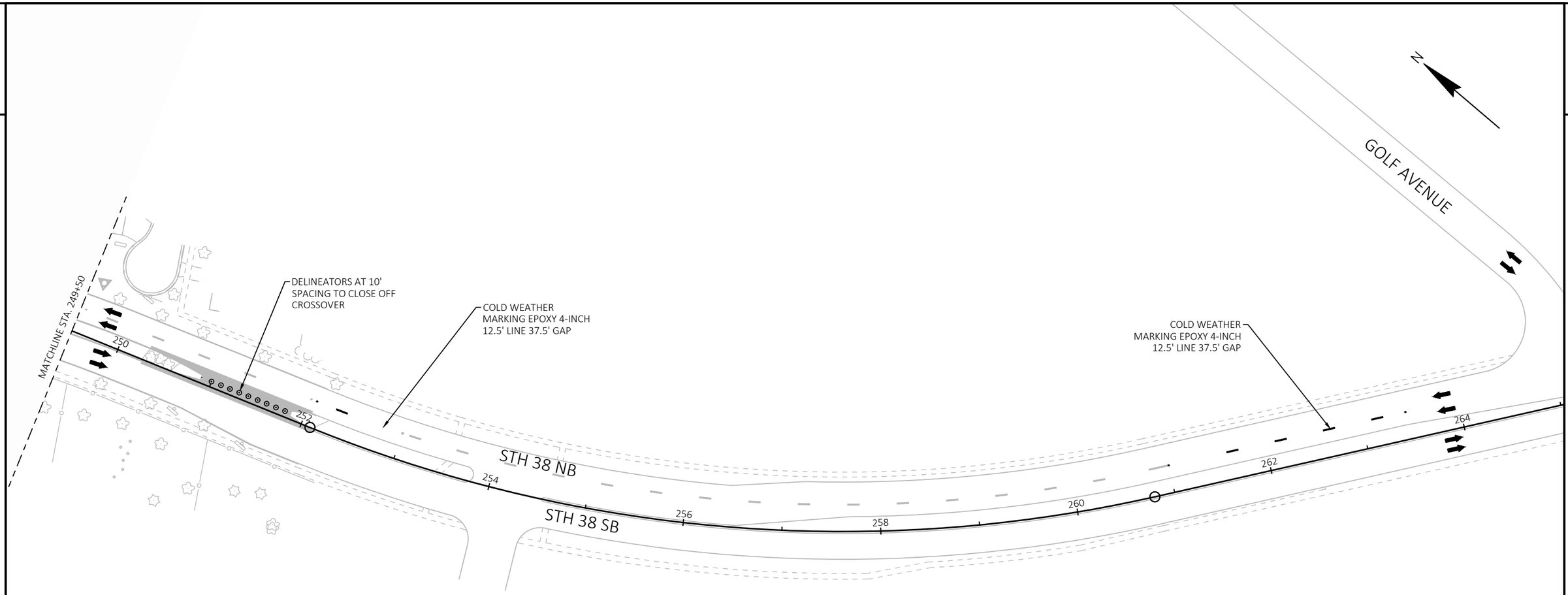
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - WINTER SHUTDOWN	SHEET 137	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026001_WINTER.DWG
LAYOUT NAME - 026003_s1

PLOT DATE : 7/31/2023 1:37 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2



LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
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- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
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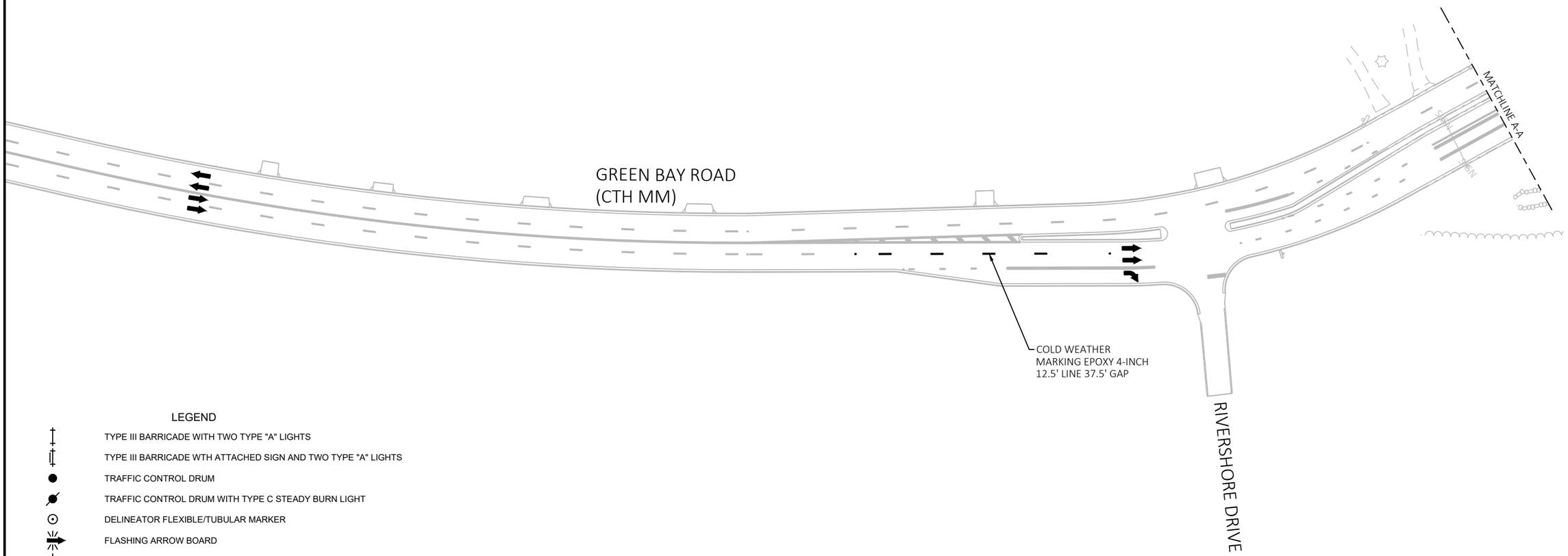
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - WINTER SHUTDOWN	SHEET 138	E

2



LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
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- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
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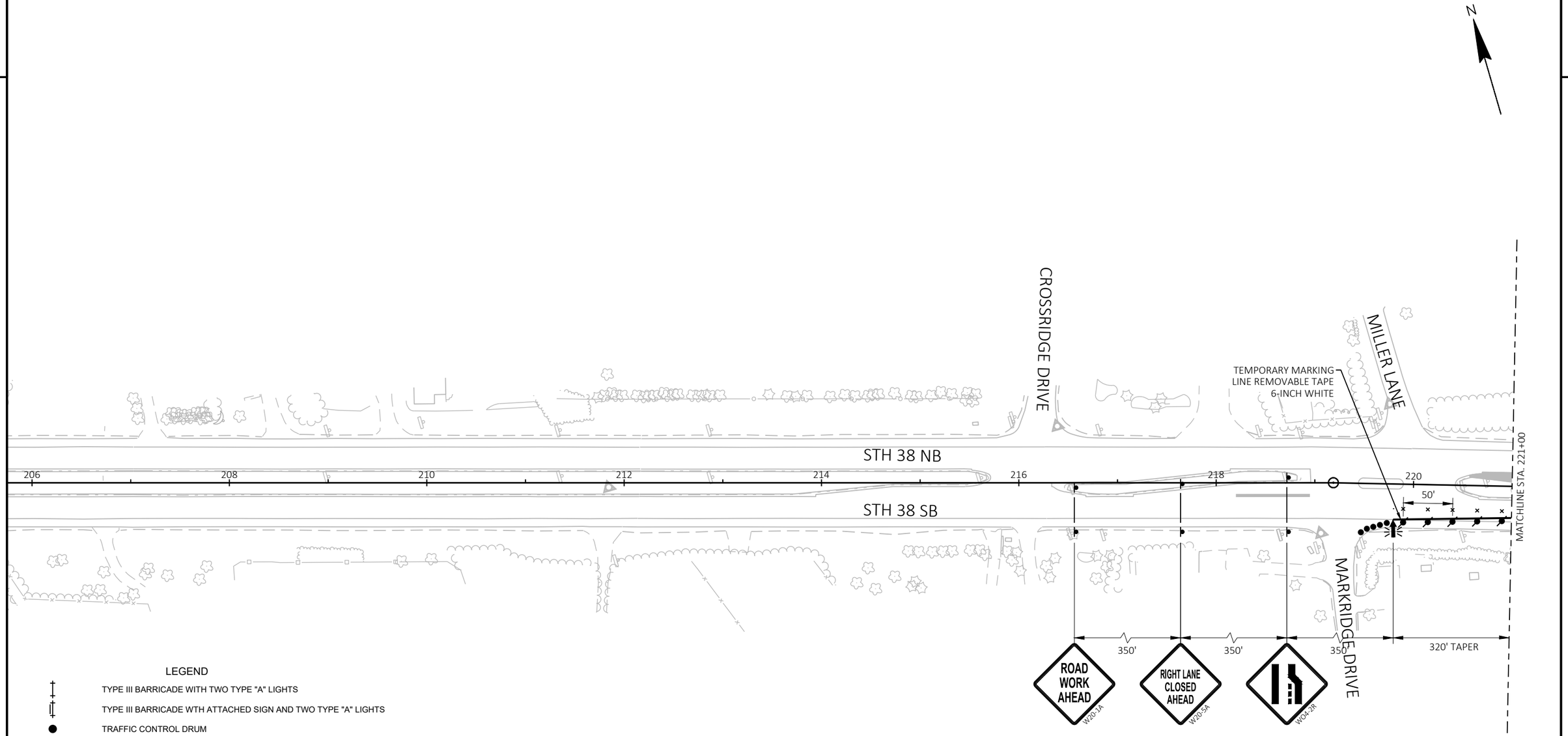
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - WINTER SHUTDOWN	SHEET 139	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026001_WINTER.DWG
LAYOUT NAME - 026005_s1
PLOT DATE : 7/31/2023 1:37 PM
PLOT BY : SCHOWALTER, STEVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2



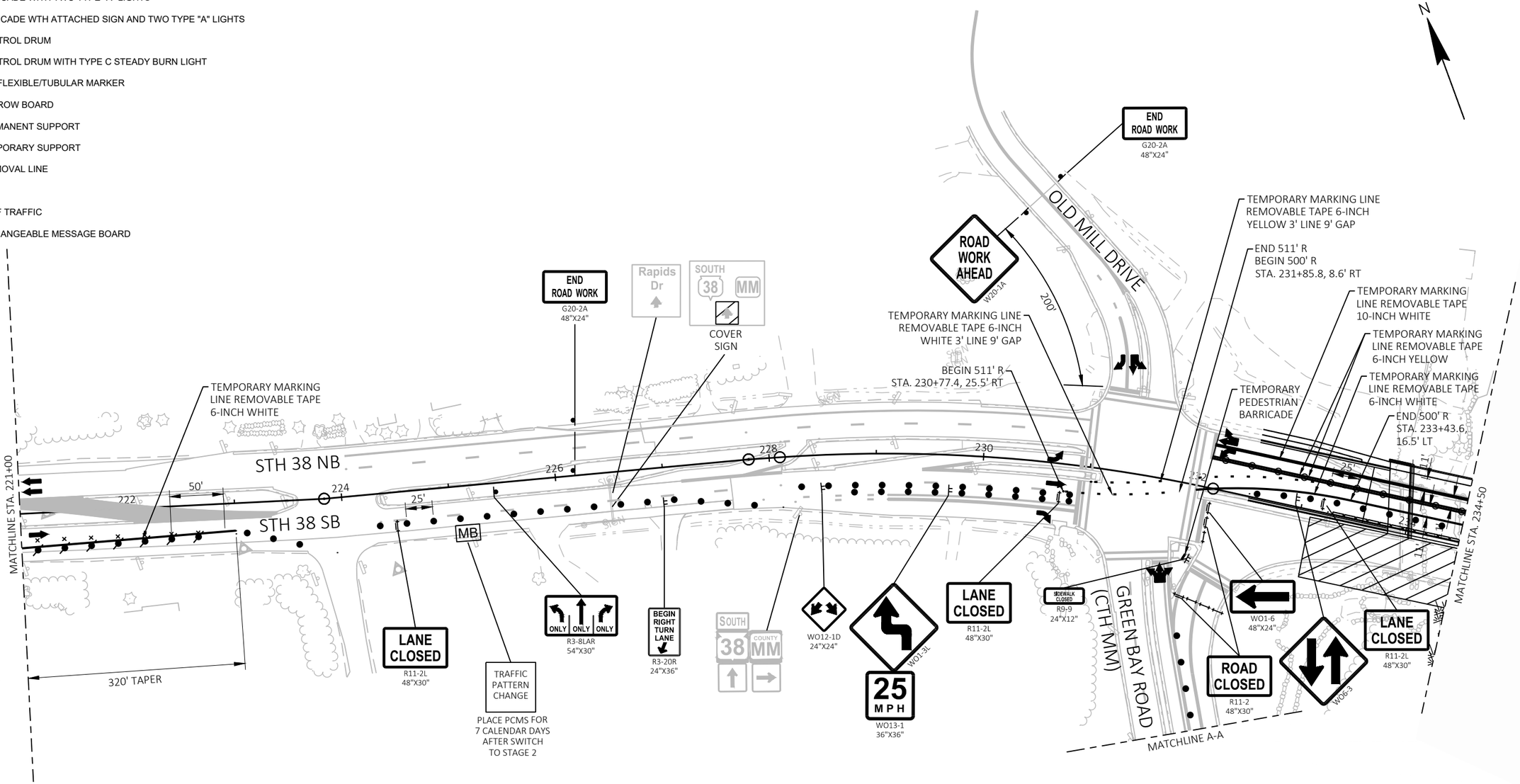
LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 2	SHEET 140	E

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD



2

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 2	SHEET 141	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026101_S2.DWG
LAYOUT NAME - 026102_s2
PLOT DATE : 7/31/2023 1:38 PM
PLOT BY : SCHOWALTER, STEVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

MATCHLINE STA. 234+50

MATCHLINE STA. 53+50

RAPIDS DRIVE

TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH WHITE

WO12-1D 24"X24"

LANE CLOSED R11-2L 48"X30"

TEMPORARY PEDESTRIAN BARRICADE

INSTALL PERMANENT SIGN

INSTALL PERMANENT SIGN AND COVER ARROW

INSTALL PERMANENT SIGN AND COVER WORD

INSTALL PERMANENT SIGN OVER TURN LANE. MOVE IN STAGE 3 TO CORRECT POSITION

INSTALL PERMANENT SIGN

BEGIN LEFT TURN LANE R3-20L 24"X36"

WO6-3

TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH WHITE

SIDEWALK CLOSED R9-9 24"X12"

TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH YELLOW

R3-8AR 36"X30"

WO1-3R

25 MPH WO13-1 36"X36"

STH 38 NB

STH 38 SB

TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH WHITE

TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH YELLOW

REMOVE PAVEMENT MARKINGS INSTALLED FOR WINTER SHUTDOWN BETWEEN STH 38 AND RAPIDS DRIVE

TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH

SIDEWALK CLOSED R9-9 24"X12"

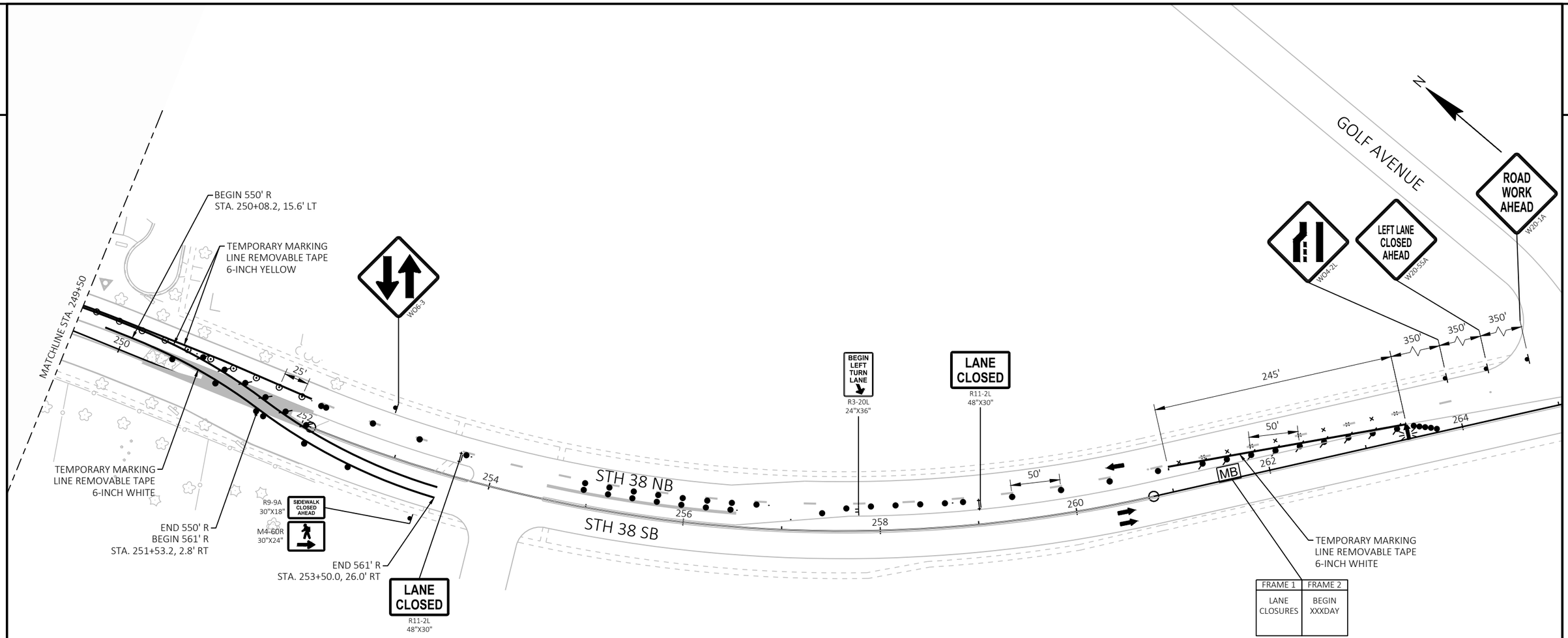
TEMPORARY PEDESTRIAN BARRICADE

MATCHLINE STA. 249+50

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 2	SHEET 142	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026101_S2.DWG
LAYOUT NAME - 026103_s2
PLOT DATE : 7/31/2023 1:38 PM
PLOT BY : SCHOWALTER, STEVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

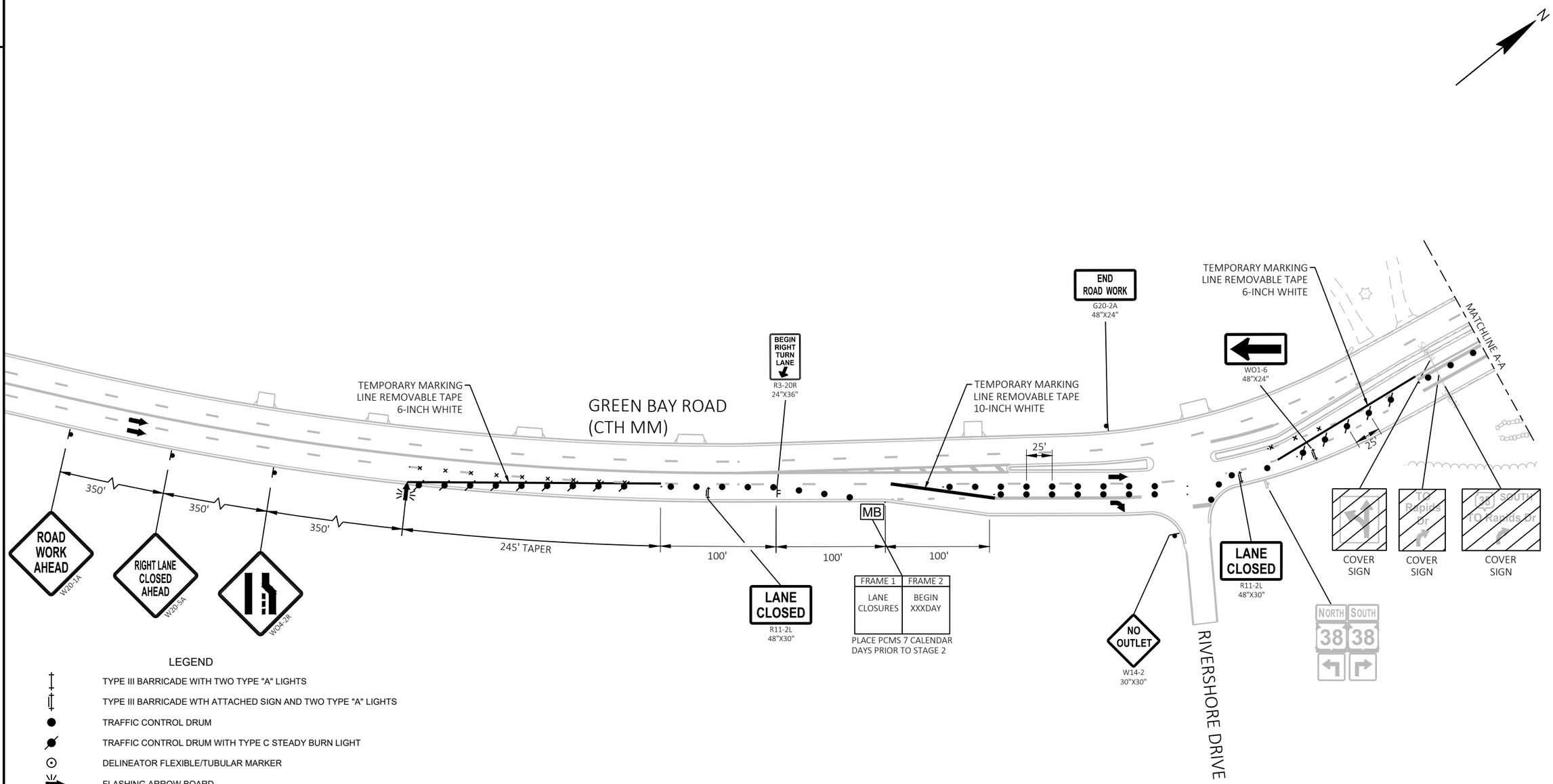


LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 2	SHEET 143	E

2



LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 2	SHEET 144	E

2

N GREEN BAY ROAD

FRAME 1	FRAME 2
LANE CLOSURES	BEGIN XXXDAY

PLACE PCMS 7 CALENDAR DAYS PRIOR TO STAGE 2

ROAD WORK AHEAD
W20-1A

ROAD WORK AHEAD
W20-1A

RAPIDS COURT

MB

56

54

MATCHLINE STA. 53+50

END ROAD WORK
G20-2A
48"X24"

FLOYD DRIVE

RAPIDS DRIVE

GOLF AVENUE

N

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

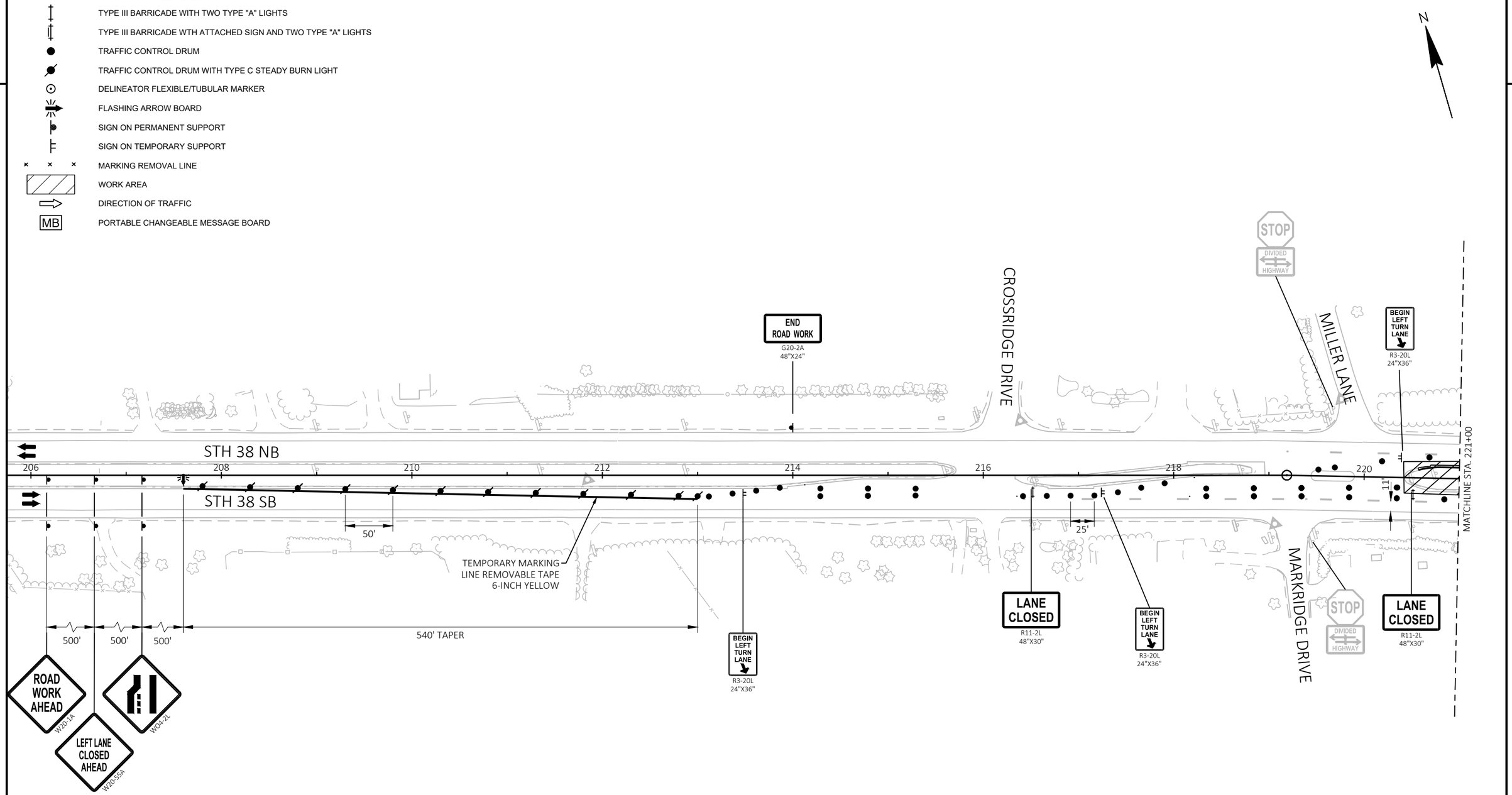
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 2	SHEET 145	E

2

2

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 3	SHEET 146	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026201_S3.DWG
LAYOUT NAME - 026001_s1

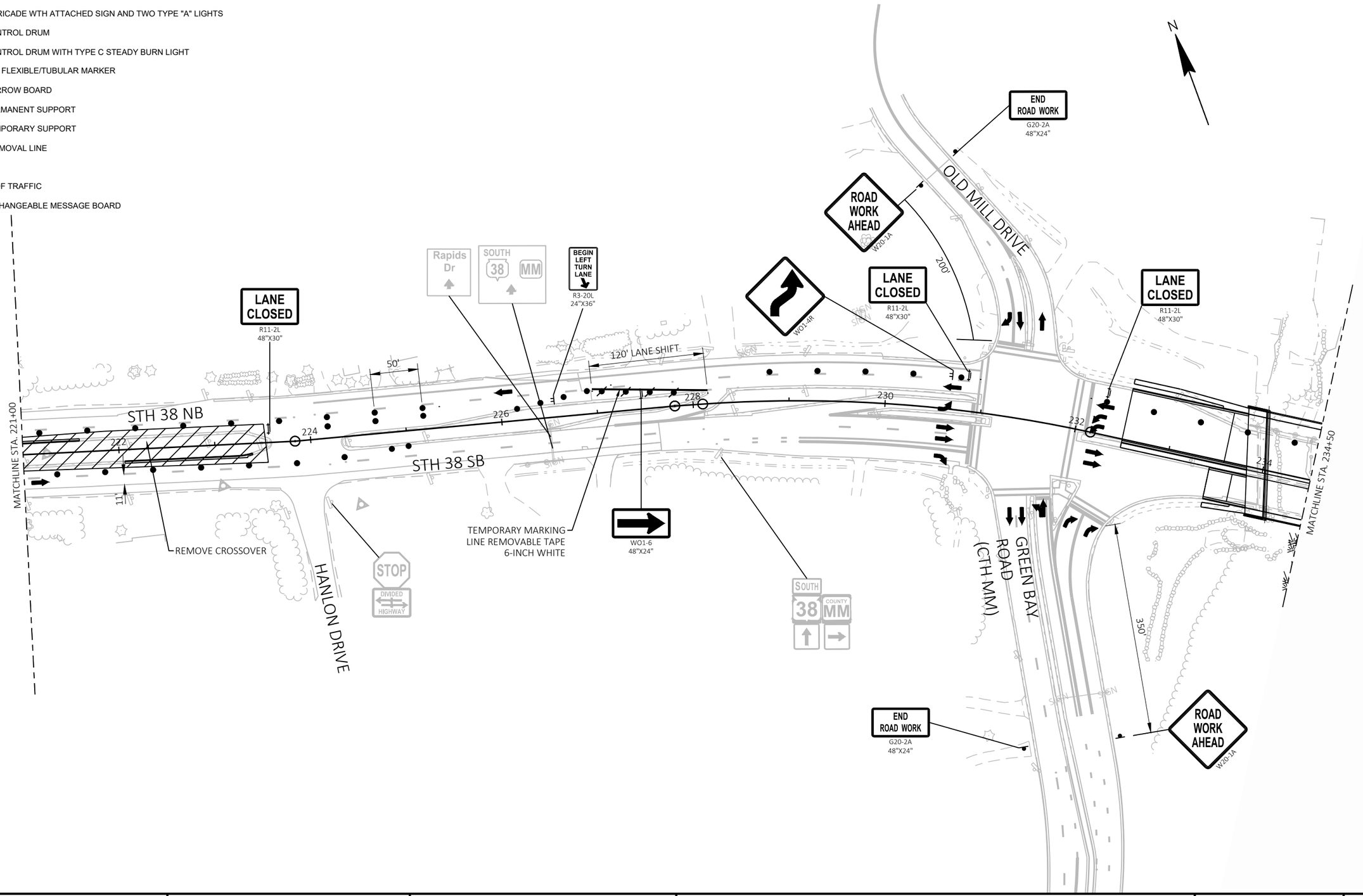
PLOT DATE : 7/31/2023 1:38 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 3	SHEET 147	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026201_S3.DWG
LAYOUT NAME - 026002_s1
PLOT DATE : 7/31/2023 1:38 PM
PLOT BY : SCHOWALTER, STEVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

ROAD WORK AHEAD
W20-1A

350'

END ROAD WORK
G20-2A
48"X24"

RAPIDS DRIVE

ABANDON PIPE

12' LANE SHIFT

25'

50'

STH 38 NB

STH 38 SB

38 MM

NORTH 38 ONLY

RAPIDS DR ONLY

W01-4L

TEMPORARY MARKING
LINE REMOVABLE TAPE
6-INCH WHITE

W01-6
48"X24"

LANE CLOSED
R11-2L
48"X30"

LANE CLOSED
R11-2L
48"X30"

11'

MATCHLINE STA. 234+50

MATCHLINE STA. 249+50

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 3	SHEET 148	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\026201_S3.DWG
LAYOUT NAME - 026003_s1

PLOT DATE : 7/31/2023 1:39 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N

GOLF AVENUE

ROAD WORK AHEAD
W20-1A

LEFT LANE CLOSED AHEAD
W20-5SA

W04-2L

350'

350'

350'

245' TAPER

MATCHLINE STA. 249+50

11'

11'

250

REMOVE CROSSOVER

LANE CLOSED
R11-2L
48"X30"

LANE CLOSED
R11-2L
48"X30"

BEGIN LEFT TURN LANE
R3-20L
24"X36"

LANE CLOSED
R11-2L
48"X30"

STH 38 NB

STH 38 SB

254

256

258

260

262

264

25'

25'

50'

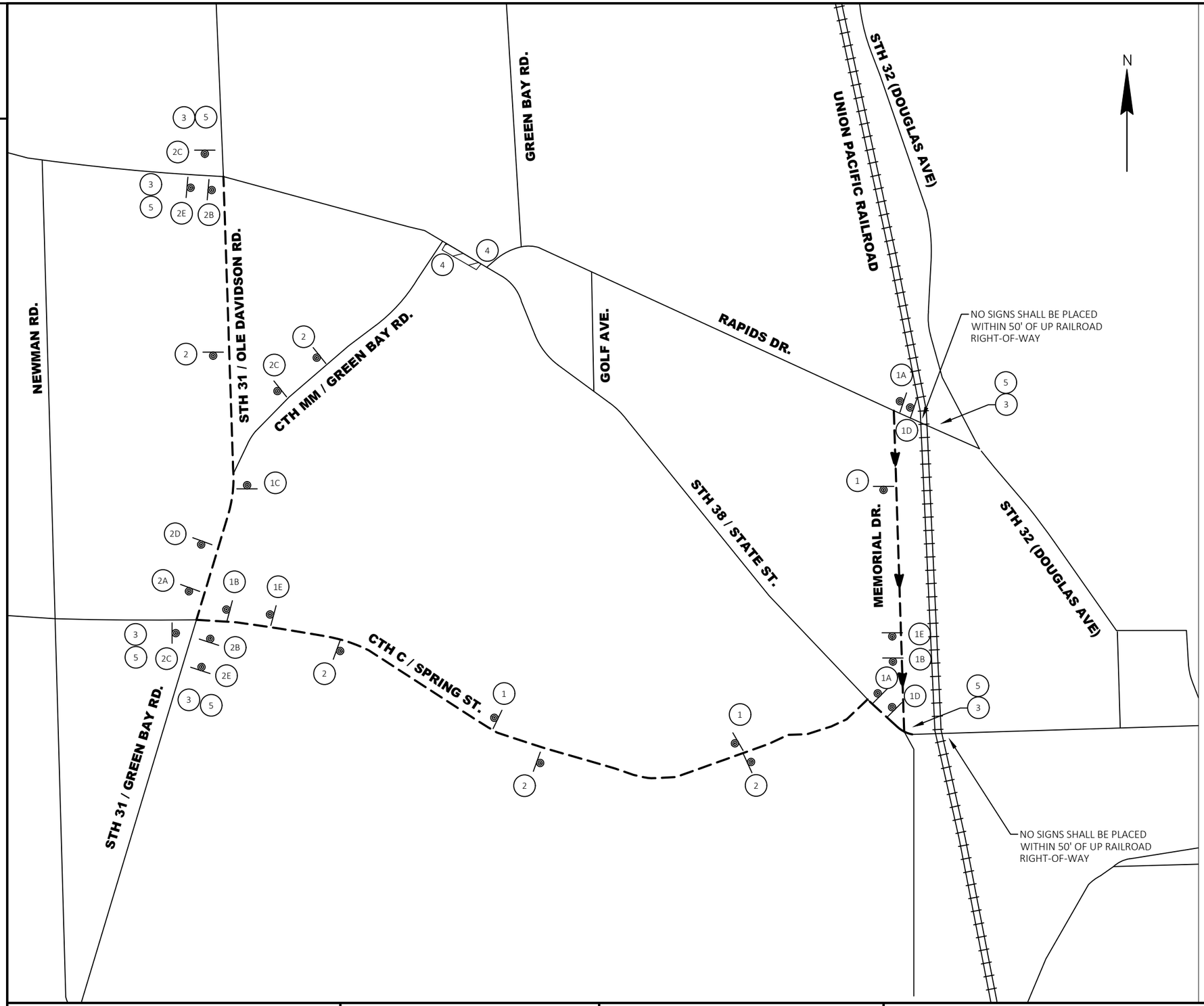
TEMPORARY MARKING
LINE REMOVABLE TAPE
6-INCH YELLOW

END ROAD WORK
G20-2A
48"X24"

LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- MARKING REMOVAL LINE
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	TRAFFIC CONTROL - STAGE 3	SHEET 149	E



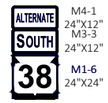
LEGEND

- ALTERNATE ROUTE
- WORK ZONE
- SIGN ON PERMANENT SUPPORT

1

M4-1 24"X12"
M3-1 24"X12"
M1-6 24"X24"

2



M4-1 24"X12"
M3-3 24"X12"
M1-6 24"X24"

3

FRAME 1	FRAME 2
LANE CLOSURES AHEAD	CONSIDER ALT ROUTE

PLACE PCMS 14 CALENDAR DAYS AFTER BEGINNING OF STAGE 1 AND STAGE 3

4

FRAME 1	FRAME 2
ROAD TO CLOSE	XXXDAY XXAM TO XXPM

PLACE PCMS 7 CALENDAR DAYS BEFORE TEMPORARY CLOSURE OF BRIDGE

5

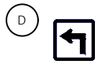
FRAME 1	FRAME 2
HWY 38 CLOSED AT RIVER	FOLLOW ALT ROUTE

PCMS ONLY ONLY TO BE PLACED WHEN BRIDGE IS TEMPORARILY CLOSED

A MO6-1 21"X21"

B MO6-1 21"X21"

C MO6-1 21"X21"

D  MO5-1L 21"X21"

E MO5-1R 21"X21"

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	ALTERNATE ROUTE	SHEET 150	E

2

2

Y = 196340.852
X = 628273.462

PI: 227+80.83
Y = 195338.436
X =628259.803

PI: 223+83.61
Y = 195440.043
X =627875.795

230+00

228+00

226+00

224+00

222+00

CURVE 1

93°1'29"

S75° 10' 46"E
397.22'

S72° 43' 10"E
464.89'

SECTION LINE
Y=195335.495
X=628269.963

BP: 22+16.03'NB'
Y = 195182.992
X =628668.783

PT: 232+16.03

BP: 12+16.03'SB'
Y = 195144.149
X =628644.141

PC: 228+09.96

PI: 25+72.48'NB'
Y = 194992.051
X =628969.774

S57° 36' 36"E
1027.17'

24+00'NB'
234+00
14+00'SB'

232+00

16+00'SB'

STH 38 (NORTHWESTERN AVE)

PI: 28+94.01'NB'
Y = 194809.800
X =629234.664

S57° 36' 36"E
349.42'

28+00'NB'
238+00
18+00'SB'

BP: 50+00.00
Y = 194703.984
X =629381.867

240+74.77 STH 38 R/L = 50+00

PC: 51+81.63

N49° 49' 13"E
181.63'

73°2'56"

EP: 57+79.33
Y = 194970.927
X =630079.563

55

RAPIDS DRIVE

PC: 32+43.43'NB'

PC: 242+43.20

32+00'NB'
242+00
22+00'SB'

PC: 22+43.20'SB'

PI STA = 55+01.33
Y = 195027.438
X = 629764.897
DELTA = 50°21'39"
D = 8°25'33"
T = 319.70'
L = 597.70'
R = 680.00'
PC STA = 51+81.63
Y = 194821.171
X = 629520.638
PT STA = 57+79.33
Y = 194970.927
X = 630079.563
BK = N49°49'12.6"E
AH = S79°49'08.0"E

CURVE 4

34+00'NB'
244+00
24+00'SB'

CURVE 2

CURVE 3

36+00'NB'
246+00
26+00'SB'

EP: 26+86.17'SB'
Y = 194278.183
X =629816.249

EP: 37+02.57'NB'
Y = 194295.368
X =629845.587

PT: 248+97.43

248+00

250+00

252+00

254+00

S18° 21' 24"E
312.06'

PC: 252+09.49

CURVE 5

CURVE 1
PI STA = 230+14.37
Y = 195273.490
X = 628484.123
DELTA = 16°14'35"
D = 4°00'00"
T = 204.41'
L = 406.08'
R = 1432.40'
PC STA = 228+09.96
Y = 195330.337
X = 628287.778
PT STA = 232+16.03
Y = 195163.992
X = 628656.730
BK = S73°51'10.5"E
AH = S57°36'35.9"E

CURVE 2
PI STA = 24+68.96
Y = 194472.980
X = 629702.141
DELTA = 27°14'56"
D = 6°09'05"
T = 225.76'
L = 442.97'
R = 931.43'
PC STA = 22+43.20
Y = 194593.914
X = 629511.506
PT STA = 26+86.17
Y = 194278.183
X = 629816.249
BK = S57°36'35.9"E
AH = S30°21'39.7"E

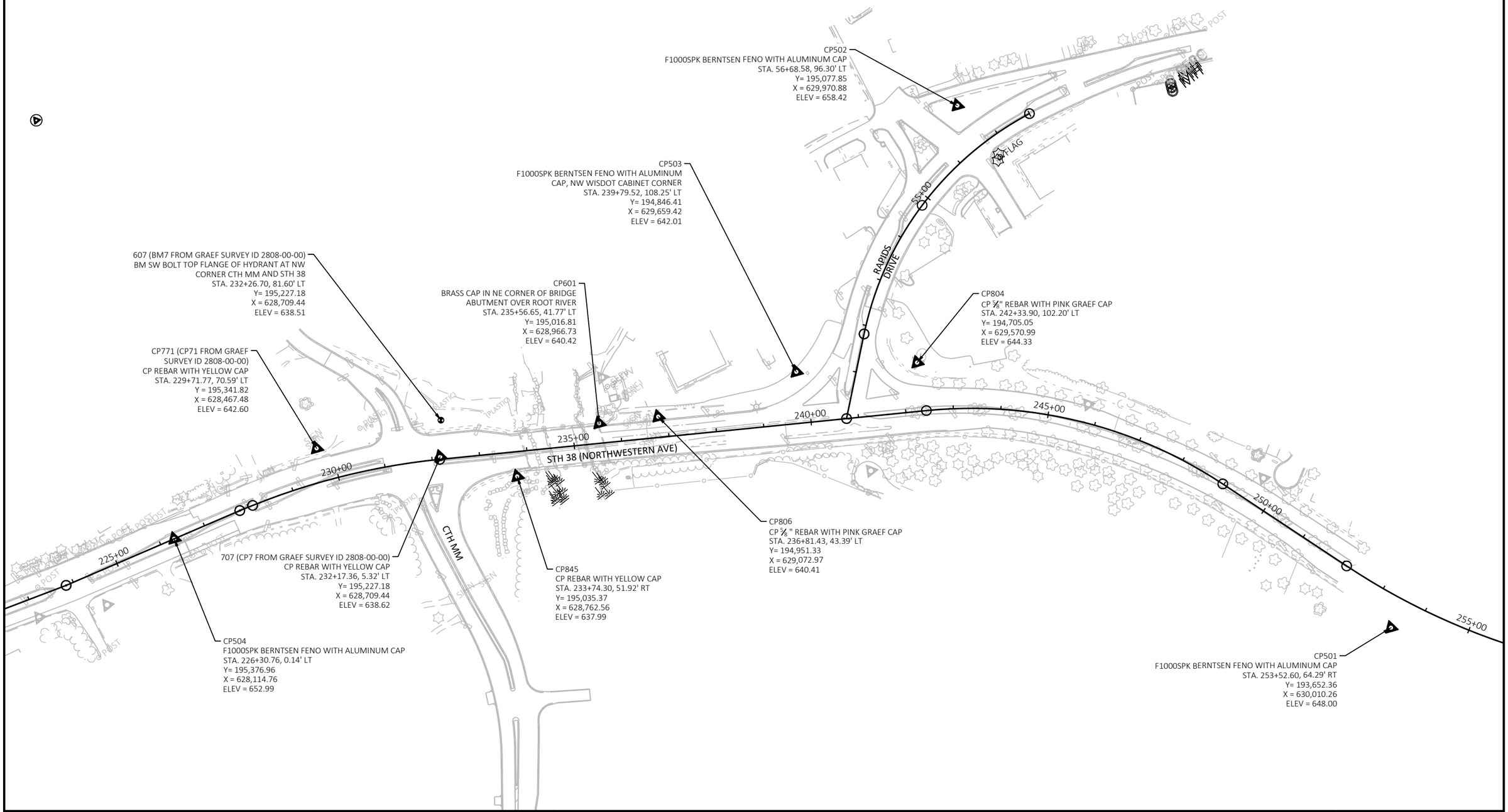
CURVE 3
PI STA = 245+83.74
Y = 194431.339
X = 629811.650
DELTA = 39°15'12"
D = 6°00'00"
T = 340.54'
L = 654.22'
R = 954.93'
PC STA = 242+43.20
Y = 194613.758
X = 629524.095
PT STA = 248+97.43
Y = 194108.132
X = 629918.896
BK = S57°36'35.9"E
AH = S18°21'24.1"E

CURVE 4
PI STA = 34+77.42
Y = 194497.276
X = 629727.313
DELTA = 27°14'56"
D = 5°56'05"
T = 234.00'
L = 459.14'
R = 965.43'
PC STA = 32+43.43
Y = 194622.624
X = 629529.719
PT STA = 37+02.57
Y = 194295.368
X = 629845.587
BK = S57°36'35.9"E
AH = S30°21'39.7"E

CURVE 5
PI STA = 256+58.37
Y = 193385.907
X = 630158.542
DELTA = 34°48'00"
D = 4°00'00"
T = 448.89'
L = 870.00'
R = 1432.40'
PC STA = 252+09.49
Y = 193811.952
X = 630017.173
PT STA = 260+79.49
Y = 193116.741
X = 630517.777
BK = S18°21'24.1"E
AH = S53°09'24.1"E

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	ALIGNMENT PLAN	SHEET 151	E

2



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	ALIGNMENT LAYOUT SURVEY CONTROL	SHEET 152	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\027202-AD.DWG
LAYOUT NAME - 027202_ad

PLOT DATE : 7/31/2023 1:39 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:200 FT

Estimate Of Quantities

2290-03-73

Line		Item	Item Description	Unit	Total	Qty
0002		108.4400	CPM Progress Schedule	EACH	1.000	1.000
0004		201.0210	Grubbing	SY	1,315.000	1,315.000
0006		201.0220	Grubbing	ID	12.000	12.000
0008		203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. B-51-0012	EACH	1.000	1.000
0010		204.0100	Removing Concrete Pavement	SY	9,275.000	9,275.000
0012		204.0115	Removing Asphaltic Surface Butt Joints	SY	30.000	30.000
0014		204.0120	Removing Asphaltic Surface Milling	SY	1,656.000	1,656.000
0016		204.0150	Removing Curb & Gutter	LF	1,172.000	1,172.000
0018		204.0155	Removing Concrete Sidewalk	SY	1,190.000	1,190.000
0020		204.0170	Removing Fence	LF	608.000	608.000
0022		204.0185	Removing Masonry	CY	20.000	20.000
0024	**	204.0195	Removing Concrete Bases	EACH	11.000	11.000
0024	**	204.0195	Removing Concrete Bases	EACH	13.000	13.000
0026		204.0210	Removing Manholes	EACH	2.000	2.000
0028		204.0220	Removing Inlets	EACH	8.000	8.000
0030		204.0245	Removing Storm Sewer (size) 01. 10-Inch	LF	27.000	27.000
0032		204.0245	Removing Storm Sewer (size) 02. 12-Inch	LF	144.000	144.000
0034		204.0245	Removing Storm Sewer (size) 03. 15-Inch	LF	9.000	9.000
0036		204.0245	Removing Storm Sewer (size) 04. 18-Inch	LF	322.000	322.000
0038		204.0245	Removing Storm Sewer (size) 05. 24-Inch	LF	17.000	17.000
0040		204.0245	Removing Storm Sewer (size) 06. 27-Inch	LF	74.000	74.000
0042		204.0245	Removing Storm Sewer (size) 07. 36-Inch	LF	116.000	116.000
0044		204.0245	Removing Storm Sewer (size) 08. 48-Inch	LF	150.000	150.000
0046		204.0246	Removing Ancillary Structure (structure) 01. S-51-246	EACH	1.000	1.000
0048		204.0246	Removing Ancillary Structure (structure) 02. S-51-245	EACH	1.000	1.000
0050		204.0246	Removing Ancillary Structure (structure) 04. S-51-009	EACH	1.000	1.000
0052		204.0246	Removing Ancillary Structure (structure) 06. S-51-010	EACH	1.000	1.000
0054		204.0291.S	Abandoning Sewer	CY	0.600	0.600
0056		204.9060.S	Removing (item description) 01. Traffic Signals STH 38 & Rapids Drive	EACH	1.000	1.000
0058		204.9060.S	Removing (item description) 02. Loop Detector Wire & Lead-In Cable STH 38 & Rapids Dr	EACH	1.000	1.000
0060		204.9060.S	Removing (item description) 03. Lighting Units	EACH	11.000	11.000
0062		205.0100	Excavation Common	CY	10,890.000	10,890.000
0064		205.0200	Excavation Rock	CY	265.000	265.000
0066		206.1001	Excavation for Structures Bridges (structure) 01. B-51-0157	EACH	1.000	1.000
0068		210.1500	Backfill Structure Type A	TON	1,548.000	1,548.000
0070		211.0201	Prepare Foundation for Concrete Pavement (project) 01. 2290-03-73	EACH	1.000	1.000
0072		213.0100	Finishing Roadway (project) 01. 2290-03-73	EACH	1.000	1.000
0074	**	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	4,904.000	4,904.000
0074	**	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	680.000	680.000
0076		310.0110	Base Aggregate Open-Graded	TON	22.000	22.000
0078		312.0110	Select Crushed Material	TON	9,790.000	9,790.000
0080		390.0303	Base Patching Concrete	SY	35.000	35.000
0082		415.0075	Concrete Pavement 7 1/2-Inch	SY	8,234.000	8,234.000
0084		415.0410	Concrete Pavement Approach Slab	SY	339.000	339.000
0086		416.0610	Drilled Tie Bars	EACH	168.000	168.000
0088		416.0620	Drilled Dowel Bars	EACH	221.000	221.000
0090		455.0605	Tack Coat	GAL	174.000	174.000
0092		460.2000	Incentive Density HMA Pavement	DOL	130.000	130.000

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Line	Item	Item Description	Unit	Total	Qty
0094	460.6224	HMA Pavement 4 MT 58-28 S	TON	200.000	200.000
0096	465.0105	Asphaltic Surface	TON	4.000	4.000
0098	465.0125	Asphaltic Surface Temporary	TON	389.000	389.000
0100	502.0100	Concrete Masonry Bridges	CY	1,327.000	1,327.000
0102	502.3200	Protective Surface Treatment	SY	2,414.000	2,414.000
0104	502.3210	Pigmented Surface Sealer	SY	159.000	159.000
0106	503.0172	Prestressed Girder Type I 72W-Inch	LF	2,567.000	2,567.000
0108	505.0400	Bar Steel Reinforcement HS Structures	LB	21,120.000	21,120.000
0110	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	158,720.000	158,720.000
0112	505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB	3,910.000	3,910.000
0114	505.0904	Bar Couplers No. 4	EACH	8.000	8.000
0116	505.0905	Bar Couplers No. 5	EACH	84.000	84.000
0118	505.0906	Bar Couplers No. 6	EACH	38.000	38.000
0120	505.0908	Bar Couplers No. 8	EACH	24.000	24.000
0122	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	34.000	34.000
0124	506.4000	Steel Diaphragms (structure) 01. B-51-157	EACH	32.000	32.000
0126	509.0301	Preparation Decks Type 1	SY	15.000	15.000
0128	509.0302	Preparation Decks Type 2	SY	6.000	6.000
0130	509.0310.S	Sawing Pavement Deck Preparation Areas	LF	150.000	150.000
0132	509.2000	Full-Depth Deck Repair	SY	20.000	20.000
0134	509.2100.S	Concrete Masonry Deck Repair	CY	4.000	4.000
0136	511.2200	Temporary Shoring Left in Place (structure) 01. B-51-157	SF	338.000	338.000
0138	513.7011	Railing Steel Type C2	LF	382.000	382.000
0140	516.0500	Rubberized Membrane Waterproofing	SY	58.000	58.000
0142	520.8000	Concrete Collars for Pipe	EACH	5.000	5.000
0144	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	3.000	3.000
0146	522.1027	Apron Endwalls for Culvert Pipe Reinforced Concrete 27-Inch	EACH	1.000	1.000
0148	531.1100	Concrete Masonry Ancillary Structures Type NS	CY	13.000	13.000
0150	531.1140	Steel Reinforcement HS Ancillary Structures Type NS	LB	1,420.000	1,420.000
0152	531.2030	Drilling Shaft 30-Inch	LF	72.000	72.000
0154	531.5410	Foundation Single-Shaft Type TF-I (structure) 01. S-51-262	EACH	2.000	2.000
0156	531.5410	Foundation Single-Shaft Type TF-I (structure) 03. S-51-263	EACH	2.000	2.000
0158	532.5330	Truss Cantilever 2-Chord Type III (structure) 06. S-51-616	EACH	1.000	1.000
0160	532.5410	Truss Full Span 2-Chord Type I (structure) 01. S-51-262	EACH	1.000	1.000
0162	532.5410	Truss Full Span 2-Chord Type I (structure) 03. S-51-263	EACH	1.000	1.000
0164	532.5410	Truss Full Span 2-Chord Type I (structure) 05. S-51-615	EACH	1.000	1.000
0166	550.0020	Pre-Boring Rock or Consolidated Materials	LF	680.000	680.000
0168	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	1,020.000	1,020.000
0170	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	4,908.000	4,908.000
0172	602.0410	Concrete Sidewalk 5-Inch	SF	13,883.000	13,883.000
0174	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	120.000	120.000
0176	603.8000	Concrete Barrier Temporary Precast Delivered	LF	575.000	575.000
0178	603.8125	Concrete Barrier Temporary Precast Installed	LF	575.000	575.000
0180	606.0400	Riprap Extra-Heavy	CY	675.000	675.000
0182	608.0005	Storm Sewer Rock Excavation	CY	100.000	100.000
0184	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	355.000	355.000
0186	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	45.000	45.000
0188	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	225.000	225.000
0190	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	182.000	182.000

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Line	Item	Item Description	Unit	Total	Qty
0192	608.0327	Storm Sewer Pipe Reinforced Concrete Class III 27-Inch	LF	82.000	82.000
0194	611.0430	Reconstructing Inlets	EACH	1.000	1.000
0196	611.0530	Manhole Covers Type J	EACH	8.000	8.000
0198	611.0606	Inlet Covers Type B	EACH	1.000	1.000
0200	611.0624	Inlet Covers Type H	EACH	8.000	8.000
0202	611.0639	Inlet Covers Type H-S	EACH	5.000	5.000
0204	611.0642	Inlet Covers Type MS	EACH	1.000	1.000
0206	611.2004	Manholes 4-FT Diameter	EACH	6.000	6.000
0208	611.2005	Manholes 5-FT Diameter	EACH	1.000	1.000
0210	611.2006	Manholes 6-FT Diameter	EACH	1.000	1.000
0212	611.3004	Inlets 4-FT Diameter	EACH	5.000	5.000
0214	611.3230	Inlets 2x3-FT	EACH	16.000	16.000
0216	611.3901	Inlets Median 1 Grate	EACH	1.000	1.000
0218	611.8110	Adjusting Manhole Covers	EACH	1.000	1.000
0220	611.8120.S	Cover Plates Temporary	EACH	5.000	5.000
0222	612.0106	Pipe Underdrain 6-Inch	LF	160.000	160.000
0224	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	350.000	350.000
0226	614.2300	MGS Guardrail 3	LF	134.000	134.000
0228	614.2610	MGS Guardrail Terminal EAT	EACH	2.000	2.000
0230	614.2620	MGS Guardrail Terminal Type 2	EACH	3.000	3.000
0232	616.0700.S	Fence Safety	LF	493.000	493.000
0234	619.1000	Mobilization	EACH	1.000	1.000
0236	620.0300	Concrete Median Sloped Nose	SF	378.000	378.000
0238	624.0100	Water	MGAL	311.000	311.000
0240	625.0100	Topsoil	SY	4,694.000	4,694.000
0242	628.1104	Erosion Bales	EACH	23.000	23.000
0244	628.1504	Silt Fence	LF	621.000	621.000
0246	628.1520	Silt Fence Maintenance	LF	621.000	621.000
0248	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0250	628.1910	Mobilizations Emergency Erosion Control	EACH	6.000	6.000
0252	628.2004	Erosion Mat Class I Type B	SY	156.000	156.000
0254	628.2006	Erosion Mat Urban Class I Type A	SY	1,855.000	1,855.000
0256	628.6005	Turbidity Barriers	SY	824.000	824.000
0258	628.7005	Inlet Protection Type A	EACH	38.000	38.000
0260	628.7015	Inlet Protection Type C	EACH	59.000	59.000
0262	628.7020	Inlet Protection Type D	EACH	10.000	10.000
0264	628.7504	Temporary Ditch Checks	LF	38.000	38.000
0266	628.7555	Culvert Pipe Checks	EACH	4.000	4.000
0268	628.7560	Tracking Pads	EACH	6.000	6.000
0270	628.7570	Rock Bags	EACH	340.000	340.000
0272	629.0210	Fertilizer Type B	CWT	3.000	3.000
0274	630.0140	Seeding Mixture No. 40	LB	9.400	9.400
0276	630.0200	Seeding Temporary	LB	14.100	14.100
0278	631.0300	Sod Water	MGAL	120.000	120.000
0280	631.1000	Sod Lawn	SY	2,684.000	2,684.000
0282	632.0201	Shrubs (species, root, size) 01. Buttonbush CG 3-ft Ht	EACH	12.000	12.000
0284	632.0201	Shrubs (species, root, size) 02. Dogwood Redosier CG 2-ft Ht	EACH	12.000	12.000
0286	632.9101	Landscape Planting Surveillance and Care Cycles	EACH	14.000	14.000
0288	633.5200	Markers Culvert End	EACH	4.000	4.000

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Line		Item	Item Description	Unit	Total	Qty
0290		634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	33.000	33.000
0292		634.0814	Posts Tubular Steel 2x2-Inch X 14-FT	EACH	5.000	5.000
0294		637.1220	Signs Type I Reflective SH	SF	261.500	261.500
0296		637.2210	Signs Type II Reflective H	SF	426.710	426.710
0298		637.2215	Signs Type II Reflective H Folding	SF	52.220	52.220
0300		637.2230	Signs Type II Reflective F	SF	17.000	17.000
0302		638.2101	Moving Signs Type I	EACH	1.000	1.000
0304		638.2102	Moving Signs Type II	EACH	3.000	3.000
0306		638.2601	Removing Signs Type I	EACH	7.000	7.000
0308		638.2602	Removing Signs Type II	EACH	61.000	61.000
0310		638.3000	Removing Small Sign Supports	EACH	24.000	24.000
0312		638.3100	Removing Structural Steel Sign Supports	EACH	2.000	2.000
0314		642.5201	Field Office Type C	EACH	1.000	1.000
0316		643.0300	Traffic Control Drums	DAY	58,479.000	58,479.000
0318		643.0420	Traffic Control Barricades Type III	DAY	4,953.000	4,953.000
0320		643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	203.000	203.000
0322		643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	203.000	203.000
0324		643.0705	Traffic Control Warning Lights Type A	DAY	9,906.000	9,906.000
0326		643.0715	Traffic Control Warning Lights Type C	DAY	13,545.000	13,545.000
0328		643.0800	Traffic Control Arrow Boards	DAY	653.000	653.000
0330		643.0900	Traffic Control Signs	DAY	38,920.000	38,920.000
0332		643.0910	Traffic Control Covering Signs Type I	EACH	13.000	13.000
0334		643.0920	Traffic Control Covering Signs Type II	EACH	5.000	5.000
0336		643.1050	Traffic Control Signs PCMS	DAY	291.000	291.000
0338		643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	19,859.000	19,859.000
0340		643.3280	Temporary Marking Line Removable Tape 10-Inch	LF	1,033.000	1,033.000
0342		643.3850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	68.000	68.000
0344		643.5000	Traffic Control	EACH	1.000	1.000
0346		644.1810	Temporary Pedestrian Barricade	LF	60.000	60.000
0348	**	645.0111	Geotextile Type DF Schedule A	SY	107.000	107.000
0348	**	645.0111	Geotextile Type DF Schedule A	SY	268.000	268.000
0350	**	645.0120	Geotextile Type HR	SY	60.000	60.000
0350	**	645.0120	Geotextile Type HR	SY	946.000	946.000
0352		646.1020	Marking Line Epoxy 4-Inch	LF	1,089.000	1,089.000
0354		646.2020	Marking Line Epoxy 6-Inch	LF	3,315.000	3,315.000
0356		646.3020	Marking Line Epoxy 8-Inch	LF	176.000	176.000
0358		646.4020	Marking Line Epoxy 10-Inch	LF	2,533.000	2,533.000
0360		646.5020	Marking Arrow Epoxy	EACH	25.000	25.000
0362		646.5120	Marking Word Epoxy	EACH	5.000	5.000
0364		646.6120	Marking Stop Line Epoxy 18-Inch	LF	465.000	465.000
0366		646.6464	Cold Weather Marking Epoxy 4-Inch	LF	2,353.000	2,353.000
0368		646.6468	Cold Weather Marking Epoxy 8-Inch	LF	1,008.000	1,008.000
0370		646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	785.000	785.000
0372		646.8120	Marking Curb Epoxy	LF	120.000	120.000
0374		646.8220	Marking Island Nose Epoxy	EACH	6.000	6.000
0376		646.9000	Marking Removal Line 4-Inch	LF	735.000	735.000
0378		646.9100	Marking Removal Line 8-Inch	LF	590.000	590.000
0380		646.9200	Marking Removal Line Wide	LF	84.000	84.000
0382		646.9300	Marking Removal Special Marking	EACH	17.000	17.000

Line		Item	Item Description	Unit	Total	Qty
0384		650.4000	Construction Staking Storm Sewer	EACH	31.000	31.000
0386		650.4500	Construction Staking Subgrade	LF	2,087.000	2,087.000
0388		650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	215.000	215.000
0390		650.6501	Construction Staking Structure Layout (structure) 01. B-51-157	EACH	1.000	1.000
0392		650.7000	Construction Staking Concrete Pavement	LF	2,087.000	2,087.000
0394		650.9000	Construction Staking Curb Ramps	EACH	12.000	12.000
0396		650.9500	Construction Staking Sidewalk (project) 01. 2290-03-73	EACH	1.000	1.000
0398		650.9911	Construction Staking Supplemental Control (project) 01. 2290-03-73	EACH	1.000	1.000
0400		650.9920	Construction Staking Slope Stakes	LF	4,174.000	4,174.000
0402		652.0135	Conduit Rigid Metallic 3-Inch	LF	96.000	96.000
0404		652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,162.000	1,162.000
0406	**	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	699.000	699.000
0406	**	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	1,300.000	1,300.000
0408		652.0800	Conduit Loop Detector	LF	1,682.000	1,682.000
0410		653.0135	Pull Boxes Steel 24x36-Inch	EACH	9.000	9.000
0412		653.0140	Pull Boxes Steel 24x42-Inch	EACH	12.000	12.000
0414		653.0900	Adjusting Pull Boxes	EACH	1.000	1.000
0416		653.0905	Removing Pull Boxes	EACH	20.000	20.000
0418		654.0101	Concrete Bases Type 1	EACH	11.000	11.000
0420		654.0102	Concrete Bases Type 2	EACH	3.000	3.000
0422		654.0105	Concrete Bases Type 5	EACH	5.000	5.000
0424		654.0120	Concrete Bases Type 10-Special	EACH	2.000	2.000
0426		654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	1.000	1.000
0428		655.0230	Cable Traffic Signal 5-14 AWG	LF	707.000	707.000
0430		655.0240	Cable Traffic Signal 7-14 AWG	LF	2,615.000	2,615.000
0432		655.0260	Cable Traffic Signal 12-14 AWG	LF	996.000	996.000
0434		655.0320	Cable Type UF 2-10 AWG Grounded	LF	1,675.000	1,675.000
0436		655.0515	Electrical Wire Traffic Signals 10 AWG	LF	2,304.000	2,304.000
0438		655.0610	Electrical Wire Lighting 12 AWG	LF	1,665.000	1,665.000
0440		655.0700	Loop Detector Lead In Cable	LF	4,133.000	4,133.000
0442		655.0800	Loop Detector Wire	LF	5,592.000	5,592.000
0444		655.0900	Traffic Signal EVP Detector Cable	LF	823.000	823.000
0446		656.0201	Electrical Service Meter Breaker Pedestal (location) 01. STH 38 & Rapids Dr	EACH	1.000	1.000
0448		657.0100	Pedestal Bases	EACH	11.000	11.000
0450		657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	8.000	8.000
0452		657.0310	Poles Type 3	EACH	3.000	3.000
0454		657.0322	Poles Type 5-Aluminum	EACH	4.000	4.000
0456		657.0420	Traffic Signal Standards Aluminum 13-FT	EACH	6.000	6.000
0458		657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	4.000	4.000
0460		657.0609	Luminaire Arms Single Member 4-Inch Clamp 6-FT	EACH	5.000	5.000
0462		657.0610	Luminaire Arms Single Member 4 1/2-Inch Clamp 6-FT	EACH	6.000	6.000
0464		658.0173	Traffic Signal Face 3S 12-Inch	EACH	15.000	15.000
0466		658.0416	Pedestrian Signal Face 16-Inch	EACH	10.000	10.000
0468		658.0500	Pedestrian Push Buttons	EACH	8.000	8.000
0470		658.5070	Signal Mounting Hardware (location) 01. STH 38 & CTH MM/Old Mill Rd	EACH	1.000	1.000
0472		658.5070	Signal Mounting Hardware (location) 02. STH 38 & Rapids Dr	EACH	1.000	1.000
0474		659.1125	Luminaires Utility LED C	EACH	12.000	12.000
0476		659.5000.S	Lamp, Ballast, LED, Switch Disposal by Contractor	EACH	25.000	25.000
0478		661.0201	Temporary Traffic Signals for Intersections (location) 01. STH 38 & CTH MM/Old Mill Rd	EACH	1.000	1.000

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Line	Item	Item Description	Unit	Total	Qty
0480	661.0201	Temporary Traffic Signals for Intersections (location) 02. STH 38 & Rapids Dr	EACH	1.000	1.000
0482	661.0300	Generators	DAY	2.000	2.000
0484	677.0200	Install Camera Assembly	EACH	1.000	1.000
0486	678.0700	Install Wireless Antennas	EACH	1.000	1.000
0488	690.0150	Sawing Asphalt	LF	55.000	55.000
0490	690.0250	Sawing Concrete	LF	2,571.000	2,571.000
0492	715.0502	Incentive Strength Concrete Structures	DOL	7,962.000	7,962.000
0494	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	2,583.000	2,583.000
0496	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 234+79	EACH	1.000	1.000
0498	999.2005.S	Maintaining Bird Deterrent System (station) 01. 234+79	EACH	1.000	1.000
0500	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	4,800.000	4,800.000
0502	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	8,000.000	8,000.000
0504	SPV.0060	Special 03. Adjusting Sanitary Manhole	EACH	1.000	1.000
0506	SPV.0060	Special 04. Utility Line Opening (ULO)	EACH	5.000	5.000
0508	SPV.0060	Special 05. Replace Sign Struture Pole	EACH	1.000	1.000
0510	SPV.0060	Special 06. Temporary Pipe Connection 12-Inch	EACH	1.000	1.000
0512	SPV.0060	Special 30. Install Poles Type 9 Special	EACH	1.000	1.000
0514	SPV.0060	Special 31. Install Poles Type 10 Special	EACH	1.000	1.000
0516	SPV.0060	Special 32. Install Monotube Arms 40-Ft Type 9/10 Sec Pole	EACH	1.000	1.000
0518	SPV.0060	Special 33. Install Monotube Arms 45-Ft Type 9/10 Spec Pole	EACH	1.000	1.000
0520	SPV.0060	Special 34. Install Luminaire Arms Steel 15-Ft	EACH	1.000	1.000
0522	SPV.0060	Special 35. Trnspt & Install State Furn Traffic Signal Cabinet STH 38 & Rapids Dr (CB1)	EACH	1.000	1.000
0524	SPV.0060	Special 36. Trnspt Traffic Signal & Inter Lighting Materials STH 38 & Rapids Dr	EACH	1.000	1.000
0526	SPV.0060	Special 37. Trnspt & Install State Furn EVP Detector Heads STH 38 & Rapids Dr	EACH	1.000	1.000
0528	SPV.0060	Special 38. Salvage & Reuse Signal Equipment	EACH	2.000	2.000
0530	SPV.0060	Special 39. Temp Infrared EVP System STH 38 & CTH MM/Old Mill Rd	EACH	1.000	1.000
0532	SPV.0060	Special 40. Temp Infrared EVP System STH 38 & Rapids Dr	EACH	1.000	1.000
0534	SPV.0090	Special 03. Removing Existing Steel Piling	LF	420.000	420.000
0536	SPV.0195	Special 01. Excavation, Hauling and Disposal of Lead Contaminated Soil	TON	1,269.000	1,269.000

** TOTAL ITEMS WITH UNEQUAL PROJECT ITEM PRICES ACROSS ALL PROJECTS => 10

GRUBBING

STREET	STATION	TO	STATION	LT/RT	GRUBBING 201.0210 SY	GRUBBING 201.0220 ID
STH 38	233+00	-	235+00	LT	76	-
STH 38	233+00	-	235+00	RT	148	-
STH 38	235+00	-	236+00	LT	292	-
STH 38	235+00	-	238+00	RT	629	-
STH 38	239+00	-	241+00	RT	170	-
STH 38	251+00	-	252+00	LT	-	12
			PROJECT TOTAL		1,315	12

REMOVING CONCRETE PAVEMENT

STREET	STAGE	STATION	TO	STATION	204.0100 SY
STH 38	PRE-STAGE	220+50	-	252+25	--
STH 38	STAGE 1	232+25	-	247+50	5,339
STH 38	STAGE 2	232+25	-	244+50	3,936
STH 38	STAGE 3	220+50	-	252+25	--
				PROJECT TOTAL	9,275

3

REMOVING ASPHALTIC SURFACE BUTT JOINTS

STREET	STATION	TO	STATION	204.0115 SY
STH 38	232+50	-	233+83	--
STH 38	235+75	-	244+48	30
			PROJECT TOTAL	30

REMOVING ASPHALTIC SURFACE MILLING

STREET	STATION	TO	STATION	204.0120 SY
STH 38	232+50	-	233+83	--
STH 38	235+75	-	246+15	1,656
			PROJECT TOTAL	1,656

REMOVING CURB & GUTTER

STREET	STAGE	STATION	TO	STATION	204.0150 LF
STH 38	PRE-STAGE	220+50	-	252+25	953
STH 38	STAGE 1	232+25	-	247+50	133
STH 38	STAGE 2	232+25	-	244+50	86
STH 38	STAGE 3	220+50	-	252+25	--
				PROJECT TOTAL	1,172

REMOVING CONCRETE SIDEWALK

STREET	STAGE	STATION	TO	STATION	204.0155 SY
STH 38	PRE-STAGE	220+50	-	252+25	279
STH 38	STAGE 1	232+25	-	247+50	542
STH 38	STAGE 2	232+25	-	244+50	368
STH 38	STAGE 3	220+50	-	252+25	--
				PROJECT TOTAL	1,190

ALL ITEMS CATEGORY 0010

3

REMOVING FENCE

STREET	STATION	TO	STATION	204.0170 LF
STH 38	236+15	-	242+00	608
			PROJECT TOTAL	608

REMOVING MASONRY

STREET	STATION	TO	STATION	204.0185 CY
STH 38	232+50	-	233+83	13
STH 38	235+75	-	244+48	7
			PROJECT TOTAL	20

REMOVING CONCRETE BASES

STREET	STATION	TO	STATION	204.0195 EACH
STH 38	232+50	-	233+83	0
STH 38	235+75	-	244+48	11
			PROJECT TOTAL	11

3

REMOVING STORM SEWER STRUCTURES

STRUCTURE NO.	STREET	STATION	LOCATION	REMOVING MANHOLES 204.0210 EACH	REMOVING INLETS 204.0220 EACH
201	STH 38	233+24	47.6' LT	--	1
202	STH 38	236+00	39.4' LT	1	--
203	STH 38	236+03	37.0' RT	--	1
204	STH 38	239+91	22.9' RT	--	1
205	STH 38	241+49	44.8' RT	--	1
206	STH 38	241+76	9.1' LT	--	1
207	STH 38	240+62	62.5' LT	--	1
208	STH 38	241+03	95.3' LT	--	1
209	STH 38	240+64	113.1' LT	1	--
210	STH 38	241+56	179.9' LT	--	1
			PROJECT TOTAL	2	8

ABANDONING SEWER

STREET	STATION	LOCATION	204.0291.S CY
STH 38	238+65	42 - 64- LT	0.6
		PROJECT TOTAL	0.6

REMOVING LIGHTING UNITS

STREET	STATION	TO	STATION	204.9060.S.03 EACH
STH 38	232+50	-	233+83	0
STH 38	235+75	-	244+48	11
			PROJECT TOTAL	11

ALL ITEMS CATEGORY 0010

REMOVING STORM SEWER

STREET	STATION	TO	STATION	204.0245.01 REMOVING STORM SEWER 10" LF	204.0245.02 REMOVING STORM SEWER 12" LF	204.0245.03 REMOVING STORM SEWER 15" LF	204.0245.04 REMOVING STORM SEWER 18" LF	204.0245.05 REMOVING STORM SEWER 24" LF	204.0245.06 REMOVING STORM SEWER 27" LF	204.0245.07 REMOVING STORM SEWER 36" LF	204.0245.08 REMOVING STORM SEWER 48" LF
STH 38	232+50	-	233+83	0	0	0	0	0	0	0	150
STH 38	235+75	-	244+48	27	144	9	322	17	74	116	0
PROJECT TOTAL				27	144	9	322	17	74	116	150

DIVISION	FROM/TO STATION	205.0100 COMMON EXCAVATION CY (1) CUT (2)	205.0100 COMMON EXCAVATION CY (1) EBS EXCAVATION (3)	SALVAGED/UNUSABLE PAVEMENT MATERIAL CY (4)	AVAILABLE MATERIAL CY (5)	205.0200 ROCK EXCAVATION (7)	EXPANDED ROCK (12) FACTOR 1.10	UNEXPANDED FILL CY	EXPANDED FILL CY (13) FACTOR 1.30	MASS ORDINATE +/- CY (14)	WASTE CY	COMMENT
DIVISION 1												
CROSSOVERS & TEMP PAVEMENT (PRESTAGE)		567	0	0	567	0	0	0	0	567	567	
STH 38 (STAGE 1)	232+50/244+38	4,195	0	1,365	2,830	0	0	321	417	2,413	2,413	
STH 38 (STAGE 2)	232+50/244+38	4,346	0	1,349	2,997	165	182	312	170	2,827	2,827	
RAPIDS DRIVE	50+40/52+79	1,782	0	696	1,086	0	0	0	0	1,086	1,086	
STH 38 (STAGE 3)		0	0	0	0	0	0	125	163	-163	0	
UNDISTRIBUTED		0	0	0	0	100	110	0	0	110	110	
DIVISION 1 SUBTOTAL		10,890	0	3,410	7,480	265	292	758	749	6,841	7,003	
GRAND TOTAL		10,890	0	3,410	7,480	265	292	758	749	6,841	7,003	
TOTAL COMMON EXC		10,890										

NOTES:

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

(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL

(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL

(7) ROCK EXCAVATION ITEM NUMBER 205.0200

(12) EXPANDED ROCK FACTOR = 1.10

(13) EXPANDED FILL FACTOR = 1.30

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

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

ALL ITEMS CATEGORY 0010

3

BASE AGGREGATE DENSE 1 1/4-INCH

STREET	STAGE	STATION	TO	STATION	305.0120 TON
STH 38	PRE-STAGE	220+50	-	252+25	990
STH 38	STAGE 1	232+25	-	247+50	2,358
STH 38	STAGE 2	232+25	-	244+50	1,556
STH 38	STAGE 3	220+50	-	252+25	--
		PROJECT	TOTAL		4,904

BASE AGGREGATE OPEN GRADED

STREET	STA	TO	STA	310.0110 TON
STH 38	232+50	-	233+83	2.7
STH 38	235+75	-	244+48	19.0
	PROJECT	TOTAL		22

SELECT CRUSHED MATERIAL

STREET	STAGE	STA	TO	STA	312.0110 TON
STH 38	PRE-STAGE	220+50	-	252+25	--
STH 38	STAGE 1	232+25	-	247+50	--
STH 38	STAGE 2	232+25	-	244+50	977
STH 38	STAGE 3	220+50	-	252+25	8,813
		PROJECT	TOTAL		9,790

3

WATER

STREET	STAGE	624.0100 MGAL
STH 38	PRE-STAGE	20
STH 38	STAGE 1	47
STH 38	STAGE 2	51
STH 38	STAGE 3	176
UNDISTRIBUTED		17
PROJECT TOTAL		311

NOTE: WATER IS FOR BASE PLACEMENT

BASE PATCHING

STREET	STATION	TO	STATION	390.0100 REMOVING PAVEMENT FOR BASE PATCHING CY	390.0305 BASE PATCHING CONCRETE CY
STH 38	232+50	-	233+83	--	--
STH 38	235+75	-	244+48	8	8
	PROJECT	TOTAL		8	8

CONCRETE PAVEMENT 7 1/2-INCH

STREET	STAGE	415.0075 SY
STH 38	PRE-STAGE	0
STH 38	STAGE 1	5,050
STH 38	STAGE 2	3,184
STH 38	STAGE 3	0
PROJECT TOTAL		8,234

CONCRETE PAVEMENT APPROACH SLAB

STREET	STATION	415.0410 SY
STH 38	PRE-STAGE	0
STH 38	STAGE 1	220
STH 38	STAGE 2	119
STH 38	STAGE 3	0
PROJECT TOTAL		339

DRILLED TIE BARS AND DOWEL BARS

STREET	STATION	TO	STATION	DRILLED TIE BARS 416.0610 EACH	DRILLED DOWEL BARS 416.0620 EACH
STH 38	232+50	-	233+83	95	67
STH 38	235+75	-	244+48	73	154
	PROJECT	TOTAL		168	221

ALL ITEMS CATEGORY 0010

3

ASPHALTIC PAVEMENT

STREET	STATION	TO	STATION	455.0605 TACK COAT (GAL)	460.6224 HMA PAVEMENT 4 MT 58-28 S (TON)
STH 38	232+50	-	233+83	0	0
STH 38	235+75	-	246+15	174	200
PROJECT TOTALS				174	200

ASPHALTIC SURFACE

STREET				LOCATION	465.0105 TON
STH 38	232+50	-	233+83	BUTT JOINTS	--
STH 38	235+75	-	246+15	BUTT JOINTS	4
PROJECT TOTALS					4

ASPHALTIC SURFACE TEMPORARY

STREET		STATION	TO	STATION	465.0125 TON
STH 38	PRE-STAGE	220+50	-	252+25	377
STH 38	STAGE 1	232+25	-	247+50	12
STH 38	STAGE 2	232+25	-	244+50	--
STH 38	STAGE 3	220+50	-	252+25	--
PROJECT TOTALS					389

APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE

STREET	STATION	TO	STATION	24-INCH 522.1024 EACH	27-INCH 522.1027 EACH
STH 38	232+50	-	233+83	0	0
STH 38	235+75	-	244+48	3	1
			PROJECT TOTAL	3	1

CONCRETE CURB & GUTTER 30-INCH TYPE A

STREET	STAGE	STATION	TO	STATION	601.0409 LF
STH 38	PRE-STAGE	220+50	-	252+25	--
STH 38	STAGE 1	232+25	-	247+50	2,518
STH 38	STAGE 2	232+25	-	244+50	1,794
STH 38	STAGE 3	220+50	-	252+25	596
				PROJECT TOTAL	4,908

CONCRETE SIDEWALK 5-INCH

STREET	STATION	TO	STATION	602.0410 SF
STH 38	232+50	-	233+83	1,560
STH 38	235+75	-	244+48	12,323
			PROJECT TOTAL	13,883

CURB RAMP DETECTABLE WARNING FIELD YELLOW

STREET	STATION	TO	STATION	602.0505 SF
STH 38	232+50	-	233+83	--
STH 38	235+75	-	244+48	120
			PROJECT TOTAL	120

ALL ITEMS CATEGORY 0010

3

CONCRETE BARRIER TEMPORARY PRECAST

STREET		STA	TO	STA	603.8000 DELIVERED LF	603.8125 INSTALLED LF
STH 38	STAGE 1	233+63	-	236+50	287.5	287.5
STH 38	WINTER SHUTDOWN	233+25	-	236+122	287.5	287.5
		PROJECT		TOTAL	575	575

3

STORM SEWER SUMMARY

ITEM NUMBER	ITEM	TOTAL	
520.8000	Concrete Collar for Pipe	5	EACH
608.0005	Storm Sewer Rock Excavation - Undistributed	100	CY
608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	355	LF
608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	45	LF
608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	225	LF
608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	182	LF
608.0327	Storm Sewer Pipe Reinforced Concrete Class III 27-Inch	82	LF
611.0430	Reconstructing Inlets	1	EACH
611.0530	Manhole Covers Type J	8	EACH
611.0606	Inlet Covers Type B	1	EACH
611.0624	Inlet Covers Type H	8	EACH
611.0639	Inlet Covers Type H-S	5	EACH
611.0642	Inlets Cover Type MS	1	EACH
611.2004	Manholes 4-FT Diameter	6	EACH
611.2005	Manholes 5-FT Diameter	1	EACH
611.2006	Manholes 6-FT Diameter	1	EACH
611.3004	Inlets 4-FT Diameter	5	EACH
611.3230	Inlets 2x3-FT	16	EACH
611.3901	Inlets Median 1 Grate	1	EACH
SPV.0060.06	Temporary Pipe Connection 12-Inch	1	EACH

ADJUSTING MANHOLE COVERS

STREET	STATION	OFFSET	611.8110 EACH
STH 38	241+50	44.9' LT	1
		PROJECT TOTALS	1

COVER PLATES TEMPORARY

STREET	STATION	COVER PLATES TEMPORARY 611.8120.S EACH
STH 38	239+90 RT	1
UNDISTRIBUTED		4
	PROJECT TOTAL	5

ALL ITEMS CATEGORY 0010

3

PIPE UNDERDRAIN 6 INCH

STREET	STATION	TO	STATION	612.0106 LF
STH 38	232+50	-	233+83	20
STH 38	235+75	-	244+48	140
PROJECT TOTAL				160

MGS GUARDRAIL 3

STREET	STATION	TO	STATION	614.2300 LF
STH 38	232+50	-	233+83	0
STH 38	235+75	-	244+48	134
PROJECT TOTAL				134

MGS GUARDRAIL TERMINAL

STREET	STATION	TO	STATION	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH
STH 38	232+50	-	233+83	0	0
STH 38	235+75	-	244+48	2	3
PROJECT TOTAL				2	3

3

FENCE SAFETY

STREET	STATION	TO	STATION	616.0700.S SF
STH 38	233+00	-	236+25	493
PROJECT TOTAL				493

CONCRETE MEDIAN SLOPED NOSE

STREET	STATION	TO	STATION	620.0300 SF
STH 38	232+50	-	233+83	--
STH 38	235+75	-	244+48	378
PROJECT TOTAL				378

EROSION CONTROL MOBILIZATIONS

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT 2290-03-73	2	6
PROJECT TOTAL	2	6

EROSION CONTROL

STREET	STAGE	625.0100 TOPSOIL SY	628.1104 EROSION BALES EACH	628.2004 EROSION MAT CLASS I TYPE B SY	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	628.7570 ROCK BAGS EACH	629.0210 FERTILZIER TYPE B CWT	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY
STH 38	PRE-STAGE	151	0	0	151	0	0.1	0.3	0.5	3	0	0
	STAGE 1	1,346	10	0	648	175	0.8	2.7	4.0	23	31	698
	STAGE 2	2,217	10	156	857	122	1.4	4.4	6.7	37	54	1,205
	STAGE 3	607	0	0	0	0	0.4	1.2	1.8	10	27	607
UNDISTRIBUTED		374	3	0	200	44	0	1	1	0	8	175
PROJECT TOTAL		4,694	23	156	1,855	340	3.0	9.4	14.1	73	120	2,684

ALL ITEMS CATEGORY 0010

3

SILT FENCE

STREET	STAGE	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
STH 38	PRE-STAGE	0	0
	STAGE 1	373	373
	STAGE 2	124	124
	STAGE 3	0	0
UNDISTRIBUTED		124	124
	PROJECT TOTALS	621	621

TURBIDITY BARRIERS

STREET	STAGE	628.6005 SY
STH 38	PRE-STAGE	0
	STAGE 1	389
	STAGE 2	270
	STAGE 3	0
UNDISTRIBUTED		165
	PROJECT TOTAL	824

3

INLET PROTECTION

STREET	STAGE	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7020 INLET PROTECTION TYPE D EACH
STH 38	PRE-STAGE	0	4	0
	STAGE 1	22	21	7
	STAGE 2	8	18	1
	STAGE 3	0	4	0
UNDISTRIBUTED		8	12	2
	PROJECT TOTA	38	59	10

PIPE & DITCH CHECKS

STREET	STAGE	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH
STH 38	PRE-STAGE	--	--
	STAGE 1	20	0
	STAGE 2	10	3
	STAGE 3	0	0
UNDISTRIBUTED		8	1
	PROJECT TOTAL	38	4

TRACKING PADS

STREET	STATION	TO	STATION	628.7560 EACH
UNDISTRIBUTED				6
			PROJECT TOTAL	6

SHRUBS

LOCATION	632.0201.01 SHRUBS BUTTONBUSH CG 2-FT HT EACH	632.0201.02 SHRUBS DOGWOOD REDOSIER CG 2-FT HT EACH	632.9101 LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES EACH
EAST ABUTMENT	8	8	-
WEST ABUTMENT	4	4	-
UNDISTRIBUTED	-	-	14
PROJECT TOTALS	12	12	14

MARKERS CULVERT END

STREET	STATION	TO	STATION	633.5200 EACH
STH 38	232+50	-	233+83	0
STH 38	235+75	-	244+48	4
			PROJECT TOTAL	4

ALL ITEMS CATEGORY 0010

3

TRAFFIC CONTROL -MARKING

LOCATION	643.3180 TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH LF	643.3280 TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH LF	643.3850 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH LF	646.6464 COLD WEATHER MARKING EPOXY 4-INCH LF	646.6468 COLD WEATHER MARKING EPOXY 8-INCH LF	646.9000 MARKING REMOVAL LINE 4-INCH LF	646.9100 MARKING REMOVAL LINE 8-INCH LF	646.9200 MARKING REMOVAL LINE WIDE LF	646.9300 MARKING REMOVAL SPECIAL MARKING EACH
PRESTAGE	2,406	192				630	520	84	11
STAGE 1	11,173	269	44			25	70		6
WINTER SHUTDOWN				2,353	1,008				
STAGE 2	6280	572	24			80			
STAGE 3	1,025								
	19,859	1,033	68	2,353	1,008	735	590	84	17

3

TEMPORARY PEDESTRIAN BARRICADE

STREET	LOCATION	STATION	TO	STATION	644.1810 LF
STH 38	PRE-STAGE	220+50	-	252+25	--
STH 38	STAGE 1	232+25	-	247+50	6
STH 38	STAGE 2	232+25	-	244+50	36
STH 38	STAGE 3	220+50	-	252+25	--
	UNDISTRIBUTED				18
	PROJECT TOTALS				60

TRAFFIC CONTROL

LOCATION	638.2101 MOVING SIGNS TYPE I EACH	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I EACH	CYCLES	SIGNS	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	CYCLES	SIGNS	643.5000 TRAFFIC CONTROL EACH
PRESTAGE		2	1	2				
STAGE 2		6	1	6				
STAGE 3	1							
UNDISTRIBUTED		5	1	5	5	1	5	1
PROJECT TOTALS	1			13			5	1

ALL ITEMS CATEGORY 0010

TRAFFIC CONTROL

LOCATION	DAYS	DRUMS	643.0300 TRAFFIC CONTROL DRUMS DAY	TYPE III	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS EACH	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES EACH	A light	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	C light	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	AB	643.0800 TRAFFIC CONTROL ARROW BOARDS DAY	Signs	643.0900 TRAFFIC CONTROL SIGNS DAY	PCMS	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY
PRESTAGE	22	319	7,018	18	396			36	792	51	1,122	3	66	54	1,188	5	35
STAGE 1	145	218	31,610	21	3,045	129	129	42	6,090	57	8,265	2	290	163	23,635	4	28
STAGE 2	93	197	18,321	15	1,395	74	74	30	2,790	42	3,906	3	279	148	13,764	4	28
STAGE 3	9	170	1,530	13	117			26	234	28	252	2	18	37	333		
DETOUR	10															20	200
PROJECT TOTALS		904	58,479	67	4,953	203	203	134	9,906	178	13,545	10	653	402	38,920	33	291

GEOTEXTILE

STREET	STATION	TO	STATION	GEOTEXTILE TYPE DF SCHEDULE A 645.0111 SY	GEOTEXTILE TYPE HR 645.0120 SY
STH 38	232+50	-	233+83	14	30
STH 38	235+75	-	244+48	93	30
		PROJECT TOTAL		107	60

ALL ITEMS CATEGORY 0010

3

PAVEMENT MARKING

STREET	646.1020 MARKING LINE EPOXY 4-INCH WHITE LF	646.1020 MARKING LINE EPOXY 4-INCH YELLOW LF	646.2020 MARKING LINE EPOXY 6-INCH BLACK LF	646.2020 MARKING LINE EPOXY 6-INCH WHITE LF	646.3020 MARKING LINE EPOXY 8-INCH LF	646.4020 MARKING LINE EPOXY 10-INCH LF	646.5020 MARKING ARROW EPOXY EACH	646.5120 MARKING WORD EPOXY EACH	646.6120 MARKING STOP LINE EPOXY 18-INCH LF	646.7420 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH LF	646.8120 MARKING CURB EPOXY LF	646.8220 MARKING ISLAND NOSE EPOXY EACH
STH 38	871	218	750	2565	176	2533	25	5	465	785	120	6
PROJECT TOTAL	1,089		3,315		176	2,533	25	5	465	785	120	6

3

CONSTRUCTION STAKING ITEMS

ITEM	QUANTITY	UNIT	DESCRIPTION
650.4000	31	EACH	CONSTRUCTION STAKING STORM SEWER
650.4500	2,087	LF	CONSTRUCTION STAKING SUBGRADE
650.5500	215	LF	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER
650.6501	1	EACH	CONSTRUCTION STAKING STRUCTURE LAYOUT (B-51-157)
650.7000	2087	LF	CONSTRUCTION STAKING CONCRETE PAVEMENT
650.9000	12	EACH	CONSTRUCTION STAKING CURB RAMPS
650.9500	1	EACH	CONSTRUCTION STAKING SIDEWALK (2290-03-73)
650.9911	1	EACH	CONSTRUCTION STAKING SUPLEMENTAL CONTROL (2290-03-73)
650.9920	4,174	LF	CONSTRUCTION STAKING SLOPE STAKES

LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR

STREET	STATION	TO	STATION	659.5000.S EACH
STH 38	232+50	-	233+83	0
STH 38	235+75	-	244+48	11
			PROJECT TOTAL	11

SAWCUT

STREET	STAGE	SAWING ASPHALT 690.0150 LF	SAWING CONCRETE 690.0250 LF
STH 38	PRE-STAGE	--	2,006
	STAGE 1	55	410
	STAGE 2	--	155
	STAGE 3	--	--
	PROJECT TOTAL	55	2,571

INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM (234+79)

STREET	999.2000.S EACH
STH 38	1
PROJECT TOTAL	1

ALL ITEMS CATEGORY 0010

ADJUSTING SANITARY MANHOLES

STREET	STATION	OFFSET	SPV.0060.03 EACH
STH 38	239+55	40.8' RT	1
		PROJECT TOTALS	1

UTILITY LINE OPENING (ULO)

STREET	SPV.0060.04 EACH
UNDISTRIBUTED	5
PROJECT TOTAL	5

3

EXCAVATION, HAULING, AND DISPOSAL OF LEAD CONTAMINATED SOIL

STREET	STATION	TO	STATION	LOCATION	SPV.0195.01 TON
STH 38	233+30	-	233+83	B-51-157 EXCAVATION	768
STH 38	233+30	-	233+83	GENERAL EXCAVATION	98
STH 38	233+30	-	233+50	STORM SEWER EXCAVATION	110
UNDISTRIBUTED					293
				PROJECT TOTAL	1,269

ALL ITEMS CATEGORY 0010

TYPE I & II PERMANENT SIGNING REMOVALS **2290-03-73**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	REMARKS / NEW SIGN LOCATION	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]
1R	R2-1		1		LIGHT POLE		
2R	NONE	RAPIDS DR RIGHT ONLY ARROW			ON S-51-245 STRUCTURE BEING REMOVED	1	
3R	NONE	RAPIDS DR RIGHT ONLY ARROW			ON S-51-245 STRUCTURE BEING REMOVED	1	
4R	NONE	SOUTH 38 AHEAD ARROW			ON S-51-245 STRUCTURE BEING REMOVED	1	
5R	NONE	DO NOT CHANGE LANES	1		LIGHT POLE		
6R	J4-1		1		ON S-51-245 POLE		
7R	NONE	MM ONLY ARROW			ON S-51-246 STRUCTURE BEING REMOVED	1	
8R	NONE	MM ONLY ARROW			ON S-51-246 STRUCTURE BEING REMOVED	1	
9R	NONE	NORTH 38 AHEAD ARROW			ON S-51-246 STRUCTURE BEING REMOVED	1	
10R	R71-D		1		LIGHT POLE		
11R	R3-8LL		1		ON SIGN STRUCTURE S-51-244 UPRIGHT		
12R	R7-1R		1	1			
13R	J4-1		1		LIGHT POLE		
14R	I2-3	RACINE POPULATION 78860	1	2			
15R	R3-5R		1		ON S-51-10 STRUCTURE BEING REMOVED		
16R	NONE	RAPIDS DR	1		ON S-51-10 STRUCTURE BEING REMOVED		
17R	R3-5R		1		ON S-51-10 STRUCTURE BEING REMOVED		
18R	NONE	38 DOWN ARROW	1		ON S-51-10 STRUCTURE BEING REMOVED		
19R	R7-1D		1		LIGHT POLE		
20R	W12-1D		1	1			
21R	R3-4		1		SIGNAL POLE		
22R	R1-1F		1		SIGNAL POLE		
23R	R1-1F		1		SIGNAL POLE		
24R	W5-52R		1		SIGNAL POLE		
25R	NONE	DOWNTOWN HARBOR	1		LIGHT POLE		
		AHEAD ARROW					
26R	R7-1D		1		LIGHT POLE		
27R	R2-1	SPEED LIMIT 35	1	1			
28R	R4-7		1		SIGNAL POLE		
29R	W12-1D		1	1			
30R	R1-1		1	1			

SHEET: 1 OF 2

TYPE I & II PERMANENT SIGNING REMOVALS **2290-03-73**

SIGN NO.	SIGN CODE	SIGN MESSAGE	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	REMARKS / NEW SIGN LOCATION	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]
31R	R1-1F		1		SIGNAL POLE		
32R	R1-1F		1		SIGNAL POLE		
33R	R5-1		1		SIGNAL POLE		
34R	J3-1		1		ON TROMBONE ARM OF SIGNAL		
35R	R3-5L		1		ON S-51-10 STRUCTURE BEING REMOVED		
36R	R10-11B		1		SIGNAL POLE		
37R	R10-11B		1		SIGNAL POLE		
38R	R12-53		1		LIGHT POLE		
39R	J2-1		1		LIGHT POLE		
40R	W3-3		1	1			
41R	J2-2		1	1			
42R	J2-2		1	1			
43R	R7-1D		1		ON UPRIGHT OF SIGN STRUCTURE S-51-9		
44R	M1-5A	CTH MM	1		ON S-51-9 OVERHEAD STRUCTURE TO BE REMOVED		
45R	NONE	MM WITH DOWN ARROW	1		ON S-51-9 OVERHEAD STRUCTURE TO BE REMOVED		
46R	NONE	38 WITH DOWN ARROW	1		ON S-51-9 OVERHEAD STRUCTURE TO BE REMOVED		
47R	NONE	RAPIDS DRIVE WITH DOWN ARROW	1		ON S-51-9 OVERHEAD STRUCTURE TO BE REMOVED		
48R	R12-53		1		ON S-51-9 OVERHEAD STRUCTURE TO BE REMOVED		
49R	R7-1D		1		LIGHT POLE		
50R	R4-7		1	1			
51R	J3-2		1	1			
52R	J3-2		1	1			
53R	R7-1D		1		LIGHT POLE		
54R	R1-1F		1		SIGNAL POLE		
55R	R5-1		1	1			
56R	J2-3		1	2			
57R	J2-1		1	1			
58R	J2-1		1	1			
59R	R4-7		1	1			
60R	R3-8LR		1	1			
61R	R7-1D		1		LIGHT POLE		
62R	J3-1		1		LIGHT POLE		
63R	R1-1F		1		SIGNAL POLE		
64R	R4-7		1		SIGNAL POLE SHEET 3		
65R	R5-2		1		ON S-51-607 SIGN STRUCTURE OVERHEAD - STRUCTURE TO REMAIN. SHEET 5		
UNDISTRIBUTED			2	2		1	2
TOTALS			61	22	--	7	2

SHEET: 1 OF 15

TYPE I & II PERMANENT SIGNING 2290-03-73

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]
1	D16-1 MOD	38 - MM ARROW UP										MOUNT ON S-51-616 - I BEAMS INCIDENTAL. SHEET 6	6 X 4.5	27.00
2	D16-1A	NORTH 38 ONLY ARROW RIGHT										MOUNT ON S-51-616 - I BEAMS INCIDENTAL. SHEET 6	3 X 6	18.00
3	D16-1L	MM ONLY ARROW LEFT										MOUNT ON S-51-262 - I BEAMS INCIDENTAL - SHEET 2	3 X 5	15.00
4	D16-1L	MM ONLY ARROW LEFT										MOUNT ON S-51-262 - I BEAMS INCIDENTAL - SHEET 2	3 5	15.00
5	D16-1A	NORTH 38 ONLY ARROW UP										MOUNT ON S-51-262 - I BEAMS INCIDENTAL - SHEET 2	3 X 6	18.00
6	NONE	NORTH 38 , OLD MILL RD COMBINATION UP/RIGHT ARROW										MOUNT ON S-51-262 - I BEAMS INCIDENTAL - SHEET 2	7 X 6.5	45.50
7	D16-1L	RAPIDS DR ONLY ARROW LEFT										MOUNT ON S-51-263 - I BEAMS INCIDENTAL - SHEET 2	4 X 5	20.00
7A	R5-2(2M)		24 X 24	4.000								MOUNT ON S-51-263 - I BEAMS INCIDENTAL - SHEET 2		
8	D16-1L	RAPIDS DR ONLY ARROW LEFT										MOUNT ON S-51-263 - I BEAMS INCIDENTAL - SHEET 2	4 X 5	20.00
9	D16-1A	SOUTH 38 ONLY UP ARROW										MOUNT ON S-51-263 - I BEAMS INCIDENTAL - SHEET 2	3 X 6	18.00
10	D16-1 MOD	38 - MM ARROW UP										MOUNT ON S-51-615 - I BEAMS INCIDENTAL - SHEET 4	6 X 4.5	27.00
11	D16-1A	NORTH 38 ONLY UP ARROW										MOUNT ON S-51-615 - I BEAMS INCIDENTAL - SHEET 4	3 X 6	18.00
12	D16-1R	RAPIDS DR ONLY ARROW RIGHT										MOUNT ON S-51-615 - I BEAMS INCIDENTAL - SHEET 4	4 X 5	20.00
13	R5-2(2M)		24 X 24	4.000								MOUNT ON S-51-607 - I BEAMS INCIDENTAL - SHEET 5		
14	NONE	ROOT RIVER					1		2					
15	R2-1(2M)	35 MPH	30 X 36	7.500					1					
16	R3-8LLAF		72 X 30	15.000					2					
17	R7-1D(2M)		24 X 30	5.000					1					
18	J4-1(2M)		24 X 36	6.000					1					
	M3-1		24 X 12											
	M1-6	STH 38	24 X 24											
19	D1-1	OLD MILL RD					1	2	2					
20	NONE	ROOT RIVER					1					LIGHT POLE. MOVE TO UPRIGHT OF S-51-262		
21	R3-8LL(2M)		36 X 30	7.500								LIGHT POLE		
22	R7-1D(2M)		24 X 30	5.000					1					
23	J4-1(2M)		24 X 36	6.000					1					
	M3-3		24 X 12											
	M1-6	STH 38	24 X 24											
24	I2-3(2M)	RACINE POPULATION 78860	60 X 24	10.000					2					
25	R7-1D(2M)		24 X 30	5.000					1					
26	R6-3A(2M)		30 X 24	5.000								SIGNAL POLE. MOUNT ABOVE R1-1F		
27	R6-3A(2M)		30 X 24	5.000								SIGNAL POLE. MOUNT ABOVE R1-1F		
28	R1-1F(2M)		36 X 36		7.460							SIGNAL POLE		
29	R1-1F(2M)		36 X 36		7.460							SIGNAL POLE		
30	R3-4(2M)		36 X 36	9.000								LIGHT POLE		

SHEET: 1 OF 3

TYPE I & II PERMANENT SIGNING 2290-03-73

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.]	x	H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]
31	M1-94H	RAPIDS DRIVE ARROW LEFT	90	X	18	11.250								MOUNT ON SIGNAL ARM				
32	R4-7(2M)		24	X	30	5.000					1							
33	R3-4(2M)		36	X	36	9.000							32					
34	D1-1	DOWNTOWN HARBOR ARROW UP	72	X	24	12.000					2							
35	R2-1(2M)	SPEED LIMIT 35	30	X	36	7.500					1							
36	R2-1(2M)	SPEED LIMIT 35	30	X	36	7.500					1							
37	R7-1D(2M)		24	X	30	5.000							36					
38	R1-1F(2M)		36	X	36		7.460							SIGNAL POLE				
39	R6-3A(2M)		30	X	24	5.000								SIGNAL POLE MOUNT ABOVE R1-1F				
40	R1-1F(2M)		36	X	36		7.460							SIGNAL POLE				
41	R6-2L(2M)		30	X	36	7.500								SIGNAL POLE				
42	W12-1D(2M)		24	X	24			4.000			1			2 FOOT MOUNTING HEIGHT				
43	R1-1 (2M)		36	X	36	7.460								LIGHT POLE				
44	R5-1(2M)		36	X	36	9.000								SIGNAL POLE				
45	R4-7(2M)		24	X	30	5.000								SIGNAL POLE				
46	M1-94H	RAPIDS DR ARROW RIGHT	90	X	18	11.250								MOUNT ON SIGNAL ARM . I BEAM INCIDENTAL				
47	J3-1(2M)	38 ONLY ARROW DOWN	24	x	69	11.500								MOUNT ON SIGNAL ARM				
	M1-6	STH 38	24	X	24													
	M4-5 MODIFIED	ONLY	24	X	12													
	M6-1		21	X	21													
48	J3-1(2M)	38, MM ARROW DOWN	24	X	69	1.500								MOUNT ON SIGNAL ARM. I BEAM INCIDENTAL				
	M1-6	STH 38	24	X	24													
	M1-5A	CTH MM	24	X	24													
	M6-1		21	X	21													
49	J2-1(2M)		24	X	45	7.500					1							
	M1-5A	CTH MM	24	X	24													
	M5-1L		21	X	21													
50	R12-53(2M)		24	X	30	5.000							49					
51	W3-3(2M)		36	X	36			9.000			1							
52	R10-11B(2M)		24	X	24	4.000								SIGNAL POLE				
53	R10-11B(2M)		24	X	24	4.000								SIGNAL POLE				
54	R3-8LL(2M)		36	X	30	7.500								LIGHT POLE				
55	J2-2(2M)		48	X	48	16.000					1							
	M1-5A	CTH MM	24	X	24													
	M4-20L		24	X	24													
	M1-6	STH 38	24	X	24													
	M4-20 C	CENTER LANE																
56	J2-2(2M)		48	X	48	16.000					1							
	M1-5A	CTH MM	24	X	24													
	M4-2OL		24	X	24													
	M1-6	STH 38	24	X	24													
	M4-20C	CENTER LANE	24	X	24													
57	R7-1D(2M)		24	X	30	5.000								MOUNT ON UPRIGHT OF S-51-615				
58	M1-5A	CTH MM	24	X	24									MOUN ON UPRIGHT OF S-51-615 MEDIAN				
59	R12-53(2M)		24	X	30	5.000								MOUN ON UPRIGHT OF S-51-615 MEDIAN				
60	R7-1D(2M)		24	X	30	5.000								LIGHT POLE				

SHEET: 2 OF 3

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	MISCELLANEOUS QUANTITIES – PERMANENT SIGNING	SHEET: 174	E

TYPE I & II PERMANENT SIGNING 2290-03-73

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0814 POSTS TUBULAR STEEL 2 X 2 INCH X 14 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.]	x	H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]
61	R4-7(2M)		24	X	30	5.000								SIGNAL POLE				
62	J3-3(2M)		72	X	57	28.500					2							
	M3-3		24	X	12													
	M1-6	STH 38	24	X	24													
	M3-1		24	X	12													
	M1-6	STH 38	24	X	24													
	M6-2		21	X	21													
	M1-5A	CTH MM	24	X	24													
	M6-2		21	X	21													
63	R5-1(2M)		36	X	36	9.000					1							
64	J2-3(2M)		72	X	57	28.500					2							
	M3-3		24	X	12													
	M1-6	STH 38	24	X	24													
	M5-1L		21	X	21													
	M4-5		24	X	12													
	M1-5A	CTH MM	24	X	24													
	M6-1		21	X	21													
	M3-1		24	X	12													
	M1-6	STH 38	24	X	24													
	M5-1R		21	X	21													
65	J3-1(2M)		24	X	60	10.000								UPRIGHT OF S-51-616				
	M3-1		24	X	12													
	M1-6	STH 38	24	X	24													
	M4-20R		24	X	24													
66	R4-7(2M)		24	X	30							1						
67	R3-8LRR(2M)		54	X	30	11.250						2						
68	R7-1D(2M)		24	X	30	5.000								LIGHT POLE				
69	J3-1(2M)		24	X	60	10.000								LIGHT POLE				
	M3-1		24	X	12													
	M1-6	STH 38	24	X	24													
	M4-20R		24	X	24													
70	J3-2(2M)		48	X	60	20.000					2							
	M4-5		24	X	12													
	M1-5A	CTH MM	24	X	24													
	M4-20L		24	X	24													
	M3-1		24	X	12													
	M1-6	STH 38	24	X	24													
	M4-20R		24	X	24													
71	W12-1D(2M)		24	X	24			4.000			1			2 FOOT MOUNTING HEIGHT				
72	R1-1F(2M)		36	X	36		7.460							SIGNAL POLE				
73	R7-1D(2M)		24	X	30	5.000					1							
74	R1-1F(2M)		36	X	36		7.460							SIGNAL POLE				
75	R1-1F(2M)		36	X	36		7.460							SIGNAL POLE				
76	R6-3A(2M)		30	X	24	5.000							75	MOUNT ABOVE R1-1F				
77	NONE	BOTH LANES	30	X	24	5.000								MOUNT ON S-51-257 - I BEAMS INCIDENTAL				
UNDISTRIBUTED												2						
TOTALS						426.710	52.220	17.000	3	2	33	5	--	--				261.500

SHEET: 3 OF 3

PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	MISCELLANEOUS QUANTITIES – PERMANENT SIGNING	SHEET:	E

FILE NAME : N:\SPO\Operations\Signing\Miscellaneous Quantities\2290-03-73\030502_MQ.pptx PLOT DATE : 4/20/2022 PLOT BY : DOTTAH PLOT NAME : 030502_MQ.pdf PLOT SCALE : 1:1

STH 38 & CTH MM/OLD MILL RD
RACINE COUNTY
CATEGORY 0030
S51-0156

3

3

REMOVING CONCRETE BASES

SIGNAL BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
SB5	1
SB18	1
TOTAL	2 *

* ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

PULL BOXES

PULL BOX NO.	653.0900 ADJUSTING PULL BOXES EACH
PB7	1
TOTAL	1

CONCRETE BASES

SIGNAL BASE NO.	LOCATION ^	654.0101 CONCRETE BASES TYPE 1 EACH	654.0105 CONCRETE BASES TYPE 5 EACH
SB5	REPLACE IN KIND	1	--
SB18	REPLACE IN KIND	--	1
	TOTAL	1 *	1 *

^ FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
* ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.
SB5	HEAD 18	19
	TOTAL	19 *

* ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.
SB18	LUMIN (2)	234
	TOTAL	234 *

* ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

SIGNAL BASES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH
SB5	1	--
SB18	--	1
TOTAL	1 *	1 *

* ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

STH 38 & CTH MM/OLD MILL RD
RACINE COUNTY
CATEGORY 0030
S51-0156

3

SIGNAL MOUNTING HARDWARE

LOCATION	658.5070.01 SIGNAL MOUNTING HARDWARE EACH
STH 38 & CTH MM/OLD MILL RD	1
TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

LOCATION	661.0201.01 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS EACH	661.0300 GENERATORS DAY
STH 38 & CTH MM/OLD MILL RD	1	1
TOTAL	1	1*

* ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

SALVAGE AND REUSE SIGNAL EQUIPMENT

LOCATION	SPV.0060.38 SALVAGE & REUSE SIGNAL EQUIPMENT EACH
SB5/HEAD 18	1
SB18/LUMINAIRE (2)	1
TOTAL	2

TEMPORARY INFRARED EVP SYSTEM

LOCATION	SPV.0060.39 TEMP INFRARED EVP SYSTEM EACH
STH 38 & CTH MM/OLD MILL RD	1
TOTAL	1

STH 38 (NORTHWESTERN AVE) & RAPIDS DR
RACINE COUNTY
CATEGORY 0030
S51-0157

3

STATE FURNISHED MATERIALS SUMMARY

EACH	DESCRIPTION
1	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 8 PHASE
1	TRAFFIC SIGNAL CABINET
1	POLES TYPE 9 SPECIAL
1	POLES TYPE 10 SPECIAL
1	MONOTUBE ARMS 40-FT TYPE 9/10 SPEC POLE
1	MONOTUBE ARMS 45-FT TYPE 9/10 SPEC POLE
1	LUMINAIRE ARMS 15-FT
3	EVP DETECTOR HEADS
1	RADIO INTERCONNECT ANTENNA 5.8 GHZ
1	CCTV OBSERVATION CAMERA (TEMPORARY SIGNAL)

STATE FURNISHED FOR INFORMATION ONLY

SIGNAL BASE NO.	POLES TYPE 9 SPECIAL EACH	POLES TYPE 10 SPECIAL EACH	MONOTUBE ARMS 40-FT TYPE 9/10 SPEC POLE EACH	MONOTUBE ARMS 45-FT TYPE 9/10 SPEC POLE EACH	LUMINAIRE ARMS STEEL 15-FT EACH	EVP DETECTOR HEADS EACH	RADIO INTERCONNECT ANTENNA 5.8 GHZ EACH
SB2	1	--	1	--	--	2	1
SB8	--	1	--	1	1	1	--
TOTAL	1	1	1	1	1	3	1

REMOVING CONCRETE BASES

SIGNAL BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
CB1	1
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
SB7	1
SB8	1
SB9	1
SB10	1
TOTAL	11 *

* ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL REMOVALS

LOCATION	204.9060.S.01 REMOVING TRAFFIC SIGNALS EACH	204.9060.S.02 REMOVING LOOP DETECTOR WIRE & LEAD-IN CABLE EACH
STH 38 & RAPIDS DR	1	1
TOTAL	1	1

3

3

LAMP, BALLAST, LED, SWITCH DISPOSAL

FIXTURE TYPE		659.5000.S LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR EACH
TRAFFIC SIGNAL, THREE SECTION		13
MERCURY SWITCHES		1
	TOTAL	14

LAMP, BALLAST, LED, SWITCH DISPOSAL
(FOR INFORMATION ONLY)

SIGNAL BASE NO.		TRAFFIC SIGNAL, THREE SECTION EACH	MERCURY SWITCHES EACH
CB1		--	1
SB1		1	--
SB2		1	--
SB3		2	--
SB4		1	--
SB5		1	--
SB6		2	--
SB7		2	--
SB8		1	--
SB9		1	--
SB10		1	--
	TOTAL	13	1

3

REMOVING PULL BOXES

PULL BOX NO.	653.0905 REMOVING PULL BOXES EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
PB7	1
PB8	1
PB9	1
PB10	1
PB11	1
PB12	1
PB13	1
PB14	1
PB15	1
PB16	1
PB17	1
PB18	1
PB19	1
PB20	1
TOTAL	20

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.
CB1	PB1	--	30
PB1	PB2	13	--
PB2	PB3	206	--
PB3	SB16	41	--
PB1	SB1	10	--
PB1	PB4	--	114
PB4	SB2	--	23
PB4	PB5	--	62
PB5	PB6	17	--
PB5	SB3	6	--
PB5	PB7	--	98
PB7	SB4	6	--
PB7	PB8	--	54
PB8	PB9	--	43
PB9	SB17	5	--
PB8	PB10	12	--
PB8	SB5	13	--
PB8	PB11	--	88
PB11	PB12	232	--
PB11	SB6	14	--
PB11	PB13	--	40
PB13	SB7	14	--
PB13	PB14	--	64
PB14	SB8	--	13
PB14	PB15	--	78
PB15	SB9	17	--
PB15	PB16	--	138
PB16	SB10	19	--
PB16	SB11	23	--
PB16	PB17	--	116
PB17	PB18	--	114
PB18	PB19	18	--
PB19	SB12	19	--
PB18	PB20	212	--
PB20	SB18	15	--
SB18	SB19	176	--
PB18	SB13	16	--
PB18	SB14	50	--
PB18	PB21	--	156
PB21	SB15	8	--
PB21	CB1	--	69
	TOTAL	1162	1300

STH 38 (NORTHWESTERN AVE) & RAPIDS DR
RACINE COUNTY
CATEGORY 0030
S51-0157

3

TRAFFIC DETECTOR LOOPS

LOOP NO.	HOME RUN PB	LOCATION* ** ^	SIZE (FT)x(FT)	NO. OF TURNS	SDD INSTALLATION REFERENCE	652.0800 CONDUIT LOOP DETECTOR L.F.	655.0700 LOOP DETECTOR LEAD IN CABLE L.F.	655.0800 LOOP DETECTOR WIRE L.F.
11	PB20	237+79.1, 17.5'RT	6'x8'	4	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	70	327	280
12	PB20	237+79.1, 5.5'RT	6'x8'	4	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	46	327	184
13	PB19	240+04.1, 17.5'RT	6'x20'	3	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	94	133	282
14	PB19	240+32.1, 17.5'RT	6'x20'	3	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	94	133	282
15	PB19	240+04.1, 5.5'RT	6'x20'	3	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	70	133	210
16	PB19	240+32.1, 5.5'RT	6'x20'	3	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	72	133	216
17	PB3	52+72.4, 39.4'LT (RAPIDS DR)	6'x6'	4	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	44	243	176
18	PB3	52+72.2, 27.4'LT (RAPIDS DR)	6'x6'	4	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	68	243	272
19	PB2	240+35.6, 94.6'LT	6'x20'	3	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	82	37	246
110	PB2	240+15.9, 74.6'LT	6'x20'	3	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	78	37	234
111	PB2	240+50.0, 90.2'LT	6'x20'	3	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	114	37	342
112	PB2	240+31.5, 69.1'LT	6'x20'	3	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	108	37	324
21	PB12	243+89.8, 21.3'LT	6'x8'	5	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	68	464	340
22	PB12	243+89.9, 9.3'LT	6'x8'	5	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	44	464	220
23	PB10	241+71.8, 28.5'LT	6'x20'	3	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	86	200	258
24	PB10	241+43.8, 28.5'LT	6'x20'	3	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	86	200	258
25	PB10	241+71.8, 16.5'LT	6'x20'	3	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	110	200	330
26	PB10	241+43.8, 16.5'LT	6'x20'	3	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	110	200	330
61	PB20	237+79.1, 29.5'RT	6'x8'	4	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	94	327	376
71	PB6	240+77.1, 86.0'LT	6'x20'	3	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	72	129	216
72	PB6	240+70.0, 59.2'LT	6'x20'	3	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	72	129	216
					TOTAL	1682	4133	5592

* LOCATION IS TO FRONT CENTER OF DETECTOR LOOP
** STATION/OFFSETS ARE TO THE CTH MM ALIGNMENT UNLESS NOTED OTHERWISE
^ FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

3

PULL BOXES

PULL BOX NO.	LOCATION ** ^	653.0135 PULL BOXES STEEL 24x36-INCH EACH	653.0140 PULL BOXES STEEL 24x42-INCH EACH
PB1	240+06.8, 97.2'LT	--	1
PB2	240+18.8, 99.2'LT	1	--
PB3	52+71.3, 52.0'LT (RAPIDS DR)	1	
PB4	240+58.0, 72.7'LT	--	1
PB5	240+86.7, 63.5'LT	--	1
PB6	240+87.3, 79.5'LT	1	--
PB7	241+34.8, 64.0'LT	--	1
PB8	241+56.5, 48.1'LT	--	1
PB9	241+85.5, 79.5'LT	--	1
PB10	241+67.5, 47.4'LT	1	--
PB11	241+56.5, 4.4'LT	--	1
PB12	243+87.2, 1.0'RT	1	--
PB13	241+56.5, 15.5'RT	--	1
PB14	241+56.5, 47.1'RT	--	1
PB15	241+19.3, 55.0'RT	1	--
PB16	240+51.3, 53.4'RT	1	--
PB17	239+94.2, 50.5'RT	--	1
PB18	239+90.6, 5.5'LT	--	1
PB19	240+08.0, 5.5'LT	1	--
PB20	237+82.0, 5.5'LT	1	--
PB21	239+85.7, 83.1'LT	--	1
	TOTAL	9	12

** STATION/OFFSETS ARE TO THE CTH MM ALIGNMENT UNLESS NOTED OTHERWISE
^ FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

CONCRETE BASES

SIGNAL BASE NO.	LOCATION ** ^	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0105 CONCRETE BASES TYPE 5 EACH	654.0120 CONCRETE BASES TYPE 10-SPECIAL EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	239+98.2, 101.6'LT	--	--	--	--	1
SB1	240+06.2, 87.3'LT	--	1	--	--	--
SB2	240+48.0, 52.7'LT	--	--	--	1	--
SB3	240+85.0, 58.7'LT	--	1	--	--	--
SB4	241+33.9, 58.7'LT	1	--	--	--	--
SB5	241+43.5, 47.6'LT	1	--	--	--	--
SB6	241+43.5, 2.5'LT	1	--	--	--	--
SB7	241+43.5, 12.4'RT	1	--	--	--	--
SB8	241+43.8, 47.3'RT	--	--	--	1	--
SB9	241+03.0, 52.9'RT	1	--	--	--	--
SB10	240+69.7, 52.1'RT	1	--	--	--	--
SB11	240+29.1, 49.8'RT	1	--	--	--	--
SB12	240+26.8, 5.5'LT	1	--	--	--	--
SB13	239+74.9, 5.5'LT	1	--	--	--	--
SB14	239+42.5, 5.5'LT	--	1	--	--	--
SB15	239+93.0, 80.4'LT	1	--	--	--	--
SB16	52+35.0, 52.4'LT (RAPIDS DR)	--	--	1	--	--
SB17	241+83.0, 83.1'LT	--	--	1	--	--
SB18	237+67.4, 7.8'LT	--	--	1	--	--
SB19	235+92.6, 2.5'RT	--	--	1	--	--
	TOTAL	10 *	3	4 *	2	1

** STATION/OFFSETS ARE TO THE CTH MM ALIGNMENT UNLESS NOTED OTHERWISE
^ FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
* ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

FILE NAME : N:\PDS\C3D\CAD\22900303\SIG\S51-0157\S51-0157_mq.pptx PLOT DATE : 5/24/2023 PLOT BY : DOTCMV PLOT NAME : S51-0157_mq.pdf PLOT SCALE : 1:1

3

3

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED L.F.
CB1	SB1	47	--	--
CB1	SB2	--	133	--
CB1	SB3	--	163	--
CB1	SB4	228	--	--
CB1	SB5	--	278	--
CB1	SB6	339	--	--
CB1	SB7	375	--	--
CB1	SB8	--	422	--
CB1	SB9	393	--	--
CB1	SB10	310	--	--
CB1	SB11	314	--	--
CB1	SB12	197	--	--
CB1	SB13	160	--	--
CB1	SB14	194	--	--
CB1	SB15	58	--	--
CB1	SB1	--	--	47
SB1	SB16	--	--	326
SB1	SB3	--	--	160
SB3	SB17	--	--	202
SB17	SB8	--	--	245
CB1	SB14	--	--	194
SB14	SB18	--	--	317
SB18	SB19	--	--	184
	TOTAL	2615	996	1675

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	47
SB1	SB2	130
SB2	SB3	100
SB3	SB4	101
SB4	SB5	86
SB5	SB6	111
SB6	SB7	88
SB7	SB8	99
SB8	SB9	109
SB9	SB10	145
SB10	SB11	66
SB11	SB12	247
SB12	SB13	93
SB13	SB14	90
SB14	SB15	176
SB15	CB1	58
PB1	CB1	33
PB4	SB2	43
PB5	SB3	26
PB7	SB4	26
PB8	SB5	33
PB11	SB6	34
PB13	SB7	34
PB14	SB8	33
PB15	SB9	37
PB16	SB10	39
PB17	SB11	117
PB18	SB13	36
PB19	SB12	39
PB21	SB15	28
	TOTAL	2304

3

3

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.
SB1	HEAD 10	21
SB2	HEAD 8	65
SB2	HEAD 9	65
SB2	HEAD 17	15
SB2	HEAD 18	15
SB3	HEAD 13	21
SB3	HEAD 19	15
SB3	HEAD 20	15
SB4	HEAD 21	15
SB5	HEAD 7	19
SB5	HEAD 22	15
SB6	HEAD 23	15
SB7	HEAD 24	15
SB8	HEAD 2	70
SB8	HEAD 3	21
SB8	HEAD 5	70
SB8	HEAD 6	70
SB8	HEAD 25	15
SB9	HEAD 14	19
SB10	HEAD 15	19
SB11	HEAD 1	19
SB12	HEAD 4	19
SB13	HEAD 11	19
SB14	HEAD 12	21
SB15	HEAD 16	15
	TOTAL	688 *

* ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.
SB1	LUMIN	117
SB3	LUMIN (2)	234
SB8	LUMIN	144
SB14	LUMIN (2)	234
SB16	LUMIN	117
SB17	LUMIN	117
SB18	LUMIN (2)	234
SB19	LUMIN (2)	234
	TOTAL	1431 *

* ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE L.F.
CB1	SB2 (HEAD A)	163
CB1	SB8 (HEAD B)	497
CB1	SB2 (HEAD C)	163
	TOTAL	823

ELECTRICAL SERVICE METER BREAKER PEDESTAL

LOCATION ^	656.0201.01 ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH
STH 38 & RAPIDS DR	1
TOTAL	1

^ FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

3

3

POLES (CONTRACTOR FURNISHED)

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0310 POLES TYPE 3 EACH	657.0322 POLES TYPE 5 ALUMINUM EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	657.0610 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1	--	1	1	--	--	--	1	--	--	1
SB3	--	1	1	--	--	--	2	--	1	2
SB4	1	--	--	--	--	1	--	--	1	--
SB5	1	--	--	--	1	--	--	--	1	--
SB6	1	--	--	--	--	1	--	--	1	--
SB7	1	--	--	--	--	1	--	--	1	--
SB9	1	--	--	--	1	--	--	--	--	--
SB10	1	--	--	--	1	--	--	--	--	--
SB11	1	--	--	--	1	--	--	--	--	--
SB12	1	--	--	--	1	--	--	--	--	--
SB13	1	--	--	--	1	--	--	--	--	--
SB14	--	1	1	--	--	--	2	--	--	2
SB15	1	--	--	--	--	1	--	--	1	--
SB16	--	1	--	1	--	--	--	1	--	1
SB17	--	1	--	1	--	--	--	1	--	1
SB18	--	1	--	1	--	--	--	2	--	2
SB19	--	1	--	1	--	--	--	2	--	2
TOTAL	10 *	7 *	3	4	6	4	5	6	6 *	11 *

* ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

POLES (STATE FURNISHED)

SIGNAL BASE NO.	SPV.0060.30 INSTALL POLES TYPE 9 SPECIAL EACH	SPV.0060.31 INSTALL POLES TYPE 10 SPECIAL EACH	SPV.0060.32 INSTALL MONOTUBE ARMS 40-FT TYPE 9/10 SPEC POLE EACH	SPV.0060.33 INSTALL MONOTUBE ARMS 45-FT TYPE 9/10 SPEC POLE EACH	SPV.0060.34 INSTALL LUMINAIRE ARMS STEEL 15-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB2	1	--	1	--	--	1	--
SB8	--	1	--	1	1	1	1
TOTAL	1	1	1	1	1	2 *	1 *

* ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

3

FACES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH
1	SB11	1	--
2	SB8	1	--
3	SB8	1	--
4	SB12	1	--
5	SB8	1	--
6	SB8	1	--
7	SB5	1	--
8	SB2	1	--
9	SB2	1	--
10	SB1	1	--
11	SB13	1	--
12	SB14	1	--
13	SB3	1	--
14	SB9	1	--
15	SB10	1	--
16	SB15	--	1
17	SB2	--	1
18	SB2	--	1
19	SB3	--	1
20	SB3	--	1
21	SB4	--	1
22	SB5	--	1
23	SB6	--	1
24	SB7	--	1
25	SB8	--	1
	TOTAL	15	10

SIGNAL MOUNTING HARDWARE

LOCATION		658.5070.02 SIGNAL MOUNTING HARDWARE EACH
STH 38 & RAPIDS DR		1
	TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

LOCATION		661.0201.02 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS EACH	661.0300 GENERATORS DAY	677.0200 INSTALL CAMERA ASSEMBLY EACH
STH 38 & RAPIDS DR		1	1	1
	TOTAL	1	1 *	1

* ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

COMMUNICATIONS EQUIPMENT

LOCATION		678.0700 INSTALL WIRELESS ANTENNAS EACH
SB2		1
	TOTAL	1

STH 38 (NORTHWESTERN AVE) & RAPIDS DR
RACINE COUNTY
CATEGORY 0030
S51-0157

3

3

TRANSPORT AND INSTALL
STATE FURNISHED TRAFFIC SIGNAL CABINET

LOCATION	SPV.0060.35 TRNSPT AND INSTALL STATE FURN TRAFFIC SIGNAL CABINET EACH
STH 38 & RAPIDS DR (CB1)	1
TOTAL	1

TRANSPORT TRAFFIC SIGNAL
AND INTERSECTION LIGHTING MATERIALS

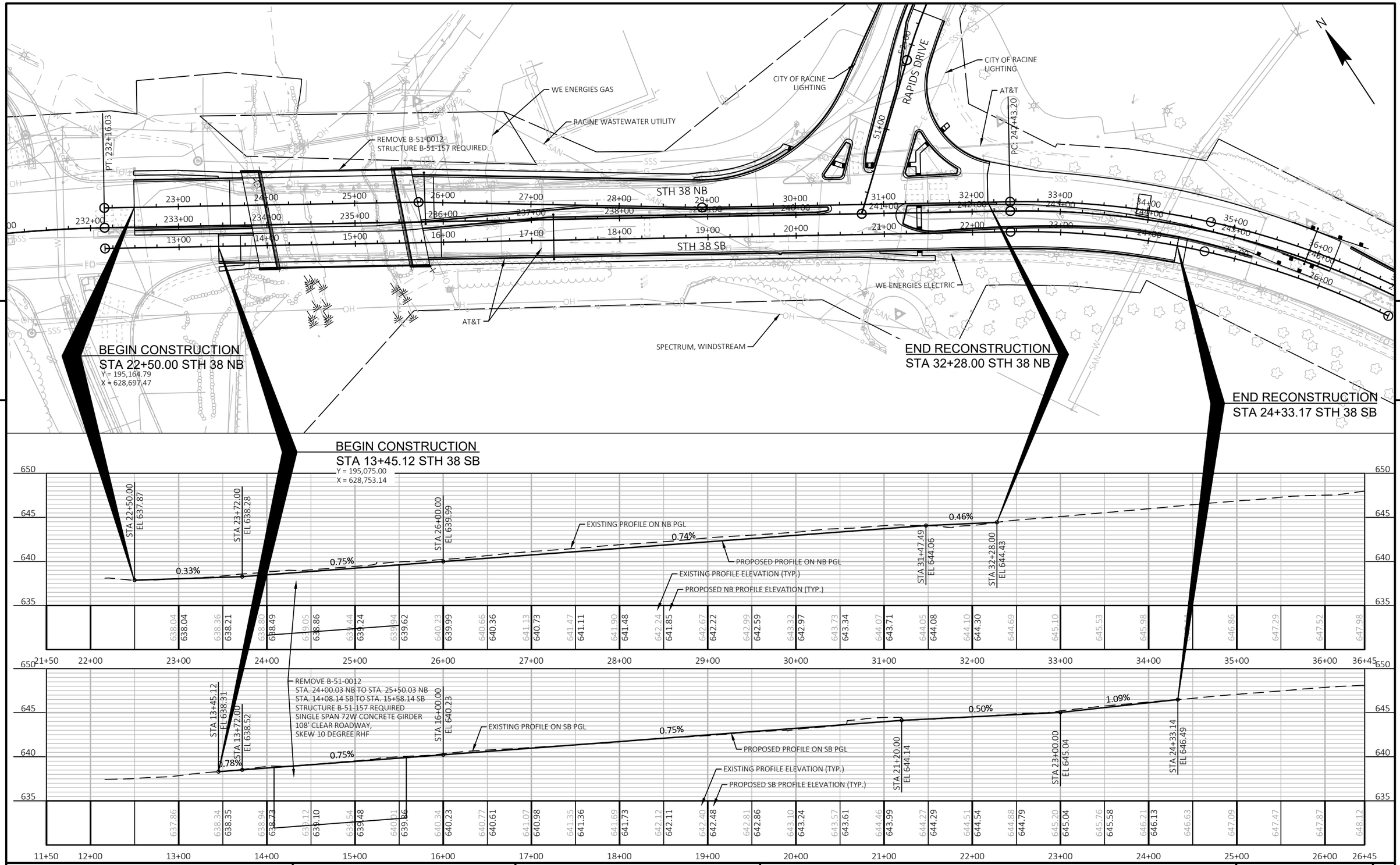
LOCATION	SPV.0060.36 TRNSPT TRAFFIC SIGNAL & INTER LIGHTING MATERIALS EACH
STH 38 & RAPIDS DR	1
TOTAL	1

EVP DETECTOR HEAD INSTALLATION

LOCATION	SPV.0060.37 TRNSPT & INSTALL STATE FURN EVP DETECTOR HEADS EACH
STH 38 & RAPIDS DR	1
TOTAL	1

TEMPORARY INFRARED EVP SYSTEM

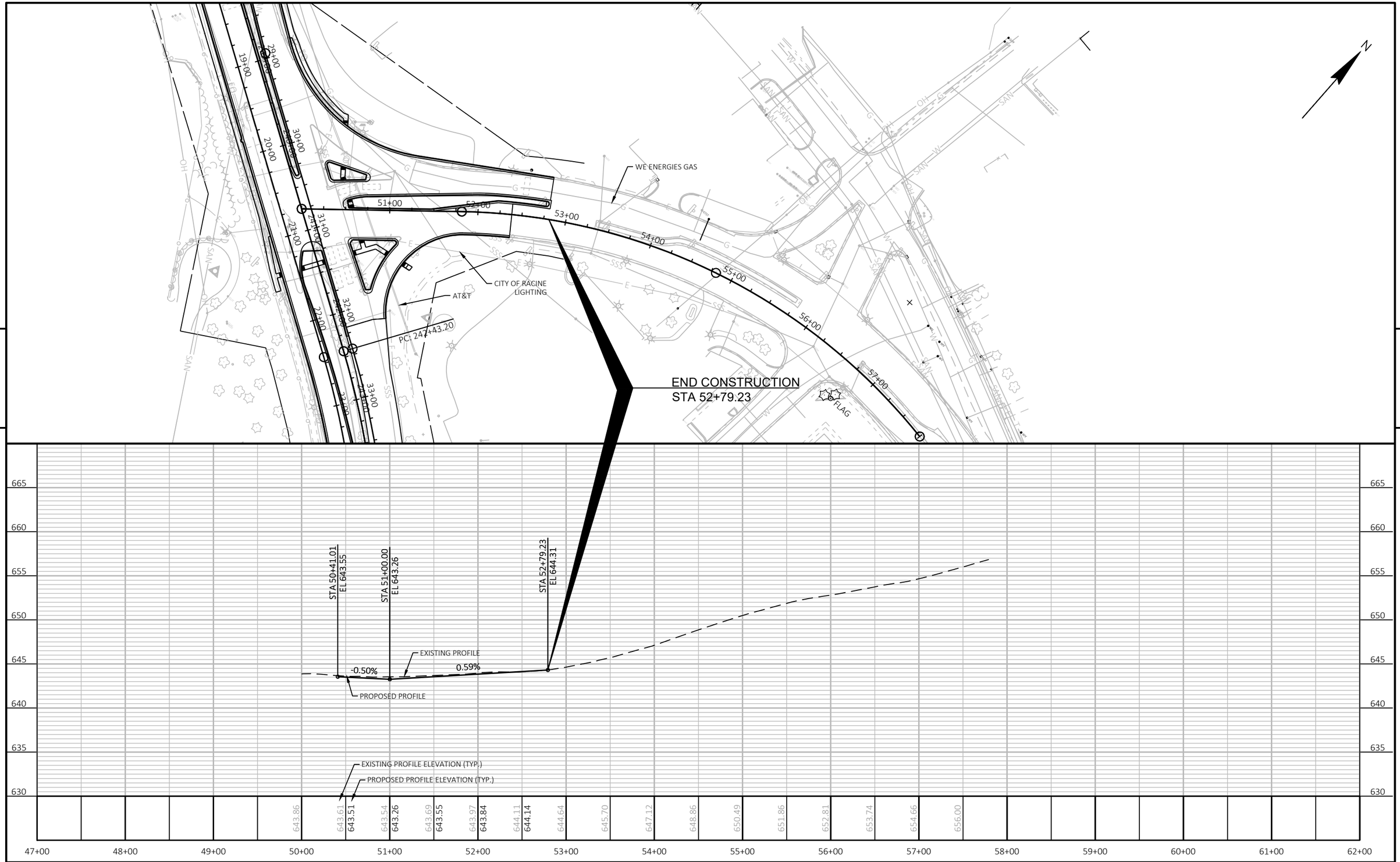
LOCATION	SPV.0060.40 TEMP INFRARED EVP SYSTEM EACH
STH 38 & RAPIDS DR	1
TOTAL	1



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PLAN AND PROFILE: STH 38	SHEET 188	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 050101_pp

PLOT DATE : 7/31/2023 1:40 PM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	PLAN AND PROFILE: RAPIDS DRIVE	SHEET 189	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 050102_pp
PLOT DATE : 7/31/2023 1:40 PM
PLOT BY : SCHOWALTER, STEVEN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

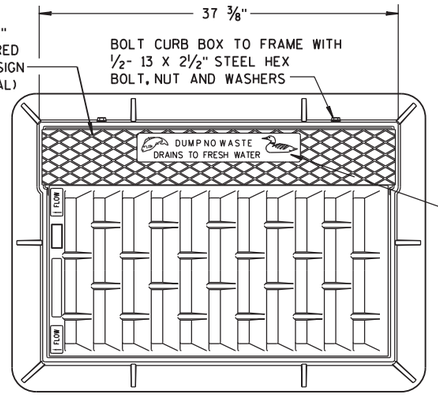
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-03	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D15-05B	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D15-05C	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E11-02	TURBIDITY BARRIER
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B04-12	PULL BOX
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C15-01	CONCRETE BASE TYPE 10 SPECIAL
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09E01-15B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-15D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-06	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-09C	TYPE 9 SPECIAL POLE 40' MONOTUBE ARM
09E08-09H	TYPE 10 SPECIAL POLE 45' MONOTUBE ARM
09E08-09K	GENERAL NOTES,HARDWARE DETAILS FOR TYPE 9/10,9/10 SPECIAL,12 & 13 POLES W/MONOTUBE ARMS
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
09G01-04A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09H16-01	INSTALL WIRELESS ANTENNA
11B02-02	CONCRETE MEDIAN NOSE
12A03-10	NAME PLATE (STRUCTURES)
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13B02-09B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C14-07A	BASE PATCHING CONCRETE
13C14-07B	BASE PATCHING CONCRETE
13C14-07C	BASE PATCHING CONCRETE
13C18-08A	CONCRETE PAVEMENT JOINTING
13C18-08B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-08C	CONCRETE PAVEMENT JOINT TYPES
13C18-08D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
13C18-08F	CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER
13C19-03	HMA LONGITUDINAL JOINTS
14A01-03	TREE PRESERVATION DETAILS

6

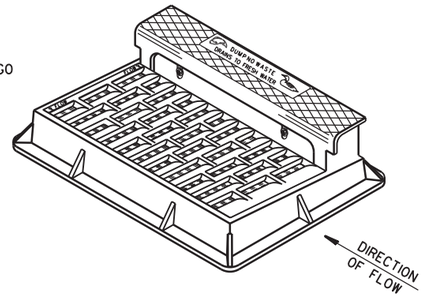
Standard Detail Drawing List

14B07-16A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16J	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16K	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16L	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16M	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16N	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B47-05A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05D	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05E	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05F	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05G	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-09F	ADVANCED WIDTH RESTRICTION SIGNING
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-23C	PAVEMENT MARKING (TURN LANES)
15C08-23D	PAVEMENT MARKING (TURN LANES)
15C11-10A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C18-08A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C18-08B	MEDIAN ISLAND MARKING MEDIAN ISLAND NOSE
15C18-08C	MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D20-07A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY
15D20-07B	TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D20-07C	TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-09A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09B	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

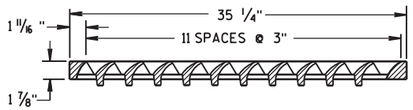
6

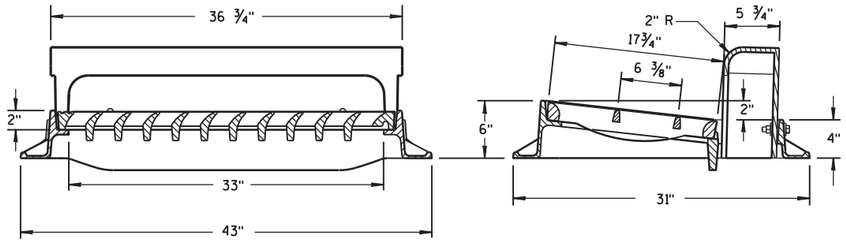


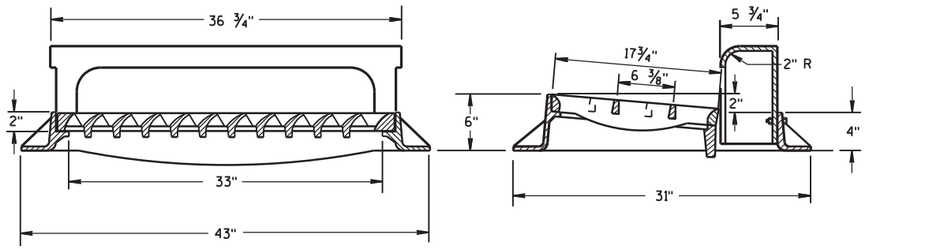
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

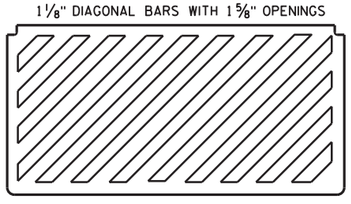






TYPE "H"

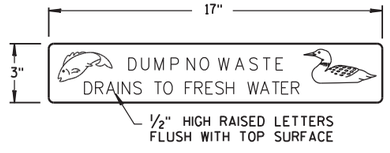
NOTE: EITHER CASTING IS ACCEPTABLE



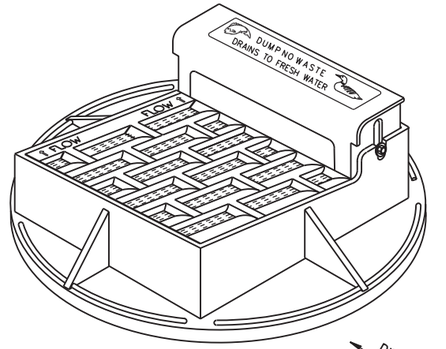
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

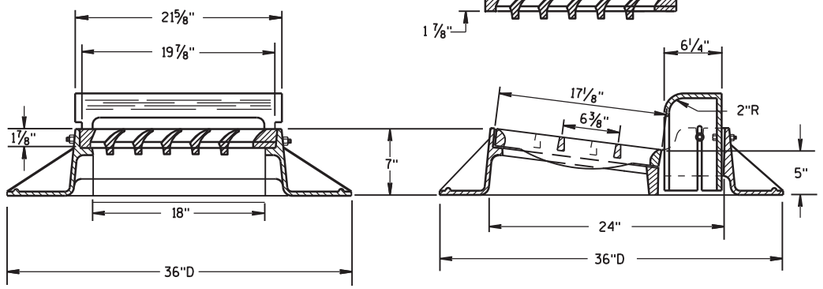


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



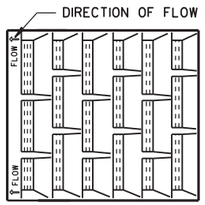
TYPE "A"

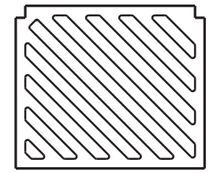
GENERAL NOTES

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

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

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

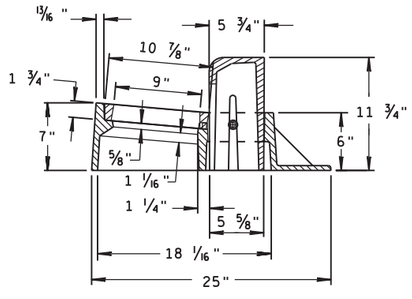


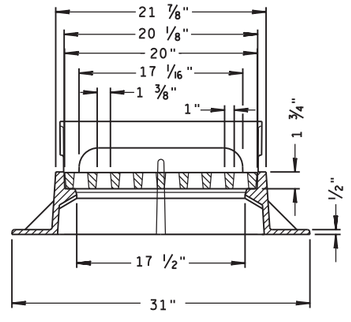


SPECIAL GRATE FOR TYPE "A" COVER

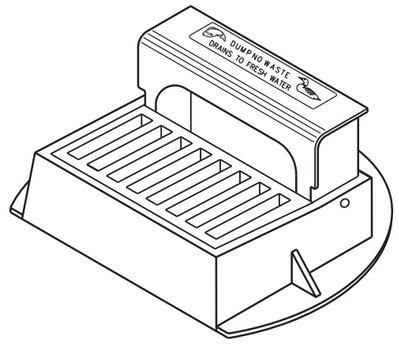
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)





TYPE "Z"



INLET COVERS TYPE A, H, A-S, H-S & Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

S.D.D. 8 A 5-19a

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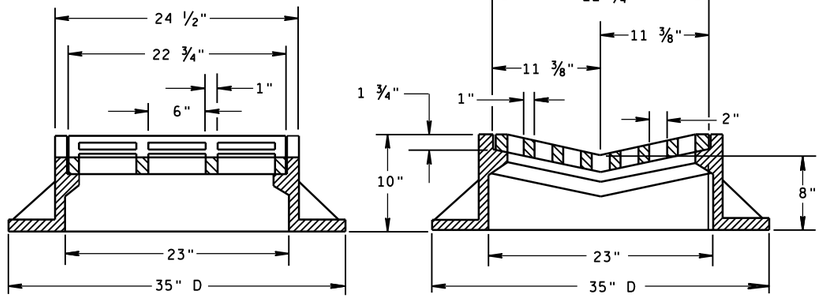
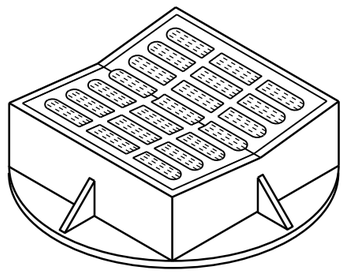
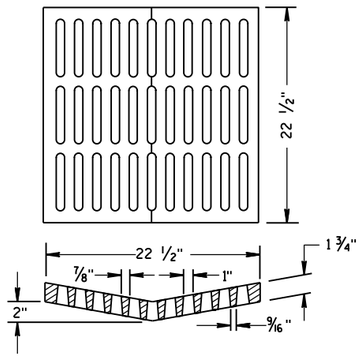


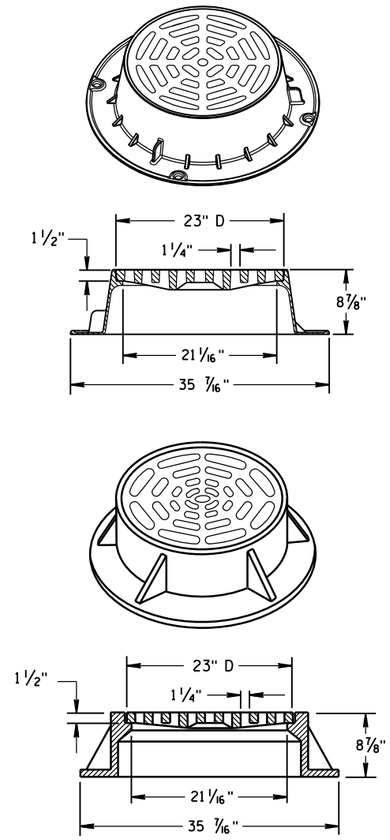


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

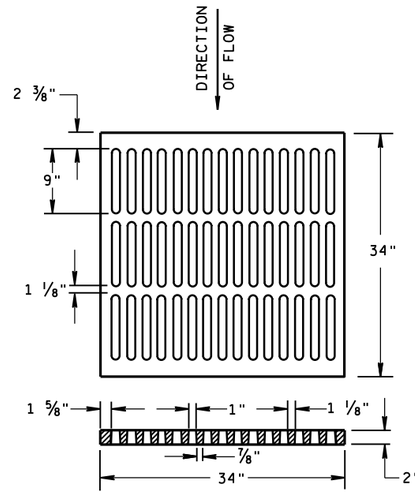
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

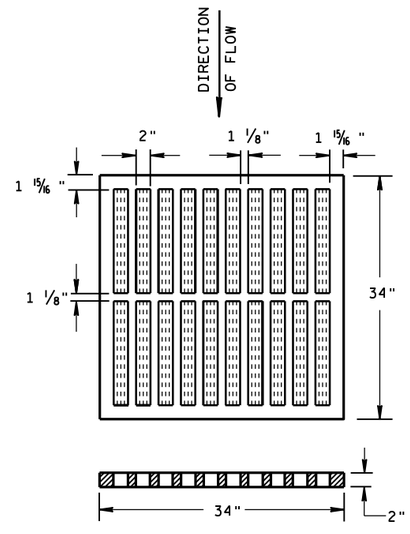
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



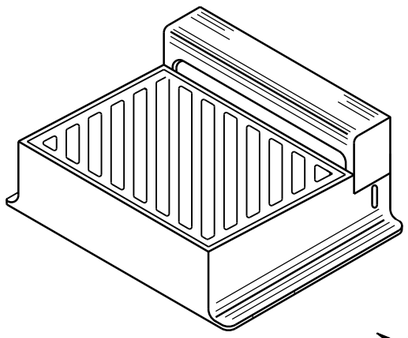
ALTERNATIVE TYPE "MS"

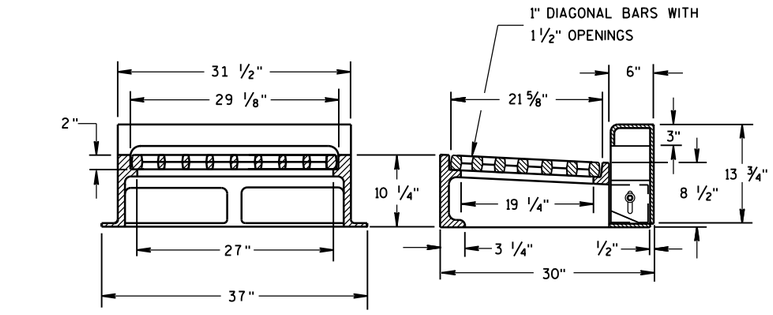
USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE





NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

DIRECTION OF FLOW

DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.

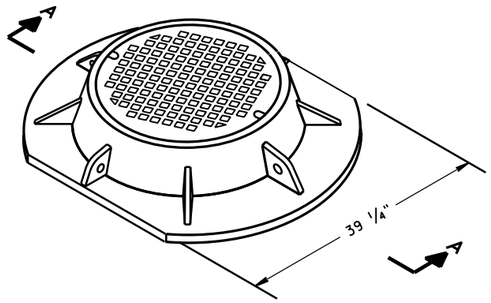
INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

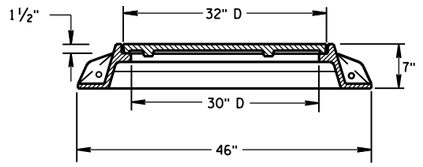
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

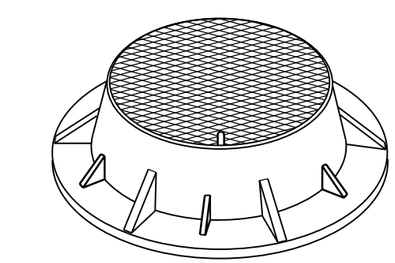
6

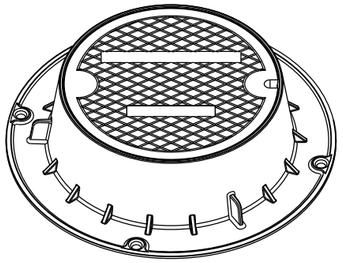
S.D.D. 8 A 5-19b

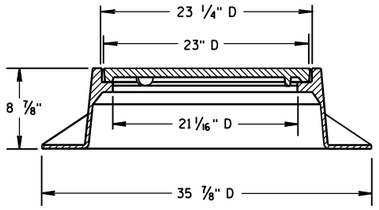


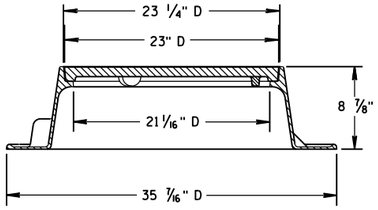


SECTION A-A
TYPE "K"









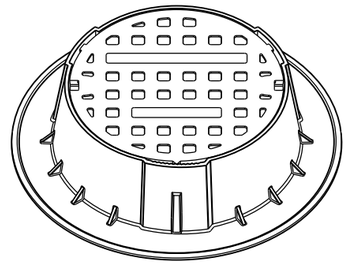
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

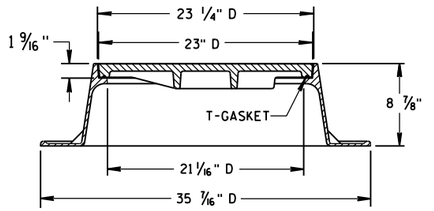
GENERAL NOTES

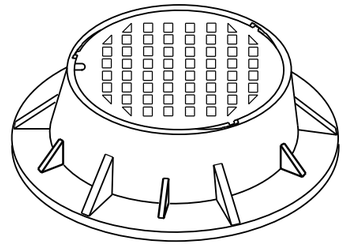
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

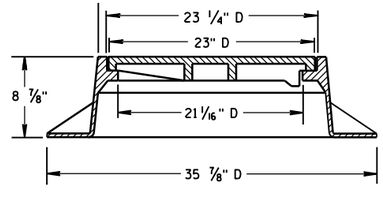
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

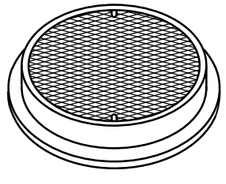


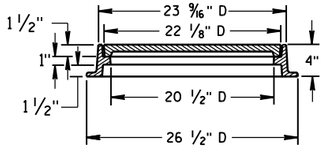






TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE





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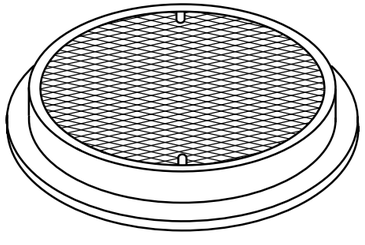

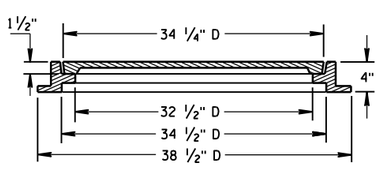

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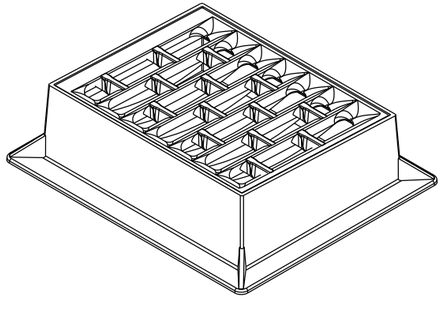
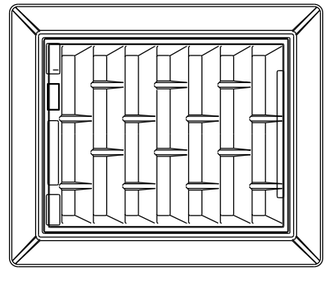
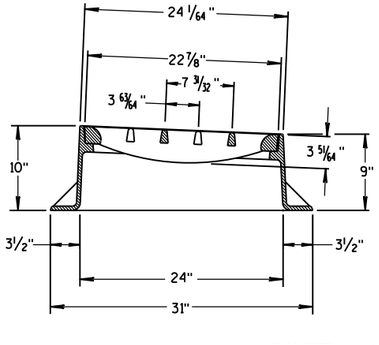
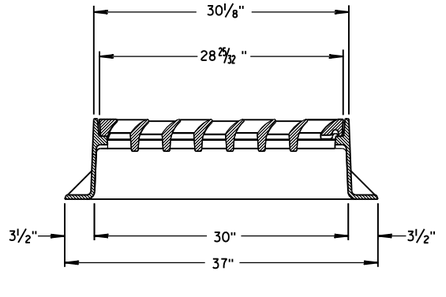








INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

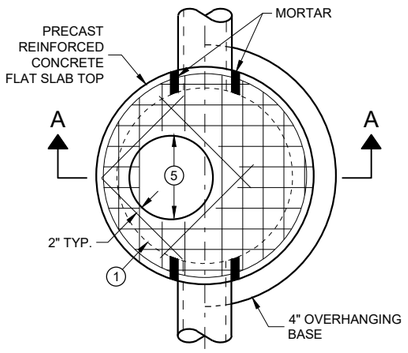
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

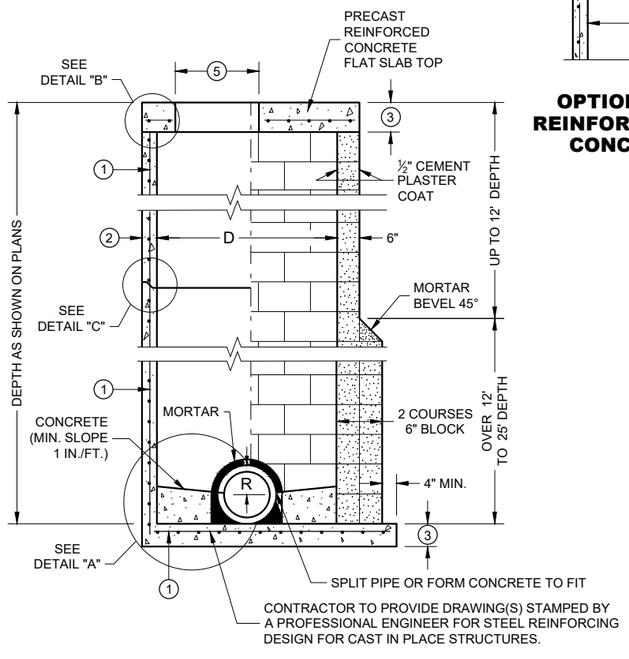
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

S.D.D. 8 A 5-19d



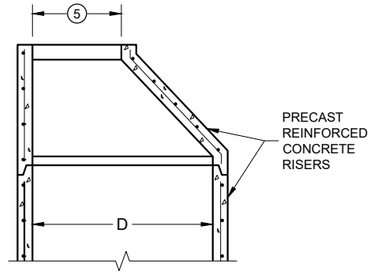
PLAN VIEW
CIRCULAR OPENING



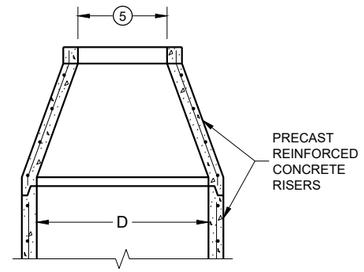
SECTION A - A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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



OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP



OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

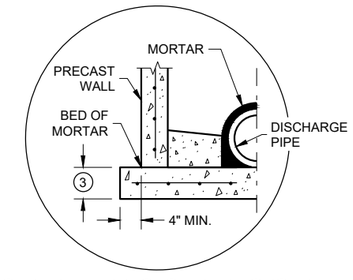
MANHOLE COVER OPENING MATRIX

OPENING SIZE (FT.) \ MANHOLE COVER TYPE	C	ALL J'S	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

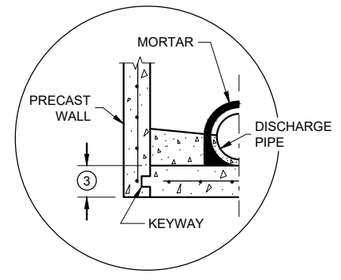
PIPE MATRIX

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES		MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
	180° SEPARATION (IN)	90° SEPARATION (IN)		
3-FT	15	12	4	6
4-FT	24	18	4	6
5-FT	36	24	5	8
6-FT	42	36	6	8
7-FT	48	36/42*	7	8
8-FT	60	42	8	8
9-FT	66	54	9	10
10-FT	72	60	10	10

*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES.
SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.

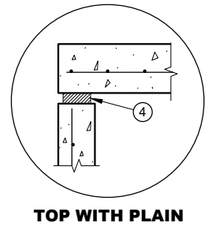


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

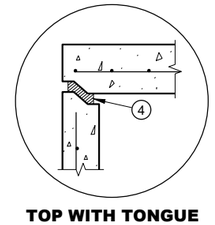


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

DETAIL "A"

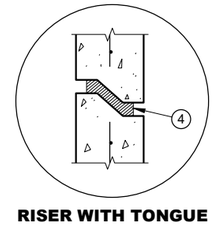


TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT

DETAIL "B"



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "C"

GENERAL NOTES

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

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

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

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

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

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½ INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

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

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

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

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

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

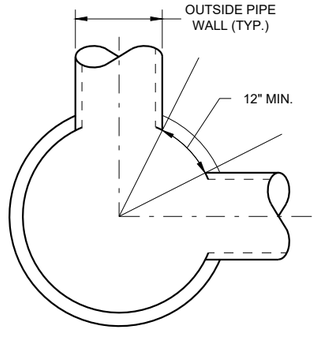
(1) FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

(2) SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES

(3) SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.

(4) JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP.).

(5) SEE MANHOLE COVER OPENING MATRIX.



MINIMUM HORIZONTAL PIPE SEPARATION

MANHOLES, 3-FT, 4-FT 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

6

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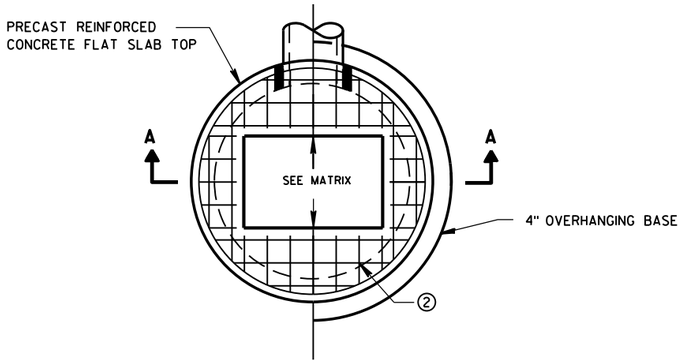
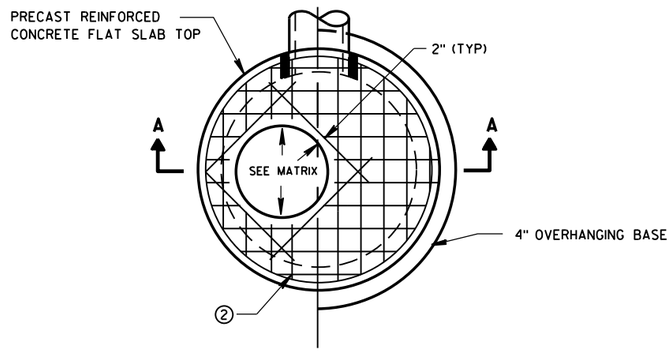
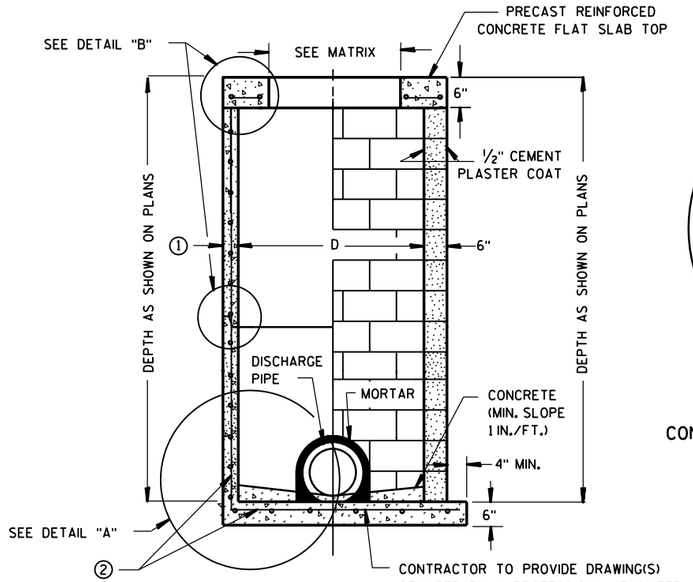


PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

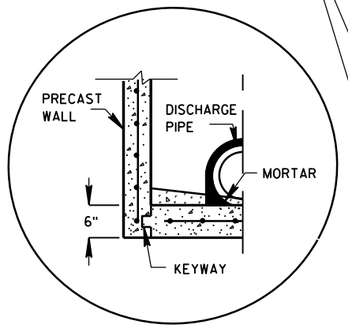


SECTION A-A

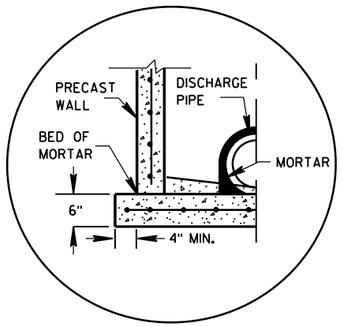
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

CIRCULAR INLETS W/ FLAT TOP

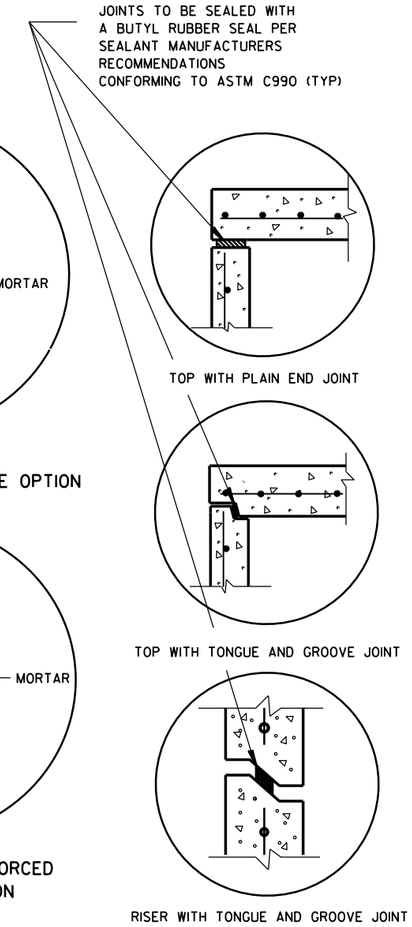


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

GENERAL NOTES

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

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

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

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

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

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

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

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

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

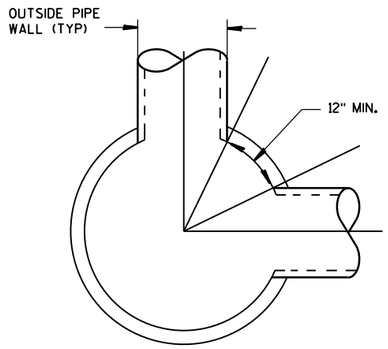
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

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

INLETS 3-FT AND 4-FT DIAMETER

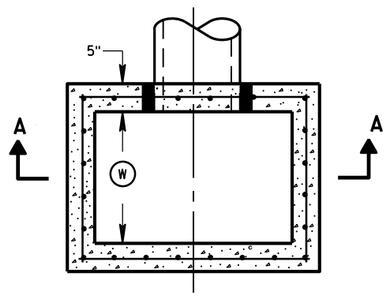
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS | UNIT SUPERVI ENT
FHWA

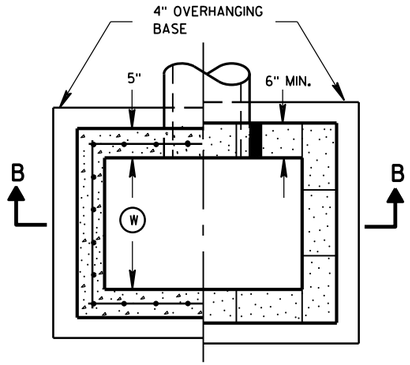
INLETS 3-FT AND 4-FT DIAMETER

6

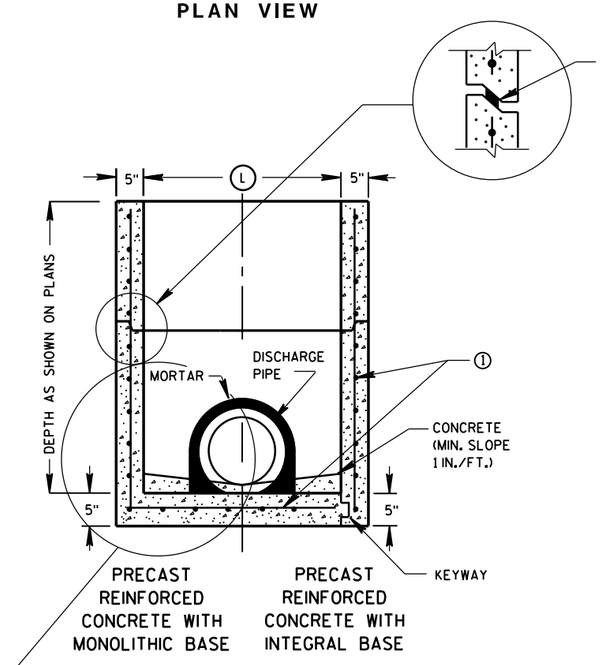
S.D.D. 8 C 6-2



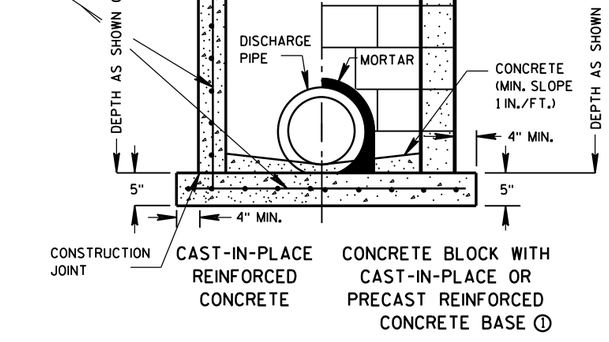
PLAN VIEW



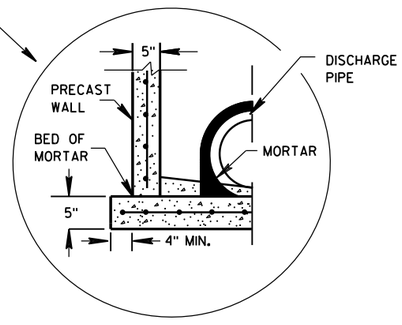
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

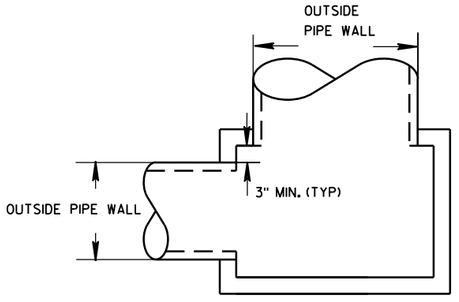
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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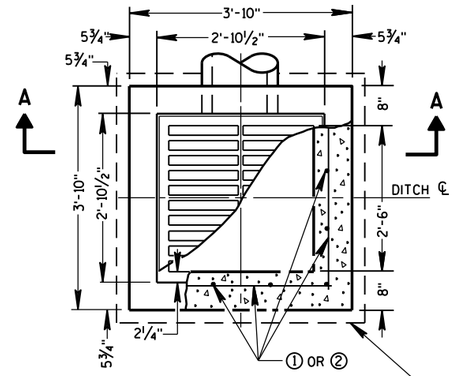
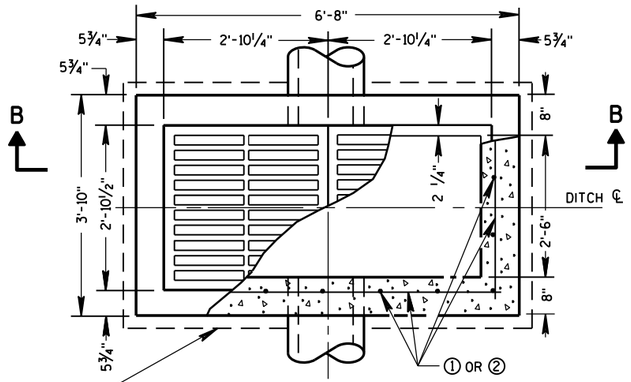
Sept., 2016
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT
UNIT SUPERVIS
FHWA

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

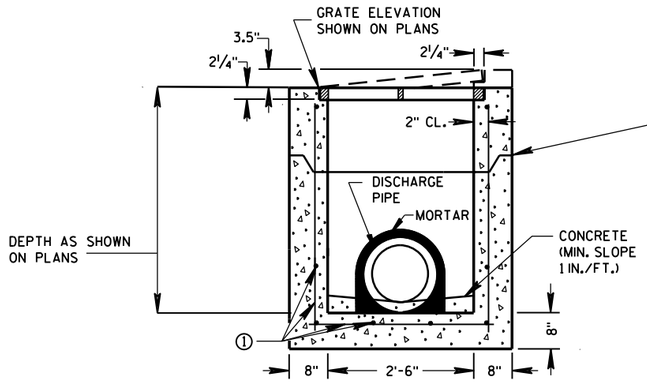


PLAN VIEW

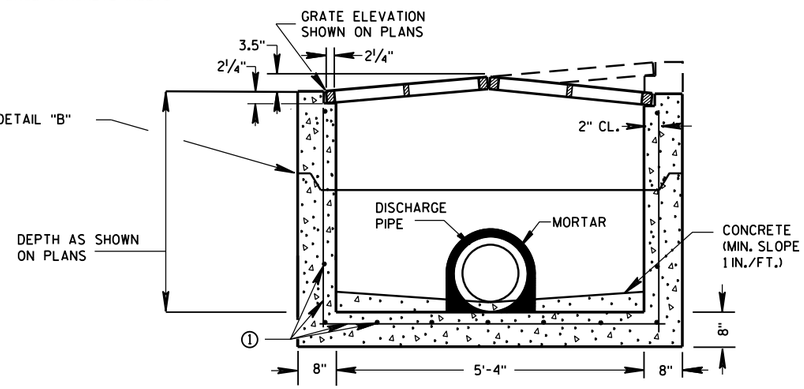


PLAN VIEW

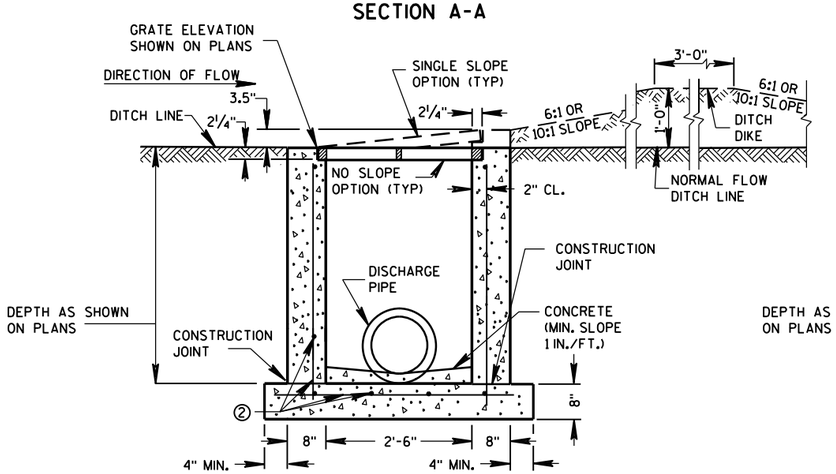
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



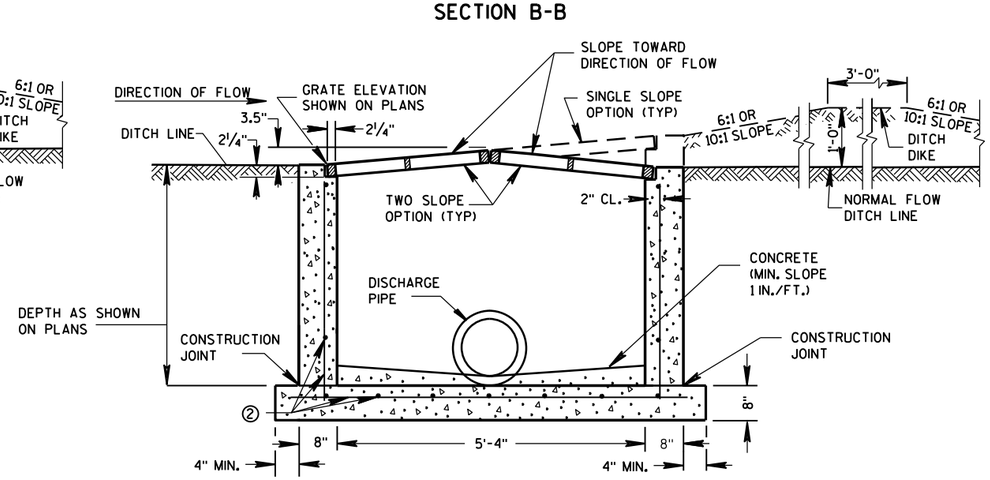
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

GENERAL NOTES

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

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

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

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

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

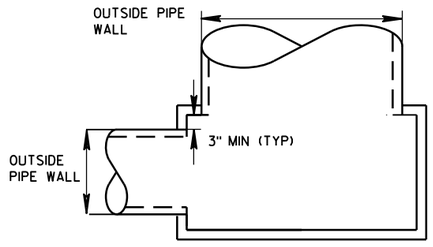
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

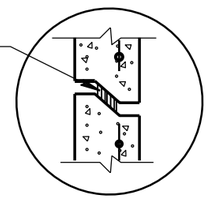
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
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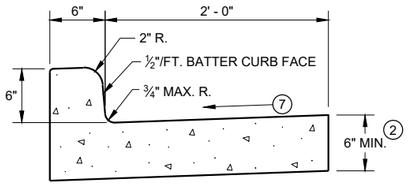
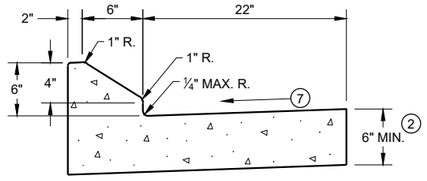
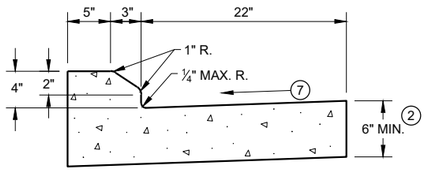


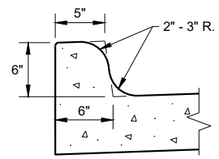
TYPES A (1) & D



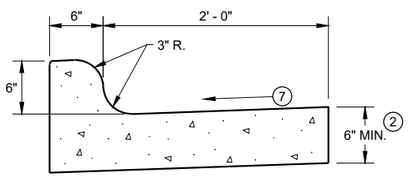
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

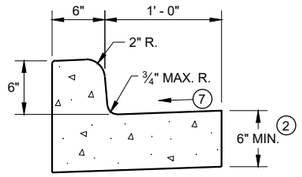


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



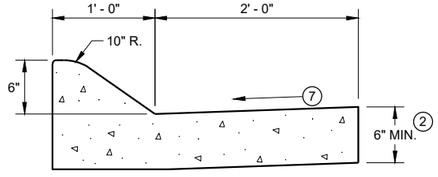
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

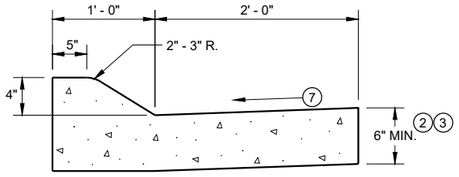


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

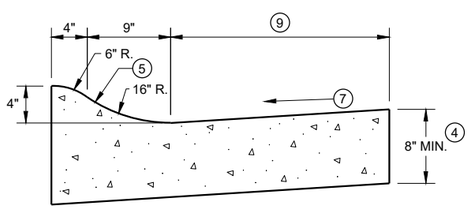


6" SLOPED CURB TYPES A (1) & D



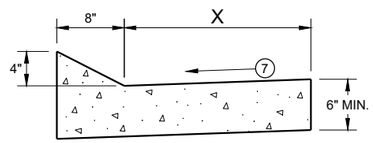
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

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

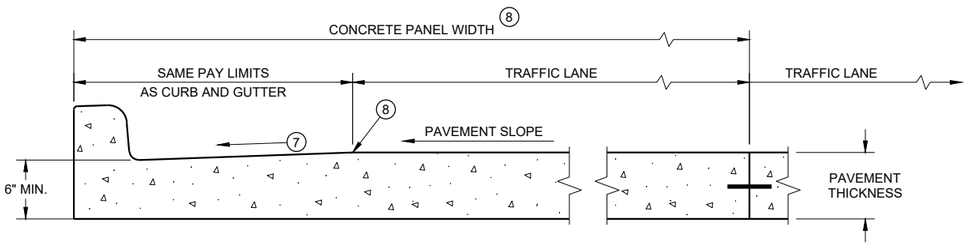


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

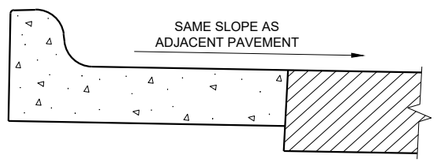
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

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

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

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

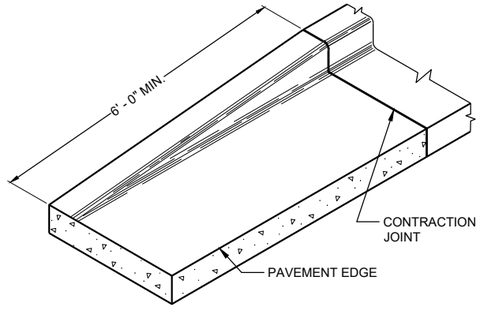
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

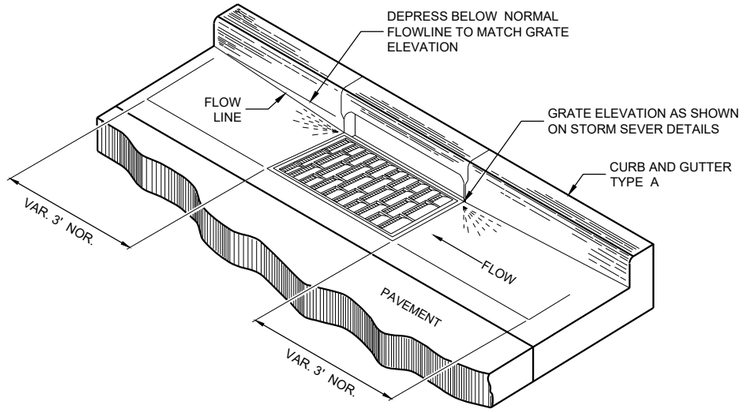
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D01 - 23a



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

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

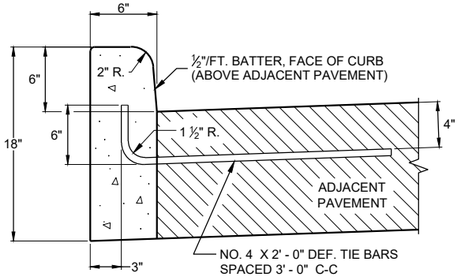
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

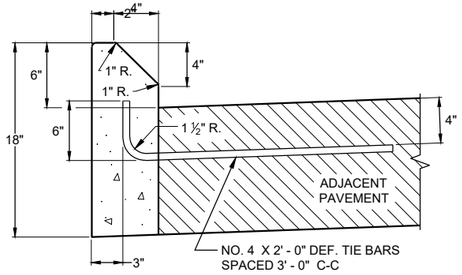
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(10) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

(11) PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

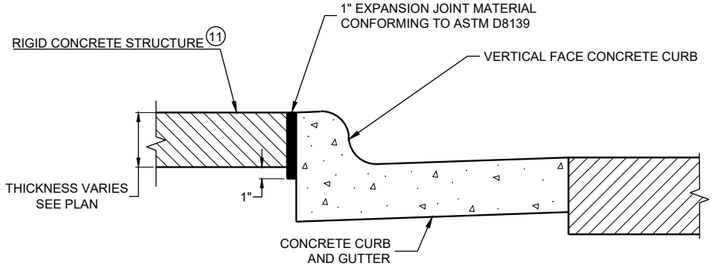


TYPES A (1) & D

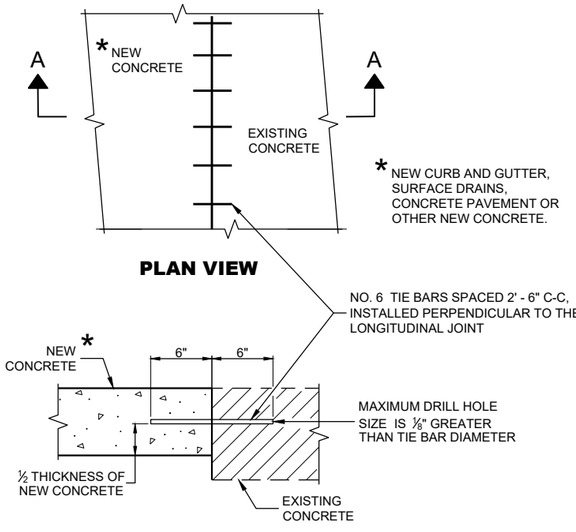


TYPES G (1) & J

CONCRETE CURB



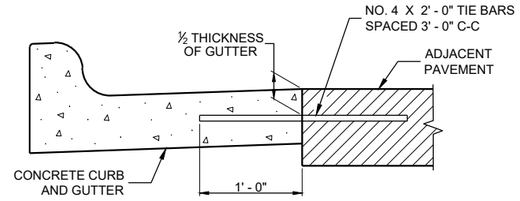
EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)



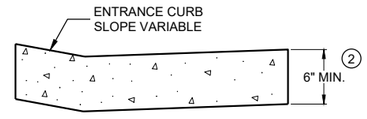
PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (10)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

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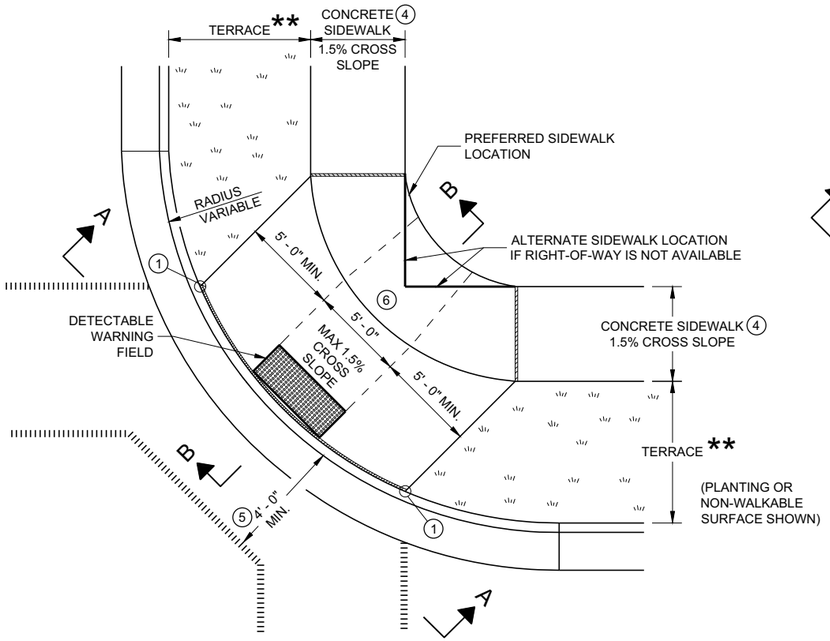
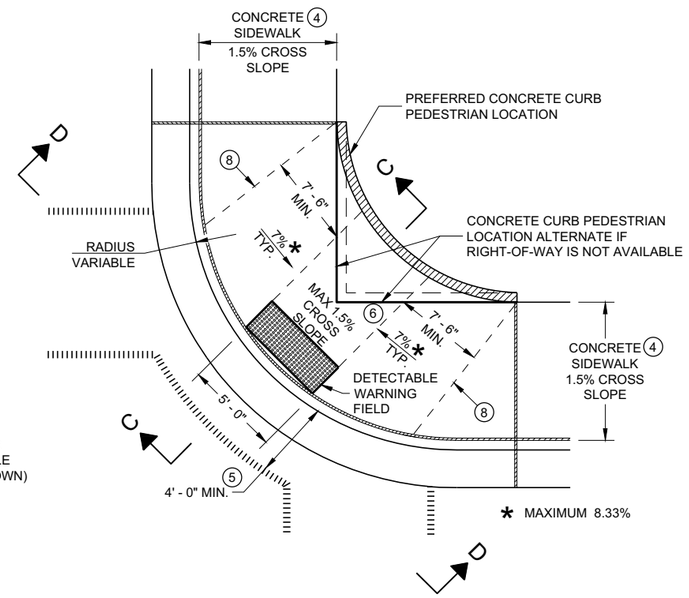
SDD08D01 - 23b



PLAN VIEW

CURB RAMP TYPE 1

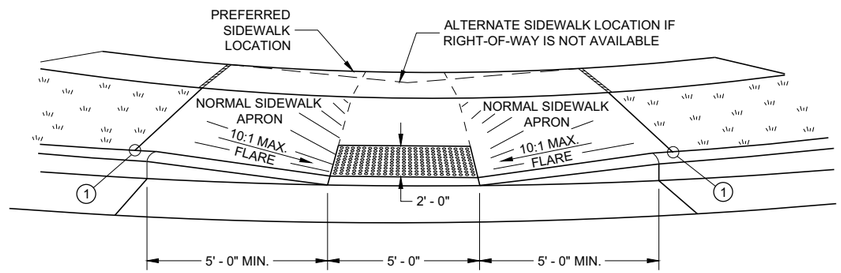
(CENTER OF CORNER RADIUS)



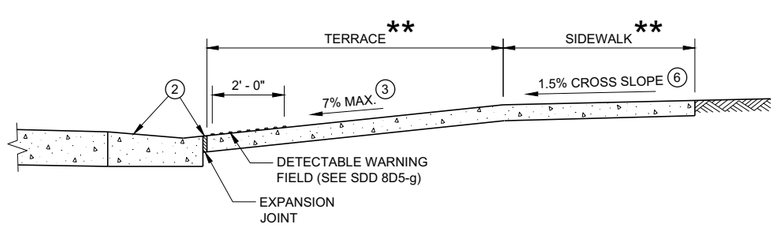
PLAN VIEW

CURB RAMP TYPE 1 - A

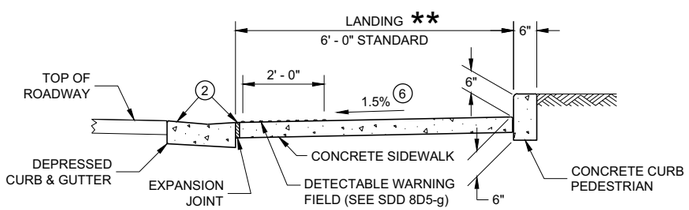
(NO TERRACE)



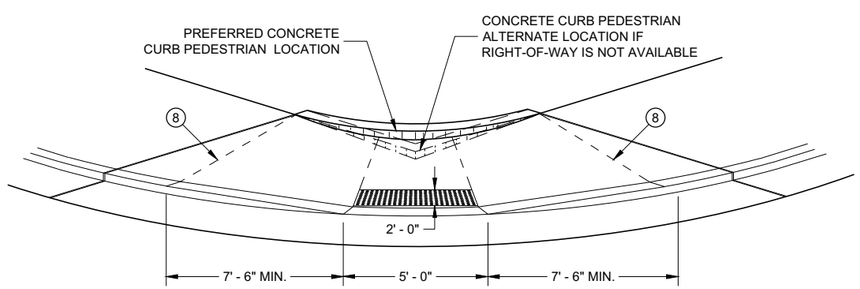
VIEW A - A FOR TYPE 1



SECTION B - B FOR TYPE 1



SECTION C - C FOR TYPE 1 - A



VIEW D - D FOR TYPE 1 - A

** WIDTH SHOWN ELSEWHERE IN THE PLANS

GENERAL NOTES

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

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

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

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

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

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

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

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

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

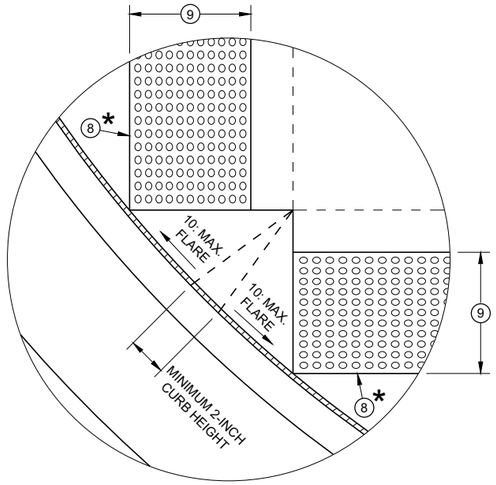
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 1 AND 1-A

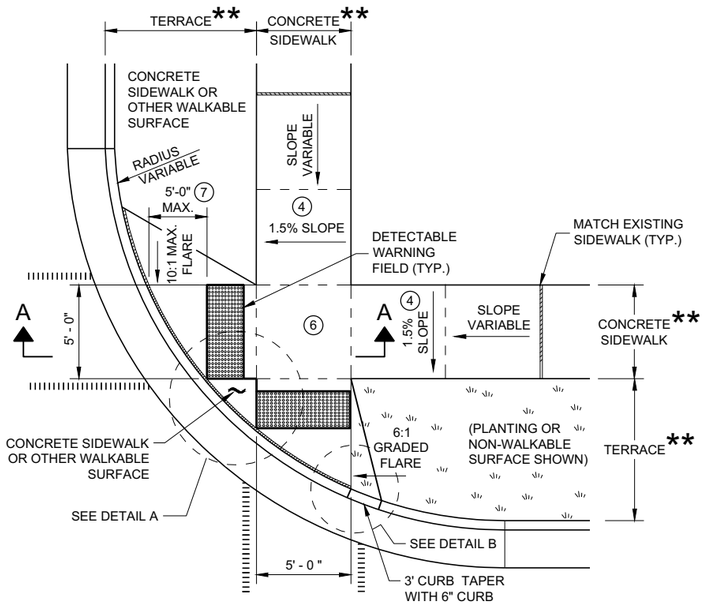
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20a



DETAIL A



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

GENERAL NOTES

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

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.

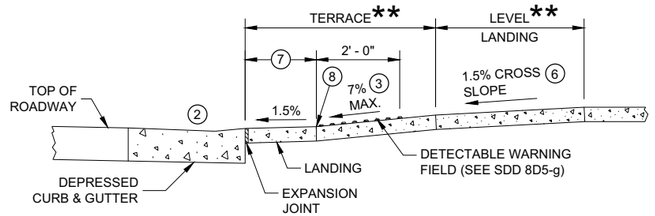
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.

(7) WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

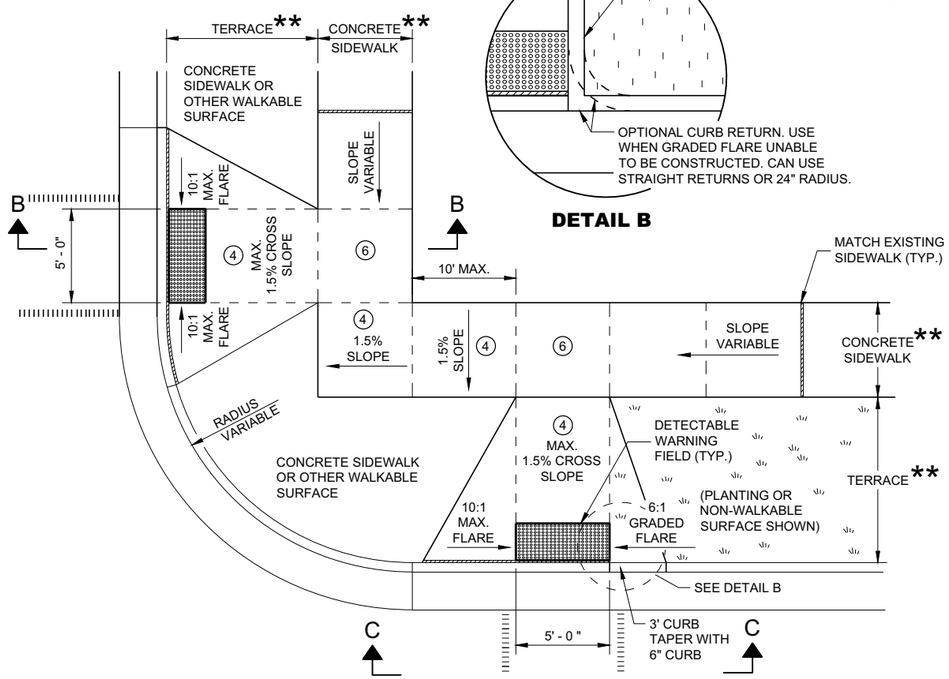
(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



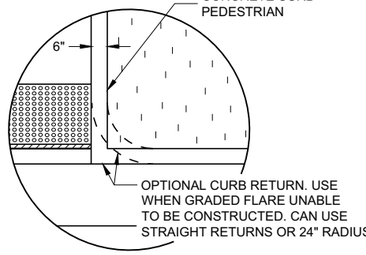
SECTION A - A FOR TYPE 2

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

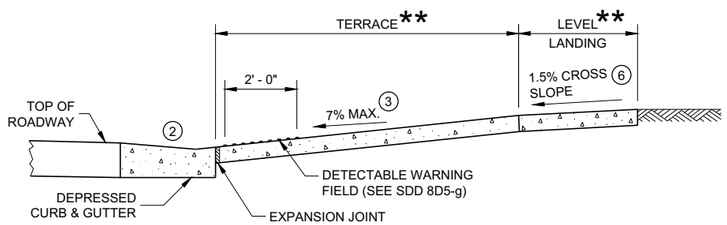
** WIDTH SHOWN ELSEWHERE IN THE PLANS



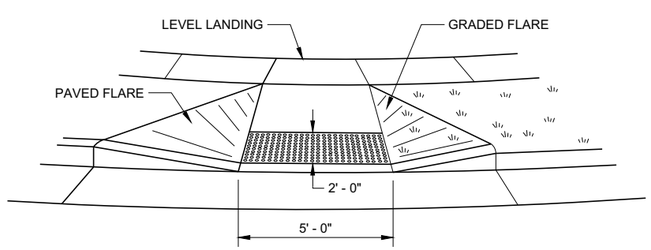
PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)



DETAIL B



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 2 AND 3

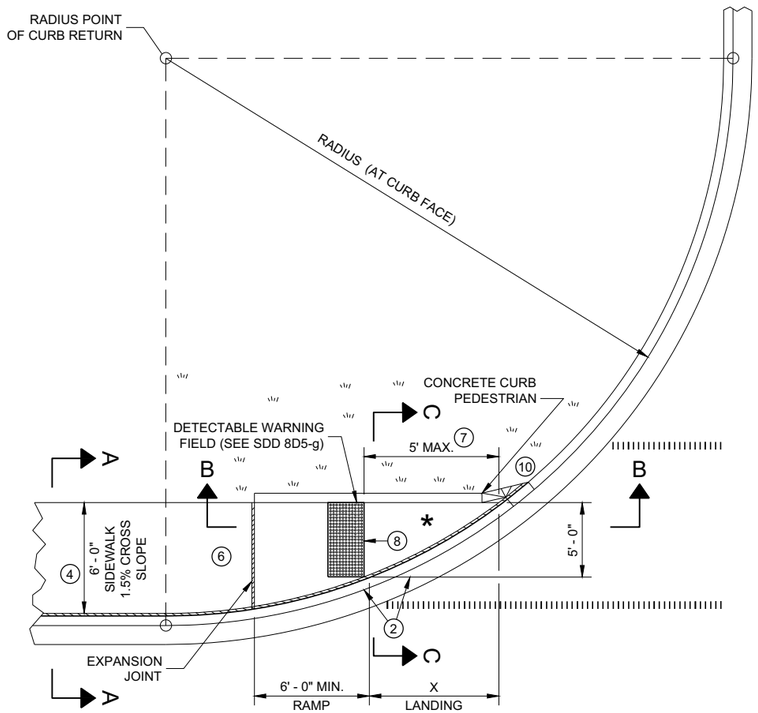
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20b

6

SDD 08D05 - 20b

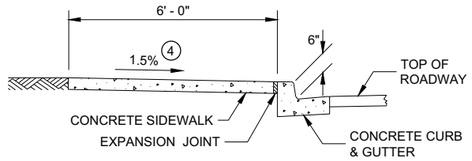


PLAN VIEW

CURB RAMP TYPE 4A

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"
15 FEET	6' - 5½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A

GENERAL NOTES

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

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

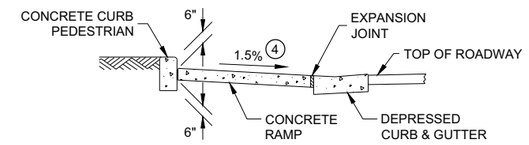
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

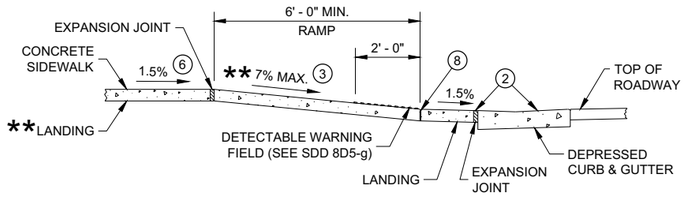
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)



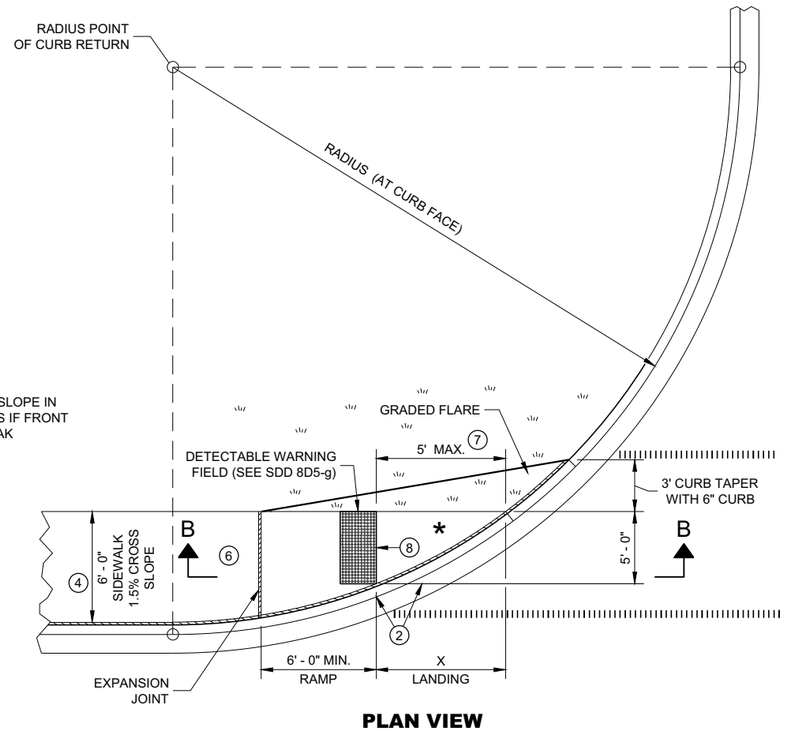
SECTION C - C FOR TYPE 4A



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

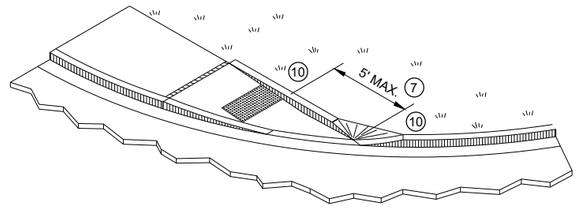
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

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

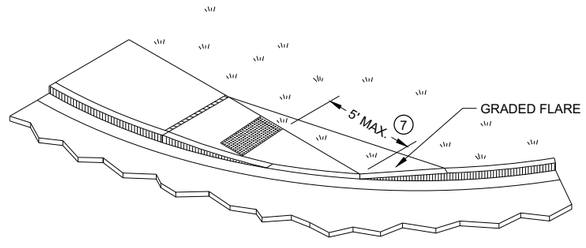


PLAN VIEW

CURB RAMP TYPE 4A1



ISOMETRIC VIEW FOR TYPE 4A



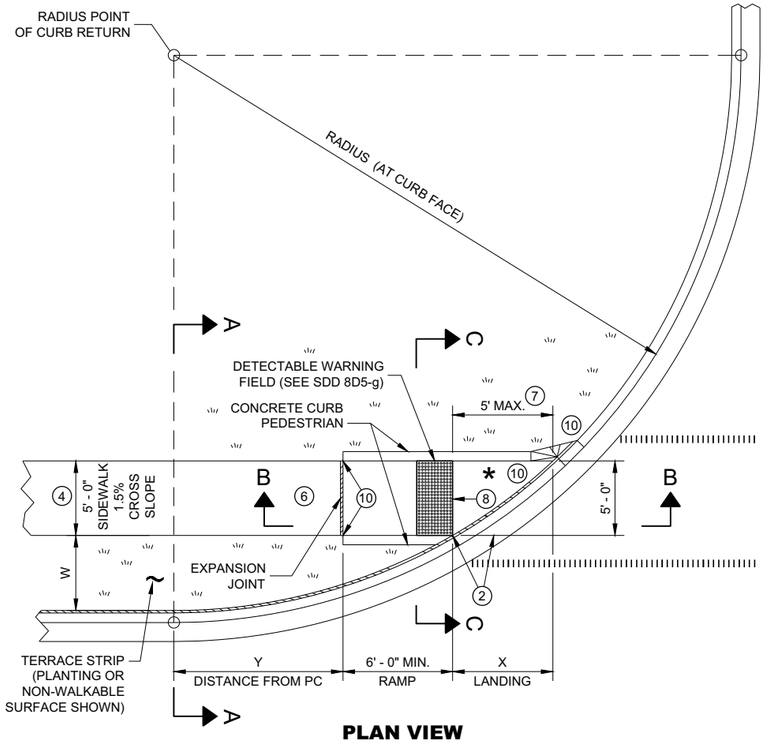
ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20c

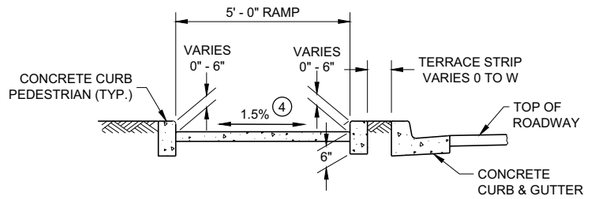


PLAN VIEW

CURB RAMP TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 ¼"	0' - 5"	2' - 1"	1' - 4 ½"	1' - 5"	2' - 1"	0' - 10"	2' - 7 ½"	0' - 3 ¼"	3' - 0 ¼"						
15 FEET	4' - 6 ¾"	2' - 1 ¾"	3' - 9"	3' - 5 ¾"	3' - 1 ¼"	4' - 6"	2' - 6 ¾"	5' - 4 ½"	2' - 1"	6' - 1"	1' - 8"	6' - 8 ½"	1' - 3 ¼"	7' - 2 ½"	0' - 10 ¾"	7' - 7 ¼"
20 FEET	5' - 9 ¾"	3' - 6 ½"	4' - 11 ½"	5' - 1 ¾"	4' - 3 ¼"	6' - 5 ½"	3' - 8 ¾"	7' - 7"	3' - 3"	8' - 6 ½"	2' - 10"	9' - 4 ½"	2' - 5 ½"	10' - 1 ¼"	2' - 1 ¼"	10' - 9"
30 FEET			6' - 9 ¼"	7' - 11 ¼"	6' - 0 ¼"	9' - 8"	5' - 5"	11' - 1 ¾"	4' - 10 ¾"	12' - 5 ¾"	4' - 5 ½"	13' - 7 ¾"	4' - 0 ¾"	14' - 8 ½"	3' - 8 ½"	15' - 8 ¼"
40 FEET									6' - 1 ¾"	15' - 8 ½"	5' - 8"	17' - 2"	5' - 3"	18' - 5 ¾"	4' - 10 ¾"	19' - 8 ¼"
50 FEET															5' - 10 ¼"	23' - 2"

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



SECTION C - C FOR TYPE 4B

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

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

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

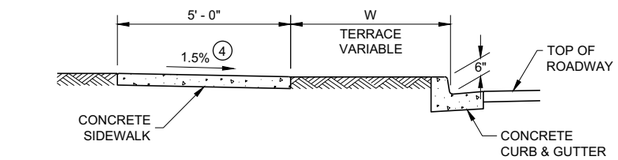
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

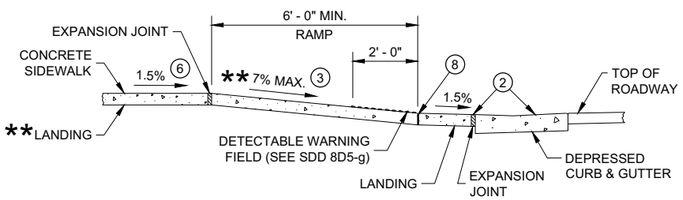
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

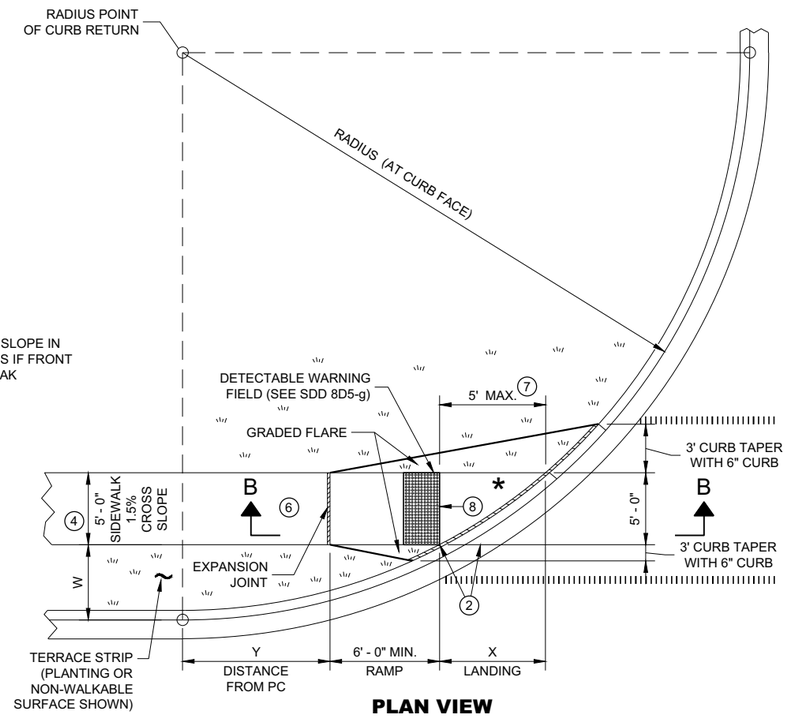


SECTION A - A FOR TYPE 4B



SECTION B - B FOR TYPE 4B AND TYPE 4B1

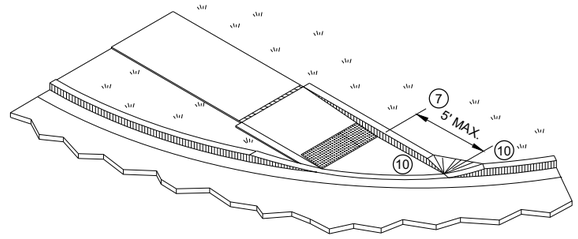
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED



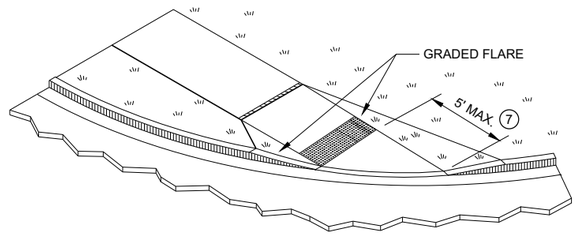
PLAN VIEW

CURB RAMP TYPE 4B1

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



ISOMETRIC VIEW FOR TYPE 4B



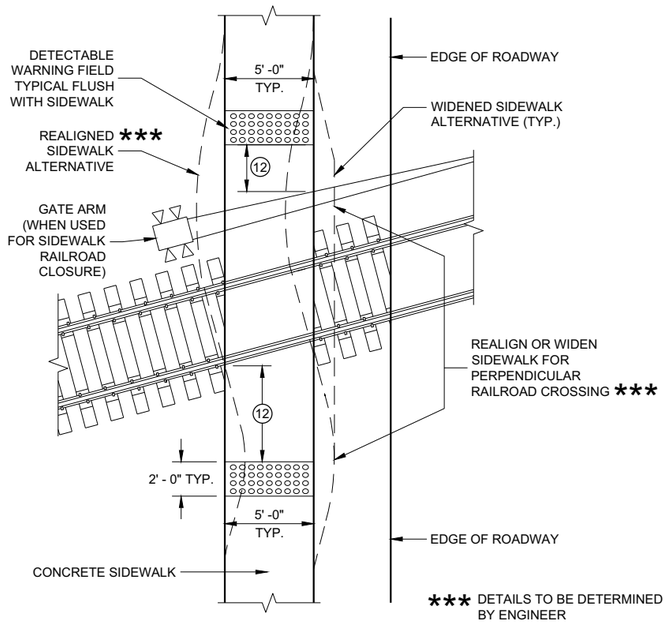
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

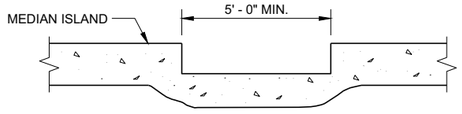
6

SDD 08D05 - 20d

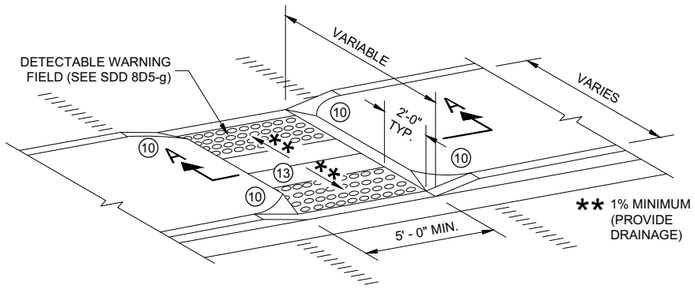


CURB RAMP TYPE 8

DETECTABLE WARNINGS AT RAILROAD CROSSING



SECTION A - A FOR TYPE 5



CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

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

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

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ½ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

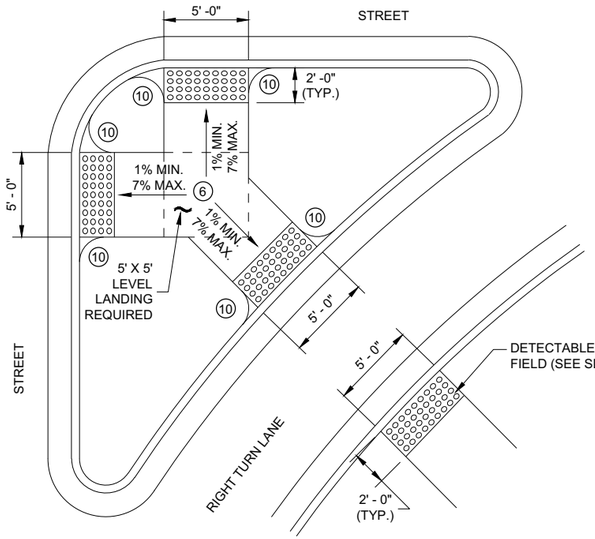
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

LEGEND

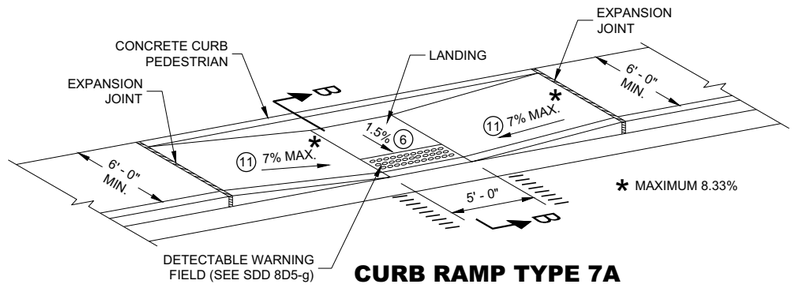
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



CURB RAMP TYPE 6

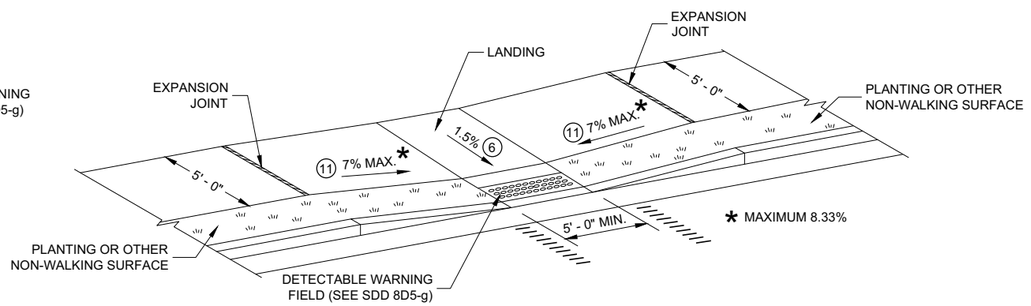
DETECTABLE WARNING AT ISLANDS

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



CURB RAMP TYPE 7A

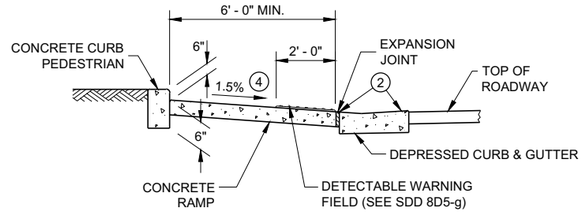
MID BLOCK CROSSING



CURB RAMP TYPE 7B

MID BLOCK CROSSING

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.



SECTION B - B FOR TYPE 7A

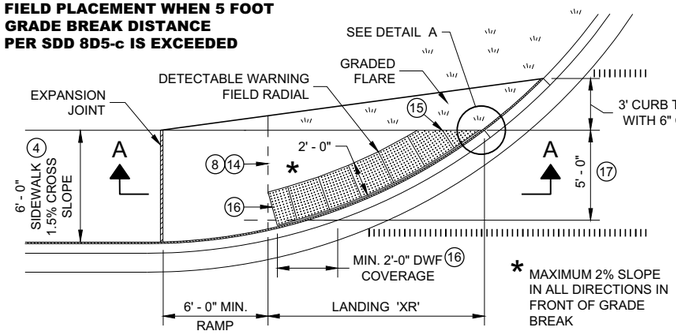
CURB RAMPS TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D05 - 20e

SDD 08D05 - 20e

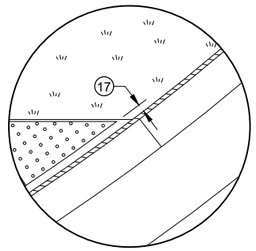
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



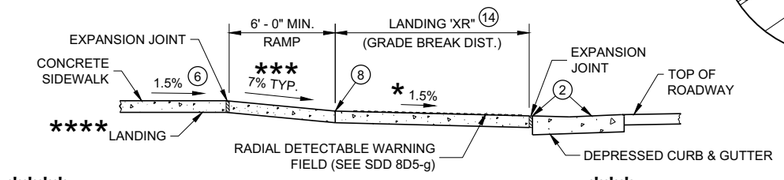
PLAN VIEW

CURB RAMP TYPE 4A1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL A

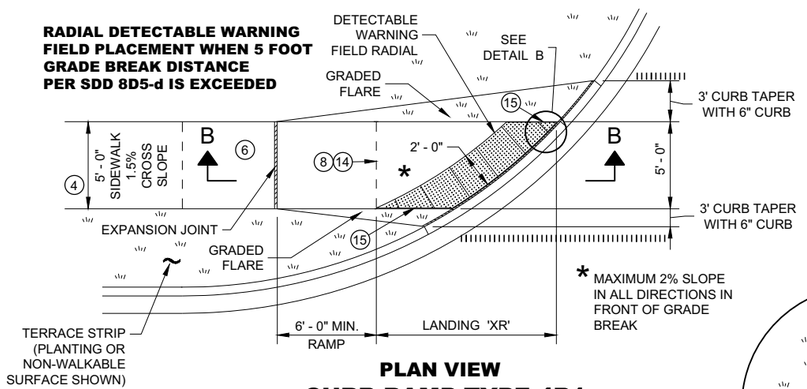


**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION A - A FOR TYPE 4A1

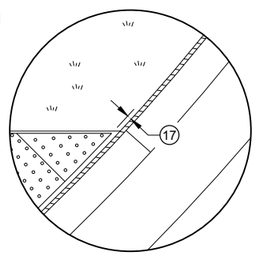
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



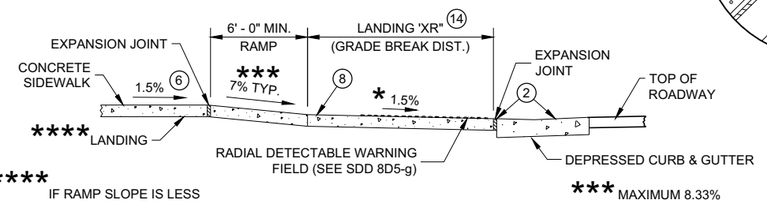
PLAN VIEW

CURB RAMP TYPE 4B1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL B



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

*** MAXIMUM 8.33%

SECTION B - B FOR TYPE 4B1

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

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

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

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

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

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

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

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

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

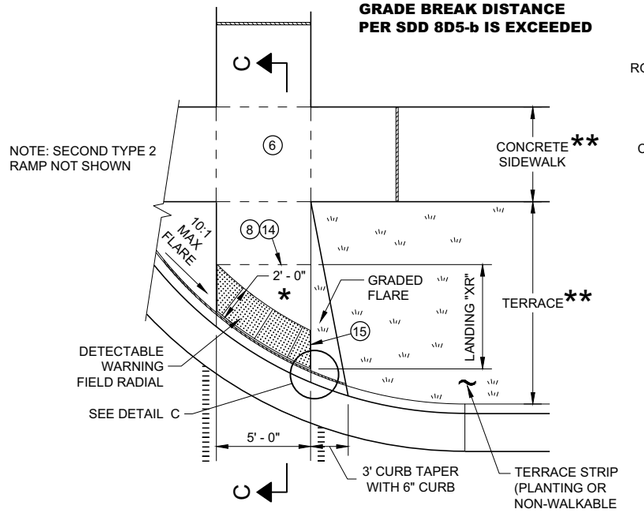
(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

(17) A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

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

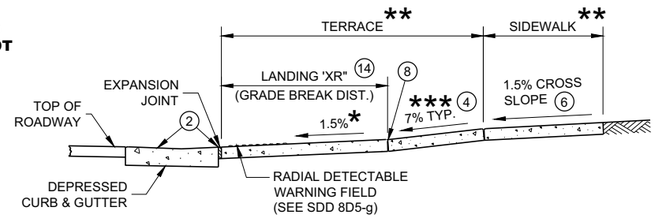


PLAN VIEW

CURB RAMP TYPE 2

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)

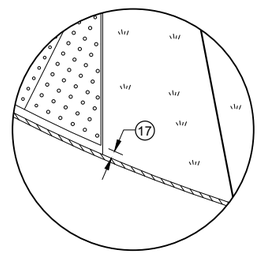


SECTION C - C FOR TYPE 2

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

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%



DETAIL C

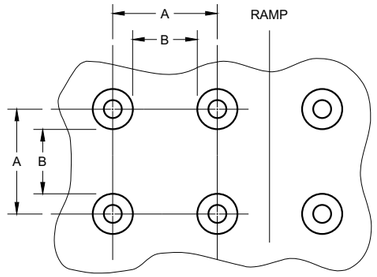
CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

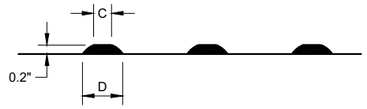
SDD 08D05 - 20f

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

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

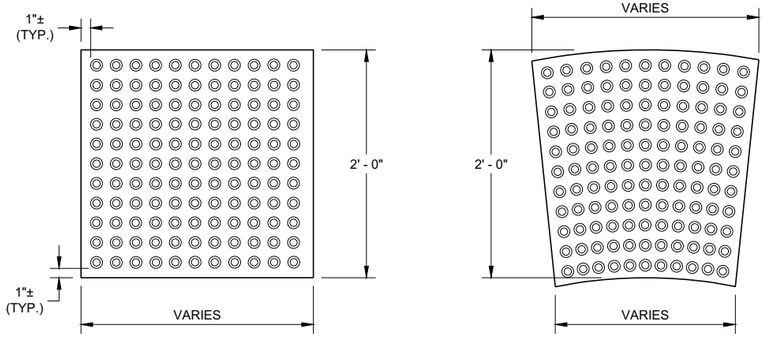


PLAN VIEW



ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



RECTANGULAR PLATES

RADIAL PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)

GENERAL NOTES

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

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

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

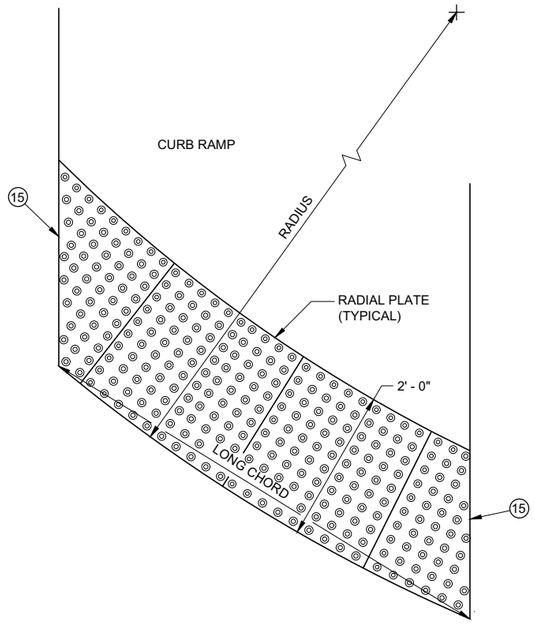
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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

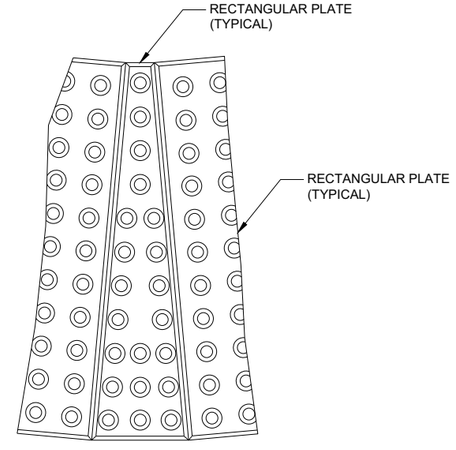
REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

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

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.



PLAN VIEW
RADIAL DETECTABLE WARNING FIELD ATTRIBUTES



PLAN VIEW
RADIAL WEDGE PLATE CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

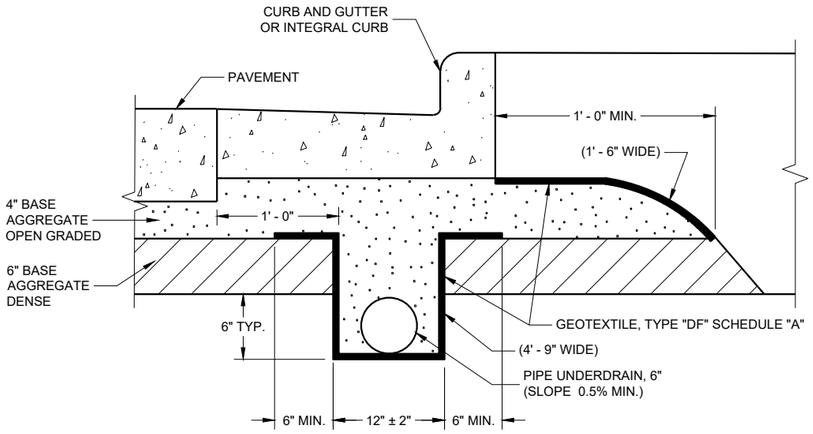
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

6

SDD 08D05 - 20g



EDGEDRAIN IN URBAN ROADWAY

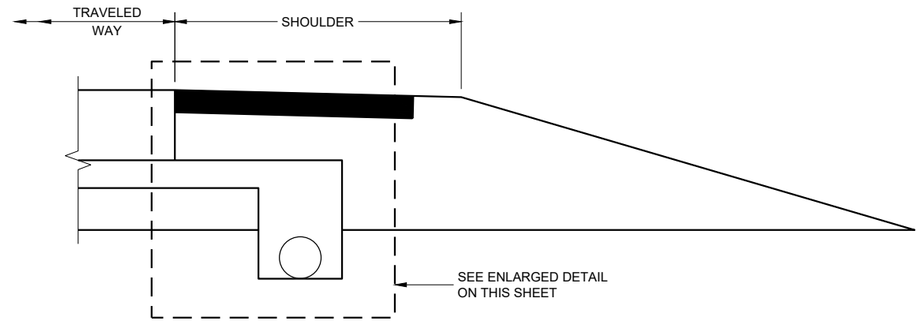
GENERAL NOTES

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

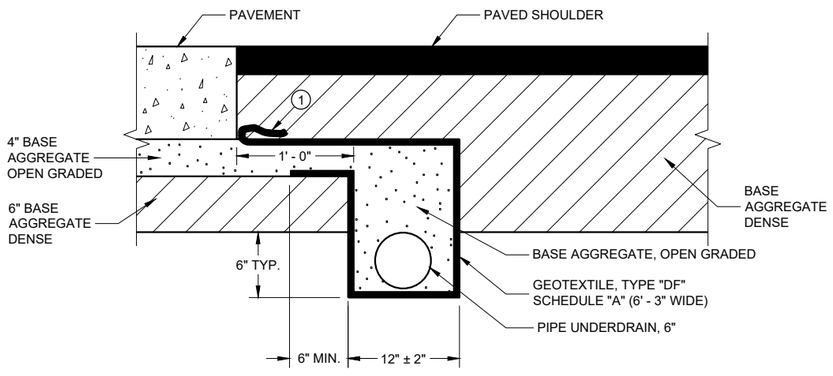
(1) FOLD OVER EXCESS GEOTEXTILE AT THIS LOCATION.

(2) TOTAL GEOTEXTILE WIDTH IS 6'-3" FOR PAYMENT.



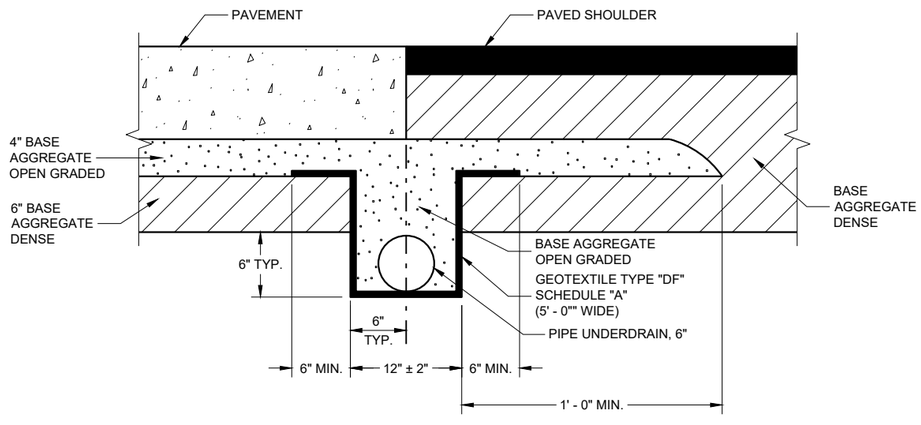
RURAL CROSS SECTION

6



POST PAVING INSTALLATION

(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATIVE

EDGEDRAIN IN RURAL ROADWAY

6

SDD 08D15 - 05b

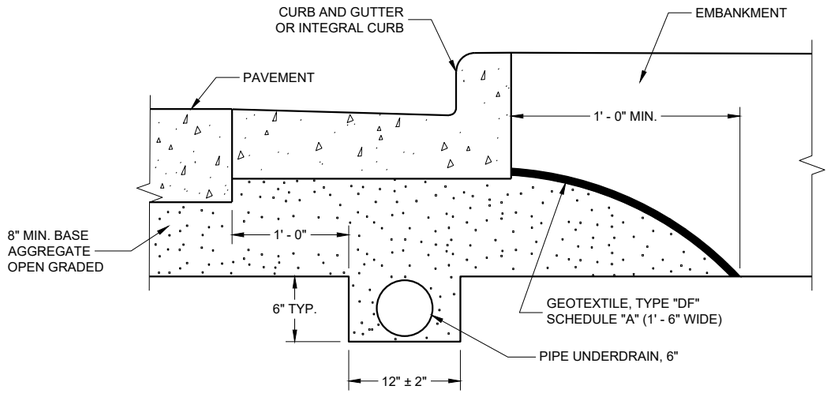
EGEDRAIN AND BASE AGGREGATE OPEN GRADED

SDD 08D15 - 05b

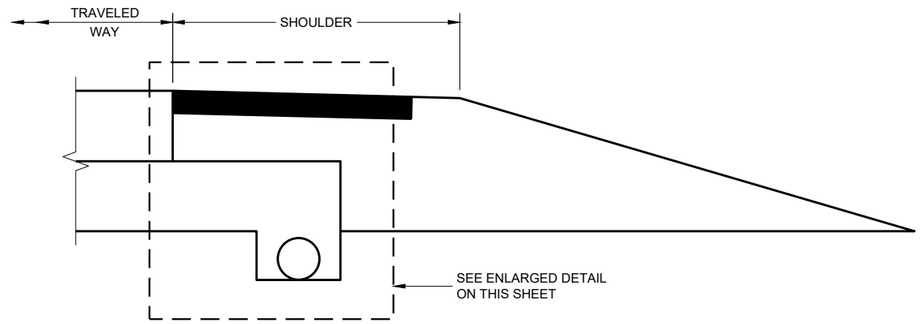
GENERAL NOTES

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

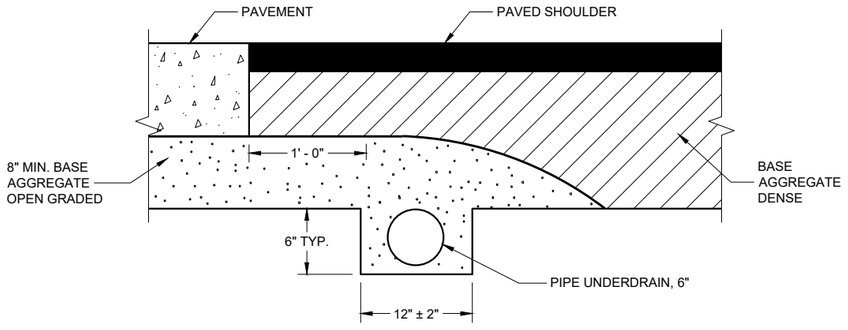
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.



EDGEDRAIN IN URBAN ROADWAY

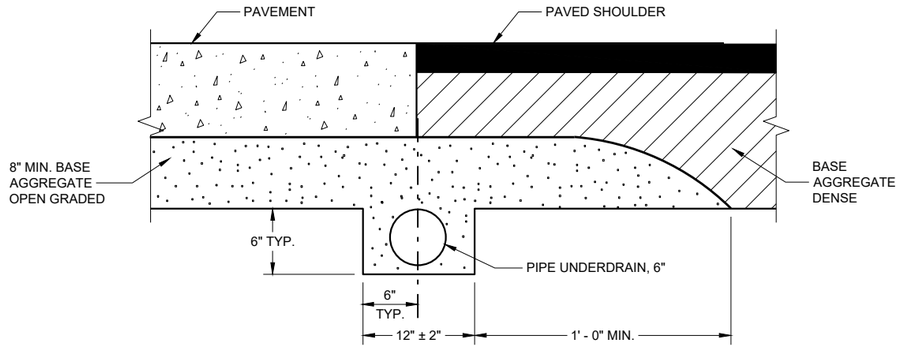


RURAL CROSS SECTION



POST PAVING INSTALLATION

(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATIVE

EDGEDRAIN IN RURAL ROADWAY

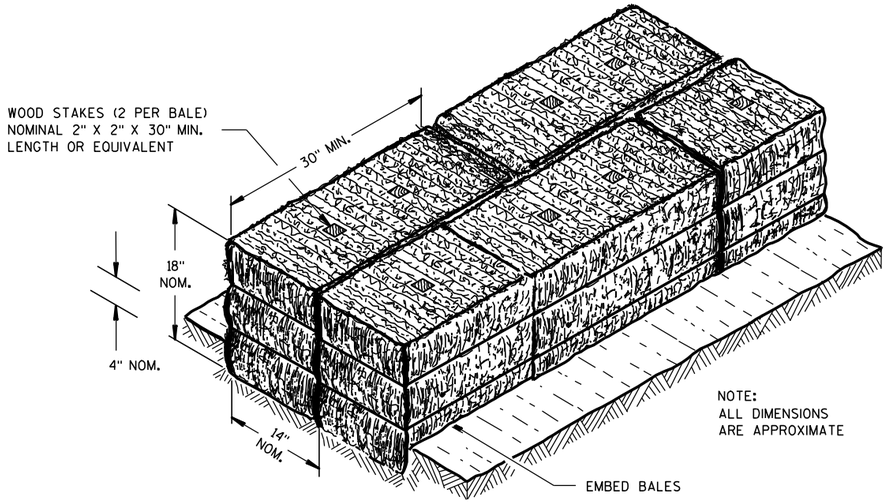
EDGEDRAIN AND BASE AGGREGATE OPEN GRADED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

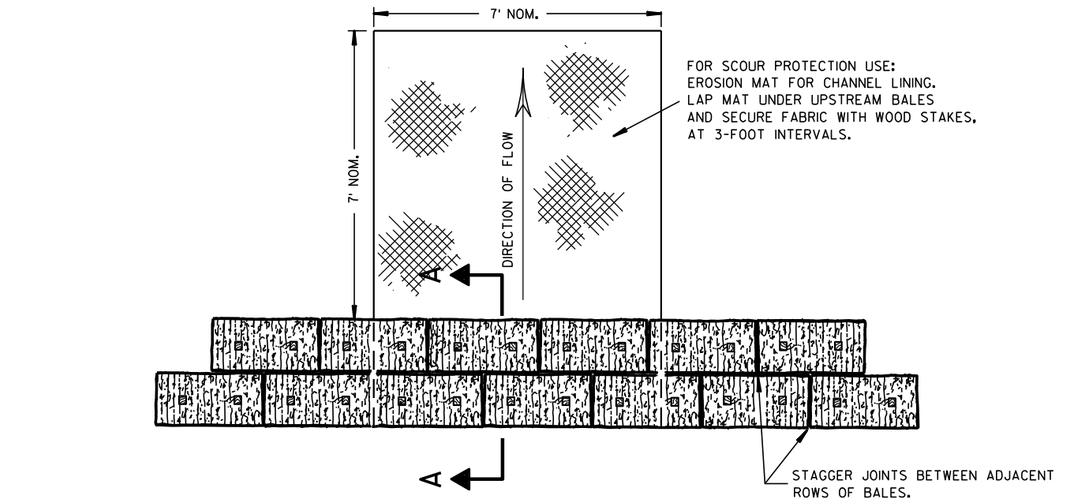
APPROVED
September 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPERVISOR
FHWA

6

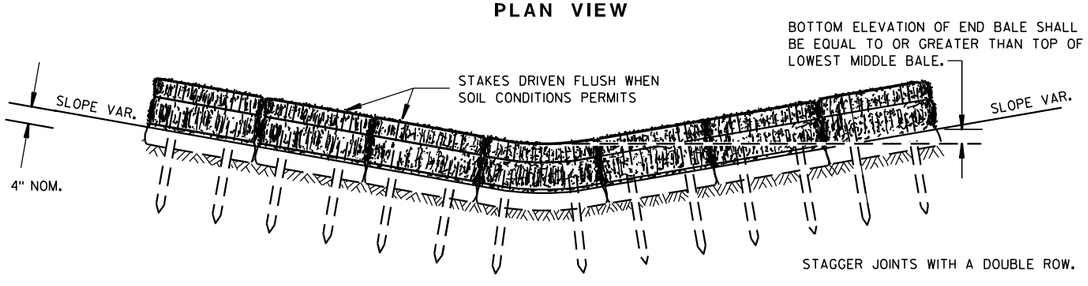
SDD 08D15 - 05c



SECTION A-A



PLAN VIEW



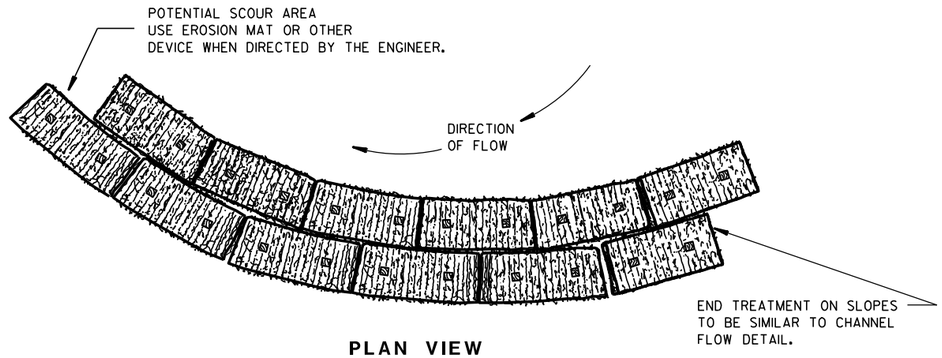
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

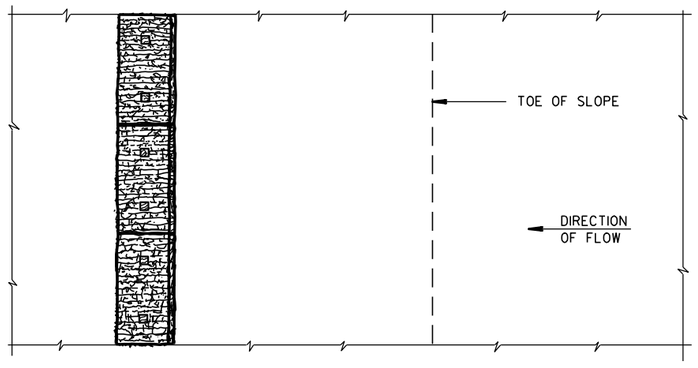
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

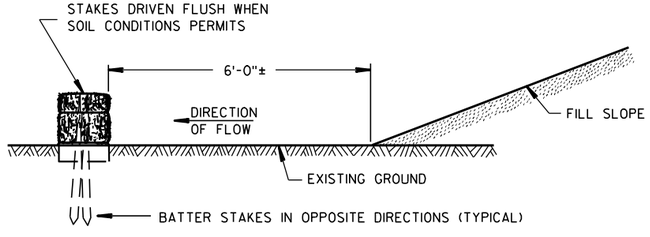


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

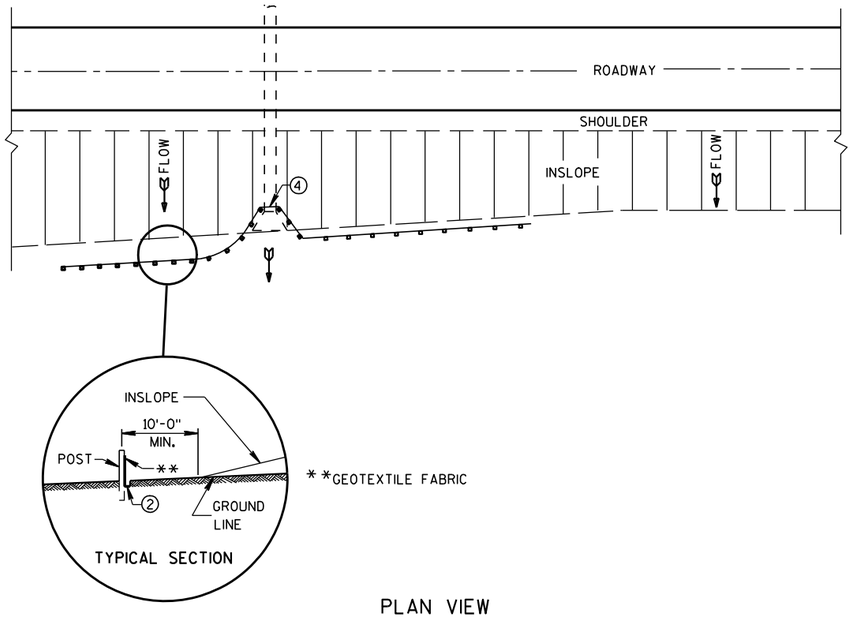
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 DATE

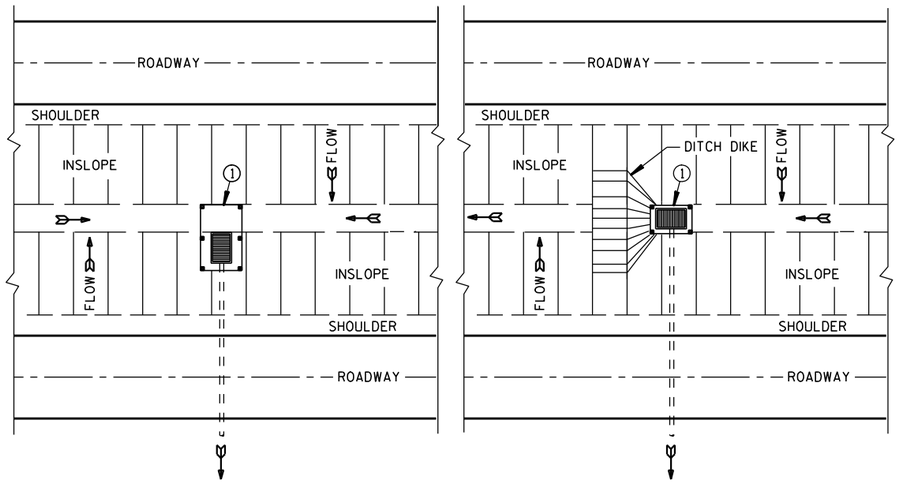
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



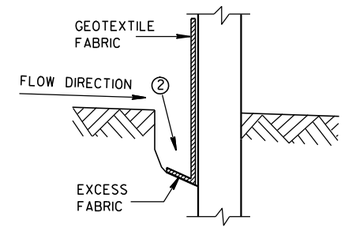
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

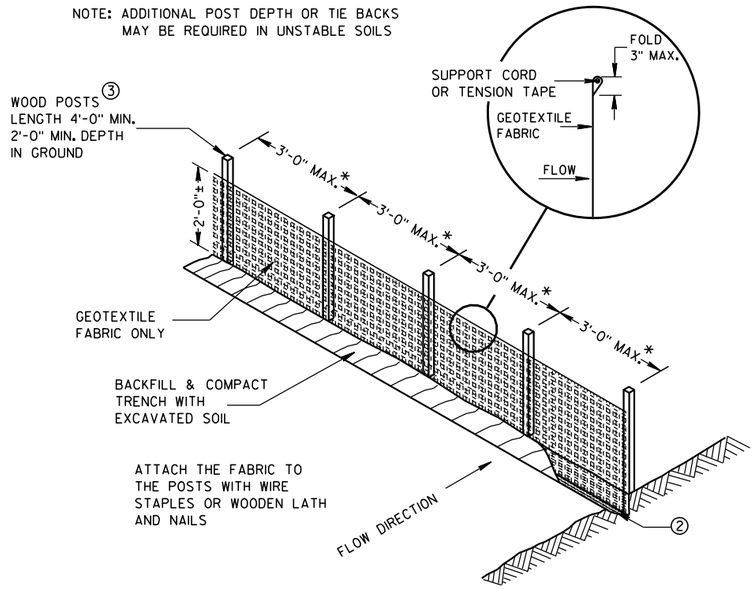
GENERAL NOTES

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

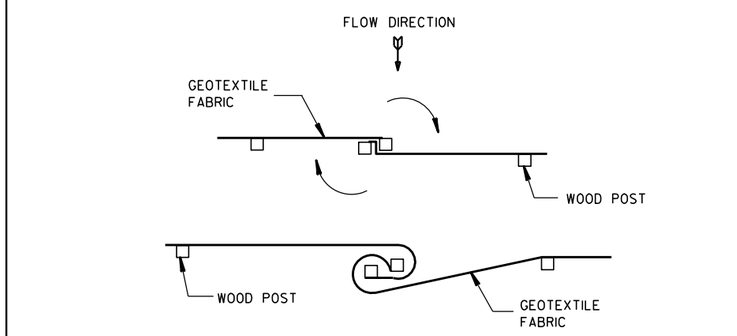
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



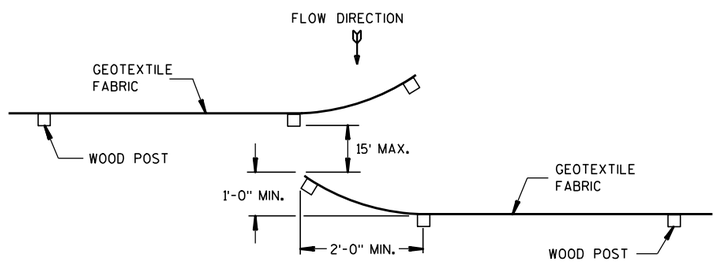
TRENCH DETAIL



SILT FENCE

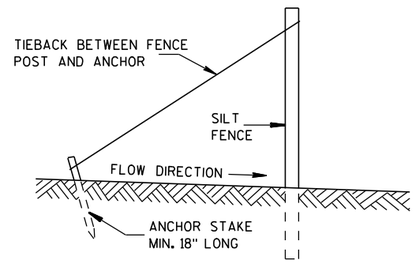


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 E 9-6

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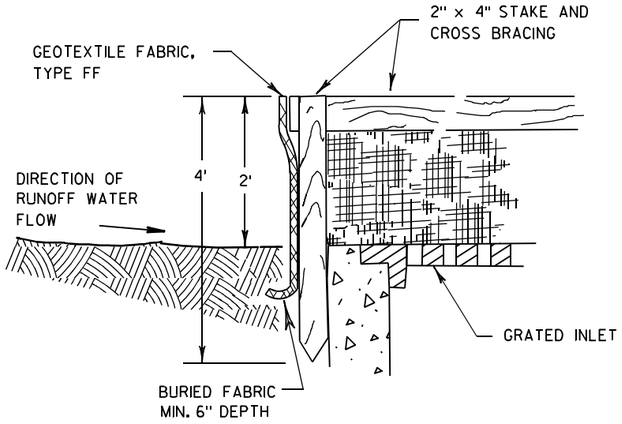
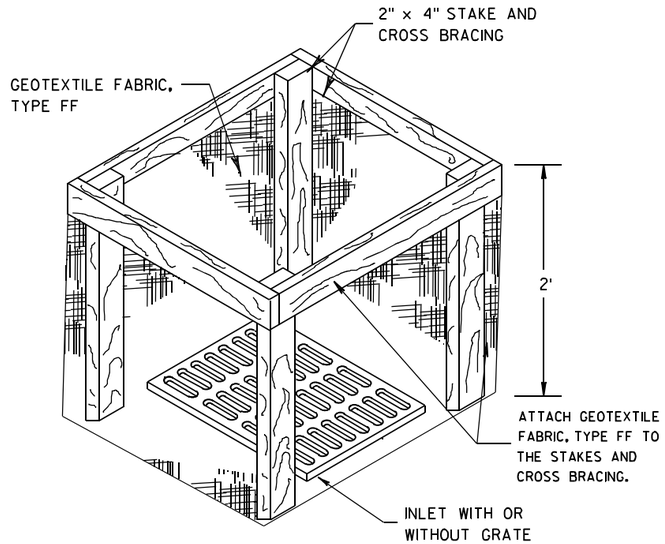
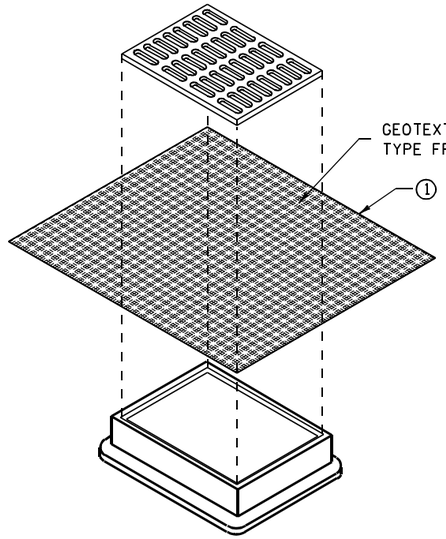
S.D.D. 8 E 9-6



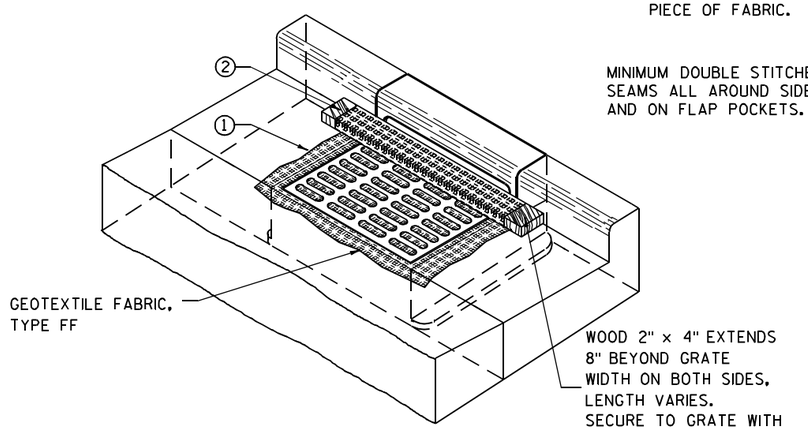


INLET PROTECTION, TYPE A

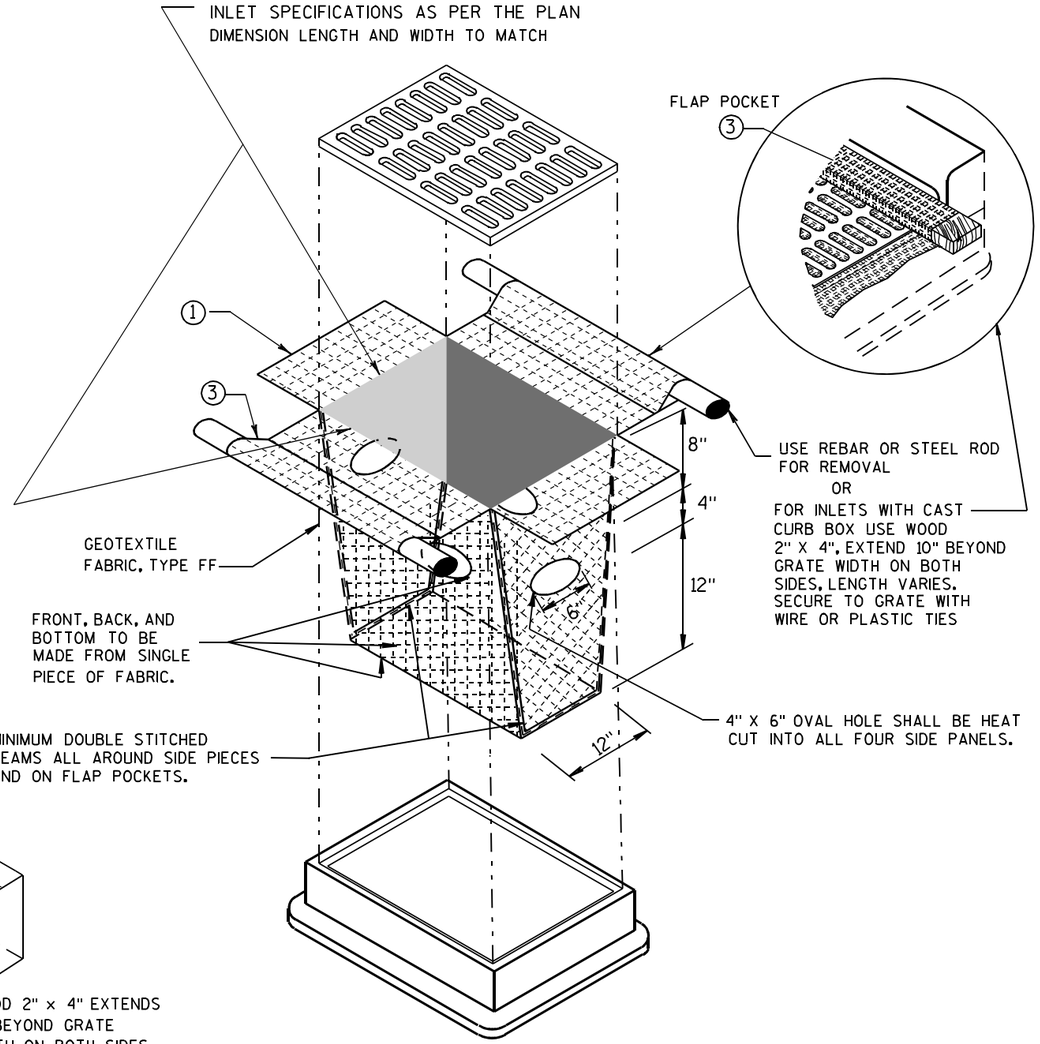


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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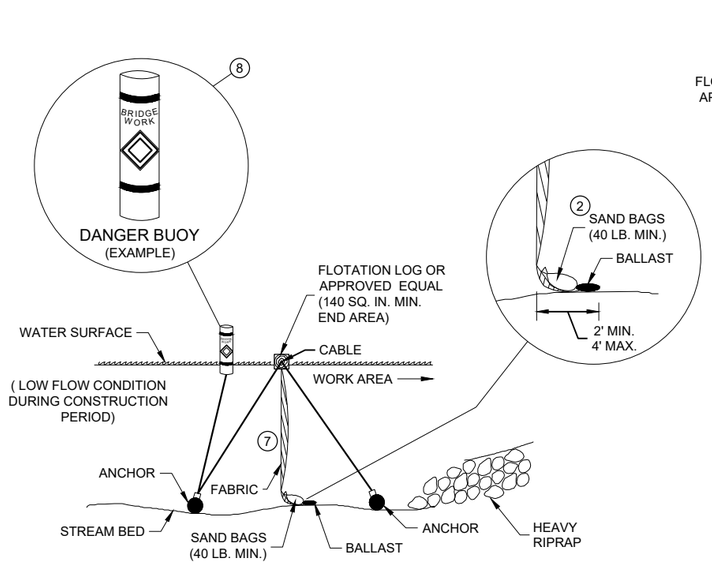
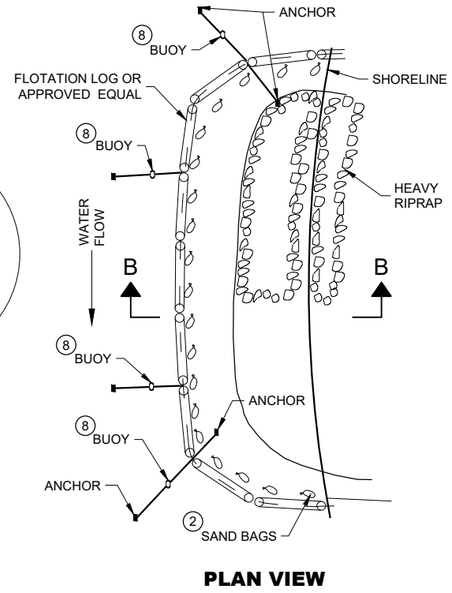
S.D.D. 8 E 10-2

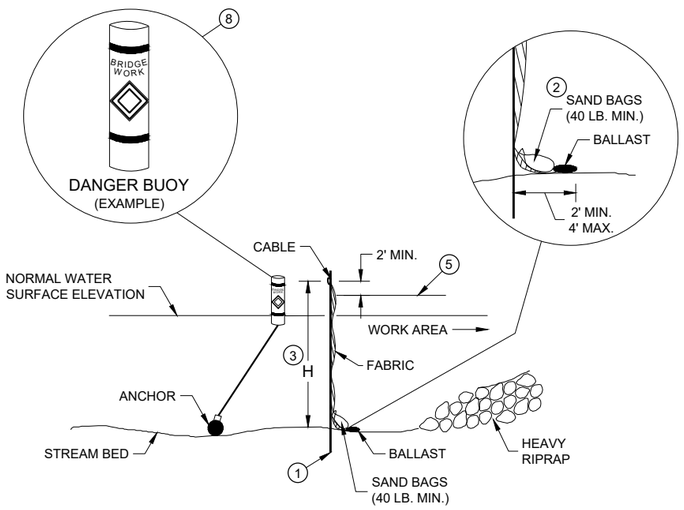


SECTION B - B

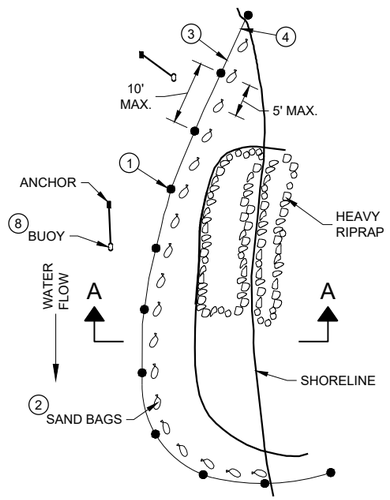


PLAN VIEW

TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A - A



PLAN VIEW

TURBIDITY BARRIER - STANDARD POST INSTALLATION

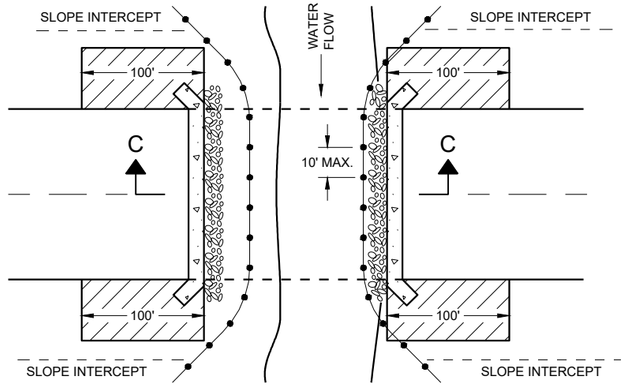
TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

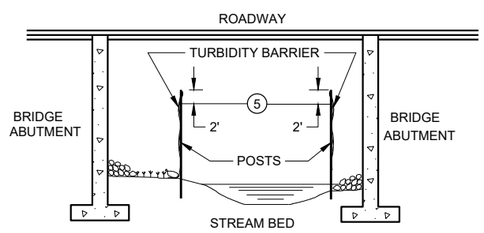
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

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



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/4/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOI
ENGINEER

FHWA

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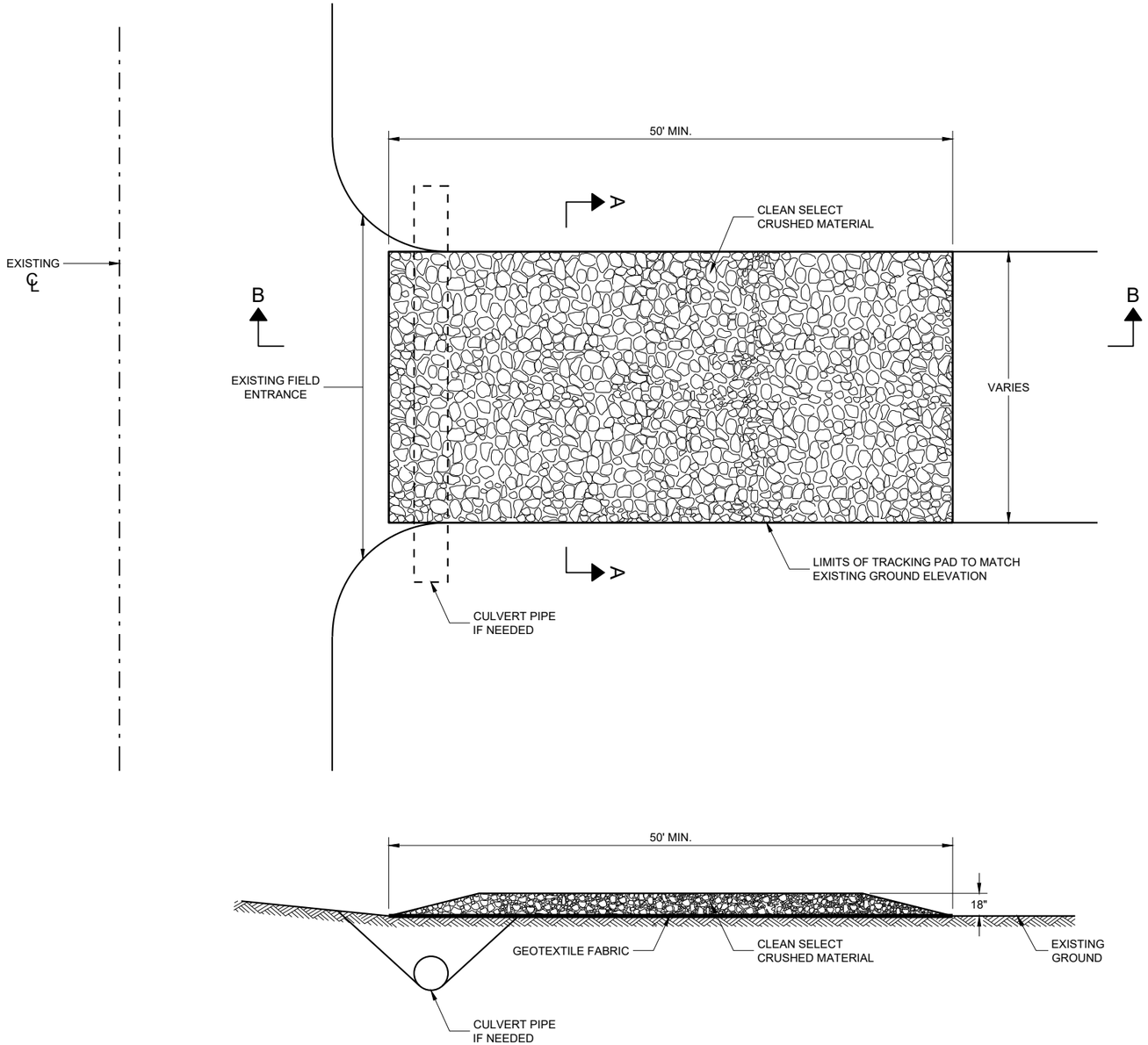
SDD 08E11 - 02



SECTION B - B

GENERAL NOTES

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

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

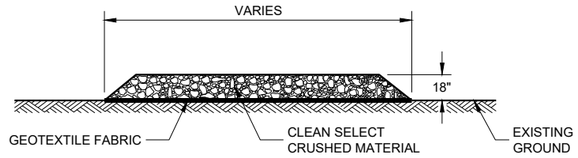
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A - A

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SDD 08E14 - 01

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2011
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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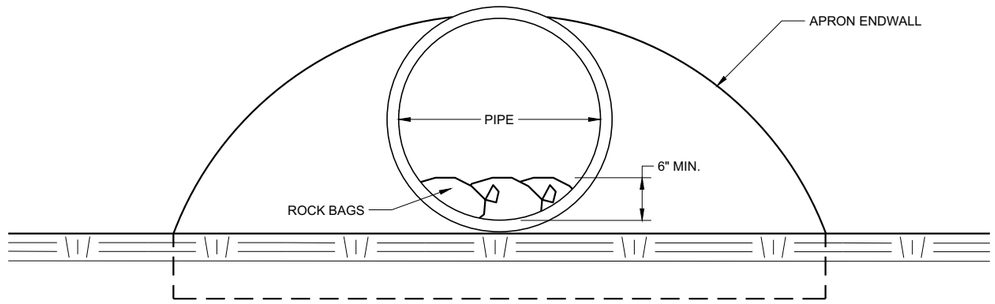
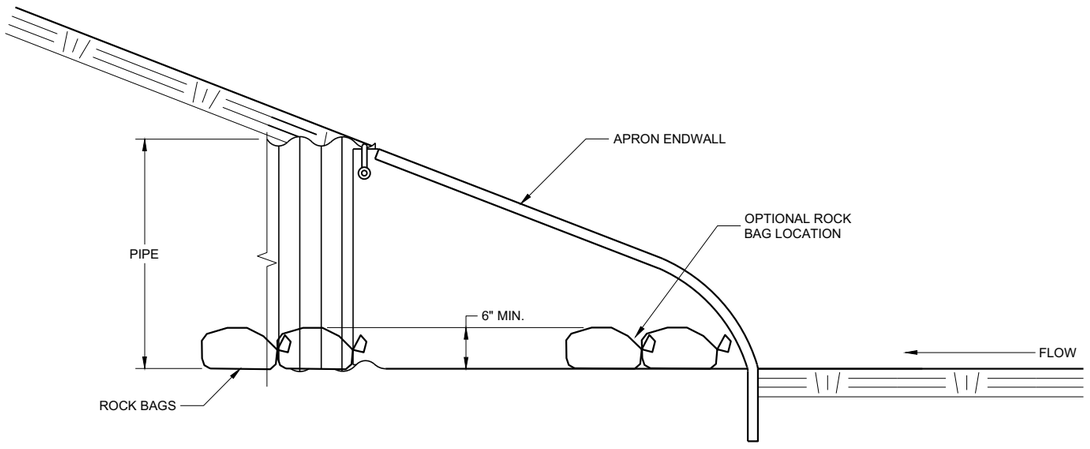
SDD 08E14 - 01



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Daniel Schave
EROSION CONTROL ENGI

FHWA

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SDD 08E15 - 01

6

SDD 08E15 - 01

METAL APRON ENDWALLS

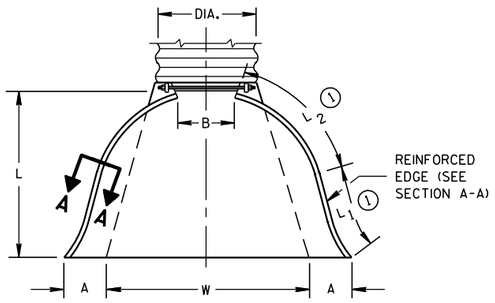
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

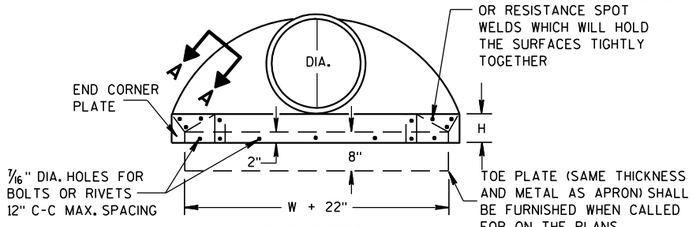
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

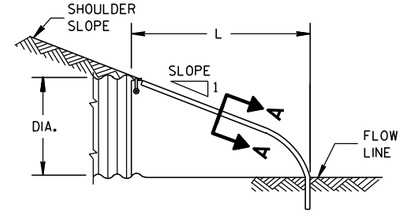
*MINIMUM
**MAXIMUM



PLAN VIEW

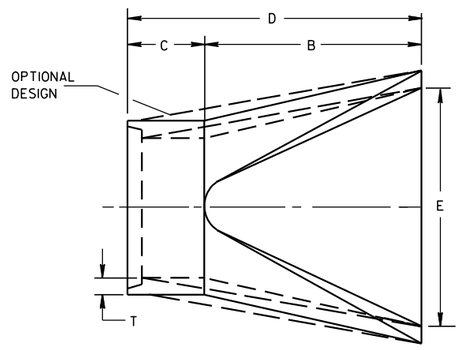


END VIEW

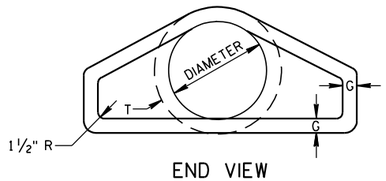


SIDE ELEVATION

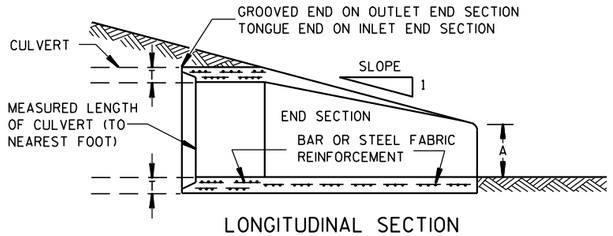
METAL ENDWALLS



PLAN

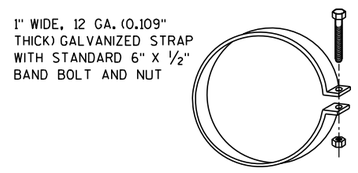


END VIEW



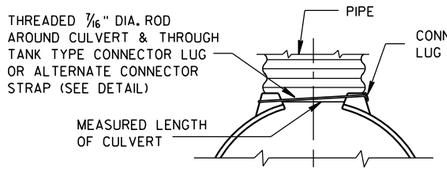
LONGITUDINAL SECTION

CONCRETE ENDWALLS

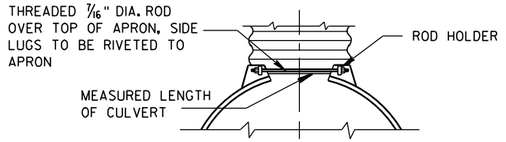


ALTERNATE FOR TYPE 1 CONNECTION

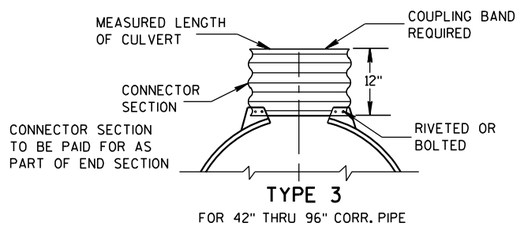
END SECTION CONNECTOR STRAP



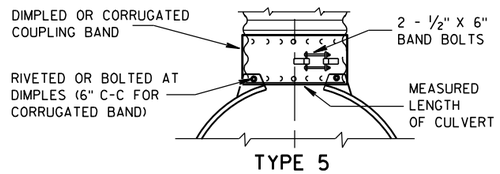
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

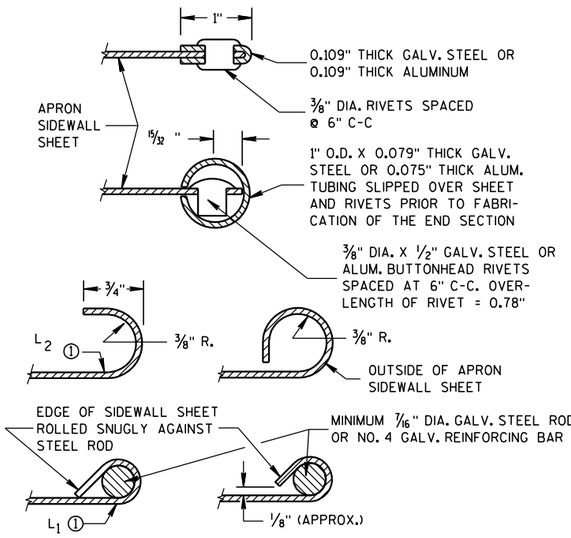
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

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

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

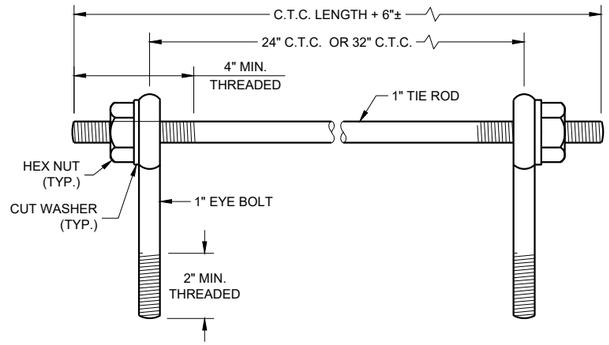
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

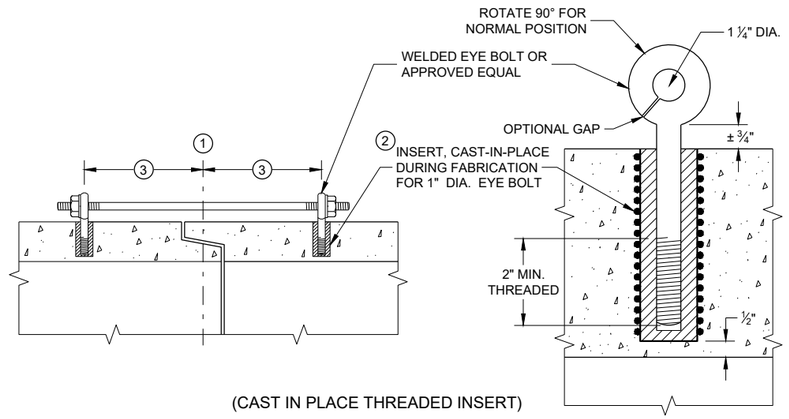
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

(1) CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

(2) THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

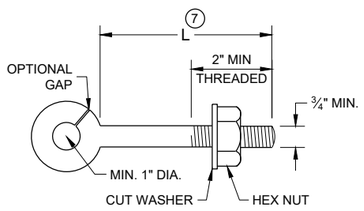
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

(4) BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

(5) OPENING TO BE ROD DIAMETER PLUS 1 INCH.

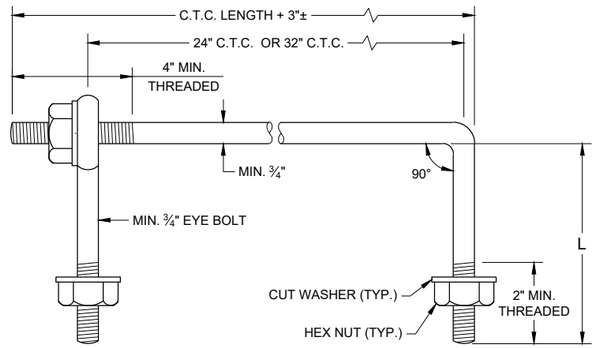
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

(7) EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

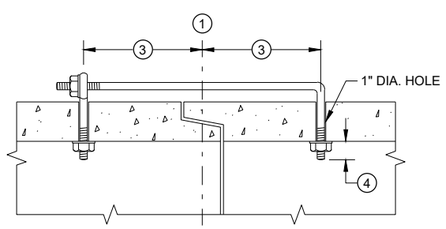


EYE BOLT (7)

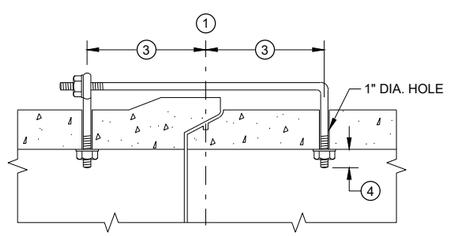
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

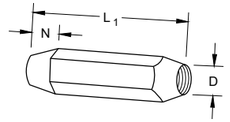
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12 - 60	⅝	⅝	5	½
66 - 84	¾	¾	5	½
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES



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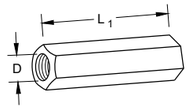
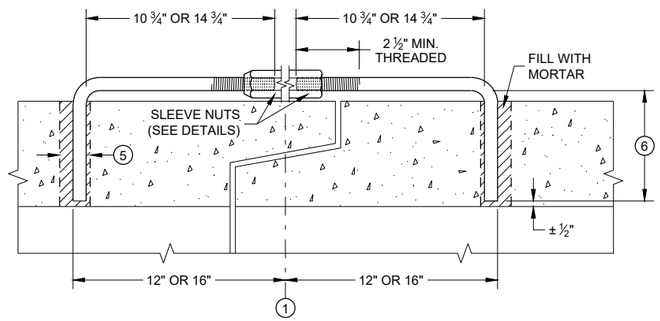


PLAIN

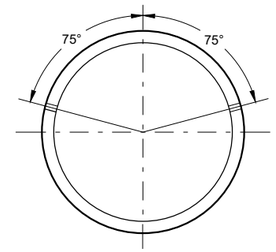
RIGHT AND LEFT THREADS

SLEEVE NUTS



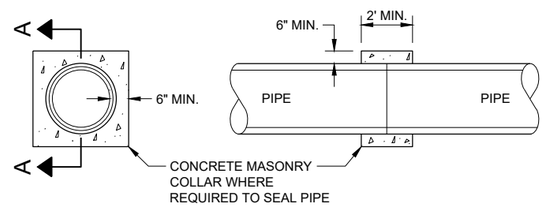
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A - A

CONCRETE COLLAR DETAIL

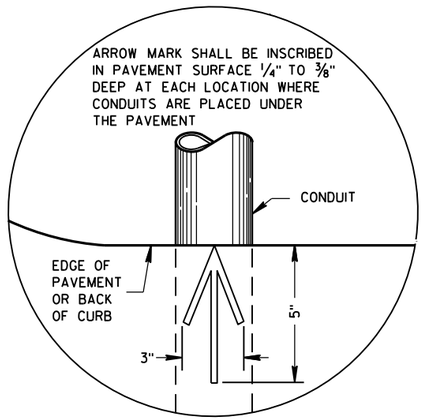
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

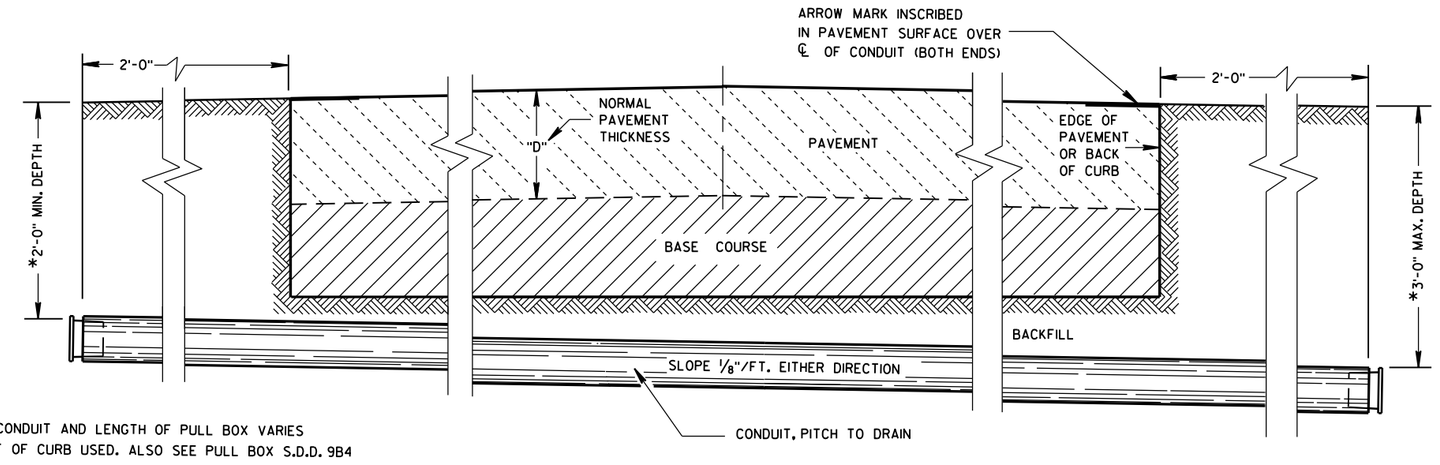
SDD 08F04 - 08

SDD 08F04 - 08



PLAN VIEW

ARROW MARK



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

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

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

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

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

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

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

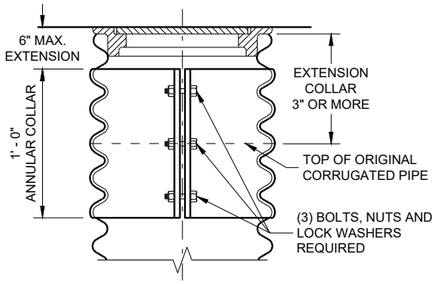
CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

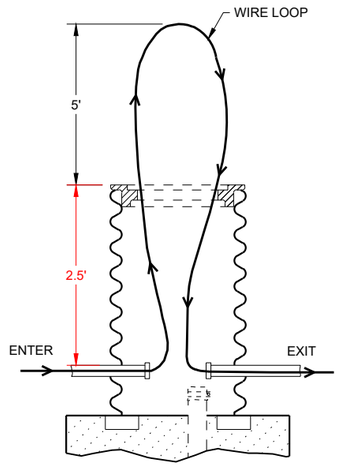
APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

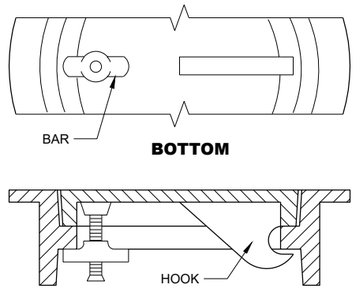
S.D.D. 9 B 2-10



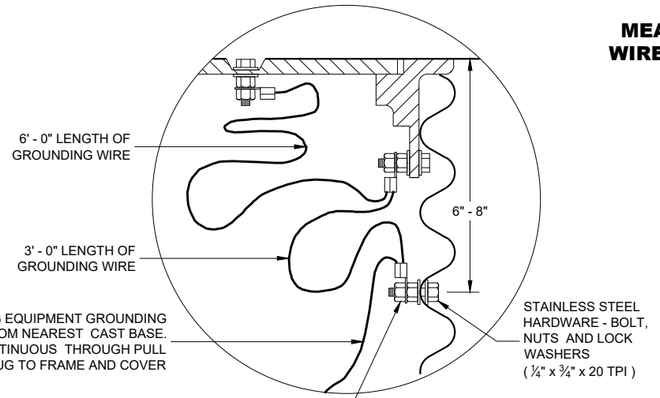
CORRUGATED PIPE EXTENDER



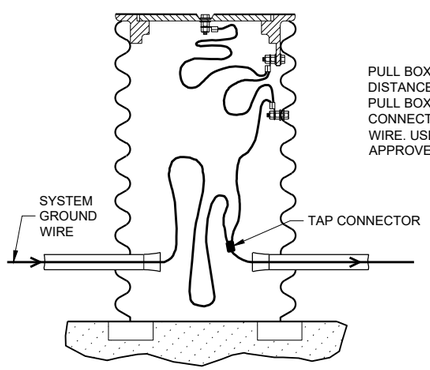
MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



ALTERNATE COVER (LOCKING)
TIGHTENING BAR TYPE

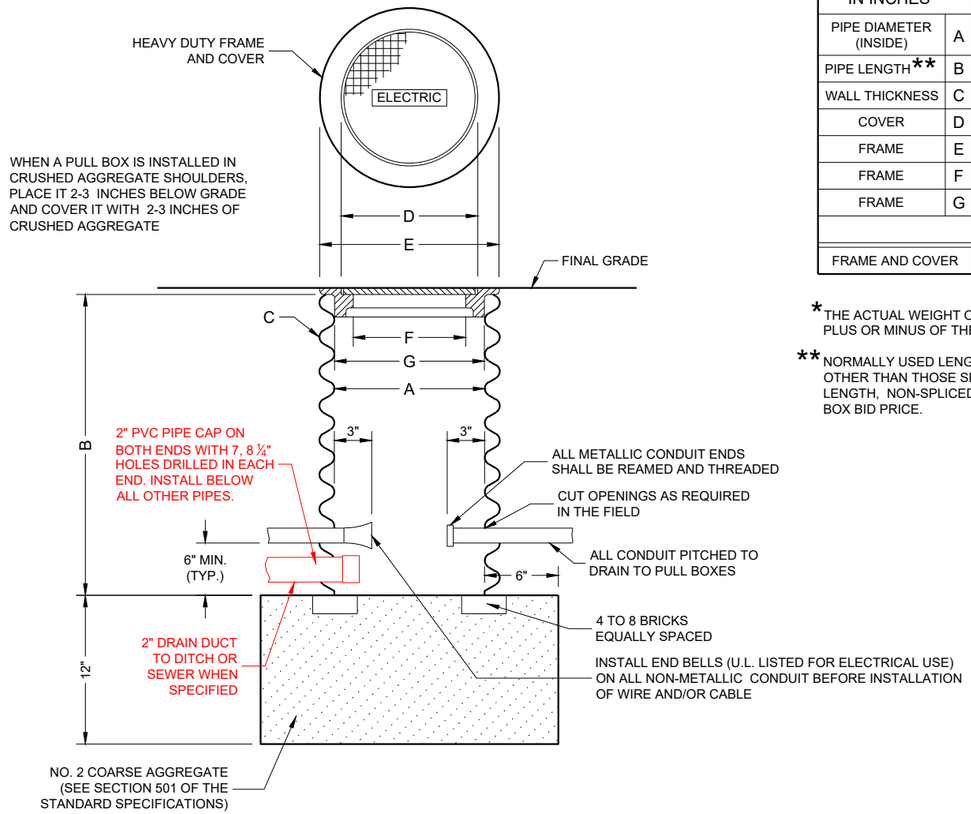


EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



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

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN ¼".

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

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

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

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

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH**	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 ¼	10 ¼	10 ¼	16 ¼	16 ¼	16 ¼	22 ¼	22 ¼	22 ¼
FRAME	E	14 ½	14 ½	14 ½	20 ½	20 ½	20 ½	26 ½	26 ½	26 ½
FRAME	F	8 ½	8 ½	8 ½	14 ½	14 ½	14 ½	20 ½	20 ½	20 ½
FRAME	G	11 ½	11 ½	11 ½	17 ½	17 ½	17 ½	23 ½	23 ½	23 ½
WEIGHT IN POUNDS*										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

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

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

PULL BOX

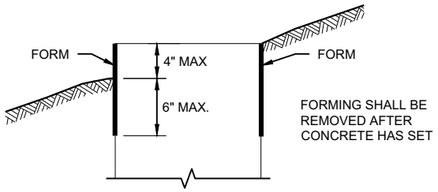
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

FHWA

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



FORMING DETAIL

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

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

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

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

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

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

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

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

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

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

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

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

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

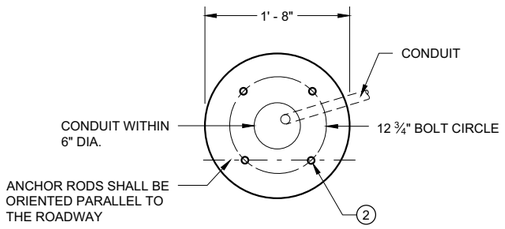
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

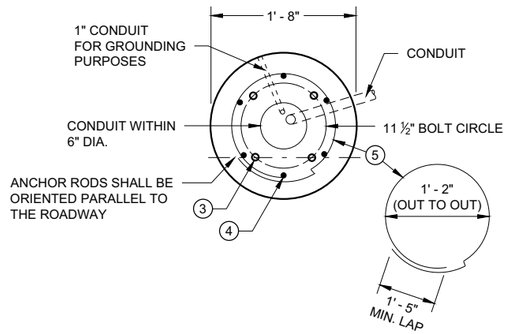
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

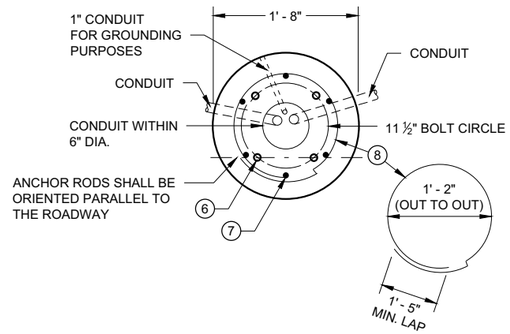
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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

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







1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

2 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

3 (4) 1" DIA. X 5' - 0" ANCHOR RODS.

4 (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.

5 (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.

6 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

7 (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.

8 (5) NO. 4 X 5' - 1" BAR STELL REINFORCEMENT @ 1' - 0" C -C.

9 EXOTHERMIC CONNECTION TO EUIPMENT GROUNDING CONDUCTOR

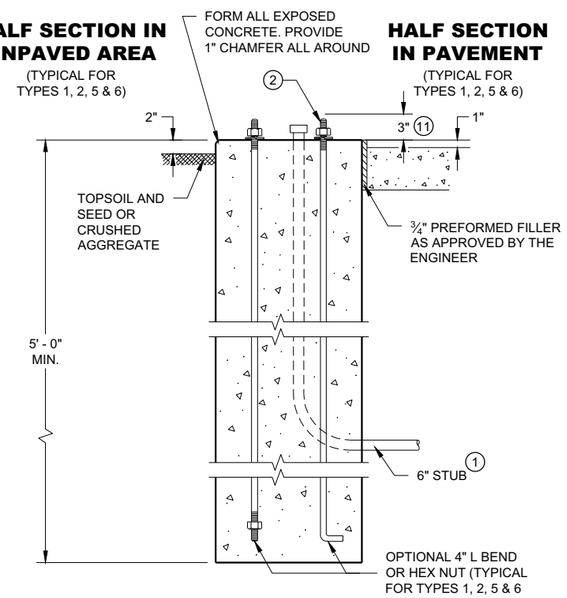
10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 ¾" OR LONGER THAN 3 ¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

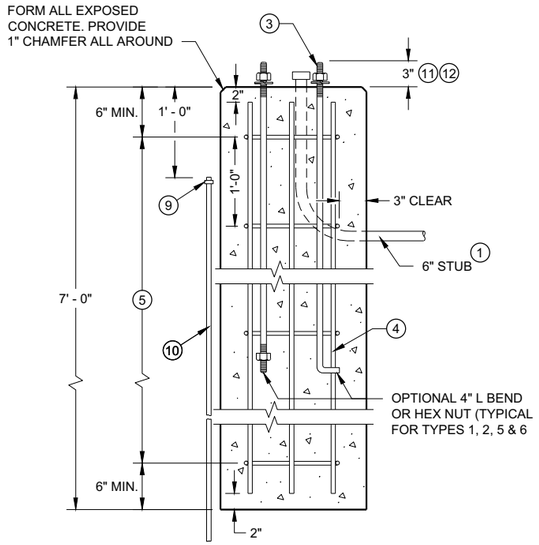
12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5 & 6)

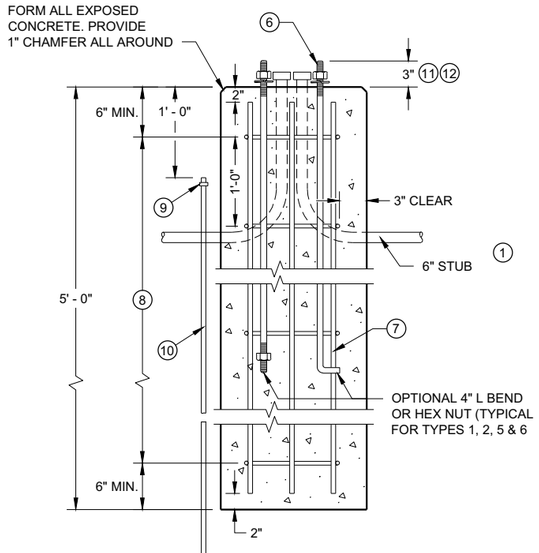
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5 & 6)



TYPE 1



TYPE 2



TYPE 5 & 6

CONCRETE BASES

CONCRETE BASES
TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 220
FHWA

GENERAL NOTES

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

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

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

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

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

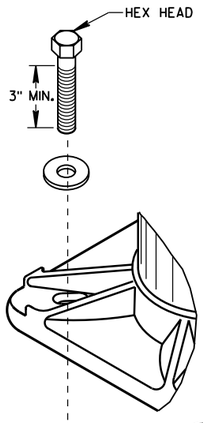
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

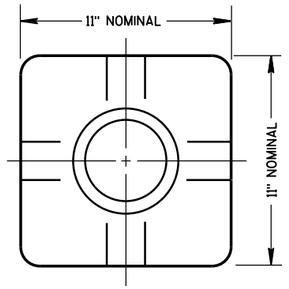
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

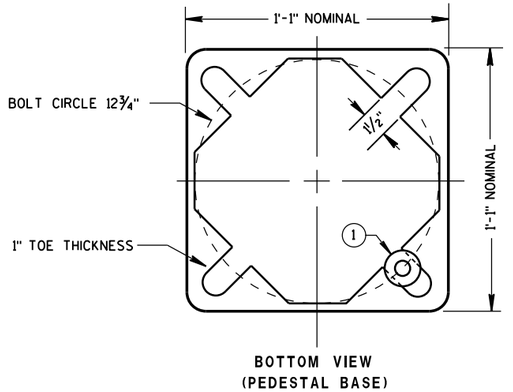
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

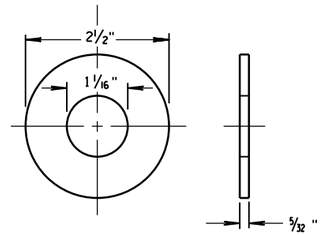




TOP VIEW
(PEDESTAL BASE)

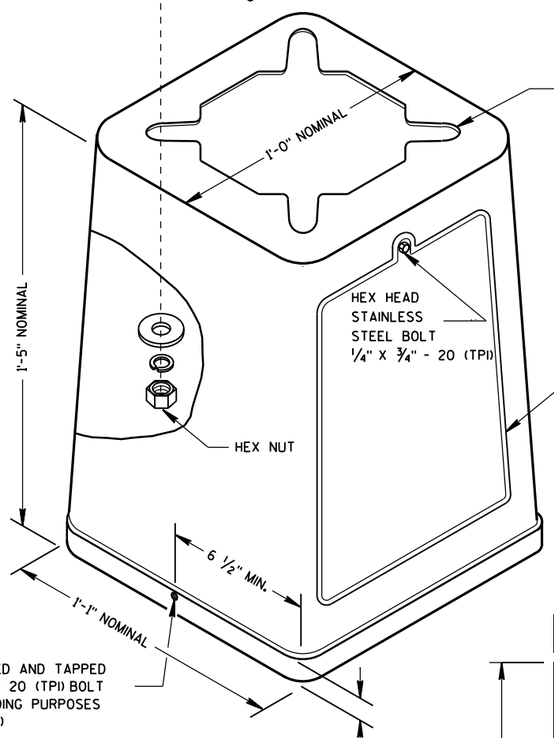


BOTTOM VIEW
(PEDESTAL BASE)

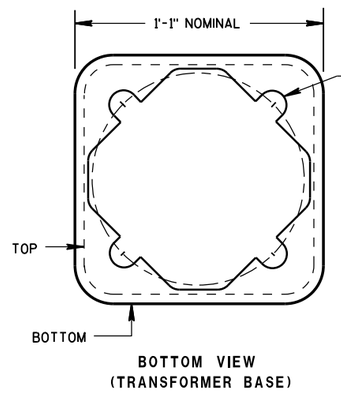


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

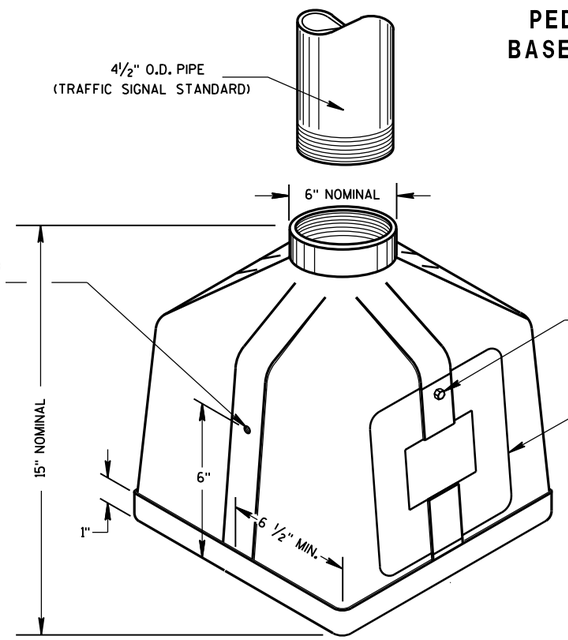
PEDESTAL BASE WASHER (1)



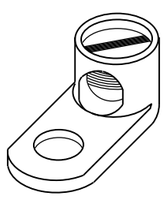
ISOMETRIC VIEW



BOTTOM VIEW
(TRANSFORMER BASE)

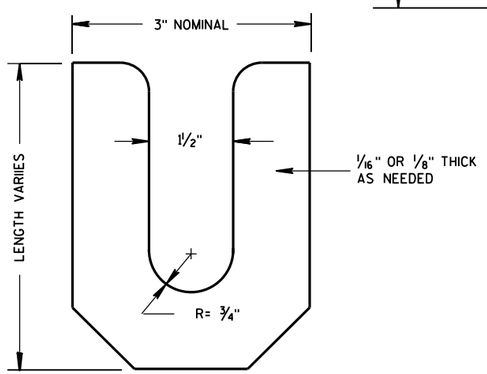


ISOMETRIC VIEW
PEDESTAL BASE



TYPICAL MECHANICAL CONNECTOR LUG
TO BE FURNISHED WITH EACH BASE

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



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

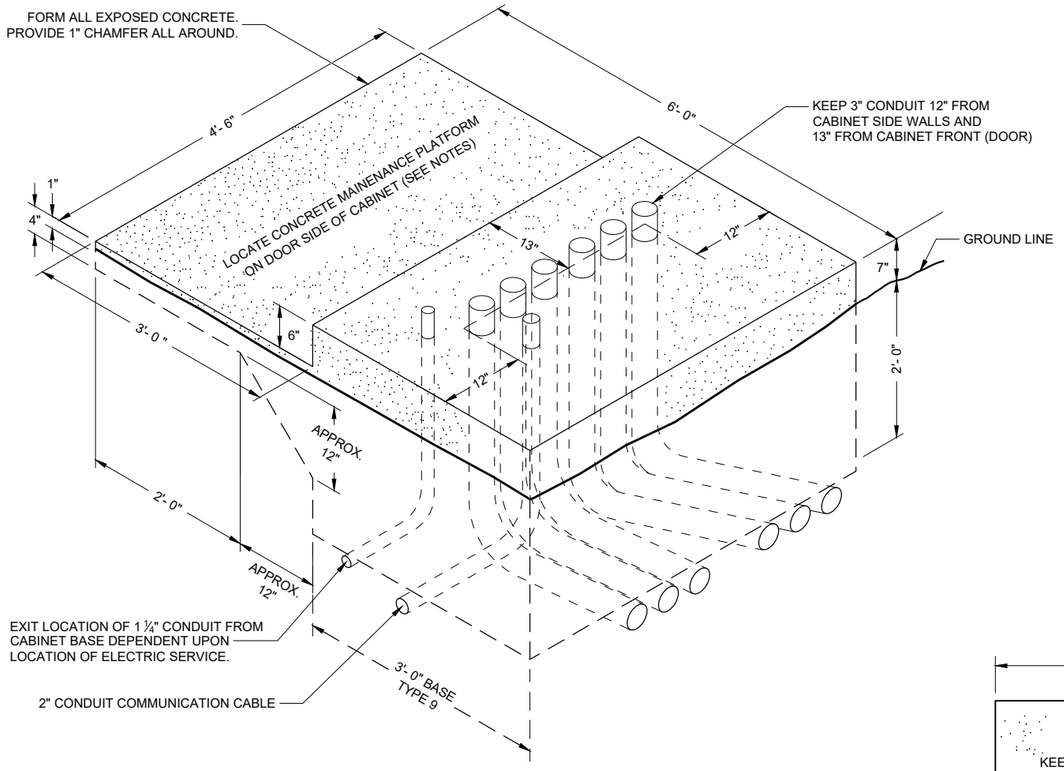
6

S.D.D. 9 C 3-4

6

S.D.D. 9 C 3-4

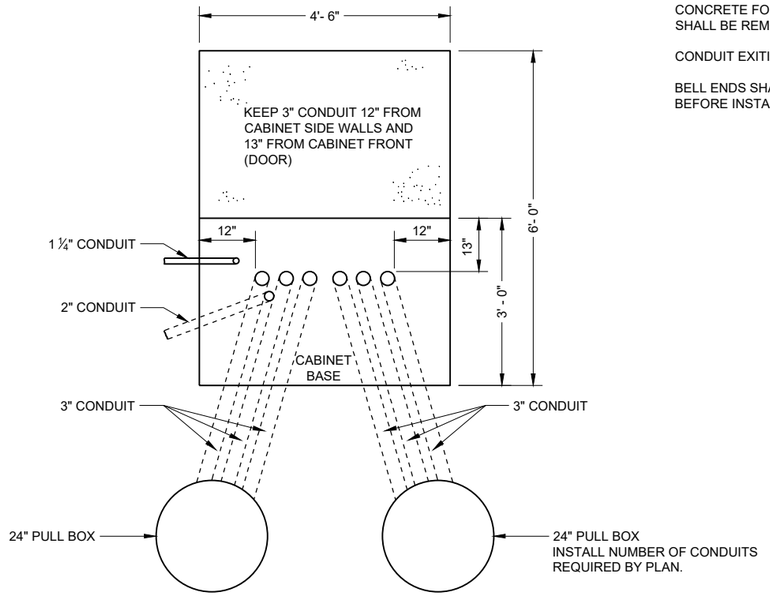
SDD 09C06 Concrete Control Cabinet Base, Type 9, Special



ISOMETRIC VIEW

TYPE 9 SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9 SPECIAL

GENERAL NOTES

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

INSTALL FOUR INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

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

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

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

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT EQUALS 6 TIMES THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NON - METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

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

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCHES MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

CONDUIT EXITING THE CONCRETE BASE (SIX 3") SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE CONTROL CABINET BASE TYPE 9, SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2014
DATE

/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI 222

FHWA

GENERAL NOTES

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

THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING. A STEEL CASING OR CORRUGATED METAL PIPE IS ALLOWED TO REMAIN. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BASE IN LAYERS OF ONE FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

ANY DAMAGE TO THE CONCRETE BASE AND ANCHOR RODS DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

THE REINFORCEMENT AND ANCHOR RODS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR RODS STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

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

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

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

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

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

FORM ALL EXPOSED CONCRETE CORNERS WITH 1" CHAMFER ALL AROUND. TOP OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS.

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

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 ½" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NON-METALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

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

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

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

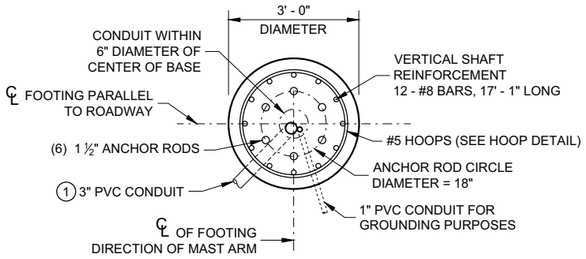
A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

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

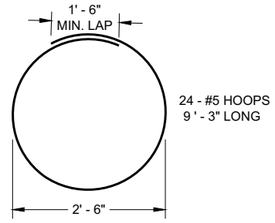
THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER RUN) EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

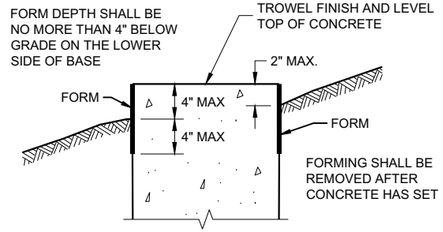
CONCRETE MASONRY.....fc = 3,500 p.s.i
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION).....fy = 55,000 p.s.i.
TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.



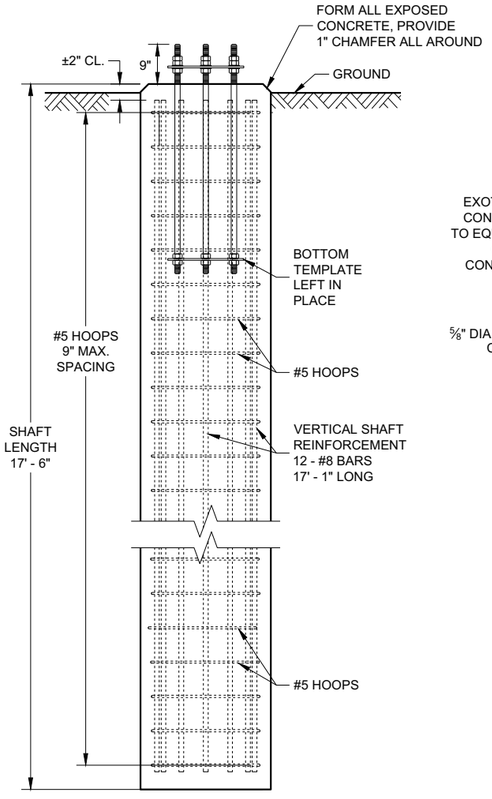
PLAN VIEW



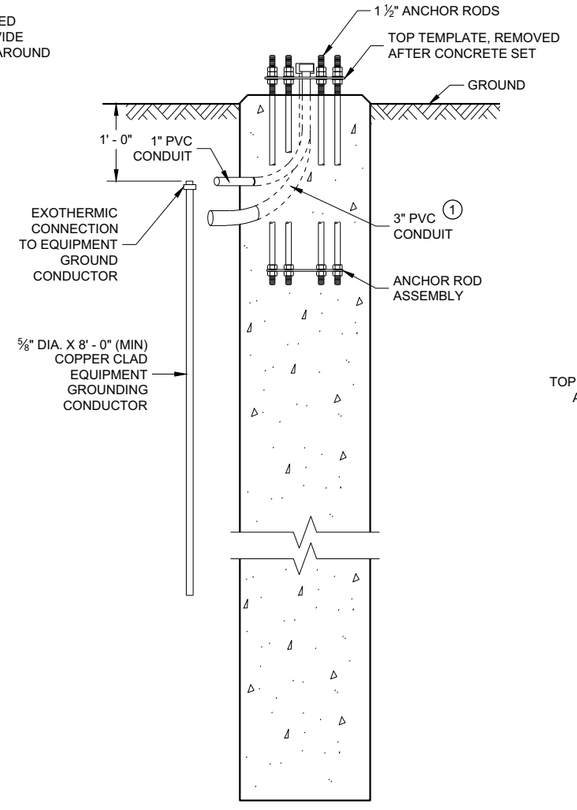
HOOP DETAIL



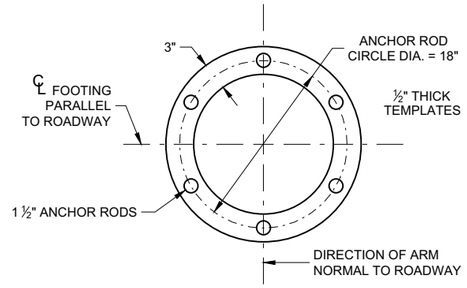
FORMING DETAIL



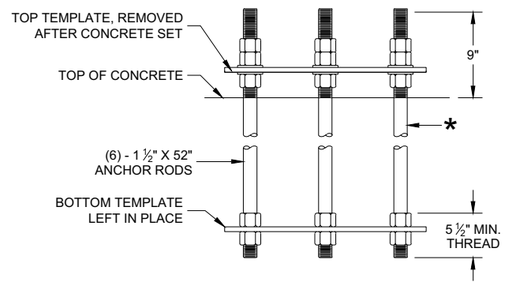
ELEVATION VIEW
(CONDUITS NOT SHOWN ON THIS VIEW FOR CLARITY)



SIDE VIEW
(HOOPS AND VERTICAL SHAFT REINFORCEMENT NOT SHOWN ON THIS VIEW FOR CLARITY)



TOP AND BOTTOM TEMPLATE



ANCHOR ROD ASSEMBLY DETAILS

* THREAD TOP 10" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 ½" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

CONCRETE BASE, TYPE 10 SPECIAL
(FOR TYPE 9 SPECIAL AND TYPE 10 SPECIAL POLES)

CONCRETE = 4.6 CUBIC YARD
H.S. REINFORCEMENT = 779 LBS.

FOR USE WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.

CONCRETE BASE TYPE 10 SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 — DATE
/S/ Alex Crabtree — WIND LOADED STRUCTU PROGRAM LEADER
FHWA

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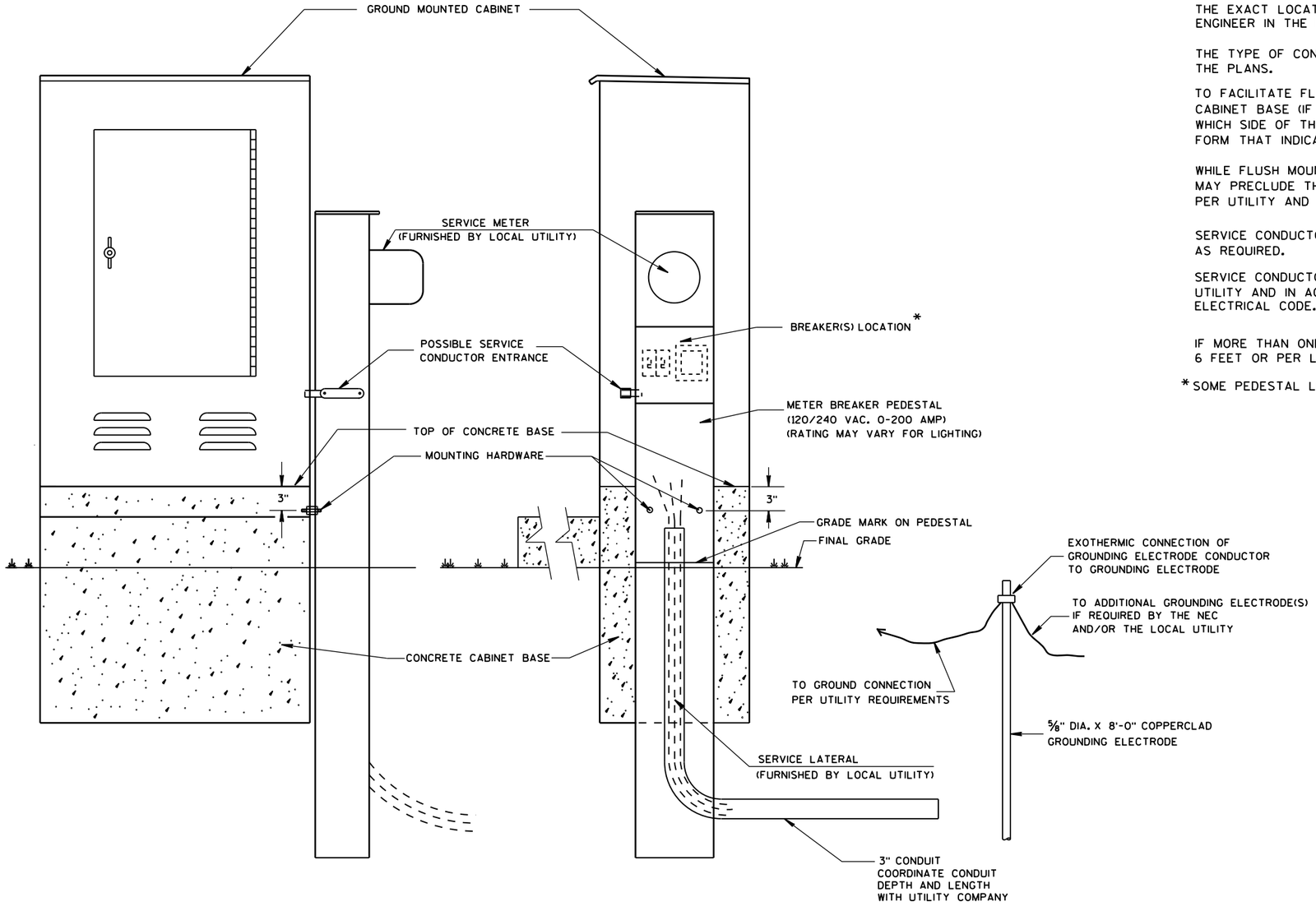
SDD 09C15 - 01



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

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S.D.D. 9 D 1-5

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S.D.D. 9 D 1-5

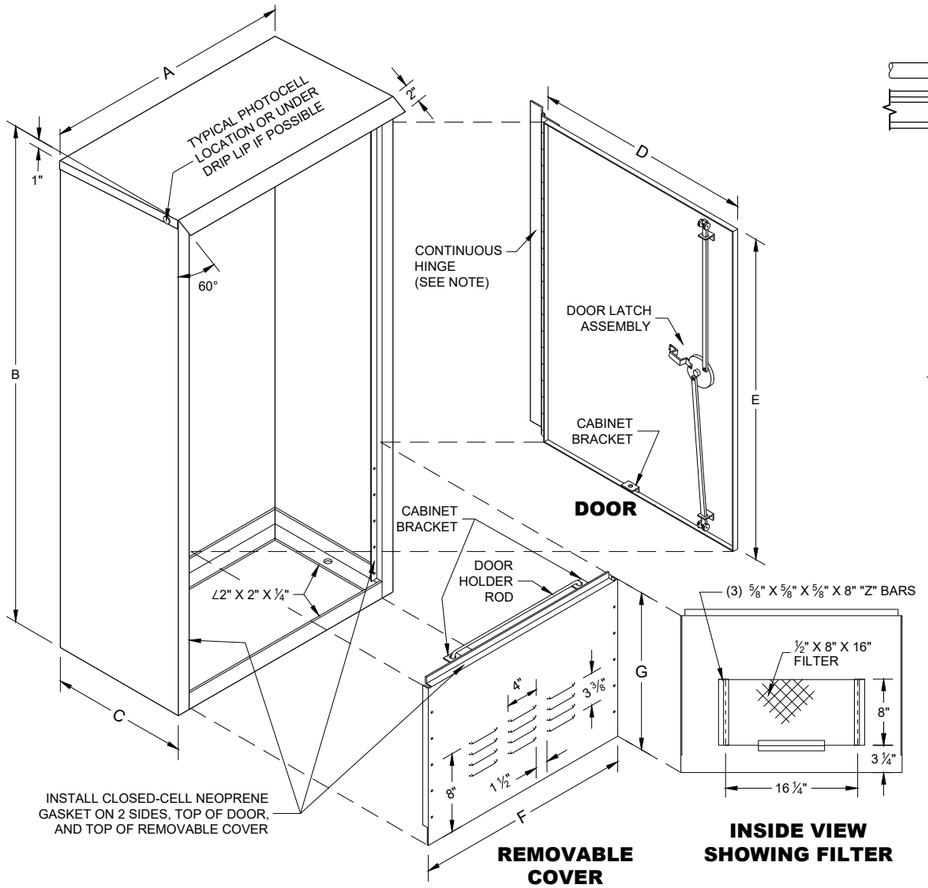
CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

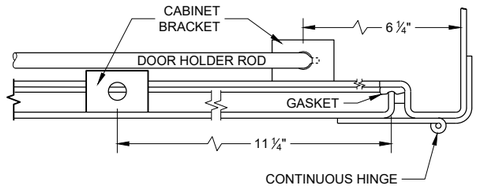
FHWA



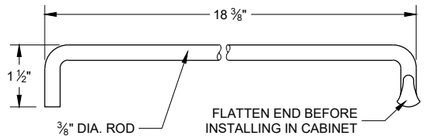
DOOR

REMOVABLE COVER

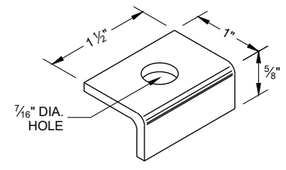
INSIDE VIEW SHOWING FILTER



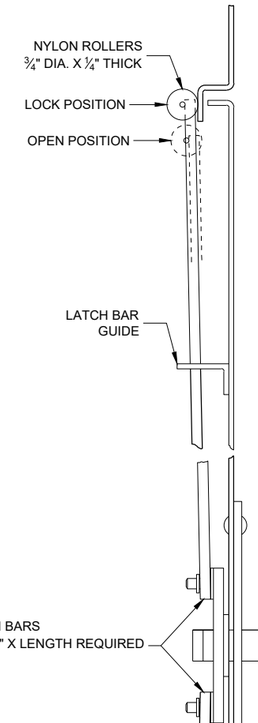
HINGE AND DOOR HOLDER

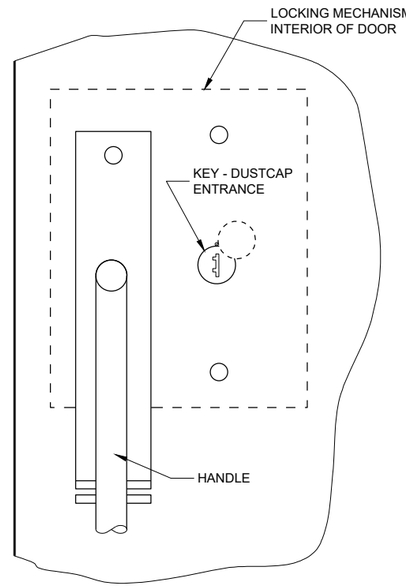


HOLDER ROD



CABINET BRACKET





SIDE VIEW **FRONT VIEW**

LATCH ASSEMBLY

GENERAL NOTES

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

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

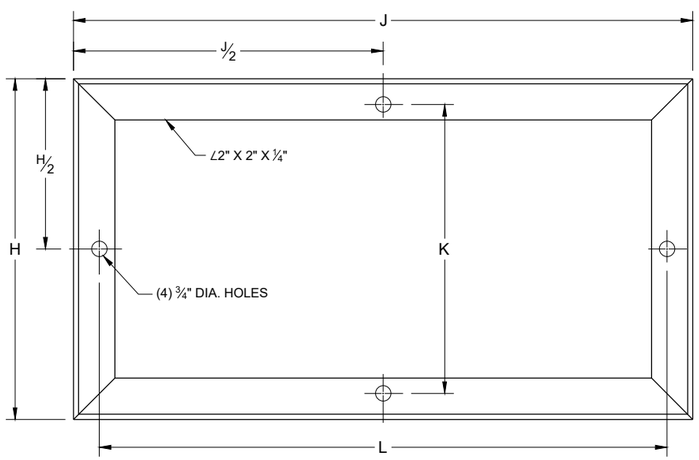
ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH ¼" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH ¼" X 20 TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH - NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST.

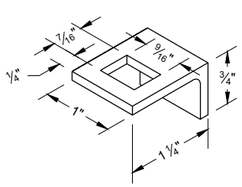
DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.



MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 ½	16 ½	24
D	26 ½	34 ¾	33 ¾
E	38 ¾	38 ¾	38 ¾
F	26 ½	34 ¾	33 ¾
G	19	19	25
H	16 ½	16 ½	24
H/2	8 ¼	8 ¼	12
J	30	38	38
J/2	15	19	19
K	13 ¾	13 ¾	21 ¼
L	27 ½	35 ½	35 ½



LATCH BAR GUIDE

SIGNAL CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2014
DATE

/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI 225

FHWA

SDD 09D02 - 03

SDD 09D02 - 03

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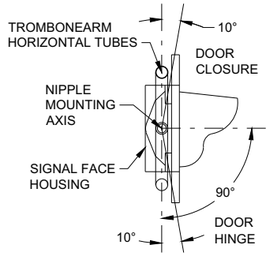
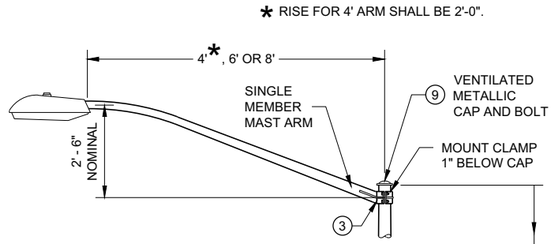
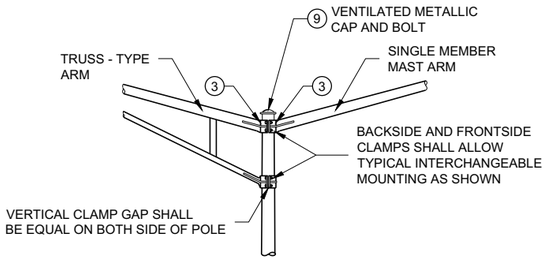
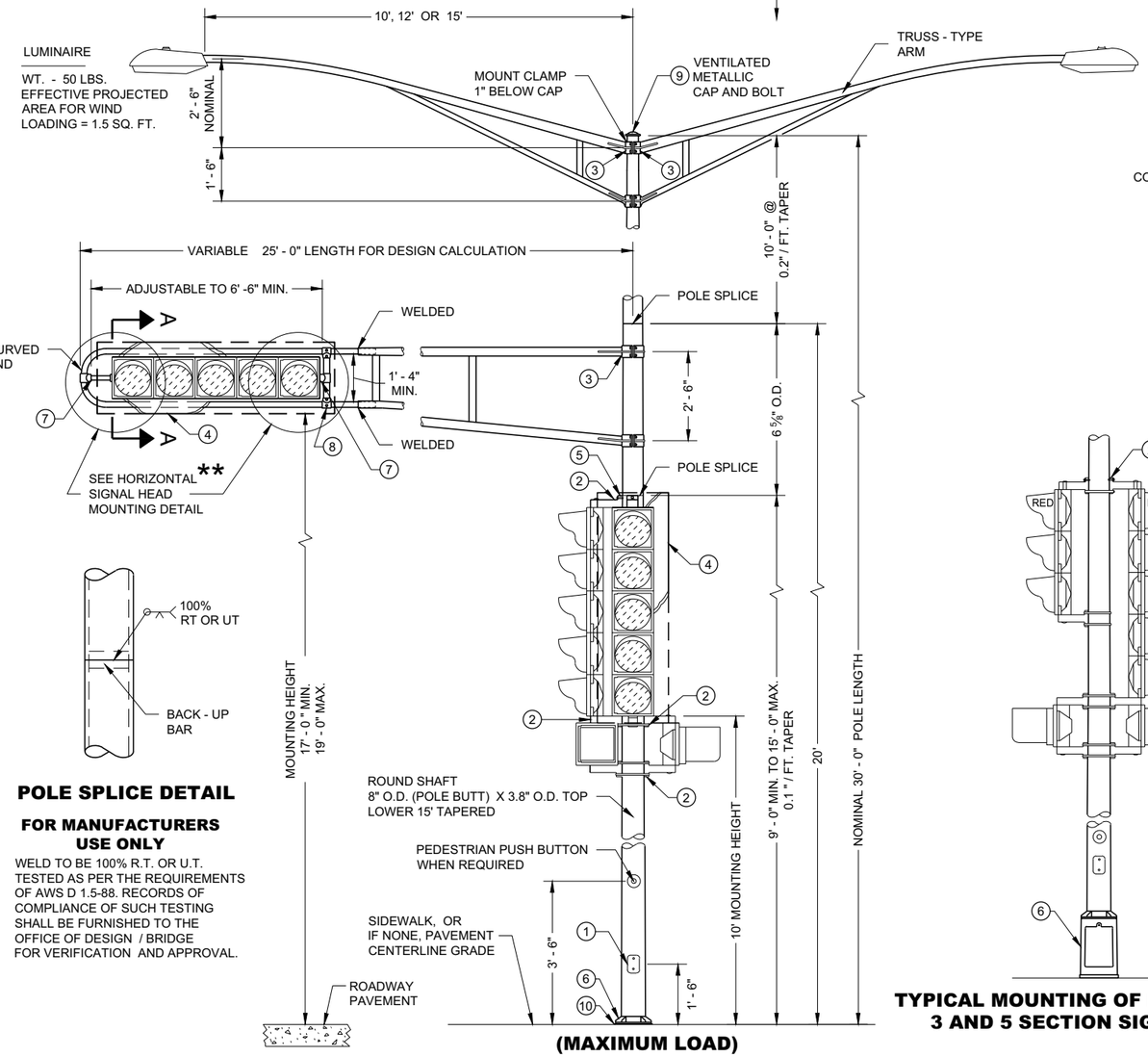


SECTION A-A

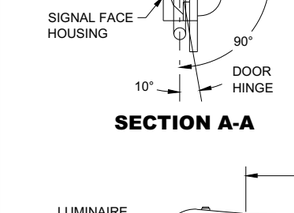




INTERCHANGEABLE MOUNTING DETAIL



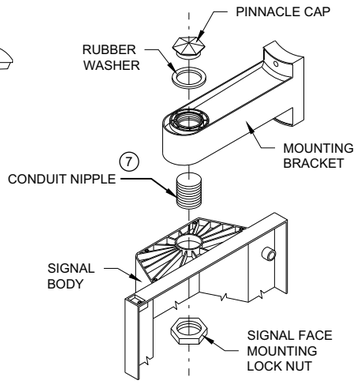
(MAXIMUM LOAD)



POLE SPLICE DETAIL

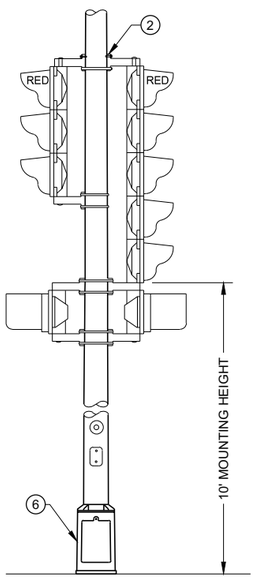
FOR MANUFACTURERS USE ONLY

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

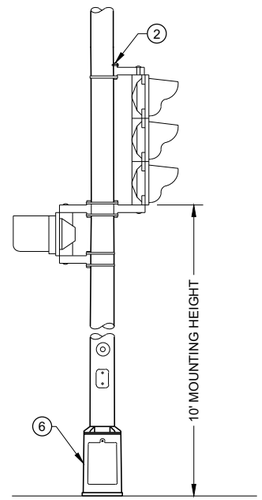


SIGNAL FACE MOUNTING DETAIL

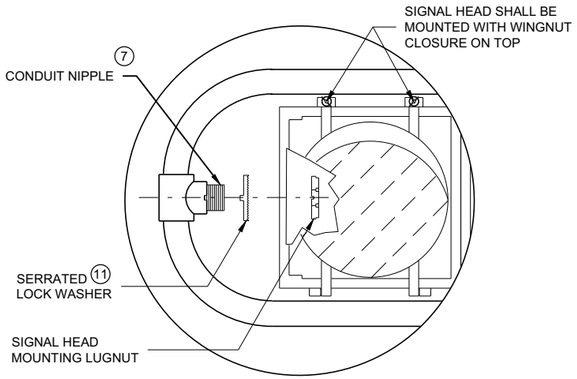
(BANDED)



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



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE



HORIZONTAL SIGNAL HEAD ** MOUNTING DETAIL

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

GENERAL NOTES

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

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

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

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

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

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

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.

(3) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED. UNDER MAX LOADING, TYPE 3 POLE SHALL BE MOUNTED DIRECTLY TO ITS CONCRETE BASE.

(7) USE 1 ½" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 ½" OPENING IN SIGNAL FACES AND BRACKET ENDS.

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

(9) FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

TYPE 3 POLE MOUNTING CONFIGURATION

POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS TYPE 3 (HEAVY DUTY)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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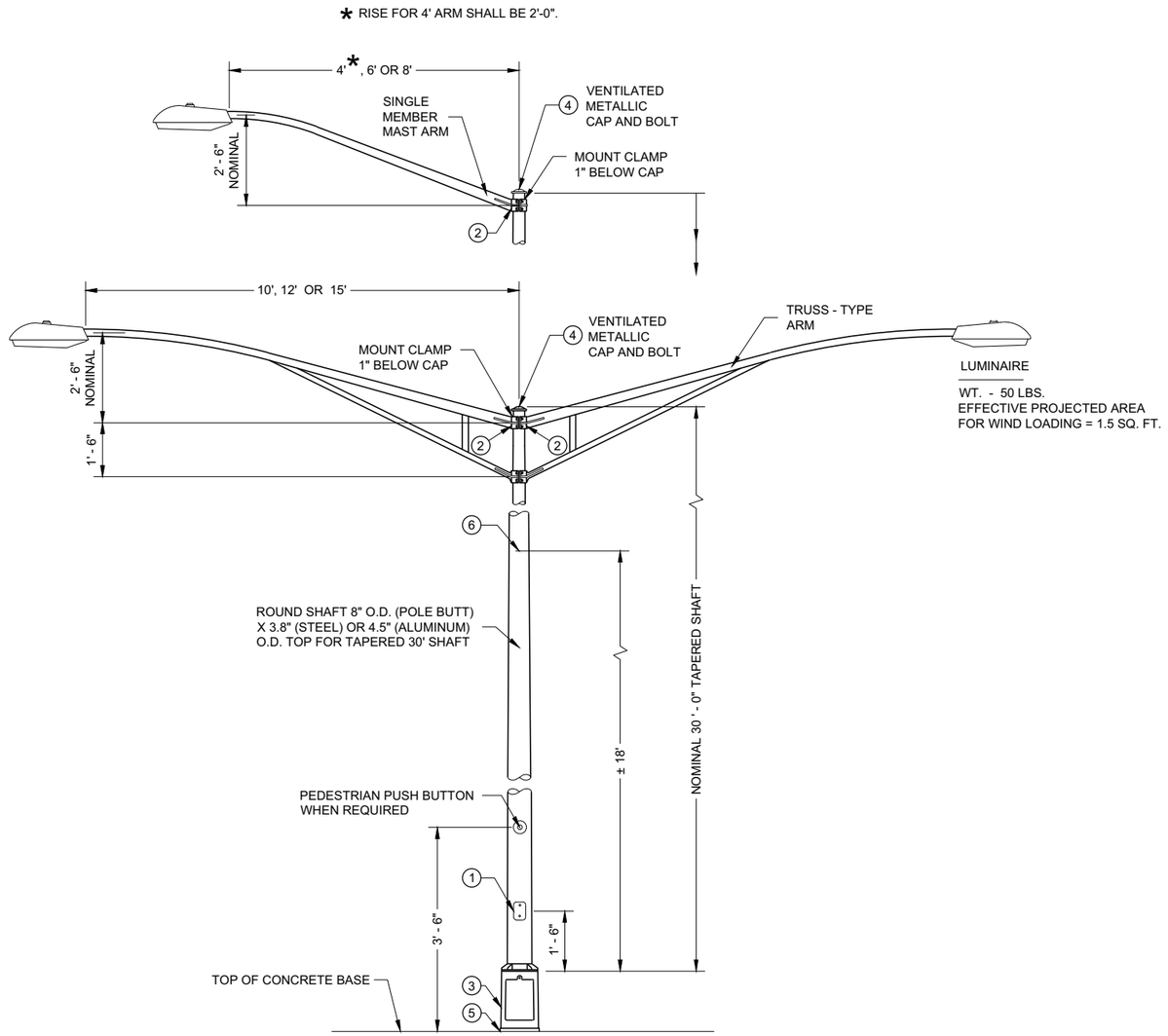
SDD 09E01 - 15b



TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY

GENERAL NOTES

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

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

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

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

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.1888".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 ⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

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

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

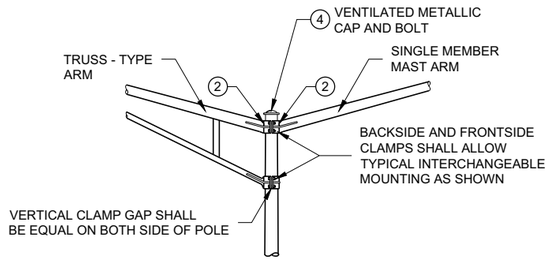
(2) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

(6) INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.



INTERCHANGEABLE MOUNTING DETAIL

POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)

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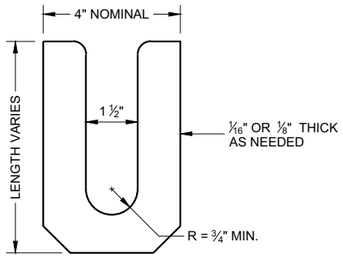
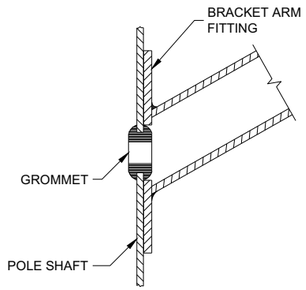
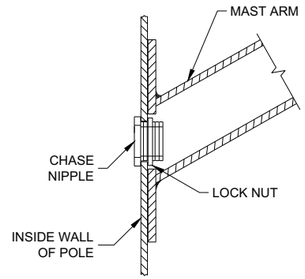
SDD 09E01 - 15d



LEVELING SHIM (1)
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

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

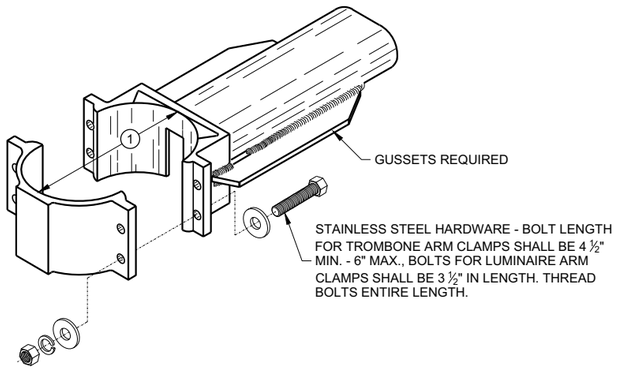
(1) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(2) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

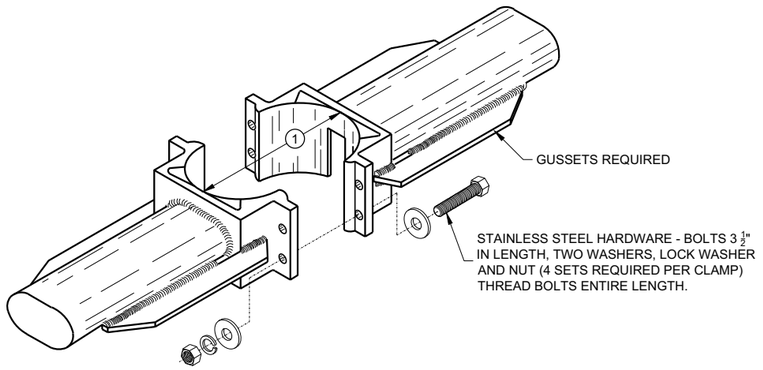
(3) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(4) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

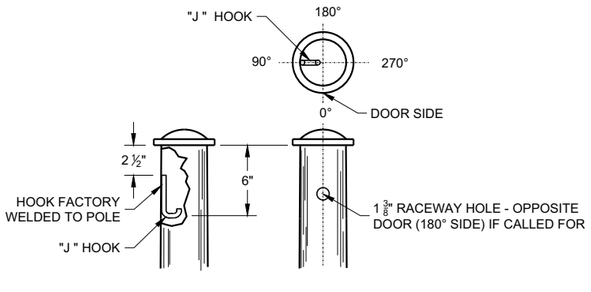
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



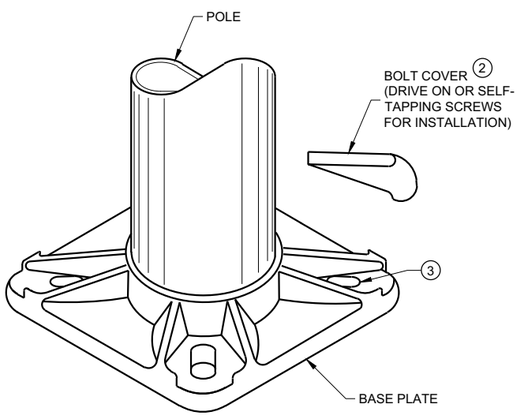
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



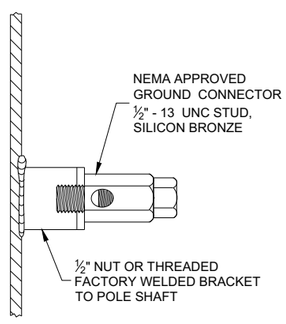
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

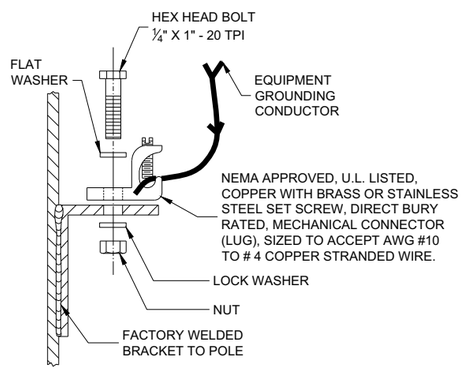


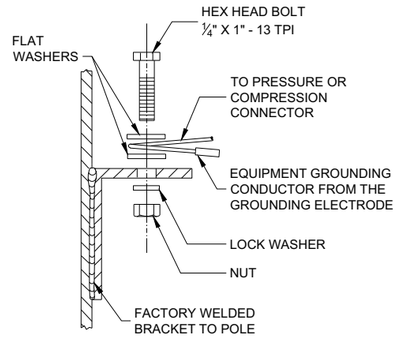
TYPICAL "J" HOOK LOCATION



BASE PLATE







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

HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 228

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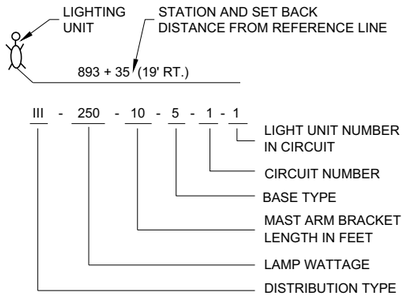
SDD 09E01 - 15g

GENERAL NOTES

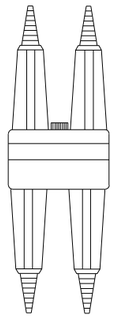
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

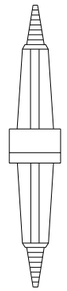
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.



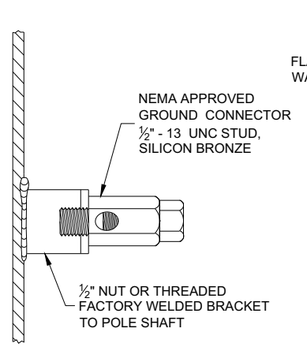
LIGHTING UNIT CODE
(TYPICAL)



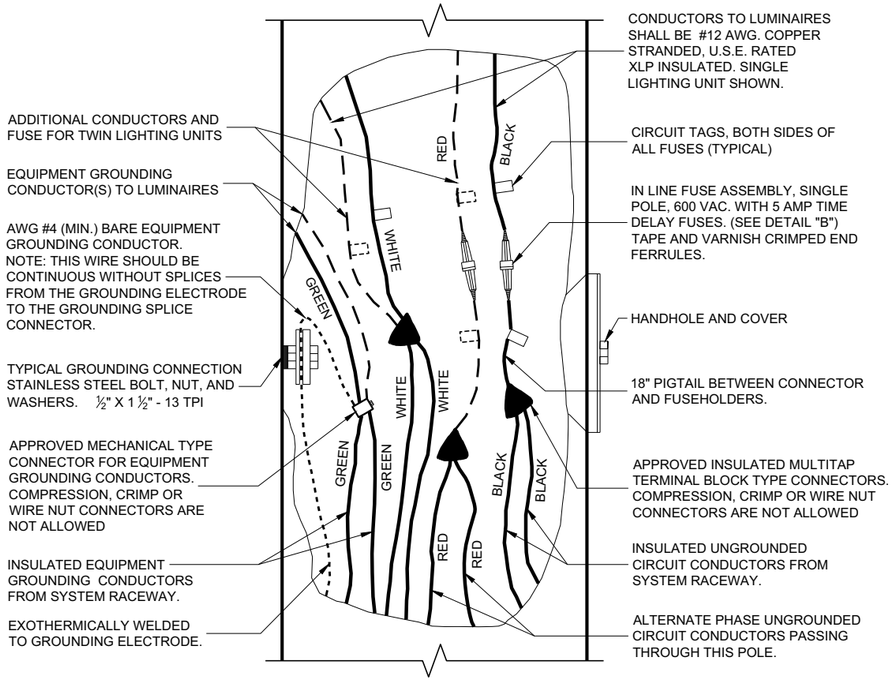
DETAIL "A"
BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



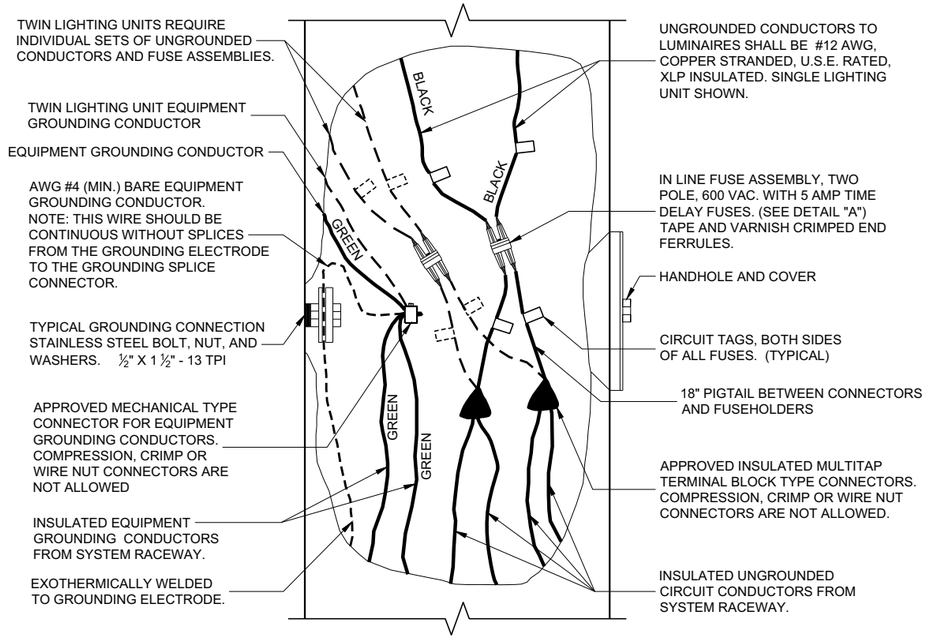
DETAIL "B"
BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT



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



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH GROUNDING CONDUCTOR AND EQUIPMENT GROUNDING CONDUCTOR



2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

NON - FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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November 2018
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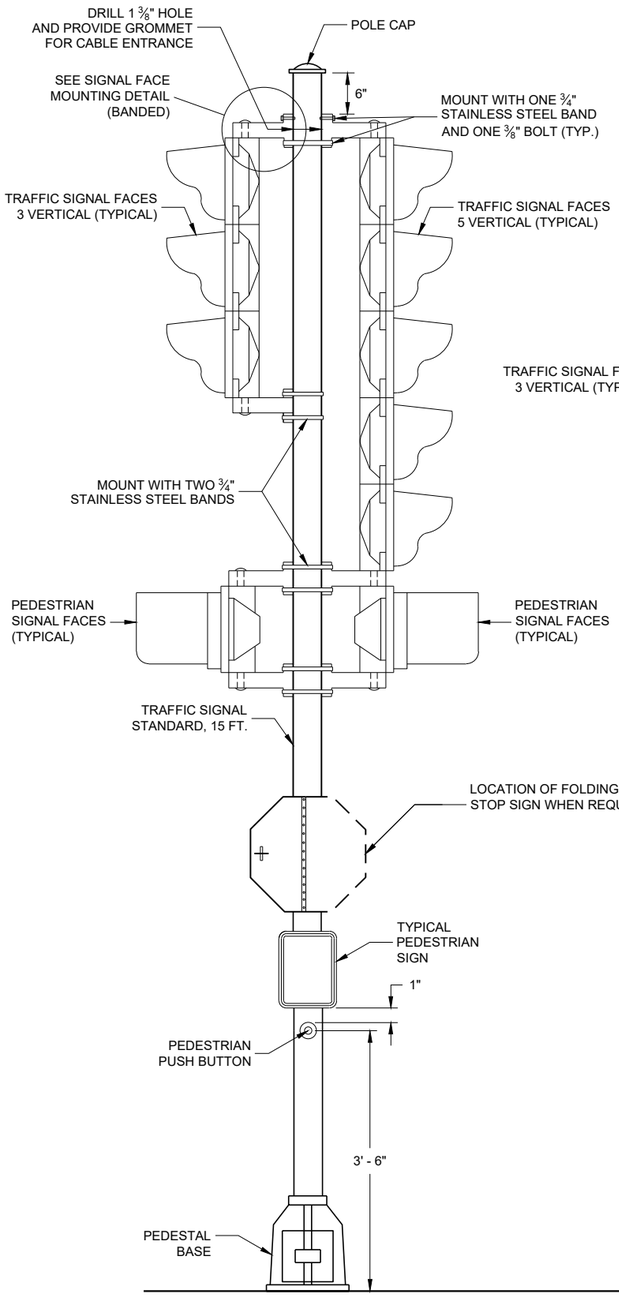
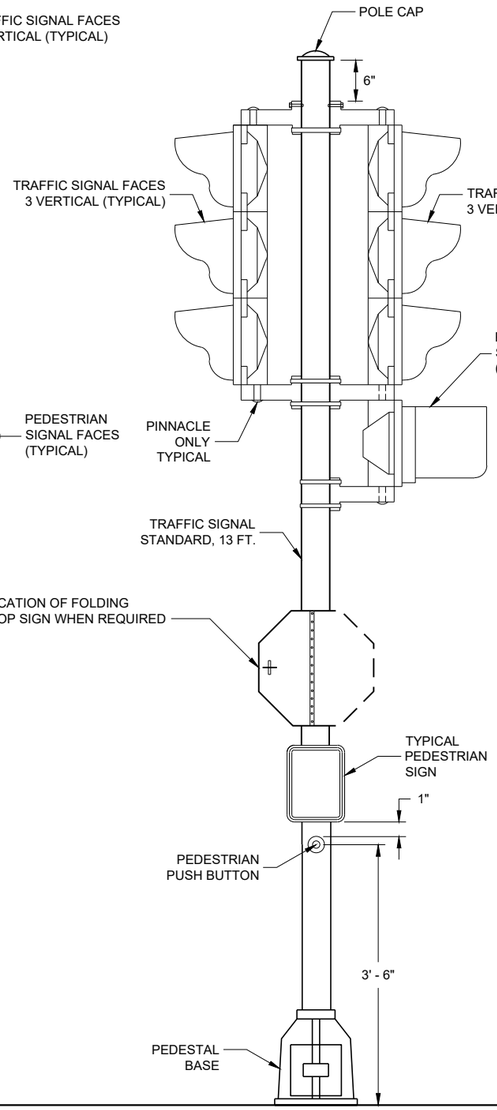
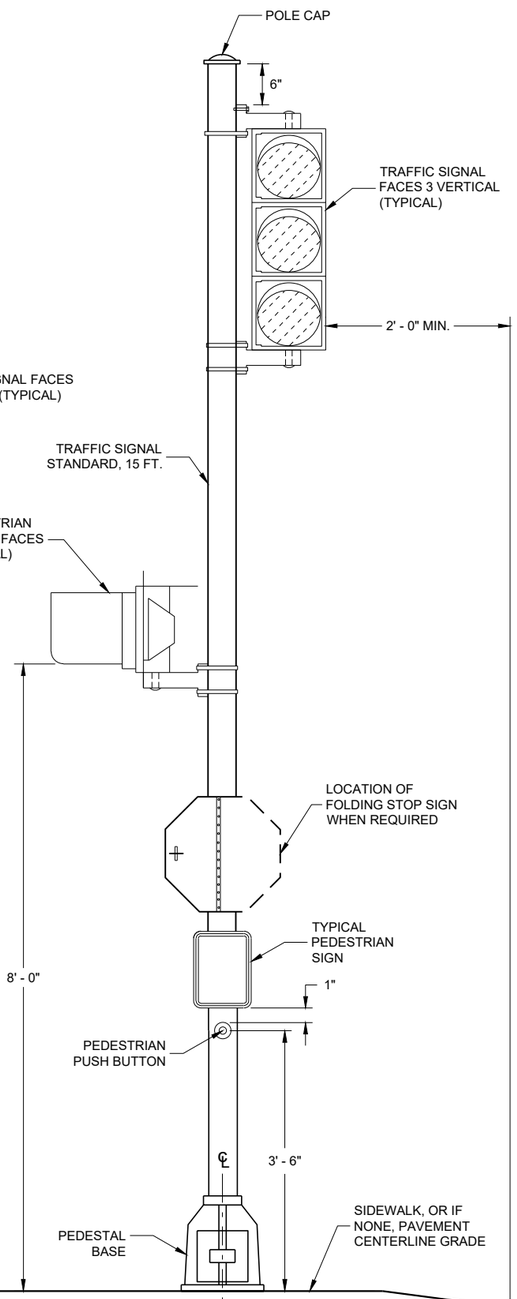


TRAFFIC SIGNAL STANDARD - 15 FT.



TRAFFIC SIGNAL STANDARD - 13 FT.



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

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

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

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

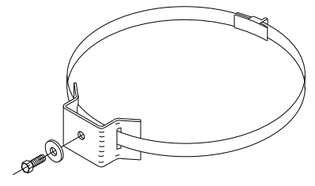
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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

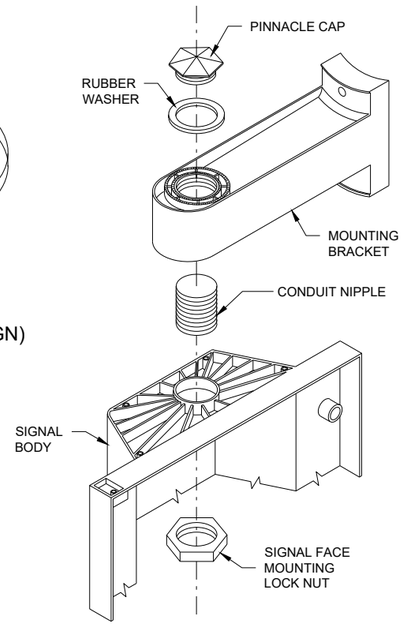
FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

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



TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



SIGNAL FACE MOUNTING DETAIL (BANDED)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/28/2013
DATE

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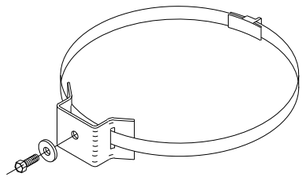
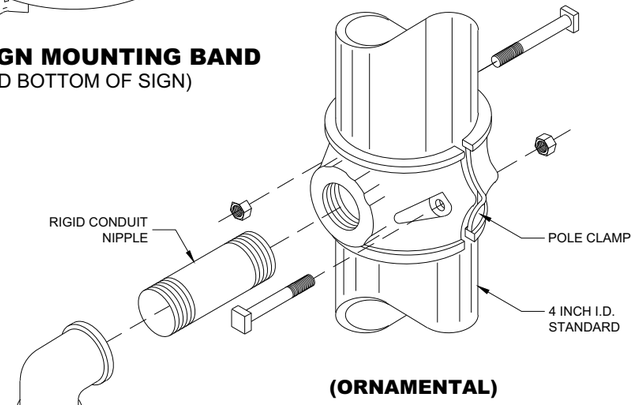
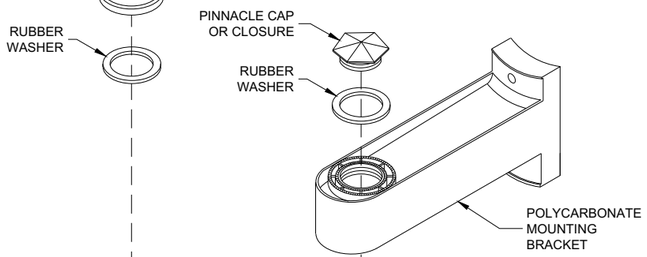


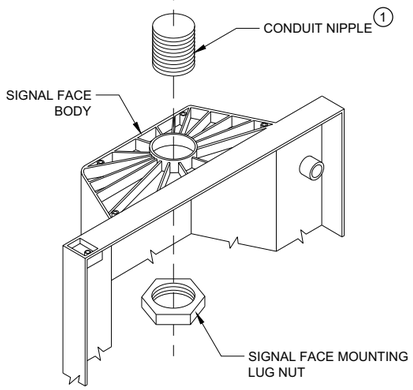
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



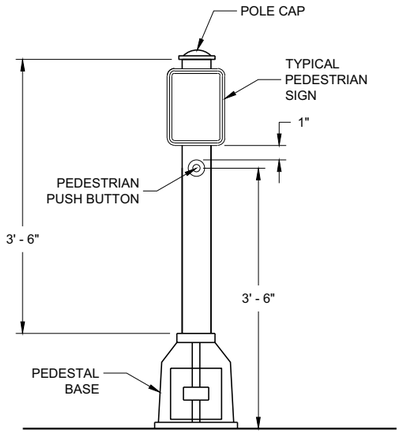
(ORNAMENTAL)



(BANDED)



SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

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

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

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

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

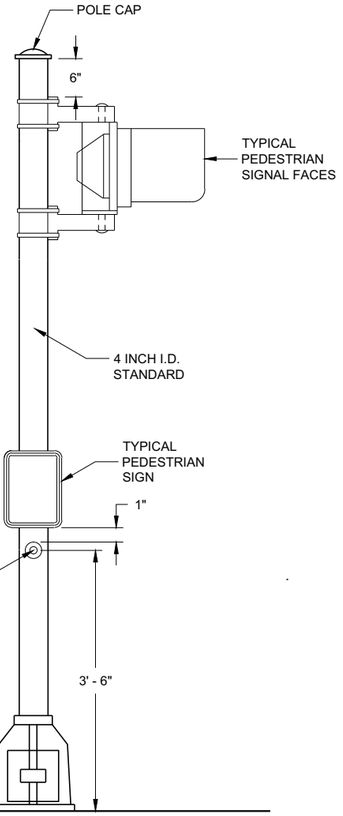
LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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

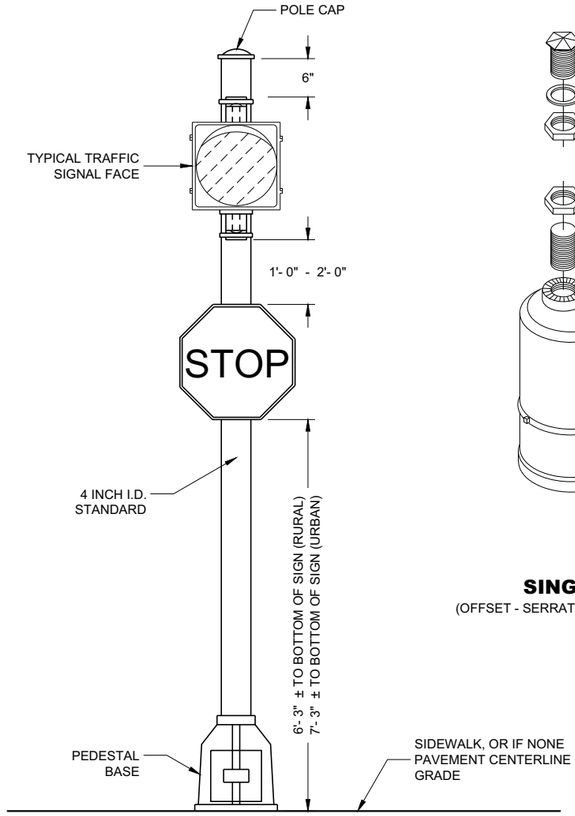
PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

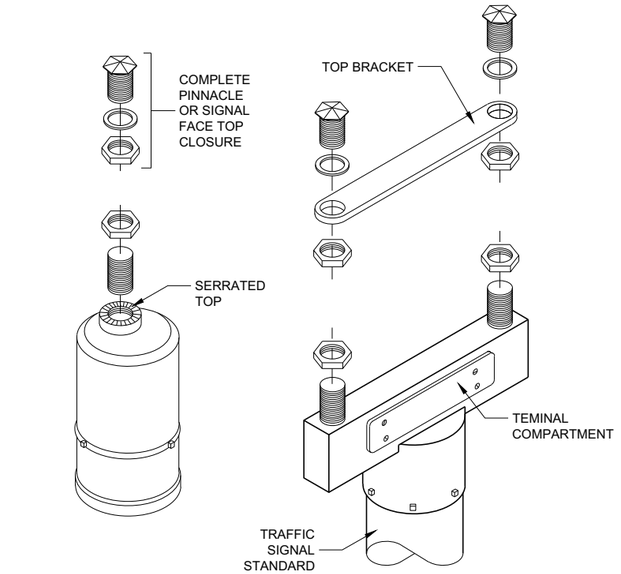
(1) USE 1 ½" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 ½" OPENING IN SIGNAL FACESAND BRACKET ENDS.



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



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



SINGLE
(OFFSET - SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD
PEDESTRIAN AND FLASHER
TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 231
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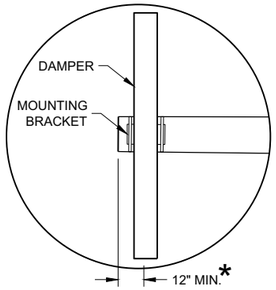
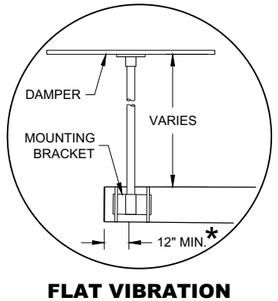
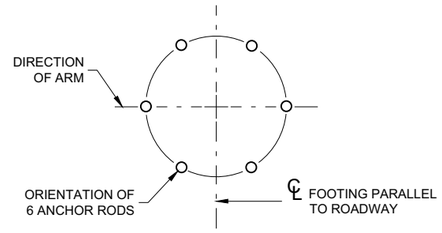


DUMBBELL VIBRATION DAMPER

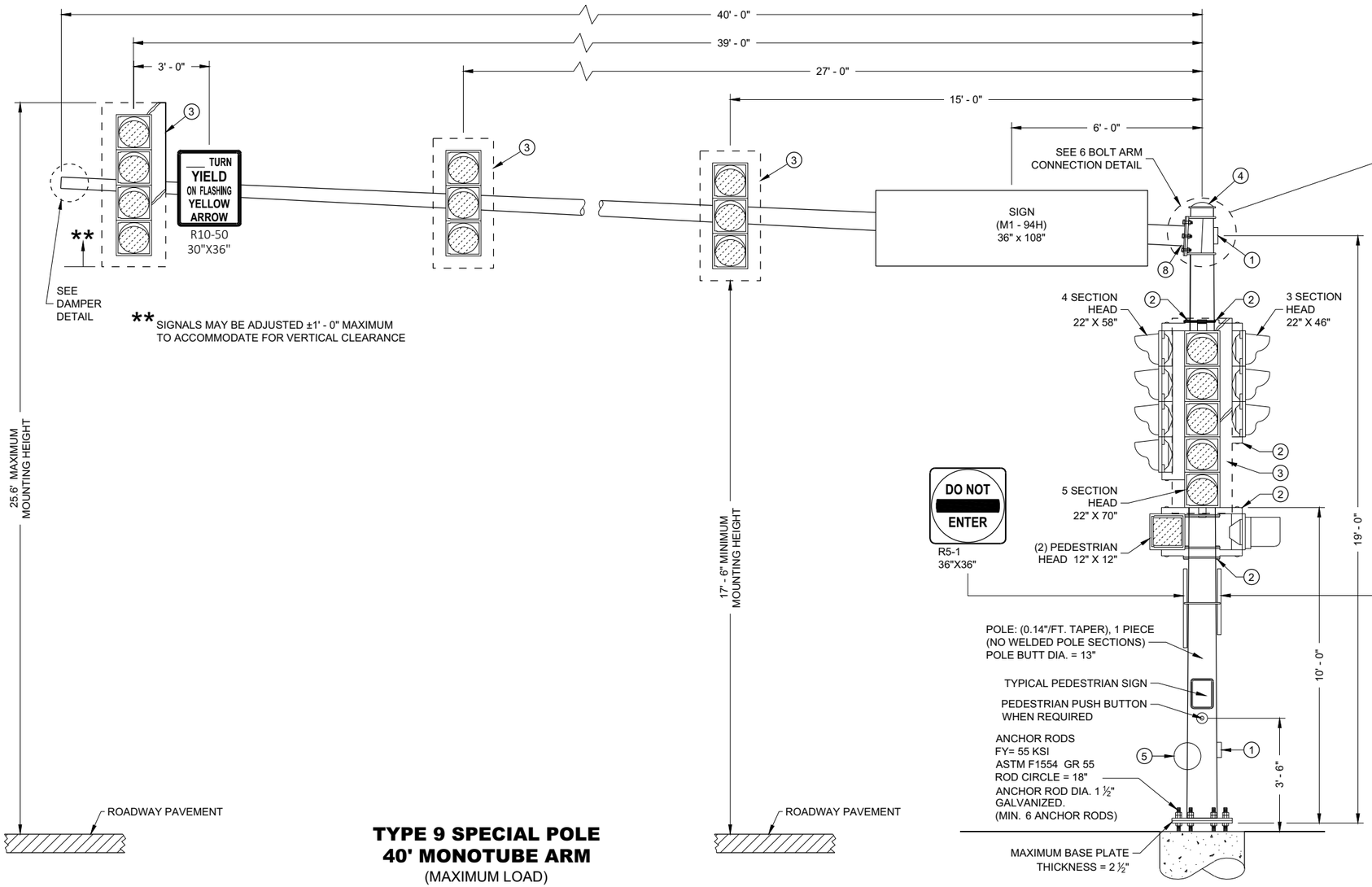


FLAT VIBRATION DAMPER

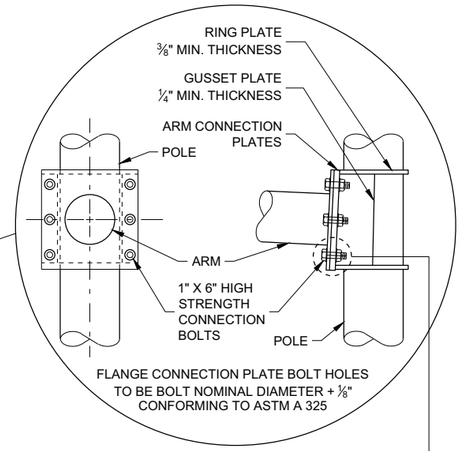
* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.



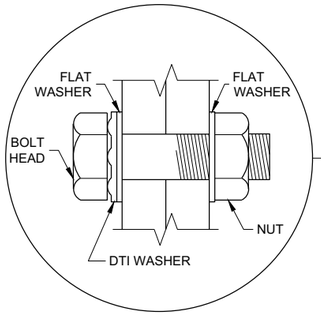
ANCHOR ROD LOCATION



TYPE 9 SPECIAL POLE 40' MONOTUBE ARM
(MAXIMUM LOAD)



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 9 SPECIAL POLE 40' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE
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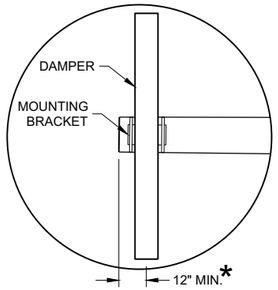
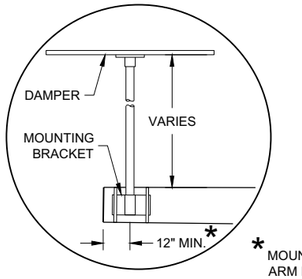
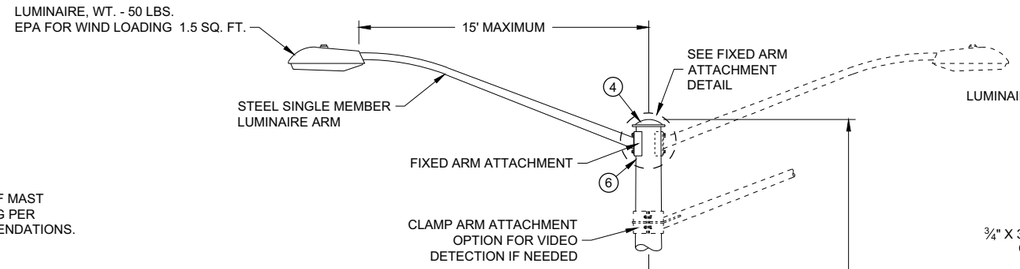


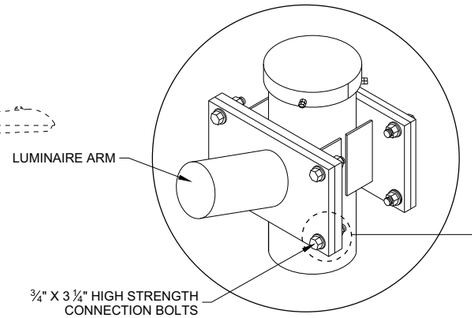
DUMBBELL VIBRATION DAMPER



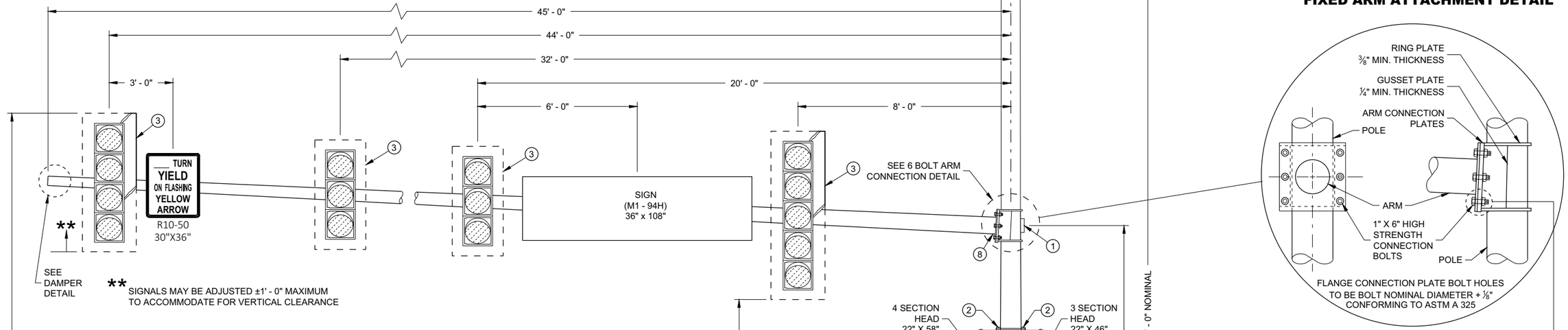
FLAT VIBRATION DAMPER

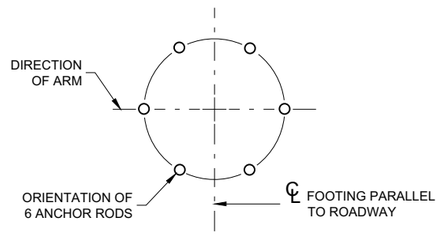
* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.





FIXED ARM ATTACHMENT DETAIL

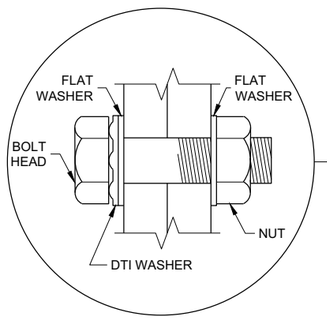




ANCHOR ROD LOCATION

TYPE 10 SPECIAL POLE
45' MONOTUBE ARM
(MAXIMUM LOAD)

6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 10 SPECIAL POLE
45' MONTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

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GENERAL NOTES

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

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15 FOOT TO 30 FOOT.

POLE TYPES 9 SPECIAL AND 10 SPECIAL ARE FOR ARM LENGTHS 35 FOOT, 40 FOOT, AND 45 FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35 FOOT TO 55 FOOT.

MONOTUBE POLES AND ARMS SHALL BE GALVANIZED STEEL.

RING STIFFENED BUILT UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3% ± RISE).

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

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNAL 2015 1ST EDITION (INCLUDING INTERIM REVISIONS)" AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR THE LIGHTING STRUCTURES AS FOLLOWS:

CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.

CATEGORY II FATIGUE LOADS OF TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 SPECIAL AND TYPE 10 SPECIAL STRUCTURES. IN LIEU OF DESIGNING FOR GALLOPING, A VIBRATION DAMPER MITIGATION DEVICE IS REQUIRED TO BE SUPPLIED AND INSTALLED AT THE END OF THE MAST ARM.

CATEGORY II FATIGUE FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE12 AND TYPE 13 STRUCTURES.

115 MPH (700 YEAR MRI BASIC WIND SPEED).

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" STAINLESS STEEL BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR A S DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEAD AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

(1) DESIGN FOR MAXIMUM ALLOWABLE HAND HOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

(2) SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING (SEE SPECIFICATION SECTION 658).

(3) SECURELY MOUNT BACK PLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.

(5) FACTORY WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HAND HOLD, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

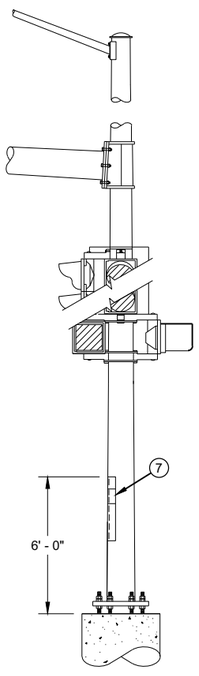
(6) FACTORY WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

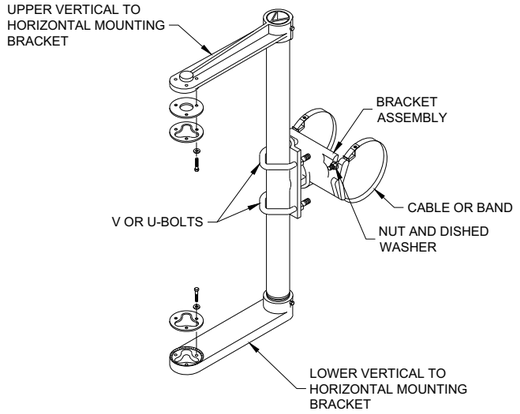
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

MOUNTING HEIGHT SHALL BE 6' - 0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

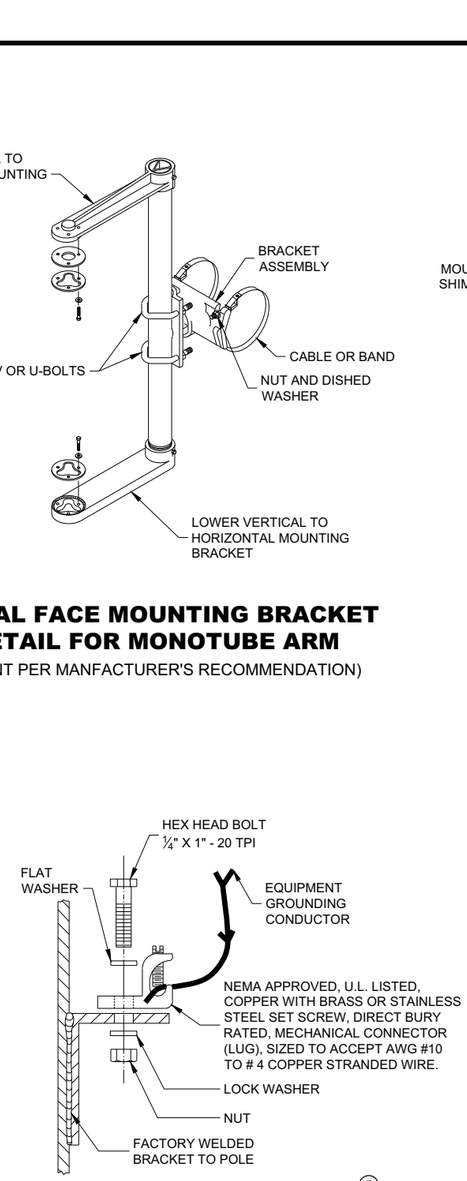


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



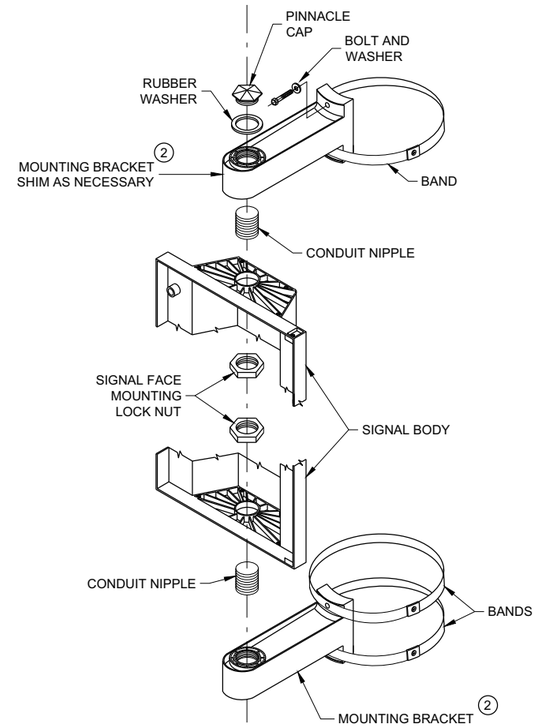
SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANFACTURER'S RECOMMENDATION)

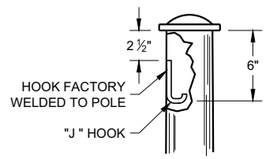


TYPICAL GROUNDING (5) CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



SIGNAL FACE VERTICAL MOUNTING DETAIL



TYPICAL "J" HOOK (6) WIRE SUPPORT

GENERAL NOTES AND HARDWARE FOR TYPES 9,10, 9/10 SPECIAL, 12 AND 13 POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

FHWA

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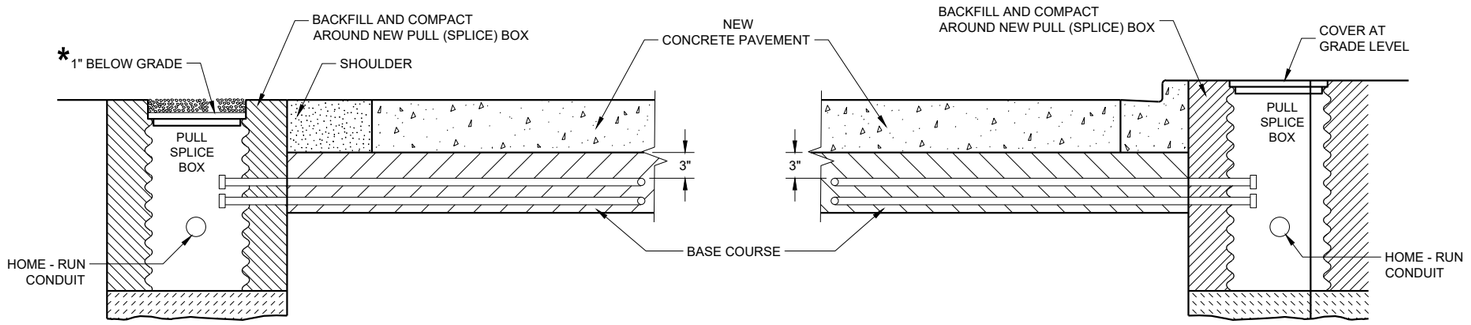


SECTION A - A
NO CURB AND GUTTER

SECTION B - B
CURB AND GUTTER

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

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

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

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

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

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

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

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

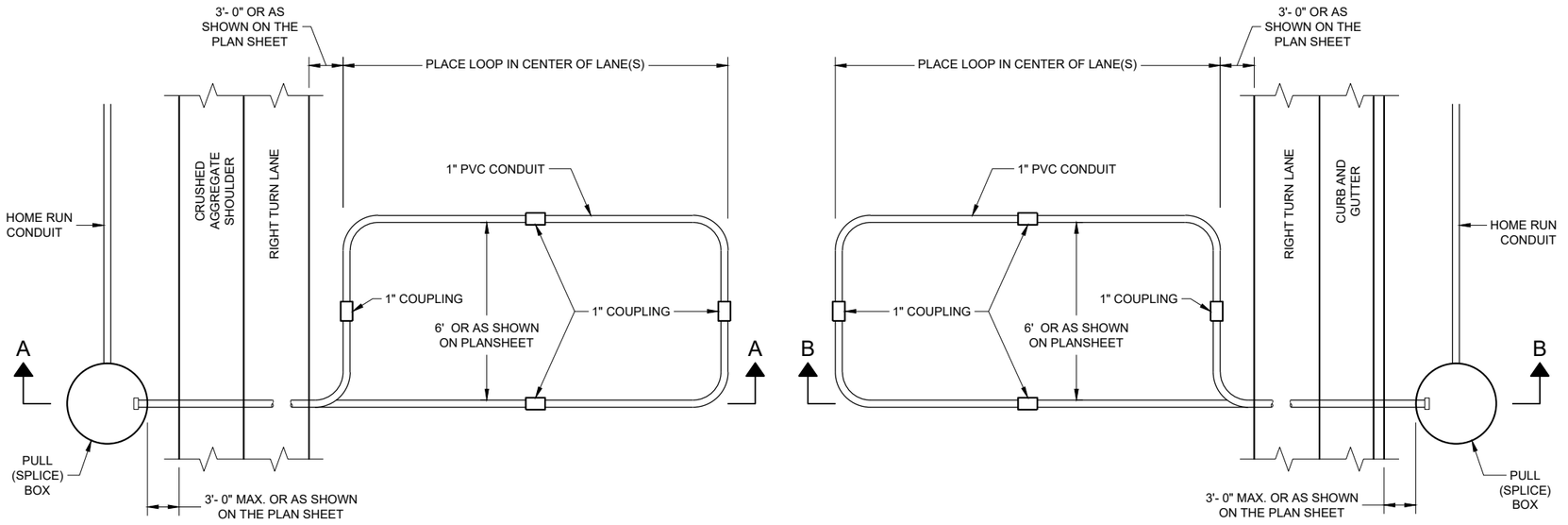
THE #12 AWG LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

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

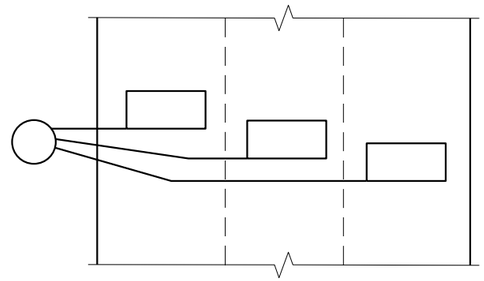
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE NON-SPLICED, CONTINUOUS LENGTH.

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

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



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



MULTI-LANE INSTALLATION

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

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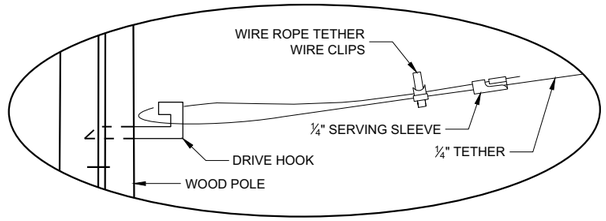
MINIMUM POLE LENGTHS	POLE BURIAL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

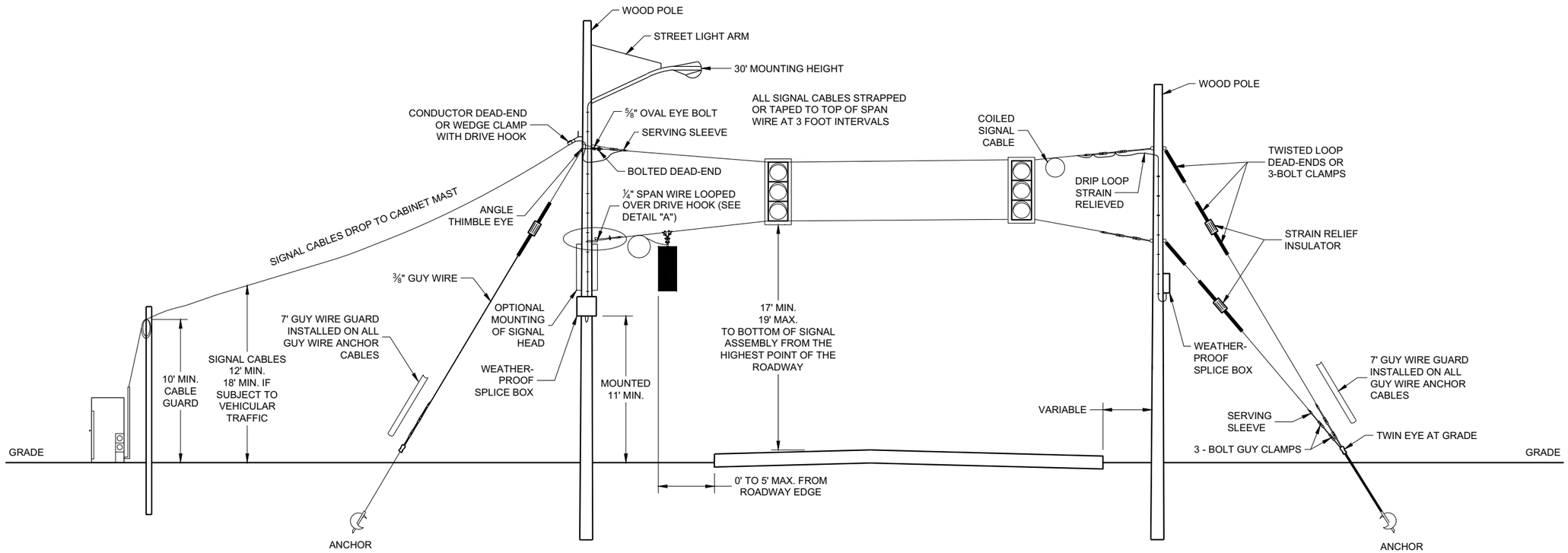


DETAIL "A"

GENERAL NOTES

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

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.
2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBLY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



SPAN WIRE
TEMPORARY SIGNALS

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015 — DATE
/S/ Ahmet Demerbilek — STATE ELECTRICAL ENGI
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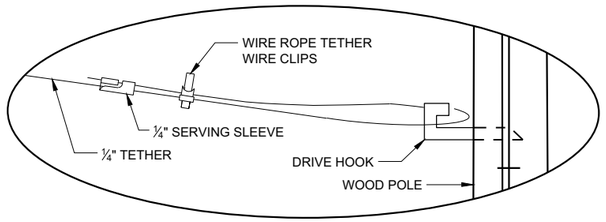
MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'



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   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.

3. SPAN WIRE:
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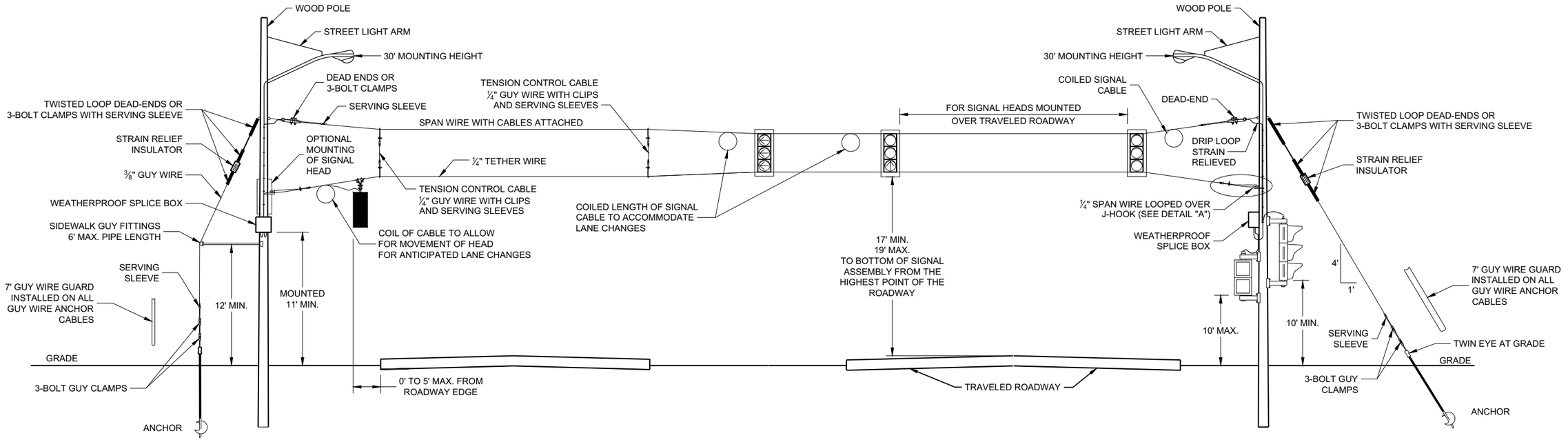
   C. THE SIGNAL ASSEMBLY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015
DATE

/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI

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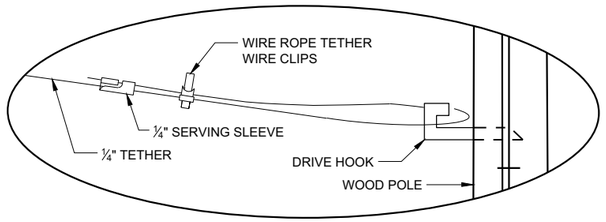
MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'



DETAIL "A"

GENERAL NOTES

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   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
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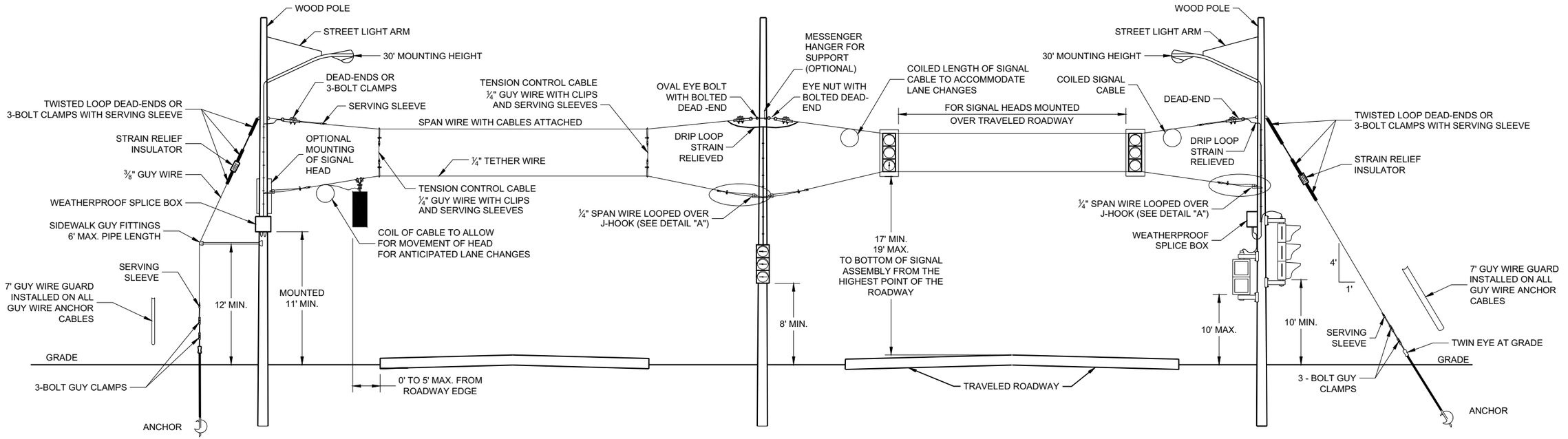
   C. THE SIGNAL ASSEMBLY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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June 2015
DATE
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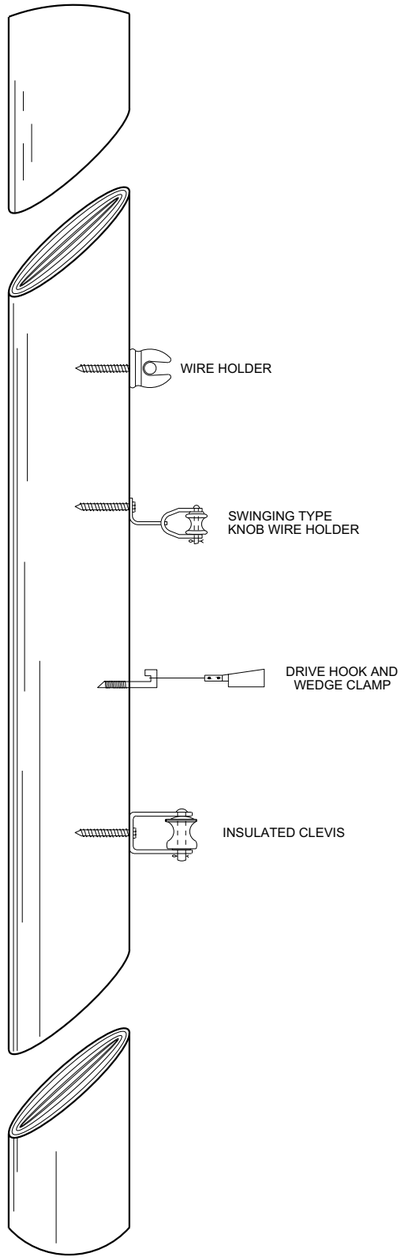

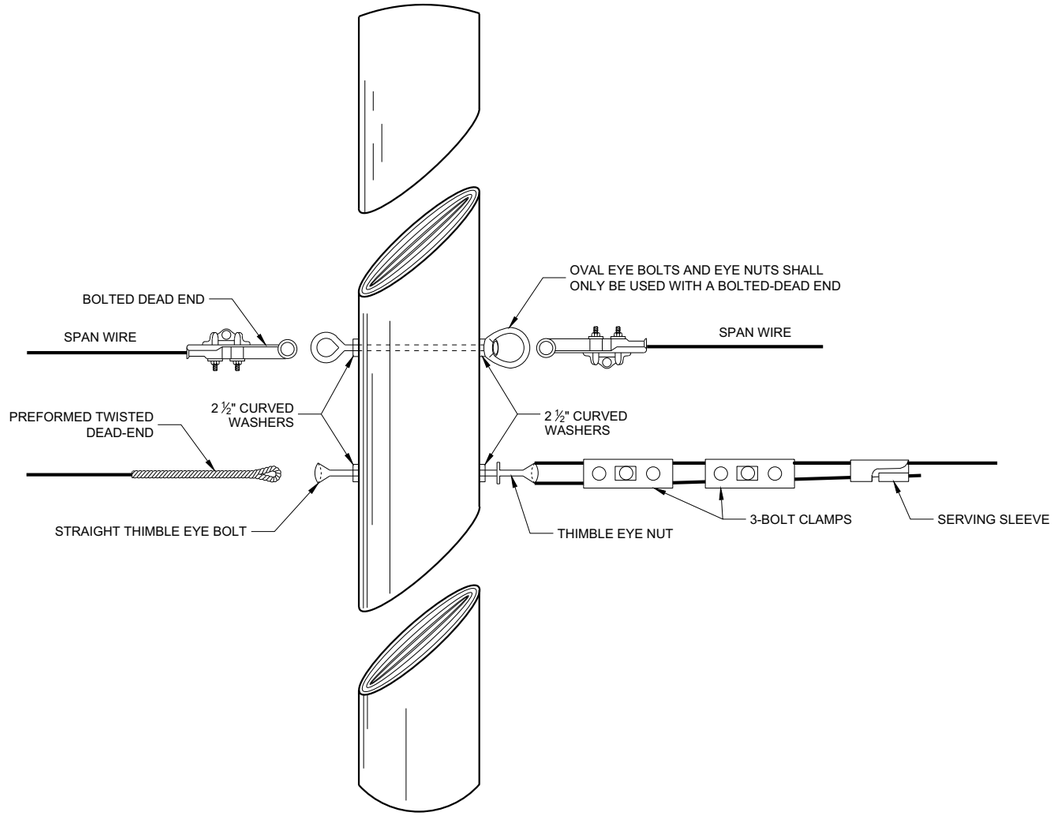

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SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
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APPROVED

June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

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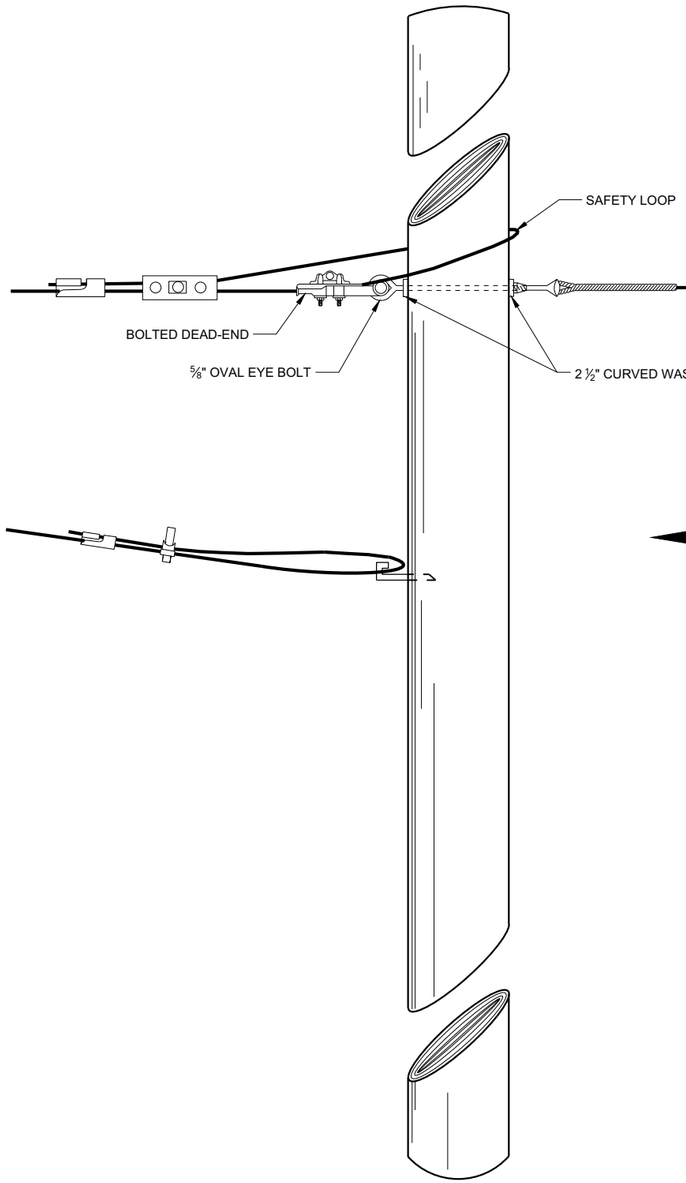
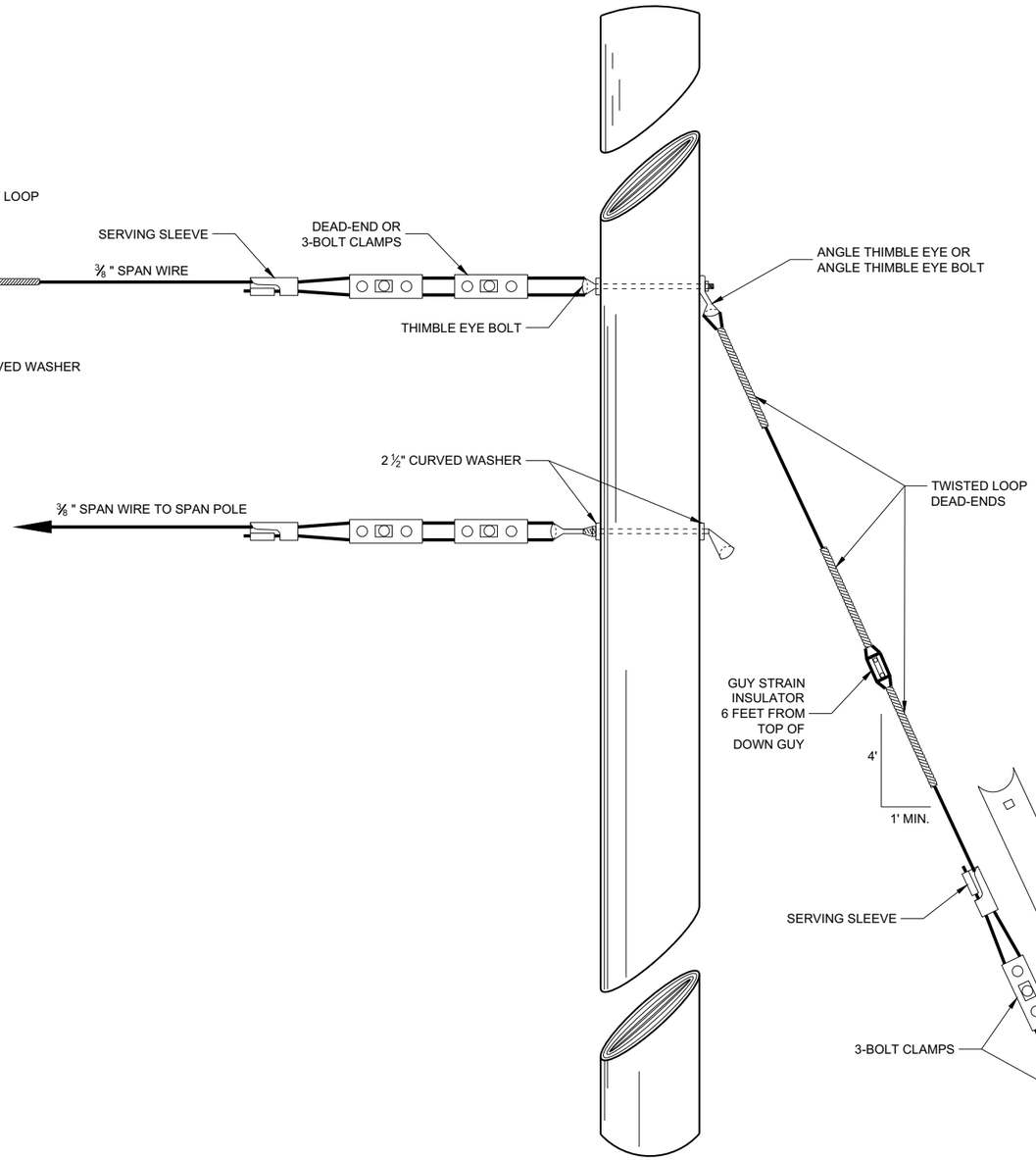
GENERAL NOTES

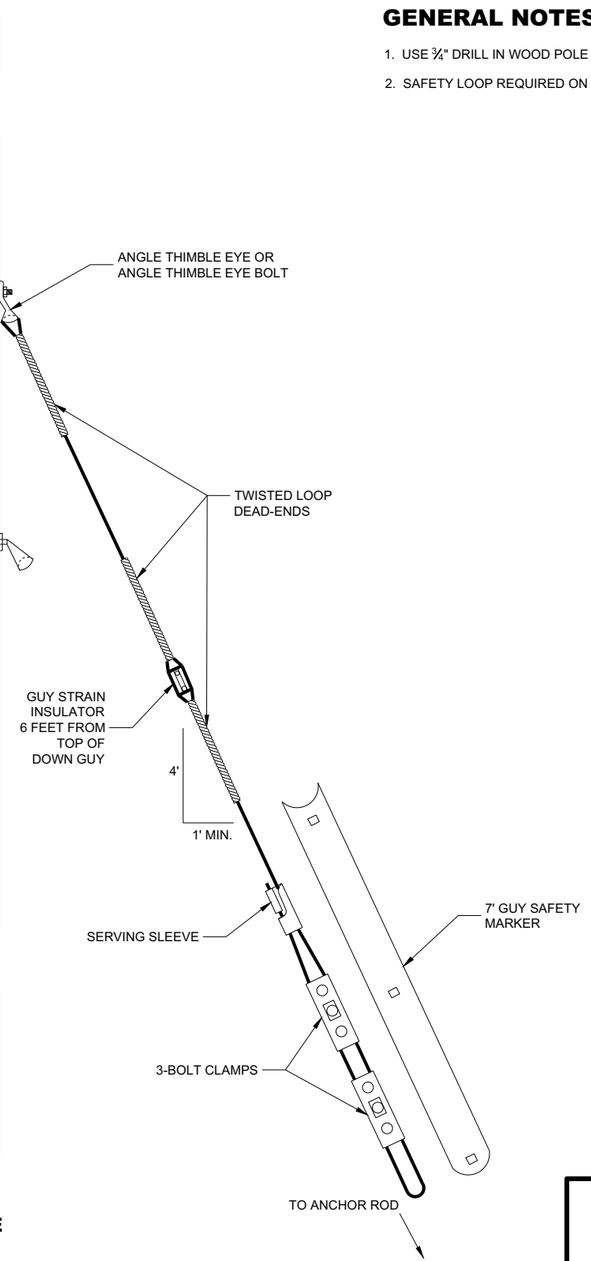
1. USE ¾" DRILL IN WOOD POLE TO PROVIDE FOR ⅝" BOLTS.
2. SAFETY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



SPAN WIRE POLE



GUY POLE



TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
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FHWA

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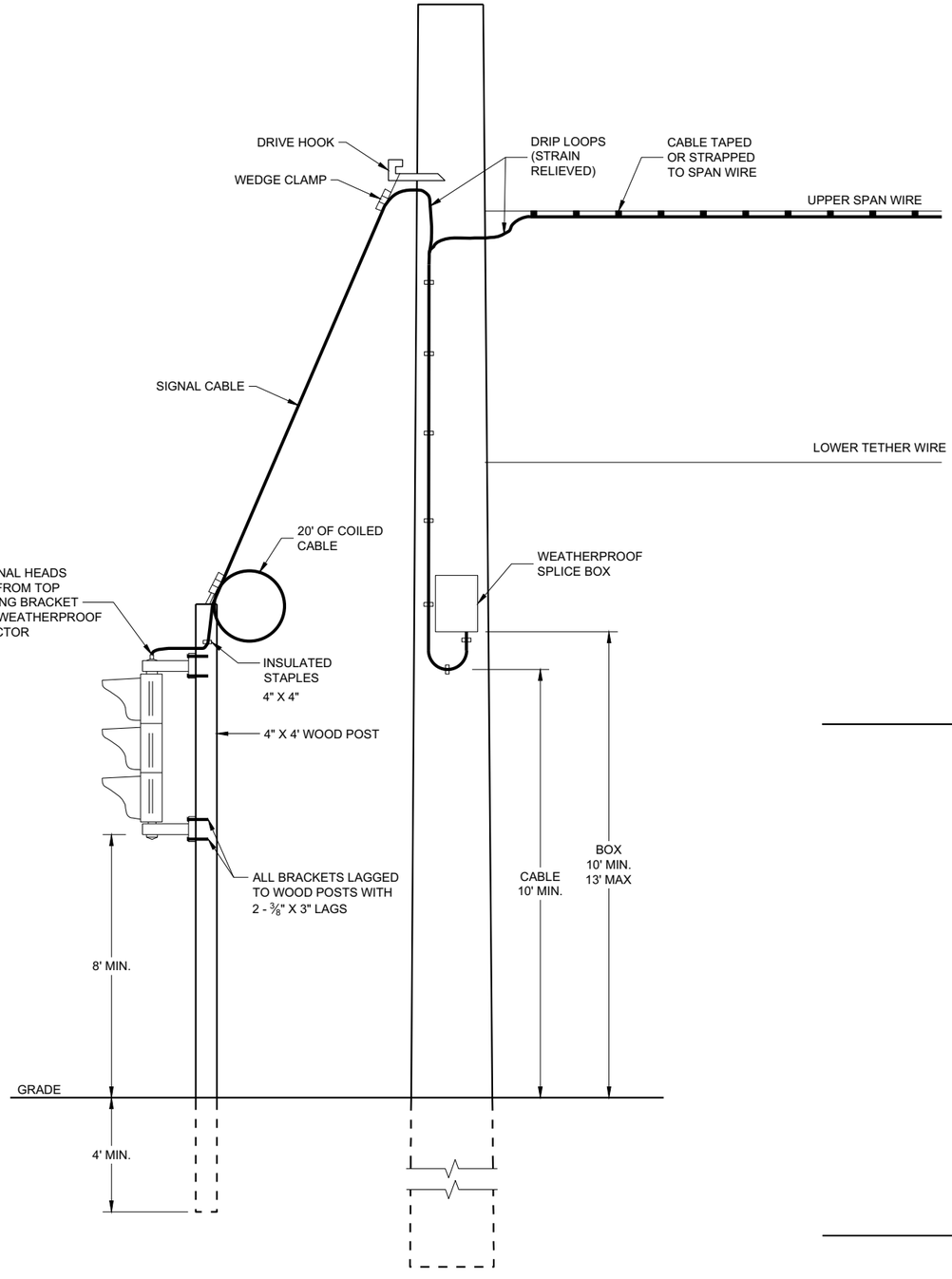
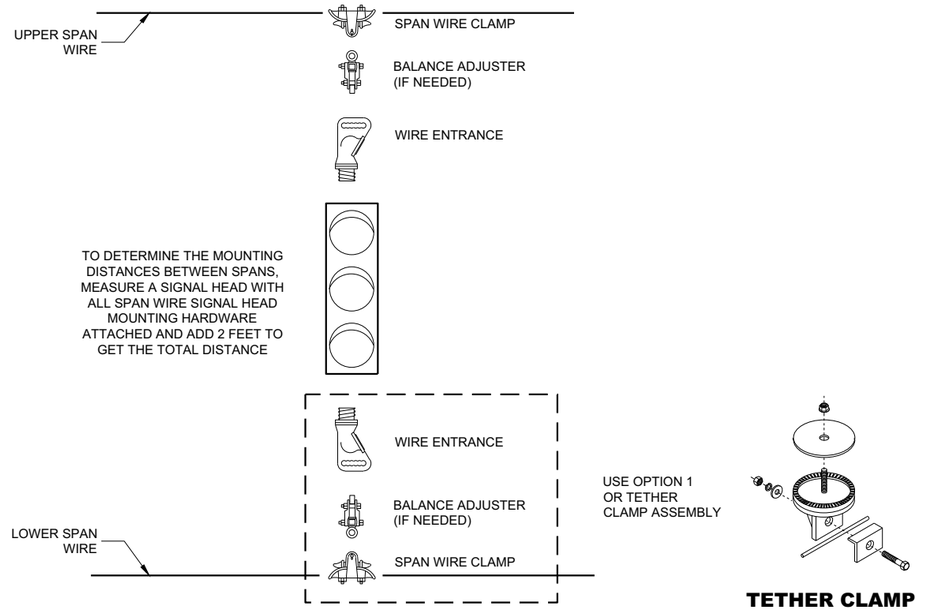


TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL

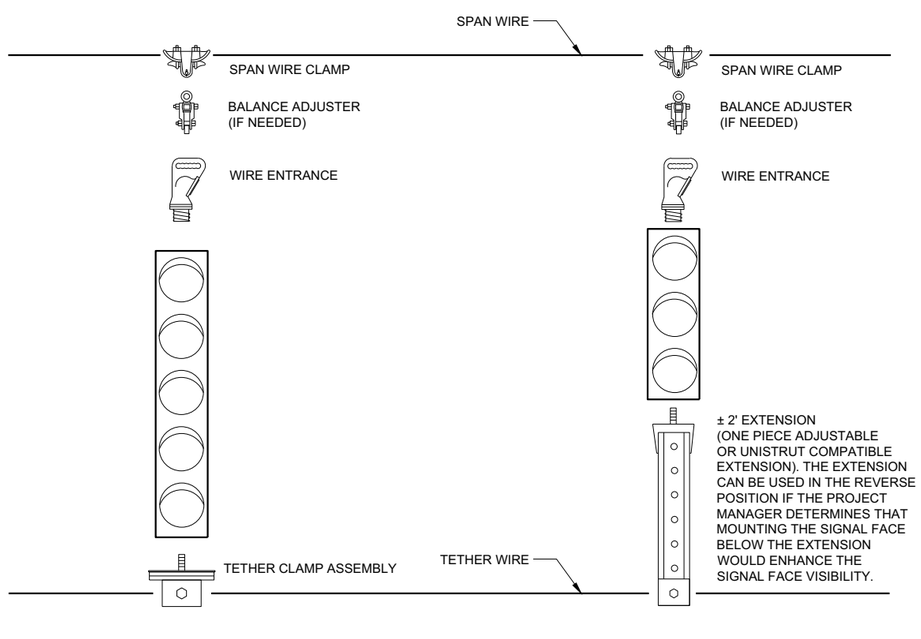


OPTION 1

USE OPTION 1 OR TETHER CLAMP ASSEMBLY

TETHER CLAMP ASSEMBLY OPTION

TYPICAL SPAN WIRE MOUNTING HARDWARE



5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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SDD 09G01 - 4f

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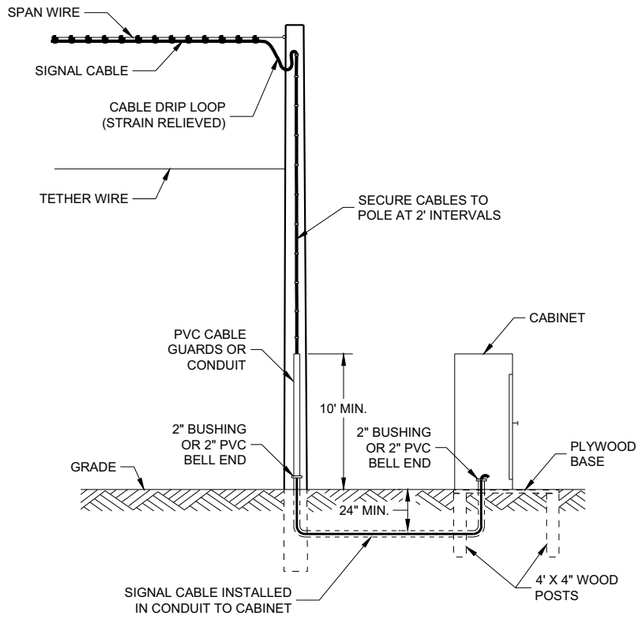
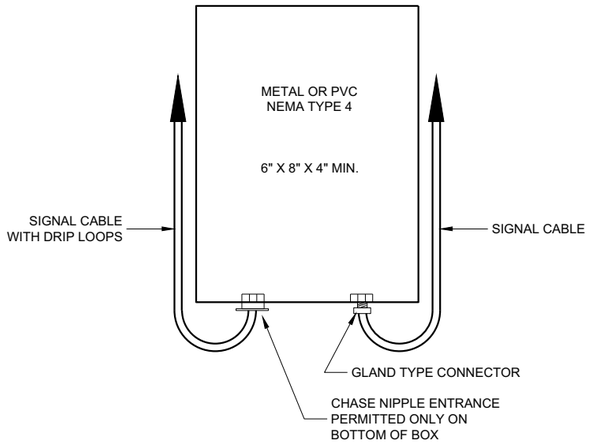
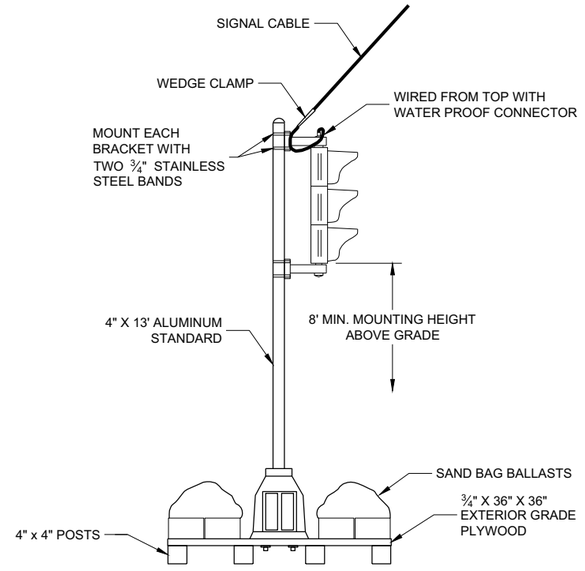
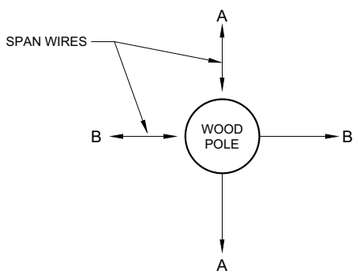




SPLICE BOX

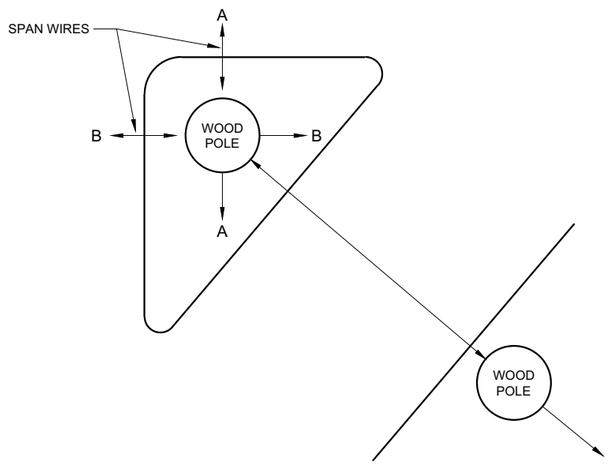


TYPICAL SKID TYPE TEMPORARY

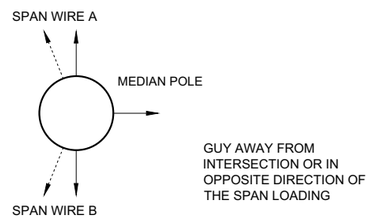


ALL DOWN OR SIDEWALK GUYS
SHALL BE INSTALLED IN THE
OPOSITE DIRECTION OF THE
STRAIN OF THE SPAN WIRE

CORNER POLES



ISLAND POLES



GUY AWAY FROM
INTERSECTION OR IN
OPPOSITE DIRECTION OF
THE SPAN LOADING

MEDIAN POLES

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

FHWA

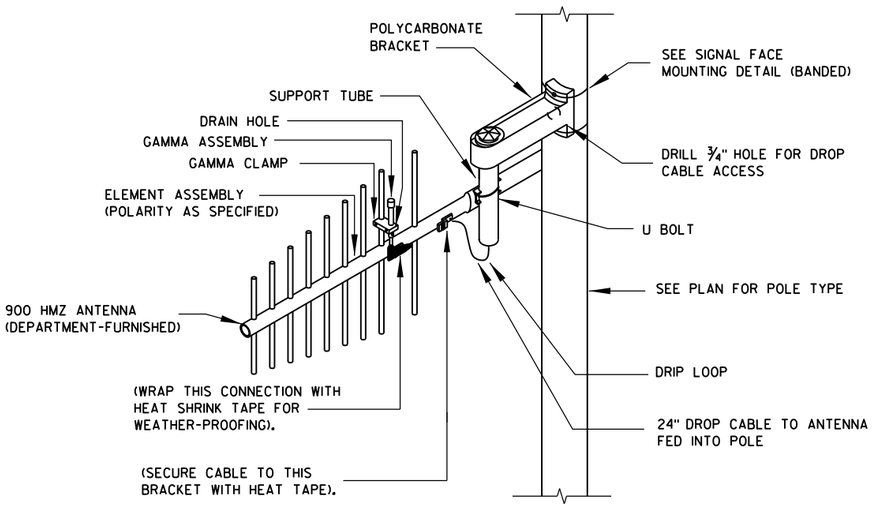
6

SDD 09G01 - 4g

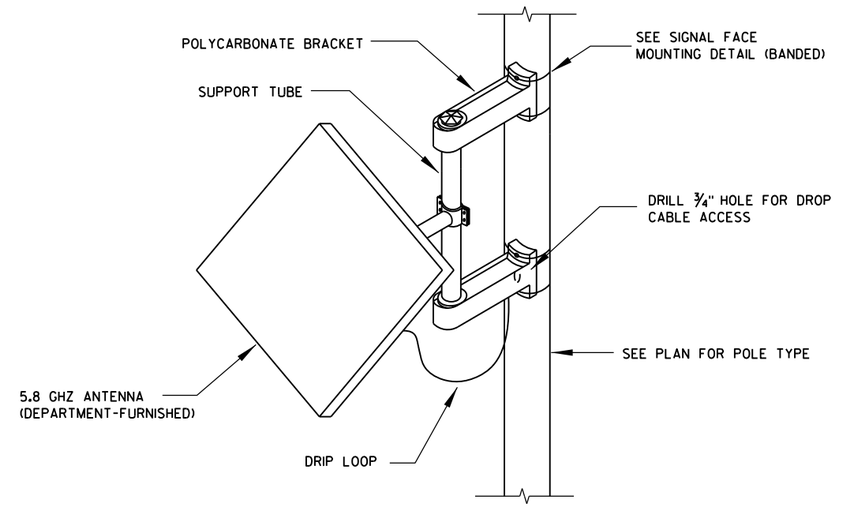
GENERAL NOTES

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

ALL MOUNTING EQUIPMENT REQUIRED IS INCIDENTIAL TO BID ITEM "INSTALL WIRELESS ANTENNA".



900 MHZ ANTENNA



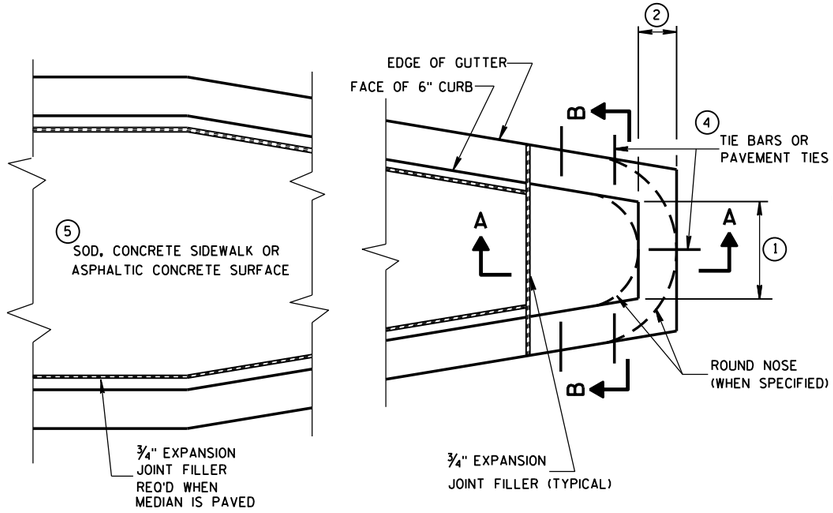
5.8 GHZ ANTENNA

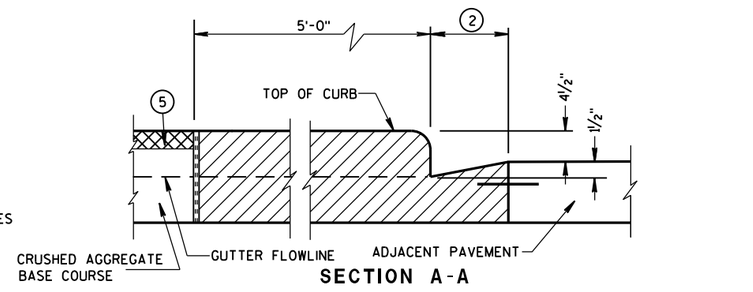
INSTALL WIRELESS ANTENNA

INSTALL WIRELESS ANTENNA	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
May 2017 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL
FHWA	

S.D.D. 9 H 16-1

S.D.D. 9 H 16-1





CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

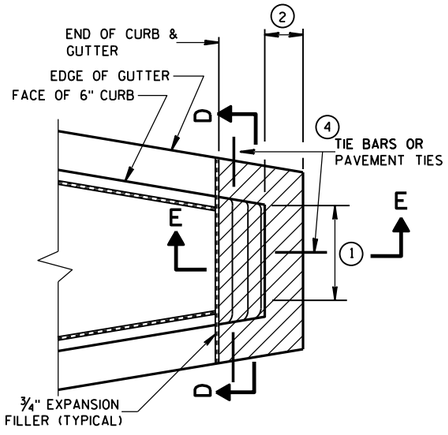
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

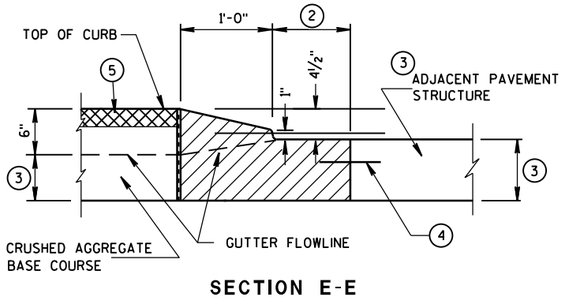
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

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

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

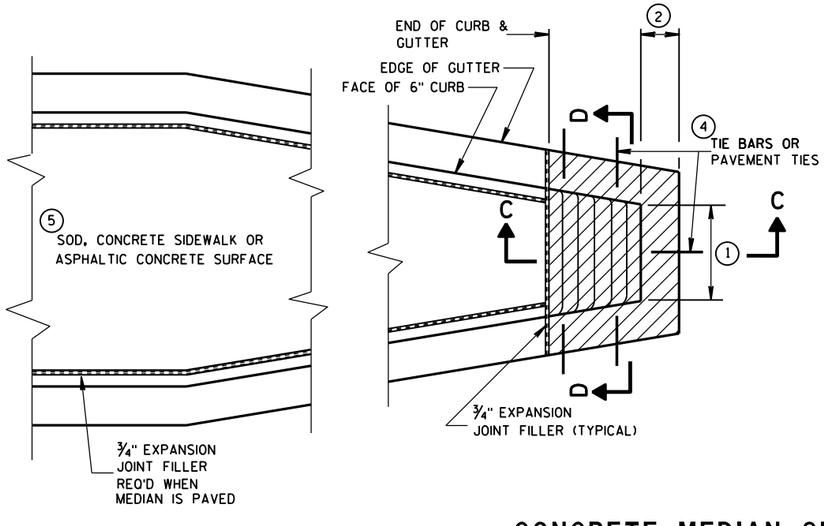
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

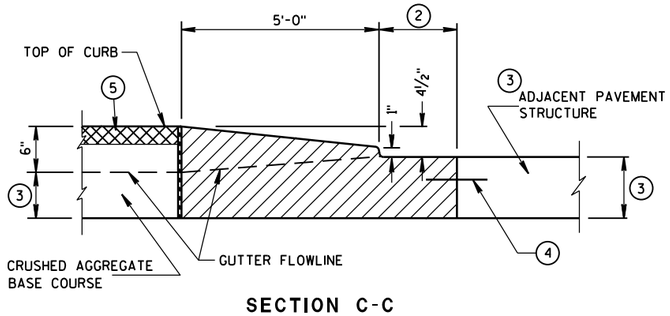




SECTION E-E

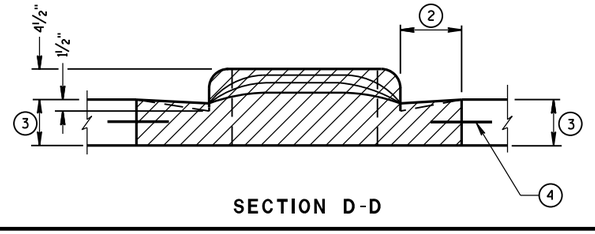
CONCRETE MEDIAN SLOPED NOSE TYPE 2





SECTION C-C

CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION D-D

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/8/2006 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 11 B 2-2

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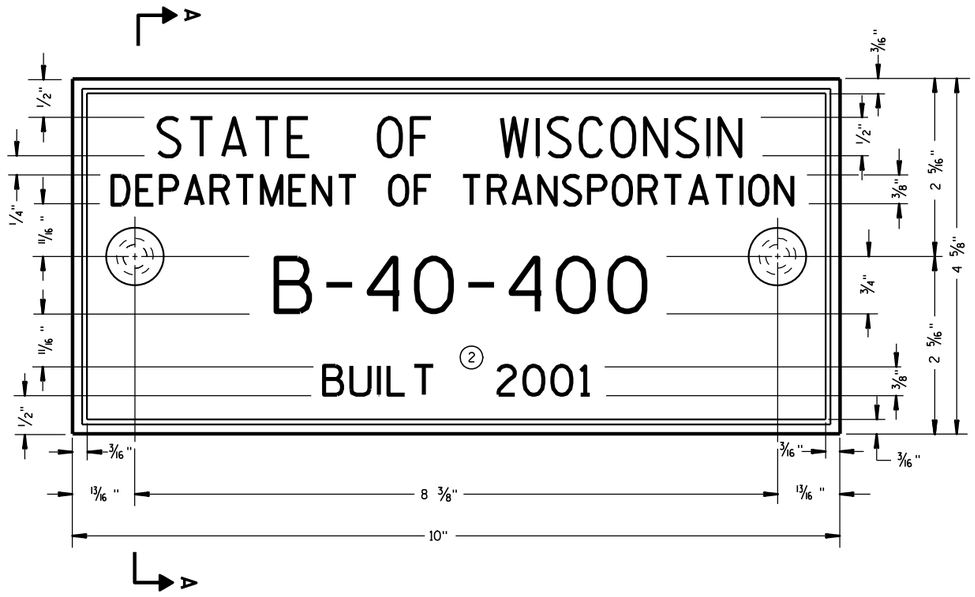
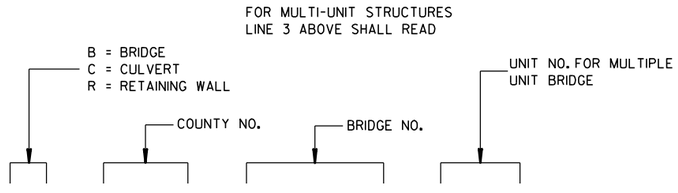
S.D.D. 11 B 2-2



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

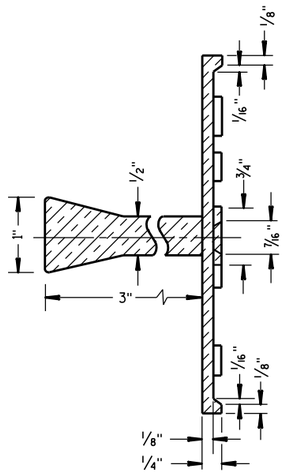
GENERAL NOTES

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

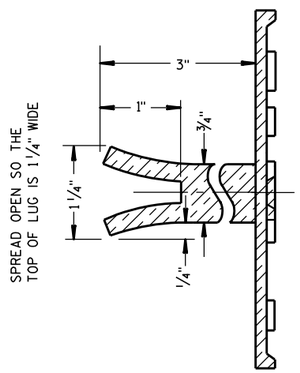
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

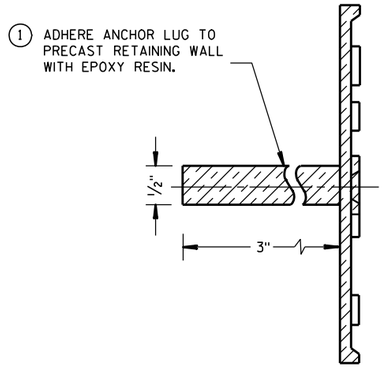
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
3/26/10 DATE	/S/ Scot Beck CHIEF STRUCTURAL DEVELOP ENGINEER
FHWA	

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S.D.D. 12 A 3-10

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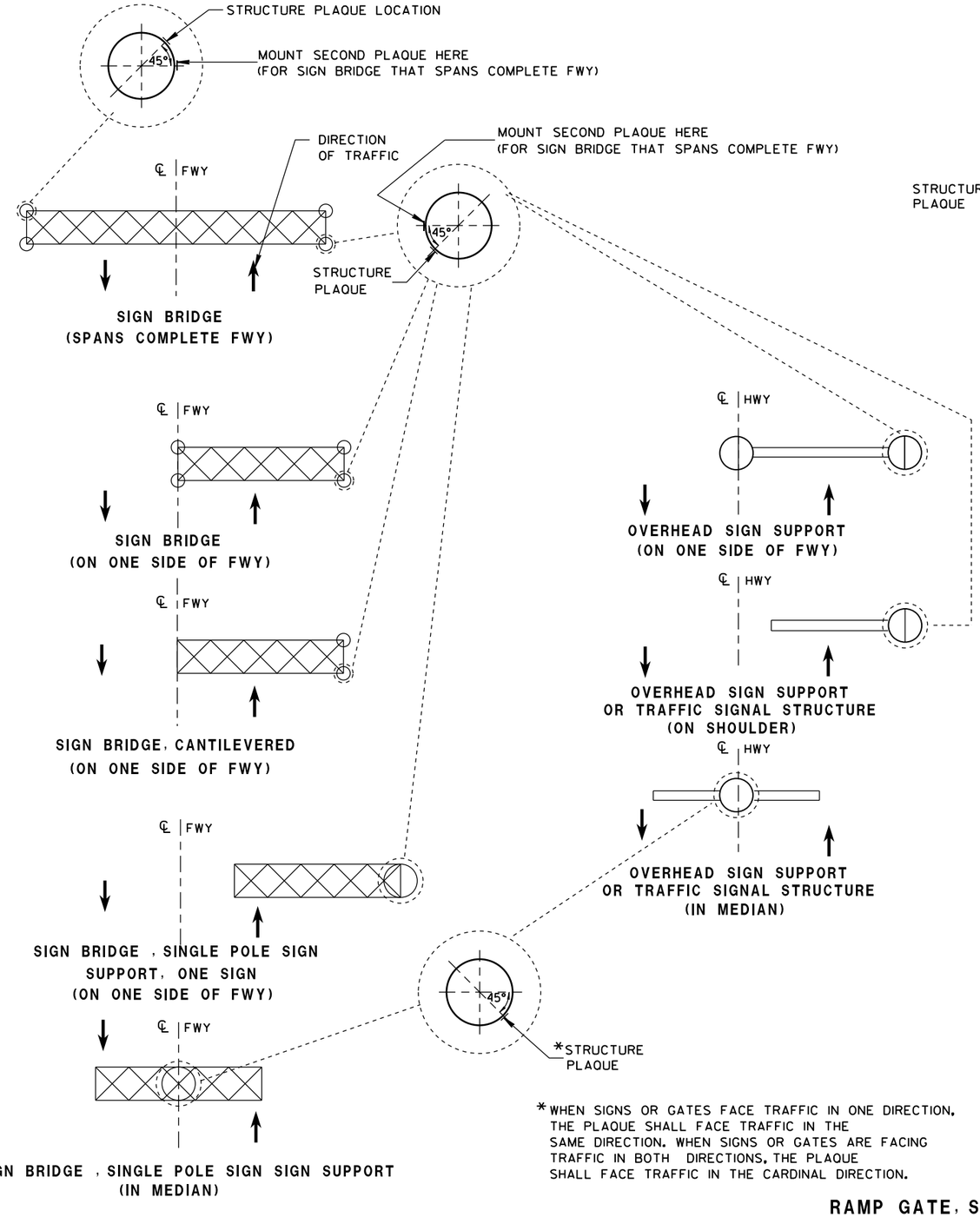
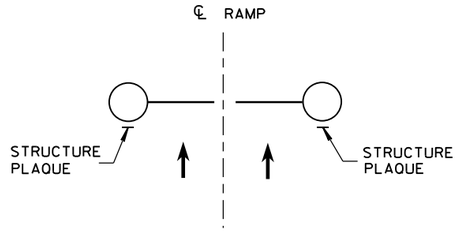
S.D.D. 12 A 3-10

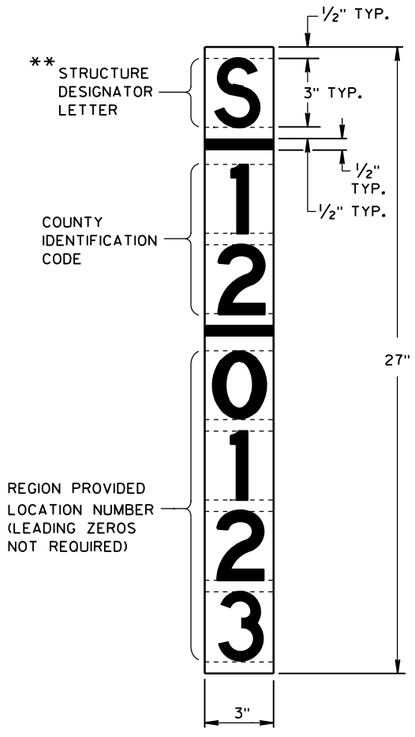


*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES



RAMP GATE
(ACROSS FWY ON-RAMP)



** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

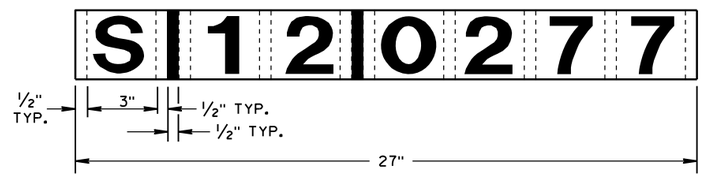
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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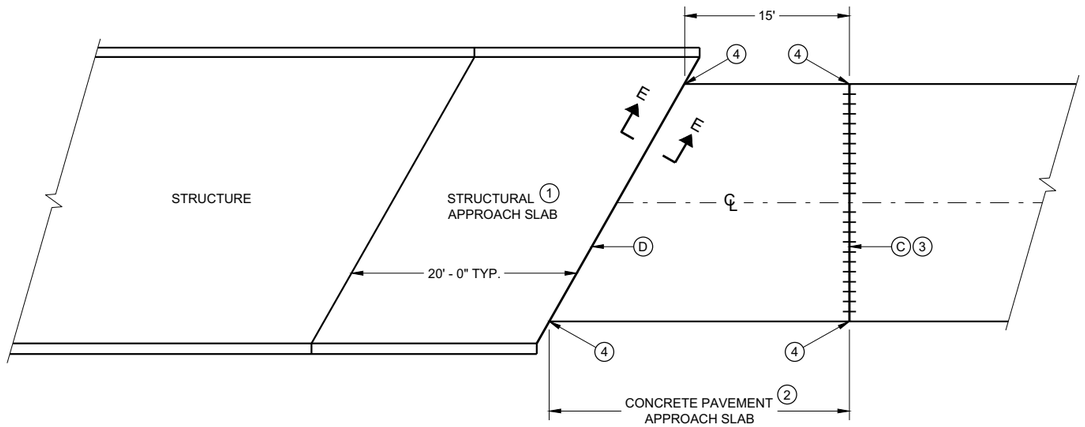
S.D.D. 12 A 4-3



BRIDGE APPROACHES

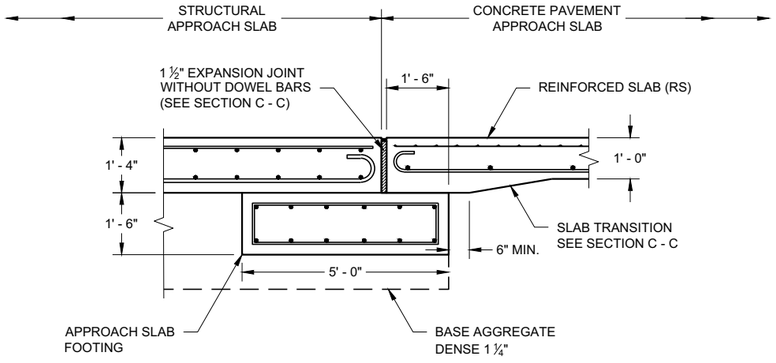
GENERAL NOTES

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

1. SEE BRIDGE PLAN.
2. CONFORM TO SDD 13B02 SHEET A FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS
3. DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
4. EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

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

D. 1 ½" EXPANSION JOINT (NO DOWELS)



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

STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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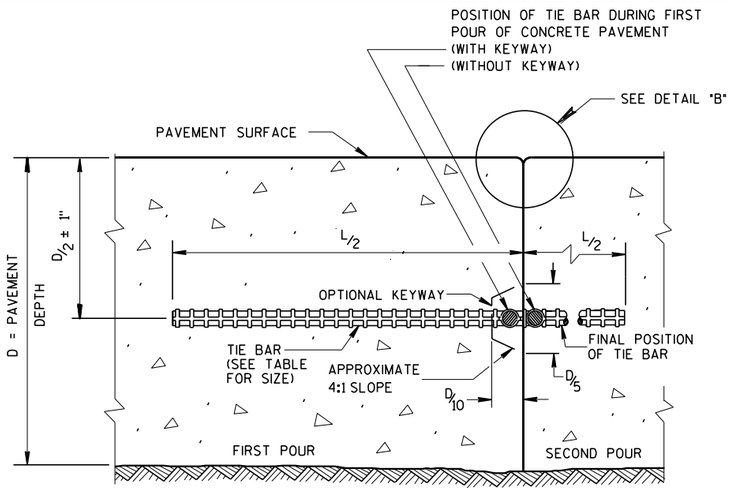
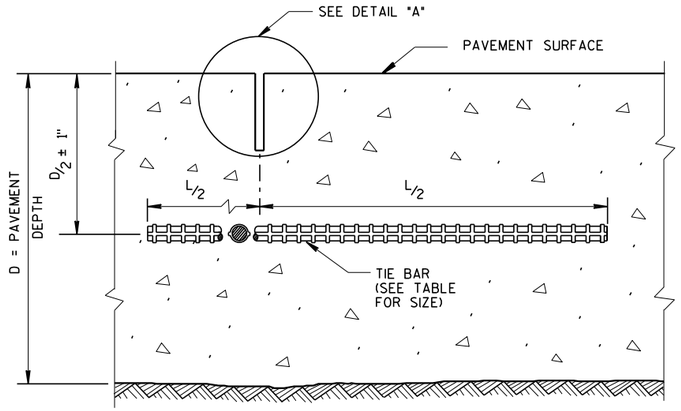
SDD 13B02 - 09b



CONSTRUCTION JOINT



SAWED JOINT

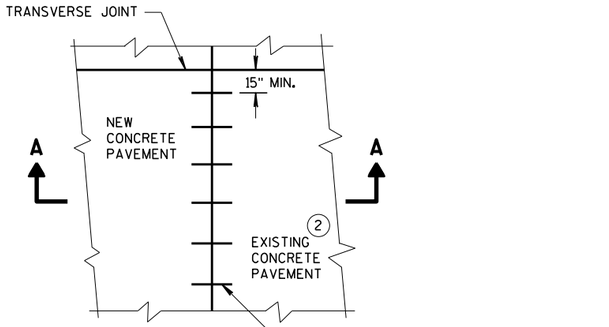
GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

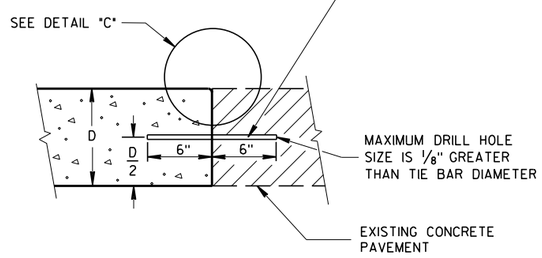
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

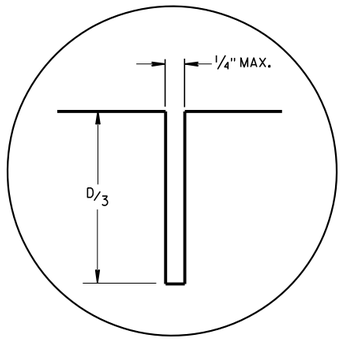


PLAN VIEW

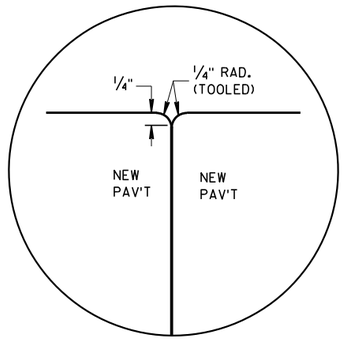


SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"



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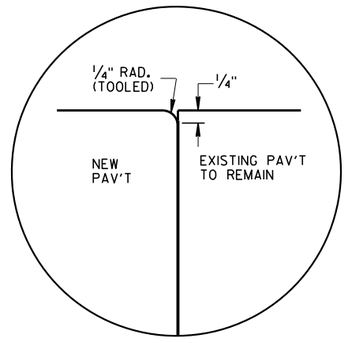


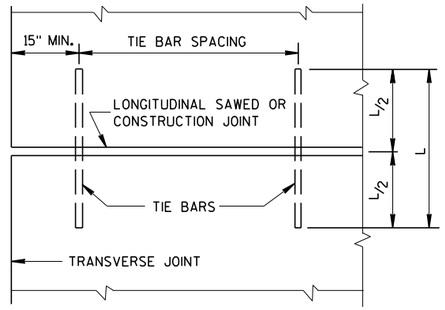
DETAIL "C"

TIE BAR TABLE

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

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

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



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Kemp PE — PAVEMENT SUPE
FHWA

6

S.D.D. 13 C 1-19

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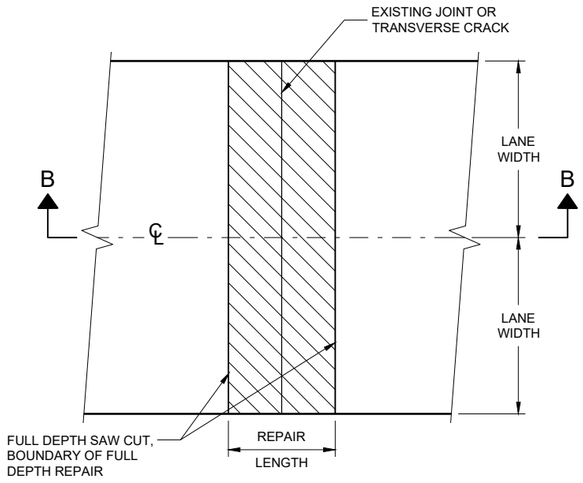
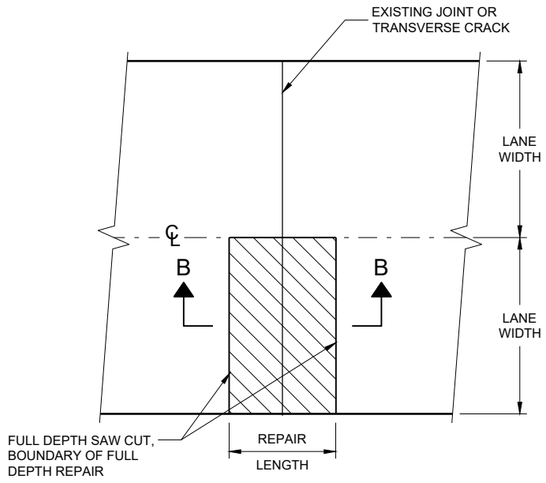
S.D.D. 13 C 1-19



PLAN VIEW
DOUBLE LANE REPAIR



PLAN VIEW
SINGLE LANE REPAIR

GENERAL NOTES

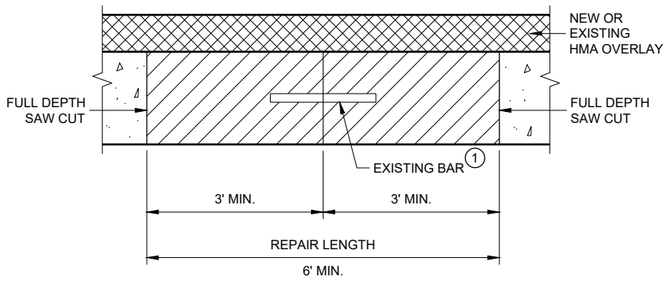
SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

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

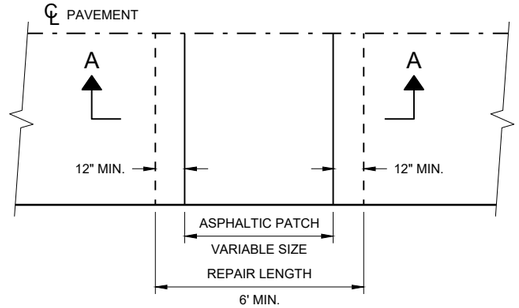
THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

(1) DOWEL BARS MAY NOT BE PRESENT.

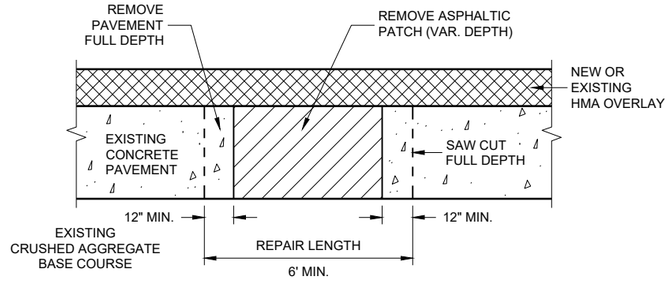
FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION B - B
CONCRETE REMOVAL



PLAN VIEW



SECTION A - A

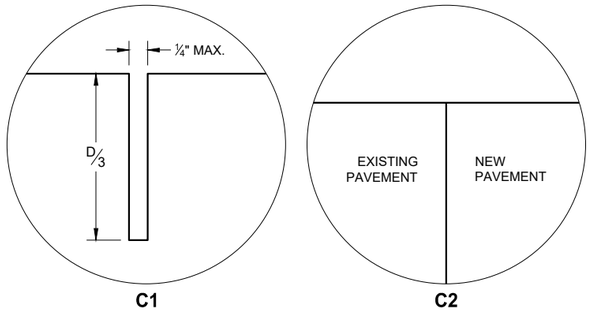
HMA PATCH REMOVAL

BASE PATCHING CONCRETE

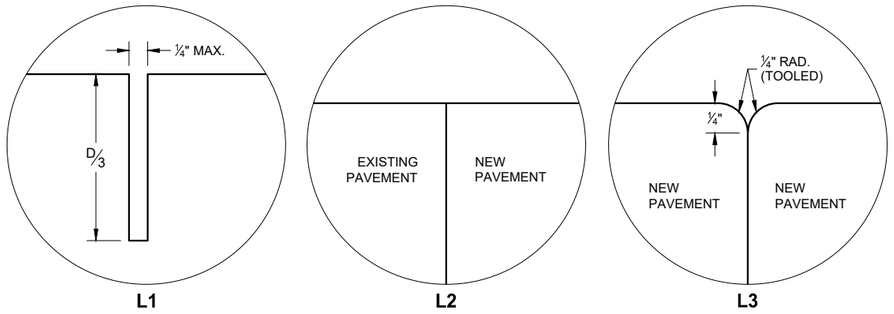
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

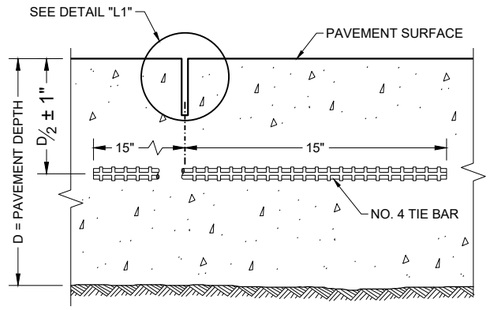
SDD 13C14 - 07a



TRANSVERSE JOINTS

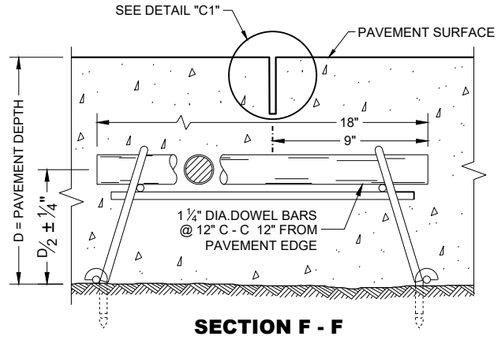


LONGITUDINAL JOINTS



SECTION C - C

SAWED LONGITUDINAL JOINT



SECTION F - F

CONTRACTION JOINT

GENERAL NOTES

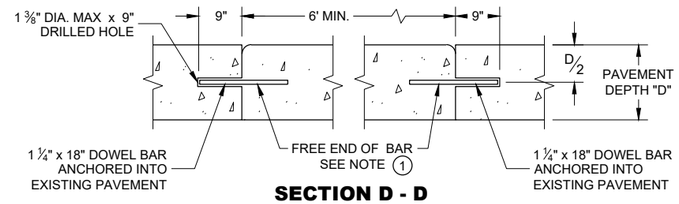
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE BASE PATCHES OF EXISTING NON-DOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

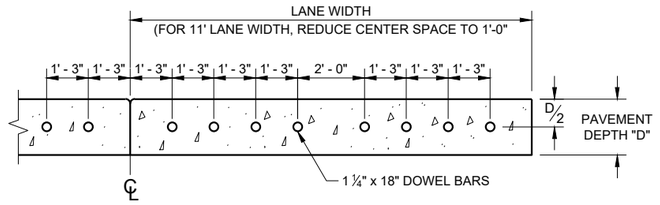
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT O EDGE.

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

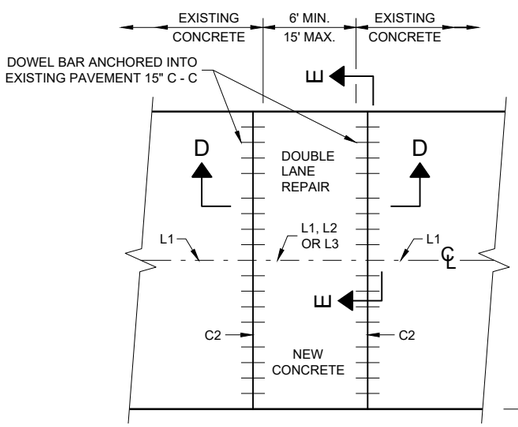


SECTION D - D



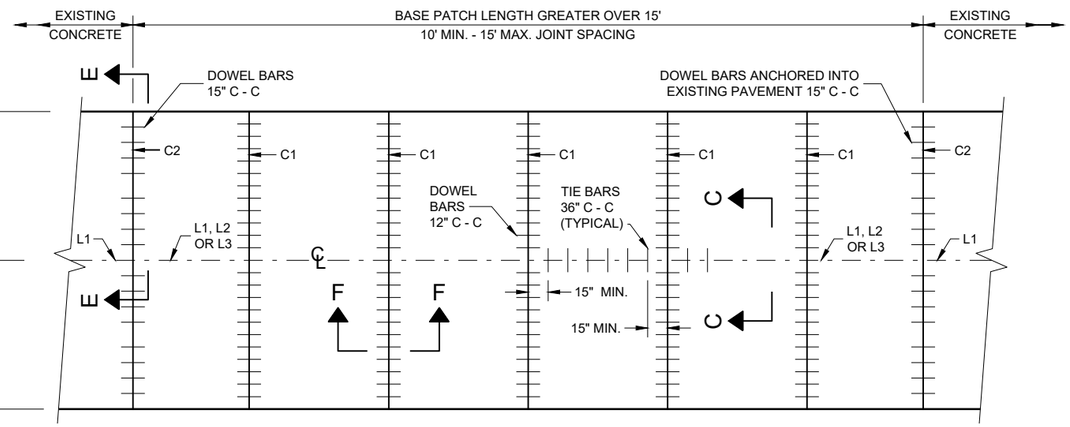
SECTION E - E

SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW

MULTILANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

MULTILANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA 250

SDD 13C14 - 07b

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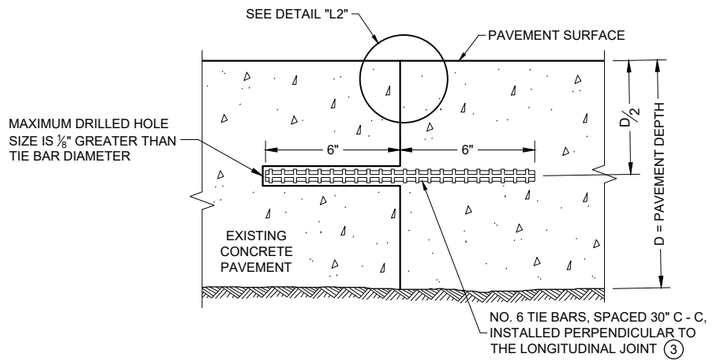
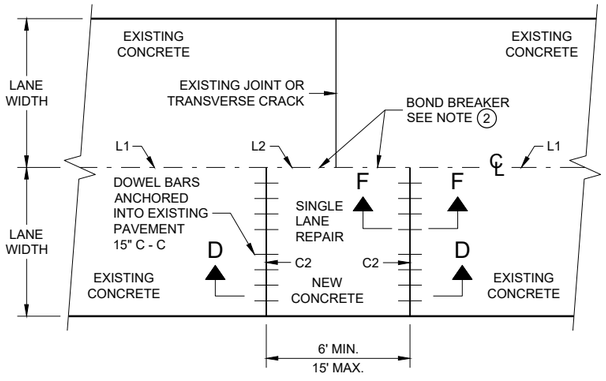


SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

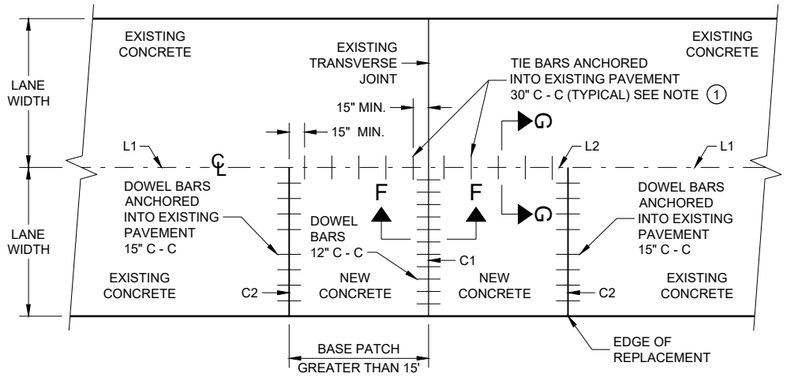
GENERAL NOTES

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



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH
GREATER THAN 15' LENGTH

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPERVIS
FHWA

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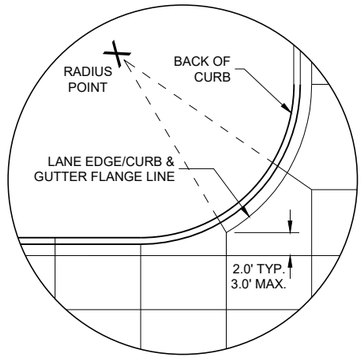
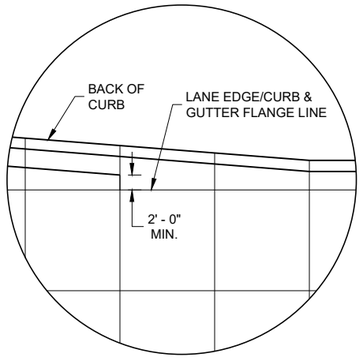
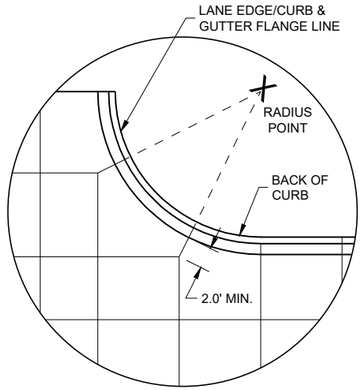


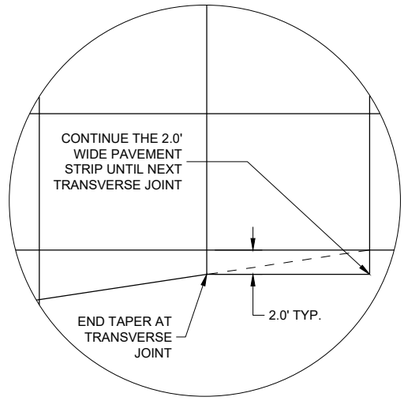
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

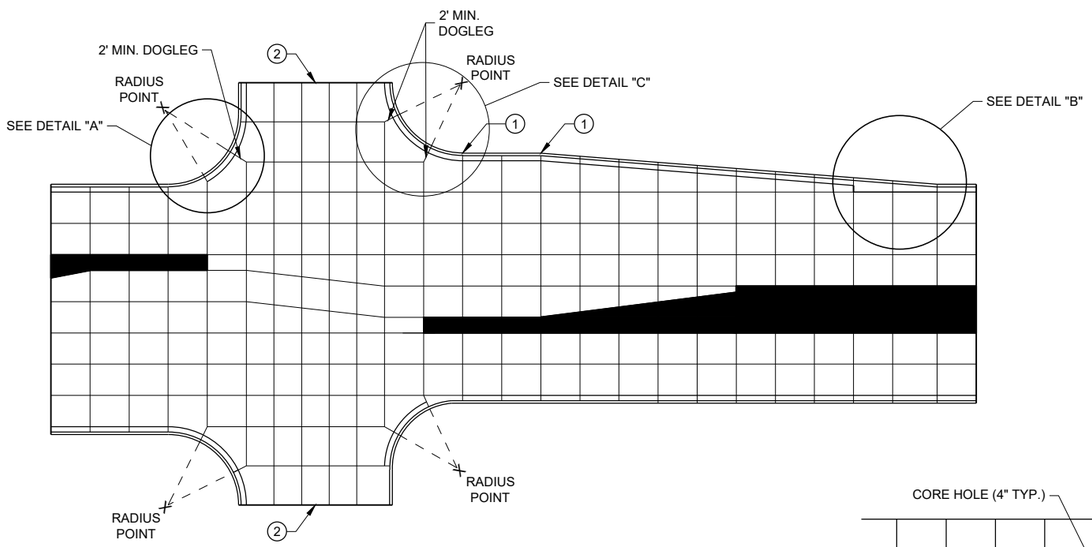
AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.

(2) CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.

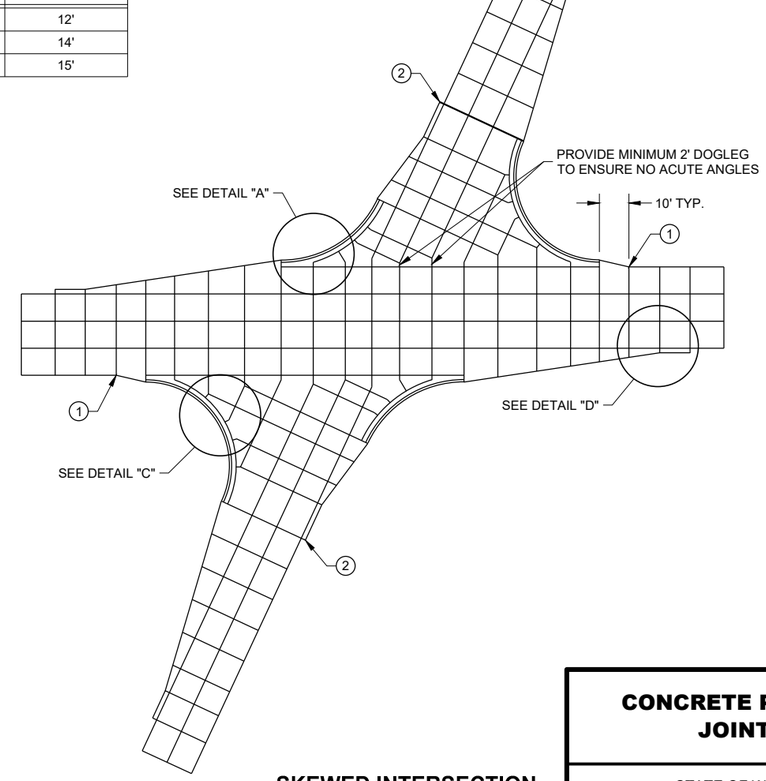
(3) THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



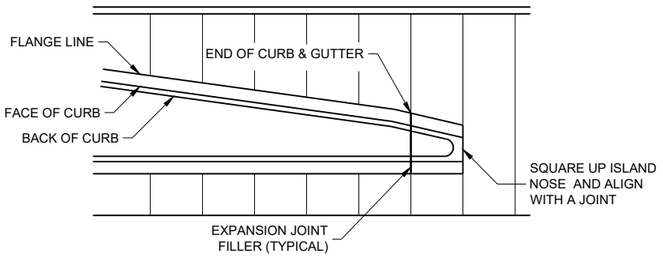
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

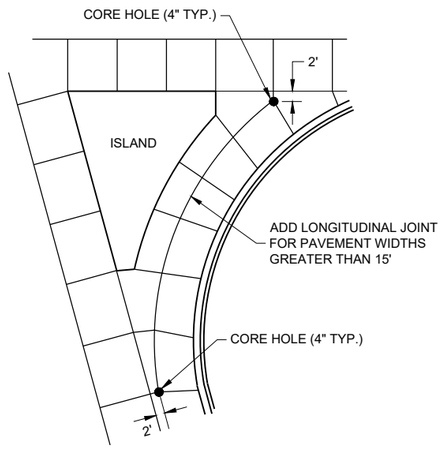
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 ½"	12'
7", 7 ½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
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SDD 13C18 - 08a

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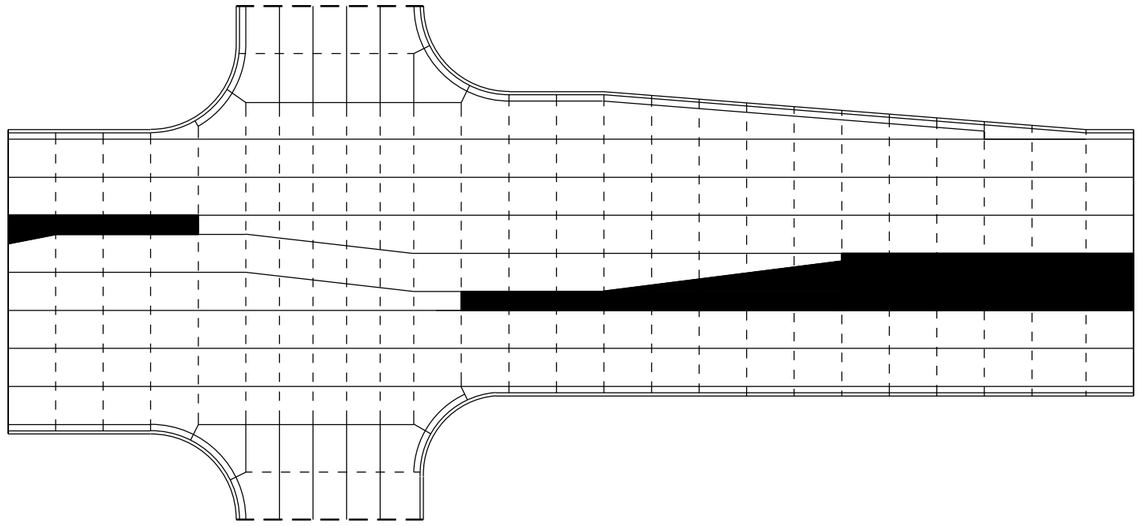
LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

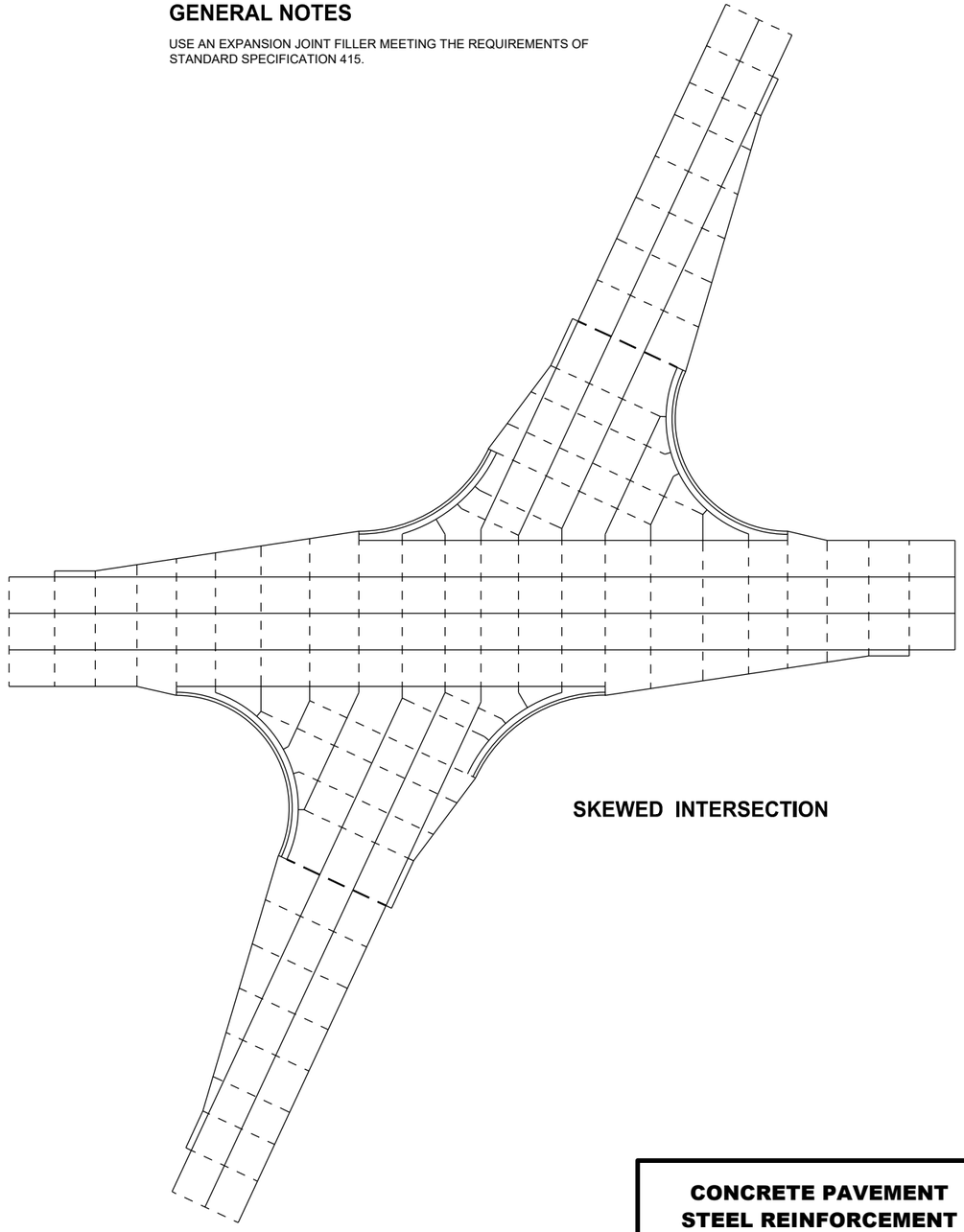
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

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



SKEWED INTERSECTION

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CONCRETE PAVEMENT STEEL REINFORCEMENT

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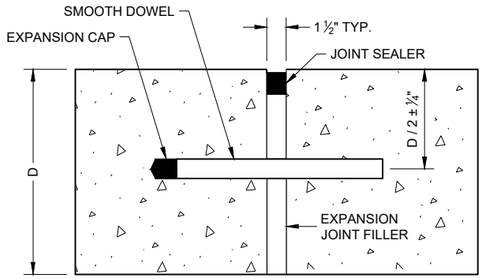
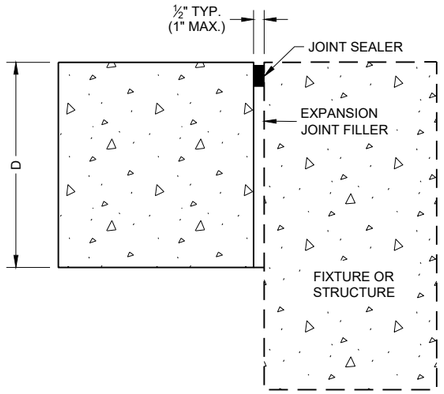
SDD 13C18 - 08b



DOWELED TRANSVERSE (1)



UNTIED - LONGITUDINAL

EXPANSION JOINTS

TIE BAR TABLE

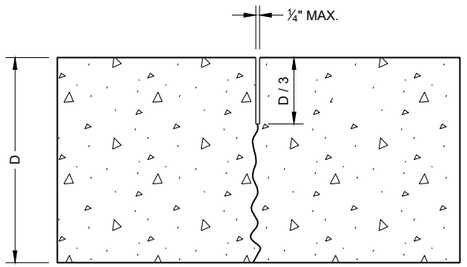
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

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

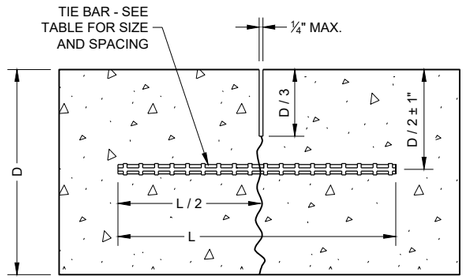
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

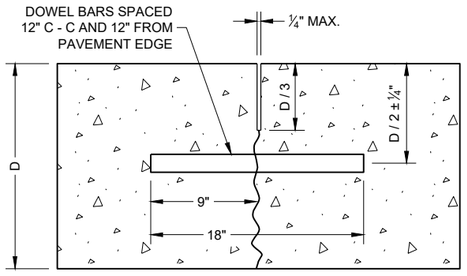
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATETHE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A ¼" RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



UNDOWELED TRANSVERSE

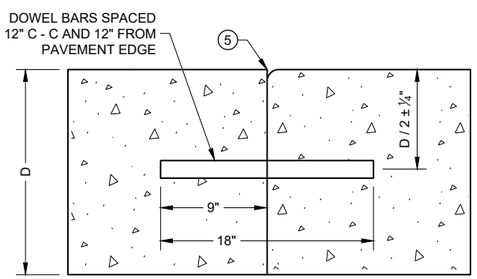


TIED LONGITUDINAL

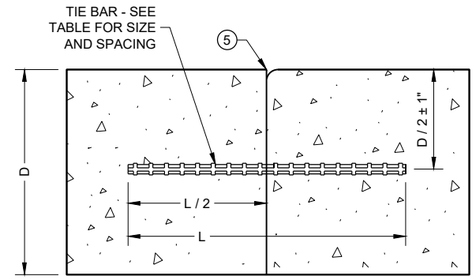


DOWELED TRANSVERSE

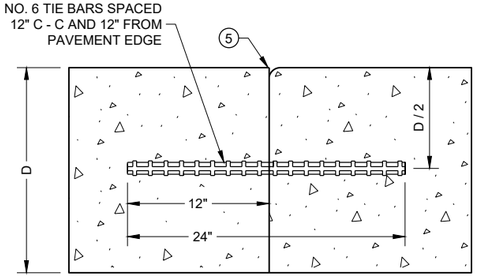
CONTRACTION JOINTS (2)



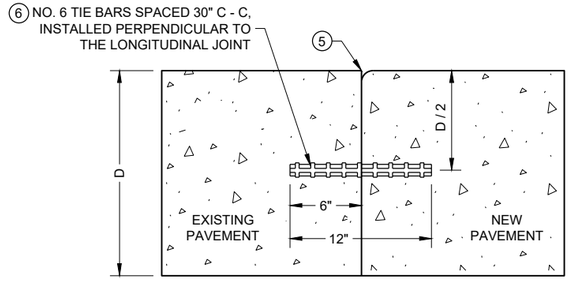
DOWELED TRANSVERSE (3)



TIED LONGITUDINAL



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



TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS (4)

CONCRETE PAVEMENT JOINT TYPES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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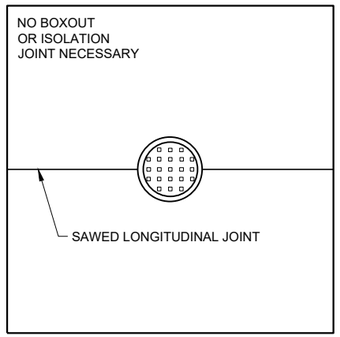
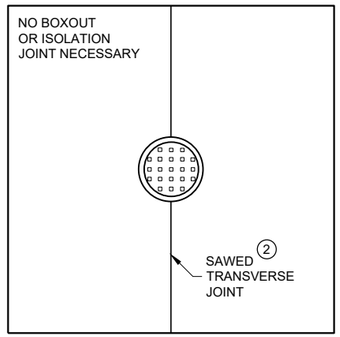
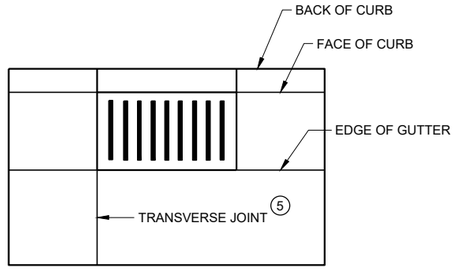


MANHOLE WITH LONGITUDINAL JOINT



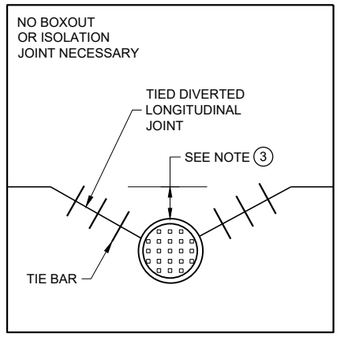
MANHOLE WITH TRANSVERSE JOINT



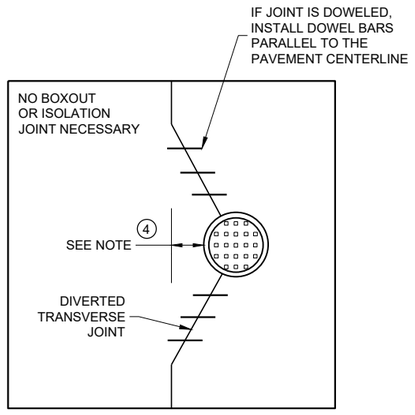
INLET WITH TRANSVERSE JOINT

GENERAL NOTES

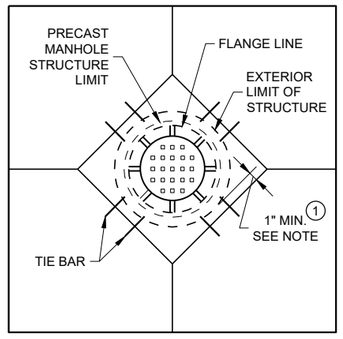
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF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



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT



DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVISO

FHWA

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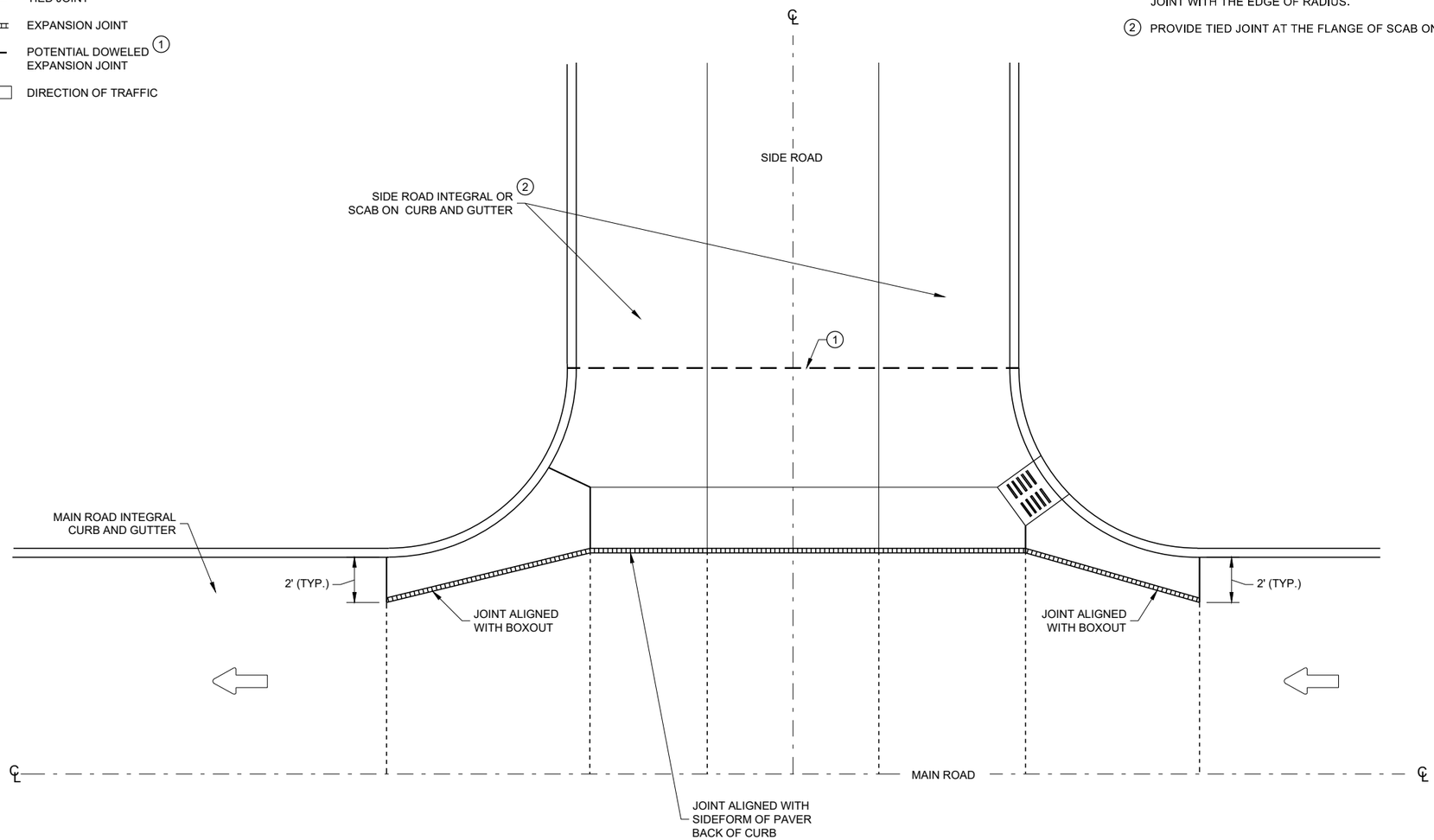
LEGEND

- DOWELED JOINT
- TIED JOINT
- EXPANSION JOINT
- POTENTIAL DOWELED EXPANSION JOINT (1)
- DIRECTION OF TRAFFIC



GENERAL NOTES

(1) CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH THE EDGE OF RADIUS.

(2) PROVIDE TIED JOINT AT THE FLANGE OF SCAB ON CURB IF SCAB ON CURB AND GUTTER IS USE.

INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER

CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Peter Kemp P.E.
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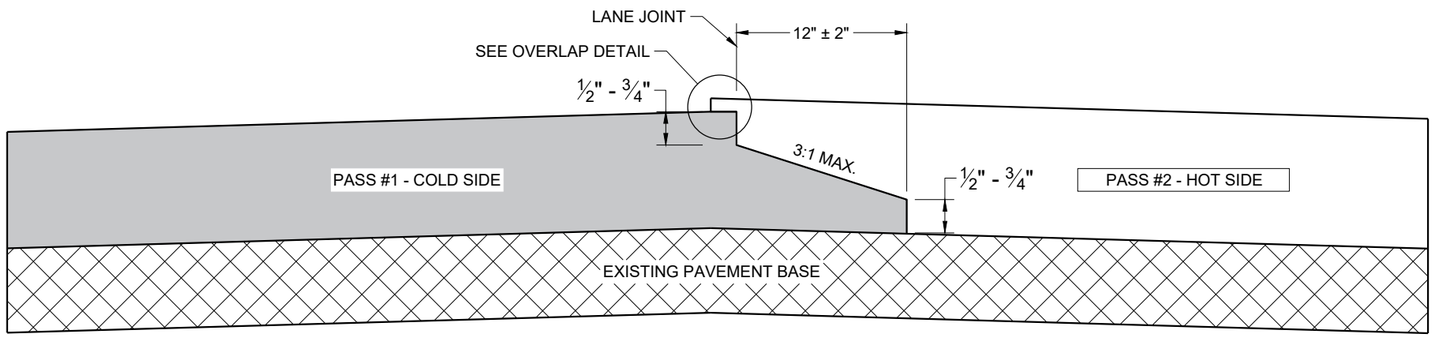
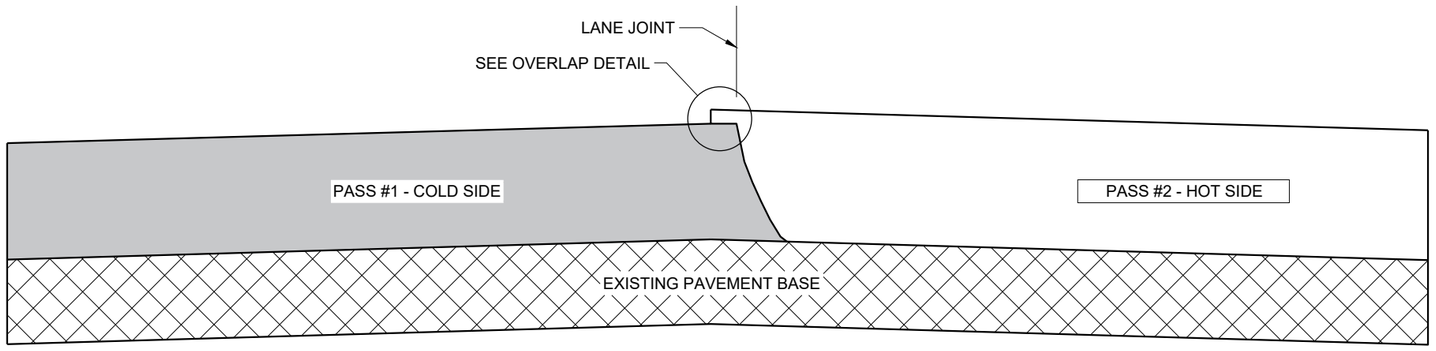
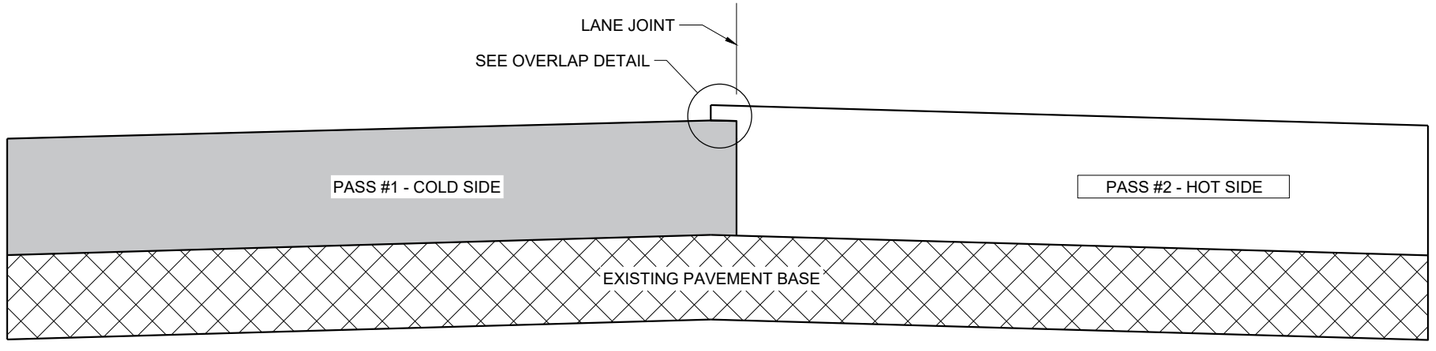
SDD 13C18 - 08f



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

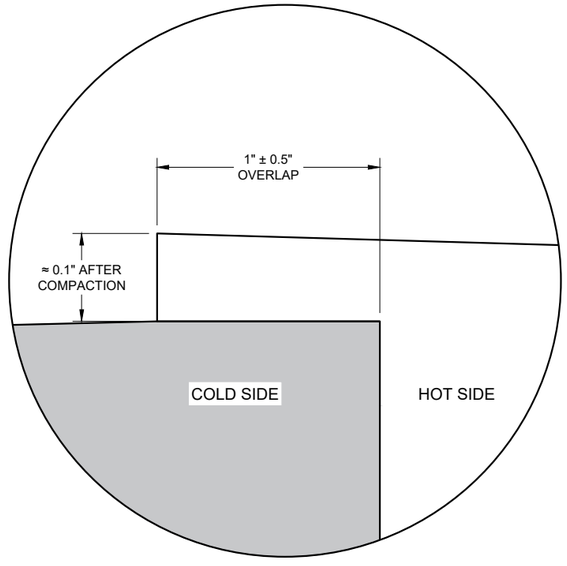
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

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SDD 13C19 - 03

SDD 13C19 - 03

HMA LONGITUDINAL JOINTS

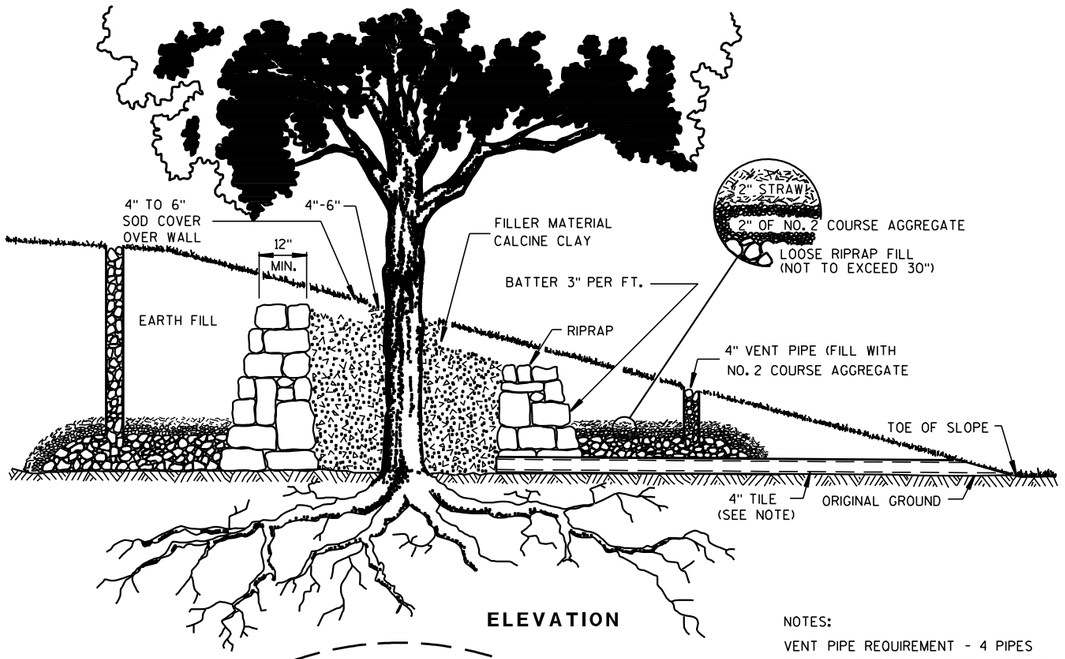
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

257

FHWA



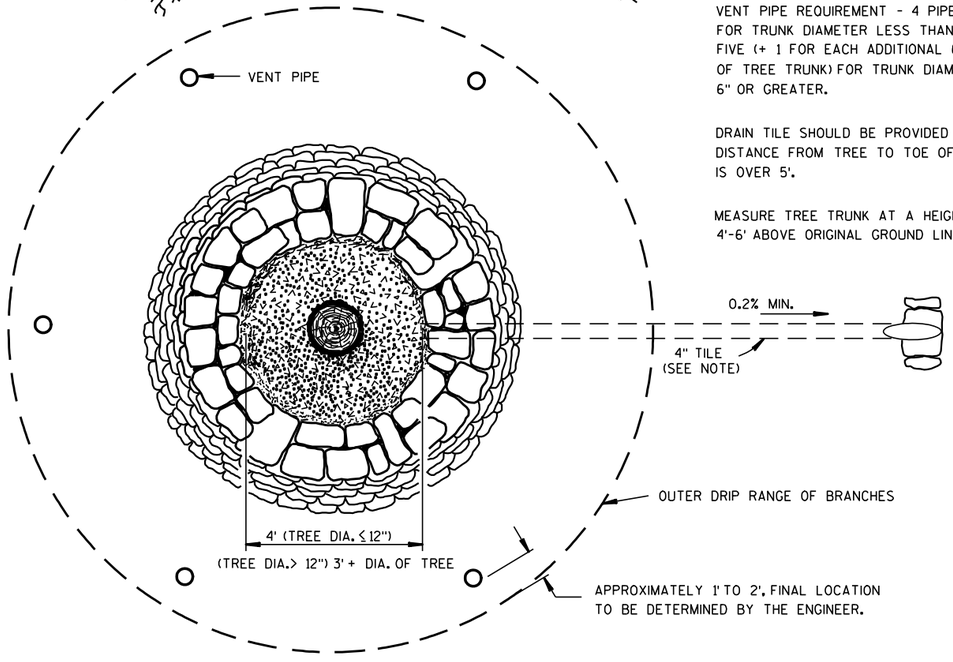
ELEVATION

NOTES:

VENT PIPE REQUIREMENT - 4 PIPES FOR TRUNK DIAMETER LESS THAN 6". FIVE (+ 1 FOR EACH ADDITIONAL 6" OF TREE TRUNK) FOR TRUNK DIAMETER 6" OR GREATER.

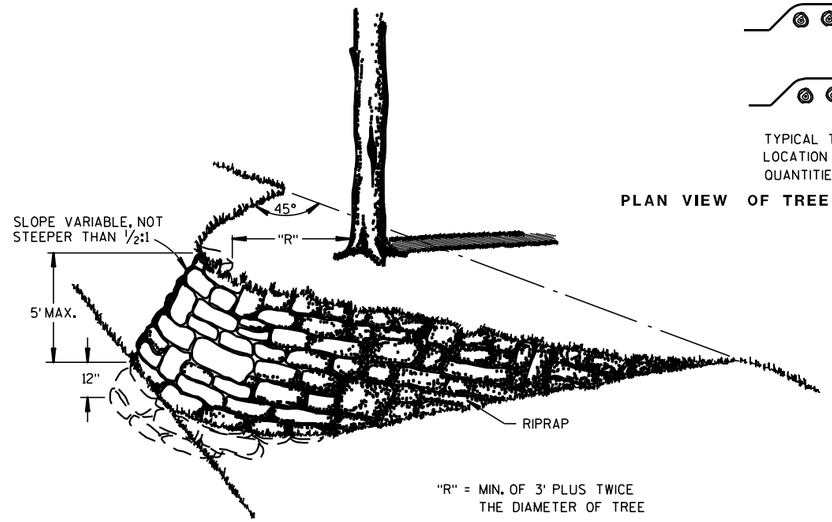
DRAIN TILE SHOULD BE PROVIDED IF DISTANCE FROM TREE TO TOE OF SLOPE IS OVER 5'.

MEASURE TREE TRUNK AT A HEIGHT 4'-6' ABOVE ORIGINAL GROUND LINE.



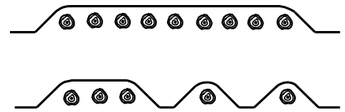
PLAN

FULL TREE WELL WITH RIPRAP WALL



"R" = MIN. OF 3' PLUS TWICE THE DIAMETER OF TREE

DETAILS OF TREE ISLAND AND ROOT PROTECTION



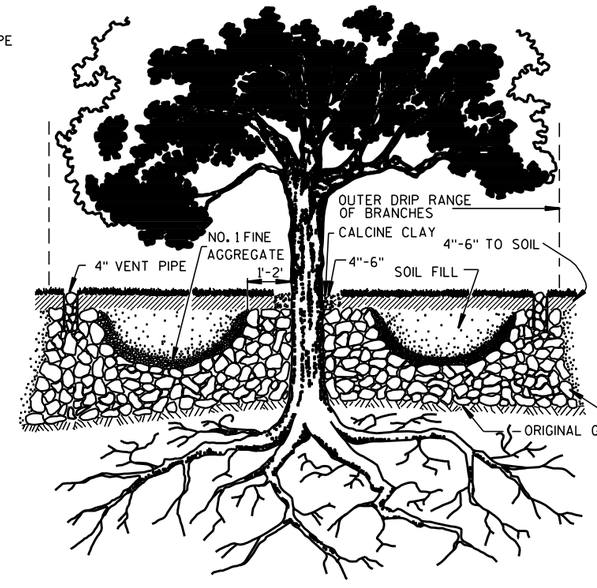
TYPICAL TREATMENTS OF ROOT PROTECTION. LOCATION SHOWN ON MISCELLANEOUS QUANTITIES SHEET.

PLAN VIEW OF TREE ISLANDS FOR ONE OR MORE TREES

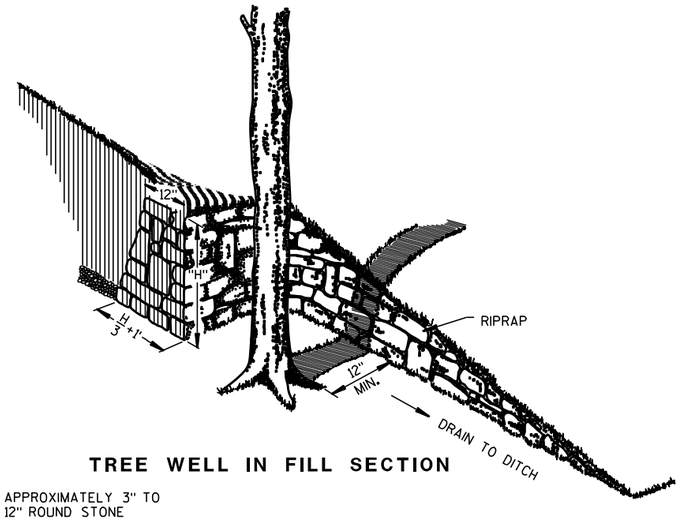
GENERAL NOTES

WALLS TO BE BUILT TO APPROXIMATE SHAPE AND DIMENSIONS SHOWN. STONE TO CONFORM TO SPECIFICATIONS FOR RIPRAP.

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



TREE WELL WITHOUT WALL



TREE WELL IN FILL SECTION

DETAILS FOR TREE WELLS

TREE PRESERVATION DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/25/76 DATE

/S/ D. L. Strand
STATE DESIGN ENGINEER

FHWA

258 WYS

6

S.D.D. 14 A 1-3

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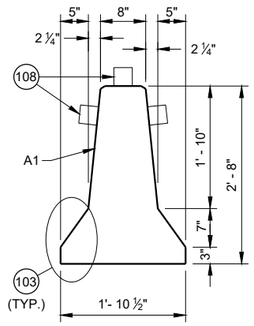
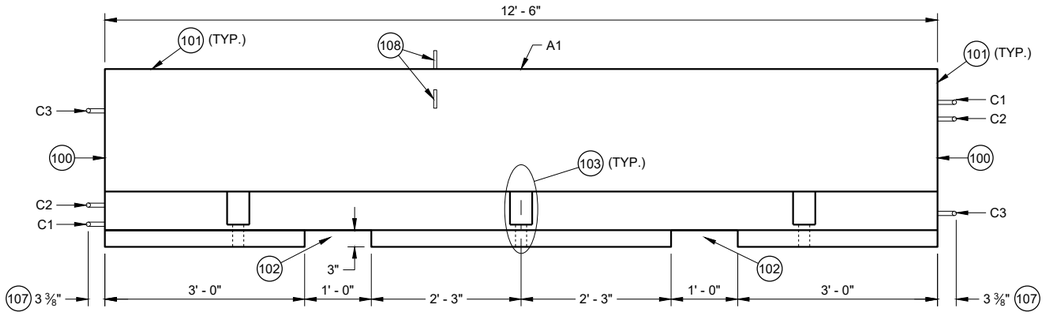
S.D.D. 14 A 1-3



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

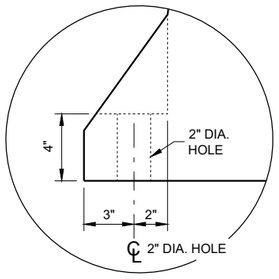
(104) 1 ¾" MIN. CLEAR COVER

(105) 2" MIN. CLEAR COVER

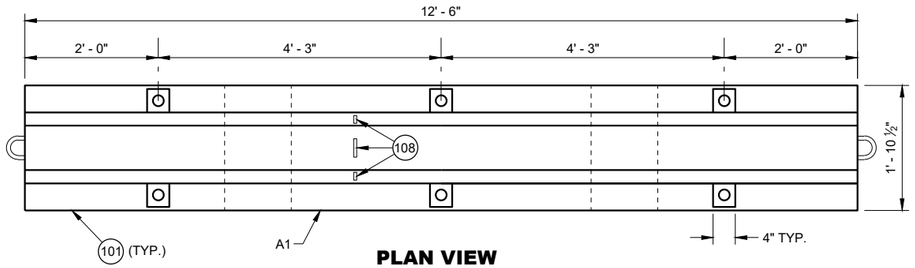
(106) 1" MIN. CLEAR COVER

(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 TO 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.

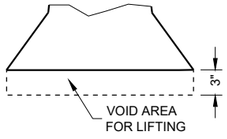


ANCHOR BLOCK DETAIL

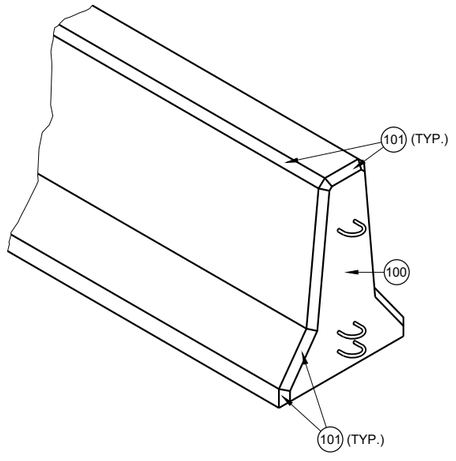


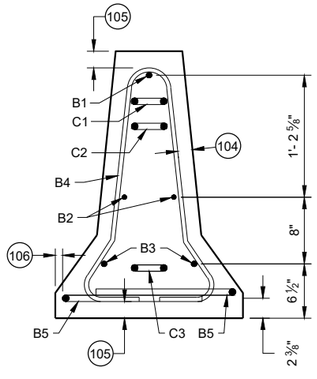
PLAN VIEW

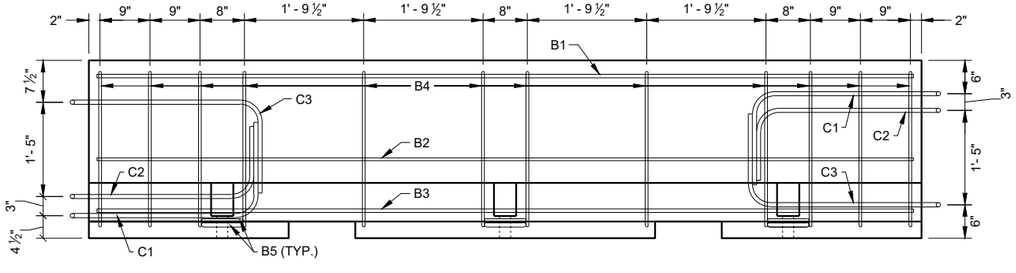
TEMPORARY BARRIER



LIFTING SLOT DETAIL (TYP.)



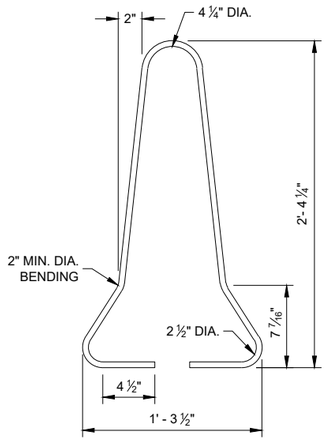




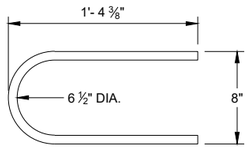
PROFILE VIEW

TEMPORARY BARRIER REINFORCEMENT

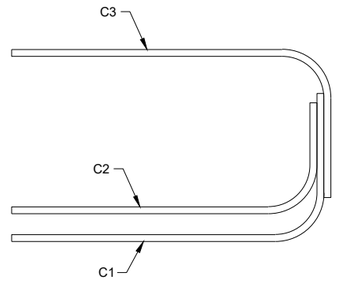
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"



B4 BAR DETAIL

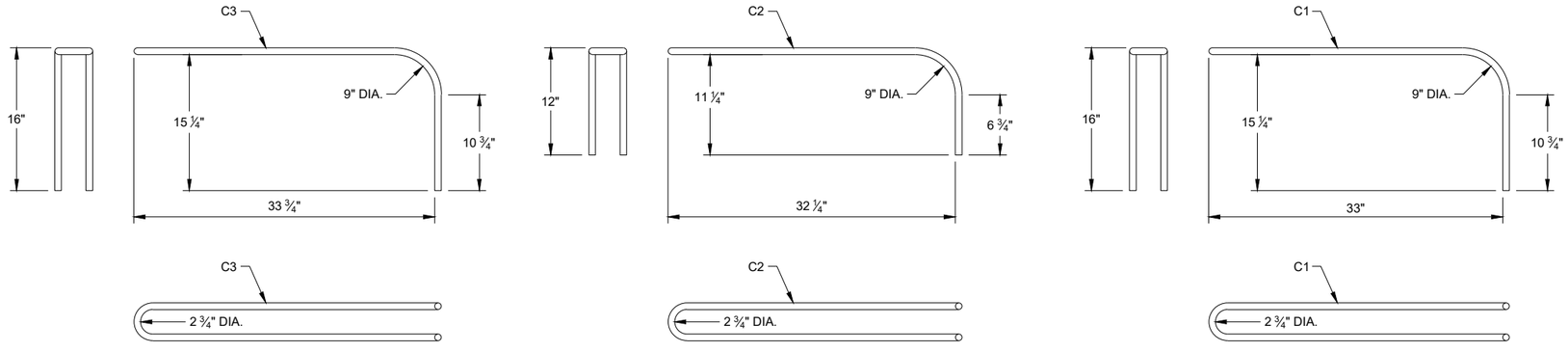


B5 BAR DETAIL



PROFILE VIEW

LOOP BAR ASSEMBLY



C BAR DETAILS

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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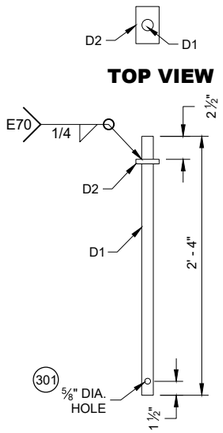
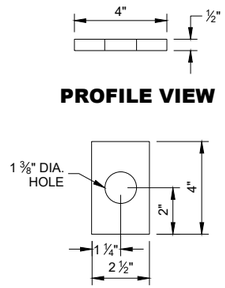
SDD 14B07-16b



TOP VIEW

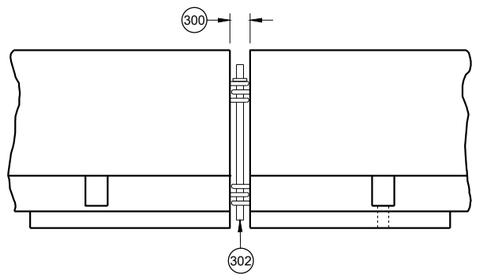
PROFILE VIEW

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.

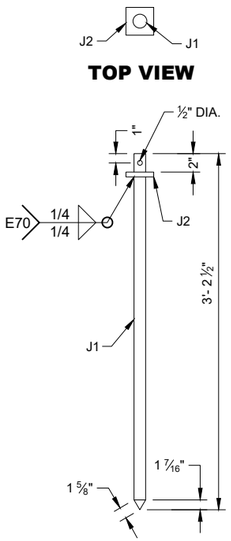
305 DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.

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"

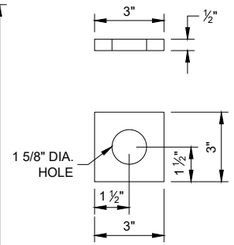
309 WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.



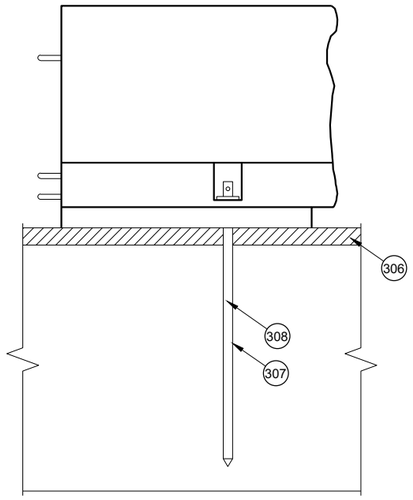
TOP VIEW

PROFILE VIEW

ASPHALT ANCHOR PIN ASSEMBLY

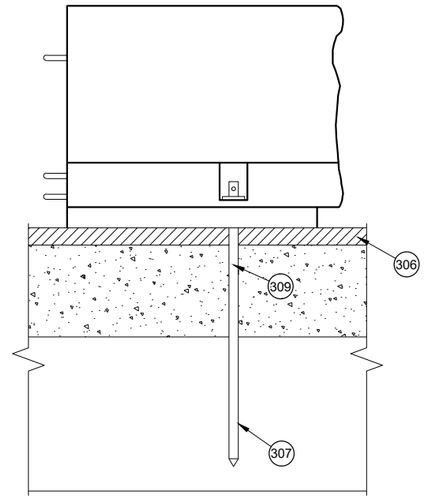


TOP VIEW J2



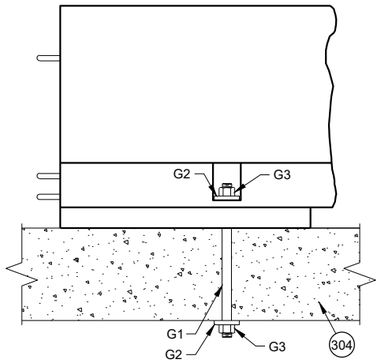
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT PAVEMENT



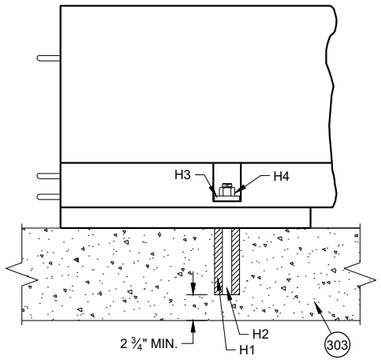
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT OVERLAY ON TOP OF CONCRETE PAVEMENT



SIDE VIEW

THROUGH BOLT ANCHOR INSTALLATION 305



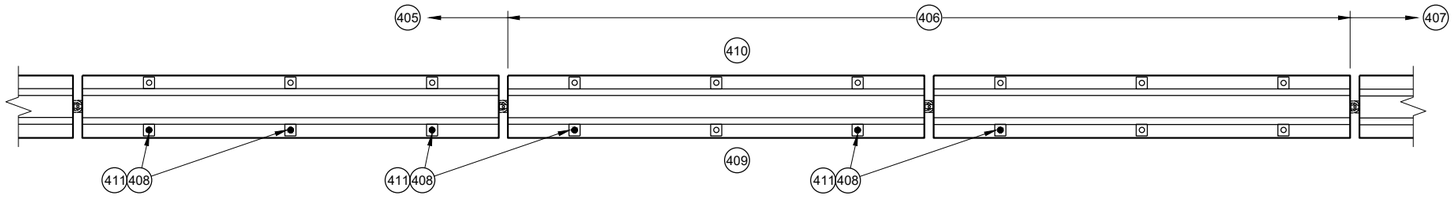
SIDE VIEW

ADHESIVE ANCHOR INSTALLATION 305

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

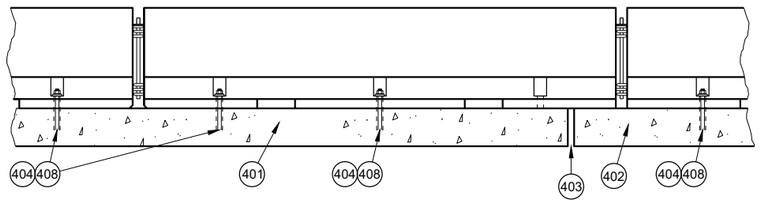
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16c



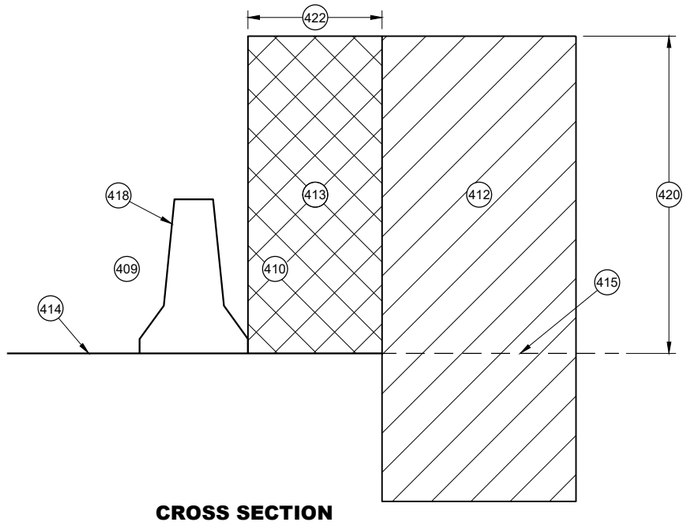
PLAN VIEW

TRANSITION FROM FREE STANDING TO ANCHORED BARRIER



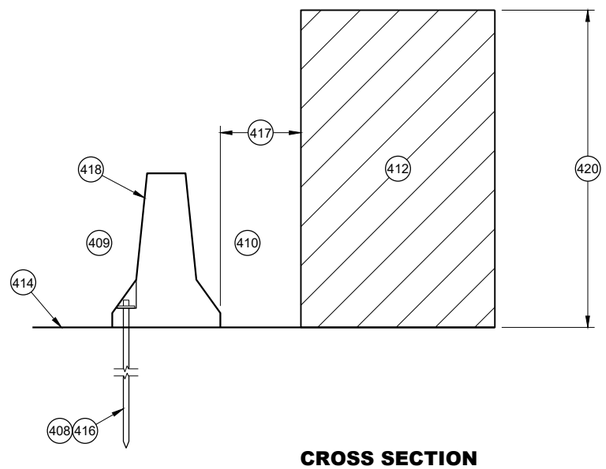
PROFILE VIEW

ANCHORED BARRIER NEAR EXPANSION JOINT (400)



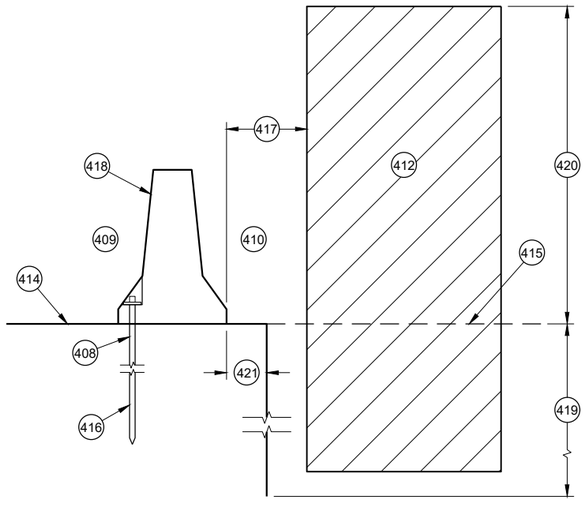
CROSS SECTION

FREE STANDING BARRIER



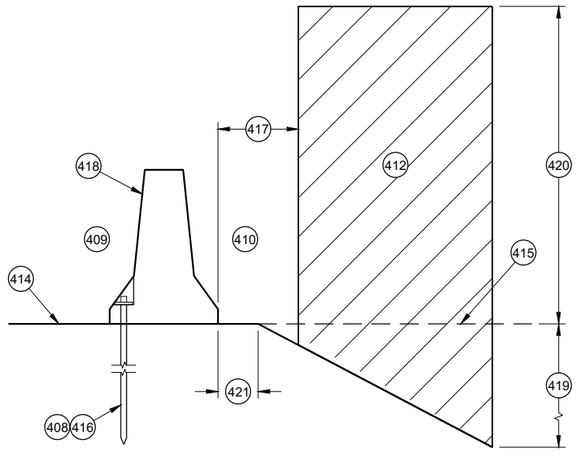
CROSS SECTION

ANCHORED BARRIER FOR OBJECTS ABOVE THE GRADE LINE AND NEAR THE BARRIER



CROSS SECTION

ANCHORED BARRIER NEAR VERTICAL DROP OFF



CROSS SECTION

ANCHORED BARRIER NEAR A SLOPE

GENERAL NOTES

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

(401) CONCRETE DECK

(402) CONCRETE DECK OR APPROACH SLAB.

(403) EXPANSION JOINT

(404) ADHESIVE ANCHOR SHOWN. SEE ANCHOR DETAILS.

(405) ANCHORED TEMPORARY BARRIER

(406) TRANSITION FROM ANCHORED TEMPORARY BARRIER TO FREE STANDING

(407) FREE STANDING BARRIER

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

(409) TRAFFIC SIDE

(410) NON-TRAFFIC SIDE

(411) ANCHOR LOCATION. SEE ANCHORING DETAILS.

(412) WORK AREA

(413) AREA FREE OF OBJECTS AND WORKERS

(414) GRADE LINE

(415) EXTENDED GRADE LINE

(416) ANCHORED TEMPORARY BARRIER. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR AN ASPHALT ANCHOR ROD DETAILS FOR MORE INFORMATION. ASPHALT ANCHOR ROD SHOWN.

(417) WHEN OBJECTS EXTEND ABOVE THE GRADE. A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT.

(418) OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR ALLOWED TO LEAN AGAINST THE BARRIER WITHOUT WRITTEN PERMISSION OF THE PROJECT ENGINEER.

(419) DEPTHS OF 3 FEET OR MORE.

(420) Y = 6.5'

(421) OFFSET FROM BACK OF BARRIER EDGE:

CONCRETE PAVEMENT	0.5'
ASPHALT	0.5'

(422) POSTED SPEED (MPH):

45 OR GREATER	4.0'
40 OR LOWER	2.0'

6

SDD 14B07-16d

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

6

SDD 14B07-16d

GENERAL NOTES

500 EXISTING RIGID BARRIERS (VARIES)

501 TEMPORARY BARRIER

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

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

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

505 TRAFFIC TRAVELS FROM PERMANENT BARRIER TO TEMPORARY BARRIER.

506 TRAFFIC TRAVELS FROM TEMPORARY BARRIER TO PERMANENT BARRIER.

507 VERTICAL BARRIER

508 SAFETY SHAPE BARRIER

509 SINGLE SLOPE BARRIER

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

511 BENT THRIE BEAM TO FIT.

512 THRIE BEAM PIECES ARE OFFSET 15 ¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.

513 TWO (2) P1, P2 AND P3 ARE REQUIRED

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

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

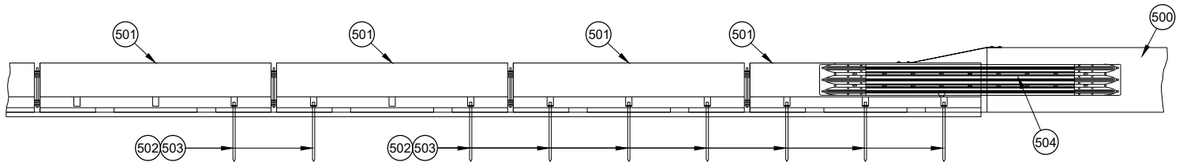
516 CUT WOOD BLOCK TO FIT.

517 SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL ASSEMBLY.

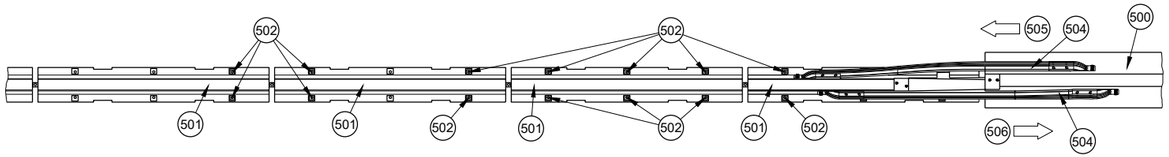
518 CAP ASSEMBLY

519 4" MAX. GAP BETWEEN TEMPORARY BARRIER AND RIGID BARRIER.

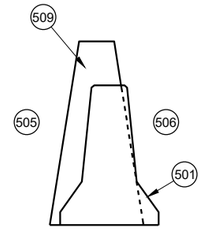
520 ALL TWELVE SPLICE HOLES REQUIRE M1 AND M2



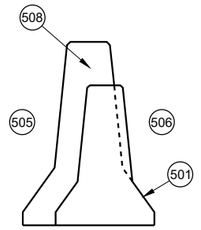
PROFILE VIEW



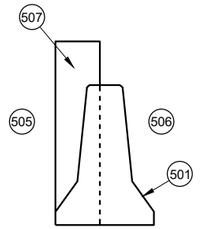
PLAN VIEW



CROSS SECTION TEMPORARY BARRIER PLACEMENT SINGLE SLOPE

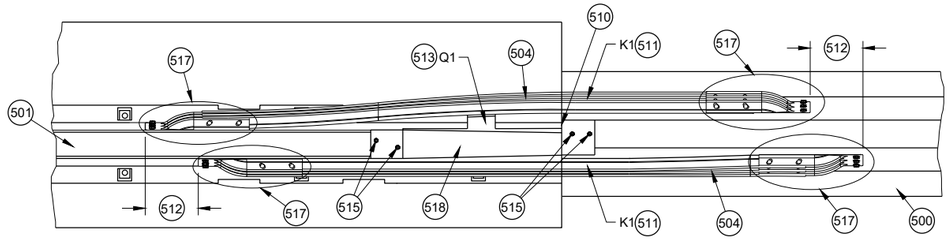


CROSS SECTION TEMPORARY BARRIER PLACEMENT SAFETY SHAPE

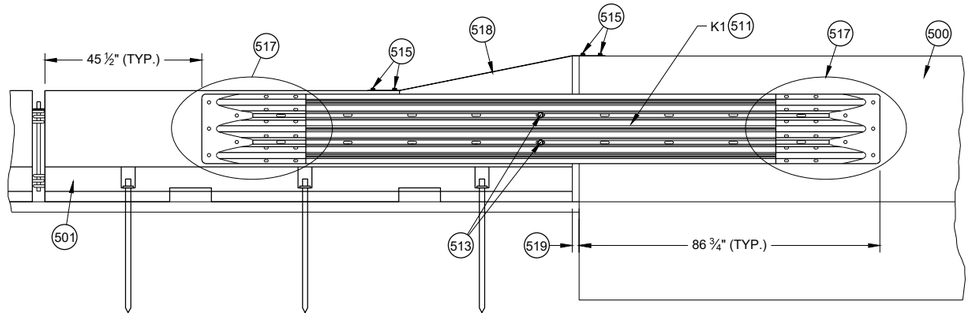


CROSS SECTION TEMPORARY BARRIER PLACEMENT VERTICAL

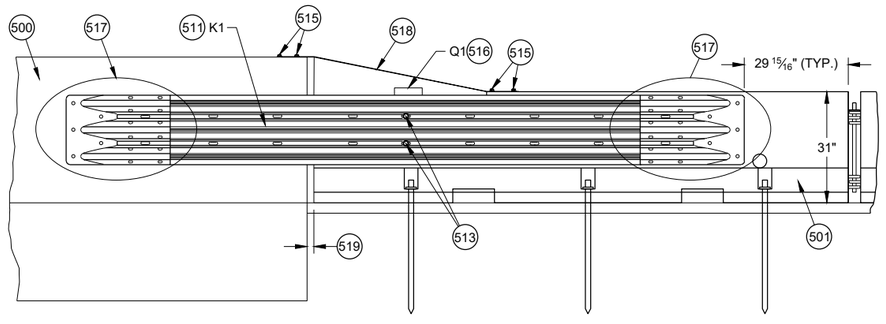
PLAN VIEW
TRANSITION TO RIGID BARRIER



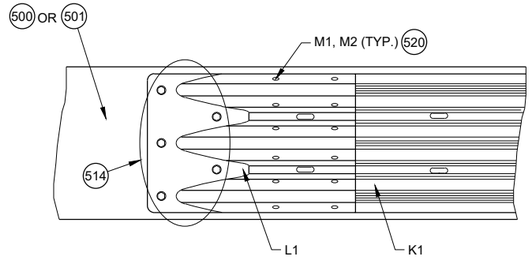
PLAN DETAIL VIEW
TRANSITION TO RIGID BARRIER



FRONT DETAIL VIEW
TRANSITION TO RIGID BARRIER

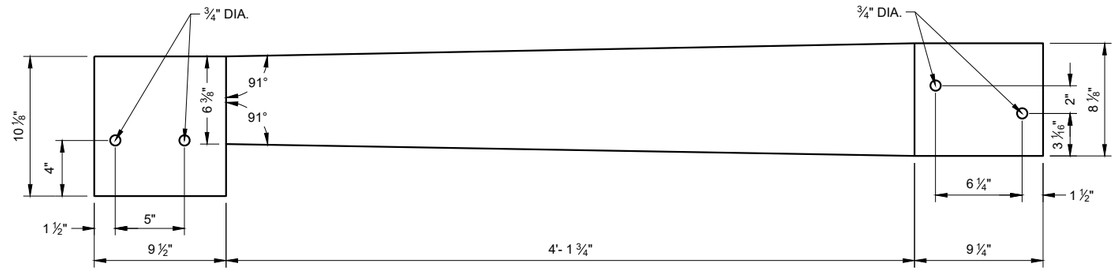


BACK DETAIL VIEW
TRANSITION TO RIGID BARRIER



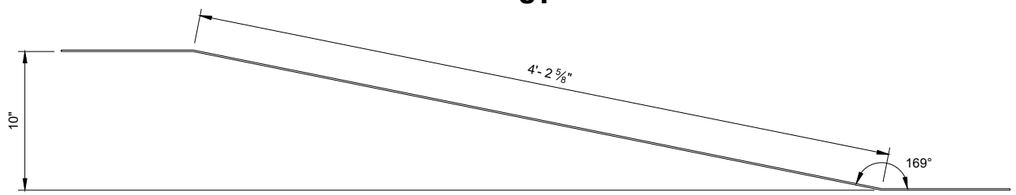
517 DETAIL PLAN VIEW
THRIE BEAM RAIL TERMINAL CONNECTOR ASSEMBLY

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"



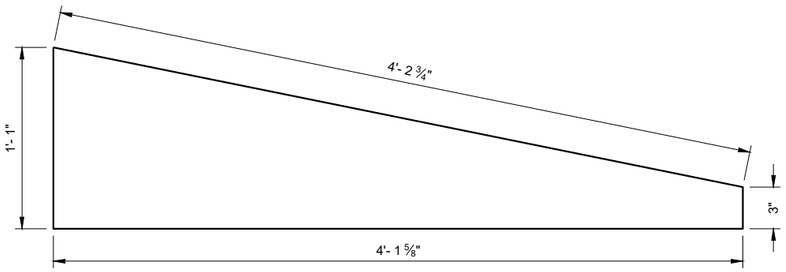
TOP VIEW

S1



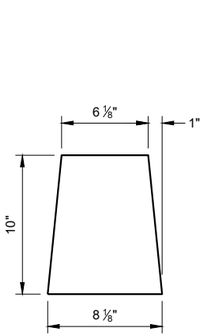
ELEVATION VIEW

S1



SIDE VIEW

S3



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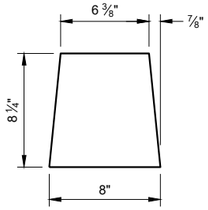

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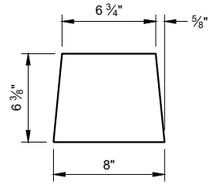

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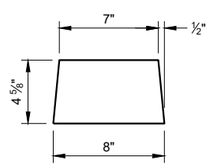

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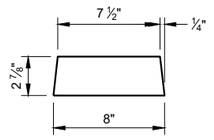
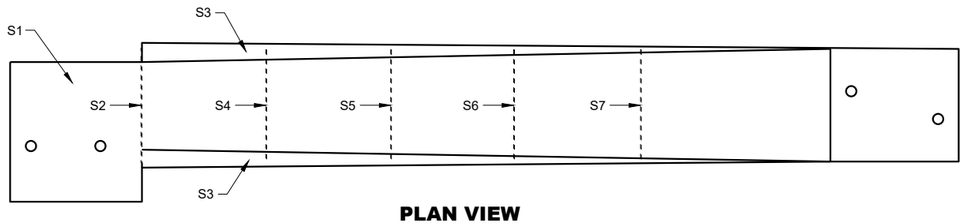
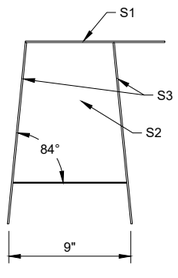


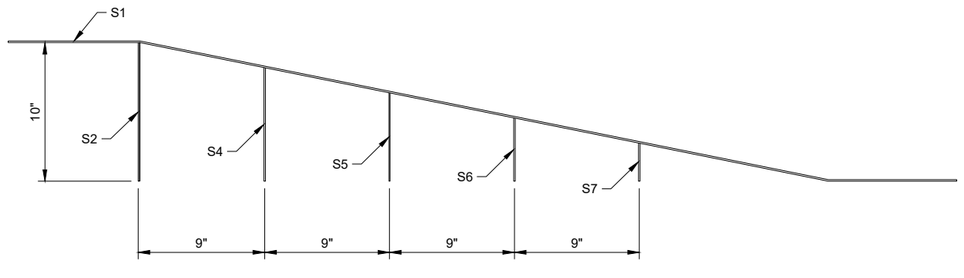
S7



PLAN VIEW



BACK VIEW



SIDE VIEW (600)

42" TOP CAP ASSEMBLY

GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THREE SIDES

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

(600) SIDE PLATES (S3) NOT SHOWN FOR CLARITY.

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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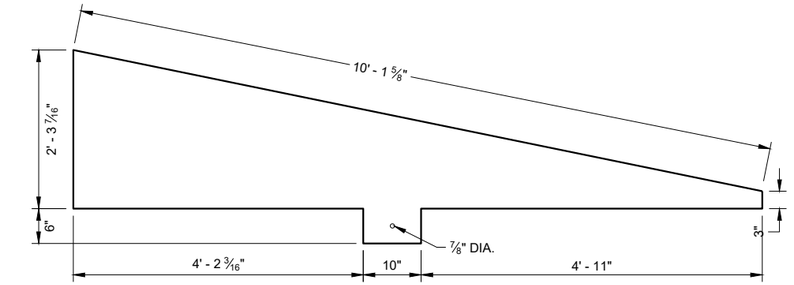
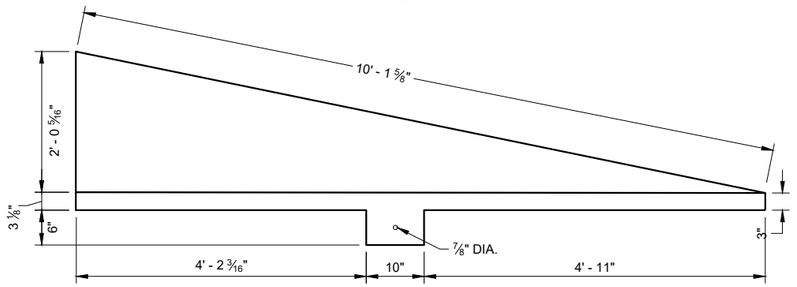


SIDE VIEW
T4

END VIEW



SIDE VIEW
T3

END VIEW

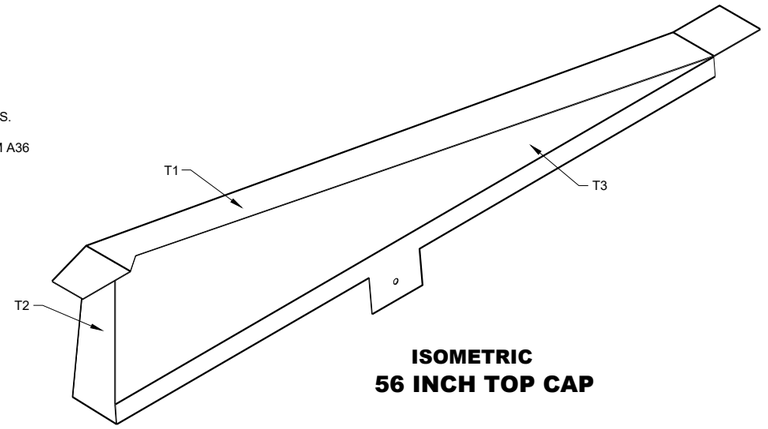
GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THRIE SIDES

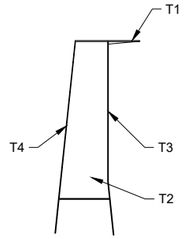
STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

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

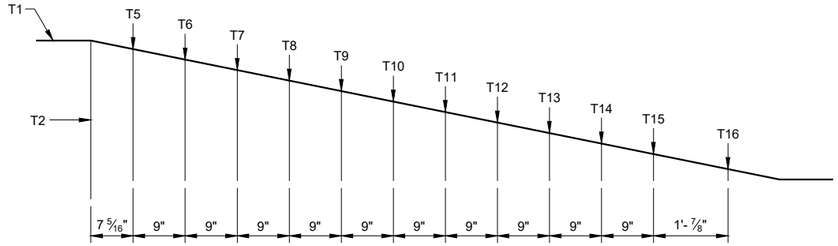
(700) SIDE PLATES (T3 AND T4) NOT SHOWN FOR CLARITY.



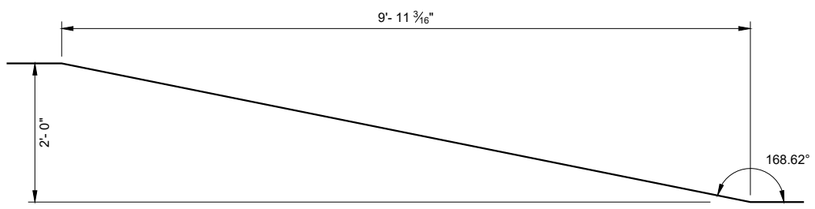
ISOMETRIC
56 INCH TOP CAP



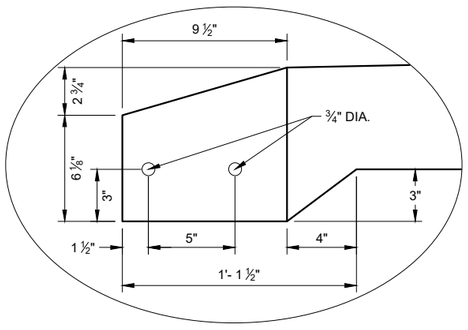
END VIEW
56 INCH TOP CAP



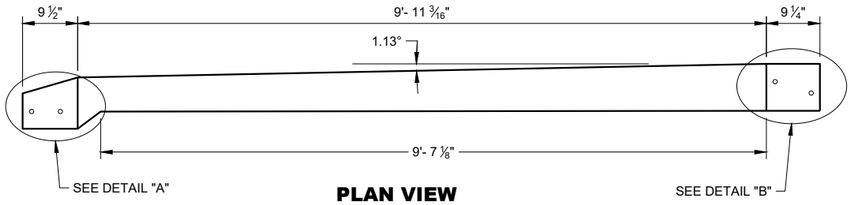
SIDE VIEW (700)
56 INCH TOP CAP



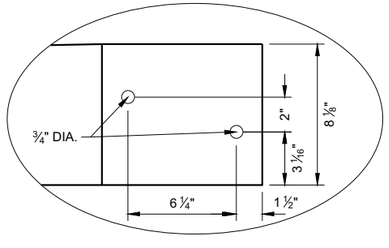
SIDE VIEW
TOP PLATE T1



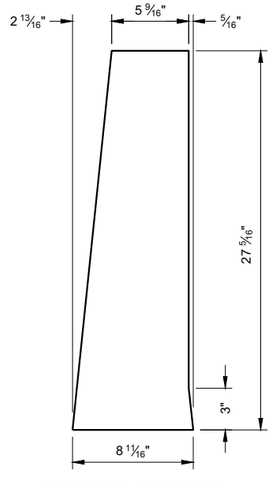
DETAIL "A"



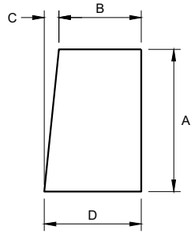
PLAN VIEW
TOP PLATE T1



DETAIL "B"



END PLATE T2



GUSSET PLATES
T5 - T16

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

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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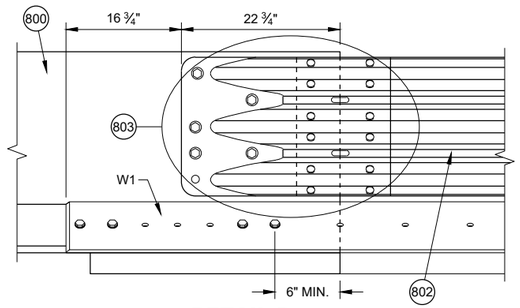
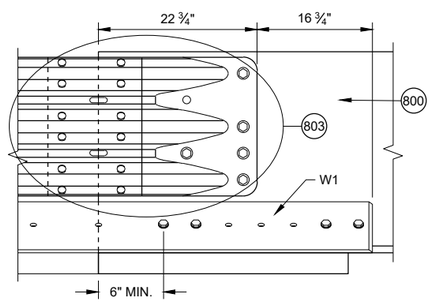


DETAIL D



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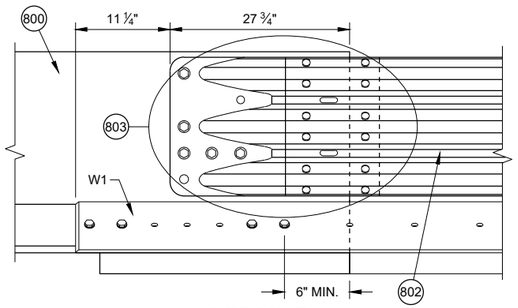

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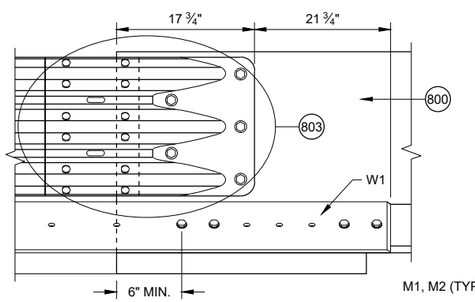
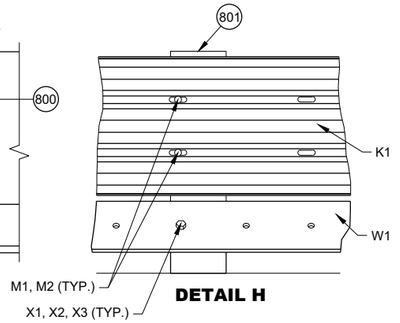


DETAIL G



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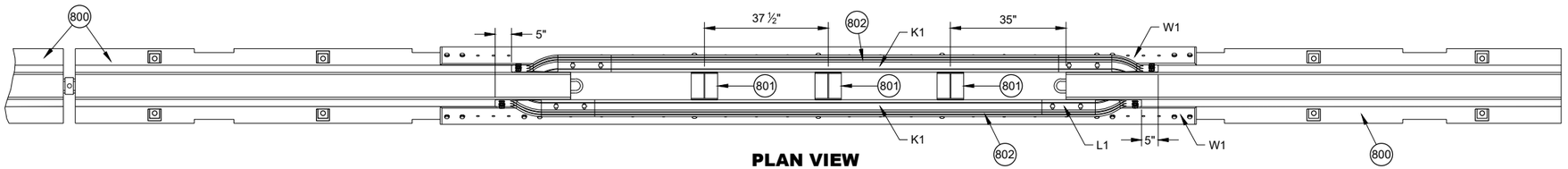


PLAN VIEW

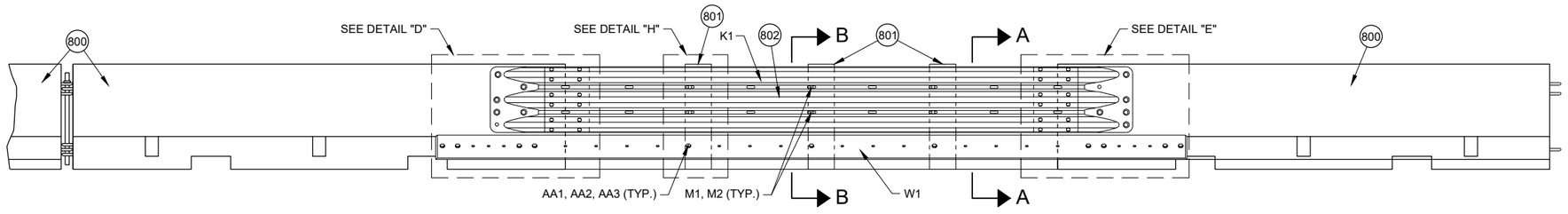
GENERAL NOTES

(800) FREE STANDING TEMPORARY BARRIER

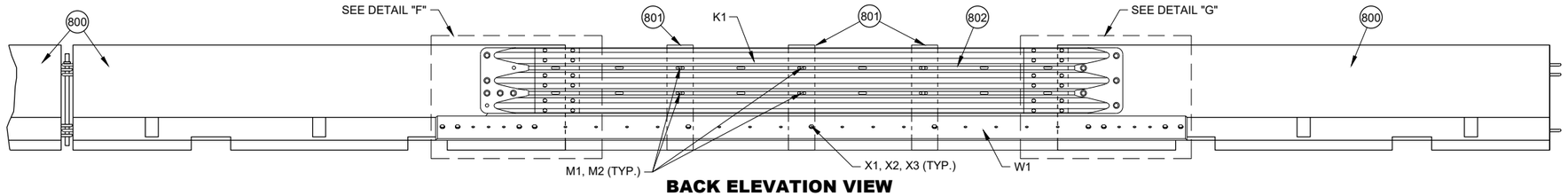
(801) GAP STIFFENER ASSEMBLY

(802) THRIE BEAMS ARE NESTED ON BOTH SIDES OF THE TEMPORARY BARRIER.

(803) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL



FRONT ELEVATION VIEW



BACK ELEVATION VIEW

PORTABLE CONCRETE BARRIER GAP THRIE BEAM COVER

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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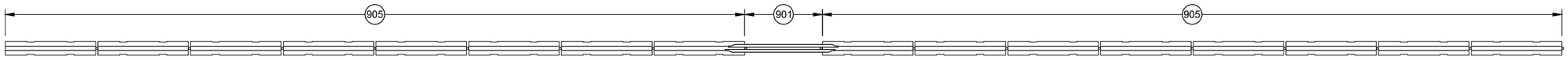
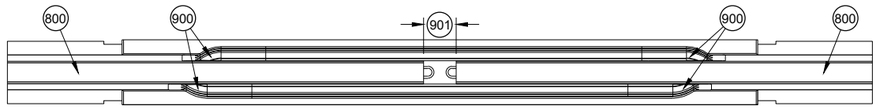
SDD 14B07-16h



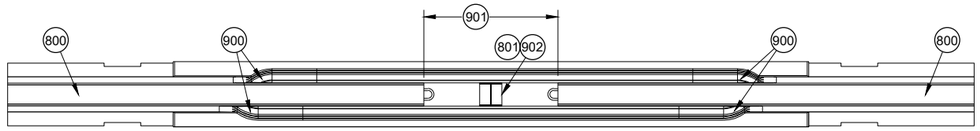
PLAN VIEW
GAP WITHIN SPACING



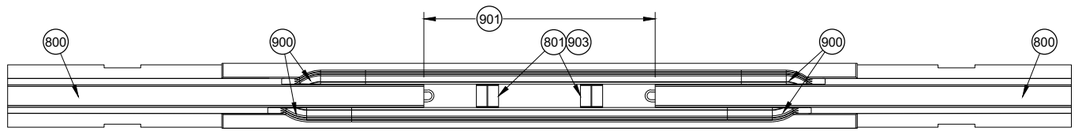
PLAN VIEW
TEMPORARY BARRIER GAP OVER 4" TO 1' MAX. (904)

GENERAL NOTES

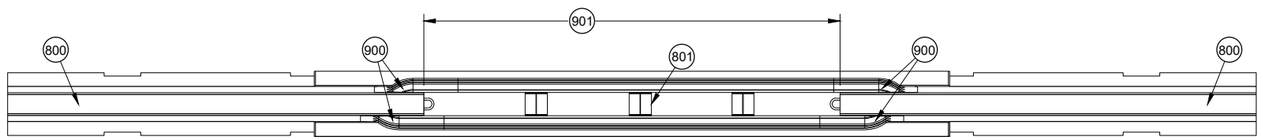
(900) SEE OTHER DETAILS FOR TEMPORARY GAP HARDWARE (TYP.)
(901) TEMPORARY BARRIER GAP
(902) GAP STIFFENER ASSEMBLY CENTERED IN THE GAP.
(903) GAP STIFFENER ASSEMBLY IS OFFSET 18 ¾" FROM CENTER
(904) MINIMUM NUMBER OF GAP STIFFENERS SHOWN FOR THE GAP RANGE SHOWN.
(905) MINIMUM OF 8 CONTINUOUS FREE STANDING TEMPORARY BARRIERS



PLAN VIEW
TEMPORARY BARRIER GAP OVER 1' TO 4' MAX. (904)



PLAN VIEW
TEMPORARY BARRIER GAP OVER 4' TO 7' MAX. (904)



PLAN VIEW
TEMPORARY BARRIER GAP OVER 7' TO 12.5' MAX. (904)

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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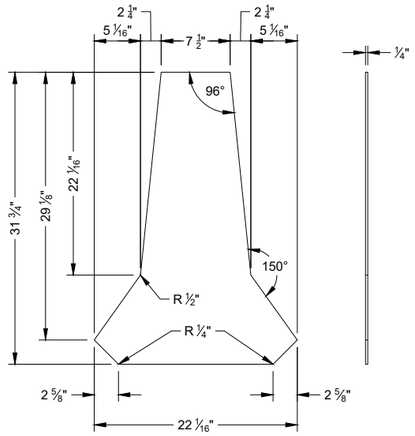
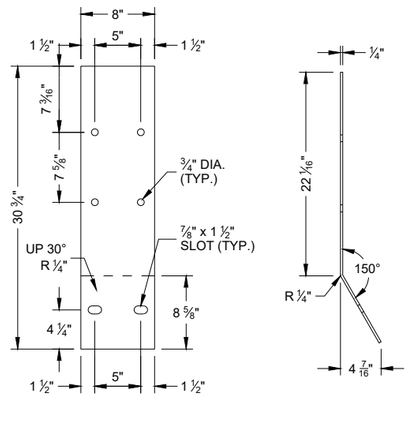
SDD 14B07-16i



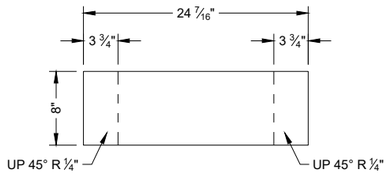
PROFILE VIEW SIDE VIEW

STIFFENER ASSEMBLY CENTER PANEL U1

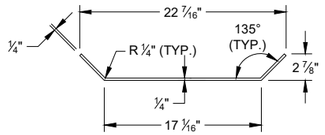


FLAT PATTERN SIDE VIEW

STIFFENER ASSEMBLY SIDE PANEL U2

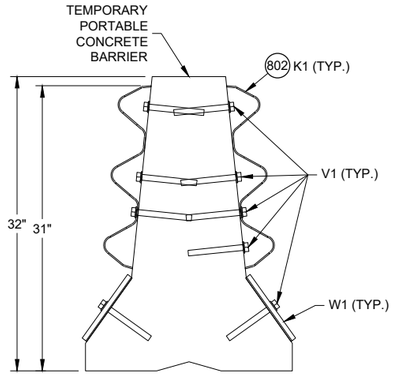


FLAT PATTERN

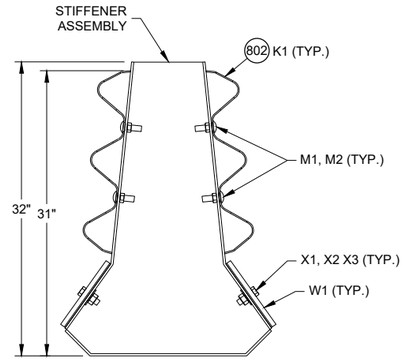


PROFILE VIEW

STIFFENER ASSEMBLY BOTTOM PANEL U3

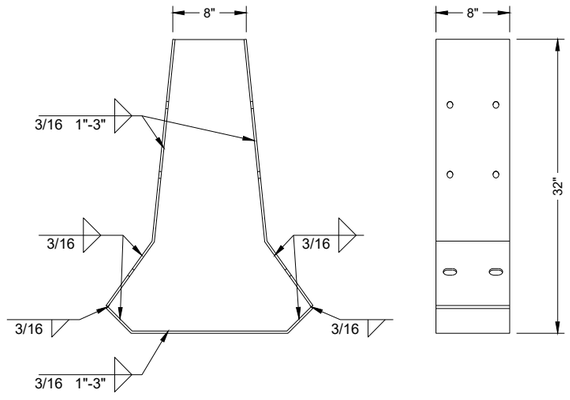


SECTION A - A



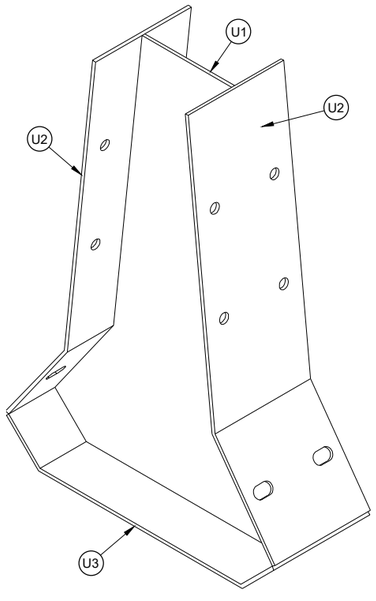
SECTION B - B

PLAN VIEW



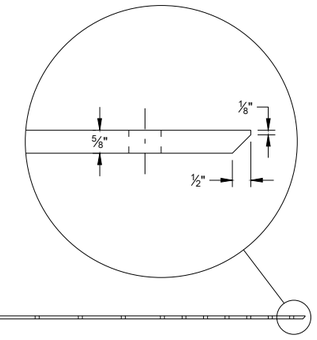
PROFILE VIEW

SIDE VIEW

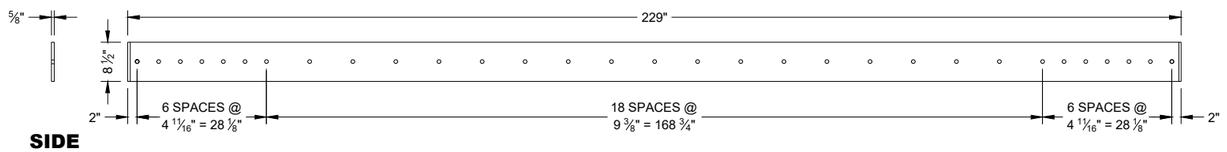


ISOMETRIC

GAP STIFFENER ASSEMBLY



PLAN VIEW

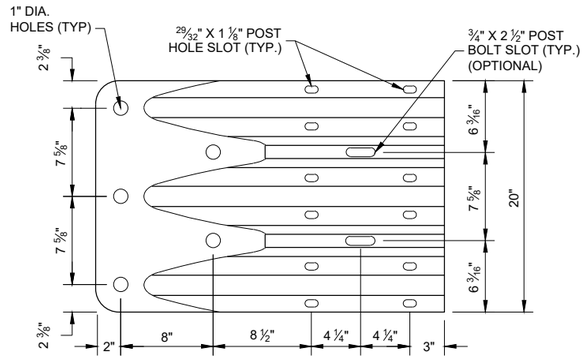


SIDE VIEW

ELEVATION VIEW

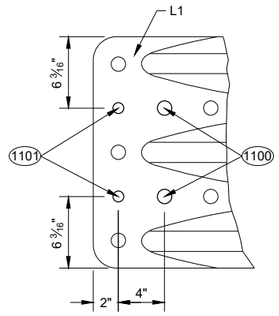
W1 TOE PLATE

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"



ELEVATION VIEW

THRIE BEAM TERMINAL CONNECTOR



ELEVATION VIEW

ADDITIONAL THRIE BEAM (1102) TERMINAL CONNECTOR HOLE DETAIL

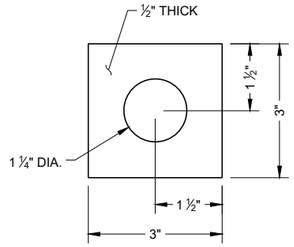


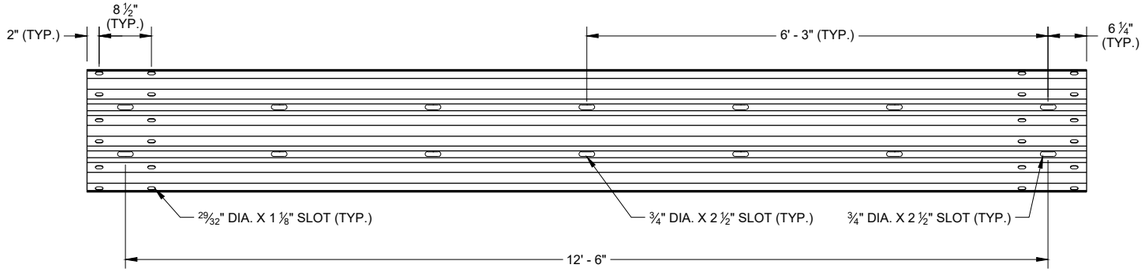
PLATE WASHER DETAIL G2, H3

GENERAL NOTES

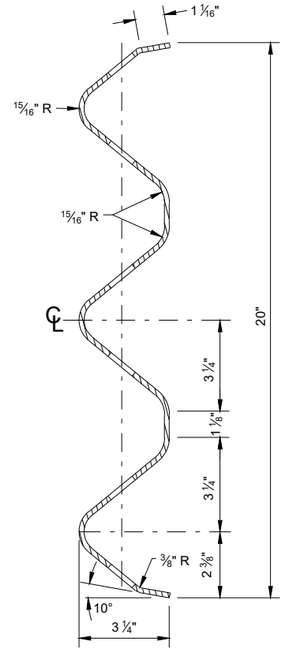
(1100) 1" DIA. HOLE

(1101) 3/4" DIA. HOLE

(1102) PROVIDE HOLES IN THRIE BEAM TERMINAL CONNECTOR TO LIMIT STEEL REINFORCEMENT OR LOOP BAR CONFLICT. CONTRACTOR MAY FIELD DRILL ADDITIONAL HOLE OR PROVIDE THRIE BEAM TERMINAL CONNECTOR WITH ADDITIONAL HOLES FROM SUPPLIER.



SLOTTED THRIE BEAM RAIL K1



SECTION THROUGH BEAM K1

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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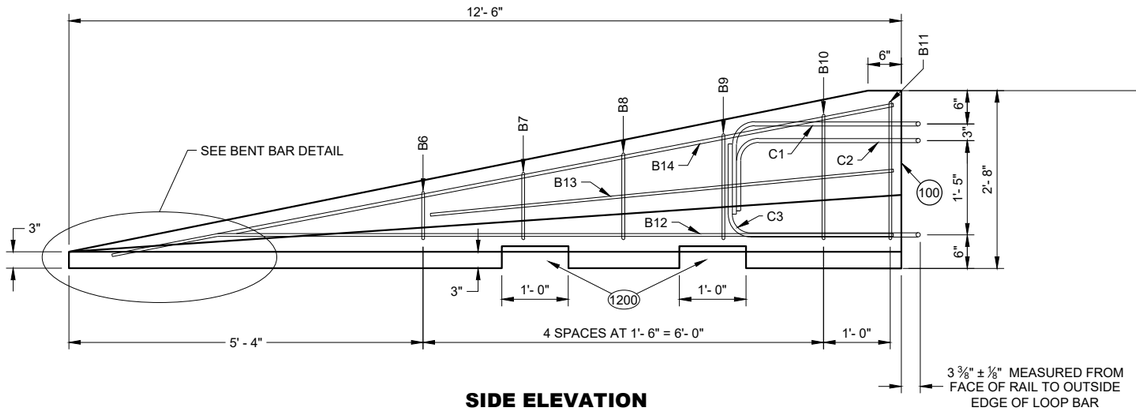
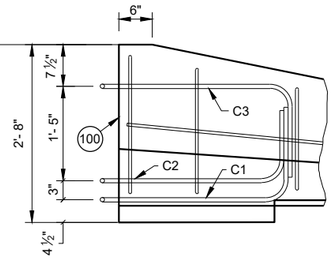


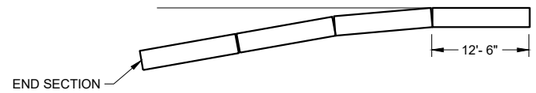
SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



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

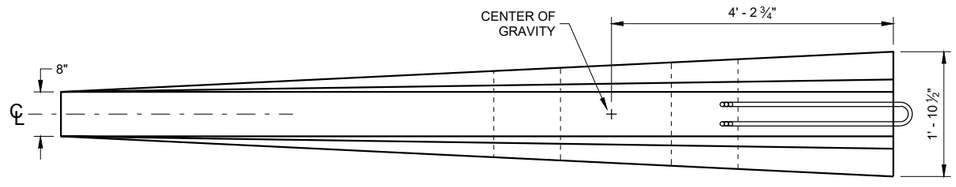
GENERAL NOTES

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

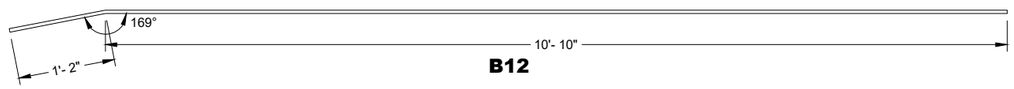


FLARE AT BARRIER END

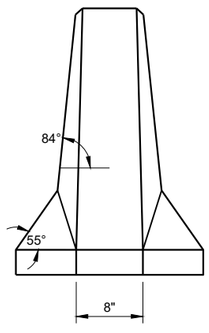
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1



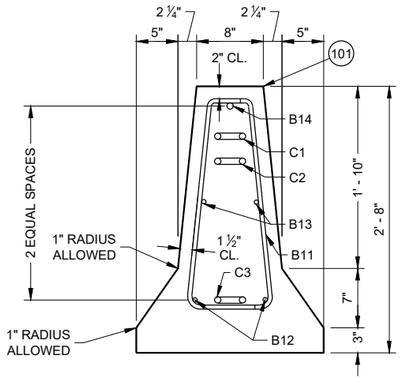
PLAN VIEW



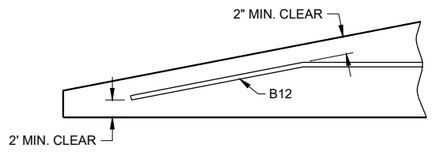
B12



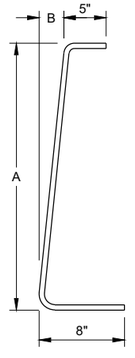
FRONT ELEVATION



END SECTION



BENT BAR DETAIL



BAR	A	B
B6	10"	1"
B7	1'- 1"	1 ¼"
B8	1'- 5"	1 ⅝"
B9	1'- 8"	1 ⅞"
B10	2'- 0 ½"	2 ⅜"
B11	2'- 3"	2 ¾"

B BARS
2 OF EACH SIZE REQUIRED FOR STIRRUP ASSEMBLY

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B07-16I

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	PRECAST TEMPORARY BARRIER - CONCRETE	MIN. = f'c 5000 PSI	
B1	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B2	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-2"
B3	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B4	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 6'-0"
B5	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#6 REBAR, LENGTH 2'-11"
B6	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 1'-11"
B7	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-2"
B8	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-6"
B9	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-9"
B10	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-2"
B11	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-4"
B12	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-0"
B13	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 7'-9"
B14	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 11'-9"
C1	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C2	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C3	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
D1	CONNECTION PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ¼" DIA.
D2	CONNECTION PIN - TOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G1	BOLT THROUGH ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A OR SAE J429 GRADE 2 UNC	1 ⅛" DIA.
G2	BOLT THROUGH ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G3	BOLT THROUGH ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
H1	ADHESIVE ANCHOR - ADHESIVE	ICC-ES-AC308 5 ¼" EMBEDMENT WITH A MIN. BOND STRENGTH OF 1,650 PSI. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
H2	ADHESIVE ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A / SAE J429 GRADE 2 UNC	1 ⅛" DIA.
H3	ADHESIVE ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
H4	ADHESIVE ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
J1	ASPHALT ANCHOR PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ½" DIA.
J2	ASPHALT ANCHOR PIN - STOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
K1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE
L1	THRIE BEAM RAIL - TERMINAL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE

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

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SDD 14B07-16m

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B07-16m

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

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

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

6

SDD 14B07-16n

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

6

SDD 14B07-16n

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

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

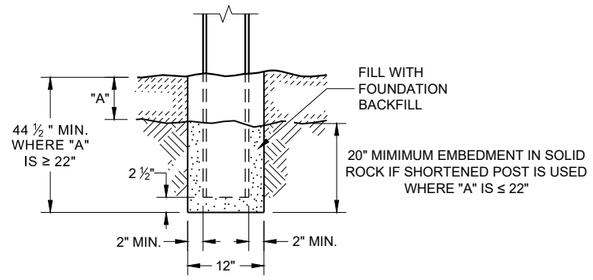
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

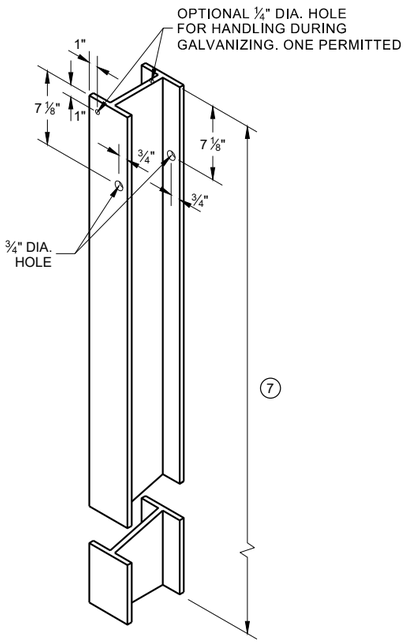
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

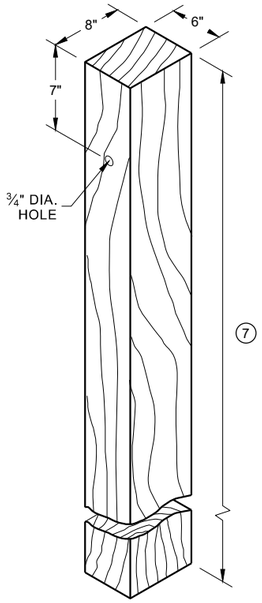
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



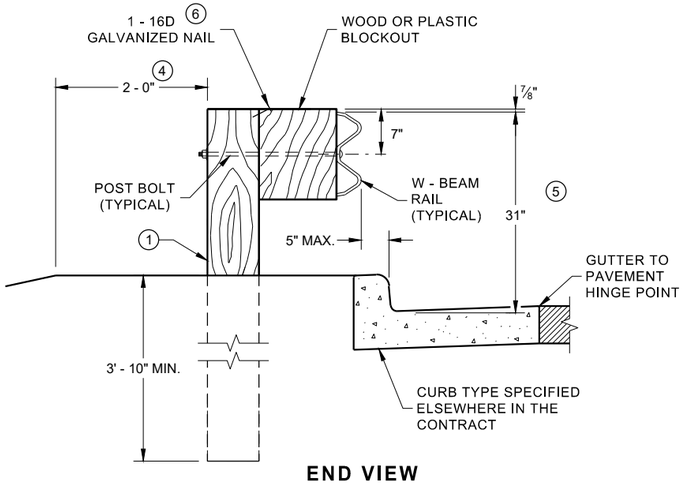
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



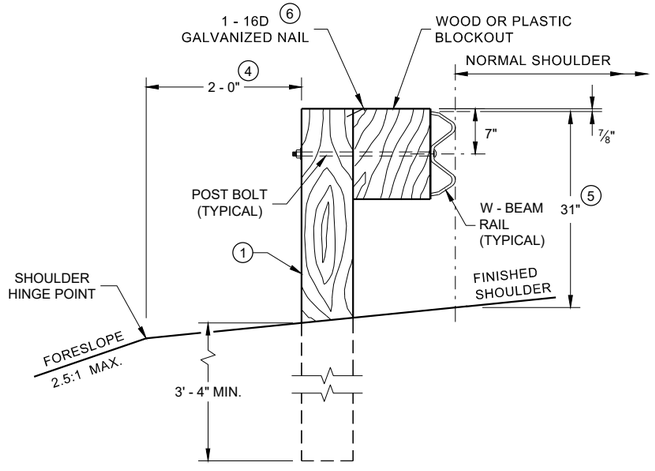
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



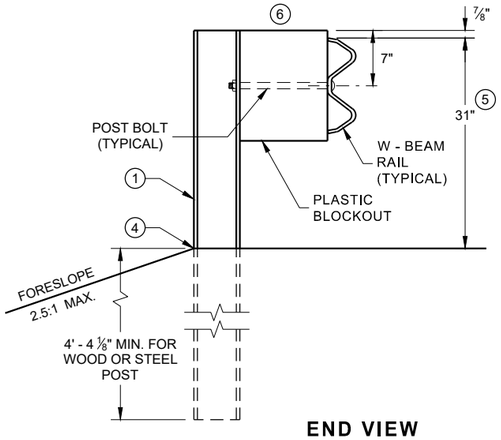
WOOD POST (6" X 8") NOMINAL (1)



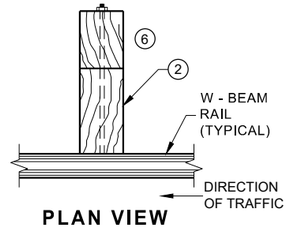
END VIEW
LOCATED ALONG A CURBED ROADWAY



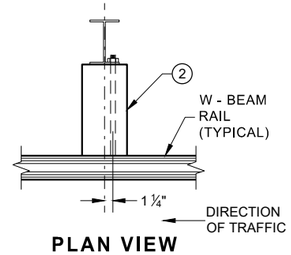
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



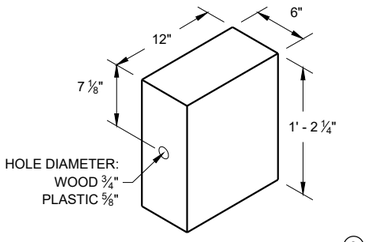
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B42 - 07a

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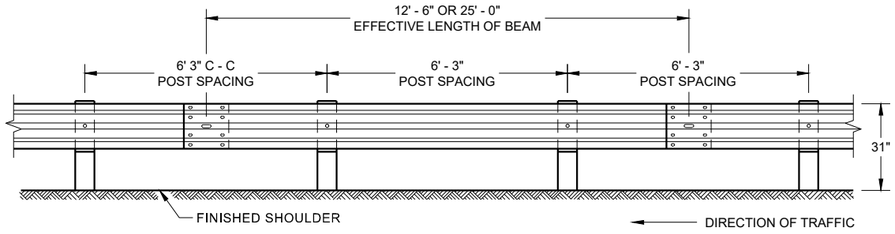
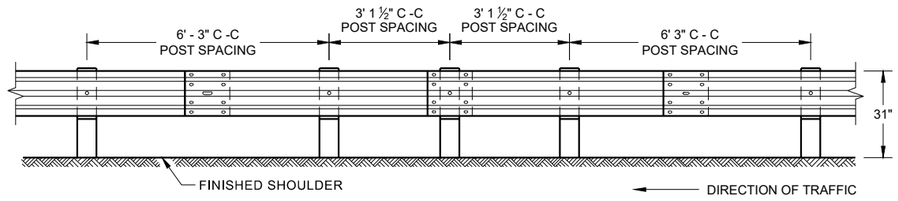
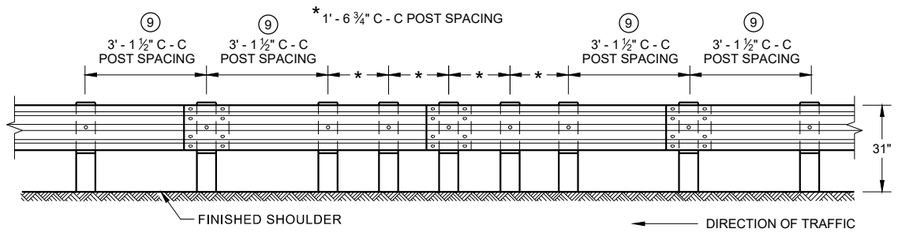


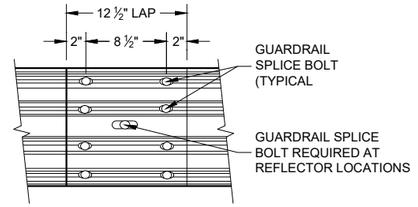
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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



FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE

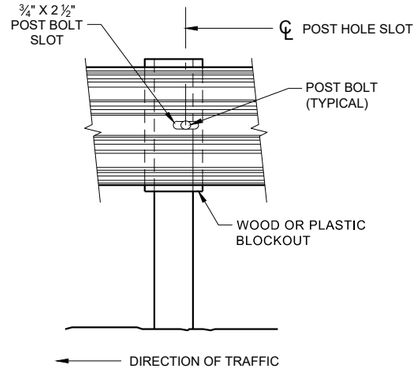
GENERAL NOTES

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

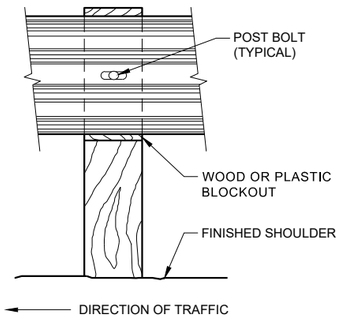
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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

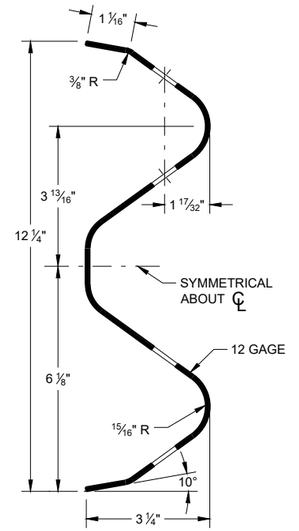
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



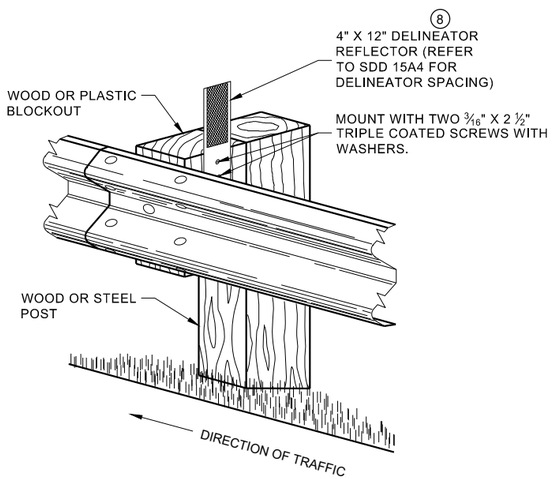
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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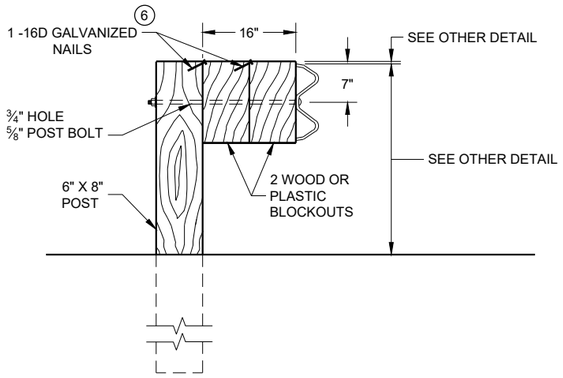
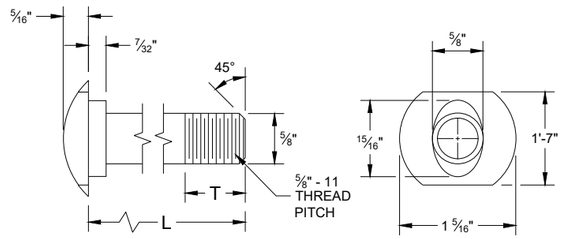


DETAIL FOR 16" BLOCKOUT DEPTH

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

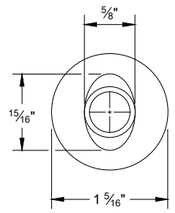
NOTE:

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

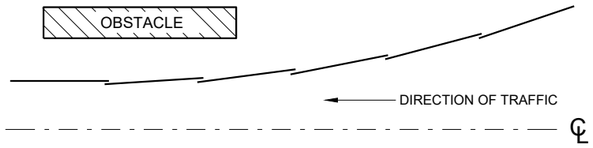


POST BOLT TABLE

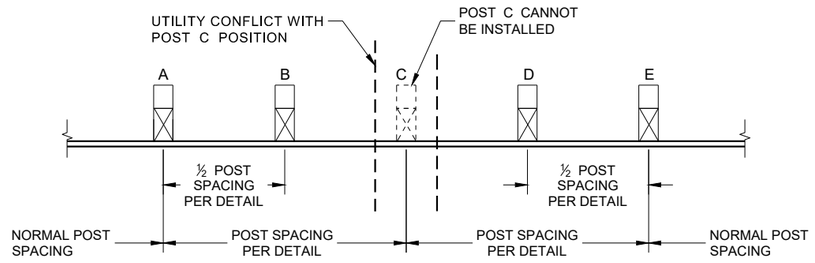
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



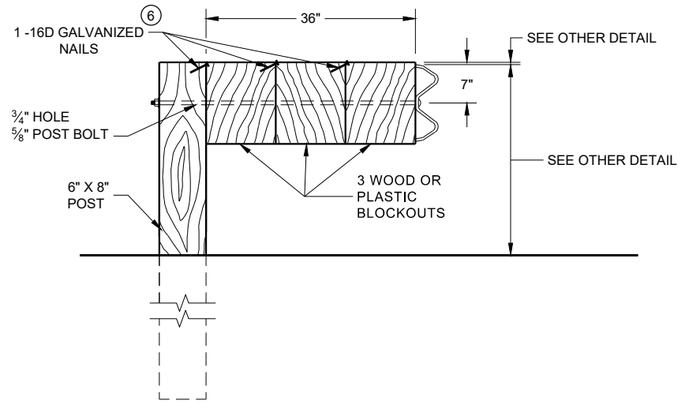
ALTERNATE BOLT HEAD



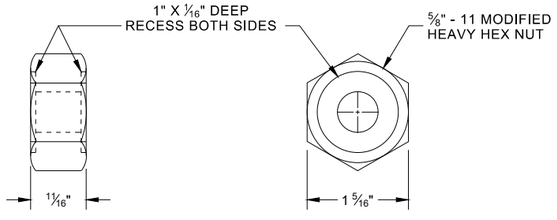
PLAN VIEW
BEAM LAPPING DETAIL



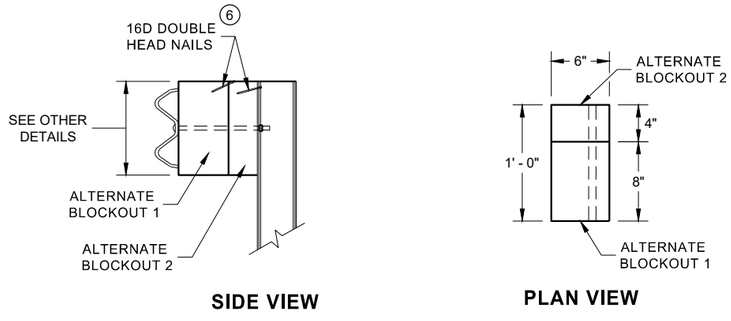
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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

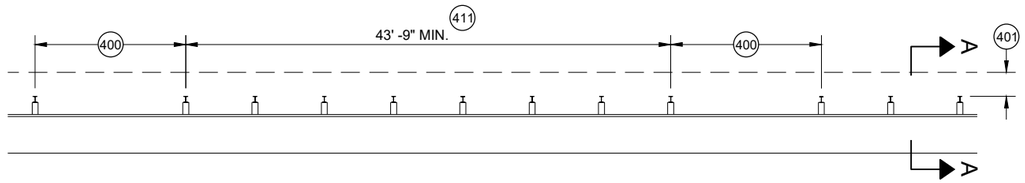
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

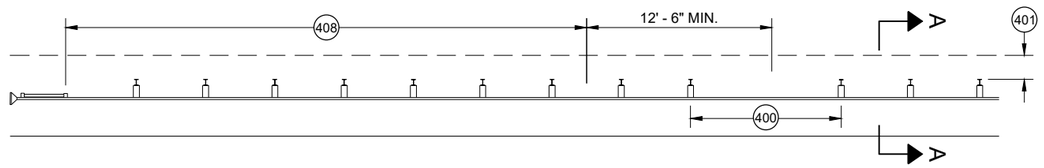
6

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

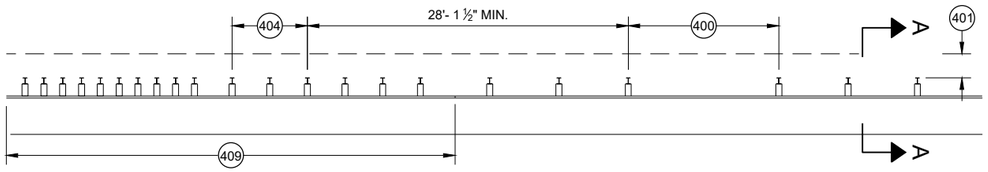
SDD 14B42 - 07c



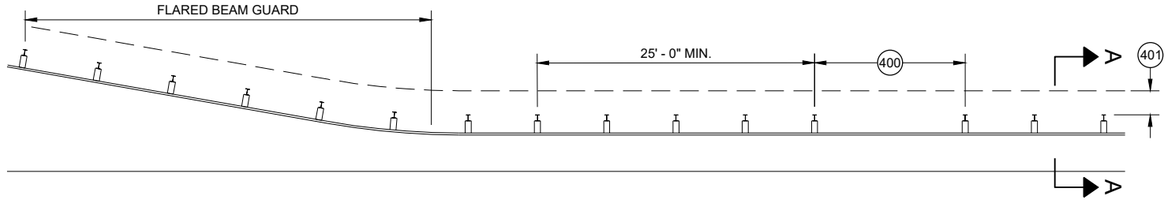
MISSING POST IN MGS GUARDRAIL



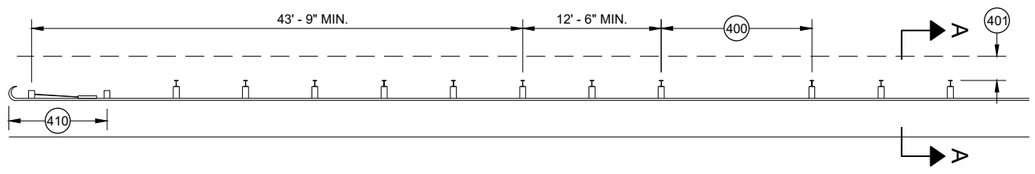
MISSING POST IN MGS GUARDRAIL NEAR EAT



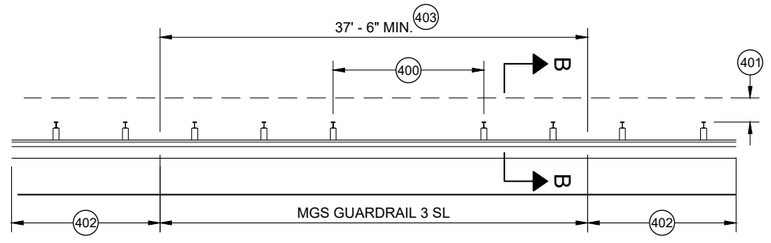
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

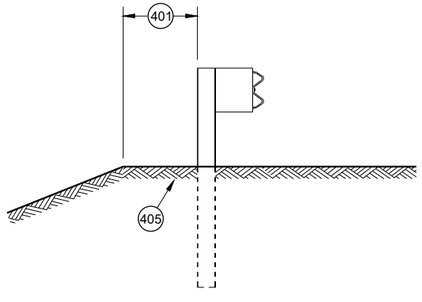


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

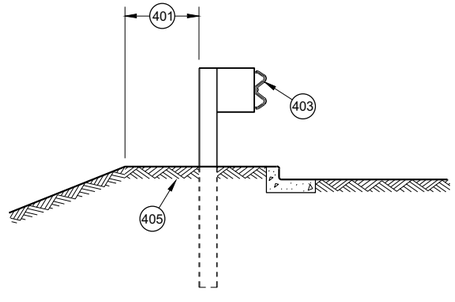


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

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



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR
FHWA

6

SDD 14B42 - 07d

GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

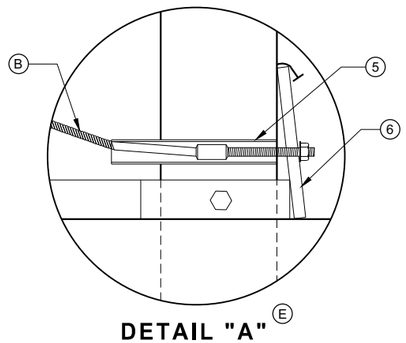
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

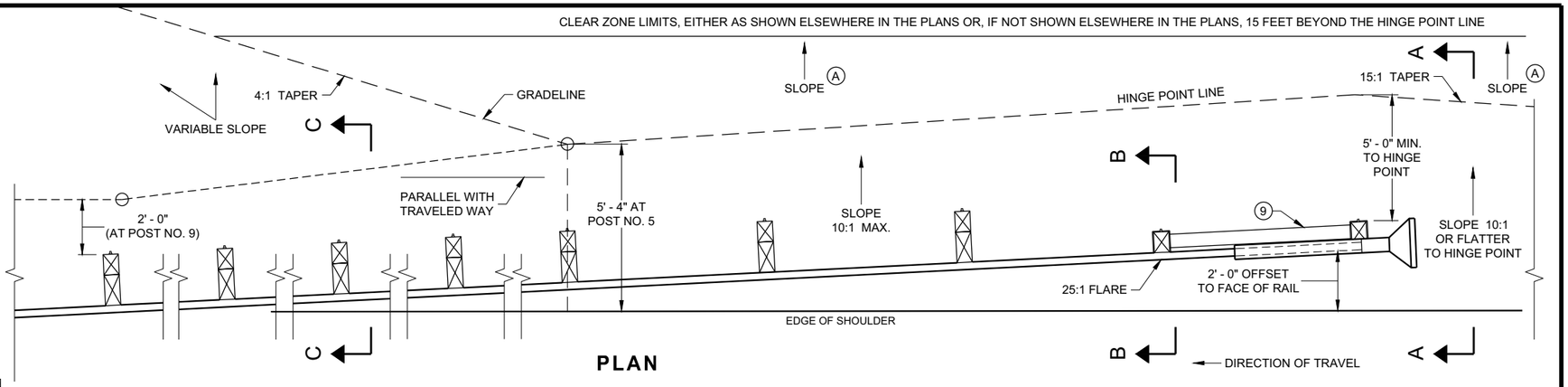
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

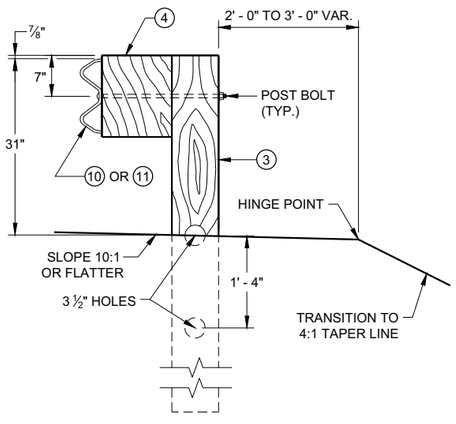
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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

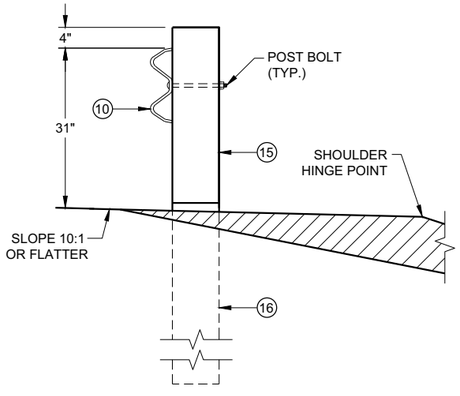


DETAIL "A" (E)

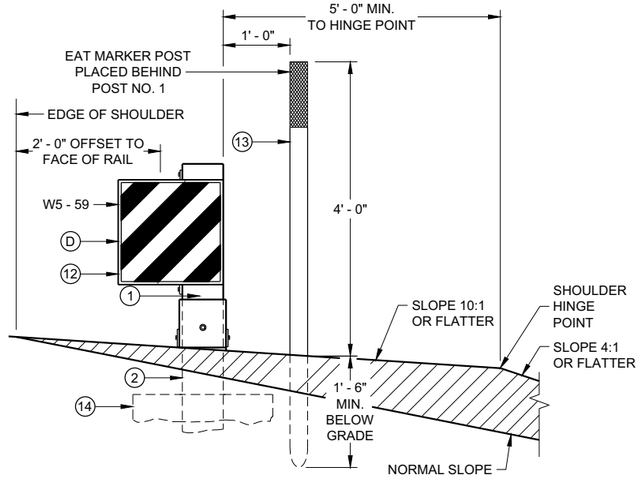




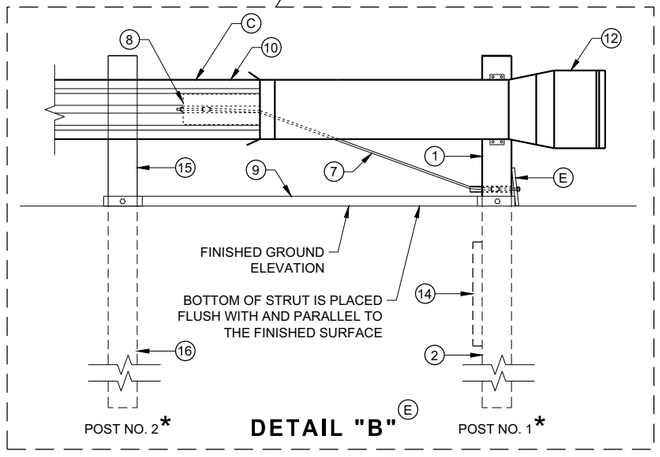
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

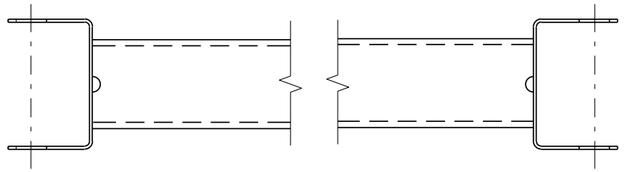
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

SDD 14B44 - 04a

6

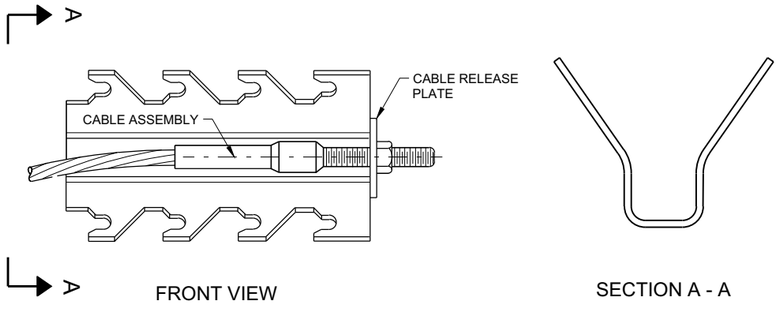
6



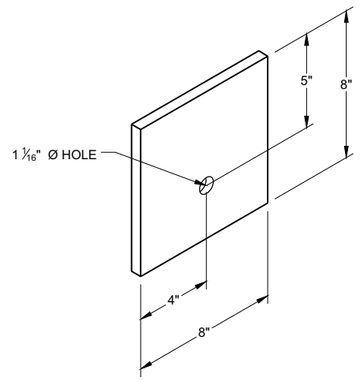
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

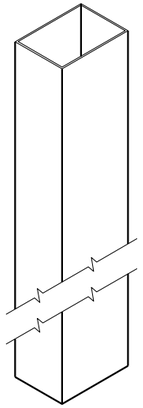
6

SDD 14B44 - 04b

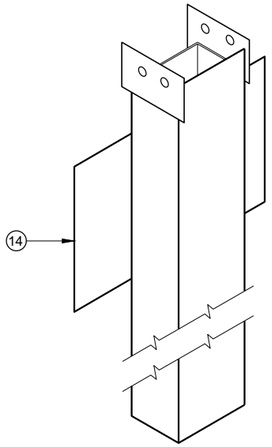
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

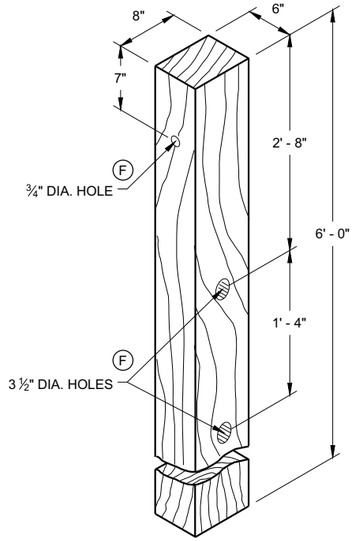
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



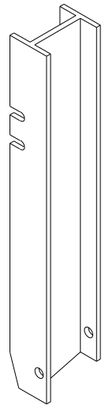
UPPER POST NO. 1 (1) (E)



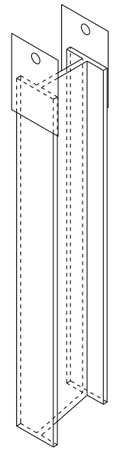
LOWER POST NO. 1 (2) (E)



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



UPPER POST NO. 2 (15) (E)



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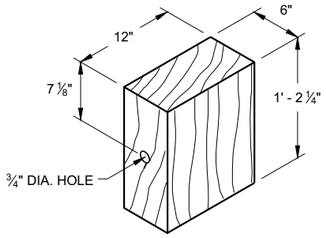
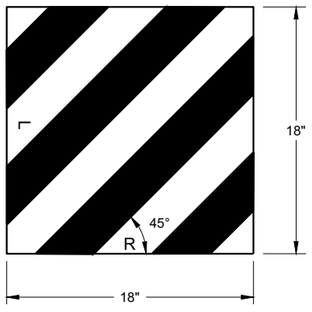
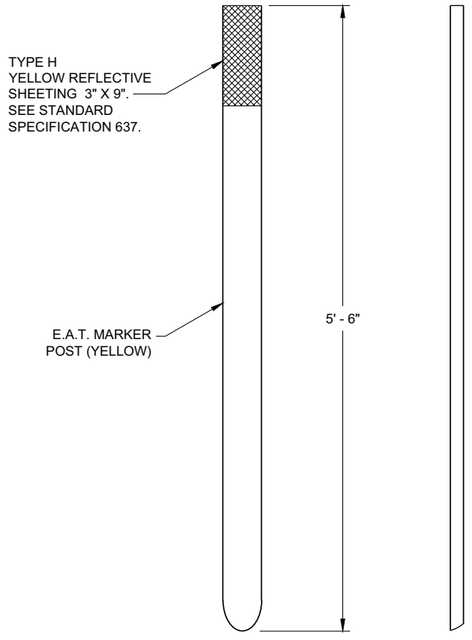


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



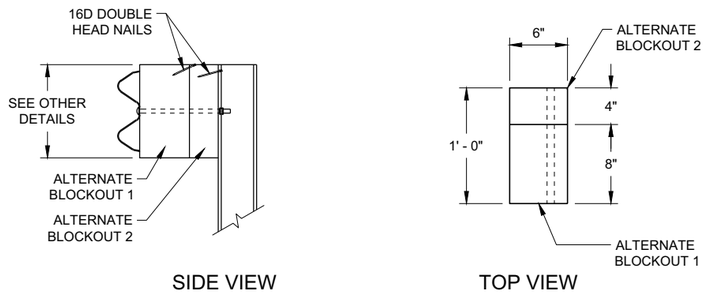
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

6

SDD 14B44 - 04c

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

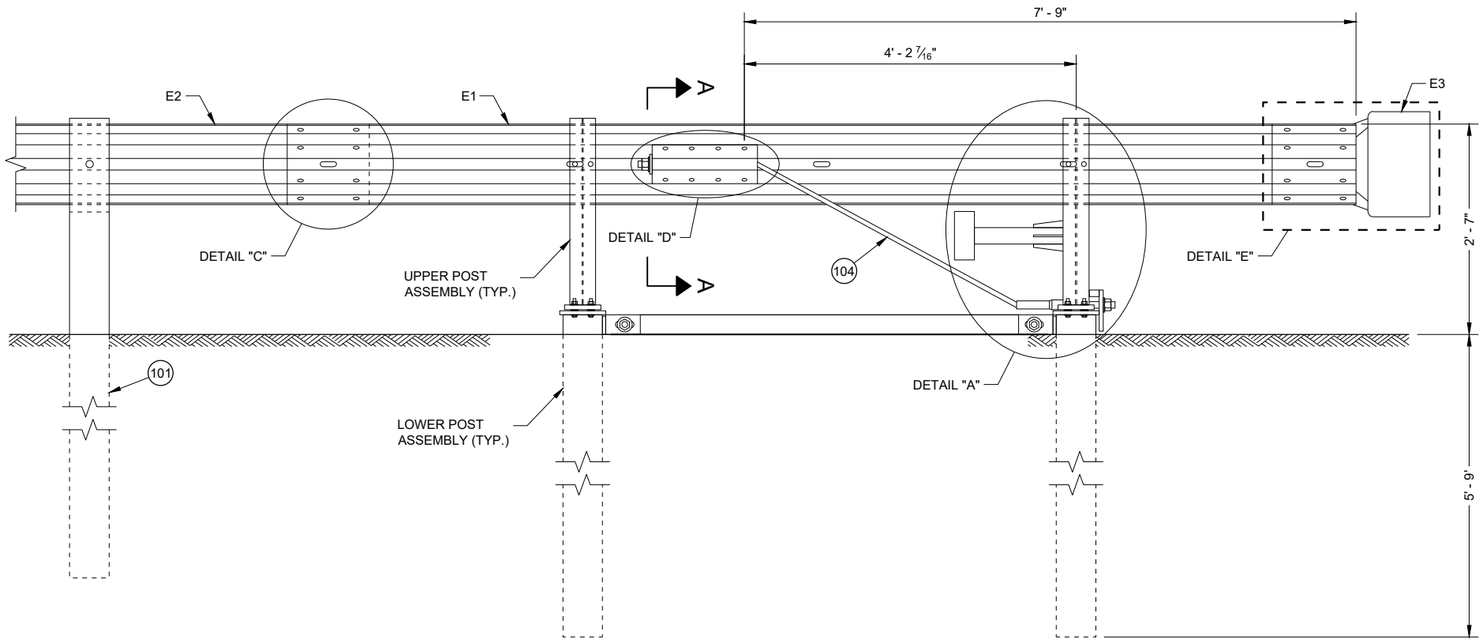
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

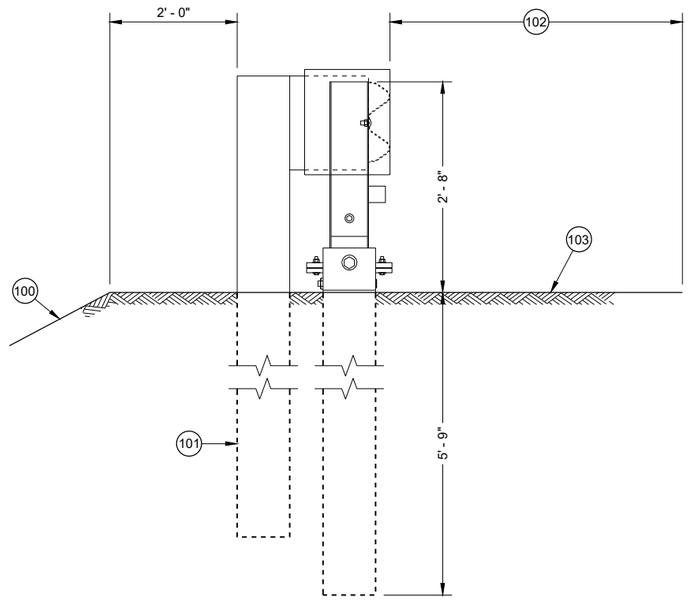
FHWA

6

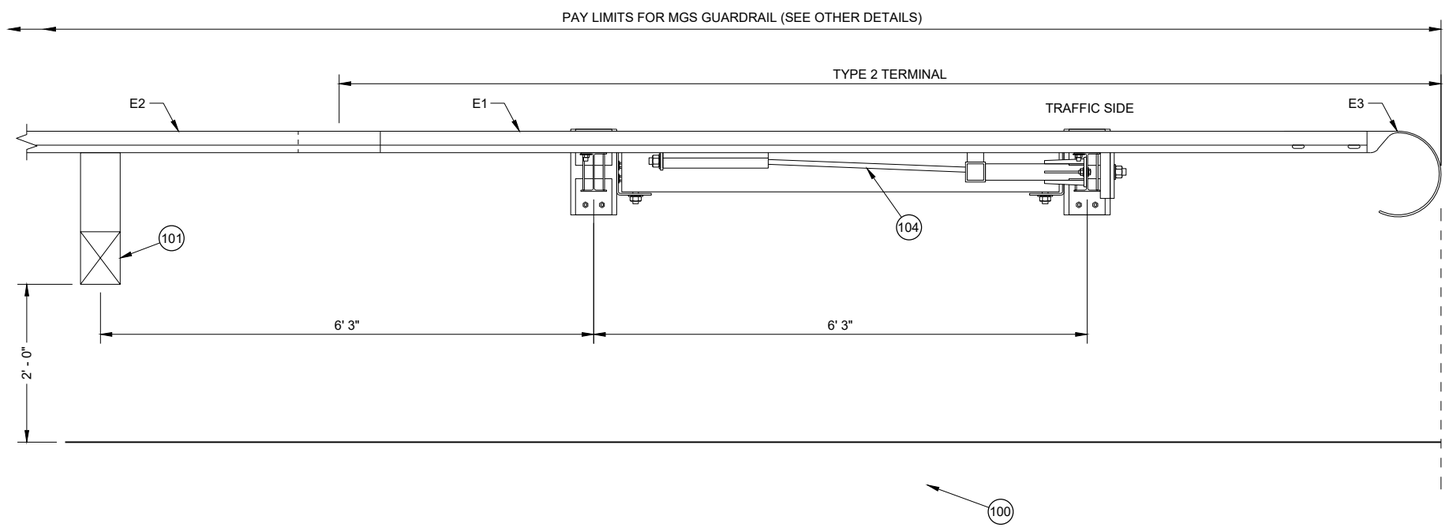
SDD 14B44 - 04c



BACK VIEW
TYPE 2 TERMINAL



SIDE VIEW
TYPE 2 TERMINAL



TOP VIEW
TYPE 2 TERMINAL

GENERAL NOTES

(100) MAXIMUM SLOPE IS 2.5:1.

(101) SEE SDD 14B42 FOR MORE INFORMATION.

(102) SHOULDER

(103) MAXIMUM SLOPE IS 10:1.

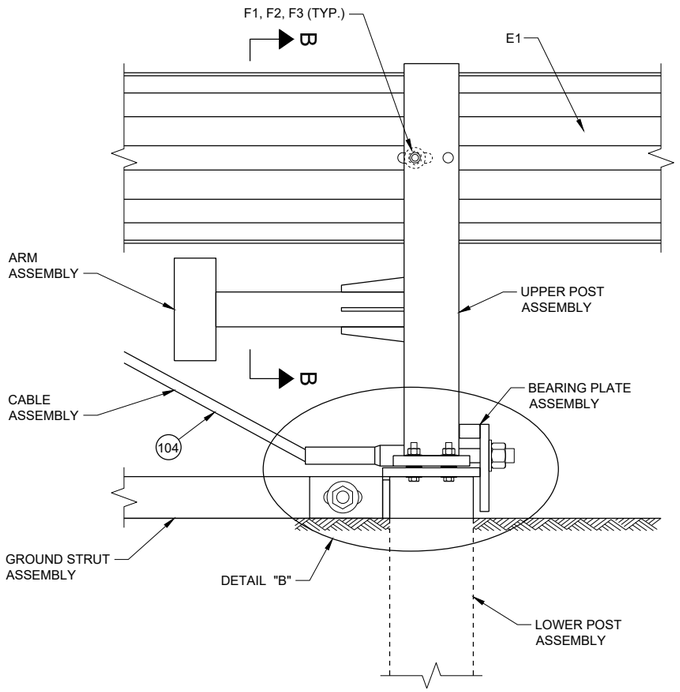
(104) AFTER ASSEMBLY, CABLE IS TO BE TIGHTENED WITHOUT TWISTING THE CABLE.

MIDWEST GUARDRAIL SYSTEM (MGS)
TYPE 2 TERMINAL

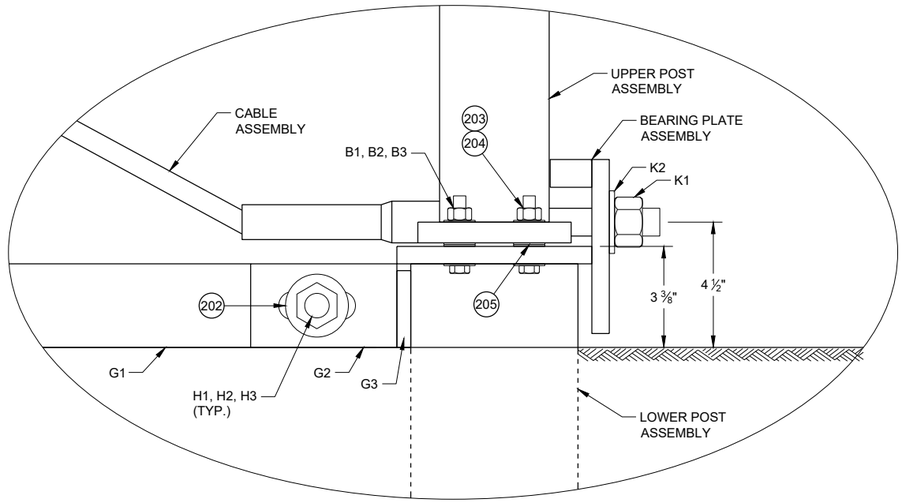
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

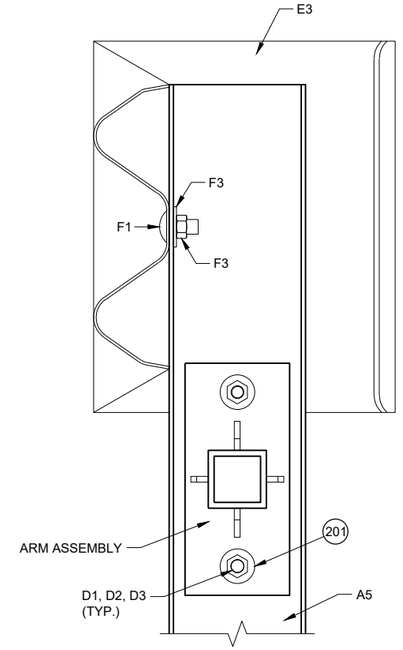
SDD 14B47 - 05a



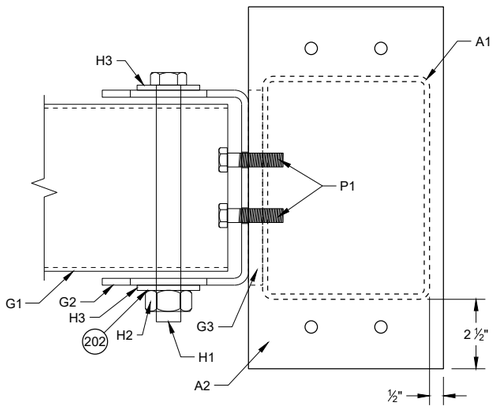
DETAIL "A"



DETAIL "B"

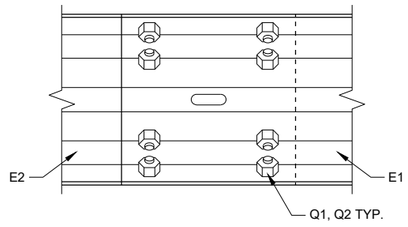


SECTION B - B



TOP VIEW

GROUND STRUT CONNECTION DETAIL



DETAIL "C"

GENERAL NOTES

200 INSTALL ONE WASHER UNDER BOLT HEAD AND RAIL AND ON WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

201 INSTALL ONE WASHER UNDER BOLT HEAD AND UPPER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND ARM PLATE.

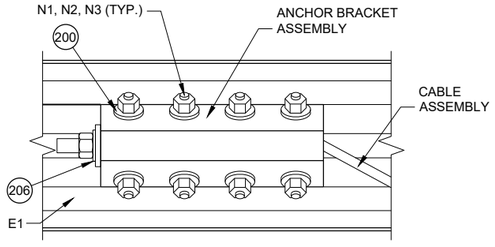
202 INSTALL ONE WASHER UNDER BOLT HEAD AND GROUND STRUT CONNECTOR AND ONE WASHER BETWEEN NUT AND GROUND STRUT CONNECTOR.

203 INSTALL ONE WASHER UNDER BOLT HEAD AND LOWER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND UPPER POST ASSEMBLY.

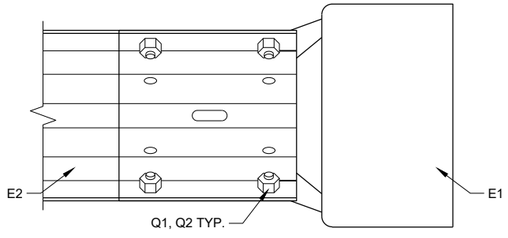
204 TORQUE VALUE IS BETWEEN 60 - 75 FT-LB.

205 TWO WASHERS BETWEEN UPPER AND LOWER POST ASSEMBLY.

206 INSTALL ONE WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.



DETAIL "D"



DETAIL "E"

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

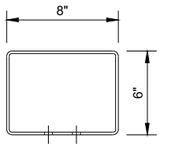
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

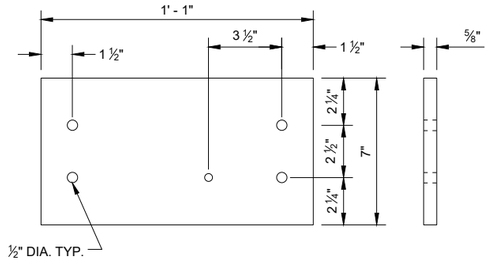
SDD 14B47 - 05b

GENERAL NOTES

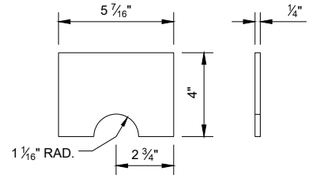
(300) TAP FOR 1/2" AFTER GALVANIZATION



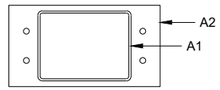
TOP VIEW



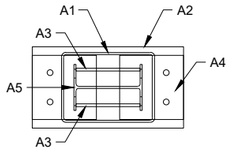
LOWER PLATE (A2)

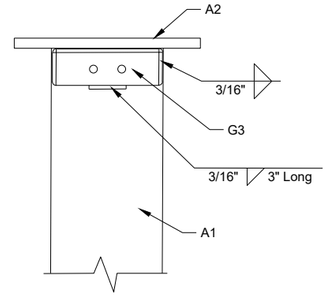


POST GUSSET (A3)

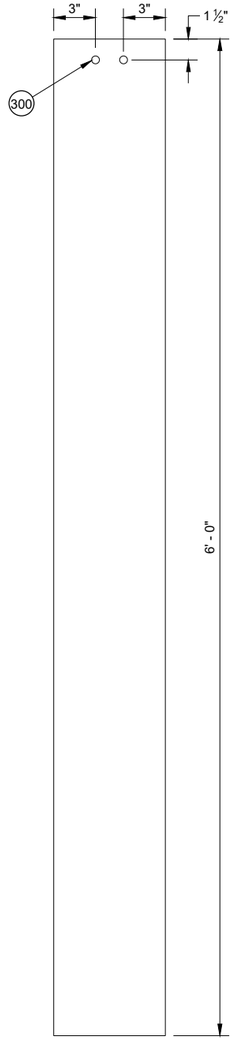


PLAN VIEW



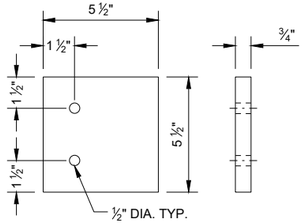


WELDING DETAIL
G3 AND A1

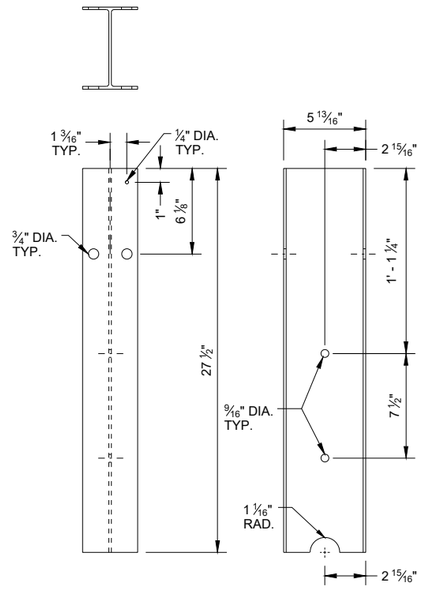


SIDE VIEW

FOUNDATION
TUBE (A1)

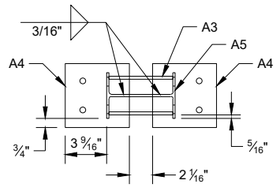


UPPER PLATE (A4)

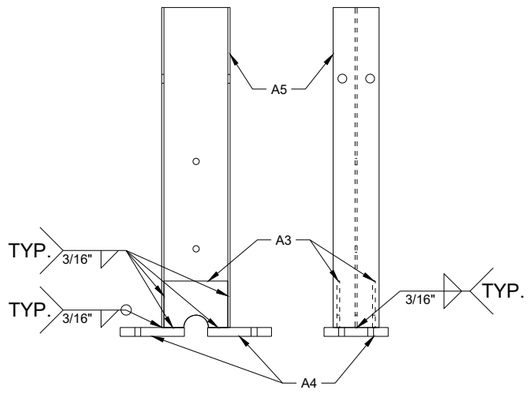


FRONT VIEW SIDE VIEW

TYPE 2 POST (A5)

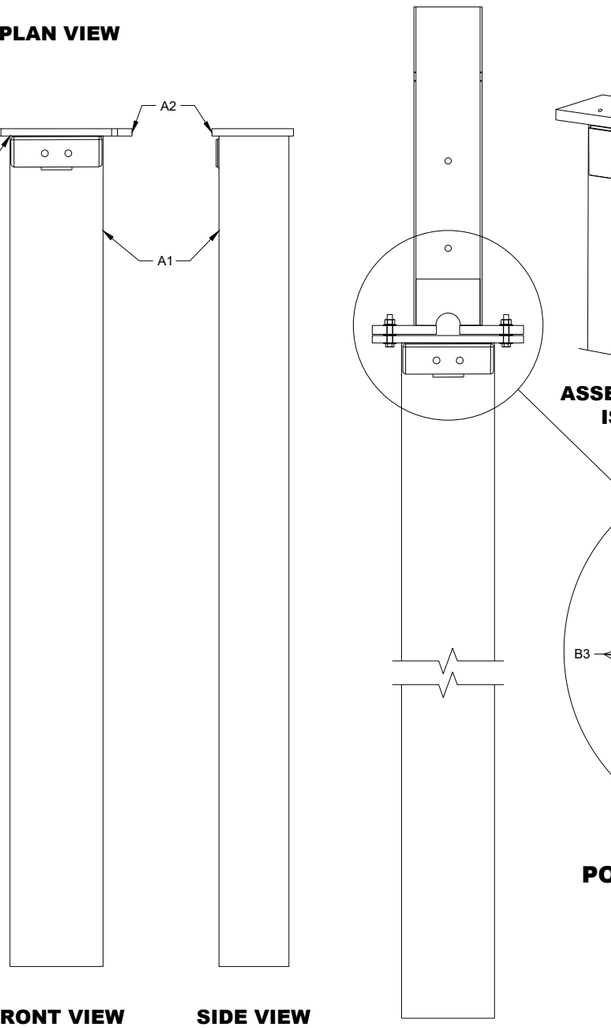


PLAN VIEW



SIDE VIEW FRONT VIEW

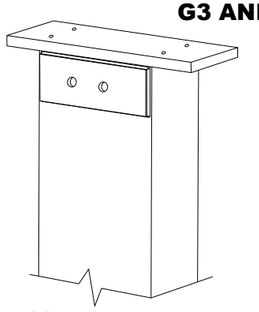
UPPER POST ASSEMBLY



FRONT VIEW SIDE VIEW

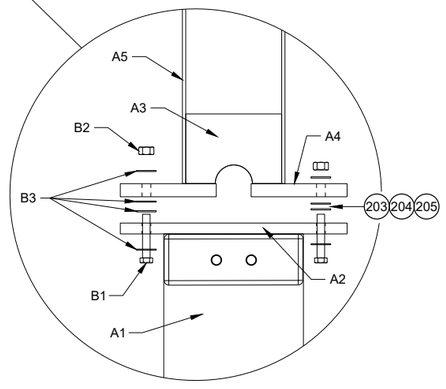
LOWER POST ASSEMBLY

ASSEMBLED POST



ASSEMBLY DETAIL
ISOMETRIC

A1



POST CONNECTION DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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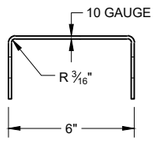
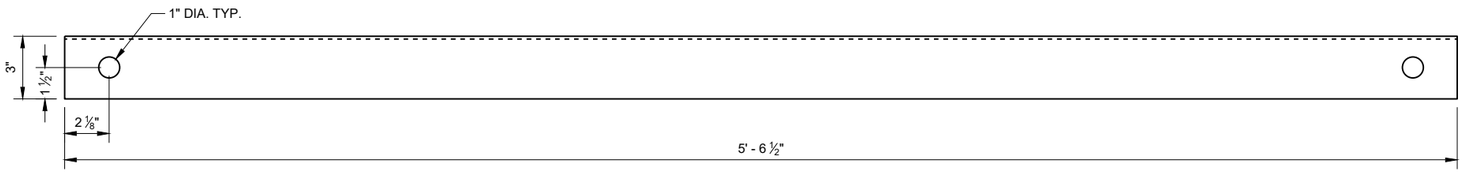
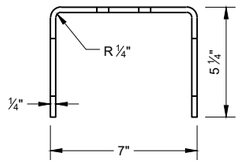


SIDE VIEW

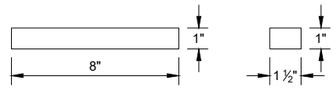


FRONT VIEW

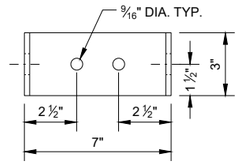
GROUND STRUT CHANNEL (G1)



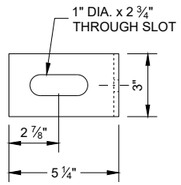
TOP VIEW



BEARING PLATE FLANGE (L2)

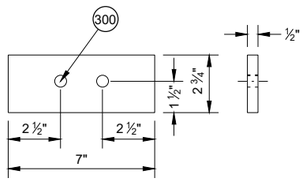


FRONT VIEW

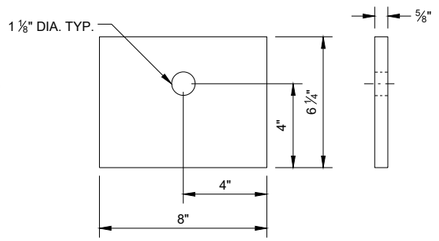


SIDE VIEW

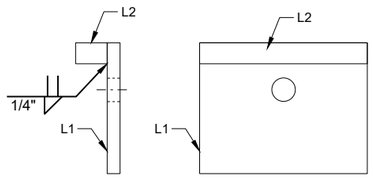
GROUND STRUT CONNECTOR (G2)



GROUND STRUT PLATE (G3)

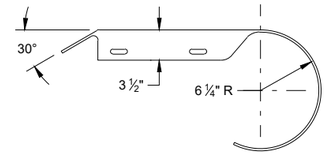


BEARING PLATE (L1)

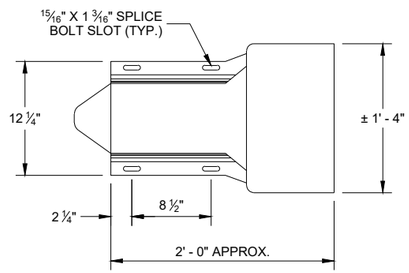


SIDE VIEW FRONT VIEW

BEARING PLATE ASSEMBLY

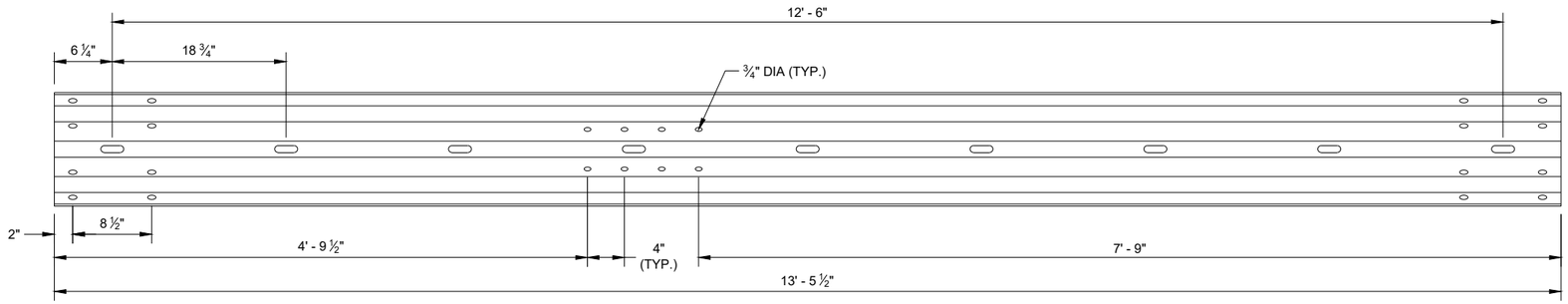


PLAN VIEW

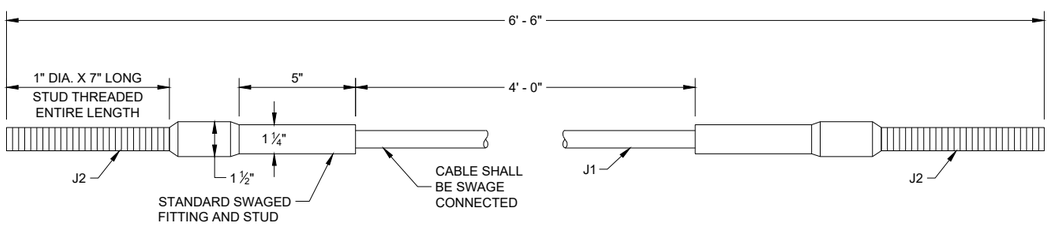


ELEVATION VIEW

ROUNDED BUFFER END (E3)



TYPE 2 GUARDRAIL (E1)



CABLE ASSEMBLY

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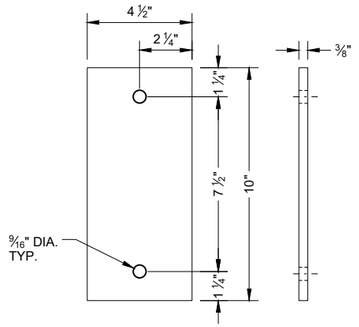
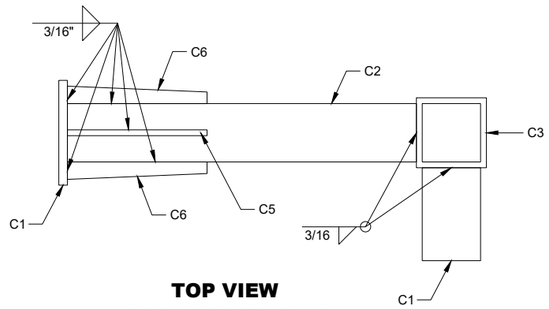
MIDWEST GUARDRAIL SYSTEM (MGS)
TYPE 2 TERMINAL

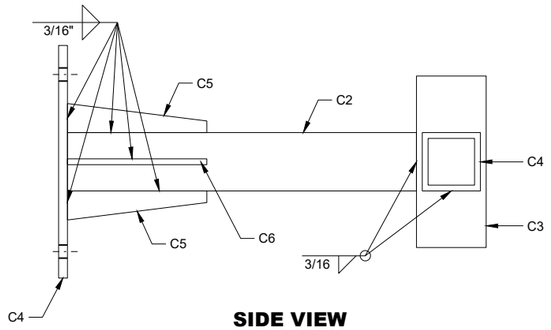
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



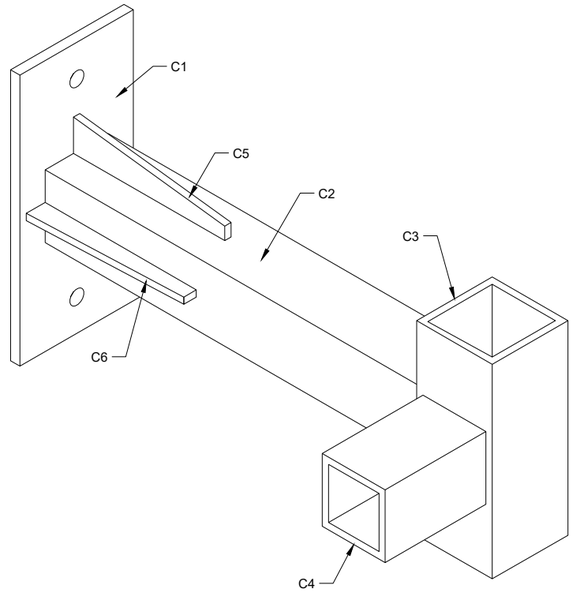
ARM PLATE (C1)



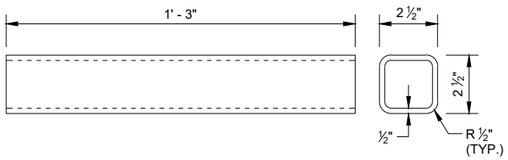
TOP VIEW
ARM ASSEMBLY



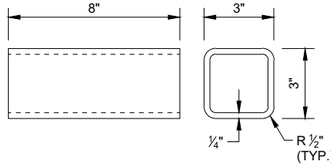
SIDE VIEW
ARM ASSEMBLY



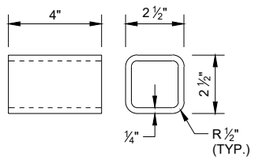
ISOMETRIC VIEW
ARM ASSEMBLY



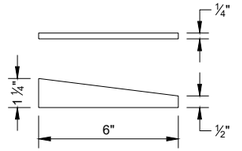
ARM TUBE 1 (C2)



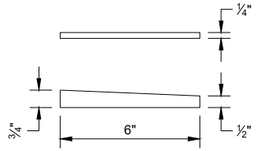
ARM TUBE 2 (C3)



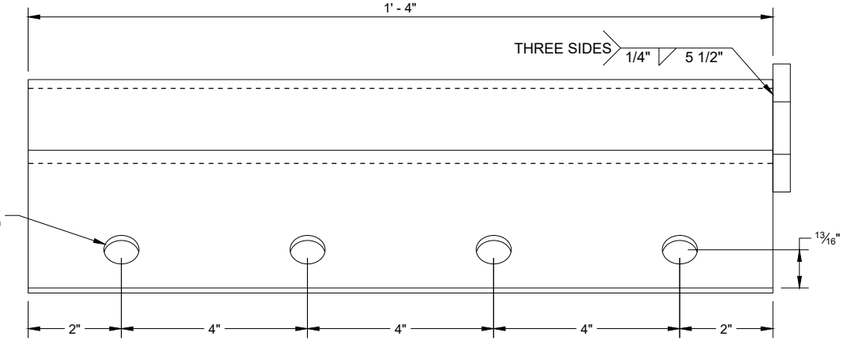
ARM TUBE 3 (C4)

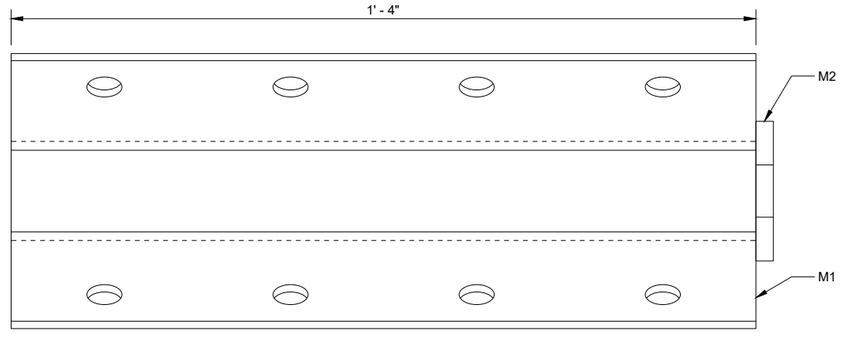


ARM GUSSET PLATE 1 (C5)

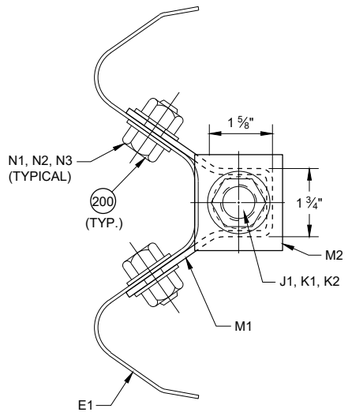


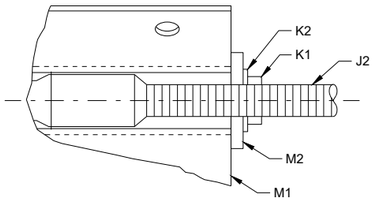
ARM GUSSET PLATE 2 (C6)



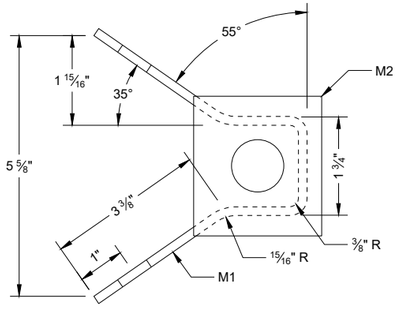


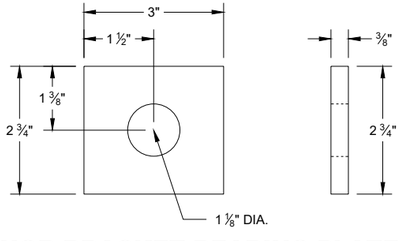
ANCHOR BRACKET (M1, M2)





SECTION A - A





ANCHOR BRACKET BEARING PLATE (M2)

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	TYPE 2 FOUNDATION TUBE	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
A2	LOWER PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	5/8" THICKNESS
A3	POST GUSSET	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
A4	UPPER PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/4" THICKNESS
A5	TYPE 2 POST	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI, w6x9 or w6x8.5	
B1	BREAKAWAY BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED . PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	7/16" DIA.
B2	BREAKAWAY BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	7/16" DIA.
B3	BREAKAWAY BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
C1	ARM ASSEMBLY PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/8" THICKNESS
C2	ARM ASSEMBLY TUBE 1	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
C3	ARM ASSEMBLY TUBE 2	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 3" x 3" x 1/4"
C4	ARM ASSEMBLY TUBE 3	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 2 1/2" x 2 1/2" X 1/4"
C5	ARM ASSEMBLY GUSSET PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
C6	ARM ASSEMBLY GUSSET PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
D1	ARM ASSEMBLY BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	1/2" DIA.
D2	ARM ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	1/2" DIA.
D3	ARM ASSEMBLY NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1/2" DIA.
E1	TYPE 2 GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E2	BEAM GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E3	BEAM GUARD ROUNDED BUFFER END	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
F1	POST BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
F2	POST BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
F3	POST BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
G1	GROUND STRUT CHANNEL	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/2" x 11 3/4" x 10 GAUGE
G2	GROUND STRUT CONNECTOR	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
G3	GROUND STRUT PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/2" THICKNESS

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MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B47 - 05f

BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
H1	GROUND STRUT BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	7/8" DIA.
H2	GROUND STRUT BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	7/8" DIA.
H3	GROUND STRUT BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
J1	BCT CABLE	AASHTO M30 / ASTM A741 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS), 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS) TYPE II OR IIC, CLASS C ZINC COATED MIN. BREAKING STRENGTH OF 42.7 KIPS	**3/4" DIA.**
J2	BCT CABLE	UNC 1" ASTM A576 GRADE 1035 SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. MIN BREAKING STRENGTH OF 42.7 KIPS ASME B30.26 "FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING IN TO CONNECTION: NAME OF MANUFACTURE OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE FOR ALLOY EYEBOLTS."	
K1	CABLE ASSEMBLY NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1" DIA.
K2	CABLE ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1	1" DIA.
L1	BEARING PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	5/8" THICKNESS
L2	BEARING PLATE FLANGE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1" THICKNESS
M1	BEAM GUARD ANCHOR BRACKET	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	
M2	BEAM GUARD ANCHOR END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/8" THICKNESS
N1	ANCHOR BRACKET BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
N2	ANCHOR BRACKET BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
N3	ANCHOR BRACKET BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 /ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
P1	FOUNDATION TUBE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1/2" DIA.
Q1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
Q2	SPLICE NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	5/8" DIA.

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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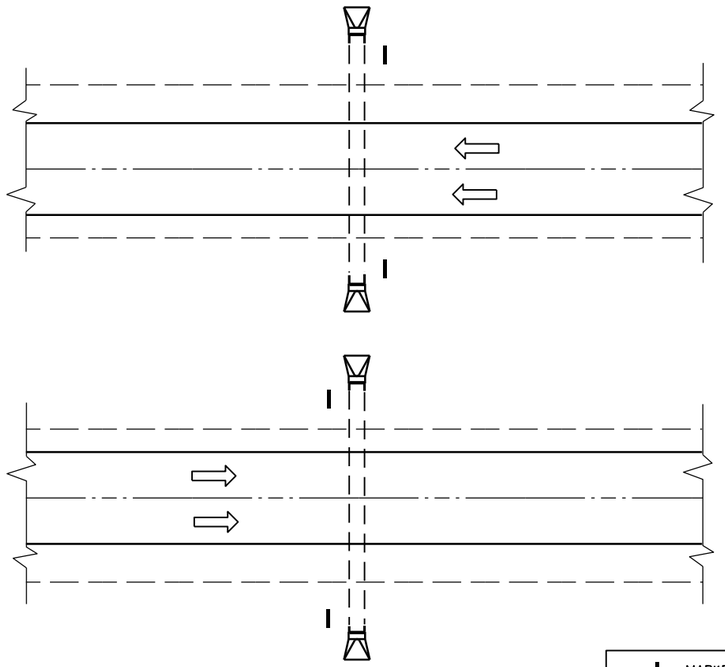
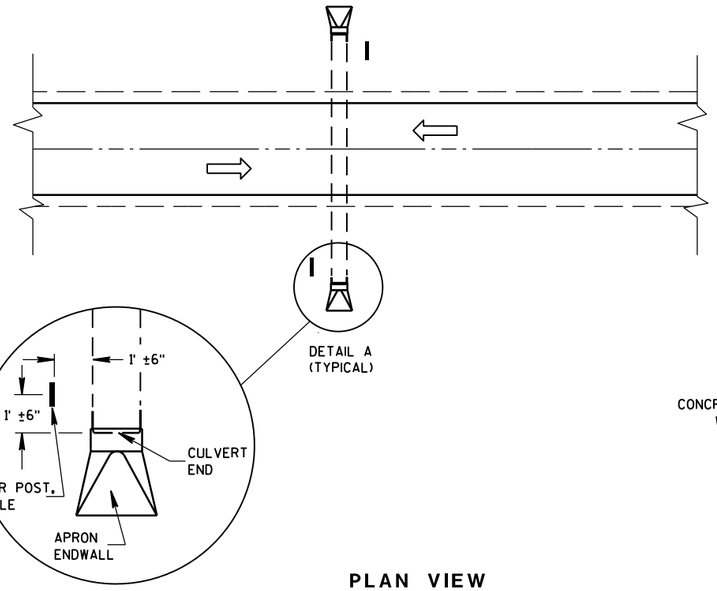
SDD 14B47 - 05g



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

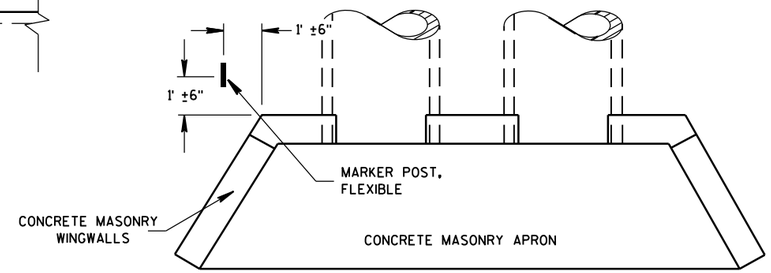
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

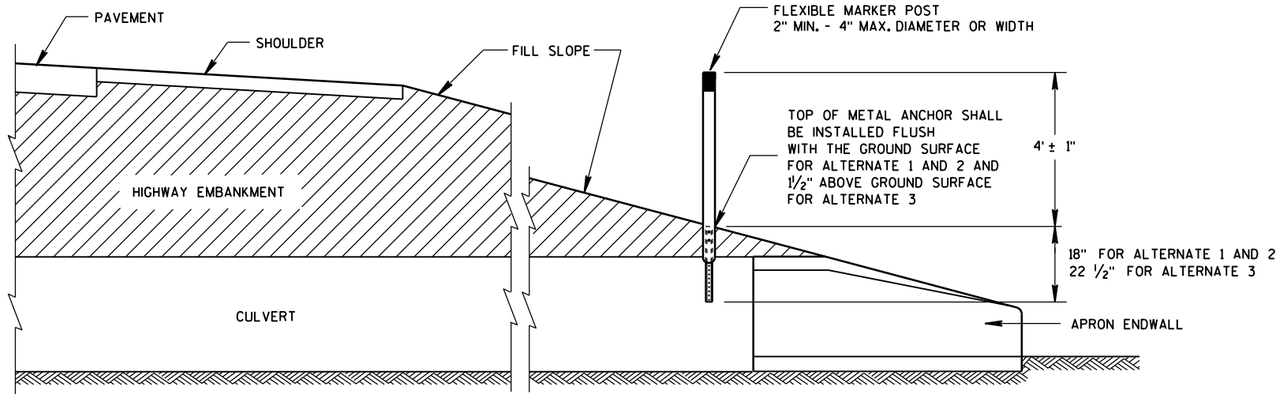
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 15 A 3-2a

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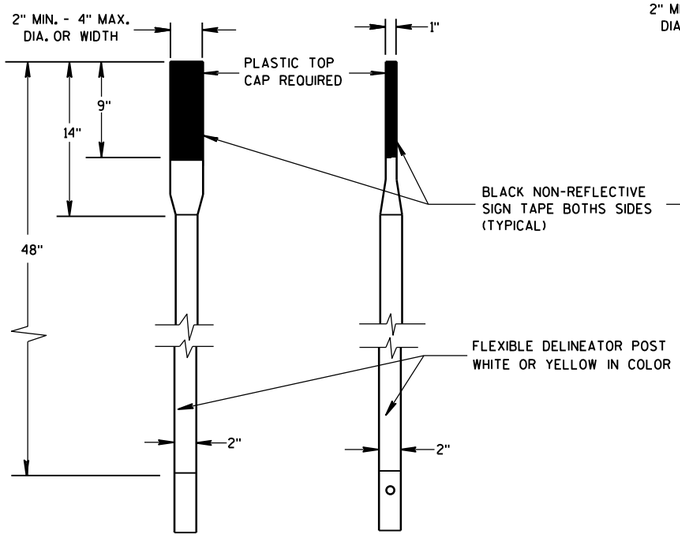
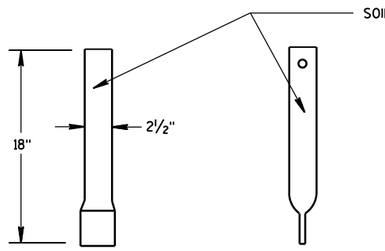
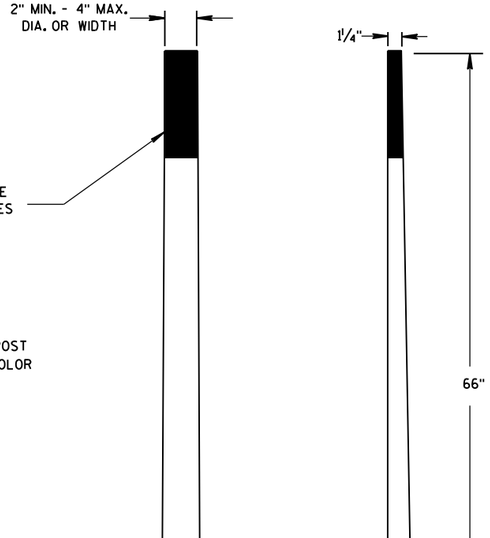
S.D.D. 15 A 3-2a





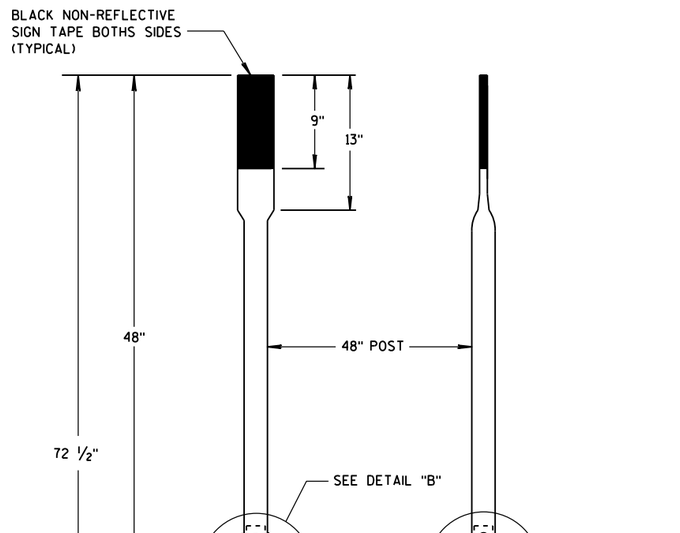
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

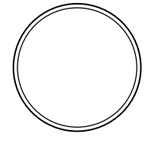
ALTERNATE 2



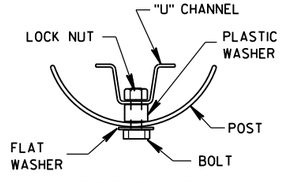
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS



SECTION A-A



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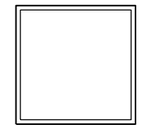
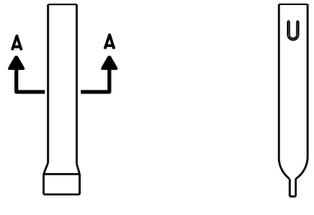
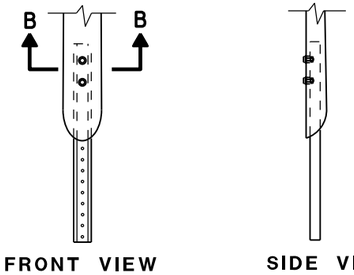


SECTION C-C



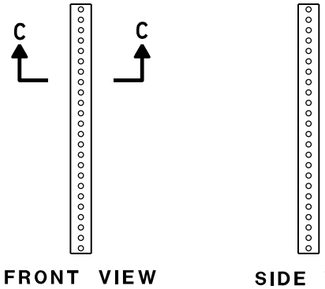
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

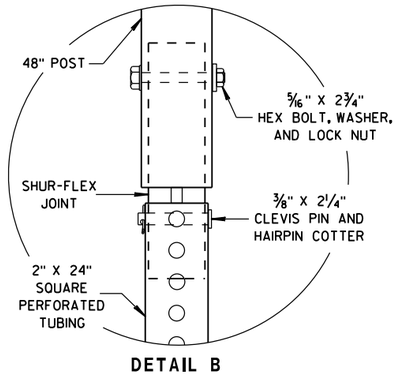
ALTERNATE 2



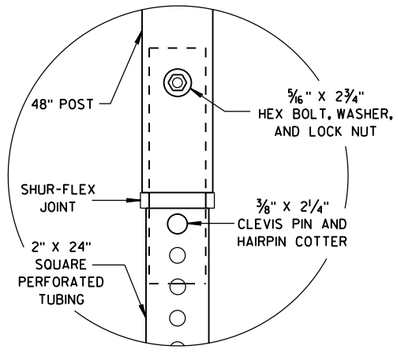
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
288
IGN
FHWA

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S.D.D. 15 A 3-2b

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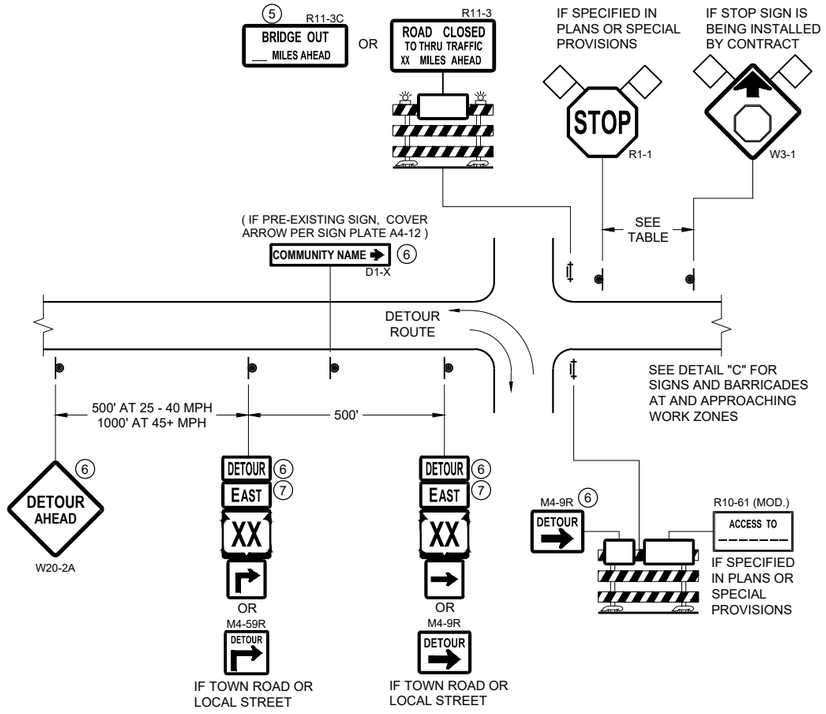
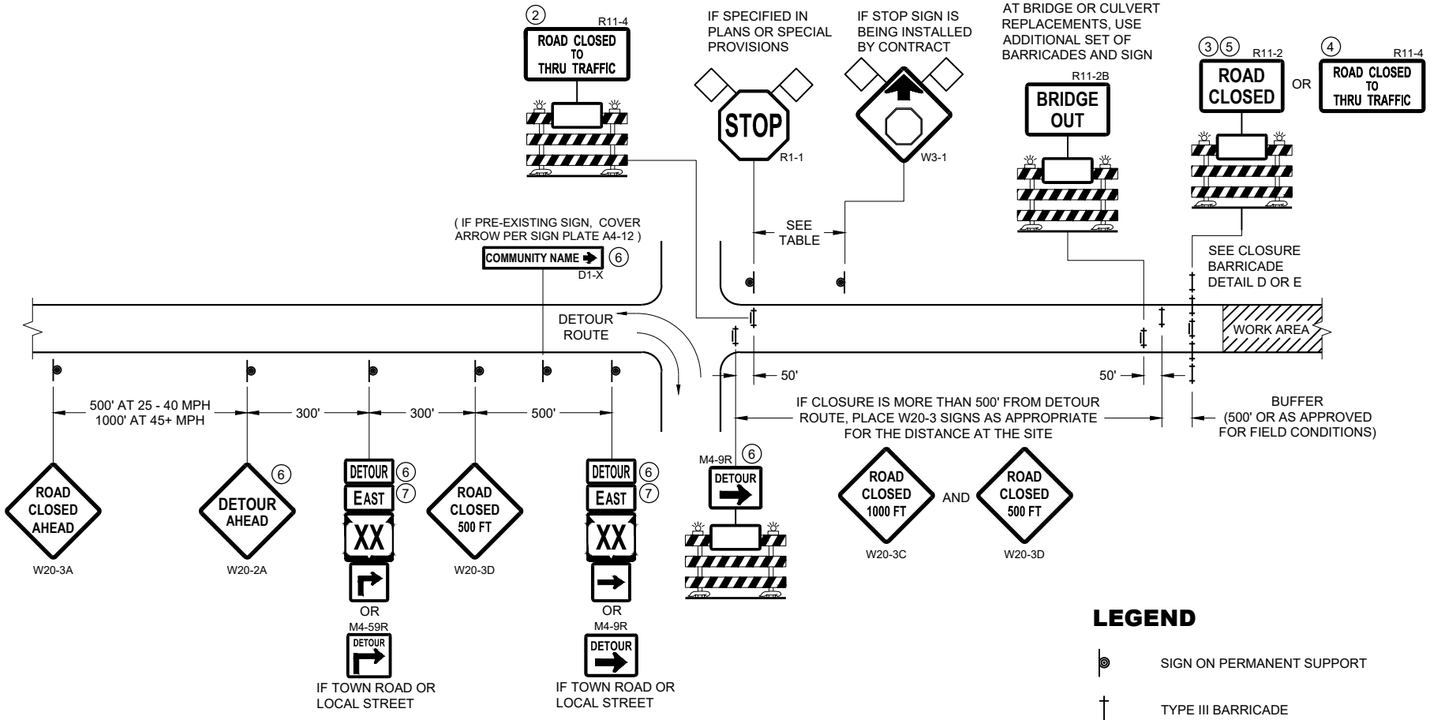
S.D.D. 15 A 3-2b



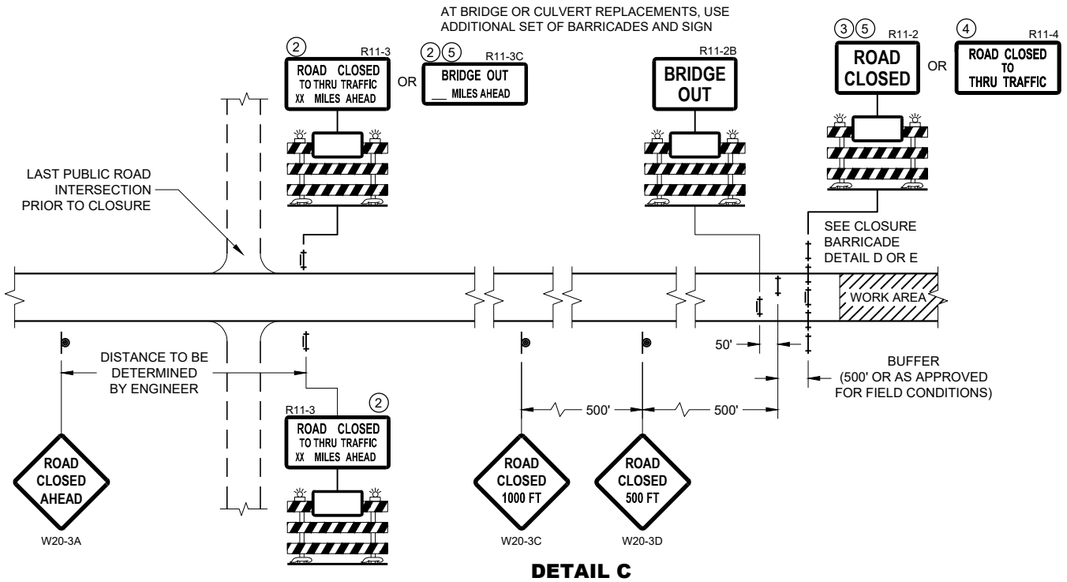
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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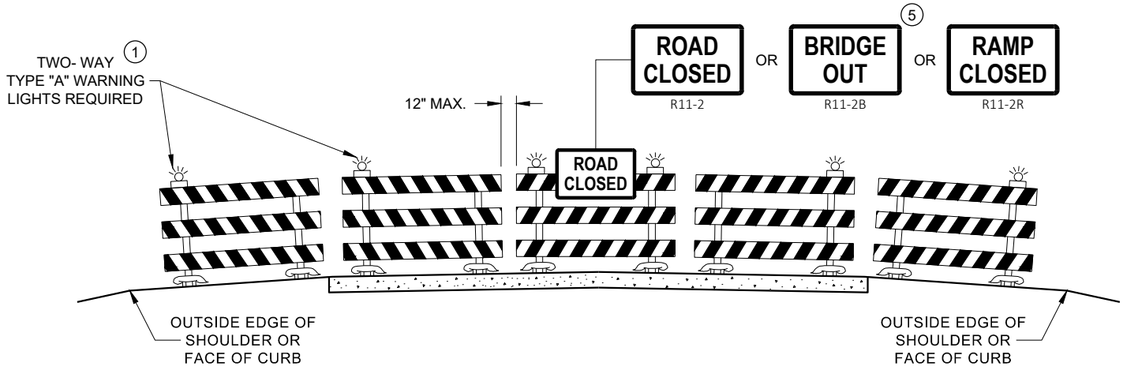
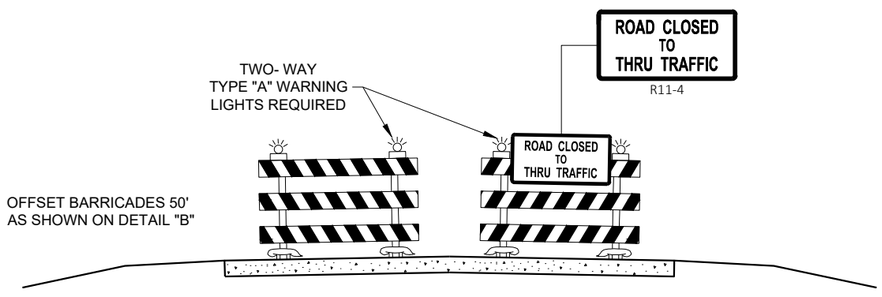
SDD 15C02 - 09a

SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

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SDD 15C02 - 09b

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SDD 15C02 - 09b

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

LEGEND

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

GENERAL NOTES

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

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

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

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

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

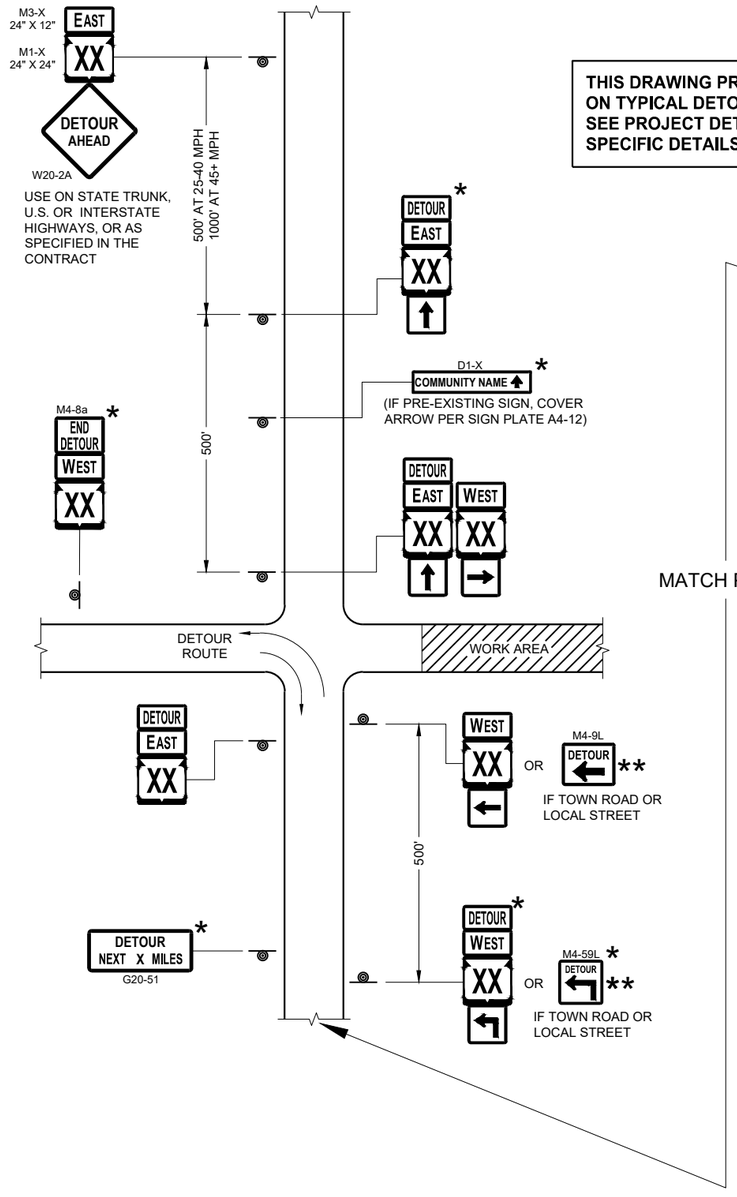
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

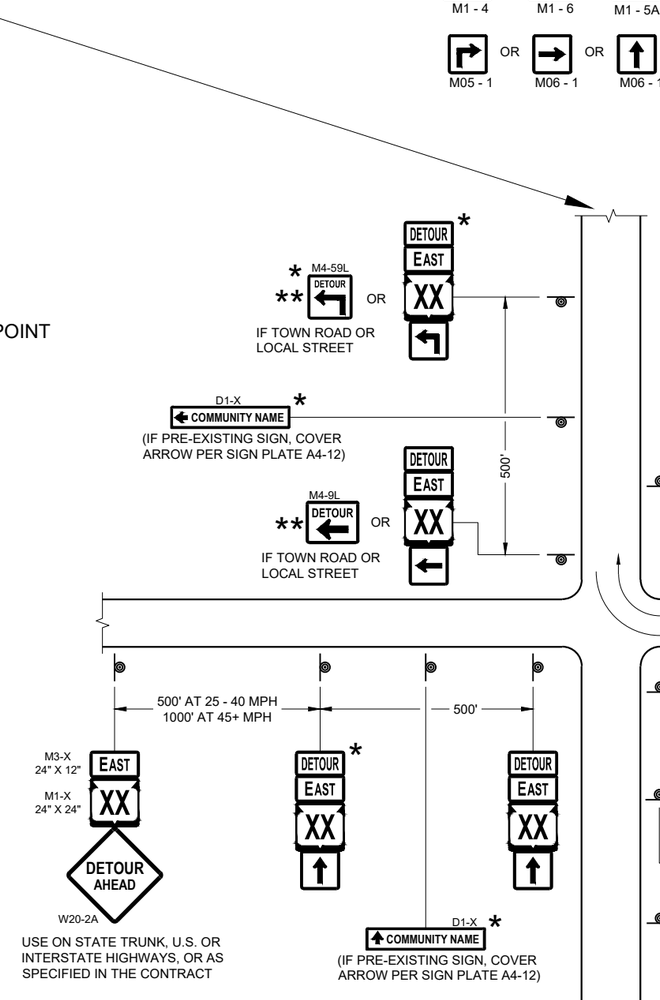
SIGN SIZES SHALL BE AS FOLLOWS:

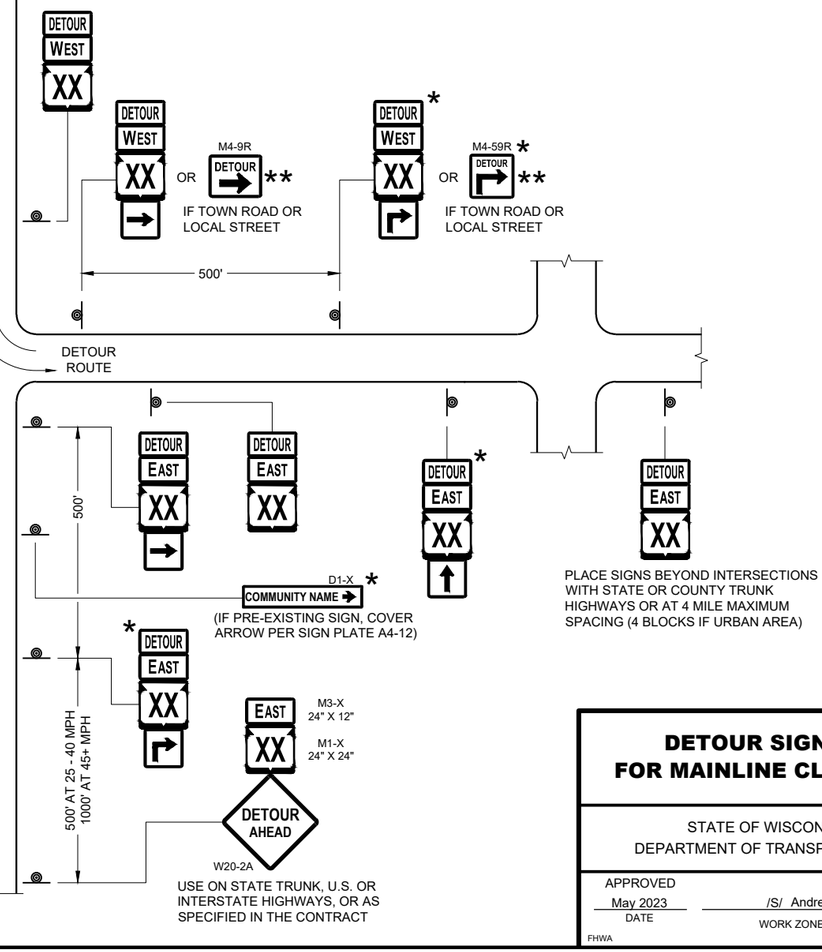
M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)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

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

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







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

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

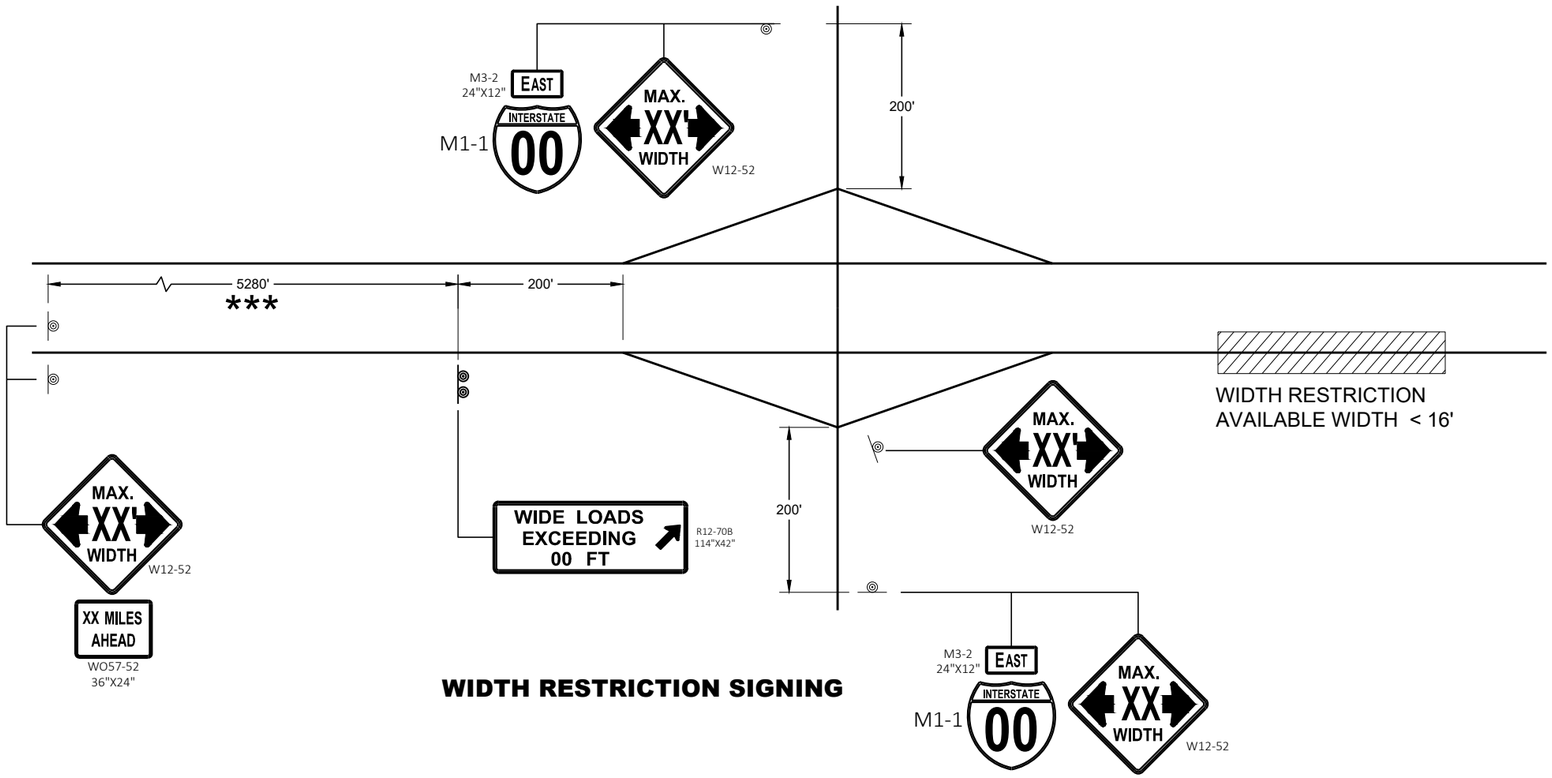
APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

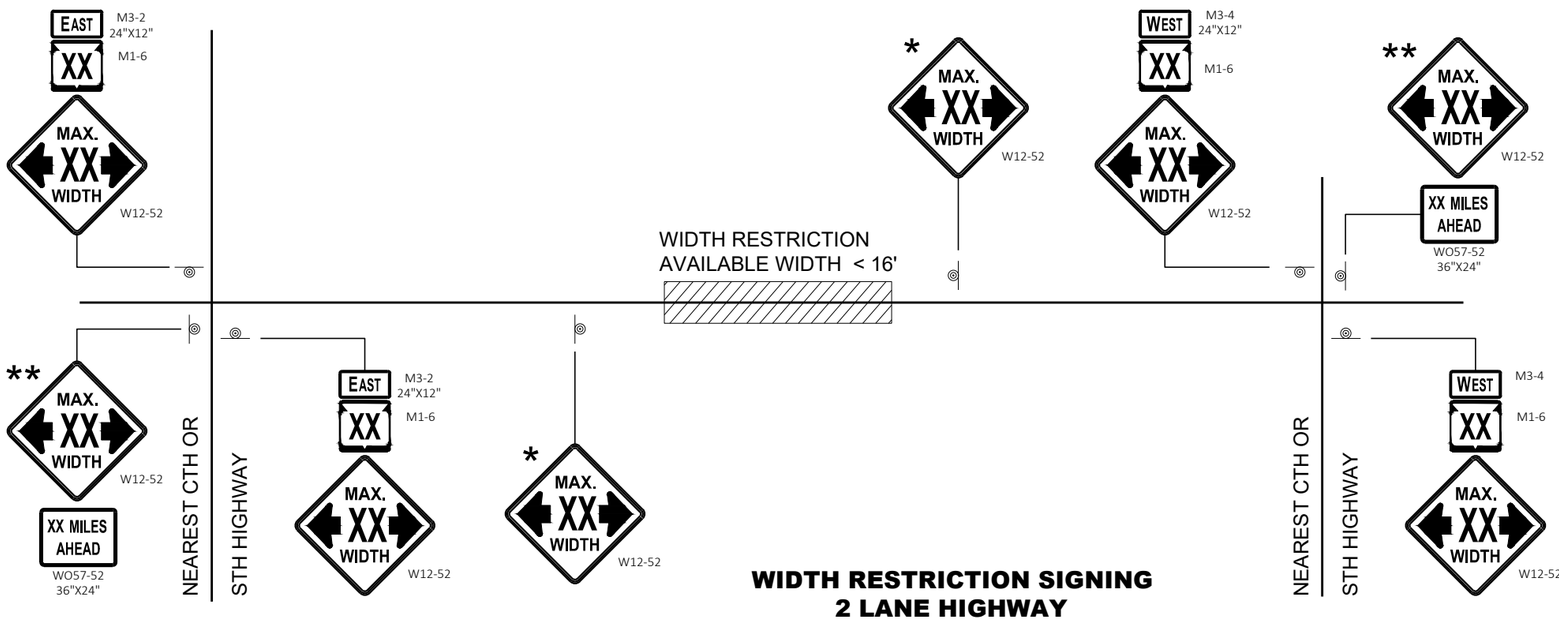
FHWA

6

SDD 15C02 - 09c



WIDTH RESTRICTION SIGNING



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

LEGEND

◎ SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

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

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

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

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

WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

* PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

** SIGN SHALL BE VISIBLE FROM ROADWAY.

*** ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.

WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

6

6

SDD 15C02 - 09f

SDD 15C02 - 09f

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
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DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

GENERAL NOTES

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

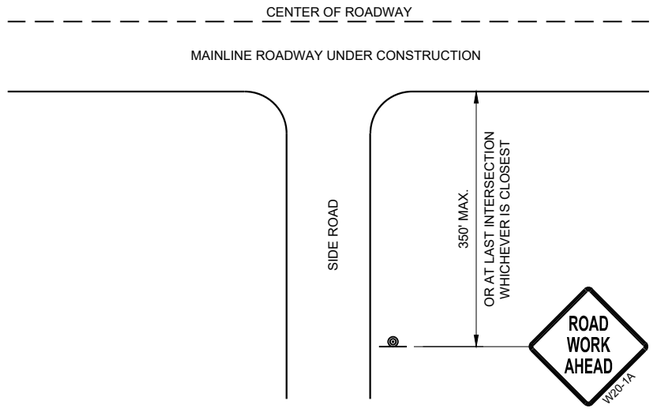
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

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



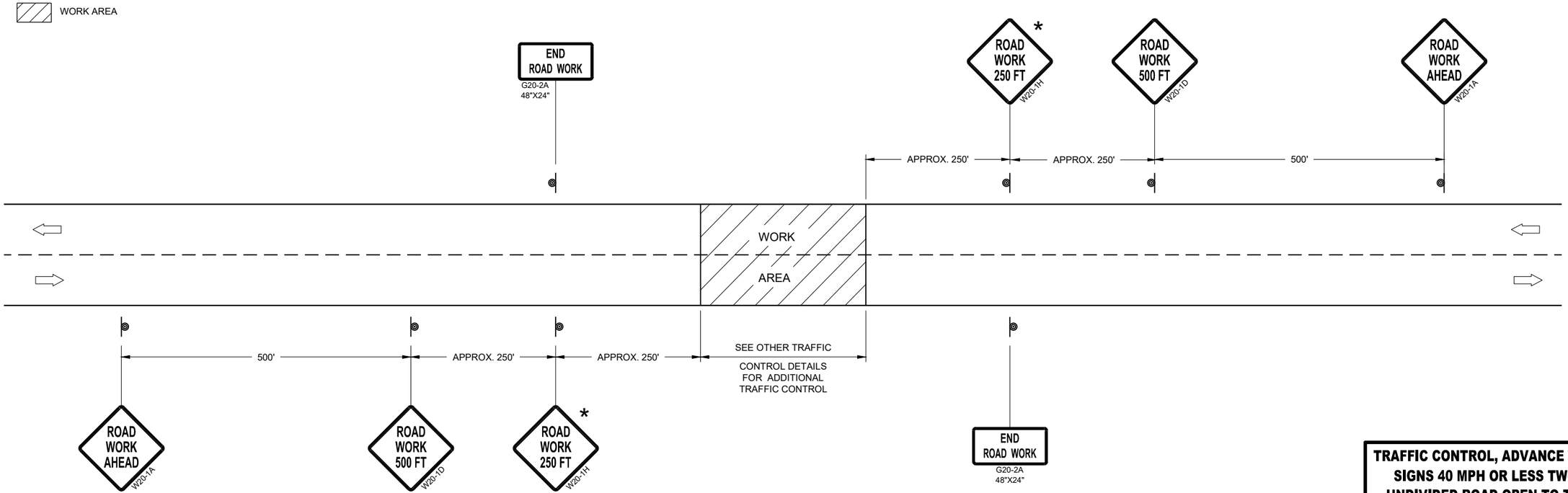
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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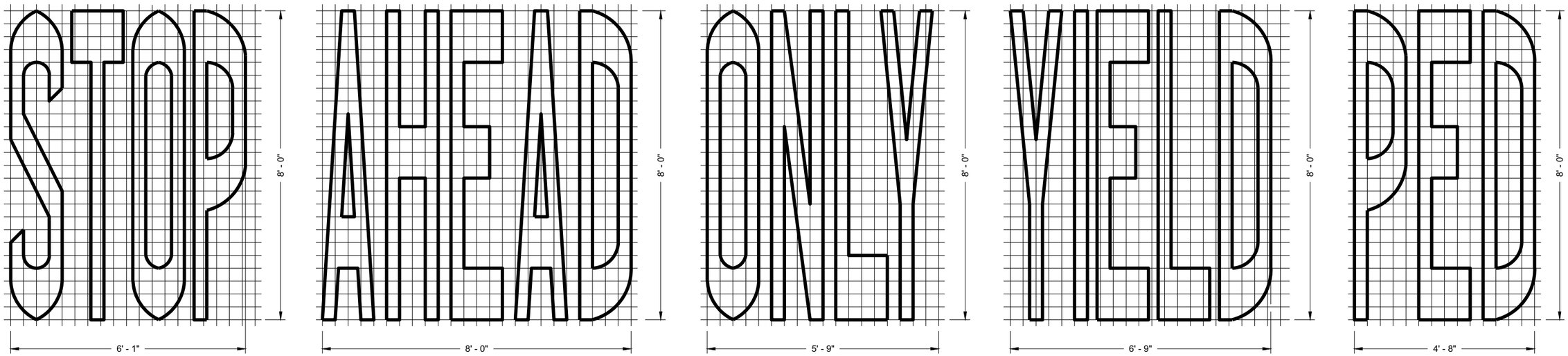
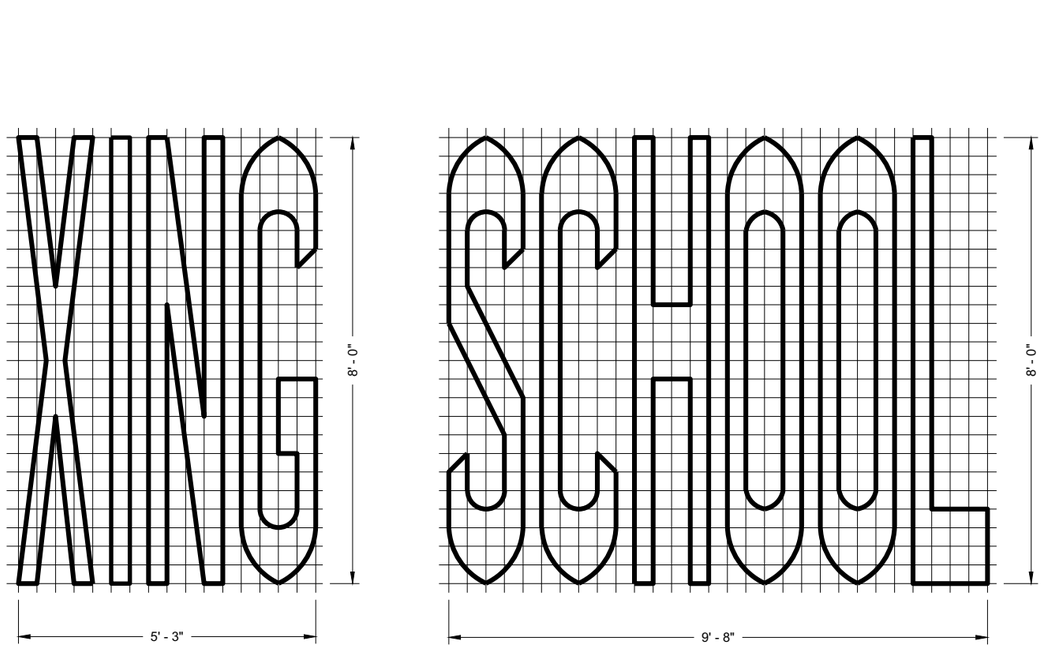
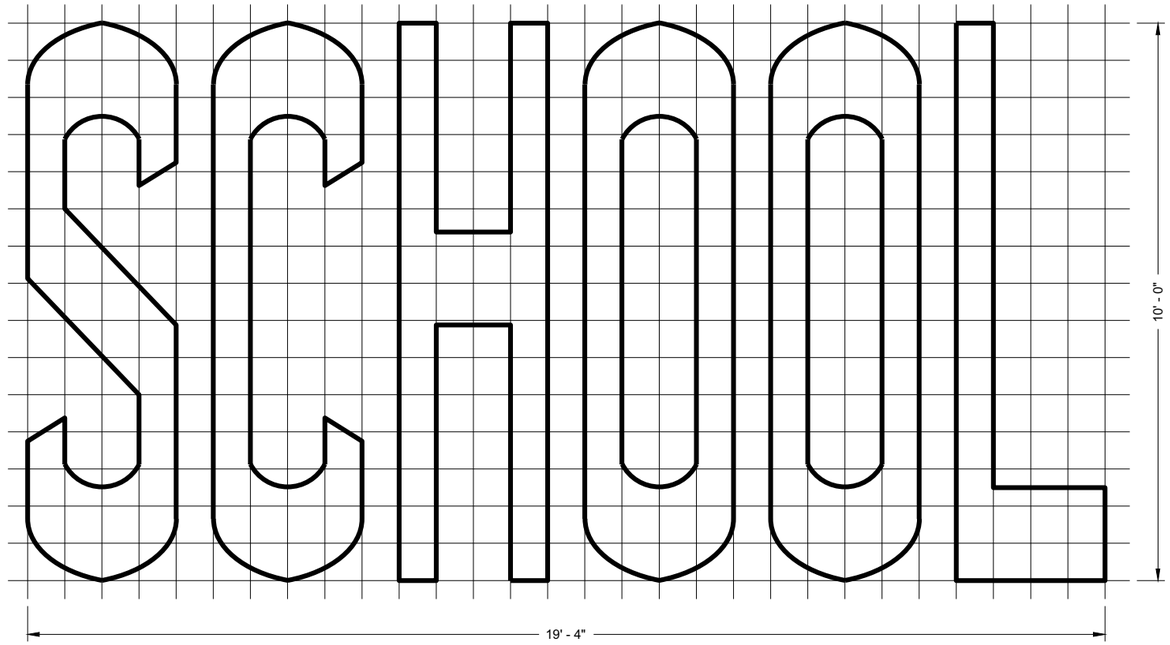
SDD 15C05 - 05





SINGLE LANE



TWO - LANE

GENERAL NOTES

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

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

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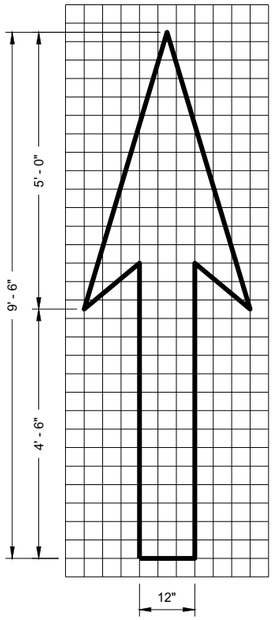
SDD 15C07 - 15b

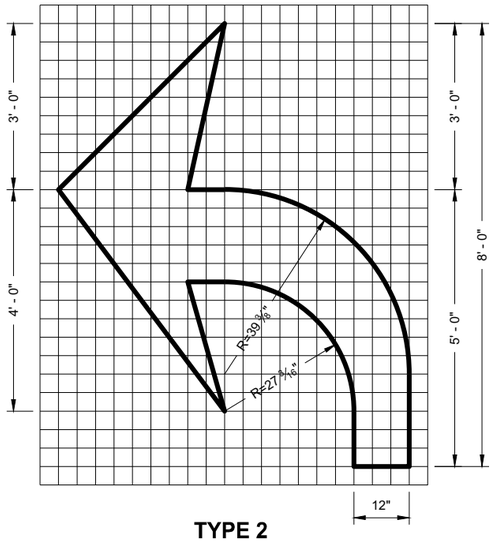
SDD 15C07 - 15b

GENERAL NOTES

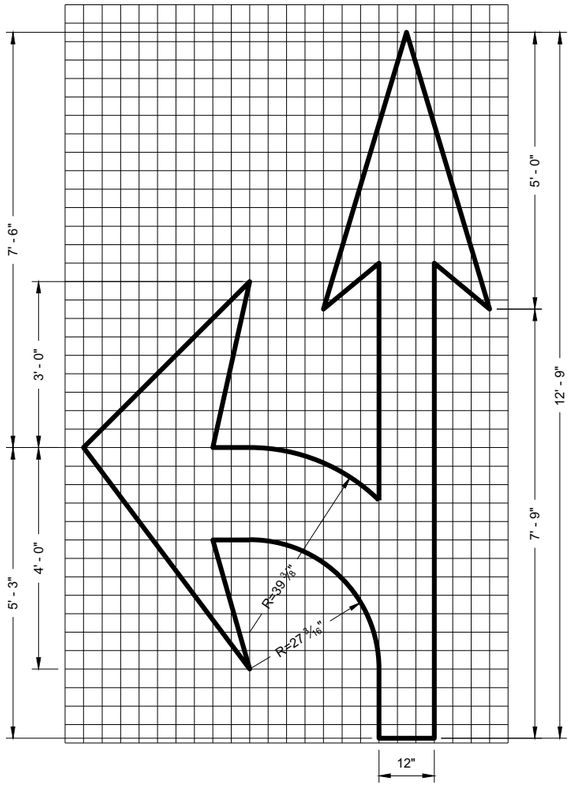
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



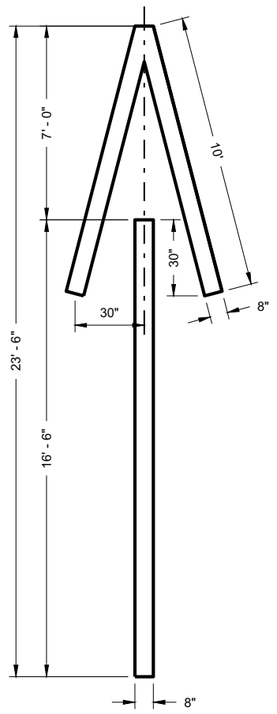
TYPE 1



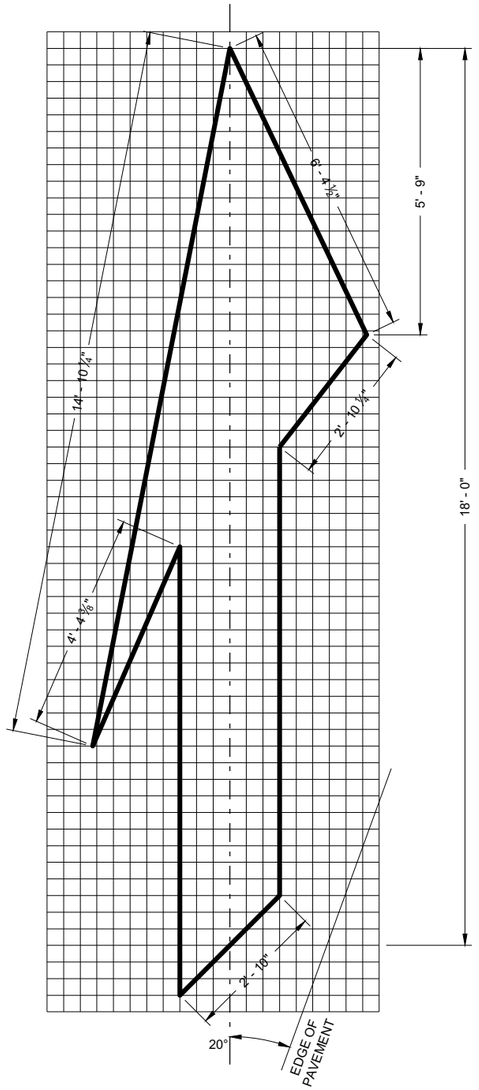
TYPE 2



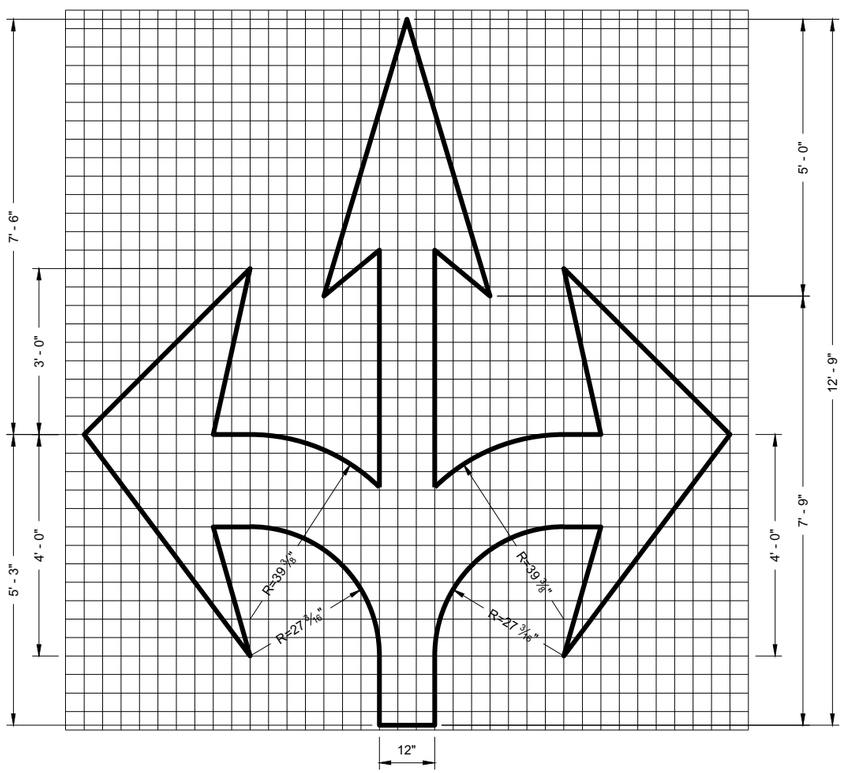
TYPE 3



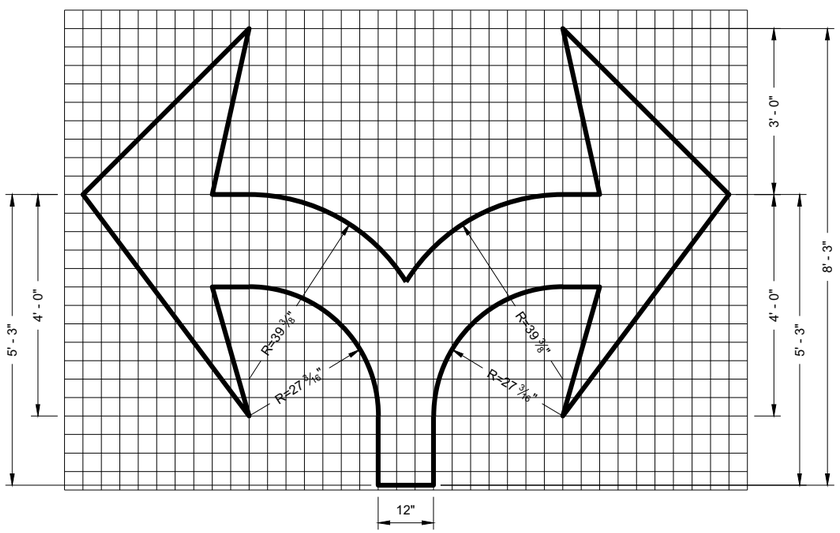
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MAF ENGINEER

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SDD 15C07 - 15c

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SDD 15C07 - 15c

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

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

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

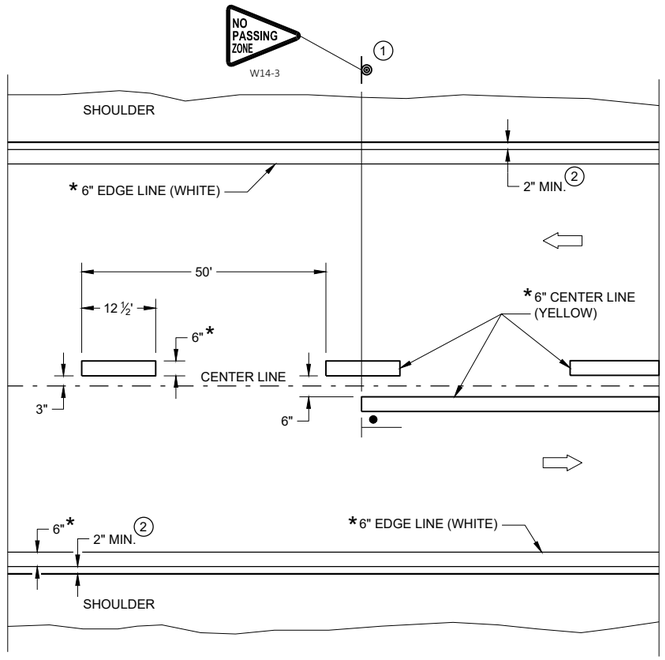
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

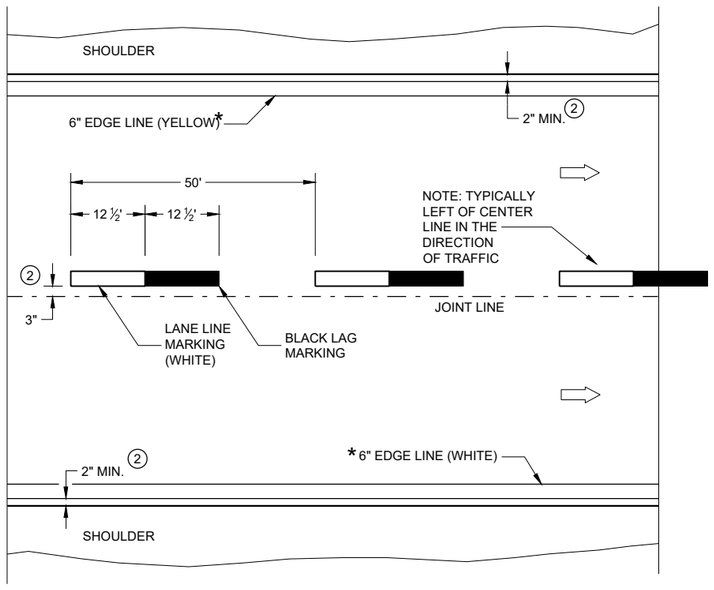
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER
FHWA

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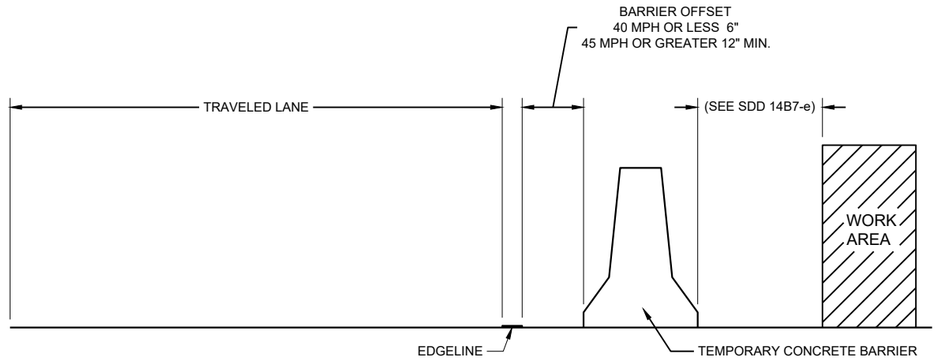
SDD 15C08-23a

SDD 15C08-23a



TEMPORARY BARRIER OFFSET FROM EDGELINE

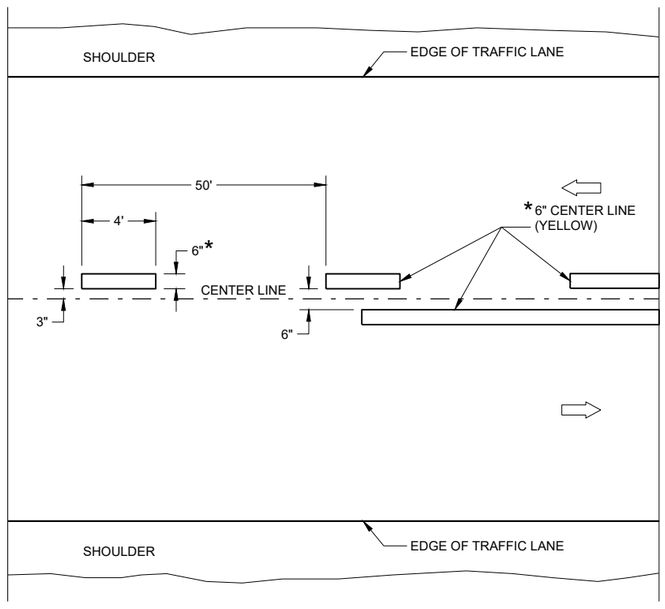
GENERAL NOTES

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

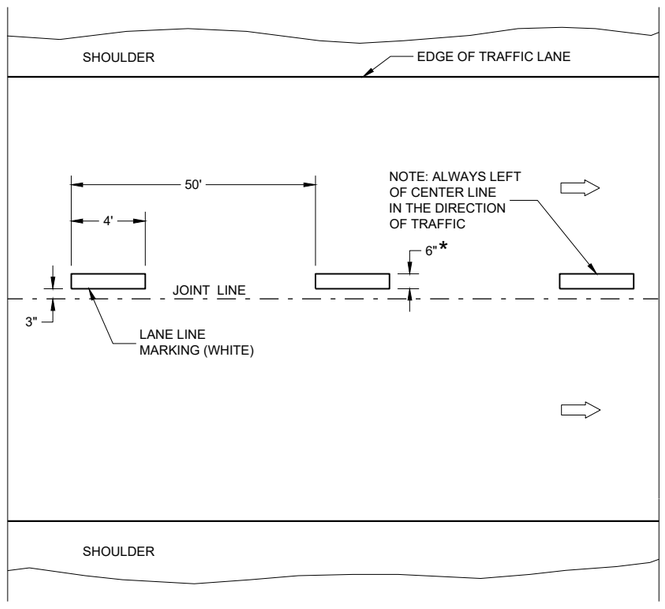
LEGEND

⇨ DIRECTION OF TRAFFIC

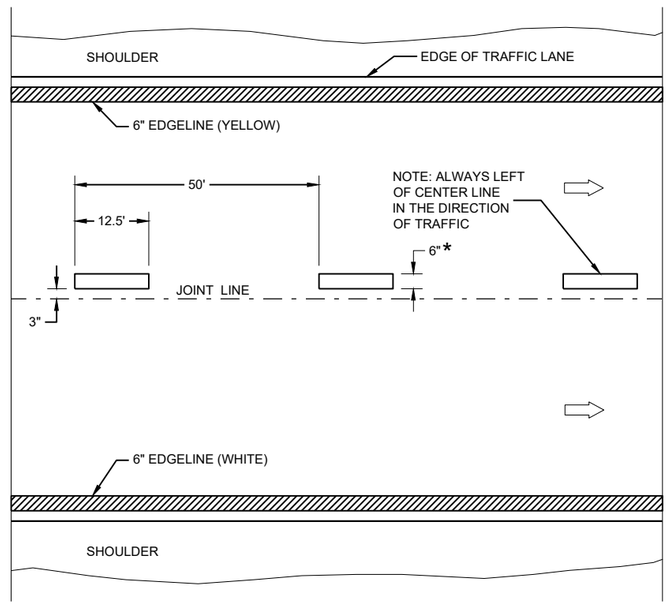
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Jeannie Silver STATEWIDE SIGNING AND M ENGINEER

FHWA

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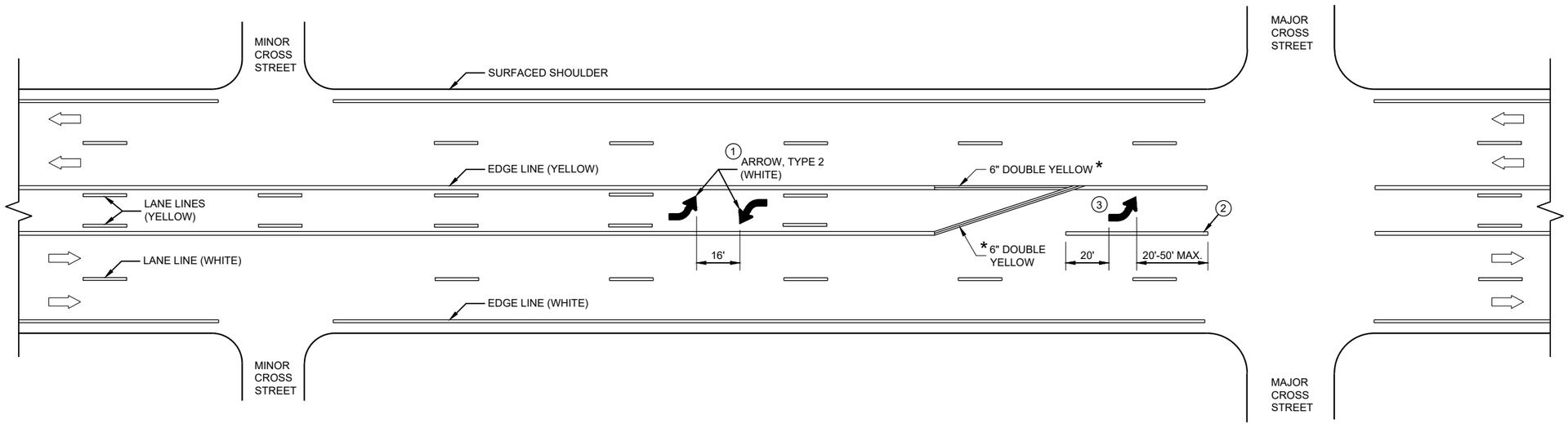
SDD 15C08-23b

GENERAL NOTES

1. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
2. 10" WHITE
3. TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

DIRECTION OF TRAFFIC

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY LEFT TURN LANE

6

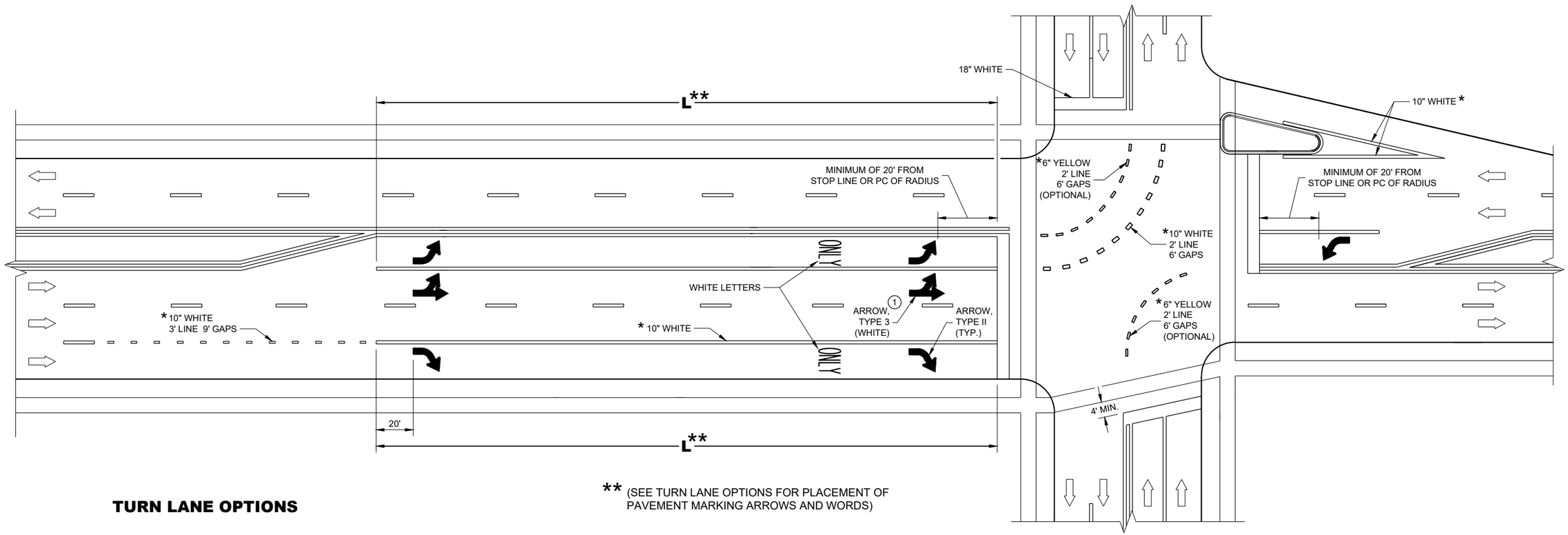
SDD 15C08-23c

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA· 298

6

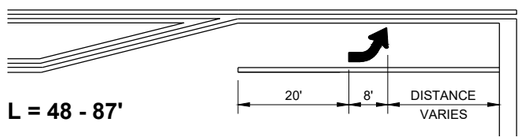
SDD 15C08-23c



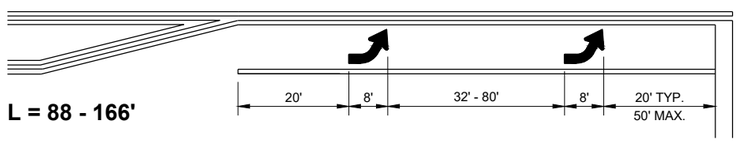
** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

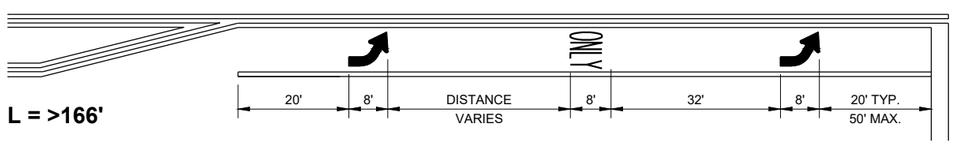
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48 - 87'



L = 88 - 166'



L = >166'

GENERAL NOTES

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

DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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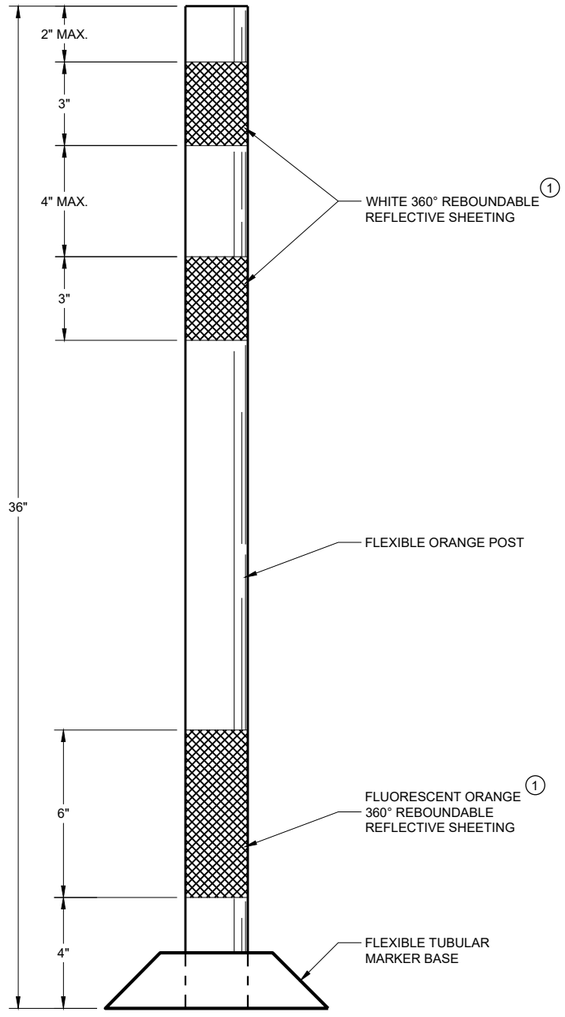
SDD 15C08-23d



FLEXIBLE TUBULAR MARKER POST WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

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

CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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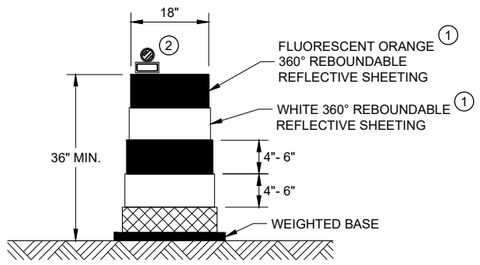
SDD 15C11 - 10a

SDD 15C11 - 10a

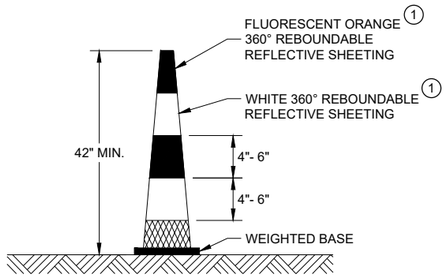
GENERAL NOTES

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

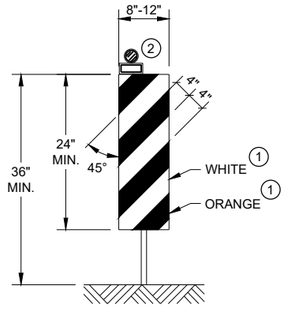
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

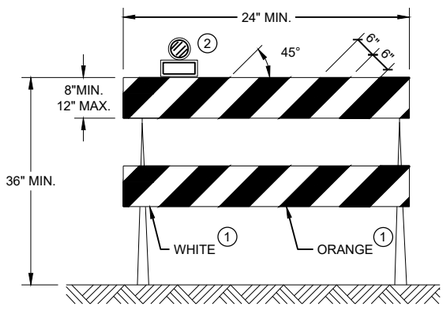
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



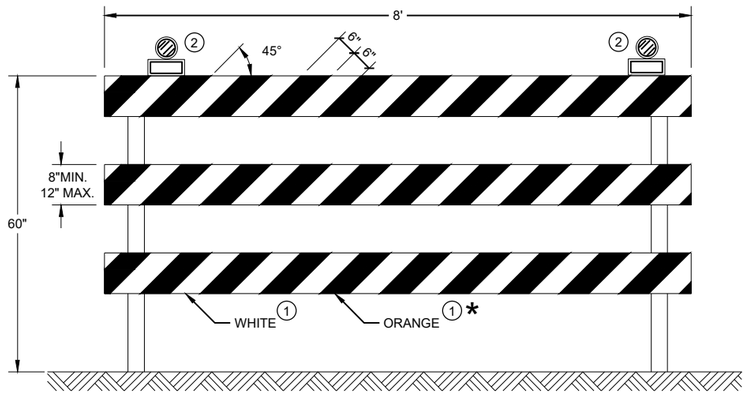
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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SDD 15C11 - 10b
SDD 15C11 - 10b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

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

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

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

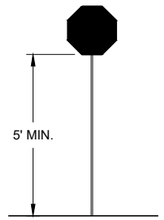
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



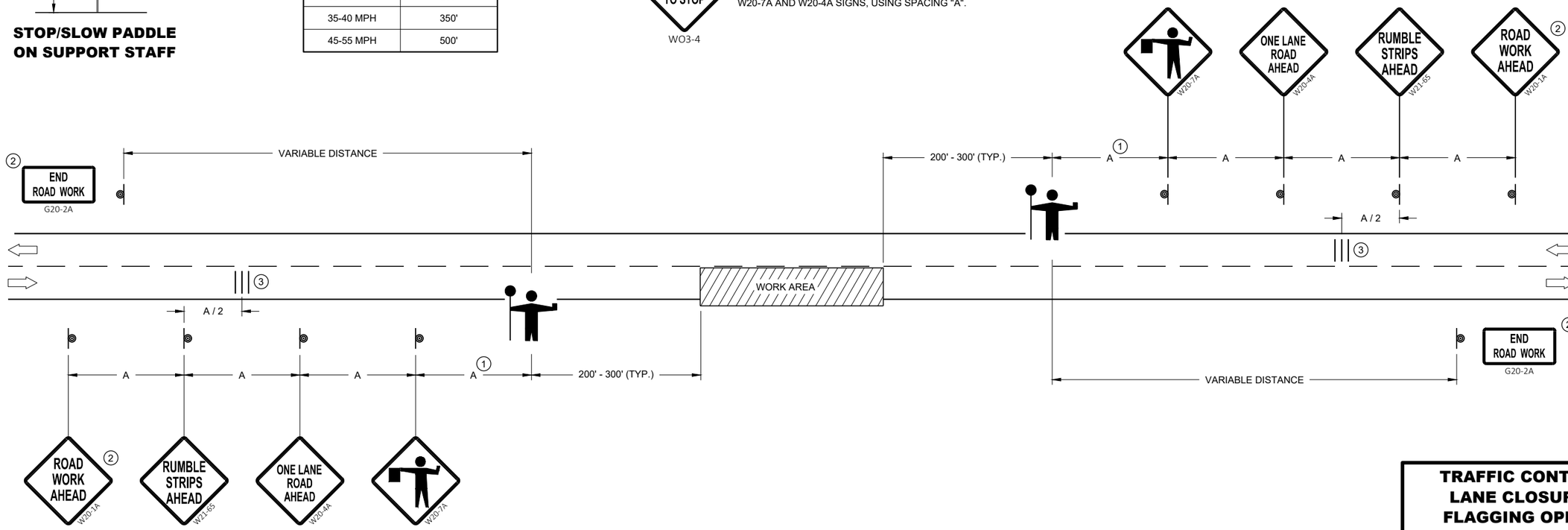
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

WO3-4

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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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SDD 15C12 - 09a

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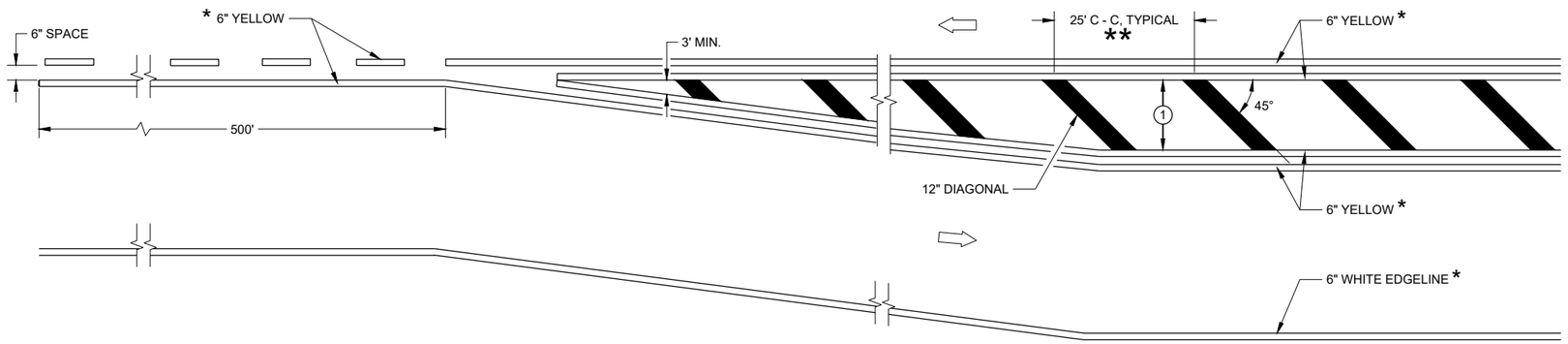
SDD 15C12 - 09a



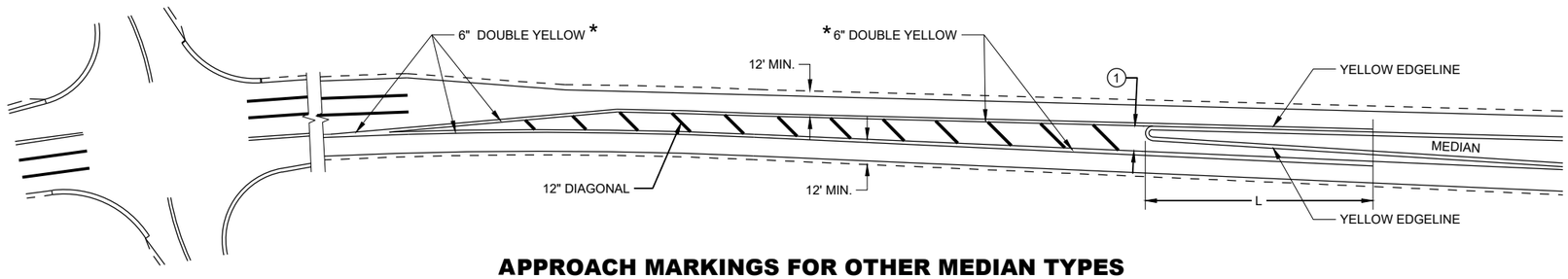
MEDIAN ISLAND DETAIL

GENERAL NOTES

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

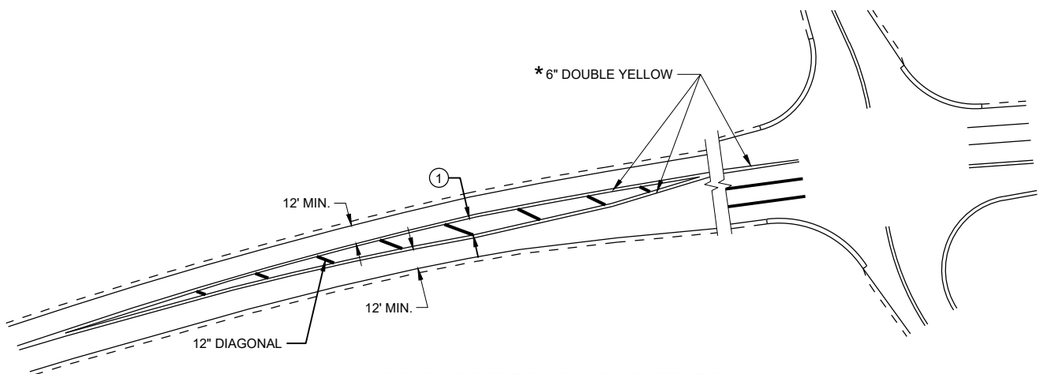
⇨ DIRECTION OF TRAVEL

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



APPROACH MARKINGS FOR OTHER MEDIAN TYPES

SPEED LIMIT	L
<35 MPH	5'
35> MPH	50'



NON-APPROACH MARKINGS

MEDIAN ISLAND PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MAF ENGINEER
FHWA

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SDD 15C18-08a

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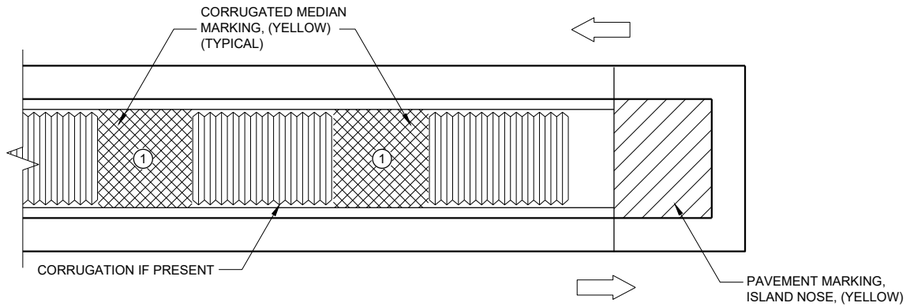
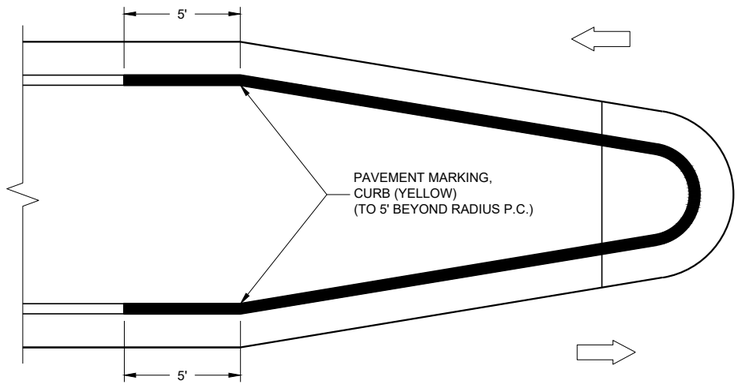
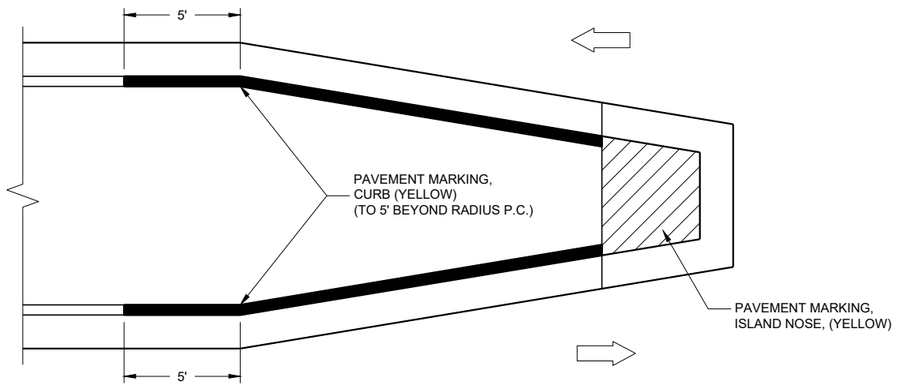


MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

(1) APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.

ISLAND NOSE MARKING

CURB MARKING

CORRUGATED MEDIAN MARKING

DIRECTION OF TRAVEL

PAVEMENT MARKINGS, MEDIAN ISLAND NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023
DATE

/S/ Jeannie Silver
STATE SIGNING AND MAR ENGINEER

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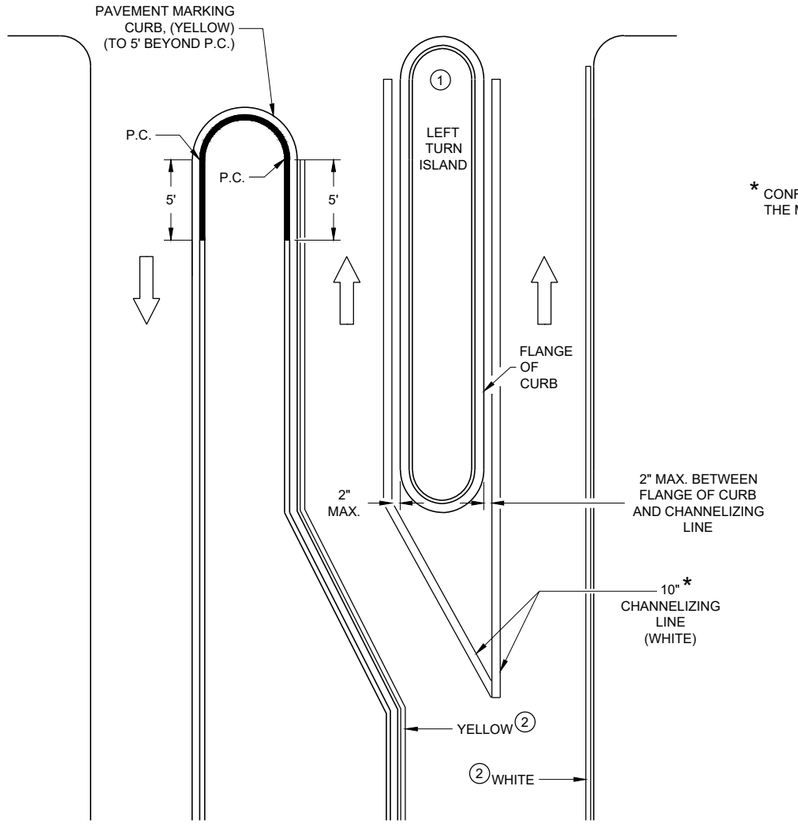
SDD 15C18-08b

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



* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEFT TURN & MEDIAN ISLAND

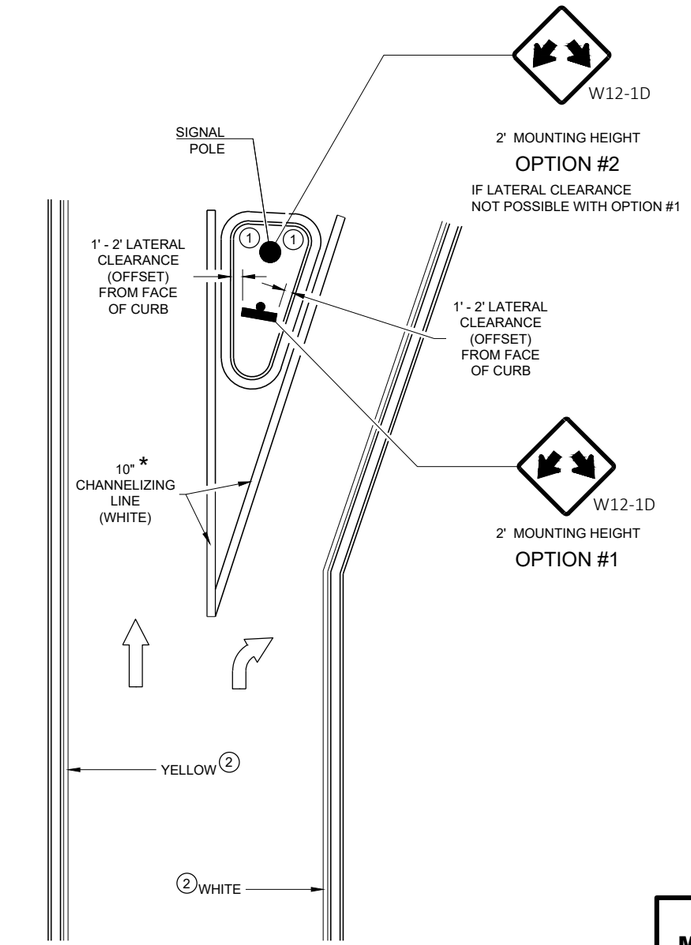
GENERAL NOTES

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

1. MARK CURB NOSES YELLOW.
2. MARK ACCORDING TO TABLE.

DIRECTION OF TRAVEL



RIGHT TURN ISLAND

MEDIAN PAVEMENT MARKINGS, DOUBLE ARROW WARNING SIGN PLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MAF ENGINEER

FHWA

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SDD 15C18-08c

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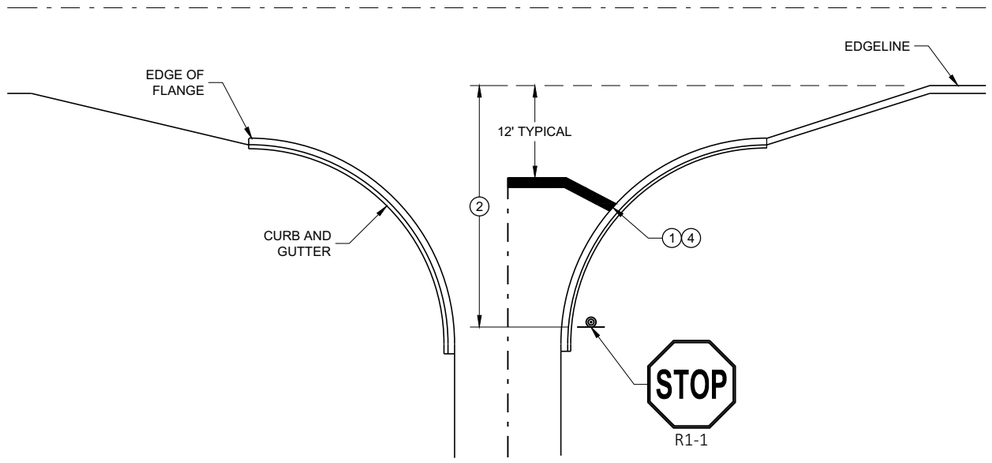
SDD 15C18-08c

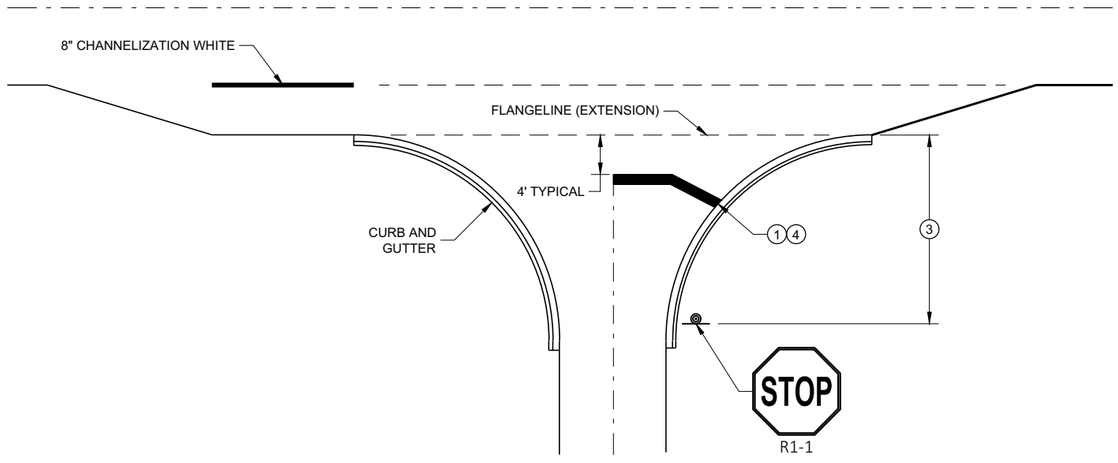
GENERAL NOTES

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

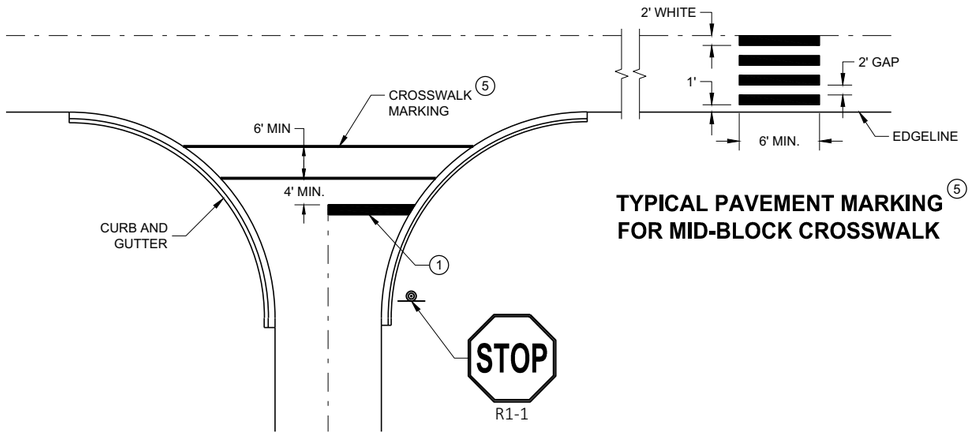
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
4. MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
5. LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

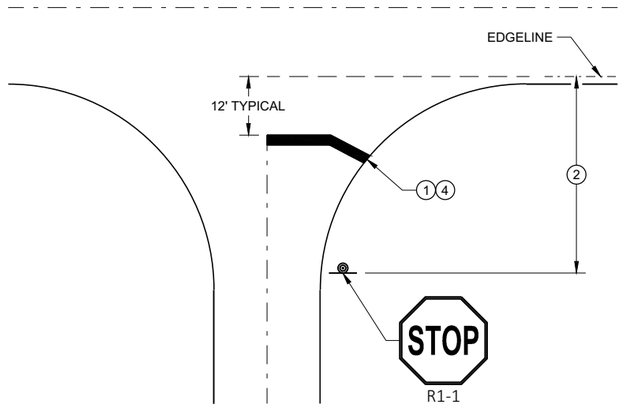


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK 5

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MARKING ENGINEER

FHWA

6

SDD 15C33 - 04

6

SDD 15C33 - 04

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

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

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

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

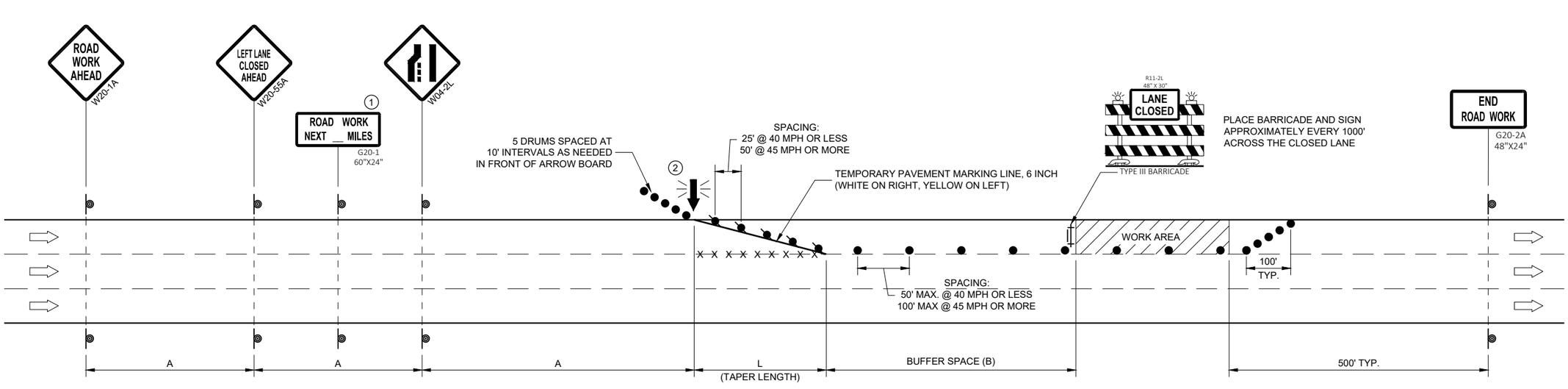
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

(1) OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

(2) WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D20-07a

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

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

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

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

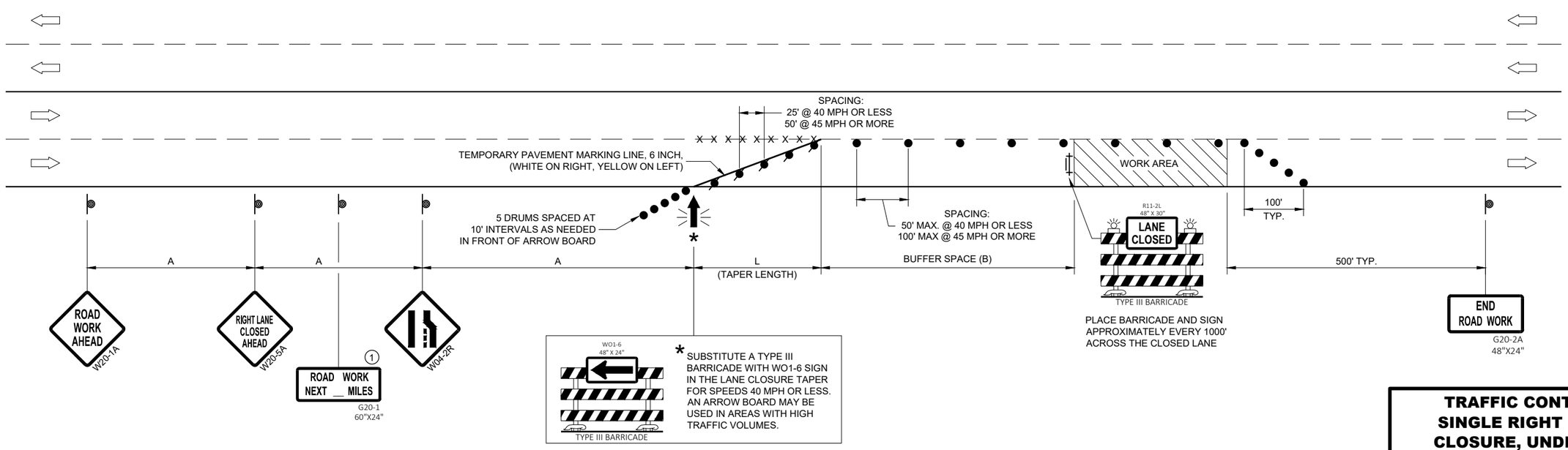
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

(1) OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'



TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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SDD 15D20-07b

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SDD 15D20-07b

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

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

DUE TO LACK OF SHOULDER/MEDIAN, ARROW BOARD IS PLACED AT THE THE END OF THE TAPER.

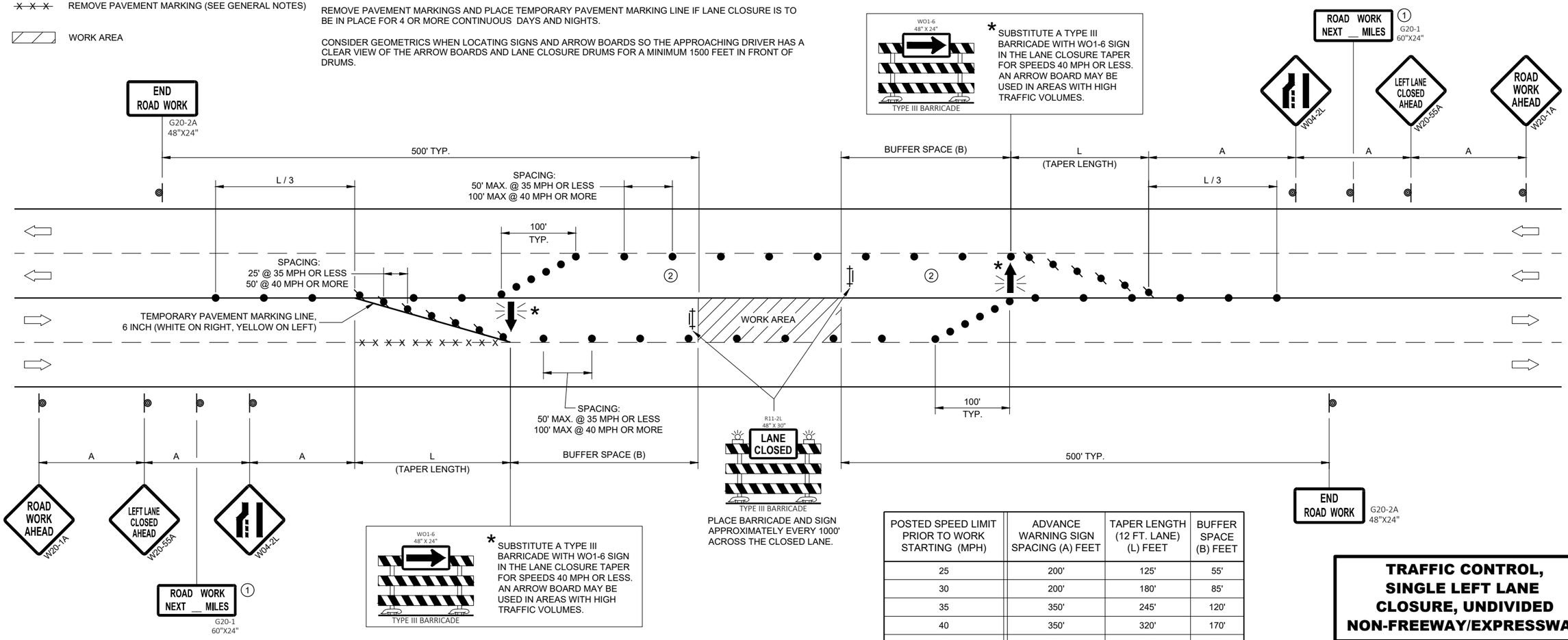
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

(1) OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

(2) LANE MAY BE OPENED WHEN WORKERS ARE NOT PRESENT IN THE WORK AREA.



WO1-6 48" X 24"

TYPE III BARRICADE

* SUBSTITUTE A TYPE III BARRICADE WITH WO1-6 SIGN IN THE LANE CLOSURE TAPER FOR SPEEDS 40 MPH OR LESS. AN ARROW BOARD MAY BE USED IN AREAS WITH HIGH TRAFFIC VOLUMES.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'

TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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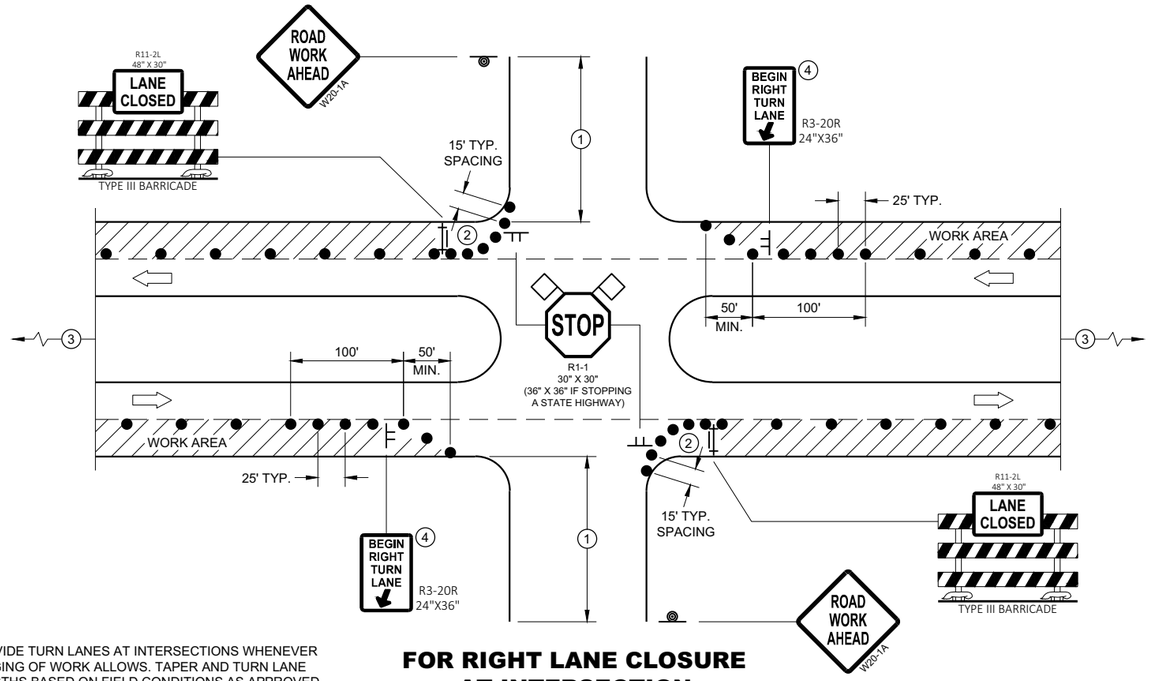
SDD 15D20-07c

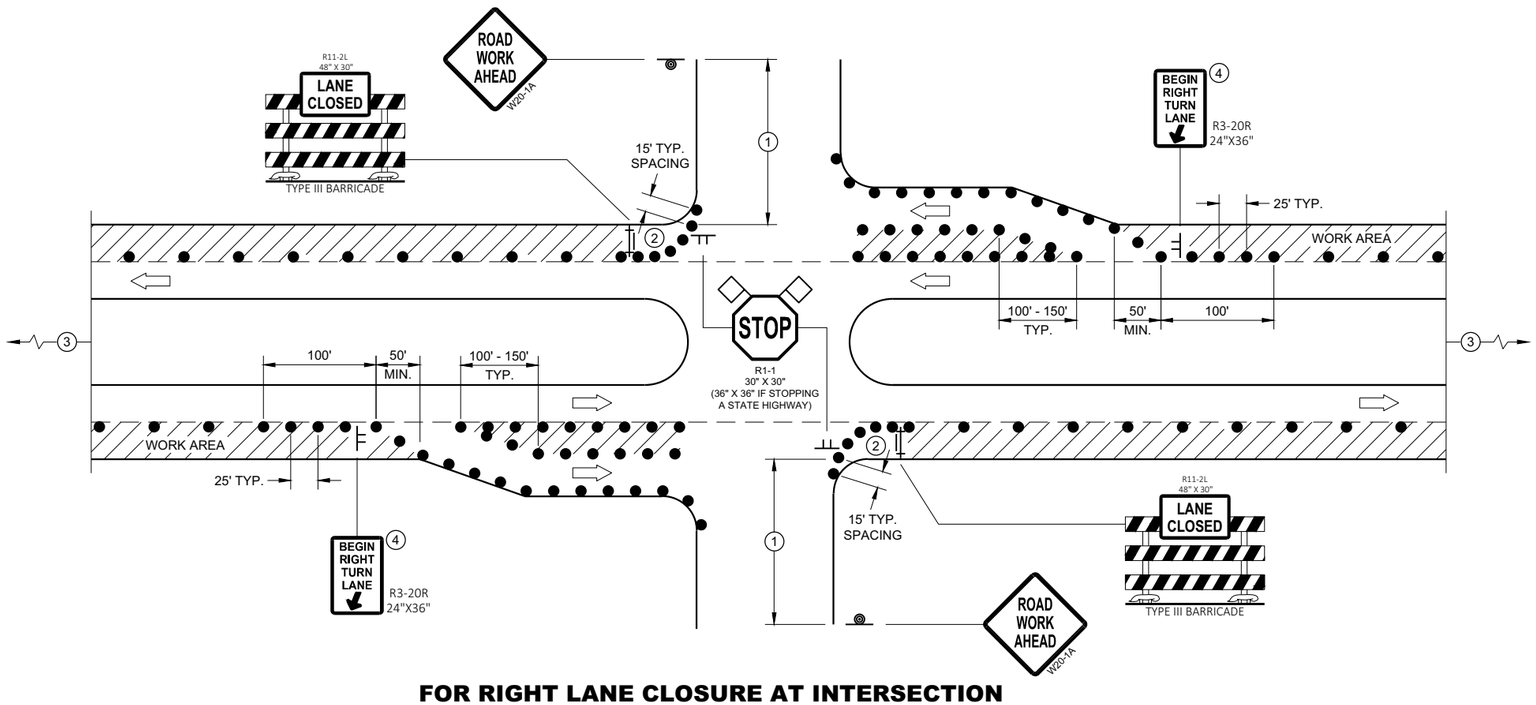
6

SDD 15D20-07c



FOR RIGHT LANE CLOSURE AT INTERSECTION

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



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

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

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

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

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.

(2) ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

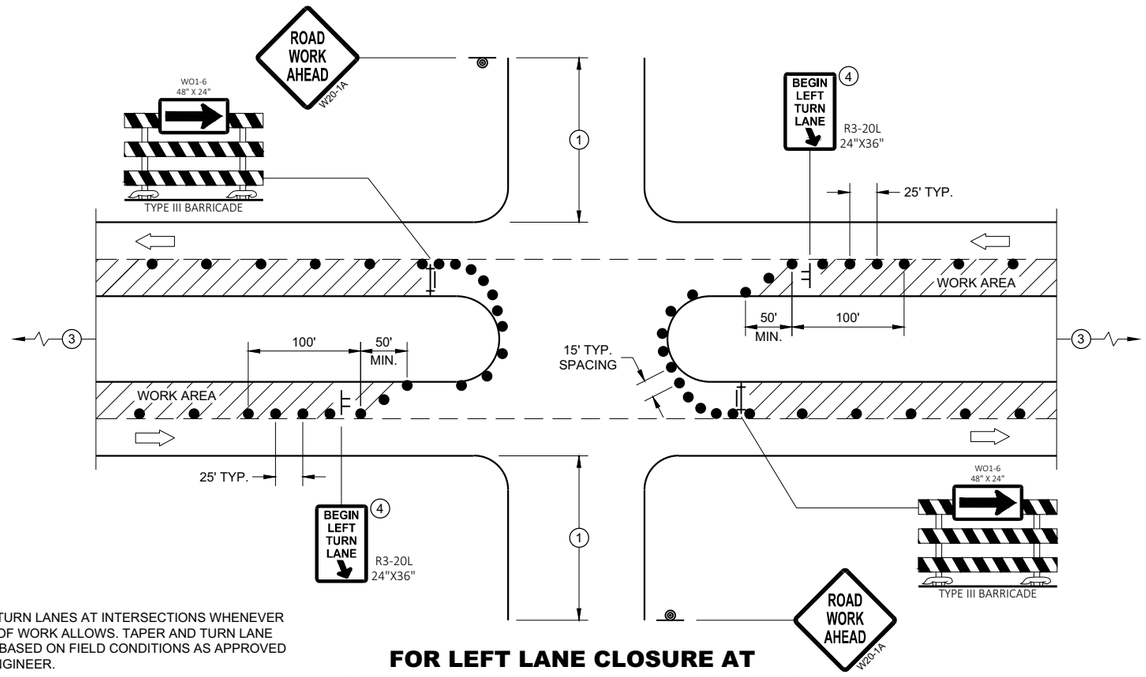
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D21 - 07a

6

SDD 15D21 - 07a



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

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

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

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

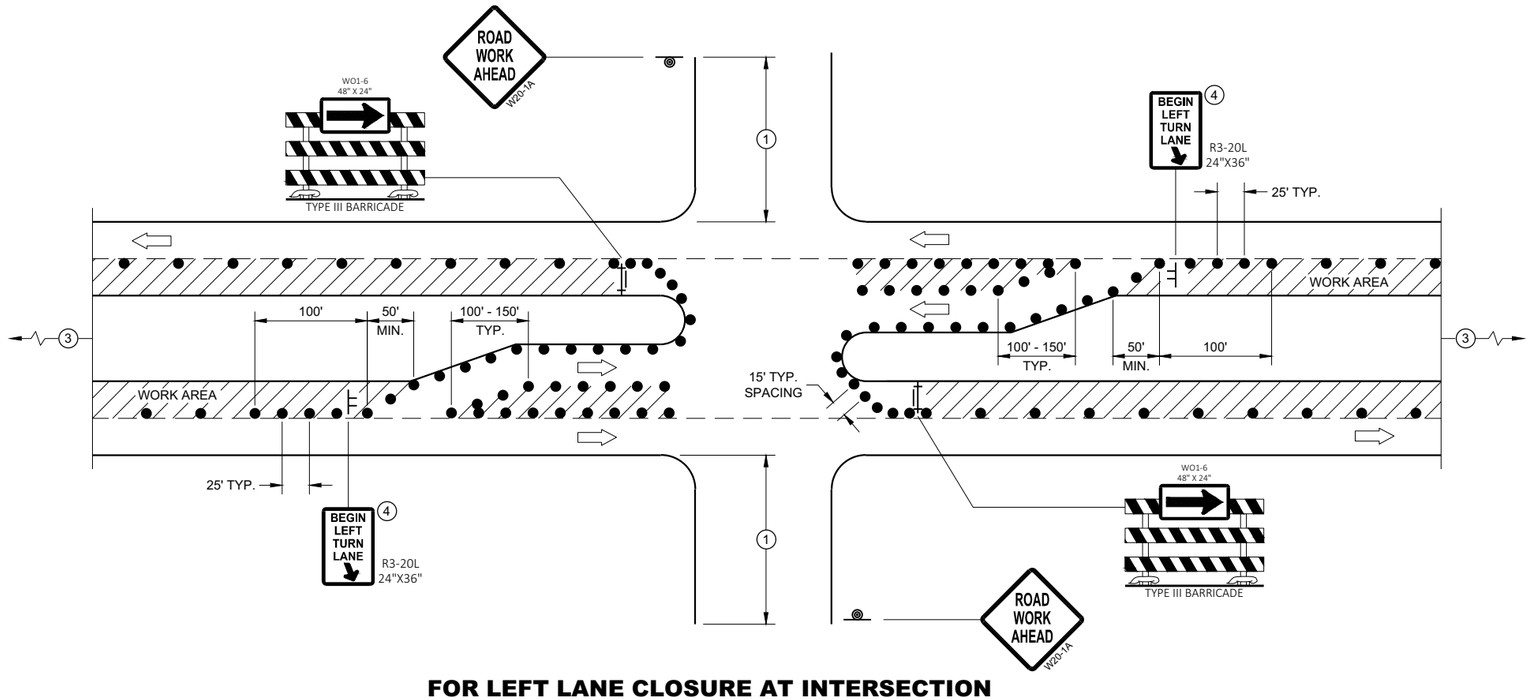
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.

(2) ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.



FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D21 - 07b

6

SDD 15D21 - 07b

GENERAL NOTES

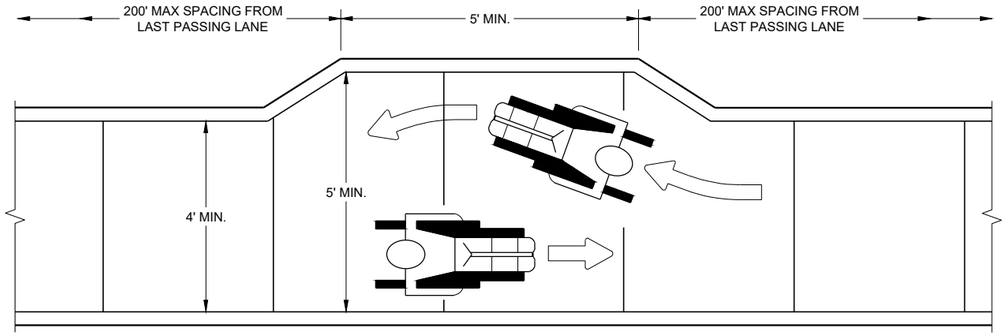
BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

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

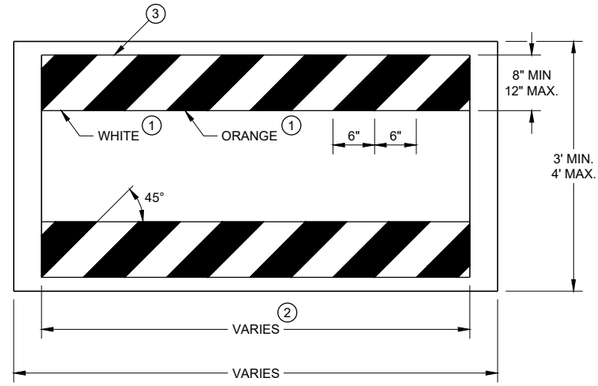
(2) SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

(3) PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

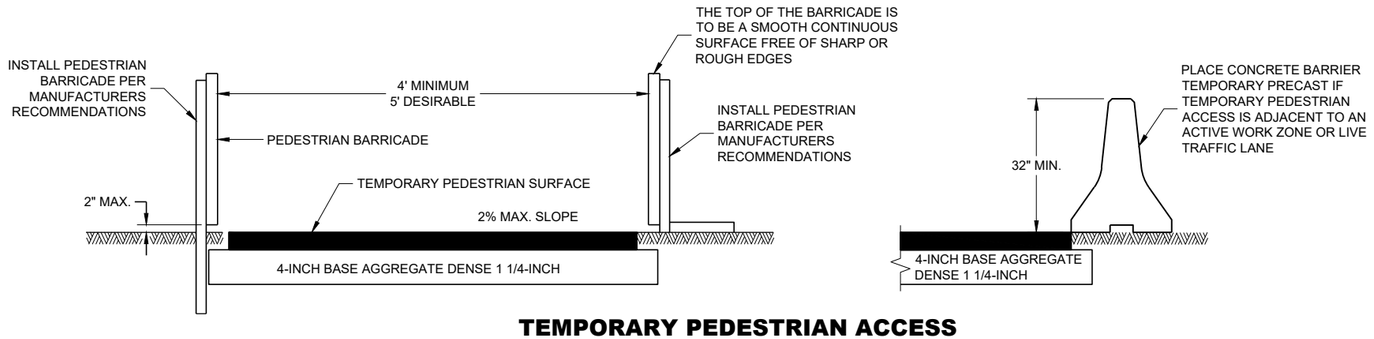
* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.



NARROW SIDEWALK PASSING DETAIL



TEMPORARY PEDESTRIAN BARRICADE*

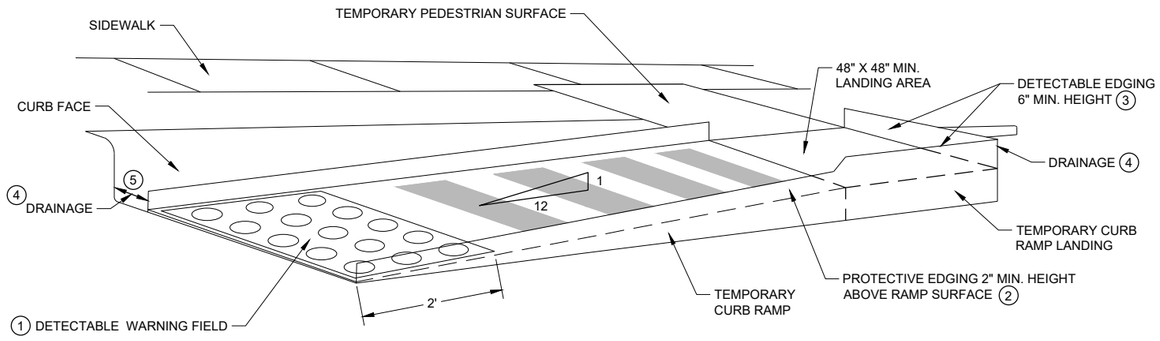


TEMPORARY PEDESTRIAN ACCESS

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

6

SDD 15D30 - 09a



PERSPECTIVE VIEW

GENERAL NOTES

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

CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

(1) INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS.

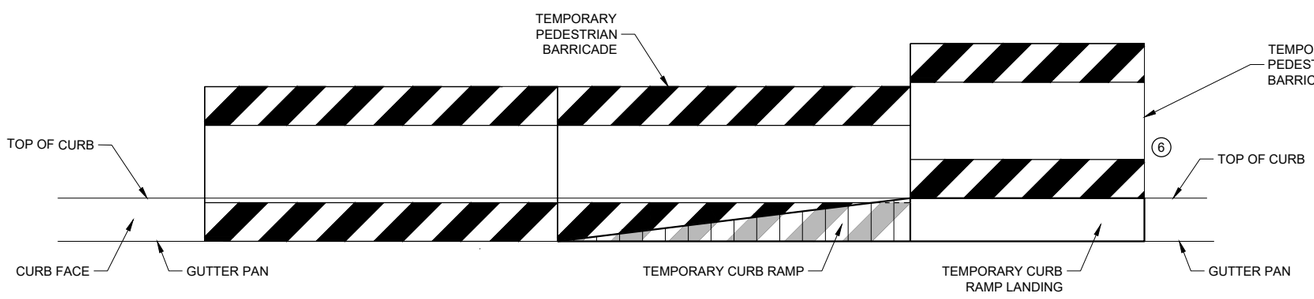
(2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

(3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

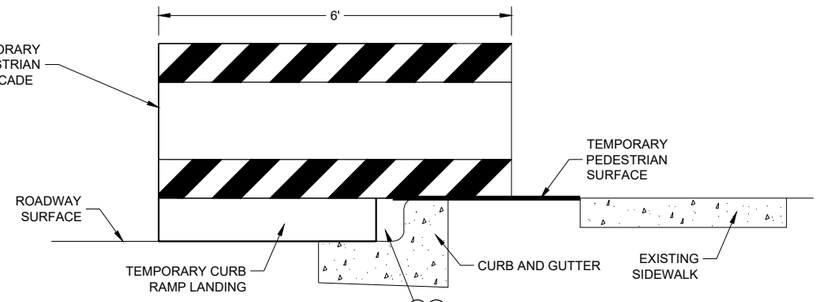
(4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(5) ENSURE CURB RAMP IS OUT OF THE GUTTER PAN.

(6) IF ONLY PART OF THE END PANEL OF TEMPORARY PEDESTRIAN BARRICADE PANEL IS NEEDED, EXTEND EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL HERE.



FRONT VIEW



SIDE VIEW

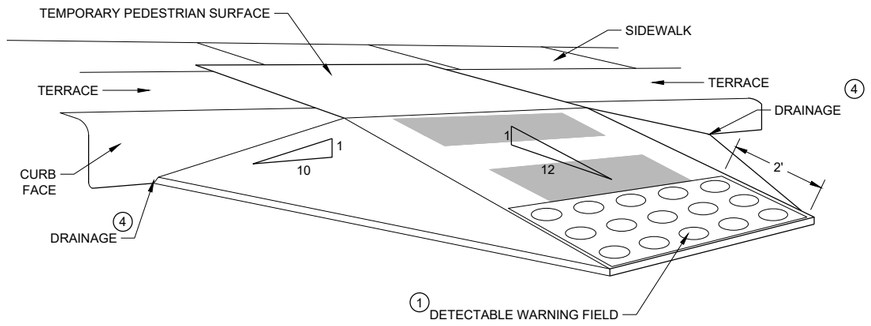
TEMPORARY CURB RAMP PARALLEL TO CURB

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

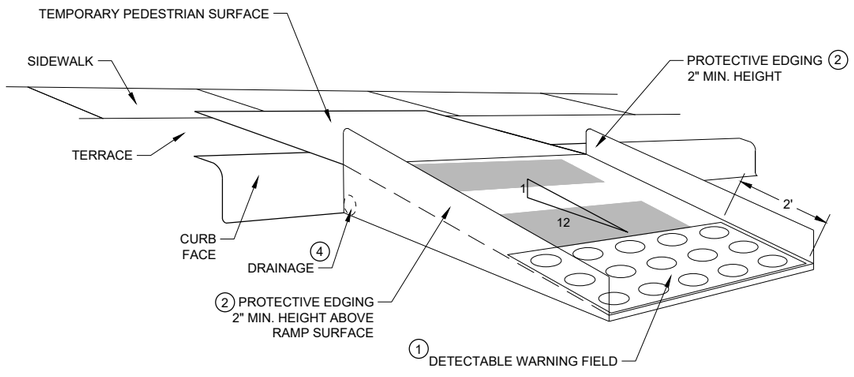
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D30 - 09b



WITH SIDE APRON (5)



WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

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

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

CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

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

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

(1) INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS

(2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

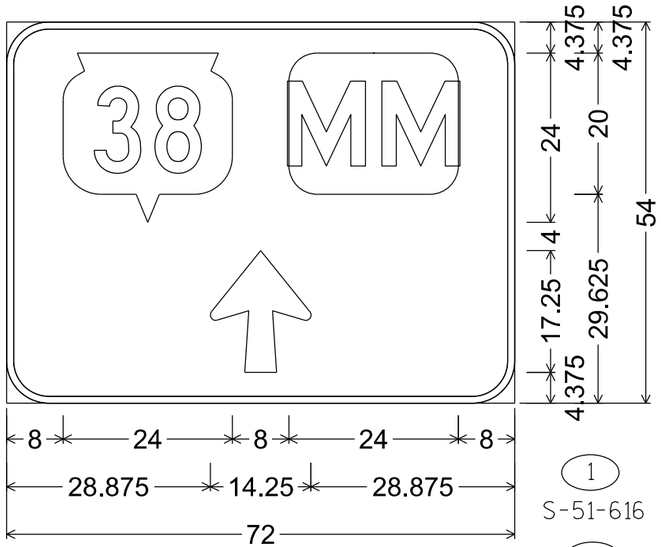
(3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

(4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(5) CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.

NOTES

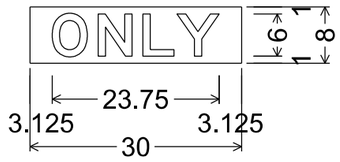
1. Signs are Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E except as noted
4. Only Plaque background on Yellow Type F Reflective Sheeting with Black Non-Reflective Message



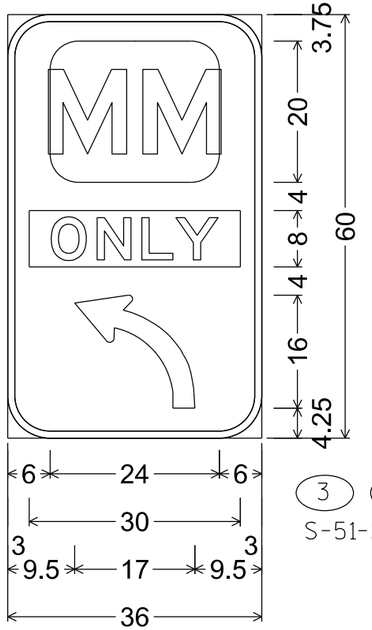
1
S-51-616

10
S-51-615

D16-1; 6.000" Radius, 1.000" Border



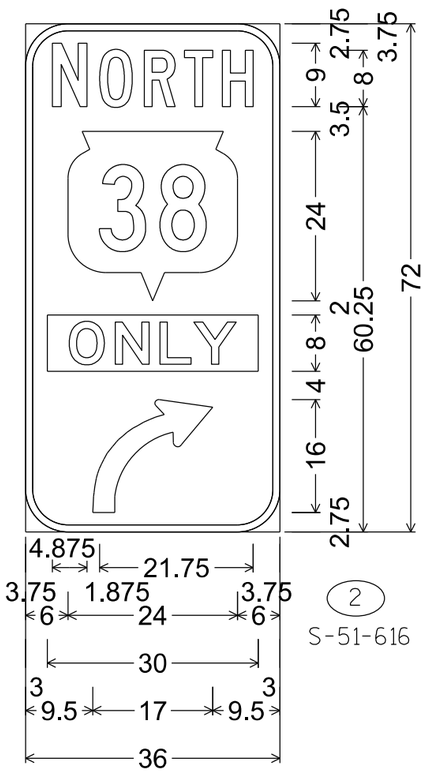
No border, Black on, Fluorescent yellow



3
S-51-262

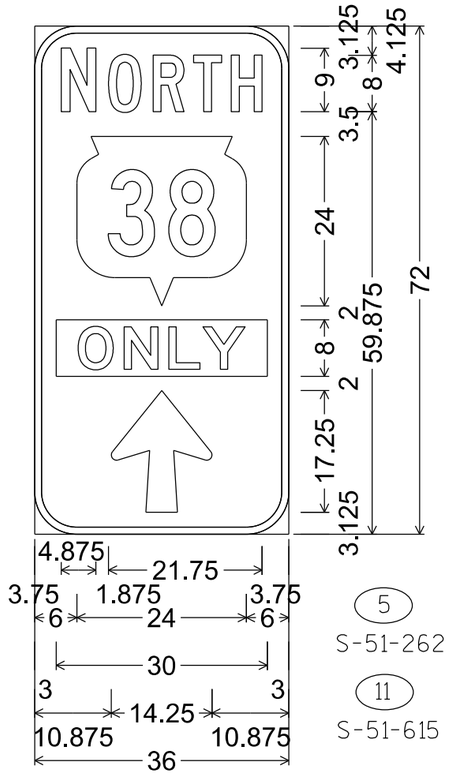
4

D16-1R; 6.000" Radius, 1.000" Border



2
S-51-616

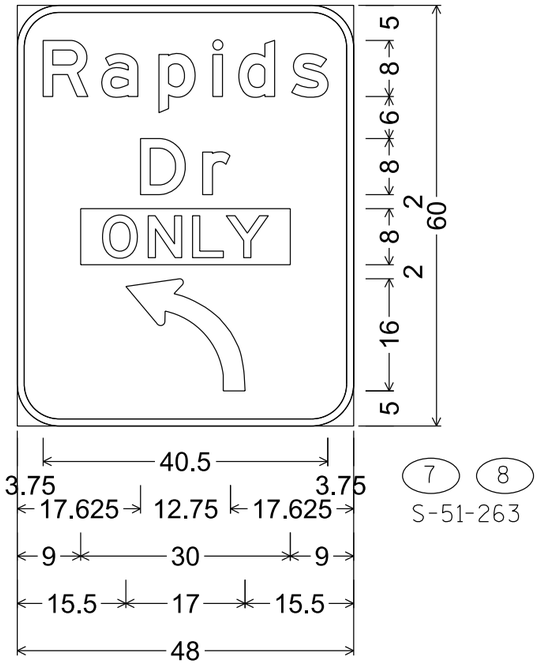
D16-1; 6.000" Radius, 1.000" Border
"NORTH", C



5
S-51-262

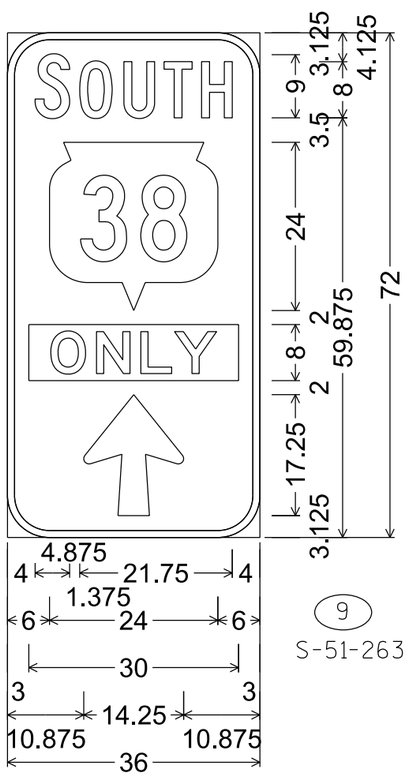
11
S-51-615

D16-1; 6.000" Radius, 1.000" Border
"NORTH", C



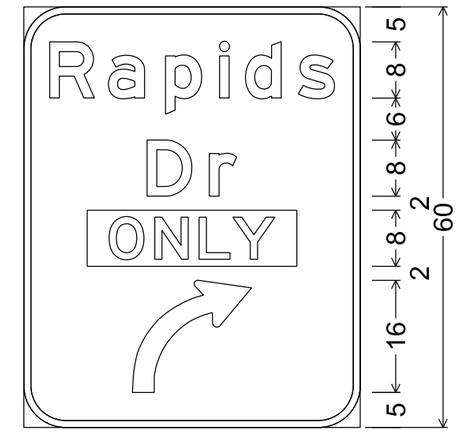
7 8
S-51-263

D16-1; 6.000" Radius, 1.000" Border
"Rapids", E; "Dr", E



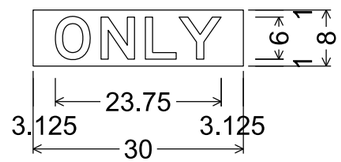
9
S-51-263

D16-1; 6.000" Radius, 1.000" Border
"SOUTH", C



12
S-51-615

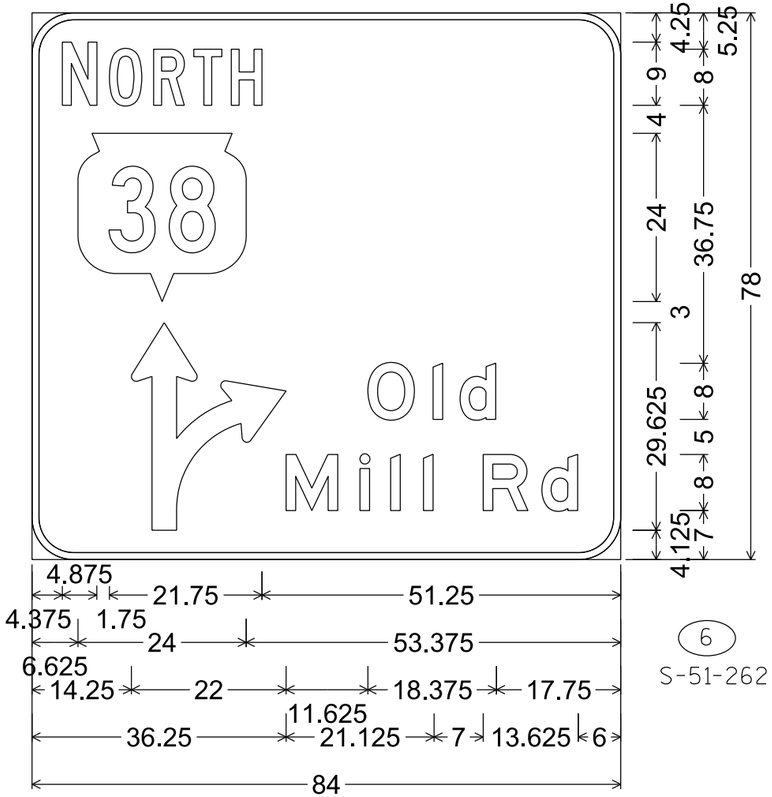
D16-1; 6.000" Radius, 1.000" Border
"Rapids", E; "Dr", E



No border, Black on, Fluorescent yellow

NOTES

1. Signs are Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E except as noted
4. Only Plaque background on Yellow Type F Reflective Sheeting with Black Non-Reflective Message



6
S-51-262

6.000" Radius, 1.000" Border
"NORTH", C; "Old", E; "Mill Rd", E

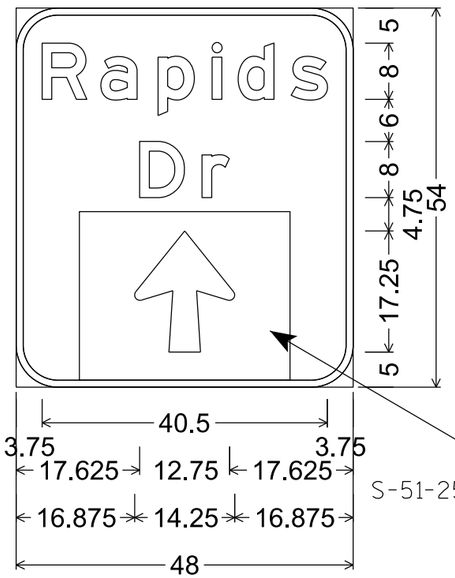
7

7

NOTES

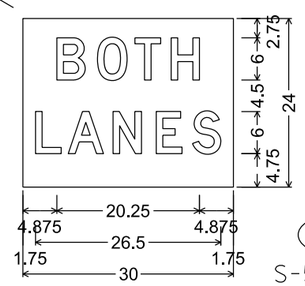
1. Signs are Type II- Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - D
4. Plaque overlay base material on .040" aluminum blank

EXISTING SIGN



S-51-257

D16-1;
6.000" Radius, 1.000" Border



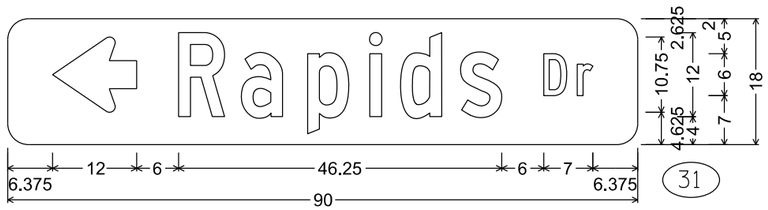
77
S-51-257

No border

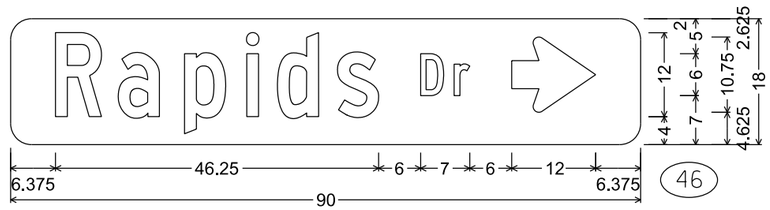
Place plaque at the top of white border to cover arrow

NOTES

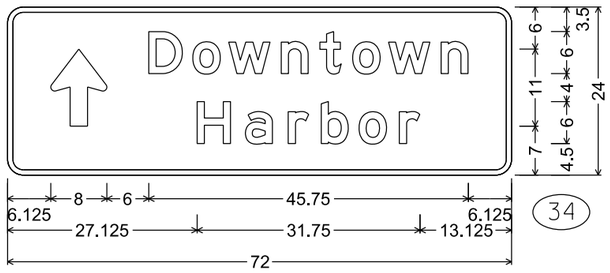
1. Signs are Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - C except as noted



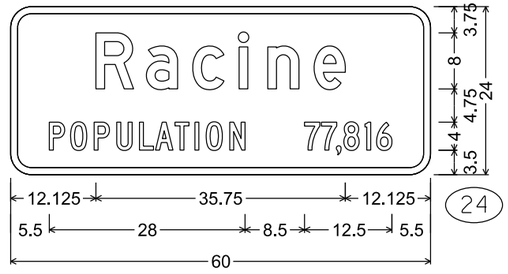
M1-94H; 3.000" Radius, No border



M1-94H; 3.000" Radius, No border



D1-2; 2.250" Radius, 0.750" Border,
"Downtown", E; "Harbor", E;

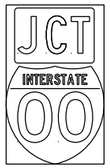


I2-3; 3.000" Radius, 1.000" Border,
"Racine", D; "POPULATION", C; "77,816", C

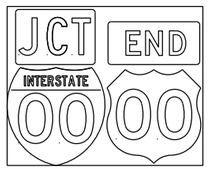
7

7

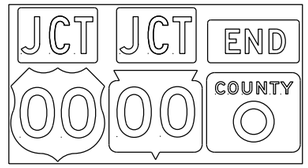
TYPICAL ASSEMBLIES



J1-1



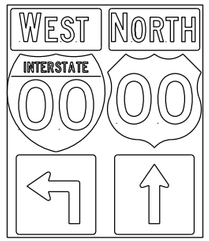
J1-2



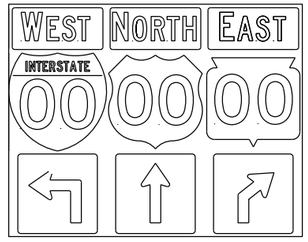
J1-3

JR1-1

J2-1

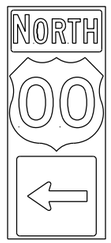


J2-2

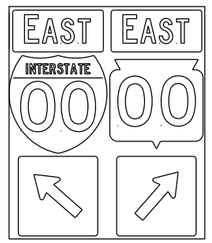


J2-3

JV
(Typical Vertical J-Assembly
See Note 10 and 11)



J3-1



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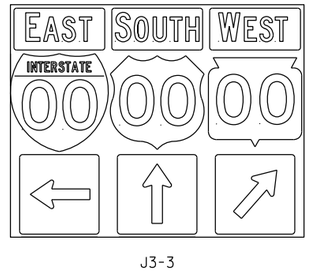

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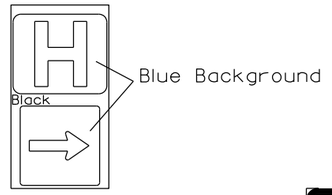
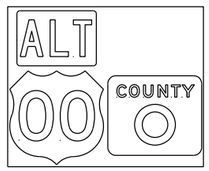
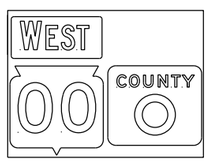


JH-1

J4-1

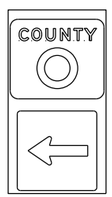


J4-2



J4-2

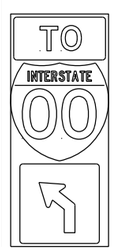
J12-1



J13-1

J32-1

J33-1



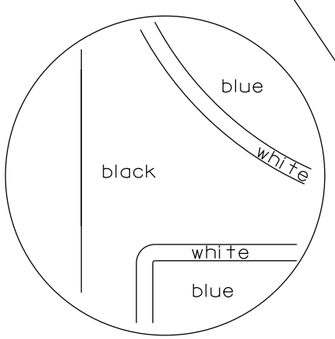
J22-1

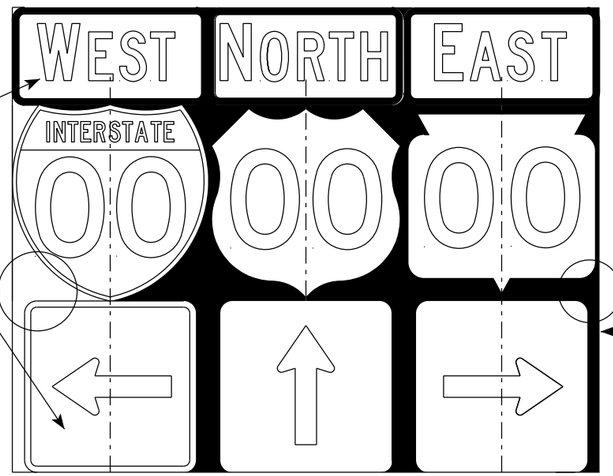
J23-1

JR13-1

JR23-1

JR99-1





NOTES

1. Signs are Type II - Type H Reflective
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

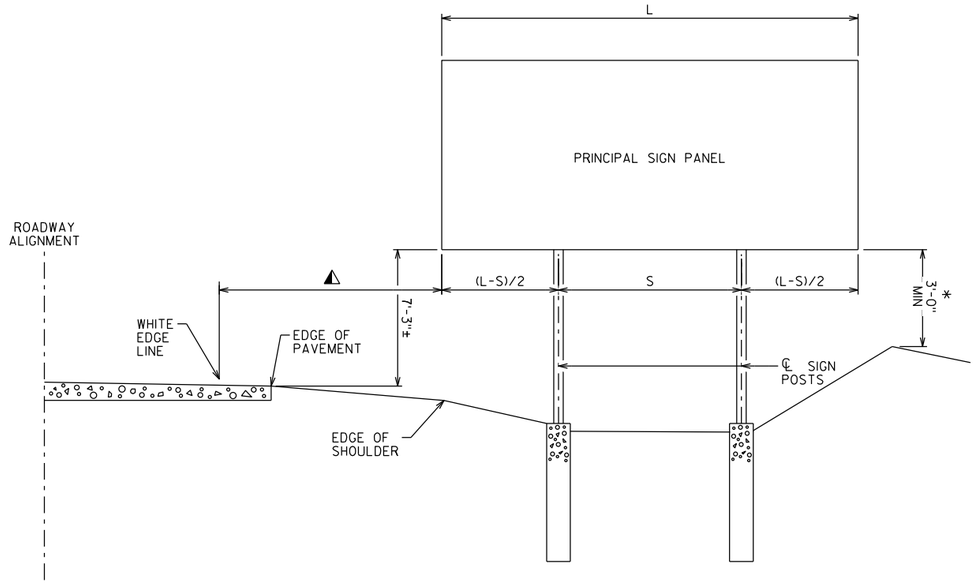
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

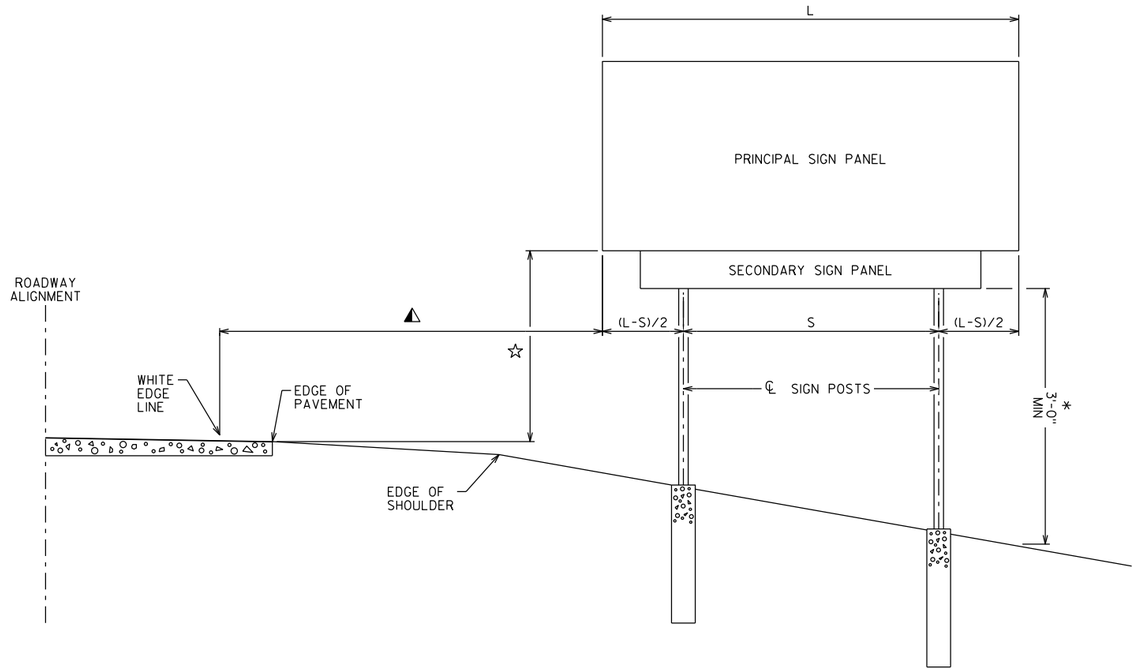
DATE 3/18/21 PLATE NO. A2-1S.9

PROJECT NO:

SHEET NO: 319 E



INSTALLATION WITHOUT SECONDARY SIGN



INSTALLATION WITH SECONDARY SIGN

TYPE 1 SIGN INSTALLATION NOTES:

FOR A 2-POST INSTALLATION, "S" EQUALS 3L/5, BUT SHALL NOT BE LESS THAN 6'-0".

FOR A 3-POST INSTALLATION, "S" EQUALS 5L/7, BUT SHALL NOT BE LESS THAN 12'-0". THE SPACING BETWEEN ANY TWO POSTS SHALL NOT BE LESS THAN 6'-0".

◭ UNLESS NOTED IN THE PLANS, THE SIGN OFFSET DISTANCE SHALL BE A MINIMUM OF 17'-6" FROM THE WHITE EDGE LINE, DESIRABLE 30'-0".

THE ± TOLERANCE SHOWN ON THIS SHEETS IS 3".

THE VERTICAL SIGN HEIGHT CLEARANCES SHOWN ON THIS SHEET ARE MEASURED FROM THE BOTTOM OF THE SIGN PANEL TO THE NEAR EDGE OF PAVEMENT.

☆ THE VERTICAL CLEARANCE SHALL BE 8'-3"± WHEN THE SECONDARY SIGN HEIGHT IS 3'-0" OR LESS. FOR SECONDARY SIGN HEIGHTS LARGER THAN 3'-0", THE VERTICAL CLEARANCE TO THE BOTTOM OF THE SECONDARY SIGN PANEL SHALL BE 5'-3"±.

* THE VERTICAL SIGN GROUND CLEARANCE ON RIGHT END OF SIGN SHALL BE A MINIMUM OF 3'-0"±.

POST LENGTHS SHOWN IN THE MISCELLANEOUS QUANTITIES ARE ESTIMATED LENGTHS. THE CONTRACTOR SHALL VERIFY POST LENGTHS AT THE TIME OF FINAL GRADING.

REFER TO THE TRAFFIC ENGINEERING OPERATIONS AND SAFETY MANUAL FOR FURTHER GUIDANCE ON MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

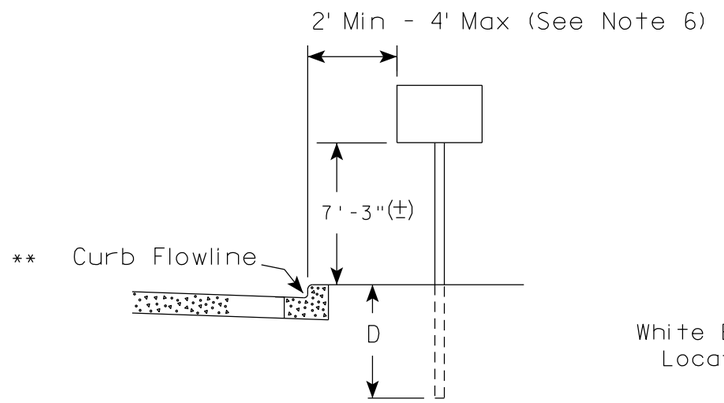
DRAWN BY | PLANS CK'D.

TYPICAL TYPE I SIGN INSTALLATION

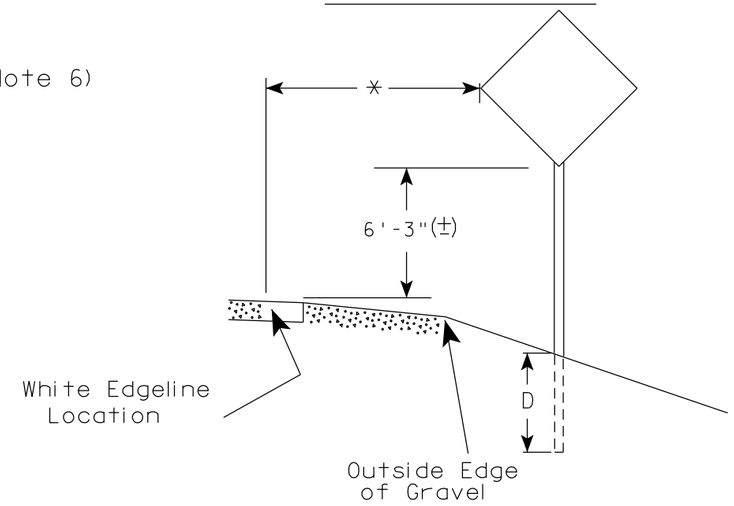
SHEET A4-1.10

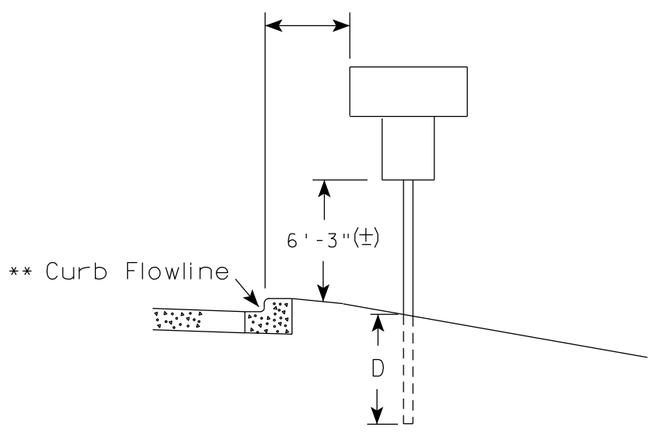
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 320	E

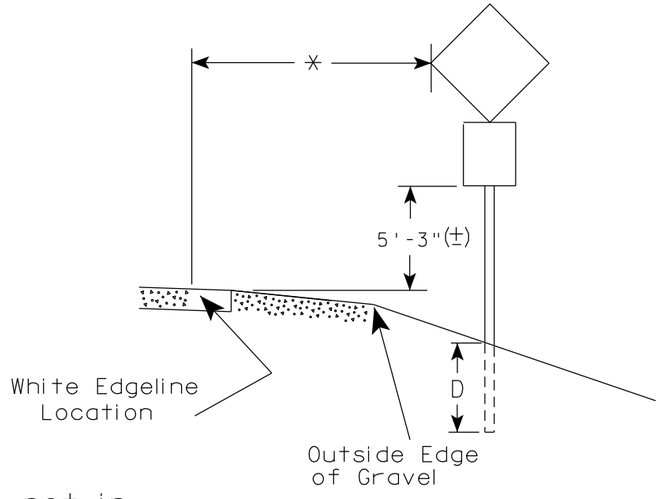
URBAN AREA



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.

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

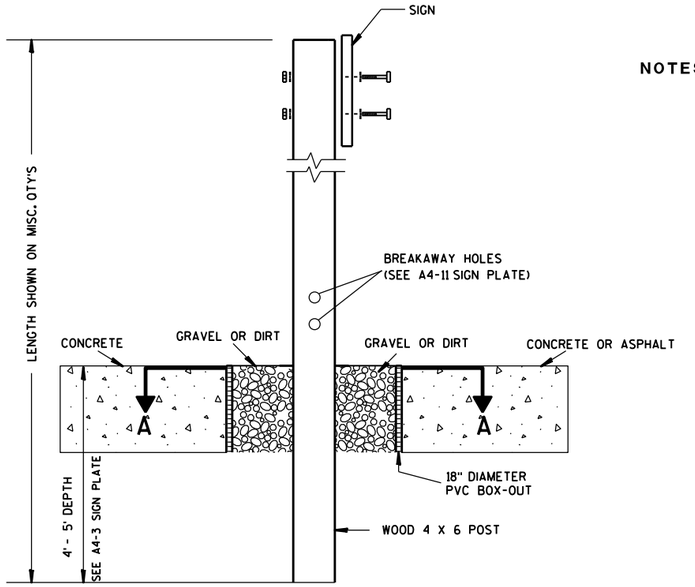
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

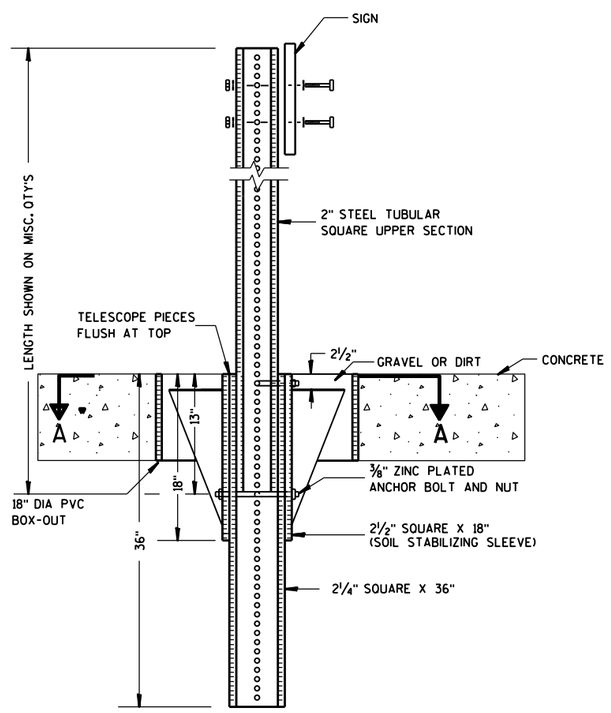
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 321	E



ELEVATION VIEW

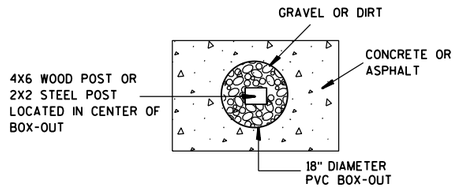
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

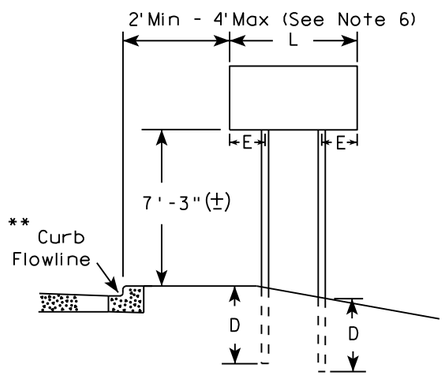
APPROVED Matthew R Rauch
for State Traffic Engineer

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

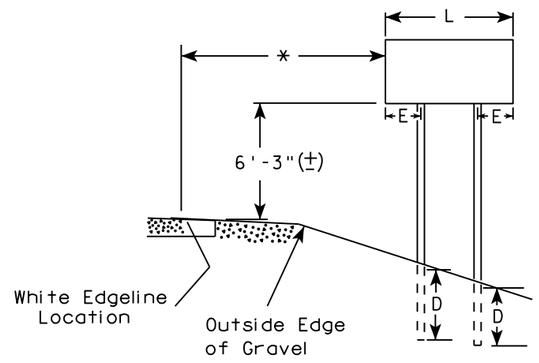
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

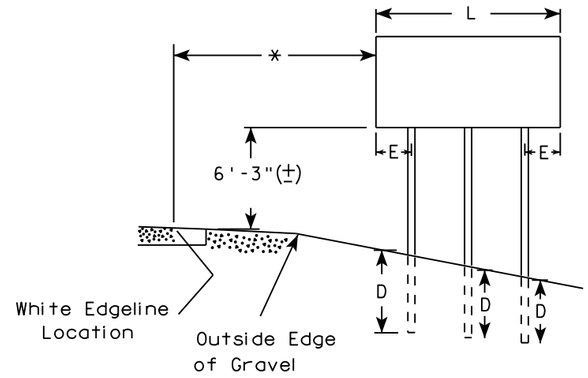
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

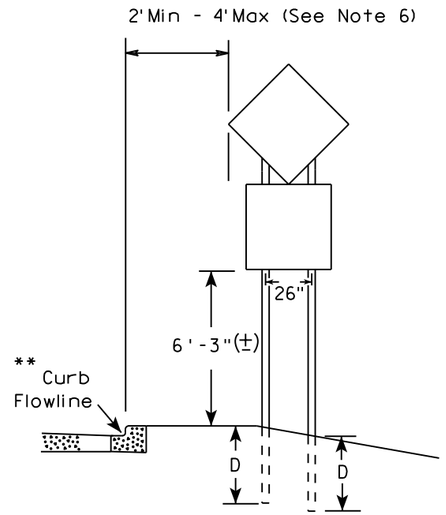
URBAN AREA



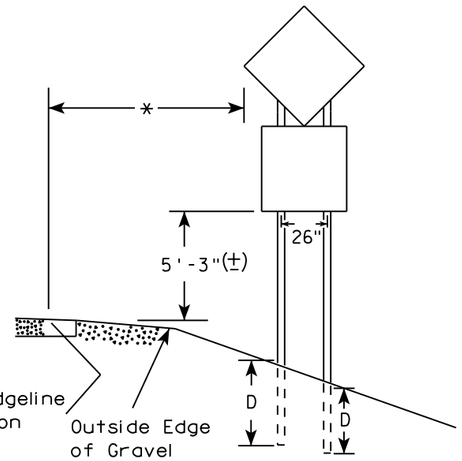
RURAL AREA (See Note 3)







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" (±) or 6'-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" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-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" (±).

* 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

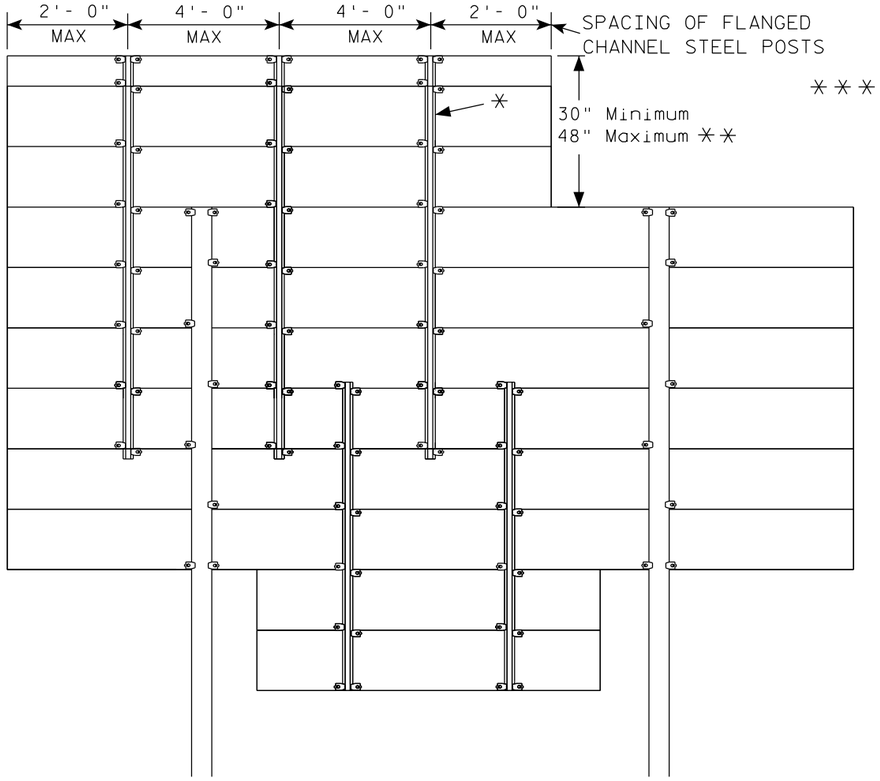
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 323	E

GROUND MOUNTED SIGN



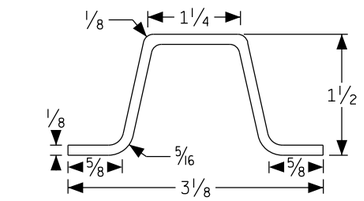
✳=2.00 lb/ft AND 4.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

✳✳=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

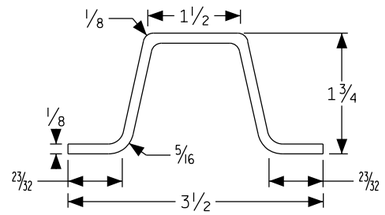
✳✳✳ THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 15 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 15 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAILS

NOT TO SCALE

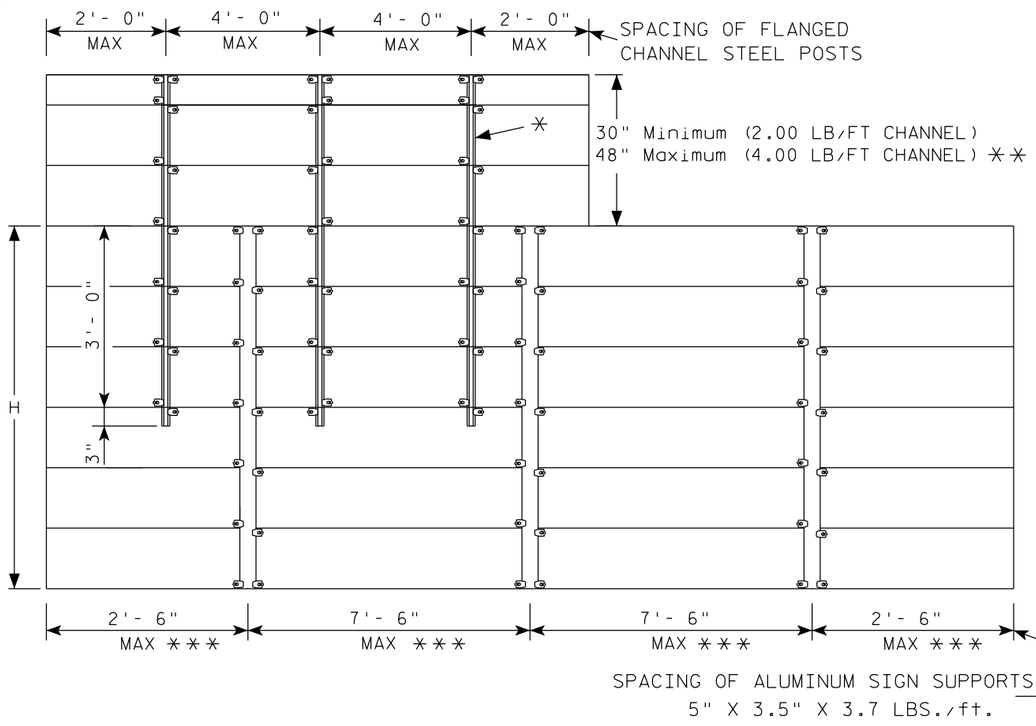


2.00 LB/FT CHANNEL



4.00 LB/FT CHANNEL

SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.

2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.

3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.

4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.

5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)

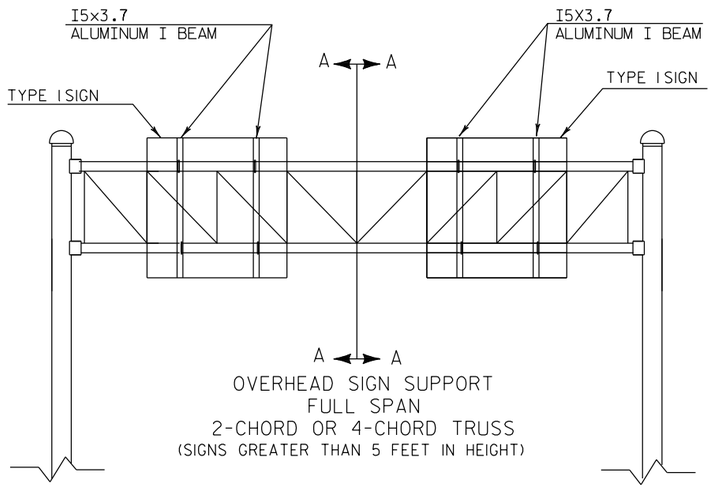
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

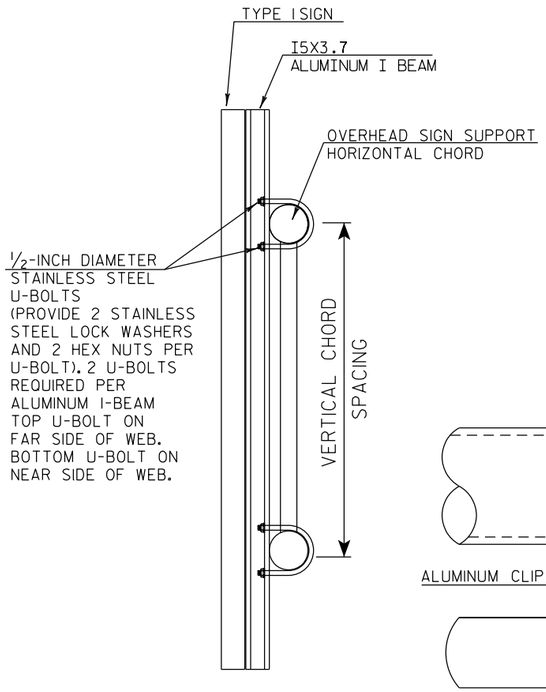
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

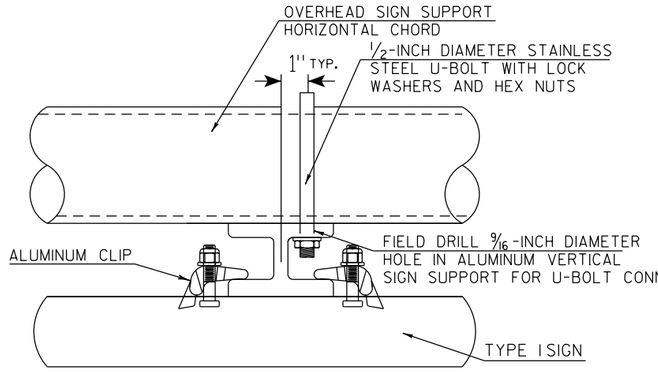
DATE 1/07/20 PLATE NO. A4-6.12



OVERHEAD SIGN SUPPORT
FULL SPAN
2-CHORD OR 4-CHORD TRUSS
(SIGNS GREATER THAN 5 FEET IN HEIGHT)



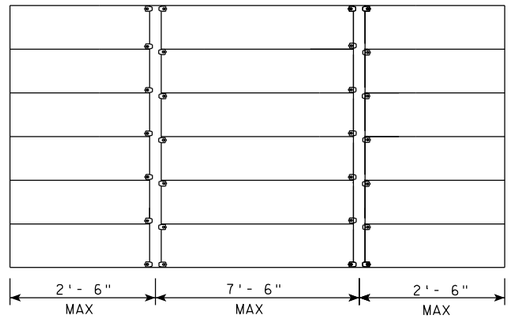
CUT SECTION A-A



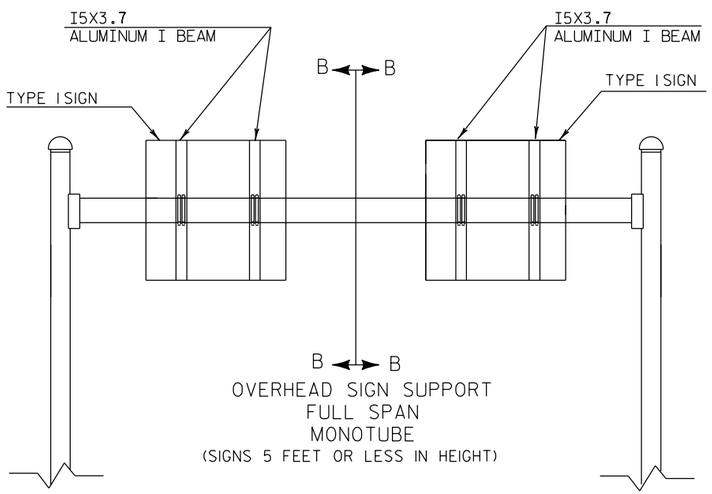
TYPICAL SIGN CONNECTION FOR
2-CHORD OR 4-CHORD TRUSS
PLAN VIEW

GENERAL NOTES

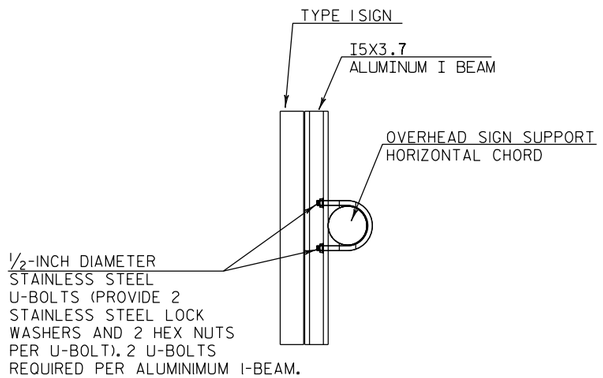
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
   STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.
   STAINLESS STEEL HEX NUTS ASTM A276.
   ALUMINUM I-BEAMS ARE 6061-T6.
9. SLOTTED HOLES IN I-BEAMS ARE NOT ALLOWED



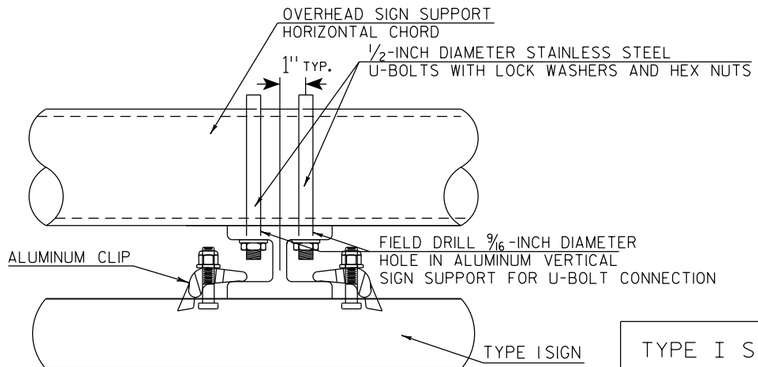
SPACING OF I5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



OVERHEAD SIGN SUPPORT
FULL SPAN
MONOTUBE
(SIGNS 5 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
MONOTUBE
PLAN VIEW

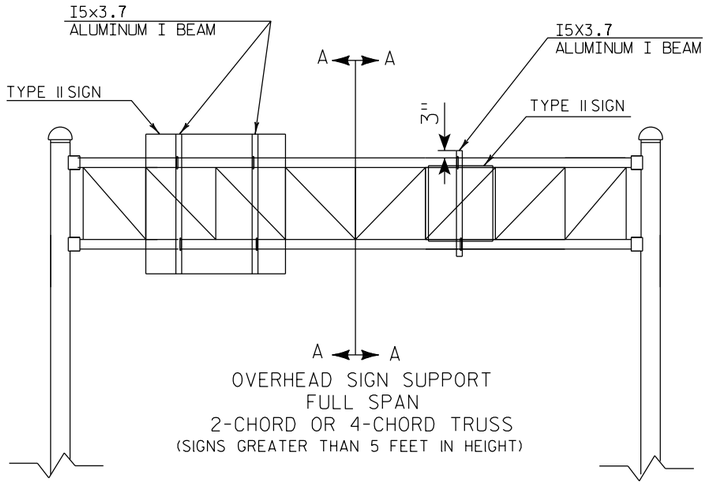
TYPE I SIGN CONNECTION
TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION

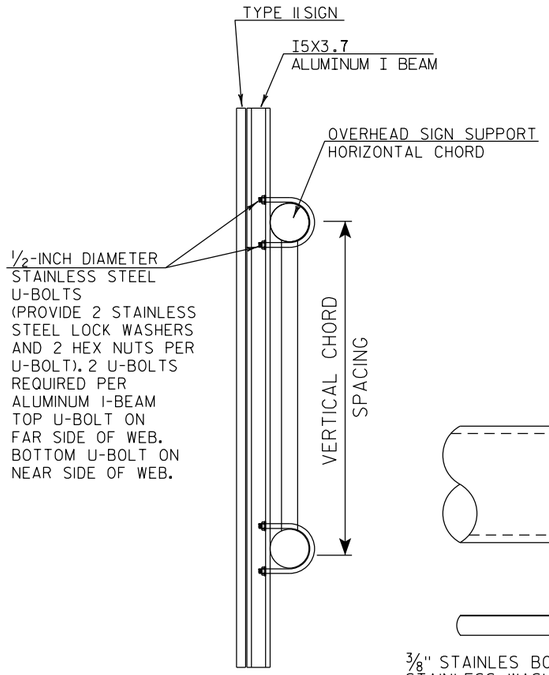
APPROVED Matthew R Rauch
State Traffic Engineer

DATE 1/07/20 PLATE NO. A4-7A.1

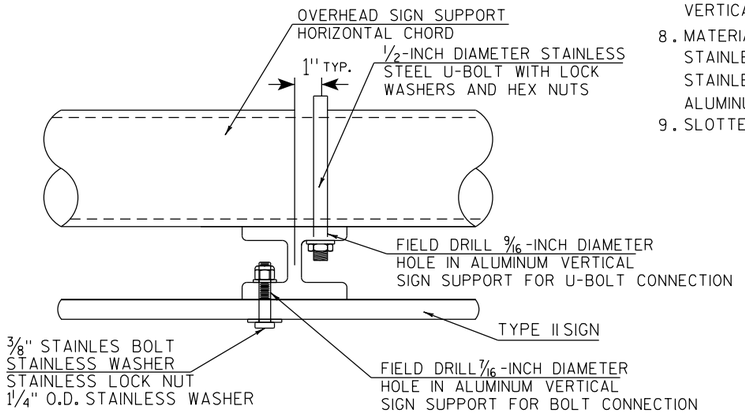
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 325	E



OVERHEAD SIGN SUPPORT
FULL SPAN
2-CHORD OR 4-CHORD TRUSS
(SIGNS GREATER THAN 5 FEET IN HEIGHT)



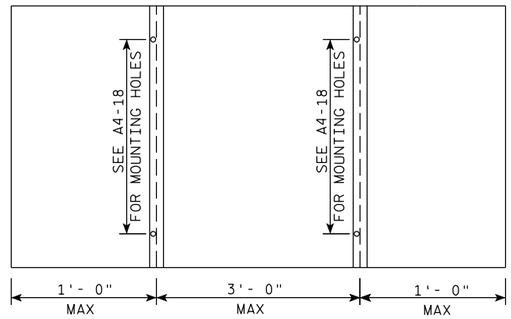
CUT SECTION A-A



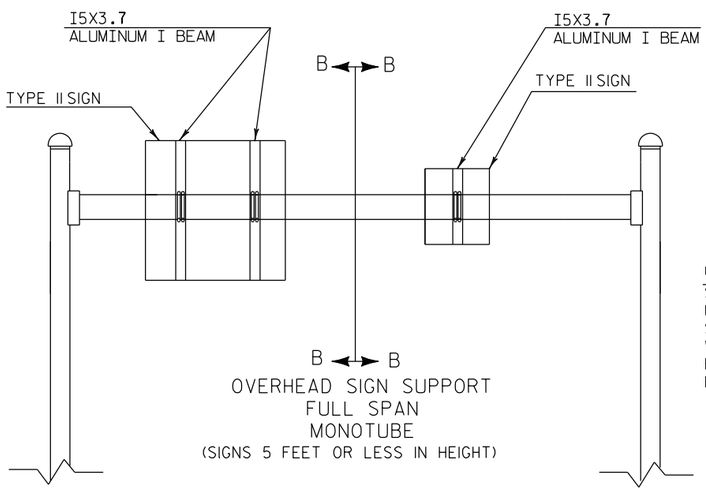
TYPICAL SIGN CONNECTION FOR
2-CHORD OR 4-CHORD TRUSS
PLAN VIEW

GENERAL NOTES

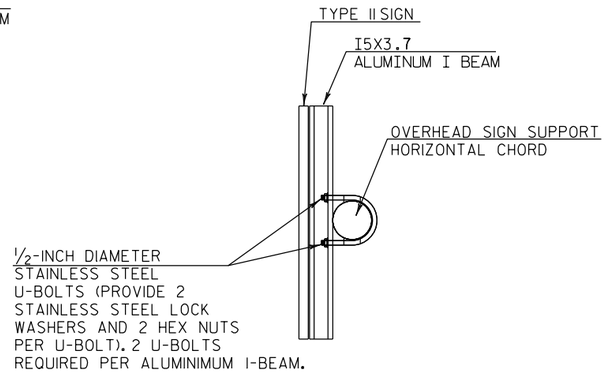
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE STAINLESS BOLTS AT BOLT HOLES IN SIGN PANEL PER SIGN PLATE A4-18.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
   STAINLESS STEEL U-BOLTS, BOLTS, AND LOCKWASHERS ASTM 304.
   STAINLESS STEEL HEX NUTS ASTM A276.
   ALUMINUM I-BEAMS ARE 6061-T6.
9. SLOTTED HOLES IN I-BEAMS ARE NOT ALLOWED



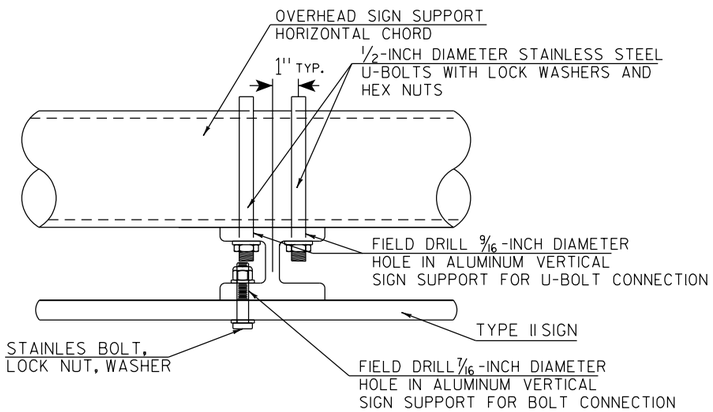
SPACING OF I5X3.7 ALUMINUM
MULTIPLE VERTICAL SIGN SUPPORTS



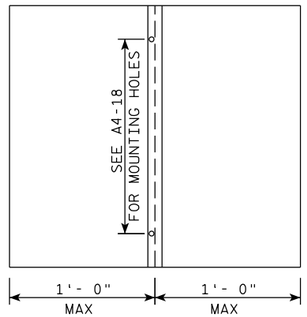
OVERHEAD SIGN SUPPORT
FULL SPAN
MONOTUBE
(SIGNS 5 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
MONOTUBE
PLAN VIEW



SPACING OF I5X3.7 ALUMINUM
SINGLE VERTICAL SIGN SUPPORT

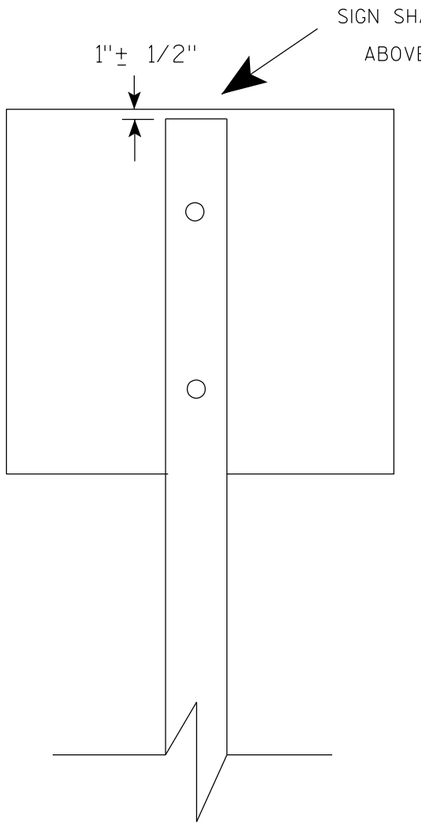
TYPE II SIGN CONNECTION
TO OVERHEAD SIGN SUPPORT

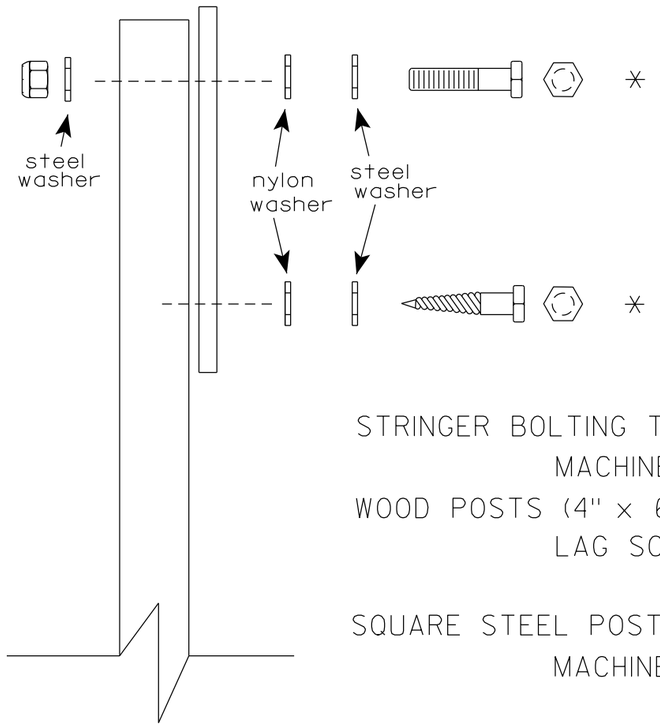
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/07/20 PLATE NO. A4-7B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 326	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

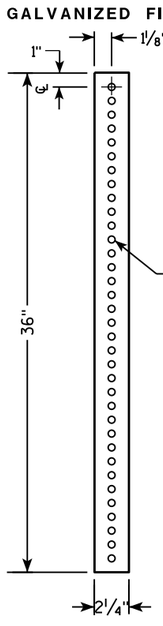
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

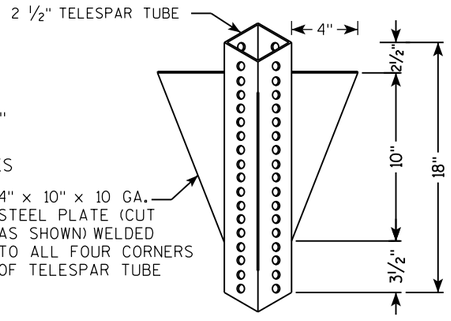
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

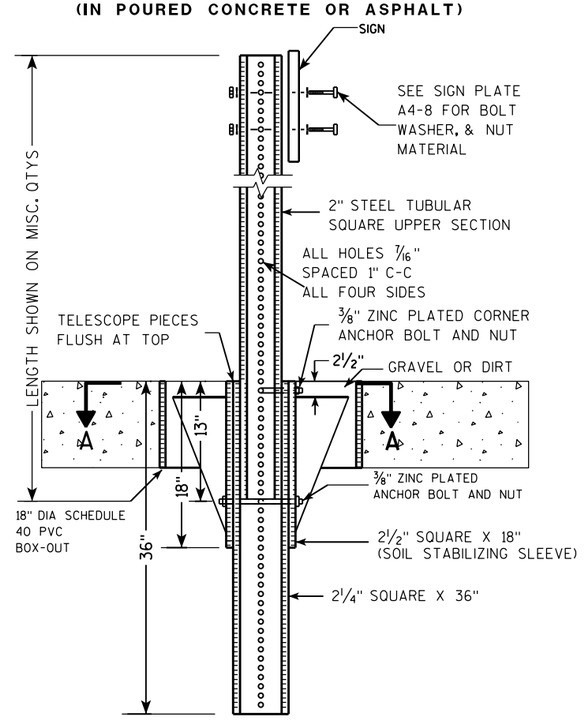
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



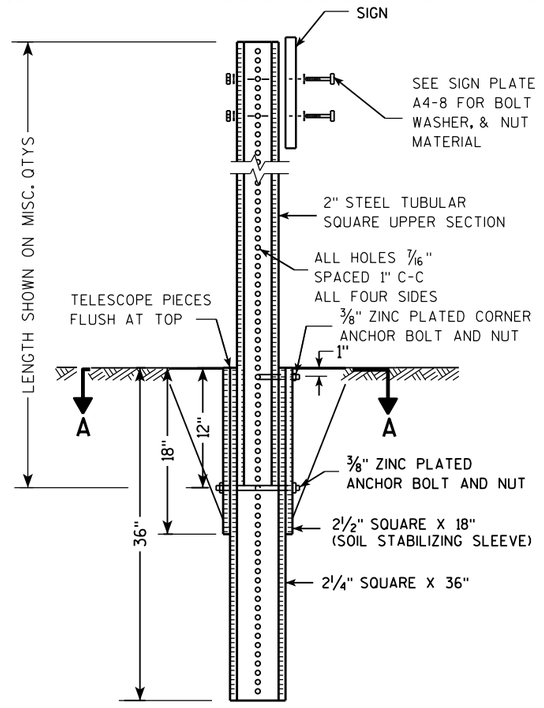
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

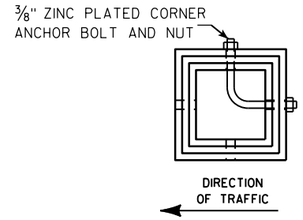


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

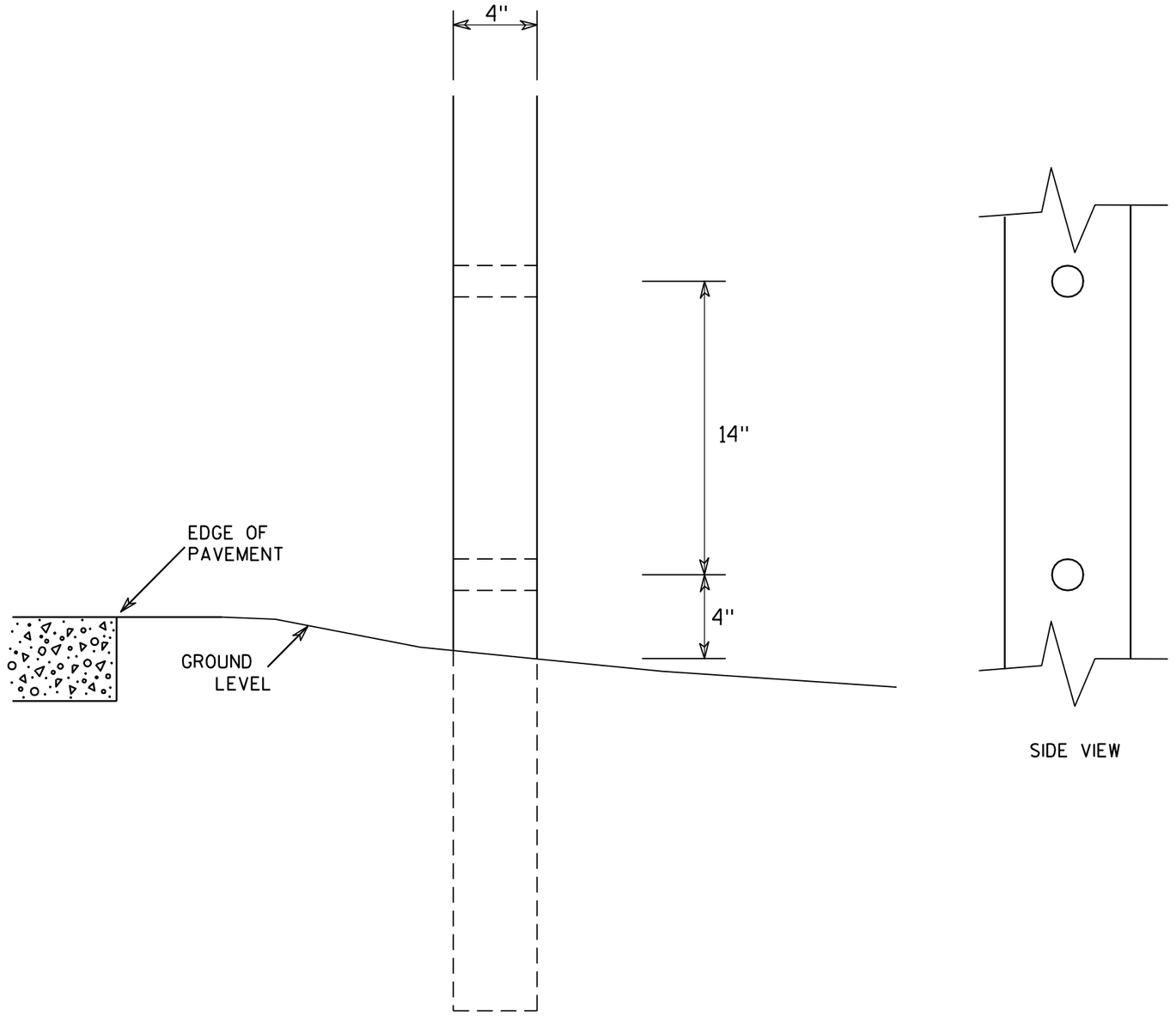
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 328 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.

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7

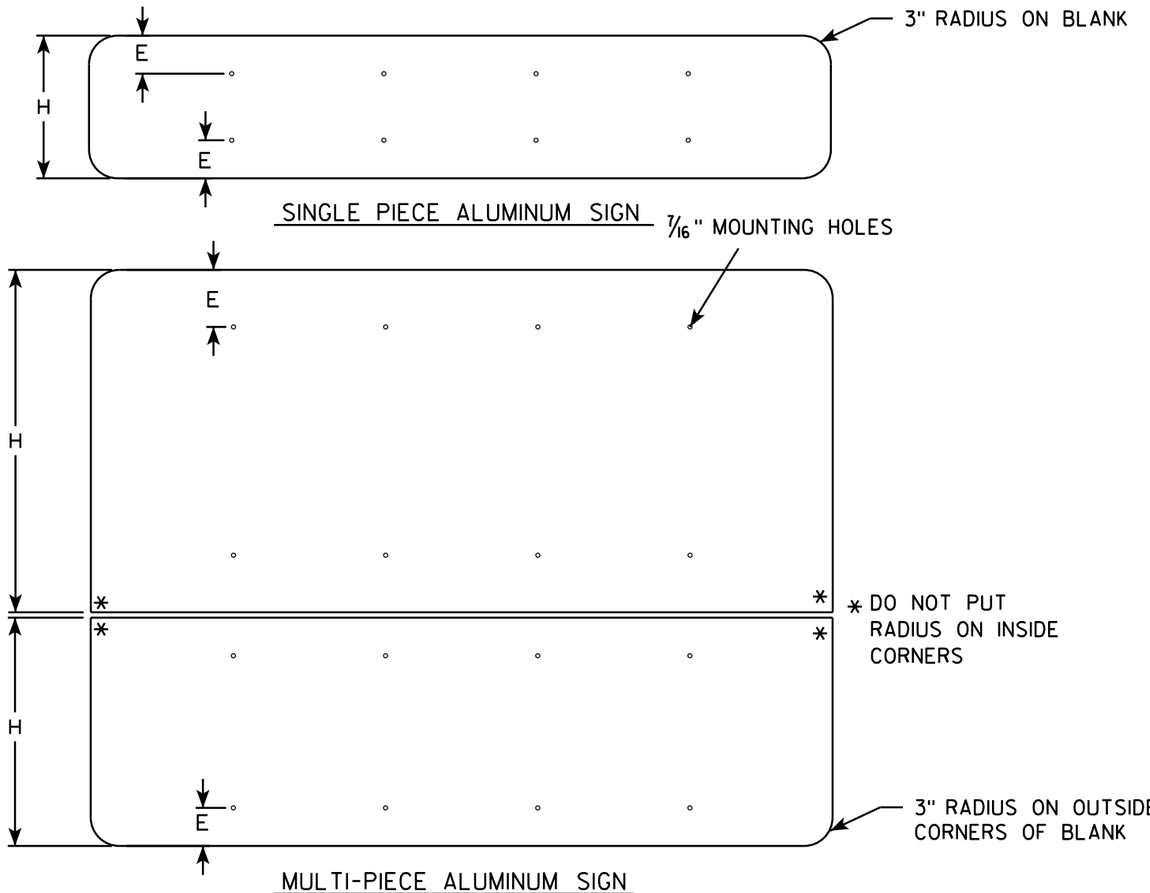
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

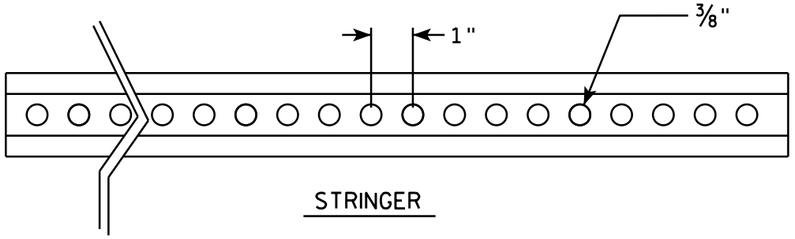
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 329	E



GENERAL NOTES

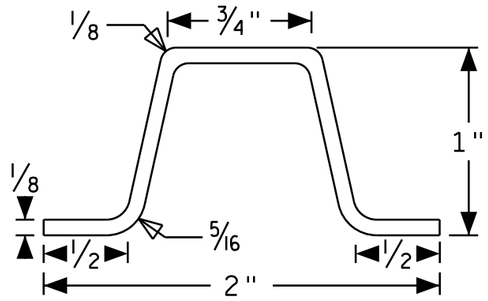
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16½" 33½" 50½" 67½"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19½" 38½" 57½" 76½"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22½" 43½" 64½" 85½"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

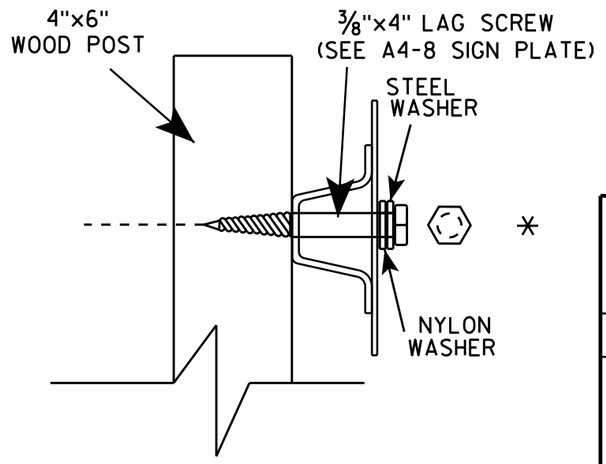


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

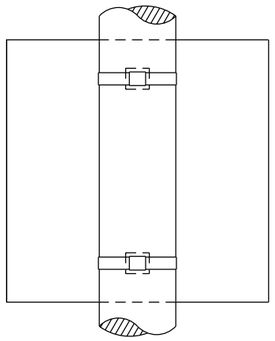
DATE 4/26/16 PLATE NO A4-18.1

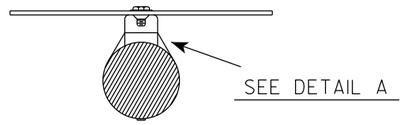
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

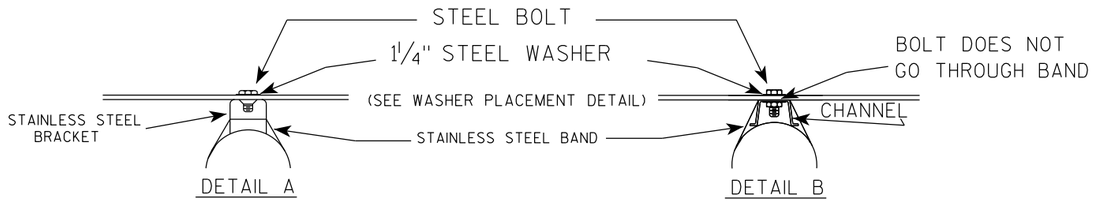
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000 WISDOT/CADDS SHEET 42

BANDING

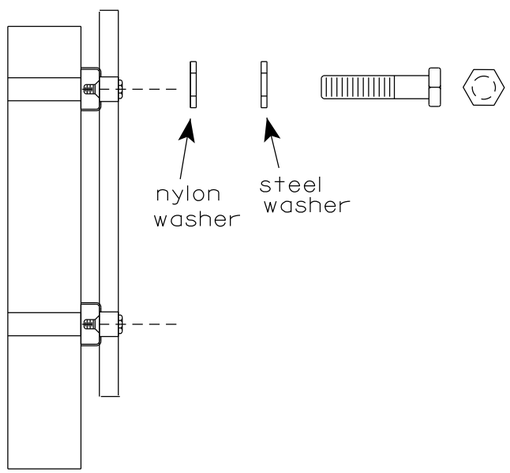
SINGLE SIGN







WASHER PLACEMENT

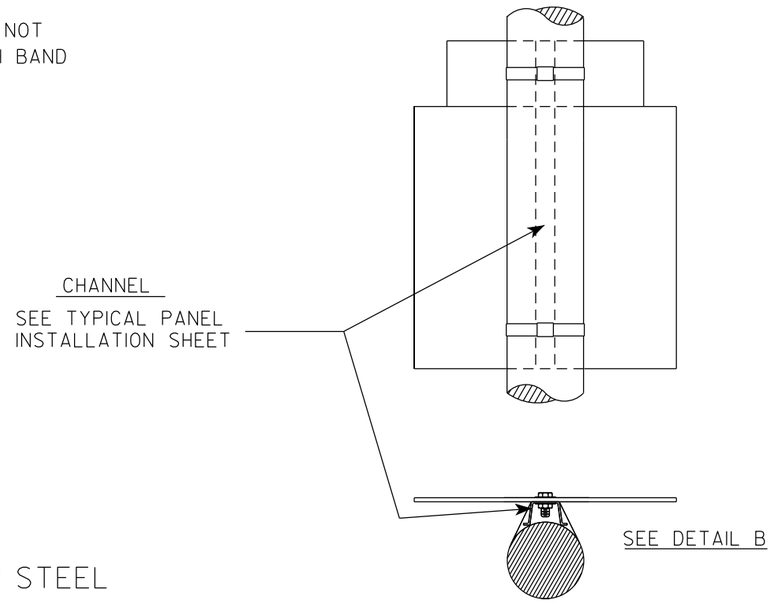


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

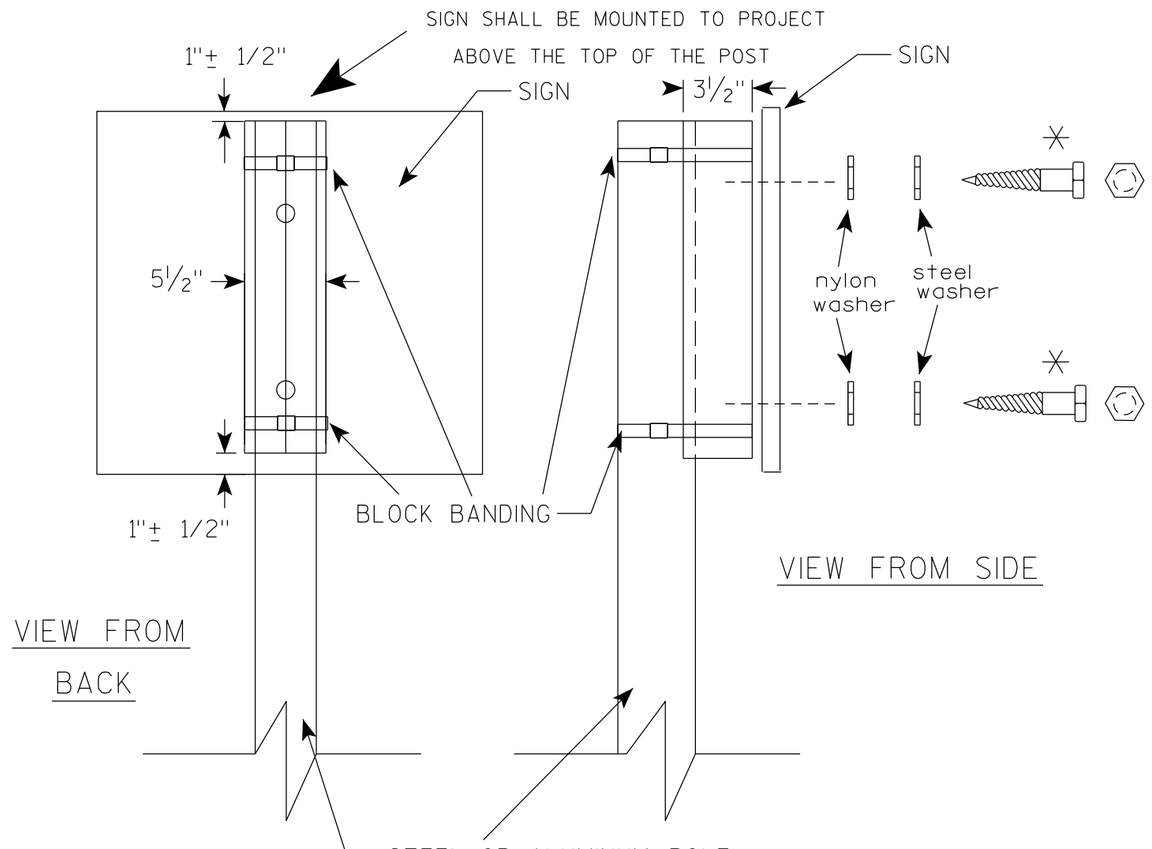
DATE 6/10/19 PLATE NO. A5-9.4

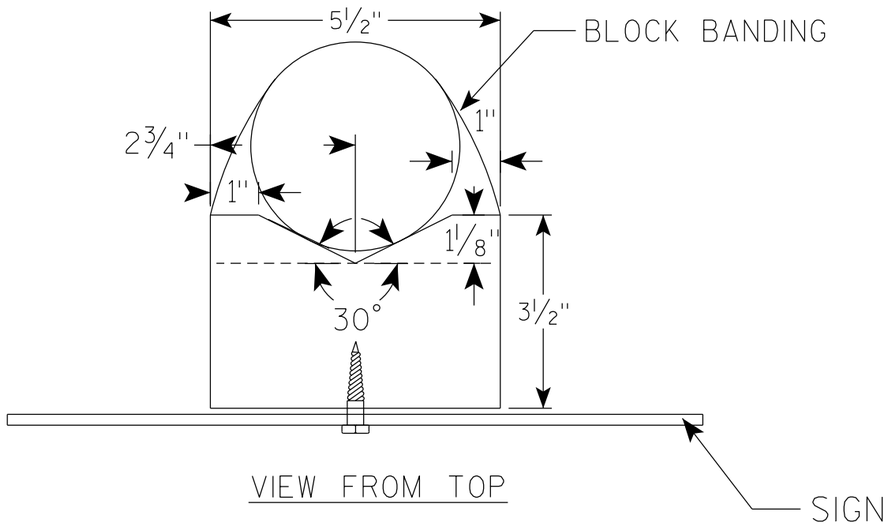
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 331	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

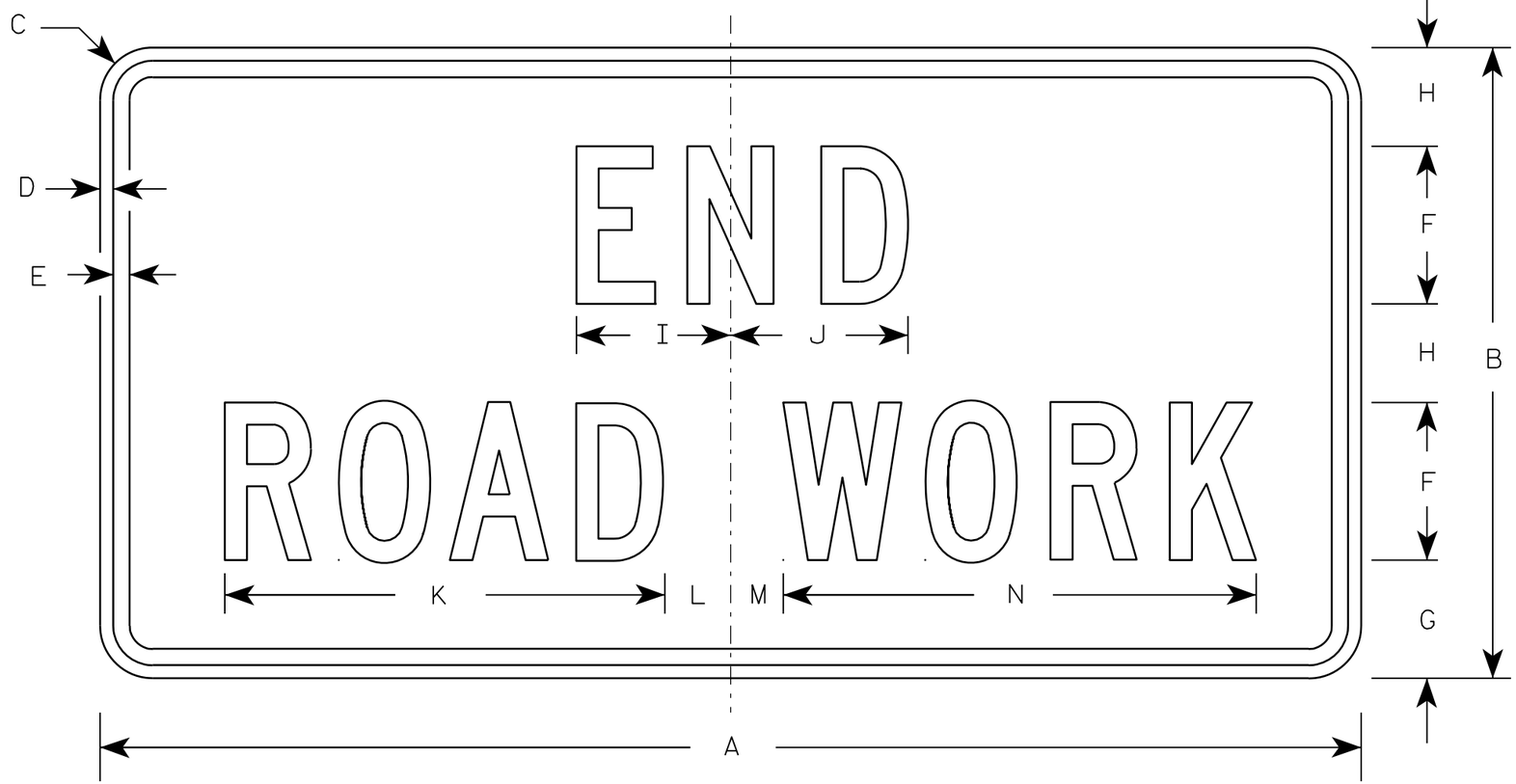
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 332 E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

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.	Area m2
1	36	18	1 1/8	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	0.41
2	48	24	1 1/2	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	0.72
3	48	24	1 1/2	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	0.72
4	48	24	1 1/2	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	0.72
5	48	24	1 1/2	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	0.72

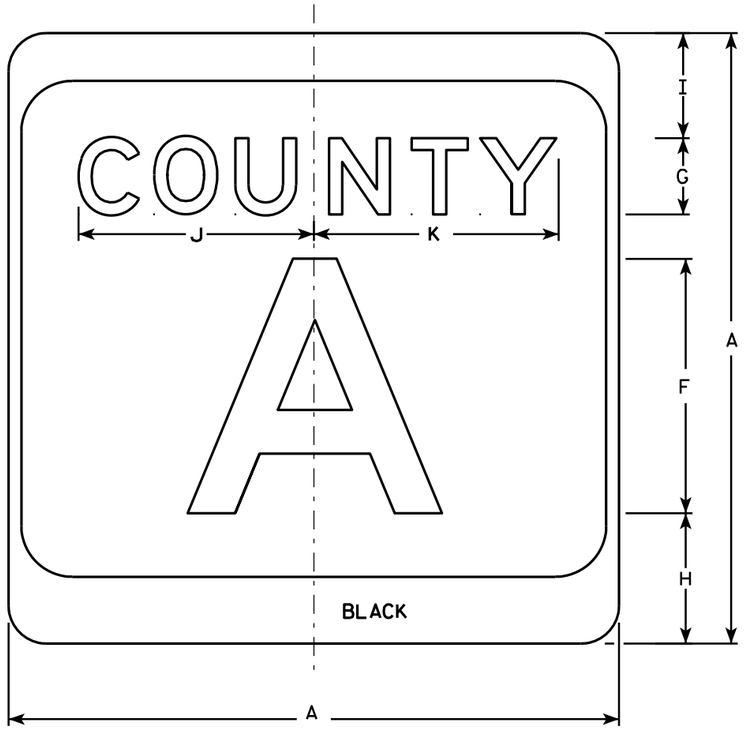
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

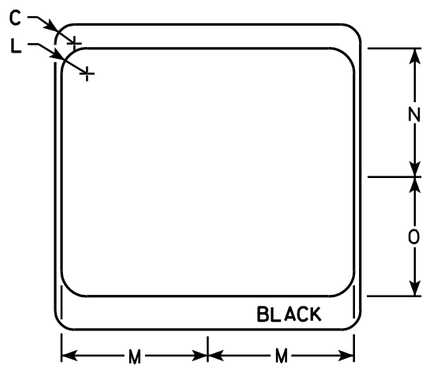
APPROVED Matthew R Rauch
for State Traffic Engineer

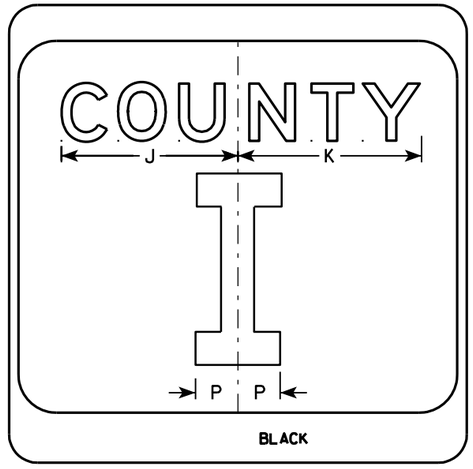
DATE 9/30/09 PLATE NO. G20-2A.8

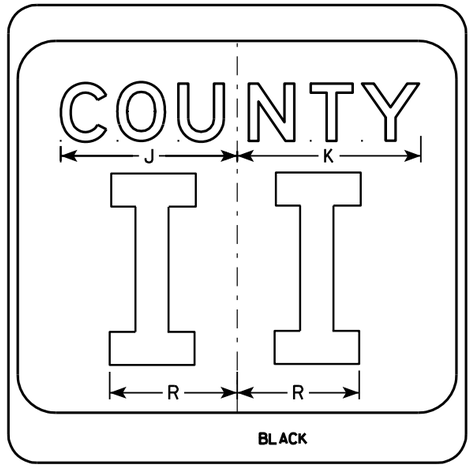
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 333	E



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   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. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

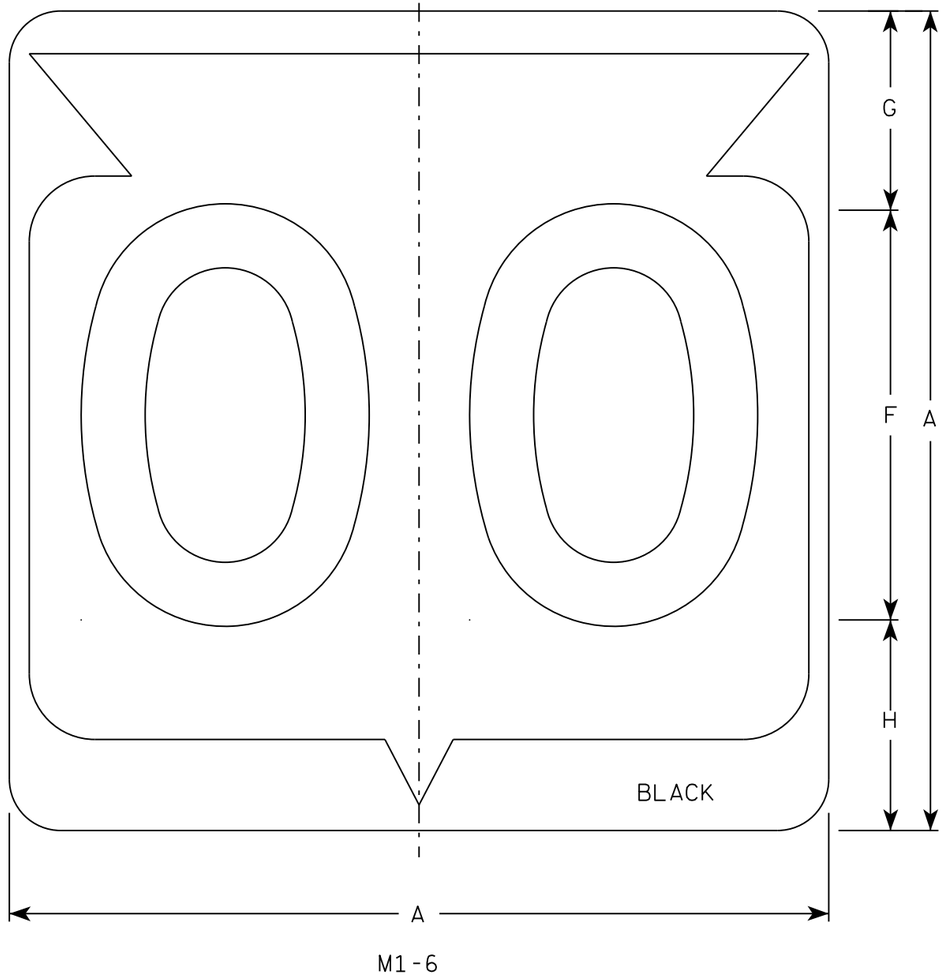
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

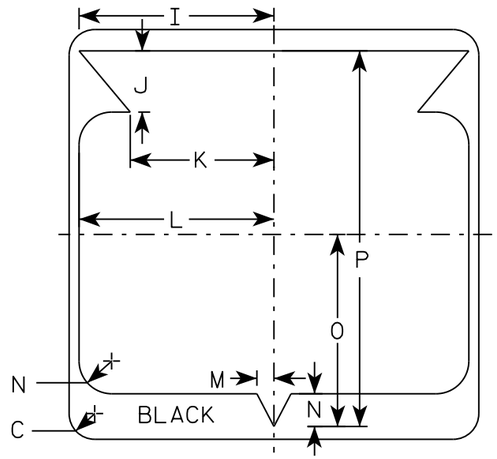
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 334	E



M1-6

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

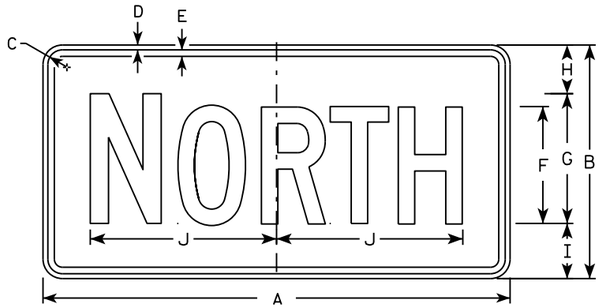
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

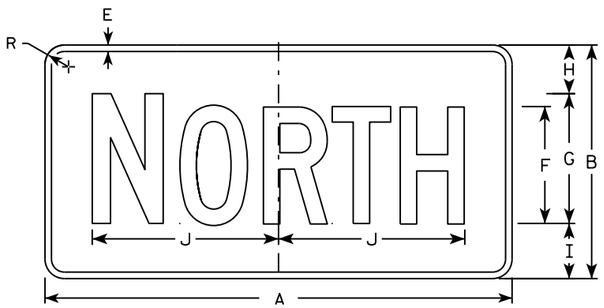
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 335 | E



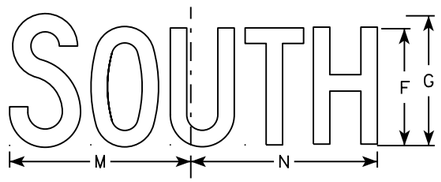
M3-1
MM3-1
MP3-1



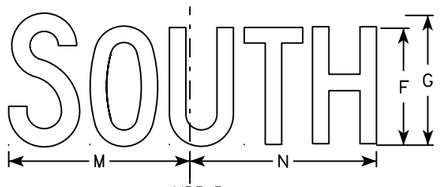
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

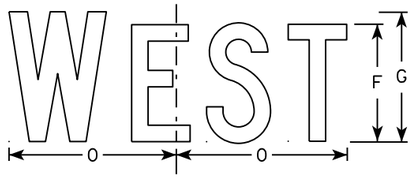
MB3-2
MK3-2
MN3-2



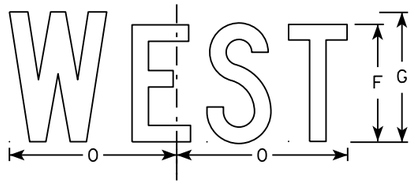
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

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

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

STANDARD SIGNS
M3-1 thur M3-4
SERIES

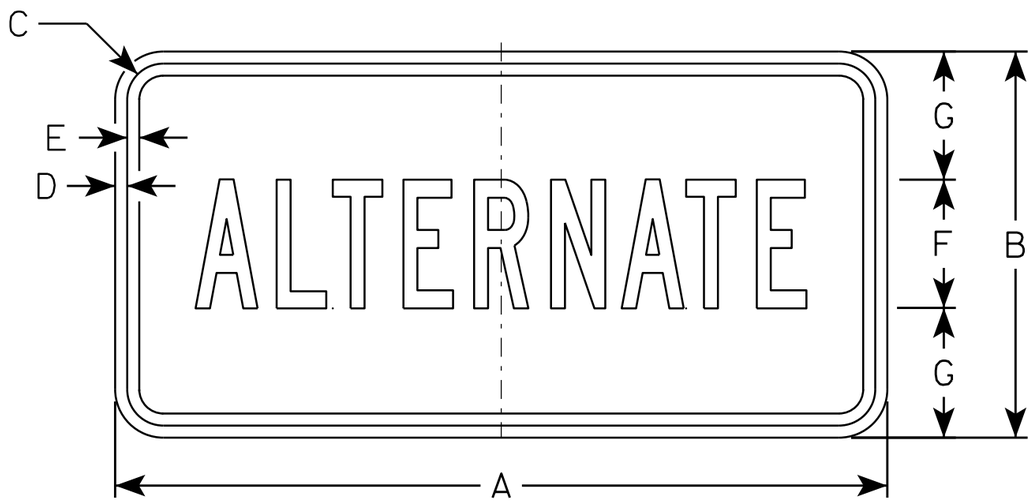
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

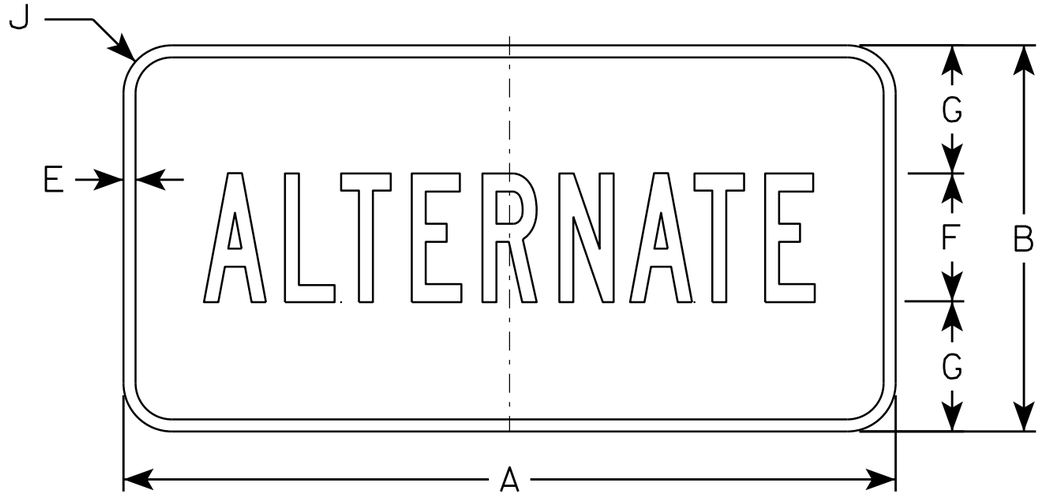
DATE 10/15/15 PLATE NO M3-1.14

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-1
M04-1



MB4-1

NOTES

1. Sign is Type II - Type H except as Shown
2. Color:
   Background - See Note 5
   Message - See note 5
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-1 Background - White
   Message - Black

   MB4-1 Background - Blue
   Message - White

   M04-1 Background - Orange - Type F
   Message - Black

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	4	4	9 3/4	9 1/2	1 1/2																	2.00
3	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
4	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
5	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5

STANDARD SIGN
M4-1

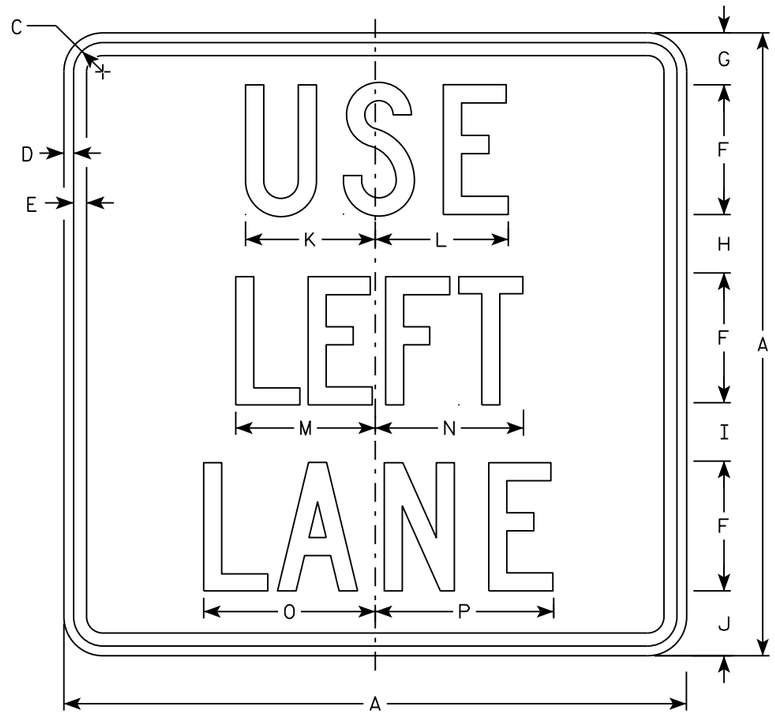
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

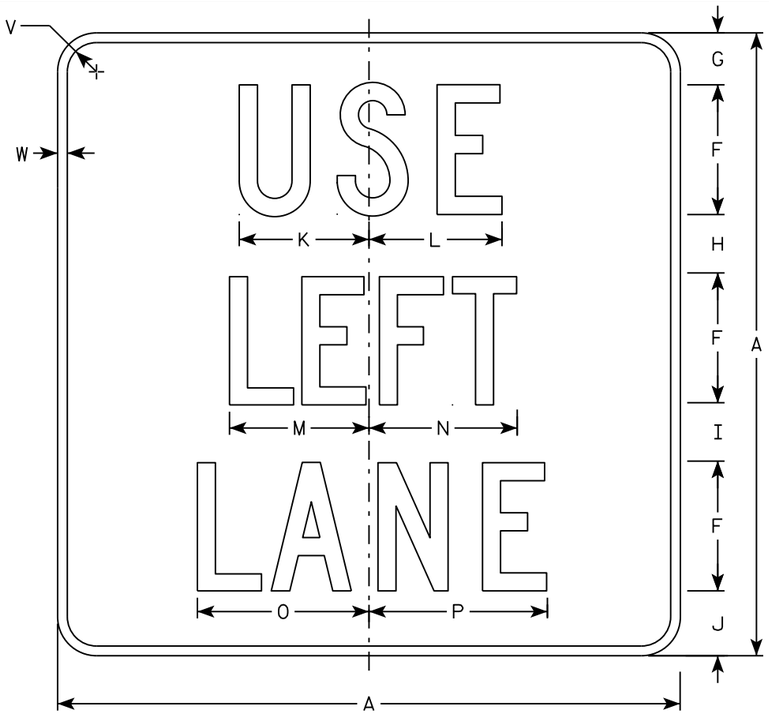
DATE 6/30/14 PLATE 14-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M41.DGN PLOT DATE : 30-JUN-2014 15:38 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.708937:1.000000 WISDOT/CADDS SHEET 42



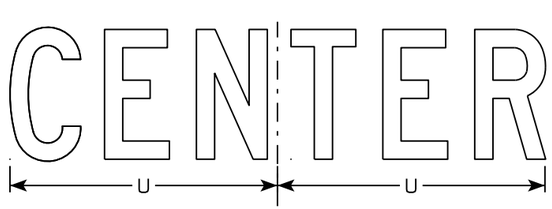
M4-20L



MB4-20L

M4-20L
MM4-20L
M04-20L
MP4-20L

MB4-20L
MK4-20L
MN4-20L
MR4-20L



M4-20C
MB4-20C
MK4-20C
MM4-20C
MN4-20C
M04-20C
MP4-20C
MR4-20C

M4-20R
MB4-20R
MK4-20R
MM4-20R
MN4-20R
M04-20R
MP4-20R
MR4-20R

NOTES

1. Sign is Type II - Type H except as Shown
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-20 Background - White
   Message - Black
   MB4-20 Background - Blue
   Message - White
   MK4-20 Background - Green
   Message - White
   MM4-20 Background - White
   Message - Green
   MN4-20 Background - Brown
   Message - White
   M04-20 Background - Orange - Type F Reflective
   Message - Black
   MP4-20 Background - White
   Message - Blue
   MR4-20 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/8	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8	5 3/8	5 3/4	6 5/8	6 7/8			7	7 5/8	10 1/4	1 1/2	1/2				4.0
3	36		1 5/8	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4	8	8 5/8	9 7/8	10 1/4			10 3/8	11 3/8	14 3/8	1 7/8	1/2				9.0
4																											
5																											

STANDARD SIGN
M4-20

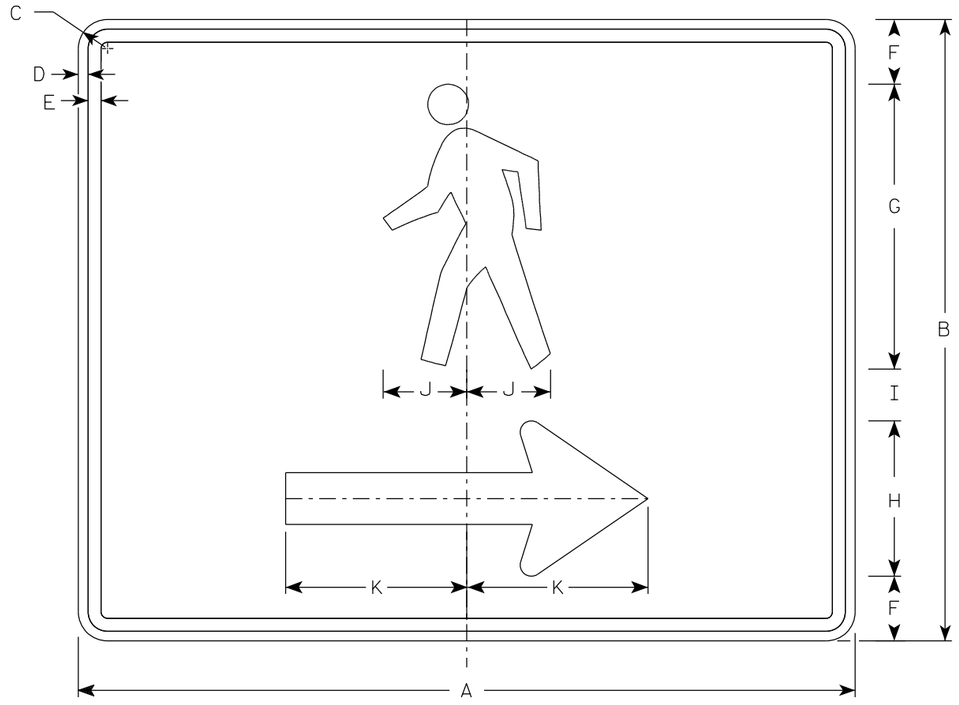
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 10/15/15 PLATE NO M4-20.5

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

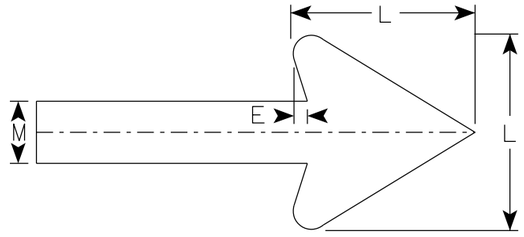
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M420.DGN PLOT DATE : 01-DEC-2015 18:03 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.837526:1.000000



M4-60R

NOTES

1. Sign is Type II- Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M4-60L is the same as M4-60R except the arrow is reversed.



Arrow Detail

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

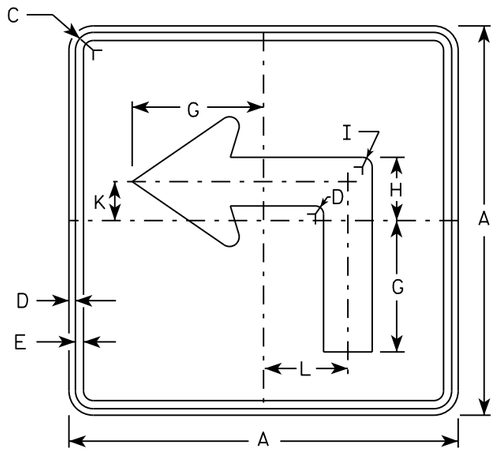
STANDARD SIGN
M4-60 L&R

WISCONSIN DEPT OF TRANSPORTATION

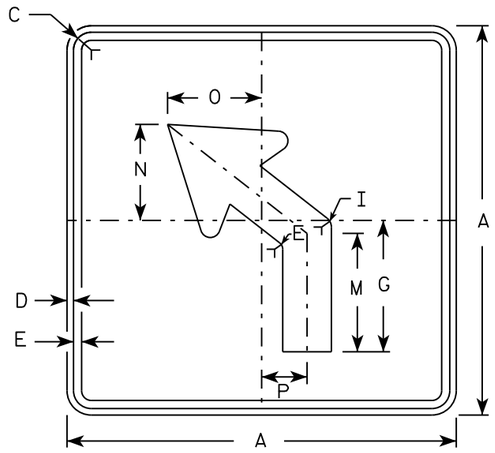
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/16/2021 PLATE NO. M4-60.1

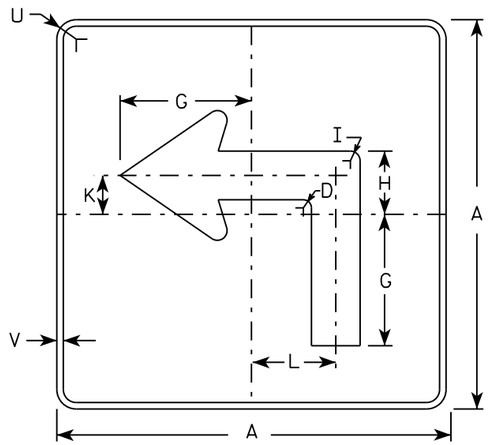
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 339	E



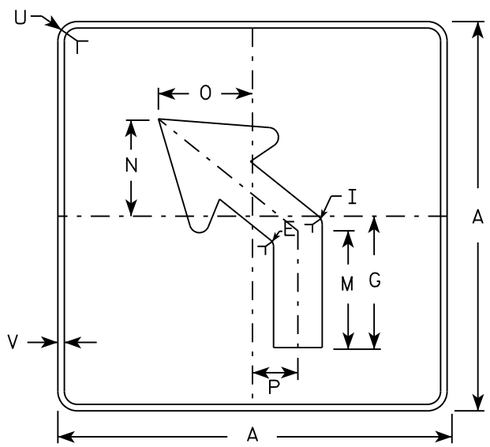
M5-1L
MM5-1L
MO5-1L
MP5-1L



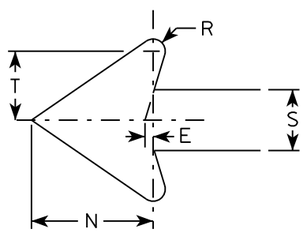
M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

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

STANDARD SIGN
M5-1 & M5-2

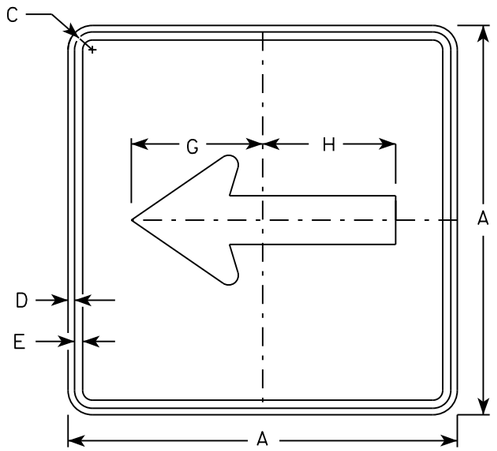
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

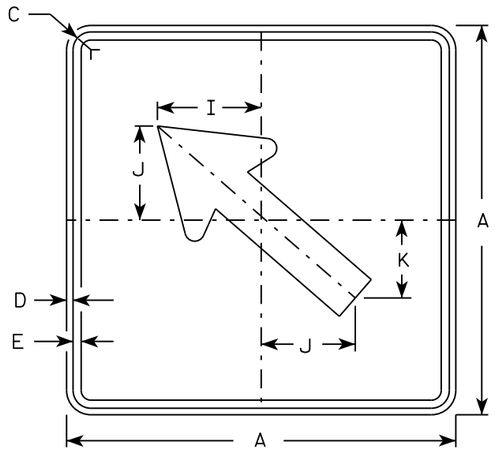
DATE 10/15/15 PLATE NO. M5-1.13

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M51.DGN PLOT DATE : 01-DEC-2015 18:07 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



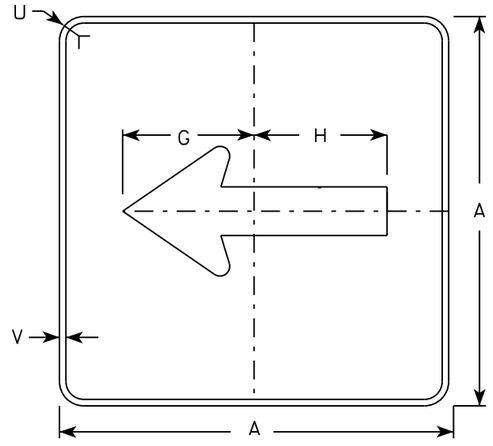
M6-1
MM6-1
MO6-1
MP6-1



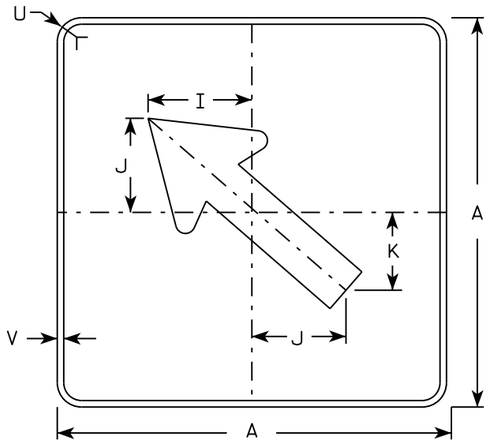
M6-2
MM6-2
MO6-2
MP6-2

NOTES

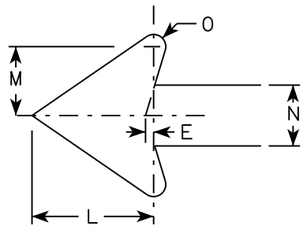
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



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

STANDARD SIGN
M6-1 & M6-2
SERIES

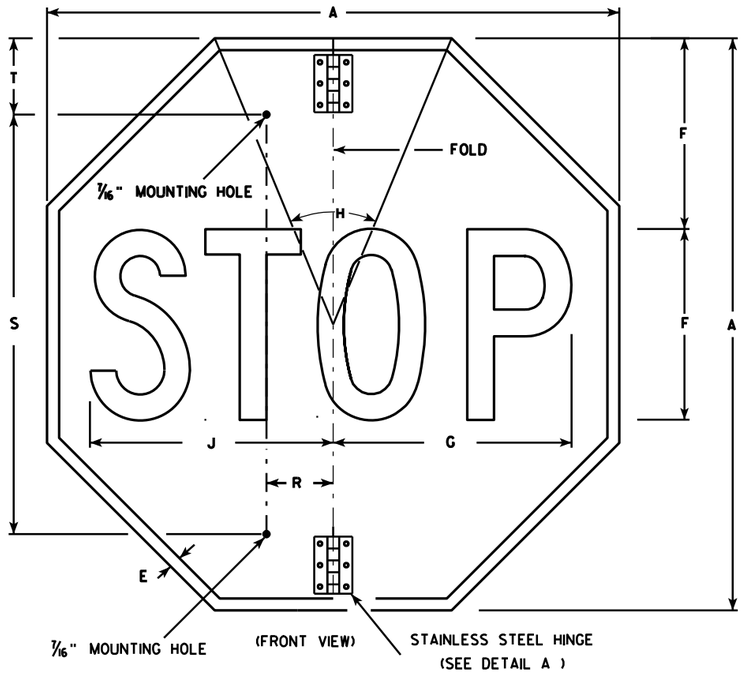
WISCONSIN DEPT OF TRANSPORTATION

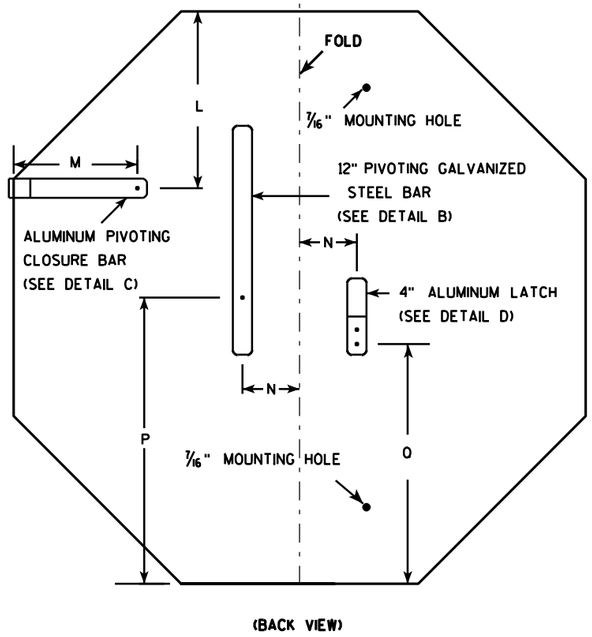
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 341 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

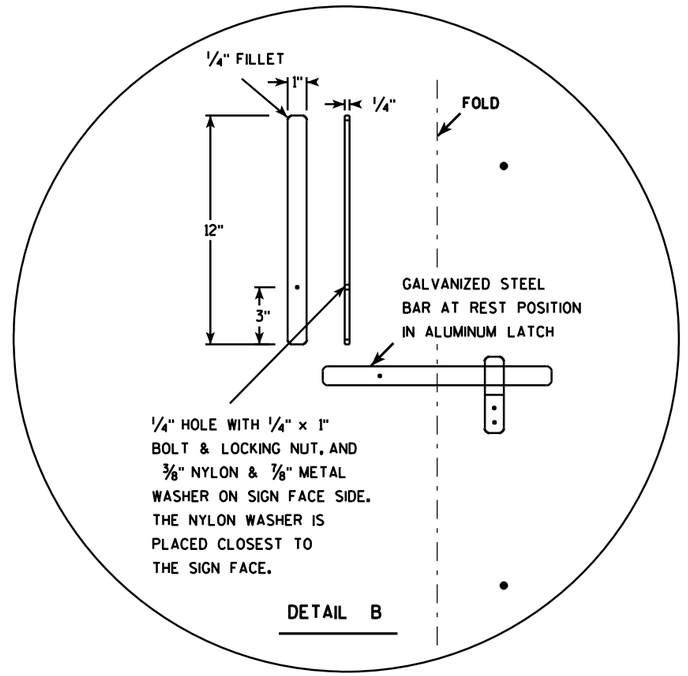
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 01-DEC-2015 17:57 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000

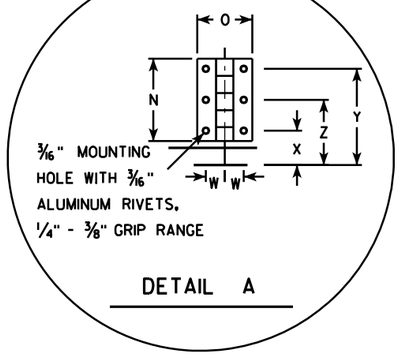


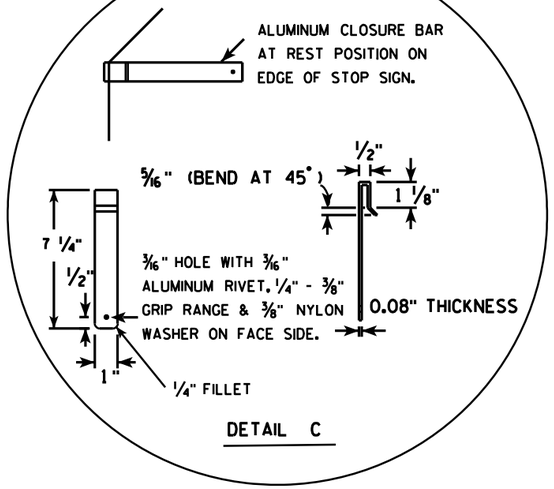


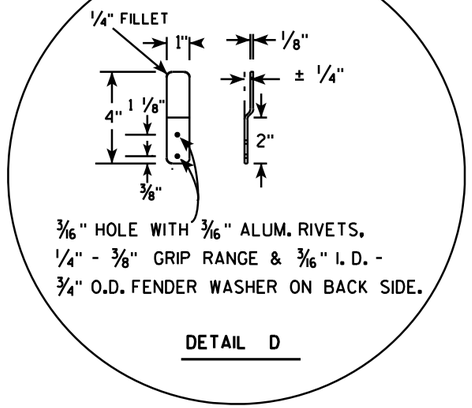
NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.









SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

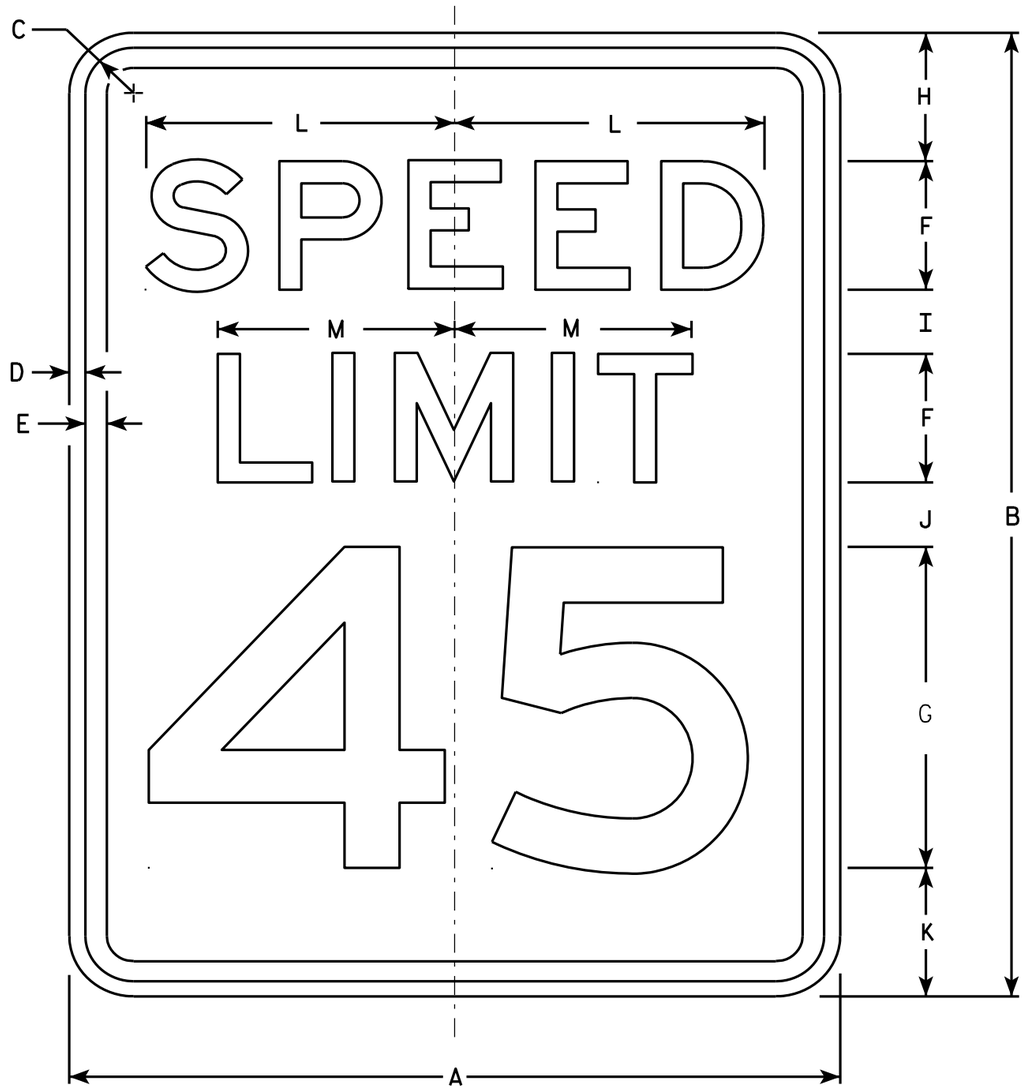
STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 342 | E



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

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 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

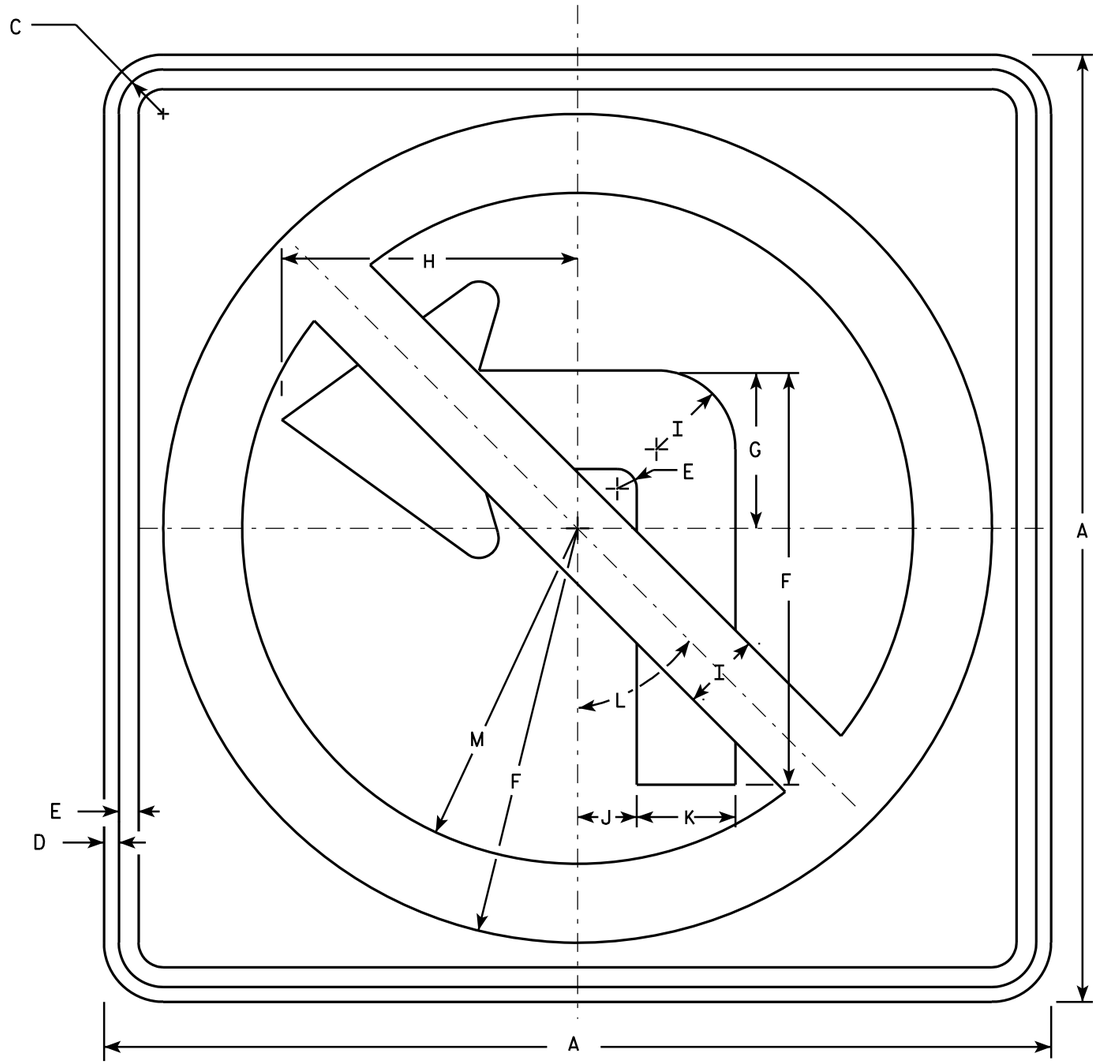
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

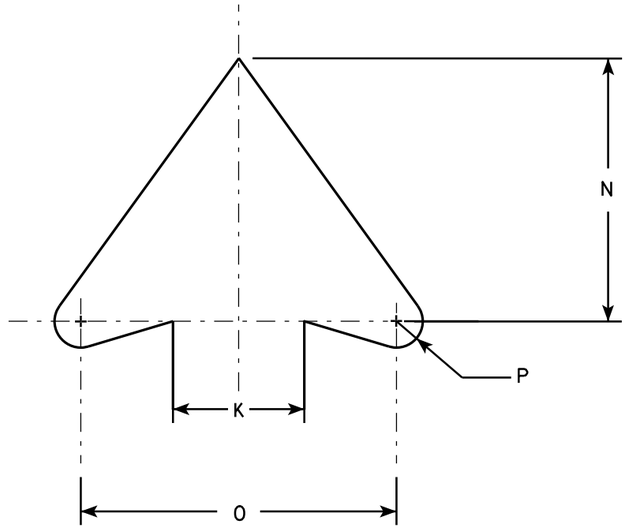
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 343	E



R3-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



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	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

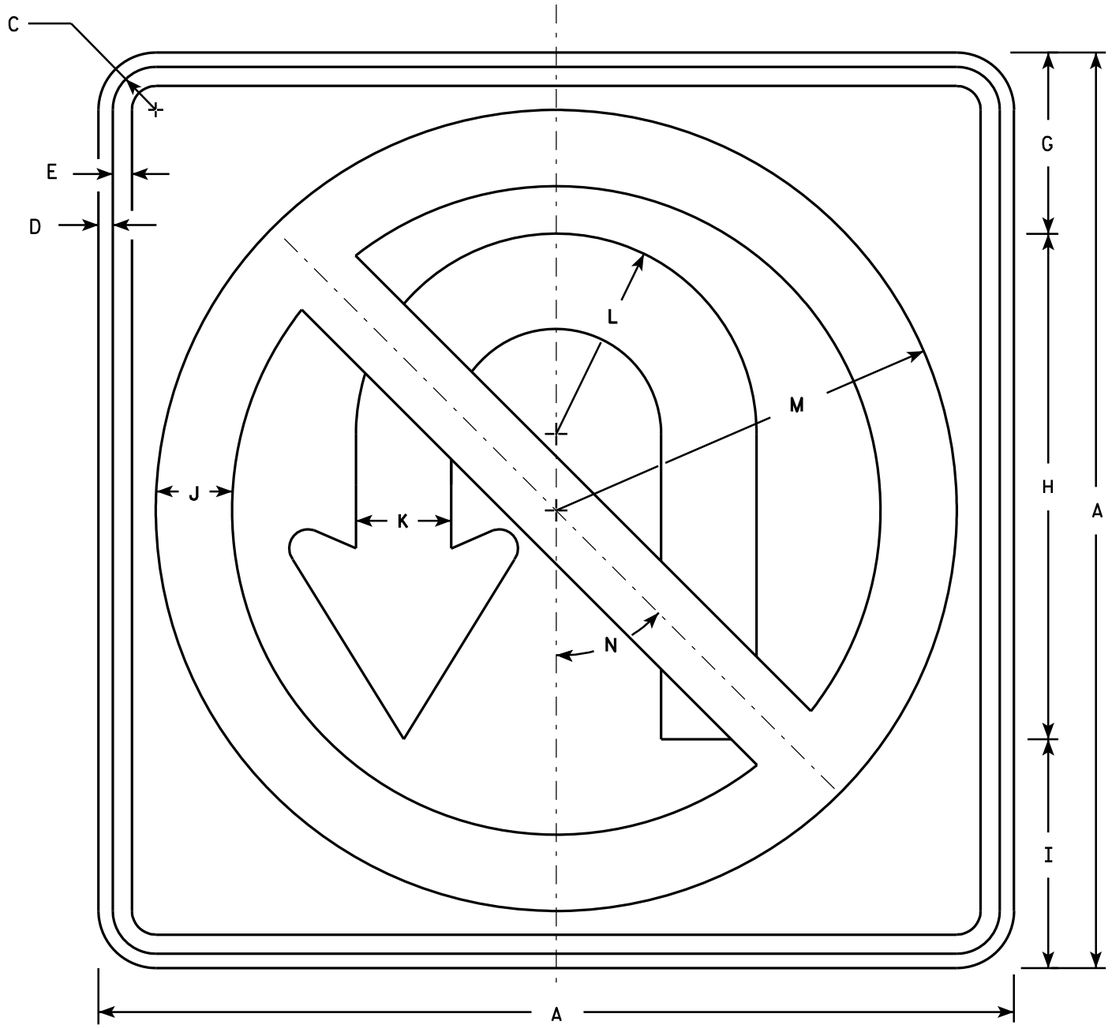
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

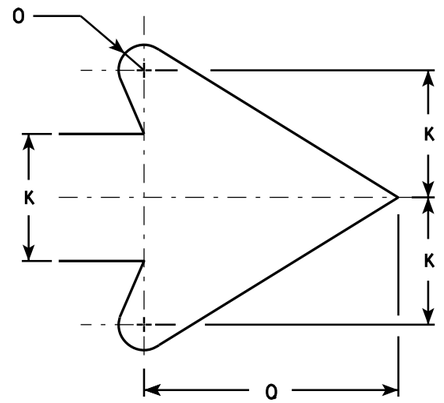
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 344	E



R3-4

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		4 3/4	13 1/4	6	2	2 1/2	5 1/4	10 1/2	45°	1/2		5										4.0
2M	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
3	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
4	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
5	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0

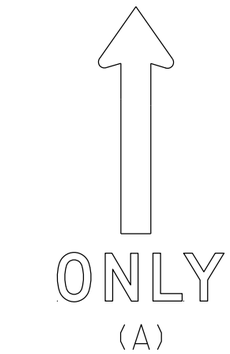
STANDARD SIGN
R3-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

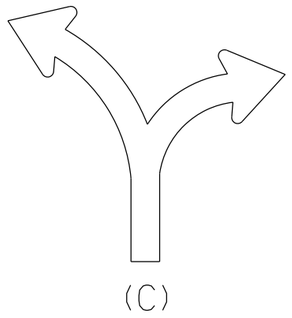
DATE 12/08/10 PLATE NO. R3-4.11

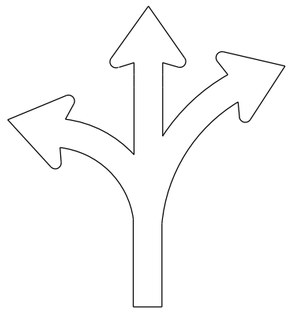
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 345	E

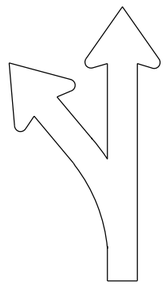


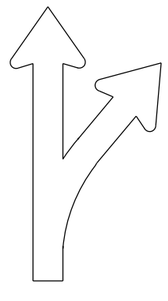
(A)

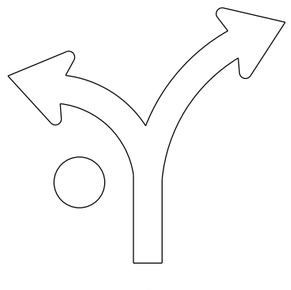
(B)

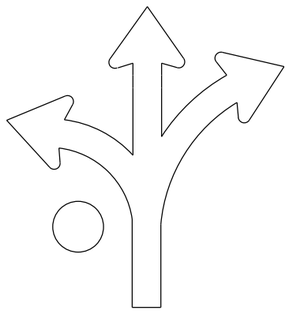

(C)

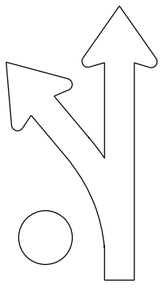

(D)


(E)

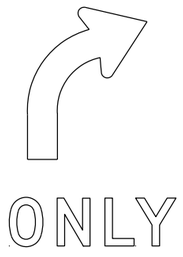

(F)


(G)

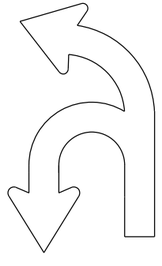

(H)


(I)

(L)



(R)


(U)

NOTES

1. Sigs are Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Use appropriate Letter for Sign Code
   Each letter added makes sign wider. Example R3-8EAR
5. Square footage of sign varies by letters

1 Letter =	3.75 sq ft	for Size 2
	6.0 sq ft	for Size 3
	10.0 sq ft	for Size 4 or 5
2 Letters =	7.5 sq ft	for Size 2
	12.0 sq ft	for Size 3
	20.0 sq ft	for Size 4 or 5
3 Letters =	11.25 sq ft	for Size 2
	18.0 sq ft	for Size 3
	30.0 sq ft	for Size 4 or 5
4 Letters =	15.0 sq ft	for Size 2
	24.0 sq ft	for Size 3
	40.0 sq ft	for Size 4 or 5
5 Letters =	18.75 sq ft	for Size 2
	30.0 sq ft	for Size 3
	50.0 sq ft	for Size 4 or 5
6 Letters =	22.5 sq ft	for Size 2
	36.0 sq ft	for Size 3
	60.0 sq ft	for Size 4 or 5

6. When letters C,D,G,H are used on the Left or Right end of the sign the Sq. Ft. changes.
   Add the amounts when these letters are used:
   1.25 sq ft for Size 2
   1.5 sq ft for Size 3
   2.0 sq ft for Size 4 or 5

STANDARD SIGN
R3-8 Series

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

7

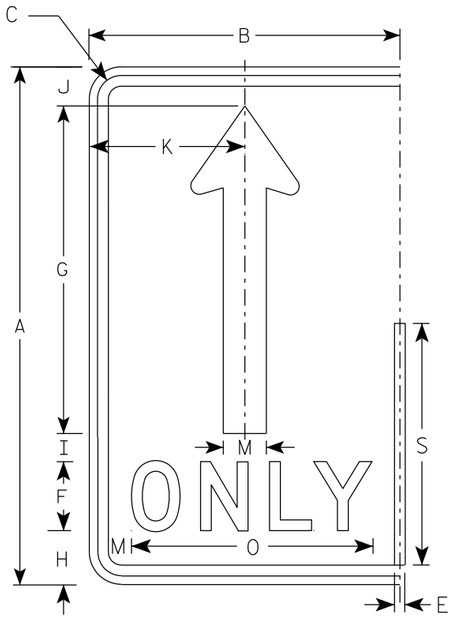
7

PROJECT NO:

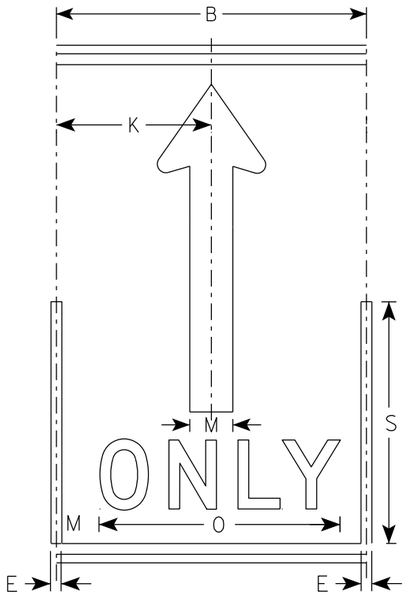
SHEET NO: 346 E

NOTES

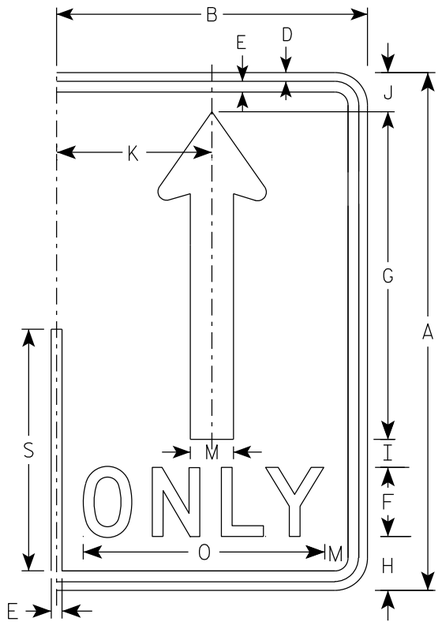
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



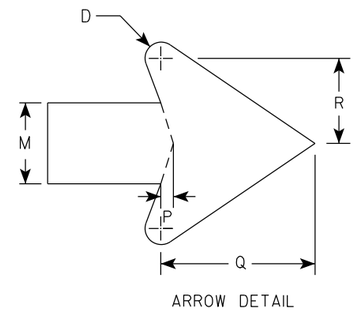
(A)



(A)



(A)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8	5	22 3/4	3 3/4	1 3/4	2 3/4	12		3		17 5/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

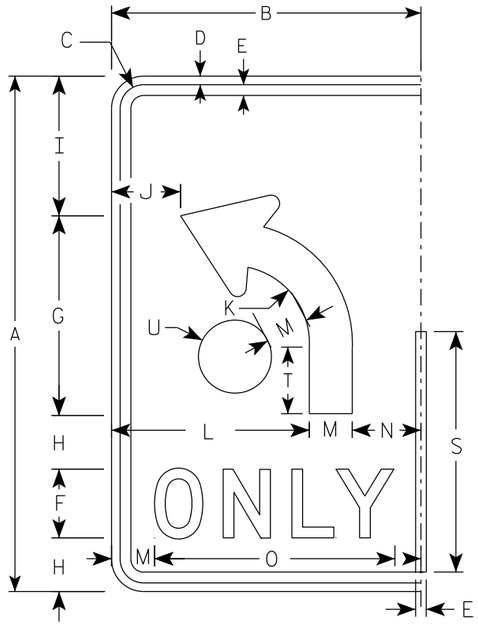
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

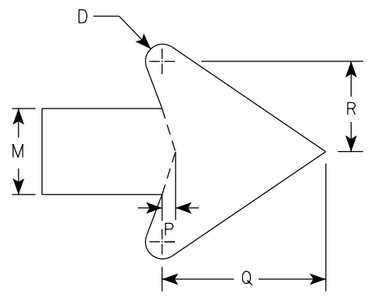
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 347 | E

NOTES

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



(B)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8	2 1/2						6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0

STANDARD SIGN

R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

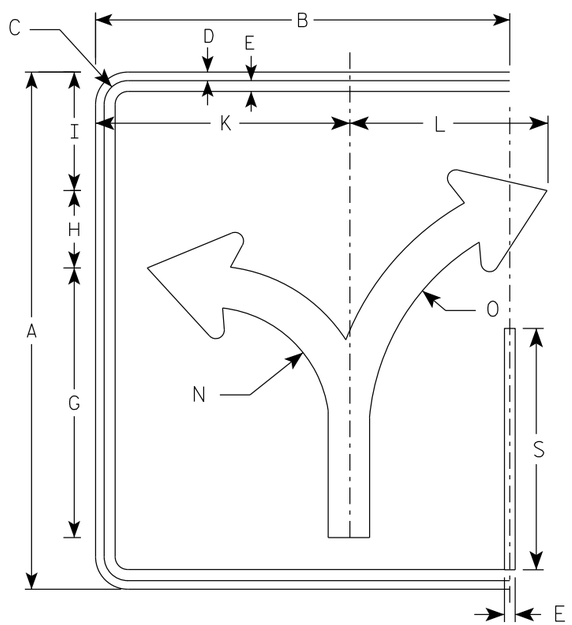
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

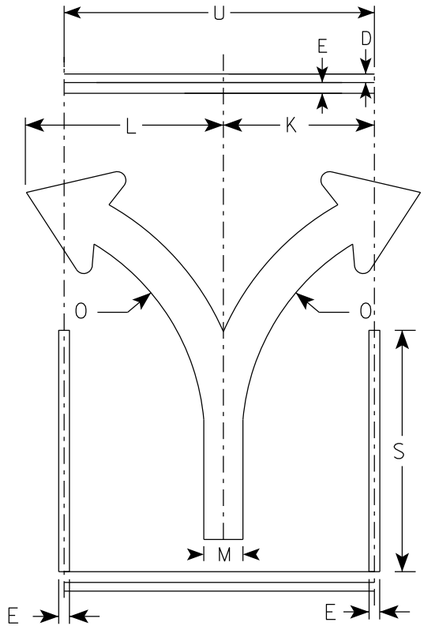
SHEET NO: 348 E

NOTES

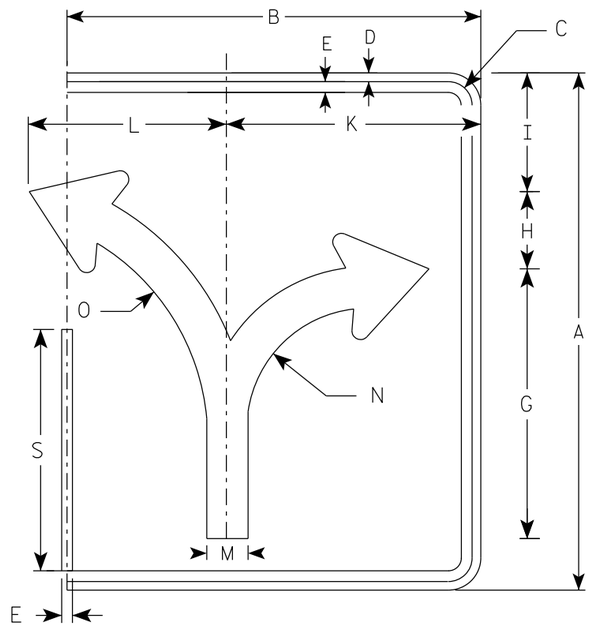
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



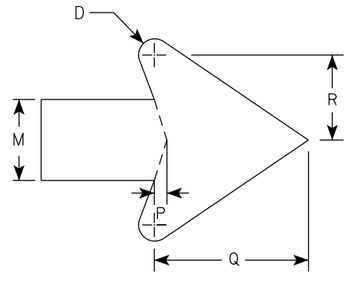
(C)



(C)



(C)



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	ENDS Area sq. ft.	MIDDLE Area sq. ft.
1																												
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN
R3-8 (C) Arrow

WISCONSIN DEPT OF TRANSPORTATION

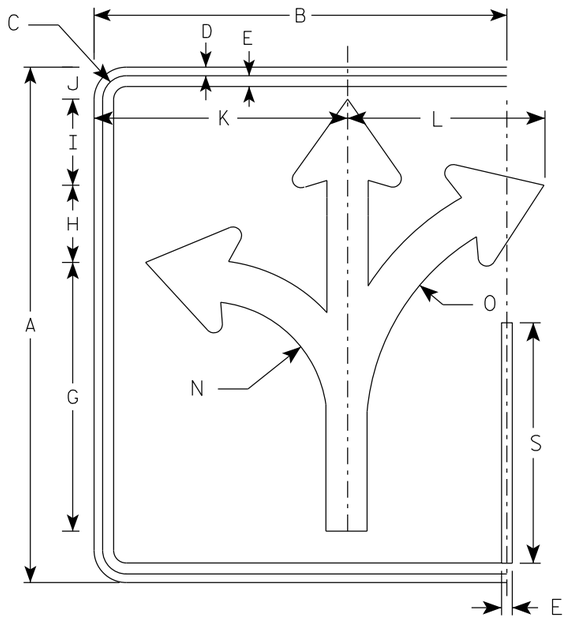
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

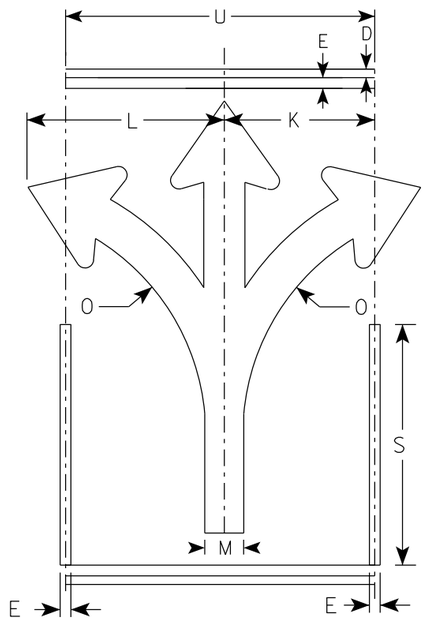
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 349 | E

NOTES

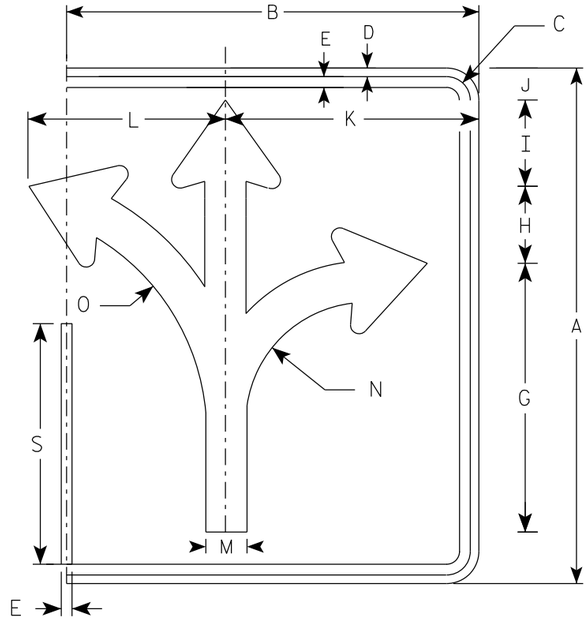
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



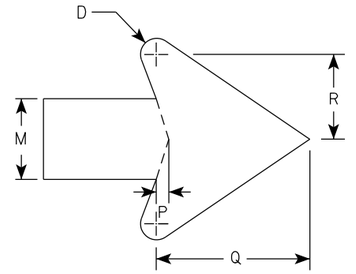
(D)



(D)



(D)



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	ENDS Area sq. ft.	MIDDLE Area sq. ft.
1																												
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	6	2 1/4	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN
R3-8 (D) Arrow

WISCONSIN DEPT OF TRANSPORTATION

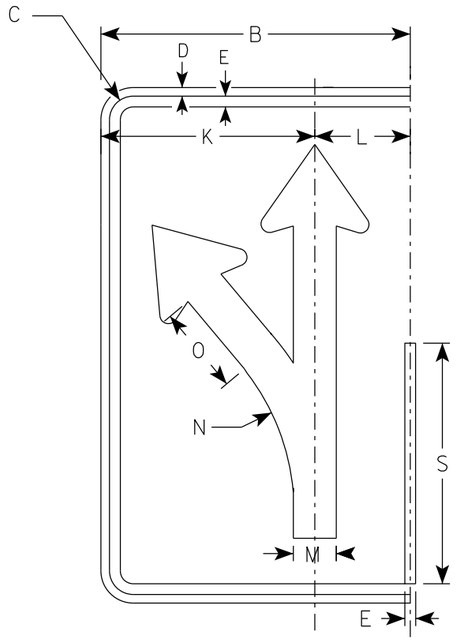
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

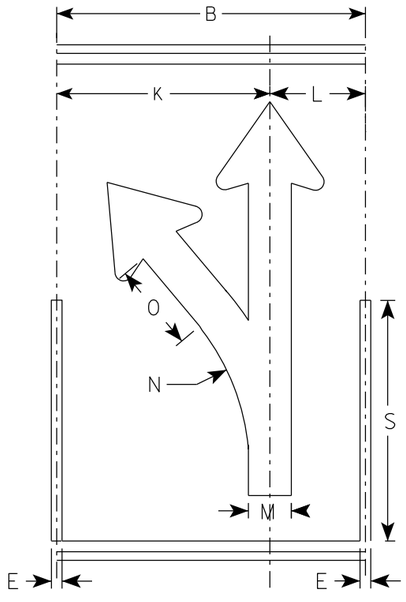
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 350 | E

NOTES

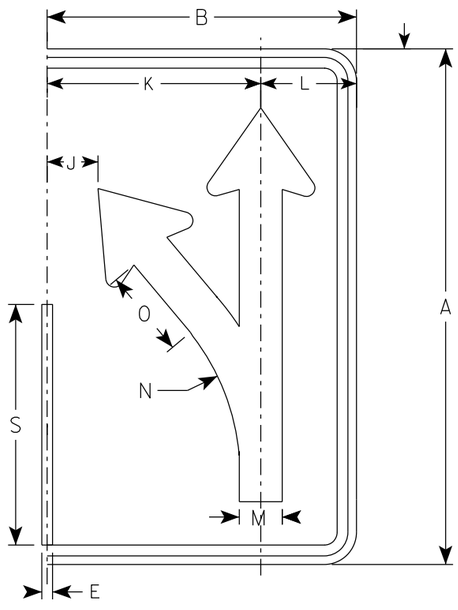
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



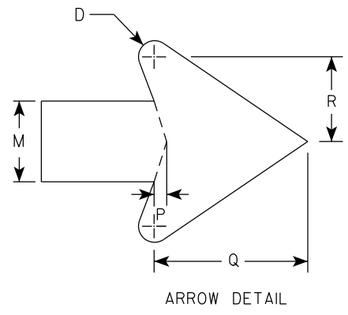
(E)



(E)



(E)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (E) Arrow

WISCONSIN DEPT OF TRANSPORTATION

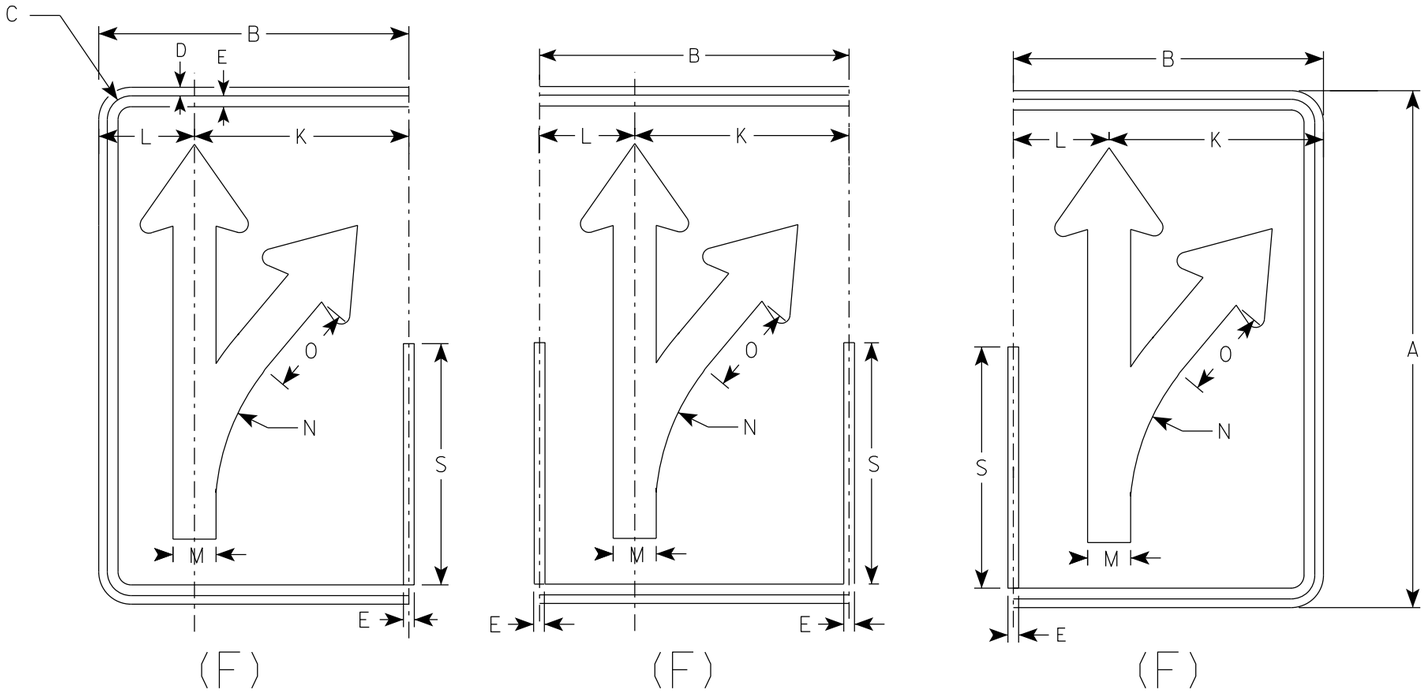
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

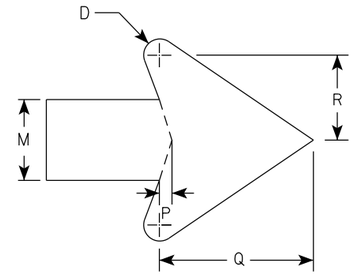
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 351 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(F) (F) (F)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (F) Arrow

WISCONSIN DEPT OF TRANSPORTATION

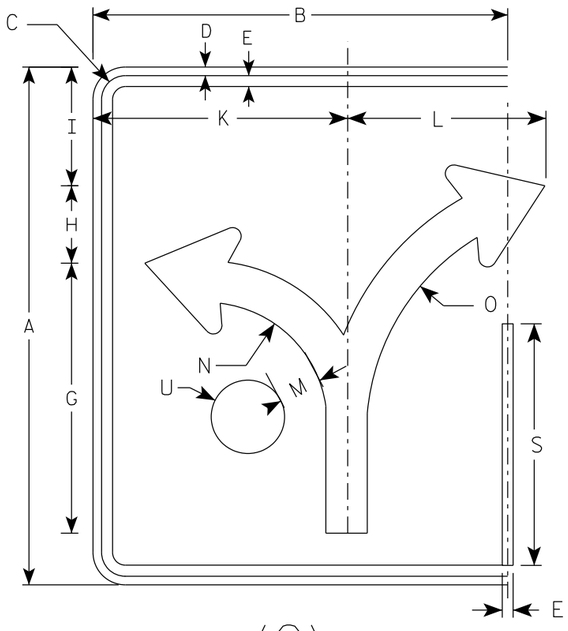
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

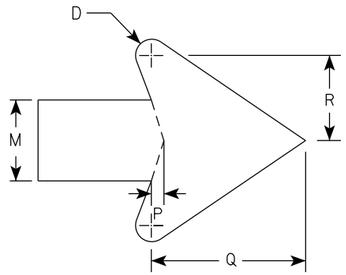
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 352 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(G)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN
R3-8 (G) Arrow

WISCONSIN DEPT OF TRANSPORTATION

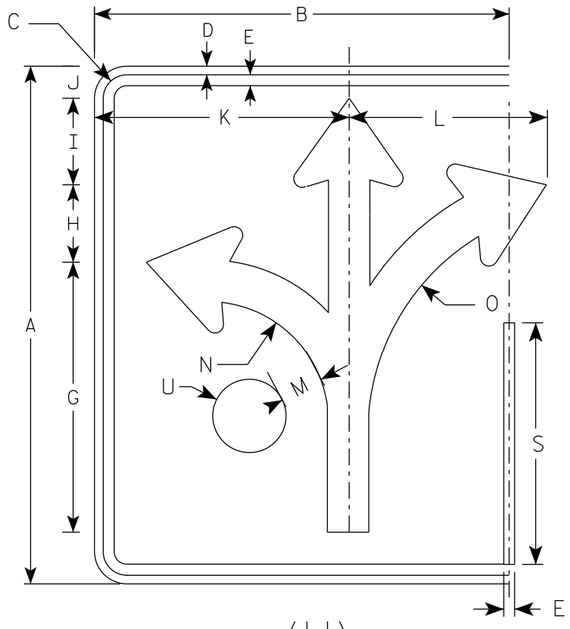
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

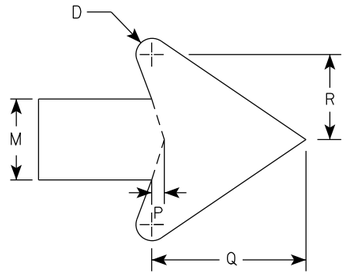
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 353 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(H)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	6	3 1/8	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN
R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

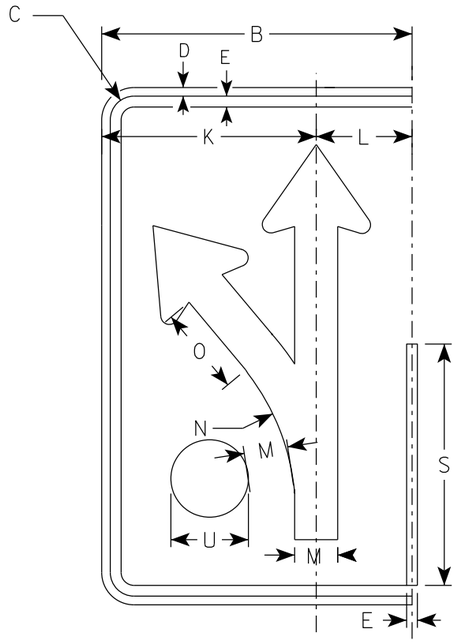
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

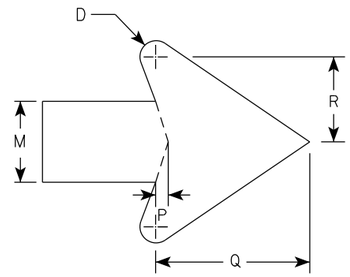
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 354	E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(I)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4		2 1/2						6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0

STANDARD SIGN
R3-8 (I) Arrow

WISCONSIN DEPT OF TRANSPORTATION

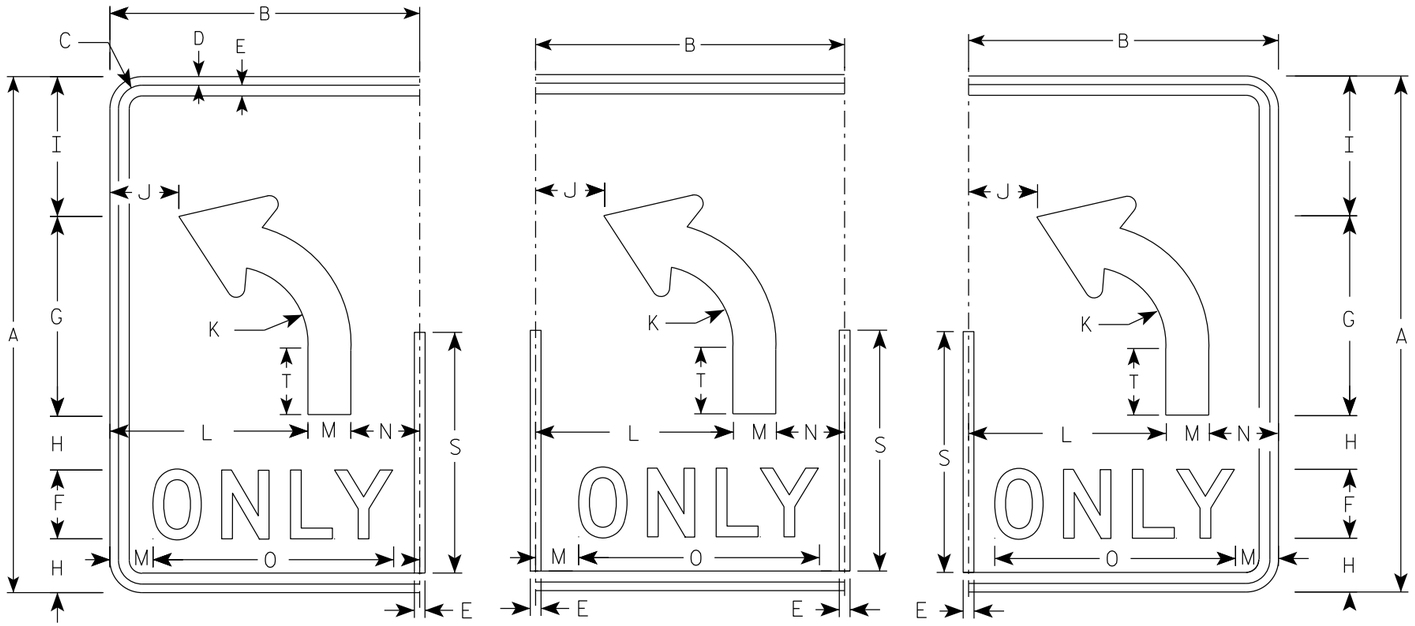
APPROVED Matthew R Rauch
For State Traffic Engineer

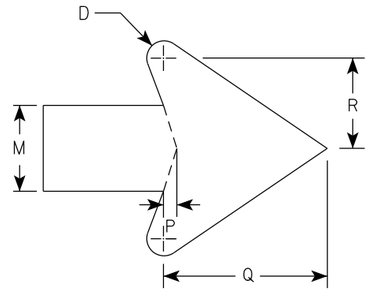
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 355 | E

NOTES

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





ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4		5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN

R3-8 (L) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

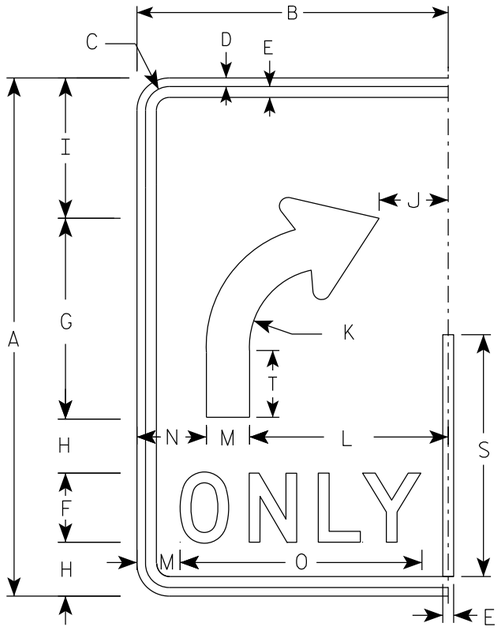
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

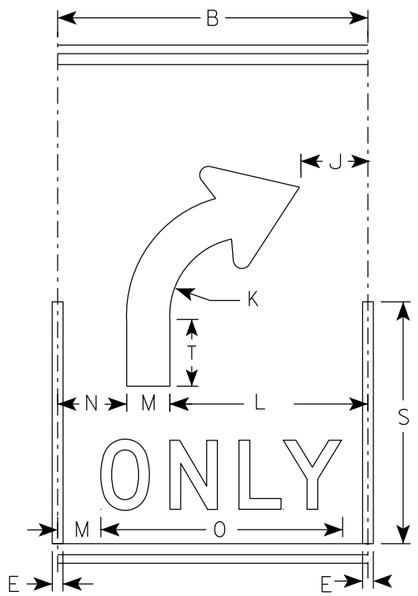
SHEET NO: 356 E

NOTES

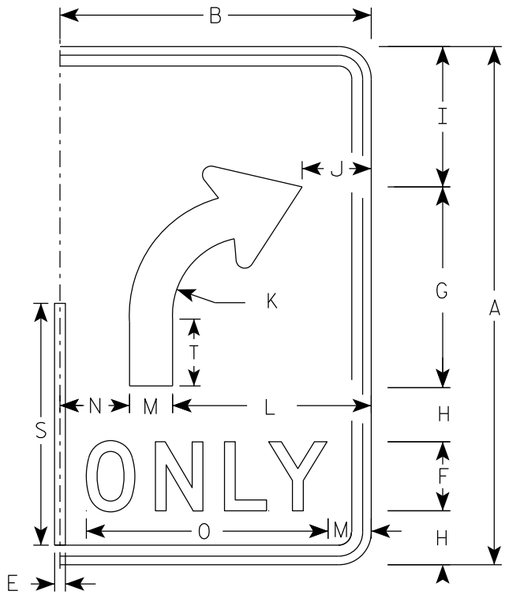
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



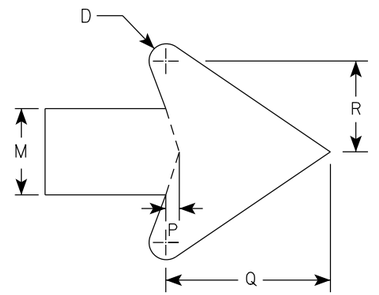
(R)



(R)



(R)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN
R3-8 (R) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

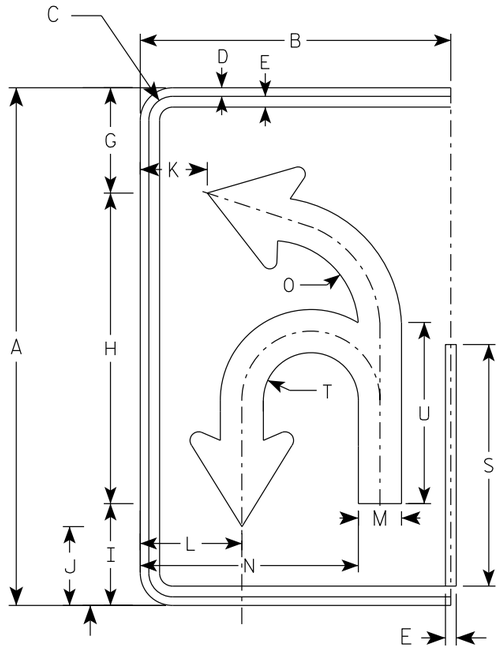
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

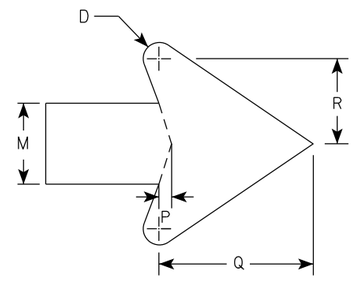
SHEET NO: 357 **E**

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(U)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
2M	30	18	1 3/8	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	21 5/8	7 1/8	5 1/2	5 7/8	8 1/4	3	16 3/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4	3 1/4	12 5/8						6.0
4	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0
5	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0

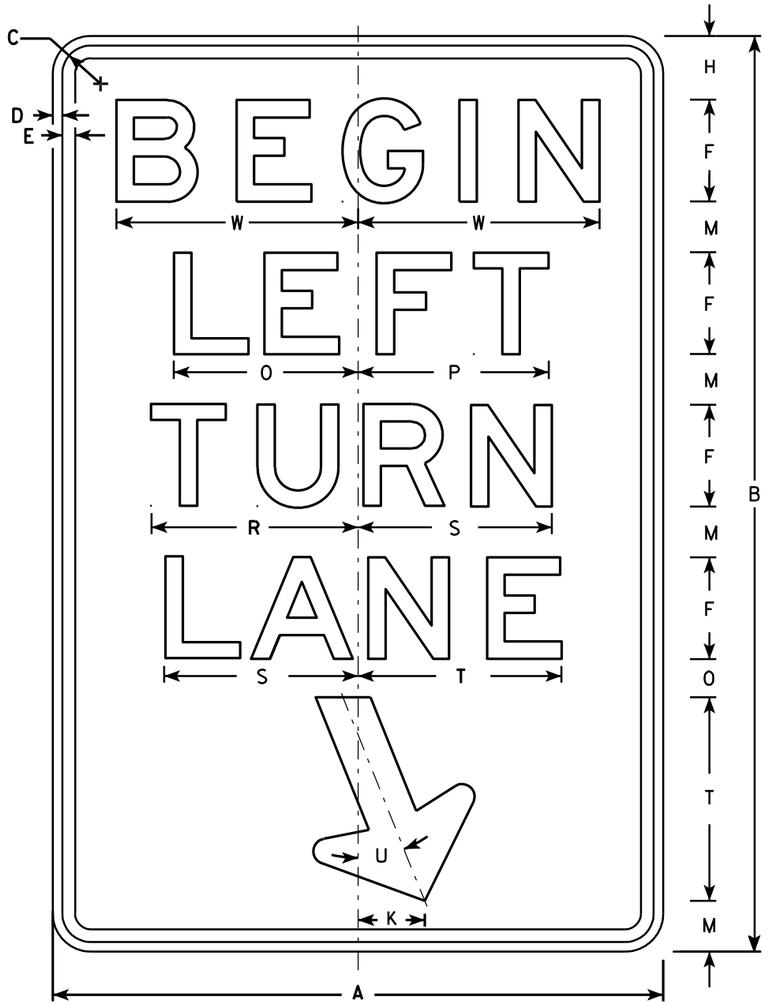
STANDARD SIGN
R3-8 (U) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

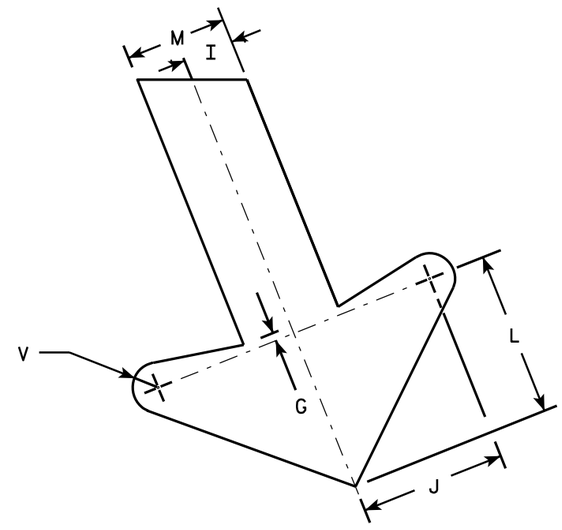
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 358 | E



R3-20L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

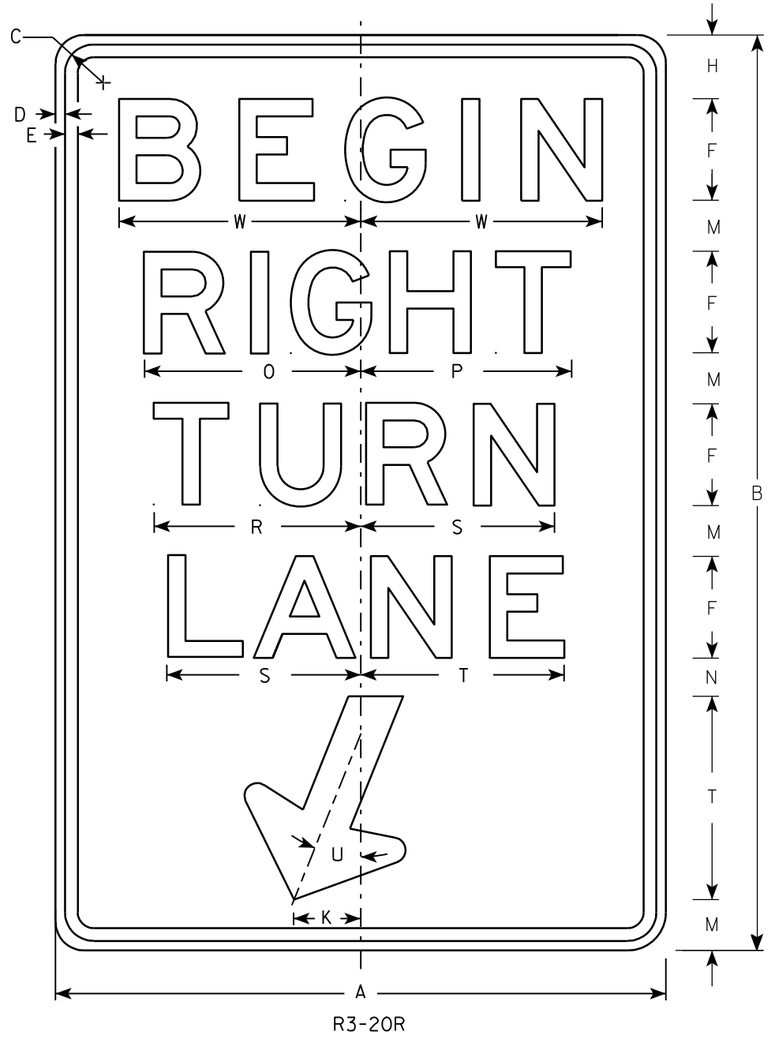
STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

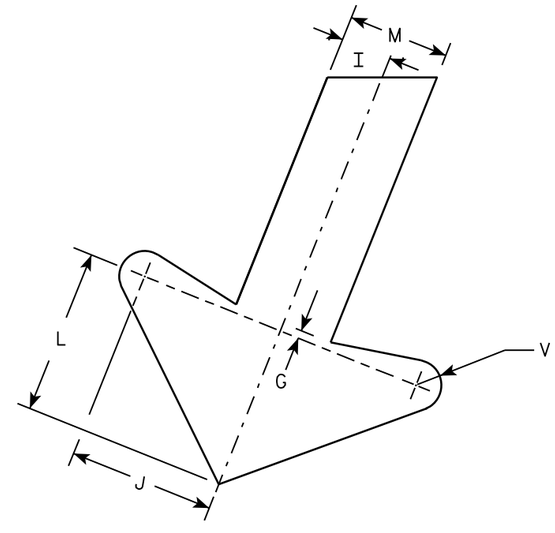
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 359 | E



R3-20R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	8 1/2	8 1/4		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	8 1/2	8 1/4		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	12 3/4	12 1/2		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

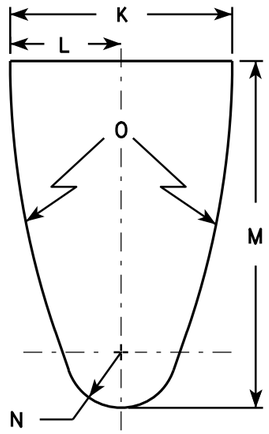
STANDARD SIGN
R3-20R

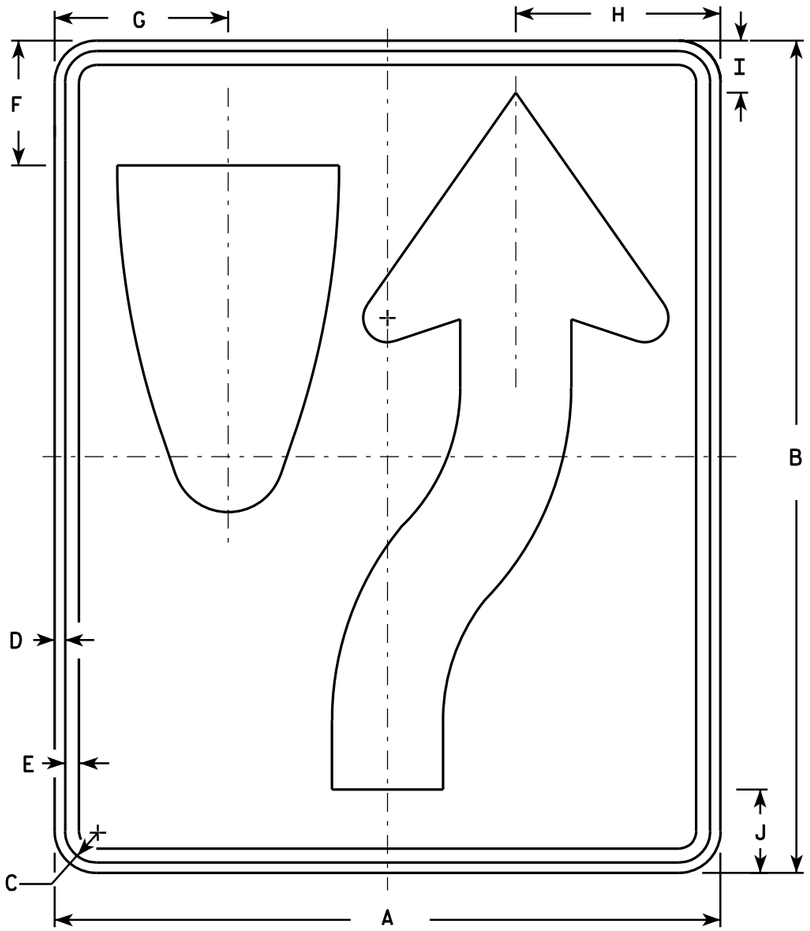
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20R.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 360 | E

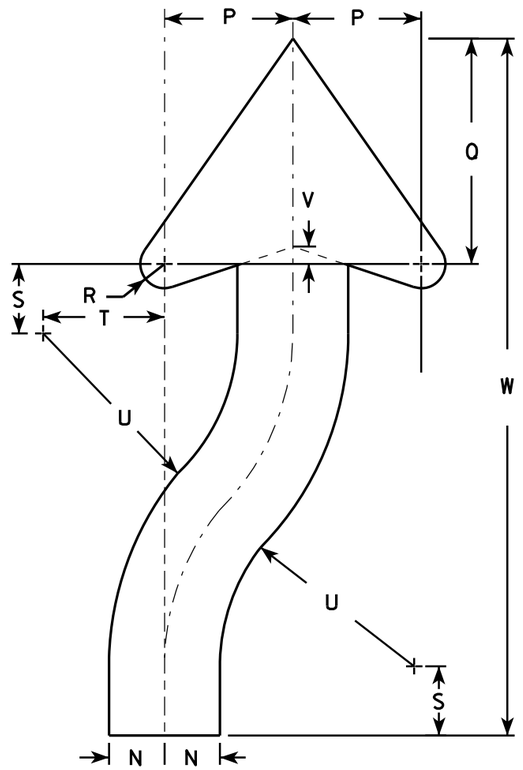




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

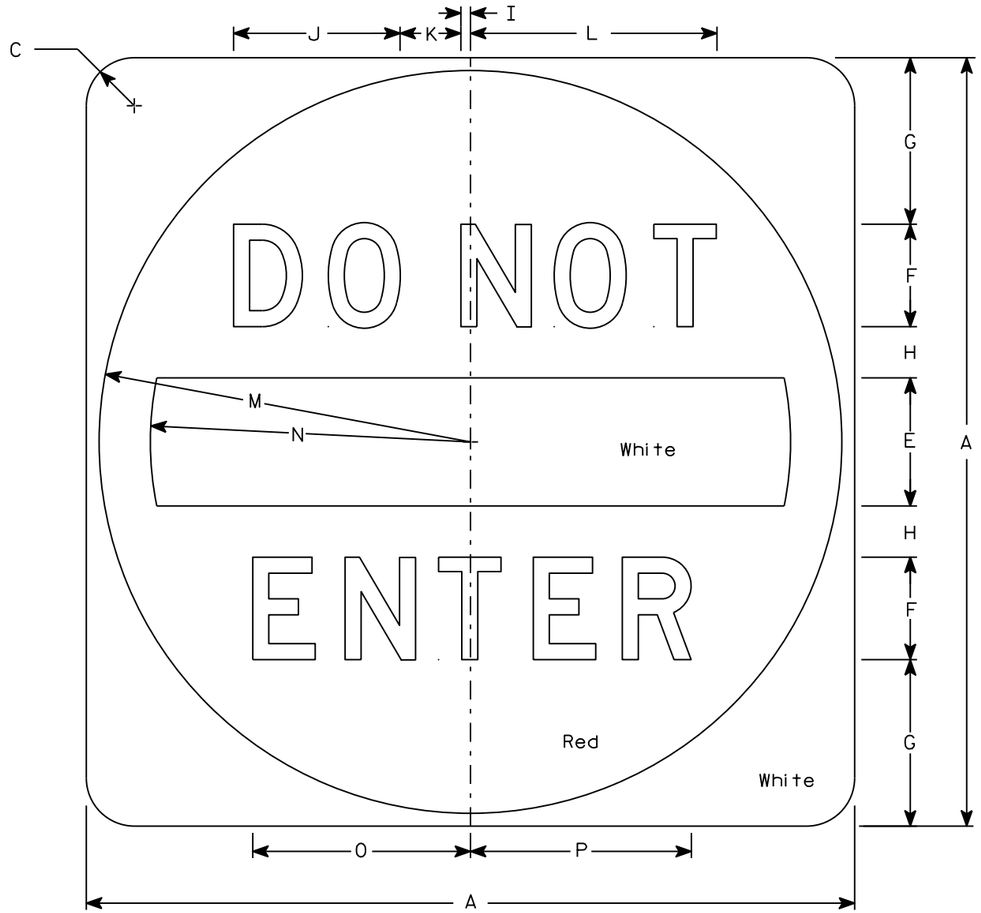
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 361	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See detail
   Message - White
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																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.25
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

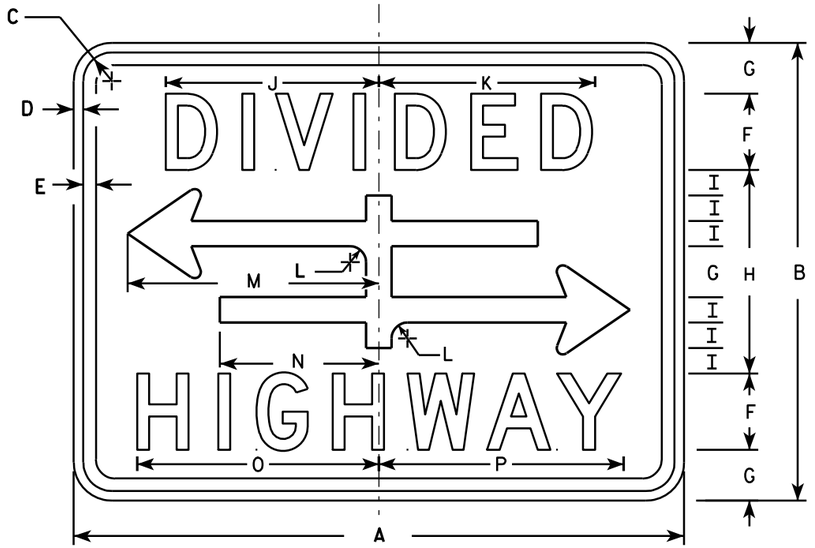
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

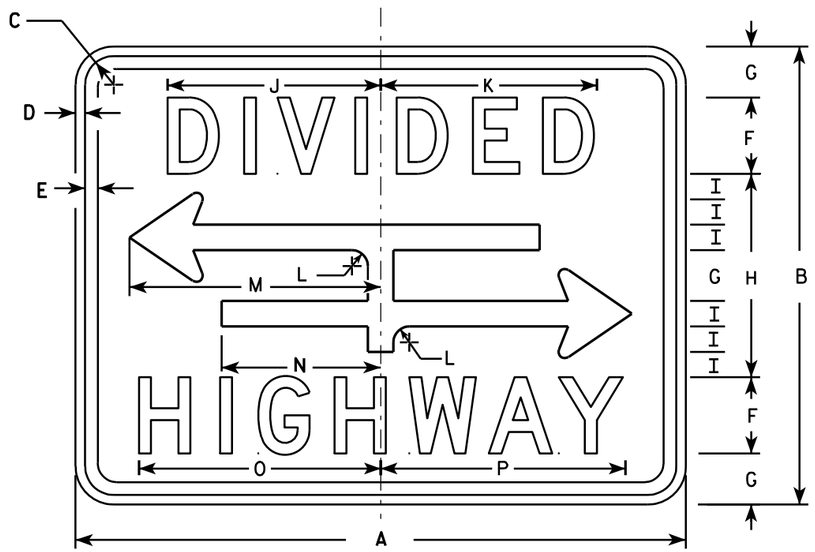
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 362 | E



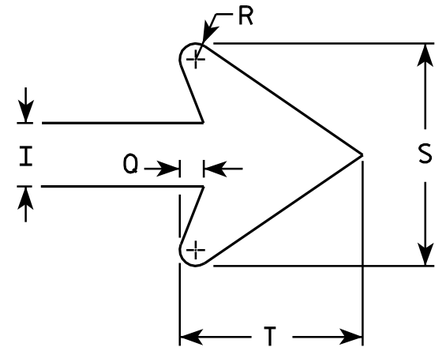
R6-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R6-3A



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	24	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN
R6-3 & R6-3A

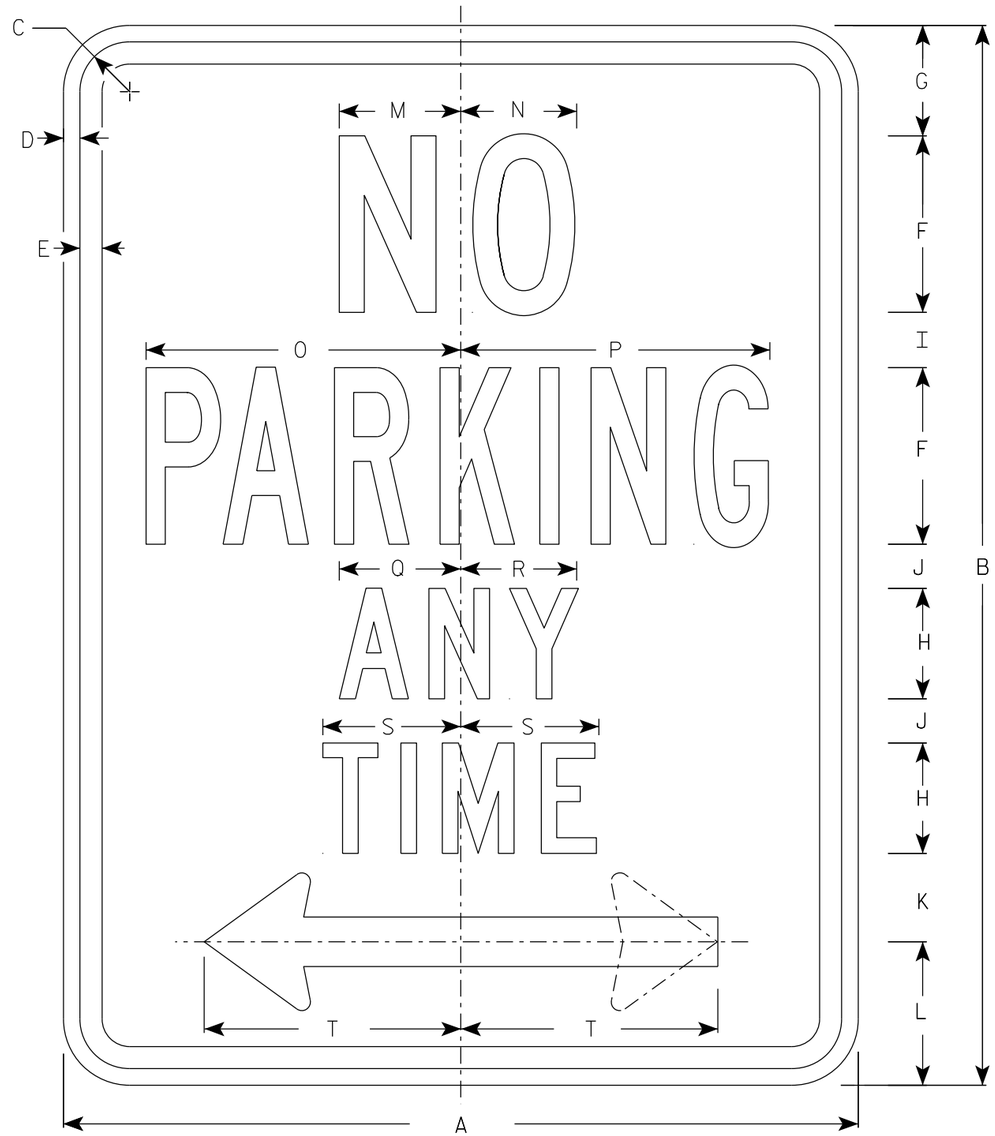
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

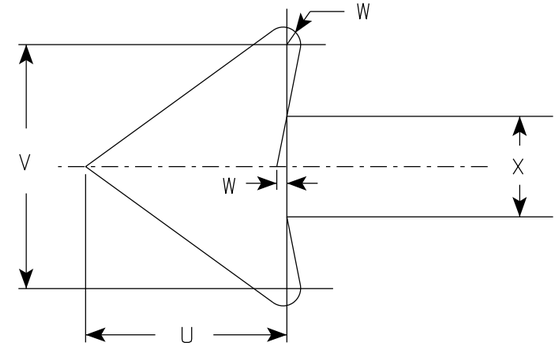
SHEET NO: 363 E



R7-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Lines 1, 3 and 4 are series C, line 2 is series B.
5. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



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	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

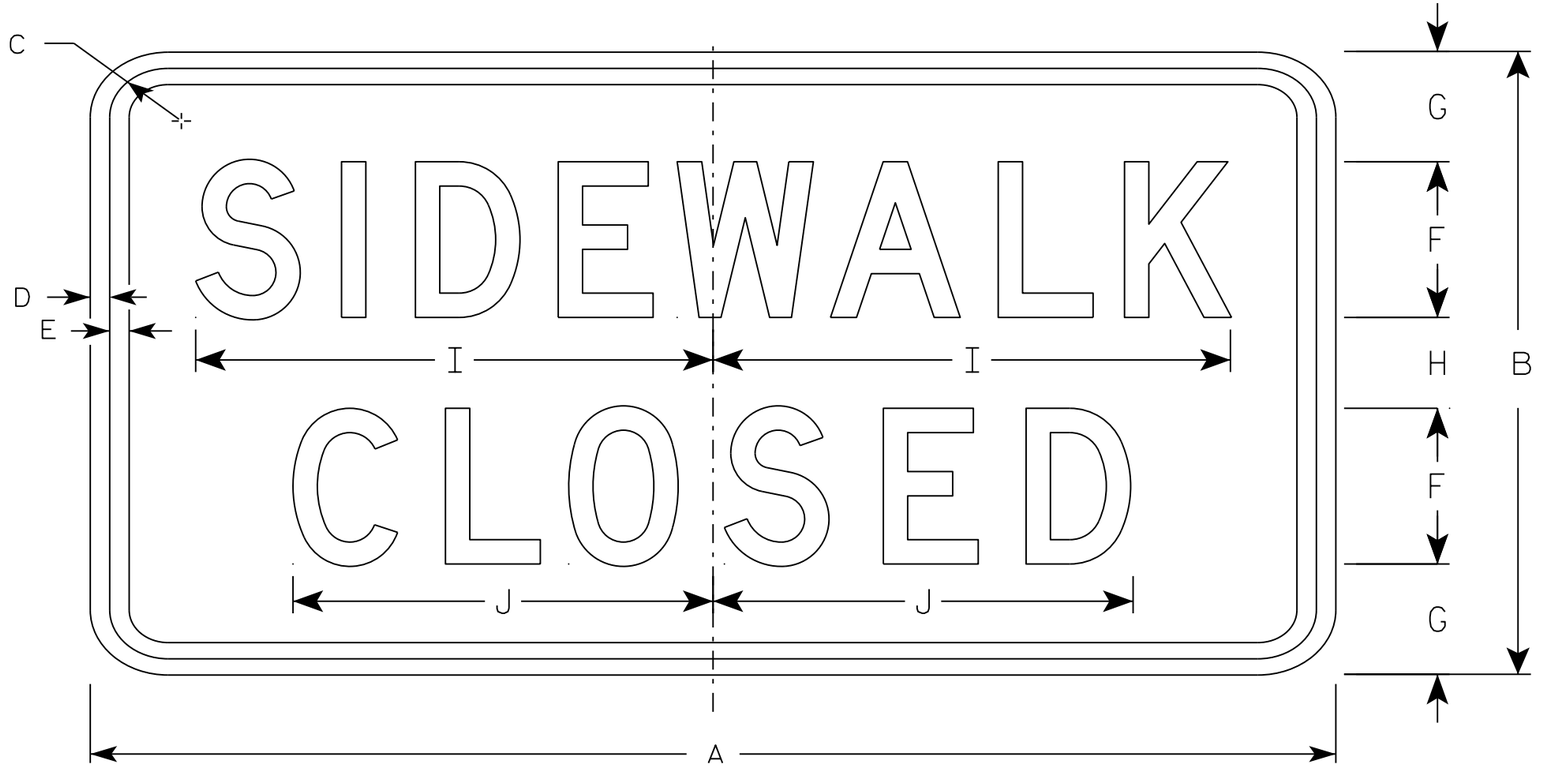
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2021 PLATE NO. R7-1.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 364 E

7

7



R9-9

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 3/4	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

STANDARD SIGN
R9-9

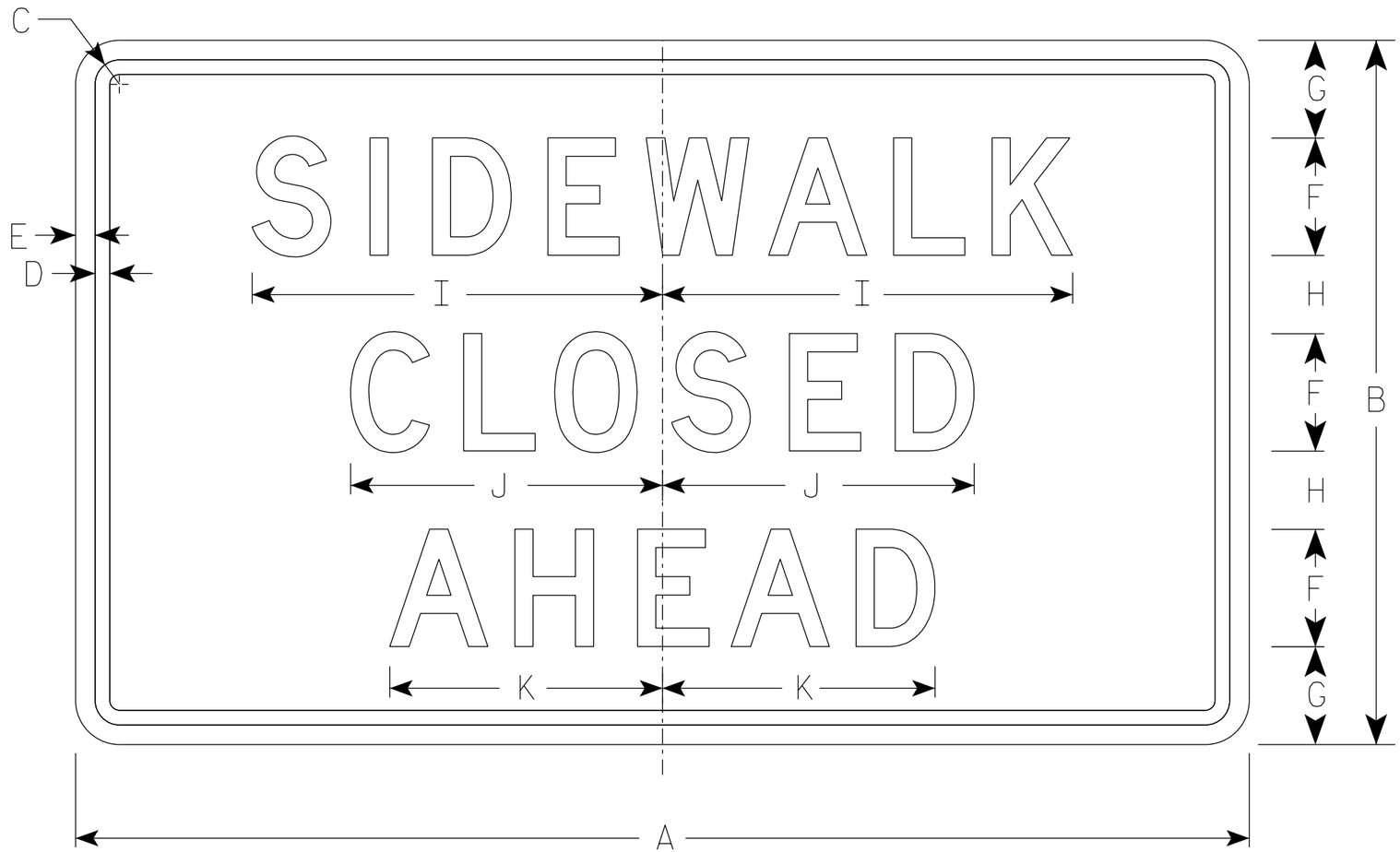
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/11/16 PLATE 365 R9-9.6

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R99.DGN PLOT DATE : 11-AUG-2016 11:33 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 2.918761:1.000000



R9-9A

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/8	3/8	1/2	3	2 1/2	2	10 1/2	8	7																3.75
2M	30	18	1 1/8	3/8	1/2	3	2 1/2	2	10 1/2	8	7																3.75
3																											
4																											
5																											

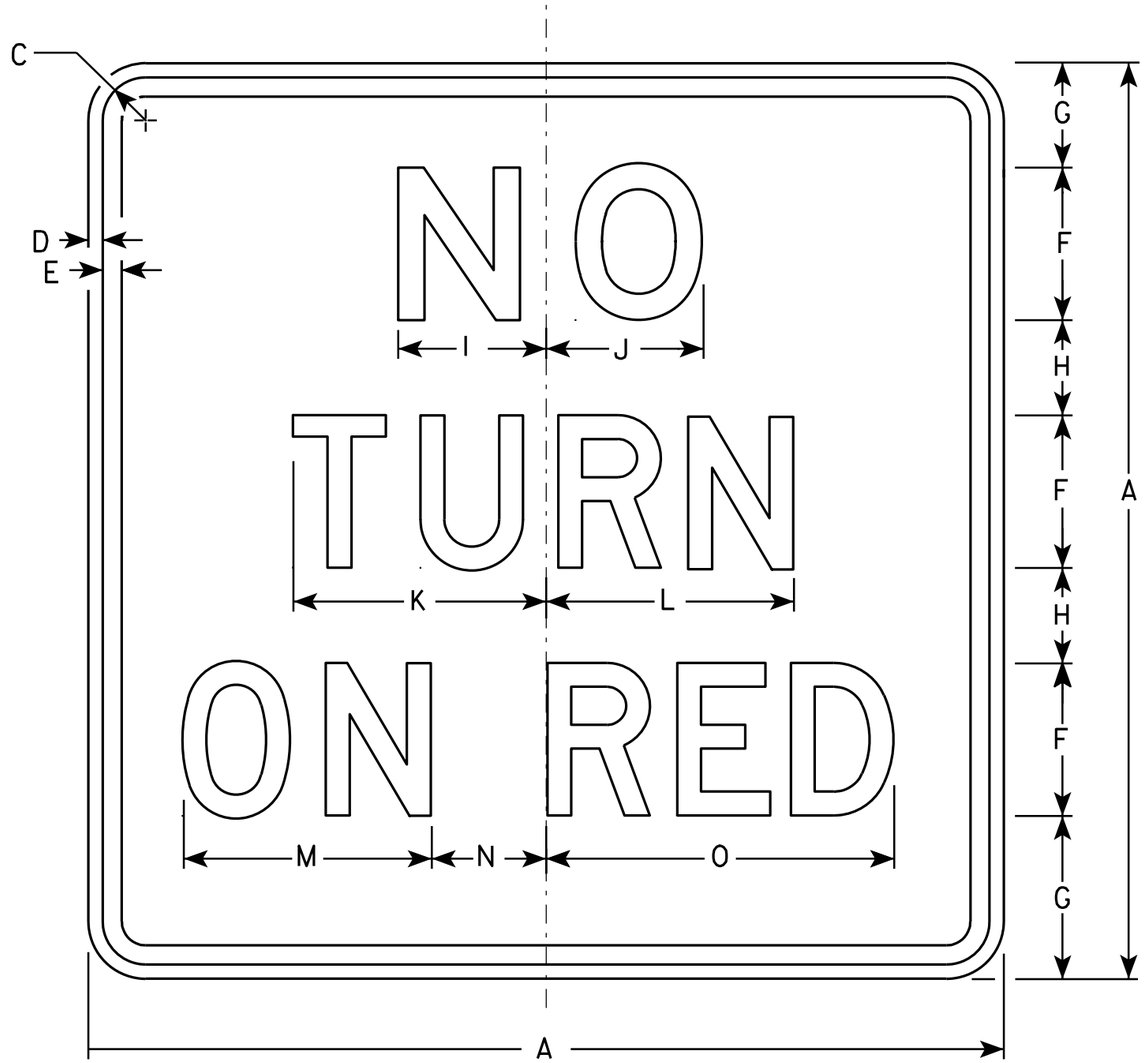
STANDARD SIGN
R9-9A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/31/2020 PLATE NO. R9-9A.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 366 | E



R10-11B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - See Note 5.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series E.
   Lines 2 and 3 are 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		1 1/8	3/8	3/8	3	2 3/4	1 3/4	3	3 1/8	5	4 7/8	5 1/4	1 7/8	7 1/8												2.25
2S	24		1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 7/8	4 1/8	6 5/8	6 1/2	6 1/2	3	9 1/8												4.0
2M	24		1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 7/8	4 1/8	6 5/8	6 1/2	6 1/2	3	9 1/8												4.0
3	30		1 3/8	1/2	5/8	5	4 1/2	3	4 7/8	5 1/4	8 1/4	8 1/8	7 3/4	4 1/8	11 7/8												6.25
4																											
5																											

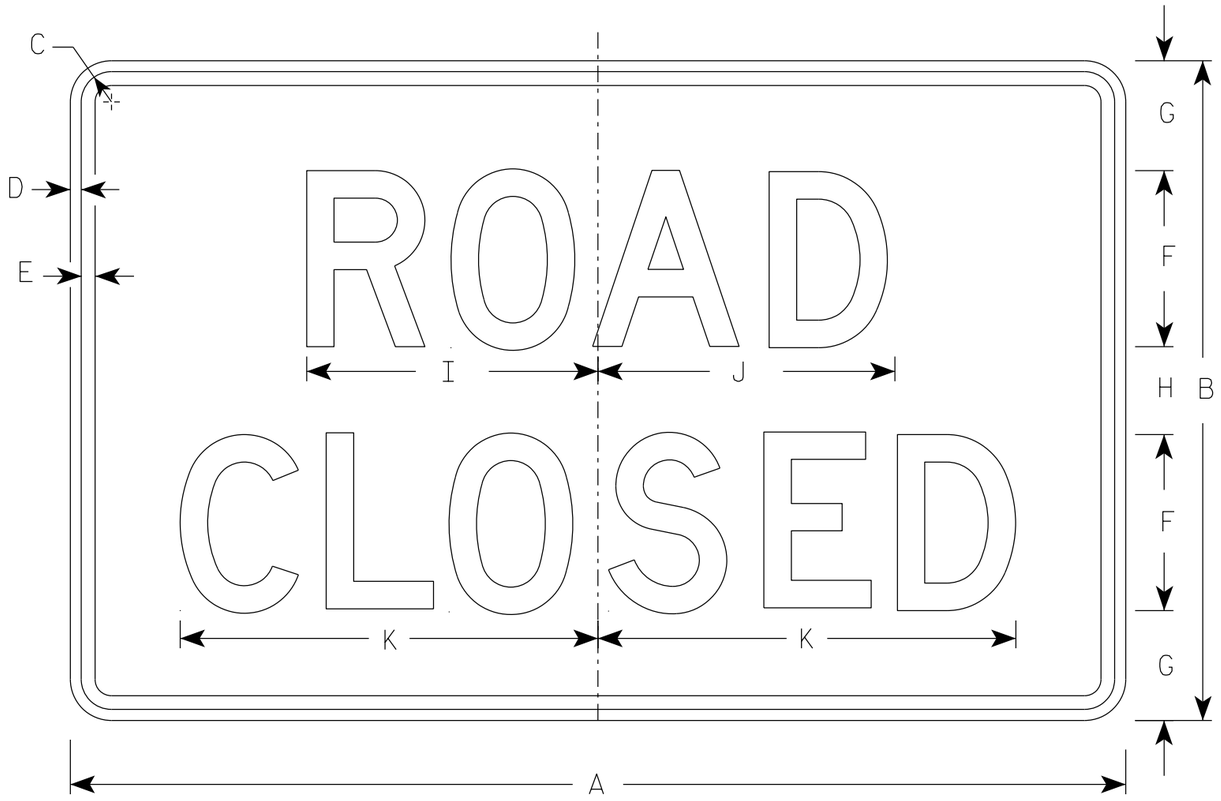
STANDARD SIGN
R10-11B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-11B.4

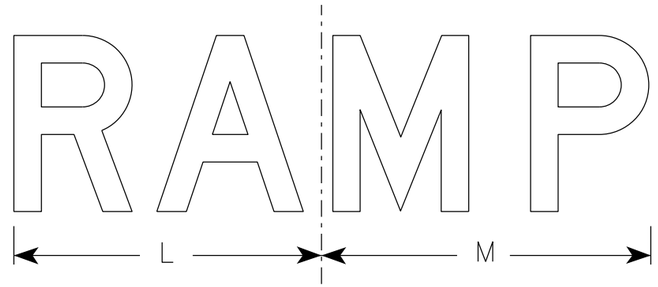
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 367 | E



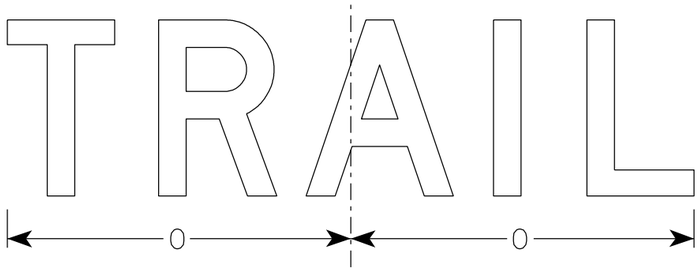
R11-2

NOTES

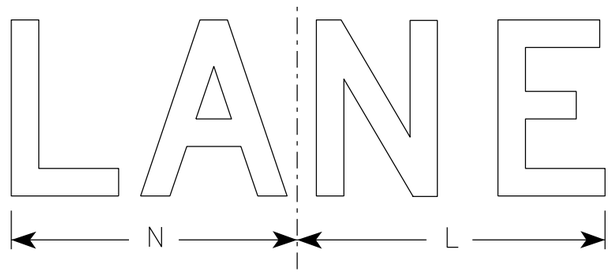
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the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



R11-2R



R11-2T



R11-2L

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

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

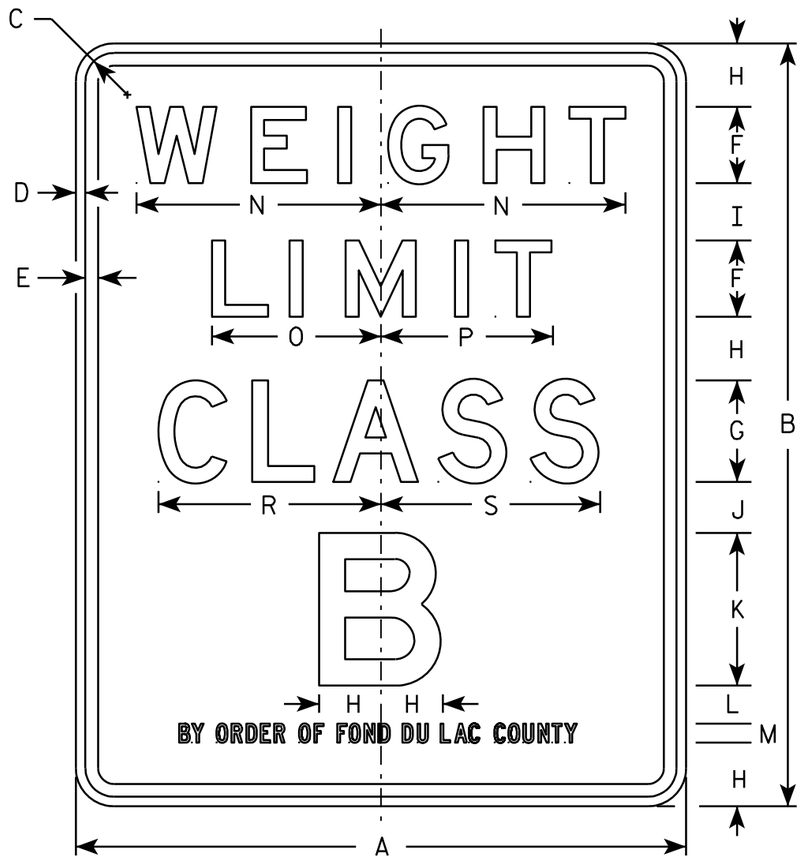
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2021 PLATE NO. R11-2.11

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

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112.dgn PLOT DATE : 29-MAR 2021 8:15 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7



R12-53

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 2 & 4 are Series E.
   Line 3 is Series D.
   Line 5 is Series C.
6. Line 5 of the sign shall vary with the name of the maintaining authority.

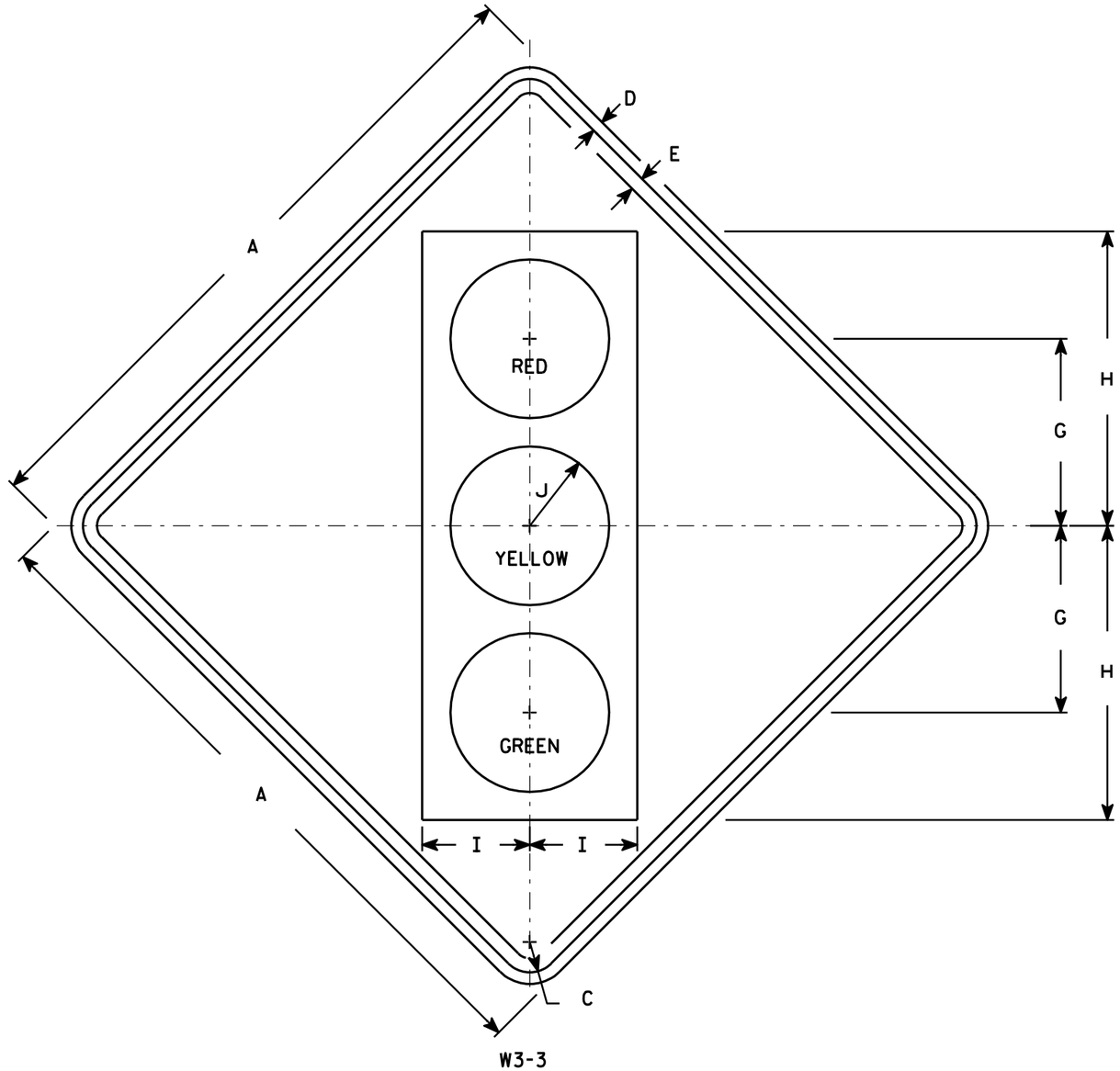
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/8	3/8	1/2	3	4	2 1/2	2 1/4	2	6	1 1/2	3/4	9 5/8	6 5/8	6 3/4		8 3/4	8 5/8								5.0
2M	24	30	1 1/8	3/8	1/2	3	4	2 1/2	2 1/4	2	6	1 1/2	3/4	9 5/8	6 5/8	6 3/4		8 3/4	8 5/8								5.0
3										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

STANDARD SIGN
R12-53

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 4/1/11 PLATE NO. R12-53.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 369 | E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

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	30		1 3/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

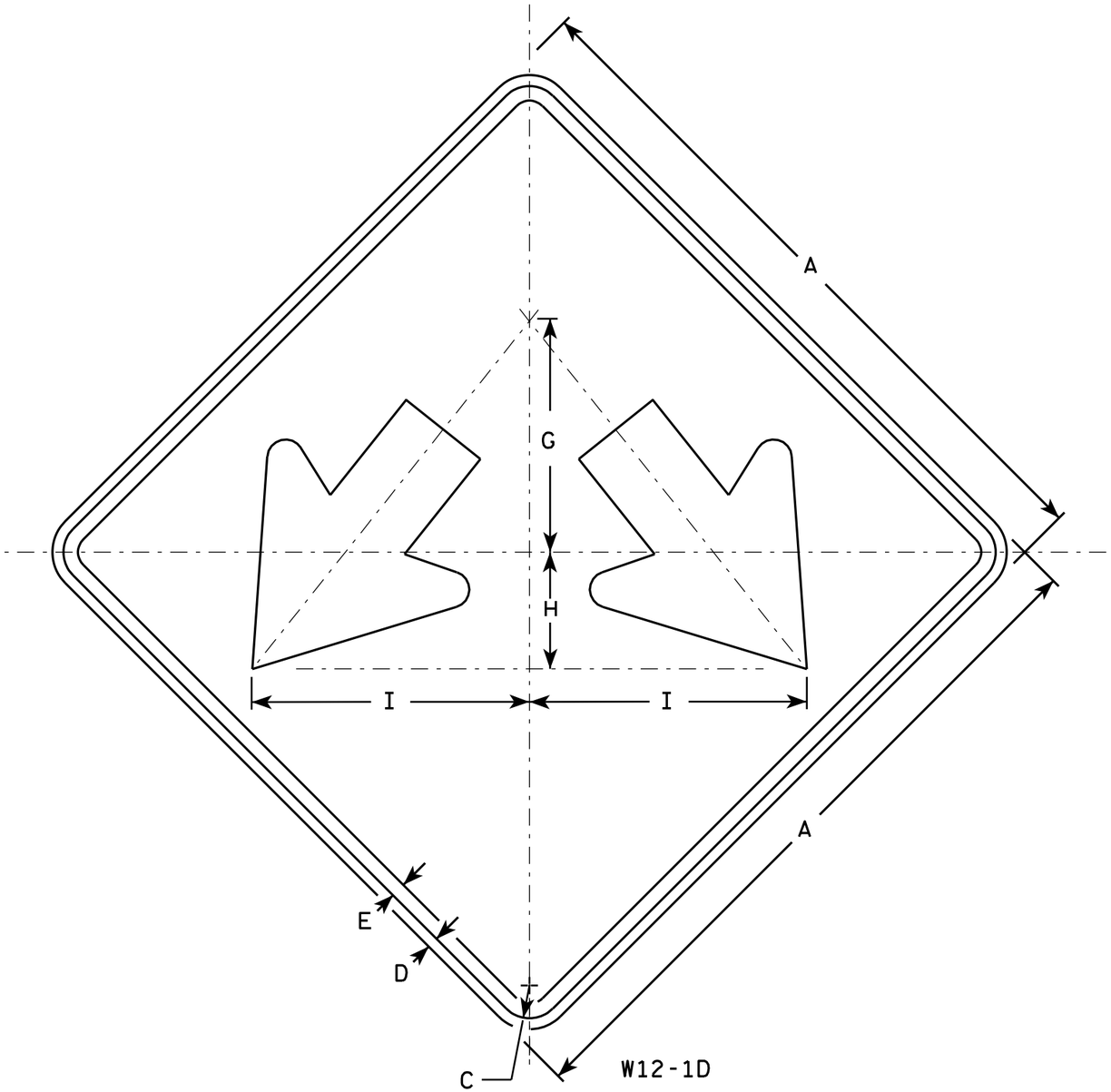
STANDARD SIGN
W3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

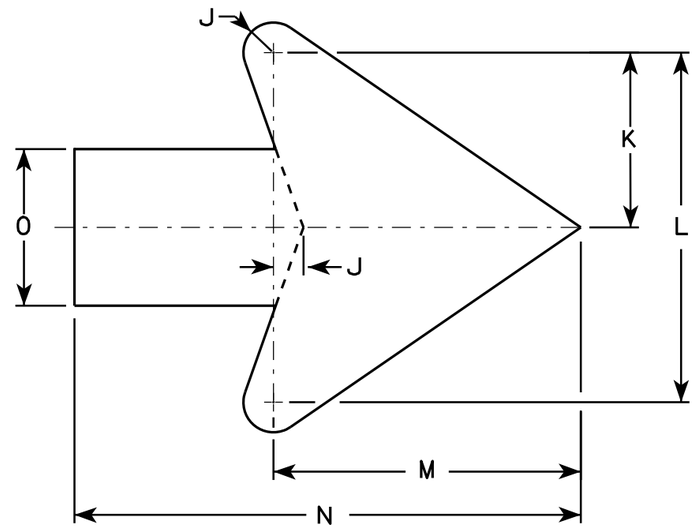
DATE 6/7/10 PLATE NO. W3-3.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 370 | E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   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.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

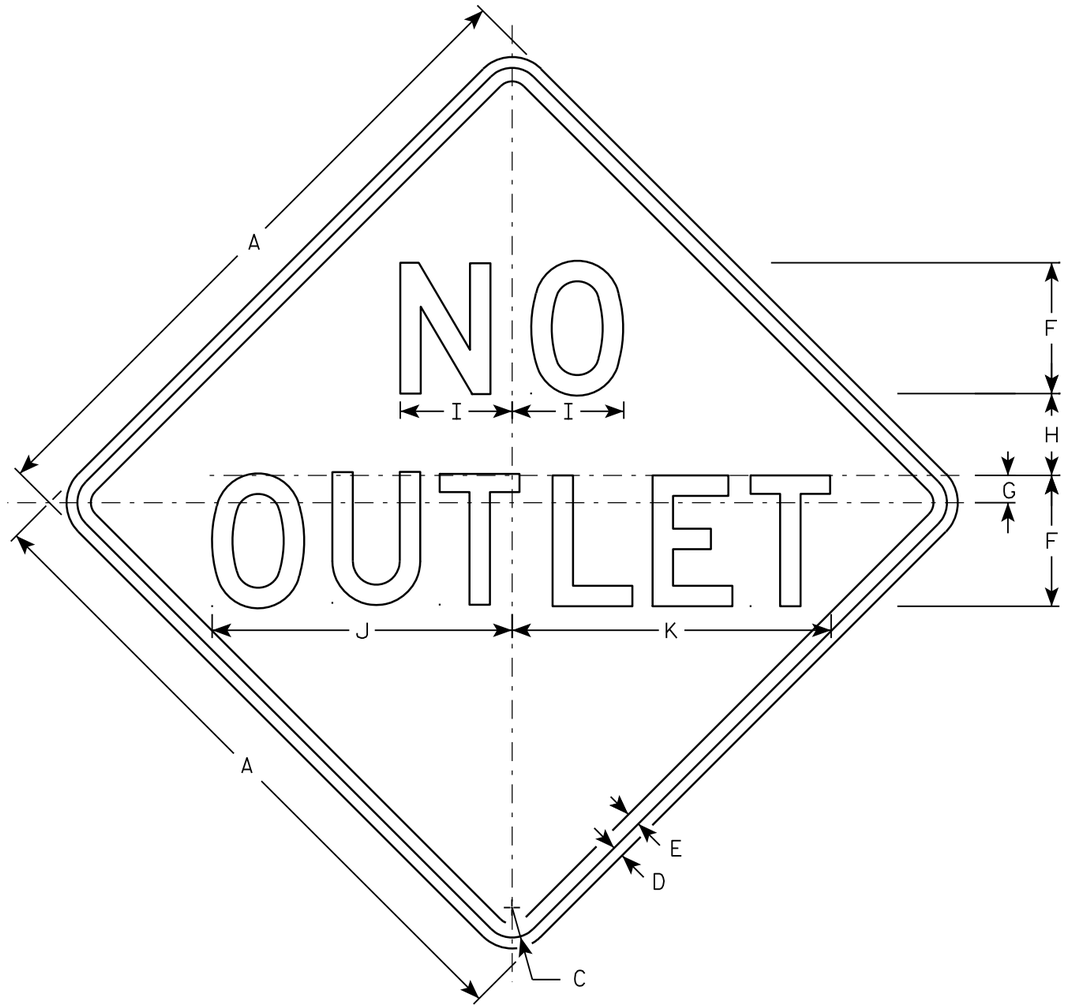
STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 371	E



W14-2

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Message - BLACK
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	5	1	2 3/4	4 1/8	11 3/4	12 3/8																4.0
2S	30		1 3/8	1/2	5/8	6	1 1/4	3 3/4	5 1/8	13 3/4	14 5/8																6.25
2M	30		1 3/8	1/2	5/8	6	1 1/4	3 3/4	5 1/8	13 3/4	14 5/8																6.25
3	36		1 5/8	5/8	3/4	7	1 3/8	4 5/8	6	16 1/8	17 1/8																9.0
4																											
5																											

STANDARD SIGN
W14-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

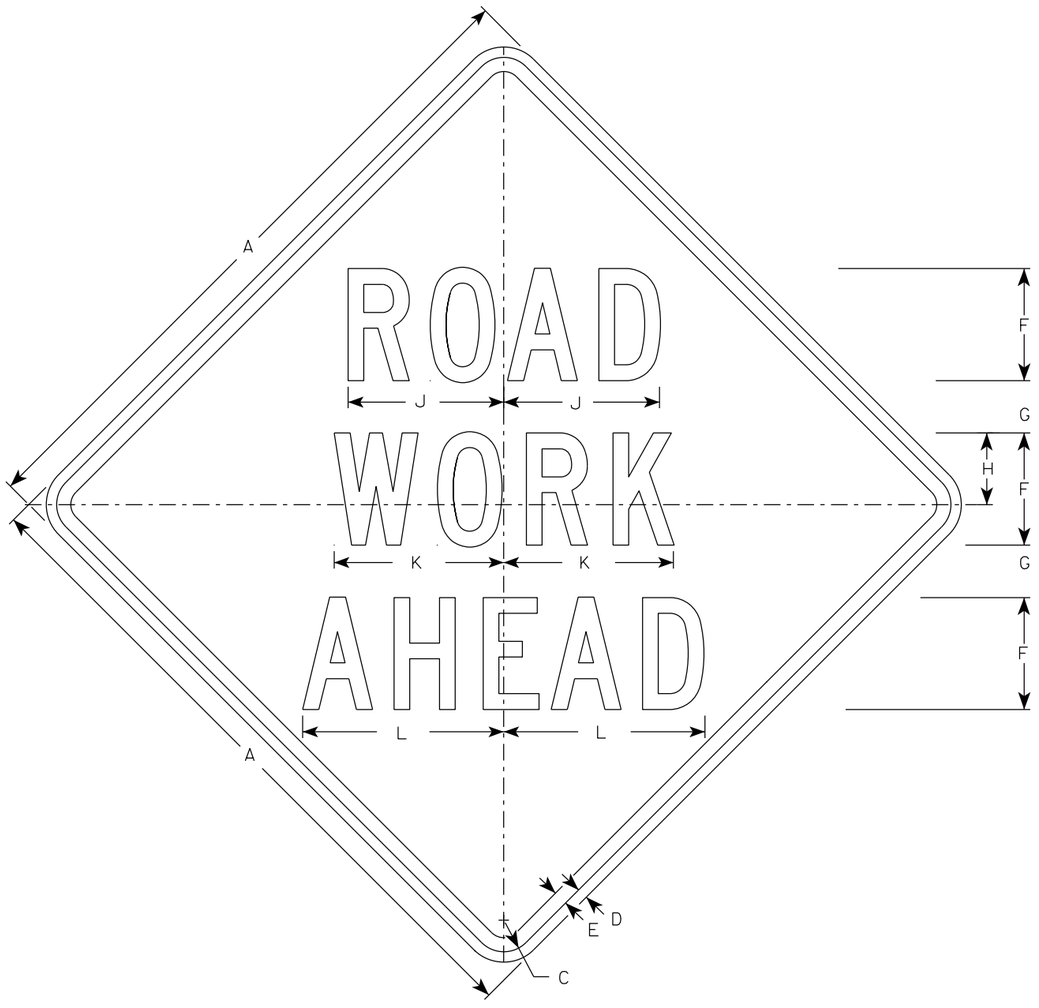
DATE 3/13/13 PLATE NO. W14-2.3

PROJECT NO:

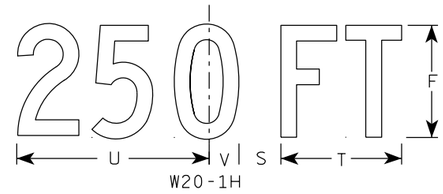
SHEET NO: 372 E

NOTES

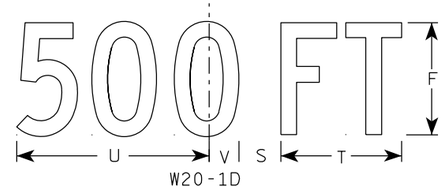
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1A

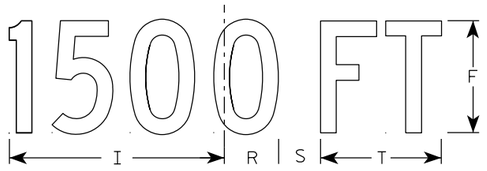


W20-1H

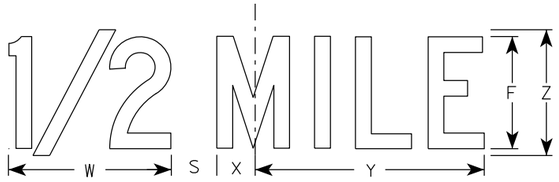


W20-1D

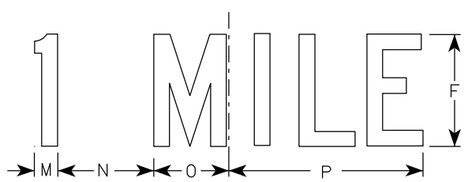
W20-1C



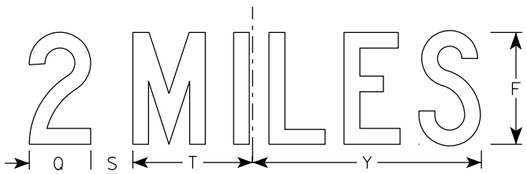
W20-1B



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		1 5/8	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		2 1/4	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		2 1/4	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		2 1/4	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		2 1/4	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		2 1/4	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 3/25/2020 PLATE NO. W20-1.11

PROJECT NO:

SHEET NO: E

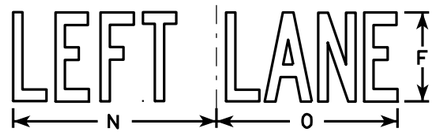
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 25-MARCH-2020 PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

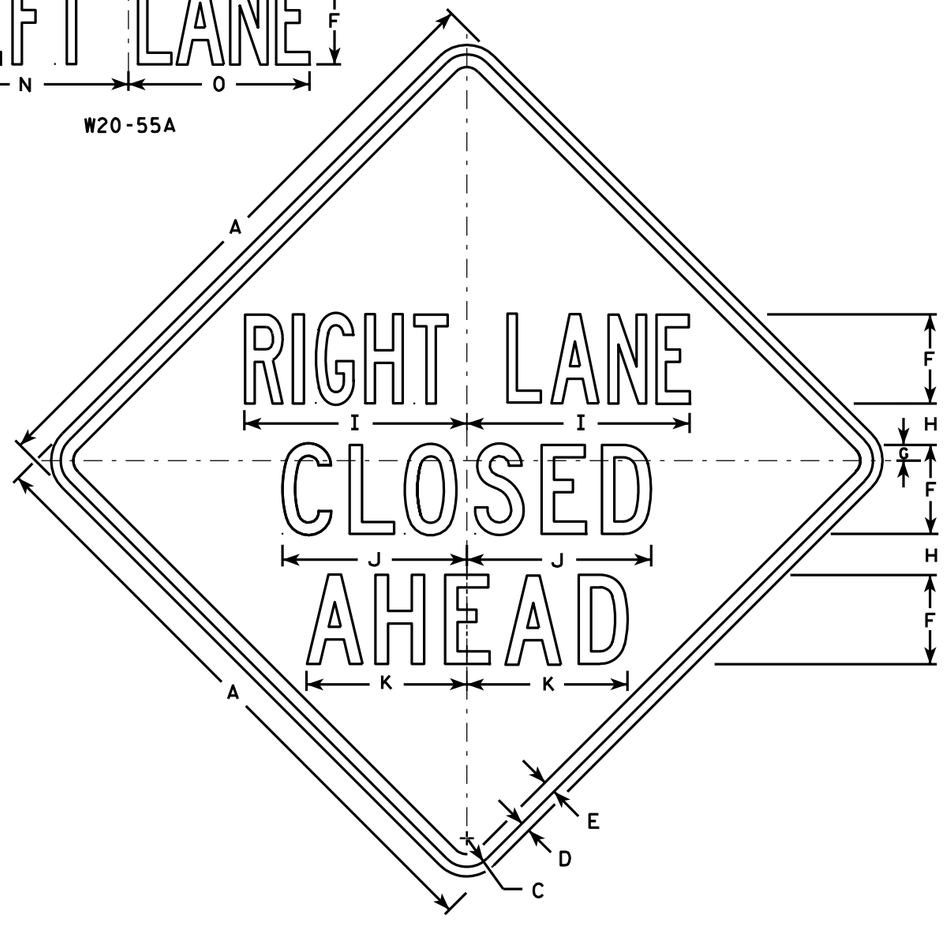
7

7

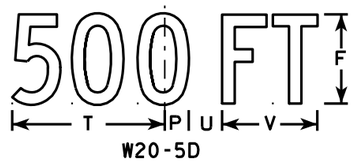
W20-56A



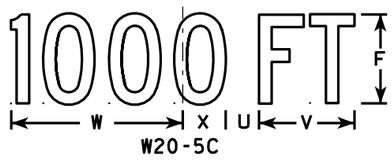
W20-55A



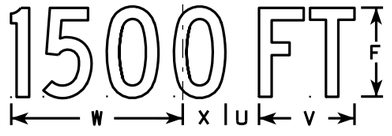
W20-5A



W20-5D



W20-5C



W20-5B

W20-5G

W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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	1 5/8	5/8	3/4	5	1/8	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 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	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	2 1/4	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	2 1/4	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	2 1/4	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	2 1/4	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
W20-5A, B, C, D, F & G

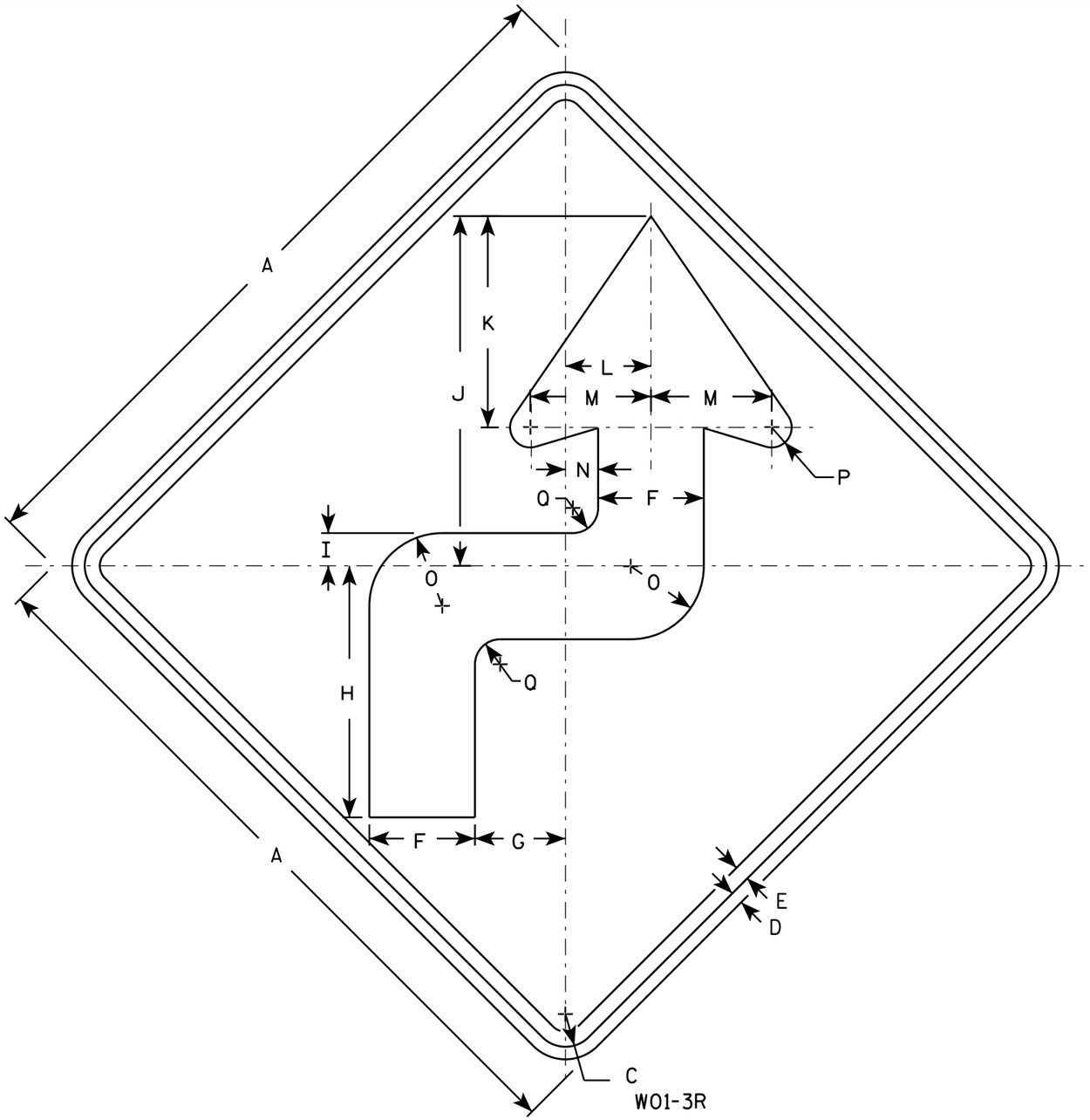
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 374 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000
WISDOT/CADDS SHEET 42



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-3L is the same as W01-3R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
2S	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
2M	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
3	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
4	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
5	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0

STANDARD SIGN
W01-3

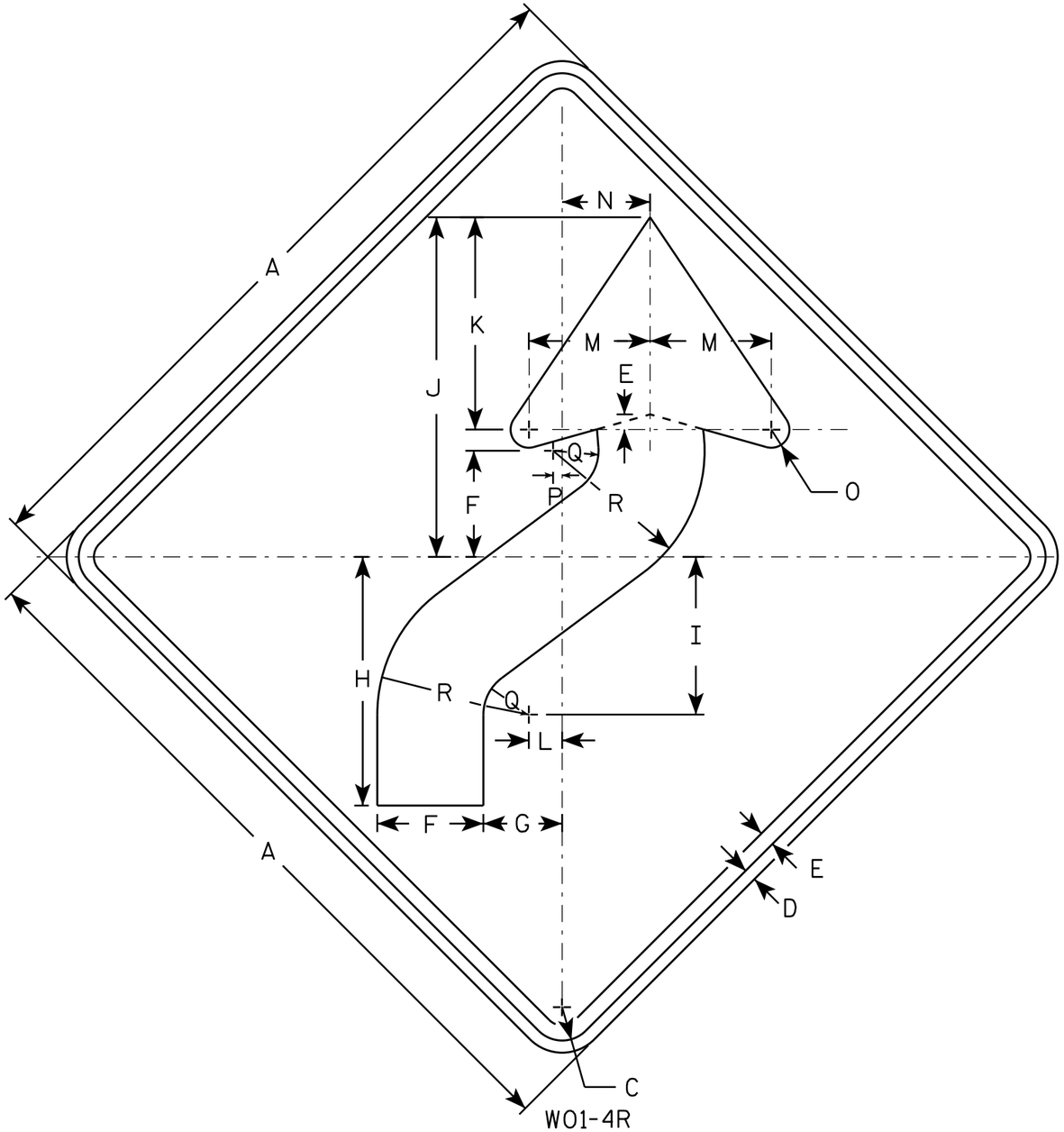
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE W01-3.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W013.DGN PLOT DATE : 28-FEB-2014 11:35 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.567217:1.000000 WISDOT/CADDS SHEET 42



W01-4R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN
W01-4

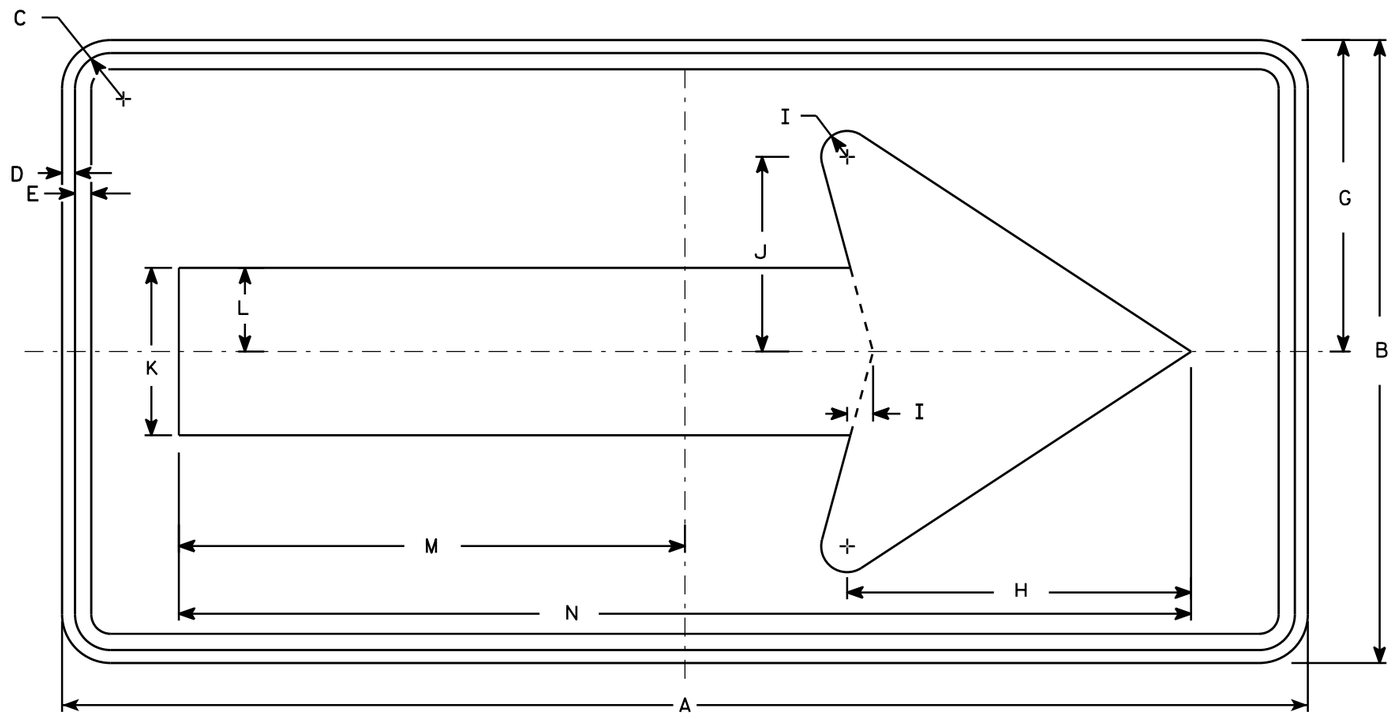
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO W01-4.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W014.DGN PLOT DATE : 28-FEB-2014 11:35 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.755110:1.000000 WISDOT/CADDS SHEET 42



W01-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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 3/8	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 3/8	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 3/8	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 3/8	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 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

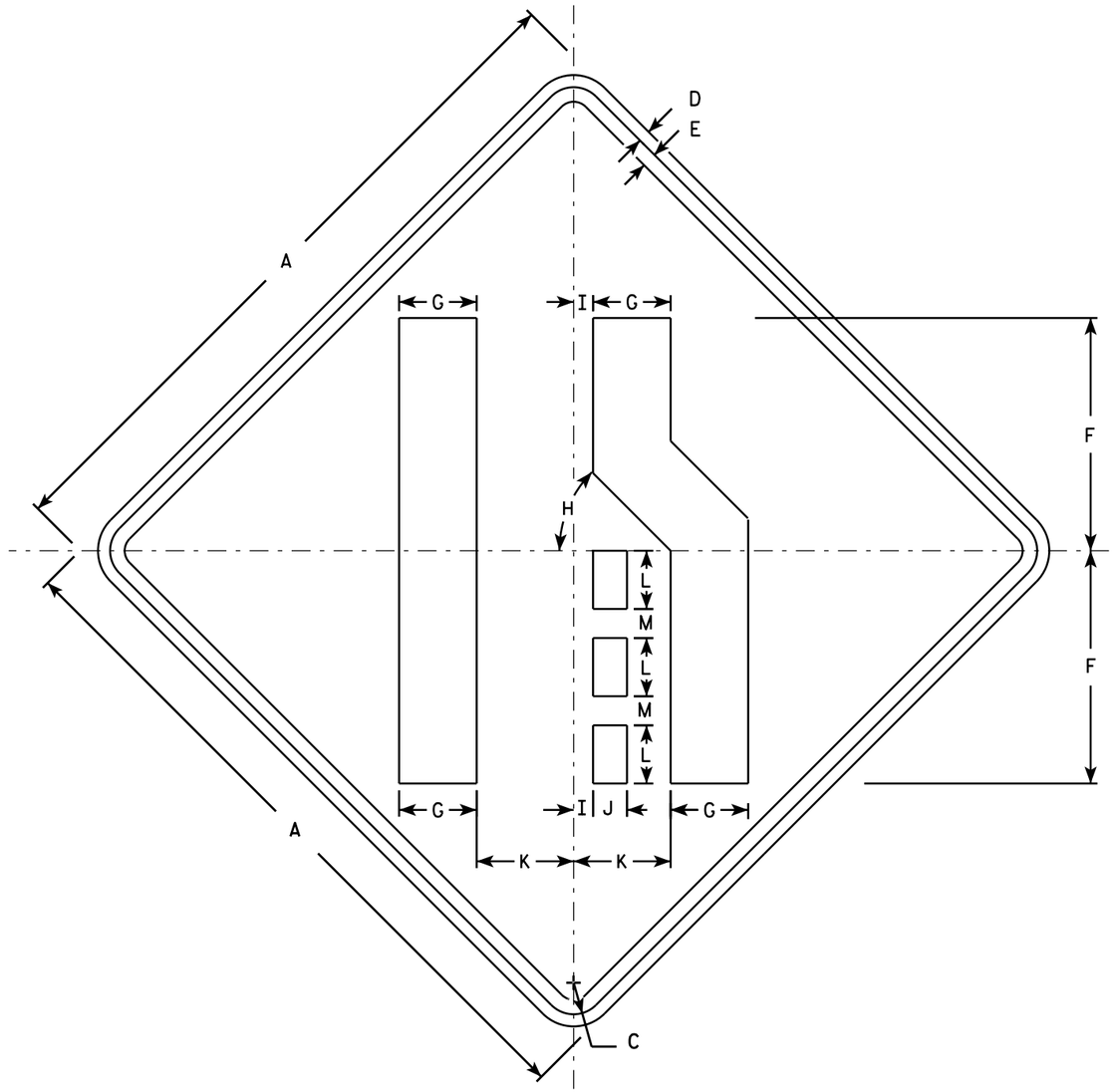
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

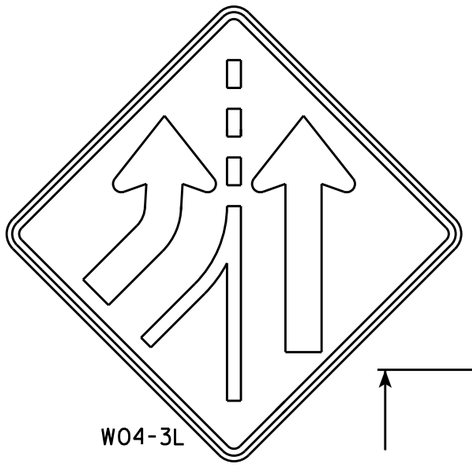
STANDARD SIGN
W04-2

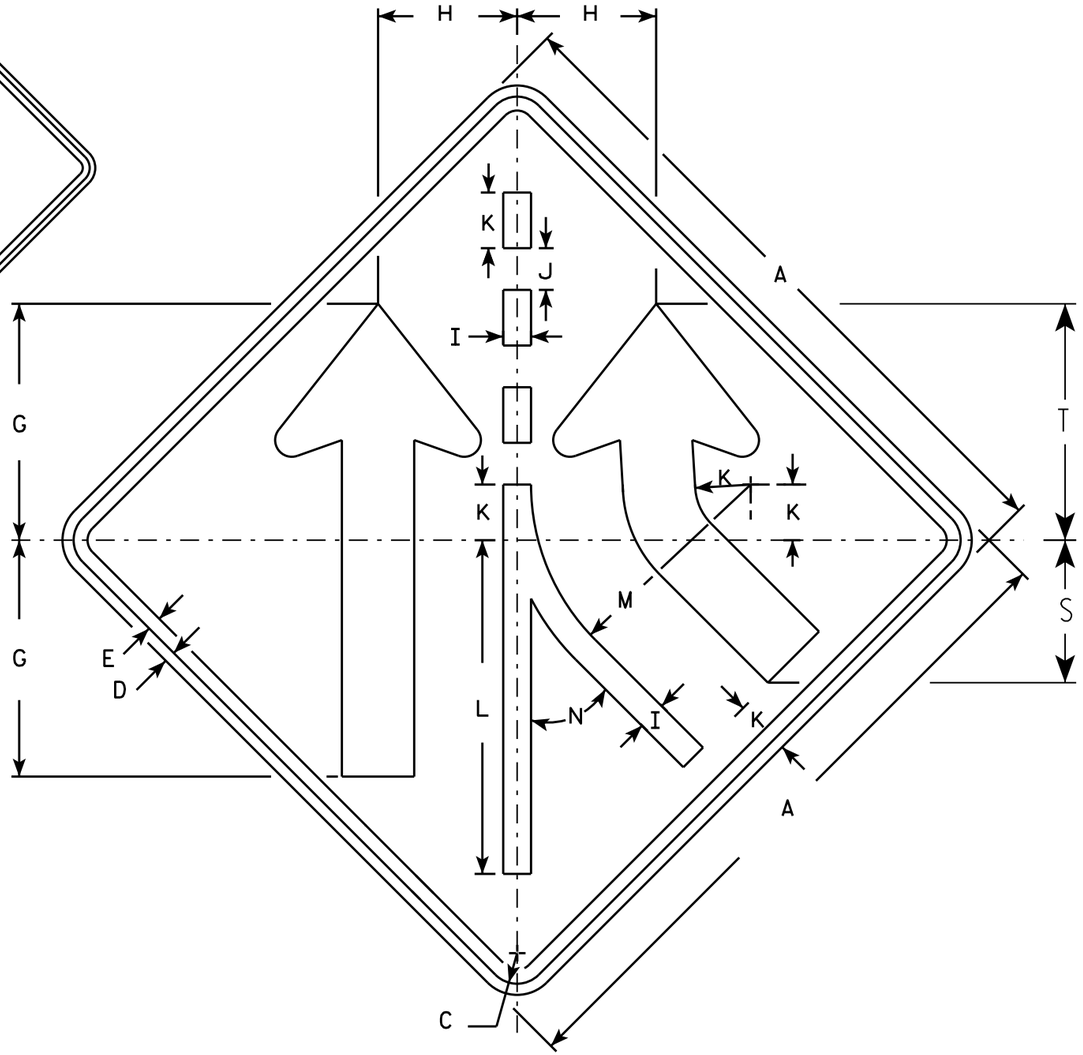
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 378 W04-2.1

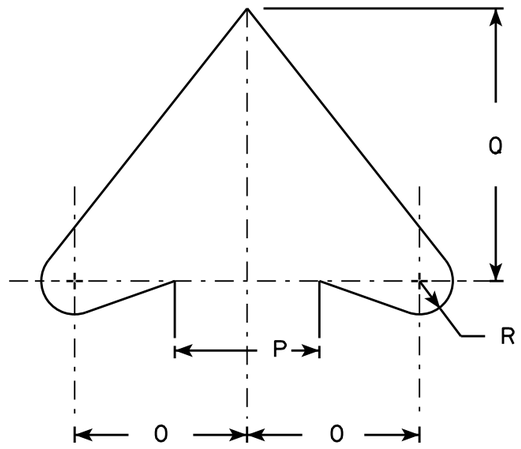
PROJECT NO: | SHEET NO: E





NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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. W04-3 L is the same as W04-3 R except the arrow is reversed along the vertical centerline.



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		1 5/8	5/8	3/4		12 3/4	7 1/2	1 1/2	2 1/4	3	18	11 7/8	45°	4 5/8	4	7 3/8	7/8	7 3/4	12 3/4							9.0
2S	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0
2M	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0
3	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0
4	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0
5	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0

STANDARD SIGN

W0433

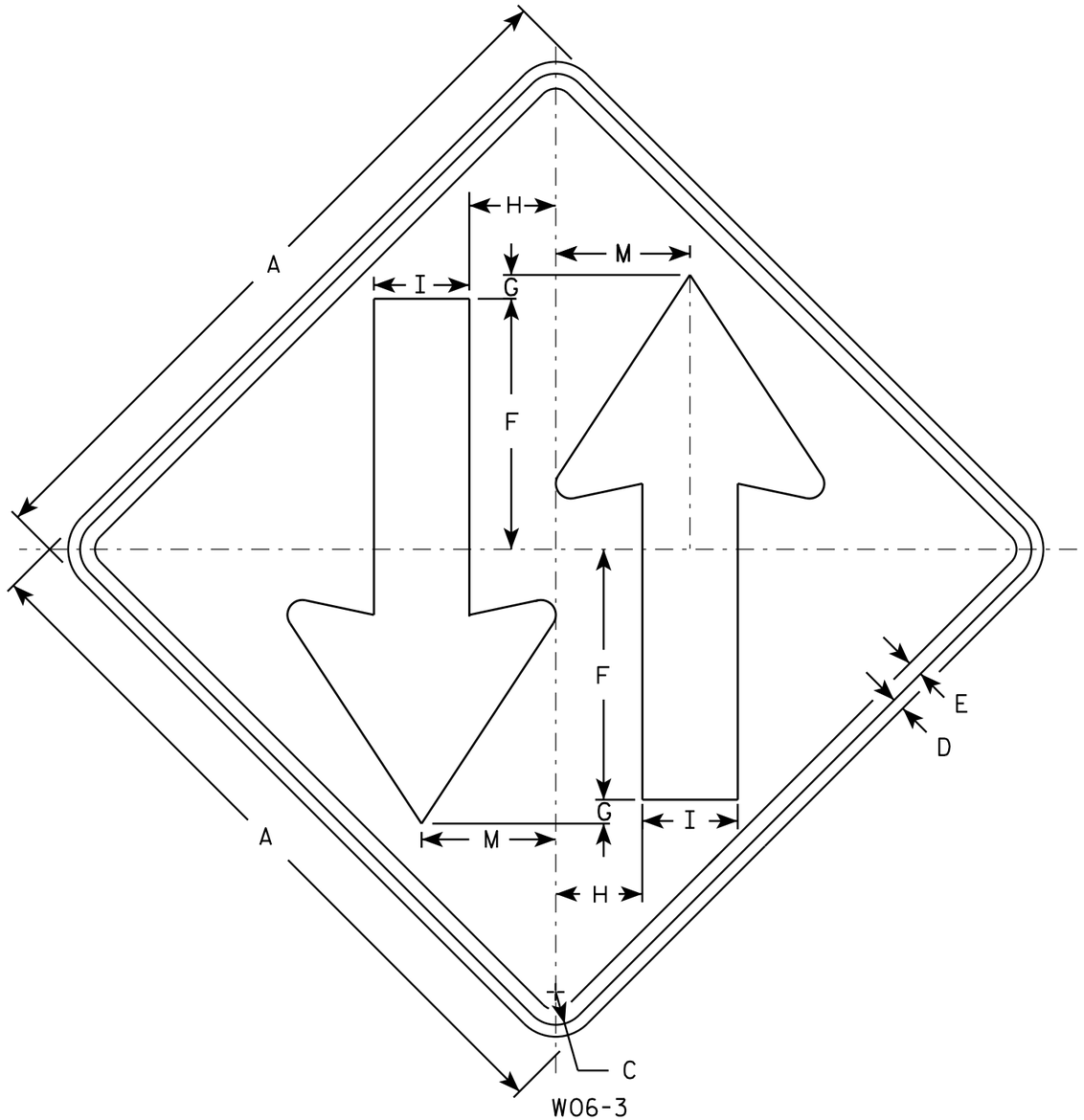
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/20/13 PLATE W04-3.1

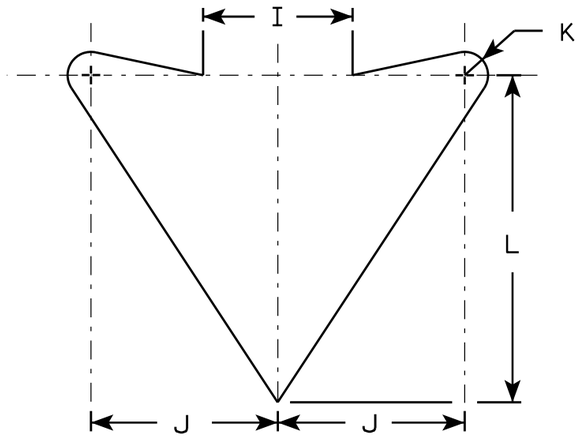
PROJECT NO:

SHEET NO: E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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.



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		1 5/8	5/8	3/4	12	1	4 1/4	5	6	3/4	10 1/2	6 3/4														9.0
2S	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
2M	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
3	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
4	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
5	48		2 1/4	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0

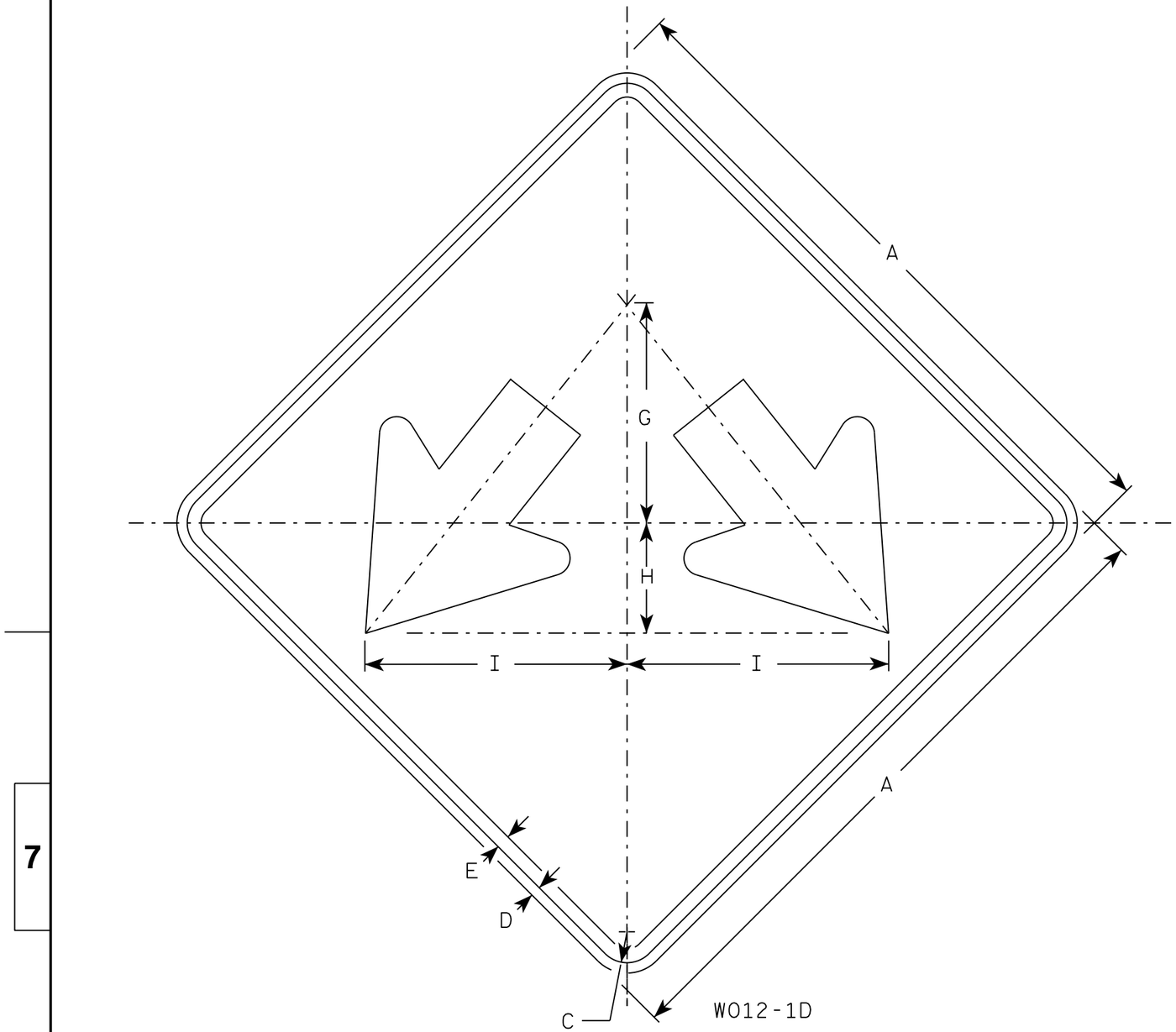
STANDARD SIGN
W06-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 380 W06-3.1

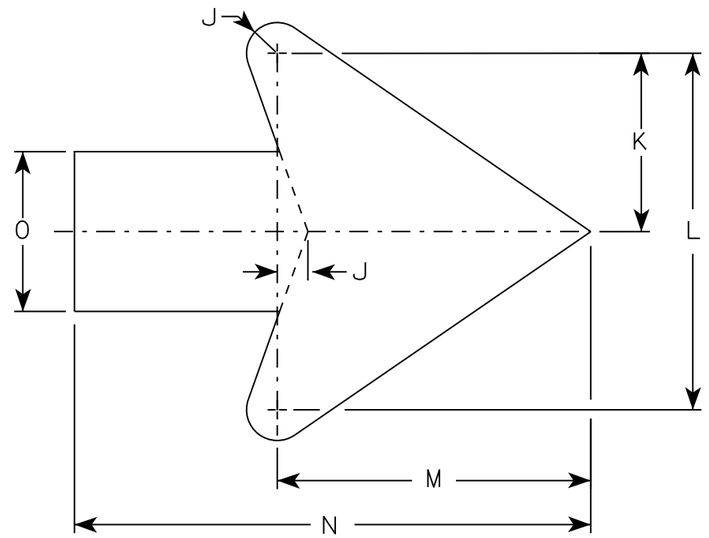
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W012-1D

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.



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	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0

STANDARD SIGN
W012-1D

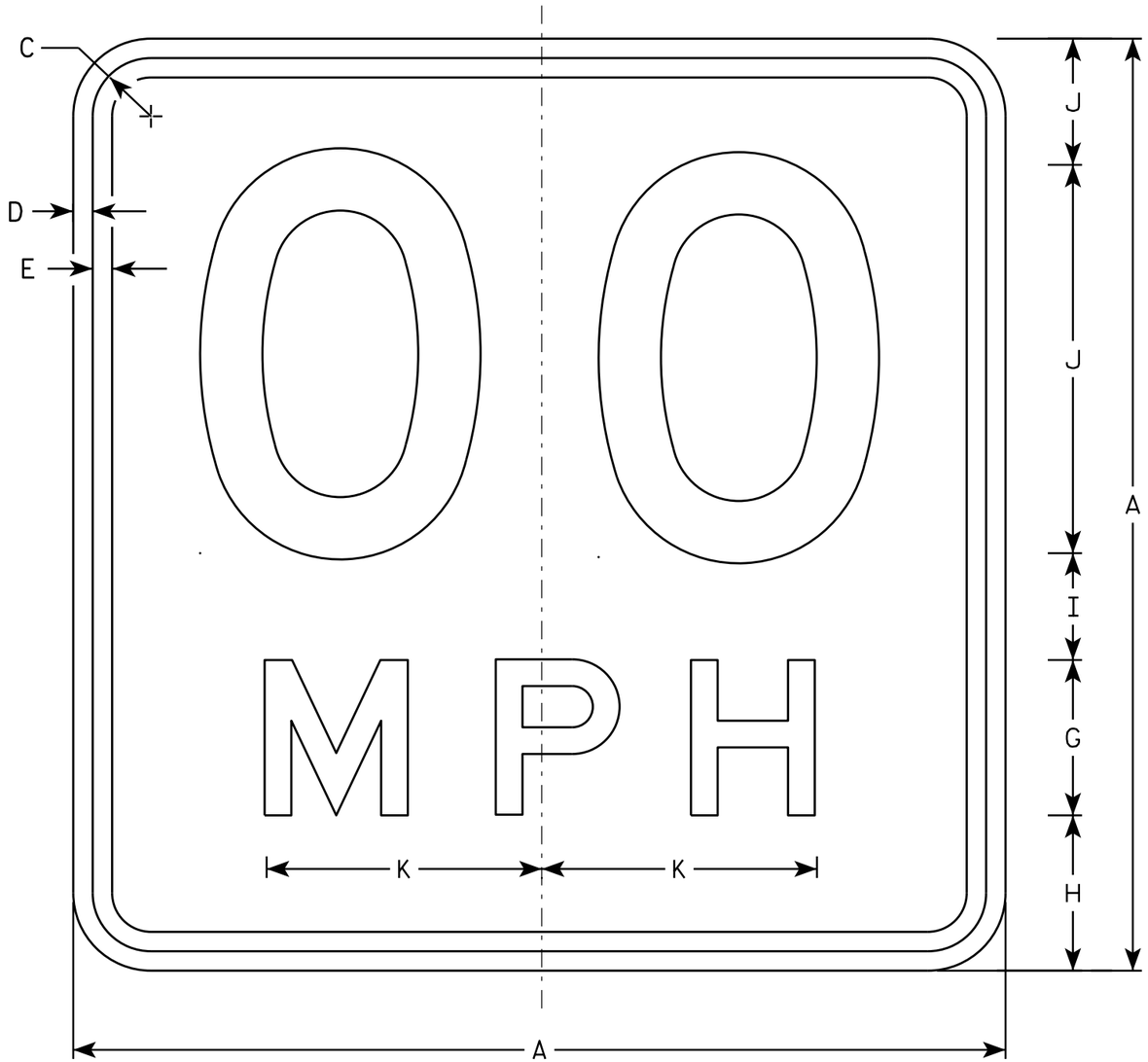
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/28/16 PLATE NO W012-1D.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W0121D.DGN PLOT DATE : 11-AUG-2016 11:28 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.621375:1.000000



W013-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is 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	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W013-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/13 PLATE 382 W013-1.1

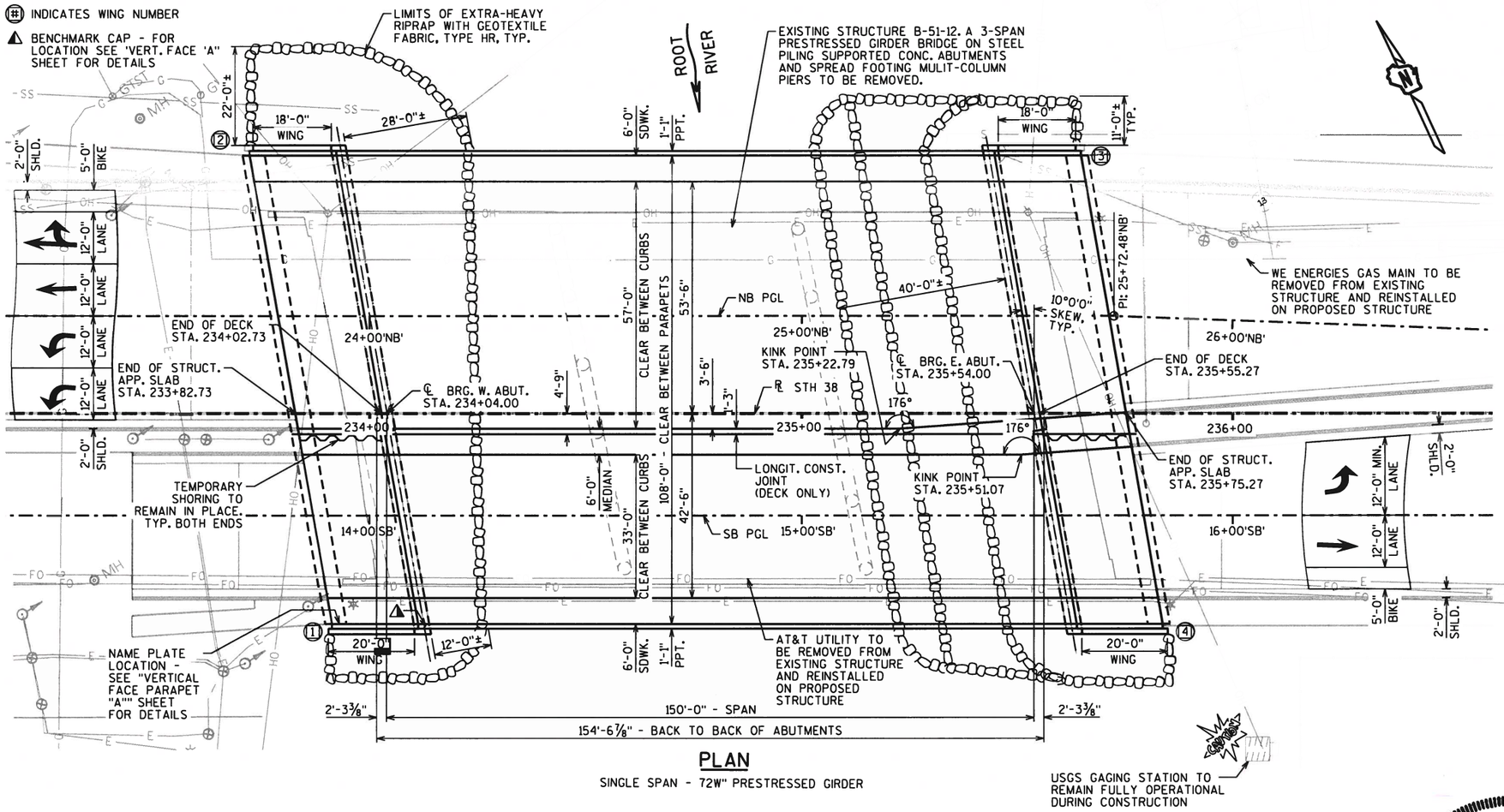
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

STATE PROJECT NUMBER

2290-03-73

(#) INDICATES WING NUMBER

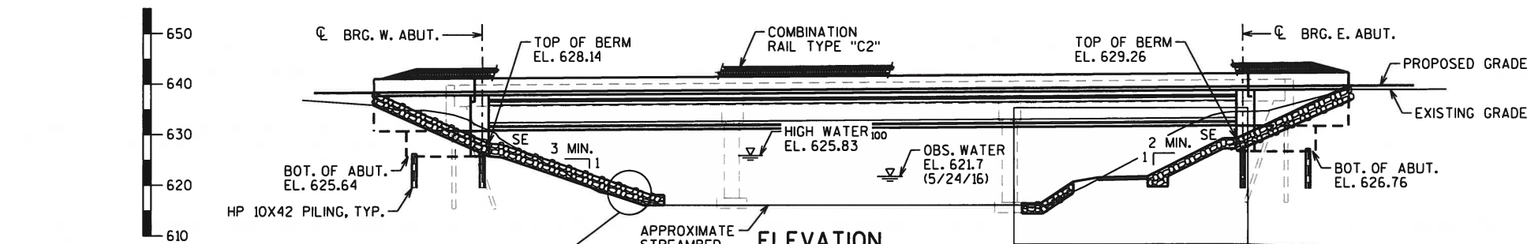
▲ BENCHMARK CAP - FOR LOCATION SEE 'VERT. FACE 'A'' SHEET FOR DETAILS



PLAN

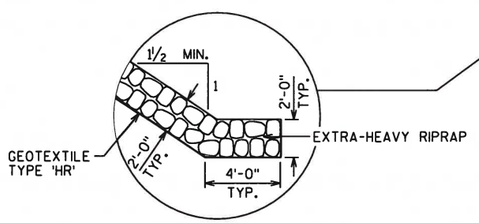
SINGLE SPAN - 72W" PRESTRESSED GIRDER

USGS GAGING STATION TO REMAIN FULLY OPERATIONAL DURING CONSTRUCTION

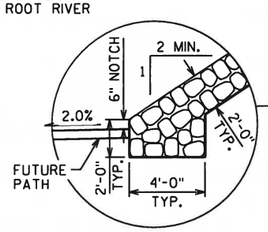


ELEVATION

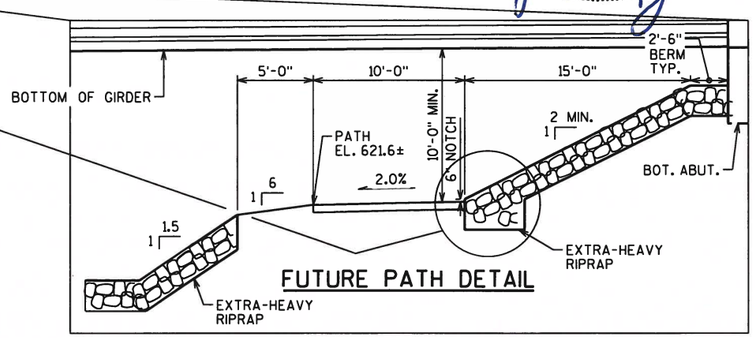
LOOKING UPSTREAM NORMAL TO ROOT RIVER



TOE OF SLOPE DETAIL



TOE OF SLOPE AT PATH DETAIL



FUTURE PATH DETAIL

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.32
OPERATING RATING FACTOR: RF = 2.22
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250(KIPS)

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

STRUCTURE IS DESIGNED FOR UTILITIES UP TO 34 POUNDS PER LINEAL FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 — fy = 60,000 P.S.I.
STAINLESS, GRADE 60 — fy = 60,000 P.S.I.

72W" PRESTRESSED GIRDERS:
CONCRETE MASONRY — f'c = 8,000 P.S.I.
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10X42 PILING SEATED IN PREBORED HOLES CORED A MINIMUM OF 3'-0" INTO BEDROCK. ESTIMATED 15'-0" LONG AT BOTH ABUTMENTS.

PILES PLACED IN PREBORED HOLES BORED INTO ROCK DO NOT REQUIRE DRIVING. PILING SHALL BE FIRMLY SEATED AFTER PLACEMENT. THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS 180 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 6,380 C.F.S.
$VEL._{100}$ = 7.96 F.P.S.
$HW._{100}$ = EL. 625.83
WATERWAY AREA = 801.50 SQ. FT.
DRAINAGE AREA = 186 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY

Q_2 = 3,520 C.F.S.
$VEL._2$ = 6.22 F.P.S.
$HW._2$ = EL. 623.35

TRAFFIC VOLUME

STH 38

ADT = 34,700 (2042)
R.D.S. = 40 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & GENERAL NOTES
3. QUANTITIES
4. CONSTRUCTION STAGING
5. SUBSURFACE EXPLORATION
6. WEST ABUTMENT
7. WEST ABUTMENT DETAILS
8. EAST ABUTMENT
9. EAST ABUTMENT DETAILS
10. 72W" PRESTRESSED GIRDER DETAILS 1
11. 72W" PRESTRESSED GIRDER DETAILS 2
12. STEEL DIAPHRAGM
13. SUPERSTRUCTURE
14. SUPERSTRUCTURE DETAILS 1
15. SUPERSTRUCTURE DETAILS 2
16. SUPERSTRUCTURE DETAILS 3
17. SUPERSTRUCTURE BILL OF BARS
18. VERTICAL FACE PARAPET "A"
19. COMBINATION RAIL TYPE "C2"
20. COMBINATION RAIL TYPE "C2" DETAILS
21. WEST STRUCT. APP. SLAB
22. EAST STRUCT. APP. SLAB
23. CONDUIT DETAILS
24. ALTERNATE CONSTRUCTION JOINT & BAR COUPLERS

STRUCTURE DESIGN CONTACTS:

WYATT ROZMENOSKI (414) 266-9066
AARON BONK (608) 261-0261

WISCONSIN
WYATT ROZMENOSKI
47659
MILWAUKEE, WI
PROFESSIONAL ENGINEER
6/15/2023

NO.	DATE	REVISION	BY

GRAEF
275 West Wisconsin Avenue, Suite 300
Milwaukee, WI 53203
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 08/22/23
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-51-157

STH 38 OVER ROOT RIVER

COUNTY RACINE	VILLAGE MOUNT PLEASANT & CITY OF RACINE
DESIGN SPEC.	AASHTO LFFD BRIDGE DESIGN SPECIFICATIONS
DESIGNED BY VLG	DESIGNED CK'D. WAR
DRAWN BY SRK	PLANS CK'D. KGW

GENERAL PLAN

SHEET 1 OF 24
383

SCALE =

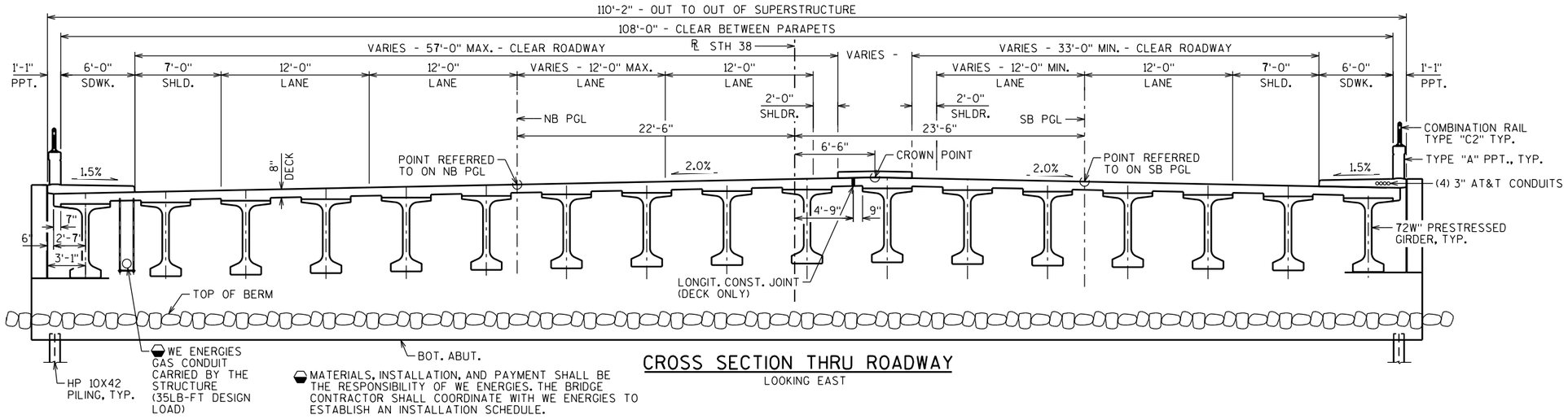
DATE:

8

8

X:±ML±2020±20200238±DESIGN±TRANSPORTATION±SHEETSPLAN±B-51-157±2022_01_B51157_GENPLAN.DGN 6/15/2023 4:34:25 PM

STATE PROJECT NUMBER
2290-03-73



CROSS SECTION THRU ROADWAY

LOOKING EAST

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES B-51-157" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON THE STRUCTURAL APPROACH SLAB SHEETS.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

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

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS AND THE SIDEWALKS AND MEDIAN.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

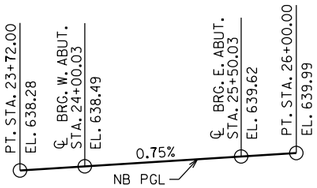
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH EXTRA-HEAVY RIPRAP AND GEOTEXTILE TYPE "HR" TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

AT ABUTMENTS, HP 12X53 STEEL PILING MAY BE USED IN LIEU OF HP 10X42 STEEL PILING. PAYMENT SHALL BE BASED ON BID PRICE FOR HP 10X42 STEEL PILING.

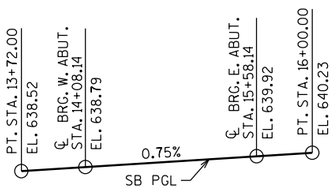
THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "72W PRESTRESSED GIRDER DETAILS 2" SHEET.

AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

THE EXISTING STRUCTURE, B-51-12, IS A 3 SPAN, SIMPLE SPAN, PRESTRESSED CONCRETE GIRDERS WITH AN EXISTING OUT-TO-OUT WIDTH OF 88'-0" AND BACK-TO-BACK ABUTMENT LENGTH OF 171'-9¾" THE STRUCTURE IS TO BE REMOVED ENTIRELY.



NB PROFILE GRADE LINE



SB PROFILE GRADE LINE

NOTE:
STA. 23+72.00 NB PGL = STA. 233+72.00 ℄ STH 38
STA. 13+72.00 SB PGL = STA. 233+72.00 ℄ STH 38

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY	PLANS CK'D.
SRK	KGW

CROSS SECTION & GENERAL NOTES

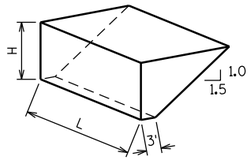
SHEET 2 OF 24
384

I.D.

DATE:

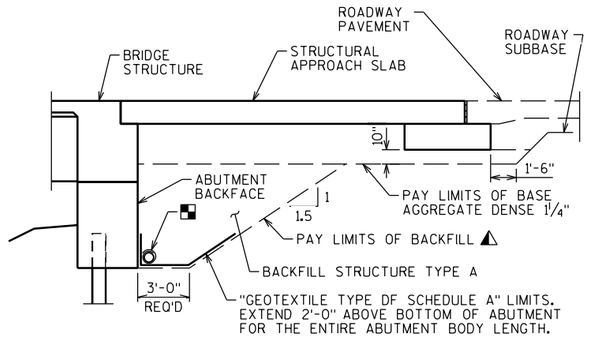
SCALE = 5.00

STATE PROJECT NUMBER
2290-03-73



ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)



TYPICAL SECTION THRU ABUTMENT

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	W. STRUCT. APP. SLAB	WEST ABUT.	EAST ABUT.	E. STRUCT. APP. SLAB	CAT. 0090 *	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-51-12	EACH	---	---	---	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-51-157	EACH	---	---	---	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	---	774	774	---	---	1,548
305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	---	340	---	---	340	---	680
502.0100	CONCRETE MASONRY BRIDGES	CY	790.6	151.8	116.6	116.0	152.6	---	1,327
502.3200	PROTECTIVE SURFACE TREATMENT	SY	1,924	245	---	---	245	---	2,414
502.3210	PIGMENTED SURFACE SEALER	SY	125	17	---	---	17	---	159
503.0172	PRESTRESSED GIRDER TYPE I 72W-INCH	LF	2,567	---	---	---	---	---	2,567
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	---	10,060	10,060	---	---	21,120
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	104,260	23,480	3,710	3,760	23,510	---	158,720
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	3,910	---	---	---	---	---	3,910
505.0904	BAR COUPLERS NO. 4	EACH	---	---	4	4	---	---	8
505.0905	BAR COUPLERS NO. 5	EACH	---	42	---	---	42	---	84
505.0906	BAR COUPLERS NO. 6	EACH	---	---	19	19	---	---	38
505.0908	BAR COUPLERS NO. 8	EACH	---	12	---	---	12	---	24
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	34	---	---	---	---	---	34
506.4000	STEEL DIAPHRAGMS B-51-157	EACH	32	---	---	---	---	---	32
◆ 509.0301	PREPARATION DECKS TYPE 1	SY	15	---	---	---	---	---	15
◆ 509.0302	PREPARATION DECKS TYPE 2	SY	6	---	---	---	---	---	6
◆ 509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	150	---	---	---	---	---	150
◆ 509.2000	FULL-DEPTH DECK REPAIR	SY	20	---	---	---	---	---	20
◆ 509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	4	---	---	---	---	---	4
511.2200	TEMPORARY SHORING LEFT IN PLACE B-51-157	SF	---	---	169	169	---	---	338
513.7011	RAILING STEEL TYPE C2	SF	306	---	38	38	---	---	382
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	---	29	29	---	---	58
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	---	---	340	340	---	---	680
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	---	---	510	510	---	---	1,020
606.0400	RIPRAP EXTRA-HEAVY	CY	---	---	316	359	---	---	675
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	---	175	175	---	---	350
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	---	134	134	---	---	268
645.0120	GEOTEXTILE TYPE HR	SY	---	---	449	497	---	---	946
652.0135	CONDUIT RIGID METALLIC 3-INCH	LF	---	---	---	---	---	96	96
652.0235	CONDUIT RIGID NON-METALLIC SCHEDULE 40 3-INCH	LF	---	---	---	---	---	699	699
SPV.0090	REMOVING EXISTING STEEL PILING	LF	---	---	210	210	---	---	420
	NON-BID ITEMS								
	FILLER	SIZE	---	---	---	---	---		½", ¾", 1½"

LEGEND

◭ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

■ PIPE UNDERDRAIN WRAPPED (6 INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

* BID ITEMS ARE SOLELY REQUIRED TO CARRY AT&T UTILITIES, MATERIALS AND INSTALLATION ARE THE RESPONSIBILITY OF THE CONTRACTOR. PAYMENT FOR THE MATERIALS AND INSTALLATION IS THE RESPONSIBILITY OF AT&T.

◆ BID ITEMS TO BE USED AS REQUIRED TO MAINTAIN DRIVING SURFACE OF EXISTING STRUCTURE DURING STAGE 1 CONSTRUCTION. SEE SHEET 4. QUANTITIES SHOWN ARE APPROXIMATE, REPAIRS TO BE PERFORMED AT DIRECTION OF FIELD ENGINEER.

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY SRK | PLANS CK'D. KGW

QUANTITIES

SHEET 3 OF 24
385

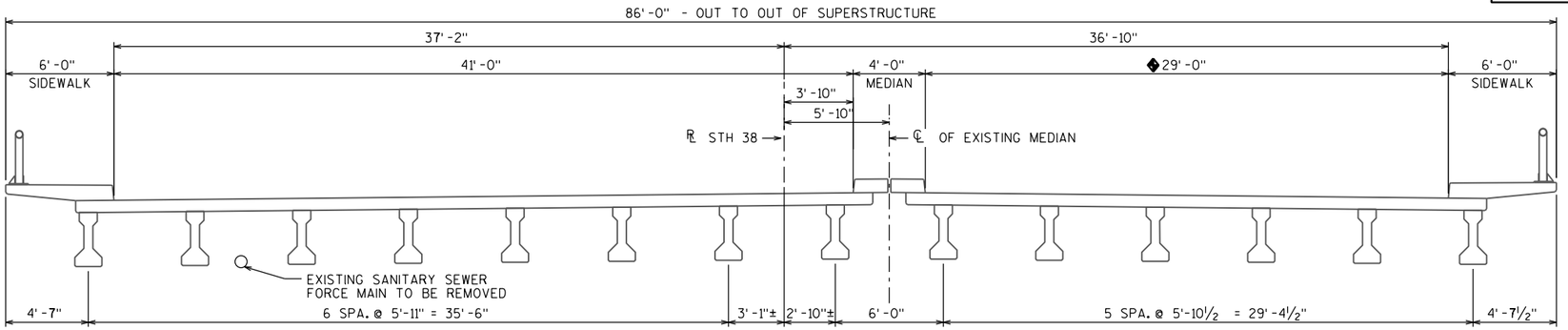
I.D.

DATE:

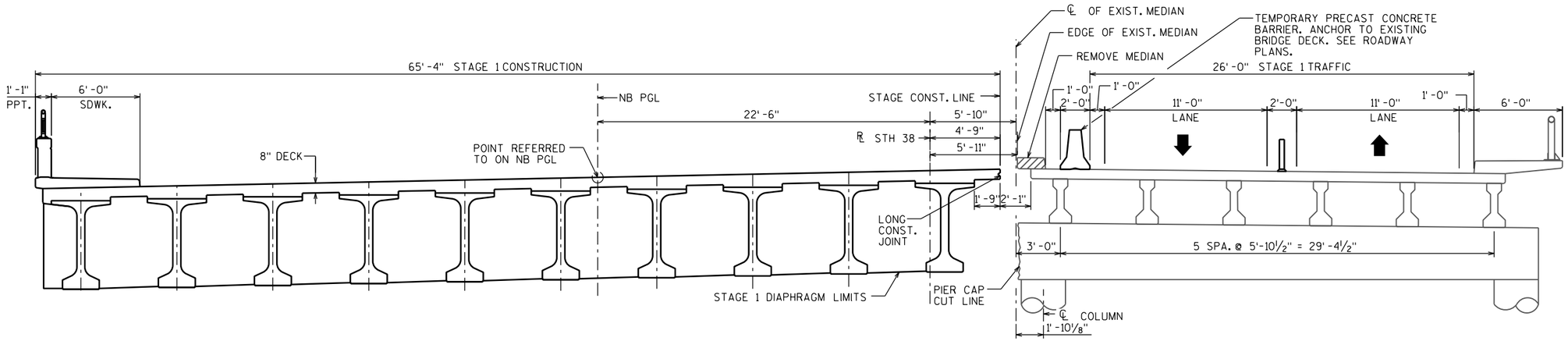
SCALE = 5.00

8

STATE PROJECT NUMBER
2290-03-73



EXISTING BRIDGE B-51-12
(LOOKING EAST)



STAGE 1 CONSTRUCTION
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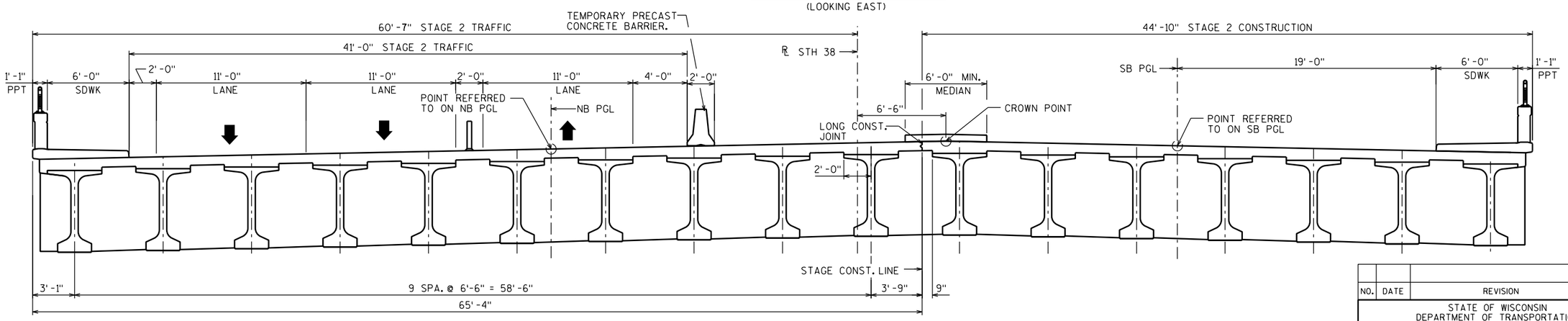


STAGE 2 CONSTRUCTION
(LOOKING EAST)

NOTE: REMOVAL OF EXISTING ABANDONED SANITARY SEWER FORCE MAIN TO BE REMOVED SHALL BE INCIDENTAL TO THE LUMP SUM BID FOR "REMOVAL OF STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-51-12"

LEGEND

◆ BID ITEMS PROVIDED TO MAINTAIN DRIVING SURFACE ON EXISTINGSTRUCTURE DURING STAGE 1 CONSTRUCTION. SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY	SRK	PLANS CK'D.	KGW

CONSTRUCTION STAGING

SHEET 4 OF 24
386

I.D.

DATE:

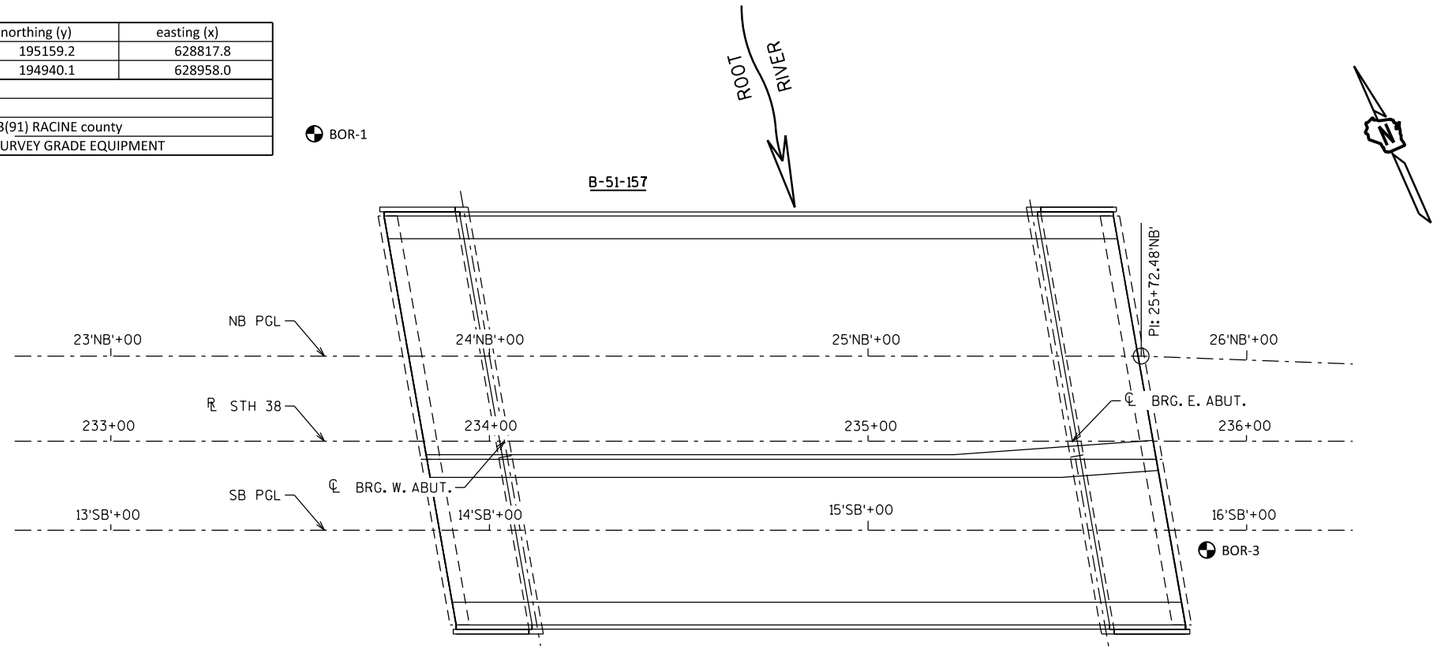
SCALE = 4.00

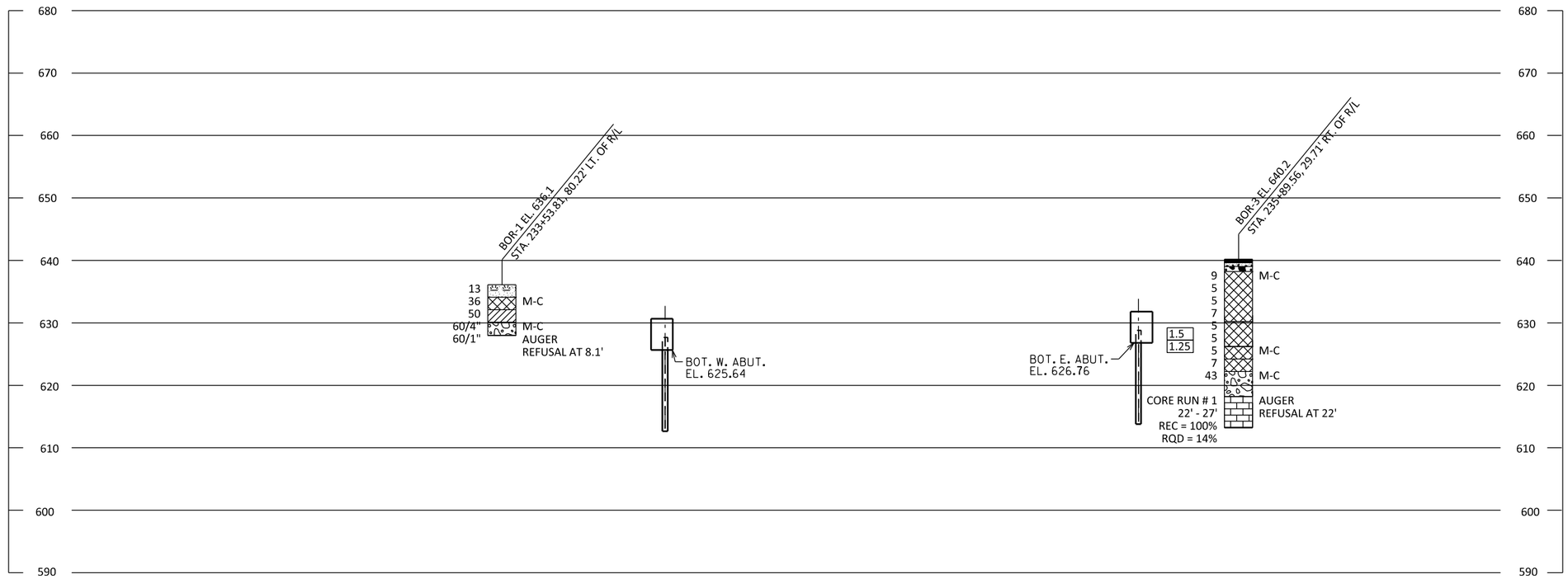
8

8

X:±ML±2020±20200238±DESIGN±TRANSPORTATION±SHEETSPLAN±B-51-157±2022_04_B51157_CONST-STAGING..DGN 6/15/2023 2:05:41 PM

boring #	date completed	northing (y)	easting (x)
1	10/12/2021	195159.2	628817.8
3	10/07/2021	194940.1	628958.0
borings completed by: GESTRA			
report completed by: WISDOT			
all coordinates referenced to wccs nad 83(91) RACINE county			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			





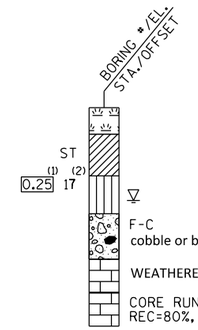
STATE PROJECT NUMBER

2290-03-73

MATERIAL SYMBOLS

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

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY TLP/SEW | PLANS CK'D. KGW

SUBSURFACE EXPLORATION

SHEET 5 OF 24
387

SCALE = 20

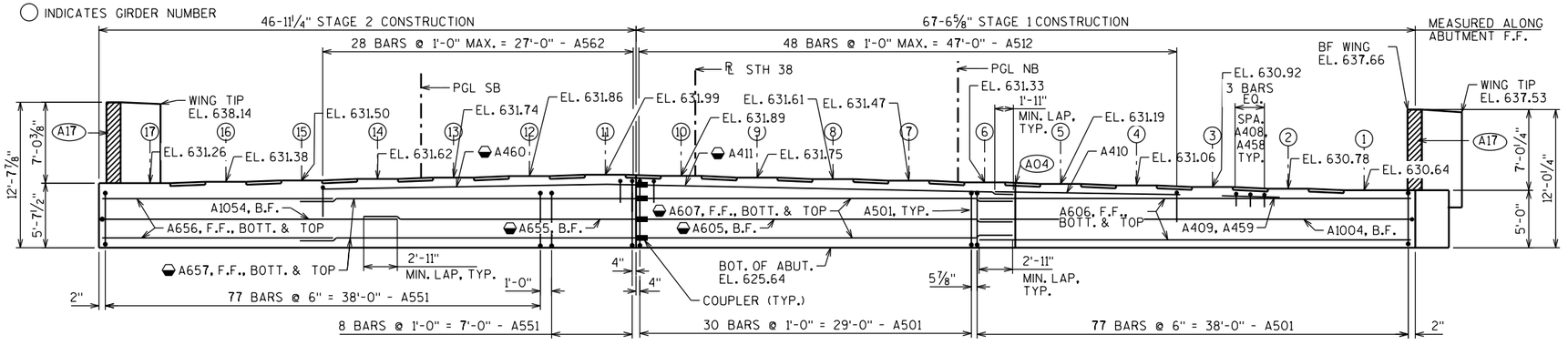
8

8

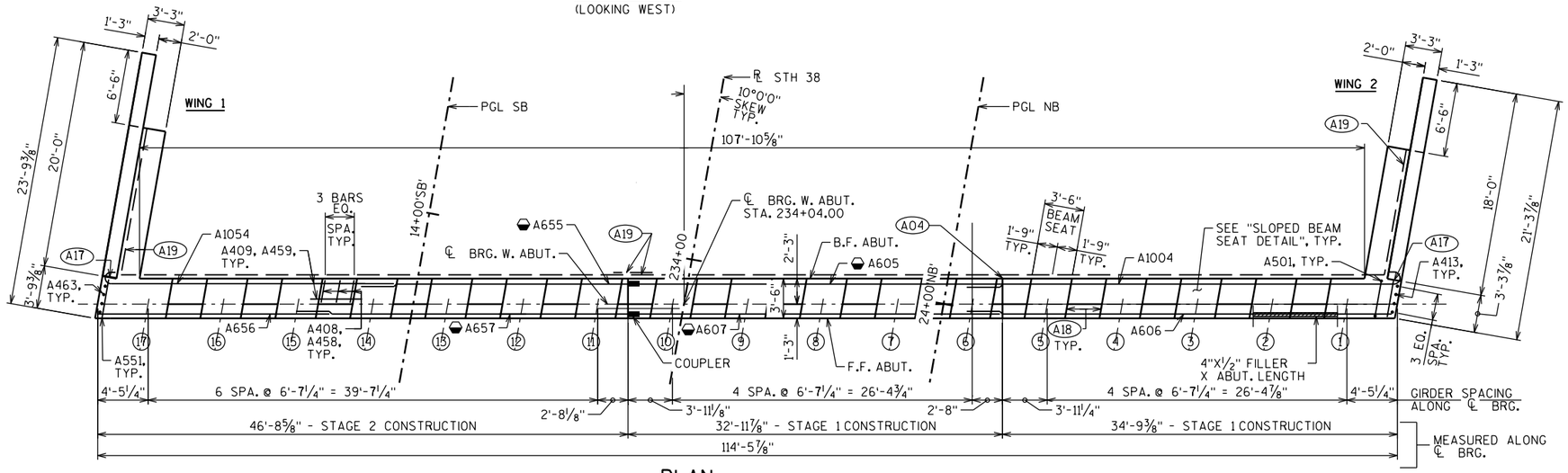
STATE PROJECT NUMBER

2290-03-73

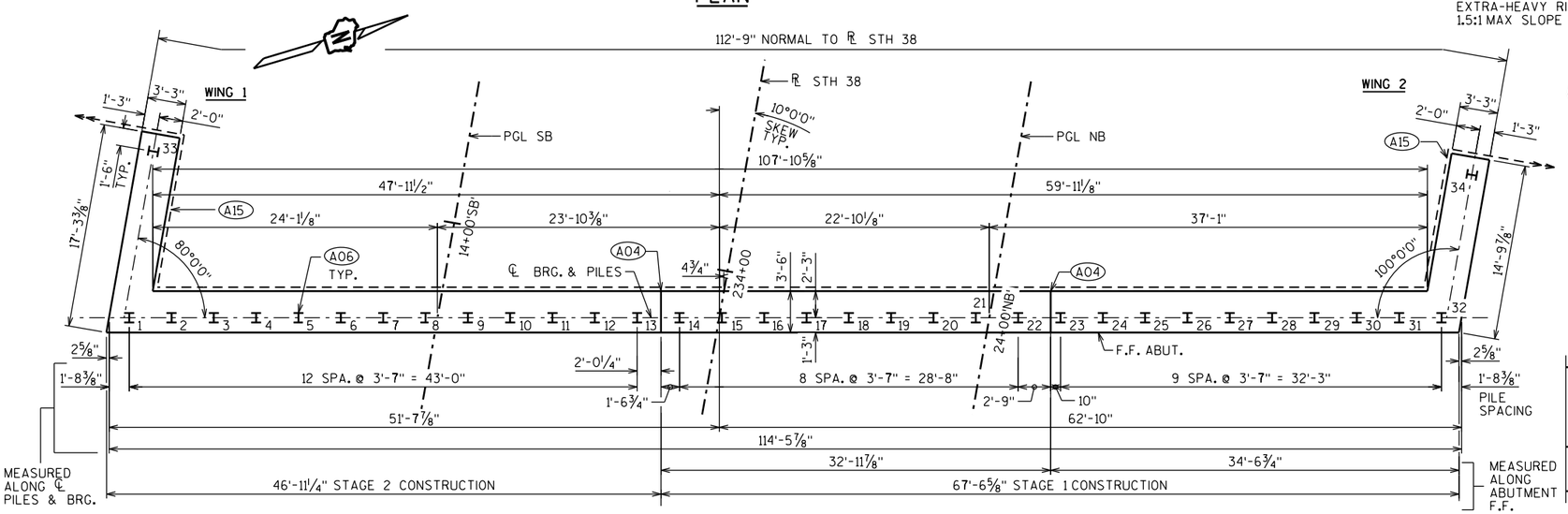
INDICATES GIRDER NUMBER



ELEVATION
(LOOKING WEST)



PLAN



PILE PLAN

LEGEND

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT & BAR COUPLERS" SHEET.

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 15'-0" LONG FIRMLY SEATED IN PRE-BORED HOLES CORED AT A MIN. OF 3'-0" INTO ROCK. PILE DRIVING IS NOT REQUIRED.

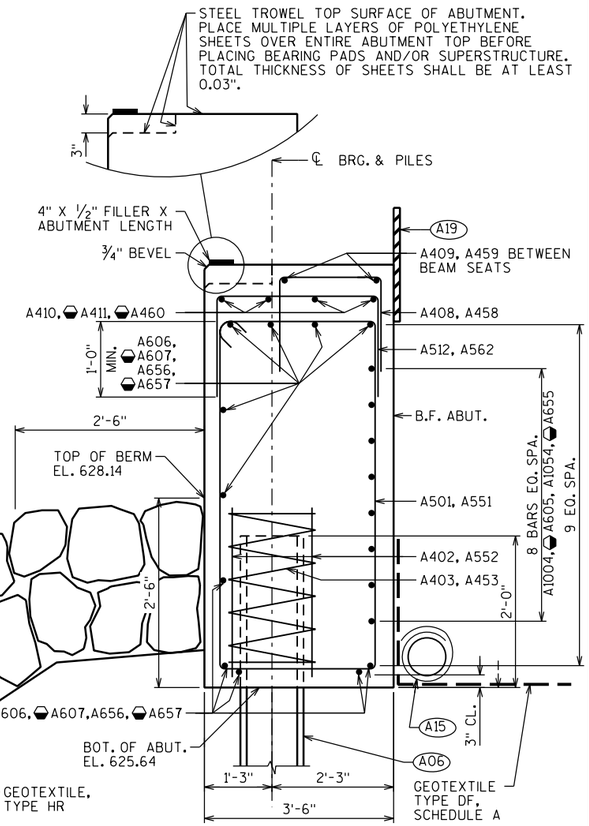
(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

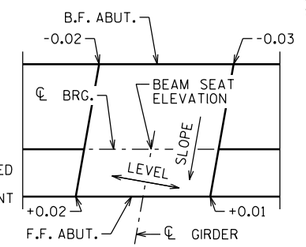
(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

BAR COUPLER REQ'D., BAR LENGTHS GIVEN ARE TO THE CONSTRUCTION JOINT LINE. COORDINATE ACTUAL LENGTHS W/ BAR COUPLER SUPPLIER, SEE SHEET 24 FOR DETAILS.



SECTION THRU BODY



SLOPED BEAM SEAT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY SRK | PLANS CK'D. KGW

WEST ABUTMENT

SHEET 6 OF 24

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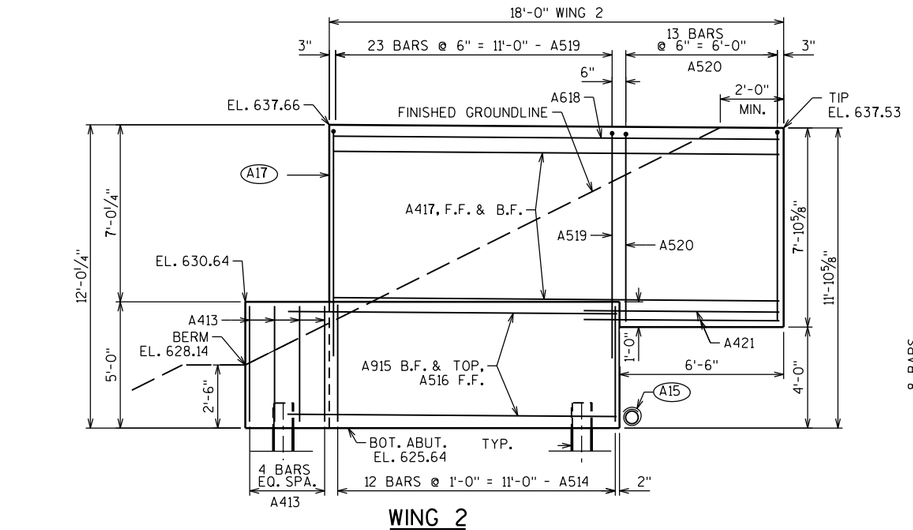
I.D.

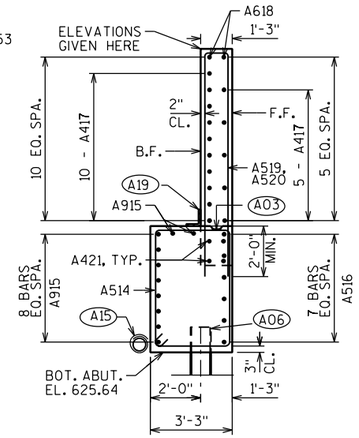
DATE:

SCALE = 6.00

X:±ML±2020±20200238±DESIGN±TRANSPORTATION±SHEETSPLAN±B-51-157±2022_06_B51157_WABUT.DGN 6/15/2023 2:05:42 PM



WING 2



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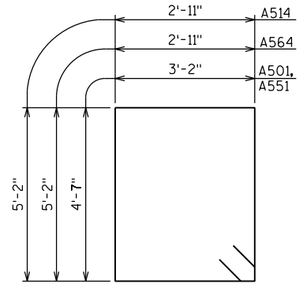
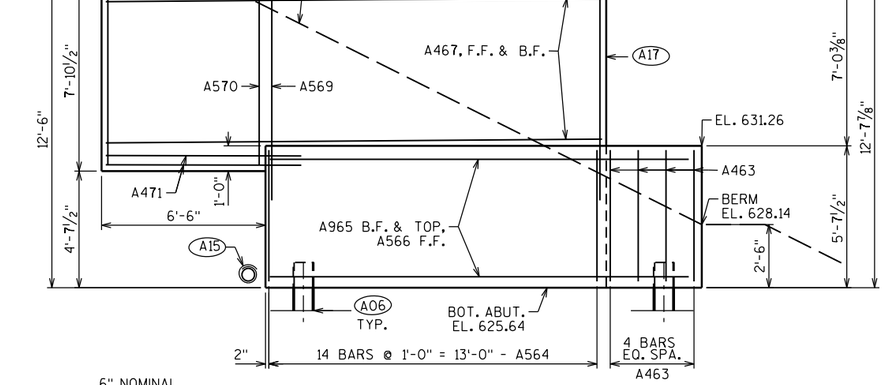


A501, A551, A564, A514

BILL OF BARS

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

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
A501		107	16'-2"		x	STAGE 1 - BODY - STIRRUP - VERT.
A402		40	2'-3"			STAGE 1 - PILE - 2 PER PILE - VERT.
A403		20	28'-0"		x	STAGE 1 - PILE - 1 PER PILE
A1004		8	39'-5"		x	STAGE 1 - BODY - HORIZ. - B.F. - N. END
⬬ A605		8	32'-11"			STAGE 1 - BODY - HORIZ. - B.F. - CENTER
A606		11	38'-0"			STAGE 1 - BODY - HORIZ. - F.F. - TOP & BOTTOM - N. END
⬬ A607		11	32'-11"			STAGE 1 - BODY - HORIZ. - F.F. - TOP & BOTTOM - CENTER
A408		30	4'-5"		x	STAGE 1 - BODY - TOP - BTWN. GRIDERS - VERT.
A409		20	5'-6"			STAGE 1 - BODY - TOP - BTWN. GRIDERS - HORIZ.
A410		4	16'-1"			STAGE 1 - BODY - TOP - HORIZ. - N. END
⬬ A411		4	32'-11"			STAGE 1 - BODY - TOP - HORIZ. - CENTER
A512		48	8'-5"		x	STAGE 1 - BODY - TOP - VERT.
A413	X	4	4'-6"			STAGE 1 - BODY - N. END
A514	X	12	17'-4"		x	STAGE 1 - WING 2 - BODY - STIRRUP - VERT.
A915	X	10	14'-11"		x	STAGE 1 - WING 2 - BODY - HORIZ. - B.F. & CENTER
A516	X	7	14'-6"			STAGE 1 - WING 2 - BODY - HORIZ. - F.F.
A417	X	15	17'-8"			STAGE 1 - WING 2 - UPPER - HORIZ.
A618	X	2	17'-8"			STAGE 1 - WING 2 - UPPER - TOP - HORIZ.
A519	X	23	18'-6"		x	STAGE 1 - WING 2 - UPPER - VERT.
A520	X	13	15'-6"		x	STAGE 1 - WING 2 - UPPER - VERT.
A421	X	4	7'-10"			STAGE 1 - WING 2 - UPPER - HORIZ.
A551		85	16'-2"		x	STAGE 2 - BODY - STIRRUP - VERT.
A452		28	2'-3"			STAGE 2 - PILE - 2 PER PILE - VERT.
A453		14	28'-0"		x	STAGE 2 - PILE - 1 PER PILE
A1054		8	25'-5"		x	STAGE 2 - BODY - HORIZ. - B.F. - S. END
⬬ A655		8	26'-3"			STAGE 2 - BODY - HORIZ. - B.F. - CENTER
A656		11	20'-0"			STAGE 2 - BODY - HORIZ. - F.F. - TOP & BOTTOM - S. END
⬬ A657		11	30'-4"			STAGE 2 - BODY - HORIZ. - F.F. - TOP & BOTTOM - CENTER
A458		19	4'-5"		x	STAGE 2 - BODY - TOP - BTWN. GRIDERS - VERT.
A459		14	5'-6"			STAGE 2 - BODY - TOP - BTWN. GRIDERS - HORIZ.
⬬ A460		4	26'-6"			STAGE 2 - BODY - TOP - HORIZ.
NOT USED						
A562		28	8'-5"		x	STAGE 2 - BODY - TOP - VERT.
A463	X	4	5'-2"			STAGE 2 - BODY - S. END
A564	X	14	16'-10"		x	STAGE 2 - WING 1 - BODY - STIRRUP - VERT.
A965	X	10	16'-11"		x	STAGE 2 - WING 1 - BODY - HORIZ. - B.F. & CENTER
A566	X	7	16'-11"			STAGE 2 - WING 1 - BODY - HORIZ. - F.F.
A467	X	15	19'-8"			STAGE 2 - WING 1 - UPPER - HORIZ.
A668	X	2	19'-8"			STAGE 2 - WING 1 - UPPER - TOP - HORIZ.
A569	X	27	18'-6"		x	STAGE 2 - WING 1 - UPPER - VERT.
A570	X	13	15'-6"		x	STAGE 2 - WING 1 - UPPER - VERT.
A471	X	4	7'-10"			STAGE 2 - WING 1 - UPPER - HORIZ.



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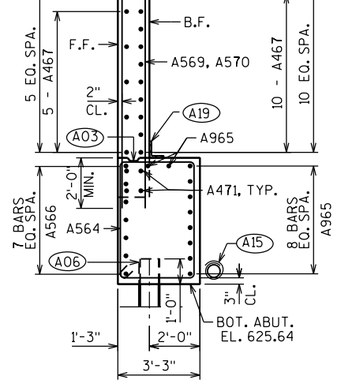

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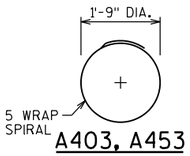
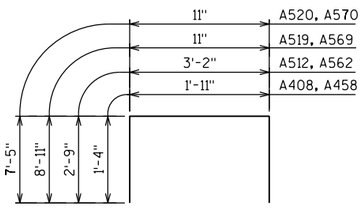
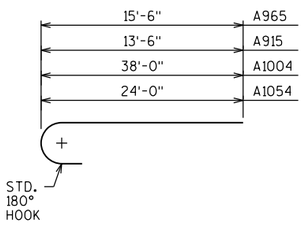


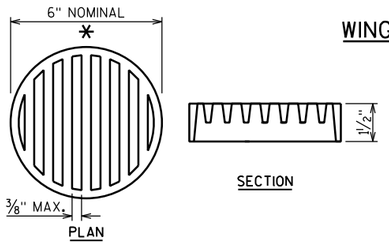
A403, A453



A408, A458, A512, A562, A519, A569, A520, A570



A1004, A1054, A915, A965

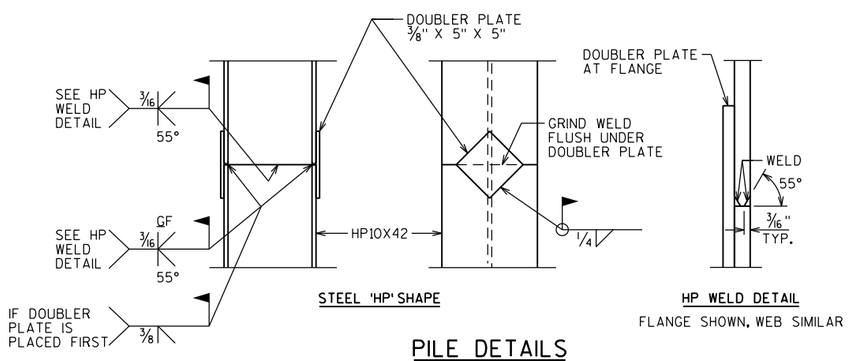


RODENT SHIELD DETAIL

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

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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



STEEL 'HP' SHAPE

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

LEGEND

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT & BAR COUPLERS" SHEET.

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 15'-0" LONG FIRMLY SEATED IN PRE-BORED HOLESCORED AT A MIN. OF 3'-0" INTO ROCK. PILE DRIVING IS NOT REQUIRED.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

⬬ BAR COUPLER REQ'D., BAR LENGTHS GIVEN ARE TO THE CONSTRUCTION JOINT LINE. COORDINATE ACTUAL LENGTHS W/ BAR COUPLER SUPPLIER, SEE SHEET 24 FOR DETAILS.

NO.	DATE	REVISION	BY

STATE PROJECT NUMBER

2290-03-73

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY SRK | PLANS CK'D. KGW

WEST ABUTMENT DETAILS

SHEET 7 OF 24
389

I.D.

DATE:

SCALE = 3.00

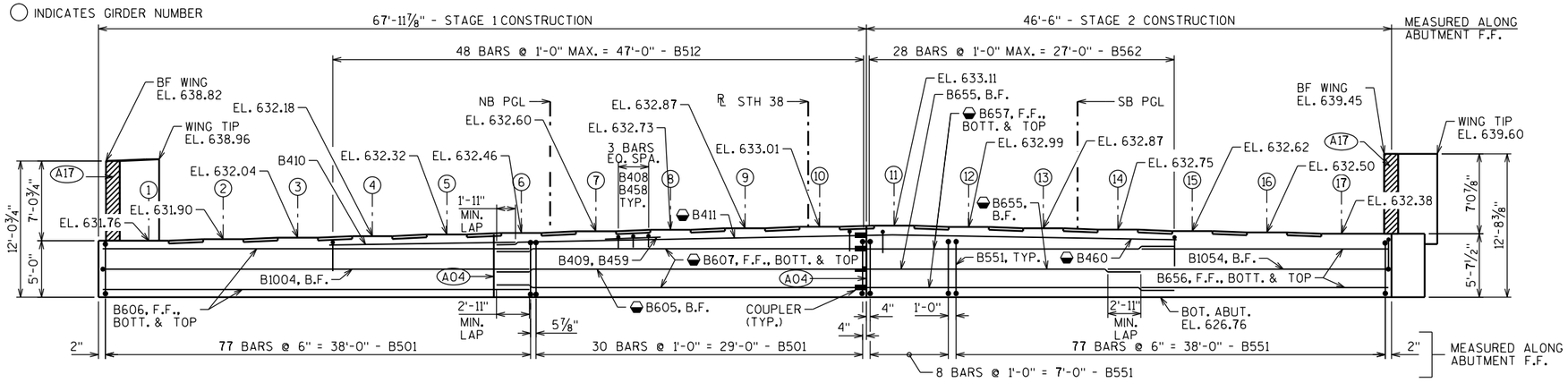
8

8

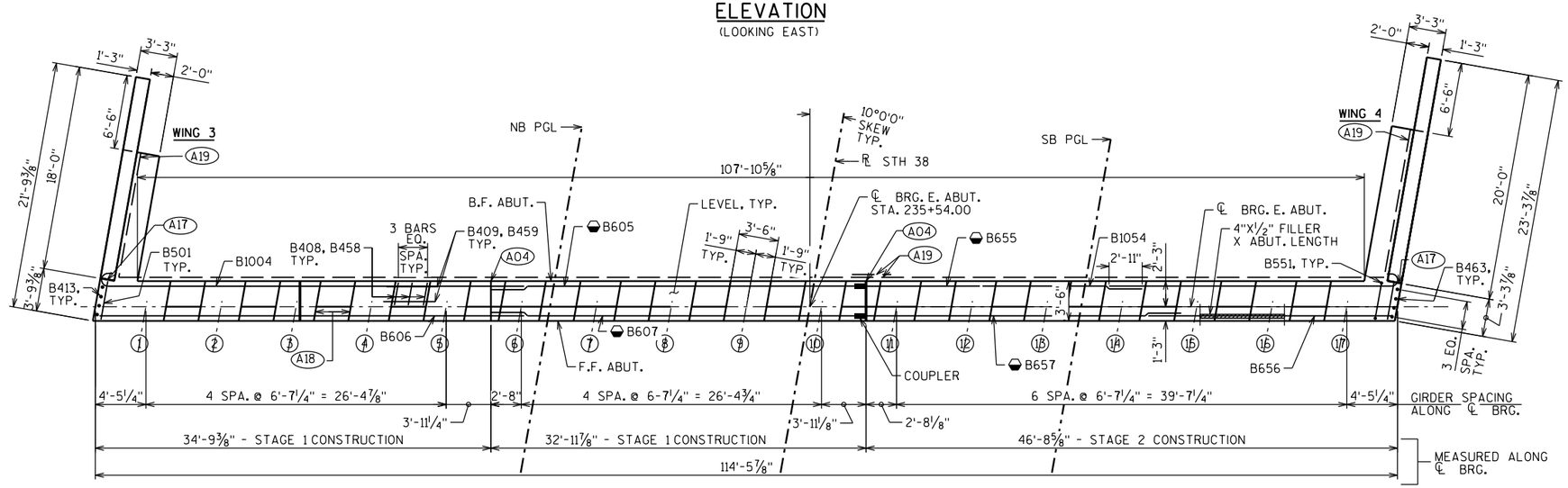
STATE PROJECT NUMBER

2290-03-73

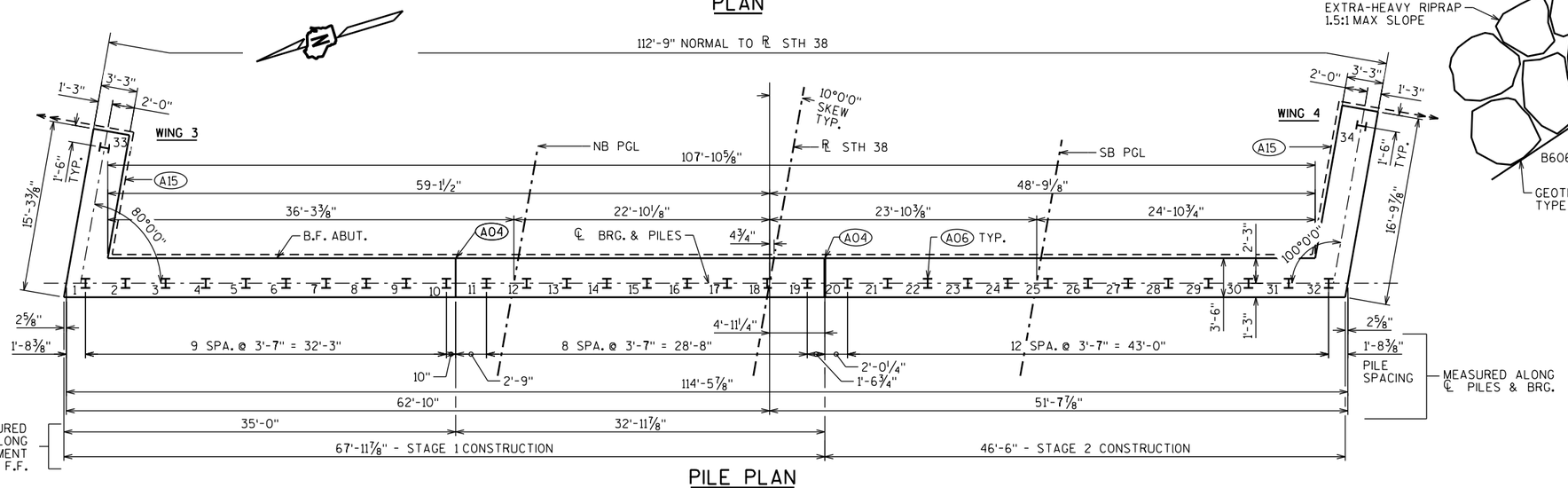
INDICATES GIRDER NUMBER



ELEVATION
(LOOKING EAST)



PLAN



PILE PLAN

LEGEND

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT & BAR COUPLERS" SHEET.

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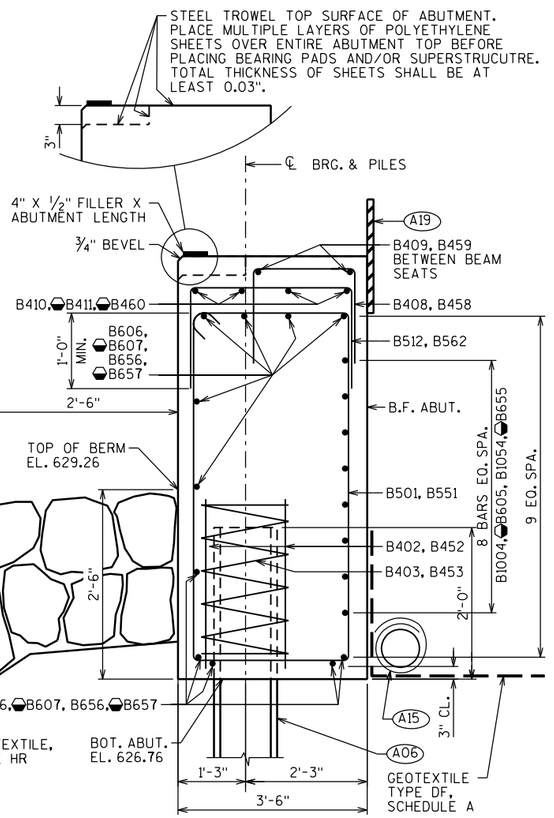
(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A18) 3/4" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

BAR COUPLER REQ'D., BAR LENGTHS GIVEN ARE TO THE CONSTRUCTION JOINT LINE. COORDINATE ACTUAL LENGTHS W/ BAR COUPLER SUPPLIER, SEE SHEET 24 FOR DETAILS.



SECTION THRU BODY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

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EAST ABUTMENT

SHEET 8 OF 24
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DATE:

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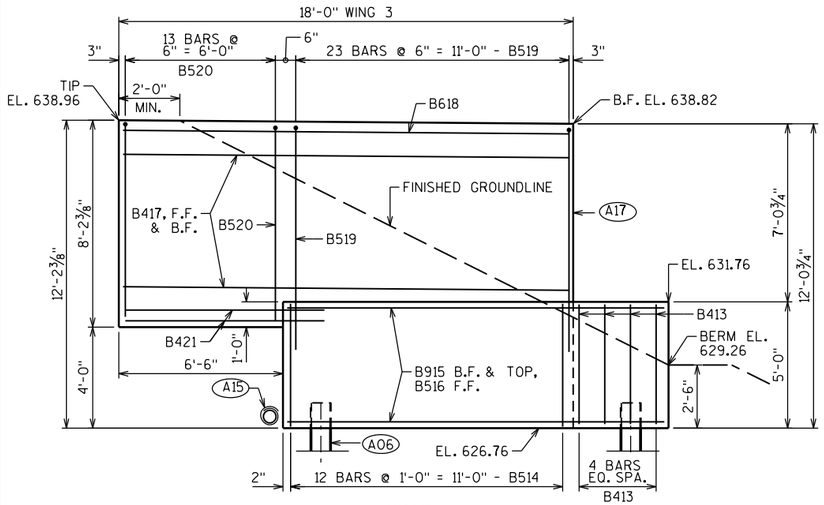
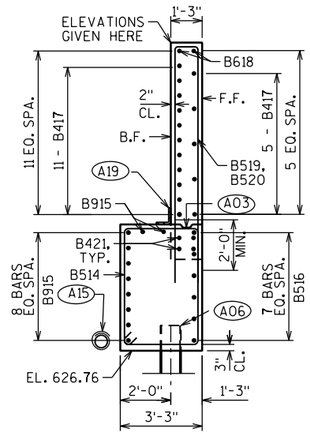
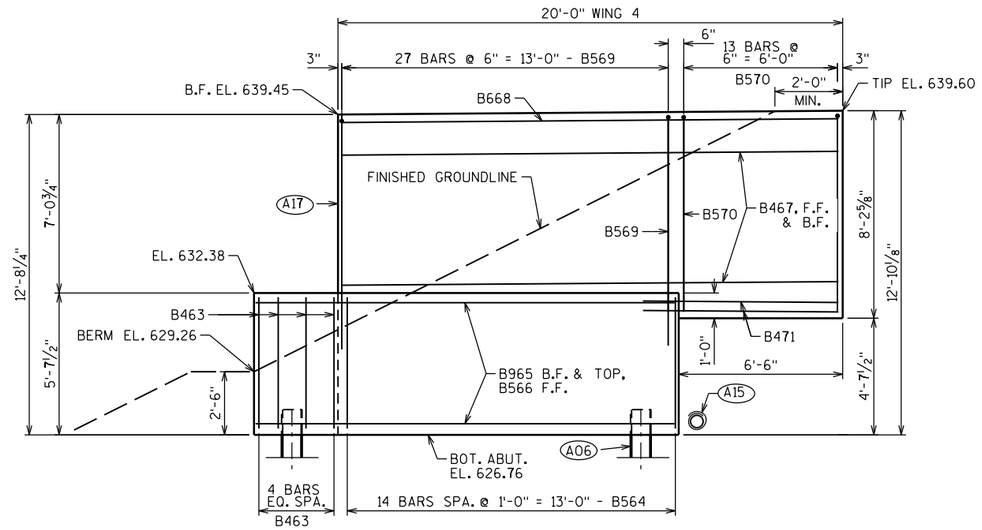


WING 3



WING 3 SECTION



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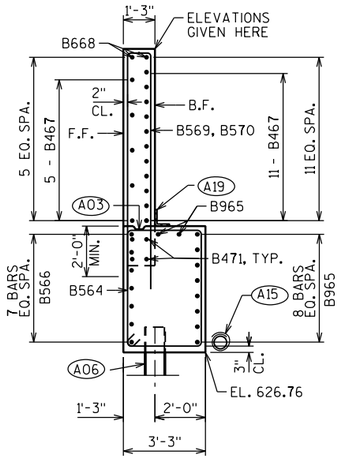
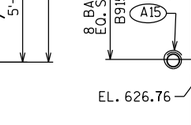
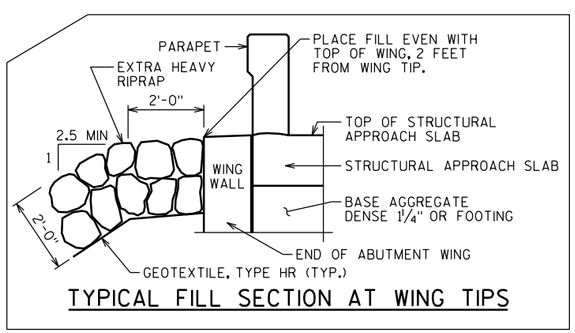


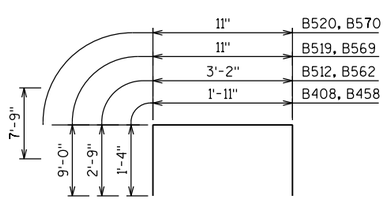
WING 4 SECTION



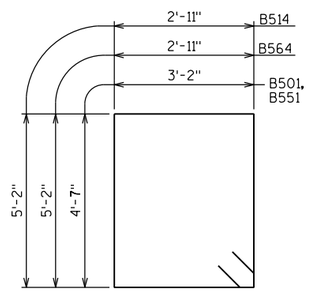
B403, B453



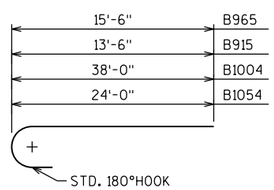
TYPICAL FILL SECTION AT WING TIPS



B408, B458, B512, B562, B519, B569, B520, B570



B501, B551, B514, B564



B1004, B1054, B915, B965

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

STATE PROJECT NUMBER

2290-03-73

BILL OF BARS

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
B501		107	16'-2"		x	STAGE 1 - BODY - STIRRUP - VERT.
B402		40	2'-3"			STAGE 1 - PILE - 2 PER PILE - VERT.
B403		20	28'-0"		x	STAGE 1 - PILE - 1 PER PILE
B1004		8	39'-5"		x	STAGE 1 - BODY - HORIZ - B.F. - N. END
B605		8	32'-11"			STAGE 1 - BODY - HORIZ - B.F. - CENTER
B606		11	38'-0"			STAGE 1 - BODY - HORIZ - F.F. - TOP & BOTTOM - N. END
B607		11	32'-11"			STAGE 1 - BODY - HORIZ - F.F. - TOP & BOTTOM - CENTER
B408		30	4'-5"		x	STAGE 1 - BODY - TOP - BTWN. GRIDERS - VERT.
B409		20	5'-6"			STAGE 1 - BODY - TOP - BTWN. GRIDERS - HORIZ.
B410		4	16'-1"			STAGE 1 - BODY - TOP - HORIZ - N. END
B411		4	32'-11"			STAGE 1 - BODY - TOP - HORIZ - CENTER
B512		48	8'-5"		x	STAGE 1 - BODY - TOP - VERT.
B413	X	4	4'-6"			STAGE 1 - BODY - N. END
B514	X	12	17'-4"		x	STAGE 1 - WING 3 - BODY - STIRRUP - VERT.
B915	X	10	14'-11"		x	STAGE 1 - WING 3 - BODY - HORIZ. - B.F. & CENTER
B516	X	7	14'-11"			STAGE 1 - WING 3 - BODY - HORIZ. - F.F.
B417	X	16	17'-8"			STAGE 1 - WING 3 - UPPER - HORIZ.
B618	X	2	17'-8"			STAGE 1 - WING 3 - UPPER - TOP - HORIZ.
B519	X	23	18'-6"		x	STAGE 1 - WING 3 - UPPER - VERT.
B520	X	13	16'-2"		x	STAGE 1 - WING 3 - UPPER - VERT.
B421	X	4	7'-10"			STAGE 1 - WING 3 - UPPER - HORIZ.
B551		85	16'-2"		x	STAGE 2 - BODY - STIRRUP - VERT.
B452		28	2'-3"			STAGE 2 - PILE - 2 PER PILE - VERT.
B453		14	28'-0"		x	STAGE 2 - PILE - 1 PER PILE
B1054		8	25'-5"		x	STAGE 2 - BODY - HORIZ - B.F. - S. END
B655		8	26'-3"			STAGE 2 - BODY - HORIZ - B.F. - CENTER
B656		11	20'-0"			STAGE 2 - BODY - HORIZ - F.F. - TOP & BOTTOM - S. END
B657		11	30'-4"			STAGE 2 - BODY - HORIZ - F.F. - TOP & BOTTOM - CENTER
B458		19	4'-5"		x	STAGE 2 - BODY - TOP - BTWN. GRIDERS - VERT.
B459		14	5'-6"			STAGE 2 - BODY - TOP - BTWN. GRIDERS - HORIZ.
B460		4	26'-6"			STAGE 2 - BODY - TOP - HORIZ.
NOT USED						
B562		28	8'-5"		x	STAGE 2 - BODY - TOP - VERT.
B463	X	4	5'-2"			STAGE 2 - BODY - S. END
B564	X	14	16'-10"		x	STAGE 2 - WING 4 - BODY - STIRRUP - VERT.
B965	X	10	16'-11"		x	STAGE 2 - WING 4 - BODY - HORIZ. - B.F. & CENTER
B566	X	7	16'-6"			STAGE 2 - WING 4 - BODY - HORIZ. - F.F.
B467	X	16	19'-8"			STAGE 2 - WING 4 - UPPER - HORIZ.
B668	X	2	19'-8"			STAGE 2 - WING 4 - UPPER - TOP - HORIZ.
B569	X	27	18'-6"		x	STAGE 2 - WING 4 - UPPER - VERT.
B570	X	13	16'-2"		x	STAGE 2 - WING 4 - UPPER - VERT.
B471	X	4	7'-10"			STAGE 2 - WING 4 - UPPER - HORIZ.

LEGEND

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. 3/4" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT & BAR COUPLERS" SHEET.

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 15'-0" LONG FIRMLY SEATED IN PRE-BORED HOLES CORED AT A MIN. OF 3'-0" INTO ROCK. PILE DRIVING IS NOT REQUIRED. SEE SHEET 7 FOR PILE SPLICE DETAILS.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

BAR COUPLER REQ'D., BAR LENGTHS GIVEN ARE TO THE CONSTRUCTION JOINT LINE. COORDINATE ACTUAL LENGTHS W/ BAR COUPLER SUPPLIER, SEE SHEET 24 FOR DETAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY SRK | PLANS CK'D. KGW

EAST ABUTMENT DETAILS

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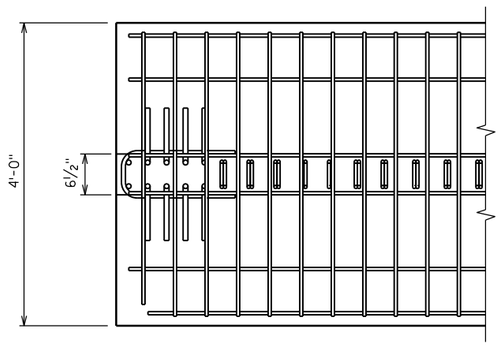
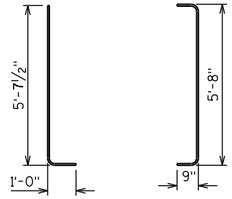
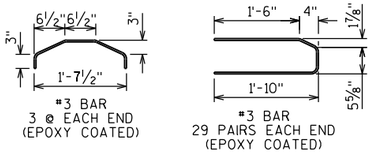
2290-03-73







NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" 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 SECTION 503.3.4 OF THE 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.

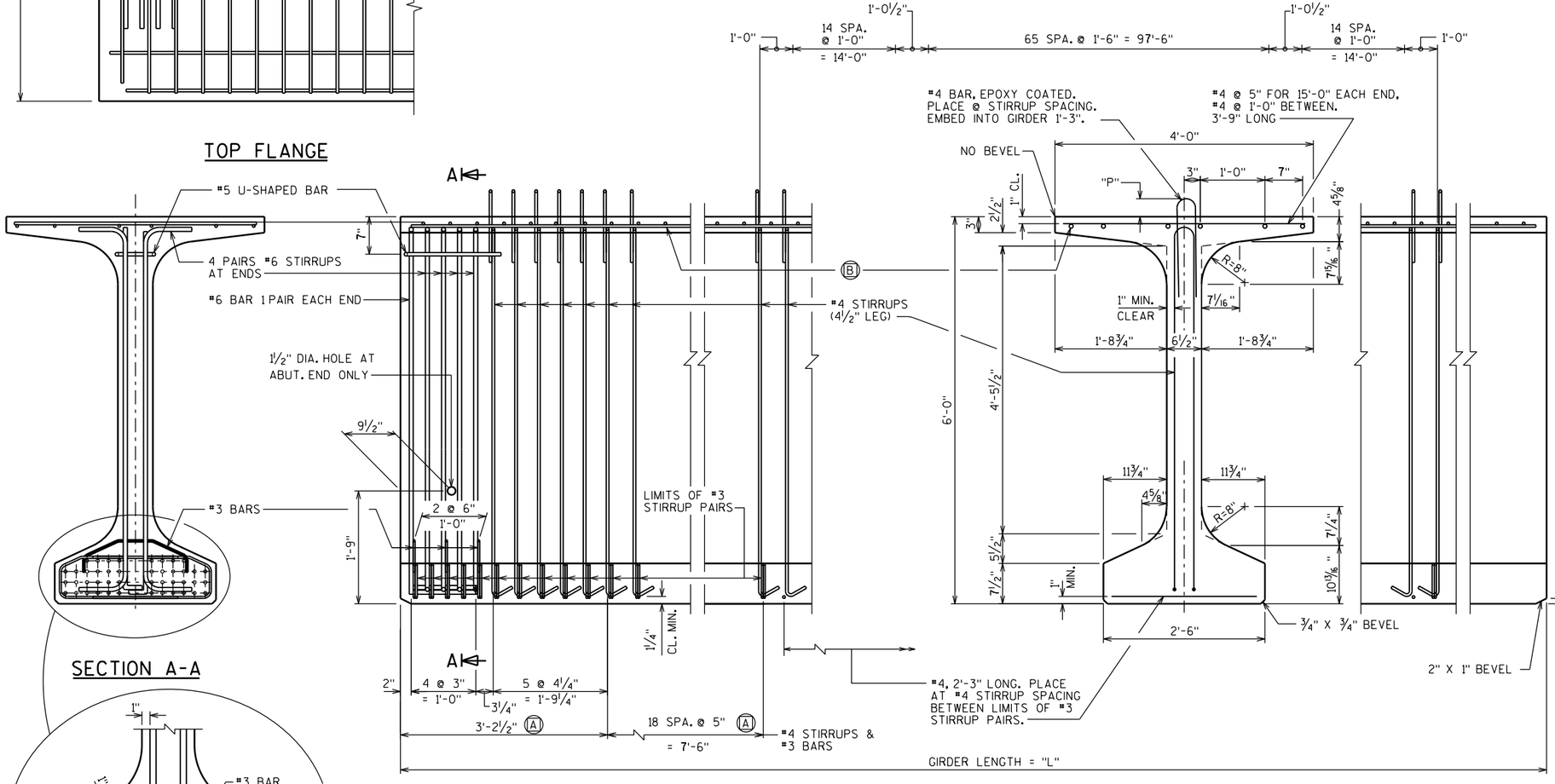
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

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 MAINTENANCE 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.

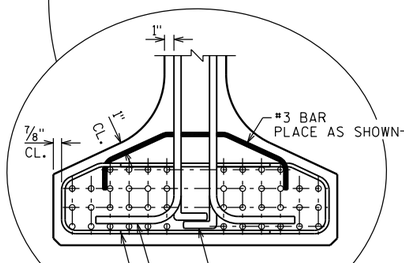
FOR DIAPHRAGM INSERT LOCATIONS & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

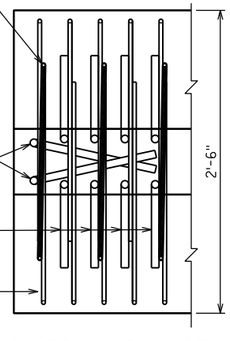


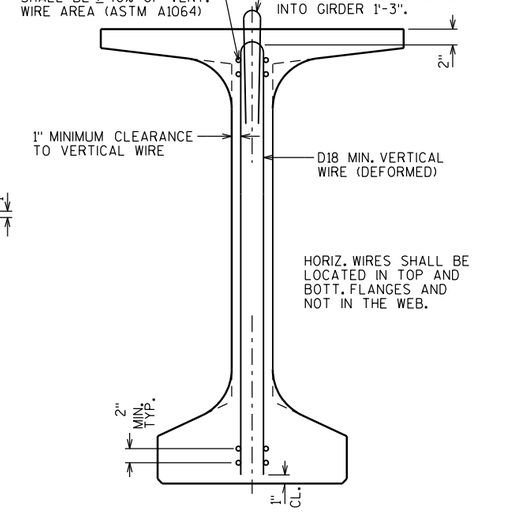
SIDE VIEW & TYP. SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-8"







SECTION THRU GIRDER

SHOWING WELDED WIRE FABRIC (WWF) STIRRUPS ASTM A1064 (FY = 70 KSI)

✳ 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 1/3 OF GIRDER	MID 1/3 OF GIRDER	END 1/3 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.) ✳
1	ALL	151	0.8	1.5	2.0	2.4	2.5	2.4	2.0	1.5	0.8	8,000	9	8	9	0.6	46	6,800	67	20.5	23.5	5		

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-51-157

DRAWN BY SRK | PLANS CK'D. KGW

72W" PRESTRESSED GIRDER DETAILS 1

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SCALE = 1.00

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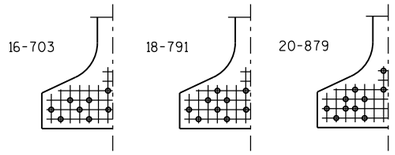
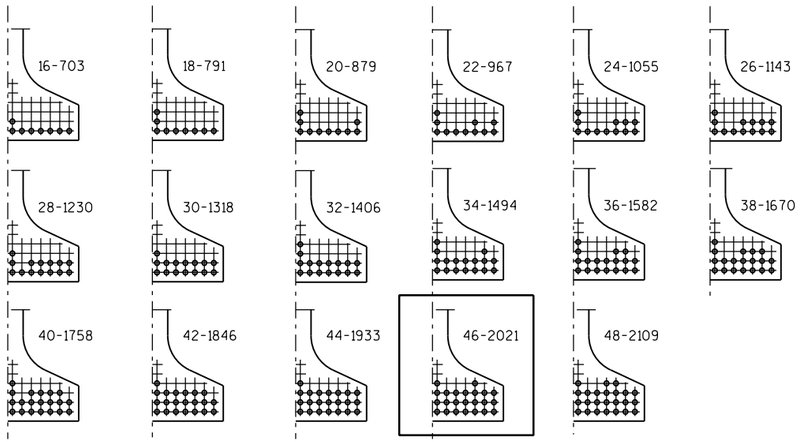


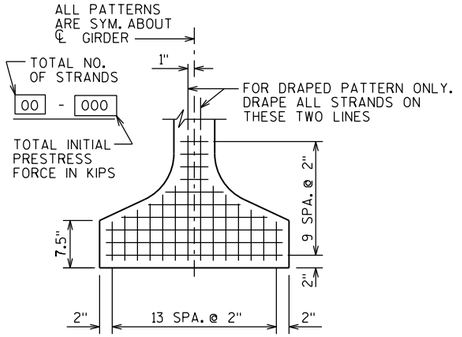
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6" DIA. STRANDS

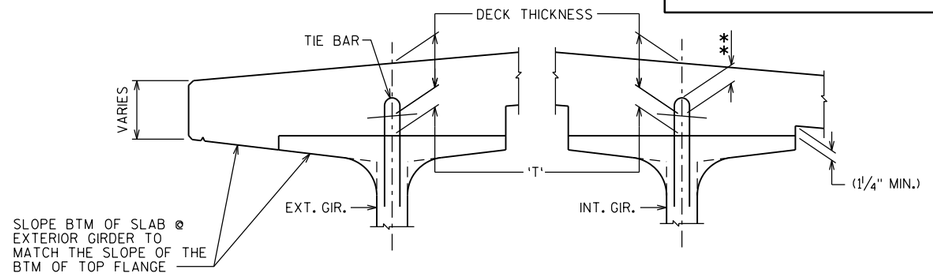


ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6" DIA. STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

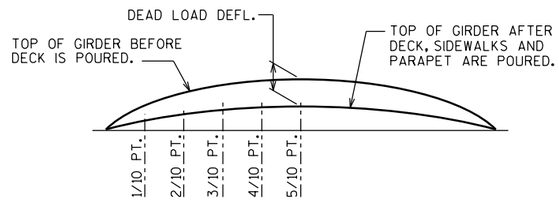
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

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

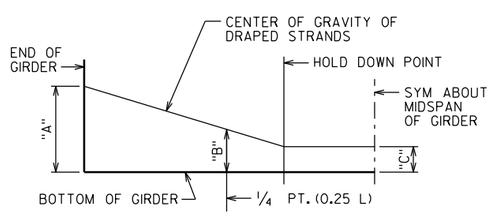
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 3.5" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

*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.) *
1	4.54

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

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY SRK | PLANS CK'D. KGW

72W" PRESTRESSED GIRDER DETAILS 2

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STATE PROJECT NUMBER

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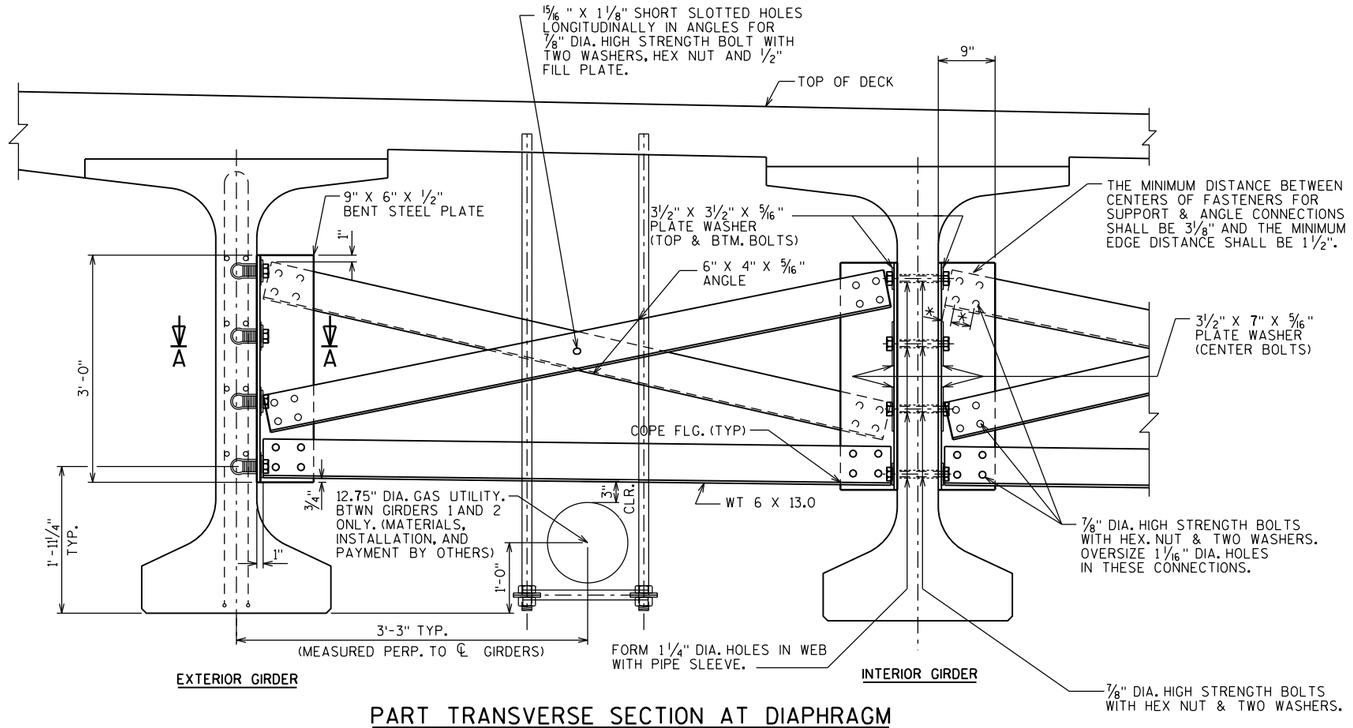


PART TRANSVERSE SECTION AT DIAPHRAGM

(72W" PRESTRESSED GIRDER)

NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-51-157", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS 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.

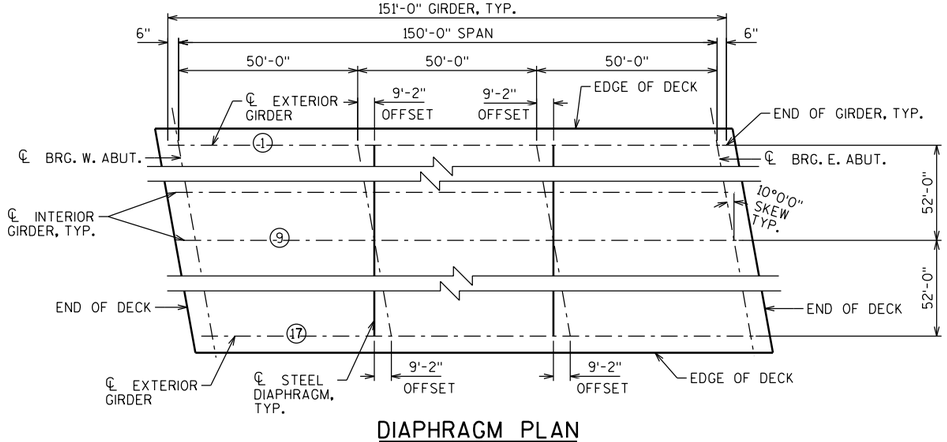
CONCRETE INSERTS TO SUSPEND THE UTILITIES AND SPACING SHALL BE FURNISHED BY THE UTILITY CONTRACTOR AND PLACED BY BRIDGE CONTRACTOR.

CONCRETE INSERT SPACING SHALL BE ADJUSTED WHERE NECESSARY TO MAINTAIN A MINIMUM CLEAR DISTANCE BETWEEN THE HANGER RODS AND DIAPHRAGMS OF 2-INCH, AND TO PROVIDE A MINIMUM CLEARANCE OF 1-INCH FROM THE DECK REINFORCING BARS.

ONLY CONCRETE INSERTS ARE ALLOWED. THE HANGER RODS SHALL NOT BE INSTALLED USING EPOXY OR EXPANSION BOLTS INTO THE BRIDGE DECK.

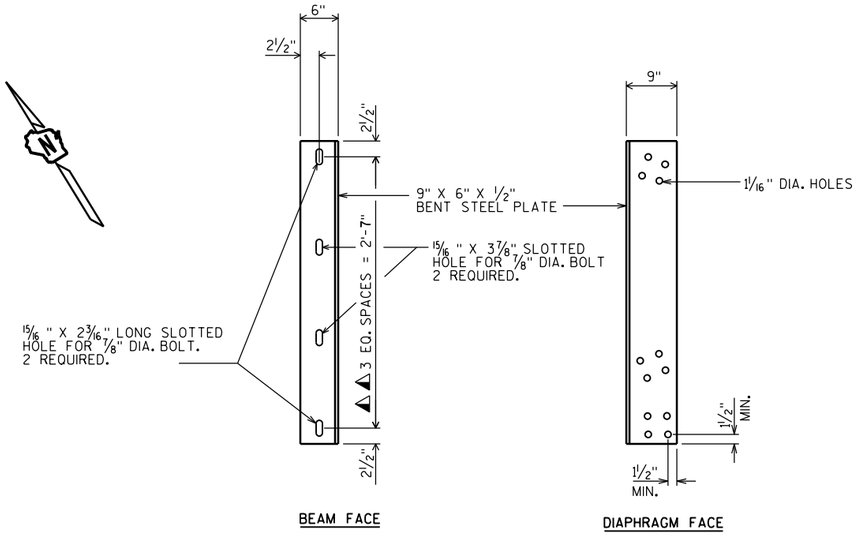
THE BOTTOMS OF ALL UTILITY SUPPORT HARDWARE SHALL NOT EXTEND BELOW THE ADJACENT GIRDER BOTTOM FLANGES.

PROVIDE CALCULATIONS IN THE FORM OF SHOP DRAWINGS FOR PERMANENT PIPE HANGER ASSEMBLY TO THE ENGINEER OF RECORD FOR REVIEW. THE SHOP DRAWINGS ARE TO BE SIGNED AND SEALED BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF WISCONSIN.



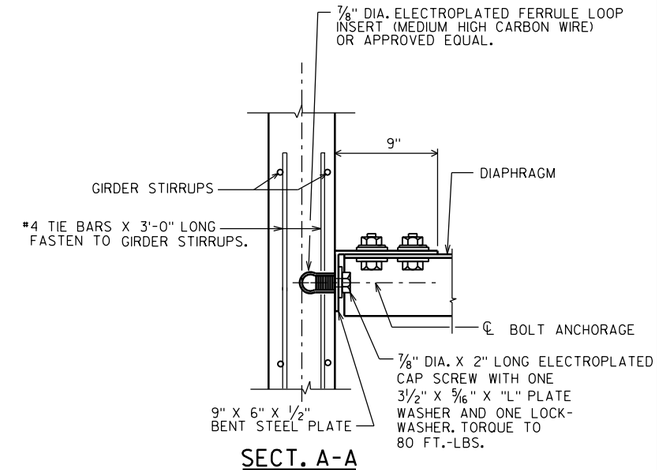
DIAPHRAGM PLAN

◯ INDICATES GIRDER NUMBER



DIAPHRAGM SUPPORT

▲▲ BOLT HOLES SHALL BE SPACED SO AS TO MISS PRESTRESSED STRANDS IN CONCRETE BEAMS.



SECT. A-A

(FOR EXTERIOR ATTACHMENT)

"L" = 3 1/2"; TOP AND BOTTOM BOLTS
"L" = 7"; CENTER BOLTS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY	PLANS CK'D.
SRK	KGW

STEEL DIAPHRAGM

SHEET 12 OF 24

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I.D.

DATE:

SCALE = 1.00

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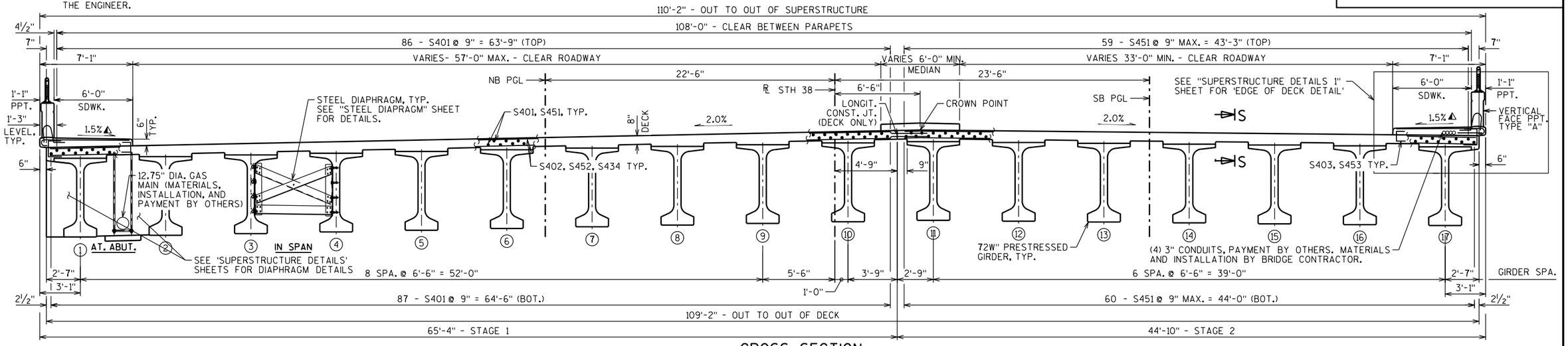
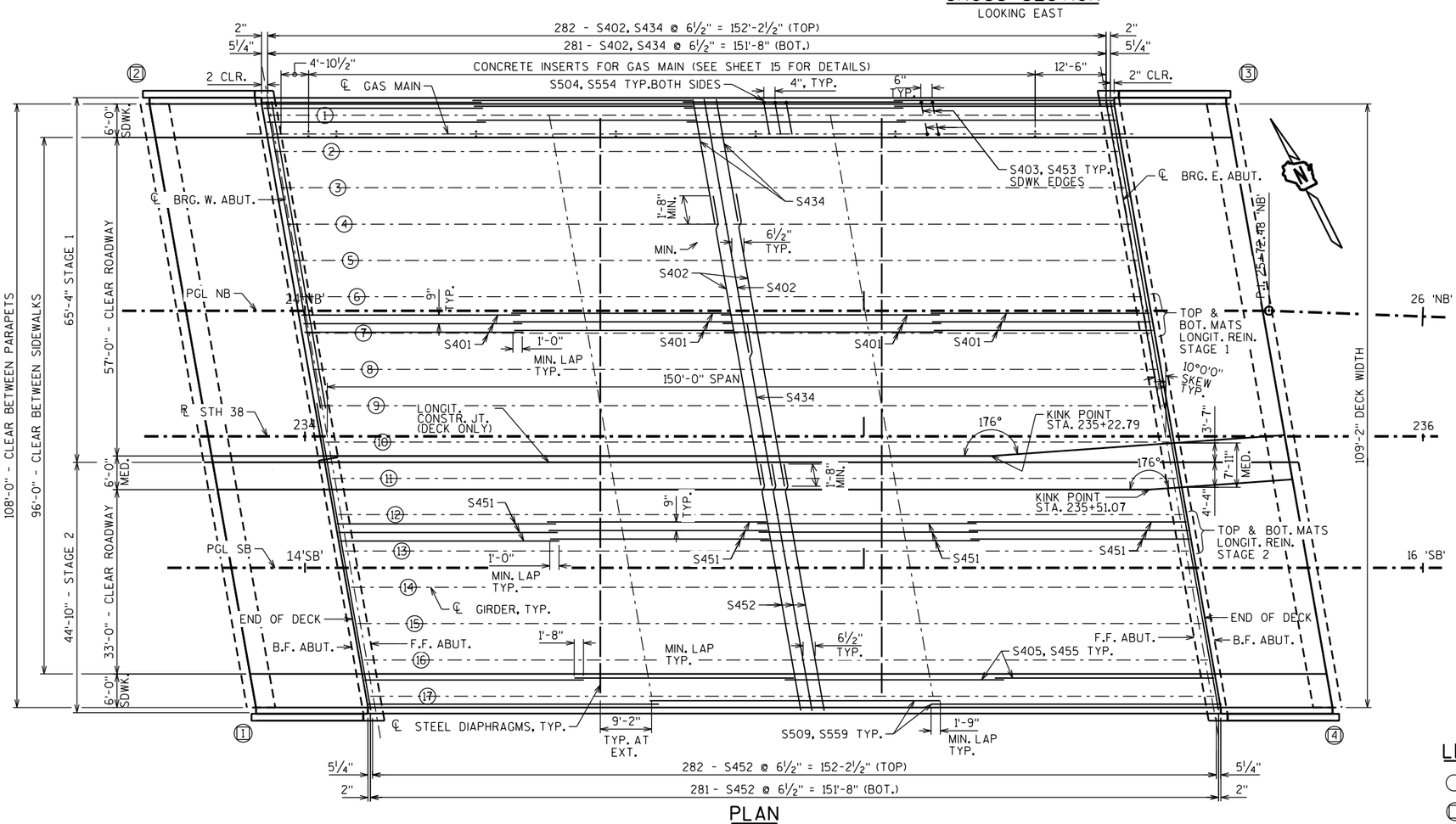
STATE PROJECT NUMBER
2290-03-73

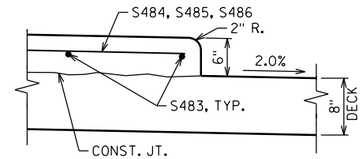
▲ CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



CROSS SECTION
LOOKING EAST

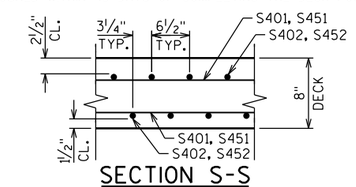


PLAN

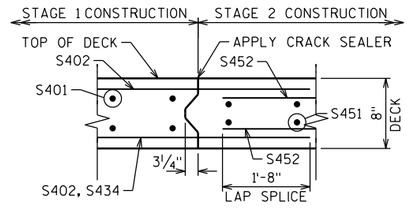


MEDIAN REINFORCEMENT DETAIL

CLEAN ALL LOOSE MATERIAL ON THE DECK AT THE MEDIAN LOCATION PRIOR TO MEDIAN PLACEMENT USING HIGH PRESSURE WATER OR AIR, ENSURING ALL FREE-STANDING WATER IS REMOVED PRIOR TO MEDIAN PLACEMENT. NEAT CEMENT IS REQUIRED AS PER 509.3.9.2 OF THE STANDARD SPECIFICATIONS UNLESS THE MEDIAN IS POURED WITHIN 45 DAYS OF COMPLETING THE DECK POUR.



SECTION S-S



SECTION THRU LONGITUDINAL JOINT

LEGEND

◯ INDICATES GIRDER NUMBER

⬡ INDICATES WING NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY SRK | PLANS CK'D. KGW

SUPERSTRUCTURE

SHEET 13 OF 24
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I.D.

DATE:

SCALE = 11.50

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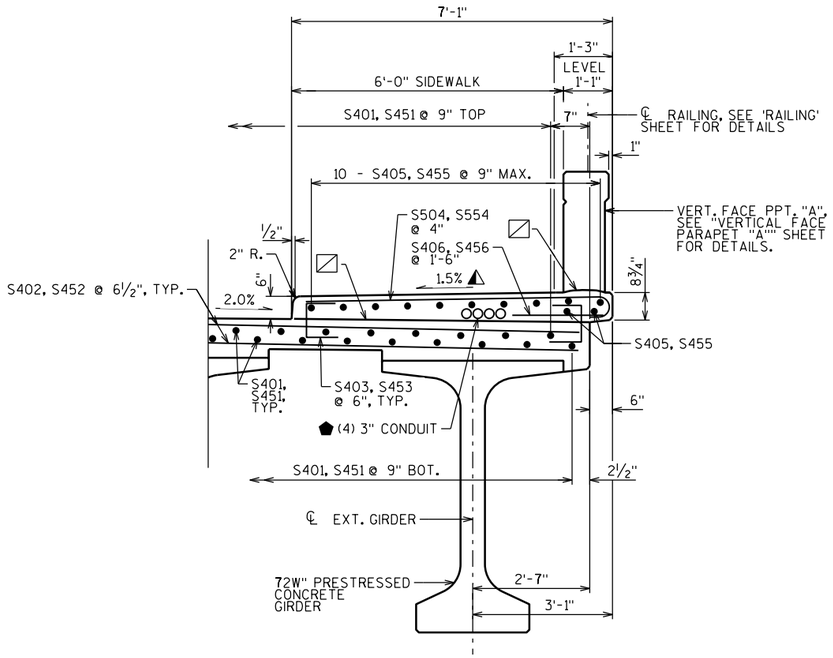
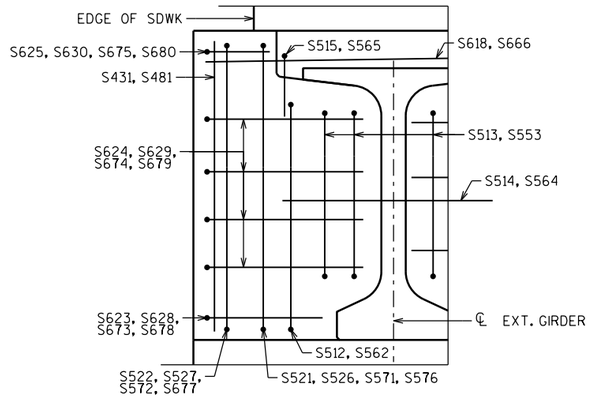
STATE PROJECT NUMBER

2290-03-73

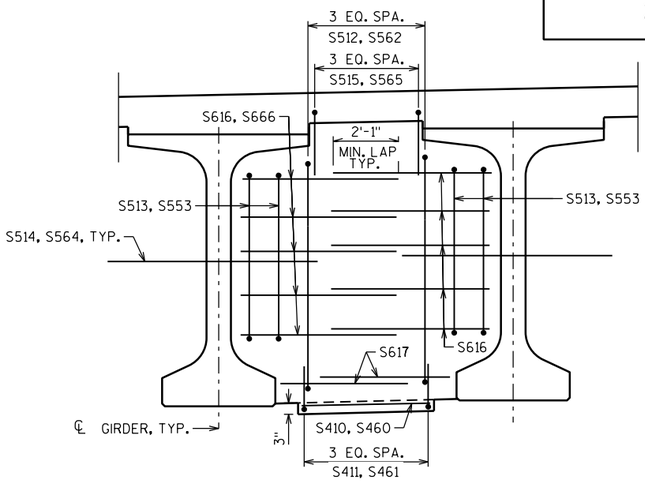


EDGE OF DECK DETAIL



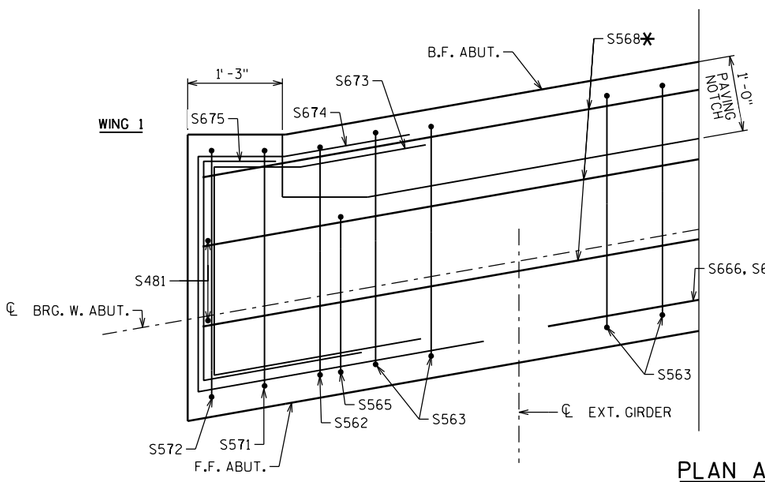
EXTERIOR GIRDERS

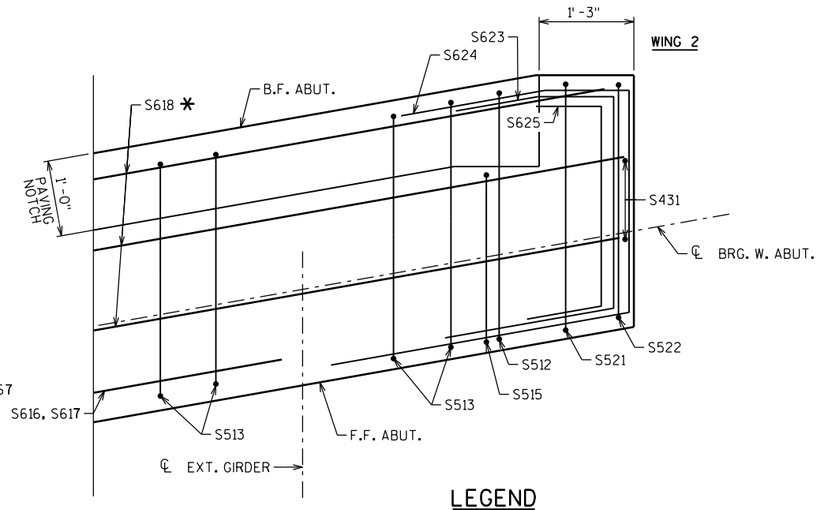
SEE "SUPERSTRUCTURE DETAILS 2" FOR SIDEWALK/DIAPHRAGM REBAR



INTERIOR GIRDERS

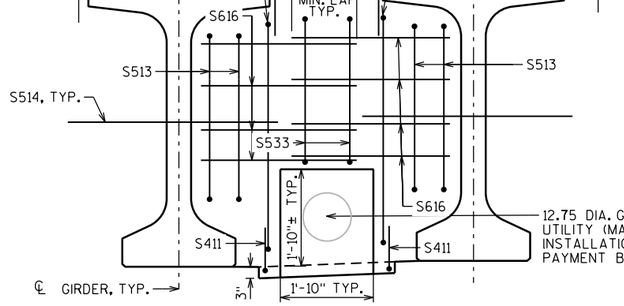
ABUT. DIAPHRAGM





PLAN ABUT. DIAPHRAGM

WEST ABUT. SHOWN, EAST ABUT. SIMILAR
SEE "SUPERSTRUCTURE DETAILS 2" FOR SIDEWALK/DIAPHRAGM REBAR



ABUT. DIA. UTILITY BLOCKOUT

BTWN. GIRDERS 1 AND 2 ONLY

LEGEND

☆ CONTRACTOR SHALL COORDINATE BLOCKOUTS IN ABUTMENT DIAPHRAGMS AS REQUIRED FOR THE WE ENERGIES UTILITY. WRAP UTILITY IN ⅜" THICK COMPRESSIBLE EXPANSION MATERIAL AT CONCRETE DIAPHRAGMS AND GROUT BLOCKOUTS FULL AFTER INSTALLATION OF CONDUIT. USE NON-SHRINK GROUTFROM THE DEPARTMENT'S APPROVED PRODUCTS LIST. EXPANSION MATERIAL AND GROUT INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

◭ CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

▨ CONSTR. JT. - STRIKE OFF AS SHOWN AND LEAVE ROUGH

* 2 BARS PER ROW/STAGE, 2'-1" MIN. LAP. FIELD CUT AT UTILITY BLOCK-OUT AS DIRECTED BY THE ENGINEER.

⬟ PAYMENT BY OTHERS. MATERIALS AND INSTALLATION BY BRIDGE CONTRACTOR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY SRK | PLANS CK'D. KGW

SUPERSTRUCTURE DETAILS 1

SHEET 14 OF 24
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SCALE = 1.00

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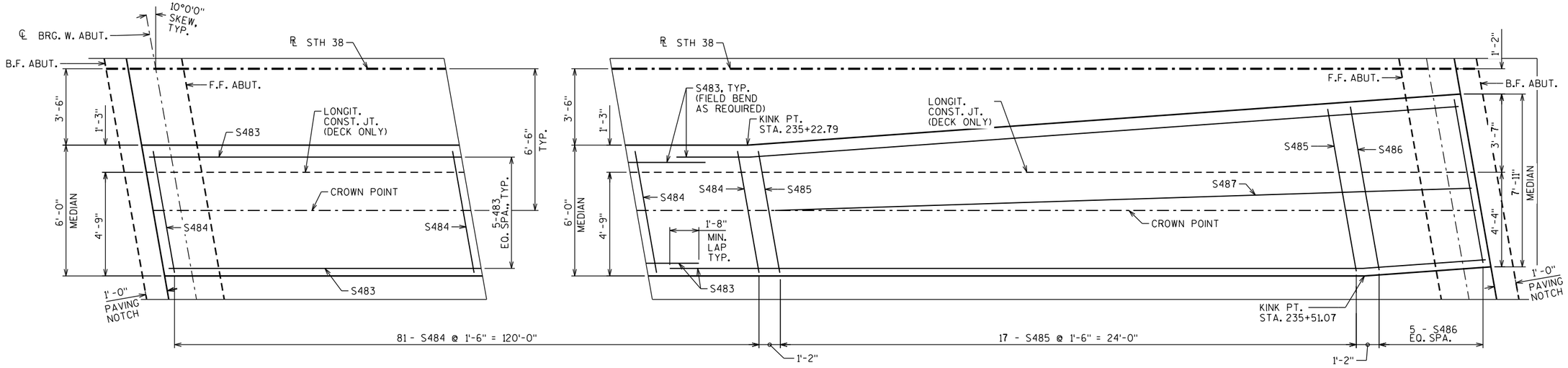
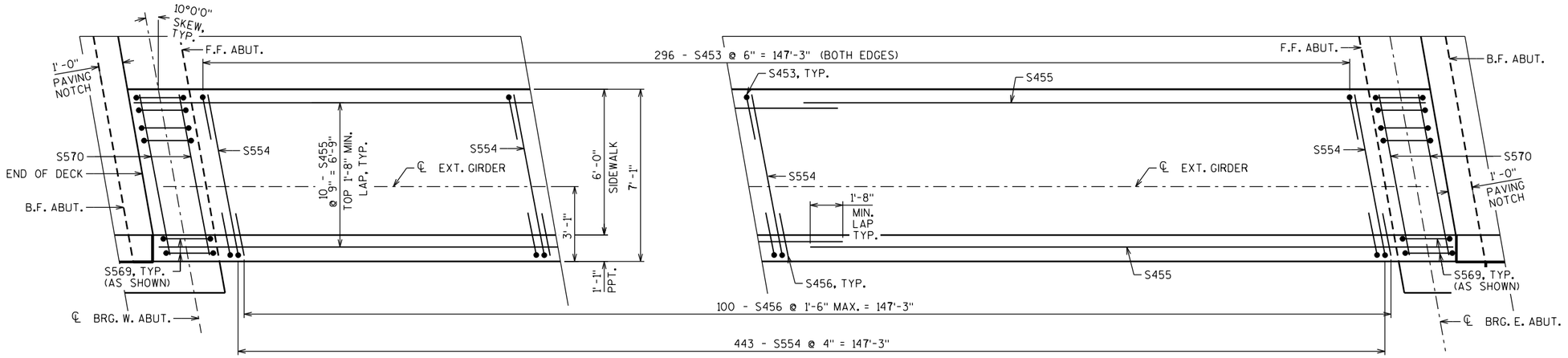
I.D.

DATE:

STATE PROJECT NUMBER
2290-03-73



MEDIAN PLAN



SIDEWALK PLAN

OTHER SIDEWALK SIMILAR
(PARAPET REBAR AND CONDUIT NOT SHOWN FOR CLARITY)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY SRK | PLANS CK'D. KGW

SUPERSTRUCTURE DETAILS 2

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DATE:

SCALE = 2.50

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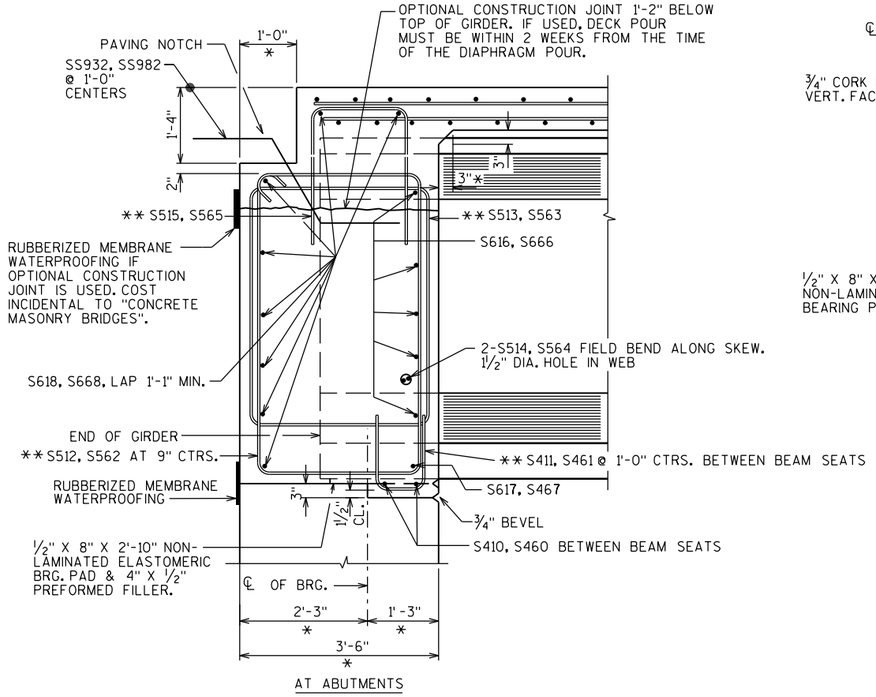
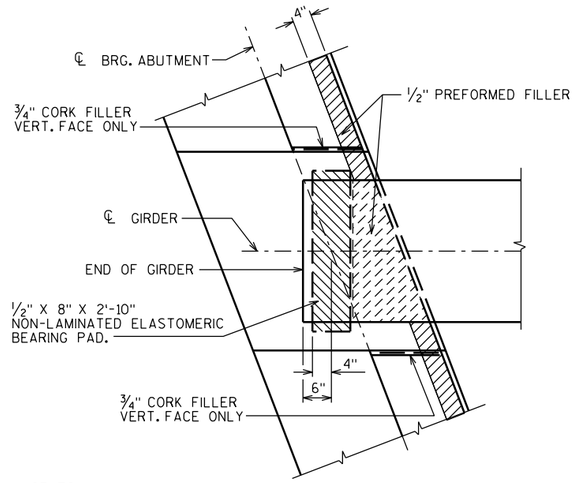


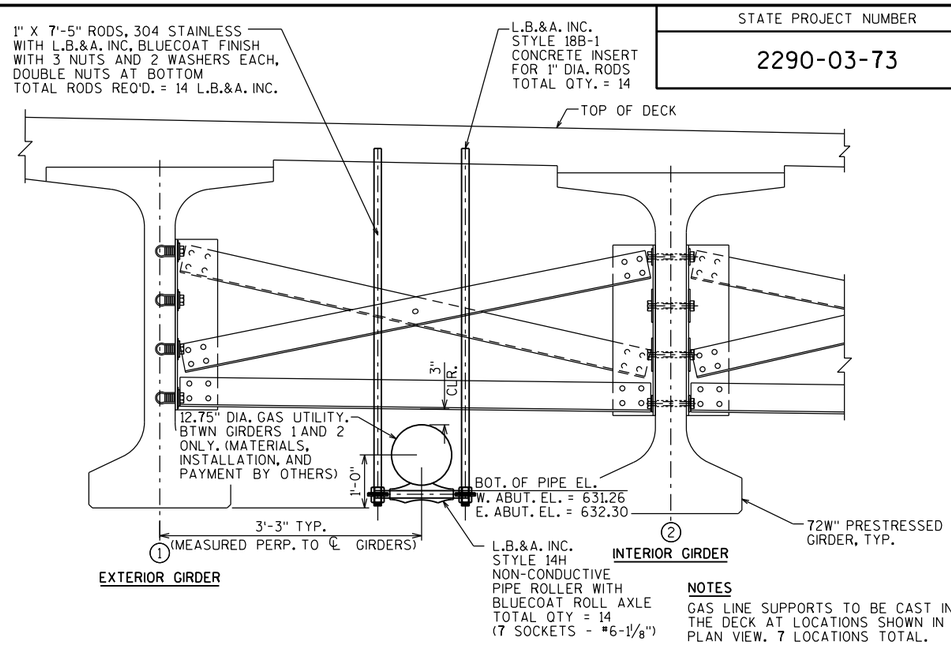
PART LONGIT. SECTION

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.

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



BEARING PAD DETAIL



GAS LINE SUPPORT - SECTION

(LOOKING EAST)
SUPPORTS LOCATED OFFSET FROM GIRDER DIAPHRAGM LOCATIONS

NOTES

GAS LINE SUPPORTS TO BE CAST INTO THE DECK AT LOCATIONS SHOWN IN THE PLAN VIEW. 7 LOCATIONS TOTAL.

COORDINATE GAS LINE INSTALLATION WITH BRIDGE CONTRACTOR.

ALL STEEL AND HARDWARE IN GAS LINE SUPPORT TO BE 304 STAINLESS STEEL WITH L.B.&A. BLUECOAT FINISH.

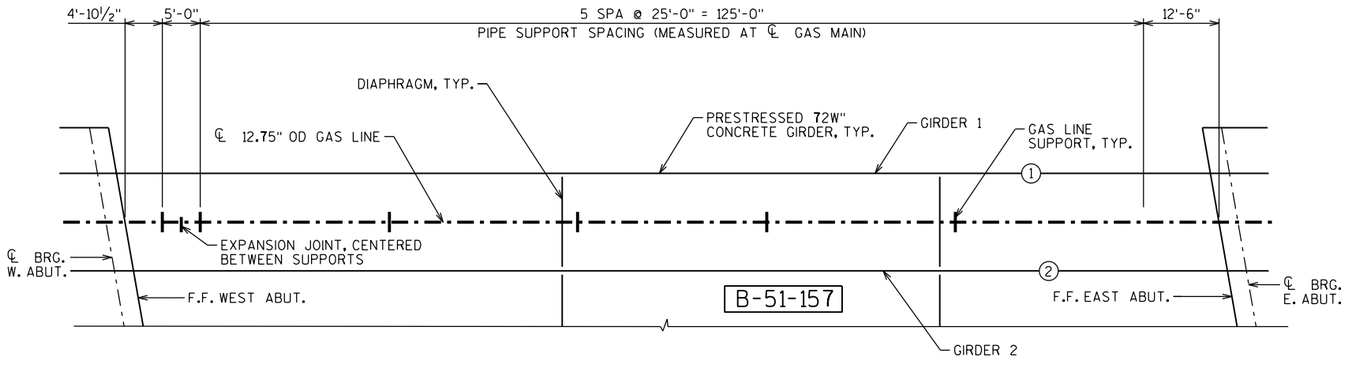
1'-8" X 1'-8" OPENING TO BE PROVIDED THROUGH ABUTMENT WALLS BY BRIDGE CONTRACTOR.

CONCRETE INSERTS TO BE FURNISHED BY WE ENERGIES AND PLACED BY THE CONTRACTOR. COST OF PLACING INSERTS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR "CONCRETE MASONRY BRIDGES".

CONTRACTOR TO COORDINATE WITH WE ENERGIES FOR TRANSVERSE SPACING OF INSERTS.

TOP OF DECK ELEVATIONS EOD = EDGE OF DECK

	℄ BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ BRG. E. ABUT.
N. EOD	637.69	637.80	637.91	638.03	638.14	638.25	638.36	638.48	638.59	638.70	638.81
GIRDER 1	637.74	637.86	637.97	638.08	638.19	638.31	638.42	638.53	638.64	638.76	638.87
GIRDER 2	637.88	638.00	638.11	638.22	638.33	638.45	638.56	638.67	638.78	638.90	639.01
GIRDER 3	638.02	638.13	638.25	638.36	638.47	638.58	638.70	638.81	638.92	639.03	639.15
GIRDER 4	638.16	638.27	638.38	638.50	638.61	638.72	638.83	638.95	639.06	639.17	639.28
GIRDER 5	638.30	638.41	638.52	638.64	638.75	638.86	638.97	639.09	639.20	639.31	639.42
GIRDER 6	638.44	638.55	638.66	638.77	638.89	639.00	639.11	639.22	639.34	639.45	639.56
PGL NB	638.49	638.60	638.72	638.83	638.94	639.05	639.17	639.28	639.39	639.50	639.62
GIRDER 7	638.58	638.69	638.80	638.91	639.03	639.14	639.25	639.36	639.48	639.59	639.70
GIRDER 8	638.71	638.83	638.94	639.05	639.16	639.28	639.39	639.50	639.61	639.73	639.84
GIRDER 9	638.85	638.97	639.08	639.19	639.30	639.42	639.53	639.64	639.75	639.87	639.98
GIRDER 10	638.99	639.10	639.22	639.33	639.44	639.55	639.67	639.78	639.89	640.00	640.12
CROWN	639.11	639.22	639.33	639.45	639.56	639.67	639.78	639.90	640.01	640.12	640.23
GIRDER 11	639.09	639.20	639.31	639.43	639.54	639.65	639.76	639.88	639.99	640.10	640.21
GIRDER 12	638.97	639.08	639.19	639.31	639.42	639.53	639.64	639.76	639.87	639.98	640.09
GIRDER 13	638.85	638.96	639.07	639.18	639.30	639.41	639.52	639.63	639.75	639.86	639.97
PGL SB	638.79	638.90	639.02	639.13	639.24	639.35	639.47	639.58	639.69	639.80	639.92
GIRDER 14	638.73	638.84	638.95	639.06	639.18	639.29	639.40	639.51	639.63	639.74	639.85
GIRDER 15	638.60	638.72	638.83	638.94	639.05	639.17	639.28	639.39	639.50	639.62	639.73
GIRDER 16	638.48	638.60	638.71	638.82	638.93	639.05	639.16	639.27	639.38	639.50	639.61
GIRDER 17	638.36	638.47	638.59	638.70	638.81	638.92	639.04	639.15	639.26	639.37	639.49
S. EOD	638.31	638.43	638.54	638.65	638.76	638.88	638.99	639.10	639.21	639.33	639.44



GAS LINE SUPPORT - PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY SRK | PLANS CK'D. KGW

SUPERSTRUCTURE DETAILS 3

SHEET 16 OF 24
398

STATE PROJECT NUMBER
2290-03-73

I.D.

DATE:

SCALE = 1.33

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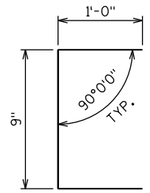
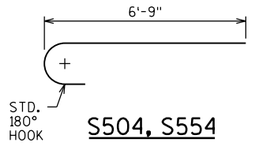
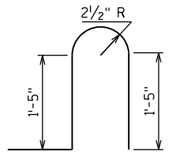


S403, S453



S504, S554



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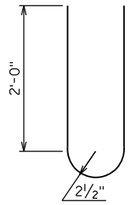

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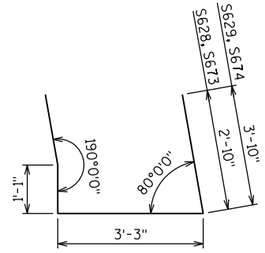
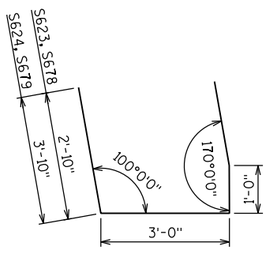


S628, S629, S673, S674

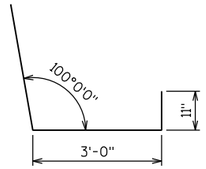


S623, S624, S678, S679

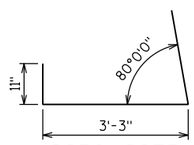
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
S485	1 SERIES OF 17	5'-10" TO 7'-7"

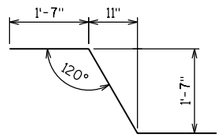
BUNDLE AND TAG EACH SERIES SEPARATELY.



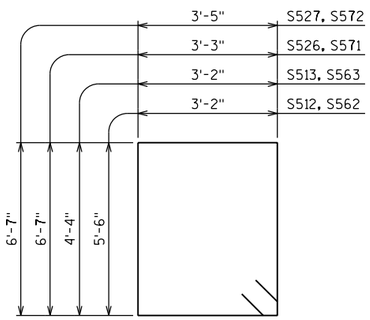
S625, S680



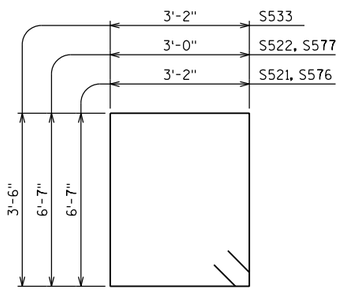
S630, S675



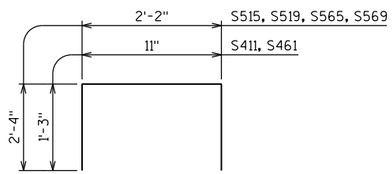
SS932, SS982



S512, S513, S526, S527
S562, S563, S571, S572



S521, S522, S533
S576, S577



S411, S515, S519
S461, S565, S569

BILL OF BARS

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

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
S401	X	692	39'-0"			STAGE 1 - DECK - TOP & BOTTOM LONGITUDINAL
S402	X	563	40'-0"			STAGE 1 - DECK - TOP & BOTTOM TRANSVERSE LONG
S403	X	592	2'-7"		x	STAGE 1 - DECK/SDWK DOWEL
S504	X	443	7'-4"		x	STAGE 1 - SDWK - TRANSVERSE
S405	X	48	39'-10"			STAGE 1 - SDWK - LONGITUDINAL
S406	X	100	1'-4"			STAGE 1 - SDWK - TRANSVERSE - EDGES
S507	X	184	4'-4"		x	STAGE 1 - PPT. - VERTICAL - TRANSVERSE
S508	X	184	4'-9"		x	STAGE 1 - PPT. - VERTICAL - TRANSVERSE
S509	X	24	52'-2"			STAGE 1 - PPT. - LONGITUDINAL
S410	X	40	2'-8"			STAGE 1 - DIAPH. - HORIZONTAL BTWN BEAM SEATS
S411	X	80	3'-3"		x	STAGE 1 - DIAPH. - VERTICAL BTWN BEAM SEATS
S512	X	82	18'-0"		x	STAGE 1 - DIAPH. - VERT. - STIRRUP
S513	X	84	15'-8"		x	STAGE 1 - DIAPH. - VERT. - STIRRUP
S514	X	40	6'-0"			STAGE 1 - DIAPH. - HORIZONTAL THRU GIRDERS
S515	X	82	6'-7"		x	STAGE 1 - DIAPH. - VERT. - TOP
S616	X	200	4'-0"			STAGE 1 - DIAPH. - HORIZ. - F.F.
S617	X	40	3'-0"			STAGE 1 - DIAPH. - HORIZ. - F.F. - BOTTOM
S618	X	32	35'-2"			STAGE 1 - DIAPH. - HORIZ. - B.F. - TOP
S519	X	12	6'-7"		x	STAGE 1 - DIAPH./SDWK. - VERT. - TOP
S520	X	4	6'-9"			STAGE 1 - DIAPH./SDWK. - HORIZ. - TOP
S521	X	1	20'-2"		x	STAGE 1 - DIAPH. ENDS - STIRRUP - VERTI. - WING 2
S522	X	1	19'-10"		x	STAGE 1 - DIAPH. ENDS - STIRRUP - VERTI. - WING 2
S623	X	1	8'-8"		x	STAGE 1 - DIAPH. ENDS - HORIZ. - WING 2
S624	X	4	9'-8"		x	STAGE 1 - DIAPH. ENDS - HORIZ. - WING 2
S625	X	1	5'-9"		x	STAGE 1 - DIAPH. ENDS - HORIZ. - WING 2
S526	X	1	20'-4"		x	STAGE 1 - DIAPH. ENDS - STIRRUP - VERTI. - WING 3
S527	X	1	20'-8"		x	STAGE 1 - DIAPH. ENDS - STIRRUP - VERTI. - WING 3
S628	X	1	8'-8"		x	STAGE 1 - DIAPH. ENDS - HORIZ. - WING 3
S629	X	4	9'-8"		x	STAGE 1 - DIAPH. ENDS - HORIZ. - WING 3
S630	X	1	6'-0"		x	STAGE 1 - DIAPH. ENDS - HORIZ. - WING 3
S431	X	4	6'-9"			STAGE 1 - DIAPH. ENDS - VERT.
SS932		136	5'-0"		x	STAGE 1 - CONC. ABUT. DIA. TO APP. SLAB
S533	X	4	14'-0"		x	STAGE 1 - DIAPH. - BTWN. - STIRRUPS - BTWN. GIRDER 1 & 2
S434	X	563	29'-6"			STAGE 1 - DECK - TOP & BOTTOM TRANSVERSE SHORT
S451	X	476	39'-0"			STAGE 2 - DECK - TOP & BOTTOM LONGITUDINAL
S452	X	563	44'-8"			STAGE 2 - DECK - TOP & BOTTOM TRANSVERSE
S453	X	592	2'-7"		x	STAGE 2 - DECK/SDWK DOWEL
S554	X	443	7'-4"		x	STAGE 2 - SDWK - TRANSVERSE
S455	X	48	39'-10"			STAGE 2 - SDWK - LONGITUDINAL
S456	X	100	1'-4"			STAGE 2 - SDWK - TRANSVERSE - EDGES
S557	X	184	4'-4"		x	STAGE 2 - PPT. - VERTICAL - TRANSVERSE
S558	X	184	4'-9"		x	STAGE 2 - PPT. - VERTICAL - TRANSVERSE
S559	X	24	52'-2"			STAGE 2 - PPT. - LONGITUDINAL
S460	X	24	2'-8"			STAGE 2 - DIAPH. - HORIZONTAL BTWN BEAM SEATS
S461	X	48	3'-3"		x	STAGE 2 - DIAPH. - VERTICAL BTWN BEAM SEATS
S562	X	50	18'-0"		x	STAGE 2 - DIAPH. - VERT. - STIRRUP
S563	X	52	15'-8"		x	STAGE 2 - DIAPH. - VERT. - STIRRUP
S564	X	28	6'-0"			STAGE 2 - DIAPH. - HORIZONTAL THRU GIRDERS
S565	X	50	6'-7"		x	STAGE 2 - DIAPH. - VERT. - TOP
S666	X	120	4'-0"			STAGE 2 - DIAPH. - HORIZ. - F.F.
S667	X	24	3'-0"			STAGE 2 - DIAPH. - HORIZ. - F.F. - BOTTOM
S668	X	32	24'-8"			STAGE 2 - DIAPH. - HORIZ. - B.F. - TOP
S569	X	12	6'-7"		x	STAGE 2 - DIAPH./SDWK. - VERT. - TOP
S570	X	4	6'-9"			STAGE 2 - DIAPH./SDWK. - HORIZ. - TOP
S571	X	1	20'-4"		x	STAGE 2 - DIAPH. ENDS - STIRRUP - VERTI. - WING 1
S572	X	1	20'-8"		x	STAGE 2 - DIAPH. ENDS - STIRRUP - VERTI. - WING 1
S673	X	1	8'-8"		x	STAGE 2 - DIAPH. ENDS - HORIZ. - WING 1
S674	X	4	9'-8"		x	STAGE 2 - DIAPH. ENDS - HORIZ. - WING 1
S675	X	1	6'-0"		x	STAGE 2 - DIAPH. ENDS - HORIZ. - WING 1
S576	X	1	20'-2"		x	STAGE 2 - DIAPH. ENDS - STIRRUP - VERTI. - WING 4
S577	X	1	19'-10"		x	STAGE 2 - DIAPH. ENDS - STIRRUP - VERTI. - WING 4
S678	X	1	8'-8"		x	STAGE 2 - DIAPH. ENDS - HORIZ. - WING 4
S679	X	4	9'-8"		x	STAGE 2 - DIAPH. ENDS - HORIZ. - WING 4
S680	X	1	5'-9"		x	STAGE 2 - DIAPH. ENDS - HORIZ. - WING 4
S481	X	4	6'-9"			STAGE 2 - DIAPH. ENDS - VERT.
SS982		94	5'-0"		x	STAGE 2 - CONC. ABUT. DIAPH. TO APP. SLAB
S483	X	15	51'-10"			STAGE 2 - MEDIAN - LONGITUDINAL
S484	X	81	5'-8"			STAGE 2 - MEDIAN - TRANSVERSE
S485	X	17	6'-9"	⚠		STAGE 2 - MEDIAN - TRANSVERSE
S486	X	5	7'-8"			STAGE 2 - MEDIAN - TRANSVERSE
S487	X	1	32'-0"			STAGE 2 - MEDIAN - LONGITUDINAL - E. END

STAINLESS STEEL → SS932

STAINLESS STEEL → SS982

LEGEND

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

STATE PROJECT NUMBER

2290-03-73

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY SRK | PLANS CK'D. KGW

SUPERSTRUCTURE BILL OF BARS

SHEET 17 OF 24
399

SCALE = 1.33

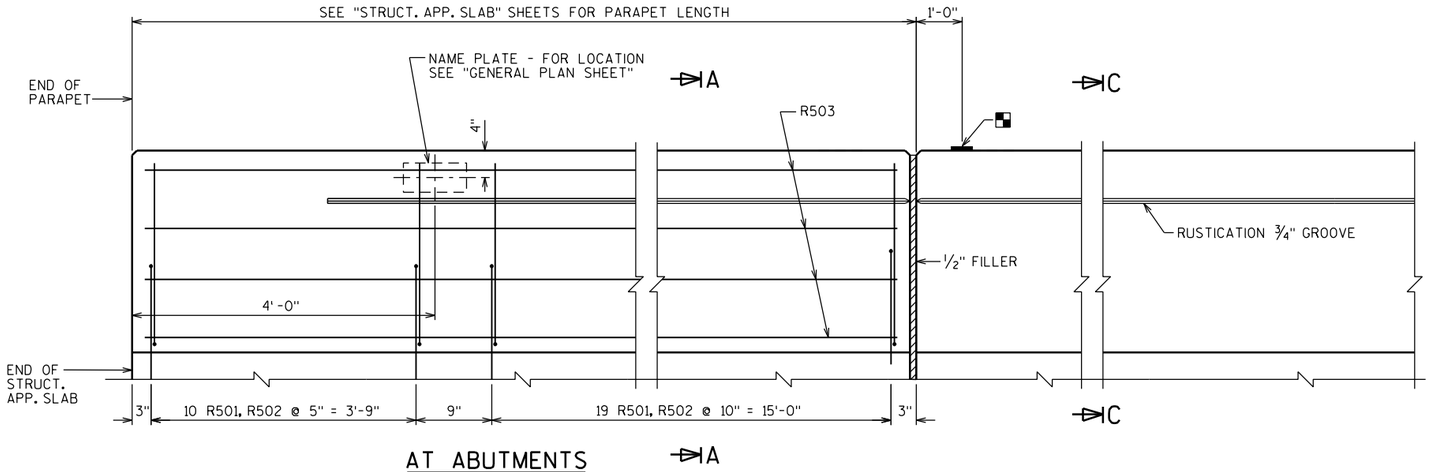
I.D.

DATE:

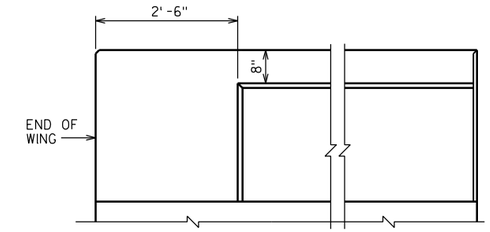
8

8

STATE PROJECT NUMBER
2290-03-73



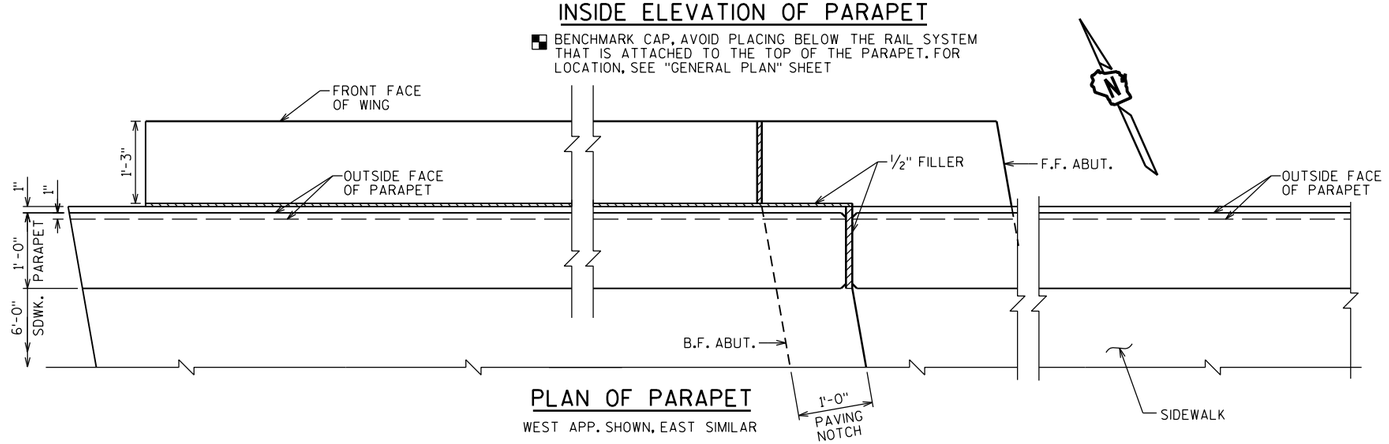
AT ABUTMENTS



OUTSIDE FACE OF PARAPET

INSIDE ELEVATION OF PARAPET

BENCHMARK CAP, AVOID PLACING BELOW THE RAIL SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET. FOR LOCATION, SEE "GENERAL PLAN" SHEET

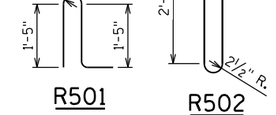


PLAN OF PARAPET

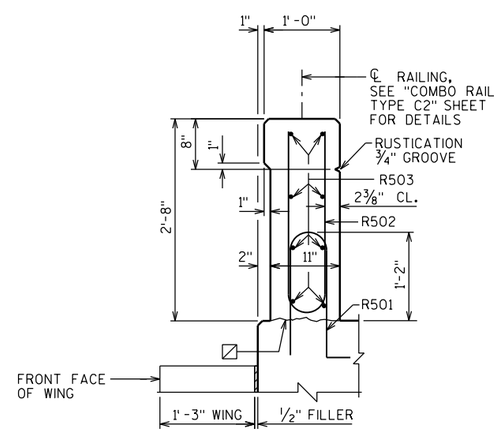
WEST APP. SHOWN, EAST SIMILAR

BILL OF BARS

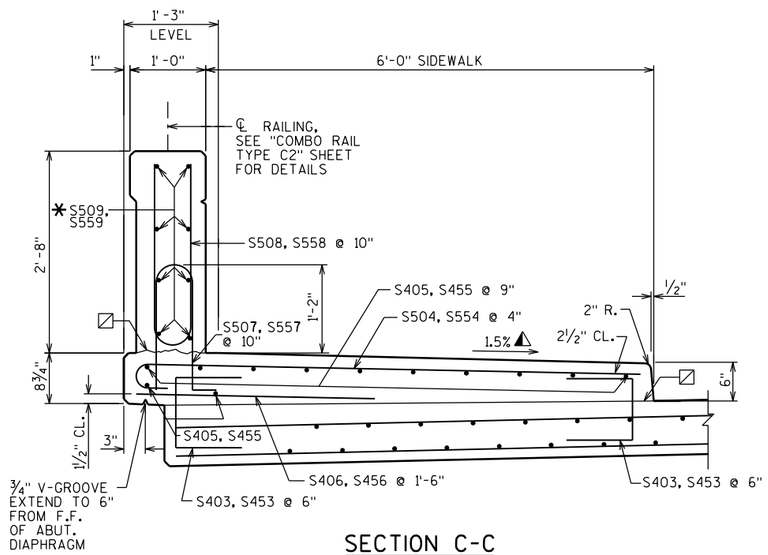
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	116	4'-4"	X		PARAPET VERT.
R502	X	116	4'-9"	X		PARAPET VERT.
R503	X	32	19'-8"			PARAPET HORIZ.



R501 R502



SECTION A-A



SECTION C-C

72W" GIRDER NOT SHOWN FOR CLARITY

LEGEND

☒ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.

▲ ± 0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

* OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY	SRK	PLANS CK'D.	KGW

VERTICAL FACE PARAPET "A"

SHEET 18 OF 24
400

I.D.

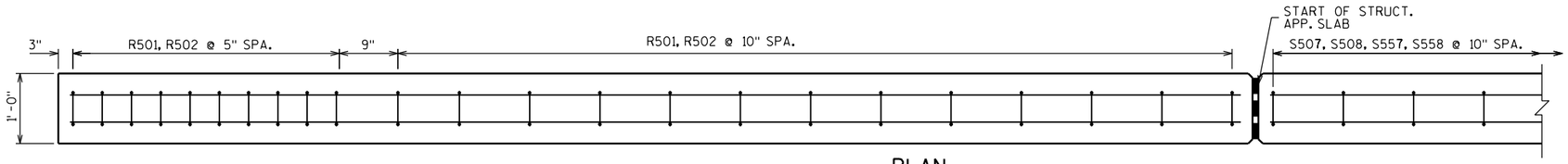
DATE:

SCALE = 1.00

8

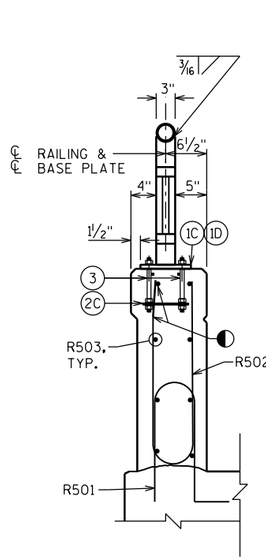
8

STATE PROJECT NUMBER
2290-03-73

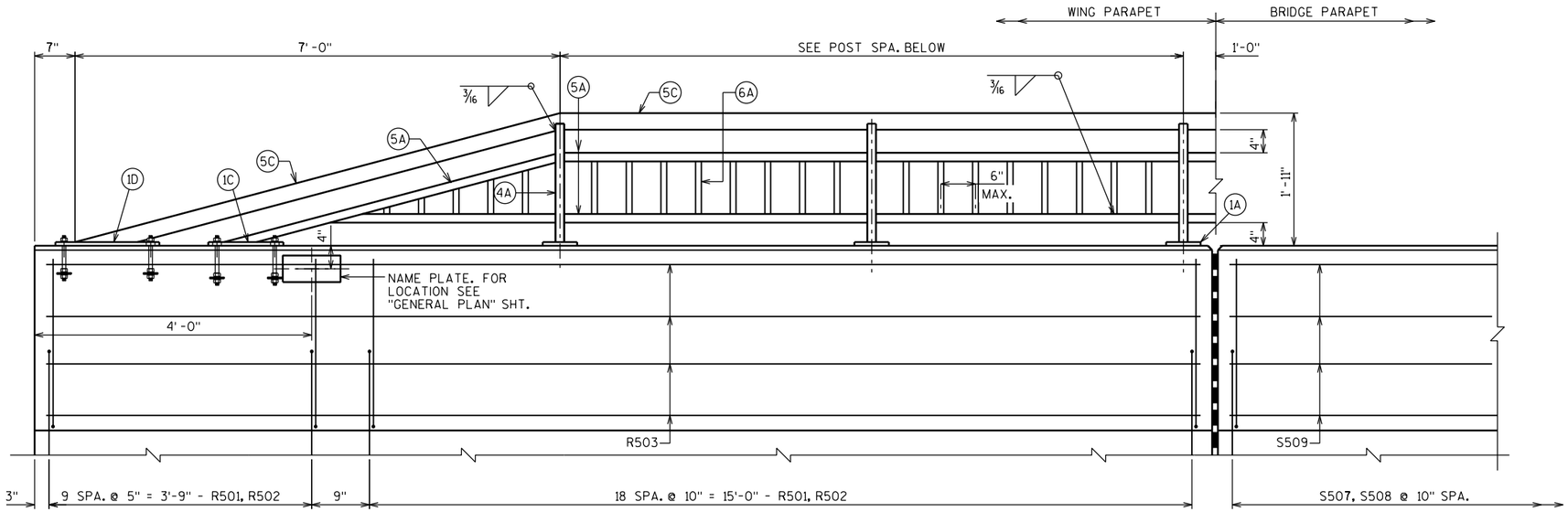


PLAN

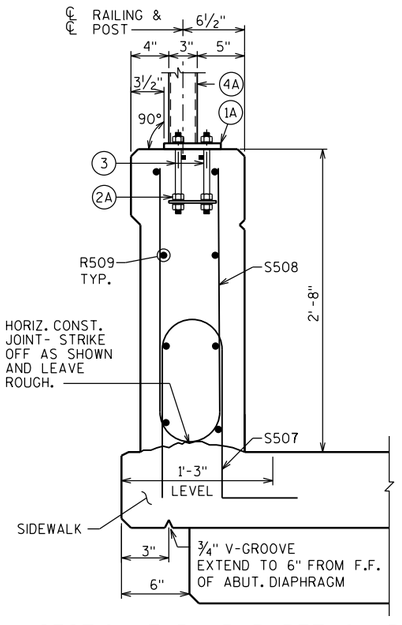
◐ WHEN ADHESIVE ANCHORS ARE USED, FIELD BEND AND/OR DISPLACE TO AVOID HITTING LONGITUDINAL BAR WHEN DRILLING FOR ADHESIVE ANCHORS.



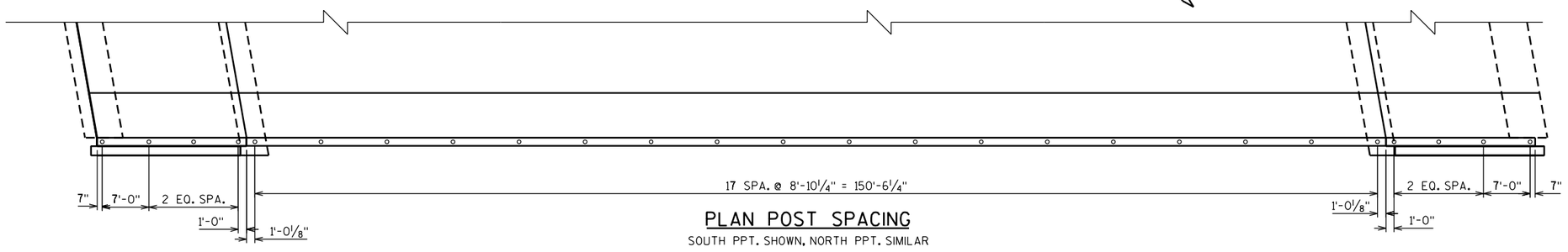
END VIEW



INSIDE ELEVATION OF PARAPET



SECTION THRU PARAPET ON BRIDGE



PLAN POST SPACING

SOUTH PPT. SHOWN, NORTH PPT. SIMILAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY	SRK	PLANS CK'D.	KGW

COMBINATION RAIL TYPE "C2"

SHEET 19 OF 24
401

I.D.

DATE:

SCALE = 1.00

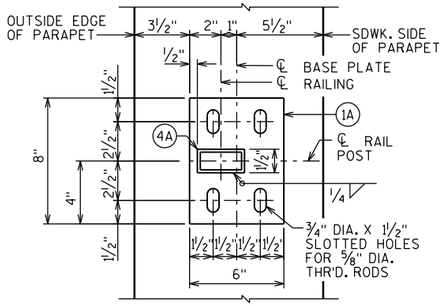
8

8

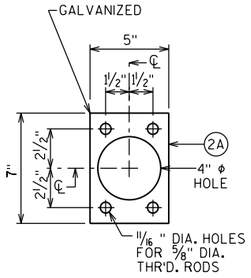
X:±ML±2020±20200238±DESIGN±TRANSPORTATION±SHEETSPLAN±B-51-157±2022_19_B51157_C2RAIL.DGN 6/15/2023 2:05:48 PM

STATE PROJECT NUMBER

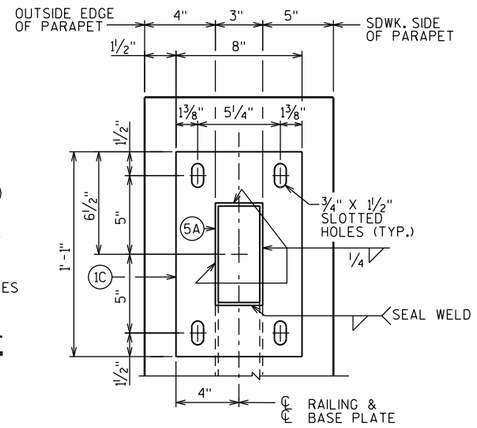
2290-03-73



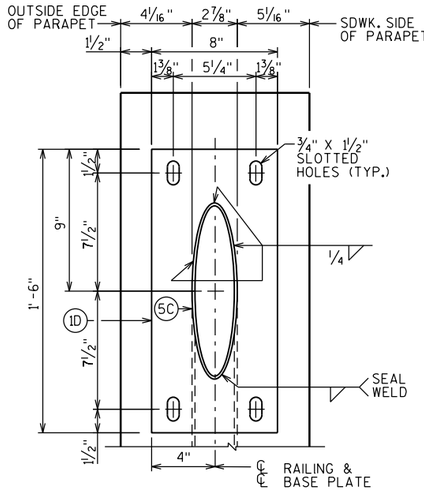
TYPICAL RAIL POST BASE PLATE



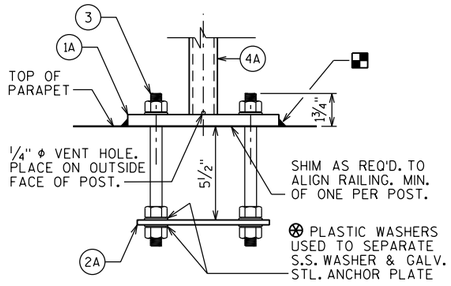
ANCHOR PLATE



END RAIL BASE PLATE

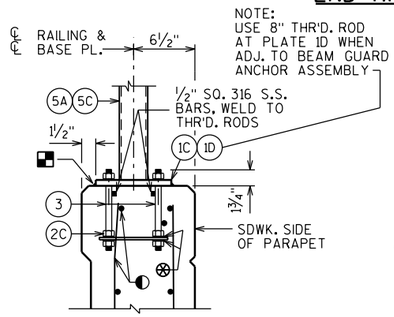


END RAIL BASE PLATE



ANCHORAGE FOR RAIL POSTS

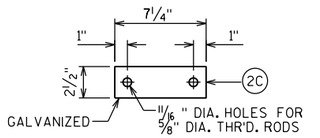
NOTE: ANCHOR PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.



ANCHORAGE FOR END RAIL

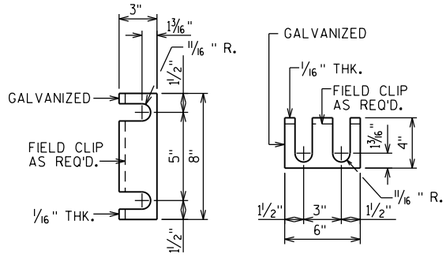
NOTE: ANCHOR PLATES NOT REQ'D. WHEN ADHESIVE ANCHORS ARE USED.

◐ WHEN ADHESIVE ANCHORS ARE USED, FIELD BEND AND/OR DISPLACE TO AVOID HITTING LONGITUDINAL BAR WHEN DRILLING FOR ADHESIVE ANCHORS.



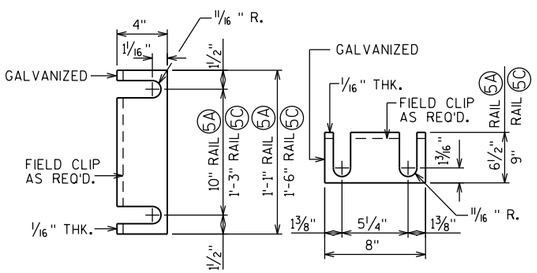
END RAIL ANCHOR PLATE

2 REQ'D. PER END RAIL BASE PLATE



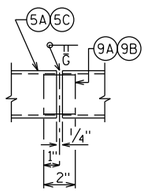
RAIL POST SHIM DETAIL

(2 SETS PER POST)



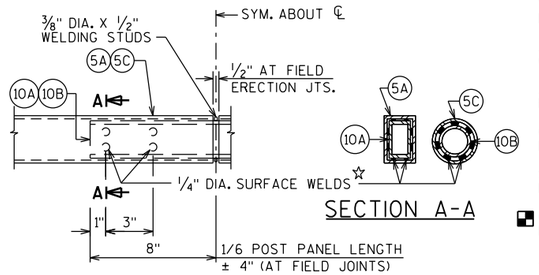
END RAIL SHIM DETAIL

(2 SETS PER POST)



SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



SECTION A-A

FIELD ERECTION JOINT DETAIL

☆ MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.

LEGEND

(1A) PLATE ⅝" X 6" X 8" WITH ¾" X 1½" SLOTTED HOLES.

(1C) PLATE ⅝" X 8" X 1'-1" WITH ¾" X 1½" SLOTTED HOLES.

(1D) PLATE ⅝" X 8" X 1'-6" WITH ¾" X 1½" SLOTTED HOLES.

(2A) ¼" X 5" X 7" ANCHOR PLATE WITH 11/16 " DIA. HOLES FOR THR'D. RODS NO. 3.

(2C) ¼" X 2½" X 7¼" ANCHOR PLATE WITH 11/16 " DIA. HOLES FOR THR'D. RODS NO. 3.

(3) ⅝" DIA. X 9" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 AND 502.3.14 OF THE STANDARD SPECIFICATIONS.

(4A) STRUCTURAL TUBING 3" X 1½" X 3/16". PLACE VERTICAL. WELD TO NO. 1 & 5.

(5A) STRUCTURAL TUBING 3" X 1½" X 3/16" RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.

(5C) STRUCTURAL TUBING 2½" DIA. (STANDARD SIZE) (2.875" O.D.). WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.

(6A) BAR 1" X 1" PICKETS. WELD TO NO. 5. PLACE VERTICAL.

(9A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT".

(9B) CIRCULAR SLEEVE FABRICATED FROM STRUCTURAL TUBING 2" DIA. (STANDARD SIZE) (2.375" O.D.)

(10A) RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ STRIP SEAL JTS.)

(10B) CIRCULAR SLEEVE FABRICATED FROM STRUCTURAL TUBING 2" DIA. (STANDARD SIZE) (2.375" O.D.) (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ STRIP SEAL EXP. JTS.)

RAILING NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C2", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

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

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

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

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

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

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

ALL JOINTS AND RECESSES IN CONCRETE PARAPET ARE TO BE VERTICAL.

ALL MATERIAL (EXCEPT NO. 3 & 12) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED AMS STD. COLOR NO. 27038, BLACK.

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

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY SRK | PLANS CK'D. KGW

COMBINATION RAIL TYPE "C2" DETAILS

SHEET 20 OF 24
402

I.D.

DATE:

SCALE = 1.00

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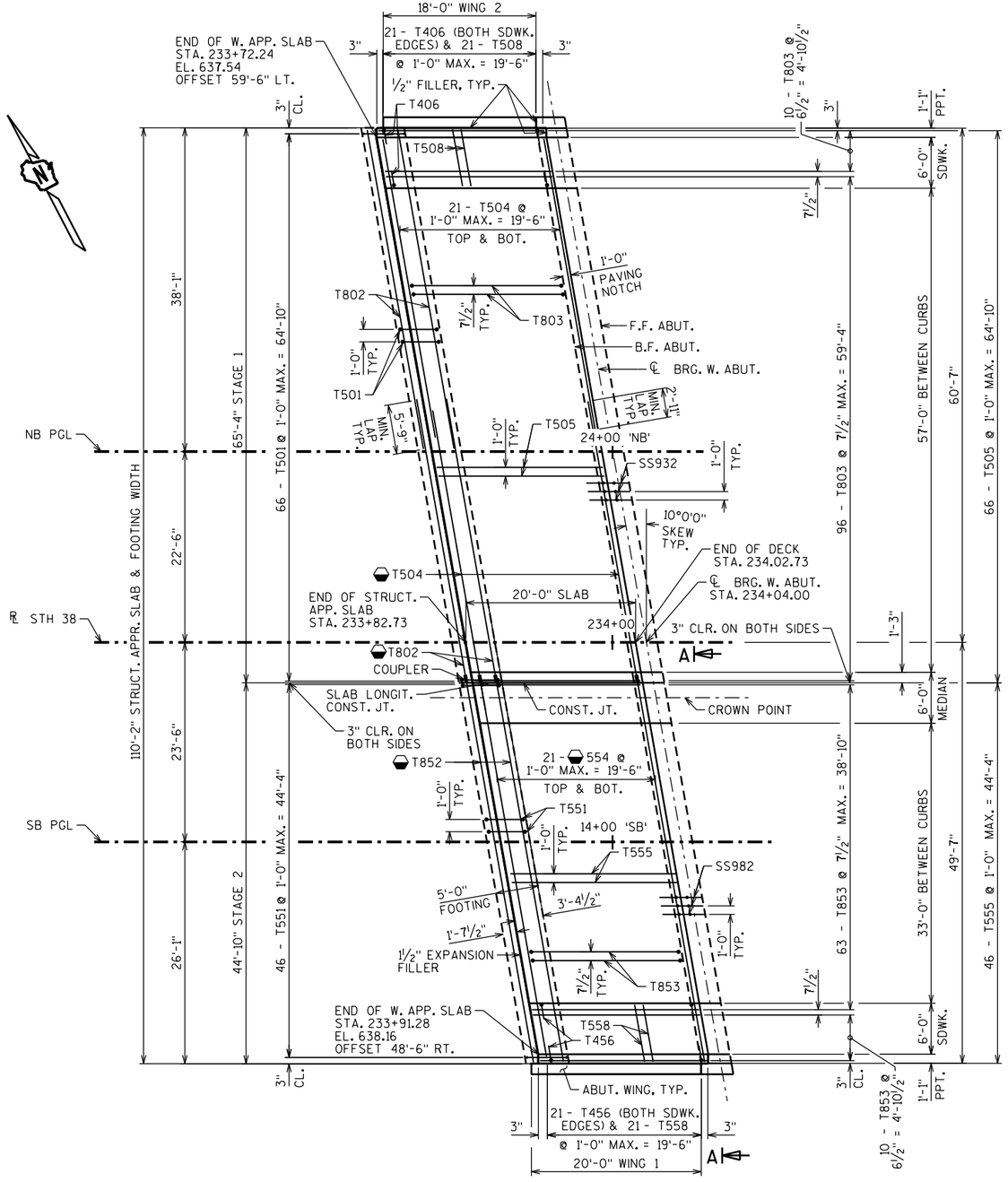
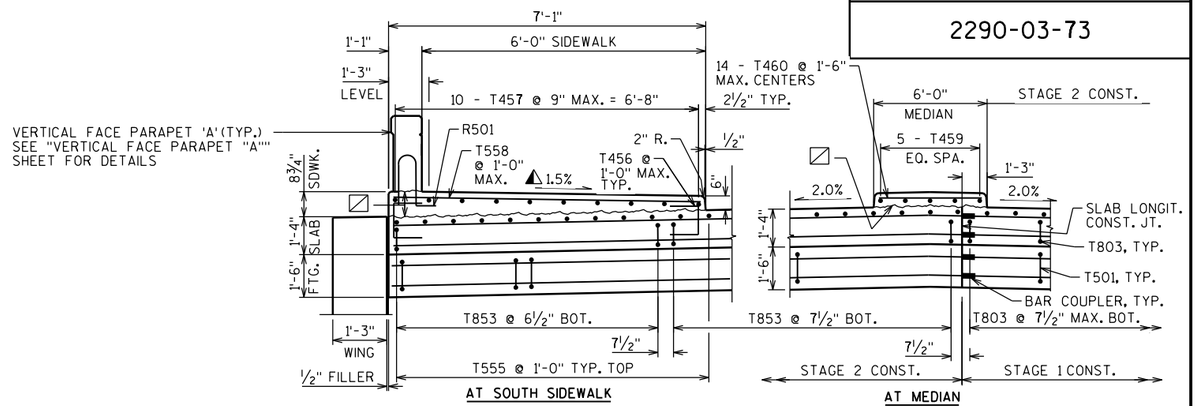
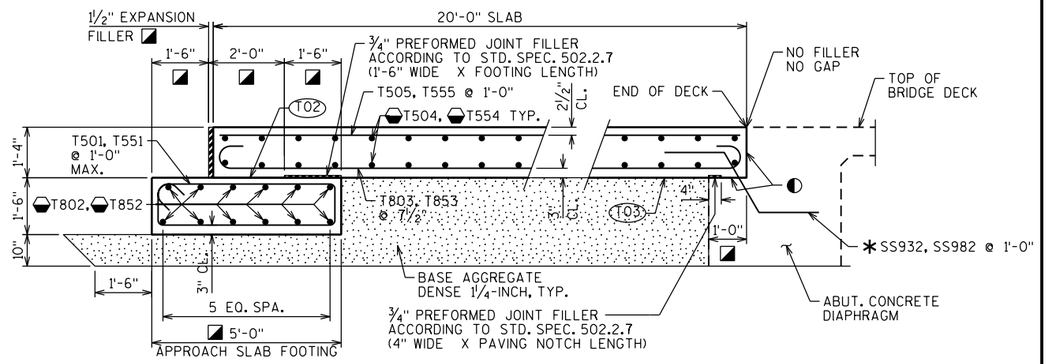
STATE PROJECT NUMBER
2290-03-73





SECTION A-A



SECTION THRU APPROACH SLAB

LEGEND

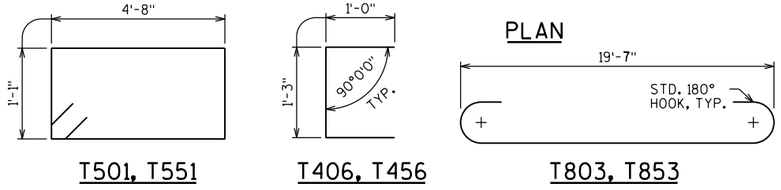
- ✱ INCLUDED IN SUPERSTRUCTURE BILL OF BARS
- ⊘ CONST. JOINT - STRIKE OFF AND LEAVE ROUGH AS SHOWN.
- (T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.
- (T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.
- ◐ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.
- ◪ MEASURED NORMAL TO ABUTMENT
- ◭ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⬭ BAR COUPLER REQ'D., BAR LENGTHS GIVEN ARE TO THE CONSTRUCTION JOINT LINE. COORDINATE ACTUAL LENGTHS W/ BAR COUPLER SUPPLIER, SEE SHEET 24 FOR DETAILS.

BILL OF BARS

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

MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
T501	X	66	12'-2"		x	STAGE 1 - FOOTING - STIRRUP
T802	X	24	35'-6"			STAGE 1 - FOOTING - TRANSV. - TOP & BOTTOM
T803	X	106	21'-5"		x	STAGE 1 - SLAB - LONGITUDINAL - BOTTOM
T504	X	84	34'-4"			STAGE 1 - SLAB - TRANSV. - TOP & BOTTOM
T505	X	66	19'-6"			STAGE 1 - SLAB - LONGITUDINAL - TOP
T406	X	42	3'-1"		x	STAGE 1 - SLAB/SDWK - VERT. - DOWEL
T407	X	10	19'-6"			STAGE 1 - SDWK. - LONGITUDINAL - TOP
T508	X	21	6'-7"			STAGE 1 - SDWK. - TRANSVERSE
T551	X	46	12'-2"		x	STAGE 2 - FOOTING - STIRRUP
T852	X	12	45'-0"			STAGE 2 - FOOTING - TRANSV. - TOP & BOTTOM
T853	X	73	21'-5"		x	STAGE 2 - SLAB - LONGITUDINAL - BOTTOM
T554	X	42	45'-2"			STAGE 2 - SLAB - TRANSV. - TOP & BOTTOM
T555	X	46	19'-6"			STAGE 2 - SLAB - LONGITUDINAL - TOP
T456	X	42	3'-1"		x	STAGE 2 - SLAB/SDWK - VERT. - DOWEL
T457	X	10	19'-6"			STAGE 2 - SDWK. - LONGITUDINAL - TOP
T558	X	21	6'-7"			STAGE 2 - SDWK. - TRANSVERSE
T459	X	5	19'-6"			STAGE 2 - MEDIAN - LONGITUDINAL
T460	X	14	5'-6"			STAGE 2 - MEDIAN - TRANSVERSE

PLAN



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY SRK | PLANS CK'D. KGW

WEST STRUCT. APP. SLAB

SHEET 21 OF 24
403

I.D.

DATE:

SCALE = 8.00

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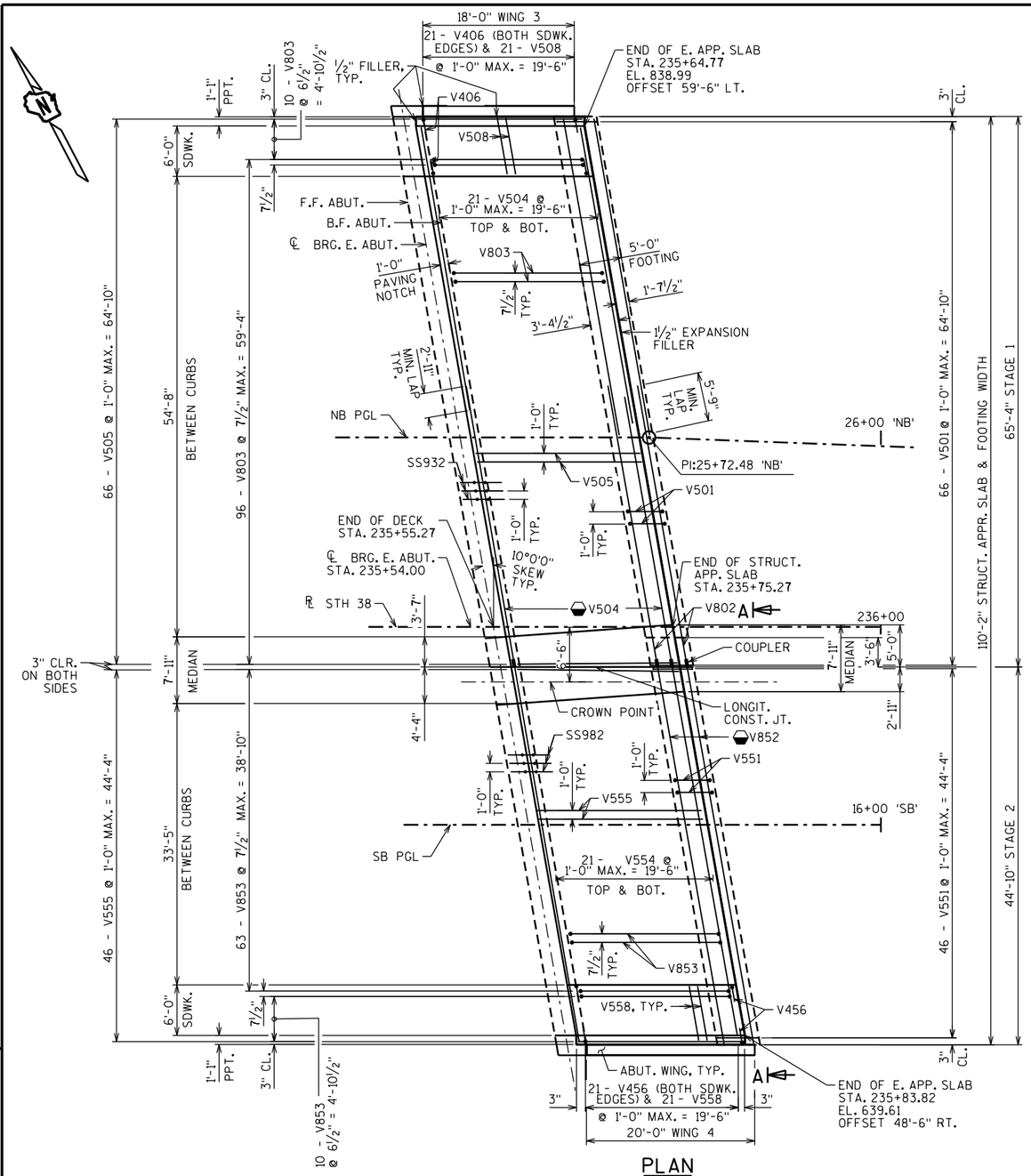
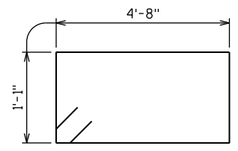
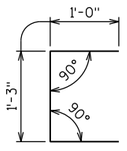
2290-03-73



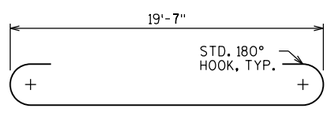
PLAN



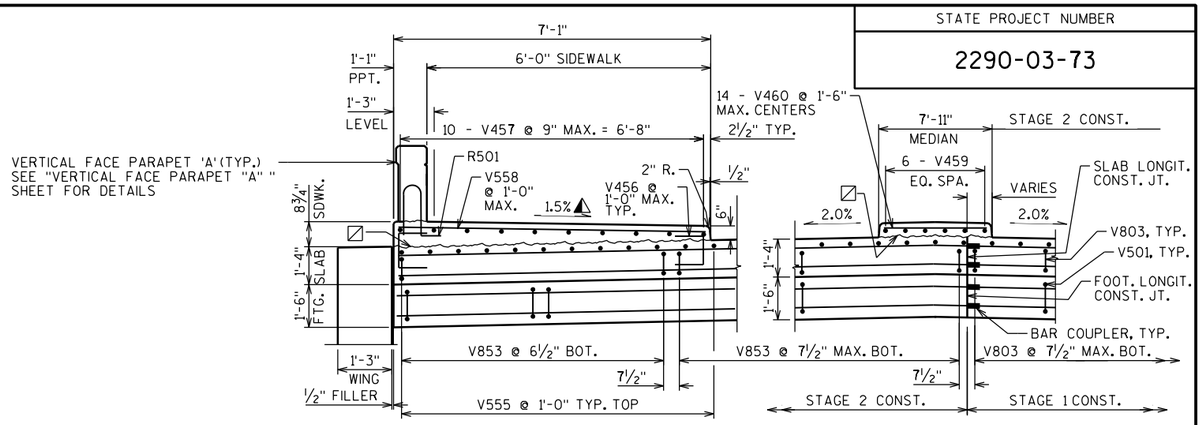
V501, V551



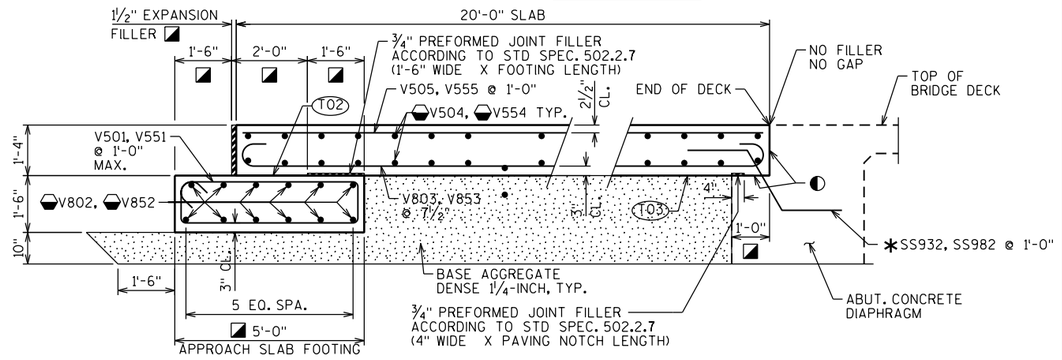
V406, V456



V803, V853



SECTION A-A



SECTION THRU APPROACH SLAB

LEGEND

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- ⬬ BAR COUPLER REQ'D., BAR LENGTHS GIVEN ARE TO THE CONSTRUCTION JOINT LINE. COORDINATE ACTUAL LENGTHS W/ BAR COUPLER SUPPLIER, SEE SHEET 24 FOR DETAILS.

BILL OF BARS

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V407	X	10	19'-6"			STAGE 1 - SDWK. - LONGITUDINAL - TOP
V508	X	21	6'-7"			STAGE 1 - SDWK. - TRANSVERSE
V551	X	46	12'-2"		x	STAGE 2 - FOOTING - STIRRUP
V852	X	12	45'-0"			STAGE 2 - FOOTING - TRANSV. - TOP & BOTTOM
V853	X	73	21'-5"		x	STAGE 2 - SLAB - LONGITUDINAL - BOTTOM
V554	X	42	45'-2"			STAGE 2 - SLAB - TRANSV. - TOP & BOTTOM
V555	X	46	19'-6"			STAGE 2 - SLAB - LONGITUDINAL - TOP
V456	X	42	3'-1"		x	STAGE 2 - SLAB/SDWK - VERT. - DOWEL
V457	X	10	19'-6"			STAGE 2 - SDWK. - LONGITUDINAL - TOP
V558	X	21	6'-7"			STAGE 2 - SDWK. - TRANSVERSE
V459	X	6	19'-6"			STAGE 2 - MEDIAN - LONGITUDINAL
V460	X	14	7'-7"			STAGE 2 - MEDIAN - TRANSVERSE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY SRK | PLANS CK'D. KGW

EAST STRUCT. APP. SLAB

SHEET 22 OF 24
404

I.D.

DATE:

SCALE = 8.00

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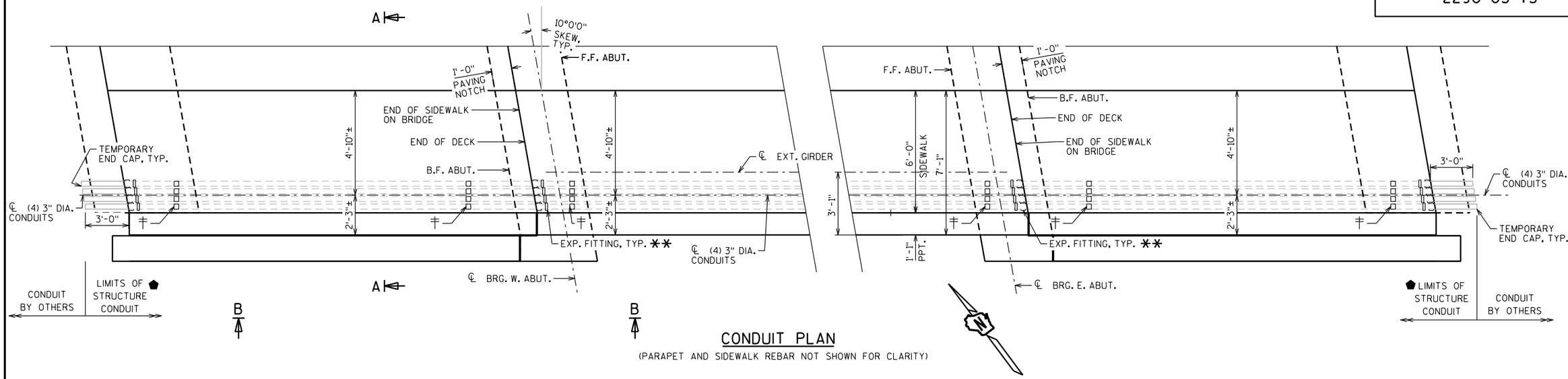
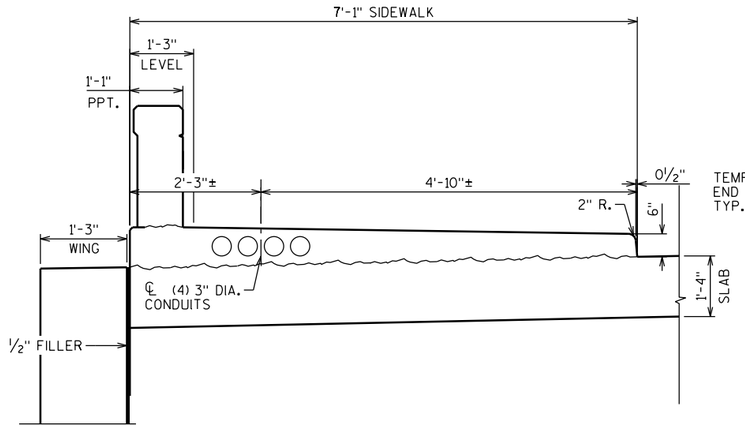
STATE PROJECT NUMBER

2290-03-73

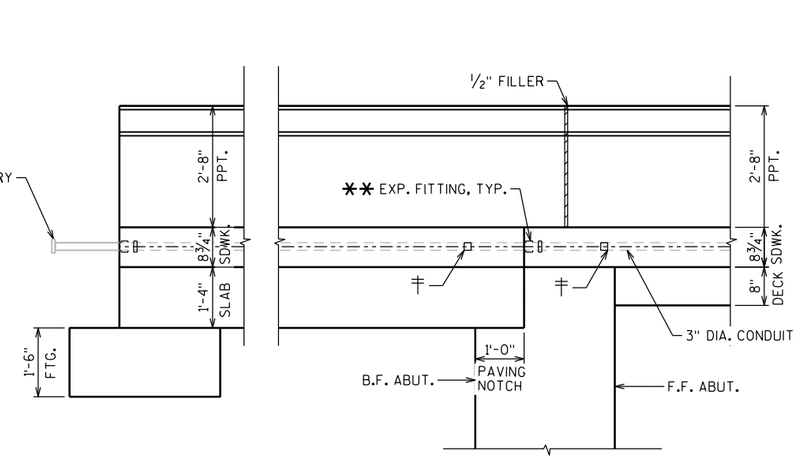


CONDUIT PLAN

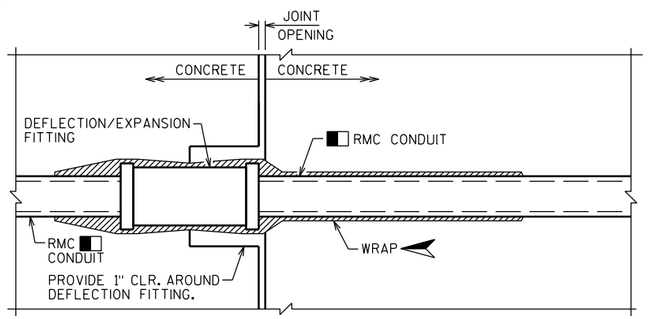
(PARAPET AND SIDEWALK REBAR NOT SHOWN FOR CLARITY)



SECTION A-A



SECTION B-B



DEFLECTION/EXPANSION FITTING

THIS DETAIL ACCOMMODATES A MAXIMUM OF ¾" TOTAL MOVEMENT AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION. BOND JUMPER NOT SHOWN FOR CLARITY (CONCRETE TO CONCRETE FITTING)

NOTES

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 3" DIA. RIGID NONMETALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE.

CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS INCIDENTAL TO CONDUIT WORK.

CONDUIT BENDS SHALL CONFORM TO THE NATIONAL ELECTRIC CODE.

LEGEND

- ■ USE 3" DIA. RIGID METALLIC (RMC) CONDUIT AT FITTINGS. PROVIDE RMC FOR 3'-0" MIN. ON EACH SIDE OF THE JOINT OPENINGS UNLESS NOTED OTHERWISE.
- ‡ NONMETALLIC CONDUIT TO METALLIC CONDUIT ADAPTER FITTING (UL OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED).
- ◥ SPONGE RUBBER WRAP TO BE AASHTO M153, TYPE 1 OR EQUIVALENT - ¼" MINIMUM THICKNESS. PROVIDE WRAP FOR THE ENTIRE LENGTH OF THE FITTING OR AS SHOWN. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 3-INCH".
- ** DEFLECTION/EXPANSION FITTING REQUIREMENTS (IF USED): UP TO ¾" CONDUIT CONTRACTION OR EXPANSION AND UP TO 30° OF ANGULAR MISALIGNMENT IN ANY DIRECTION WITH BONDING JUMPER
- ⬟ MATERIALS AND INSTALLATION BY BRIDGE CONTRACTOR. PAYMENT FOR CONDUIT BY OTHERS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY SRK | PLANS CK'D. KGW

CONDUIT DETAILS

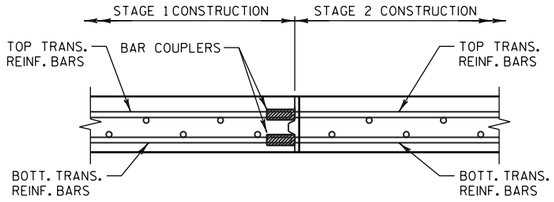
SHEET 23 OF 24
405

I.D.

DATE:

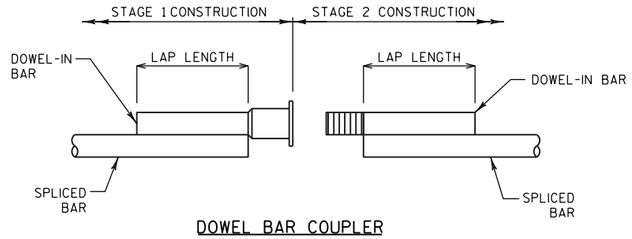
SCALE = 2.50

STATE PROJECT NUMBER
2290-03-73



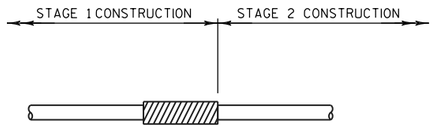
SECTION THRU DECK

ONE-PIECE THREADED BAR COUPLER SHOWN



DOWEL BAR COUPLER

STAGE 2 DOWEL SCREWS INTO COUPLER PLACED IN STAGE 1



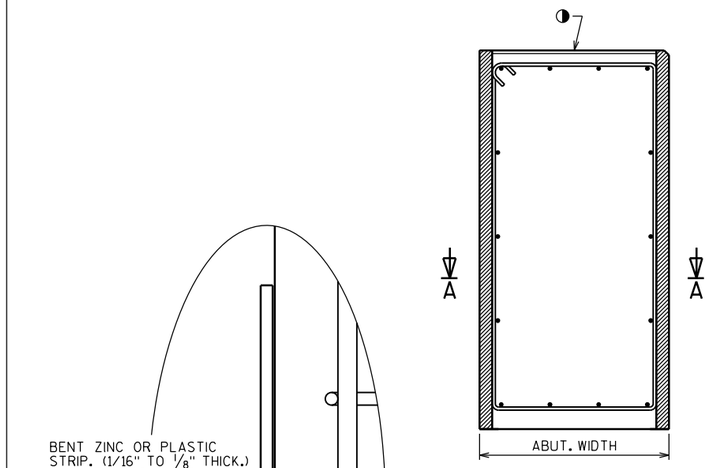
ONE PIECE THREADED SPLICER

BAR COUPLER ALTERNATIVES

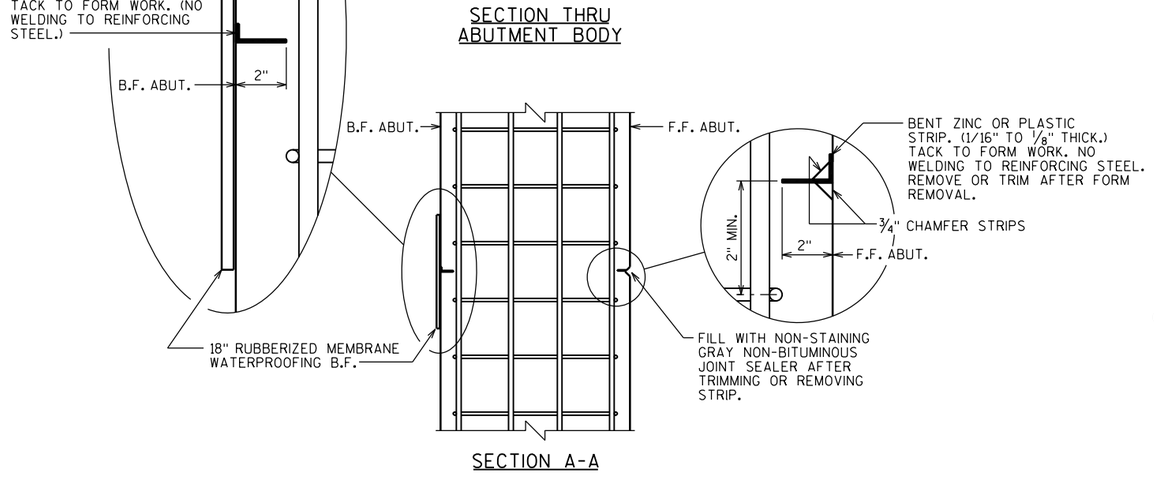
NOTES

FOR DOWEL BAR SPLICERS, ALL DOWEL BARS SHALL BE LAPPED AND TIED TO THE REINFORCEMENT BARS.

BAR LENGTH COMPUTED TO THE ℄ OF THE CONSTRUCTION JOINT AND SHALL BE MODIFIED PER BAR COUPLER MANUFACTURER'S RECOMMENDATIONS.



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED.

◑ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-51-157

DRAWN BY	SRK	PLANS CK'D.	KGW

ALTERNATE CONSTRUCTION JOINT & BAR COUPLERS

SHEET 24 OF 24

406

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DATE:

SCALE = 1.00

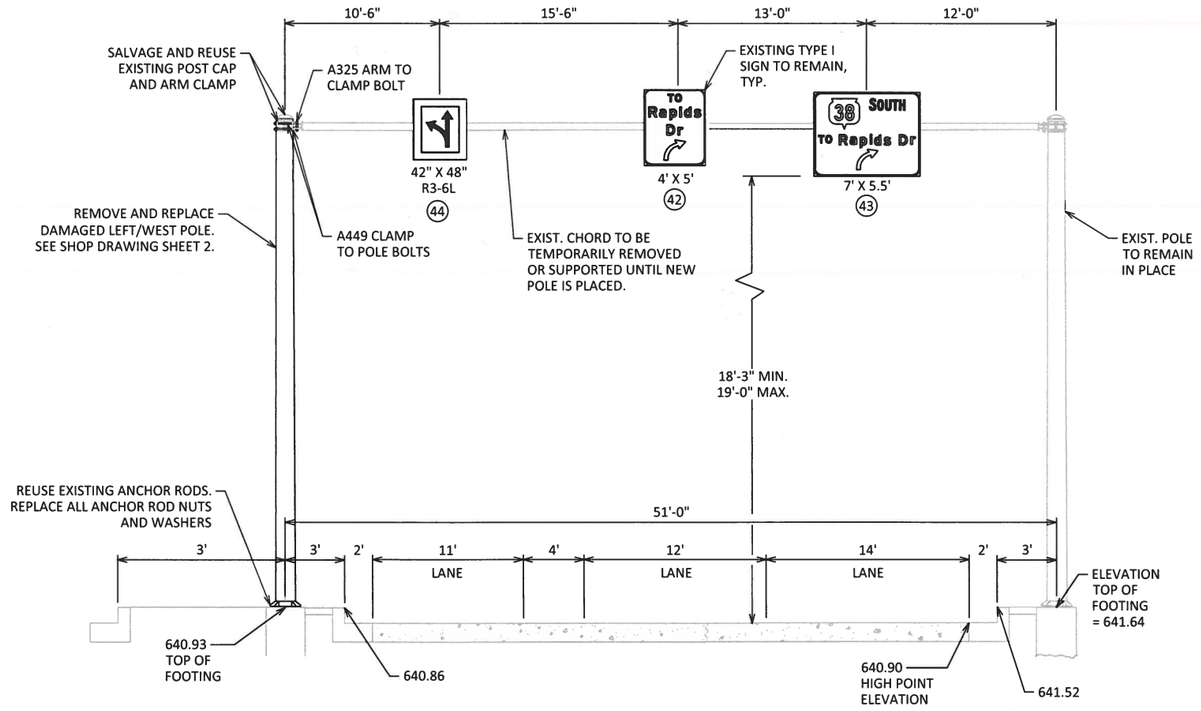
STATE PROJECT NUMBER

2290-03-73

LEGEND

(XX) INDICATES SIGN NUMBER

(X) INDICATES SIGN SIZE



ELEVATION

STA. 143+50
(LOOKING NORTH AT FRONT FACE OF SIGN)
CTH MM AT STH 38

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS AND ELEVATIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PER THE REQUIREMENTS IN THE SPECIAL PROVISIONS PRIOR TO FABRICATION OF THE STRUCTURE.

WELD TEST AS PER AWS D1.1

SIZE FOR REPLACEMENT COMPONET(S), INCLUDING TAPERED VERTICAL SUPPORT PLATE THICKNESS, SHALL BE NO LESS THAN THE EXISTING COMPONENT(S).

REUSE OF UNFASTENED/LOOSENED BOLTS, NUTS AND WASHERS AT THE POLE TO ARM CONNECTION IS NOT ALLOWED. SEE ELEVATION FOR REQUIRED REPLACEMENT BOLT MATERIAL. REPLACEMENT BOLTS, NUTS AND WASHERS TO MATCH DIAMETER OF THE EXISTING.

MATERIAL PROPERTIES:

STRUCTURAL PLATE:
ASTM A709 GRADE 36 — f_y = 36,000 PSI

TAPERED VERTICAL SUPPORT:
ASTM A595 GRADE A OR A572 GRADE 55 — f_y = 55,000 PSI

HIGH STRENGTH BOLTS:
A325 — f_y = 92,000 PSI
A449 — f_y = 92,000 PSI

HEAVY HEX NUTS FOR ANCHOR RODS - ASTM A563A

WASHERS FOR ANCHOR RODS - ASTM F436

LIST OF DRAWINGS:

1. ELEVATION & QUANTITIES
2. EXISTING SHOP DRAWING I
3. EXISTING SHOP DRAWING II

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	S-51-607
SPV.0060.05	REPLACE SIGN STRUCTURE POLE	EACH	1

ALL ITEMS ARE CATEGORY 0800

STRUCTURE DESIGN CONTACTS:
KEVIN WOOD (414) 266-9144
AARON BONK (608) 261-0261

WISCONSIN
KEVIN G. WOOD
E-32070
MILWAUKEE, WI
PROFESSIONAL ENGINEER
7-26-2022

NO.	DATE	REVISION	BY

GRÄEF
275 W. Wisconsin Avenue
Suite 300
Milwaukee, WI 53203
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORATION

ACCEPTED SDR 09/15/22
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE S-51-607

CTH MM SOUTH OF INTERSECTION STH 38

COUNTY	VILLAGE
RACINE	MOUNT PLEASANT

DESIGN SPEC.
N/A REHABILITATION

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
KGW	WAR	WAR	KGW

ELEVATION & QUANTITIES

SHEET 1 OF 3
407

SCALE =

I.D.

DATE:

8

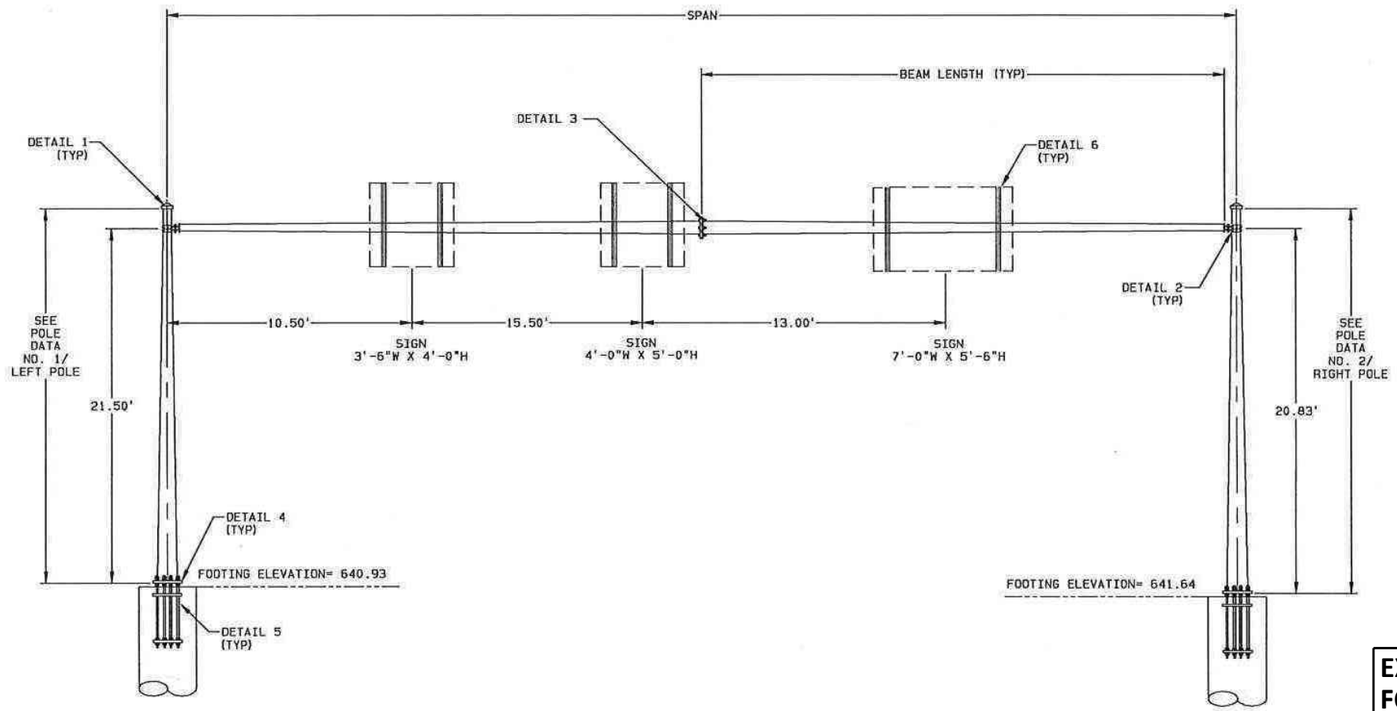
8

STATE PROJECT NUMBER

2290-03-73

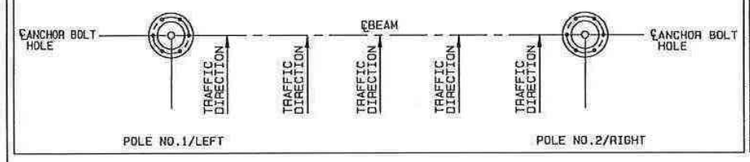
STRUCTURE SCHEDULE

QTY.	STATION NO.	SPAN	POLE NO. 1/LEFT POLE DATA				POLE NO. 2/RIGHT POLE DATA				BEAM DATA				BASEPLATE DATA				ANCHOR BOLT DATA				
			BASE DIA. (IN)	TOP DIA. (IN)	LENGTH (FT)	GAUGE OR THK. (IN)	BASE DIA. (IN)	TOP DIA. (IN)	LENGTH (FT)	GAUGE OR THK. (IN)	BASE DIA. (IN)	END DIA. (IN)	LENGTH (W/FLANGES)	GAUGE OR THK. (IN)	DIAMETER "DI" (IN)	BOLT CIRCLE "Y" (IN)	THK. "M" (IN)	BOLT HOLE "Z" (IN)	QTY.	DIA. "K" (IN)	LENGTH "J" (IN)	THREAD LENGTH "U" (IN)	THREAD LENGTH "H" (IN)
1	S-51-607	51.00'	12.00	8.85	22.50	7	12.00	8.94	21.83	7	11.00	7.57	24'-7.11"	7	20.00	16.00	1.25	1.50	6	1.25	48.00	10.00	5.50



EXISTING SHOP DRAWINGS, FOR REFERENCE ONLY

RADIAL INDEX



MATERIAL DATA

COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)	COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
TAPERED TUBES	A595 GR.A OR A572	55	ANCHOR BOLTS W/ SUPPLEMENTARY SPEC S4	F1554 GR.55	55
			CONNECTING BOLTS	AS NOTED*	
POLE BASE PLATE	A36	36	HARDWARE	F2329/A153	
ARM FLANGE PLATE	A36	36	HARDWARE LESS THAN 0.63" DIAMETER TO BE STAINLESS STEEL.		
ARM END PLATE & VANGS	A572 GR.65	65			

*LUBRICATE CONNECTING BOLTS IN THE FIELD IF NECESSARY.

SYSTEM: GALVANIZED (GV)
BASE COAT: HOT-DIP GALVANIZED TO ASTM A123
PRIME COAT: NONE
FINISH COAT: NONE
COLOR: NONE
SPEC: F-1

FINISH

JOB RACINE COUNTY, WISCONSIN
PROJECT NO. 2290-03-72
TITLE OVERHEAD SIGN STRUCTURES

VALMONT INDUSTRIES, INC. RESERVES THE RIGHT TO INSTALL VARIOUS, ENGINEER APPROVED, MATERIAL HANGING ACCOMMODATIONS TO FACILITATE THE MANUFACTURING PROCESS.

valmont
Valley, NE 68064
(402) 359-2201

ORDER NUMBER: 395861-P1
PAGE NUMBER: 6 OF 7
DRAWING NUMBER: WI395861P1
REV.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-51-607

DRAWN BY WAR | PLANS CK'D STS

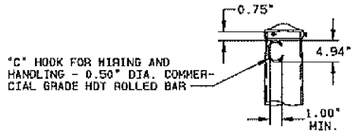
EXISTING SHOP DRAWING I

SHEET 2 OF 3
408

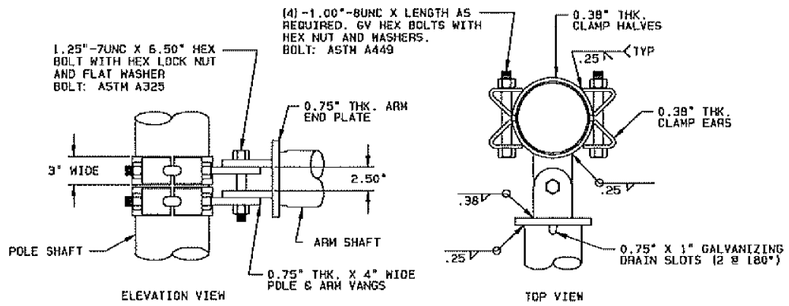
SCALE =

STATE PROJECT NUMBER

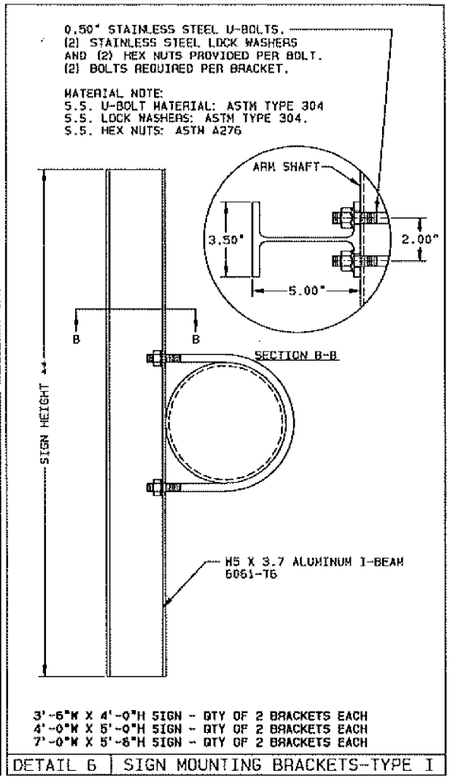
2290-03-73



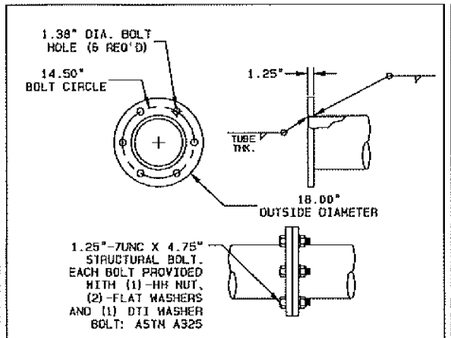
DETAIL 1 | POLE TOP



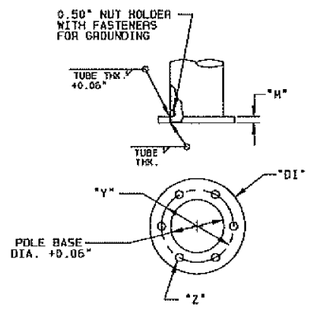
DETAIL 2 | MONOTUBE ARM CLAMP



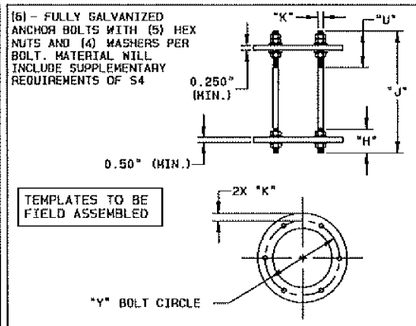
DETAIL 6 | SIGN MOUNTING BRACKETS-TYPE I



DETAIL 3 | FLANGE PLATE



DETAIL 4 | POLE BASE



DETAIL 5 | ANCHOR BOLT ASSEMBLY

EXISTING SHOP DRAWINGS, FOR REFERENCE ONLY

1. THE OVERHEAD SIGN STRUCTURES SHOWN ON THIS DRAWING HAVE BEEN DESIGNED IN ACCORDANCE WITH THE LOADING AND THE ALLOWABLE STRESS REQUIREMENTS OF THE 2013 AASHTO 'STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS', 6TH EDITION WITH 2015 INTERIM REVISIONS. THE WIND LOADS WERE CALCULATED FROM A BASIC WIND VELOCITY OF 90 MPH WITH A RECURRENCE INTERVAL OF 50 YEARS.

2. ALTHOUGH RARE, VIBRATIONS SEVERE ENOUGH TO CAUSE DAMAGE CAN OCCASIONALLY OCCUR IN STRUCTURES OF ALL TYPES. BECAUSE THEY ARE INFLUENCED BY MANY INTERACTING VARIABLES, VIBRATIONS ARE GENERALLY UNPREDICTABLE. THE USER'S MAINTENANCE PROGRAM SHOULD INCLUDE OBSERVATION FOR EXCESSIVE VIBRATION AND EXAMINATION FOR ANY STRUCTURAL DAMAGE OR BOLT LOOSENING. THE VALMONT WARRANTY SPECIFICALLY EXCLUDES FATIGUE FAILURE OR SIMILAR PHENOMENA RESULTING FROM INDUCED VIBRATION, HARMONIC OSCILLATION OR RESONANCE ASSOCIATED WITH MOVEMENT OF AIR CURRENTS AROUND THE PRODUCT.

DETAILS FOR
OVERHEAD SIGN SUPPORT
S-51-607

JOB RACINE COUNTY, WISCONSIN
PROJECT NO. 2290-03-72
TITLE OVERHEAD SIGN STRUCTURES

VALMONT INDUSTRIES, INC. RESERVES THE RIGHT TO INSTALL VARIOUS, ENGINEER APPROVED, MATERIAL HANGING ACCOMMODATIONS TO FACILITATE THE MANUFACTURING PROCESS.

valmont
Valley, NE 68064
(402) 359-2201

ORDER NUMBER: 395861-P1
PAGE NUMBER: 7 OF 7
DRAWING NUMBER: WI395861P1
REV:

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-51-607

DRAWN BY WAR | PLANS CK'D STS

EXISTING SHOP DRAWING II

SHEET 3 OF 3
409

SCALE =

DESIGN DATA

CONTRACTOR DESIGNED OVERHEAD SIGN STRUCTURES SHALL BE DESIGNED ACCORDING TO THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 1ST EDITION AND INTERIM SPECIFICATIONS, AND THE WISDOT BRIDGE MANUAL.

STANDARD FOUNDATIONs DESIGNED ACCORDING TO THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION.

DEAD LOAD: WT. OF SIGN AND SUPPORTING STRUCTURE
ICE LOAD: 3 PSF TO ONE FACE OF SIGN & SURFACE OF MEMBERS
WIND PRESSURE: 115 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS (700 YEAR MEAN RECURRENCE INTERVAL)

WIND COMPONENTS	NORMAL	TRANSVERSE
LOAD CASE 1:	1.00	0.00
LOAD CASE 2:	0.00	1.00
LOAD CASE 3:	0.75	0.75

LOAD COMBINATIONS	
STRENGTH:	1.25 DC + 1.0 LL
EXTREME I (MAX DC):	1.1 DC + 1.0 W + 1.0 ICE
EXTREME I (MIN DC):	0.9 DC + 1.0 W
SERVICE I:	1.0 DC + 1.0 W
FATIGUE:	1.0 NW (NATURAL WIND GUST)
	1.0 TrG (TRUCK INDUCED GUST)
	1.0 GVW (GALLOPING - CANTILEVER ONLY)

MATERIAL PROPERTIES

CONCRETE MASONRY ——— f'_c = 3,500 PSI

HIGH STRENGTH STEEL REINFORCEMENT, GRADE 60 ——— f_y = 60,000 PSI

STRUCTURAL ANGLES, PLATES & BARS - ASTM A709 GRADE 36 ——— f_y = 36,000 PSI

HIGH STRENGTH BOLTS - ASTM A3125 GRADE A325 ——— f_y = 92,000 PSI

ANCHOR RODS - ASTM F1554 GRADE 55 ——— f_y = 55,000 PSI

HEAVY HEX NUTS - ASTM A563 GRADE DH OR ASTM A194 GRADE 2H

WASHERS - ASTM F436

DIRECT TENSION INDICATING WASHER (DTI) - ASTM F959 TYPE 325

FOUNDATION DATA

SIGN STRUCTURE FOUNDATIONS S-51-262 & S-51-263 ARE SUPPORTED ON DRILLED SHAFTS THAT HAVE BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 24° (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 750 PSF (COHESIVE SOILS) AND A UNIT WEIGHT OF 125 PCF. THE GROUND WATER TABLE FOR DESIGN IS ASSUMED TO BE AT A DEPTH OF 10'-0" BELOW THE GROUND SURFACE, ACTUAL WATER LEVEL AT SITE MAY VARY. THE REGION GEOTECHNICAL ENGINEER SHALL VISUALLY INSPECT THE SUBSURFACE SOILS DURING THE DRILLING OF THE SHAFT HOLE TO CONFIRM THESE PROPERTIES PRIOR TO PLACEMENT OF THE DRILLED SHAFT CONCRETE.

SEE SHEETS 6 & 7 FOR NON-STANDARD DRILLED SHAFTS SUPPORTING SIGN STRUCTURES S-51-615 & S-51-616. GEOTECHNICAL INVESTIGATION REPORT AVAILABLE UPON REQUEST, AND SUBSURFACE EXPLORATION BORING DATA IS SHOWN ON SHEET 8. S-51-615 FOUNDATION WAS DESIGNED PER SOIL BORING "S-2" AND S-51-616 PER BORING "S-1". BEDROCK IS ASSUMED TO BE LOCATED AT (AND BELOW) THE APPROX. ELEVATION SHOWN ON EACH FOUNDATION DETAIL SHEET. CORE/DRILL A MINIMUM OF 2'-0" INTO COMPETENT BEDROCK, OR TO A DEPTH TO ACHIEVE THE LENGTH OF SHAFT SHOWN. MODIFY LENGTH OF VERTICAL REINFORCEMENT TO MEET CLEAR REQUIREMENTS, AND MAINTAIN HOOP SPACING SHOWN. CONTACT A REGIONAL SOILS ENGINEER TO DETERMINE COMPETENT ROCK PRIOR TO MODIFYING DEPTH OF DRILLED SHAFT. CONTACT THE BUREAU OF STRUCTURES FOR FOUNDATION MODIFICATION IF BEDROCK IS DISCOVERED AT A HIGHER ELEVATION.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), RACINE COUNTY ZONE, NAD 83 (2011). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2012).

ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE ID PLAQUES SHALL BE CONSIDERED INCIDENTAL TO THE TRUSS OR MONOTUBE BID ITEMS FOR EACH APPLICABLE SIGN STRUCTURE IN THE PLAN SET. LOCATE THE ID PLAQUE ON THE FREEWAY SIDE OF THE SUPPORT COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY. FABRICATE AND INSTALL THE ID PLAQUE IN ACCORDANCE WITH S.D.D. 12 A4-3.

UNLESS DETAILED OTHERWISE IN THE PLANS, ALL H.S. BOLTED CONNECTIONS SHALL BE MADE WITH ¾" DIA. A325 GALVANIZED BOLTS. FIELD CONNECTIONS SHALL BE INSTALLED WITH DTI WASHERS.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF A TRUSS UNIT CAN BE GALVANIZED IN ONE PIECE.

WELD TEST AS PER AWS D1.1.

SEE SIGN PLATE NO. A4-6, A4-7A & A4-7B OF THE SIGN PLATE MANUAL FOR INSTRUCTIONS ON CENTERING SIGNS VERTICALLY ON THE TRUSS.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT TIME OF ERECTION. BLANKS SHALL BE ¼ THE LENGTH OF THE CANTILEVER SPAN, 2'-0" DEEPER THAN THE C/L TO C/L OF CHORDS, AND SHALL BE CENTERED ON THE BRIDGE. SIGNS SHALL BE AS DESIGNATED ON THE PLANS.

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PER THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS PRIOR TO FABRICATION OF THE STRUCTURE. CONTRACTOR SHALL SHOW SIGNS ON THE SHOP DRAWINGS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DRILLING OR EXCAVATING AND MAINTAINING A STABLE AND OPEN HOLE FOR SUBSEQUENT INSTALLATION OF CONCRETE MASONRY FOR THE DRILLED SHAFTS. PARTIAL OR FULL DEPTH TEMPORARY CASING MAY BE REQUIRED TO MAINTAIN THE STABILITY OF THE EXCAVATED HOLE FOR THE SIGN SUPPORT PRIOR TO FILLING THE HOLE WITH CONCRETE. PERMANENT CASING MADE FROM STEEL OR CORRUGATED METAL PIPE MAY BE USED IN LIEU OF TEMPORARY CASING. TEMPORARY/PERMANENT CASING, IF USED, SHALL BE INCIDENTAL TO THE BID ITEM "DRILLING SHAFT (DIA.)".

STRUCTURE DATA

STRUCTURE ID	SIGN AREA	SIGN DEPTH	STANDARD TYPE
S-51-262	93.5 SF	6'-6"	TF-I
S-51-263	58 SF	6'-0"	TF-I
S-51-615	65 SF	6'-0"	NON-STD.
S-51-616	45 SF	6'-0"	NON-STD.

LIST OF DRAWINGS:

1. GENERAL NOTES & DESIGN DATA
2. GENERAL LAYOUT S-51-262
3. GENERAL LAYOUT S-51-263
4. GENERAL LAYOUT S-51-615
5. GENERAL LAYOUT S-51-616
6. 2-CHORD FULL SPAN FOUNDATION DETAILS S-51-615
7. 2-CHORD CANT. FOUNDATION DETAILS S-51-616
8. SUBSURFACE EXPLORATION

LIST OF STANDARD DESIGN DRAWINGS

9. I. MONOTUBE & 2-CHORD TRUSS DETAILS 1
10. II. MONOTUBE & 2-CHORD TRUSS DETAILS 2
11. III. MONOTUBE & 2-CHORD TRUSS ELECTRICAL DETAILS
12. IV. MONOTUBE & 2-CHORD TRUSS FOUNDATIONS

STATE PROJECT NUMBER

2290-03-73

TRAFFIC VOLUME

A.D.T. (2042) = 34,700
R.D.S. = 40 MPH

TOTAL ESTIMATED QUANTITES

BID ITEM NO.	BID ITEM	UNIT	S-51-262	S-51-263	S-51-615	S-51-616	TOTALS
204.0246	REMOVING ANCILLARY STRUCTURE (S-51-009)	EACH	---	---	1	---	1
204.0246	REMOVING ANCILLARY STRUCTURE (S-51-010)	EACH	---	---	---	1	1
204.0246	REMOVING ANCILLARY STRUCTURE (S-51-245)	EACH	---	1	---	---	1
204.0246	REMOVING ANCILLARY STRUCTURE (S-51-246)	EACH	1	---	---	---	1
531.1100	CONCRETE MASONRY ANCILLARY STRUCTURES TYPE NS	CY	---	---	7.3	6.1	13
531.1140	STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS	LB	---	---	1,200	920	2,120
531.2030	DRILLING SHAFT 30-INCH	LF	34	34	---	---	68
531.2036	DRILLING SHAFT 36-INCH	LF	---	---	28	---	28
531.2048	DRILLING SHAFT 48-INCH	LF	---	---	---	13	13
531.5410	FOUNDATION SINGLE-SHAFT TYPE TF-I (S-51-262)	EA	2	---	---	---	2
531.5410	FOUNDATION SINGLE-SHAFT TYPE TF-I (S-51-263)	EA	---	2	---	---	2
532.5330	TRUSS CANTILEVER 2-CHORD TYPE III (S-51-616)	EA	---	---	---	1	1
532.5410	TRUSS FULL SPAN 2-CHORD TYPE I (S-51-262)	EA	1	---	---	---	1
532.5410	TRUSS FULL SPAN 2-CHORD TYPE I (S-51-263)	EA	---	1	---	---	1
532.5410	TRUSS FULL SPAN 2-CHORD TYPE I (S-51-615)	EA	---	---	1	---	1

STRUCTURE DESIGN CONTACTS:
ISATOU CEESAY 608-266-9557
LAURA SHADEWALD 608-267-9592

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED LLS 10/11/22
CHIEF STRUCTURES DESIGN ENGINEER DATE

MONOTUBE & 2-CHORD PLANS

STH 38 - RAPIDS DR.

COUNTY	CITY
RACINE	RACINE

DESIGN SPEC.
AASHTO LRFDLTS-1 W/INTERIMS

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
IFC	ARC	IFC	ARC

GENERAL NOTES & DESIGN DATA

SHEET 1 OF 12
410

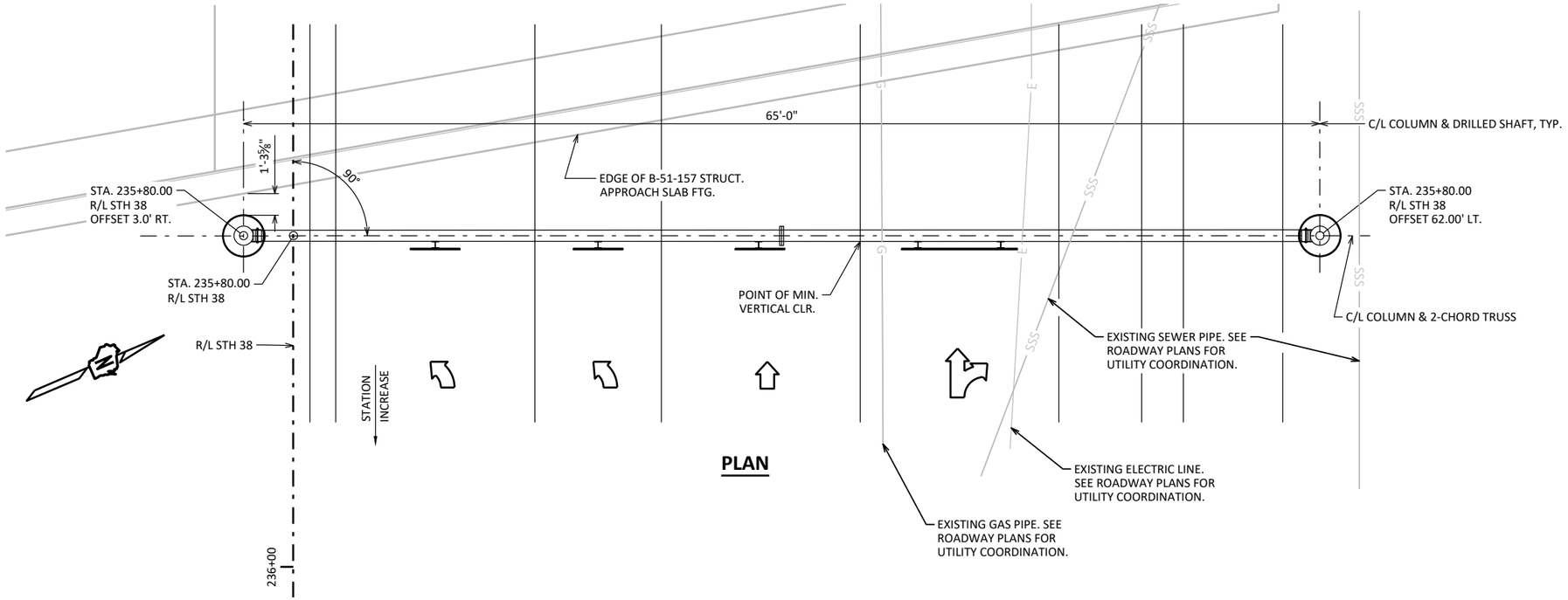
SCALE = 1.00

I.D. 2290-03-03B,C,D,E DATE: AUG. 2022

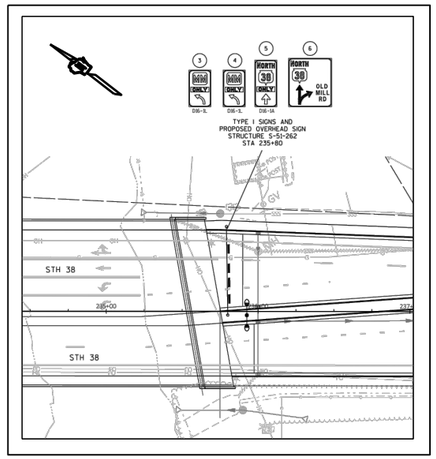
8

STATE PROJECT NUMBER

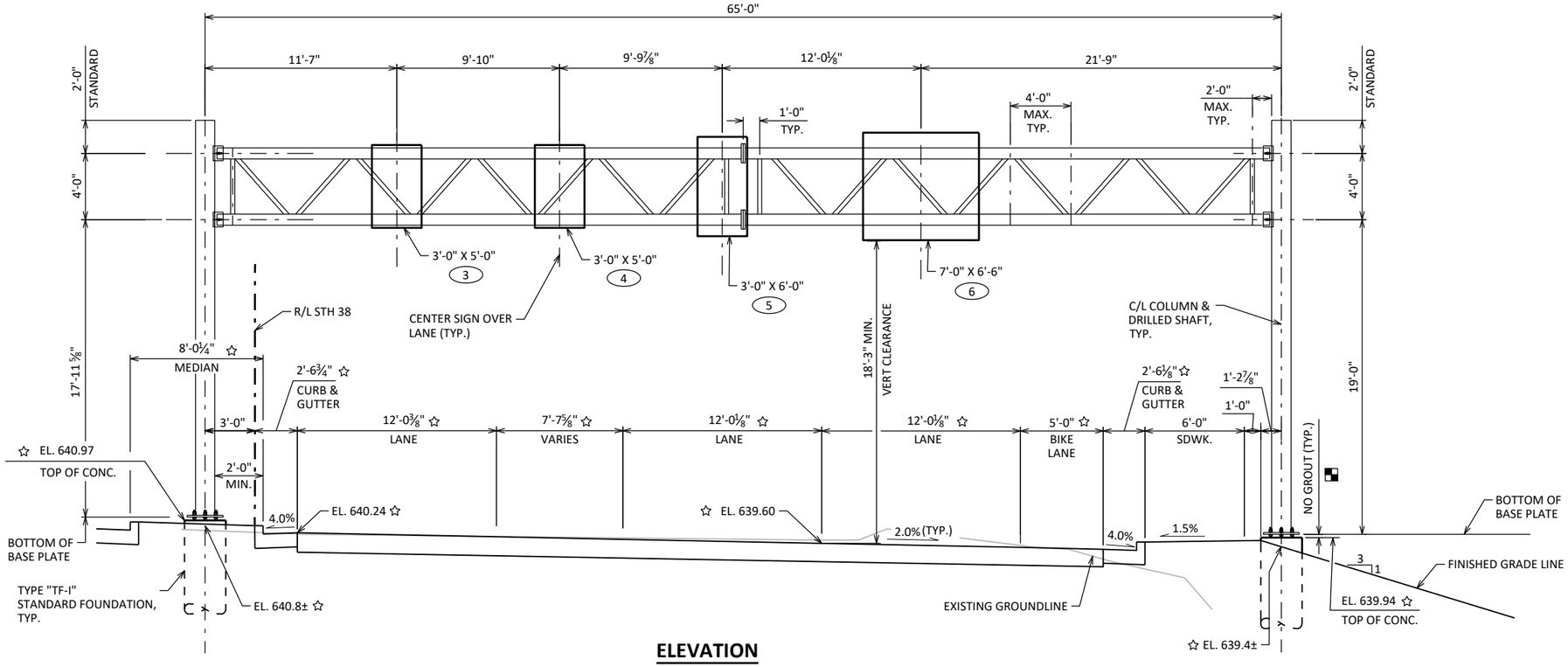
2290-03-73



PLAN



LOCATION MAP



ELEVATION

STA 235+80 STH 38 WB, WEST OF RAPIDS DR.
(LOOKING DOWNSTATION AT FRONT OF SIGN)

NOTE

POINT OF MIN. VERTICAL CLEARANCE
STA. 235+80.00, 34.24' (LEFT)
EL. 639.60

EXISTING SIGN BRIDGE, S-51-246, A 43'-0" FULL-SPAN MONOTUBE SUPPORTED BY DRILLED SHAFTS, IS LOCATED AT STA.236+55.00 TO BE REMOVED. PAID FOR UNDER BID ITEM "REMOVING ANCILLARY STRUCTURE S-51-246."

LEGEND

- ☆ ELEVATIONS & DIMENSIONS GIVEN ALONG C/L 2-CHORD TRUSS
- (XX) SIGN NUMBERS (PERMANENT SIGNING PLAN)
- ▪ STANDOFF DIMENSION IS ASSUMED TO BE 2½", BUT IS A MAXIMUM OF 2 X ANCHOR ROD DIAMETER. SEE FOUNDATION DETAILS SHEET AND SHOP DRAWINGS FOR MORE INFORMATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-51-262

DRAWN BY IFC | PLANS CK'D ARC

GENERAL LAYOUT
S-51-262

SHEET 2
411

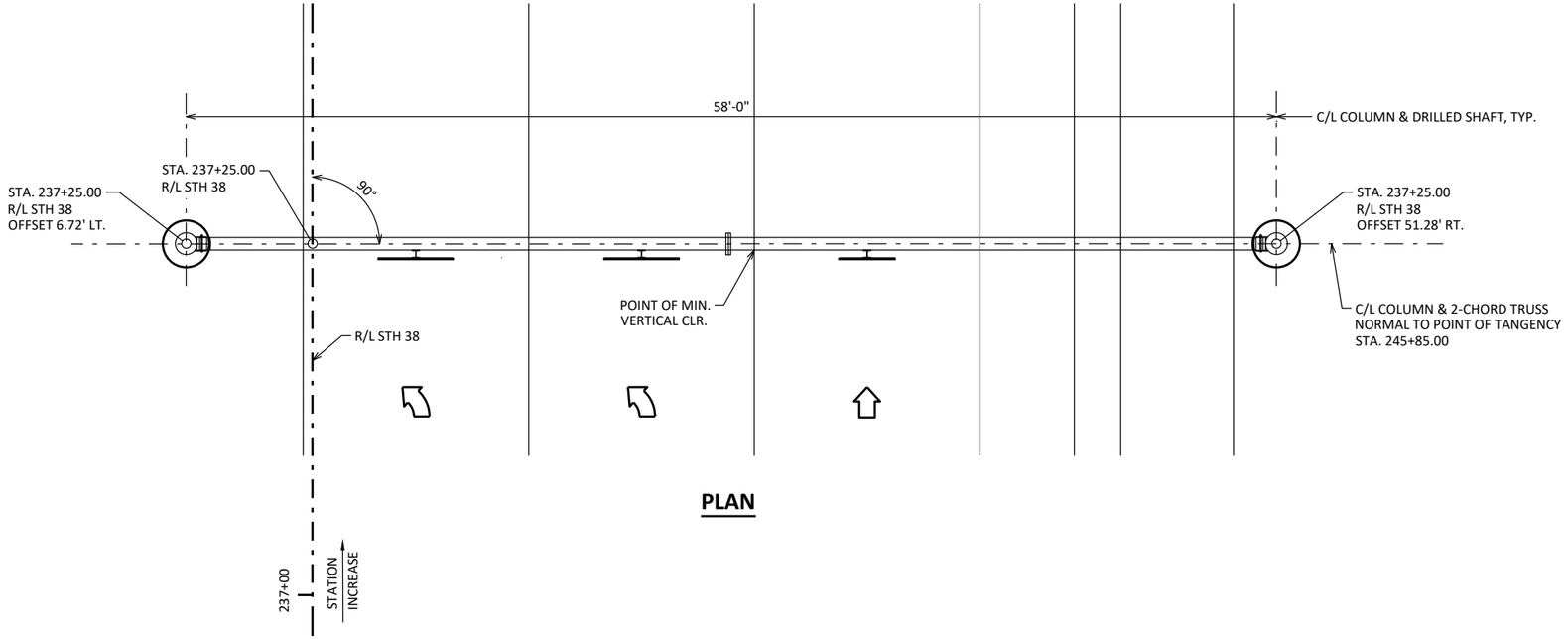
SCALE = 8.00

8

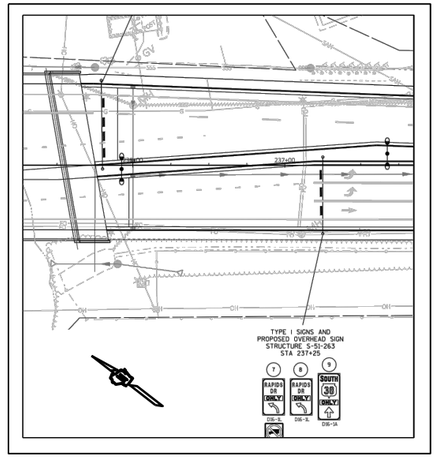
8

STATE PROJECT NUMBER

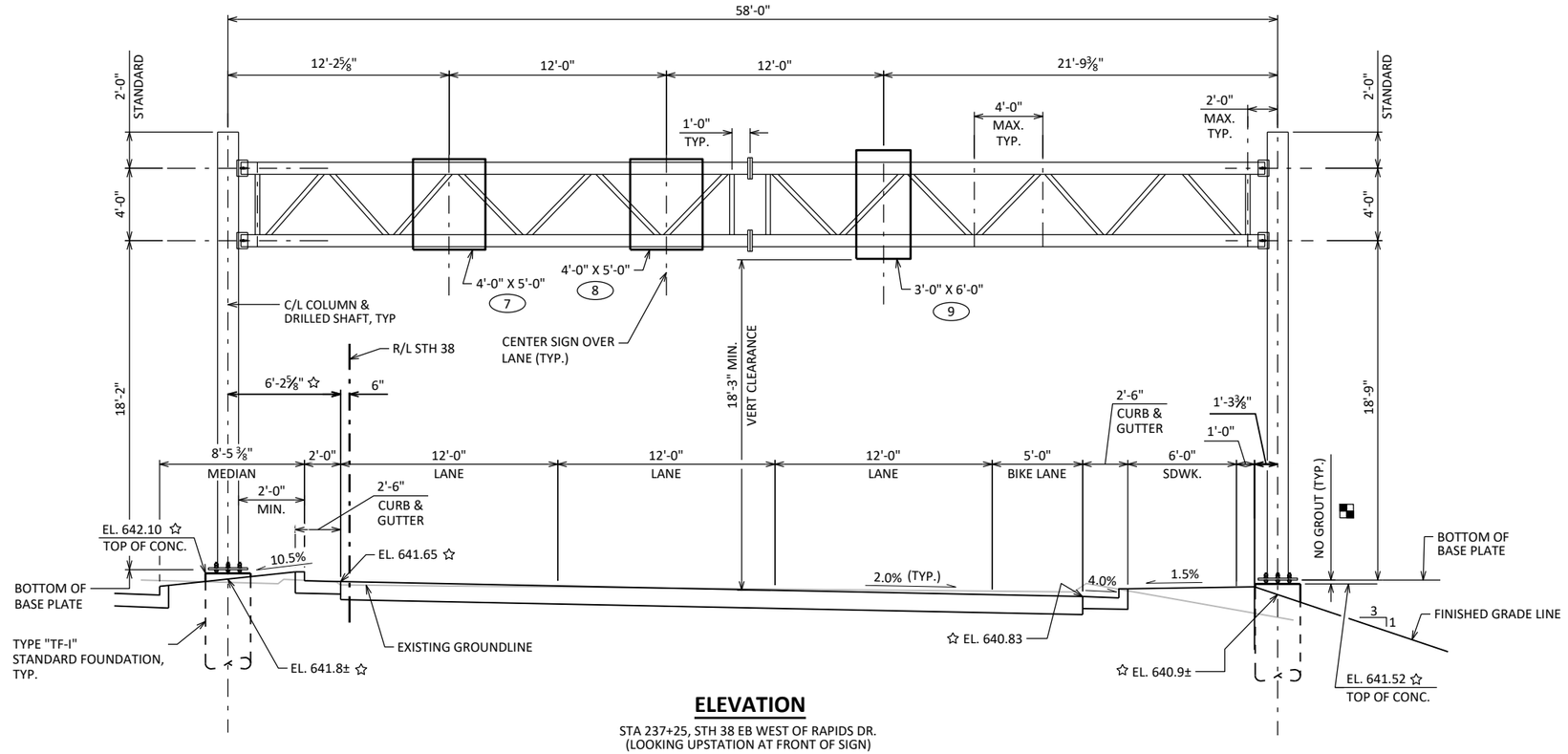
2290-03-73



PLAN



LOCATION MAP



ELEVATION

STA 237+25, STH 38 EB WEST OF RAPIDS DR.
(LOOKING UPSTATION AT FRONT OF SIGN)

NOTE

POINT OF MIN. VERTICAL CLEARANCE
STA 237+25.00, 23.50' (RIGHT)
EL. 641.17

EXISTING SIGN BRIDGE, S-51-245, A 40'-0" FULL-SPAN MONOTUBE SUPPORTED BY DRILLED SHAFTS, IS LOCATED AT STA.236+65.00 TO BE REMOVED. PAID FOR UNDER BID ITEM "REMOVING ANCILLARY STRUCTURE S-51-245."

LEGEND

☆ ELEVATIONS & DIMENSIONS GIVEN ALONG C/L 2-CHORD TRUSS

(XX) SIGN NUMBERS (PERMANENT SIGNING PLAN)

STANDOFF DIMENSION IS ASSUMED TO BE 2 ½", BUT IS A MAXIMUM OF 2 X ANCHOR ROD DIAMETER. SEE FOUNDATION DETAILS SHEET AND SHOP DRAWINGS FOR MORE INFORMATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-51-263

DRAWN BY IFC | PLANS CK'D ARC

GENERAL LAYOUT S-51-263

SHEET 3
412

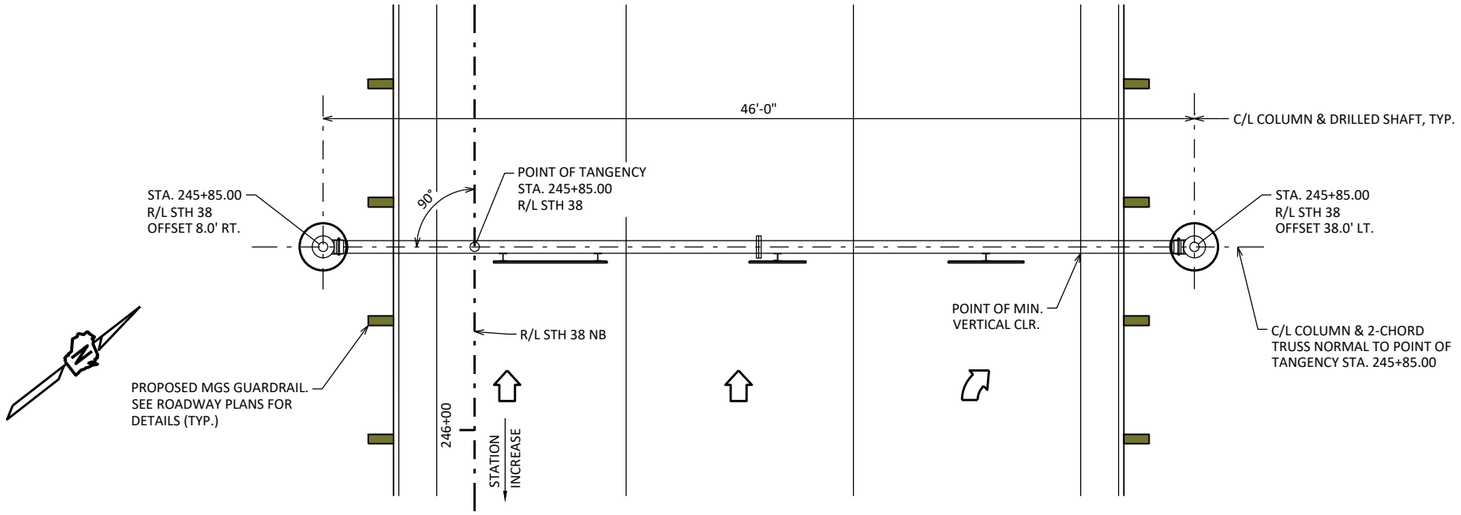
SCALE = 8.00

8

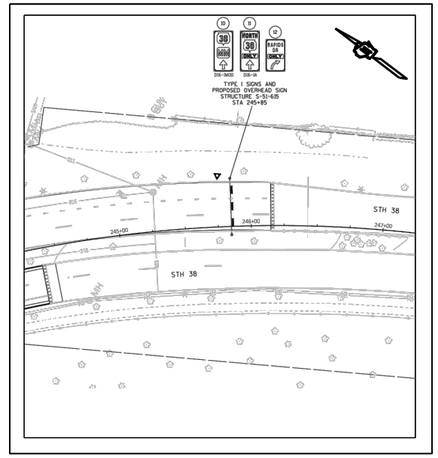
8

STATE PROJECT NUMBER

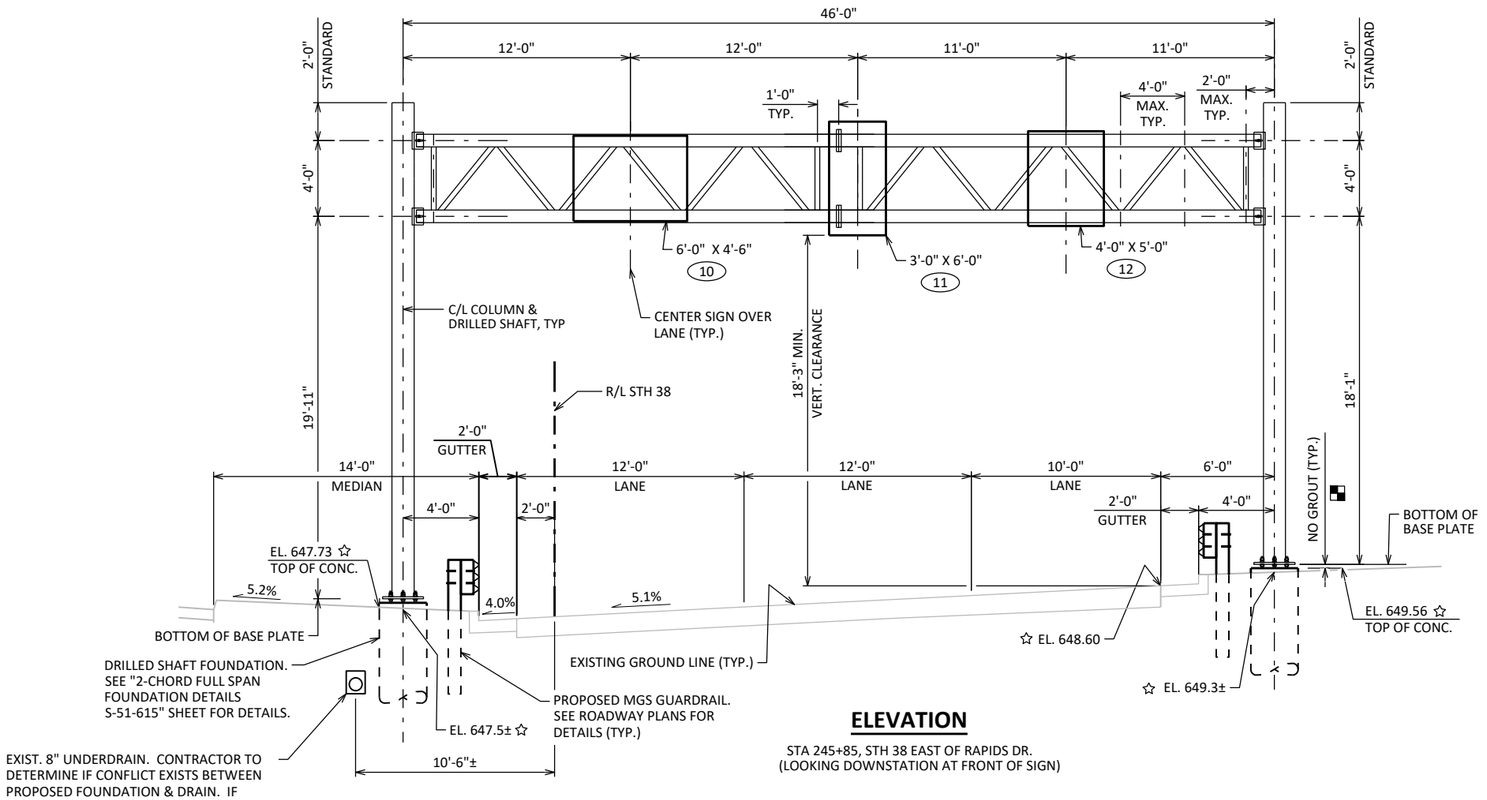
2290-03-73



PLAN



LOCATION MAP



ELEVATION

STA 245+85, STH 38 EAST OF RAPIDS DR.
(LOOKING DOWNSTATION AT FRONT OF SIGN)

NOTE

POINT OF MIN. VERTICAL CLEARANCE
STA 245+85.00, 32.0' (LEFT)
EL. 648.60

EXISTING SIGN BRIDGE, S-51-009, A 47'-0" FULL-SPAN MONOTUBE SUPPORTED BY DRILLED SHAFTS, IS LOCATED AT STA.246+42.00 TO BE REMOVED. PAID FOR UNDER BID ITEM "REMOVING ANCILLARY STRUCTURE S-51-009."

LEGEND

☆ ELEVATIONS GIVEN ALONG C/L 2-CHORD TRUSS

(XX) SIGN NUMBERS (PERMANENT SIGNING PLAN)

■ STANDOFF DIMENSION IS ASSUMED TO BE 2 ¾", BUT IS A MAXIMUM OF 2 X ANCHOR ROD DIAMETER. SEE FOUNDATION DETAILS SHEET AND SHOP DRAWINGS FOR MORE INFORMATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-51-615

DRAWN BY IFC | PLANS CK'D ARC

GENERAL LAYOUT
S-51-615

SHEET 4
413

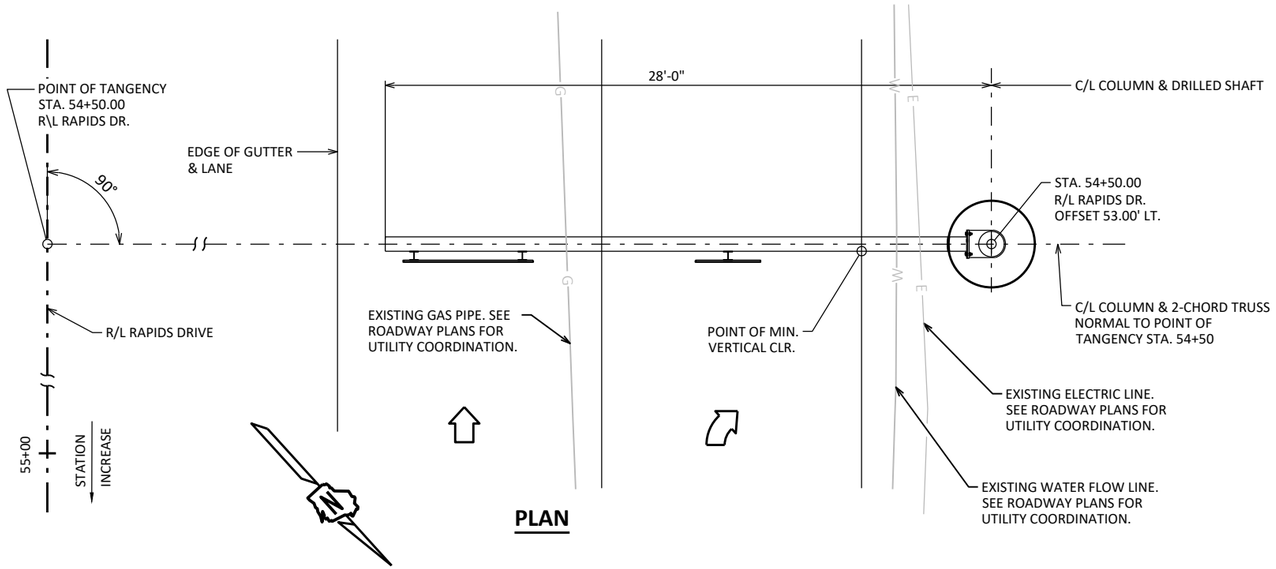
SCALE = 8.00

8

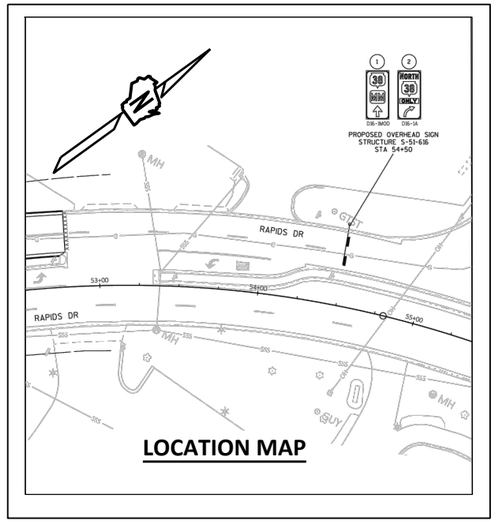
8

STATE PROJECT NUMBER

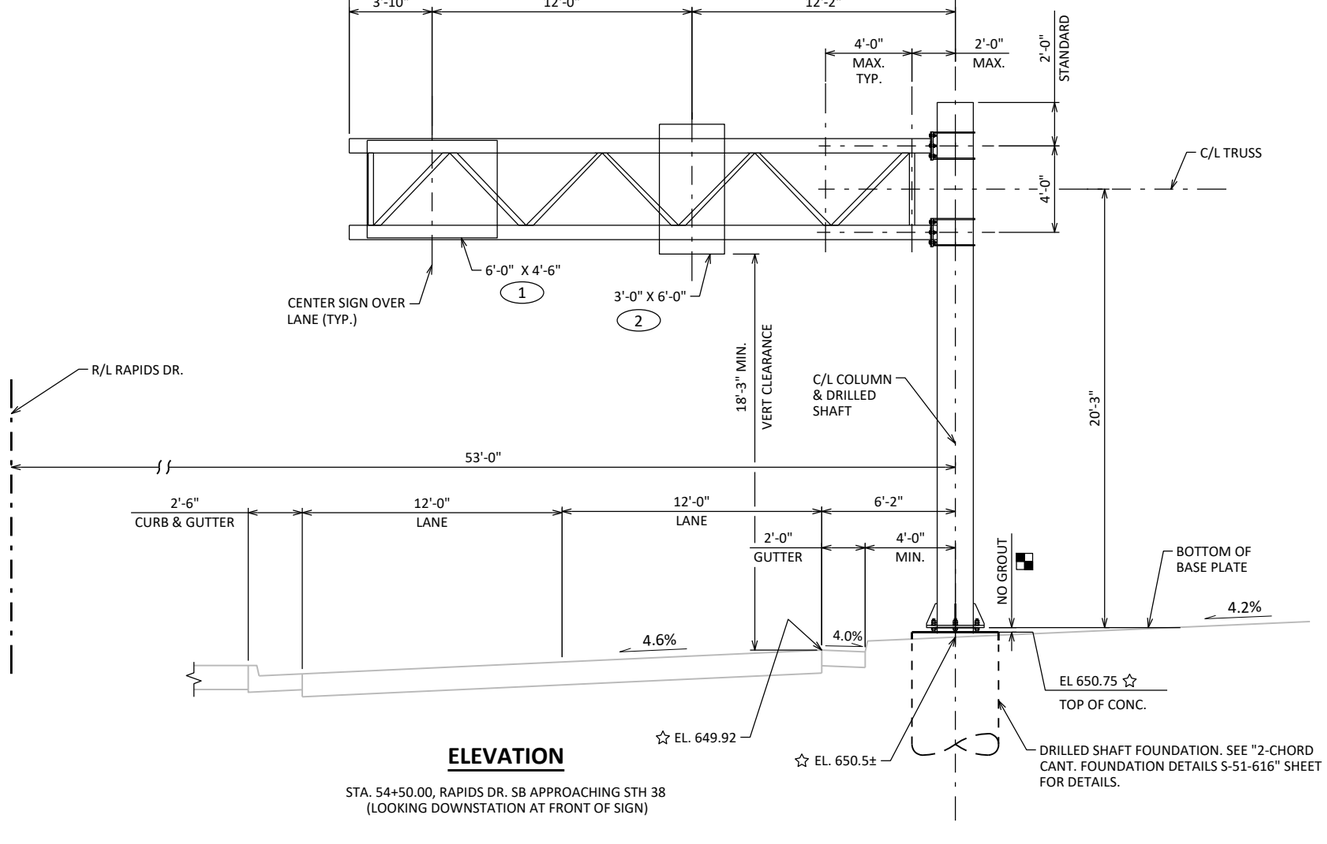
2290-03-73



PLAN



LOCATION MAP



ELEVATION

STA. 54+50.00, RAPIDS DR. SB APPROACHING STH 38
(LOOKING DOWNSTATION AT FRONT OF SIGN)

NOTE

POINT OF MIN. VERTICAL CLEARANCE
STA. 54+50.00, 46.83' (LEFT)
EL 649.92

EXISTING SIGN BRIDGE, S-51-010, A 54'-0" FULL-SPAN MONOTUBE WITH CANTILEVER, SUPPORTED BY DRILLED SHAFTS, IS LOCATED AT STA. 239+25± TO BE REMOVED. PAID FOR UNDER BID ITEM "REMOVING ANCILLARY STRUCTURE S-51-010."

LEGEND

☆ ELEVATIONS GIVEN ALONG C/L 2-CHORD TRUSS

(XX) SIGN NUMBERS (PERMANENT SIGNING PLAN)

STANDOFF DIMENSION IS ASSUMED TO BE 2 ½", BUT IS A MAXIMUM OF 2 X ANCHOR ROD DIAMETER. SEE FOUNDATION DETAILS SHEET AND SHOP DRAWINGS FOR MORE INFORMATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-51-616

DRAWN BY IFC | PLANS CK'D ARC

GENERAL LAYOUT
S-51-616

SHEET 5
414

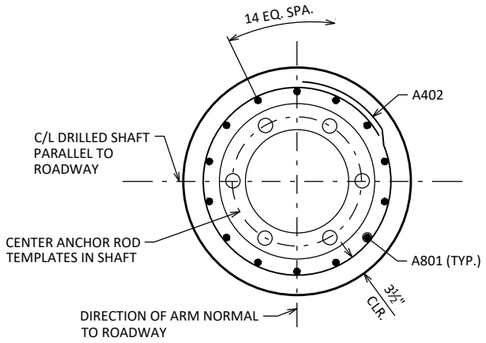
SCALE = 7.00

8

8

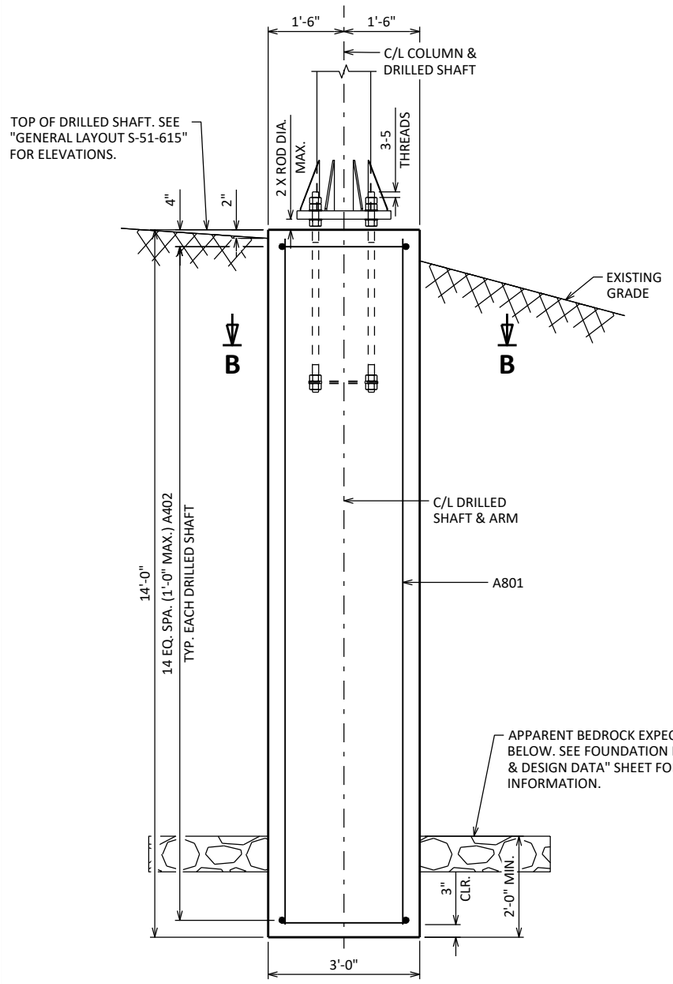
STATE PROJECT NUMBER

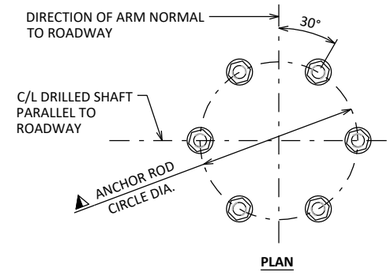
2290-03-73



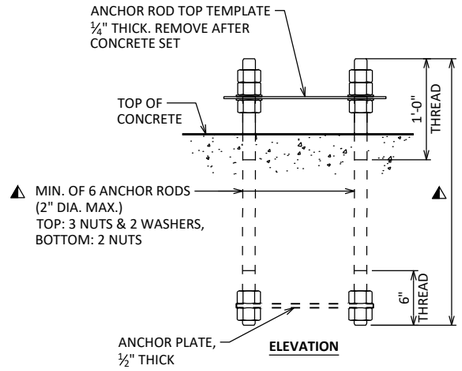
SECTION B-B

TYPICAL FOR EACH DRILLED SHAFT FOOTING





PLAN

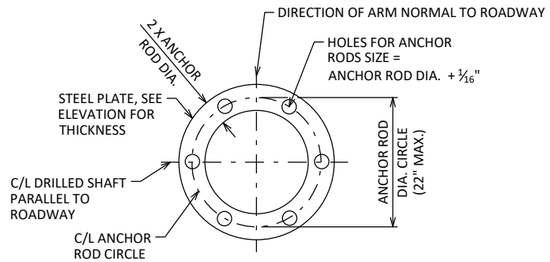


ELEVATION

ANCHOR ROD ASSEMBLY DETAILS

⚠ ANCHOR RODS PER ASSEMBLY TO BE DESIGNED BY CONTRACTOR AND SHOWN ON SHOP DRAWINGS. SHOW DIAMETER, NUMBER, ORIENTATION, PROJECTION AND EMBEDMENT OF ANCHOR RODS.

CENTER ANCHOR ROD ASSEMBLY AND ENSURE ASSEMBLY IS PLUMB. MAINTAIN ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE AS DETAILED. ANCHOR ROD ASSEMBLY SHALL BE RIGIDLY SECURED IN POSITION DURING AND AFTER CONCRETE PLACEMENT. DO NOT WELD THE ANCHORS.

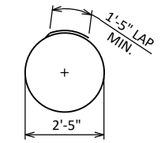


ANCHOR PLATE & TOP TEMPLATE

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

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		28	13'-7"			DRILLED SHAFT - VERTICAL
A402		30	9'-0"	X		DRILLED SHAFT - HORIZONTAL



A402

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-51-615

DRAWN BY IFC | PLANS CK'D ARC

2-CHORD FULL SPAN FOUNDATION DETAILS S-51-615

SHEET 6
415

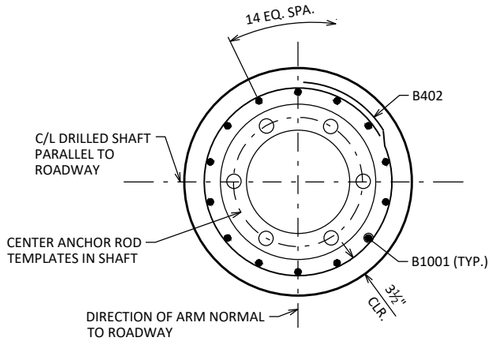
SCALE = 3.00

8

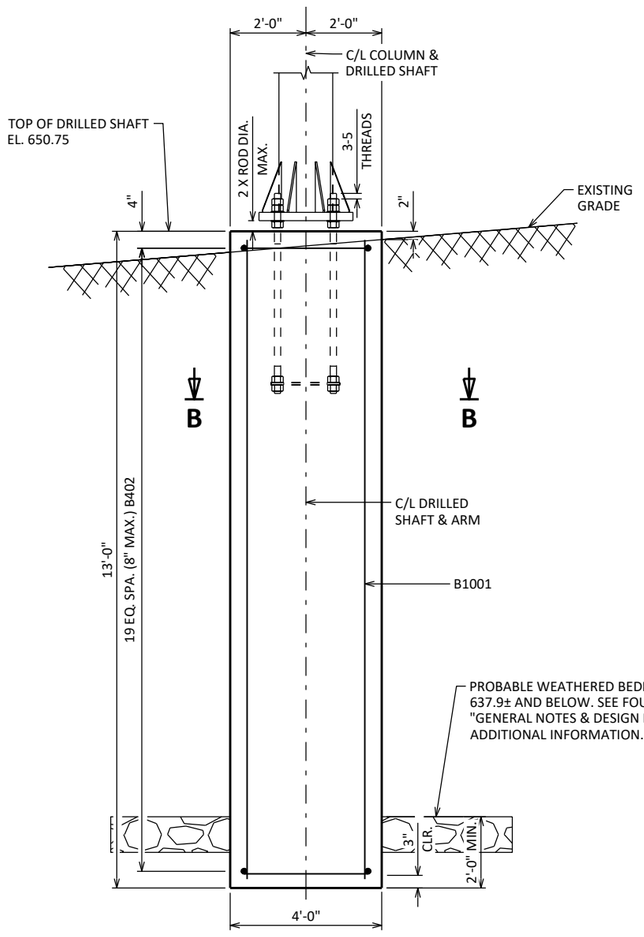
8

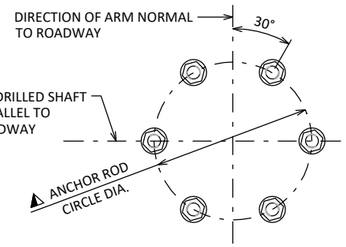
STATE PROJECT NUMBER

2290-03-73

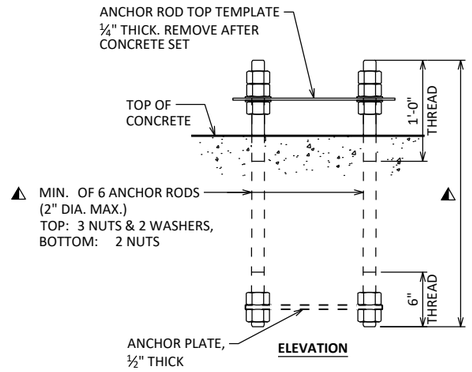


SECTION B-B





PLAN

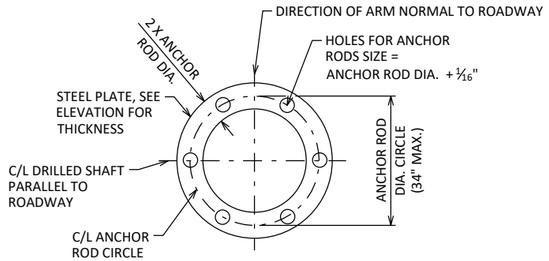


ELEVATION

ANCHOR ROD ASSEMBLY DETAILS

⚠ ANCHOR RODS PER ASSEMBLY TO BE DESIGNED BY CONTRACTOR AND SHOWN ON SHOP DRAWINGS. SHOW DIAMETER, NUMBER, ORIENTATION, PROJECTION AND EMBEDMENT OF ANCHOR RODS.

CENTER ANCHOR ROD ASSEMBLY AND ENSURE ASSEMBLY IS PLUMB. MAINTAIN ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE AS DETAILED. ANCHOR ROD ASSEMBLY SHALL BE RIGIDLY SECURED IN POSITION DURING AND AFTER CONCRETE PLACEMENT. DO NOT WELD THE ANCHORS.

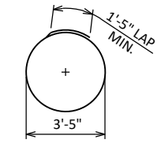


ANCHOR PLATE & TOP TEMPLATE

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

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B1001		14	12'-7"			DRILLED SHAFT - VERTICAL
B402		20	12'-2"	X		DRILLED SHAFT - HORIZONTAL



B402

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-51-616

DRAWN BY IFC | PLANS CK'D ARC

2-CHORD CANT. FOUNDATION DETAILS S-51-616

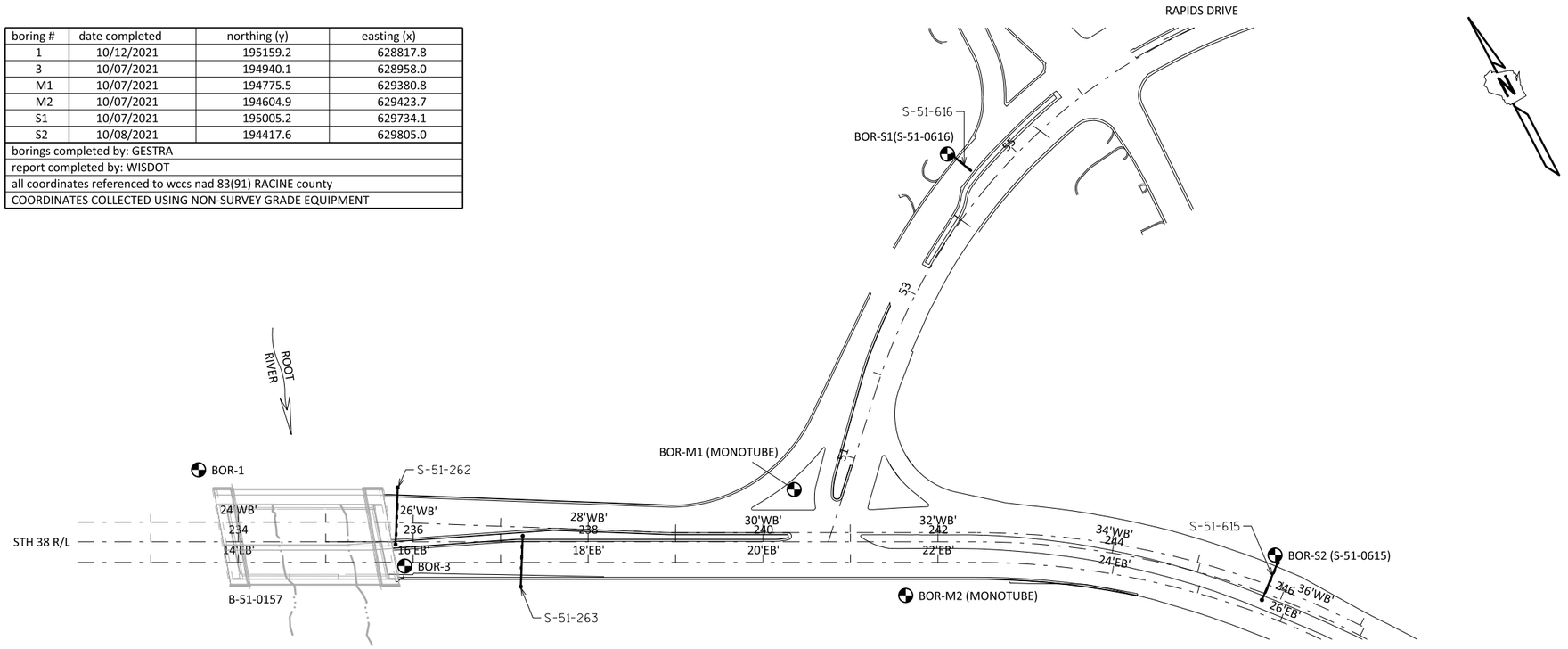
SHEET 7
416

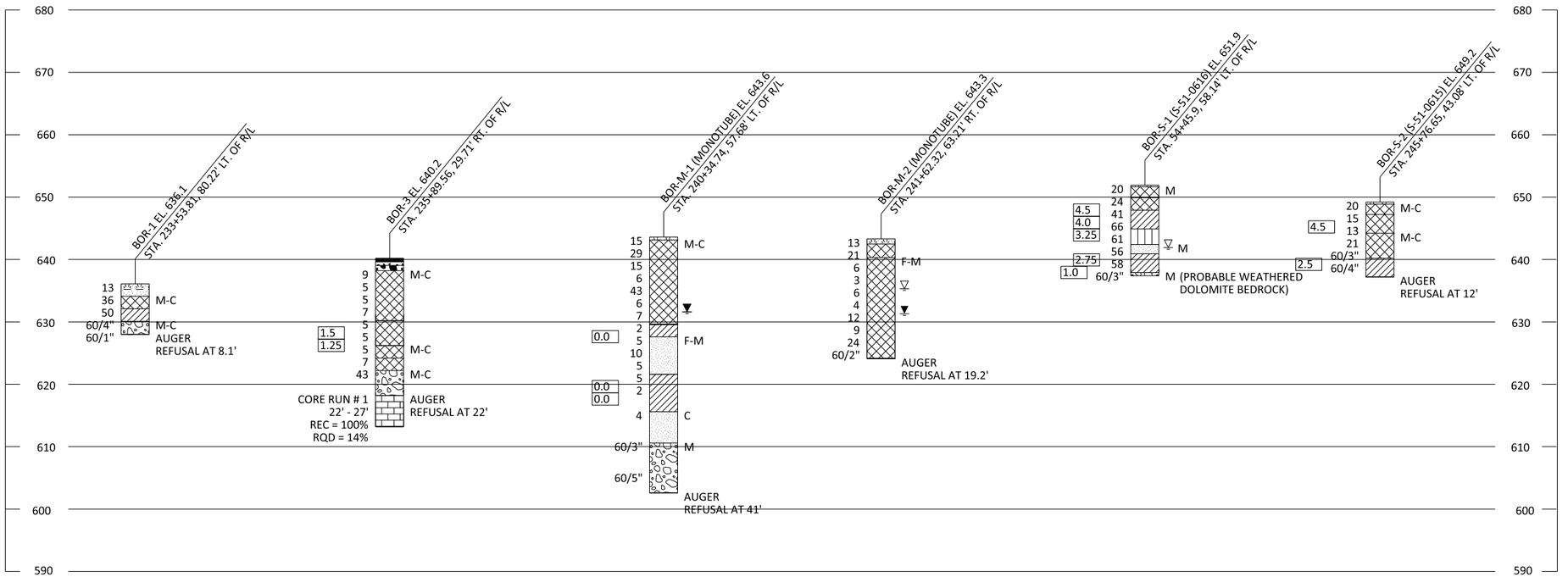
SCALE = 3.00

8

8

boring #	date completed	northing (y)	easting (x)
1	10/12/2021	195159.2	628817.8
3	10/07/2021	194940.1	628958.0
M1	10/07/2021	194775.5	629380.8
M2	10/07/2021	194604.9	629423.7
S1	10/07/2021	195005.2	629734.1
S2	10/08/2021	194417.6	629805.0
borings completed by: GESTRA			
report completed by: WISDOT			
all coordinates referenced to wccs nad 83(91) RACINE county			
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT			





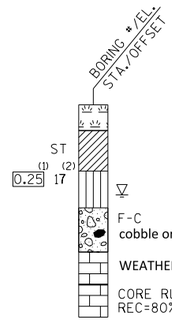
STATE PROJECT NUMBER

2290-03-73

MATERIAL SYMBOLS

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

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-51-615, 616

DRAWN BY TLP/IFC | PLANS CK'D. ARC

SUBSURFACE EXPLORATION

SHEET 8

417

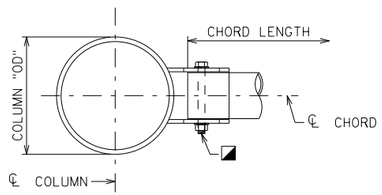
8

8

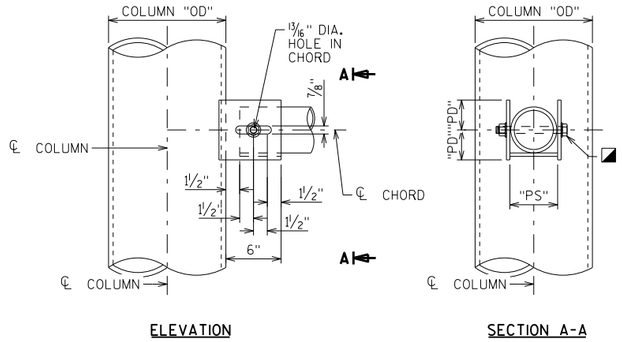
SCALE = 7.50

STATE PROJECT NUMBER

STANDARD



PLAN



ELEVATION SECTION A-A

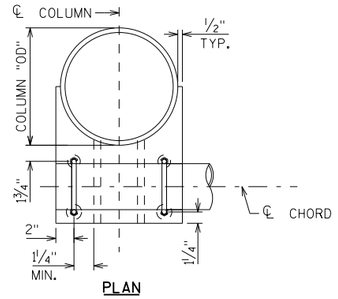
FULL SPAN SADDLE CONNECTION

PREFERRED

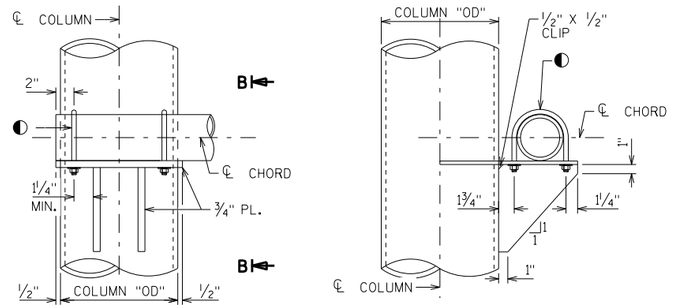
¾" GALVANIZED A325 OR A449 HEAVY HEX BOLT, NUT, WASHER

"PD" = (CHORD "OD")/2 + ¾"

"PS" = CHORD "OD" + 3/16"



PLAN

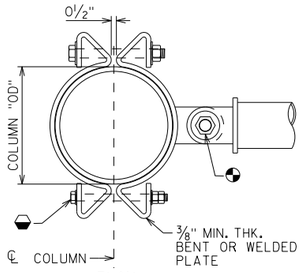


ELEVATION SECTION B-B

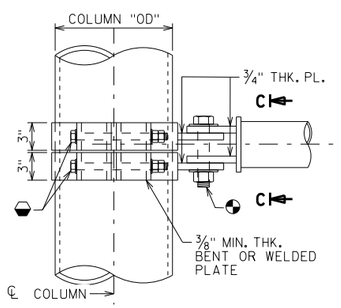
FULL SPAN STIFFENED BEARING CONNECTION

ALTERNATE 1

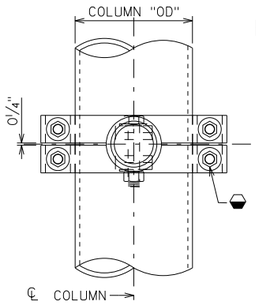
◐ (2) - ½" MIN. GALVANIZED U-BOLT, NUT, WASHER AND LOCK WASHER



PLAN



ELEVATION



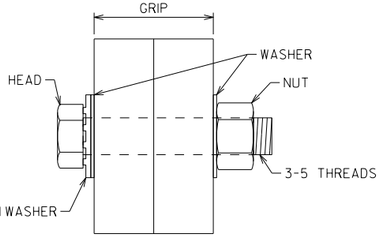
SECTION C-C

FULL SPAN CLAMP CONNECTION

ALTERNATE 2 - TAPERED COLUMNS ONLY

◔ 1¼" GALVANIZED A325 HEAVY HEX BOLT, NUT AND WASHER

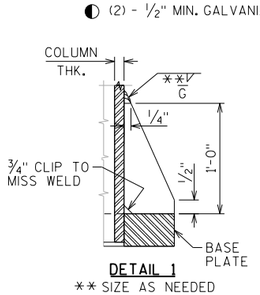
⬣ 1" GALVANIZED A449 HEAVY HEX BOLT, NUT AND WASHER



RECOMMENDED BOLT DETAIL WITH DTI

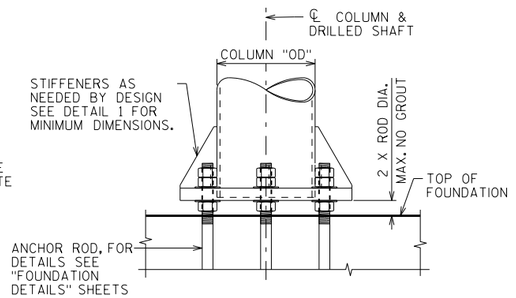
NUT IS THE TURNED ELEMENT

PLAN



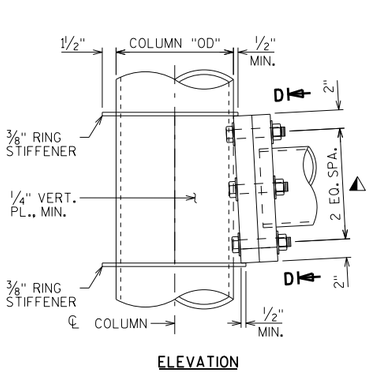
DETAIL 1

** SIZE AS NEEDED

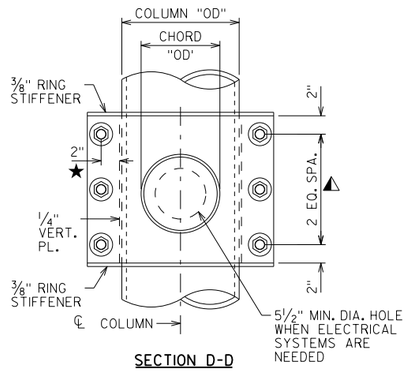


BASE PLATE & COLUMN DETAIL

LOOKING AT FRONT FACE OF STRUCTURE



ELEVATION

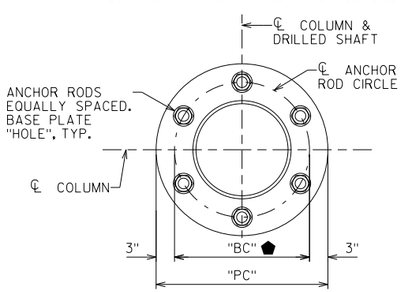


SECTION D-D

CANTILEVER POST TO CHORD CONNECTION

◭ MIN. CONNECTION = (6) - 1" GALVANIZED F3125 GRADE A325 BOLTS, NUT, WASHER AND DTI

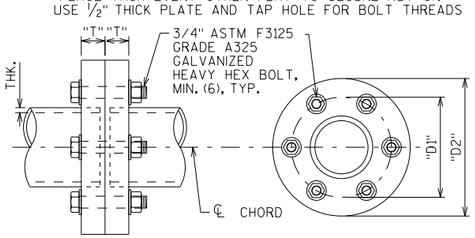
★ MIN. DIMENSION MEASURED FROM EXT. FACE OF VERT. PLATE



BASE PLATE

PLAN

⬟ "BC" = POLE OD + 6"

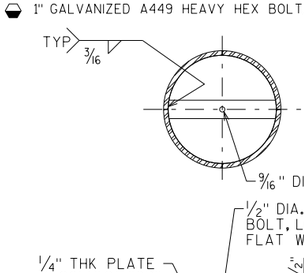


CHORD SPLICE DETAIL

"D1" = CHORD "OD" + 3"

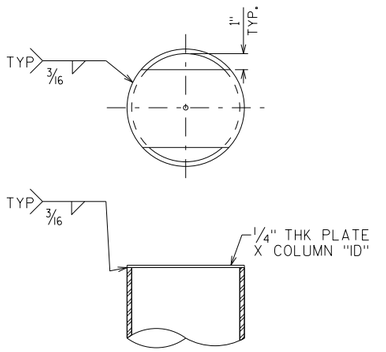
"D2" = CHORD "OD" + 6"

"T" = BY DESIGN



COLUMN/CHORD CAP DETAIL

* PLACE TACK EVERY OTHER FLAT TO SECURE NUT OR USE ½" THICK PLATE AND TAP HOLE FOR BOLT THREADS



CHORD CAP DETAIL

NOTES:

MINIMUM VALUES SHOWN

ALL CONNETIONS ARE TO BE DESIGNED FOR ACTUAL STRUCTURE LOADS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: MARCH 2021

DRAWN BY BOS | PLANS CK'D. BOS

MONOTUBE & 2-CHORD TRUSS DETAILS 1

SHEET 1 OF IV

418

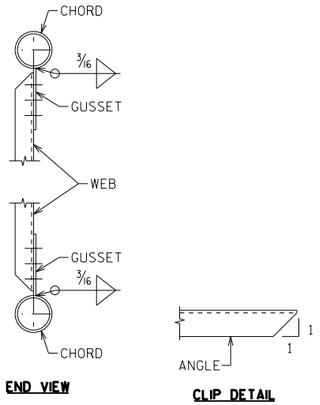
8

8

SCALE = 1.00

STATE PROJECT NUMBER

STANDARD

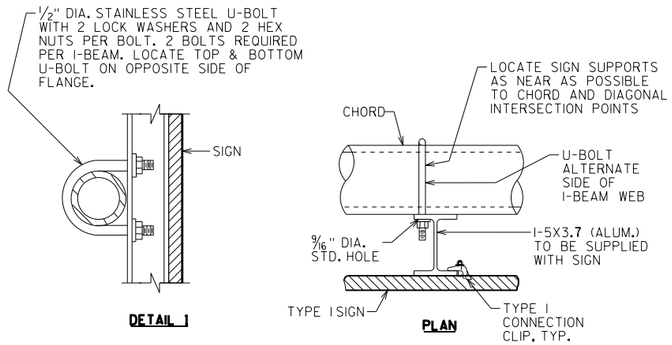


END VIEW

CLIP DETAIL

TRUSS CONNECTION DETAILS

BOLTED CONNECTIONS SHOWN, NUMBER OF BOLTS BY DESIGN
WELDED CONNECTIONS SIMILAR



DETAIL 1

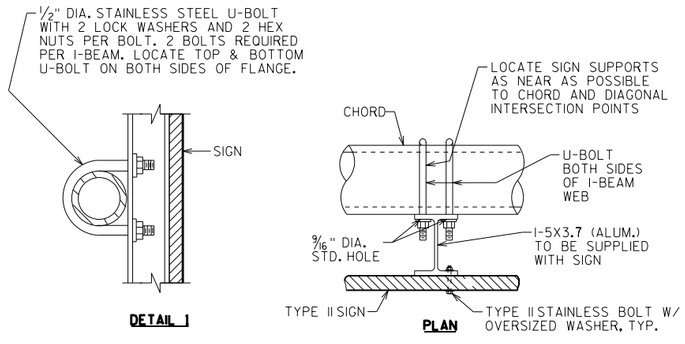
PLAN

2-CHORD TRUSS SIGN CONNECTION

SEE SIGN PLATE MANUAL A4-7A FOR DETAILS

ALUMINUM I-5X3.7 I-BEAMS ARE TO BE SUPPLIED WITH THE SIGN PANEL

HARDWARE TO BE SUPPLIED BY THE CONTRACTOR



DETAIL 1

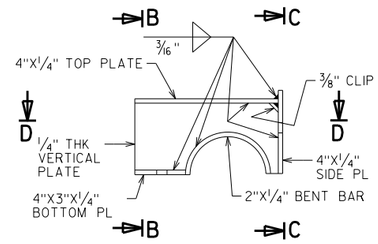
PLAN

MONOTUBE SIGN CONNECTION

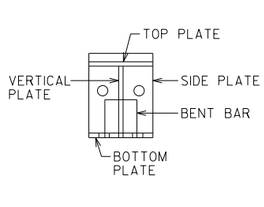
SEE SIGN PLATE MANUAL A4-7B FOR DETAILS

ALUMINUM I-5X3.7 I-BEAMS ARE TO BE SUPPLIED WITH THE SIGN PANEL

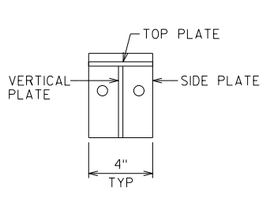
HARDWARE TO BE SUPPLIED BY THE CONTRACTOR



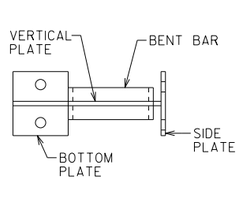
ELEVATION



SECTION B-B



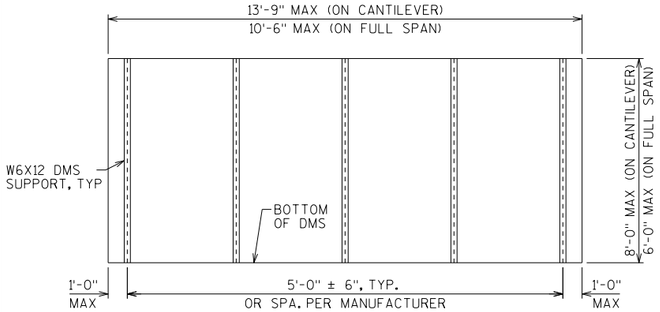
SECTION C-C



SECTION D-D

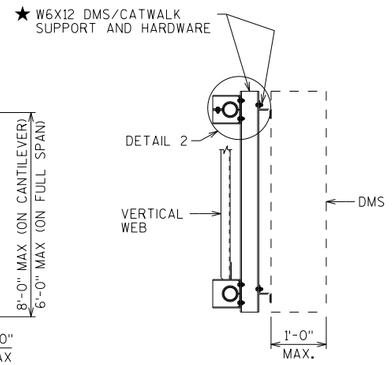
DMS WELDED PLATE CONNECTION DETAILS

TOP PLATE CLAMP SHOWN
BOTTOM PLATE CLAMP SIMILAR



DMS MOUNTING POST SPACING DETAIL

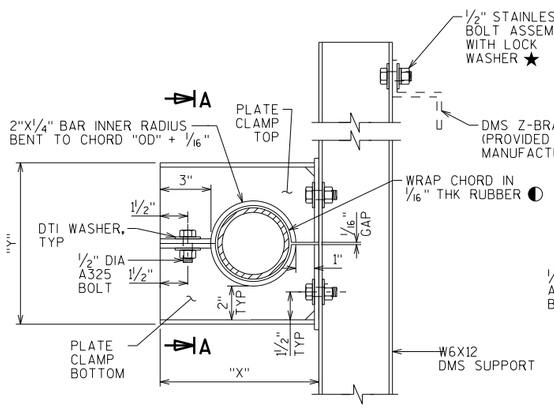
POST SPACING MAY BE ADJUSTED AS REQUIRED IF CONFLICT WITH TRUSS IS ENCOUNTERED.



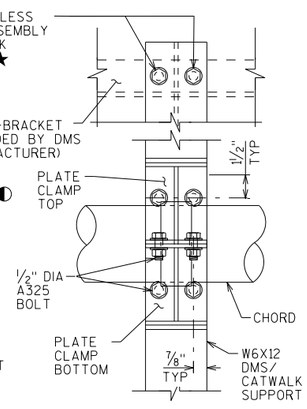
SECTION THRU TRUSS

FOR DMS/CATWALK CONNECTION

★ W6X12 SUPPORTS AND HARDWARE ARE TO BE SUPPLIED BY THE CONTRACTOR. 1/2" STAINLESS BOLT, NUT, WASHER AND LOCK WASHER REQUIRED, 4 PER W6X12.



DETAIL 2

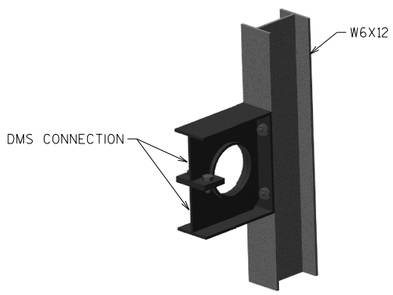


SECTION A-A

CHORD OUTER DIA	"X"	"Y"
"OD"	"OD"+4 13/16"	"OD"+5 1/16"

TYPICAL DMS CONNECTION

◐ NEOPRENE, GRADE 45±5, OTHERWISE MEETING THE REQUIREMENTS OF STD SPEC 506.2.6.1



3-D VIEW DMS CONNECTION

CHORD NOT SHOWN FOR CLARITY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: APRIL 2021

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MONOTUBE & 2-CHORD TRUSS DETAILS 2

SHEET II OF IV

419

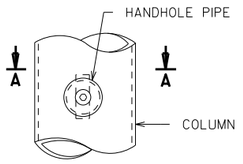
SCALE = 2.00

8

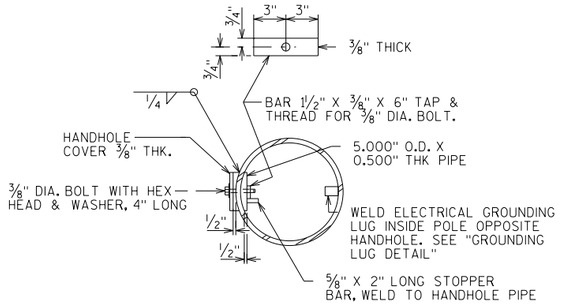
8

STATE PROJECT NUMBER

STANDARD



HANDHOLE DETAILS

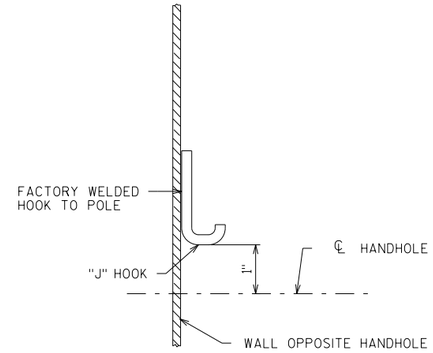


SECTION A-A

HANDHOLE NOTES

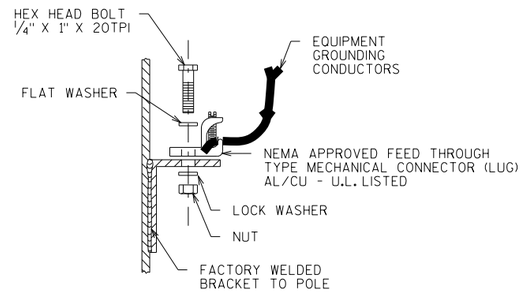
HANDHOLES SHALL BE LOCATED IN ONE COLUMN OF THE SIGN STRUCTURE IF ELECTRICALLY OPERATED DEVICES ARE INSTALLED ON/IN THE STRUCTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE WITH THE REGION TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN COLUMNS AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL PLAN DETAIL SHEETS.

UNLESS NOTED OTHERWISE, ALL HANDHOLE ELEMENTS TO BE GALVANIZED PER THE WISDOT STANDARD SPECIFICATIONS.



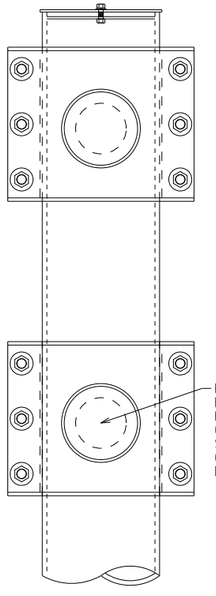
TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.

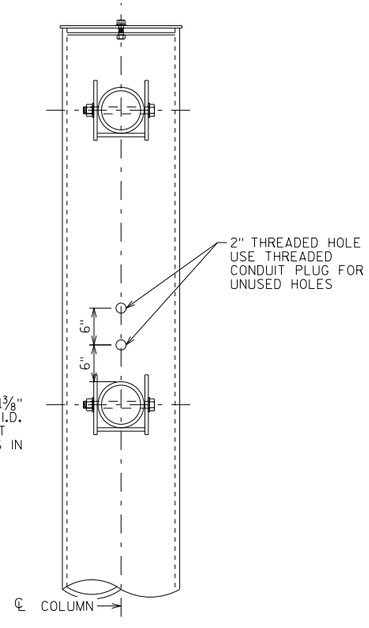


GROUNDING LUG DETAIL

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



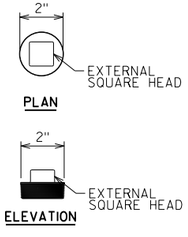
2-CHORD CANTILEVER



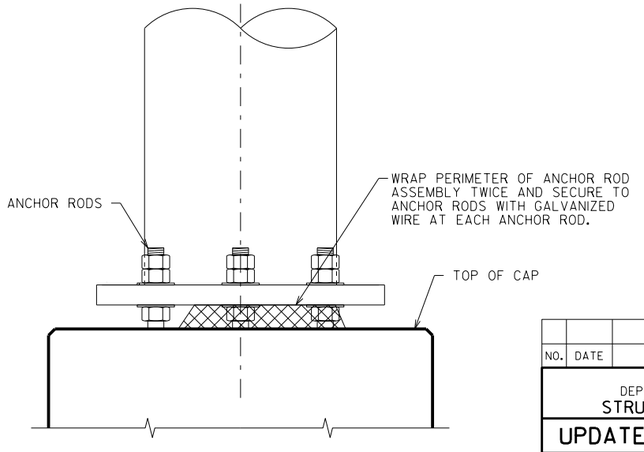
2-CHORD FULL SPAN

SADDLE CONNECTIONS SHOWN, BEARING AND CLAMP CONNECTIONS SIMILAR

CONDUIT HOLE LOCATIONS



CONDUIT PLUG DETAILS



RODENT SCREEN

(ONLY REQ'D. WHEN ELECTRICAL DEVICES ARE INSTALLED)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

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MONOTUBE & 2-CHORD TRUSS ELECTRICAL DETAILS

SHEET III OF IV

420

SCALE = 1.00

8

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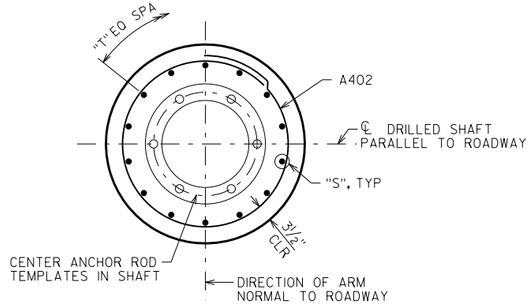
STATE PROJECT NUMBER

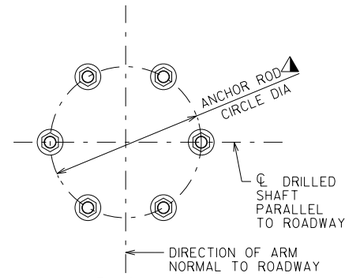
STANDARD

FOUNDATION & REINFORCING DATA

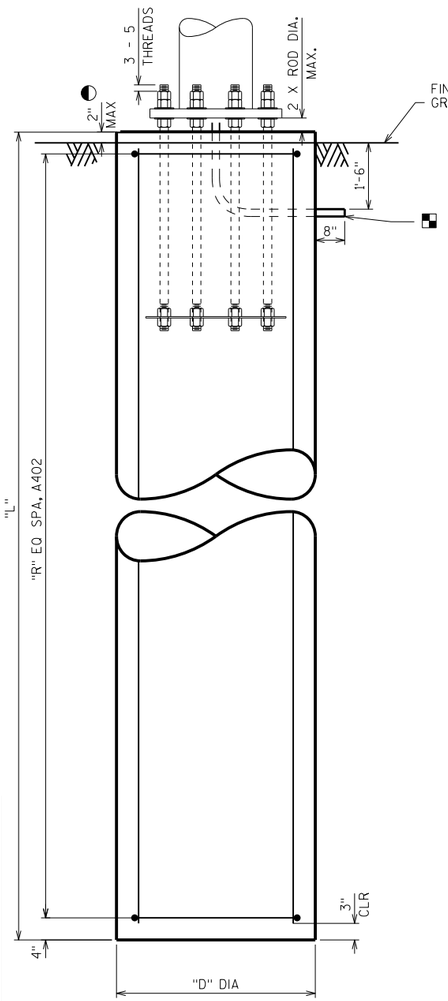
STANDARD FOUNDATION TYPE	SHAFT VARIABLES					
	"D"	"L"	"R"	"S"	"T"	"BC" MAX
MFI	2'-0"	12'-0"	12	A801	6	12"
MFII	2'-6"	13'-0"	13	A801	10	17"
MCI/MCII/TFI	2'-6"	17'-0"	17	A801	10	17"
TCI	3'-0"	18'-0"	18	A801	14	22"
TFII	3'-0"	20'-0"	20	A801	14	22"
MCIII/TCII/TFIII	3'-6"	18'-0"	18	A901	14	28"
MCIV/TFIV	3'-6"	23'-0"	23	A901	14	28"
TCIII	4'-0"	23'-0"	23	A1001	14	34"
TCIV	4'-0"	28'-0"	28	A1001	14	34"



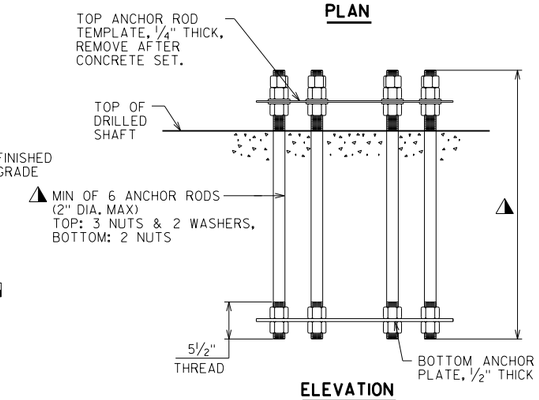
PLAN



PLAN



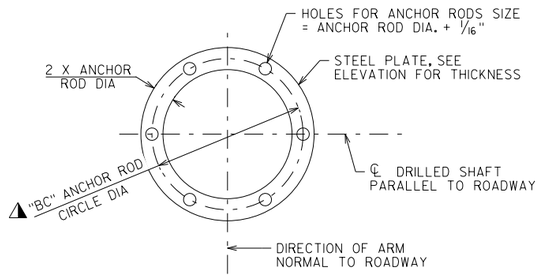
ELEVATION



ELEVATION

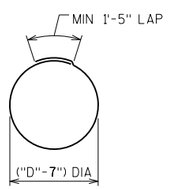
ANCHOR ROD ASSEMBLY DETAILS

⚠ ANCHOR ROD NUMBER, DIAMETER, LENGTH & ORIENTATION AS SHOWN ON FABRICATION DRAWING.



ANCHOR PLATE/TOP TEMPLATE

PLAN



A402

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

BILL OF BARS - STANDARD FOUNDATIONS

STANDARD FOUNDATION MFI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		6	11'-7"			DRILLED SHAFT - VERTICAL
A402		13	5'-10"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MFII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		10	12'-7"			DRILLED SHAFT - VERTICAL
A402		14	7'-5"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MCI/MCII/TFI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		10	16'-7"			DRILLED SHAFT - VERTICAL
A402		18	7'-5"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TCI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		14	17'-7"			DRILLED SHAFT - VERTICAL
A402		19	9'-0"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TFII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		14	19'-7"			DRILLED SHAFT - VERTICAL
A402		21	9'-0"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MCIII/TCII/TFIII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A901		14	17'-7"			DRILLED SHAFT - VERTICAL
A402		19	10'-6"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MCIV/TFIV

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A901		14	22'-7"			DRILLED SHAFT - VERTICAL
A402		24	10'-6"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TCIII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	22'-7"			DRILLED SHAFT - VERTICAL
A402		24	12'-2"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TCIV

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	27'-7"			DRILLED SHAFT - VERTICAL
A402		29	12'-2"	X		DRILLED SHAFT - HORIZONTAL

ESTIMATED QUANTITIES - FOUNDATIONS

STANDARD FOUNDATION TYPE	CONCRETE MASONRY (CY)	STEEL REINFORCEMENT HS (LBS)	FOUNDATION DRILLING (LF)				
			24" DIA.	30" DIA.	36" DIA.	42" DIA.	48" DIA.
MFI	2	240	12				
MFII	3	410		13			
MCI/MCII/TFI	4	540		17			
TCI	5	780			18		
TFII	6	860			20		
MCIII/TCII/TFIII	7	970				18	
MCIV/TFIV	9	1,250				23	
TCIII	11	1,560					23
TCIV	13	1,900					28

✳✳ QUANTITIES ARE FOR INFORMATION ONLY AND ARE BASED ON STANDARD STRUCTURE DIMENSIONS

NOTES

CENTER ANCHOR ROD ASSEMBLY ON DRILLED SHAFT AND MAKE SURE IT IS PLUMB. MAINTAIN ANCHOR ROD PROJECTION ABOVE FOOTING AS DETAILED. ANCHOR ROD ASSEMBLY SHALL BE RIGIDLY SECURED IN POSITION DURING AND AFTER CONCRETE PLACEMENT. DO NOT WELD THE ANCHOR RODS.

◐ FOR OVERHEAD SIGN STRUCTURES THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE SHAFT SHALL BE POURED FLUSH WITH THE FINISHED GRADE.

◪ 2" DIA NONMETALLIC CONDUITS, INSTALL ONLY WITH DMS. EXTEND CONDUITS AS SHOWN AND CAP OR SEAL EACH END WITH A SUITABLE REMOVABLE PLUG. PLACE CONDUITS UNDER COLUMN ADJACENT TO THE DMS. CONDUITS INCIDENTAL TO THE FOUNDATION BID ITEMS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: MARCH 2021

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MONOTUBE & 2-CHORD TRUSS FOUNDATIONS

SHEET IV OF IV

421

SCALE = 1.67

8

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DIVISION 1 - STH 38 CENTER ALIGNMENT (2020)

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
									1.00	1.30	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
232+50.156	23250.16	0.00	166.02	58.00	0.00	0	0	0	0	0	0
233+00	23300.00	49.84	162.43	58.00	0.00	303	117	0	303	0	186
233+50	23350.00	50.00	170.97	58.00	0.64	309	117	1	612	1	377
236+00	23600.00	50.00	132.77	52.00	34.53	281	102	33	893	44	513
236+50	23650.00	50.00	128.31	46.00	30.81	242	91	60	1,135	122	586
237+00	23700.00	50.00	118.49	41.00	28.24	229	81	55	1,364	194	662
237+50	23750.00	50.00	117.39	35.00	22.90	218	70	47	1,582	255	749
238+00	23800.00	50.00	103.78	34.00	23.97	205	64	43	1,787	311	834
238+50	23850.00	50.00	97.96	34.00	22.07	187	63	43	1,974	367	902
238+93.787	23893.79	43.79	100.56	34.00	14.91	161	55	30	2,135	406	969
238+95	23895.00	1.21	87.28	34.00	0.00	4	2	0	2,139	406	971
239+00	23900.00	5.00	96.58	34.00	2.19	17	6	0	2,156	406	982
239+05	23905.00	5.00	97.65	35.00	11.98	18	6	1	2,174	407	993
239+10	23910.00	5.00	98.42	36.00	10.20	18	7	2	2,192	410	1,002
239+15	23915.00	5.00	99.49	36.00	7.93	18	7	2	2,210	412	1,010
239+20	23920.00	5.00	100.59	36.00	5.72	19	7	1	2,229	413	1,021
239+25	23925.00	5.00	102.01	37.00	4.26	19	7	1	2,248	415	1,031
239+30	23930.00	5.00	104.87	38.00	3.53	19	7	1	2,267	416	1,042
239+35	23935.00	5.00	108.05	39.00	2.59	20	7	1	2,287	417	1,054
239+40	23940.00	5.00	111.41	41.00	1.39	20	7	0	2,307	417	1,067
239+45	23945.00	5.00	114.56	43.00	0.54	21	8	0	2,328	417	1,080
239+50	23950.00	5.00	118.77	44.00	0.55	22	8	0	2,350	417	1,094
239+55	23955.00	5.00	123.59	45.00	0.49	22	8	0	2,372	417	1,108
239+60	23960.00	5.00	128.30	47.00	0.76	23	9	0	2,395	417	1,122
239+65	23965.00	5.00	132.85	49.00	1.06	24	9	0	2,419	417	1,137
239+70	23970.00	5.00	138.67	52.00	1.50	25	9	0	2,444	417	1,153
239+75	23975.00	5.00	144.64	54.00	1.72	26	10	0	2,470	417	1,169
239+80	23980.00	5.00	152.25	57.00	1.58	27	10	0	2,497	417	1,186
239+85	23985.00	5.00	161.21	60.00	1.54	29	11	0	2,526	417	1,204
239+90	23990.00	5.00	172.30	63.00	1.42	31	11	0	2,557	417	1,224
239+95	23995.00	5.00	182.93	67.00	0.11	33	12	0	2,590	417	1,245
240+00	24000.00	5.00	195.78	70.00	0.00	35	13	0	2,625	417	1,267
240+05	24005.00	5.00	209.83	74.00	0.00	38	13	0	2,663	417	1,292
240+10	24010.00	5.00	224.12	78.00	0.00	40	14	0	2,703	417	1,318
240+15	24015.00	5.00	235.32	83.00	0.00	43	15	0	2,746	417	1,346
240+20	24020.00	5.00	246.94	87.00	0.00	45	16	0	2,791	417	1,375
240+25	24025.00	5.00	261.32	84.00	0.00	47	16	0	2,838	417	1,406

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DIVISION 1 - STH 38 CENTER ALIGNMENT (2020)

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.30	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
240+30	24030.00	5.00	257.52	80.00	0.00	48	15	0	2,886	417	1,439
240+35	24035.00	5.00	247.93	77.00	0.00	47	15	0	2,933	417	1,471
240+40	24040.00	5.00	236.25	75.00	0.00	45	14	0	2,978	417	1,502
240+45	24045.00	5.00	220.95	69.00	0.00	42	13	0	3,020	417	1,531
240+50	24050.00	5.00	201.12	64.00	0.00	39	12	0	3,059	417	1,558
240+55	24055.00	5.00	178.06	59.00	0.00	35	11	0	3,094	417	1,582
240+60	24060.00	5.00	147.88	53.00	0.00	30	10	0	3,124	417	1,602
240+65	24065.00	5.00	135.15	48.00	0.00	26	9	0	3,150	417	1,619
240+70	24070.00	5.00	123.14	42.00	0.00	24	8	0	3,174	417	1,635
240+75	24075.00	5.00	110.91	37.00	0.00	22	7	0	3,196	417	1,650
240+80	24080.00	5.00	97.81	31.00	0.00	19	6	0	3,215	417	1,663
240+85	24085.00	5.00	84.34	30.00	0.00	17	6	0	3,232	417	1,674
240+90	24090.00	5.00	93.12	28.00	0.00	16	5	0	3,248	417	1,685
240+95	24095.00	5.00	104.50	30.00	0.00	18	5	0	3,266	417	1,698
241+00	24100.00	5.00	114.92	31.00	0.00	20	6	0	3,286	417	1,712
241+05	24105.00	5.00	125.34	38.00	0.00	22	6	0	3,308	417	1,728
241+10	24110.00	5.00	136.56	45.00	0.00	24	8	0	3,332	417	1,744
241+15	24115.00	5.00	149.95	49.00	0.00	27	9	0	3,359	417	1,762
241+20	24120.00	5.00	151.33	53.00	0.00	28	9	0	3,387	417	1,781
241+25	24125.00	5.00	181.91	43.00	0.00	31	9	0	3,418	417	1,803
241+30	24130.00	5.00	196.74	32.00	0.00	35	7	0	3,453	417	1,831
241+35	24135.00	5.00	214.14	33.00	0.00	38	6	0	3,491	417	1,863
241+40	24140.00	5.00	228.40	33.00	0.00	41	6	0	3,532	417	1,898
241+45	24145.00	5.00	240.31	33.00	0.00	43	6	0	3,575	417	1,935
241+50	24150.00	5.00	247.94	33.00	0.00	45	6	0	3,620	417	1,974
241+55	24155.00	5.00	257.62	33.00	0.00	47	6	0	3,667	417	2,015
241+60	24160.00	5.00	267.68	33.00	0.00	49	6	0	3,716	417	2,058
241+65	24165.00	5.00	256.36	33.00	0.00	49	6	0	3,765	417	2,101
241+70	24170.00	5.00	229.93	33.00	0.00	45	6	0	3,810	417	2,140
241+75	24175.00	5.00	211.13	33.00	0.00	41	6	0	3,851	417	2,175
241+80	24180.00	5.00	197.34	33.00	0.00	38	6	0	3,889	417	2,207
241+85	24185.00	5.00	185.03	51.00	0.00	35	8	0	3,924	417	2,234
241+90	24190.00	5.00	174.06	51.00	0.00	33	9	0	3,957	417	2,258
241+95	24195.00	5.00	165.24	51.00	0.00	31	9	0	3,988	417	2,280
242+00	24200.00	5.00	158.99	51.00	0.00	30	9	0	4,018	417	2,301
242+05	24205.00	5.00	157.02	51.00	0.00	29	9	0	4,047	417	2,321
242+10	24210.00	5.00	153.85	51.00	0.00	29	9	0	4,076	417	2,341
242+15	24215.00	5.00	151.50	51.00	0.00	28	9	0	4,104	417	2,360
242+20	24220.00	5.00	124.64	51.00	0.00	26	9	0	4,130	417	2,377
242+21	24221.03	1.03	112.60	50.00	0.00	5	2	0	4,135	417	2,380
242+50	24250.00	28.97	0.00	0.00	0.00	60	27	0	4,195	417	2,413
243+00	24300.00	50.00	0.00	0.00	0.00	0	0	0	4,195	417	2,413
243+50	24350.00	50.00	0.00	0.00	0.00	0	0	0	4,195	417	2,413
244+00	24400.00	50.00	0.00	0.00	0.01	0	0	0	4,195	417	2,413
244+37.936	24437.94	37.94	0.00	0.00	0.31	0	0	0	4,195	417	2,413

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PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	EARTHWORK TABLE: STH 38 STAGE 1	SHEET 423	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\090101_EW.DWG
LAYOUT NAME - 090102_ew

PLOT DATE : 8/1/2023 6:55 AM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

DIVISION 1 - RAPIDS DRIVE ALIGNMENT (2020)

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.10	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
50+40	0.00	23.54	9.00	0.00	0	0	0	0	0	0
50+45	5.00	52.00	21.00	0.00	7	3	0	7	0	4
50+50	5.00	81.95	33.00	0.00	12	5	0	19	0	11
50+55	5.00	112.02	45.00	0.00	18	7	0	37	0	22
50+60	5.00	150.17	56.00	0.00	24	9	0	61	0	37
50+65	5.00	190.75	68.00	0.00	32	11	0	93	0	58
50+70	5.00	229.98	79.00	0.00	39	14	0	132	0	83
50+75	5.00	266.09	91.00	0.00	46	16	0	178	0	113
50+80	5.00	299.89	103.00	0.00	52	18	0	230	0	147
50+85	5.00	310.17	105.00	0.00	56	19	0	286	0	184
50+90	5.00	317.31	108.00	0.00	58	20	0	344	0	222
50+95	5.00	325.05	110.00	0.00	59	20	0	403	0	261
51+00	5.00	333.48	111.00	0.00	61	20	0	464	0	302
51+05	5.00	334.57	113.00	0.00	62	21	0	526	0	343
51+10	5.00	334.99	114.00	0.00	62	21	0	588	0	384
51+15	5.00	336.62	116.00	0.00	62	21	0	650	0	425
51+20	5.00	339.68	118.00	0.00	63	22	0	713	0	466
51+25	5.00	326.28	113.00	0.00	62	21	0	775	0	507
51+30	5.00	251.16	109.00	0.00	53	21	0	828	0	539
51+35	5.00	275.12	105.00	0.00	49	20	0	877	0	568
51+40	5.00	259.75	100.00	0.00	50	19	0	927	0	599
51+45	5.00	246.21	97.00	0.00	47	18	0	974	0	628
51+50	5.00	234.78	94.00	0.00	45	18	0	1,019	0	655
51+55	5.00	226.06	91.00	0.00	43	17	0	1,062	0	681
51+60	5.00	218.66	89.00	0.00	41	17	0	1,103	0	705
51+65	5.00	210.76	87.00	0.00	40	16	0	1,143	0	729
51+70	5.00	202.74	85.00	0.00	38	16	0	1,181	0	751
51+75	5.00	201.66	83.00	0.00	37	16	0	1,218	0	772
51+80	5.00	193.00	82.00	0.00	37	15	0	1,255	0	794
51+83.875	3.87	189.86	81.00	0.00	27	12	0	1,282	0	809
52+00	16.13	185.82	80.00	0.00	112	48	0	1,394	0	873
52+38.413	38.41	174.79	76.00	0.00	257	111	0	1,651	0	1,019
52+57.882	19.47	61.51	34.00	0.18	85	40	0	1,736	0	1,064
52+79.183	21.30	56.24	26.00	0.23	46	24	0	1,782	0	1,086

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DIVISION 1 - STH 38 CENTER ALIGNMENT (2020)

STATION	REAL STATION	DISTANCE	AREA (SF)						INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)			
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	ROCK EXC	CUT	EXPANDED FILL	EXPANDED ROCK	MASS ORDINATE
													1.00	1.30	1.10	
									NOTE 1	NOTE 2	NOTE 3		NOTE 1			NOTE 8
232+50.156	23250.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0
233+00	23300.00	49.84	0.00	0.00	0.00	0.00	0.00	0.00	0	10	0	0	0	0	0	-10
233+50	23350.00	50.00	99.70	34.00	0.00	0.00	0.00	0.00	92	41	0	0	92	0	0	41
236+00	23600.00	50.00	110.43	38.00	37.09	0.00	0.00	0.00	195	67	34	0	287	44	0	125
236+50	23650.00	50.00	251.49	41.00	14.13	0.00	18.00	0.00	335	73	47	17	622	81	19	350
237+00	23700.00	50.00	248.44	45.00	11.71	0.00	18.00	0.00	463	80	24	33	1,085	65	55	749
237+50	23750.00	50.00	222.12	46.00	14.60	0.00	20.00	0.00	436	84	24	35	1,521	46	94	1,120
238+00	23800.00	50.00	200.04	46.00	16.11	0.00	13.00	0.00	391	85	28	31	1,912	38	128	1,434
238+50	23850.00	50.00	129.84	46.00	13.67	0.00	0.00	0.00	305	85	28	12	2,217	57	141	1,635
238+93.787	23893.79	43.79	118.60	46.00	13.34	0.00	0.00	0.00	201	75	22	0	2,418	86	141	1,732
238+95	23895.00	1.21	118.61	46.00	13.10	0.00	0.00	0.00	5	2	1	0	2,423	87	141	1,734
239+00	23900.00	5.00	118.81	46.00	12.19	0.00	0.00	0.00	22	9	2	0	2,445	90	141	1,744
239+05	23905.00	5.00	119.10	46.00	11.32	0.00	0.00	0.00	22	9	2	0	2,467	93	141	1,754
239+10	23910.00	5.00	119.40	46.00	10.34	0.00	0.00	0.00	22	9	2	0	2,489	95	141	1,765
239+15	23915.00	5.00	119.01	46.00	10.79	0.00	0.00	0.00	22	9	2	0	2,511	98	141	1,775
239+20	23920.00	5.00	118.57	46.00	11.18	0.00	0.00	0.00	22	9	2	0	2,533	100	141	1,786
239+25	23925.00	5.00	118.16	46.00	11.52	0.00	0.00	0.00	22	9	2	0	2,555	103	141	1,796
239+30	23930.00	5.00	117.80	46.00	11.88	0.00	0.00	0.00	22	9	2	0	2,577	106	141	1,806
239+35	23935.00	5.00	117.82	46.00	11.76	0.00	0.00	0.00	22	9	2	0	2,599	108	141	1,817
239+40	23940.00	5.00	118.15	46.00	10.87	0.00	0.00	0.00	22	9	2	0	2,621	111	141	1,827
239+45	23945.00	5.00	120.30	46.00	10.59	0.00	0.00	0.00	22	9	2	0	2,643	113	141	1,838
239+50	23950.00	5.00	120.49	46.00	10.64	0.00	0.00	0.00	22	9	2	0	2,665	116	141	1,848
239+55	23955.00	5.00	120.68	46.00	10.09	0.00	0.00	0.00	22	9	2	0	2,687	119	141	1,858
239+60	23960.00	5.00	120.58	46.00	9.77	0.00	0.00	0.00	22	9	2	0	2,709	121	141	1,869
239+65	23965.00	5.00	119.86	46.00	10.14	0.00	0.00	0.00	22	9	2	0	2,731	124	141	1,879
239+70	23970.00	5.00	119.21	46.00	11.06	0.00	0.00	0.00	22	9	2	0	2,753	126	141	1,890
239+75	23975.00	5.00	118.58	46.00	12.29	0.00	0.00	0.00	22	9	2	0	2,775	129	141	1,900
239+80	23980.00	5.00	118.42	46.00	12.13	0.00	0.00	0.00	22	9	2	0	2,797	132	141	1,910
239+85	23985.00	5.00	118.25	46.00	11.94	0.00	0.00	0.00	22	9	2	0	2,819	134	141	1,921
239+90	23990.00	5.00	118.00	46.00	12.51	0.00	0.00	0.00	22	9	2	0	2,841	137	141	1,931
239+95	23995.00	5.00	117.71	46.00	11.61	0.00	0.00	0.00	22	9	2	0	2,863	139	141	1,942
240+00	24000.00	5.00	118.04	46.00	11.37	0.00	0.00	0.00	22	9	2	0	2,885	142	141	1,952
240+05	24005.00	5.00	118.69	46.00	10.94	0.00	0.00	0.00	22	9	2	0	2,907	145	141	1,962
240+10	24010.00	5.00	119.65	46.00	10.64	0.00	0.00	0.00	22	9	2	0	2,929	147	141	1,973
240+15	24015.00	5.00	120.17	46.00	10.58	0.00	0.00	0.00	22	9	2	0	2,951	150	141	1,983
240+20	24020.00	5.00	121.09	46.00	9.77	0.00	0.00	0.00	22	9	2	0	2,973	152	141	1,994
240+25	24025.00	5.00	122.32	46.00	9.44	0.00	0.00	0.00	23	9	2	0	2,996	155	141	2,005

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DIVISION 1 - STH 38 CENTER ALIGNMENT (2020)

STATION	REAL STATION	DISTANCE	AREA (SF)						INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)			
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	ROCK EXC	CUT 1.00	EXPANDED FILL 1.30	EXPANDED ROCK 1.00	MASS ORDINATE
									NOTE 1	NOTE 2	NOTE 3		NOTE 1			NOTE 8
240+30	24030.00	5.00	113.25	46.00	11.13	0.00	0.00	0.00	22	9	2	0	3018	158	141	2,015
240+35	24035.00	5.00	125.89	50.00	15.43	0.00	0.00	0.00	22	9	2	0	3040	160	141	2,026
240+40	24040.00	5.00	126.28	54.00	15.16	0.00	0.00	0.00	23	10	3	0	3063	164	141	2,035
240+45	24045.00	5.00	126.58	54.00	14.81	0.00	0.00	0.00	23	10	3	0	3086	168	141	2,044
240+50	24050.00	5.00	126.01	54.00	14.54	0.00	0.00	0.00	23	10	3	0	3109	172	141	2,053
240+55	24055.00	5.00	125.33	54.00	14.05	0.00	0.00	0.00	23	10	3	0	3132	176	141	2,062
240+60	24060.00	5.00	124.88	54.00	13.10	0.00	0.00	0.00	23	10	3	0	3155	180	141	2,071
240+65	24065.00	5.00	124.62	54.00	12.12	0.00	0.00	0.00	23	10	2	0	3178	182	141	2,082
240+70	24070.00	5.00	124.48	54.00	11.37	0.00	0.00	0.00	23	10	2	0	3201	185	141	2,092
240+75	24075.00	5.00	125.44	54.00	9.05	0.00	0.00	0.00	23	10	2	0	3224	187	141	2,103
240+80	24080.00	5.00	126.25	54.00	7.76	0.00	0.00	0.00	23	10	2	0	3247	190	141	2,113
240+85	24085.00	5.00	127.07	54.00	5.86	0.00	3.00	0.00	23	10	1	0	3270	191	141	2,125
240+90	24090.00	5.00	126.75	54.00	4.28	0.00	5.00	0.00	24	10	1	1	3294	191	142	2,139
240+95	24095.00	5.00	124.53	54.00	3.14	0.00	8.00	0.00	23	10	1	1	3317	191	143	2,152
241+00	24100.00	5.00	122.10	54.00	2.82	0.00	10.00	0.00	23	10	1	2	3340	190	145	2,166
241+05	24105.00	5.00	114.87	54.00	2.06	0.00	10.00	0.00	22	10	0	2	3362	187	147	2,181
241+10	24110.00	5.00	109.03	54.00	1.18	0.00	10.00	0.00	21	10	0	2	3383	184	150	2,195
241+15	24115.00	5.00	89.18	54.00	1.24	0.00	10.00	0.00	18	10	0	2	3401	181	152	2,206
241+20	24120.00	5.00	91.09	54.00	4.61	0.00	10.00	0.00	17	10	1	2	3418	179	154	2,215
241+25	24125.00	5.00	85.01	36.00	6.42	0.00	10.00	0.00	16	8	1	2	3434	178	156	2,224
241+30	24130.00	5.00	80.11	28.00	7.40	0.00	10.00	0.00	15	6	1	2	3449	176	158	2,235
241+35	24135.00	5.00	75.94	26.00	8.33	0.00	10.00	0.00	14	5	1	2	3463	175	161	2,245
241+40	24140.00	5.00	72.70	25.00	8.62	0.00	10.00	0.00	14	5	2	2	3477	174	163	2,255
241+45	24145.00	5.00	70.59	23.00	7.34	0.00	10.00	0.00	13	4	1	2	3490	173	165	2,265
241+50	24150.00	5.00	69.00	22.00	6.45	0.00	10.00	0.00	13	4	1	2	3503	171	167	2,276
241+55	24155.00	5.00	68.44	23.00	6.07	0.00	8.00	0.00	13	4	1	2	3516	170	169	2,286
241+60	24160.00	5.00	67.47	23.00	3.01	0.00	8.00	0.00	13	4	1	1	3529	170	171	2,295
241+65	24165.00	5.00	68.01	23.00	2.94	0.00	8.00	0.00	13	4	1	1	3542	170	172	2,304
241+70	24170.00	5.00	67.29	23.00	2.76	0.00	8.00	0.00	13	4	1	1	3555	169	173	2,314
241+75	24175.00	5.00	67.84	23.00	2.40	0.00	8.00	0.00	13	4	0	1	3568	168	174	2,324
241+80	24180.00	5.00	68.35	24.00	2.32	0.00	8.00	0.00	13	4	0	1	3581	167	175	2,334
241+85	24185.00	5.00	69.31	24.00	2.02	0.00	8.00	0.00	13	4	0	1	3594	165	176	2,345
241+90	24190.00	5.00	70.31	25.00	1.69	0.00	8.00	0.00	13	5	0	1	3607	164	177	2,354
241+95	24195.00	5.00	70.99	25.00	1.63	0.00	8.00	0.00	13	5	0	1	3620	162	178	2,364
242+00	24200.00	5.00	71.72	25.00	1.35	0.00	6.00	0.00	13	5	0	1	3633	161	179	2,373
242+05	24205.00	5.00	72.53	25.00	1.29	0.00	5.00	0.00	13	5	0	1	3646	159	180	2,383
242+10	24210.00	5.00	72.81	25.00	1.62	0.00	3.00	0.00	13	5	0	1	3659	158	182	2,392
242+15	24215.00	5.00	73.69	25.00	1.37	0.00	0.00	0.00	14	5	0	0	3673	158	182	2,401
242+20	24220.00	5.00	74.13	25.00	1.25	0.00	0.00	0.00	14	5	0	0	3687	158	182	2,410
242+21.034	24221.03	1.03	74.21	26.00	1.28	0.00	0.00	0.00	3	1	0	0	3690	158	182	2,412
242+50	24250.00	28.97	75.23	27.00	1.71	0.00	0.00	0.00	80	28	2	0	3770	161	182	2,461
243+00	24300.00	50.00	81.65	27.00	1.91	0.00	0.00	0.00	145	50	3	0	3915	164	182	2,553
243+50	24350.00	50.00	89.42	30.00	0.22	0.00	0.00	0.00	158	53	2	0	4073	167	182	2,655
244+00	24400.00	50.00	88.38	30.00	0.82	0.00	0.00	0.00	165	56	1	0	4238	168	182	2,763
244+37.936	24437.94	37.94	65.25	30.00	0.00	0.00	0.00	0.00	108	42	1	0	4346	170	182	2,827

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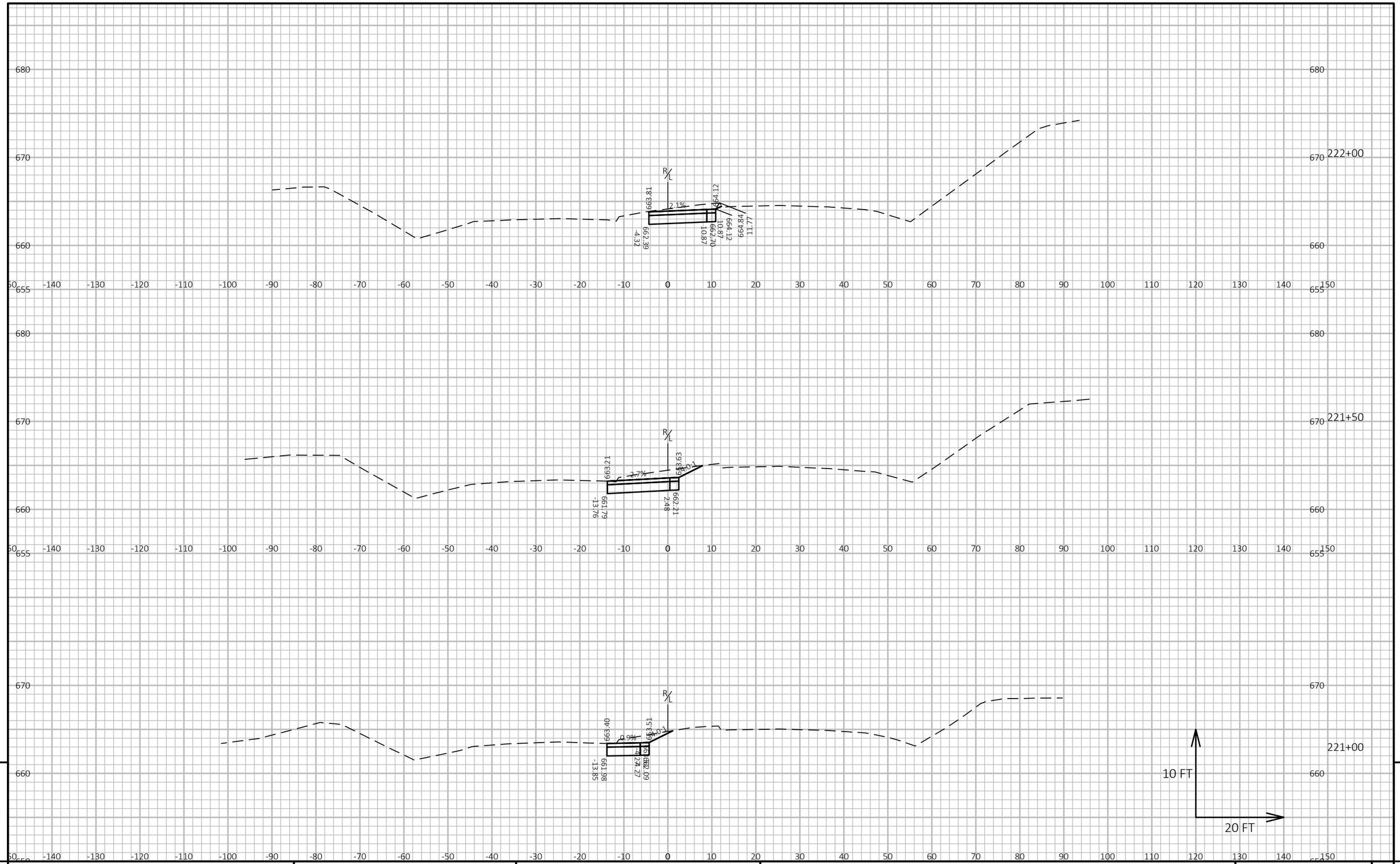
PROJECT NO: 2290-03-73 | HWY: STH 38 | COUNTY: RACINE | EARTHWORK TABLE: STH 38 STAGE 2 | SHEET 426 | E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\090101_EW.DWG
LAYOUT NAME - 090105_ew

PLOT DATE : 8/1/2023 6:55 AM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42



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PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CROSS SECTIONS: WEST CROSSOVER	SHEET 427	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090201_xs

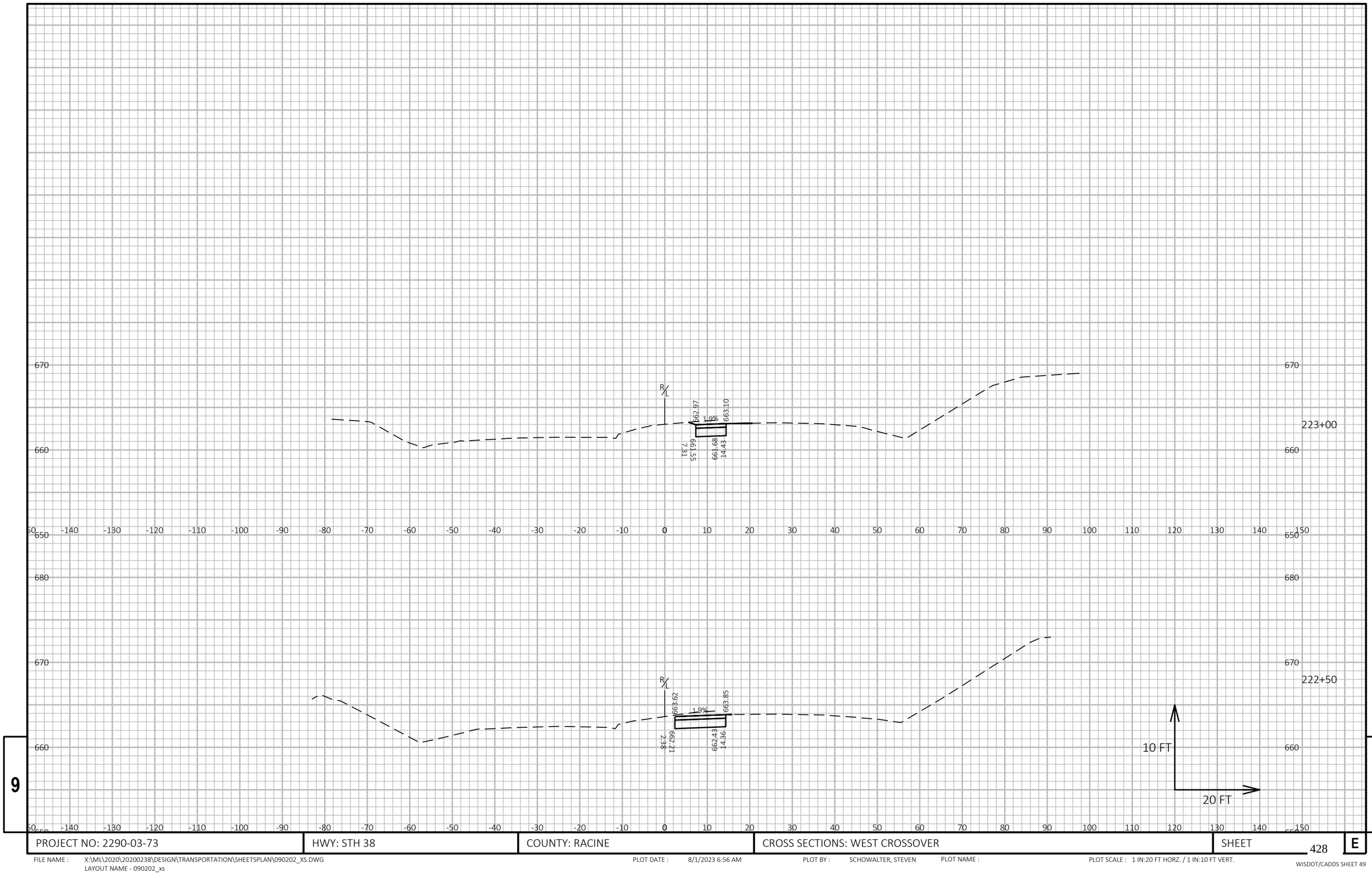
PLOT DATE : 8/1/2023 6:56 AM

PLOT BY : SCHOWALTER, STEVEN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CROSS SECTIONS: WEST CROSSOVER	SHEET 428	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs

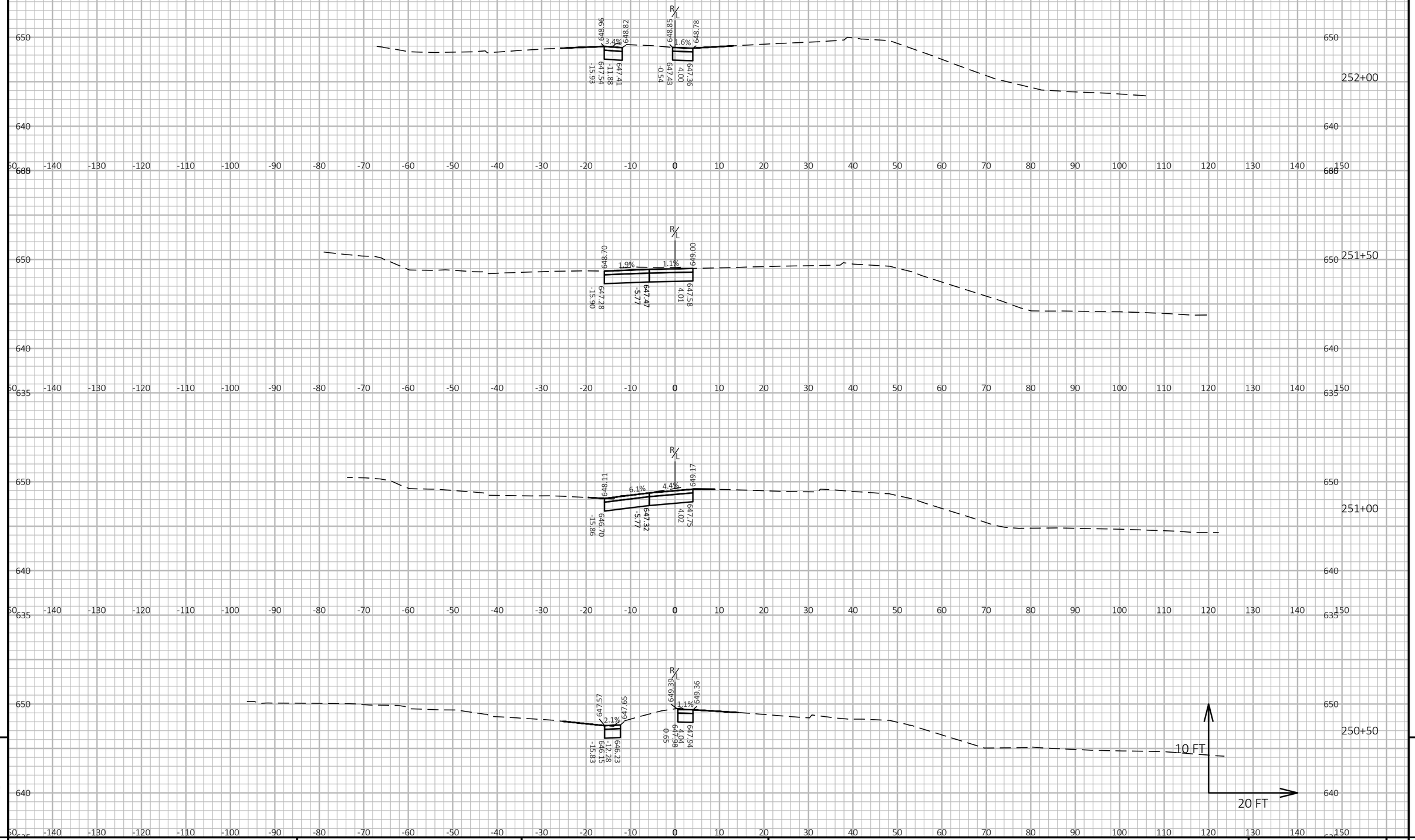
PLOT DATE : 8/1/2023 6:56 AM

PLOT BY : SCHOWALTER, STEVEN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CROSS SECTIONS: EAST CROSSOVER	SHEET 429	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090201_xs

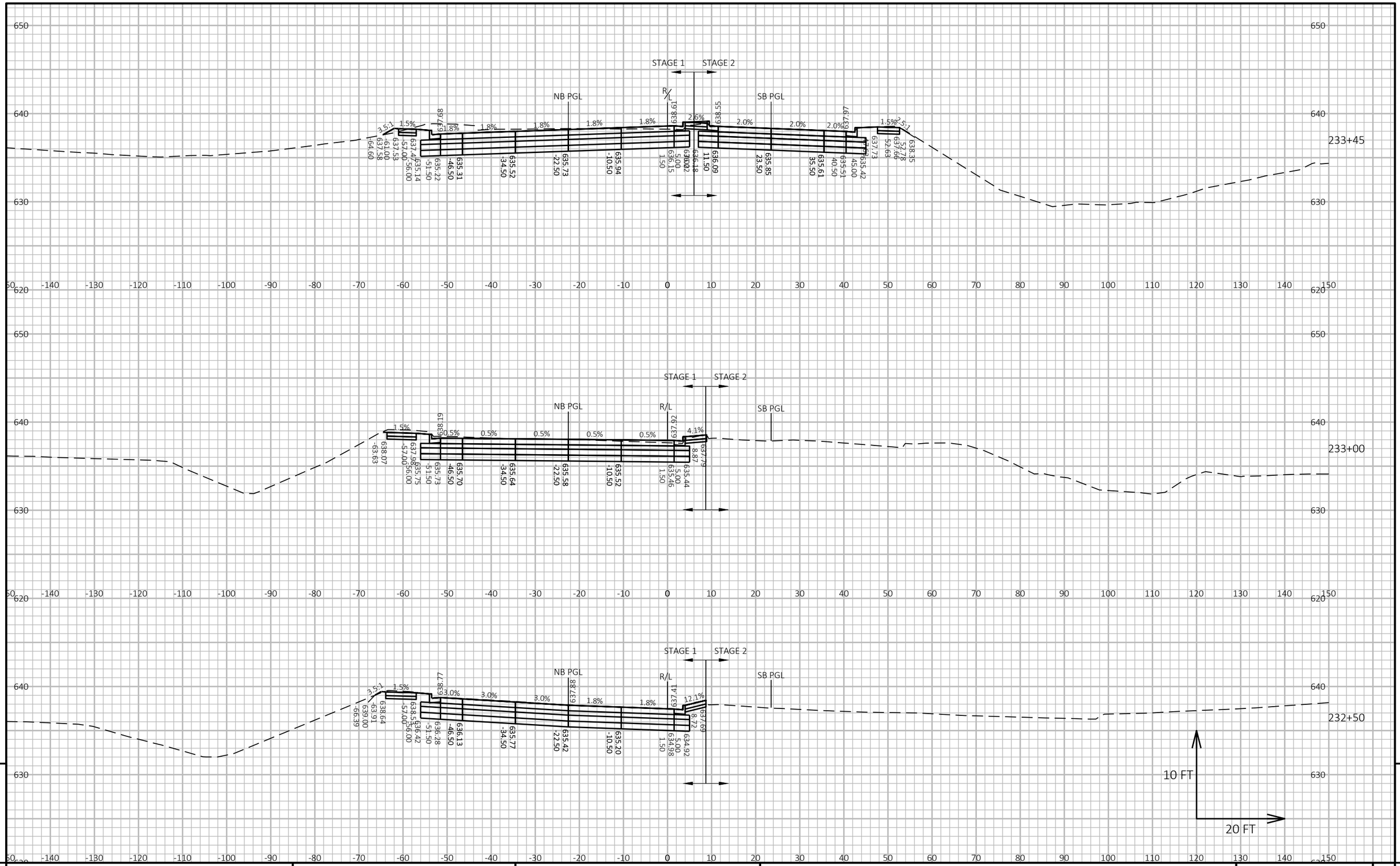
PLOT DATE : 8/1/2023 6:57 AM

PLOT BY : SCHOWALTER, STEVEN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



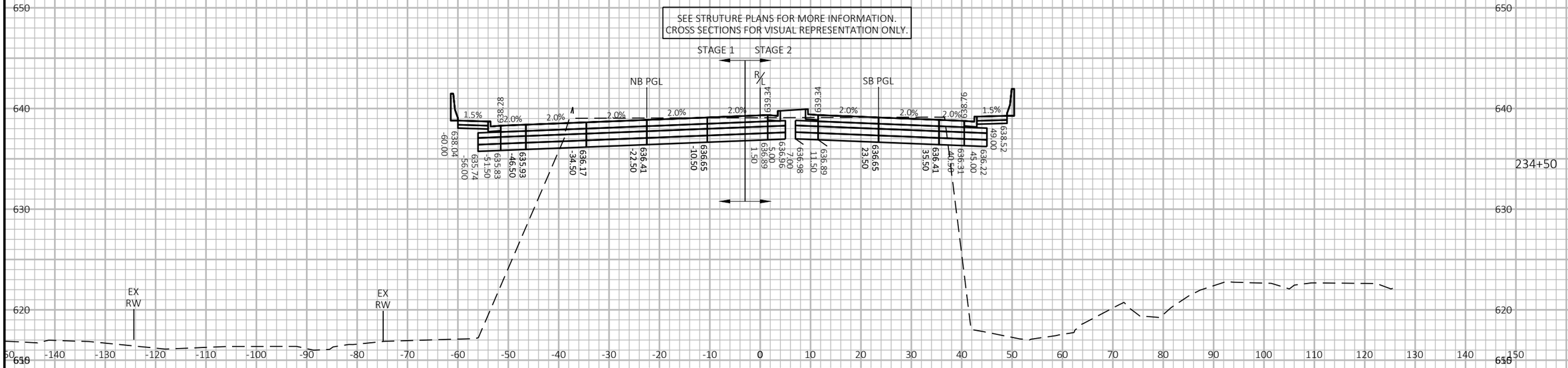
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CROSS SECTIONS: STH 38	SHEET 430 E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_xs

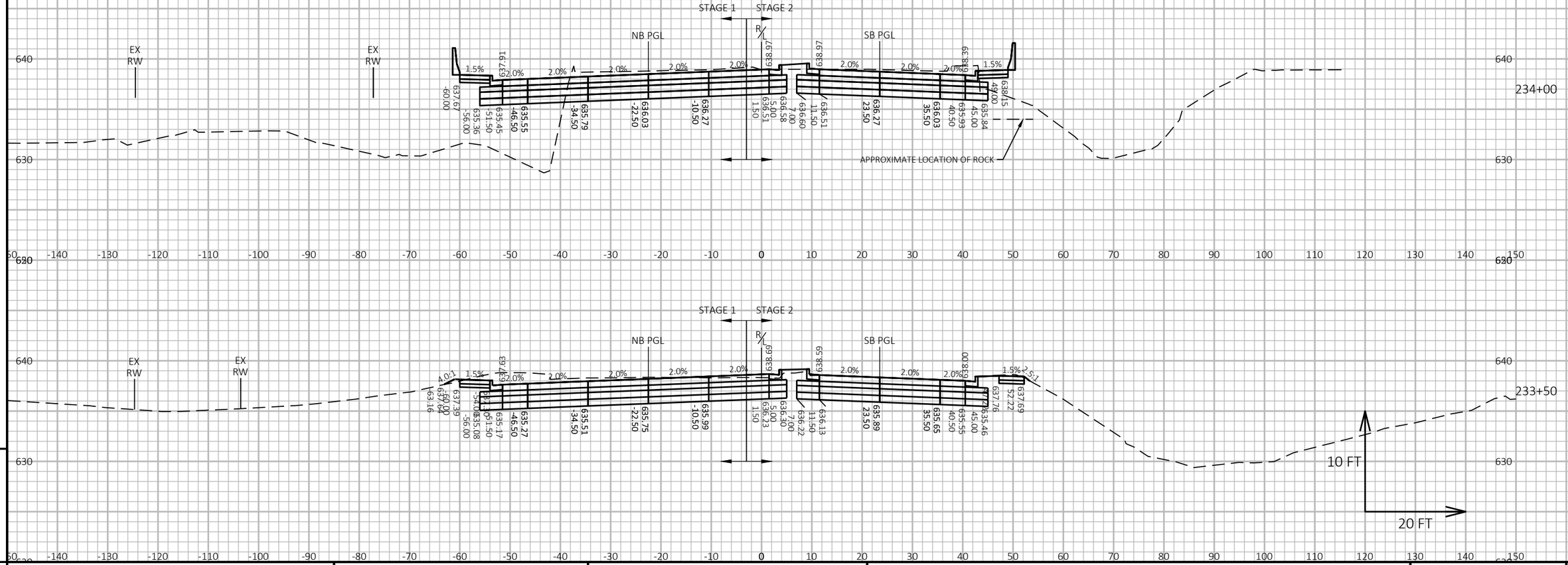
PLOT DATE : 8/1/2023 6:57 AM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

SEE STRUTURE PLANS FOR MORE INFORMATION.
CROSS SECTIONS FOR VISUAL REPRESENTATION ONLY.



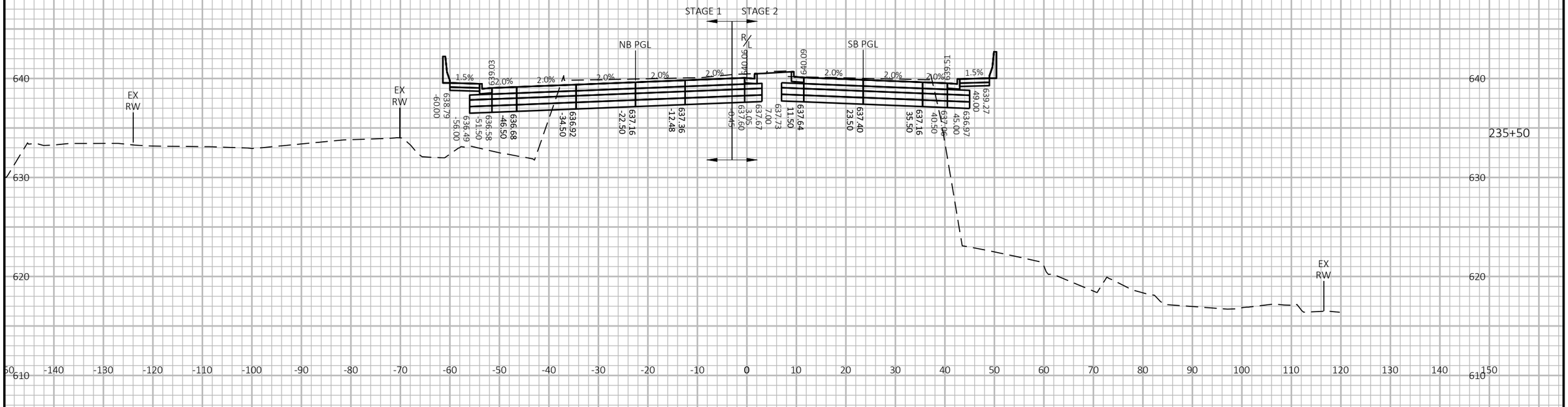
SEE STRUTURE PLANS FOR MORE INFORMATION.
CROSS SECTIONS FOR VISUAL REPRESENTATION ONLY.



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CROSS SECTIONS: STH 38	SHEET 431	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090202_xs
PLOT DATE : 8/1/2023 6:57 AM
PLOT BY : SCHOWALTER, STEVEN
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

SEE STRUTURE PLANS FOR MORE INFORMATION.
CROSS SECTIONS FOR VISUAL REPRESENTATION ONLY.



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PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CROSS SECTIONS: STH 38	SHEET 432	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090203_xs

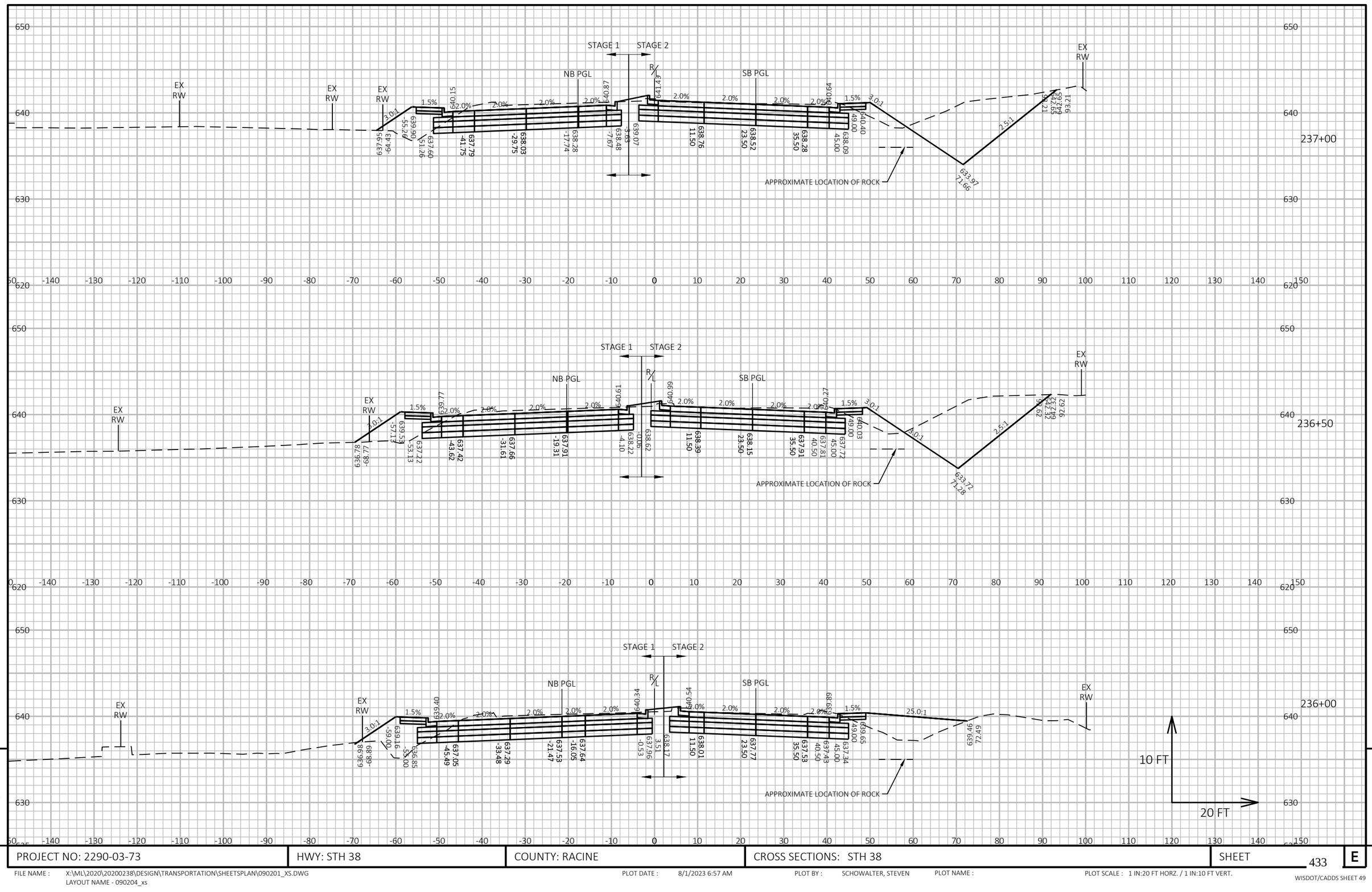
PLOT DATE : 8/1/2023 6:57 AM

PLOT BY : SCHOWALTER, STEVEN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

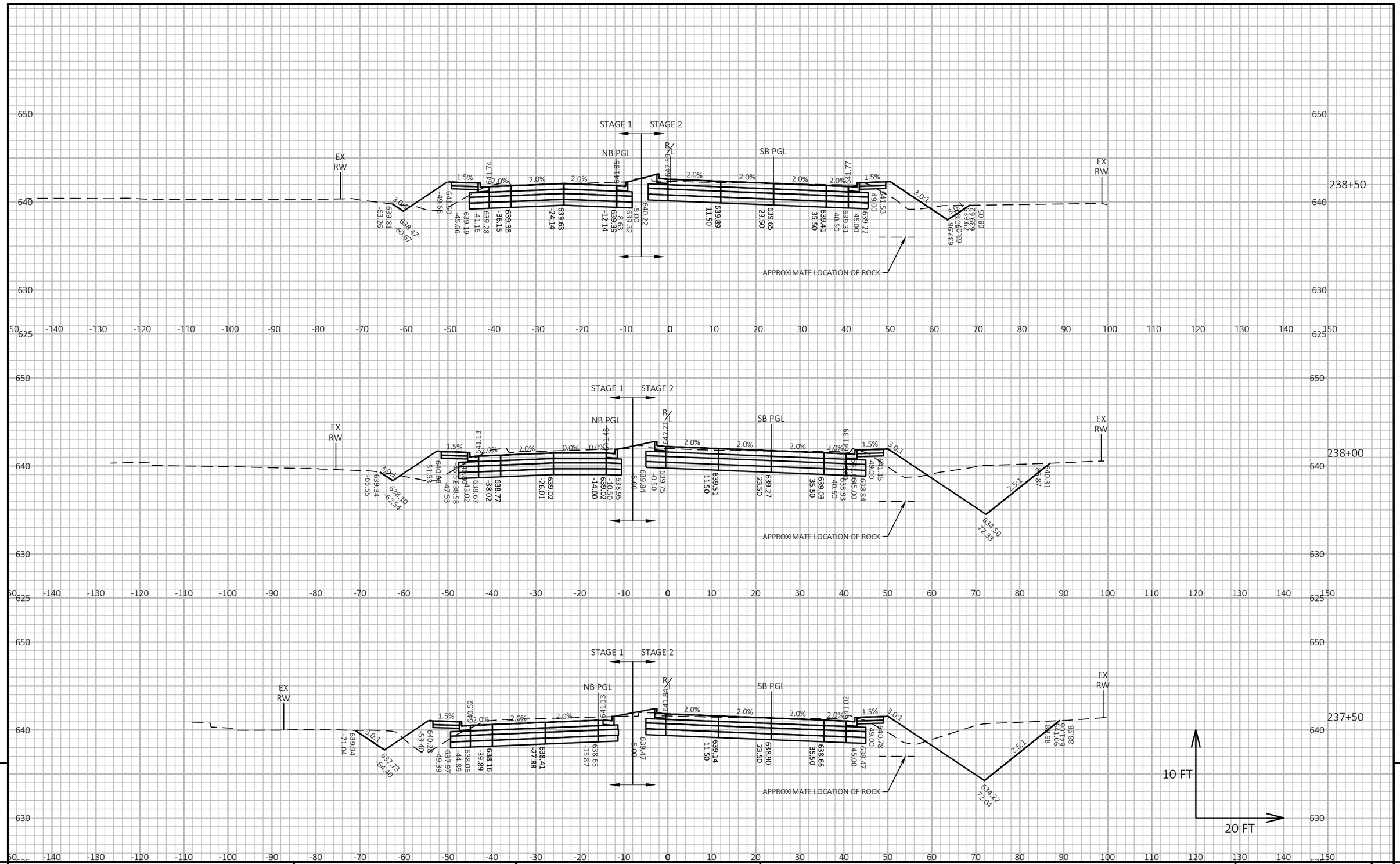


PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CROSS SECTIONS: STH 38	SHEET 433 E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090204_xs

PLOT DATE : 8/1/2023 6:57 AM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CROSS SECTIONS: STH 38	SHEET 434	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090205_xs

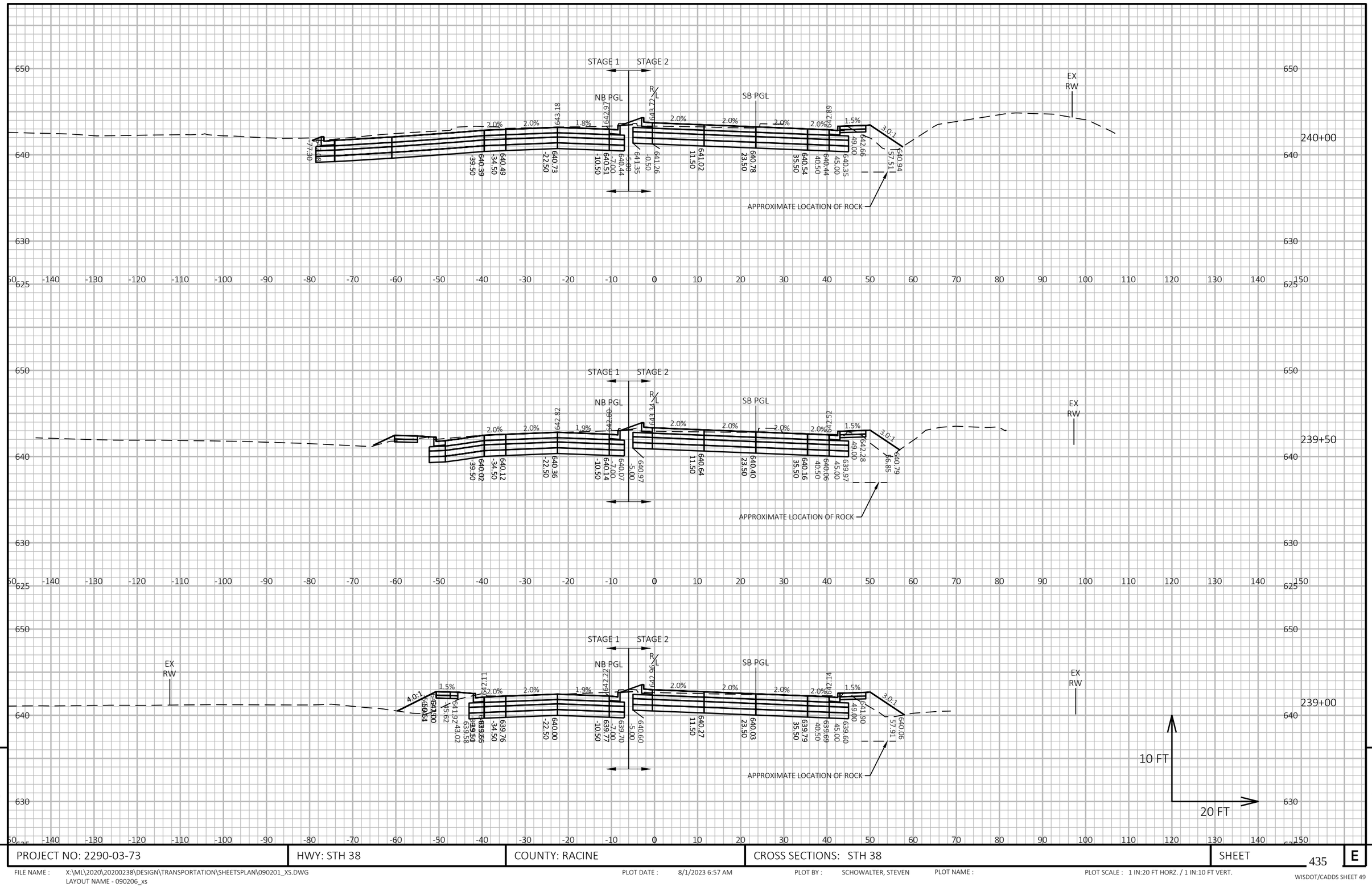
PLOT DATE : 8/1/2023 6:57 AM

PLOT BY : SCHOWALTER, STEVEN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CROSS SECTIONS: STH 38	SHEET 435 E

FILE NAME : X:\MIL\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090206_xs

PLOT DATE : 8/1/2023 6:57 AM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CROSS SECTIONS: STH 38	SHEET 436	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090207_xs

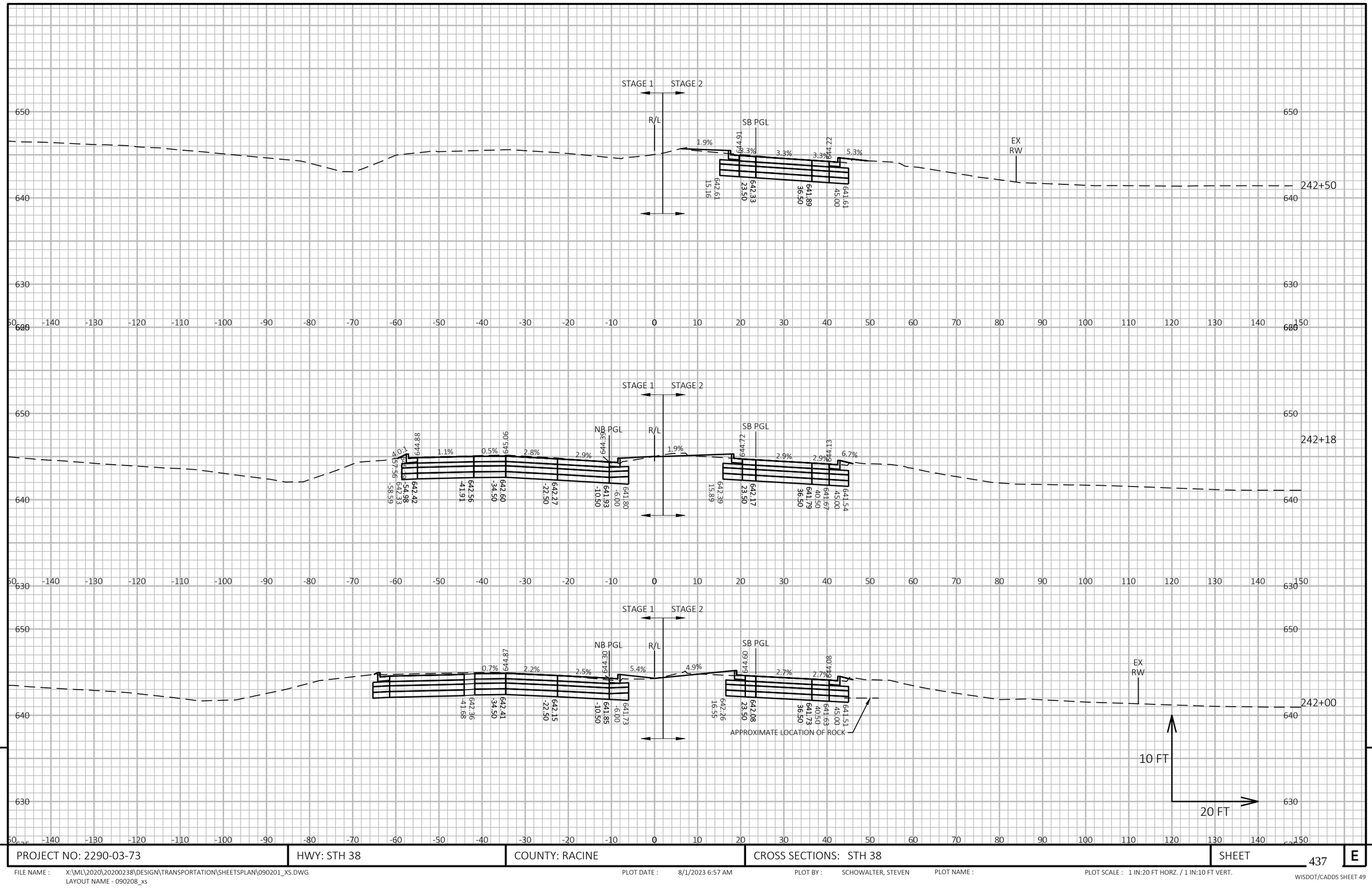
PLOT DATE : 8/1/2023 6:57 AM

PLOT BY : SCHOWALTER, STEVEN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

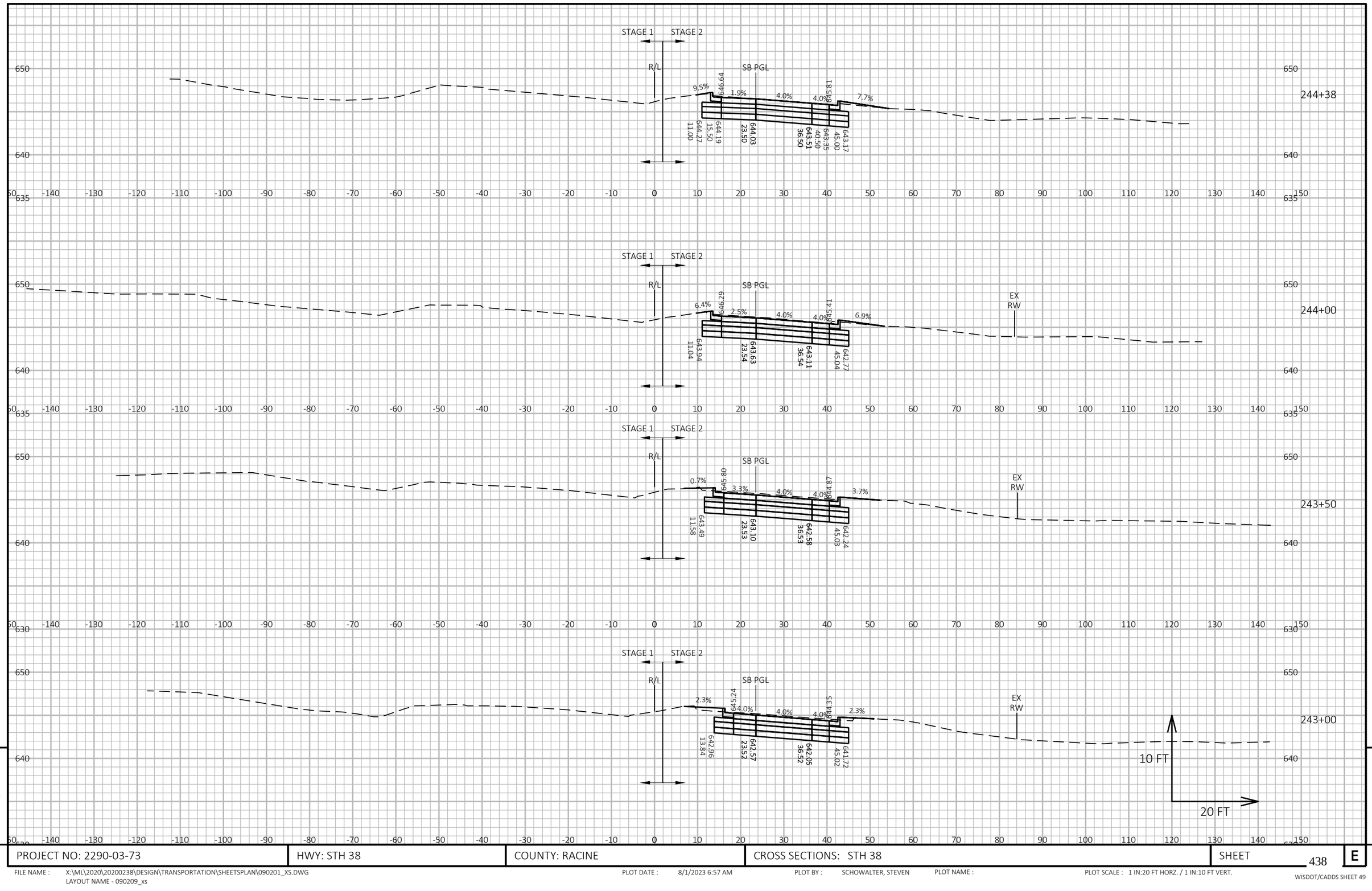


PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CROSS SECTIONS: STH 38	SHEET 437 E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090208_xs

PLOT DATE : 8/1/2023 6:57 AM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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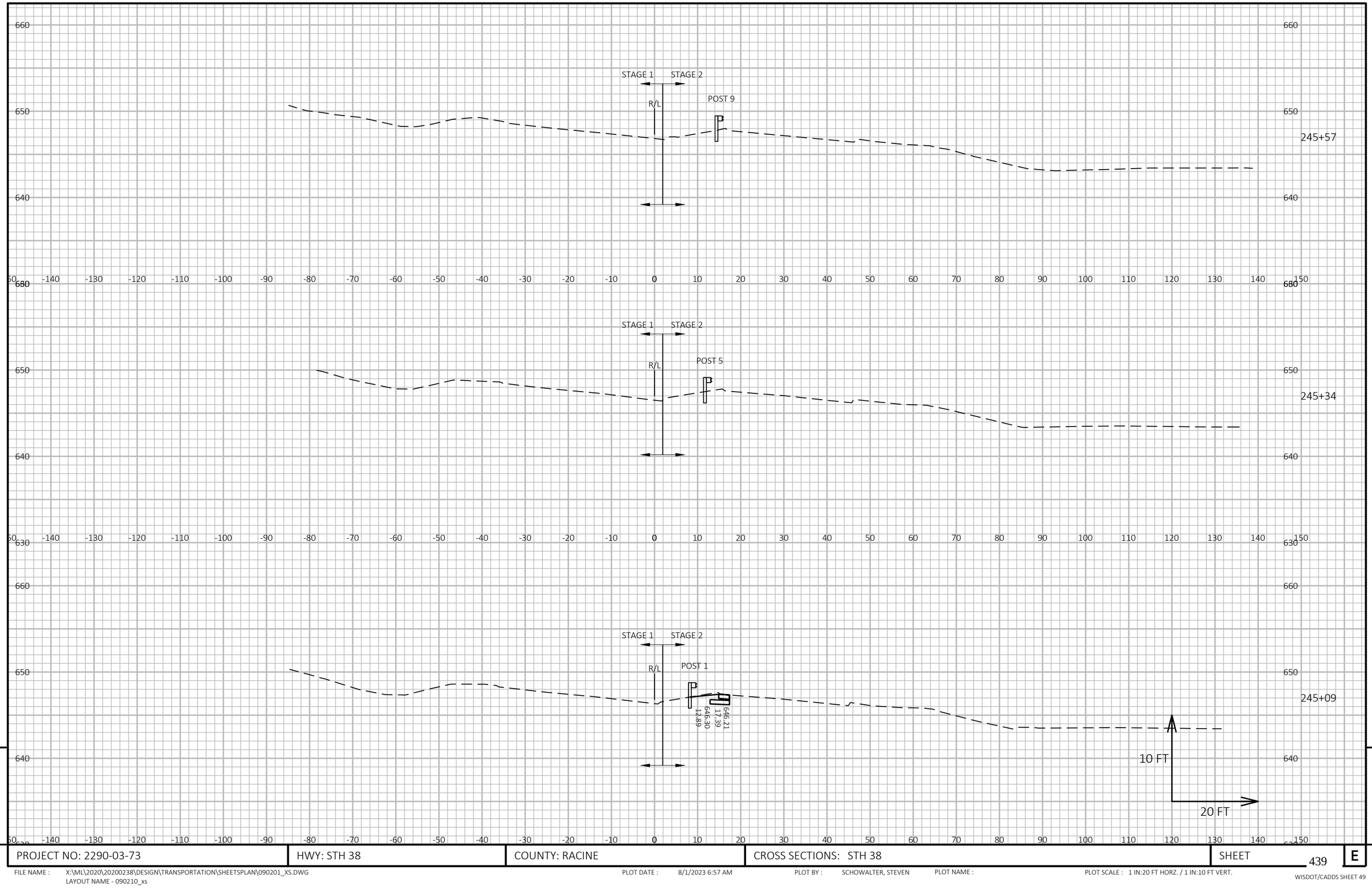
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CROSS SECTIONS: STH 38	SHEET 438	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090209_xs

PLOT DATE : 8/1/2023 6:57 AM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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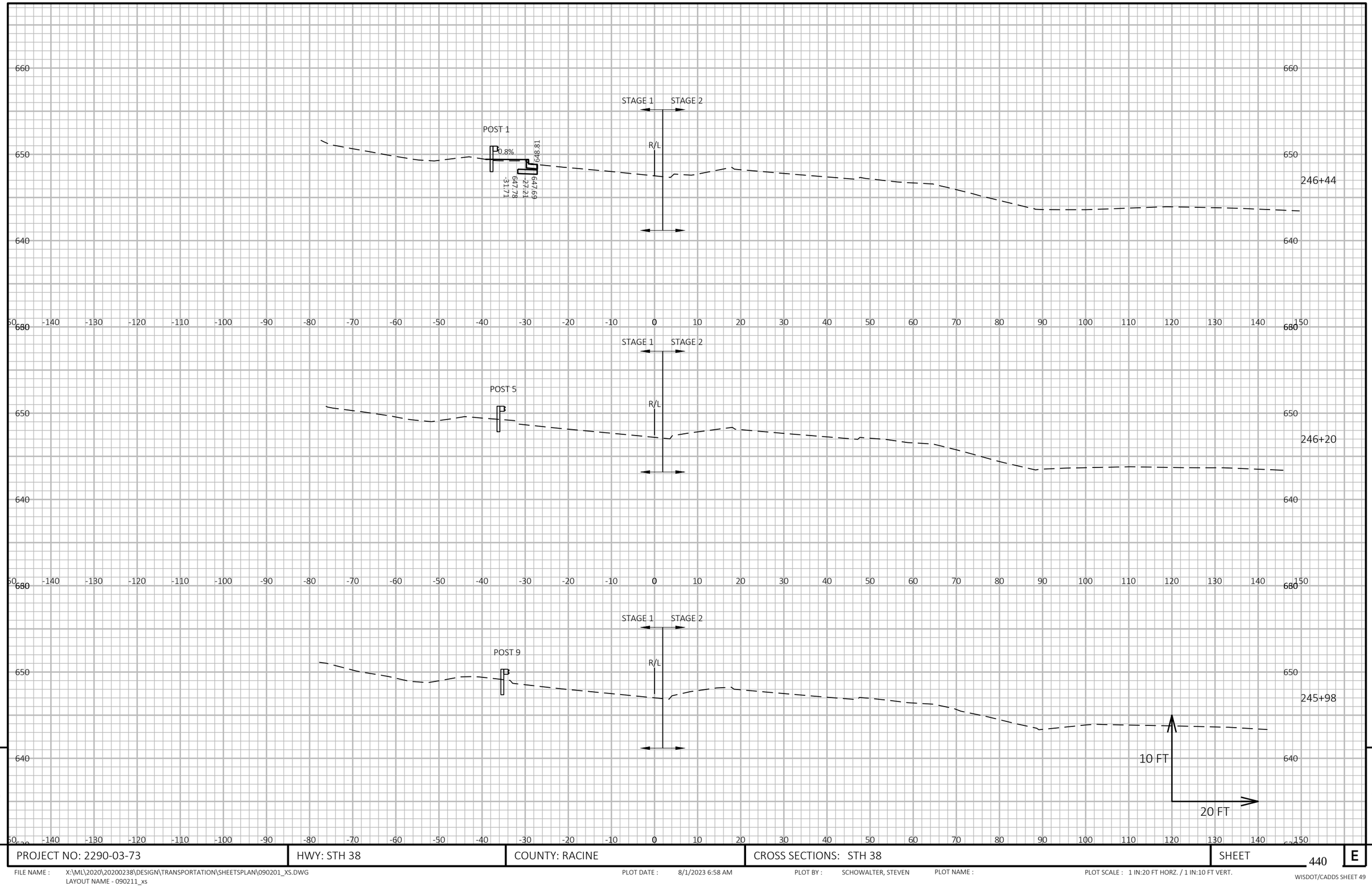
PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CROSS SECTIONS: STH 38	SHEET 439	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090210_xs

PLOT DATE : 8/1/2023 6:57 AM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CROSS SECTIONS: STH 38	SHEET 440	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090211_xs

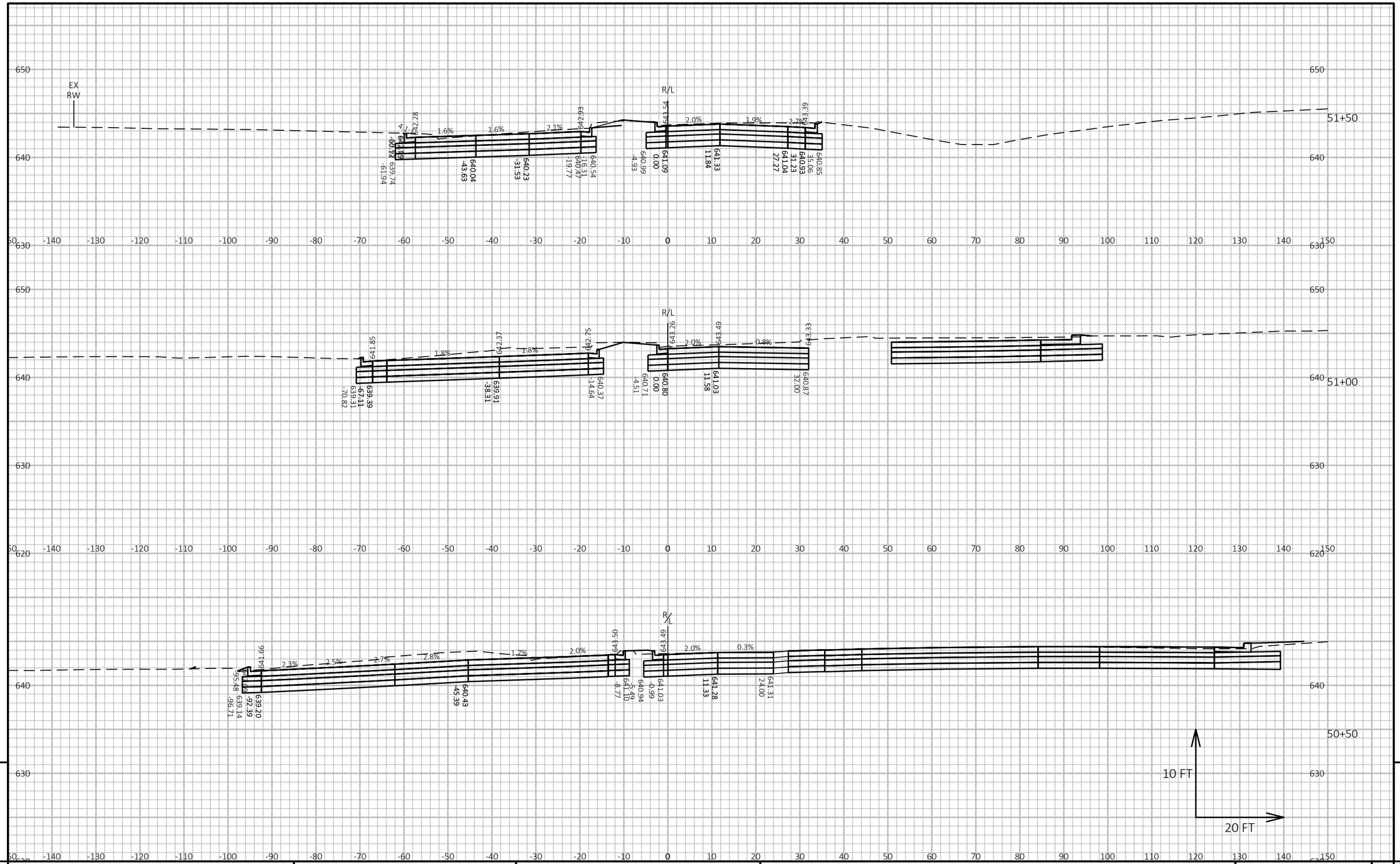
PLOT DATE : 8/1/2023 6:58 AM

PLOT BY : SCHOWALTER, STEVEN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

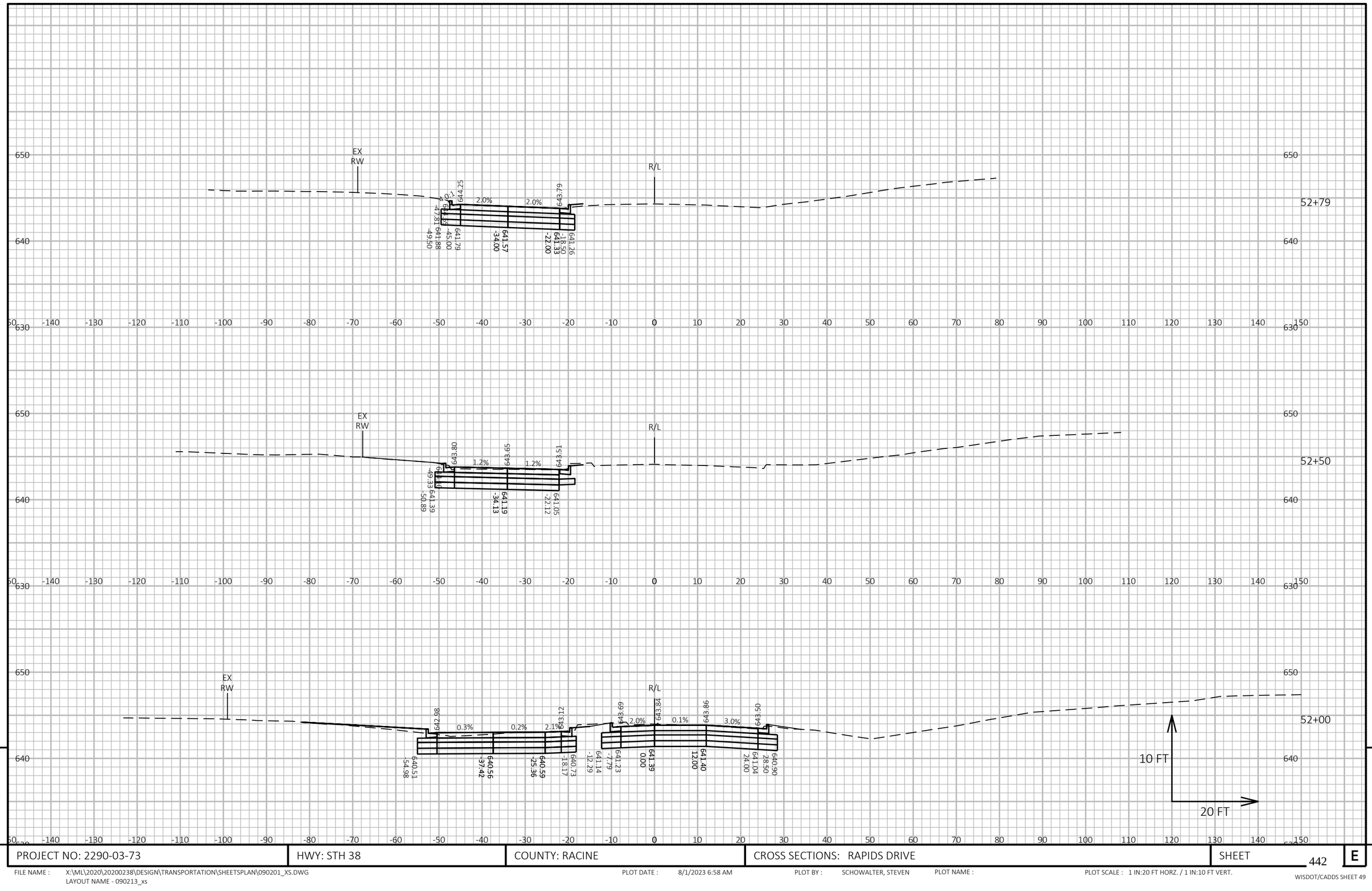


PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CROSS SECTIONS: RAPIDS DRIVE	SHEET 441	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090212_xs

PLOT DATE : 8/1/2023 6:58 AM PLOT BY : SCHOWALTER, STEVEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 2290-03-73	HWY: STH 38	COUNTY: RACINE	CROSS SECTIONS: RAPIDS DRIVE	SHEET 442	E

FILE NAME : X:\ML\2020\20200238\DESIGN\TRANSPORTATION\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090213_xs

PLOT DATE : 8/1/2023 6:58 AM

PLOT BY : SCHOWALTER, STEVEN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov