WKE AUGUST 2023

PROJECT ID: 1360-13-70

WITH: 1360-13-71

COUNTY: MILWAUKEE

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1360-13-70	WISC 2023578	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

C MILWAUKEE, FOND DU LAC AVE

76TH, PED BRIDGES

STH 145

MILWAUKEE COUNTY

STATE PROJECT NUMBER
1360-13-70

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 = 316

N

DESIGN DESIGNATION 76TH ST. (STH 181)

A.A.D.T.	2022	=	28,800
A.A.D.T.	2042	=	31,600
D.H.V.		=	-
D.D.		=	-
T.		=	-
DESIGN SPEED		=	40 MPH
ESALS		=	-

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

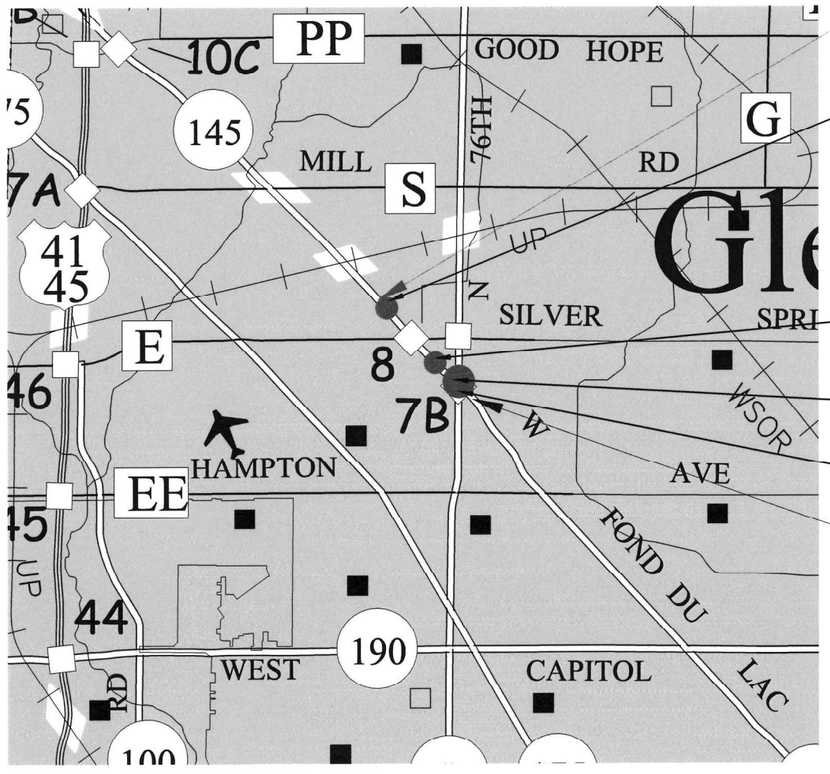
- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

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

R-21-E

T-8-N



BEGIN PROJECT
STA 143+89.65
X: 577,607.623
Y: 330,241.646

STRUCTURE B-40-297 (84th ST. PED. BRIDGE)
NW OF SILVER SPRING DR. ON 84TH ST.

STRUCTURE B-40-298 (SHERIDAN AVE. PED. BRIDGE)
SW OF SILVER SPRING DR. ON W. SHERIDAN AVE.

STRUCTURE B-40-255 (SB 76TH ST.)
STA 50+58 - STA 53+47

STRUCTURE B-40-256 (NB 76TH ST.)
STA 50+10 - STA 53+30

END PROJECT
STA 182+48.01

LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.731 MI

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

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

ORIGINAL PLANS PREPARED BY

benesch
Alfred Benesch & Company
1300 West Canal Street, Suite 150
Milwaukee, Wisconsin 53233
414-308-1610 main no. 20288.00

WISCONSIN
BENJAMIN J. WEIGAND
E-39495
RACINE, WI
PROFESSIONAL ENGINEER

DATE: 5-19-2023 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	GRAEF
Designer	BENESCH
Project Manager	MARTIN VILLACA
Regional Examiner	
Regional Supervisor	JOSH LEVEQUE

APPROVED FOR THE DEPARTMENT

DATE: 5-19-2023 (Signature)

E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\010101_TI.DWG

PLOT DATE : 5/19/2023 1:40 PM PLOT BY : WEIGAND, BEN PLOT NAME :

2

GENERAL NOTES

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WIHTIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.
2. THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPALITY OR PUBLIC AGENCY WHICH IS NOT A MEMBER OF DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.
3. ALL ELEVATIONS AND OFFSETS SHOWN IN THE PLAN SHALL BE VERIFIED IN THE FIELD.
4. NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.
5. THE COST OF GRADING, CONSTRUCTING, MAINTAINING, AND REMOVING TEMPORARY ACCESS IS INCIDENTAL TO THE CONTRACT.
6. HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY-IN
7. THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING OR TURNING LANE.

EROSION CONTROL GENERAL NOTES

1. RE-TOPSOIL DISTURBED AREAS, AS DESIGNATED BY THE ENGINEER. SEED AND E-MAT TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.
2. STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. 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.
3. QUANTITIES FOR EROSION CONTROL ITEMS HAVE BEEN INCLUDED IN THE PROJECT, BUT MAY NOT BE REPRESENTED ON THE PLAN. THE LOCATIONS AND TYPE OF EROSION CONTROL ITEMS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER. EROSION CONTROL ITEMS SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE ITEMS IS NO LONGER REQUIRED.

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANCE (PERCENT)			SLOPE RANCE (PERCENT)			SLOPE RANCE (PERCENT)			SLOPE RANCE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	0.08 0.22	0.16 0.30	0.22 0.38	0.12 0.26	0.20 0.34	0.27 0.44	0.15 0.30	0.24 0.37	0.33 0.50	0.19 0.34	0.28 0.41	0.38 0.56
MEDIAN STRIP TURF	0.19 0.24	0.20 0.26	0.24 0.30	0.19 0.25	0.22 0.28	0.26 0.33	0.20 0.26	0.23 0.30	0.30 0.37	0.20 0.27	0.25 0.32	0.30 0.40
SIDE SLOPE TURF	0.25 0.34	0.27 0.36	0.25 0.32	0.30		0.27 0.34			0.28 0.36			0.30 0.38
PAVEMENT:												
ASPHALT	0.70 - 0.95											
CONCRETE	0.80 - 0.95											
BRICK	0.70 -0.80											
DRIVES, WALKS	0.75 - 0.85											
ROOFS	0.75 - 0.95											
GRAVEL ROADS, SHOULDERS	0.40 - 0.60											

TOTAL PROJECT AREA = 1.70 ACRES

TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.55 ACRES

DIGGERS HOTLINE

Dial 811 or (800)242-8511

www.DiggersHotline.com

WISDOT CONTACT

Southeast Region
Vida Shaffer
141 NW BARSTOW ST
WAUKESHA, WI 53188
PHONE: (414) 333-9116
EMAIL: VIDA.SHAFFER@dot.wi.gov

DESIGN CONTACT

Alfred Benesch & Co
Bill Zippel
1300 W Canal St, Suite 150
Milwaukee, WI 53233
PHONE: (414) 308-1310
wzippel@benesch.com

DNR CONTACT

DNR - Southeast Region
Kristina Betzold
2300 N Martin Luther King Jr Dr
Milwaukee, WI 53212
PHONE: (414) 507-4946
EMAIL: kristina.betzold@wisconsin.gov

ORDER OF SECTION 2 SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
CURB RAMP DETAILS
JOINT DETAILS
EROSION CONTROL PLAN
CITY UNDERGROUND CONDUIT
PERMANENT SIGNING
STREET LIGHTING
TEMPORARY TRAFFIC SIGNAL PLAN
TRAFFIC SIGNAL INTERCONNECT
PAVEMENT MARKING
TRAFFIC CONTROL
ALIGNMENT PLAN

UTILITIES

COMMUNICATIONS

AT&T LOCAL NETWORK
TIMOTHY LAPOINTE
1301 FANNIN STREET
HOUSTON, TX 77002
PHONE: (281) 352-3631
EMAIL: tl0695@ATT.COM

COMMUNICATIONS

AT&T WISCONSIN
JAY BULANEK
2005 PEWAUKEE RD
WAUKESHA, WI 53188-2443
PHONE: (262) 896-7669
EMAIL: JB5175@ATT.COM

COMMUNICATIONS

CITY OF MILWAUKEE - COMMUNICATIONS
COMMUNICATIONS DISPATCH
1440 WEST CANAL STREET
MILWAUKEE, WI 53202
PHONE: (414) 286-3686

UNDERGROUND CONDUIT

CITY OF MILWAUKEE - UNDERGROUND CONDUIT
HAZAM RAMADAN
841 N BROADWAY, ROOM 920
MILWAUKEE, WI 53202
PHONE: (414) 286-3242
EMAIL: HRAMAD@MILWAUKEE.GOV

ELECTRICITY

CITY OF MILWAUKEE - STREET LIGHTING
ENG-KIE LEE
841 N BROADWAY
MILWAUKEE, WI 53202
PHONE: (414) 286-2174
EMAIL: ELEE@MILWAUKEE.GOV

SEWER

CITY OF MILWAUKEE - SEWER
ZAFAR YOUSUF
841 N BROADWAY
MILWAUKEE, WI 53202
PHONE:
EMAIL: ZYOUSU@MILWAUKEE.GOV

WATER

CITY OF MILWAUKEE - MILWAUKEE WATER WORKS
DAVE GOLDAPP
841 N BROADWAY, ROOM 40
MILWAUKEE, WI 53202
PHONE: (414) 286-6301
EMAIL: DAVE.GOLDAPP@MILWAUKEE.GOV

COMMUNICATIONS

EVERSTREAM
SHAD GARCIA
324 E Wisconsin Ave, Suite 730
Milwaukee, WI 53202
PHONE: (414) 522-6685
EMAIL: SGARCIA@EVERSTREAM.NET

SEWER

MILWAUKEE METRO SEWERAGE DISTRICT
MICHAEL LEE
260 W SEEBOTH STREET
MILWAUKEE, WI 53204
PHONE: (414) 225-2241
EMAIL: MLEE@MMSD.CO

COMMUNICATIONS

PAETEC COMMUNICATIONS
ERIC BECKER
314 N DANZ AVE
GREEN BAY, WI 54302-3526
PHONE: (920) 461-9825
EMAIL: ERICBECKER@WINDSTREAM.COM

COMMUNICATIONS

SPECTRUM
BEAU ABUYA
1320 N DR MARTIN LUTHER KIND JR DR
MILWAUKEE, WI 53212
PHONE: (414) 758-9241
EMAIL: BEAU.ABUYA@CHARTER.COM

COMMUNICATIONS

VERIZON BUSINESS
RJ Cicatello Jr.
15725 W RYERSON RD
New Berlin, WI 53151
PHONE: (262) 232-1323
EMAIL: randy.cicatello@verizon.com

ELECTRICITY

WE ENERGIES - ELECTRICITY
TODD WIEDOFF
W 140 N9100 LILLY RD
MENOMONEE FALLS, WI 53051
PHONE: (262) 502-6818
EMAIL: TODD.WIEDOFF@WE-ENERGIES.COM

GAS/PETROLEUM

WE ENERGIES - GAS
JACOB HULBERT
500 S 116TH STREET
WEST ALLIS, WI 53214
PHONE: (414) 944-5575
WE-UTILITY-RELOCATIONS@WE-ENERGIES.COM

ELECTRICITY

WISDOT - STREET LIGHTING
ERIC PEREA
141 NW BARSTOW STREET
WAUKESHA, WI 53188
PHONE: (262) 574-5422
ERICPEREA@DOT.WI.GOV

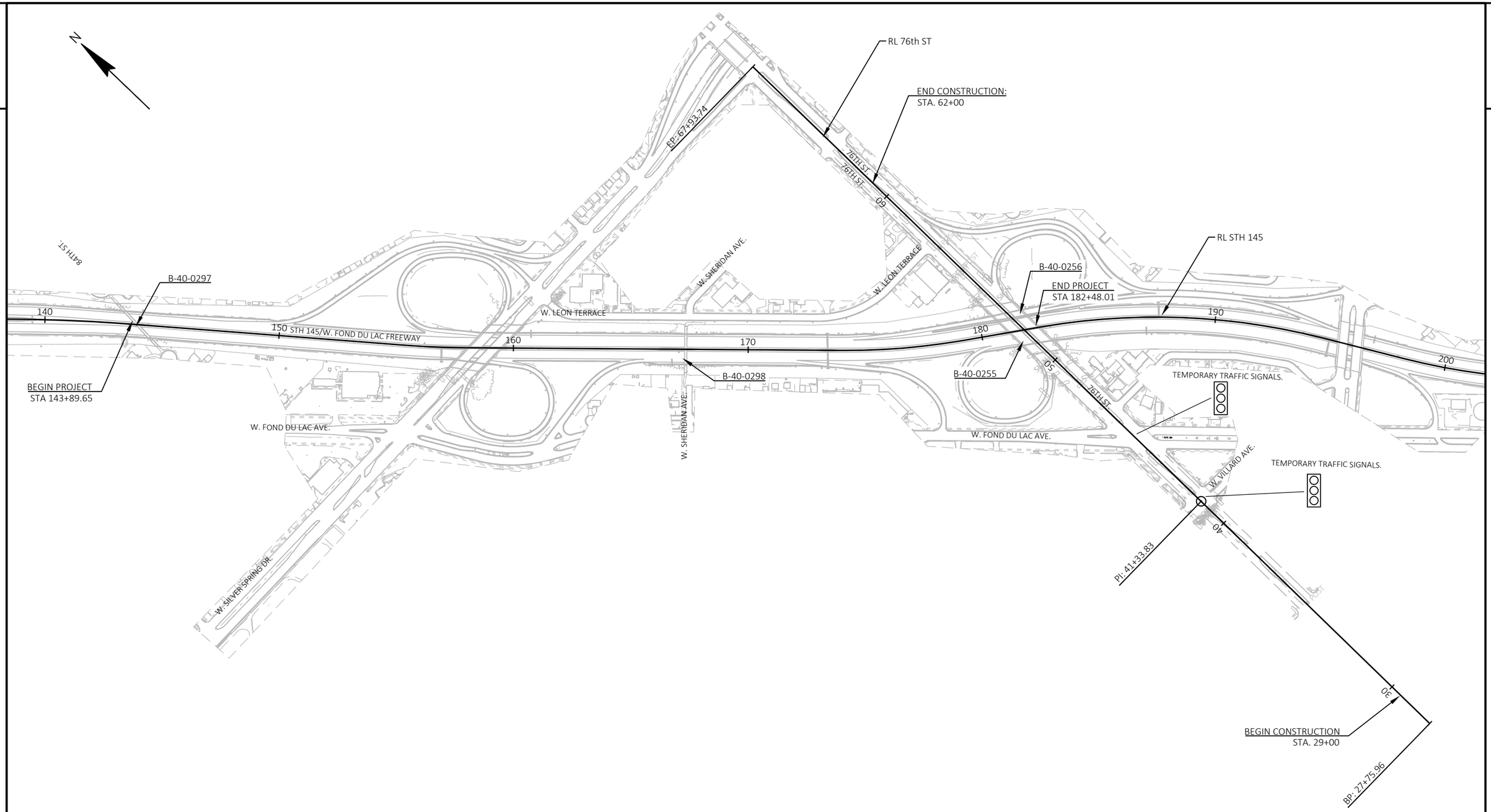
ELECTRICITY

WISDOT - SIGNAL OPERATIONS
WISDOT ELECTRICAL FIELD UNIT
141 NW BARSTOW STREET
WAUKESHA, WI 53188
PHONE: (414) 750-2605

LIST OF STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AC	ACRE
AGG	AGGREGATE
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ASPH	ASPHALT
AVG	AVERAGE
ADT	AVERAGE DAILY TRAFFIC
BF	BACK FACE
BL	BASE LINE
BM	BENCH MARK
CB	CATCH BASIN
C/L	CENTERLINE
CC	CENTER TO CENTER
CE	COMMERCIAL ENTRANCE
CONC	CONCRETE
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CY	CUBIC YARD
CULV	CULVERT
C&G	CURB AND GUTTER
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
DD	DIRECTIONAL DISTRIBUTION
E	EAST
X	EAST GRID COORDINATE
EB	EASTBOUND
ELEC	ELECTRIC
ELEV	ELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
FF	FACE TO FACE
FE	FIELD ENTRANCE
FG	FINISHED GRADE
FL	FLOW LINE
FT	FOOT
FTMS	FREEWAY TRAFFIC MANAGEMENT SYSTEM
HES	HIGH EARLY STRENGTH
CWT	HUNDREDWEIGHT
HYD	HYDRANT
IN DIA	INCH DIAMETER
INL	INLET
ID	INSIDE DIAMETER
INV	INVERT
IP	IRON PIPE
JT	JOINT
JCT	JUNCTION
LT	LEFT
L	LENGTH OF CURVE
LHF	LEFT-HAND FORWARD
LF	LINEAR FOOT
L	LITER
LS	LUMP SUM
MH	MANHOLE
MB	MESSAGE BOARD
MLB	MAILBOX
ML	MATCH LINE
NC	NORMAL CROWN
N	NORTH
Y	NORTH GRID COORDINATE
NB	NORTHBOUND
NO	NUMBER
OD	OUTSIDE DIAMETER
PAVT	PAVEMENT
PERM	PERMANENT
PLE	PERMANENT LIMITED EASEMENT
PT	POINT
PVC	POLYVINYL CHLORIDE
PCC	PORTLAND CEMENT CONCRETE
PE	PRIVATE ENTRANCE
PROJ	PROJECT
PL	PROPERTY LINE
R	RADIUS
R/L	REFERENCE LINE
RCCP	REINFORCED CONCRETE CULVERT PIPE
REQD	REQUIRED
RT	RIGHT
RHF	RIGHT HAND FORWARD
R/W	RIGHT-OF-WAY
RD	ROAD
RDWY	ROADWAY
SALV	SALVAGED
SSS	SANITARY AND STORM SEWER
SAN S	SANITARY SEWER
SEC	SECTION
SHLDR	SHOULDER
SW	SIDEWALK
S	SOUTH
SB	SOUTHBOUND
SP	SPECIAL
SPECS	SPECIFICATIONS
SQ	SQUARE
SF	SQUARE FEET
SY	SQUARE YARD
STD	STANDARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAYS
STA	STATION
SS	STORM SEWER
STR	STRUCTURE OR STRUCTURAL
SL	SURVEY LINE
TEL	TELEPHONE
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
T	TON
TC	TOP OF CURB
T	TRUCKS (PERCENT OF)
TYP	TYPICAL
UG	UNDERGROUND
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
VERT	VERTICAL
W	WATER
WM	WATER MAIN
WV	WATER VALVE
W	WEST
WB	WESTBOUND
YD	YARD

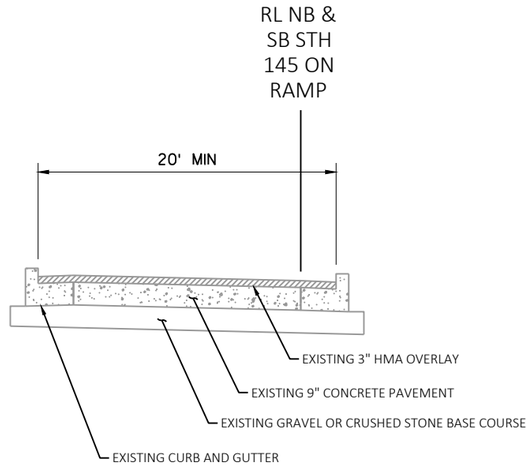
2



PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET 3	E

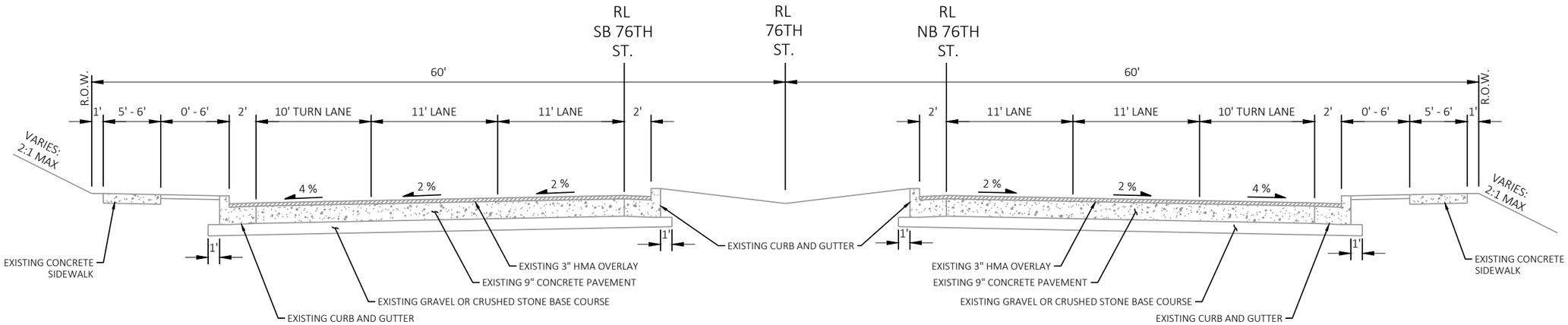
FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\020201_PO.DWG
LAYOUT NAME - 01
PLOT DATE : 7/28/2022 5:09 PM
PLOT BY : WEIGAND, BEN
PLOT NAME :
PLOT SCALE : 1 IN:400 FT
WISDOT/CADDS SHEET 42

2



76TH ST. RAMP EXISTING TYPICAL SECTION

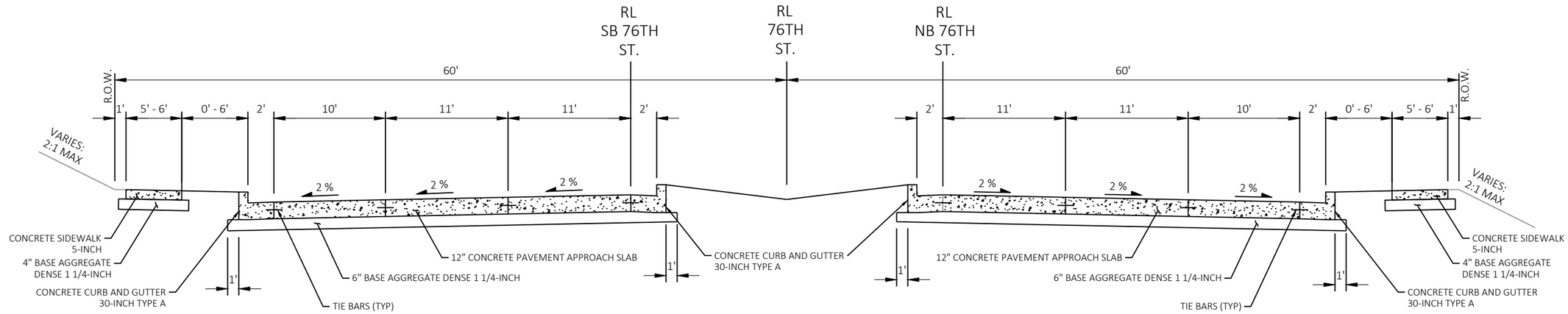
STA 1+44.06 - 2+78.53 NB
STA 1+82.09 - 2+86.77 SB



76TH STREET EXISTING TYPICAL SECTION

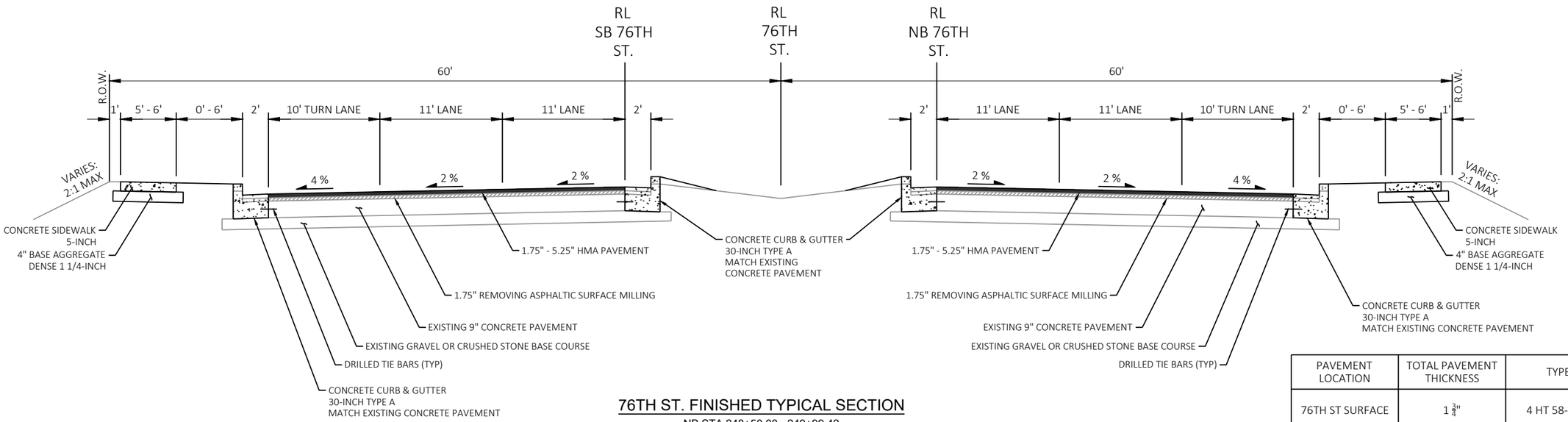
STA 48+50.00 - 55+00.00

2



76TH ST. FINISHED TYPICAL SECTION

NB STA 249+99.42 - DECK
SB STA 150+43.17 - DECK
NB STA DECK - 253+44.10
SB STA DECK - 153+87.86

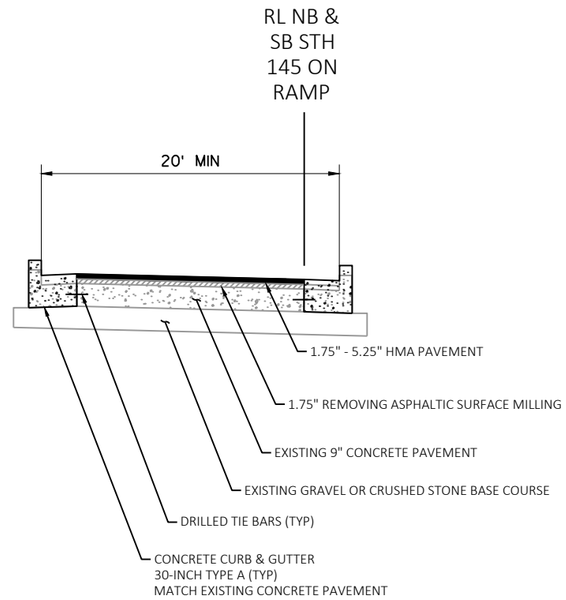


76TH ST. FINISHED TYPICAL SECTION

NB STA 248+50.00 - 249+99.42
SB STA 149+50.00 - 150+43.17
NB STA 253+44.10 - 254+78.53
SB STA 153+87.86 - 155+00.00

PAVEMENT LOCATION	TOTAL PAVEMENT THICKNESS	TYPE
76TH ST SURFACE	1 $\frac{3}{4}$"	4 HT 58-28 H
76TH ST WEDGE	1 $\frac{3}{4}$" - 3"	4 HT 58-28 H
76TH ST LOWER WEDGE	1 $\frac{3}{4}$"	4 HT 58-28 H

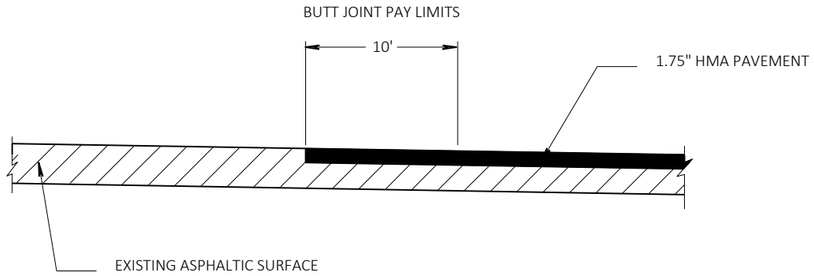
2



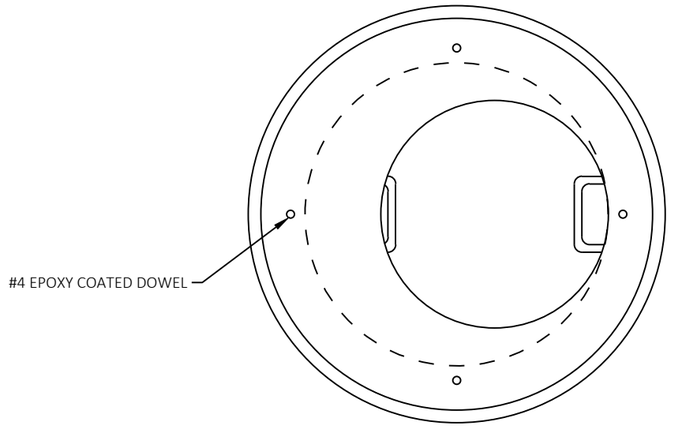
76TH ST. RAMP FINISHED TYPICAL SECTION

STA 1+44.06 - 2+78.53 NB
STA 1+82.09 - 2+86.77 SB

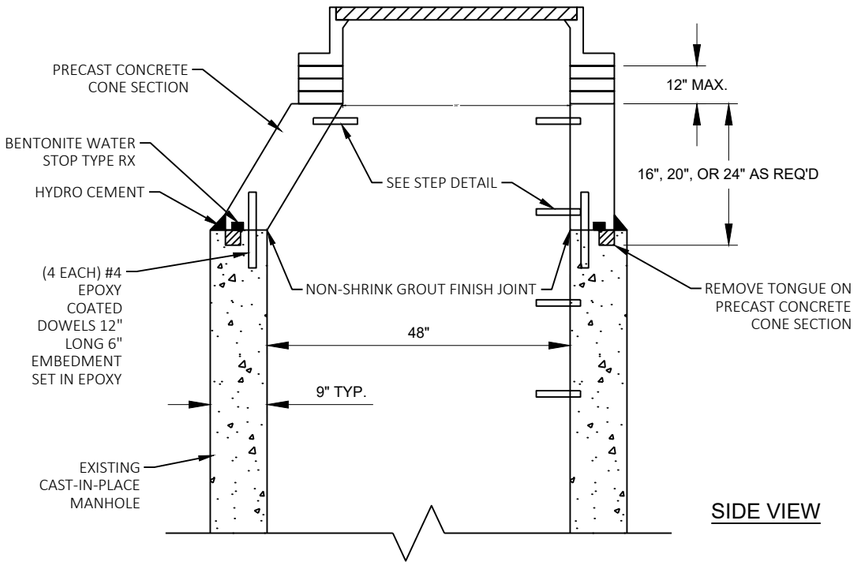
PAVEMENT LOCATION	TOTAL PAVEMENT THICKNESS	LAYER	TYPE
RAMP OVERLAY	1.75" - 3"	1.75" UPPER 0-1.25" LOWER	4 HT 58-28 H 4 HT 58-28 H



DETAIL OF BUTTED JOINT
NOTE: EXACT DIMENSIONS TO BE DETERMINED BY ENGINEER IN THE FIELD.



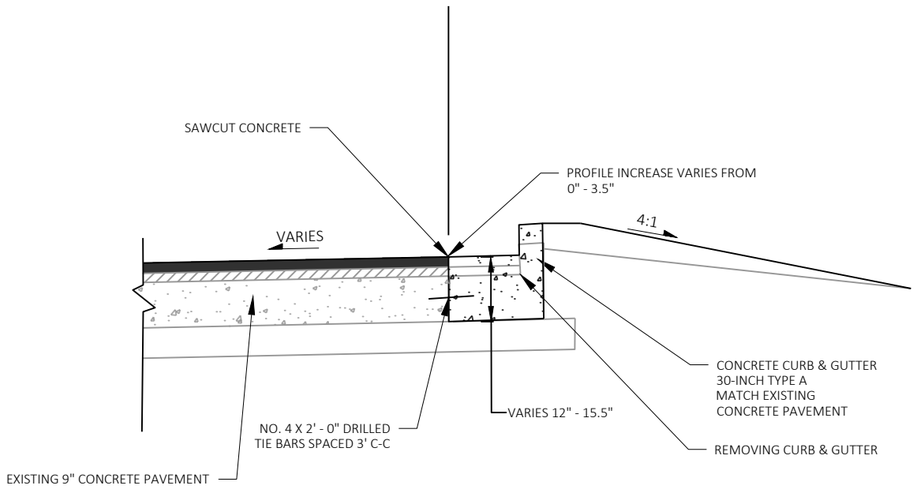
TOP VIEW



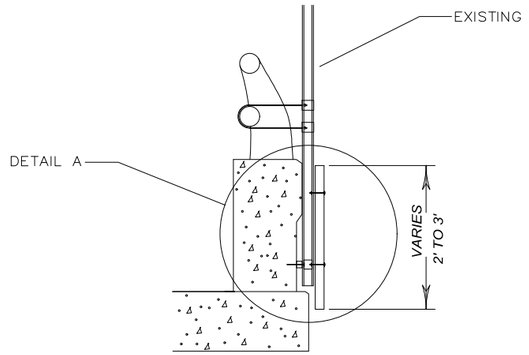
SIDE VIEW

MMSD MANHOLE RECONSTRUCT
WITH PRECAST CONCRETE CONE

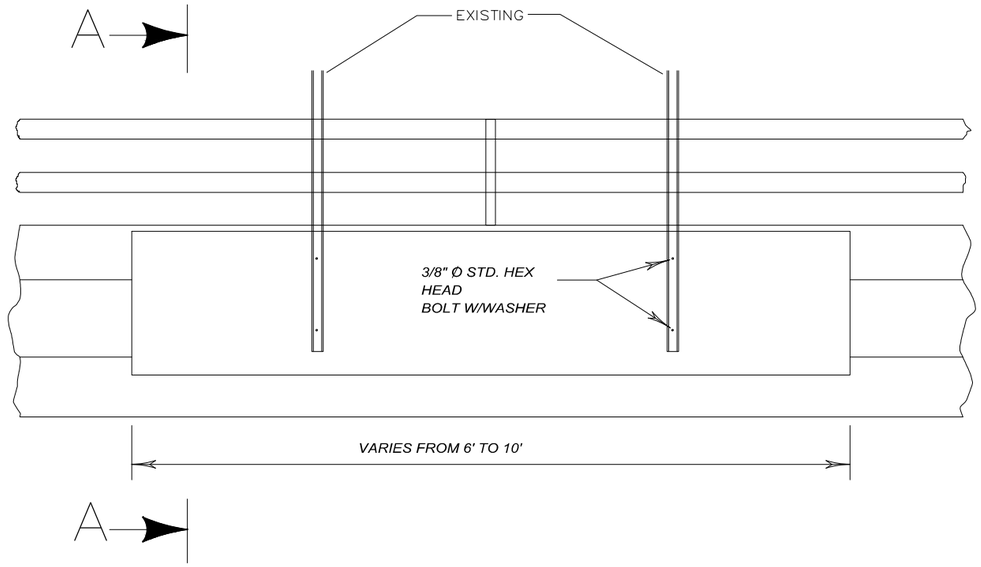
RL



CURB REPLACEMENT DETAIL



SECTION A–A
SIDE VIEW

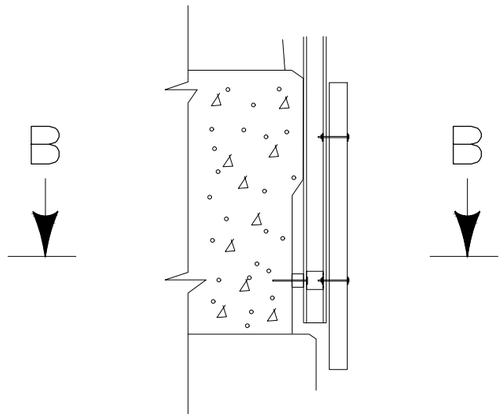


FRONT VIEW

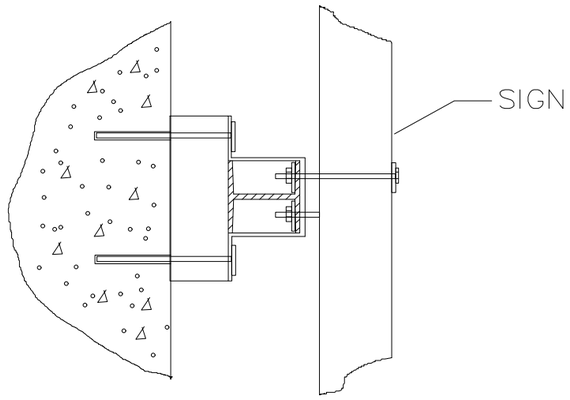
NOTES:

PROVIDE NEW BOLTS.

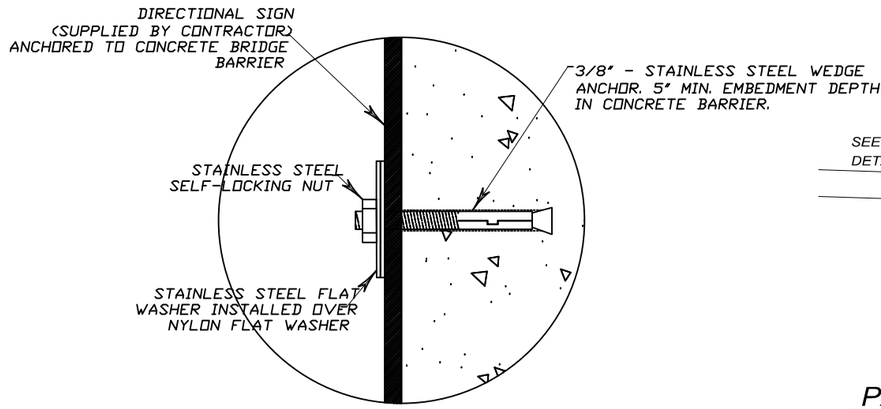
MOUNTING DETAIL COSTS ARE INCIDENTAL TO PAY ITEM "TYPE II SIGNS, REFLECTIVE".



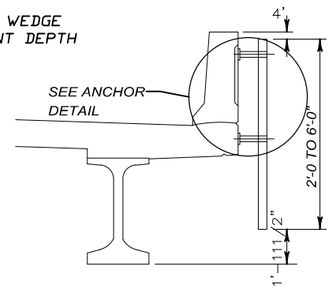
DETAIL A



SECTION B–B
TOP VIEW



ANCHOR DETAIL
N.T.S.

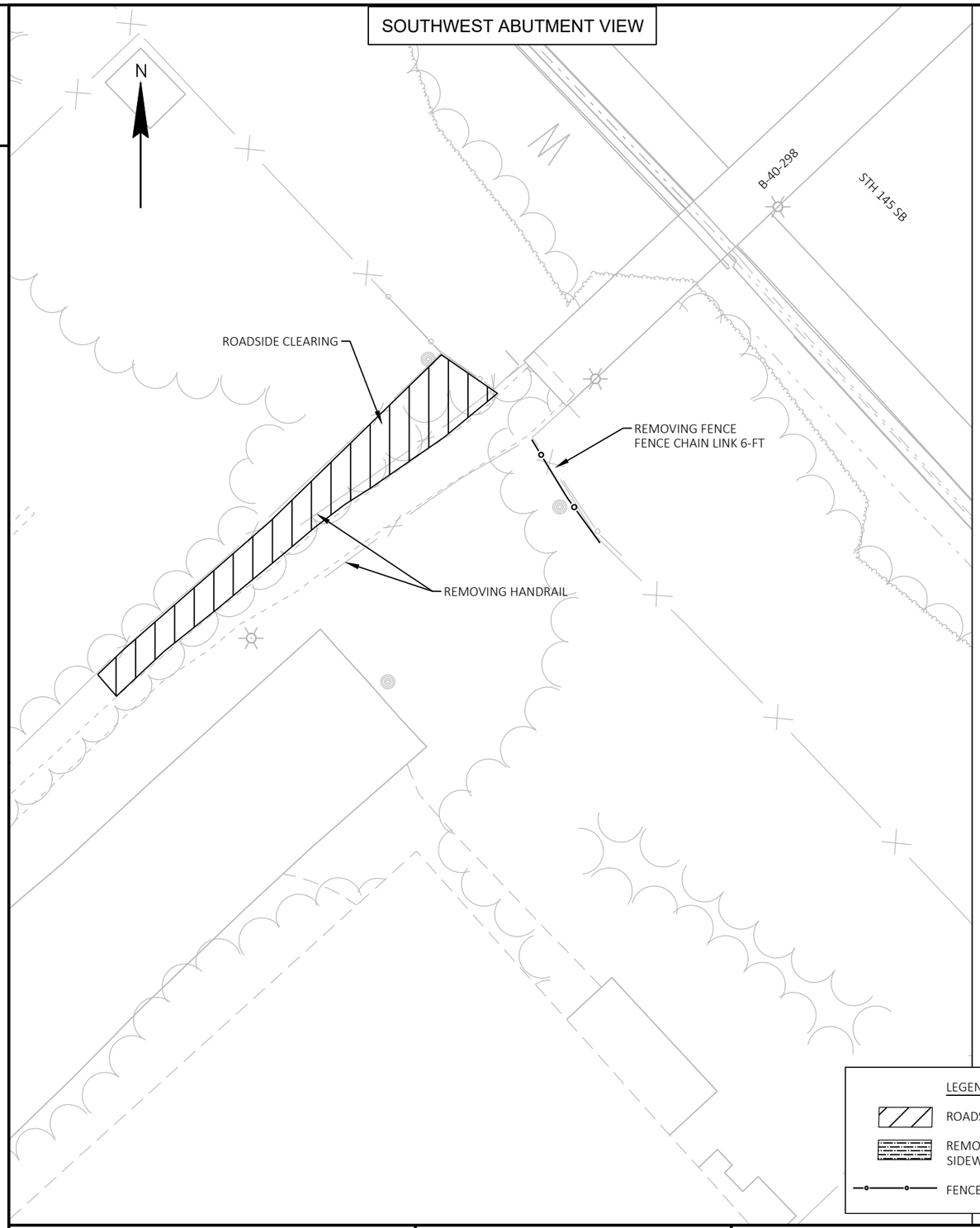


PARAPET OPTION
WITHOUT RAIL

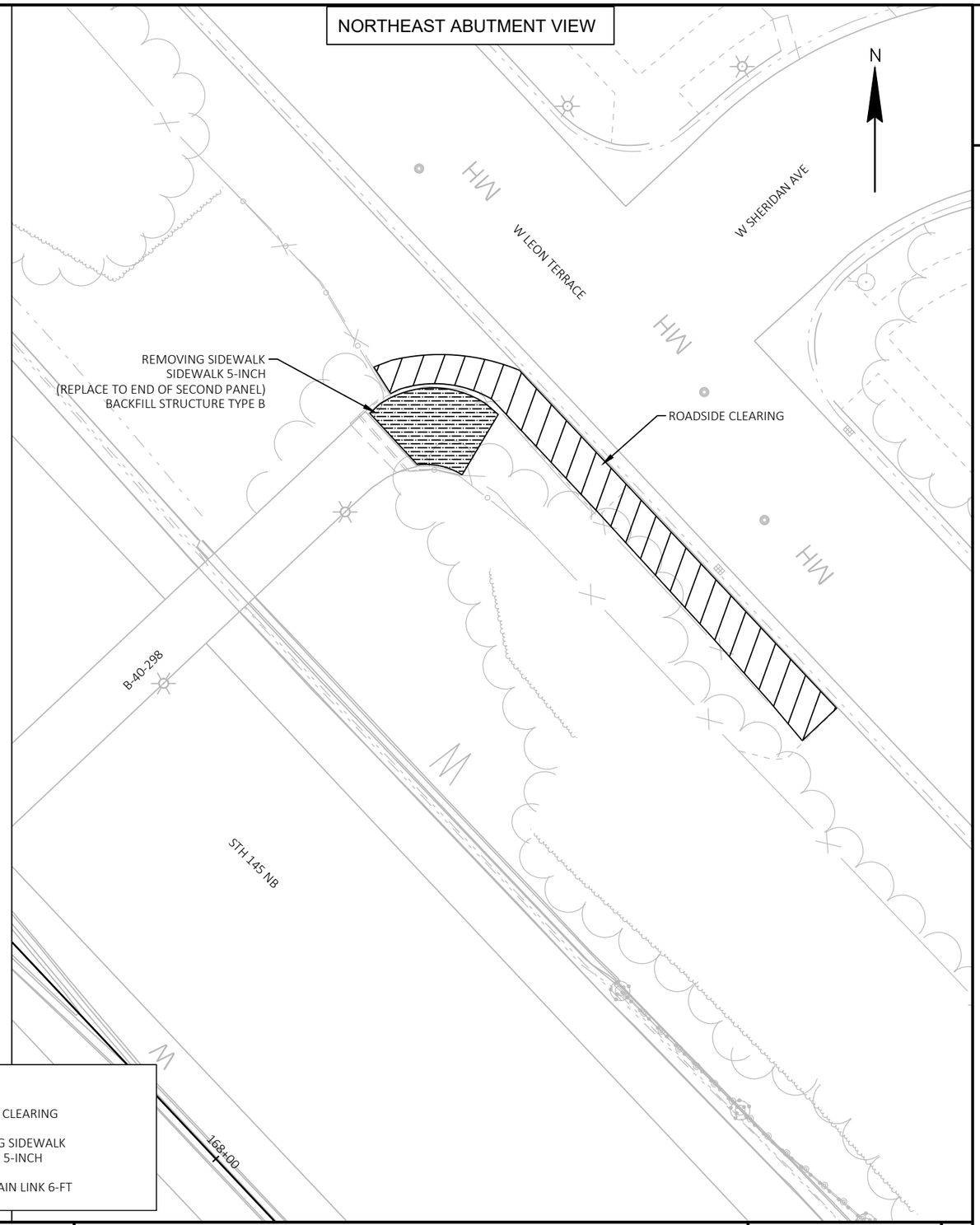
PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	SIGN MOUNTING DETAIL ON BRIDGE	SHEET 8 E

2

SOUTHWEST ABUTMENT VIEW



NORTHEAST ABUTMENT VIEW



2

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	PEDESTRIAN BRIDGE DETAILS B-40-298	SHEET 9	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\021002_CD.DWG
LAYOUT NAME - 01
PLOT DATE : 7/28/2022 5:11 PM
PLOT BY : WEIGAND, BEN
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

2

SOUTHWEST ABUTMENT VIEW

N

RAMP

HW

B-40-297

STH 145 SB

145+00

GRADING SHAPING FINISHING SHOULDERS

REMOVING FENCE 4-FT
REMOVING HANDRAIL

ROADSIDE CLEARING

N 84TH ST

INL

LEGEND

ROADSIDE CLEARING

NORTHEAST ABUTMENT VIEW

N

2

W CARMEN AVE

HW

ROADSIDE CLEARING

REMOVING FENCE 4-FT
REMOVING HANDRAIL

GRADING SHAPING FINISHING SHOULDERS

B-40-297

STH 145 NB

143+00

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	PEDESTRIAN BRIDGE DETAILS B-40-297	SHEET 10	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\021002_CD.DWG
LAYOUT NAME - 02

PLOT DATE : 7/28/2022 5:12 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

N

REMOVING FENCE AND INSTALL FENCE CHAIN LINK 6-FT TO END OF PARAPET

CONCRETE CURB & GUTTER 30-INCH TYPE A

CONCRETE SIDEWALK 5-INCH

ADJUSTING MMSD MANHOLE COVER

CITY OF MILWAUKEE LIGHTING

WE ENERGIES ELECTRIC

REMOVING FENCE INSTALL FENCE CHAIN LINK 6-FT STA. 2+86.00 29' LT

WE ENERGIES MANHOLE COVER ADJUTMENT BY OTHERS

BEGIN CONSTRUCTION STA 49+50 MATCH EXISTING ASPHALTIC BUTT JOINT

SEE CONDUIT PLANS

CONCRETE PAVEMENT APPROACH SLAB

76th ST. SB

B-40-0255
(SEE STRUCTURE PLANS)

RECONSTRUCTING MMSD MANHOLE

CONCRETE PAVEMENT APPROACH SLAB

REMOVING FENCE AND INSTALL FENCE CHAIN LINK 6-FT FROM 53+98.44 67' LT TO END OF PARAPET

WE ENERGIES MANHOLE COVER ADJUTMENT BY OTHERS

CONCRETE SIDEWALK 5-INCH

ADJUSTING MANHOLE COVER

CONCRETE CURB & GUTTER 30-INCH TYPE A

ADJUSTING MMSD MANHOLE COVER

CITY OF MILWAUKEE LIGHTING

WE ENERGIES GAS

MMSD

END CONSTRUCTION STA 55+00 MATCH EXISTING ASPHALTIC BUTT JOINT

AT&T

R/I 76TH ST

CONCRETE CURB & GUTTER 30-INCH TYPE A

49+00 50+00 51+00 52+00 53+00 54+00 55+00

4+00 3+00 2+00 1+00 179+00 180+00 181+00 182+00 183+00 184+00 12+00 11+00 10+00

PT: 179+12.67

PC: 182+58.43

76th ST. NB

ADJUSTING MANHOLE COVER

REMOVING FENCE AND INSTALL FENCE CHAIN LINK 6-FT

B-40-0256
(SEE STRUCTURE PLANS)

REMOVING FENCE AND INSTALL FENCE CHAIN LINK 6-FT

ADJUSTING ATT MANHOLE COVER

END CONSTRUCTION STA 54+78.53 MATCH EXISTING ASPHALTIC BUTT JOINT

CONCRETE CURB & GUTTER 30-INCH TYPE A

CITY OF MILWAUKEE WATER

WE ENERGIES ELECTRIC

BEGIN CONSTRUCTION STA 48+50 MATCH EXISTING ASPHALTIC BUTT JOINT

ADJUSTING WATER VALVES

ADJUSTING INLET COVER

CONCRETE SIDEWALK 5-INCH

CITY OF MILWAUKEE LIGHTING

CONCRETE PAVEMENT APPROACH SLAB

WE ENERGIES GAS

REMOVING FENCE

INSTALL FENCE CHAIN LINK 6-FT FROM STA. 49+89.14 75' RT TO END OF PARAPET

WISDOT LIGHTING

CONCRETE PAVEMENT APPROACH SLAB

ADJUSTING WATER VALVES

CONCRETE SIDEWALK 5-INCH

REMOVING FENCE AND INSTALL FENCE CHAIN LINK 6-FT TO END OF PARAPET

WISDOT LIGHTING

LEGEND

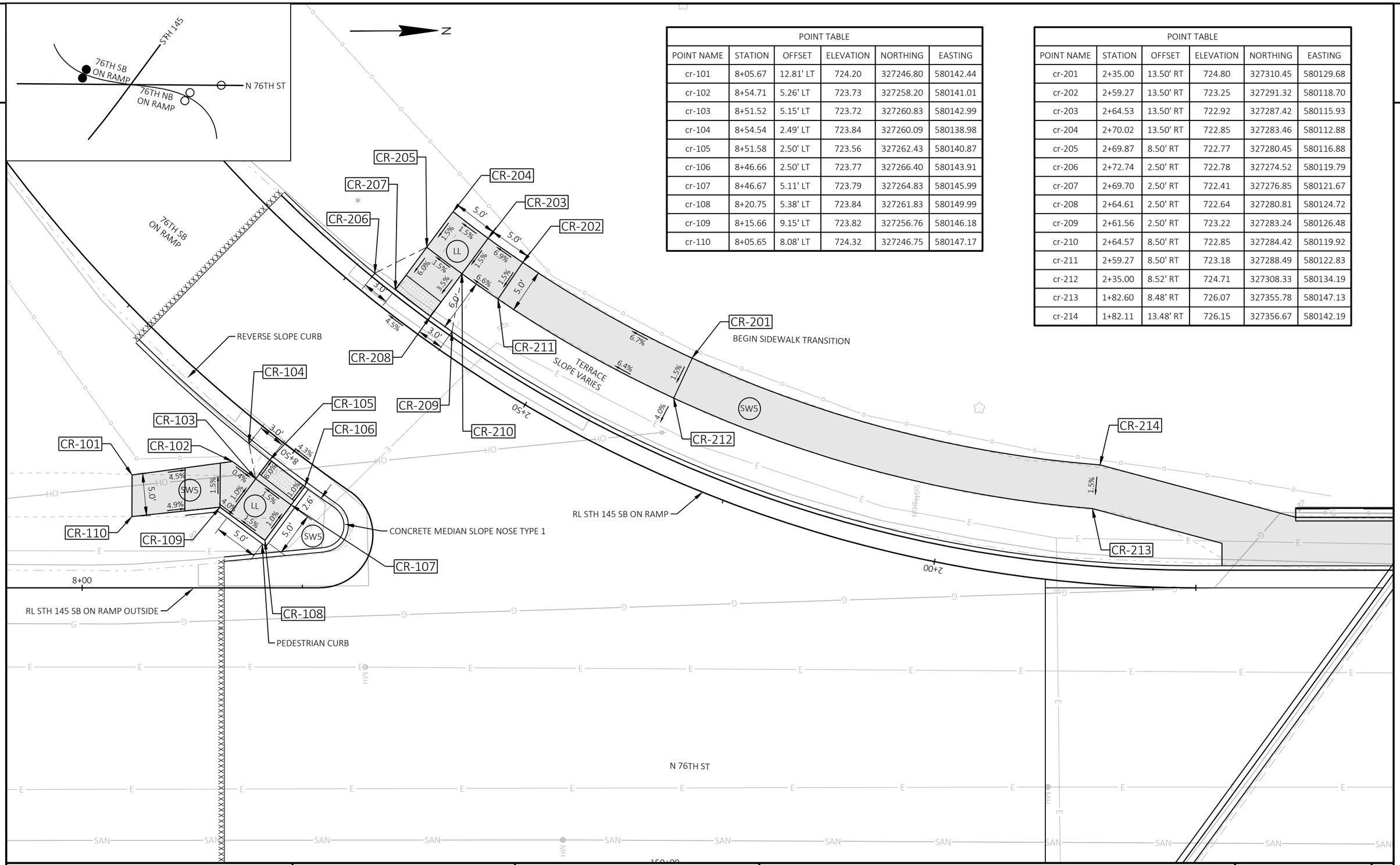
- CONCRETE PAVEMENT APPROACH SLAB
- HMA PAVEMENT
- CONCRETE SIDEWALK 5-INCH

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 11	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\021201_PD.DWG
LAYOUT NAME - 01

PLOT DATE : 5/19/2023 2:13 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42



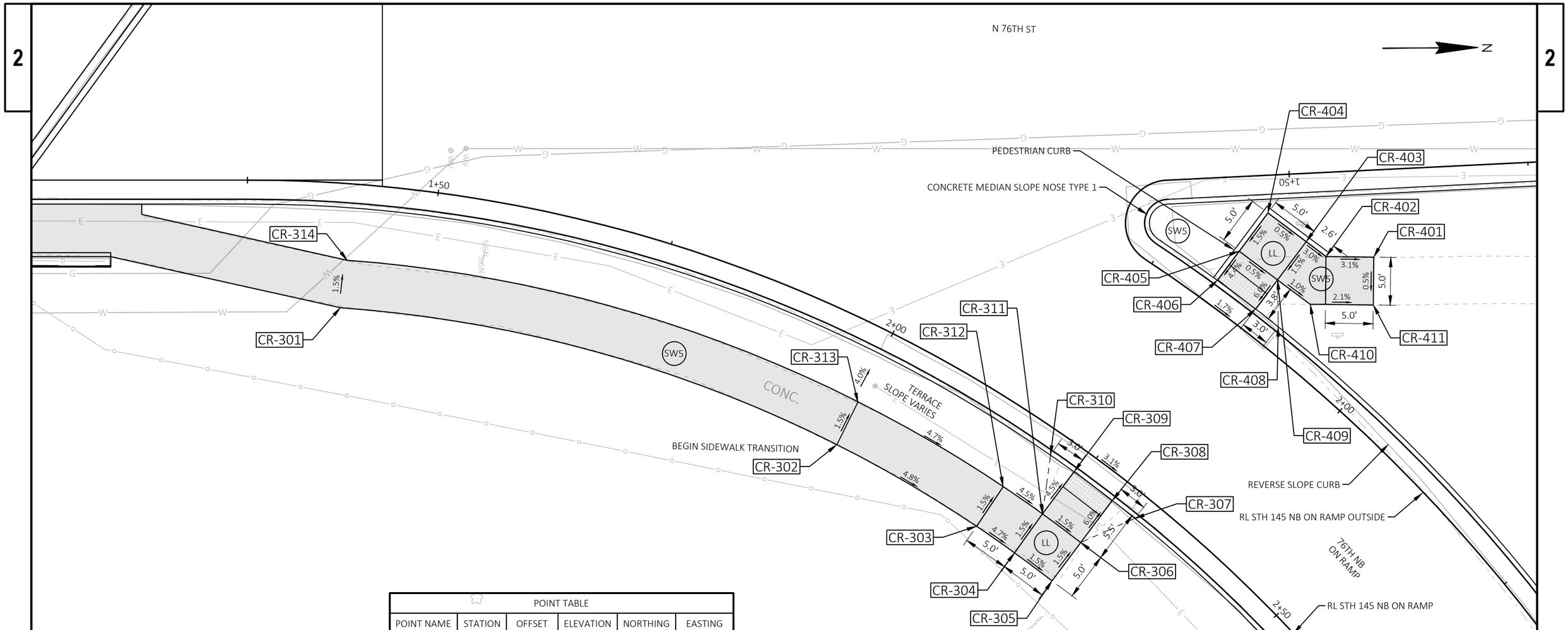
POINT TABLE					
POINT NAME	STATION	OFFSET	ELEVATION	NORTHING	EASTING
cr-101	8+05.67	12.81' LT	724.20	327246.80	580142.44
cr-102	8+54.71	5.26' LT	723.73	327258.20	580141.01
cr-103	8+51.52	5.15' LT	723.72	327260.83	580142.99
cr-104	8+54.54	2.49' LT	723.84	327260.09	580138.98
cr-105	8+51.58	2.50' LT	723.56	327262.43	580140.87
cr-106	8+46.66	2.50' LT	723.77	327266.40	580143.91
cr-107	8+46.67	5.11' LT	723.79	327264.83	580145.99
cr-108	8+20.75	5.38' LT	723.84	327261.83	580149.99
cr-109	8+15.66	9.15' LT	723.82	327256.76	580146.18
cr-110	8+05.65	8.08' LT	724.32	327246.75	580147.17

POINT TABLE					
POINT NAME	STATION	OFFSET	ELEVATION	NORTHING	EASTING
cr-201	2+35.00	13.50' RT	724.80	327310.45	580129.68
cr-202	2+59.27	13.50' RT	723.25	327291.32	580118.70
cr-203	2+64.53	13.50' RT	722.92	327287.42	580115.93
cr-204	2+70.02	13.50' RT	722.85	327283.46	580112.88
cr-205	2+69.87	8.50' RT	722.77	327280.45	580116.88
cr-206	2+72.74	2.50' RT	722.78	327274.52	580119.79
cr-207	2+69.70	2.50' RT	722.41	327276.85	580121.67
cr-208	2+64.61	2.50' RT	722.64	327280.81	580124.72
cr-209	2+61.56	2.50' RT	723.22	327283.24	580126.48
cr-210	2+64.57	8.50' RT	722.85	327284.42	580119.92
cr-211	2+59.27	8.50' RT	723.18	327288.49	580122.83
cr-212	2+35.00	8.52' RT	724.71	327308.33	580134.19
cr-213	1+82.60	8.48' RT	726.07	327355.78	580147.13
cr-214	1+82.11	13.48' RT	726.15	327356.67	580142.19

2

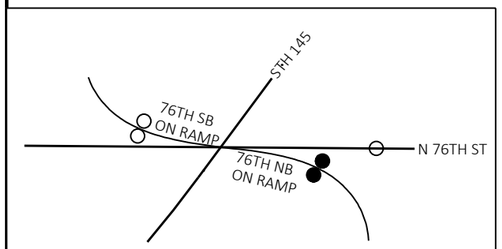
PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	CURB RAMP DETAILS	SHEET 12	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\023101_CR.DWG
LAYOUT NAME - 01
PLOT DATE : 4/25/2023 7:09 AM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



POINT TABLE					
POINT NAME	STATION	OFFSET	ELEVATION	NORTHING	EASTING
cr-301	1+40.64	13.00' RT	727.57	327646.08	580263.70
cr-302	1+99.99	13.04' RT	726.89	327697.87	580278.44
cr-303	2+18.54	13.00' RT	727.57	327712.44	580287.06
cr-304	2+23.82	13.00' RT	725.84	327716.39	580289.85
cr-305	2+29.20	13.00' RT	725.77	327720.30	580292.82
cr-306	2+29.11	8.00' RT	725.69	327723.33	580288.85
cr-307	2+32.06	2.50' RT	725.77	327728.99	580286.35
cr-308	2+29.03	2.52' RT	725.37	327726.65	580284.49
cr-309	2+23.94	2.50' RT	725.52	327722.69	580281.45
cr-310	2+20.87	2.50' RT	726.11	327720.24	580279.69
cr-311	2+23.82	8.00' RT	725.77	327719.34	580285.81
cr-312	2+18.54	8.00' RT	725.99	327715.26	580282.93
cr-313	1+99.99	8.08' RT	726.82	327700.14	580274.03
cr-314	1+41.03	8.00' RT	727.50	327646.84	580258.75

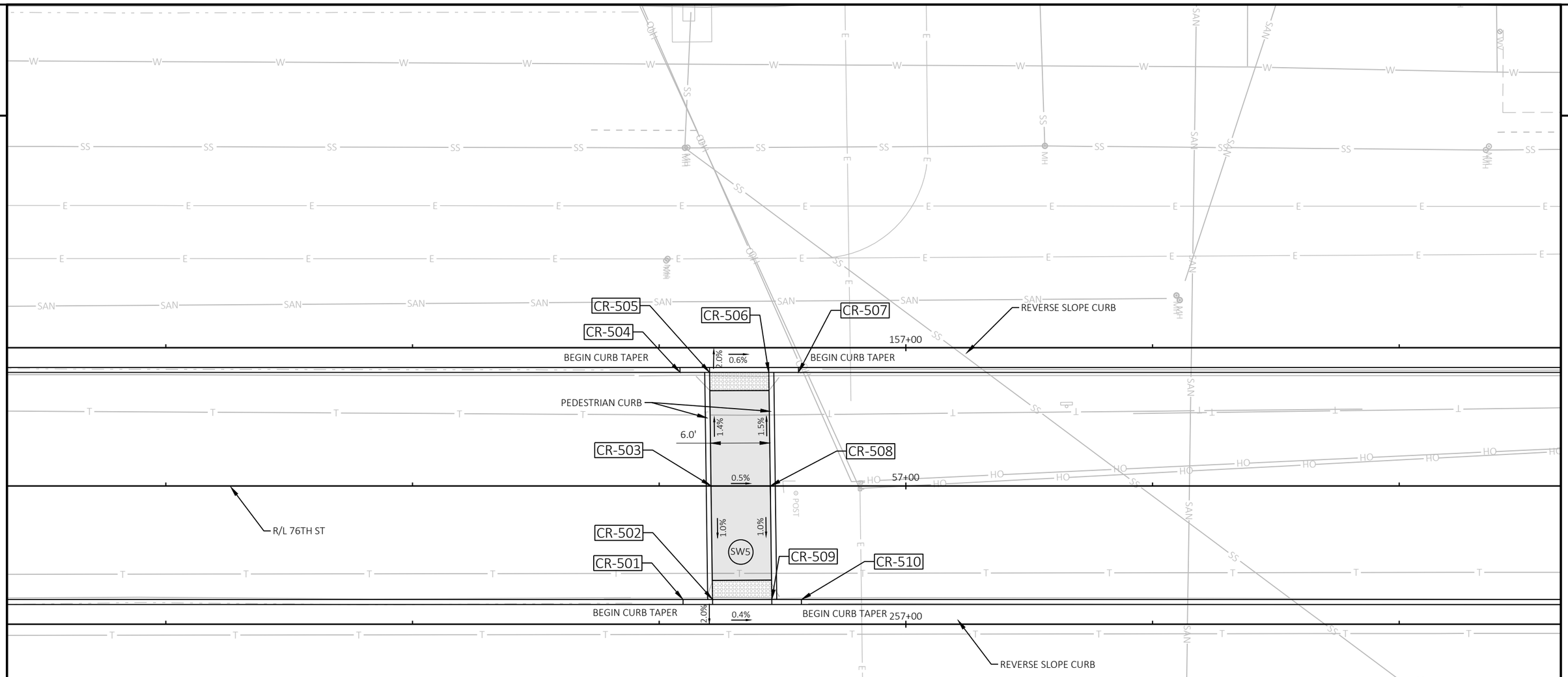
POINT TABLE					
POINT NAME	STATION	OFFSET	ELEVATION	NORTHING	EASTING
cr-401	1+41.57	9.10' LT	726.72	327754.21	580259.25
cr-402	1+46.57	8.79' LT	726.87	327749.21	580259.15
cr-403	1+48.56	7.13' LT	726.95	327747.15	580257.57
cr-404	1+52.41	3.93' LT	727.30	327743.17	580254.53
cr-405	1+81.63	6.31' LT	727.20	327740.13	580258.52
cr-406	1+81.58	2.50' LT	726.76	327737.83	580261.55
cr-407	1+86.51	2.50' LT	726.65	327741.81	580264.58
cr-408	1+89.47	2.50' LT	727.09	327744.16	580266.45
cr-409	1+86.46	6.31' LT	726.88	327744.12	580261.55
cr-410	1+90.57	6.42' LT	726.83	327747.51	580264.14
cr-411	1+95.43	10.60' LT	726.69	327754.11	580264.25



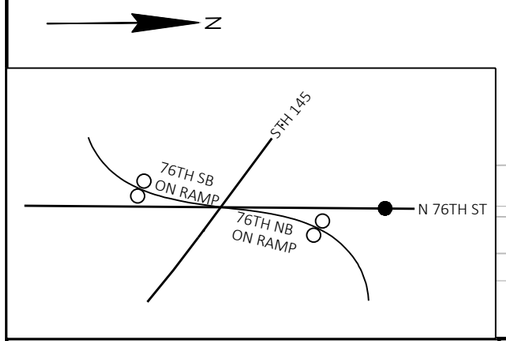
PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	CURB RAMP DETAILS	SHEET 13	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\023101_CR.DWG
LAYOUT NAME - 02
PLOT DATE : 4/25/2023 7:09 AM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2



POINT TABLE					
POINT NAME	STATION	OFFSET	ELEVATION	NORTHING	EASTING
cr-501	56+77.41	11.50' RT	726.81	327984.15	580218.48
cr-502	56+80.41	11.50' RT	726.30	327987.15	580218.50
cr-503	56+80.27	0.00'	726.42	327987.09	580207.00
cr-504	56+77.12	11.50' LT	726.79	327984.03	580195.48
cr-505	56+80.11	11.50' LT	726.26	327987.02	580195.50
cr-506	56+86.11	11.50' LT	726.22	327993.02	580195.55
cr-507	56+89.12	11.50' LT	726.71	327996.03	580195.57
cr-508	56+86.27	0.00'	726.39	327993.09	580207.05
cr-509	56+86.41	11.50' RT	726.27	327993.15	580218.55
cr-510	56+89.41	11.50' RT	726.76	327996.15	580218.57



PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	CURB RAMP DETAILS	SHEET 14	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\023101_CR.DWG
LAYOUT NAME - 03
PLOT DATE : 4/25/2023 7:09 AM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

LEGEND

CONCRETE SIDEWALK 5-INCH

N

REVERSE SLOPE CURB & GUTTER

R/L 76th ON RAMP

CONCRETE PAVEMENT APPROACH SLAB

BEGIN CONSTRUCTION
STA 49+50
MATCH EXISTING
ASPHALTIC BUTT JOINT

76th ST. SB

B-40-0255
(SEE STRUCTURE PLANS)

R/L 76th ST.

49+00

50+00

51+00

BEGIN CONSTRUCTION
STA 48+50
MATCH EXISTING
ASPHALTIC BUTT JOINT

76th ST. NB

B-40-0256
(SEE STRUCTURE PLANS)

CONCRETE PAVEMENT
APPROACH SLAB

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	JOINT DETAILS	SHEET 15	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\021401_JD.DWG
LAYOUT NAME - 01
PLOT DATE : 7/28/2022 5:15 PM
PLOT BY : WEIGAND, BEN
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

2

CONCRETE PAVEMENT APPROACH SLAB

B-40-0255
(SEE STRUCTURE PLANS)

76th ST. SB

727.05 727.10 727.14 727.12 727.03 726.93 726.80

727.25 727.30

727.47 727.52

727.56 727.69 727.74 727.78 727.81 727.77 727.67 727.54

2.0% 10.0' 3.0%

2.0% 11.0' 2.0%

2.0% 11.0' 2.0%

MH MH MH MH

END CONSTRUCTION
STA 55+00
MATCH EXISTING
ASPHALTIC BUTT JOINT

12+00

53+00 54+00 55+00

R/L 76th ST.

REVERSE SLOPE CURB & GUTTER

727.46 727.56 727.68 727.73 727.74 727.71 727.63

727.59

727.24 727.34

727.02 727.12

726.82 726.84 726.83

2.0% 11.0' 2.0%

2.0% 11.0' 2.0%

2.7% 10.0' 3.0%

MH

END CONSTRUCTION
STA 54+78.53
MATCH EXISTING
ASPHALTIC BUTT JOINT

76th ST. NB

B-40-0256
(SEE STRUCTURE PLANS)

3.5%

726.99 726.96

726.63

4.0%

726.64

726.21

5.0%

726.03

725.57

724.72

725.14

6.0%

723.84

CONCRETE PAVEMENT APPROACH SLAB

R/L 76th OFF RAMP

REVERSE SLOPE CURB & GUTTER

LEGEND

CONCRETE SIDEWALK 5-INCH

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	JOINT DETAILS	SHEET 16	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\021401_JD.DWG
LAYOUT NAME - 02

PLOT DATE : 7/28/2022 5:15 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

CITY OF MILWAUKEE LIGHTING

WE ENERGIES ELECTRIC

CITY OF MILWAUKEE CUC

76th ST. SB

76th ST. NB

B-40-0255
(SEE STRUCTURE PLANS)

B-40-0256
(SEE STRUCTURE PLANS)

49+00 50+00 51+00 52+00 53+00 54+00 55+00

BF: 1+10.14

EP: 10+35.00

EP: 12+92.59

PT: 179+12.67

179+00

180+00

182+00

183+00

184+00

PC: 182+58.43

PT: 9+90.89

BP: 1+30.00

10

CITY OF MILWAUKEE LIGHTING

WE ENERGIES GAS

MMSD

AT&T

R/L 76th ST.

IN STAGE 4 REMOVE ASPHALTIC SURFACE AND PLACE TOPSOIL AND RESTORE CROSSOVER TO THE END OF AREA DISTURBED BY THE PROJECT.

WE ENERGIES ELECTRIC

CITY OF MILWAUKEE WATER

WISDOT LIGHTING

WE ENERGIES GAS

CITY OF MILWAUKEE LIGHTING

WALLS

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- A B C — INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	EROSION CONTROL PLAN	SHEET 17	E

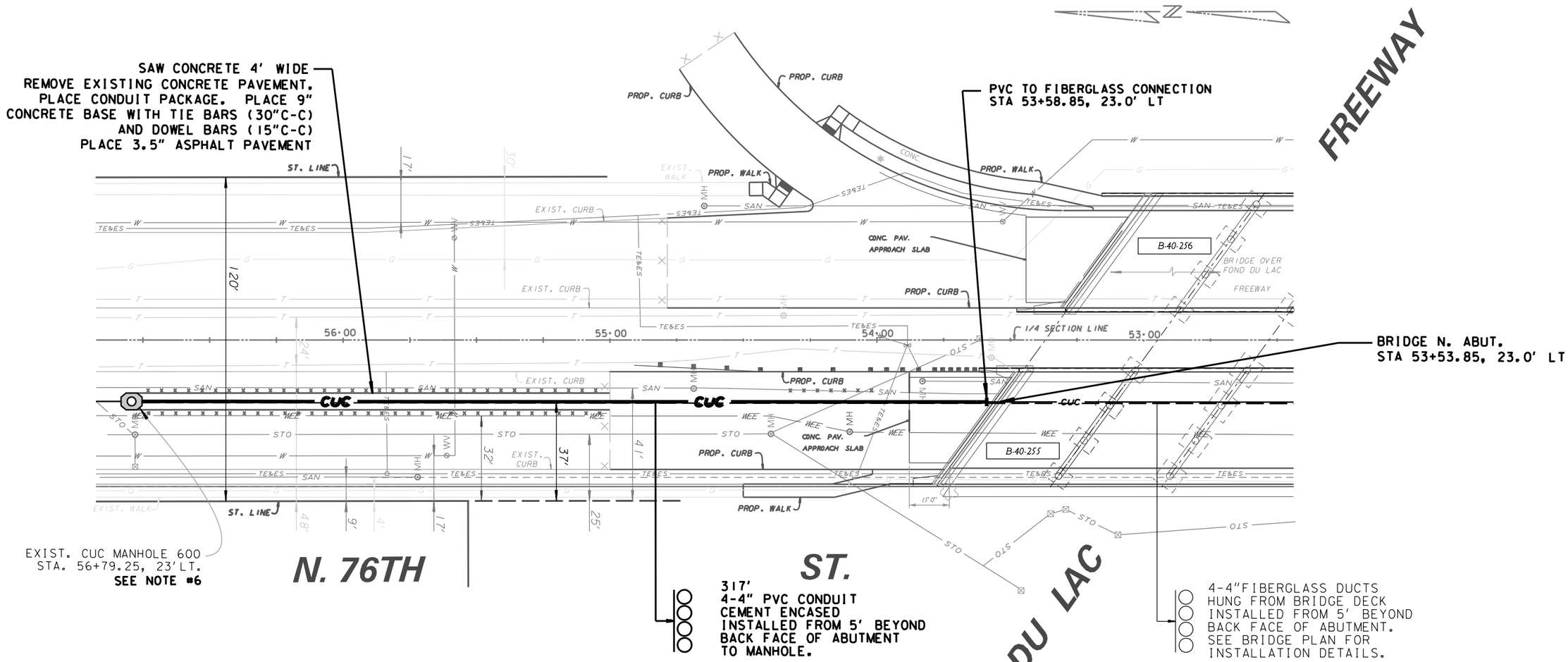
FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\022001_EC.DWG
LAYOUT NAME - 01

PLOT DATE : 7/28/2022 5:19 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER
1360-13-70

2



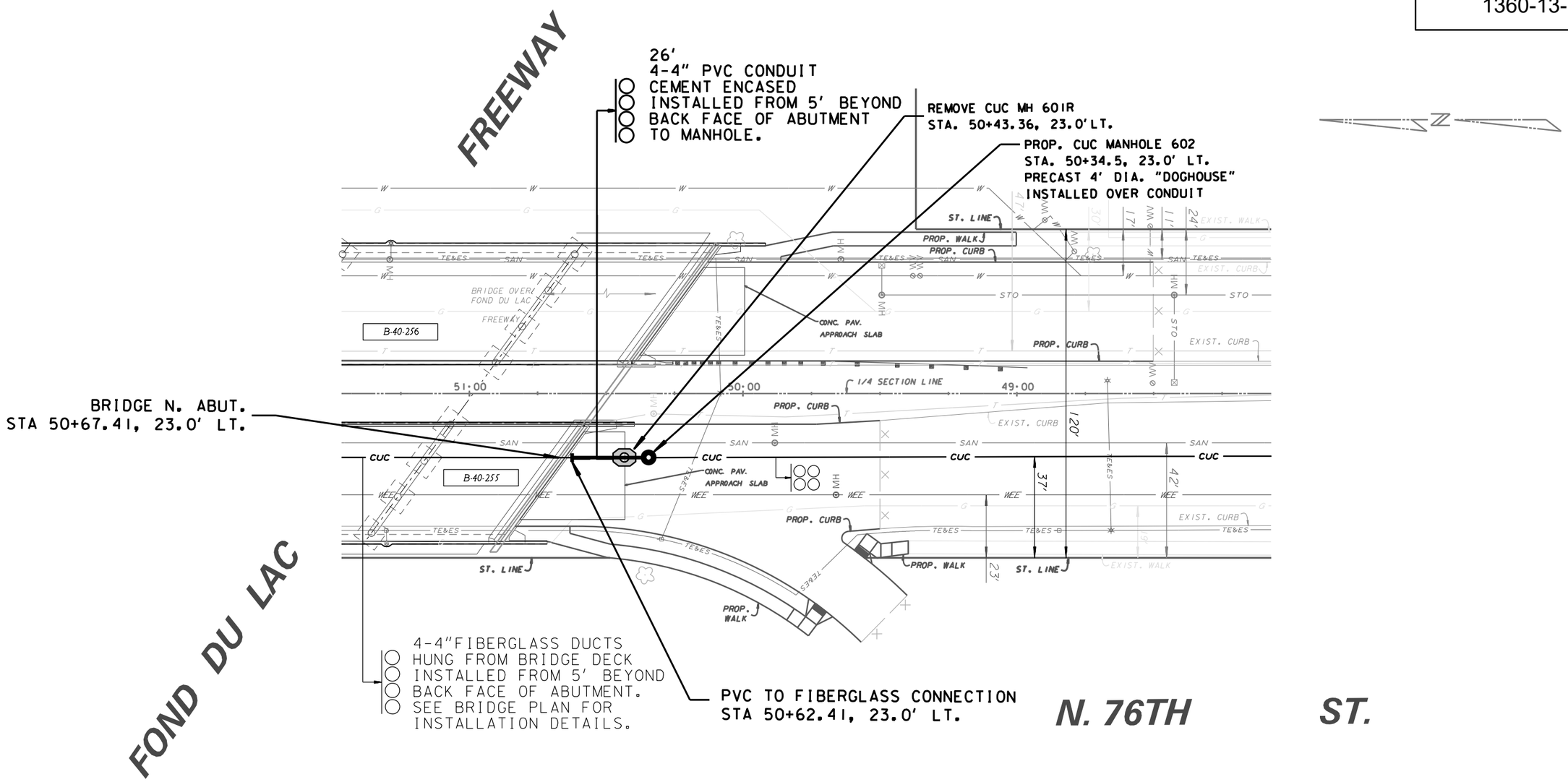
NOTES:

1) CONSTRUCTION STAKING FOR THE CITY UNDERGROUND CONDUIT (CUC) FACILITIES IS TO BE INCLUDED IN AND PAID FOR UNDER THE BID ITEM 650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS
2) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
3) THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
4) DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
5) MAINTAIN A STANDARD DEPTH OF 39-INCHES BETWEEN FINISHED GRADE AND TOP OF CONDUIT.
6) REMOVE ABANDONED CONDUIT FROM MANHOLE WALL AND INSTALL THE PROPOSED CONDUIT INTO THE MANHOLE AT THE SAME LOCATION.
7) REMOVE ABANDONED CONDUIT AS NEEDED FOR PROPOSED INSTALLATION.

LEGEND

— CUC —	PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT & 4-INCH BLACK FIBER GLASS CONDUIT, NUMBER OF RUNS AS NOTED.
●	PROPOSED CUC MANHOLE
⊙	EXISTING CUC MANHOLE
—— CUC ——	EXISTING CONDUIT
— — — —	ABANDONED CONDUIT

STATE PROJECT NUMBER
1360-13-70



NOTES:

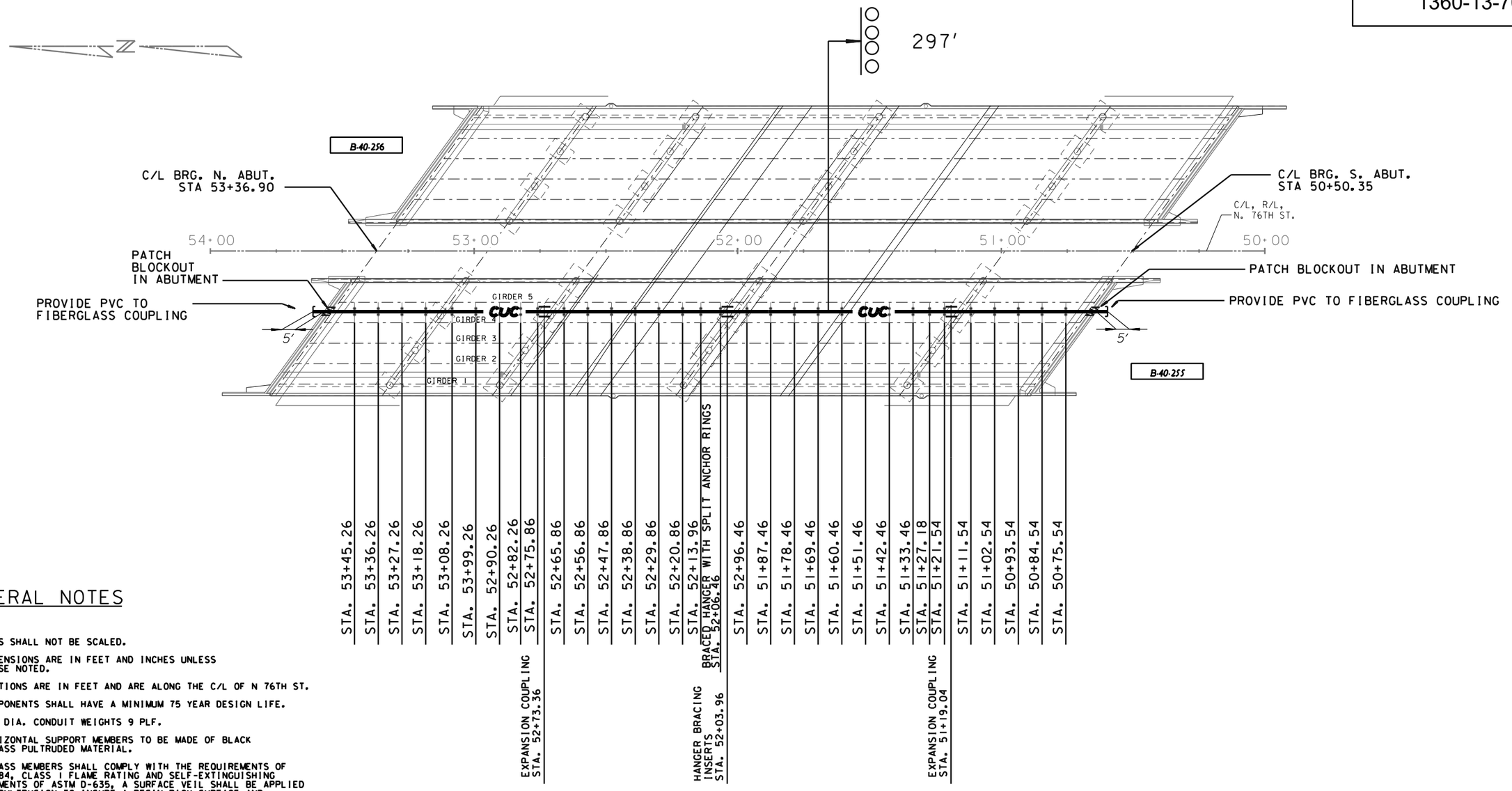
1) CONSTRUCTION STAKING FOR THE CITY UNDERGROUND CONDUIT (CUC) FACILITIES IS TO BE INCLUDED IN AND PAID FOR UNDER THE BID ITEM 650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS
2) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
3) THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
4) DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
5) MAINTAIN A STANDARD DEPTH OF 39-INCHES BETWEEN FINISHED GRADE AND TOP OF CONDUIT.
6) REMOVE ABANDONED CONDUIT FROM MANHOLE WALL AND INSTALL THE PROPOSED CONDUIT INTO THE MANHOLE AT THE SAME LOCATION.
7) REMOVE ABANDONED CONDUIT AS NEEDED FOR PROPOSED INSTALLATION.

LEGEND

— CUC —	PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT & 4-INCH BLACK FIBER GLASS CONDUIT, NUMBER OF RUNS AS NOTED.
●	PROPOSED CUC MANHOLE
⯃	EXISTING CUC MANHOLE
—— CUC ——	EXISTING CONDUIT
— — — —	ABANDONED CONDUIT

STATE PROJECT NO.: 1360-13-70	HWY: S.T.H. 145	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT BRIDGE APPROACH(CUC)	SCALE FEET 0' 40'	SHEET 19	E

STATE PROJECT NUMBER
1360-13-70



GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL STATIONS ARE IN FEET AND ARE ALONG THE C/L OF N 76TH ST.

ALL COMPONENTS SHALL HAVE A MINIMUM 75 YEAR DESIGN LIFE.

EACH 4" DIA. CONDUIT WEIGHTS 9 PLF.

ALL HORIZONTAL SUPPORT MEMBERS TO BE MADE OF BLACK FIBERGLASS PULTRUDED MATERIAL.

FIBERGLASS MEMBERS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM E-84, CLASS I FLAME RATING AND SELF-EXTINGUISHING REQUIREMENTS OF ASTM D-635, A SURFACE VEIL SHALL BE APPLIED DURING PULTRUSION TO INSURE A RESIN RICH SURFACE AND ULTRAVIOLET RESISTANCE.

ALL CUTS AND HOLES SHOULD BE PROPERLY SEALED PER MANUFACTURERS RECOMMENDATIONS TO PREVENT CORROSION.

ALL STEEL MEMBERS AND HARDWARE SHALL BE 304 STAINLESS STEEL.

FURNISH CONCRETE FOR BRIDGES CONFORMING TO SECTION 501. GRADE E. CONTRACTOR MAY USE PREMIXED BAG CEMENT PER ENGINEER'S APPROVAL.

SPACE HANGERS A MAXIMUM 10'-0". LOCATE CONDUIT HANGERS BETWEEN GIRDERS 4 & 5. SEE BRIDGE PLANS.

ALL FIBERGLASS JOINTS SHALL BE EPOXIED PER MANUFACTURER'S SPECIFICATIONS.

EXTEND CONDUIT 5'-0" FROM BACK FACE OF ABUTMENT. PROVIDE FIBERGLASS TO PVC COUPLING.

FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION.

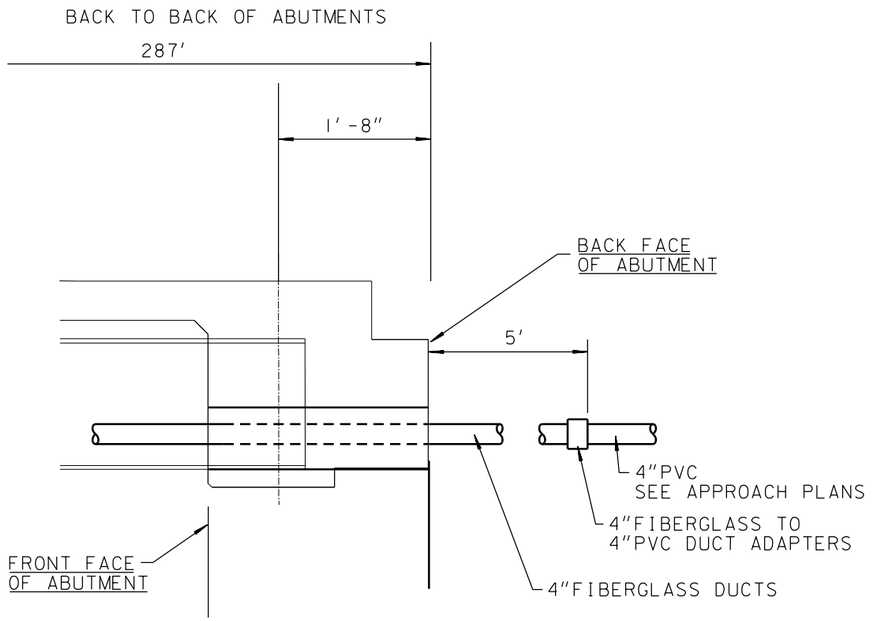
INSTALL EXPANSION JOINT PER LOCATION SHOWN ON BRIDGE PLAN.

1 - 4 DUCT CITY COMMUNICATIONS PACKAGE - 297' - 5' BEYOND ABUTMENT TO 5' BEYOND ABUTMENT

STATE PROJECT NO.: 1360-13-70	HWY: S.T.H. 145	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT BRIDGE INSTALLATION (CUC)	SCALE FEET NTS	SHEET 20	E

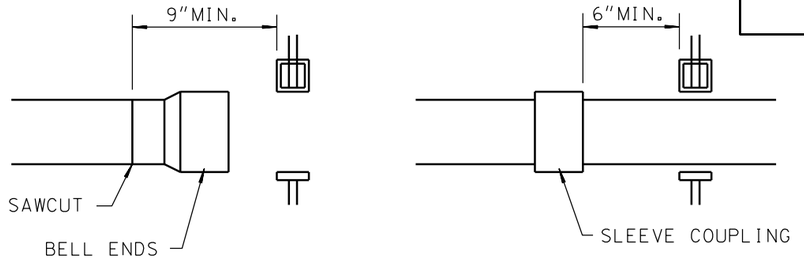
FILE NAME : W:\ugd\Conduit Work Files\uconduit\2021\76TH STREET BRIDGE\Design\CO-B-40-255_LAYOUT_1
PLOT DATE : 04 /04 /2022
PLOT BY : Hazem Ramadan
PLOT NAME : _____
PLOT SCALE : NTS
WISDOT/CADDS SHEET

2



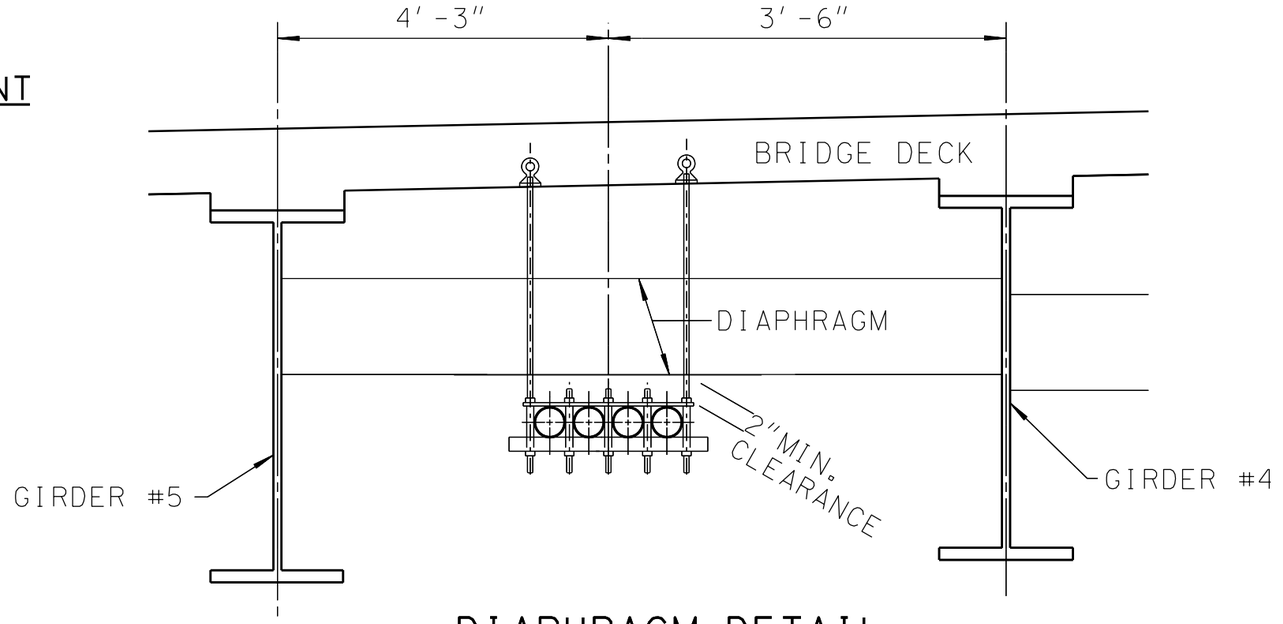
LOOKING WEST

TYPICAL SECTION AT ABUTMENT



CLEARANCES FOR SLEEVE COUPLINGS AND BELL ENDS

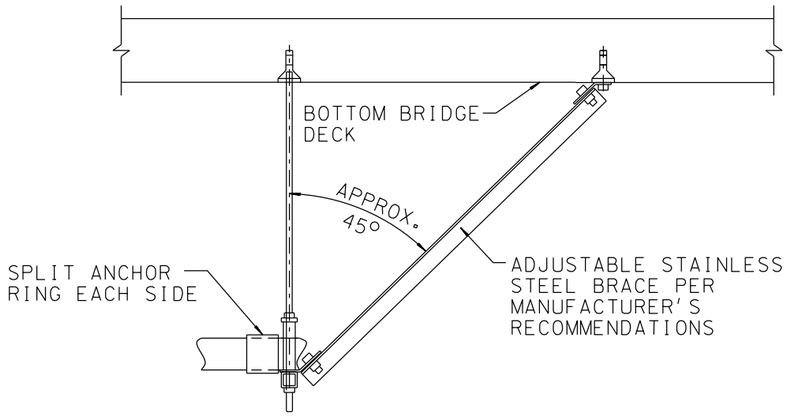
NOTES:
A BELLED END OR COUPLING SHOULD BE NO CLOSER THAN 6" ON EITHER SIDE OF A SUPPORT AS SHOWN ABOVE. A TAPE MEASURE CAN BE USED TO PREDETERMINE THESE LOCATIONS AND THE CONDUIT CAN BE SAW CUT TO THE PROPER LENGTH BEFORE IT IS THREADED THROUGH THE HANGERS AS SHOWN ABOVE.



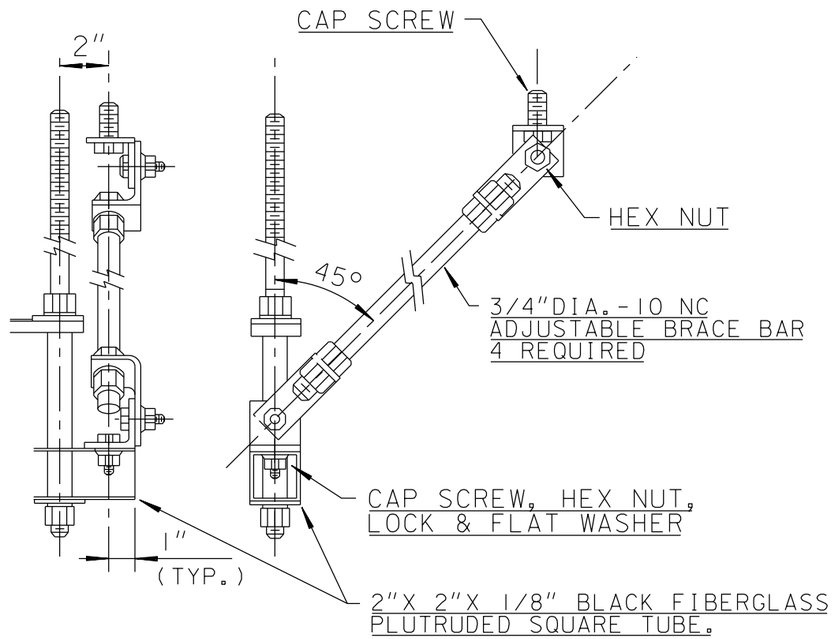
DIAPHRAGM DETAIL

4-DUCT CITY COMMUNICATION HANGER PACKAGE THROUGH INTERMEDIATE DIAPHRAM DETAIL

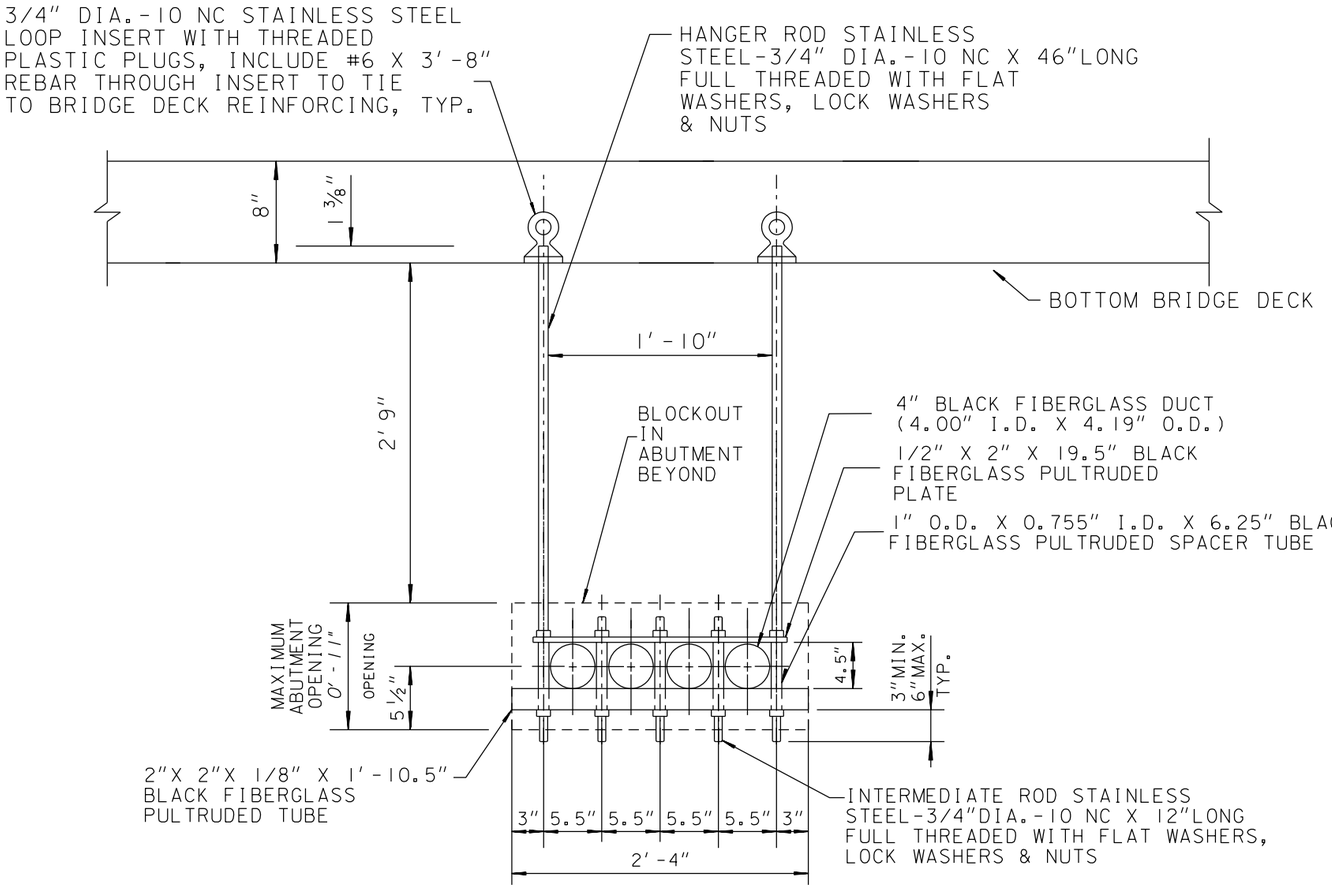
STATE PROJECT NUMBER
1360-13-70



BRACED HANGER DETAIL

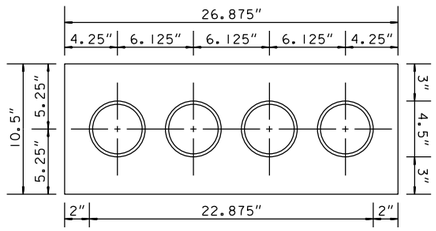


BRACED HANGER DETAIL



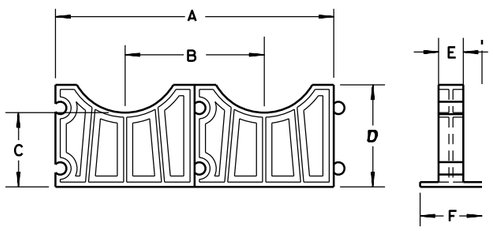
4 DUCT CITY COMMUNICATION HANGER PACKAGE DETAIL

* THE CONTRACTOR SHALL FIELD VERIFY HANGER LENGTHS IN ORDER TO AVOID CONFLICTS WITH DIAPHRAM CROSSING.

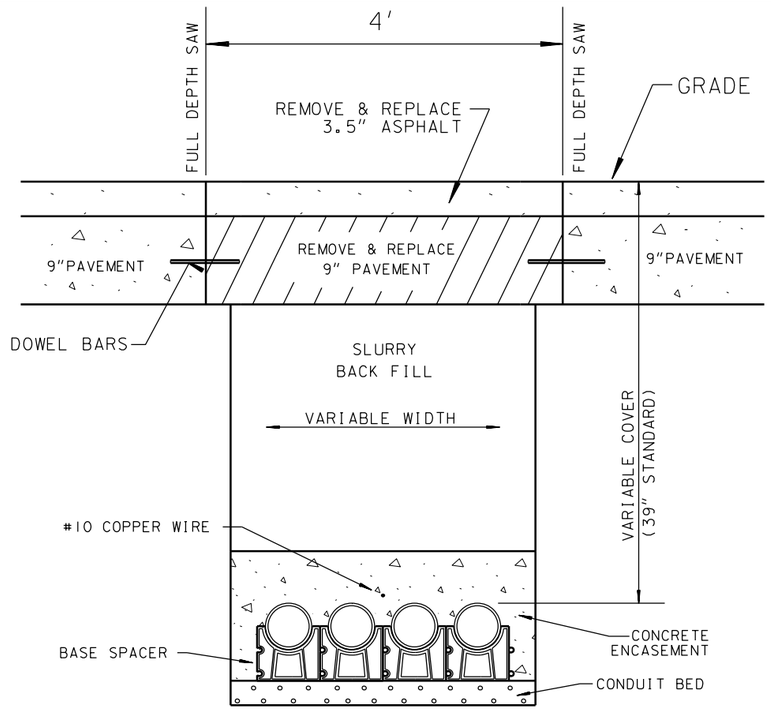


4-DUCT CROSS SECTION VIEW
N.T.S.

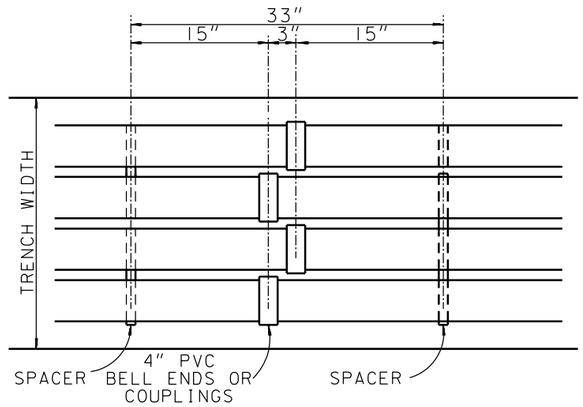
COND.	3"	4"
A	10 1/4"	12 1/4"
B	5.13"	6.13"
C	3"	3"
D	4 3/4"	5.31"
E	1"	1"
F	3"	3"



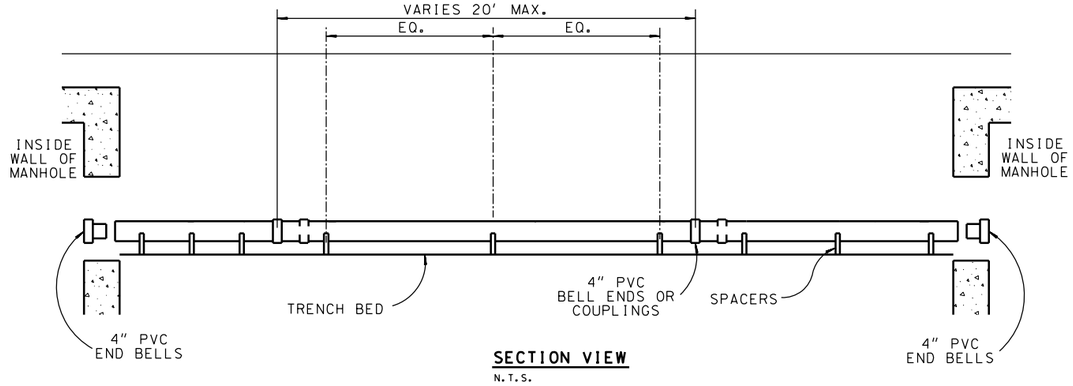
BASE SPACER DETAIL
N.T.S.



TRENCH AND 4-DUCT CROSS-SECTION VIEW
N.T.S.



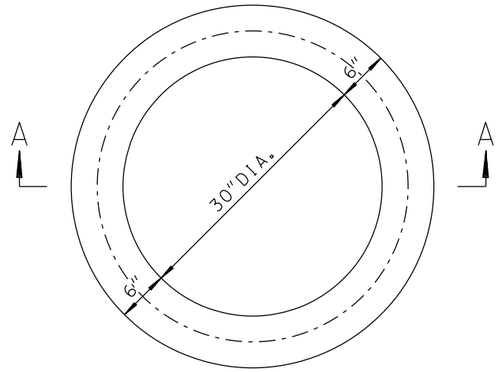
PLAN VIEW
N.T.S.



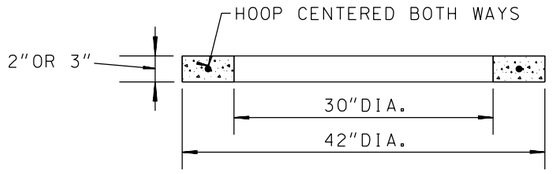
SECTION VIEW
N.T.S.

DUCT INSTALLATION DETAIL
N.T.S.

STATE PROJECT NO.: 1360-13-70	HWY: S.T.H. 145	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT DETAILS (CUC)	SCALE FEET NTS	SHEET 23	E



PLAN



SECTION A-A

THE ADJUSTING RING SHALL BE 2" OR 3" IN HEIGHT.

THE CIRCUMFERENTIAL STEEL SHALL BE CENTERED WITHIN THE RING.

AREA OF CIRCUMFERENTIAL STEEL = 0.07 SQ. INCH PER VERTICAL FOOT WITH A MINIMUM OF .024 SQ. INCH IN ANY ONE RING.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE CORE SHALL BE 4000 P.S.I.

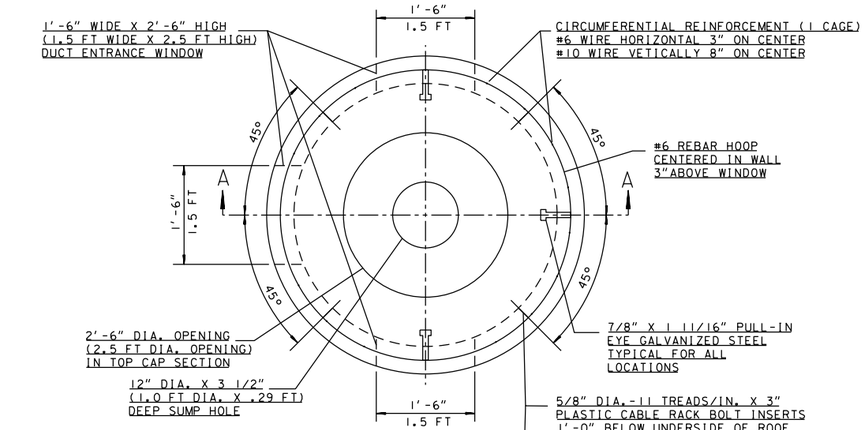
CONCRETE ADJUSTING RING

ADJUSTING CUC MANHOLES

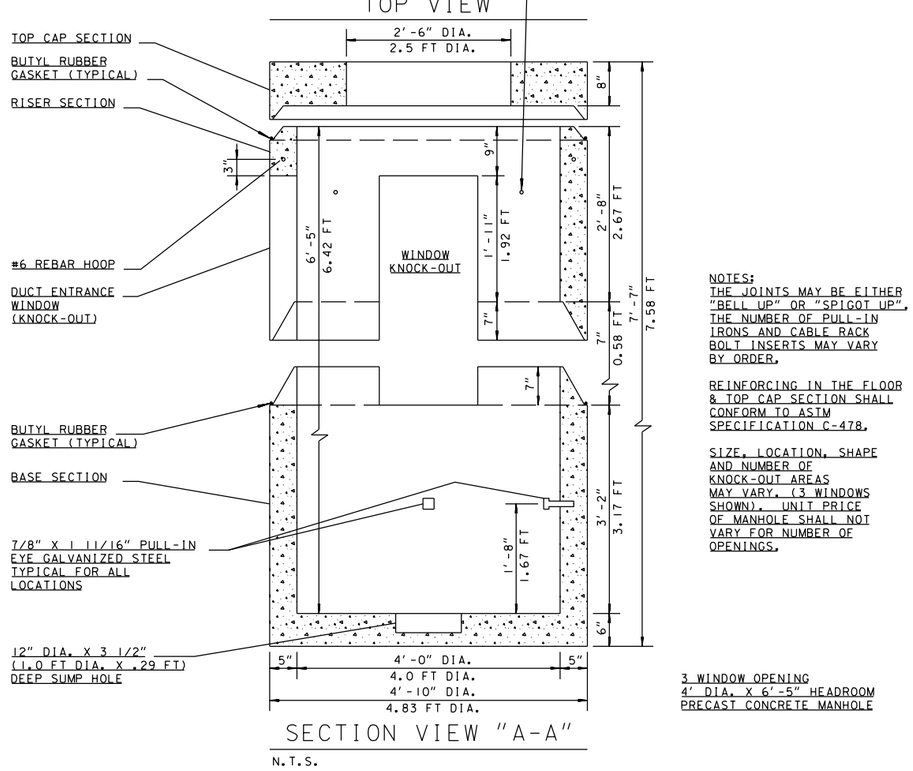
N.T.S.

STATE PROJECT NUMBER

1360-13-70



TOP VIEW



NOTES:
THE JOINTS MAY BE EITHER "BELL UP" OR "SPIGOT UP", THE NUMBER OF PULL-IN IRONS AND CABLE RACK BOLT INSERTS MAY VARY BY ORDER.

REINFORCING IN THE FLOOR & TOP CAP SECTION SHALL CONFORM TO ASTM SPECIFICATION C-478.

SIZE, LOCATION, SHAPE AND NUMBER OF KNOCK-OUT AREAS MAY VARY. (3 WINDOWS SHOWN). UNIT PRICE OF MANHOLE SHALL NOT VARY FOR NUMBER OF OPENINGS.

3 WINDOW OPENING 4' DIA. X 6'-5" HEADROOM PRECAST CONCRETE MANHOLE

SECTION VIEW "A-A"

N.T.S.

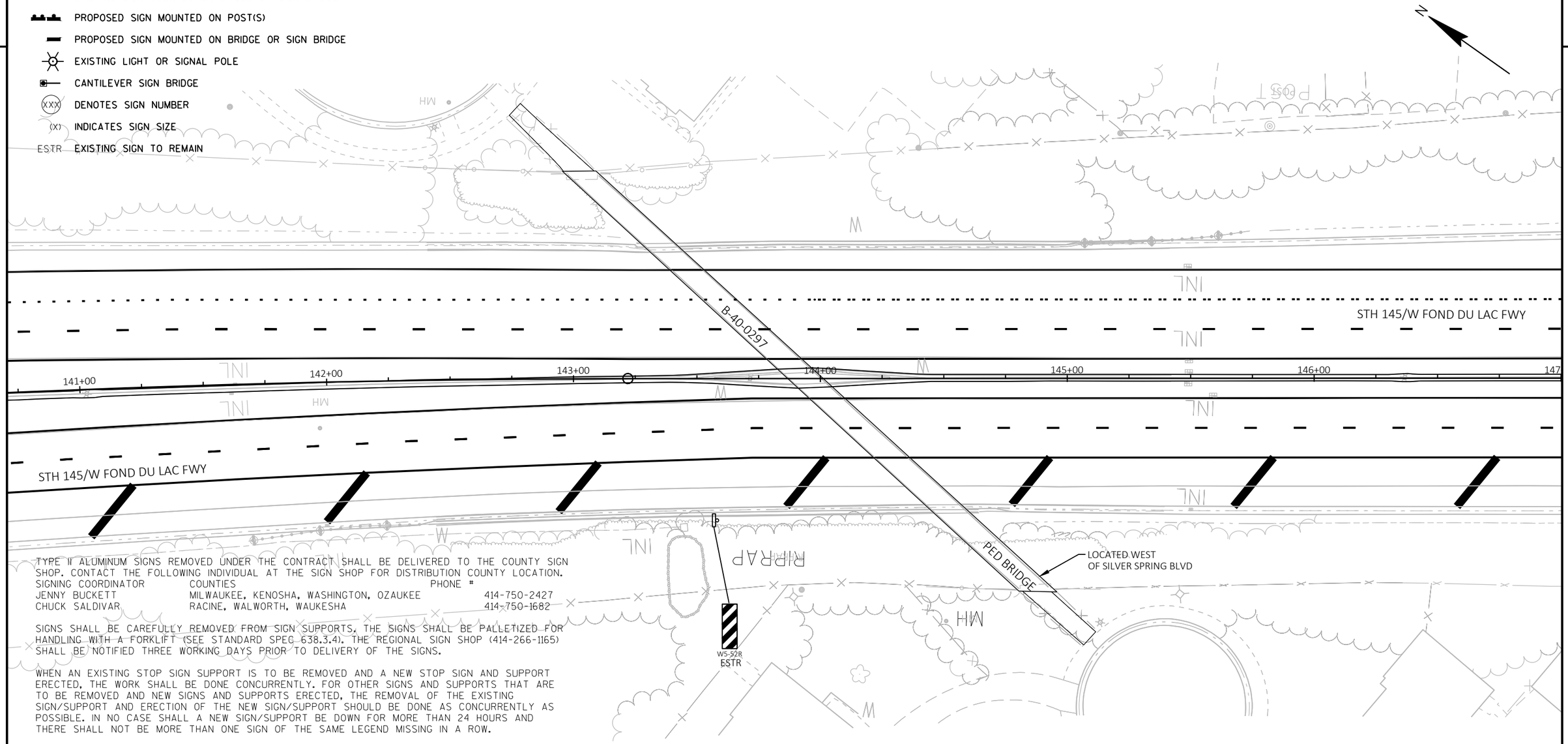
4' DIAMETER "DOGHOUSE" TYPE CUC MANHOLE

STATE PROJECT NO.: 1360-13-70	HWY: S.T.H. 145	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT DETAILS (CUC)	SCALE FEET NTS	SHEET ___-24	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
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN



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	COUNTIES	PHONE #
JENNY BUCKETT	MILWAUKEE, KENOSHA, WASHINGTON, OZAUKEE	414-750-2427
CHUCK SALDIVAR	RACINE, 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.

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

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 25	E

FILE NAME : N:\PDS\C3D\CAD\13601300\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 01
PLOT DATE : 5/22/2023 8:18 AM
PLOT BY : WAGNER, SCOTT H
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
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

T507
129.40

B-40-0298

SPEED LIMIT 55
R2-1
ESTR
L.P.

STH 145/W FOND DU LAC FWY

165+00 166+00 167+00 168+00 169+00 170+00

STH 145/W FOND DU LAC FWY

EXIT 7 B
181
76 TH STREET
EXIT ONLY
TYPE I
ESTR

SOUTH
145
J4-1
COLUMN
ESTR

SPEED LIMIT 55
R2-1
ESTR
L.P.

EXIT
30 MPH
W13-2D
ESTR

SHEET 2 OF 5

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 26	E

FILE NAME : N:\PDS\C3D\CAD\13601300\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 02

PLOT DATE : 5/22/2023 8:19 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

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
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

76TH ST

B-40-0256

B-40-0255

5 REMOVE
W4-3R (5)

4 W5-52R
MOVE
4' HEIGHT

NORTH 145 MILE 7 .6
D10-5
ESTR
L.P.

W4-1R
ESTR

179+00 180+00 181+00 182+00 183+00 184+00

STH 145/W FOND DU LAC FWY

2 3 N 76th St
M1-94
MOVE FROM
OLD TO NEW
BRIDGE

1 RIDESHARE
INFO CALL
1 - 800 - 455 - POOL
D12-2A (5)

RIDESHARE
INFO CALL
1 - 800 - 455 - POOL
REMOVE

SOUTH 145 MILE 7 .6
D10-5
ESTR
L.P.

SHEET 3 OF 5

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 27 E

FILE NAME : N:\PDS\C3D\CAD\13601300\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 03

PLOT DATE : 5/22/2023 8:19 AM PLOT BY : WAGNER, SCOTT H 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
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

N

12 REMOVE SOUTH 145 J3-1(2S)

11 REMOVE W11-2(2S) W16-7L(2S) L.P.

11A

10 MOVE Fond Du Lac Ave NEXT SIGNAL D1-65

9 REMOVE RAMP 25 MPH W13-3B(2M)

13 REMOVE NORTH 145 J2-1(2M) L.P.

W3-3 ESTR

6 REMOVE NORTH 145 J2-1(2M)

7 REMOVE BEGIN RIGHT TURN LANE YIELD TO BIKES R4-4(2M)

8 NO PARKING ANY TIME R7-1L(2M)

76TH ST SB

76TH ST NB

STH 145/W FOND DU LAC FWY

00+081

00+181

00+281

00+381

00+481

MH

INL

W

POST

SIGN

SHEET 4 OF 5

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 28	E

FILE NAME : N:\PDS\C3D\CAD\13601300\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 04

PLOT DATE : 5/22/2023 8:20 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

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
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

STH 145/W FOND DU LAC FWY

76TH ST SB

76TH ST NB

WALLS

21 REMOVE SOUTH 145 J3-1(2M) L.P.

20 MOVE Wauwatosa / Downtown Milwaukee D1-2 3 STEEL POSTS

19 REMOVE BEGIN RIGHT TURN LANE YIELD TO BIKES R4-4 (2M)

SPEED LIMIT 35 R2-1 ESTR L.P.

14 REMOVE RAMP 25 MPH W13-3B (2M)

15 REMOVE W11-2 (2S)

15A W16-7L (2S)

18 REMOVE W1-8 (2S)

16 REMOVE NORTH 145 J3-1(2S)

W1-8 ESTR

17 REMOVE R7-1D (2M)

SHEET 5 OF 5

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 29	E

FILE NAME : N:\PDS\C3D\CAD\13601300\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 05

PLOT DATE : 5/22/2023 8:20 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

STREET LIGHTING GENERAL NOTES:

PRIOR TO CONSTRUCTION, THE LOCATION OF UNDERGROUND UTILITIES SHALL BE DETERMINED IN THE FIELD BY CONTACTING "DIGGERS HOTLINE."

THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE, IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

STREET LIGHTING SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 652 EXCEPT:

ALL CHANGES OR ANY DEVIATIONS FROM PLANS MUST BE APPROVED BY STREET LIGHTING ENGINEERING.

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

1 THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCLUDING REPAIRS, REPLACEMENT OR RELOCATION ETC. OF STREET LIGHTING FACILITIES IF THE CONTRACTOR DOES ANY DEVIATION FROM THE
2 STREET LIGHTING DESIGN WITHOUT THE STREET LIGHTING ENGINEERS SIGNED PERMISSION.

3 LOCATIONS OF THE HDPE AND NON-METALLIC PVC CONDUITS WHERE THEY ARE REQUIRED ARE IDENTIFIED IN THE PRINTS. HOWEVER, INSTALLATION MAY REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. ANY RELOCATIONS MUST BE APPROVED BY THE ENGINEER.

4 CONDUIT INSTALLED BEHIND CURB, AND UNDER DRIVEWAYS SHALL BE INSTALLED AT A DISTANCE OF MINIMUM OF 6-INCHES AWAY FROM THE BACK OF CURB TO THE CENTER LINE OF CONDUIT, AND MINIMUM 24 INCHES DOWN MEASURED FROM THE TOP OF CURB OR FINISHED GRADE TO THE TOP OF CONDUIT.

5 DEPTH OF CONDUIT INSTALLED BELOW STREETS, HIGHWAYS, AND ALLEYS SHALL BE 24-INCHES MINIMUM AND 36-INCHES MAXIMUM. (MEASURED FROM FINISHED FLANGE LINE)
IF THE CONTRACTOR DOES ANY DEVIATION FROM THE STREET LIGHTING DESIGN WITHOUT THE STREET LIGHTING ENGINEERS SIGNED PERMISSION.

6 WHEN THERE IS MORE THAN ONE CONDUIT TO BE INSTALLED, PLACE ALL CONDUITS IN THE SAME TRENCH, OR BORE MULTIPLE CONDUITS TOGETHER AT THE SAME TIME.

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

8 BENDING OF NON-METALLIC PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR IMMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

9 ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS. (PER NEC CODE)

10 PRIOR TO CONDUIT ACCEPTANCE, ALL CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND BE CAPPED IMMEDIATELY AFTER INSTALLATION WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT, BUT EASILY REMOVED IN THE FUTURE. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

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

12 3/8-INCH PULL ROPE SHALL BE INSTALLED IN ALL NEW AND EMPTY CONDUIT.

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

14 UNLESS THE CONDUIT IS DESIGNED AND SHOWN WITH BENDS ON THE PLANS, ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO CONCRETE BASE, AND PULL BOX TO ENCLOSURE. OTHERWISE IT MUST BE APPROVED BY THE STREET LIGHTING ENGINEER.

15 MINIMUM CONDUIT CLEARANCES FOR CONDUIT CROSSINGS AND PULL BOXES FROM THE FOLLOWING:
FIRE HYDRANTS: 6-FT TREE TRUNKS: 10-FT END OF DRIVEWAY FLARES: 6-FT
UNLESS NOTED OTHERWISE, OR APPROVED BY THE STREET LIGHTING ENGINEER.

16 HAND DIGGING MAY BE REQUIRED FOR LOCATIONS ADJACENT TO EXISTING GAS AND POWER LINES. HAND EXCAVATION SHOULD BE ANTICIPATED AND WILL BE CONSIDERED INCIDENTAL TO THE BID ITEM BEING INSTALLED. COORDINATE ALL WORK NEAR GAS LINES WITH WE ENERGIES.

STREET LIGHTING GENERAL NOTES:

17 TYPICAL RECTANGULAR PULL BOXES / VAULTS SHOULD BE INSTALLED AS SHOWN ON PLANS, BUT WHEN IT IS NOT POSSIBLE, A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS AND FIRE HYDRANTS SHOULD BE USED, OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

18 TYPICAL CONDUIT INSTALLATION FROM THE PULL BOX TO A DIRECT BURIED STREET LIGHT POLE IS AS FOLLOWS: USE A NYLON LIQUIDTIGHT CONNECTOR (UL APPROVED) TO CONNECT THE 1 1/2-INCH LIQUIDTIGHT FLEXIBLE NON-METALLIC CONDUIT LFNC-B (UL APPROVED) TO THE PULL BOX AND CONNECT TO STREET LIGHT POLE BY STUBBING UP A MINIMUM OF 6-INCHES OF THE LIQUIDTIGHT FLEXIBLE NON-METALLIC CONDUIT (LFNC-B) INTO THE CABLE SLOT.

19 ALL HDPE OR NON-METALLIC PVC CONDUITS THAT CONNECT TO PULL BOXES REQUIRE A PVC END BELL CONNECTOR INSIDE THE PULL BOX

20 PROVIDE REMOVABLE SEALANT SUCH AS DUCT SEAL IN THE CONDUITS AT THE CABINETS, PULL BOXES AND JUNCTION BOXES TO AVOID CONDENSATION CAUSED BY AIRFLOW THROUGH THE CONDUITS DUE TO TEMPERATURE DIFFERENCE. THIS WORK SHALL BE INCIDENTAL TO ASSOCIATED CONDUIT PAY ITEM.

21 CONDUCTOR COLORS: 240/480, 1 PHASE - BLACK / RED / WHITE (NEUTRAL) / GREEN (GROUND)

22 PROVIDE MINIMUM CABLE/CONDUCTOR(S) SLACK AS NOTED BELOW:
PULL BOXES: 3-FT EMBEDDED JUNCTION BOXES: 3-FT
DISTRIBUTION CENTER/LOAD CENTER: 10-FT BREAK AWAY TRANSFORMER BASE: 2-FT

23 UNDERGROUND WIRE & CONDUIT SHOWN ON PLANS TO BE ABANDONED IN PLACE UNLESS DIRECTED BY THE ENGINEER. CONTRACTOR MAY CHOOSE TO REMOVE CONDUCTOR AT THEIR OWN EXPENSE.

24 LIGHT POLES INSTALLED BEHIND THE CURB MUST MEET A MINIMUM DISTANCE OF 24 INCHES FROM THE FACE OF CURB TO THE CURB SIDE FACE OF THE POLE OR TRAFFIC STANDARD.

25 ON ALL NEW STREET LIGHT POLES A PLAQUE WITH THE POLE NUMBER AS SHOWN ON THE PLANS SHALL BE AFFIXED ONTO THE POLE SHAFT.

26 COORDINATE NEW CONDUIT CONNECTIONS WITH EXISTING CONDUIT, DUCT PACKAGES, AND PULL BOXES/ VAULTS/ MANHOLES WITH CITY OF MILWAUKEE STREET LIGHTING. THE CITY REQUIRES THREE WORKING DAYS ADVANCED NOTICE. CONTACT ELECTRICAL SUPERVISOR
STREET LIGHTING - NEAL KARWEIK (OFFICE 414-286-5943 (CELL) 414-708-4245
STREET LIGHTING - MARK MACRAE (OFFICE) 414-286-5928 (CELL) 414-708-0434
STREET LIGHTING - DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - RUDY GUTIERREZ (OFFICE) 414-286-5941 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

27 IMMEDIATELY AFTER THE CONTRACTOR HAS COMPLETED ALL THE ELECTRICAL PULL BOXES / VAULTS, CONDUIT AND CONDUIT CONNECTIONS, AND JUST BEFORE ELECTRICAL WORK IS COVERED UP WITH CONRETE, SOIL, OR ETC. THE CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SHOP SUPERVISORS FOR FINAL INSPECTION AND APPROVAL OF ALL WORK.
STREET LIGHTING - NEAL KARWEIK (OFFICE) 414-286-5943 (CELL) 414-708-4245
STREET LIGHTING - MARK MACRAE (OFFICE) 414-286-5928 (CELL) 414-708-0434
STREET LIGHTING - THOMAS HUGHES (OFFICE) 414-286-3457 (CELL) 414-708-3175
STREET LIGHTING - DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - RUDY GUTIERREZ (OFFICE) 414-286-5941 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

28 CONTRACTOR TO PROVIDE AS-BUILT DRAWINGS DETAILING THE FINAL PLACEMENT OF CONDUIT, CABLING, EQUIPMENT, AND GEOMETRIC MODIFICATIONS UNDER THE CONTRACT. PROVIDE PDF COPY CONFORMING TO CMM 1-65.14, OR RECORD ALL CHANGES IN RED INK ONLY ON THE AS-LET (DESIGN) PAPER DRAWINGS. THE CITY OF MILWAUKEE DPW ENGINEER WILL REJECT AS-BUILTS WITH INCOMPLETE OR INCORRECT CONTENT OR NOT CONFORMING TO CMM STANDARDS.

29 CONTRACTOR TO DELIVER THE FOLLOWING REMOVED STREET LIGHTING MATERIALS:
-ALUMINUM AND WOOD POLES
-LUMINAIRE BRACKET ARMS
-LUMINAIRES
-BREAKAWAY TRANSFORMER PEDESTALS
-WIRING PEDESTALS (GREEN IN COLOR)
TO CITY OF MILWAUKEE STREET LIGHTING YARD AT 1540 W. CANAL ST.
CALL RICO LOPEZ AT 414-286-5983 (CANAL) OR 414-286-6123 N. 35th ST.)
OR ELSE DISPATCHER AT 414-286-5944, THREE (3) WORKING BEFORE TO COORDINATE DELIVERY OF MATERIALS

30 CONTRACTOR WILL BE RESPONSIBLE FOR THE DISPOSAL OF CONCRETE POLES, AND WIRING.

FILE NAME : W:\bes_WisDot\2022\(1360-13-70) Silver Spring Dr & 76th Over STH 145\Notes & Details\Detail Master.dgn
PLOT DATE : 18-APR-2022 06:58
PLOT BY : dkozel
PLOT NAME :
PLOT SCALE : 1:40
WISDOT/CADDS SHEET 42

STREET LIGHTING GENERAL NOTES:

AS-BUILT GUIDELINES:

PROVIDE AS-BUILT DRAWINGS DETAILING THE FINAL PLACEMENT OF CONDUIT, CABLING, EQUIPMENT, AND GEOMETRIC MODIFICATIONS UNDER THE CONTRACT. PROVIDE PDF COPY CONFORMING TO CMM 1-65.14, OR RECORD ALL CHANGES IN RED INK ONLY ON THE AS-LET (DESIGN) PAPER DRAWINGS. THE ENGINEER WILL REJECT AS-BUILTS WITH INCOMPLETE OR INCORRECT CONTENT OR NOT CONFORMING TO CMM STANDARDS.

IT IS CRITICAL THAT THE CONTRACTOR WORK ON THE AS-BUILT DRAWINGS WHILE THE JOB IS PROGRESSING, SO CHANGES ARE DOCUMENTED WHILE THEY ARE STILL FRESH IN YOUR MIND.

IF THERE IS A STRUCTURE DRAWING, INCLUDE ALL STRUCTURES DRAWING SHEETS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSERT ANY ADDENDUM OR REPLACEMENT DRAWING SHEETS. TO DO THIS, RENUMBER THEM SIMILARLY TO THE ORIGINAL DRAWING SHEET.

FOR EXAMPLE:
REVISED SHEET 5 WOULD REPLACE SHEET 5. HOWEVER, ALL THE ORIGINAL SHEETS SHALL REMAIN IN THE AS-BUILT. IF THE SHEET HAS BEEN REPLACED CROSS IT OUT WITH AN X AND INDICATE THE NUMBER OF ITS REPLACEMENT SHEET. IF ADDITIONAL SHEETS WERE ADDED, INSERT THEM IN THE ORIGINAL LOCATION AND LABEL THEM WITH THE PREVIOUS SHEET NUMBER FOLLOWED BY AN "A", "B", "C", ETC.

NOTE THE SHEET CHANGES ON THE TITLE SHEET UNDER THE ORDER OF SHEETS.

THE TITLE SHEET OF THE AS-BUILT DRAWING SHOULD INCLUDE THE FOLLOWING INFORMATION:
AS-BUILT DRAWING
SUPERVISOR:
PROJECT MANAGER:
CONTRACTOR LEADER:
CONTRACTOR COMAPNY:
WORK STARTED:
WORK COMPLETED:

LINE OUT OR CROSS OUT ALL CHANGED INFORMATION AND WRITE-IN THE CORRECTED INFORMATION ABOVE THE ORIGINAL OR CLOSE TO IT WHEREVER POSSIBLE. USE BLANK SPACES ON THE DRAWING SO NOTES ARE NOT SUPERIMPOSED. DRAWINGS WITH EXCESSIVE DETAIL MAY REQUIRE AN ALTERNATE APPROACH. NUMBERED CHANGES OR ADDITIONS MAY BE SHOWN ON SUPPLEMENTAL NON-DRAWING SHEETS.

- LOCATE AND CLEARLY LABEL ALL CONDUIT RUNS, FITTINGS, SPLICE VAULTS, PULL BOXES, METER PEDESTALS, CONCRETE BASES, TRANSFORMERS, POLES AND OTHER APPURTENANCES IN TWO DIRECTIONS. SWING TIES SHOULD BE MADE FROM THE OBJECTS THAT ARE PERMANENT IN NATURE AND VISIBLE ON THE FINISHED SURFACE.
- STREET NAMES SHALL BE ON ALL SHEETS.
- SHOW ALL SIZES AND MATERIAL TYPES OF PIPES AND CONDUITS, IF CHANGED OR MODIFIED FROM ORIGINAL DESIGN.
- ALL HORIZONTAL DISTANCES SHALL BE SHOWN TO THE NEAREST TENTH OF A FOOT (I.E., 205.3'). ALL VERTICAL DISTANCES SHALL BE TO THE NEAREST INCH (I.E., 24")
- SHOW LOCATION AND ELEVATIONS ON PIPES AND FITTINGS WHERE CHANGES OR DEFLECTIONS IN DIRECTION OCCUR.
- SPECIAL DETAIL DRAWINGS MAY BE REQUIRED WHERE INSTALLATIONS ARE NOT SHOWN ON APPROVED CONSTRUCTION DRAWINGS FOR WHATEVER REASON OR WHERE REQUIRED FOR CLARITY.
- TYPICAL SERVICE INSTALLATION DETAILS WITH DEVIATIONS FROM ORIGINAL PLANS OR STANDARD DETAILS SHALL BE NOTED ON AS-BUILT DRAWINGS.
- NO ARBITRARY MARK-UPS WILL BE PERMITTED.

IF THERE ARE NO CORRECTIONS OR ADDITIONS TO THE AS-LET PLAN(S) PUT "NO CHANGE" ON THE SHEET WITH ALL OTHER REQUIRED AS-BUILT INFORMATION.

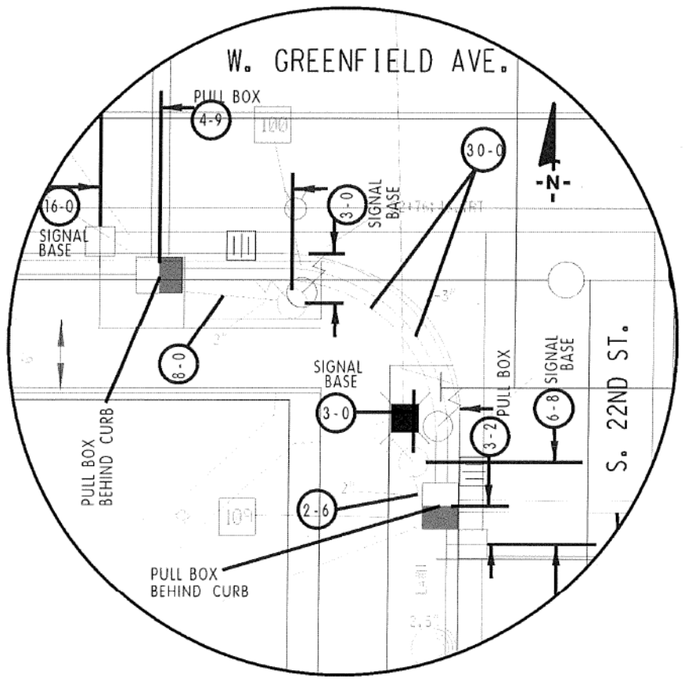
SEND TO:
CITY OF MILWAUKEE
INFRASTRUCTURE SERVICES DIVISION
TRANSPORTATION SECTION
STREET LIGHTING & CUC MANAGER
841 NORTH BROADWAY
ROOM 920
MILWAUKEE, WISCONSIN 53202

USE RED INK TO DO AS-BUILTS

RECORD RETENTION GUIDELINES:

* CONTRACTOR TO LOCATE AND CLEARLY DIMENSION ALL OF THERE NEWLY INSTALLED CONDUIT RUNS, FITTINGS, SPLICE VAULTS, PULL BOXES, METER PEDESTALS, CONCRETE BASES, TRANSFORMERS, POLES AND OTHER APPURTENANCES IN TWO (2) DIRECTIONS. SWING TIES SHOULD BE MADE FROM OBJECTS THAT ARE PERMANENT IN NATURE AND VISIBLE ON THE FINISHED SURFACE.
* STREET NAMES SHALL BE ON ALL SHEETS.
* SHOW ALL SIZES AND MATERIAL TYPES OF PIPES AND CONDUITS, IF CHANGED OR MODIFIED FROM ORGINAL DESIGN.
* ALL HORIZONTAL DISTANCES SHALL BE SHOWN TO THE NEAREST TENTH OF A FOOT (I.E., 205.3'). ALL VERTICAL DISTANCES SHALL BE SHOWN TO THE NEAREST INCH (I.E. 24").
* SHOW LOCATION AND ELEVATIONS OF PIPES AND FITTINGS WHERE CHANGES OR DEFLECTIONS IN DIRECTION OCCUR.
* SPECIAL DETAIL DRAWINGS WILL BE SUPPLIED WHERE REQUIRED FOR CLARITY.
* DEVIATIONS FROM ORIGINAL PLANS OR STANDARD DETAILS SHALL BE NOTED ON AS-BUILT DRAWINGS.
* IF THERE ARE NO CORRECTIONS OR ADDITIONS TO THE AS-LET PLAN(S) PUT "NO CHANGE" ON THE SHEET.

SUPERVISOR:_____
PROJECT MANAGER:_____
CONTRACTOR LEADER:_____
CONTRACTOR COMPANY:_____
WORK STARTED:_____
WORK COMPLETED:_____



FIELD RECORD EXAMPLE DETAIL NOT TO SCALE

TYPICAL DIMENSIONING OF CONDUIT, PULL BOXES, AND CONCRETE BASES

MEASURING GUIDE LINES

IF CONDUIT IS NOT PLACED DIRECTLY BEHIND THE CURB IN THE ISLANDS & SIDE TERRACE AREAS, A MEASURED DISTANCE FROM THE FACE OF CURB TO THE CONDUIT WILL NEED TO BE PROVIDED.

PROVIDE A MEASURED DISTANCE OF UNINTERRUPTED CONDUIT RUNS

USE PERMANENT OBJECTS LIKE HYDRANTS, CATCH BASINS, OR EVEN CURB FACE LINES EXTENED TO MEASURE OFF WHEN LOCATING CONDUIT, PULL BOXES AND CONCRETE BASES.

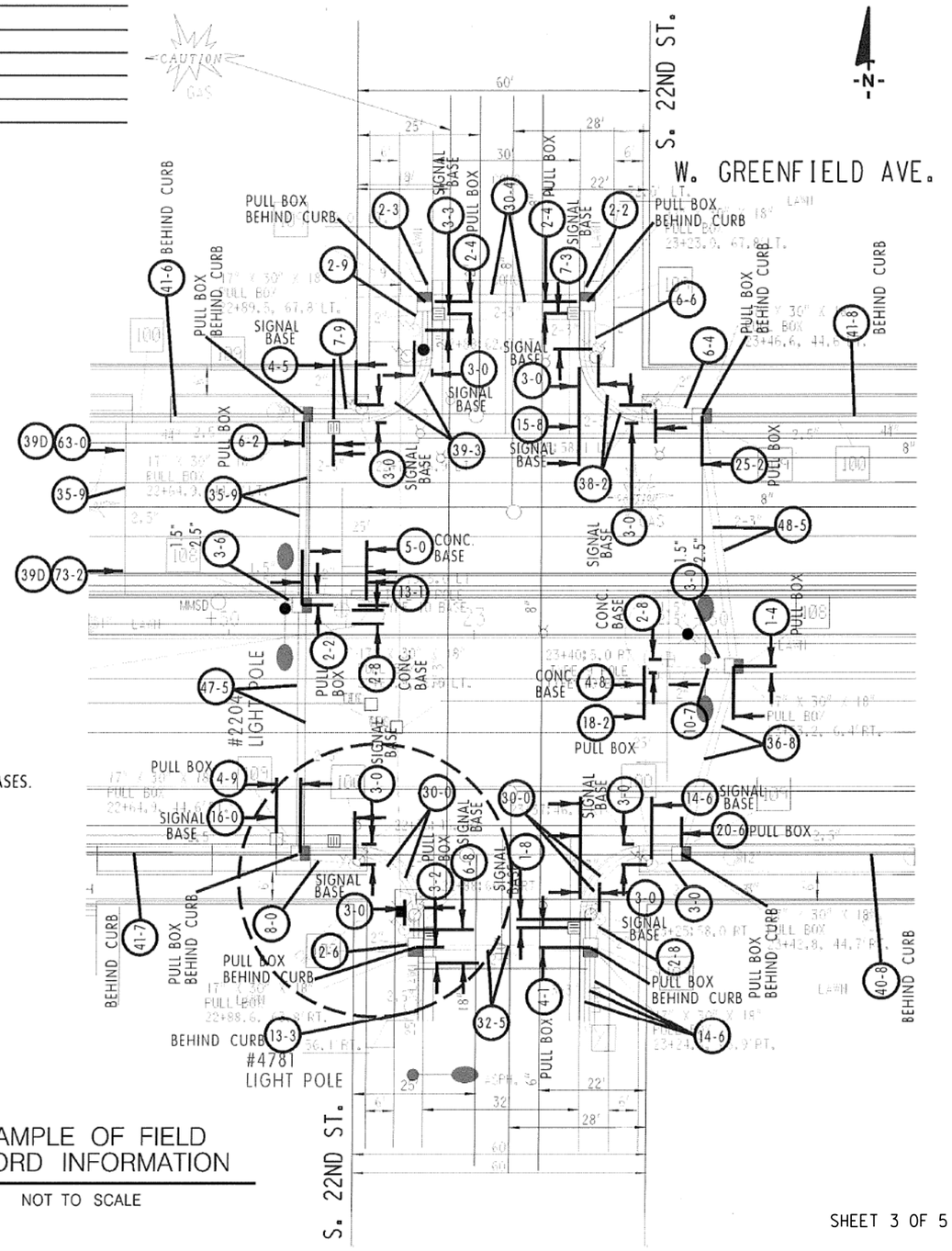
MEASURE TO OR FROM THE CENTERS OF OBJECTS FOR DISTANCE TAKING.

(39D) MEANS = CONDUIT IS 39" DEEP

(48-5) MEANS = LENGTH OF CONDUIT IS 48.5 FT. LONG (MEASURED TO NEAREST TENTH OF A FOOT)

OR

(25-6) MEANS = DISTANCE OF 25.6 FT. BETWEEN PERMANENT OBJECT OR CURB FACE TO CONDUIT, PULL BOX, AND CONCRETE BASE (MEASURED TO NEAREST TENTH OF A FOOT)



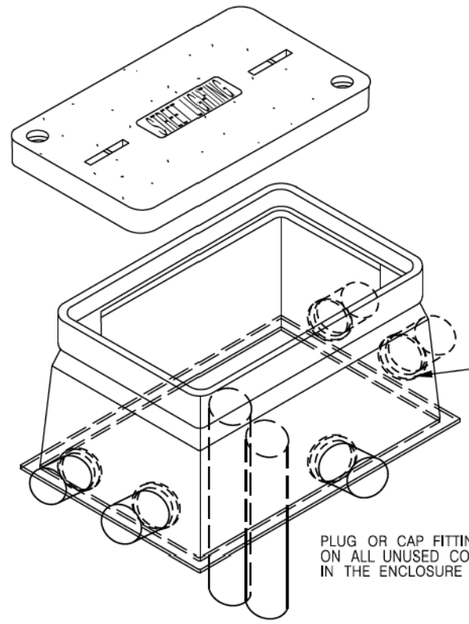
EXAMPLE OF FIELD RECORD INFORMATION

NOT TO SCALE

SHEET 3 OF 5

PROJECT NO. 1360-13-70	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - GENERAL NOTES & DETAILS	SHEET 32	E

2

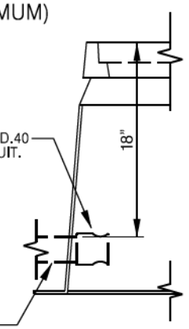


HEAVY DUTY COVER
W/ STREETLIGHTING LOGO
& W / 2 BOLTS
COLOR: GRAY
TIER 15 RATING (MINIMUM)

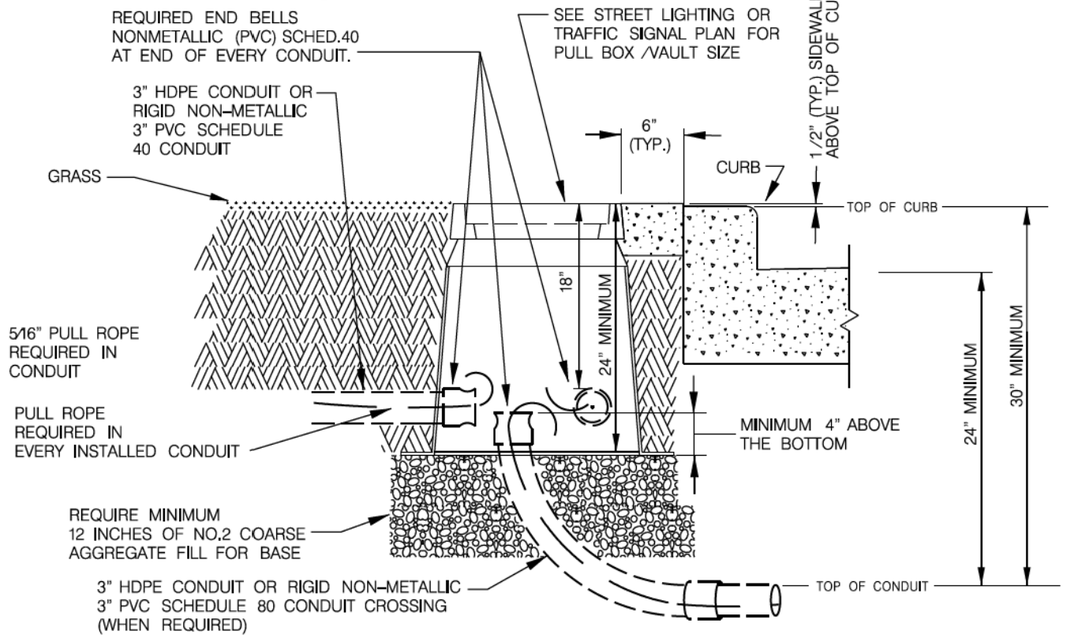
PULL BOX /VAULT
FLARED WALL
BOX W / NO BASE
COLOR: GRAY
TIER 15 RATING (MINIMUM)
(VARIOUS SIZES)

REQUIRED END BELLS
NONMETALLIC (PVC) SCHED.40
AT END OF EVERY CONDUIT.

PLUG OR CAP FITTINGS
ON ALL UNUSED CONDUITS
IN THE ENCLOSURE



HDPE OR
RIGID NONMETALLIC
PVC CONDUIT



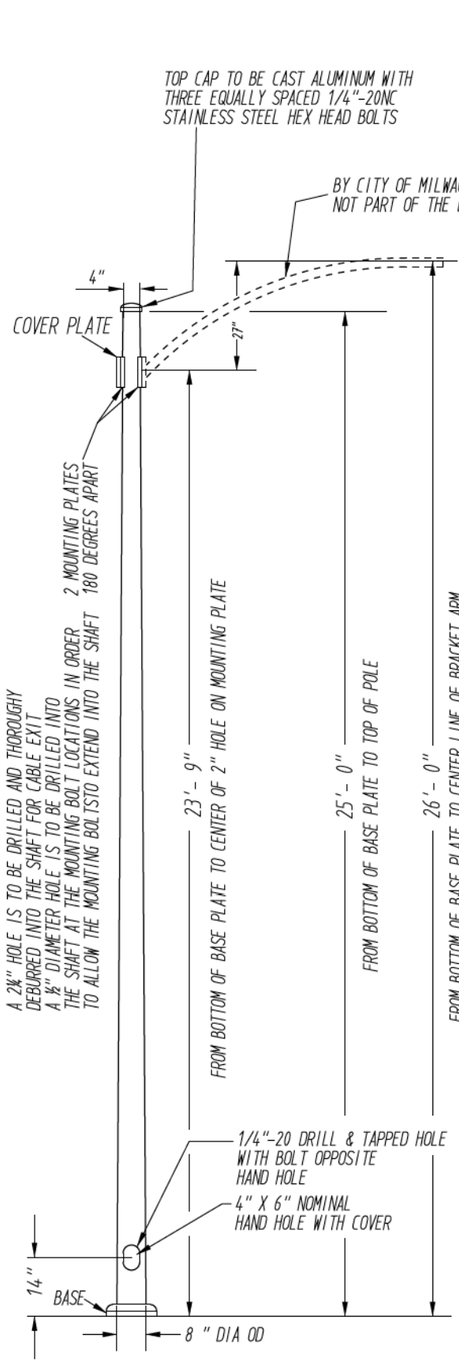
112 DETAIL

TYPICAL PULL BOX /VAULT INSTALLATION IN EITHER PAVEMENT OR GRASS AREAS

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

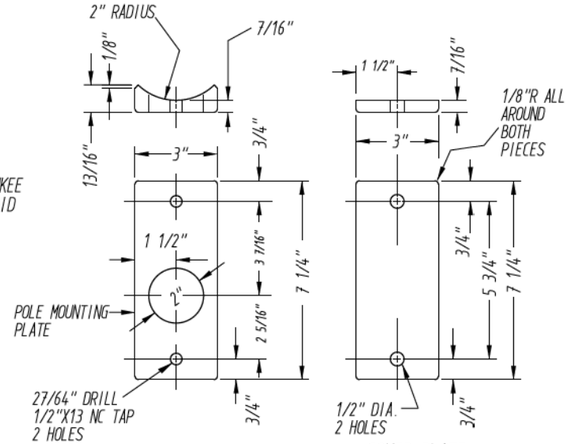
NOT TO SCALE

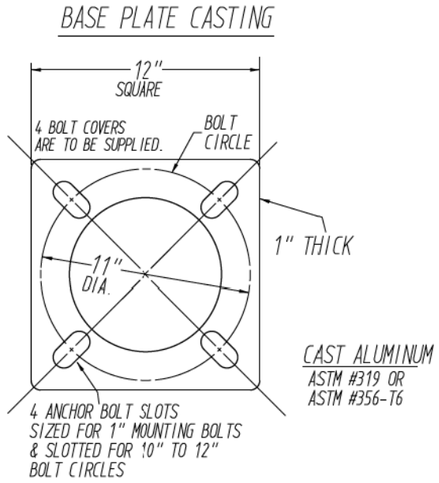
SHEET 4 OF 5



POLES TYPE 25-AL-BD

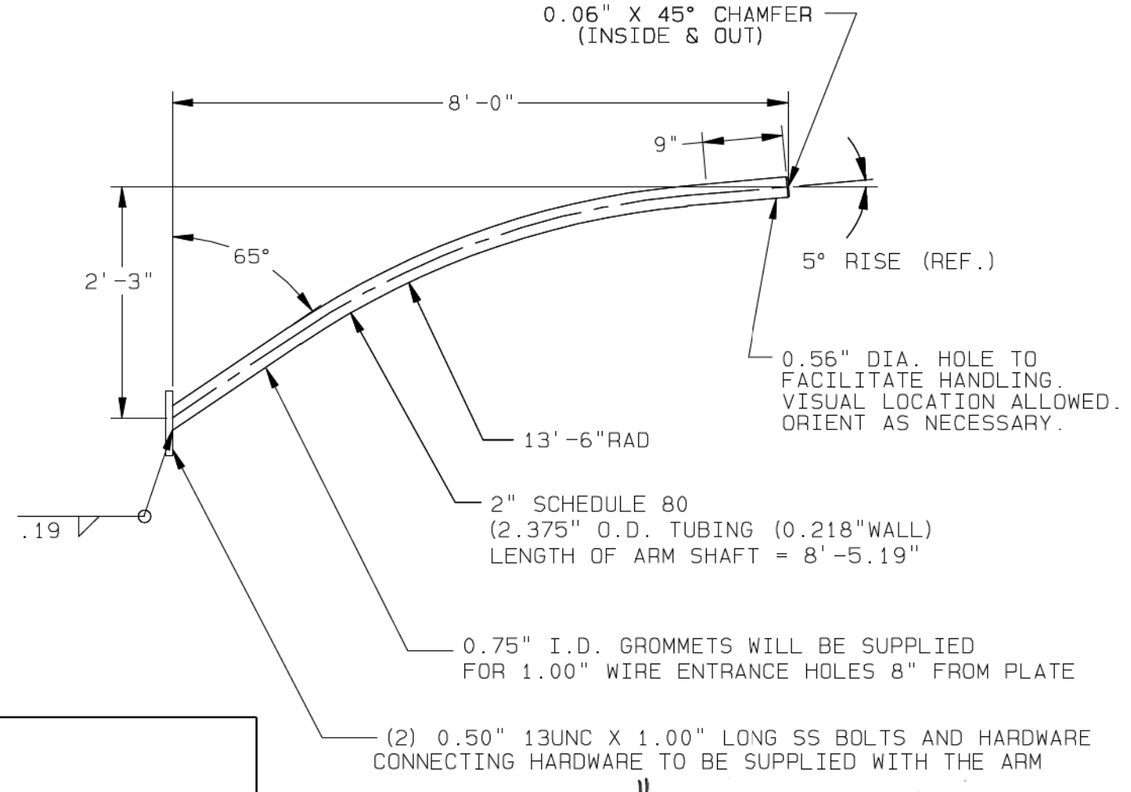
G:\Street Lighting Specs\Poles. Aluminum Bolt Down\B-14-13 26FT.dgn

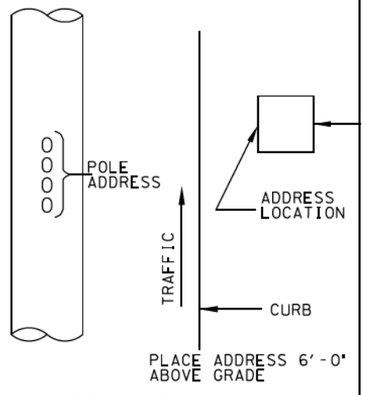




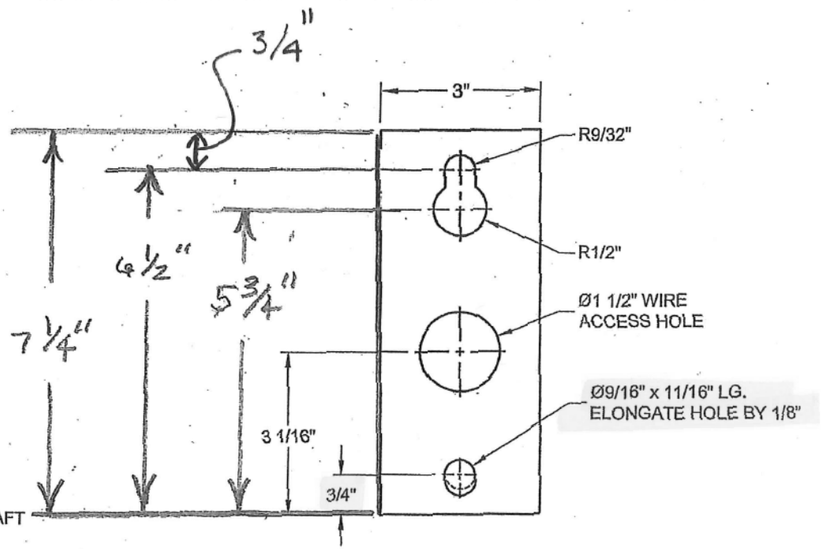
REVISED DATE:		REVISED BY:			
SPEC. NO. 12c-C-1					
BOLT DOWN ALUMINUM POLE 26 FOOT MOUNTING HEIGHT					
CITY OF MILWAUKEE D.P.W. TRANSPORTATION SECTION INFRASTRUCTURE SERVICES DIVISION					
STREET LIGHTING DIVISION					
DATE 11-14-14	SCALE: NONE	DRAWN DK	DESIGN BES	CHECKED	APPROVED
SUPERSEDES		DRG. # B-14-13			
SUPERSEDED BY					

LUMINAIRE ARMS SINGLE MEMBER 8-Ft.





CONTRACTOR FURNISHED AND INSTALLED



NOTE: 1" I.D. RUBBER GROMMET PROVIDED FOR USE IN POLE SHAFT

MOUNTING PLATE DETAIL

1/2" THK. ALUMINUM (6061-T6 ALLOY)

SHEET 5 OF 5

PROJECT NO. 1360-13-70	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - GENERAL NOTES & DETAILS	SHEET 34	E

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.

- EX. UNDERGROUND PRIMARY CABLE

W. GRANTOSA DR.

STH 181 / N. 76th ST.

E. OF UNIT #7618

9#14LTP INTER.

2#4LTP SIG. SERVICE AT WALK

IN SERVICE U.G. CABLE CIR.NO-6

2-1#8FS

ABANDONED CABLE CIR.NO-6

2#SE-3-6 #5119 26'S&AL,2S2 PRIM.RISER, GROUND & TEST

IN SERVICE U.G. CABLE CIR.NO-5

CITY OF MILWAUKEE TO REMOVE O.H. 1#6 PRIM. CIR.NO-6 CABLE BEFORE CONSTRUCTION

EXISTING 35 FT. WP 31'W. OF WCLX PRIM.RISER, LTG.ARR.

TR.SIGNAL CONTROL CAB.

CIR.NR-20 CIR

2-2#12UF

PIPE LOCATION UNKNOWN

#5076 30'D8'AL 33HSE-4-6 S. OF UNIT #5076

#7602 26'D8'AL,3S3

CONC.BUS PAD

EXISTING O.H. CABLE 1#6 PRIM. CIR.NO-6

33HSE-6-0 N. OF UNIT #5040 30'D6'AL

33HSE-2-6 #5104 30'D6'AL,(2)3S3 PRIM.RISER,LTG.ARR.

#5120 EXISTING 35 FT. WP 6'U.B.,2S2,2HSX DIRECTLY IN LINE WITH EX.POLE #5119 AND CENTERED IN ISLAND

CITY OF MILWAUKEE TO INSTALL 1#6 PRIM. CIR.NO-6 O.H. CABLE

ABANDON CABLE CIR.NO-6

S. EDGE OF WALK

#7542 30'D6'AL,(2)3S2 33HSE-29-6 E. OF CURB

35'W.P. (FOR TR.SIGNALS) 5'N. OF TR.SIGNAL & NEXT TO WALK

IN SERVICE U.G. CABLE CIR.NO-6

22HSE-17-0 W. OF UNIT #7534 #7534 25'D8'AL,(2)2S2

2-2#12UF CIR.NO-6

35+00

36+00

37+00

TEMP. PHASE I - SHEET 1 OF 5

PROJECT NO. 1360-13-70	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PROPOSED TEMPORARY PHASE I PLAN	SHEET 35	E

CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

STH 181 / N. 76th ST.

W. VILLARD AV.

W. MEDFORD AVE

W. FOND DU LAC AVE.

9#14LTP INTER.

IN SERVICE U.G. CABLE CIR.NO-5

IN SERVICE U.G. CABLE CIR.NO-4

IN SERVICE U.G. CABLE CIR.NP-11

IN SERVICE U.G. CABLE CIR.NO-6

CONTRACTOR WILL NEED TO PLACE JERSEY BARRIER 1 FT. OFF POLE ON THE WEST SIDE

CONTRACTOR WILL NEED TO PLACE JERSEY BARRIER 1 FT. OFF POLE ON BOTH EAST AND WEST SIDES

CITY OF MILWAUKEE TO INSTALL 3#12 UF CIR.NO-6 O.H. CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO REMOVE O.H. 1#6 PRIM. CIR.NO-6 CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO REMOVE 35 FT. WOOD POLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO INSTALL 35 FT. WOOD POLE 6 FT. BRACKET ARM, 2S2 BEFORE CONSTRUCTION STA. 39+21/53LT. 6.5'S. OF CARRIAGE WALK @#5153 AND 3 FT. B.O.C.

CITY OF MILWAUKEE TO REMOVE O.H. 1#6 PRIM. CIR.NP-11 CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO INSTALL 1#6 PRIM. CIR.NO-6 O.H. CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO INSTALL 1#6 PRIM. CIR.NP-11 O.H. CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO INSTALL 1#6 PRIM. CIR.NO-4 O.H. CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO INSTALL 35 FT. WOOD POLE BEFORE CONSTRUCTION STA. 38+57.60'RT. 13.5'E. OF ECLX & 9.5'B.O.C.

CITY OF MILWAUKEE TO INSTALL 35 FT. WOOD POLE 6 FT. BRACKET ARM, 2S2, 2PHSX BEFORE CONSTRUCTION STA. 39+27.75'RT. 92'N. OF NDLX & 4.5'B.O.C.

CITY OF MILWAUKEE TO REMOVE LIGHT POLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO REMOVE O.H. 3#12UF CIR.NP-11 CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO REMOVE O.H. 1#6 PRIM. CIR.NP-11 CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO INSTALL 35 FT. WOOD POLE BEFORE CONSTRUCTION STA. 38+57.60'RT. 13.5'E. OF ECLX & 9.5'B.O.C.

CITY OF MILWAUKEE TO INSTALL 1#6 PRIM. CIR.NP-11 O.H. CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO INSTALL 1#6 PRIM. CIR.NO-4 O.H. CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO REMOVE PRIMARY RISER, LIGHTNING ARRESTER.

EXISTING 35 FT. WP PRIM.RISER, LTG.ARR. 60'E.. OF ECLX

EXISTING 35 FT. WP PRIM.RISER, LTG.ARR. 11'S OF WISDOT POLE AND 3'E OF WEST CURB OF ISLAND

35'WP PRIM.RISER, LTG.ARR. 48'W. OF WCLX

35'WP PRIM.RISER, LTG.ARR. 65'SE OF ECLX OF N.76th ST.

35'WP 2HSX CITY OF MILWAUKEE PRIMARY RISER, LIGHTNING ARRESTER

35'WP 25'N OF THE WISDOT LIGHT POLE AND CENTERED IN ISLAND

35'WP PRIM.RISER, LTG.ARR. 10'S OF UNIT #5214

EXISTING O.H. 1#6 PRIM., CIR.NP-11

EXISTING UG CABLE CIR.NP-11

ABANDON CABLE CIR.NO-4

ABANDON CABLE CIR.NP-11

CONC.BUS PAD

WISDOT POLE

#5148 26'D8'AL/2S2 2PHSX

#7533 A21-6,1S2V 1HSX PRIM.RISER LTG.ARR.

#5211 25'S6'AL/2S2 2HSE-3-6

#5214 26'S6'AL/2S2 2HSE-4-0

#7526 25'S6'AL 2HSE-4-0

22HSE-12-0 S OF UNIT #5148

33HSE-4-10 N OF UNIT #5154

22HSE-9-0 W OF UNIT #5328

1HSE-4-0 #7533 A21-6,1S2V 1HSX PRIM.RISER LTG.ARR.

2#12UF CIR.NO-4

2#12UF CIR.NP-11

3#12UF

1#6 PRIM. CIR.NO-6

1#6 PRIM. CIR.NO-4

1#6 PRIM. CIR.NP-11

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

TEMP. PHASE I- SHEET 2 OF 5

PROJECT NO. 1360-13-70	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PROPOSED TEMPORARY PHASE I PLAN	SHEET 36	E

CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.

STH 181 / N. 76th ST.

W. FOND DU LAC AVE.

W. CALDWELL AVE.

CONC. BUS PAD

EXISTING U.G. CABLE CIR.NP-12

EXISTING O.H. 2#12UF, CIR.NP-12

EXISTING O.H CABLE 1#6 PRIM.,CIR.NP-11

ABANDON U.G. CABLE CIR.NP-11

EXISTING O.H CABLE 1#6 PRIM.,CIR.NP-11

EXISTING 35 FT. WP, PRIM.RISER,LTG.ARR. 9'S OF UNIT #5318 DIRECTLY ACROSS IN THE CENTER ISLAND

ABANDON U.G. CABLE CIR.NP-11

EXISTING O.H. CABLE 3#12UF, CIR.NP-11

EXISTING 35 FT. WP 2#4SX, 2'S OF PIPE CROSSING

ABANDON U.G. CABLE 2-2#12UF

ABANDON U.G. CABLE CIR.NP-9

ABANDON U.G. CABLE CIR.NP-11

ABANDON U.G. CABLE CIR.NP-12

EXISTING U.G. CABLE CIR.NO-4

EXISTING U.G. CABLE CIR.NP-11

EXISTING U.G. CABLE CIR.NP-9

EXISTING U.G. CABLE CIR.NP-12

EXISTING 35 FT. WP PRIM.RISER 40'SE. OF UNIT #7612

EXISTING 35 FT WP 2#SX ON CIR.NP-12 12PRIM.RISER,LTG.ARR. GROUND & TEST CENTERED IN ISLAND AT THE PIPE CROSSING

EX. UG CABLE CIR.NP-11 WHT WIRE
EX. UG CABLE CIR.NP-11 BLK WIRE
ONE OF THE CIRCUITS IS NOT IN SERVICE

CIR.NO-4

CIR.NP-11

CITY OF MILWAUKEE TO INSTALL 1#6 PRIM. CIR.NO-4 O.H. CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO INSTALL 35'WP. 33'S. OF HYDRANT BEFORE CONSTRUCTION

35'WP 2HSX PRIM.RISER 10'S OF UNIT #5214

CITY OF MILWAUKEE TO INSTALL 1#6 PRIM. CIR.NO-4 O.H. CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO INSTALL 35'WP. 13'S.E. OF C/L OF CATCH BASIN BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO INSTALL 1#6 PRIM. CIR.NO-4 O.H. CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO INSTALL 1#6 PRIM. CIR.NO-4 O.H. CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO INSTALL 1#6 PRIM. CIR.NP-11 CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO INSTALL O.H. 1#6 PRIM. CIR.NP-9 CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO INSTALL O.H. 1#6 PRIM. CIR.NP-9 CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO REMOVE O.H. 1#6 PRIM. CIR.NP-9 CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO REMOVE POLE BEFORE CONSTRUCTION #5318 26'S8'AL/0252 22HSE-31-10 S. OF UNIT #5318

#7612 25'S6'AL,3M2 3MVACI-4-0

1ACI-60-0 W. OF CURB SHORTED TRANSFORMER

2HSE-3-6 #5269 26'S6'AL252

#5268 24'S6'AL252 PRIM.RISER,LTG.ARR. 2HSE-4-0

#5302 26'D8'AL/0252 DIRECT BURY 7'W. OF EAST CURB LINE OF ISLAND

#5304 CITY OF MILWAUKEE TO INSTALL 35 FT. WOOD POLE, 6 FT. BRACKET ARM, 2S2.2HSX BEFORE CONSTRUCTION STA. 48+74.2,50.51'T. DIRECTLY INLINE WITH UNIT #5302 IN ISLAND & 3 FT. B.O.C. HYDROVAC HOLE DUE TO NEARBY UTILITIES

CITY OF MILWAUKEE TO INSTALL 35 FT. WOOD POLE BEFORE CONSTRUCTION STA. 49+88.8,55.41'RT. 36.5'N. OF C/L OF CB. & DIRECTLY BEHIND BACKSIDE OF WALK HYDROVAC HOLE DUE TO NEARBY UTILITIES

#7515 1HSE-3-6 WEP.CO. W.P. #61-5192 6-0 U.B.1S2V

UTILITY POLE PRIMARY RISER LTG.ARR.

WISDOT POLE

"Y" SPLICE-15-0 N. OF UNIT

"Y" SPLICE-22-10 S. OF CURB

"Y" SPLICE-15-0 S. OF UNIT

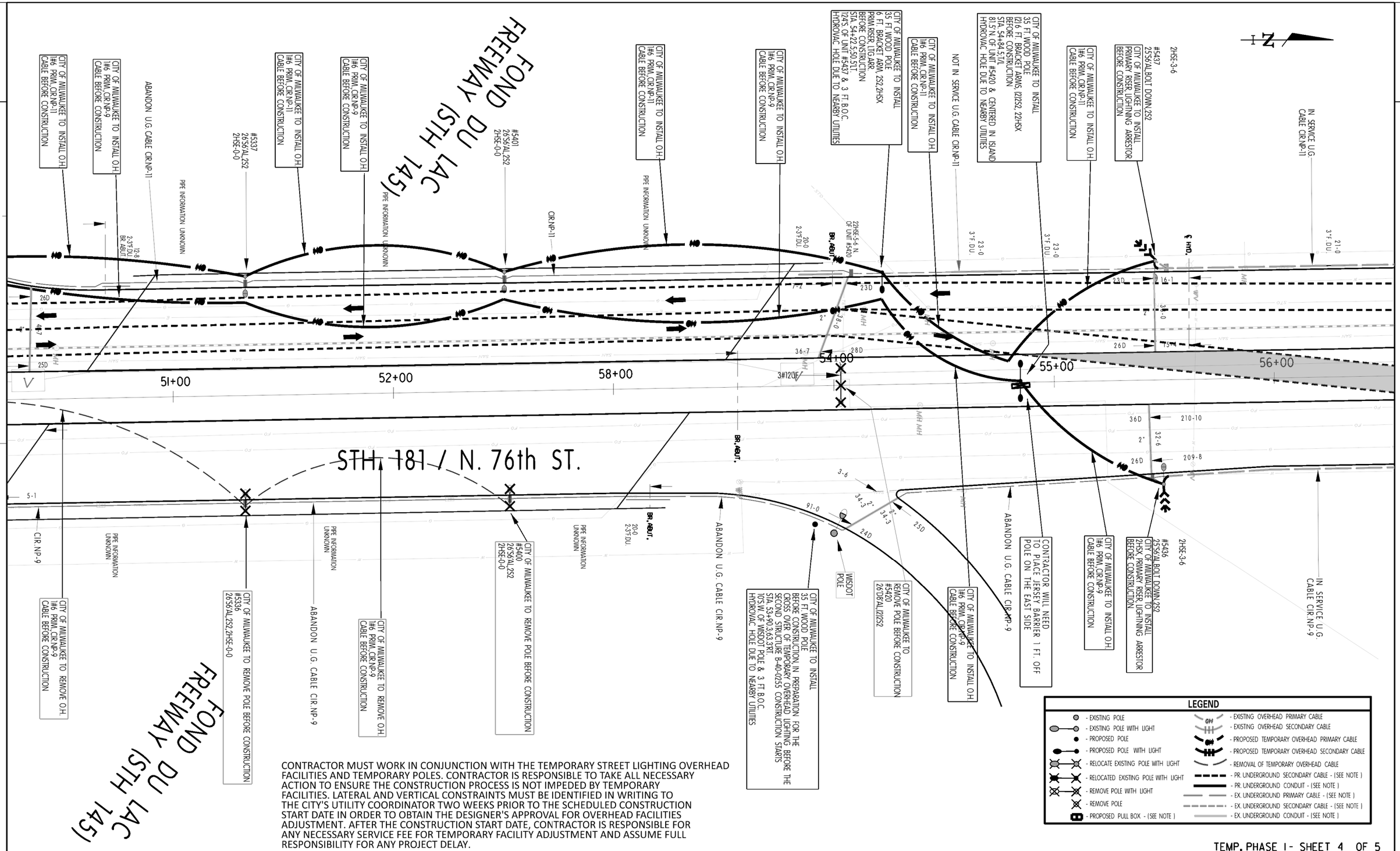
44+00 45+00 46+00 47+00 48+00 49+00 50+00

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

TEMP. PHASE I- SHEET 3 OF 5

PROJECT NO. 1360-13-70	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PROPOSED TEMPORARY PHASE I PLAN	SHEET 37	E



CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.

TEMP. PHASE I - SHEET 4 OF 5

PROJECT NO. 1360-13-70	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PROPOSED TEMPORARY PHASE I PLAN	SHEET 38	E

CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.

W. LEON TER.

CONC. BUS PAD

STH 181 / N. 76th ST.

57+00 58+00 59+00 60+00 61+00 62+00

2#8LTP CIR.N.S.MULT.#16

EXISTING 35 FT. WP. 32'S. OF SCLX. PRIM.RISER. LTG.ARR. CITY OF MILWAUKEE TO TRANSFER 22HSX BALLAST FROM CENTER ISLAND WP.

CITY OF MILWAUKEE TO INSTALL O.H. 3#12 UF W/GRD.,CIR.NP-11 APPROX.75 FT., COIL UP EXTRA CABLE AND ATTACHED TO WP. ITO BE USED LATER WHEN ISLAND IS REPLACED) CABLE BEFORE CONSTRUCTION

CITY OF MILWAUKEE TO REMOVE O.H. 1#6 PRIM.,CIR.NP-11 CABLE BEFORE CONSTRUCTION

#7608 22'S6'AL 1S2V

CITY OF MILWAUKEE TO INSTALL O.H. 1#6 PRIM.,CIR.NP-11 APPROX.140 FT. CABLE BEFORE CONSTRUCTION

ABANDON U.G. CABLE CIR.NP-11

CITY OF MILWAUKEE TO INSTALL 35 FT. WOOD POLE 2HSX ON CIR. NP-11 BEFORE CONSTRUCTION. STA. 58+59.53LT. 62'N. OF NCLX. HYDROVAC HOLE DUE TO NEARBY UTILITIES

CITY OF MILWAUKEE TO INSTALL O.H. 3#12 UF W/GRD.,CIR.NP-11 APPROX.35 FT., CABLE BEFORE CONSTRUCTION

#5475 25'S6'AL 2S2 BOLT DOWN 2HSE-3-6

CITY OF MILWAUKEE TO INSTALL O.H. 1#6 PRIM.,CIR.NP-11 APPROX.90 FT. CABLE BEFORE CONSTRUCTION

EXISTING 35 FT. WP 6'N. OF CENTER ISLAND EX.POLE PRIM.RISER. LTG.ARR.

IN SERVICE U.G. CABLE CIR.NP-11

#5513 25'S6'AL 2S2 BOLT DOWN 2HSE-3-6

ABANDON UG BALLAST 22HSE-29-0 S. OF CURB

#5531 35'WP. 36'S. OF SCLX 6'BRKT. 2S2. 2HSX PRIM.RISER LTG.ARR.

ABANDON CABLE CIR.NP-11 2-3#12UF

ABANDON UG CABLE 2-3#12UF

2-2#12UF

#5496 25'D8'AL 2I2S2 BOLT DOWN

CONTRACTOR WILL NEED TO PLACE JERSEY BARRIER 1 FT. OFF POLE ON BOTH EAST AND WEST SIDES

IN SERVICE U.G. CABLE CIR.NP-9

PRIMARY SPLICE

#5454 35'WP. 12/6 U.B. I2I2S2. 6'N. OF EX.POLE & CENTERED IN ISLAND CITY OF MILWAUKEE TO TRANSFER 22HSX BALLAST TO WP ALONG WEST CURB

IN SERVICE U.G. CABLE CIR.NP-9

CITY OF MILWAUKEE TO REMOVE O.H. 1#6 PRIM.,CIR.NP-11 CABLE BEFORE CONSTRUCTION

WISDOT POLE

CITY OF MILWAUKEE TO REMOVE POLE 35 FT WP. 2HSX ON CIR.NP-11 BEFORE THE START OF CONSTRUCTION.

CITY OF MILWAUKEE TO INSTALL 35 FT WOOD POLE BEFORE CONSTRUCTION. STA. 58+66.31Q.7LT. 32'N. OF EX WP IN ISLAND & 5 FT. BACK OF CURB HYDROVAC HOLE DUE TO NEARBY UTILITIES

IN SERVICE U.G. CABLE CIR.NP-9

22HSE-6-0 S. OF UNIT #5496

IN SERVICE U.G. CABLE CIR.NP-9

#5512 25'S6'AL 2S2 BOLT DOWN 2HSE-3-6

CIR.NP-9

35'WP. 42'S. OF EX.WP.#5532 PRIM.RISER LTG.ARR.

1#6 PRIM. CIR.NP-9

#5532 35'WP. 6'BRKT. 2S2 2HSX PRIM.RISER

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

TEMP. PHASE I - SHEET 5 OF 5

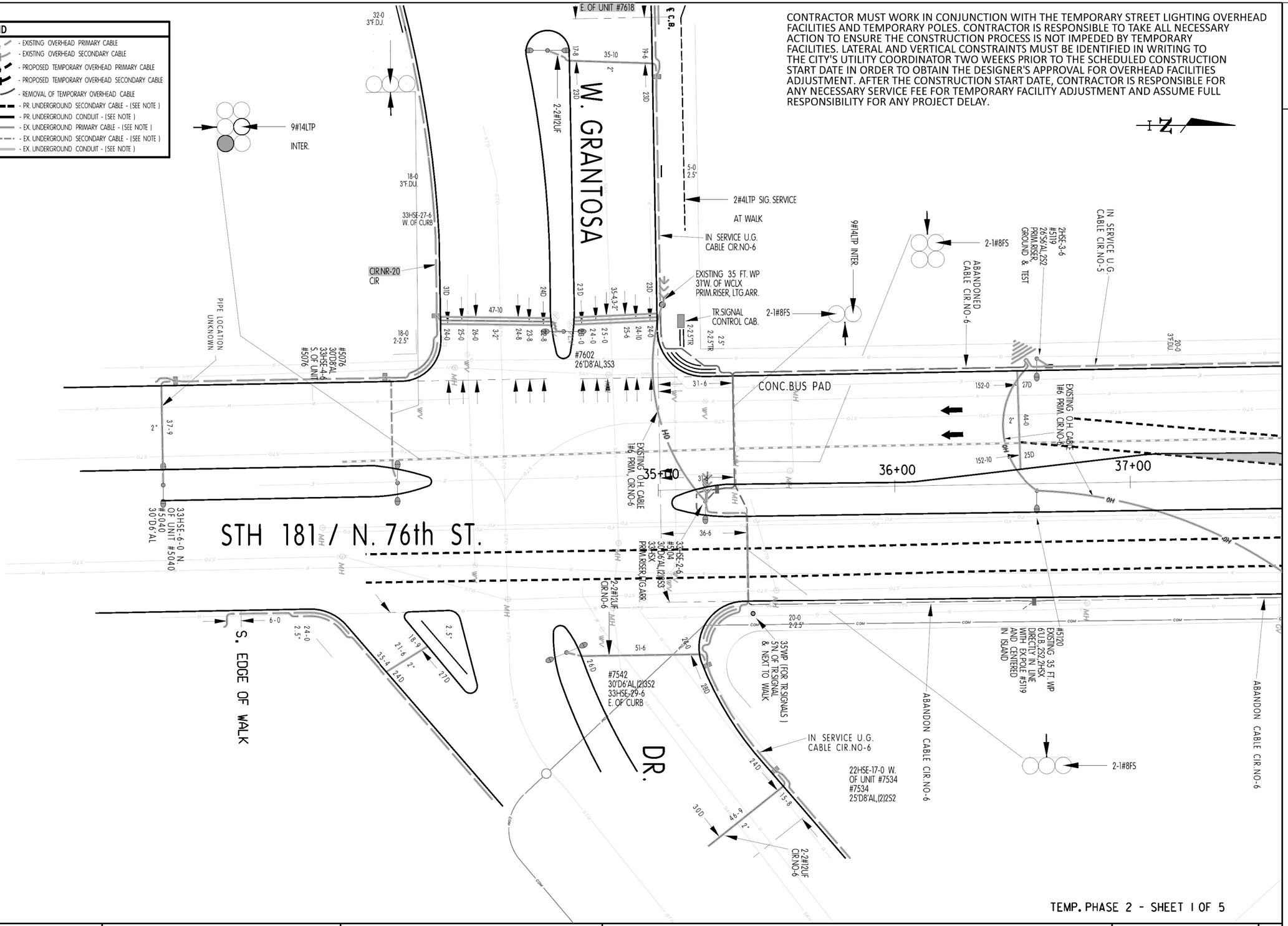
PROJECT NO. 1360-13-70	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PROPOSED TEMPORARY PHASE I PLAN	SHEET 39	E

2

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.



TEMP. PHASE 2 - SHEET 1 OF 5

PROJECT NO. 1360-13-70	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PROPOSED TEMPORARY PHASE 2 PLAN	SHEET 40	E

CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

STH 181 / N.76th ST.

W. VILLARD AV.

W. MEDFORD AVE

W. FOND DU LAC AVE.

9#14LTP INTER.

IN SERVICE U.G. CABLE CIR.NO-5

EXISTING JERSEY BARRIER

IN SERVICE U.G. CABLE CIR.NO-4

35'WP PRIM.RISER, LTG.ARR. 48'W. OF WCLX

ABANDON CABLE CIR.NO-4

CONC.BUS PAD

#5211 25'S6'AL,2'S2 2HSE-3-6

2#12UF CIR.NO-4

1#6 PRIM. CIR.NO-4

35'WP 2HSX

#5148 26'D8'AL,2'S2 2HSX

3#12UF

EXISTING 35 FT. WP 6 FT. BRACKET ARM, 2'S2 STA. 39+21.75'LT. 6'S.OF CARRIAGE WALK @#3153 AND 3'FT. B.O.C.

EXISTING 1#6 PRIM. CIR.NO-6

O.H. CABLE 1#6 PRIM. CIR.NP-11

EXISTING 35 FT. WP

EXISTING JERSEY BARRIERS

1HSE-4-0 #7533 A21-6,1S2V 1HSX PRIM.RISER LTG.ARR.

1#6 PRIM. CIR.NO-6

IN SERVICE U.G. CABLE CIR.NO-6

IN SERVICE U.G. CABLE CIR.NP-11

EXISTING 35 FT. WP STA. 38+53;62.3'RT. 16'E. OF ECLX & 5'B.O.C.

35'WP PRIM.RISER, LTG.ARR.

ABANDON CABLE CIR.NP-11

EXISTING 35 FT. WP 6 FT. BRC(KET ARM, 2'S2, 2HSX STA. 39+27.75'RT. 79'N. OF NCLX & 4.5'B.O.C.

33HSE-4-10 N OF UNIT #5154

O.H. CABLE 1#6 PRIM. CIR.NP-11

EXISTING 35 FT. WP PRIM.RISER, LTG.ARR. 60'E.. OF ECLX

EXISTING O.H. 1#6 PRIM., CIR.NP-11

9#14LTP INTER.

IN SERVICE U.G. CABLE CIR.NP-11

WISDOT POLE

EXISTING 35 FT. WP STA. OF WISDOT POLE AND 3'E OF WEST CURB OF ISLAND

#7526 25'S6'AL 2HSE-4-0

EXISTING UG CABLE CIR.NP-11

35'WP 25'N OF THE WISDOT LIGHT POLE AND CENTERED IN ISLAND

35'WP 2HSX PRIM.RISER 10'S OF UNIT #5214

#5214 2#'S6'AL,2'S2 2HSE-4-0

1#6 PRIM. CIR.NP-11

2#12UF CIR.NP-11

22HSE-9-0 W. OF UNIT #7528

35'WP PRIM.RISER, LTG.ARR. 65'SE OF ECLX OF N.76th ST.

22HSE-12-0 S. OF UNIT #5148

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

TEMP. PHASE 2 - SHEET 2 OF 5

PROJECT NO. 1360-13-70	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PROPOSED TEMPORARY PHASE 2 PLAN	SHEET 41	E

2

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

W. FOND DU LAC AVE.

STH 181 / N. 76th ST.

W. CALDWELL AVE.

35'WP PRIMARY RISER LIGHTNING ARRESTOR

CIR.NO-4

1#6 PRIM. CIR.NO-4

EXISTING U.G. CABLE CIR.NP-12

#7612 26'S6'AL,BOLT DOWN,3M2 3MVACI-4-0

2#12UF

1ACI-60-0 W. OF CURB SHORTED TRANSFORMER

EXISTING 35 FT. WP PRIM.RISER 40'SE. OF UNIT #7612

2HSE-3-6 #5269 25'S6'AL,BOLT DOWN,252

"Y" SPLICE-15-0 N. OF UNIT

ABANDON U.G. CABLE CIR.NP-12

WISDOT POLE

CONC.BUS PAD

EXISTING O.H. 2#12UF, CIR.NP-12

1#6 PRIM. CIR.NP-12

CITY OF MILWAUKEE TO REMOVE O.H. CABLE 1#6 PRIM.,CIR.NP-11 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

ABANDON U.G. CABLE CIR.NP-11

CITY OF MILWAUKEE TO REMOVE O.H. CABLE 3#12UF,CIR.NP-11 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

35 FT. WOOD POLE TO REMAIN

CITY OF MILWAUKEE TO REMOVE O.H. CABLE 1#6 PRIM.,CIR.NP-11 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

CITY OF MILWAUKEE TO REMOVE O.H. CABLE 1#6 PRIM.,CIR.NP-9 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

ABANDON U.G. CABLE CIR.NP-11

35 FT. WOOD POLE TO REMAIN

CITY OF MILWAUKEE TO REMOVE O.H. CABLE 1#6 PRIM.,CIR.NP-9 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

CITY OF MILWAUKEE TO REMOVE O.H. CABLE 1#6 PRIM.,CIR.NP-11 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

CITY OF MILWAUKEE TO REMOVE POLE AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255 #5302 26'D6'AL,252, DIRECT BURY

#5304 35 FT. WOOD POLE, 6 FT. BRACKET ARM, 252,2HSX

ABANDON U.G. CABLE CIR.NP-9

CITY OF MILWAUKEE TO INSTALL O.H. CABLE 1#6 PRIM.,CIR.NP-11 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

CITY OF MILWAUKEE TO INSTALL O.H. CABLE 1#6 PRIM.,CIR.NP-9 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

35 FT. WOOD POLE TO REMAIN

CITY OF MILWAUKEE TO INSTALL O.H. CABLE 1#6 PRIM.,CIR.NP-9 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

BRIDGE CONTRACTOR TO FURNISH AND INSTALL CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

CITY OF MILWAUKEE TO INSTALL O.H. CABLE 1#6 PRIM.,CIR.NP-9 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

2-1-2#12UF

EXISTING UG CABLE CIR.NP-11

EXISTING UG CABLE CIR.NP-9

UTILITY POLE PRIMARY RISER LTG.ARR.

#7515 1HSE-3-6 WEP.CO. W.P. #61-5192 6-0 U.B.152V

FOR REFERENCE ONLY PROPOSED CONTRACTOR INSTALLED TEMPORARY OVERHEAD FOR WISDOT LIGHTS AND SIGNALS

FOR REFERENCE ONLY PROPOSED CONTRACTOR INSTALLED TEMPORARY WOOD POLES FOR WISDOT LIGHTS AND SIGNALS

EX. UG CABLE CIR.NP-11 WHT WIRE
EX. UG CABLE CIR.NP-11 BLK WIRE
ONE OF THE CIRCUITS IS NOT IN SERVICE

#5268 26'S6'AL,BOLT DOWN,252 PRIM.RISER, LTG.ARR. 2HSE-4-0

EXISTING .35 FT WP 2HSX ON CIR.NP-12, I2/PRIM.RISER, LTG.ARR. GROUND & TEST CENTERED IN ISLAND AT THE PIPE CROSSING

EXISTING O.H CABLE 1#6 PRIM.,CIR.NP-9

CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.

TEMP. PHASE 2 - SHEET 3 OF 5

PROJECT NO. 1360-13-70	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PROPOSED TEMPORARY PHASE 2 PLAN	SHEET 42	E

2

N

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

FOND DU LAC 151
FREEWAY (STH 151)

CITY OF MILWAUKEE TO REMOVE O.H. CABLE 1#6 PRIM. CIR.NP-11 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

CITY OF MILWAUKEE TO REMOVE O.H. CABLE 1#6 PRIM. CIR.NP-9 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

NOT IN SERVICE U.G. CABLE CIR.NP-11

#5423 CITY OF MILWAUKEE TO REMOVE POLE 35 FT. WP 6 FT. BRACKET ARM, 2S2, 2HSX AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

CITY OF MILWAUKEE TO REMOVE O.H. CABLE 1#6 PRIM. CIR.NP-9 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

CITY OF MILWAUKEE TO REMOVE O.H. CABLE 1#6 PRIM. CIR.NP-9 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

CITY OF MILWAUKEE TO REMOVE O.H. CABLE 1#6 PRIM. CIR.NP-11 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

CITY OF MILWAUKEE TO REMOVE POLE AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE #5401 26'S6'ALBOLT DOWN 2S2

CITY OF MILWAUKEE TO REMOVE POLE AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE #5337 26'S6'ALBOLT DOWN 2S2

CITY OF MILWAUKEE TO REMOVE O.H. CABLE 1#6 PRIM. CIR.NP-11 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

CITY OF MILWAUKEE TO REMOVE O.H. CABLE 1#6 PRIM. CIR.NP-9 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

CITY OF MILWAUKEE TO REMOVE O.H. CABLE 1#6 PRIM. CIR.NP-9 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

CITY OF MILWAUKEE TO REMOVE O.H. CABLE 1#6 PRIM. CIR.NP-11 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

ABANDON U.G. CABLE CIR.NP-11

PIPE INFORMATION UNKNOWN

PIPE INFORMATION UNKNOWN

CIR.NP-11

22HSE-5-6 N. OF UNIT #5420

BR. ABUT.

20-0 2-3°T.D.U.

12-8 2-3°T.D.U. BR. ABUT.

23-0 3°F. D.U.

23-0 3°F. D.U.

#5430 EXISTING 35 FT. WP 12'6 FT. BRACKET ARMS, 12'2S2, 22HSX

EXISTING O.H. CABLE 1#6 PRIM. CIR.NP-11

2HSE-3-6 #5437 26'S6'ALBOLT DOWN 2S2

Uni 3

IN. SERVICE U.G. CABLE CIR.NP-11

21-0 3°F. D.U.

26D 40-7 2" 25D

7-2 23D 2" 38-0 36-7 28D

23D 16-1 2" 38-0 26D 15-4

36D 210-10 2" 32-6 26D 209-8

HO

MH

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

STH 181 / N. 76th ST.

ABANDON U.G. CABLE 3#12UF

BR. ABUT.

5-1

3-6 34-2 2" 34-3 21-0 24D 20D

ABANDON U.G. CABLE CIR.NP-9

#5418 EXISTING 35 FT WP CITY OF MILWAUKEE TO INSTALL 10 FT BRACKET ARM, 2S2, 2HSX AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

WISDOT POLE

CITY OF MILWAUKEE TO INSTALL O.H. CABLE 1#6 PRIM. CIR.NP-9 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

CITY OF MILWAUKEE TO INSTALL O.H. CABLE 1#6 PRIM. CIR.NP-11 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

ABANDON U.G. CABLE CIR.NP-9

EXISTING JERSEY BARRIER

EXISTING O.H. CABLE 1#6 PRIM. CIR.NP-11

2HSE-3-6

#5436 26'S6'ALBOLT DOWN 2S2 2HSX PRIMARY RISER LIGHTNING ARRESTOR BEFORE CONSTRUCTION.

IN. SERVICE U.G. CABLE CIR.NP-9

IN. SERVICE U.G. CABLE CIR.NP-11

#5400 CONTRACTOR TO FURNISH AND INSTALL ON LIGHT BUSTER AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255 657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE SPV.0060.320 POLES TYPE 25-AL-BD SPV.0060.347 LUMINAIRE ARMS SINGLE MEMBER 8FT - SPECIAL SPV.0060.371 INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2 CITY TO INSTALL AT TOP OF POLE A 110W-OV20 BALLAST

#5336 CONTRACTOR TO FURNISH AND INSTALL ON LIGHT BUSTER AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255 657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE SPV.0060.320 POLES TYPE 25-AL-BD SPV.0060.347 LUMINAIRE ARMS SINGLE MEMBER 8FT - SPECIAL SPV.0060.371 INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2 CITY TO INSTALL AT TOP OF POLE A 110W-OV20 BALLAST

BRIDGE CONTRACTOR TO FURNISH AND INSTALL CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

BRIDGE CONTRACTOR TO FURNISH AND INSTALL CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

BRIDGE CONTRACTOR TO FURNISH AND INSTALL CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

CITY OF MILWAUKEE TO INSTALL O.H. CABLE 1#6 PRIM. CIR.NP-11 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

CITY OF MILWAUKEE TO INSTALL O.H. CABLE 1#6 PRIM. CIR.NP-9 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

CITY OF MILWAUKEE TO INSTALL O.H. CABLE 1#6 PRIM. CIR.NP-11 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

CITY OF MILWAUKEE TO INSTALL O.H. CABLE 1#6 PRIM. CIR.NP-9 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

CITY OF MILWAUKEE TO INSTALL O.H. CABLE 1#6 PRIM. CIR.NP-11 AFTER STRUCTURE B-40-0256 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0255

CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.

TEMP. PHASE 2 - SHEET 4 OF 5

PROJECT NO. 1360-13-70	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PROPOSED TEMPORARY PHASE 2 PLAN	SHEET 43	E

CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.

W. LEON TER.

STH 181 / N. 76th ST.

CONC.BUS PAD

ABANDON CABLE CIR.NP-11 2-3#12UF

ABANDON UG CABLE 2-3#12UF

2-2#12UF

ABANDON UG BALLAST 22HSE-29-0 S. OF CURB

#5531 35'WP. 36'S. OF SCLX 6'BRKT 2S2 2HSX PRIM.RISER LTG.ARR.

#5513 25'S6'AL2S2 BOLT DOWN 2HSE-3-6

#5496 25'D8'AL@2S2 BOLT DOWN

#5475 25'S6'AL2S2 BOLT DOWN 2HSE-3-6

#7608 22'S6'AL 1S2V

2#8LTP CIR.N.S.MULT.#16

EXISTING 35 FT WP. 32'S. OF SCLX, PRIM.RISER, LTG.ARR.

EXISTING O.H. 3#12 UF W/GRD.,CIR.NP-11

EXISTING O.H. 1#6 PRIM.,CIR.NP-11

EXISTING 35 FT WOOD POLE 2HSX ON CIR.NP-11

EXISTING O.H. 3#2 UF W/GRD.,CIR.NP-11

EXISTING O.H. 1#6 PRIM.,CIR.NP-11

ABANDON U.G.CABLE CIR.NP-11

EXISTING 35 FT WP. 6'N. OF CENTER ISLAND EX.POLE PRIM.RISER, LTG.ARR.

IN SERVICE U.G. CABLE CIR.NP-11

CIR.NP-11

1#6 PRIM. CIR.NP-11

22HSE-6-0 S. OF UNIT #5496

CIR.NP-9

35'WP. 42'S. OF EX.WP.#5532 PRIM.RISER LTG.ARR.

1#6 PRIM. CIR.NP-9

#5532 35'WP 6'BRKT 2S2 2HSX PRIM.RISER

#5512 25'S6'AL2S2 BOLT DOWN 2HSE-3-6

IN SERVICE U.G. CABLE CIR.NP-9

EXISTING 35 FT.WOOD POLE

WISDOT POLE

IN SERVICE U.G. CABLE CIR.NP-9

EXISTING JERSEY BARRIERS

PRIMARY SPLICE

IN SERVICE U.G. CABLE CIR.NP-9

#5454 35'WP. I216 U.B.@2S2, 2HSX 6'N. OF EX.POLE & CENTERED IN ISLAND

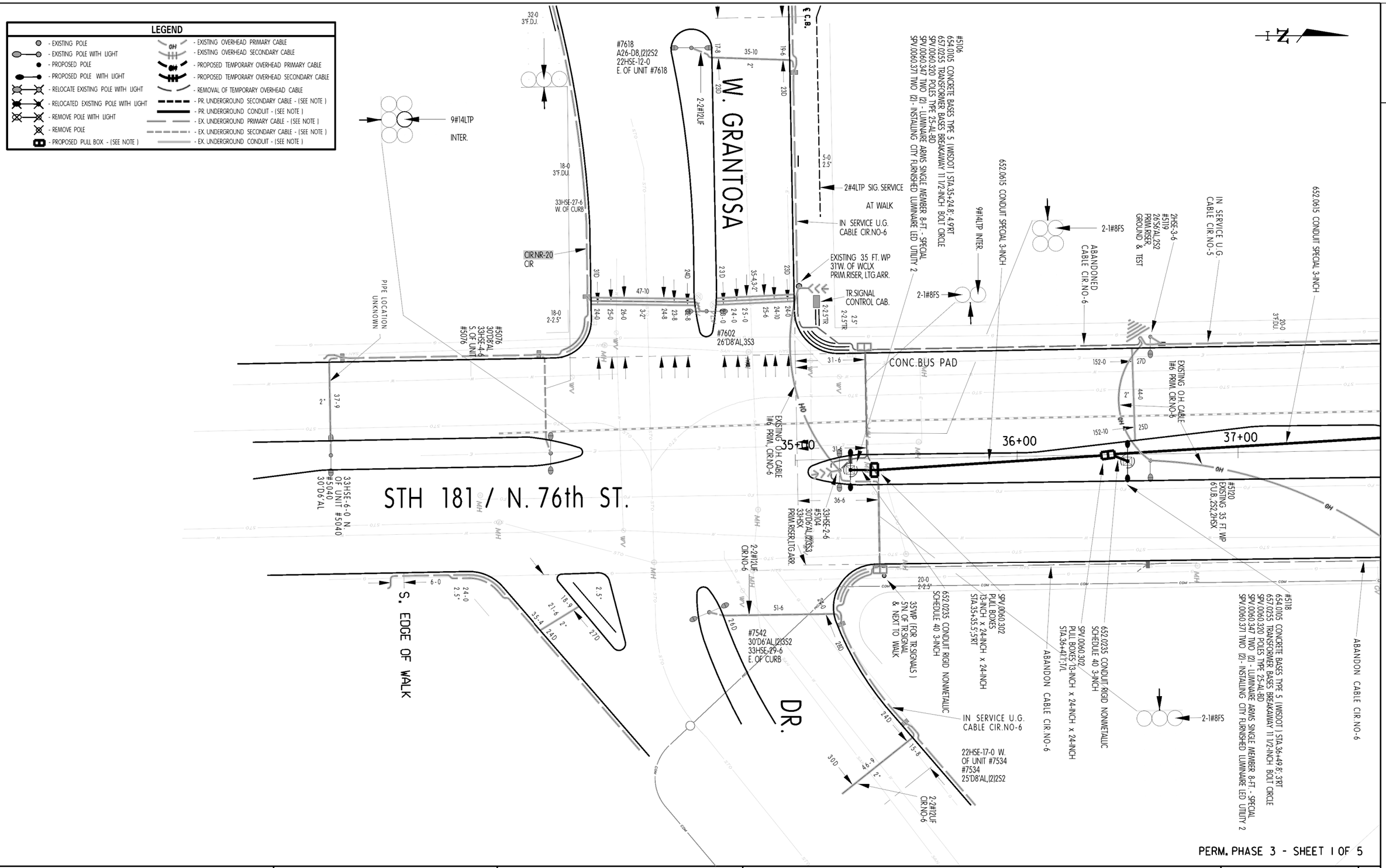
57+00 58+00 59+00 60+00 61+00 62+00

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

TEMP. PHASE 2 - SHEET 5 OF 5

PROJECT NO. 1360-13-70	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PROPOSED TEMPORARY PHASE 2 PLAN	SHEET 44	E



PROJECT NO. 1360-13-70	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PERMANENT UNDERGROUND	SHEET 45	E

2

N

W. VILLARD

STH 181 / N. 76th ST.

W. MEDFORD AVE

W. FOND DU LAC AVE.

AV.

38+00

39+00

40+00

41+00

42+00

43+00

IN SERVICE U.G. CABLE CIR.NO-4

652.0615 CONDUIT SPECIAL 3-INCH

ABANDON UG CABLE CIR.NO-4

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.43+44.9'.22LT SEE DETAIL 112

#5212 654.0105 CONCRETE BASES TYPE 5 (WISDOT) STA.43+33.3'.1LT 657.0255 TRANSFORMER BASES BREAKAWAY 1I 1/2-INCH BOLT CIRCLE SPV.0060.320 POLES TYPE 25-AL-BD SPV.0060.347 TWO (2) - LUMINAIRE ARMS SINGLE MEMBER 8-FT. - SPECIAL SPV.0060.371 TWO (2) - INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.43+43.3'.52.6LT SEE DETAIL 112

652.0615 CONDUIT SPECIAL 3-INCH

2#12UF CIR.NO-4

35'WP 2HSX PRIM.RISER, LTG.ARR.

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.42+21.9'.52LT

ABANDON CABLE CIR.NO-4

#5211 25'S6'AL,2S2 2HSE-3-6

1#6 PRIM. CIR.NO-4

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.41+77.2'.63LT SEE DETAIL 112

652.0615 CONDUIT SPECIAL 3-INCH

35'WP PRIM.RISER, LTG.ARR. 48'W. OF WCLX

WISDOT POLE

IN SERVICE U.G. CABLE CIR.NO-5

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.40+92.2'.60LT SEE DETAIL 112

652.0615 CONDUIT SPECIAL 3-INCH

CONTRACTOR TO REMOVE JERSEY BARRIERS

#5154 654.0105 CONCRETE BASES TYPE 5 (WISDOT) STA.39+29.4'.3.2'RT 657.0255 TRANSFORMER BASES BREAKAWAY 1I 1/2-INCH BOLT CIRCLE SPV.0060.320 POLES TYPE 25-AL-BD SPV.0060.347 TWO (2) - LUMINAIRE ARMS SINGLE MEMBER 8-FT. - SPECIAL SPV.0060.371 TWO (2) - INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.40+64'.33LT SEE DETAIL 112

652.0615 CONDUIT SPECIAL 3-INCH

EXISTING 35 FT WP 6 FT. BRACKET ARM, 2S2 STA. 39+21.7.5'.1LT 6'.5'S. OF CARRIAGE WALK @#3153 AND 3 FT. B.O.C.

652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

CONTRACTOR TO REMOVE JERSEY BARRIERS

9#14LTP INTER.

IN SERVICE U.G. CABLE CIR.NO-5

652.0615 CONDUIT SPECIAL 3-INCH

3#12UF

#5146 654.0105 CONCRETE BASES TYPE 5 (WISDOT) STA.37+74.9'.2.1RT 657.0255 TRANSFORMER BASES BREAKAWAY 1I 1/2-INCH BOLT CIRCLE SPV.0060.320 POLES TYPE 25-AL-BD SPV.0060.347 TWO (2) - LUMINAIRE ARMS SINGLE MEMBER 8-FT. - SPECIAL SPV.0060.371 TWO (2) - INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2

652.0235 CONDUIT RIGID NONMETALLIC, SCHEDULE 40 3-INCH

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.37+68.1'.4.9'LT SEE DETAIL 112

#5148 26'D8'AL,I2S2 22HSX

1HSE-4-0 #7533 A21-6,1S2V 1HSX PRIM.RISER LTG.ARR.

652.0615 CONDUIT SPECIAL 3-INCH

IN SERVICE U.G. CABLE CIR.NO-6

EXISTING 35 FT. WP SEE DETAIL 112

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.38+44.0'.29.5'RT

EXISTING 1#6 PRIM. CIR.NO-6

O.H. CABLE 1#6 PRIM. CIR.NP-11

EXISTING 35 FT.WP STA. 38+53;62.3'RT. 16'E. OF ECLX & 5'B.O.C.

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.39+15'2'.6.2'RT SEE DETAIL 112

ABANDON CABLE CIR NP-11

EXISTING 35 FT. WP 6 FT. BRCKET ARM, 2S2, 2HSX STA. 39+27.7.5'RT. 79'N. OF NCLX & 4.5'B.O.C.

33HSE-4-10 N OF UNIT #5154

CONC.BUS PAD

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.40+63.7'.2LT SEE DETAIL 112

EXISTING O.H. 1#6 PRIM., CIR.NP-11

EXISTING 35 FT. WP PRIM.RISER, LTG.ARR. 60'E.. OF ECLX

IN SERVICE U.G. CABLE CIR.NP-11

9#14LTP INTER.

IN SERVICE U.G. CABLE CIR.NO-6

IN SERVICE U.G. CABLE CIR.NP-11

EXISTING UG CABLE CIR.NP-11

#7526 25'S6'AL 2HSE-4-0

35'WP PRIM.RISER, LTG.ARR.

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.43+54.8'.49.3'RT SEE DETAIL 112

22HSE-9-0 W. OF UNIT #7528

#5214 26'S6'AL,2S2 2HSE-4-0

1#6 PRIM. CIR.NP-11

2#12UF CIR.NP-11

652.0615 CONDUIT SPECIAL 3-INCH

ABANDON UG CABLE CIR NP-11

652.0615 CONDUIT SPECIAL 3-INCH

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.43+49.2'.67.6'RT SEE DETAIL 112

9#14LTP INTER.

35'WP 2HSX PRIM.RISER LTG.ARR.

22HSE-9-0 W. OF UNIT #7528

EXISTING UG CABLE CIR.NP-11

35'WP PRIM.RISER, LTG.ARR. 25'N OF THE WISDOT LIGHT POLE AND CENTERED IN ISLAND

1#6 PRIM. CIR.NO-4

WISDOT POLE

652.0615 CONDUIT SPECIAL 3-INCH

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

PERM. PHASE 3 - SHEET 2 OF 5

PROJECT NO. 1360-13-70	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PERMANENT UNDERGROUND	SHEET 46	E

2

STH 181 / N. 76th ST.

W. FOND DU LAC AVE.

W. CALDWELL AVE.

VACATED

VACATED

EXISTING U.G. CABLE CIR.NP-12

EXISTING 35 FT. WP PRIM.RISER 40'SE. OF UNIT #7612

EXISTING O.H. 2#12UF, CIR.NP-12

EXISTING UG CABLE CIR.NP-9

EXISTING UG CABLE CIR.NP-11

ABANDON U.G. CABLE CIR.NP-11

ABANDON U.G. CABLE CIR NO-4

ABANDON U.G. CABLE CIR.NP-12

ABANDON U.G. CABLE CIR.NP-9

#7612 26'S6'AL,BOLT DOWN,3M2 3MVACI-4-0

1ACI-60-0 W. OF CURB SHORTED TRANSFORMER

#5268 654.0105 CONCRETE BASES TYPE 5 (WISDOT) STA.47+31.4', 4.5'RT 657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE SPV.0060.320 POLES TYPE 25-AL-BD SPV.0060.347 TWO (2) - LUMINAIRE ARMS SINGLE MEMBER 8-FT. - SPECIAL SPV.0060.371 TWO (2)- INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2

2HSE-3-6 #5269 26'S6'AL,BOLT DOWN,2S2

#5306 654.0105 CONCRETE BASES TYPE 5 (WISDOT) STA.48+83', 3.1'RT 657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE SPV.0060.320 POLES TYPE 25-AL-BD SPV.0060.347 TWO (2) - LUMINAIRE ARMS SINGLE MEMBER 8-FT. - SPECIAL SPV.0060.371 TWO (2)- INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2

#5304 35 FT. WOOD POLE, 6 FT. BRACKET ARM, 2S2.2H-X

#5320 654.0105 CONCRETE BASES TYPE 5 (WISDOT) STA.50+10.7', 05'LT 657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE SPV.0060.320 POLES TYPE 25-AL-BD SPV.0060.347 TWO (2) - LUMINAIRE ARMS SINGLE MEMBER 8-FT. - SPECIAL SPV.0060.371 TWO (2)- INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2

#7515 1HSE-3-6 WEP.CO. W.P. #61-5192 6-0 U.B.152V

EXISTING 35 FT WP PRIM.RISER, LTG.ARR. 2HSX ON CIR.NP-12, 12'PRIM.RISER, LTG.ARR. GROUND & TEST, CENTERED IN ISLAND AT THE PIPE CROSSING

#5268 2&6'SAL,2S2 PRIM.RISER, LTG.ARR. 2HSE-4-0

652.0615 CONDUIT SPECIAL 3-INCH

652.0225 TWO (2) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.46+40.1';67.8'LT SEE DETAIL 112

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.46+93.5';105.1'LT SEE DETAIL 112

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.45+15';58.8'LT SEE DETAIL 112

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.46+75.9';61.8'LT SEE DETAIL 112

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.44+44.0';9.5'RT SEE DETAIL 112

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.49+70.8';7.4'RT SEE DETAIL 112

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.50+12.2';61.6'LT SEE DETAIL 112

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.46+90.2';7.4'RT

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH STA.49+44.4';54'RT SEE DETAIL 112

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH STA.45+76';61'RT

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.46+50.6';72.6'RT SEE DETAIL 112

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.46+96.2';67.7'RT SEE DETAIL 112

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.46+99.1';67'RT SEE DETAIL 112

652.0615 CONDUIT SPECIAL 3-INCH

652.0625 CONDUIT SPECIAL 3-INCH

WISDOT WOOD POLE INSTALLED BY CONTRACTOR

WISDOT POLE

1#6 PRIM. CIR.NP-11

CABLE 1#6 PRIM.CIR.NP-11

CABLE 1#6 PRIM.CIR.NP-9

EXISTING OH 2#12UF, CIR.NP-11

EXISTING OH CABLE 1#6 PRIM.CIR.NP-11

EXISTING OH CABLE 1#6 PRIM.CIR.NP-9

EX. UG CABLE CIR.NP-11 WHT WIRE
EX. UG CABLE CIR.NP-11 BLU WIRE
ONE OF THE CIRCUITS IS NOT IN SERVICE

FOR REFERENCE ONLY
PROPOSED CONTRACTOR INSTALLED
TEMPORARY OVERHEAD
FOR WISDOT LIGHTS AND SIGNALS

FOR REFERENCE ONLY
PROPOSED CONTRACTOR INSTALLED
TEMPORARY WOOD POLES
FOR WISDOT LIGHTS AND SIGNALS

UTILITY POLE PRIMARY RISER LTG.ARR.

BRIDGE CONTRACTOR TO FURNISH AND INSTALL CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

CONNECT TO BRIDGE CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

EX. 35 FT WOOD POLE CITY TO INSTALL 250W-OV20 BALLAST ON CIR.NP-9, & 250W-OV20 BALLAST ON CIR.NP-11

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

PERM. PHASE 3 - SHEET 3 OF 5

PROJECT NO. 1360-13-70	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PERMANENT UNDERGROUND	SHEET 47	E

2

2

STH 181 / N. 76th ST.

FOND DU LAC FREEWAY (STH 145)

FOND DU LAC FREEWAY (STH 145)

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

652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

IN SERVICE U.G. CABLE CIR.NP-11

EXISTING O.H. CABLE 1#6 PRIM. CIR.NP-11

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH
STA.54+36+51.11LT
SEE DETAIL 112

EXISTING 35 FT WP TO REMAIN
CITY TO REMOVE (2) 6 FT. BRACKET ARMS, (2)252, 22HSX

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH
STA.54+43.5'2RT
SEE DETAIL 112
NOT IN SERVICE U.G. CABLE CIR.NP-11

652.0615 CONDUIT SPECIAL 3-INCH

2HSE-3-6
#5437
25SK/AL252
BOLT DOWN

652.0225 TWO (2) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

CONNECT TO BRIDGE CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

#5420
654.0105 CONCRETE BASES TYPE 5 (WISDOT) STA.54+10.6' 11LT
657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE
SPV.0060.320 POLES TYPE 25-AL-BD
SPV.0060.347 TWO (2) - LUMINAIRE ARMS SINGLE MEMBER 8-FT. - SPECIAL
SPV.0060.371 TWO (2) - INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2

BRIDGE CONTRACTOR TO FURNISH AND INSTALL
CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

#5401
BRIDGE CONTRACTOR TO FURNISH AND INSTALL ON LIGHT BUSTER
657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE
SPV.0060.320 POLES TYPE 25-AL-BD
SPV.0060.347 LUMINAIRE ARMS SINGLE MEMBER 8FT - SPECIAL
SPV.0060.371 INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2

BRIDGE CONTRACTOR TO FURNISH AND INSTALL
CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

#5337
BRIDGE CONTRACTOR TO FURNISH AND INSTALL ON LIGHT BUSTER
657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE
SPV.0060.320 POLES TYPE 25-AL-BD
SPV.0060.347 LUMINAIRE ARMS SINGLE MEMBER 8FT - SPECIAL
SPV.0060.371 INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2

BRIDGE CONTRACTOR TO FURNISH AND INSTALL
CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

CONNECT TO BRIDGE CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

652.0225 TWO (2) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

ABANDON U.G. CABLE 3#12UF

BR. ABUT.

BR. ABUT.

#5418
EXISTING 35 FT WP
10 FT. BRACKET ARM, 252, 2HSX

WISDOT POLE

#5400
TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE
POLES TYPE 25-AL-BD
LUMINAIRE ARMS SINGLE MEMBER 8FT - SPECIAL
LUMINAIRE LED UTILITY 2 (2LED2)
110W-OV20 BALLAST

#5336
TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE
POLES TYPE 25-AL-BD
LUMINAIRE ARMS SINGLE MEMBER 8FT - SPECIAL
LUMINAIRE LED UTILITY 2 (2LED2)
110W-OV20 BALLAST

BRIDGE CONTRACTOR TO FURNISH AND INSTALL
CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

BRIDGE CONTRACTOR TO FURNISH AND INSTALL
CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

BRIDGE CONTRACTOR TO FURNISH AND INSTALL
CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

CONNECT TO BRIDGE CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

652.0225 TWO (2) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

652.0615 CONDUIT SPECIAL 3-INCH

CABLE 1#6 PRIM. CIR.NP-11

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH
STA.54+50.4'51.3'RT
SEE DETAIL 112

CABLE 1#6 PRIM. CIR.NP-9

652.0615 CONDUIT SPECIAL 3-INCH

ABANDON U.G. CABLE CIR. NP-9

CONTRACTOR TO REMOVE JERSEY BARRIERS

652.0615 CONDUIT SPECIAL 3-INCH

EXISTING O.H. CABLE 1#6 PRIM. CIR.NP-11

#5436
654.0105 CONCRETE BASES TYPE 5 (WISDOT) STA.55+48' 11LT
657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE
SPV.0060.320 POLES TYPE 25-AL-BD
SPV.0060.347 TWO (2) - LUMINAIRE ARMS SINGLE MEMBER 8-FT. - SPECIAL
SPV.0060.371 TWO (2) - INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2

#5436
25SK/AL BOLT DOWN
2HSX, PRIMARY RISER, LIGHTNING ARRESTOR

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH
STA.55+57.6'2RT

IN SERVICE U.G. CABLE CIR.NP-9

652.0615 CONDUIT SPECIAL 3-INCH

CABLE 1#6 PRIM. CIR.NP-11

CABLE 1#6 PRIM. CIR.NP-9

CABLE 1#6 PRIM. CIR.NP-11

CABLE 1#6 PRIM. CIR.NP-9

CABLE 1#6 PRIM. CIR.NP-11

CABLE 1#6 PRIM. CIR.NP-9

BRIDGE CONTRACTOR TO FURNISH AND INSTALL
CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

BRIDGE CONTRACTOR TO FURNISH AND INSTALL
CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

BRIDGE CONTRACTOR TO FURNISH AND INSTALL
CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

BRIDGE CONTRACTOR TO FURNISH AND INSTALL
CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

652.0230 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH

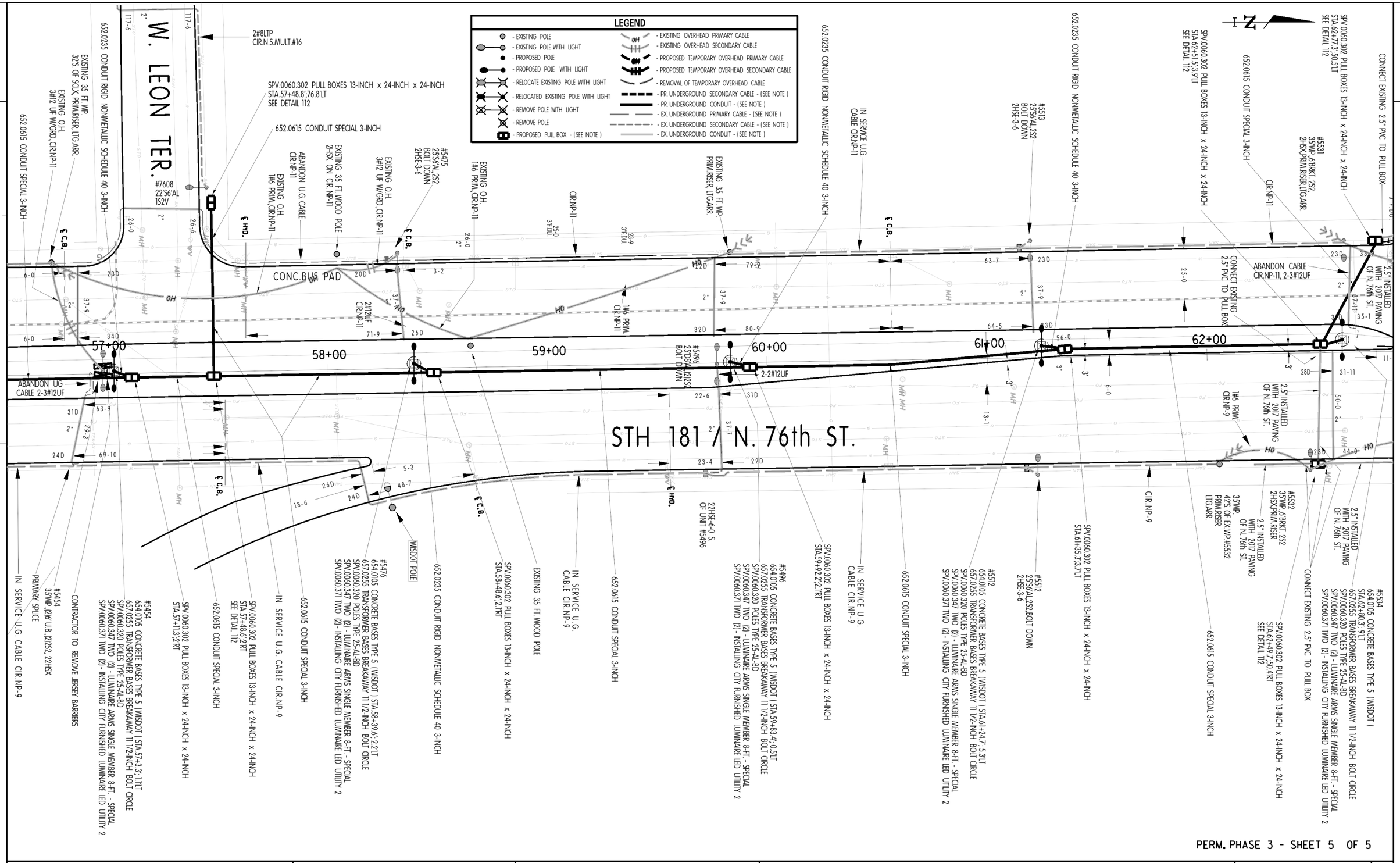
SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH
STA.55+31.2'51.1'RT

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

PERM. PHASE 3 - SHEET 4 OF 5

PROJECT NO. 1360-13-70	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PERMANENT UNDERGROUND	SHEET 48	E



PROJECT NO. 1360-13-70	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PERMANENT UNDERGROUND	SHEET 49	E

2

LEGEND

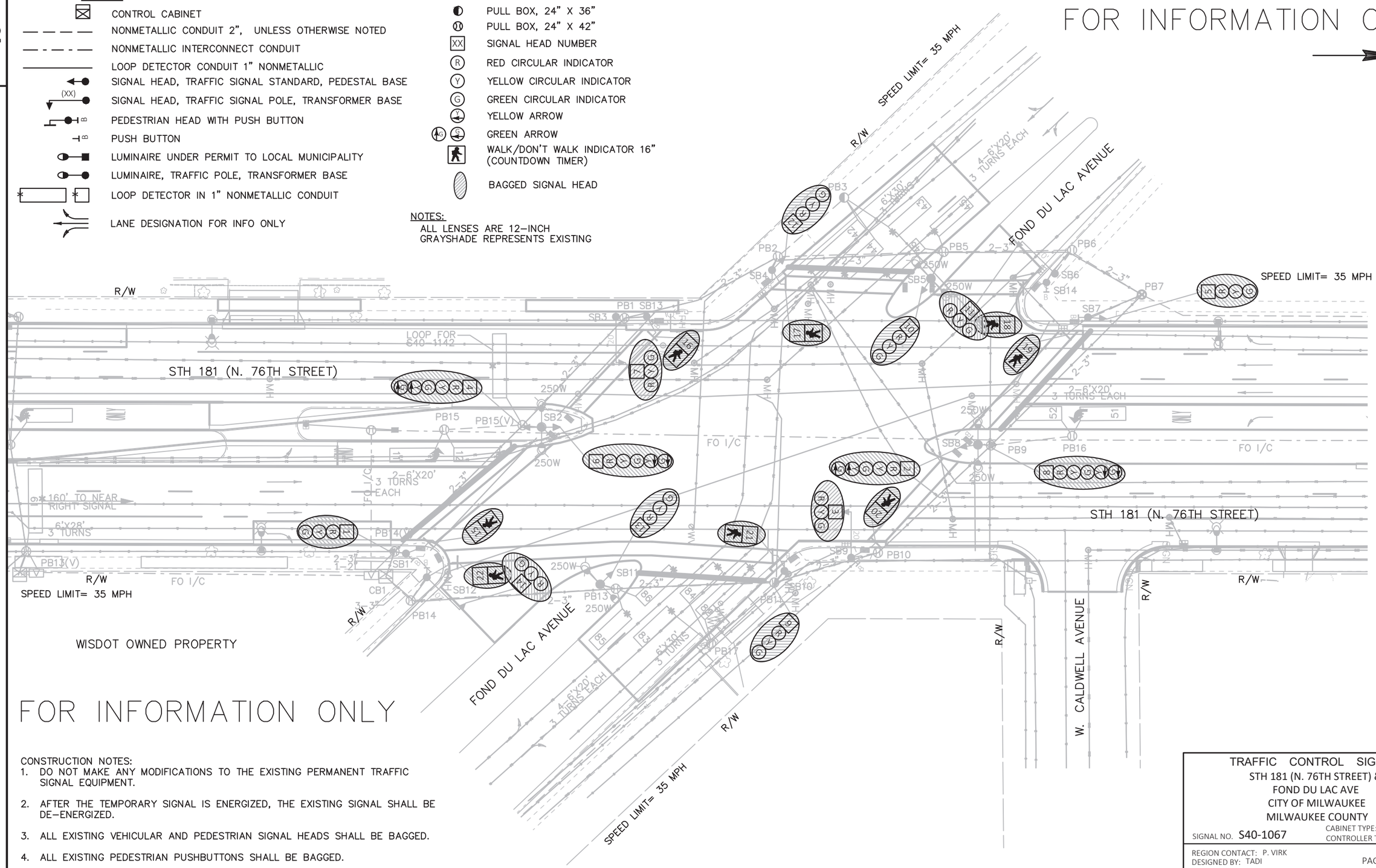
- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- NONMETALLIC INTERCONNECT CONDUIT
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- LANE DESIGNATION FOR INFO ONLY

- 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
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- BAGGED SIGNAL HEAD

NOTES:
ALL LENSES ARE 12–INCH
GRAYSHADE REPRESENTS EXISTING

FOR INFORMATION ONLY

N



FOR INFORMATION ONLY

CONSTRUCTION NOTES:
1. DO NOT MAKE ANY MODIFICATIONS TO THE EXISTING PERMANENT TRAFFIC SIGNAL EQUIPMENT.
2. AFTER THE TEMPORARY SIGNAL IS ENERGIZED, THE EXISTING SIGNAL SHALL BE DE–ENERGIZED.
3. ALL EXISTING VEHICULAR AND PEDESTRIAN SIGNAL HEADS SHALL BE BAGGED.
4. ALL EXISTING PEDESTRIAN PUSHBUTTONS SHALL BE BAGGED.

TRAFFIC CONTROL SIGNAL
STH 181 (N. 76TH STREET) &
FOND DU LAC AVE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S40-1067
CABINET TYPE: TEMP
CONTROLLER TYPE: ECONOLITE

REGION CONTACT: P. VIRK
DESIGNED BY: TADI
REVISED BY:

PAGE 1 OF 5

PROJECT NO:1360–13–70	HWY:STH 181	COUNTY:MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN – PRE–STAGE	SHEET 50 E

FILE NAME : Z:\SHARED\WI\2552 STH 145 TEMPORARY SIGNALS\76TH STREET\CAD\S40–1067_FOND_DU_LAC_TEMP_PRESTAGE.DWG
LAYOUT NAME – S40–1067_D_PG1
PLOT DATE : 7/28/2022 6:03 PM
PLOT BY : JEFF FAIT
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

CONSTRUCTION NOTES:

1. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
2. ALL SIGNING, STRIPING, TRAFFIC SIGNALS, AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
3. CONTRACTOR SHALL USE THE EXISTING ELECTRICAL SERVICE, AND ADJUST THE LOCATIONS OF THE TEMPORARY SIGNAL FACES TO ACCOMMODATE TRAFFIC DURING STAGING.
4. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET & HEADS SHALL BE AS DIRECTED BY THE ON-SITE ENGINEER.
5. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
6. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ON-SITE ENGINEER.
7. ALL EXISTING PERMANENT SIGNAL HEADS SHALL BE BAGGED.

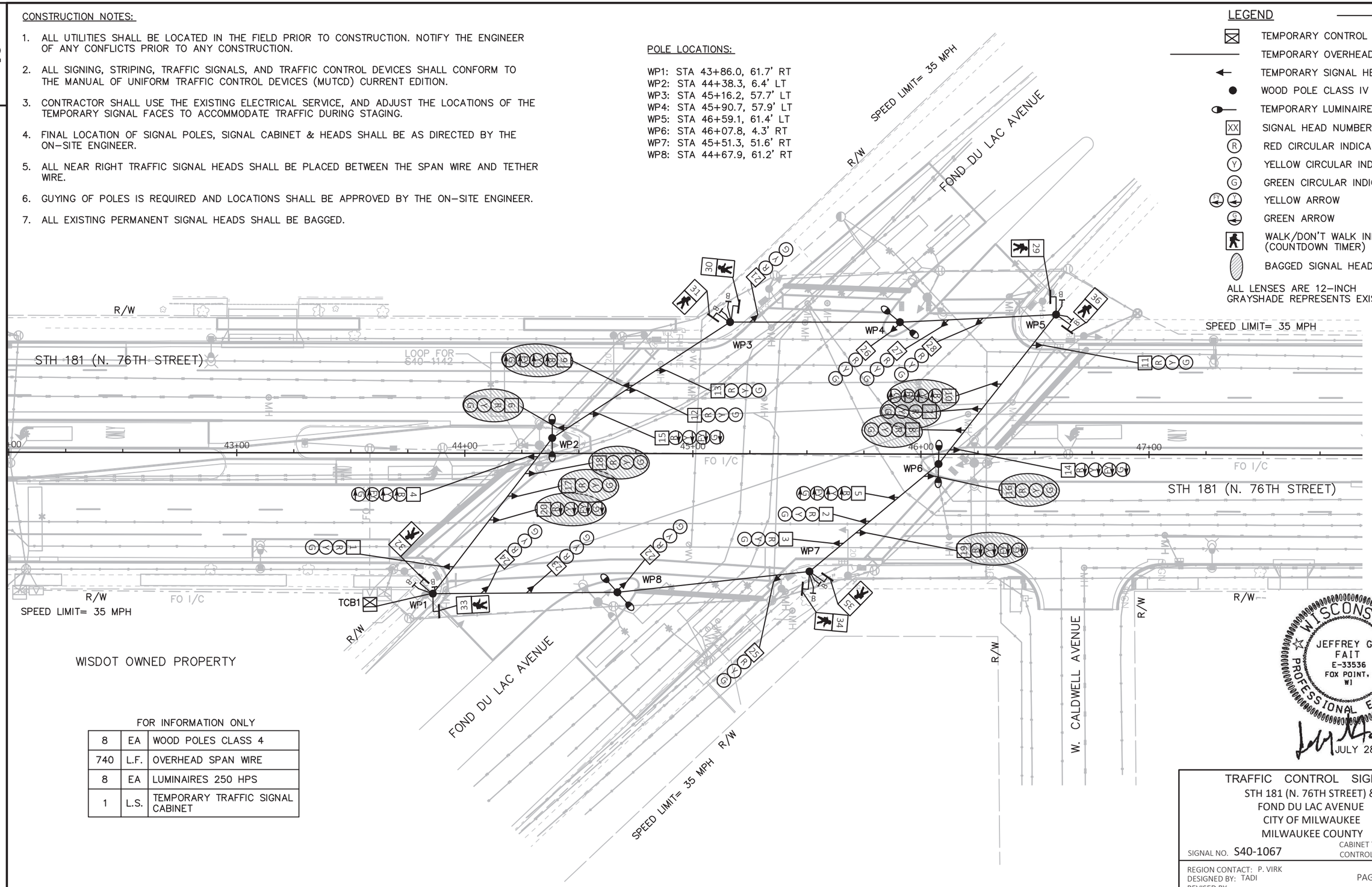
POLE LOCATIONS:

WP1: STA 43+86.0, 61.7' RT
WP2: STA 44+38.3, 6.4' LT
WP3: STA 45+16.2, 57.7' LT
WP4: STA 45+90.7, 57.9' LT
WP5: STA 46+59.1, 61.4' LT
WP6: STA 46+07.8, 4.3' RT
WP7: STA 45+51.3, 51.6' RT
WP8: STA 44+67.9, 61.2' RT

LEGEND

- TEMPORARY CONTROL CABINET
- TEMPORARY OVERHEAD SPAN WIRE
- TEMPORARY SIGNAL HEAD
- WOOD POLE CLASS IV
- TEMPORARY LUMINAIRE AND ARM
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- YA YELLOW ARROW
- GA GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- BAGGED SIGNAL HEAD

ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



WISDOT OWNED PROPERTY

FOR INFORMATION ONLY

8	EA	WOOD POLES CLASS 4
740	L.F.	OVERHEAD SPAN WIRE
8	EA	LUMINAIRES 250 HPS
1	L.S.	TEMPORARY TRAFFIC SIGNAL CABINET

WISCONSIN
JEFFREY G. FAIT
E-33536
FOX POINT, WI
PROFESSIONAL ENGINEER
JULY 28, 2022

TRAFFIC CONTROL SIGNAL
STH 181 (N. 76TH STREET) &
FOND DU LAC AVENUE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S40-1067
CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP

REGION CONTACT: P. VIRK
DESIGNED BY: TADI
REVISED BY:

PAGE 2 OF 5

PROJECT NO:1360-13-70	HWY: STH 181	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN – STAGES 1 & 4	SHEET 51 E

FILE NAME : Z:\SHARED\WI\2552 STH 145 TEMPORARY SIGNALS\76TH STREET\CAD\S40-1067_FOND_DU_LAC_TEMP_STAGE_1_4.DWG
LAYOUT NAME – S40-1067_TEMP_STG_1_4_PG1
PLOT DATE : 7/28/2022 6:03 PM PLOT BY : JEFF FAIT PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

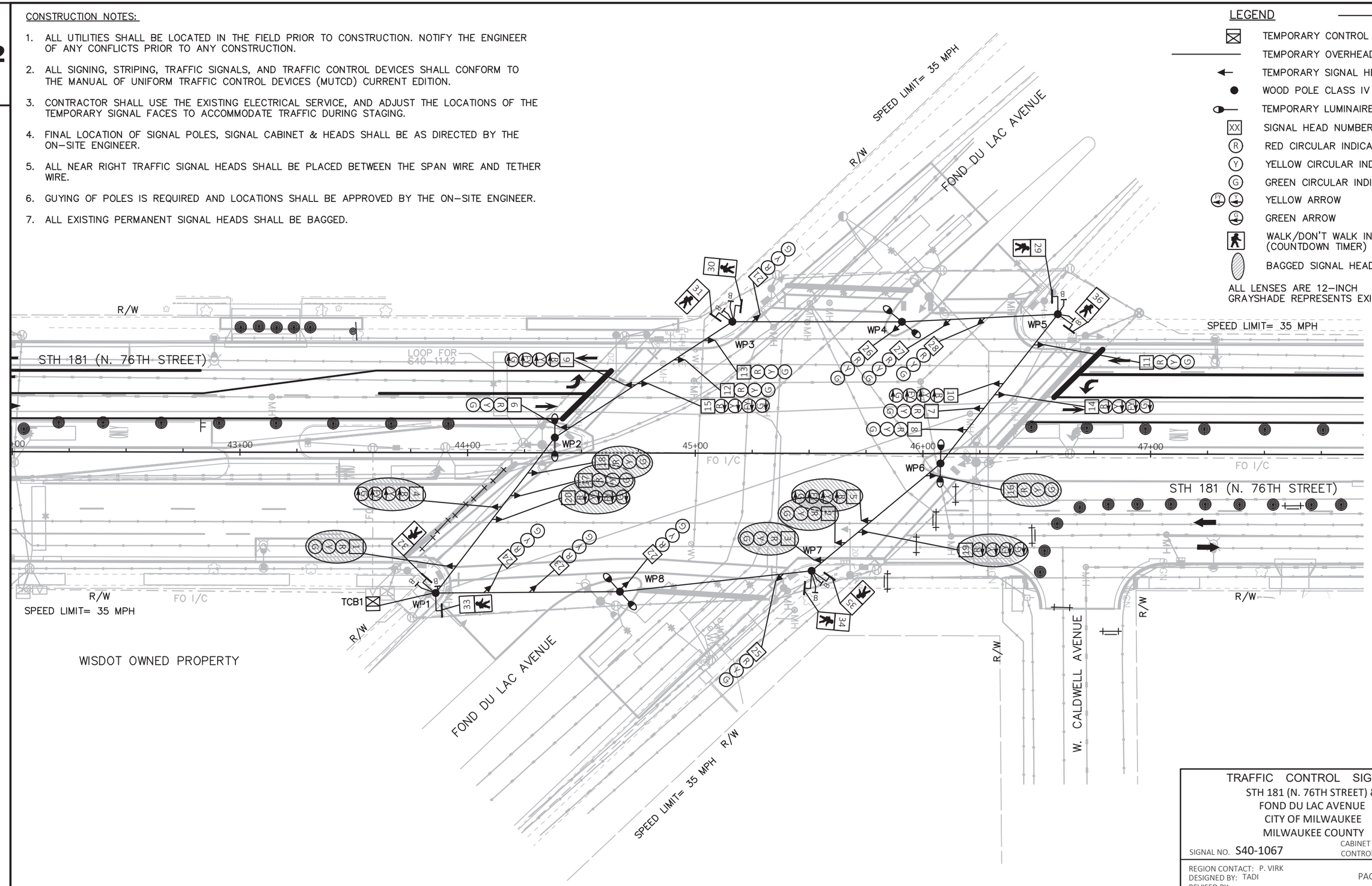
CONSTRUCTION NOTES:

1. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
2. ALL SIGNING, STRIPING, TRAFFIC SIGNALS, AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
3. CONTRACTOR SHALL USE THE EXISTING ELECTRICAL SERVICE, AND ADJUST THE LOCATIONS OF THE TEMPORARY SIGNAL FACES TO ACCOMMODATE TRAFFIC DURING STAGING.
4. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET & HEADS SHALL BE AS DIRECTED BY THE ON-SITE ENGINEER.
5. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
6. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ON-SITE ENGINEER.
7. ALL EXISTING PERMANENT SIGNAL HEADS SHALL BE BAGGED.

LEGEND

- TEMPORARY CONTROL CABINET
- TEMPORARY OVERHEAD SPAN WIRE
- TEMPORARY SIGNAL HEAD
- WOOD POLE CLASS IV
- TEMPORARY LUMINAIRE AND ARM
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- YA YELLOW ARROW
- GA GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- BAGGED SIGNAL HEAD

ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
STH 181 (N. 76TH STREET) &
FOND DU LAC AVENUE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S40-1067
CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP

REGION CONTACT: P. VIRK
DESIGNED BY: TADI
REVISED BY:

PAGE 3 OF 5

PROJECT NO:1360-13-70	HWY: STH 181	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN – STAGE 2	SHEET 52 E

FILE NAME : Z:\SHARED\WI\2552 STH 145 TEMPORARY SIGNALS\76TH STREET\CAD\S40-1067_FOND_DU_LAC_TEMP_STAGE_2.DWG
LAYOUT NAME – S40-1067_TEMP_STG_2_PG1
PLOT DATE : 7/28/2022 6:04 PM PLOT BY : JEFF FAIT PLOT NAME : PLOT SCALE : 1 IN:40 FT

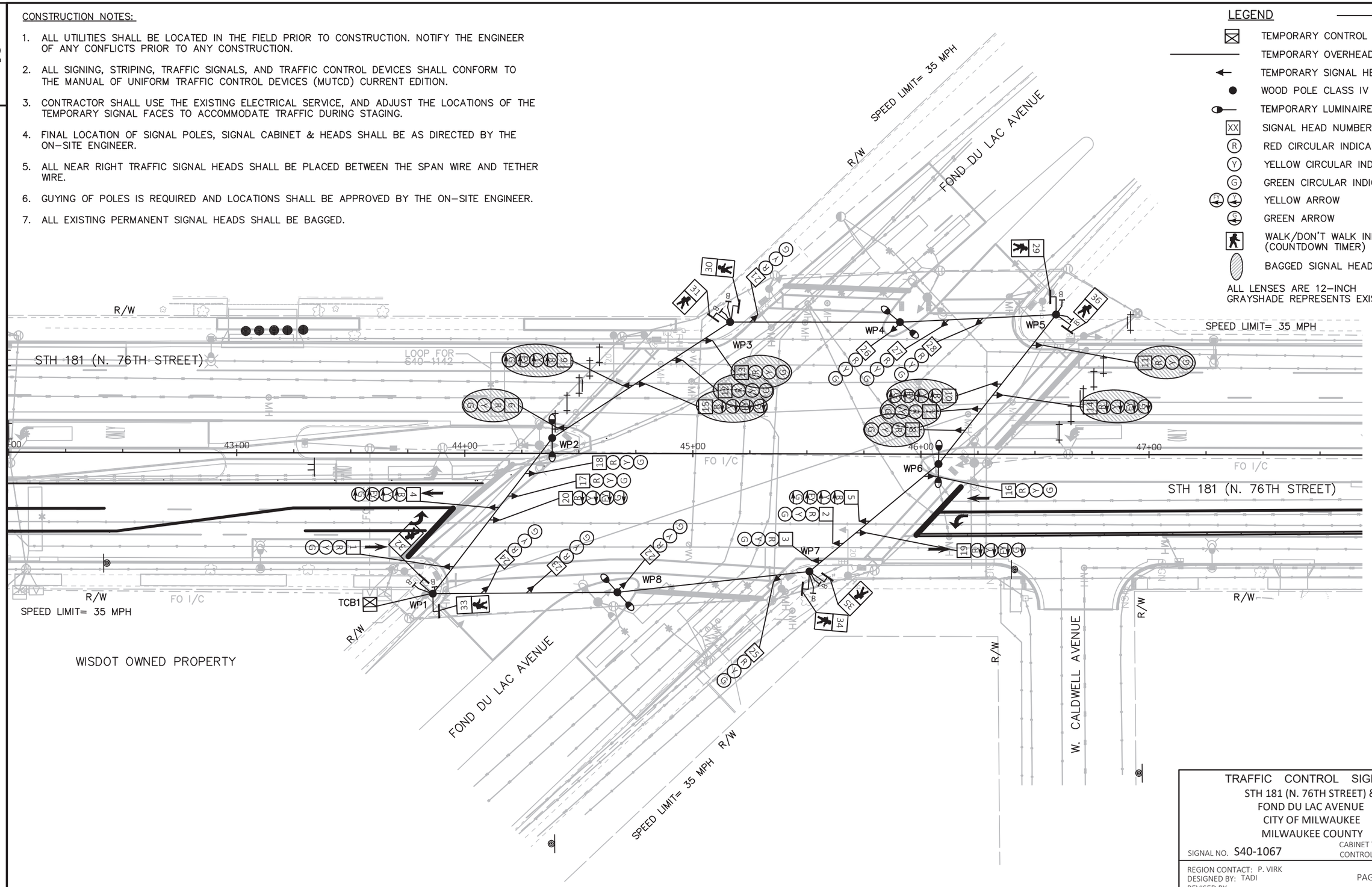
CONSTRUCTION NOTES:

1. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
2. ALL SIGNING, STRIPING, TRAFFIC SIGNALS, AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
3. CONTRACTOR SHALL USE THE EXISTING ELECTRICAL SERVICE, AND ADJUST THE LOCATIONS OF THE TEMPORARY SIGNAL FACES TO ACCOMMODATE TRAFFIC DURING STAGING.
4. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET & HEADS SHALL BE AS DIRECTED BY THE ON-SITE ENGINEER.
5. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
6. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ON-SITE ENGINEER.
7. ALL EXISTING PERMANENT SIGNAL HEADS SHALL BE BAGGED.

LEGEND

- TEMPORARY CONTROL CABINET
- TEMPORARY OVERHEAD SPAN WIRE
- TEMPORARY SIGNAL HEAD
- WOOD POLE CLASS IV
- TEMPORARY LUMINAIRE AND ARM
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- BAGGED SIGNAL HEAD

ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
STH 181 (N. 76TH STREET) &
FOND DU LAC AVENUE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S40-1067
CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP

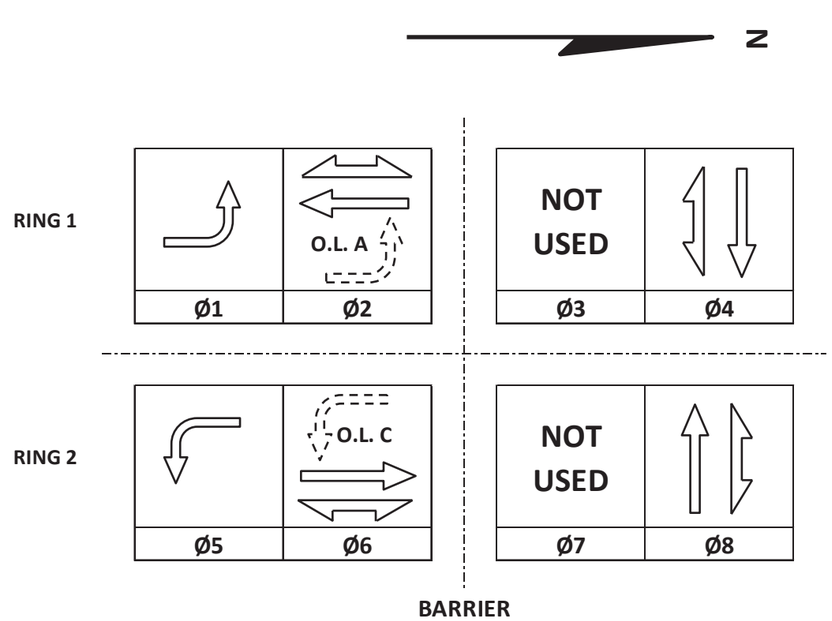
REGION CONTACT: P. VIRK
DESIGNED BY: TADI
REVISED BY:

PAGE 4 OF 5

PROJECT NO:1360-13-70	HWY:STH 181	COUNTY:MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN – STAGE 3	SHEET 53 E

FILE NAME : Z:\SHARED\WI\2552 STH 145 TEMPORARY SIGNALS\76TH STREET\CAD\S40-1067_FOND_DU_LAC_TEMP_STAGE_3.DWG
LAYOUT NAME – S40-1067_TEMP_STG_3_PG1
PLOT DATE : 7/28/2022 6:05 PM PLOT BY : JEFF FAIT PLOT NAME : PLOT SCALE : 1 IN:40 FT

	HEAD NUMBERS	FLASH
Ø1	4,5,9,10	-
Ø2	11,12,1316,17,18	R
Ø3		
Ø4	21,22,23,24	R
Ø5	14,15,19,20	-
Ø6	1,2,3,6,7,8	R
Ø7		
Ø8	25,26,27,28	R
Ø2P	29,30	
Ø4P	31,32	
Ø6P	33,34	
Ø8P	35,36	
OLA	4,5,9,10	R ←
OLB		
OLC	14,15,19,20	R ←
OLD		



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

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	
IN TRAFFIC CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

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

STH 181 & FOND DU LAC AVE

CITY OF MILWAUKEE

MILWAUKEE COUNTY

SIGNAL NO: S40-1067 CABINET TYPE: TEMP

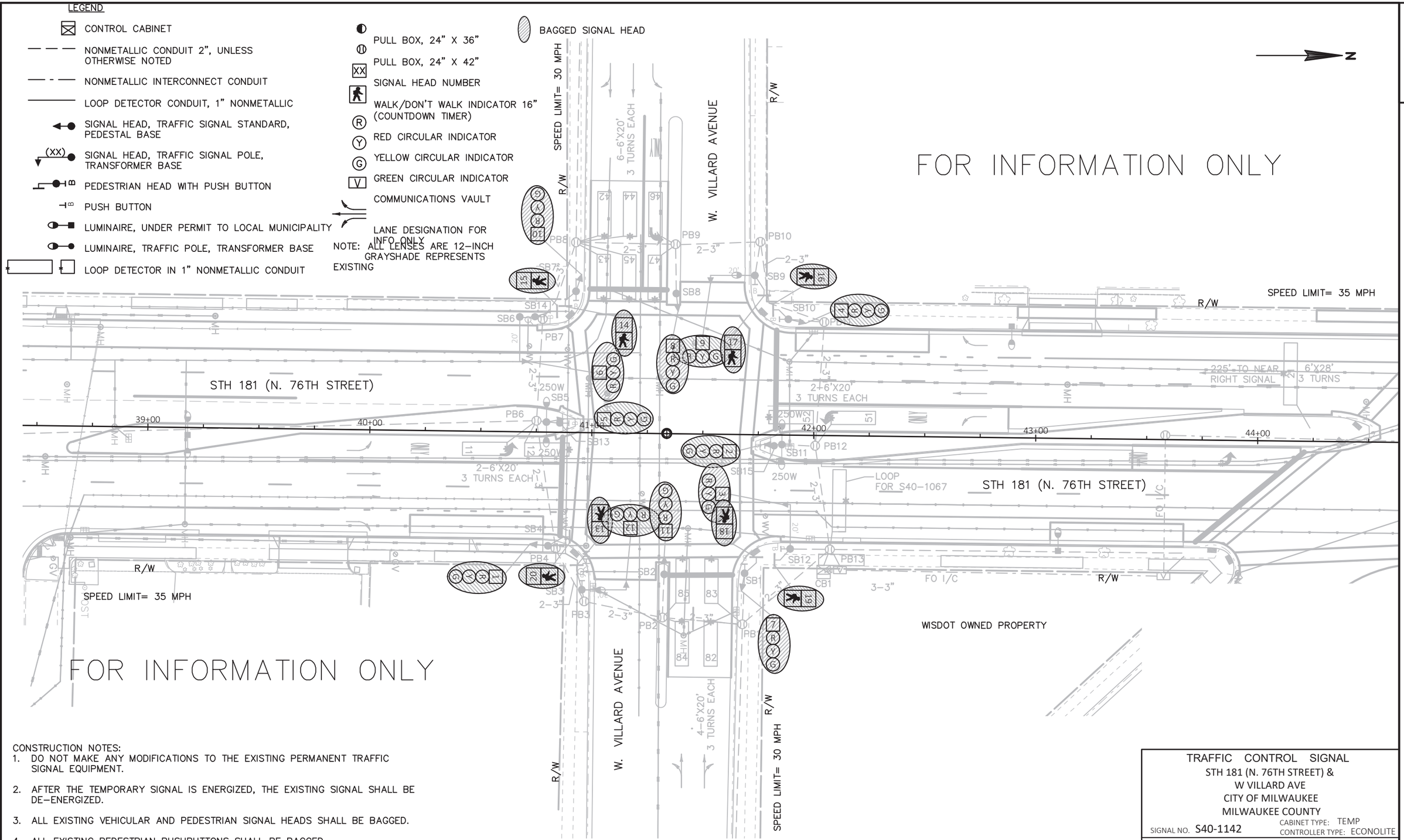
CONTROLLER TYPE: ECONOLITE

DATE: 7/22 PAGE NUMBER: 5 OF 5

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- NONMETALLIC INTERCONNECT CONDUIT
- LOOP DETECTOR CONDUIT, 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, UNDER PERMIT TO LOCAL MUNICIPALITY
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- SIGNAL HEAD NUMBER
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- COMMUNICATIONS VAULT
- LANE DESIGNATION FOR INFO ONLY
- BAGGED SIGNAL HEAD

NOTE: ALL LENSES ARE 12–INCH GRAYSHADE REPRESENTS EXISTING



FOR INFORMATION ONLY

CONSTRUCTION NOTES:

1. DO NOT MAKE ANY MODIFICATIONS TO THE EXISTING PERMANENT TRAFFIC SIGNAL EQUIPMENT.
2. AFTER THE TEMPORARY SIGNAL IS ENERGIZED, THE EXISTING SIGNAL SHALL BE DE–ENERGIZED.
3. ALL EXISTING VEHICULAR AND PEDESTRIAN SIGNAL HEADS SHALL BE BAGGED.
4. ALL EXISTING PEDESTRIAN PUSHBUTTONS SHALL BE BAGGED.

TRAFFIC CONTROL SIGNAL
STH 181 (N. 76TH STREET) &
W VILLARD AVE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S40-1142
CABINET TYPE: TEMP
CONTROLLER TYPE: ECONOLITE

REGION CONTACT: P. VIRK
DESIGNED BY: TADI
REVISED BY:

PAGE 1 OF 5

PROJECT NO:1360–13–70	HWY: STH 181	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN – PRE–STAGE	SHEET 55 E

FILE NAME : Z:\SHARED\WI\2552 STH 145 TEMPORARY SIGNALS\76TH STREET\CAD\S40–1142_VILLARD_TEMP_PRESTAGE.DWG
LAYOUT NAME – S40–1142_TEMP_PRESTAGE_PG1

PLOT DATE : 7/28/2022 5:54 PM PLOT BY : JEFF FAIT PLOT NAME : PLOT SCALE : 1 IN:40 FT

LEGEND

- TEMPORARY CONTROL CABINET
- TEMPORARY OVERHEAD SPAN WIRE
- TEMPORARY SIGNAL HEAD
- WOOD POLE CLASS IV
- TEMPORARY LUMINAIRE AND ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- BAGGED SIGNAL HEAD

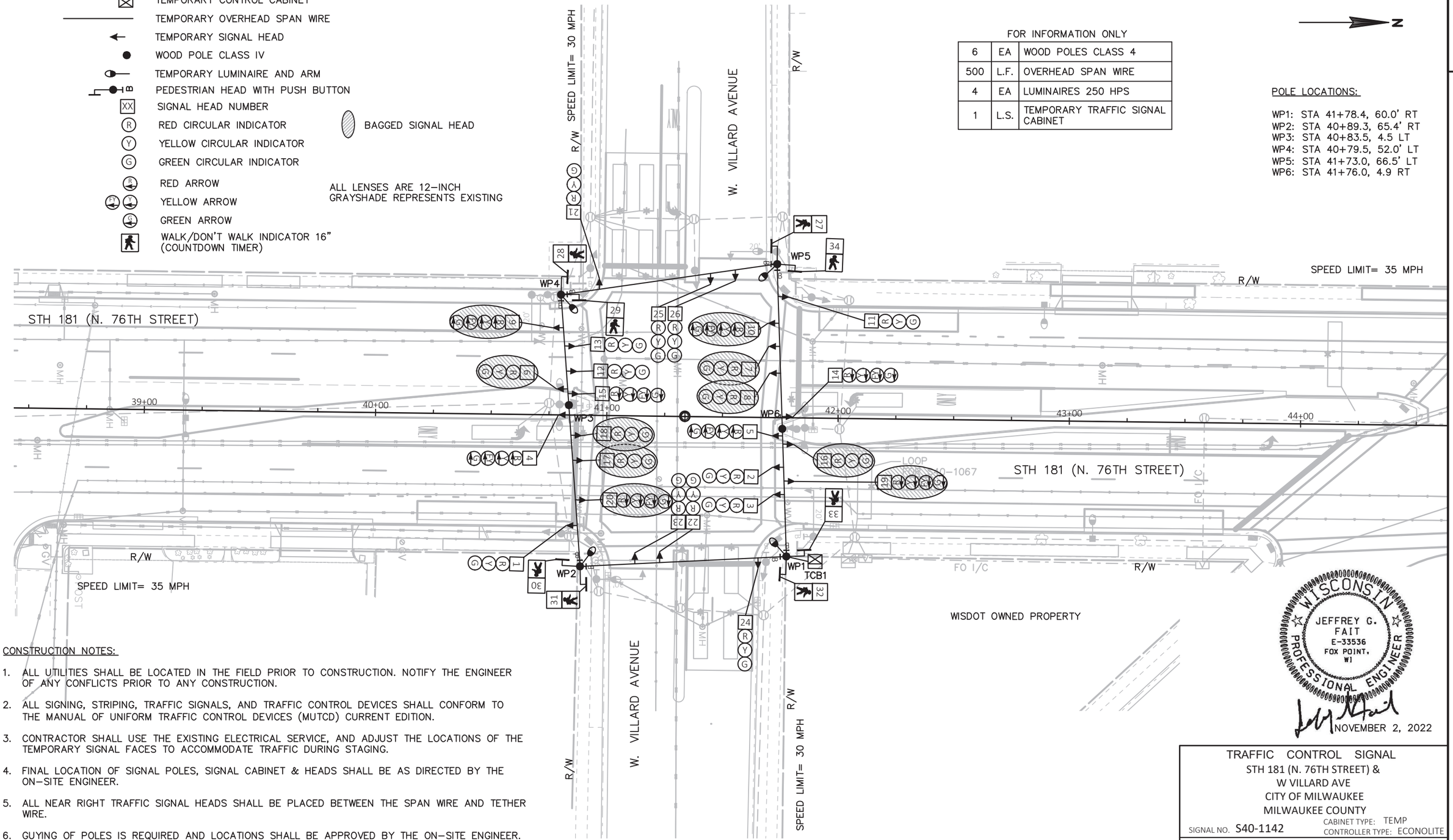
ALL LENSES ARE 12–INCH
GRAYSHADE REPRESENTS EXISTING

FOR INFORMATION ONLY

6	EA	WOOD POLES CLASS 4
500	L.F.	OVERHEAD SPAN WIRE
4	EA	LUMINAIRES 250 HPS
1	L.S.	TEMPORARY TRAFFIC SIGNAL CABINET

POLE LOCATIONS:

WP1: STA 41+78.4, 60.0' RT
WP2: STA 40+89.3, 65.4' RT
WP3: STA 40+83.5, 4.5 LT
WP4: STA 40+79.5, 52.0' LT
WP5: STA 41+73.0, 66.5' LT
WP6: STA 41+76.0, 4.9 RT



CONSTRUCTION NOTES:

1. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
2. ALL SIGNING, STRIPING, TRAFFIC SIGNALS, AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
3. CONTRACTOR SHALL USE THE EXISTING ELECTRICAL SERVICE, AND ADJUST THE LOCATIONS OF THE TEMPORARY SIGNAL FACES TO ACCOMMODATE TRAFFIC DURING STAGING.
4. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET & HEADS SHALL BE AS DIRECTED BY THE ON–SITE ENGINEER.
5. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
6. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ON–SITE ENGINEER.
7. ALL EXISTING PERMANENT SIGNAL HEADS SHALL BE BAGGED.

WISCONSIN PROFESSIONAL ENGINEER
JEFFREY G. FAIT
E–33536
FOX POINT, WI
NOVEMBER 2, 2022

TRAFFIC CONTROL SIGNAL
STH 181 (N. 76TH STREET) &
W VILLARD AVE
CITY OF MILWAUKEE
MILWAUKEE COUNTY
SIGNAL NO. S40-1142
CABINET TYPE: TEMP
CONTROLLER TYPE: ECONOLITE
REGION CONTACT: P. VIRK
DESIGNED BY: TADI
REVISED BY:
PAGE 2 OF 5

PROJECT NO:1360–13–70	HWY: STH 181	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN – STAGES 1 & 4	SHEET 56 E

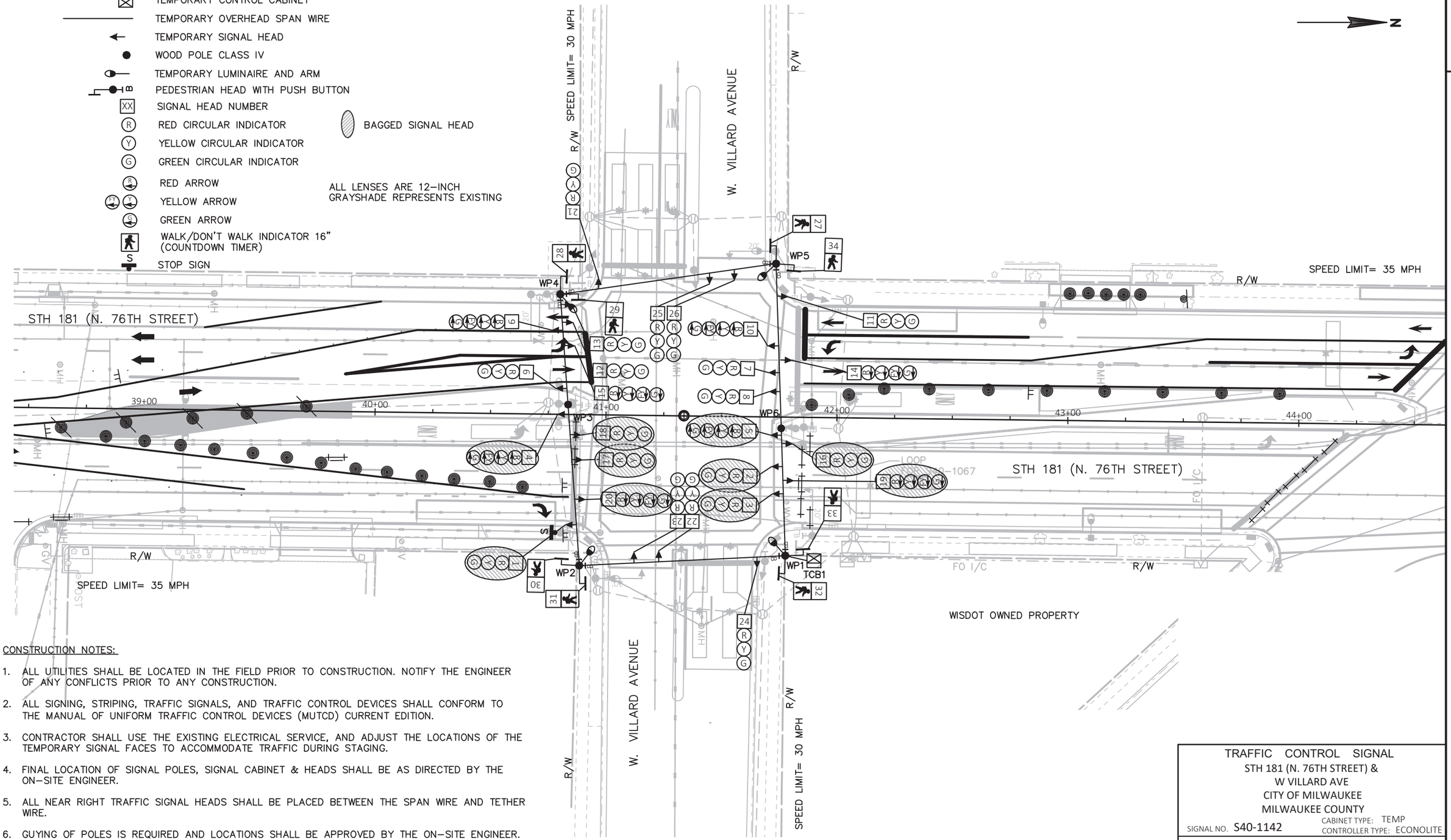
FILE NAME : Z:\SHARED\WI\2552 STH 145 TEMPORARY SIGNALS\76TH STREET\CAD\S40–1142_VILLARD_TEMP_STAGE_1_4.DWG
LAYOUT NAME – S40–1142_TEMP_STG_1_4_PG1
PLOT DATE : 11/2/2022 9:41 AM PLOT BY : JEFF FAIT PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- TEMPORARY CONTROL CABINET
- TEMPORARY OVERHEAD SPAN WIRE
- TEMPORARY SIGNAL HEAD
- WOOD POLE CLASS IV
- TEMPORARY LUMINAIRE AND ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- STOP SIGN
- BAGGED SIGNAL HEAD

ALL LENSES ARE 12–INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
2. ALL SIGNING, STRIPING, TRAFFIC SIGNALS, AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
3. CONTRACTOR SHALL USE THE EXISTING ELECTRICAL SERVICE, AND ADJUST THE LOCATIONS OF THE TEMPORARY SIGNAL FACES TO ACCOMMODATE TRAFFIC DURING STAGING.
4. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET & HEADS SHALL BE AS DIRECTED BY THE ON–SITE ENGINEER.
5. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
6. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ON–SITE ENGINEER.
7. ALL EXISTING PERMANENT SIGNAL HEADS SHALL BE BAGGED.

TRAFFIC CONTROL SIGNAL
STH 181 (N. 76TH STREET) &
W VILLARD AVE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S40-1142
CABINET TYPE: TEMP
CONTROLLER TYPE: ECONOLITE

REGION CONTACT: P. VIRK
DESIGNED BY: TADI
REVISED BY:

PAGE 3 OF 5

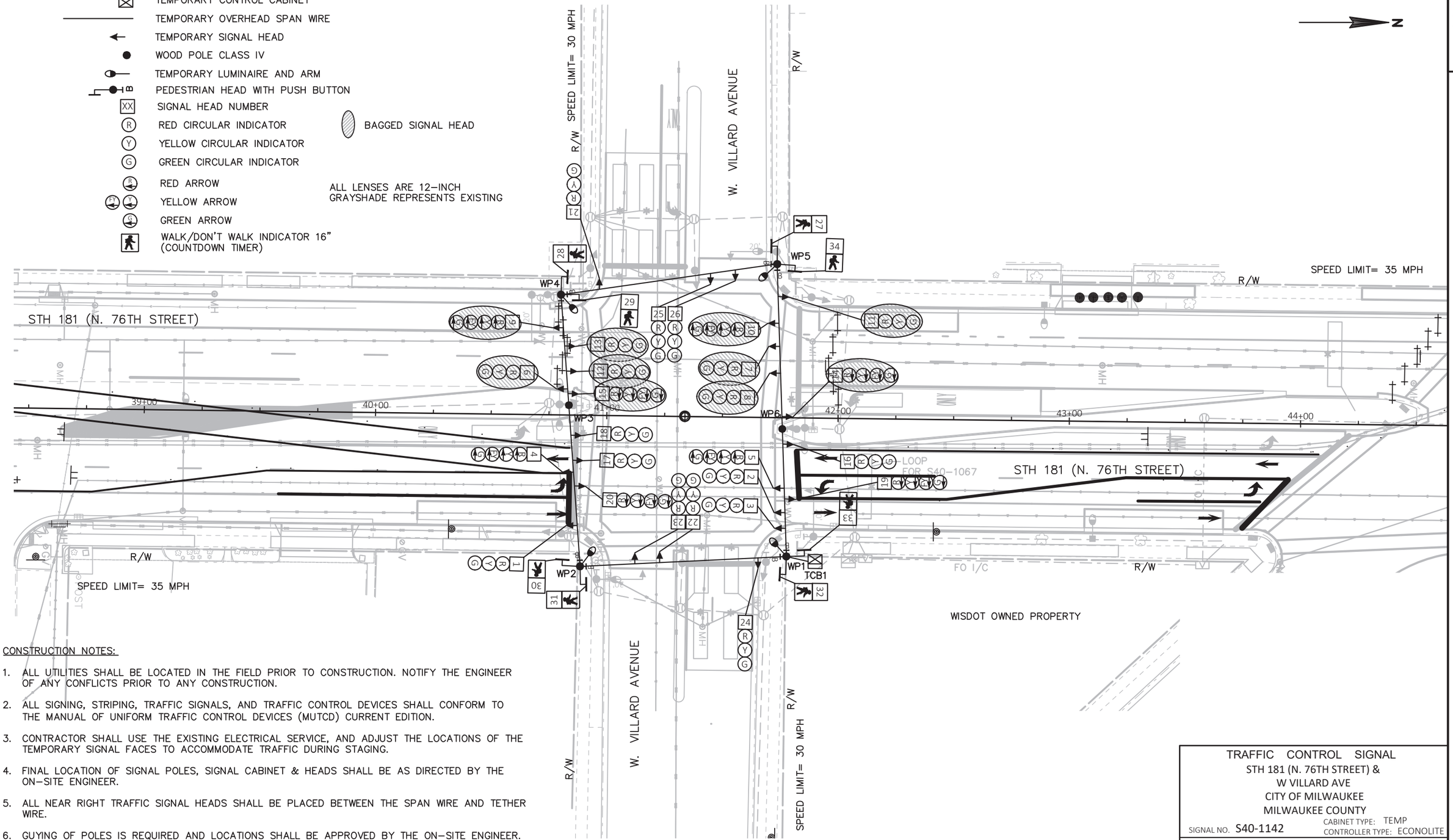
PROJECT NO:1360–13–70	HWY: STH 181	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN – STAGE 2	SHEET 57 E

FILE NAME : Z:\SHARED\WI\2552 STH 145 TEMPORARY SIGNALS\76TH STREET\CAD\S40–1142_VILLARD_TEMP_STAGE_2.DWG
LAYOUT NAME – S40–1142_TEMP_STG_2_PG1
PLOT DATE : 11/2/2022 9:42 AM PLOT BY : JEFF FAIT PLOT NAME : PLOT SCALE : 1 IN:40 FT

LEGEND

- TEMPORARY CONTROL CABINET
- TEMPORARY OVERHEAD SPAN WIRE
- TEMPORARY SIGNAL HEAD
- WOOD POLE CLASS IV
- TEMPORARY LUMINAIRE AND ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- BAGGED SIGNAL HEAD

ALL LENSES ARE 12–INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
2. ALL SIGNING, STRIPING, TRAFFIC SIGNALS, AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
3. CONTRACTOR SHALL USE THE EXISTING ELECTRICAL SERVICE, AND ADJUST THE LOCATIONS OF THE TEMPORARY SIGNAL FACES TO ACCOMMODATE TRAFFIC DURING STAGING.
4. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET & HEADS SHALL BE AS DIRECTED BY THE ON–SITE ENGINEER.
5. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
6. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ON–SITE ENGINEER.
7. ALL EXISTING PERMANENT SIGNAL HEADS SHALL BE BAGGED.

TRAFFIC CONTROL SIGNAL
STH 181 (N. 76TH STREET) &
W VILLARD AVE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S40-1142
CABINET TYPE: TEMP
CONTROLLER TYPE: ECONOLITE

REGION CONTACT: P. VIRK
DESIGNED BY: TADI
REVISED BY:

PAGE 4 OF 5

PROJECT NO:1360–13–70	HWY: STH 181	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN – STAGE 3	SHEET 58 E

FILE NAME : Z:\SHARED\WI\2552 STH 145 TEMPORARY SIGNALS\76TH STREET\CAD\S40–1142_VILLARD_TEMP_STAGE_3.DWG
LAYOUT NAME – S40–1142_TEMP_STG_3_PG1

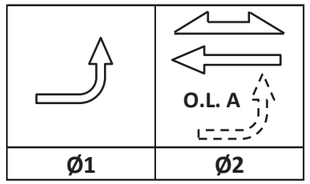
PLOT DATE : 11/2/2022 9:44 AM PLOT BY : JEFF FAIT PLOT NAME : PLOT SCALE : 1 IN:40 FT

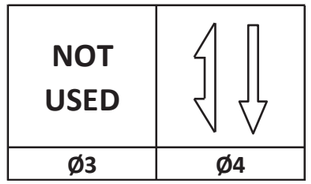
WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	4,5,9,10	-
Ø2	11,12,13,16,17,18	R
Ø3		
Ø4	21,22,23	R
Ø5	14,15,19,20	-
Ø6	1,2,3,6,7,8	R
Ø7		
Ø8	24,25,26	R
Ø2P	27,28	
Ø4P	29,30	
Ø6P	31,32	
Ø8P	33,34	
OLA	4,5,9,10	R ←
OLB		
OLC	14,15,19,20	R ←
OLD		

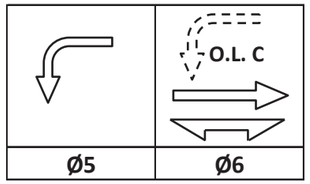
N

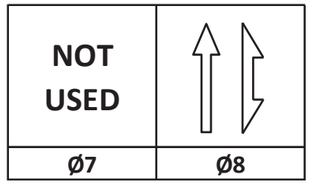
RING 1





RING 2





BARRIER

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

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	
IN TRAFFIC CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

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

STH 181 & VILLARD AVE

CITY OF MILWAUKEE

MILWAUKEE COUNTY

SIGNAL NO: S40-1142 CABINET TYPE: TEMP

CONTROLLER TYPE: ECONOLITE

DATE: 7/22 PAGE NUMBER: 5 OF 5

PULL FIBER BACK
FROM I/C CV103
TO I/C CV101, COIL
INTO I/C CV101 AND I/C PB100

PI: 93+39.70

95

100

I/C PB100

STH 181 (N 76 STREET)

W FOND DU LAC AVE

W. VILLARD AVENUE

I/C CV100

I/C CV101

FO I/C

SLAB

A/C

STH 145

CUT FIBER AT I/C CV103
(PULL BACK FIBER FROM I/C CV103 TO I/C CV101,
COIL INTO I/C CV101 AND I/C PB100)

I/C CV102

I/C CV103

105

CONSTRUCTION NOTES:

1. BEFORE CUTTING THE FIBER, CONTRACTOR SHALL CONTACT REGIONAL ELECTRICAL FIELD UNIT AT 414-266-1170
2. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.

LEGEND

- CONTROL CABINET
- CONDUIT HDPE 1-DUCT 2-INCH UNLESS OTHERWISE NOTED
- PULL BOX, 24" X 42"
- COMMUNICATIONS VAULT

SIGNAL INTERCONNECT PLAN
STH 181 (N. 76TH STREET)
CITY OF MILWAUKEE
COUNTY MILWAUKEE

REGION CONTACT: P. VIRK
DESIGNED BY: S. WAGNER
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1360-13-70	HWY: STH 181	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT REMOVAL PLAN	SHEET 60	E

FILE NAME : N:\PDS\C3D\CAD\13601300\SIG\INTERCONNECT\024101_IC_RM_20.DWG
LAYOUT NAME - 01

PLOT DATE : 4/27/2022 2:14 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

RE-INSTALL FIBER BACK TO I/C CV103 ONCE NEW CONDUIT IS INSTALLED

PI: 93+39.70

95

100

I/C PB100

STH 181 (N 76 STREET)

STH 181 (N 76 STREET)

W. VILLARD AVENUE

W FOND DU LAC AVE

W FOND DU LAC AVE

I/C CV100

I/C CV101

F0 I/C

F0 I/C

SLAB

SIGN

POST

A/C

CONNECT 2-1/2" CONDUIT WITH THE CONDUIT IN BRIDGE PARAPET

INSTALL 10 AWG TRACER CABLE AND RE-INSTALL FIBER FROM I/C CV101 TO I/C CV103

SPLICE FIBER INTO THE SPLICE ENCLOSURE

STH 145

STH 145

I/C CV102

I/C CV103

105

2-1/2" CONDUIT THE BRIDGE PARAPET (SEE BRIDGE PLANS)

STH 181 (N 76 STREET)

STH 181 (N 76 STREET)

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING INTERCONNECT CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT CABLE COILED IN EACH INTERCONNECT VAULT. LEAVE 30-FEET OF FIBER OPTIC CABLE IN EACH INTERCONNECT PULL BOX.
5. INSTALL 10 AWG TRACER CABLE IN INTERCONNECT CONDUIT.
6. SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS OF FIBER OPTIC WARNING TAPE.
7. MAINLINE SPLICES SHALL BE AS DIRECTED BY THE ENGINEER IN THE FIELD.

LEGEND

- CONTROL CABINET
- 2-1/2" CONDUIT
- CONDUIT HDPE 1-DUCT 2-INCH UNLESS OTHERWISE NOTED
- PULL BOX, 24" X 42"
- COMMUNICATIONS VAULT

SIGNAL INTERCONNECT PLAN
STH 181 (N. 76TH STREET)
CITY OF MILWAUKEE
COUNTY MILWAUKEE

REGION CONTACT: P. VIRK
DESIGNED BY: S. WAGNER
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1360-13-70	HWY: STH 181	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET 61	E

FILE NAME : N:\PDS\C3D\CAD\13601300\SIG\INTERCONNECT\024001_IC_20.DWG
LAYOUT NAME - 01

PLOT DATE : 7/11/2022 12:31 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

2

76th ST. SB

28+00 29+00 30+00 31+00 R/L 76th ST. 32+00 33+00

MATCH LINE STA. 33+75.00

76th ST. NB

CONTINUE PAVEMENT MARKING TO END OF SECTION DISTURBED BY THE PROJECT. APPROXIMATELY STATION 29+00

MARKING LINE GROOVED PERMANENT TAPE 4-INCH, 12.5' SEGMENT, 37.5' GAP, WHITE

N

2

N

MATCH LINE STA. 33+75.00

76th ST. SB

34+00 35+00 36+00 37+00 R/L 76th ST. 38+00 39+00

MARKING LINE EPOXY 4-INCH, WHITE

MARKING LINE GROOVED PERMANENT TAPE 4-INCH, 12.5' SEGMENT, 37.5' GAP, WHITE

MARKING LINE GROOVED PERMANENT TAPE 8-INCH, WHITE

MARKING ISLAND NOSE EPOXY

MATCH LINE STA. 39+50.00

76th ST. NB

MARKING LINE GROOVED PERMANENT TAPE 4-INCH, 12.5' SEGMENT, 37.5' GAP, WHITE

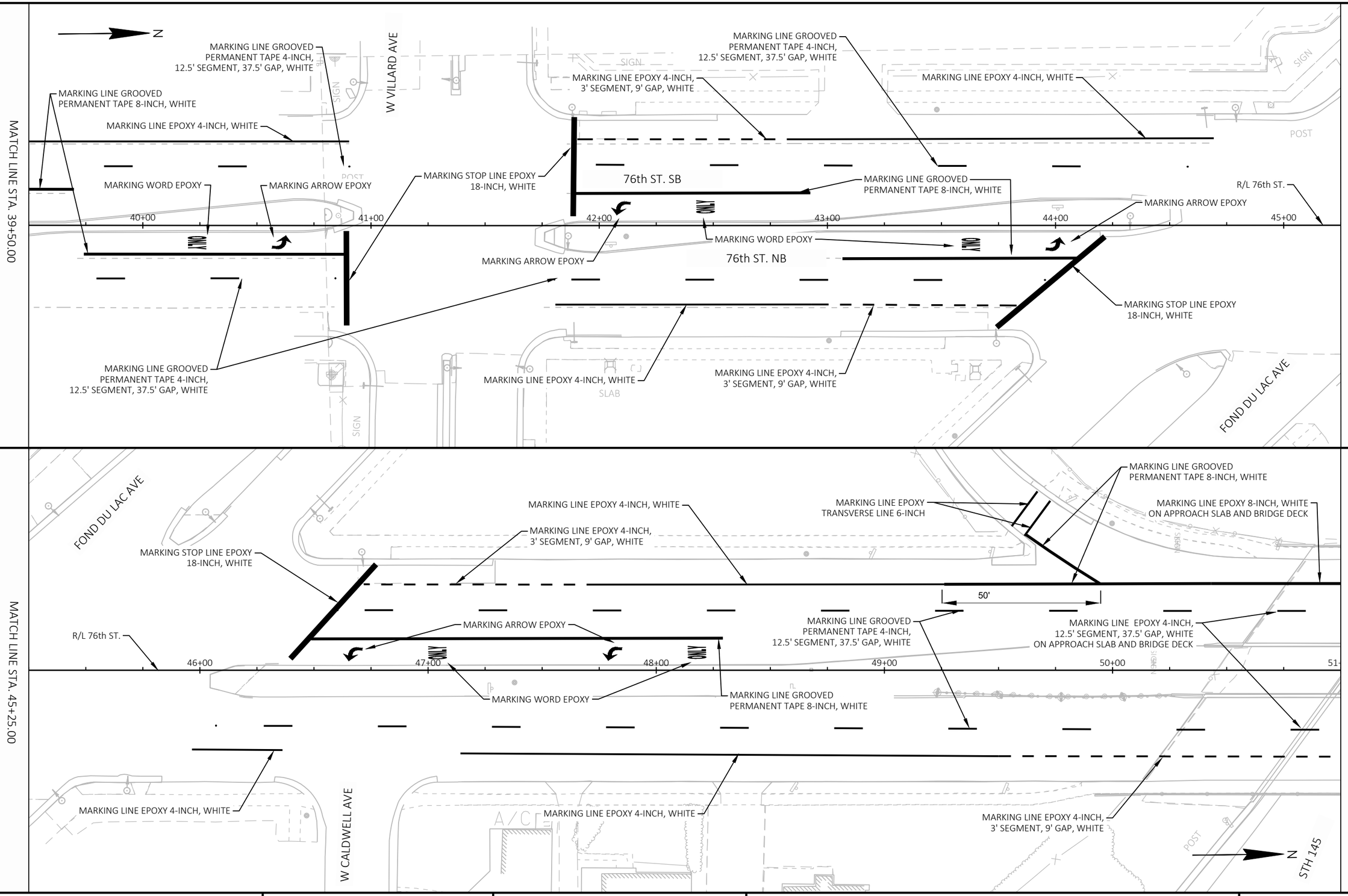
W GRANTOSA DR

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 62	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\024501_PM.DWG
LAYOUT NAME - 01

PLOT DATE : 7/28/2022 5:23 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 63	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\024501_PM.DWG
LAYOUT NAME - 02
PLOT DATE : 7/28/2022 5:23 PM
PLOT BY : WEIGAND, BEN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2

MATCH LINE STA. 51+00.00

STH 145

MARKING LINE EPOXY 8-INCH, WHITE
ON APPROACH SLAB AND BRIDGE DECK

MARKING LINE EPOXY 4-INCH,
3' SEGMENT, 9' GAP, WHITE

MARKING LINE EPOXY 4-INCH, WHITE

N

R/L 76th ST.

76th ST. SB

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

MARKING LINE EPOXY 4-INCH,
12.5' SEGMENT, 37.5' GAP, WHITE
ON APPROACH SLAB AND BRIDGE DECK

MARKING LINE GROOVED
PERMANENT TAPE 4-INCH,
12.5' SEGMENT, 37.5' GAP, WHITE

76th ST. NB

MARKING LINE EPOXY 4-INCH,
3' SEGMENT, 9' GAP, WHITE

MARKING LINE EPOXY 8-INCH, WHITE
ON APPROACH SLAB AND BRIDGE DECK

MARKING LINE EPOXY
TRANSVERSE LINE 6-INCH

MARKING LINE GROOVED
PERMANENT TAPE 8-INCH, WHITE

MARKING LINE EPOXY 4-INCH, WHITE

MATCH LINE STA. 56+75.00

2

MATCH LINE STA. 56+75.00

W LEON TERRACE

FLAG

MARKING LINE EPOXY 4-INCH,
3' SEGMENT, 9' GAP, WHITE

MARKING LINE EPOXY 4-INCH, WHITE

CONTINUE PAVEMENT MARKING TO END OF
SECTION DISTURBED BY THE PROJECT.
APPROXIMATELY STATION 66+00

R/L 76th ST.

76th ST. SB

57+00 58+00 59+00 60+00 61+00 62+00

MARKING LINE GROOVED
PERMANENT TAPE 4-INCH,
12.5' SEGMENT, 37.5' GAP, WHITE

76th ST. NB

50'

CONTINUE PAVEMENT MARKING TO END OF
SECTION DISTURBED BY THE PROJECT.
APPROXIMATELY STATION 60+00

MARKING LINE EPOXY 4-INCH, WHITE

MARKING LINE GROOVED
PERMANENT TAPE 8-INCH, WHITE

N

MATCH LINE STA. 56+75.00

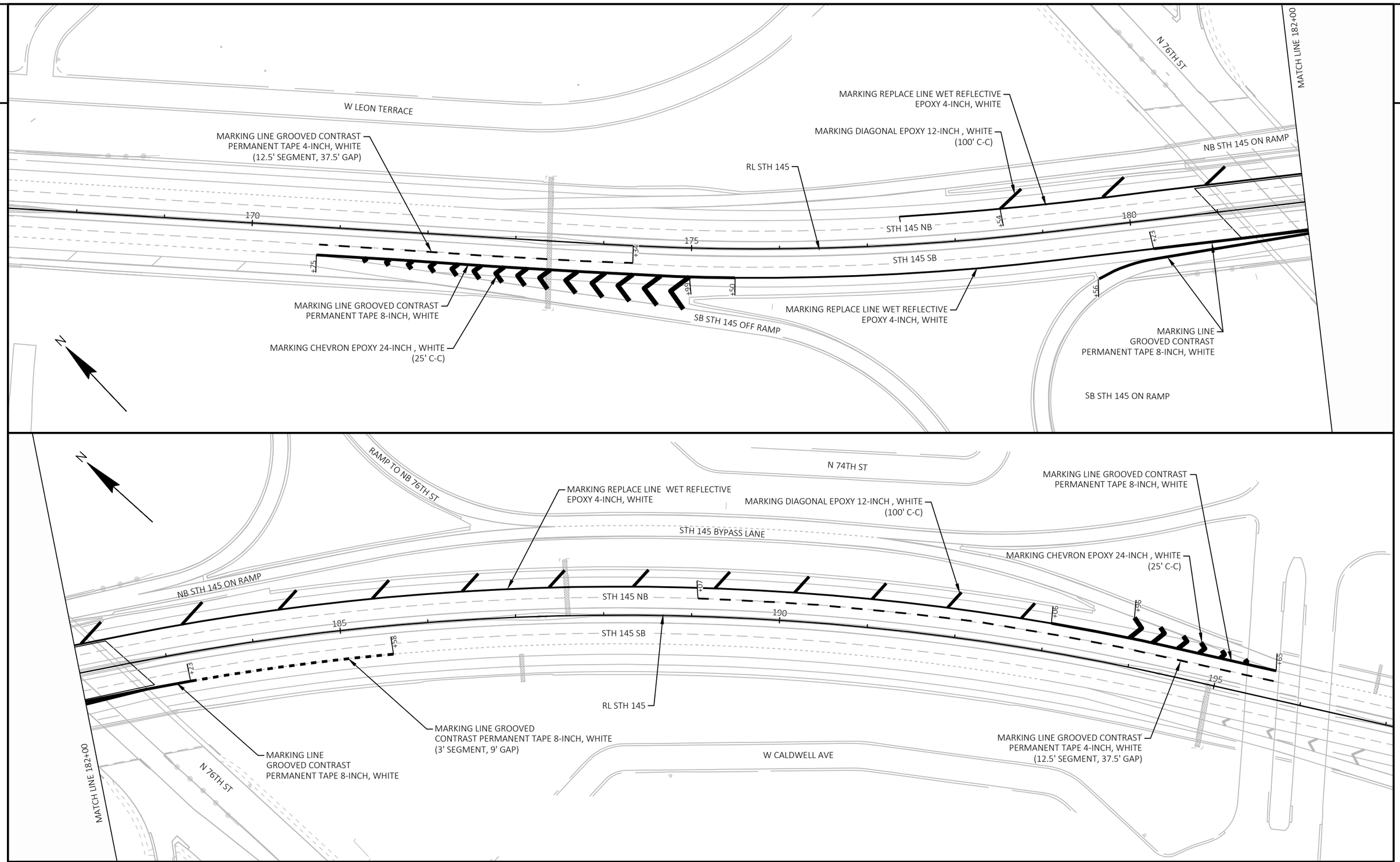
PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 64	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\024501_PM.DWG
LAYOUT NAME - 03

PLOT DATE : 7/28/2022 5:23 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2



PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 65	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\024501_PM 145.DWG
LAYOUT NAME - 01

PLOT DATE : 7/28/2022 5:23 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

GENERAL NOTES FOR TRAFFIC CONTROL

1. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
2. CONFLICTING TRAFFIC SIGNS SHALL BE REMOVED OR COVERED AS DIRECTED BY THE ENGINEER.
3. ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.
4. ALL TRAFFIC CONTROL DRUMS ALONG 76TH STREET ARE SPACED AT 25 FEET AND FLEXIBLE TUBULAR MARKERS ARE SPACED AT 15 FEET, UNLESS OTHERWISE NOTED.
5. REMOVE CONFLICTING PAVEMENT MARKING ON 76TH ST BY UTILIZING REMOVAL LINE GROOVED PERMANENT TAPE FOR EXISTING TAPE OR BY MARKING REMOVAL LINE WATER BLASTING FOR EXISTING EPOXY.
6. NO TRAFFIC CONTROL SIGNS OR DEVICES TO BE PLACED WITHIN 50 FEET OF THE RAILROAD RIGHT-OF-WAY

TRAFFIC CONTROL DEVICE LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN WITH TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- DIRECTION OF TRAFFIC
- MB — FIXED MESSAGE BOARD
- WORK AREA
- PEDESTRIAN DETOUR ROUTE
- HMA PAVEMENT FROM PREVIOUS STAGE

TEMPORARY MARKING LEGEND 76TH STREET

1. TEMPORARY MARKING LINE EPOXY 4-INCH YELLOW
2. TEMPORARY MARKING LINE EPOXY 4-INCH WHITE
3. TEMPORARY MARKING LINE EPOXY 4-INCH DOUBLE YELLOW
4. TEMPORARY MARKING LINE EPOXY 8-INCH WHITE
5. TEMPORARY MARKING STOP LINE EPOXY 18-INCH

PCMS MESSAGING

STH 145:
PLACE PCMS 7 DAYS PRIOR TO REMOVING EXISTING BRIDGE DECK AND PARAPET

FRAME 1	FRAME 2
STH 145 TO CLOSE	XXXDAY 8PM -6AM

FIXED MESSAGING

76TH ST:
PLACE FIXED MESSAGE BOARD 7 DAYS PRIOR TO STAGE 1

ROADWORK
BEGINNING
XXX-XX

PEDESTRIAN BRIDGES
PLACE FIXED MESSAGE BOARD 7 DAYS PRIOR TO STAGE 1

BRIDGE CLOSED
BEGINNING
XXX-XX

PLACE FIXED MESSAGE BOARD ON BARRICADE
AT BRIDGE DURING CONSTRUCTION

BRIDGE CLOSED
USE N 76 ST
BRIDGE

TRAFFIC CONTROL STAGING OVERVIEW

76TH STREET

STAGE 1:
TRAFFIC: INSIDE LANE AND SHOULDER CLOSURES
CONSTRUCTION: INSTALL TEMPORARY TRAFFIC SIGNALS AND CROSSOVERS

STAGE 2:
TRAFFIC: CROSSOVER NB 76TH TRAFFIC AS SHOWN ON PLANS
CONSTRUCTION: WORK ON B-40-256

STAGE 3:
TRAFFIC: CROSSOVER SB 76TH TRAFFIC AS SHOWN ON PLANS
CONSTRUCTION: WORK ON B-40-252

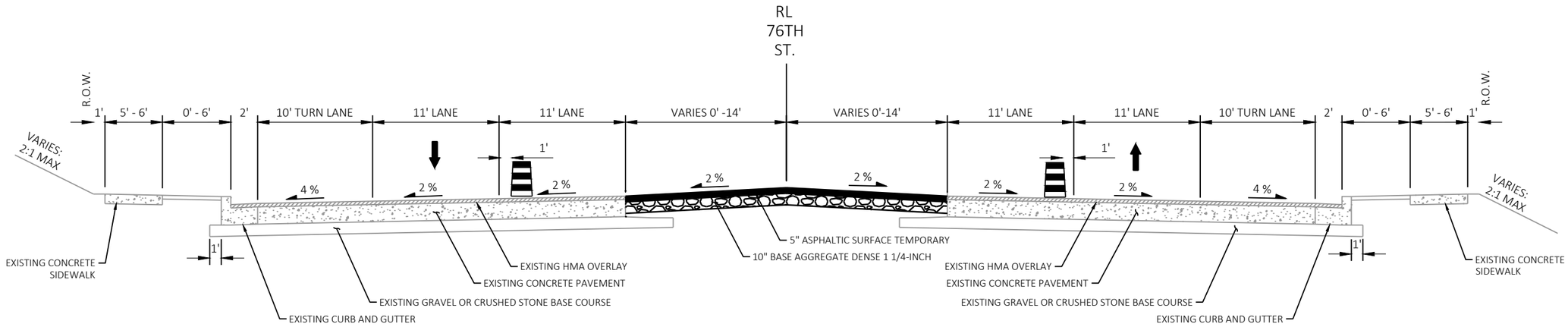
STAGE 4:
TRAFFIC: INSIDE LANE AND SHOULDER CLOSURES - SAME AS STAGE 1
CONSTRUCTION: REMOVE TEMPORARY TRAFFIC SIGNALS AND CROSSOVERS

STH 145

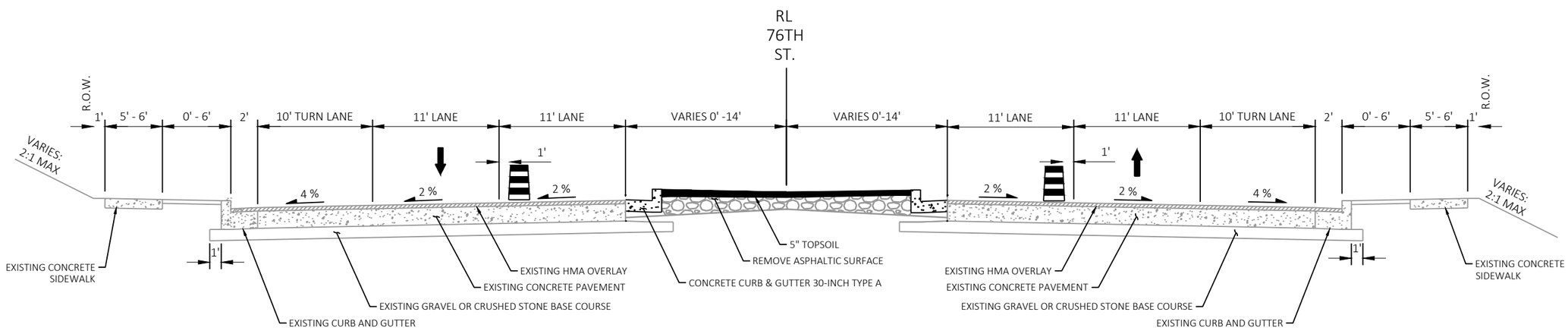
CONSTRUCTION: DEMO OF EXISTING STRUCTURE AND PEDESTRIAN BRIDGE CONCRETE SURFACE REPAIRS
TRAFFIC: SHOULDER CLOSURE TO COMPLETE PEDESTRIAN BRIDGE BEARING WORK. OVERNIGHT FULL CLOSURES BETWEEN 8PM AND 6AM. TO DEMO STRUCTURES.

STAGE 1:
TRAFFIC: SINGLE INSIDE LANE AND SHOULDER CLOSURES
CONSTRUCTION: PAINT STRUCTURE B-40-255 AND B-40-256 OVER INSIDE LANES

STAGE 2:
TRAFFIC: SINGLE OUTSIDE LANE CLOSURES
CONSTRUCTION: PAINT STRUCTURE B-40-255 AND B-40-256 OVER OUTSIDE LANES

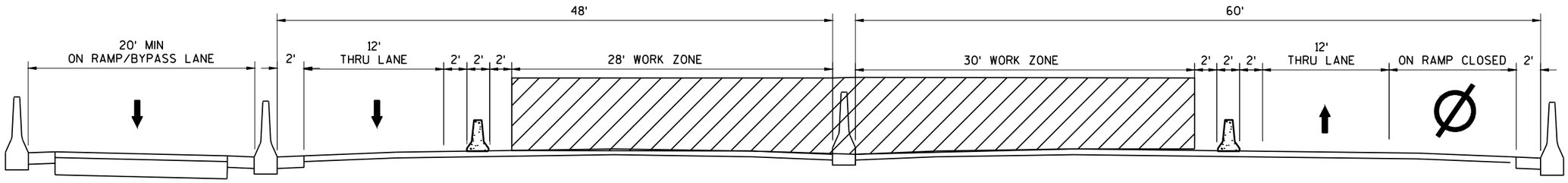


76TH ST (LOOKING NORTH)
STAGE 1
CROSSOVERS



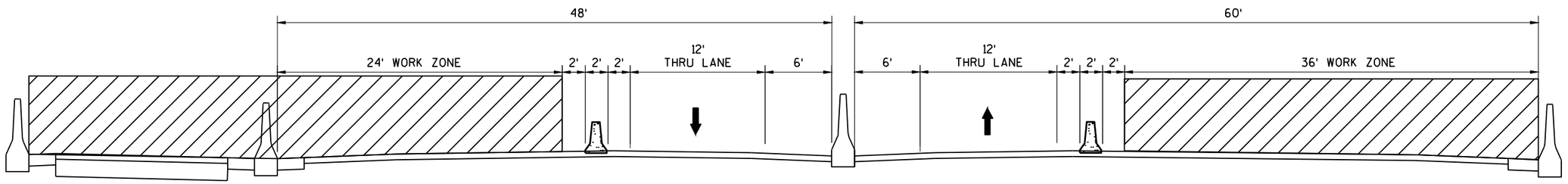
76TH ST (LOOKING NORTH)
STAGE 4
CROSSOVERS

2



STH 145 (LOOKING SOUTH)
STAGE 1
INSIDE LANES CLOSED
BOTH DIRECTIONS

WORK:
- CLOSE INSIDE LANE AND PUSH ALL TRAFFIC TO OUTSIDE LANE AND SHOULDER.
- TRAFFIC WILL BE SHIFTED SLIGHTLY ONTO THE OUTSIDE SHOULDER TO ALLOW FOR TEMPORARY CONCRETE BARRIER AND BUFFERS.
- PAINT STRUCTURE OVER INSIDE LANE AND SHOULDER.

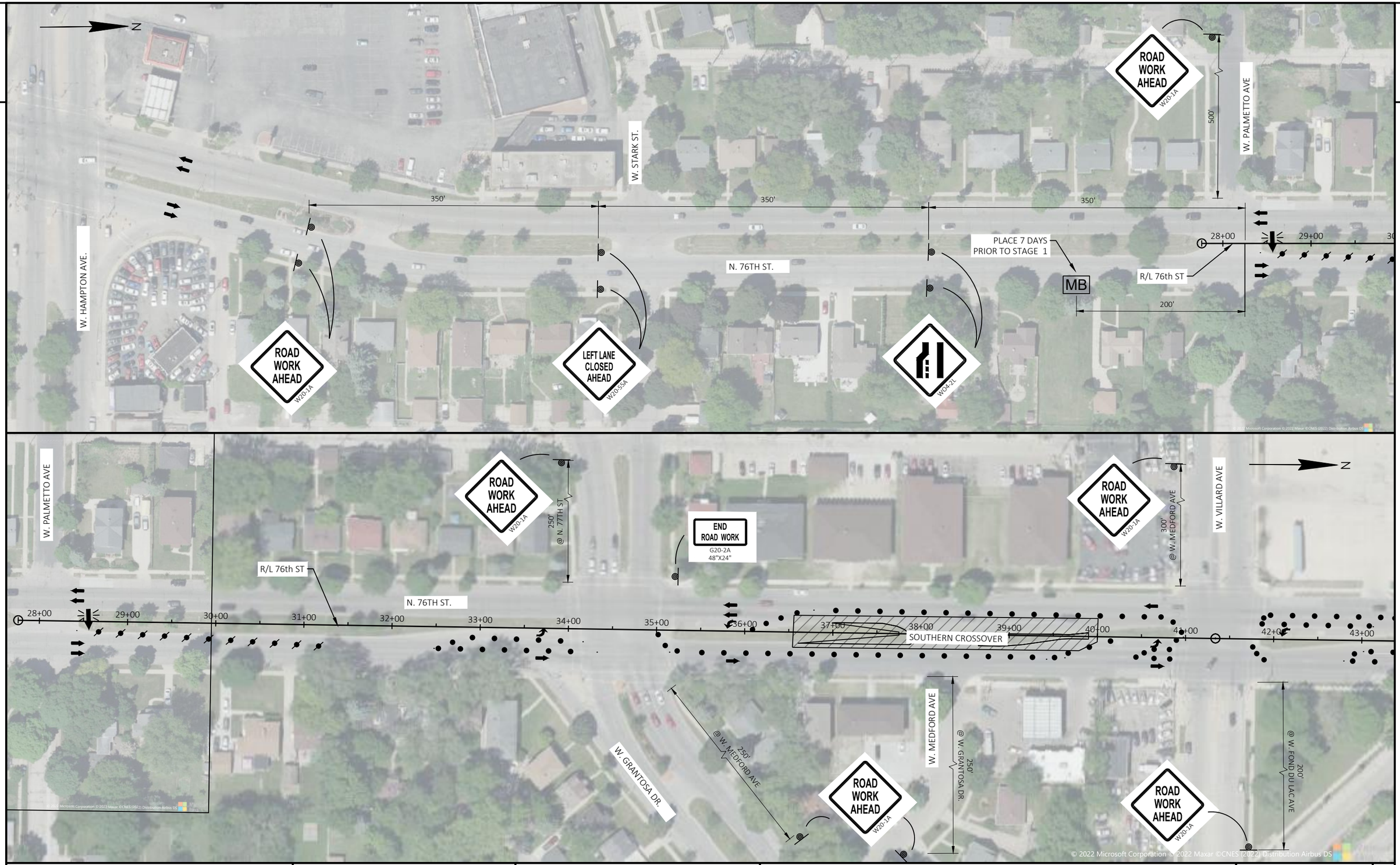


STH 145 (LOOKING SOUTH)
STAGE 2
OUTSIDE LANE CLOSED
BOTH DIRECTIONS

WORK:
- CLOSE OUTSIDE LANE AND PUSH ALL TRAFFIC TO INSIDE LANE.
- PAINT STRUCTURE OVER REMAINING OUTSIDE LANE AND OUTSIDE SHOULDER.

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - TYPICAL SECTIONS	SHEET 68	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025101_TC_GN.DWG
LAYOUT NAME - 03
PLOT DATE : 4/25/2023 7:13 AM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1 & 4 - 76TH ST ADVANCED WARNING SIGNS	SHEET 69	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025101_TC STAGE 1 ADVANCED WARNING.DWG
LAYOUT NAME - 01

PLOT DATE : 4/25/2023 7:14 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

ROAD WORK AHEAD W20-1A

500'

W. FOND DU LAC AVE

R/L STH 145

180

R/L 76th ST

W. LEON TERRACE

43+00 44+00 45+00 46+00 47+00 48+00 49+00 50+00 51+00 52+00 53+00 54+00 55+00 56+00 57+00 58+00

NORTHERN CROSSOVER

W. CALDWELL AVE

STH 145

N

59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00 67+00

W. SHERIDAN AVE

PLACE 7 DAYS PRIOR TO STAGE 1

MB

200'

350'

W. SILVER SPRING DR

END ROAD WORK G20-2A 48"X24"

R/L 76th ST

W04-2L

LEFT LANE CLOSED AHEAD W20-5A

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1 & 4 - 76TH ST ADVANCED WARNING SIGNS	SHEET 70	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025101_TC STAGE 1 ADVANCED WARNING.DWG
LAYOUT NAME - 02

PLOT DATE : 4/25/2023 7:14 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

W. GRANTOSA DR

R/L 76th ST

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

+00 29+00 30+00 31+00 32+00 33+00 34+00

W. PALMETTO AVE

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

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IN STAGE 4 FOLLOW THE SAME TRAFFIC CONTROL TO REMOVE THE HMA CROSSOVERS. INSTALL REVERSE SLOPE CONCRETE CURB & GUTTER 30-INCH TYPE A. REMOVE 5-INCH ASPHALTIC SURFACE AND PLACE 5-INCHES OF TOPSOIL, EROSION MAT URBAN CLASS 1 TYPE B, FERTILIZER TYPE B, #40 SEED, AND TEMPORARY SEED.

N

W. VILLARD AVE

W. GRANTOSA DR

WO1-6
48"X24"

DETOUR
M4-9BL
30"X24"
SIDEWALK CLOSED
R9-9
24"X12"

REMOVING CURB & GUTTER

TEMPORARY PEDESTRIAN BARRICADE

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

WO1-6
48"X24"

LIGHT POLE AND CONCRETE BASE TO BE REMOVED BY OTHERS

DETOUR
M4-9BR
30"X24"

DETOUR
M4-9BL
30"X24"

R/L 76th ST

+99.02
11.07' LT

+75
2.00' LT

ADJUSTING INLET COVERS

35+00 36+00 37+00 38+00 39+00 40+00 41+00

+90
4.00' LT

+90
3.00' RT

REMOVING CONCRETE PAVEMENT

+60.73
12.49' RT

+75
1.30' RT

REMOVING CURB & GUTTER

LIGHT POLE AND CONCRETE BASE TO BE REMOVED BY OTHERS

R11-2L
48"X30"
LANE CLOSED

ADJUSTING MANHOLE COVERS

TEMPORARY PEDESTRIAN BARRICADE

SAWING CONCRETE 2' OFFSET FROM FACE OF EXISTING CURB FACE

TEMPORARY PEDESTRIAN BARRICADE

UTILITY POLE TO BE REMOVED BY OTHERS

W. GRANTOSA DR

DETOUR
M4-9BR
30"X24"
SIDEWALK CLOSED
R9-9
24"X12"

W. MEDFORD AVE

RIGHT TURN ONLY
R3-53R
24"X30"

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

R3-2
24"X24"

DETOUR
M4-9BL
30"X24"

DETOUR
M4-9BR
30"X24"

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PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1 & 4 - 76TH ST	SHEET 71	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025101_TC.DWG
LAYOUT NAME - 01

PLOT DATE : 4/25/2023 7:14 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

W. VILLARD AVE

WO1-6
48"X24"

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

WO1-6
48"X24"

R/L 76th ST

42+00 43+00 44+00 45+00 46+00 47+00

N

WO1-6
48"X24"

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

W. FOND DU LAC AVE

WO1-6
48"X24"

W. CALDWELL AVE

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R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

STH 145 ON RAMP

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

R/L 76th ST

47+00 48+00 49+00 50+00 51+00 52+00 53+00

N

W. VILLARD AVE

STH 145

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PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1 & 4 - 76TH ST	SHEET 72	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025101_TC.DWG
LAYOUT NAME - 02

PLOT DATE : 4/25/2023 7:14 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:40 FT

IN STAGE 4 FOLLOW THE SAME TRAFFIC CONTROL TO REMOVE THE HMA CROSSOVERS. INSTALL REVERSE SLOPE CONCRETE CURB & GUTTER 30-INCH TYPE A. REMOVE 5-INCH ASPHALTIC SURFACE AND PLACE 5-INCHES OF TOPSOIL, EROSION MAT URBAN CLASS 1 TYPE B, FERTILIZER TYPE B, #40 SEED, AND TEMPORARY SEED.

2

2

R11-2L
48"X30"
LANE CLOSED

DETOUR
M4-9BL
30"X24"
SIDEWALK CLOSED
R9-9
24"X12"

W. LEON TERRACE

TEMPORARY PEDESTRIAN BARRICADE

REMOVING CURB & GUTTER

SEE CONSTRUCTION DETAILS FOR REPLACING CURB RAMP

R/L 76th ST

+75 11.81' LT

+25 5.50' LT

+25 0.50' LT

+40 11.79' LT

53+00 54+00 55+00 56+00 57+00 58+00

+35 11.17' RT

+25 1.50' RT

+25 2.00' RT

+10 11.81' RT

REMOVING CONCRETE SIDEWALK

REMOVING CURB & GUTTER

LIGHT POLE AND CONCRETE BASE TO BE REMOVED BY OTHERS

SAWING CONCRETE
2' OFFSET FROM FACE OF EXISTING CURB FACE

DETOUR
M4-9BR
30"X24"
SIDEWALK CLOSED
R9-9
24"X12"

STH 145 ON RAMP

N. 76TH ON RAMP

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W. SHERIDAN AVE

DETOUR
M4-9BL
30"X24"

DETOUR
M4-9BR
30"X24"

R/L 76th ST

59+00 60+00 61+00 62+00 63+00 64+00

DETOUR
M4-9BR
30"X24"

DETOUR
M4-9BL
30"X24"

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PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1 & 4 - 76TH ST	SHEET 73	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025101_TC.DWG
LAYOUT NAME - 03
PLOT DATE : 4/25/2023 7:14 AM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2

N

W. HAMPTON AVE.

W. STARK ST.

N. 76TH ST.

350'

350'

350'

ROAD WORK AHEAD
W20-1A

RIGHT LANE CLOSED AHEAD
W20-5A

W04-2R

ROAD WORK AHEAD
W20-1A

500'

W. PALMETTO AVE

28+00

29+00

R/L 76th ST

W. PALMETTO AVE

ROAD WORK AHEAD
W20-1A

250'
@ N. 77TH ST.

W. GRANTOSA DR.

END ROAD WORK
G20-2A
48"X24"

R/L 76th ST

N. 76TH ST.

28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00 39+00 40+00 41+00 42+00 43+00

NO PARKING ALLOWED

ROAD WORK AHEAD
W20-1A

300'
@ W. MEDFORD AVE

W. VILLARD AVE

N

NO PARKING ALLOWED

W. GRANTOSA DR.

250'
@ W. MEDFORD AVE

ROAD WORK AHEAD
W20-1A

ROAD CLOSED AHEAD
W20-3A

W. MEDFORD AVE

250'
@ W. GRANTOSA DR.

NO PARKING ALLOWED

W. VILLARD AVE

200'
@ W. FOND DU LAC AVE

NO PARKING ALLOWED

ROAD WORK AHEAD
W20-1A

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PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2 - 76TH ST ADVANCED WARNING SIGNS	SHEET 74	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025103_TC STAGE 2 ADVANCED WARNING.DWG
LAYOUT NAME - 01

PLOT DATE : 4/25/2023 7:14 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

ROAD WORK AHEAD W20-1A

500'

W. FOND DU LAC AVE

NO PARKING ALLOWED

NO PARKING ALLOWED

R/L 76th ST

R/L STH 145

180

ROAD WORK AHEAD W20-1A

500'

W. LEON TERRACE

NO PARKING ALLOWED

43+00 44+00 45+00 46+00 47+00 48+00 49+00 50+00 51+00 52+00 53+00 54+00 55+00

B-40-0256

NO PARKING ALLOWED

W. FOND DU LAC AVE

500'

ROAD WORK AHEAD W20-1A

500'

W. CALDWELL AVE

ROAD CLOSED AHEAD W20-3A

STH 145

500'

ROAD WORK AHEAD W20-1A

N

ROAD WORK AHEAD W20-1A

500'

W. SHERIDAN AVE

W. SILVER SPRING DR

58+00 59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00 67+00

350' 350' 350'

R/L 76th ST

END ROAD WORK G20-2A 48"X24"

W04-2L

LEFT LANE CLOSED AHEAD W20-5A

ROAD WORK AHEAD W20-1A

500'

ROAD WORK AHEAD W20-1A

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2 - 76TH ST ADVANCED WARNING SIGNS	SHEET 75	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025103_TC STAGE 2 ADVANCED WARNING.DWG
LAYOUT NAME - 02

PLOT DATE : 4/25/2023 7:14 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

W.PALMETTO AVE

N

MATCH LINE 33+75

2

WO1-4L

BEGIN RIGHT TURN LANE
R3-20R
24"X36"

R/L 76th ST

28+00 29+00 30+00 31+00 32+00 33+00

2

NO PARKING HERE TO CORNER
R7-51L
18"X24"

W. FAIRMOUNT AVE

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

BUS STOP TO REMAIN OPEN

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N

W. GRANTOSA DR

WO1-6
48" X 24"
TYPE III BARRICADE

DETOUR
M4-9BL
30"X24"
SIDEWALK CLOSED
R9-9
24"X12"

R3-2
24"X24"

R3-8LA
36"X30"

TEMPORARY PEDESTRIAN BARRICADE

+25.81
35.75' LT

MATCH LINE 39+50

R/L 76th ST

15'

+62.12
4.34' LT

34+00 35+00 36+00 37+00 38+00 39+00

2'

11'

+60.73
12.49' RT

+82.40
12.45' RT

+63.64
15.82' RT

+22.93
9.80' RT

MATCH LINE 33+75

15'

NO PARKING HERE TO CORNER
R7-51L
18"X24"

W. GRANTOSA DR

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

BEGIN RIGHT TURN LANE
R3-20R
24"X36"

DETOUR
M4-9BR
30"X24"
SIDEWALK CLOSED
R9-9
24"X12"

TEMPORARY PEDESTRIAN BARRICADE

W. MEDFORD AVE

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

43.58
34.41' RT

TEMPORARY PEDESTRIAN BARRICADE

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2 - 76TH ST	SHEET 76	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025103_TC.DWG
LAYOUT NAME - 01

PLOT DATE : 4/25/2023 7:14 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

NO PARKING HERE TO CORNER
R7-51R
18"X24"

+86.97
16.34' LT
+02.07
-4.85' LT
+17.87
-35.74' LT
+36.43
-25.04' LT
+79.48
-25.28' LT
+77.39
-15.70' RT

M4-9BL
30"X24"
M4-9BR
30"X24"

W. VILLARD AVE

INSTALL ON FIRST TUBULAR MARKER
W6-4
12"X18"
COORDINATE BUS STOP LOCATIONS WITH MCTS
CLOSE DRIVEWAY TEMPORARILY
+82.52
-35.83' LT
+59.80
-35.93' LT
R3-8LF
36"X30"
INSTALL ON FIRST TUBULAR MARKER
NO PARKING HERE TO CORNER
R7-51L
18"X24"

3' SEGMENT
3' GAP

40+00
41+00
42+00
43+00
44+00
45+00

TEMPORARY TRAFFIC SIGNALS
15'
R3-8LF
36"X30"
R/L 76th ST

WO1-6
48" X 24"
TYPE III BARRICADE
COORDINATE BUS STOP LOCATIONS WITH MCTS
M4-9BL
30"X24"
M4-9BR
30"X24"
RIGHT TURN ONLY
R3-53R
24"X30"
R7-51L
18"X24"
R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE
COORDINATE BUS STOP LOCATIONS WITH MCTS
W. FOND DU LAC AVE
W. FOND DU LAC AVE

MATCH LINE 39+50
MATCH LINE 45+25
MATCH LINE 45+25
MATCH LINE 51+00

R11-2B
48" X 30"
BRIDGE OUT
TYPE III BARRICADE
W. FOND DU LAC AVE
INSTALL ON FIRST TUBULAR MARKER
W6-4
12"X18"
M4-9BR
30"X24"
COORDINATE BUS STOP LOCATIONS WITH MCTS
NO PARKING HERE TO CORNER
R7-51L
18"X24"
R3-8LF
36"X30"
WO1-4R

+66.80
-34.89' LT
+53.21
-42.93' LT
+16.84
-31.11' LT
+02.54
-19.00' LT

3' SEGMENT
3' GAP

46+00
47+00
48+00
49+00
50+00
51+

B-40-255
B-40-256
TEMPORARY TRAFFIC SIGNALS
15'
R/L 76th ST
W. CALDWELL AVE
NO PARKING ANY TIME
R7-1L
18"X24"
R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE
TEMPORARY PEDESTRIAN BARRICADE
SIDEWALK CLOSED
R9-9
24"X12"
WO1-6
48" X 24"
TYPE III BARRICADE
R11-2B
48" X 30"
BRIDGE OUT
TYPE III BARRICADE
SIDEWALK CLOSED AHEAD
R9-9A
30"X18"
DETOUR
M4-9BL
30"X24"
N

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PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2 - 76TH ST	SHEET 77	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025103_TC.DWG
LAYOUT NAME - 02
PLOT DATE : 4/25/2023 7:14 AM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

2

MATCH LINE 51+00

SB STH 145

NB STH 145

DO NOT PASS
R4-1
24"X30"

W6-4
12"X18"

INSTALL ON FIRST TUBULAR MARKER

WO6-3

NO PARKING ANY TIME
R7-1L
18"X24"

+02.23
16.36' LT

+65.43
38.78' LT

12'

B-40-255

+00.46
22.45' LT

2'

52+00

53+00

54+00

55+00

R/L 76th ST

B-40-256

R11-2B
48" X 30"
BRIDGE OUT
TYPE III BARRICADE

WO1-6
48" X 24"
TYPE III BARRICADE

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MATCH LINE 56+75

2

SIDEWALK CLOSED
R9-9
24"X12"

W. LEON TERRACE

R11-2L
48"X30"
LANE CLOSED

COORDINATE BUS STOP LOCATIONS WITH MCTS

TEMPORARY PEDESTRIAN BARRICADE

+87.66
-24.66' LT

58+00

59+00

60+00

61+00

62+00

R/L 76th ST

+91.49
24.03' RT

+70.73
24.10' RT

TEMPORARY PEDESTRIAN BARRICADE

SIDEWALK CLOSED
R9-9
24"X12"

MATCH LINE 62+50

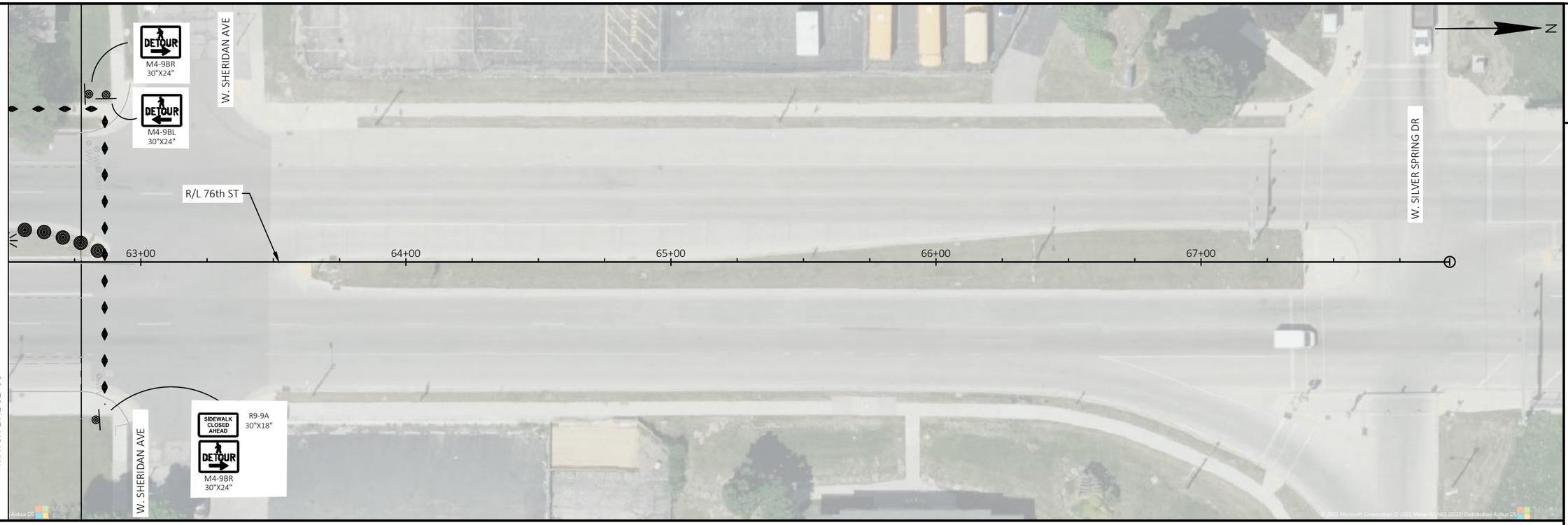
MATCH LINE 56+75

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2 - 76TH ST	SHEET 78	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025103_TC.DWG
LAYOUT NAME - 03

PLOT DATE : 4/25/2023 7:14 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:40 FT

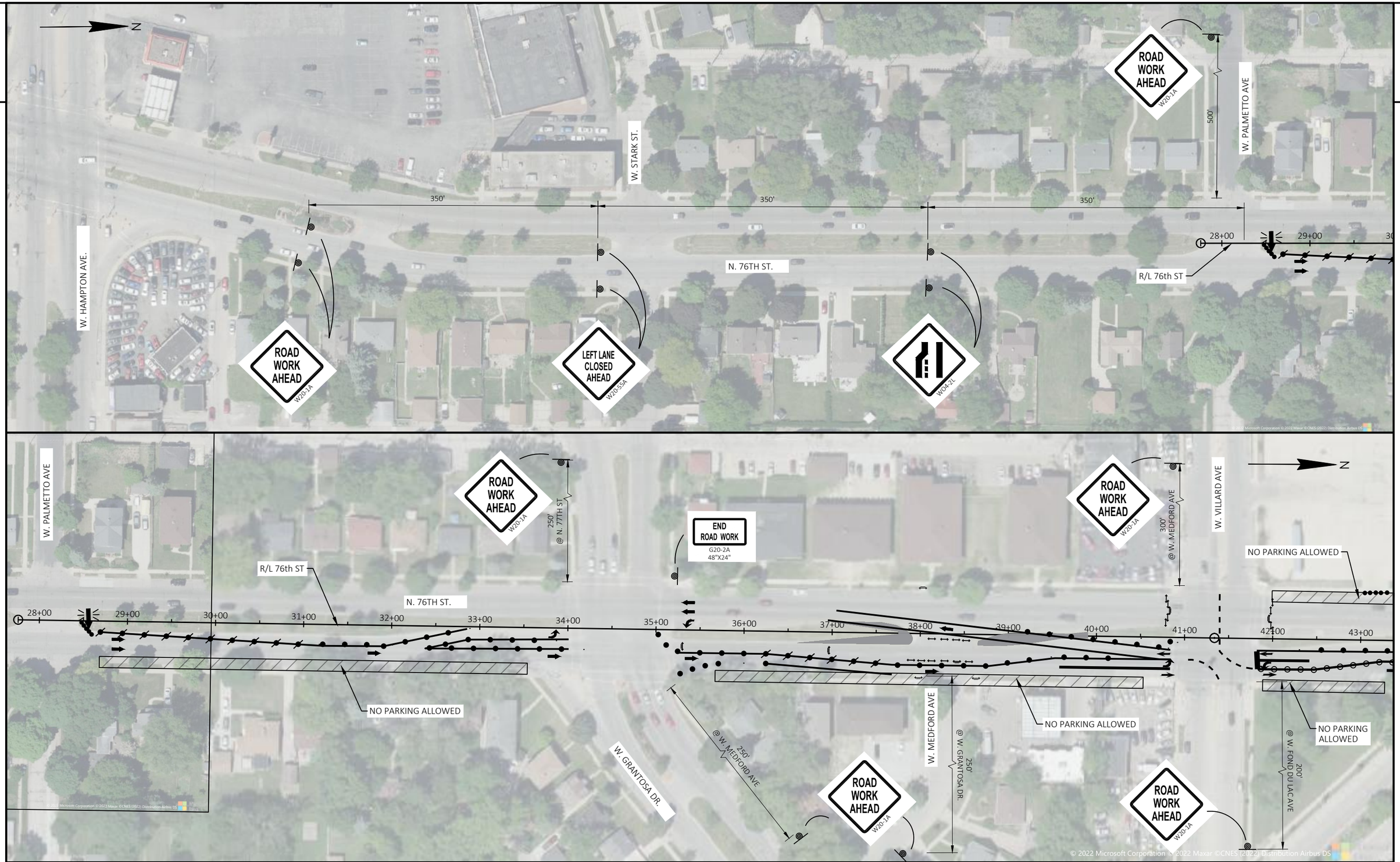
2



2

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2 - 76TH ST	SHEET 79	E

2



PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3 - 76TH ST ADVANCED WARNING SIGNS	SHEET 80	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025104_TC STAGE 3 ADVANCED WARNING.DWG
LAYOUT NAME - 01

PLOT DATE : 4/25/2023 7:15 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

ROAD WORK AHEAD W20-1A

500'

W. FOND DU LAC AVE

NO PARKING ALLOWED

NO PARKING ALLOWED

R/L 76th ST

B-40-0255

R/L STH 145

180

ROAD CLOSED AHEAD W20-3A

500'

W. LEON TERRACE

NO PARKING ALLOWED

43+00 44+00 45+00 46+00 47+00 48+00 49+00 50+00 51+00 52+00 53+00 54+00

NO PARKING ALLOWED

W. FOND DU LAC AVE

500'

ROAD WORK AHEAD W20-1A

500'

W. CALDWELL AVE

ROAD WORK AHEAD W20-1A

STH 145

ROAD WORK AHEAD W20-1A

500'

N

ROAD CLOSED AHEAD W20-3A

500'

W. SHERIDAN AVE

NO PARKING ALLOWED

58+00 59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00 67+00

250'

350'

350'

W. SILVER SPRING DR

R/L 76th ST

END ROAD WORK G20-2A 48"X24"

500'

ROAD WORK AHEAD W20-1A

W04-2R

RIGHT LANE CLOSED AHEAD W20-5A

ROAD WORK AHEAD W20-1A

N

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3 - 76TH ST ADVANCED WARNING SIGNS	SHEET 81	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025104_TC STAGE 3 ADVANCED WARNING.DWG
LAYOUT NAME - 02

PLOT DATE : 4/25/2023 7:15 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

W. PALMETTO AVE

28+00 29+00 30+00 31+00 32+00 33+00

N

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

+86
3' RT

2

1

+21
24' RT

+91
24' RT

MATCH LINE 33+75

W. FAIRMOUNT AVE

NO PARKING HERE TO CORNER
R7-51L
18"X24"

WO1-4R

BUS STOP TO REMAIN OPEN

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2

W. GRANTOSA DR

BUS STOP TO REMAIN OPEN

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

SIDEWALK CLOSED
R9-9
24"X12"

N

R3-2
24"X24"

+04
25' LT

TEMPORARY PEDESTRIAN BARRICADE

+95
13' LT

2

17'

1

34+00 35+00 36+00 37+00 38+00 39+00

MATCH LINE 39+50

15' TYP

+25
26' RT

1

+68
36' RT

+78
36' RT

TEMPORARY PEDESTRIAN BARRICADE

TEMPORARY PEDESTRIAN BARRICADE

MATCH LINE 33+75

W. GRANTOSA DR

WO1-6
48"X24"

NO PARKING HERE TO CORNER
R7-51L
18"X24"

2

SIDEWALK CLOSED
R9-9
24"X12"

W. MEDFORD AVE

RIGHT TURN ONLY
R3-53R
24"X30"

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

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2

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3 - 76TH ST	SHEET 82	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025104_TC.DWG
LAYOUT NAME - 01

PLOT DATE : 4/25/2023 7:15 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

W. VILLARD AVE

COORDINATE BUS STOP LOCATIONS WITH MCTS

TEMPORARY TRAFFIC SIGNALS

40+00 41+00 42+00 43+00 44+00 45+00

R/L 76th ST

+73 25' RT
+53 26' RT
+42 24' RT
+47 34' RT
+25 24' RT
+30 34' RT

12' 10' 11' 10'

15' TYP

W6-4
12"X18"

INSTALL ON FIRST TUBULAR MARKER

R7-51L
18"X24"

R3-8LF
36"X30"

3' SEGMENT
3' GAP

W. FOND DU LAC AVE

MATCH LINE 39+50

MATCH LINE 45+25

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SIDEWALK CLOSED AHEAD
R9-9A
30"X18"
DETOUR
M4-9BR
30"X24"

R11-2B
48" X 30"
BRIDGE OUT
TYPE III BARRICADE

SIDEWALK CLOSED
R9-9
24"X12"

B-40-255

B-40-256

46+00 47+00 48+00 49+00 50+00 51+00

+15 12' RT
+45 16' RT
+84 44' RT
+49 40' RT

12' 12' 11' 10'

DETOUR
M4-9BL
30"X24"

W01-4L

W. CALDWELL AVE

R7-1L
18"X24"

DO NOT PASS
R4-1
24"X30"

MATCH LINE 51+00

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PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3 - 76TH ST	SHEET 83	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025104_TC.DWG
LAYOUT NAME - 02

PLOT DATE : 4/25/2023 7:15 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

SB STH 145

NB STH 145

W06-3

R11-2B
48" X 30"
BRIDGE OUT
TYPE III BARRICADE

TEMPORARY PEDESTRIAN BARRICADE

SIDEWALK CLOSED
R9-9
24"X12"

NO PARKING ANY TIME
R7-1L
18"X24"

B-40-255

DO NOT PASS
R4-1
24"X30"

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

R/L 76th ST

B-40-256

12'
12'

+15 16' RT
+15 8' RT
12'
12'

+55 8' RT
+55 40' RT

W01-4L

MATCH LINE 51+00

MATCH LINE 56+75

TEMPORARY PEDESTRIAN BARRICADE

W. LEON TERRACE

SIDEWALK CLOSED
R9-9
24"X12"

COORDINATE BUS STOP LOCATIONS WITH MCTS

ONLY
R3-50R
30"X36"

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

BEGIN RIGHT TURN LANE
R3-20R
24"X36"

+65 -28' LT
+60 -28' LT
12'
+65 -16' LT

57+00 58+00 59+00 60+00 61+00 62+00

+20 12' RT
12'
+20 24' RT

R/L 76th ST

TEMPORARY PEDESTRIAN BARRICADE

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

SIDEWALK CLOSED
R9-9
24"X12"

R3-2
24"X24"

MATCH LINE 56+75

MATCH LINE 62+50

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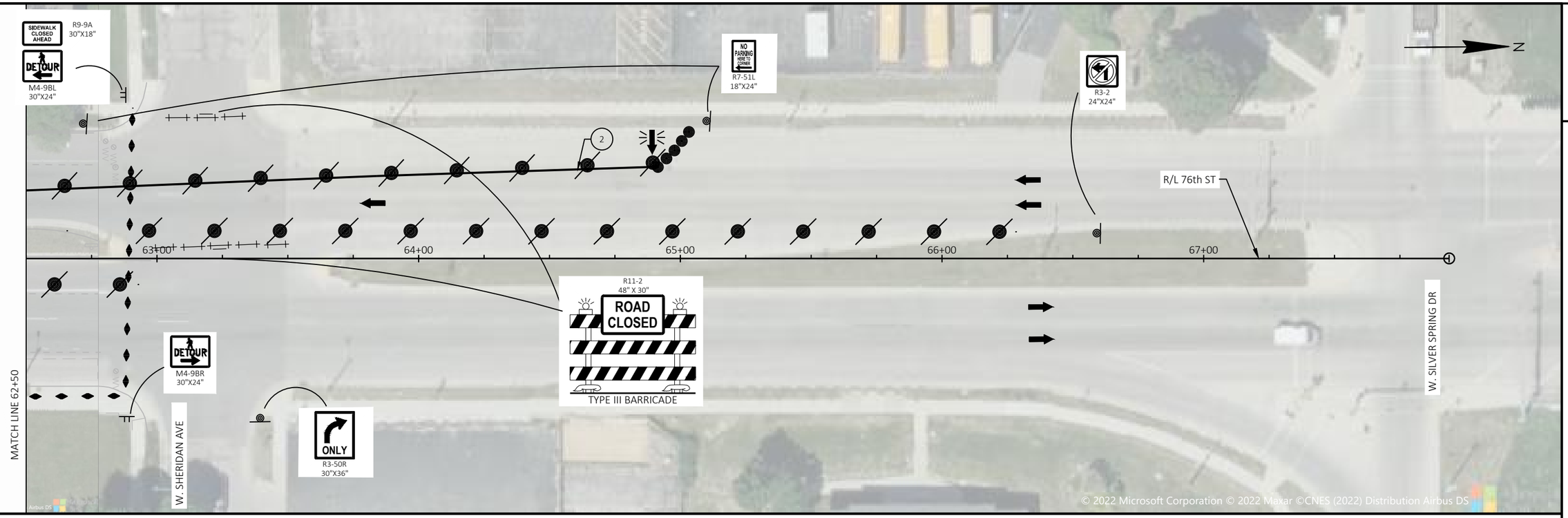
PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3 - 76TH ST	SHEET 84	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025104_TC.DWG
LAYOUT NAME - 03

PLOT DATE : 4/25/2023 7:15 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:40 FT

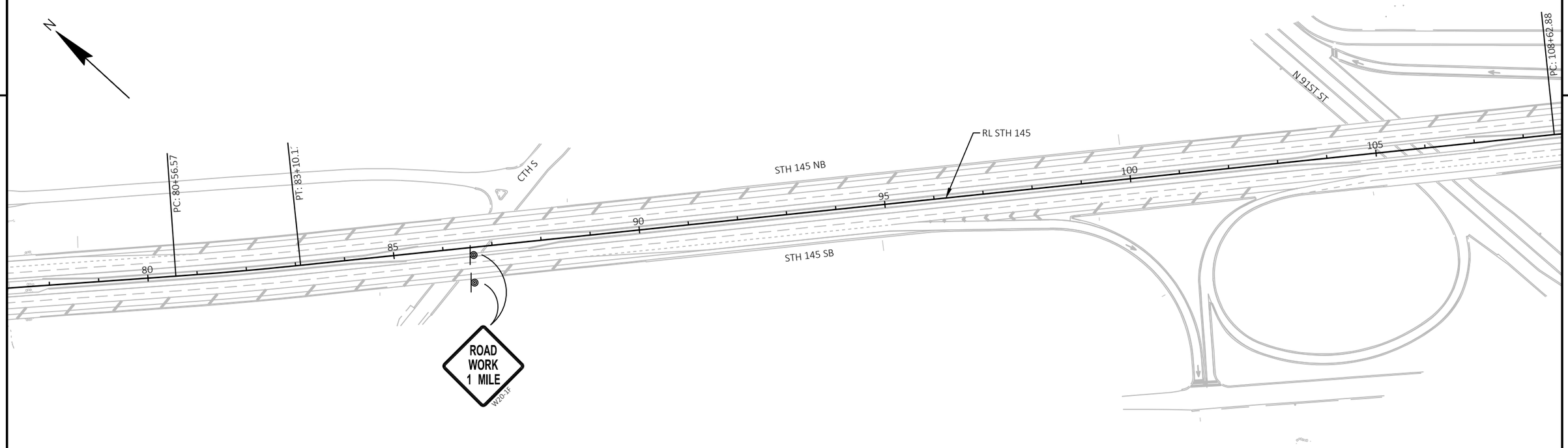


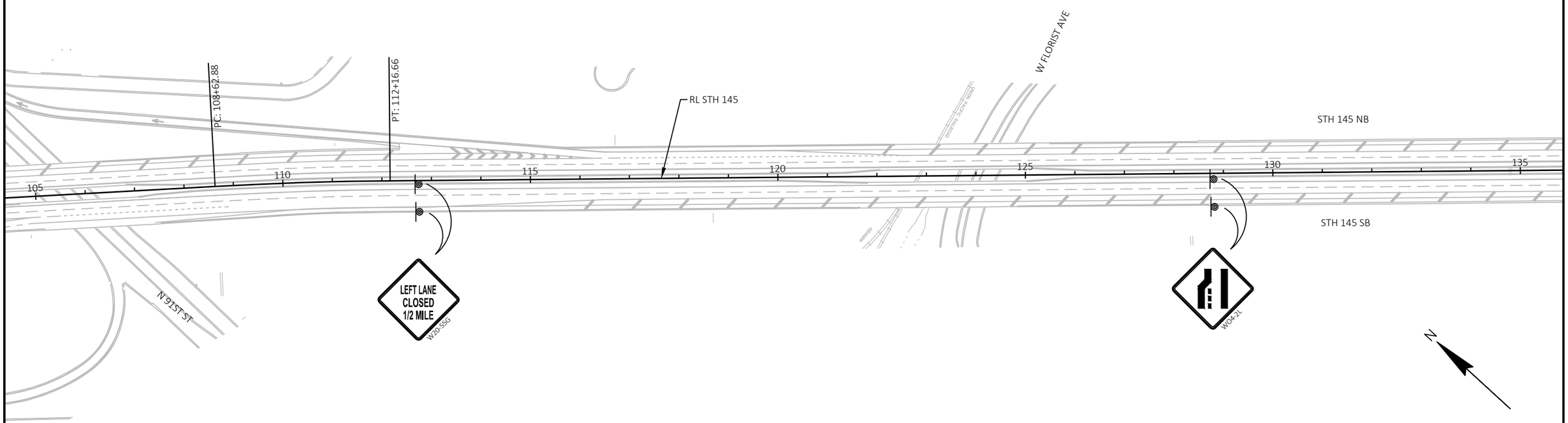
PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3 - 76TH ST	SHEET 85	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025104_TC.DWG
LAYOUT NAME - 04

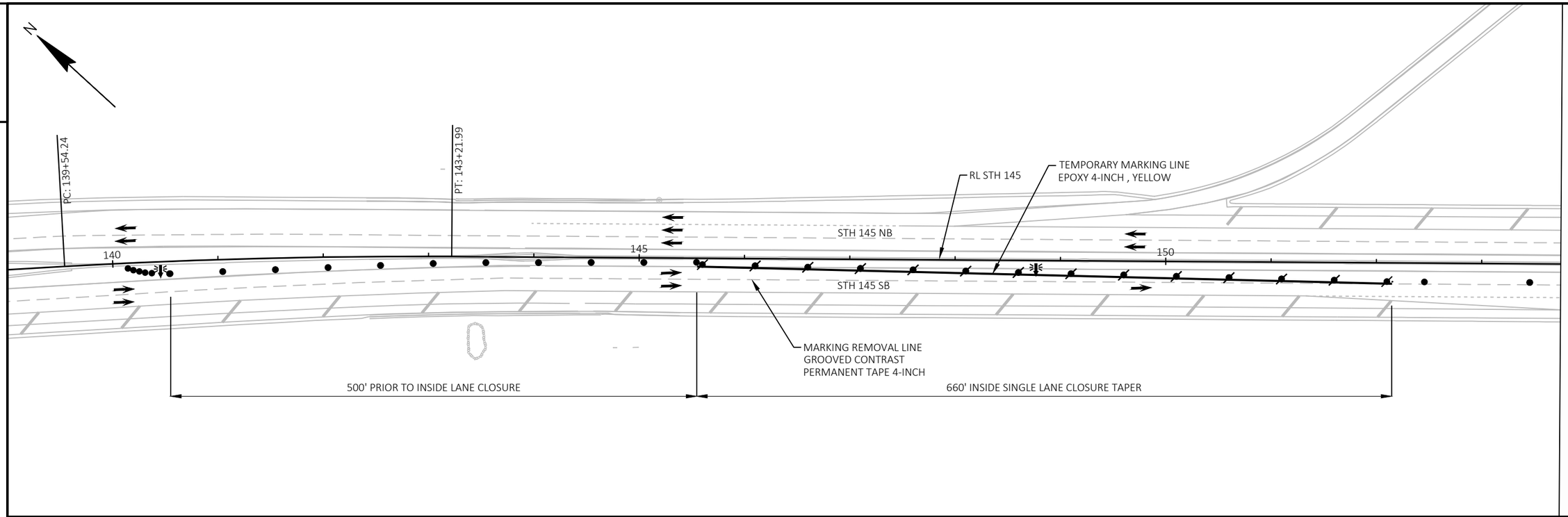
PLOT DATE : 4/25/2023 7:15 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

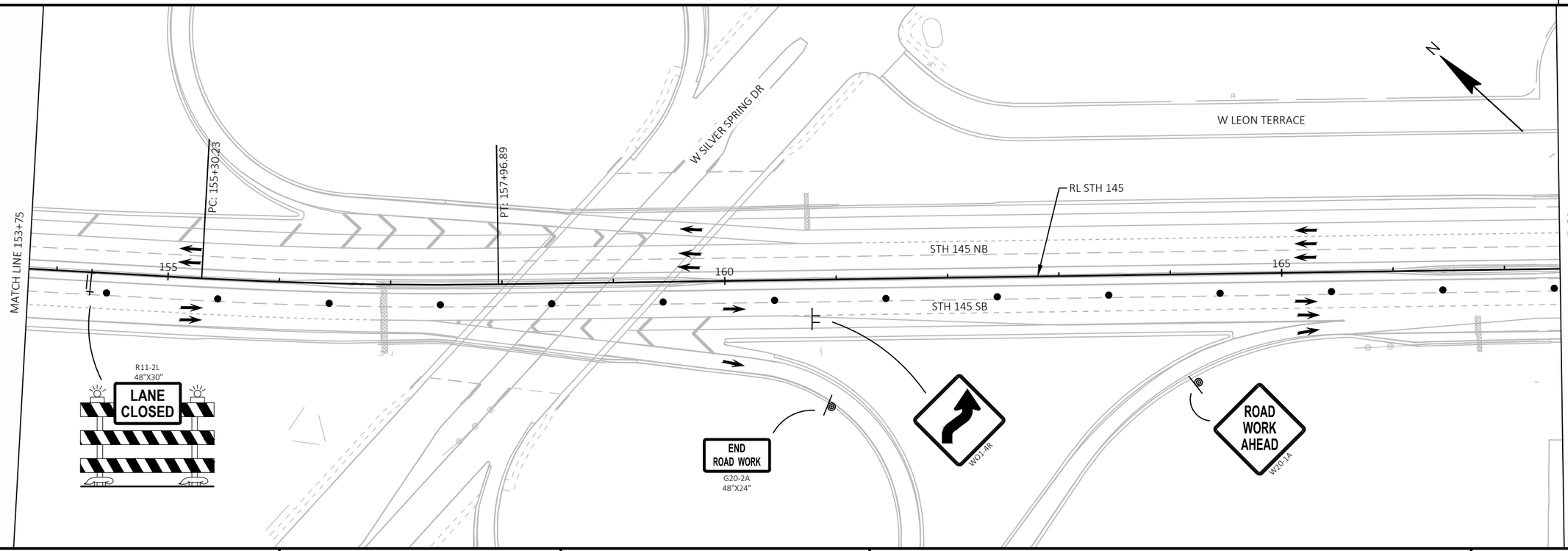




PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1 - STH 145	SHEET 86	E



2



PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1 - STH 145	SHEET 87	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025101_TC 145 1.DWG
LAYOUT NAME - 01
PLOT DATE : 4/25/2023 7:15 AM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

N

W LEON TERRACE

N 76TH ST

WO1-6
48"X24"

R11-2L
48"X30"
LANE CLOSED

END ROAD WORK
G20-2A
48"X24"

RL STH 145

TEMPORARY MARKING LINE
EPOXY 4-INCH, YELLOW

MATCH LINE 167+50

170

PC: 174+03.50

175

MARKING REMOVAL LINE
GROOVED CONTRAST
PERMANENT TAPE 4-INCH

TEMPORARY MARKING LINE
EPOXY 4-INCH, WHITE

PT: 179+12.67

NB STH 145 ON RAMP

+38.09
-32.17' LT

STH 145 NB

180

CC

STH 145 SB

MATCH LINE 181+25

SB STH 145 OFF RAMP

MARKING REMOVAL LINE
GROOVED CONTRAST
PERMANENT TAPE 8-INCH

TEMPORARY MARKING LINE
EPOXY 4-INCH , WHITE

440' MIN. SHIFTING TAPER
SHIFT 16' RIGHT

MARKING REMOVAL LINE
WATER BLASTING 4-INCH

400' BUFFER

SB STH 145
ON RAMP

RAMP CLOSED

8:1 TEMPORARY CONCRETE
BARRIER TAPER

N

RAMP TO NB 76TH ST

N 74TH ST

400' BUFFER

770' SHIFTING TAPER
SHIFT 16' RIGHT
RADIUS = 3000 FT

MARKING REMOVAL LINE
GROOVED CONTRAST
PERMANENT TAPE 4-INCH

MARKING REMOVAL LINE
GROOVED CONTRAST
PERMANENT TAPE 8-INCH

RL STH 145

STH 145 BYPASS LANE

NB STH 145 ON RAMP

PC: 182+58.43

185

CC

STH 145 NB

190

PT: 194+57.91

STH 145 SB

MATCH LINE 181+25

MATCH LINE 195+00

8:1 TEMPORARY CONCRETE
BARRIER TAPER

TEMPORARY MARKING LINE
EPOXY 4-INCH, WHITE

WO5-52L
18"X54"

R11-2L
48"X30"
LANE CLOSED

TEMPORARY MARKING LINE
EPOXY 4-INCH , WHITE

END ROAD WORK
G20-2A
48"X24"

W CALDWELL AVE

TEMPORARY MARKING LINE
EPOXY 4-INCH , YELLOW

WO1-6
48"X24"

N 76TH ST

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1 - STH 145	SHEET 88	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025101_TC 145 1.DWG
LAYOUT NAME - 02
PLOT DATE : 4/25/2023 7:16 AM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

660' INSIDE SINGLE LANE CLOSURE TAPER

W01-4R

TEMPORARY MARKING LINE
EPOXY 4-INCH, WHITE

MARKING REMOVAL LINE
GROOVED CONTRAST
PERMANENT TAPE 8-INCH

MARKING REMOVAL LINE
GROOVED CONTRAST
PERMANENT TAPE 4-INCH

MATCH LINE 195+00

PC: 198+22.93

PT: 204+97.93

W LEON TERRACE

NB STH 145

SB STH 145

MATCH LINE 208+75

200

205

SB STH 145 OFF RAMP

TEMPORARY MARKING LINE
EPOXY 4-INCH, YELLOW

W GRANTOSA DR

R11-2L
48"X30"

LANE
CLOSED

TEMPORARY MARKING LINE
EPOXY 4-INCH , YELLOW

RL STH 145

N

500' PRIOR TO INSIDE LANE CLOSURE

W LEON TERRACE

PC: 210+27.37

MATCH LINE 208+75

210

215

220

PT: 215+84.52

PC: 218+30.78

NB STH 145

RL STH 145

W FOND DU LAC AVE

SB STH 145

W FOND DU LAC AVE

LEFT LANE
CLOSED
1000 FT

W20-5SC

ROAD
WORK
AHEAD

W20-1A

N

STANDARD DETAIL DRAWINGS:
1. SEE SDD TRAFFIC CONTROL, LANE CLOSURE

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1 - STH 145	SHEET 89	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025101_TC 145 1.DWG
LAYOUT NAME - 03

PLOT DATE : 4/25/2023 7:16 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

N

W FOND DU LAC AVE

SB STH 145 ON RAMP

PLACE 7 CALENDAR DAYS PRIOR TO CLOSURE

RAMP CLOSED BEGINNING XXX-XX

G20-58
90"X48"

R11-2R
48" X 30"

RAMP CLOSED

TYPE III BARRICADE

RL STH 145

180

CC

RAMP CLOSED AHEAD

W20-53A

W LEON TERRACE

45 50 55 60

RL N 76TH ST

W CALDWELL AVE

185

DD

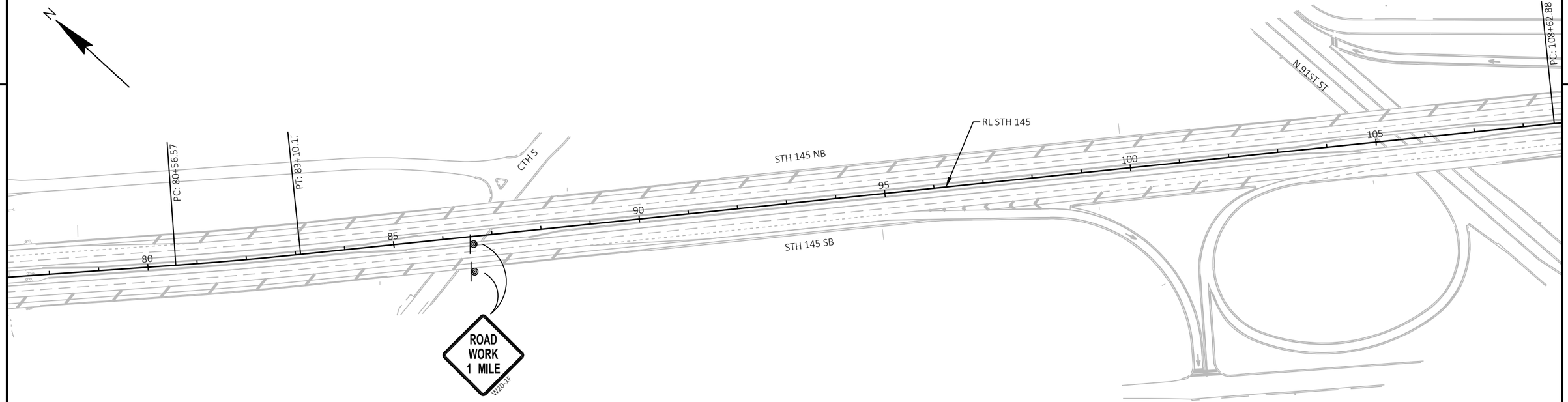
NB STH 145 ON RAMP

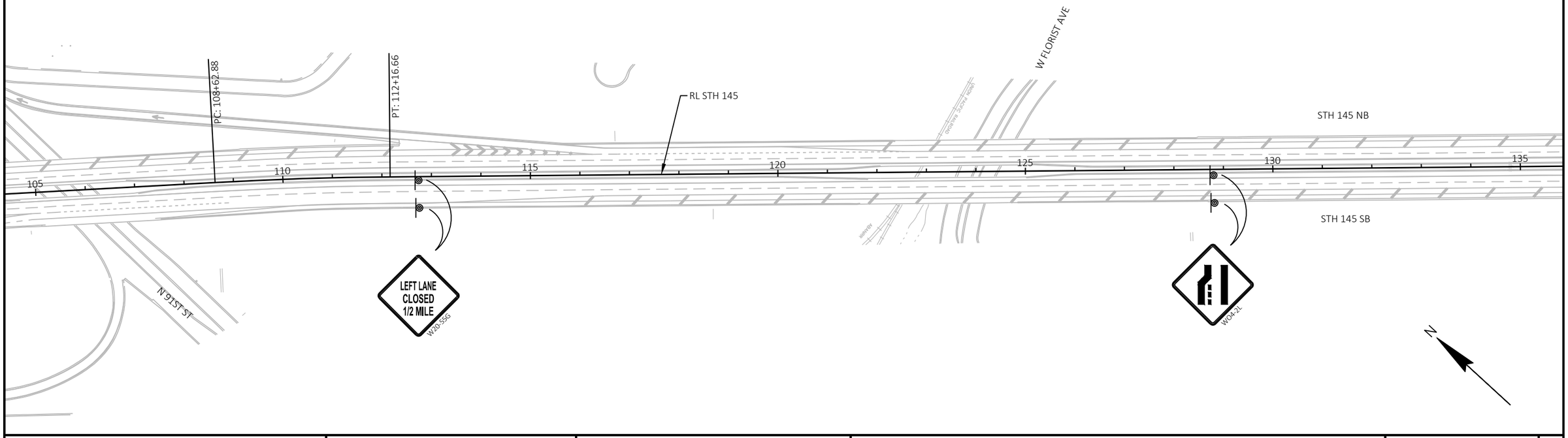
RAMP TO NB 76TH ST

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1 - STH 145	SHEET 90	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025101_TC 145 1 76TH.DWG
LAYOUT NAME - 01

PLOT DATE : 4/25/2023 7:16 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

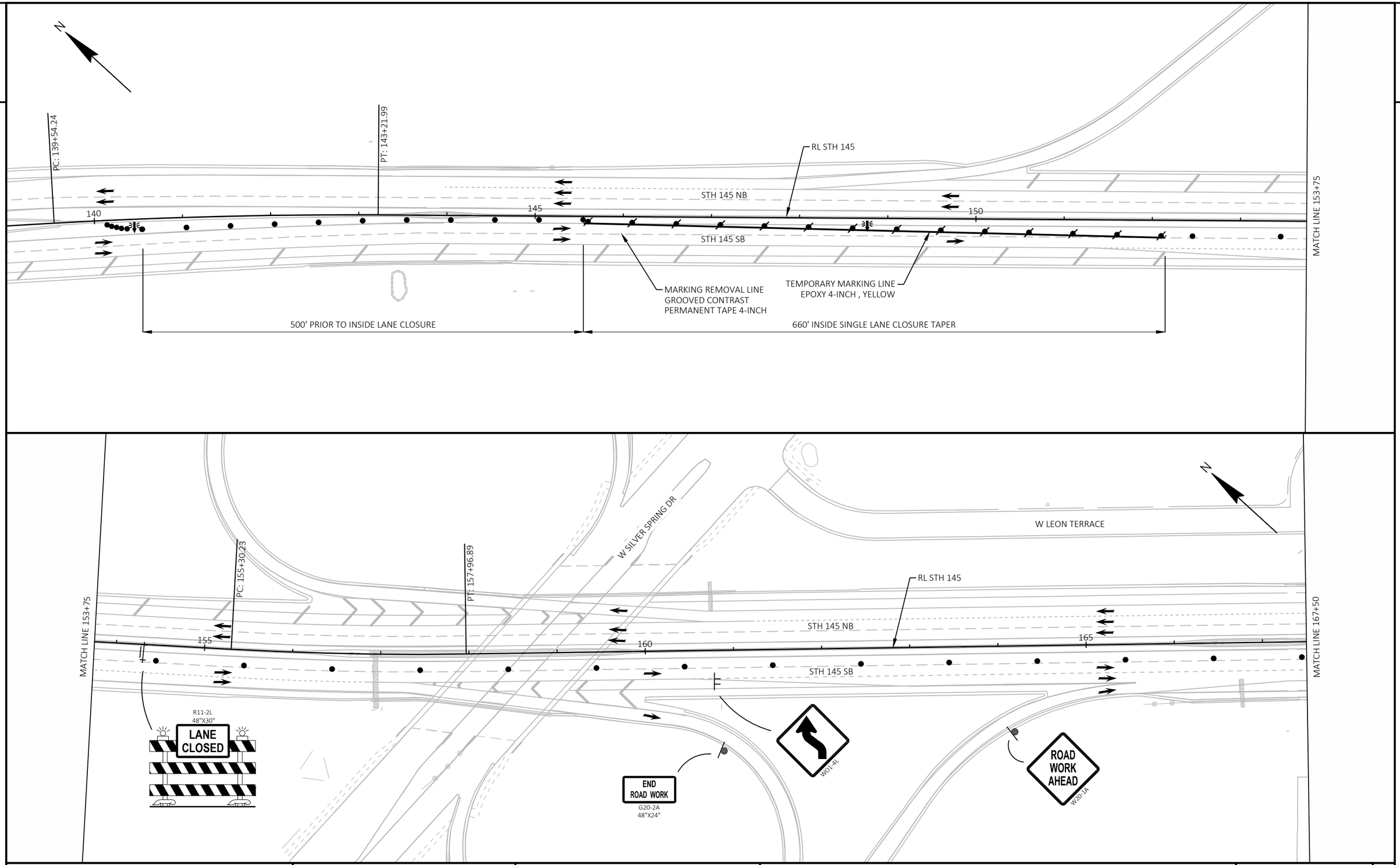




PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2 - STH 145	SHEET 91	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025101_TC 145 1.DWG
LAYOUT NAME - 01-2
PLOT DATE : 4/25/2023 7:16 AM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44

2



PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2 - STH 145	SHEET 92	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025101_TC 145 2.DWG
LAYOUT NAME - 01
PLOT DATE : 4/25/2023 7:16 AM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

N

END ROAD WORK
G20-2A
48"X24"

WO1-6
48" X 24"
TYPE III BARRICADE

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

W LEON TERRACE

N 76TH ST

RL STH 145

TEMPORARY MARKING LINE
EPOXY 4-INCH , YELLOW

MARKING REMOVAL LINE
GROOVED CONTRAST
PERMANENT TAPE 4-INCH

PC: 174+03.50

PT: 179+12.67

NB STH 145 ON RAMP

MATCH LINE 167+50

170

175

180

STH 145 NB

STH 145 SB

CC

MATCH LINE 181+25

TEMPORARY MARKING LINE
EPOXY 4-INCH , WHITE

SB STH 145 OFF RAMP

SB STH 145 ON RAMP

330' MIN. SHIFTING TAPER
SHIFT 12' LEFT

500' BUFFER

RAMP CLOSED

8:1 TEMPORARY CONCRETE
BARRIER TAPER

END ROAD WORK
G20-2A
48"X24"

R11-2R
48" X 30"
RAMP CLOSED
TYPE III BARRICADE

RAMP TO NB 76TH ST

NORTH 145

NORTH 181

COVER EXISTING SIGNS

N 74TH ST

RAMP CLOSED 500 FT
W20-53D

660' SHIFTING TAPER
SHIFT 12' LEFT

STH 145 BYPASS LANE

MARKING REMOVAL LINE
GROOVED CONTRAST
PERMANENT TAPE 4-INCH

TEMPORARY MARKING LINE
EPOXY 4-INCH , WHITE

PT: 194+57.91

MATCH LINE 195+00

RAMP CLOSED

500' BUFFER

NB STH 145 ON RAMP

PC: 182+58.43

185

190

STH 145 NB

STH 145 SB

RL STH 145

CC

MATCH LINE 181+25

8:1 TEMPORARY CONCRETE
BARRIER TAPER

N 76TH ST

WO5-52L
18"X54"

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

TEMPORARY MARKING LINE
EPOXY 4-INCH , YELLOW

W CALDWELL AVE

END ROAD WORK
G20-2A
48"X24"

WO1-6
48" X 24"
TYPE III BARRICADE

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2 - STH 145	SHEET 93	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025101_TC 145 2.DWG
LAYOUT NAME - 02

PLOT DATE : 4/25/2023 7:16 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

660' INSIDE SINGLE LANE CLOSURE TAPER

MARKING REMOVAL LINE
GROOVED CONTRAST
PERMANENT TAPE 4-INCH

TEMPORARY MARKING LINE
EPOXY 4-INCH, WHITE

COVER EXISTING SIGNS

W01-4L

W LEON TERRACE

PT: 204+97.93

MATCH LINE 195+00

NB STH 145

MATCH LINE 208+75

200

SB STH 145 OFF RAMP

SB STH 145

PC: 198+22.93

R11-2L
48"X30"

LANE
CLOSED

RL STH 145

TEMPORARY MARKING LINE
EPOXY 4-INCH , YELLOW

TEMPORARY MARKING LINE
EPOXY 4-INCH, YELLOW

W GRANTOSA DR

COVER EXISTING SIGNS

N

500' PRIOR TO INSIDE LANE CLOSURE

LEFT LANE
CLOSED
1000 FT

W20-5SC

W LEON TERRACE

PC: 210+27.37

PT: 215+84.52

PC: 218+30.78

MATCH LINE 208+75

210

215

NB STH 145

220

RL STH 145

SB STH 145

W FOND DU LAC AVE

W FOND DU LAC AVE

ROAD
WORK
AHEAD

W20-1A

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2 - STH 145	SHEET 94	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025101_TC 145 2.DWG
LAYOUT NAME - 03

PLOT DATE : 4/25/2023 7:17 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

N

W FOND DU LAC AVE

SB STH 145 ON RAMP

RL STH 145

R11-2R
48" X 30"
RAMP CLOSED
TYPE III BARRICADE

RAMP CLOSED AHEAD
W20-53A

W LEON TERRACE

45 50 55 60

RL N 76TH ST

PLACE 7 CALENDAR DAYS PRIOR TO CLOSURE

RAMP CLOSED BEGINNING XXX-XX
G20-58
90"X48"

R11-2R
48" X 30"
RAMP CLOSED
TYPE III BARRICADE

RAMP CLOSED AHEAD
W20-53A

W CALDWELL AVE

NB STH 145 ON RAMP

RAMP TO NB 76TH ST

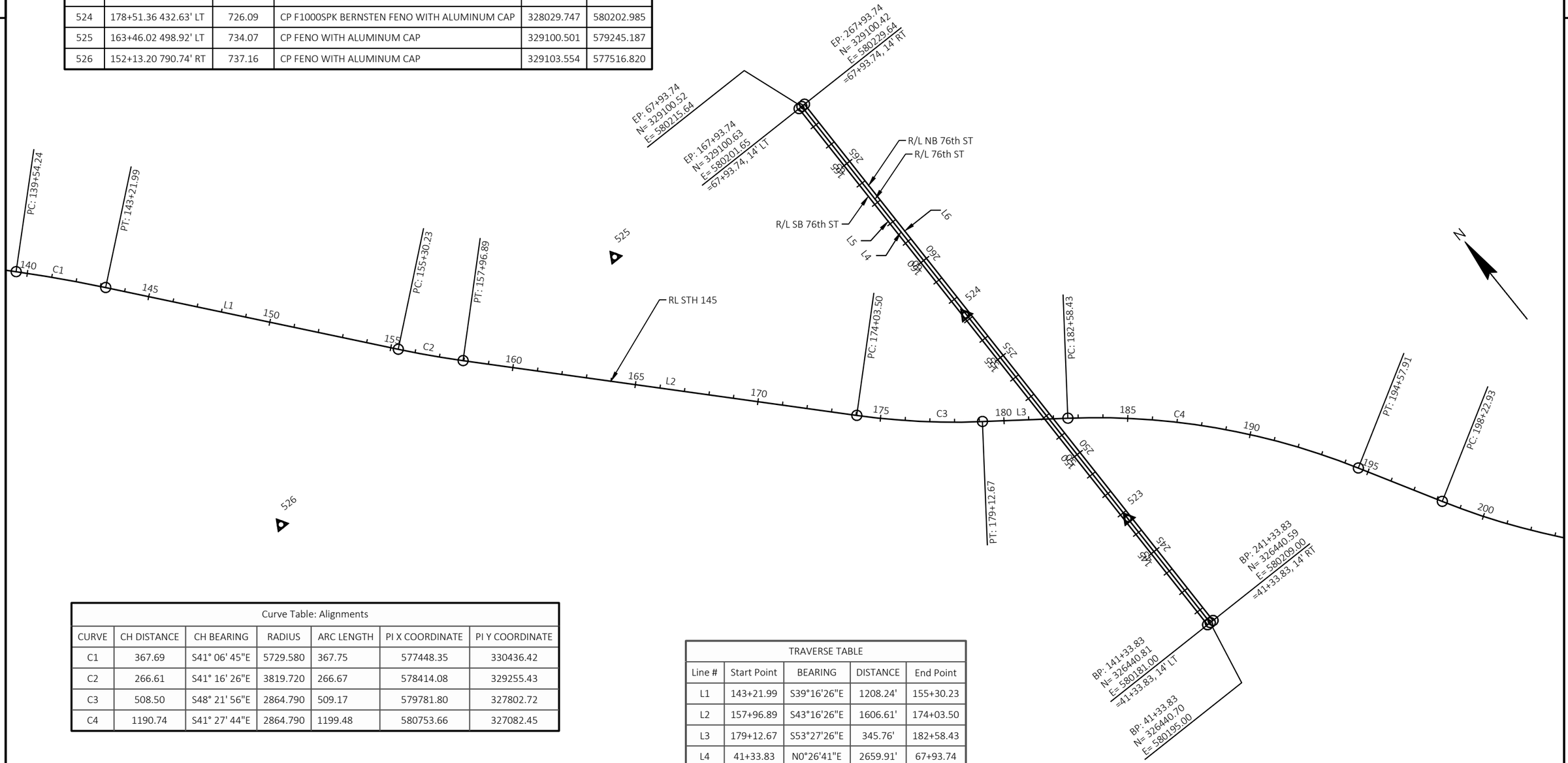
PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2 - STH 145	SHEET 95	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\025101_TC 145 2 76TH.DWG
LAYOUT NAME - 01

PLOT DATE : 4/25/2023 7:17 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

CONTROL POINTS					
NAME	STATION	ELEVATION	DESCRIPTION	Y	X
523	185+21.65 404.59' RT	719.07	CP F1000SPK BERNSTEN FENO WITH ALUMINUM CAP	326977.064	580198.936
524	178+51.36 432.63' LT	726.09	CP F1000SPK BERNSTEN FENO WITH ALUMINUM CAP	328029.747	580202.985
525	163+46.02 498.92' LT	734.07	CP FENO WITH ALUMINUM CAP	329100.501	579245.187
526	152+13.20 790.74' RT	737.16	CP FENO WITH ALUMINUM CAP	329103.554	577516.820



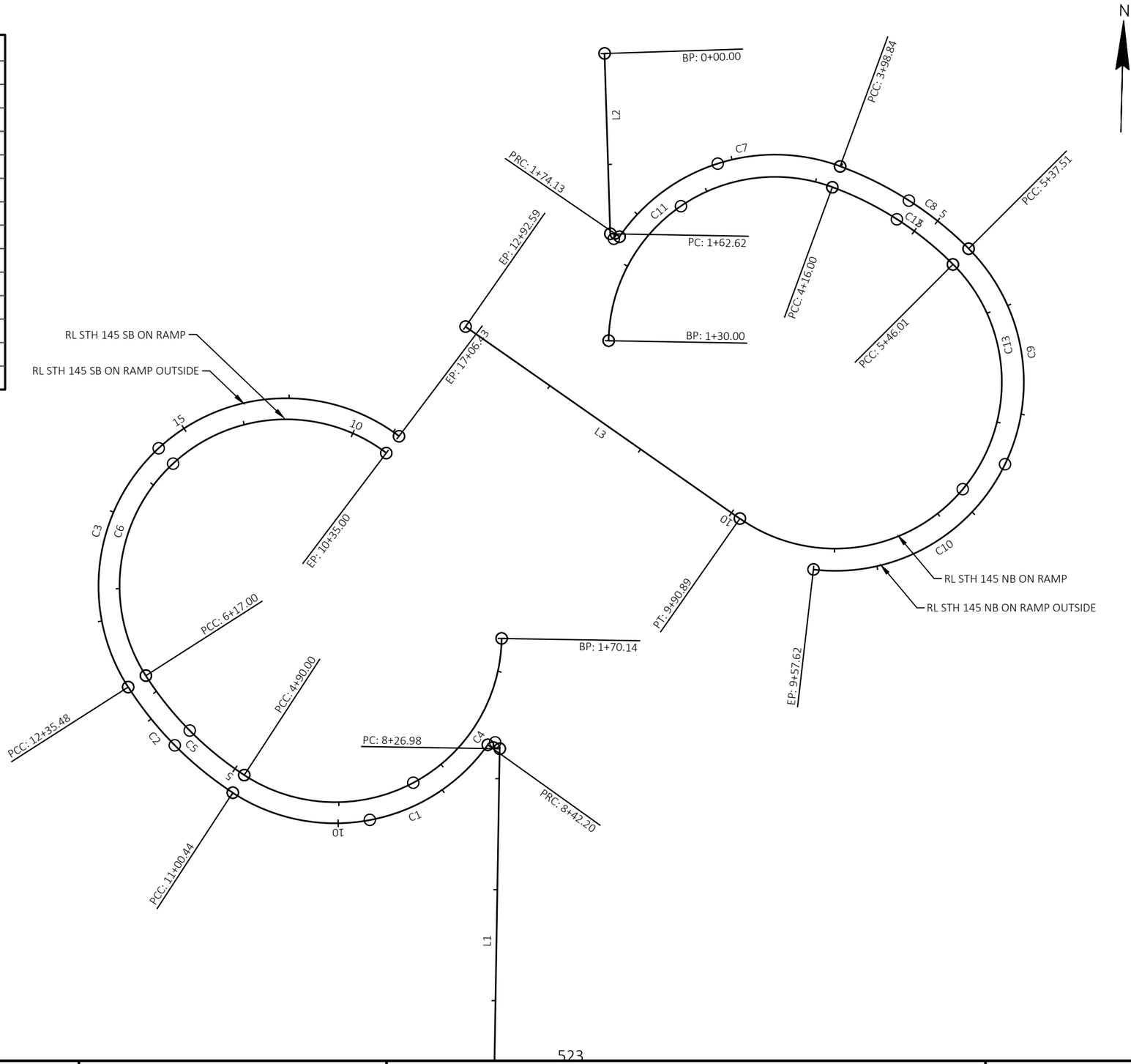
Curve Table: Alignments						
CURVE	CH DISTANCE	CH BEARING	RADIUS	ARC LENGTH	PI X COORDINATE	PI Y COORDINATE
C1	367.69	S41° 06' 45"E	5729.580	367.75	577448.35	330436.42
C2	266.61	S41° 16' 26"E	3819.720	266.67	578414.08	329255.43
C3	508.50	S48° 21' 56"E	2864.790	509.17	579781.80	327802.72
C4	1190.74	S41° 27' 44"E	2864.790	1199.48	580753.66	327082.45

TRAVERSE TABLE				
Line #	Start Point	BEARING	DISTANCE	End Point
L1	143+21.99	S39°16'26"E	1208.24'	155+30.23
L2	157+96.89	S43°16'26"E	1606.61'	174+03.50
L3	179+12.67	S53°27'26"E	345.76'	182+58.43
L4	41+33.83	N0°26'41"E	2659.91'	67+93.74
L6	241+33.83	N0°26'41"E	2659.91'	267+93.74
L5	141+33.83	N0°26'41"E	2659.91'	167+93.74

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	ALIGNMENT PLAN	SHEET 96	E

Curve Table: Alignments						
CURVE	CH DISTANCE	CH BEARING	RADIUS	ARC LENGTH	PI X COORDINATE	PI Y COORDINATE
C11	244.60	N55° 04' 00"E	150.000	286.00	580251.92	327847.71
C12	128.99	S57° 53' 48"E	300.000	130.01	580512.99	327754.29
C13	298.84	S39° 29' 00"W	150.000	444.88	581774.46	326513.92
C4	262.61	S61° 32' 03"W	150.000	319.86	580154.08	327095.85
C5	126.05	N45° 14' 57"W	300.000	127.00	579871.03	327277.03
C6	295.29	N46° 42' 39"E	150.000	418.00	579378.81	328031.48
C7	208.71	N71° 49' 14"E	170.000	224.71	580333.09	327839.91
C8	137.59	S57° 53' 48"E	320.000	138.67	580523.88	327771.64
C9	321.08	S25° 18' 41"W	170.000	420.10	580922.09	327380.09
C10	321.08	S25° 18' 41"W	170.000	420.10	580922.09	327380.09
C1	233.84	S78° 50' 53"W	169.000	258.24	580051.46	327138.98
C2	134.04	N45° 14' 57"W	319.000	135.04	579857.35	327263.23
C3	332.69	N46° 42' 39"E	169.000	470.95	579305.01	328109.82

TRAVERSE TABLE				
Line #	Start Point	BEARING	DISTANCE	End Point
L3	9+90.89	N55°33'00"W	301.70'	12+92.59
L2	0+00.00	S2°22'30"E	162.62'	1+62.62
L1	0+00.00	N0°26'41"E	826.98'	8+26.98



PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	ALIGNMENT PLAN	SHEET 97	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\027212_AD.DWG
LAYOUT NAME - 01
PLOT DATE : 7/28/2022 5:39 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:100 FT

1360-13-70

Line	Item	Item Description	Unit	Total	Qty
0002	108.4400	CPM Progress Schedule	EACH	1.000	1.000
0004	202.0110	Roadside Clearing	SY	198.000	198.000
0006	203.0220	Removing Structure (structure) 001. B-40-255	EACH	1.000	1.000
0008	203.0220	Removing Structure (structure) 002. B-40-256	EACH	1.000	1.000
0014	204.0100	Removing Concrete Pavement	SY	442.000	442.000
0016	204.0110	Removing Asphaltic Surface	SY	950.000	950.000
0018	204.0115	Removing Asphaltic Surface Butt Joints	SY	188.000	188.000
0020	204.0120	Removing Asphaltic Surface Milling	SY	2,133.000	2,133.000
0022	204.0150	Removing Curb & Gutter	LF	2,424.000	2,424.000
0024	204.0155	Removing Concrete Sidewalk	SY	283.000	283.000
0026	204.0165	Removing Guardrail	LF	206.000	206.000
0028	204.0170	Removing Fence	LF	596.000	596.000
0032	204.0210	Removing Manholes	EACH	1.000	1.000
0034	204.9060.S	Removing (item description) 001. Removing City of Milwaukee Communications Conduit (B-40-255)	EACH	1.000	1.000
0038	204.9090.S	Removing (item description) 001. Handrail	LF	205.000	205.000
0040	205.0100	Excavation Common	CY	762.000	762.000
0042	206.1001	Excavation for Structures Bridges (structure) 001. B-40-255	EACH	1.000	1.000
0044	206.1001	Excavation for Structures Bridges (structure) 002. B-40-256	EACH	1.000	1.000
0050	210.1500	Backfill Structure Type A	TON	404.000	404.000
0052	210.2100	Backfill Structure Type B	CY	8.000	8.000
0054	211.0101	Prepare Foundation for Asphaltic Paving (project) 001. 1360-13-70	EACH	1.000	1.000
0058	213.0100	Finishing Roadway (project) 001. 1360-13-70	EACH	1.000	1.000
0062	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	750.000	750.000
0064	320.0155	Concrete Base 9-Inch	SY	129.000	129.000
0068	415.0410	Concrete Pavement Approach Slab	SY	380.000	380.000
0070	416.0610	Drilled Tie Bars	EACH	937.000	937.000
0072	416.0620	Drilled Dowel Bars	EACH	60.000	60.000
0074	455.0605	Tack Coat	GAL	300.000	300.000
0076	460.2000	Incentive Density HMA Pavement	DOL	290.000	290.000
0078	460.7424	HMA Pavement 4 HT 58-28 H	TON	448.000	448.000
0080	465.0105	Asphaltic Surface	TON	25.000	25.000
0082	465.0125	Asphaltic Surface Temporary	TON	269.000	269.000
0084	502.0100	Concrete Masonry Bridges	CY	1,003.000	1,003.000
0086	502.0717.S	Crack Sealing Epoxy	LF	450.000	450.000
0088	502.3101	Expansion Device	LF	208.000	208.000
0090	502.3200	Protective Surface Treatment	SY	2,310.000	2,310.000
0092	502.3210	Pigmented Surface Sealer	SY	582.000	582.000
0094	502.3215	Protective Surface Treatment Reseal	SY	570.000	570.000
0098	502.4204	Adhesive Anchors No. 4 Bar	EACH	18.000	18.000
0100	502.4205	Adhesive Anchors No. 5 Bar	EACH	468.000	468.000
0102	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	230,252.000	230,252.000
0104	506.6000	Bearing Assemblies Expansion (structure) 001. B-40-255	EACH	12.000	12.000
0106	506.6000	Bearing Assemblies Expansion (structure) 002. B-40-256	EACH	12.000	12.000
0112	506.7050.S	Removing Bearings (structure) 001. B-40-255	EACH	12.000	12.000
0114	506.7050.S	Removing Bearings (structure) 002. B-40-256	EACH	12.000	12.000
0120	509.0301	Preparation Decks Type 1	SY	14.000	14.000
0122	509.0302	Preparation Decks Type 2	SY	2.000	2.000
0124	509.0310.S	Sawing Pavement Deck Preparation Areas	LF	202.000	202.000

1360-13-70

Line	Item	Item Description	Unit	Total	Qty
0126	509.1200	Curb Repair	LF	25.000	25.000
0128	509.1500	Concrete Surface Repair	SF	411.000	411.000
0130	509.2000	Full-Depth Deck Repair	SY	2.000	2.000
0132	509.2100.S	Concrete Masonry Deck Repair	CY	2.000	2.000
0134	509.5100.S	Polymer Overlay	SY	2,310.000	2,310.000
0136	513.4091	Railing Tubular Screening	LF	648.000	648.000
0138	516.0500	Rubberized Membrane Waterproofing	SY	56.000	56.000
0140	517.0901.S	Preparation and Coating of Top Flanges (structure) 001. B-40-255	EACH	1.000	1.000
0142	517.0901.S	Preparation and Coating of Top Flanges (structure) 002. B-40-256	EACH	1.000	1.000
0148	517.1801.S	Structure Repainting Recycled Abrasive (structure) 001. B-40-255	EACH	1.000	1.000
0150	517.1801.S	Structure Repainting Recycled Abrasive (structure) 002. B-40-256	EACH	1.000	1.000
0156	517.4501.S	Negative Pressure Containment and Collection of Waste Materials (structure) 001. B-40-255	EACH	1.000	1.000
0158	517.4501.S	Negative Pressure Containment and Collection of Waste Materials (structure) 002. B-40-256	EACH	1.000	1.000
0164	517.6001.S	Portable Decontamination Facility	EACH	2.000	2.000
0166	531.8990	Anchor Assemblies Poles on Structures	EACH	4.000	4.000
0168	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	2,590.000	2,590.000
0170	601.0600	Concrete Curb Pedestrian	LF	81.000	81.000
0172	602.0410	Concrete Sidewalk 5-Inch	SF	2,706.000	2,706.000
0174	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	64.000	64.000
0176	603.8000	Concrete Barrier Temporary Precast Delivered	LF	570.000	570.000
0178	603.8125	Concrete Barrier Temporary Precast Installed	LF	1,140.000	1,140.000
0182	611.8110	Adjusting Manhole Covers	EACH	10.000	10.000
0184	611.8115	Adjusting Inlet Covers	EACH	3.000	3.000
0186	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	492.000	492.000
0188	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	2.000	2.000
0190	614.0905	Crash Cushions Temporary	EACH	4.000	4.000
0192	614.2300	MGS Guardrail 3	LF	75.000	75.000
0194	614.2500	MGS Thrie Beam Transition	LF	79.000	79.000
0196	614.2610	MGS Guardrail Terminal EAT	EACH	2.000	2.000
0198	616.0206	Fence Chain Link 6-FT	LF	456.000	456.000
0200	618.0100	Maintenance And Repair of Haul Roads (project) 001. 1360-13-70	EACH	1.000	1.000
0204	619.1000	Mobilization	EACH	0.500	0.500
0206	620.0300	Concrete Median Sloped Nose	SF	110.000	110.000
0208	624.0100	Water	MGAL	15.400	15.400
0210	625.0100	Topsoil	SY	1,018.000	1,018.000
0212	625.0500	Salvaged Topsoil	SY	1,005.000	1,005.000
0214	628.1504	Silt Fence	LF	867.000	867.000
0216	628.1520	Silt Fence Maintenance	LF	867.000	867.000
0218	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0220	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0222	628.2008	Erosion Mat Urban Class I Type B	SY	2,008.000	2,008.000
0224	628.7005	Inlet Protection Type A	EACH	2.000	2.000
0226	628.7010	Inlet Protection Type B	EACH	2.000	2.000
0228	628.7015	Inlet Protection Type C	EACH	13.000	13.000
0230	628.7504	Temporary Ditch Checks	LF	24.000	24.000
0232	629.0210	Fertilizer Type B	CWT	1.400	1.400
0234	630.0140	Seeding Mixture No. 40	LB	38.000	38.000

1360-13-70

Line	Item	Item Description	Unit	Total	Qty
0236	630.0200	Seeding Temporary	LB	55.000	55.000
0238	630.0500	Seed Water	MGAL	45.700	45.700
0240	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	8.000	8.000
0242	634.0622	Posts Wood 4x6-Inch X 22-FT	EACH	6.000	6.000
0244	634.0814	Posts Tubular Steel 2x2-Inch X 14-FT	EACH	9.000	9.000
0246	637.2210	Signs Type II Reflective H	SF	98.500	98.500
0248	637.2230	Signs Type II Reflective F	SF	65.500	65.500
0250	638.2102	Moving Signs Type II	EACH	6.000	6.000
0252	638.2602	Removing Signs Type II	EACH	20.000	20.000
0254	638.3000	Removing Small Sign Supports	EACH	23.000	23.000
0256	642.5001	Field Office Type B	EACH	0.500	0.500
0258	643.0300	Traffic Control Drums	DAY	40,506.000	40,506.000
0260	643.0410	Traffic Control Barricades Type II	DAY	824.000	824.000
0262	643.0420	Traffic Control Barricades Type III	DAY	6,234.000	6,234.000
0264	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	160.000	160.000
0266	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	160.000	160.000
0268	643.0705	Traffic Control Warning Lights Type A	DAY	6,240.000	6,240.000
0270	643.0715	Traffic Control Warning Lights Type C	DAY	12,036.000	12,036.000
0272	643.0800	Traffic Control Arrow Boards	DAY	532.000	532.000
0274	643.0900	Traffic Control Signs	DAY	15,736.000	15,736.000
0276	643.0910	Traffic Control Covering Signs Type I	EACH	9.000	9.000
0278	643.1000	Traffic Control Signs Fixed Message	SF	90.000	90.000
0280	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0282	643.3120	Temporary Marking Line Epoxy 4-Inch	LF	24,509.000	24,509.000
0284	643.3220	Temporary Marking Line Epoxy 8-Inch	LF	1,358.000	1,358.000
0286	643.3820	Temporary Marking Stop Line Epoxy 18-Inch	LF	101.000	101.000
0288	643.5000	Traffic Control	EACH	0.500	0.500
0290	644.1810	Temporary Pedestrian Barricade	LF	324.000	324.000
0292	645.0111	Geotextile Type DF Schedule A	SY	188.000	188.000
0294	646.1020	Marking Line Epoxy 4-Inch	LF	2,173.000	2,173.000
0296	646.1041.S	Marking Replace Line Wet Reflective Epoxy 4-Inch	LF	2,060.000	2,060.000
0298	646.1050	Marking Line Grooved Permanent Tape 4-Inch	LF	1,105.000	1,105.000
0300	646.1555	Marking Line Grooved Contrast Permanent Tape 4-Inch	LF	600.000	600.000
0302	646.3020	Marking Line Epoxy 8-Inch	LF	255.000	255.000
0304	646.3050	Marking Line Grooved Permanent Tape 8-Inch	LF	1,053.000	1,053.000
0306	646.3555	Marking Line Grooved Contrast Permanent Tape 8-Inch	LF	1,412.000	1,412.000
0308	646.5020	Marking Arrow Epoxy	EACH	5.000	5.000
0310	646.5120	Marking Word Epoxy	EACH	4.000	4.000
0314	646.6120	Marking Stop Line Epoxy 18-Inch	LF	236.000	236.000
0318	646.7120	Marking Diagonal Epoxy 12-Inch	LF	500.000	500.000
0320	646.7220	Marking Chevron Epoxy 24-Inch	LF	503.000	503.000
0322	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	80.000	80.000
0324	646.8220	Marking Island Nose Epoxy	EACH	2.000	2.000
0326	646.9010	Marking Removal Line Water Blasting 4-Inch	LF	15,871.000	15,871.000
0328	646.9050	Marking Removal Line Grooved Permanent Tape 4-Inch	LF	823.000	823.000
0330	646.9055	Marking Removal Line Grooved Contrast Permanent Tape 4-Inch	LF	1,628.000	1,628.000
0332	646.9110	Marking Removal Line Water Blasting 8-Inch	LF	1,358.000	1,358.000
0334	646.9150	Marking Removal Line Grooved Permanent Tape 8-Inch	LF	344.000	344.000
0336	646.9155	Marking Removal Line Grooved Contrast Permanent Tape 8-Inch	LF	971.000	971.000

1360-13-70

Line	Item	Item Description	Unit	Total	Qty
0338	646.9210	Marking Removal Line Water Blasting Wide	LF	101.000	101.000
0340	646.9310	Marking Removal Special Marking Water Blasting	EACH	1.000	1.000
0342	650.4500	Construction Staking Subgrade	LF	770.000	770.000
0344	650.5000	Construction Staking Base	LF	670.000	670.000
0346	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	2,590.000	2,590.000
0348	650.6501	Construction Staking Structure Layout (structure) 001. B-40-255	EACH	1.000	1.000
0350	650.6501	Construction Staking Structure Layout (structure) 002. B-40-256	EACH	1.000	1.000
0356	650.7000	Construction Staking Concrete Pavement	LF	100.000	100.000
0358	650.8501	Construction Staking Electrical Installations (project) 001. 1360-13-70	EACH	1.000	1.000
0362	650.9000	Construction Staking Curb Ramps	EACH	6.000	6.000
0364	650.9500	Construction Staking Sidewalk (project) 001. 1360-13-70	EACH	1.000	1.000
0368	650.9911	Construction Staking Supplemental Control (project) 001. 1360-13-70	EACH	1.000	1.000
0372	650.9920	Construction Staking Slope Stakes	LF	450.000	450.000
0374	652.0125	Conduit Rigid Metallic 2-Inch	LF	60.000	60.000
0376	652.0130	Conduit Rigid Metallic 2 1/2-Inch	LF	40.000	40.000
0378	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,795.000	1,795.000
0380	652.0230	Conduit Rigid Nonmetallic Schedule 40 2 1/2-Inch	LF	35.000	35.000
0382	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	135.000	135.000
0384	652.0615	Conduit Special 3-Inch	LF	4,215.000	4,215.000
0386	653.0222	Junction Boxes 18x12x6-Inch	EACH	4.000	4.000
0388	654.0105	Concrete Bases Type 5	EACH	15.000	15.000
0390	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	344.000	344.000
0392	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	19.000	19.000
0394	661.0201	Temporary Traffic Signals for Intersections (location) 001. STH 181 at Fond Du Lac Ave	EACH	1.000	1.000
0396	661.0201	Temporary Traffic Signals for Intersections (location) 002. STH 181 at Villard Ave	EACH	1.000	1.000
0400	670.0101	Field System Integrator	EACH	1.000	1.000
0402	670.0201	ITS Documentation	EACH	1.000	1.000
0404	673.0105	Communication Vault Type 1	EACH	2.000	2.000
0406	674.0300	Remove Cable	LF	906.000	906.000
0408	674.0400	Reinstall Cable	LF	906.000	906.000
0410	678.0200	Fiber Optic Splice Enclosure	EACH	1.000	1.000
0412	678.0300	Fiber Optic Splice	EACH	36.000	36.000
0414	678.0501	Communication System Testing	EACH	1.000	1.000
0416	690.0150	Sawing Asphalt	LF	40.000	40.000
0418	690.0250	Sawing Concrete	LF	3,084.000	3,084.000
0420	715.0502	Incentive Strength Concrete Structures	DOL	6,018.000	6,018.000
0422	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0424	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	4,000.000	4,000.000
0426	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	9,600.000	9,600.000
0428	SPV.0060	Special 001. Cleaning Painting and Lubricating Bearings	EACH	8.000	8.000
0430	SPV.0060	Special 002. Fence Repairs B-40-297	EACH	1.000	1.000
0432	SPV.0060	Special 003. Fence Repairs B-40-298	EACH	1.000	1.000
0434	SPV.0060	Special 004. Grading Shaping Finishing Shoulders	EACH	4.000	4.000
0436	SPV.0060	Special 150. Adjusting MMSD Manhole Cover	EACH	2.000	2.000
0438	SPV.0060	Special 151. Reconstructing MMSD Manhole	EACH	1.000	1.000
0440	SPV.0060	Special 200. Adjusting Water Valve Boxes	EACH	4.000	4.000
0442	SPV.0060	Special 302. Pull Boxes 13-Inch x 24-Inch x 24-Inch	EACH	43.000	43.000
0446	SPV.0060	Special 320. Poles Type 25-AL-BD	EACH	19.000	19.000
0448	SPV.0060	Special 347. Luminaire Arms Single Member 8-Ft.	EACH	34.000	34.000

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Line	Item	Item Description	Unit	Total	Qty
0450	SPV.0060	Special 371. Installing City Furnished Luminaire LED Utility 2	EACH	34.000	34.000
0452	SPV.0060	Special 399. Utility Line Opening (ULO)	EACH	1.000	1.000
0454	SPV.0060	Special 401. Underdeck Utility Structure B-40-255, C Milwaukee Communications Conduit	EACH	1.000	1.000
0458	SPV.0060	Special 411. 4' Diameter "Doghouse" Manhole Type CUC, Installed Over Conduit	EACH	1.000	1.000
0460	SPV.0060	Special 425. Installing Conduit into Existing Manhole	EACH	1.000	1.000
0462	SPV.0090	Special 404. 4-Duct, Cement Encased, 4-inch Rigid Nonmetallic Conduit DB-60	LF	343.000	343.000
0464	SPV.0165	Special 001. Removing Loose Concrete	SF	225.000	225.000

3

EARTHWORK

DIVISION	FROM/TO STATION	205.0100 COMMON EXCAVATION (1) CUT (2)	205.0100 COMMON EXCAVATION (1) EBS EXCAVATION (3)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (6) FACTOR 1.20	MASS ORDINATE +/- (7)	WASTE
STAGE 1									
SOUTH CROSSOVER	35+00/40+00	106	0	0	106	0	0	106	106
NORTH CROSSOVER	55+00/59+00	290	0	0	290	0	0	290	290
DIVISION 1 SUBTOTAL		396	0	0	396	0	0	396	396
STAGE 2									
SOUTH OF NB BRIDGE	48+50/50+50	94	0	77	17	14	17	76	76
NORTH OF NB BRIDGE	53+00/55+00	101	0	86	15	13	15	85	85
DIVISION 2 SUBTOTAL		195	0	163	32	27	32	161	161
STAGE 3									
SOUTH OF SB BRIDGE	49+50/51+00	87	0	71	16	13	16	71	71
NORTH OF SB BRIDGE	53+00/55+00	84	0	70	14	12	14	70	70
DIVISION 3 SUBTOTAL		171	0	141	30	25	30	141	141
GRAND TOTAL		762	0	304	458	52	62	698	698

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.
(3) EBS EXCAVATION TO BE BACKFILLED WITH BAD 1 1/4-INCH MATERIAL. EBS IS NOT EXPECTED.
(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
(6) EXPANDED FILL FACTOR = 1.2
(7) 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.

3

MISCELLANEOUS REMOVALS

CATEGORY	STATION	TO	STATION	LOCATION	* 204.0100 REMOVING CONCRETE PAVEMENT SY	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0150 REMOVING CURB & GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY	204.0165 REMOVING GUARDRAIL LF	REMARKS
0010	36+60	-	37+95	RT & LT	5	-	-	-	240	-	-	STAGE 1
0010	38+60	-	39+90	RT & LT	4	-	-	-	265	-	-	STAGE 1
0010	54+35	-	58+40	RT & LT	-	-	-	-	740	16	-	STAGE 1
0010	48+50		54+80	RT - NB	189	-	92	1,244	701	143	103	STAGE 2
0010	49+50	-	55+00	LT - SB	115	-	96	889	478	124	103	STAGE 3
0010	36+60		58+40	CROSSOVERS	-	950	-	-	-	-	-	STAGE 4
				TOTAL 0010	313	950	188	2,133	2,424	283	206	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

211.0101.001

CATEGORY	STATION	TO	STATION	PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) (1360-13-70) EACH
0010	248+50	-	249+99	
0010	253+44	-	254+79	
0010	149+50	-	150+43	
0010	153+88	-	155+00	
0010	1+44	-	2+79	
0010	1+82	-	2+87	
				1

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BASE AGGREGATE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL	REMARKS
0010	36+60	-	37+95		77	1.6	STAGE 1
0010	38+60	-	39+90		73	1.5	STAGE 1
0010	54+35	-	58+40		407	8.2	STAGE 1
0010	48+50	-	Deck		46	1.0	STAGE 2
0010	Deck	-	54+79		52	1.1	STAGE 2
0010	49+50	-	Deck		52	1.1	STAGE 3
0010	Deck	-	55+00		43	0.9	STAGE 3
				TOTAL 0010	750	15.4	

PEDESTRIAN BRIDGES MISC. ITEMS

LOCATION	202.0110 ROADSIDE CLEARING SY	204.9090.S.001 REMOVING (HANDRAIL) LF	* 204.0170 REMOVING FENCE LF	210.2100 BACKFILL STRUCTURE TYPE B CY	SPV.0060.004 SPECIAL (004. GRADING SHAPING FINISHING SHOULDERS) EACH	REMARKS
B-40-298	122	90	-	8	-	
B-40-297	76	115	140	-	4	
TOTAL 0010	198	205	140	8	4	

* ADDITIONAL QUANTITY SHOWN ELSEWHERE

CATEGORY	STATION	TO	STATION	LOCATION	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	REMARKS
0010	48+50	-	Deck	NB	95	
0010	Deck	-	54+79	NB	95	
0010	49+50	-	Deck	SB	95	
0010	Deck	-	55+00	SB	95	
				TOTAL 0010	380	

HMA ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	460.7424 HMA PAVEMENT 4 HT 58-28 H TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	REMARKS
0010	36+60	-	37+95		-	-	37	STAGE 1
0010	38+60	-	39+90		-	-	36	STAGE 1
0010	54+35	-	58+40		-	-	196	STAGE 1
0010	48+50	-	Deck		75	110	-	STAGE 2
0010	Deck	-	54+79		100	158	-	STAGE 2
0010	49+50	-	Deck		69	87	-	STAGE 3
0010	Deck	-	55+00		56	93	-	STAGE 3
				TOTAL 0010	300	448	269	

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CURB AND SIDEWALK ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	* 416.0610 DRILLED TIE BARS EACH	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	601.0600 CONCRETE CURB PEDESTRIAN LF	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	620.0300 CONCRETE MEDIAN SLOPED NOSE SF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.9000 CONSTRUCTION STAKING CURB RAMPS EACH	650.9500.001 CONSTRUCTION STAKING SIDEWALK (1360-13-70) EACH	REMARKS
0010	48+50	-	51+00	RT	118	352	-	570	-	-	352	2		STAGE 2
0010	48+50	-	51+00	RT	140	420	19	711	20	16	420	-		STAGE 2, TYPE 1 NOSE
0010	53+00	-	55+00	LT	105	313	18	722	20	-	313	-		STAGE 3
0010	53+00	-	55+00	LT	89	265	-	385	-	16	265	2		STAGE 3, TYPE 1 NOSE
0010	36+60	-	39+90	RT/LT	167	500	-	-	-	78	500	-		STAGE 4; TYPE 1 NOSE
0010	54+35	-	58+40	RT/LT	247	740	44	138	24	-	740	2		STAGE 4
0010	-	-	-	B-40-298	-	-	-	180	-	-	-	-		NE ABUTMENT
				TOTAL 0010	866	2,590	81	2,706	64	110	2,590	6	1	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ADJUSTING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	611.8110 ADJUSTING MANHOLE COVERS EACH	611.8115 ADJUSTING INLET COVERS EACH	REMARKS
0010	39+90			RT	-	2	STAGE 1 AND STAGE 4
0010	49+40			RT	1	-	STAGE 2
0010	49+40			RT	-	1	STAGE 2
0010	49+70			LT	1	-	STAGE 3
0010	49+90			LT	1	-	STAGE 3
0010	50+35			LT	1	-	STAGE 3
0010	50+40			LT	1	-	STAGE 3
0010	54+36			RT	1	-	STAGE 2
0010	54+10			LT	1	-	STAGE 3
0010	54+40			LT	1	-	STAGE 3
0010	54+36			RT	2	-	STAGE 1 AND STAGE 4
				TOTAL 0010	10	3	

TEMPORARY BARRIER ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	614.0905 CRASH CUSHIONS TEMPORARY EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS
0010	180+30	-	183+50	STH 145 STAGE 1	570	570	2	4	OM-3L (W5-58L)	TL-3	UNIDIRECTIONAL	RT	TEMP BARRIER AT INGRESS
0010	180+40	-	183+00	STH 145 STAGE 2	-	570	2	4	OM-3R (W5-58R)	TL-3	UNIDIRECTIONAL	LT	TEMP BARRIER AT INGRESS
				TOTAL 0010	570	1,140	4						

GUARDRAIL ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	REMARKS
0010	48+90	-	50+30	NB 76TH	38	40	1	STAGE 2
0010	53+60	-	54+90	SB 76TH	38	40	1	STAGE 3
				TOTAL 0010	75	79	2	

FENCING ITEMS

CATEGORY	LOCATION	* 204.0170 REMOVING FENCE LF	616.0206 FENCE CHAIN LINK 6-FT LF	REMARKS
0010	NE	184	184	
0010	NW	20	20	
0010	MEDIAN	56	56	
0010	SE	16	16	
0010	SW	160	160	
0010	B-40-298	20	20	
	TOTAL 0010	456	456	

* ADDITIONAL QUANTITY SHOWN ELSEWHERE

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EROSION CONTROL ITEMS

CATEGORY	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7504 TEMPORARY DITCH CHECKS LF	REMARKS
0010	PROJECT WIDE	788	788	2	1	900	2	2	5	24	
0010	CROSSOVER	---	---	1	---	925	---	---	8	---	
0010	UNDISTRIBUTED	79	79	---	---	183	---	---	---	---	
	TOTAL 0010	867	867	3	1	2,008	2	2	13	24	

LANDSCAPING ITEMS

CATEGORY	LOCATION	625.0100 TOPSOIL SY	625.0500 SALVAGED TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL	REMARKS
0010	NB 76th	---	481	0.3	9	13	10.9	
0010	SB 76th	---	432	0.3	8	12	9.8	
0010	Crossover	925	---	0.6	17	25	20.8	5-INCHES OF TOPSOIL
0010	Undistributed	93	92	0.2	4	5	4.2	
	TOTAL 0010	1,018	1,005	1.4	38	55	45.7	

PROPOSED PAVEMENT MARKING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	646.1041.S MARKING REPLACE LINE WET REFLECTIVE EPOXY 4-INCH LF	646.1050 MARKING LINE GROOVED PERMANENT TAPE 4-INCH LF	646.1555 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH LF	646.3020 MARKING LINE EPOXY 8-INCH LF	646.3050 MARKING LINE GROOVED PERMANENT TAPE 8-INCH LF	646.3555 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH LF	646.5020 MARKING ARROW EPOXY EACH	646.5120 MARKING WORD EPOXY EACH	646.6120 MARKING STOP LINE EPOXY 18-INCH LF	646.7120 MARKING DIAGONAL EPOXY 12-INCH LF	646.7220 MARKING CHEVRON EPOXY 24-INCH LF	646.7420 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH LF	646.8220 MARKING ISLAND NOSE EPOXY EACH	REMARKS
0010	29+00	-	60+00	76TH ST NB	740	-	590	-	105	542	-	2	1	120	-	-	40	-	WHITE MARKINGS
0010	29+00	-	60+00	76TH ST NB	-	-	-	-	-	-	-	-	-	-	-	-	-	2	YELLOW MARKINGS
0010	29+00	-	60+00	76TH ST SB	1,433	-	515	-	150	511	-	3	3	116	-	-	40	-	WHITE MARKINGS
0010	145+00	-	186+00	STH 145 EB	-	480	-	255	-	-	1,150	-	-	-	-	388	-	-	WHITE MARKINGS
0010	177+00	-	209+00	STH 145 WB	-	1,580	-	345	-	-	262	-	-	-	500	115	-	-	WHITE MARKINGS
				TOTAL 0010	2,173	2,060	1,105	600	255	1,053	1,412	5	4	236	500	503	80	2	

TRAFFIC CONTROL ITEMS

STATION	TO	STATION	LOCATION	NUMBER OF DEVICES	DURATION	643.0300 TRAFFIC CONTROL DRUMS DAY	NUMBER OF DEVICES	643.0410 TRAFFIC CONTROL BARRICADES TYPE II DAY	NUMBER OF DEVICES	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	NUMBER OF DEVICES	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	NUMBER OF DEVICES	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	NUMBER OF DEVICES	643.0800 TRAFFIC CONTROL ARROW BOARDS DAY	NUMBER OF DEVICES	643.0900 TRAFFIC CONTROL SIGNS DAY	NUMBER OF CYCLES	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I EACH	644.1810 TEMPORARY PEDESTRIAN BARRICADE LF
STAGE 1 - 76TH ST																							
35+00	-	41+50	LT	23			-		1		-	-	-		-		-		-		-	-	
41+50	-	46+00	LT	54			-		1		-	-	-		-		-		-		-	-	
46+00	-	62+25	LT	93			-		2		-	-	4		11		4		-		-	-	
			SIDEROADS - LT	-			-		-		-	-	-		-		-		-		-	-	
28+25	-	34+00	RT	44			-		1		-	-	2		11		2		-		-	-	
35+00	-	40+90	RT	32			-		2		-	-	2		-		2		-		-	-	
41+75	-	44+20	RT	22			-		1		-	-	-		-		-		-		-	-	
46+00	-	58+80	RT	50			-		2		-	-	2		-		2		-		-	-	
			SIDEROADS - RT	-			-		-		-	-	-		-		-		-		-	-	
			SUB TOTAL	318	14	4452	4	56	10	140	-	-	10	140	22	308	10	140	65	910	-	-	36.00
STAGE 2 - 76TH ST																							
35+00	-	41+50	LT	1			1		-		20	20	-		1		-		-		-	-	
41+50	-	46+00	LT	15			-		-		18	18	-		-		-		-		-	-	
46+00	-	62+25	LT	61			1		2		50	50	4		29		1		-		-	-	
			SIDEROADS - LT	-					-		-	-	-		-		-		-		-	-	
28+25	-	34+00	RT	36			-		1		-	-	2		8		1		-		-	-	
35+00	-	40+90	RT	40			2		10		-	-	10		11		-		-		-	-	
41+75	-	44+20	RT	-			-		10		-	-	4		-		-		-		-	-	
46+00	-	58+80	RT	35			3		8		-	-	-		9		-		-		-	-	
			SIDEROADS - RT	-			-		2		-	-	-		-		-		-		-	-	
			SUB TOTAL	188	70	13160	4	280	33	2310	88	88	20	1400	58	4060	2	140	90	6300	-	-	72.00
STAGE 3 - 76TH ST																							
35+00	-	41+50	LT	6			1		5		-	-	6		6		-		-		-	-	
41+50	-	46+00	LT	6			-		10		-	-	12		-		-		-		-	-	
46+00	-	62+25	LT	43			2		17		-	-	22		23		1		-		-	-	
			SIDEROADS - LT	-			-		6		-	-	4		-		-		-		-	-	
28+25	-	34+00	RT	34			-		-		-	-	-		11		1		-		-	-	
35+00	-	40+90	RT	45			2		3		-	-	6		17		-		-		-	-	
41+75	-	44+20	RT	12			-		-		20	20	-		-		-		-		-	-	
46+00	-	58+80	RT	21			-		-		52	52	-		14		-		-		-	-	
			SIDEROADS - RT	-			-		-		-	-	-		-		-		-		-	-	
			SUB TOTAL	167	80	13360	4	320	41	3280	72	72	50	4000	71	5680	2		84	6720	-	-	180.00
STAGE 4 - 76TH ST																							
28+25	-	62+25	LT & RT	318			-		10		-	-	10		22		10				-	-	
			SUB TOTAL	318	14	4452	4	56	10	140	-	-	10	140	22	308	10	140	65	910	-	-	36.00
STAGE 1 - STH 145																							
177+00	-	214+00	LT	70			-		3		-	-	6		37		2		-		-	-	
140+00	-	178+00	RT	75			-		4		-	-	8		25		2		-		-	-	
EXIT RAMP CLOSURE				20			-		4		-	-	4		-		-		-		1	3	
			SUB TOTAL	165	14	2310	4	56	11	154	-	-	18	252	62	868	4	56			1	3	
STAGE 2 - STH 145																							
179+00	-	214+00	LT	82			-		4		-	-	8		36		2		29	406	-	-	
140+00	-	184+00	RT	76			-		3		-	-	6		22		2				-	-	
EXIT RAMP CLOSURE				40			-		8		-	-	8		-		-				1	6	
			SUB TOTAL	198	14	2772	4	56	15	210	-	-	22	308	58	812	4	56	35	490	1	6	
			TOTAL 0010			40,506		824		6,234	160	160		6,240		12,036		532		15,736		9	324

SAWING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	690.0150 SAWING ASPHALT LF	* 690.0250 SAWING CONCRETE LF	REMARKS
0010	36+60	-	37+95	RT & LT	-	240	STAGE 1 76TH
0010	38+60	-	39+90	RT & LT	-	265	STAGE 1 76TH
0010	54+35	-	58+40	RT & LT	-	740	STAGE 1 76TH
0010	48+50	-	54+80	RT - NB	20	849	STAGE 2 76 TH
0010	49+50	-	55+00	LT - SB	20	626	STAGE 3 76TH
				TOTAL 0010	40	2,720	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PCMS MESSAGING

LOCATION	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	REMARKS
STH 145	-	14	BRIDGE DEMO
PEDESTRIAN BRIDGE	60	-	
76TH STAGE 1	30	-	
TOTAL 0010	90	14	

3

SPV.0060.200 SPECIAL (200. ADJUSTING WATER BOXES)

LOCATION	EACH	REMARKS
STA 249+39	2	
STA 253+55	2	
TOTAL 0020	4	

MMSD MANHOLE ITEMS

LOCATION	SPV.0060.150 SPECIAL (150. ADJUSTING MMSD MANHOLE COVER) EACH	SPV.0060.151 SPECIAL (151. RECONSTRUCTING MMSD MANHOLE) EACH	REMARKS
STA 49+88	1	-	
STA 54+68	1	-	
STA 53+81	-	1	
TOTAL 0030	2	1	

CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	48+50	-	51+00	76TH	50	-	50	250
0010	53+00	-	55+00	76TH	50	-	50	200
0010	36+60	-	37+95	CROSSOVERS	135	135	-	-
0010	38+60	-	39+90	CROSSOVERS	130	130	-	-
0010	54+35	-	58+40	CROSSOVERS	405	405	-	-
				TOTAL 0010	770	670	100	450

TEMPORARY PAVEMENT MARKING

STATION	TO	STATION	LOCATION	643.3120 TEMPORARY MARKING LINE EPOXY 4-INCH LF		643.3220 TEMPORARY MARKING LINE EPOXY 8-INCH LF	643.3820 TEMPORARY MARKING STOP LINE EPOXY 18-INCH LF	REMARKS
STAGE 1 - 76TH ST				WHITE	YELLOW			
46+00	-	62+25	LT	245	-	-	-	
28+25	-	34+00	RT	245	-	-	-	
			SUB TOTAL	490	-	-	-	
STAGE 2 - 76TH ST								
35+00	-	41+50	LT	275	279	199	21	
41+50	-	46+00	LT	256	378	189	30	
46+00	-	62+25	LT	1895	2291	200	-	
28+25	-	34+00	RT	245	-	-	-	
35+00	-	40+90	RT	653	132	-	-	
46+00	-	58+80	RT	203	102	255	-	
			SUB TOTAL	3527	3182	843	51	
STAGE 3 - 76TH ST								
35+00	-	41+50	LT	242	133	-	-	
46+00	-	62+25	LT	537	167	-	-	
28+25	-	34+00	RT	697	-	-	-	
35+00	-	40+90	RT	283	807	126	-	
41+75	-	44+20	RT	225	524	113	21	
46+00	-	58+80	RT	1532	2325	276	29	
			SUB TOTAL	3516	3956	515	50	
STAGE 1 - STH 145								
177+00	-	214+00	LT	1844	1553	-	-	
140+00	-	178+00	RT	1462	1667	-	-	
			SUB TOTAL	3306	3220	-	-	
STAGE 2 - STH 145								
179+00	-	214+00	LT	665	1327	-	-	
140+00	-	184+00	RT	330	990	-	-	
			SUB TOTAL	995	2317	-	-	
			TOTAL 0010	11,834	12,675	1,358	101	

3

REMOVING PAVEMENT MARKING

CATEGORY	STATION	TO	STATION	LOCATION	646.9010 MARKING REMOVAL LINE WATER BLASTING 4-INCH LF	646.9050 MARKING REMOVAL LINE GROOVED PERMANENT TAPE 4-INCH LF	646.9055 MARKING REMOVAL LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH LF	646.9110 MARKING REMOVAL LINE WATER BLASTING 8-INCH LF	646.9150 MARKING REMOVAL LINE GROOVED PERMANENT TAPE 8-INCH LF	646.9155 MARKING REMOVAL LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH LF	646.9210 MARKING REMOVAL LINE WATER BLASTING WIDE LF	646.9310 MARKING REMOVAL SPECIAL MARKING WATER BLASTING EACH	REMARKS
	STAGE 1 - 76TH ST												
0010	28+50	-	31+50	NB 76TH	-	65	-	-	-	-	-	-	
0010	60+00	-	62+50	SB 76TH	-	65	-	-	-	-	-	-	
	STAGE 2 - 76TH ST			`									
0010	28+50	-	62+50	NB 76TH	152	106	-	-	-	-	-	-	
0010	28+50	-	62+50	SB 76TH	742	468	75	-	229	120	-	-	
	STAGE 3 - 76TH ST			`									
0010	28+50	-	62+50	NB 76TH	2,131	249	-	255	115	-	-	1	
0010	28+50	-	62+50	SB 76TH	5,374	-	-	588	-	-	51	-	
	STAGE 4 - 76TH ST			`									
0010	28+50	-	62+50	NB 76TH	6,393	-	-	515	-	-	50	-	
0010	28+50	-	62+50	SB 76TH	1,079	-	-	-	-	-	-	-	
	STAGE 1 - STH 145												
0010	171+00	-	196+00	STH 145	-	-	1,333	-	-	851	-	-	
	STAGE 2 - STH 145												
0010	171+00	-	194+00	STH 145	-	-	220	-	-	-	-	-	
				TOTAL 0010	15,871	823	1,628	1,358	344	971	101	1	

STH 181 & FOND DU LAC AVE

3

3

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

661.0200.001

LOCATION	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS L.S.
STH 181 AT FOND DU LAC AVE	1
TOTAL	1

STH 181 & VILLARD AVE

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

661.0200.002

LOCATION	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS L.S.
STH 181 AT VILLARD AVE	1
TOTAL	1

3

CITY UNDERGROUND CONDUIT
MISCELLANEOUS QUANTITIES

LOCATION			204.0100 REMOVING PAVEMENT SY	320.0155 CONCRETE BASE 9-INCH SY	465.0105 ASPHALTIC SURFACE TONS	416.0620 DRILLED DOWEL BARS EACH	416.0610 DRILLED TIE BARS EACH	204.0215 REMOVING MANHOLE EACH	690.025 SAWING CONCRETE LF	SPV.0060.411 4' DIAMETER DOGHOUSE MANHOLE TYPLE CUC INSTALLAED OVER CONDUIT EACH	SPV.0060.425 INSTALLING CONDUIT INTO EXISTING MANHOLE EACH	SPV.0090.404 4-4" CONDUIT CEMENT ENCASED DB-60 LF	SPV.0060.401 UNDERDECK UTILITY STRUCTURE B-40-255 CITY OF MILWAUKEE COMMUNICATIONS CONDUIT EACH
MANHOLE 600	-	STA 56+79.25, 23.0' LT									1		
MANHOLE 600	TO	PROJECT LIMITS	129	129	25	60	71		364			176	
PROJECT LIMITS	-	STA 55+00.00, 23.0' LT											
PROJECT LIMITS	TO	5' NORTH OF ABUTMENT										141	
5' NORTH OF ABUTMENT	-	STA 53+87.86, 23.0' LT											
5' NORTH OF ABUTMENT	TO	5' SOUTH OF ABUTMENT											1
5' NORTH OF ABUTMENT	TO	MANHOLE 601R										15	
MANHOLE 601R	-	STA 50+43.36, 23.0' LT						1					
MANHOLE 601R	TO	MANHOLE 602										11	
MANHOLE 602	-	STA 50+34.50, 23.0' LT								1			
TOTAL			129	129	25	60	71	1	364	1	1	343	1

ALL ITEMS CATEGORY 0020

TYPE II PERMANENT SIGNING 1360-13-70

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.2602 REMOVING SIGNS TYPE II (EA)	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0622 POSTS WOOD 4" X 6" X 22' (EA)	634.0814 POSTS TUBULAR STEEL 2 X 2-INCH X 14-FT	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
1	D12-2A(5)		78	X	48	26.000			1	2		2			
2	M1-94	N. 76TH ST						1							MOVE SIGN FROM OLD BRIDGE TO NEW BRIDGE PARAPET. MOUNTING INCIDENTAL. SEE DETAIL
3	M1-94	N. 76TH ST						1							MOVE SIGN FROM OLD BRIDGE TO NEW BRIDGE PARAPET. MOUNTING INCIDENTAL. SEE DETAIL
4	W5-52R							1		1	1				4 FOOT MOUNTING HEIGHT
5	W4-3R(5)		48	X	48		16.000		1	1		2			
6	J2-1(2M)		24	X	57	9.500			1	1	1				
	M3-1		24	X	12										
	M1-6	STH 145	24	X	24										
	M5-1R		21	X	21										
7	R4-4(2M)		36	X	30	7.500			1	1			2		
8	R7-1L(2M)		24	X	30	5.000								7	
9	W13-3B(2M)	25 MPH	36	X	60		15.000		1	2		1			
10	D1-65	FOND DU LAC AVE						1		2			2		
		NEXT SIGNAL													
11	W11-2(2S)		30	X	30		6.250		1						MOUNT ON LIGHT POLE
11A	W16-7L(2S)		24	X	12		2.000		1					11	
12	J3-1(2S)		24	X	57	9.500			1	1	1				
	M3-3		24	X	12										
	M1-6	STH 145	24	X	24										
	M6-2		21	X	21										
13	J2-1(2M)		24	X	57	9.500			1	1	1				
	M3-1		24	X	12										
	M1-6	STH 145	24	X	24										
	M5-1R		21	X	21										
14	W13-3B(2M)	25 MPH	36	X	60		15.000		1	2		1			
15	W11-2(2S)		30	X	30		6.250		1						MOUNT ON LIGHT POLE
15A	W16-7L(2S)		24	X	12		2.000		1					15	
16	J3-1(2S)		24	X	57	9.500			1	1	1				
	M3-1		24	X	12										
	M1-6	STH 145	24	X	24										
	M6-2		21	X	21										
17	R7-1D(2M)		24	X	30	5.000			1	1			1		
18	W1-8(2S)		18	X	24		3.000		1	1	1				4 FOOT MOUNTING HEIGHT
19	R4-4(2M)		36	X	30	7.500			1	1			1		
20	D1-2	WAUWATOSA AHEAD ARROW DOWNTOWN MILWAUKEE ARROW RIGHT							1	3			3		
21	J3-1(2M)		24	X	57	9.500			1						MOUNT ON LIGHT POLE
	M3-3		24	X	12										
	M1-6	STH 145	24	X	24										
	M6-2		21	X	21										
22															
		UNDISTRIBUTED						2	2	2	2				
		TOTALS				98.500	65.500	6	20	23	8	6	9		

SHEET 1 OF 1

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES – PERMANENT SIGNING	SHEET:	E

ESTIMATE OF TOTAL QUANTITIES ; STREET LIGHTING
MILWAUKEE COUNTY
NORTH 76th STREET BRIDGE OVER S.T.H. 145 - ID 1360-13-70 - 90/10 SPLIT

	Std.Bid Item No.	Description	Unit	Quantity
-	650.8501	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS	EACH	0.2
-	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	230
-	657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	EACH	4
-	SPV.0060.302	PULL BOXES 13-INCH x 24-INCH x 24-INCH	EACH	4
-	SPV.0060.320	POLES TYPE 25-AL-BD	EACH	4
-	SPV.0060.347	LUMINAIRE ARMS SINGLE MEMBER 8-Ft.	EACH	4
-	SPV.0060.371	INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2	EACH	4
-				
-				

ALL ITEMS CATEGORY 0020

ESTIMATE OF TOTAL QUANTITIES ; STREET LIGHTING
MILWAUKEE COUNTY
ADDITIONAL CITY OF MILWAUKEE WORK INCORPORATED INTO THE WISDOT CONTRACT

	Std.Bid Item No.	Description	Unit	Quantity
-	650.8501	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS	EACH	0.8
-	652.0615	CONDUIT SPECIAL 3-INCH	LF	4,215
-	652.0230	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH	LF	35
-	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	135
-	654.0105	CONCRETE BASES TYPE 5	EACH	15
-	657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	EACH	15
-	SPV.0060.302	PULL BOXES 13-INCH x 24-INCH x 24-INCH	EACH	39
-	SPV.0060.320	POLES TYPE 25-AL-BD	EACH	15
-	SPV.0060.347	LUMINAIRE ARMS SINGLE MEMBER 8-Ft.	EACH	30
-	SPV.0060.371	INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2	EACH	30
-	SPV.0060.399	UTILITY LINE OPENING (ULO)	EACH	1
-				

ALL ITEMS CATEGORY 0080

(THESE QUANTITIES DO NOT INCLUDE THE MATERIALS IN/ON THE BRIDGE)
SUCH AS: CONDUIT, JUNCTION BOXES, AND LIGHT POLE ANCHORAGE

STH 181 (N. 76TH STREET)
MILWAUKEE COUNTY
CATEGORY 0010
COMMUNICATIONS

3

CONDUIT

FROM	TO	652.0130 CONDUIT RIGID 2-1/2 INCH L.F.	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
I/C CV102	CONDUIT FROM BRIDGE PARAPET	20	
I/C CV103	CONDUIT FROM BRIDGE PARAPET	20	344
	TOTAL	40	344

I/C PULL BOXES & VAULTS

STRUCTURE NO.	LOCATION^		673.0105 COMMUNICATION VAULT TYPE 1 EACH
I/C CV102	102+36.14, 9.1' LT		1
I/C CV103	105+85.43, 5.9' LT		1
		TOTAL	2

^ FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

FIELD SYSTEM INTEGRATOR

LOCATION		670.0101 FIELD SYSTEM INTEGRATOR EACH	670.0201 ITS DOCUMENTATION EACH	678.0501 COMMUNICATION SYSTEM TESTING EACH
PROJECT ID: 1360-13-70		1	1	1
	TOTAL	1	1	1

REMOVE CABLE AND WIRE

REMOVE FROM	REMOVE TO	674.0300 REMOVE CABLE LF
I/C CV103	I/C CV101	906
TOTAL		906

RE-INSTALL CABLE AND WIRE

INSTALL FROM	INSTALL TO	674.0400 REINSTALL CABLE L.F.
I/C VC101	I/C CV103	906
TOTAL		906

FIBER OPTIC SPLICE

LOCATION		678.0200 FIBER OPTIC SPLICE ENCLOSURE EACH	678.0300 FIBER OPTIC SPLICE EACH
I/C CV103		1	36
	TOTAL	1	36

R/L STH 145 SB ON RAMP
SAW STA 2+86
SB STH 145 ON RAMP
SLOPE INTERCEPT (TYP.)
CONCRETE PAVEMENT APPROACH SLAB STA 50+43.17
CITY OF MILWAUKEE SIGNAL
CITY OF MILWAUKEE LIGHTING
CITY OF MILWAUKEE ELECTRIC
CITY OF MILWAUKEE ELECTRIC
BEGIN CONSTRUCTION STA 49+50
MATCH EXISTING ASPHALTIC BUTT JOINT
WE ENERGIES GAS
CITY OF MILWAUKEE LIGHTING
EP: 10+35.00
EP: 12+92.59
R/L STH 145
B-40-255
R/L SB 76TH ST
76TH ST SB
BP: 1+70.14
R/L NB 76TH ST
76TH ST NB
R/L 76TH ST
E B-40-256
STH 145 SB
STH 145 NB
PC: 182+58.43
WISDOT LIGHTING
MMSD 48" MIS
BP: 1+30.00
MGS THRIE BEAM TRANSITION
CONCRETE PAVEMENT APPROACH SLAB STA 53+87.86
CITY OF MILWAUKEE CUC
MGS GUARDRAIL 3
SAW AND MATCH SIDEWALK STA 54+50
CITY OF MILWAUKEE LIGHTING
WE ENERGIES ELECTRIC
END CONSTRUCTION STA 55+00
MATCH EXISTING ASPHALTIC BUTT JOINT
AT&T
MGS GUARDRAIL TERMINAL EAT POST 1 STA 54+91.68 10.0' LT
POST 5 STA 54+66.68 11.0' LT
CITY OF MILWAUKEE LIGHTING
REMOVE EXISTING GUARDRAIL
R/L STH 145 NB ON RAMP
CITY OF MILWAUKEE WATER
NB STH 145 ON RAMP
POST 9 STA 54+41.68 12.0' LT
WE ENERGIES ELECTRIC
WISDOT LIGHTING
N

LEGEND
CONCRETE PAVEMENT APPROACH SLAB
HMA PAVEMENT
CONCRETE SIDEWALK 5-INCH

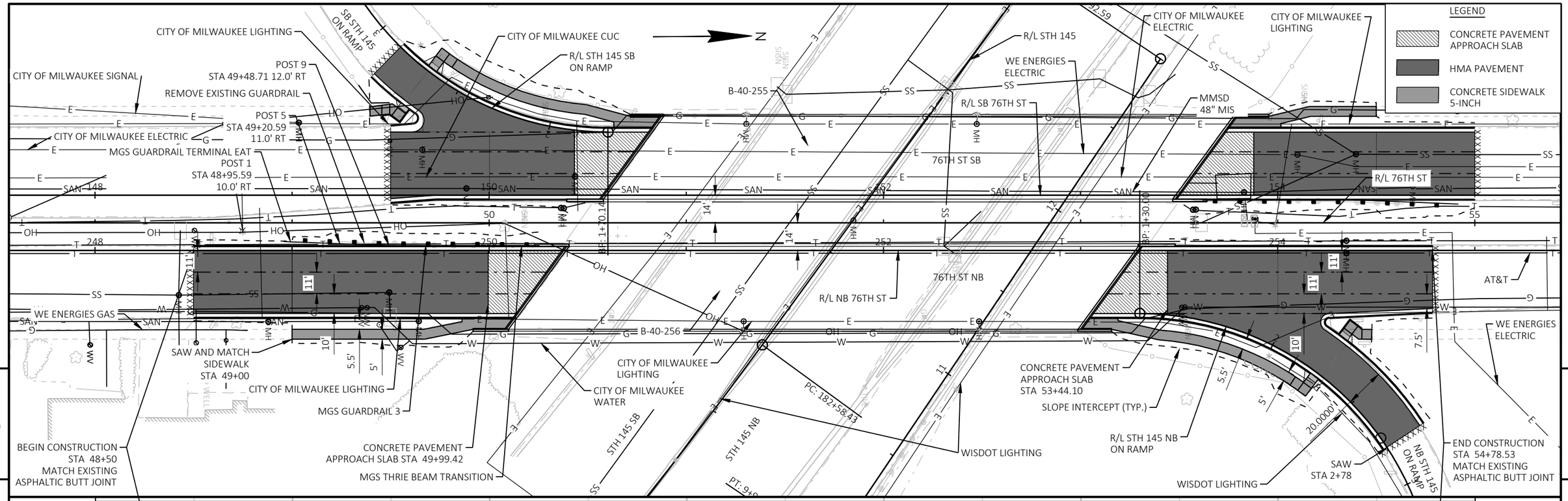
VPC STA 149+22.50 VPC EL 724.53
VPI STA 149+85.00 VPI EL 725.74
VPT STA 150+47.50 VPT EL 726.05
VPC STA 153+75.00 VPC EL 727.69
VPI STA 154+25.00 VPI EL 727.94
VPT STA 154+75.00 VPT EL 727.67
STA 155+00.03 EL 727.54
PROPOSED PROFILE
1.93%
0.50%
-0.53%
STRUCTURE B-40-0255
ORIGINAL GROUND
HP STA 154+23.55 HP EL 727.81
STA 149+13.80 EL 724.37
VCL = 125.00
K = 87.32
VCL = 100.00
K = 97.23
EXISTING GRADE
PROPOSED GRADE

730 725 720 715

722.90	724.02	725.01	725.02	725.58	725.69	725.85	726.06	707.73	726.31	705.26	726.56	706.20	726.81	706.77	727.06	706.25	727.31	727.39	727.56	727.48	727.78	727.66	727.77	727.54	727.54	727.22
148	149			150				151			152					153				154				155		155

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	PLAN AND PROFILE: 76TH ST SOUTHBOUND	SHEET 115	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\050101_PP.DWG
LAYOUT NAME - 04
PLOT DATE : 7/28/2022 5:45 PM
PLOT BY : WEIGAND, BEN
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	PLAN AND PROFILE: 76TH ST NORTHBOUND	SHEET 116	E

Standard Detail Drawing List

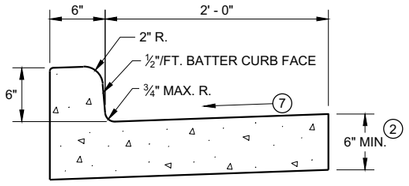
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-10	CONDUIT
09B04-12	PULL BOX
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
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
09H09-02	COMMUNICATION VAULT TYPE 1
12A03-10	NAME PLATE (STRUCTURES)
13A03-07	CONCRETE PAVEMENT SHOULDERS
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13C15-08A	CONCRETE BASE
13C15-08B	CONCRETE BASE
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"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-22A	LONGITUDINAL MARKING (MAINLINE)
15C08-22B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-22C	PAVEMENT MARKING (TURN LANES)

6

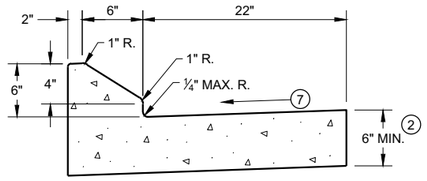
Standard Detail Drawing List

15C08-22D	PAVEMENT MARKING (TURN LANES)
15C11-10A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-07A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C18-07B	MEDIAN ISLAND MARKING MEDIAN ISLAND NOSE
15C18-07C	MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT
15C31-04A	PAVEMENT MARKING EXIT RAMP AND PARALLEL EXIT RAMP
15C31-04C	PAVEMENT MARKING ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D12-10A	TRAFFIC CONTROL, LANE CLOSURE
15D16-05	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-06A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-08A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-08B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-08C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D40-04C	TRAFFIC CONTROL, PARTIAL LANE SHIFT NON-FREEWAY OR MULTILANE DIVIDED 45 MPH AND UNDER
15D40-04D	TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER
15D47-02A	TRAFFIC CONTROL, INGRESS/EGRESS WITH BARRIER

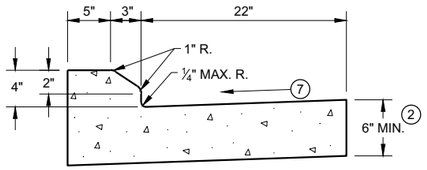
6



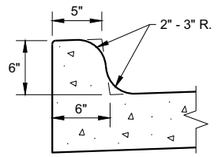
TYPES A (1) & D



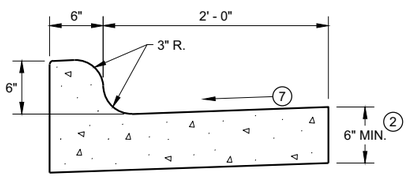
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

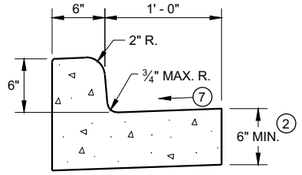


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



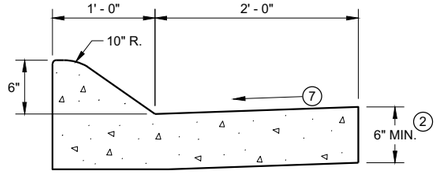
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

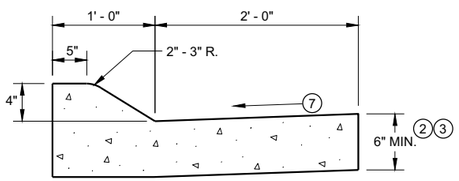


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

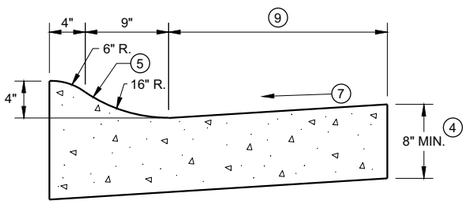


6" SLOPED CURB TYPES A (1) & D



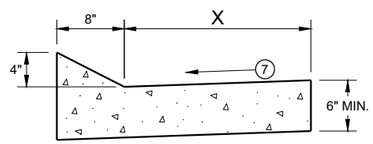
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

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

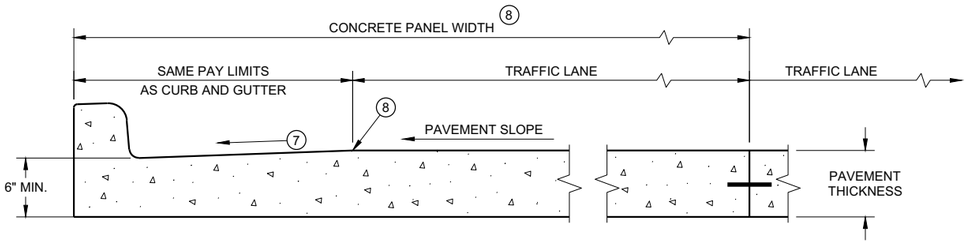


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

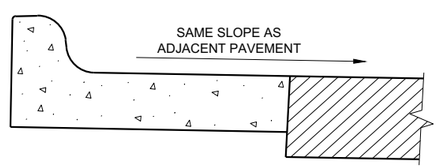
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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.

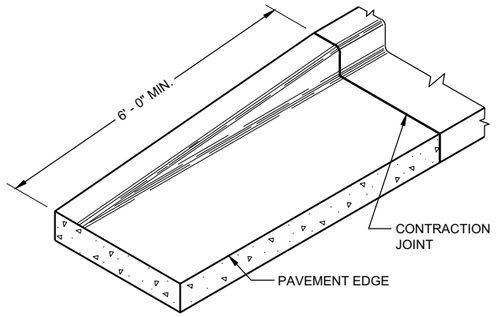
(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

CONCRETE CURB AND GUTTER

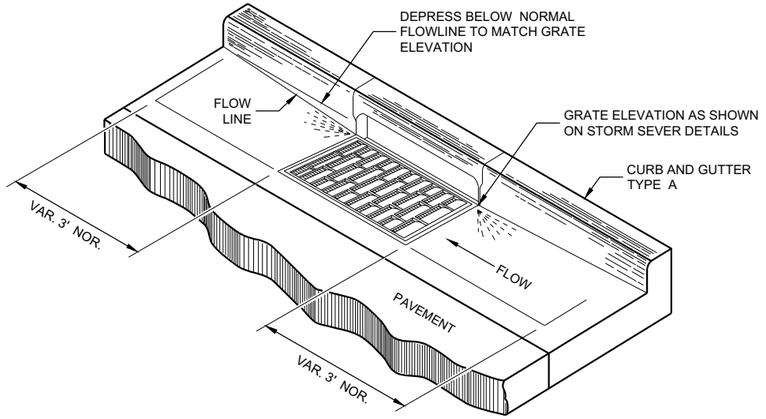
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D01 - 22a
SDD 08D01 - 22a



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.

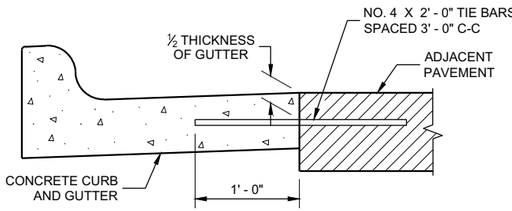
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

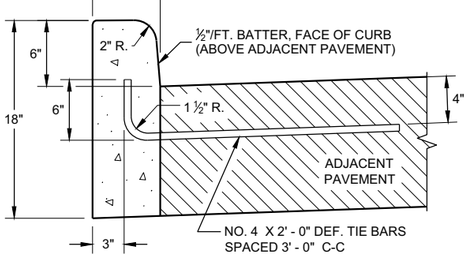
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(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.

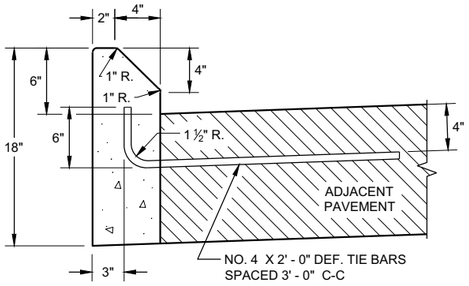
(9) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION (1)

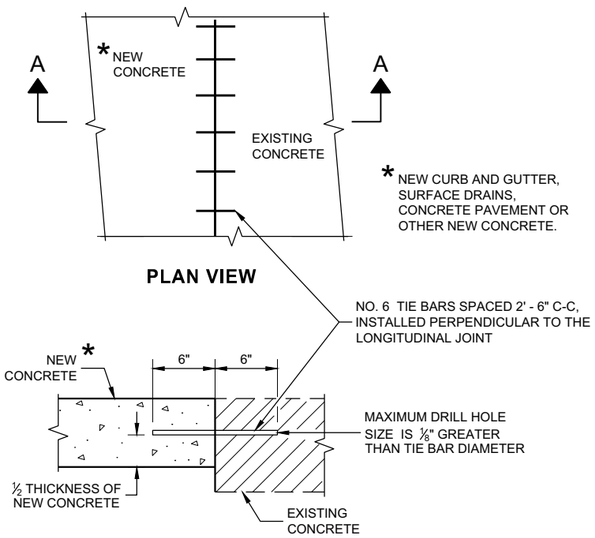


TYPES A (1) & D



TYPES G (1) & J

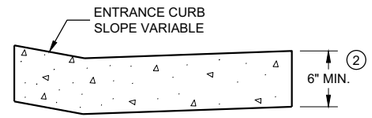
CONCRETE CURB



PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

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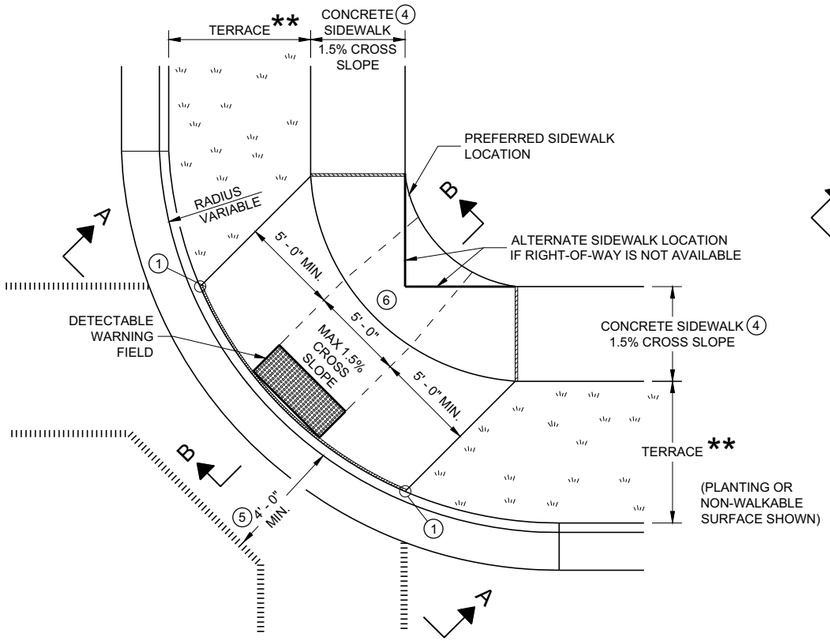
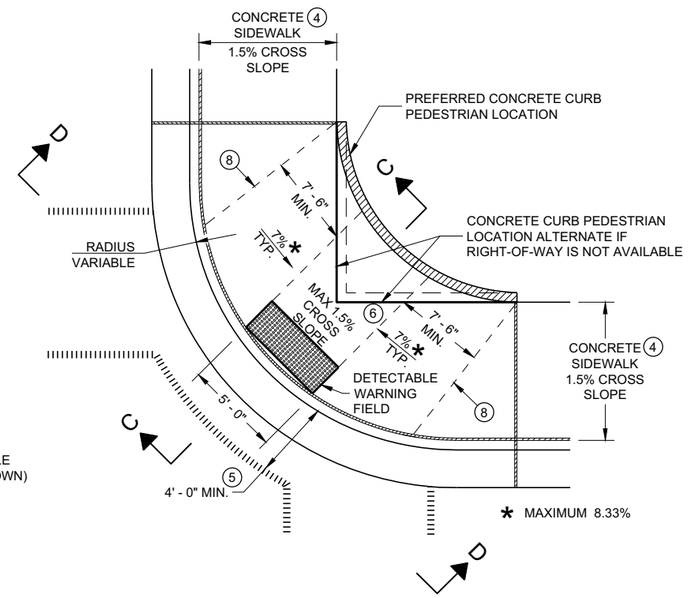
SDD08D01 - 22b



PLAN VIEW

CURB RAMP TYPE 1

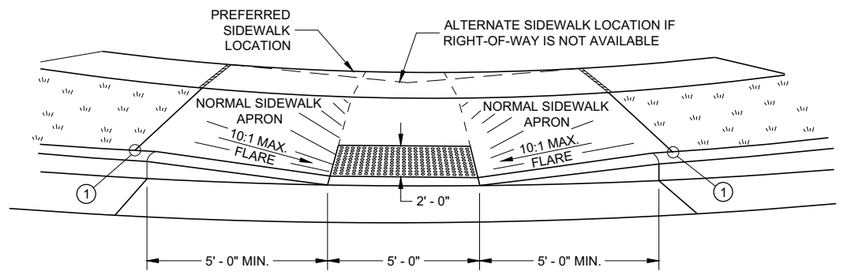
(CENTER OF CORNER RADIUS)



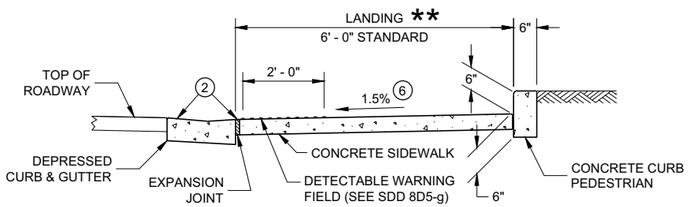
PLAN VIEW

CURB RAMP TYPE 1 - A

(NO TERRACE)

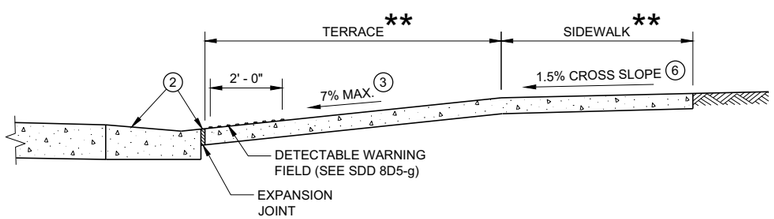


VIEW A - A FOR TYPE 1

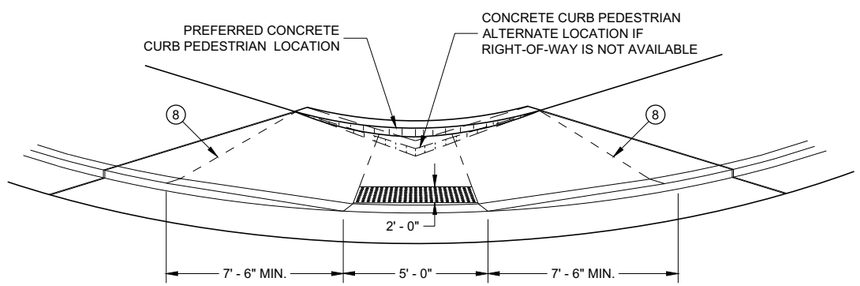


SECTION C - C FOR TYPE 1 - A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF 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

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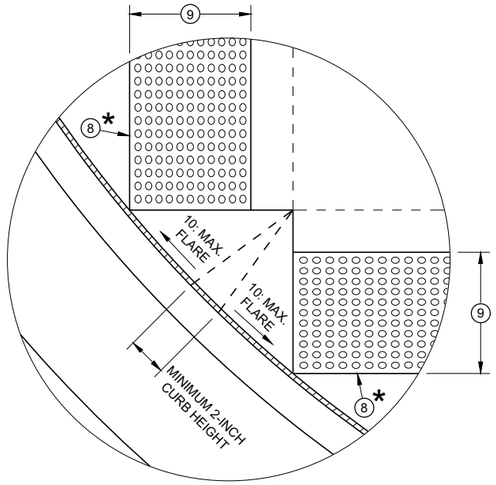
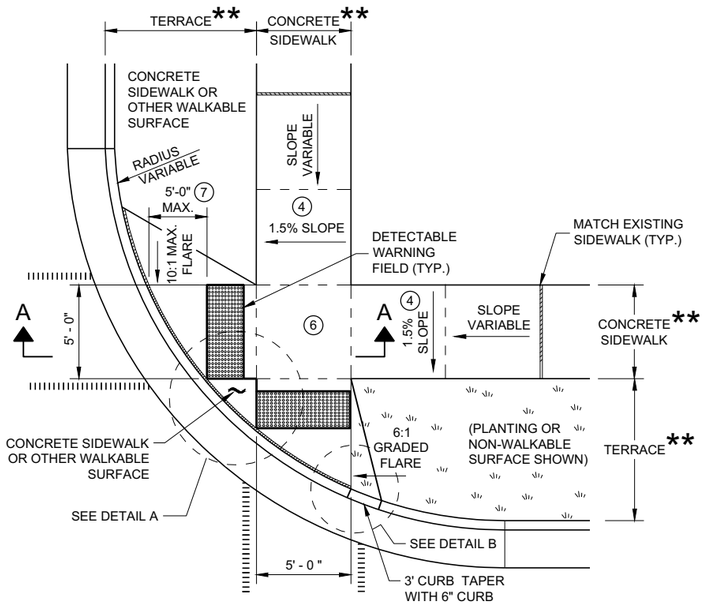
SDD 08D05 - 20a



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.

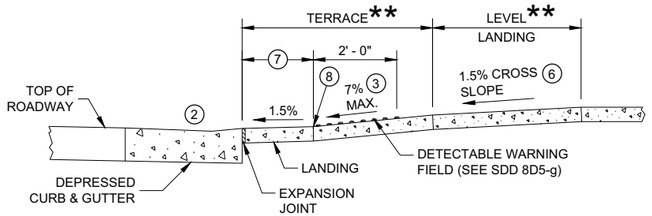
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(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.

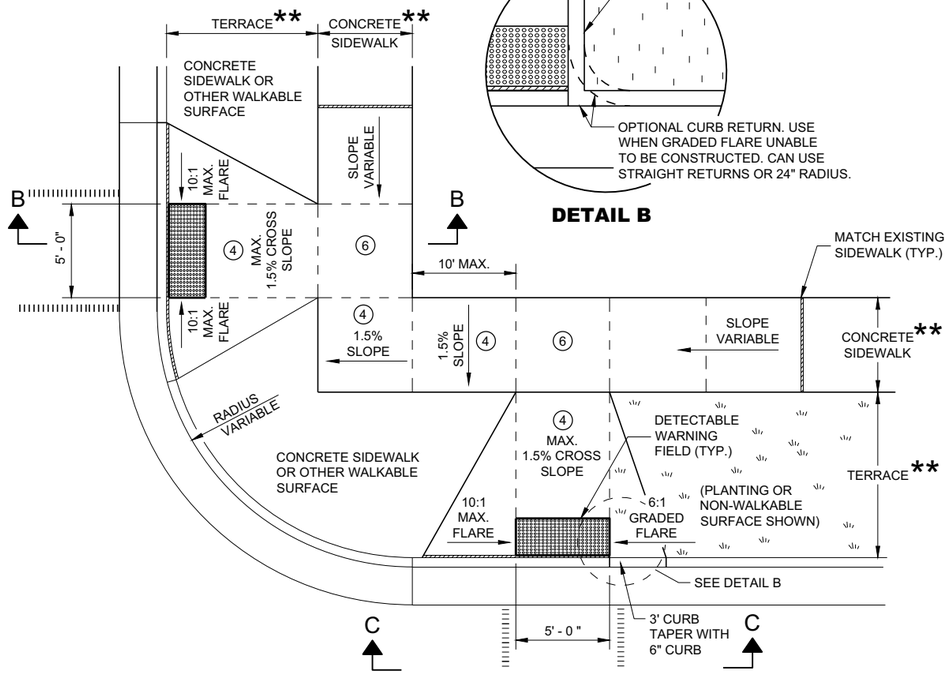
(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



SECTION A - A FOR TYPE 2

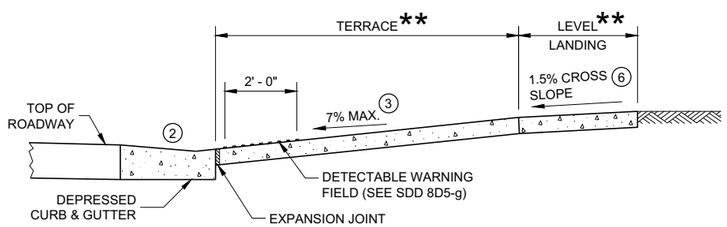
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

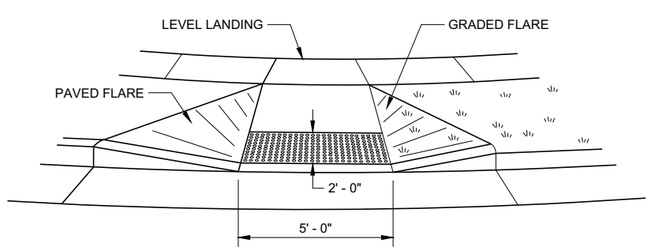


DETAIL B

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



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

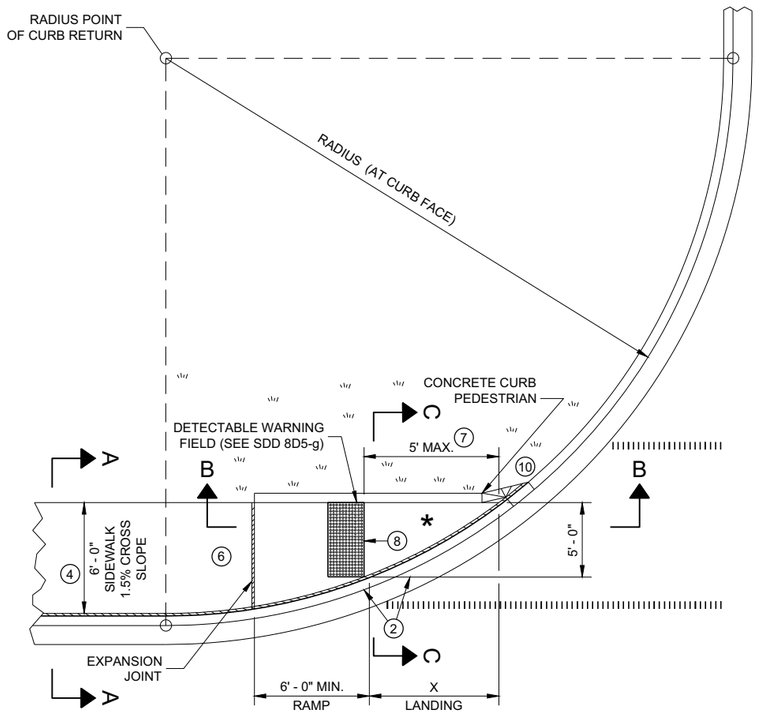
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20b

6

SDD 08D05 - 20b

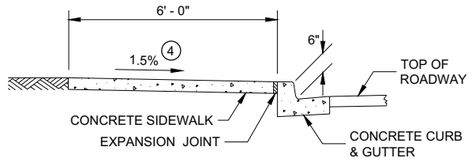


PLAN VIEW

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.

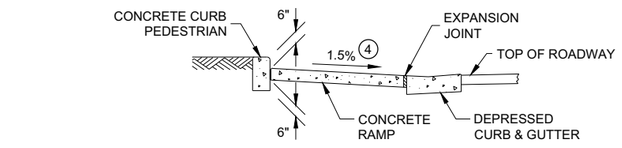
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

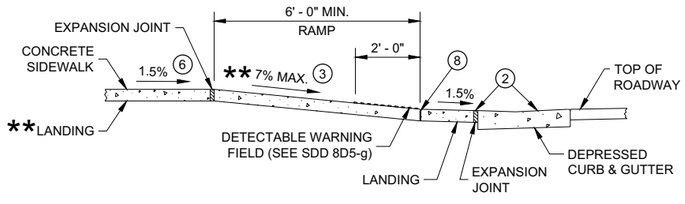
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)



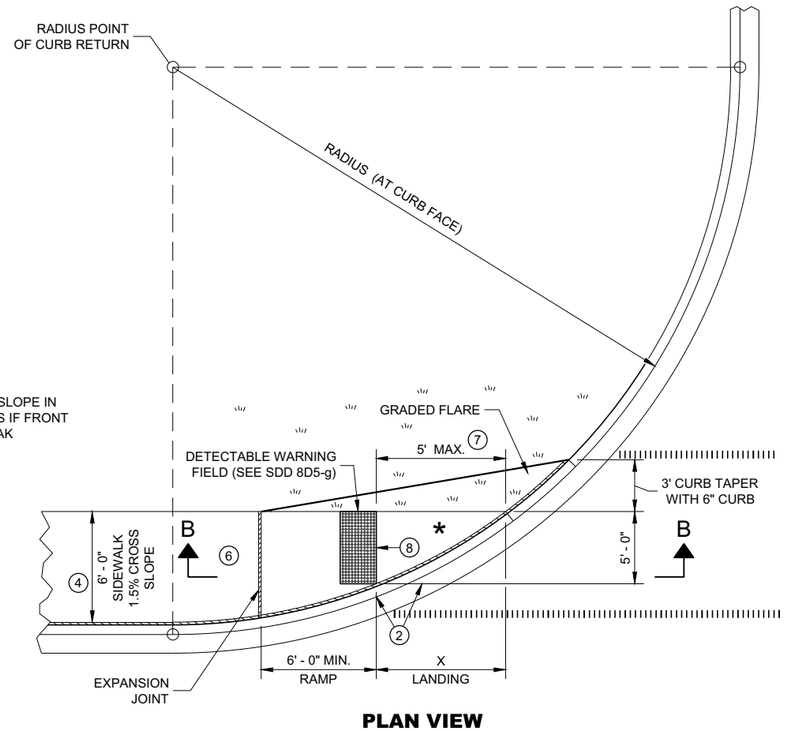
SECTION C - C FOR TYPE 4A



SECTION B - B FOR TYPE 4A AND TYPE 4A1

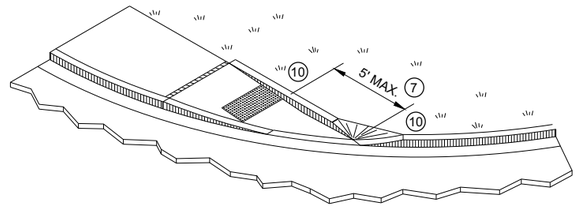
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

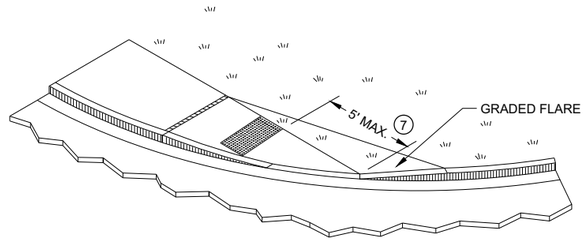


PLAN VIEW

CURB RAMP TYPE 4A1



ISOMETRIC VIEW FOR TYPE 4A



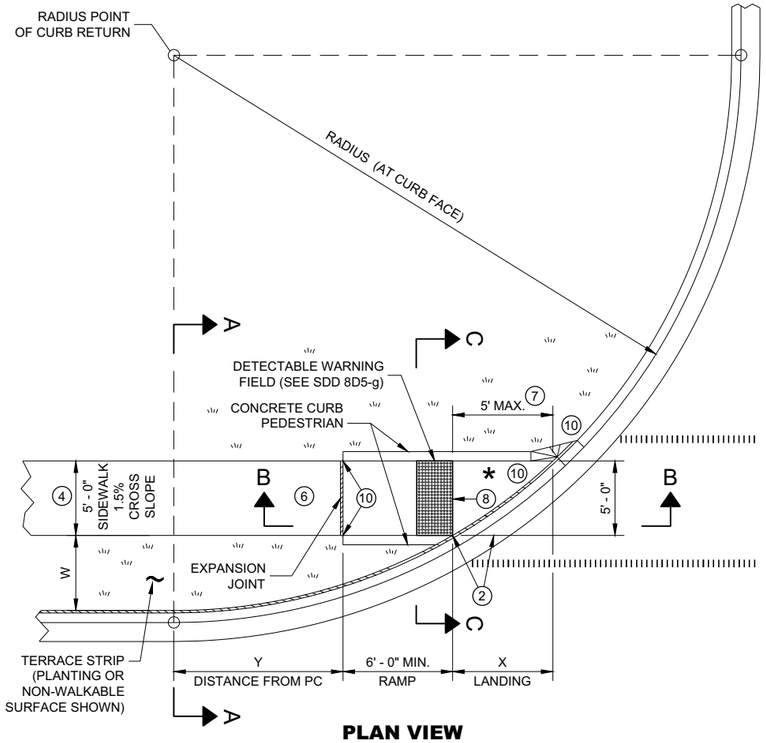
ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20c

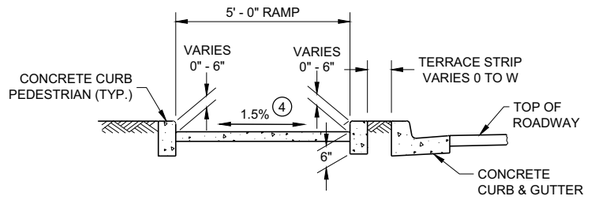


PLAN VIEW

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.

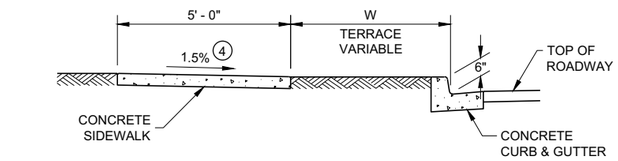
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

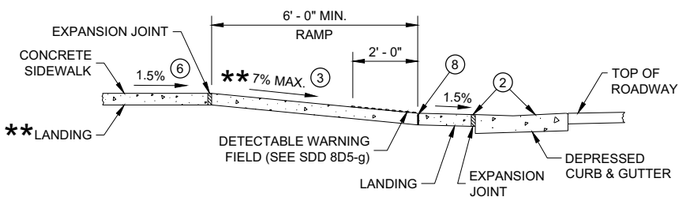
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



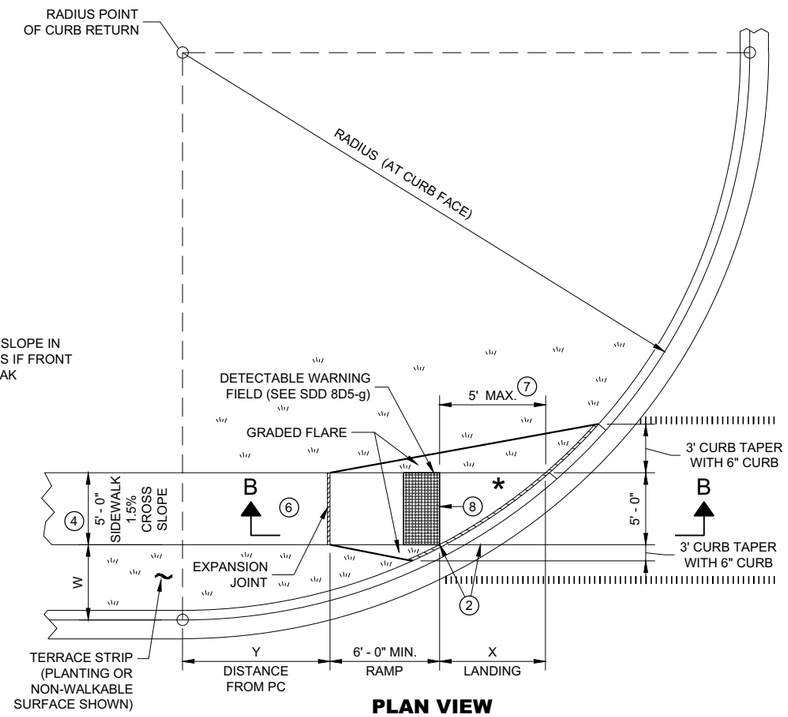
SECTION A - A FOR TYPE 4B



SECTION B - B FOR TYPE 4B AND TYPE 4B1

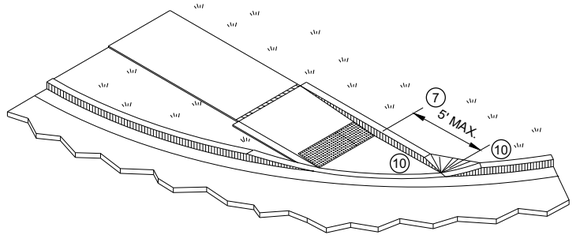
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

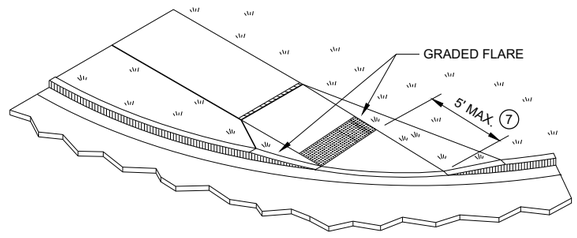


PLAN VIEW

CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B

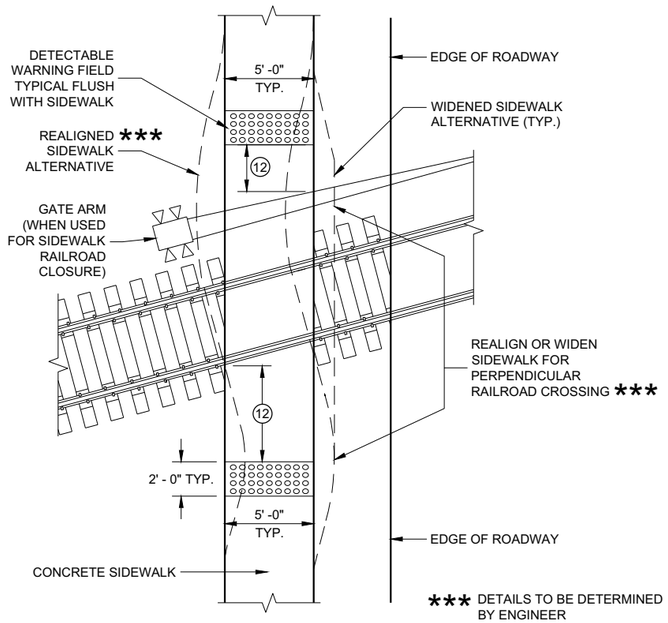


ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

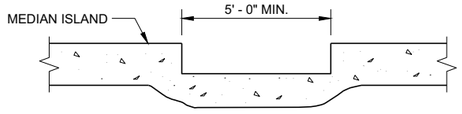
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D05 - 20d

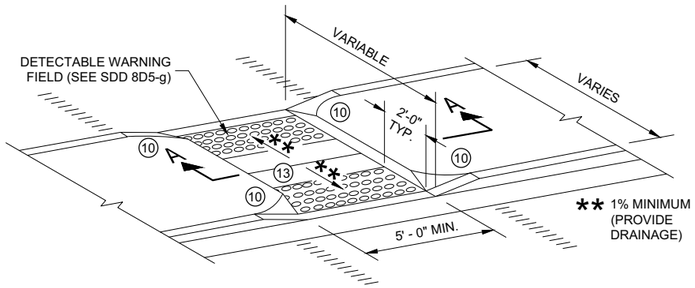


CURB RAMP TYPE 8

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.

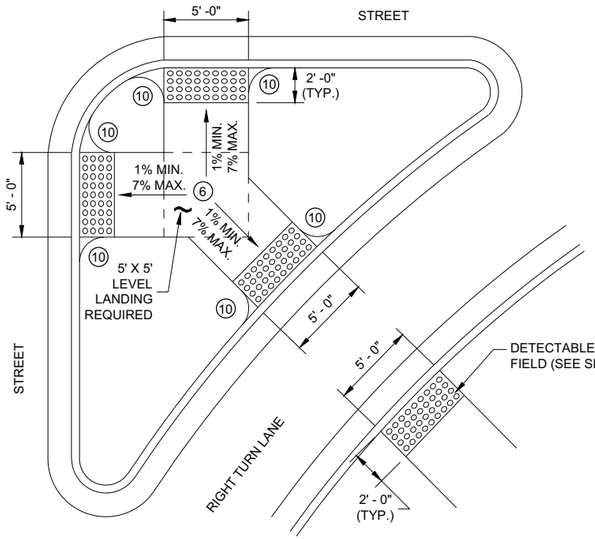
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(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

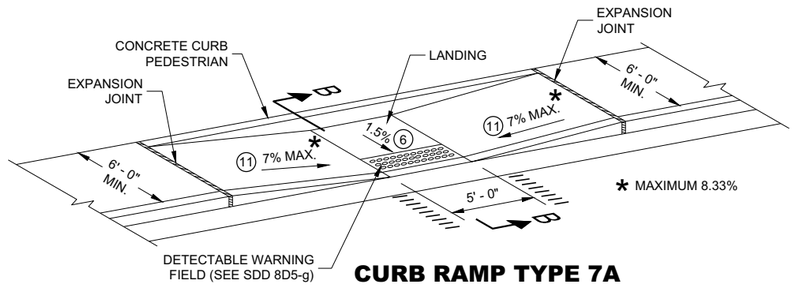
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



CURB RAMP TYPE 6

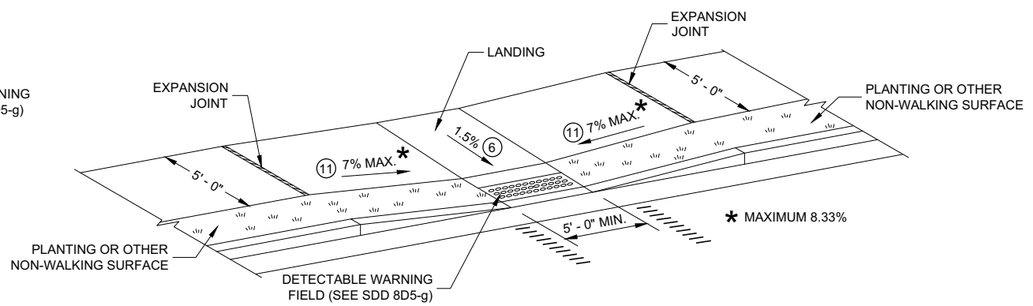
DETECTABLE WARNING AT ISLANDS

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



CURB RAMP TYPE 7A

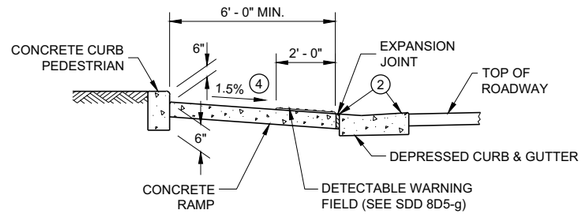
MID BLOCK CROSSING



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

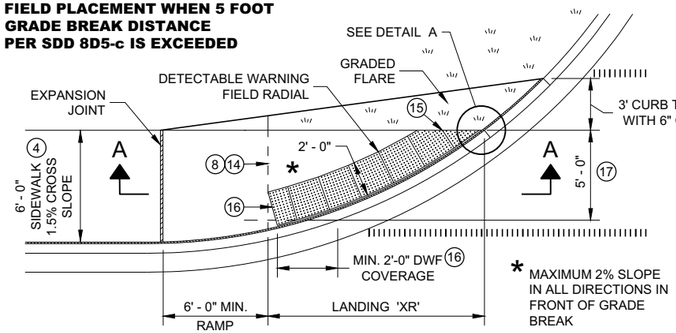
CURB RAMPS
TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20e

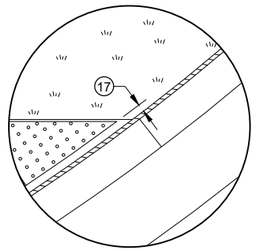
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



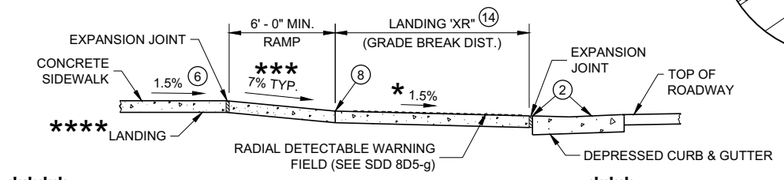
PLAN VIEW

CURB RAMP TYPE 4A1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL A

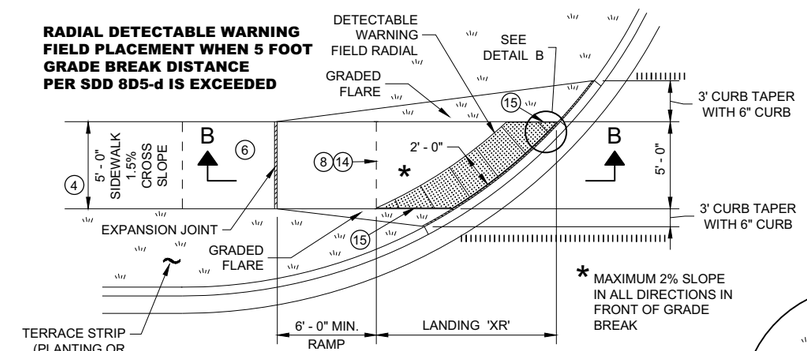


**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION A - A FOR TYPE 4A1

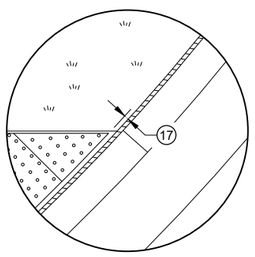
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



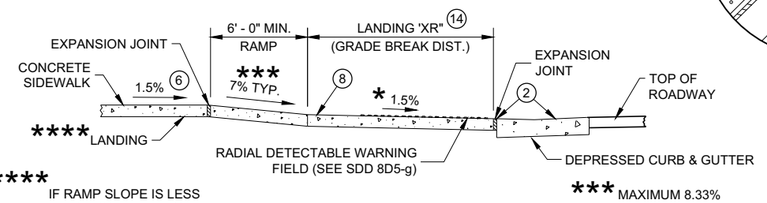
PLAN VIEW

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.

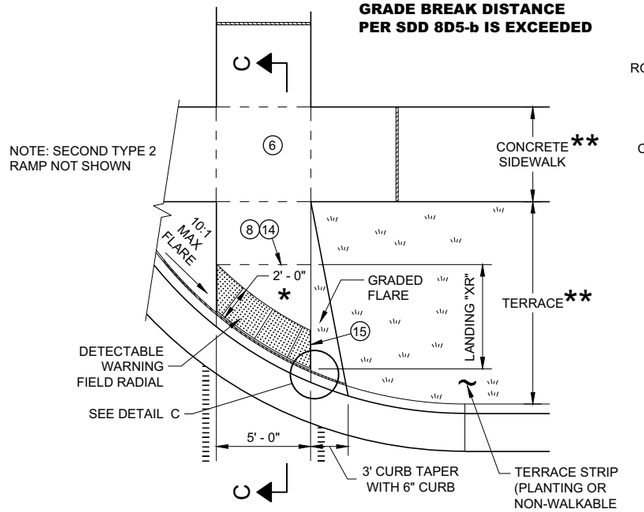
(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(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

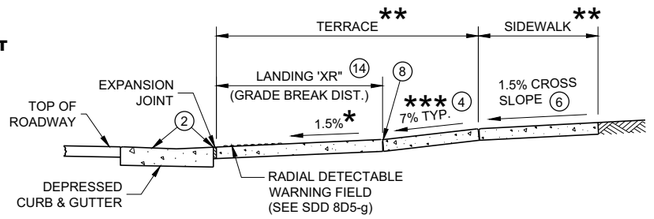


PLAN VIEW

CURB RAMP TYPE 2

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)

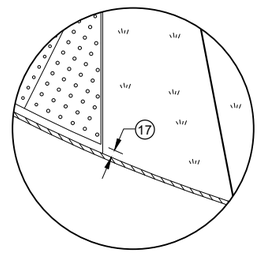


SECTION C - C FOR TYPE 2

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%



DETAIL C

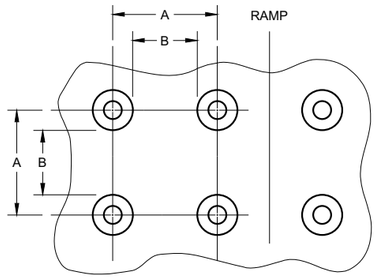
CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

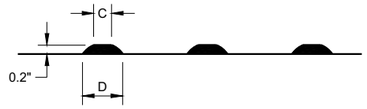
SDD 08D05 - 20f

	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.

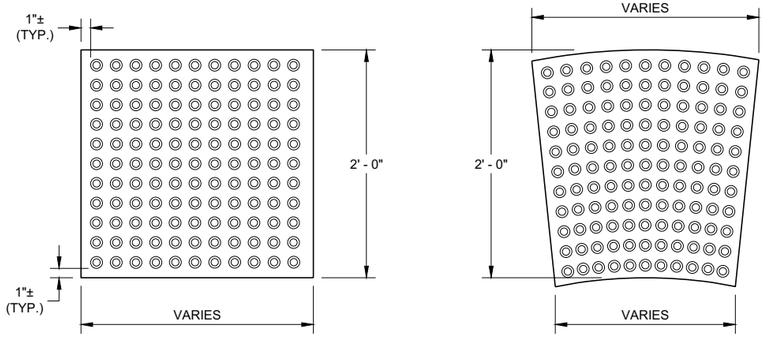


PLAN VIEW



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.

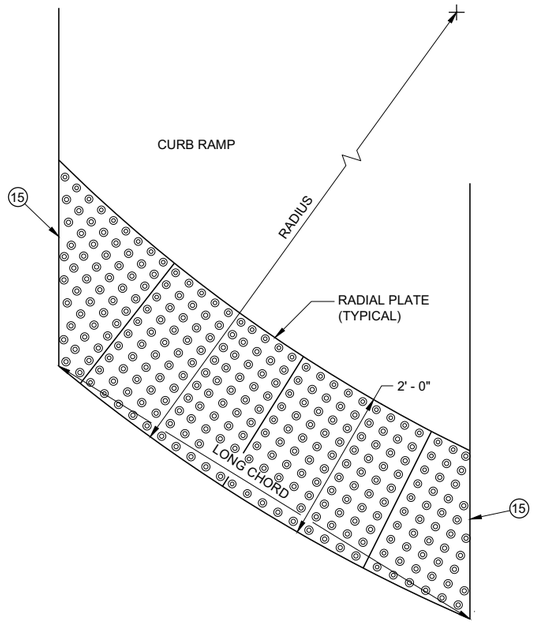
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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.

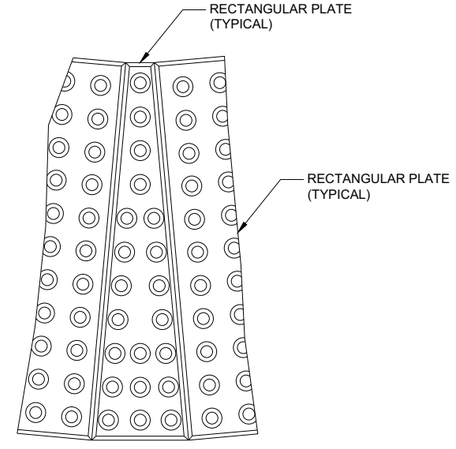
REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

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

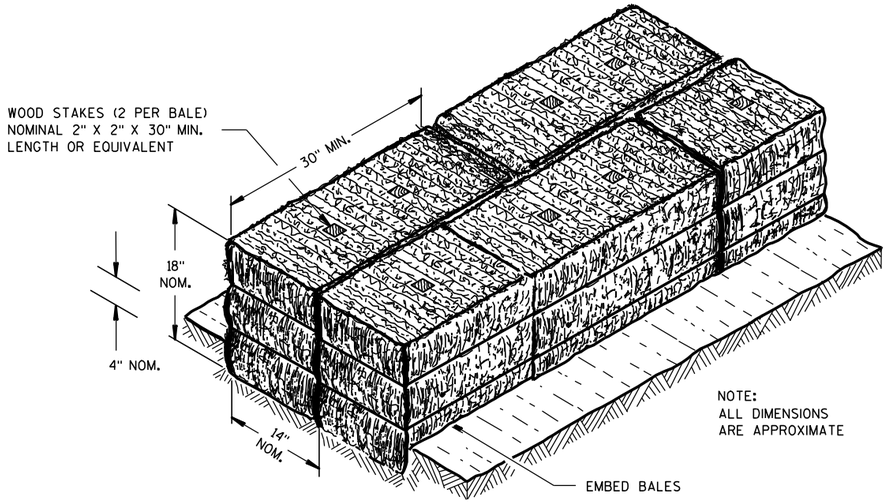
CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

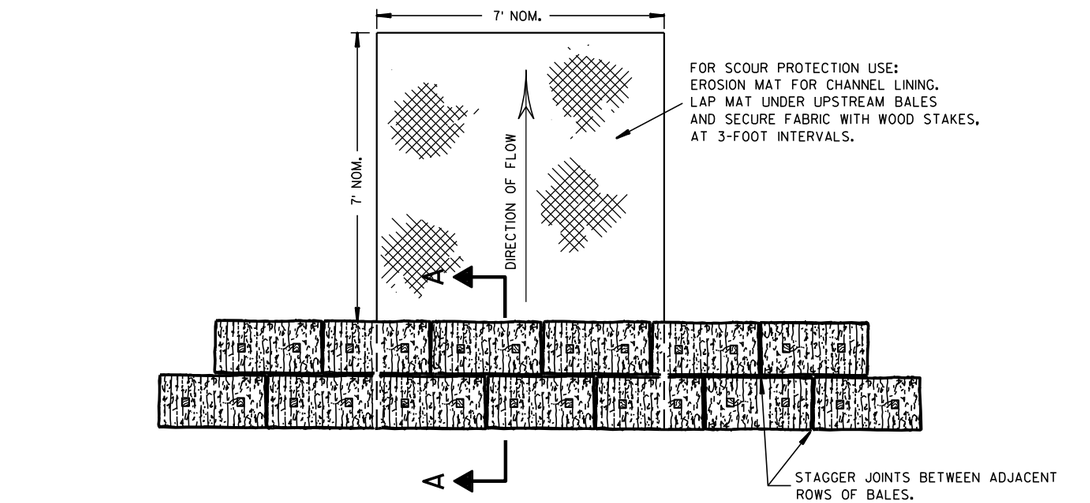
APPROVED
May 2019
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

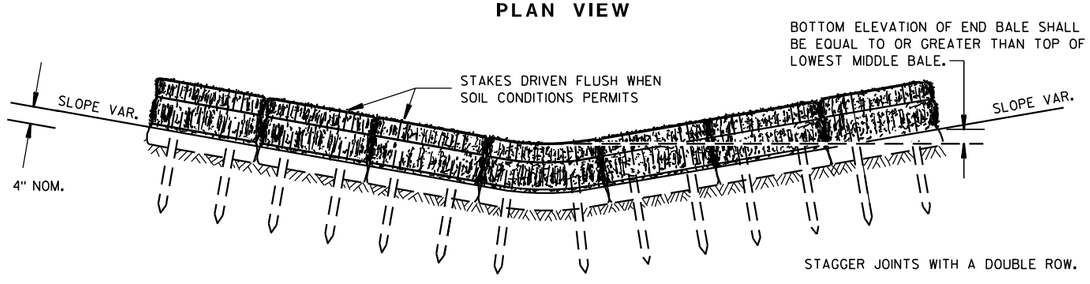
6
SDD 08D05 - 20g



SECTION A-A



PLAN VIEW



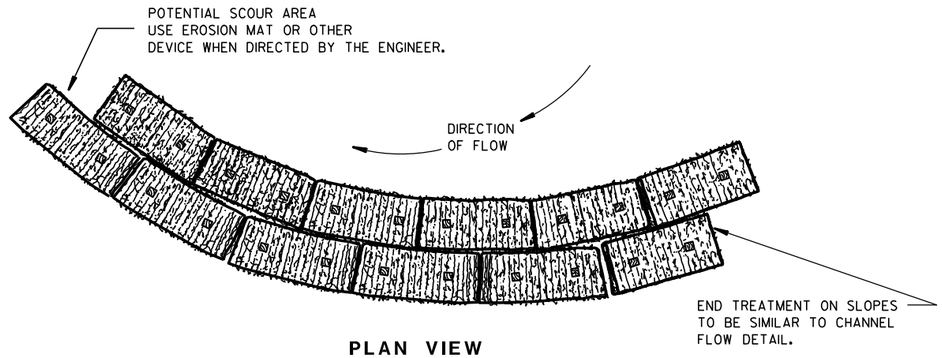
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

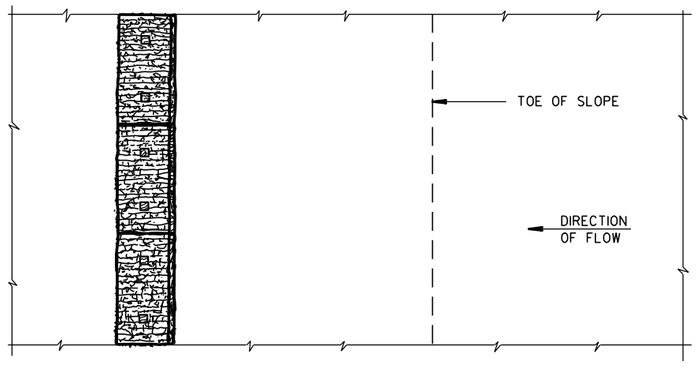
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

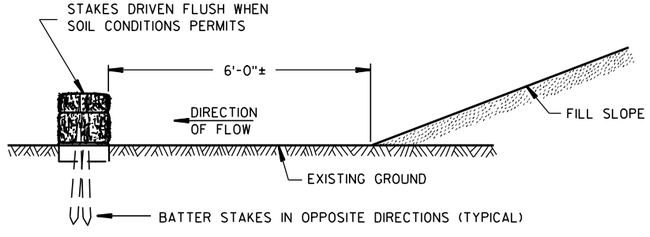


PLAN VIEW

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

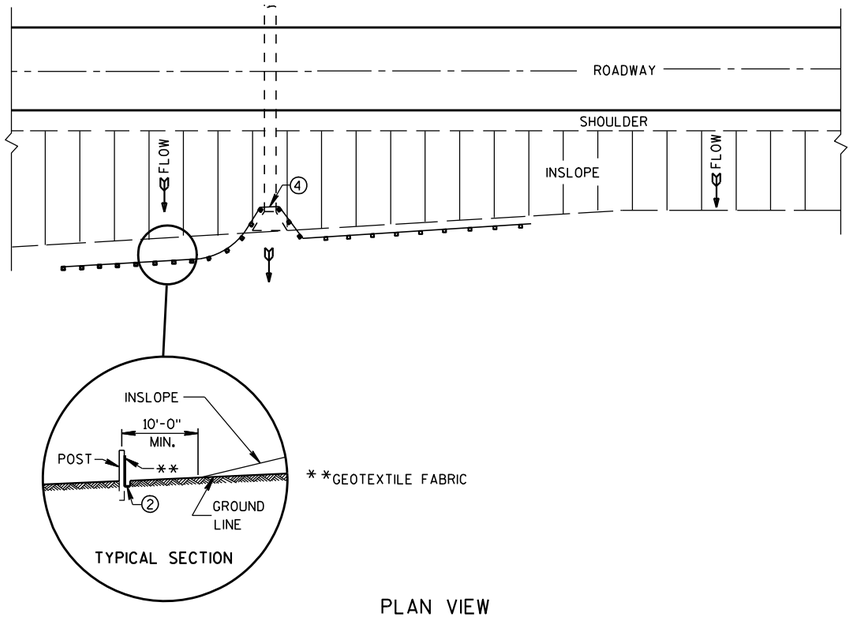
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

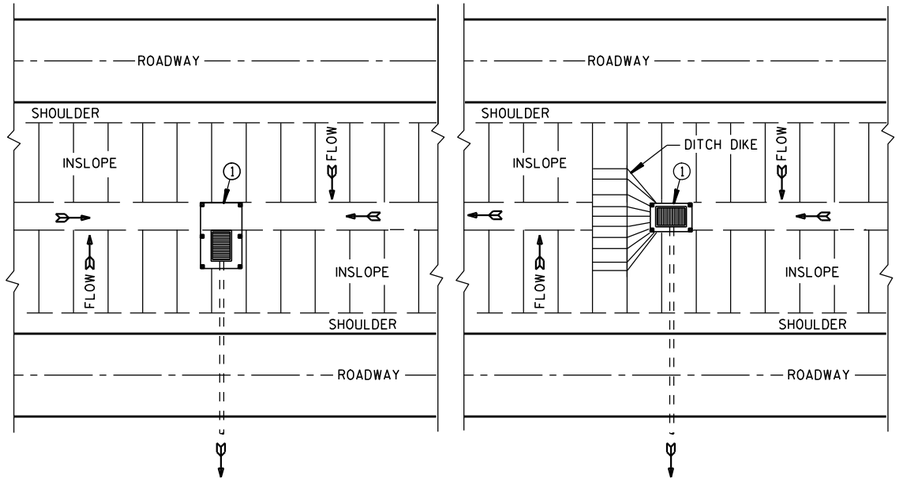
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



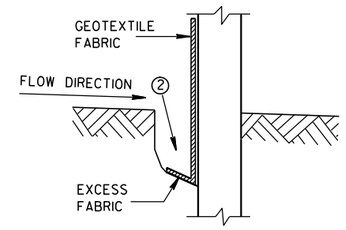
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

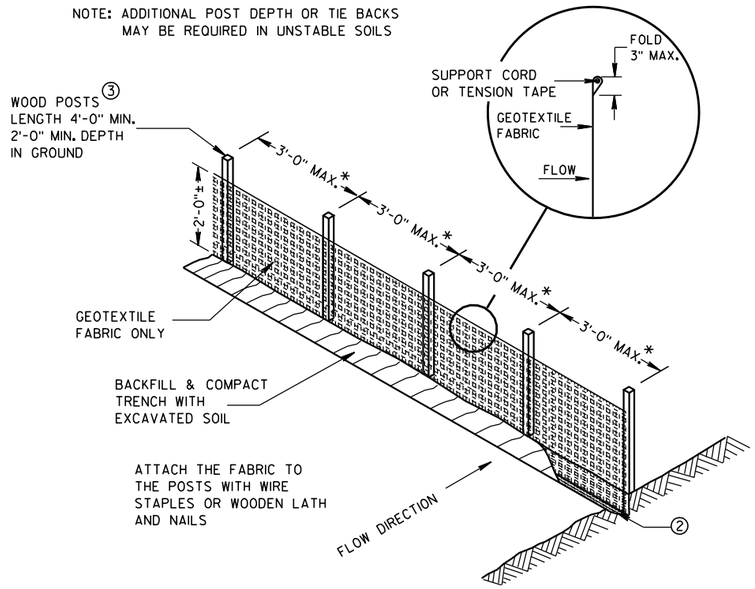
GENERAL NOTES

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

1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

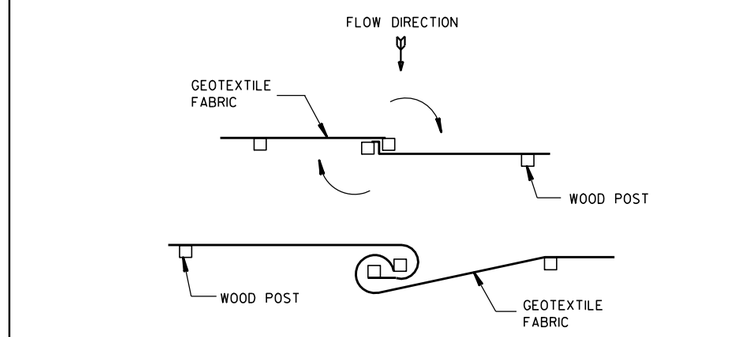


TRENCH DETAIL

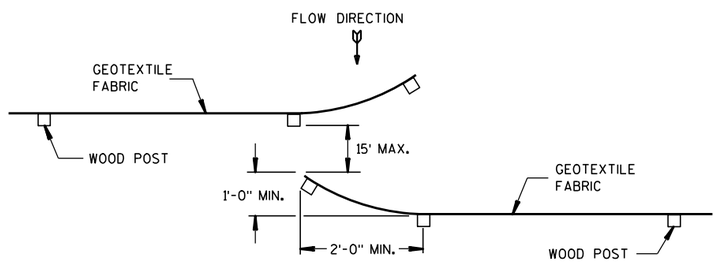


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

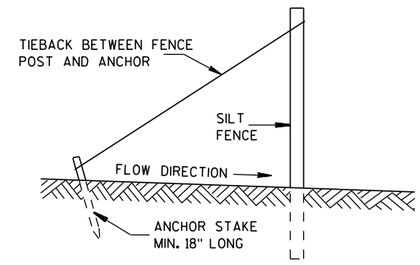


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

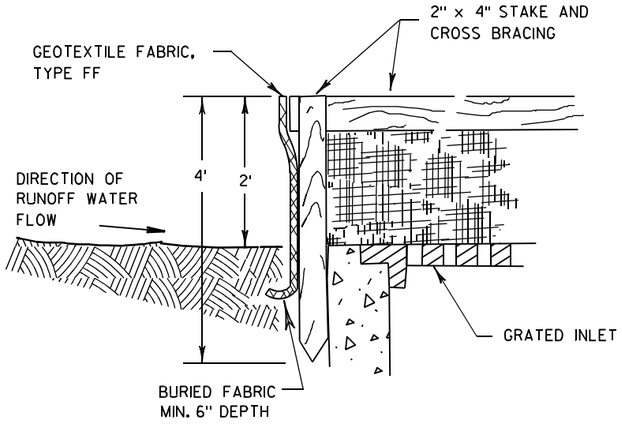
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

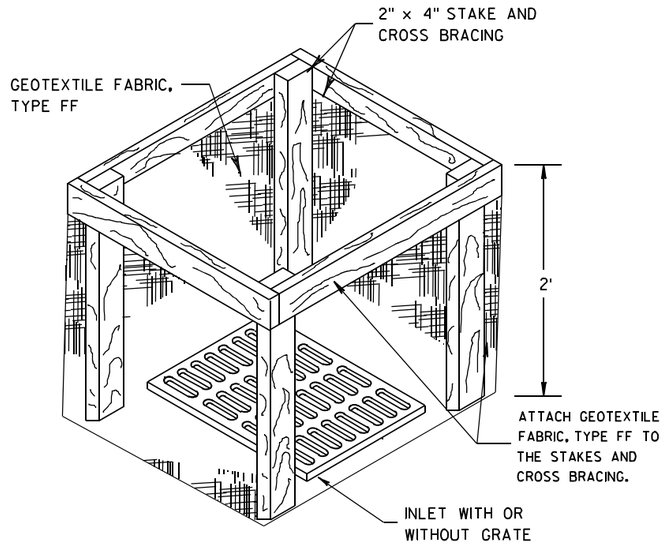
6

S.D.D. 8 E 9-6

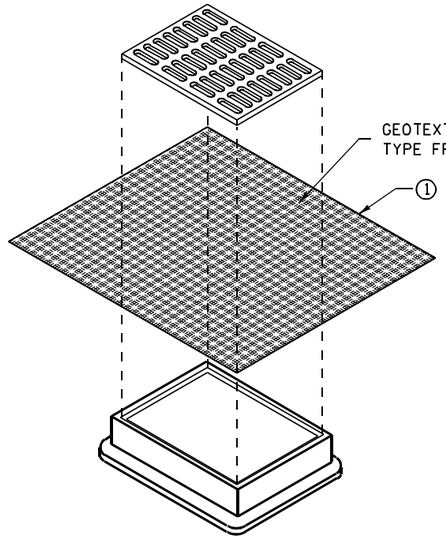
6

S.D.D. 8 E 9-6



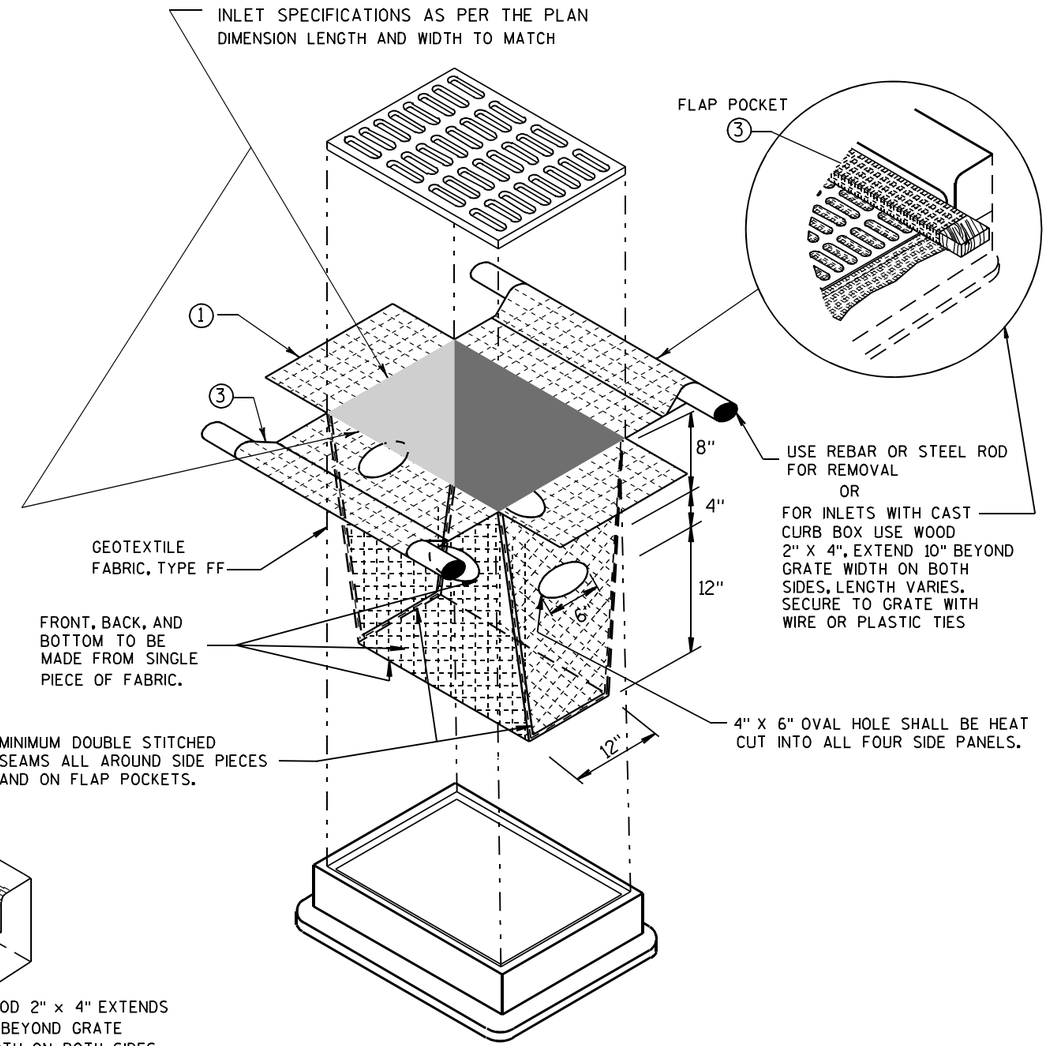


INLET PROTECTION, TYPE A



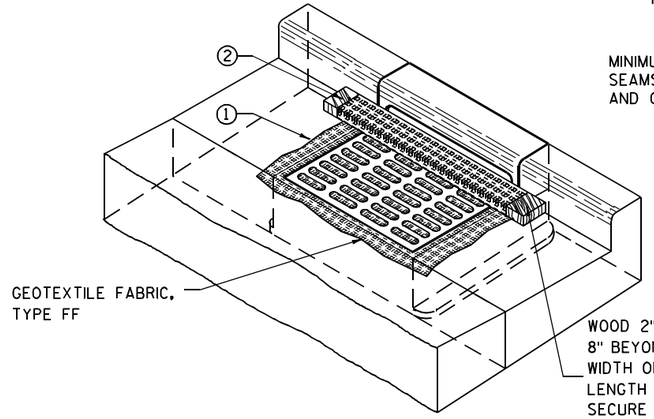
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

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.

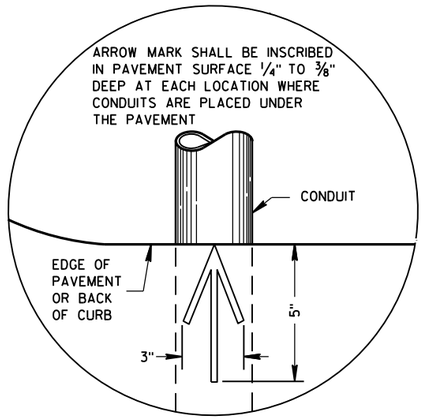
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

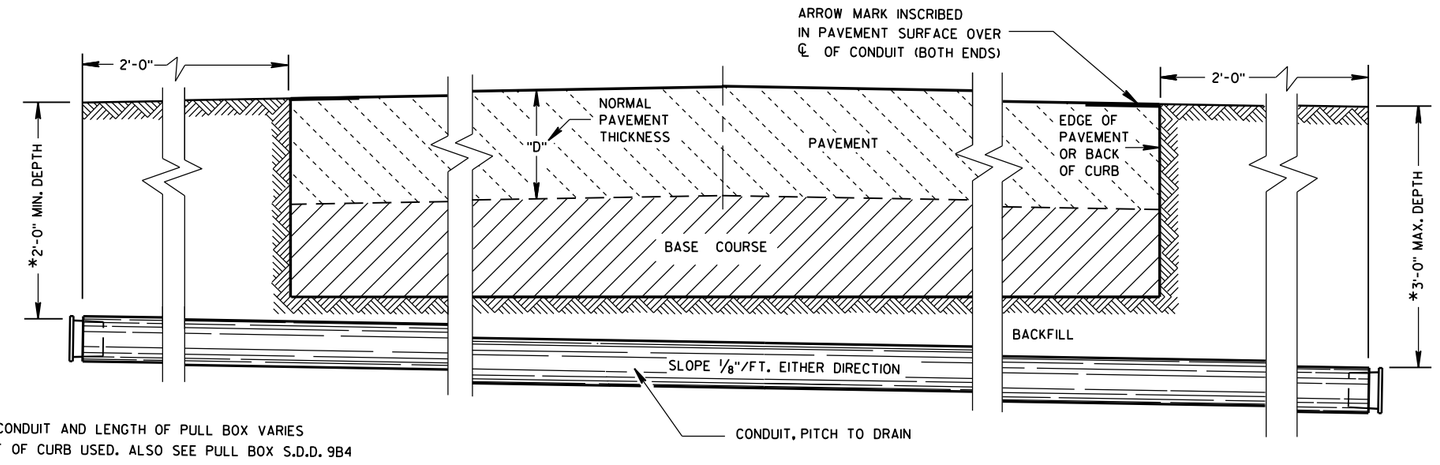
APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 10-2



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

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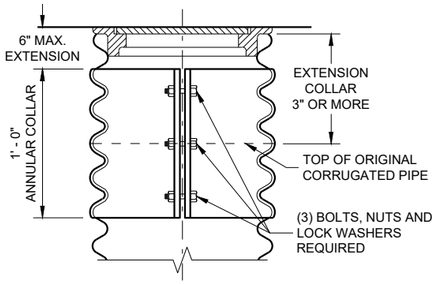
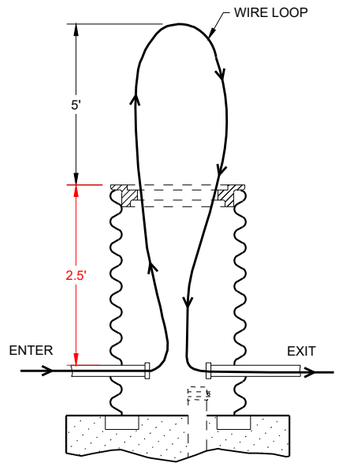
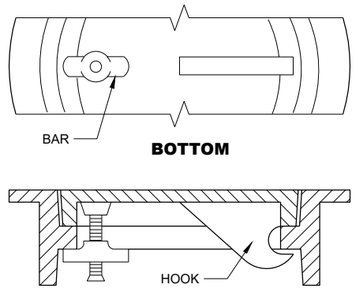
S.D.D. 9 B 2-10



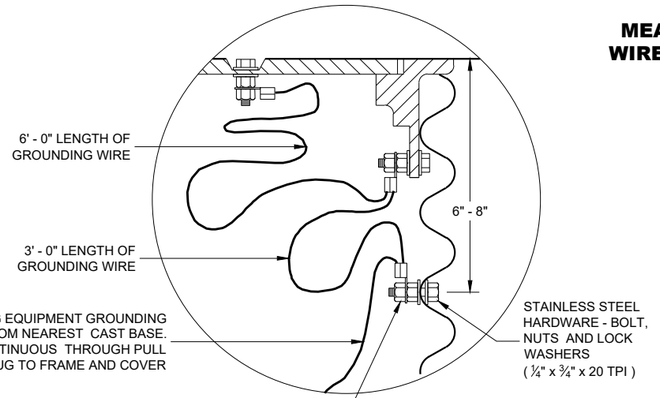
CORRUGATED PIPE EXTENDER



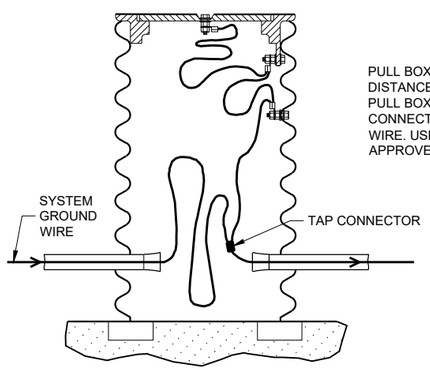
MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



ALTERNATE COVER (LOCKING)
TIGHTENING BAR TYPE

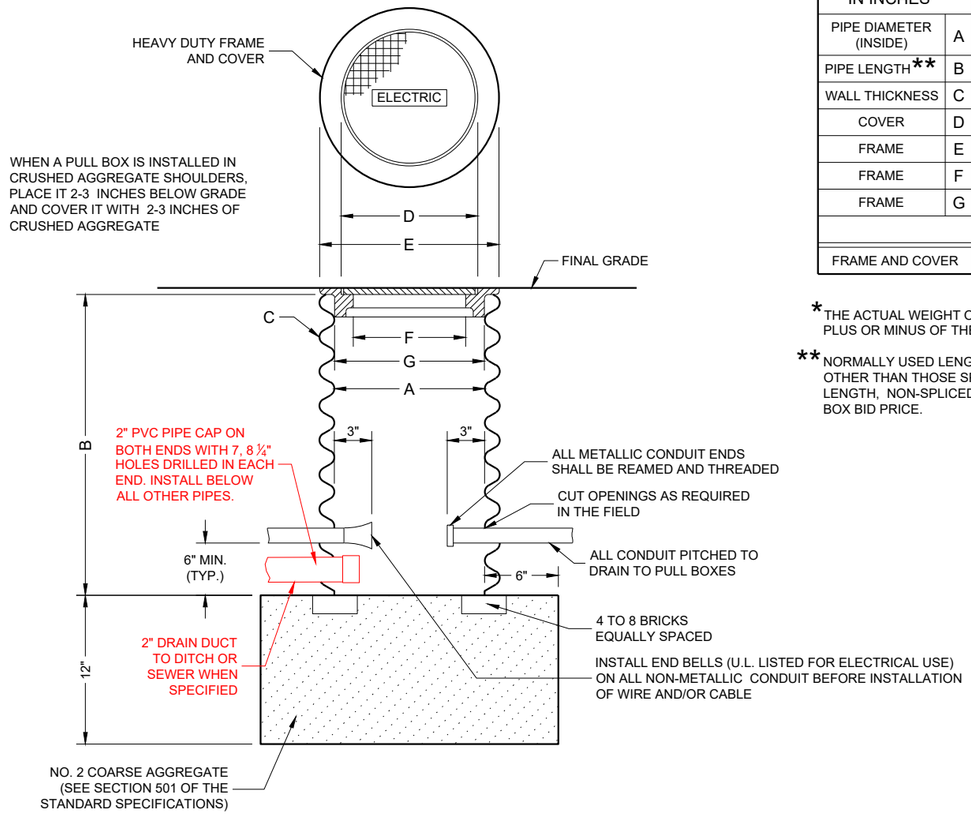


EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



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

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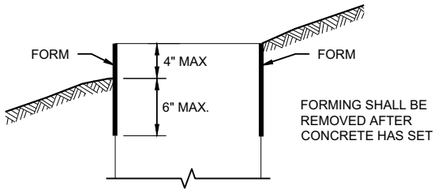
SDD 09B04-12

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.

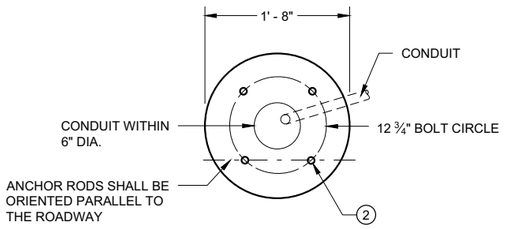
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

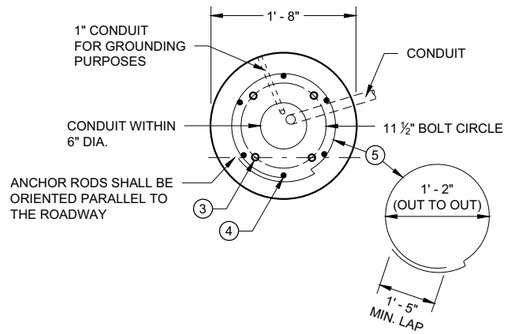
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

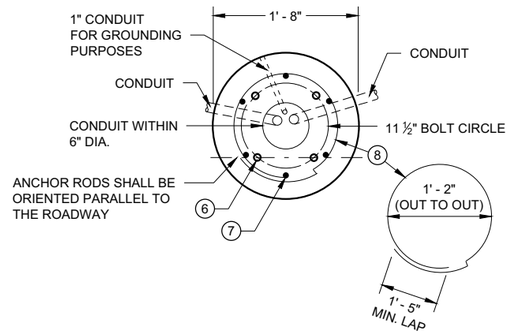
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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

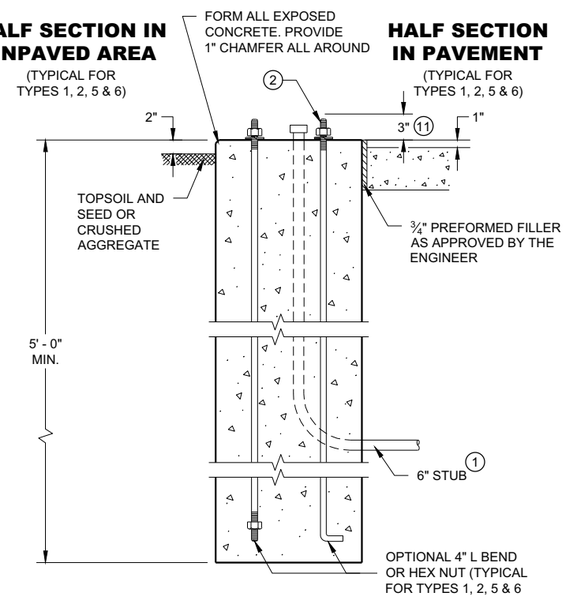
10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

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.

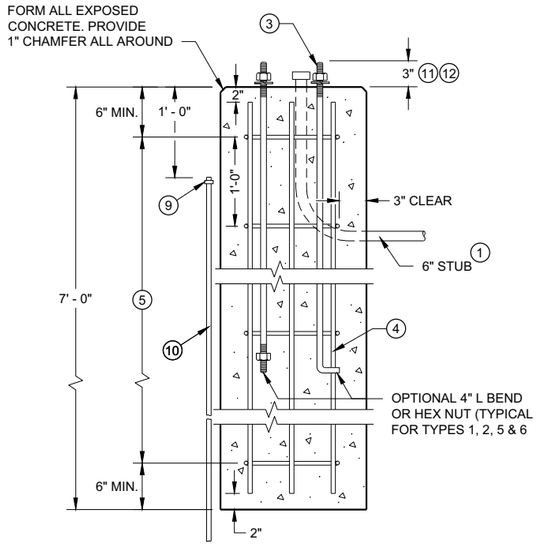
12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5 & 6)

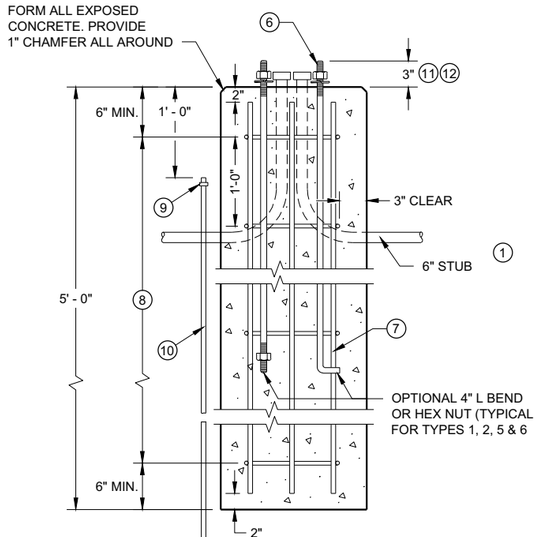
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5 & 6)



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

FHWA

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SDD 09C02 - 09

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.

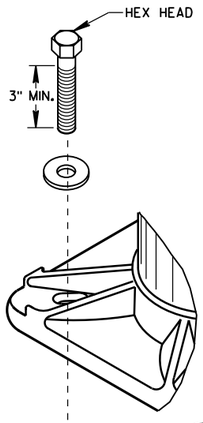
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

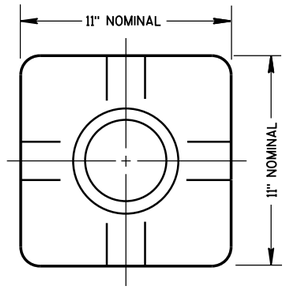
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

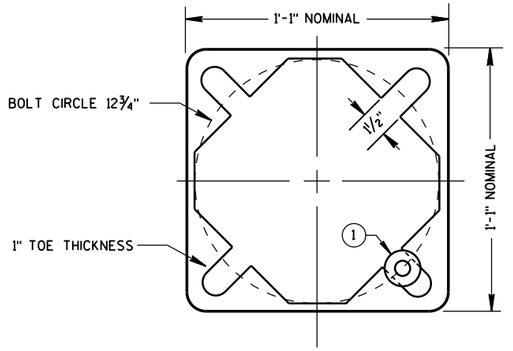
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

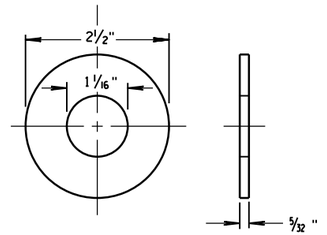




TOP VIEW
(PEDESTAL BASE)

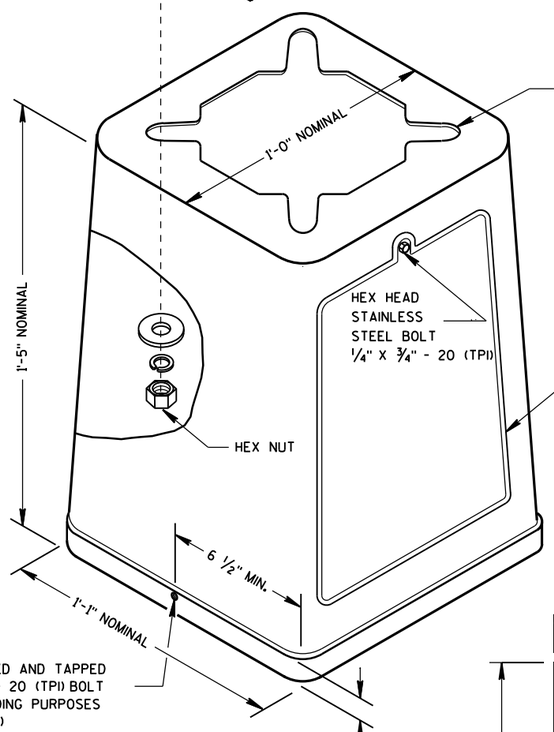


BOTTOM VIEW
(PEDESTAL BASE)

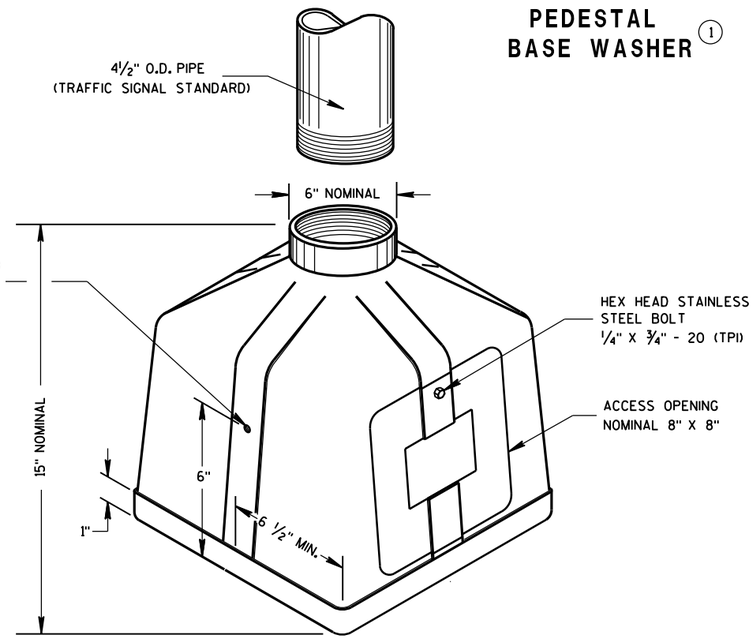


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

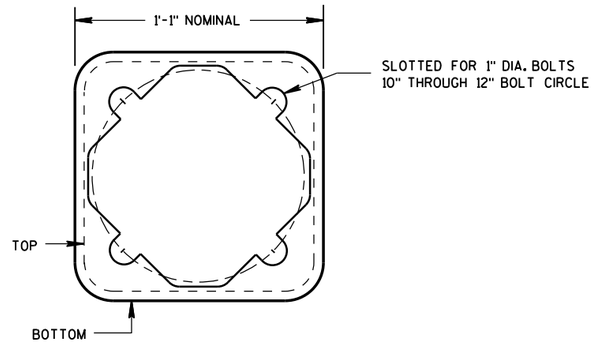


ISOMETRIC VIEW

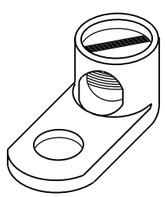


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

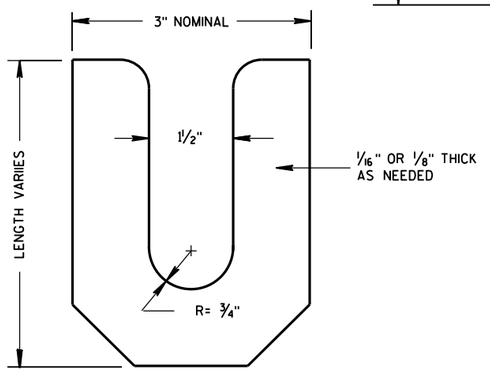


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

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



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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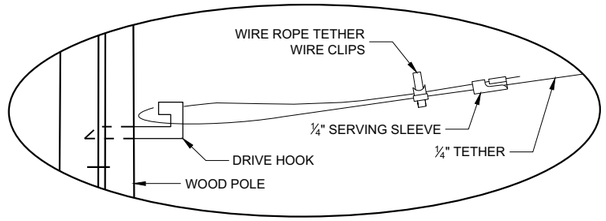
S.D.D. 9 C 3-4

MINIMUM POLE LENGTHS	POLE BURIAL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

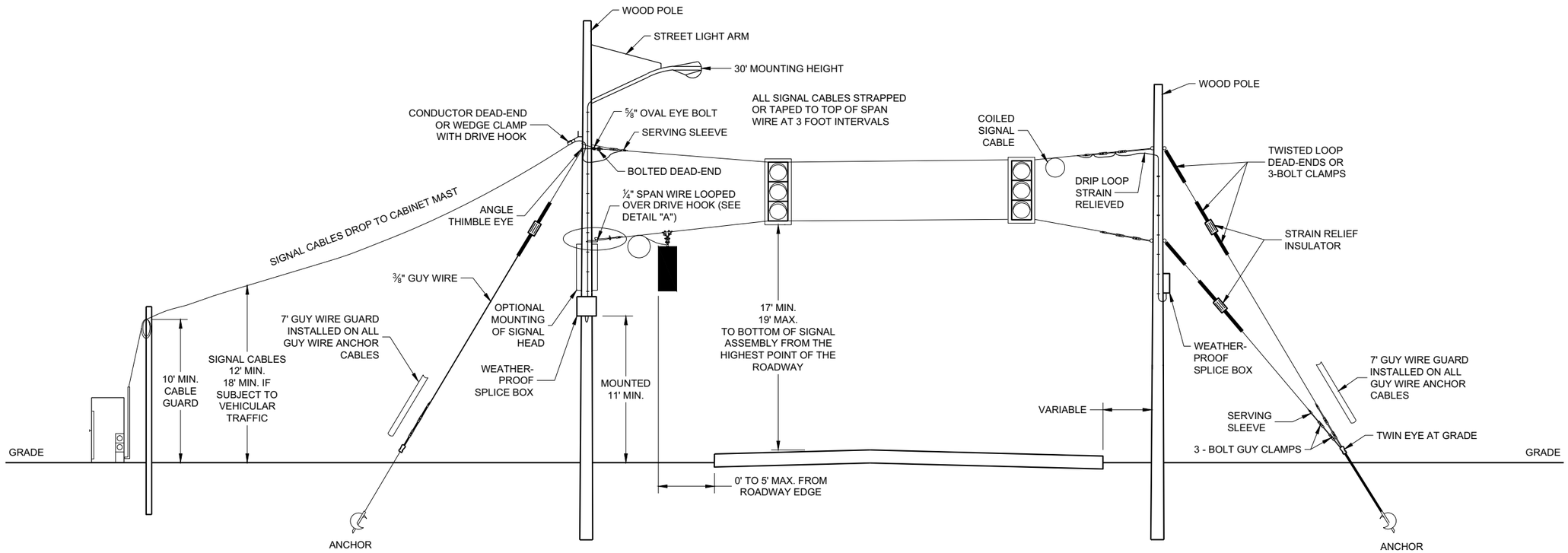


DETAIL "A"

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

FHWA

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SDD09G01 - 04a

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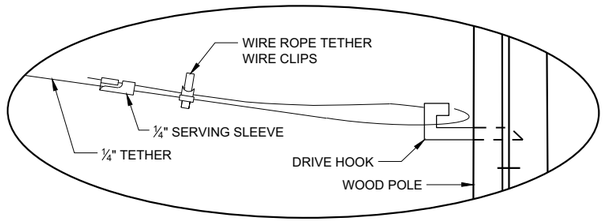
MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'



DETAIL "A"

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   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
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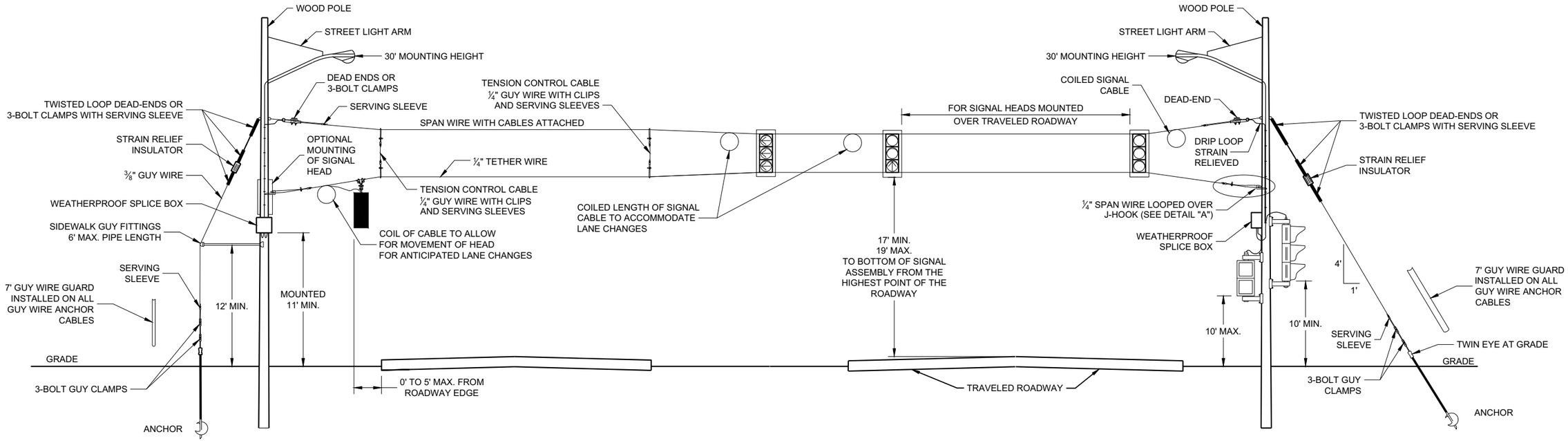


SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

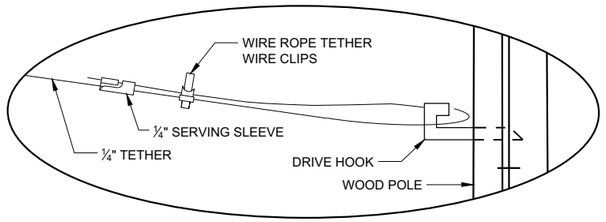
APPROVED
June 2015
DATE
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI

FHWA

SDD09G01 - 04b

SDD09G01 - 04b

MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'



DETAIL "A"

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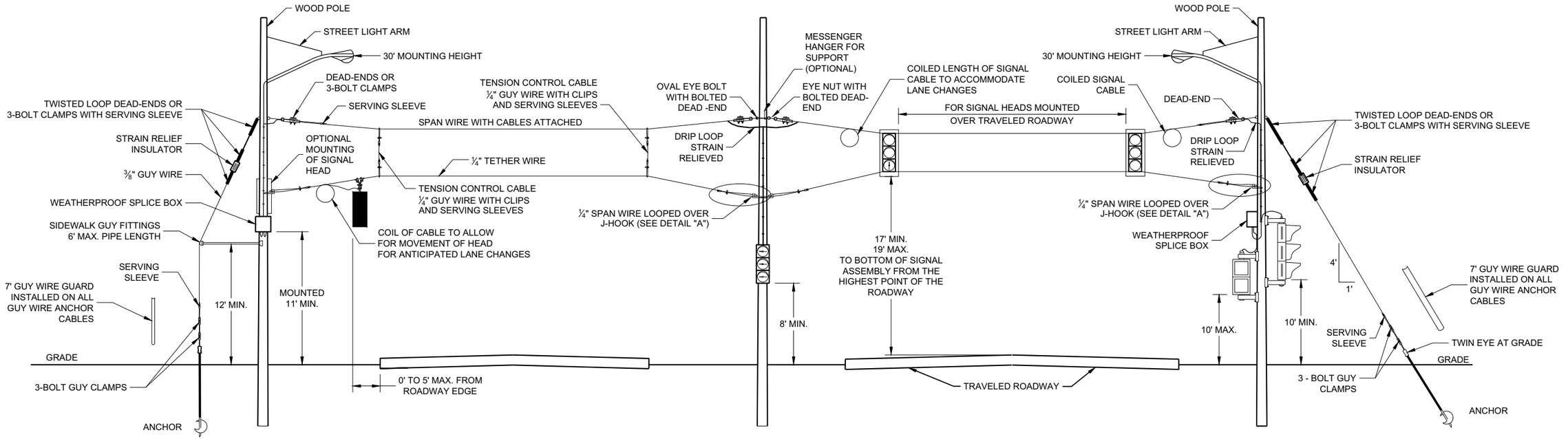

SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

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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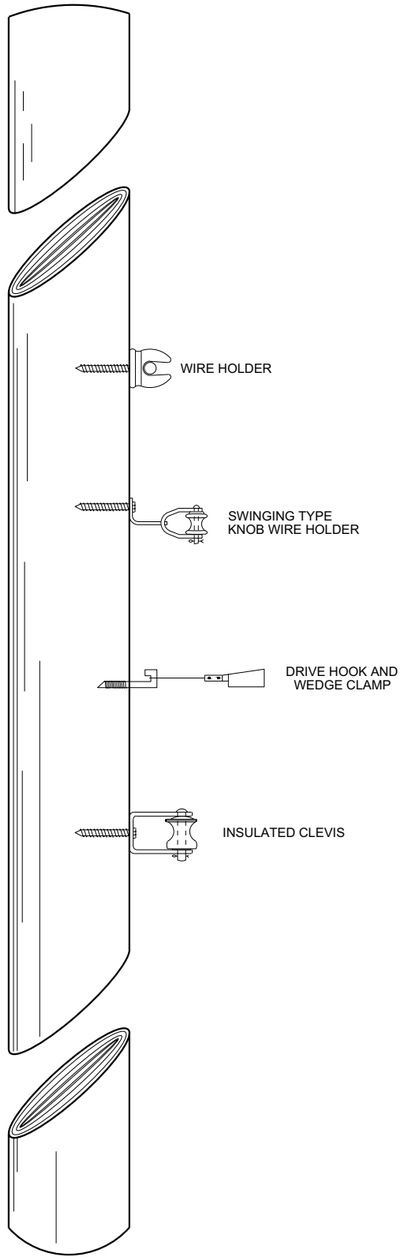

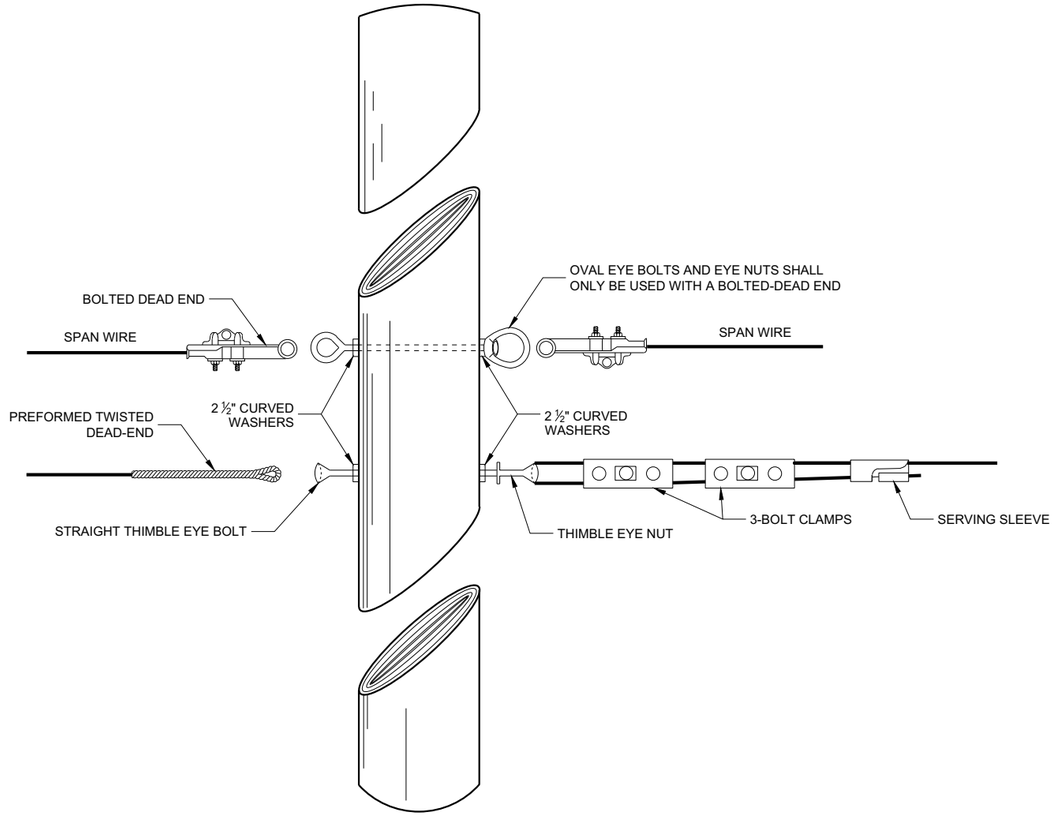

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SDD 09G01 - 4d

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

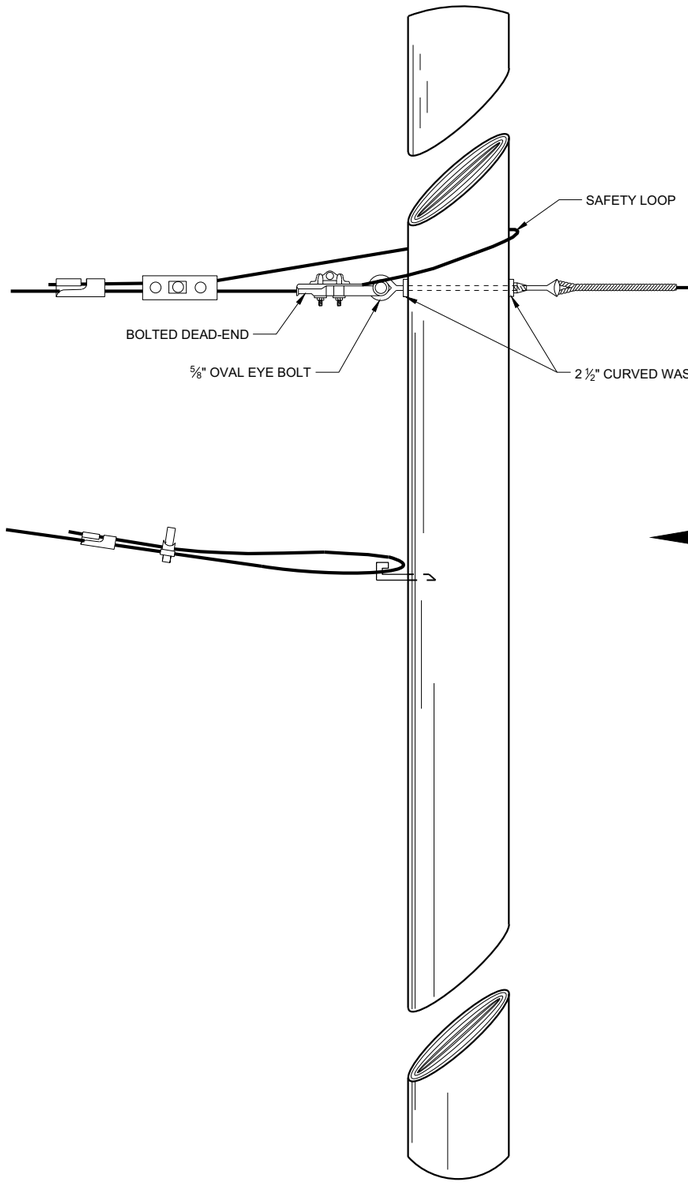
June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

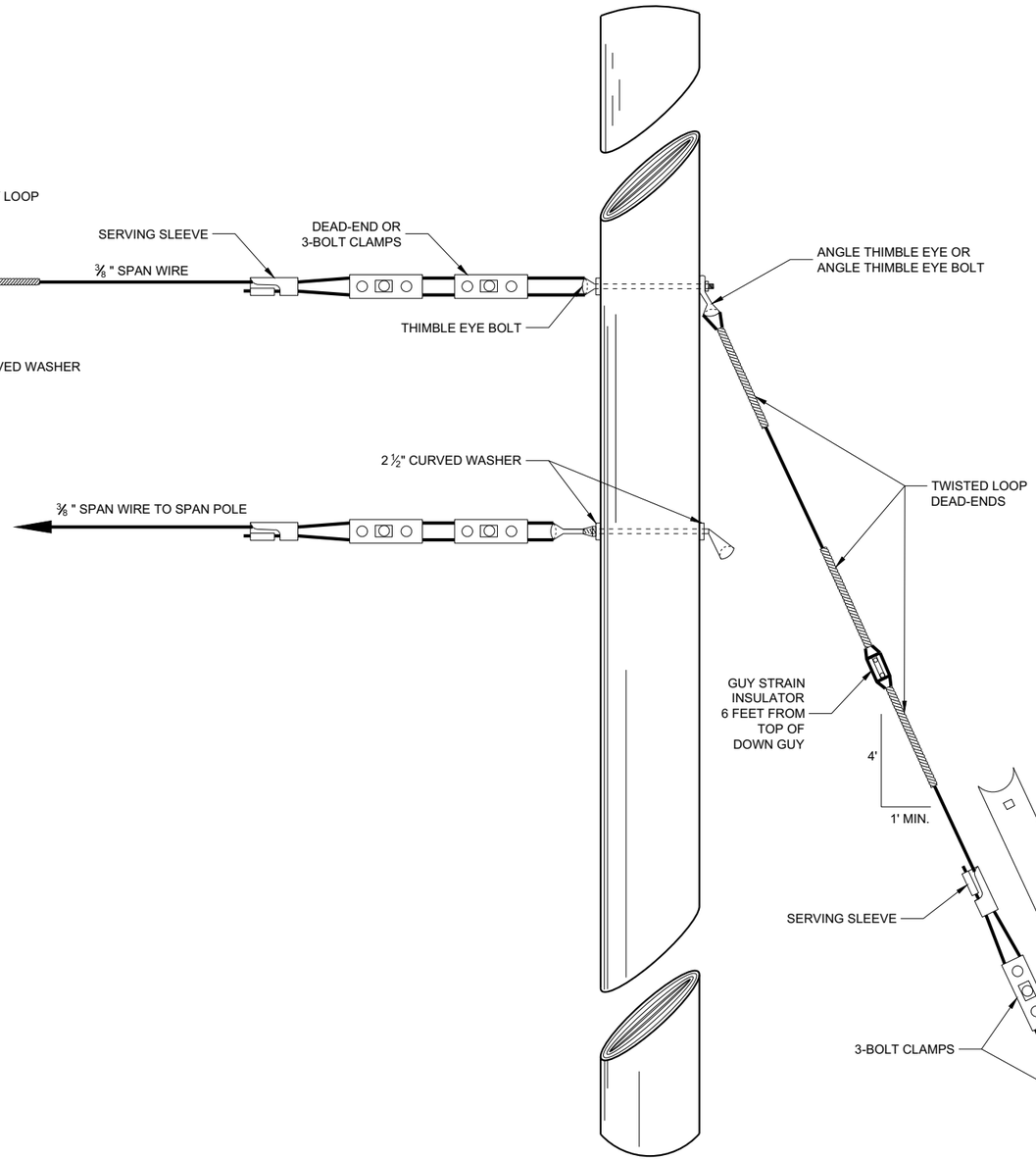
FHWA

GENERAL NOTES

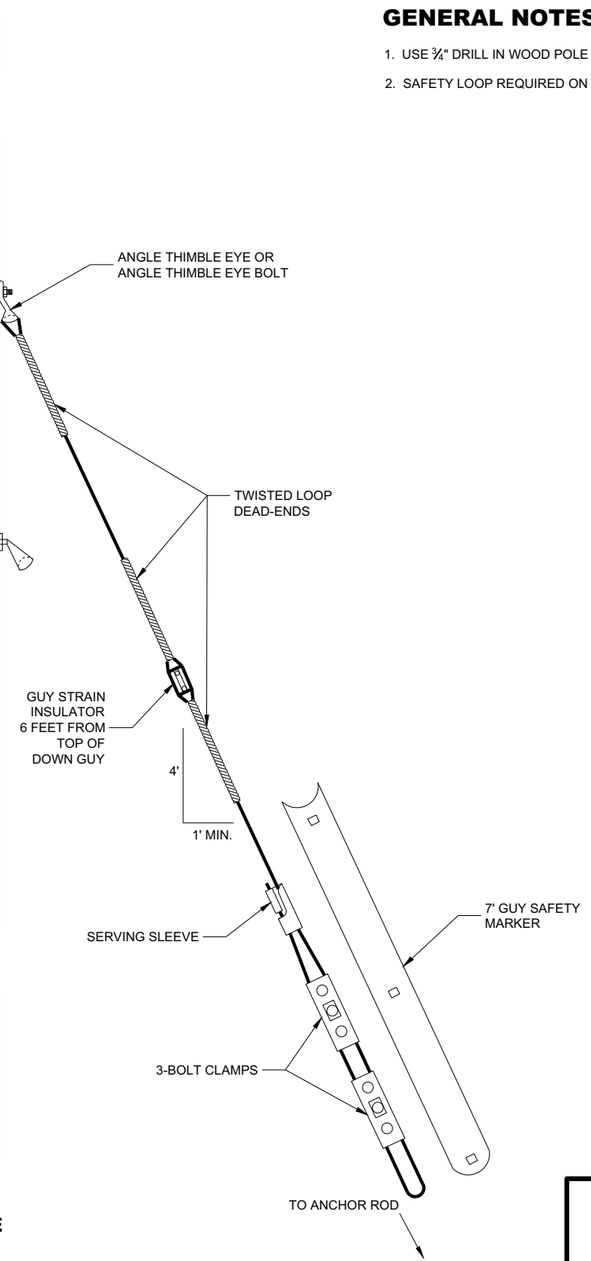
1. USE ¾" DRILL IN WOOD POLE TO PROVIDE FOR ⅝" BOLTS.
2. SAFETY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



SPAN WIRE POLE



GUY POLE



TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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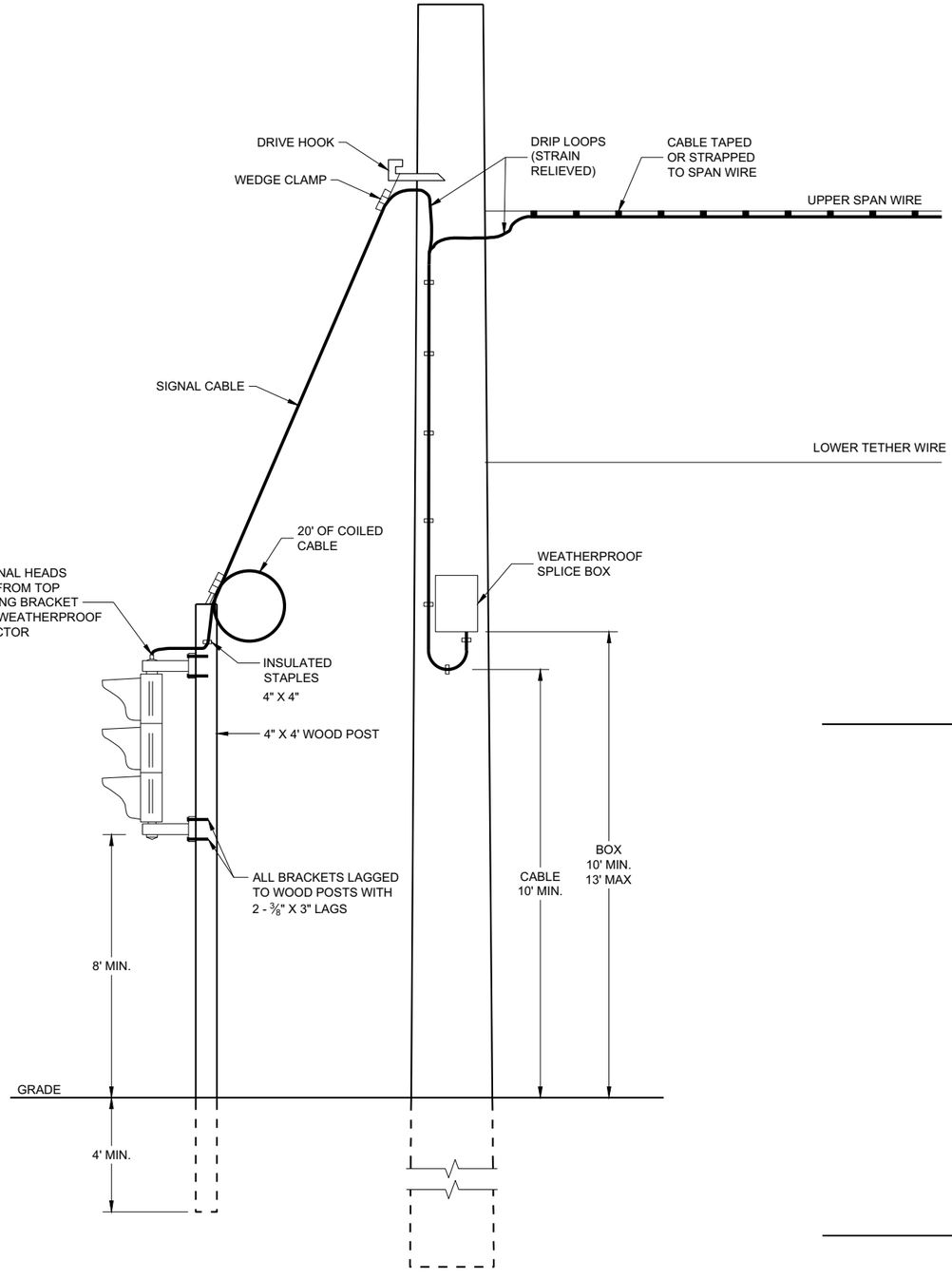
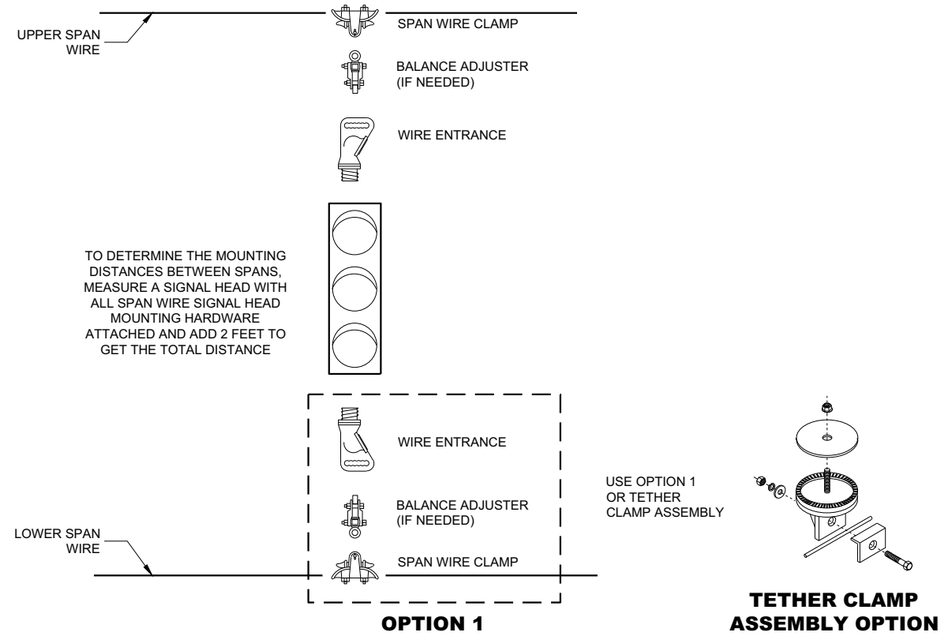
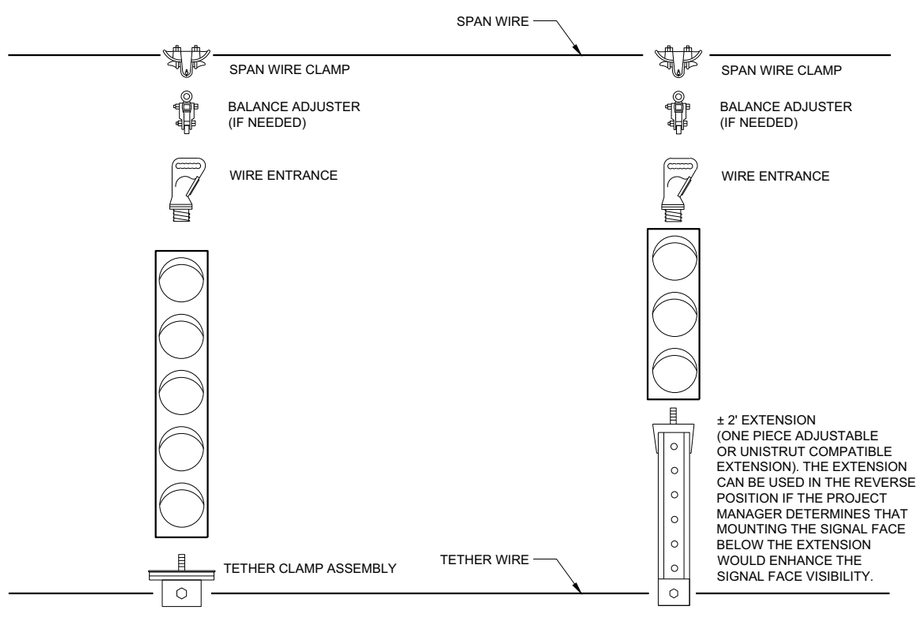


TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL



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

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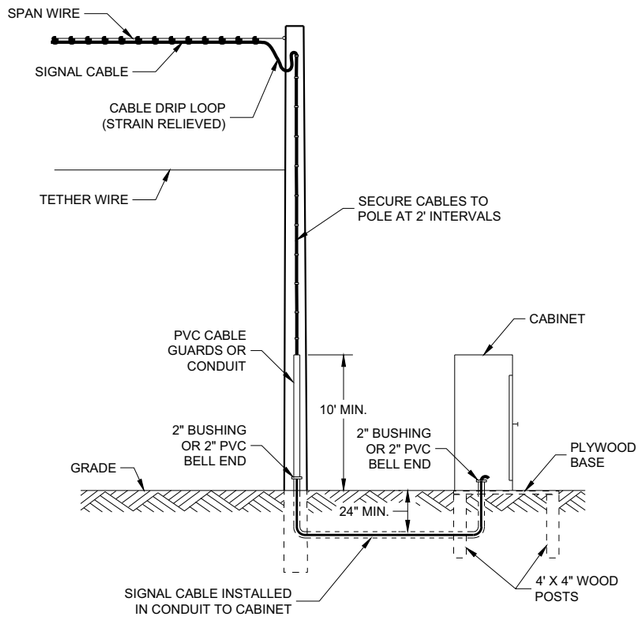
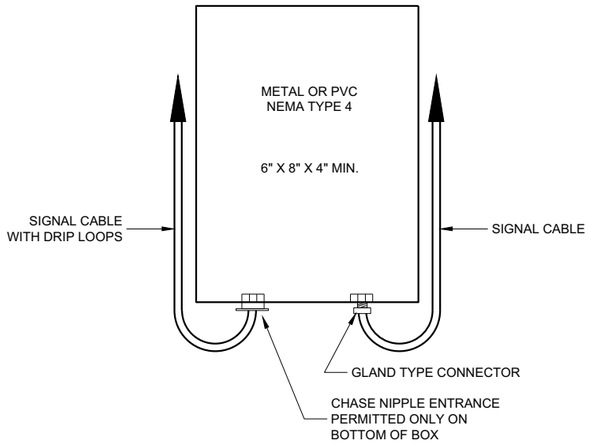
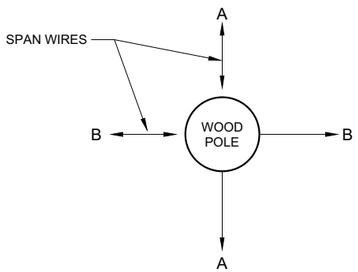




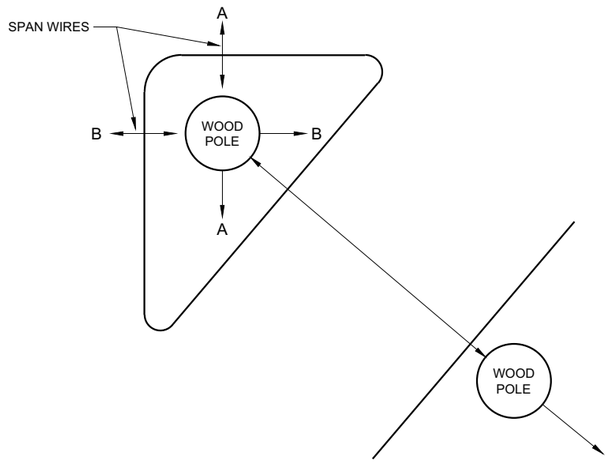
SPLICE BOX

TYPICAL SKID TYPE TEMPORARY

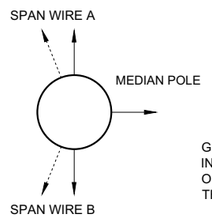


ALL DOWN OR SIDEWALK GUYS SHALL BE INSTALLED IN THE OPOSITE DIRECTION OF THE STRAIN OF THE SPAN WIRE

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

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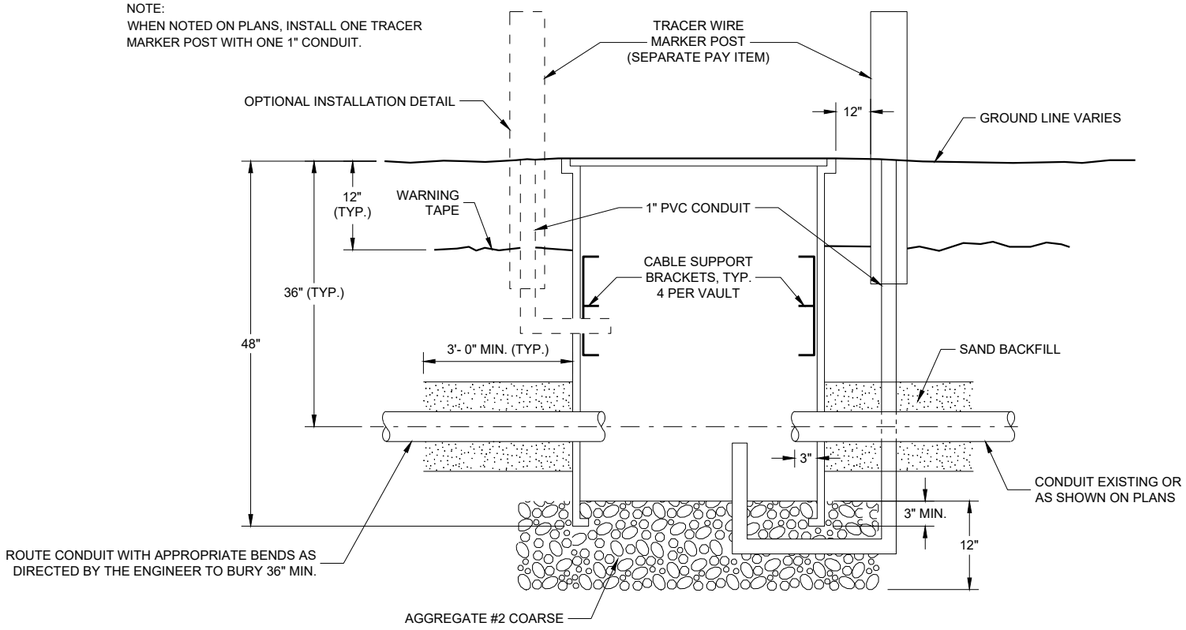
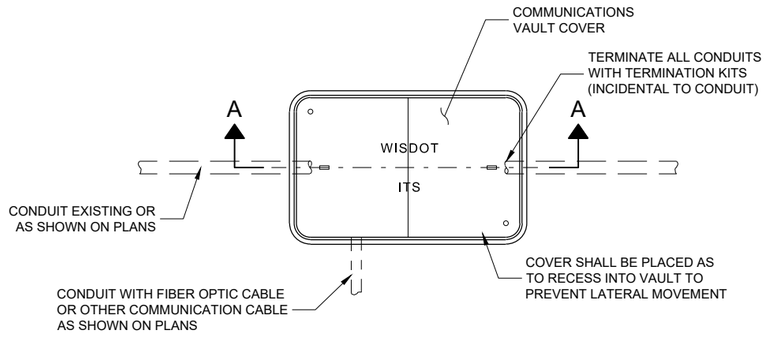
SDD 09G01 - 4g

NOTE:
WHEN NOTED ON PLANS, INSTALL ONE TRACER MARKER POST WITH ONE 1" CONDUIT.



SECTION A - A



PLAN VIEW

COMMUNICATIONS VAULT TYPE 1

GENERAL NOTES

PROVIDE VAULT WITH OPEN BASE.

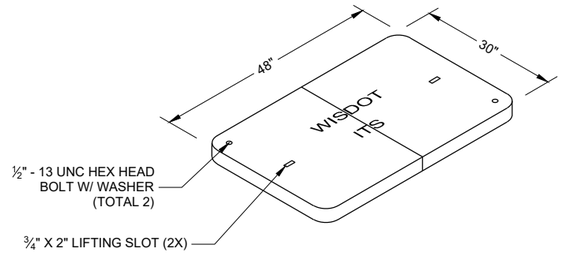
COVER SHALL HAVE A MINIMUM DESIGN LOAD OF 15,000 LBS AND SHALL LOCK.

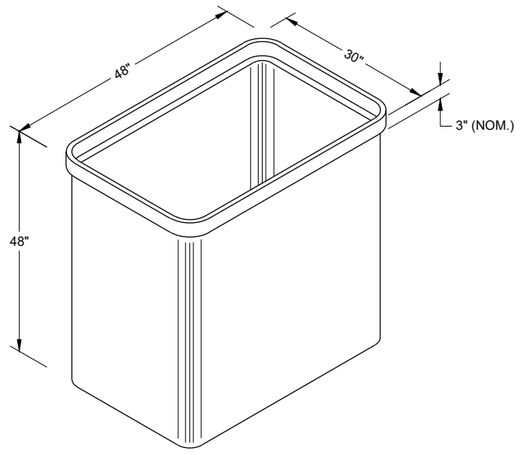
ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION, OR PUNCH DRIVEN AT TIME OF PLACEMENT.

VAULTS SHALL BE OF ONE-PIECE CONSTRUCTION. TWO-PIECE/STACKABLE VAULTS WILL NOT BE PERMITTED.

FIELD PLACEMENT OF COMMUNICATIONS VAULTS SHALL BE AS DIRECTED BY THE ENGINEER.

FIBER TRACER MARKER POSTS SHALL BE CONSTRUCTED WITH HIGH-IMPACT PLASTIC MATERIAL WHICH IS FADE RESISTANT AND UV STABLE. ALL HARDWARE SHALL BE STAINLESS STEEL AND CONTAIN A MINIMUM OF FIVE STANDARD TERMINALS.





ISOMETRIC VIEW

COMMUNICATION VAULT TYPE 1	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
May 2017 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGI
FHWA	142

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SDD 09H09 - 02

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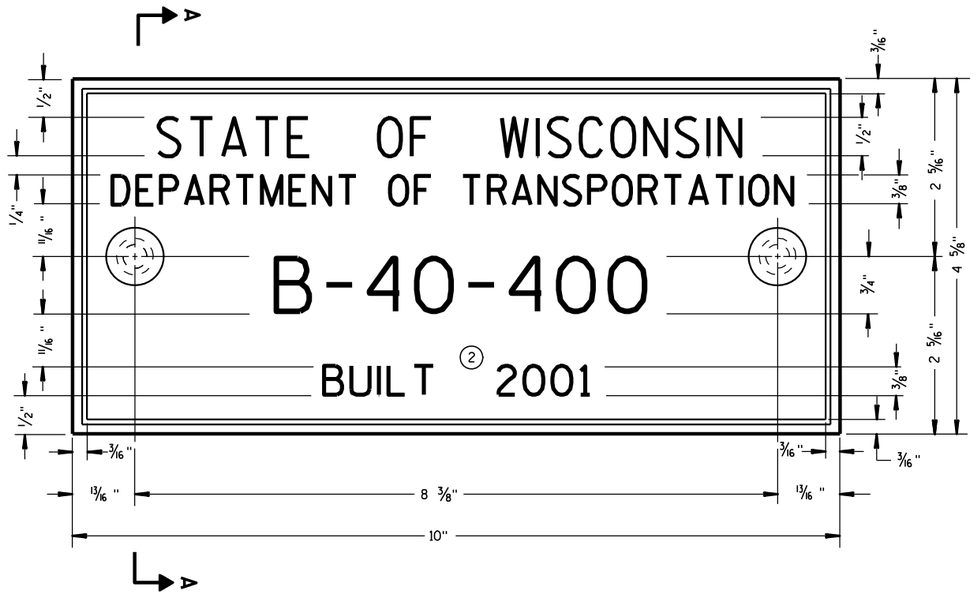
SDD 09H09 - 02



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

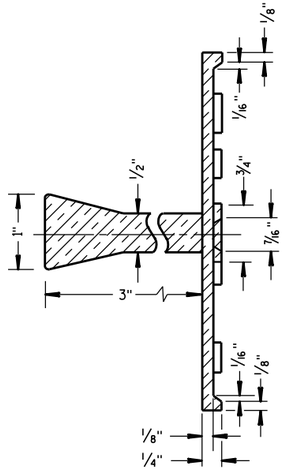
GENERAL NOTES

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

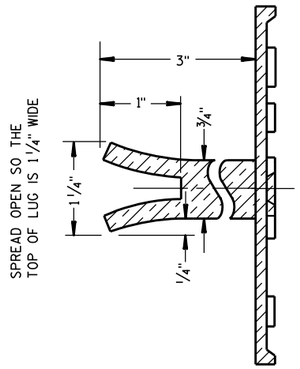
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

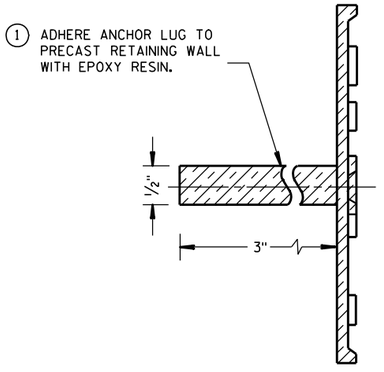
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

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S.D.D. 12 A 3-10

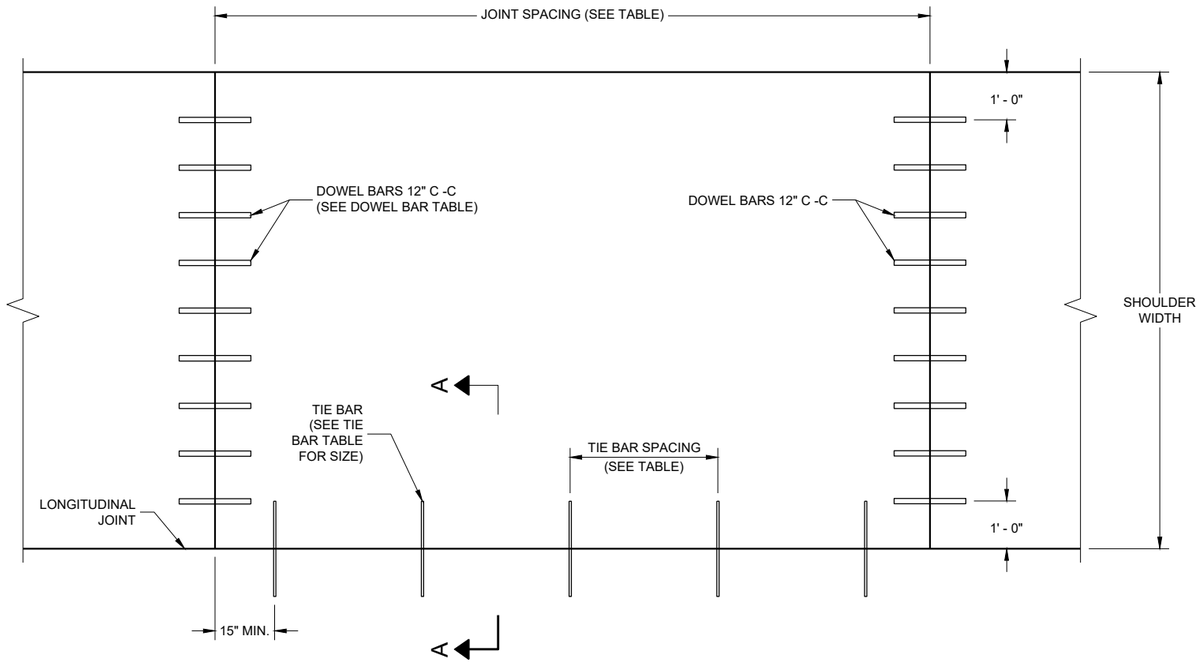
GENERAL NOTES

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

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

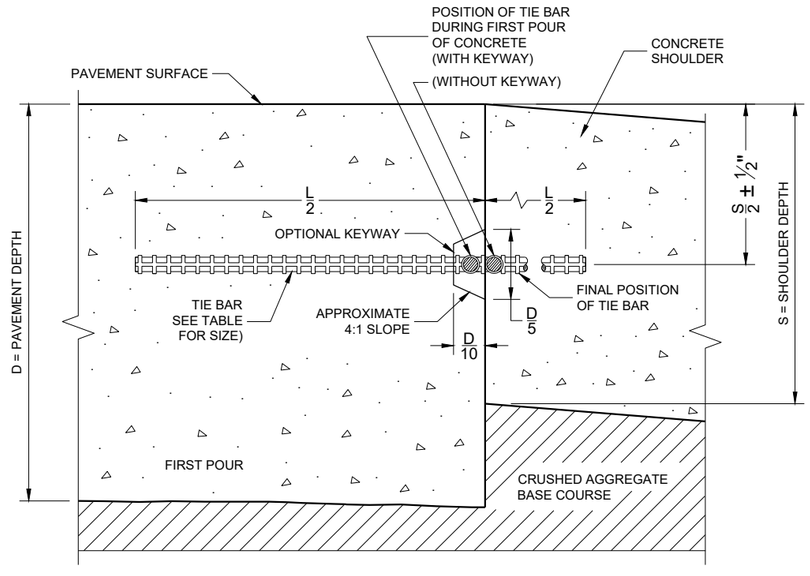
FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



PLAN VIEW

CONCRETE PAVEMENT SHOULDER



SECTION A - A

LONGITUDINAL CONSTRUCTION JOINT

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 BATS 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.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER ***	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	12"
7", 7 ½"	1"	14"
8" & ABOVE	1 ¼"	15"

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FRO THE AVERAGE THICKNESS OF THE CROSS SECTION.

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Peter Kemp
PAVEMENT SUPERVIS

FHWA

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SDD 13A03 - 07

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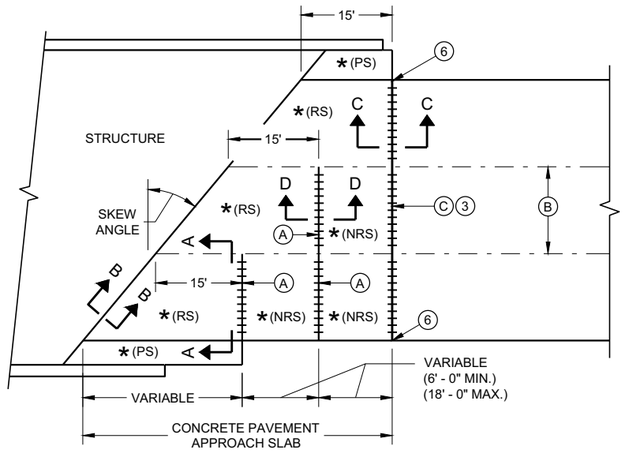
SDD 13A03 - 07



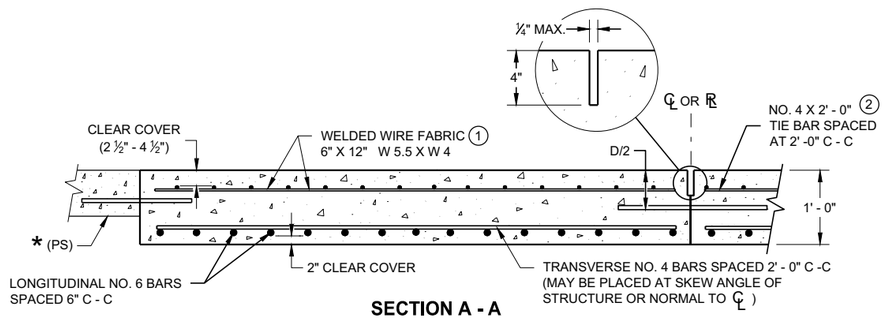
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

* (RS) = REINFORCED CONCRETE SLAB

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

* (NRS) - NON - REINFORCED CONCRETE SLAB

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



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

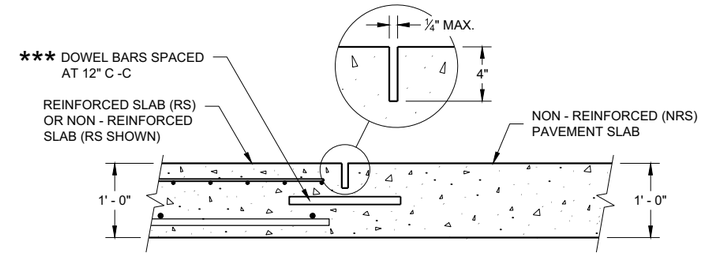
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

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

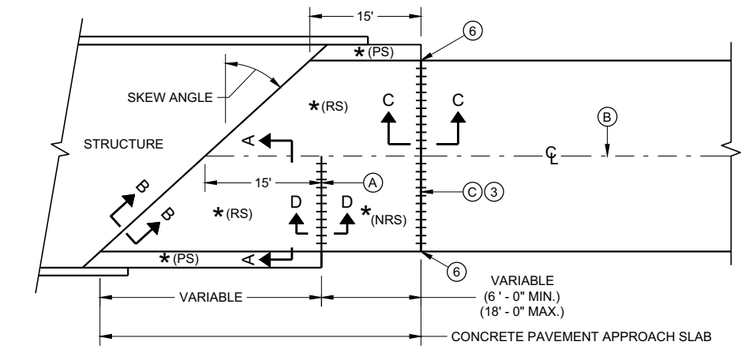
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

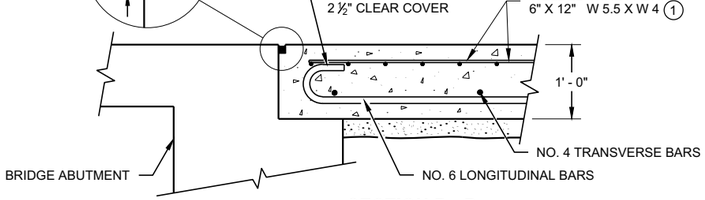
(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .



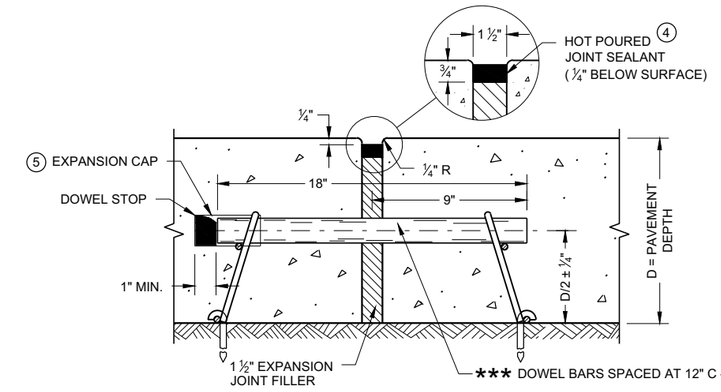
SECTION D - D
CONTRACTION JOINT



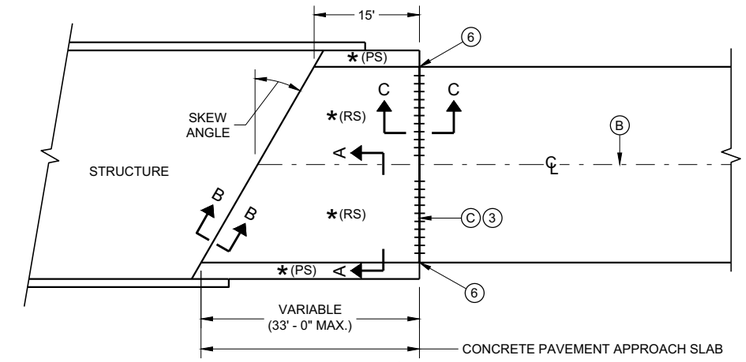
SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')



SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT

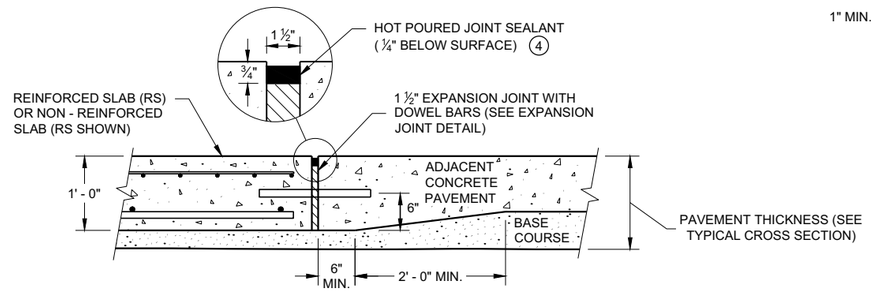


EXPANSION JOINT DETAIL



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

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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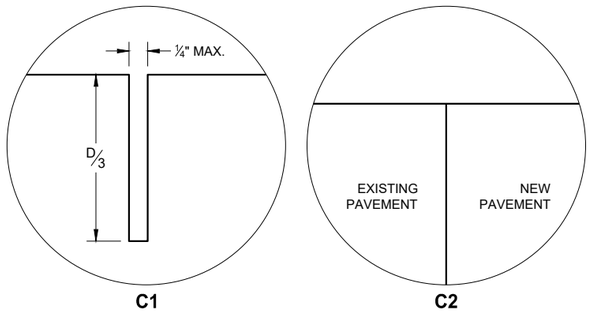
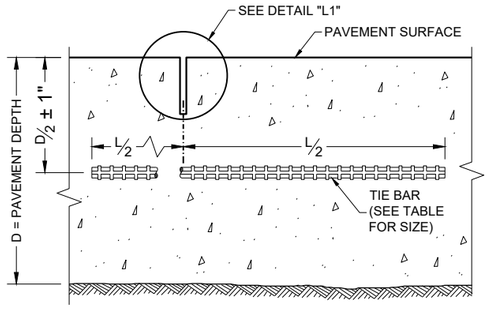
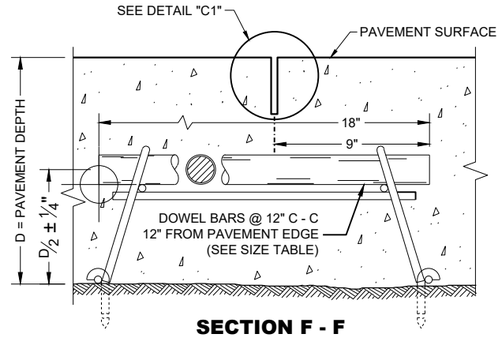
SDD 13B02 - 09a



TRANSVERSE JOINTS



SECTION C - C
SAWED JOINT



SECTION F - F
CONTRACTION JOINT

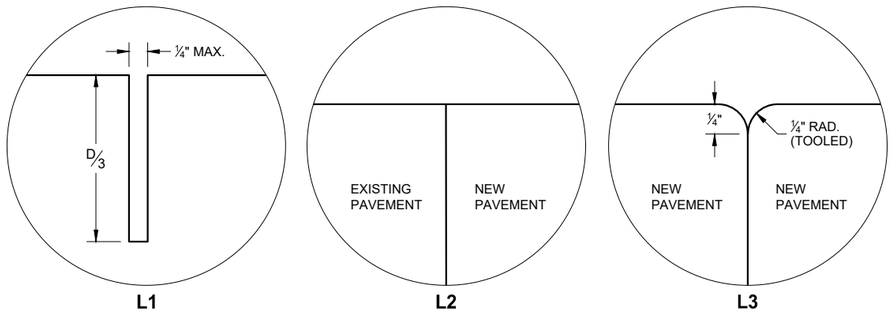
GENERAL NOTES

ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

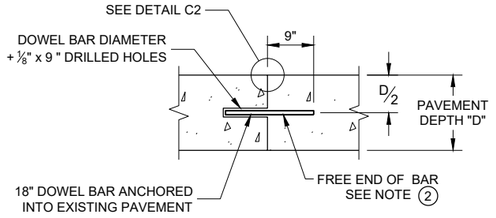
PROVIDE A MIMIMUM DISTANCE OF 15 INCHES FROM AN EXISTING TRANSVERSE JOINT OR EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

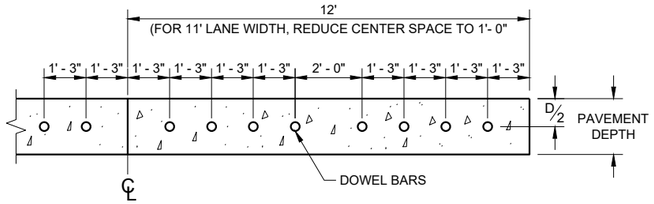
(2) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



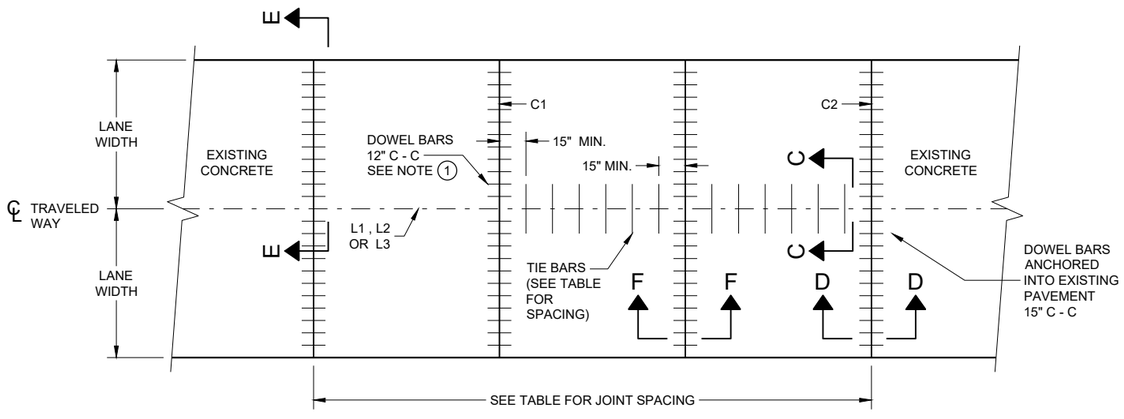
LONGITUDINAL JOINTS



SECTION D - D



SECTION E - E
SPACING OF DOWEL BARS
ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW
CONCRETE BASE
CONTRACTION JOINT LOCATIONS

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.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

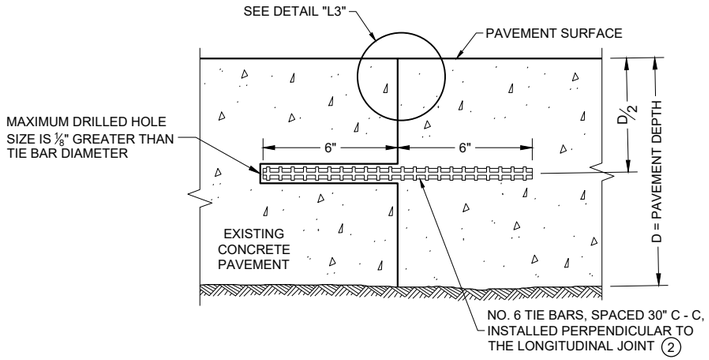
PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8" & ABOVE	1 ¼"	15'

CONCRETE BASE

SDD 13C15 - 08a
6

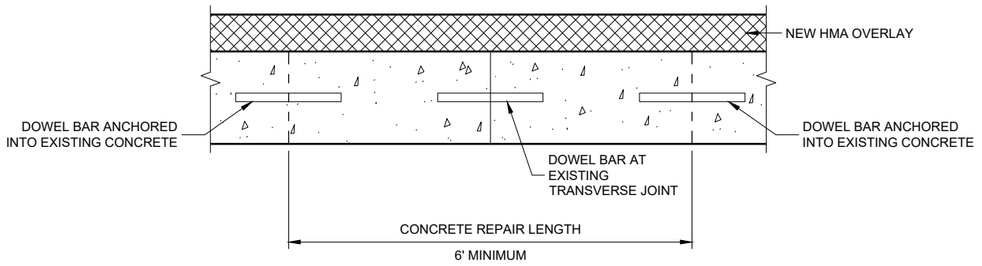
GENERAL NOTES

1. USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) AT THE LONGITUDINAL JOINT IN LIEU OF TIE BARS FOR SINGLE LANE CONCRETE BASE REPAIRS UP TO 15 FEET IN LENGTH.
2. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
3. PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

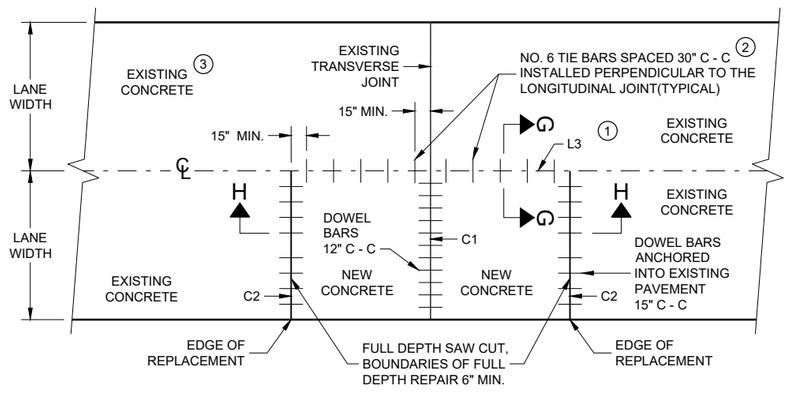


SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



SECTION H - H



PLAN VIEW

SINGLE LANE CONCRETE BASE REPAIR

CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

FHWA

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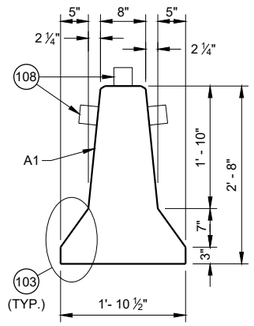
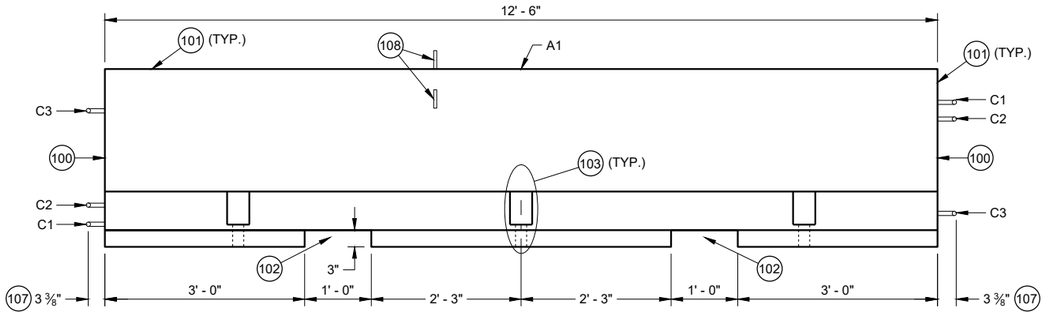
SDD 13C15 - 08b
SDD 13C15 - 08b



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

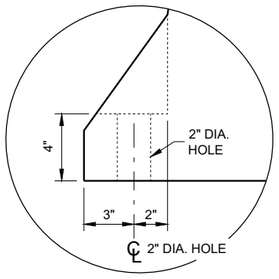
(104) 1 ¾" MIN. CLEAR COVER

(105) 2" MIN. CLEAR COVER

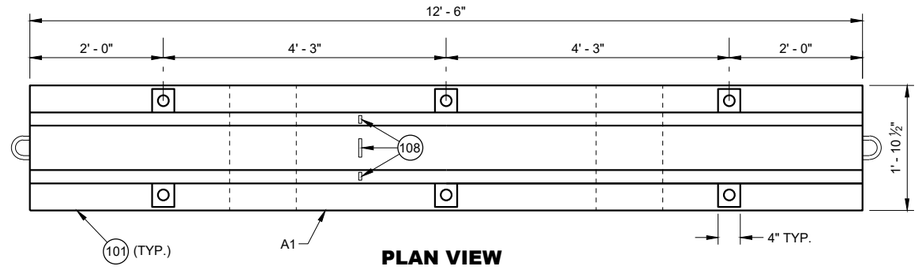
(106) 1" MIN. CLEAR COVER

(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.

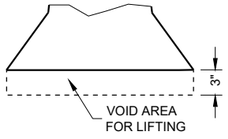


ANCHOR BLOCK DETAIL

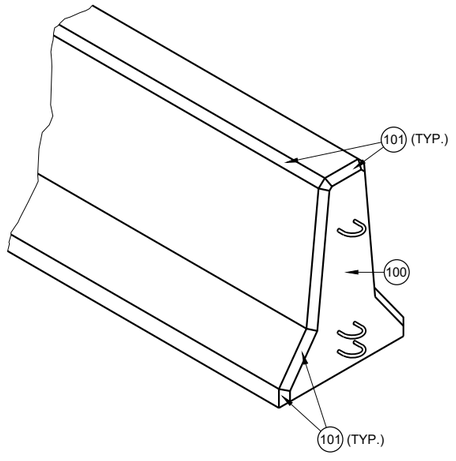


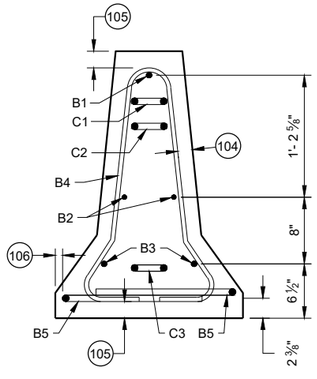
PLAN VIEW

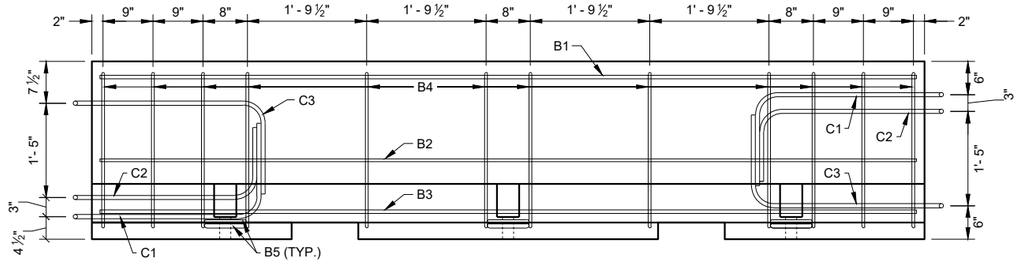
TEMPORARY BARRIER



LIFTING SLOT DETAIL (TYP.)







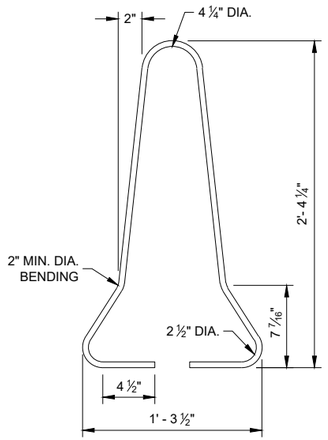
PROFILE VIEW

TEMPORARY BARRIER REINFORCEMENT

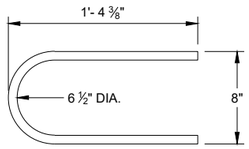
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

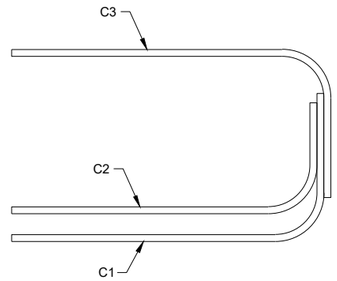
6
SDD 14B07-16a



B4 BAR DETAIL

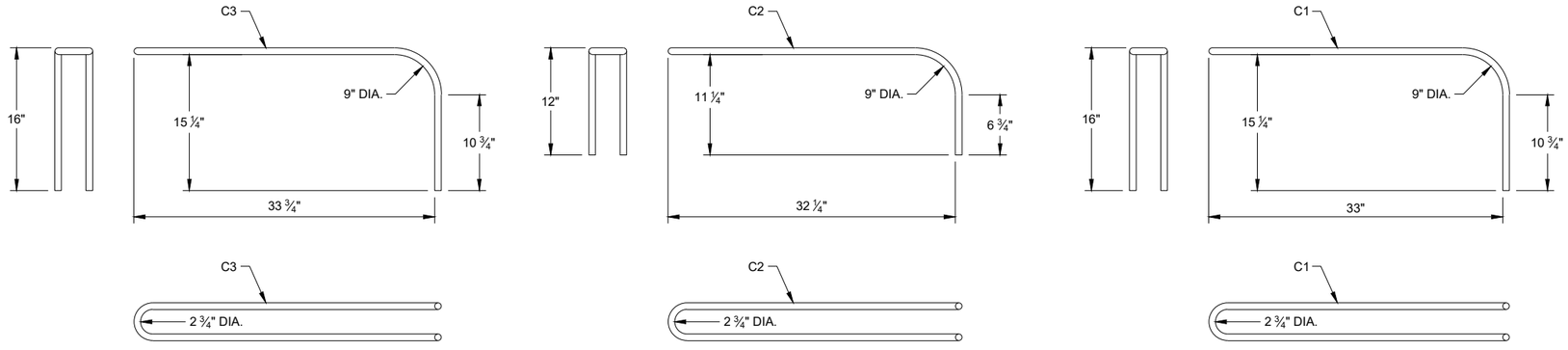


B5 BAR DETAIL



PROFILE VIEW

LOOP BAR ASSEMBLY



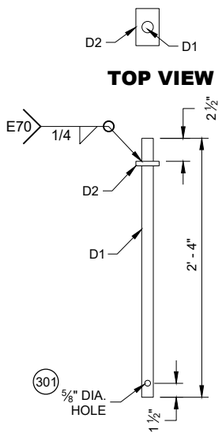
C BAR DETAILS

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

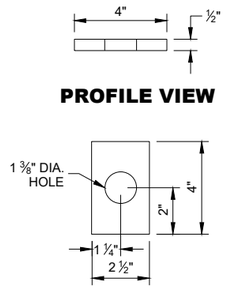
SDD 14B07-16b



TOP VIEW

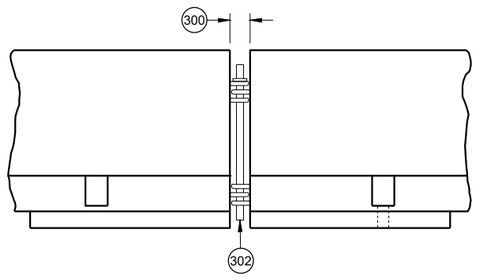
PROFILE VIEW

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.

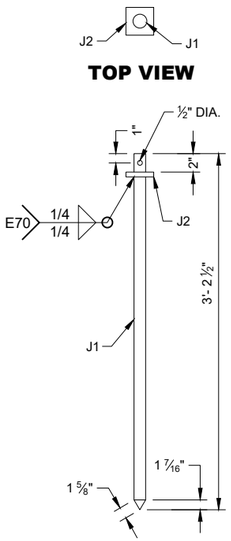
305 DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.

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"

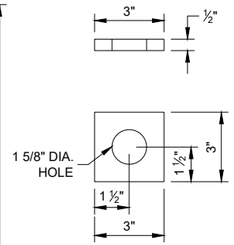
309 WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.



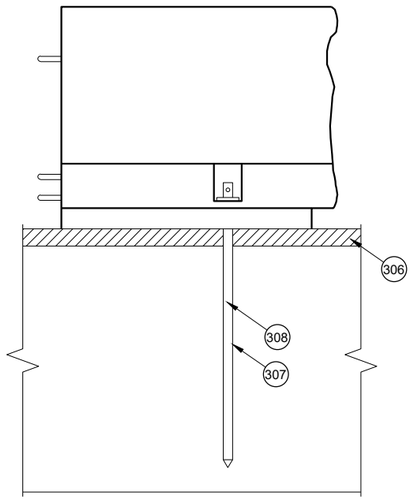
TOP VIEW

PROFILE VIEW

ASPHALT ANCHOR PIN ASSEMBLY

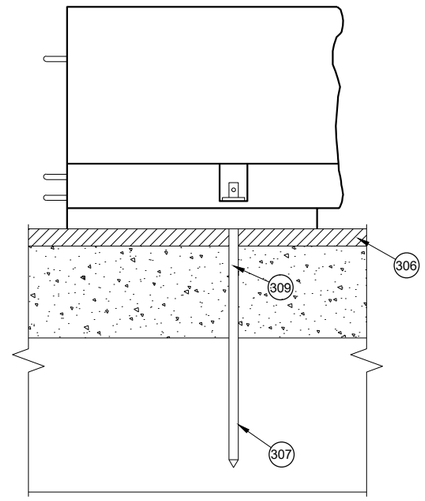


TOP VIEW J2



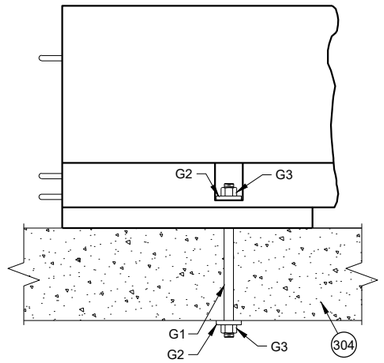
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT PAVEMENT



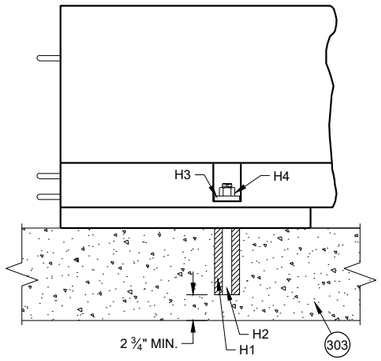
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT OVERLAY ON TOP OF CONCRETE PAVEMENT



SIDE VIEW

THROUGH BOLT ANCHOR INSTALLATION (305)



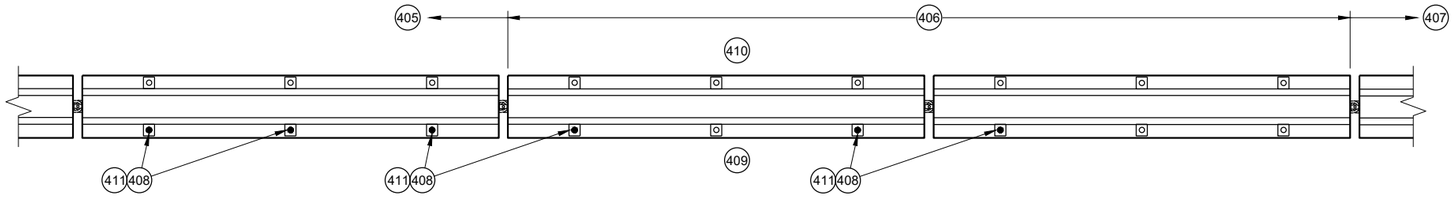
SIDE VIEW

ADHESIVE ANCHOR INSTALLATION (305)

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

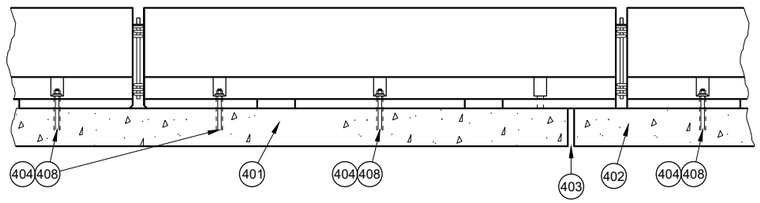
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16c



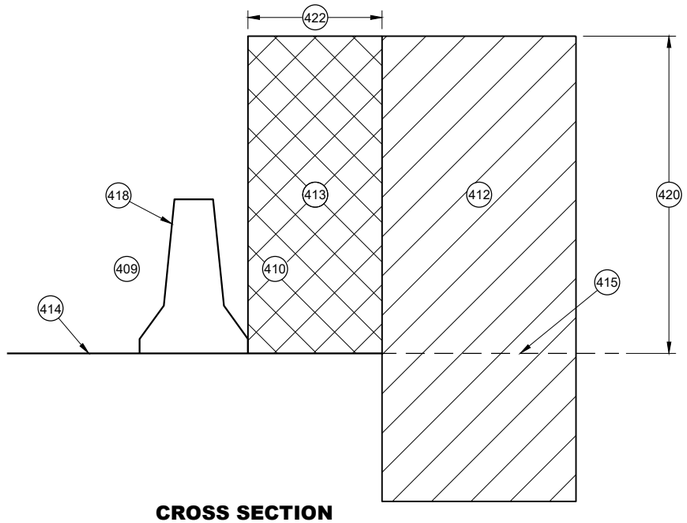
PLAN VIEW

TRANSITION FROM FREE STANDING TO ANCHORED BARRIER



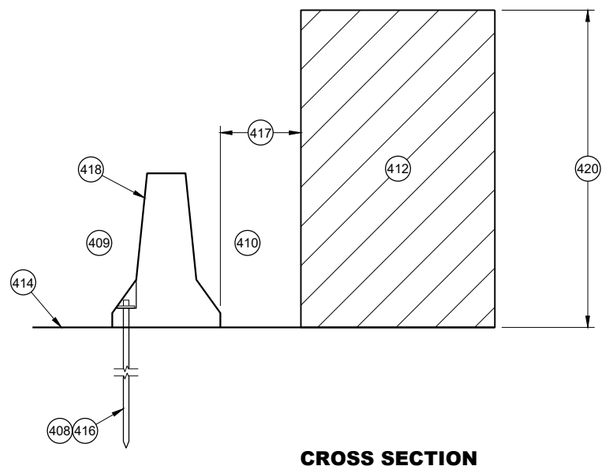
PROFILE VIEW

ANCHORED BARRIER NEAR EXPANSION JOINT (400)



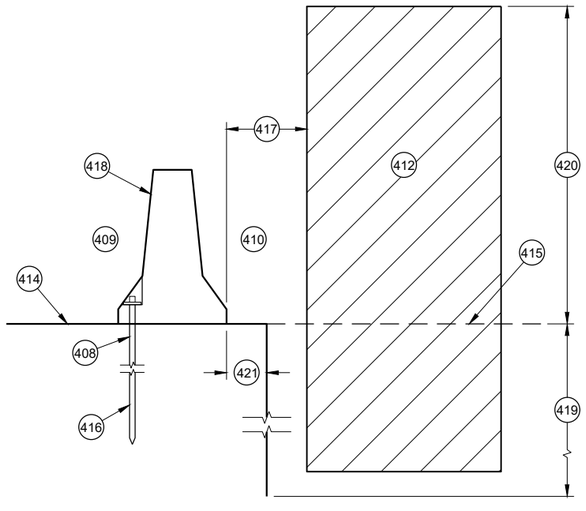
CROSS SECTION

FREE STANDING BARRIER



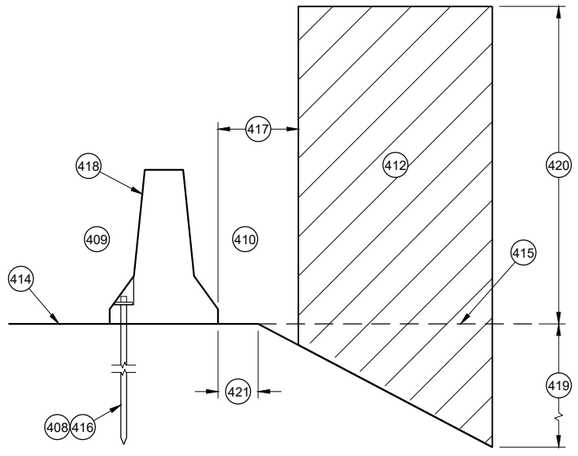
CROSS SECTION

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

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6

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CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

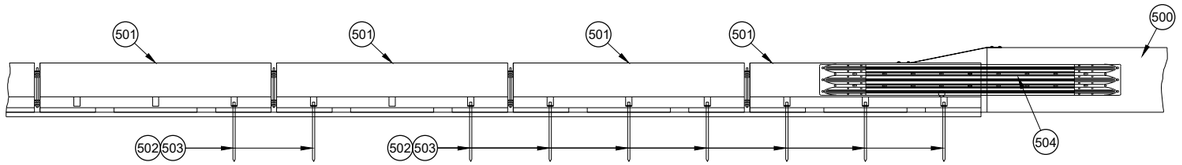
516 CUT WOOD BLOCK TO FIT.

517 SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL ASSEMBLY.

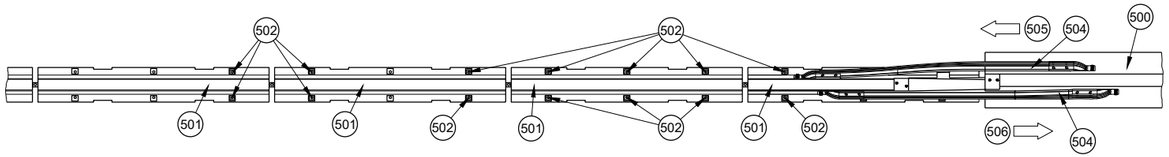
518 CAP ASSEMBLY

519 4" MAX. GAP BETWEEN TEMPORARY BARRIER AND RIGID BARRIER.

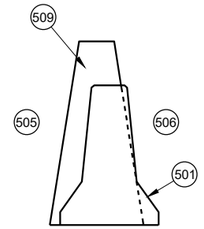
520 ALL TWELVE SPLICE HOLES REQUIRE M1 AND M2



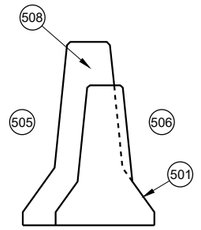
PROFILE VIEW



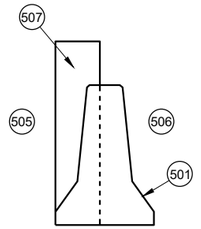
PLAN VIEW



CROSS SECTION TEMPORARY BARRIER PLACEMENT SINGLE SLOPE

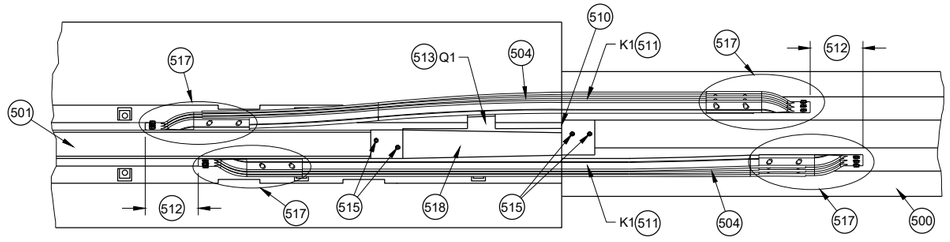


CROSS SECTION TEMPORARY BARRIER PLACEMENT SAFETY SHAPE

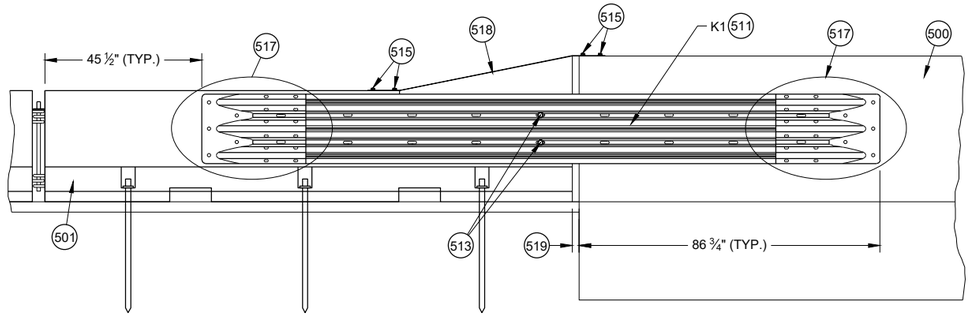


CROSS SECTION TEMPORARY BARRIER PLACEMENT VERTICAL

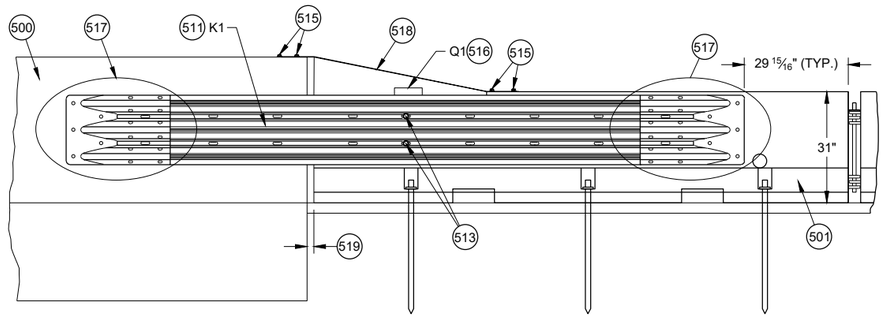
PLAN VIEW
TRANSITION TO RIGID BARRIER



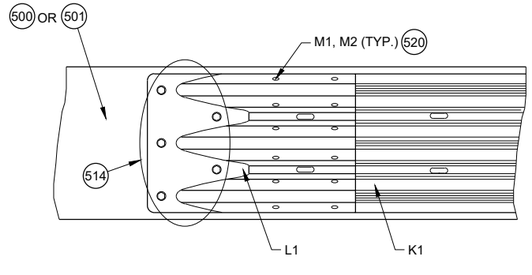
PLAN DETAIL VIEW
TRANSITION TO RIGID BARRIER



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"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B07-16e

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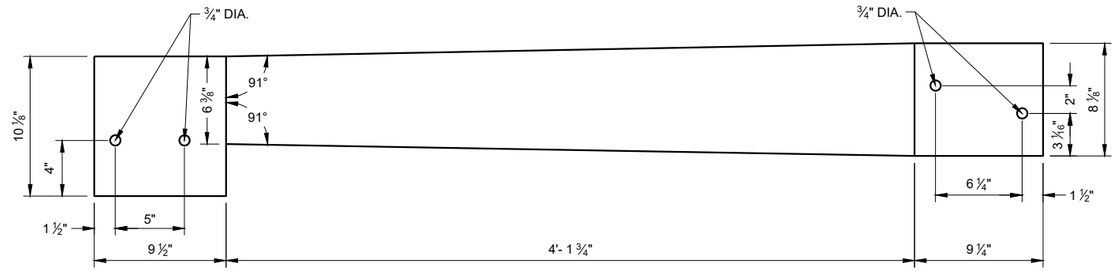
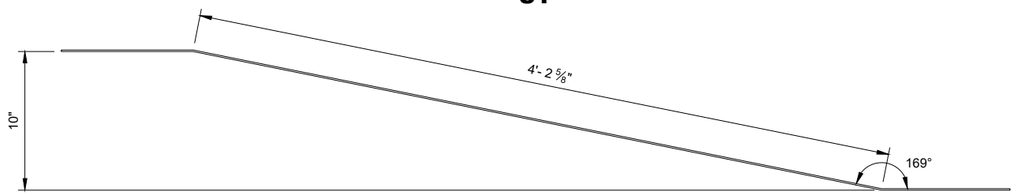
SDD 14B07-16e



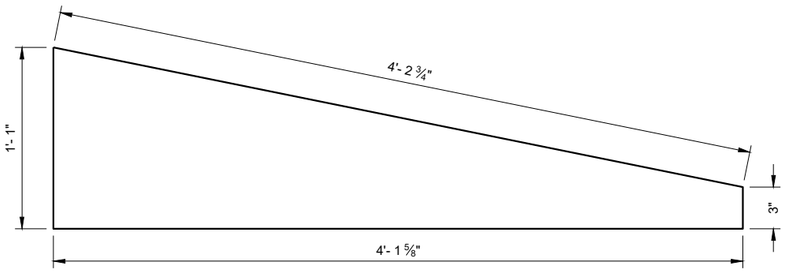
TOP VIEW

S1



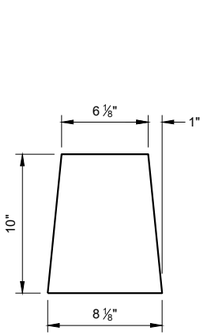
ELEVATION VIEW

S1

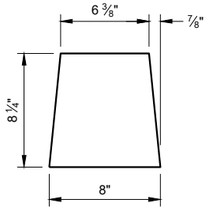


SIDE VIEW

S3



S2



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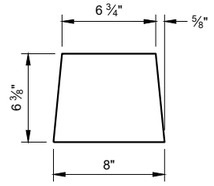
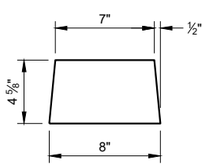


S5



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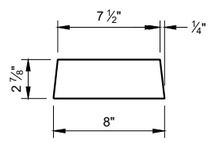
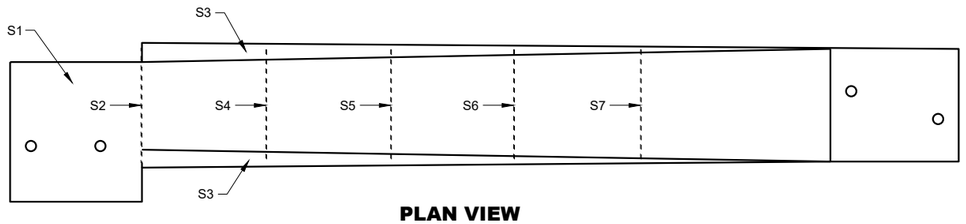
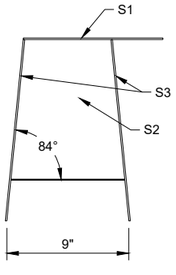


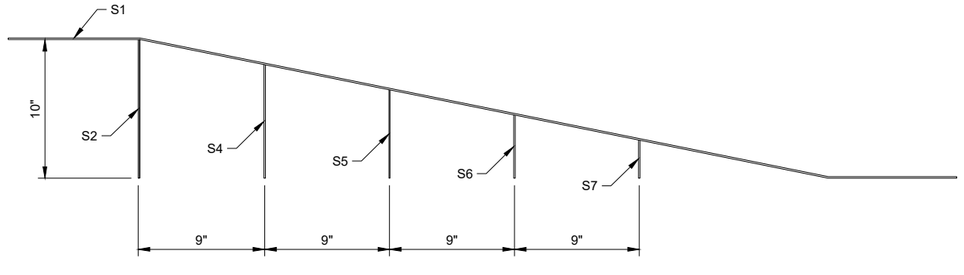
S7



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.

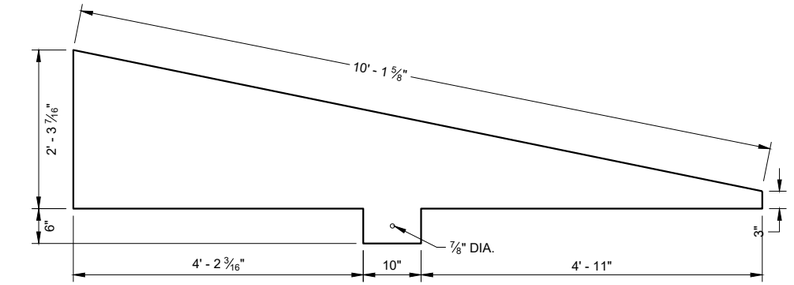
(600) SIDE PLATES (S3) NOT SHOWN FOR CLARITY.

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

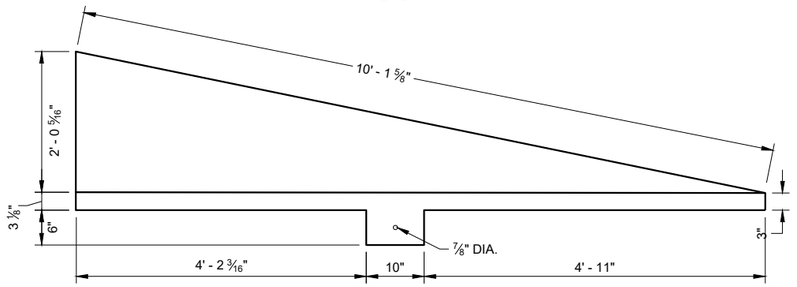
6

SDD 14B07-16f



SIDE VIEW
T4

END VIEW



SIDE VIEW
T3

END VIEW

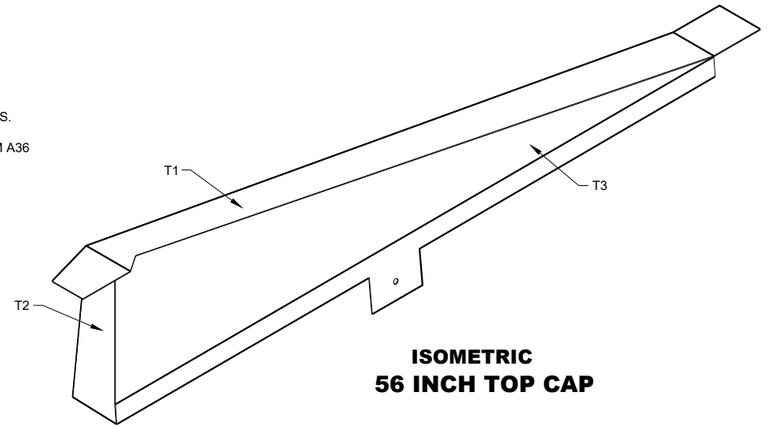
GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THRIE SIDES

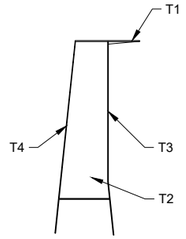
STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

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

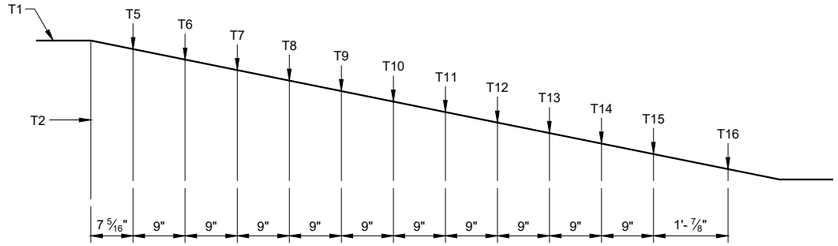
(700) SIDE PLATES (T3 AND T4) NOT SHOWN FOR CLARITY.



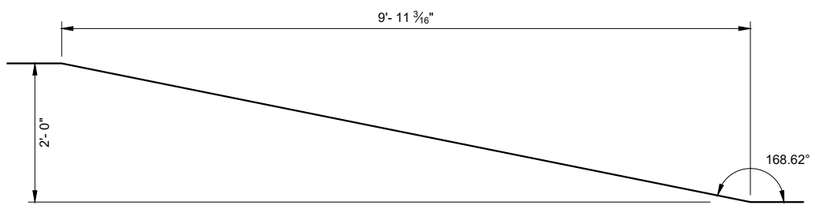
ISOMETRIC
56 INCH TOP CAP



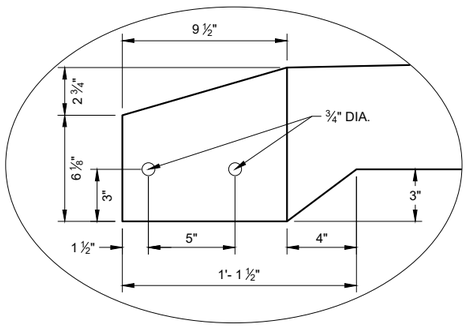
END VIEW
56 INCH TOP CAP



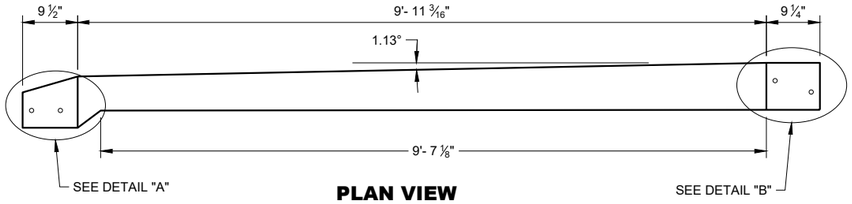
SIDE VIEW (700)
56 INCH TOP CAP



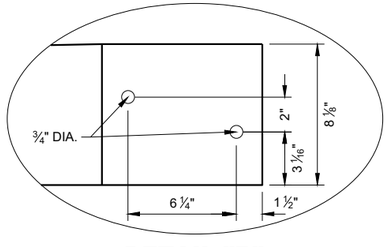
SIDE VIEW
TOP PLATE T1



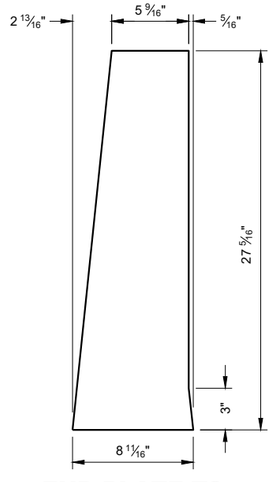
DETAIL "A"



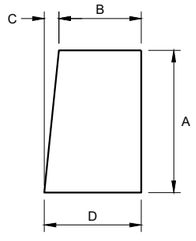
PLAN VIEW
TOP PLATE T1



DETAIL "B"



END PLATE T2



GUSSET PLATES
T5 - T16

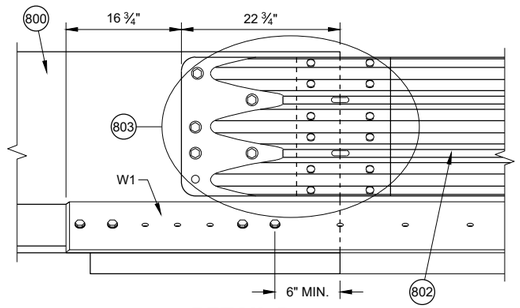
GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
T5	22 13/16"	5 1/16"	2 5/16"	8 1/16"
T6	21"	5 7/8"	2 3/16"	8 1/16"
T7	19 3/16"	6 1/16"	1 15/16"	8 1/16"
T8	17 3/8"	6 1/4"	1 13/16"	8 1/16"
T9	15 5/16"	6 7/16"	1 9/16"	8 1/16"
T10	13 3/4"	6 5/8"	1 7/16"	8 1/16"
T11	11 15/16"	6 13/16"	1 1/4"	8 1/16"
T12	10 1/8"	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"

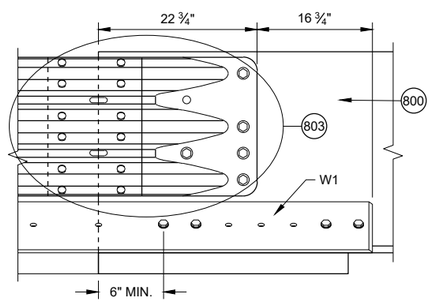
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

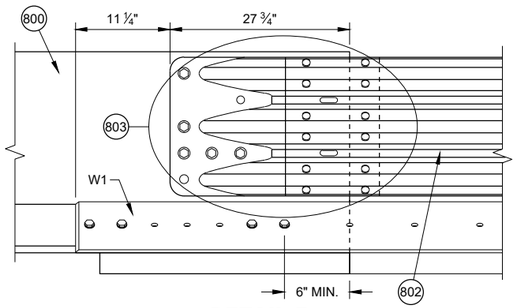
SDD 14B07-16g



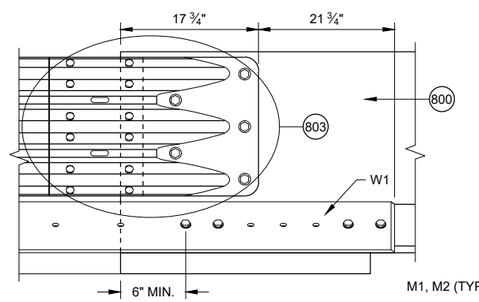
DETAIL D



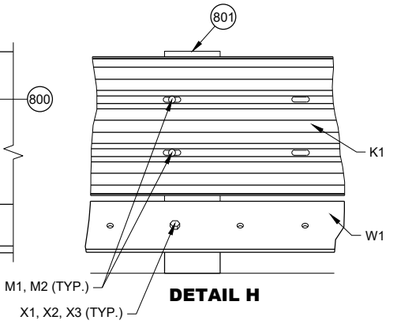
DETAIL E



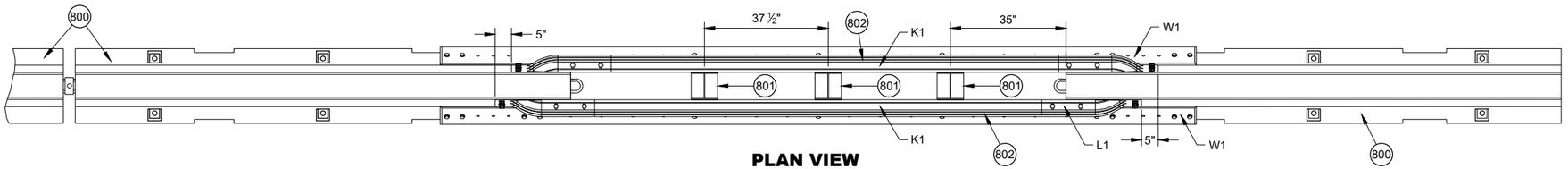
DETAIL F



DETAIL G



DETAIL H



PLAN VIEW

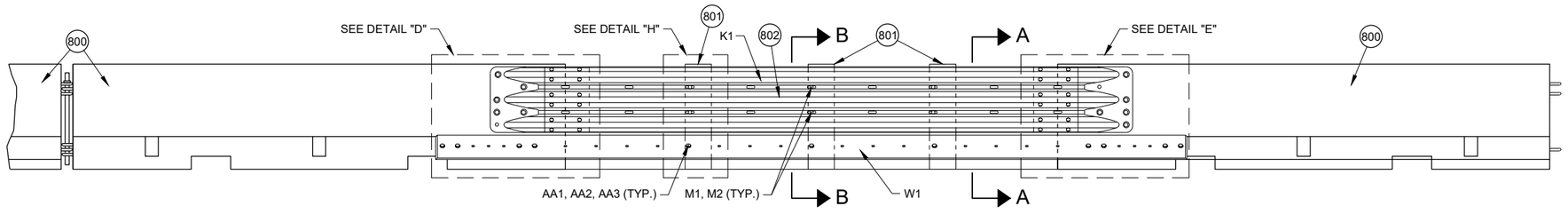
GENERAL NOTES

(800) FREE STANDING TEMPORARY BARRIER

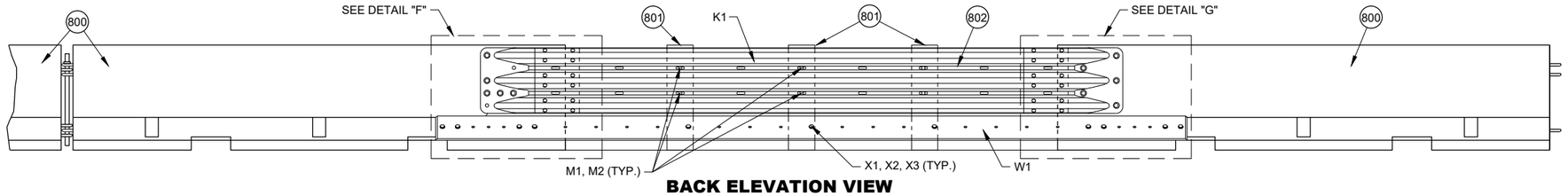
(801) GAP STIFFENER ASSEMBLY

(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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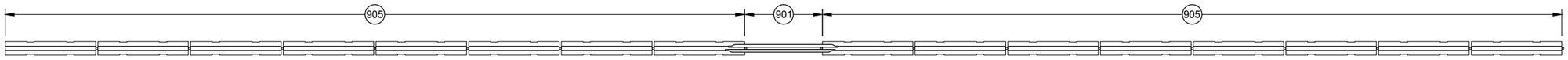
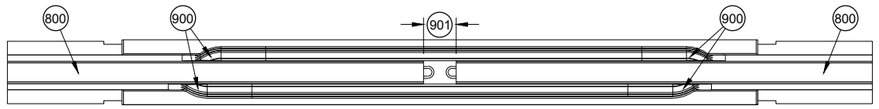


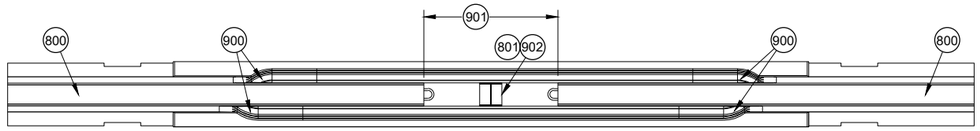
PLAN VIEW
GAP WITHIN SPACING



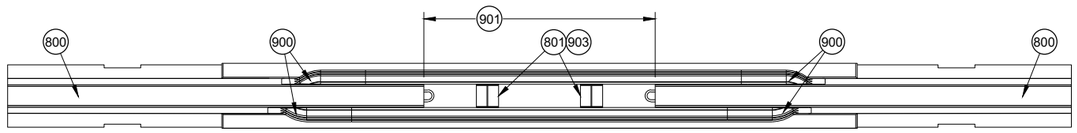
PLAN VIEW
TEMPORARY BARRIER GAP OVER 4" TO 1' MAX. (904)

GENERAL NOTES

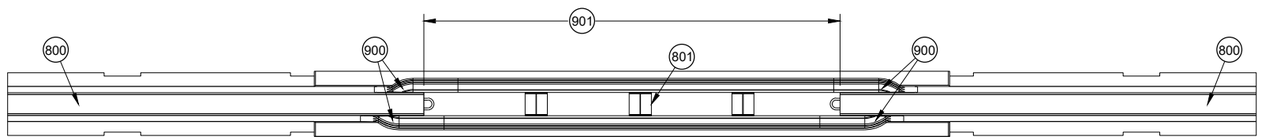
(900) SEE OTHER DETAILS FOR TEMPORARY GAP HARDWARE (TYP.)
(901) TEMPORARY BARRIER GAP
(902) GAP STIFFENER ASSEMBLY CENTERED IN THE GAP.
(903) GAP STIFFENER ASSEMBLY IS OFFSET 18 ¾" FROM CENTER
(904) MINIMUM NUMBER OF GAP STIFFENERS SHOWN FOR THE GAP RANGE SHOWN.
(905) MINIMUM OF 8 CONTINUOUS FREE STANDING 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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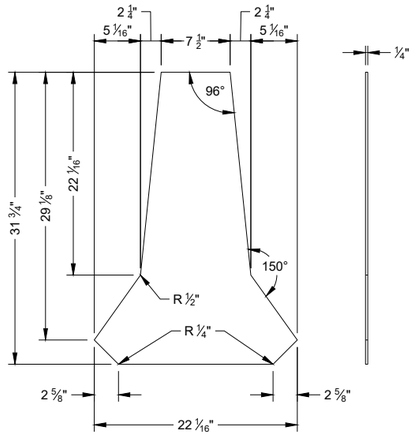
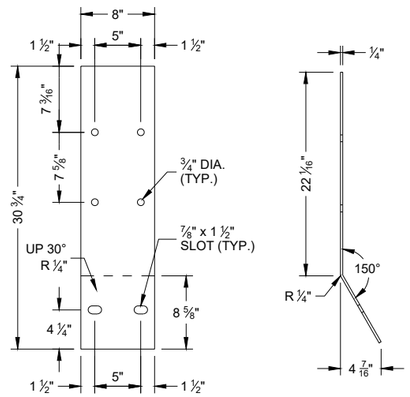


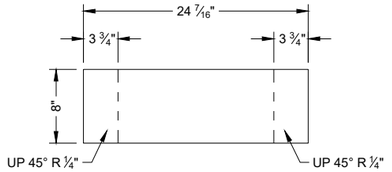
PROFILE VIEW SIDE VIEW

STIFFENER ASSEMBLY CENTER PANEL U1

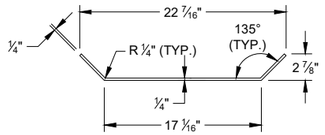


FLAT PATTERN SIDE VIEW

STIFFENER ASSEMBLY SIDE PANEL U2

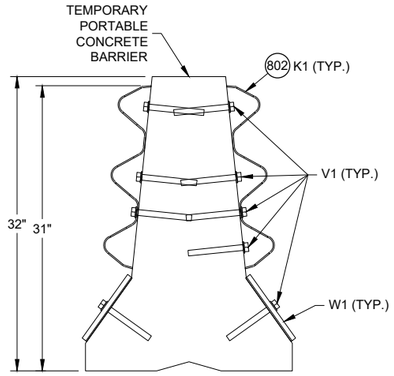


FLAT PATTERN

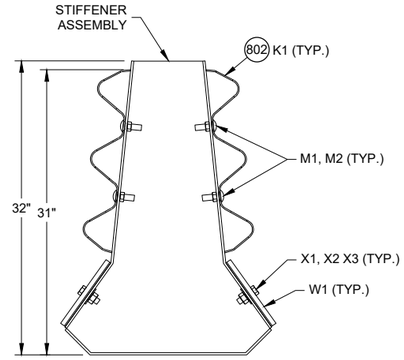


PROFILE VIEW

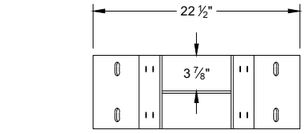
STIFFENER ASSEMBLY BOTTOM PANEL U3



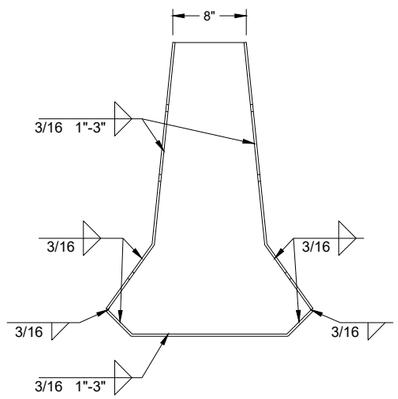
SECTION A - A



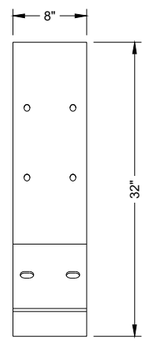
SECTION B - B



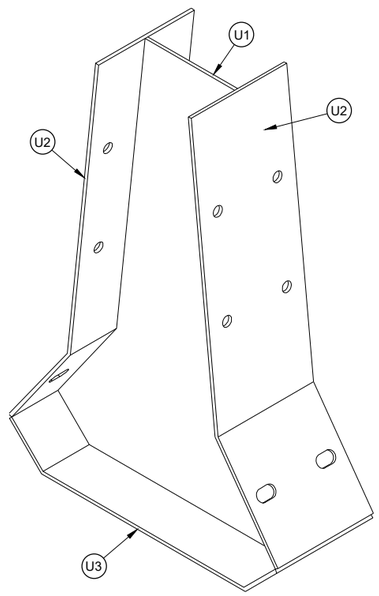
PLAN VIEW



PROFILE VIEW

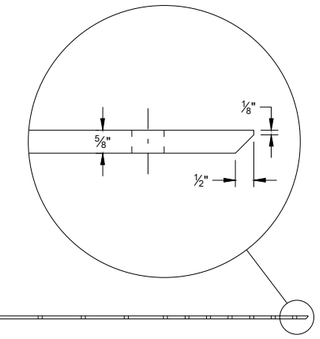


SIDE VIEW

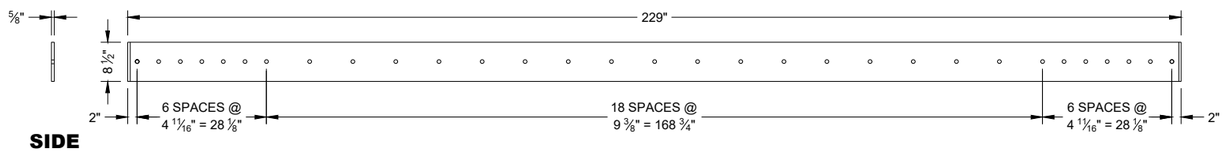


ISOMETRIC

GAP STIFFENER ASSEMBLY



PLAN VIEW



SIDE VIEW

ELEVATION VIEW

W1 TOE PLATE

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

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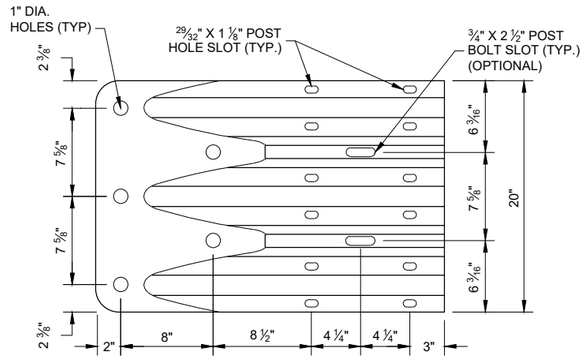
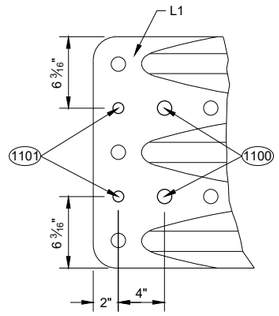


ELEVATION VIEW

THRIE BEAM TERMINAL CONNECTOR



ELEVATION VIEW

ADDITIONAL THRIE BEAM (1102) TERMINAL CONNECTOR HOLE DETAIL

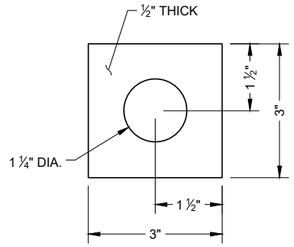


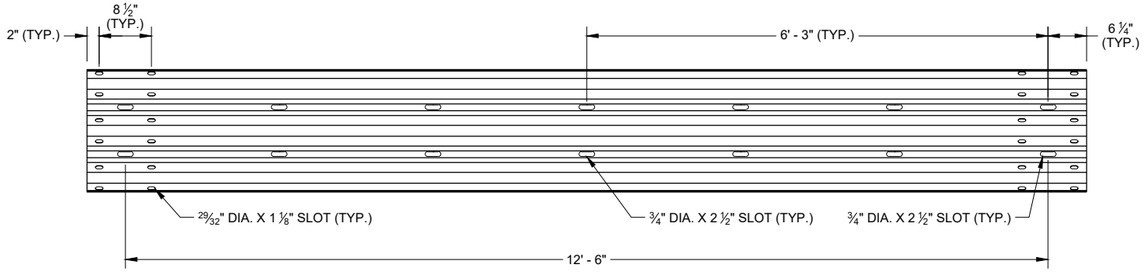
PLATE WASHER DETAIL G2, H3

GENERAL NOTES

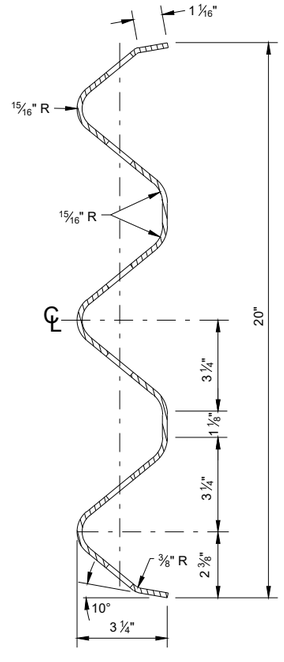
(1100) 1" DIA. HOLE

(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

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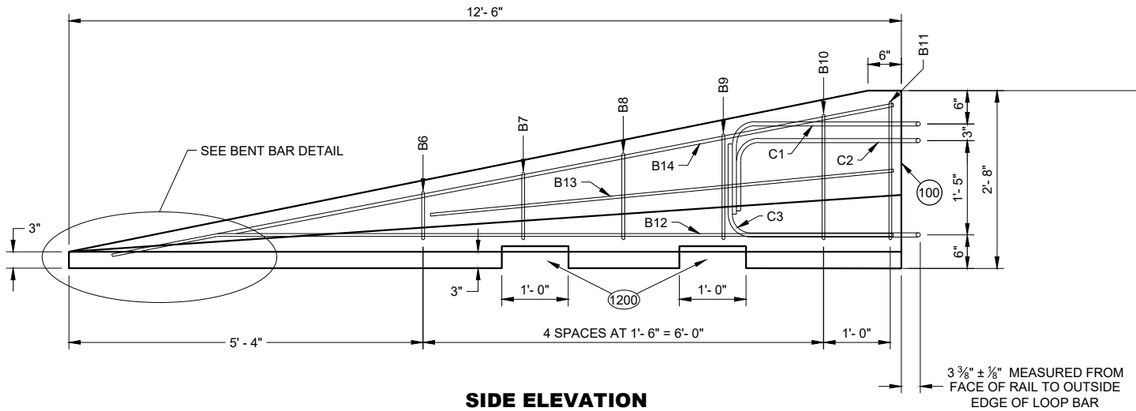
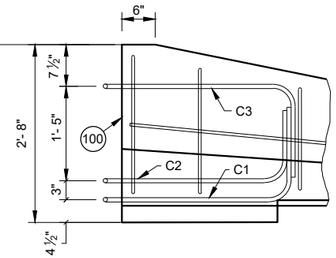


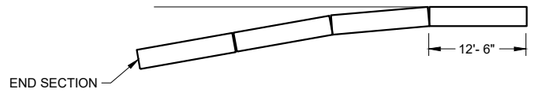
SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END
(FOR CONNECTION TO RIGHT END OF BARRIER)

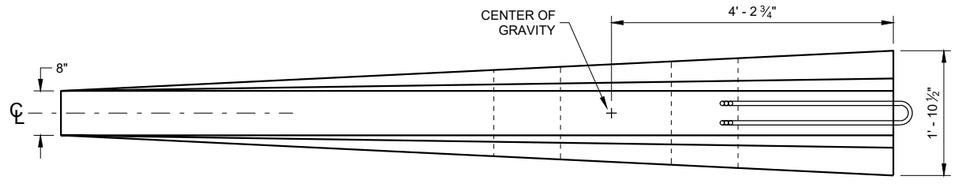
GENERAL NOTES

(1200) SEE LIFTING SLOT DETAIL. LOCATION OF LIFTING SLOTS DETERMINED BY CONTRACTOR.

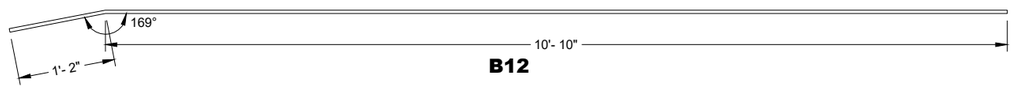


FLARE AT BARRIER END

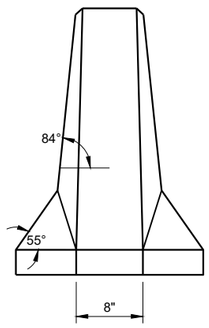
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1



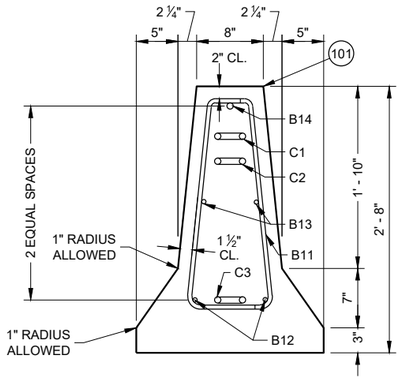
PLAN VIEW



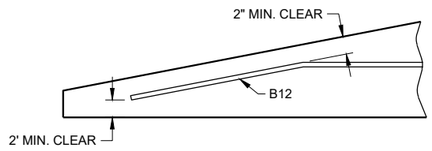
B12



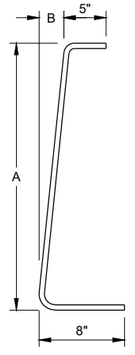
FRONT ELEVATION



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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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	

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SDD 14B07-16n

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

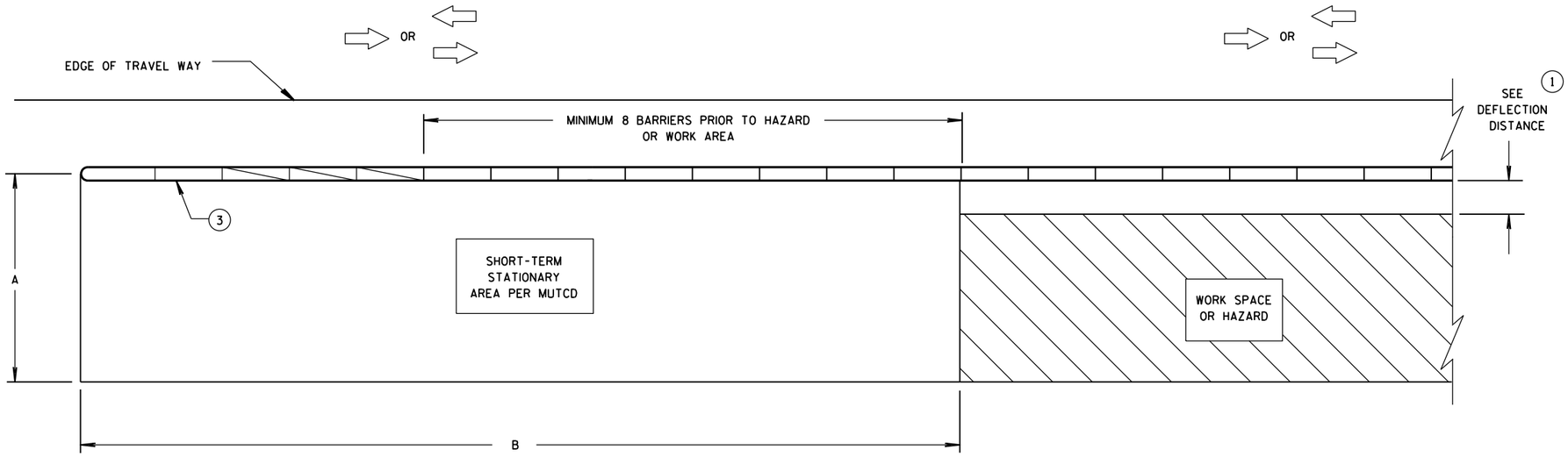
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 14B07-16n



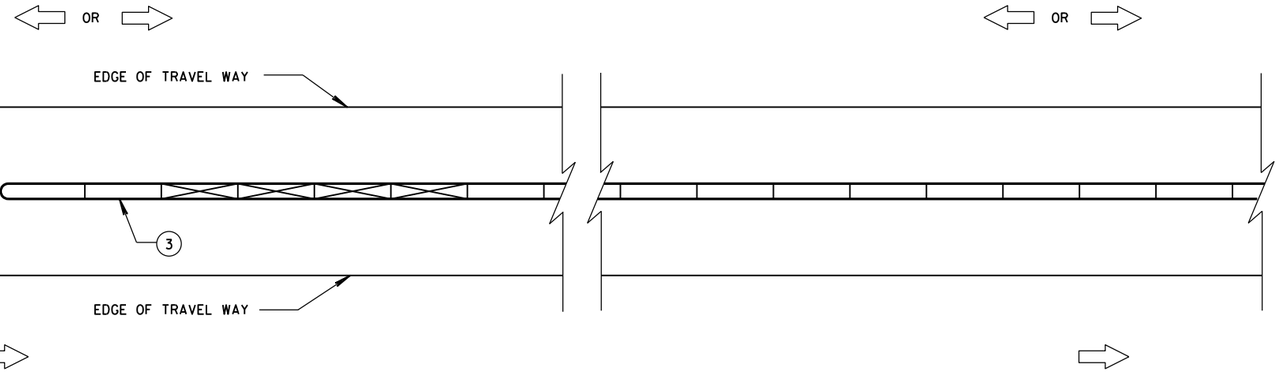
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

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

DIMENSION B TABLE (2)

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



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

LEGEND

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

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

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

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

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

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

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

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

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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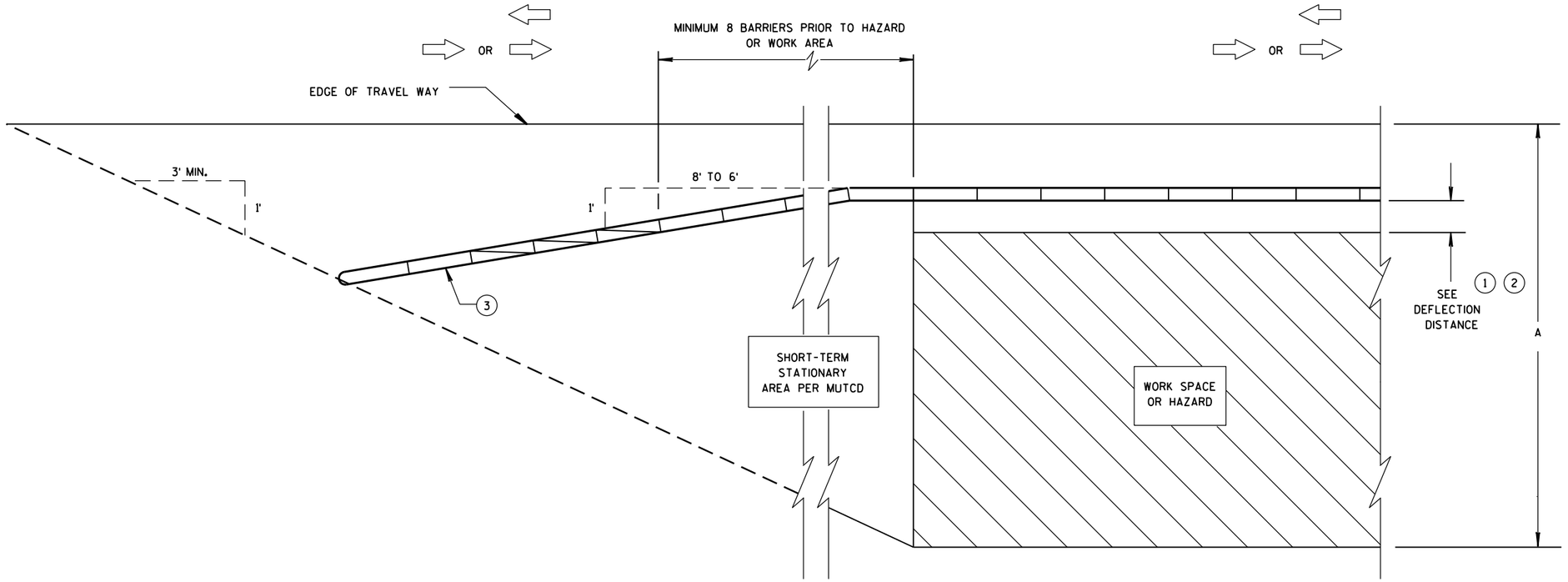
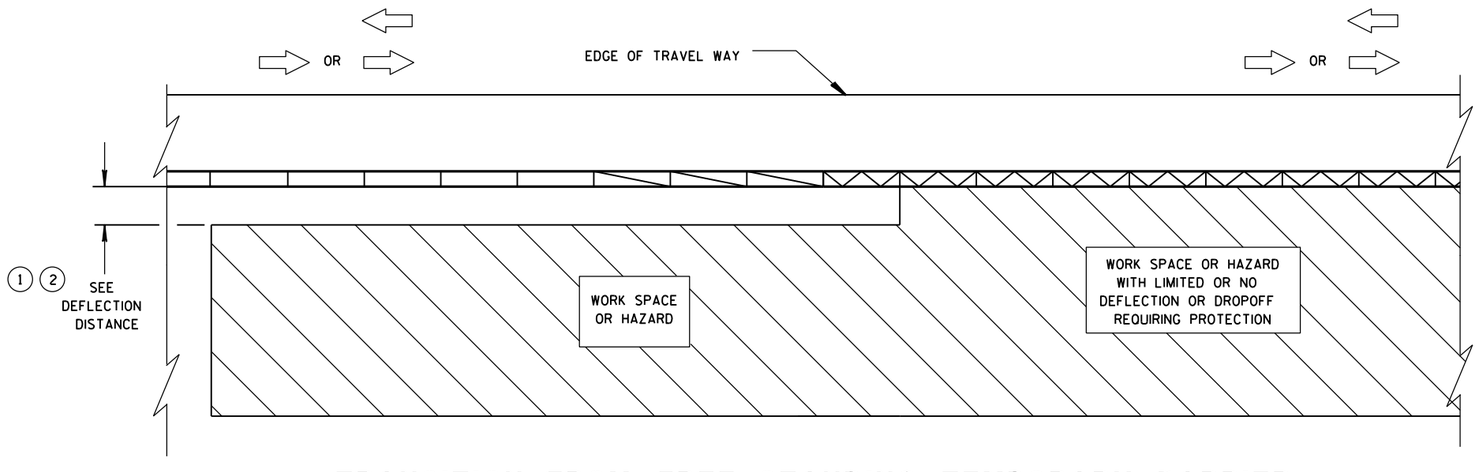
S.D.D. 14 B 8-2a



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



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

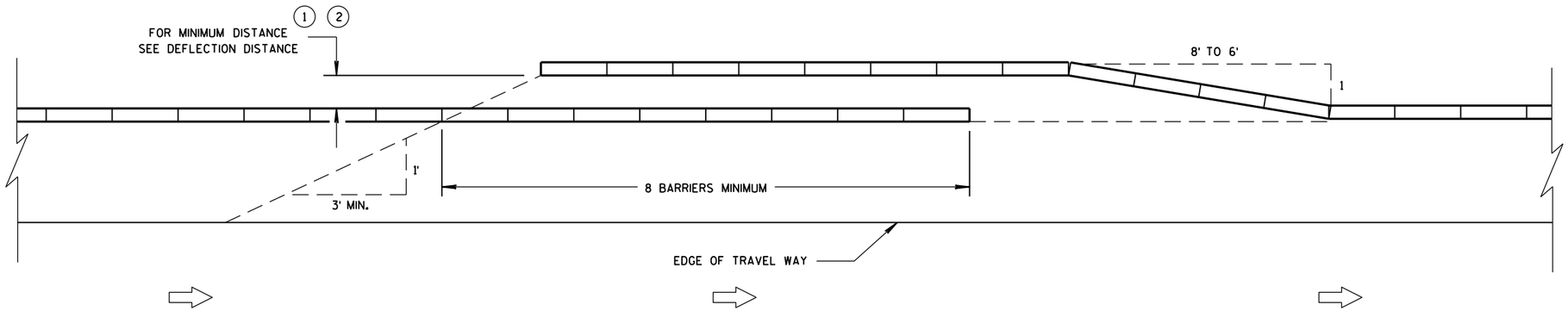
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

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

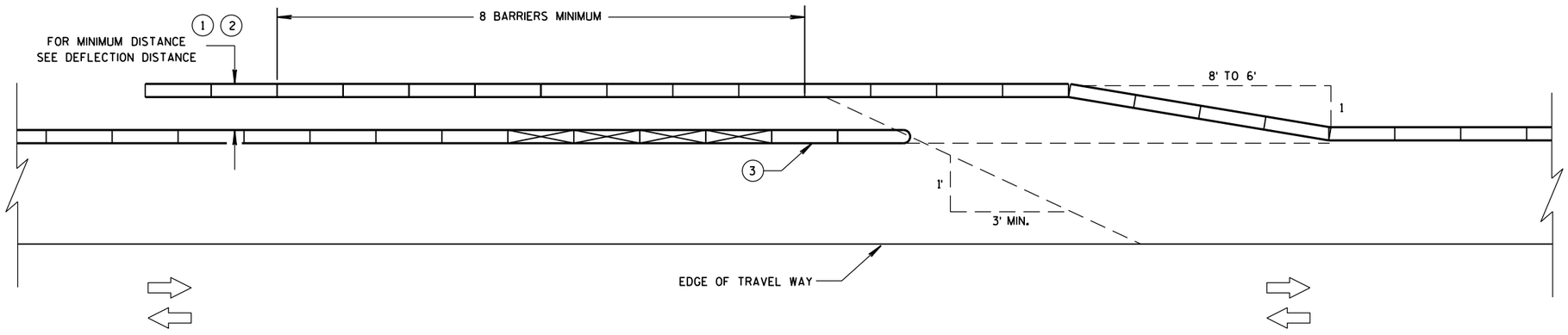
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

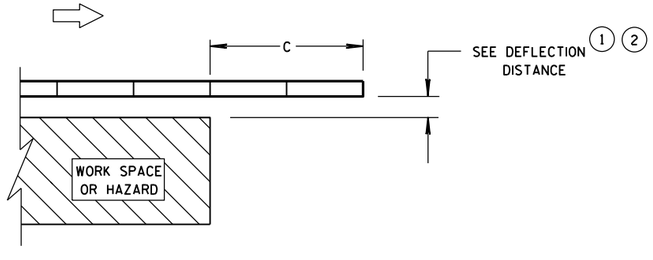
S.D.D. 14 B 8-2b



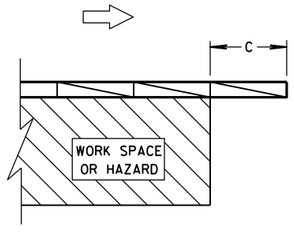
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

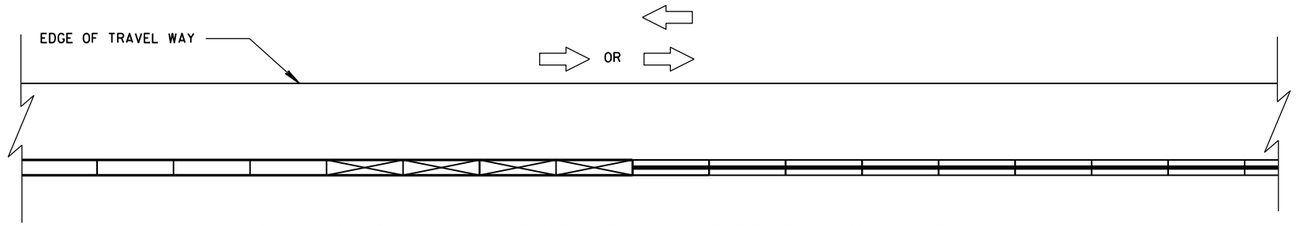
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

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

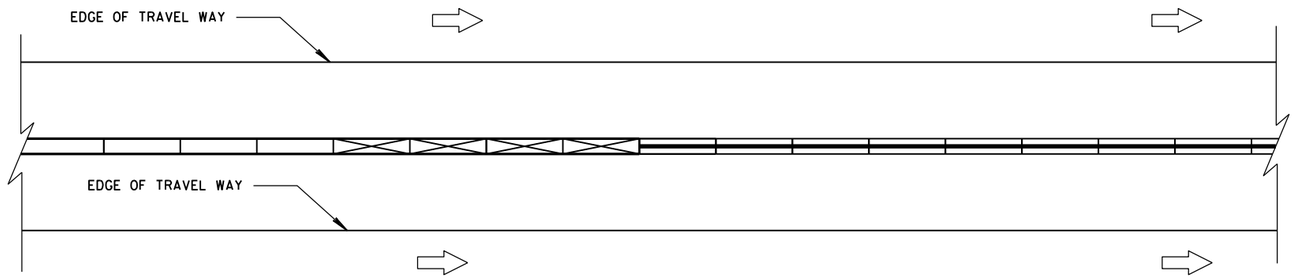
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



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



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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

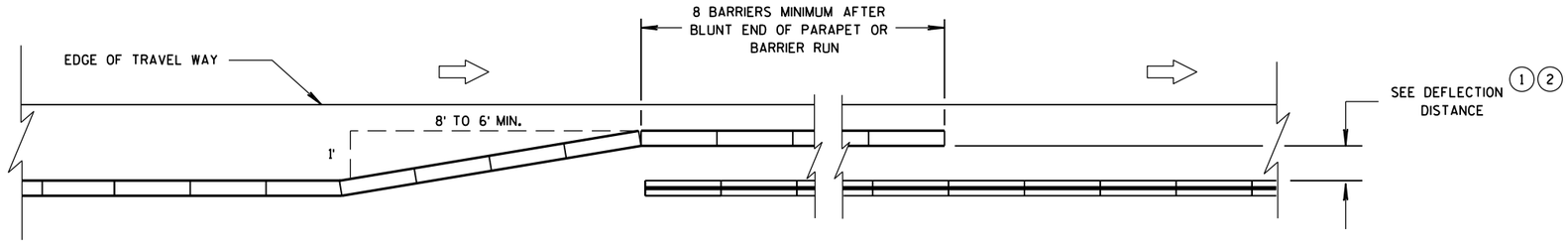
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

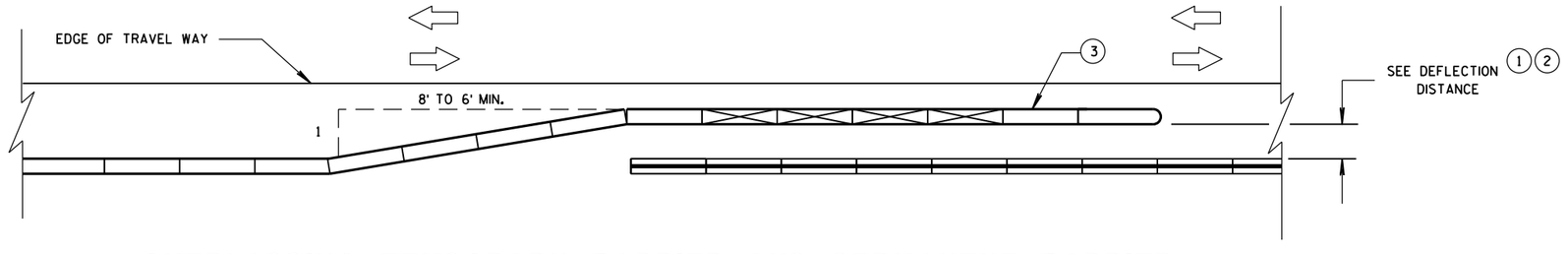
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER
OR CONCRETE PARAPET

FREE STANDING TEMPORARY
BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

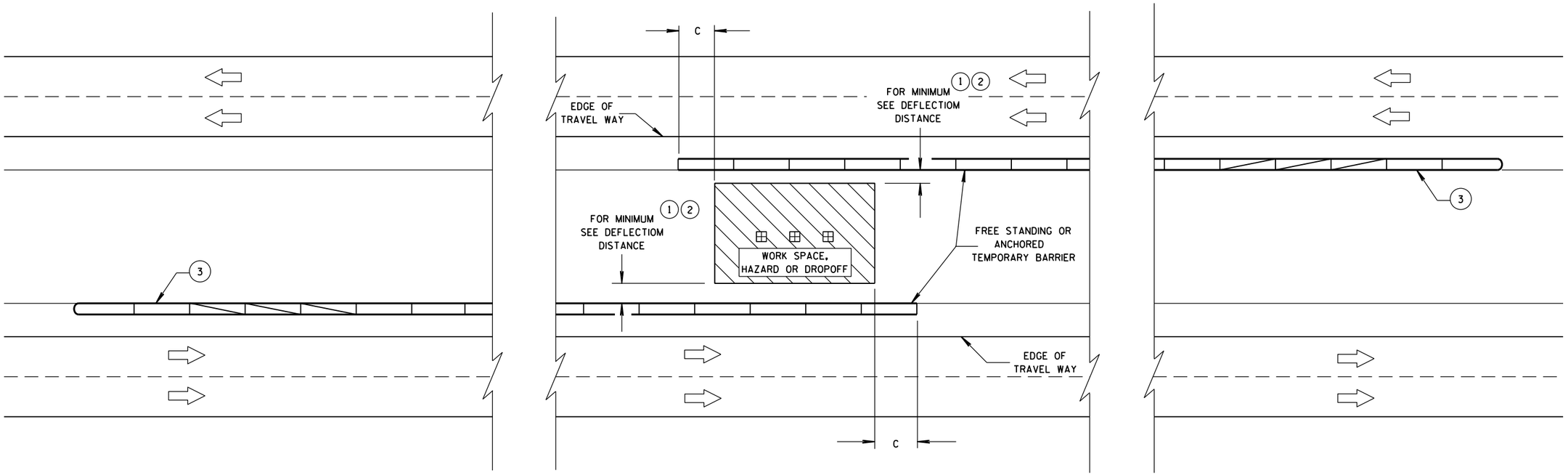
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

(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.

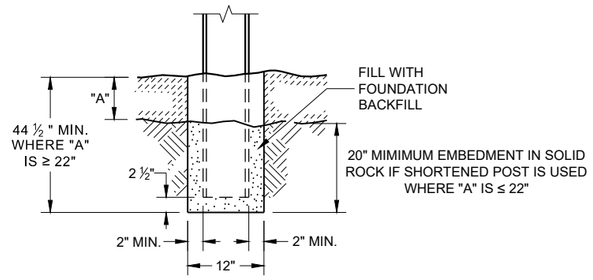
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

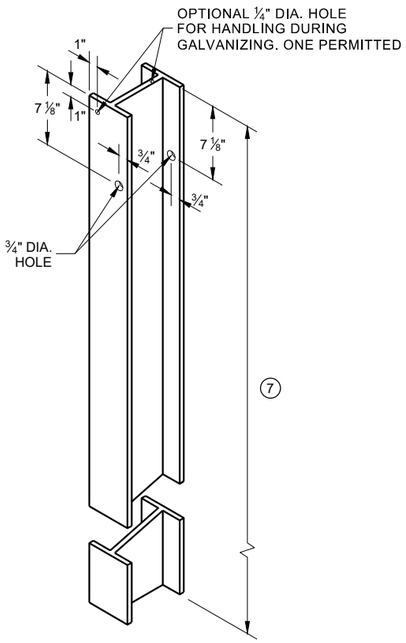
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

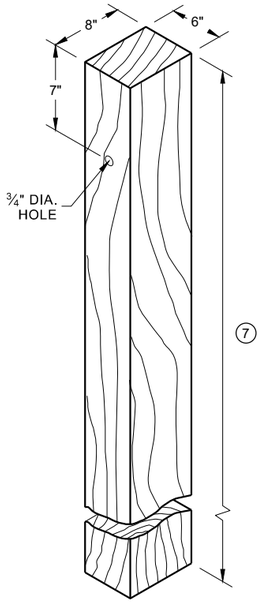
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



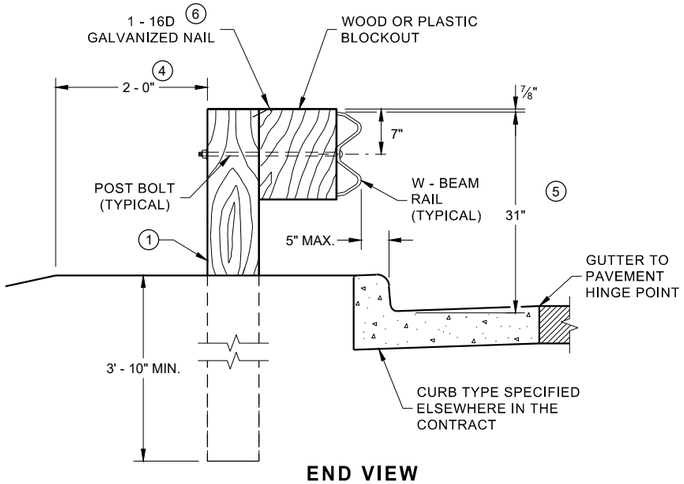
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



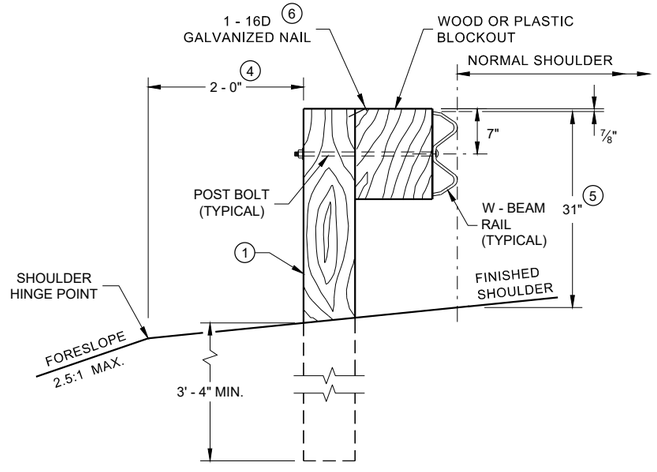
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



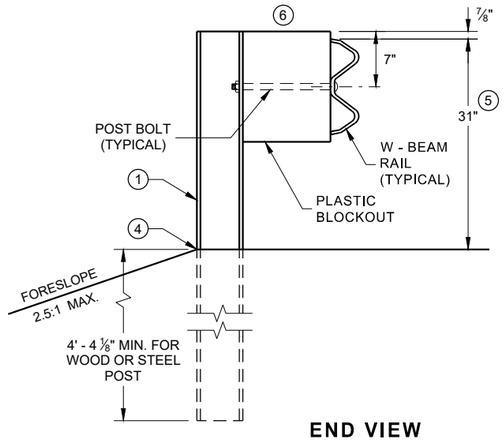
WOOD POST (6" X 8") NOMINAL (1)



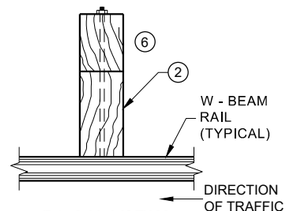
END VIEW
LOCATED ALONG A CURBED ROADWAY



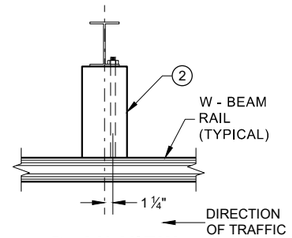
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



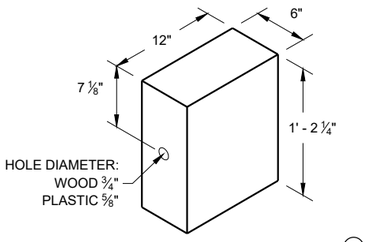
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



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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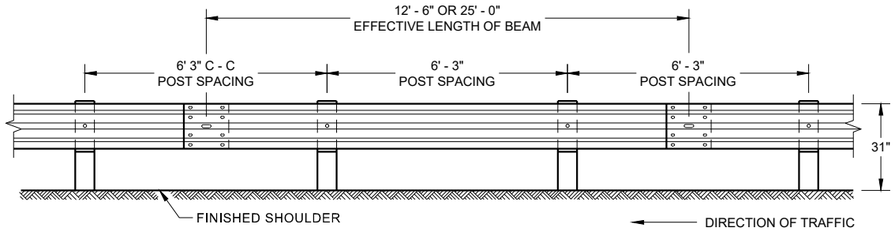
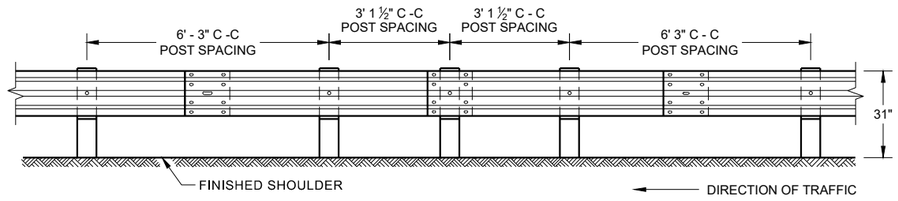
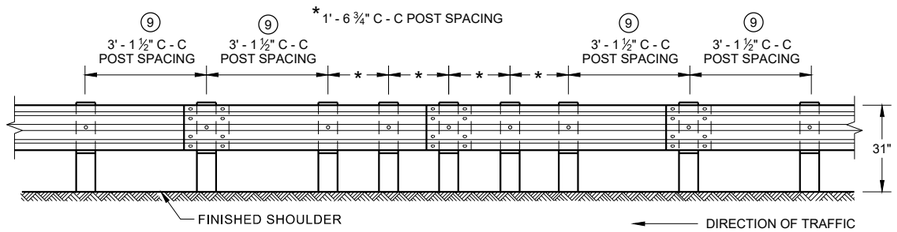
SDD 14B42 - 07a



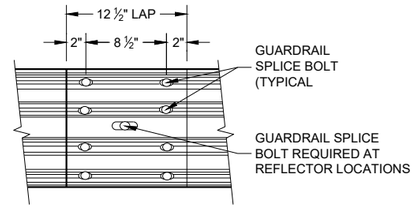
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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

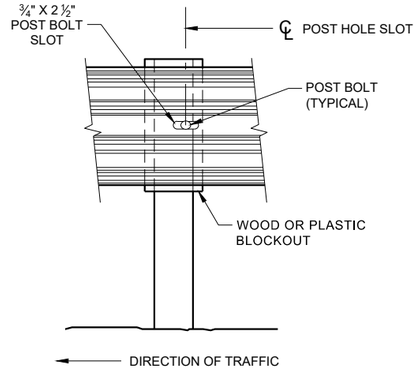
GENERAL NOTES

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

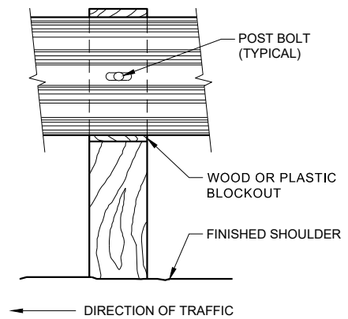
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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.

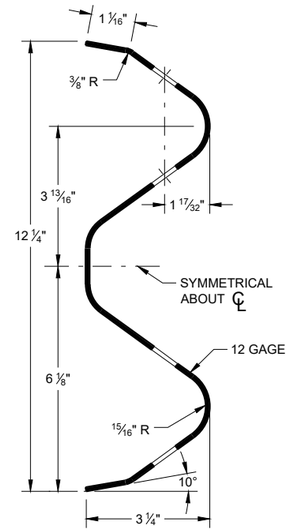
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



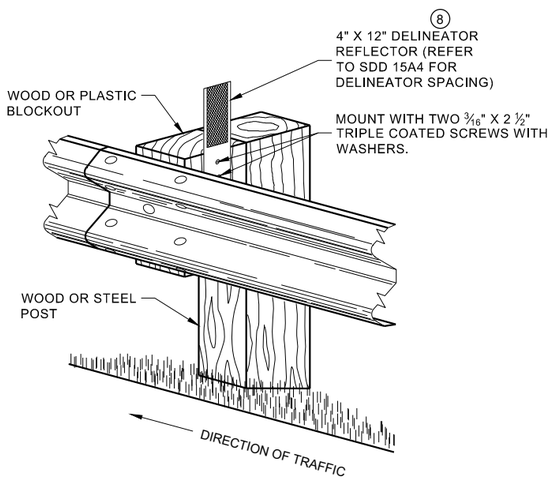
FRONT VIEW AT STEEL POST



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

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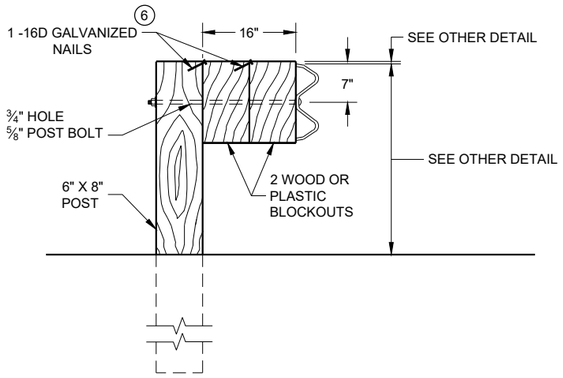
SDD 14B42 - 07b

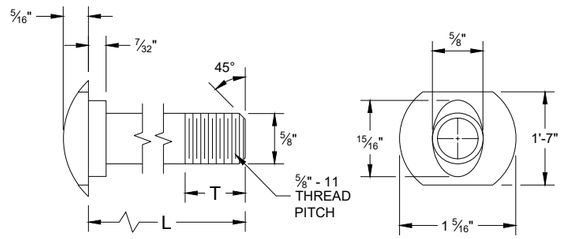


DETAIL FOR 16" BLOCKOUT DEPTH

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

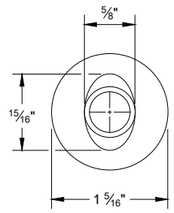
NOTE:

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

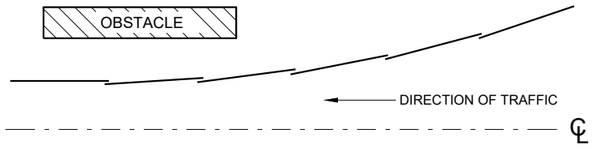


POST BOLT TABLE

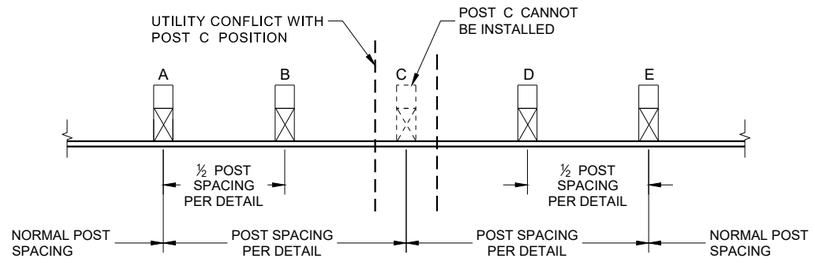
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



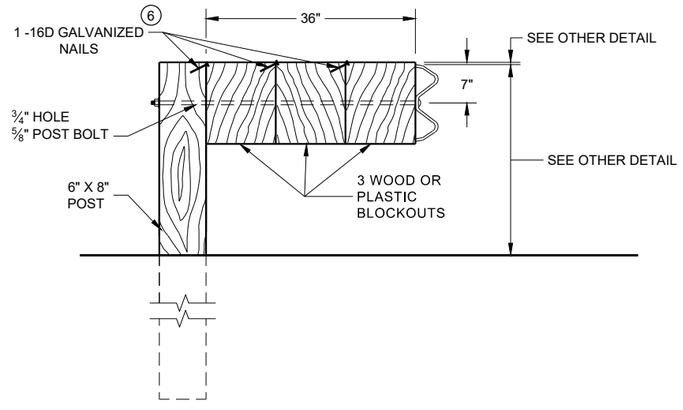
ALTERNATE BOLT HEAD



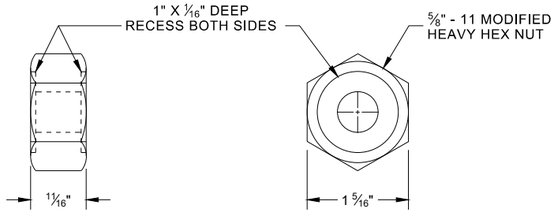
PLAN VIEW
BEAM LAPPING DETAIL



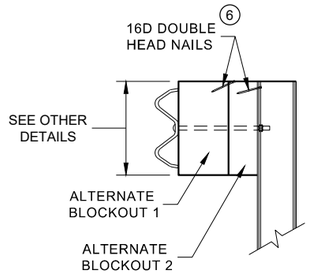
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



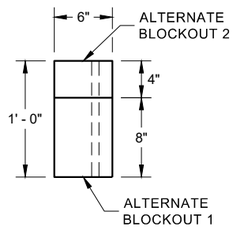
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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

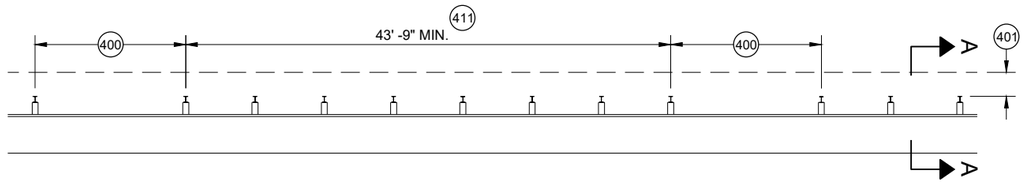
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

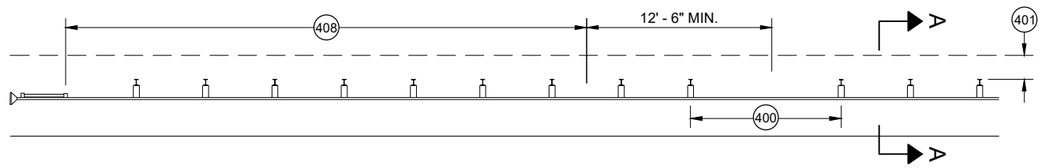
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

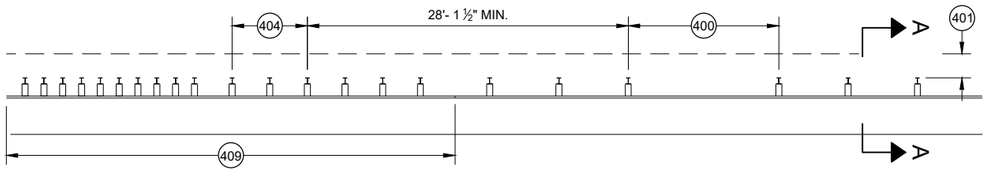
SDD 14B42 - 07c



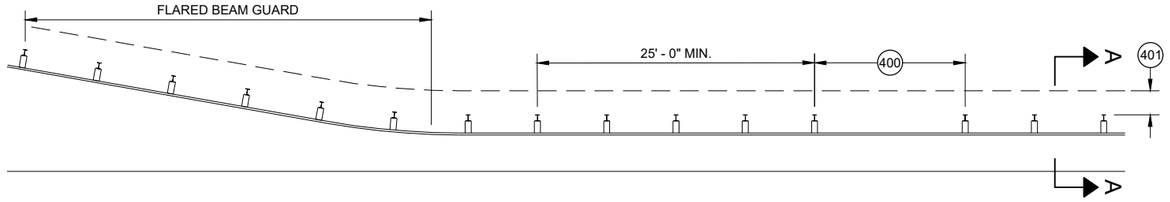
MISSING POST IN MGS GUARDRAIL



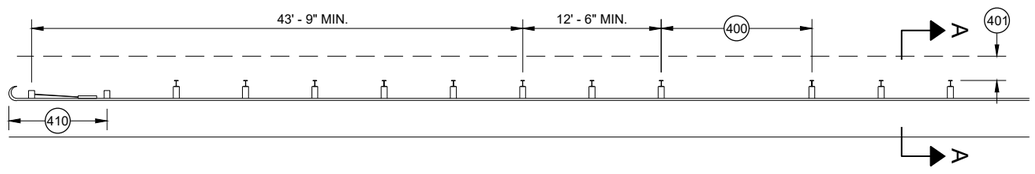
MISSING POST IN MGS GUARDRAIL NEAR EAT



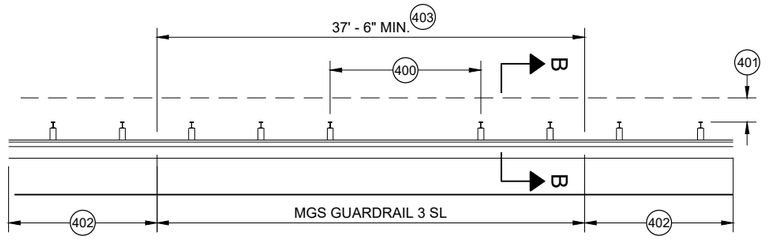
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

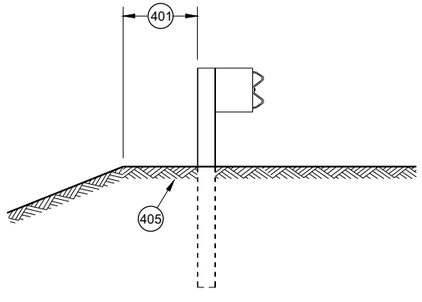


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

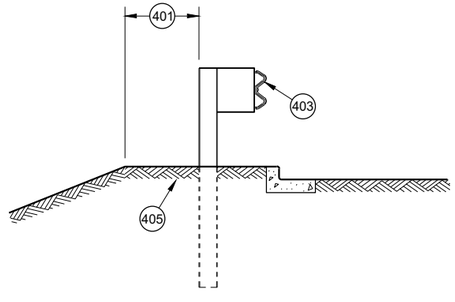


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(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.

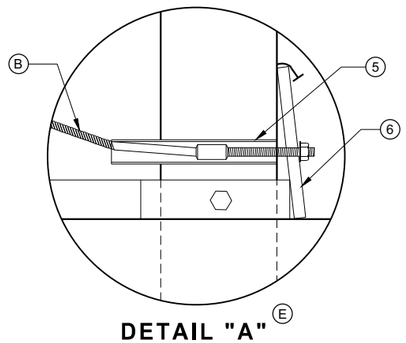
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

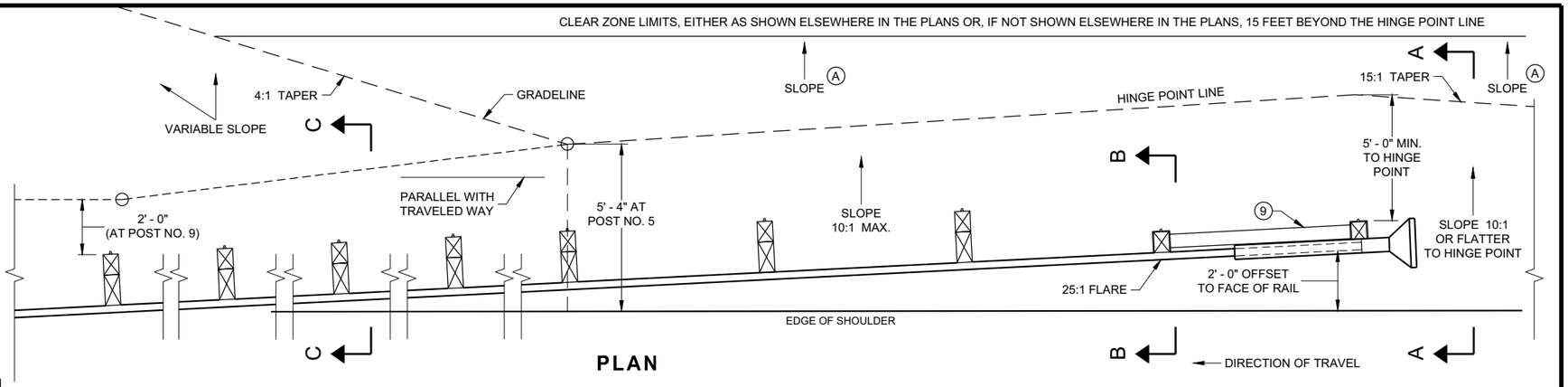
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

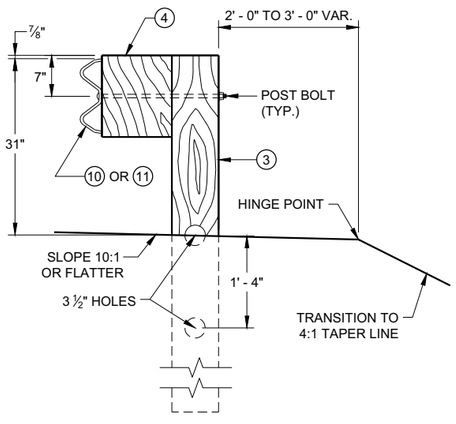
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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.

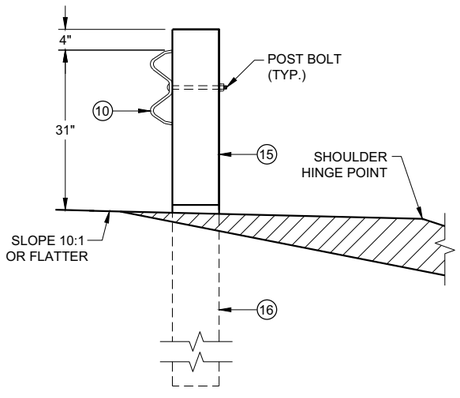


DETAIL "A" (E)

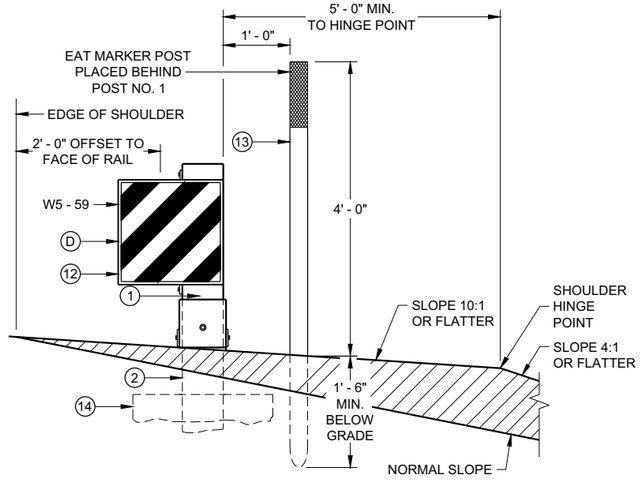




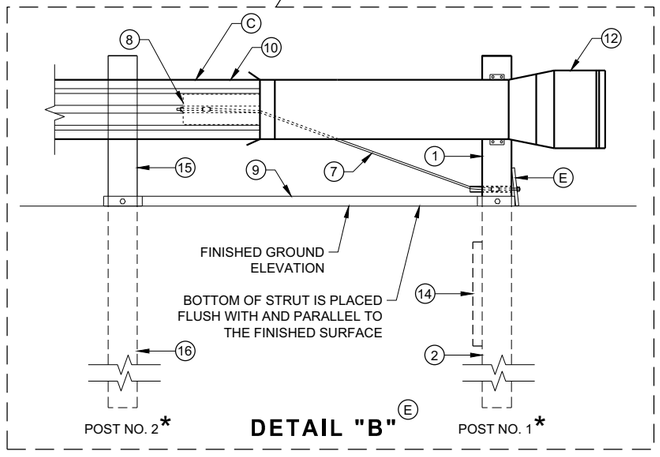
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



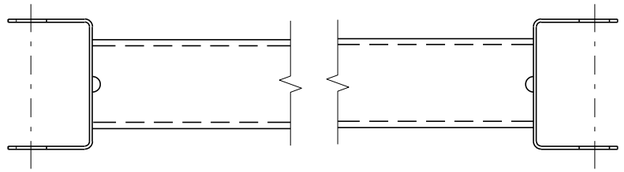
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

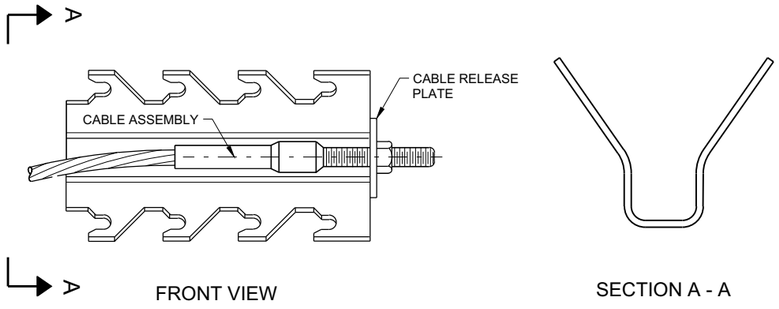
SDD 14B44 - 04a



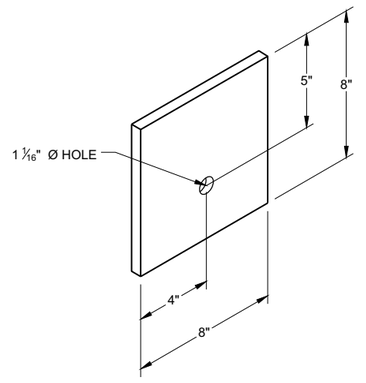
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

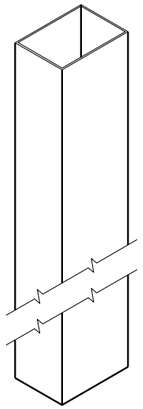
6

SDD 14B44 - 04b

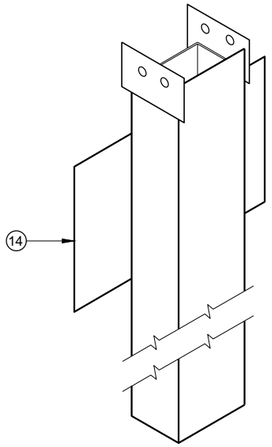
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

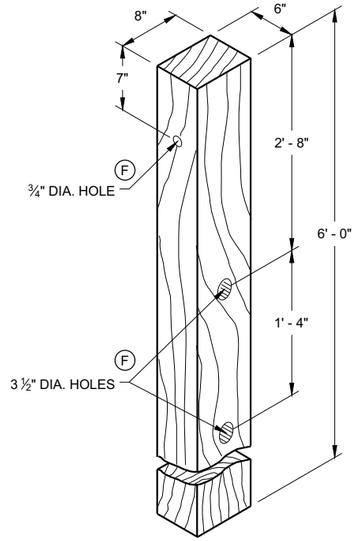
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



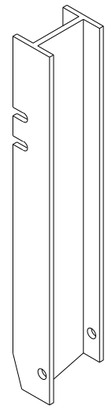
UPPER POST NO. 1 (1) (E)



LOWER POST NO. 1 (2) (E)



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



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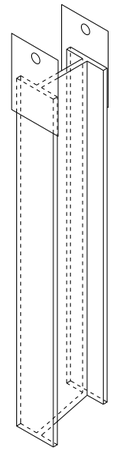
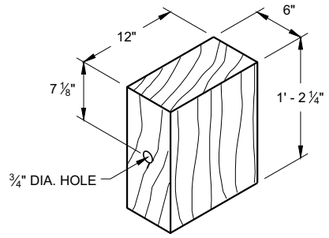
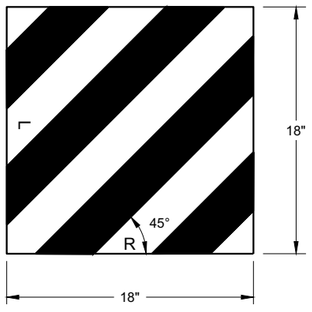


LOWER POST NO. 2 (16) (E)

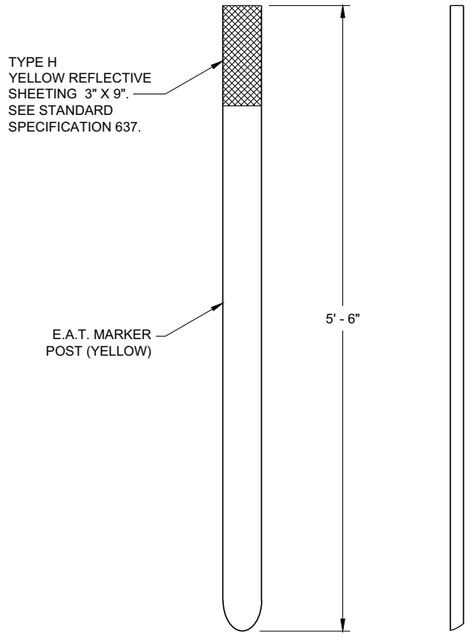


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



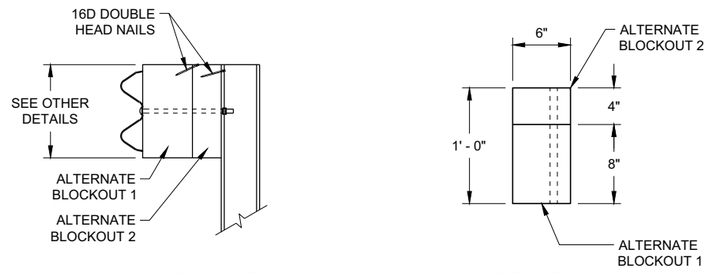
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

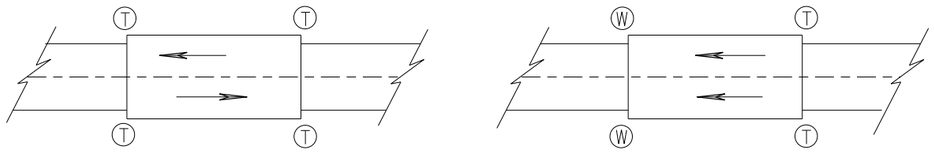
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

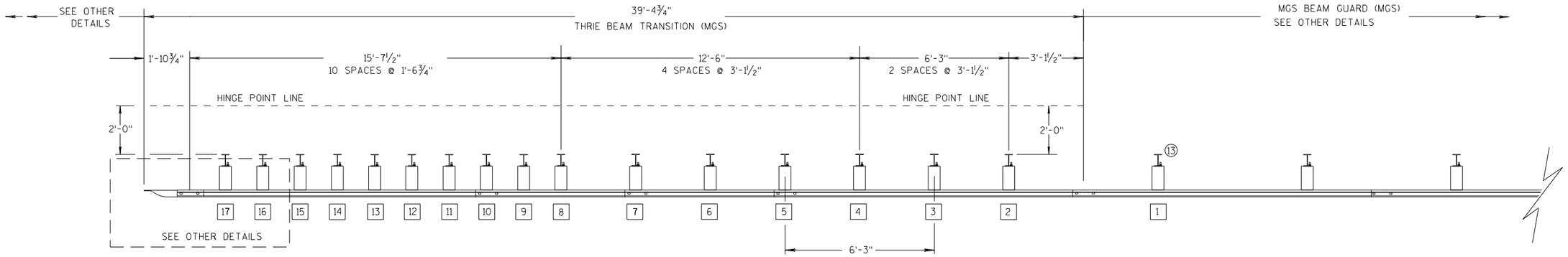
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

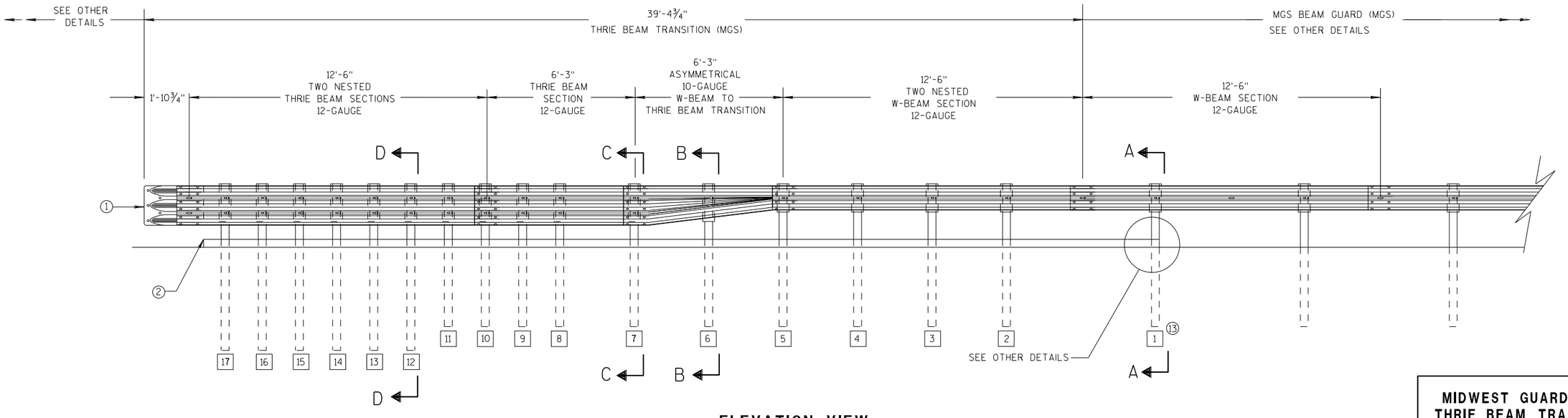
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

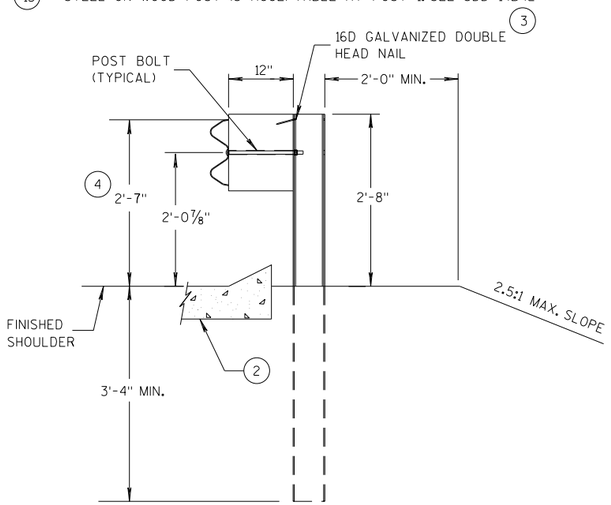
GENERAL NOTES

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

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

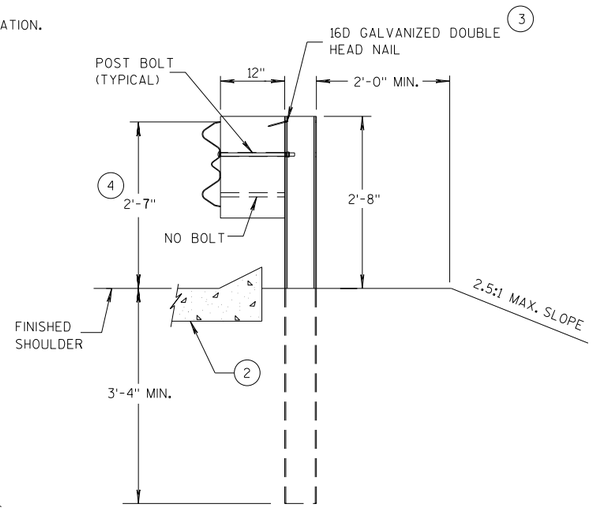
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



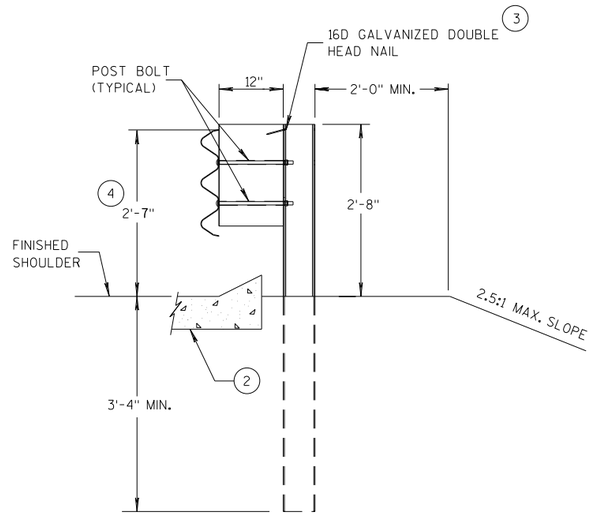
SECTION A-A (13)

POSTS 1-5



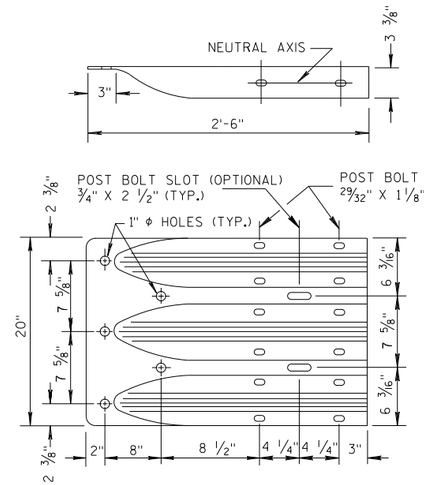
SECTION B-B

POST 6

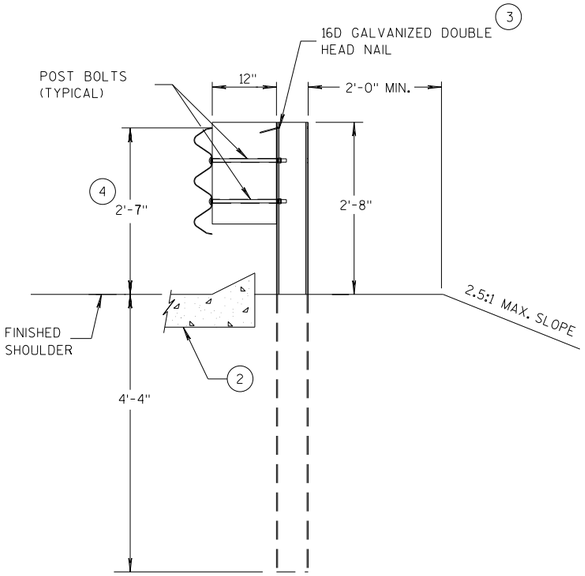


SECTION C-C

POSTS 7-11

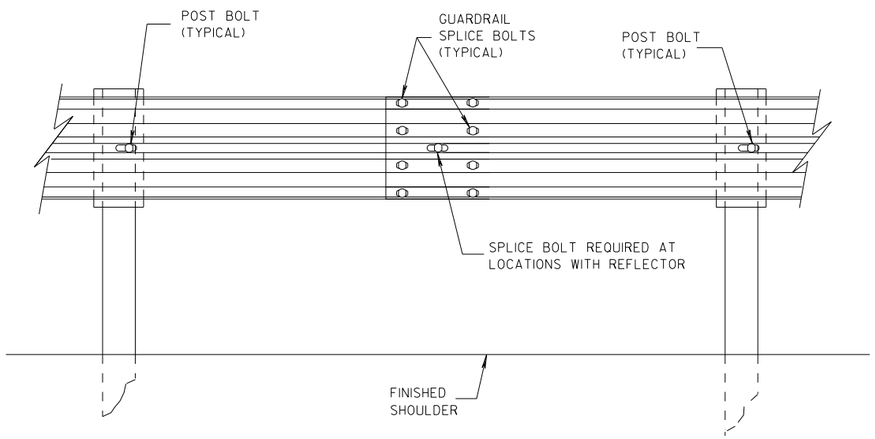


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

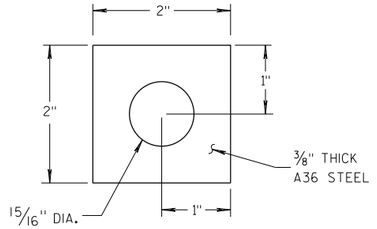
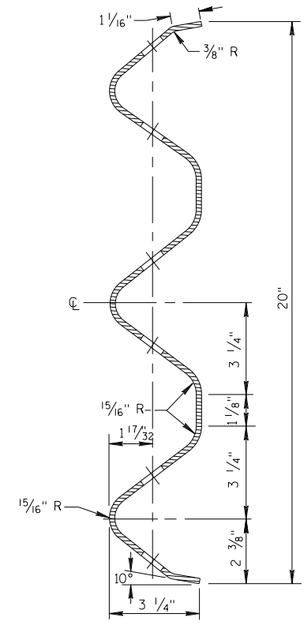


PLATE WASHER DETAIL



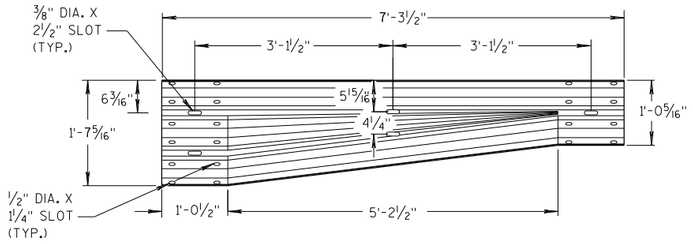
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

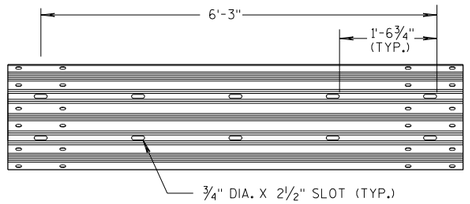
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

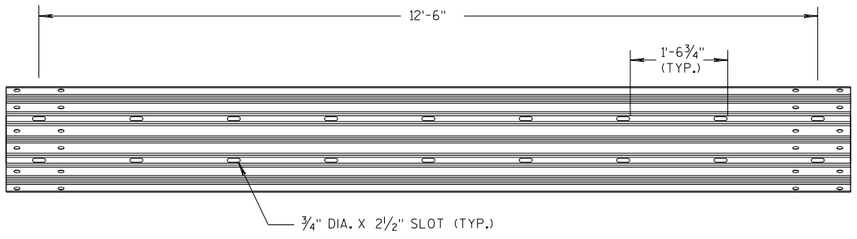
S.D.D. 14 B 45-5b



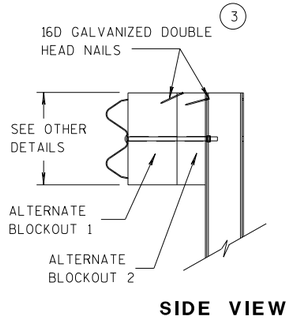
W-BEAM TO THRIE BEAM TRANSITION SECTION



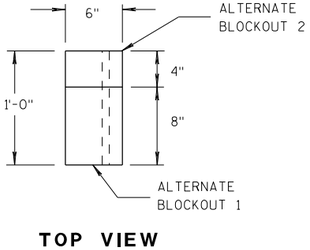
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

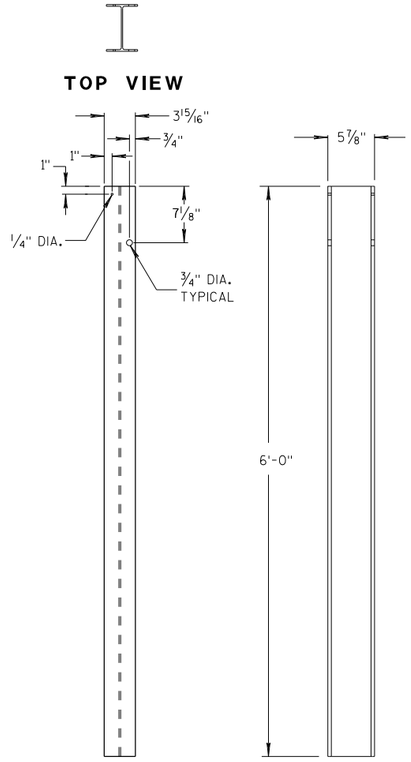


SIDE VIEW



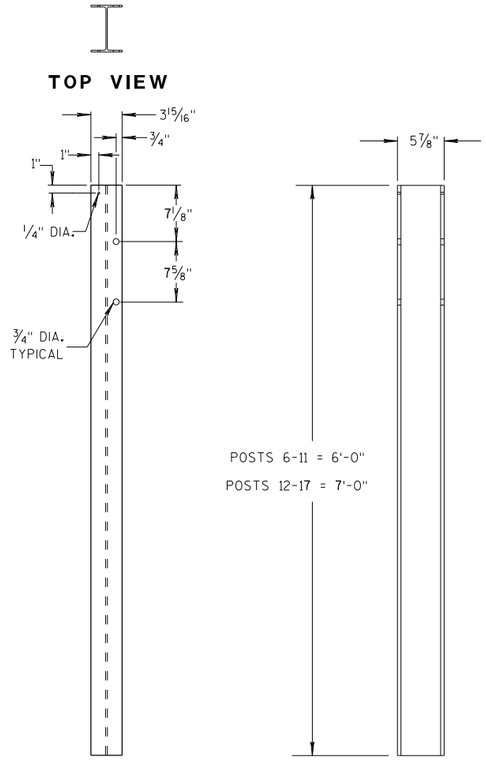
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



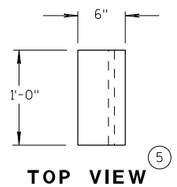
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

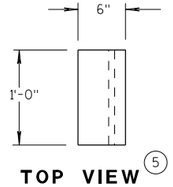


FRONT VIEW SIDE VIEW

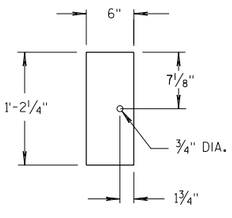
STEEL POSTS 6-17



TOP VIEW (5)

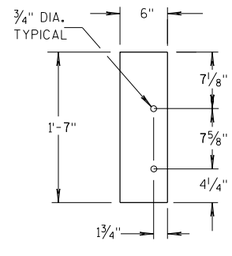


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

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

(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

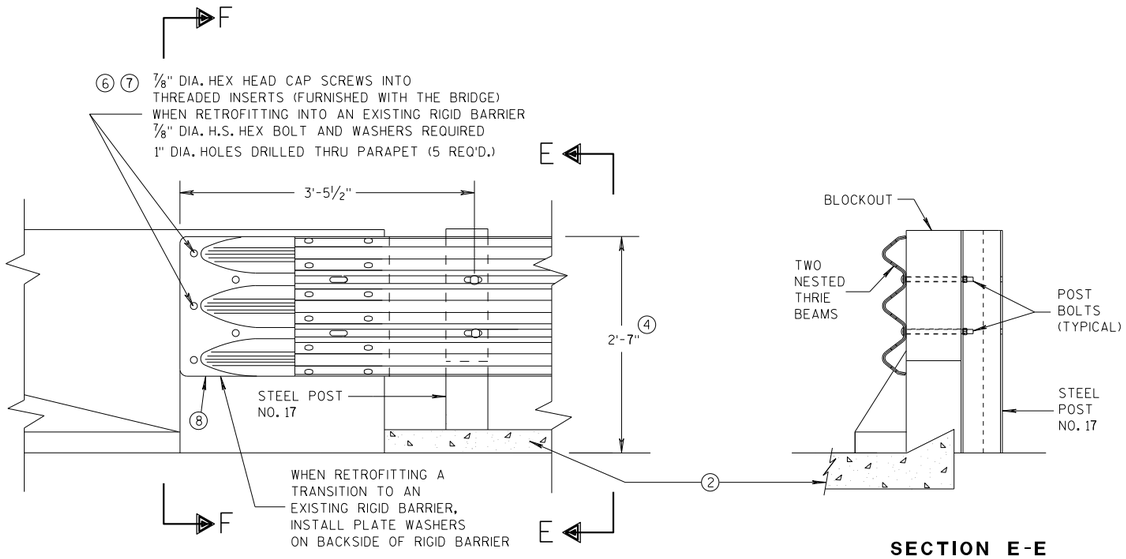
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

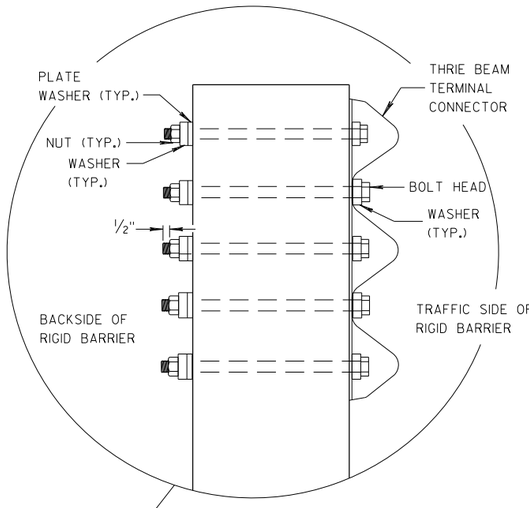
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

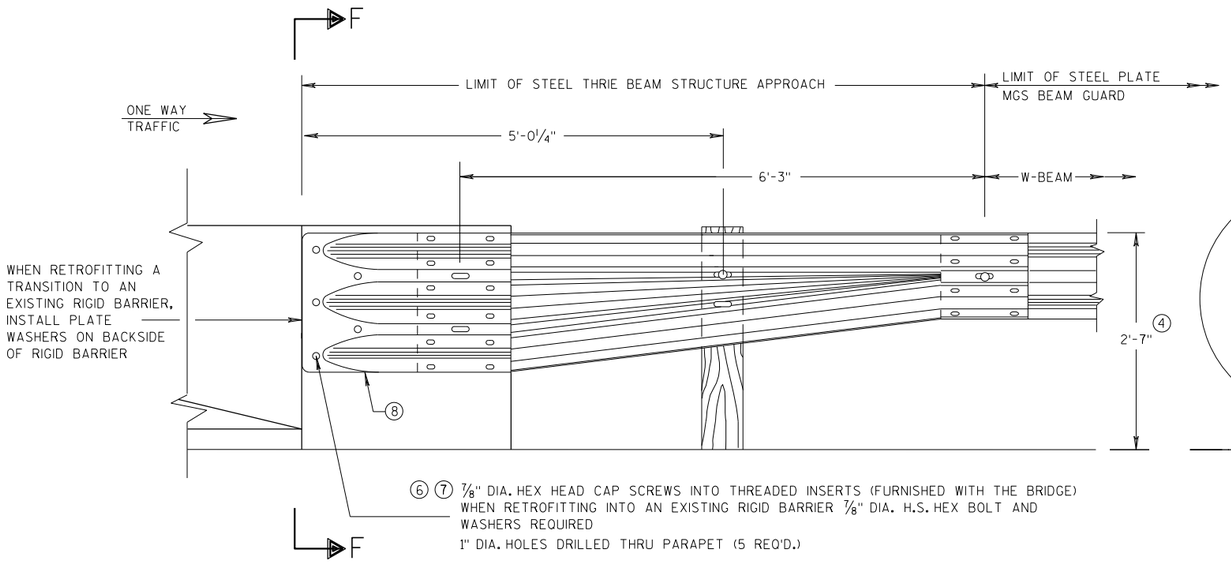
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

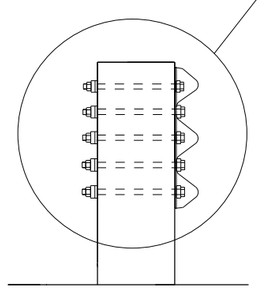
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

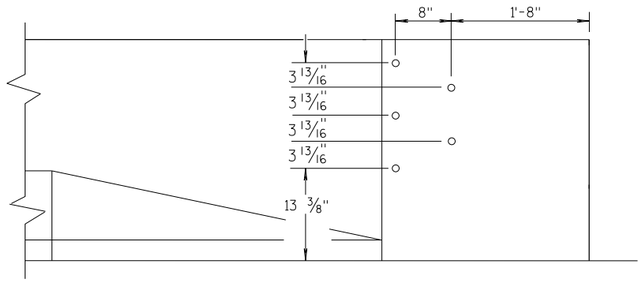




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

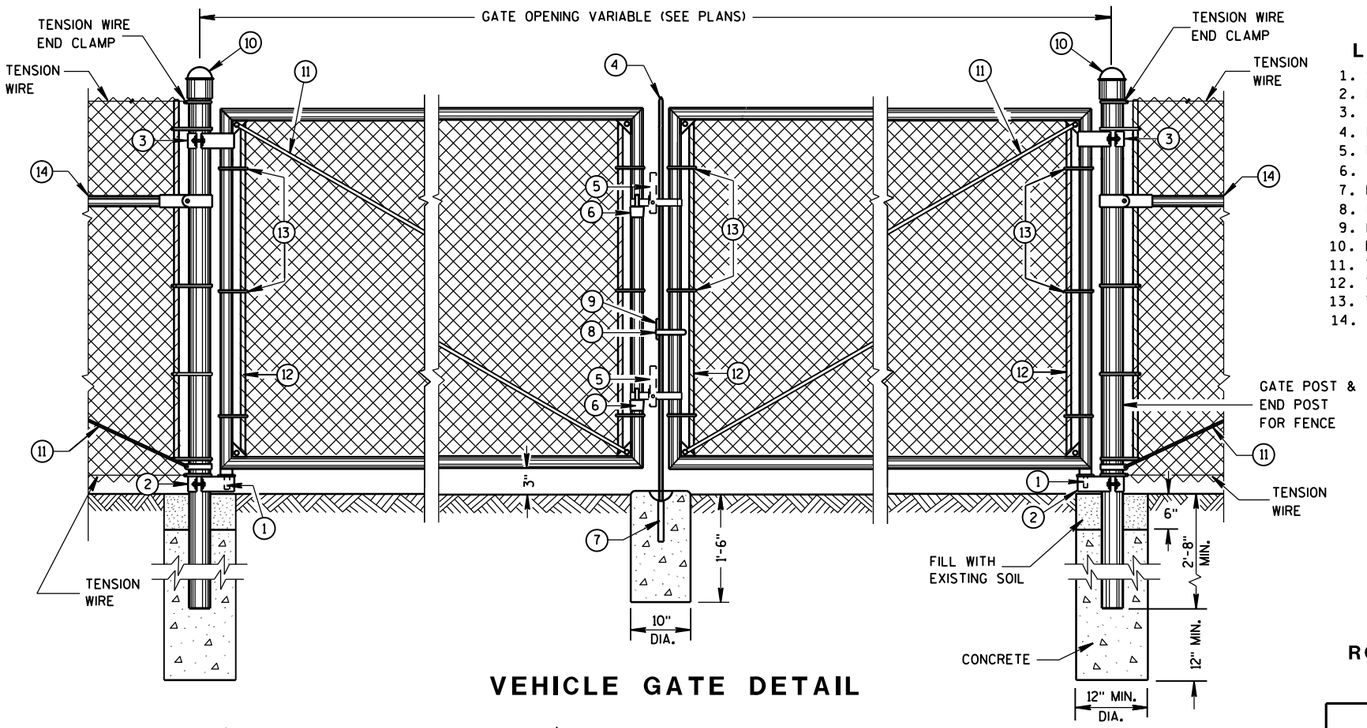
APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D[UNIT SUPERVIS[NT
FHWA

6

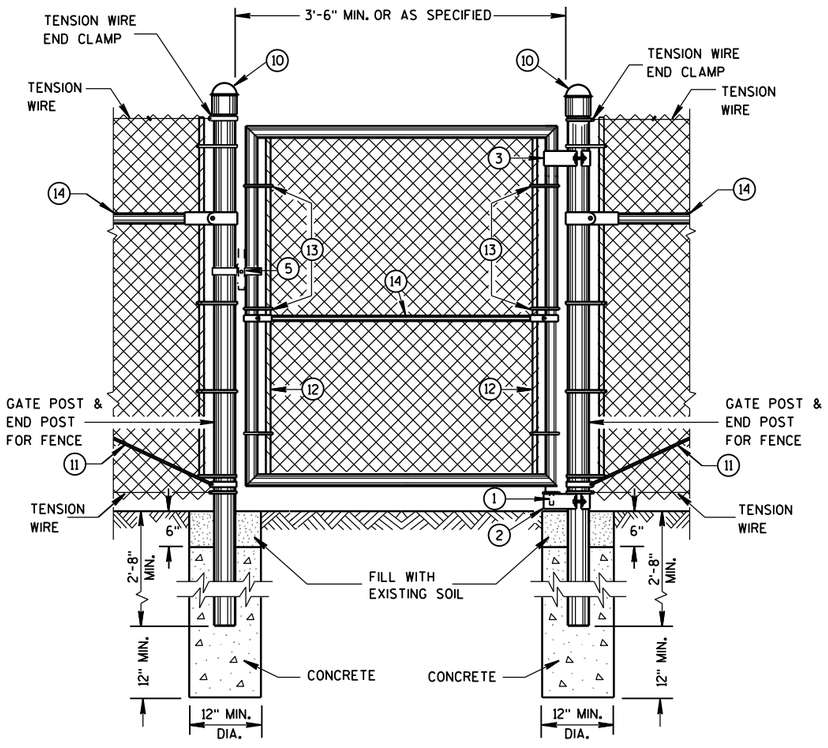
S.D.D. 14 B 45-5d

6

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



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

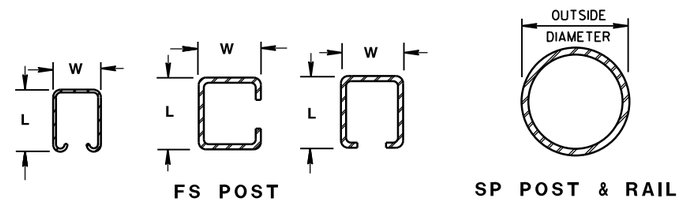
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

USE TYPE 2, CLASS 3, MARCELLED/CRIMPED, TENSION WIRE PER ASTM A 817.



FS POST — SP POST & RAIL

CROSS SECTIONS OF POSTS AND RAILS

ROLLED-FORMED STEEL FENCE POST (2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

ROUND STEEL FENCE POST (1.8 OZ./SQ. FT. COATING)

POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

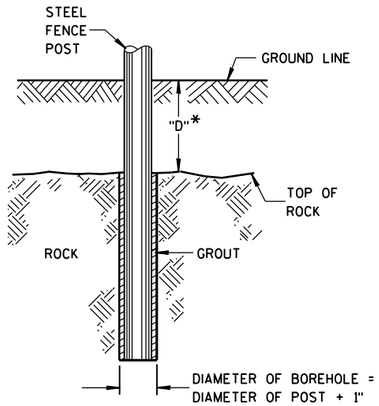
** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

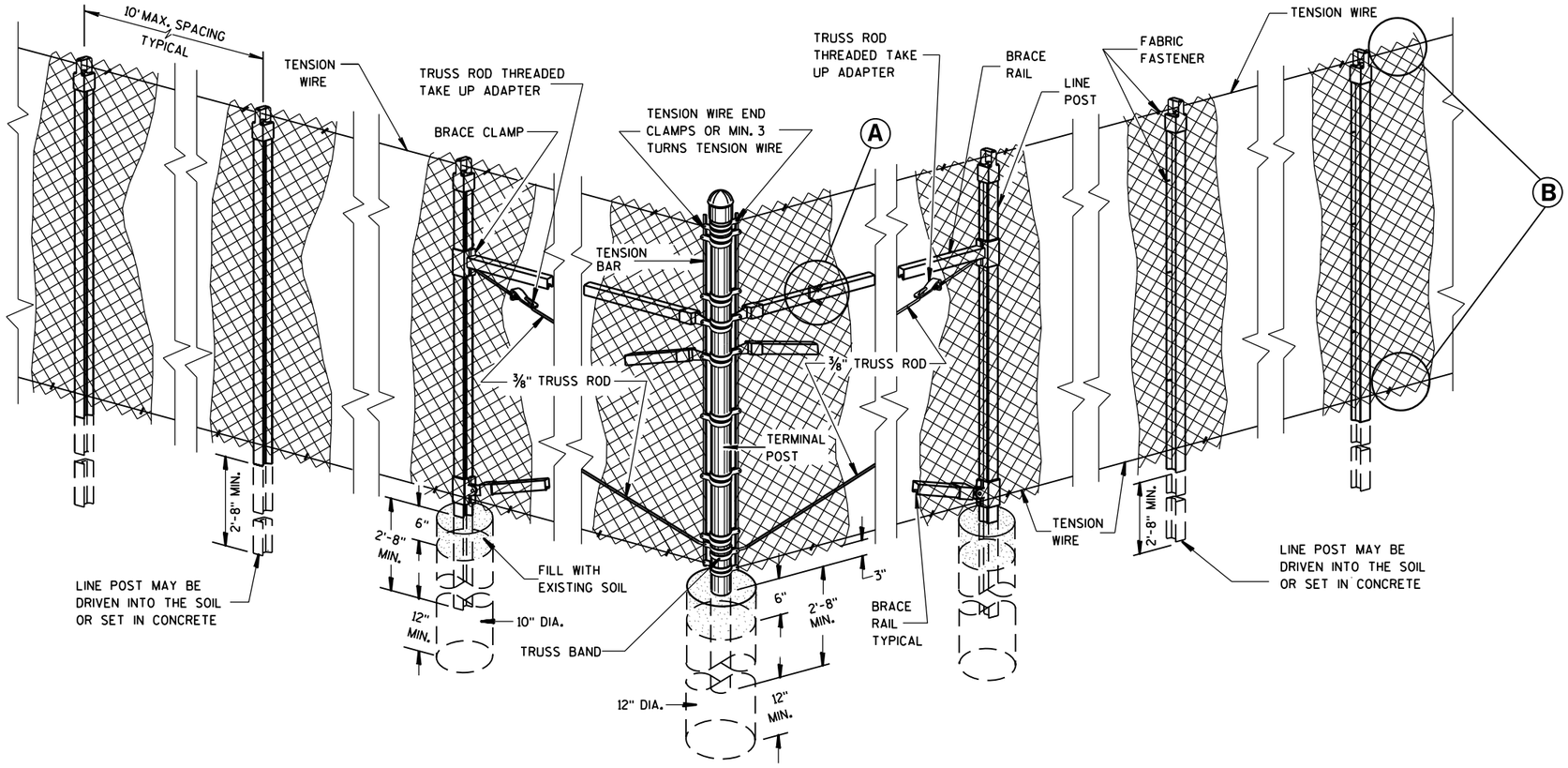
6

S.D.D. 15 B 3-15a

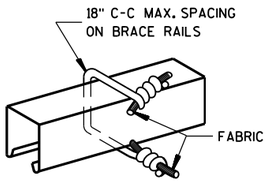


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



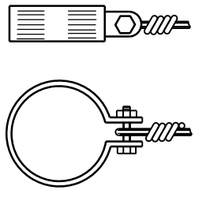
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



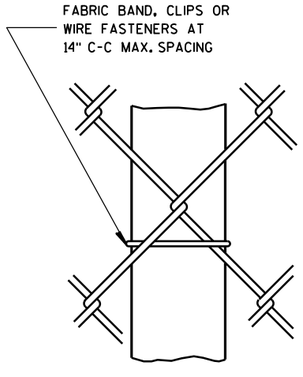
BRACE RAIL

FABRIC FASTENER

Ⓐ



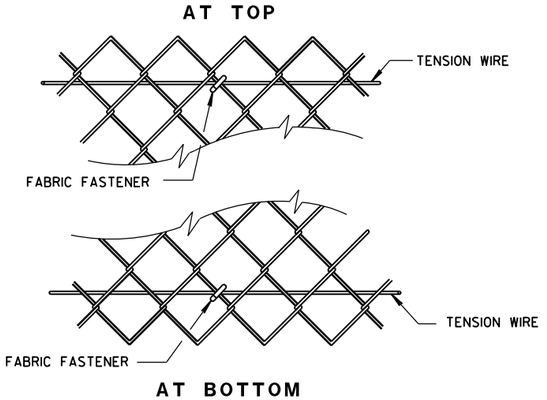
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

FENCE CHAIN LINK

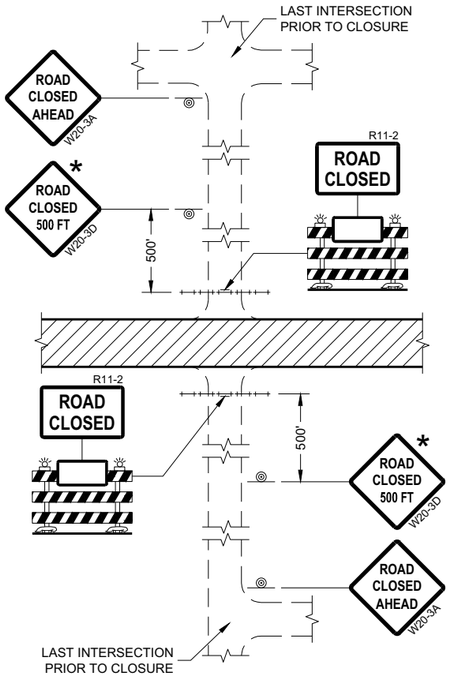
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
FEB. 2015 DATE
FHWA

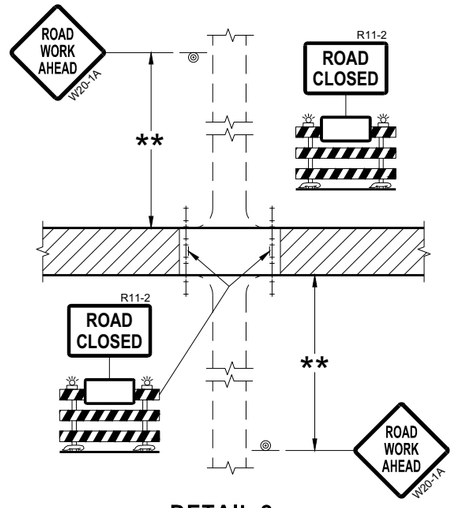
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

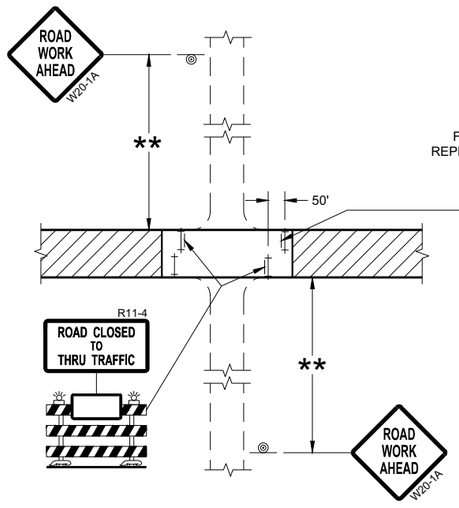
S.D.D. 15 B 3-15b



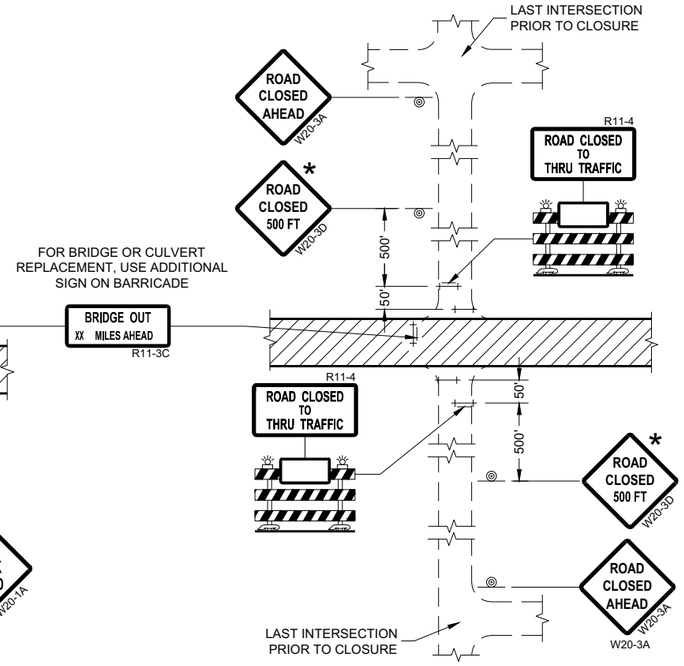
DETAIL 1
(NO ACCESS TO PROJECT)



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



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



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

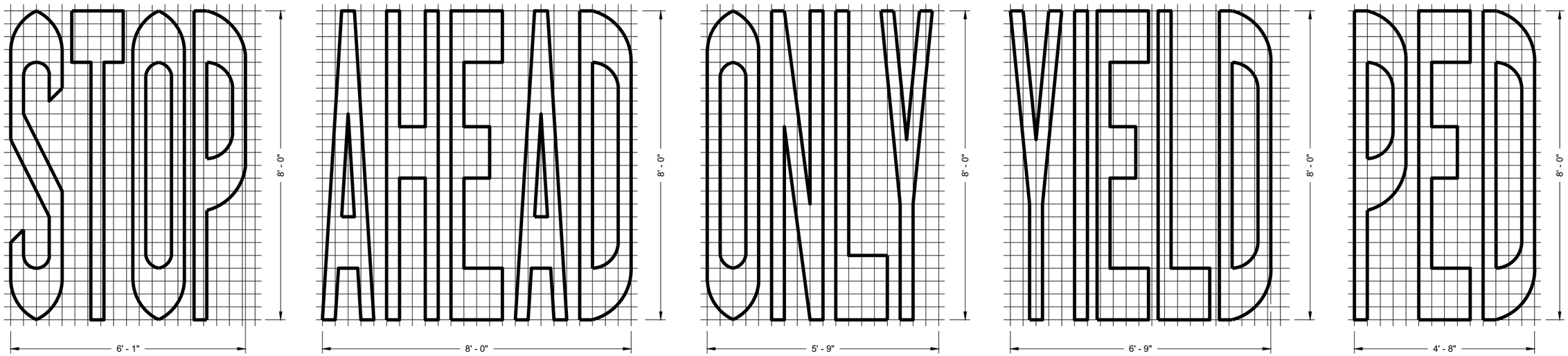
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

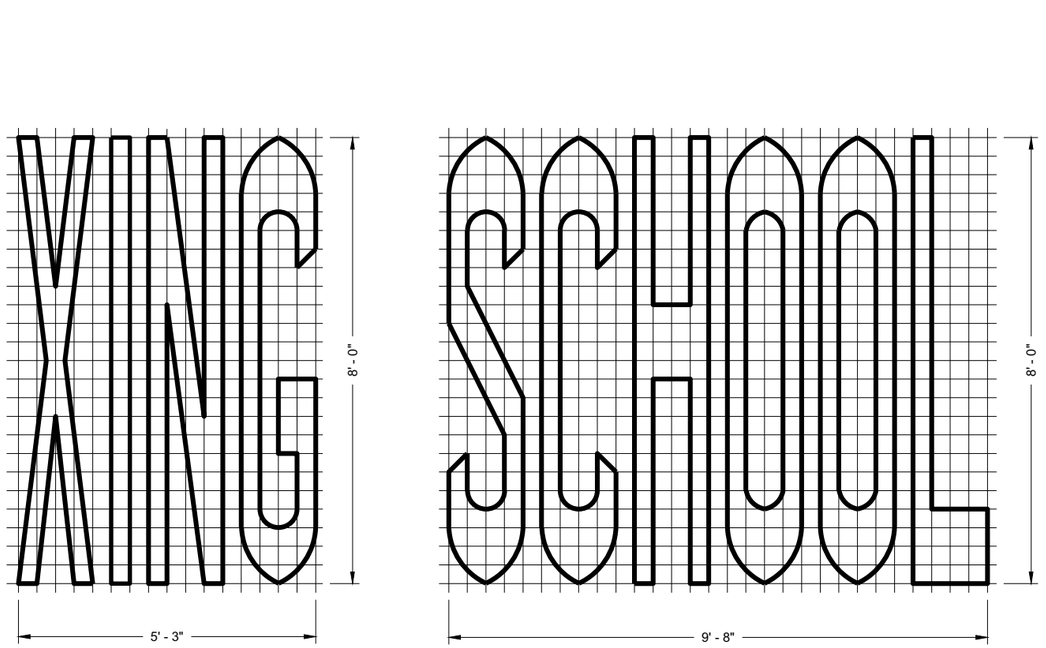
APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

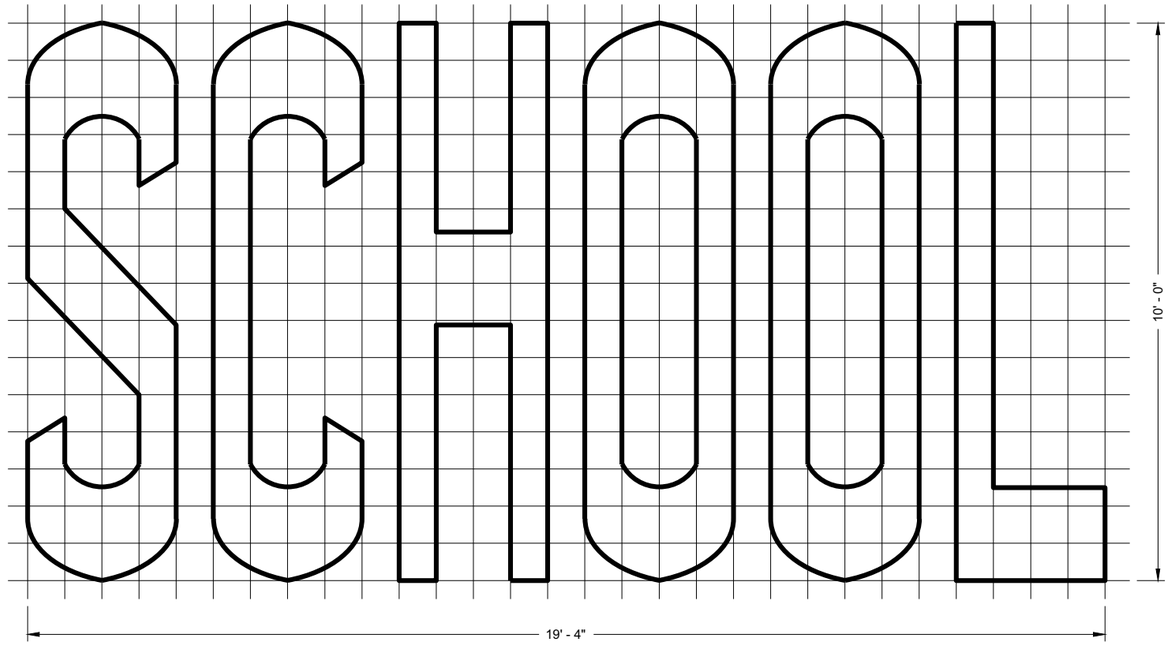
FHWA

6
SDD 15C03 - 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

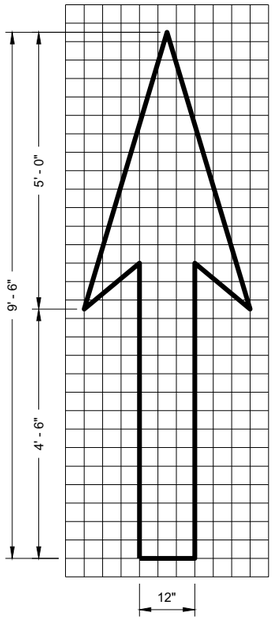
6

SDD 15C07 - 15b

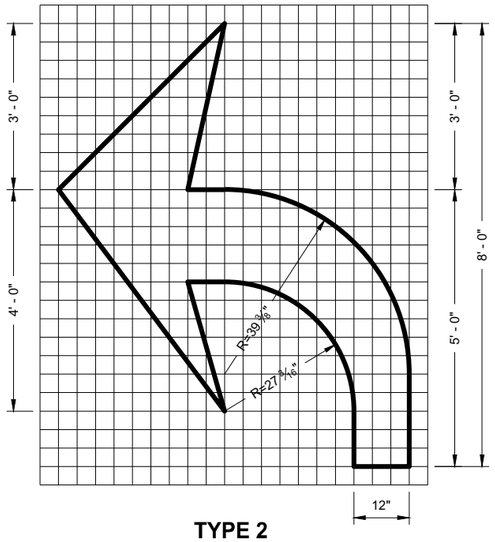
SDD 15C07 - 15b

GENERAL NOTES

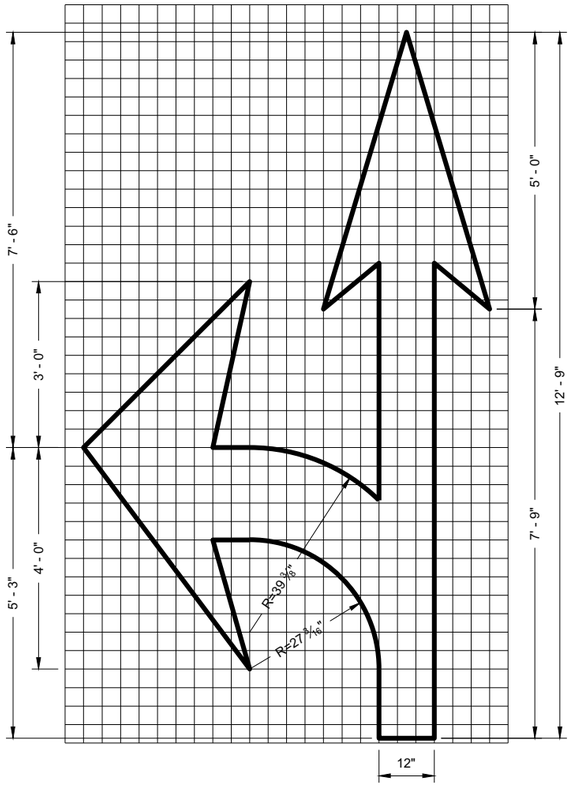
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



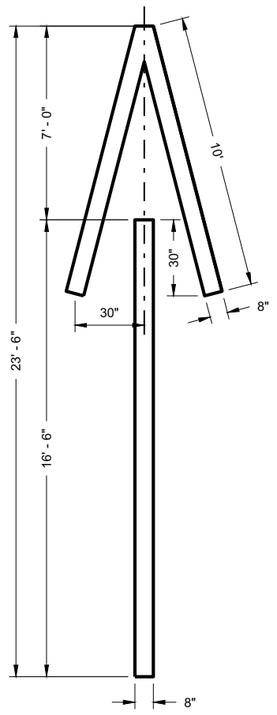
TYPE 1



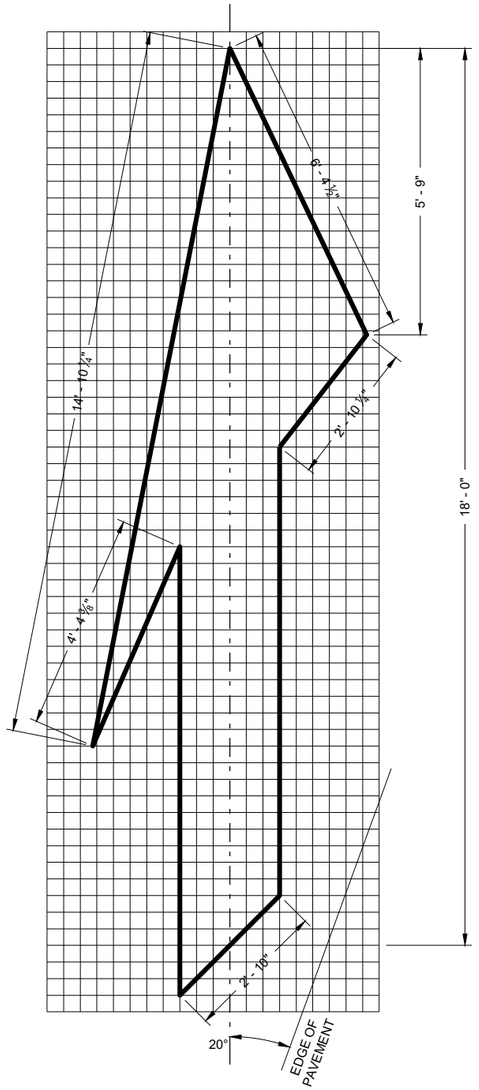
TYPE 2



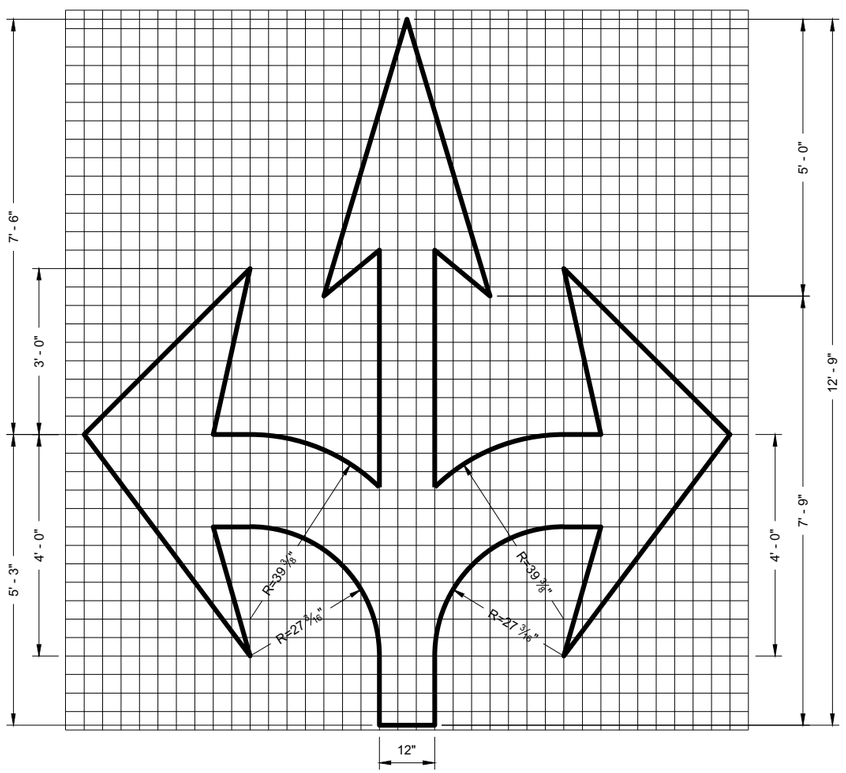
TYPE 3



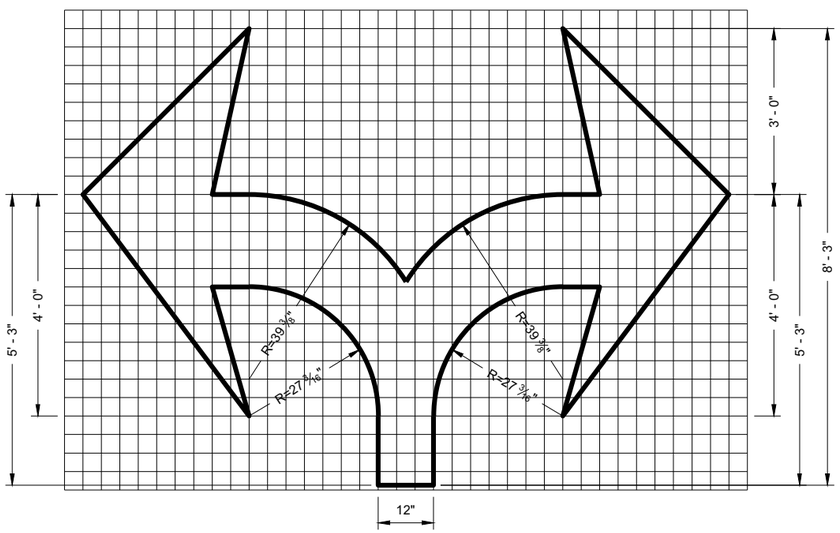
TYPE 4



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 MARKING ENGINEER

FHWA

6

SDD 15C07 - 15c

6

SDD 15C07 - 15c

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

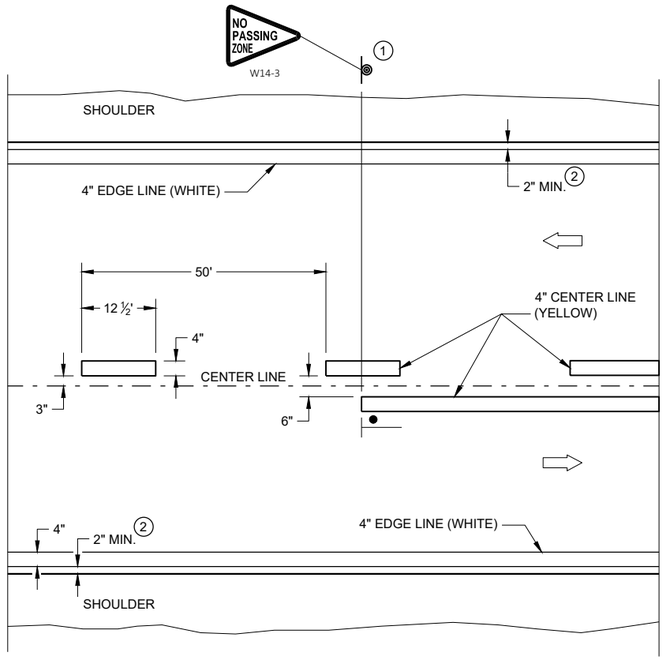
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

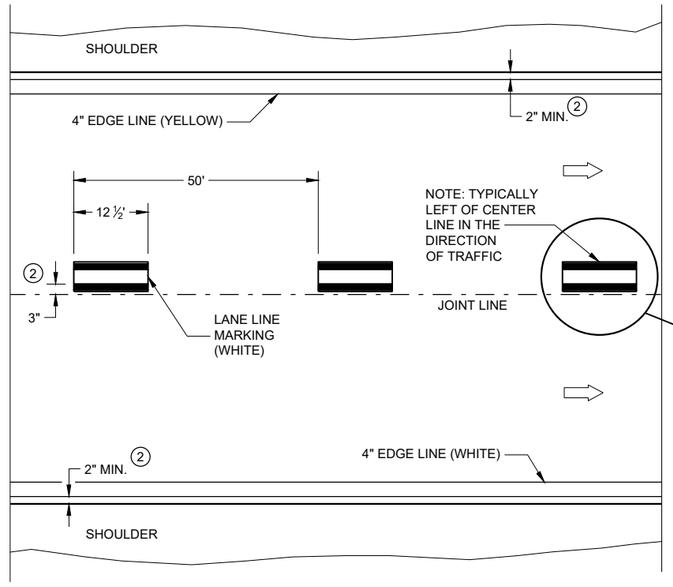
"T" MARKING

SIGN ON PERMANENT SUPPORT

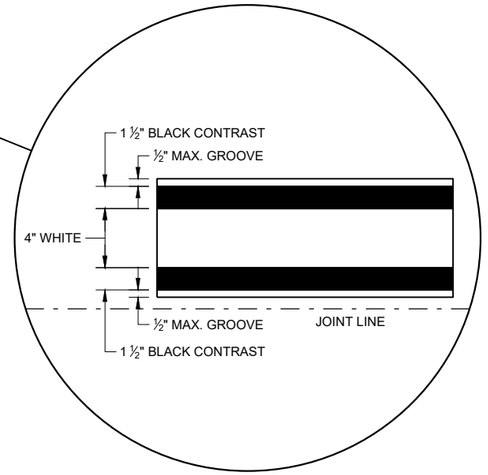
DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC



PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 — DATE
/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER

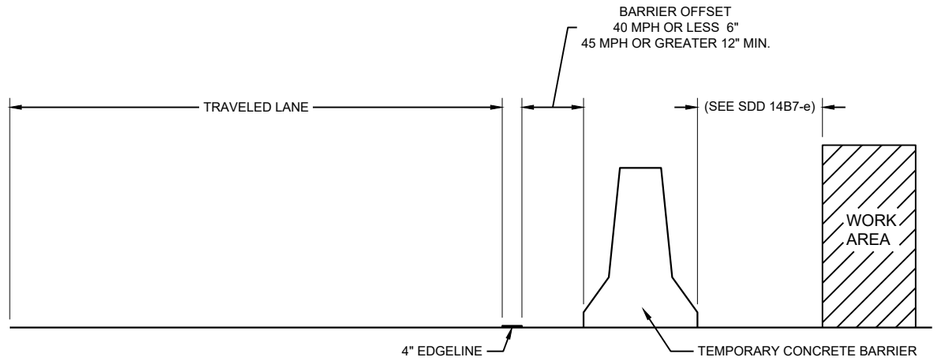
FHWA

6

SDD 15C08 - 22a

6

SDD 15C08 - 22a



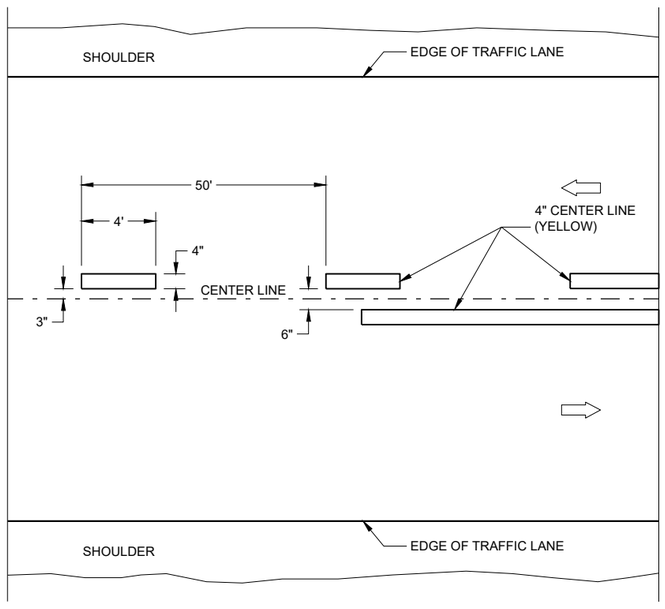
TEMPORARY BARRIER OFFSET FROM EDGELINE

GENERAL NOTES

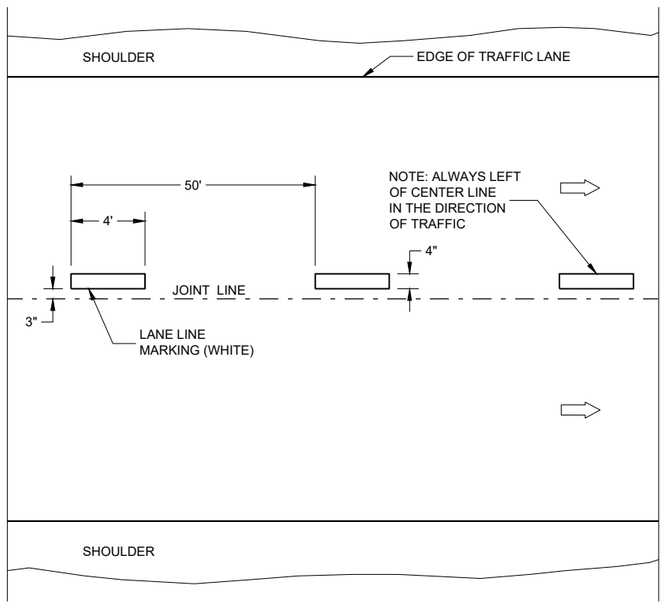
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

LEGEND

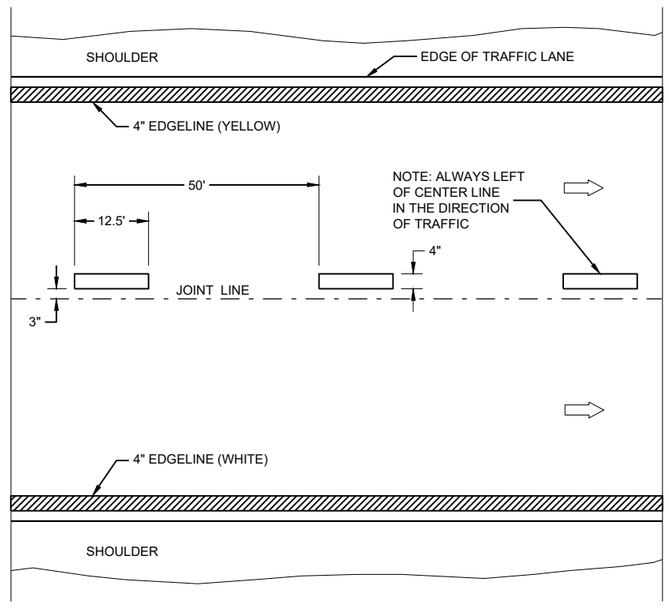
DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 — DATE
/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER

FHWA

6

SDD 15C08 - 22b

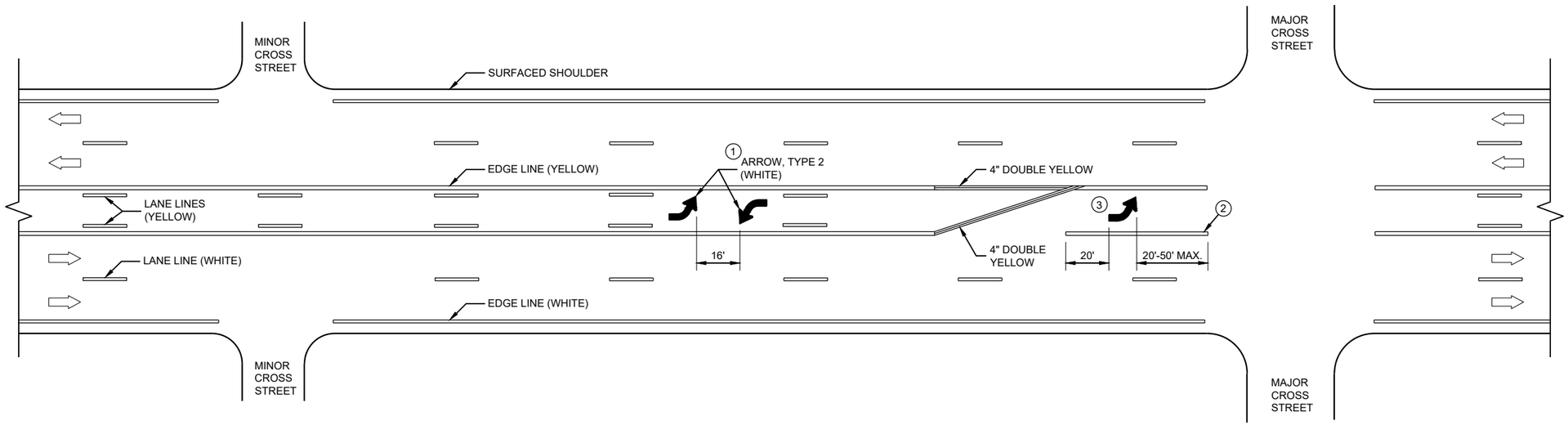
6

SDD 15C08 - 22b

GENERAL NOTES

1. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
2. 8" WHITE
3. TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

DIRECTION OF TRAFFIC



TWO WAY LEFT TURN LANE

6

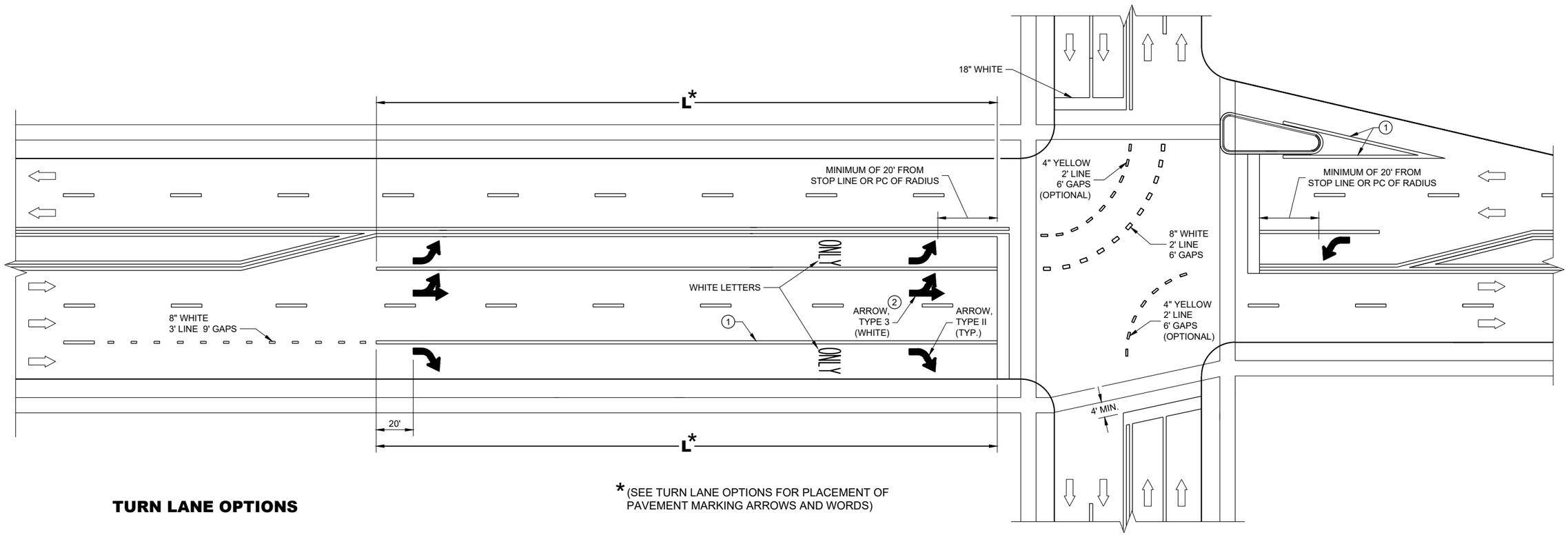
SDD 15C08 - 22c

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

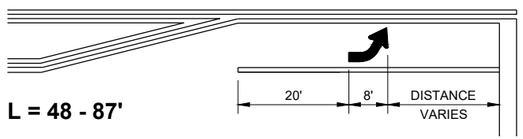
SDD 15C08 - 22c



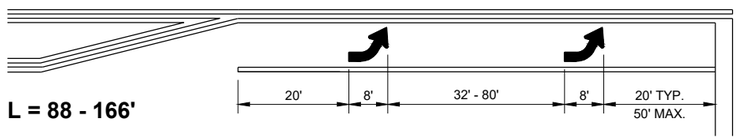
* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

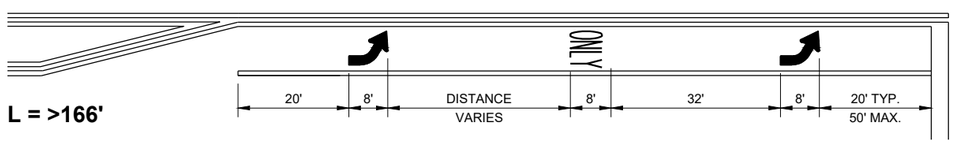
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48 - 87'



L = 88 - 166'



L = >166'

GENERAL NOTES

1. 8" WHITE
2. 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

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 15C08 - 22d

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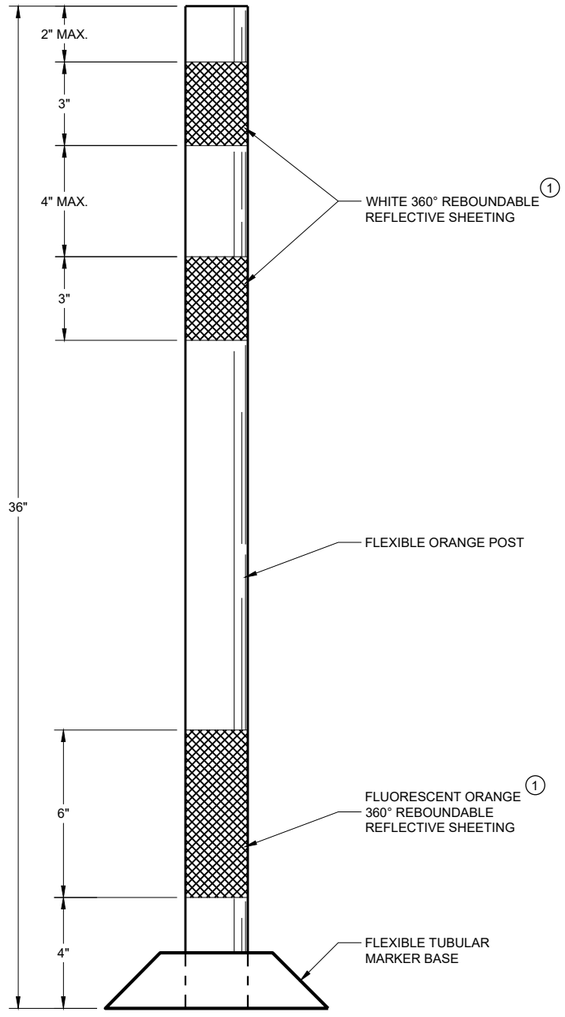
SDD 15C08 - 22d



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 ENGINEE

FHWA

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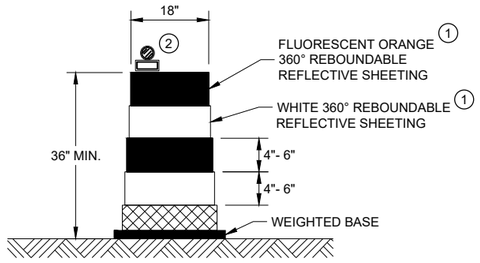
SDD 15C11 - 10a

SDD 15C11 - 10a

GENERAL NOTES

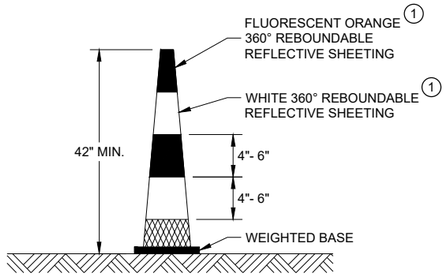
(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

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



DRUM

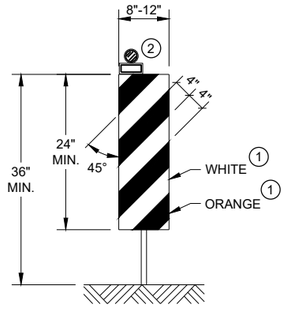
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

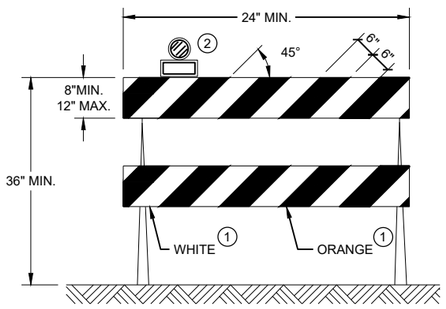
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



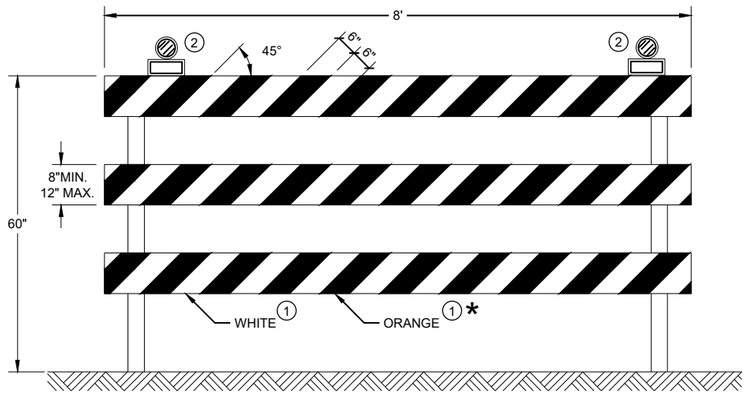
VERTICAL PANEL

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
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SDD 15C11 - 10b

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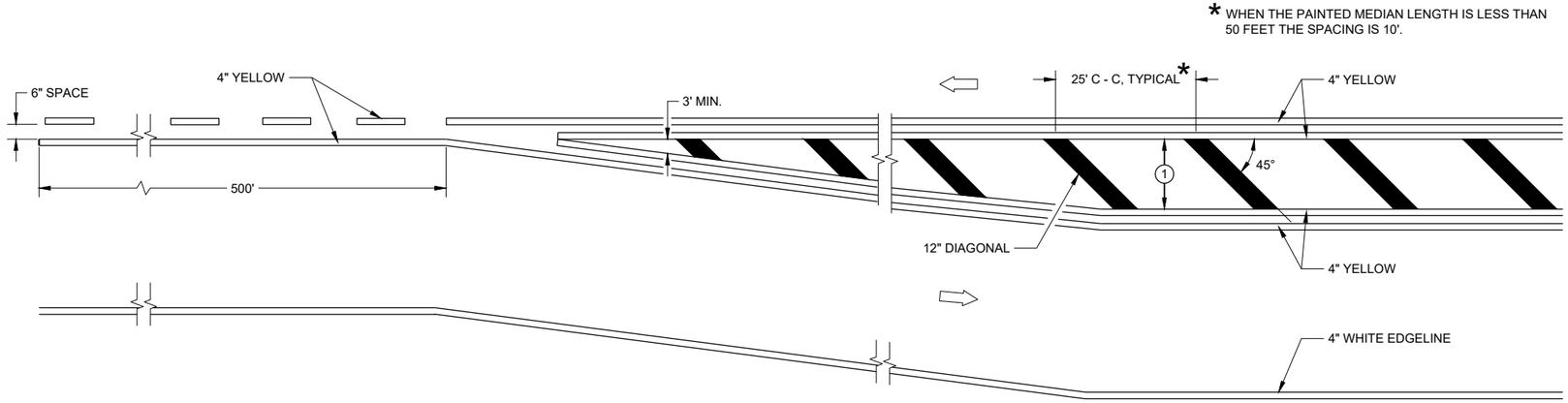
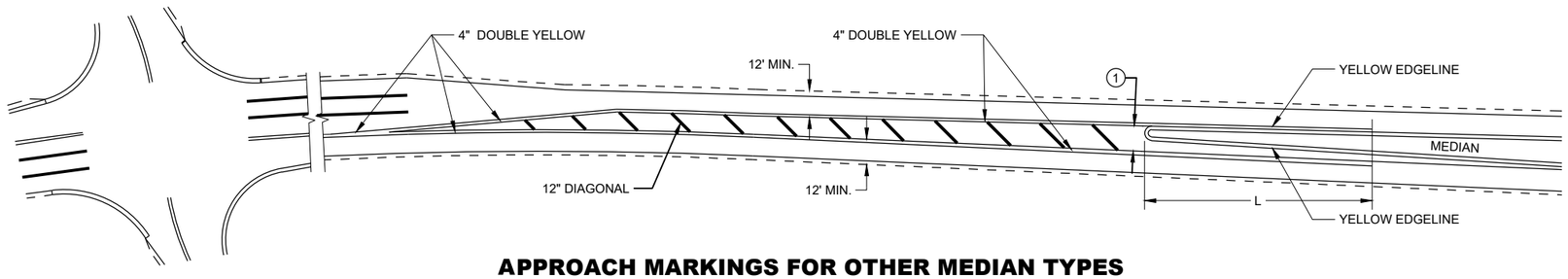


MEDIAN ISLAND DETAIL

GENERAL NOTES

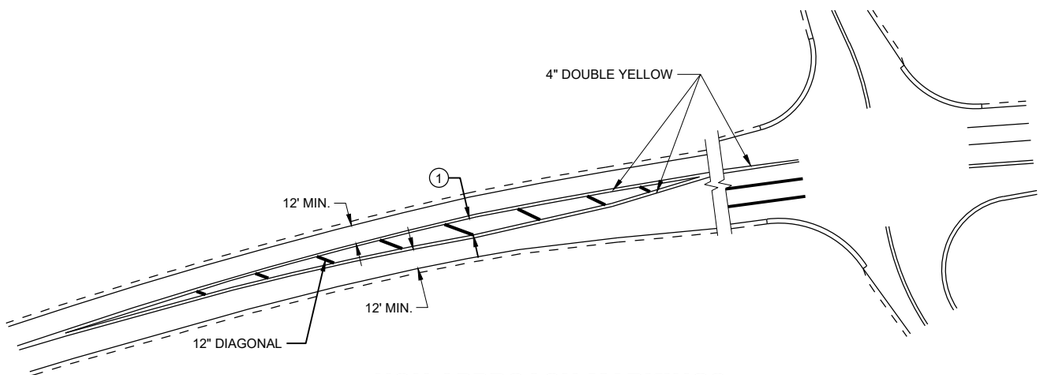
1. DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

⇨ DIRECTION OF TRAVEL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES

SPEED LIMIT	L
<35 MPH	5'
35> MPH	50'



NON-APPROACH MARKINGS

6

SDD 15C18 - 07a

MEDIAN ISLAND PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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November 2022 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MAF ENGINEER
FHWA

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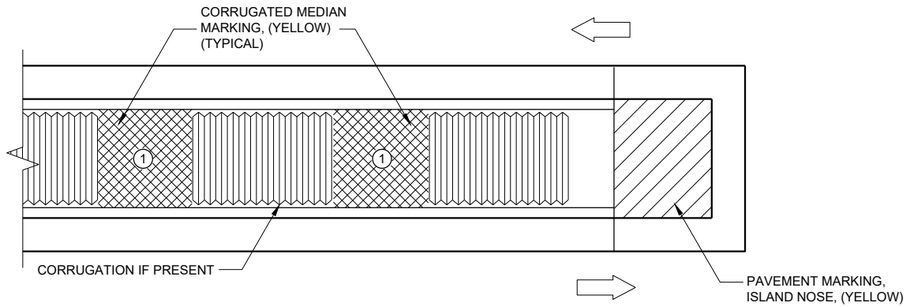
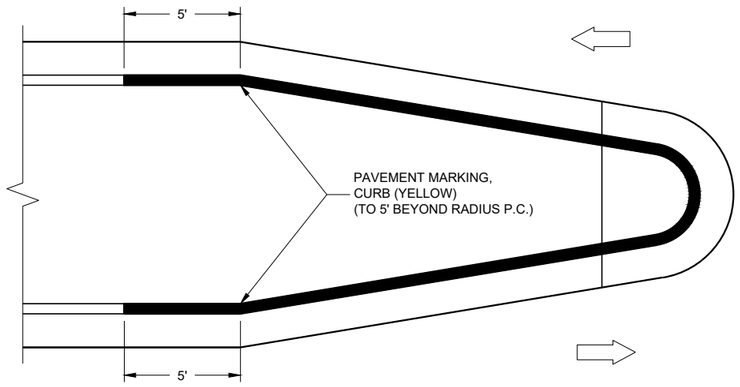
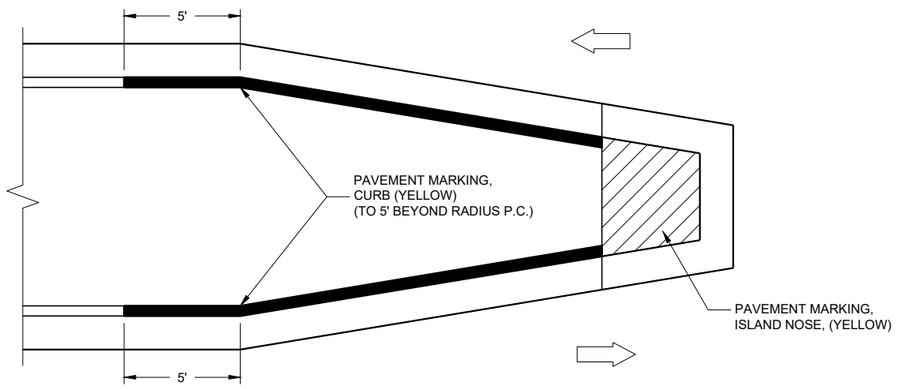


MEDIAN ISLAND WITH SQUARE BLUNT NOSE



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
November 2022
DATE

/S/ Jeannie Silver
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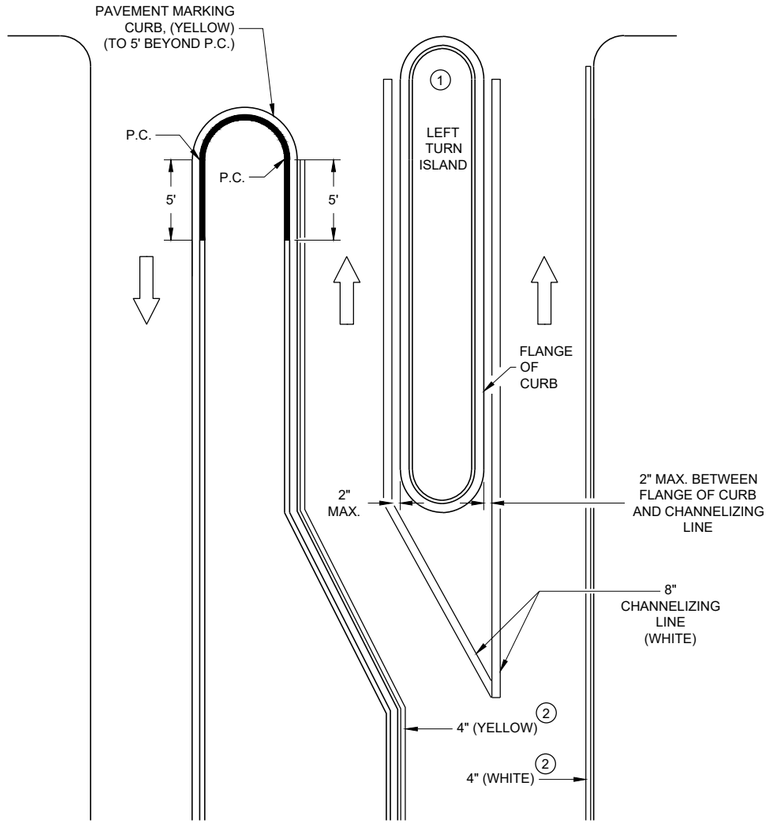
REQUIREMENTS FOR EDGE LINES		
POSTED SPEED	IS THERE CONTINUOUS LIGHTING?	
	YES	NO
≤ 30 MPH	NO	OPTIONAL
35 OR 40 MPH	OPTIONAL	RECOMMENDED
≥ 45 MPH	RECOMMENDED	REQUIRED



LEFT TURN & MEDIAN ISLAND

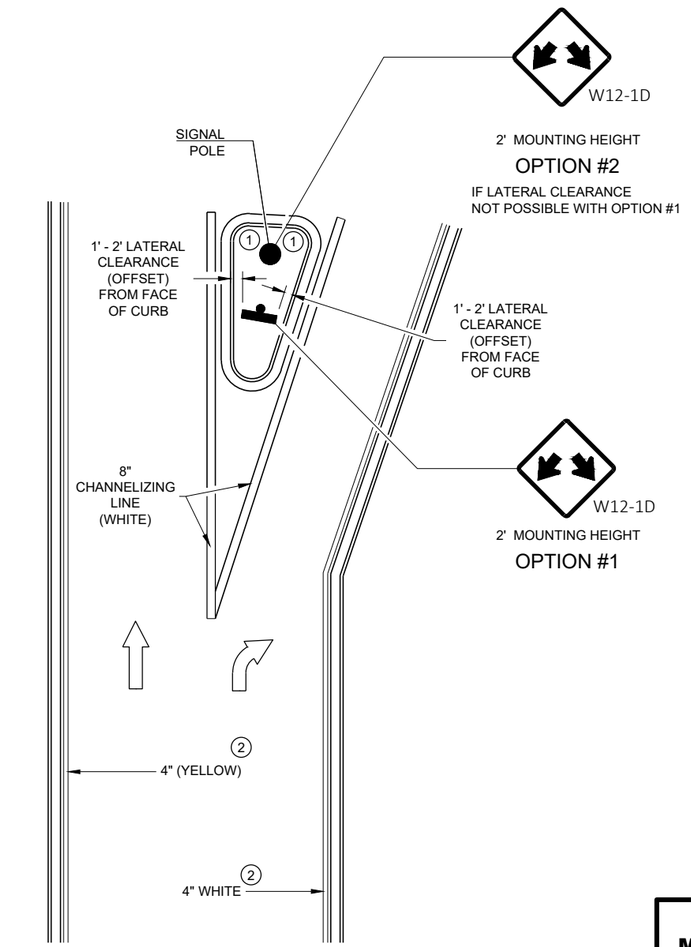
GENERAL NOTES

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

November 2022
DATE

/S/ Jeannie Silver
STATE SIGNING AND MAF ENGINEER

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SDD 15C18 - 07c

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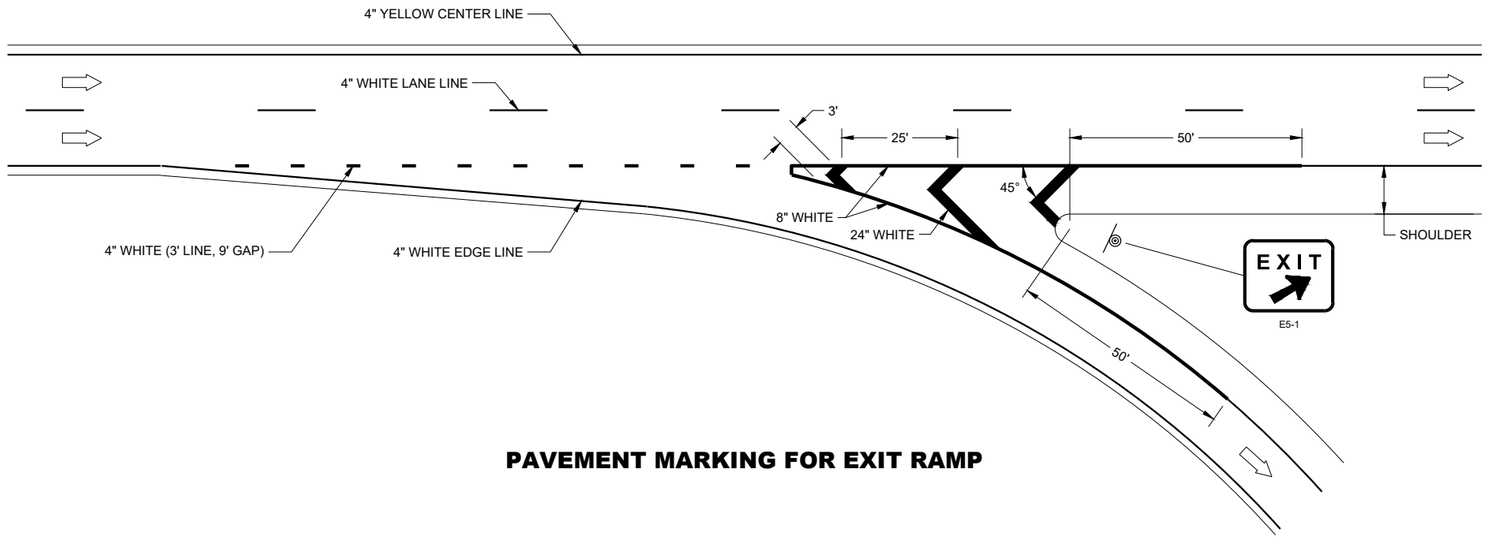
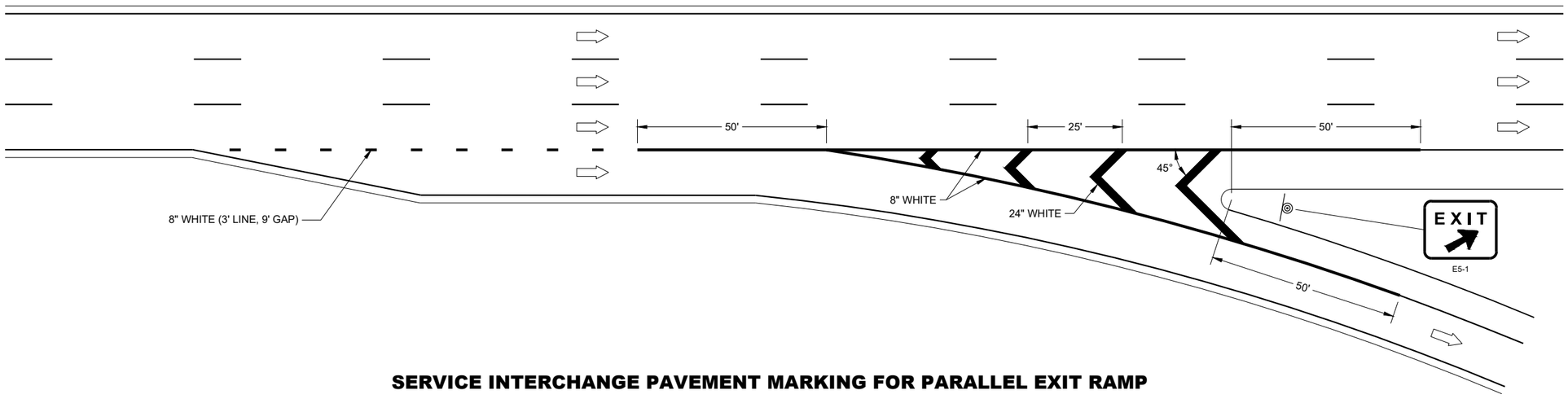
SDD 15C18 - 07c



PAVEMENT MARKING FOR EXIT RAMP



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT RAMP

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAVEL

6

SDD 15C31 - 04a

PAVEMENT MARKING, EXIT RAMP AND PARALLEL EXIT RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

SDD 15C31 - 04a

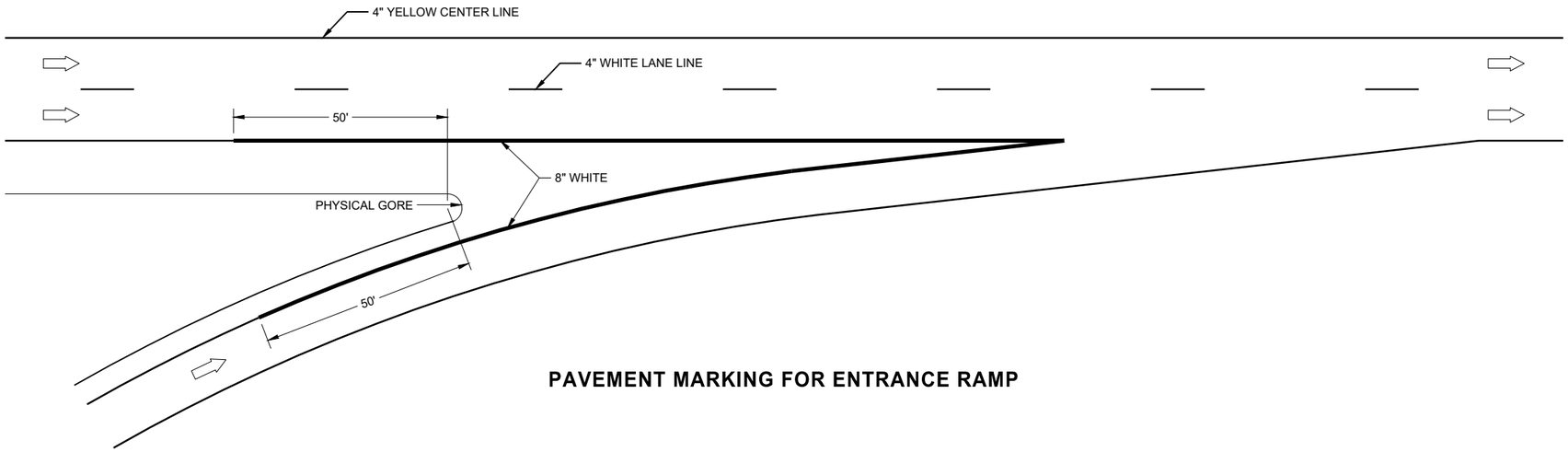
GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

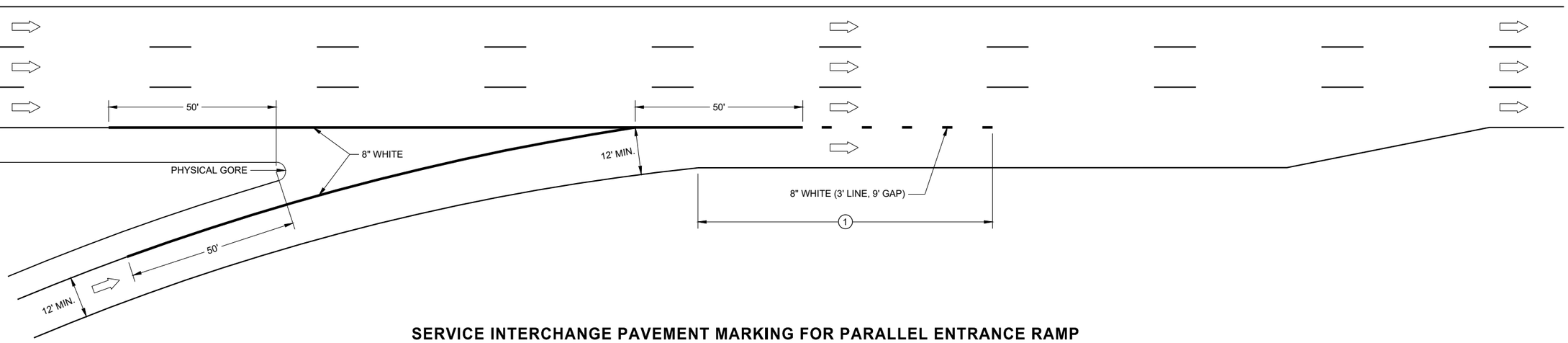
(1) ½ LENGTH OF FULL WIDTH ACCELERATION LANE.

LEGEND

DIRECTION OF TRAVEL



PAVEMENT MARKING FOR ENTRANCE RAMP



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE RAMP

6

6

SDD 14C31 - 04c

SDD 14C31 - 04c

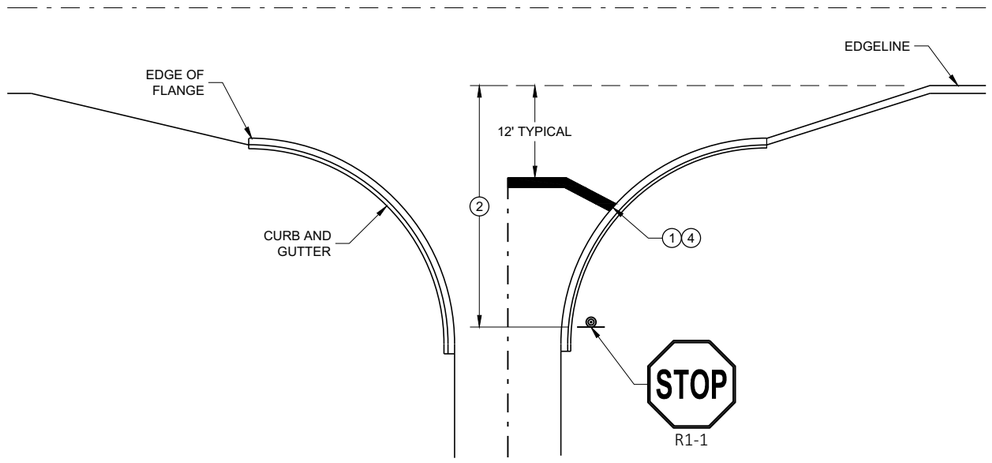
PAVEMENT MARKING, ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

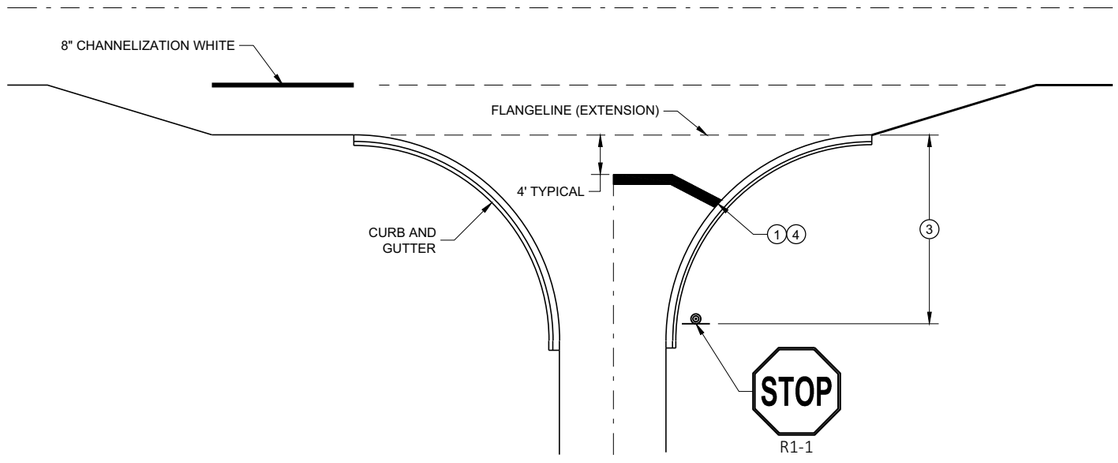
GENERAL NOTES

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

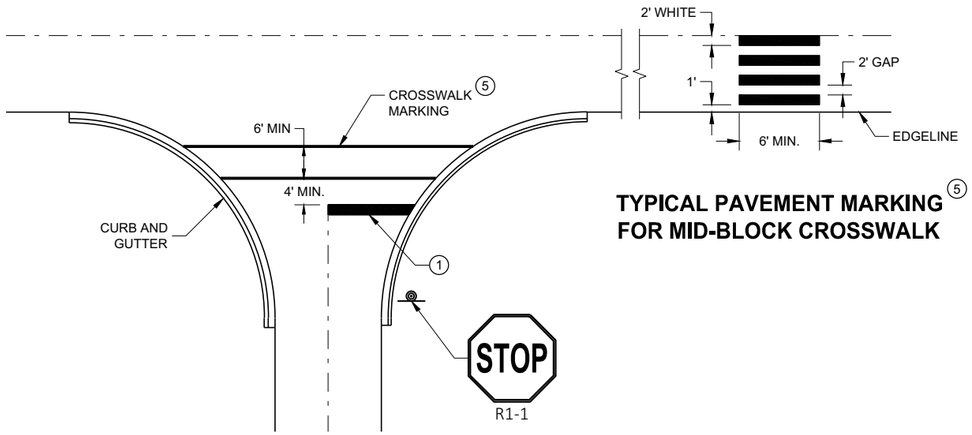
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE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

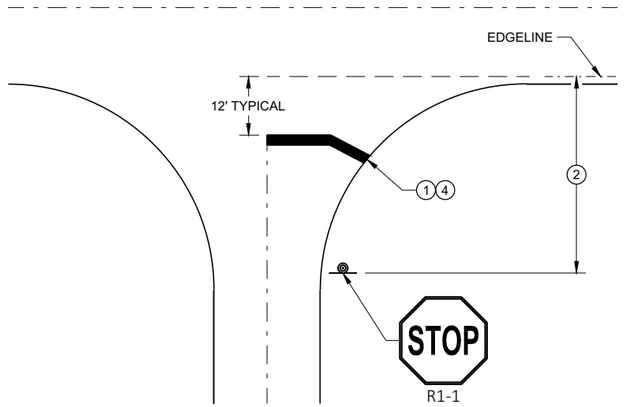


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



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

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SDD 15C33 - 04

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

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

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

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

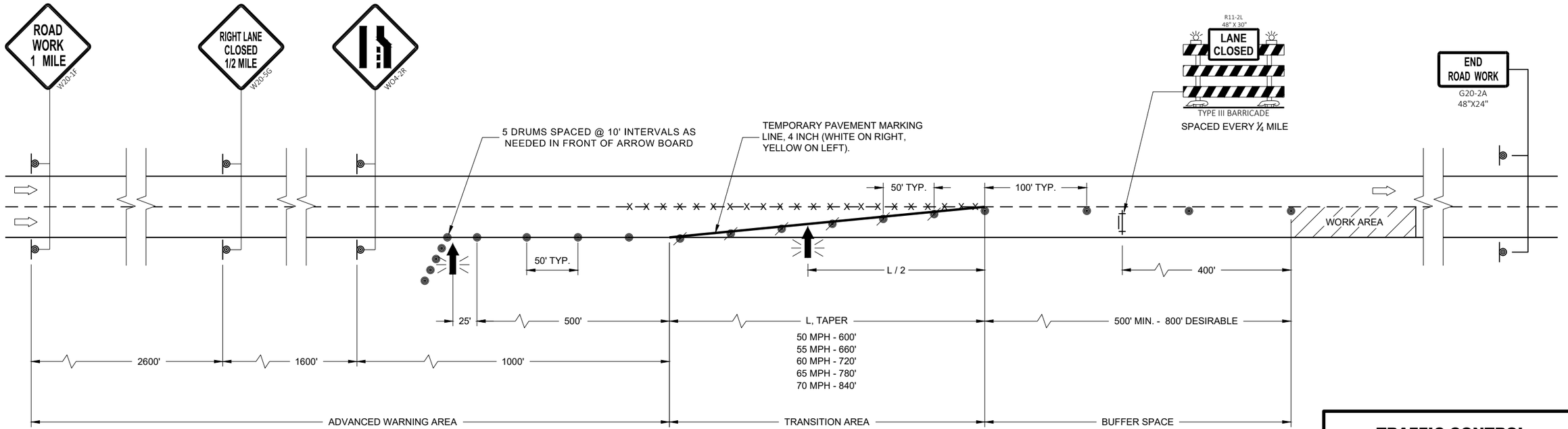
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD



TRAFFIC CONTROL LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15D12 - 10a

SDD 15D12 - 10a

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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 SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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.

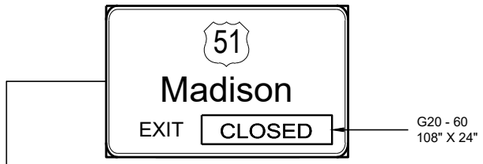
PLACE TEMPORARY PAVEMENT MARKING LINE IF RAMP CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROP OFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN WORK IS NOT IN PROGRESS.

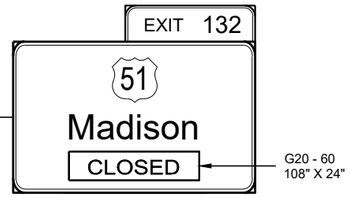
WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12 - HOUR DURATION.

(1) W20 - 1A AND G20 - 2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

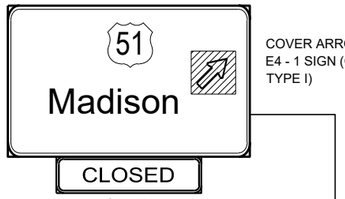
(2) PLACE "RAMP CLOSED BEGINNING" SIGN OR PCMS 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



OR



PLACE SIGN G20 - 60 OVER MILEAGE ON EXISTING E1 - 1A SIGN



COVER ARROW ON EXISTING E4 - 1 SIGN (COVERING SIGNS TYPE I)

G20 - 61
120 ' X 30"

OR

PCMS MESSAGING

FRAME 1	FRAME 2
RAMP TO CLOSE	XXXDAY XX XX XX

TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVE ENGINEER

FHWA

SDD 15D16 - 05

6
SDD 15D16 - 05

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.

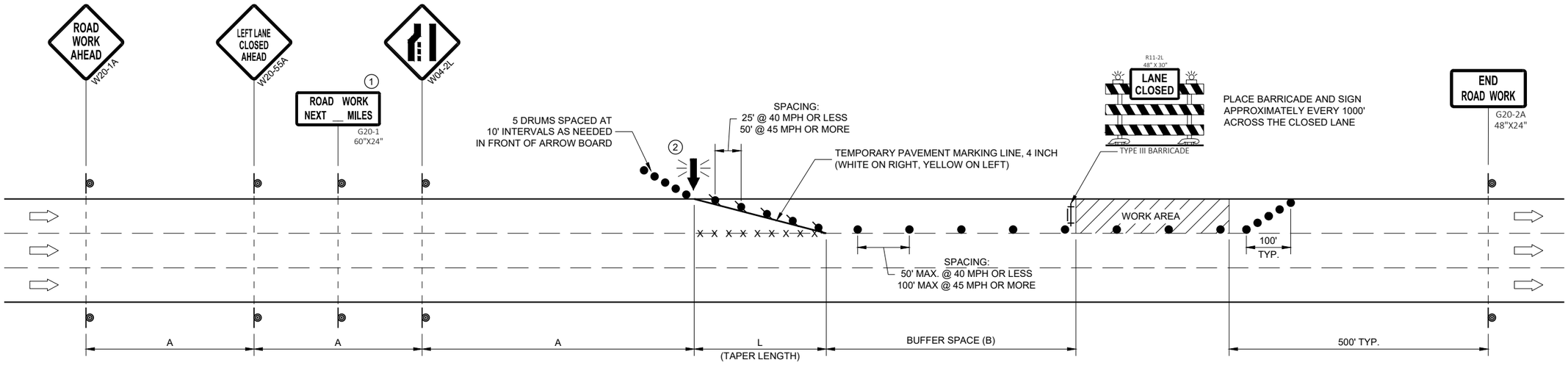
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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
February 2022
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

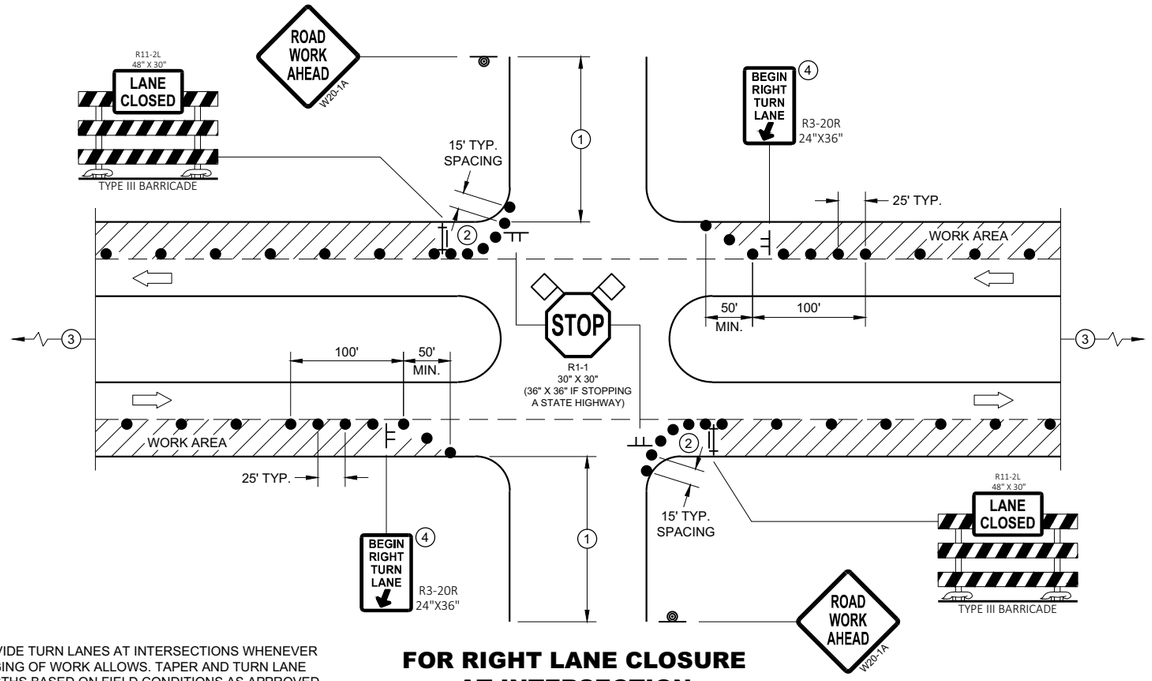
FHWA

6

SDD 15D20 - 06a

6

SDD15D20 - 06a



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

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

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

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

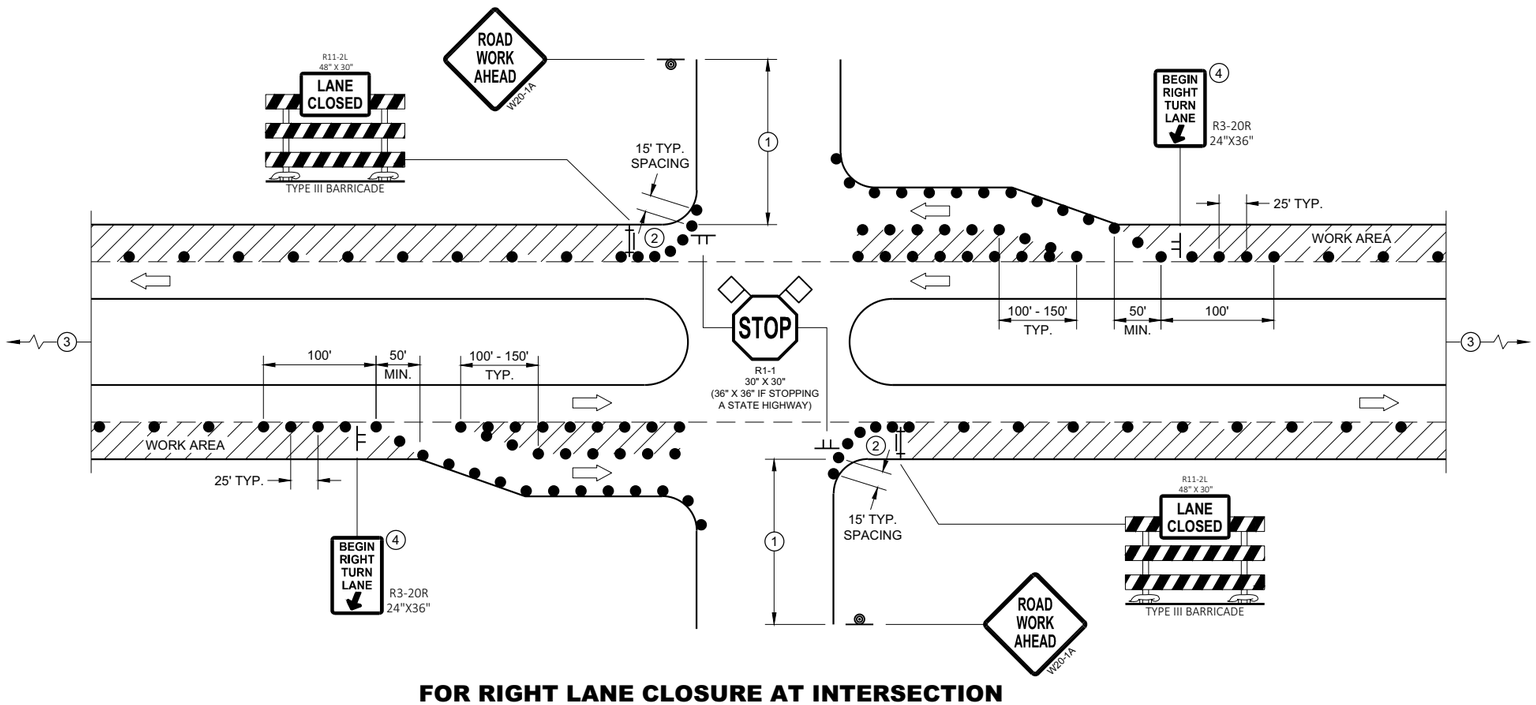
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.

(2) ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.



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

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

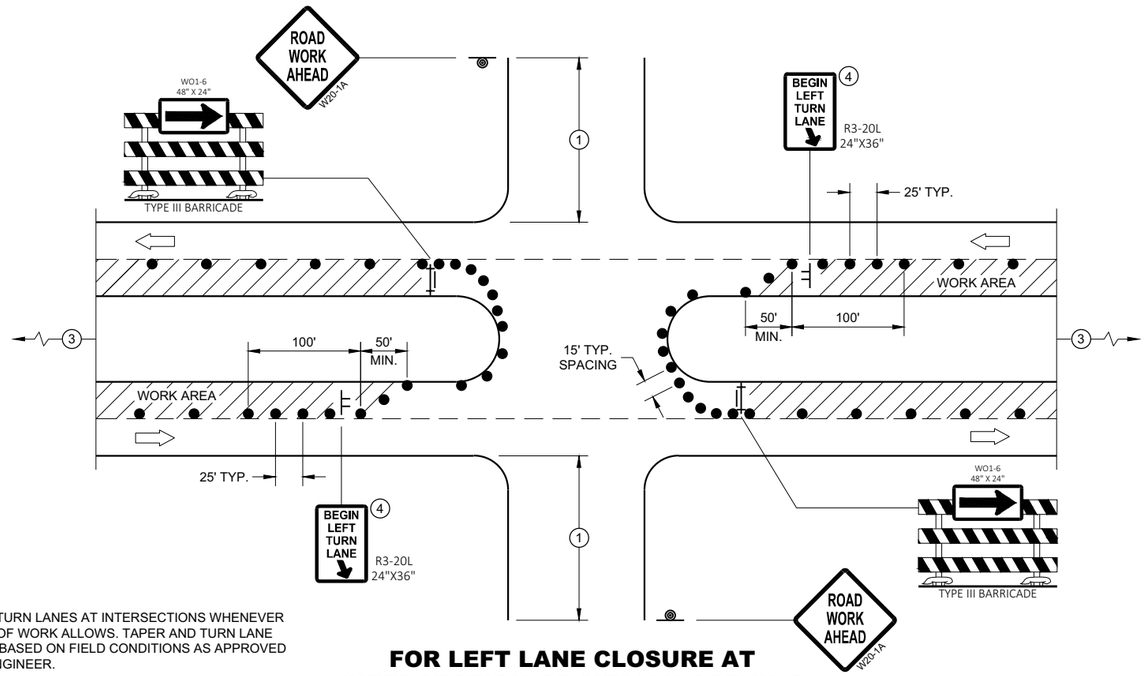
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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.

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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.

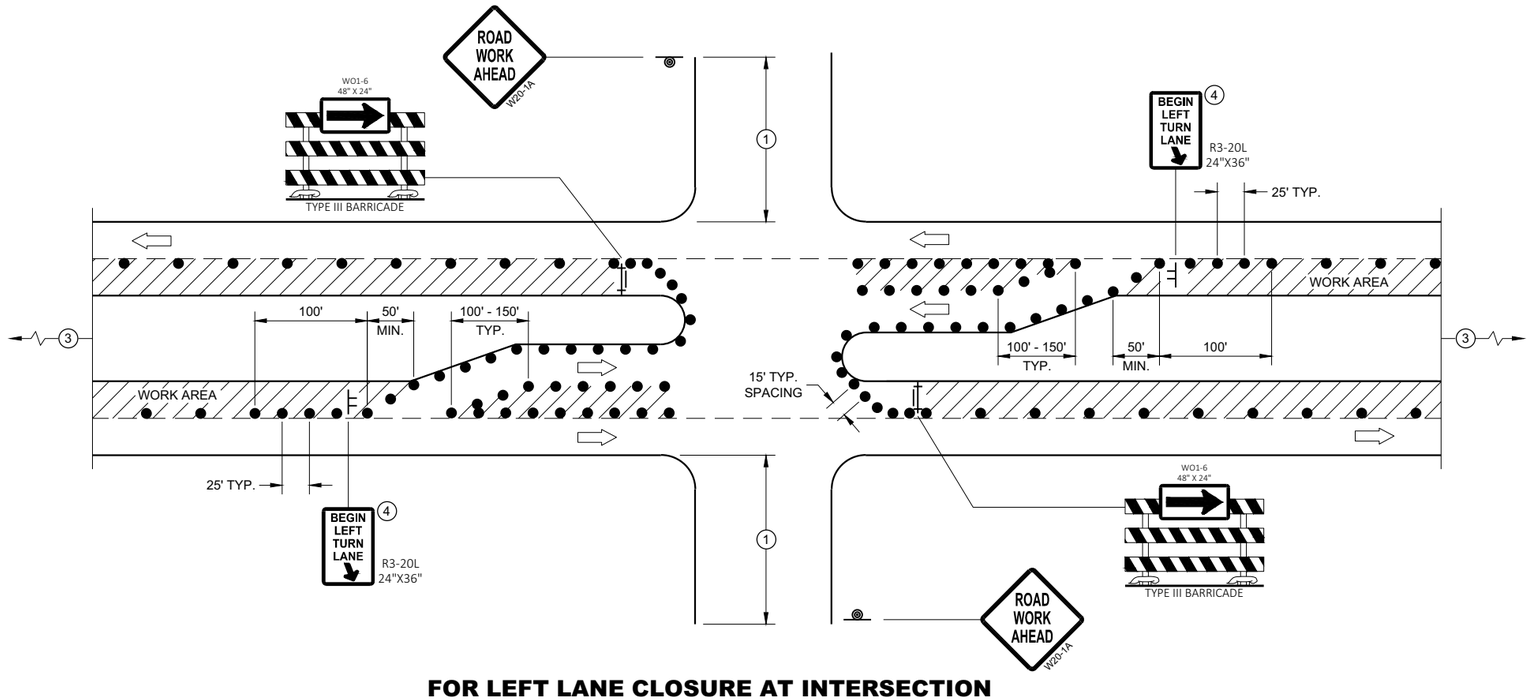
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(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

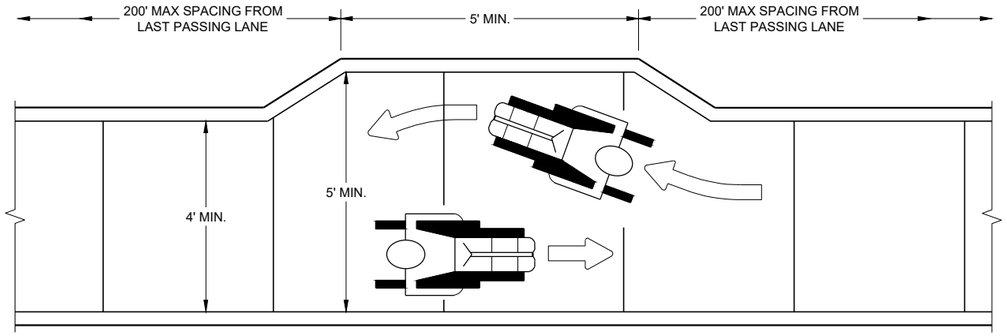
BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

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

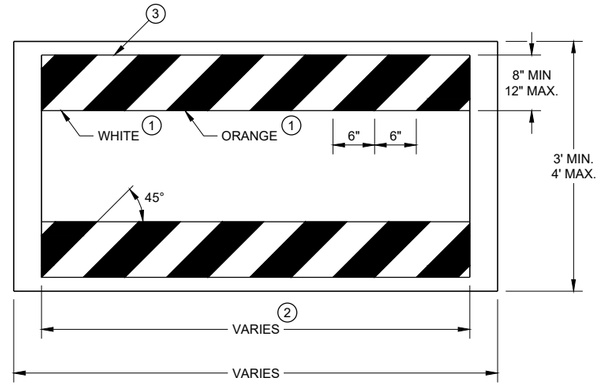
(2) SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

(3) PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

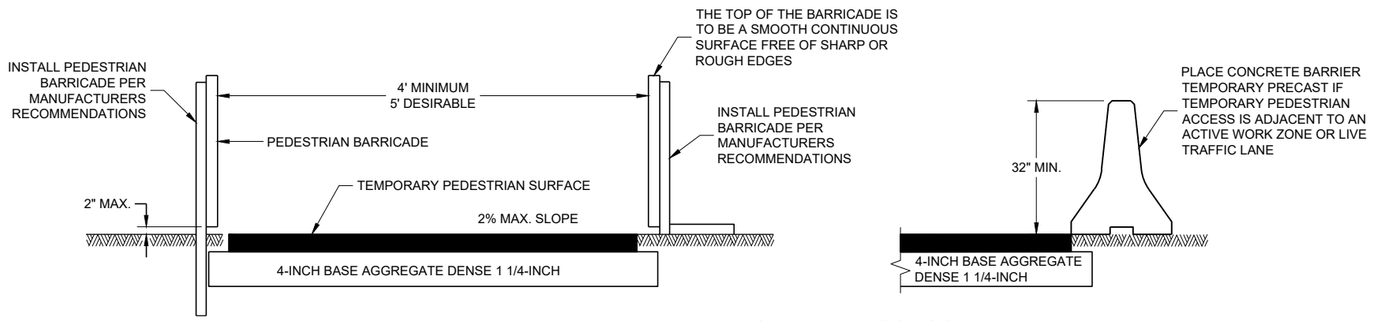
* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.



NARROW SIDEWALK PASSING DETAIL



TEMPORARY PEDESTRIAN BARRICADE*

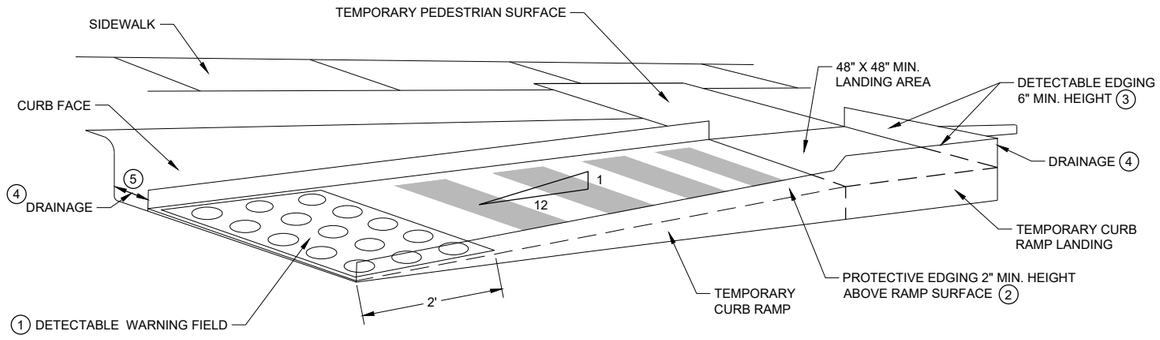


TEMPORARY PEDESTRIAN ACCESS

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

6

SDD 15D30 - 08a



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.

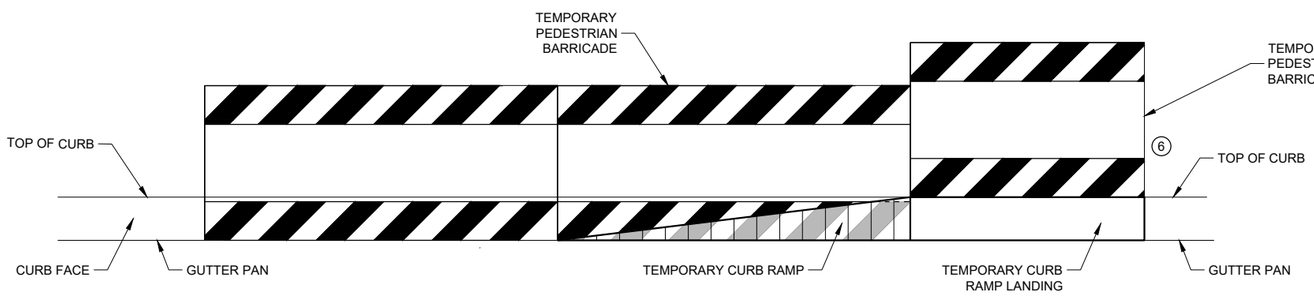
(2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

(3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

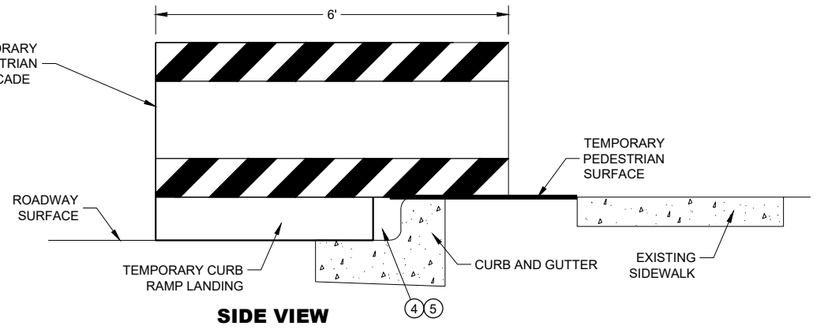
(4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(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

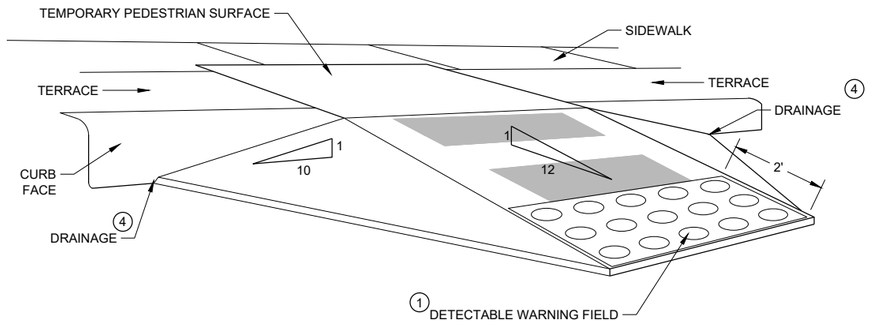
TEMPORARY CURB RAMP PARALLEL TO CURB

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

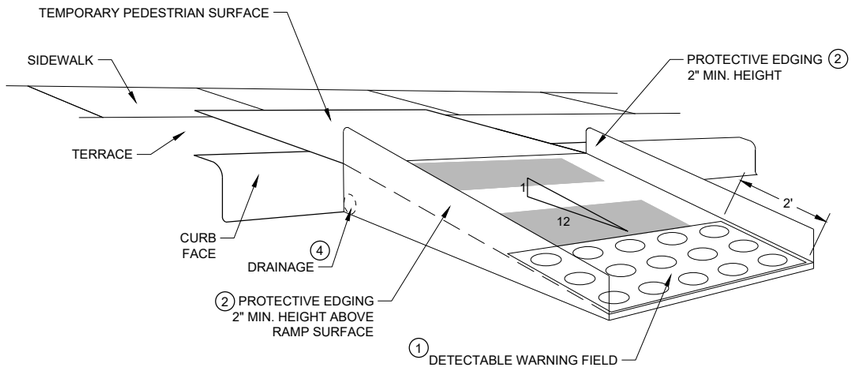
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D30 - 08b



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.

6

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- CONCRETE BARRIER TEMPORARY PRECAST

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON ANY "COVERED" OR "DOWNED" SIGNS.

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

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

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

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

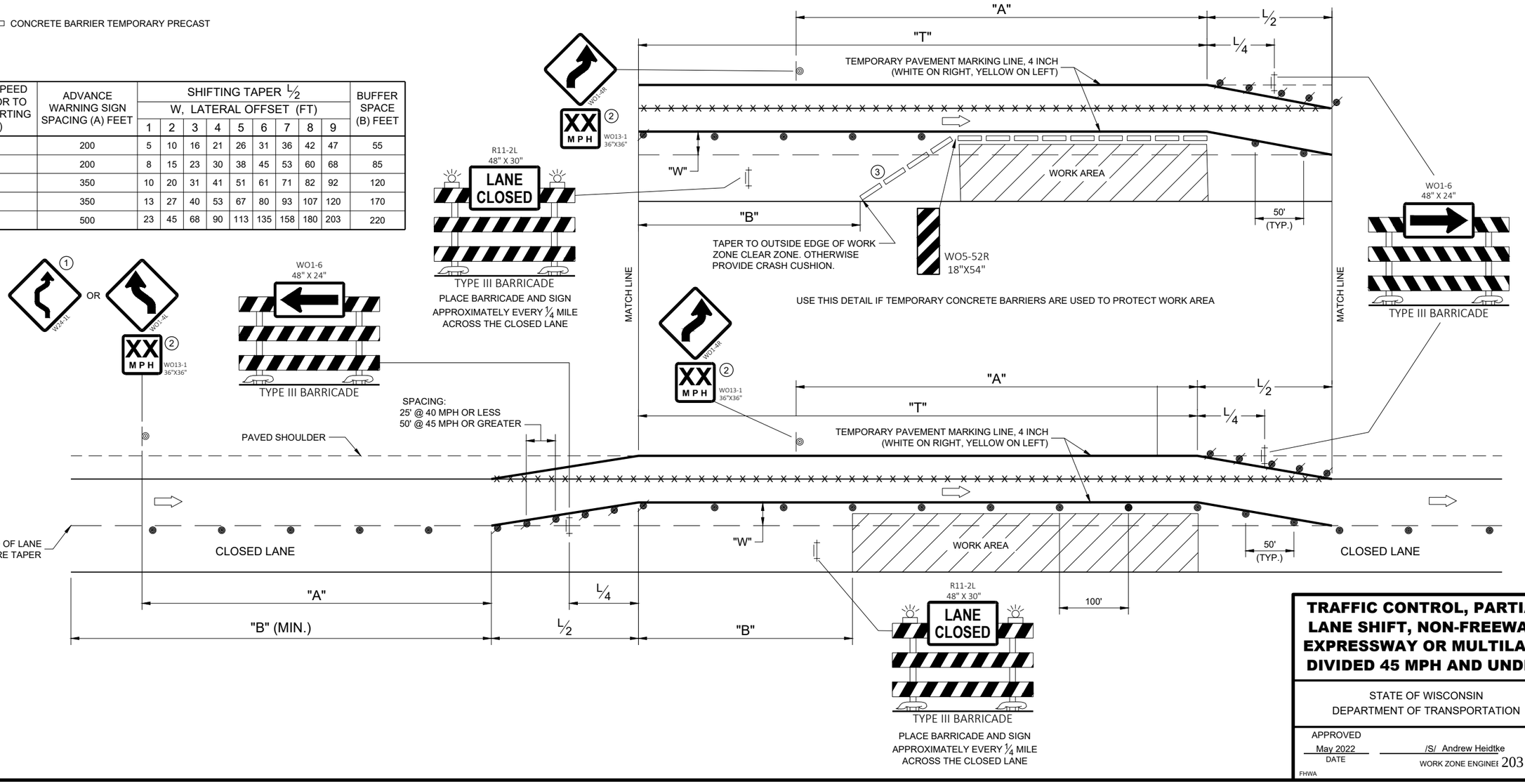
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP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

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

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

(3) BARRIER FLARE RATE: 6:1 @ 40 MPH OR LESS
8:1 @ 45 MPH OR GREATER

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER L/2 W, LATERAL OFFSET (FT)									BUFFER SPACE (B) FEET
		1	2	3	4	5	6	7	8	9	
25	200	5	10	16	21	26	31	36	42	47	55
30	200	8	15	23	30	38	45	53	60	68	85
35	350	10	20	31	41	51	61	71	82	92	120
40	350	13	27	40	53	67	80	93	107	120	170
45	500	23	45	68	90	113	135	158	180	203	220



TRAFFIC CONTROL, PARTIAL LANE SHIFT, NON-FREEWAY/ EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15D40 - 04c

SDD 15D40 - 04c

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- CONCRETE BARRIER TEMPORARY PRECAST

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	SHIFTING TAPER L/2 W, LATERAL OFFSET (FT)								
	1	2	3	4	5	6	7	8	9
50	25	50	75	100	125	150	175	200	225
55	28	55	83	110	138	165	193	220	248
60	30	60	90	120	150	180	210	240	270
65	33	65	98	130	163	195	228	260	293
70	35	70	105	140	175	210	245	280	315

GENERAL NOTES

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

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

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

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

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

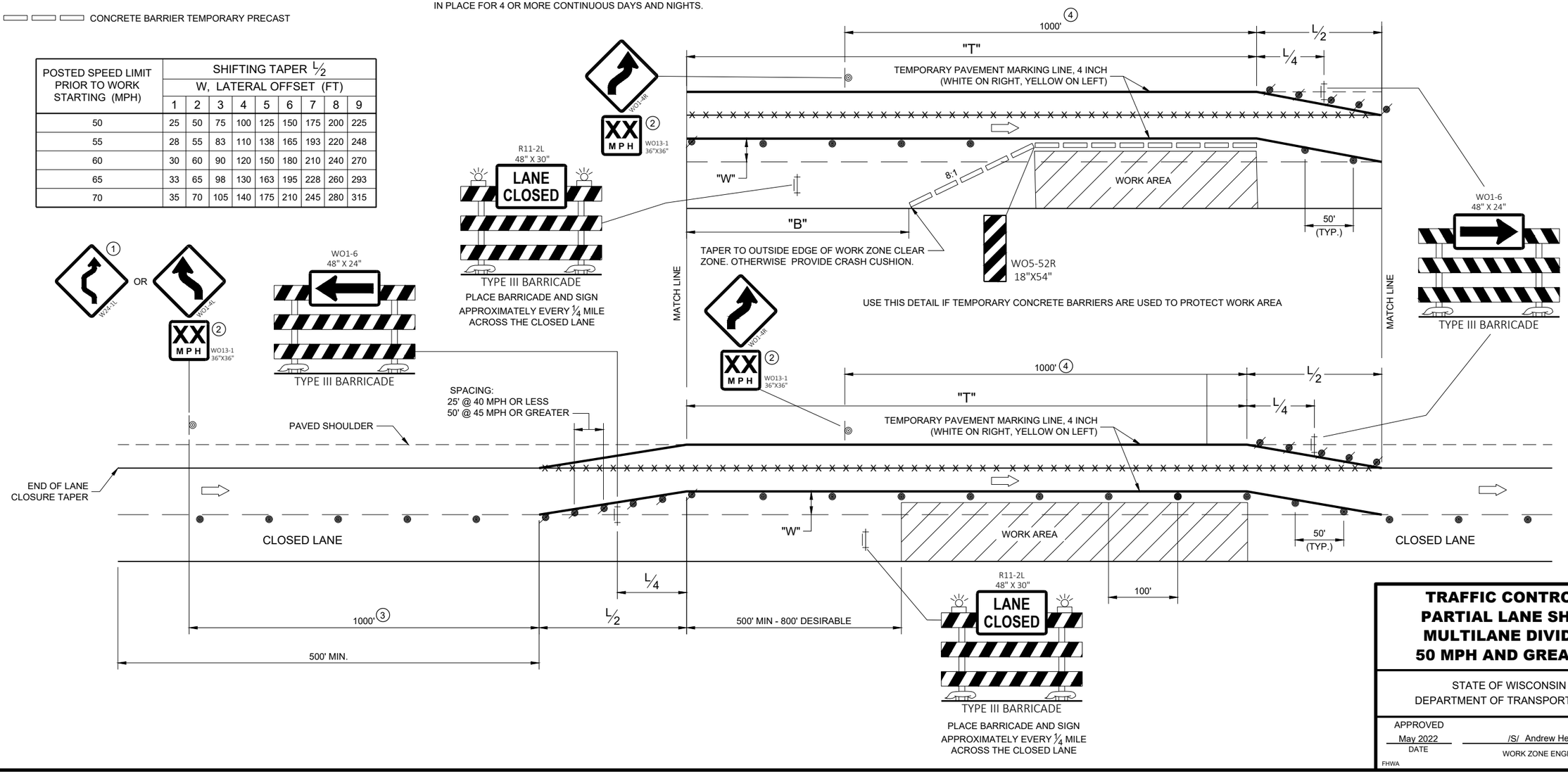
REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

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

1. USE ONLY WHEN T<600', OMIT WO1-4R.
2. IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.
3. IF THE BEGINNING OF LANE SHIFT TAPER IS 1200 FEET OR LESS FROM END OF LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE LANE CLOSURE TAPER.
4. IF THE BEGINNING OF THE SECOND LANE SHIFT TAPER IS 1200 FEET OR LESS FROM END OF THE FIRST LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE FIRST LANE CLOSURE TAPER.



TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6
SDD 15D40 - 04d

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- DELINEATOR, FLEXIBLE TUBULAR MARKER
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- CONSTRUCTION TRAFFIC
- WORK AREA
- CC — CRASH CUSHION TEMPORARY
- EXISTING CONCRETE BARRIER TEMPORARY PRECAST

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"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.

WORK ZONE INGRESS/EGRESS LOCATIONS SHALL BE APPROVED BY THE ENGINEER. LOCATIONS FOR WORK ZONE ACCESS TO/FROM THE FREEWAY SHALL NOT BE USED FOR INGRESS AND EGRESS AT THE SAME TIME.

THIS ACCESS DETAIL IS TYPICAL FOR LEFT LANE ACCESS, FOR RIGHT LANE ACCESS, REVERSE THE TRAFFIC CONTROL

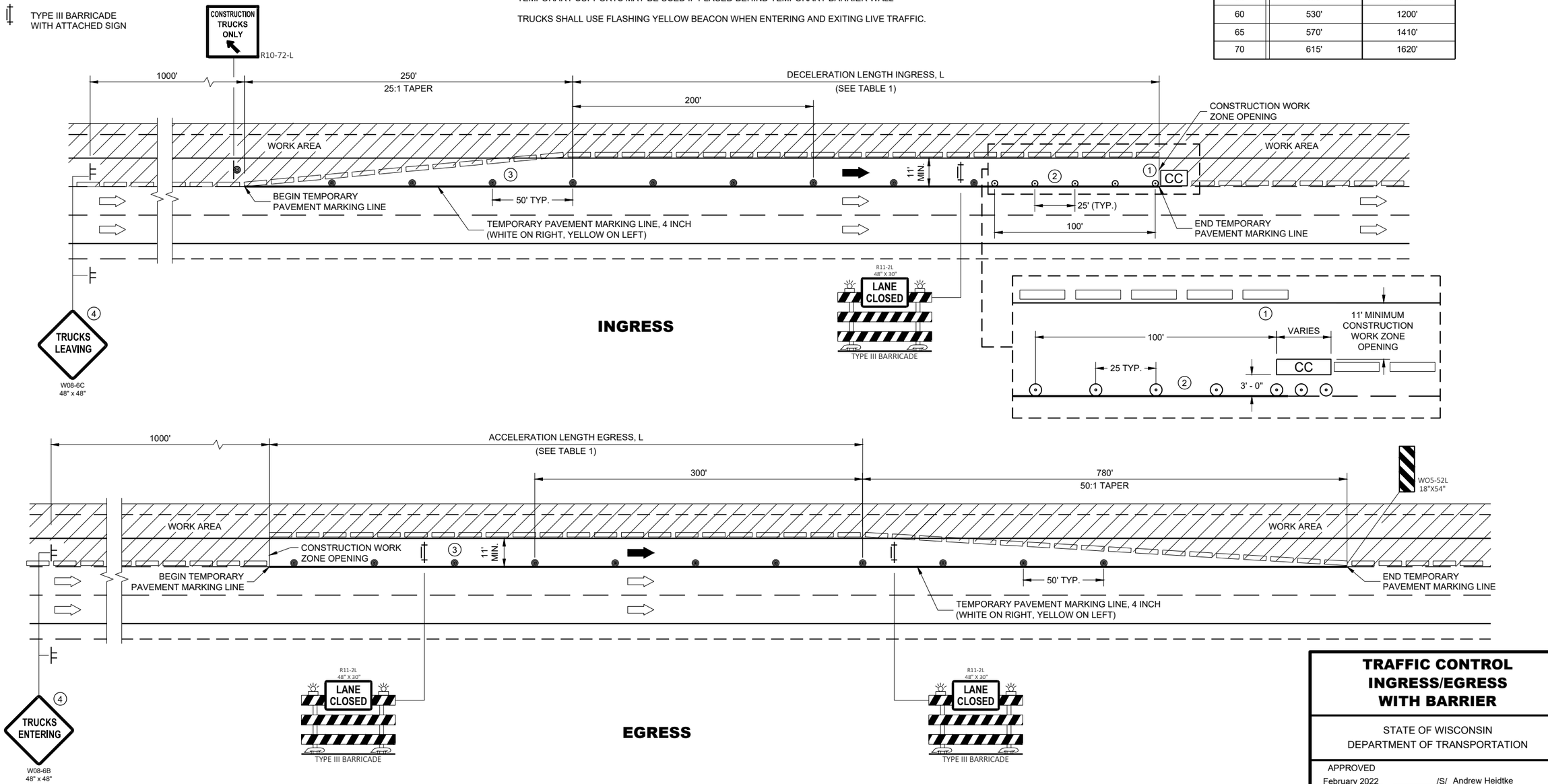
TEMPORARY SUPPORTS MAY BE USED IF PLACED BEHIND TEMPORARY BARRIER WALL

TRUCKS SHALL USE FLASHING YELLOW BEACON WHEN ENTERING AND EXITING LIVE TRAFFIC.

1. WIDEN BARRIER AS NECESSARY TO ACCOMMODATE CRASH CUSHION WIDTH.
2. USE TUBULAR MARKERS TO HELP DELINEATE TEMPORARY CRASH CUSHION.
3. REMOVE DRUMS / BARRICADES WHEN INGRESS / EGRESS ARE IN USE.
4. REMOVE OR COVER WHEN ACCESS IS NOT NEEDED.

TABLE 1

S (MPH)	INGRESS, L	EGRESS, L
50	435'	720'
55	480'	960'
60	530'	1200'
65	570'	1410'
70	615'	1620'



TRAFFIC CONTROL INGRESS/EGRESS WITH BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022
DATE

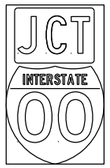
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

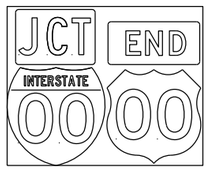
SDD 15D47 - 02a

SDD 15D47 - 02a

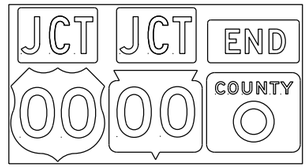
TYPICAL ASSEMBLIES



J1-1



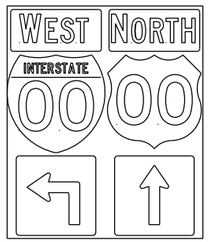
J1-2



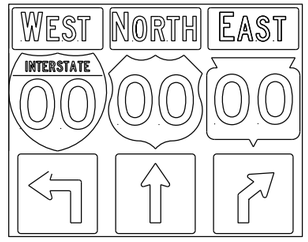
J1-3

JR1-1

J2-1

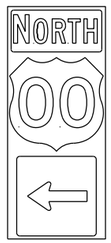


J2-2

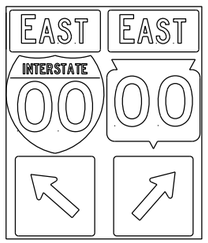


J2-3

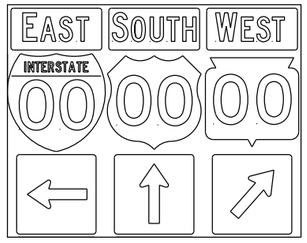
JV
(Typical Vertical J-Assembly
See Note 10 and 11)



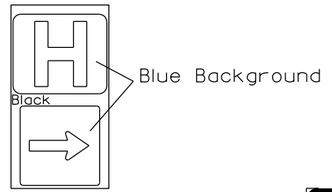
J3-1



J3-2

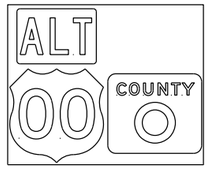


J3-3

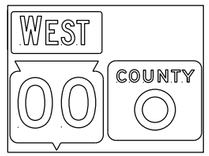


JH-1

J4-1

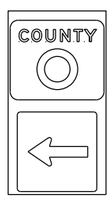


J4-2

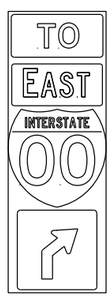


J4-2

J12-1



J13-1



J32-1

J33-1

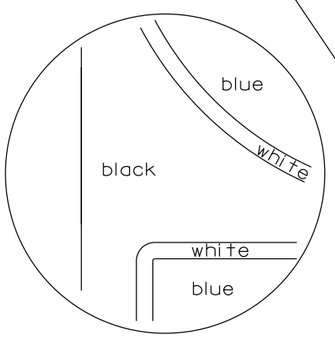
J22-1

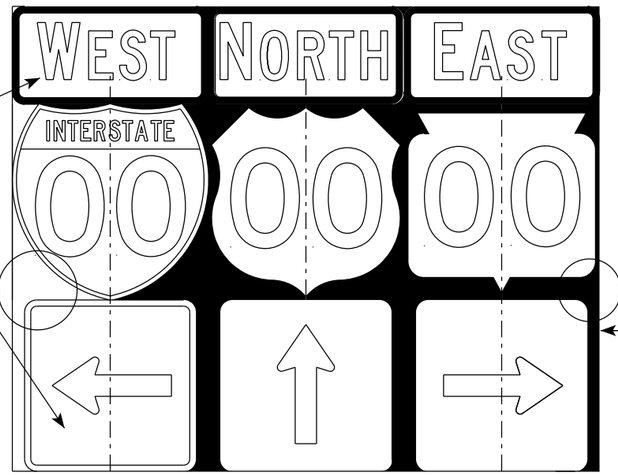
J23-1

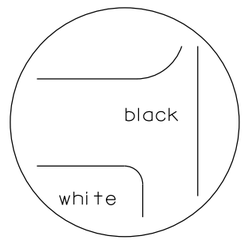
JR13-1

JR23-1

JR99-1







black background

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: 206 E

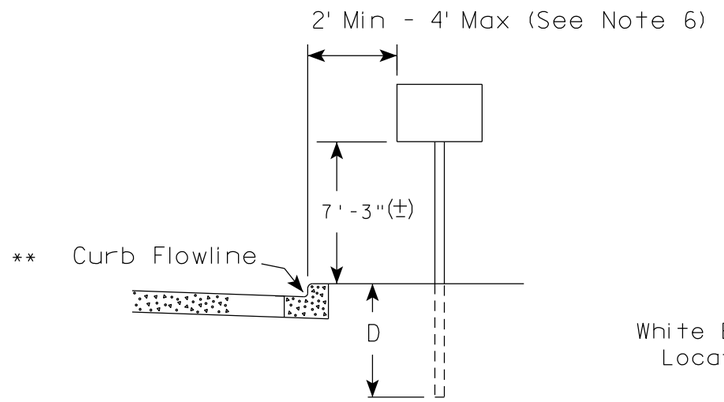
FILE NAME : C:\CAEfiles\Projects\tr_stdplate_A21S.dgn PLOT DATE : 18-MAR 2021 1:37 PLOT BY : mscj9h PLOT NAME :

WISDOT/CADDS SHEET 42

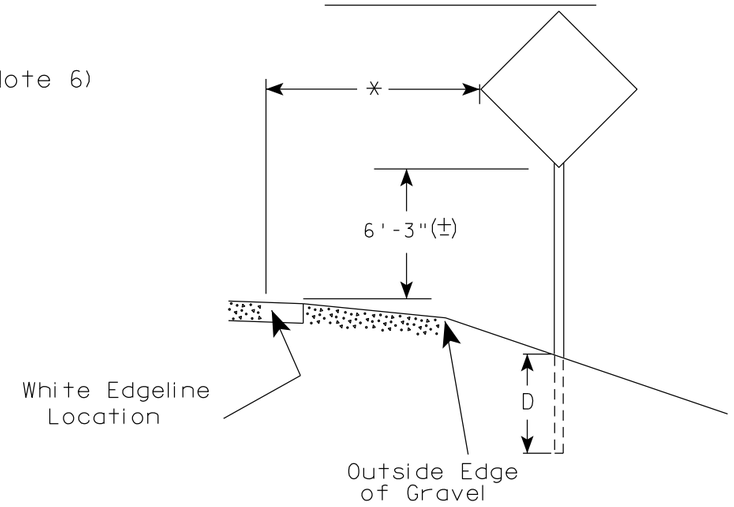
7

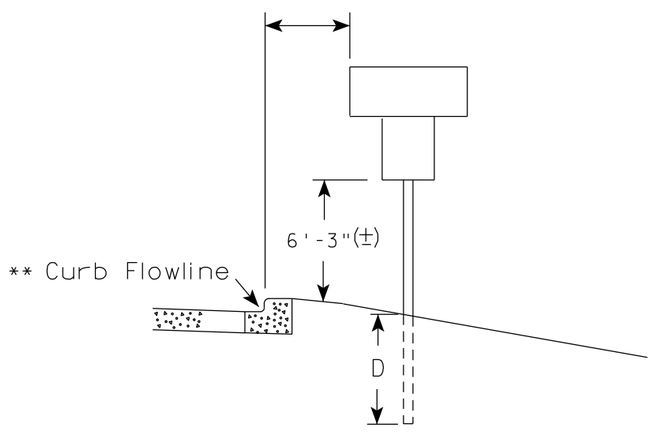
7

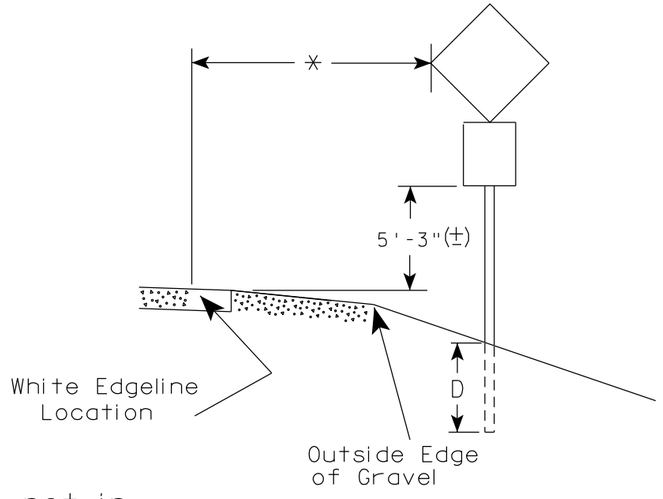
URBAN AREA



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.

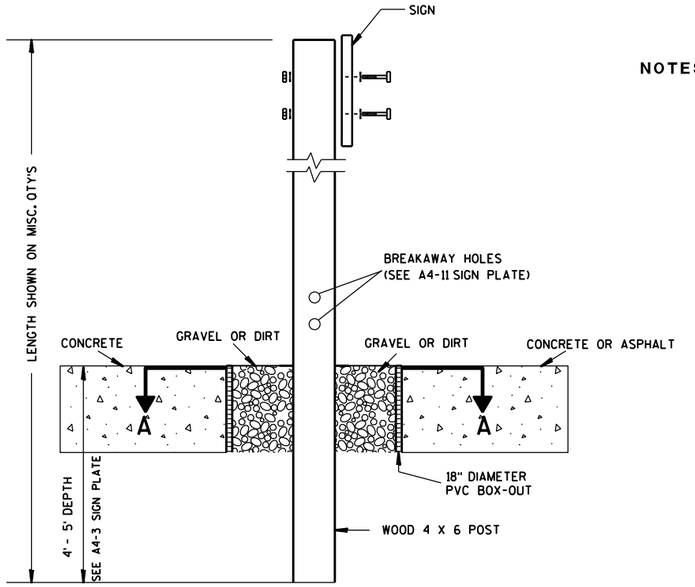
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

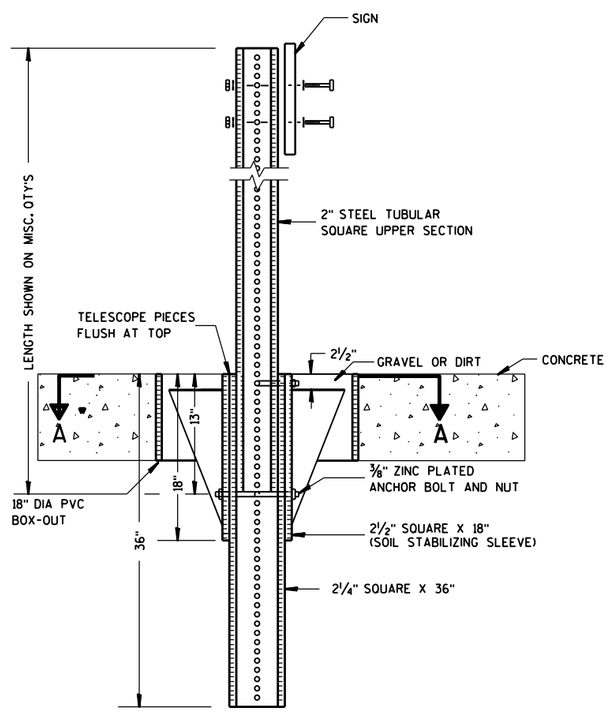
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 207	E



ELEVATION VIEW

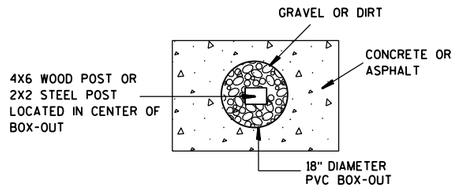
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

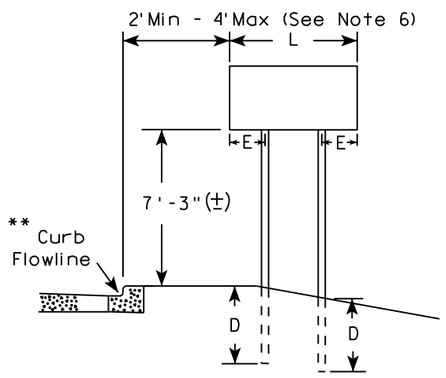
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

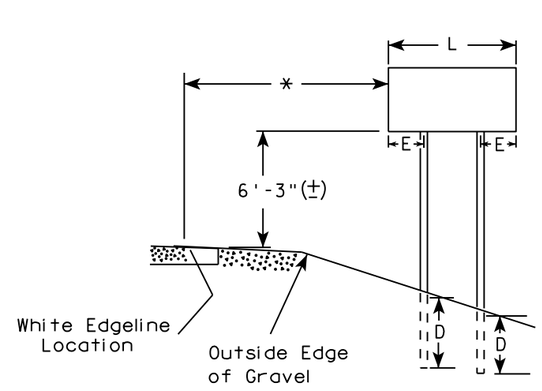
DATE 1/27/14 PLATE NO. A4-3B.1

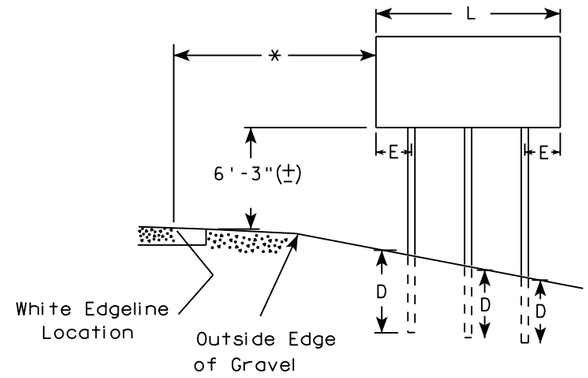
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

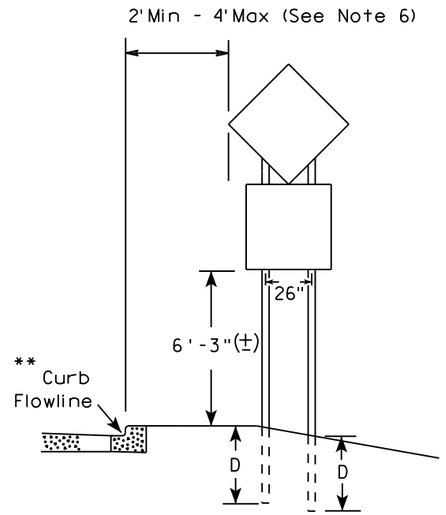
URBAN AREA



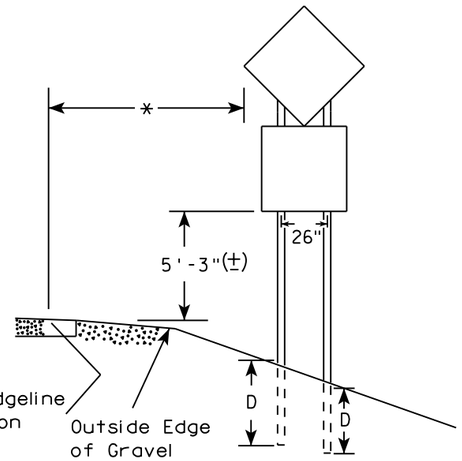
RURAL AREA (See Note 3)







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'

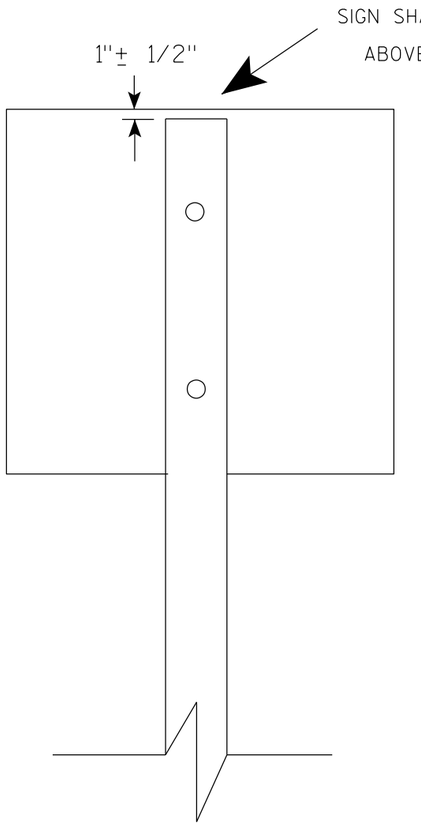
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

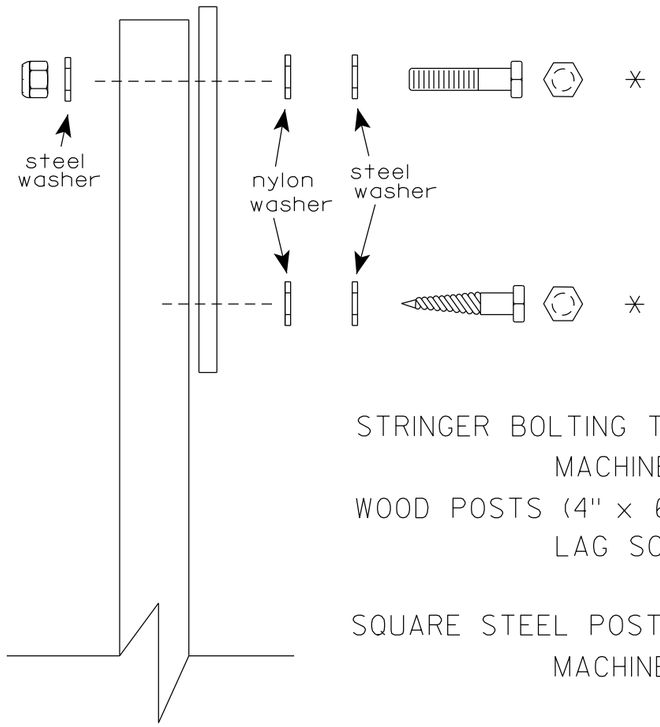
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 209	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

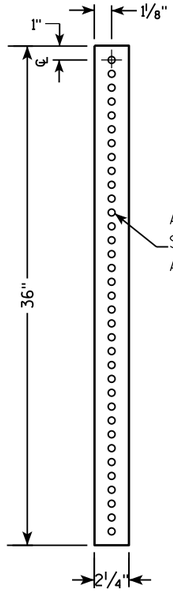
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

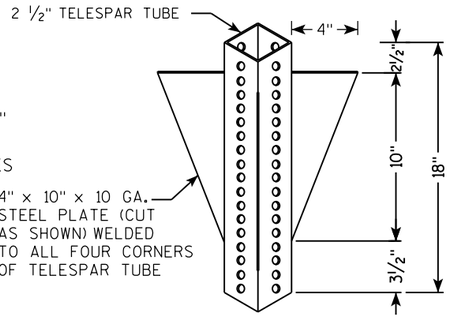
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

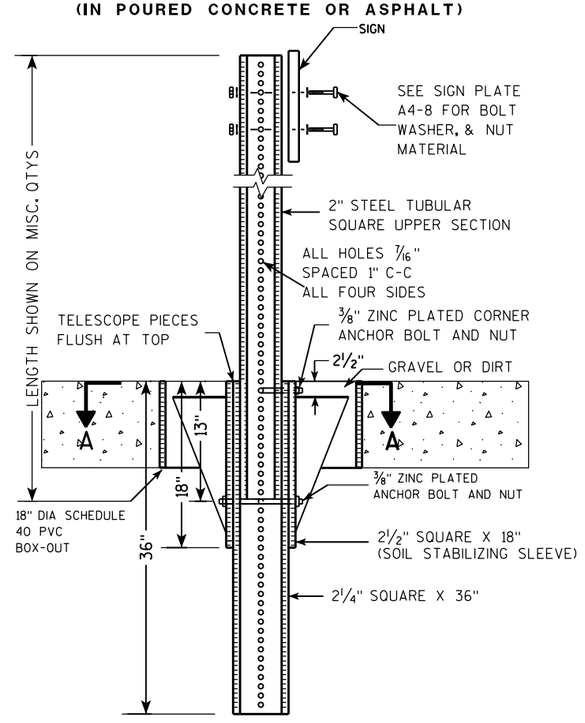
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



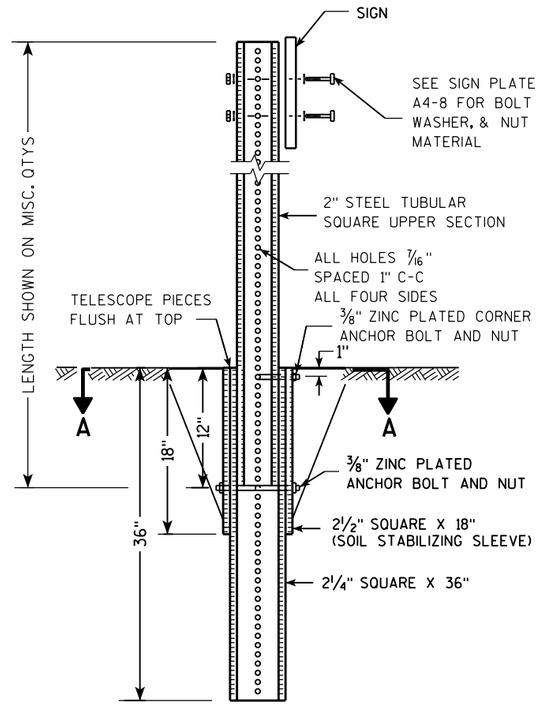
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

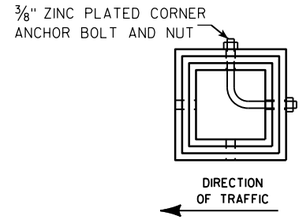


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

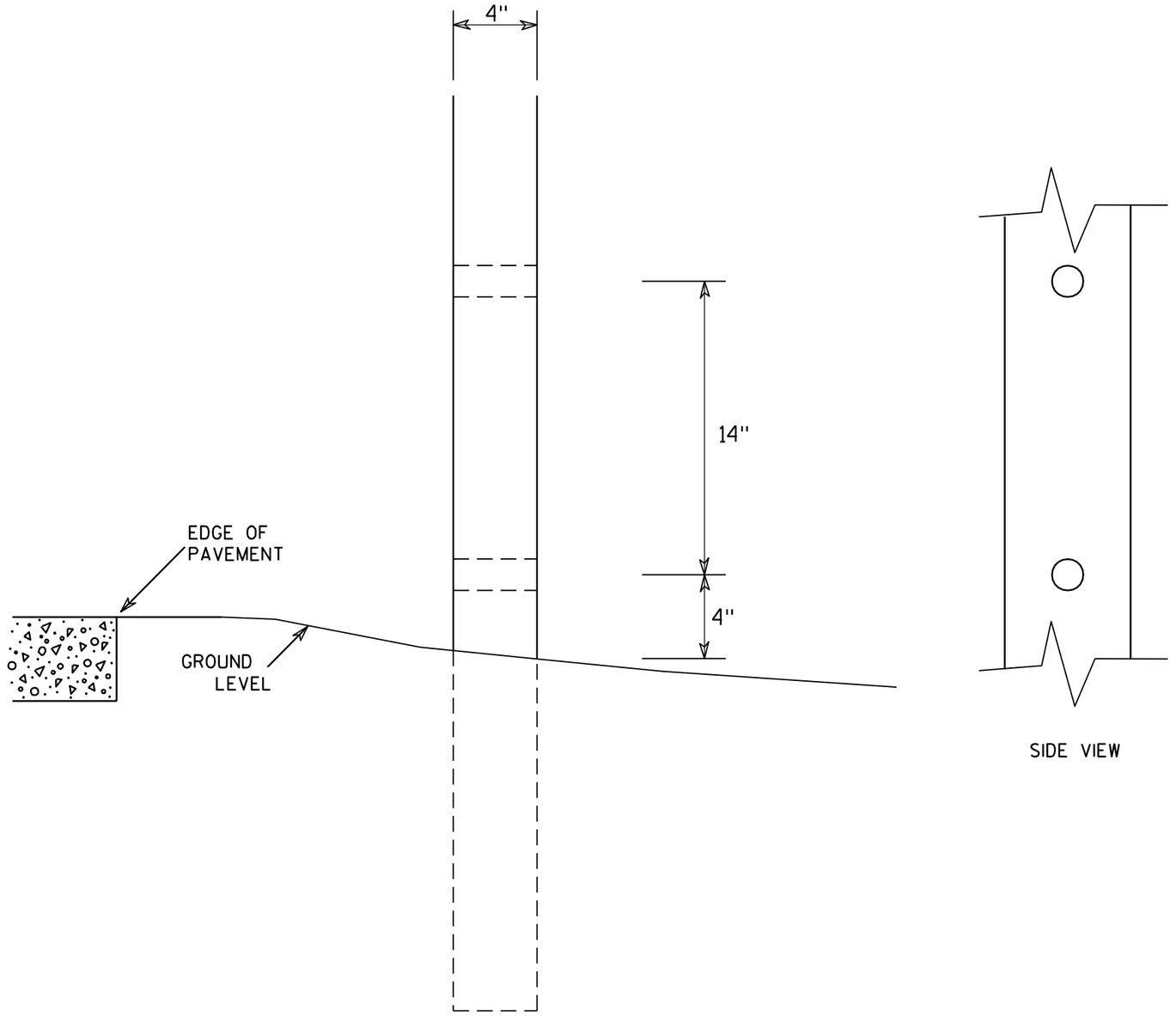
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 211 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

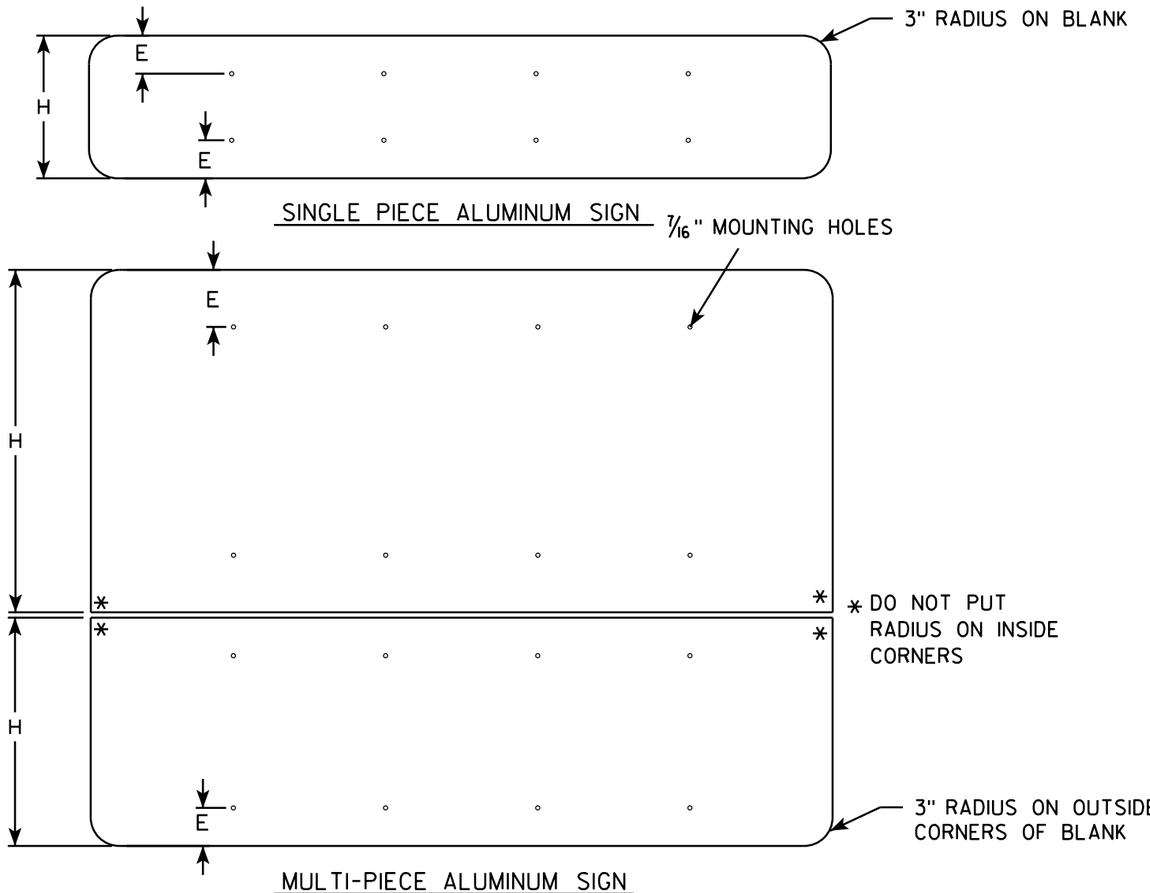
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

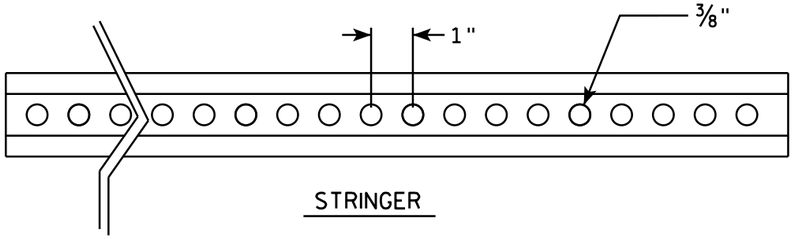
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 212	E



GENERAL NOTES

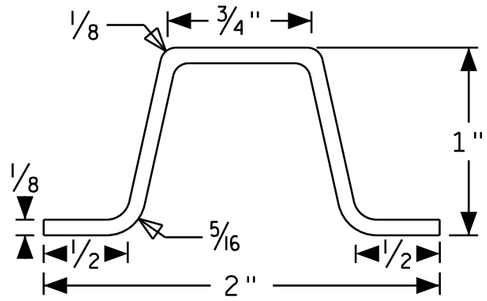
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 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"

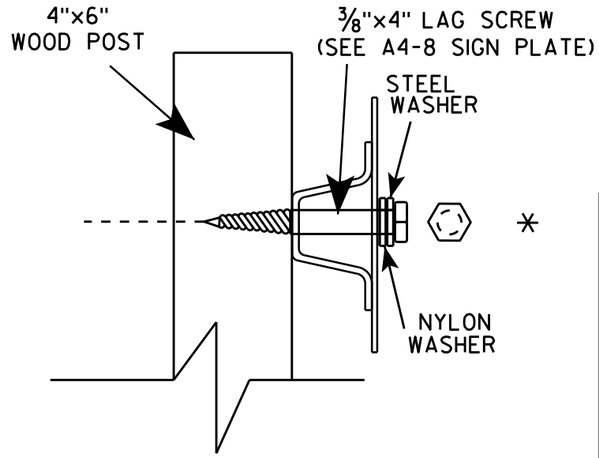


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

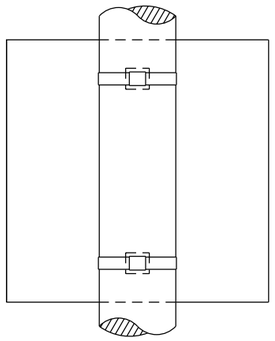
DATE 4/26/16 PLATE NO A4-18.1

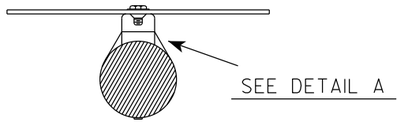
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

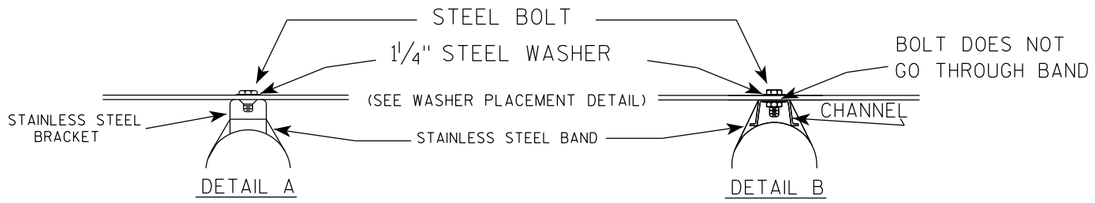
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000 WISDOT/CADDS SHEET 42

BANDING

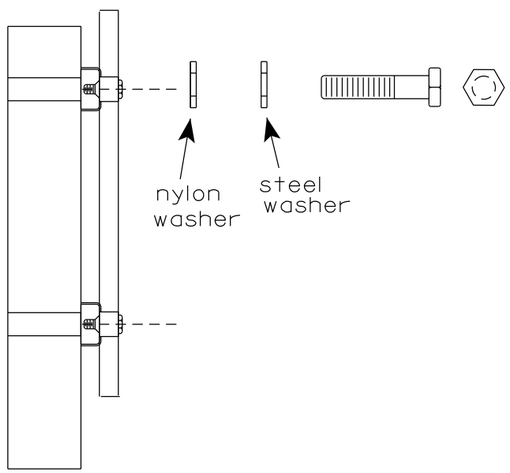
SINGLE SIGN







WASHER PLACEMENT

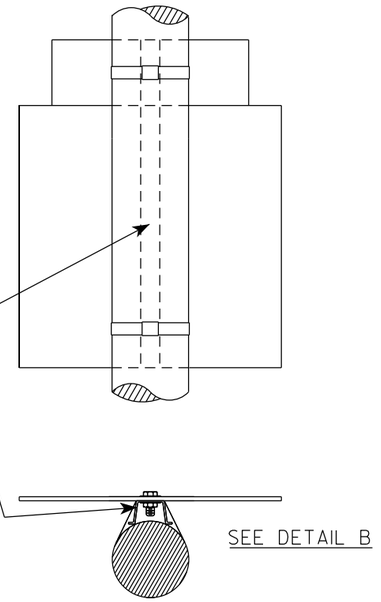


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

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

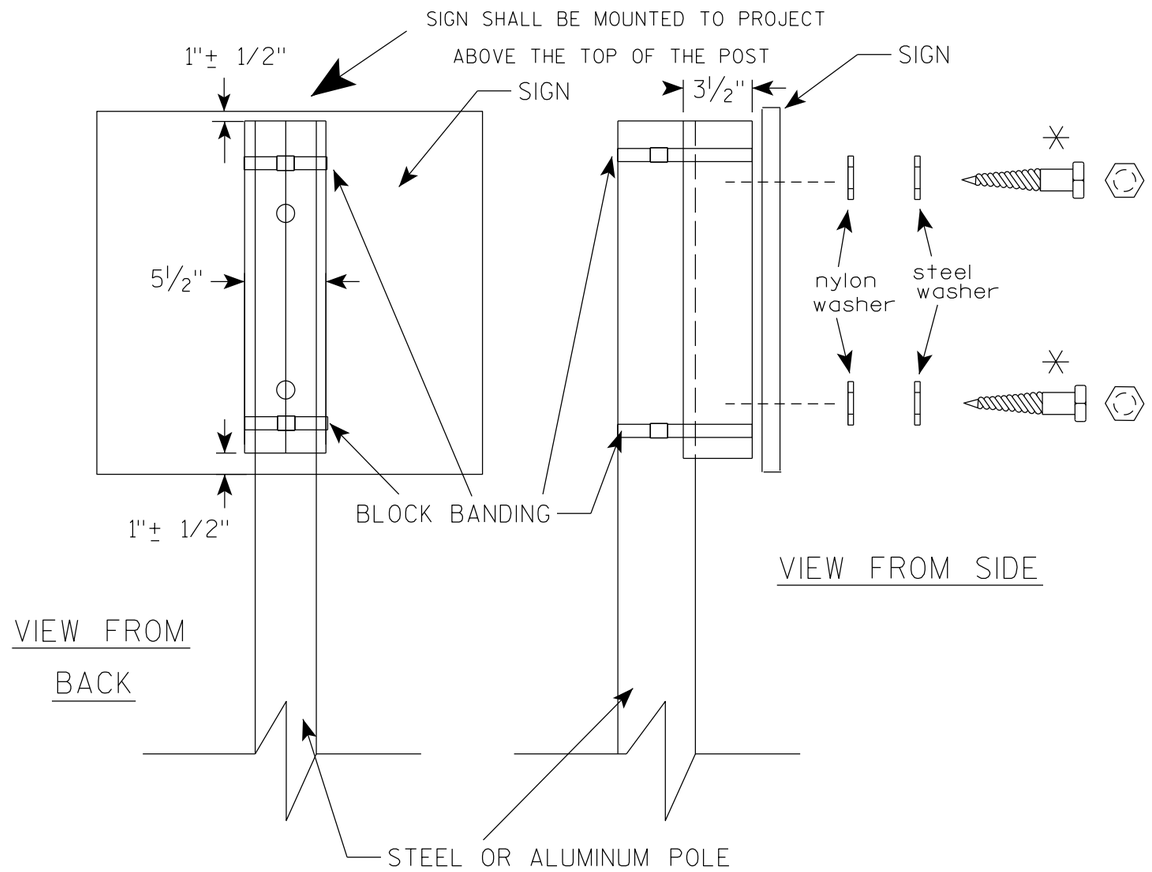
DATE 6/10/19 PLATE NO. A5-9.4

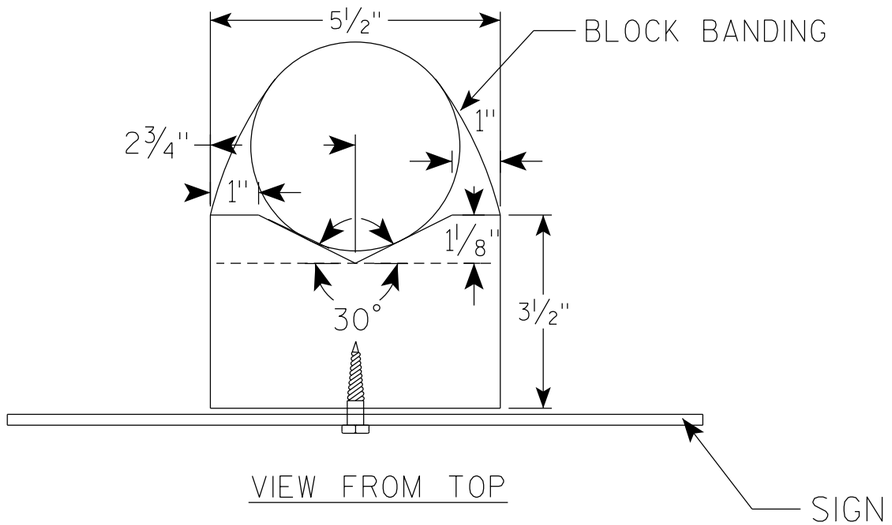
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 214	E

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)

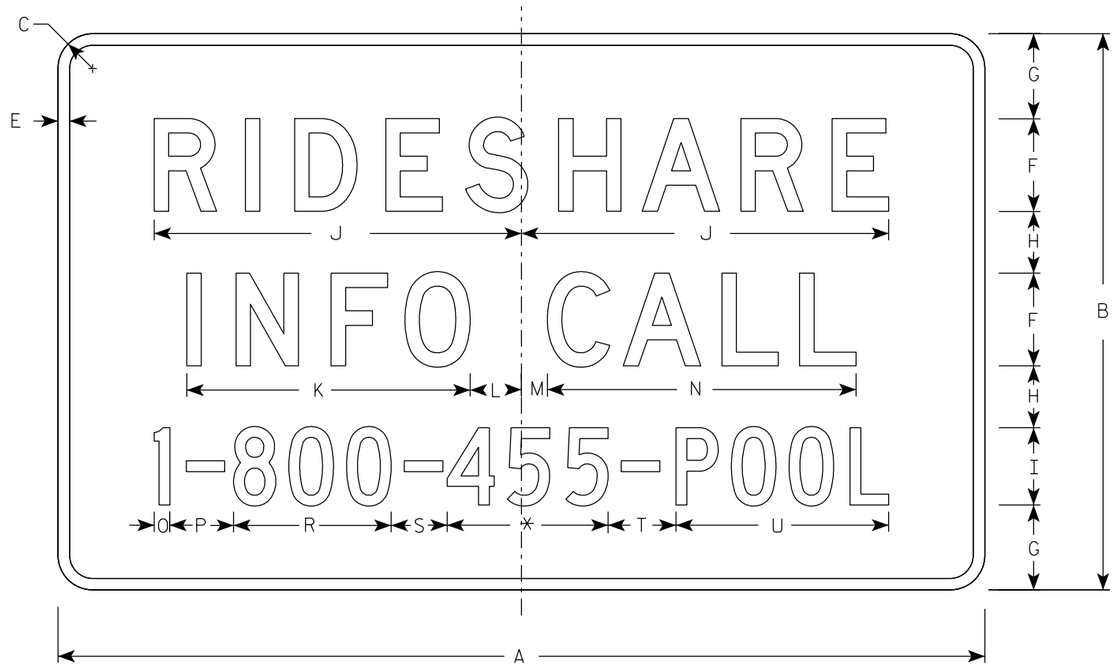
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 215 E



D12-2

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Blue
   Message - White
3. Message Series - Lines 1 & 2 are Series D and Line 3 is Series C
4. Substitute appropriate numerals and adjust spacing as required to achieve proper balance.

* Variable (See note 4)

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	42	24	1 1/2		1/2	4	3 1/2	3	3	15 7/8	12 1/4	2	1	13 3/8	5/8	2 1/2		6 1/8	2 1/8	2 5/8	8 1/4						7.0
2S	60	36	2 1/4		3/4	6	5 1/2	4	5	23 3/4	18 3/8	3 3/8	1 5/8	20	1	4 1/8		10 1/4	3 5/8	4 3/8	13 3/4						15.0
2M	60	36	2 1/4		3/4	6	5 1/2	4	5	23 3/4	18 3/8	3 3/8	1 5/8	20	1	4 1/8		10 1/4	3 5/8	4 3/8	13 3/4						15.0
3	60	36	2 1/4		3/4	6	5 1/2	4	5	23 3/4	18 3/8	3 3/8	1 5/8	20	1	4 1/8		10 1/4	3 5/8	4 3/8	13 3/4						15.0
4	60	36	2 1/4		3/4	6	5 1/2	4	5	23 3/4	18 3/8	3 3/8	1 5/8	20	1	4 1/8		10 1/4	3 5/8	4 3/8	13 3/4						15.0
5	78	48	3		1	8	6 1/2	6	7	31 3/4	24 1/2	4 5/8	2 3/8	26 5/8	1 3/8	5 3/4		14 1/4	5 1/8	6 1/8	19 1/4						26.0

STANDARD SIGN
D12-2A

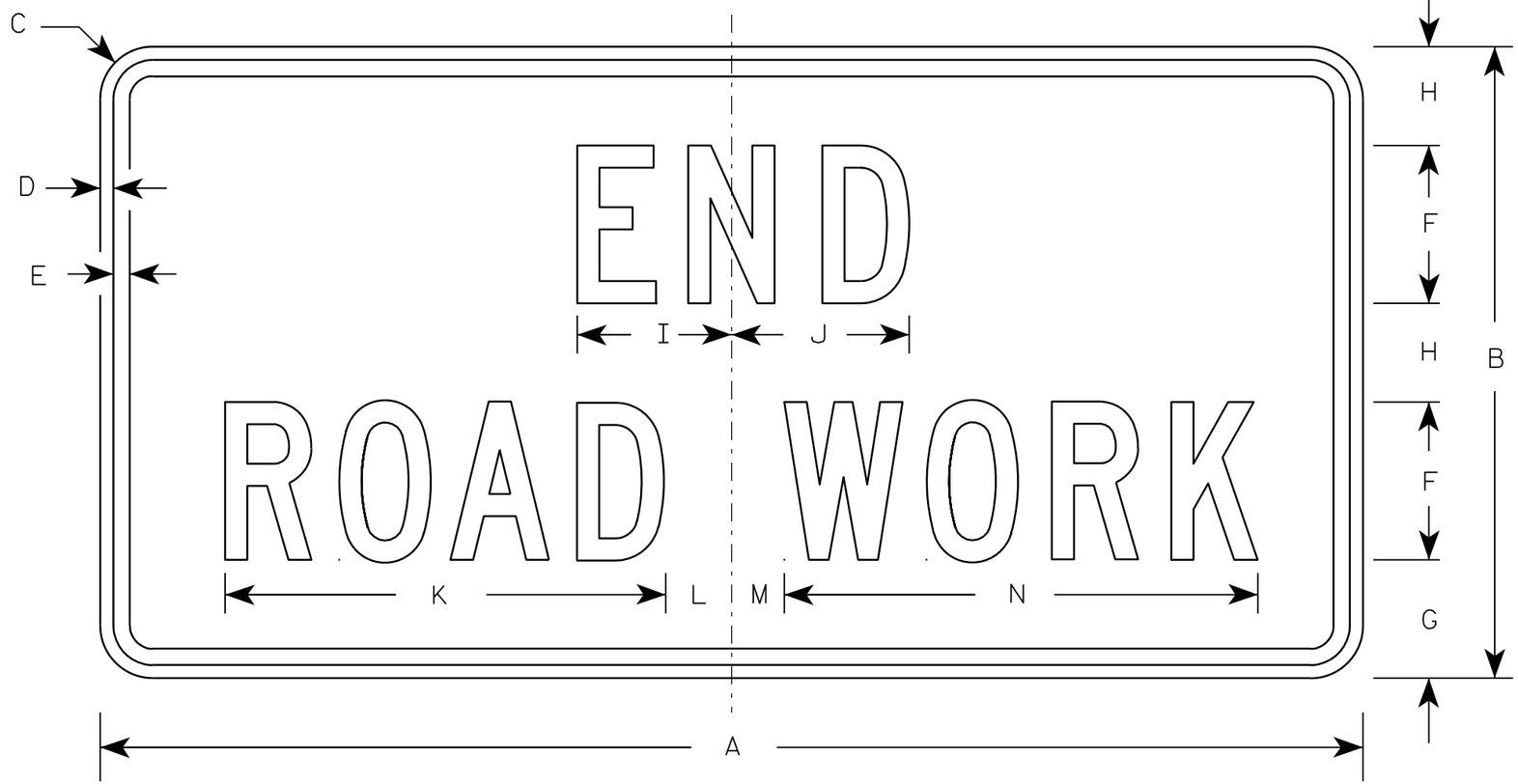
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2021 PLATE NO. D12-2.5

PROJECT NO:

SHEET NO: 216 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

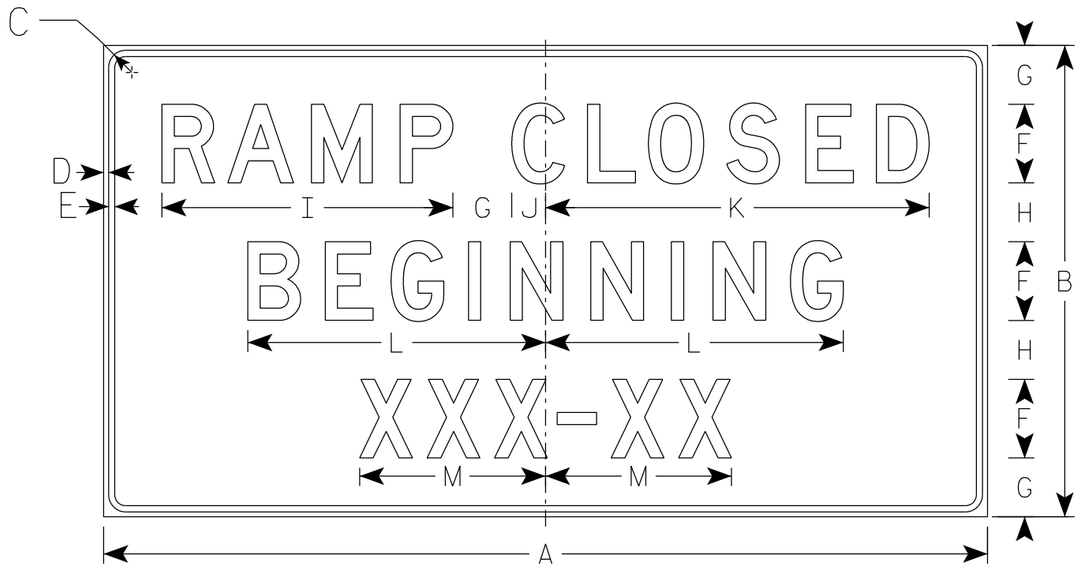
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 217	E

NOTES

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



G20-58

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	72	36	1 5/8	5/8	3/4	6	5	4	22 1/4	2 3/8	29 1/2	22 3/4	14 1/4														18.0
3	90	48	1 5/8	5/8	3/4	8	6	6	29 5/8	3 3/8	39	30 3/8	19														30.0
4																											
5																											

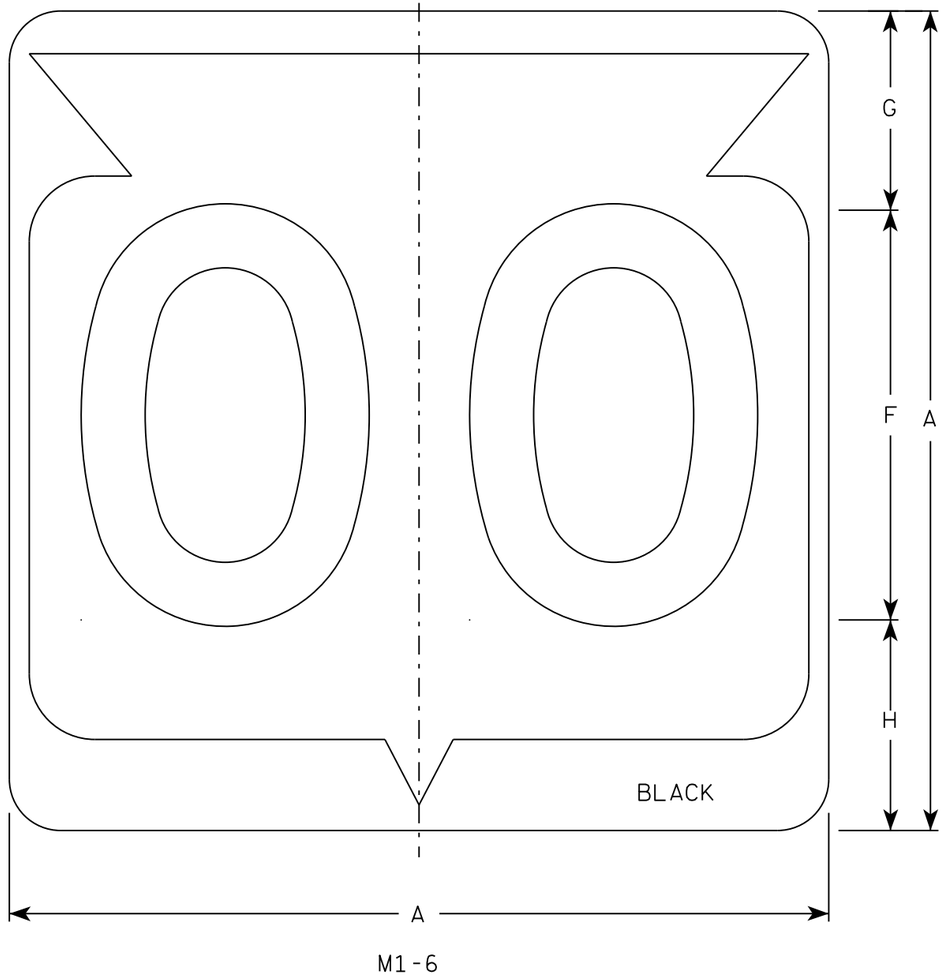
STANDARD SIGN
G20-58

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/19/2020 PLATE NO. G20-58.2

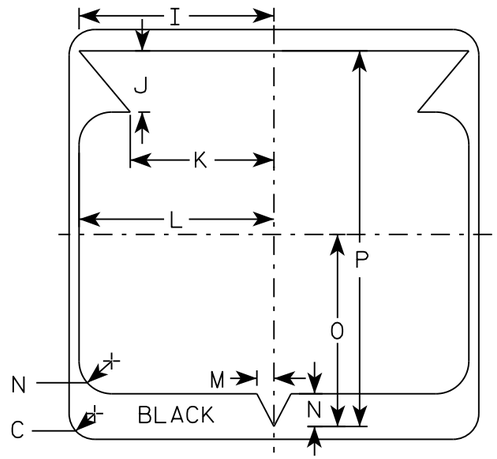
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 218 | E



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

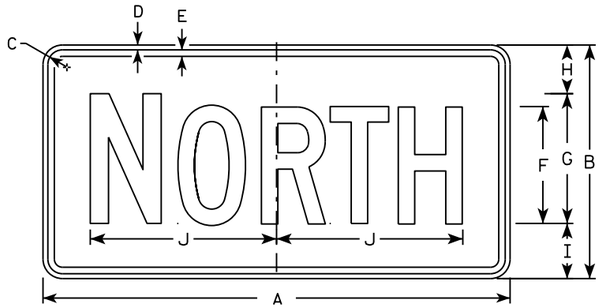
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

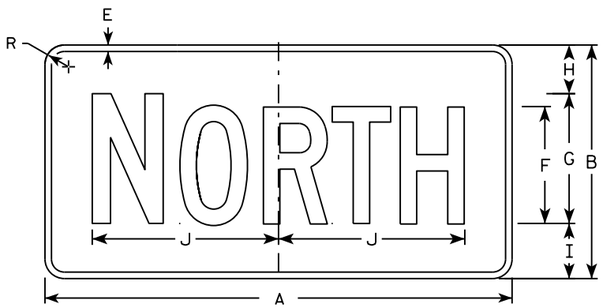
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 219 | E



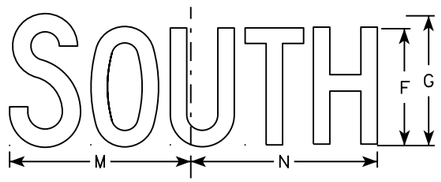
M3-1
MM3-1
MP3-1



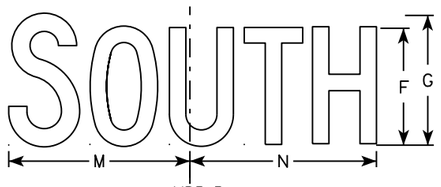
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

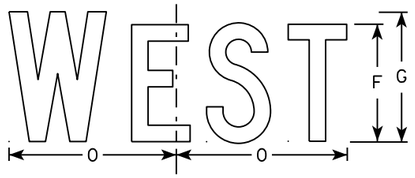
MB3-2
MK3-2
MN3-2



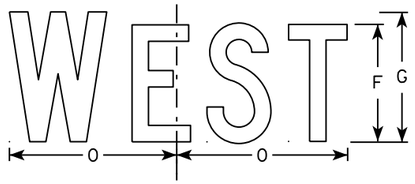
M3-3
MM3-3
MP3-3



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

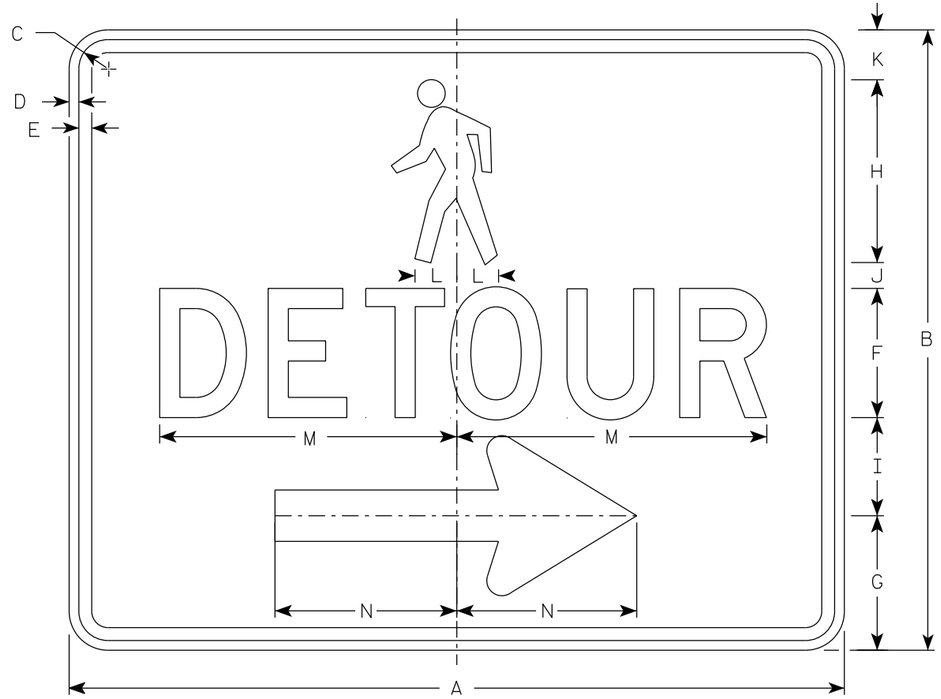
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

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

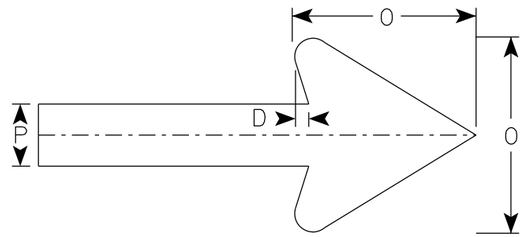
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-9BR

NOTES

1. Sign is Type II-Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9BL is the same as M4-9BR 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	5	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.00
3																											
4																											
5																											

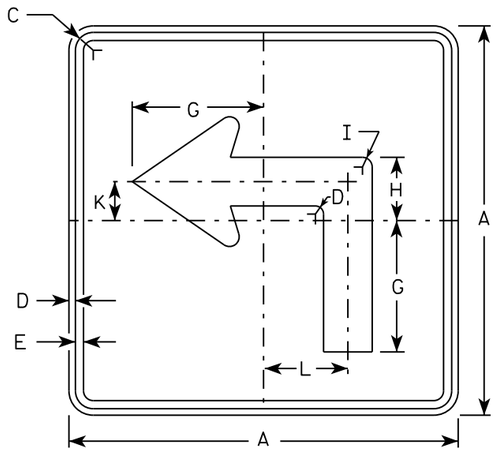
STANDARD SIGN
M4-9B L&R

WISCONSIN DEPT OF TRANSPORTATION

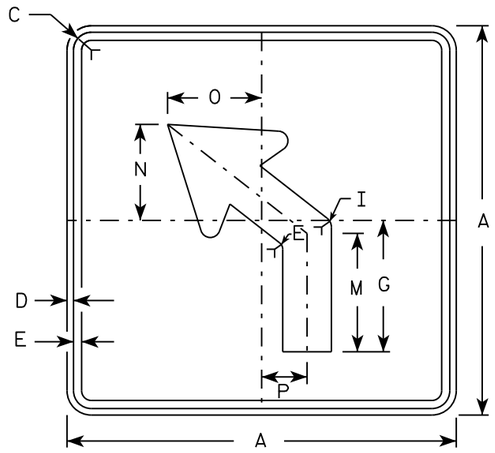
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 7/1/19 PLATE NO. M4-9B.2

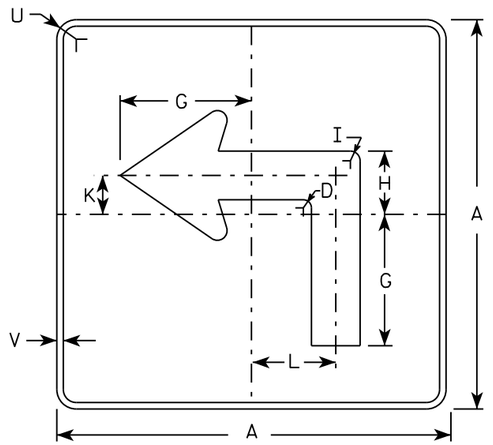
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 221 | E



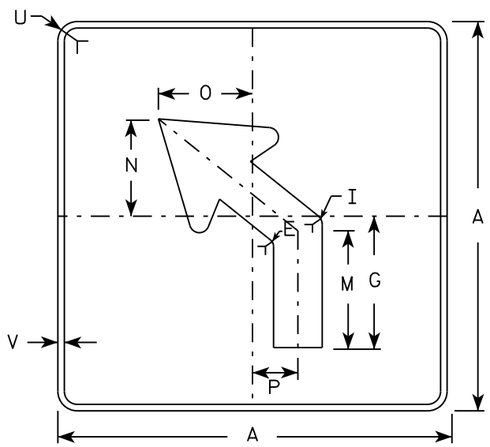
M5-1L
MM5-1L
MO5-1L
MP5-1L



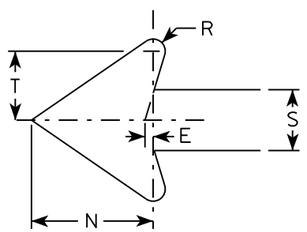
M5-2L
MM5-2L
MO5-2L
MP5-2L



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

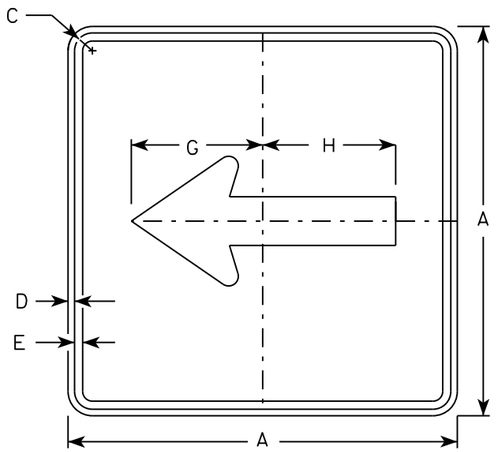
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

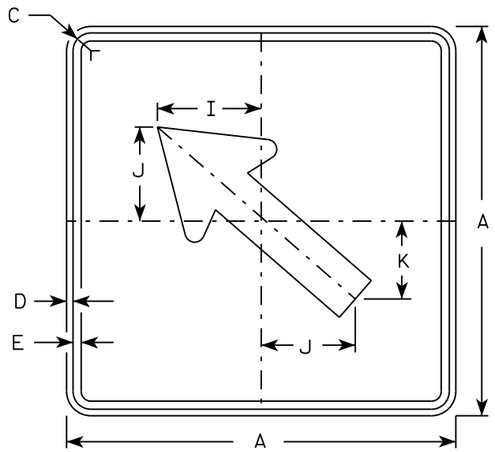
DATE 10/15/15 PLATE NO. M5-1.13

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



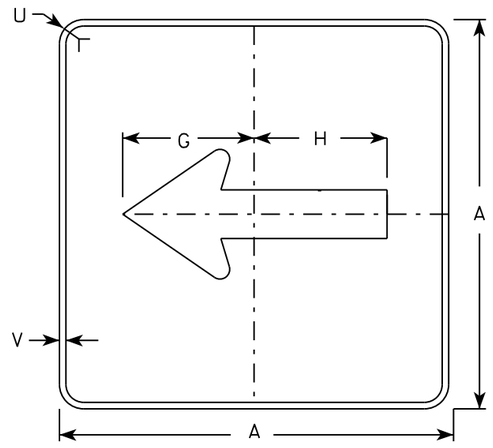
M6-1
MM6-1
MO6-1
MP6-1



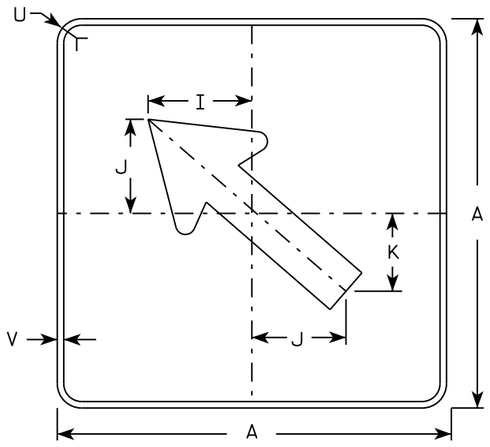
M6-2
MM6-2
MO6-2
MP6-2

NOTES

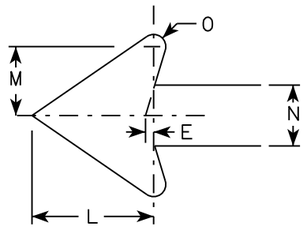
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - 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

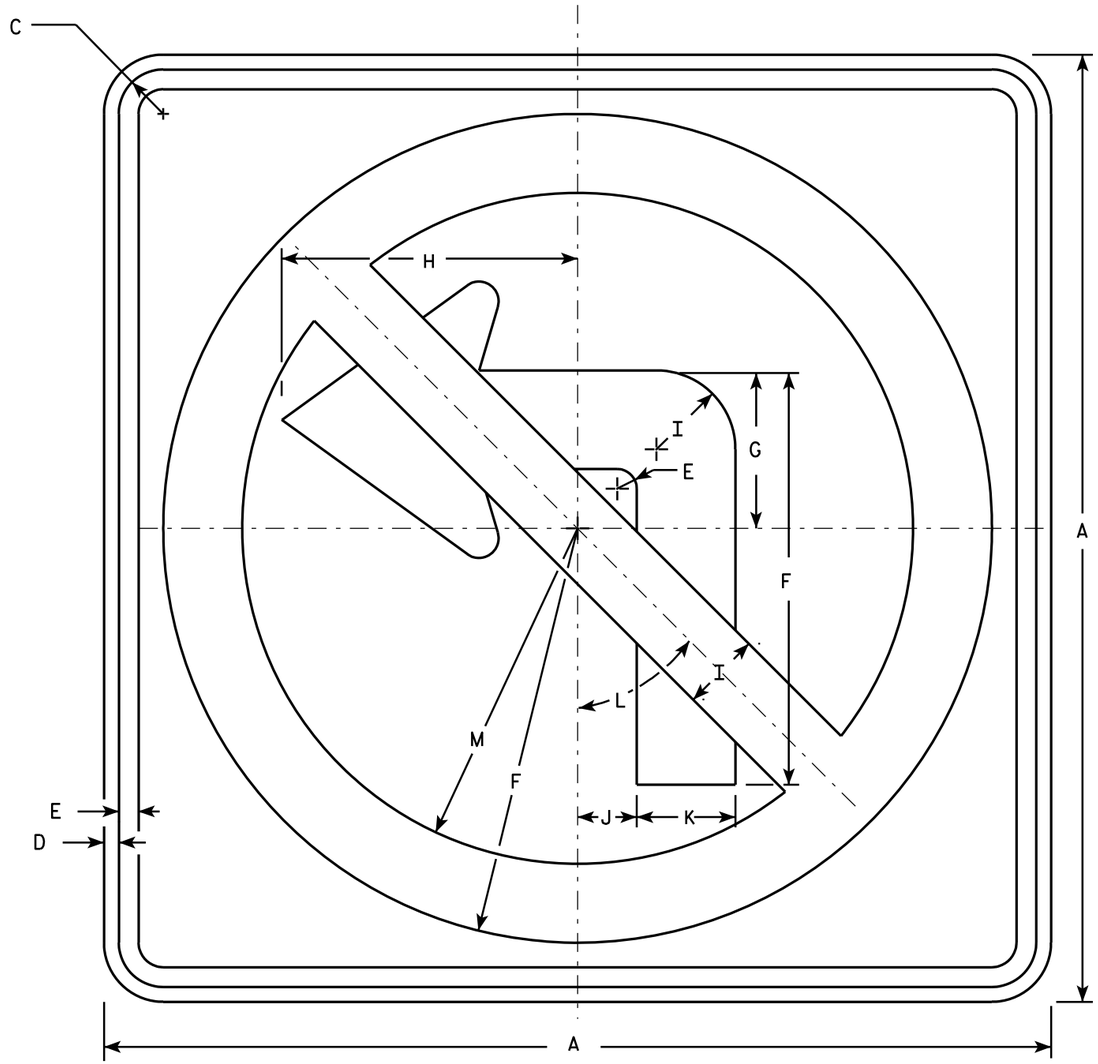
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATI 223 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

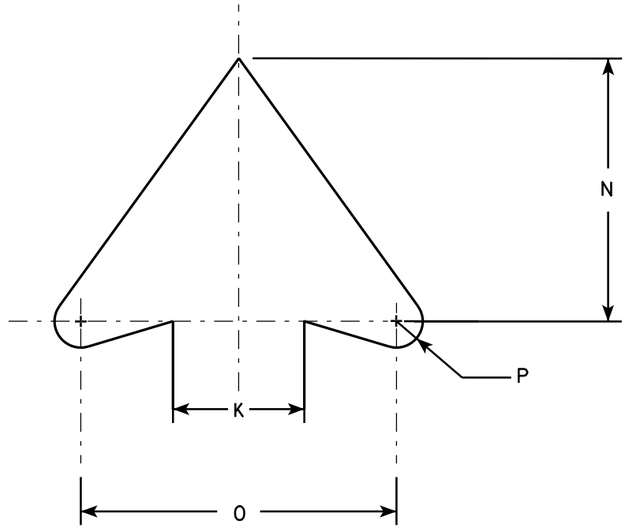
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 01-DEC-2015 17:57 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



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

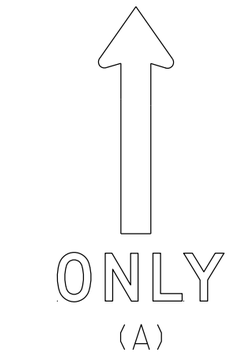
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

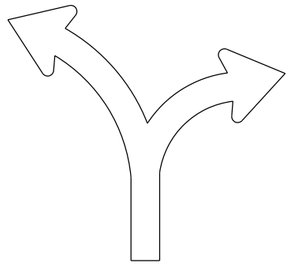
DATE 12/08/10 PLATE NO. R3-2.10

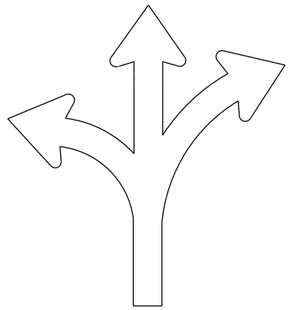
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 224	E

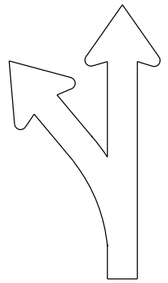


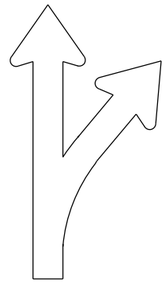
(A)

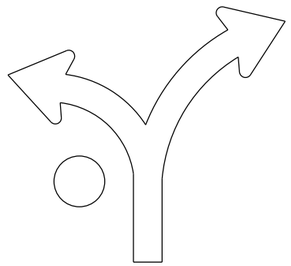
(B)

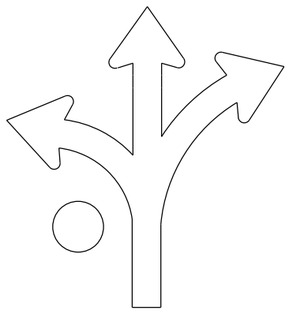

(C)

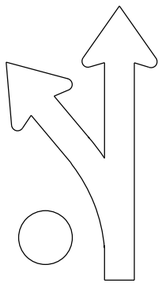

(D)


(E)

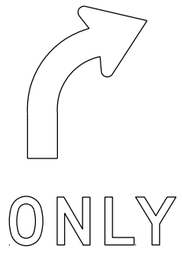

(F)


(G)

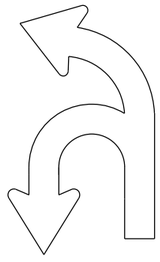

(H)


(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

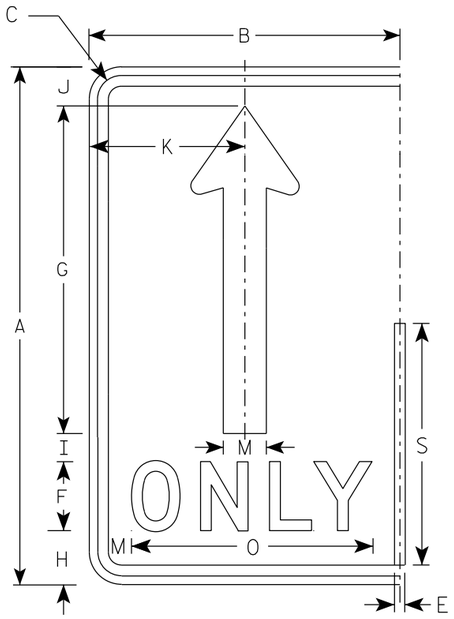
7

PROJECT NO:

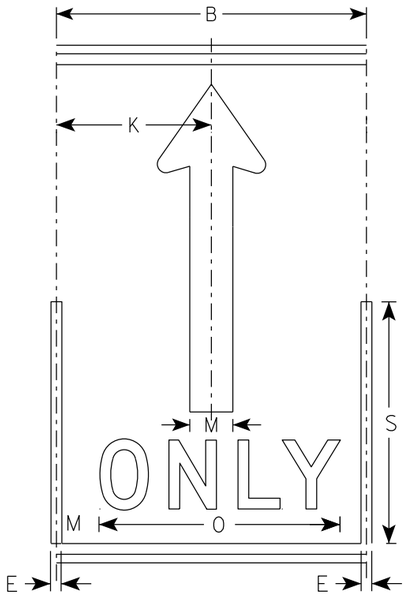
SHEET NO: 225 E

NOTES

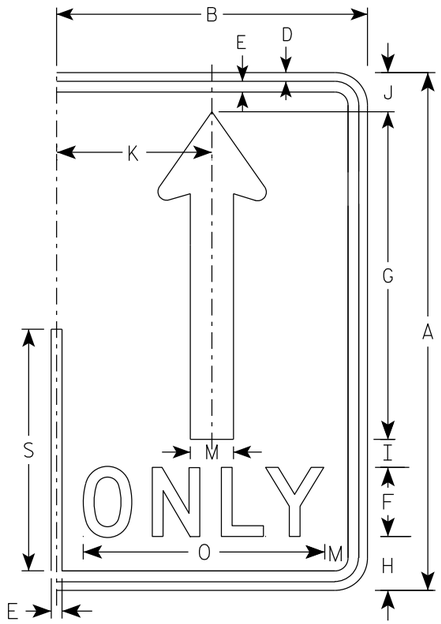
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



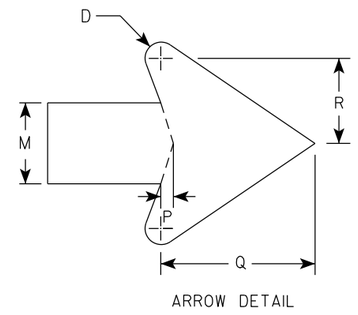
(A)



(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

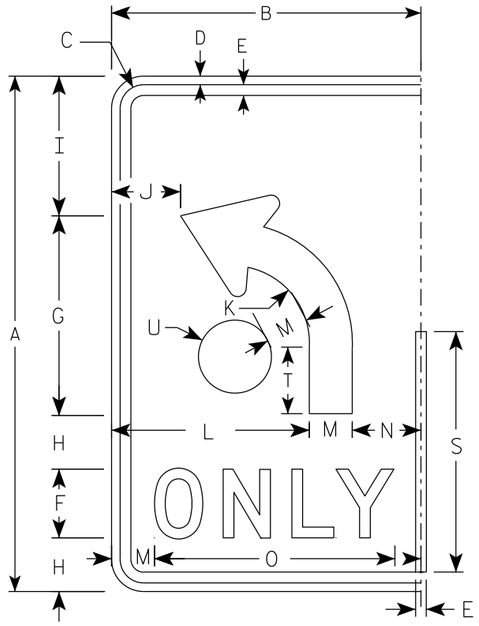
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

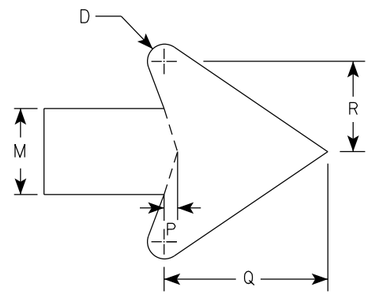
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 226 | E

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

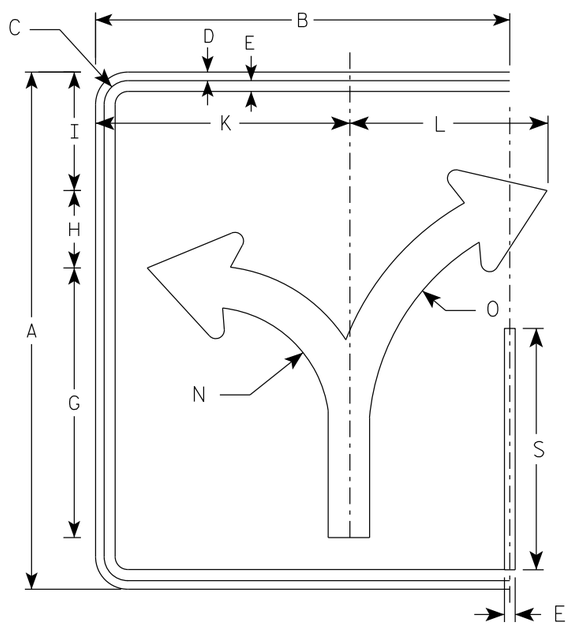
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

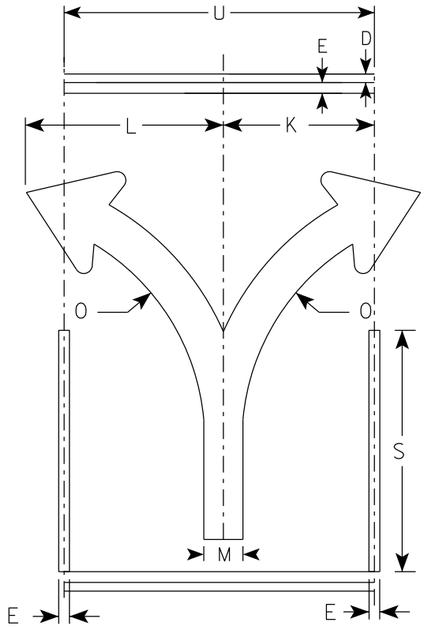
SHEET NO: 227 E

NOTES

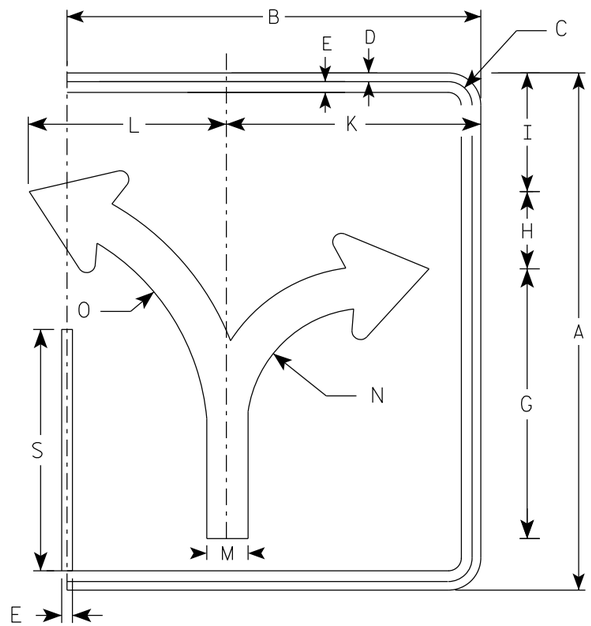
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



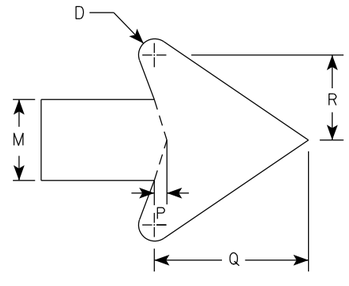
(C)



(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

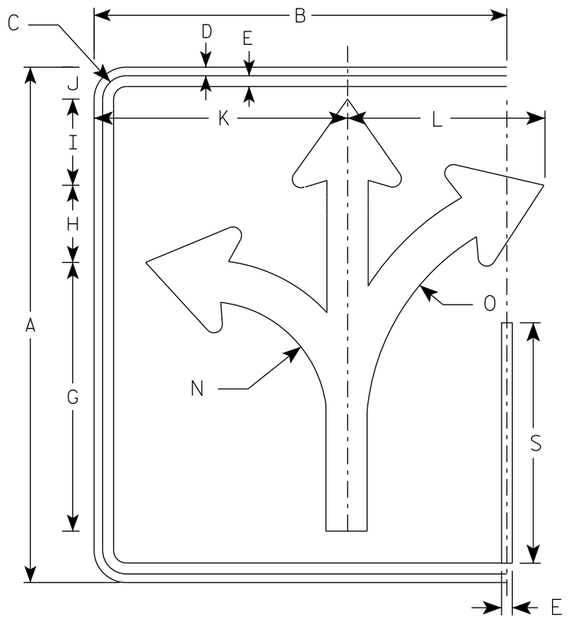
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

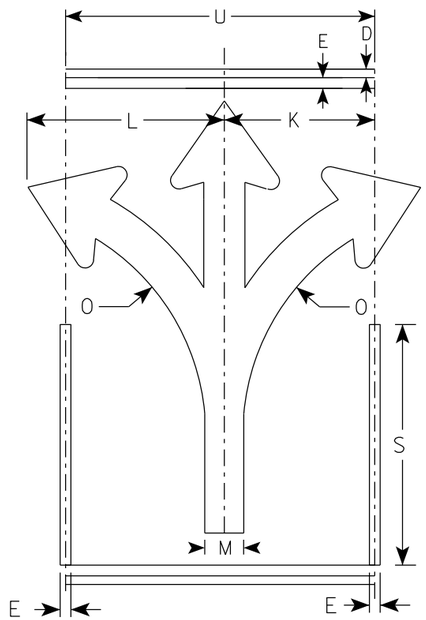
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 228 | E

NOTES

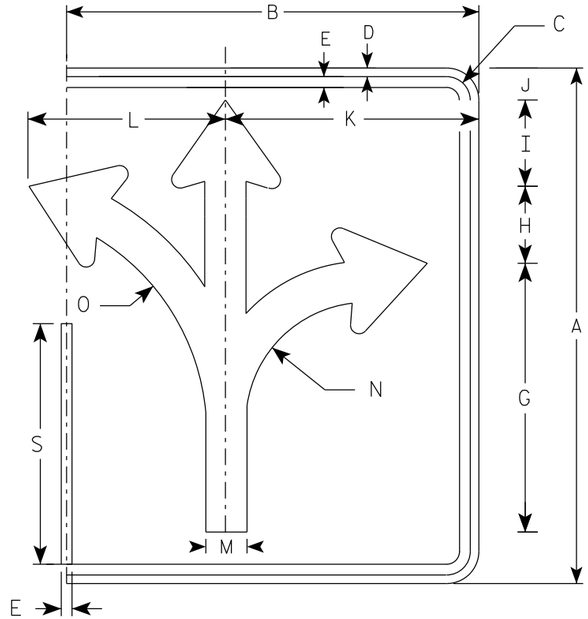
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



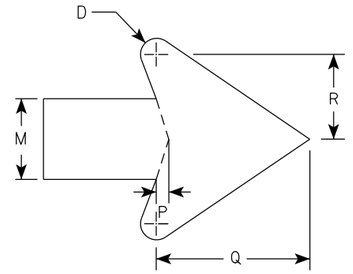
(D)



(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

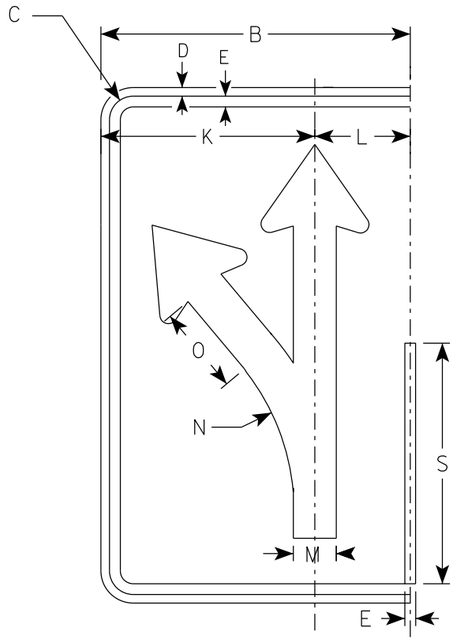
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 229 | E

7

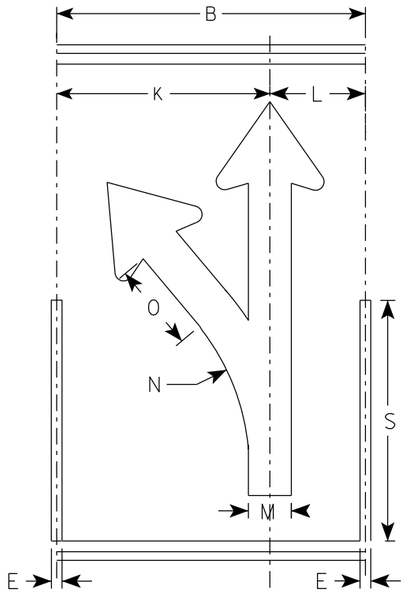
7

NOTES

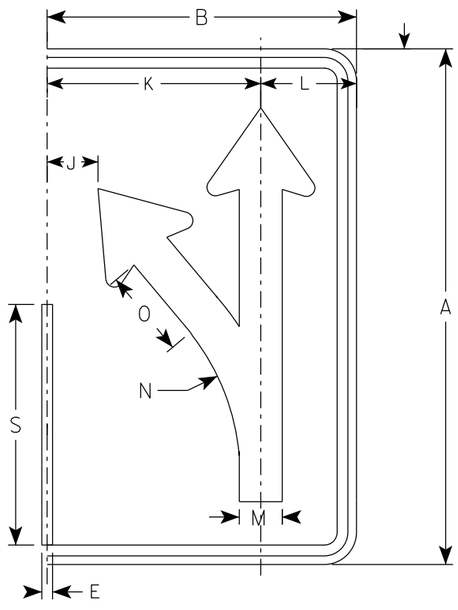
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



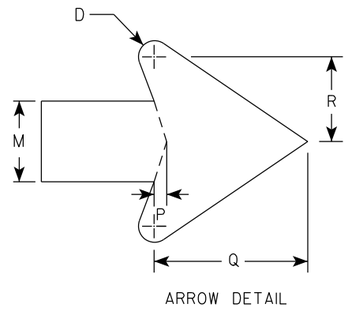
(E)



(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

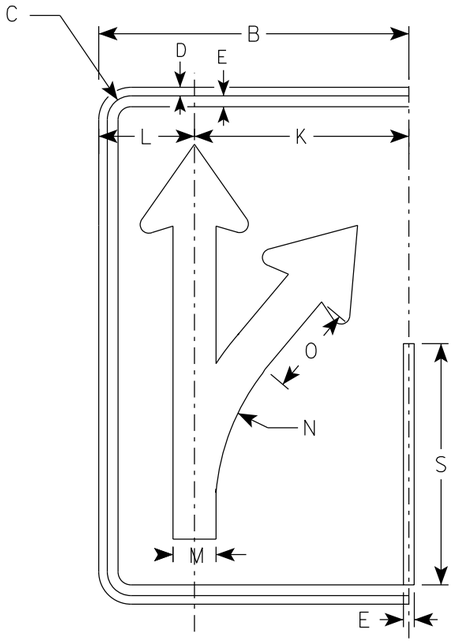
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

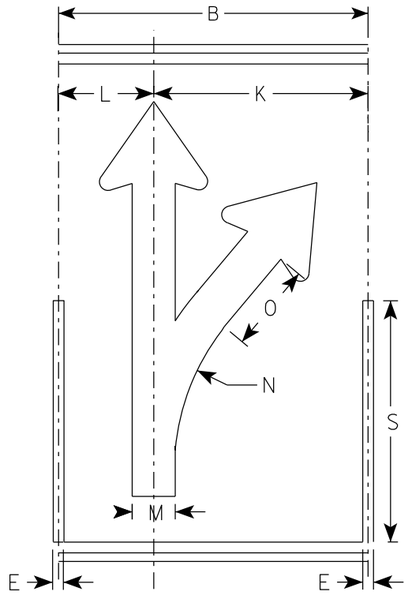
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 230 | E

NOTES

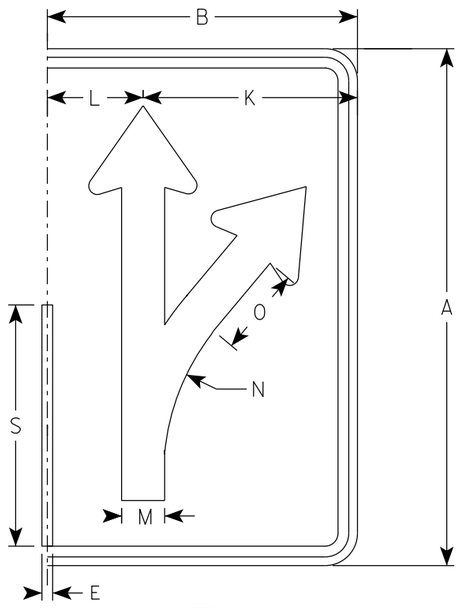
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



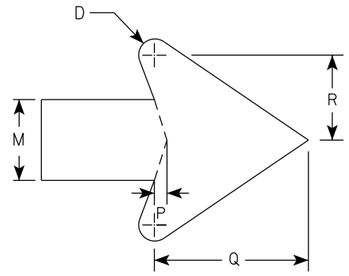
(F)



(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

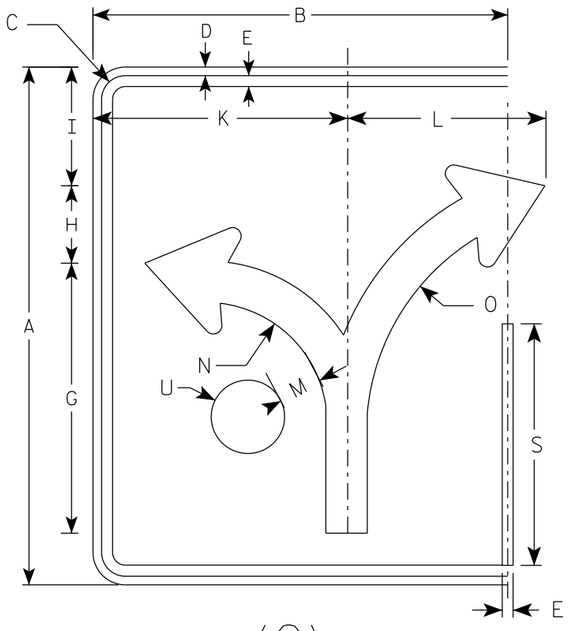
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

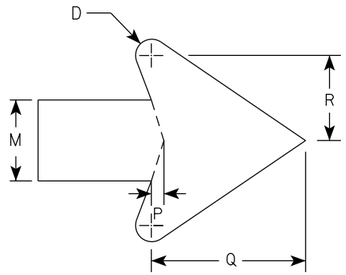
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 231 | E

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

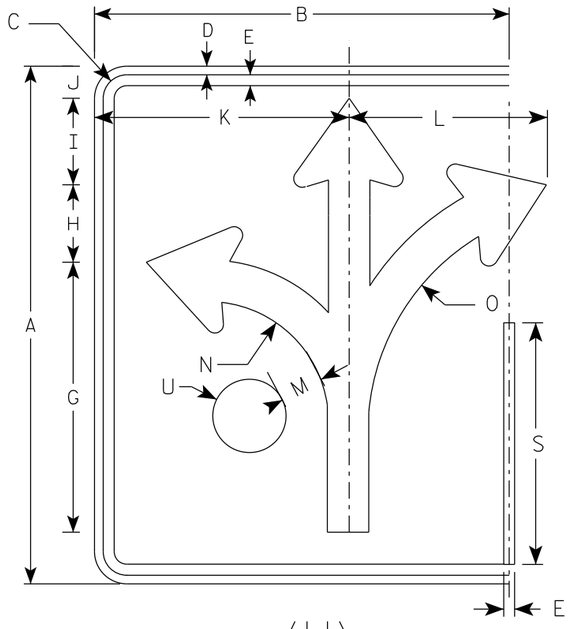
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

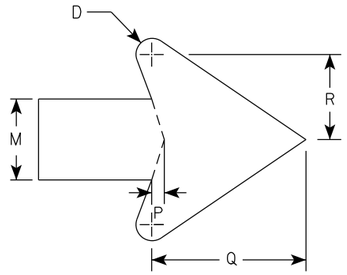
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 232 | E

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

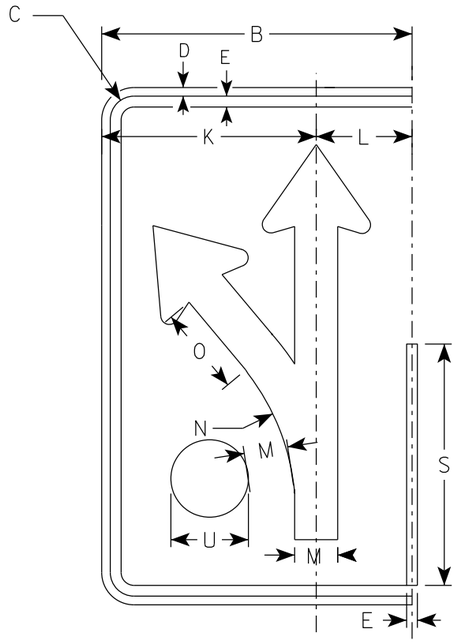
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

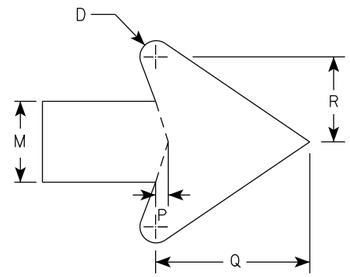
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 233	E

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

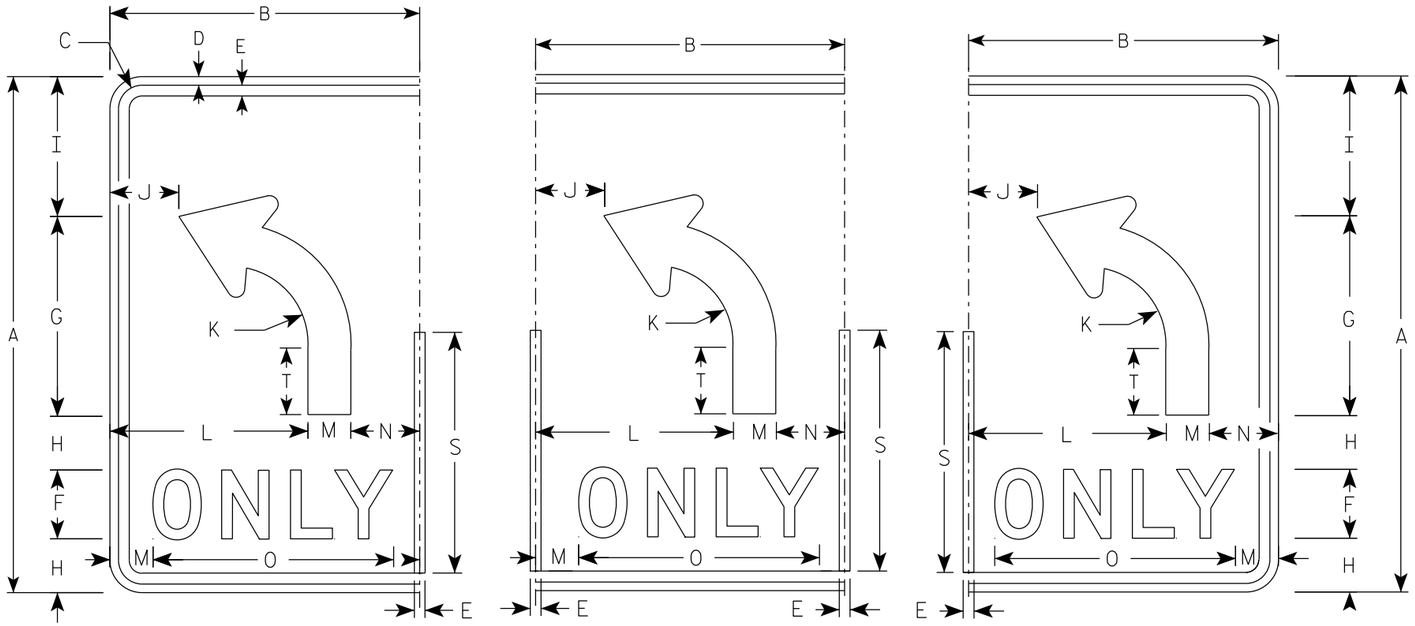
APPROVED Matthew R Rauch
For State Traffic Engineer

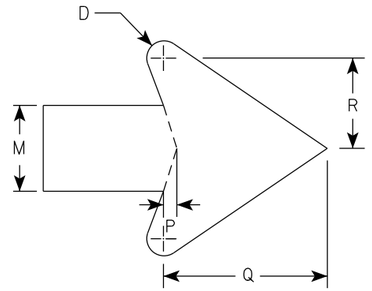
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 234 | 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

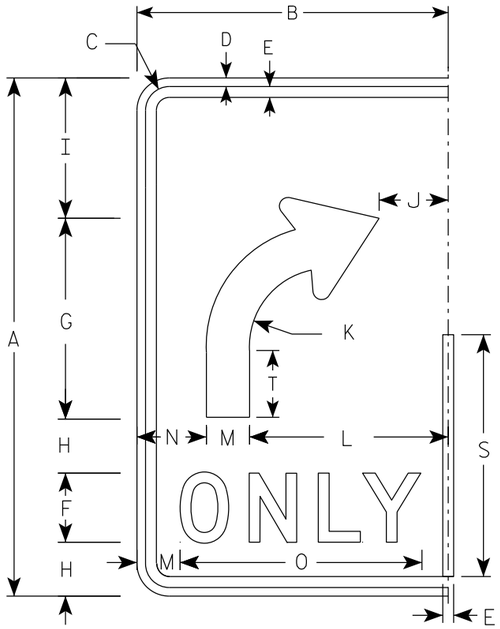
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

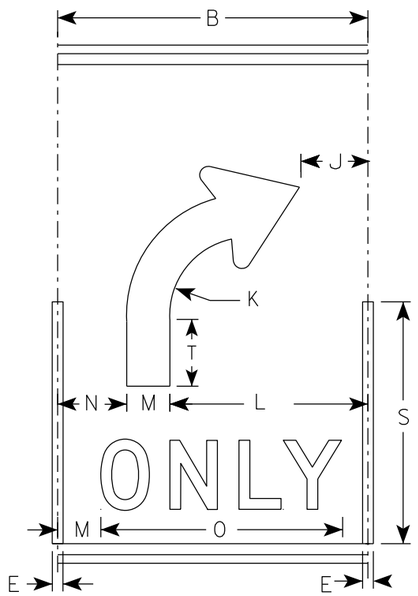
SHEET NO: 235 E

NOTES

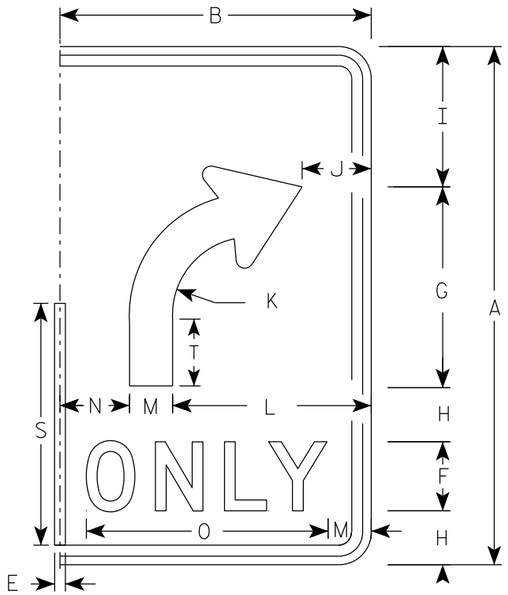
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



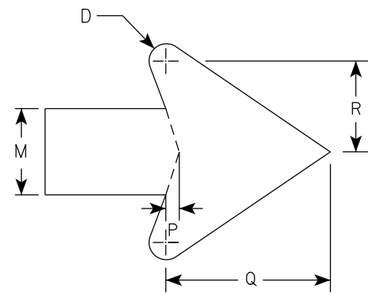
(R)



(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

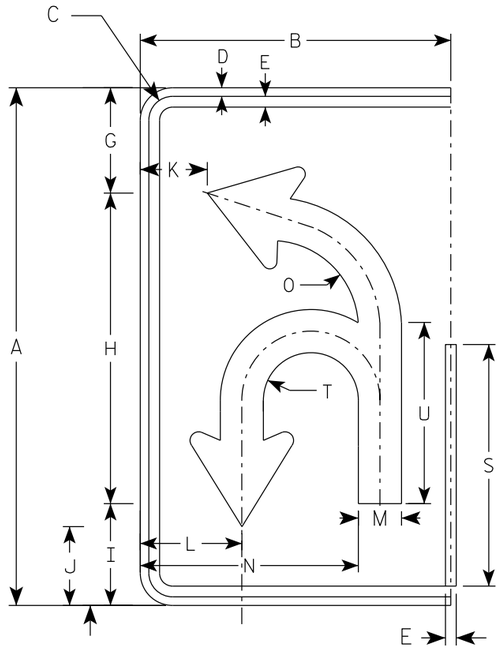
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

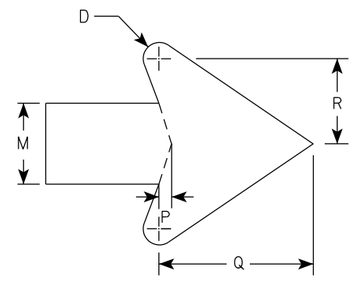
SHEET NO: 236 **E**

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

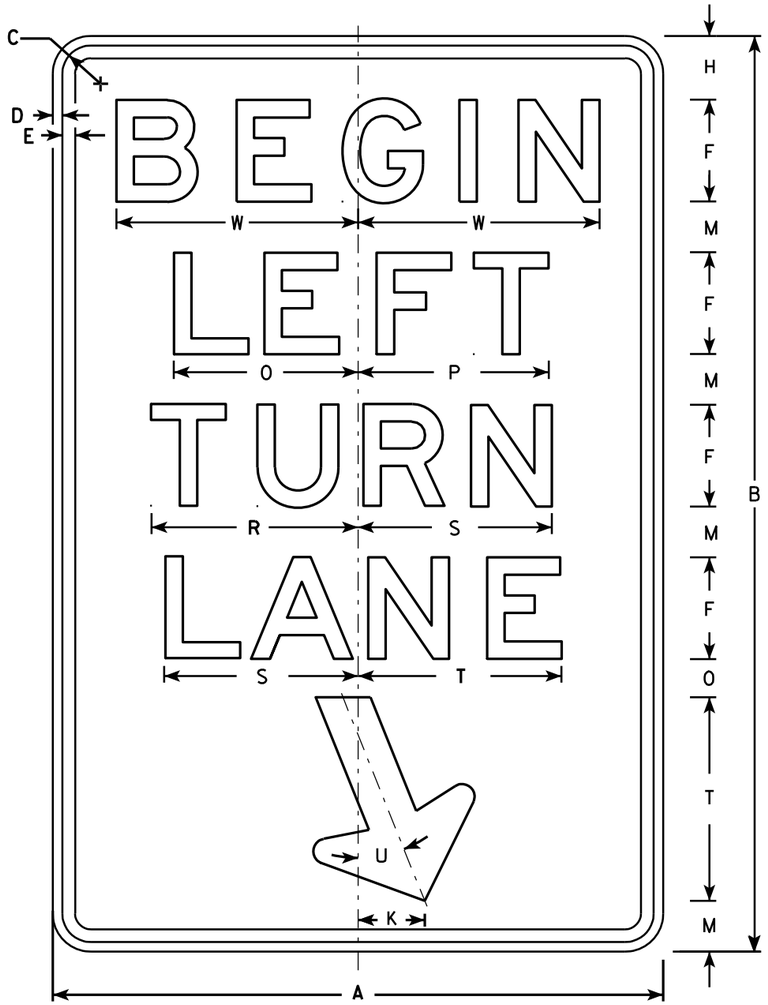
STANDARD SIGN
R3-8 (U) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

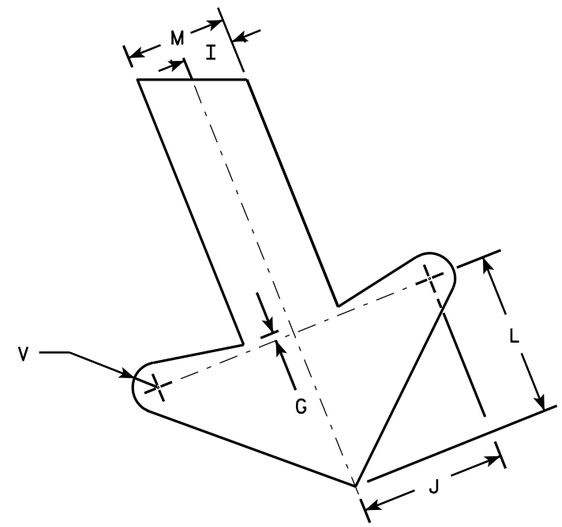
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 237 | E



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																											

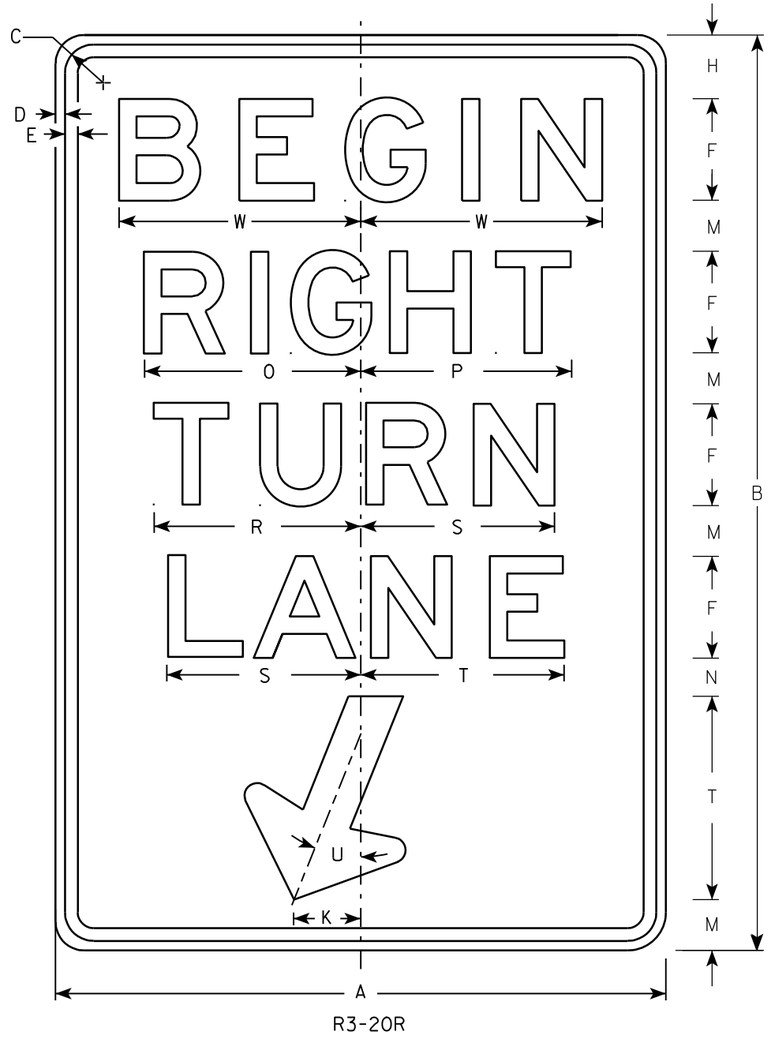
STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

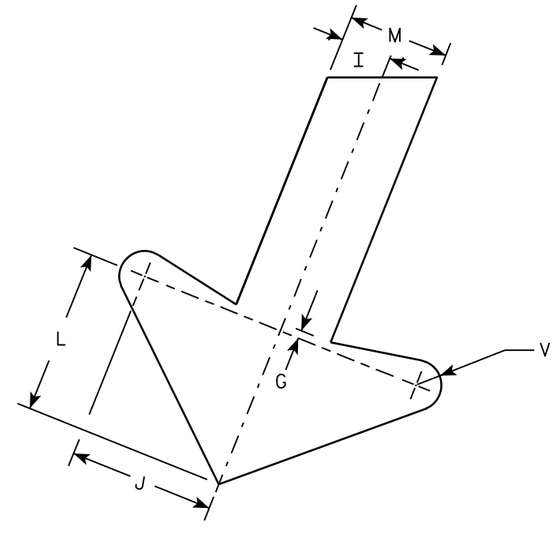
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 238 | E



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																											

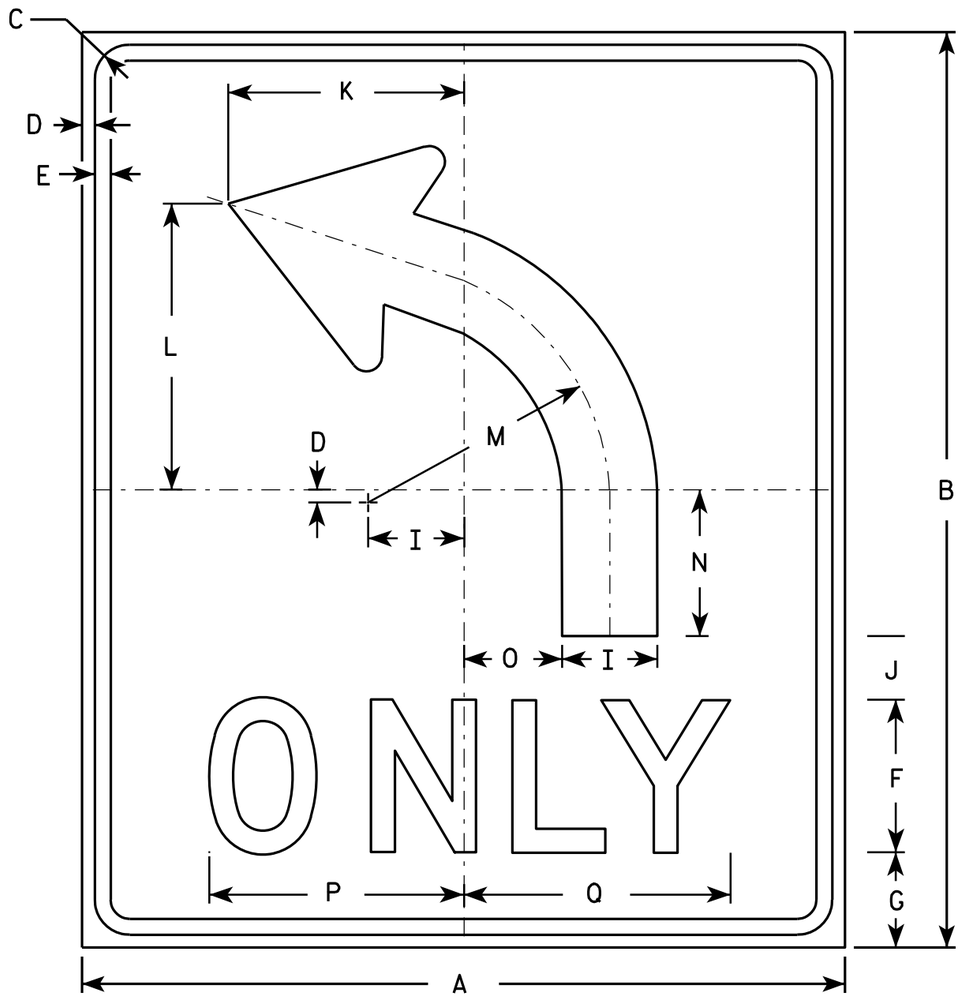
STANDARD SIGN
R3-20R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20R.6

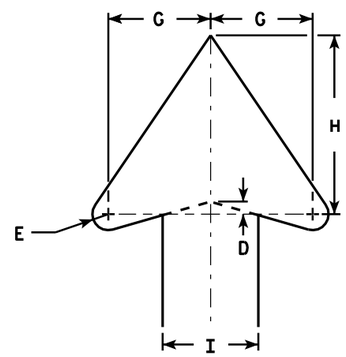
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 239 | E



R3-50L

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.
5. R3-50R is the same as R3-50L except curved portion of arrow points right.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	6	4	7	3 3/4	2 1/2	9 1/4	11 1/4	9 1/2	5 3/4	3 7/8	10	10 1/2										7.5
2M	30	36	1 3/8	1/2	5/8	6	4	7	3 3/4	2 1/2	9 1/4	11 1/4	9 1/2	5 3/4	3 7/8	10	10 1/2										7.5
3																											
4																											
5																											

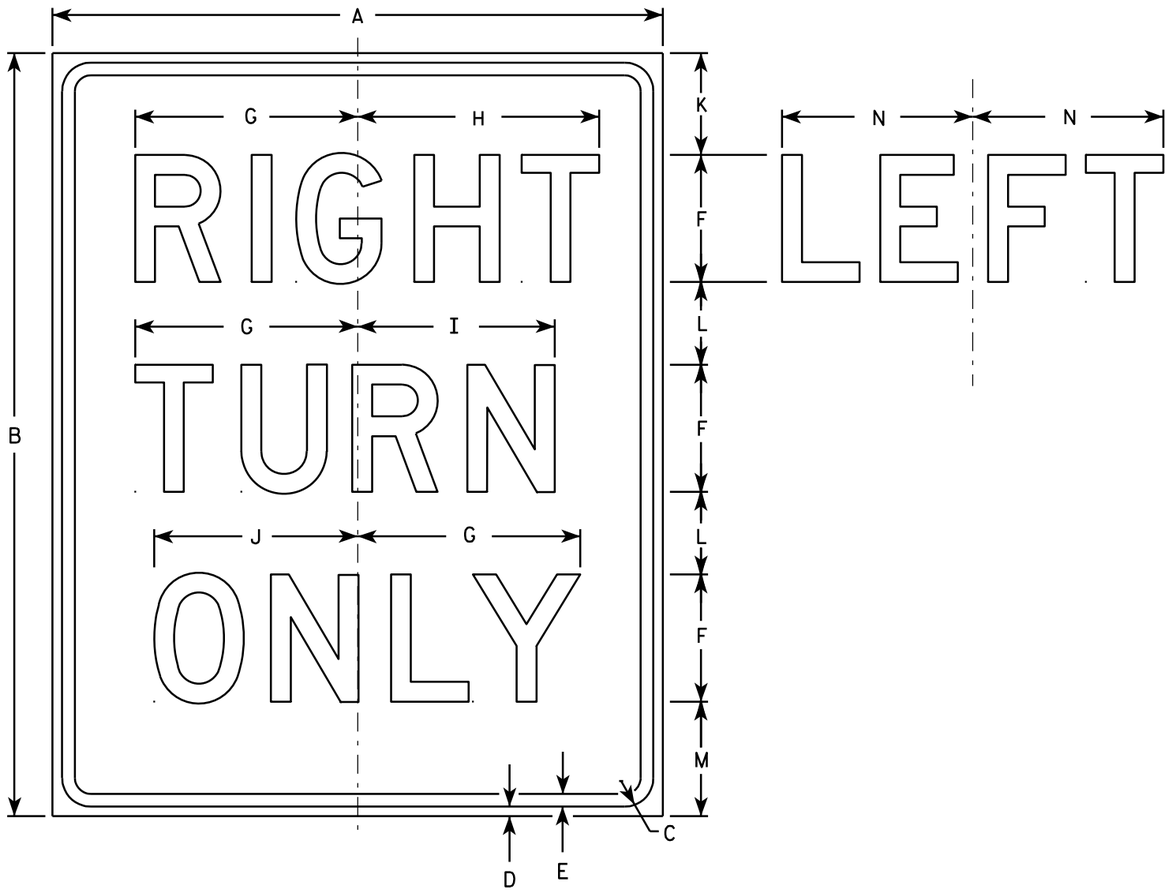
STANDARD SIGN
R3-50

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-50.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 240 | E



R3-53R

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.
5. R3-53L same as R3-53R except LEFT is substituted for 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																											
2S	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
2M	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
3	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
4																											
5																											

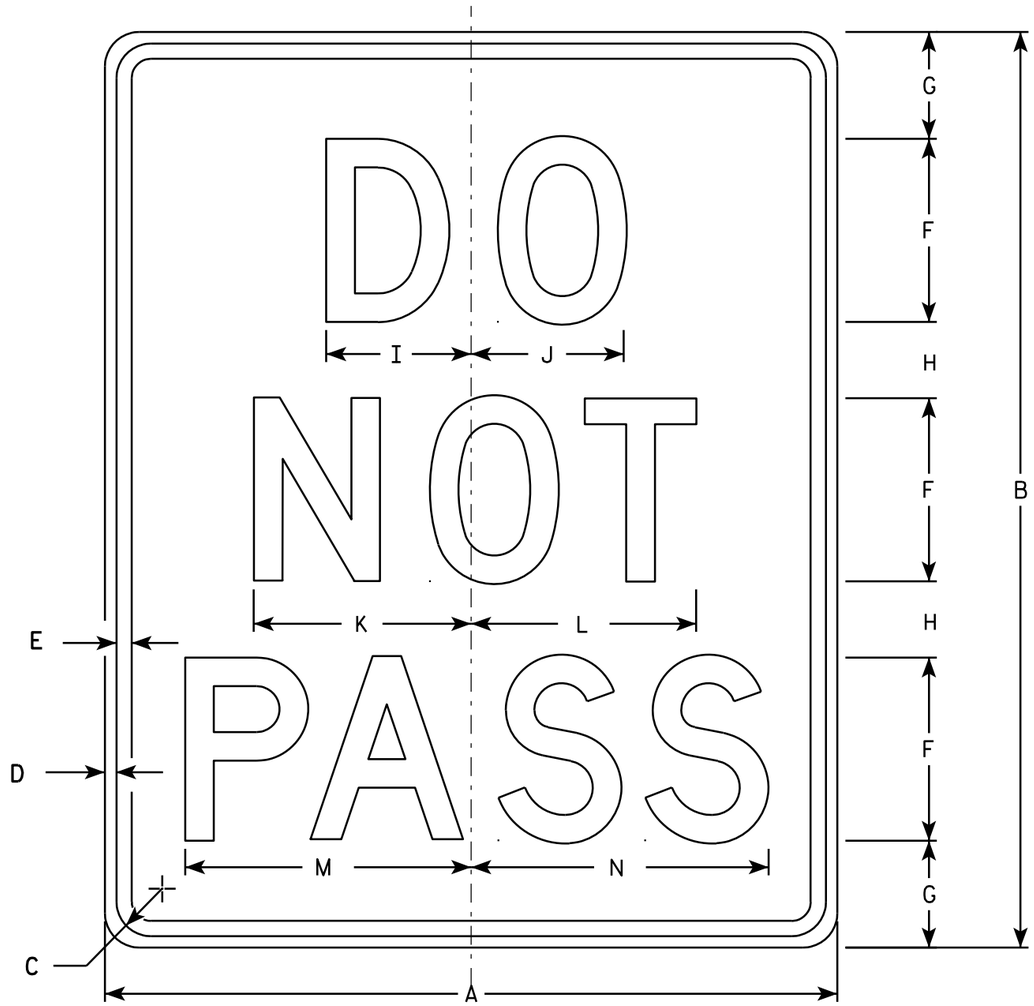
STANDARD SIGN
R3-53

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-53.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 241	E



R4-1

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 - 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	18	24	1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 1/8	3 1/4	4 3/4	4 7/8	6 1/4	6 1/2													3.0
2S	24	30	1 1/8	3/8	1/2	6	3 1/2	2 1/2	4 3/4	5	7 1/8	7 3/8	9 3/8	9 3/4													5.0
2M	24	30	1 1/8	3/8	1/2	6	3 1/2	2 1/2	4 3/4	5	7 1/8	7 3/8	9 3/8	9 3/4													5.0
3																											
4	36	48	1 5/8	5/8	3/4	8	7	5	6 1/4	6 5/8	9 1/2	9 3/4	12 1/2	13													12.0
5	48	60	2 1/4	3/4	1	10	8	7	7 3/4	8 3/8	11 7/8	12 1/4	15 5/8	16 1/4													20.0

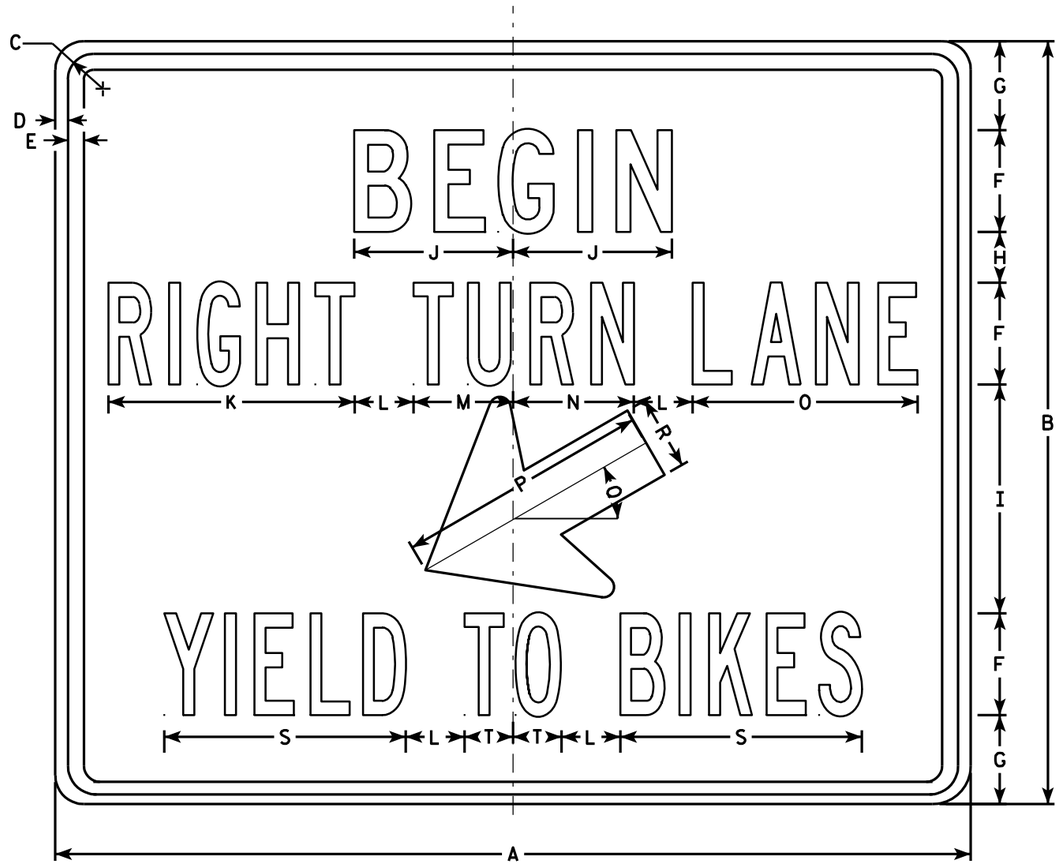
STANDARD SIGN
R4-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-1.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 242 | E



R4-4

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 - 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 C
   Lines 2 & 3 are Series B

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	36	30	1 3/8	1/2	5/8	4	3 1/2	2	9	6 1/4	9 3/4	2 3/8	3 7/8	4 3/4	8 7/8	10	30°	2 7/8	9 1/2	1 7/8							7.5
2M	36	30	1 3/8	1/2	5/8	4	3 1/2	2	9	6 1/4	9 3/4	2 3/8	3 7/8	4 3/4	8 7/8	10	30°	2 7/8	9 1/2	1 7/8							7.5
3																											
4																											
5																											

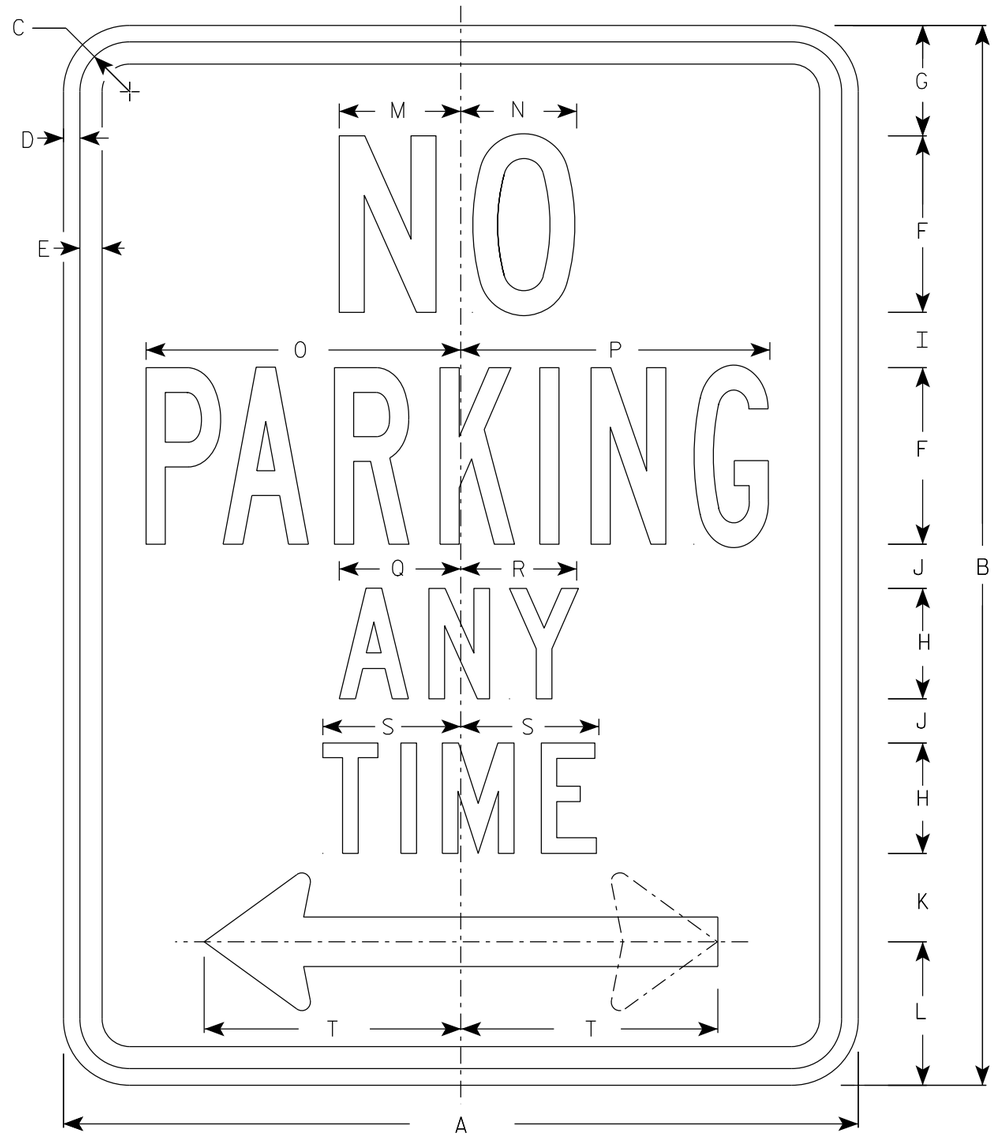
STANDARD SIGN
R4-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-4.2

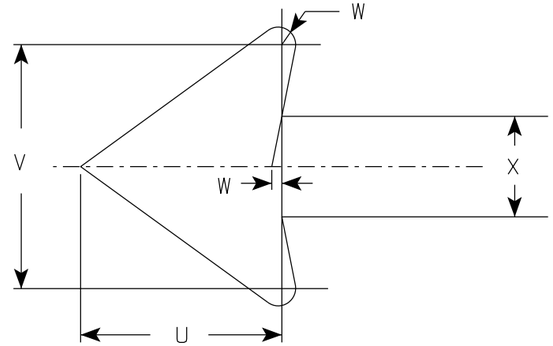
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 243	E



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

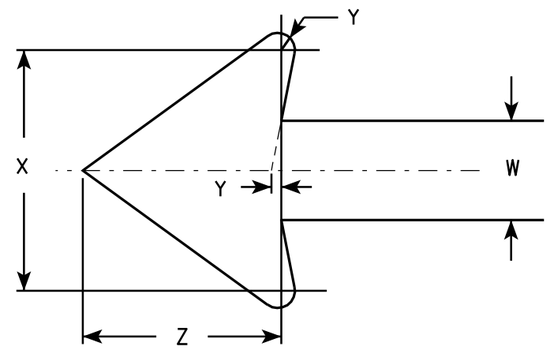
DATE 3/31/2021 PLATE NO. R7-1.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 244 E

R7-51

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 - Red
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. R7-51D (double arrow)
   R7-51R (right arrow)
   R7-51L (left arrow)
6. Lines 1, 3 and 4 are Series C.
   Line 2 is Series B.



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	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	4 7/8	5/8	1 3/4	2 1/2	4 3/8	3 7/8	3/4	1 3/4	1/8	1 1/2	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	5 3/4	1 1/8	1 1/2	3 1/8	5 1/2	5 7/8	1 1/8	2 5/8	1/4	2 1/4	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	7 1/8	1 1/4	2	3 3/4	6 1/2	7 3/4	1 1/2	3 1/2	1/4	3	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	7 1/8	1 1/4	2	3 3/4	6 1/2	7 3/4	1 1/2	3 1/2	1/4	3	5.0
4																											
5																											

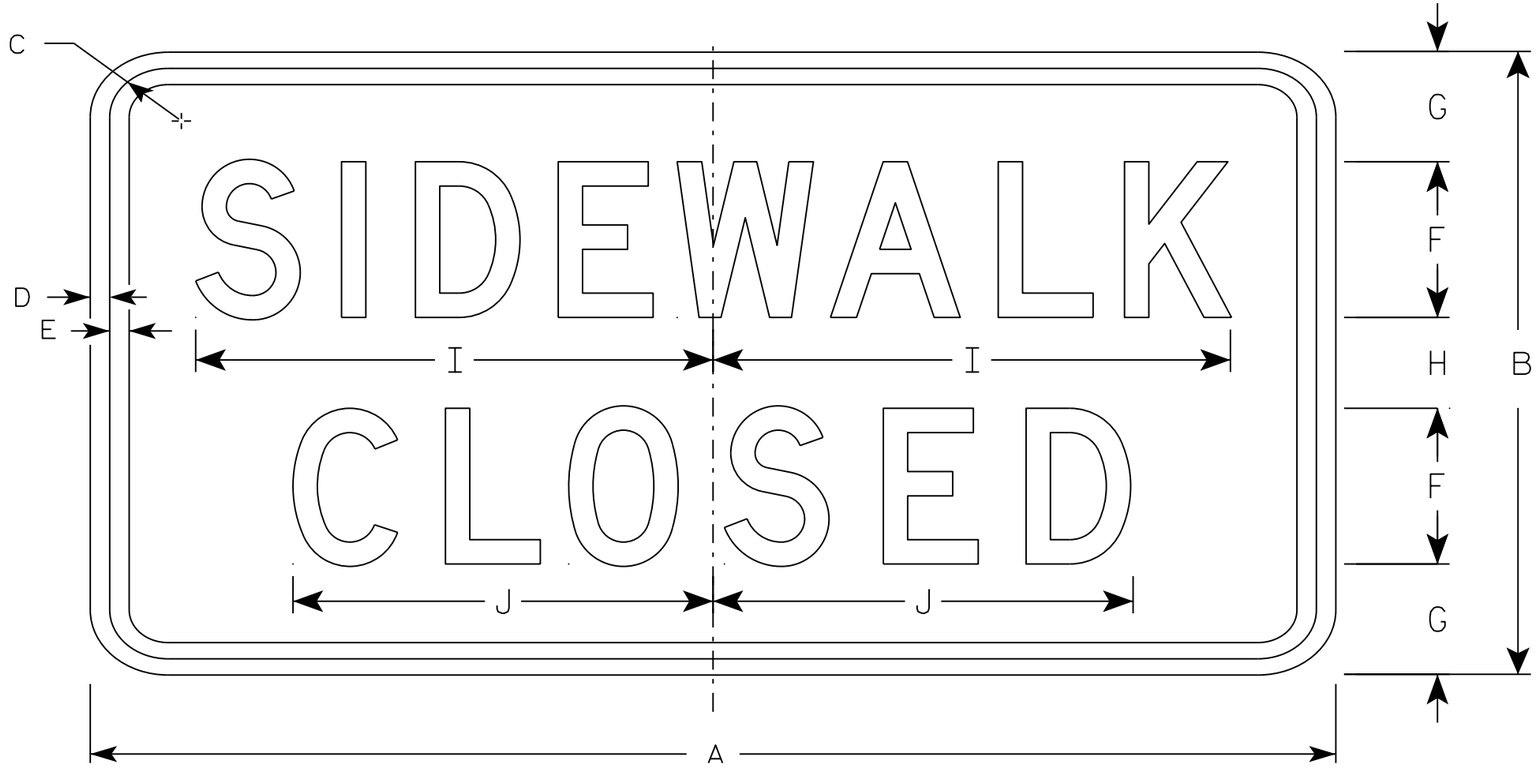
STANDARD SIGN
R7-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-51.6

PROJECT NO:	HWY:	COUNTY:			SHEET NO: 245	E



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

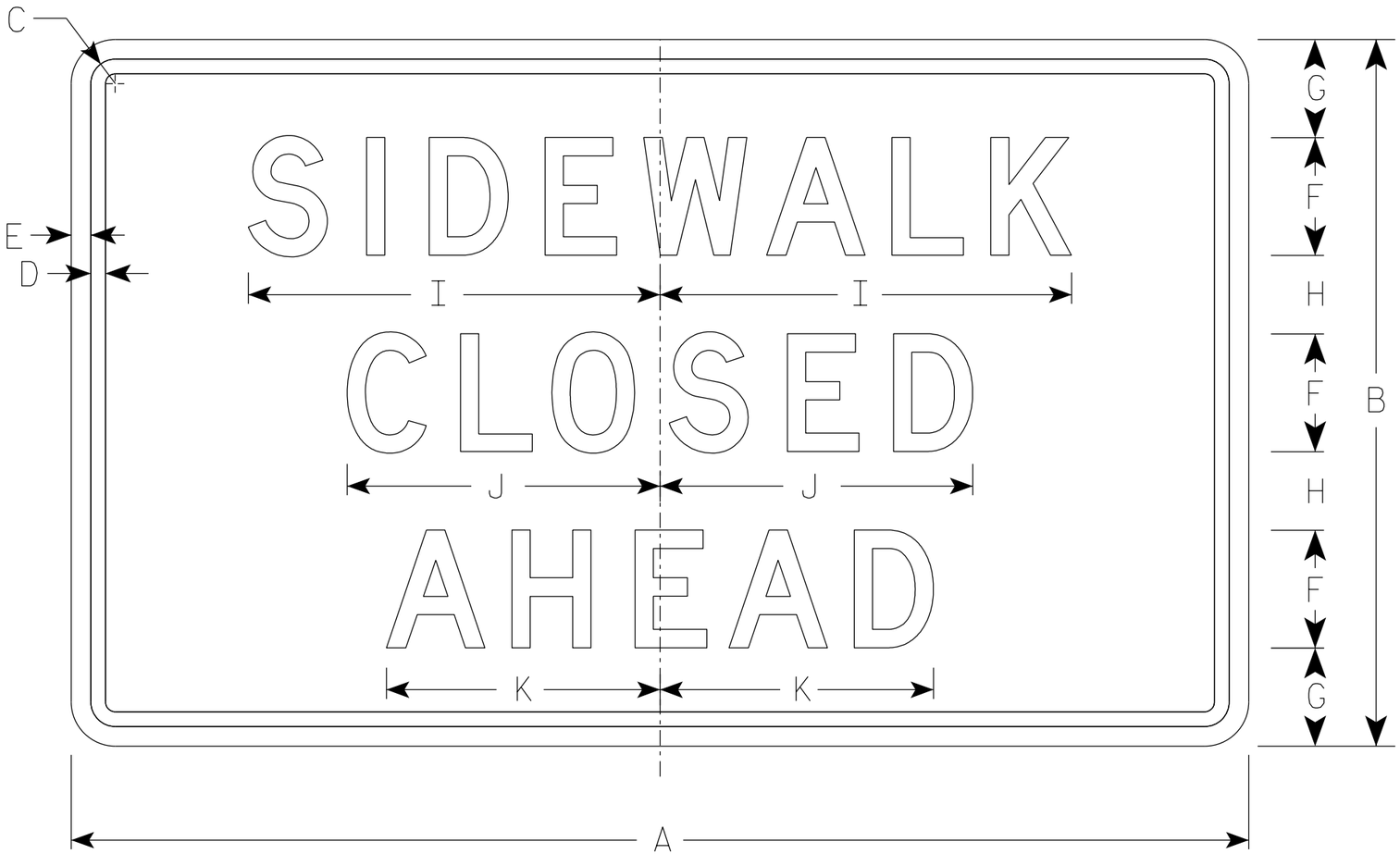
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/11/16 PLATE 246 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																											

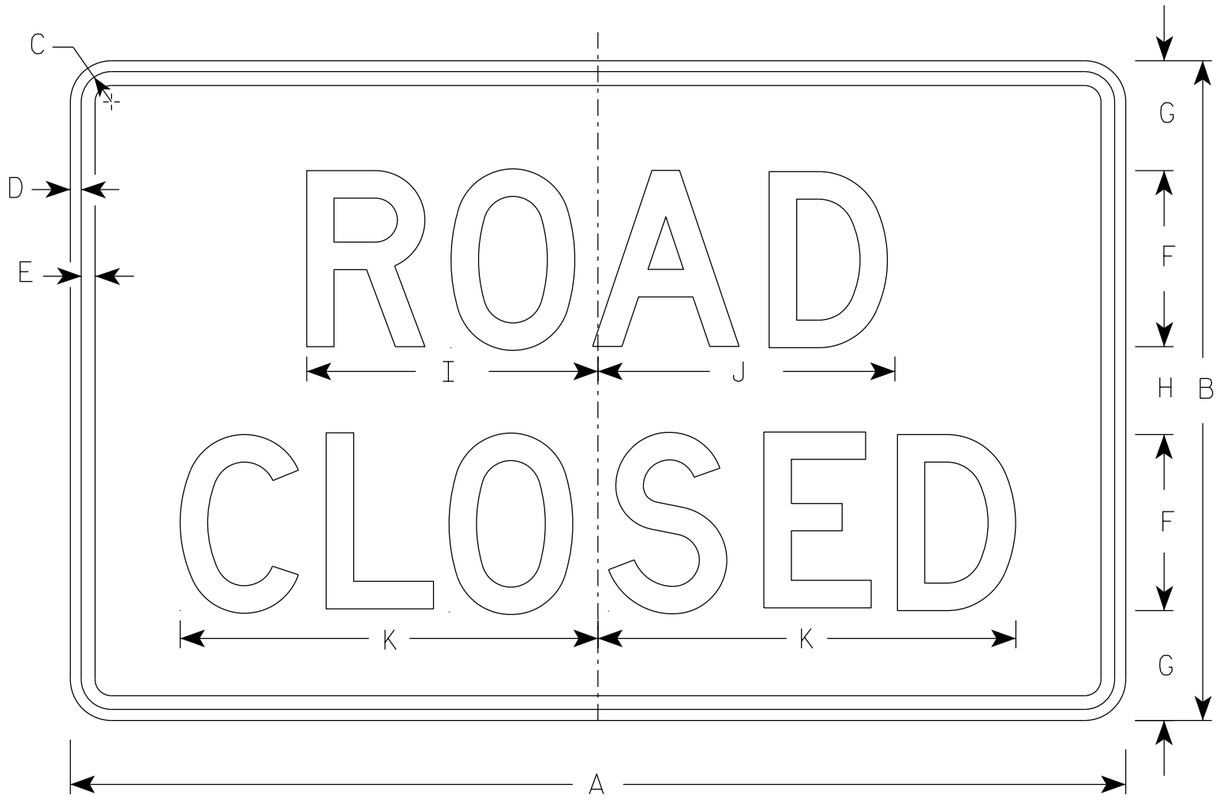
STANDARD SIGN
R9-9A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/31/2020 PLATE NO. R9-9A.1

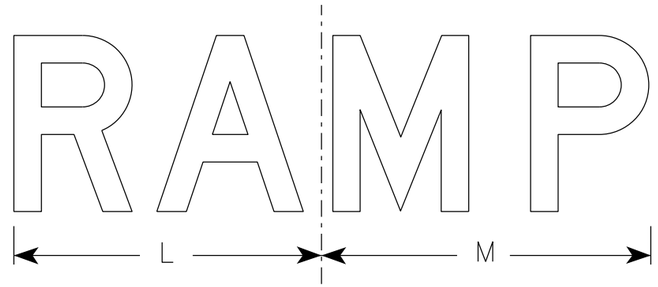
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 247 | E



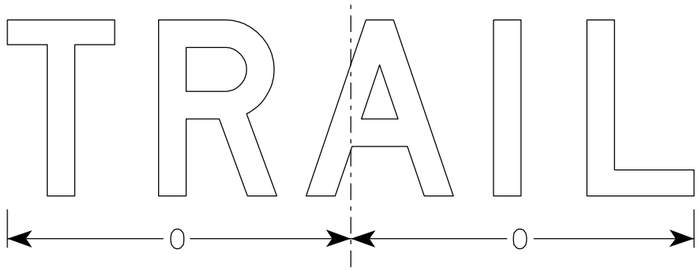
R11-2

NOTES

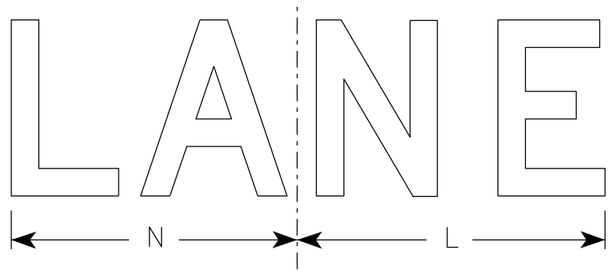
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the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

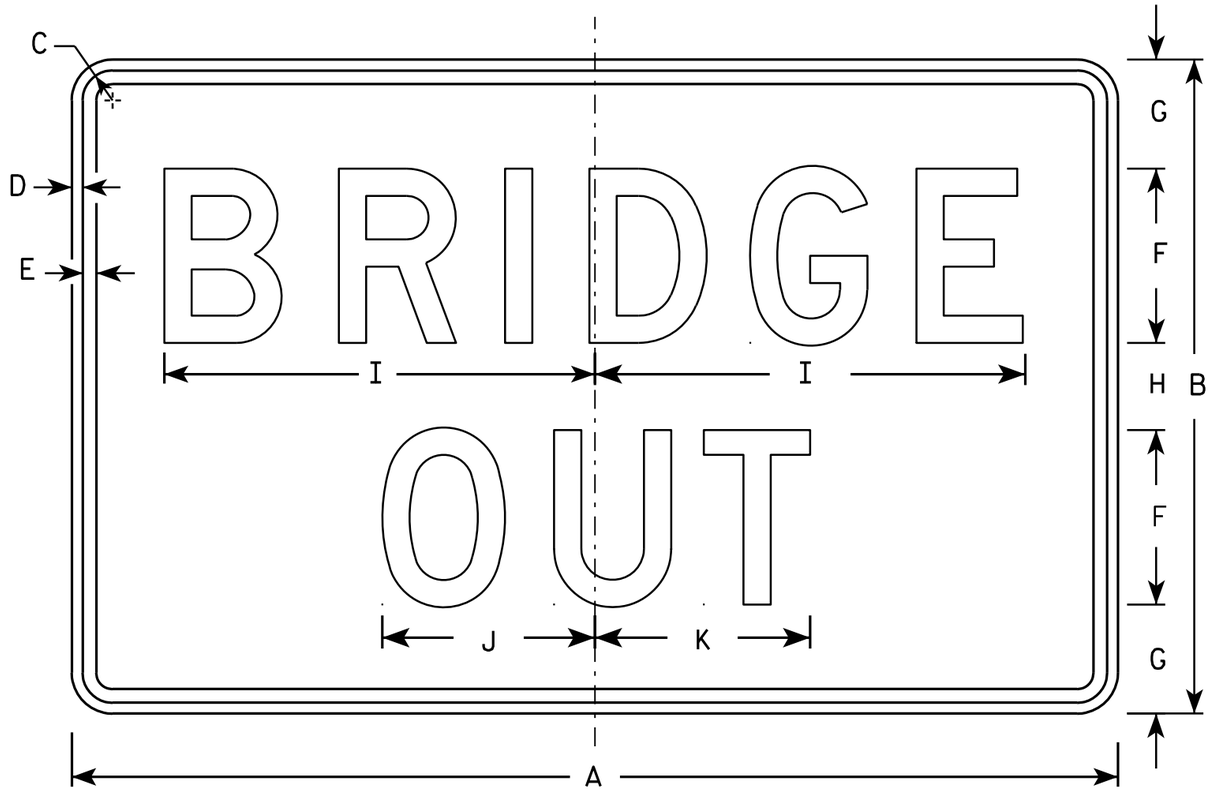
APPROVED Matthew R Rauch
for State Traffic Engineer

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



R11-2B

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.

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	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

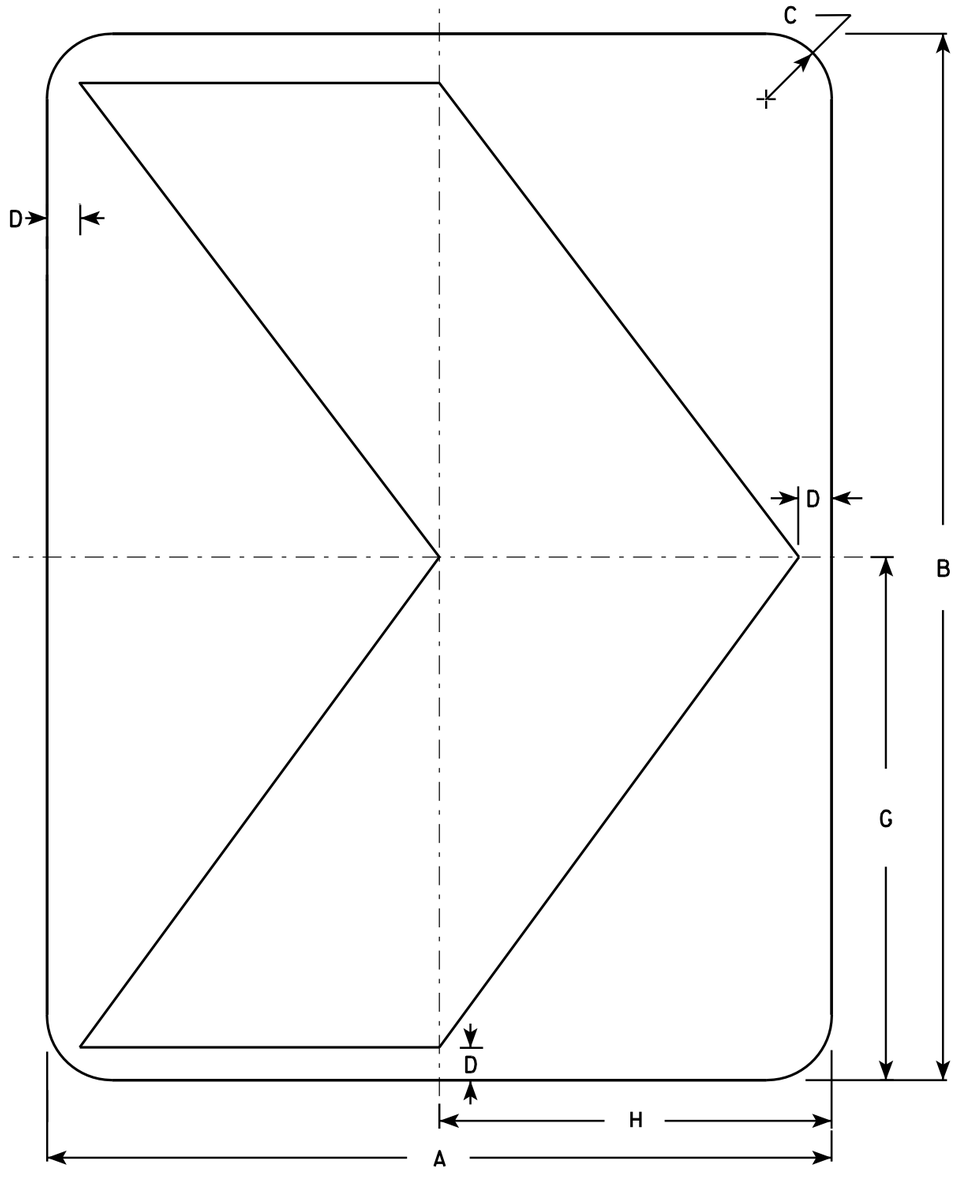
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2B.2

PROJECT NO:

SHEET NO: 249 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.

W1-8

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 ½	½			9	6																			1.5
2S	18	24	1 ½	¾			12	9																			3.0
2M	18	24	1 ½	¾			12	9																			3.0
3	24	30	1 ½	1			15	12																			5.0
4	30	36	1 ⅞	1 ¼			18	15																			7.5
5	36	48	2 ¼	1 ½			24	18																			12.0

STANDARD SIGN
W1-8

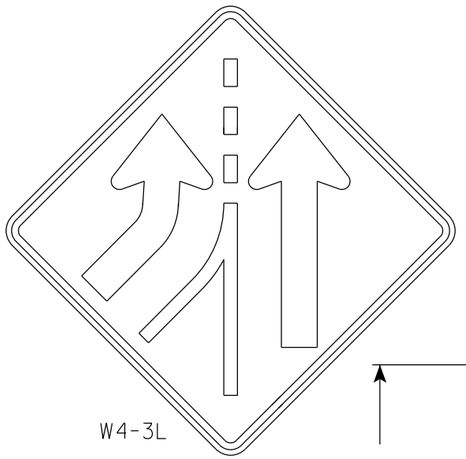
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

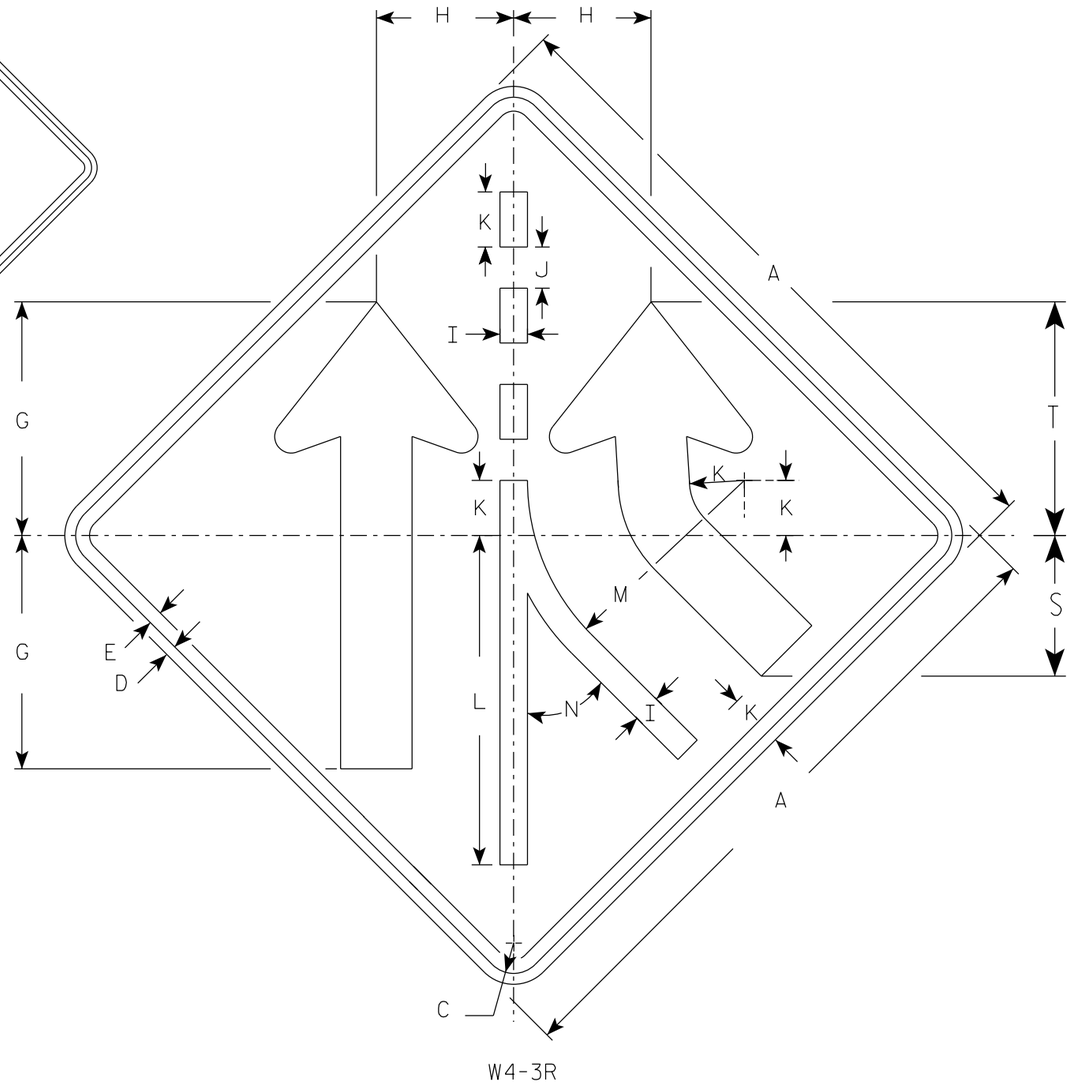
DATE 6/7/10 PLATE NO. W1-8.6

PROJECT NO:

SHEET NO: 250 E



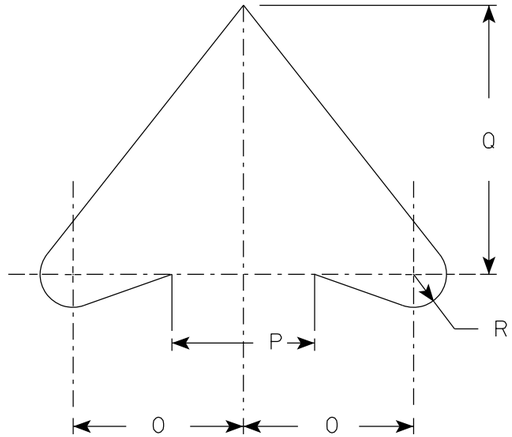
W4-3L



W4-3R

NOTES

1. Sign is Type II - Type F Reflective
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.
4. W4-3 L is the same as W4-3 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	30		1 3/8	1/2	5/8		10 5/8	6 1/4	1 1/4	1 7/8	2 1/2	15	9 7/8	45°	3 7/8	3 1/4	6 1/8	3/4	6 3/8	10 5/8							6.25
2S	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
2M	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
3	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
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
W4-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/06/2021 PLATE NO. W4-3.9

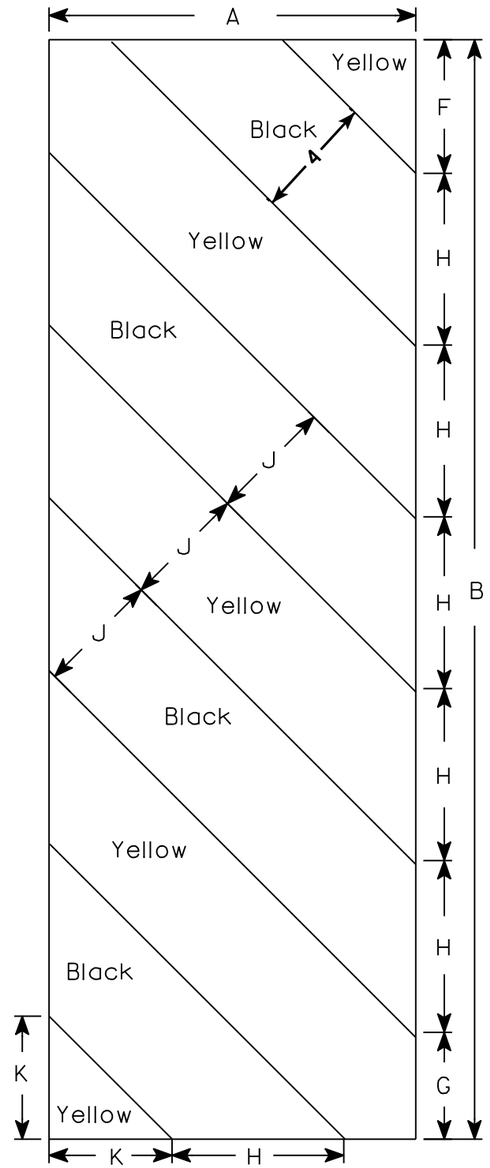
PROJECT NO:

SHEET NO: E

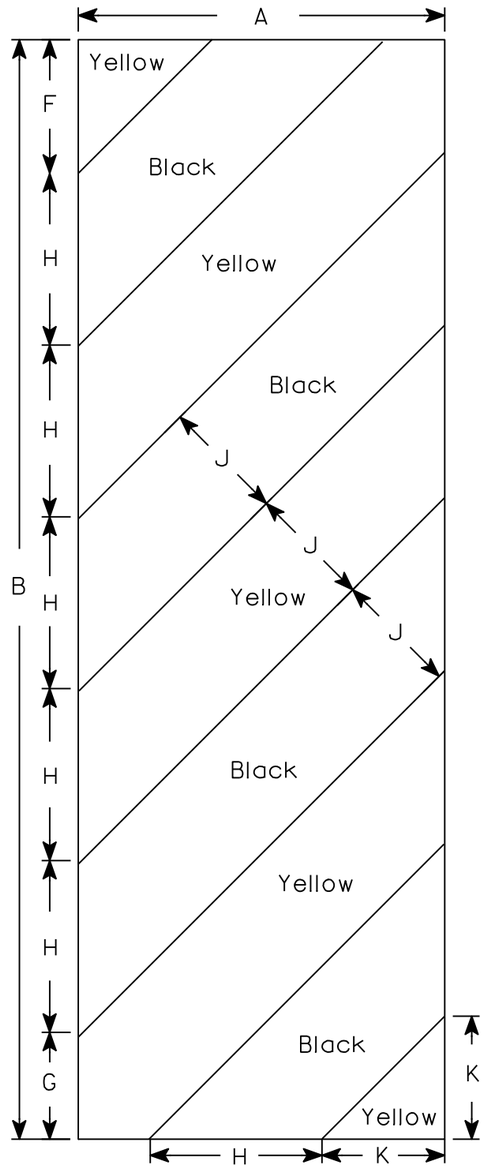
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W43.dgn

PLOT DATE : 06-DEC 2021 10:48 PLOT BY : dotc4c

$$.....plotscale.....$$ WISDOT/CADDS SHEET 42



W5-52L



W5-52R

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.
4. Alternate colors of stripes as shown.

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	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

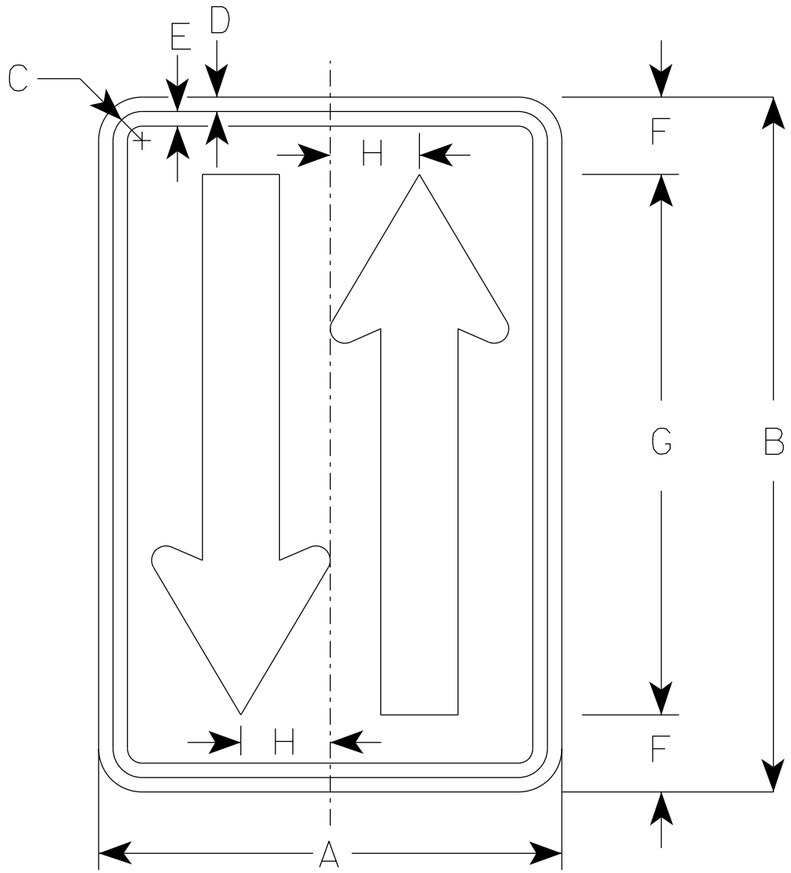
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

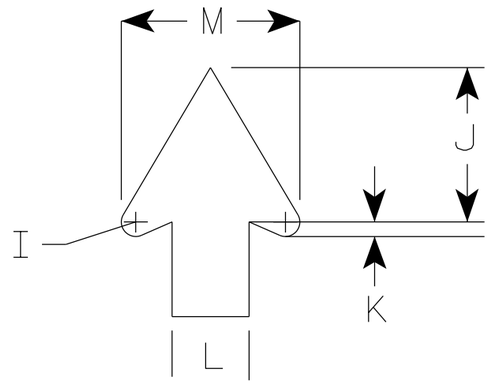
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 252 | E



W6-4

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black



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	12	18	1 1/8	3/8	3/8	2	14	2 1/4	3/8	4	1/8	2	4 5/8														1.5
2M	12	18	1 1/8	3/8	3/8	2	14	2 1/4	3/8	4	1/8	2	4 5/8														1.5
3																											
4																											
5																											

STANDARD SIGN
W6-4

WISCONSIN DEPT OF TRANSPORTATION

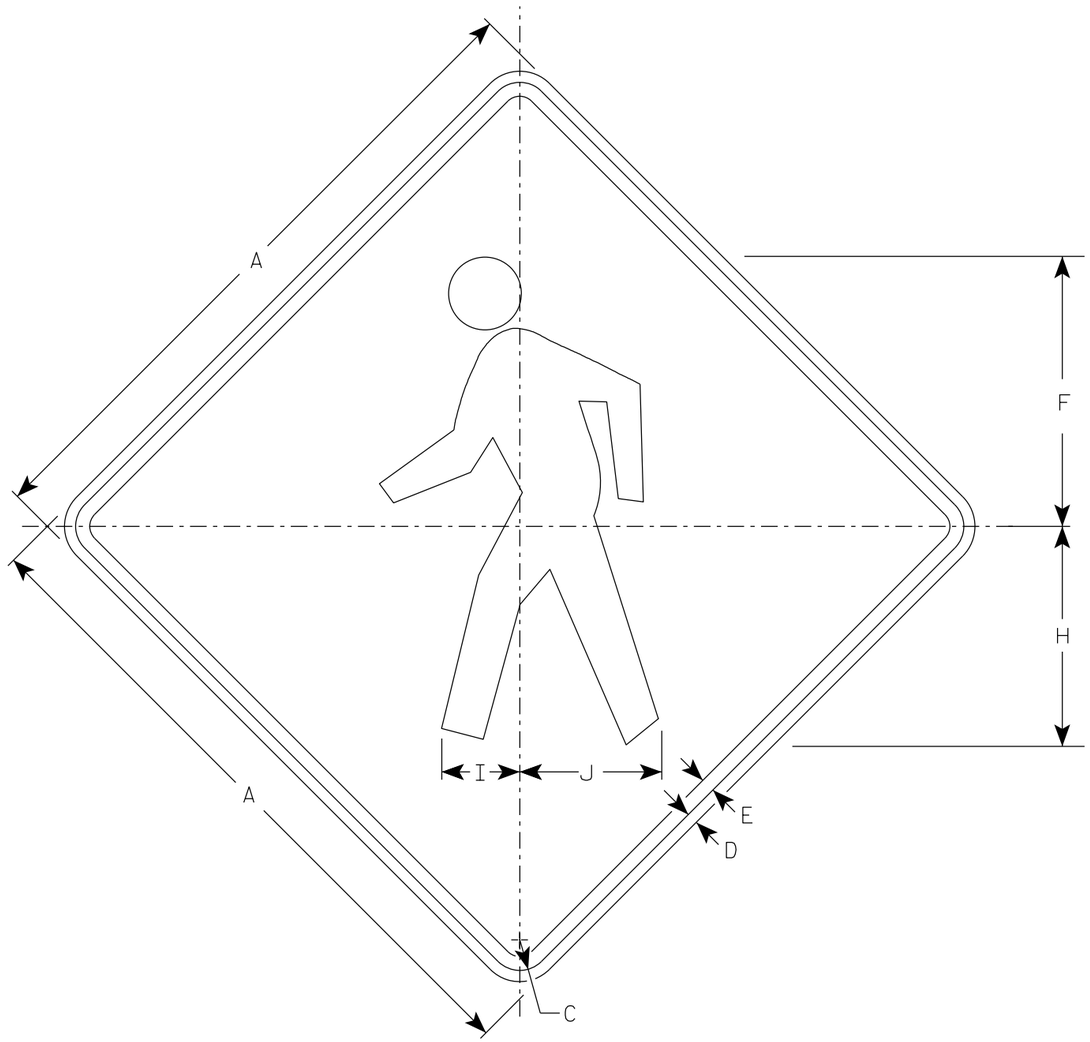
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2021 PLATE NO. W6-4.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

NOTES

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



W11-2

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	24		1 1/8	3/8	1/2	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

STANDARD SIGN

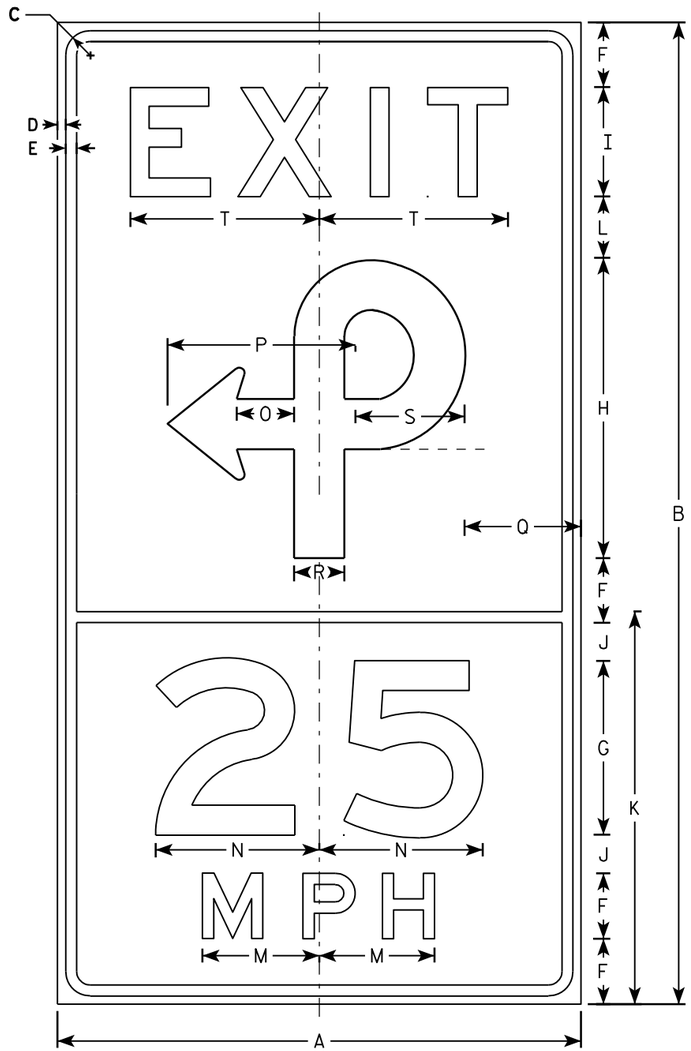
W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/8/2020 PLATE NO. W11-2.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 254	E



W13-2B

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 - 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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	90	2 1/4	3/4	1	6	16	27 1/2	10	3 1/2	36	5 1/2	10 3/4	15	5 1/4	17 1/4	10 3/4	4 5/8	10	17 3/8							30
2M	48	90	2 1/4	3/4	1	6	16	27 1/2	10	3 1/2	36	5 1/2	10 3/4	15	5 1/4	17 1/4	10 3/4	4 5/8	10	17 3/8							30
3																											
4																											
5																											

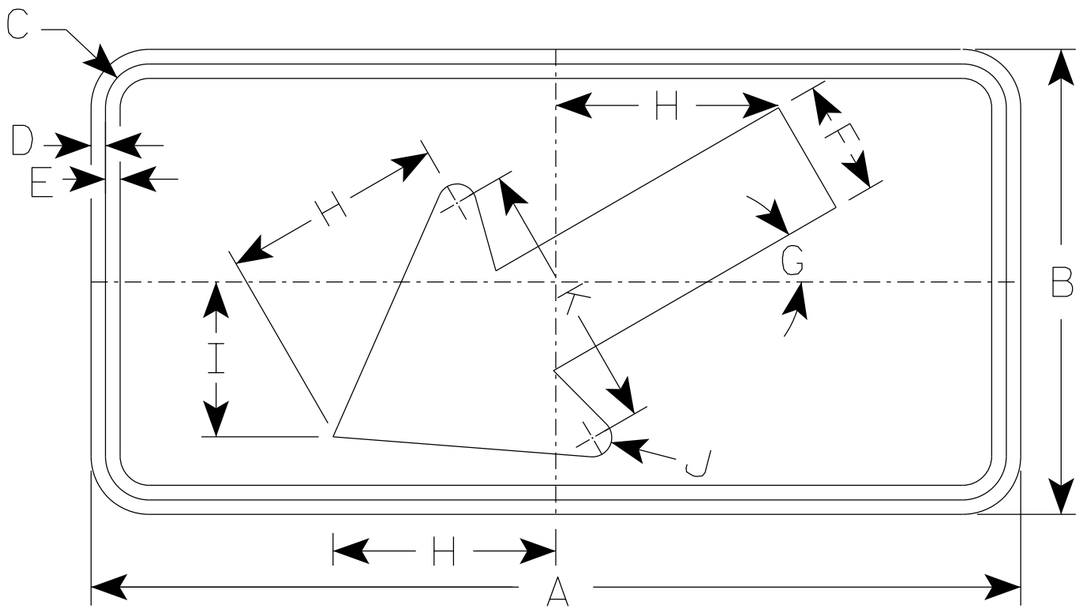
STANDARD SIGN
W13-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-2B.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 255	E



W16-7L

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. W16-7R is the same as W16-7L except the arrow is reversed along the vertical centerline.

* For 36" x 36" Warning Signs, use 30" x 18" W16-7L signs.
* For 48" x 48" Warning Signs, use 48" x 24" W16-7L signs.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	3	30°	5 3/4	4	1/2	7																2.0
* 2M	30	18	1 1/8	3/8	1/2	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
* 3	30	18	1 1/8	3/8	1/2	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
* 4	48	24	1 3/8	1/2	5/8	6	30°	11 1/2	8	1	14																8.0
5																											

STANDARD SIGN
W16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

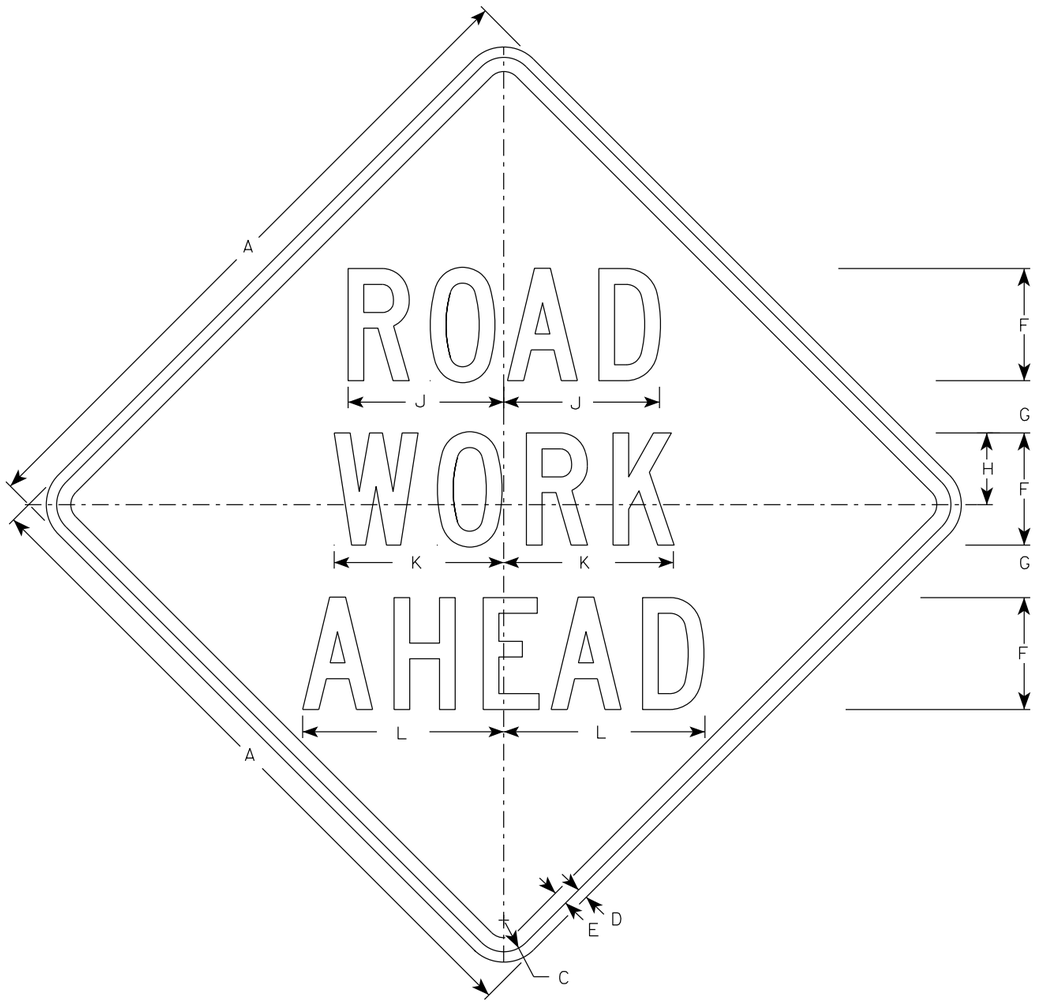
DATE 3/16/2021 PLATE NO. W16-7.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 256 | E

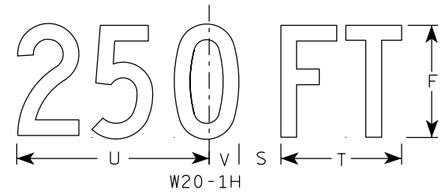
7

NOTES

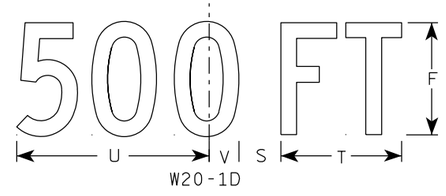
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1A

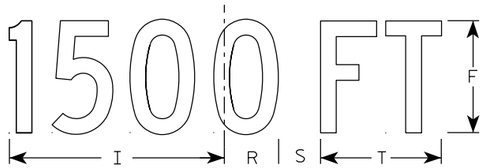


W20-1H

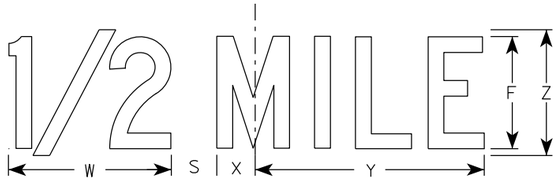


W20-1D

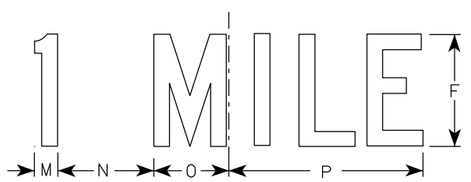
W20-1C



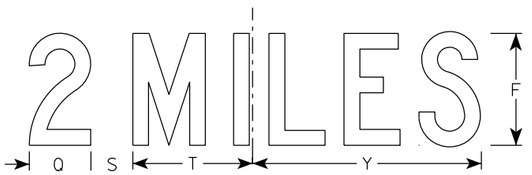
W20-1B



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:

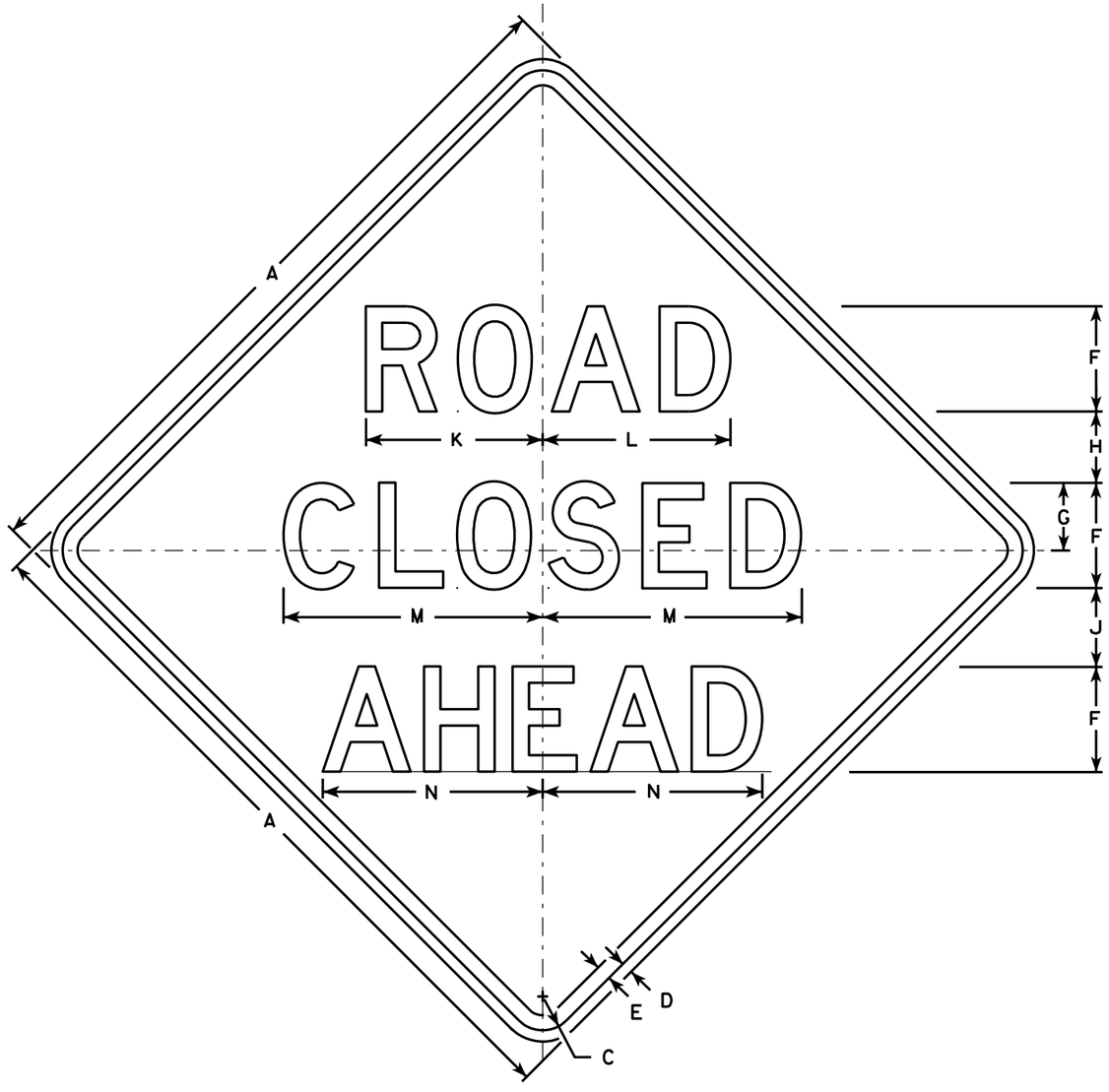
SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 25-MARCH-2020 PLOT BY : dotc4c

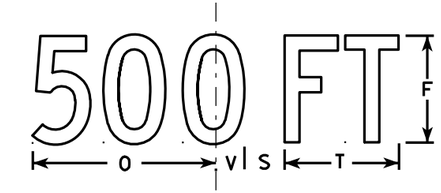
WISDOT/CADDS SHEET 42

7

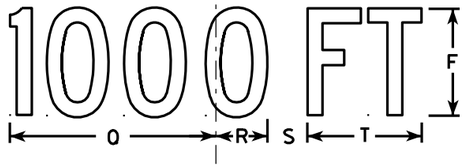
7



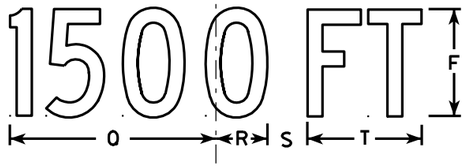
W20-3A



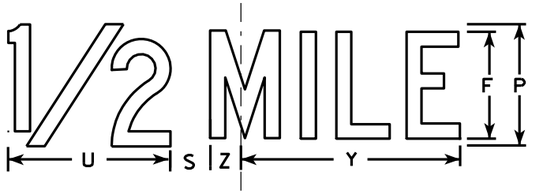
W20-3D



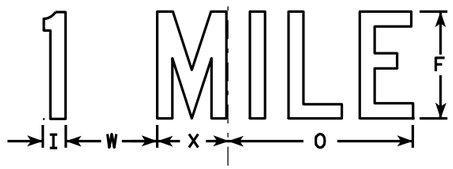
W20-3C



W20-3B



W20-3G



W20-3F

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. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

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

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 258 | E

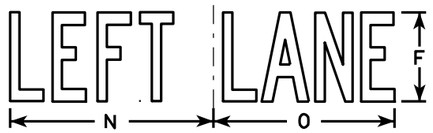
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000

WISDOT/CADDS SHEET 42

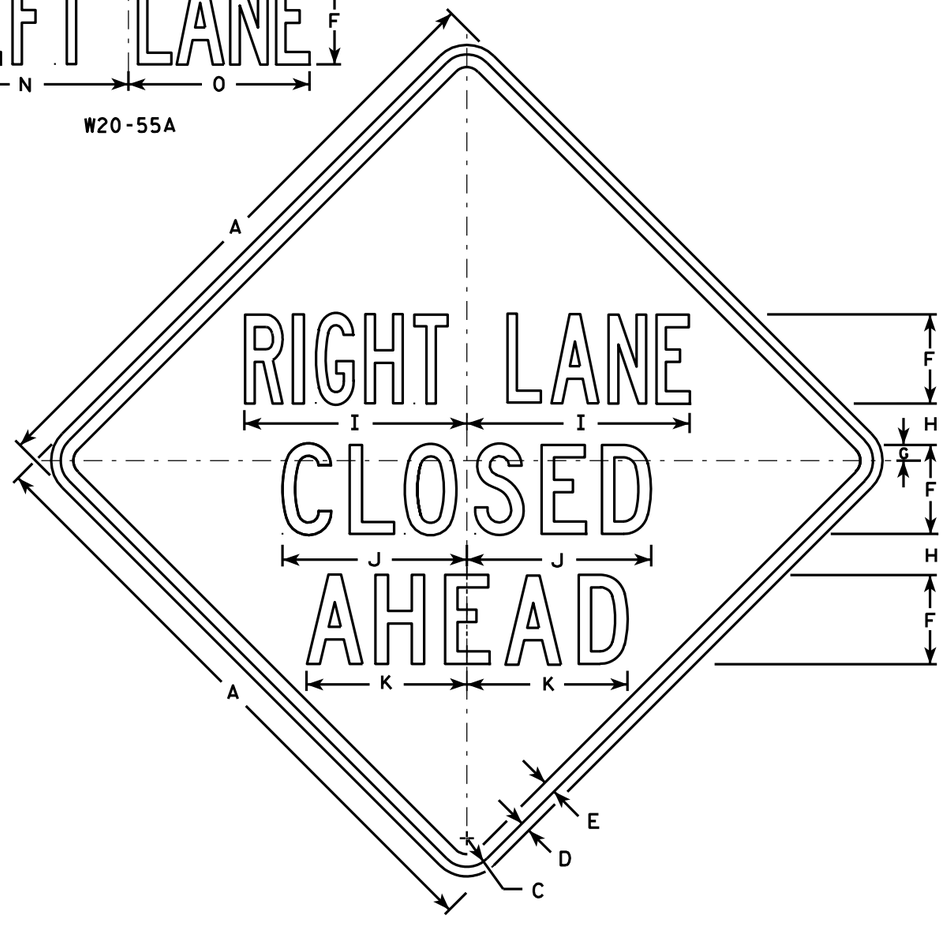
7

7

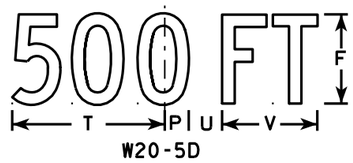
W20-56A



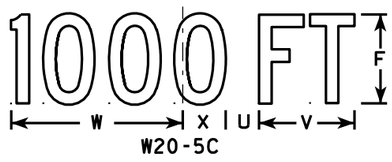
W20-55A



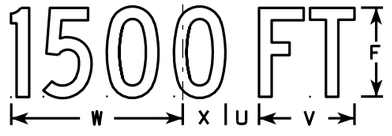
W20-5A



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

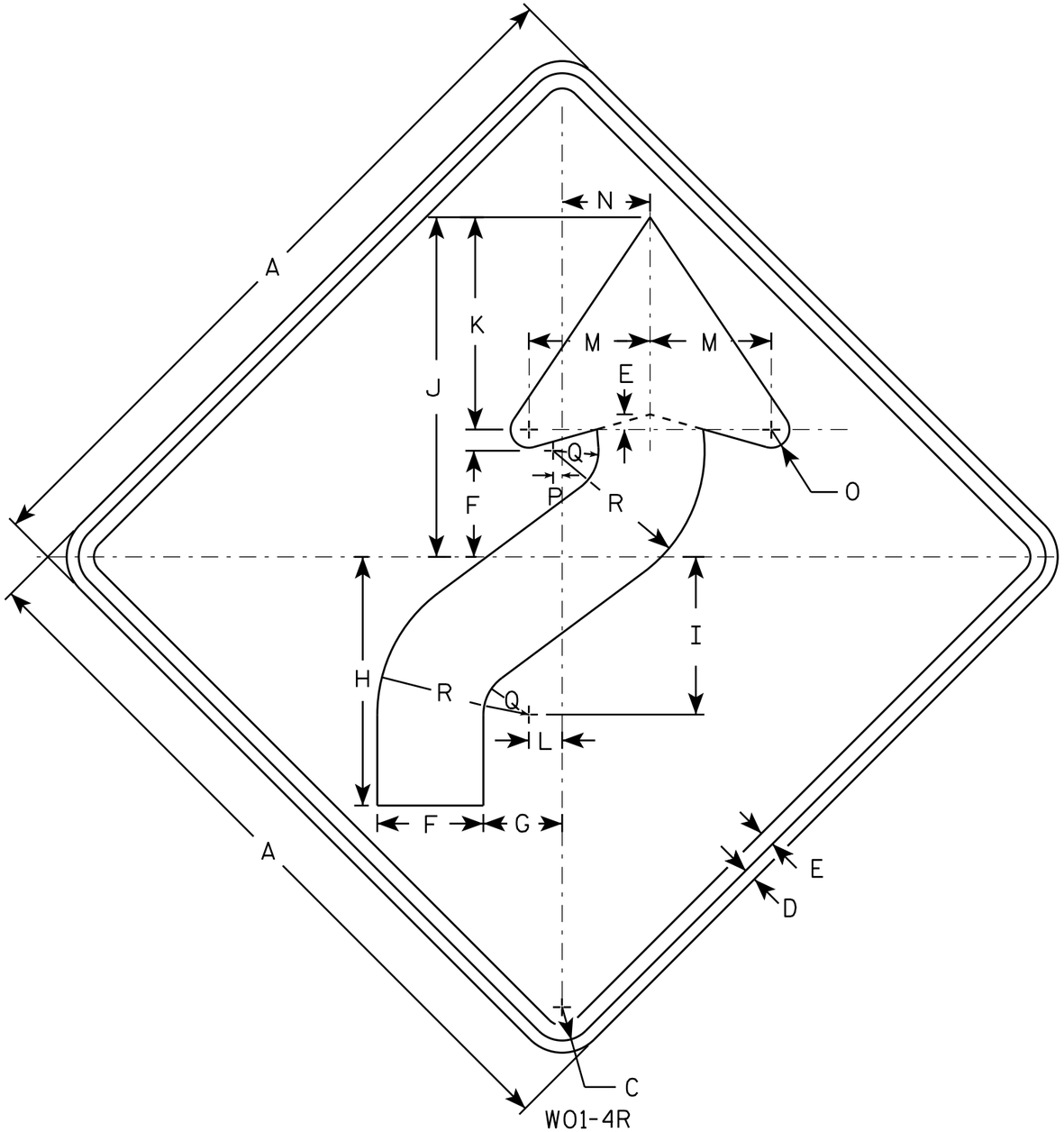
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 259 | 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



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

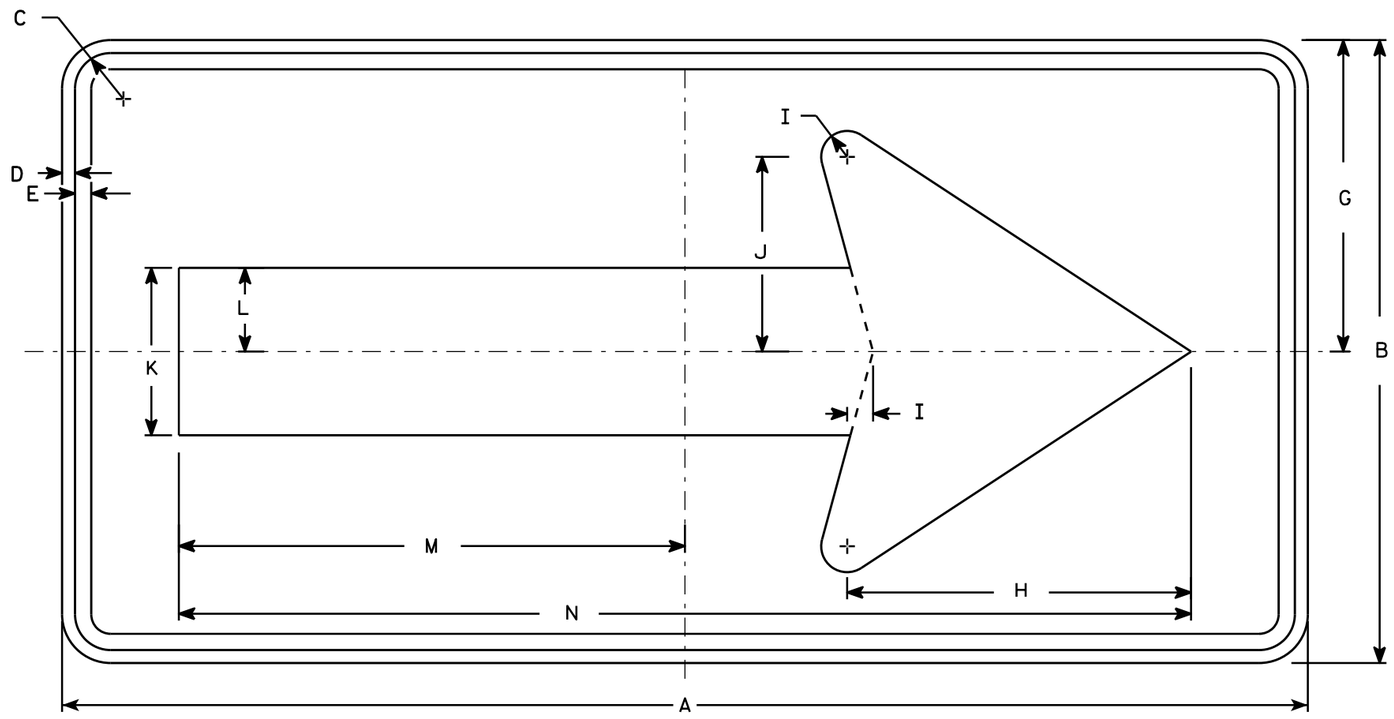
WISCONSIN DEPT OF TRANSPORTATION

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

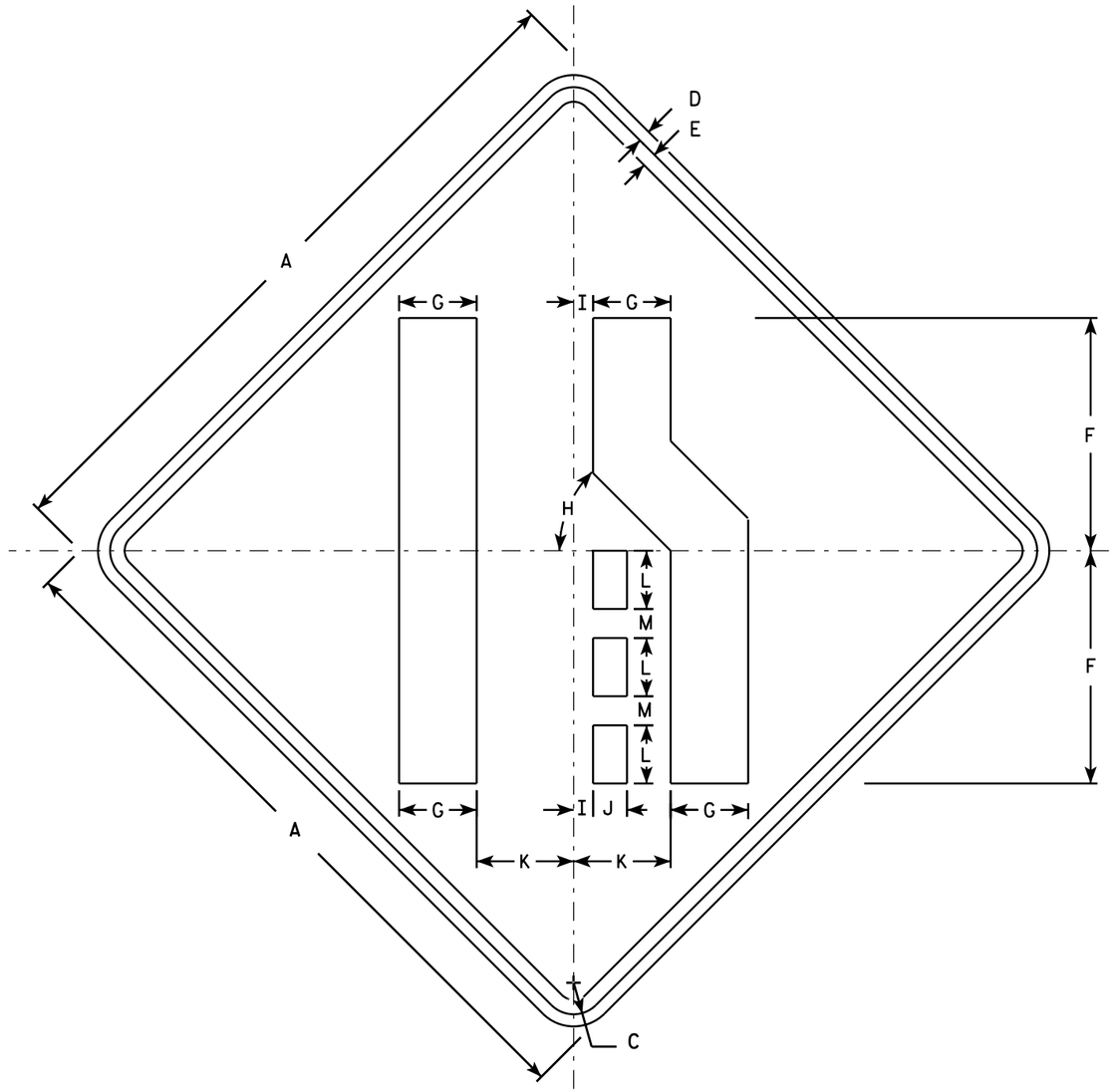
WISCONSIN DEPT OF TRANSPORTATION

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

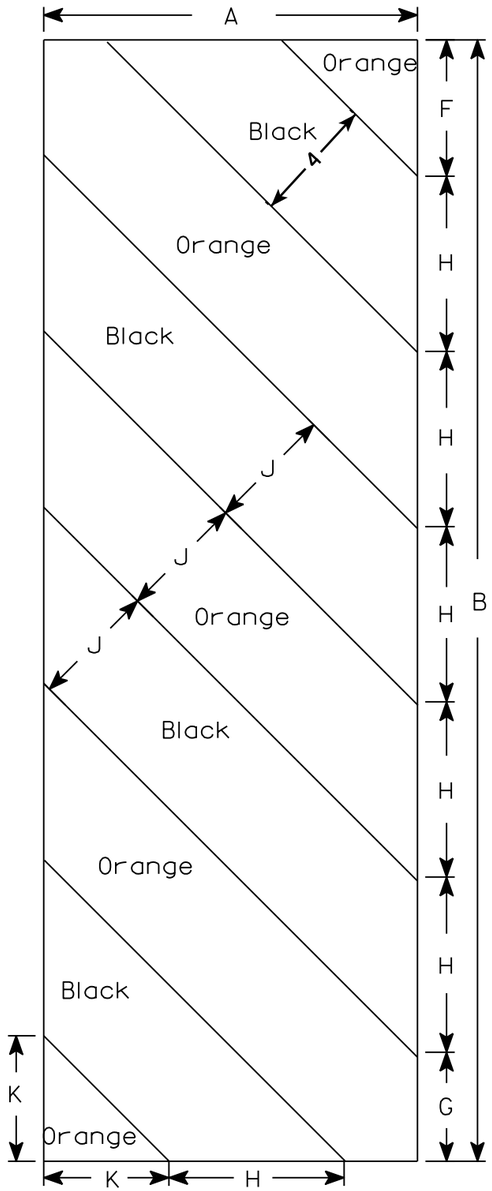
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

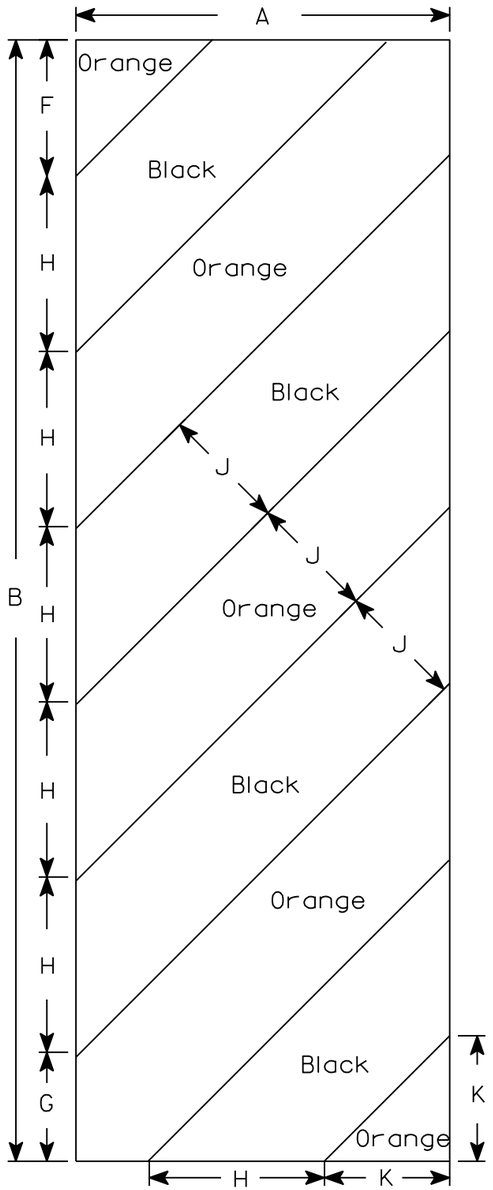
DATE 11/20/13 PLATE 262 W04-2.1

PROJECT NO: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W042.DGN PLOT DATE : 20-NOV-2013 11:43 PLOT BY : mscsja



W05-52L



W05-52R

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. Alternate colors of stripes as shown.

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	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

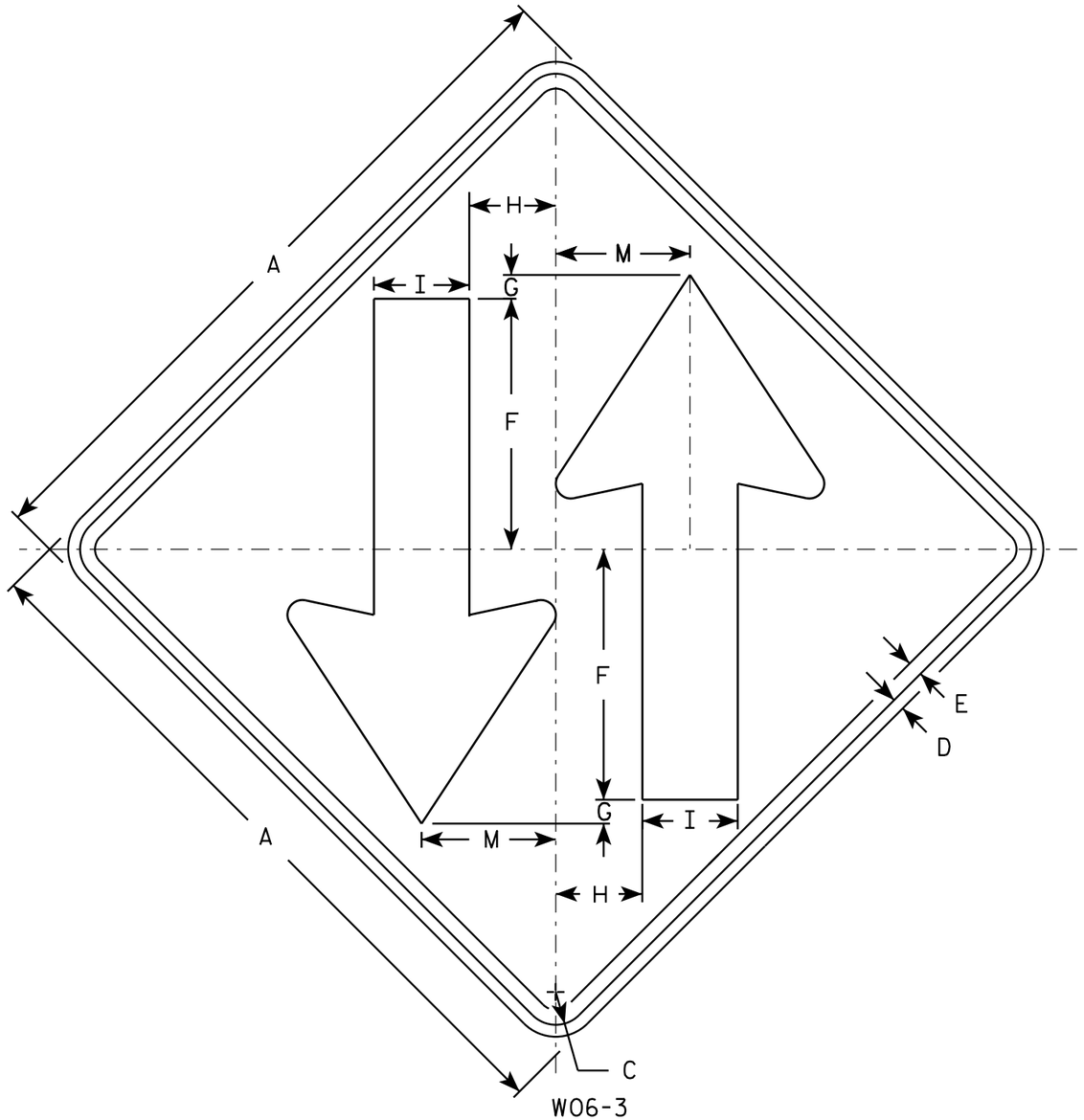
STANDARD SIGN
W05-52L & W05-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

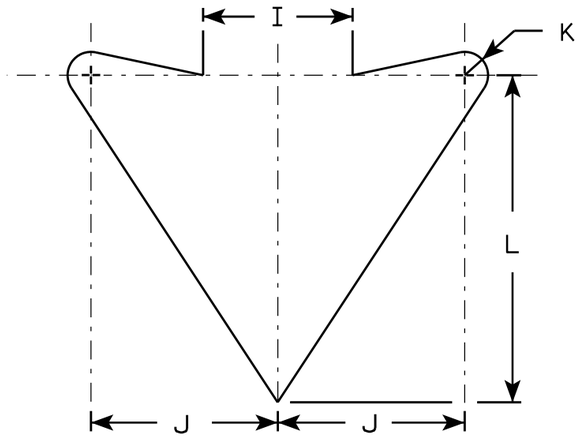
DATE 11/20/13 PLATE W05-52.1

PROJECT NO:	HWY:	COUNTY:		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

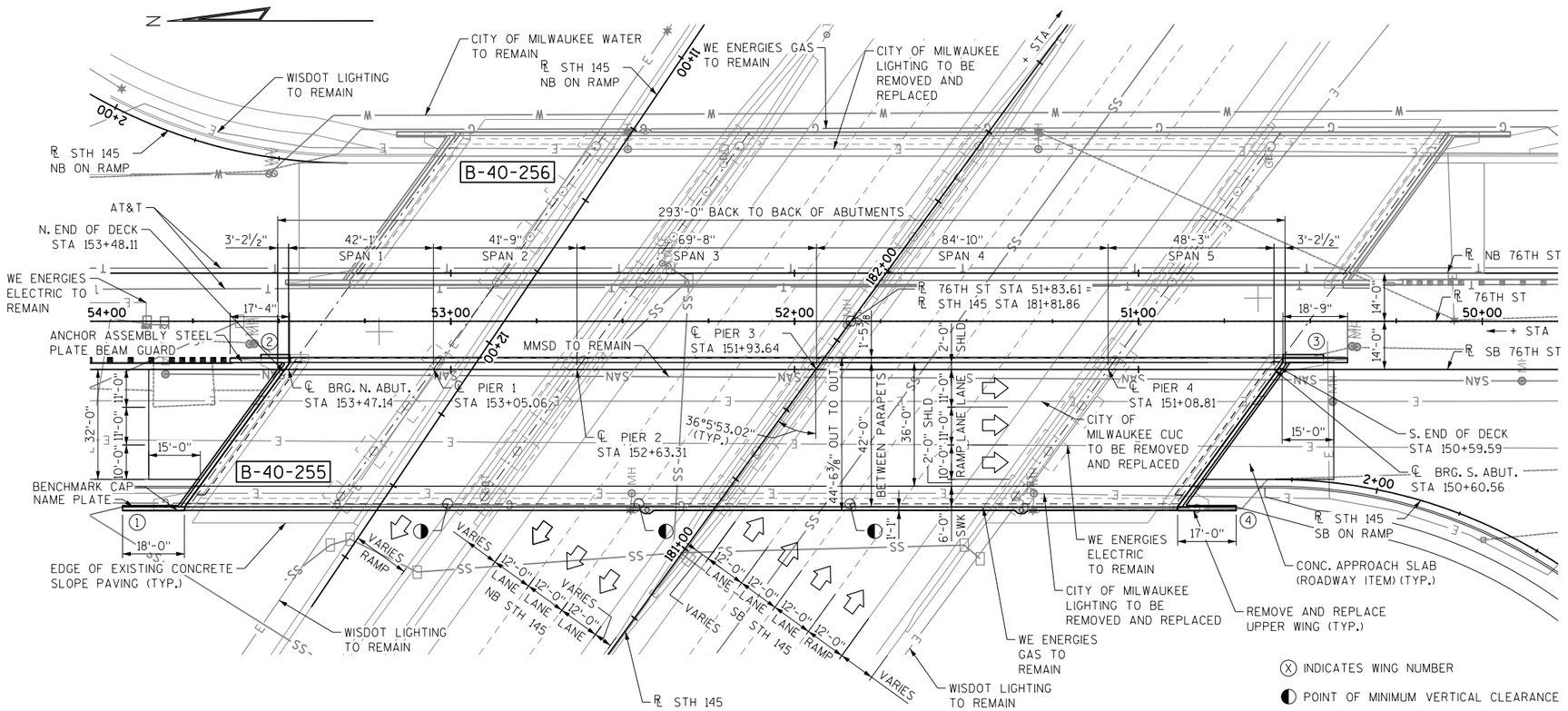
STANDARD SIGN
W06-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

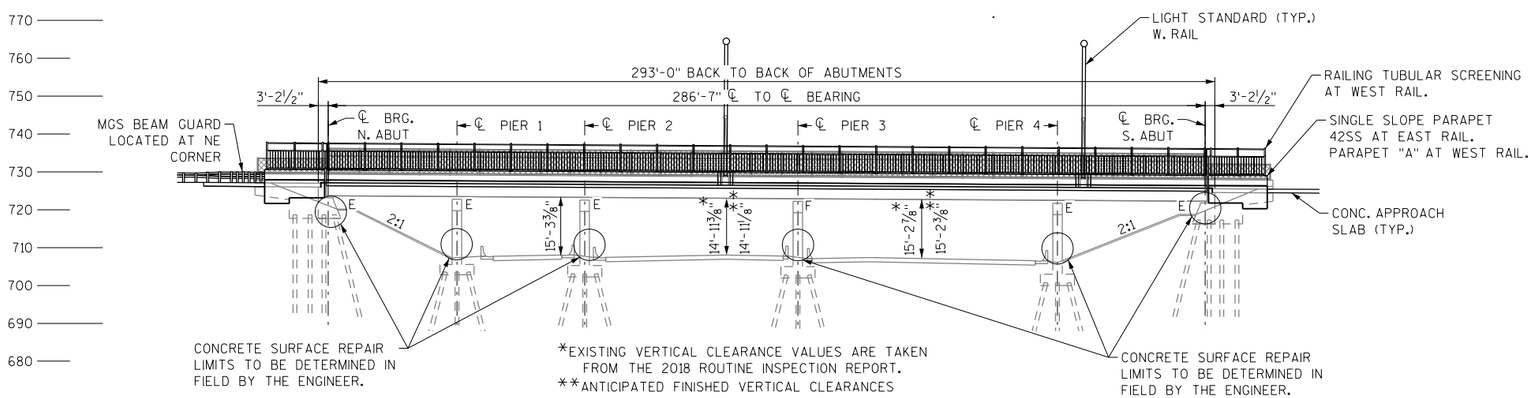
DATE 11/20/13 PLATE 264 W06-3.1

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



PLAN

(5 SPAN - STEEL GIRDERS)
DECK REPLACEMENT, POLYMER OVERLAY, AND REPAINTING



ELEVATION

LOOKING SOUTHEAST ALONG ℄ STH 145

STATE PROJECT NUMBER

1360-13-70

DESIGN DATA

LIVE LOAD:
DESIGN LOADING HS20
INVENTORY RATING HS17
OPERATING RATING HS29
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV) = 250 KIPS
DESIGN ACCOUNTS FOR FUTURE WEARING SURFACE = 20 PSF

MATERIAL PROPERTIES:
CONCRETE MASONRY:
SUBSTRUCTURE ..... f'c = 3,500 psi
SUPERSTRUCTURE ..... f'c = 4,000 psi
BAR STEEL REINFORCEMENT ..... fy = 60,000 psi

EXISTING STRUCTURE

THE EXISTING BRIDGE (B-40-255) IS A 293'-0" LONG, 44'-8" WIDE 5 SPAN STEEL GIRDER BRIDGE SUPPORTED ON REINFORCED CONCRETE PIERS AND ABUTMENTS. THE STRUCTURE BEGINS AT STA 150+58.17 AND ENDS AT STA 153+49.53. PLANS OF THE EXISTING BRIDGE ARE AVAILABLE FOR REVIEW AT WISDOT SE REGION OFFICE, 141 NW BARSTOW ST. WAUKESHA, WI OR THROUGH THE WISDOT STRUCTURES WEBSITE.

BENCHMARKS

NAME	DESCRIPTION	ELEV	STA STH 145	OFFSET
523	CP F1000SPK BERNSTEN FENO WITH ALUMINUM CAP	719.07	185+21.65	404.59' RT
524	CP F1000SPK BERNSTEN FENO WITH ALUMINUM CAP	726.09	178+51.36	432.63' LT

TRAFFIC DATA

STH 181 (76TH ST)
AADT 2022 = 28,800
AADT 2042 = 31,600
DESIGN SPEED = 40 MPH.

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
AARON BONK, PE
(608) 261-0261

CONSULTANT:
WILLIAM J. ZIPPEL, PE, SE
ALFRED BENESCH & CO
1300 W CANAL ST, SUITE 150
MILWAUKEE, WI 53233
(414) 308-1321

WISCONSIN
WILLIAM J. ZIPPEL
38868-006
MILWAUKEE, WI
5/30/2023
PROFESSIONAL ENGINEER

LIST OF DRAWINGS:

1. GENERAL PLAN & ELEVATION
2. TYPICAL SECTIONS, QUANTITIES & GENERAL NOTES
3. STAGING PLAN & TYP DETAILS
4. SUBSTRUCTURE REMOVALS
5. NORTH ABUTMENT MODIFICATIONS
6. NORTH ABUTMENT WINGWALL MODIFICATIONS
7. SOUTH ABUTMENT MODIFICATIONS
8. SOUTH ABUTMENT WINGWALL MODIFICATIONS
9. BEARING DETAILS
10. DECK ELEVATIONS
11. SUPERSTRUCTURE REINFORCEMENT
12. SUPERSTRUCTURE DETAILS
13. SINGLE SLOPE PARAPET 42SS
14. VERTICAL FACE PARAPET "A"
15. TUBULAR STEEL RAILING SCREENING
16. STRIP SEAL EXPANSION JOINT
17. COVER PLATE DETAILS
18. LIGHT SUPPORT DETAILS
19. CONDUIT DETAILS

NO.	DATE	REVISION	BY

benesch
Alfred Benesch & Company
1300 West Canal Street, Suite 150
Milwaukee, Wisconsin 53233
414-308-1310 Job No. 20288.00

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 05/31/23
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-255

STH 181 SB (N 76TH ST) OVER STH 145

COUNTY MILWAUKEE	~~TOWN~~/CITY/~~VILLAGE~~ MILWAUKEE
DESIGN SPEC. REHABILITATION N/A	
DESIGNED BY JAP	DESIGN CK'D. WJZ
DRAWN BY JAP	PLANS CK'D. WJZ

GENERAL PLAN & ELEVATION

SHEET 1 OF 19

265

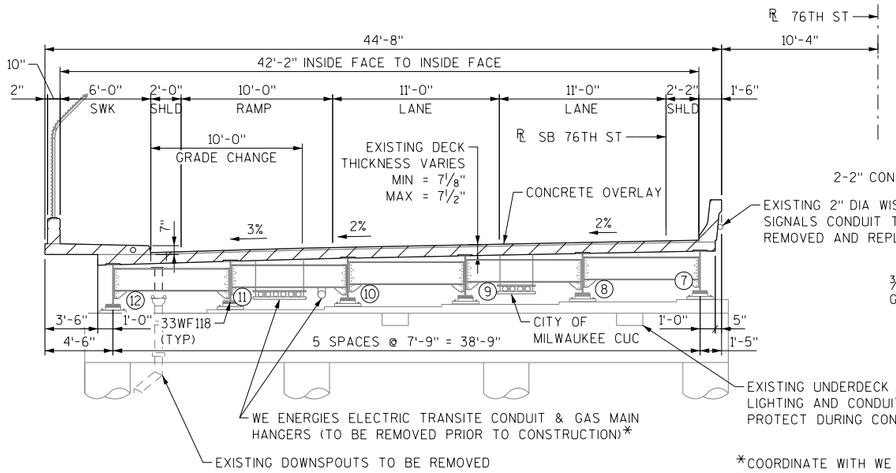
FILE= B-40-255_10_GP&E.DGN
SCALE = 1:40

8

8

STATE PROJECT NUMBER

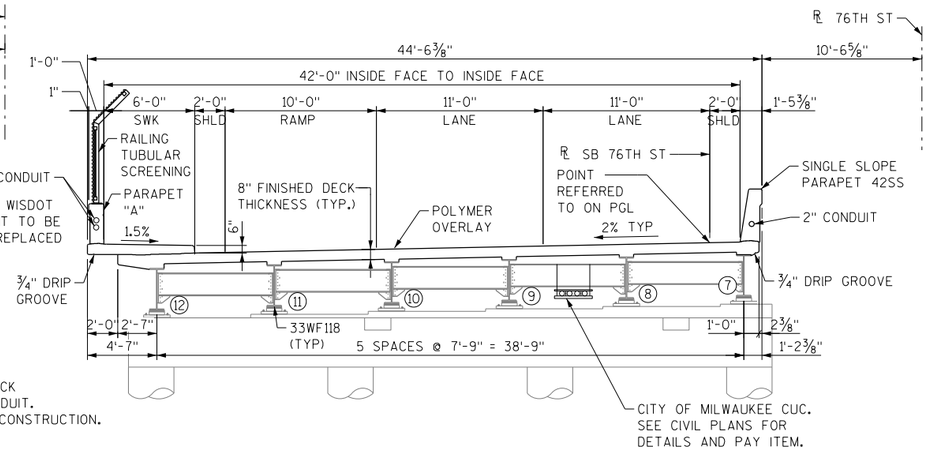
1360-13-70



EXISTING TYPICAL SECTION THRU STRUCTURE B-40-255

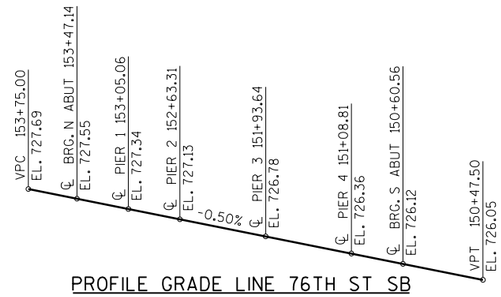
(LOOKING NORTH)

*COORDINATE WITH WE ENERGIES FOR REMOVAL OF REMAINING PORTIONS THROUGH BACKWALLS.



FINISHED TYPICAL SECTION THRU STRUCTURE B-40-255

(LOOKING NORTH)



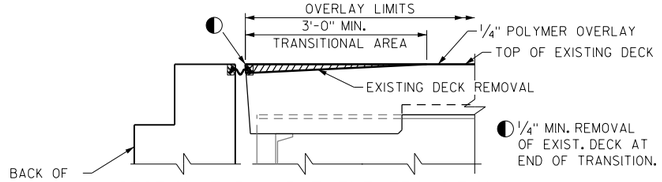
PROFILE GRADE LINE 76TH ST SB

GENERAL NOTES

1. DRAWINGS SHALL NOT BE SCALED.
2. EXISTING STRUCTURE DIMENSIONS ARE BASED ON THE ORIGINAL STRUCTURE PLANS.
3. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
4. THE TOP LAYER OF BAR STEEL REINFORCEMENT IN THE DECK SHALL BE PLACED WITH 2½" OF CONCRETE COVER.
5. THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
6. PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND TOP OF THE PARAPETS.
7. BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.
8. ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS NOTED OTHERWISE.
9. ALL STATIONS AND ELEVATIONS ARE IN FEET.
10. THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE DECK REPLACEMENT DETAILS.
11. THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.
12. UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.
13. CONCRETE INSERTS TO BE FURNISHED BY THE UTILITY COMPANY AND PLACED BY THE CONTRACTOR. COST OF PLACING INSERTS SHALL BE INCLUDED IN THE BID PRICE FOR CONCRETE MASONRY.
14. THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR, 1964.
15. EXISTING FLOOR DRAIN REMOVAL IS INCLUDED IN THE COST OF BID ITEM "REMOVING OLD STRUCTURE B-40-255".
16. VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.
17. THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-40-255" SHALL BE THE EXISTING GROUNDLINE.
18. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
19. APPLY PROTECTIVE SURFACE TREATMENT TO THE DECK AND SIDEWALK ON THE BRIDGE.
20. ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT UNLESS SHOWN OR NOTED OTHERWISE.
21. AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.
22. THE COLOR OF THE FINISH EPOXY TOP COAT FOR THE GIRDERS AND CONNECTING STRUCTURAL STEEL SHALL BE BLUE (AMS COLOR NO. 25240).
23. CLEAN AND PAINT BEARINGS AT PIERS. COST IS INCLUDED IN THE RELEVANT STRUCTURE PAINTING PAY ITEMS.
24. SHOT BLASTING, DECK SURFACE PREPARATIONS, AND TRANSITIONAL AREAS ARE INCLUDED IN THE BID ITEM "POLYMER OVERLAY".
25. REMOVE DRAIN PIPES AT PIERS 2 AND 4. INCLUDED IN BID ITEM 203.0200.

TOTAL ESTIMATE OF QUANTITIES

BID NO.	BID ITEMS	UNIT	N ABUT	PIER 1	PIER 2	PIER 3	PIER 4	S ABUT	SUPER	TOTAL
203.0220	REMOVING STRUCTURE B-40-255	EACH								1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-40-255	EACH								1
210.1500	BACKFILL STRUCTURE TYPE A	TON	104					100		204
502.0100	CONCRETE MASONRY BRIDGES	CY	25.5					25.1	451.0	502
502.3101	EXPANSION DEVICE	LF	52					52		104
502.3200	PROTECTIVE SURFACE TREATMENT	SY							1155	1155
502.3210	PIGMENTED SURFACE SEALER	SY							291	291
502.4204	ADHESIVE ANCHORS NO. 4 BAR	EACH	5					4		9
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	114					120		234
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	3402					3415	108409	115226
506.6000	BEARING ASSEMBLIES EXPANSION B-40-255	EACH	6					6		12
506.7050.S	REMOVING BEARINGS B-40-255	EACH	6					6		12
509.1500	CONCRETE SURFACE REPAIR	SF	10	12	16	48	52	30		168
509.5100.S	POLYMER OVERLAY	SY							1155	1155
513.4091	RAILING TUBULAR SCREENING	LF							324	324
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	14					14		28
517.0901.S	PREPARATION AND COATING OF TOP FLANGES B-40-255	EACH								1
517.1801.S	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-255	EACH								1
517.4501.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-40-255	EACH								1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH								1
531.8990	ANCHOR ASSEMBLIES POLES ON STRUCTURES	EACH							2	2
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	123					123		246
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1							1
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	47					47		94
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF							36	36
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF							939	939
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH							2	2
	NON-BID ITEMS									
	PREFORMED JOINT FILLER - ½", ¾"									
	NON-BITUMINOUS JOINT SEALER									
	NAME PLATE									



SECTION THRU ABUTMENT TRANSITIONAL AREA ON DECK AT EXPANSION JOINT

(REMOVAL AND OVERLAY THICKNESS NOT TO SCALE)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-255

DRAWN BY JAP | PLANS CK'D. WJZ

TYPICAL SECTIONS, QUANTITIES & GENERAL NOTES

SHEET 2 OF 19

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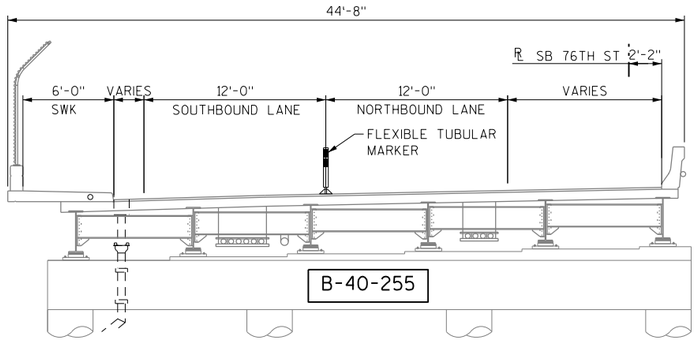
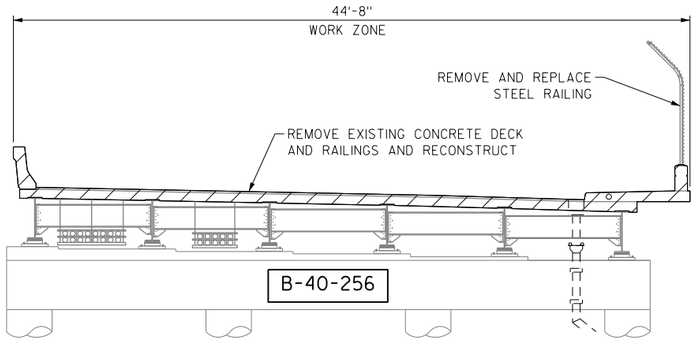
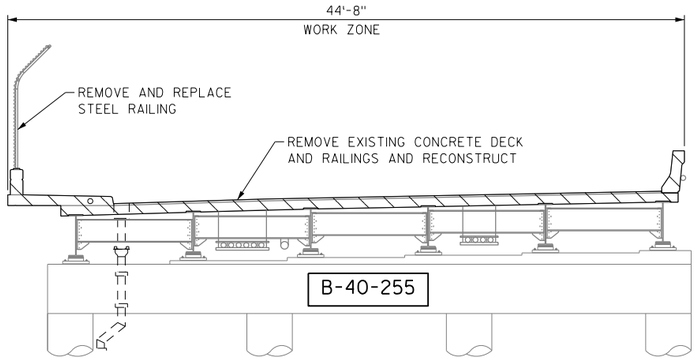
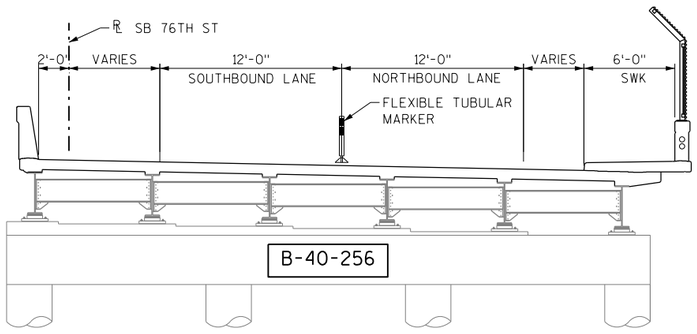
STATE PROJECT NUMBER
1360-13-70





STAGE 2: SECTION
(LOOKING NORTH)





STAGE 3: SECTION
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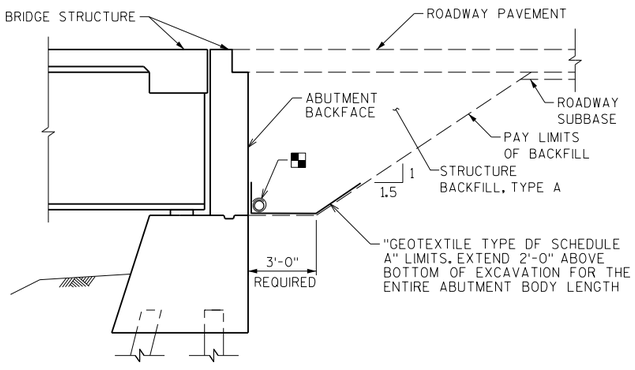


ABUTMENT BACKFILL SECTION

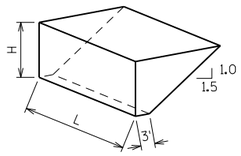
ABUTMENT BACKFILL NOTES

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-40-255" SHALL BE THE EXISTING GROUNDLINE

AT THE BACKFACE 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.

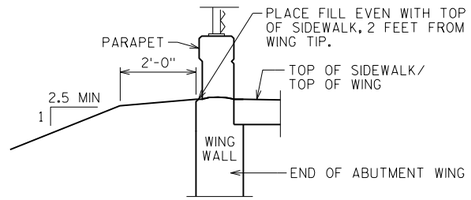
THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

▪ PIPE UNDERDRAIN WRAPPED (6 INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

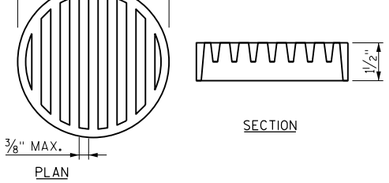


ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

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 FILL SECTION AT WING TIPS



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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-255

DRAWN BY JAP | PLANS CK'D. WJZ

STAGING PLAN & TYP DETAILS

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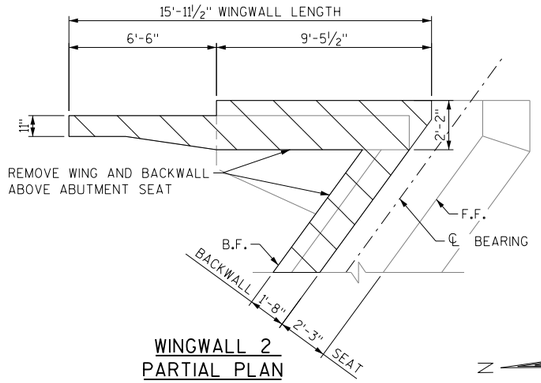
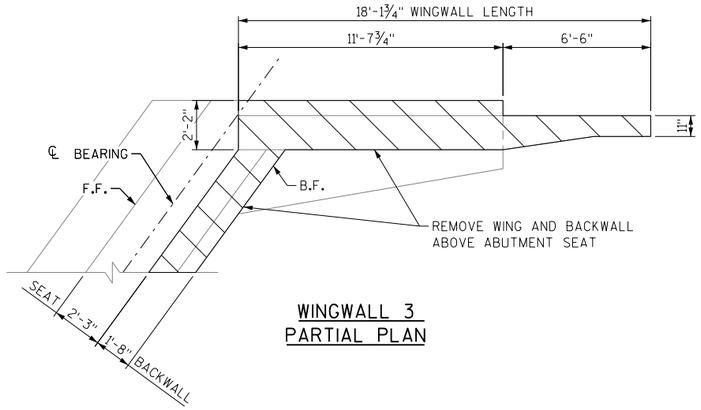
STATE PROJECT NUMBER

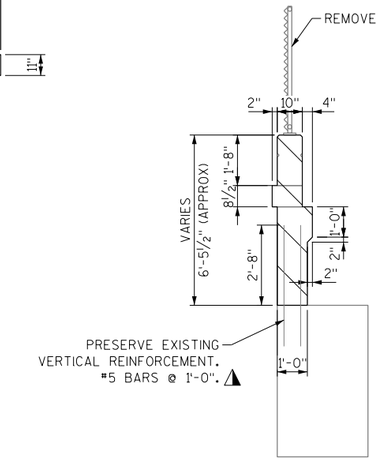
1360-13-70



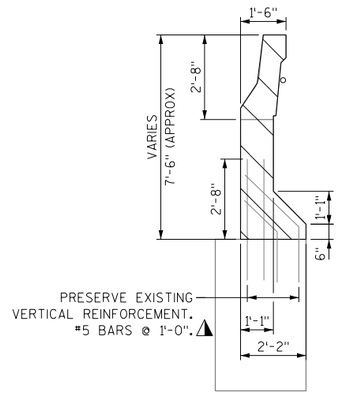
WINGWALL 2
PARTIAL PLAN



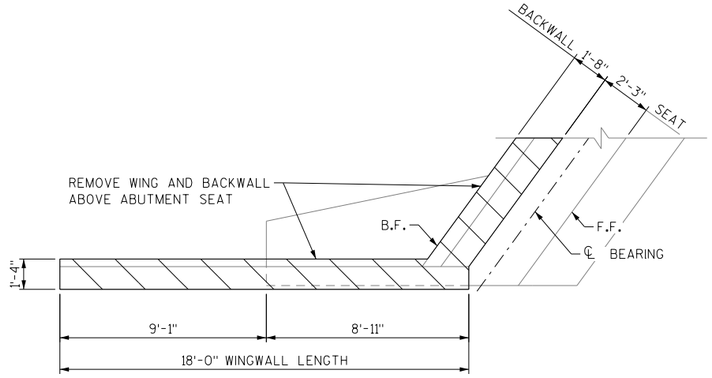
WINGWALL 3
PARTIAL PLAN



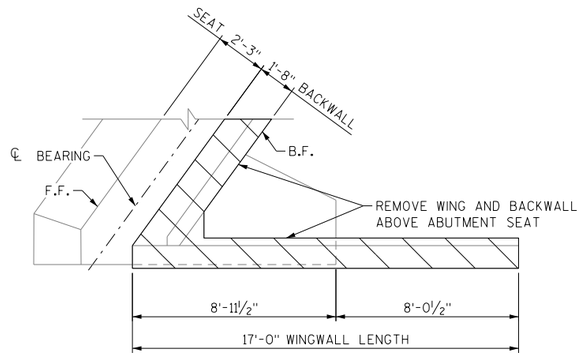
SECTION THROUGH
WINGWALLS 1 & 4



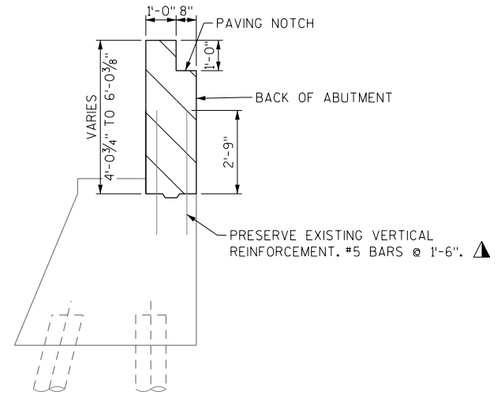
SECTION THROUGH
WINGWALLS 2 & 3



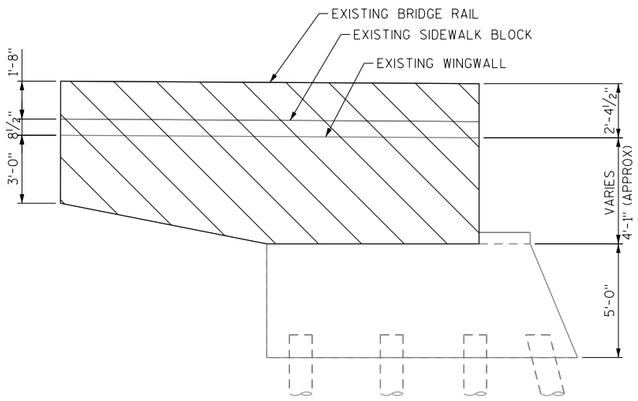
WINGWALL 1
PARTIAL PLAN



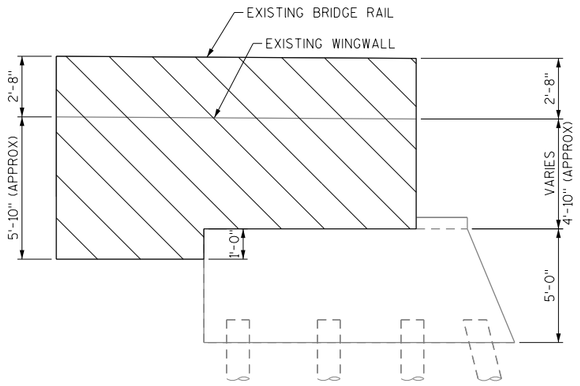
WINGWALL 4
PARTIAL PLAN



SECTION THROUGH
ABUTMENT



WINGWALL 1 ELEVATION
(WINGWALL 4 IS SIMILAR)



WINGWALL 3 ELEVATION
(WINGWALL 2 IS SIMILAR)

LEGEND

◭ CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW LIMITS SHOWN. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED BY THE ENGINEER.

HATCHED AREAS INDICATE CONCRETE REMOVALS

F.F. - FRONT FACE

B.F. - BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-255

DRAWN BY JAP | PLANS CK'D. WJZ

SUBSTRUCTURE REMOVALS

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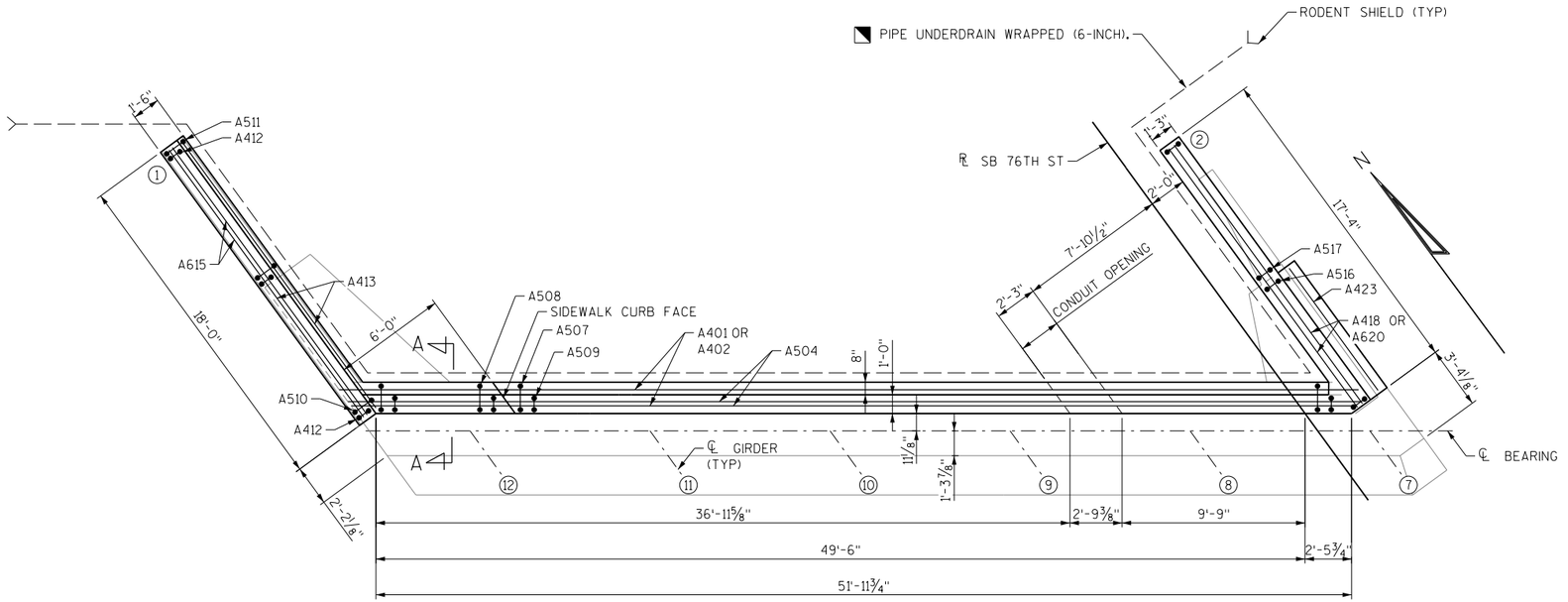
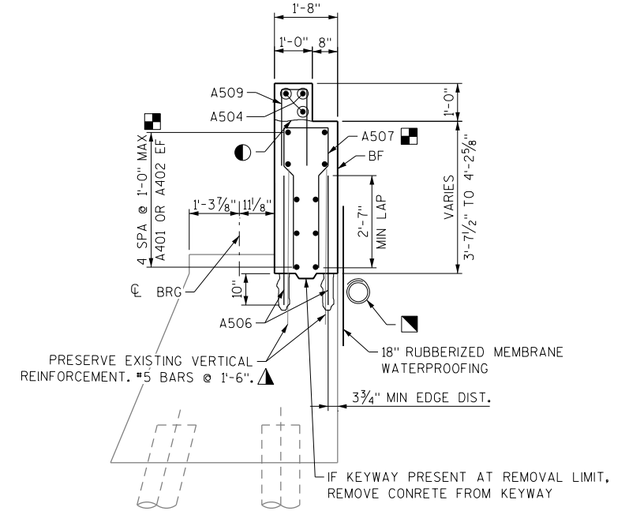
STATE PROJECT NUMBER

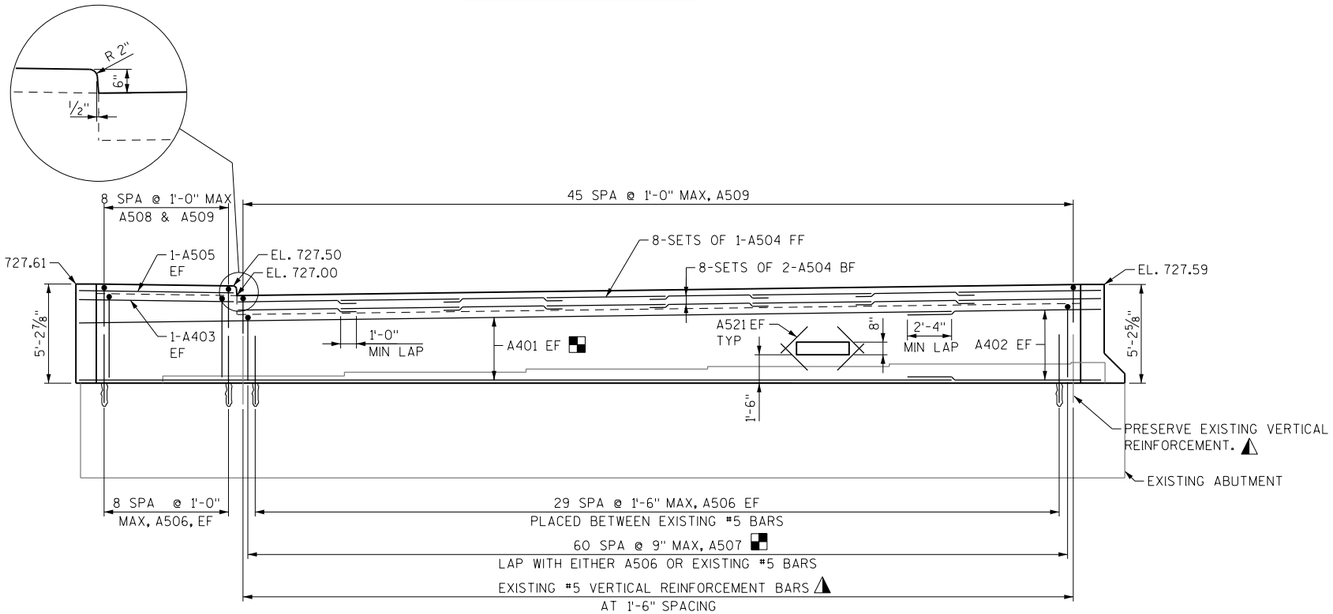
1360-13-70



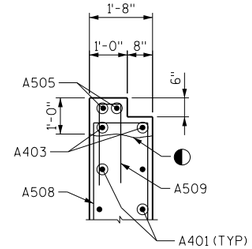
NORTH ABUTMENT PLAN



TYPICAL ABUTMENT SECTION



NORTH ABUTMENT BACKWALL ELEVATION
(WINGWALLS NOT SHOWN FOR CLARITY)



SECTION A-A AT SIDEWALK NOTCH

LEGEND

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

◥ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN.

◐ CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH. POUR CONCRETE ABOVE THIS JOINT AFTER DECK IS IN PLACE.

◪ FIELD CUT OR SHIFT TO MISS UTILITY BLOCK OUT AS DIRECTED BY THE ENGINEER.

◭ CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW REMOVAL LIMITS SHOWN ON REMOVAL DRAWING. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED IN THE FIELD BY THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-255

DRAWN BY JAP | PLANS CK'D. WJZ

NORTH ABUTMENT MODIFICATIONS

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269

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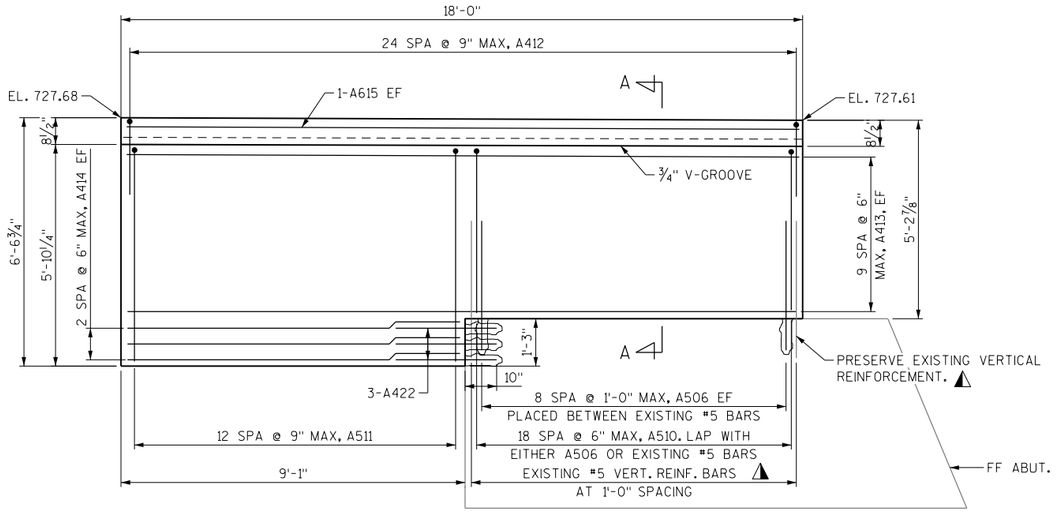
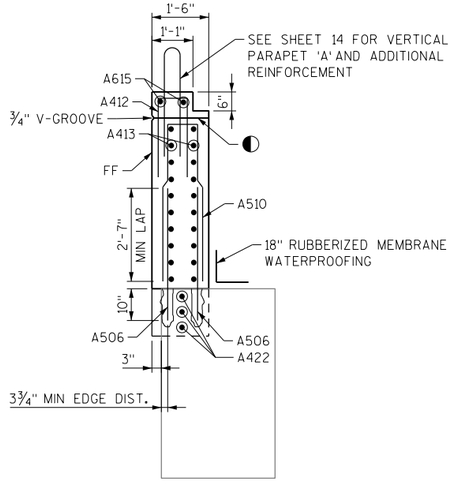
STATE PROJECT NUMBER

1360-13-70



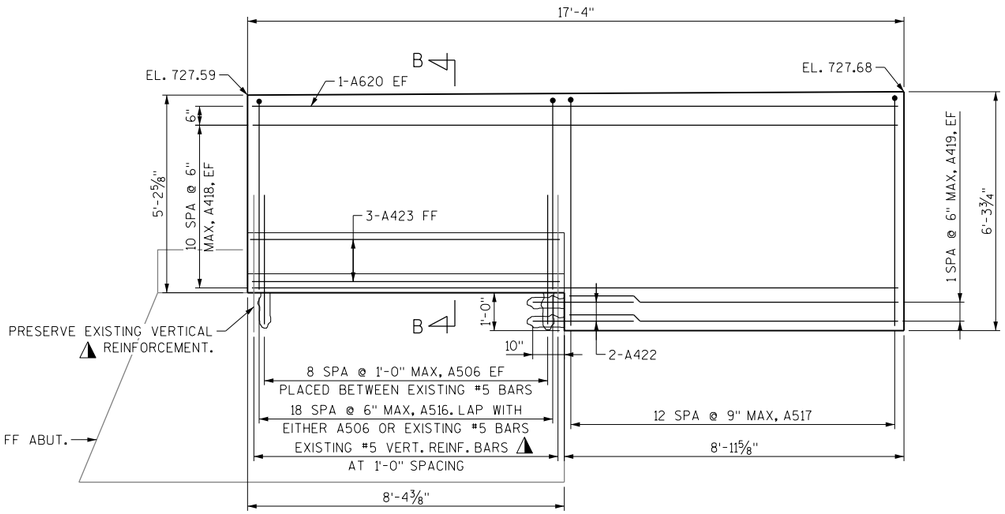
WINGWALL 1 ELEVATION



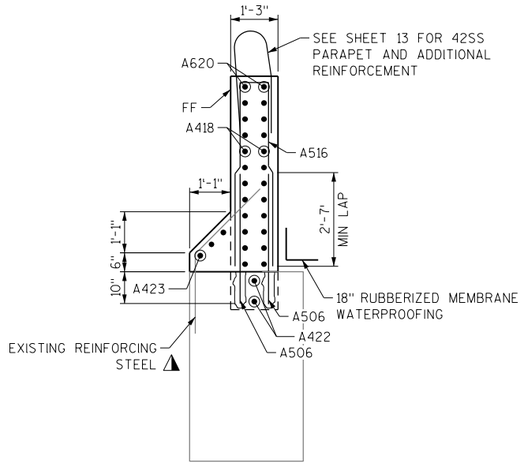
SECTION A-A

BILL OF BARS

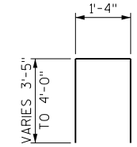
BAR NO.	COATED BAR	NO. REQ'D	LENGTH	BENT BAR	BUNDLED	BAR SERIES ⊠	3402 # COATED -- # UNCOATED LOCATION
A401	X	10	45'-0"				BACKWALL HORIZONTAL - FF & BF
A402	X	10	13'-1"				BACKWALL HORIZONTAL - FF & BF
A403	X	2	8'-1"				BACKWALL HORIZONTAL - FF & BF AT SIDEWALK
A504	X	24	6'-7"				PAVING BLOCK HORIZONTAL
A505	X	2	8'-1"				PAVING BLOCK HORIZONTAL - SIDEWALK
A506	X	114	3'-8"				BACKWALL & WINGWALL VERTICAL - ADHESIVE ANCHORS
A507	X	61	8'-6"	X		X	BACKWALL VERTICAL
A508	X	9	9'-11"	X			BACKWALL VERTICAL - SIDEWALK
A509	X	55	4'-5"	X			PAVING BLOCK VERTICAL
A510	X	19	9'-7"	X			WINGWALL 1 VERTICAL
A511	X	13	11'-9"	X			WINGWALL 1 VERTICAL - OVERHANG
A412	X	25	4'-8"	X			WINGWALL 1 VERTICAL - SIDEWALK NOTCH
A413	X	20	17'-8"				WINGWALL 1 HORIZONTAL
A414	X	6	8'-9"				WINGWALL 1 HORIZONTAL - BOTTOM
A615	X	2	17'-8"				WINGWALL 1 HORIZONTAL - SIDEWALK NOTCH
A516	X	19	10'-8"	X			WINGWALL 2 VERTICAL
A517	X	13	12'-6"	X			WINGWALL 2 VERTICAL - OVERHANG
A418	X	22	17'-0"				WINGWALL 2 HORIZONTAL
A419	X	4	8'-7"				WINGWALL 2 HORIZONTAL - BOTTOM
A620	X	2	17'-0"				WINGWALL 2 HORIZONTAL - TOP
A521	X	8	2'-0"				BACKWALL UTILITY BLOCKOUT
A422	X	5	2'-8"				WINGWALLS 1& 2 HORIZONTAL - ADHESIVE ANCHOR
A423	X	3	7'-11"				WINGWALL 2 HORIZONTAL - FF STEP



WINGWALL 2 ELEVATION



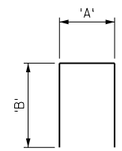
SECTION B-B



A507

BAR SERIES TABLE

BAR NO	NUMBER REQUIRED	LENGTH
A507	1 SERIES OF 61	7'-11" TO 9'-1"



BAR NO	DIM 'A'	DIM 'B'
A508	1'-4"	4'-5"
A509	8"	2'-0"
A510	1'-2"	4'-4"
A511	1'-2"	5'-5"
A412	9"	2'-1"
A516	11"	5'-0"
A517	11"	5'-11"

LEGEND

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

◐ CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH

◭ CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW LIMITS SHOWN ON REMOVAL PLAN. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED IN THE FIELD BY THE ENGINEER.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-255

DRAWN BY JAP | PLANS CK'D. WJZ

NORTH ABUTMENT WINGWALL MODIFICATIONS

SHEET 6 OF 19

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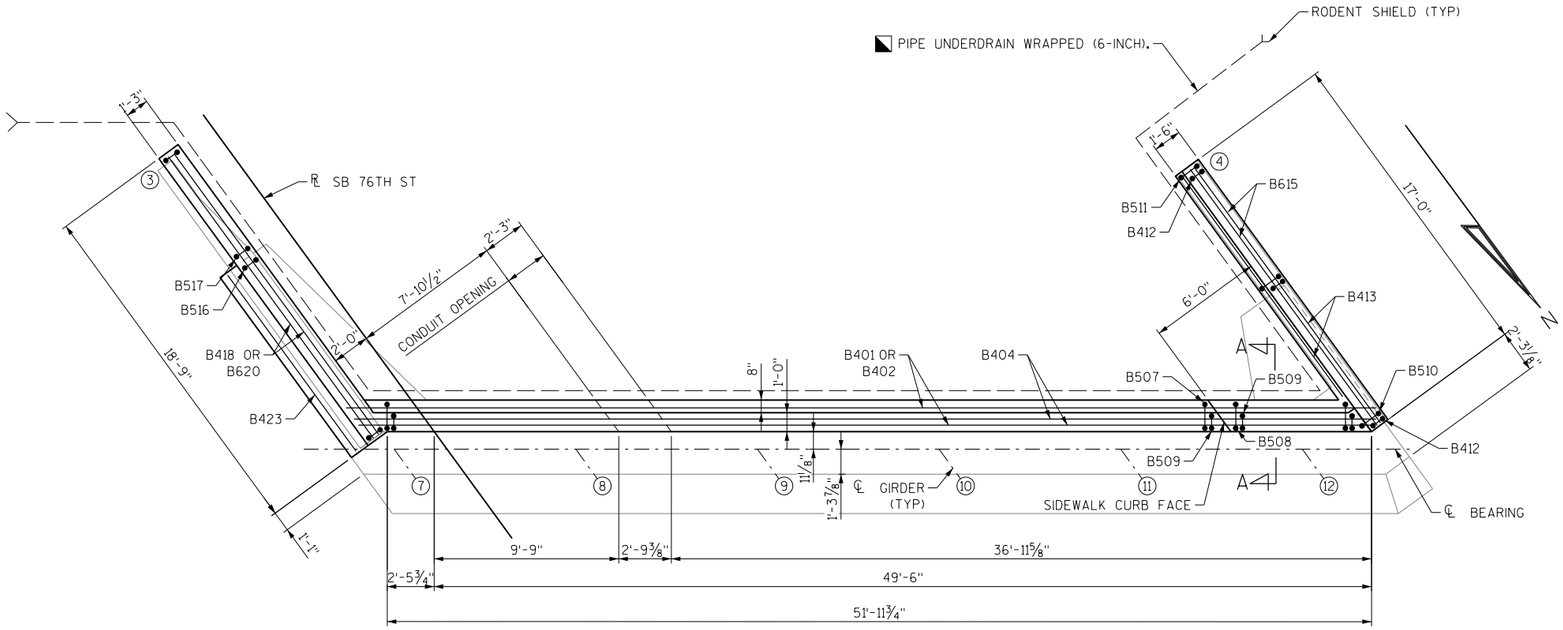
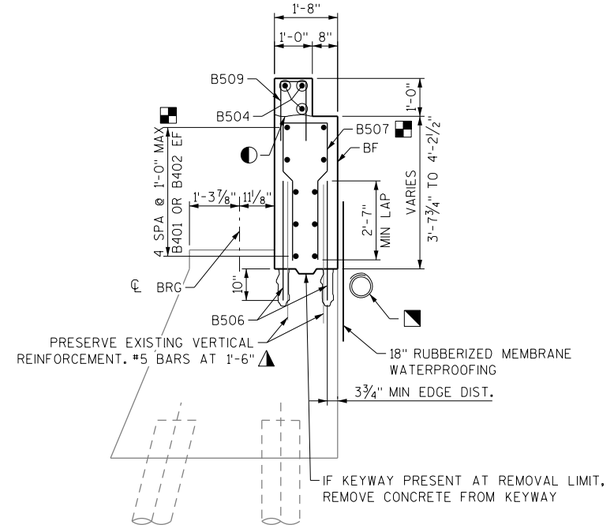
STATE PROJECT NUMBER

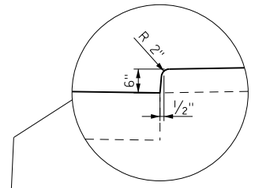
1360-13-70

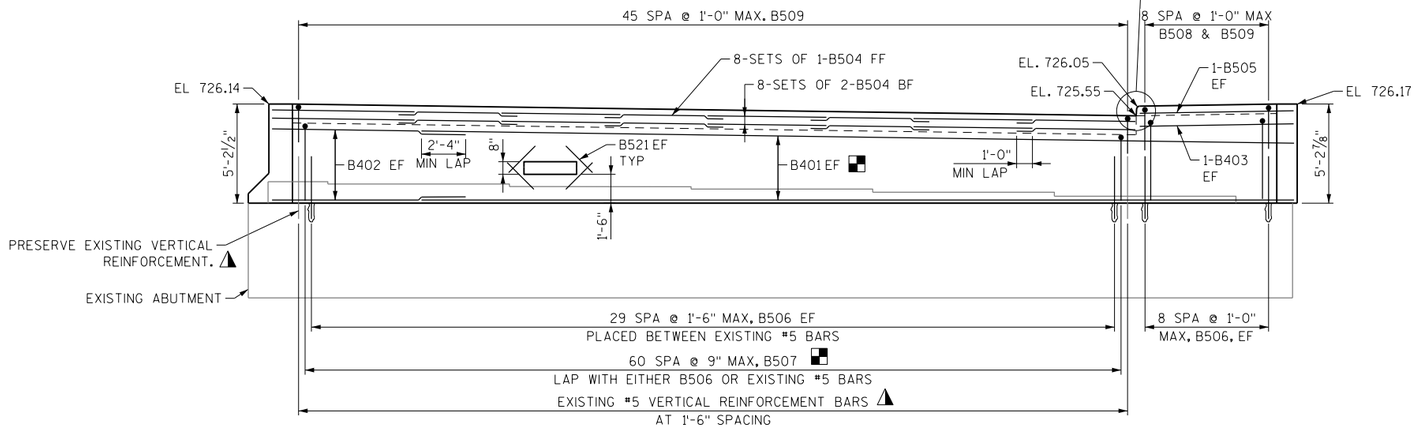


SOUTH ABUTMENT PLAN

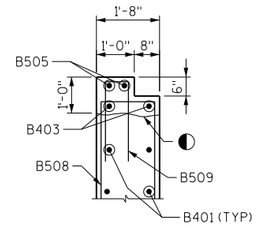


TYPICAL ABUTMENT SECTION





SOUTH ABUTMENT
BACKWALL ELEVATION
(WINGWALLS NOT SHOWN FOR CLARITY)



SECTION A-A AT
SIDEWALK NOTCH

LEGEND

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

◥ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN.

◐ CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH. POUR CONCRETE ABOVE THIS JOINT AFTER DECK IS IN PLACE.

◪ FIELD CUT OR SHIFT TO MISS UTILITY BLOCK OUT AS DIRECTED BY THE ENGINEER.

◭ CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW REMOVAL LIMITS SHOWN ON REMOVAL DRAWING. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED IN THE FIELD BY THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-255

DRAWN BY JAP | PLANS CK'D. WJZ

SOUTH ABUTMENT MODIFICATIONS

SHEET 7 OF 19

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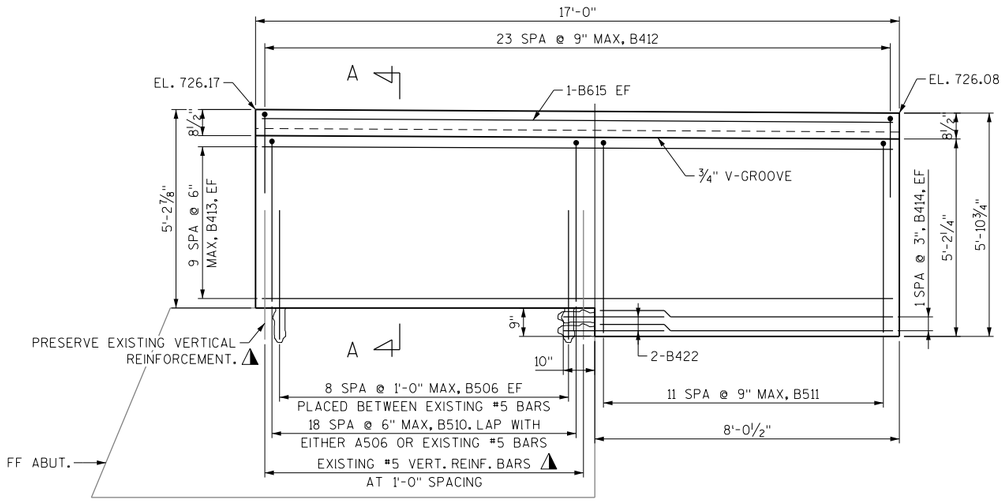
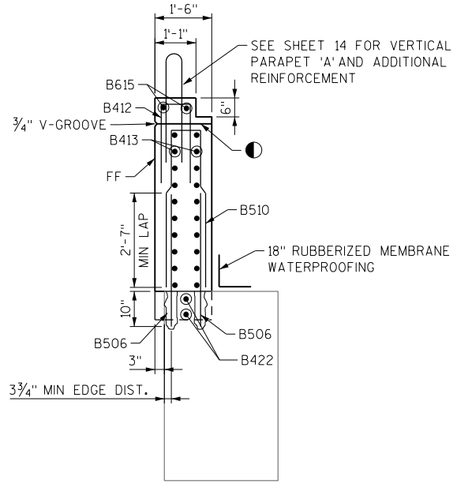
STATE PROJECT NUMBER

1360-13-70



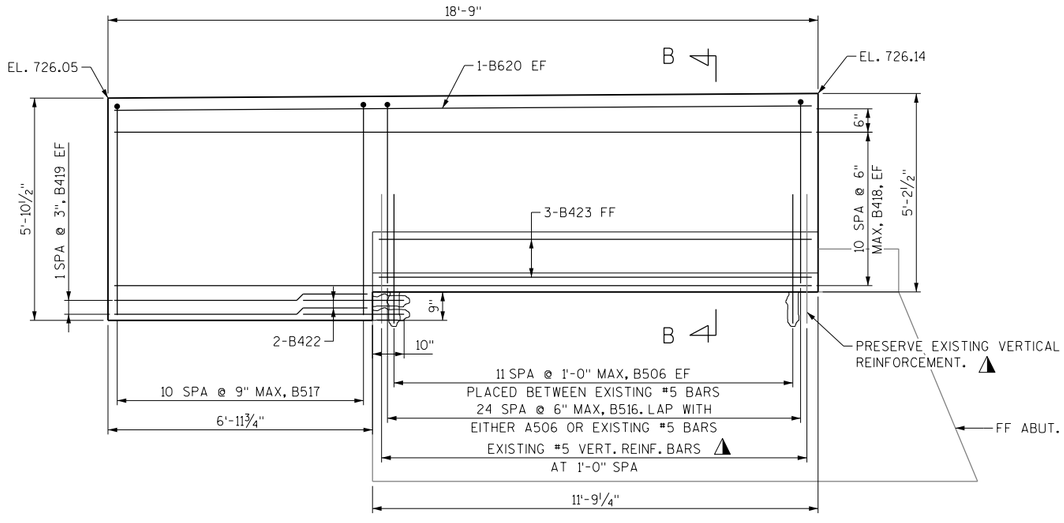
WINGWALL 4 ELEVATION



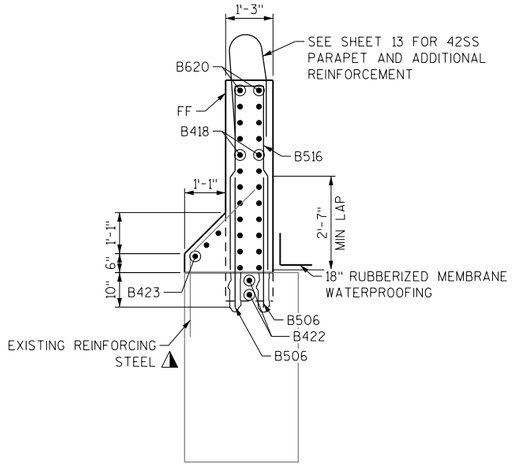
SECTION A-A

BILL OF BARS

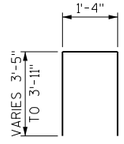
BAR NO.	COATED BAR	NO. REQ'D	LENGTH	BENT BAR	BUNDLED	BAR SERIES	3415 # COATED -- # UNCOATED LOCATION
B401	X	10	45'-0"				BACKWALL HORIZONTAL - FF & BF
B402	X	10	13'-1"				BACKWALL HORIZONTAL - FF & BF
B403	X	2	8'-1"				BACKWALL HORIZONTAL - FF & BF AT SIDEWALK
B504	X	24	6'-7"				PAVING BLOCK HORIZONTAL
B505	X	2	8'-1"				PAVING BLOCK HORIZONTAL - SIDEWALK
B506	X	120	3'-8"				BACKWALL & WINGWALL VERTICAL - ADHESIVE ANCHORS
B507	X	61	8'-5"	X		X	BACKWALL VERTICAL
B508	X	9	9'-11"	X			BACKWALL VERTICAL - SIDEWALK
B509	X	55	4'-5"	X			PAVING BLOCK VERTICAL
B510	X	19	9'-7"	X			WINGWALL 4 VERTICAL
B511	X	12	10'-7"	X			WINGWALL 4 VERTICAL - OVERHANG
B412	X	24	4'-8"	X			WINGWALL 4 VERTICAL - SIDEWALK NOTCH
B413	X	20	16'-8"				WINGWALL 4 HORIZONTAL
B414	X	4	7'-8"				WINGWALL 4 HORIZONTAL - BOTTOM
B615	X	2	16'-8"				WINGWALL 4 HORIZONTAL - SIDEWALK NOTCH
B516	X	25	10'-8"	X			WINGWALL 3 VERTICAL
B517	X	11	11'-8"	X			WINGWALL 3 VERTICAL - OVERHANG
B418	X	22	18'-5"				WINGWALL 3 HORIZONTAL
B419	X	4	6'-8"				WINGWALL 3 HORIZONTAL - BOTTOM
B620	X	2	18'-5"				WINGWALL 3 HORIZONTAL - TOP
B521	X	8	2'-0"				BACKWALL UTILITY BLOCKOUT
B422	X	4	2'-8"				WINGWALLS 3 & 4 HORIZONTAL - ADHESIVE ANCHOR
B423	X	3	11'-5"				WINGWALL 3 HORIZONTAL - FF STEP



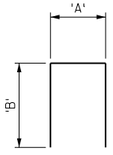
WINGWALL 3 ELEVATION



SECTION B-B



B507



BAR NO	DIM 'A'	DIM 'B'
B508	1'-4"	4'-5"
B509	8"	2'-0"
B510	1'-2"	4'-4"
B511	1'-2"	4'-10"
B412	9"	2'-1"
B516	11"	5'-0"
B517	11"	5'-6"

BAR SERIES TABLE

BAR NO	NUMBER REQUIRED	LENGTH
B507	1 SERIES OF 61	7'-11" TO 8'-11"

LEGEND

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

◐ CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH

⚠ CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW LIMITS SHOWN ON REMOVAL PLAN. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED IN THE FIELD BY THE ENGINEER.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-255

DRAWN BY JAP | PLANS CK'D. WJZ

SOUTH ABUTMENT WINGWALL MODIFICATIONS

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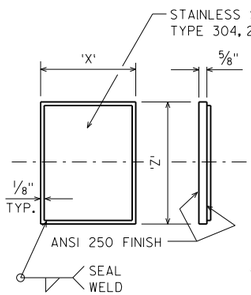
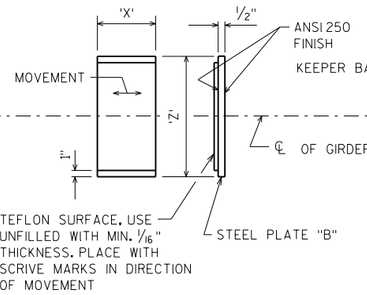
STATE PROJECT NUMBER

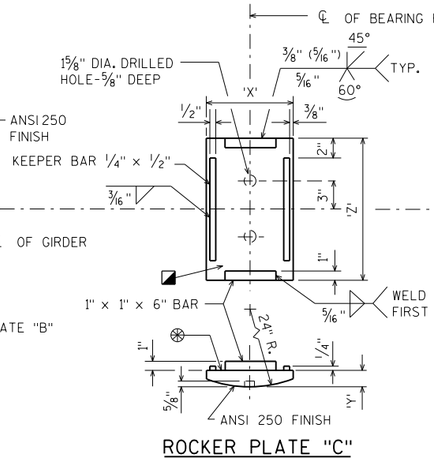
1360-13-70



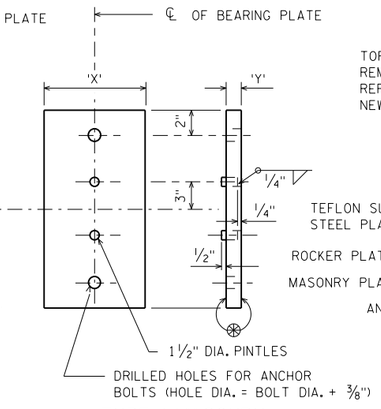
TOP PLATE "A"



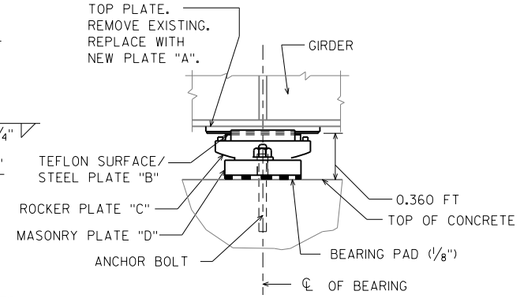
TEFLON SURFACE ON PLATE "B"



ROCKER PLATE "C"

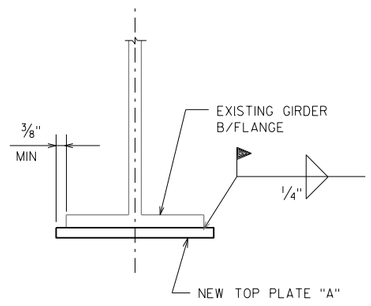


TYPE I MASONRY PLATE "D"

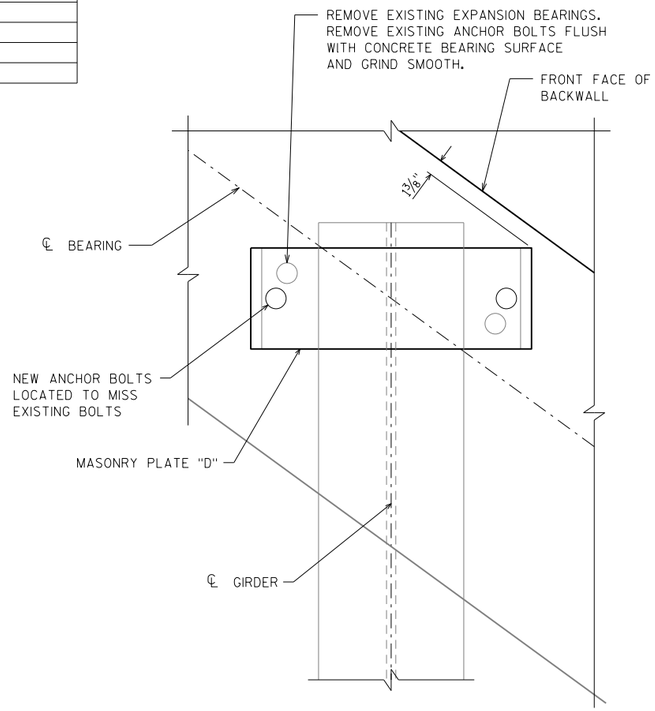


EXPANSION BEARING ASSEMBLY

PLATE "A"		PLATE "B"		PLATE "C"			PLATE "D"			PLATE "D" TYPE	ANCHOR BOLT SIZE	NO. OF BRG'S REQ'D.	LOCATION
'X'	'Z'	'X'	'Z'	'X'	'Y'	'Z'	'X'	'Y'	'Z'				
9"	1'-0 1/4"	5"	1'-0 1/4"	7"	1 1/16"	1'-2 1/2"	8"	1 1/2"	1'-10 1/4"	I	1 1/4"	12	NORTH AND SOUTH ABUTMENTS



TOP PLATE 'A' WELD DETAIL



BEARING PLAN ON ABUTMENT SEAT

UPPER BEARING PLATES NOT SHOWN FOR CLARITY

BEARING NOTES

REPLACE ALL BEARINGS AT ABUTMENTS.

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING PLATE.

⊛ FINISH THESE SURFACES TO ANSI 250 IF 'Y' DIMENSION IS GREATER THAN 2".

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM F1554 GRADE 50, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING STAINLESS STEEL SHEET, TEFLON SURFACE, PINTLES, ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-40-255"

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

PROVIDE 1/8" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE "D" FOR EACH BEARING.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. BOLT LENGTH TO BE 1'-5" FOR 1 1/4" BOLTS. PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE "D" FOR A DRIVING FIT.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR ASTM A572 GRADE 50.

EXPANSION BEARINGS:
ROCKER PLATE "C" AND MASONRY PLATE "D" SHALL BE GALVANIZED. TOP PLATE "A" AND STEEL PLATE "B" SHALL BE SHOP PAINTED. USE A WELDABLE PRIMER ON TOP PLATE "A". DO NOT PAINT STAINLESS STEEL OR TEFLON SURFACES.

◪ PROVIDE A METHOD FOR HANDLING ROCKER PLATE "C" DURING GALVANIZING.

⚠ BOND STEEL PLATE "B" AND TEFLON WITH ADHESIVE MATERIAL MEETING REQUIREMENTS FOUND IN THE STANDARD SPECIFICATION.

AT INSTALLATION, ENSURE STAINLESS STEEL SLIDING FACE OF THE UPPER ELEMENT AND THE TFE SLIDING FACE OF THE LOWER ELEMENT HAVE THE SURFACE FINISH SPECIFIED AND ARE CLEAN AND FREE OF ALL DUST, MOISTURE, AND OTHER FOREIGN MATTER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-255

DRAWN BY JAP | PLANS CK'D. WJZ

BEARING DETAILS

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FILE= B-40-255_90_BEARING.DGN
SCALE = 1:1

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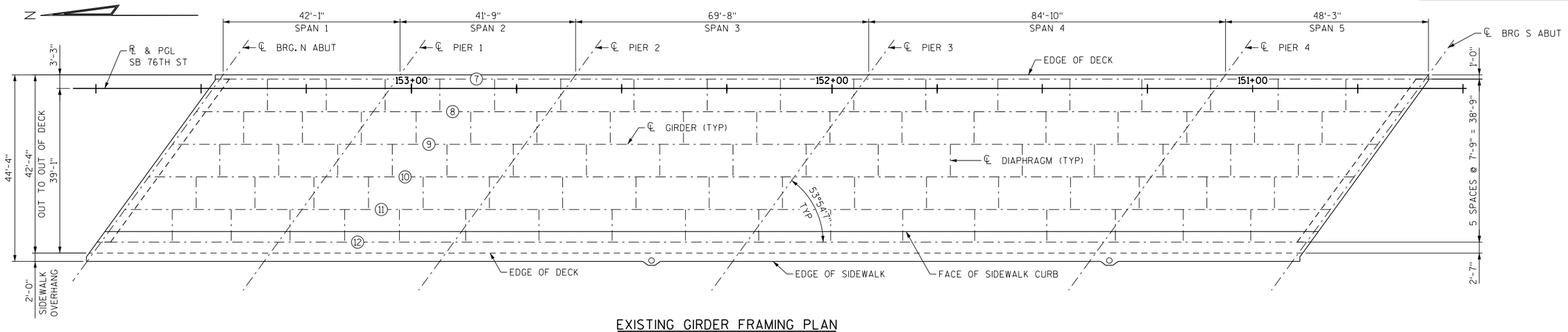


EXISTING GIRDER FRAMING PLAN

(FIELD SPLICES AND COVER PLATES NOT SHOWN)

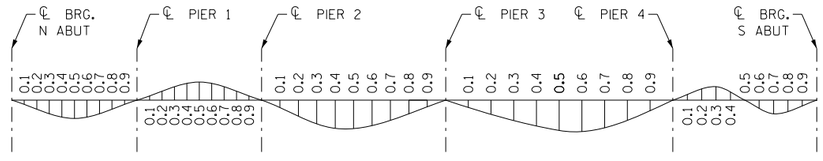
FINISHED TOP OF DECK ELEVATIONS

*THIS ELEVATION IS A CONTINUATION OF THE DECK CROSS SLOPE.

	LOCATION	EAST EDGE OF DECK*	GIRDER 7	EAST FACE OF PARAPET	PGL SB 76TH ST	GIRDER 8	GIRDER 9	GIRDER 10	GIRDER 11	WEST FACE OF CURB	GIRDER 12	WEST EDGE OF DECK
	℄ N ABUT	727.60	727.59	727.58	727.55	727.46	727.33	727.21	727.08	726.99	726.95	726.91
SPAN 1	0.1	727.58	727.57	727.56	727.53	727.44	727.31	727.19	727.06	726.97	726.93	726.89
	0.2	727.56	727.55	727.54	727.51	727.42	727.29	727.17	727.04	726.95	726.91	726.87
	0.3	727.54	727.52	727.52	727.49	727.40	727.27	727.14	727.02	726.93	726.89	726.85
	0.4	727.52	727.50	727.50	727.47	727.38	727.25	727.12	727.00	726.91	726.87	726.83
	0.5	727.50	727.48	727.48	727.45	727.36	727.23	727.10	726.98	726.89	726.85	726.81
	0.6	727.48	727.46	727.46	727.42	727.33	727.21	727.08	726.95	726.87	726.83	726.79
	0.7	727.46	727.44	727.44	727.40	727.31	727.19	727.06	726.93	726.85	726.81	726.76
	0.8	727.44	727.42	727.41	727.38	727.29	727.17	727.04	726.91	726.83	726.79	726.74
	0.9	727.41	727.40	727.39	727.36	727.27	727.14	727.02	726.89	726.80	726.76	726.72
	℄ PIER 1	727.39	727.38	727.37	727.34	727.25	727.12	727.00	726.87	726.78	726.74	726.70
SPAN 2	0.1	727.37	727.36	727.35	727.32	727.23	727.10	726.98	726.85	726.76	726.72	726.68
	0.2	727.35	727.33	727.33	727.30	727.21	727.08	726.95	726.83	726.74	726.70	726.66
	0.3	727.33	727.31	727.31	727.28	727.19	727.06	726.93	726.81	726.72	726.68	726.64
	0.4	727.31	727.29	727.29	727.26	727.17	727.04	726.91	726.79	726.70	726.66	726.62
	0.5	727.29	727.27	727.27	727.24	727.15	727.02	726.89	726.77	726.68	726.64	726.60
	0.6	727.27	727.25	727.25	727.21	727.12	727.00	726.87	726.74	726.66	726.62	726.58
	0.7	727.25	727.23	727.23	727.19	727.10	726.98	726.85	726.72	726.64	726.60	726.55
	0.8	727.23	727.21	727.21	727.17	727.08	726.96	726.83	726.70	726.62	726.58	726.53
	0.9	727.20	727.19	727.18	727.15	727.06	726.93	726.81	726.68	726.60	726.55	726.51
	℄ PIER 2	727.18	727.17	727.16	727.13	727.04	726.91	726.79	726.66	726.57	726.53	726.49
SPAN 3	0.1	727.15	727.13	727.13	727.10	727.01	726.88	726.75	726.63	726.54	726.50	726.46
	0.2	727.11	727.10	727.09	727.06	726.97	726.84	726.72	726.59	726.51	726.46	726.42
	0.3	727.08	727.06	727.06	727.03	726.94	726.81	726.68	726.56	726.47	726.43	726.39
	0.4	727.04	727.03	727.02	726.99	726.90	726.77	726.65	726.52	726.44	726.39	726.35
	0.5	727.01	726.99	726.99	726.96	726.87	726.74	726.61	726.49	726.40	726.36	726.32
	0.6	726.97	726.96	726.95	726.92	726.83	726.70	726.58	726.45	726.37	726.32	726.28
	0.7	726.94	726.92	726.92	726.89	726.80	726.67	726.54	726.42	726.33	726.29	726.25
	0.8	726.90	726.89	726.88	726.85	726.76	726.63	726.51	726.38	726.30	726.25	726.21
	0.9	726.87	726.85	726.85	726.82	726.73	726.60	726.47	726.35	726.26	726.22	726.18
	℄ PIER 3	726.83	726.82	726.81	726.78	726.69	726.57	726.44	726.31	726.23	726.19	726.14
SPAN 4	0.1	726.79	726.78	726.77	726.74	726.65	726.52	726.40	726.27	726.18	726.14	726.10
	0.2	726.75	726.73	726.73	726.70	726.61	726.48	726.35	726.23	726.14	726.10	726.06
	0.3	726.71	726.69	726.69	726.65	726.56	726.44	726.31	726.18	726.10	726.06	726.02
	0.4	726.67	726.65	726.64	726.61	726.52	726.40	726.27	726.14	726.06	726.02	725.97
	0.5	726.62	726.61	726.60	726.57	726.48	726.35	726.23	726.10	726.01	725.97	725.93
	0.6	726.58	726.56	726.56	726.53	726.44	726.31	726.18	726.06	725.97	725.93	725.89
	0.7	726.54	726.52	726.52	726.48	726.39	726.27	726.14	726.01	725.93	725.89	725.85
	0.8	726.50	726.48	726.47	726.44	726.35	726.23	726.10	725.97	725.89	725.85	725.80
	0.9	726.45	726.44	726.43	726.40	726.31	726.18	726.06	725.93	725.84	725.80	725.76
	℄ PIER 4	726.41	726.39	726.39	726.36	726.27	726.14	726.01	725.89	725.80	725.76	725.72
SPAN 5	0.1	726.39	726.37	726.37	726.33	726.24	726.12	725.99	725.86	725.78	725.74	725.69
	0.2	726.36	726.35	726.34	726.31	726.22	726.09	725.97	725.84	725.75	725.71	725.67
	0.3	726.34	726.32	726.32	726.28	726.19	726.07	725.94	725.81	725.73	725.69	725.65
	0.4	726.31	726.30	726.29	726.26	726.17	726.04	725.92	725.79	725.70	725.66	725.62
	0.5	726.29	726.27	726.27	726.24	726.15	726.02	725.89	725.77	725.68	725.64	725.60
	0.6	726.27	726.25	726.24	726.21	726.12	726.00	725.87	725.74	725.66	725.62	725.57
	0.7	726.24	726.22	726.22	726.19	726.10	725.97	725.84	725.72	725.63	725.59	725.55
	0.8	726.22	726.20	726.20	726.16	726.07	725.95	725.82	725.69	725.61	725.57	725.52
	0.9	726.19	726.18	726.17	726.14	726.05	725.92	725.80	725.67	725.58	725.54	725.50
	℄ S ABUT	726.17	726.15	726.15	726.12	726.03	725.90	725.77	725.65	725.56	725.52	725.48

DEAD LOAD DEFLECTIONS ◥

	LOCATION	GIRDER 7	GIRDER 8-11	GIRDER 12
	℄ N ABUT	0.0	0.0	0.0
SPAN 1	0.1	0.1	0.1	0.1
	0.2	0.1	0.2	0.2
	0.3	0.2	0.2	0.2
	0.4	0.2	0.3	0.2
	0.5	0.2	0.3	0.2
	0.6	0.2	0.2	0.2
	0.7	0.1	0.2	0.2
	0.8	0.1	0.1	0.1
	0.9	0.0	0.1	0.0
	℄ PIER 1	0.0	0.0	0.0
SPAN 2	0.1	0.0	0.0	0.0
	0.2	0.0	0.0	0.0
	0.3	0.0	0.0	0.0
	0.4	0.0	0.0	0.0
	0.5	0.0	0.0	0.0
	0.6	0.0	-0.1	0.0
	0.7	0.0	-0.1	-0.1
	0.8	0.0	-0.1	-0.1
	0.9	0.0	0.0	0.0
	℄ PIER 2	0.0	0.0	0.0
SPAN 3	0.1	0.1	0.1	0.1
	0.2	0.2	0.3	0.3
	0.3	0.3	0.4	0.4
	0.4	0.4	0.5	0.4
	0.5	0.3	0.5	0.4
	0.6	0.3	0.4	0.3
	0.7	0.2	0.2	0.2
	0.8	0.0	0.0	0.0
	0.9	0.0	0.0	0.0
	℄ PIER 3	0.0	0.0	0.0
SPAN 4	0.1	0.2	0.3	0.2
	0.2	0.5	0.7	0.6
	0.3	0.8	1.1	1.0
	0.4	1.1	1.5	1.3
	0.5	1.2	1.6	1.4
	0.6	1.1	1.5	1.4
	0.7	0.9	1.2	1.1
	0.8	0.6	0.8	0.7
	0.9	0.2	0.3	0.3
	℄ PIER 4	0.0	0.0	0.0
SPAN 5	0.1	-0.1	-0.1	-0.1
	0.2	-0.1	-0.1	-0.1
	0.3	-0.1	-0.1	-0.1
	0.4	0.0	-0.1	0.0
	0.5	0.0	0.0	0.0
	0.6	0.0	0.0	0.0
	0.7	0.1	0.1	0.1
	0.8	0.1	0.1	0.1
	0.9	0.0	0.0	0.0
	℄ S ABUT	0.0	0.0	0.0



DEFLECTION DIAGRAM

◥ DEFLECTIONS ARE GIVEN IN INCHES
NEGATIVE DEFLECTION INDICATES UPWARD DEFLECTION
DEFLECTIONS ARE THEORETICAL AND MAY VARY IN THE FIELD.

NOTES

A 1¼" MINIMUM HAUNCH IS REQUIRED AT THE EDGE OF GIRDER. IF A 1¼" MINIMUM HAUNCH HEIGHT CANNOT BE MAINTAINED THE GRADE LINE MAY BE REVISED BY THE ENGINEER IN THE FIELD 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 AND PROFILE BY MORE THAN ½"

THE FOLLOWING AVERAGE HAUNCH DEPTHS ('T') WERE USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

GIRDER 7: 3.9"
GIRDERS 8-10: 4.0"
GIRDER 11: 4.6"
GIRDER 12: 5.5"

'T' = HAUNCH HEIGHT AT ℄ GIRDER

TO DETERMINE 'T': AFTER EXISTING DECK HAS BEEN REMOVED, AND ABUTMENT BEARINGS HAVE BEEN REPLACED, ELEVATIONS OF THE TOP FLANGES SHALL BE TAKEN AT CENTERLINES OF BEARING AND AT 0.1 POINTS.

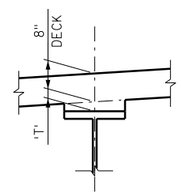
TOP OF DECK ELEVATION AT FINAL GRADE

\- TOP OF STEEL ELEVATION AFTER EXISTING DECK HAS BEEN REMOVED

\+ DEAD LOAD DEFLECTION (DOWNWARD DEFLECTION IS ADDED, UPWARD DEFLECTION IS SUBTRACTED)

\- DECK THICKNESS

= 'T' VALUE FOR SETTING HAUNCH



SLAB HAUNCH DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-255

DRAWN BY JAP | PLANS CK'D. WJZ

DECK ELEVATIONS

SHEET 10 OF 19

274

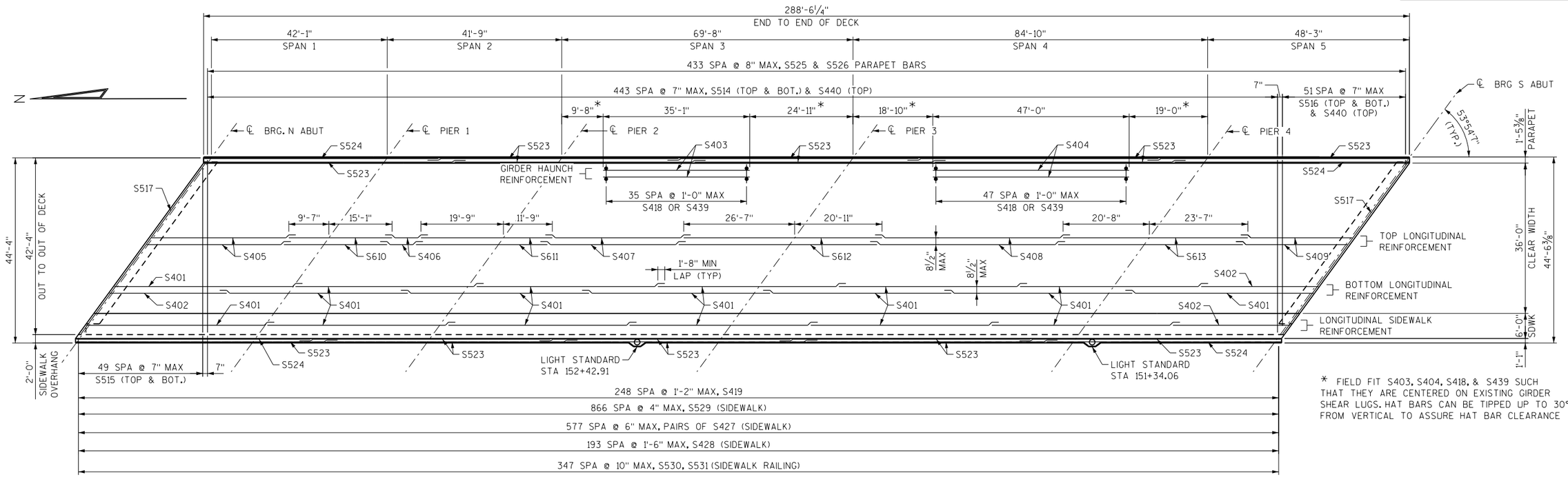
FILE= B-40-255_100_GIRD&SUPER.DGN
SCALE = 1:25

8

8

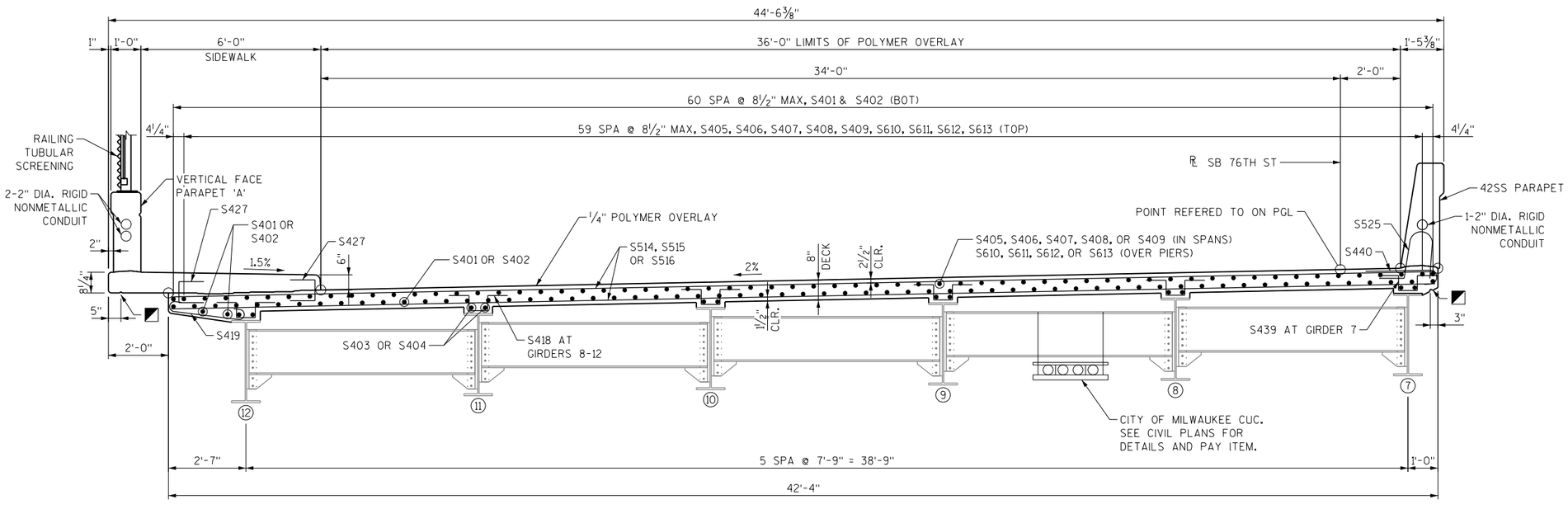
STATE PROJECT NUMBER

1360-13-70



* FIELD FIT S403, S404, S418, & S439 SUCH THAT THEY ARE CENTERED ON EXISTING GIRDER SHEAR LUGS. HAT BARS CAN BE TIPPED UP TO 30° FROM VERTICAL TO ASSURE HAT BAR CLEARANCE

DECK PLAN



TYPICAL SECTION THRU DECK
(LOOKING NORTH)

NOTES:

SEE SHEET 12 FOR SUPERSTRUCTURE BILL OF BARS AND DECK DETAILS

SEE SHEET 10 FOR TOP OF DECK ELEVATIONS

SEE SHEET 13 FOR 42SS PARAPET DETAILS

SEE SHEET 14 FOR VERTICAL FACE PARAPET 'A' DETAILS

SEE SHEET 15 FOR RAILING TUBULAR SCREENING

SEE SHEET 12 FOR SIDEWALK REINFORCEMENT

SEE SHEET 18 FOR LIGHT STANDARD DETAIL

○ INDICATES T/SLAB ELEVATION LOCATION

◪ ¾" V-GROOVE TO EXTEND TO 2'-0" FROM FRONT FACE OF ABUTMENT BODY

Ⓧ INDICATES GIRDER NUMBER

ALTERNATE LAP LOCATIONS IN PARAPET, SIDEWALK AND DECK LONGITUDINAL BARS AS SHOWN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-255

DRAWN BY JAP | PLANS CK'D. WJZ

SUPERSTRUCTURE REINFORCEMENT

SHEET 11 OF 19

275

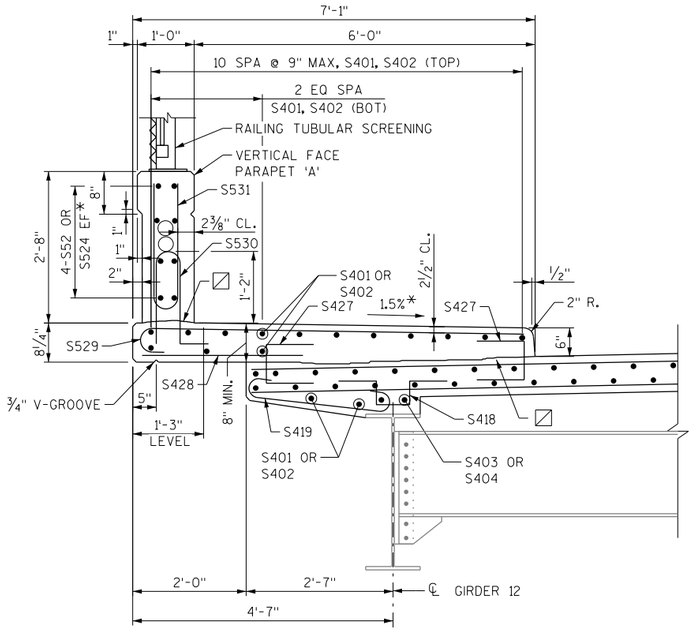
FILE= B-40-255.110_SUPERREINF.DGN
SCALE = 1:25

8

8

STATE PROJECT NUMBER

1360-13-70

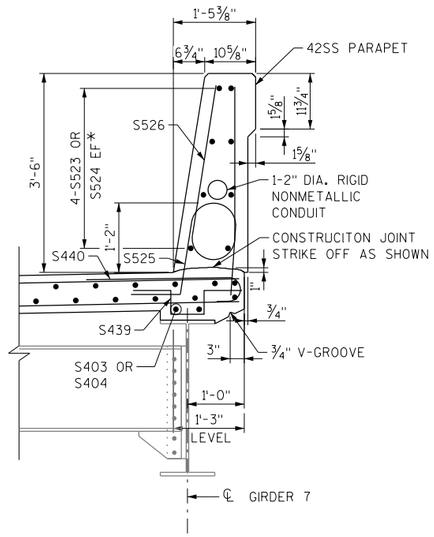


SECTION THROUGH PARAPET AND SIDEWALK AT WEST OVERHANG

* ±0.5% TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR ENGINEER APPROVAL

☒ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE.

SEE SHEET 14 FOR DEFLECTION JOINT DETAILS.



SECTION THROUGH PARAPET AT EAST OVERHANG

BILL OF BARS - DECK

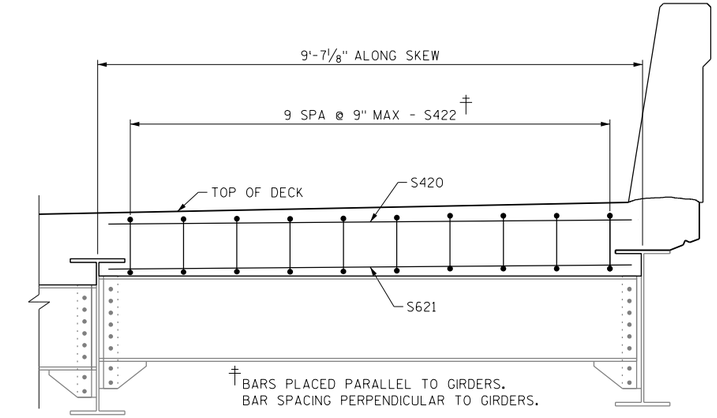
BAR NO.	COATED BAR	NO. REQ'D	LENGTH	BENT BAR	BUNDLED BAR	▲ SERIES	106,430 # COATED -- # UNCOATED LOCATION
S401	X	462	45'-0"				DECK & SIDEWALK LONGITUDINAL - BOTTOM
S402	X	77	29'-0"				DECK & SIDEWALK LONGITUDINAL - BOTTOM
S403	X	12	35'-1"				DECK LONGITUDINAL - HAUNCH SPAN 3
S404	X	12	47'-0"				DECK LONGITUDINAL - HAUNCH SPAN 4
S405	X	62	35'-2"				DECK LONGITUDINAL - TOP SPAN 1
S406	X	62	10'-3"				DECK LONGITUDINAL - TOP SPAN 2
S407	X	62	34'-9"				DECK LONGITUDINAL - TOP SPAN 3
S408	X	62	46'-7"				DECK LONGITUDINAL - TOP SPAN 4
S409	X	62	27'-4"				DECK LONGITUDINAL - TOP SPAN 5
S610	X	62	24'-8"				DECK LONGITUDINAL - TOP PIER 1
S611	X	62	31'-6"				DECK LONGITUDINAL - TOP PIER 2
S612	X	62	47'-6"				DECK LONGITUDINAL - TOP PIER 3
S613	X	62	44'-3"				DECK LONGITUDINAL - TOP PIER 4
S514	X	888	42'-0"				DECK TRANSVERSE - TOP AND BOTTOM
S515	X	100	20'-8"			X	DECK TRANSVERSE - TOP AND BOTTOM NORTH END SERIES
S516	X	104	21'-3"			X	DECK TRANSVERSE - TOP AND BOTTOM SOUTH END SERIES
S517	X	4	50'-9"				DECK TRANSVERSE - DECK ENDS TOP & BOTTOM
S418	X	420	2'-10"	X			DECK TRANSVERSE - HAUNCH GIRDERS 8-12
S419	X	249	3'-2"	X			DECK TRANSVERSE - OUTSIDE OVERHANG
S420	X	40	9'-3"				DIAPHRAGM & JOINT - TOP
S621	X	50	9'-3"				DIAPHRAGM - BOTTOM
S422	X	100	3'-10"	X			DIAPHRAGM STIRRUPS
S523	X	64	60'-0"				PARAPET HORIZONTAL
S524	X	16	55'-2"				PARAPET HORIZONTAL
S525	X	434	4'-5"	X			42SS PARAPET VERTICAL
S526	X	434	6'-8"	X			42SS PARAPET VERTICAL
S427	X	1156	2'-8"	X			SIDEWALK VERTICAL
S428	X	194	2'-10"				SIDEWALK TRANSVERSE - BOTTOM
S529	X	867	7'-4"	X			SIDEWALK TRANSVERSE - TOP
S530	X	348	4'-4"	X			VERTICAL FACE PARAPET 'A' VERTICAL
S531	X	348	4'-9"	X			VERTICAL FACE PARAPET 'A' VERTICAL
S532	X	8	6'-3"	X			LIGHT STANDARD VERTICAL - PARAPET
S533	X	8	7'-0"	X			LIGHT STANDARD VERTICAL - PARAPET
S634	X	14	10'-3"	X			LIGHT STANDARD HORIZONTAL - PARAPET
S535	X	24	6'-8"				LIGHT STANDARD TRANSVERSE - SIDEWALK BOTTOM
S536	X	4	3'-2"	X			LIGHT STANDARD VERTICAL - PARAPET
S537	X	4	3'-4"	X			LIGHT STANDARD VERTICAL - PARAPET
S538	X	24	7'-4"	X			LIGHT STANDARD TRANSVERSE SIDEWALK TOP
S439	X	84	2'-8"	X			DECK TRANSVERSE - HAUNCH GIRDER 7
S440	X	496	3'-0"	X			DECK TRANSVERSE - GIRDER 7 OVERHANG

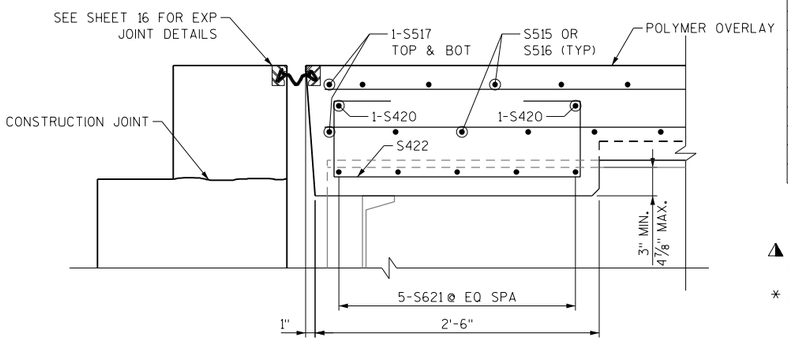
THE FIRST DIGIT OR FIRST TWO DIGITS OF A BAR MARK INDICATE THE BAR SIZE. ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.

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

* OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MINIMUM OF 1'-9". MINIMUM JOINT SPACING OF 80'-0". DEFINE CONSTRUCTION JOINT WITH A ¾" 'V' GROOVE.

SEE SHEET 19 FOR LIGHT STANDARD DETAILS



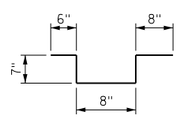


SECTION THROUGH END DIAPHRAGM AND EXPANSION JOINT

(DIMENSIONS ARE TAKEN NORMAL TO THE ℄ OF THE JOINT)

BAR SERIES TABLE

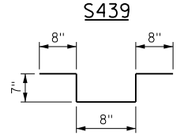
BAR NO	NUMBER REQUIRED	LENGTH
S515	2 SERIES OF 50	1'-2" TO 40'-1"
S516	2 SERIES OF 52	1'-1" TO 41'-5"



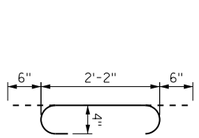
S439

SECTION AT END DIAPHRAGM

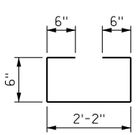
(SHOWING ADDITIONAL DIAPHRAGM REINFORCEMENT ONLY)



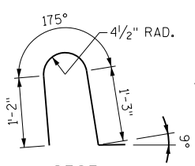
S418



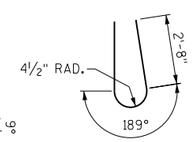
S419



S422



S525



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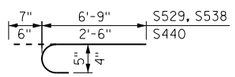
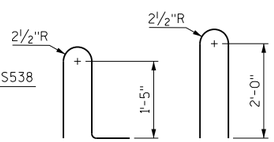
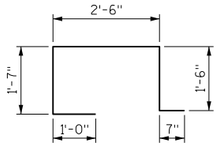


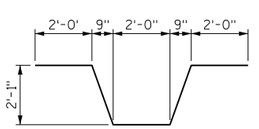
S529, S538, & S440



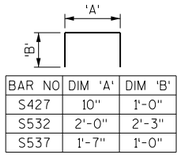
S530 S531



S533



S634



BAR NO	DIM 'A'	DIM 'B'
S427	10"	1'-0"
S532	2'-0"	2'-3"
S537	1'-7"	1'-0"

S536

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-255

DRAWN BY JAP | PLANS CK'D. WJZ

SUPERSTRUCTURE DETAILS

SHEET 12 OF 19

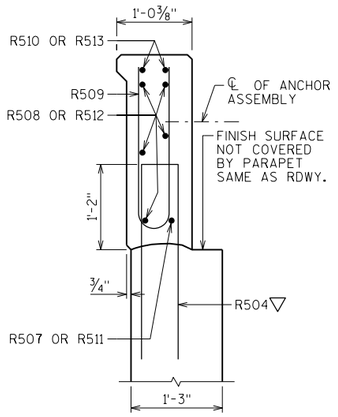
276

8

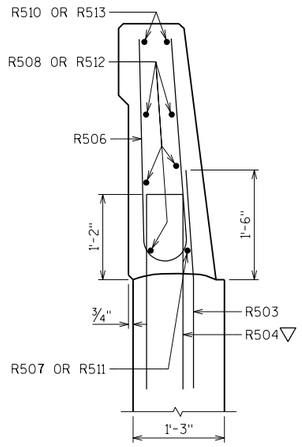
8

FILE= B-40-255_120_SUPERDETAILDGN
SCALE = 1:2.66667

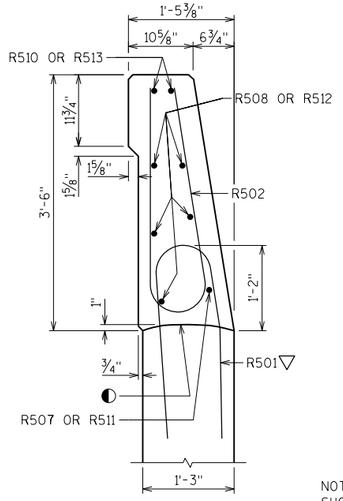
STATE PROJECT NUMBER
1360-13-70



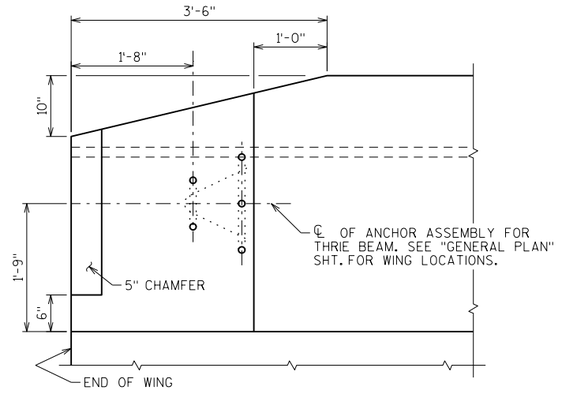
SECTION A-A



SECTION B-B



SECTION C-C



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

BILL OF BARS

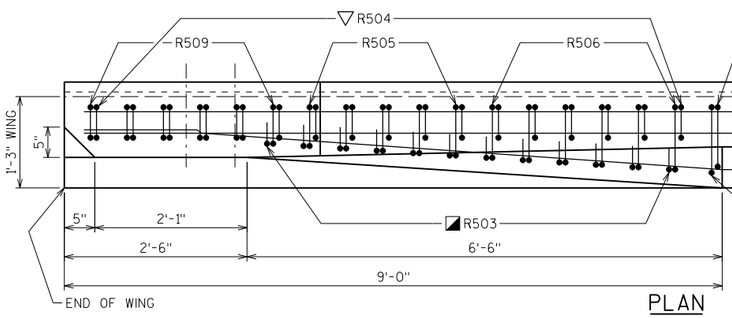
BAR MARK	COAT	NO REQ'D N ABUT.	NO REQ'D S ABUT.	LENGTH	BENT	BAR SERIES	1157# COATED LOCATION
R501	X	14	16	5'-10	X		PARAPET VERT.
R502	X	14	16	6'-8"	X		PARAPET VERT.
R503	X	11	11	3'-0"	X		PARAPET VERT.
R504	X	17	17	5'-7"	X		PARAPET VERT.
R505	X	5	5	6'-5"	X		PARAPET VERT.
R506	X	6	6	6'-6"	X		PARAPET VERT.
R507	X	1		16'-11"	X		PARAPET HORIZ.
R508	X	5		17'-0"			PARAPET HORIZ.
R509	X	6	6	5'-5"	X	▲	PARAPET VERT.
R510	X	2		17'-0"	X		PARAPET HORIZ.
R511	X		1	18'-4"	X		PARAPET HORIZ.
R512	X		5	18'-5"			PARAPET HORIZ.
R513	X		2	18'-5"	X		PARAPET HORIZ.

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

BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
R509	2 SERIES OF 6	4'-9" TO 6'-1"

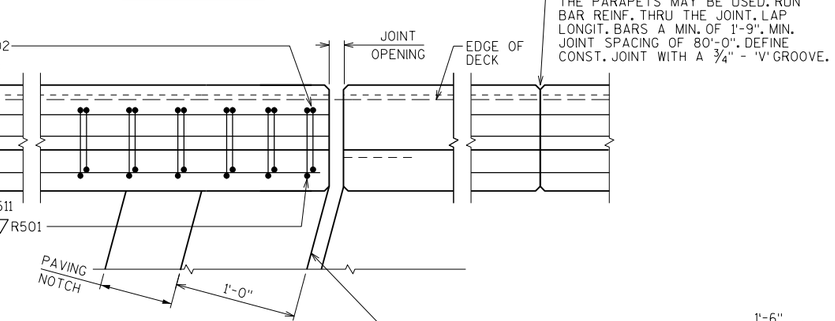
BUNDLE AND TAG EACH SERIES SEPARATELY.



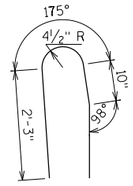
PLAN

NE CORNER SHOWN, SE SIMILAR

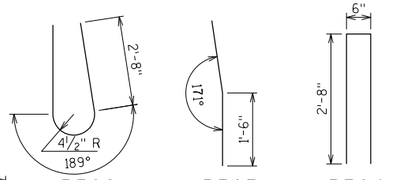
NOTE: CONDUIT NOT SHOWN FOR CLARITY



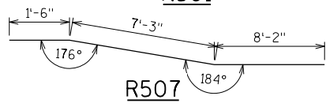
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 3/4" - 'V' GROOVE.



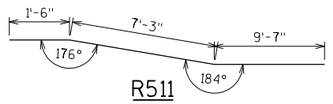
R501



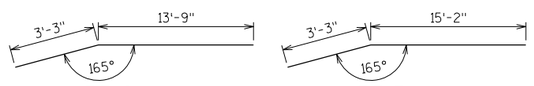
R502 R503 R504



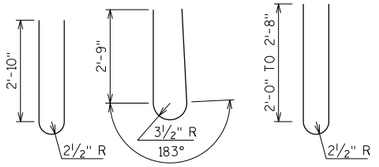
R507



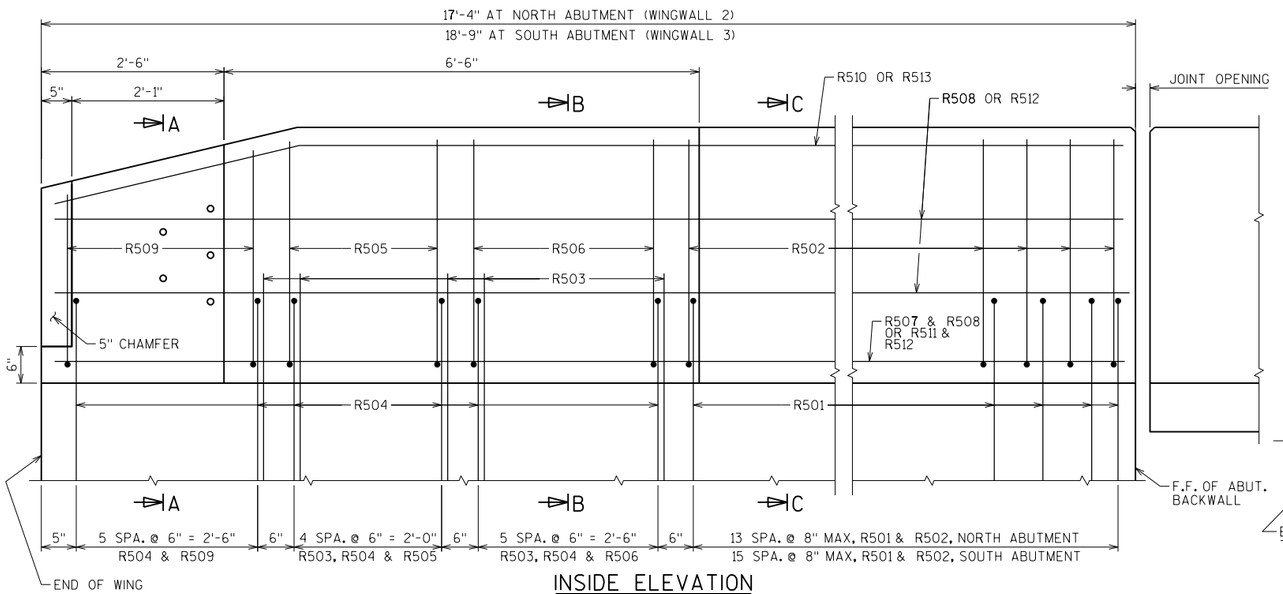
R511



R510 R513

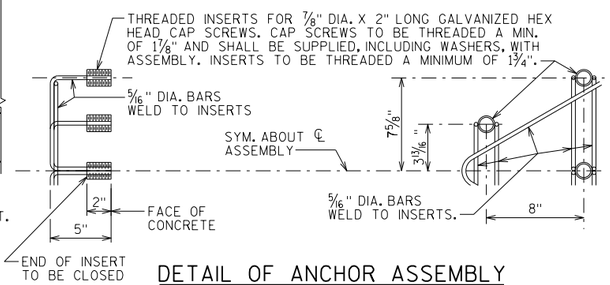


R505 R506 R509



INSIDE ELEVATION

NE CORNER SHOWN, SE SIMILAR



DETAIL OF ANCHOR ASSEMBLY

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

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

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-255

DRAWN BY JAP | PLANS CK'D. WJZ

SINGLE SLOPE PARAPET 42SS

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SCALE = 1:1

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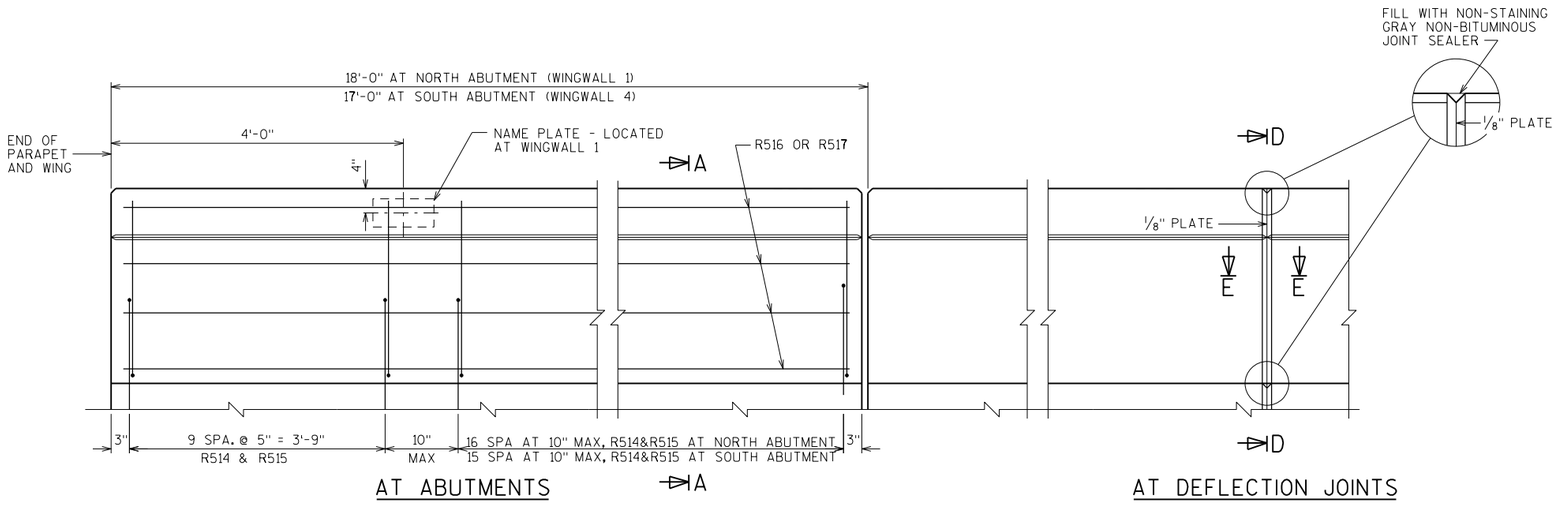
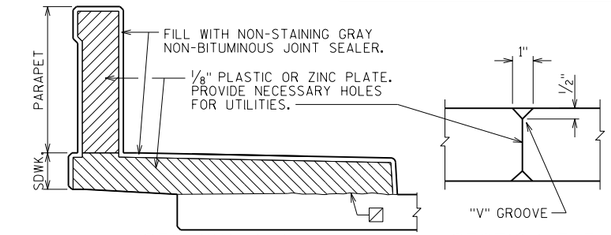


AT ABUTMENTS

AT DEFLECTION JOINTS

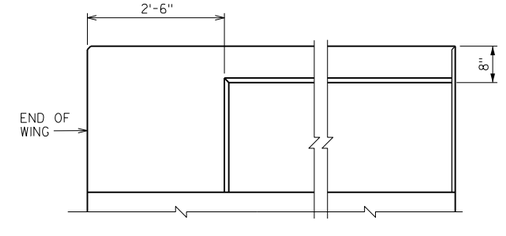


SECTION D-D

SECTION E-E

(SHOWING DEFLECTION JOINT IN PARAPET AND SIDEWALK.)

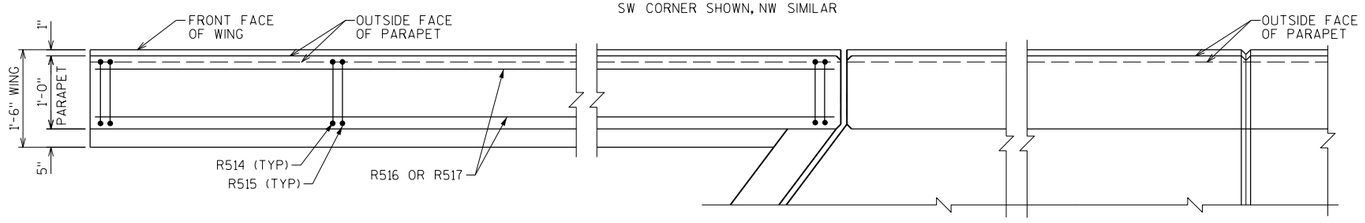
WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION D-D BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.



OUTSIDE FACE OF PARAPET

INSIDE ELEVATION OF PARAPET

SW CORNER SHOWN, NW SIMILAR

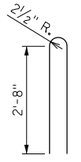


AT ABUTMENTS

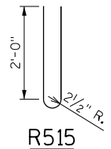
AT DEFLECTION JOINTS

BILL OF BARS

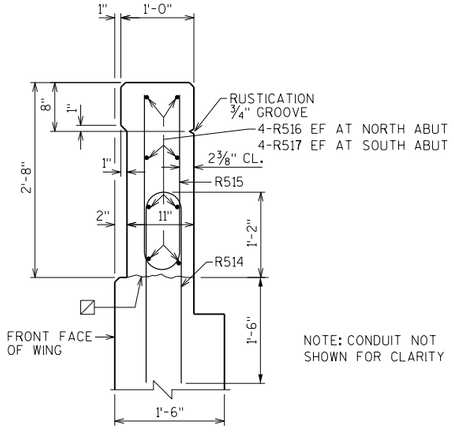
BAR MARK	COAT	NO. REQ'D N ABUT.	NO. REQ'D S ABUT.	LENGTH	BENT	BAR SERIES	822# COATED LOCATION
R514	X	27	26	6'-1"	X		PARAPET VERT.
R515	X	27	26	4'-9"	X		PARAPET VERT.
R516	X	8		17'-8"			PARAPET HORIZ.
R517	X		8	16'-8"			PARAPET HORIZ.



R514



R515



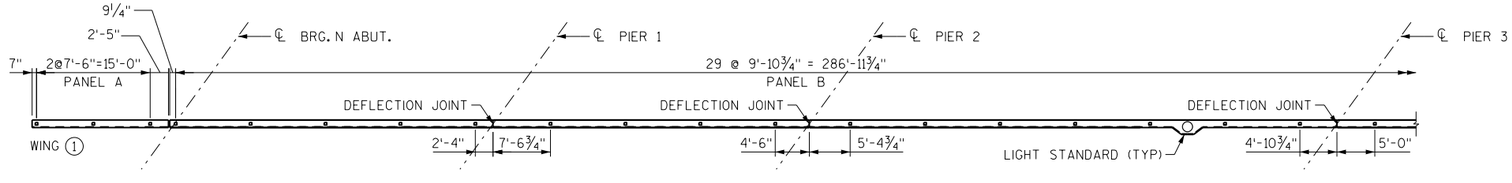
NOTE: CONDUIT NOT SHOWN FOR CLARITY

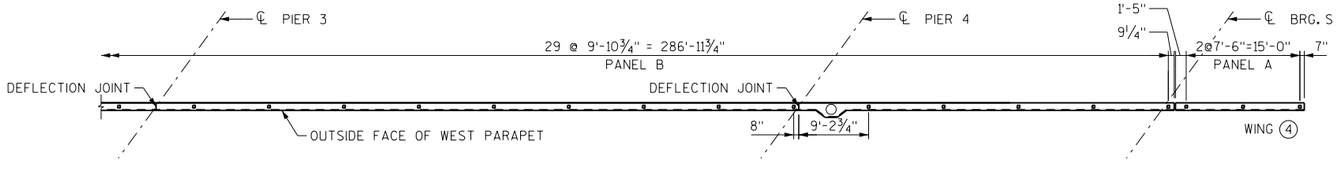
SECTION A-A

☒ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.

PLAN OF PARAPET

SW CORNER SHOWN, NW SIMILAR





FENCE POST SPACING PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-255

DRAWN BY JAP | PLANS CK'D. WJZ

VERTICAL FACE PARAPET "A"

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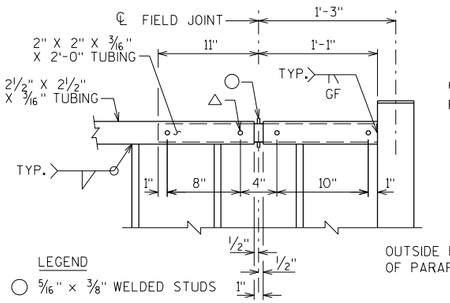
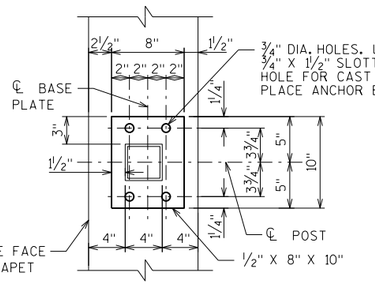
FILE= B-40-255_140_VERTPPTA.DGN

SCALE = 1:1

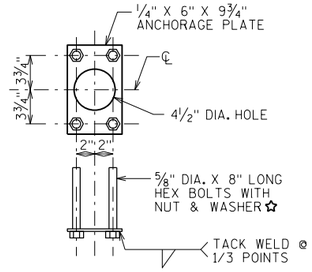


△ WELD BEAD ON EACH SIDE OF TUBE. GRIND BEADS SO THAT SLEEVE FITS FREELY INSIDE THE 2½" × 2½" TUBE.

RAILING EXPANSION JOINT DETAIL



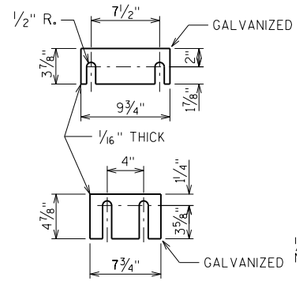
BASE PLATE



ANCHORAGE DETAIL

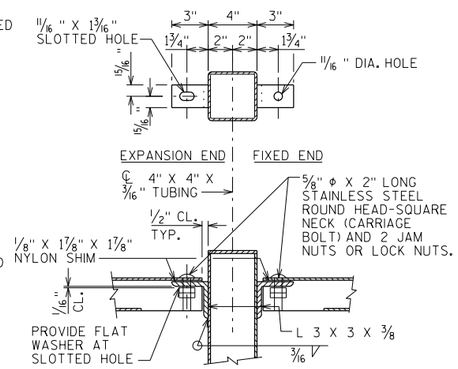
✪ALTERNATIVE ANCHORAGE: ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 AND 502.3.14 OF THE STANDARD SPECIFICATIONS.

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

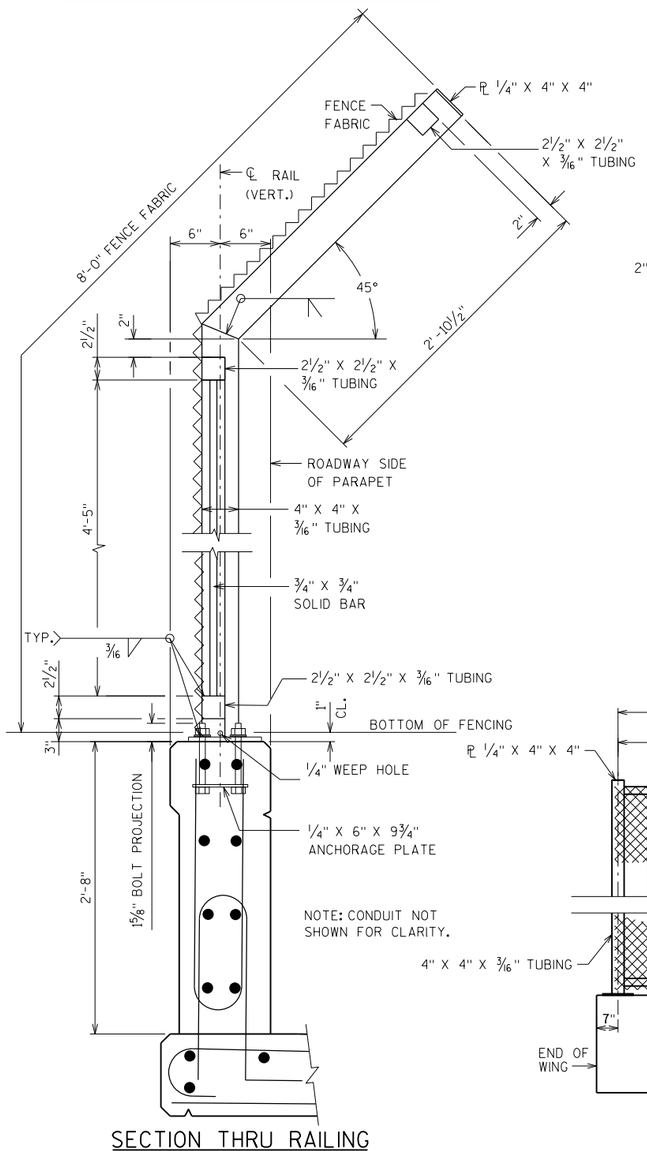


SHIM PLATE DETAILS

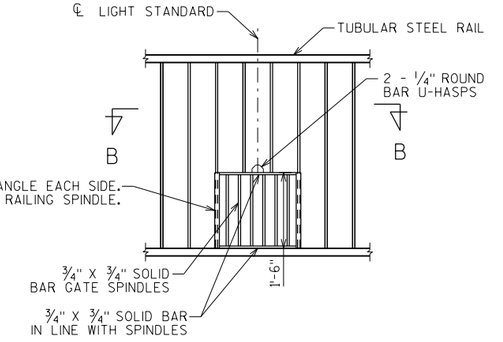
TWO SHIMS OF EACH SIZE REQUIRED PER POST



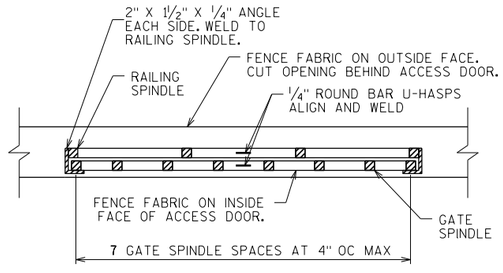
TOP RAIL CONNECTION FOR FENCE W/ BENT TOP



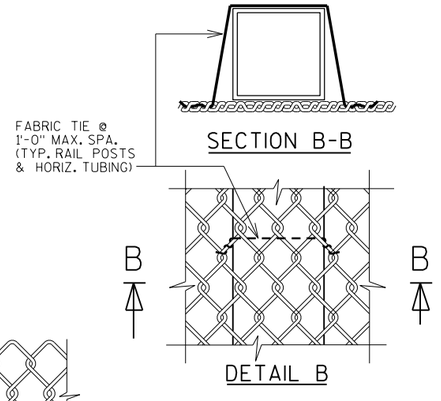
SECTION THRU RAILING

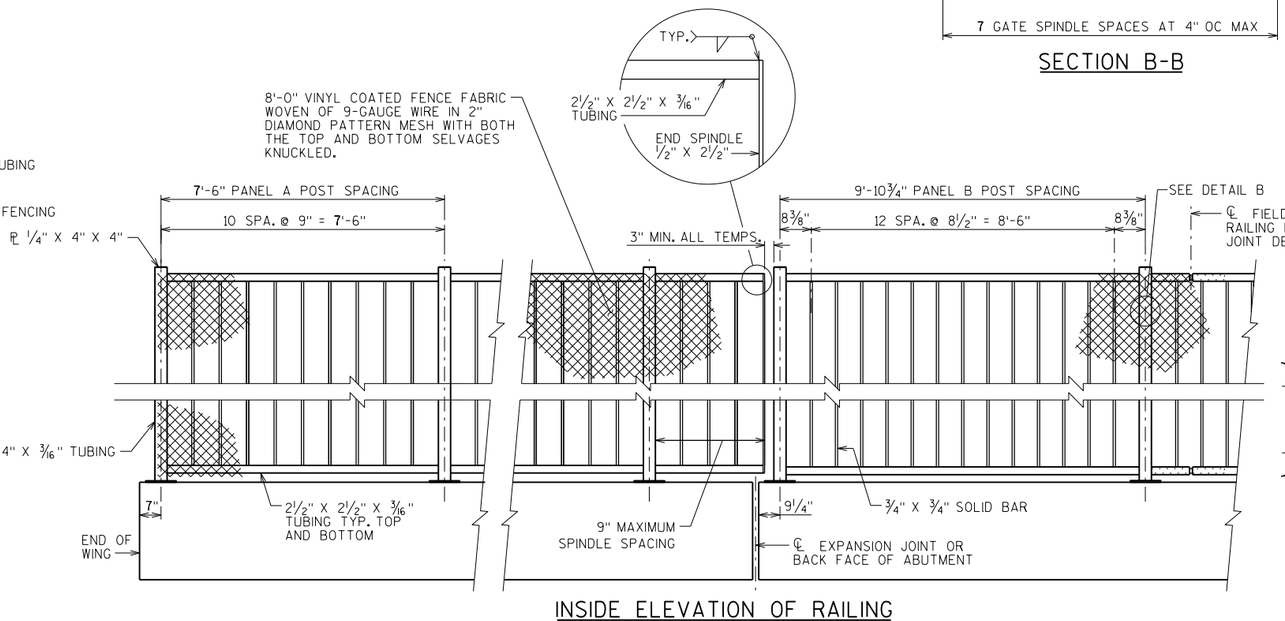


RAILING ACCESS DOOR ELEVATION

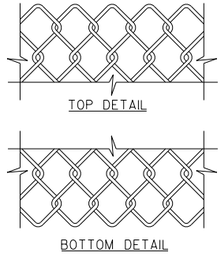


SECTION B-B





INSIDE ELEVATION OF RAILING



FENCE FABRIC

NOTES

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 CUT.

STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B. PLATES, ANGLES, BARS AND SHIMS SHALL CONFORM TO ASTM A709, GRADE 36. FENCE FABRIC SHALL CONFORM TO F668, CLASS 2B.

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

ALL POST SPACINGS ARE TAKEN HORIZONTAL ALONG CENTERLINE OF RAILING AT BASE OF POST.

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

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED. ✪

THE BID ITEM SHALL BE "RAILING TUBULAR SCREENING" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE NOT MORE THAN 3 POSTS.

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

ALL RAILING MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS.

THE END OF THE FABRIC SHALL BE ATTACHED TO THE POST BY MEANS OF A TENSION BAR THREADED THROUGH THE END LOOPS OF THE FABRIC AND SECURED TO THE POST WITH CLAMPS & BOLT. THE FABRIC SHALL BE STRETCHED TO REMOVE ALL SLACK.

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TUBULAR STEEL RAILING SCREENING

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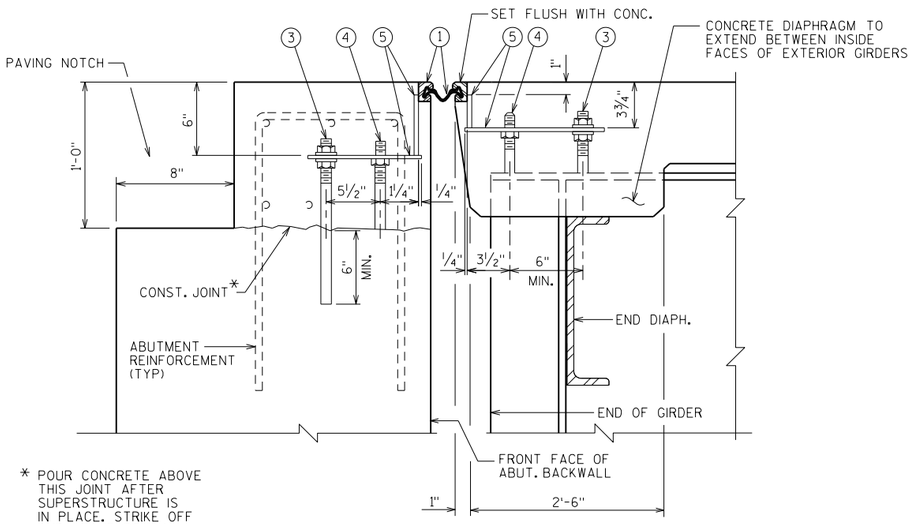
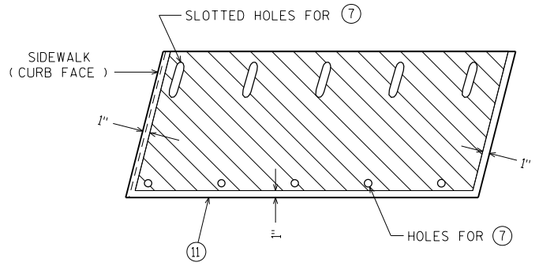


* POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE



PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE

PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN HATCHED AREA ONLY (NOT ON CURB FACE).

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES		
PRODUCT	MANUFACTURER	CONTACT AT
SLIPNOT GRADE 2, STEEL	W. S. MOLNAR COMPANY	1-800-SLIPNOT
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170

LEGEND

① NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.

② STUDS ⅝"Φ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝"Φ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

③ ¾" Φ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

④ ¾"Φ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

⑤ FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" Φ HOLE FOR NO. 3 & 1" Φ HOLE FOR NO. 4.

⑥ GALVANIZED PLATE ⅜" X 10" X 2'-2" LONG WITH HOLES FOR NO. 7.

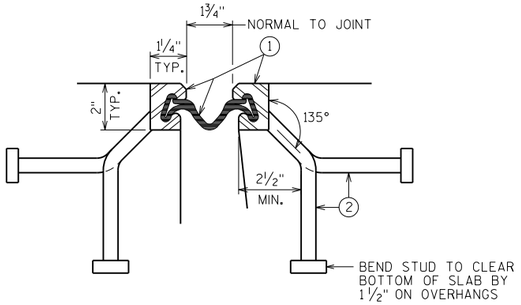
⑦ ¾"Φ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

⑧ ¾"Φ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

⑨ ¾"Φ X 2¼" GALVANIZED THREADED COUPLING.

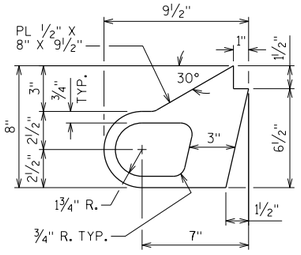
⑩ 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

⑪ SIDEWALK COVER PLATE ⅜" X 2'-0" X LIMITS SHOWN. BEND DOWN FACE OF SIDEWALK WITH HOLES FOR NO. 7. GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.

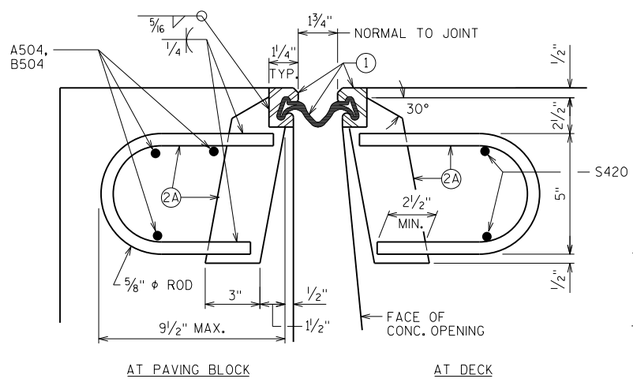


SECTION THRU JOINT

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

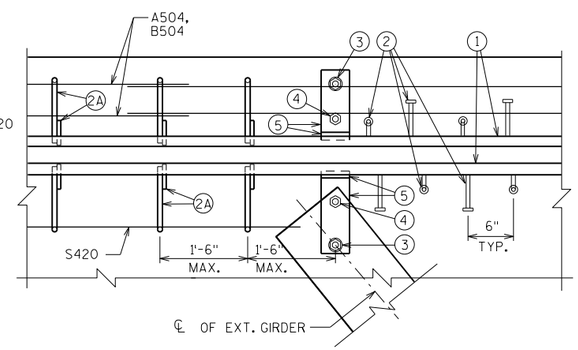


ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



PART PLAN

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, ANCHOR PLATES SHALL BE PROVIDED 3" FROM EACH SIDE OF THE FIELD SPLICE. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

ALL MATERIAL IN THE EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID AT THE UNIT PRICE BID FOR "EXPANSION DEVICE", LF.

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STRUCTURE B-40-255

DRAWN BY JAP | PLANS CK'D. WJZ

STRIP SEAL EXPANSION JOINT

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FILE= B-40-255_160_JOINT.DGN
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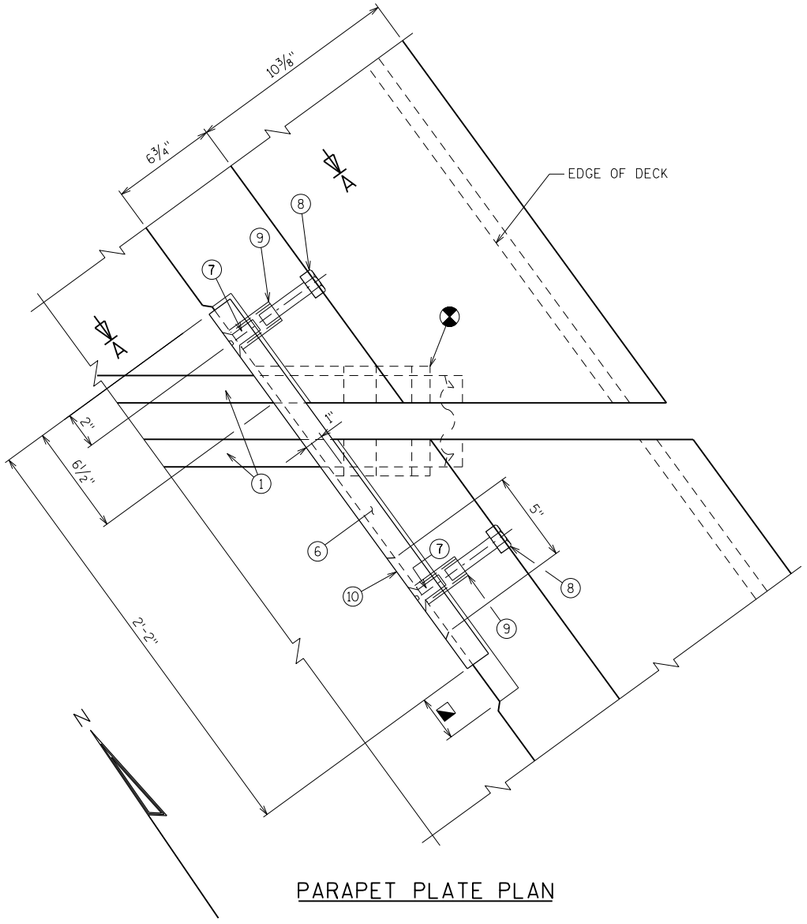
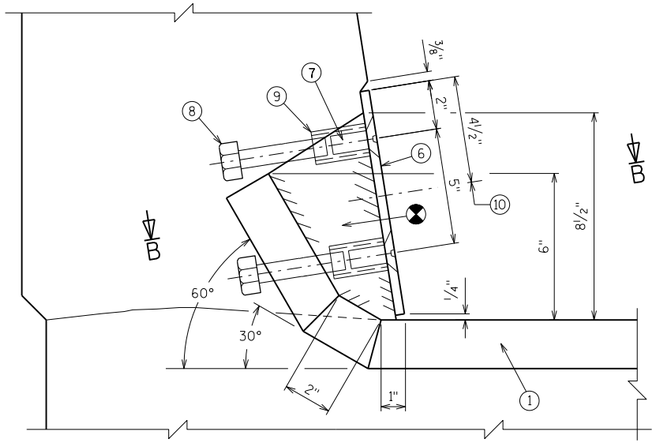
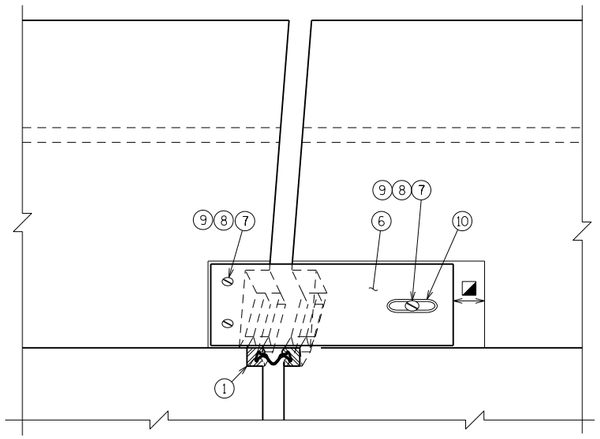


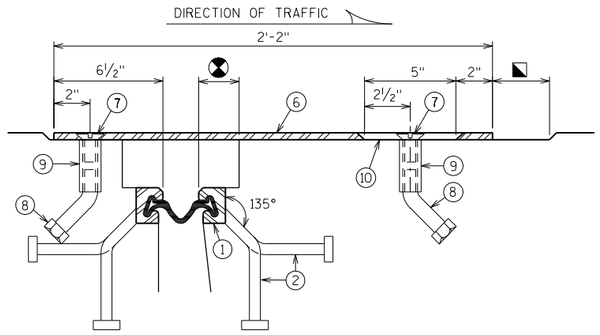
PARAPET PLATE PLAN



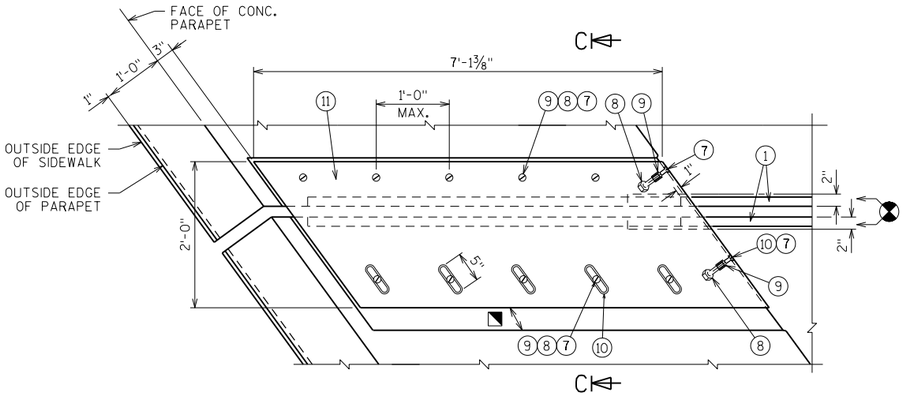
SECTION A-A



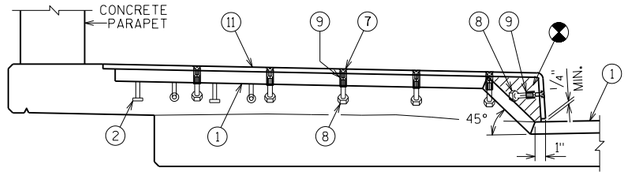
VIEW OF PARAPET PLATE FROM ROADWAY



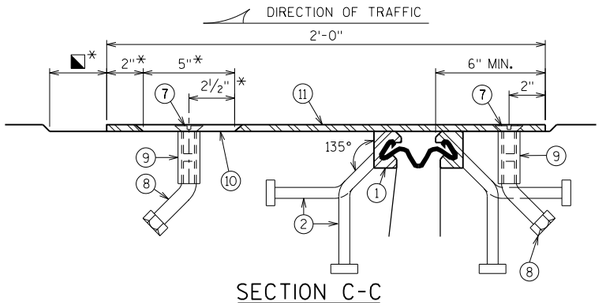
SECTION B-B



SIDEWALK PLATE PLAN



SECTION AT SIDEWALK



SECTION C-C

* DIMENSION ALONG DIRECTION OF MOVEMENT

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION ALONG SKEW PLUS 1/2".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-255

DRAWN BY JAP | PLANS CK'D. WJZ

COVER PLATE DETAILS

SHEET 17 OF 19

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FILE = B-40-255_1TO_COVERPLATES.DGN
SCALE = 1:1

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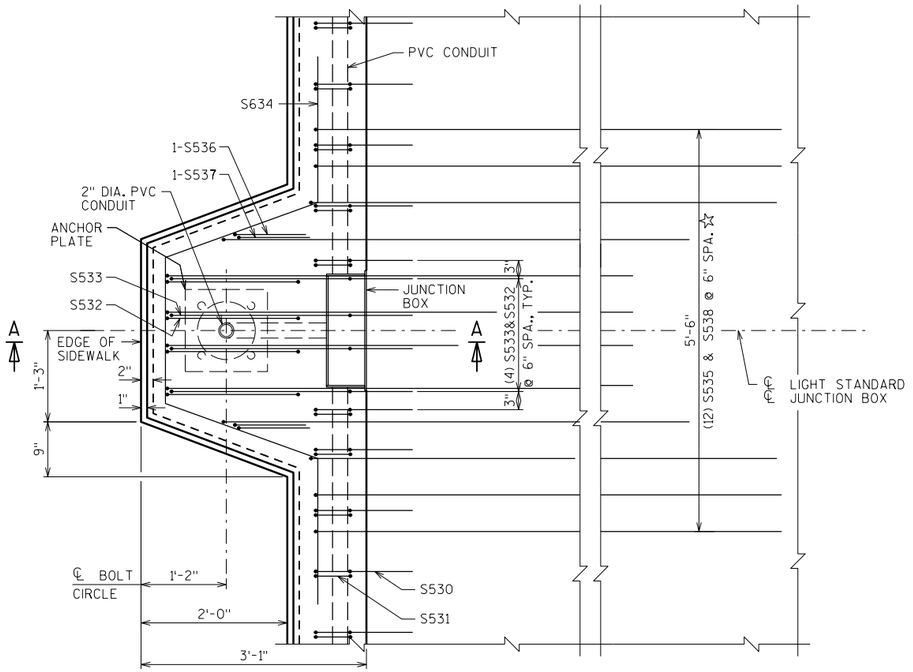
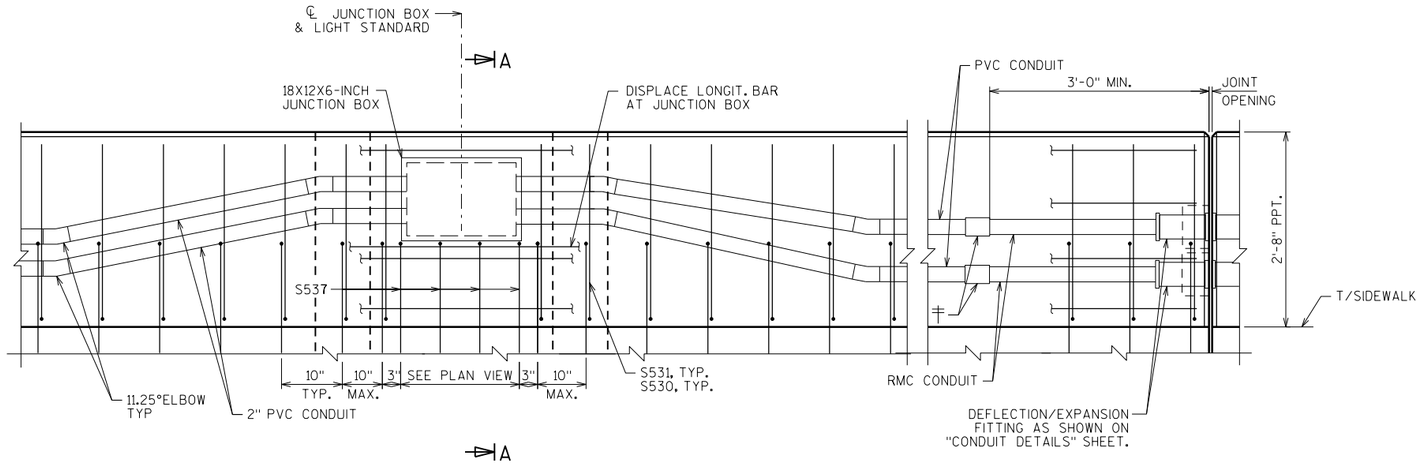
STATE PROJECT NUMBER
1360-13-70



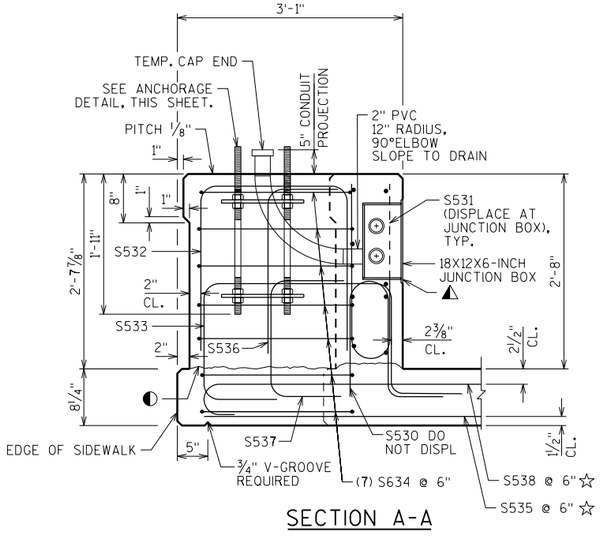
PLAN AT LIGHT STANDARD

(DECK AND SIDEWALK STEEL NOT SHOWN FOR CLARITY)



INSIDE ELEVATION AT JUNCTION BOX

(DECK AND SIDEWALK STEEL NOT SHOWN FOR CLARITY)



SECTION A-A

NOTES

BID ITEM SHALL BE "ANCHOR ASSEMBLIES POLES ON STRUCTURES", EACH

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2½" DIA. RIGID NONMETALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE.

CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS ARE INCIDENTAL TO CONDUIT WORK.

PROVIDE JUNCTION BOXES FROM THE APPROVED PRODUCTS LIST.

SEE "CONDUIT DETAILS" SHEET FOR ADDITIONAL INFORMATION.

⅜" NYLON PULL WIRE/ROPE IS REQUIRED FOR ALL CONDUIT AND SHALL BE INCIDENTAL TO CONDUIT INSTALLATION

ANCHOR BOLTS FOR ANCHOR ASSEMBLIES MUST BE INSTALLED PERPENDICULAR TO THE HORIZON

THE TOP OF THE LIGHT STANDARD SHALL HAVE A ⅛" PITCH FROM THE OUTSIDE FACE OF THE PARAPET TO THE OUTSIDE FACE OF THE LIGHT STANDARD.

LEGEND

◐ CONSTRUCTION JOINT, STRIKE OFF AS SHOWN.

◭ CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

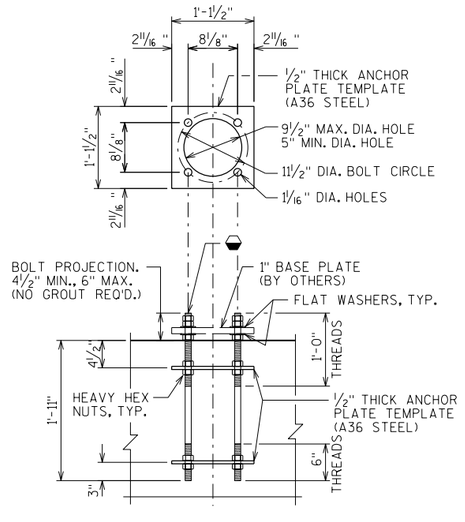
⫩ NONMETALLIC CONDUIT TO METALLIC CONDUIT ADAPTER FITTING (UL OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED).

PVC = POLYVINYL CHLORIDE (RIGID NONMETALLIC) CONDUIT

RMC = RIGID METALLIC CONDUIT

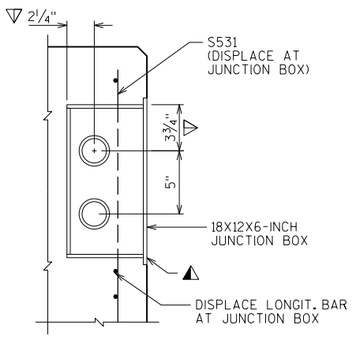
☆ THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN SIDEWALK.

◒ 1" DIA. ANCHOR RODS ASTM F1554 GR 55, HEAVY HEX NUTS ASTM A563, AND WASHERS ASTM F436. ANCHOR ASSEMBLIES SHALL BE GALVANIZED PER SECTION 531 OF THE STANDARD SPECIFICATION. PROVIDE (2) WASHERS AND (7) NUTS PER ANCHOR ROD.



ANCHOR ROD ASSEMBLY DETAIL

(SINGLE ASSEMBLY SHOWN 2 - REQ'D.)
(4) - ANCHOR RODS REQUIRED PER ASSEMBLY



JUNCTION BOX DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-255

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LIGHT SUPPORT DETAILS

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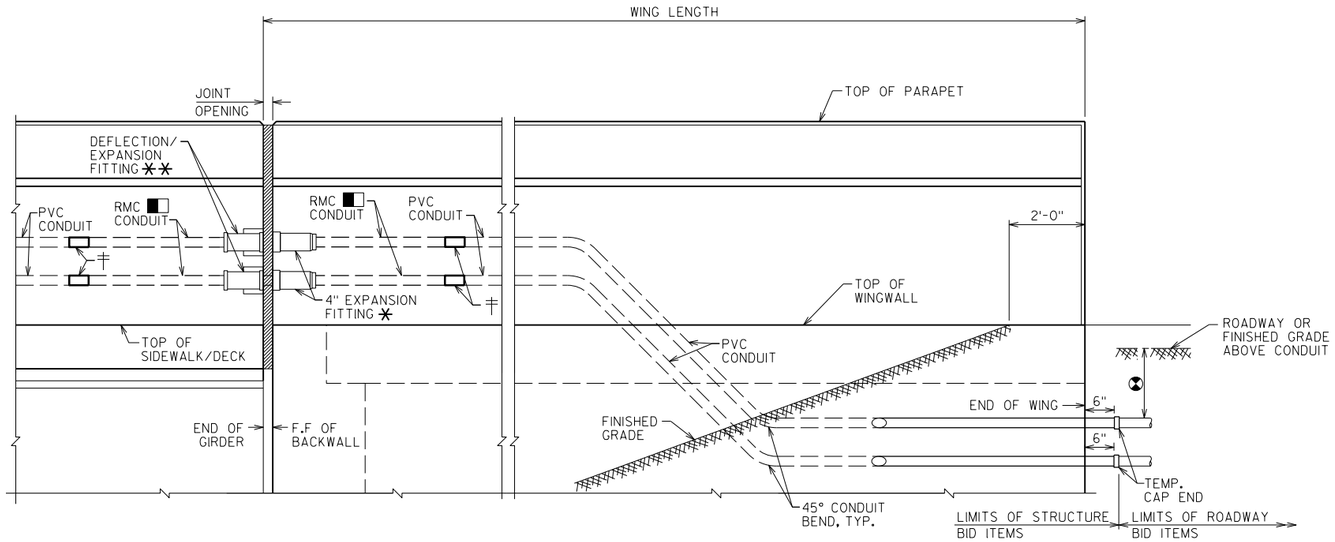
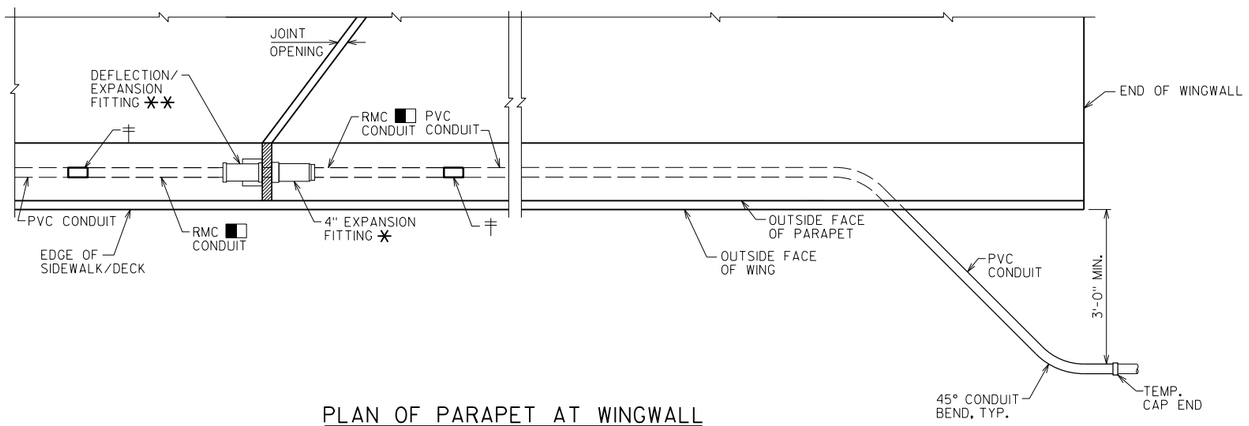
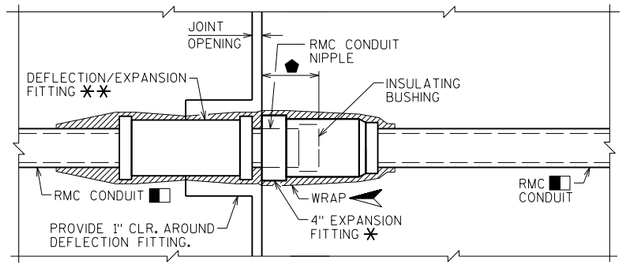


OUTSIDE ELEVATION OF PARAPET AT WINGWALL



PLAN OF PARAPET AT WINGWALL



DEFLECTION/EXPANSION AND 4" EXPANSION FITTING

THIS DETAIL ACCOMMODATES A MAXIMUM OF 4" TOTAL MOVEMENT AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION. BOND JUMPER NOT SHOWN FOR CLARITY

LEGEND

■ USE 2" DIA. RIGID METALLIC (RMC) CONDUIT AT FITTINGS. PROVIDE RMC FOR 3'-0" MIN. ON EACH SIDE OF 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 - 1/4" MINIMUM THICKNESS. PROVIDE WRAP FOR THE ENTIRE LENGTH OF THE FITTING OR AS SHOWN. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

⬟ POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

☢ 2'-0" MIN. CONDUIT COVER UNDER ROADWAYS, 1'-6" OTHERWISE. CONDUIT COVER SHOULD NOT EXCEED 3'-0".

✳ EXPANSION FITTING REQUIREMENTS (IF USED):
- 4" TOTAL MOVEMENT WITH BONDING JUMPER

✳✳ DEFLECTION/EXPANSION FITTING REQUIREMENTS (IF USED):
- UP TO 3/4" CONDUIT CONTRACTION OR EXPANSION AND UP TO 30° OF ANGULAR MISALIGNMENT IN ANY DIRECTION WITH BONDING JUMPER

NOTES

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" 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.

3/8" NYLON PULL WIRE/ROPE IS REQUIRED FOR ALL CONDUIT AND SHALL BE INCIDENTAL TO CONDUIT INSTALLATION.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-255

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CONDUIT DETAILS

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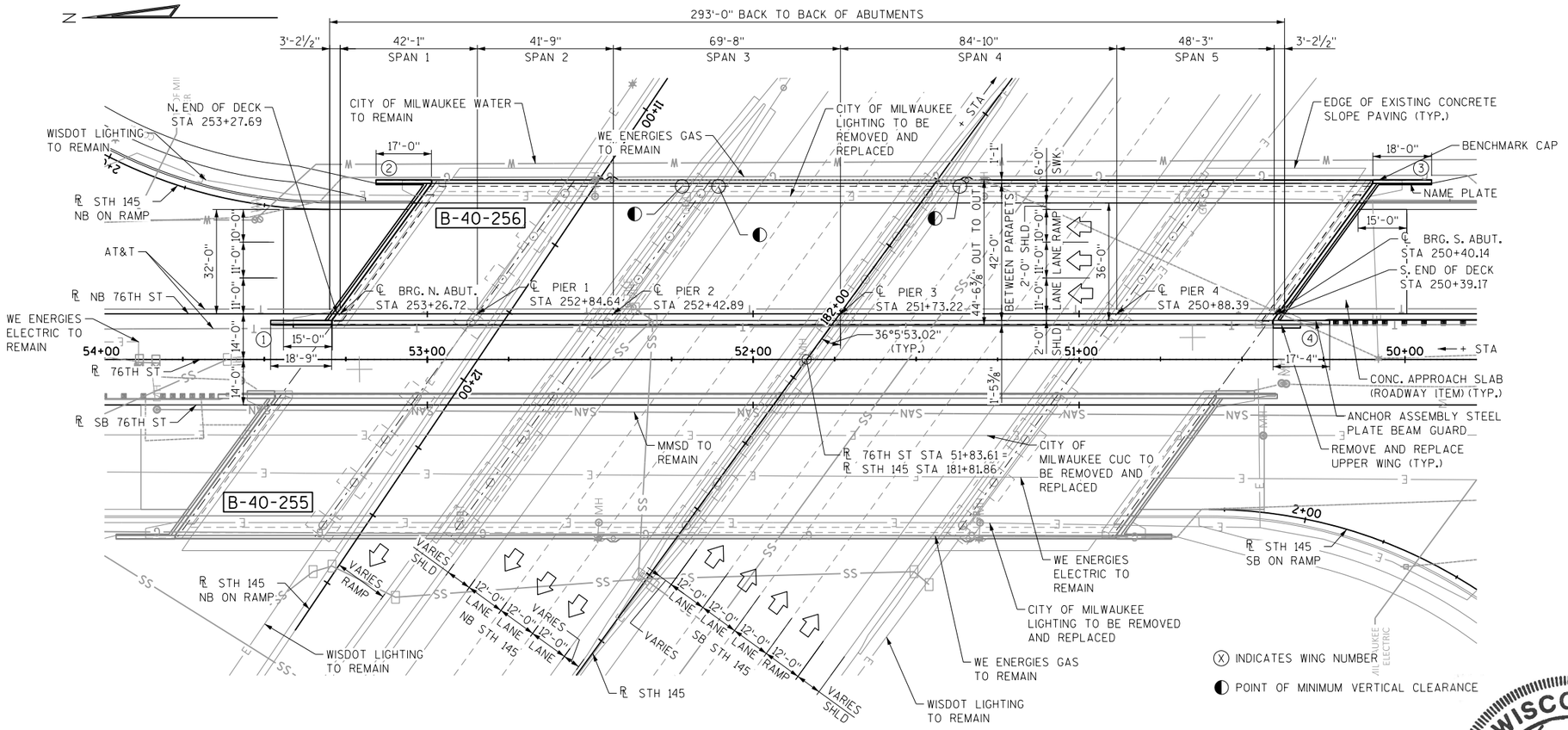
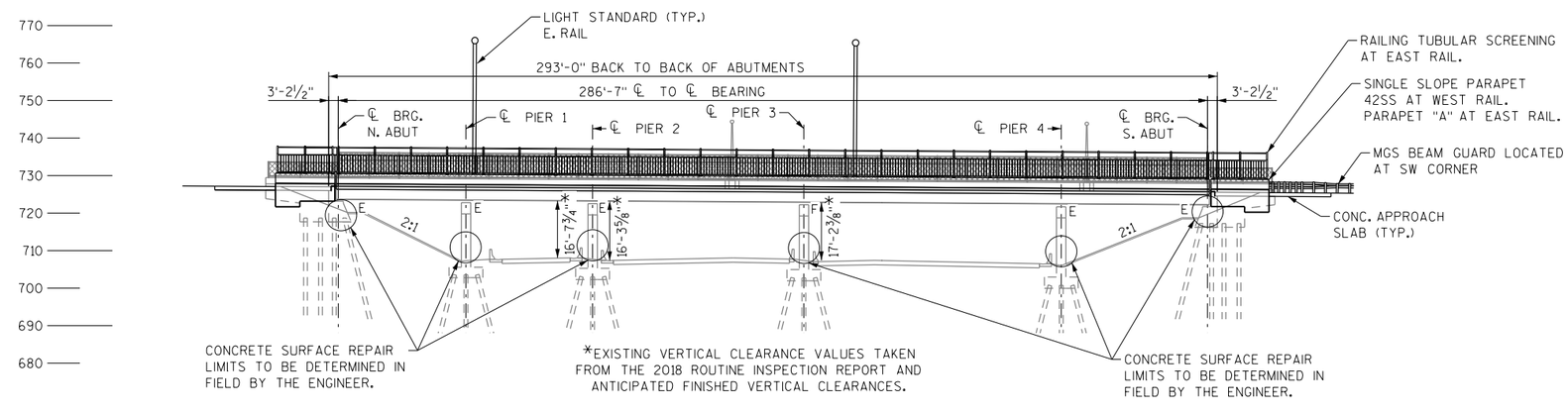
STATE PROJECT NUMBER
1360-13-70



PLAN

(5 SPAN - STEEL GIRDERS)
DECK REPLACEMENT, POLYMER OVERLAY, AND REPAINTING



ELEVATION

LOOKING SOUTHEAST ALONG ℄ STH 145

DESIGN DATA

LIVE LOAD:
DESIGN LOADING HS20
INVENTORY RATING HS17
OPERATING RATING HS31
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV) = 250 KIPS
DESIGN ACCOUNTS FOR FUTURE WEARING SURFACE = 20 PSF

MATERIAL PROPERTIES:
CONCRETE MASONRY:
SUBSTRUCTURE ..... f'c = 3,500 psi
SUPERSTRUCTURE ..... f'c = 4,000 psi
BAR STEEL REINFORCEMENT ..... fy = 60,000 psi

EXISTING STRUCTURE

THE EXISTING BRIDGE (B-40-256) IS A 293'-0" LONG, 44'-8" WIDE 5 SPAN STEEL GIRDER BRIDGE SUPPORTED ON REINFORCED CONCRETE PIERS AND ABUTMENTS. THE STRUCTURE BEGINS AT STA 250+37.75 AND ENDS AT STA 253+29.11. PLANS OF THE EXISTING BRIDGE ARE AVAILABLE FOR REVIEW AT WISDOT SE REGION OFFICE, 141 NW BARSTOW ST. WAUKESHA, WI OR THROUGH THE WISDOT STRUCTURES WEBSITE.

BENCHMARKS

NAME	DESCRIPTION	ELEV	STA (STH 145)	OFFSET
523	CP F1000SPK BERNSTEN FENO WITH ALUMINIM CAP	719.07	285+21.65	404.59' RT
524	CP F1000SPK BERNSTEN FENO WITH ALUMINIM CAP	726.09	278+51.36	432.63' LT

TRAFFIC DATA

STH 181 (76TH ST)
AADT 2022 = 28,800
AADT 2042 = 31,600
DESIGN SPEED = 40 MPH.

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
AARON BONK, PE
(608) 261-0261

CONSULTANT:
WILLIAM J. ZIPPEL, PE, SE
ALFRED BENESCH & CO
1300 W CANAL ST, SUITE 150
MILWAUKEE, WI 53233
(414) 308-1321

Ⓧ INDICATES WING NUMBER

◐ POINT OF MINIMUM VERTICAL CLEARANCE

WISCONSIN
WILLIAM J. ZIPPEL
38868-006
MILWAUKEE, WI
5/30/2023
PROFESSIONAL ENGINEER

LIST OF DRAWINGS:

1. GENERAL PLAN & ELEVATION
2. TYPICAL SECTIONS, QUANTITIES & GENERAL NOTES
3. STAGING PLAN & TYP DETAILS
4. SUBSTRUCTURE REMOVALS
5. NORTH ABUTMENT MODIFICATIONS
6. NORTH ABUTMENT WINGWALL MODIFICATIONS
7. SOUTH ABUTMENT MODIFICATIONS
8. SOUTH ABUTMENT WINGWALL MODIFICATIONS
9. BEARING DETAILS
10. DECK ELEVATIONS
11. SUPERSTRUCTURE REINFORCEMENT
12. SUPERSTRUCTURE DETAILS
13. SINGLE SLOPE PARAPET 42SS
14. VERTICAL FACE PARAPET "A"
15. TUBULAR STEEL RAILING SCREENING
16. STRIP SEAL EXPANSION JOINT
17. COVER PLATE DETAILS
18. LIGHT SUPPORT DETAILS
19. CONDUIT DETAILS

NO.	DATE	REVISION	BY

benesch
Alfred Benesch & Company
1300 West Canal Street, Suite 150
Milwaukee, Wisconsin 53233
414-308-1310 Job No. 20288.00

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 05/31/23
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-40-256

STH 181 NB (N 76TH ST) OVER STH 145

COUNTY	MILWAUKEE	~~TOWN~~/CITY/~~VILLAGE~~	MILWAUKEE
DESIGN SPEC.	REHABILITATION N/A		

DESIGNED BY	JAP	DESIGN CK'D.	WJZ	DRAWN BY	JAP	PLANS CK'D.	WJZ

GENERAL PLAN & ELEVATION

SHEET 1 OF 19

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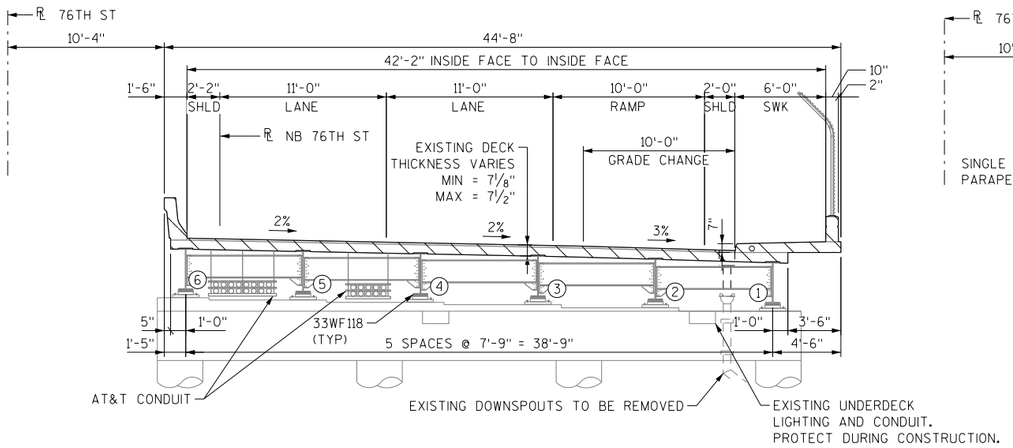
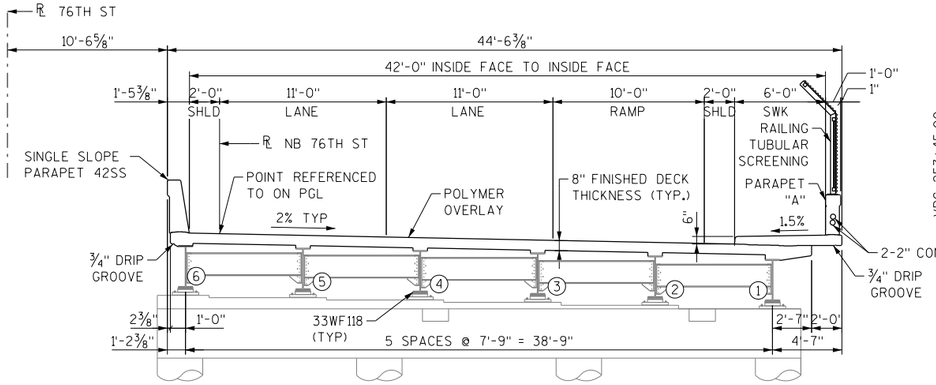
STATE PROJECT NUMBER

1360-13-70



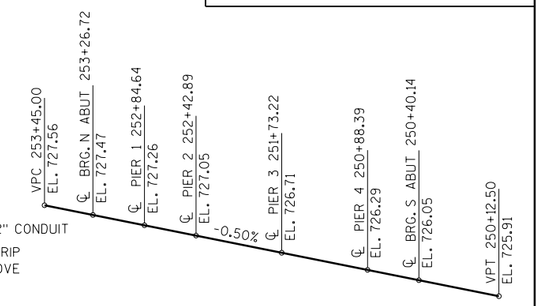
EXISTING TYPICAL SECTION THRU STRUCTURE B-40-256

(LOOKING NORTH)



FINISHED TYPICAL SECTION THRU STRUCTURE B-40-256

(LOOKING NORTH)



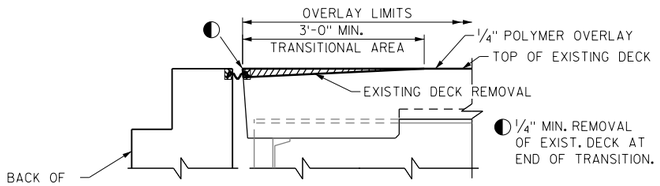
PROFILE GRADE LINE 76TH ST NB

GENERAL NOTES

1. DRAWINGS SHALL NOT BE SCALED.
2. EXISTING STRUCTURE DIMENSIONS ARE BASED ON THE ORIGINAL STRUCTURE PLANS.
3. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
4. THE TOP LAYER OF BAR STEEL REINFORCEMENT IN THE DECK SHALL BE PLACED WITH 2½" OF CONCRETE COVER.
5. THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
6. PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND TOP OF THE PARAPETS.
7. BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.
8. ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS NOTED OTHERWISE.
9. ALL STATIONS AND ELEVATIONS ARE IN FEET.
10. THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE DECK REPLACEMENT DETAILS.
11. THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.
12. UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.
13. THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR, 1964.
14. EXISTING FLOOR DRAIN REMOVAL IS INCLUDED IN THE COST OF BID ITEM "REMOVING OLD STRUCTURE B-40-256."
15. VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.
16. THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-40-256" SHALL BE THE EXISTING GROUNDLINE.
17. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
18. APPLY PROTECTIVE SURFACE TREATMENT TO THE DECK AND SIDEWALK ON THE BRIDGE.
19. ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT UNLESS SHOWN OR NOTED OTHERWISE.
20. AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.
21. THE COLOR OF THE FINISH EPOXY TOP COAT FOR THE GIRDERS AND CONNECTING STRUCTURAL STEEL SHALL BE BLUE (AMS COLOR NO. 25240).
22. CLEAN AND PAINT BEARINGS AT PIERS. COST IS INCLUDED IN THE RELEVANT STRUCTURE PAINTING PAY ITEMS.
23. SHOT BLASTING, DECK SURFACE PREPARATIONS, AND TRANSITIONAL AREAS ARE INCLUDED IN THE BID ITEM "POLYMER OVERLAY".
25. REMOVE DRAIN PIPES AT PIERS 2 AND 4, INCLUDED IN BID NO. 203.0200.

TOTAL ESTIMATE OF QUANTITIES

ITEM NO.	BID ITEMS	UNIT	N ABUT	PIER 1	PIER 2	PIER 3	PIER 4	S ABUT	SUPER	TOTAL
203.0220	REMOVING STRUCTURE B-40-256	EACH								1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-40-256	EACH								1
210.1500	BACKFILL STRUCTURE TYPE A	TON	98					102		200
502.0100	CONCRETE MASONRY BRIDGES	CY	24.1					24.6	452.7	501
502.3101	EXPANSION DEVICE	LF	52					52		104
502.3200	PROTECTIVE SURFACE TREATMENT	SY							1155	1155
502.3210	PIGMENTED SURFACE SEALER	SY							291	291
502.4204	ADHESIVE ANCHORS NO. 4 BAR	EACH	3					6		9
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	120					114		234
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	3307					3310	108409	115026
506.6000	BEARING ASSEMBLIES EXPANSION B-40-256	EACH	6					6		12
506.7050.S	REMOVING BEARINGS B-40-256	EACH	6					6		12
509.1500	CONCRETE SURFACE REPAIR	SF	15	5	20	0	60	25		125
509.5100.S	POLYMER OVERLAY	SY							1155	1155
513.4091	RAILING TUBULAR SCREENING	LF							324	324
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	14					14		28
517.0901.S	PREPARATION AND COATING OF TOP FLANGES B-40-256	EACH								1
517.1801.S	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-256	EACH								1
517.4501.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-40-256	EACH								1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH								1
531.8990	ANCHOR ASSEMBLIES POLES ON STRUCTURES	EACH							2	2
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	123					123		246
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1							1
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	47					47		94
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF							24	24
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF							626	626
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH							2	2
	NON-BID ITEMS									
	PREFORMED JOINT FILLER - ½", ¾"									
	NON-BITUMINOUS JOINT SEALER									
	NAME PLATE									



SECTION THRU ABUTMENT TRANSITIONAL AREA ON DECK AT EXPANSION JOINT

(REMOVAL AND OVERLAY THICKNESS NOT TO SCALE)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-256

DRAWN BY JAP | PLANS CK'D. WJZ

TYPICAL SECTIONS, QUANTITIES & GENERAL NOTES

SHEET 2 OF 19

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FILE= B-40-256_20_TYP&QTY.DGN
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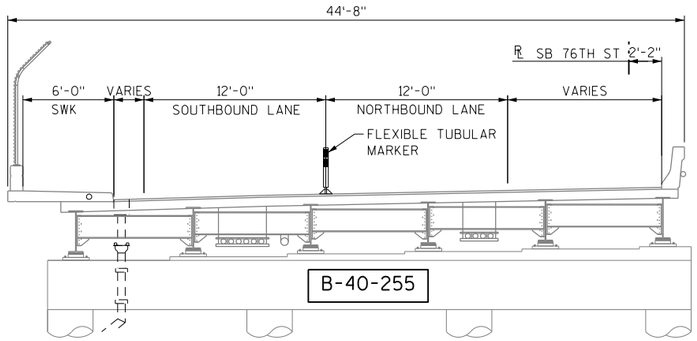
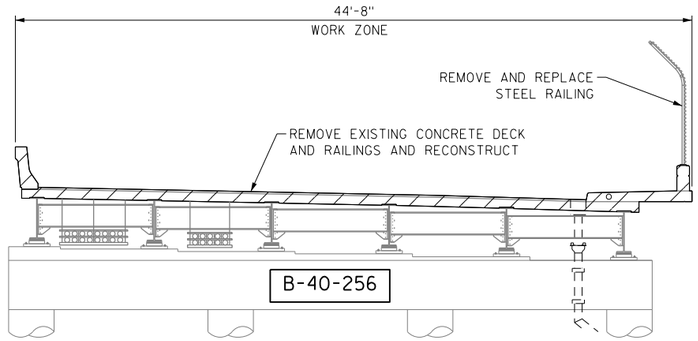
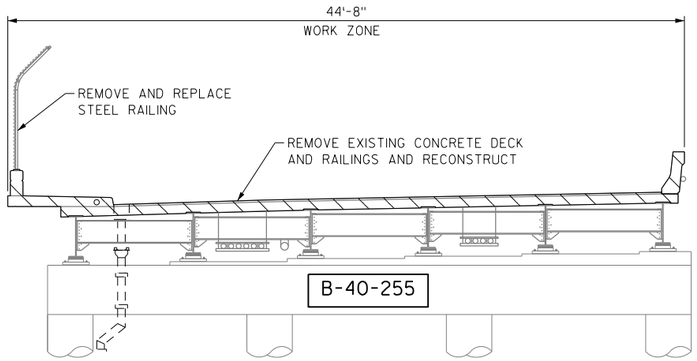
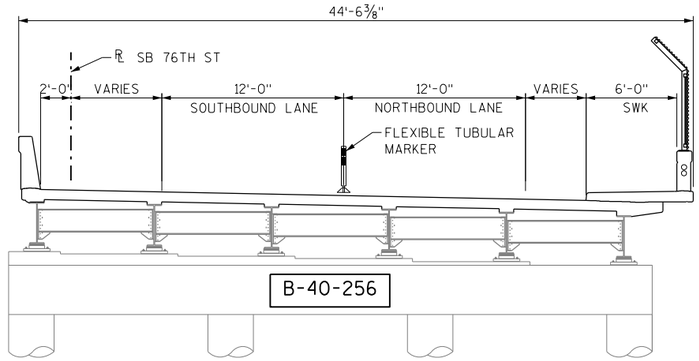
STATE PROJECT NUMBER
1360-13-70



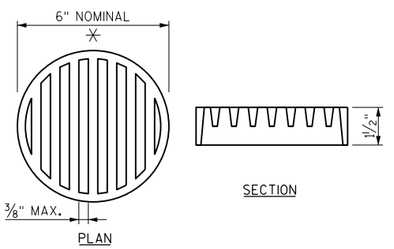


STAGE 2: SECTION
(LOOKING NORTH)





STAGE 3: SECTION
(LOOKING NORTH)

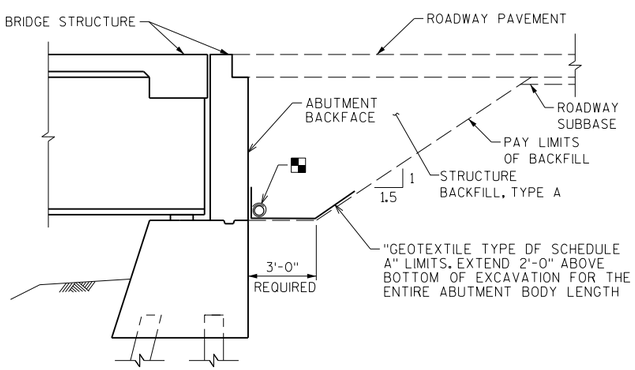


RODENT SHIELD DETAIL

⚹ 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.



⚠ 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.

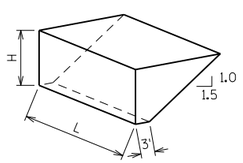
ABUTMENT BACKFILL SECTION

ABUTMENT BACKFILL NOTES

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-40-256" SHALL BE THE EXISTING GROUNDLINE

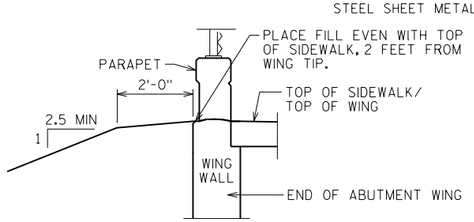
AT THE BACKFACE OF ABUTMENT, ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.



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 FILL SECTION AT WING TIPS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-256

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STAGING PLAN & TYP DETAILS

SHEET 3 OF 19

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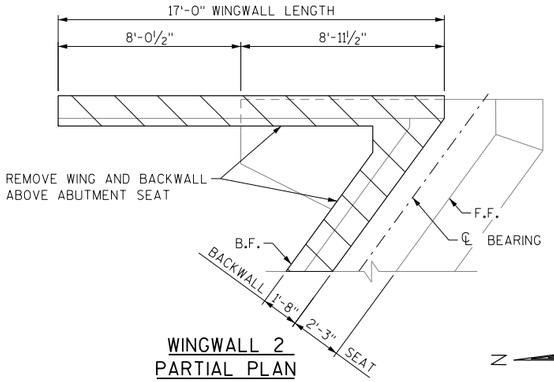
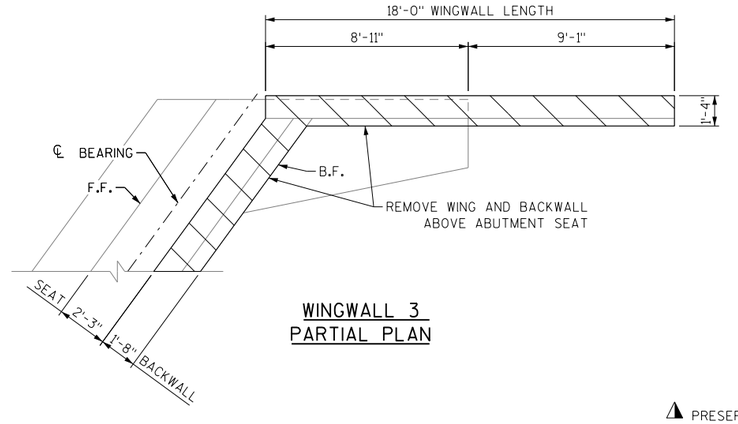
STATE PROJECT NUMBER

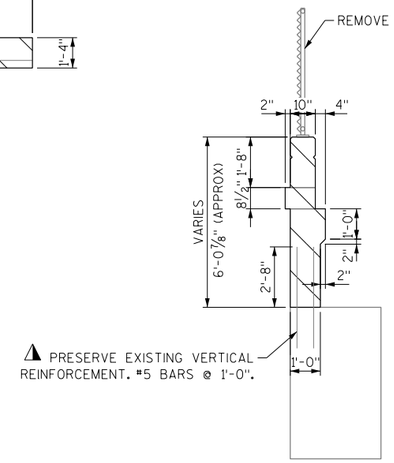
1360-13-70



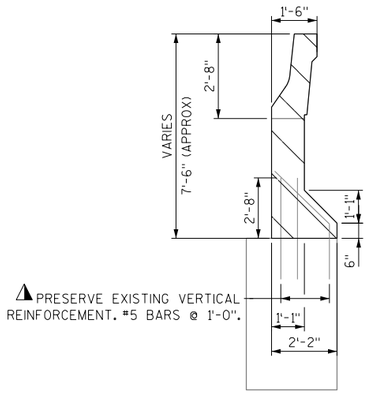
WINGWALL 2
PARTIAL PLAN



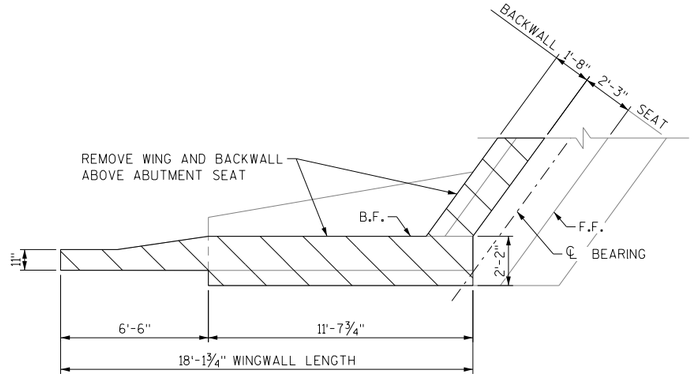
WINGWALL 3
PARTIAL PLAN



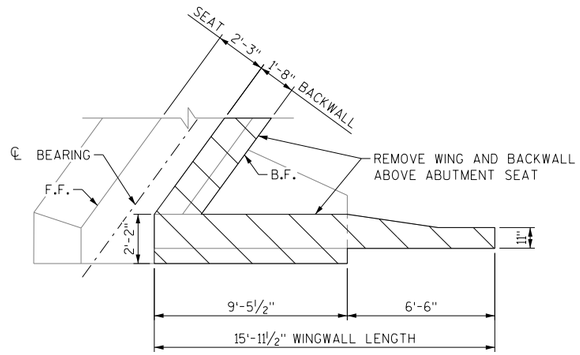
SECTION THROUGH
WINGWALLS 2 & 3



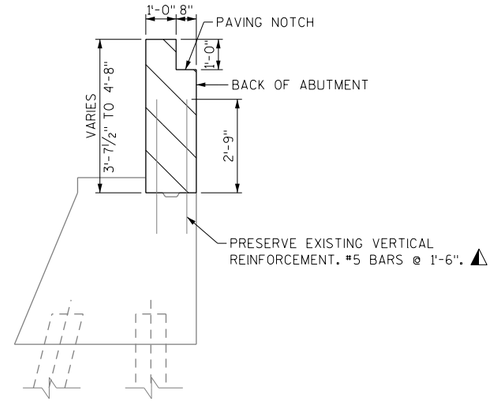
SECTION THROUGH
WINGWALLS 1 & 4



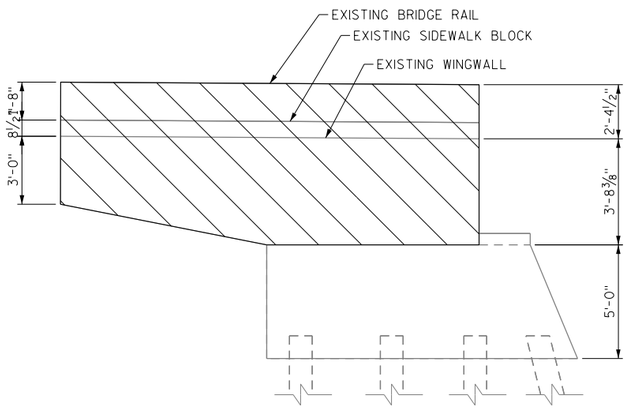
WINGWALL 1
PARTIAL PLAN



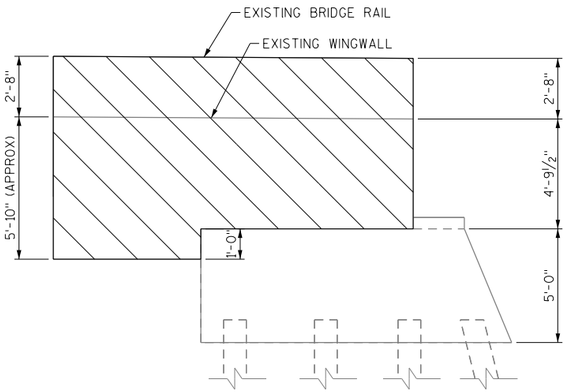
WINGWALL 4
PARTIAL PLAN



SECTION THROUGH
ABUTMENT



WINGWALL 3 ELEVATION
(WINGWALL 2 IS SIMILAR)



WINGWALL 1 ELEVATION
(WINGWALL 4 IS SIMILAR)

LEGEND

⚠ CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW LIMITS SHOWN. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED BY THE ENGINEER.

HATCHED AREAS INDICATE CONCRETE REMOVALS

F.F. - FRONT FACE

B.F. - BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-256

DRAWN BY JAP | PLANS CK'D. WJZ

SUBSTRUCTURE REMOVALS

SHEET 4 OF 19

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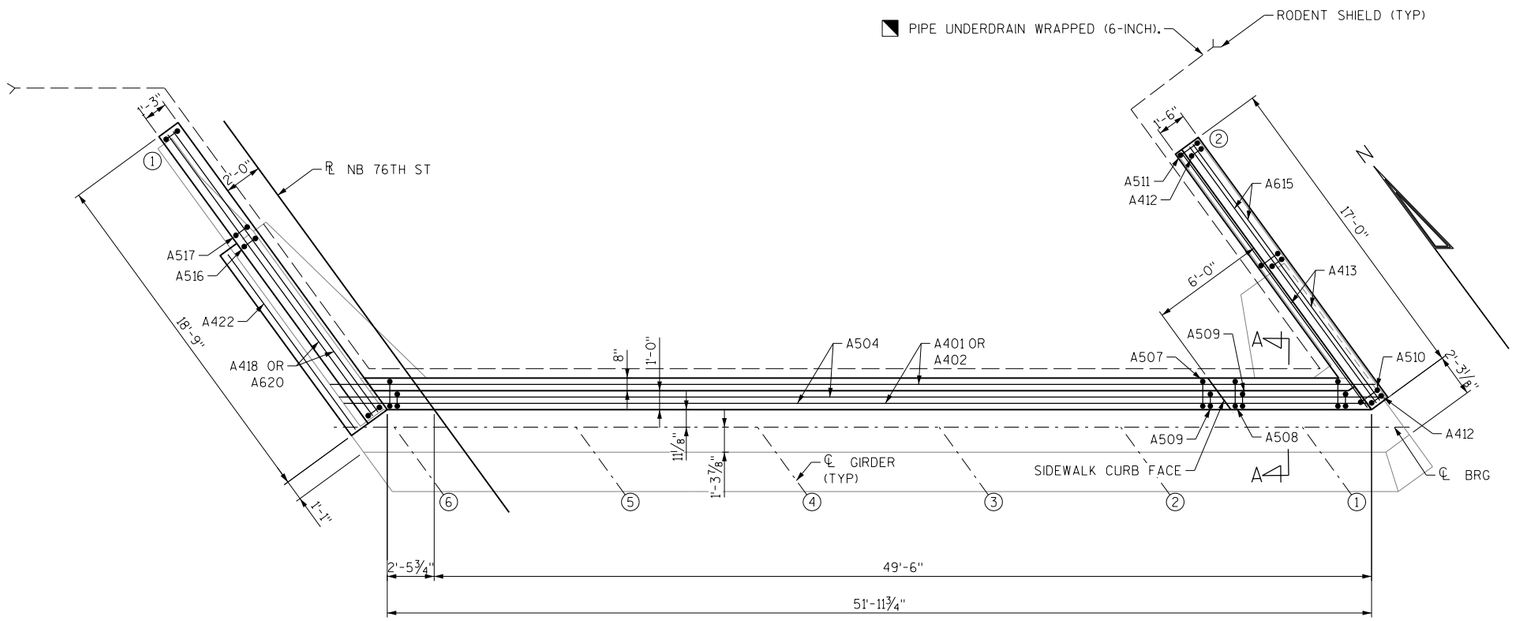
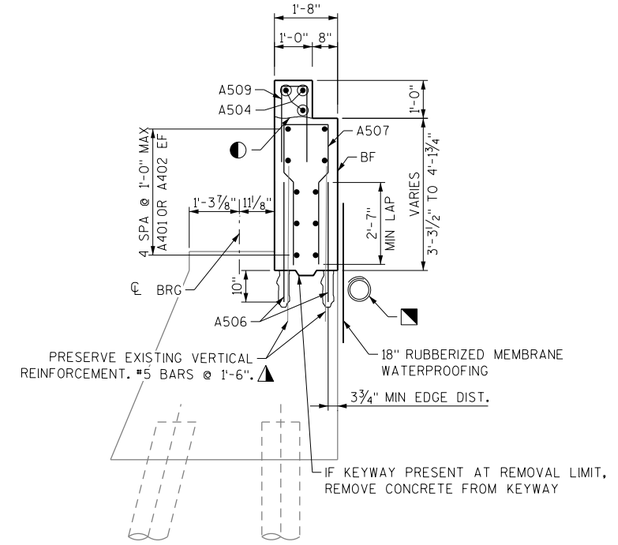
STATE PROJECT NUMBER

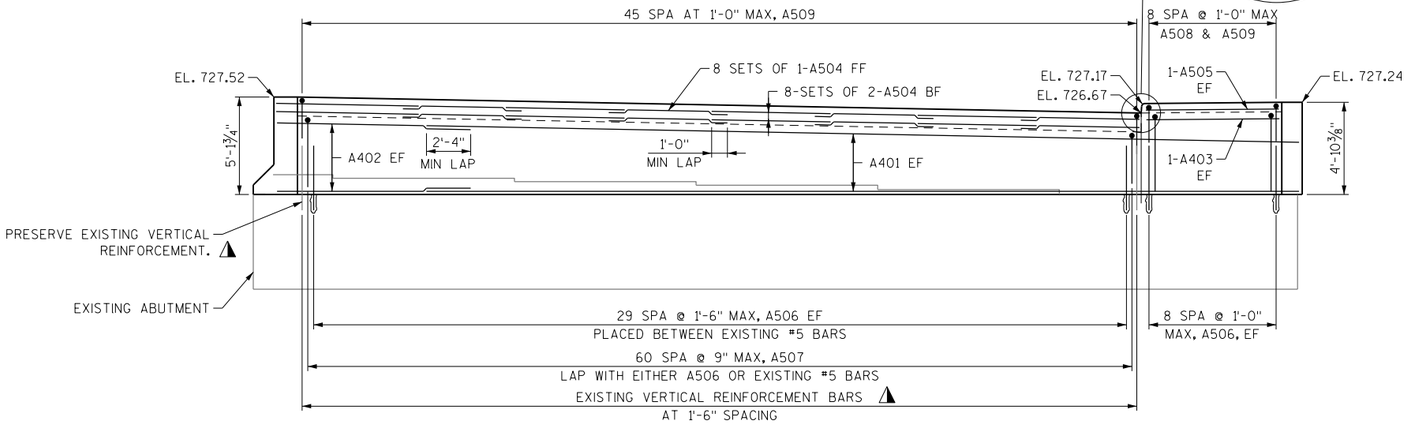
1360-13-70



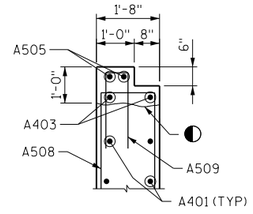
NORTH ABUTMENT PLAN



TYPICAL ABUTMENT SECTION



NORTH ABUTMENT
BACKWALL ELEVATION
(WINGWALLS NOT SHOWN FOR CLARITY)



SECTION A-A AT
SIDEWALK NOTCH

LEGEND

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN.

CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH. POUR CONCRETE ABOVE THIS JOINT AFTER DECK IS IN PLACE.

CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW REMOVAL LIMITS SHOWN ON REMOVAL DRAWING. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED IN THE FIELD BY THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-256

DRAWN BY JAP | PLANS CK'D. WJZ

NORTH ABUTMENT MODIFICATIONS

SHEET 5 OF 19

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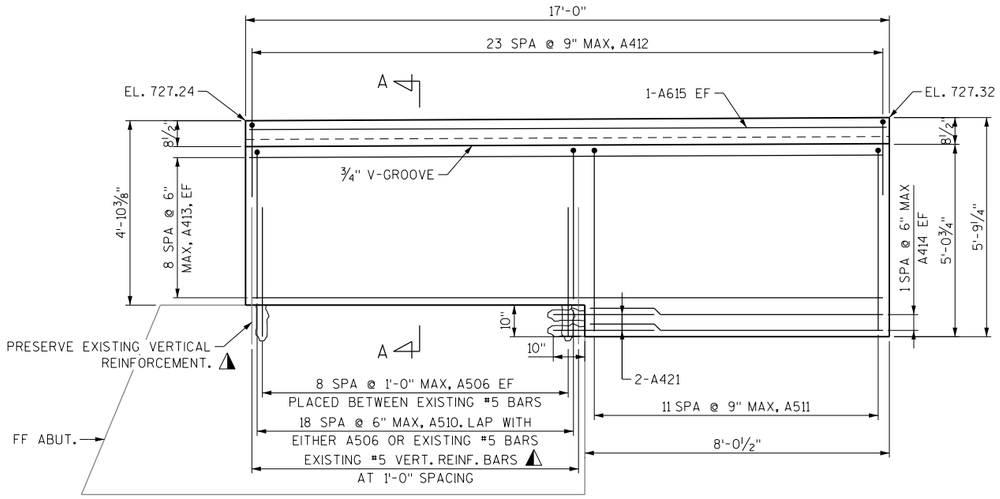
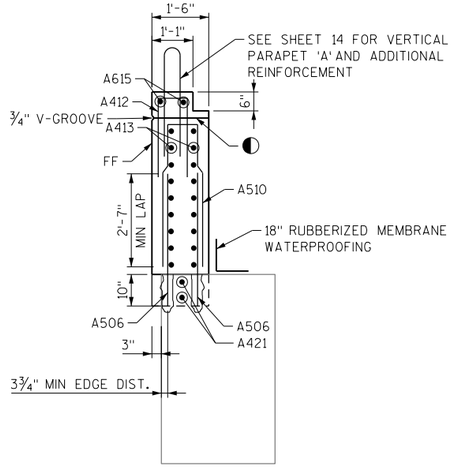
STATE PROJECT NUMBER

1360-13-70



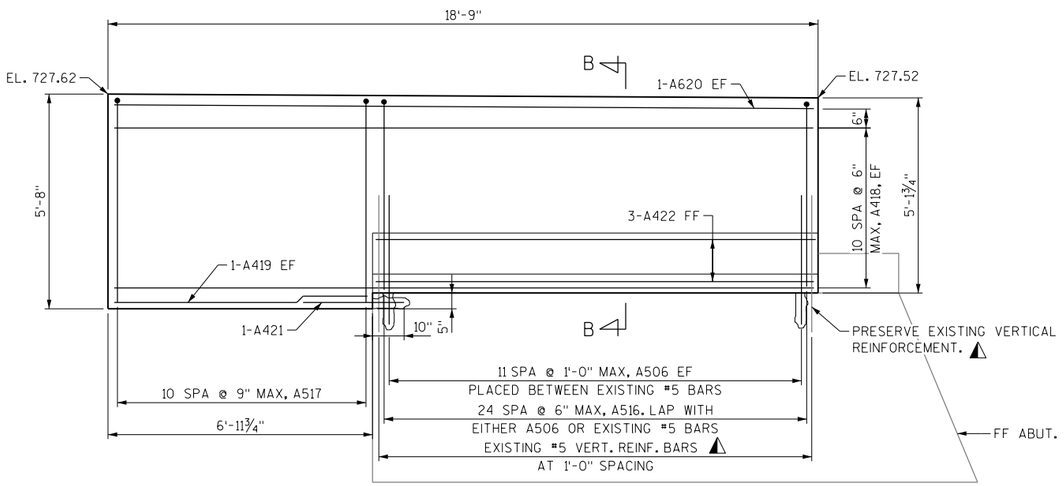
WINGWALL 2 ELEVATION



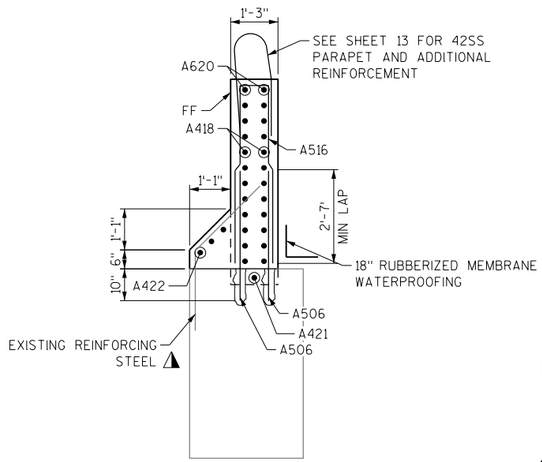
SECTION A-A

BILL OF BARS

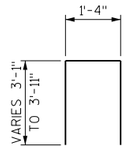
BAR NO.	COATED BAR	NO. REQ'D	LENGTH	BENT BAR	BUNDLED	BAR SERIES ⊠	3307 # COATED -- # UNCOATED LOCATION
A401	X	10	45'-0"				BACKWALL HORIZONTAL - FF & BF
A402	X	10	13'-1"				BACKWALL HORIZONTAL - FF & BF
A403	X	2	8'-1"				BACKWALL HORIZONTAL - FF & BF AT SIDEWALK
A504	X	24	6'-7"				PAVING BLOCK HORIZONTAL
A505	X	2	8'-1"				PAVING BLOCK HORIZONTAL - SIDEWALK
A506	X	120	3'-8"				BACKWALL & WINGWALL VERTICAL - ADHESIVE ANCHORS
A507	X	61	8'-1"	X		X	BACKWALL VERTICAL
A508	X	9	9'-3"	X			BACKWALL VERTICAL - SIDEWALK
A509	X	55	4'-5"	X			PAVING BLOCK VERTICAL
A510	X	19	8'-9"	X			WINGWALL 2 VERTICAL
A511	X	12	10'-3"	X			WINGWALL 2 VERTICAL - OVERHANG
A412	X	24	4'-8"	X			WINGWALL 2 VERTICAL - SIDEWALK NOTCH
A413	X	18	16'-8"				WINGWALL 2 HORIZONTAL
A414	X	4	7'-8"				WINGWALL 2 HORIZONTAL - BOTTOM
A615	X	2	16'-8"				WINGWALL 2 HORIZONTAL - SIDEWALK NOTCH
A516	X	25	10'-6"	X			WINGWALL 1 VERTICAL
A517	X	11	11'-2"	X			WINGWALL 1 VERTICAL - OVERHANG
A418	X	22	18'-5"				WINGWALL 1 HORIZONTAL
A419	X	2	6'-7"				WINGWALL 1 HORIZONTAL - BOTTOM
A620	X	2	18'-5"				WINGWALL 1 HORIZONTAL - TOP
A421	X	3	2'-8"				WINGWALLS 1 & 2 HORIZONTAL - ADHESIVE ANCHOR
A422	X	3	11'-5"				WINGWALL 1 HORIZONTAL - FF STEP



WINGWALL 1 ELEVATION



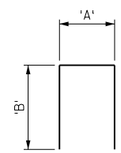
SECTION B-B



A507

BAR SERIES TABLE

BAR NO	NUMBER REQUIRED	LENGTH
A507	1 SERIES OF 61	7'-3" TO 8'-11"



BAR NO	DIM 'A'	DIM 'B'
A508	1'-4"	4'-1"
A509	8"	2'-0"
A510	1'-2"	3'-11"
A511	1'-2"	4'-8"
A412	9"	2'-1"
A516	11"	4'-11"
A517	11"	5'-3"

LEGEND

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

◐ CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH

◭ CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW LIMITS SHOWN ON REMOVAL PLAN. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED IN THE FIELD BY THE ENGINEER.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-256

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NORTH ABUTMENT WINGWALL MODIFICATIONS

SHEET 6 OF 19

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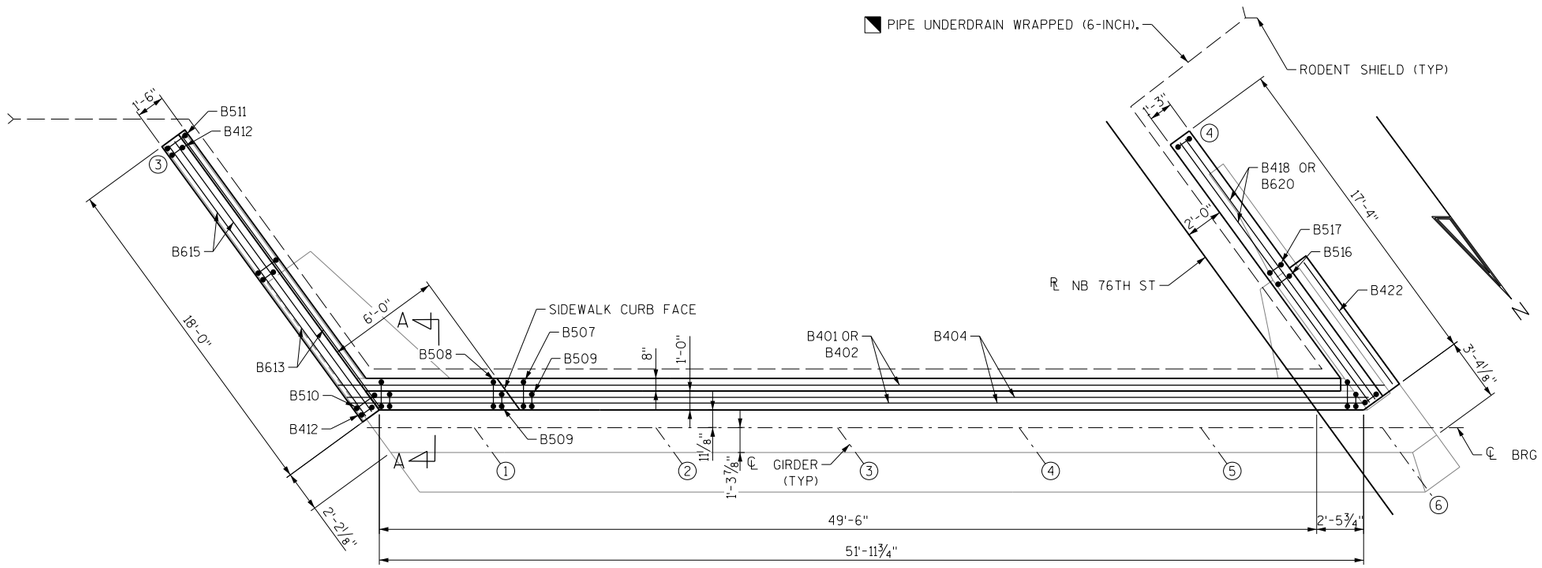
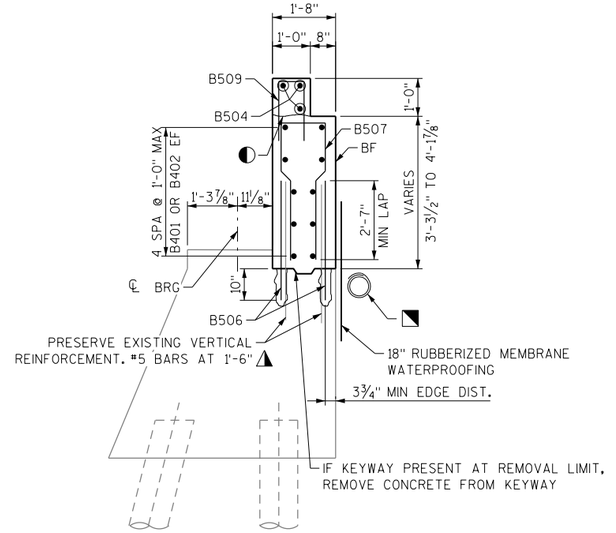
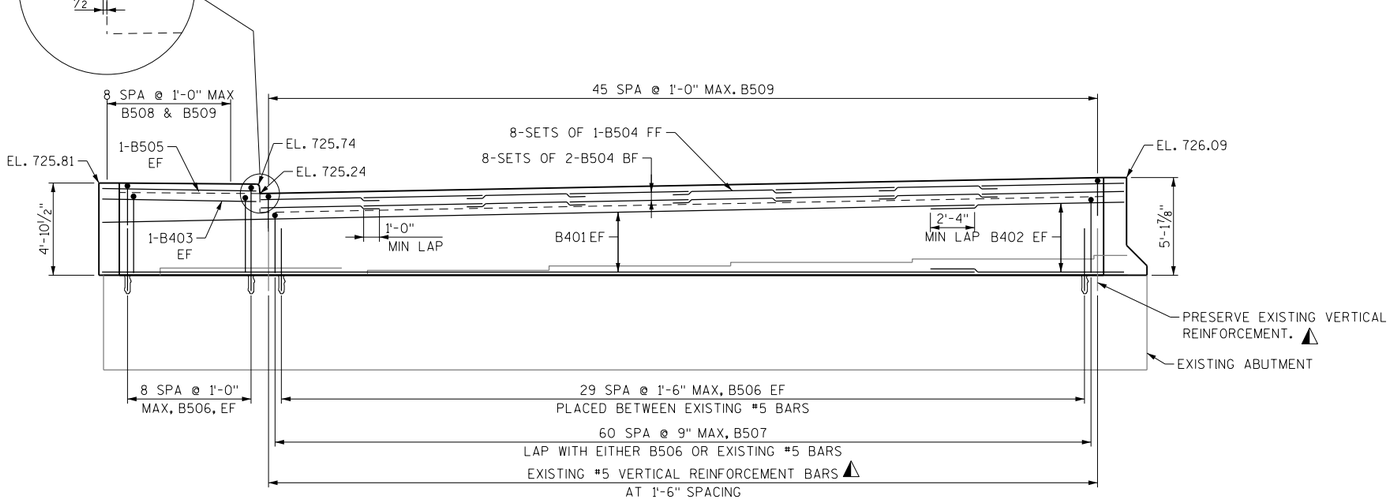
STATE PROJECT NUMBER
1360-13-70



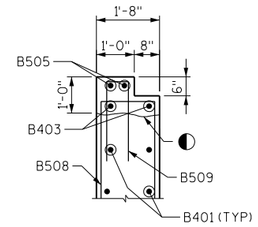
SOUTH ABUTMENT PLAN



TYPICAL ABUTMENT SECTION



SOUTH ABUTMENT
BACKWALL ELEVATION
(WINGWALLS NOT SHOWN FOR CLARITY)



SECTION A-A AT
SIDEWALK NOTCH

LEGEND

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN.

CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH. POUR CONCRETE ABOVE THIS JOINT AFTER DECK IS IN PLACE.

CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW REMOVAL LIMITS SHOWN ON REMOVAL DRAWING. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED IN THE FIELD BY THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-256

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SOUTH ABUTMENT MODIFICATIONS

SHEET 7 OF 19

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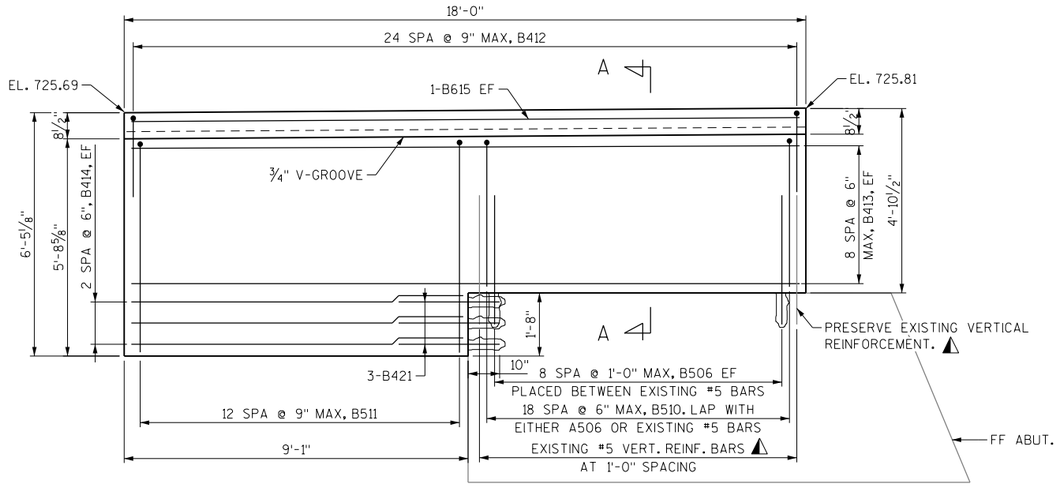
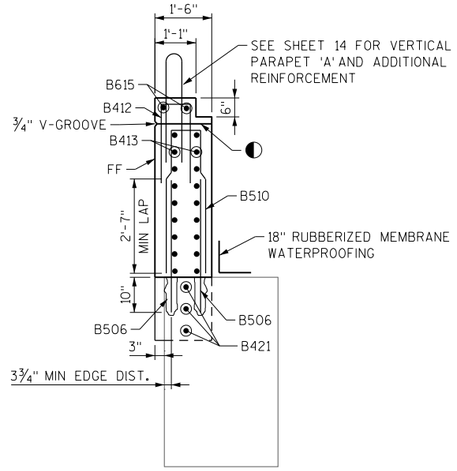
STATE PROJECT NUMBER

1360-13-70



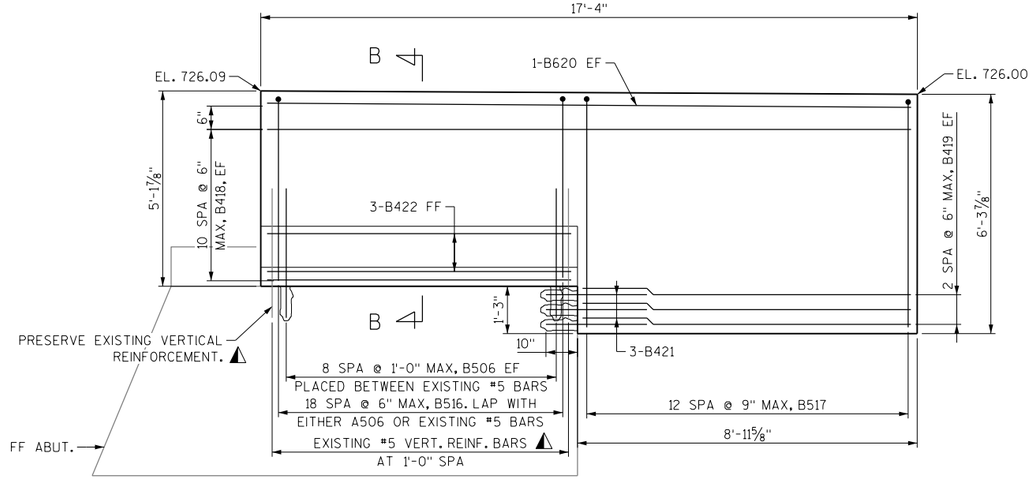
WINGWALL 3 ELEVATION



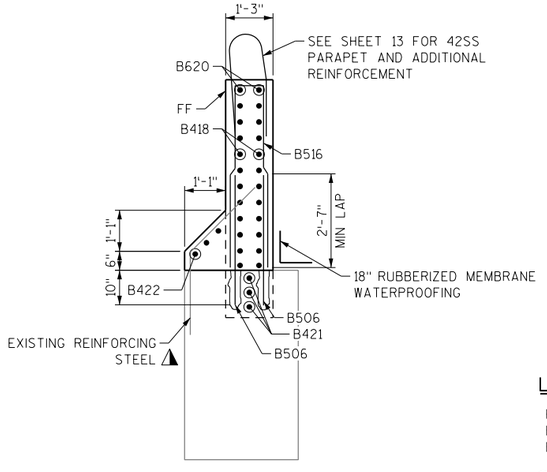
SECTION A-A

BILL OF BARS

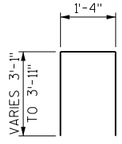
BAR NO.	COATED BAR	NO. REQ'D	LENGTH	BENT BAR	BUNDLED	BAR SERIES	3310 # COATED -- # UNCOATED LOCATION
B401	X	10	45'-0"				BACKWALL HORIZONTAL - FF & BF
B402	X	10	13'-1"				BACKWALL HORIZONTAL - FF & BF
B403	X	2	8'-1"				BACKWALL HORIZONTAL - FF & BF AT SIDEWALK
B504	X	24	6'-7"				PAVING BLOCK HORIZONTAL
B505	X	2	8'-1"				PAVING BLOCK HORIZONTAL - SIDEWALK
B506	X	114	3'-8"				BACKWALL & WINGWALL VERTICAL - ADHESIVE ANCHORS
B507	X	61	8'-1"	X		X	BACKWALL VERTICAL
B508	X	9	9'-3"	X			BACKWALL VERTICAL - SIDEWALK
B509	X	55	4'-5"	X			PAVING BLOCK VERTICAL
B510	X	19	8'-9"	X			WINGWALL 3 VERTICAL
B511	X	12	11'-7"	X			WINGWALL 3 VERTICAL - OVERHANG
B412	X	25	4'-8"	X			WINGWALL 3 VERTICAL - SIDEWALK NOTCH
B413	X	18	17'-8"				WINGWALL 3 HORIZONTAL
B414	X	6	8'-9"				WINGWALL 3 HORIZONTAL - BOTTOM
B615	X	2	17'-8"				WINGWALL 3 HORIZONTAL - SIDEWALK NOTCH
B516	X	19	10'-6"	X			WINGWALL 4 VERTICAL
B517	X	13	12'-8"	X			WINGWALL 4 VERTICAL - OVERHANG
B418	X	22	17'-0"				WINGWALL 4 HORIZONTAL
B419	X	6	8'-7"				WINGWALL 4 HORIZONTAL - BOTTOM
B620	X	2	17'-0"				WINGWALL 4 HORIZONTAL - TOP
B421	X	6	2'-8"				WINGWALLS 3 & 4 HORIZONTAL - ADHESIVE ANCHOR
B422	X	3	8'-0"				WINGWALL 4 HORIZONTAL - FF STEP



WINGWALL 4 ELEVATION



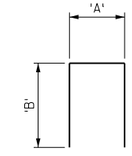
SECTION B-B



B507

BAR SERIES TABLE

BAR NO	NUMBER REQUIRED	LENGTH
B507	1 SERIES OF 61	7'-3" TO 8'-11"



BAR NO	DIM 'A'	DIM 'B'
B508	1'-4"	4'-1"
B509	8"	2'-0"
B510	1'-2"	3'-11"
B511	1'-2"	5'-4"
B412	9"	2'-1"
B516	11"	4'-11"
B517	11"	6'-0"

LEGEND

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

◐ CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH

⚠ CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW LIMITS SHOWN ON REMOVAL PLAN. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED IN THE FIELD BY THE ENGINEER.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-256

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SOUTH ABUTMENT WINGWALL MODIFICATIONS

SHEET 8 OF 19

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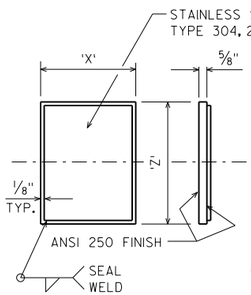
8

8

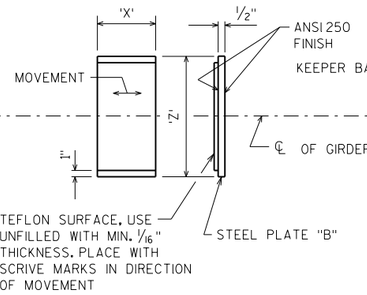
FILE= B-40-256_80_SABUTWINGS.DGN
SCALE = 1:4

STATE PROJECT NUMBER

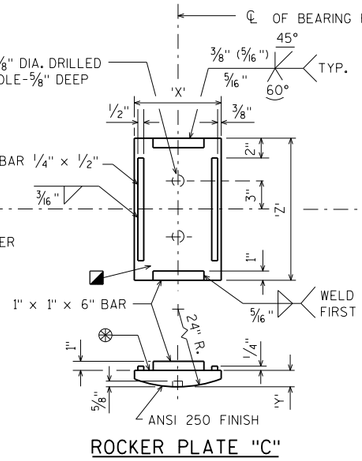
1360-13-70



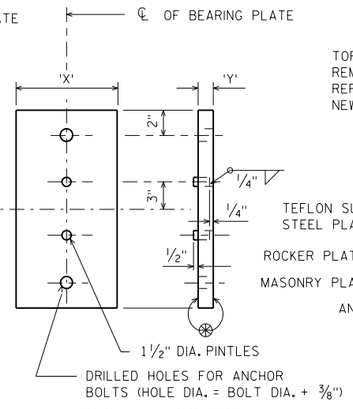
TOP PLATE "A"



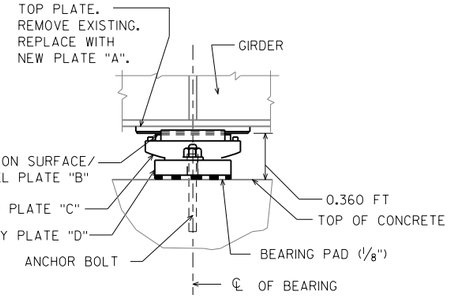
TEFLON SURFACE ON PLATE "B"



ROCKER PLATE "C"

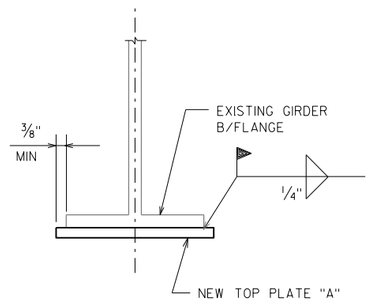


TYPE I MASONRY PLATE "D"

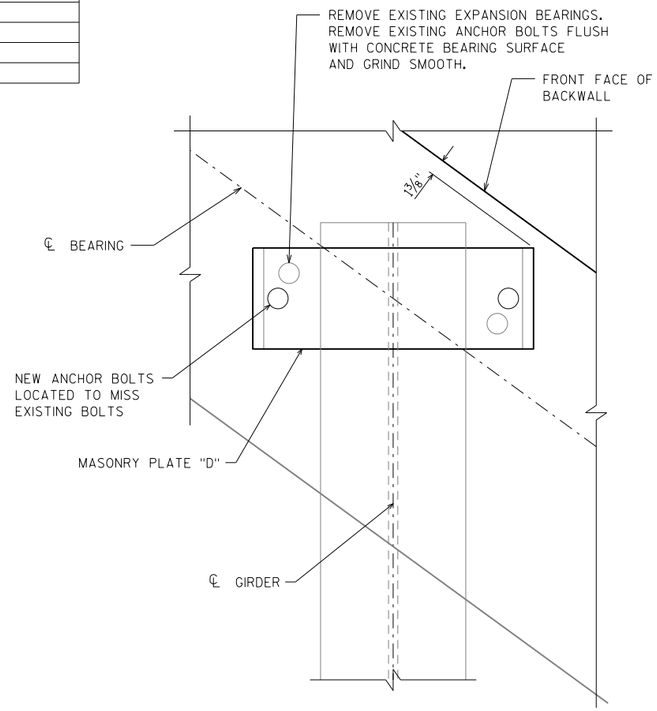


EXPANSION BEARING ASSEMBLY

PLATE "A"		PLATE "B"		PLATE "C"			PLATE "D"			PLATE "D" TYPE	ANCHOR BOLT SIZE	NO. OF BRG'S REQ'D.	LOCATION
'X'	'Z'	'X'	'Z'	'X'	'Y'	'Z'	'X'	'Y'	'Z'				
9"	1'-0 1/4"	5"	1'-0 1/4"	7"	1 1/16"	1'-2 1/2"	8"	1 1/2"	1'-10 1/4"	I	1 1/4"	12	NORTH AND SOUTH ABUTMENTS



TOP PLATE 'A' WELD DETAIL



BEARING PLAN ON ABUTMENT SEAT

UPPER BEARING PLATES NOT SHOWN FOR CLARITY

BEARING NOTES

REPLACE ALL BEARINGS AT ABUTMENTS.

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING PLATE.

⊛ FINISH THESE SURFACES TO ANSI 250 IF 'Y' DIMENSION IS GREATER THAN 2".

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM F1554 GRADE 50, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING STAINLESS STEEL SHEET, TEFLON SURFACE, PINTLES, ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-40-256"

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

PROVIDE 1/8" THICK BEARING PAD THE SAME SIZE AS MASONRY PLATE "D" FOR EACH BEARING.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. BOLT LENGTH TO BE 1'-5" FOR 1 1/4" BOLTS. PROJECT ANCHOR BOLTS, MASONRY PLATE "D" THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE "D" FOR A DRIVING FIT.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR ASTM A572 GRADE 50.

EXPANSION BEARINGS:
ROCKER PLATE "C" AND MASONRY PLATE "D" SHALL BE GALVANIZED. TOP PLATE "A" AND STEEL PLATE "B" SHALL BE SHOP PAINTED. USE A WELDABLE PRIMER ON TOP PLATE "A". DO NOT PAINT STAINLESS STEEL OR TEFLON SURFACES.

◪ PROVIDE A METHOD FOR HANDLING ROCKER PLATE "C" DURING GALVANIZING.

⚠ BOND STEEL PLATE "B" AND TEFLON WITH ADHESIVE MATERIAL MEETING REQUIREMENTS FOUND IN THE STANDARD SPECIFICATION.

AT INSTALLATION, ENSURE STAINLESS STEEL SLIDING FACE OF THE UPPER ELEMENT AND THE TFE SLIDING FACE OF THE LOWER ELEMENT HAVE THE SURFACE FINISH SPECIFIED AND ARE CLEAN AND FREE OF ALL DUST, MOISTURE, AND OTHER FOREIGN MATTER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-256

DRAWN BY JAP | PLANS CK'D. WJZ

BEARING DETAILS

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FILE= B-40-256_90_BEARING.DGN
SCALE = 1:1

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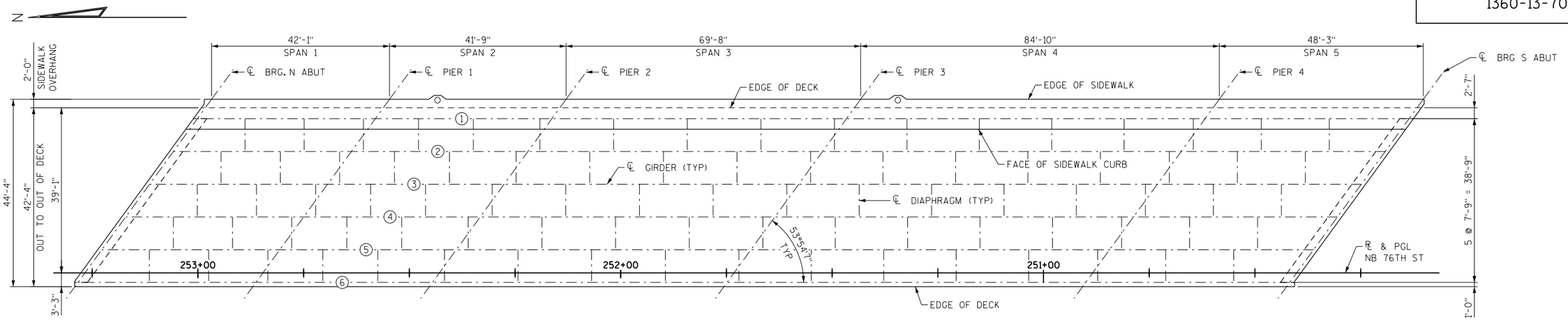
STATE PROJECT NUMBER

1360-13-70



EXISTING GIRDER FRAMING PLAN

(FIELD SPLICES AND COVER PLATES NOT SHOWN)

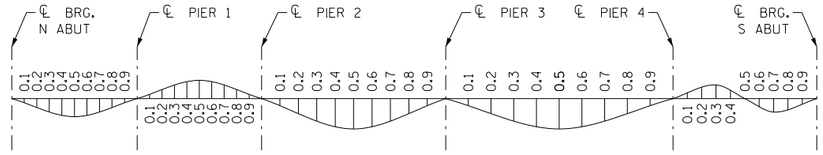
FINISHED TOP OF DECK ELEVATIONS

*THIS ELEVATION IS A CONTINUATION OF THE DECK CROSS SLOPE.

	LOCATION	EAST EDGE OF DECK	GIRDER 1	EAST FACE OF CURB	GIRDER 2	GIRDER 3	GIRDER 4	GIRDER 5	PGL NB 76TH ST	WEST FACE OF PARAPET	GIRDER 6	WEST EDGE* OF DECK
	℄ N ABUT	726.55	726.61	726.67	726.79	726.97	727.16	727.34	727.47	727.52	727.52	727.55
SPAN 1	0.1	726.53	726.59	726.65	726.77	726.95	727.14	727.32	727.45	727.50	727.50	727.53
	0.2	726.50	726.57	726.62	726.75	726.93	727.11	727.30	727.43	727.47	727.48	727.50
	0.3	726.48	726.54	726.60	726.73	726.91	727.09	727.28	727.41	727.45	727.46	727.48
	0.4	726.46	726.52	726.58	726.71	726.89	727.07	727.26	727.39	727.43	727.44	727.46
	0.5	726.44	726.50	726.56	726.69	726.87	727.05	727.23	727.36	727.41	727.42	727.44
	0.6	726.42	726.48	726.54	726.66	726.85	727.03	727.21	727.34	727.39	727.40	727.42
	0.7	726.40	726.46	726.52	726.64	726.83	727.01	727.19	727.32	727.37	727.38	727.40
	0.8	726.38	726.44	726.50	726.62	726.81	726.99	727.17	727.30	727.35	727.36	727.38
	0.9	726.36	726.42	726.48	726.60	726.79	726.97	727.15	727.28	727.33	727.33	727.36
	℄ PIER 1	726.34	726.40	726.46	726.58	726.76	726.95	727.13	727.26	727.31	727.31	727.34
SPAN 2	0.1	726.32	726.38	726.44	726.56	726.74	726.93	727.11	727.24	727.29	727.29	727.32
	0.2	726.30	726.36	726.42	726.54	726.72	726.91	727.09	727.22	727.27	727.27	727.30
	0.3	726.28	726.34	726.40	726.52	726.70	726.89	727.07	727.20	727.25	727.25	727.28
	0.4	726.25	726.32	726.37	726.50	726.68	726.86	727.05	727.18	727.22	727.23	727.25
	0.5	726.23	726.29	726.35	726.48	726.66	726.84	727.03	727.16	727.20	727.21	727.23
	0.6	726.21	726.27	726.33	726.46	726.64	726.82	727.01	727.14	727.18	727.19	727.21
	0.7	726.19	726.25	726.31	726.44	726.62	726.80	726.99	727.12	727.16	727.17	727.19
	0.8	726.17	726.23	726.29	726.42	726.60	726.78	726.96	727.09	727.14	727.15	727.17
	0.9	726.15	726.21	726.27	726.39	726.58	726.76	726.94	727.07	727.12	727.13	727.15
	℄ PIER 2	726.13	726.19	726.25	726.37	726.56	726.74	726.92	727.05	727.10	727.11	727.13
SPAN 3	0.1	726.10	726.16	726.22	726.34	726.52	726.71	726.89	727.02	727.07	727.07	727.10
	0.2	726.06	726.12	726.18	726.31	726.49	726.67	726.85	726.98	727.03	727.04	727.06
	0.3	726.03	726.09	726.15	726.27	726.45	726.64	726.82	726.95	727.00	727.00	727.03
	0.4	725.99	726.05	726.11	726.24	726.42	726.60	726.79	726.92	726.96	726.97	726.99
	0.5	725.96	726.02	726.08	726.20	726.38	726.57	726.75	726.88	726.93	726.93	726.96
	0.6	725.92	725.98	726.04	726.17	726.35	726.53	726.72	726.85	726.89	726.90	726.92
	0.7	725.89	725.95	726.01	726.13	726.32	726.50	726.68	726.81	726.86	726.86	726.89
	0.8	725.85	725.91	725.97	726.10	726.28	726.46	726.65	726.78	726.82	726.83	726.85
	0.9	725.82	725.88	725.94	726.06	726.25	726.43	726.61	726.74	726.79	726.80	726.82
	℄ PIER 3	725.78	725.85	725.90	726.03	726.21	726.39	726.58	726.71	726.75	726.76	726.78
SPAN 4	0.1	725.74	725.80	725.86	725.99	726.17	726.35	726.54	726.67	726.71	726.72	726.74
	0.2	725.70	725.76	725.82	725.94	726.13	726.31	726.49	726.62	726.67	726.68	726.70
	0.3	725.66	725.72	725.78	725.90	726.09	726.27	726.45	726.58	726.63	726.63	726.66
	0.4	725.62	725.68	725.74	725.86	726.04	726.23	726.41	726.54	726.59	726.59	726.62
	0.5	725.57	725.64	725.69	725.82	726.00	726.18	726.37	726.50	726.54	726.55	726.57
	0.6	725.53	725.59	725.65	725.78	725.96	726.14	726.33	726.45	726.50	726.51	726.53
	0.7	725.49	725.55	725.61	725.73	725.92	726.10	726.28	726.41	726.46	726.47	726.49
	0.8	725.45	725.51	725.57	725.69	725.87	726.06	726.24	726.37	726.42	726.42	726.45
	0.9	725.41	725.47	725.53	725.65	725.83	726.02	726.20	726.33	726.38	726.38	726.41
	℄ PIER 4	725.36	725.42	725.48	725.61	725.79	725.97	726.16	726.29	726.33	726.34	726.36
SPAN 5	0.1	725.34	725.40	725.46	725.58	725.77	725.95	726.13	726.26	726.31	726.32	726.34
	0.2	725.32	725.38	725.44	725.56	725.74	725.93	726.11	726.24	726.29	726.29	726.32
	0.3	725.29	725.35	725.41	725.54	725.72	725.90	726.08	726.21	726.26	726.27	726.29
	0.4	725.27	725.33	725.39	725.51	725.69	725.88	726.06	726.19	726.24	726.24	726.27
	0.5	725.24	725.30	725.36	725.49	725.67	725.85	726.04	726.17	726.21	726.22	726.24
	0.6	725.22	725.28	725.34	725.46	725.65	725.83	726.01	726.14	726.19	726.20	726.22
	0.7	725.20	725.26	725.32	725.44	725.62	725.81	725.99	726.12	726.17	726.17	726.20
	0.8	725.17	725.23	725.29	725.42	725.60	725.78	725.97	726.10	726.14	726.15	726.17
	0.9	725.15	725.21	725.27	725.39	725.58	725.76	725.94	726.07	726.12	726.12	726.15
	℄ S ABUT	725.12	725.19	725.24	725.37	725.55	725.73	725.92	726.05	726.09	726.10	726.12

DEAD LOAD DEFLECTIONS ◥

	LOCATION	GIRDER 1	GIRDER 2-5	GIRDER 6
	℄ N ABUT	0.0	0.0	0.0
SPAN 1	0.1	0.1	0.1	0.1
	0.2	0.2	0.2	0.1
	0.3	0.2	0.2	0.2
	0.4	0.2	0.3	0.2
	0.5	0.2	0.3	0.2
	0.6	0.2	0.2	0.2
	0.7	0.2	0.2	0.1
	0.8	0.1	0.1	0.1
	0.9	0.0	0.1	0.0
	℄ PIER 1	0.0	0.0	0.0
SPAN 2	0.1	0.0	0.0	0.0
	0.2	0.0	0.0	0.0
	0.3	0.0	0.0	0.0
	0.4	0.0	0.0	0.0
	0.5	0.0	0.0	0.0
	0.6	0.0	0.0	0.0
	0.7	0.0	-0.1	0.0
	0.8	0.0	-0.1	0.0
	0.9	0.0	0.0	0.0
	℄ PIER 2	0.0	0.0	0.0
SPAN 3	0.1	0.1	0.1	0.1
	0.2	0.2	0.3	0.2
	0.3	0.4	0.4	0.3
	0.4	0.4	0.5	0.3
	0.5	0.4	0.4	0.3
	0.6	0.3	0.3	0.2
	0.7	0.2	0.2	0.1
	0.8	0.0	0.0	0.0
	0.9	0.0	0.0	0.0
	℄ PIER 3	0.0	0.0	0.0
SPAN 4	0.1	0.2	0.3	0.2
	0.2	0.6	0.7	0.5
	0.3	1.0	1.1	0.8
	0.4	1.3	1.5	1.1
	0.5	1.4	1.6	1.2
	0.6	1.4	1.5	1.1
	0.7	1.1	1.2	0.9
	0.8	0.7	0.8	0.6
	0.9	0.3	0.3	0.3
	℄ PIER 4	0.0	0.0	0.0
SPAN 5	0.1	-0.1	-0.1	-0.1
	0.2	-0.1	-0.1	-0.1
	0.3	-0.1	-0.1	-0.1
	0.4	0.0	-0.1	0.0
	0.5	0.0	0.0	0.0
	0.6	0.0	0.0	0.0
	0.7	0.1	0.1	0.1
	0.8	0.1	0.1	0.0
	0.9	0.0	0.0	0.0
	℄ S ABUT	0.0	0.0	0.0



DEFLECTION DIAGRAM

◥ DEFLECTIONS ARE GIVEN IN INCHES
NEGATIVE DEFLECTION INDICATES UPWARD DEFLECTION
DEFLECTIONS ARE THEORETICAL AND MAY VARY IN THE FIELD.

NOTES

A 1¼" MINIMUM HAUNCH IS REQUIRED AT THE EDGE OF GIRDER. IF A 1¼" MINIMUM HAUNCH HEIGHT CANNOT BE MAINTAINED THE GRADE LINE MAY BE REVISED BY THE ENGINEER IN THE FIELD 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 AND PROFILE BY MORE THAN ½"

THE FOLLOWING AVERAGE HAUNCH DEPTHS ('T') WERE USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

GIRDER 1: 5.8"
GIRDER 2: 4.8"
GIRDER 3-5: 4.3"
GIRDER 6: 4.2"

'T' = HAUNCH HEIGHT AT ℄ GIRDER

TO DETERMINE 'T': AFTER EXISTING DECK HAS BEEN REMOVED, AND ABUTMENT BEARINGS HAVE BEEN REPLACED, ELEVATIONS OF THE TOP FLANGES SHALL BE TAKEN AT CENTERLINES OF BEARING AND AT 0.1 POINTS.

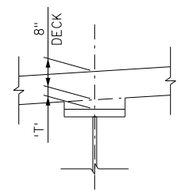
TOP OF DECK ELEVATION AT FINAL GRADE

\- TOP OF STEEL ELEVATION AFTER EXISTING DECK HAS BEEN REMOVED

\+ DEAD LOAD DEFLECTION (DOWNWARD DEFLECTION IS ADDED, UPWARD DEFLECTION IS SUBTRACTED)

\- DECK THICKNESS

= 'T' VALUE FOR SETTING HAUNCH



SLAB HAUNCH DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-256

DRAWN BY JAP | PLANS CK'D. WJZ

DECK ELEVATIONS

SHEET 10 OF 19

293

FILE= B-40-256_100_GIRD&SUPER.DGN
SCALE = 1:25

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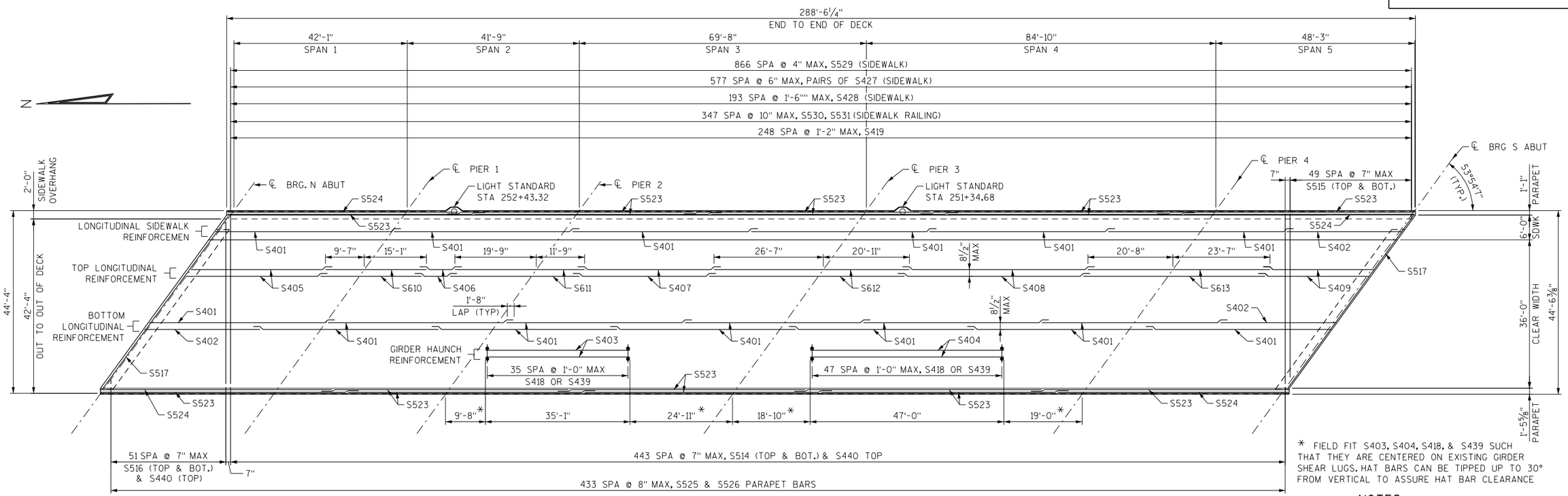
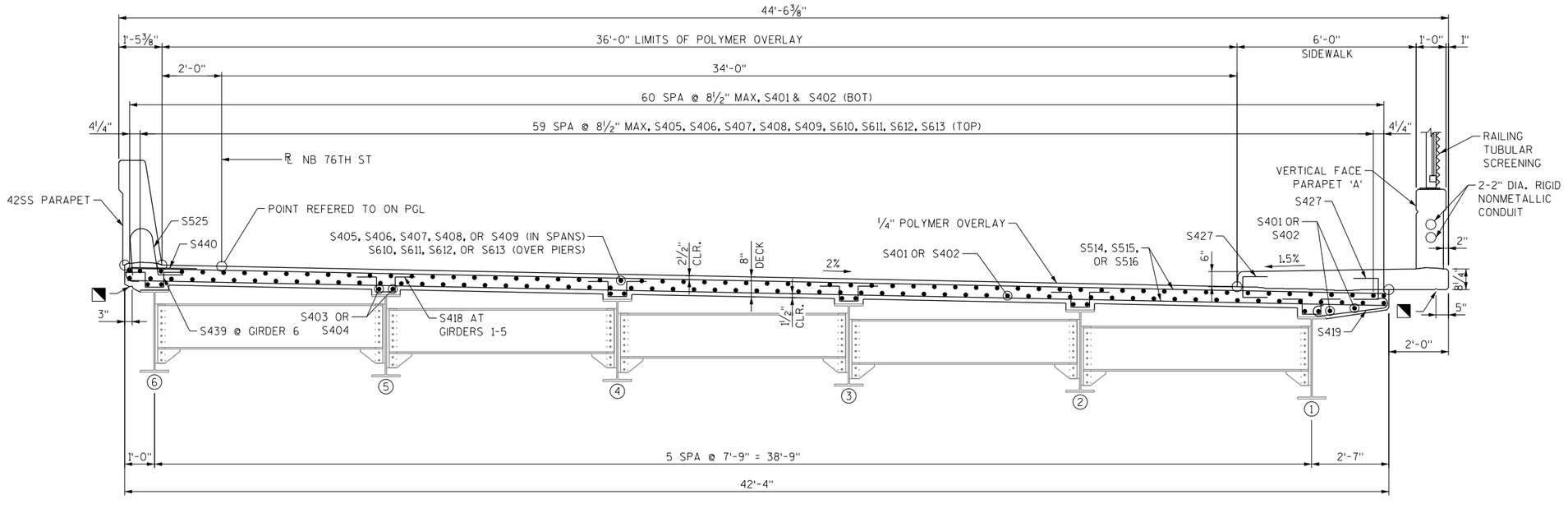
STATE PROJECT NUMBER

1360-13-70



DECK PLAN

* FIELD FIT S403, S404, S418, & S439 SUCH THAT THEY ARE CENTERED ON EXISTING GIRDER SHEAR LUGS. HAT BARS CAN BE TIPPED UP TO 30° FROM VERTICAL TO ASSURE HAT BAR CLEARANCE



TYPICAL SECTION THRU DECK
(LOOKING NORTH)

NOTES:

SEE SHEET 12 FOR SUPERSTRUCTURE BILL OF BARS AND DECK DETAILS

SEE SHEET 10 FOR TOP OF DECK ELEVATIONS

SEE SHEET 13 FOR 42SS PARAPET DETAILS

SEE SHEET 14 FOR VERTICAL FACE PARAPET 'A' DETAILS

SEE SHEET 15 FOR RAILING TUBULAR SCREENING

SEE SHEET 12 FOR SIDEWALK REINFORCEMENT

SEE SHEET 18 FOR LIGHT STANDARD DETAIL

○ INDICATES T/SLAB ELEVATION LOCATION

◥ ¾" V-GROOVE TO EXTEND TO 2'-0" FROM FRONT FACE OF ABUTMENT BODY

Ⓧ INDICATES GIRDER NUMBER

ALTERNATE LAP LOCATIONS IN PARAPET, SIDEWALK AND LONGITUDINAL DECK BARS AS SHOWN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-256

DRAWN BY JAP | PLANS CK'D. WJZ

SUPERSTRUCTURE REINFORCEMENT

SHEET 11 OF 19

294

8

8

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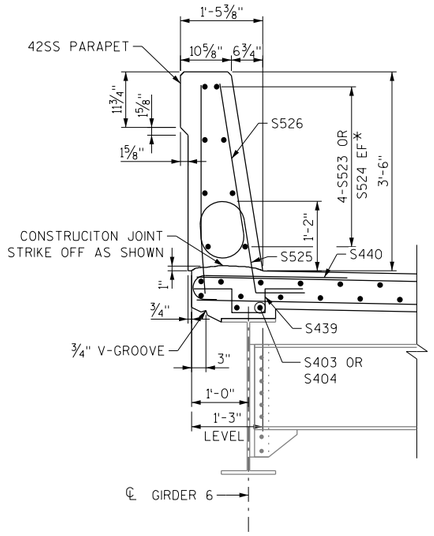
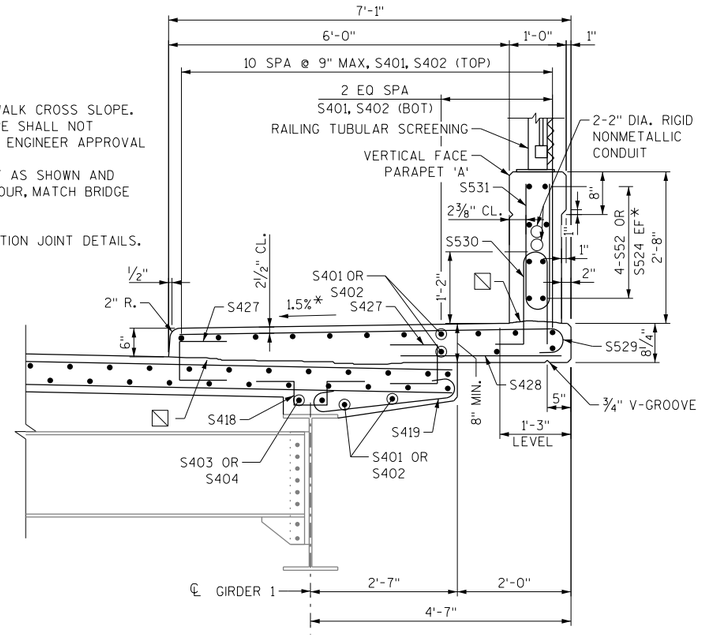


SECTION THROUGH PARAPET AT WEST OVERHANG

* ±0.5% TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR ENGINEER APPROVAL

☒ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE.

SEE SHEET 14 FOR DEFLECTION JOINT DETAILS.



SECTION THROUGH PARAPET AND SIDEWALK AT EAST OVERHANG

BILL OF BARS - DECK

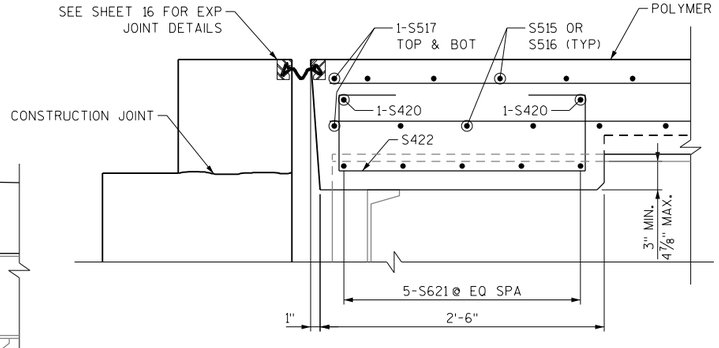
BAR NO.	COATED BAR	NO. REQ'D	LENGTH	BENT BAR BUNDLED	BAR SERIES ⚠	106,430 # COATED -- # UNCOATED LOCATION
S401	X	462	45'-0"			DECK & SIDEWALK LONGITUDINAL - BOTTOM
S402	X	77	29'-0"			DECK & SIDEWALK LONGITUDINAL - BOTTOM
S403	X	12	35'-1"			DECK LONGITUDINAL - HAUNCH SPAN 3
S404	X	12	47'-0"			DECK LONGITUDINAL - HAUNCH SPAN 4
S405	X	62	35'-2"			DECK LONGITUDINAL - TOP SPAN 1
S406	X	62	10'-3"			DECK LONGITUDINAL - TOP SPAN 2
S407	X	62	34'-9"			DECK LONGITUDINAL - TOP SPAN 3
S408	X	62	46'-7"			DECK LONGITUDINAL - TOP SPAN 4
S409	X	62	27'-4"			DECK LONGITUDINAL - TOP SPAN 5
S610	X	62	24'-8"			DECK LONGITUDINAL - TOP PIER 1
S611	X	62	31'-6"			DECK LONGITUDINAL - TOP PIER 2
S612	X	62	47'-6"			DECK LONGITUDINAL - TOP PIER 3
S613	X	62	44'-3"			DECK LONGITUDINAL - TOP PIER 4
S514	X	888	42'-0"			DECK TRANSVERSE - TOP AND BOTTOM
S515	X	100	20'-8"		X	DECK TRANSVERSE - TOP AND BOTTOM SOUTH END SERIES
S516	X	104	21'-3"		X	DECK TRANSVERSE - TOP AND BOTTOM NORTH END SERIES
S517	X	4	50'-9"			DECK TRANSVERSE - DECK ENDS TOP & BOTTOM
S418	X	420	2'-10"	X		DECK TRANSVERSE - HAUNCH GIRDERS 1-5
S419	X	249	3'-2"	X		DECK TRANSVERSE - OUTSIDE OVERHANG
S420	X	40	9'-3"			DIAPHRAGM & JOINT - TOP
S621	X	50	9'-3"			DIAPHRAGM - BOTTOM
S422	X	100	3'-10"	X		DIAPHRAGM STIRRUPS
S523	X	64	60'-0"			PARAPET HORIZONTAL
S524	X	16	55'-2"			PARAPET HORIZONTAL
S525	X	434	4'-5"	X		42SS PARAPET VERTICAL
S526	X	434	6'-8"	X		42SS PARAPET VERTICAL
S427	X	1156	2'-8"	X		SIDEWALK VERTICAL
S428	X	194	2'-10"			SIDEWALK TRANSVERSE - BOTTOM
S529	X	867	7'-4"	X		SIDEWALK TRANSVERSE - TOP
S530	X	348	4'-4"	X		VERTICAL FACE PARAPET 'A' VERTICAL
S531	X	348	4'-9"	X		VERTICAL FACE PARAPET 'A' VERTICAL
S532	X	8	6'-3"	X		LIGHT STANDARD VERTICAL - PARAPET
S533	X	8	7'-0"	X		LIGHT STANDARD VERTICAL - PARAPET
S634	X	14	10'-3"	X		LIGHT STANDARD HORIZONTAL - PARAPET
S535	X	24	6'-8"			LIGHT STANDARD TRANSVERSE - SIDEWALK BOTTOM
S536	X	4	3'-2"	X		LIGHT STANDARD VERTICAL - PARAPET
S537	X	4	3'-4"	X		LIGHT STANDARD VERTICAL - PARAPET
S538	X	24	7'-4"	X		LIGHT STANDARD TRANSVERSE SIDEWALK TOP
S439	X	84	2'-8"	X		DECK TRANSVERSE - HAUNCH GIRDER 6
S440	X	496	3'-0"	X		DECK TRANSVERSE - GIRDER 6 OVERHANG

THE FIRST DIGIT OR FIRST TWO DIGITS OF A BAR MARK INDICATE THE BAR SIZE. ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.

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

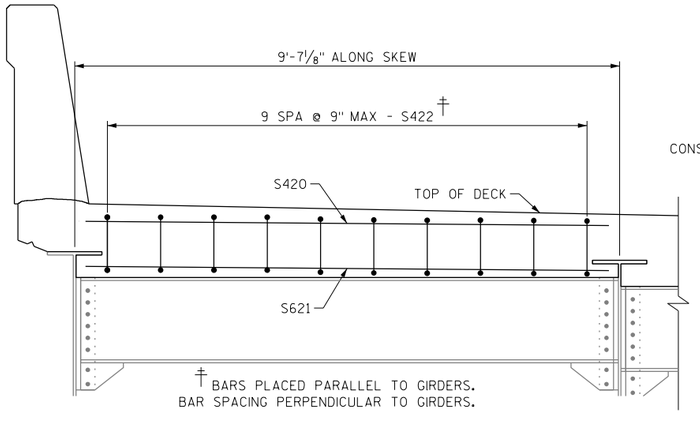
* OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MINIMUM OF 1'-9". MINIMUM JOINT SPACING OF 80'-0". DEFINE CONSTRUCTION JOINT WITH A 3/4" 'V' GROOVE.

SEE SHEET 18 FOR LIGHT STANDARD DETAILS



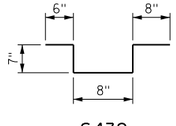
SECTION THROUGH END DIAPHRAGM AND EXPANSION JOINT

(DIMENSIONS ARE TAKEN NORMAL TO THE ℄ OF THE JOINT)



BAR SERIES TABLE

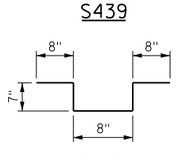
BAR NO	NUMBER REQUIRED	LENGTH
S515	2 SERIES OF 50	1'-2" TO 40'-1"
S516	2 SERIES OF 52	1'-1" TO 41'-5"



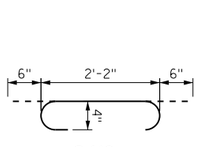
S439

SECTION AT END DIAPHRAGM

(SHOWING ADDITIONAL DIAPHRAGM REINFORCEMENT ONLY)



S418



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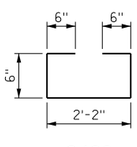

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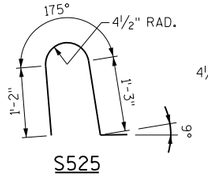

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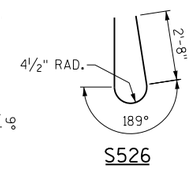
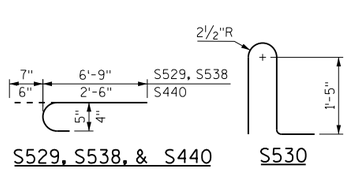
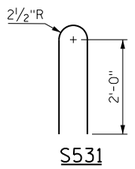


S526

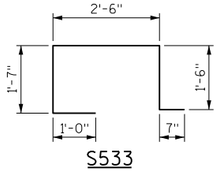


S529, S538, & S440

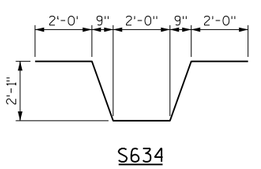
S530



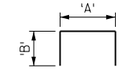
S531



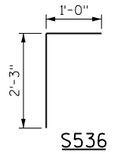
S533



S634



BAR NO	DIM 'A'	DIM 'B'
S427	10"	1'-0"
S532	2'-0"	2'-3"
S537	1'-7"	1'-0"



S536

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-256

DRAWN BY JAP | PLANS CK'D. WJZ

SUPERSTRUCTURE DETAILS

SHEET 12 OF 19

295

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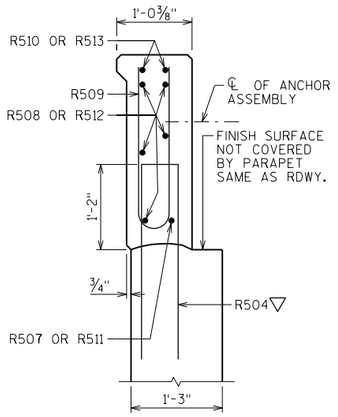
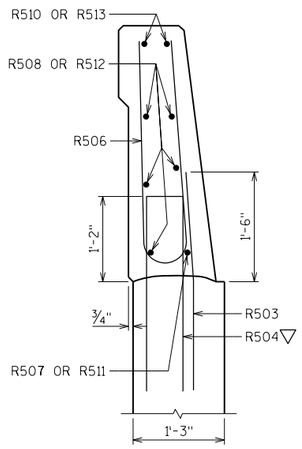
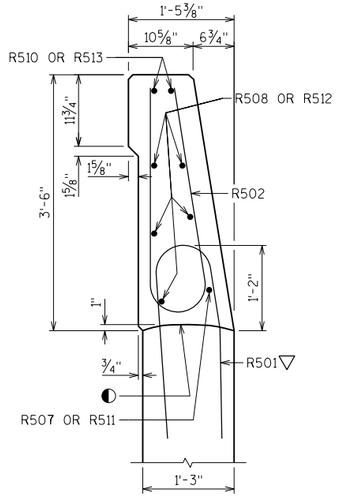
STATE PROJECT NUMBER
1360-13-70



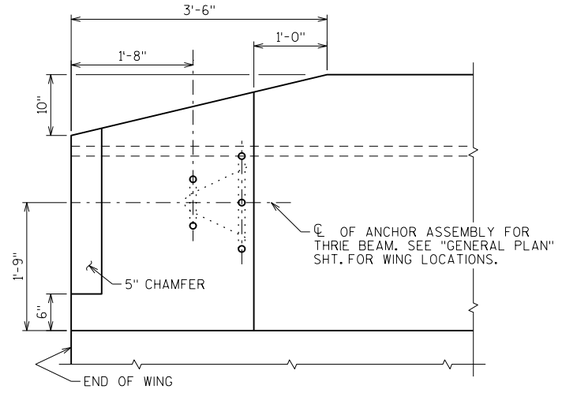
SECTION A-A



SECTION B-B



SECTION C-C



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

BILL OF BARS

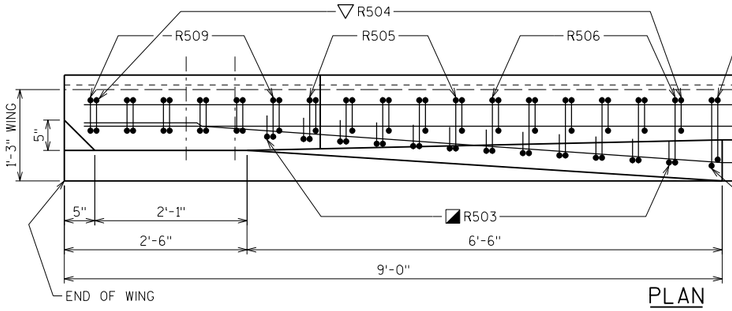
BAR MARK	COAT	NO REQ'D N ABUT.	NO REQ'D S ABUT.	LENGTH	BENT	BAR SERIES	1157# COATED LOCATION
R501	X	16	14	5'-10	X		PARAPET VERT.
R502	X	16	14	6'-8"	X		PARAPET VERT.
R503	X	11	11	3'-0"	X		PARAPET VERT.
R504	X	17	17	5'-7"	X		PARAPET VERT.
R505	X	5	5	6'-5"	X		PARAPET VERT.
R506	X	6	6	6'-6"	X		PARAPET VERT.
R507	X		1	16'-11"	X		PARAPET HORIZ.
R508	X		5	17'-0"			PARAPET HORIZ.
R509	X	6	6	5'-5"	X	▲	PARAPET VERT.
R510	X		2	17'-0"	X		PARAPET HORIZ.
R511	X	1		18'-4"	X		PARAPET HORIZ.
R512	X	5		18'-5"			PARAPET HORIZ.
R513	X	2		18'-5"	X		PARAPET HORIZ.

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

BAR SERIES TABLE

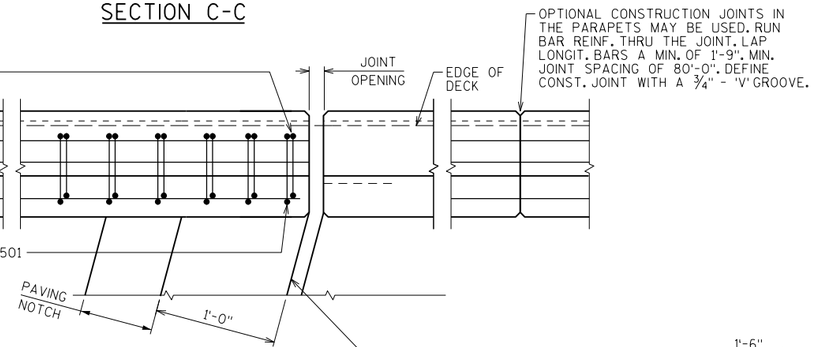
BAR MARK	NO. REQ'D	LENGTH
R509	2 SERIES OF 6	4'-9" TO 6'-1"

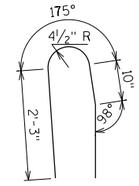
BUNDLE AND TAG EACH SERIES SEPARATELY.



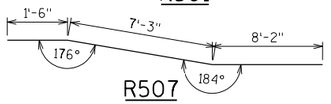
PLAN

SW CORNER SHOWN, NW SIMILAR

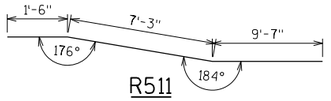




R501



R507

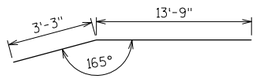


R511

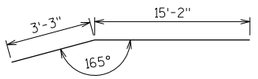
R502

R503

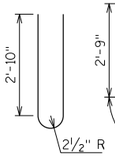
R504



R510



R513



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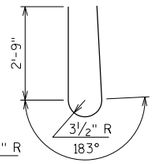

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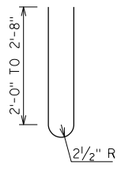
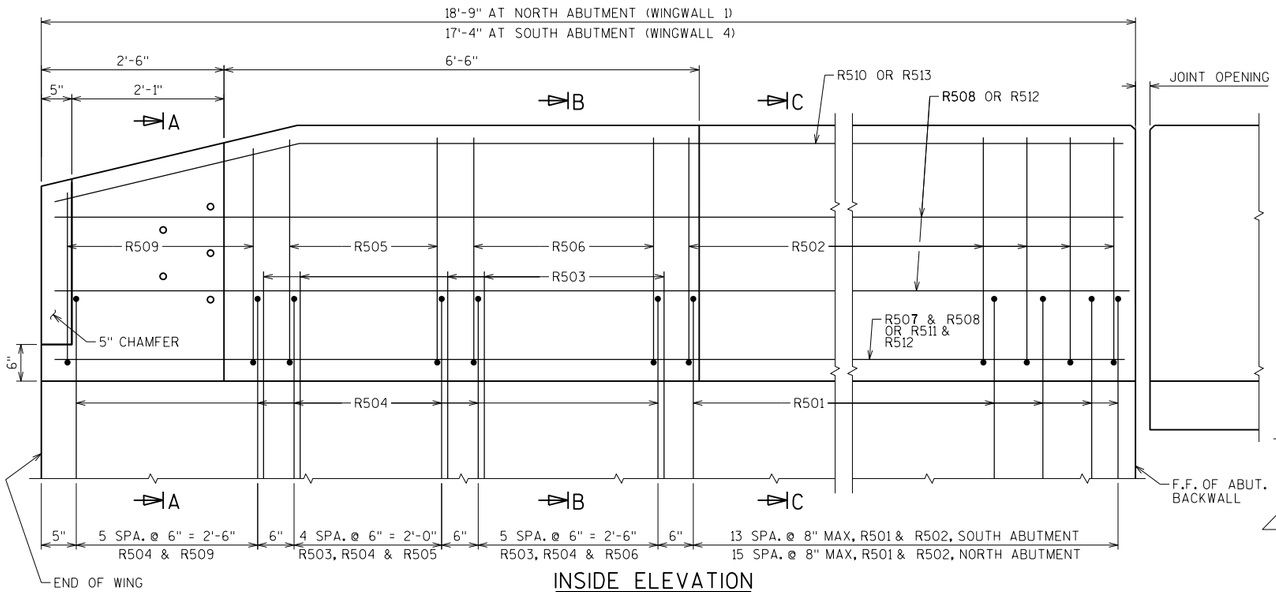
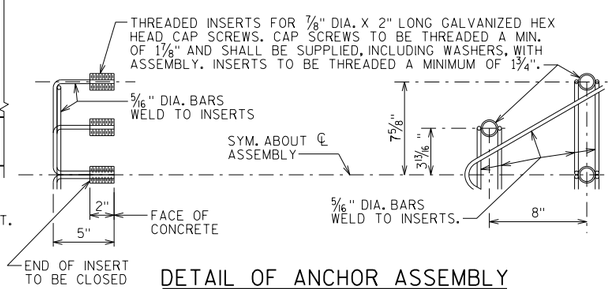


R509



INSIDE ELEVATION

SW CORNER SHOWN, NW SIMILAR



DETAIL OF ANCHOR ASSEMBLY

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

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

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-256

DRAWN BY JAP | PLANS CK'D. WJZ

SINGLE SLOPE PARAPET 42SS

SHEET 13 OF 19

296

8

8

FILE= B-40-256_130_42SS.DGN
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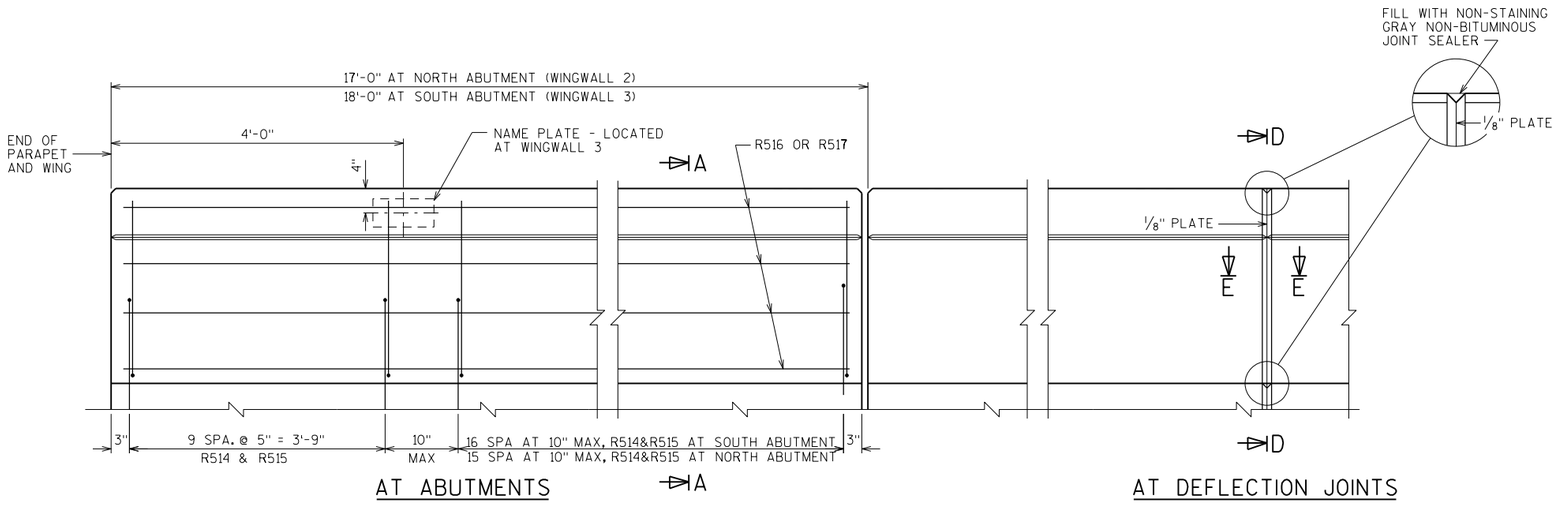
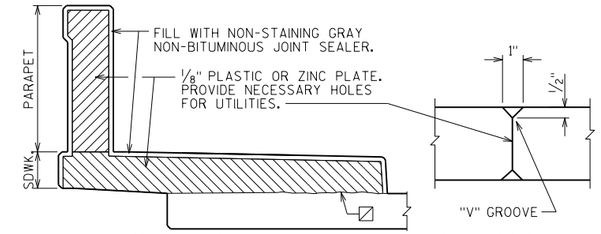
STATE PROJECT NUMBER

1360-13-70



AT ABUTMENTS

AT DEFLECTION JOINTS

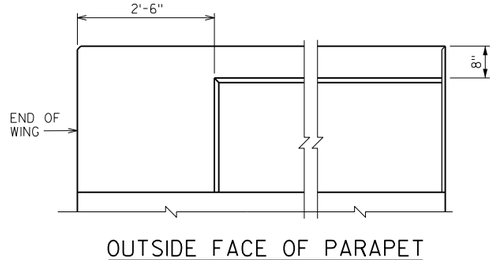


SECTION D-D

SECTION E-E

(SHOWING DEFLECTION JOINT IN PARAPET AND SIDEWALK.)

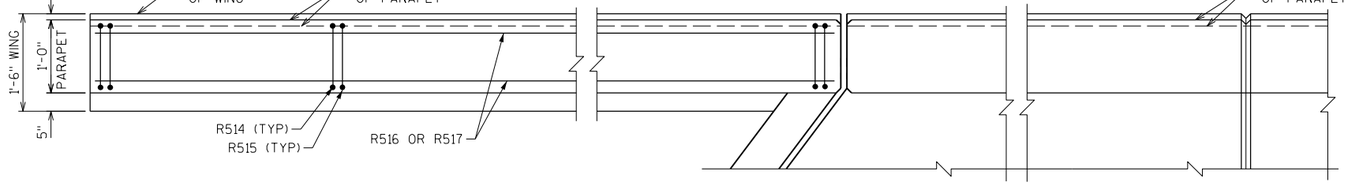
WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION D-D BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.



OUTSIDE FACE OF PARAPET

INSIDE ELEVATION OF PARAPET

NE CORNER SHOWN, SE SIMILAR

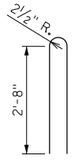


AT ABUTMENTS

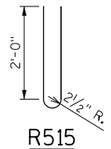
AT DEFLECTION JOINTS

BILL OF BARS

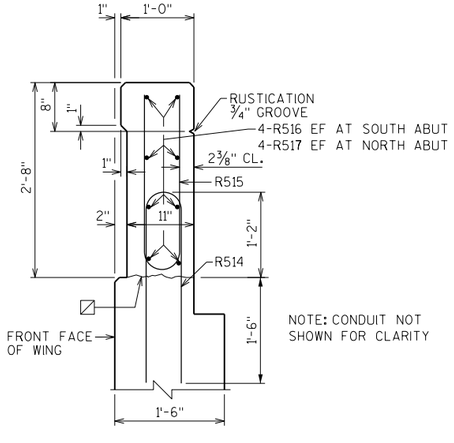
BAR MARK	COAT	NO. REQ'D N ABUT.	NO. REQ'D S ABUT.	LENGTH	BENT	BAR SERIES	822# COATED LOCATION
R514	X	26	27	6'-1"	X		PARAPET VERT.
R515	X	26	27	4'-9"	X		PARAPET VERT.
R516	X		8	17'-8"			PARAPET HORIZ.
R517	X	8		16'-8"			PARAPET HORIZ.



R514



R515



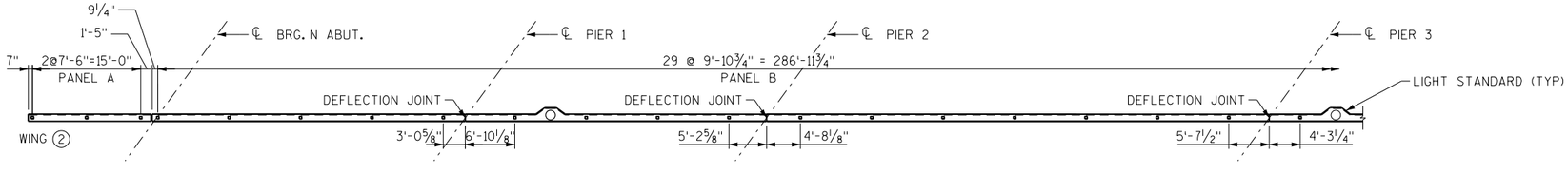
NOTE: CONDUIT NOT SHOWN FOR CLARITY

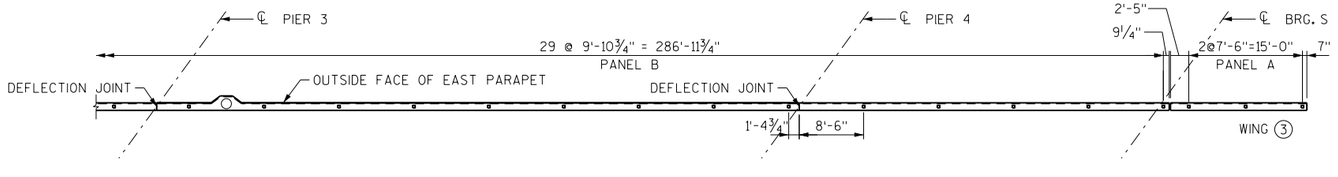
SECTION A-A

☒ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.

PLAN OF PARAPET

NE CORNER SHOWN, SE SIMILAR





FENCE POST SPACING PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-256

DRAWN BY JAP | PLANS CK'D. WJZ

VERTICAL FACE PARAPET "A"

SHEET 14 OF 19

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FILE= B-40-256_140_VERTPPTA.DGN
SCALE = 1:1

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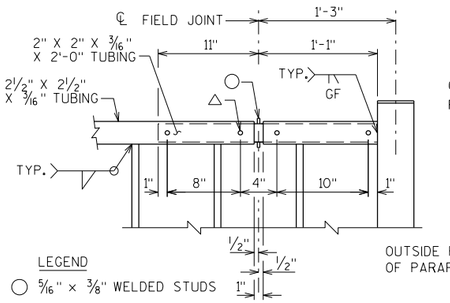
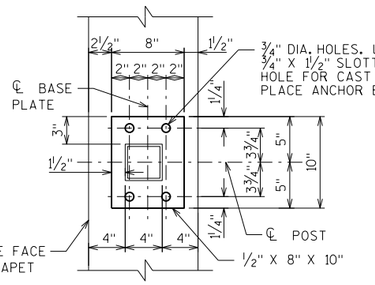
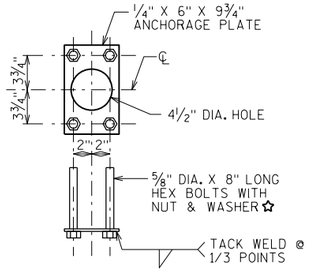


△ WELD BEAD ON EACH SIDE OF TUBE. GRIND BEADS SO THAT SLEEVE FITS FREELY INSIDE THE 2½" × 2½" TUBE.

RAILING EXPANSION JOINT DETAIL



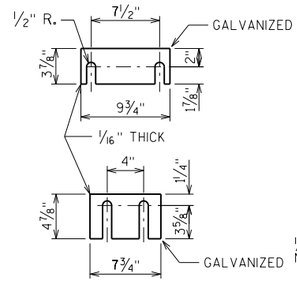
BASE PLATE



ANCHORAGE DETAIL

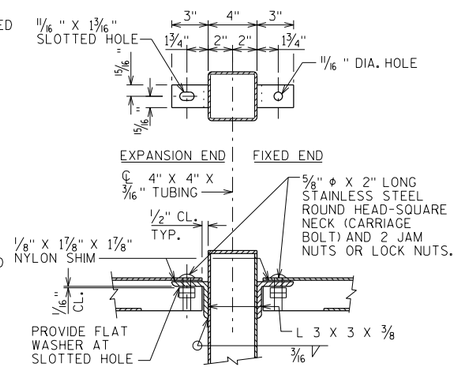
✪ ALTERNATIVE ANCHORAGE: ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 AND 502.3.14 OF THE STANDARD SPECIFICATIONS.

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

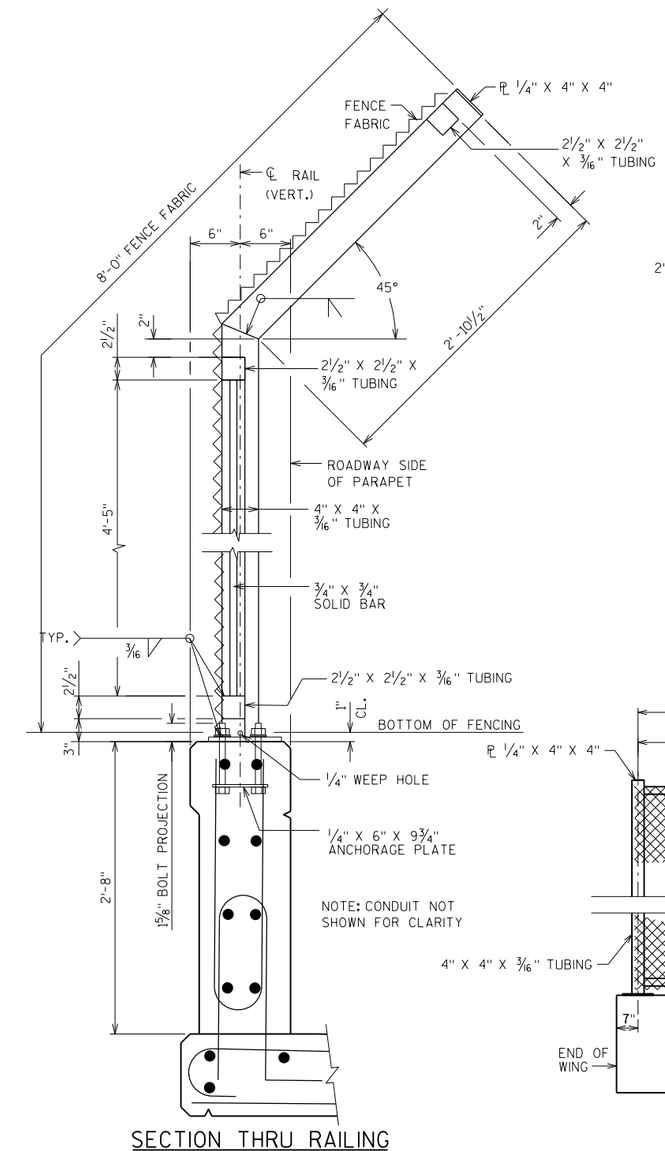


SHIM PLATE DETAILS

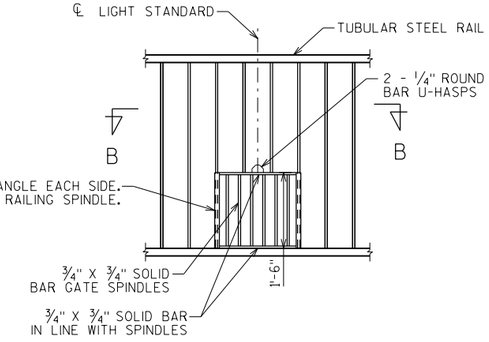
TWO SHIMS OF EACH SIZE REQUIRED PER POST



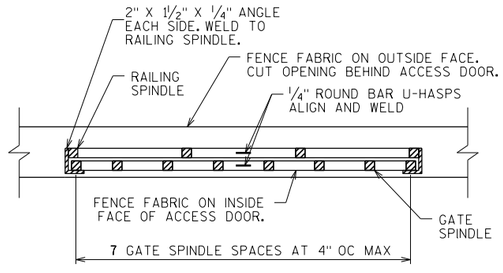
TOP RAIL CONNECTION FOR FENCE W/ BENT TOP



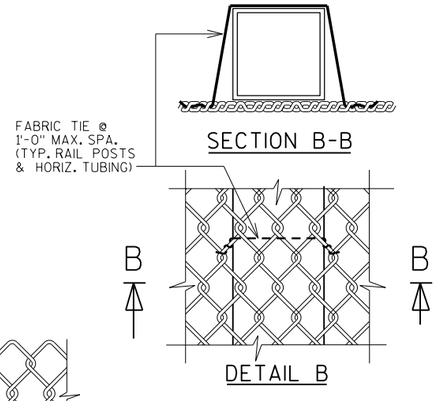
SECTION THRU RAILING

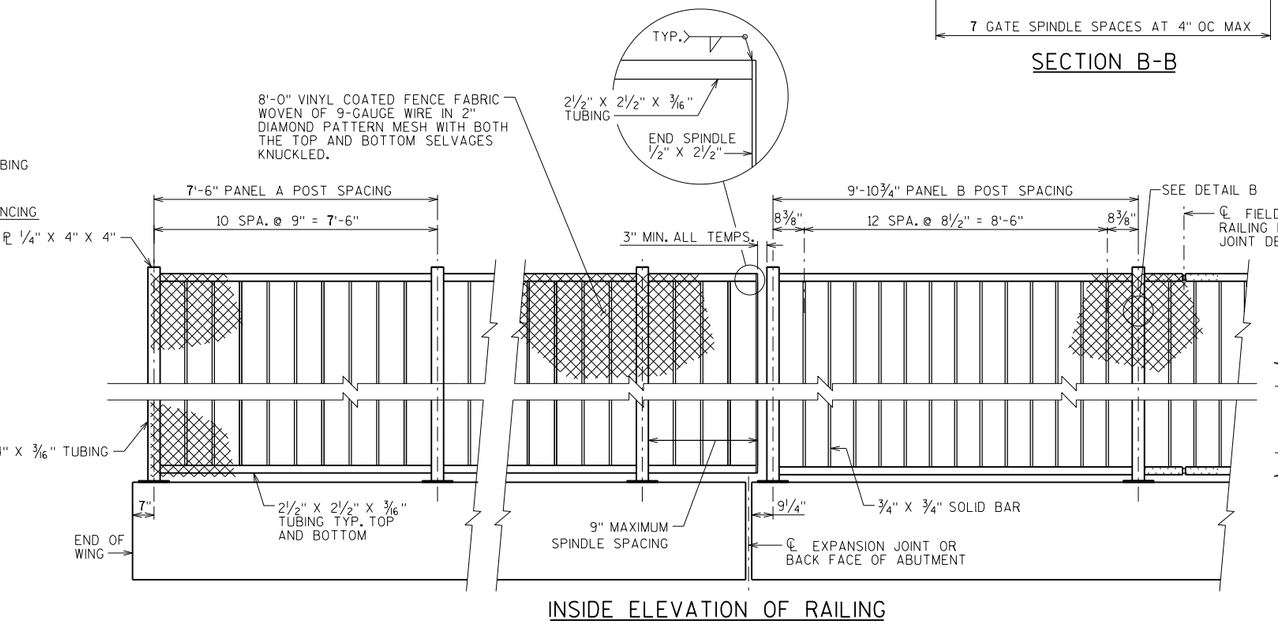


RAILING ACCESS DOOR ELEVATION

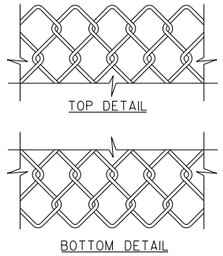


SECTION B-B





INSIDE ELEVATION OF RAILING



FENCE FABRIC

STATE PROJECT NUMBER

1360-13-70

NOTES

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 CUT.

STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B. PLATES, ANGLES, BARS AND SHIMS SHALL CONFORM TO ASTM A709, GRADE 36. FENCE FABRIC SHALL CONFORM TO F668, CLASS 2B.

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

ALL POST SPACINGS ARE TAKEN HORIZONTAL ALONG CENTERLINE OF RAILING AT BASE OF POST.

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

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED. ✪

THE BID ITEM SHALL BE "RAILING TUBULAR SCREENING" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE NOT MORE THAN 3 POSTS.

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

ALL RAILING MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS.

THE END OF THE FABRIC SHALL BE ATTACHED TO THE POST BY MEANS OF A TENSION BAR THREADED THROUGH THE END LOOPS OF THE FABRIC AND SECURED TO THE POST WITH CLAMPS & BOLT. THE FABRIC SHALL BE STRETCHED TO REMOVE ALL SLACK.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-256

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TUBULAR STEEL RAILING SCREENING

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SCALE = 1:1

STATE PROJECT NUMBER

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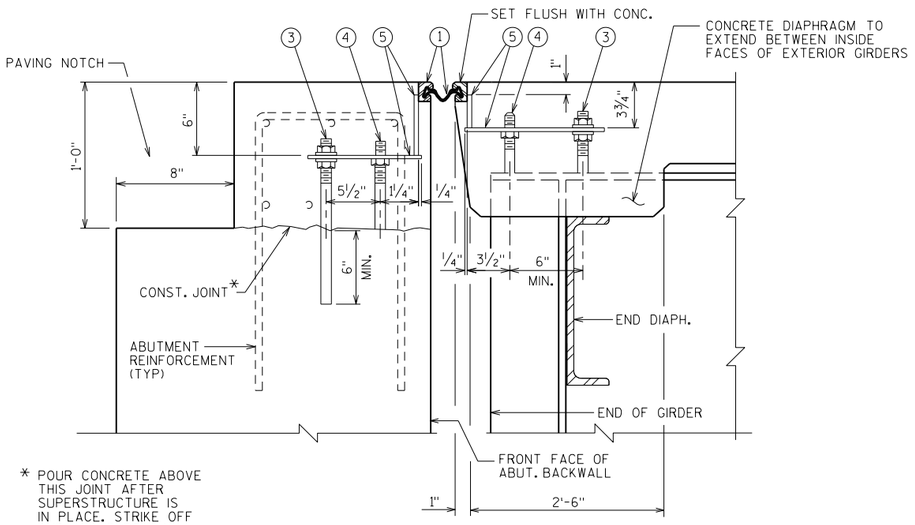
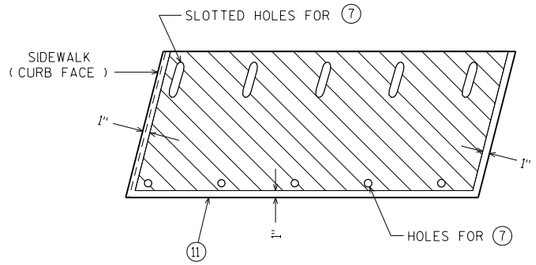


* POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE



PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE

PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN HATCHED AREA ONLY (NOT ON CURB FACE).

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES		
PRODUCT	MANUFACTURER	CONTACT AT
SLIPNOT GRADE 2, STEEL	W. S. MOLNAR COMPANY	1-800-SLIPNOT
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170

LEGEND

① NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.

② STUDS ⅝"Φ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝"Φ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

③ ¾" Φ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

④ ¾"Φ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

⑤ FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" Φ HOLE FOR NO. 3 & 1" Φ HOLE FOR NO. 4.

⑥ GALVANIZED PLATE ⅜" X 10" X 2'-2" LONG WITH HOLES FOR NO. 7.

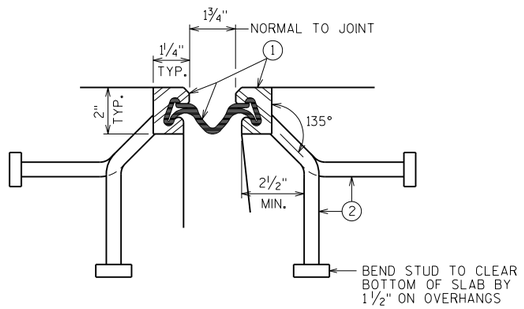
⑦ ¾"Φ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

⑧ ¾"Φ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

⑨ ¾"Φ X 2¼" GALVANIZED THREADED COUPLING.

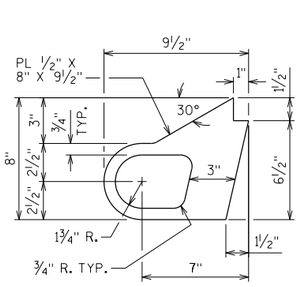
⑩ 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

⑪ SIDEWALK COVER PLATE ⅜" X 2'-0" X LIMITS SHOWN. BEND DOWN FACE OF SIDEWALK WITH HOLES FOR NO. 7. GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.

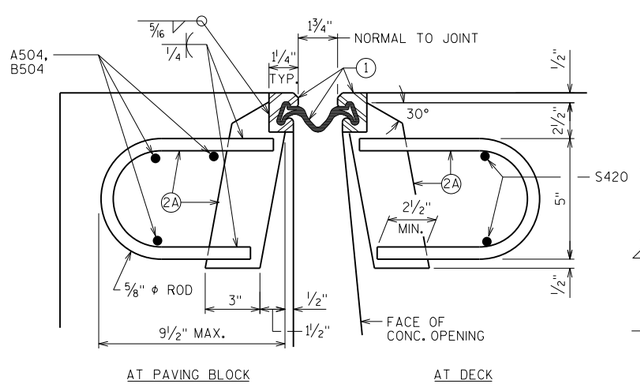


SECTION THRU JOINT

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

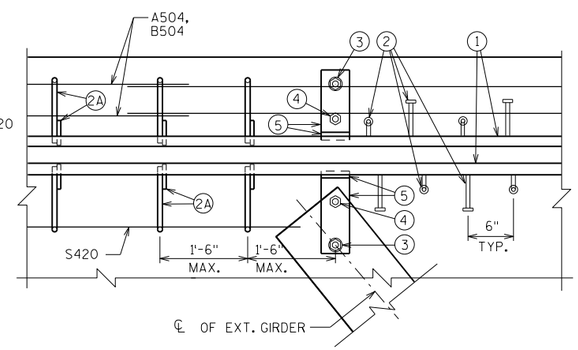


ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



PART PLAN

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, ANCHOR PLATES SHALL BE PROVIDED 3" FROM EACH SIDE OF THE FIELD SPLICE. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

ALL MATERIAL IN THE EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID AT THE UNIT PRICE BID FOR "EXPANSION DEVICE", LF.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-256

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STRIP SEAL EXPANSION JOINT

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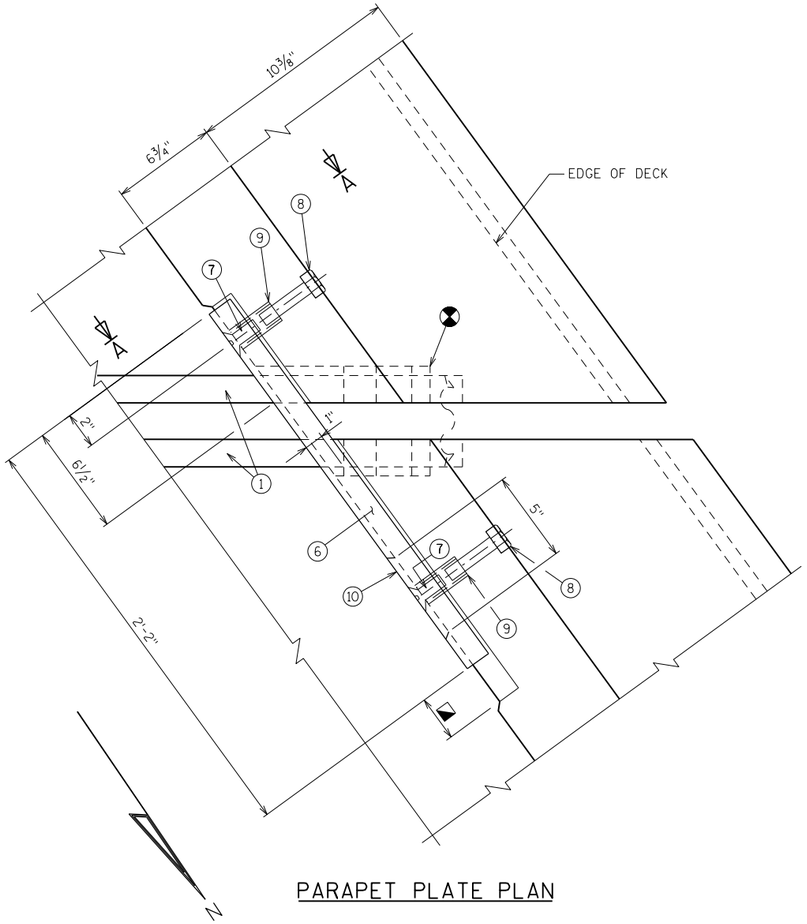
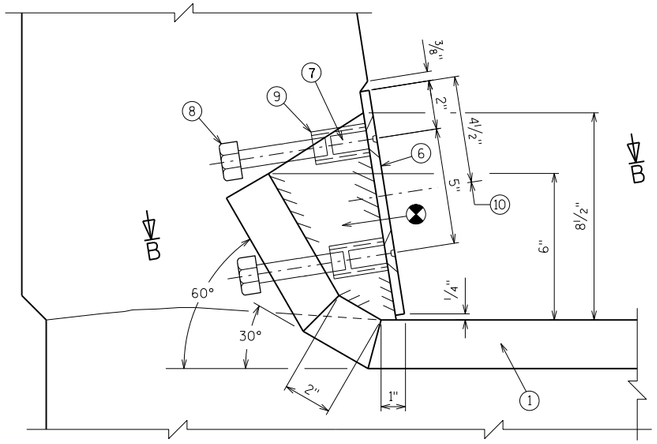
STATE PROJECT NUMBER

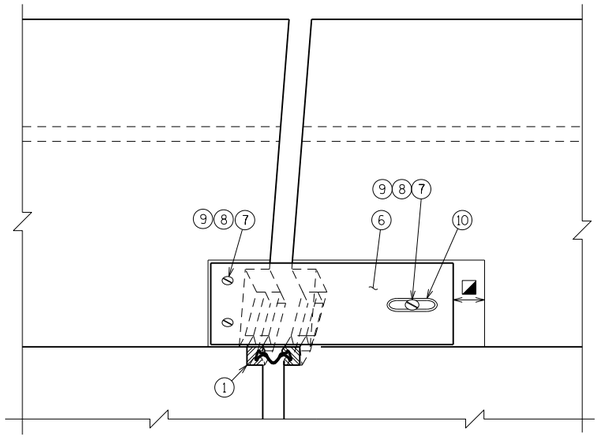
1360-13-70



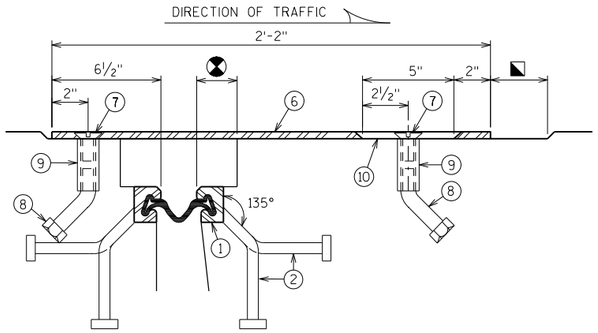
PARAPET PLATE PLAN



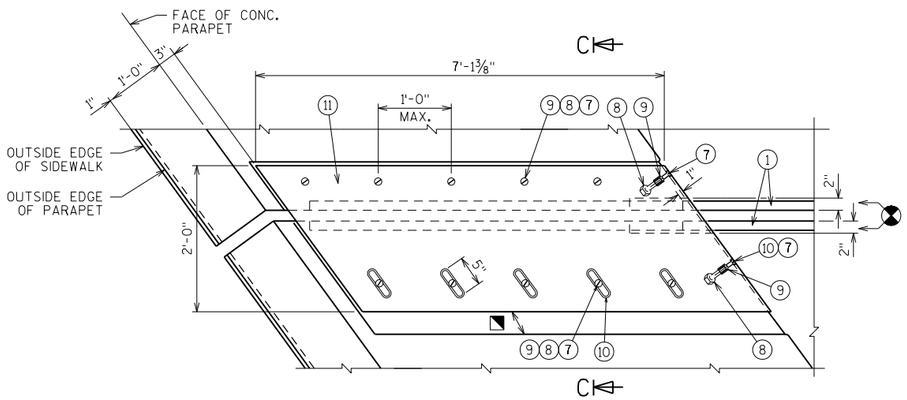
SECTION A-A



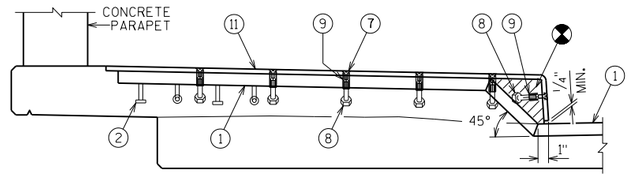
VIEW OF PARAPET PLATE FROM ROADWAY



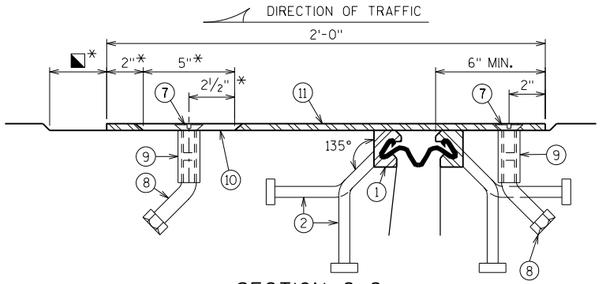
SECTION B-B



SIDEWALK PLATE PLAN



SECTION AT SIDEWALK



SECTION C-C

* DIMENSION ALONG DIRECTION OF MOVEMENT

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION ALONG SKEW PLUS 1/2".

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-256

DRAWN BY JAP | PLANS CK'D. WJZ

COVER PLATE DETAILS

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300

FILE= B-40-256_170_COVERPLATES.DGN
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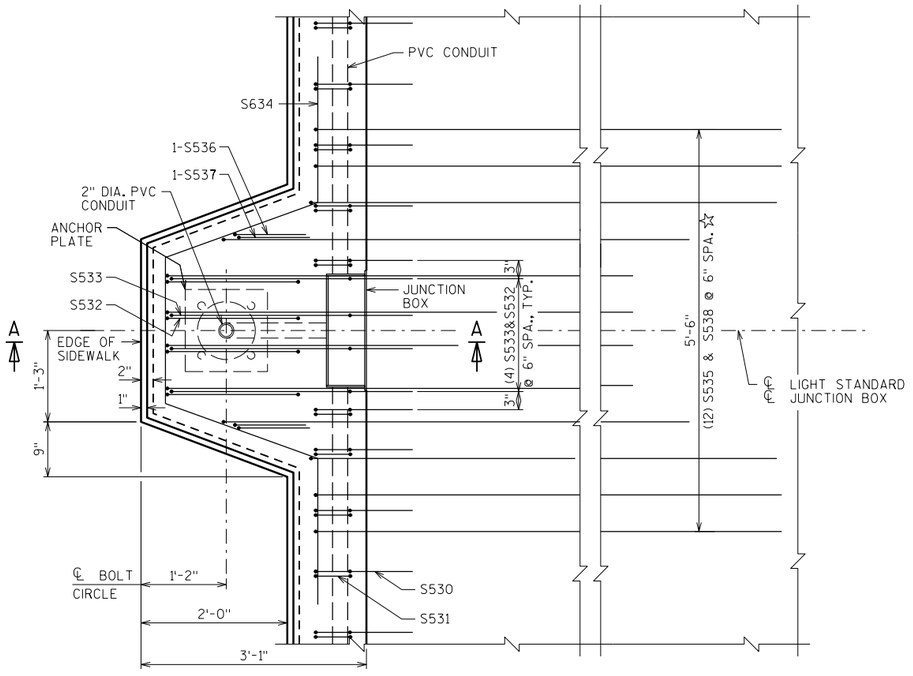
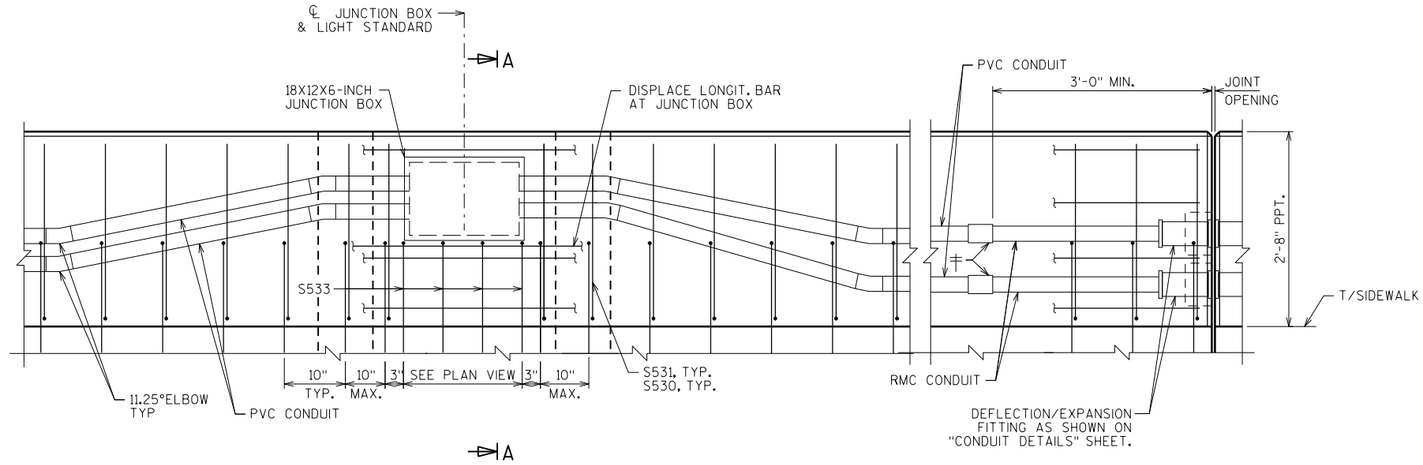
STATE PROJECT NUMBER
1360-13-70



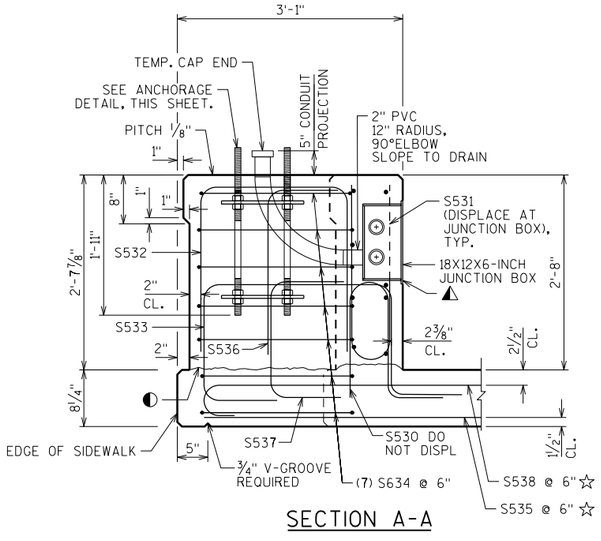
PLAN AT LIGHT STANDARD

(DECK AND SIDEWALK STEEL NOT SHOWN FOR CLARITY)



INSIDE ELEVATION AT JUNCTION BOX

(DECK AND SIDEWALK STEEL NOT SHOWN FOR CLARITY)



SECTION A-A

NOTES

BID ITEM SHALL BE "ANCHOR ASSEMBLIES POLES ON STRUCTURES", EACH

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2½" DIA. RIGID NONMETALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE.

CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS ARE INCIDENTAL TO CONDUIT WORK.

PROVIDE JUNCTION BOXES FROM THE APPROVED PRODUCTS LIST.

SEE "CONDUIT DETAILS" SHEET FOR ADDITIONAL INFORMATION.

⅜" NYLON PULL WIRE/ROPE IS REQUIRED FOR ALL CONDUIT AND SHALL BE INCIDENTAL TO CONDUIT INSTALLATION

ANCHOR BOLTS FOR ANCHOR ASSEMBLIES MUST BE INSTALLED PERPENDICULAR TO THE HORIZON

THE TOP OF THE LIGHT STANDARD SHALL HAVE A ⅛" PITCH FROM THE OUTSIDE FACE OF THE PARAPET TO THE OUTSIDE FACE OF THE LIGHT STANDARD.

LEGEND

◐ CONSTRUCTION JOINT, STRIKE OFF AS SHOWN.

◭ CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

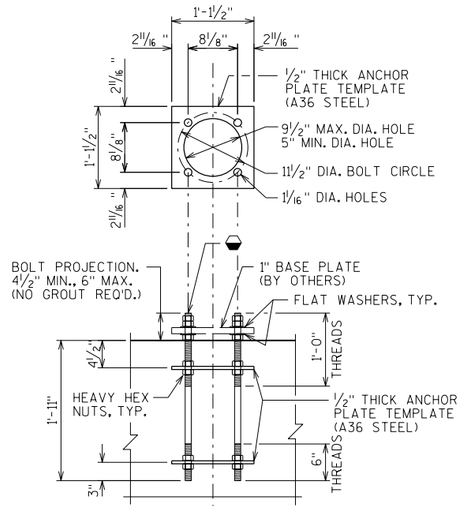
⫩ NONMETALLIC CONDUIT TO METALLIC CONDUIT ADAPTER FITTING (UL OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED).

PVC = POLYVINYL CHLORIDE (RIGID NONMETALLIC) CONDUIT

RMC = RIGID METALLIC CONDUIT

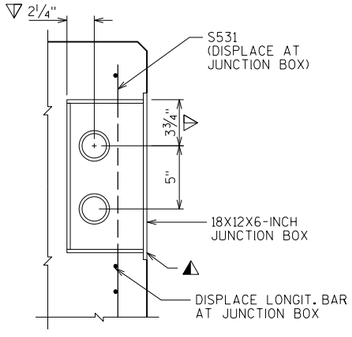
☆ THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN SIDEWALK.

◒ 1" DIA. ANCHOR RODS ASTM F1554 GR 55, HEAVY HEX NUTS ASTM A563, AND WASHERS ASTM F436. ANCHOR ASSEMBLIES SHALL BE GALVANIZED PER SECTION 531 OF THE STANDARD SPECIFICATION. PROVIDE (2) WASHERS AND (7) NUTS PER ANCHOR ROD.



ANCHOR ROD ASSEMBLY DETAIL

(SINGLE ASSEMBLY SHOWN 2 - REQ'D.)
(4) - ANCHOR RODS REQUIRED PER ASSEMBLY



JUNCTION BOX DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-256

DRAWN BY JAP | PLANS CK'D. WJZ

LIGHT SUPPORT DETAILS

SHEET 18 OF 19

301

8

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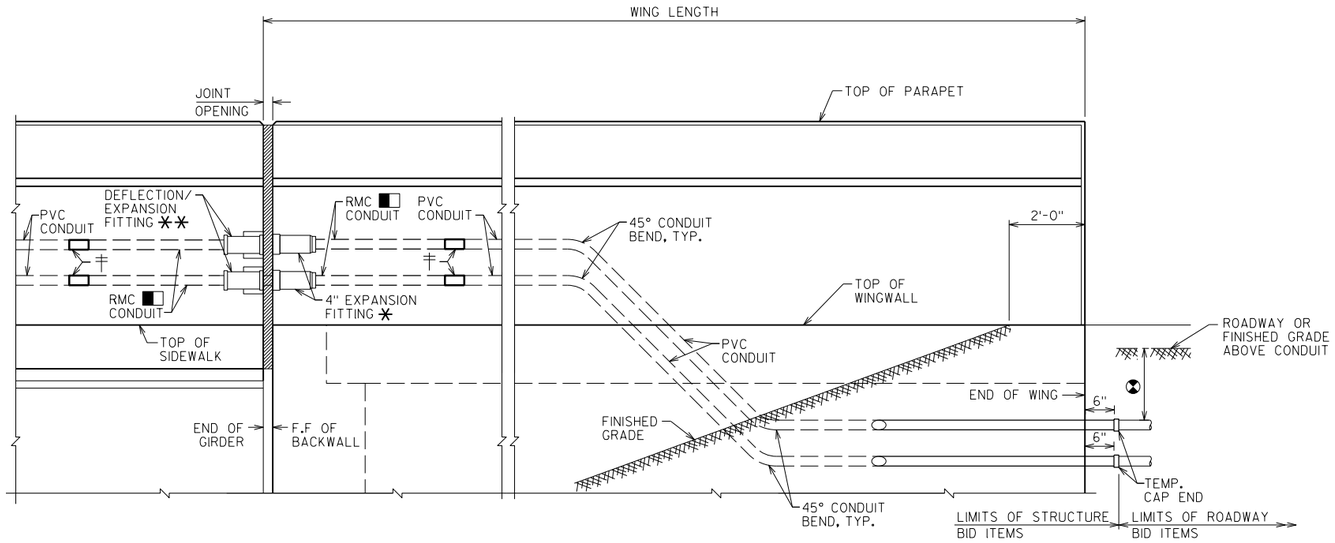
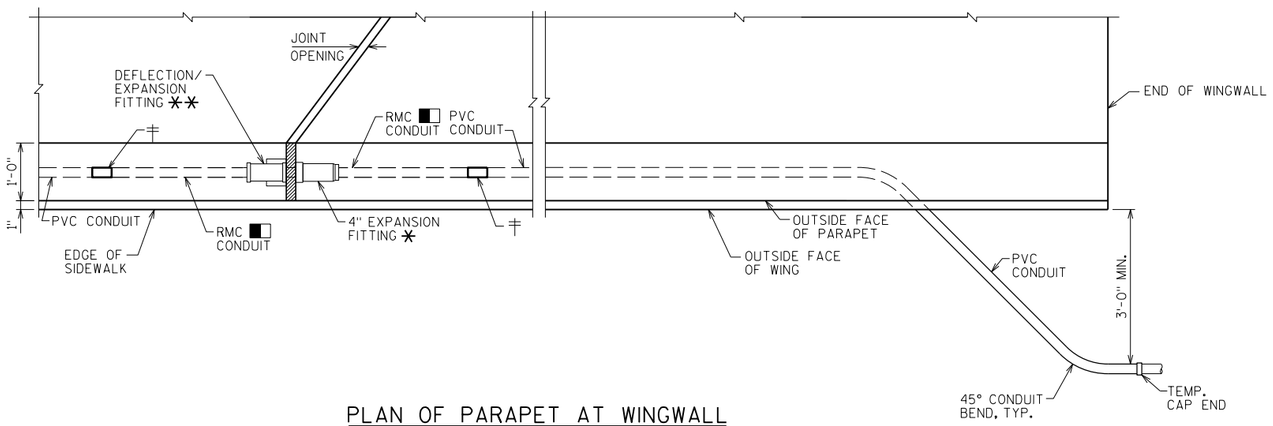
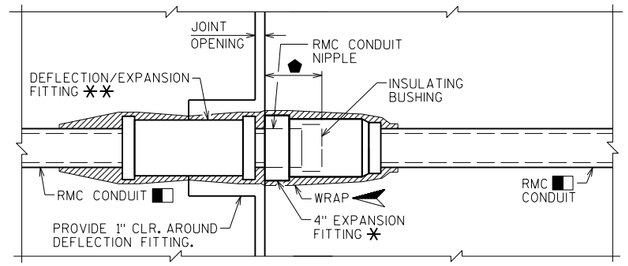


OUTSIDE ELEVATION OF PARAPET AT WINGWALL



PLAN OF PARAPET AT WINGWALL



DEFLECTION/EXPANSION AND 4" EXPANSION FITTING

THIS DETAIL ACCOMMODATES A MAXIMUM OF 4" TOTAL MOVEMENT AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION. BOND JUMPER NOT SHOWN FOR CLARITY

LEGEND

■ USE 2" DIA. RIGID METALLIC (RMC) CONDUIT AT FITTINGS. PROVIDE RMC FOR 3'-0" MIN. ON EACH SIDE OF 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 - 1/4" MINIMUM THICKNESS. PROVIDE WRAP FOR THE ENTIRE LENGTH OF THE FITTING OR AS SHOWN. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

⬟ POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

☢ 2'-0" MIN. CONDUIT COVER UNDER ROADWAYS, 1'-6" OTHERWISE. CONDUIT COVER SHOULD NOT EXCEED 3'-0".

* EXPANSION FITTING REQUIREMENTS (IF USED):
- 4" TOTAL MOVEMENT WITH BONDING JUMPER

** DEFLECTION/EXPANSION FITTING REQUIREMENTS (IF USED):
- UP TO 3/4" CONDUIT CONTRACTION OR EXPANSION AND UP TO 30° OF ANGULAR MISALIGNMENT IN ANY DIRECTION WITH BONDING JUMPER

NOTES

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" 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.

3/8" NYLON PULL WIRE/ROPE IS REQUIRED FOR ALL CONDUIT AND SHALL BE INCIDENTAL TO CONDUIT INSTALLATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-256

DRAWN BY JAP | PLANS CK'D. WJZ

CONDUIT DETAILS

SHEET 19 OF 19

302

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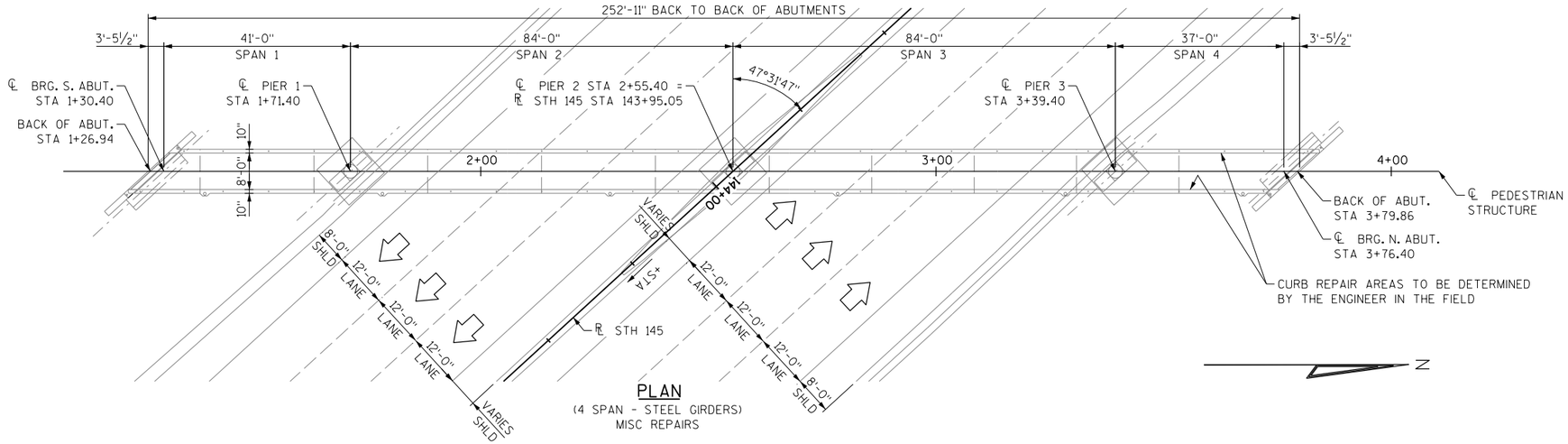
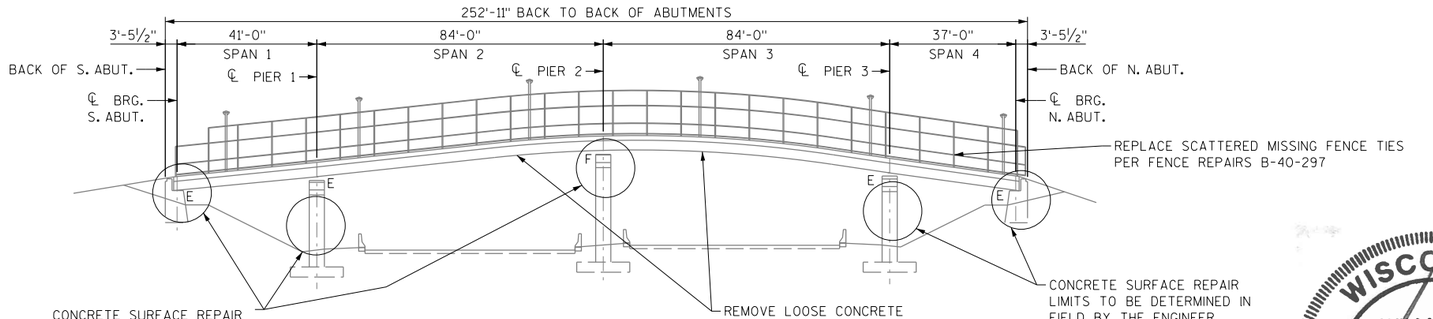
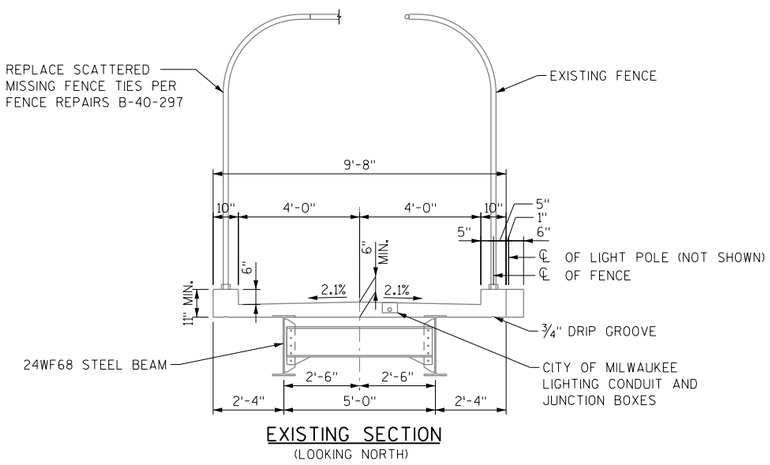
STATE PROJECT NUMBER
1360-13-70



PLAN
(4 SPAN - STEEL GIRDERS)
MISC REPAIRS



ELEVATION
LOOKING WEST ALONG ℄ STH 145



EXISTING SECTION
(LOOKING NORTH)

GENERAL NOTES:

1. DRAWINGS SHALL NOT BE SCALED.
2. EXISTING STRUCTURE DIMENSIONS ARE BASED ON THE ORIGINAL STRUCTURE PLANS.
3. BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.
4. ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS NOTED OTHERWISE.
5. ALL STATIONS ARE IN FEET.
6. ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.
7. SPECIFIC LOCATIONS OF CONCRETE SURFACE REPAIR AT ABUTMENTS & PIERS ARE TO BE DETERMINED BY THE ENGINEER.
8. CLEAN AND FILL EXISTING LONGITUDINAL AND TRANSVERSE CRACKS IN WEARING SURFACE WITH A PENETRATING EPOXY AS DIRECTED BY THE FIELD ENGINEER.
9. PROTECTIVE SURFACE TREATMENT RESEAL SHALL BE APPLIED TO THE DECK. SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "PROTECTIVE SURFACE TREATMENT RESEAL".

EXISTING STRUCTURE

THE EXISTING BRIDGE (B-40-297) IS A 252'-11" LONG, 9'-8" WIDE 4 SPAN STEEL GIRDER PEDESTRIAN BRIDGE SUPPORTED ON REINFORCED CONCRETE PIERS AND ABUTMENTS. THE STRUCTURE BEGINS AT STA 1+26.94 AND ENDS AT STA 3+79.86. PLANS OF THE EXISTING BRIDGE ARE AVAILABLE FOR REVIEW AT WISDOT SE REGION OFFICE, 141 NW BARSTOW ST. WAUKESHA, WI OR THROUGH THE WISDOT STRUCTURES WEBSITE.

LIST OF DRAWINGS:

1. GENERAL PLAN & ELEVATION

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
AARON BONK, PE
(608) 261-0261

CONSULTANT:
WILLIAM J. ZIPPEL, PE, SE
ALFRED BENESCH & CO
1300 W CANAL ST, SUITE 150
MILWAUKEE, WI 53233
(414) 308-1321

WISCONSIN
WILLIAM J. ZIPPEL
38868-006
MILWAUKEE, WI
8/3/2022
PROFESSIONAL ENGINEER

TOTAL ESTIMATE OF QUANTITIES

BID NO.	BID ITEMS	UNIT	W ABUT	PIER 1	PIER 2	PIER 3	E ABUT	SUPER	TOTAL
502.0717.S	CRACK SEALING EPOXY	LF						250	250
502.3215	PROTECTIVE SURFACE TREATMENT RESEAL	SY						337	337
509.0301	PREPARATION DECKS TYPE 1	SY						8	8
509.0302	PREPARATION DECKS TYPE 2	SY						1	1
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF						116	116
509.1200	CURB REPAIR	LF						5	5
509.1500	CONCRETE SURFACE REPAIR	SF	8	16	10	12			46
509.2000	FULL-DEPTH DECK REPAIR	SY						1	1
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY						1	1
SPV.060.001	CLEANING, PAINTING, AND LUBRICATING BEARINGS	EACH	2				2		4
SPV.0060.002	FENCE REPAIRS B-40-297	EACH						1	1
SPV.0165.001	REMOVING LOOSE CONCRETE	SF						120	120
	NON-BID ITEMS								
	JOINT FILLER								
	NON-BITUMINOUS JOINT SEALER								

NO.	DATE	REVISION	BY

benesch
Alfred Benesch & Company
1300 West Canal Street, Suite 150
Milwaukee, Wisconsin 53233
414-308-1310 Job No. 20288.00

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 08/03/22
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-297

PEDESTRIAN BRIDGE OVER STH 145

COUNTY	MILWAUKEE	~~TOWN~~/CITY/~~VILLAGE~~	MILWAUKEE
DESIGN SPEC.	REHABILITATION N/A		
DESIGNED BY	JAP	DESIGN CK'D.	WJZ
DRAWN BY	MRL	PLANS CK'D.	WJZ

GENERAL PLAN & ELEVATION

SHEET 1 OF 1

303

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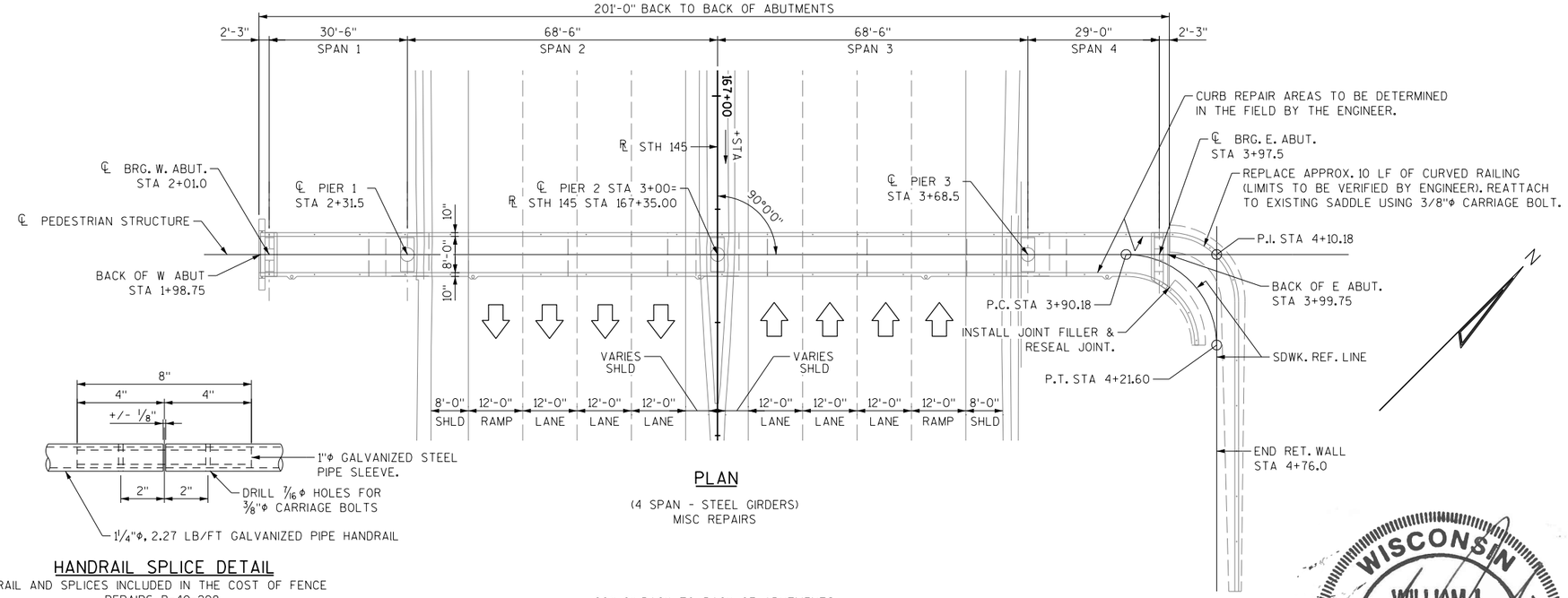
STATE PROJECT NUMBER
1360-13-70

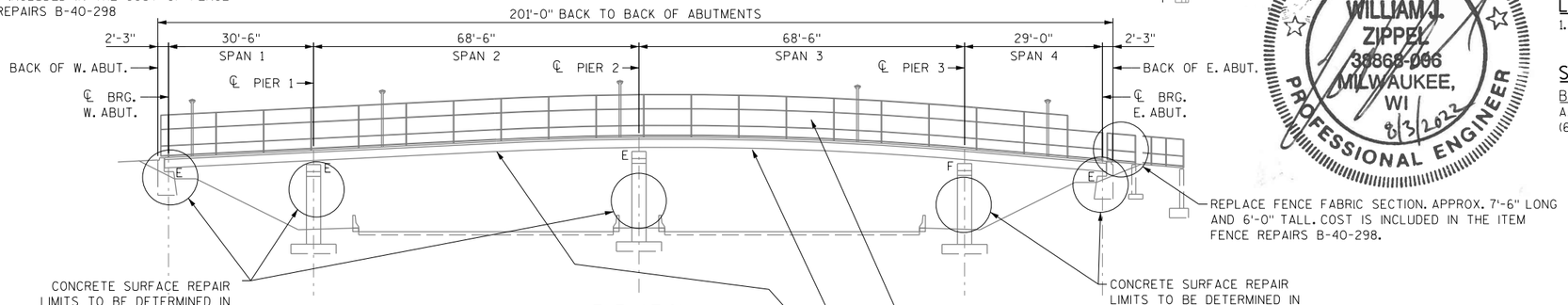


PLAN

(4 SPAN - STEEL GIRDERS)
MISC REPAIRS

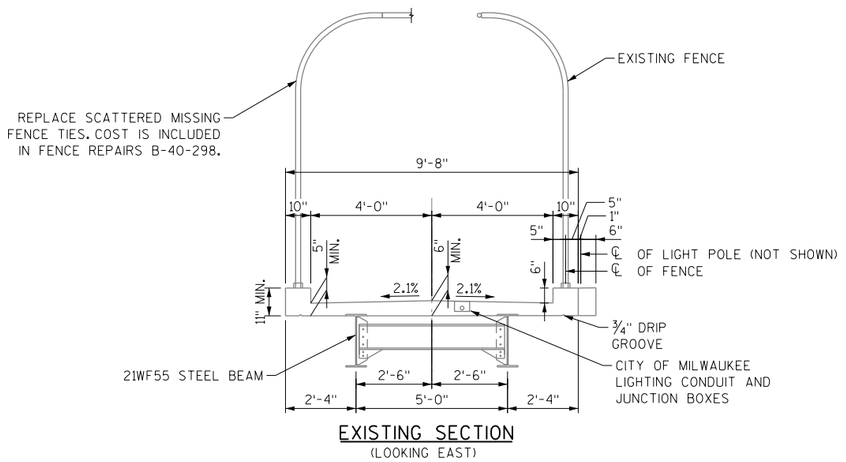
HANDRAIL SPLICE DETAIL

RAIL AND SPLICES INCLUDED IN THE COST OF FENCE REPAIRS B-40-298



ELEVATION

LOOKING NORTH ALONG ℄ STH 145



EXISTING SECTION

(LOOKING EAST)

TOTAL ESTIMATE OF QUANTITIES

BID NO.	BID ITEMS	UNIT	W ABUT	PIER 1	PIER 2	PIER 3	E ABUT	SUPER	TOTAL
502.0717.S	CRACK SEALING EPOXY	LF						200	200
502.3215	PROTECTIVE SURFACE TREATMENT RESEAL	SY						233	233
509.0301	PREPARATION DECKS TYPE 1	SY						6	6
509.0302	PREPARATION DECKS TYPE 2	SY						1	1
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF						86	86
509.1200	CURB REPAIR	LF						20	20
509.1500	CONCRETE SURFACE REPAIR	SF		4	44	20	4		72
509.2000	FULL-DEPTH DECK REPAIR	SY						1	1
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY						1	1
SPV.0060.001	CLEANING, PAINTING, AND LUBRICATING BEARINGS	EACH	2				2		4
SPV.0060.003	FENCE REPAIRS B-40-298	EACH						1	1
SPV.0165.001	REMOVING LOOSE CONCRETE	SF						105	105
	NON-BID ITEMS								
	JOINT FILLER								
	NON-BITUMINOUS JOINT SEALER								

GENERAL NOTES:

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EXISTING STRUCTURE

THE EXISTING BRIDGE (B-40-298) IS A 201'-0" LONG, 9'-8" WIDE 4 SPAN STEEL GIRDER PEDESTRIAN BRIDGE SUPPORTED ON REINFORCED CONCRETE PIERS AND ABUTMENTS. THE STRUCTURE BEGINS AT STA 1+98.75 AND ENDS AT STA 3+99.75. PLANS OF THE EXISTING BRIDGE ARE AVAILABLE FOR REVIEW AT WISDOT SE REGION OFFICE, 141 NW BARSTOW ST. WAUKESHA, WI OR THROUGH THE WISDOT STRUCTURES WEBSITE.

LIST OF DRAWINGS:

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AARON BONK, PE
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CONSULTANT:
WILLIAM J. ZIPPEL, PE, SE
ALFRED BENESCH & CO
1300 W CANAL ST. SUITE 150
MILWAUKEE, WI 53233
(414) 308-1321

WISCONSIN
WILLIAM J. ZIPPEL
38868-006
MILWAUKEE, WI
8/3/2022
PROFESSIONAL ENGINEER

NO.	DATE	REVISION	BY

benesch
Alfred Benesch & Company
1300 West Canal Street, Suite 150
Milwaukee, Wisconsin 53233
414-308-1310 Job No. 20288.00

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 08/03/22
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-298

PEDESTRIAN BRIDGE OVER STH 145

COUNTY	MILWAUKEE	~~TOWN~~/CITY/~~VILLAGE~~	MILWAUKEE
DESIGN SPEC.	REHABILITATION N/A		
DESIGNED BY JAP	DESIGN CK'D. WJZ	DRAWN BY MRL	PLANS CK'D. WJZ

GENERAL PLAN & ELEVATION

SHEET 1 OF 1

304

FILE= B-40-298_10_GP&E.DGN
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PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: CROSS SECTIONS	SHEET 305	E

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LAYOUT NAME - 01

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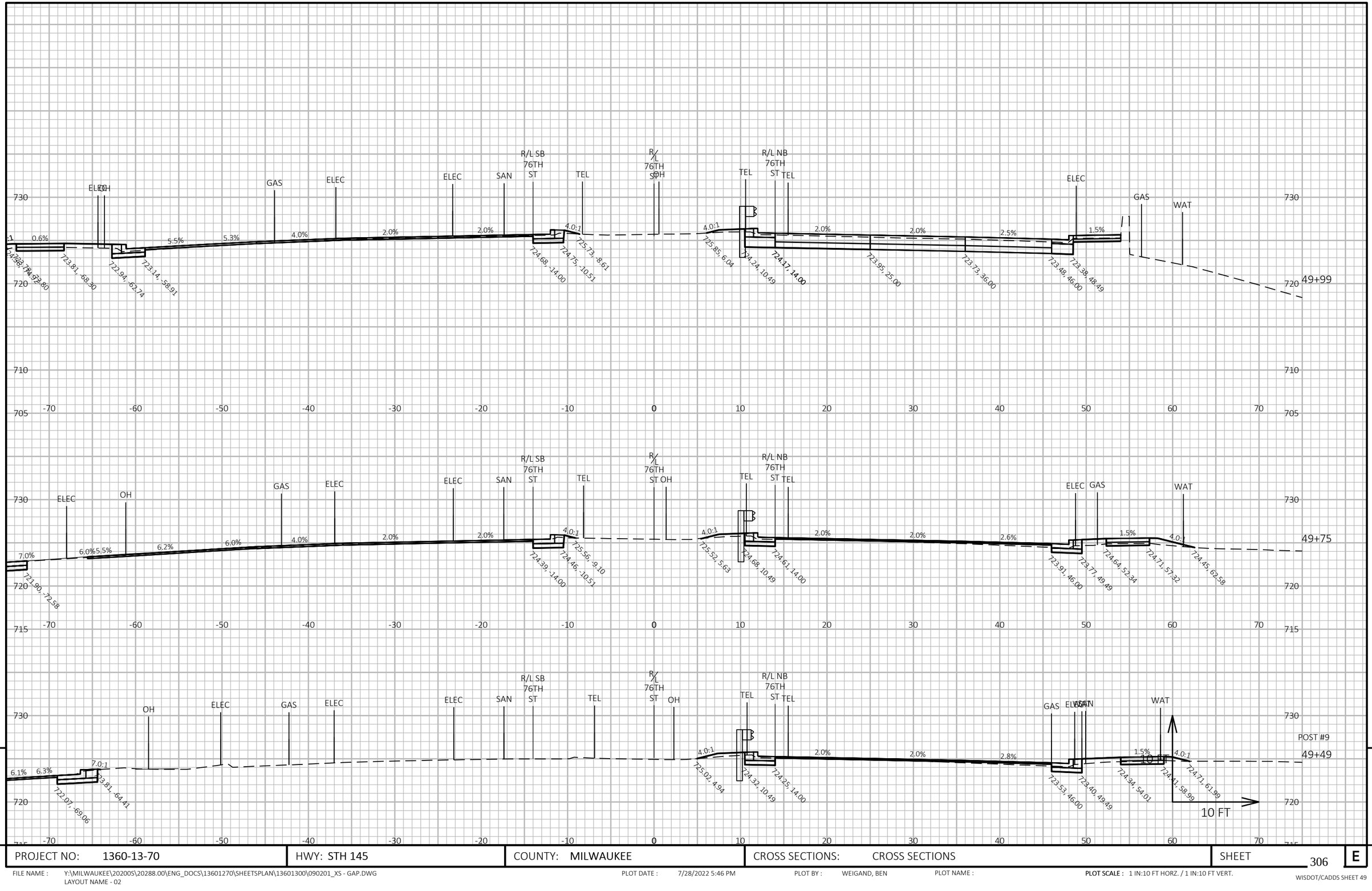
WISDOT/CADDS SHEET 49



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PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: CROSS SECTIONS	SHEET 306	E

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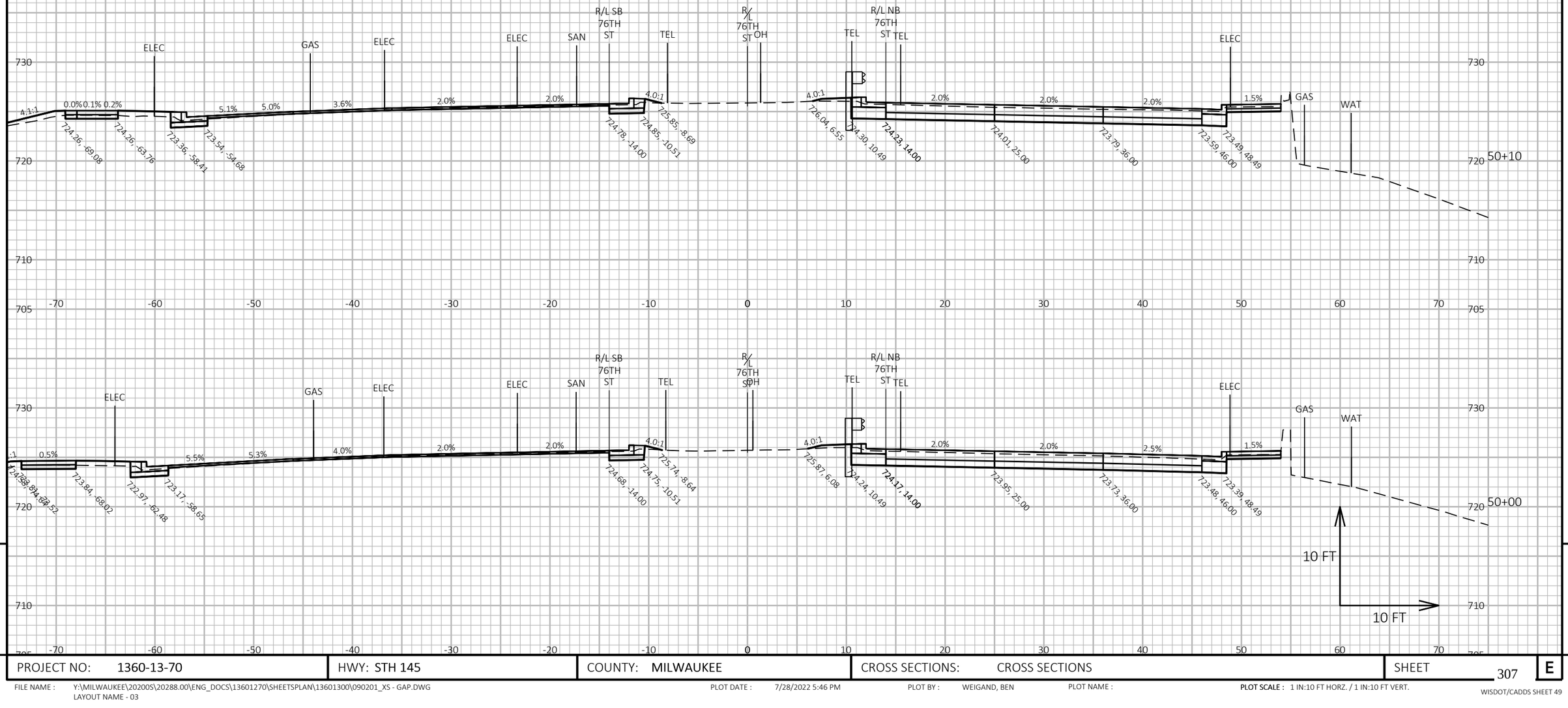

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PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: CROSS SECTIONS	SHEET 307	E

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LAYOUT NAME - 03

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PLOT BY : WEIGAND, BEN

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: CROSS SECTIONS	SHEET 308	E

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LAYOUT NAME - 04

PLOT DATE : 7/28/2022 5:46 PM

PLOT BY : WEIGAND, BEN

PLOT NAME :

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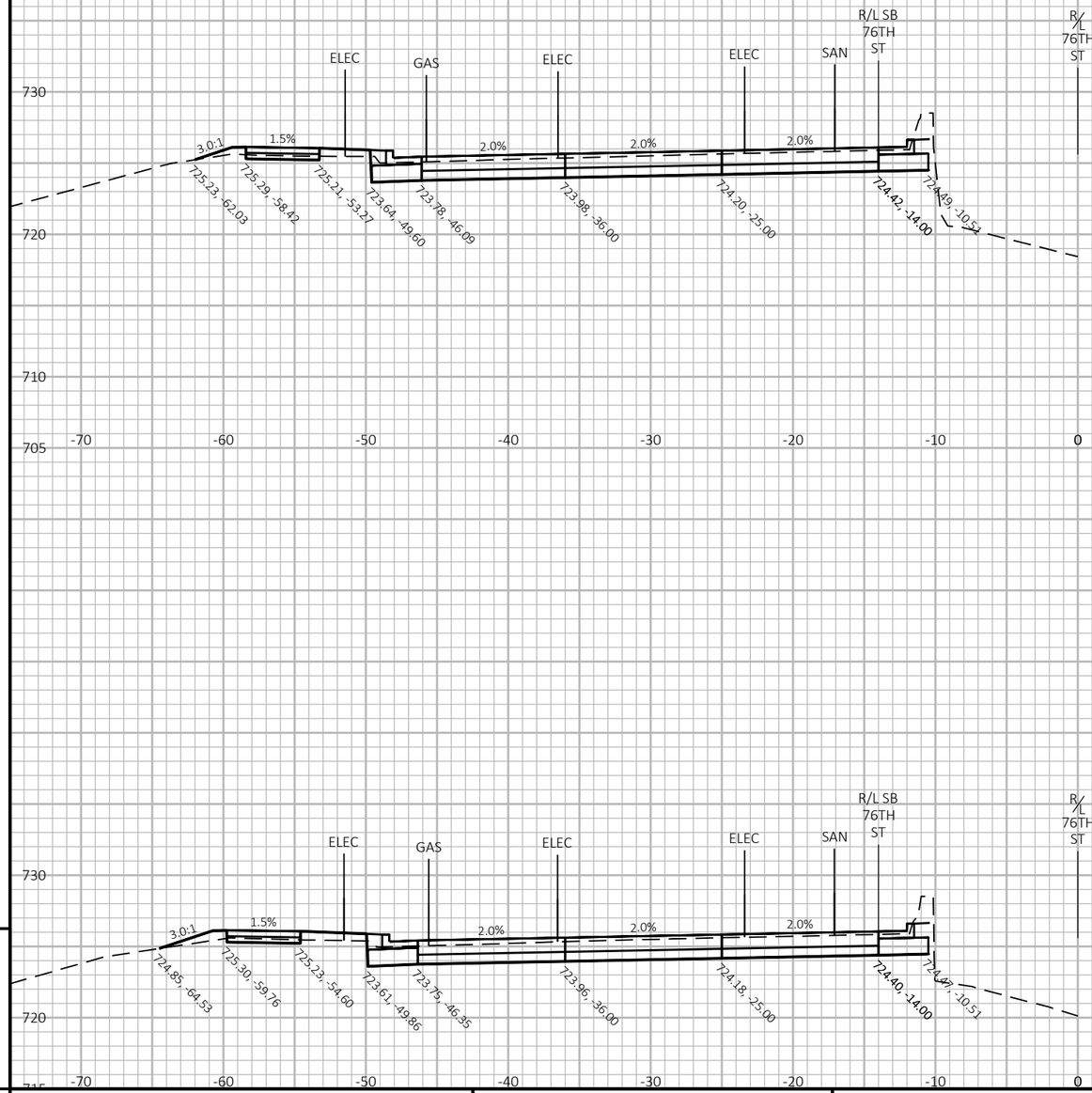
WISDOT/CADDS SHEET 49



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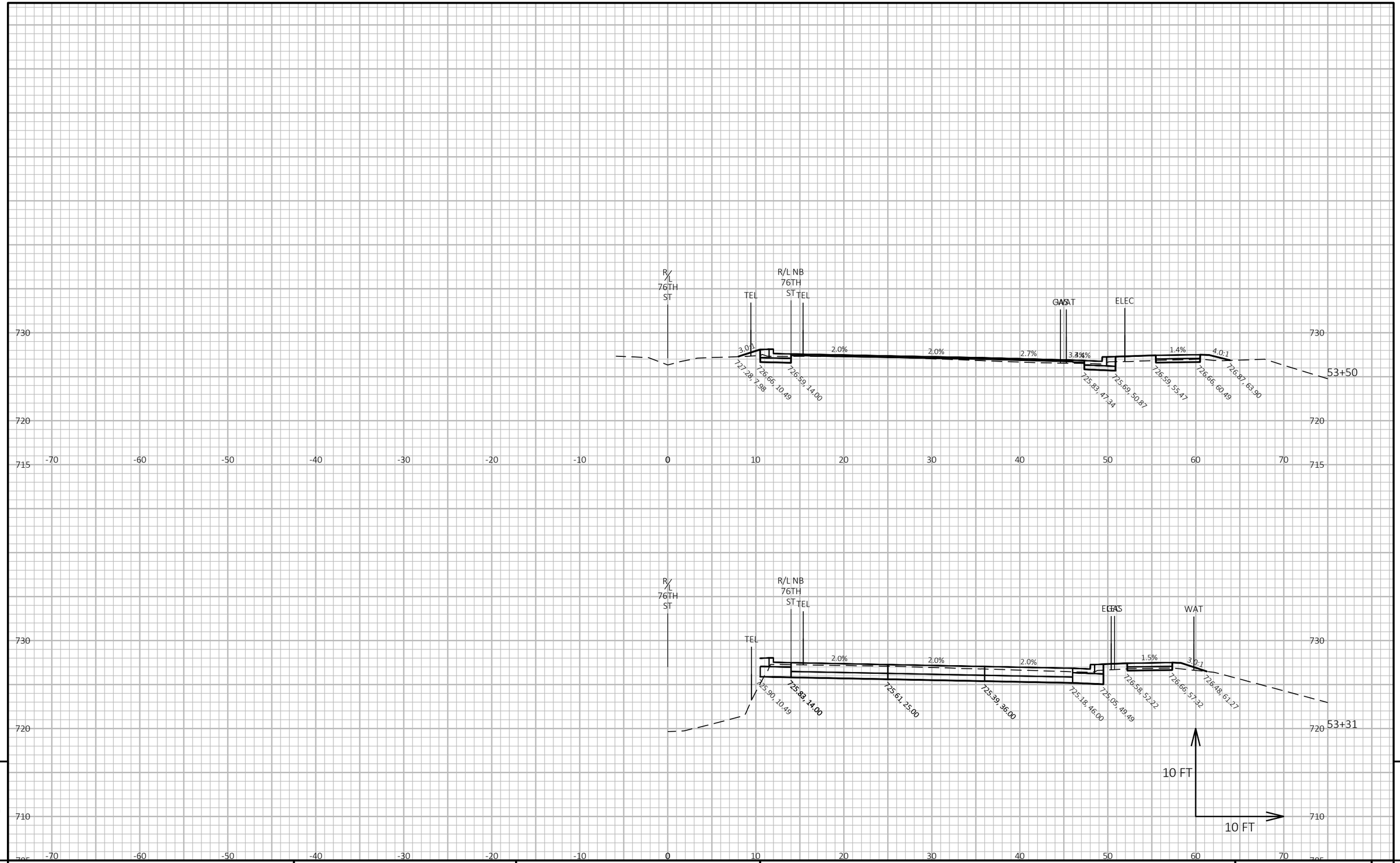

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PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: CROSS SECTIONS	SHEET 310	E

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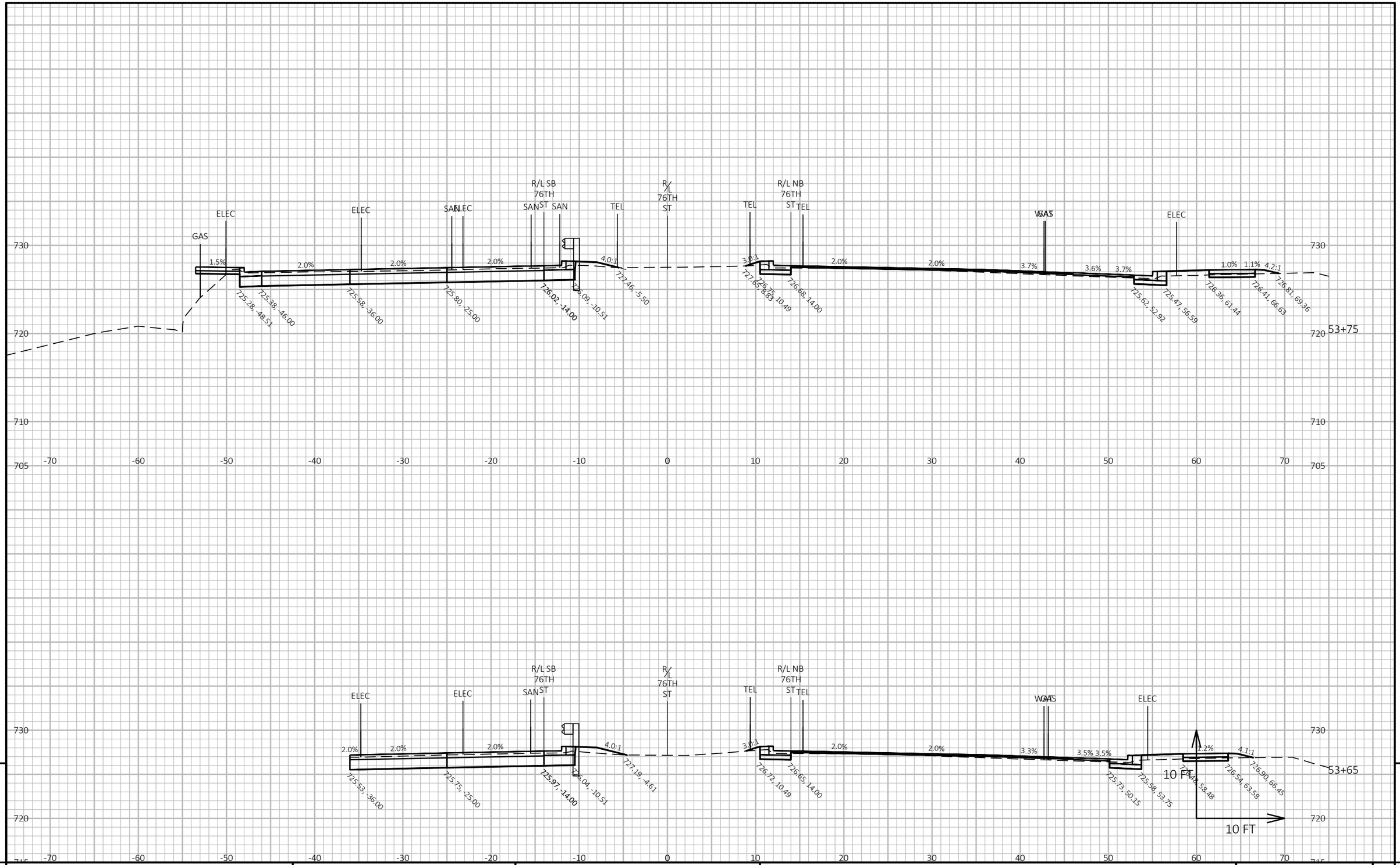
WISDOT/CADDS SHEET 49



PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: CROSS SECTIONS	SHEET 311	E

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LAYOUT NAME - 07

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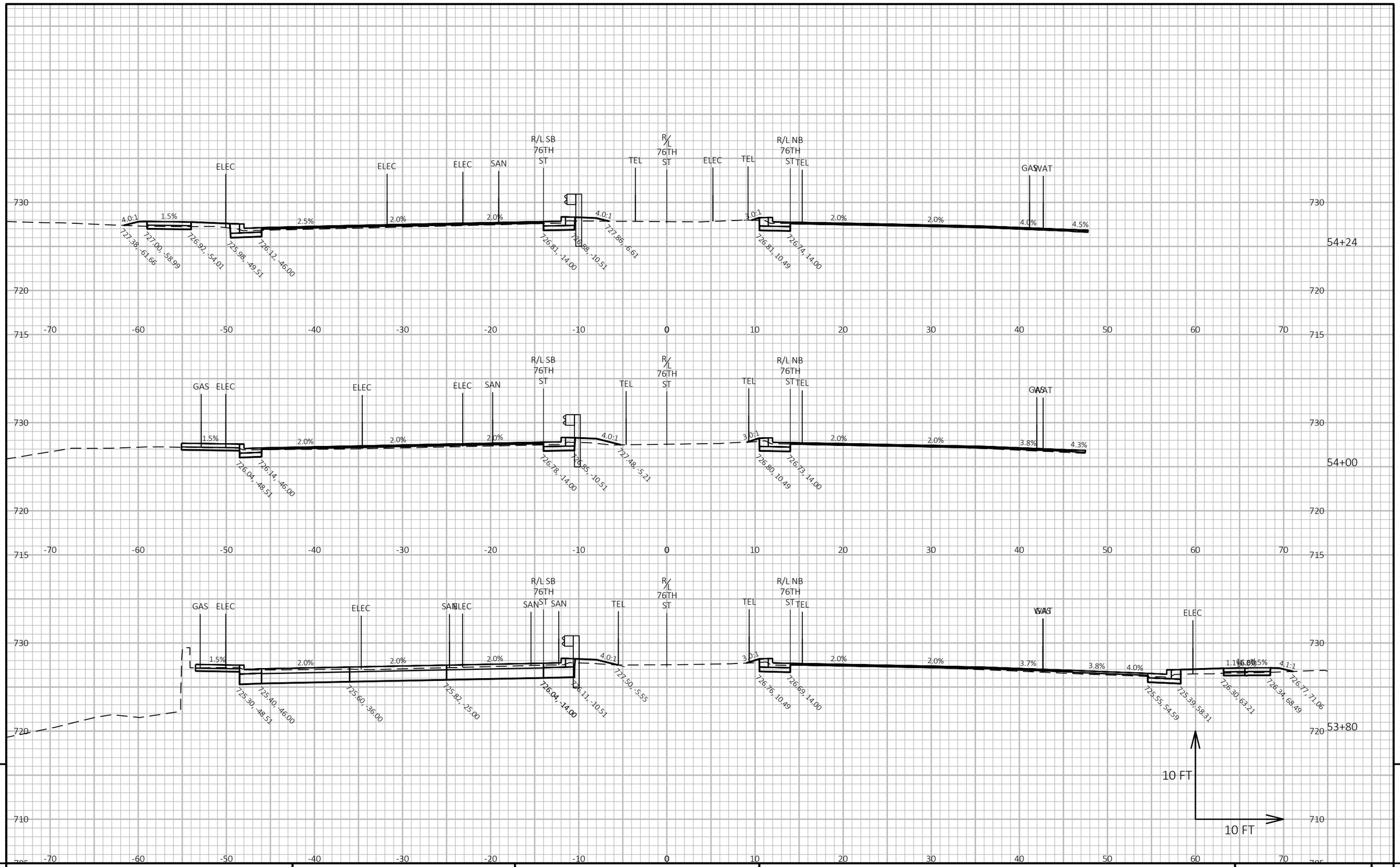
WISDOT/CADDS SHEET 49



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PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: CROSS SECTIONS	SHEET 312	E

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LAYOUT NAME - 08

PLOT DATE : 7/28/2022 5:46 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: CROSS SECTIONS	SHEET 313	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601300\090201_XS - GAP.DWG
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PLOT DATE : 7/28/2022 5:46 PM

PLOT BY : WEIGAND, BEN

PLOT NAME :

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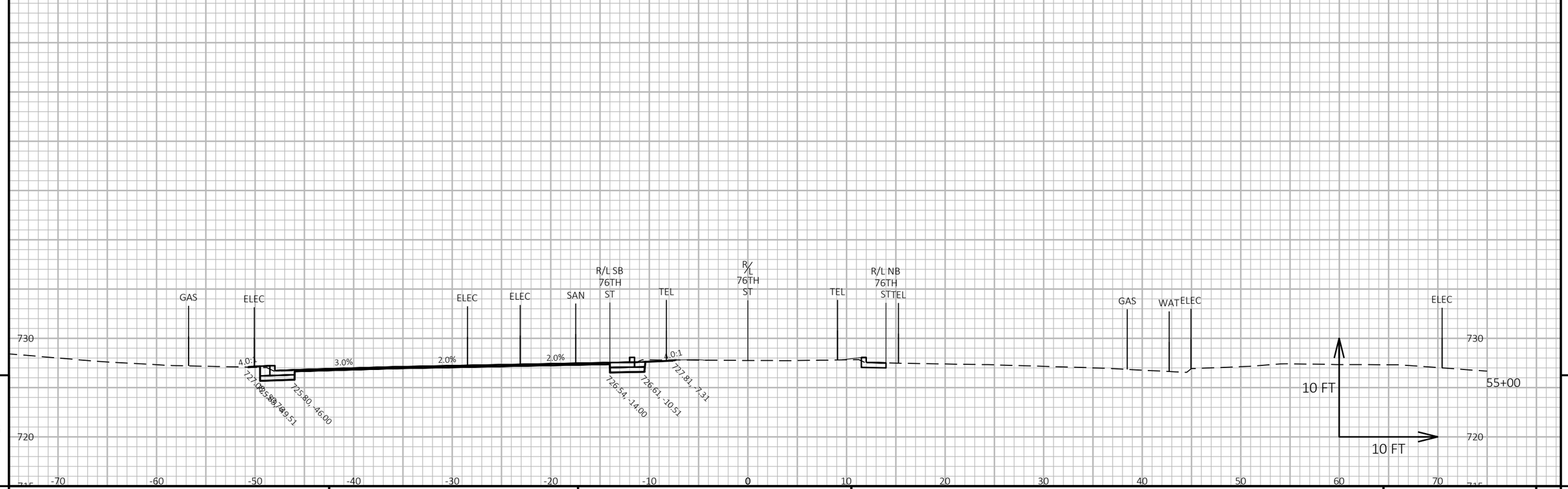
WISDOT/CADDS SHEET 49



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PROJECT NO: 1360-13-70	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: CROSS SECTIONS	SHEET 314	E

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WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

WKE , AUGUST 2023

PROJECT ID: **1360-13-71**

WITH: 1360-13-70

COUNTY: **MILWAUKEE**

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 = 308

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

C MILWAUKEE, FOND DU LAC AVE

SILVER SPRING BRIDGES

STH 145

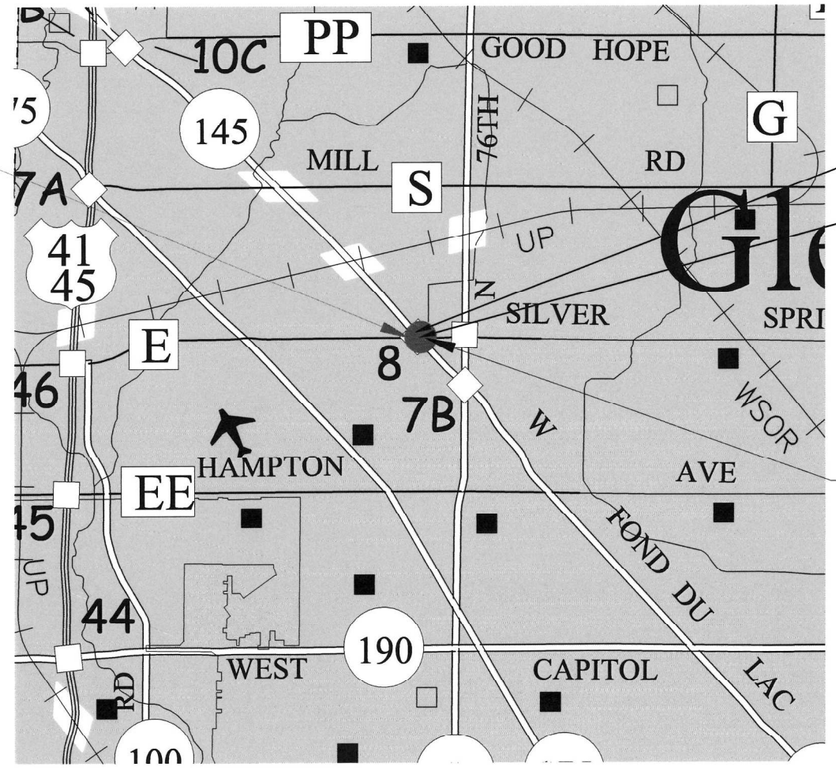
MILWAUKEE COUNTY

STATE PROJECT NUMBER
1360-13-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1360-13-71	WISC 2023579	1

R-21-E

T-8-N



BEGIN PROJECT
STA 55+95
X: 578,276.621
Y: 329,098.784

STRUCTURE B-40-254 (WB SILVER SPRING DR)
STA 56+00 - STA 61+50

STRUCTURE B-40-253 (EB SILVER SPRING DR)
STA 56+00 - STA 61+50

END PROJECT
STA 61+40

DESIGN DESIGNATION W. SILVER SPRING DR.

A.A.D.T.	2022	=	24,100
A.A.D.T.	2042	=	26,400
D.H.V.		=	-
D.D.		=	59/41
T.		=	7.3%
DESIGN SPEED		=	45 MPH
ESALS		=	-

CONVENTIONAL SYMBOLS

PLAN
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

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

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

LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.103 MI

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

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

ORIGINAL PLANS PREPARED BY

benesch

Alfred Benesch & Company
1300 West Canal Street, Suite 150
Milwaukee, Wisconsin 53233
414-308-1310 Job No. 20288.00

WISCONSIN
BENJAMIN J. WEIGAND
E-39495
RACINE, WI
PROFESSIONAL ENGINEER

DATE: 5-19-2023 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	GRAEF
Designer	BENESCH
Project Manager	MARTIN VILLACA
Regional Examiner	
Regional Supervisor	JOSH LEVEQUE

APPROVED FOR THE DEPARTMENT

DATE 5-19-2023 Martin de Villaca (Signature)

E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\010101_TI.DWG

PLOT DATE : 5/19/2023 1:41 PM PLOT BY : WEIGAND, BEN PLOT NAME :

2

GENERAL NOTES

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WIHTIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.
2. THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPALITY OR PUBLIC AGENCY WHICH IS NOT A MEMBER OF DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.
3. ALL ELEVATIONS AND OFFSETS SHOWN IN THE PLAN SHALL BE VERIFIED IN THE FIELD.
4. NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.
5. THE COST OF GRADING, CONSTRUCTING, MAINTAINING, AND REMOVING TEMPORARY ACCESS IS INCIDENTAL TO THE CONTRACT.
6. THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING OR TURNING LANE.

EROSION CONTROL GENERAL NOTES

1. RE-TOPSOIL DISTURBED AREAS, AS DESIGNATED BY THE ENGINEER. SEED AND E-MAT TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED.
2. STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. 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.
3. QUANTITIES FOR EROSION CONTROL ITEMS HAVE BEEN INCLUDED IN THE PROJECT, BUT MAY NOT BE REPRESENTED ON THE PLAN. THE LOCATIONS AND TYPE OF EROSION CONTROL ITEMS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER. EROSION CONTROL ITEMS SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE ITEMS IS NO LONGER REQUIRED.

UTILITIES

COMMUNICATIONS

AT&T LOCAL NETWORK
TIMOTY LAPOINTE
PHONE: (281) 352-3631
EMAIL: TL0695@ATT.COM

AT&T WISCONSIN
JAY BULANEK
PHONE: (414) 491-2855
EMAIL: JB5175@ATT.COM

ELECTRICITY

CITY OF MILWAUKEE - STREET LIGHTING
NEAL KARWEIK
1540 W CANAL ST
MILWAUKEE, WI 53233
OFFICE: (414) 286-5943
MOBILE: (414) 708-4245
EMAIL: NKARWE@MILWAUKEE.GOV

UNDERGROUND CONDUIT

CITY OF MILWAUKEE - UNDERGROUND CONDUIT
HAZEM RAMADAN
841 N BROADWAY
MILWAUKEE, WI 53202
PHONE: (414) 286-3242
EMAIL: HRAMAD@MILWAUKEE.GOV

SEWER

CITY OF MILWAUKEE - SEWER
ZAFAR YOUSUF
841 N BROADWAY
MILWAUKEE, WI 53202
PHONE:(414) 286-2467
EMAIL: ZYOUSU@MILWAUKEE.GOV

TRAFFIC SIGNALS

CITY OF MILWAUKEE - TRAFFIC SIGNALS
RUDY GUTIERREZ
1540 W CANAL ST
MILWAUKEE, WI 53233
OFFICE: (414) 286-5941
MOBILE: (414) 708-5148
EMAIL: RGUTIE@MILWAUKEE.GOV

WATER

CITY OF MILWAUKEE - MILWAUKEE WATER WORKS
MWW CONTROL CENTER
841 N BROADWAY, ROOM 409
MILWAUKEE, WI 53202
PHONE: (414-286-3710

SEWER

MILWAUKEE METRO SEWERAGE DISTRICT
MICHAEL LEE
260 W SEEBOTH STREET
MILWAUKEE, WI 53204
OFFICE: (414) 225-2241
MOBILE: (414) 617-1429
EMAIL: MLEE@MMSD.COM

COMMUNICATIONS

VERIZON BUSINESS
RJ CICATELLO
15725 W RYERSON RD
NEW BERLIN, WI 53151
PHONE: (262) 232-1323
EMAIL: RANDY.CICATELLO@VERIZON.COM

ELECTRICITY

WE ENERGIES - ELECTRICITY
NICHOLAS WELCH
W140N9100 LILLY RD
MENOMONEE FALLS, WI 53051
OFFICE: (262) 502-6882
MOBILE: (414) 791-0406
EMAIL: NICHOLAS.WELCH@WE-ENERGIES.COM

GAS/PETROLEUM

WE ENERGIES - GAS
MATT MIEROW
W140N9100 LILLY RD
MENOMONEE FALLS, WI 53051
OFFICE: (414) 944-5542
MOBILE: (414) 333-0325
EMAIL: MATTHEW.MIEROW@WE-ENERGIES.COM

PAVEMENT LOCATION	TOTAL PAVEMENT THICKNESS	LAYER	TYPE
EB SILVER SPRING WEST OF BRIDGE	1 3/4" - 5 1/4"	1 3/4" UPPER 0 - 1 3/4" LOWER 0 - 1 3/4" LOWER	4 HT 58-28 H
EB SILVER SPRING EAST OF BRIDGE	1 3/4" - 3 1/2"	1 3/4" UPPER 0 - 1 3/4" LOWER	4 HT 58-28 H
WB SILVER SPRING WEST OF BRIDGE	1 3/4" - 4 1/4"	1 3/4" UPPER 0 - 2 1/2" LOWER	4 HT 58-28 H
WB SILVER SPRING EAST OF BRIDGE	1 3/4" - 6 1/4"	1 3/4" UPPER 0 - 1 3/4" LOWER 0 - 2 3/4" LOWER	4 HT 58-28 H

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANCE (PERCENT)			SLOPE RANCE (PERCENT)			SLOPE RANCE (PERCENT)			SLOPE RANCE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	0.08 0.22	0.16 0.30	0.22 0.38	0.12 0.26	0.20 0.34	0.27 0.44	0.15 0.30	0.24 0.37	0.33 0.50	0.19 0.34	0.28 0.41	0.38 0.56
MEDIAN STRIP TURF	0.19 0.24	0.20 0.26	0.24 0.30	0.19 0.25	0.22 0.28	0.26 0.33	0.20 0.26	0.23 0.30	0.30 0.37	0.20 0.27	0.25 0.32	0.30 0.40
SIDE SLOPE TURF	0.25 0.34	0.27 0.36	0.25 0.32	0.30		0.27 0.34			0.28 0.36			0.30 0.38
PAVEMENT:												
ASPHALT	0.70 - 0.95											
CONCRETE	0.80 - 0.95											
BRICK	0.70 -0.80											
DRIVES, WALKS	0.75 - 0.85											
ROOFS	0.75 - 0.95											
GRAVEL ROADS, SHOULDERS	0.40 - 0.60											

TOTAL PROJECT AREA = 1.50 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.48 ACRES

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

OTHER AGENCIES

WISDOT CONTACT

Southeast Region
Martin Villaca
141 NW BARSTOW ST
WAUKESHA, WI 53188
PHONE: (262) 548-6456
EMAIL: Martin.Villaca@dot.wi.gov

DESIGN CONTACT

Alfred Benesch & Co
Bill Zippel
1300 W Canal St, Suite 150
Milwaukee, WI 53233
PHONE: (414) 308-1310
wzippel@benesch.com

DNR CONTACT

DNR - Southeast Region
TBD
2300 N Martin Luther King Jr Dr
Milwaukee, WI 53212
PHONE:
EMAIL: @wisconsin.gov

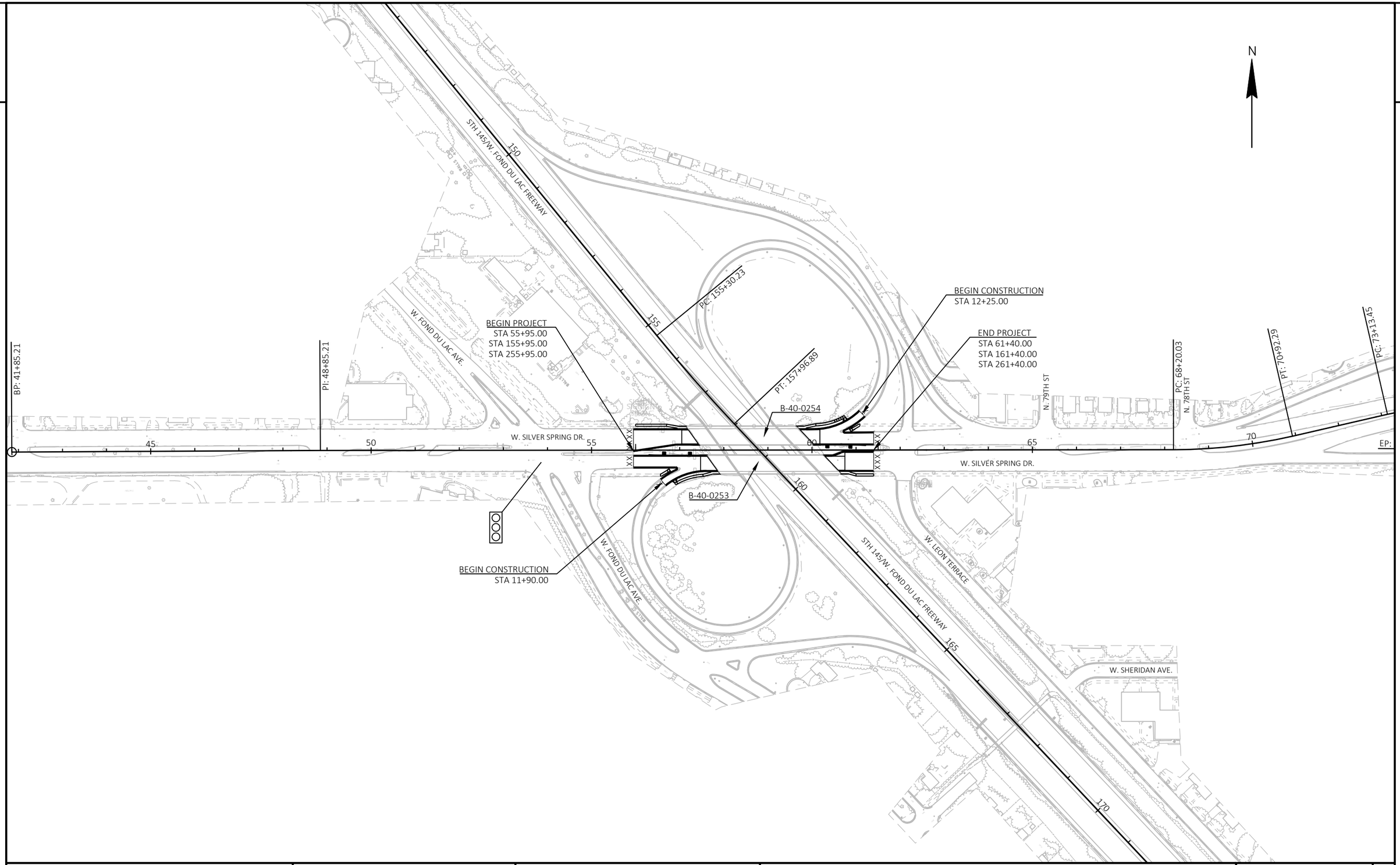
ORDER OF SECTION 2 SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
CURB RAMP DETAILS
JOINT DETAILS
EROSION CONTROL PLAN
CITY UNDERGROUND CONDUIT
PERMANENT SIGNING
STREET LIGHTING
TEMPORARY TRAFFIC SIGNALS
PAVEMENT MARKING
TRAFFIC CONTROL
ALIGNMENT PLAN

LIST OF STANDARD ABBREVIATIONS

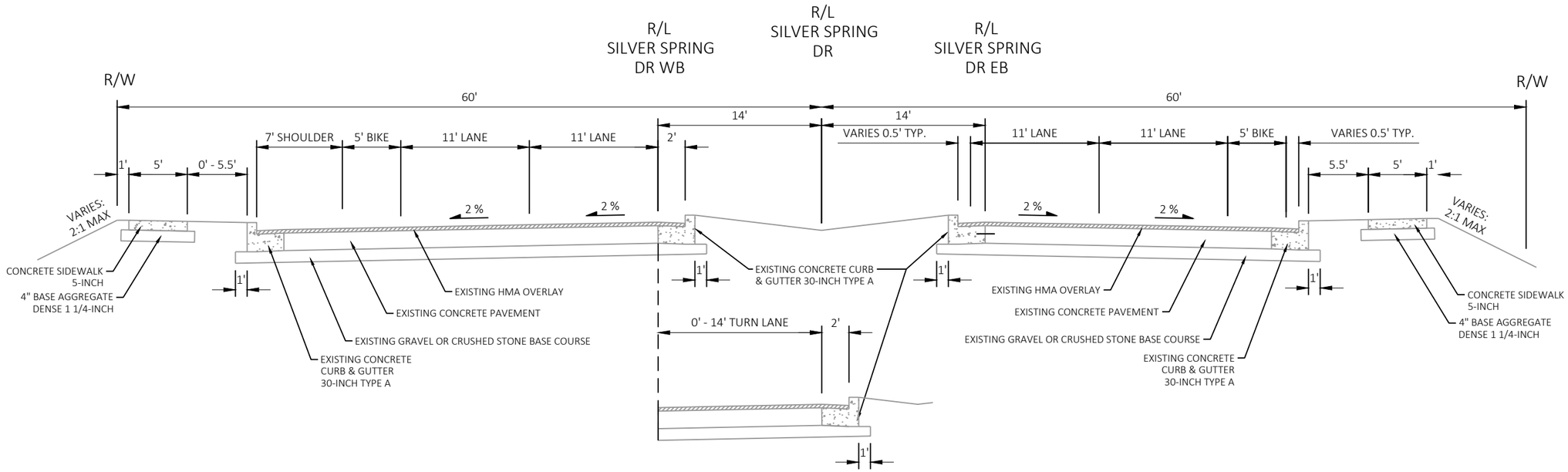
ABUT	ABUTMENT
AC	ACRE
AGG	AGGREGATE
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ASPH	ASPHALT
AVG	AVERAGE
ADT	AVERAGE DAILY TRAFFIC
BF	BACK FACE
BL	BASE LINE
BM	BENCH MARK
CB	CATCH BASIN
C/L	CENTERLINE
CC	CENTER TO CENTER
CE	COMMERCIAL ENTRANCE
CONC	CONCRETE
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CY	CUBIC YARD
CULV	CULVERT
C&G	CURB AND GUTTER
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
DD	DIRECTIONAL DISTRIBUTION
E	EAST
X	EAST GRID COORDINATE
EB	EASTBOUND
ELEC	ELECTRIC
ELEV	ELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
FF	FACE TO FACE
FE	FIELD ENTRANCE
FG	FINISHED GRADE
FL	FLOW LINE
FT	FOOT
FTMS	FREEWAY TRAFFIC MANAGEMENT SYSTEM
HES	HIGH EARLY STRENGTH
CWT	HUNDREDWEIGHT
HYD	HYDRANT
IN DIA	INCH DIAMETER
INL	INLET
ID	INSIDE DIAMETER
INV	INVERT
IP	IRON PIPE
JT	JOINT
JCT	JUNCTION
LT	LEFT
L	LENGTH OF CURVE
LHF	LEFT-HAND FORWARD
LF	LINEAR FOOT
L	LITER
LS	LUMP SUM
MH	MANHOLE
MB	MESSAGE BOARD
MLB	MAILBOX
ML	MATCH LINE
NC	NORMAL CROWN
N	NORTH
Y	NORTH GRID COORDINATE
NB	NORTHBOUND
NO	NUMBER
OD	OUTSIDE DIAMETER
PAVT	PAVEMENT
PERM	PERMANENT
PLE	PERMANENT LIMITED EASEMENT
PT	POINT
PVC	POLYVINYL CHLORIDE
PCC	PORTLAND CEMENT CONCRETE
PE	PRIVATE ENTRANCE
PROJ	PROJECT
PL	PROPERTY LINE
R	RADIUS
R/L	REFERENCE LINE
RCCP	REINFORCED CONCRETE CULVERT PIPE
REQD	REQUIRED
RT	RIGHT
RHF	RIGHT HAND FORWARD
R/W	RIGHT-OF-WAY
RD	ROAD
RDWY	ROADWAY
SALV	SALVAGED
SSS	SANITARY AND STORM SEWER
SAN S	SANITARY SEWER
SEC	SECTION
SHLDR	SHOULDER
SW	SIDEWALK
S	SOUTH
SB	SOUTHBOUND
SP	SPECIAL
SPECS	SPECIFICATIONS
SQ	SQUARE
SF	SQUARE FEET
SY	SQUARE YARD
STD	STANDARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAYS
STA	STATION
SS	STORM SEWER
STR	STRUCTURE OR STRUCTURAL
SL	SURVEY LINE
TEL	TELEPHONE
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
T	TON
TC	TOP OF CURB
T	TRUCKS (PERCENT OF)
TYP	TYPICAL
UG	UNDERGROUND
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
VERT	VERTICAL
W	WATER
WM	WATER MAIN
WV	WATER VALVE
W	WEST
WB	WESTBOUND
YD	YARD

2



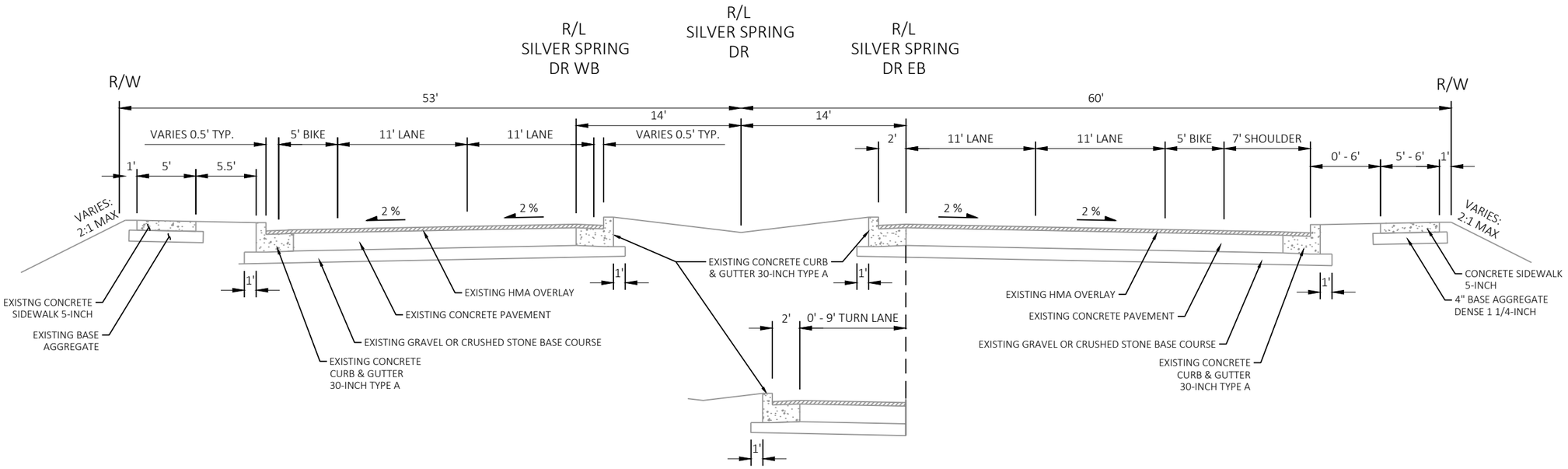
PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\020201_PO.DWG
LAYOUT NAME - 020201_po
PLOT DATE : 2/8/2023 3:00 PM
PLOT BY : WEIGAND, BEN
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42



SILVER SPRING DR. EXISTING TYPICAL SECTION

STA 155+95.00 WB - 157+04.65 WB
STA 255+95.00 EB - 257+47.44 EB

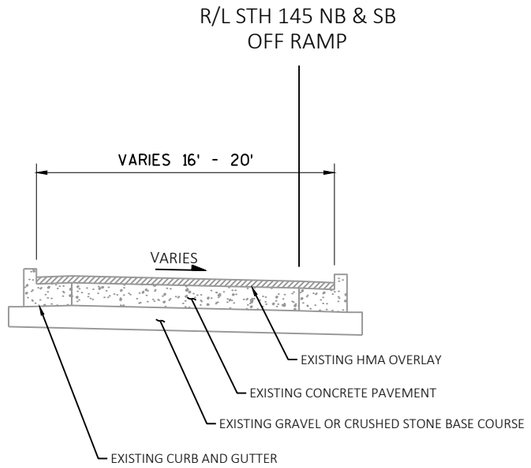


SILVER SPRING DR. EXISTING TYPICAL SECTION

STA 160+18.22 WB - 161+40.00 WB
STA 260+74.59 EB - 261+40.00 EB

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 4	E

2



SILVER SPRING DR. RAMP EXISTING TYPICAL SECTION

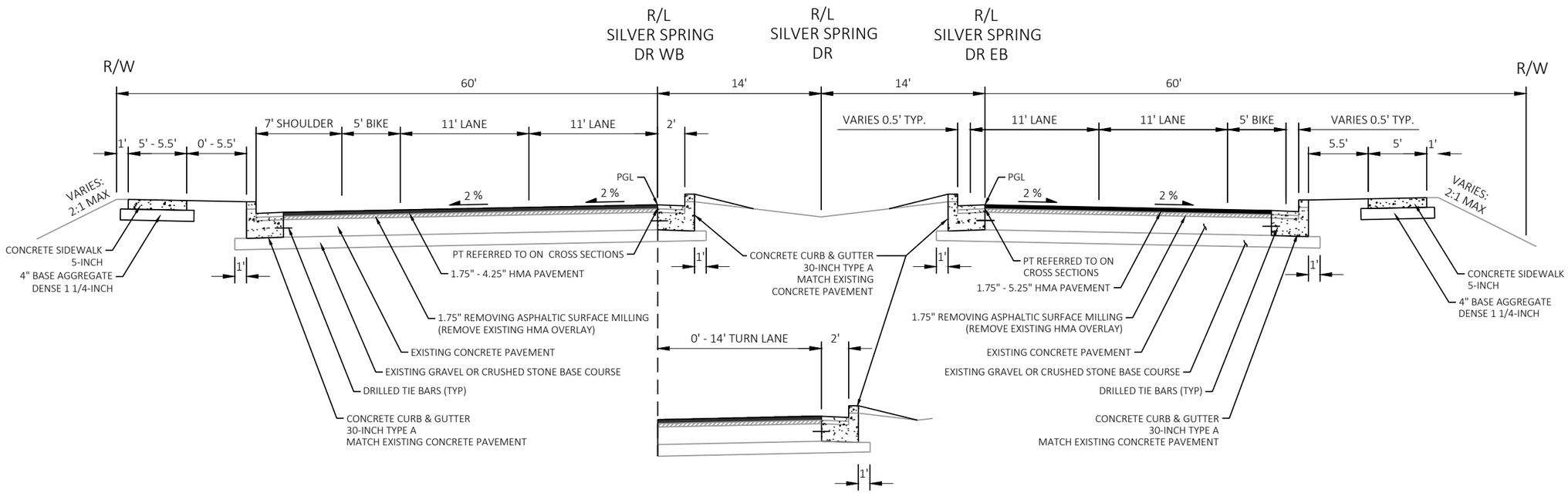
STA 12+25.00 - 12+96.05 NB
STA 11+90.00 - 12+47.72 SB

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 5	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\020301_TS.DWG
LAYOUT NAME - 02

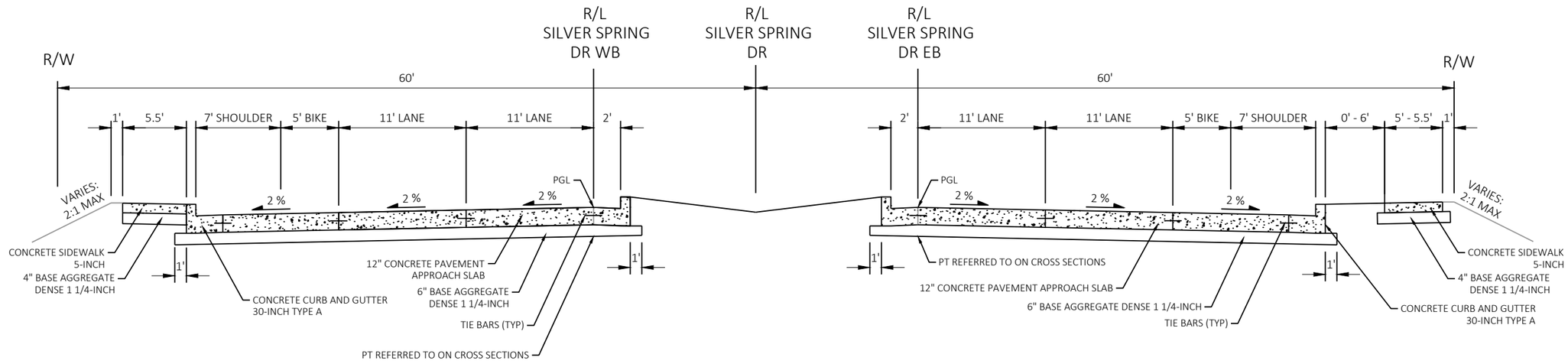
PLOT DATE : 4/24/2023 5:30 PM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:10 FT

2



SILVER SPRING DR. FINISHED TYPICAL SECTION

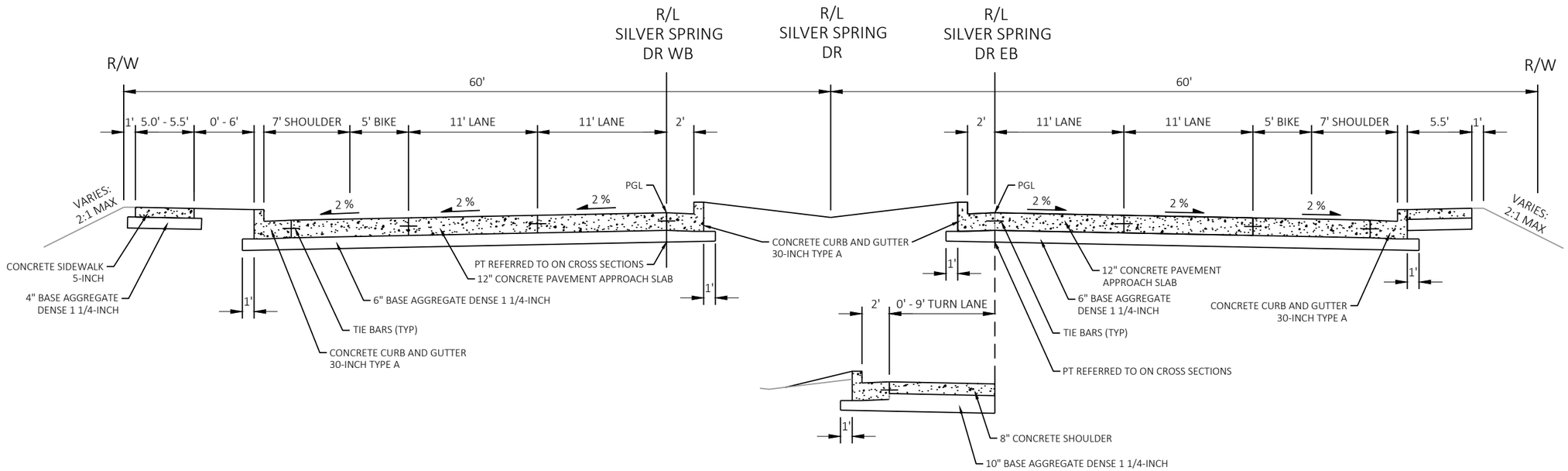
STA 155+95.00 WB - 157+04.65 WB
STA 255+95.00 EB - 257+47.44 EB



SILVER SPRING DR. FINISHED TYPICAL SECTION

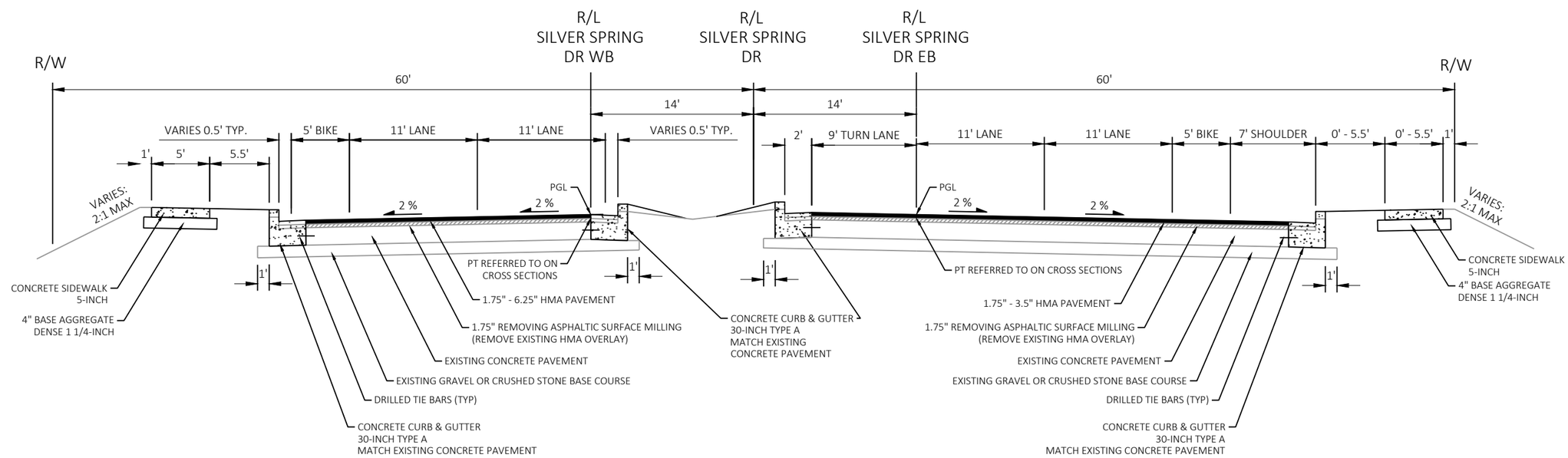
STA 157+12.60 WB - DECK
STA 257+47.44 EB - DECK

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 6	E



SILVER SPRING DR. FINISHED TYPICAL SECTION

DECK - STA 160+18.22 WB
DECK - STA 260+74.59 EB



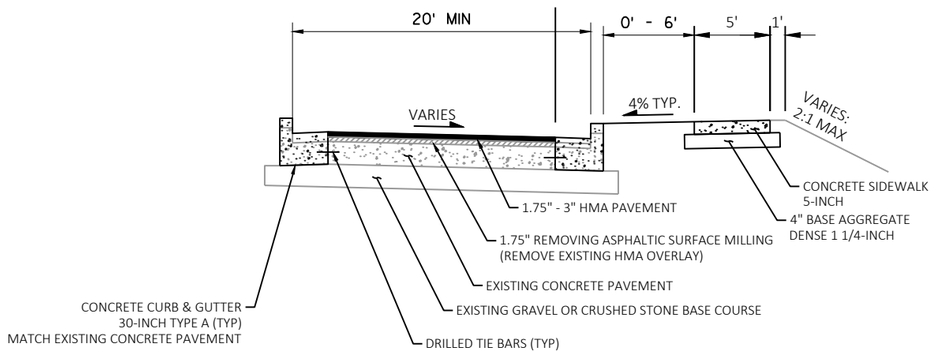
SILVER SPRING DR. FINISHED TYPICAL SECTION

STA 160+18.22 WB - 161+40.00 WB
STA 260+74.59 EB - 261+40.00 EB

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 7	E

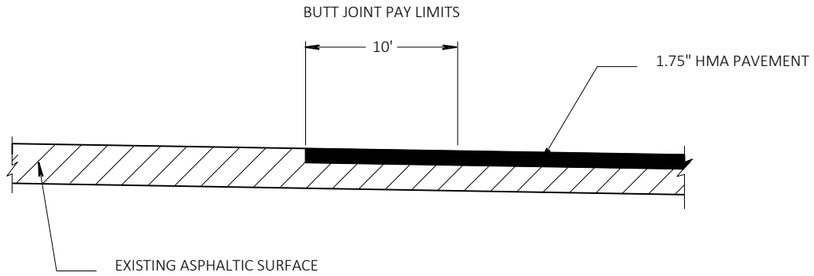
2

RL NB &
SB STH
145 OFF
RAMP



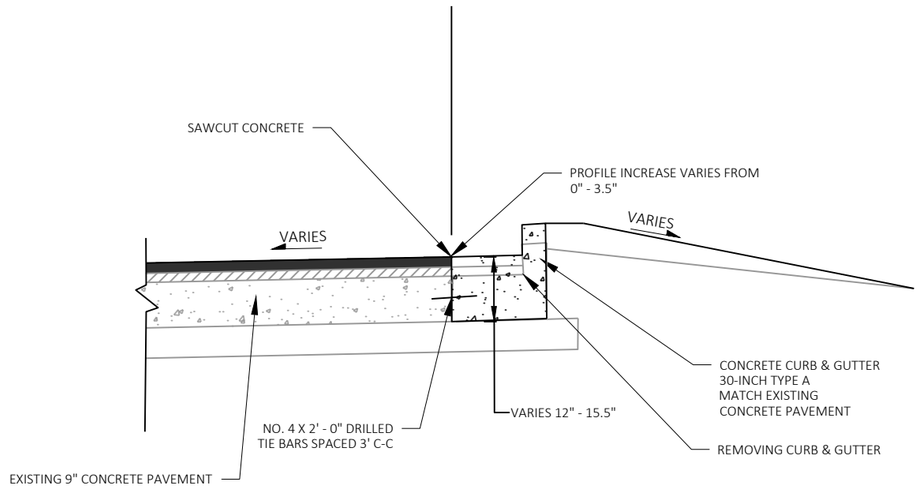
SILVER SPRING DR. RAMP FINISHED TYPICAL SECTION

STA 12+25.00 - 12+96.05 NB
STA 11+90.00 - 12+47.72 SB

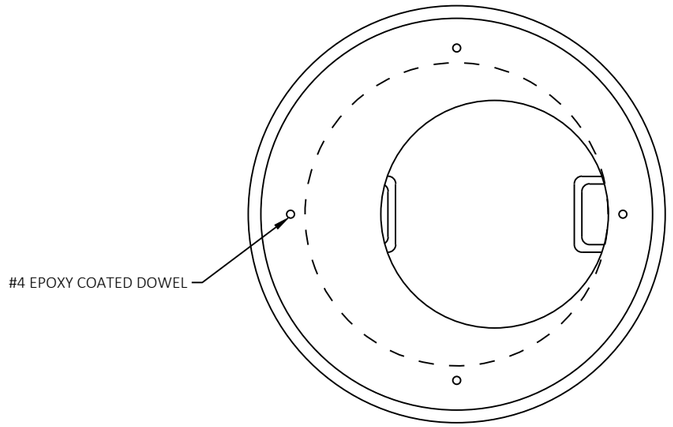


DETAIL OF BUTTED JOINT
NOTE: EXACT DIMENSIONS TO BE DETERMINED BY ENGINEER IN THE FIELD.

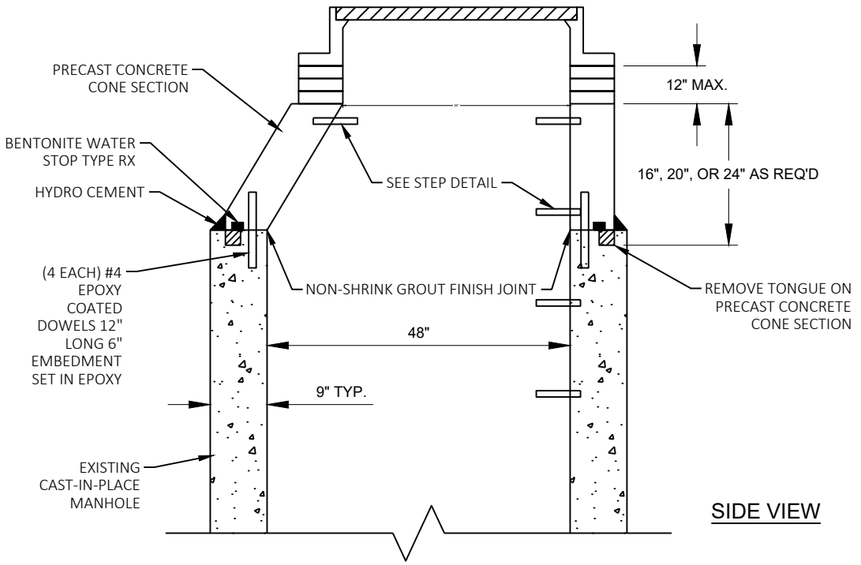
RL



CURB REPLACEMENT DETAIL

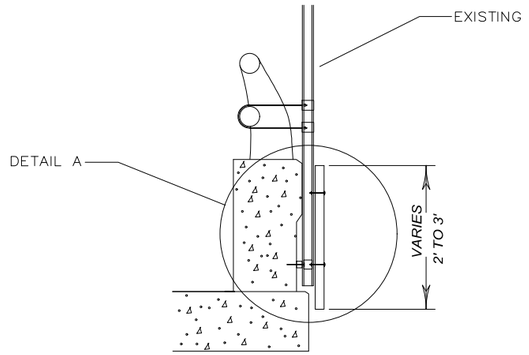


TOP VIEW

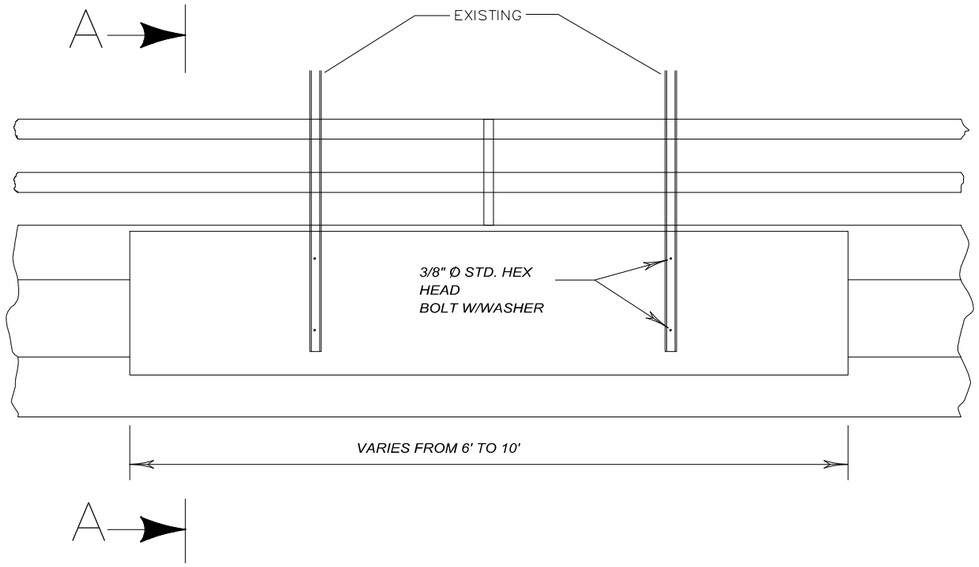


SIDE VIEW

MMSD MANHOLE RECONSTRUCT
WITH PRECAST CONCRETE CONE



SECTION A–A
SIDE VIEW

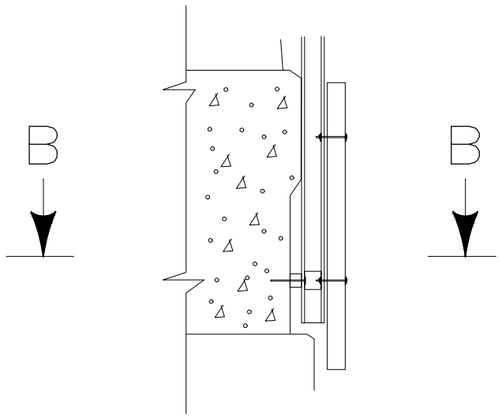


FRONT VIEW

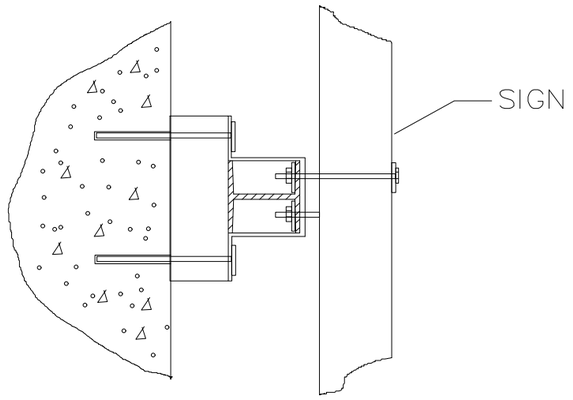
NOTES:

PROVIDE NEW BOLTS.

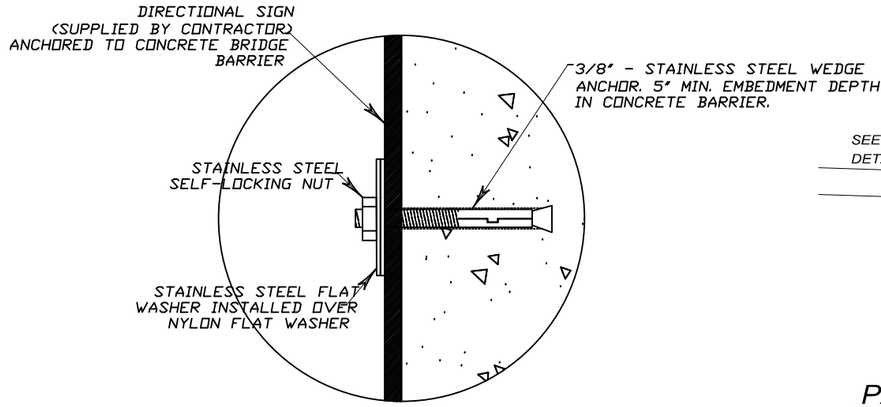
MOUNTING DETAIL COSTS ARE INCIDENTAL TO PAY ITEM "TYPE II SIGNS, REFLECTIVE".



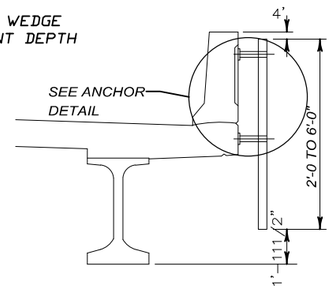
DETAIL A



SECTION B–B
TOP VIEW



ANCHOR DETAIL
N.T.S.



PARAPET OPTION
WITHOUT RAIL

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	SIGN MOUNTING DETAIL ON BRIDGE	SHEET 10 E

2

LEGEND

- CONCRETE PAVEMENT APPROACH SLAB
- HMA PAVEMENT
- CONCRETE SIDEWALK 5-INCH
- PAVED CONCRETE SHOULDER

NOTE: ALL PROPOSED CURB & GUTTER IS 30-INCH TYPE A, UNLESS NOTED OTHERWISE

N

WISDOT LIGHTING

ADJUSTING WATER VALVE BOXES

ADJUSTING MANHOLE COVER

ADJUSTING INLET COVER

CONCRETE PAVEMENT APPROACH SLAB

CITY OF MILWAUKEE SIGNAL

CONCRETE SIDEWALK 5-INCH

AT&T

MMSD

BEGIN PROJECT
STA 155+95
STA 255+95
MATCH EXISTING
SAW CUT REQ'D
ASPHALTIC BUTT JOINT

W SILVER SPRING DR

ADJUSTING INLET COVER

B-40-0254
(SEE STRUCTURE PLANS)

WE ENERGIES ELECTRIC

REMOVING FENCE AND
INSTALL FENCE CHAIN LINK
6-FT TO END OF PARAPET

CITY OF MILWAUKEE WATER

WE ENERGIES GAS

R/L NB STH 145
OFF RAMP

STH 145NB
OFF RAMP

CONCRETE SIDEWALK 5-INCH

BEGIN CONSTRUCTION
STA 12+25
MATCH EXISTING
SAW CUT REQ'D
ASPHALTIC BUTT JOINT

ADJUSTING INLET COVER

ADJUSTING MANHOLE COVER

CONCRETE PAVEMENT APPROACH SLAB

ADJUSTING MANHOLE COVER

R/L SILVER SPRING DR WB

W SILVER SPRING DR

END PROJECT
STA 161+40
STA 261+40
MATCH EXISTING
SAW CUT REQ'D
ASPHALTIC BUTT JOINT

R/L SILVER SPRING DR

R/L SILVER SPRING DR EB

B-40-0253
(SEE STRUCTURE PLANS)

PAVED CONCRETE SHOULDER

CITY OF MILWAUKEE CUC

CONCRETE PAVEMENT APPROACH SLAB

CONCRETE SIDEWALK 5-INCH

CITY OF MILWAUKEE LIGHTING

STH 145 NB

WE ENERGIES ELECTRIC

W LEON TERRACE

REMOVING FENCE
(DO NOT REINSTALL)

BEGIN CONSTRUCTION
STA 11+90
MATCH EXISTING
SAW CUT REQ'D
ASPHALTIC BUTT JOINT

MCI (VERIZON)

CITY OF MILWAUKEE LIGHTING

AT&T

STH 145 SB
OFF RAMP

R/L SB STH 145
OFF RAMP

CONCRETE SIDEWALK 5-INCH

CONCRETE PAVEMENT APPROACH SLAB

ADJUSTING INLET COVER

REMOVING FENCE AND
INSTALL FENCE CHAIN LINK
6-FT TO END OF PARAPET

MOVE STREET LIGHTING

CITY OF MILWAUKEE CUC

STH 145 SB

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET 11	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\021201_PD.DWG
LAYOUT NAME - 021201_pd

PLOT DATE : 4/24/2023 5:29 PM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

SB CURB RAMP - LT					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
CR-100	12+15.48	17.50' L	738.43	329049.28	578361.32
CR-101	12+15.41	20.07' L	738.49	329051.49	578360.00
CR-102	12+15.28	25.07' L	738.54	329055.78	578357.44
CR-103	12+11.00	25.00' L	738.49	329053.22	578353.15
CR-104	11+96.95	25.77' L	738.44	329044.80	578339.03
CR-105	11+96.26	26.11' L	738.44	329044.60	578338.17
CR-106	11+93.91	22.15' L	738.34	329039.79	578338.37
CR-107	11+95.34	20.93' L	738.34	329039.80	578340.41
CR-108	12+11.00	20.00' L	738.44	329048.93	578355.71
CR-109	12+11.00	17.50' L	738.31	329046.78	578356.99

SB CURB RAMP - RT					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
CR-200	12+11.00	2.50' R	737.40	329029.61	578367.24
CR-201	12+11.00	8.50' R	737.74	329024.45	578370.31
CR-202	12+11.00	13.50' R	737.82	329020.16	578372.87
CR-203	12+16.50	13.50' R	737.89	329022.64	578377.21
CR-204	12+37.42	13.50' R	738.75	329030.60	578394.49
CR-205	12+37.42	8.51' R	738.67	329035.27	578392.73
CR-206	12+16.30	8.50' R	737.82	329026.94	578374.65
CR-207	12+16.09	2.50' R	737.54	329032.10	578371.57

SILVER SPRING DR.

RL STH 145 SB OFF RAMP

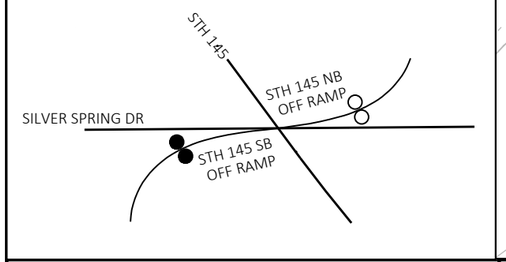
STH 145 SB OFF RAMP

TERRACE SLOPE VARIES

CITY OF MILWAUKEE LIGHTING

LEGEND

- ### / ###.## — POINT NUMBER / POINT ELEVATION
- # — CURB RAMP TYPE
- LL — LEVEL LANDING
- DETECTABLE WARNING FIELD
- PED — CONCRETE CURB PEDESTRIAN
- * — MAX EXTENT FEASIBLE



PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	CURB RAMP DETAILS	SHEET 12	E

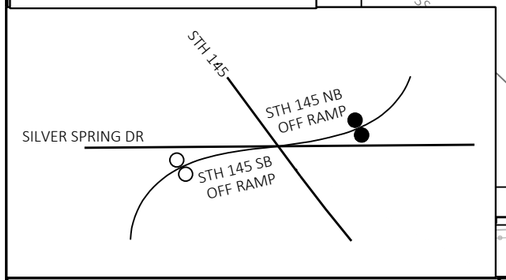
FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\023101_CR.DWG
LAYOUT NAME - 023101_cr
PLOT DATE : 2/8/2023 3:29 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

NB CURB RAMP - RT					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
CR-300	12+60.50	2.50' R	735.46	329167.87	578760.55
CR-301	12+60.50	8.50' R	735.76	329173.05	578757.52
CR-302	12+60.50	13.50' R	735.83	329177.36	578754.99
CR-303	12+66.00	13.50' R	735.91	329174.91	578750.63
CR-304	12+82.48	13.50' R	737.13	329168.55	578737.05
CR-305	12+87.97	13.50' R	737.20	329166.77	578732.38
CR-306	12+87.78	8.50' R	737.13	329162.13	578734.25
CR-307	12+82.28	8.50' R	737.05	329163.98	578739.09
CR-308	12+65.80	8.50' R	735.83	329170.60	578753.16
CR-309	12+65.59	2.50' R	735.66	329165.41	578756.19

NB CURB RAMP - LT					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
CR-400	12+60.50	17.50' L	736.37	329150.61	578770.65
CR-401	12+60.50	20.09' L	736.50	329148.37	578771.96
CR-402	12+43.42	21.20' L	735.97	329158.20	578788.74
CR-403	12+42.30	22.18' L	735.94	329158.20	578790.36
CR-404	12+44.81	26.05' L	736.05	329153.35	578790.35
CR-405	12+60.50	25.09' L	736.55	329144.06	578774.49
CR-406	12+64.78	25.16' L	736.62	329141.53	578770.17
CR-407	12+64.91	20.16' L	736.57	329145.85	578767.65
CR-408	12+64.98	17.50' L	736.55	329148.15	578766.30

LEGEND

- ### / ###.## — POINT NUMBER / POINT ELEVATION
- # — CURB RAMP TYPE
- LL — LEVEL LANDING
- DETECTABLE WARNING FIELD
- PED — CONCRETE CURB PEDESTRIAN
- * — MAX EXTENT FEASIBLE



DOT
RL STH 145 NB OFF RAMP
STH 145 NB OFF RAMP
TERRACE SLOPE VARIES
CITY OF MILWAUKEE WATER
WE ENERGIES GAS
CITY OF MILWAUKEE LIGHTING
CITY OF MILWAUKEE SEWER
SILVER SPRING DR.
PED
13+00

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	CURB RAMP DETAILS	SHEET 13	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\023101_CR.DWG
LAYOUT NAME - 023102_cr
PLOT DATE : 2/8/2023 3:29 PM
PLOT BY : WEIGAND, BEN
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2

N

SLAB

736.30 736.83 737.37 737.91 738.47 738.75

2.0% 10' 2.0% 11' 2.0% 11' 10' 11' 11'

CONCRETE PAVEMENT APPROACH SLAB
STA 157+04.65

B-40-253
(SEE STRUCTURE PLANS)

RL SILVER SPRING WB

156+00 158+00

738.93 739.11 739.39

738.60 738.13 737.67 737.22

2.0%

BEGIN PROJECT
STA 155+95
STA 255+95
MATCH EXISTING
SAW CUT REQ'D
ASPHALTIC BUTT JOINT

STH 145 SB STH 145 NB

DRIVEWAY CURB

256+00 258+00

737.00 737.53 738.06 738.61 739.16 739.69 740.09

1.0% 2.0% 2.0% 2.0% 2.0% 11'

RL SILVER SPRING EB

BEGIN OUTSIDE
LANE SLOPE CHANGE
STA 255+95

1.9% 14' 2.0% 2.0% 2.0% 11' 10'

CONCRETE PAVEMENT APPROACH SLAB
STA 257+47.44

B-40-253
(SEE STRUCTURE PLANS)

736.61 737.05 737.58 738.13

R4'

RL STH 145 SB OFF RAMP

739.21 739.65

738.61 738.53

5.0% 5.0% 5.0%

737.93 737.86 737.18

3+00

LEGEND

REVERSE SLOPE CURB & GUTTER

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	JOINT DETAILS	SHEET 14	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\021401_JD.DWG
LAYOUT NAME - 021401_jd
PLOT DATE : 2/8/2023 3:28 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

2

N

12+00

13+00

RL STH 145 NB OFF RAMP

CONCRETE PAVEMENT APPROACH SLAB
STA 160+18.22

B-40-253
(SEE STRUCTURE PLANS)

STA 160WB+78
-24.00' L

BEGIN OUTSIDE
LANE SLOPE CHANGE
STA 161+15

STA 161WB+40
-24.59' L

RL SILVER SPRING WB

DRIVEWAY CURB

EP: 162+00.00

END PROJECT
STA 161+40
STA 261+40
MATCH EXISTING
SAW CUT REQ'D
ASPHALTIC BUTT JOINT

EP: 262+00.00

STH 145 SB

STH 145 NB

STA 260EB+42.76
0.00' R

STA 260EB+51.77
-5.56' L

STA 260EB+61.58
-9.00' L

STA 260EB+79.81
-9.00' L

RL SILVER SPRING EB

CONCRETE PAVEMENT APPROACH SLAB
STA 260+74.59

B-40-253
(SEE STRUCTURE PLANS)

BEGIN OUTSIDE LANE SLOPE CHANGE
STA 261+15

LEGEND

REVERSE SLOPE CURB & GUTTER

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	JOINT DETAILS	SHEET 15	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\021401_JD.DWG
LAYOUT NAME - 021402_jd
PLOT DATE : 2/8/2023 3:28 PM
PLOT BY : WEIGAND, BEN
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

2

N

B-40-0254
(SEE STRUCTURE PLANS)

B-40-0253
(SEE STRUCTURE PLANS)

W SILVER SPRING DR

W SILVER SPRING DR

STH 145 SB
OFF RAMP

STH 145NB
OFF RAMP

STH 145 NB

STH 145 SB

55+00 56+00 57+00 58+00 59+00 60+00 61+00 62+00

156+00 157+00 158+00 159+00 160+00 161+00 162+00

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- A B C — INLET PROTECTION TYPE
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW

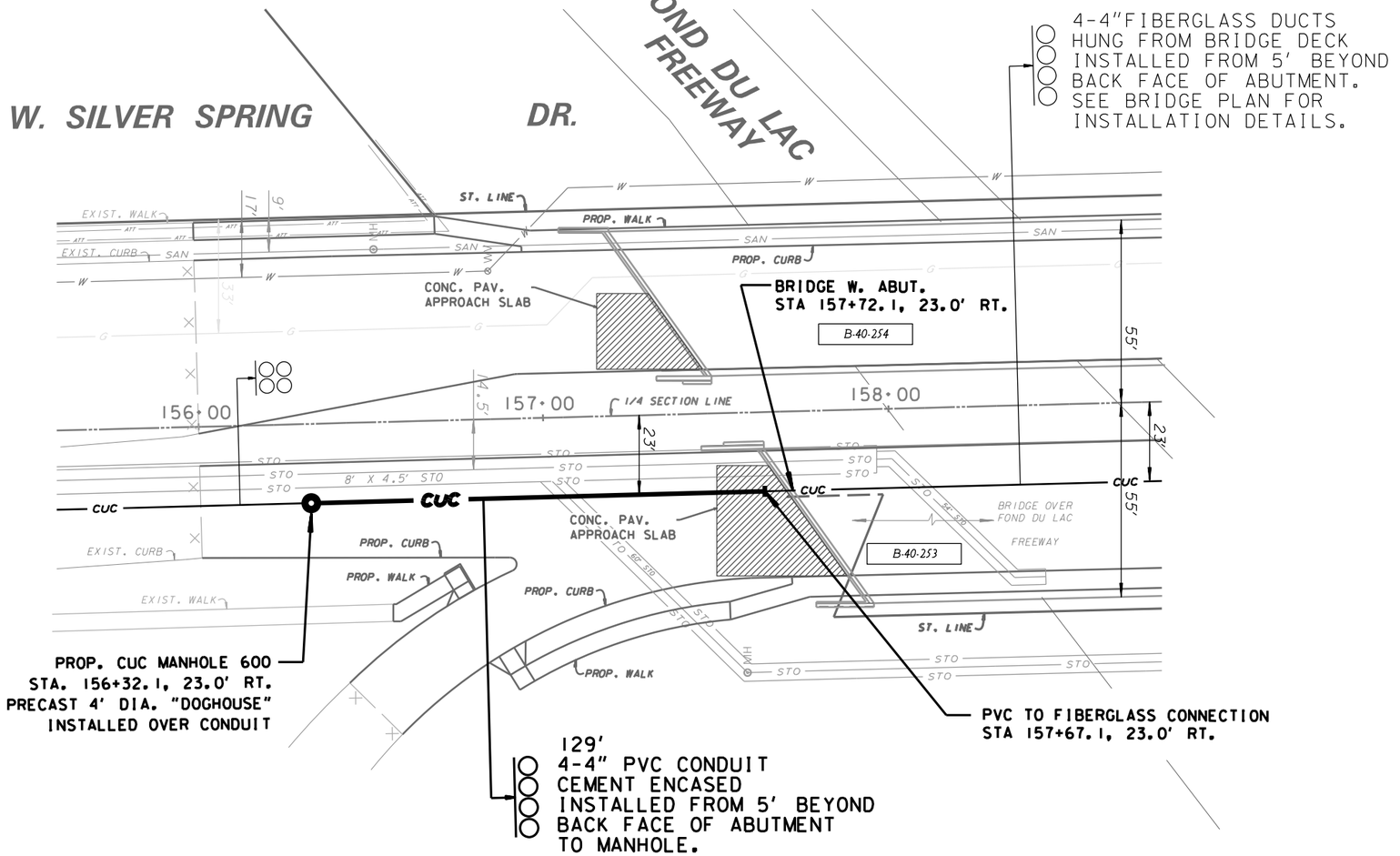
PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET 16	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\022001_EC.DWG
LAYOUT NAME - 022001_ec

PLOT DATE : 2/1/2023 12:51 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:50 FT

STATE PROJECT NUMBER
1360-13-71

2



NOTES:

1) CONSTRUCTION STAKING FOR THE CITY UNDERGROUND CONDUIT (CUC) FACILITIES IS TO BE INCLUDED IN AND PAID FOR UNDER THE BID ITEM 650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS
2) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
3) THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
4) DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
5) MAINTAIN A STANDARD DEPTH OF 39-INCHES BETWEEN FINISHED GRADE AND TOP OF CONDUIT.
6) REMOVE ABANDONED CONDUIT FROM MANHOLE WALL AND INSTALL THE PROPOSED CONDUIT INTO THE MANHOLE AT THE SAME LOCATION.
7) REMOVE ABANDONED CONDUIT AS NEEDED FOR PROPOSED INSTALLATION.

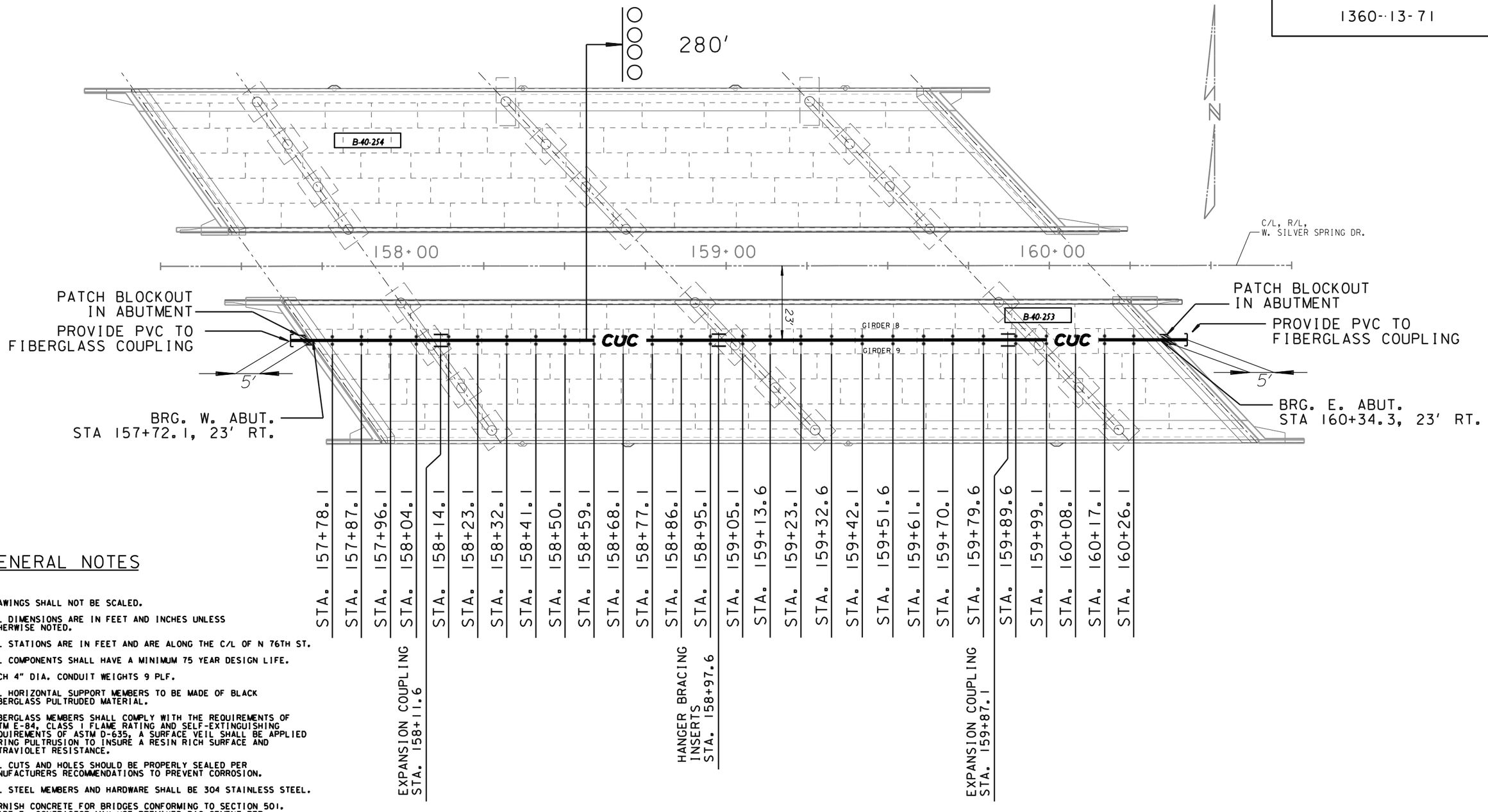
LEGEND

— CUC —	PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT & 4-INCH BLACK FIBER GLASS CONDUIT, NUMBER OF RUNS AS NOTED.
●	PROPOSED CUC MANHOLE
⯃	EXISTING CUC MANHOLE
—— CUC ——	EXISTING CONDUIT
— — — —	ABANDONED CONDUIT

SHEET 1 OF 8

STATE PROJECT NO.: 1360-13-71	HWY: S.T.H. 145	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT BRIDGE APPROACH(CUC)	SCALE FEET 0' 40'	SHEET 17	E

STATE PROJECT NUMBER
1360--13-71



GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL STATIONS ARE IN FEET AND ARE ALONG THE C/L OF N 76TH ST.

ALL COMPONENTS SHALL HAVE A MINIMUM 75 YEAR DESIGN LIFE.

EACH 4" DIA. CONDUIT WEIGHTS 9 PLF.

ALL HORIZONTAL SUPPORT MEMBERS TO BE MADE OF BLACK FIBERGLASS PULTRUDED MATERIAL.

FIBERGLASS MEMBERS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM E-84, CLASS 1 FLAME RATING AND SELF-EXTINGUISHING REQUIREMENTS OF ASTM D-635, A SURFACE VEIL SHALL BE APPLIED DURING PULTRUSION TO INSURE A RESIN RICH SURFACE AND ULTRAVIOLET RESISTANCE.

ALL CUTS AND HOLES SHOULD BE PROPERLY SEALED PER MANUFACTURERS RECOMMENDATIONS TO PREVENT CORROSION.

ALL STEEL MEMBERS AND HARDWARE SHALL BE 304 STAINLESS STEEL.

FURNISH CONCRETE FOR BRIDGES CONFORMING TO SECTION 501. GRADE E. CONTRACTOR MAY USE PREMIXED BAG CEMENT PER ENGINEER'S APPROVAL.

SPACE HANGERS A MAXIMUM 10'-0". LOCATE CONDUIT HANGERS BETWEEN GIRDERS 4 & 5. SEE BRIDGE PLANS.

ALL FIBERGLASS JOINTS SHALL BE EPOXIED PER MANUFACTURER'S SPECIFICATIONS.

EXTEND CONDUIT 5'-0" FROM BACK FACE OF ABUTMENT. PROVIDE FIBERGLASS TO PVC COUPLING.

FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION.

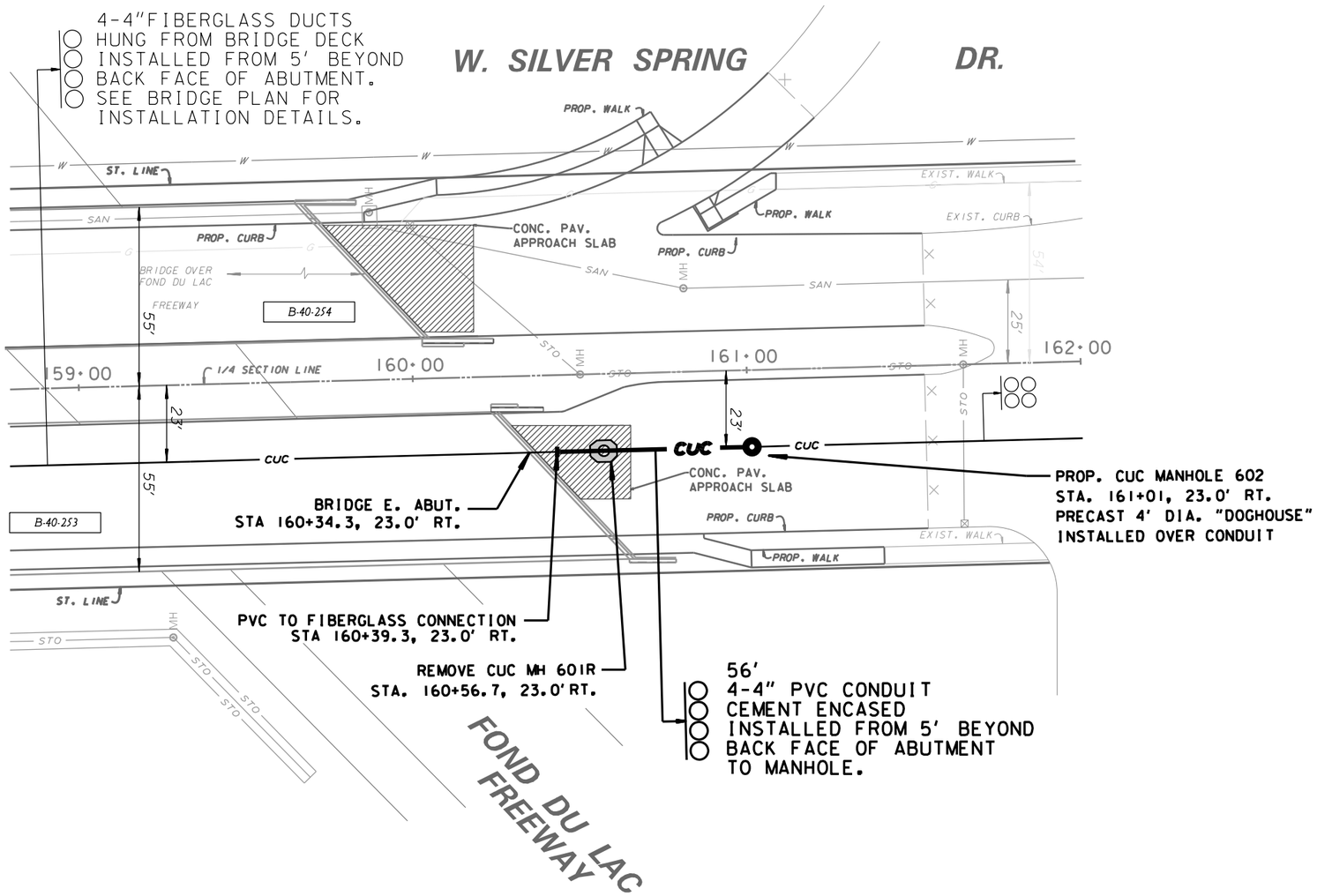
INSTALL EXPANSION JOINT PER LOCATION SHOWN ON BRIDGE PLAN.

1 - 4 FIBERGLASS DUCT CITY COMMUNICATIONS PACKAGE - 280' - 5' BEYOND ABUTMENT TO 5' BEYOND ABUTMENT

STATE PROJECT NO.: 1360-13-71	HWY: S.T.H. 145	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT BRIDGE APPROACH(CUC)	SCALE FEET NTS	SHEET 18	E

FILE NAME : W:\ugd\Conduit Work Files\uconduit\2022\Silver spring bridge over FDL HWY
PLOT DATE : 02 /08 /2023
PLOT BY : Hazem Ramadan
PLOT NAME :
PLOT SCALE : NTS
WISDOT/CADDS SHEET

STATE PROJECT NUMBER
1360-13-71



NOTES:

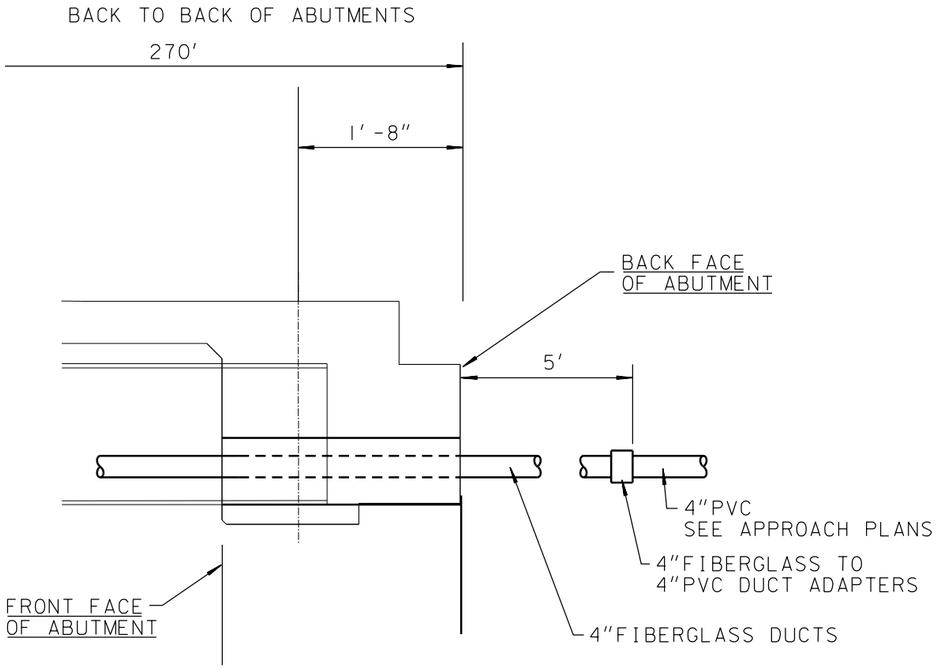
1) CONSTRUCTION STAKING FOR THE CITY UNDERGROUND CONDUIT (CUC) FACILITIES IS TO BE INCLUDED IN AND PAID FOR UNDER THE BID ITEM 650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS
2) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
3) THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
4) DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.
5) MAINTAIN A STANDARD DEPTH OF 39-INCHES BETWEEN FINISHED GRADE AND TOP OF CONDUIT.
6) REMOVE ABANDONED CONDUIT FROM MANHOLE WALL AND INSTALL THE PROPOSED CONDUIT INTO THE MANHOLE AT THE SAME LOCATION.
7) REMOVE ABANDONED CONDUIT AS NEEDED FOR PROPOSED INSTALLATION.

LEGEND

— CUC —	PROPOSED 4-INCH CEMENT ENCASED NONMETALLIC CONDUIT & 4-INCH BLACK FIBER GLASS CONDUIT, NUMBER OF RUNS AS NOTED.
●	PROPOSED CUC MANHOLE
⬡	EXISTING CUC MANHOLE
—— cuc ——	EXISTING CONDUIT
— — — —	ABANDONED CONDUIT

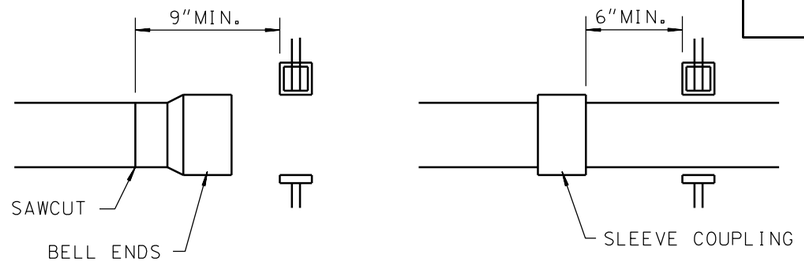
SHEET 3 OF 8

2



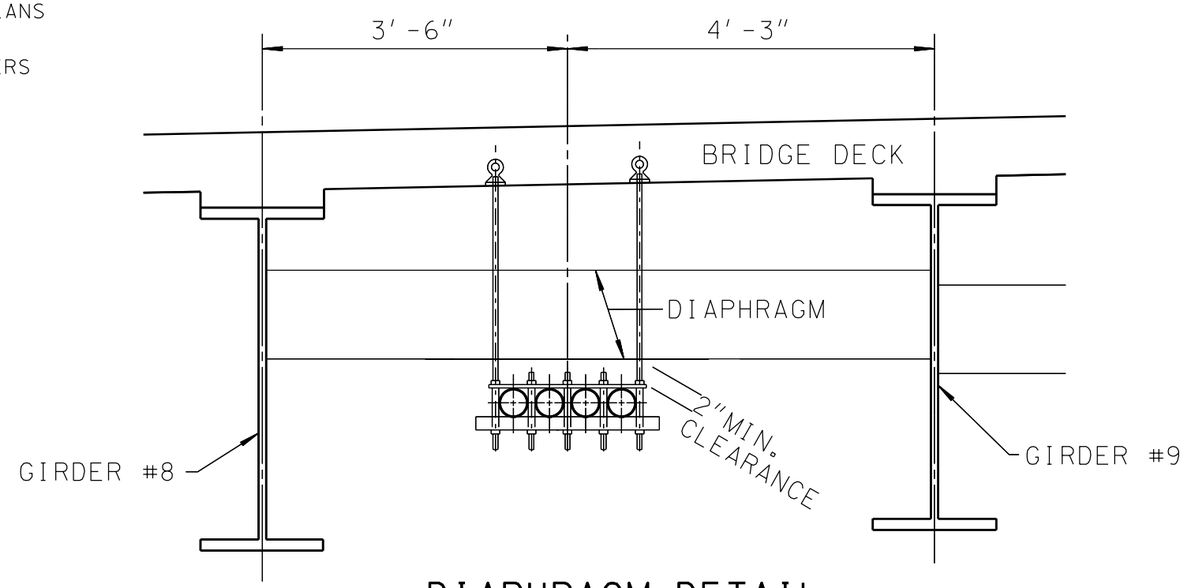
LOOKING NORTH

TYPICAL SECTION AT ABUTMENT



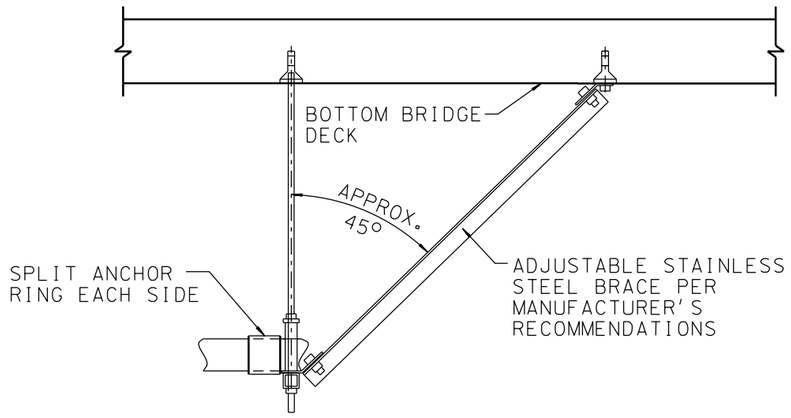
CLEARANCES FOR SLEEVE COUPLINGS AND BELL ENDS

NOTES:
A BELLED END OR COUPLING SHOULD BE NO CLOSER THAN 6" ON EITHER SIDE OF A SUPPORT AS SHOWN ABOVE. A TAPE MEASURE CAN BE USED TO PREDETERMINE THESE LOCATIONS AND THE CONDUIT CAN BE SAW CUT TO THE PROPER LENGTH BEFORE IT IS THREADED THROUGH THE HANGERS AS SHOWN ABOVE.

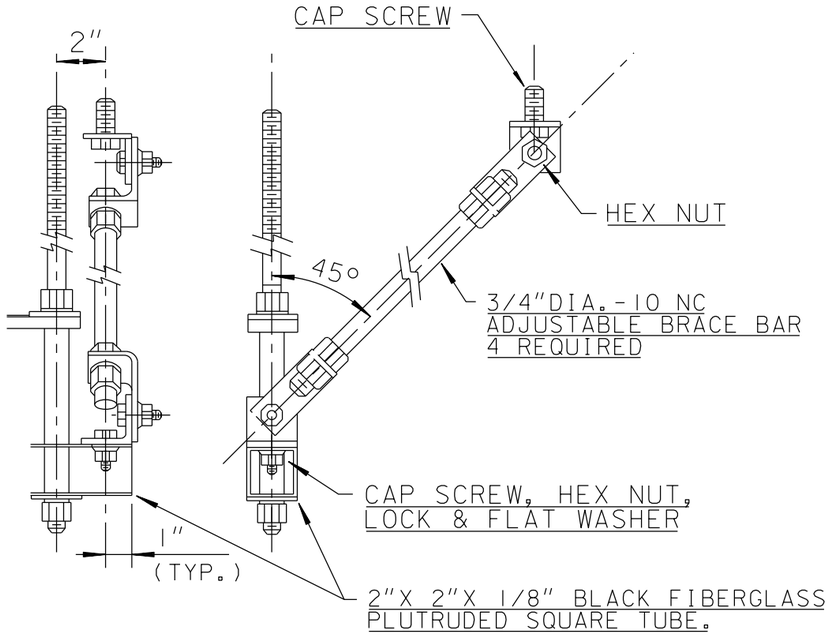


DIAPHRAGM DETAIL

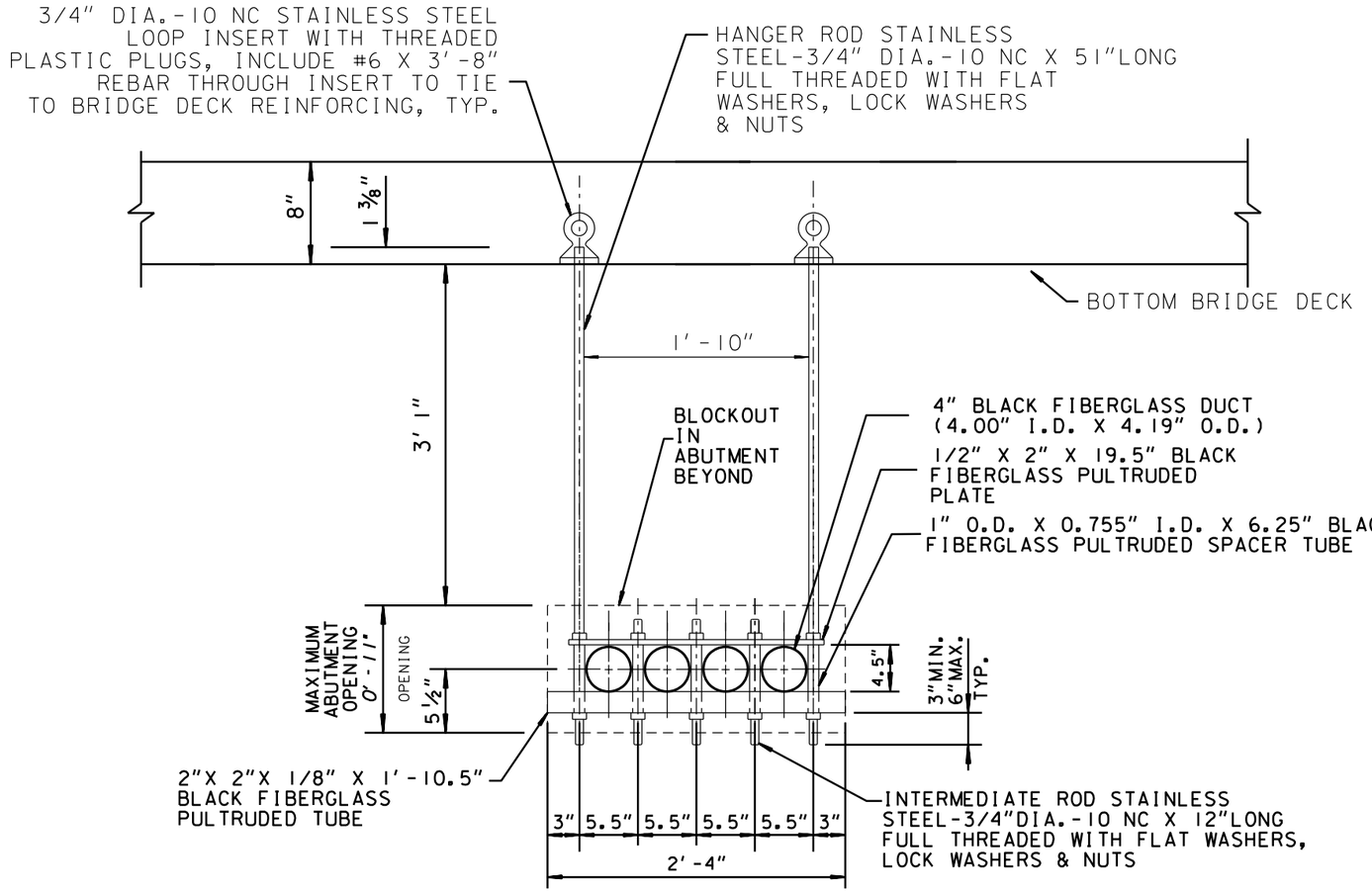
4-DUCT CITY COMMUNICATION HANGER PACKAGE THROUGH INTERMEDIATE DIAPHRAM DETAIL



BRACED HANGER DETAIL



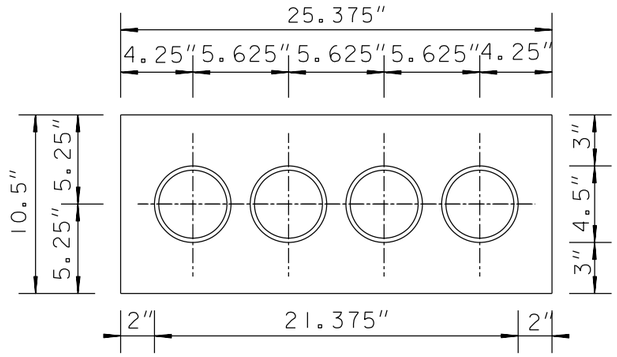
BRACED HANGER DETAIL



4 DUCT CITY COMMUNICATION HANGER PACKAGE DETAIL

* THE CONTRACTOR SHALL FIELD VERIFY HANGER LENGTHS IN ORDER TO AVOID CONFLICTS WITH DIAPHRAM CROSSING.

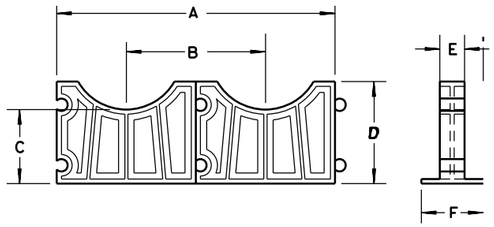
FILE NAME : W:\ugd\Conduit Work Files\uconduit\2022\Silver spring bridge over FDL HWY
PLOT DATE : 02 /08 /2023
PLOT BY : Hazem Ramadan
PLOT NAME :
PLOT SCALE : NTS
WISDOT/CADDS SHEET



4-DUCT CROSS SECTION VIEW

N.T.S.

COND.	3"	4"
A	10 1/4"	12 1/4"
B	5.13"	6.13"
C	3"	3"
D	4 3/4"	5.31"
E	1"	1"
F	3"	3"

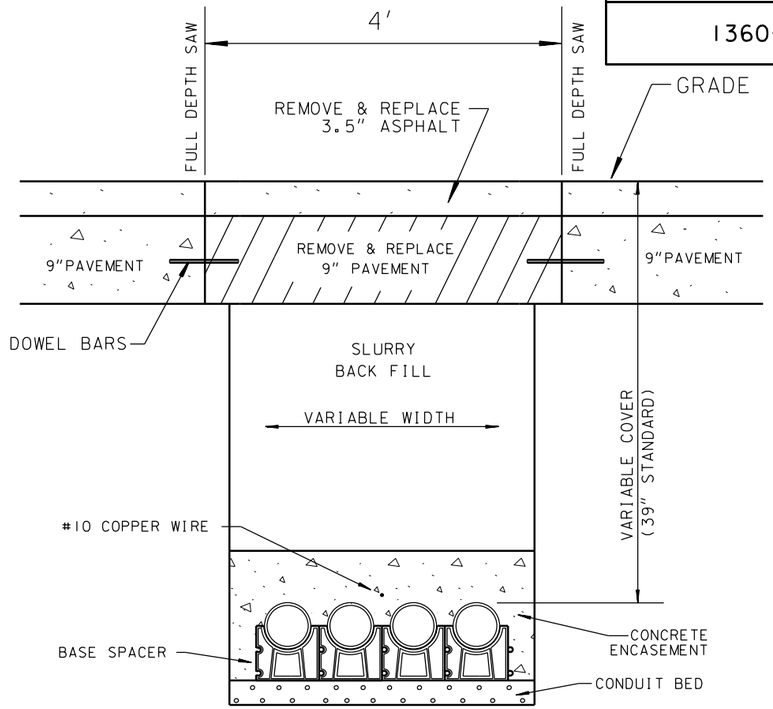


BASE SPACER DETAIL

N.T.S.

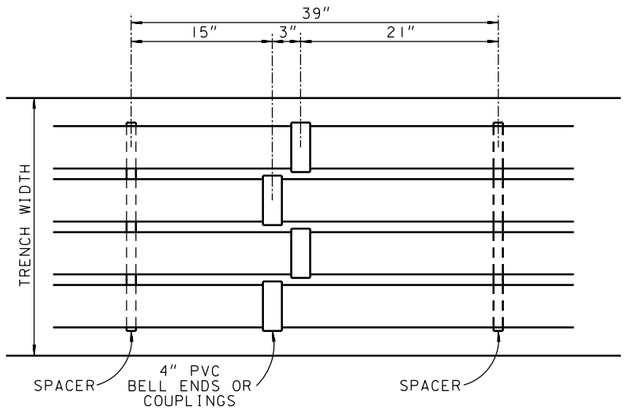
STATE PROJECT NUMBER

1360-13-71



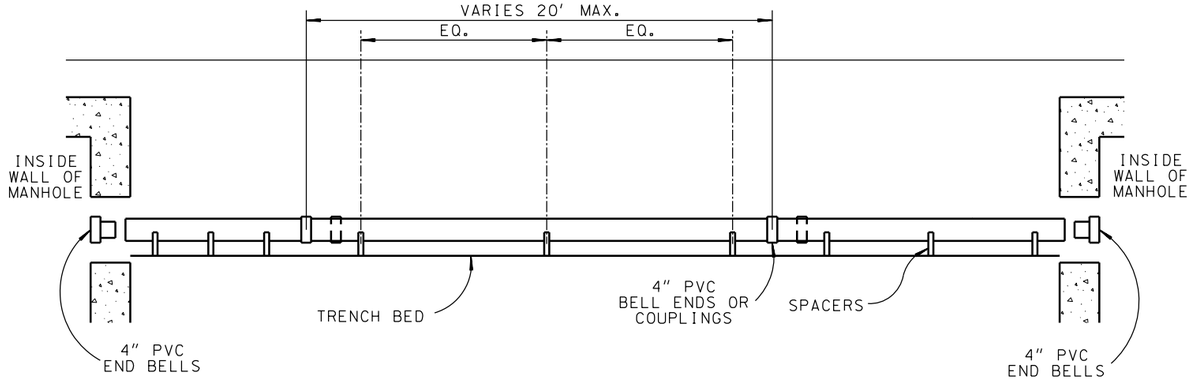
TRENCH AND 4-DUCT CROSS-SECTION VIEW

N.T.S.



PLAN VIEW

N.T.S.



SECTION VIEW

N.T.S.

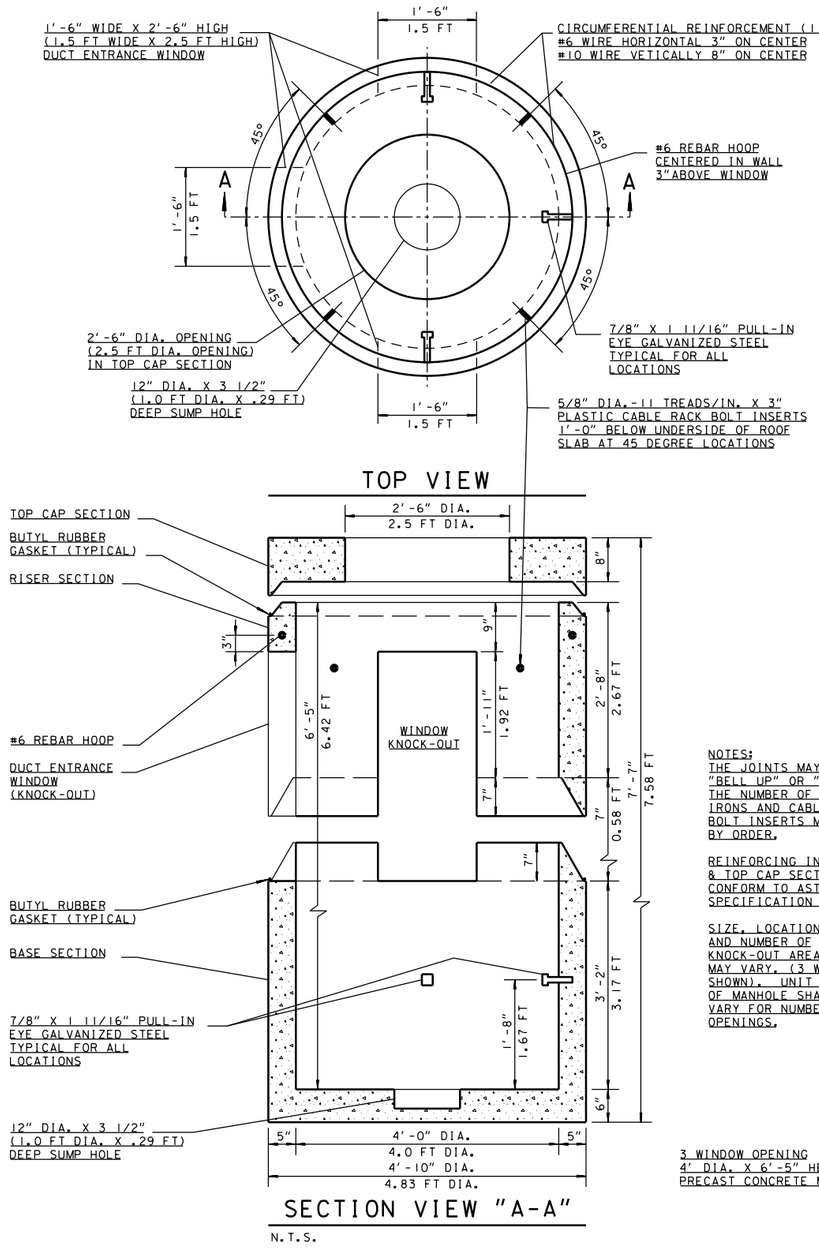
DUCT INSTALLATION DETAIL

SHEET 6 OF 8

STATE PROJECT NO.: 1360-13-71	HWY: S.T.H. 145	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT BRIDGE APPROACH(CUC)	SCALE FEET NTS	SHEET 22	E

STATE PROJECT NUMBER
1360-13-71

2

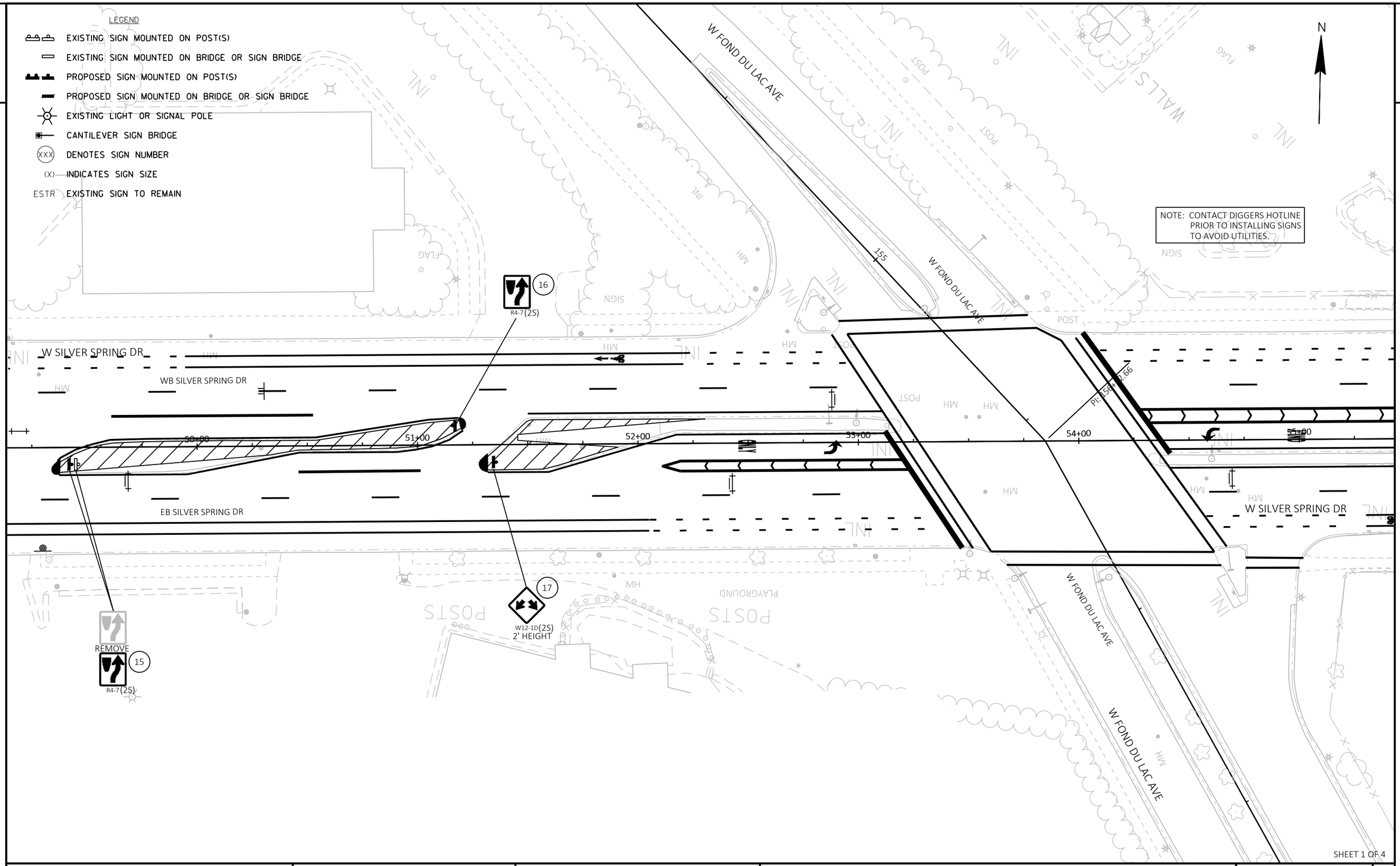


4' DIAMETER "DOGHOUSE" TYPE CUC MANHOLE

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
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN



SHEET 1 OF 4

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 24	E

FILE NAME : N:\PDS\C3D\CAD\13601300\SIGN\71\023201_PS_S1_20.DWG
LAYOUT NAME - 02

PLOT DATE : 3/20/2023 1:30 PM PLOT BY : WAGNER, SCOTT H 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
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

ALTERNATE EAST INTERSTATE 94
J3-1
ESTR ON COLUMN

NOTE: AVOID WATER LINE

9 Silver Spring Dr 5600 NORTH
10 M1-94 (MOD)
MOVE ONTO NEW BRIDGE INSTALLED UNDER 1360-15-70

8 BIKE LANE
REMOVE
BIKE LANE
R3-17 (2M)
L.P.

13 W11-2 L.P. MOVE
13A W16-7L L.P. MOVE
7 YIELD R1-2 L.P. MOUNT BELOW W11-2

6 REMOVE
R1-2 (2S)

W SILVER SPRING DR

NORTH 145 MILE 8 0
D10-5
ESTR
L.P.

EXIT 8
COUNTY E
SILVER SPRING DRIVE
EXIT ONLY
TYPE I
ESTR

STH 145/W FOND DU LAC FWY

B-40-0254
B-40-0253

156+00 157+00 158+00 159+00 160+00 161+00
59+00 60+00 61+00 57+00 55+00

WEST COUNTY E
11 REMOVE
WEST COUNTY E
M1-5A
J4-1(2M)

EXIT 7 B
181
76 TH STREET
1/4 MILE
TYPE I
ESTR

EXIT 20 MPH
W13-2B
ESTR ON COLUMN

2 REMOVE
BEGIN LEFT TURN LANE
R3-20 (2M)

EXIT 8
COUNTY E
SILVER SPRING DRIVE
EXIT ONLY
TYPE I
ESTR

W SILVER SPRING DR

3 REMOVE
NORTH 145
J2-1(2M)

1 REMOVE
YIELD
R1-2 (2S)

4 REMOVE
NORTH 145
J2-1(2M)

5 BIKE LANE
REMOVE
BIKE LANE
R3-17 (2M)
L.P.

12 W11-2 L.P. MOVE
12A W16-7L L.P. MOVE
14 YIELD R1-2 L.P. MOUNT BELOW W11-2

SOUTH 145 MILE 8 0
D10-5
ESTR
L.P.

EXIT 8
E5-1A
ESTR

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	COUNTIES	PHONE #
JENNY BUCKETT	MILWAUKEE, KENOSHA, WASHINGTON, OZAUKEE	414-750-2427
CHUCK SALDIVAR	RACINE, 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 SIGN POSTS IS INCIDENTAL TO THE POST

SHEET 2 OF 4

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 25	E

FILE NAME : N:\PDS\C3D\CAD\13601300\SIGN\71\023201_PS_20.DWG
LAYOUT NAME - 01
PLOT DATE : 3/20/2023 1:27 PM
PLOT BY : WAGNER, SCOTT H
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
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

N

STH 145

W SILVER SPRING DR

B SILVER SPRING DR

B-40-0254

WB SILVER SPRING DR

B-40-0253

EB SILVER SPRING DR

W SILVER SPRING DR

SB STH 145 RAMP

SB STH 145 TO SILVER SPRING OFF RAMP

REMOVE

18

TURNING VEHICLES

R10-15L(2S)

SB STH 145

NB STH 145

STH 145

56+00 57+00 58+00 59+00 60+00 61+00

157+00 158+00 159+00 160+00 161+00

SLAB

SIGNS

SHEET 3 OF 4

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 26	E

FILE NAME : N:\PDS\C3D\CAD\13601300\SIGN\71\023201_PS_S1_20.DWG
LAYOUT NAME - 03

PLOT DATE : 3/20/2023 1:30 PM PLOT BY : WAGNER, SCOTT H 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
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

N

NB STH 145 ON RAMP

W SILVER SPRING DR

N 79TH ST

WB SILVER SPRING DR

62+00 63+00 64+00 65+00 66+00 67+00

EB SILVER SPRING DR

W SILVER SPRING DR

W LEON TERRACE

REMOVE

NORTH 145

J3-1(2S)

19

20

REMOVE

SPEED LIMIT 40

R2-1(2S)

SHEET 4 OF 4

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 27	E

FILE NAME : N:\PDS\C3D\CAD\13601300\SIGN\71\023201_PS_S1_20.DWG
LAYOUT NAME - 04

PLOT DATE : 3/20/2023 1:31 PM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

STREET LIGHTING GENERAL NOTES:

PRIOR TO CONSTRUCTION, THE LOCATION OF UNDERGROUND UTILITIES SHALL BE DETERMINED IN THE FIELD BY CONTACTING "DIGGERS HOTLINE."

THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE, IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

STREET LIGHTING SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTIONS 652 TO 657 AND 659 EXCEPT:

ALL CHANGES OR ANY DEVIATIONS FROM PLANS MUST BE APPROVED BY STREET LIGHTING ENGINEERING.

1 DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THESE DRAWINGS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

2 THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCLUDING REPAIRS, REPLACEMENT OR RELOCATION ETC. OF STREET LIGHTING FACILITIES IF THE CONTRACTOR DOES ANY DEVIATION FROM THE STREET LIGHTING DESIGN WITHOUT THE STREET LIGHTING ENGINEERS SIGNED APPROVAL.

3 LOCATIONS OF THE HDPE AND NONMETALLIC PVC CONDUITS ARE IDENTIFIED IN THE PLANS WHERE THEY ARE REQUIRED. HOWEVER, INSTALLATION MAY REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. UNDER THE APPROVAL OF THE CITY OF MILWAUKEE DPW STREET LIGHTING, APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. FIELD MARK EACH CONDUIT LOCATION IN RED TO ILLUSTRATE AS BUILT CONDITIONS.

4 CONDUIT INSTALLED BEHIND CURB AND UNDER DRIVEWAYS SHALL BE INSTALLED AT A DISTANCE OF MINIMUM OF 6 INCHES AWAY FROM THE BACK OF CURB TO THE CENTER LINE OF CONDUIT, AND MINIMUM 24 INCHES DOWN MEASURED FROM THE TOP OF CURB OR FINISHED GRADE TO THE TOP OF CONDUIT.

5 DEPTH OF CONDUIT INSTALLED BELOW STREETS, HIGHWAYS, AND ALLEYS SHALL BE 24-INCHES MINIMUM AND 36-INCHES MAXIMUM. (MEASURED FROM FINISHED FLANGE LINE) IF THE CONTRACTOR DOES ANY DEVIATION FROM THE STREET LIGHTING DESIGN WITHOUT THE STREET LIGHTING ENGINEERS SIGNED APPROVAL.

6 CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION.

7 WHEN THERE IS MORE THAN ONE CONDUIT TO BE INSTALLED, PLACE ALL CONDUITS IN THE SAME TRENCH, OR BORE MULTIPLE CONDUITS TOGETHER AT THE SAME TIME.

8 CONDUIT INSTALLATION THAT REQUIRE TRENCHING SHALL NOT BE BACKFILLED PRIOR TO INSPECTION ON THE CONDUIT.

9 ANY EXCEPTION TO THE MINIMUM OR MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE STREET LIGHTING ENGINEER.

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

11 ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS.

12 PRIOR TO CONDUIT ACCEPTANCE, ALL OPEN CONDUIT ENDS, AND UN-TERMINATED CONDUITS SHALL BE THOROUGHLY CLEANED AND BE CAPPED IMMEDIATELY AFTER INSTALLATION WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT, BUT EASILY REMOVED. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

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

14 PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUIT.

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

16 UNLESS THE CONDUIT IS DESIGNED AND SHOWN WITH BENDS ON THE PLANS, ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO CONCRETE BASE, AND PULL BOX TO ENCLOSURE. OTHERWISE IT MUST BE APPROVED BY THE STREET LIGHTING ENGINEER.

STREET LIGHTING GENERAL NOTES:

17 MINIMUM CONDUIT CLEARANCES FOR CONDUIT CROSSINGS AND PULL BOXES FROM THE FOLLOWING:
FIRE HYDRANTS: 6-FT TREE TRUNKS: 10-FT END OF DRIVEWAY FLARES: 6-FT
UNLESS NOTED OTHERWISE, OR APPROVED BY THE STREET LIGHTING ENGINEER.

18 HAND DIGGING MAY BE REQUIRED FOR LOCATIONS ADJACENT TO EXISTING GAS AND POWER LINES. HAND EXCAVATION SHOULD BE ANTICIPATED AND WILL BE CONSIDERED INCIDENTAL TO THE BID ITEM BEING INSTALLED. COORDINATE ALL WORK NEAR GAS LINES WITH WE ENERGIES.

19 TYPICAL RECTANGULAR PULL BOXES / VAULTS SHOULD BE INSTALLED AS SHOWN ON PLANS, BUT WHEN IT IS NOT POSSIBLE, A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS AND FIRE HYDRANTS SHOULD BE USED, OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

20 TYPICAL CONDUIT INSTALLATION FROM THE PULL BOX TO A DIRECT BURIED STREET LIGHT POLE IS AS FOLLOWS: USE A NYLON LIQUIDTIGHT CONNECTOR (UL APPROVED) TO CONNECT THE 1 1/2-INCH LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT LFNC-B (UL APPROVED) TO THE PULL BOX AND CONNECT TO STREET LIGHT POLE BY STUBBING UP A MINIMUM OF 6 INCHES OF THE LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT (LFNC-B) INTO THE CABLE SLOT.

21 ALL CONDUITS AND JUNCTION BOXES EMBEDDED IN STRUCTURE SHALL BE PAID UNDER STRUCTURE PAY ITEMS. CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF EMBEDDED CONDUITS.

22 AT EVERY BRIDGE JOINT, EXPANSION/DEFLECTION FITTINGS MUST BE USED TO PREVENT DAMAGE TO CONDUIT AND LIGHTING CIRCUITS. THIS ITEM IS INCIDENTAL TO THE CONDUIT BID ITEM, AND SHALL BE PAID UNDER STRUCTURE PAY ITEMS.

23 THE SUPPORT CHANNELS FOR INSTALLATION OF CONDUITS, LUMINAIRES, JUNCTION BOXES AND ENCLOSURES SHALL BE STAINLESS STEEL UNISTRUT P1000 SERIES OR APPROVED EQUAL, CHANNELS SHALL BE SLOTTED OR PERFORATED.

24 ALL HDPE OR NONMETALLIC PVC CONDUITS THAT CONNECT TO PULL BOXES REQUIRE A PVC END BELL CONNECTOR INSIDE THE PULL BOX

25 PROVIDE REMOVABLE SEALANT SUCH AS DUCT SEAL IN THE CONDUITS AT THE CABINETS, PULL BOXES AND JUNCTION BOXES TO AVOID CONDENSATION CAUSED BY AIRFLOW THROUGH THE CONDUITS DUE TO TEMPERATURE DIFFERENCE. THIS WORK SHALL BE INCIDENTAL TO ASSOCIATED CONDUIT PAY ITEM.

26 PROVIDE 3 INCH PVC SCHEDULE 40 CONDUIT ELBOWS IN ALL GROUND MOUNTED CONCRETE LIGHT BASES FOR CABLE IN DUCT TYPE INSTALLATION. THIS WORK IS INCIDENTAL TO CONCRETE BASES PAY ITEMS.

27 AT EACH SIGNAL STANDARD BASE PROVIDE 2 INCH PVC SCHEDULE 40 CONDUIT FROM PULL BOX TO SIGNAL STANDARD BASE. INSTALLATION OF PULL BOX AND CONDUIT ARE INCIDENTAL TO SIGNAL STANDARD BASE INSTALLATION WORK.

28 CONDUCTOR COLORS: 240/480, 1 PHASE - BLACK (HOT) /WHITE (NEUTRAL) // RED (HOT) /GRAY (NEUTRAL) / GREEN (GROUND)

29 INSTALL COMMON GROUND CONDUCTOR IN CONDUIT WHERE MULTIPLE BRANCH CIRCUITS CONDUCTORS ARE INSTALLED IN SAME CONDUIT AND SPLICE THE GROUND CONDUCTOR WITH TAP CONNECTOR IN PULLBOX.

30 PROVIDE MINIMUM WIRES / CONDUCTOR(S) SLACK AS NOTED BELOW:
PULL BOXES: SEE DETAIL 142
- CONNECTED WIRES TO LIGHT POLE IN PULL BOX MUST BE EXTENDED MINIMUM 3 FT. BEYOND TOP OF PULL BOX
- UNCONNECTED WIRES THAT BY PASS THROUGH PULL BOX MUST HAVE A MINIMUM OF 6 FT. SLACK COIL LEFT INSIDE PULL BOX

EMBEDDED JUNCTION BOXES IN PARAPIT WALL :
- CONNECTED WIRES IN JUNCTION BOX EXTEND MINIMUM 2 FT. BEYOND TOP OF JUNCTION BOX
- UNCONNECTED WIRES IN JUNCTION BOX LEAVE MINIMUM OF 4 FT. SLACK COIL IN JUNCTION BOX

DISTRIBUTION CENTER/LOAD CENTER: EXTEND 10-FT.
BREAK AWAY TRANSFORMER BASE: EXTEND 2-FT.

31 UNDERGROUND WIRE & CONDUIT SHOWN ON PLANS TO BE ABANDONED IN PLACE UNLESS DIRECTED BY THE ENGINEER. CONTRACTOR MAY CHOOSE TO REMOVE CONDUCTOR AT THEIR OWN EXPENSE.

32 LIGHT POLES INSTALLED BEHIND THE CURB NEED TO BE SET 30 INCHES BACK FROM FACE OF CURB TO CENTER OF POLE, SO TO MEET THE MINIMUM DISTANCE OF 24 INCHES FROM THE CURB FACE TO THE CURB SIDE FACE OF THE POLE.

33 ON ALL NEW STREET LIGHT POLES A PLAQUE WITH THE POLE NUMBER AS SHOWN ON THE PLANS SHALL BE AFFIXED ONTO THE POLE SHAFT AS PART OF POLE INSTALLATION.

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: dkozel REVISION DATE: 12-DEC-2022 09:08
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: DEC.12-2022

STREET LIGHTING GENERAL NOTES:

34 ALL WIRE CONNECTIONS REQUIRE ANTI-OXIDANT TO BE APPLIED TO THE CONNECTIONS

35 ALL HARDWARE NUT AND BOLT CONNECTIONS REQUIRE ANTI SEIZE TO BE APPLIED TO THEM

36 COORDINATE NEW CONDUIT CONNECTIONS WITH EXISTING CONDUIT, DUCT PACKAGES, AND PULL BOXES/ VAULTS/ MANHOLES WITH CITY OF MILWAUKEE STREET LIGHTING. THE CITY REQUIRES THREE WORKING DAYS ADVANCED NOTICE. CONTACT ELECTRICAL SUPERVISOR
STREET LIGHTING - NEAL KARWEIK (OFFICE 414-286-5943 (CELL) 414-708-4245
STREET LIGHTING - WILLIE COTTON (OFFICE) 414-286-5997 (CELL) 414-708-1629
STREET LIGHTING - DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - RUDY GUTIERREZ (OFFICE) 414-286-5941 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

37 IMMEDIATELY AFTER THE CONTRACTOR HAS COMPLETED ALL THE ELECTRICAL PULL BOXES / VAULTS, CONDUIT AND CONDUIT CONNECTIONS, AND JUST BEFORE ELECTRICAL WORK IS COVERED UP WITH CONCRETE, SOIL, OR ETC. THE CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SHOP SUPERVISORS FOR FINAL INSPECTION AND APPROVAL OF ALL WORK.
STREET LIGHTING - NEAL KARWEIK (OFFICE) 414-286-5943 (CELL) 414-708-4245
STREET LIGHTING - WILLIE COTTON (OFFICE) 414-286-5997 (CELL) 414-708-1629
STREET LIGHTING - STEVEN RHODA (OFFICE) 414-286-5942 (CELL) 414-708-4251
STREET LIGHTING - DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - RUDY GUTIERREZ (OFFICE) 414-286-5941 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

38 CONTRACTOR SHALL SUPPLY AS-BUILT DRAWINGS FOR ALL WORK BEING DONE DETAILING THE FINAL PLACEMENT OF CONDUIT, CABLING, EQUIPMENT, AND GEOMETRIC MODIFICATIONS UNDER THE CONTRACT. PROVIDE (.PDF FORMAT) COPY CONFORMING TO CMM 1-65.14, OR RECORD ALL CHANGES IN RED INK ONLY ON THE AS-LET (DESIGN) PAPER DRAWINGS. THE CITY OF MILWAUKEE DPW ENGINEER WILL REJECT AS-BUILTS WITH INCOMPLETE OR INCORRECT CONTENT OR NOT CONFORMING TO CMM STANDARDS.

39 CONTRACTOR TO DELIVER THE FOLLOWING REMOVED STREET LIGHTING MATERIALS:
-ALUMINUM AND WOOD POLES
-LUMINAIRE BRACKET ARMS
-LUMINAIRES
-BREAKAWAY TRANSFORMER PEDESTALS
-WIRING PEDESTALS (GREEN IN COLOR)
TO CITY OF MILWAUKEE STREET LIGHTING YARD AT 1540 W. CANAL ST.
CALL RICO LOPEZ AT 414-286-5983 (CANAL OFFICE) OR 414-286-6123 (DPW FIELD OFFICE) OR DISPATCHER AT 414-286-5944
THREE (3) WORKING DAYS BEFORE TO COORDINATE DELIVERY OF MATERIALS

40 CONTRACTOR WILL BE RESPONSIBLE FOR THE DISPOSAL OF CONCRETE POLES, CONCRETE BASES, AND WIRING.

41 CONTRACTOR SHALL DISPOSE OF REMOVED EXISTING LAMPS IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

42 ONLY WHEN THE CITY OF MILWAUKE IS FURNISHING MATERIALS FOR A PROJECT THE CONTRACTOR IS RESPONSIBLE TO CONTACT THE STREET LIGHTING SHOP YARD CONTACT PERSON FOUR (4) WORKING DAYS BEFORE, AND WILL NEED TO PROVIDE THE EXACT QUANTITY OF MATERIALS NEEDED. THE ADVANCE NOTICE WILL ALLOW THE SHOP TO GATHER THE REQUEST ITEMS FOR THE CONTRACTOR TO PICK UP AND SIGN FOR TAKING POSSESSION OF THE MATERIALS.

THE CONTRACTOR WILL BE RESPONSIBLE FOR THE MATERIALS THAT THEY TAKE POSSESSION OF AND FOR THE ANY RETURNING OF ANY UNSED MATERIALS BACK TO THE SHOP IN GOOD CONDITION. IF ANY MATERIALS COME BACK DAMAGED OR BROKEN THE CONTRACTOR WILL BE RESPONSIBLE FOR REPLACING THE BROKEN OR DAMAGED ITEMS.

STREET LIGHTING SHOP YARD CONTACT PERSON:
NEAL KARWEIK 414-286-5943 (OFFICE) 414-708-4245 (CELL)
ALL THE MATERIALS MUST BE EITHER PICKED OR DROPPED OFF ALL AT ONE TIME.
THE STREET LIGHTING SHOP YARD HOURS FOR PICKING UP MATERIALS IS FROM 8AM TO 2PM: MONDAY THROUGH FRIDAY.

CONTRACTOR MUST BE OUT OF THE SHOP YARD BY 2PM NO LATER.

STREET LIGHTING GENERAL NOTES:

AS-BUILT GUIDELINES:

PROVIDE AS-BUILT DRAWINGS DETAILING THE FINAL PLACEMENT OF CONDUIT, CABLING, EQUIPMENT, AND GEOMETRIC MODIFICATIONS UNDER THE CONTRACT. PROVIDE PDF COPY CONFORMING TO CMM 1-65.14, OR RECORD ALL CHANGES IN RED INK ONLY ON THE AS-LET (DESIGN) PAPER DRAWINGS. THE ENGINEER WILL REJECT AS-BUILTS WITH INCOMPLETE OR INCORRECT CONTENT OR NOT CONFORMING TO CMM STANDARDS.

UPON PROJECT COMPLETION, FOLLOW THE WISDOT REQUIREMENTS PER CMM 165.12 AS-BUILT PLANS, THE PROJECT ENGINEER AND/OR ELECTRICAL CONTRACTOR SHALL SUBMIT AN ELECTRONIC AS-BUILT PLAN. ANY CHANGES FROM THE AS-LET PLAN THAT WERE BUILT INTO THE PROJECT SHOULD BE RECORDED IN RED USING ADOBE ACROBAT PROFESSIONAL OR EQUIVALENT SOFTWARE. DO NOT SCAN FIELD NOTES TO CREATE THE DIGITAL AS-BUILT PLAN.

IF THERE IS A STRUCTURE DRAWING, INCLUDE ALL STRUCTURES DRAWING SHEETS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSERT ANY ADDENDUM OR REPLACEMENT DRAWING SHEETS. TO DO THIS, RENUMBER THEM SIMILARLY TO THE ORIGINAL DRAWING SHEET.
FOR EXAMPLE:
REVISED SHEET 5 WOULD REPLACE SHEET 5. HOWEVER, ALL THE ORIGINAL SHEETS SHALL REMAIN IN THE AS-BUILT. IF THE SHEET HAS BEEN REPLACED CROSS IT OUT WITH AN X AND INDICATE THE NUMBER OF ITS REPLACEMENT SHEET. IF ADDITIONAL SHEETS WERE ADDED, INSERT THEM IN THE ORIGINAL LOCATION AND LABEL THEM WITH THE PREVIOUS SHEET NUMBER FOLLOWED BY AN "A", "B", "C", ETC.

NOTE THE SHEET CHANGES ON THE TITLE SHEET UNDER THE ORDER OF SHEETS.

THE TITLE SHEET OF THE AS-BUILT DRAWING SHOULD INCLUDE THE FOLLOWING INFORMATION:
AS-BUILT DRAWING
SUPERVISOR:
PROJECT MANAGER:
CONTRACTOR LEADER:
CONTRACTOR COMAPNY:
WORK STARTED:
WORK COMPLETED:

LINE OUT OR CROSS OUT ALL CHANGED INFORMATION AND WRITE-IN THE CORRECTED INFORMATION ABOVE THE ORIGINAL OR CLOSE TO IT WHEREVER POSSIBLE. USE BLANK SPACES ON THE DRAWING SO NOTES ARE NOT SUPERIMPOSED. DRAWINGS WITH EXCESSIVE DETAIL MAY REQUIRE AN ALTERNATE APPROACH. NUMBERED CHANGES OR ADDITIONS MAY BE SHOWN ON SUPPLEMENTAL NON-DRAWING SHEETS.

- LOCATE AND CLEARLY LABEL ALL CONDUIT RUNS, FITTINGS, SPLICE VAULTS, PULL BOXES, METER PEDESTALS, CONCRETE BASES, TRANSFORMERS, POLES AND OTHER APPURTENANCES IN TWO DIRECTIONS. SWING TIES SHOULD BE MADE FROM THE OBJECTS THAT ARE PERMANENT IN NATURE AND VISIBLE ON THE FINISHED SURFACE.
- STREET NAMES SHALL BE ON ALL SHEETS.
- SHOW ALL SIZES AND MATERIAL TYPES OF PIPES AND CONDUITS, IF CHANGED OR MODIFIED FROM ORIGINAL DESIGN.
- ALL HORIZONTAL DISTANCES SHALL BE SHOWN TO THE NEAREST TENTH OF A FOOT (I.E., 205.3'). ALL VERTICAL DISTANCES SHALL BE TO THE NEAREST INCH (I.E., 24")
- SHOW LOCATION AND ELEVATIONS ON CONDUIT AND FITTINGS WHERE CHANGES OR DEFLECTIONS IN DIRECTION OCCUR.
- SPECIAL DETAIL DRAWINGS MAY BE REQUIRED WHERE INSTALLATIONS ARE NOT SHOWN ON APPROVED CONSTRUCTION DRAWINGS FOR WHATEVER REASON OR WHERE REQUIRED FOR CLARITY.
- TYPICAL SERVICE INSTALLATION DETAILS WITH DEVIATIONS FROM ORIGINAL PLANS OR STANDARD DETAILS SHALL BE NOTED ON AS-BUILT DRAWINGS.
- NO ARBITRARY MARK-UPS WILL BE PERMITTED.

IF THERE ARE NO CORRECTIONS OR ADDITIONS TO THE AS-LET PLAN(S) PUT "NO CHANGE" ON THE SHEET WITH ALL OTHER REQUIRED AS-BUILT INFORMATION.

BY MAIL SEND TO:
CITY OF MILWAUKEE
INFRASTRUCTURE SERVICES DIVISION
TRANSPORTATION SECTION - CONSTRUCTION
CHIEF CONSTRUCTION ENGINEER
TONY KOTECKI
841 NORTH BROADWAY, ROOM 701
MILWAUKEE, WISCONSIN 53202

BY EMAIL SEND TO:
CITY OF MILWAUKEE
INFRASTRUCTURE SERVICES DIVISION
TRANSPORTATION SECTION - CONSTRUCTION
CHIEF CONSTRUCTION ENGINEER
TONY KOTECKI
AKOTEC@MILWAUKEE.GOV

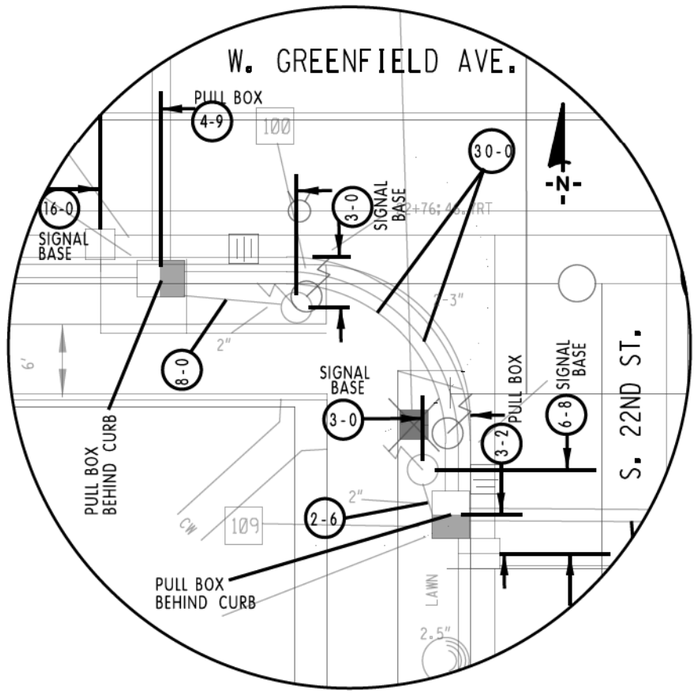
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: dkozel REVISION DATE: 12-DEC-2022 09:18
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: DEC.12-2022

USE RED INK TO DO AS-BUILTS

RECORD RETENTION GUIDELINES:

- CONTRACTOR TO LOCATE AND CLEARLY DIMENSION ALL OF THERE NEWLY INSTALLED CONDUIT RUNS, FITTINGS, SPLICE VAULTS, PULL BOXES, METER PEDESTALS, CONCRETE BASES, TRANSFORMERS, POLES AND OTHER APPURTENANCES IN TWO (2) DIRECTIONS. SWING TIES SHOULD BE MADE FROM OBJECTS THAT ARE PERMANENT IN NATURE AND VISIBLE ON THE FINISHED SURFACE.
- STREET NAMES SHALL BE ON ALL SHEETS.
- SHOW ALL SIZES AND MATERIAL TYPES OF PIPES AND CONDUITS, IF CHANGED OR MODIFIED FROM ORGINAL DESIGN.
- ALL HORIZONTAL DISTANCES SHALL BE SHOWN TO THE NEAREST TENTH OF A FOOT (I.E., 205.3'). ALL VERTICAL DISTANCES SHALL BE SHOWN TO THE NEAREST INCH (I.E. 24").
- SHOW LOCATION AND ELEVATIONS OF PIPES AND FITTINGS WHERE CHANGES OR DEFLECTIONS IN DIRECTION OCCUR.
- SPECIAL DETAIL DRAWINGS WILL BE SUPPLIED WHERE REQUIRED FOR CLARITY.
- DEVIATIONS FROM ORIGINAL PLANS OR STANDARD DETAILS SHALL BE NOTED ON AS-BUILT DRAWINGS.
- IF THERE ARE NO CORRECTIONS OR ADDITIONS TO THE AS-LET PLAN(S) PUT "NO CHANGE" ON THE SHEET.

SUPERVISOR: _____
PROJECT MANAGER: _____
CONTRACTOR LEADER: _____
CONTRACTOR COMPANY: _____
WORK STARTED: _____
WORK COMPLETED: _____



FIELD RECORD EXAMPLE DETAIL NOT TO SCALE

TYPICAL DIMENSIONING OF CONDUIT, PULL BOXES, AND CONCRETE BASES

MEASURING GUIDE LINES

IF CONDUIT IS NOT PLACED DIRECTLY BEHIND THE CURB IN THE ISLANDS & SIDE TERRACE AREAS, A MEASURED DISTANCE FROM THE FACE OF CURB TO THE CONDUIT WILL NEED TO BE PROVIDED.

PROVIDE A MEASURED DISTANCE OF UNINTERRUPTED CONDUIT RUNS

USE PERMANENT OBJECTS LIKE HYDRANTS, CATCH BASINS, OR EVEN CURB FACE LINES EXTENED TO MEASURE OFF WHEN LOCATING CONDUIT, PULL BOXES AND CONCRETE BASES.

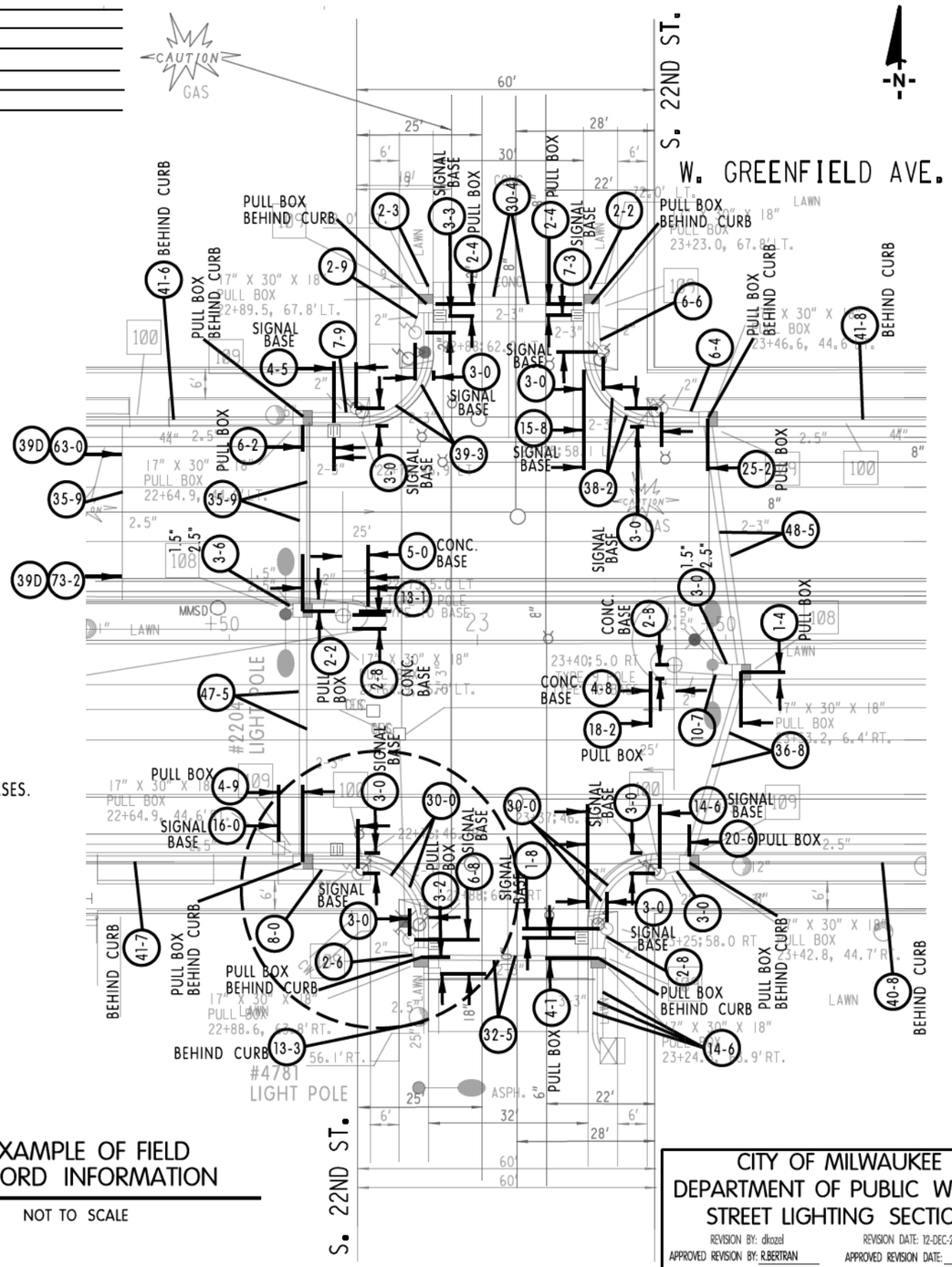
MEASURE TO OR FROM THE CENTERS OF OBJECTS FOR DISTANCE TAKING.

(39D) MEANS = CONDUIT IS 39" DEEP

(48-5) MEANS = LENGTH OF CONDUIT IS 48.5 FT. LONG (MEASURED TO NEAREST TENTH OF A FOOT)

OR

(25-6) MEANS = DISTANCE OF 25.6 FT. BETWEEN PERMANENT OBJECT OR CURB FACE TO CONDUIT, PULL BOX, AND CONCRETE BASE (MEASURED TO NEAREST TENTH OF A FOOT)



EXAMPLE OF FIELD RECORD INFORMATION

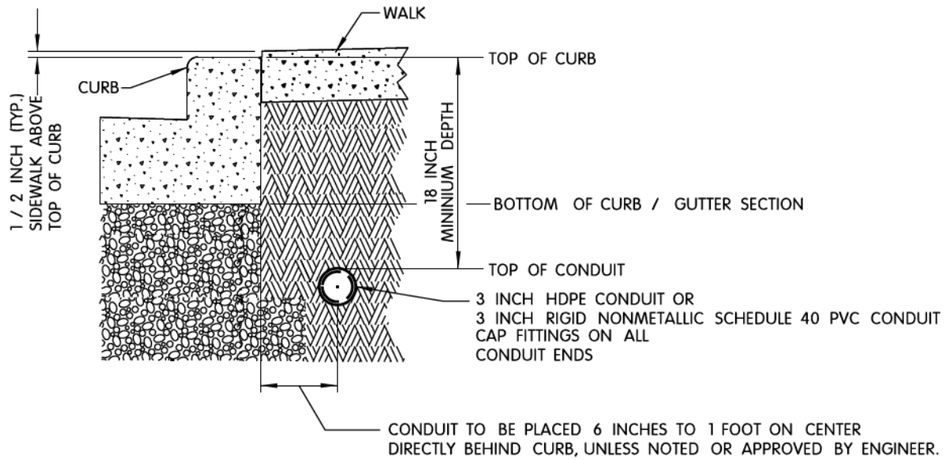
NOT TO SCALE

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION

REVISION BY: dkozel — REVISION DATE: 12-DEC-2022 09:26
APPROVED REVISION BY: R.BERTRAN — APPROVED REVISION DATE: DEC.12-2022

PROJECT NO. 1360-13-71	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - GENERAL NOTES & DETAILS	SHEET 30	E

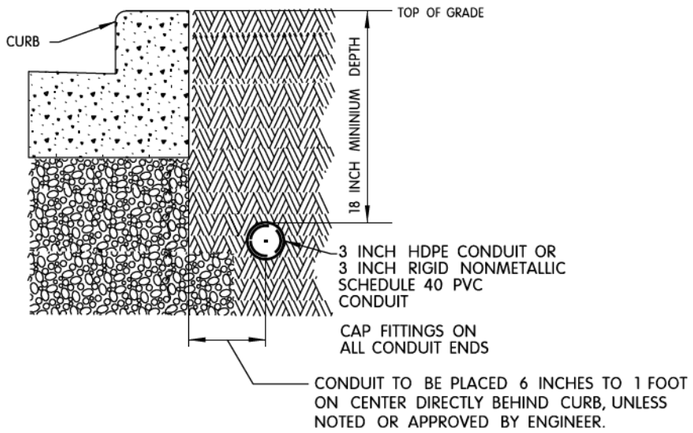
NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.



100 DETAIL "A" NOT TO SCALE

TYPICAL CONDUIT INSTALLATION
BEHIND CURB UNDER WALK

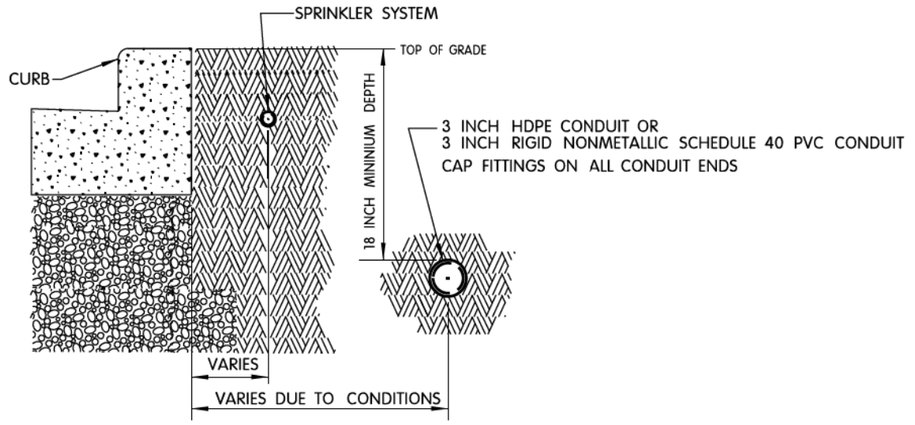
NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.



100 DETAIL "B" NOT TO SCALE

TYPICAL CONDUIT INSTALLATION
BEHIND CURB IN GRASS AREA

NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.



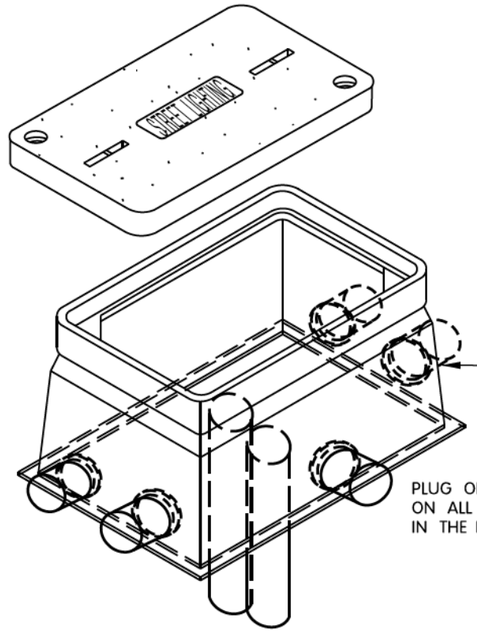
100 DETAIL "C" NOT TO SCALE

TYPICAL CONDUIT INSTALLATION WITH
OTHER UTILITIES BEHIND CURB

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: dkozel REVISION DATE: 12-DEC-2022 09:38
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: DEC.12-2022

PROJECT NO. 1360-13-71	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - GENERAL NOTES & DETAILS	SHEET 31	E

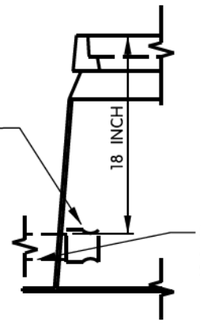


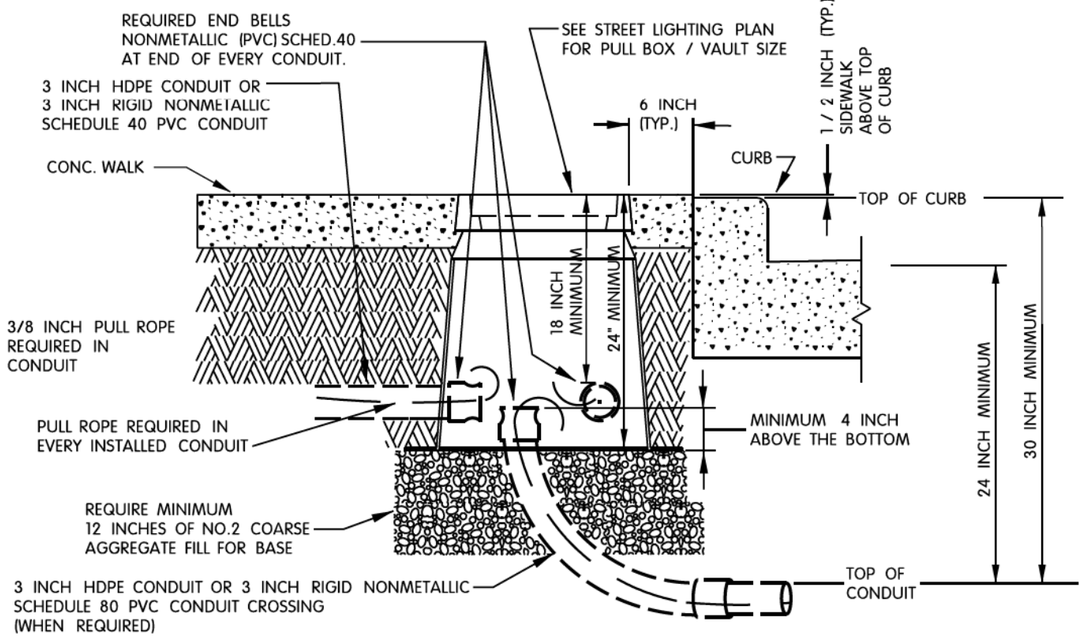
HEAVY DUTY COVER
W/ STREETLIGHTING LOGO
& W / 2 PENTA BOLTS
COLOR: GRAY
TIER 15 RATING (MINIMUM)

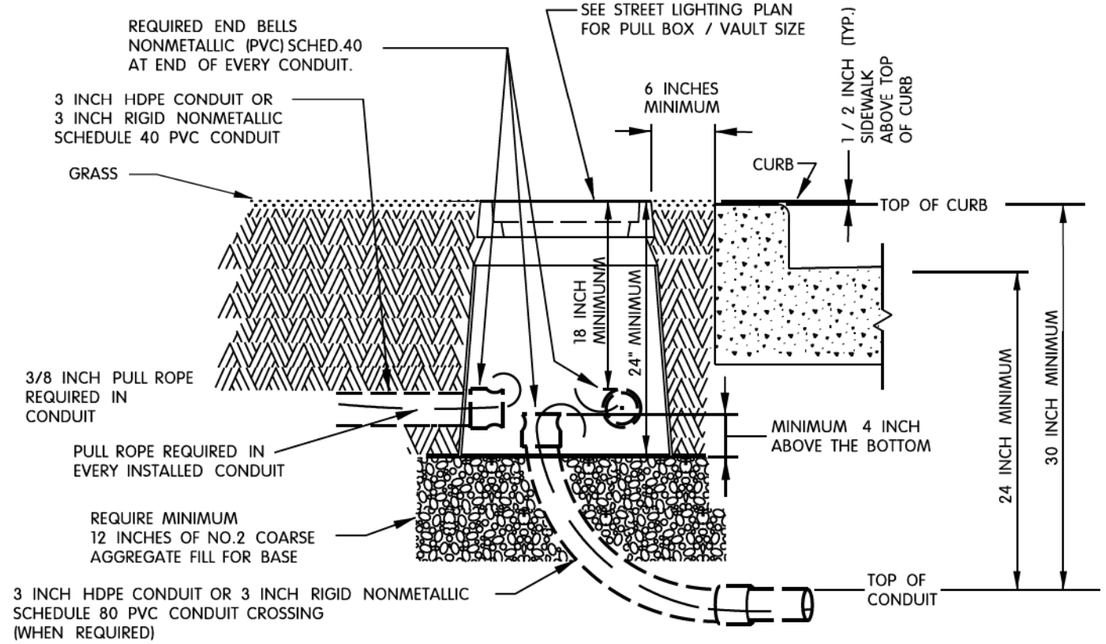
PULL BOX / VAULT
FLARED WALL
BOX W / NO BASE
COLOR: GRAY
TIER 15 RATING (MINIMUM)
(VARIOUS SIZES)

REQUIRED END BELLS
NONMETALLIC (PVC) SCHED.40
AT END OF EVERY CONDUIT.

PLUG OR CAP FITTINGS
ON ALL UNUSED CONDUITS
IN THE ENCLOSURE







112

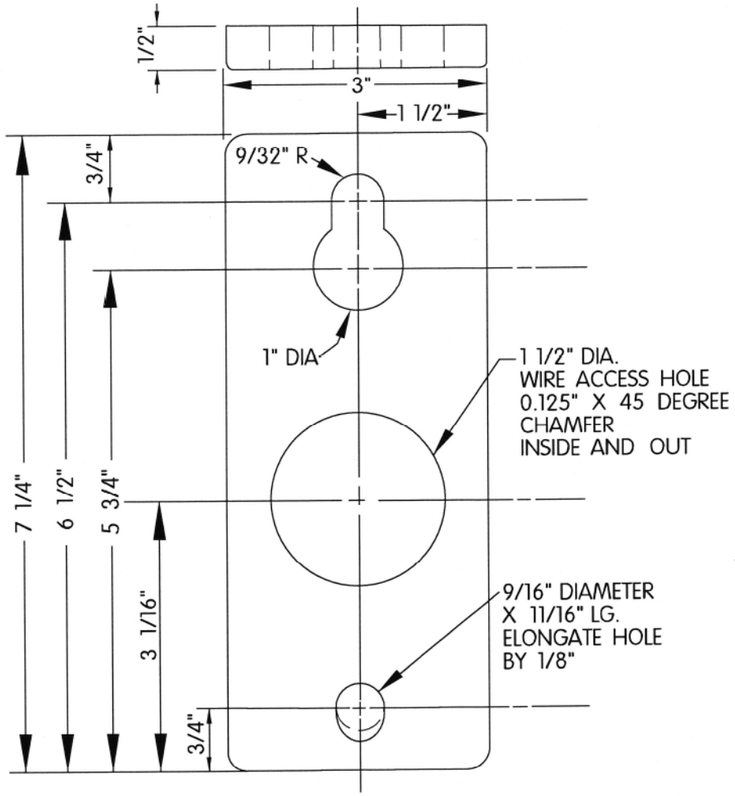
DETAIL

NOT TO SCALE

TYPICAL PULL BOX / VAULT INSTALLATION
IN EITHER PAVEMENT OR GRASS AREAS

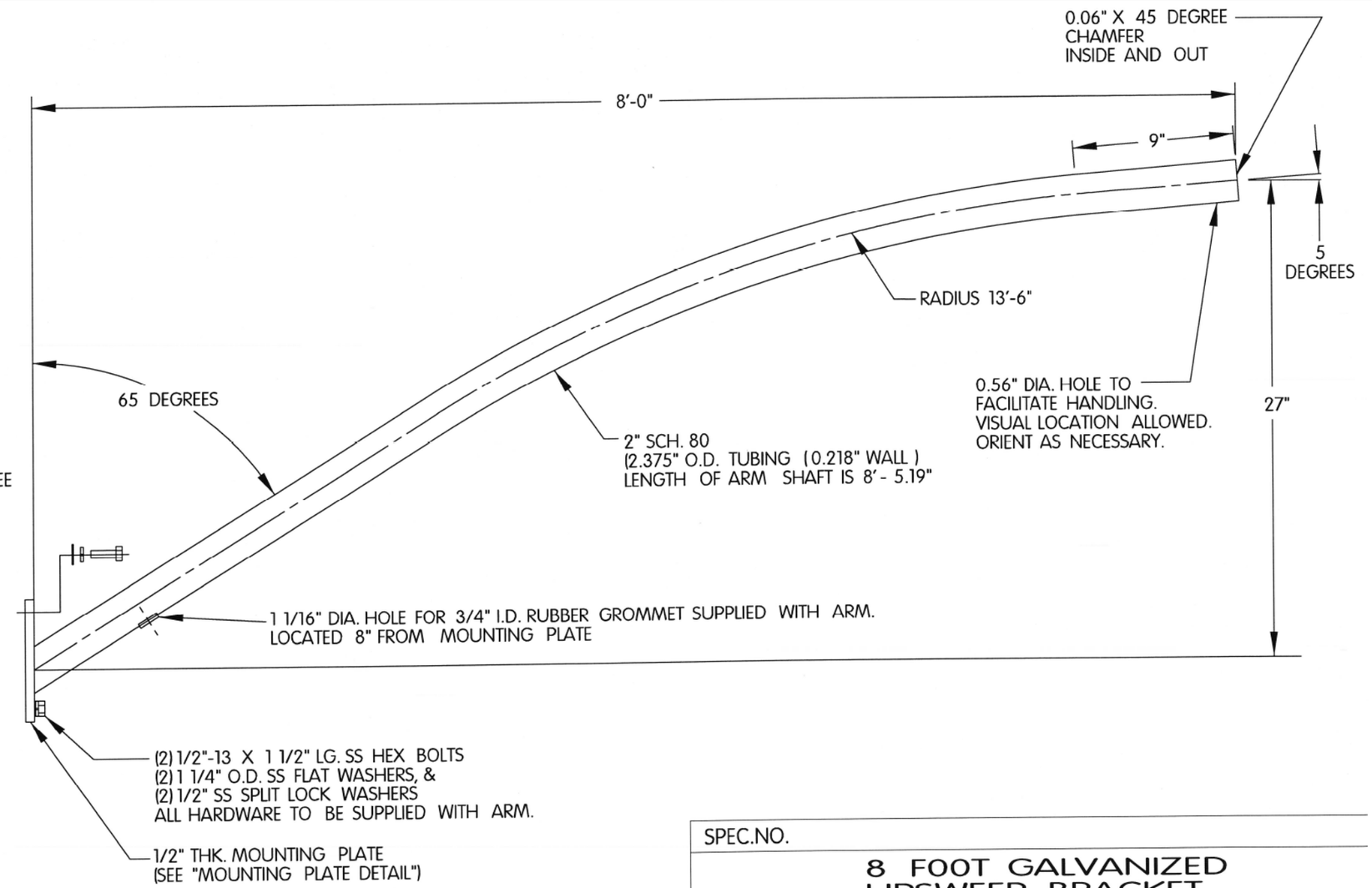
ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: dkozel REVISION DATE: 12-DEC-2022 09:42
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: DEC.12-2022



MOUNTING PLATE
DETAIL "ES #436"
1/2" THK. PLATE
ASTM A36

NOTE:
1" I.D. RUBBER GROMMET PROVIDED
FOR USE IN POLE SHAFT



MATERIAL INFO			FINISH INFO
COMPONENT	ASTM DESIGNATION	MIN YIELD (KSI)	BASE COAT: HOT DIP GALVANIZED TO ASTM A123
PIPE ARM	A501, A513, A618	36	PRIME COAT:
SIMPLEX PLATE	A36	36	FINISH COAT:
CONNECTING BOLTS	TYPE 304		COLOR:
			SPEC:

SPEC.NO.

8 FOOT GALVANIZED UPSWEEP BRACKET

8'-0" X 27" X 2.4 SGL PIPE 3" X 7.25" PLMT
GALVANIZED

CITY OF MILWAUKEE D.P.W.
TRANSPORTATION SECTION
INFRASTRUCTURE SERVICES DIVISION

STREET LIGHTING DIVISION

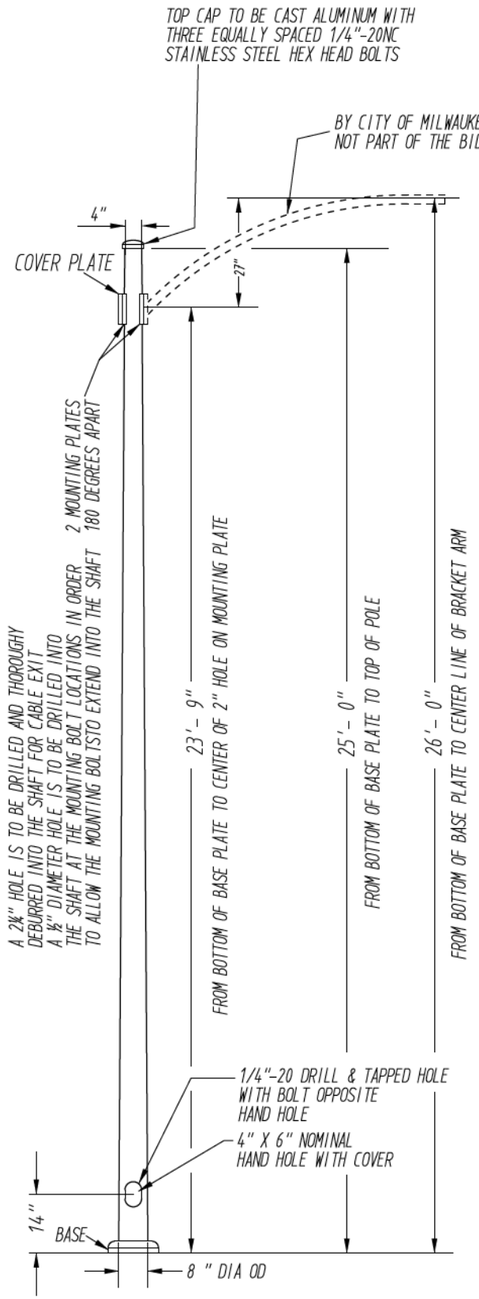
DATE	SCALE:	DRAWN	DESIGN	CHECKED	APPROVED
8/2/2022	NONE	DK		EKL	RMB

SUPERSEDES

SUPERSEDED BY

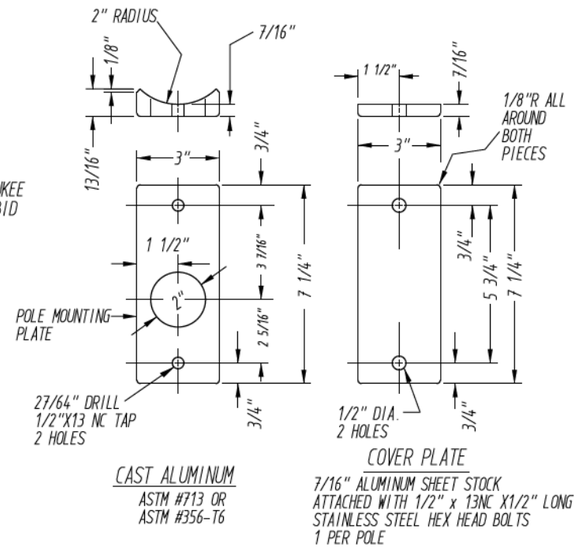
DRG.# C-22-26

PROJECT NO. 1360-13-71	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - GENERAL NOTES & DETAILS	SHEET 33	E

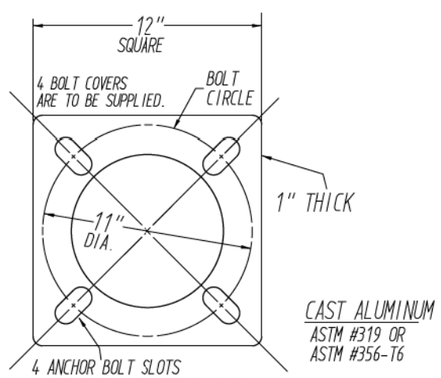


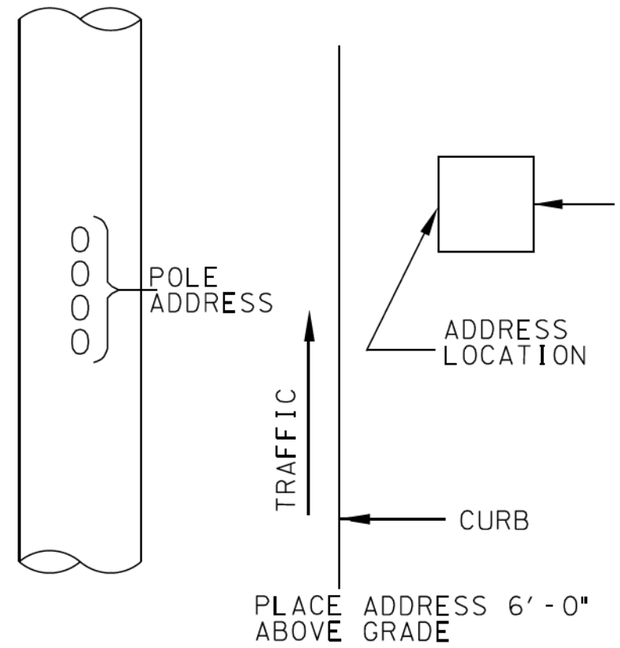
POLES TYPE 25-AL-BD

G:\Street Lighting Specs\Poles. Aluminum Bolt Down\B-14-13 26FT.dgn



BASE PLATE CASTING





CONTRACTOR FURNISHED AND INSTALLED

REVISED DATE:	REVISED BY:
SPEC. NO. 12c-C-1	

BOLT DOWN ALUMINUM POLE
26 FOOT MOUNTING HEIGHT

CITY OF MILWAUKEE D.P.W.
TRANSPORTATION SECTION
INFRASTRUCTURE SERVICES DIVISION

STREET LIGHTING DIVISION

DATE	SCALE:	DRAWN	DESIGN	CHECKED	APPROVED
11-14-14	NONE	DK	BES	[illegible]	RWB

SUPERSEDES	DRG. #
SUPERSEDED BY	B-14-13

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.

N

W. FOND DU LAC AVE.

W. SILVER SPRING

#8325 EXISTING 40'WOOD POLE 12-0 UPSWEEP BRACKET 3M2 SERIES LUMINAIRE

EXISTING 2#6 SEC.CIR. NO-2

PROPOSED WOOD POLE FOR TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

PROPOSED OVERHEAD TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

EXISTING 3#12UF, CIR.NO-2

ABANDON 2-2#12UF CABLE

EXISTING 2#6 PRIM.,CIR. NO-2

ABANDON CABLE CIR. NP-12

EXISTING 2#6PRIM., CABLE

PROPOSED WOOD POLE FOR TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

EXISTING 35'WOOD POLE

PROPOSED OVERHEAD TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

EXISTING 35'WOOD POLE 22HSX BALLAST

#8338 EXISTING 26'S6'AL.POLE,2S2 SERIES LUMINAIRE

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 2#12UF, CIR.NO-1

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 2#12UF, CIR.NO-2

ABANDON 38LTP CABLE

#8326 CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 35'FT. WOOD POLE, 6'UPSWEEP BRACKET 3S3 SERIES LUMINAIRE STA.50+30.5',50.5'LT. DIRECTLY ACROSS FROM UNIT #8328 AT THE ASPHALT SQUARE IN WALK

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 3#12UF, CIR.NO-2

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 4#12UF, CIR.NO-1

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 2#12UF, CIR.NO-2

ABANDON CABLE, CIR. T-5-N-C

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 4#12UF, CIR.NO-2

#8304 EXISTING 26'S6'AL.POLE,2S2 SERIES LUMINAIRE

REMOVE 1#6 PRIM. CIR.NO-1 REMOVAL BY CITY OF MILW.

PROPOSED 1#6 PRIM. CIR.NO-2 INSTALLED BY CITY OF MILW.

#8302 EXISTING A3I-P06, POLE, 3S2 SERIES LUMINAIRE

ABANDON 2-1#8FS CABLES

ABANDON 2-2#12UF CABLE

#8228 EXISTING A3I-P06 POLE 2-3S2 SERIES LUMINAIRE

EXISTING 3#12UF, CIR.NO-2

PROPOSED WOOD POLE FOR TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

#8300 EXISTING A3I'D4 POLE 2-3S2 SERIES LUMINAIRE

PROPOSED OVERHEAD TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

EXISTING 3#12UF, CIR.NO-2

EXISTING 1#6 PRIM., CIR.NO-2

EXISTING #8238 A31'D6',POLE, 4M2 SERIES LUMINAIRE

ABANDON 2#12UF AND 3#12UF CABLE

ABANDON 2#12UF, 3#12UF CIR. NP-12

EXISTING 3#12UF, CIR.NO-2

REMOVE #8328 31'D6'AL.POLE, 2-2S3 LUMINAIRES STA.50+28.8',1'RT. REMOVAL BY CITY OF MILW.

REMOVE 1#6 PRIM.,CIR.NO-1 REMOVAL BY CITY OF MI.W.

REMOVE 1#6 PRIM.,CIR.NO-1 REMOVAL BY CITY OF MILW.

CAUTION OVERHEAD LINES

UTILITY WP

UTILITY WP

EXISTING CABLE CIR.NO-1

BORE 2.5" PVC NEXT TO WALK

#8329 CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 35'FT. WOOD POLE, 6'UPSWEEP BRACKET, 3S3 SERIES LUMINAIRE STA.50+25.4',51.5'RT. 4'W. OF UNIT #8328 IN MEDIAN IN THE GRASS APPROX. 4'W. OF CONC. DRIVE EDGE.

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 35 FT. WOOD POLE, GROUND & TEST, (2)-PRIMARY RISERS 2-HSX,22-HSX ON CIR.NO-1 2-HSX ON CIR.NO-2 STA.51+75.7',1'L

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 2#12UF, CIR.NO-1

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 35'WOOD POLE 2-HSX,33-HSX BALLASTS STA.51+74.2',51.5'RT., 6.5'W. OF UNIT #8305

#8305 EXISTING 26'S6'AL. POLE ,2S2 SERIES LUMINAIRE 2-HSX PRIM.RISER

CITY OF MILWAUKEE TO DO THE FOLLOWING BEFORE CONSTRUCTION REMOVE LIGHTNING ARRESTOR PROPOSED GROUND & TEST

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 1#6 PRIM., CIR.NO-2

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 1#6 PRIM., CIR.NO-2

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 35 FT. WOOD POLE STA.52+66.3',8.3'LT., 35.5'W. OF UNIT #8300

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 1#6 PRIM.,CIR.NO-2

EXISTING 35'WOOD POLE 22HSX BALLAST

PROPOSED WOOD POLE FOR TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

ABANDON 2-#8FS CABLE

EXISTING 35'WOOD POLE. PRIMARY RISER, LIGHTNING ARRESTOR

EXISTING CABLE, CIR. NO-2

EXISTING 3MVE BALLAST 3-6 WEST OF UNIT

#8225 EXISTING 26'S6'AL.POLE 3M2 SERIES LUMINAIRE

EXISTING 3MVACI 4-0 EAST OF UNIT

#8224 EXISTING 25'S6'AL.POLE 3M2 SERIES LUMINAIRE

EXISTING 3MVACI 4-0 WEST OF UNIT

#8236 EXISTING 25'S6'AL.B.D.POLE 2S2 SERIES LUMINAIRE PRIMARY RISER LIGHTNING. ARRESTER 3MVACI 4-0 WEST OF UNIT

ABANDON 2#12UF

W. FOND DU LAC AVE.

PHASE I- SHEET 1 OF 3

PROJECT NO. 1360-13-71	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PHASE I PLAN - TEMPORARY	SHEET 35	E

CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.

2

2

W. SILVER SPRING DR.

B-40-0254

B-40-0253

RAMP

HIGHWAY 145

STH 145 SB

56+00 57+00 58+00 59+00 60+00 61+00

580-0

#8212 EXISTING 26'S6 AL POLE, 2S2 SERIES LUMINAIRE

ABANDON CABLE CIR.NP-12

EXISTING 2#12UF, CIR.NP-12

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 35'WOOD POLE 3HSX BALLAST STA.55+97.3'.7'RT. 79.4'W. OF UNIT #8132

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 1#6 PRIM., CIR.NP-12

#8134 CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 35'WOOD POLE, 6' UPSWEEP BRACKET, 3HSX BALLAST, 3S3 SERIES LUMINAIRE STA.56+71.92.31'LT. 118'E. OF UNIT #8212

ABANDON 28HS CABLE

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 3#12UF, CIR.NP-12

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 1#6 PRIM., CIR.NP-12

TO REMAIN THRU STAGES 1 & 2 #8112 25'S6 AL POLE, 2S2 SERIES LUMINAIRE STA.58+38.7'.49.31'LT.

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 2HSX BALLAST

ABANDON 2HSE BALLAST IN PED

ABANDON 2-2.5" CONDUIT

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 1#6 PRIM., CIR.NP-12

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 2HSX BALLAST

ABANDON 2-1-8 CONC., CABLE

TO REMAIN THRU STAGES 1 & 2 #8040 25'S6 AL POLE 2S2 SERIES LUMINAIRE STA.59+38.4'.49.2'LT.

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 2HSX BALLAST

ABANDON 2HSE BALLAST IN PED

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 1#6 PRIM., CIR.NP-12

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 3#12UF, CIR.NP-12

ABANDON 2-2.5" CONDUIT

EXISTING 35'WOOD POLE

ABANDON 28HS CABLE

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 3#12UF, CIR.NP-12

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 1#6 PRIM., CIR.NP-12

WISDOT LIGHT POLE

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 35'WOOD POLE, 2HSX, 22HSX, 22HSX BALLASTS STA.61+21.4'.4.6'LT.

"Y" SPLICE 18-0 E. OF CURB

EXISTING #8002 26'S6 AL POLE, 2S2 SERIES LUMINAIRE INSTALL 2HSX BALLAST BY CITY OF MILW.

ABANDON 2-2#12UF CABLE

REMOVE 3#12UF, CIR.NP-12 REMOVAL BY CITY OF MILW.

REMOVE 1#6 PRIM., CIR.NP-12 REMOVAL BY CITY OF MILW.

1#6 PRIM. CIR.NP-12

ABANDON 2-2#12UF CABLE

EXISTING #8213 26'S6 AL POLE 2HSX BALLAST, 2S2 SERIES LUMINAIRE,

CITY OF MILWAUKEE TO INSTALL O.H. CABLE 1#6 PRIM., CIR.NP-12

CITY OF MILWAUKEE TO REMOVE O.H. BEFORE CONSTRUCTION CABLE 1#6 PRIM., CIR.NP-12

ABANDON CABLE CIR.NP-12

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 2#12UF, CIR.NP-12

#8135 CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION, 35'WOOD POLE, 6' UPSWEEP BRACKET, 3HSX BALLAST, 3S3 SERIES LUMINAIRE STA.56+63.7'.44.4'RT., 113'E. OF UNIT #8213

#8132 CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 26'D6 AL POLE, 2-2S2 SERIES LUMINAIRE STA.56+76.6'.1.3'RT.

WISDOT LIGHT POLE

ABANDON 1#8HS CABLE

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 35'WOOD POLE, PRIMARY RISER, LIGHTNING ARRESTER.

ABANDON 1-8 CONC. CABLE

ABANDON 2HSE BALLAST IN PED

#8113 CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 25'S6 AL POLE 2S2 SERIES LUMINAIRE

ABANDON 2-2.5" CONDUIT

ABANDON 2HSE BALLAST IN PED

#8041 CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 25'S6 AL POLE 2S2 SERIES LUMINAIRE

#8024 CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 26'D6 AL POLE 2-2S2 SERIES LUMINAIRES STA.60+38.5'.1'L.

EXISTING 35'WOOD POLE TO REMAIN

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 2HSX BALLAST, PRIMARY RISER, LIGHTNING ARRESTER

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 2#12UF CIR.NP-12

ABANDON 1#8HS CABLE

#8003 EXISTING - 26'S6 AL POLE CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 2S2 SERIES LUMINAIRE CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION INSTALL 2S2 MULTIPLE LUMINAIRE

CIR.NP-12

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

PHASE I - SHEET 2 OF 3

PROJECT NO. 1360-13-71	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PHASE I PLAN - TEMPORARY	SHEET 36	E

CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.

N

RAMP

N. 79th ST.

W. SILVER SPRING DR.

W. LEON TER.

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 2#12UF, CIR.NP-12

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 1#6 PRIM, CIR.NP-12

WISDOT LIGHT POLE

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 1#6 PRIM, CIR.NP-12

#7932
CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION
35'WOOD POLE
6' UPSWEEP BRACKET, 3HSX BALLAST, 3S3 SERIES LUMINAIRE
STA.62+59.8',47'LT.
30.7'E. OF ECLX.

#7934
CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION
26'D6'AL.POLE, 22HSX BALLAST, 2-2S2 SERIES LUMINAIRE
STA.62+59.8',1'RT.

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 1#6 PRIM, CIR.NP-12

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION
35'WOOD POLE, 2HSX BALLAST
STA.63+61.3',1'LT.

#7906
CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION
35'WOOD POLE, 6' UPSWEEP BRACKET, 3HSX BALLAST, 3S3 SERIES LUMINAIRE
STA.64+61.8',49.4'LT.
50.4'W. OF WCLX.

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION#6 PRIM, CIR.NP-12

EXISTING 1#6 PRIM, CIR.NP-13

EXISTING CABLE CIR.NP-13

EXISTING 35'WOOD POLE
7'N.OF EX.
POLE #5602
1HSX BALLAST
PRIMARY RISER
LIGHTNING ARRESTER

EXISTING 2#12UF
CIR.NP-13

EXISTING
#5602
22'S6'AL.POLE
1S2V SERIES LUMINAIRE

ABANDON
CABLE CIR. NP-13

8-0
3" F.D.U.

EXISTING
#7834
26'D6'AL.POLE
2-2S2 SERIES LUMINAIRE

EXISTING 1#6 PRIM, CIR.NP-13

CAUTION OVERHEAD LINES

UTILITY POLE
EXISTIN 2HSX BALLAST

UTILITY
WP

1#6 PRIM CIR.NP-13

ABANDON 2-2#12UF CABLE

EXISTING 3#12 UF
CIR.NP-13

EXISTING 1#6 PRIM
CIR.NP-12

62+00 63+00 64+00 65+00 66+00

343-0

428-0

PROPOSED 3#12UF, CIR.N.S.MULTI.#16
INSTALLED BY CITY OF MILW.

EXISTING
#7969
22'S6'AL.POLE
1LED2 LUMINAIRE

EXISTING 2#8LTP
CIR.N.S. MULTI. #16

#7935
CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION
35'WOOD POLE, 6' UPSWEEP BRACKET, 3S3 SERIES LUMINAIRE
STA.62+55.1',53.'RT.
30.5'E. OF ECLX.

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 1#6 PRIM, CIR.NP-12

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 2#12UF, CIR.NP-12

EXISTING
#7921
26'S6'AL.POLE, 2S2 SERIES LUMINAIRE

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 1#6 PRIM, CIR.NP-12

#7904
CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION
26'D6'AL.POLE, 22HSX BALLAST, 2-2S2 SERIES LUMINAIRE
STA.64+74.7',4.6'LT.

#7903
CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION
35'WOOD POLE, 6' UPSWEEP BRACKET, 3S3 SERIES LUMINAIRE
STA.64+86.2',53.7'RT.
119.2'E. OF UNIT #7921

CITY OF MILWAUKEE TO INSTALL BEFORE CONSTRUCTION 2#12UF, CIR.NP-12

CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 1#6 PRIM, CIR.NP-12

EXISTING
#7819
26'S6'AL.POLE
2S2 SERIES LUMINAIRE

EXISTING 2#12UF CIR.NP-12

EXISTING 35'WOOD POLE.
2HSX BALLAST

EXISTING 1#6 PRIM, CIR.NP-12

EXISTING 35'WOOD POLE
22HSX BALLAST

CAUTION OVERHEAD LINES

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

PHASE I- SHEET 3 OF 3

PROJECT NO. 1360-13-71	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PHASE I PLAN - TEMPORARY	SHEET 37	E

2

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.

N

W. FOND DU LAC AVE.

W. SILVER SPRING

#8325 EXISTING 40'WOOD POLE 12-0 UPSWEEP BRACKET 3M2 SERIES LUMINAIRE

EXISTING 2#6 SEC.,CIR. NO-2

PROPOSED WOOD POLE FOR TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

PROPOSED OVERHEAD TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

EXISTING 3#12UF, CIR.NO-2

ABANDON 2-2-12UF CABLE

EXISTING 2#6 PRIM.,CIR. NO-2

ABANDON CABLE CIR. NP-12

EXISTING 2#6PRIM., CABLE

PROPOSED WOOD POLE FOR TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

EXISTING 35'WOOD POLE

PROPOSED OVERHEAD TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

EXISTING #8338 26'S6'AL.POLE,2S2 SERIES LUMINAIRE

EXISTING O.H. 2#12UF, CIR.NO-2

ABANDON 28LTP CABLE

#8326 EXISTING 35'WOOD POLE, 6' UPSWEEP BRACKET, 3S3 SERIES LUMINAIRE

EXISTING 3#12UF, CIR.NO-2

ABANDON CABLE, CIR.T-5-N-C

EXISTING #8304 26'S6'AL.POLE,2S2 SERIES LUMINAIRE

EXISTING 4#12UF, CIR.NO-2

EXISTING 35'WOOD POLE 22HSX BALLAST

EXISTING O.H. 1#6 PRIM. CIR.NO-2

2-1#8FS

ABANDON 2-1#8FS CABLES

#8302 EXISTING A31-D8, POLE, 3S2 SERIES LUMINAIRE

ABANDON 2-2#12UF CABLE

EXISTING #8228 A31-D6'POLE 2-3S2 SERIES LUMINAIRE

EXISTING 3#12UF,CIR.NP-12

PROPOSED WOOD POLE FOR TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

#8300 EXISTING A31'D6' POLE 2-3S2 SERIES LUMINAIRE

PROPOSED OVERHEAD TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

EXISTING O.H. 3#12UF, CIR.NO-2

EXISTING 1#6 PRIM., CIR.NO-2

#8238 EXISTING A31'D6', POLE, 4M2 SERIES LUMINAIRE

ABANDON 2#12UF AND 3#12UF CABLE

ABANDON 38LTP CABLE

CAUTION OVERHEAD LINES

UTILITY WP

UTILITY WP

72-0 3'FDU

26-9 2-3" F.DU

EXISTING CABLE CIR.NO-1

2.5" PVC NEXT TO WALK

#8329 EXISTING 35'WOOD POLE 6' UPSWEEP BRACKET, 3S3 SERIES LUMINAIRE

EXISTING O.H. 2#12UF, CIR.NO-1

EXISTING 35'WOOD POLE 2HSX,33HSX BALLASTS

#8305 EXISTING 26'S6'AL POLE,2S2 SERIES LUMINAIRE 2HSX,PRIM.RISER, GROUND & TEST

EXISTING 1#6 PRIM., CIR.NO-2

EXISTING 35'WOOD POLE.

ABANDON 2-1#8FS CABLE

EXISTING O.H. 1#6 PRIM., CIR.NO-2

EXISTING 35'WOOD POLE 22HSX BALLAST

PROPOSED WOOD POLE FOR TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

EXISTING 35'WOOD POLE. PRIMARY RISER, LIGHTNING ARRESTOR

EXISTING CABLE, CIR. NO-2

W. FOND DU LAC AVE.

EXISTING 3MVE BALLAST 3-6 WEST OF UNIT

EXISTING #8225 26'S6'AL.POLE 3M2 SERIES LUMINAIRE

EXISTING #8224 25'S6'AL.POLE 3M2 SERIES LUMINAIRE

EXISTING 3MVACI 4-0 EAST OF UNIT

1#6 PRIM. CIR.NP-12

ABANDON 2#12UF

PHASE 2 - SHEET 1 OF 3

PROJECT NO. 1360-13-71	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PHASE 2 PLAN - TEMPORARY & PEMANENT	SHEET 38	E

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.

RAMP

#8112 CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 25'S6'AL POLE, 2S2 SERIES LUMINAIRE, 2HSX BALLAST

ABANDON 2HSE BALLAST IN PED

ABANDON 2-2.5" CONDUIT

CITY OF MILWAUKEE TO REMOVE O.H. CABLE 1#6 PRIM.,CIR.NP-12 AFTER STRUCTURE B-40-0253 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0254

ABANDON 2-1-8 CONC., CABLE

#8040 CITY OF MILWAUKEE TO REMOVE BEFORE CONSTRUCTION 25'S6'AL POLE, 2S2 SERIES LUMINAIRE, 2HSX BALLAST

ABANDON 2HSE BALLAST IN PED

CITY OF MILWAUKEE TO REMOVE 35'WOOD POLE

ABANDON 28HS CABLE

WISDOT LIGHT POLE

#8002 CITY OF MILWAUKEE TO REMOVE 24'S6'AL POLE, 2S2 SERIES LUMINAIRE 2HSX BALLAST

"Y" SPLICE 18-0 E. OF CURB

EXISTING #8212, 24'S6'AL POLE, 2S2 SERIES LUMINAIRE

ABANDON CABLE CIR. NP-12

EXISTING 2#12UF, CIR.NP-12

EXISTING 35'WOOD POLE, 3HSX BALLAST

#8134 CITY OF MILWAUKEE TO REMOVE 35'WOOD POLE 6'UPSWEEP BRACKET, 3HSX BALLAST, 3S3 SERIES LUMINAIRE

ABANDON 28HS CABLE

W. SILVER SPRING DR

B-40-0254 (SUBSTRUCTURE PLANS)

B-40-0253

56+00 57+00 58+00 59+00 60+00 61+00

SPV.0060.303 PULL BOXES 17-INCH x 30-INCH x 24-INCH, STA.56+20.75',8.7'RT,

652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

SPV.0060.303 PULL BOXES 17-INCH x 30-INCH x 24-INCH STA.STA.61+33.5',5.5'LT

652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

BRIDGE CONTRACTOR TO FURNISH AND INSTALL JUNCTION BOX

BRIDGE CONTRACTOR TO FURNISH AND INSTALL JUNCTION BOX

HIGHWAY 145

#8213 EXISTING 26'S6'AL POLE,2HSX BALLAST, 2S2 SERIES LUMINAIRE,

EXISTING 1#6 PRIM. CIR.NP-12

1#6 PRIM CIR.NP-12

ABANDON CABLE CIR. NP-12

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH, STA.56+21.5',43.7'RT

CITY OF MILWAUKEE TO REMOVE O.H. CABLE 2#12UF, CIR.NP-12 AFTER STRUCTURE B-40-0253 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0254

CITY OF MILWAUKEE TO INSTALL O.H. CABLE 2#12UF, CIR.NP-12 AFTER STRUCTURE B-40-0253 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0254

#8135 EXISTING 35'WOOD POLE, 6'UPSWEEP BRACKET, 3HSX BALLAST, 3S3 SERIES LUMINAIRE

652.0615 CONDUIT SPECIAL 3-INCH

WISDOT LIGHT POLE

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH, STA.56+97.1',65.7'RT

652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH, STA.57+61.2',51.1'RT

652.0230 TWO (2) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

CONNECT TO BRIDGE CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

CITY OF MILWAUKEE TO INSTALL O.H. CABLE 1#6 PRIM.,CIR.NP-12 AFTER STRUCTURE B-40-0253 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0254

BRIDGE CONTRACTOR TO FURNISH AND INSTALL CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

#8113 CONTRACTOR TO FURNISH AND INSTALL ON LIGHT BUSTER AFTER STRUCTURE B-40-0254 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0253 657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE SPV.0060.320 POLES TYPE 25-AL-BD SPV.0060.347 LUMINAIRE ARMS SINGLE MEMBER 8FT - SPECIAL SPV.0060.371 INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2 CITY TO INSTALL AT TOP OF POLE A 110W-OV20 BALLAST

CITY OF MILWAUKEE TO INSTALL O.H. CABLE 1#6 PRIM.,CIR.NP-12 AFTER STRUCTURE B-40-0253 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0254

BRIDGE CONTRACTOR TO FURNISH AND INSTALL CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

#8041 CONTRACTOR TO FURNISH AND INSTALL ON LIGHT BUSTER AFTER STRUCTURE B-40-0254 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0253 657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE SPV.0060.320 POLES TYPE 25-AL-BD SPV.0060.347 LUMINAIRE ARMS SINGLE MEMBER 8FT - SPECIAL SPV.0060.371 INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2 CITY TO INSTALL AT TOP OF POLE A 110W-OV20 BALLAST

CITY OF MILWAUKEE TO INSTALL O.H. CABLE 1#6 PRIM.,CIR.NP-12 AFTER STRUCTURE B-40-0253 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0254

BRIDGE CONTRACTOR TO FURNISH AND INSTALL CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

652.0230 TWO (2) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

CONNECT TO BRIDGE CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH, STA.60+98.2',51.8'RT

EXISTING 35'WOOD POLE

652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

CITY OF MILWAUKEE TO INSTALL O.H. CABLE 1#6 PRIM.,CIR.NP-12 AFTER STRUCTURE B-40-0253 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0254

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH, STA.61+31.5',51.8'RT

EXISTING #8003 - 24'S6'AL POLE, 2S2 MULTIPLE LUMINAIRE

652.0615 CONDUIT SPECIAL 3-INCH

EXISTING 3#12UF, CIR.N.S.MULTI.#16

PHASE 2 - SHEET 2 OF 3

PROJECT NO. 1360-13-71	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PHASE 2 PLAN - TEMPORARY & PEMANENT	SHEET 39	E

2

N

N. 79th ST.

W. SILVER SPRING DR.

W. LEON TERRACE

RAMP

RAMP

CITY OF MILWAUKEE TO REMOVE O.H. CABLE 1#6 PRIM.,CIR.NP-12 AFTER STRUCTURE B-40-0253 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0254

CITY OF MILWAUKEE TO INSTALL O.H. CABLE 1#6 PRIM.,CIR.NP-12 AFTER STRUCTURE B-40-0253 IS COMPLETED AND BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0254

CAUTION OVERHEAD LINES

CAUTION OVERHEAD LINES

WISDOT LIGHT POLE

WISDOT LIGHT POLE

EXISTING #7932 35'WOOD POLE 6'UPSWEEP BRACKET, 3HSX BALLAST, 353 SERIES LUMINAIRE

EXISTING 1#6 PRIM., CIR.NP-12

EXISTING #7906 35'WOOD POLE, 6'UPSWEEP BRACKET, 3HSX BALLAST, 353 SERIES LUMINAIRE

EXISTING 1#6 PRIM., CIR.NP-12

EXISTING 1#6 PRIM., CIR.NP-13

EXISTING CABLE CIR.NP-13

EXISTING 35'WOOD POLE 7'N.OF EX. POLE #5602 1HSX BALLAST PRIMARY RISER LIGHTNING ARRESTER

EXISTING 2#12UF CIR.NP-13

EXISTING #5602 22'S6'AL.POLE 1S2V SERIES LUMINAIRE

ABANDON CABLE CIR. NP-13

8-0 3" F.DU

EXISTING #7834 26'D6'AL. POLE 2-2S2 SERIES LUMINAIRE

EXISTING 1#6 PRIM., CIR.NP-13

UTILITY POLE EXISTIN 2HSX BALLAST

UTILITY WP

1#6 PRIM CIR.NP-13

ABANDON 2-2#12UF CABLE

ABANDON 2-2#12UF CABLE

ABANDON 2-2#12UF CABLE

EXISTING 3#12UF CIR.NP-13

EXISTING 1#6 PRIM CIR.NP-12

EXISTING PULL BOX

EXISTING 3#12UF, CIR.N.S.MULTI.#16

EXISTING #7969 22'S6'AL.POLE 1LED2 LUMINAIRE

652.0615 CONDUIT SPECIAL 3-INCH

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH STA.61+87.5';73RT

EXISTING #7935 35'WOOD POLE, 6'UPSWEEP BRACKET, 353 SERIES LUMINAIRE

EXISTING 2#8LTP CIR.N.S. MULTI. #16

EXISTING 2#12UF, CIR.NP-12

EXISTING #7921 26'S6'AL.POLE, 2S2 SERIES LUMINAIRE

EXISTING #7903 35'WOOD POLE 6'UPSWEEP BRACKET, 353 SERIES LUMINAIRE

EXISTING 2#12UF, CIR.NP-12

EXISTING 35'WOOD POLE 22HSX BALLAST

EXISTING #7819 26'S6'AL.POLE, 2S2 SERIES LUMINAIRE

EXISTING 2#12UF CIR.NP-12

EXISTING 35'WOOD POLE 2HSX BALLAST

EXISTING 1#6 PRIM., CIR.NP-12

#7802 EXISTING A31'D6', 2-3S2 W/O BALLAST

62+00 63+00 64+00 65+00 66+00

343-0 59-6 65-6 1-3 34-2 34-0 7-3 38-1 71-6 79-0 87-0 25-0 86-6 44-6 428-0 4-7 4-9 31D 23D 35-0 36-1 35-5 32-6 23-8 37-8 37-9 39-11 19-6 2-3 8-0 25D 26D 27D 28D 23D 2" 3" F.DU.

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.

PHASE 2 - SHEET 3 OF 3

2

N

W. FOND DU LAC AVE.

W. SILVER SPRING DR.

CAUTION OVERHEAD LINES

UTILITY WP

UTILITY WP

50+00

51+00

52+00

53+00

54+00

55+00

EXISTING #8338 26'S6"AL.POLE,2S2 SERIES LUMINAIRE

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH, STA.49+58.5';2.5'RT

652.0615 CONDUIT SPECIAL 3-INCH

EXISTING O.H. 2#12UF, CIR.NO-2

ABANDON 28LTP CABLE

#8328 654.0105 CONCRETE BASES TYPE 5 (WISDOT) STA.50+28';1RT (CENTERED BETWEEN 657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH, BOLT CIRCLE SPV.0060.320 POLES TYPE 25-AL-BD SPV.0060.347 TWO (2) - LUMINAIRE ARMS SINGLE MEMBER 8-FT. - SPECIAL SPV.0060.371 TWO (2) - INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2

#8326 EXISTING 35'WOOD POLE, 6'UPSWEEP BRACKET, 3S3 SERIES LUMINAIRE

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH, STA.50+36.9';1'L

EXISTING #8329 35'WOOD POLE 6'UPSWEEP BRACKET, 3S3 SERIES LUMINAIRE

EXISTING CABLE CIR.NO-1

2.5" PVC NEXT TO WALK

652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

EXISTING 3#12UF, CIR.NO-2

SPV.0060.302 PULL BOXES 13-INCH x 24-INCH, STA.51+62';6.5'LT

652.0615 CONDUIT SPECIAL 3-INCH

#8325 EXISTING 40'WOOD POLE 12-0 UPSWEEP BRACKET 3M2 SERIES LUMINAIRE

EXISTING 2#6 SEC. CIR. NO-2

PROPOSED WOOD POLE FOR TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

#8306 654.0105 CONCRETE BASES TYPE 5 (WISDOT) STA.51+73';3'LT 657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE SPV.0060.320 POLES TYPE 25-AL-BD SPV.0060.347 TWO (2) - LUMINAIRE ARMS SINGLE MEMBER 8-FT. - SPECIAL SPV.0060.371 TWO (2) - INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2

EXISTING #8304 26'S6"AL.POLE,2S2 SERIES LUMINAIRE

652.0615 CONDUIT SPECIAL 3-INCH

4#12UF, CIR.NO-2

EXISTING 35'WOOD POLE 22HSX BALLAST

EXISTING 2#6 PRIM.,CIR. NO-2

ABANDON 2-2#12UF CABLE

PROPOSED OVERHEAD TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

EXISTING 3#12UF, CIR.NO-2

ABANDON CABLE CIR. NP-12

EXISTING 2#6PRIM., CABLE

PROPOSED WOOD POLE FOR TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

EXISTING 35'WOOD POLE

PROPOSED OVERHEAD TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

ABANDON 2-2#12UF CABLE

EXISTING 2-2.5"PVC

EXISTING 3#12UF,CIR.NP-12

EXISTING 2.5"PVC

PROPOSED WOOD POLE FOR TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

EXISTING #8228 A31-D6' POLE 2-352" SERIES LUMINAIRE

#8302 EXISTING A31-D8, POLE, 3S2 SERIES LUMINAIRE

EXISTING O.H. 1#6 PRIM. CIR.NO-2

2-1#8FS

ABANDON 2-1#8FS CABLES

#8300 EXISTING A31'D6' POLE 2-3S2 SERIES LUMINAIRE

PROPOSED OVERHEAD TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

EXISTING O.H. 3#12UF, CIR.NO-2

EXISTING 1#6 PRIM., CIR.NO-2

#8238 EXISTING A31'D6', POLE, 4M2 SERIES LUMINAIRE

ABANDON 2#12UF AND 3#12UF CABLE

EXISTING 35'WOOD POLE. PRIMARY RISER, LIGHTNING ARRESTOR

EXISTING CABLE, CIR. NO-2

1#6 PRIM CIR.NP-12

EXISTING #8224 25'S6'AL.POLE 3M2 SERIES LUMINAIRE

EXISTING 3MVACI 4-0 EAST OF UNIT

EXISTING 3MVE BALLAST 3-6 WEST OF UNIT

EXISTING #8225 26'S6'AL.POLE 3M2 SERIES LUMINAIRE

652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

EXISTING O.H. 2#12UF, CIR.NO-1

652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH

EXISTING 35'WOOD POLE, 2HSX,33HSX BALLASTS

#8305 EXISTING 26'S6'AL.POLE, 2S2 SERIES LUMINAIRE 2HSX,PRM.RISER, GROUND & TEST

EXISTING 1#6 PRIM., CIR.NO-2

CONNECT TO EXISTING PULL BOX

EXISTING PULL BOX

EXISTING 35'WOOD POLE

ABANDON 2-#6FS CABLE

EXISTING O.H. 1#6 PRIM., CIR.NO-2

EXISTING 35'WOOD POLE 22HSX BALLAST

PROPOSED WOOD POLE FOR TRAFFIC SIGNALS INSTALLED BY WISDOT CONTRACTOR

W.M. TO BE INSTALLED BY BORING AND TUNNELING BETWEEN THESE LIMITS.

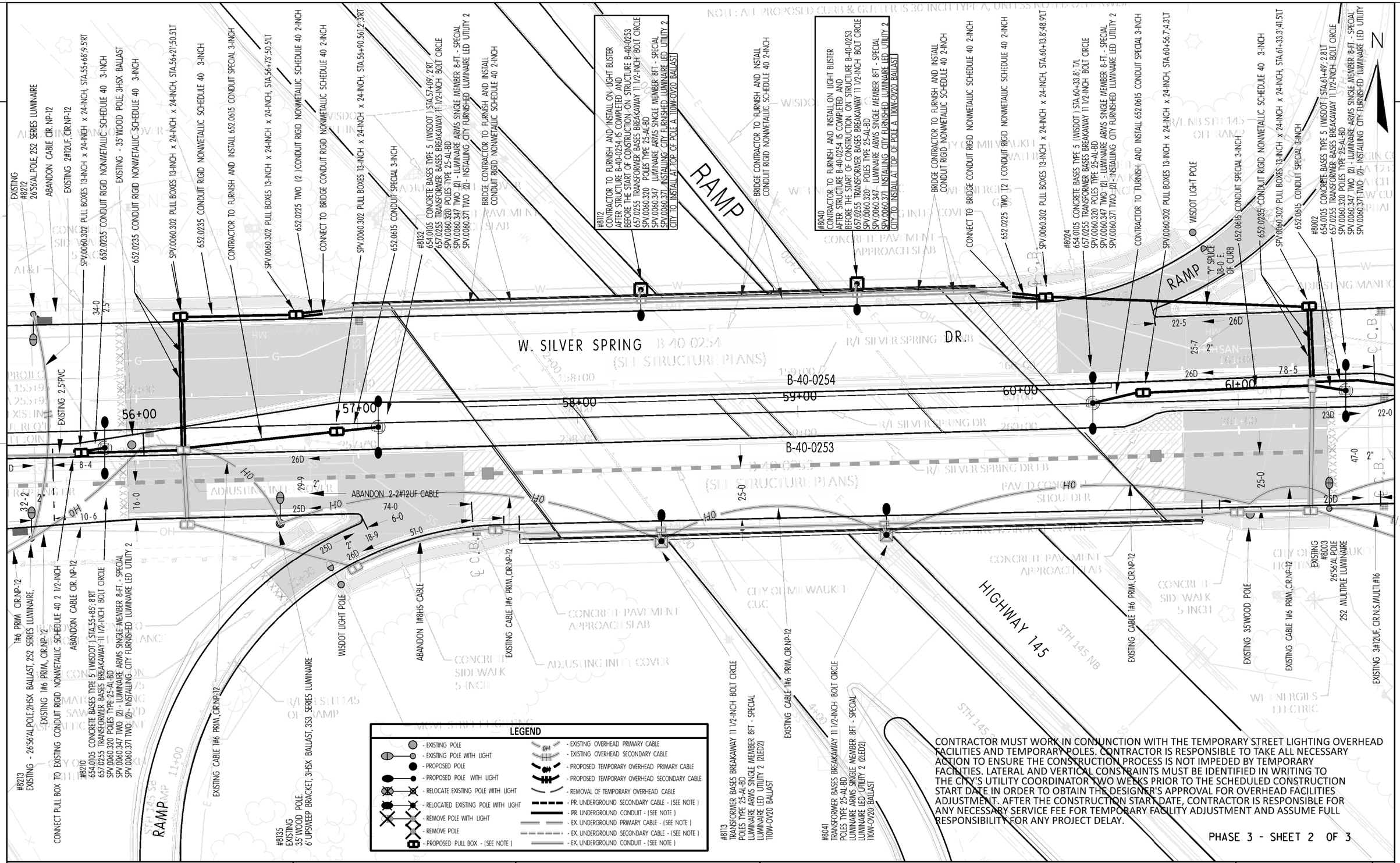
CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.

LEGEND

- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)

PHASE 3 - SHEET 1 OF 3

PROJECT NO. 1360-13-71	STH 145	COUNTY: MILWAUKEE	STREET LIGHTING - PHASE 3 PLAN - PERMANENT	SHEET 41	E


EXISTING #8212 26'S6"AL POLE, 2S2 SERIES LUMINAIRE
ABANDON CABLE CIR NP-12
EXISTING 2#12UF, CIR.NP-12
SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH, STA.55+68;9.5RT
652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
EXISTING - 35' WOOD POLE, 3HSX BALLAST
652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH, STA.56+21;50.5LT
652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
CONTRACTOR TO FURNISH AND INSTALL 652.0615 CONDUIT SPECIAL 3-INCH
SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH, STA.56+73;50.5LT
652.0225 TWO (2) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONNECT TO BRIDGE CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH, STA.56+90.56;2.3RT
652.0615 CONDUIT SPECIAL 3-INCH
#8132 654.0105 CONCRETE BASES TYPE 5 (WISDOT) STA.57+09';2RT
657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE
SPV.0060.320 POLES TYPE 25-AL-BD
SPV.0060.347 TWO (2) - LUMINAIRE ARMS SINGLE MEMBER 8-FT. - SPECIAL
SPV.0060.371 TWO (2) - INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2
BRIDGE CONTRACTOR TO FURNISH AND INSTALL
CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
#8112
CONTRACTOR TO FURNISH AND INSTALL ON LIGHT BUSTER
AFTER STRUCTURE B-40-0254 IS COMPLETED AND
BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0253
657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE
SPV.0060.320 POLES TYPE 25-AL-BD
SPV.0060.347 LUMINAIRE ARMS SINGLE MEMBER 8FT - SPECIAL
SPV.0060.371 INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2
CITY TO INSTALL AT TOP OF POLE A 110W-OV20 BALLAST
RAMP
#8040
CONTRACTOR TO FURNISH AND INSTALL ON LIGHT BUSTER
AFTER STRUCTURE B-40-0254 IS COMPLETED AND
BEFORE THE START OF CONSTRUCTION ON STRUCTURE B-40-0253
657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE
SPV.0060.320 POLES TYPE 25-AL-BD
SPV.0060.347 LUMINAIRE ARMS SINGLE MEMBER 8FT - SPECIAL
SPV.0060.371 INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2
CITY TO INSTALL AT TOP OF POLE A 110W-OV20 BALLAST
BRIDGE CONTRACTOR TO FURNISH AND INSTALL
CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
CONNECT TO BRIDGE CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
652.0225 TWO (2) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH, STA.60+13.8;48.9LT
#8024 654.0105 CONCRETE BASES TYPE 5 (WISDOT) STA.60+33.8;7/L
657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE
SPV.0060.320 POLES TYPE 25-AL-BD
SPV.0060.347 TWO (2) - LUMINAIRE ARMS SINGLE MEMBER 8-FT. - SPECIAL
SPV.0060.371 TWO (2) - INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2
CONTRACTOR TO FURNISH AND INSTALL 652.0615 CONDUIT SPECIAL 3-INCH
SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH, STA.60+56.7;4.3LT
WISDOT LIGHT POLE
"Y" SPLICE 18-0 E. OF CURB
652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
SPV.0060.302 PULL BOXES 13-INCH x 24-INCH x 24-INCH, STA.61+33.3';41.5LT
#8002 654.0105 CONCRETE BASES TYPE 5 (WISDOT) STA.61+49';2.8LT
657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE
SPV.0060.320 POLES TYPE 25-AL-BD
SPV.0060.347 TWO (2) - LUMINAIRE ARMS SINGLE MEMBER 8-FT. - SPECIAL
SPV.0060.371 TWO (2) - INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY
652.0615 CONDUIT SPECIAL 3-INCH
RAMP
W. SILVER SPRING DR.
B-40-0254
B-40-0253
56+00
57+00
58+00
59+00
60+00
61+00
ABANDON 2-2#12UF CABLE
ABANDON 1#8HS CABLE
WISDOT LIGHT POLE
EXISTING CABLE 1#6 PRIM,CIR.NP-12
EXISTING 1#6 PRIM, CIR.NP-12
CONNECT PULL BOX TO EXISTING CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH
ABANDON CABLE CIR. NP-12
#8213 EXISTING - 26'S6"AL POLE,2HSX BALLAST, 2S2 SERIES LUMINAIRE,
#8210 654.0105 CONCRETE BASES TYPE 5 (WISDOT) STA.55+85';8RT
657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE
SPV.0060.320 POLES TYPE 25-AL-BD
SPV.0060.347 TWO (2) - LUMINAIRE ARMS SINGLE MEMBER 8-FT - SPECIAL
SPV.0060.371 TWO (2) - INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2
#8135 EXISTING 35'WOOD POLE 6'UPSWEEP BRACKET, 3HSX BALLAST, 3S3 SERIES LUMINAIRE
#8113 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE
POLES TYPE 25-AL-BD
LUMINAIRE ARMS SINGLE MEMBER 8FT - SPECIAL
LUMINAIRE LED UTILITY 2 (2LED2)
110W-OV20 BALLAST
#8041 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE
POLES TYPE 25-AL-BD
LUMINAIRE ARMS SINGLE MEMBER 8FT - SPECIAL
LUMINAIRE LED UTILITY 2 (2LED2)
110W-OV20 BALLAST
EXISTING CABLE 1#6 PRIM,CIR.NP-12
HIGHWAY 145
STH 145 NB
EXISTING 35'WOOD POLE
EXISTING CABLE 1#6 PRIM,CIR.NP-12
EXISTING #8003 26'S6"AL POLE 2S2 MULTIPLE LUMINAIRE
EXISTING 3#12UF, CIR.N.S.MULTI.#16
EXISTING CABLE 1#6 PRIM,CIR.NP-12
RAMP
LEGEND
- EXISTING POLE
- EXISTING POLE WITH LIGHT
- PROPOSED POLE
- PROPOSED POLE WITH LIGHT
- RELOCATE EXISTING POLE WITH LIGHT
- RELOCATED EXISTING POLE WITH LIGHT
- REMOVE POLE WITH LIGHT
- REMOVE POLE
- PROPOSED PULL BOX - (SEE NOTE)
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- PR. UNDERGROUND CONDUIT - (SEE NOTE)
- EX. UNDERGROUND PRIMARY CABLE - (SEE NOTE)
- EX. UNDERGROUND SECONDARY CABLE - (SEE NOTE)
- EX. UNDERGROUND CONDUIT - (SEE NOTE)
CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.
PHASE 3 - SHEET 2 OF 3

CONTRACTOR MUST WORK IN CONJUNCTION WITH THE TEMPORARY STREET LIGHTING OVERHEAD FACILITIES AND TEMPORARY POLES. CONTRACTOR IS RESPONSIBLE TO TAKE ALL NECESSARY ACTION TO ENSURE THE CONSTRUCTION PROCESS IS NOT IMPEDED BY TEMPORARY FACILITIES. LATERAL AND VERTICAL CONSTRAINTS MUST BE IDENTIFIED IN WRITING TO THE CITY'S UTILITY COORDINATOR TWO WEEKS PRIOR TO THE SCHEDULED CONSTRUCTION START DATE IN ORDER TO OBTAIN THE DESIGNER'S APPROVAL FOR OVERHEAD FACILITIES ADJUSTMENT. AFTER THE CONSTRUCTION START DATE, CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY SERVICE FEE FOR TEMPORARY FACILITY ADJUSTMENT AND ASSUME FULL RESPONSIBILITY FOR ANY PROJECT DELAY.

RAMP

RAMP

N. 79th ST.

W. SILVER SPRING

W. LEON TERRACE

TER.

DR.

CAUTION OVERHEAD LINES

CAUTION OVERHEAD LINES

EXISTING 35'WOOD POLE 7'N.OF EX. POLE #5602 1HSX BALLAST PRIMARY RISER LIGHTNING ARRESTER

EXISTING #5602 22'S6'AL.POLE 1S2V SERIES LUMINAIRE

EXISTING #7932 35'WOOD POLE 6'UPSWEEP BRACKET, 3HSX BALLAST, 3S3 SERIES LUMINAIRE

EXISTING #7936 35'WOOD POLE, 6'UPSWEEP BRACKET, 3HSX BALLAST, 3S3 SERIES LUMINAIRE

EXISTING #7921 26'S6'AL.POLE 2S2 SERIES LUMINAIRE

EXISTING #7819 26'S6'AL.POLE, 2S2 SERIES LUMINAIRE

EXISTING #7903 - 35'WOOD POLE 6'UPSWEEP BRACKET, 3S3 SERIES LUMINAIRE

EXISTING #7904 - 26'D6'AL.POLE, 2-2S2 SERIES LUMINAIRE

EXISTING #7969 22'S6'AL.POLE 1LED2 LUMINAIRE

EXISTING #7935 35'WOOD POLE 6'UPSWEEP BRACKET, 3S3 SERIES LUMINAIRE

EXISTING #7934 35'WOOD POLE 6'UPSWEEP BRACKET, 3HSX BALLAST, 3S3 SERIES LUMINAIRE

EXISTING #7922 35'WOOD POLE 6'UPSWEEP BRACKET, 3HSX BALLAST, 3S3 SERIES LUMINAIRE

EXISTING #7907 35'WOOD POLE 6'UPSWEEP BRACKET, 3HSX BALLAST, 3S3 SERIES LUMINAIRE

EXISTING #7802 - 35'WOOD POLE 6'UPSWEEP BRACKET, 3HSX BALLAST, 3S3 SERIES LUMINAIRE

EXISTING #7907 - 35'WOOD POLE 6'UPSWEEP BRACKET, 3HSX BALLAST, 3S3 SERIES LUMINAIRE

EXISTING #7802 - 35'WOOD POLE 6'UPSWEEP BRACKET, 3HSX BALLAST, 3S3 SERIES LUMINAIRE

UTILITY POLE EXISTIN 2HSX BALLAST

UTILITY WP

EXISTING 1#6 PRIM, CIR.NP-12

EXISTING 1#6 PRIM, CIR.NP-13

EXISTING 1#6 PRIM, CIR.NP-12

EXISTING 1#6 PRIM, CIR.NP-13

EXISTING CABLE CIR.NP-13

EXISTING 2#12UF CIR.NP-13

EXISTING 3#12 UF CIR.NP-13

EXISTING 3#12UF, CIR.N.S.MULTI.#16

EXISTING 2#8LTP CIR.N.S. MULTI. #16

EXISTING CABLE 1#6 PRIM, CIR.NP-12

EXISTING 2#12UF, CIR.NP-12

EXISTING 1#6 PRIM, CIR.NP-12

EXISTING 2#12UF, CIR.NP-12

EXISTING 1#6 PRIM, CIR.NP-12

EXISTING 2#12UF, CIR.NP-12

EXISTING 1#6 PRIM, CIR.NP-12

EXISTING 1#6 PRIM, CIR.NP-12

EXISTING 1#6 PRIM, CIR.NP-12

EXISTING 1#6 PRIM, CIR.NP-12

EXISTING 1#6 PRIM, CIR.NP-13

EXISTING 1#6 PRIM, CIR.NP-13

EXISTING 1#6 PRIM, CIR.NP-13

EXISTING 1#6 PRIM, CIR.NP-13

EXISTING 1#6 PRIM, CIR.NP-13

EXISTING 1#6 PRIM, CIR.NP-13

EXISTING 1#6 PRIM, CIR.NP-13

EXISTING 1#6 PRIM, CIR.NP-13

652.0615 CONDUIT SPECIAL 3-INCH

652.0615 CONDUIT SPECIAL 3-INCH

652.0615 CONDUIT SPECIAL 3-INCH

2

LEGEND

- TEMPORARY CONTROL CABINET
- TEMPORARY OVERHEAD SPAN WIRE
- TEMPORARY SIGNAL HEAD
- WOOD POLE CLASS IV
- TEMPORARY LUMINAIRE AND ARM
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- BAGGED SIGNAL HEAD

ALL LENSES ARE 12–INCH
GRAYSHADE REPRESENTS EXISTING

POLE LOCATIONS:

WP1: STA 53+20.8, 52.5' RT
WP2: STA 53+09.5, 7.8' RT
WP3: STA 52+51.1, 87.2' LT
WP4: STA 53+24.4, 72.2' LT
WP5: STA 53+80.5, 71.8' LT
WP6: STA 54+50.6, 9.1' RT
WP7: STA 55+04.3, 62.6' RT
WP8: STA 54+16.8, 66.5' RT

FOR INFORMATION ONLY

8	EA	WOOD POLES CLASS 4
765	L.F.	OVERHEAD SPAN WIRE
8	EA	LUMINAIRES 250 HPS
1	L.S.	TEMPORARY TRAFFIC SIGNAL CABINET

N

W FOND DU LAC AVE

W SILVER SPRING DR

WB SILVER SPRING DR

EB SILVER SPRING DR

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

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8

TCB1

SB STH 145 TO SILVER SPRING RAMP

CONSTRUCTION NOTES:

1. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
2. ALL SIGNING, STRIPING, TRAFFIC SIGNALS, AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
3. CONTRACTOR SHALL USE THE EXISTING ELECTRICAL SERVICE, AND ADJUST THE LOCATIONS OF THE TEMPORARY SIGNAL FACES TO ACCOMMODATE TRAFFIC DURING STAGING.
4. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET & HEADS SHALL BE AS DIRECTED BY THE ON–SITE ENGINEER.
5. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
6. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ON–SITE ENGINEER.
7. ALL EXISTING PERMANENT SIGNAL HEADS SHALL BE BAGGED.
8. DO NOT MAKE ANY MODIFICATIONS TO THE EXISTING PERMANENT TRAFFIC SIGNAL EQUIPMENT.

TRAFFIC CONTROL SIGNAL
W SILVER SPRING DR &
W FOND DU LAC AVE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO.

CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP

CITY CONTACT: J. BLAKEMAN
DESIGNED BY: TADI
REVISED BY:

PAGE 1 OF 4

PROJECT NO:1360–13–71	HWY:STH 145	COUNTY:MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN – STAGE 1	SHEET 44 E

FILE NAME : Z:\SHARED\WI\2552 STH 145 TEMPORARY SIGNALS\SILVER SPRING\CAD\SILVER_SPRING_FDL_TEMP_STAGE_1.DWG
LAYOUT NAME – SS_FDL_STAGE_1

PLOT DATE : 2/3/2023 4:10 PM PLOT BY : JEFF FAIT PLOT NAME : PLOT SCALE : 1"=40'

WISDOT/CADDS SHEET 42

LEGEND

- TEMPORARY CONTROL CABINET
- TEMPORARY OVERHEAD SPAN WIRE
- TEMPORARY SIGNAL HEAD
- WOOD POLE CLASS IV
- TEMPORARY LUMINAIRE AND ARM
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- BAGGED SIGNAL HEAD

ALL LENSES ARE 12–INCH
GRAYSHADE REPRESENTS EXISTING

W FOND DU LAC AVE

W SILVER SPRING DR

WB SILVER SPRING DR

EB SILVER SPRING DR

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

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8

TCB1

SB STH 145 TO SILVER SPRING DR

CONSTRUCTION NOTES:

1. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
2. ALL SIGNING, STRIPING, TRAFFIC SIGNALS, AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
3. CONTRACTOR SHALL USE THE EXISTING ELECTRICAL SERVICE, AND ADJUST THE LOCATIONS OF THE TEMPORARY SIGNAL FACES TO ACCOMMODATE TRAFFIC DURING STAGING.
4. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET & HEADS SHALL BE AS DIRECTED BY THE ON–SITE ENGINEER.
5. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
6. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ON–SITE ENGINEER.
7. ALL EXISTING PERMANENT SIGNAL HEADS SHALL BE BAGGED.
8. DO NOT MAKE ANY MODIFICATIONS TO THE EXISTING PERMANENT TRAFFIC SIGNAL EQUIPMENT.

TRAFFIC CONTROL SIGNAL
W SILVER SPRING DR &
W FOND DU LAC AVE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO.

CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP

CITY CONTACT: J. BLAKEMAN
DESIGNED BY: TADI
REVISED BY:

PAGE 2 OF 4

PROJECT NO:1360–13–71	HWY:STH 145	COUNTY:MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN – STAGE 2	SHEET 45 E

FILE NAME : Z:\SHARED\WI\2552 STH 145 TEMPORARY SIGNALS\SILVER SPRING\CAD\SILVER_SPRING_FDL_TEMP_STAGE_2.DWG
LAYOUT NAME – SS_FDL_STAGE_2

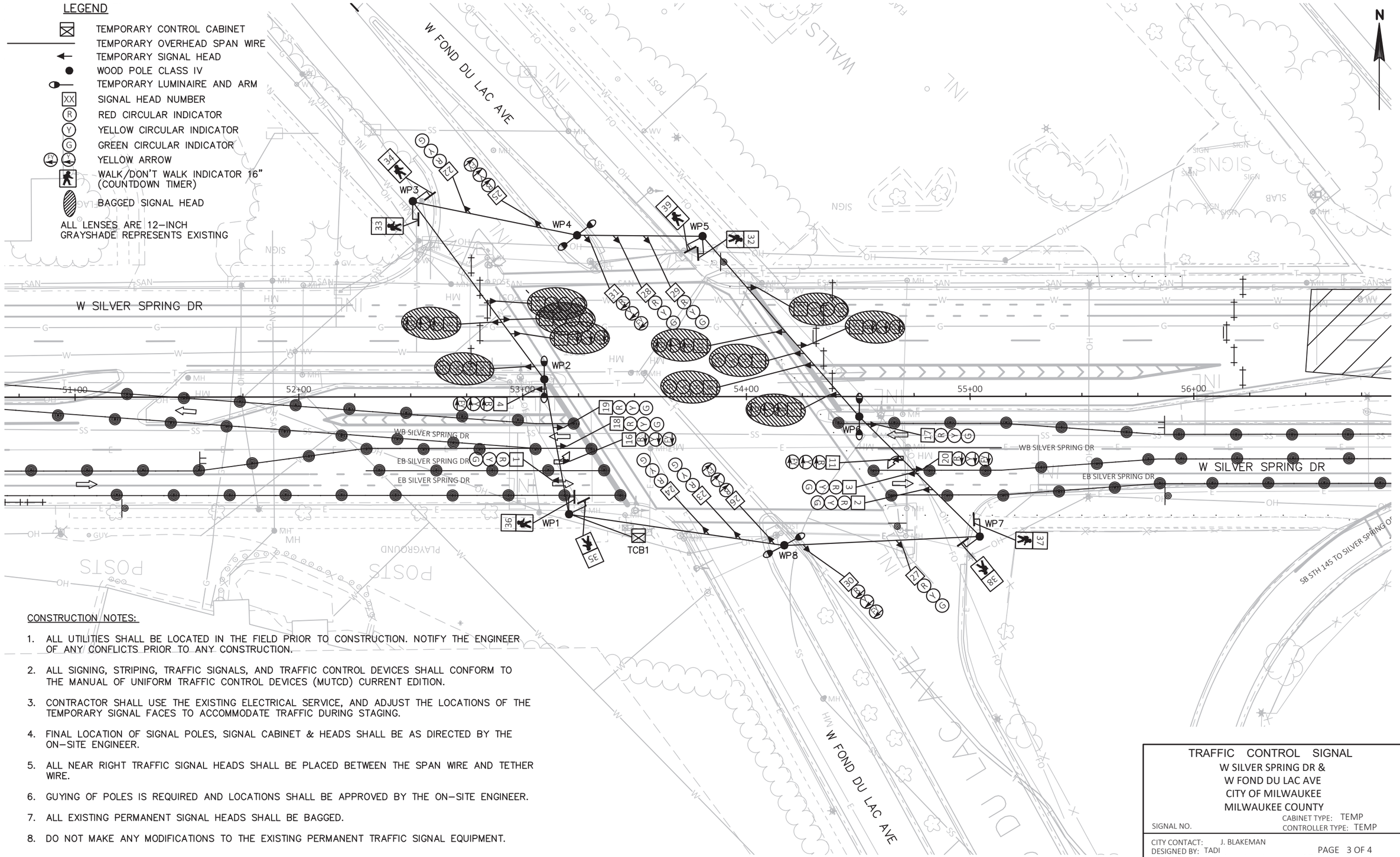
PLOT DATE : 2/3/2023 4:10 PM PLOT BY : JEFF FAIT PLOT NAME : PLOT SCALE : 1"=40'

2

LEGEND

- TEMPORARY CONTROL CABINET
- TEMPORARY OVERHEAD SPAN WIRE
- TEMPORARY SIGNAL HEAD
- WOOD POLE CLASS IV
- TEMPORARY LUMINAIRE AND ARM
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- YA YELLOW ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- BAGGED SIGNAL HEAD

ALL LENSES ARE 12–INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
2. ALL SIGNING, STRIPING, TRAFFIC SIGNALS, AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
3. CONTRACTOR SHALL USE THE EXISTING ELECTRICAL SERVICE, AND ADJUST THE LOCATIONS OF THE TEMPORARY SIGNAL FACES TO ACCOMMODATE TRAFFIC DURING STAGING.
4. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET & HEADS SHALL BE AS DIRECTED BY THE ON–SITE ENGINEER.
5. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
6. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ON–SITE ENGINEER.
7. ALL EXISTING PERMANENT SIGNAL HEADS SHALL BE BAGGED.
8. DO NOT MAKE ANY MODIFICATIONS TO THE EXISTING PERMANENT TRAFFIC SIGNAL EQUIPMENT.

TRAFFIC CONTROL SIGNAL
W SILVER SPRING DR &
W FOND DU LAC AVE
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO.

CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP

CITY CONTACT: J. BLAKEMAN
DESIGNED BY: TADI
REVISED BY:

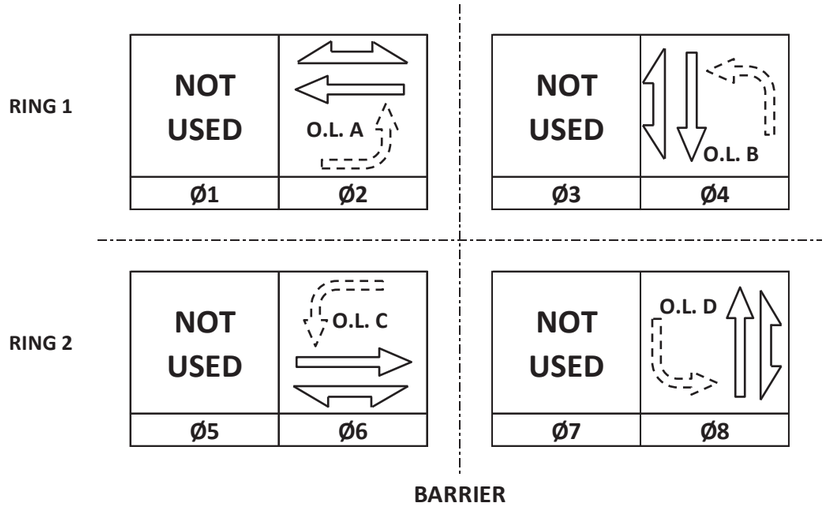
PAGE 3 OF 4

PROJECT NO:1360–13–71	HWY:STH 145	COUNTY:MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN – STAGE 3	SHEET 46 E

FILE NAME : Z:\SHARED\WI\2552 STH 145 TEMPORARY SIGNALS\SILVER SPRING\CAD\SILVER_SPRING_FDL_TEMP_STAGE_3.DWG
LAYOUT NAME – SS_FDL_STAGE_3

PLOT DATE : 2/3/2023 4:10 PM PLOT BY : JEFF FAIT PLOT NAME : PLOT SCALE : 1"=40'

	HEAD NUMBERS	FLASH
Ø1		
Ø2	12,13,14,17,18,19	R
Ø3		
Ø4	22,23,24	R
Ø5		
Ø6	1,2,3,6,7,8	R
Ø7		
Ø8	27,28,29	R
Ø2P	32,33	
Ø4P	34,35	
Ø6P	36,37	
Ø8P	38,39	
OLA	4,5,9,10,11	R
OLB	30,31	R
OLC	15,16,20,21	R
OLD	25,26	R



CONTROLLER LOGIC

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

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

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	
IN TRAFFIC CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

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

SILVER SPRING DRIVE & FOND DU LAC AVE

CITY OF MILWAUKEE

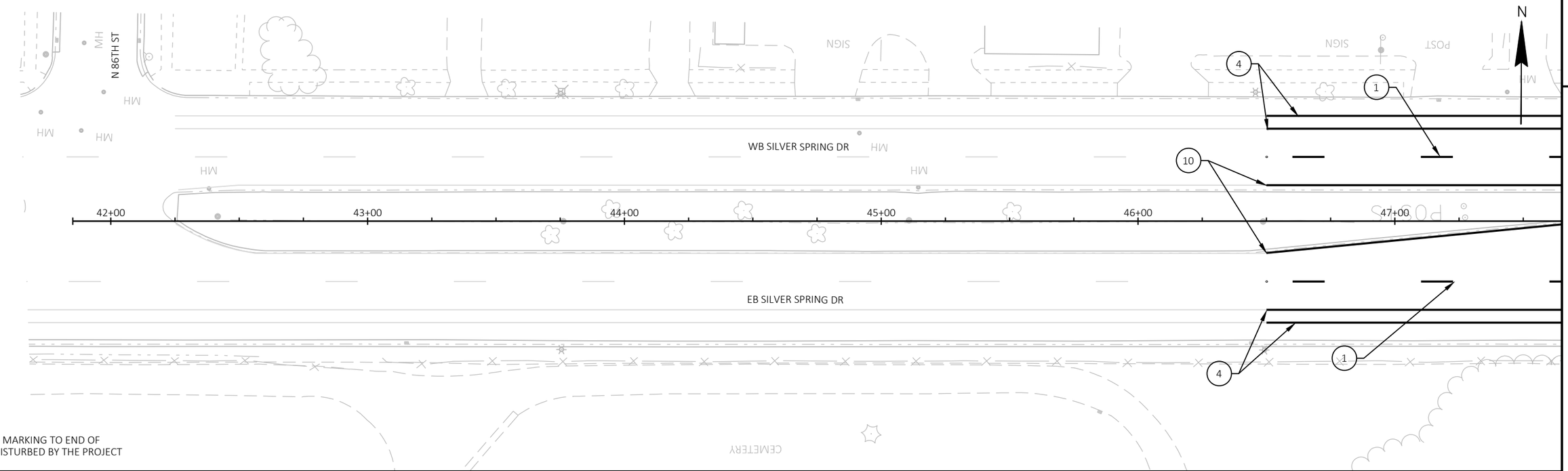
MILWAUKEE COUNTY

SIGNAL NO: CABINET TYPE: TEMP

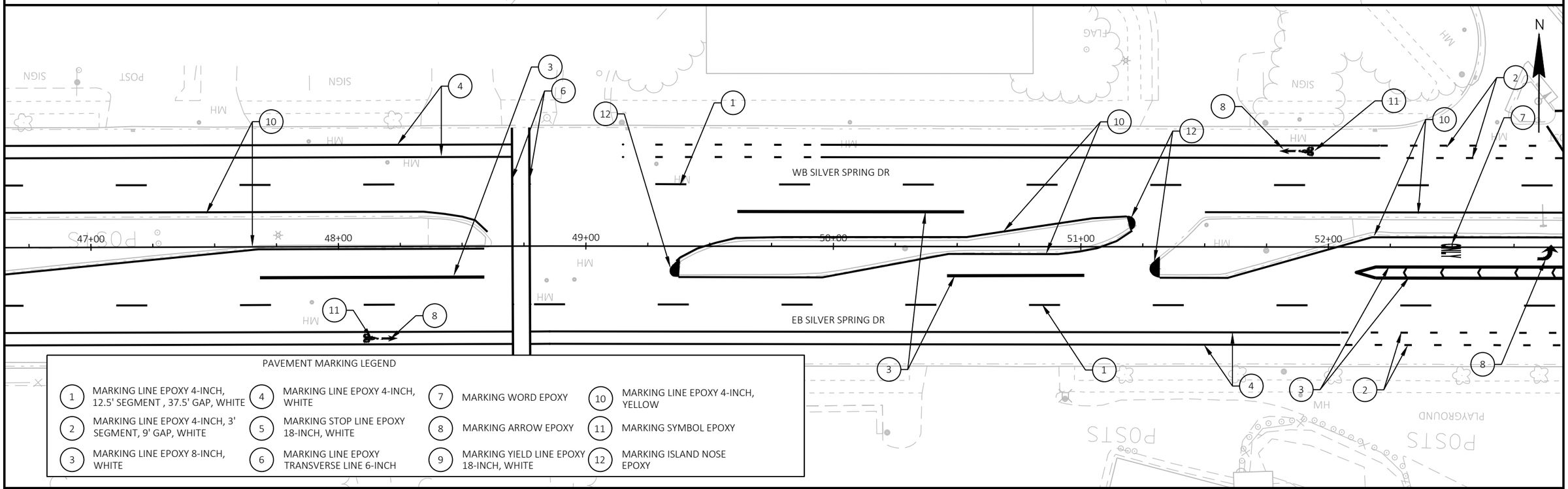
CONTROLLER TYPE: TEMP

DATE: 2/23 PAGE NUMBER: 4 OF 4

2



NOTE:
CONTINUE MARKING TO END OF
SECTION DISTURBED BY THE PROJECT



PAVEMENT MARKING LEGEND

1	MARKING LINE EPOXY 4-INCH, 12.5' SEGMENT , 37.5' GAP, WHITE	4	MARKING LINE EPOXY 4-INCH, WHITE	7	MARKING WORD EPOXY	10	MARKING LINE EPOXY 4-INCH, YELLOW
2	MARKING LINE EPOXY 4-INCH, 3' SEGMENT, 9' GAP, WHITE	5	MARKING STOP LINE EPOXY 18-INCH, WHITE	8	MARKING ARROW EPOXY	11	MARKING SYMBOL EPOXY
3	MARKING LINE EPOXY 8-INCH, WHITE	6	MARKING LINE EPOXY TRANSVERSE LINE 6-INCH	9	MARKING YIELD LINE EPOXY 18-INCH, WHITE	12	MARKING ISLAND NOSE EPOXY

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 48	E

2

W FOND DU LAC AVE

WB SILVER SPRING DR

EB SILVER SPRING DR

W FOND DU LAC AVE

SB STH 145 TO SILVER SPRING OFF RAMP

52+00 53+00 54+00 55+00 56+00 57+00 58+00

11' 11' * 5'

NB STH 145 TO SILVER SPRING OFF RAMP

NB STH 145 ON RAMP

NB STH 145 ON RAMP

WB SILVER SPRING DR

7' 5' 11' 11' 2'

58+00 59+00 60+00 61+00 62+00 63+00

2' 11' 11' 5'

EB SILVER SPRING DR

8'

W LEON TERRACE

PAVEMENT MARKING LEGEND

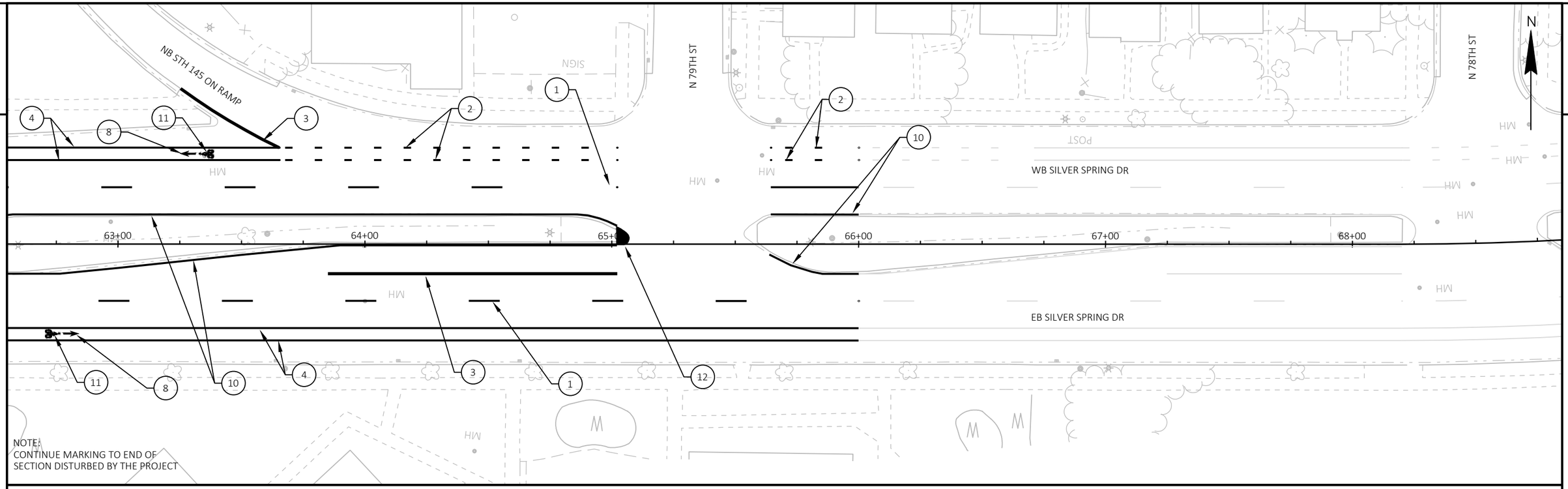
1	MARKING LINE EPOXY 4-INCH, 12.5' SEGMENT , 37.5' GAP, WHITE	4	MARKING LINE EPOXY 4-INCH, WHITE	7	MARKING WORD EPOXY	10	MARKING LINE EPOXY 4-INCH, YELLOW
2	MARKING LINE EPOXY 4-INCH, 3' SEGMENT, 9' GAP, WHITE	5	MARKING STOP LINE EPOXY 18-INCH, WHITE	8	MARKING ARROW EPOXY	11	MARKING SYMBOL EPOXY
3	MARKING LINE EPOXY 8-INCH, WHITE	6	MARKING LINE EPOXY TRANSVERSE LINE 6-INCH	9	MARKING YIELD LINE EPOXY 18-INCH, WHITE	12	MARKING ISLAND NOSE EPOXY

NOTE:
* 6" MIN EDGE OF LANE TO CURB FACE

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 49	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\024501-PM-1.DWG
LAYOUT NAME - 02

PLOT DATE : 2/8/2023 3:36 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT



PAVEMENT MARKING LEGEND

1 MARKING LINE EPOXY 4-INCH, 12.5' SEGMENT , 37.5' GAP, WHITE	4 MARKING LINE EPOXY 4-INCH, WHITE	7 MARKING WORD EPOXY	10 MARKING LINE EPOXY 4-INCH, YELLOW
2 MARKING LINE EPOXY 4-INCH, 3' SEGMENT, 9' GAP, WHITE	5 MARKING STOP LINE EPOXY 18-INCH, WHITE	8 MARKING ARROW EPOXY	11 MARKING SYMBOL EPOXY
3 MARKING LINE EPOXY 8-INCH, WHITE	6 MARKING LINE EPOXY TRANSVERSE LINE 6-INCH	9 MARKING YIELD LINE EPOXY 18-INCH, WHITE	12 MARKING ISLAND NOSE EPOXY

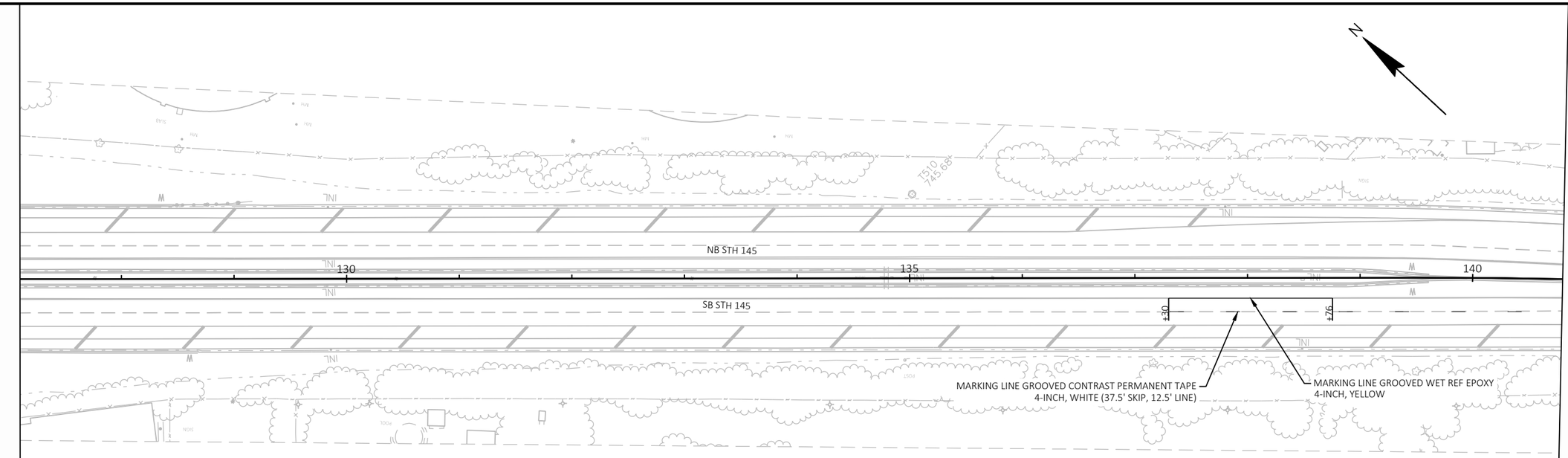
PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 50 E

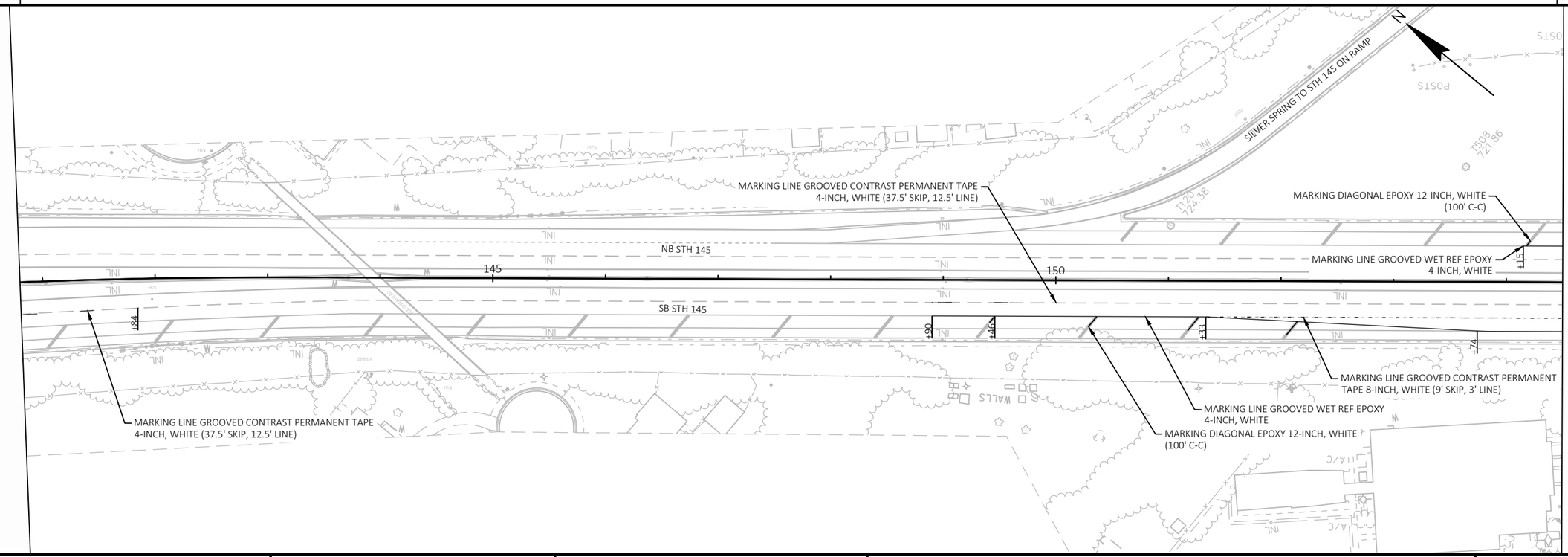
FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\024501-PM-1.DWG
LAYOUT NAME - 03

PLOT DATE : 2/8/2023 3:36 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2





PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 51	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\024502_PM-145-AFTERCOMPLETION.DWG
LAYOUT NAME - 07
PLOT DATE : 4/28/2023 9:44 AM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

MARKING LINE GROOVED WET REF EPOXY 4-INCH, WHITE

MARKING DIAGONAL EPOXY 12-INCH, WHITE (100' C-C)

MARKING CHEVRON EPOXY 24-INCH, WHITE (25' C-C)

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH, WHITE (9' SKIP, 3' LINE)

MARKING LINE GROOVED WET REF EPOXY 4-INCH, WHITE

NB STH 145 TO WB SILVER SPRING RAMP

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH, WHITE (9' SKIP, 3' LINE)

NB STH 145

SB STH 145

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH, WHITE (9' SKIP, 3' LINE)

MARKING CHEVRON EPOXY 24-INCH, WHITE (25' C-C)

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH, WHITE (9' SKIP, 3' LINE)

SB STH 145 TO EB SILVER SPRING RAMP

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH, WHITE (9' SKIP, 3' LINE)

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH, WHITE (9' SKIP, 3' LINE)

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)

WB SILVER SPRING

EB SILVER SPRING

W FOND DU LAC TO SB STH 145 RAMP

155 160 165

±72 ±57 ±103 ±52 ±70 ±32 ±57 ±85 ±35 ±28 ±75 ±52 ±26 ±35 ±45

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH, WHITE (9' SKIP, 3' LINE)

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)

W LEON TERRACE

MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH, WHITE (37.5' SKIP, 12.5' LINE)

RAMP CLOSED

NB STH 145

SB STH 145

SB STH 145 TO W FOND DU LAC RAMP

SB 76TH ST TO SB STH 145 RAMP

N 76TH ST

S 76TH ST

170 175 180

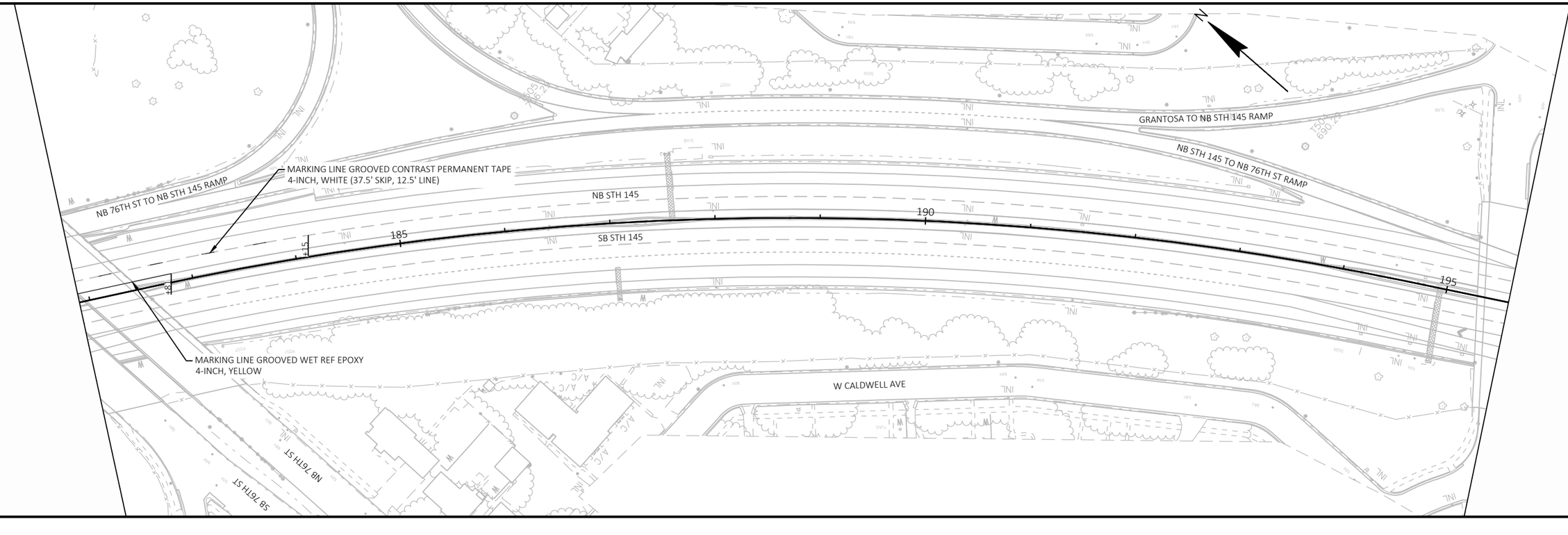
±70 ±69 ±50

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 52	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\024502_PM-145-AFTERCOMPLETION.DWG
LAYOUT NAME - 08

PLOT DATE : 4/28/2023 9:44 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 53	E

2

GENERAL NOTES FOR TRAFFIC CONTROL

1. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
2. CONFLICTING TRAFFIC SIGNS SHALL BE REMOVED OR COVERED AS DIRECTED BY THE ENGINEER.
3. ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.
4. ALL TRAFFIC CONTROL DRUMS ALONG SILVER SPRING DRIVE ARE SPACED AT 25 FEET AND FLEXIBLE TUBULAR MARKERS ARE SPACED AT 15 FEET, UNLESS OTHERWISE NOTED.
5. FOR SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS, USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE ADJACENT PAVEMENT.
6. COMPLETE MEDIAN WORK ALONG SILVER SPRING DRIVE UTILIZING SINGLE LANE CLOSURES.
7. REMOVE CONFLICTING PAVEMENT MARKING BY WATER BLASTING.
8. NO TRAFFIC CONTROL SIGNS OR DEVICES TO BE PLACED WITHIN 50 FEET OF THE RAILROAD RIGHT-OF-WAY
9. WHERE TYPE II BARRICADE IS INDICATED TO REDIRECT PEDESTRIAN TRAFFIC USE ADDITIONAL TEMPORARY PEDESTRIAN BARRICADE TO RESTRICT AND REDIRECT PEDESTRIAN PASSAGE.

TRAFFIC CONTROL DEVICE LEGEND

- TYPE II BARRICADE WTH ATTACHED SIGN (SEE NOTE 9)
- TYPE III BARRICADE WITH TWO TYPE 'A' LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN WITH TWO TYPE 'A' LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK AREA
- PEDESTRIAN DETOUR ROUTE
- HMA PAVEMENT FROM PREVIOUS STAGE
- CC — TEMPORARY CRASH CUSHION

TEMPORARY MARKING LEGEND

1. TEMPORARY MARKING LINE EPOXY 4-INCH YELLOW
2. TEMPORARY MARKING LINE EPOXY 4-INCH WHITE
3. TEMPORARY MARKING LINE EPOXY 4-INCH DOUBLE YELLOW
5. TEMPORARY MARKING STOP LINE EPOXY 18-INCH

PCMS MESSAGING

STH 145:
PLACE PCMS 7 DAYS PRIOR TO REMOVING EXISTING BRIDGE DECK AND PARAPET

FRAME 1	FRAME 2
STH 145 TO CLOSE	XXXDAY 8PM -6AM

W SILVER SPRING DR:
PLACE PCMS EB 7 DAYS PRIOR TO THE START OF TRAFFIC CONTROL STAGE 2
PLACE PCMS WB 7 DAYS PRIOR TO THE START OF TRAFFIC CONTROL STAGE 3

FRAME 1	FRAME 2
NEW TRAFFIC PATTERN	XXXXDAY XX/XX

FIXED MESSAGING

SILVER SPRING DR:
PLACE FIXED MESSAGE BOARD 7 DAYS PRIOR TO STAGE 1

ROADWORK
BEGINS
XXX-XX

TRAFFIC CONTROL STAGING OVERVIEW

SILVER SPRING DRIVE

STAGE 1:
TRAFFIC: INSIDE LANE AND SHOULDER CLOSURES,
CONSTRUCTION: INSTALL TEMPORARY TRAFFIC SIGNALS AND CROSSOVERS

STAGE 2:
TRAFFIC: CROSSOVER EB SILVER SPRING DR TRAFFIC AS SHOWN ON PLANS, CLOSE NB STH 145 OFF RAMP TO SILVER SPRING
CONSTRUCTION: WORK ON B-40-254 (WB SILVER SPRING)

STAGE 3:
TRAFFIC: CROSSOVER WB SILVER SPRING DR TRAFFIC AS SHOWN ON PLANS, CLOSE SB STH 145 OFF RAMP TO SILVER SPRING
CONSTRUCTION: WORK ON B-40-253 (EB SILVER SPRING)

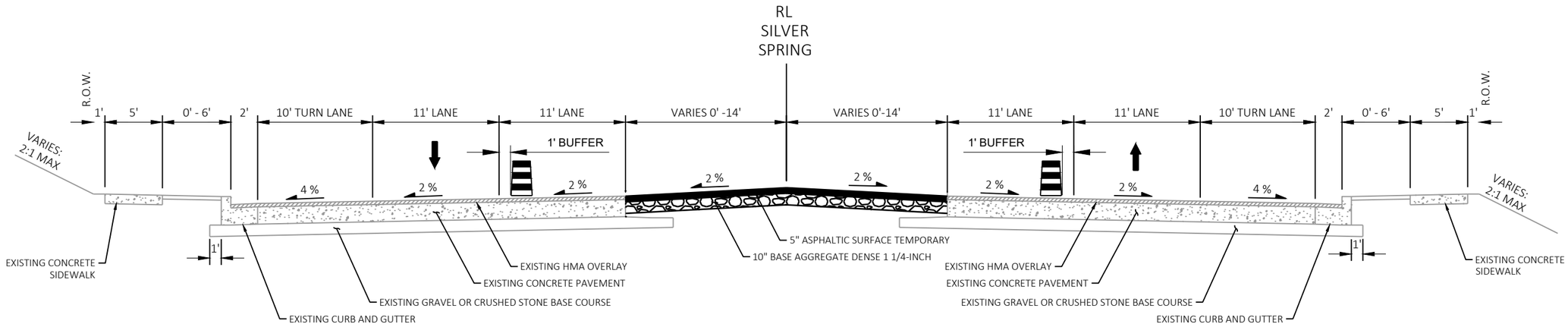
STAGE 4:
TRAFFIC: INSIDE LANE AND SHOULDER CLOSURES - SAME AS STAGE 1
CONSTRUCTION: REMOVE TEMPORARY TRAFFIC SIGNALS AND CROSSOVERS

STH 145

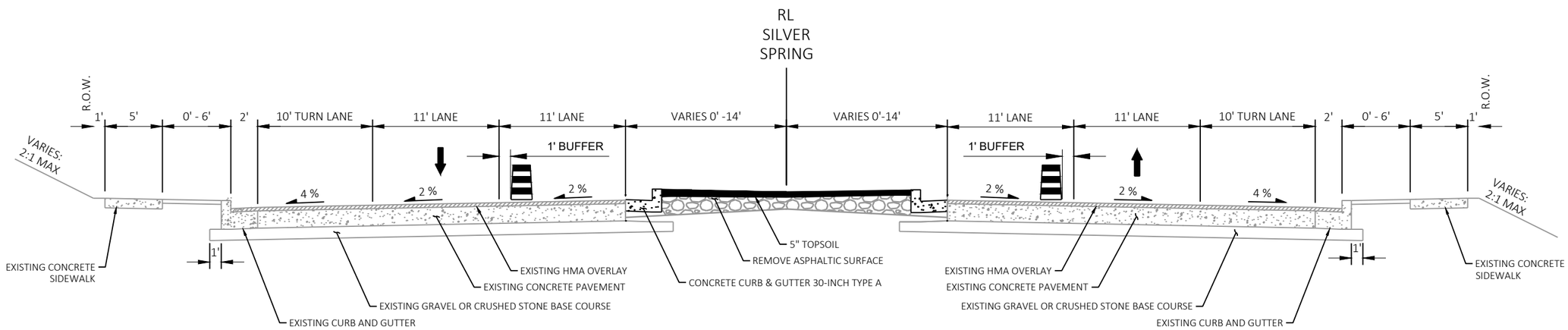
CONSTRUCTION: DEMO OF EXISTING STRUCTURES.
TRAFFIC: OVERNIGHT FULL CLOSURES BETWEEN 8PM AND 6AM. TO DEMO STRUCTURES.

STAGE 1:
TRAFFIC: SINGLE INSIDE LANE AND SHOULDER CLOSURES , CLOSE GRANTOSA/76TH ST TO NB STH 145 ON RAMP
CONSTRUCTION: PAINT STRUCTURE B-40-253 AND B-40-254 OVER INSIDE LANES

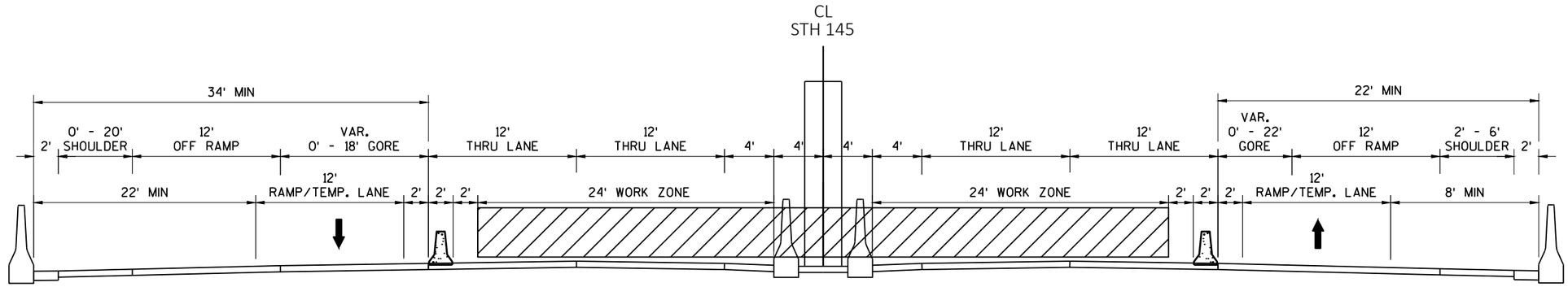
STAGE 2:
TRAFFIC: SINGLE OUTSIDE LANE CLOSURES, CLOSE GRANTOSA/76TH ST TO NB STH 145 ON RAMP ,CLOSE NB AND SB STH 145 OFF RAMPS TO SILVER SPRING
CONSTRUCTION: PAINT STRUCTURE B-40-253 AND B-40-254 OVER OUTSIDE LANES



SILVER SPRING DR. (LOOKING EAST)
STAGE 1
CROSSOVERS

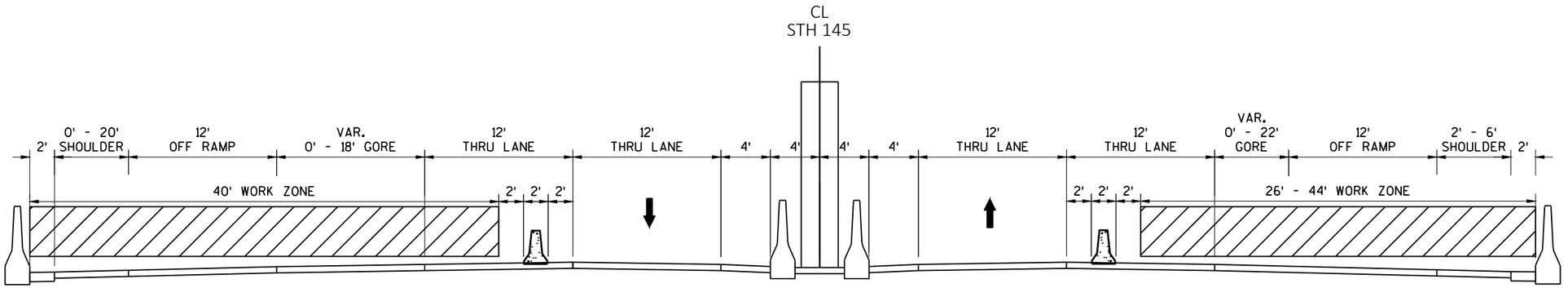


SILVER SPRING DR. (LOOKING EAST)
STAGE 4
CROSSOVERS



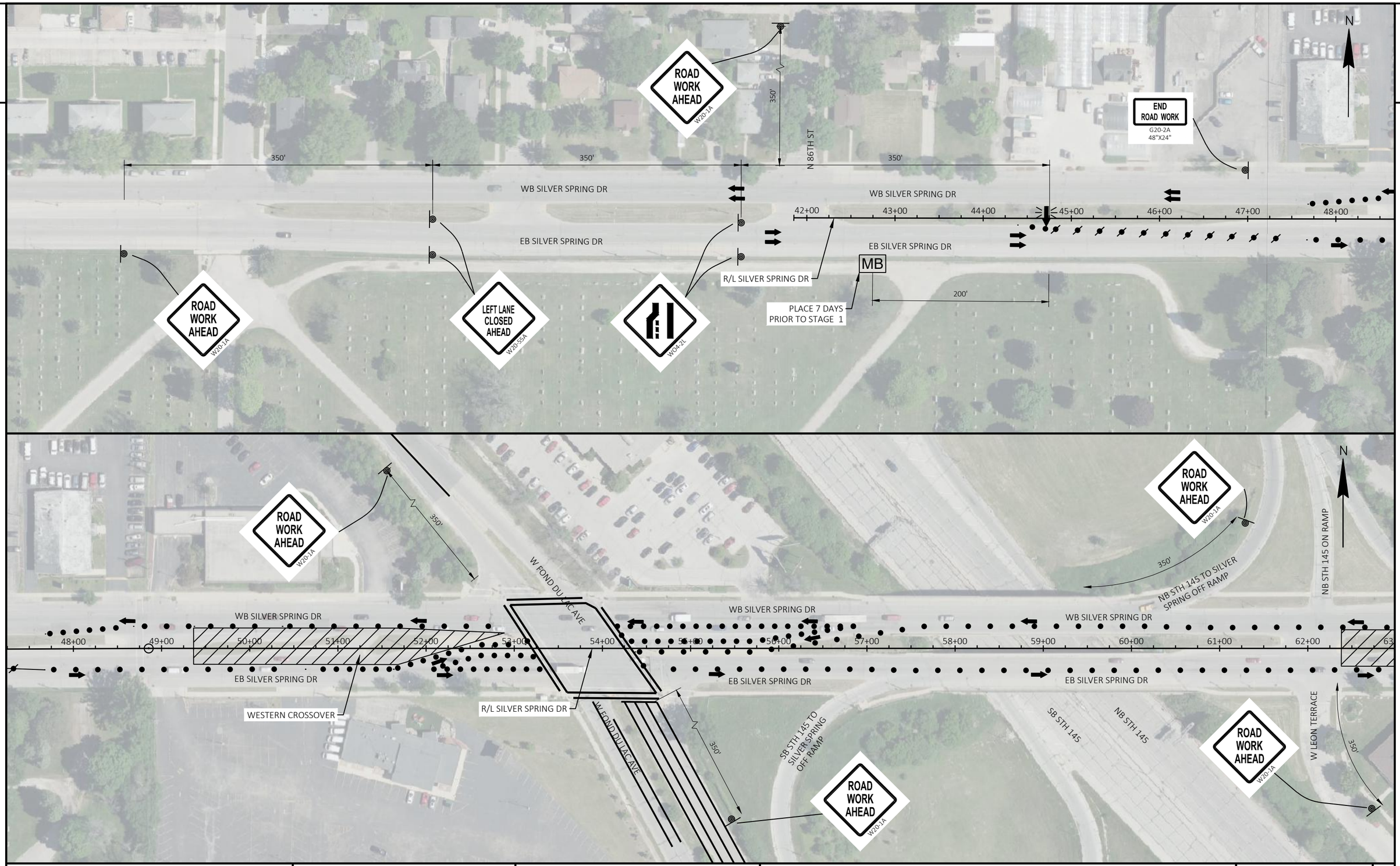
STH 145 (LOOKING SOUTH)
STAGE 1
INSIDE LANES CLOSED

WORK:
- CLOSE INSIDE LANE AND PUSH OUTSIDE LANE TO OUTSIDE GORE, RAMP AND SHOULDER.
- PAINT STRUCTURE OVER INSIDE AND PART OF OUTSIDE LANES AND SHOULDERS.



STH 145 (LOOKING SOUTH)
STAGE 2
OUTSIDE LANES AND OFF RAMPS CLOSED

WORK:
- CLOSE OUTSIDE LANES AND RAMPS
- PAINT STRUCTURE OVER REMAINING OUTSIDE GORES, RAMPS AND SHOULDERS.

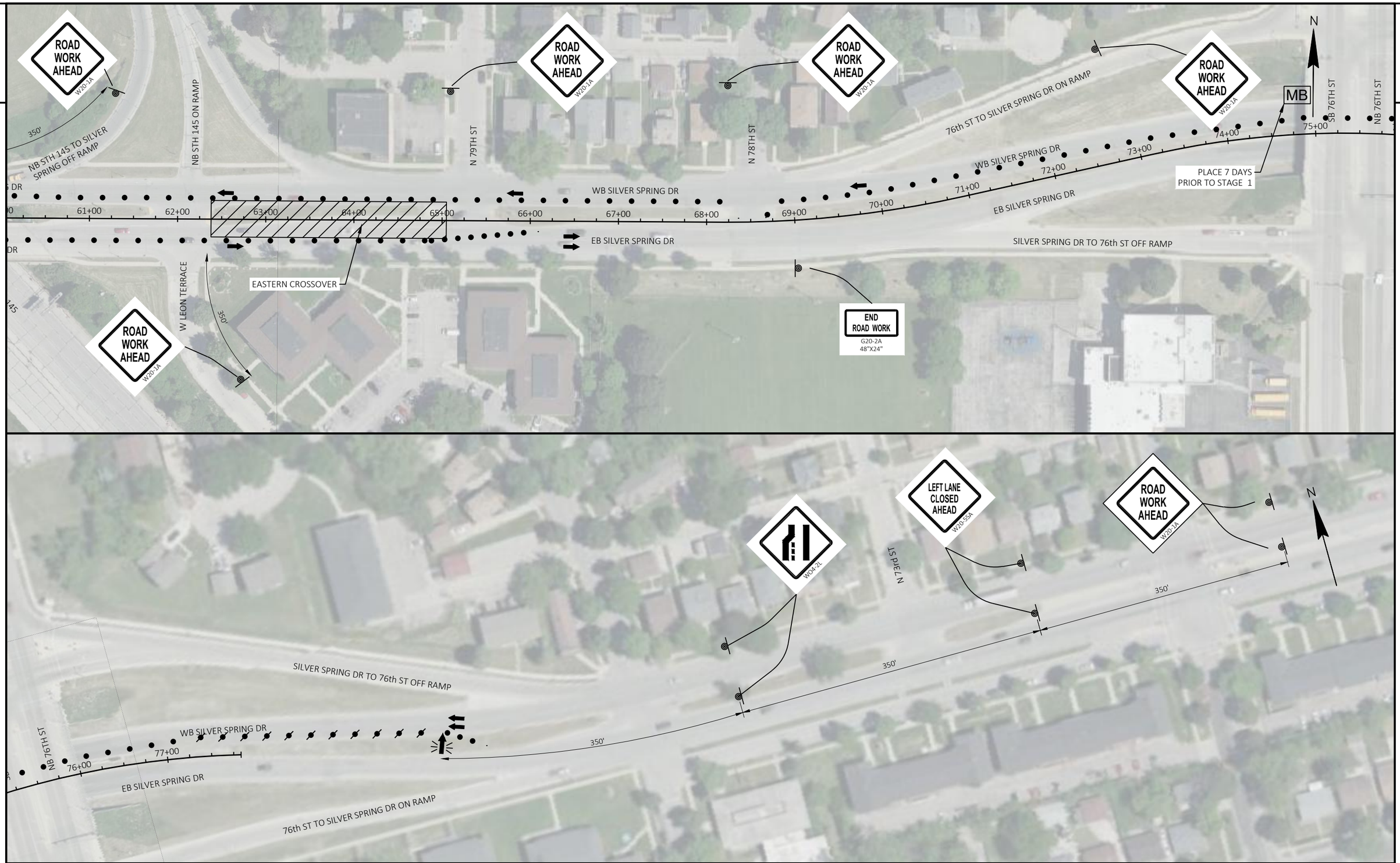


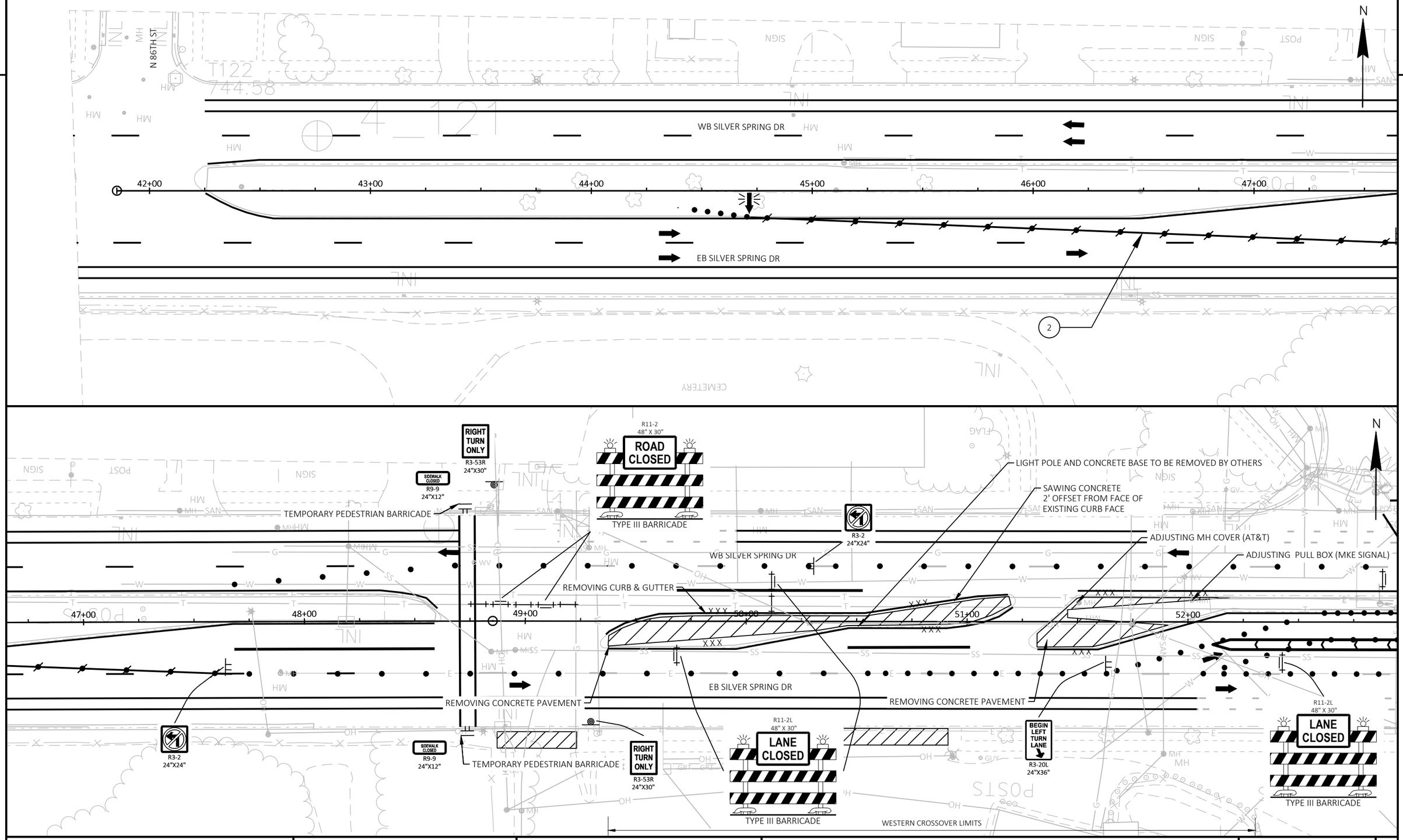
PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 1 & 4 - ADVANCED SIGNING	SHEET 57	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS1 ADVANCED WARNING.DWG
LAYOUT NAME - 01 AW

PLOT DATE : 4/24/2023 5:32 PM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44


ROAD WORK AHEAD
W20-1A
350'
NB STH 145 TO SILVER SPRING OFF RAMP
NB STH 145 ON RAMP
N 79TH ST
N 78TH ST
76th ST TO SILVER SPRING DR ON RAMP
WB SILVER SPRING DR
EB SILVER SPRING DR
SILVER SPRING DR TO 76th ST OFF RAMP
61+00
62+00
63+00
64+00
65+00
66+00
67+00
68+00
69+00
70+00
71+00
72+00
73+00
74+00
75+00
MB
SB 76TH ST
NB 76TH ST
PLACE 7 DAYS PRIOR TO STAGE 1
EASTERN CROSSOVER
W LEON TERRACE
END ROAD WORK
G20-2A
48"X24"
N
LEFT LANE CLOSED AHEAD
W20-5A
WO4-2L
N 73RD ST
NB 76TH ST
76+00
77+00
76th ST TO SILVER SPRING DR ON RAMP



PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 1 & 4	SHEET 59	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS1.DWG
LAYOUT NAME - 01
PLOT DATE : 4/24/2023 5:33 PM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2

WO1-6
48" X 24"
TYPE III BARRICADE

W FOND DU LAC AVE

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

WB SILVER SPRING DR

52+00 53+00 54+00 55+00 56+00 57+00 58+00

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

EB SILVER SPRING DR

WO1-6
48" X 24"
TYPE III BARRICADE

W FOND DU LAC AVE

SB STH 145 TO SILVER SPRING OFF RAMP

N

SB STH 145 TO SILVER SPRING OFF RAMP

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

NB STH 145 ON RAMP

R3-2
24"X24"

NB STH

REMOVING CONCRETE PAVEMENT

ADJUSTING AT MH COVER

WB SILVER SPRING DR

58+00 59+00 60+00 61+00 62+00 63+00

EB SILVER SPRING DR

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R3-2
24"X24"

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

REMOVING CURB & GUTTER

LIGHT POLE AND CONCRETE BASE TO BE REMOVED BY OTHERS

W LEON TERRACE

SB STH 145

NB STH 145

RIGHT TURN ONLY
R3-53R
24"X30"

EASTERN CROSSOVER LIMITS

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 1 & 4	SHEET 60	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS1.DWG
LAYOUT NAME - 02
PLOT DATE : 4/24/2023 5:33 PM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

SAWING CONCRETE
2' OFFSET FROM FACE OF
EXISTING CURB FACE

NB STH 145 ON RAMP

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

N 79TH ST

SIDEWALK CLOSED
R9-9
24"X12"

TEMPORARY PEDESTRIAN BARRICADE

WO1-6
48" X 24"
TYPE III BARRICADE

N 78TH ST

REMOVING CURB & GUTTER

ADJUSTING INLET COVERS

WB SILVER SPRING DR

63+00 64+00 65+00 66+00 67+00 68+00

LIGHT POLE AND CONCRETE BASE TO BE REMOVED BY OTHERS

REMOVING CONCRETE PAVEMENT

EB SILVER SPRING DR

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

R3-2
24"X24"

TEMPORARY PEDESTRIAN BARRICADE

SIDEWALK CLOSED
R9-9
24"X12"

EASTERN CROSSOVER LIMITS

N

2

N 78TH ST

N 76TH ST TO W SILVER SPRING DR RAMP

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

WB SILVER SPRING DR

69+00 70+00 71+00 72+00 73+00 74+00

EB SILVER SPRING DR

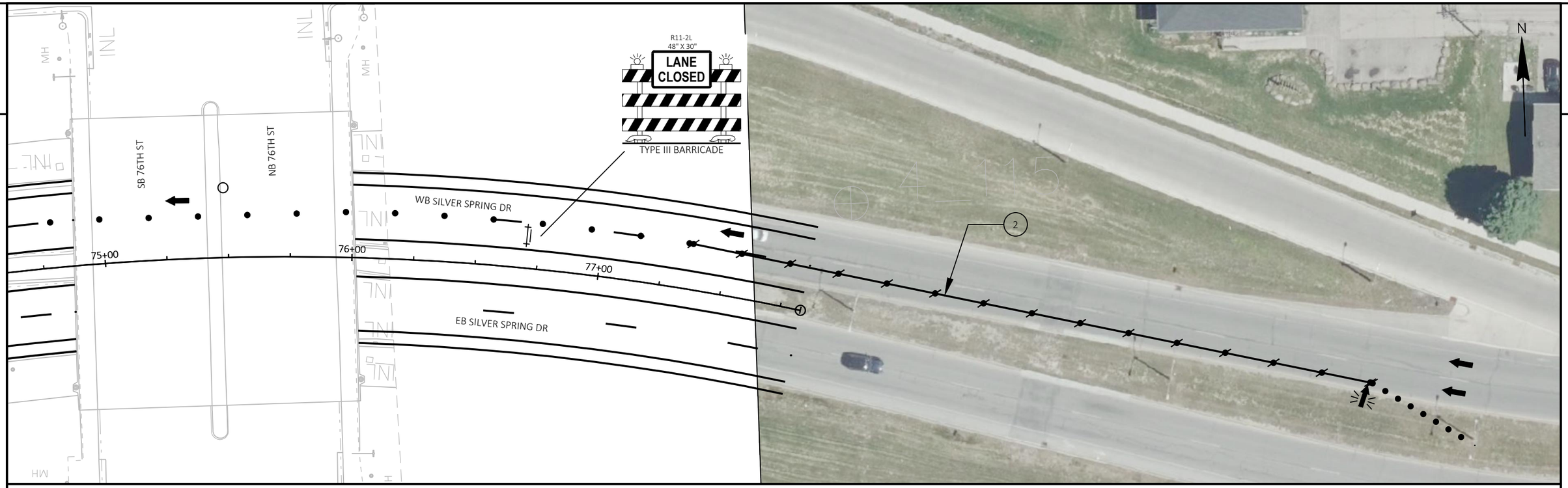
W SILVER SPRING DR TO N 76TH ST RAMP

N

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 1 & 4	SHEET 61	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS1.DWG
LAYOUT NAME - 03

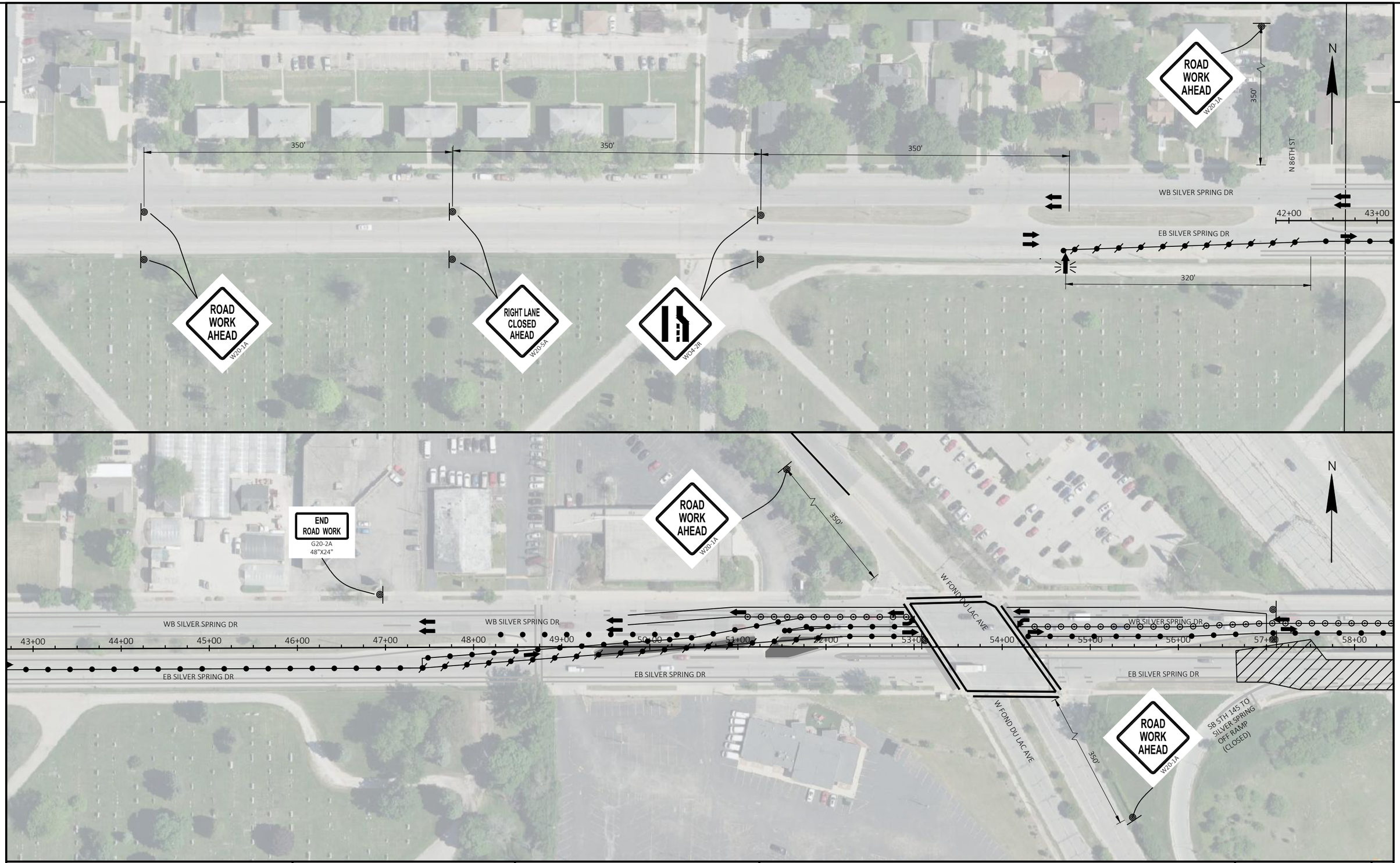
PLOT DATE : 4/24/2023 5:33 PM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:40 FT



PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 1 & 4	SHEET 62	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS1.DWG
LAYOUT NAME - 04
PLOT DATE : 4/24/2023 5:33 PM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2



PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 2 - ADVANCED SIGNING	SHEET 63	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS2 ADVANCED WARNING.DWG
LAYOUT NAME - 01
PLOT DATE : 4/10/2023 10:42 AM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

ROAD WORK AHEAD W20-1A

ROAD WORK AHEAD W20-1A

ROAD WORK AHEAD W20-1A

STOP R1-1 30"X30"

ROAD WORK AHEAD W20-1A

N

NB STH 145 TO SILVER SPRING OFF RAMP

NB STH 145 ON RAMP

N 79TH ST

N 78TH ST

76th ST TO SILVER SPRING DR ON RAMP

WB SILVER SPRING DR

58+00 59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00 67+00 68+00 69+00 70+00 71+00 72+00

EB SILVER SPRING DR

SILVER SPRING DR TO 76th ST

SB STH 145

NB STH 145

W LEON TERRACE

ROAD WORK AHEAD W20-1A

END ROAD WORK G20-2A 48"X24"

LEFT LANE CLOSED AHEAD W20-5SA

ROAD WORK AHEAD W20-1A

W04-2L

N 73rd ST

N

350'

350'

350'

SILVER SPRING DR TO 76th ST OFF RAMP

SB 76TH ST

NB 76TH ST

WB SILVER SPRING DR

73+00 74+00 75+00 76+00 77+00

EB SILVER SPRING DR

76th ST TO SILVER SPRING DR ON RAMP

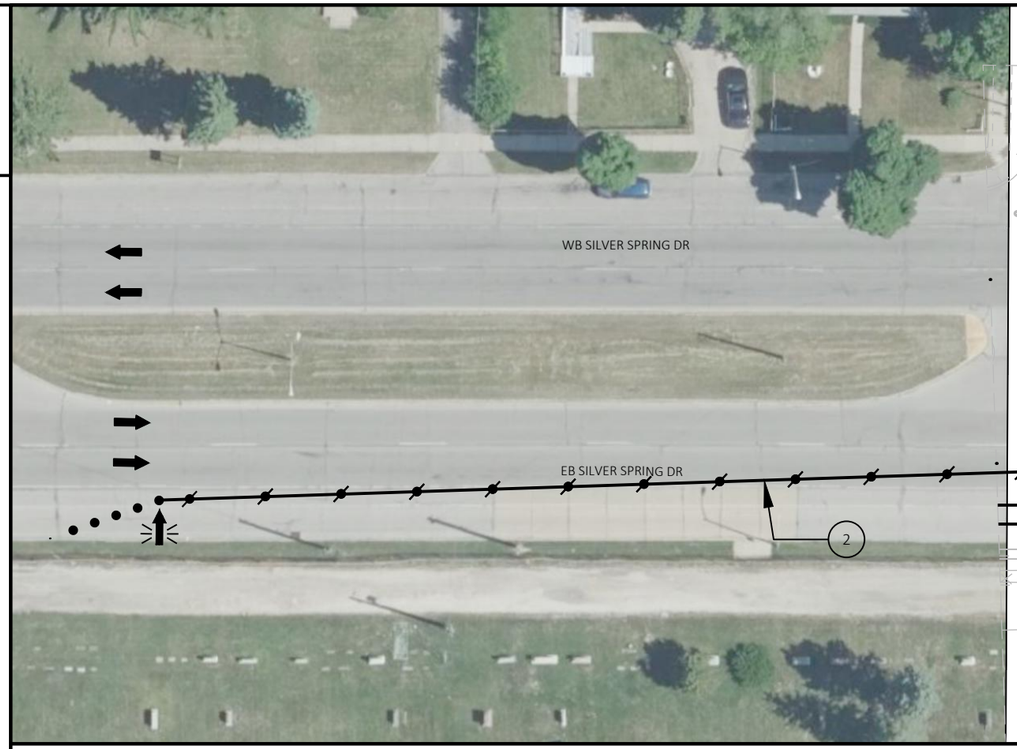
R TO 76th ST OFF RAMP

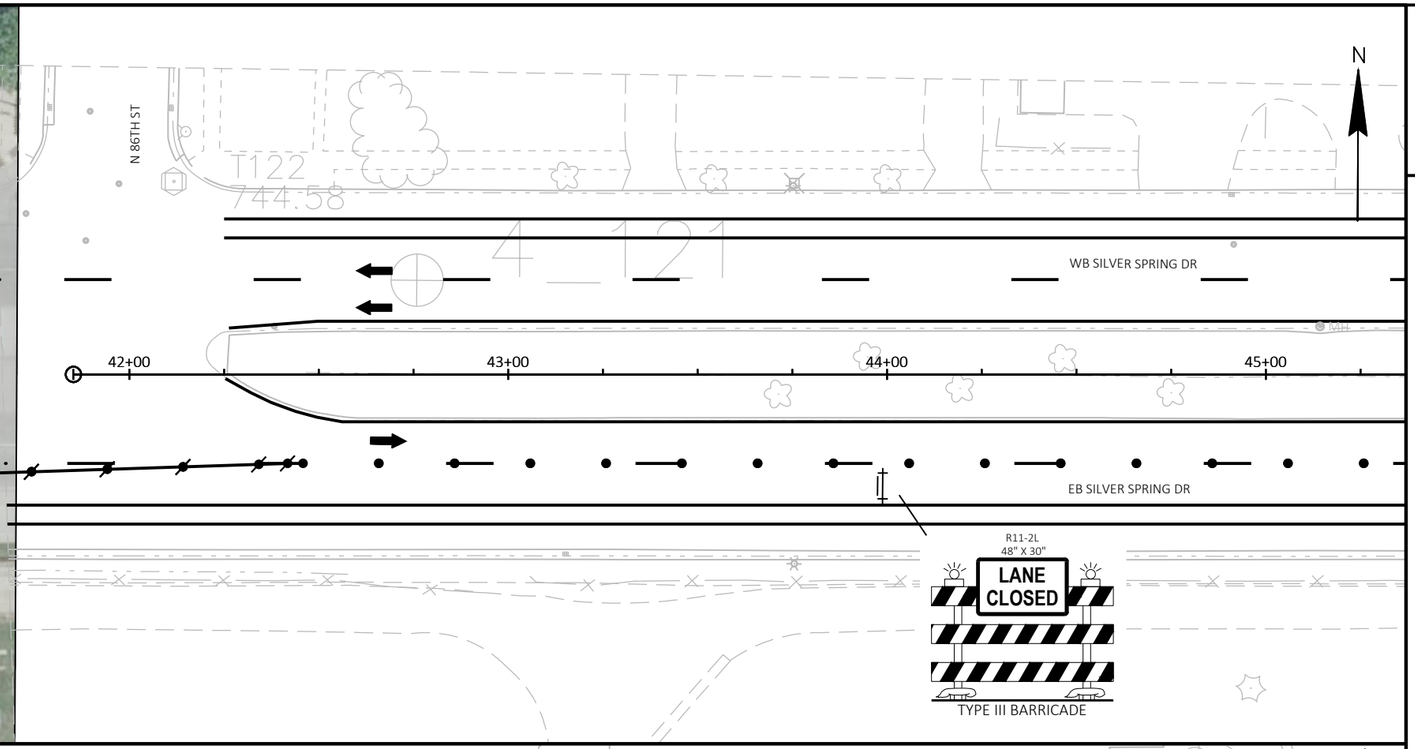
PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 2 - ADVANCED SIGNING	SHEET 64	E

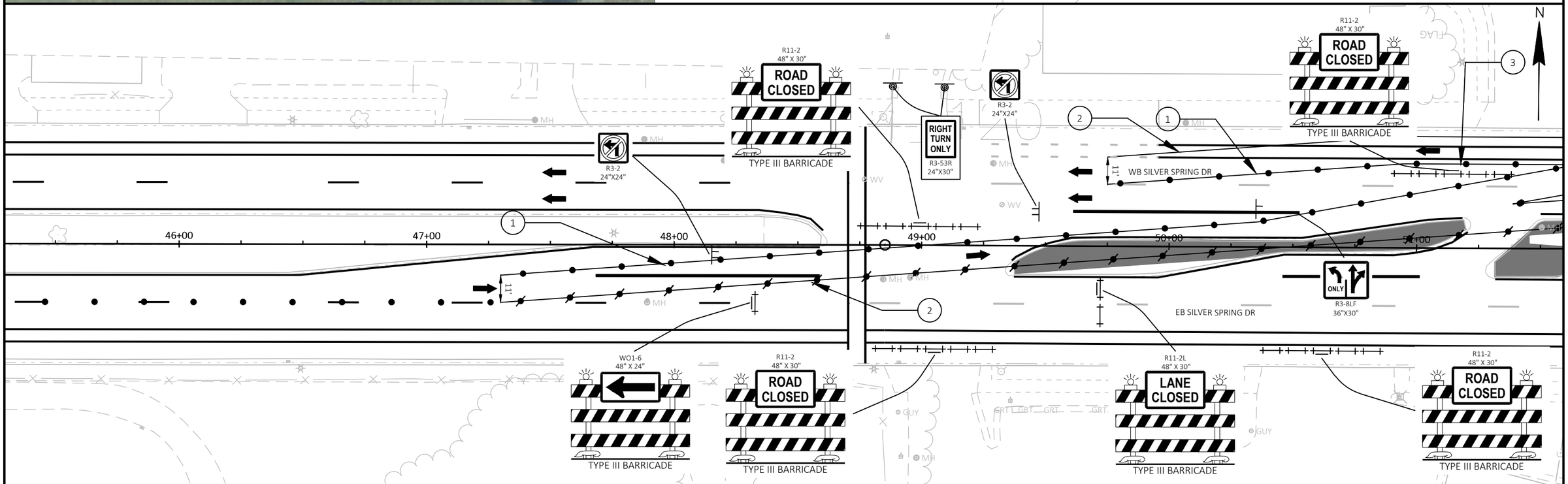
FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS2 ADVANCED WARNING.DWG
LAYOUT NAME - 02

PLOT DATE : 4/10/2023 10:42 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44







PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 2	SHEET 65	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS2.DWG
LAYOUT NAME - 01

PLOT DATE : 4/10/2023 10:42 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

N

W FOND DU LAC AVE

DETOUR
M4-9BR
30"X24"

TEMPORARY
TRAFFIC SIGNALS

W6-4
12"X18"

INSTALL ON FIRST TUBULAR MARKER

ONLY
R3-8LF
36"X30"

W6-4
12"X18"

WB SILVER SPRING DR

11'

52+00 53+00 54+00 55+00 56+00 57+00

EB SILVER SPRING DR

R11-2L
48" X 30"
LANE
CLOSED
TYPE III BARRICADE

DETOUR
M4-9BL
30"X24"

SIDEWALK
CLOSED
AHEAD
R9-9A
30"X18"

R11-2B
48" X 30"
BRIDGE
OUT
TYPE III BARRICADE

TEMPORARY PEDESTRIAN BARRICADE

SIDEWALK
CLOSED
R9-9
24"X12"

SB STH 145 TO SILVER SPRING OFF RAMP CLOSED

DO
NOT
PASS
R4-1
24"X30"

SB STH 145 TO SILVER SPRING OFF RAMP

W6-4
12"X18"

WO1-6
48" X 24"
TYPE III BARRICADE

NB STH 145 ON RAMP

WO6-3

N

NB STH

WB SILVER SPRING DR

58+00 59+00 60+00 61+00 62+00 63+00

EB SILVER SPRING DR

R11-2B
48" X 30"
BRIDGE
OUT
TYPE III BARRICADE

TEMPORARY PEDESTRIAN BARRICADE

SIDEWALK
CLOSED
R9-9
24"X12"

R11-2
48" X 30"
ROAD
CLOSED
TYPE III BARRICADE

W LEON TERRACE

RIGHT
TURN
ONLY
R3-53R
24"X30"

SB STH 145

NB STH 145

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 2	SHEET 66	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS2.DWG
LAYOUT NAME - 02

PLOT DATE : 4/10/2023 10:43 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

RIGHT TURN ONLY
R3-53R
24"X30"

SIDEWALK CLOSED
R9-9
24"X12"

SIDEWALK CLOSED
R9-9
24"X12"

TEMPORARY PEDESTRIAN BARRICADE

TEMPORARY PEDESTRIAN BARRICADE

WO1-6
48" X 24"

DETOUR
M4-9BL
30"X24"

TYPE III BARRICADE

N 79TH ST

N 78TH ST

NB STH 145 ON-RAMP

WB SILVER SPRING DR

EB SILVER SPRING DR

11'

11'

63+00

64+00

65+00

66+00

67+00

68+00

1

1

2

R11-2
48" X 30"

ROAD CLOSED

TYPE III BARRICADE

SIDEWALK CLOSED
R9-9
24"X12"

TEMPORARY PEDESTRIAN BARRICADE

SIDEWALK CLOSED AHEAD
R9-9A
30"X18"

DETOUR
M4-9BR
30"X24"

N

2

STOP
R1-1
30"X30"

N 78TH ST

N 76TH ST TO W SILVER SPRING DR RAMP

R11-2L
48" X 30"

LANE CLOSED

TYPE III BARRICADE

WB SILVER SPRING DR

EB SILVER SPRING DR

W SILVER SPRING DR TO N 76TH ST RAMP

69+00

70+00

71+00

72+00

73+00

74+00

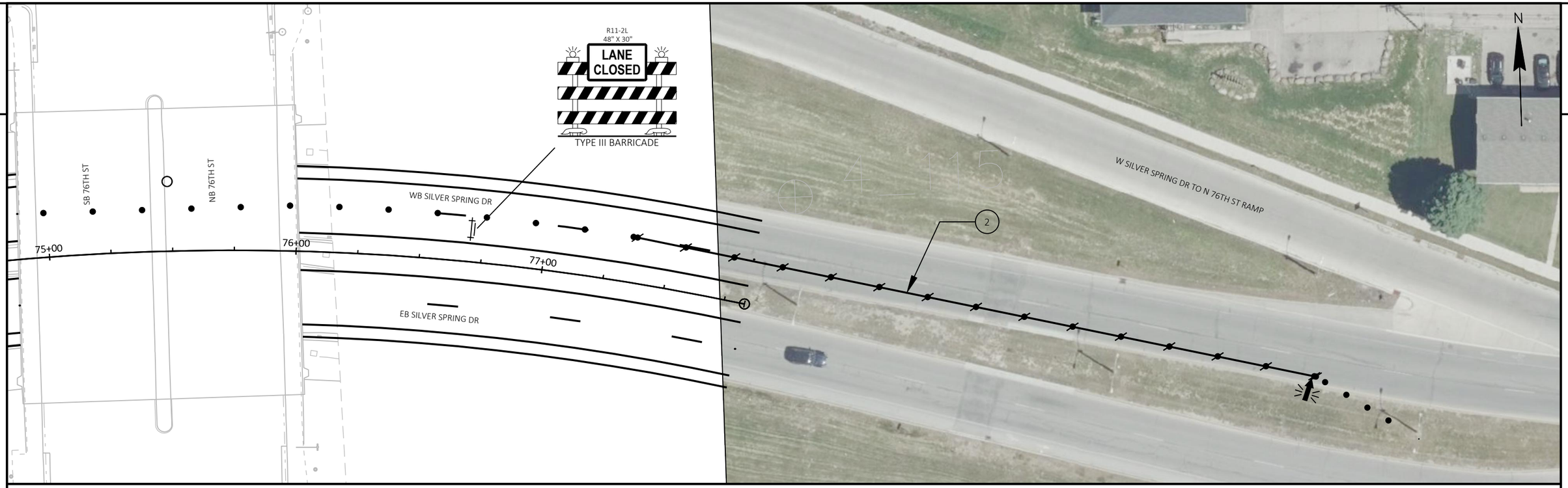
N

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 2	SHEET 67	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS2.DWG
LAYOUT NAME - 03

PLOT DATE : 4/10/2023 10:43 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



2

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 2	SHEET 68	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS2.DWG
LAYOUT NAME - 04
PLOT DATE : 4/10/2023 10:43 AM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2

W LEON TERRACE

MILL RD

NB STH 145

85 90 95

SB STH 145

SB STH 145 TO W FON DU LAC AVE

MATCH LINE 99+70

2

W LYNX AVE

SB N 91ST ST

NB N 91ST ST

NB STH 145 TO NB N 91ST ST

NB STH 145

100 105 110

SB STH 145

ROAD WORK AHEAD

W20-1A

MATCH LINE 99+70

SB N 91ST ST TO SB STH 145

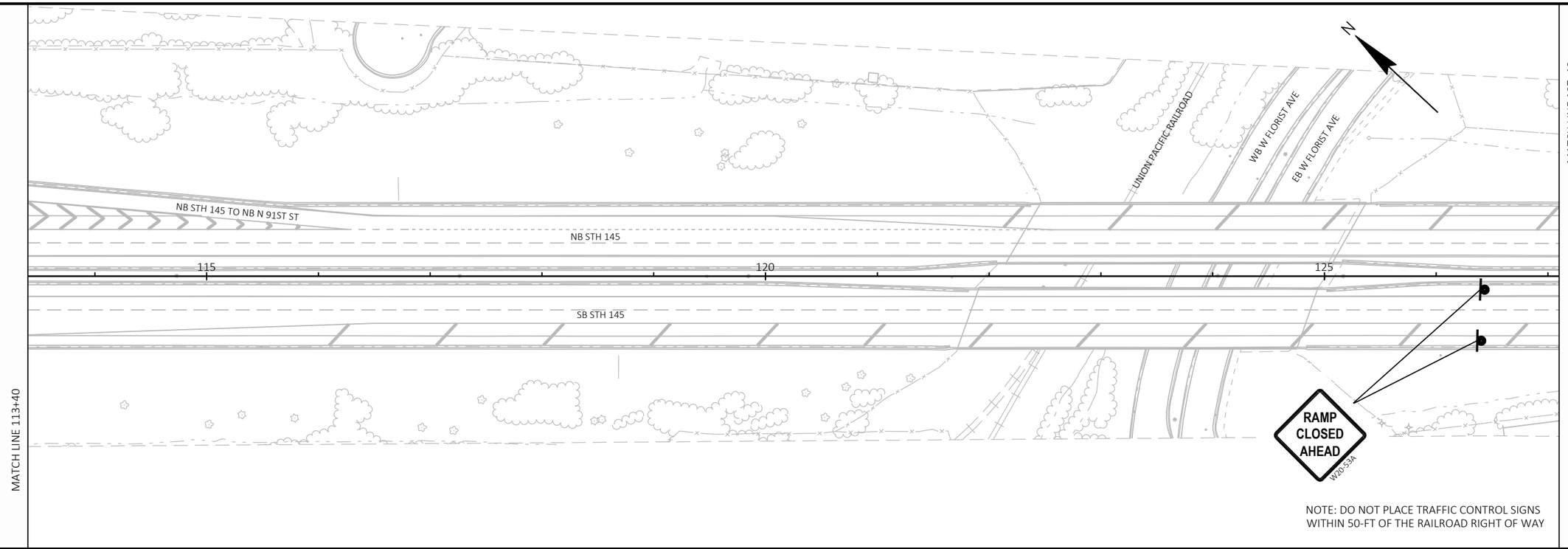
MATCH LINE 113+40

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 2 STH 145 SB OFF-RAMP	SHEET 69	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS2 RAMPS.DWG
LAYOUT NAME - 01

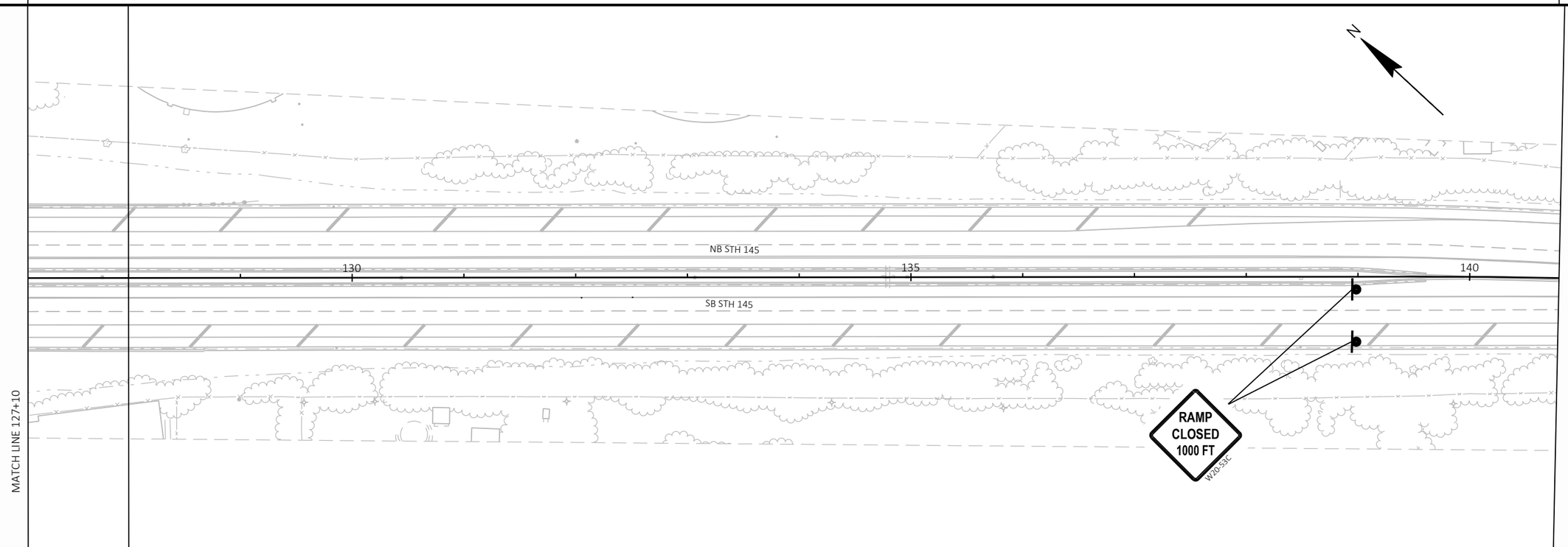
PLOT DATE : 4/10/2023 10:43 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



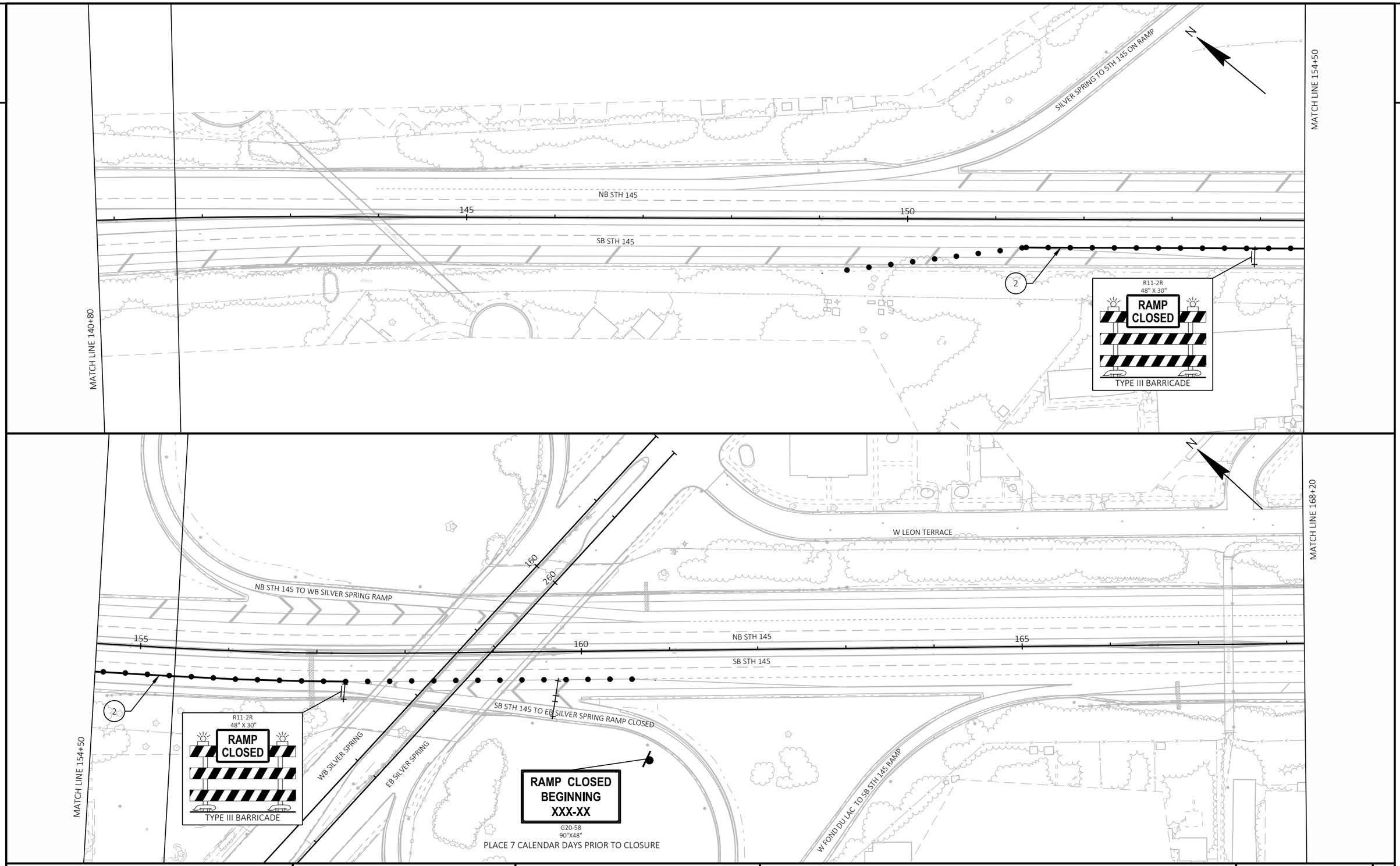
NOTE: DO NOT PLACE TRAFFIC CONTROL SIGNS WITHIN 50-FT OF THE RAILROAD RIGHT OF WAY

2



PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 2 STH 145 SB OFF-RAMP	SHEET 70	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS2 RAMPS.DWG
LAYOUT NAME - 02
PLOT DATE : 4/10/2023 10:43 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

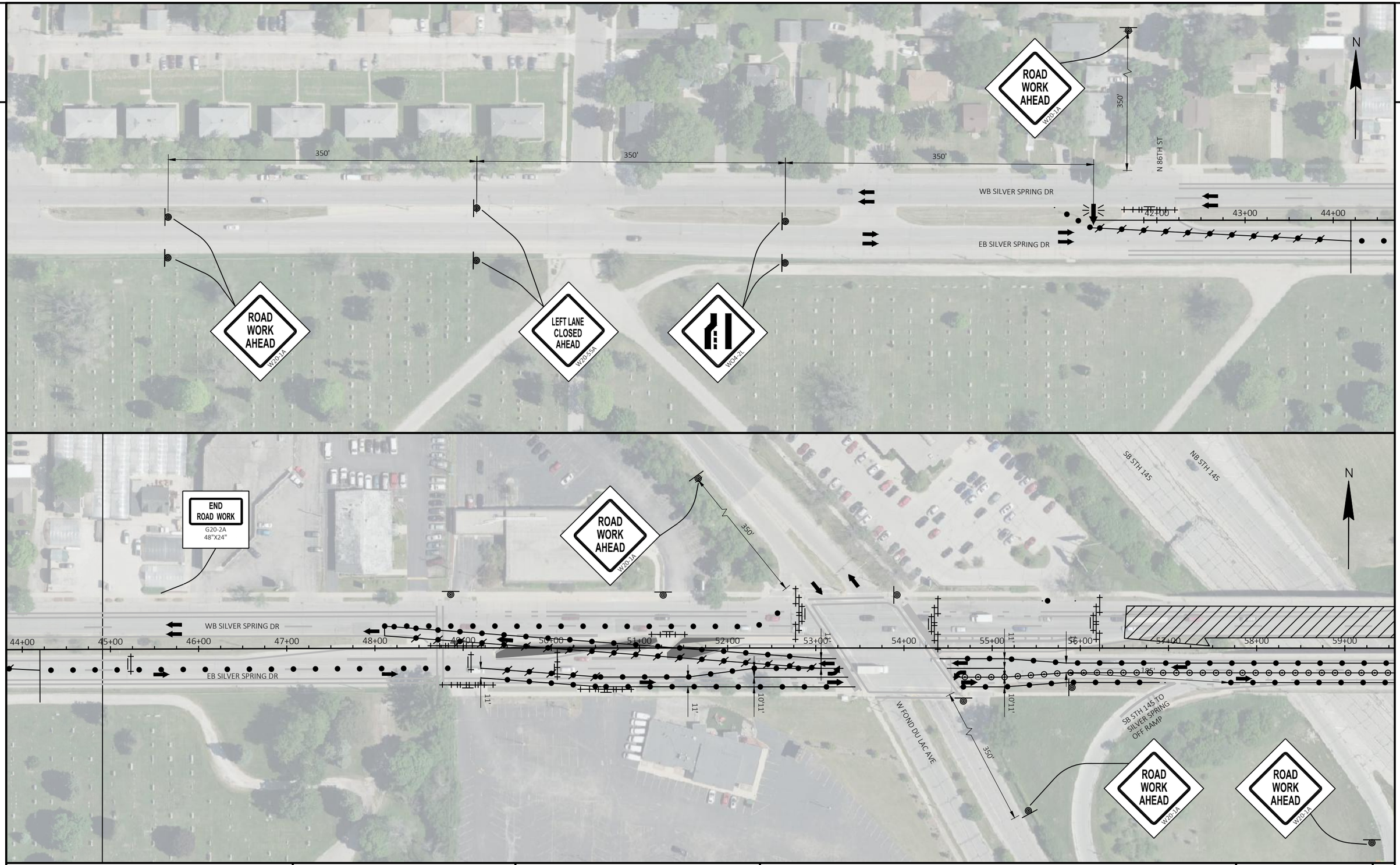


PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 2 STH 145 SB OFF-RAMP	SHEET 71	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS2 RAMPS.DWG
LAYOUT NAME - 03
PLOT DATE : 4/10/2023 10:44 AM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

2



PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 3 - ADVANCED SIGNING	SHEET 72	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS3 ADVANCED WARNING.DWG
LAYOUT NAME - 01

PLOT DATE : 4/10/2023 10:44 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

ROAD CLOSED AHEAD
W20-3A

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

ROAD WORK AHEAD
W20-1A

76th ST TO SILVER SPRING DR ON RAMP

295' MERGING TAPER (40MPH, 11' WIDTH)

N

NB STH 145 TO SILVER SPRING OFF RAMP

NB STH 145 ON RAMP

N 79TH ST

500' BUFFER

WB SILVER SPRING DR

59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00 67+00 68+00 69+00 70+00 71+00 72+00 73+00 74+00

11'

11'

EB SILVER SPRING DR

SILVER SPRING DR TO 76th ST OFF RAMP

W LEON TERRACE

ROAD WORK AHEAD
W20-1A

END ROAD WORK
G20-2A
48"X24"

ROAD WORK AHEAD
W20-1A

NB STH 145

RIGHT LANE CLOSED AHEAD
W20-5A

W4-2R

N 73RD ST

350'

350'

ROAD WORK AHEAD
W20-1A

N

SILVER SPRING DR TO 76th ST OFF RAMP

S 76TH ST

N 76TH ST

WB SILVER SPRING DR

74+00 75+00 76+00 77+00

EB SILVER SPRING DR

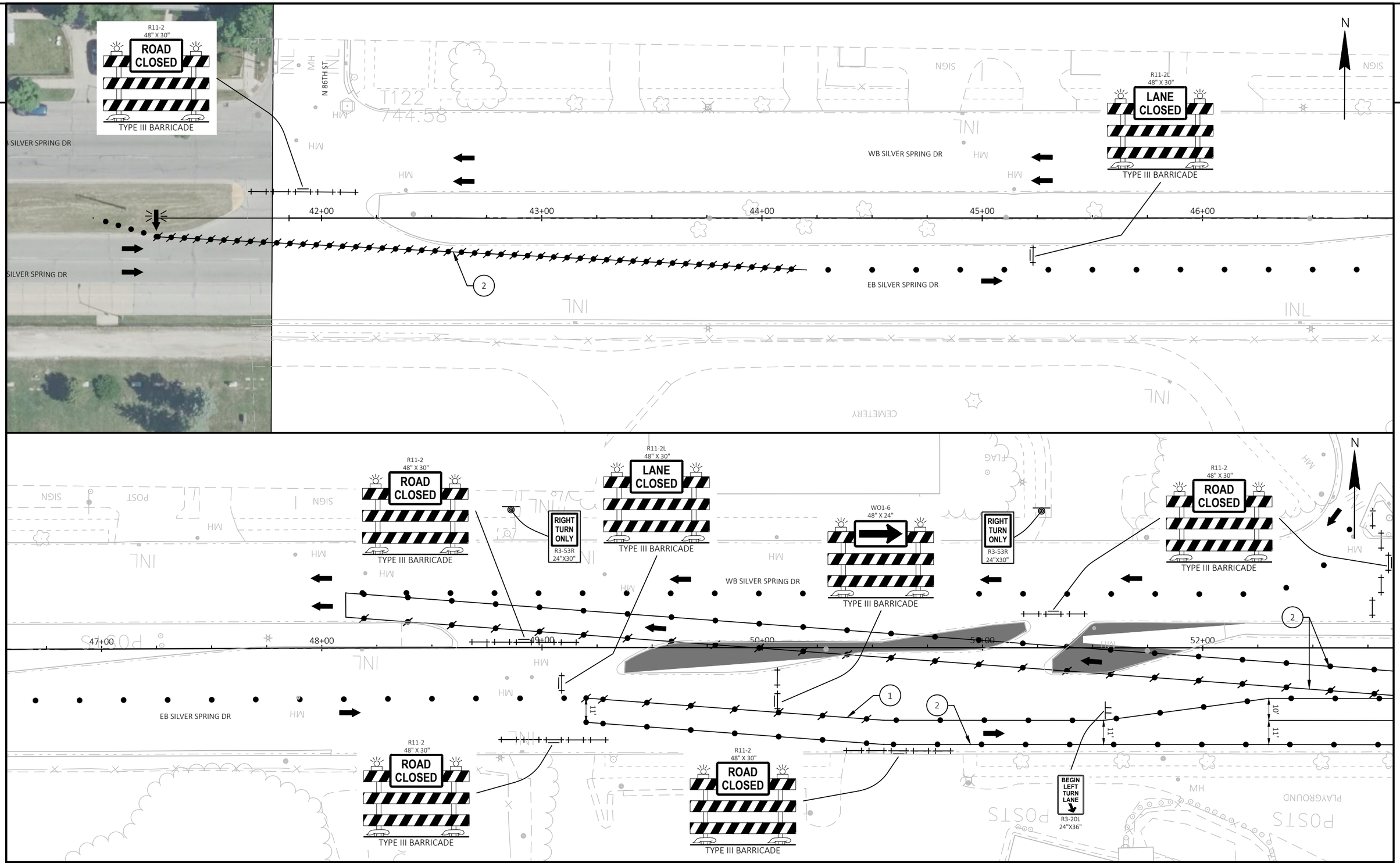
76th ST TO SILVER SPRING DR ON RAMP

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 3 - ADVANCED SIGNING	SHEET 73	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS3 ADVANCED WARNING.DWG
LAYOUT NAME - 02

PLOT DATE : 4/10/2023 10:44 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 3	SHEET 74	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS3.DWG
LAYOUT NAME - 01

PLOT DATE : 4/10/2023 10:44 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

W FOND DU LAC AVE

DETOUR
M4-9BR
30"X24"

SIDEWALK CLOSED AHEAD
R9-9A
30"X18"

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

WB SILVER SPRING DR

TEMPORARY PEDESTRIAN BARRICADE

SIDEWALK CLOSED
R9-9
24"X12"

R11-2B
48" X 30"
BRIDGE OUT
TYPE III BARRICADE

53+00 54+00 55+00 56+00 57+00 58+00 59+00

11' 11' 10' 11' 11' 11'

EB SILVER SPRING DR

W6-4
12"X18"

W FOND DU LAC AVE

DETOUR
M4-9BL
30"X24"

DO NOT PASS
R4-1
24"X30"

ONLY
R3-8LF
36"X30"

SB STH 145 TO SILVER SPRING OFF RAMP

W06-3

N

NB STH 145 TO SILVER SPRING OFF RAMP CLOSED

R11-2B
48" X 30"
BRIDGE OUT
TYPE III BARRICADE

NB STH 145 ON RAMP

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

SIDEWALK CLOSED
R9-9
24"X12"

TEMPORARY PEDESTRIAN BARRICADE

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

WB SILVER SPRING DR

DO NOT PASS
R4-1
24"X30"

W06-3

59+00 60+00 61+00 62+00 63+00 64+00 65+00

11' 11' 11' 11'

EB SILVER SPRING DR

R3-2
24"X24"

W6-4
12"X18"

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

W LEON TERRACE

RIGHT TURN ONLY
R3-53R
24"X30"

SB STH 145

NB STH 145

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 3	SHEET 75	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS3.DWG
LAYOUT NAME - 02

PLOT DATE : 4/10/2023 10:44 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

R3-1
24"X24"

N 79TH ST

RIGHT TURN ONLY
R3-53R
24"X30"

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

WO1-6
48" X 24"
TYPE III BARRICADE

DETOUR
M4-9BR
30"X24"

N 78TH ST

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

STOP
R1-1
30"X30"

N 76TH ST TO W SILVER SPRING DR RAMP

WB SILVER SPRING DR

EB SILVER SPRING DR

11'

65+00 66+00 67+00 68+00 69+00 70+00 71+00

R11-2
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

DETOUR
M4-9BL
30"X24"

N

WB SILVER SPRING DR

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

N 76TH ST TO W SILVER SPRING DR RAMP

WB SILVER SPRING DR

EB SILVER SPRING DR

W SILVER SPRING DR TO N 76TH ST RAMP

SB 76TH ST

NB 76TH ST

71+00 72+00 73+00 74+00 75+00 76+00

N

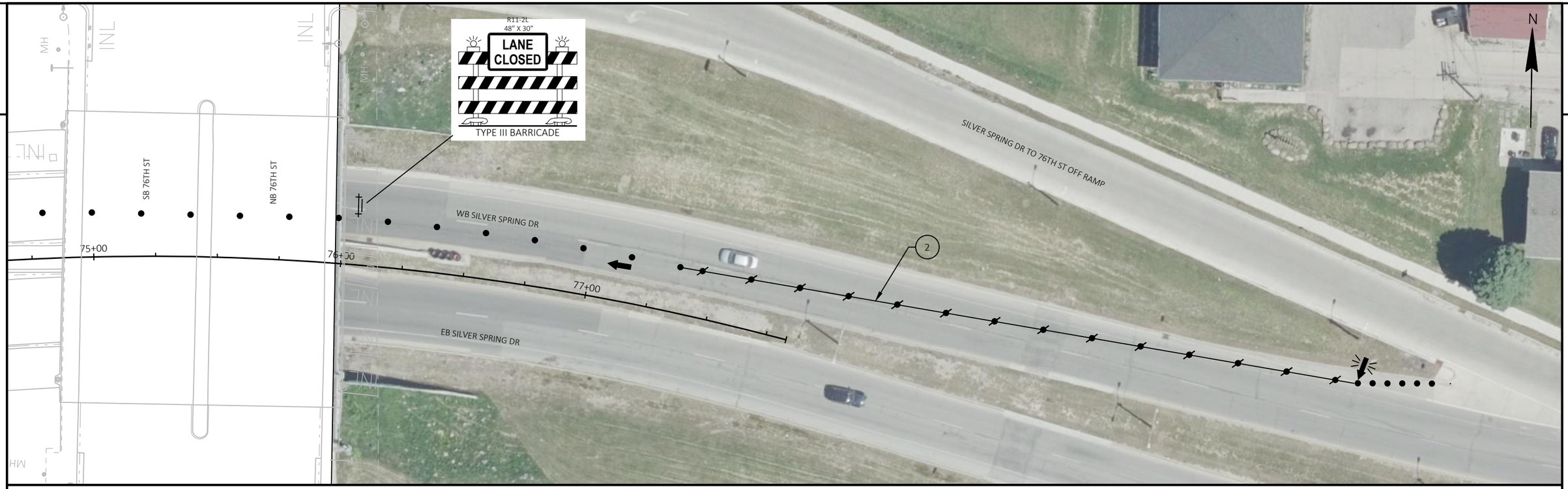
WB SILVER SPRING DR

EB SILVER SPRING DR

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 3	SHEET 76	E

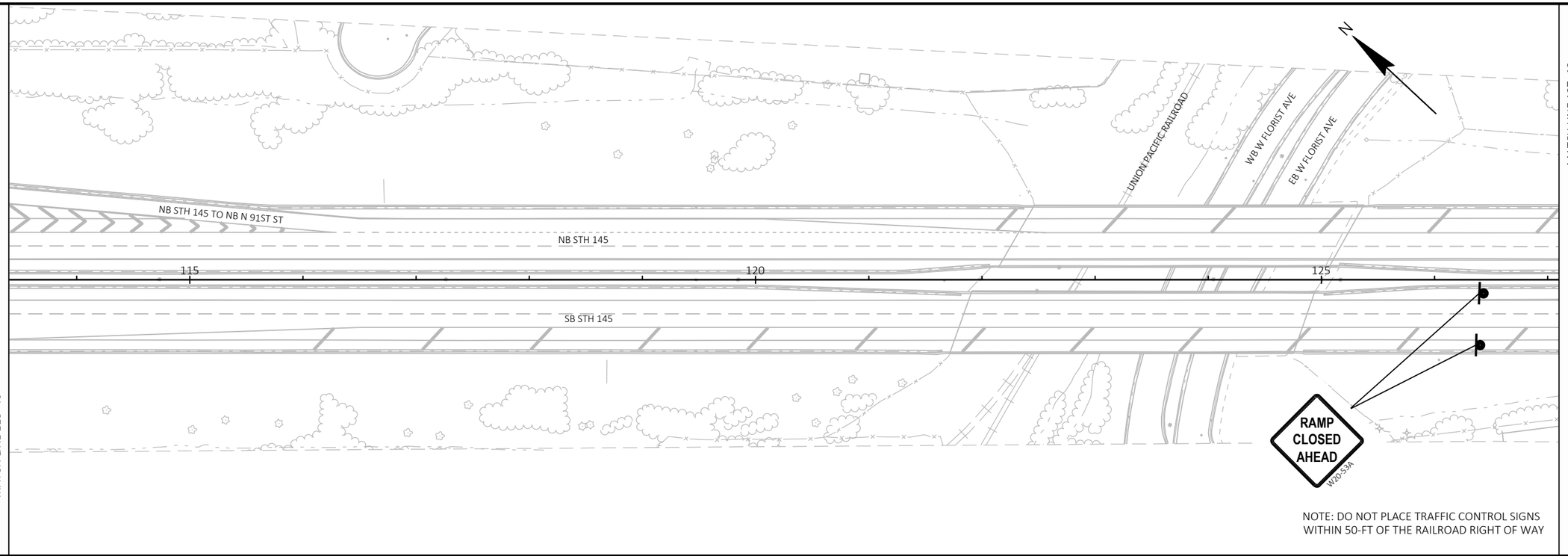
FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS3.DWG
LAYOUT NAME - 03

PLOT DATE : 4/10/2023 10:44 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:40 FT



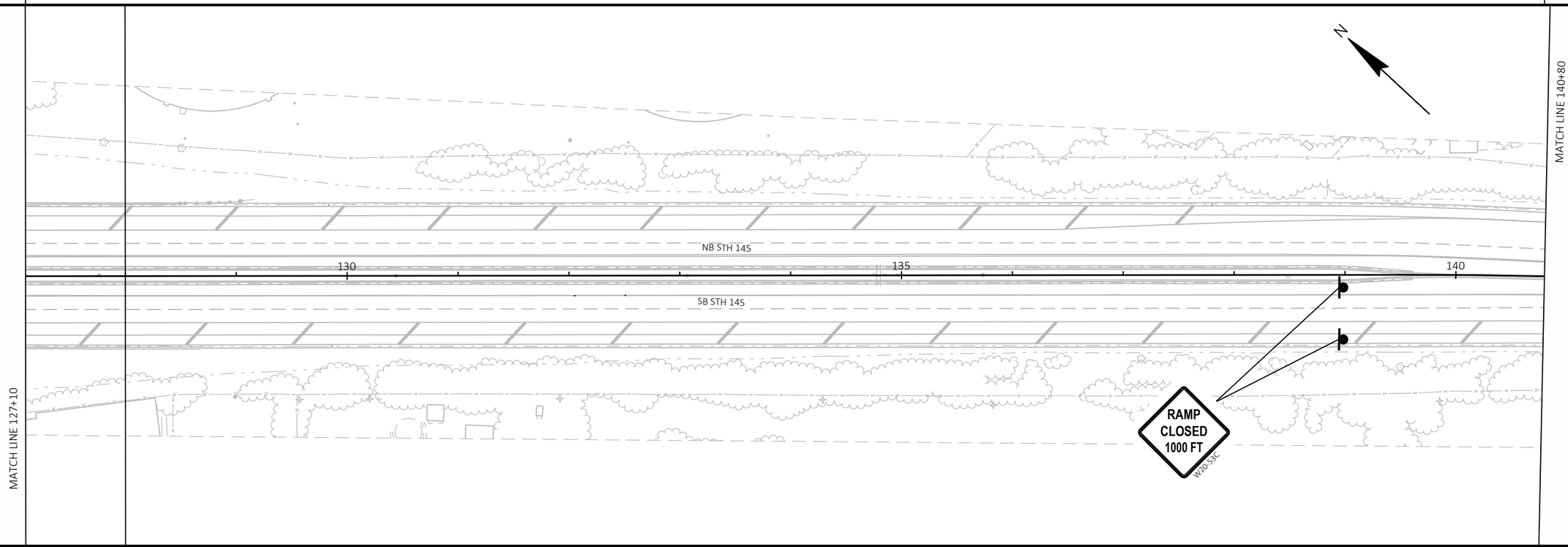
PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 3	SHEET 77	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS3.DWG
LAYOUT NAME - 04
PLOT DATE : 4/10/2023 10:44 AM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44



NOTE: DO NOT PLACE TRAFFIC CONTROL SIGNS WITHIN 50-FT OF THE RAILROAD RIGHT OF WAY

2



PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 3 STH 145 NB OFF-RAMP	SHEET 78	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS3 RAMPS.DWG
LAYOUT NAME - 02
PLOT DATE : 4/10/2023 10:45 AM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

2

MATCH LINE 140+80

MATCH LINE 154+50

SILVER SPRING TO STH 145 ON RAMP

N

NB STH 145

145

150

SB STH 145

PLACE 7 CALENDAR DAYS PRIOR TO CLOSURE

RAMP CLOSED BEGINNING XXX-XX

G20-58
90"X48"

R11-2R
48" X 30"

RAMP CLOSED

TYPE III BARRICADE

R11-2R
48" X 30"

RAMP CLOSED

TYPE III BARRICADE

N

MATCH LINE 168+20

W LEON TERRACE

660' TAPER

2

160

260

NB STH 145 TO WB SILVER SPRING RAMP CLOSED

155

160

165

NB STH 145

SB STH 145

SB STH 145 TO EB SILVER SPRING RAMP

MATCH LINE 154+50

WB SILVER SPRING

EB SILVER SPRING

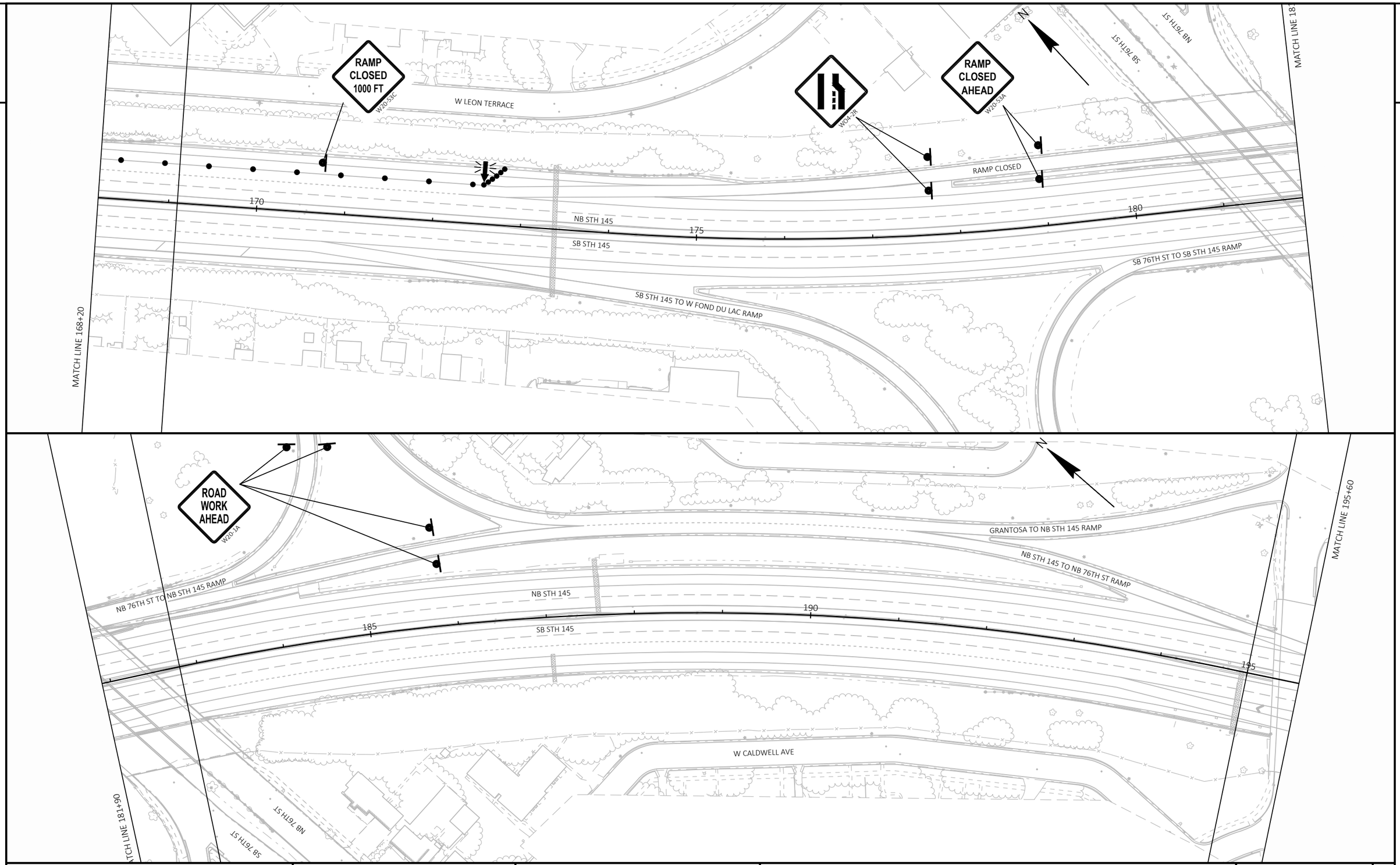
W FOND DU LAC TO SB STH 145 RAMP

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 3 STH 145 NB OFF-RAMP	SHEET 79	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS3 RAMPS.DWG
LAYOUT NAME - 03

PLOT DATE : 4/10/2023 10:45 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

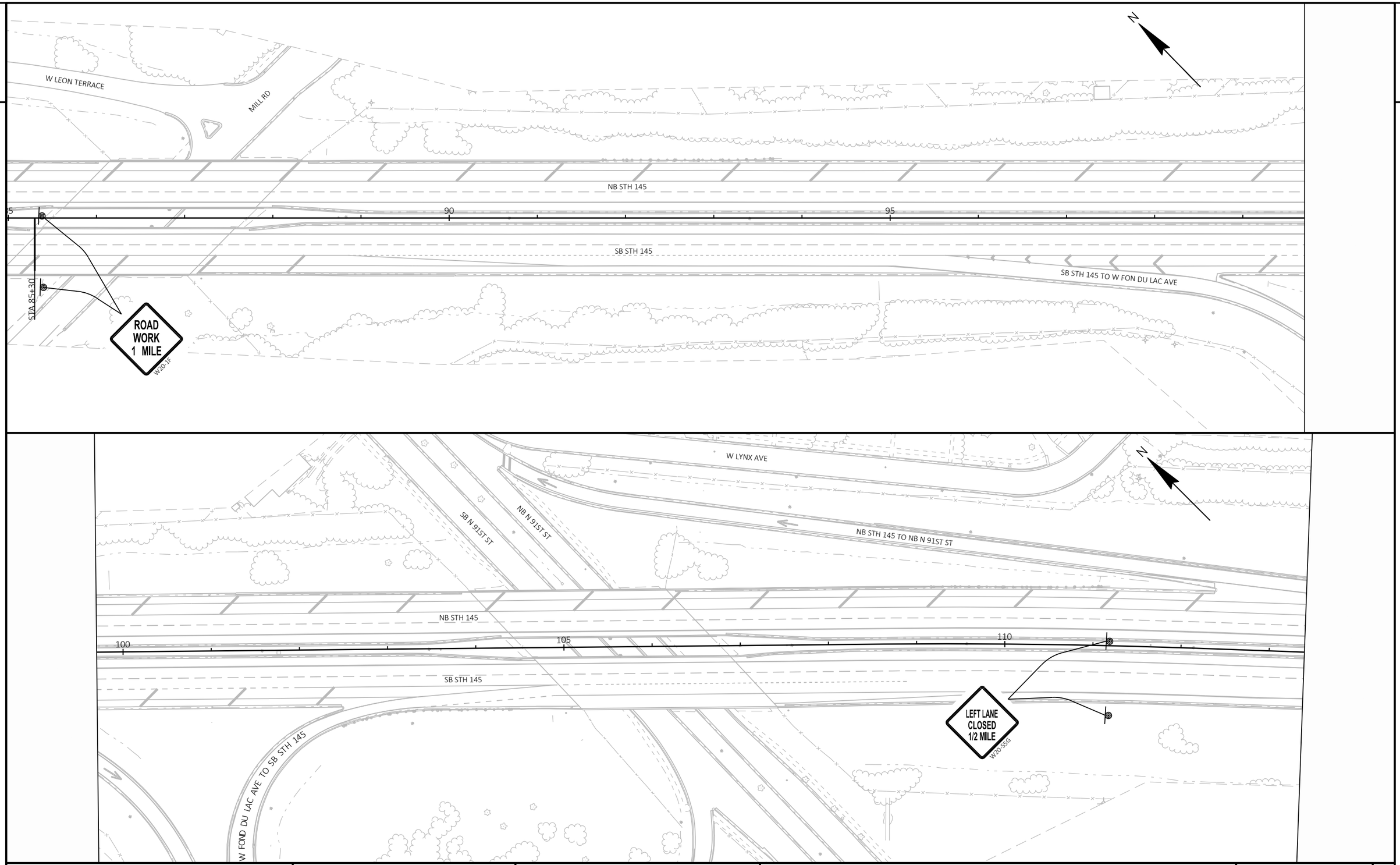


PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - SILVER SPRING DR STAGE 3 STH 145 NB OFF-RAMP	SHEET 80	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025101_TC_SS3 RAMPS.DWG
LAYOUT NAME - 04

PLOT DATE : 4/10/2023 10:45 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

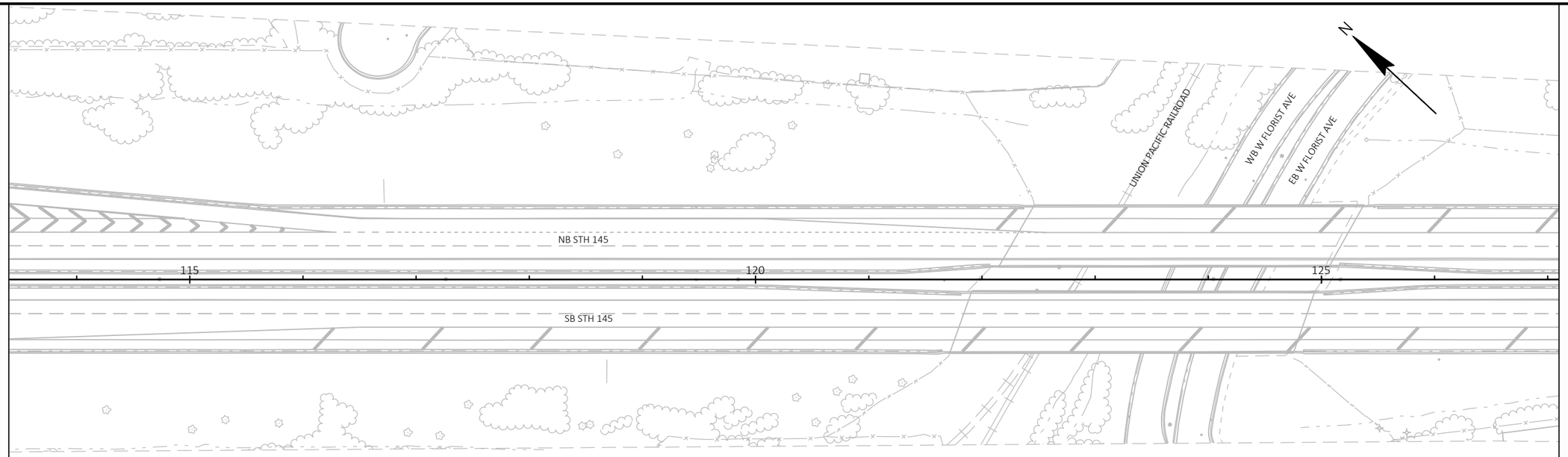


PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 145 STAGE 1	SHEET 81	E

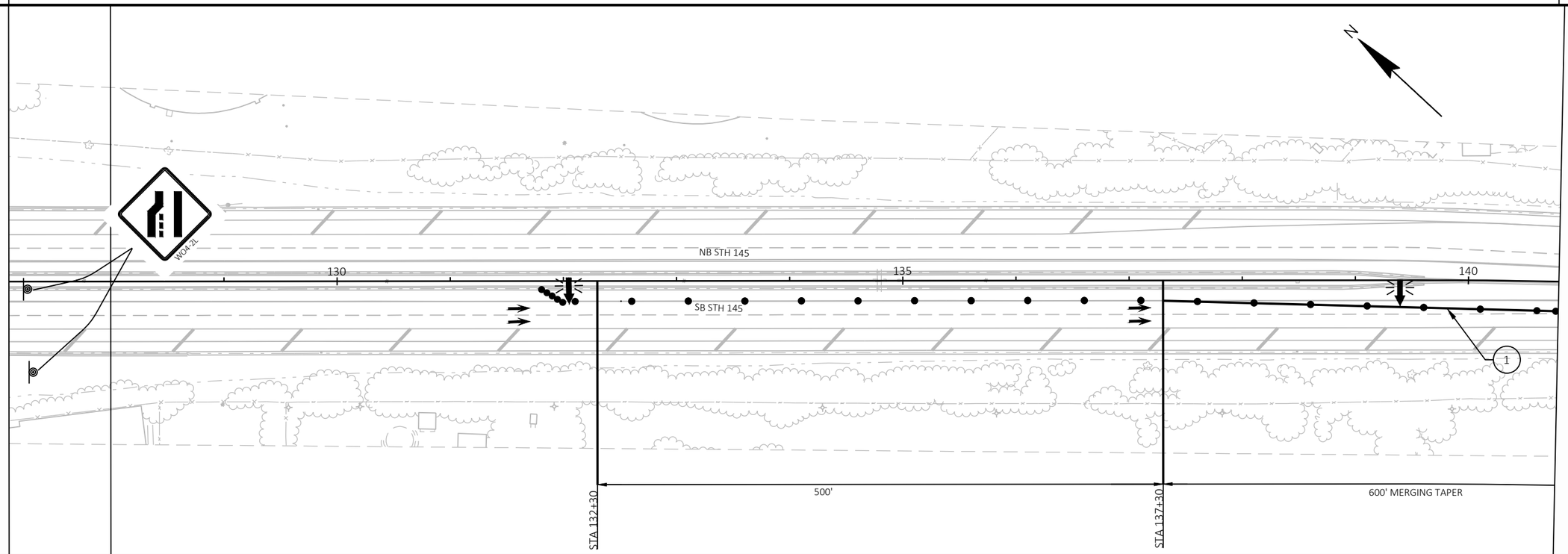
FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025105_TC_145_1.DWG
LAYOUT NAME - 01

PLOT DATE : 4/10/2023 10:45 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



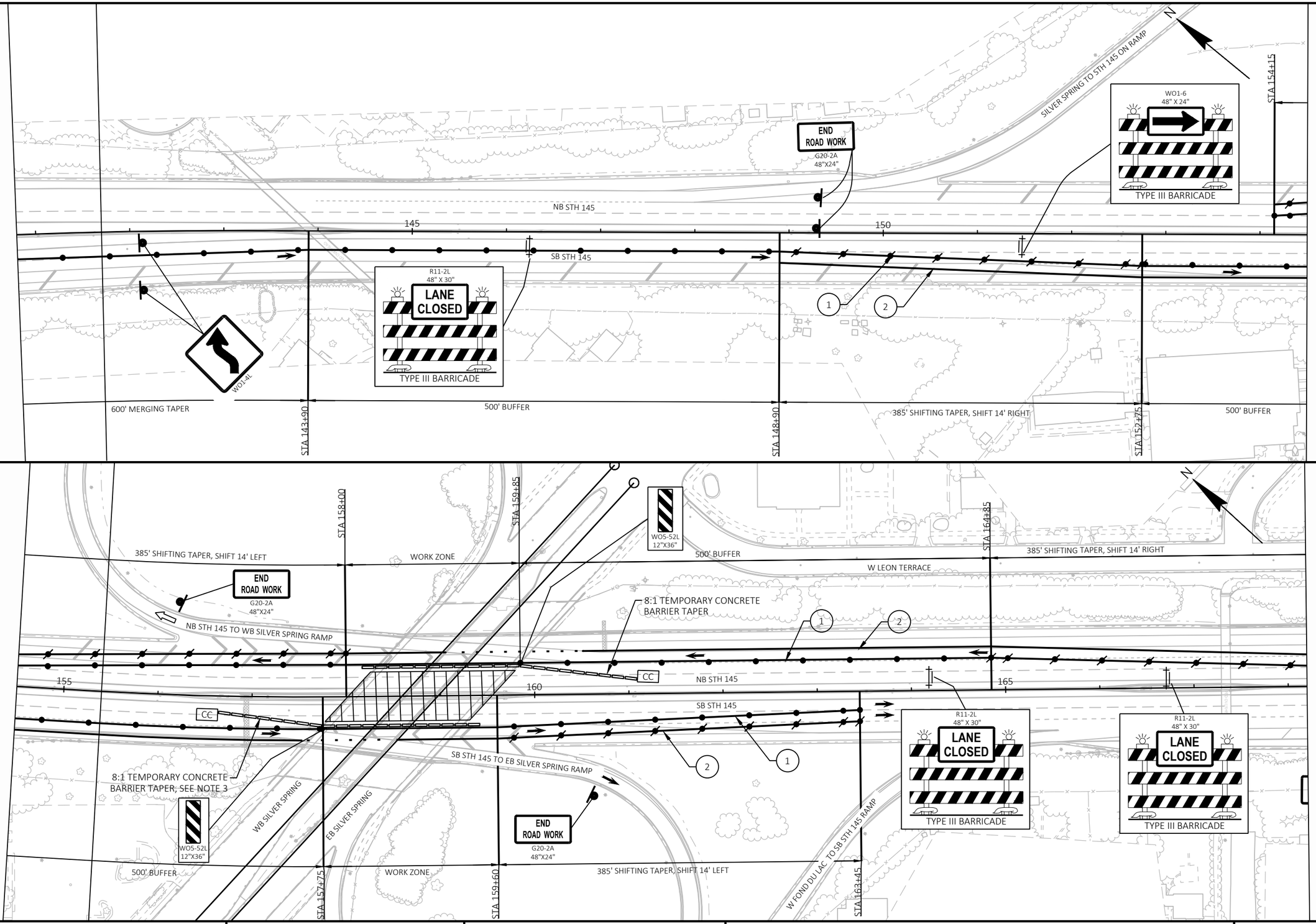
NOTE: DO NOT PLACE TRAFFIC CONTROL SIGNS
WITHIN 50-FT OF THE RAILROAD RIGHT OF WAY



PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 145 STAGE 1	SHEET 82	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025105_TC_145_1.DWG
LAYOUT NAME - 02
PLOT DATE : 4/10/2023 10:46 AM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2



PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 145 STAGE 1	SHEET 83	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025105_TC_145_1.DWG
LAYOUT NAME - 03
PLOT DATE : 4/10/2023 10:46 AM
PLOT BY : DEITCH, AIDAN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

STA 168+70

W LEON TERRACE

STA 177+55

660' MERGING TAPER

N

NB 76TH ST

SB 76TH ST

RAMP CLOSED

170

NB STH 145

175

SB STH 145

180

SB 76TH ST TO SB STH 145 RAMP

END ROAD WORK

G20-2A

48"X24"

SB STH 145 TO W FOND DU LAC RAMP

STA 184+15

RAMP CLOSED

500' BUFFER

STA 189+15

500'

RAMP CLOSED 500 FT

W20-5SD

GRANTOSA TO NB STH 145 RAMP

NB STH 145 TO NB 76TH ST RAMP

NB 76TH ST TO NB STH 145 RAMP

NB STH 145

185

SB STH 145

190

195

W04-2L

W CALDWELL AVE

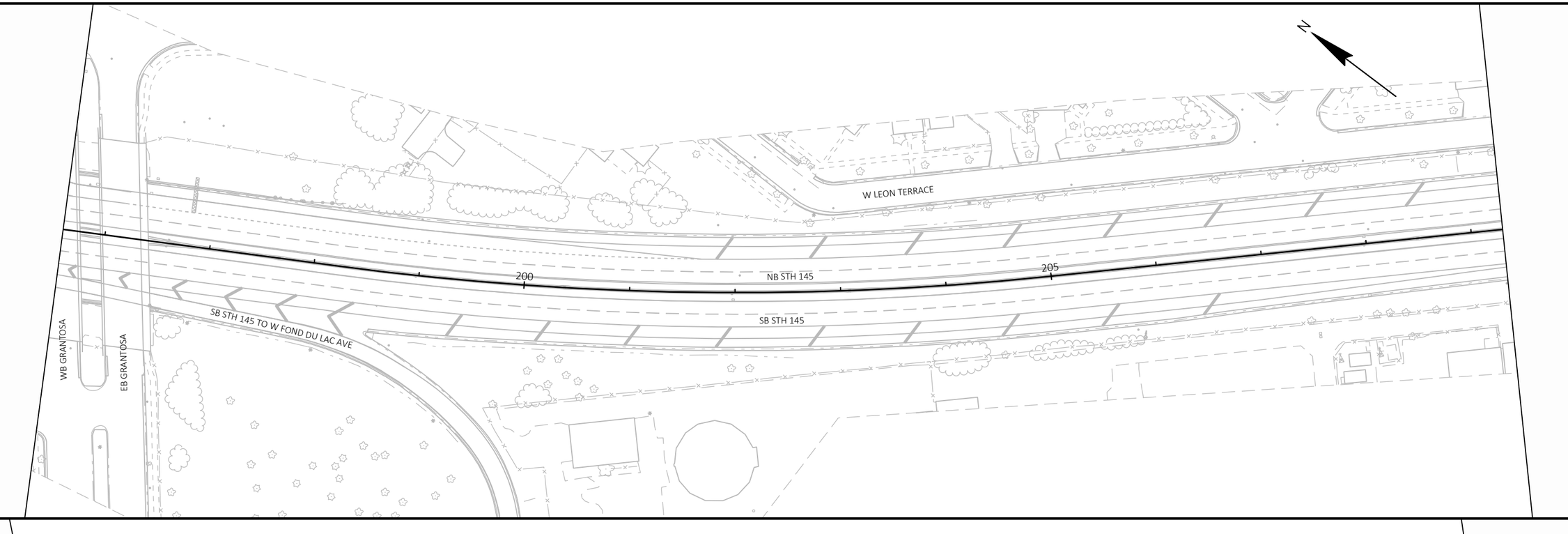
NB 76TH ST

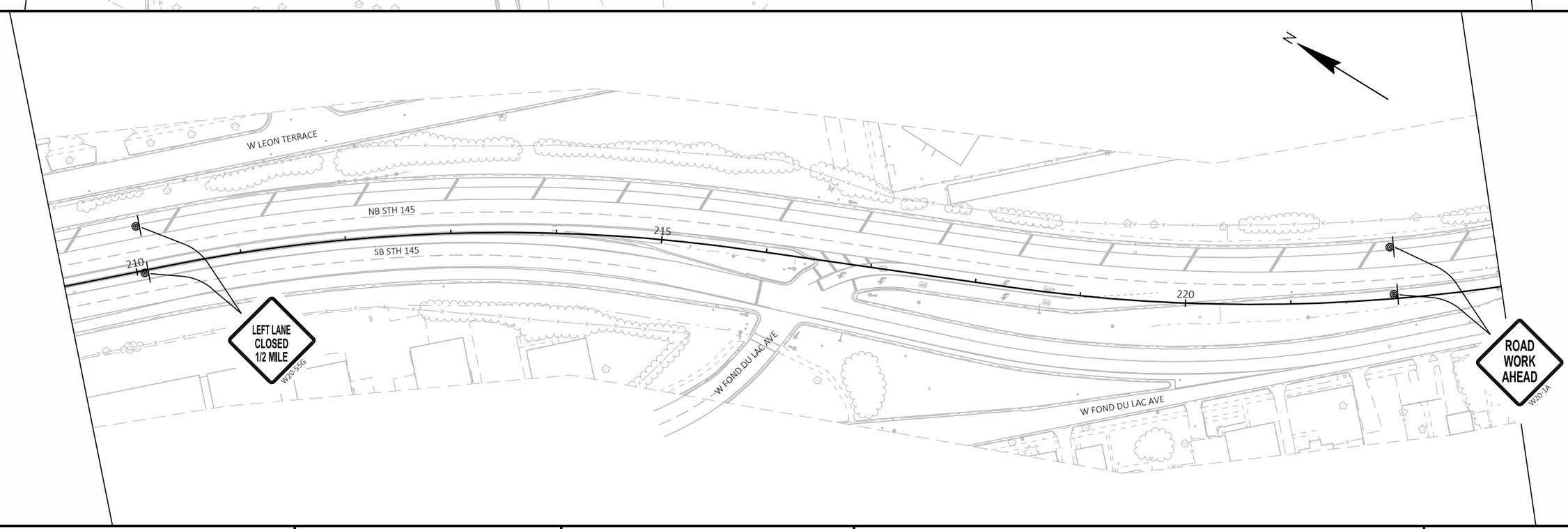
SB 76TH ST

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 145 STAGE 1	SHEET 84	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025105_TC_145_1.DWG
LAYOUT NAME - 04

PLOT DATE : 4/10/2023 10:46 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT





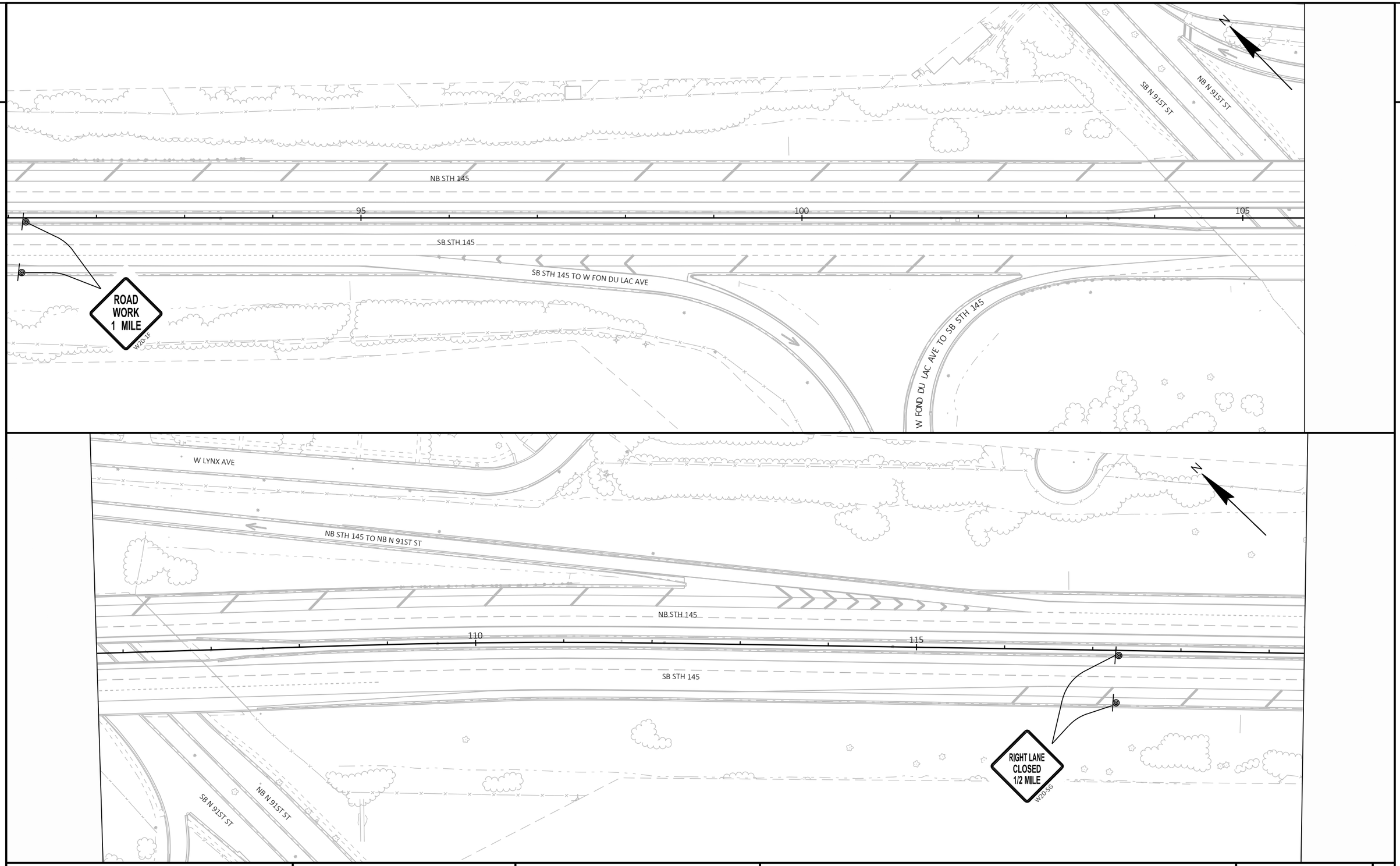
PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 145 STAGE 1	SHEET 85	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025105_TC_145_1.DWG
LAYOUT NAME - 05

PLOT DATE : 4/10/2023 10:46 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

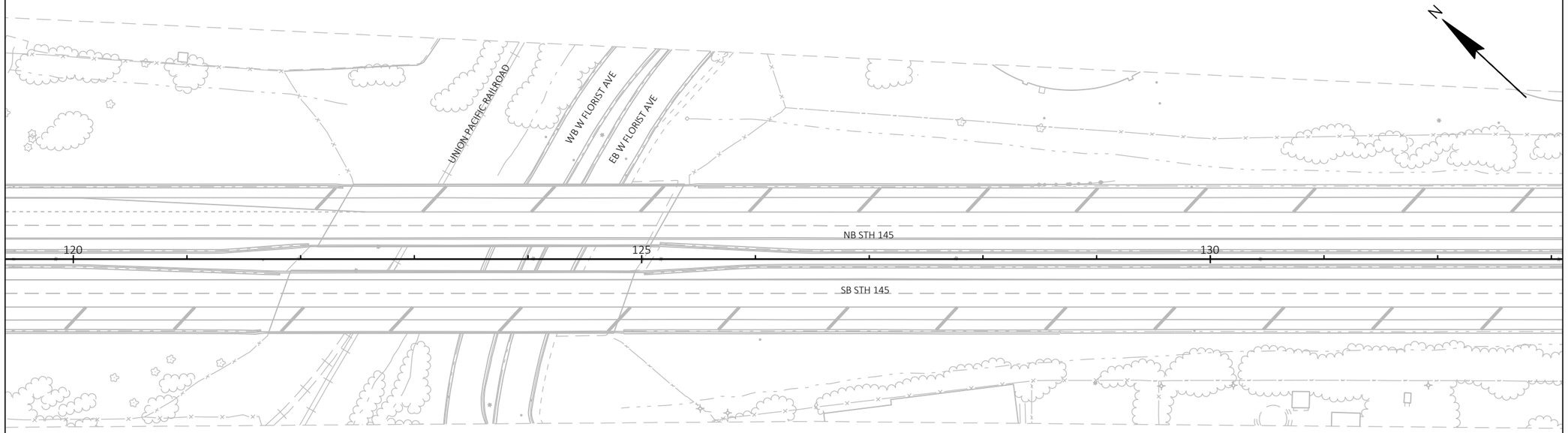
2



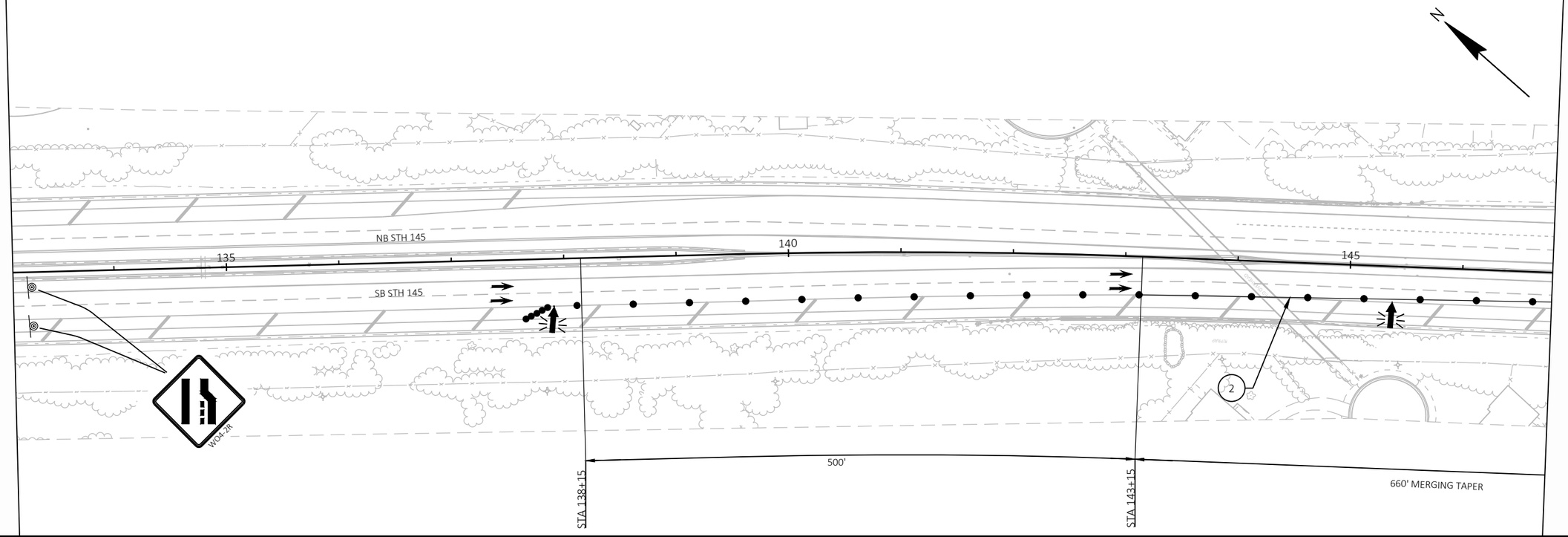
PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 145 STAGE 2	SHEET 86	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025105_TC_145_2.DWG
LAYOUT NAME - 01

PLOT DATE : 4/10/2023 10:46 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT



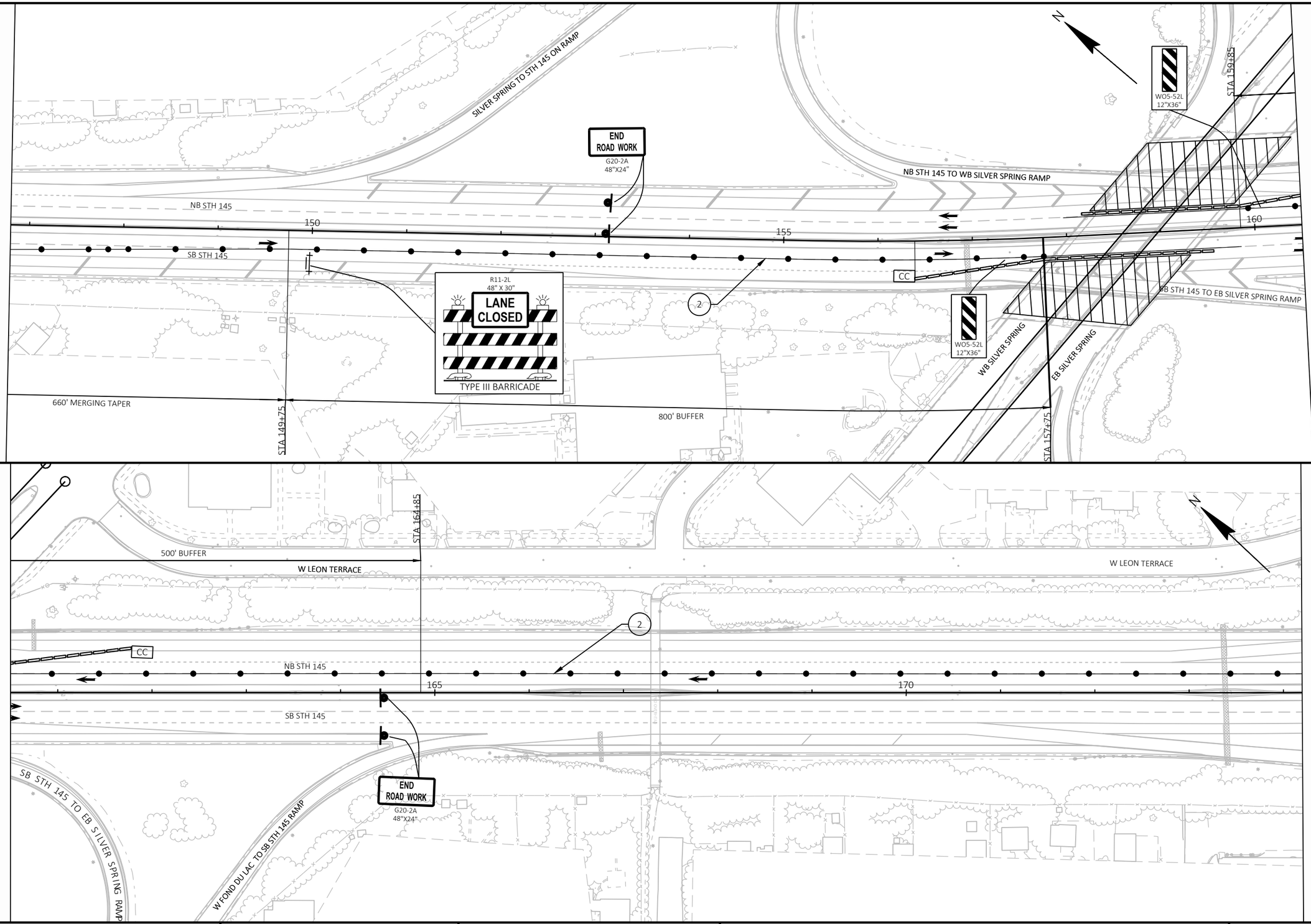
NOTE: DO NOT PLACE TRAFFIC CONTROL SIGNS
WITHIN 50-FT OF THE RAILROAD RIGHT OF WAY



PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 145 STAGE 2	SHEET 87	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025105_TC_145_2.DWG
LAYOUT NAME - 02

PLOT DATE : 4/10/2023 10:47 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

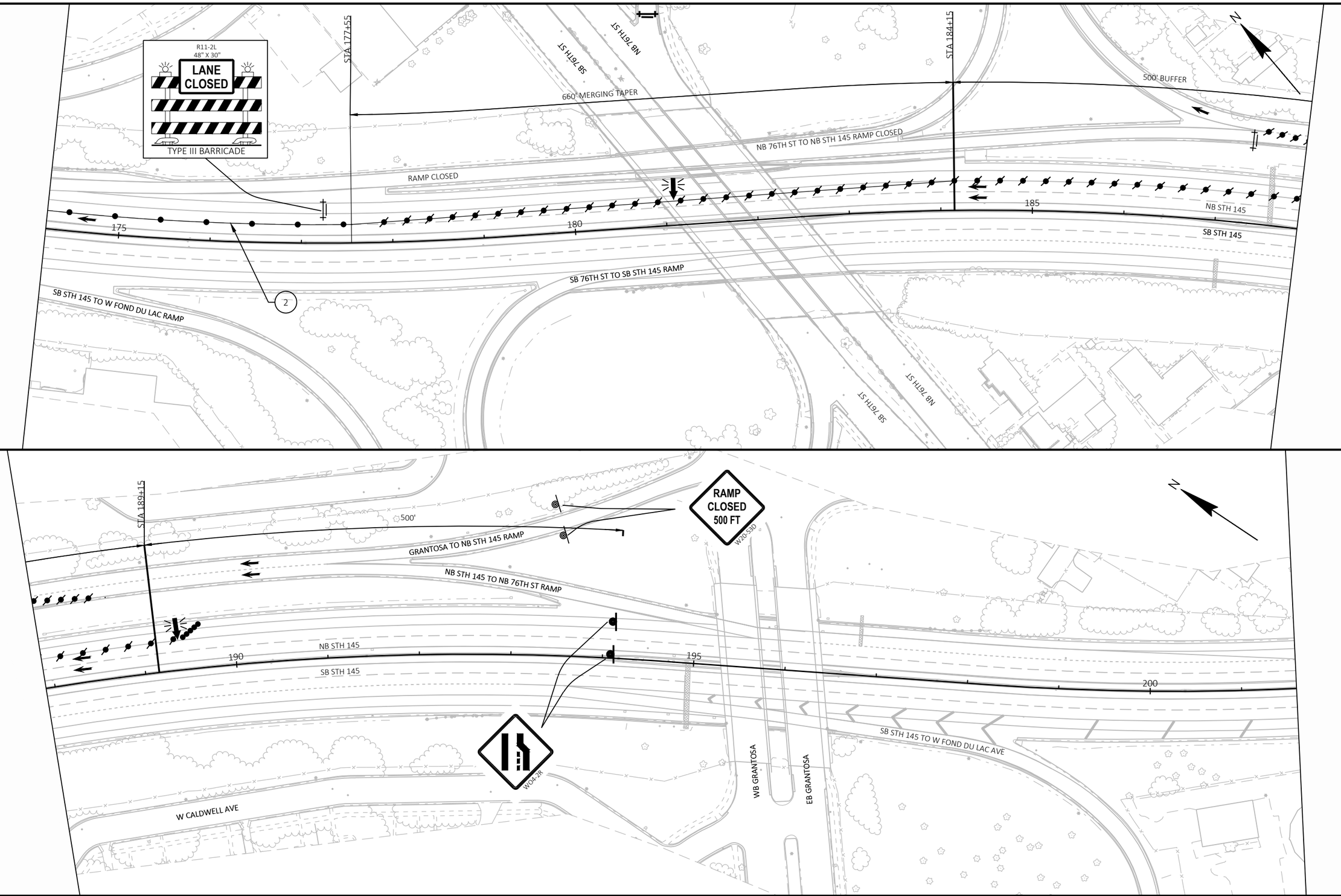


PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 145 STAGE 2	SHEET 88	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025105_TC_145_2.DWG
LAYOUT NAME - 03

PLOT DATE : 4/10/2023 10:47 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

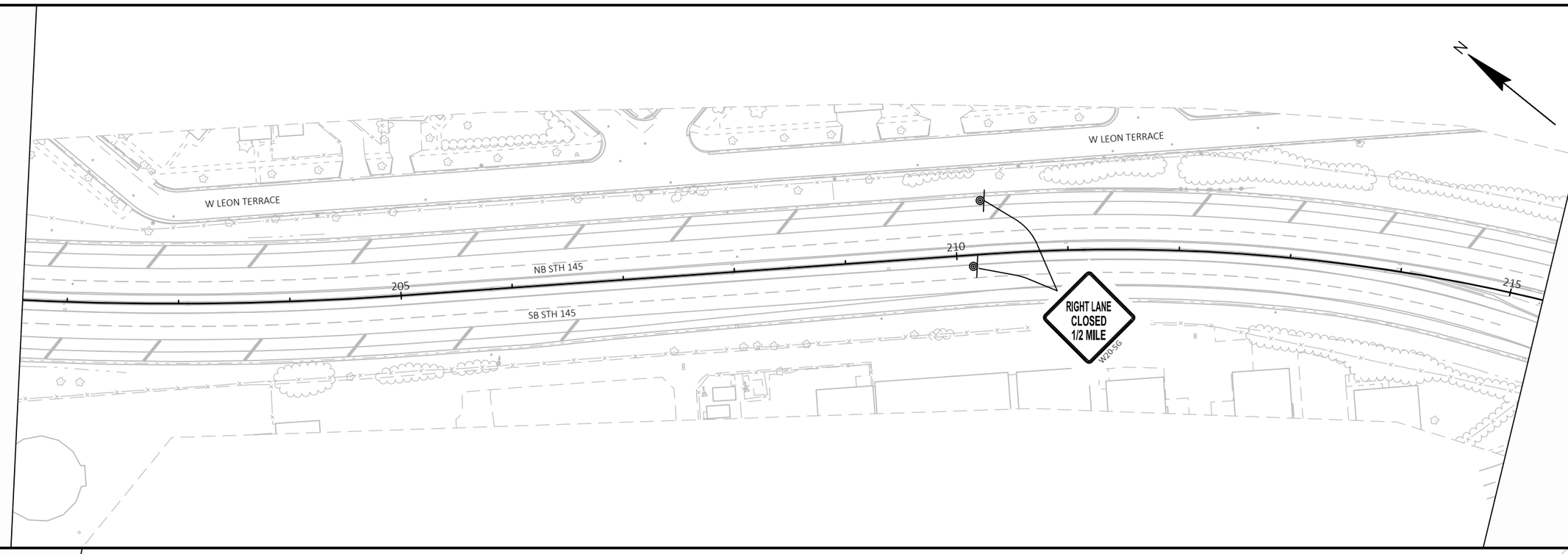


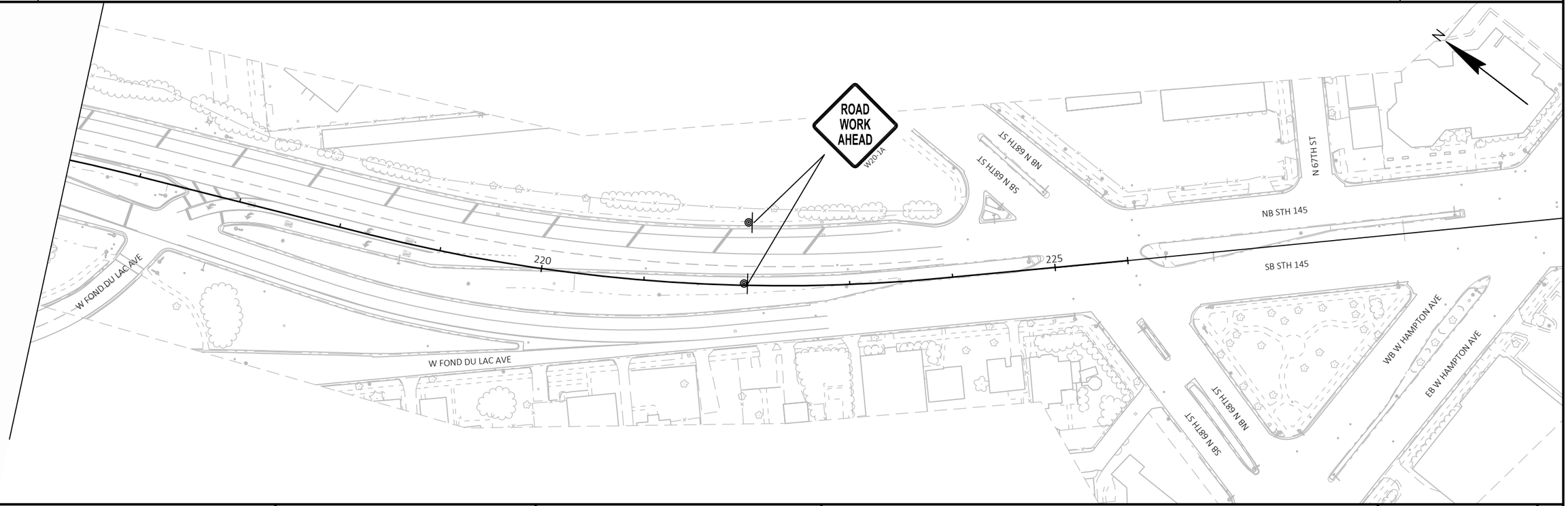
PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 145 STAGE 2	SHEET 89	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025105_TC_145_2.DWG
LAYOUT NAME - 04

PLOT DATE : 4/10/2023 10:47 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2





PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 145 STAGE 2	SHEET 90	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025105_TC_145_2.DWG
LAYOUT NAME - 05

PLOT DATE : 4/10/2023 10:47 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

W FOND DU LAC AVE

SB STH 145 ON RAMP

RL STH 145

SB STH 145

NB STH 145

180

W LEON TERRACE

SB N 76TH ST

45

50

55

60

NB N 76TH ST

PLACE 7 CALENDAR DAYS PRIOR TO CLOSURE

RL N 76TH ST

RAMP CLOSED BEGINNING XXX-XX

G20-58
90"X48"

R11-2R
48" X 30"

RAMP CLOSED

TYPE III BARRICADE

RAMP CLOSED AHEAD

W20-53A

W CALDWELL AVE

58T

NB STH 145 ON RAMP

RAMP TO NB 76TH ST

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STH 145 STAGE 1 AND 2	SHEET 91	E

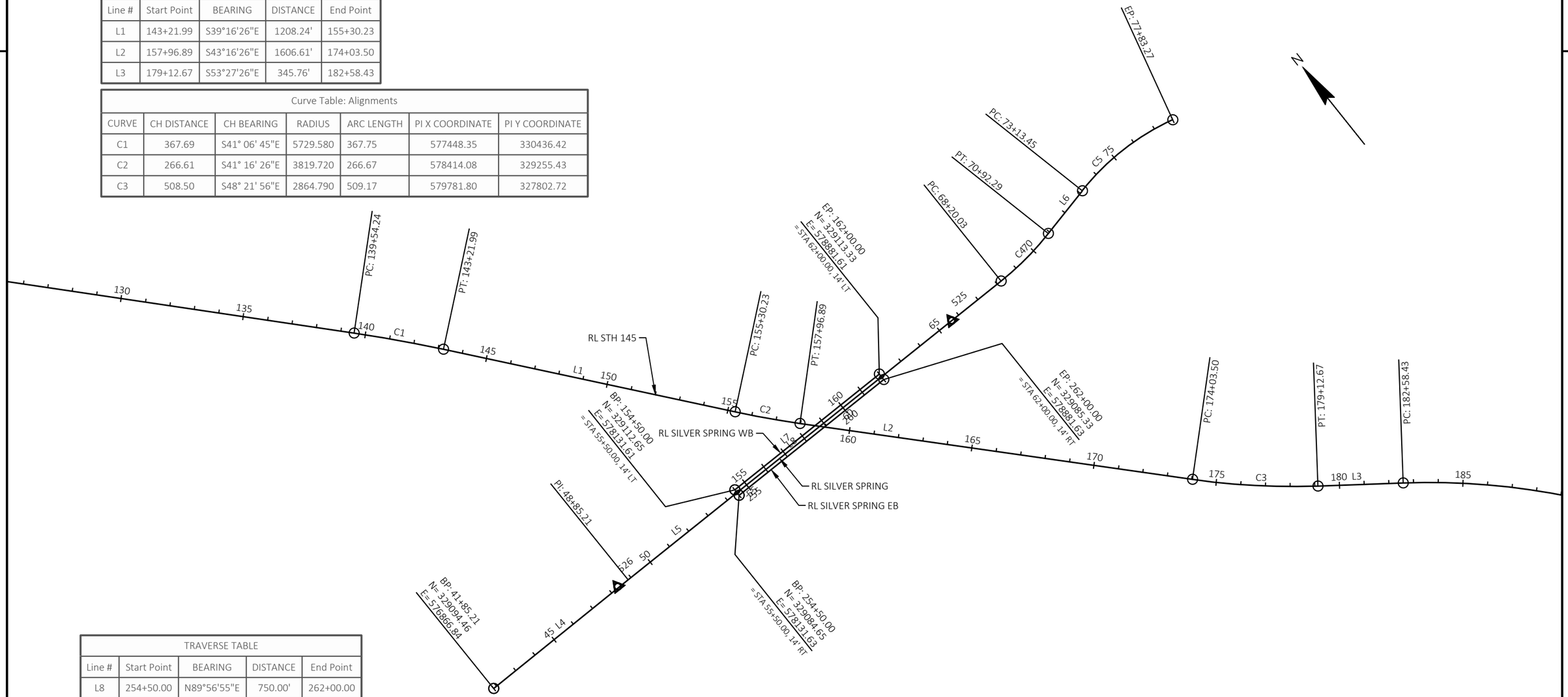
FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\025105_TC_145_3.DWG
LAYOUT NAME - 01

PLOT DATE : 4/10/2023 10:47 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

TRAVERSE TABLE				
Line #	Start Point	BEARING	DISTANCE	End Point
L1	143+21.99	S39°16'26"E	1208.24'	155+30.23
L2	157+96.89	S43°16'26"E	1606.61'	174+03.50
L3	179+12.67	S53°27'26"E	345.76'	182+58.43

Curve Table: Alignments						
CURVE	CH DISTANCE	CH BEARING	RADIUS	ARC LENGTH	PI X COORDINATE	PI Y COORDINATE
C1	367.69	S41° 06' 45"E	5729.580	367.75	577448.35	330436.42
C2	266.61	S41° 16' 26"E	3819.720	266.67	578414.08	329255.43
C3	508.50	S48° 21' 56"E	2864.790	509.17	579781.80	327802.72



TRAVERSE TABLE				
Line #	Start Point	BEARING	DISTANCE	End Point
L8	254+50.00	N89°56'55"E	750.00'	262+00.00
L7	154+50.00	N89°56'55"E	750.00'	162+00.00
L4	41+85.21	N89°41'54"E	700.00'	48+85.21
L5	48+85.21	N89°56'55"E	1934.82'	68+20.03
L6	70+92.29	N77°03'37"E	221.16'	73+13.45

Curve Table: Alignments						
CURVE	CH DISTANCE	CH BEARING	RADIUS	ARC LENGTH	PI X COORDINATE	PI Y COORDINATE
C4	271.69	N83° 30' 16"E	1210.350	272.26	579638.36	329100.01
C5	465.51	S89° 28' 49"E	1000.000	469.82	580220.39	329233.73

CONTROL POINTS					
NAME	STATION	ELEVATION	DESCRIPTION	Y	X
525	65+63.57 0.85' LT	734.07	CP FENO WITH ALUMINUM CAP	329100.501	579245.187
526	48+35.23 5.67' LT	737.16	CP FENO WITH ALUMINUM CAP	329103.554	577516.820

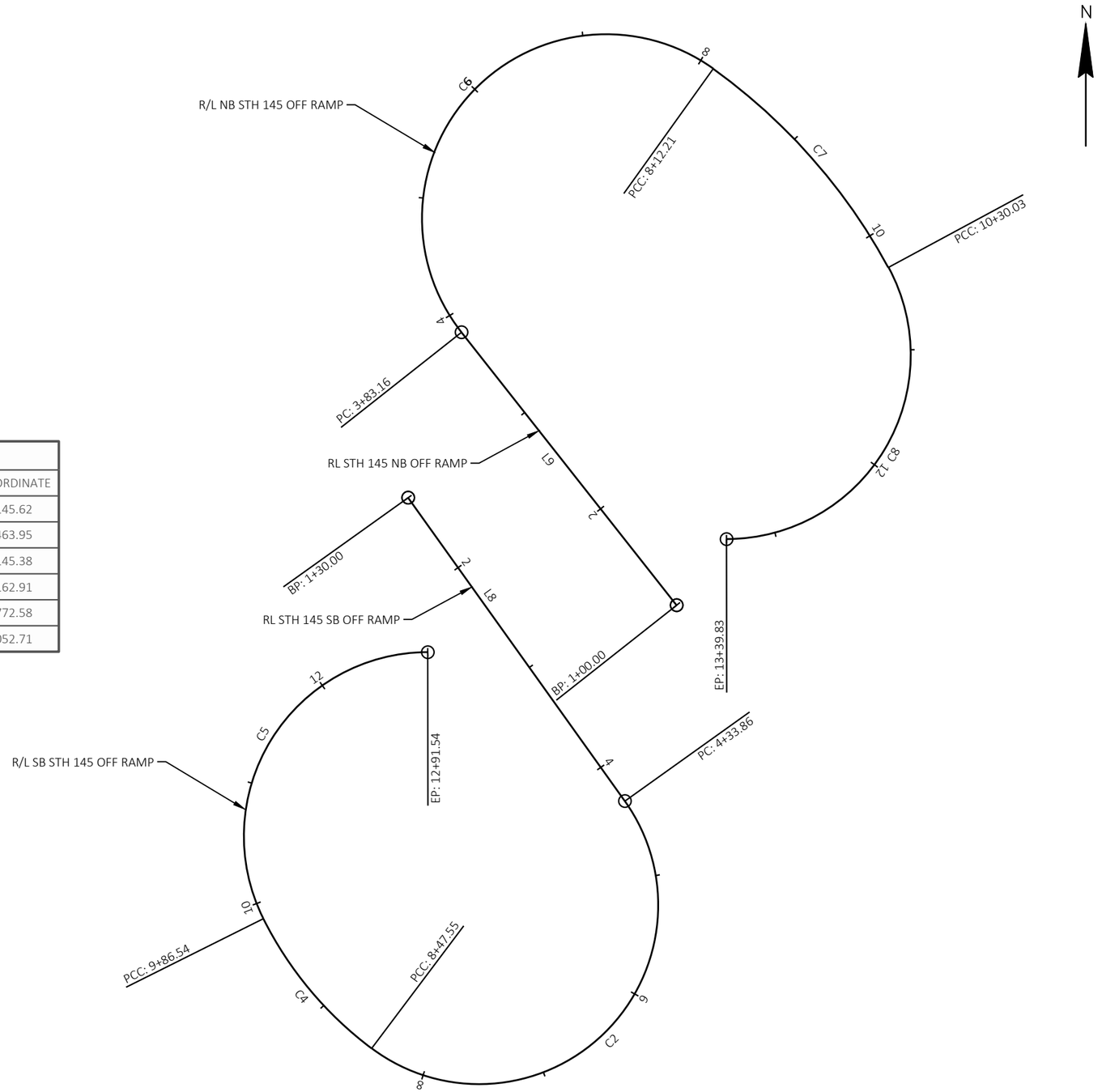
PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	ALIGNMENT PLAN	SHEET 92	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\027211_AD.DWG
LAYOUT NAME - 027211_ad
PLOT DATE : 2/1/2023 2:58 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:400 FT
WISDOT/CADDS SHEET 42

2

TRAVERSE TABLE				
Line #	Start Point	BEARING	DISTANCE	End Point
L9	1+00.00	N38°16'20"W	283.16'	3+83.16
L8	1+30.00	S35°32'20"E	303.86'	4+33.86

Curve Table: Alignments						
CURVE	CH DISTANCE	CH BEARING	RADIUS	ARC LENGTH	PI X COORDINATE	PI Y COORDINATE
C6	297.04	N43° 40' 18"E	150.000	429.06	577813.69	330145.62
C7	215.95	S41° 23' 05"E	480.000	217.82	578765.30	329463.95
C8	257.60	S30° 46' 55"W	150.000	309.80	578937.44	329145.38
C2	288.42	S45° 40' 48"W	145.920	413.69	579152.29	328162.91
C4	137.75	N39° 49' 37"W	300.000	138.99	578340.26	328772.58
C5	255.11	N31° 41' 47"E	150.000	305.00	578200.26	329052.71



PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	ALIGNMENT PLAN	SHEET 93	E

1360-13-71

Line	Item	Item Description	Unit	Total	Qty
0010	203.0220	Removing Structure (structure) 003. B-40-253	EACH	1.000	1.000
0012	203.0220	Removing Structure (structure) 004. B-40-254	EACH	1.000	1.000
0014	204.0100	Removing Concrete Pavement	SY	420.000	420.000
0016	204.0110	Removing Asphaltic Surface	SY	655.000	655.000
0018	204.0115	Removing Asphaltic Surface Butt Joints	SY	186.000	186.000
0020	204.0120	Removing Asphaltic Surface Milling	SY	1,804.000	1,804.000
0022	204.0150	Removing Curb & Gutter	LF	2,414.000	2,414.000
0024	204.0155	Removing Concrete Sidewalk	SY	247.000	247.000
0026	204.0165	Removing Guardrail	LF	137.000	137.000
0028	204.0170	Removing Fence	LF	455.000	455.000
0030	204.0175	Removing Concrete Slope Paving	SY	58.000	58.000
0032	204.0210	Removing Manholes	EACH	1.000	1.000
0036	204.9060.S	Removing (item description) 002. Removing City of Milwaukee Communications Conduit (B-40-253)	EACH	1.000	1.000
0040	205.0100	Excavation Common	CY	522.000	522.000
0046	206.1001	Excavation for Structures Bridges (structure) 003. B-40-253	EACH	1.000	1.000
0048	206.1001	Excavation for Structures Bridges (structure) 004. B-40-254	EACH	1.000	1.000
0050	210.1500	Backfill Structure Type A	TON	468.000	468.000
0056	211.0101	Prepare Foundation for Asphaltic Paving (project) 002. 1360-13-71	EACH	1.000	1.000
0060	213.0100	Finishing Roadway (project) 002. 1360-13-71	EACH	1.000	1.000
0062	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	434.000	434.000
0066	415.0080	Concrete Pavement 8-Inch	SY	16.000	16.000
0068	415.0410	Concrete Pavement Approach Slab	SY	402.000	402.000
0070	416.0610	Drilled Tie Bars	EACH	801.000	801.000
0074	455.0605	Tack Coat	GAL	318.000	318.000
0076	460.2000	Incentive Density HMA Pavement	DOL	240.000	240.000
0078	460.7424	HMA Pavement 4 HT 58-28 H	TON	365.000	365.000
0082	465.0125	Asphaltic Surface Temporary	TON	184.000	184.000
0084	502.0100	Concrete Masonry Bridges	CY	938.200	938.200
0088	502.3101	Expansion Device	LF	220.000	220.000
0090	502.3200	Protective Surface Treatment	SY	2,075.000	2,075.000
0092	502.3210	Pigmented Surface Sealer	SY	528.000	528.000
0096	502.4112	Adhesive Anchors 1 1/2-inch	EACH	96.000	96.000
0100	502.4205	Adhesive Anchors No. 5 Bar	EACH	996.000	996.000
0102	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	219,100.000	219,100.000
0108	506.6000	Bearing Assemblies Expansion (structure) 003. B-40-253	EACH	12.000	12.000
0110	506.6000	Bearing Assemblies Expansion (structure) 004. B-40-254	EACH	12.000	12.000
0116	506.7050.S	Removing Bearings (structure) 003. B-40-253	EACH	12.000	12.000
0118	506.7050.S	Removing Bearings (structure) 004. B-40-254	EACH	12.000	12.000
0128	509.1500	Concrete Surface Repair	SF	230.000	230.000
0134	509.5100.S	Polymer Overlay	SY	2,075.000	2,075.000
0136	513.4091	Railing Tubular Screening	LF	583.000	583.000
0138	516.0500	Rubberized Membrane Waterproofing	SY	58.000	58.000
0144	517.0901.S	Preparation and Coating of Top Flanges (structure) 003. B-40-253	EACH	1.000	1.000
0146	517.0901.S	Preparation and Coating of Top Flanges (structure) 004. B-40-254	EACH	1.000	1.000
0152	517.1801.S	Structure Repainting Recycled Abrasive (structure) 003. B-40-253	EACH	1.000	1.000
0154	517.1801.S	Structure Repainting Recycled Abrasive (structure) 004. B-40-254	EACH	1.000	1.000
0160	517.4501.S	Negative Pressure Containment and Collection of Waste Materials (structure) 003. B-40-253	EACH	1.000	1.000

1360-13-71

Line	Item	Item Description	Unit	Total	Qty
0162	517.4501.S	Negative Pressure Containment and Collection of Waste Materials (structure) 004. B-40-254	EACH	1.000	1.000
0164	517.6001.S	Portable Decontamination Facility	EACH	2.000	2.000
0166	531.8990	Anchor Assemblies Poles on Structures	EACH	4.000	4.000
0168	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	2,396.000	2,396.000
0170	601.0600	Concrete Curb Pedestrian	LF	36.000	36.000
0172	602.0410	Concrete Sidewalk 5-Inch	SF	2,453.000	2,453.000
0174	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	40.000	40.000
0176	603.8000	Concrete Barrier Temporary Precast Delivered	LF	644.000	644.000
0178	603.8125	Concrete Barrier Temporary Precast Installed	LF	1,204.000	1,204.000
0180	604.0400	Slope Paving Concrete	SY	114.000	114.000
0182	611.8110	Adjusting Manhole Covers	EACH	2.000	2.000
0184	611.8115	Adjusting Inlet Covers	EACH	4.000	4.000
0186	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	682.000	682.000
0188	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	2.000	2.000
0190	614.0905	Crash Cushions Temporary	EACH	4.000	4.000
0192	614.2300	MGS Guardrail 3	LF	37.500	37.500
0194	614.2500	MGS Thrie Beam Transition	LF	79.000	79.000
0196	614.2610	MGS Guardrail Terminal EAT	EACH	2.000	2.000
0198	616.0206	Fence Chain Link 6-FT	LF	255.000	255.000
0202	618.0100	Maintenance And Repair of Haul Roads (project) 002. 1360-13-71	EACH	1.000	1.000
0204	619.1000	Mobilization	EACH	0.500	0.500
0206	620.0300	Concrete Median Sloped Nose	SF	10.000	10.000
0208	624.0100	Water	MGAL	8.800	8.800
0210	625.0100	Topsoil	SY	721.000	721.000
0212	625.0500	Salvaged Topsoil	SY	654.000	654.000
0214	628.1504	Silt Fence	LF	545.000	545.000
0216	628.1520	Silt Fence Maintenance	LF	545.000	545.000
0218	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0220	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0222	628.2008	Erosion Mat Urban Class I Type B	SY	654.000	654.000
0226	628.7010	Inlet Protection Type B	EACH	13.000	13.000
0230	628.7504	Temporary Ditch Checks	LF	36.000	36.000
0232	629.0210	Fertilizer Type B	CWT	1.000	1.000
0234	630.0140	Seeding Mixture No. 40	LB	28.000	28.000
0236	630.0200	Seeding Temporary	LB	40.000	40.000
0238	630.0500	Seed Water	MGAL	31.200	31.200
0240	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	9.000	9.000
0244	634.0814	Posts Tubular Steel 2x2-Inch X 14-FT	EACH	5.000	5.000
0246	637.2210	Signs Type II Reflective H	SF	81.020	81.020
0248	637.2230	Signs Type II Reflective F	SF	10.250	10.250
0250	638.2102	Moving Signs Type II	EACH	8.000	8.000
0252	638.2602	Removing Signs Type II	EACH	13.000	13.000
0254	638.3000	Removing Small Sign Supports	EACH	11.000	11.000
0256	642.5001	Field Office Type B	EACH	0.500	0.500
0258	643.0300	Traffic Control Drums	DAY	131,646.000	131,646.000
0260	643.0410	Traffic Control Barricades Type II	DAY	126.000	126.000
0262	643.0420	Traffic Control Barricades Type III	DAY	8,782.000	8,782.000
0264	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	251.000	251.000

1360-13-71

Line	Item	Item Description	Unit	Total	Qty
0266	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	251.000	251.000
0268	643.0705	Traffic Control Warning Lights Type A	DAY	5,576.000	5,576.000
0270	643.0715	Traffic Control Warning Lights Type C	DAY	20,140.000	20,140.000
0272	643.0800	Traffic Control Arrow Boards	DAY	412.000	412.000
0274	643.0900	Traffic Control Signs	DAY	14,112.000	14,112.000
0276	643.0910	Traffic Control Covering Signs Type I	EACH	20.000	20.000
0280	643.1050	Traffic Control Signs PCMS	DAY	18.000	18.000
0282	643.3120	Temporary Marking Line Epoxy 4-Inch	LF	26,689.000	26,689.000
0286	643.3820	Temporary Marking Stop Line Epoxy 18-Inch	LF	80.000	80.000
0288	643.5000	Traffic Control	EACH	0.500	0.500
0290	644.1810	Temporary Pedestrian Barricade	LF	132.000	132.000
0292	645.0111	Geotextile Type DF Schedule A	SY	195.000	195.000
0294	646.1020	Marking Line Epoxy 4-Inch	LF	10,884.000	10,884.000
0296	646.1041.S	Marking Replace Line Wet Reflective Epoxy 4-Inch	LF	1,546.000	1,546.000
0300	646.1555	Marking Line Grooved Contrast Permanent Tape 4-Inch	LF	361.000	361.000
0302	646.3020	Marking Line Epoxy 8-Inch	LF	1,344.000	1,344.000
0306	646.3555	Marking Line Grooved Contrast Permanent Tape 8-Inch	LF	1,515.000	1,515.000
0308	646.5020	Marking Arrow Epoxy	EACH	11.000	11.000
0310	646.5120	Marking Word Epoxy	EACH	3.000	3.000
0312	646.5220	Marking Symbol Epoxy	EACH	8.000	8.000
0314	646.6120	Marking Stop Line Epoxy 18-Inch	LF	132.000	132.000
0316	646.6220	Marking Yield Line Epoxy 18-Inch	EACH	16.000	16.000
0318	646.7120	Marking Diagonal Epoxy 12-Inch	LF	90.000	90.000
0320	646.7220	Marking Chevron Epoxy 24-Inch	LF	267.000	267.000
0322	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	1,141.000	1,141.000
0324	646.8220	Marking Island Nose Epoxy	EACH	5.000	5.000
0326	646.9010	Marking Removal Line Water Blasting 4-Inch	LF	6,941.000	6,941.000
0330	646.9055	Marking Removal Line Grooved Contrast Permanent Tape 4-Inch	LF	361.000	361.000
0332	646.9110	Marking Removal Line Water Blasting 8-Inch	LF	1,037.000	1,037.000
0336	646.9155	Marking Removal Line Grooved Contrast Permanent Tape 8-Inch	LF	1,515.000	1,515.000
0338	646.9210	Marking Removal Line Water Blasting Wide	LF	489.000	489.000
0340	646.9310	Marking Removal Special Marking Water Blasting	EACH	20.000	20.000
0342	650.4500	Construction Staking Subgrade	LF	665.000	665.000
0344	650.5000	Construction Staking Base	LF	556.000	556.000
0346	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	2,396.000	2,396.000
0352	650.6501	Construction Staking Structure Layout (structure) 005. B-40-253	EACH	1.000	1.000
0354	650.6501	Construction Staking Structure Layout (structure) 006. B-40-254	EACH	1.000	1.000
0356	650.7000	Construction Staking Concrete Pavement	LF	109.000	109.000
0360	650.8501	Construction Staking Electrical Installations (project) 002. 1360-13-71	EACH	1.000	1.000
0362	650.9000	Construction Staking Curb Ramps	EACH	4.000	4.000
0366	650.9500	Construction Staking Sidewalk (project) 002. 1360-13-71	EACH	1.000	1.000
0370	650.9911	Construction Staking Supplemental Control (project) 002. 1360-13-71	EACH	1.000	1.000
0372	650.9920	Construction Staking Slope Stakes	LF	1,265.000	1,265.000
0374	652.0125	Conduit Rigid Metallic 2-Inch	LF	48.000	48.000
0378	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,223.000	1,223.000
0382	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	705.000	705.000
0384	652.0615	Conduit Special 3-Inch	LF	1,425.000	1,425.000
0386	653.0222	Junction Boxes 18x12x6-Inch	EACH	4.000	4.000
0388	654.0105	Concrete Bases Type 5	EACH	9.000	9.000

1360-13-71

Line	Item	Item Description	Unit	Total	Qty
0392	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	13.000	13.000
0398	661.0201	Temporary Traffic Signals for Intersections (location) 003. Silver Spring Dr at Fond du Lac Ave	EACH	1.000	1.000
0416	690.0150	Sawing Asphalt	LF	40.000	40.000
0418	690.0250	Sawing Concrete	LF	2,584.000	2,584.000
0420	715.0502	Incentive Strength Concrete Structures	DOL	5,629.000	5,629.000
0422	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0440	SPV.0060	Special 200. Adjusting Water Valve Boxes	EACH	4.000	4.000
0442	SPV.0060	Special 302. Pull Boxes 13-Inch x 24-Inch x 24-Inch	EACH	21.000	21.000
0444	SPV.0060	Special 303. Pull Boxes 17-Inch x 30-Inch x 24-Inch	EACH	2.000	2.000
0446	SPV.0060	Special 320. Poles Type 25-AL-BD	EACH	13.000	13.000
0448	SPV.0060	Special 347. Luminaire Arms Single Member 8-Ft.	EACH	22.000	22.000
0450	SPV.0060	Special 371. Installing City Furnished Luminaire LED Utility 2	EACH	22.000	22.000
0452	SPV.0060	Special 399. Utility Line Opening (ULO)	EACH	1.000	1.000
0456	SPV.0060	Special 402. Underdeck Utility Structure, B-40-253, C Milwaukee Communications Conduit	EACH	1.000	1.000
0458	SPV.0060	Special 411. 4' Diameter "Doghouse" Manhole Type CUC, Installed Over Conduit	EACH	1.000	1.000
0462	SPV.0090	Special 404. 4-Duct, Cement Encased, 4-inch Rigid Nonmetallic Conduit DB-60	LF	185.000	185.000

3

EARTHWORK

DIVISION	205.0100 COMMON EXCAVATION (1) CUT (2)	EBS EXCAVATIO	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (6) FACTOR 1.20	MASS ORDINATE +/- (7)	WASTE
STAGE 1								
EAST CROSSOVER	105	-	-	-	-	-	105	105
NORTH CROSSOVER	168	-	-	-	-	-	168	168
DIVISION 1 SUBTOTAL	273	-	-	-	-	-	273	273
STAGE 2								
WEST OF EB BRIDGE	56	-	37	-	15	18	4	4
EAST OF EB BRIDGE	73	-	49	-	15	18	9	9
DIVISION 2 SUBTOTAL	129	-	86	-	30	36	13	13
STAGE 3								
WEST OF WB BRIDGE	56	-	37	-	15	18	4	4
EAST OF WB BRIDGE	63	-	42	-	15	18	6	6
DIVISION 3 SUBTOTAL	119	-	79	-	30	36	10	10
TOTAL CAT 1000	521	-	165	-	60	72	295	295

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.
(3) EBS EXCAVATION TO BE BACKFILLED WITH BAD 1 1/4-INCH MATERIAL. EBS IS NOT EXPECTED.
(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
(6) EXPANDED FILL FACTOR = 1.2
(7) 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.

FILE NAME : Y:\Milwaukee\20200s\20288.00\Office_Docs\Design\QuantityEstimate PLOT DATE : May 23, 2023 PLOT BY : BENESCH PLOT NAME : PLOT SCALE : 1:1

3

MISCELLANEOUS REMOVALS

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT SY	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0150 REMOVING CURB & GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY	204.0165 REMOVING GUARDRAIL LF	REMARKS
1000	55+85	-	57+42	W OF WB BRIDGE	94	-	52	470	260	64	-	
1000	55+85	-	57+90	W OF EB BRIDGE	94	-	27	543	435	66	69	
1000	59+65	-	61+50	E OF WB BRIDGE	107	-	27	492	408	75	68	
1000	60+29	-	61+50	E OF EB BRIDGE	125	-	46	299	180	42	-	
1000	49+37	-	65+02	CROSSOVERS	-	655	-	-	1,131	-	-	
1000	56+50	-	61+26	RAMPS	-	-	34	-	-	-	-	
				TOTAL 1000	420	655	186	1,804	2,414	247	137	

3

211.0101.002

PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) (1360-13-71)

CATEGORY	STATION	TO	STATION	EACH
1000	155+95	-	157+05	
1000	160+18	-	161+40	
1000	255+95	-	257+47	
1000	260+75	-	261+40	
1000	12+25	-	12+96	
1000	11+90	-	12+48	
				1

BASE AGGREGATE ITEMS

CATEGORY	LOCATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL	REMARKS
1000	SIDEWALKS	70	1.4	
1000	APPROACH SLABS	162	3.3	
1000	APPROACH SLAB SHOULDER	20	0.4	
1000	CROSSOVERS	182	3.7	
	TOTAL 1000	434	8.8	

CONCRETE SLAB

CATEGORY	STATION	TO	STATION	LOCATION	415.0080 CONCRETE PAVEMENT 8-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY
1000	157+13	-	Deck	WB	-	94
1000	Deck	-	160+18	WB	-	107
1000	257+47	-	Deck	EB	-	94
1000	Deck	-	260+75	EB	-	107
1000	Deck	-	260+75	SHOULDER	16	-
				TOTAL 1000	16	402

HMA ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	460.7424 HMA PAVEMENT 4 HT 58-28 H TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	REMARKS
1000				CROSSOVERS	46	-	184	
1000	155+95	-	Deck	WB	66	79	-	
1000	Deck	-	161+40	WB	70	112	-	INCLUDES RAMP
1000	255+95	-	Deck	EB	78	109	-	INCLUDES RAMP
1000	Deck	-	261+40	EB	42	44	-	
1000				BUTT JOINTS	16	21	-	
				TOTAL 1000	318	365	184	

TEMPORARY BARRIER ITEMS

CATEGORY	LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	614.0905 CRASH CUSHIONS TEMPORARY EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS	REMARKS
1000	STH 145 STAGE 1	560	560	2	4	OM-3L (W5-58L)	TL-3	UNIDIRECTIONAL	RT	TEMP BARRIER AT INGRESS	
1000	STH 145 STAGE 2	84	644	2	4	OM-3R (W5-58R)	TL-3	UNIDIRECTIONAL	LT	TEMP BARRIER AT INGRESS	
	TOTAL 1000	644	1,204	4							

MISCELLANEOUS ADJUSTMENTS

CATEGORY	LOCATION	611.8110 ADJUSTING MANHOLE COVERS EACH	611.8115 ADJUSTING INLET COVERS EACH
1000	PROJECT WIDE	2	4
	TOTAL 1000	2	4

GUARDRAIL ITEMS

CATEGORY	LOCATION	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	REMARKS
1000	B-40-253 WEST APPROACH	25	39.5	1	
1000	B-40-254 EAST APPROACH	12.5	39.5	1	
	TOTAL 1000	37.5	79.0	2	

FENCING ITEMS

CATEGORY	LOCATION	204.0170 REMOVING FENCE LF	616.0206 FENCE CHAIN LINK 6-FT LF	REMARKS
1000	W OF EB BRIDGE	200	-	
1000	W OF EB BRIDGE	145	145	
1000	E OF WB BRIDGE	110	110	
	TOTAL 1000	455	255	

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EROSION CONTROL ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.7010 INLET PROTECTION TYPE B EACH	628.7504 TEMPORARY DITCH CHECKS LF	REMARKS
1000	55+95	-	57+50	LT	125	125	-	-	139		-	
1000	59+75	-	61+40	LT	145	145	-	-	203	-	18	
1000	55+95	-	58+00	RT	130	130	-	-	172	-	18	
1000	60+25	-	61+40	RT	95	95	-	-	80	-	-	
1000				STH 145	-	-	-	-	-		-	
1000				PROJECT WIDE	-	-	2	1	-	13	-	
1000				UNDISTRIBUTED	50	50	-	-	60	-	-	
				TOTAL 1000	545	545	2	1	654	13	36	

LANDSCAPING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	625.0500 SALVAGED TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL	REMARKS
1000	55+95	-	57+50	LT	-	139	0.1	3	4	3.2	
1000	59+75	-	61+40	LT	-	203	0.2	4	6	4.6	
1000	55+95	-	58+00	RT	-	172	0.1	4	5	3.9	
1000	60+25	-	61+40	RT	-	80	0.1	2	3	1.8	
1000		-		CROSSOVERS	655	-	0.4	12.0	18.0	14.7	5-INCHES OF TOP SOIL
1000		-		UNDISTRIBUTED	66	60	0.1	3	4	3.0	
				TOTAL 1000	721	654	1.0	28	40	31.2	

TRAFFIC CONTROL ITEMS

STATION	TO	STATION	LOCATION	DURATION	NUMBER OF DEVICES	643.0300 TRAFFIC CONTROL DRUMS DAY	NUMBER OF DEVICES	643.0410 TRAFFIC CONTROL BARRICADES TYPE II DAY	NUMBER OF DEVICES	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	NUMBER OF DEVICES	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	NUMBER OF DEVICES	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	NUMBER OF DEVICES	643.0800 TRAFFIC CONTROL ARROW BOARDS DAY	NUMBER OF DEVICES	643.0900 TRAFFIC CONTROL SIGNS DAY	NUMBER OF CYCLES	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I EACH	644.1810 TEMPORARY PEDESTRIAN BARRICADE LF	643.105 TRAFFIC CONTROL SIGNS PCMS DAY	REMARKS
STAGE 1 - Silver Spring																									
34+00	-	52+00	LT		49	686	-	-	5	-	-	-	2	-	-	-	-	-		-	-	-		1	
52+00	-	63+00	LT		201	2814	-	-	3	-	-	-	6	-	-	-	-	-		-	-	-		-	
63+00	-	74+00	LT		101	1414	1	-	6	-	-	-	4	-	31	-	1	-		-	-	-		-	
74+00	-	85+00	LT		-	-	-	-	-	-	-	-	-	-		-	-	-		-	-	-		-	
			SIDEROADS - LT		-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-		-	
34+00	-	52+00	RT		79	-	-	-	3	-	-	-	6	-	31	-	1	-		-	-	-		-	
52+00	-	63+00	RT		166	-	-	-	2	-	-	-	4	-	-	-	-	-		-	-	-		-	
63+00	-	74+00	RT		39	-	1	-	1	-	-	-	2	-	-	-	-	-		-	-	-		-	
74+00	-	85+00	RT		-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-		1	
			SIDEROADS - RT		-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-		-	
			SUB TOTAL	**14**	**635**	**8890**	**2**	**28**	**20**	**280**	**-**	**-**	**24**	**336**	**62**	**868**	**2**	**28**	**53**	**742**	**1**	**-**	**18**	**2**	
STAGE 2 - Silver Spring																									
30+00	-	51+50	LT		77	5390	-	-	8	560	8	8	4	280	-	-	-	-		-	-	-		-	
51+50	-	63+50	LT		223	15610	-	-	3	210	141	141	2	140	-	-	-	-		-	-	-		-	
63+50	-	74+00	LT		130	9100	-	-	7	490	-	-	6	420	48	3360	1	70		-	-	-		-	
74+00	-	85+00	LT		-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-		-	
			SIDEROADS - LT		-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-		-	
30+00	-	51+50	RT		183	12810	-	-	14	980	-	-	10	700	58	4060	1	70		-	-	-		-	
51+50	-	63+50	RT		13	910	1	70	13	910	-	-	6	420	-	-	-	-		-	-	-		-	
63+50	-	74+00	RT		73	5110	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-		-	
74+00	-	85+00	RT		-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-		-	
			SIDEROADS - RT		-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-		-	
			SUB TOTAL	**70**	**699**	**48930**	**1**	**70**	**45**	**3150**	**149**	**149**	**28**	**1960**	**106**	**7420**	**2**	**140**	**73**	**5110**	**1**	**-**	**60**	**7**	
STAGE 3 - Silver Spring																									
30+00	-	52+75	LT		52	4160	-	-	10	800	-	-	4	320	-	-	-	-		-	-	-		-	
52+75	-	65+00	LT		72	5760	-	-	26	2080	-	-	12	960	1	80	-	-		-	-	-		-	
65+00	-	76+75	LT		152	12160	-	-	6	480	-	-	4	320	60	4800	1	80		-	-	-		-	
76+75	-	85+00	LT		-	-	-	-	-	-	-	-	-	-	-	-	-	-		-					
			SIDEROADS - LT		8	640	-	-	1	80	-	-	2	160	-	-	-	-		-	-	-			
30+00	-	52+75	RT		233	18640	-	-	14	1120	-	-	10	800	49	3920	1	80		-	-	-			
52+75	-	65+00	RT		224	17920	-	-	5	400	102	102	2	160	-	-	-	-		-	-	-			
65+00	-	76+75	RT		-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-			
76+75	-	85+00	RT		-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-			
			SIDEROADS - RT		-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-			
			SUB TOTAL	**80**	**741**	**59280**	**-**	**-**	**62**	**4960**	**102**	**102**	**34**	**2720**	**110**	**8800**	**2**	**160**	**84**	**6720**	**1**	**-**	**36**	**7**	
STAGE 4 - Silver Spring																									
34+00	-	85+00	LT & RT		635	8890	2	28	20	280	-	-	24	336	62	868	2	28		-	1	14		2	COPY STAGE 1
			SUB TOTAL	**14**	**635**	**8890**	**2**	**28**	**20**	**280**	**-**	**-**	**24**	**336**	**62**	**868**	**2**	**28**	**53**	**742**	**1**	**14**	**18**	**2**	
STAGE 1 - STH 145																									
85+00	-	240+00	LT		127	1778	-	-	2	28	-	-	4	56	20	280	1	14		-	-	-			
85+00	-	240+00	RT		109	1526	-	-	2	28	-	-	4	56	34	476	1	14		-	-	-			
EXIT RAMP CLOSURE					8	112	-	-	-	-	-	-	-	-	8	112	-	-		-	1	-			
			SUB TOTAL	**14**	**244**	**3416**	**-**	**-**	**4**	**56**	**-**	**-**	**8**	**112**	**62**	**868**	**2**	**28**	**31**	**434**	**1**	**-**	**-**	**-**	
STAGE 2 - STH 145																									
90+00	-	230+00	LT		88	1232	-	-	2	28	-	-	4	56	47	658	1	14		-	-	-			
90+00	-	230+00	RT		64	896	-	-	2	28	-	-	4	56	39	546	1	14		-	-	-			
EXIT RAMP CLOSURE					8	112	-	-	-	-	-	-	-	-	8	112	-	-		-	1	6			
			SUB TOTAL	**14**	**160**	**2240**	**-**	**-**	**4**	**56**	**-**	**-**	**8**	**112**	**94**	**1316**	**2**	**28**	**26**	**364**	**1**	**6**	**-**	**-**	
			TOTAL CAT 1000			**131,646**		**126**		**8,782**	**251**	**251**		**5,576**		**20,140**		**412**		**14,112**		**20**	**132**	**18**	

PAVEMENT MARKING

CATEGORY	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	646.1041.S MARKING REPLACE LINE WET REFLECTIVE EPOXY 4-INCH LF	646.1555 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH LF	646.3020 MARKING LINE EPOXY 8-INCH LF	646.3555 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH LF	646.5020 MARKING ARROW EPOXY EACH	646.5120 MARKING WORD EPOXY EACH	646.5220 MARKING SYMBOL EPOXY EACH	646.6120 MARKING STOP LINE EPOXY 18-INCH LF	646.6220 MARKING YIELD LINE EPOXY 18-INCH EACH	646.7120 MARKING DIAGONAL EPOXY 12-INCH LF	646.7220 MARKING CHEVRON EPOXY 24-INCH LF	646.7420 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH LF	646.8220 MARKING ISLAND NOSE EPOXY EACH	REMARKS
1000	STH 145		1,546	361		1,515						90	267			
1000	PROJECT WIDE	10,884			1,344		11	3	8	132	16			1,141	5	
	TOTAL 1000	10,884	1,546	361	1,344	1,515	11	3	8	132	16	90	267	1,141	5	

PAVEMENT MARKING REMOVALS

CATEGORY	LOCATION	646.9010 MARKING REMOVAL LINE WATER BLASTING 4-INCH LF	646.9055 MARKING REMOVAL LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH LF	646.9110 MARKING REMOVAL LINE WATER BLASTING 8-INCH LF	646.9155 MARKING REMOVAL LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH LF	646.9210 MARKING REMOVAL LINE WATER BLASTING WIDE LF	646.9310 MARKING REMOVAL SPECIAL MARKING WATER BLASTING EACH
1000	STH 145	1,546	361		1,515	357	
1000	PROJECT WIDE	5,395		1,037		132	20
	TOTAL 1000	6,941	361	1,037	1,515	489	20

TEMPORARY PAVEMENT MARKINGS

CATEGORY	LOCATION	643.3120 TEMPORARY MARKING LINE EPOXY 4-INCH LF	643.3820 TEMPORARY MARKING STOP LINE EPOXY 18-INCH LF	REMARKS
1000	STAGE 1	9672	-	
1000	STAGE 2	11,368	40	
1000	STAGE 3	5,649	40	
	TOTAL 1000	26,689	80	

CURB AND SIDEWALK ITEMS

CATEGORY	STATION TO STATION	LOCATION	416.0610 DRILLED TIE BARS EACH	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	601.0600 CONCRETE CURB PEDESTRIAN LF	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	620.0300 CONCRETE MEDIAN SLOPED NOSE SF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.9000 CONSTRUCTION STAKING CURB RAMPS EACH	650.9500.002 CONSTRUCTION STAKING SIDEWALK (1360-13-71) EACH	REMARKS
1000	55+95 - 57+50	LT	86	256	-	592	-	-	256	-		
1000	59+50 - 61+40	LT	98	293	20	755	20	5	293	2		
1000	55+95 - 58+00	RT	138	412	16	714	20	5	412	2		
1000	60+00 - 61+40	RT	102	304	-	392	-	-	304	-		
1000		CROSSOVERS	377	1,131	-	-	-	-	1,131	-		
		TOTAL 1000	801	2,396	36	2,453	40	10	2,396	4	1	

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CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	REMARKS
1000	57+47	-	57+74	W OF WB BRIDGE	26	-	26	256	
1000	57+05	-	57+31	W OF EB BRIDGE	26	-	26	419	
1000	59+88	-	60+18	E OF WB BRIDGE	30	-	30	412	
1000	60+47	-	60+75	E OF EB BRIDGE	27	-	27	178	
1000	49+37	-	65+02	CROSSOVERS	556	556	-	-	
				TOTAL 1000	665	556	109	1,265	

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ADJUSTING WATER BOXES

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0060.200 SPECIAL (200. ADJUSTING WATER BOXES) EACH
1400	249+39			76th St NB	1
1400	253+55			76th St NB	1
1400	56+74			Silver Spring LT	2
				TOTAL 1400	4

SAWING

CATEGORY	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	REMARKS
1000		-	387	STAGE 1 SILVER SPRING
1000		-	179	STAGE 1 SILVER SPRING
1000		-	565	STAGE 1 SILVER SPRING
1000		20	699	STAGE 2 SILVER SPRING
1000		20	754	STAGE 3 SILVER SPRING
	TOTAL 1000	40	2,584	

TYPE II PERMANENT SIGNING 1360-13-71 STH 145

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.2602 REMOVING SIGNS TYPE II (EA)	638.3000 REM SMALL SIGN SUP [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0622 POSTS WOOD 4" X 6" X 22' (EA)	634.0814 POSTS TUBULAR STEEL 2 X 2-INCH X 14-FT	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
1	R1-2(2S)		36	X	31	3.880			1	1	1				
2	R3-20L(2M)		24	X	36	6.000			1	1			1		
3	J2-1(2M)		24	X	57	9.500			1	1	1				
	M3-1		24	X	12										
	M1-6	STH 145	24	X	24										
	M5-1L		21	X	21										
4	J2-1(2M)		24	X	57	9.500			1	1	1				
	M3-1		24	X	12										
	M1-6	STH 145	24	X	24										
	M5-1L		21	X	21										
5	R3-17(2M)		30	X	24	5.000			1						MOUNT ON LIGHT POLE
6	R1-2(2S)		36	X	31	3.880			1	1	1				
7	R1-2(2S)		36	X	31	3.880									MOUNT ON LIGHT POLE BELOW W11-2
8	R3-17(2M)		30	X	24	5.000			1						MOUNT ON LIGHT POLE
9	M1-94 MOD	SILVER SPRING DR						1							MOUNT ON BRIDGE SEE DETAIL. INCIDENTAL TO SIGN
		5600 NORTH													
10	M1-94 MOD	SILVER SPRING DR						1							MOUNT ON BRIDGE SEE DETAIL. INCIDENTAL TO SIGN
		5600 NORTH													
11	J4-1(2M)		24	X	36	6.000			1	1	1				
	M3-4		24	X	12										
	M1-5A	CTH E	24	X	24										
12	W11-2							1							MOVE UP HIGH ABOVE SIGN 14 - LIGHT POLE
12A	W16-7L							1							MOVE UP HIGH ABOVE SIGN 14 - LIGHT POLE
13	W11-2							1							MOVE UP HIGH ABOVE SIGN # 6 - LIGHT POLE
13A	W16-7L							1							MOVE UP HIGH ABOVE SIGN # 6 - LIGHT POLE
14	R1-2(2S)		36	X	31	3.880									MOUNT ON LIGHT POLE BELOW THE W11-2
15	R4-7(2S)		24	X	30	5.000			1	1			1		
16	R4-7(2S)		24	X	30	5.000							1		
17	W12-1D(2S)		24	X	24		4.000						1		2 FOOT MOUNTING HEIGHT
18	R10-15L(2S)		30	X	30		6.250		1	1	1				
19	J3-1(2S)		24	X	57	9.500			1	1	1				
	M3-1		24	X	12										
	M1-6	STH 145	24	X	24										
	M6-1		21	X	21										
20	R2-1(2S)	SPEED LIMIT 40	24	X	30	5.000							1		
		UNDISTRIBUTED						2	2	2	2				
TOTALS CATEGORY 1000						81.020	10.250	8	13	11	9		5		

SHEET 1 OF 1

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES – PERMANENT SIGNING	SHEET:	E

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ESTIMATE OF TOTAL QUANTITIES ; STREET LIGHTING
MILWAUKEE COUNTY
WEST SILVER SPRING DRIVE BRIDGE OVER S.T.H. 145 - ID 1360-13-71

	Std.Bid Item No.	Description	Unit	Quantity
-	650.8501	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT)	EACH	1
-	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	100
-	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	705
-	652.0615	CONDUIT SPECIAL 3-INCH	LF	1,425
-	654.0105	CONCRETE BASES TYPE 5	EACH	9
-	657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	EACH	13
-	SPV.0060.302	PULL BOXES 13-INCH x 24-INCH x 24-INCH	EACH	21
-	SPV.0060.303	PULL BOXES 17-INCH x 30-INCH x 24-INCH	EACH	2
-	SPV.0060.320	POLES TYPE 25-AL-BD	EACH	13
-	SPV.0060.347	LUMINAIRE ARMS SINGLE MEMBER 8-Ft.	EACH	22
-	SPV.0060.371	INSTALLING CITY FURNISHED LUMINAIRE LED UTILITY 2	EACH	22
-	SPV.0060.399	UTILITY LINE OPENING (ULO)	EACH	1
-				
-				

ALL ITEMS CATEGORY 1300

(THESE QUANTITIES DO NOT INCLUDE THE MATERIALS IN/ON THE BRIDGE)
SUCH AS: CONDUIT, JUNCTION BOXES, AND LIGHT POLE ANCHORAGE

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

661.0201.003

LOCATION		TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS EACH
SILVER SPRING DR AT FOND DU LAC AVE		1
CATEGORY 1000	TOTAL	1

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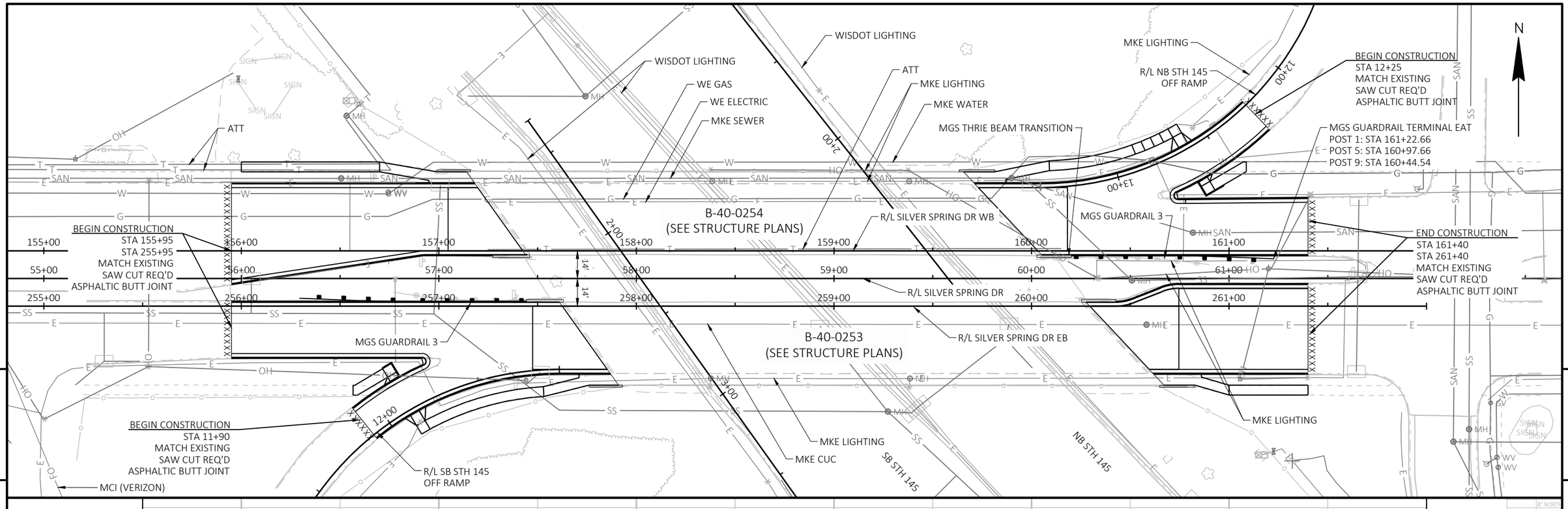
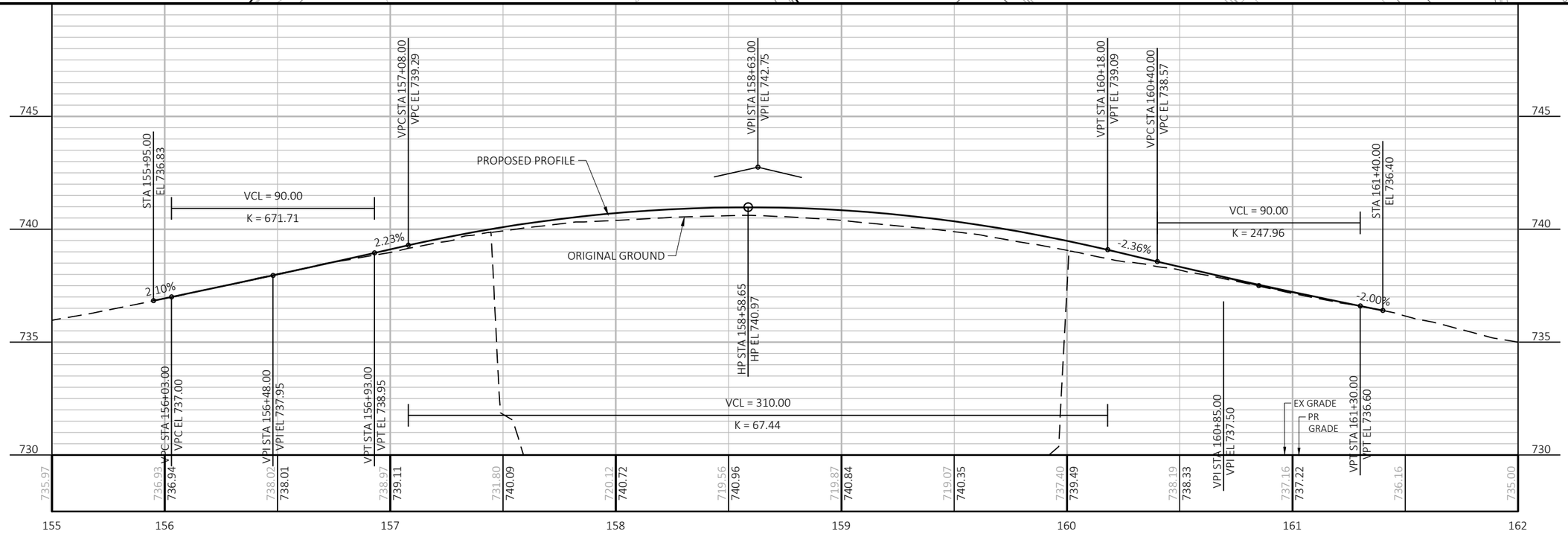
CITY UNDERGROUND CONDUIT
MISCELLANEOUS QUANTITIES

LOCATION			204.0215 REMOVING MANHOLE EACH	SPV.0060.411 4' DIAMETER DOGHOUSE MANHOLE TYPLE CUC INSTALLAED OVER CONDUIT EACH	SPV.0090.404 4-4" CONDUIT CEMENT ENCASED DB-60 LF	SPV.0060.402 UNDERDECK UTILITY STRUCTURE B-40-253 CITY OF MILWAUKEE COMMUNICATIONS CONDUIT EACH
MANHOLE 600	-	STA 156+32.1, 23.0' RT		1		
MANHOLE 600	TO	5' WEST OF ABUTMENT			129	
5' WEST OF ABUTMENT	-	STA 157+67.1, 23.0' RT				
5' WEST OF ABUTMENT	TO	5' EAST OF ABUTMENT				1
5' EAST OF ABUTMENT	-	STA 160+39.3, 23.0' RT				
5' EAST OF ABUTMENT	TO	MANHOLE 601R			14	
MANHOLE 601R	-	STA 160+56.7, 23.0' RT	1			
MANHOLE 601R	TO	MANHOLE 602			42	
MANHOLE 602	-	STA 161+01.00, 23.0' RT				
TOTAL CATEGORY 1300			1	1	185	1

3





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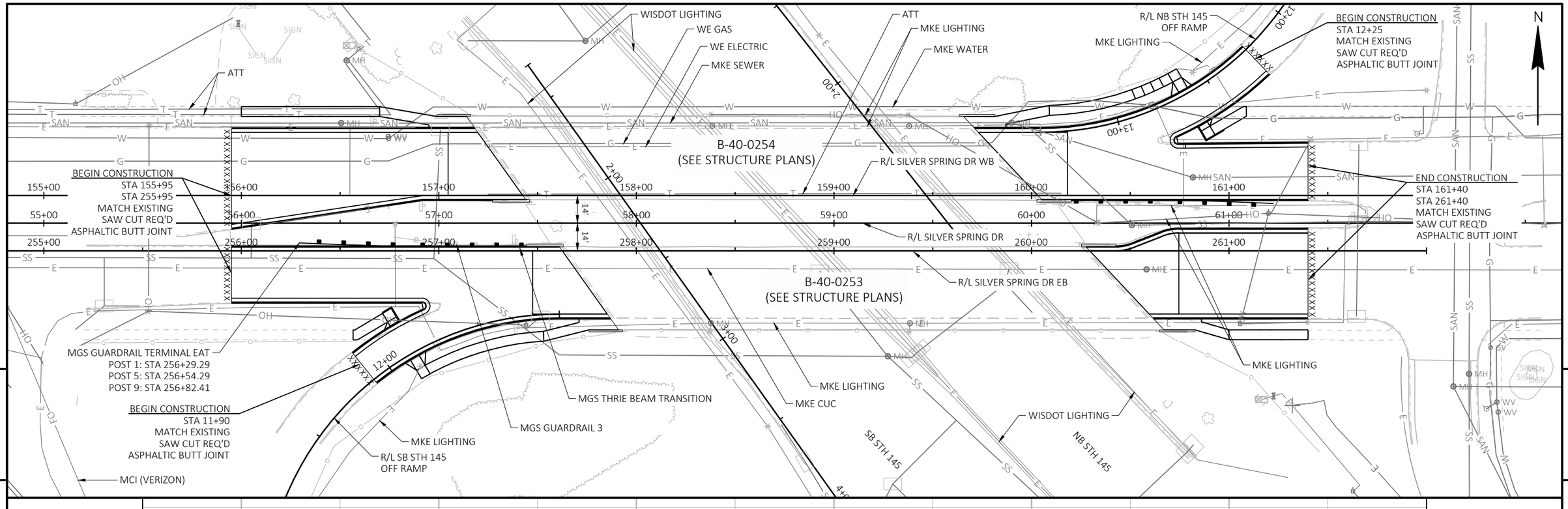
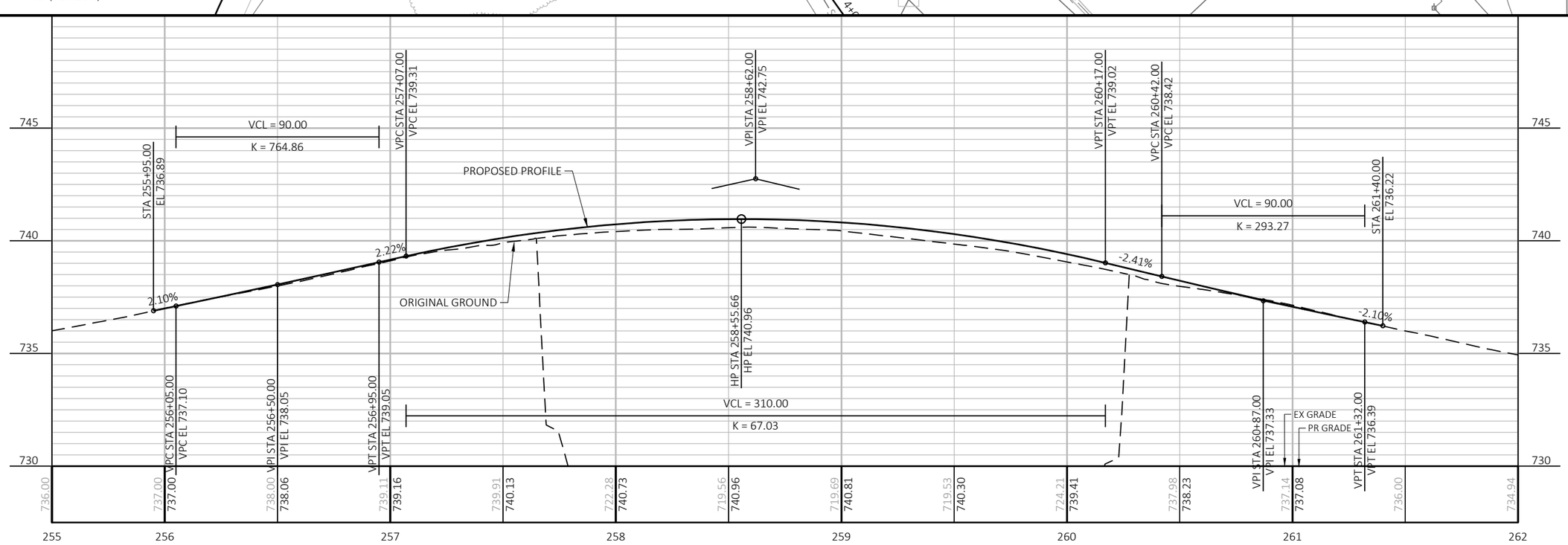
FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\050101_PP.DWG
LAYOUT NAME - 050101_pp_wb

PLOT DATE : 2/8/2023 4:32 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44





PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	PLAN AND PROFILE: SILVER SPRING DR EB	SHEET 110	E

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LAYOUT NAME - 050102_pp_eb

PLOT DATE : 2/8/2023 4:32 PM PLOT BY : WEIGAND, BEN PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

Standard Detail Drawing List

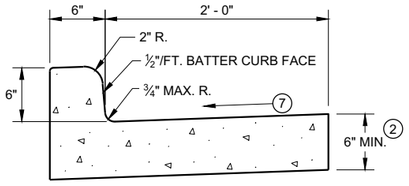
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-10	CONDUIT
09B04-12	PULL BOX
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
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
12A03-10	NAME PLATE (STRUCTURES)
13A03-07	CONCRETE PAVEMENT SHOULDERS
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
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"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-22A	LONGITUDINAL MARKING (MAINLINE)
15C08-22B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-22C	PAVEMENT MARKING (TURN LANES)
15C08-22D	PAVEMENT MARKING (TURN LANES)
15C11-10A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

6

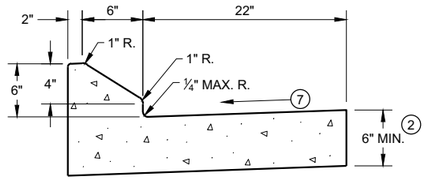
Standard Detail Drawing List

15C18-07A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C18-07B	MEDIAN ISLAND MARKING MEDIAN ISLAND NOSE
15C18-07C	MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT
15C31-04A	PAVEMENT MARKING EXIT RAMP AND PARALLEL EXIT RAMP
15C31-04C	PAVEMENT MARKING ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D12-10A	TRAFFIC CONTROL, LANE CLOSURE
15D16-05	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-06A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-08A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-08B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-08C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D40-04C	TRAFFIC CONTROL, PARTIAL LANE SHIFT NON-FREEWAY OR MULTILANE DIVIDED 45 MPH AND UNDER
15D40-04D	TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER
15D47-02A	TRAFFIC CONTROL, INGRESS/EGRESS WITH BARRIER

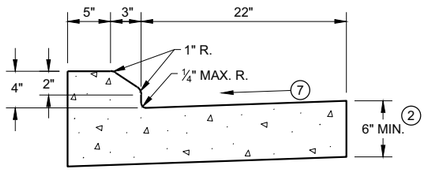
6



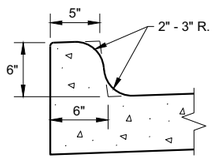
TYPES A[1] & D



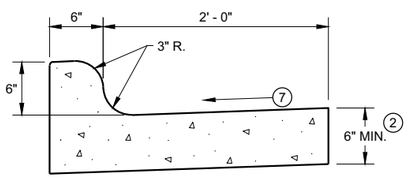
6" SLOPED CURB TYPES G[1] & J



4" SLOPED CURB TYPES G[1] & J

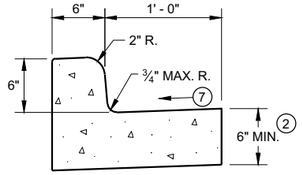


TYPES K[1] & L
(OPTIONAL CURB SHAPE)



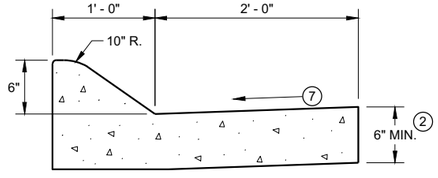
TYPES K[1] & L

CONCRETE CURB AND GUTTER 30"



TYPES A[1] & D

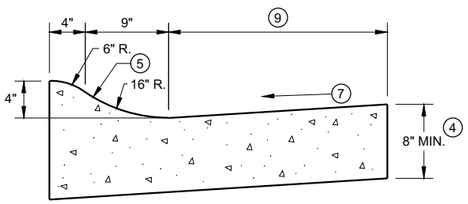
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A[1] & D

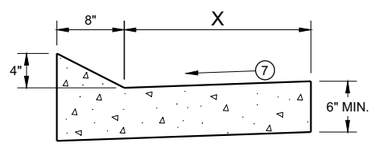
4" SLOPED CURB TYPES A[1] & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R[1] & T

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

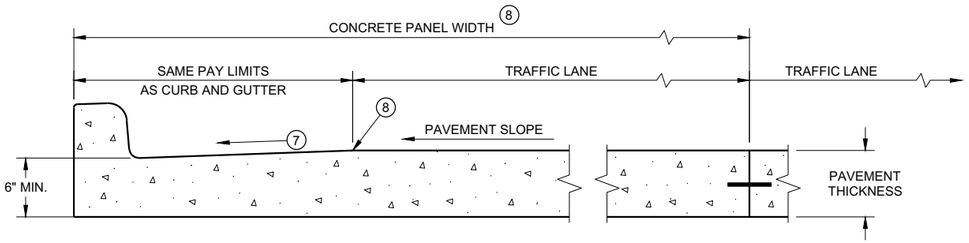


TYPES TBT & TBTT[1]

CONCRETE CURB AND GUTTER

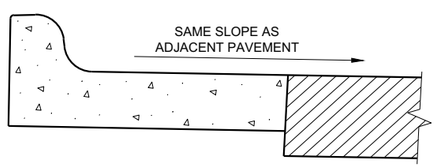
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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.

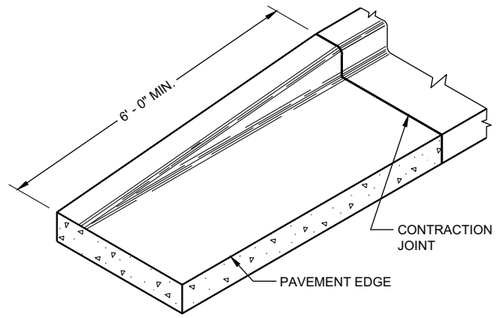
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

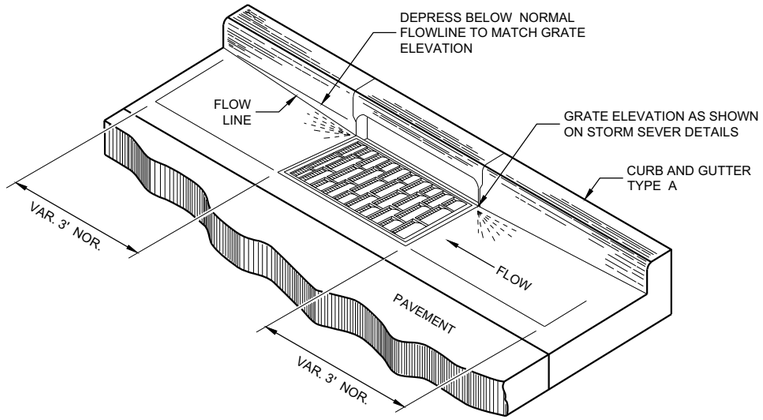
1. TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
2. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
3. USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH 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

6
SDD 08D01 - 22a



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.

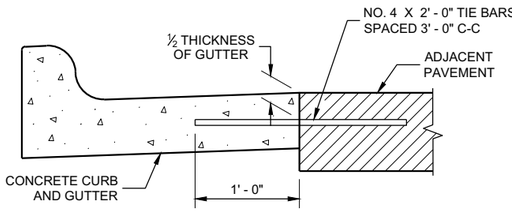
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

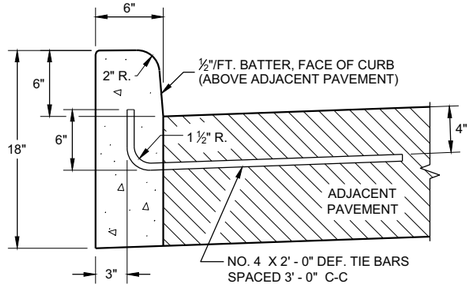
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(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.

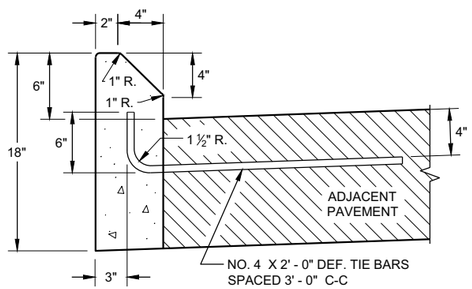
(9) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION (1)

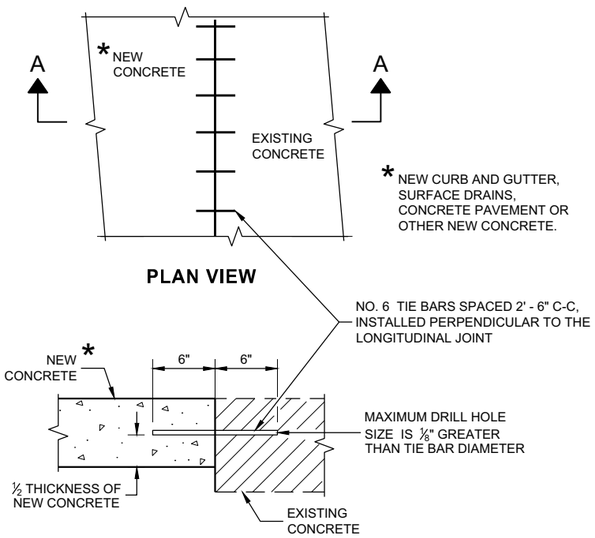


TYPES A (1) & D



TYPES G (1) & J

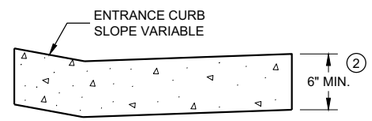
CONCRETE CURB



PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

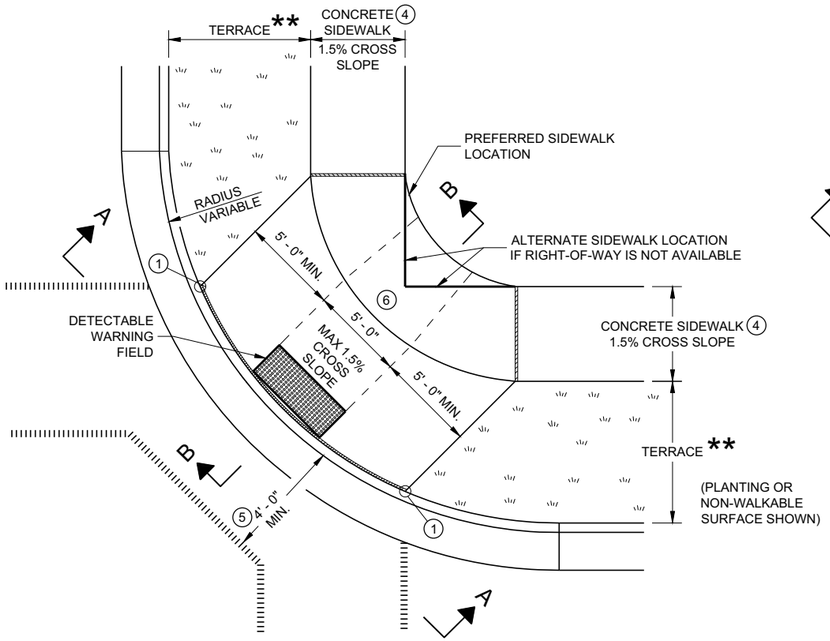
FHWA

6

SDD08D01 - 22b

6

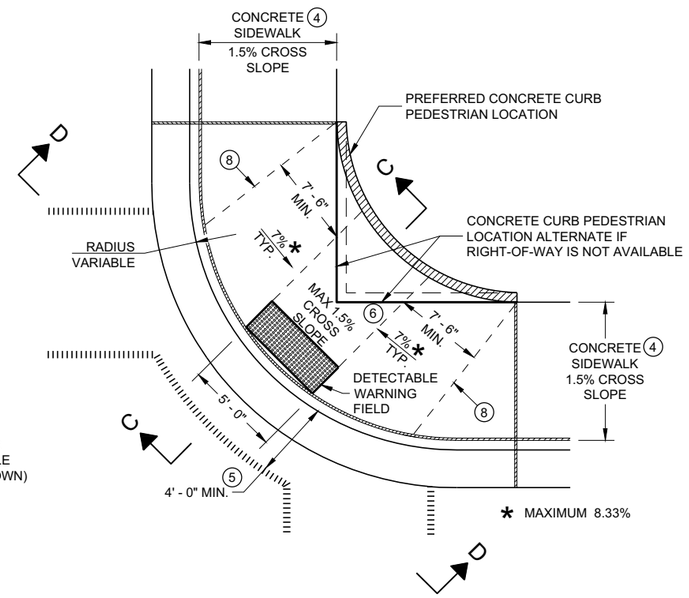
SDD08D01 - 22b



PLAN VIEW

CURB RAMP TYPE 1

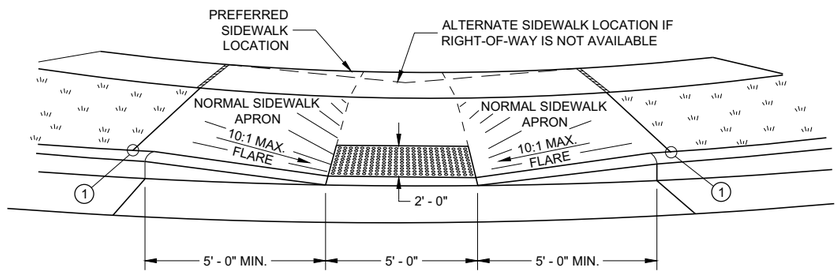
(CENTER OF CORNER RADIUS)



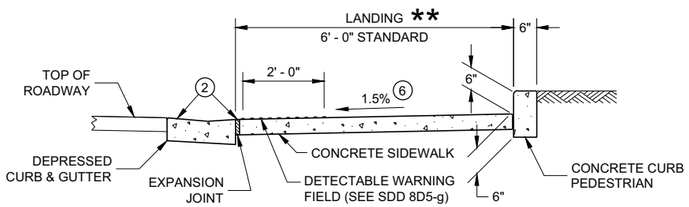
PLAN VIEW

CURB RAMP TYPE 1 - A

(NO TERRACE)

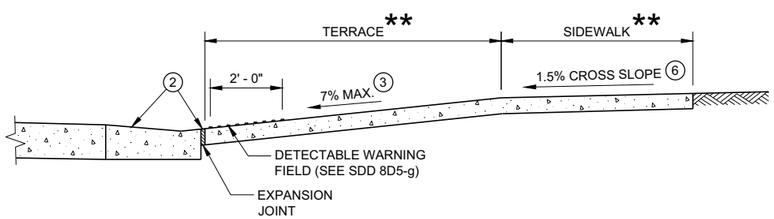


VIEW A - A FOR TYPE 1

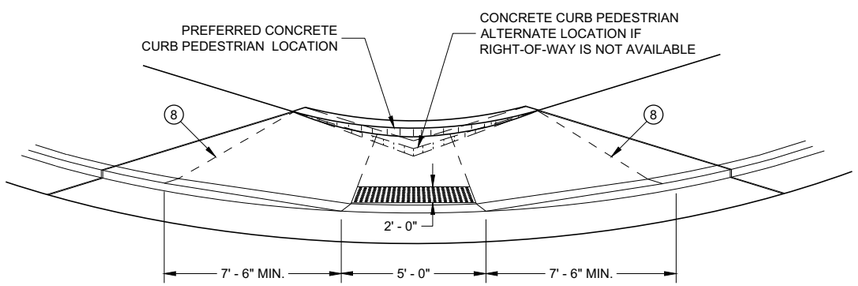


SECTION C - C FOR TYPE 1 - A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF 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

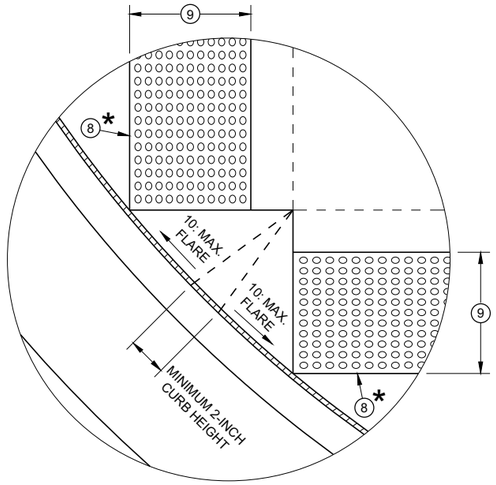
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 1 AND 1-A

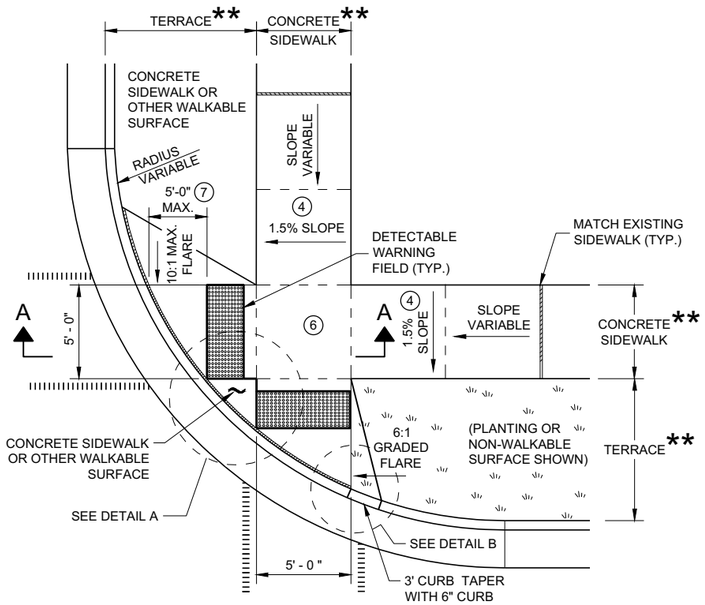
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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.

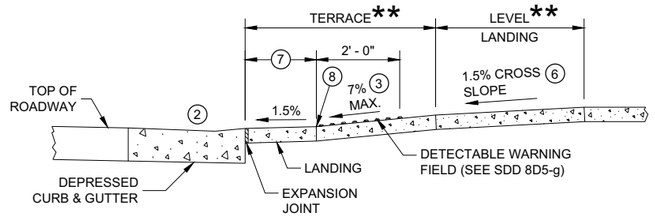
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(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.

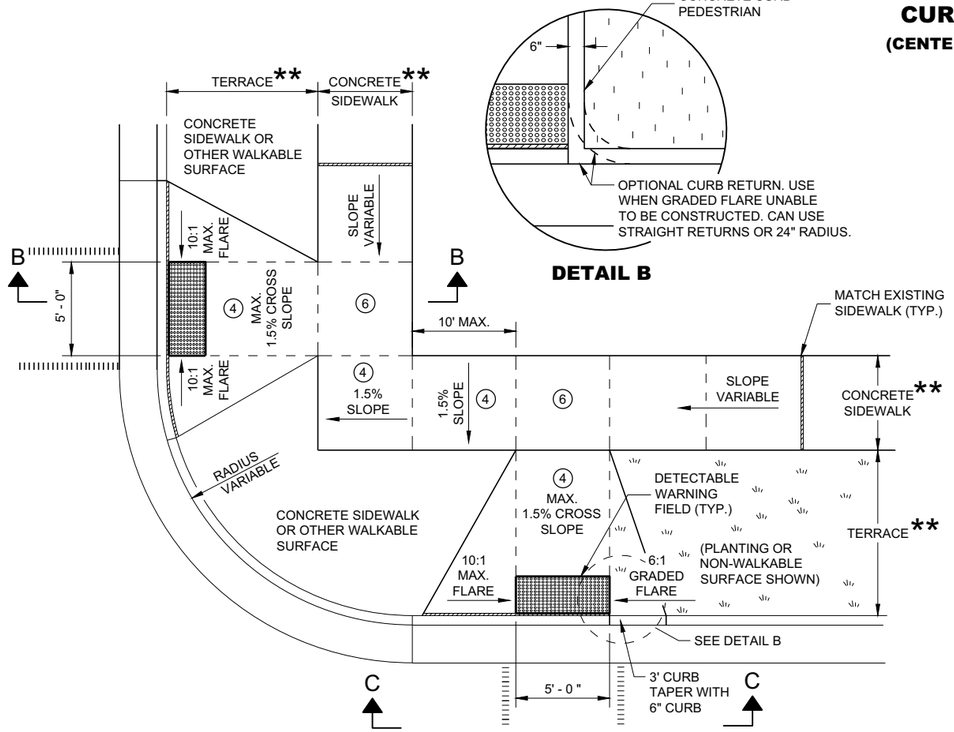
(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



SECTION A - A FOR TYPE 2

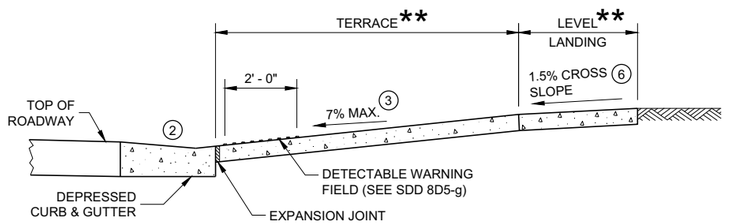
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS



DETAIL B

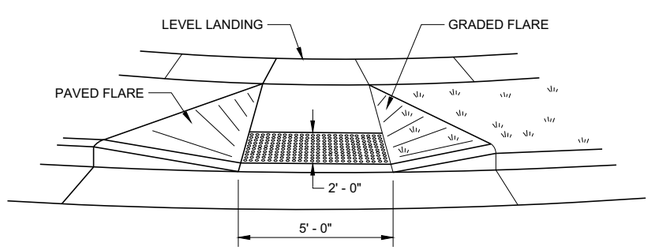
PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)



SECTION B - B FOR TYPE 3

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



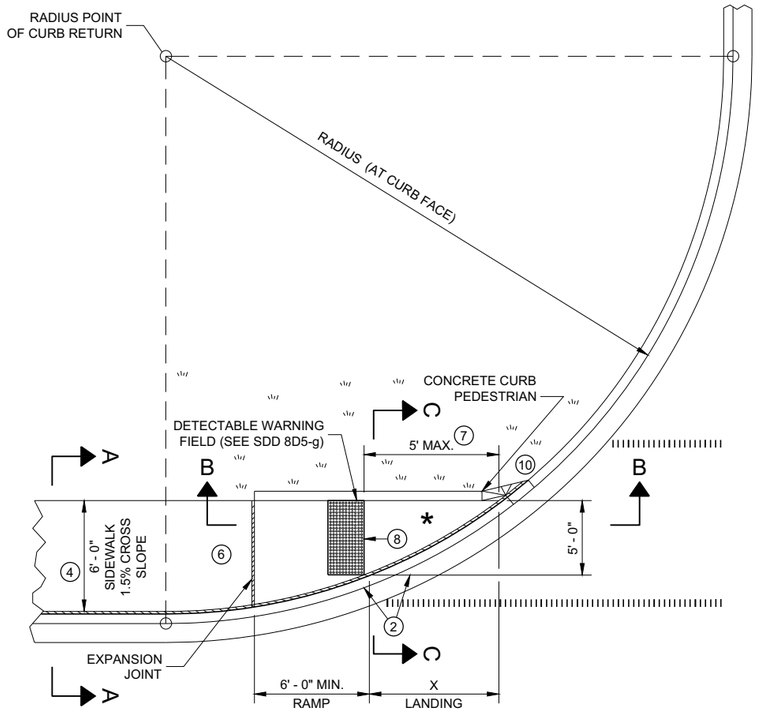
VIEW C - C FOR TYPE 3

CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20b

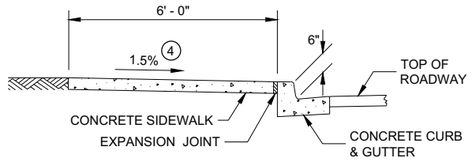


PLAN VIEW

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.

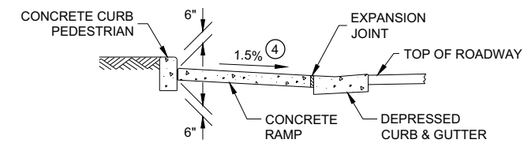
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

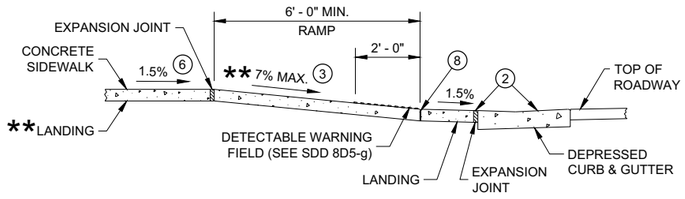
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)



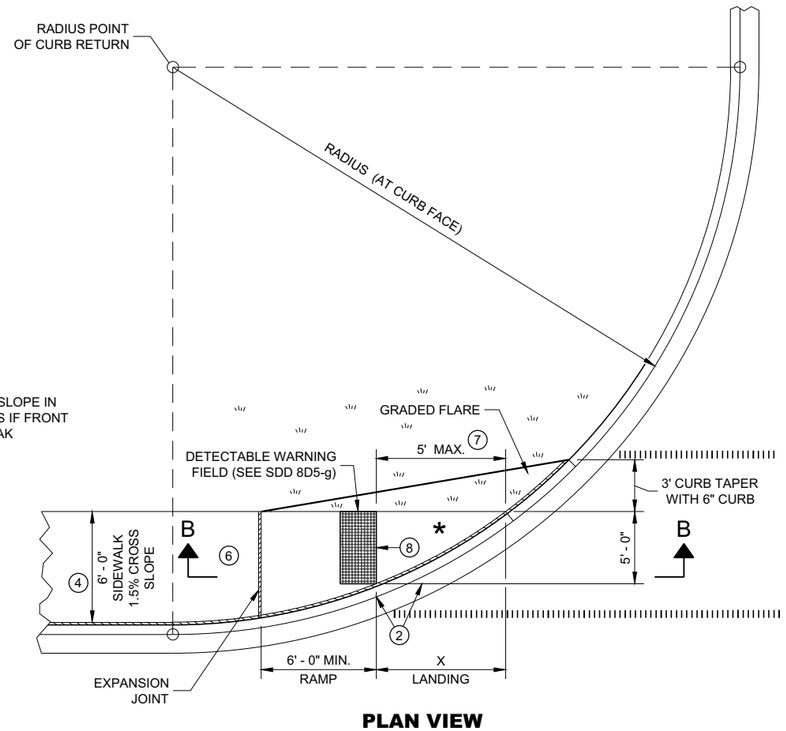
SECTION C - C FOR TYPE 4A



** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

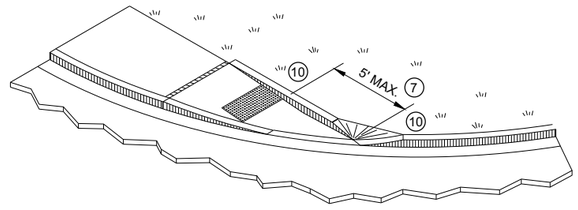
SECTION B - B FOR TYPE 4A AND TYPE 4A1

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

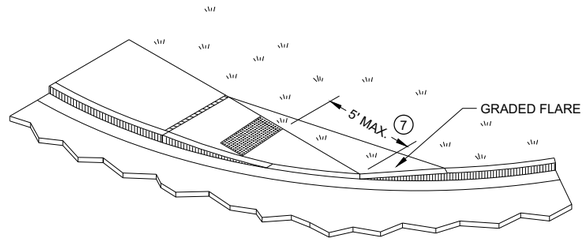


PLAN VIEW

CURB RAMP TYPE 4A1



ISOMETRIC VIEW FOR TYPE 4A



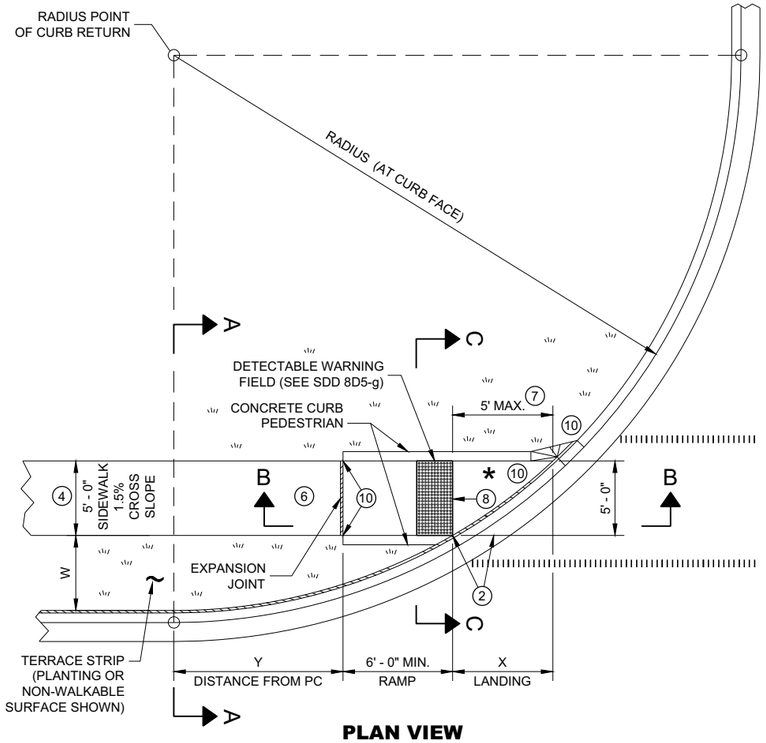
ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20c

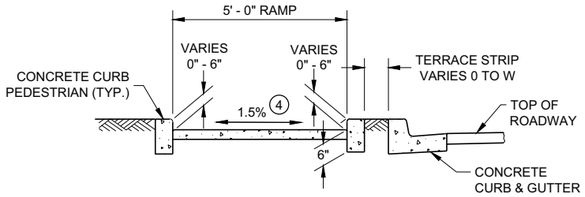


PLAN VIEW

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.

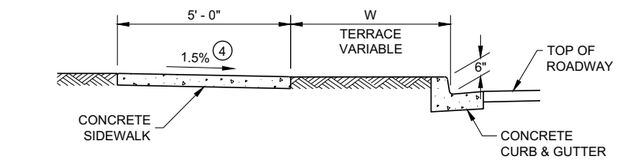
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

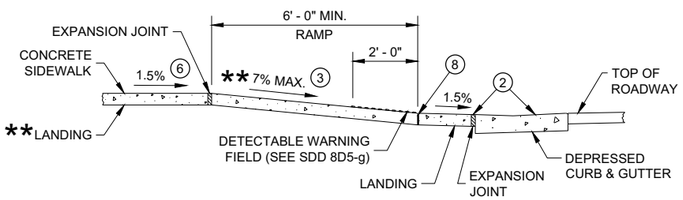
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



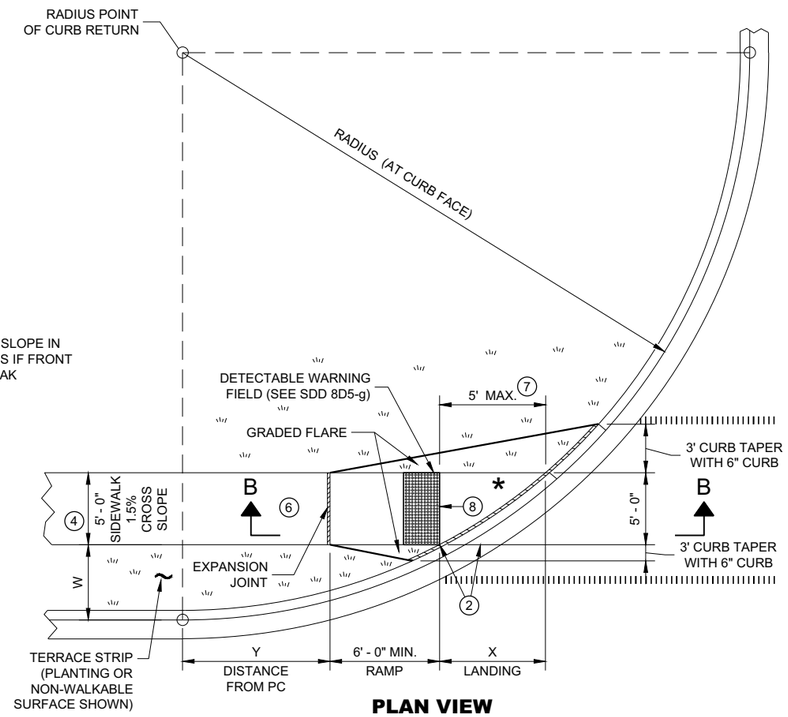
SECTION A - A FOR TYPE 4B



SECTION B - B FOR TYPE 4B AND TYPE 4B1

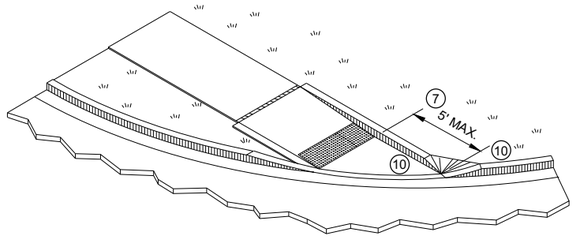
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

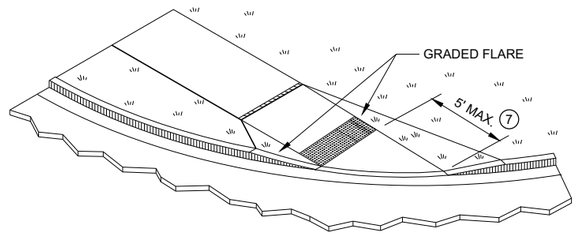


PLAN VIEW

CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B



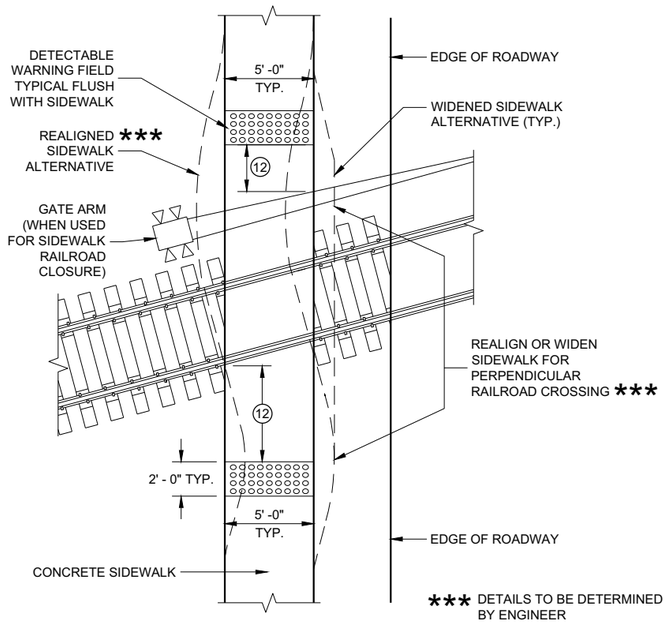
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

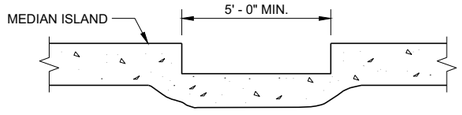
6

SDD 08D05 - 20d

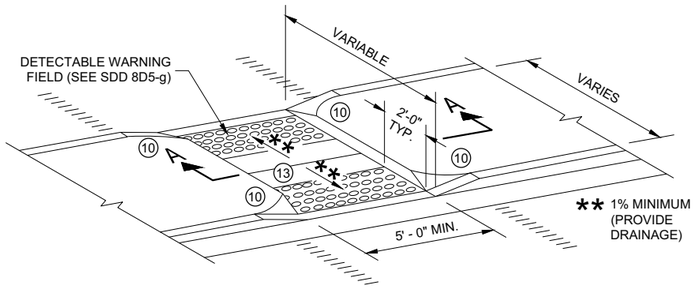


CURB RAMP TYPE 8

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.

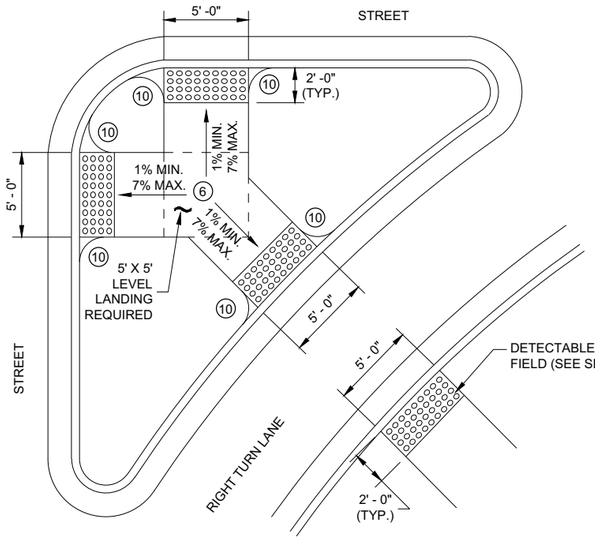
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(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

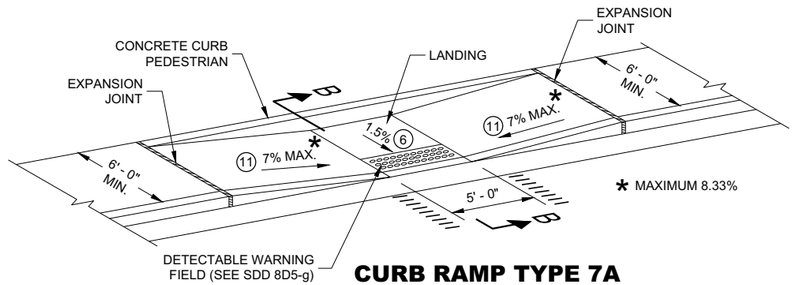
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



CURB RAMP TYPE 6

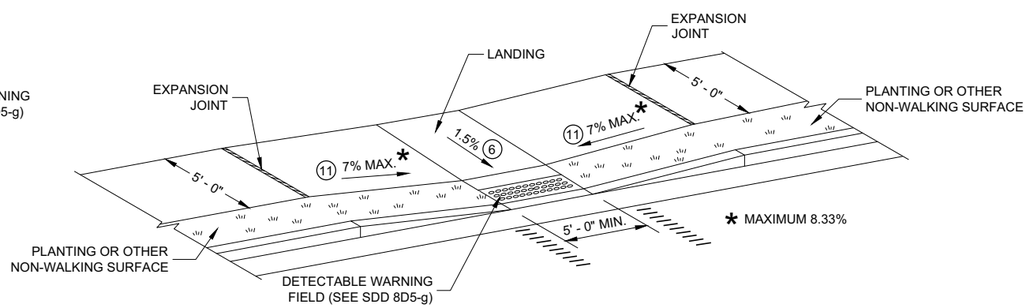
DETECTABLE WARNING AT ISLANDS

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



CURB RAMP TYPE 7A

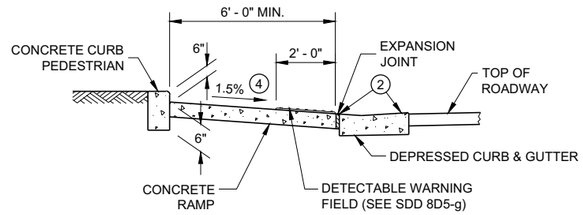
MID BLOCK CROSSING



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

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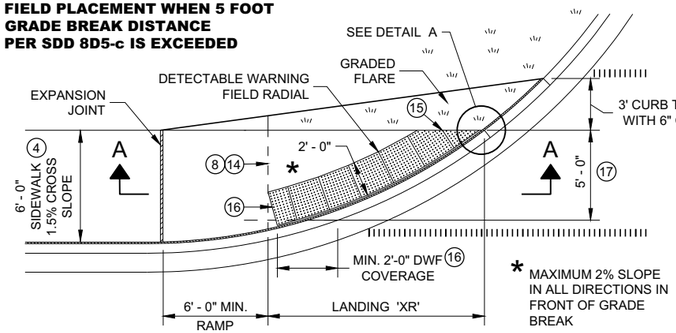
SDD 08D05 - 20e
SDD 08D05 - 20e

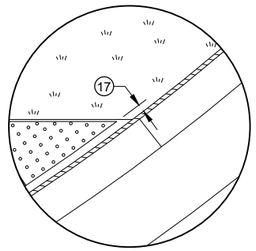
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



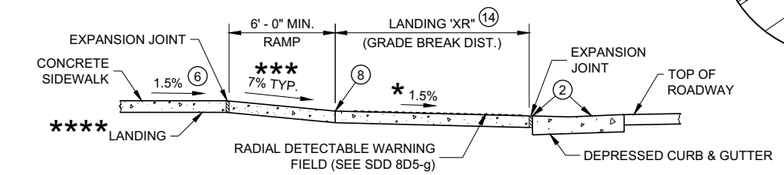
PLAN VIEW

CURB RAMP TYPE 4A1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL A

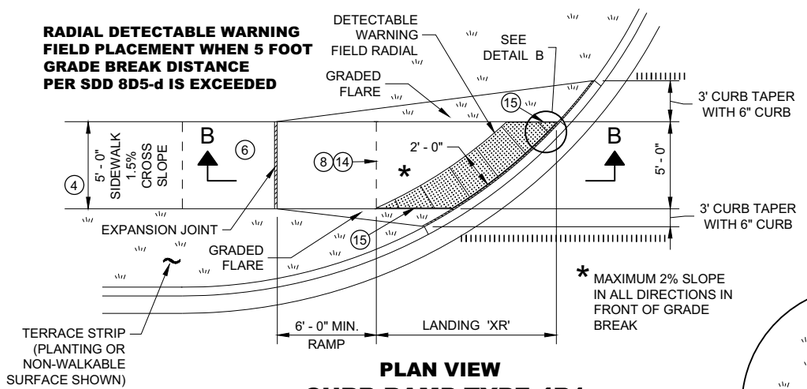


**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION A - A FOR TYPE 4A1

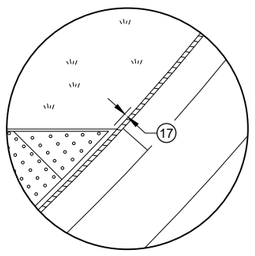
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



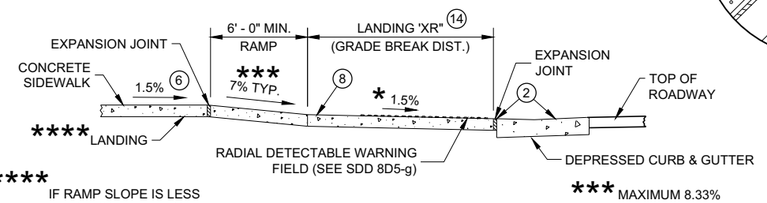
PLAN VIEW

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.

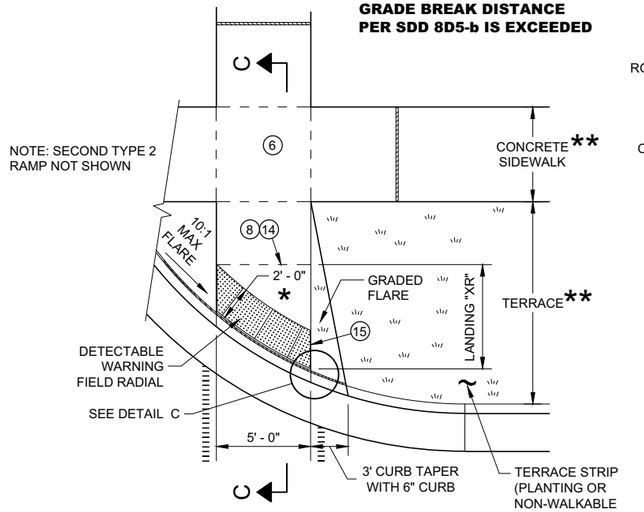
(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(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

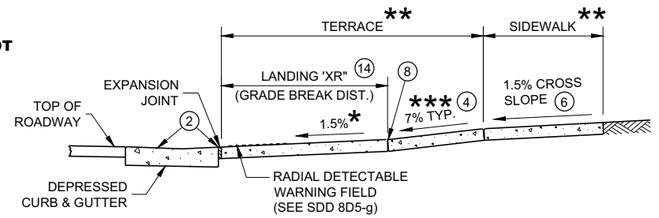


PLAN VIEW

CURB RAMP TYPE 2

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)

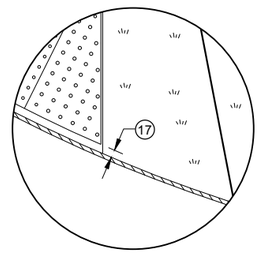


SECTION C - C FOR TYPE 2

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%



DETAIL C

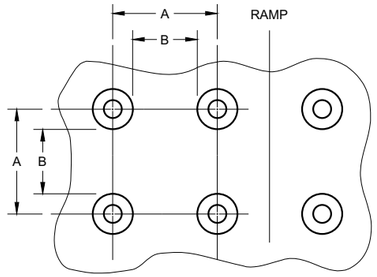
CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

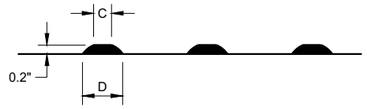
SDD 08D05 - 20f

	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.

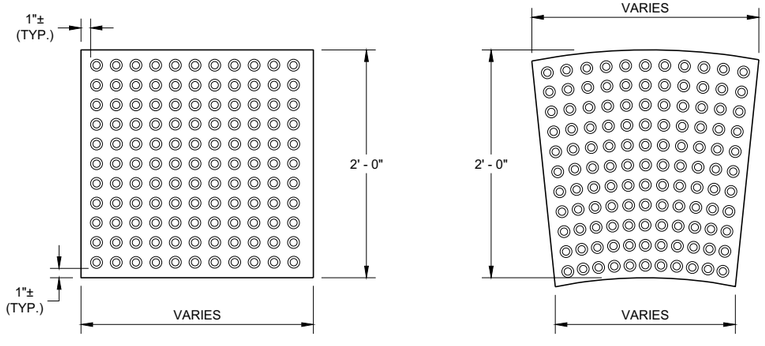


PLAN VIEW



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.

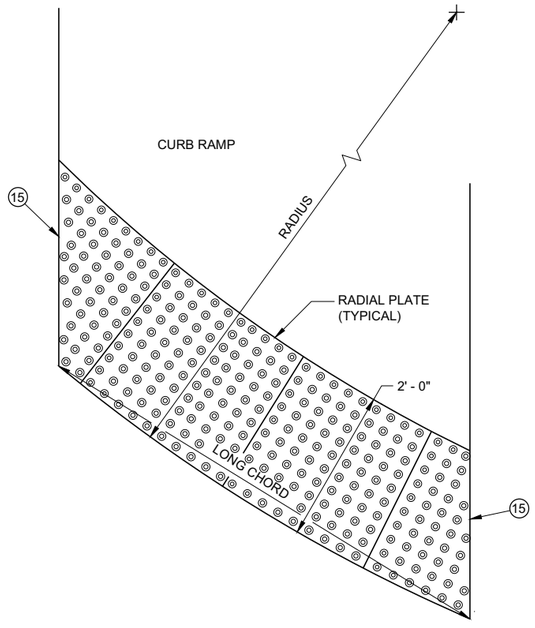
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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.

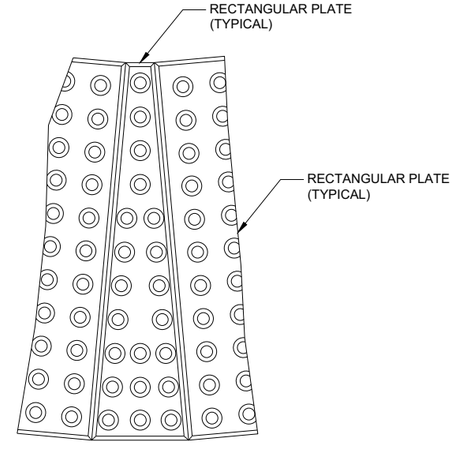
REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

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

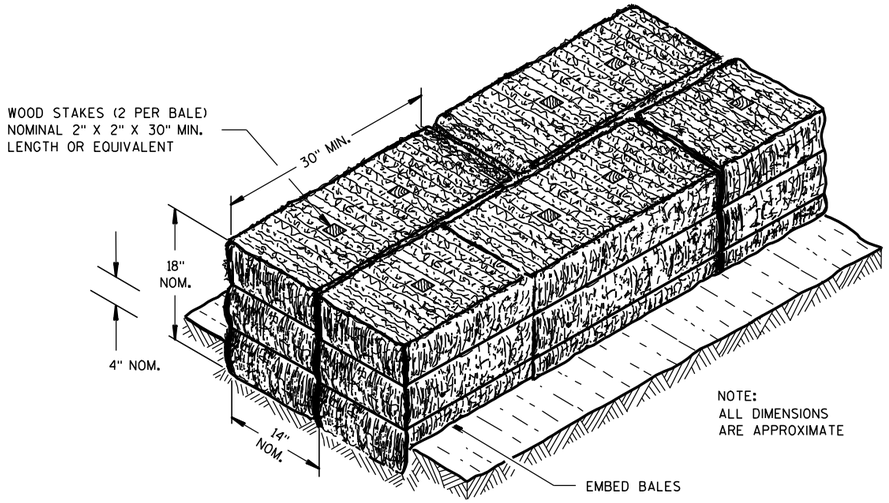
FHWA

6

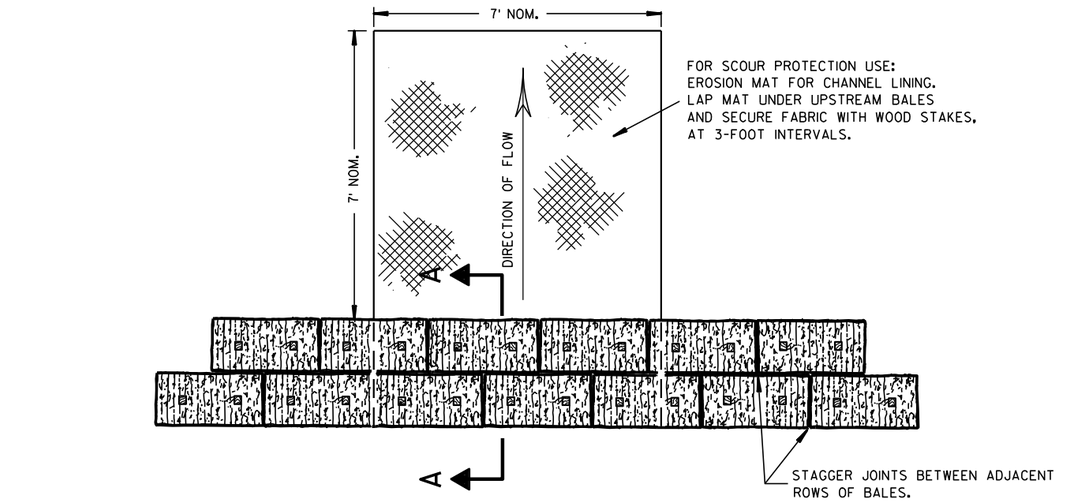
SDD 08D05 - 20g

6

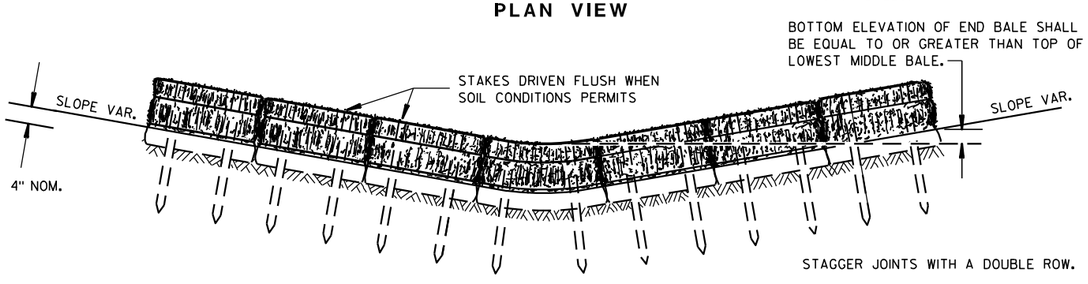
SDD 08D05 - 20g



SECTION A-A



PLAN VIEW



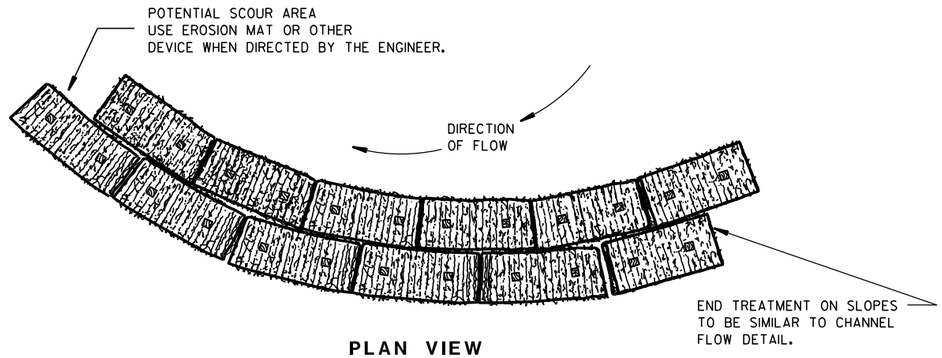
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

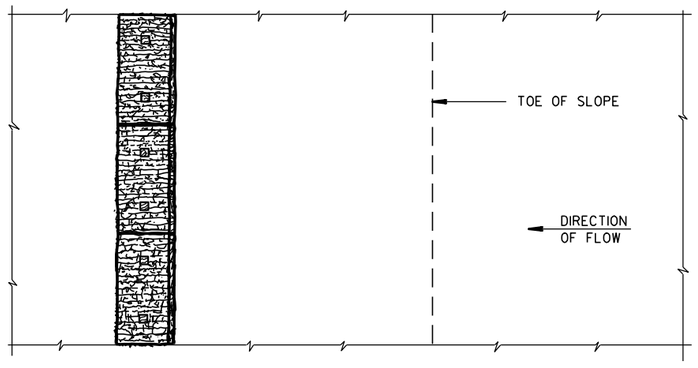
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

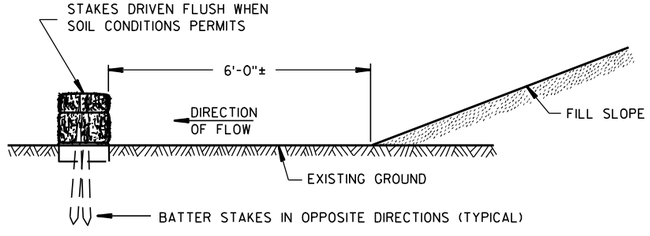


PLAN VIEW

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

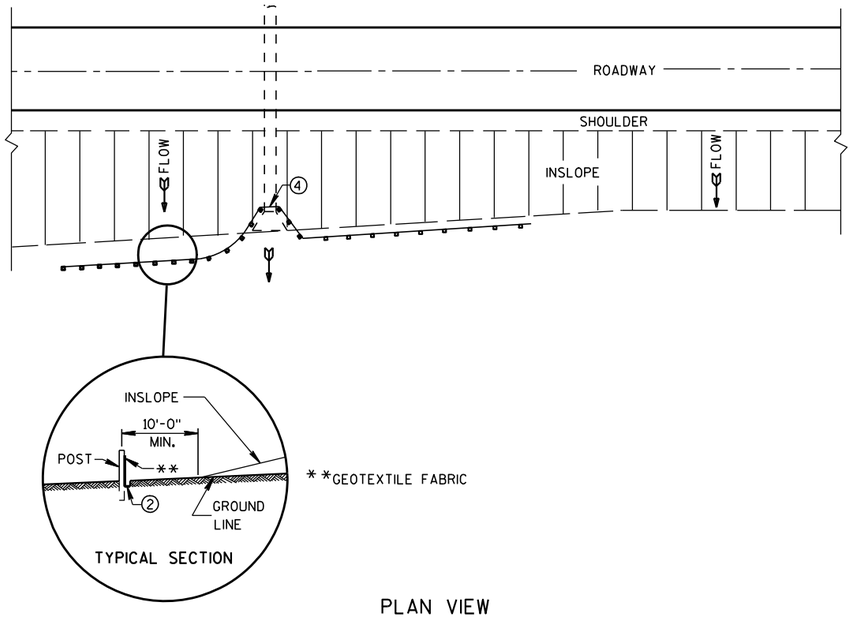
FHWA

6

S.D.D. 8 E 8-3

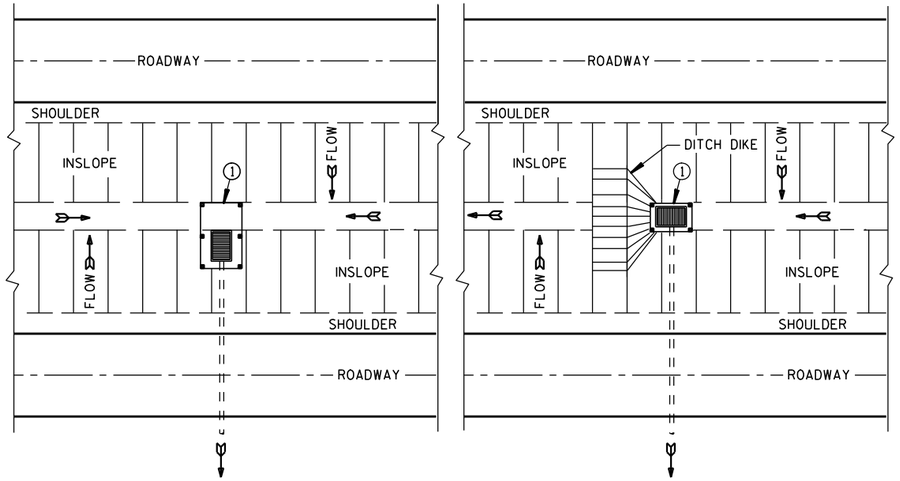
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



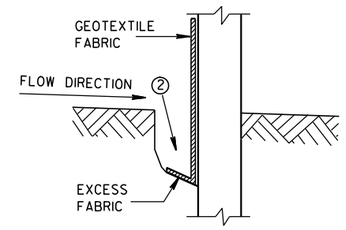
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

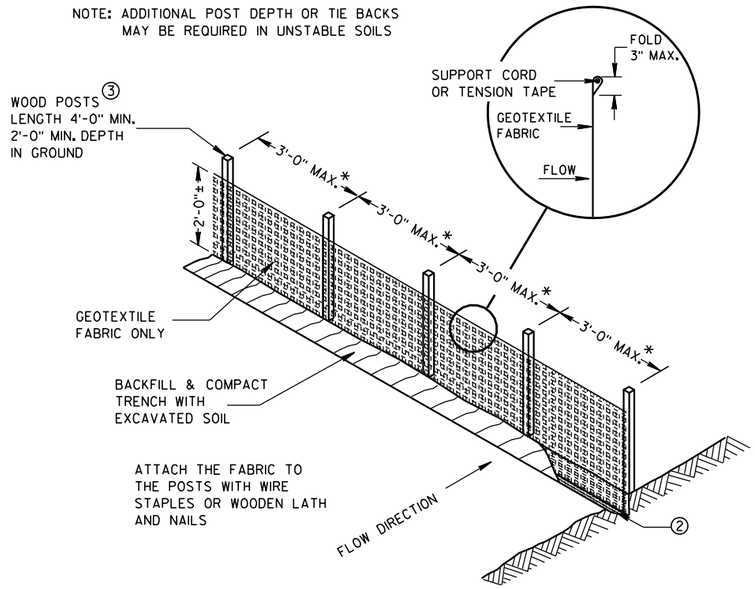
GENERAL NOTES

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

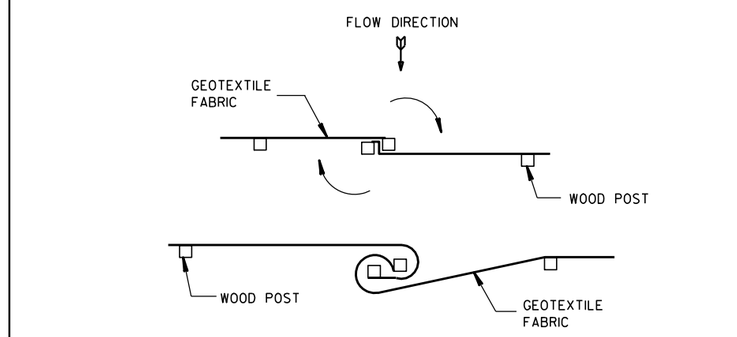
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL 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.



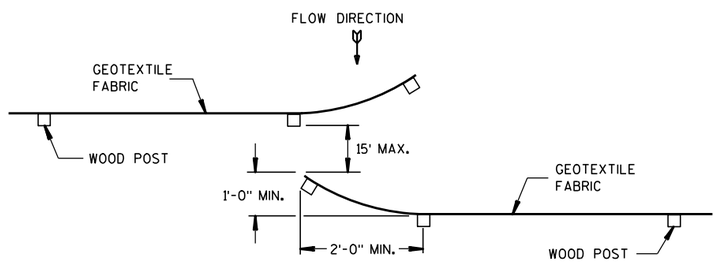
TRENCH DETAIL



SILT FENCE

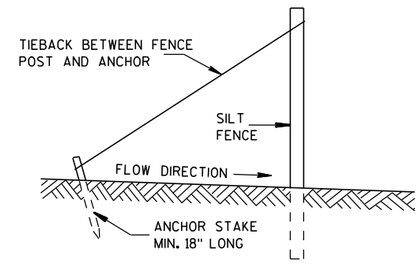


TWIST METHOD



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

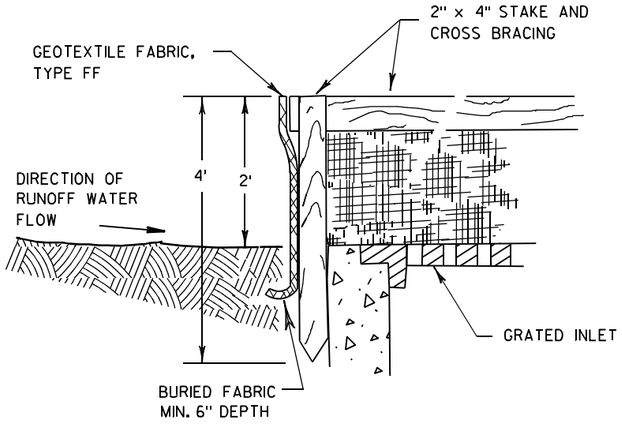
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

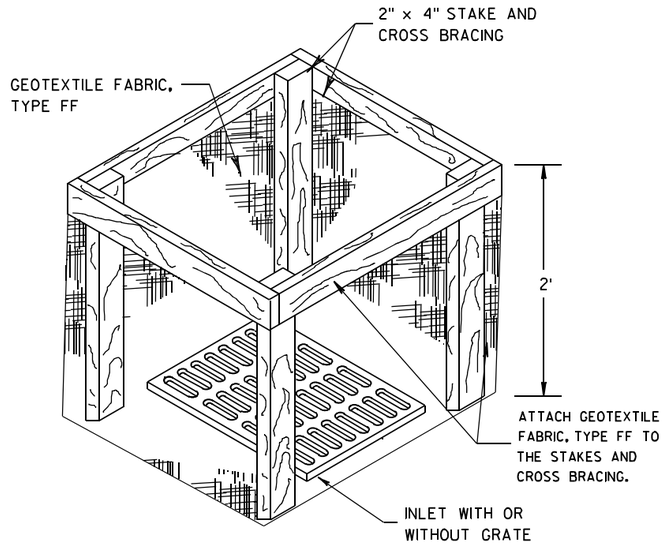
6

S.D.D. 8 E 9-6

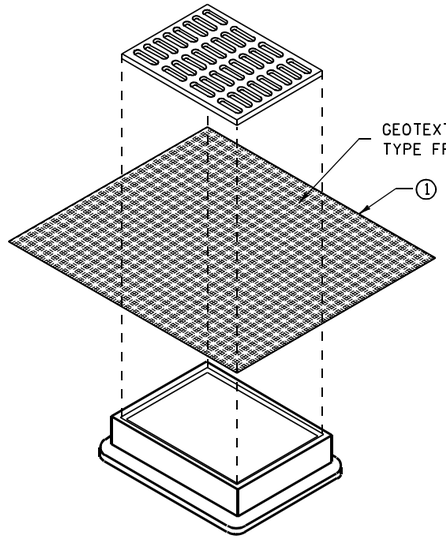
6

S.D.D. 8 E 9-6



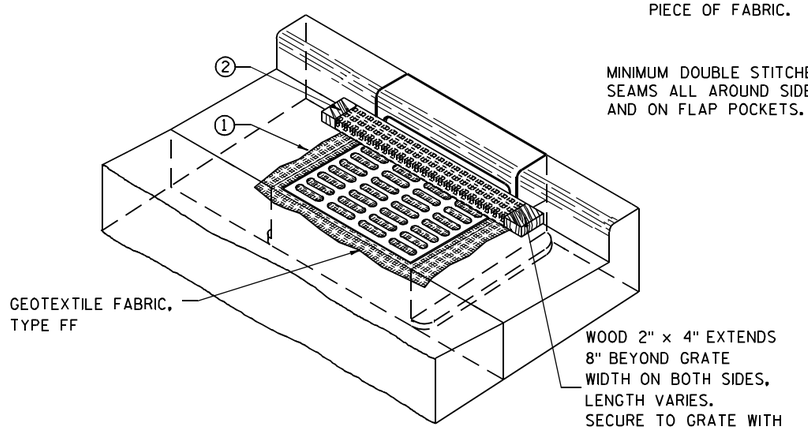


INLET PROTECTION, TYPE A

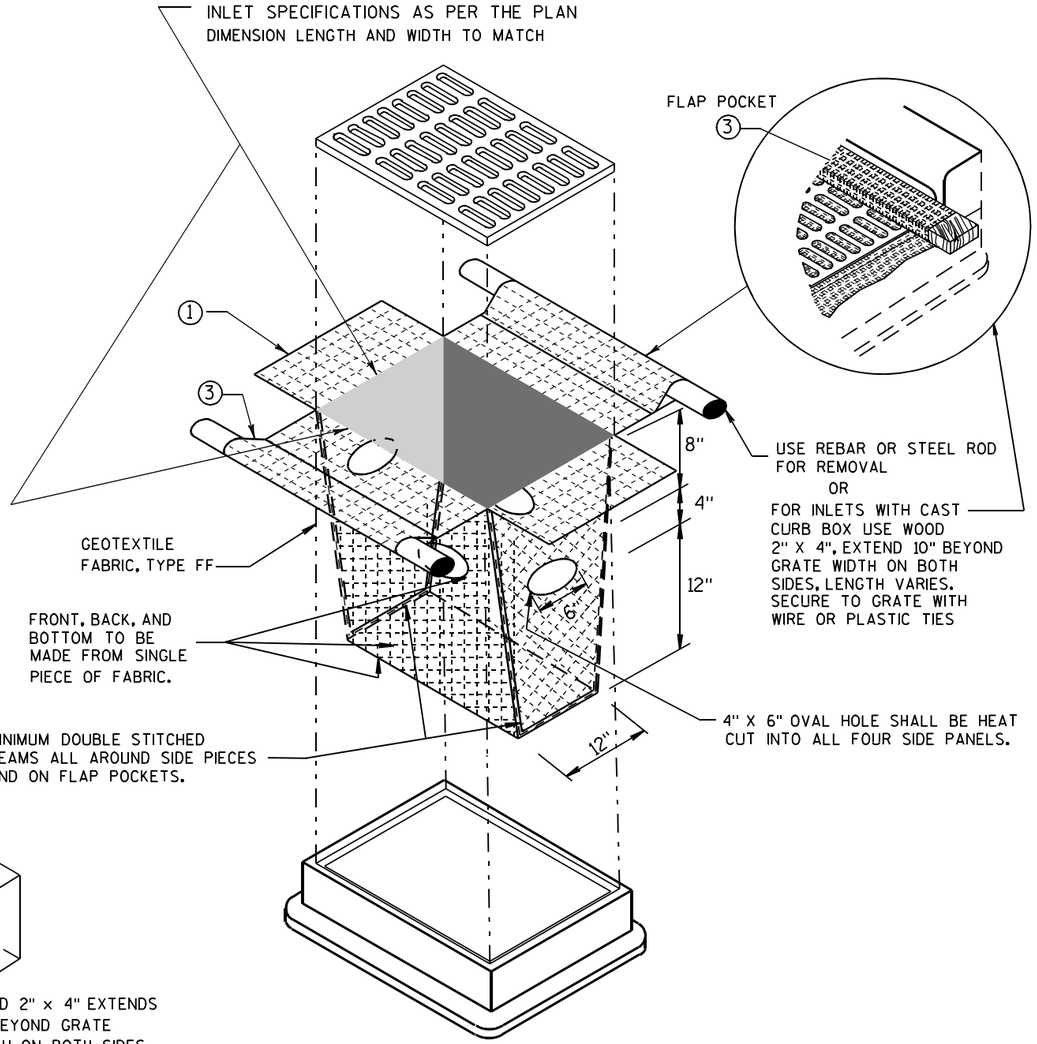


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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.

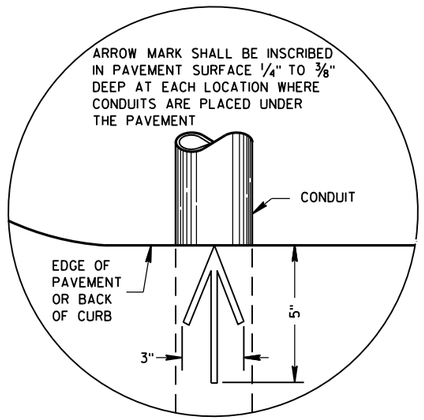
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

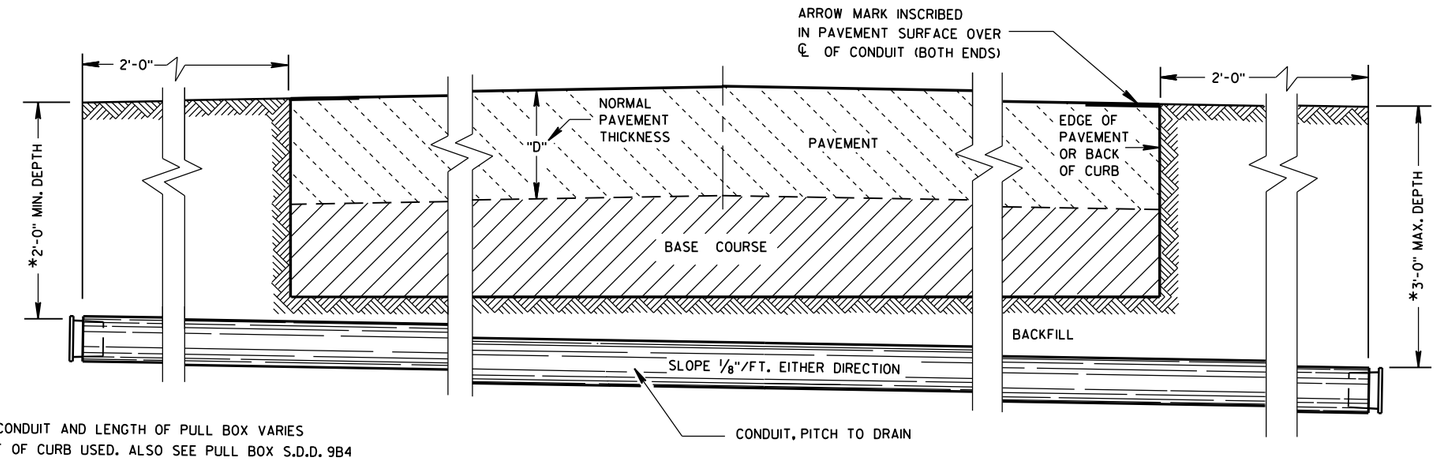
APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 10-2



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

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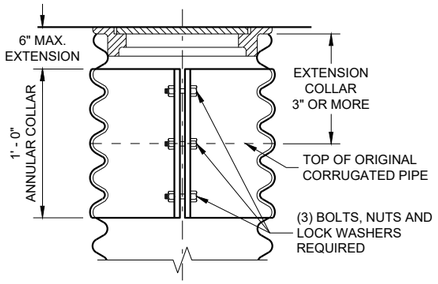
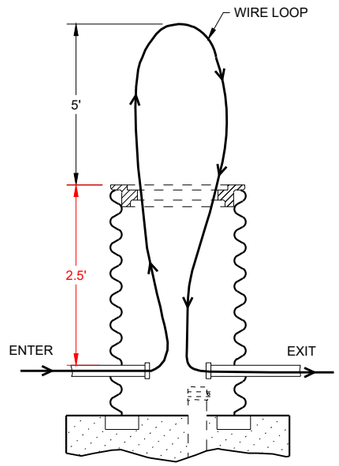
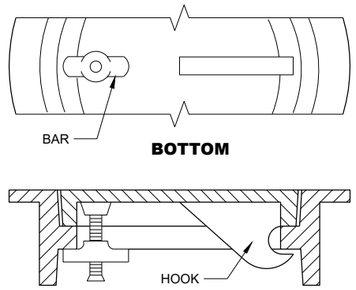
S.D.D. 9 B 2-10



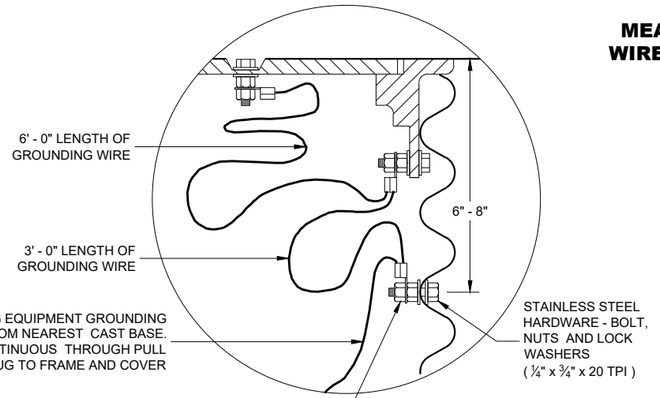
CORRUGATED PIPE EXTENDER



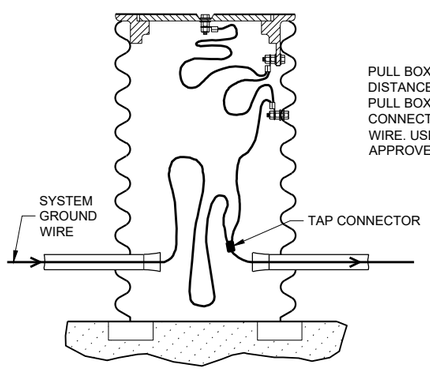
MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



ALTERNATE COVER (LOCKING)
TIGHTENING BAR TYPE

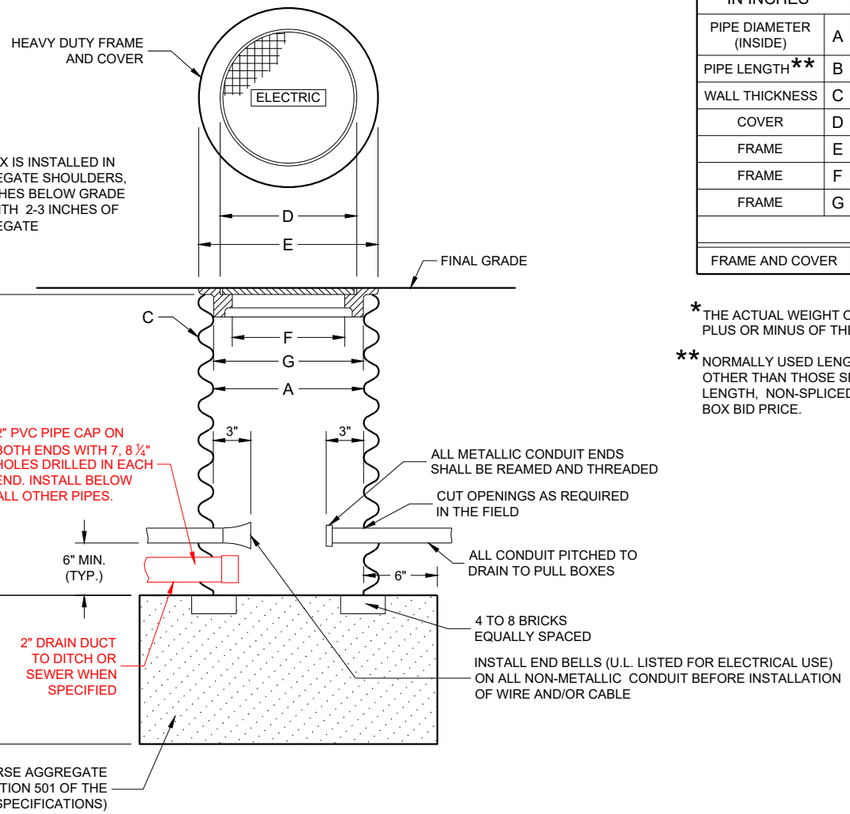


EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



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

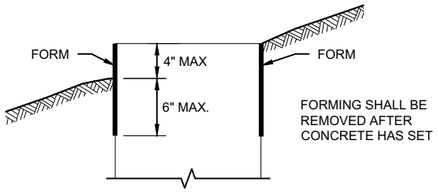
APPROVED
May 2022
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

FHWA

6
SDD 09B04-12

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.

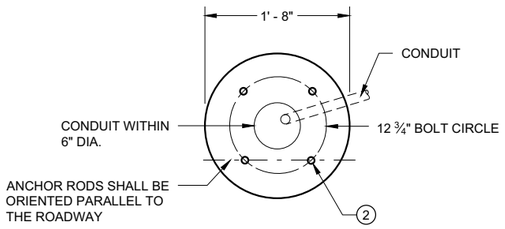
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

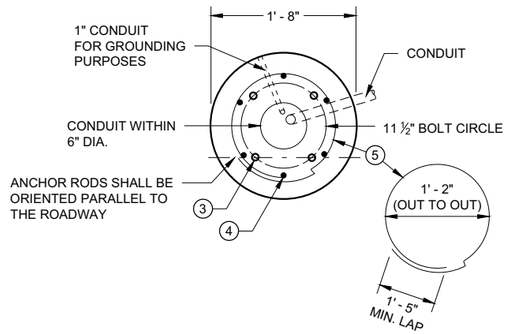
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

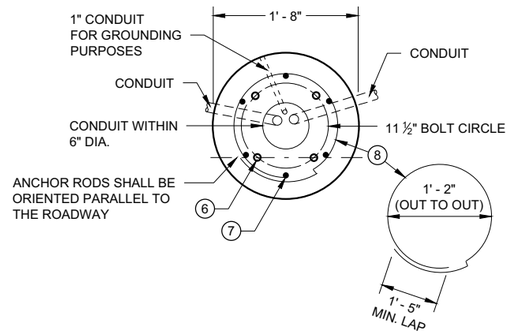
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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

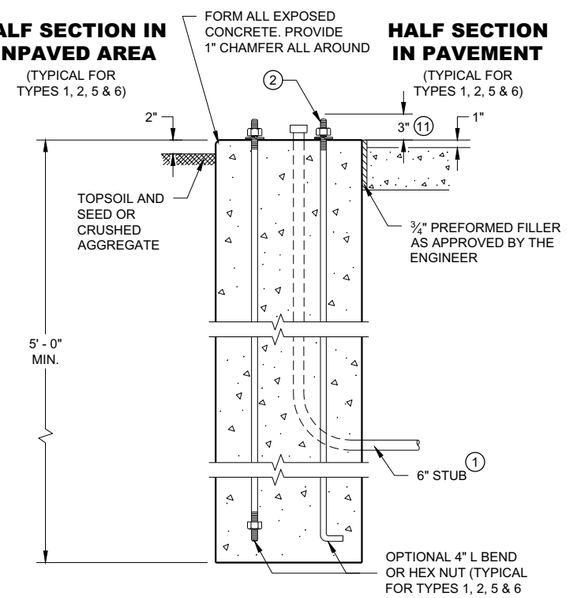
10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

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.

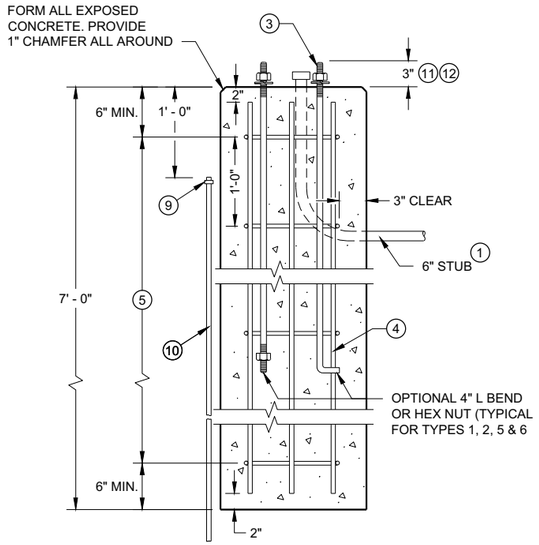
12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

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



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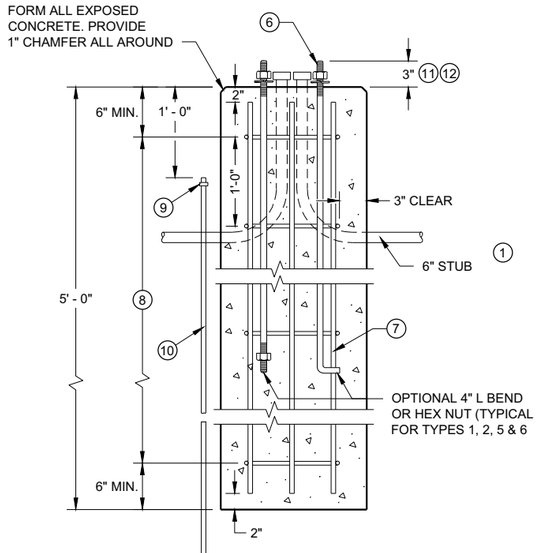


TYPE 5 & 6

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

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.

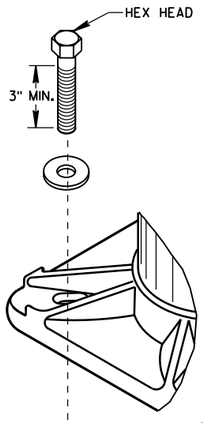
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

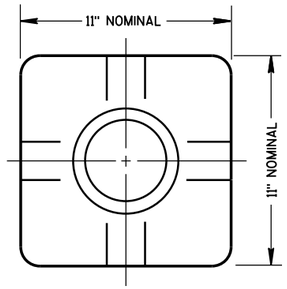
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

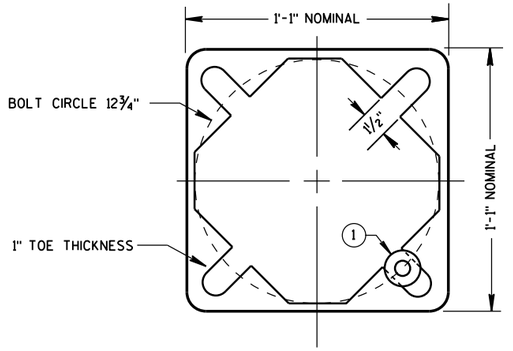
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

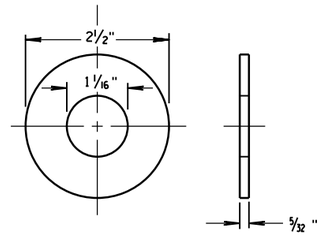




TOP VIEW
(PEDESTAL BASE)

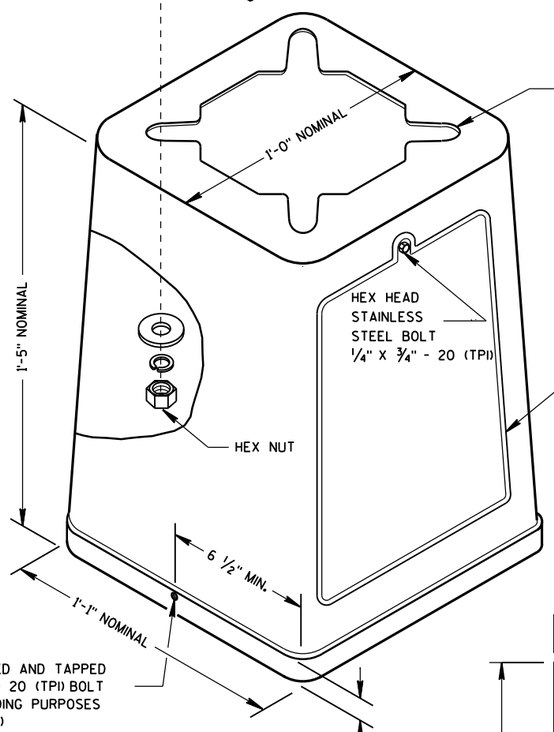


BOTTOM VIEW
(PEDESTAL BASE)

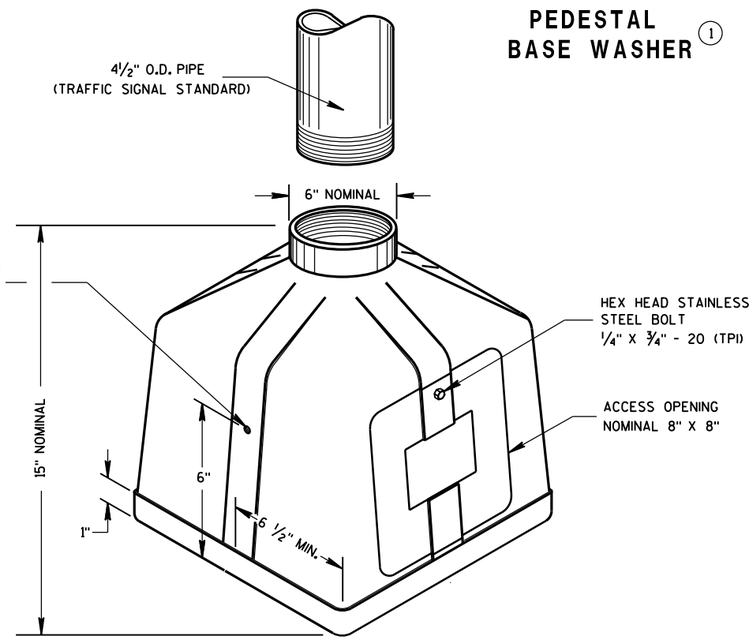


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

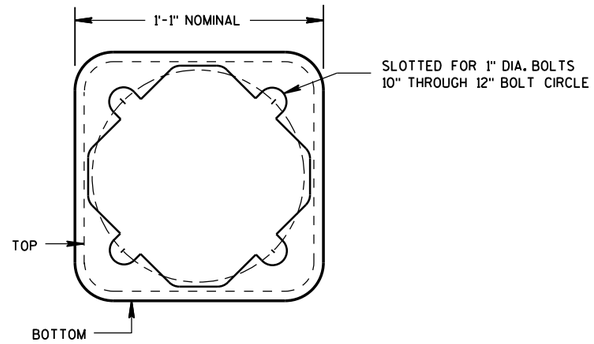


ISOMETRIC VIEW

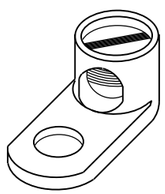


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

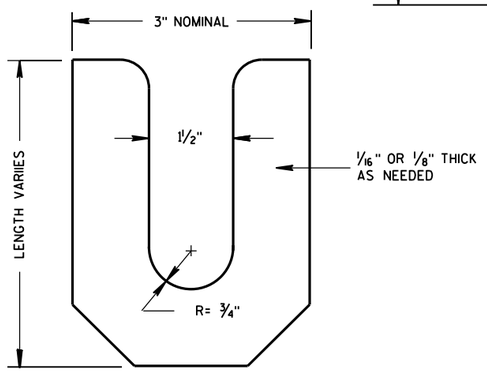


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

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



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

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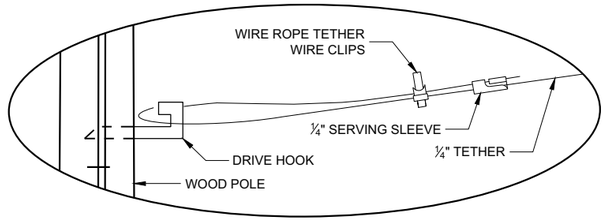
S.D.D. 9 C 3-4

MINIMUM POLE LENGTHS	POLE BURIAL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

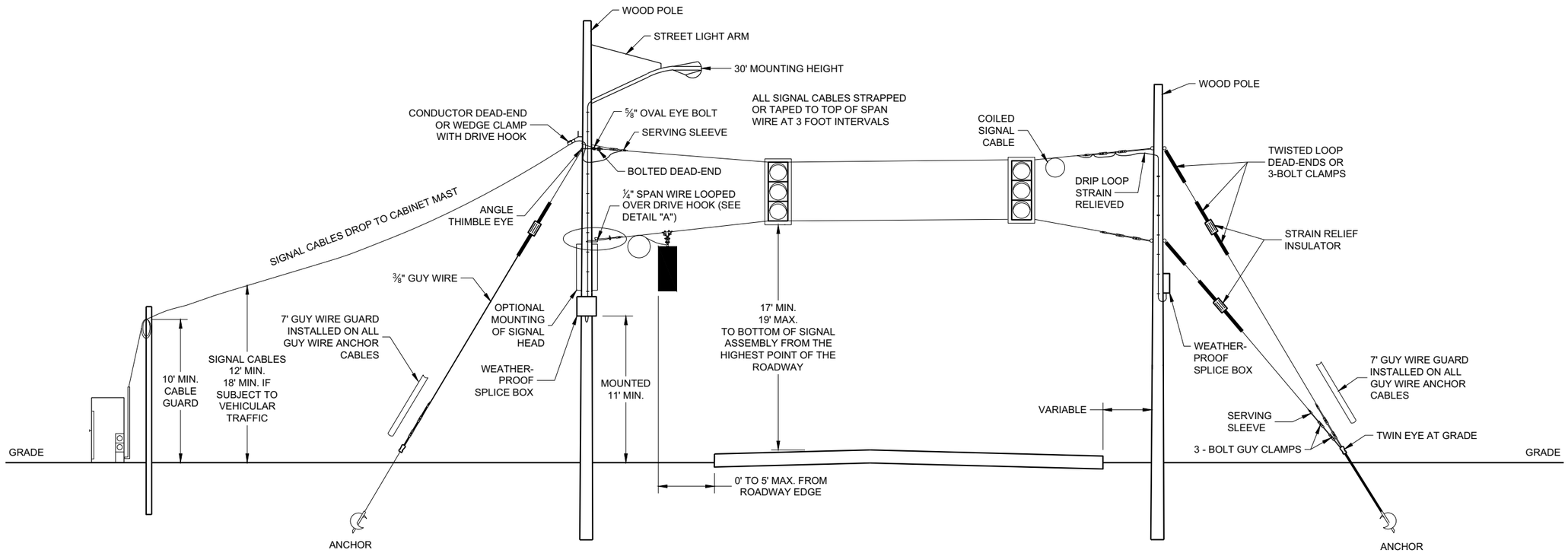


DETAIL "A"

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

FHWA

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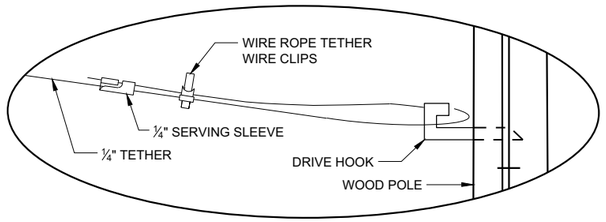
SDD09G01 - 04a

SDD09G01 - 04a

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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   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
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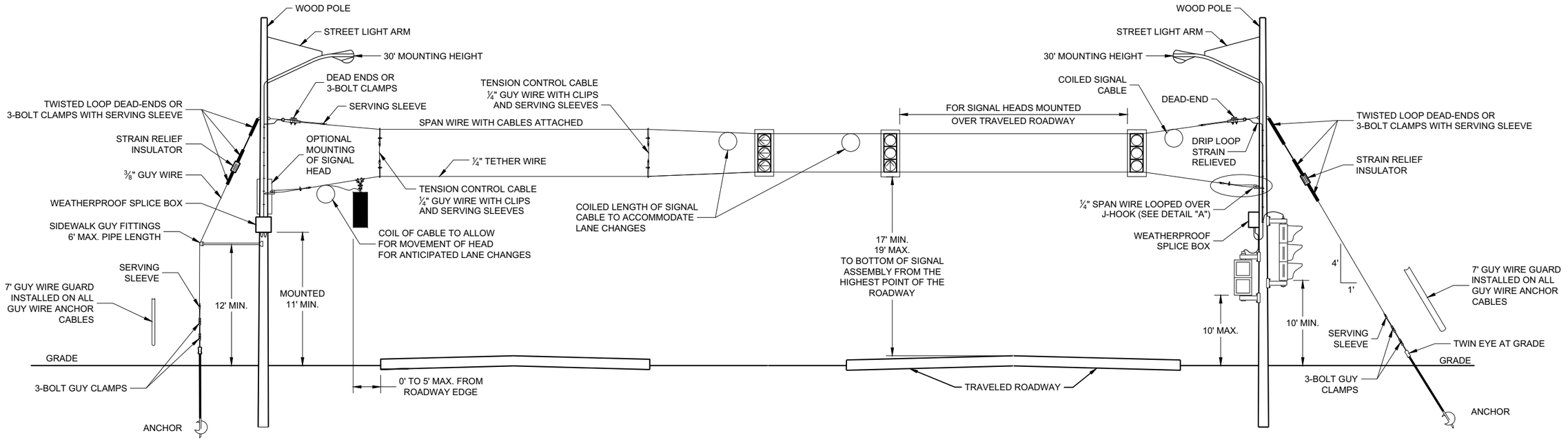


SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

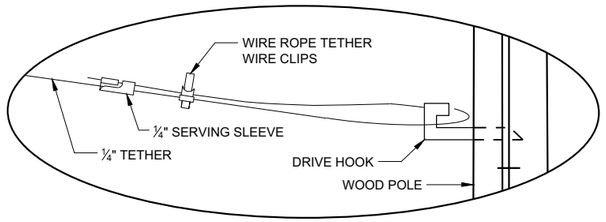
APPROVED
June 2015
DATE
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI

FHWA

SDD09G01 - 04b

SDD09G01 - 04b

MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'



DETAIL "A"

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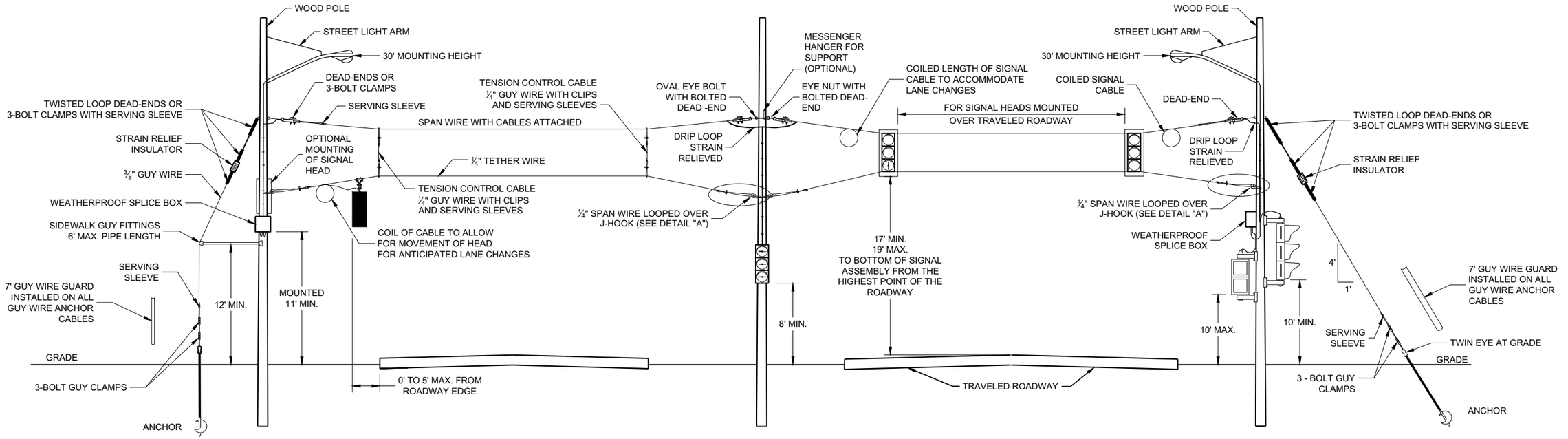

SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

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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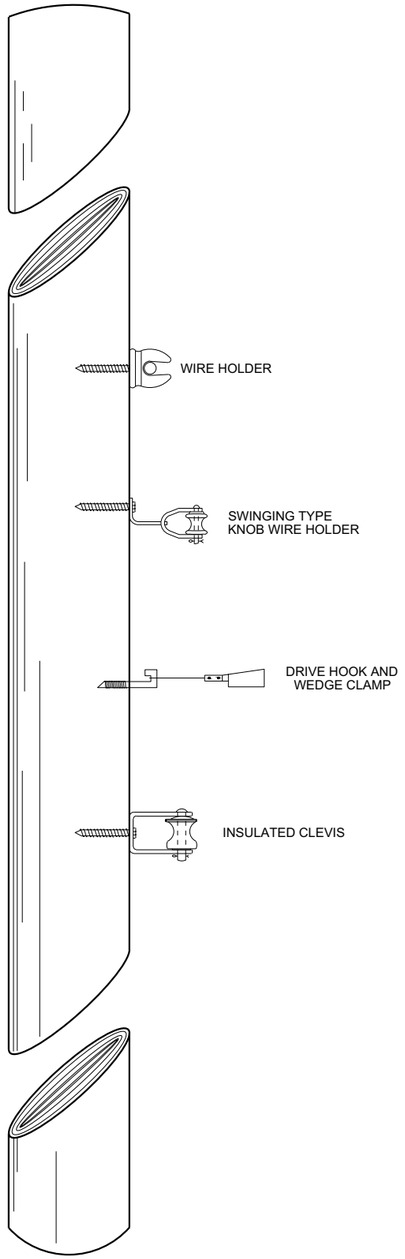

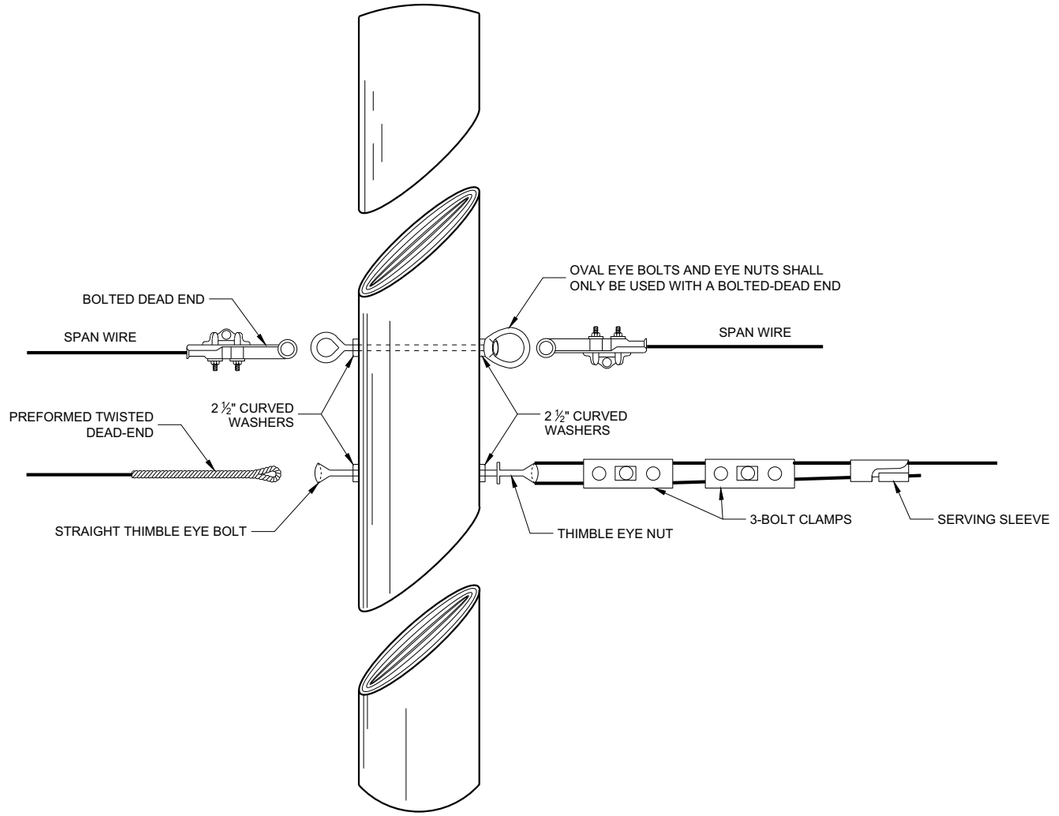

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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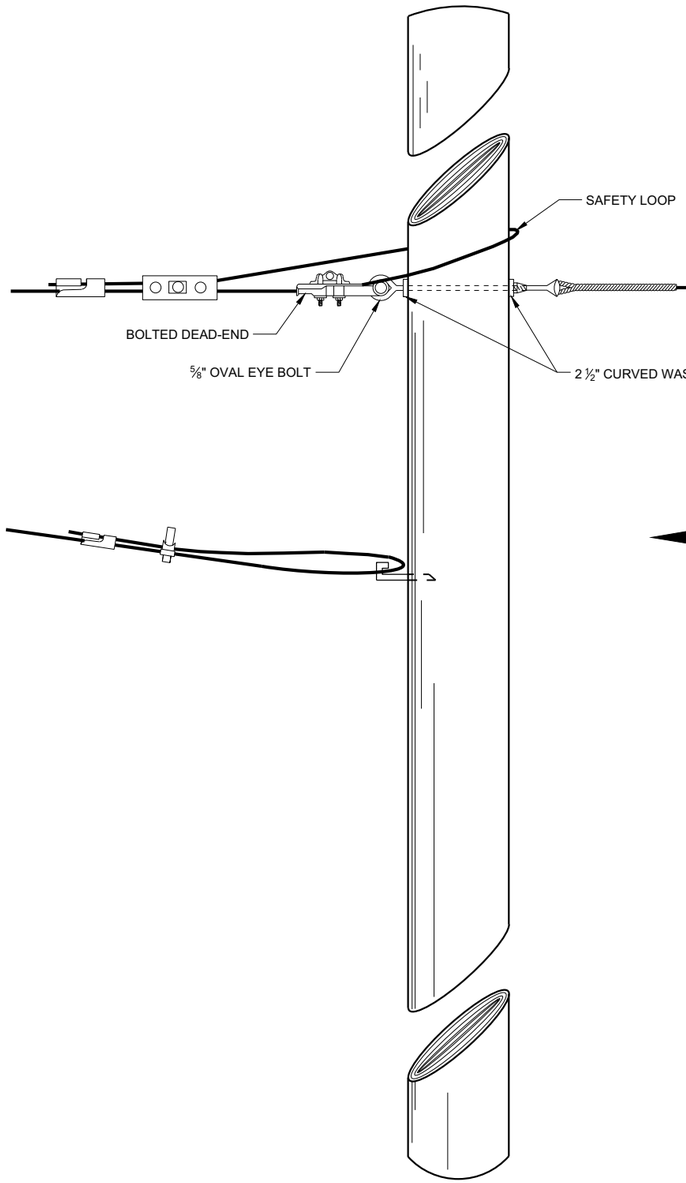
SDD 09G01 - 4d

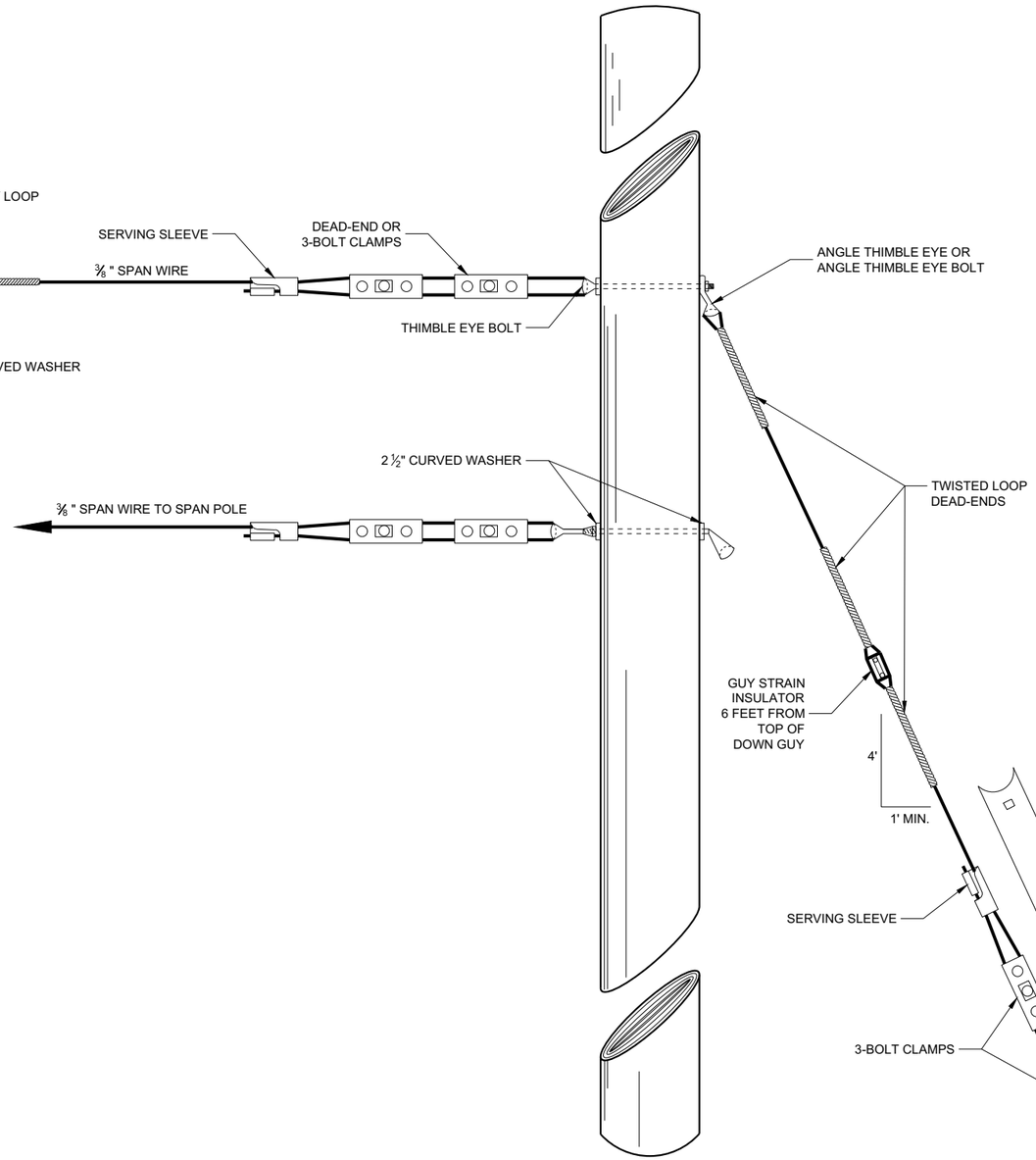
SDD 09G01 - 4d

GENERAL NOTES

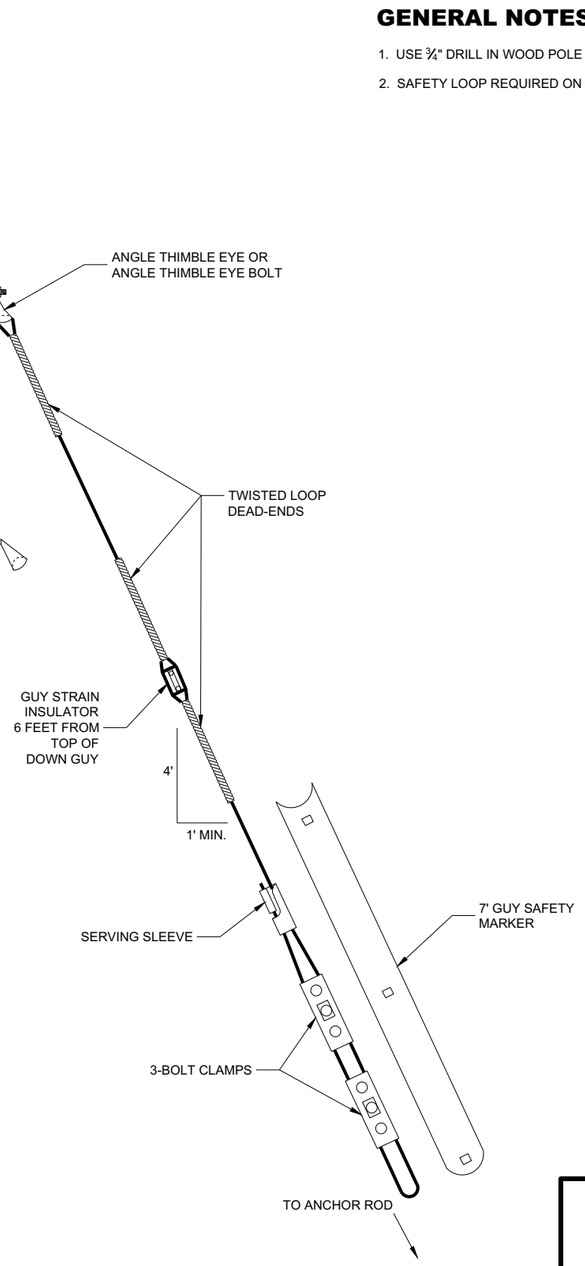
1. USE ¾" DRILL IN WOOD POLE TO PROVIDE FOR ⅝" BOLTS.
2. SAFETY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



SPAN WIRE POLE



GUY POLE



TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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SDD 09G01 - 4e

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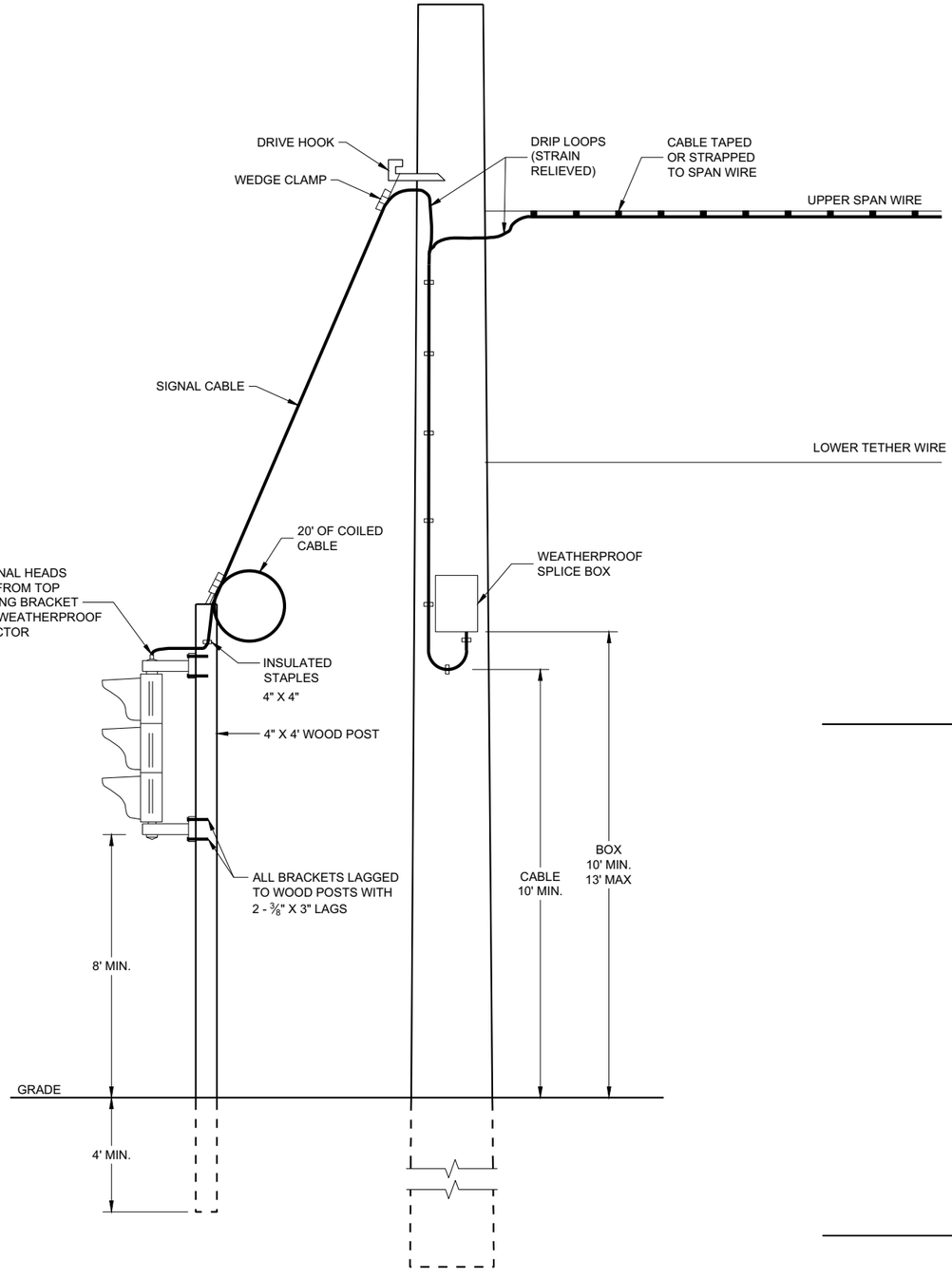
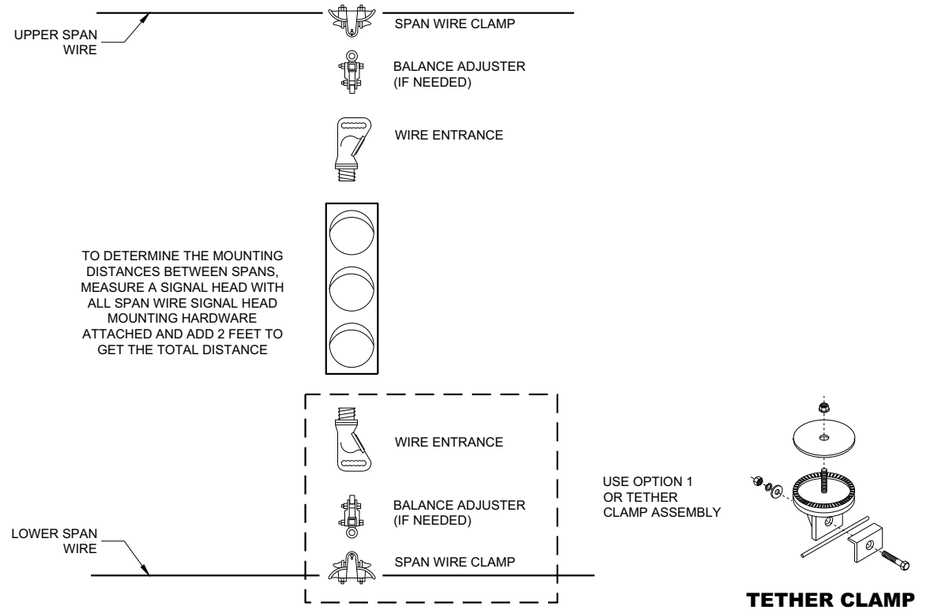
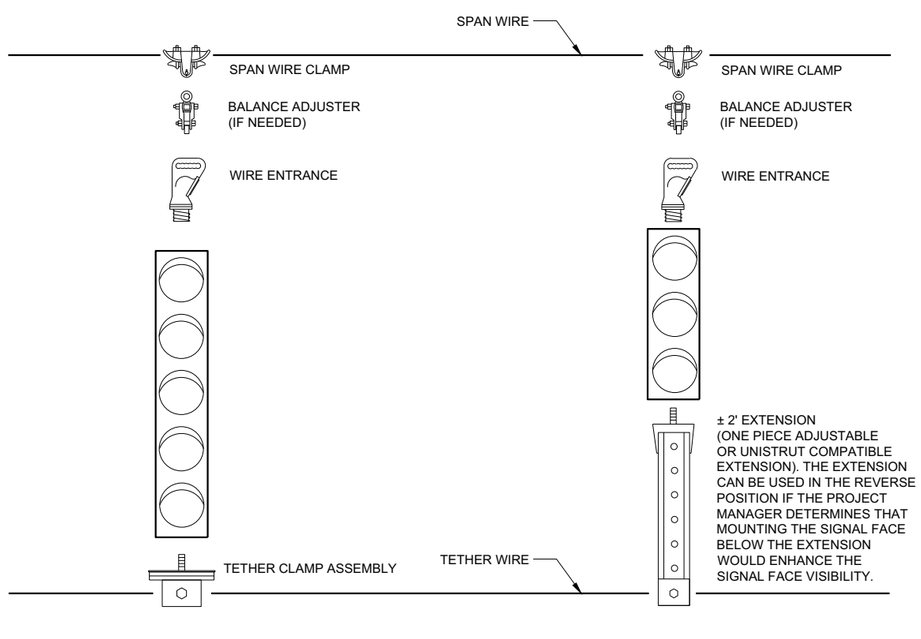
SDD 09G01 - 4e



TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL



TYPICAL SPAN WIRE MOUNTING HARDWARE



5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

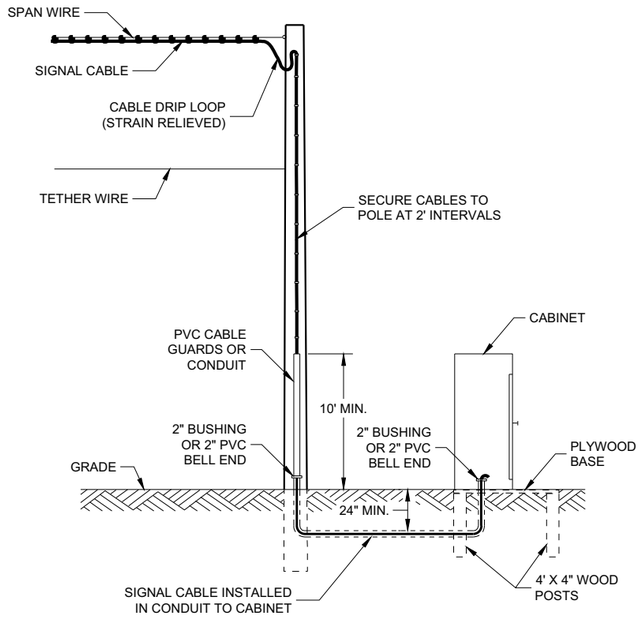
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

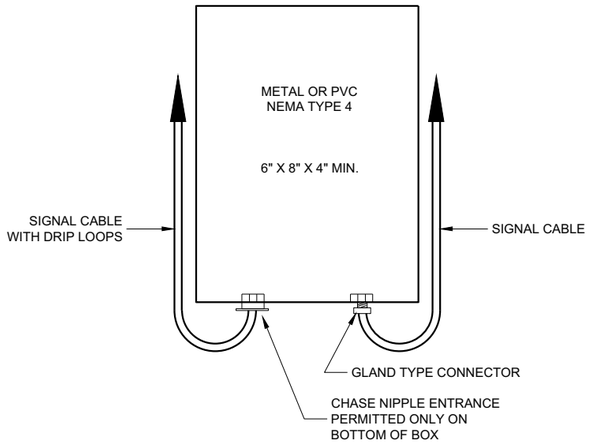
APPROVED
June 2015 — DATE
/S/ Ahmet Demerbilek — ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

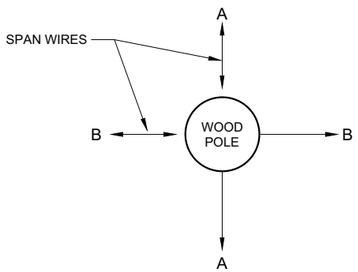
SDD 09G01 - 4f





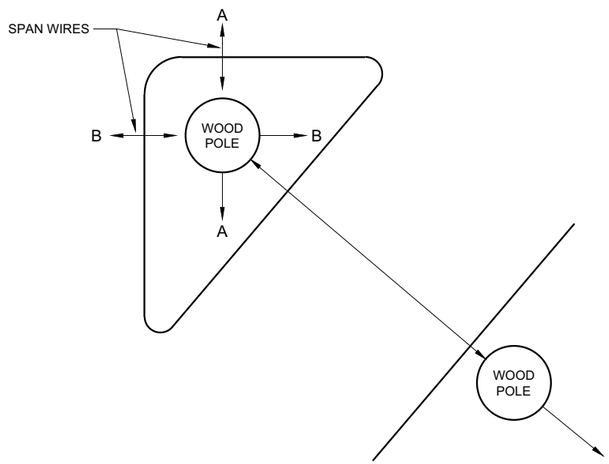
SPLICE BOX

TYPICAL SKID TYPE TEMPORARY

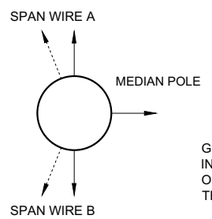


ALL DOWN OR SIDEWALK GUYS SHALL BE INSTALLED IN THE OPOSITE DIRECTION OF THE STRAIN OF THE SPAN WIRE

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

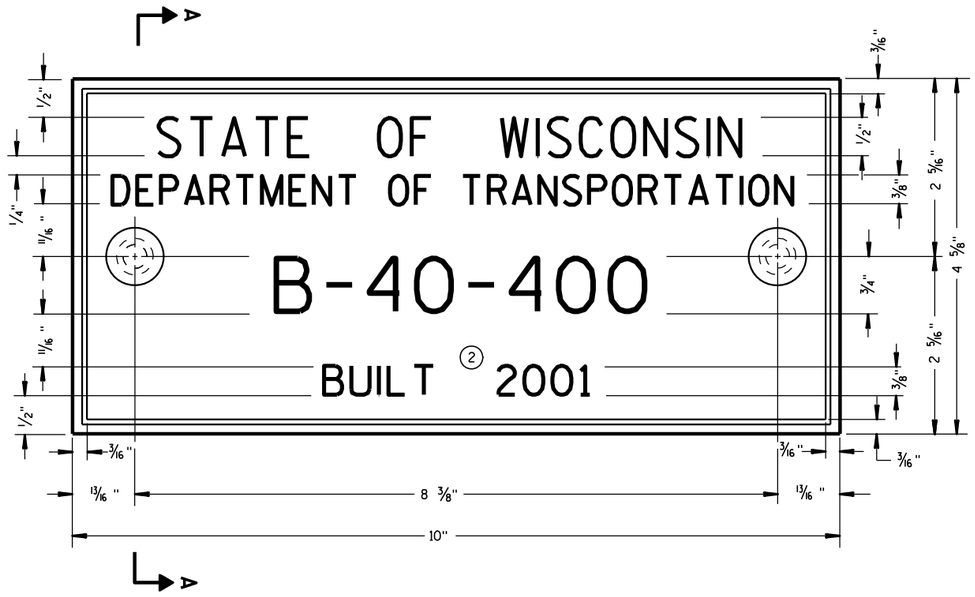
FHWA

6

SDD 09G01 - 4g

6

SDD 09G01 - 4g



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

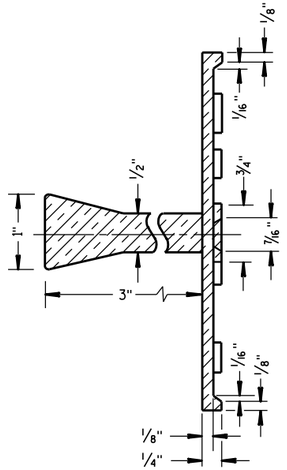
GENERAL NOTES

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

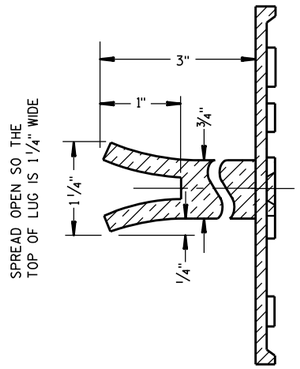
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

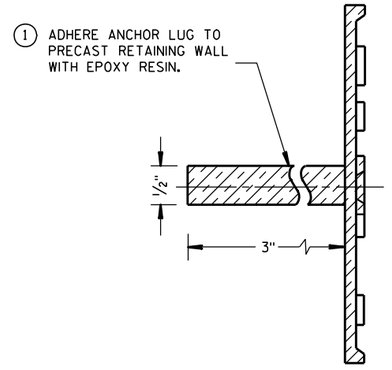
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

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S.D.D. 12 A 3-10

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S.D.D. 12 A 3-10

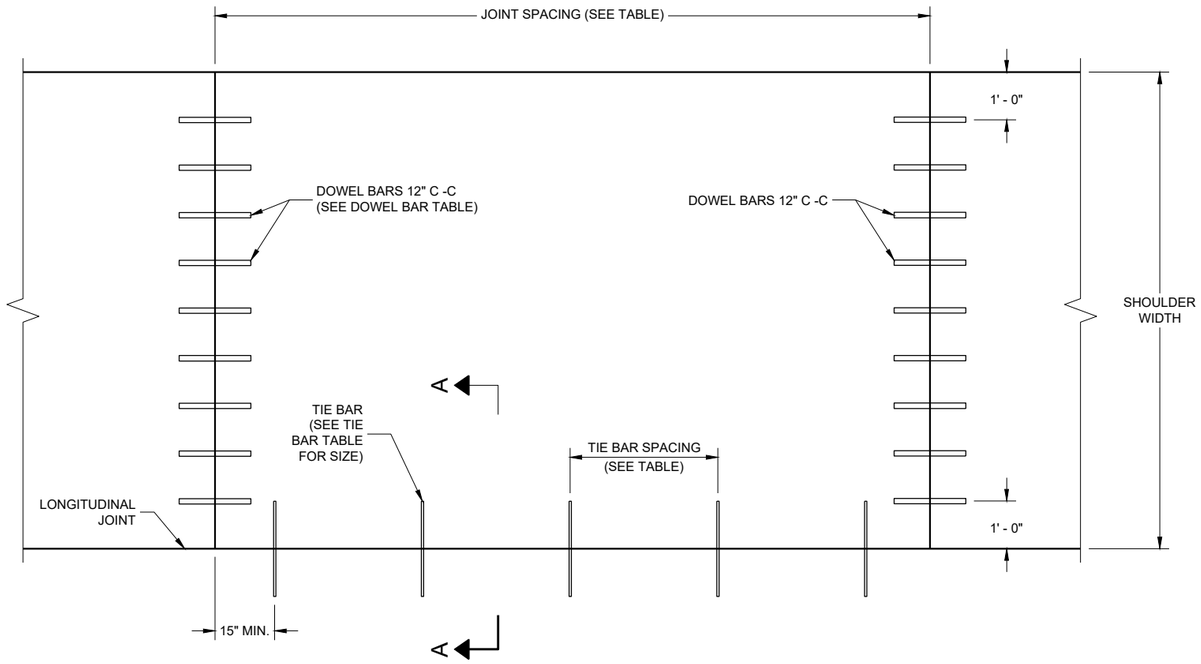
GENERAL NOTES

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

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

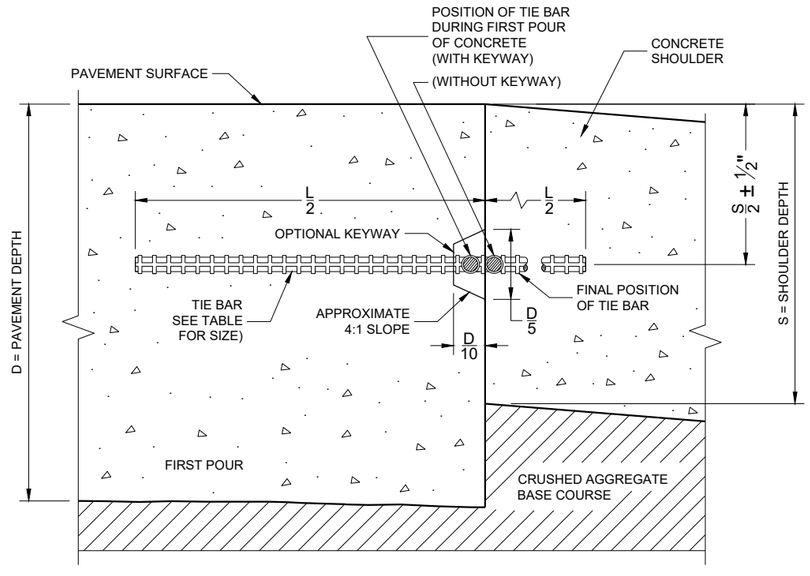
FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



PLAN VIEW

CONCRETE PAVEMENT SHOULDER



SECTION A - A

LONGITUDINAL CONSTRUCTION JOINT

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 BATS 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.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER ***	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	12"
7", 7 ½"	1"	14"
8" & ABOVE	1 ¼"	15"

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FRO THE AVERAGE THICKNESS OF THE CROSS SECTION.

CONCRETE PAVEMENT SHOULDERS

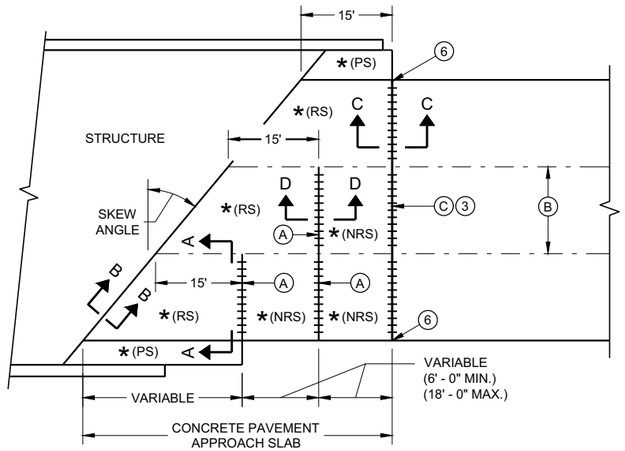
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 — DATE
/S/ Peter Kemp — PAVEMENT SUPERVIS

FHWA

SDD 13A03 - 07

SDD 13A03 - 07



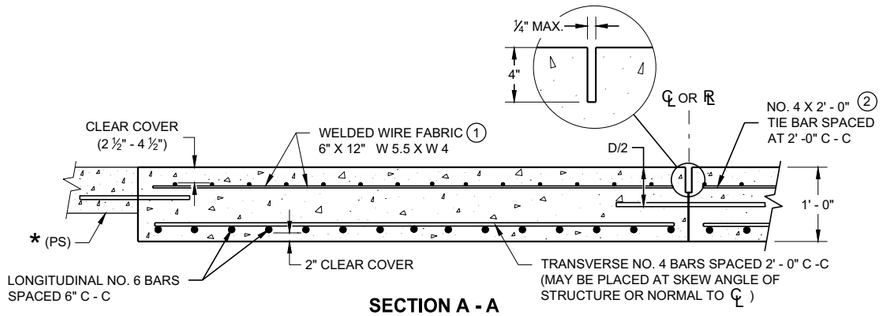
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

* (RS) = REINFORCED CONCRETE SLAB

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

* (NRS) - NON - REINFORCED CONCRETE SLAB

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



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

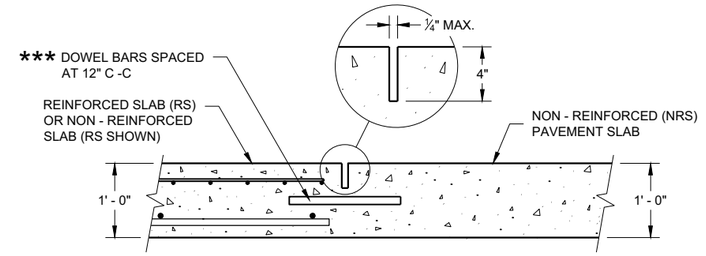
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

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

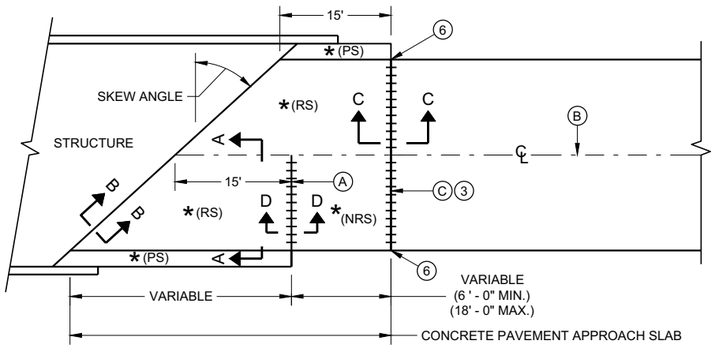
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

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

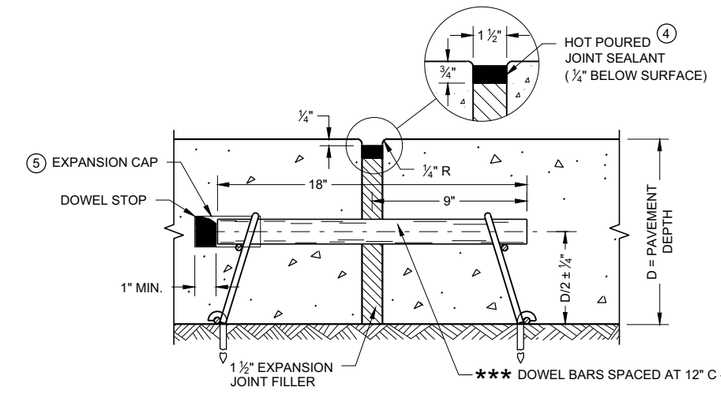


SECTION D - D
CONTRACTION JOINT

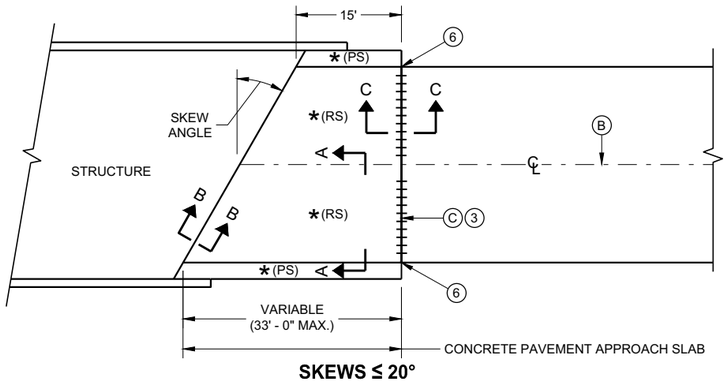


SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')

SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT

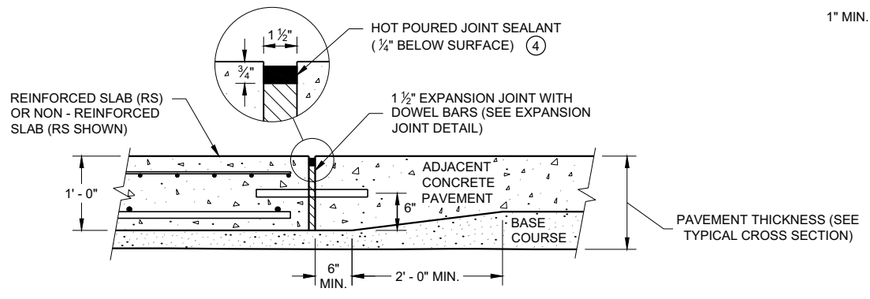


EXPANSION JOINT DETAIL



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

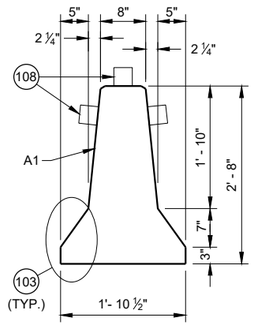
APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVIS

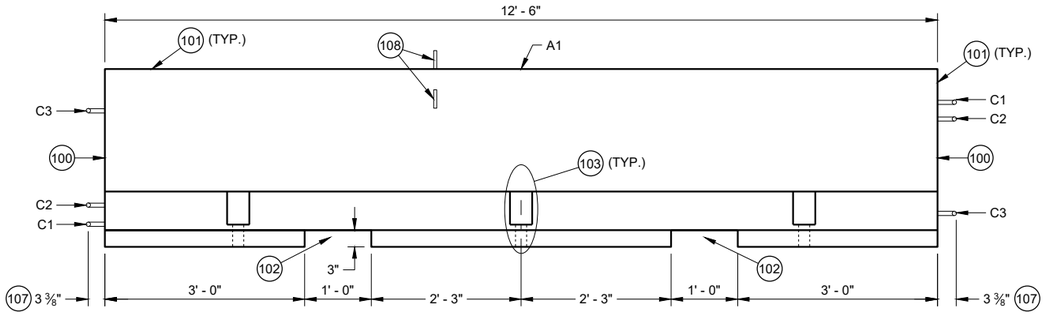
FHWA

6

SDD 13B02 - 09a



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

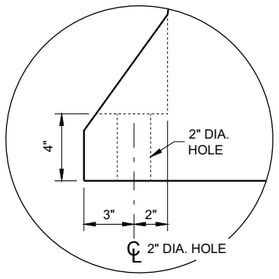
(104) 1 ¾" MIN. CLEAR COVER

(105) 2" MIN. CLEAR COVER

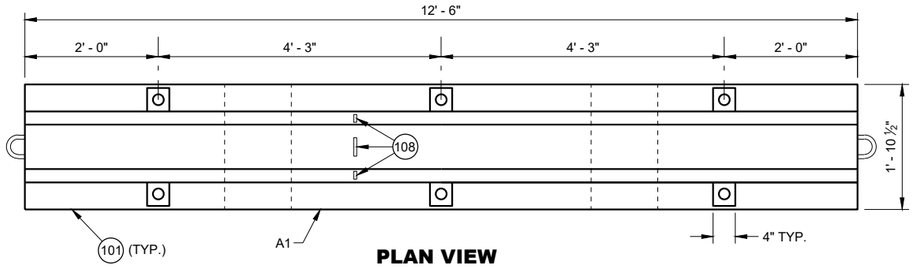
(106) 1" MIN. CLEAR COVER

(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.

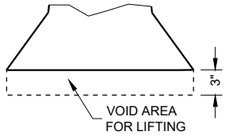


ANCHOR BLOCK DETAIL

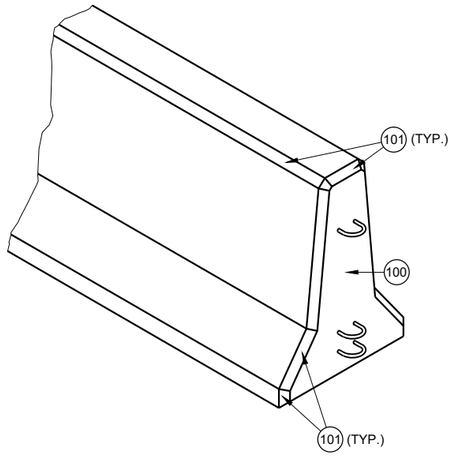


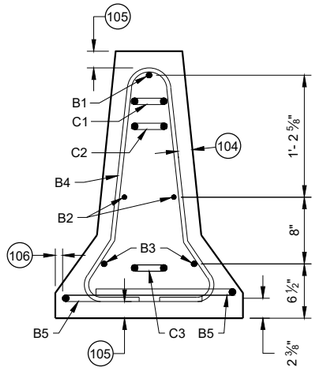
PLAN VIEW

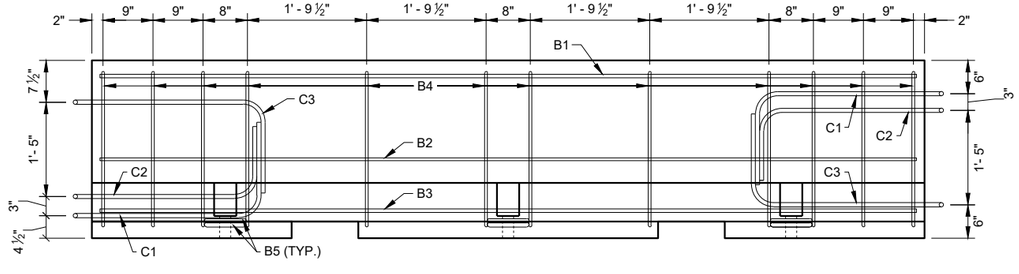
TEMPORARY BARRIER



LIFTING SLOT DETAIL (TYP.)







PROFILE VIEW

TEMPORARY BARRIER REINFORCEMENT

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

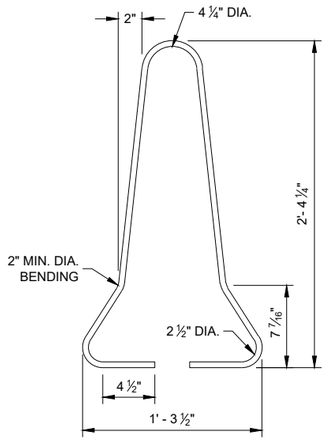
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

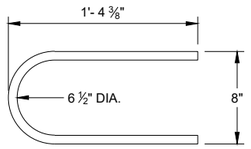
SDD 14B07-16a

6

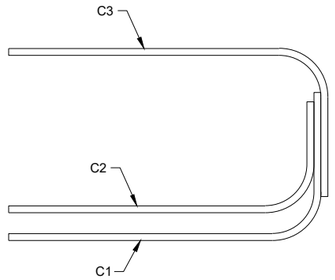
SDD 14B07-16a



B4 BAR DETAIL

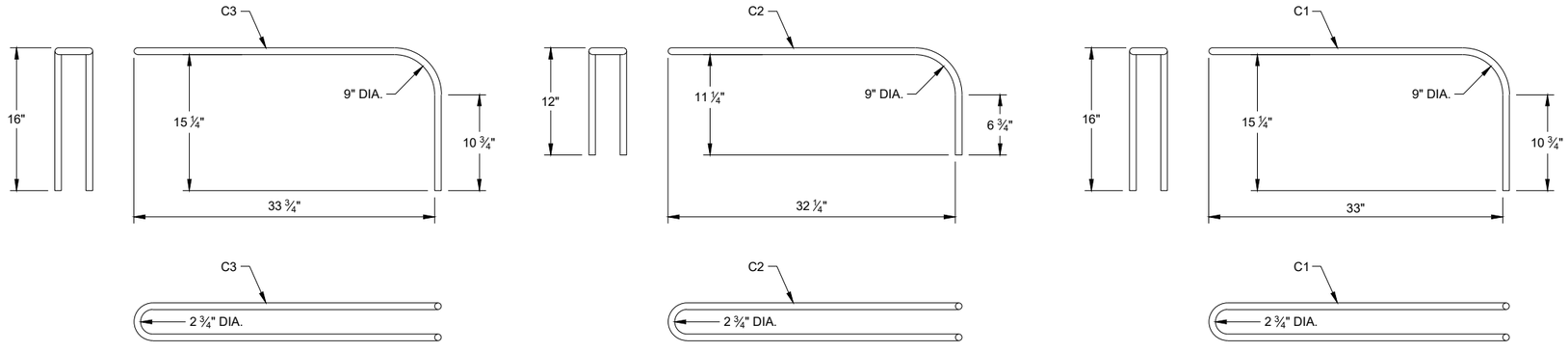


B5 BAR DETAIL



PROFILE VIEW

LOOP BAR ASSEMBLY



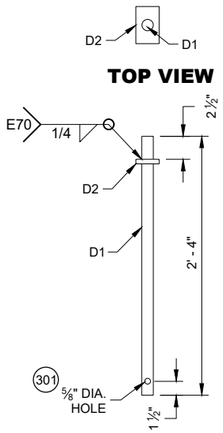
C BAR DETAILS

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

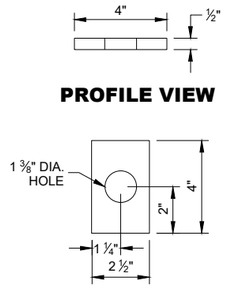
SDD 14B07-16b



TOP VIEW

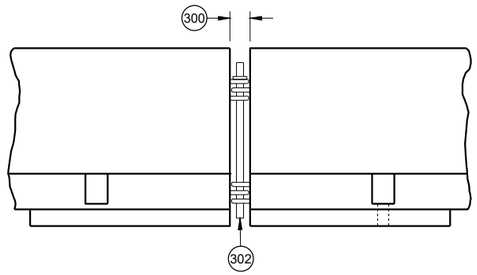
PROFILE VIEW

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.

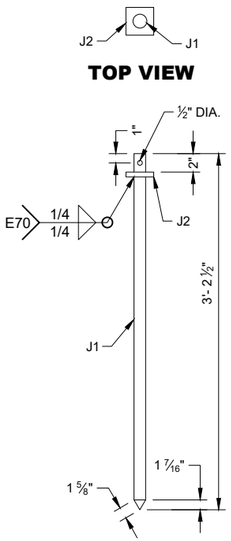
305 DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.

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"

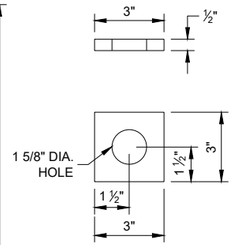
309 WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.



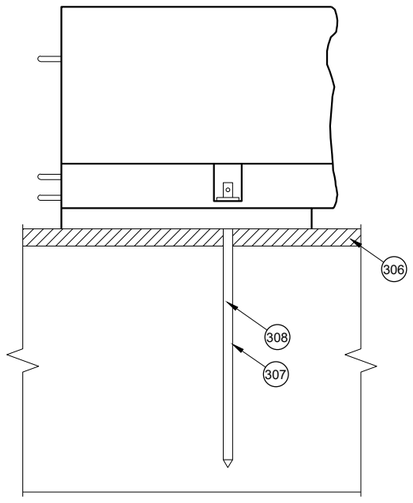
TOP VIEW

PROFILE VIEW

ASPHALT ANCHOR PIN ASSEMBLY

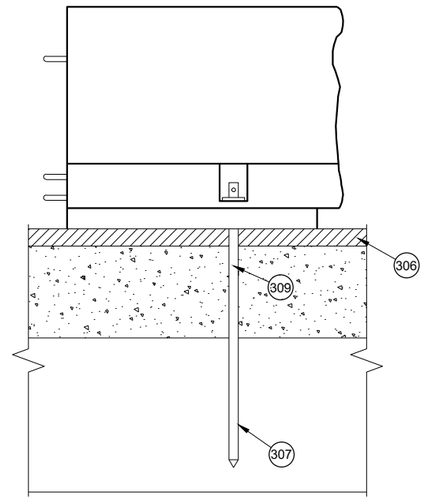


TOP VIEW J2



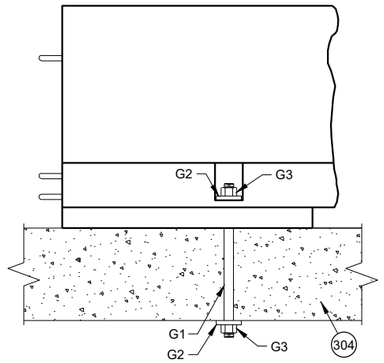
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT PAVEMENT



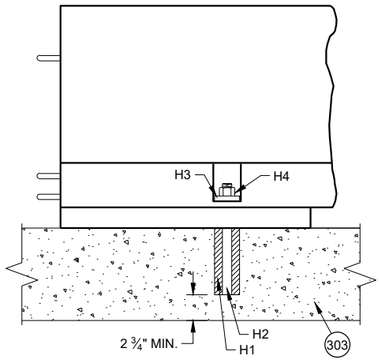
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT OVERLAY ON TOP OF CONCRETE PAVEMENT



SIDE VIEW

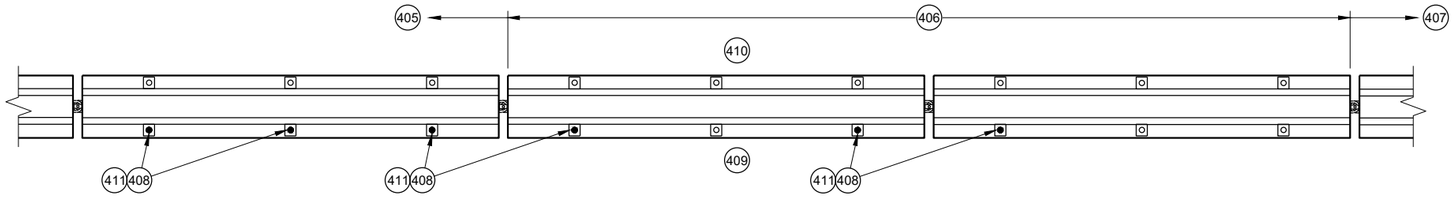
THROUGH BOLT ANCHOR INSTALLATION (305)



SIDE VIEW

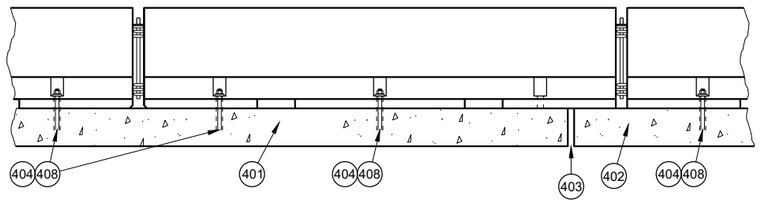
ADHESIVE ANCHOR INSTALLATION (305)

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"



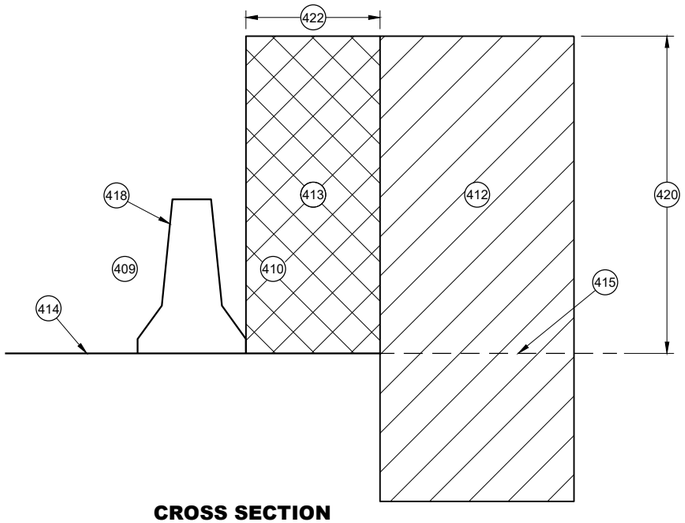
PLAN VIEW

TRANSITION FROM FREE STANDING TO ANCHORED BARRIER



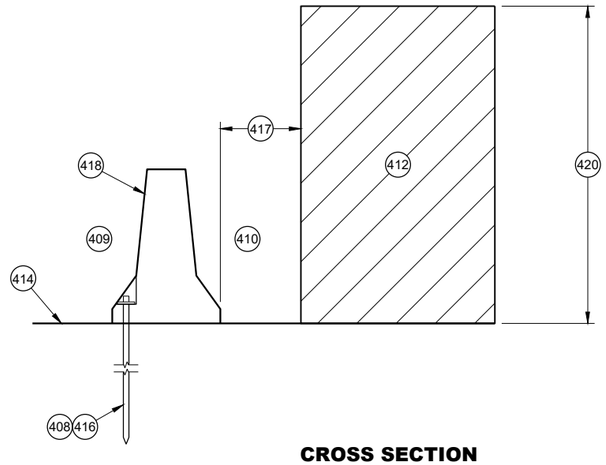
PROFILE VIEW

ANCHORED BARRIER NEAR EXPANSION JOINT (400)



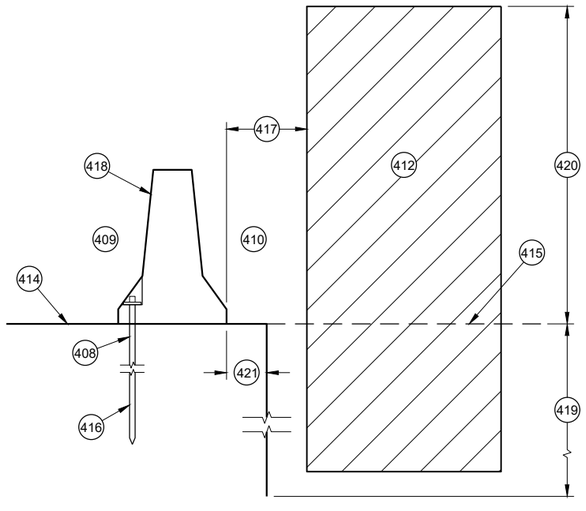
CROSS SECTION

FREE STANDING BARRIER



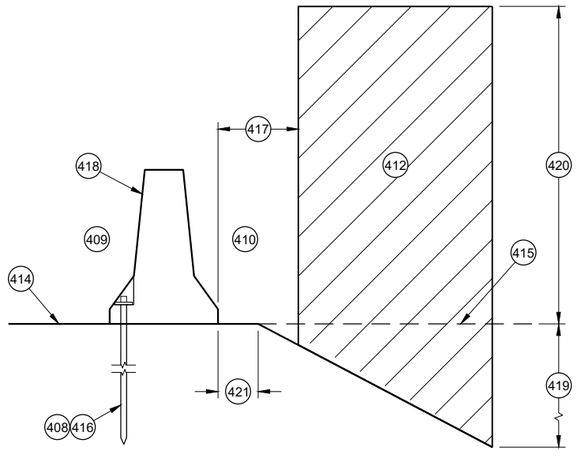
CROSS SECTION

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

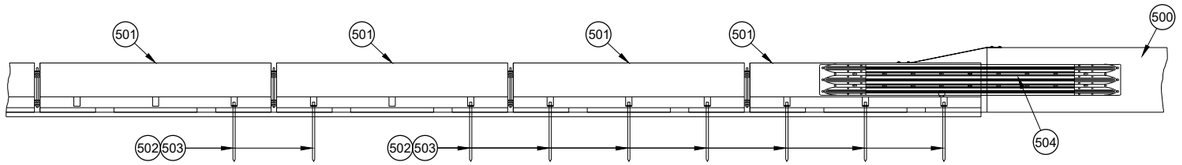
(516) CUT WOOD BLOCK TO FIT.

(517) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL ASSEMBLY.

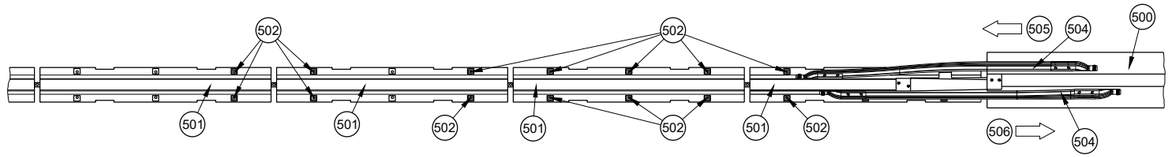
(518) CAP ASSEMBLY

(519) 4" MAX. GAP BETWEEN TEMPORARY BARRIER AND RIGID BARRIER.

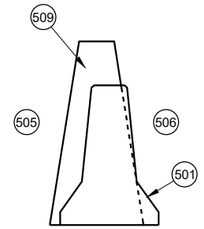
(520) ALL TWELVE SPLICE HOLES REQUIRE M1 AND M2



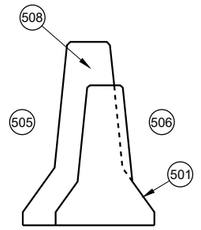
PROFILE VIEW



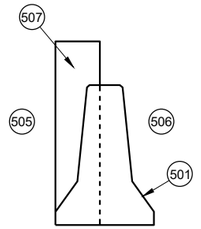
PLAN VIEW
TRANSITION TO RIGID BARRIER



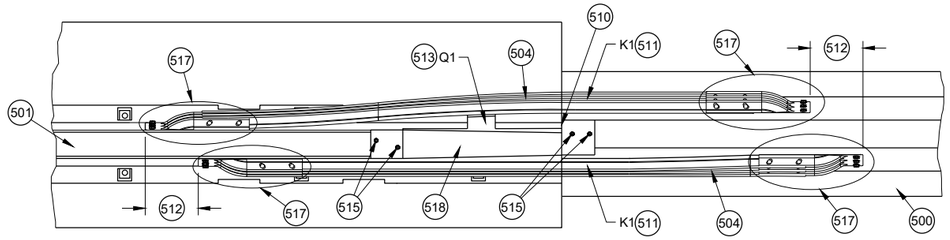
CROSS SECTION TEMPORARY BARRIER PLACEMENT SINGLE SLOPE



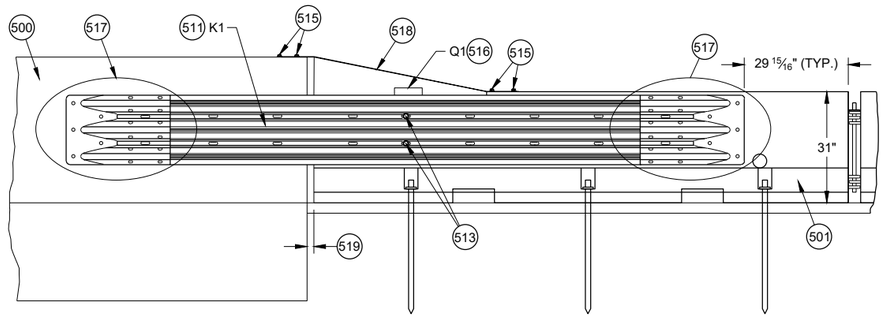
CROSS SECTION TEMPORARY BARRIER PLACEMENT SAFETY SHAPE



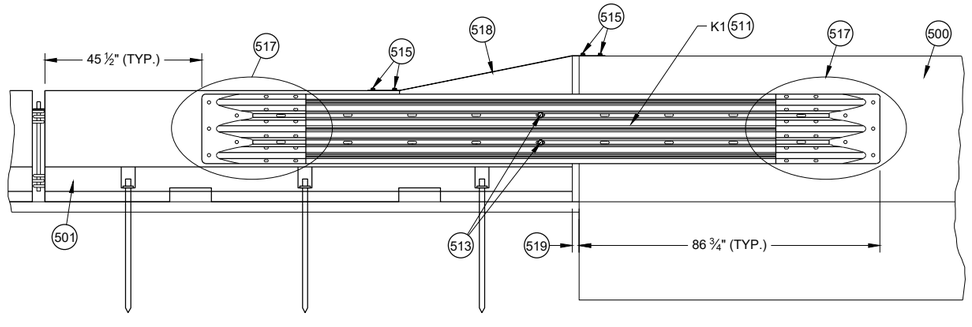
CROSS SECTION TEMPORARY BARRIER PLACEMENT VERTICAL



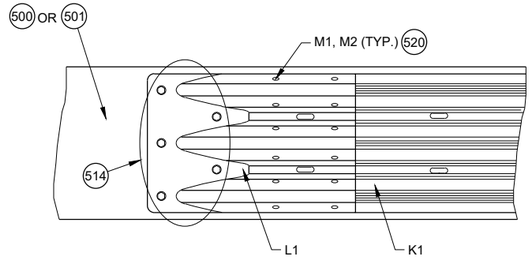
PLAN DETAIL VIEW
TRANSITION TO RIGID BARRIER



BACK DETAIL VIEW
TRANSITION TO RIGID BARRIER



FRONT DETAIL VIEW
TRANSITION TO RIGID BARRIER



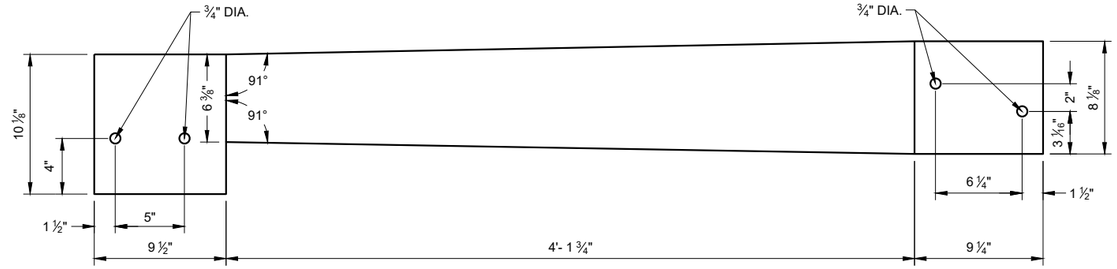
(517) DETAIL PLAN VIEW
THRIE BEAM RAIL TERMINAL CONNECTOR ASSEMBLY

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

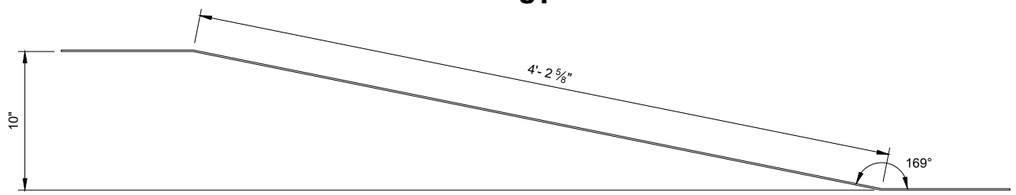
6

SDD 14B07-16e



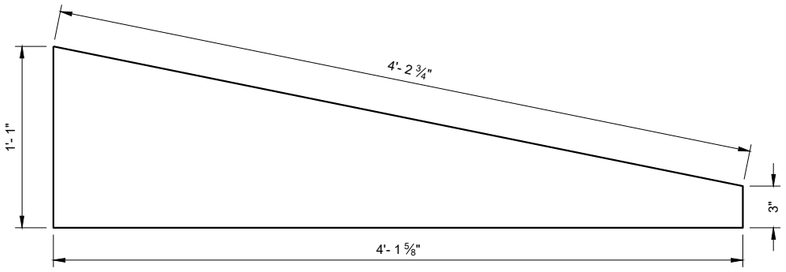
TOP VIEW

S1



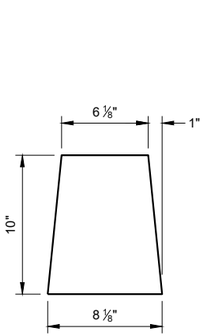
ELEVATION VIEW

S1



SIDE VIEW

S3



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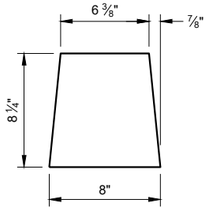

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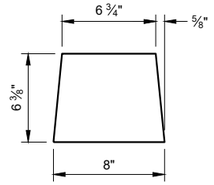

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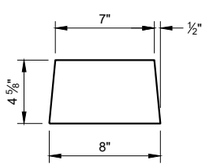
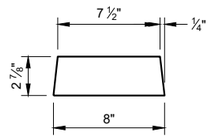
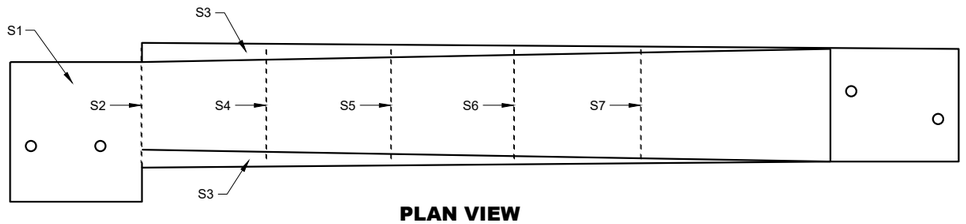


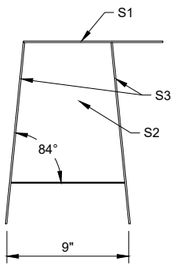
S6



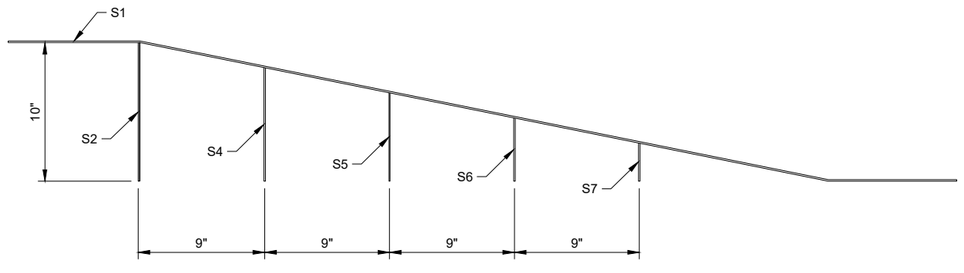
S7



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.

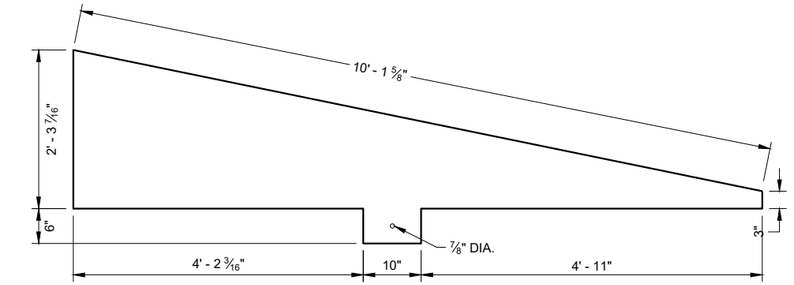
(600) SIDE PLATES (S3) NOT SHOWN FOR CLARITY.

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

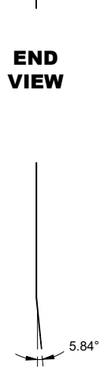
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

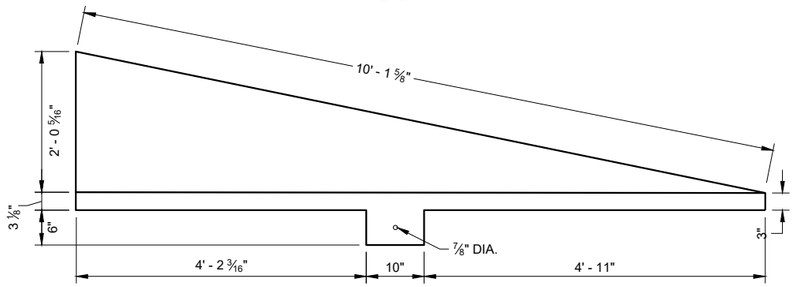
SDD 14B07-16f



SIDE VIEW
T4



END VIEW



SIDE VIEW
T3

END VIEW

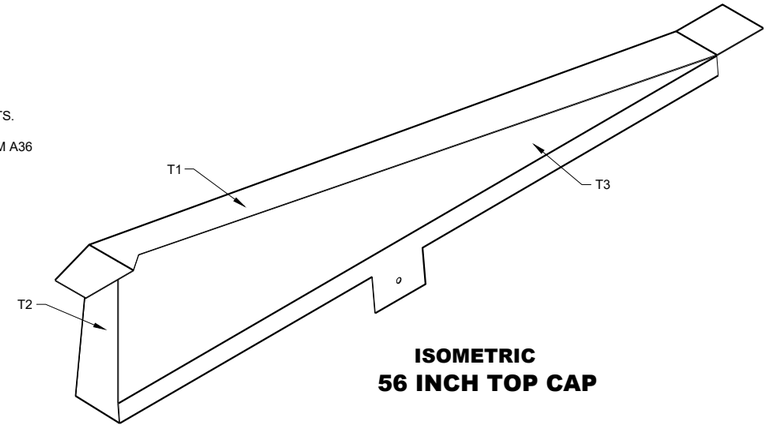
GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THRIE SIDES

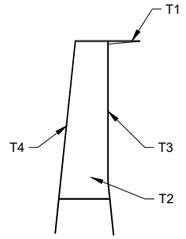
STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

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

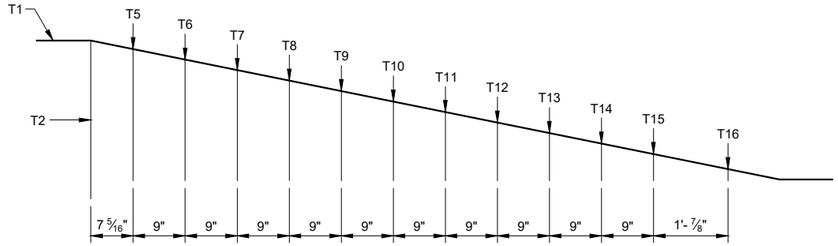
(700) SIDE PLATES (T3 AND T4) NOT SHOWN FOR CLARITY.



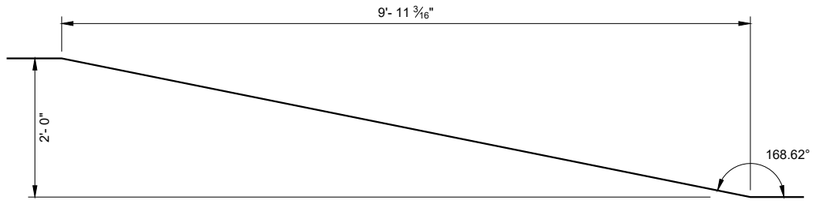
ISOMETRIC
56 INCH TOP CAP



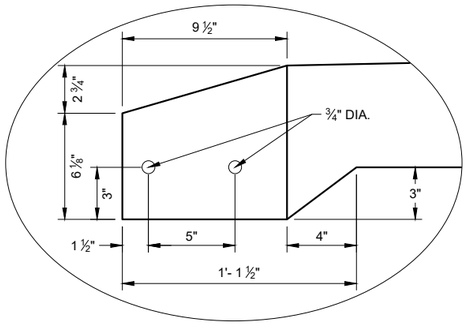
END VIEW
56 INCH TOP CAP



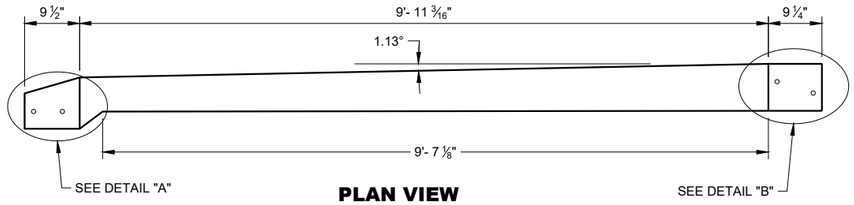
SIDE VIEW (700)
56 INCH TOP CAP



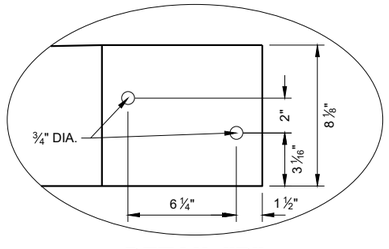
SIDE VIEW
TOP PLATE T1



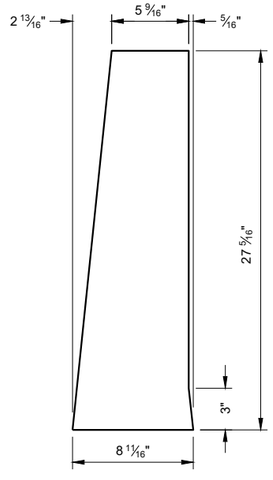
DETAIL "A"



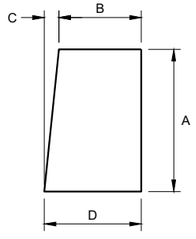
PLAN VIEW
TOP PLATE T1



DETAIL "B"



END PLATE T2



GUSSET PLATES
T5 - T16

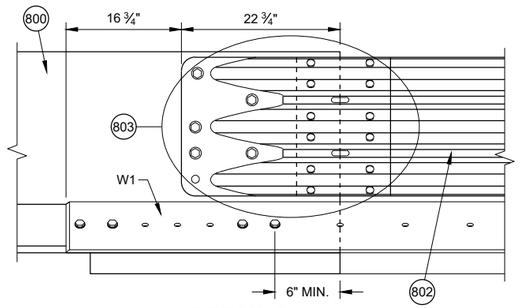
GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
T5	22 13/16"	5 1/16"	2 5/16"	8 1/16"
T6	21"	5 7/8"	2 3/16"	8 1/16"
T7	19 3/16"	6 1/16"	1 15/16"	8 1/16"
T8	17 3/8"	6 1/4"	1 13/16"	8 1/16"
T9	15 5/16"	6 7/16"	1 9/16"	8 1/16"
T10	13 3/4"	6 5/8"	1 7/16"	8 1/16"
T11	11 15/16"	6 13/16"	1 1/4"	8 1/16"
T12	10 1/8"	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"

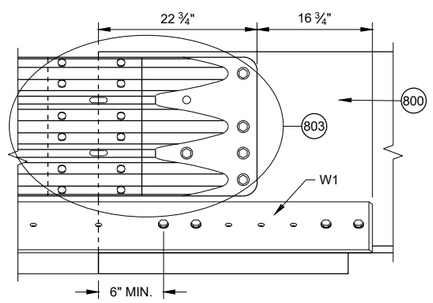
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

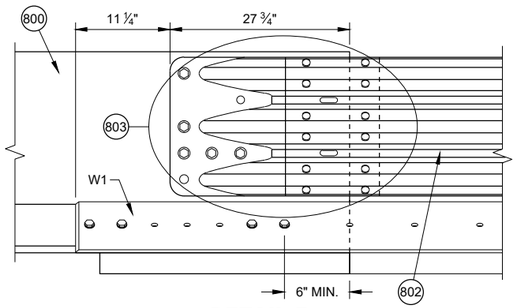
SDD 14B07-16g



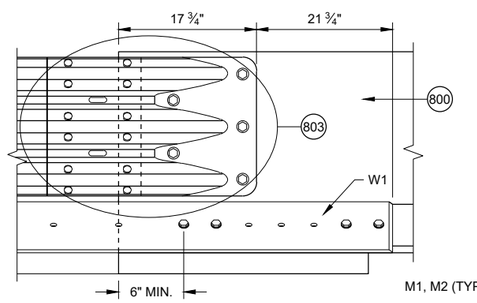
DETAIL D



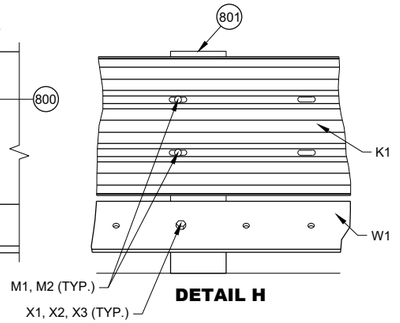
DETAIL E



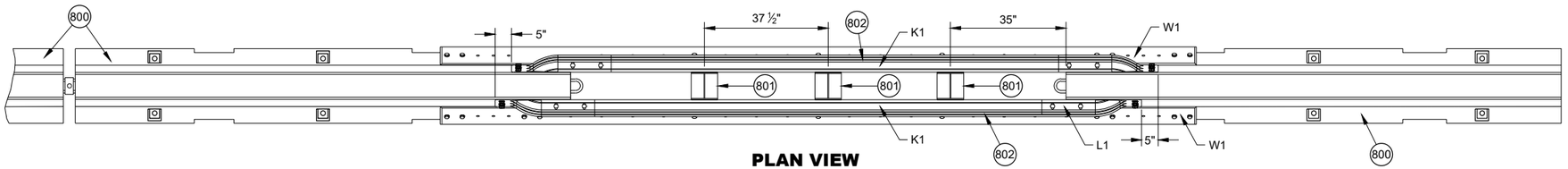
DETAIL F



DETAIL G



DETAIL H



PLAN VIEW

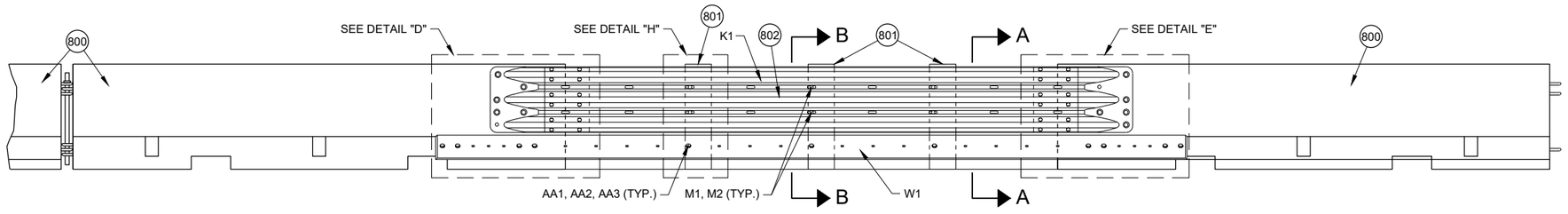
GENERAL NOTES

(800) FREE STANDING TEMPORARY BARRIER

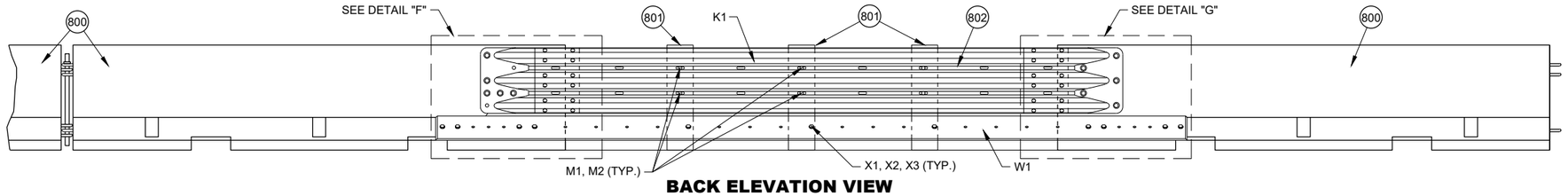
(801) GAP STIFFENER ASSEMBLY

(802) THRIE BEAMS ARE NESTED ON BOTH SIDES OF THE TEMPORARY BARRIER.

(803) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL



FRONT ELEVATION VIEW



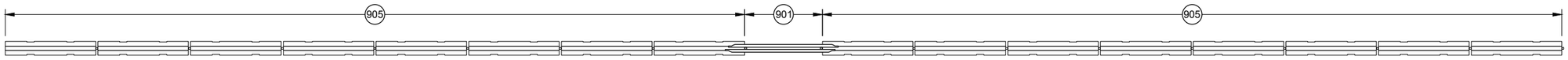
BACK ELEVATION VIEW

PORTABLE CONCRETE BARRIER GAP THRIE BEAM COVER

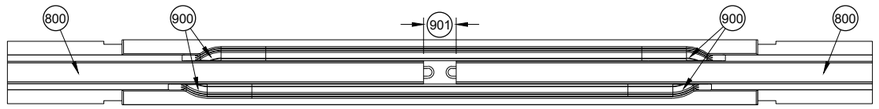
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16h



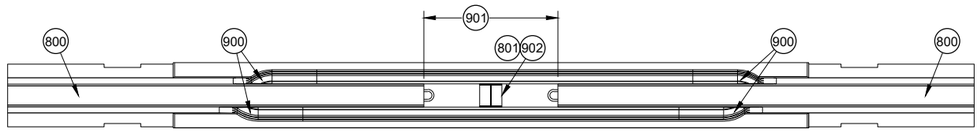
PLAN VIEW
GAP WITHIN SPACING



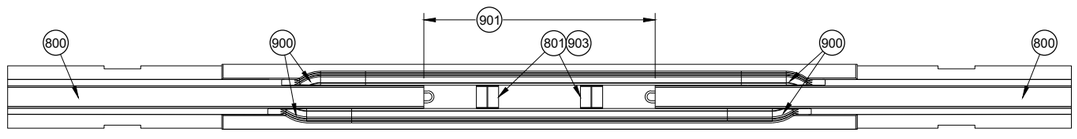
PLAN VIEW
TEMPORARY BARRIER GAP OVER 4" TO 1' MAX. (904)

GENERAL NOTES

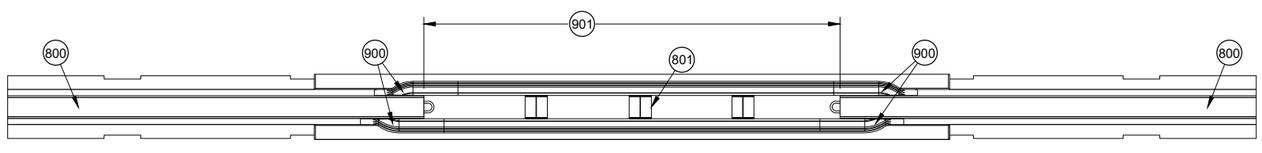
(900) SEE OTHER DETAILS FOR TEMPORARY GAP HARDWARE (TYP.)
(901) TEMPORARY BARRIER GAP
(902) GAP STIFFENER ASSEMBLY CENTERED IN THE GAP.
(903) GAP STIFFENER ASSEMBLY IS OFFSET 18 ¾" FROM CENTER
(904) MINIMUM NUMBER OF GAP STIFFENERS SHOWN FOR THE GAP RANGE SHOWN.
(905) MINIMUM OF 8 CONTINUOUS FREE STANDING TEMPORARY BARRIERS



PLAN VIEW
TEMPORARY BARRIER GAP OVER 1' TO 4' MAX. (904)

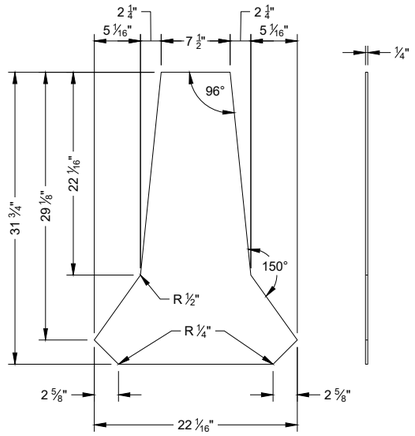


PLAN VIEW
TEMPORARY BARRIER GAP OVER 4' TO 7' MAX. (904)



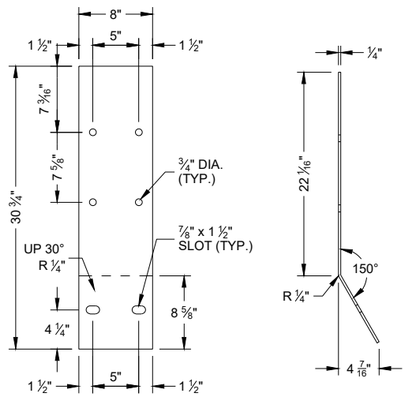
PLAN VIEW
TEMPORARY BARRIER GAP OVER 7' TO 12.5' MAX. (904)

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"



PROFILE VIEW SIDE VIEW

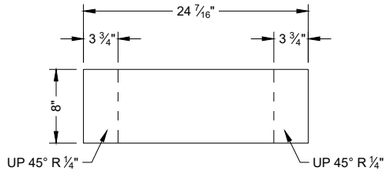
STIFFENER ASSEMBLY CENTER PANEL U1



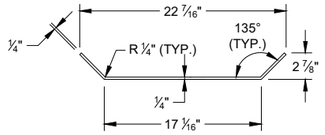
FLAT PATTERN

SIDE VIEW

STIFFENER ASSEMBLY SIDE PANEL U2

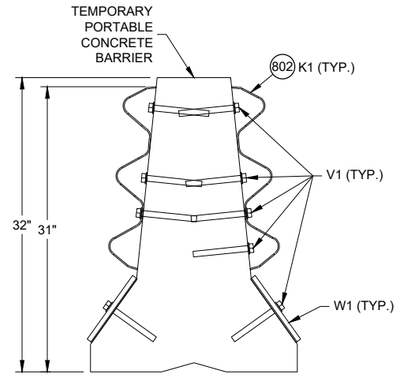


FLAT PATTERN

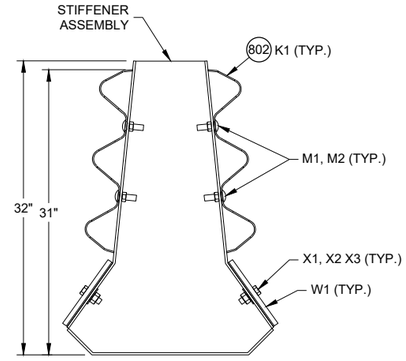


PROFILE VIEW

STIFFENER ASSEMBLY BOTTOM PANEL U3

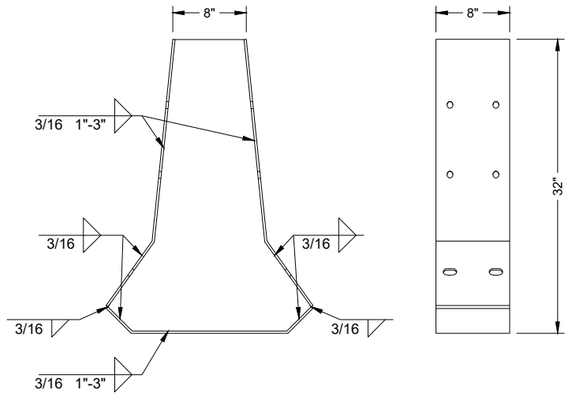


SECTION A - A



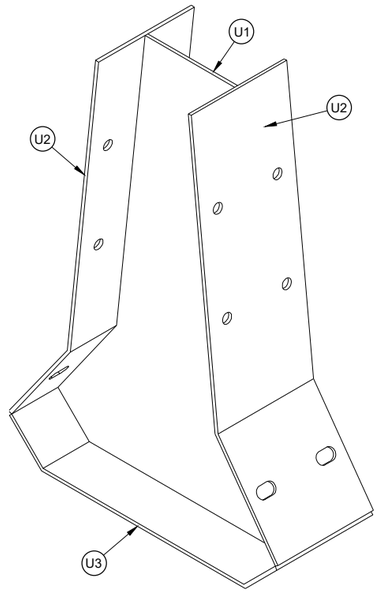
SECTION B - B

PLAN VIEW



PROFILE VIEW

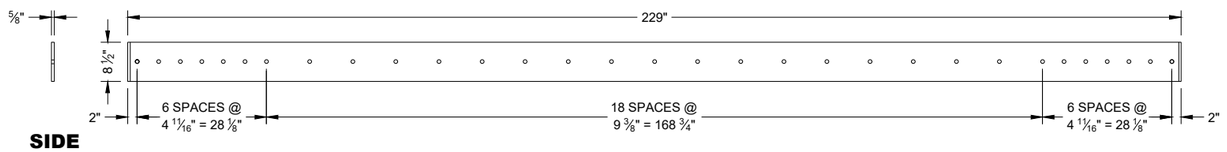
SIDE VIEW



ISOMETRIC

GAP STIFFENER ASSEMBLY

PLAN VIEW



SIDE VIEW

ELEVATION VIEW

W1 TOE PLATE

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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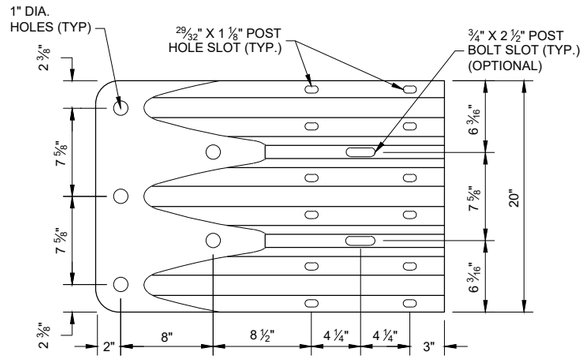
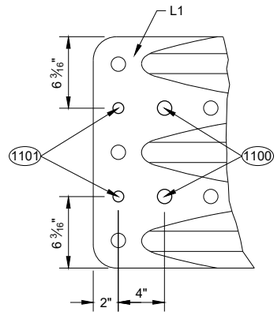
SDD 14B07-16j



ELEVATION VIEW

THRIE BEAM TERMINAL CONNECTOR



ELEVATION VIEW

ADDITIONAL THRIE BEAM (1102) TERMINAL CONNECTOR HOLE DETAIL

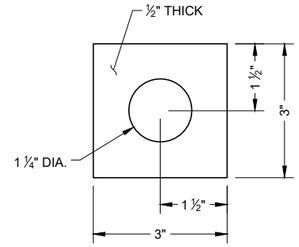


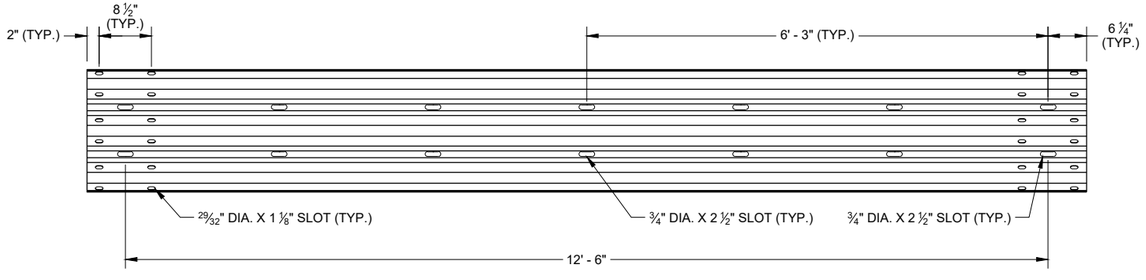
PLATE WASHER DETAIL G2, H3

GENERAL NOTES

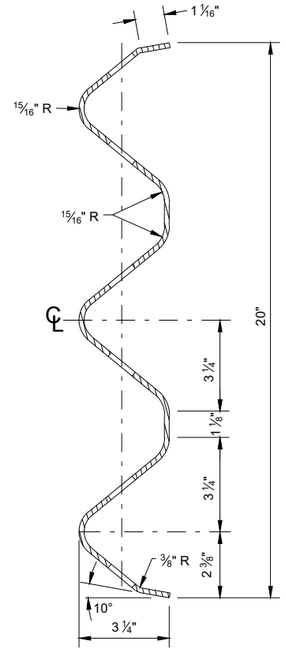
(1100) 1" DIA. HOLE

(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

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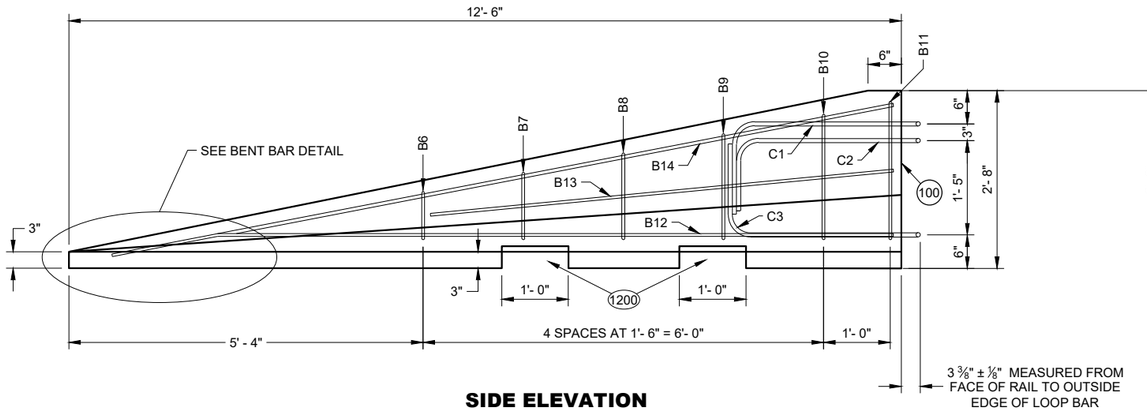
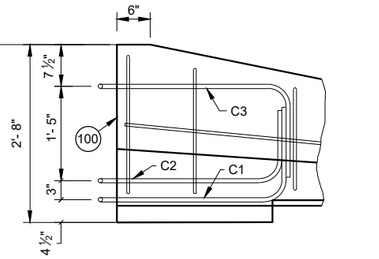
SDD 14B07-16k



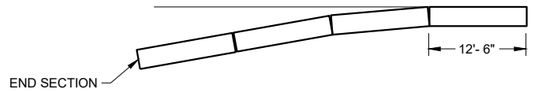
SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END
(FOR CONNECTION TO RIGHT END OF BARRIER)

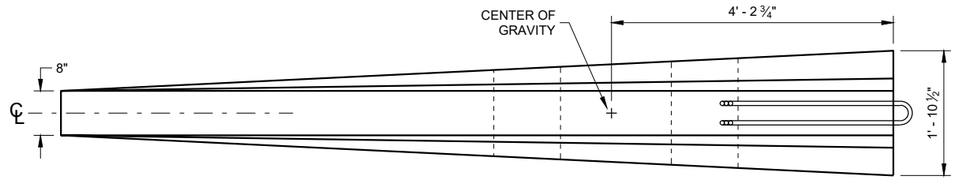
GENERAL NOTES

(1200) SEE LIFTING SLOT DETAIL. LOCATION OF LIFTING SLOTS DETERMINED BY CONTRACTOR.

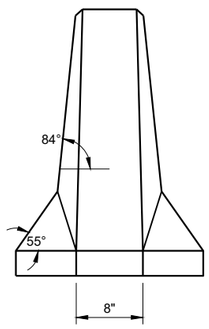


FLARE AT BARRIER END

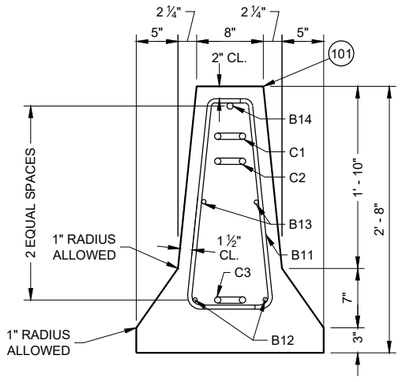
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1



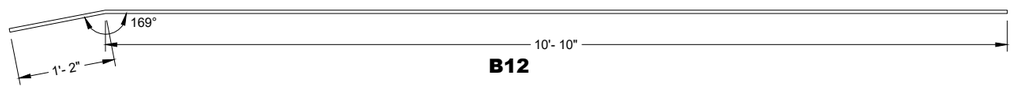
PLAN VIEW



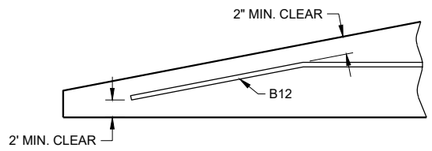
FRONT ELEVATION



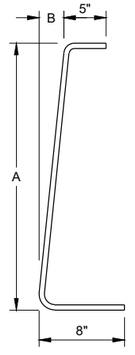
END SECTION



B12



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

6

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

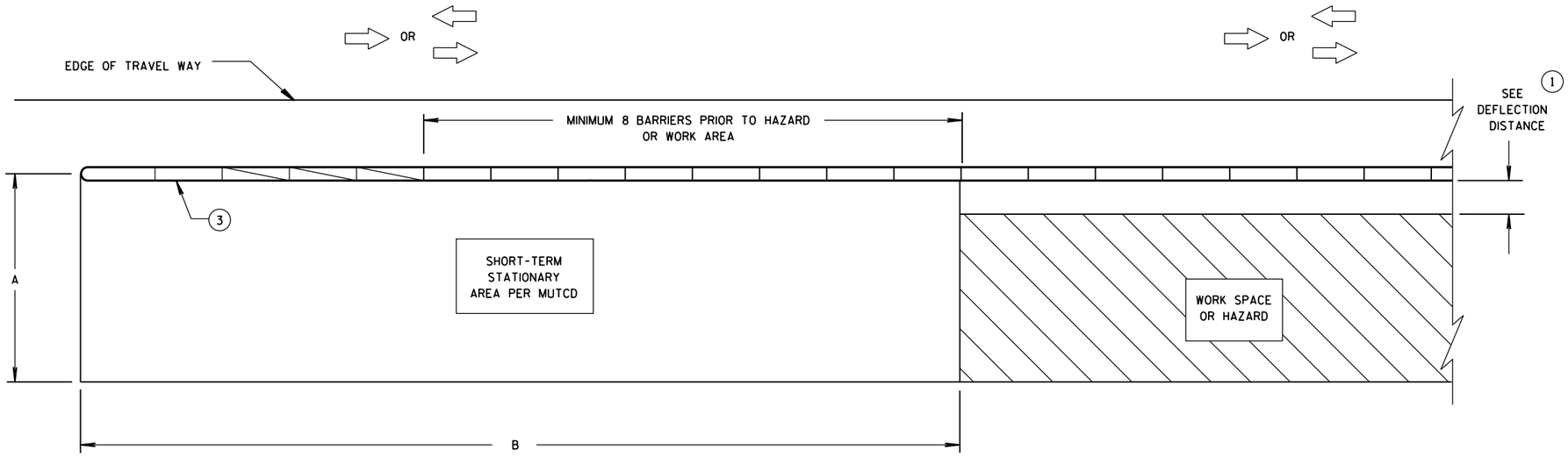
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

6

SDD 14B07-16n



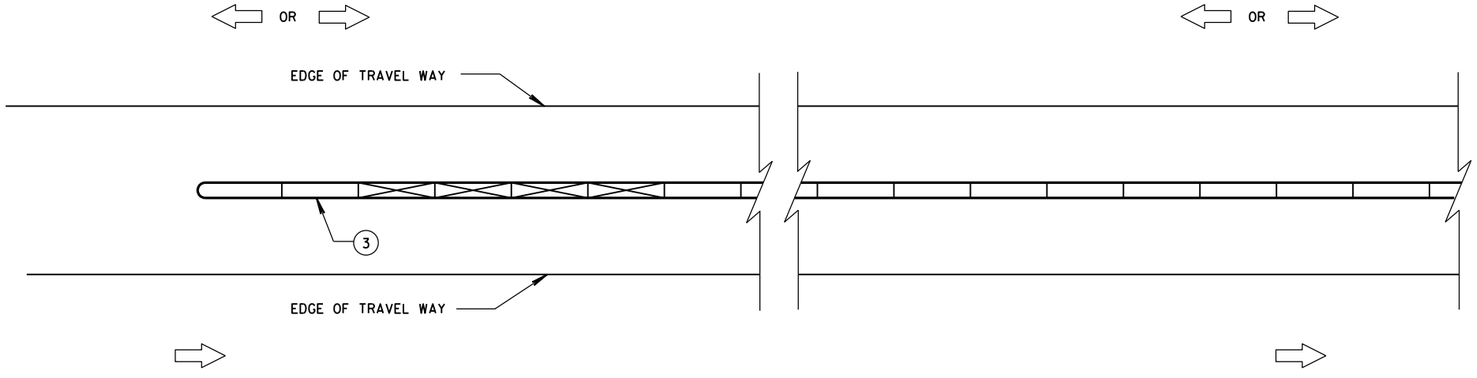
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

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

DIMENSION B TABLE (2)

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



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

LEGEND

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

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

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

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

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

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

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

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

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

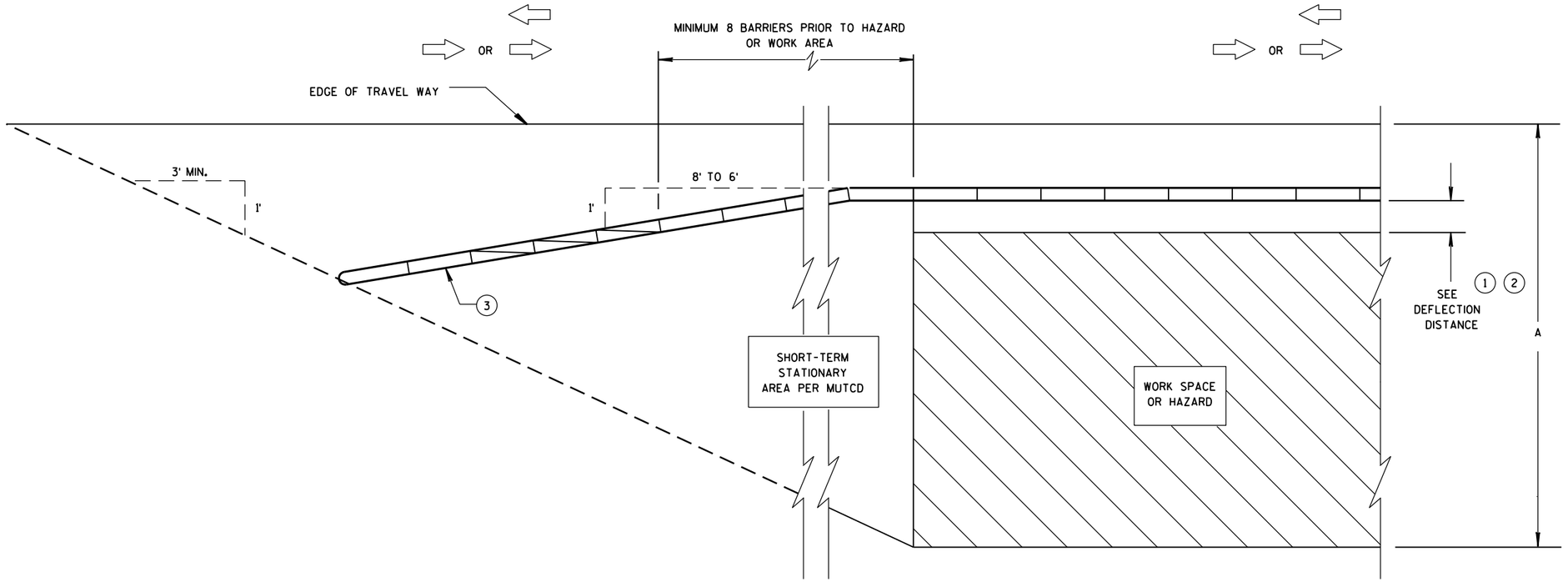
(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

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

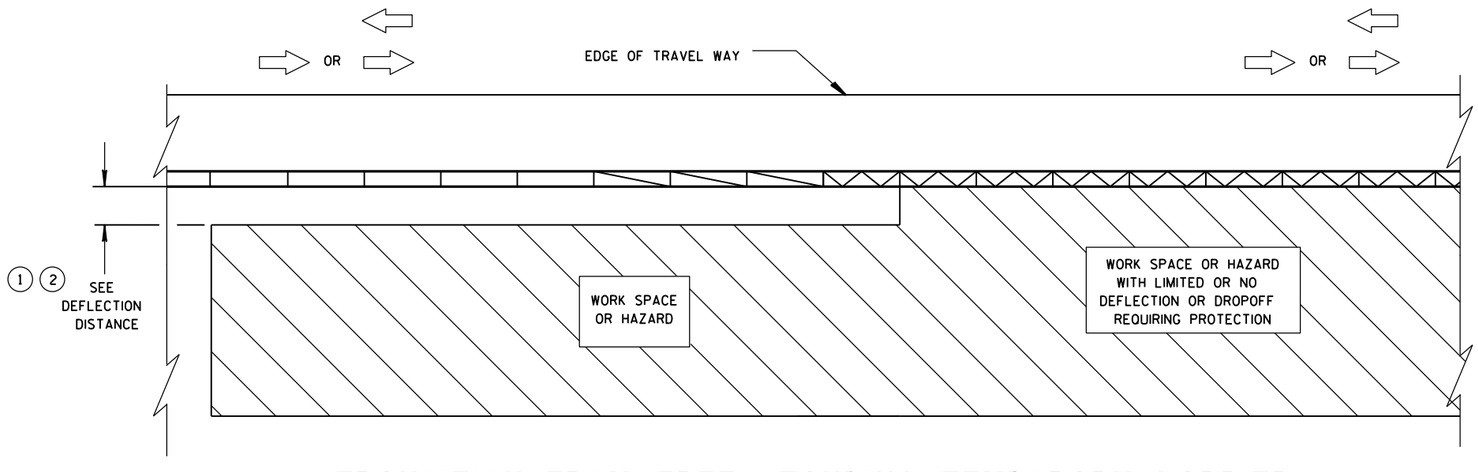
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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



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



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

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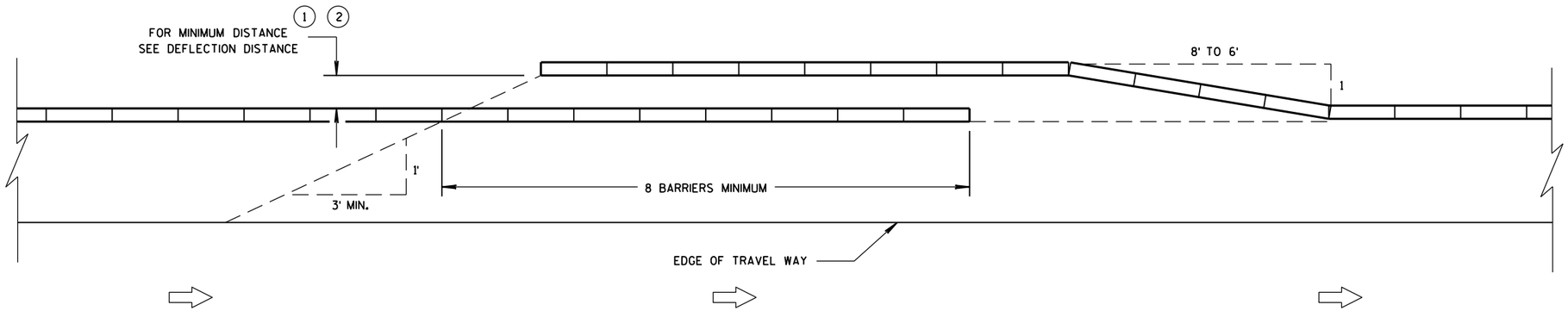
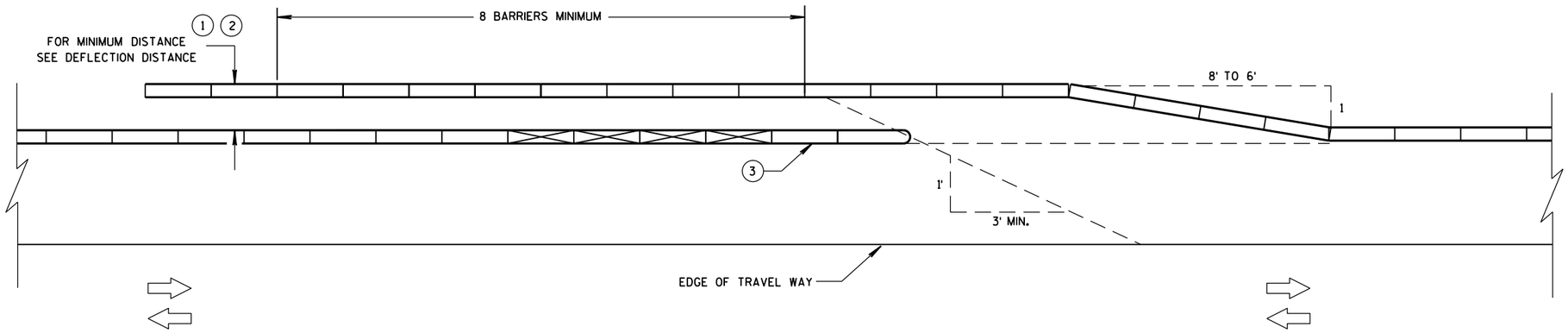
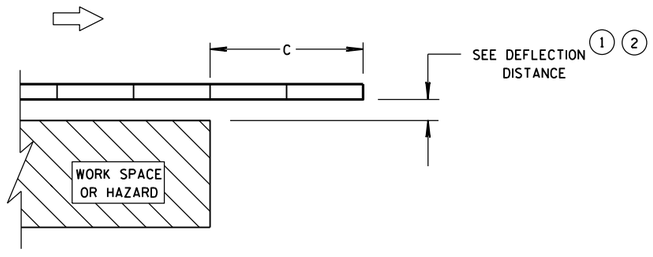
S.D.D. 14 B 8-2b



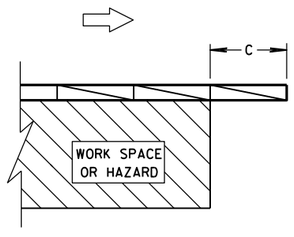
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

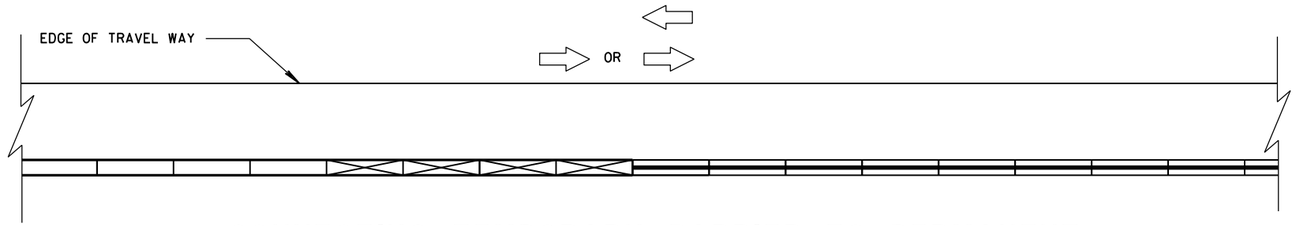
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

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

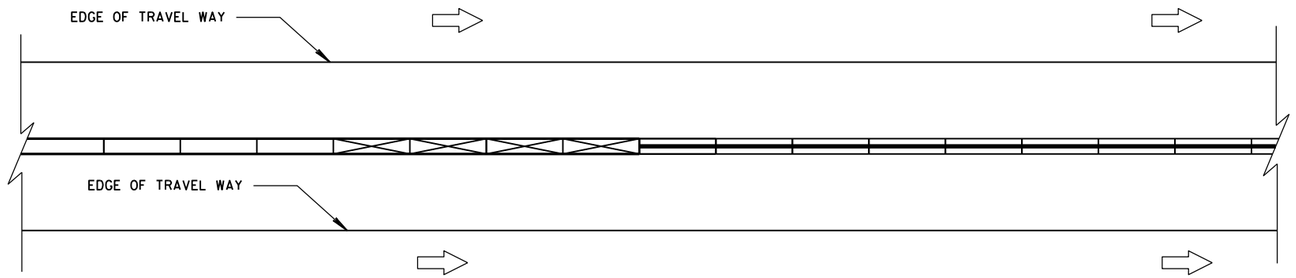
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



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



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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

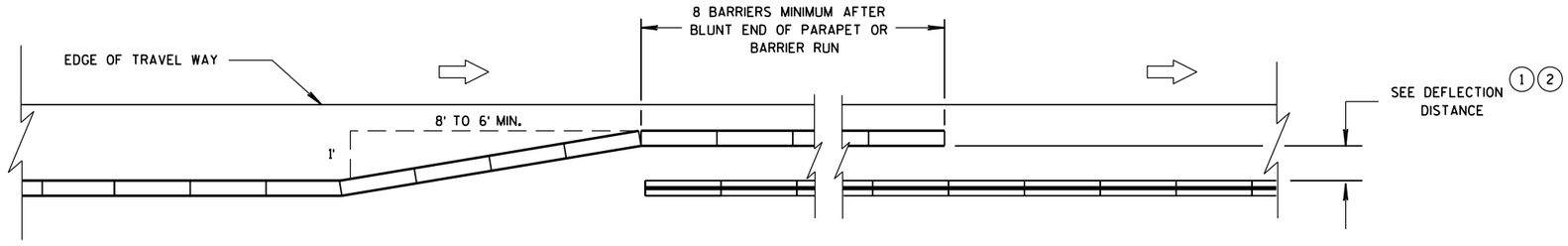
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

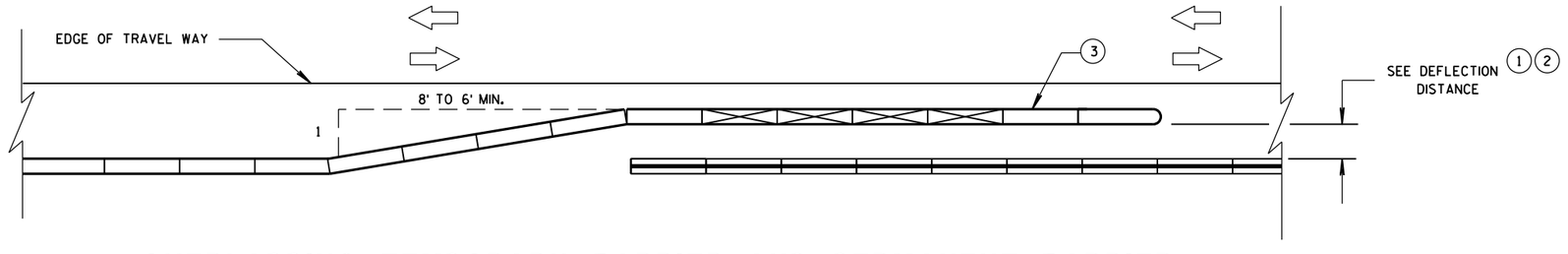
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER
OR CONCRETE PARAPET

FREE STANDING TEMPORARY
BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

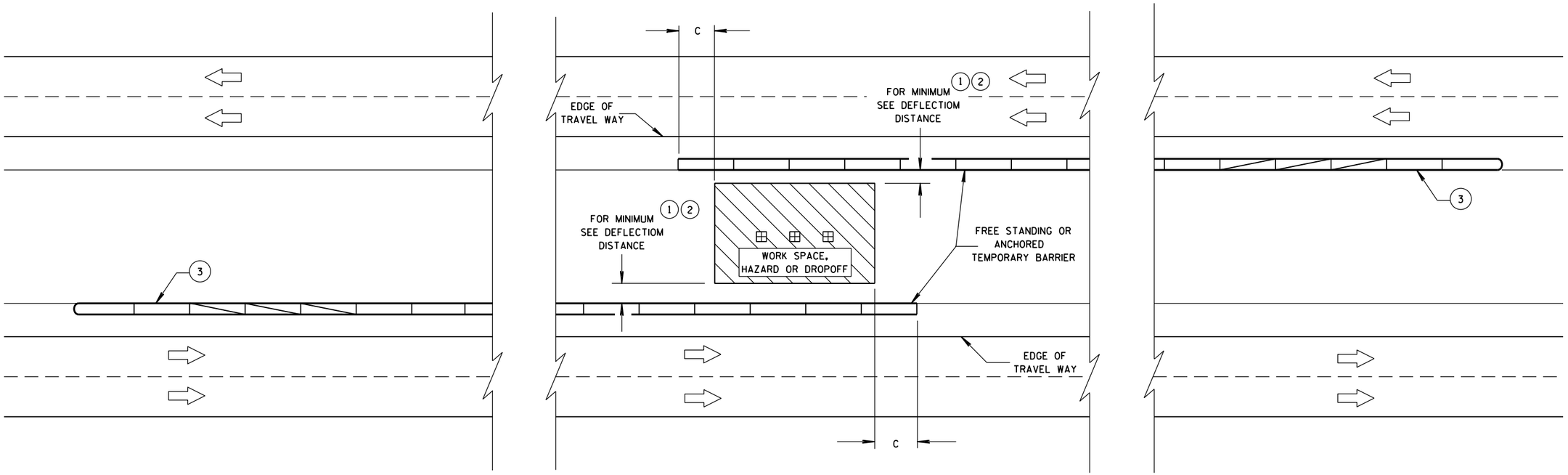
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

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

6

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

(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.

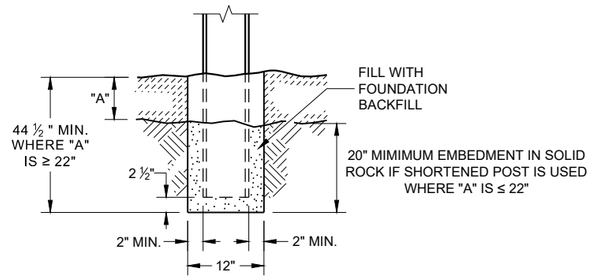
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

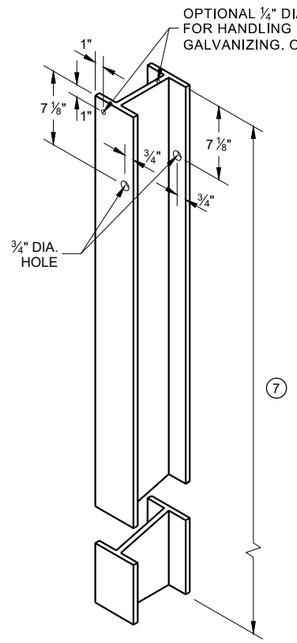
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

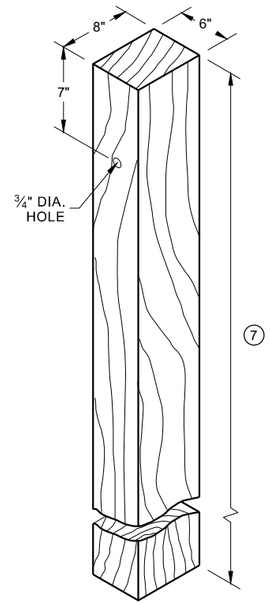
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



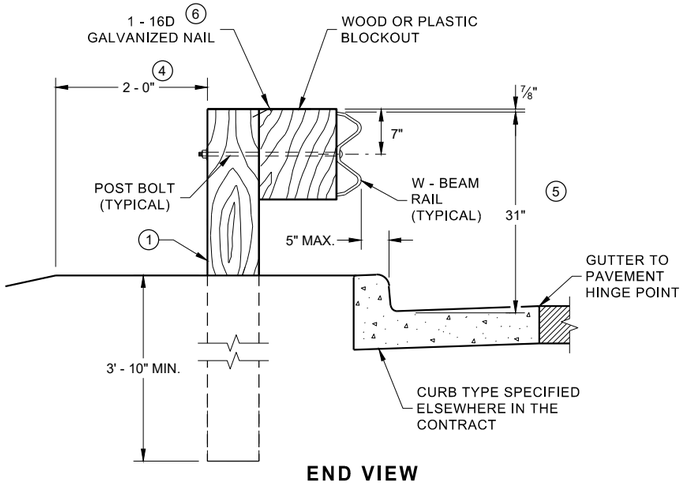
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



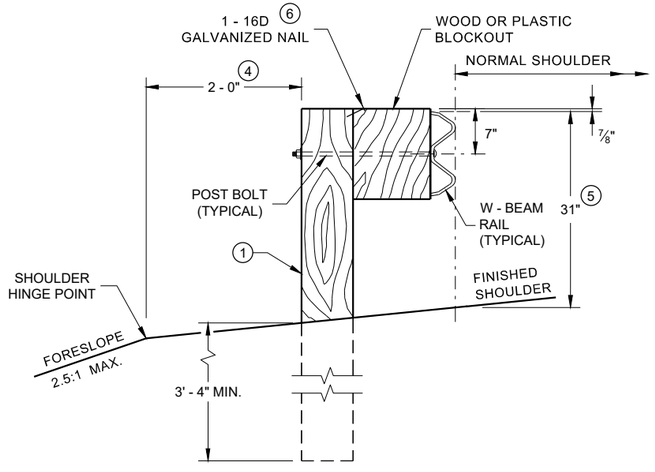
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



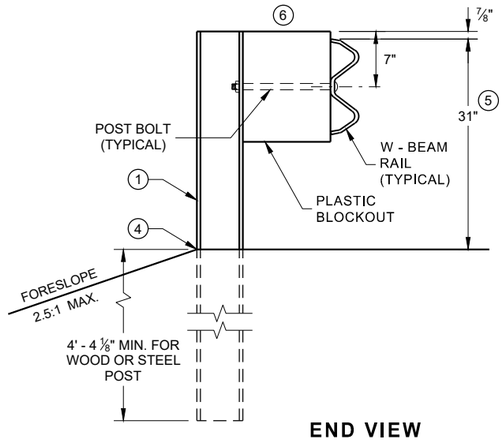
WOOD POST (6" X 8") NOMINAL (1)



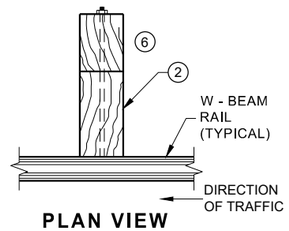
END VIEW
LOCATED ALONG A CURBED ROADWAY



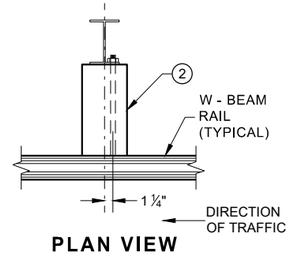
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



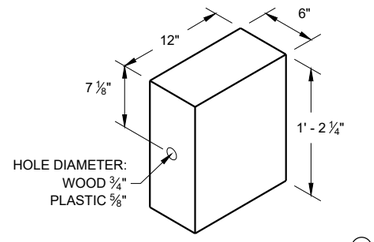
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM

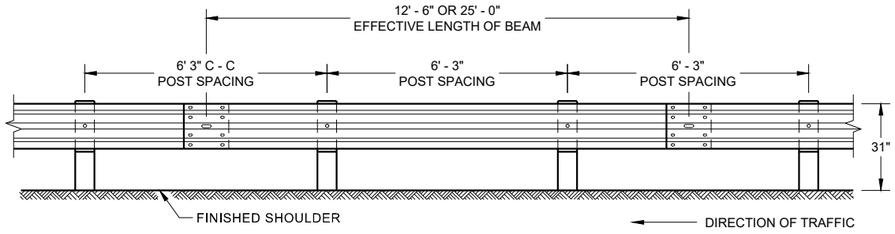


PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM

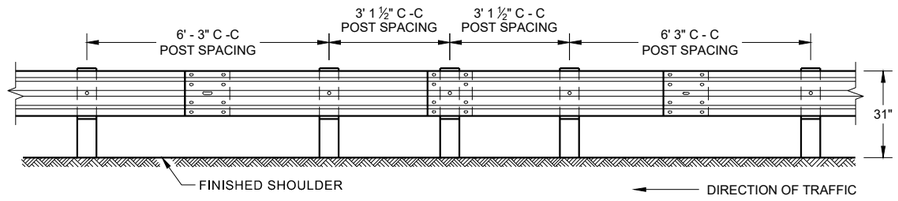


WOOD OR PLASTIC BLOCKOUT (2)

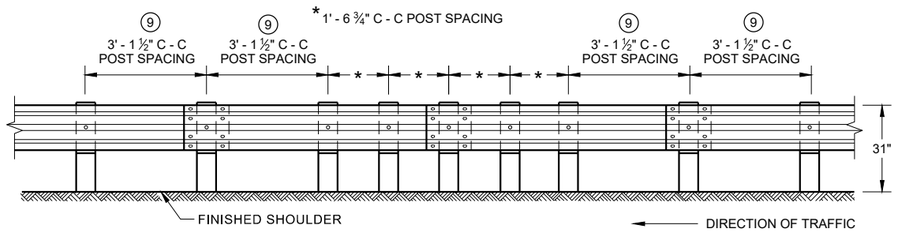
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



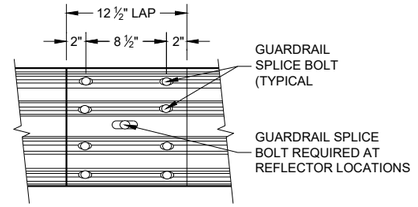
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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



FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE

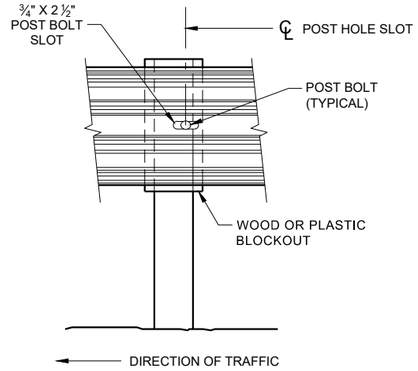
GENERAL NOTES

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

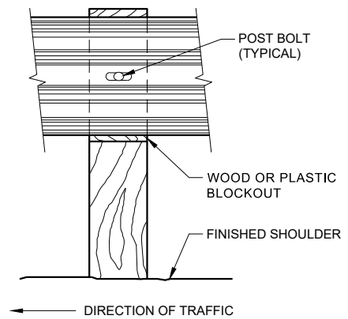
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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

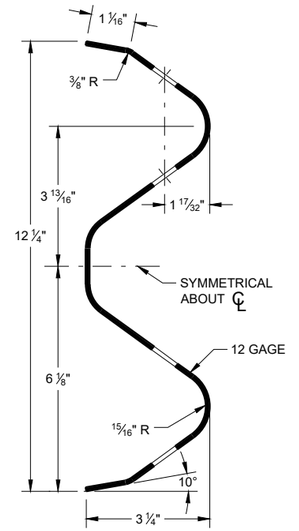
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



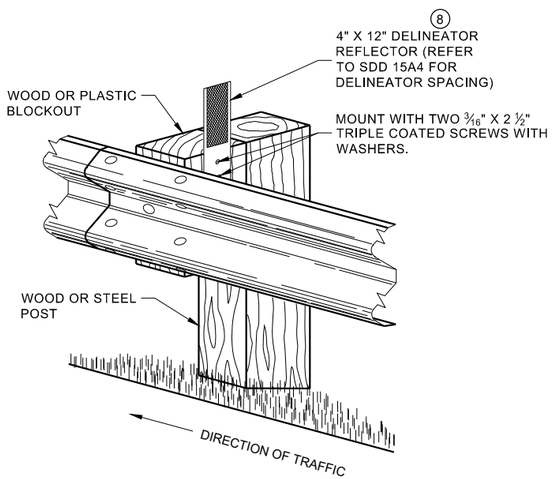
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



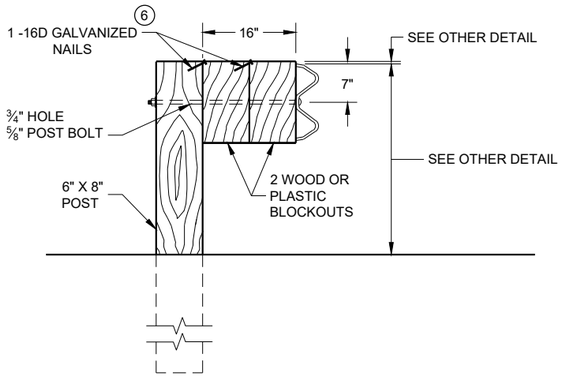
ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

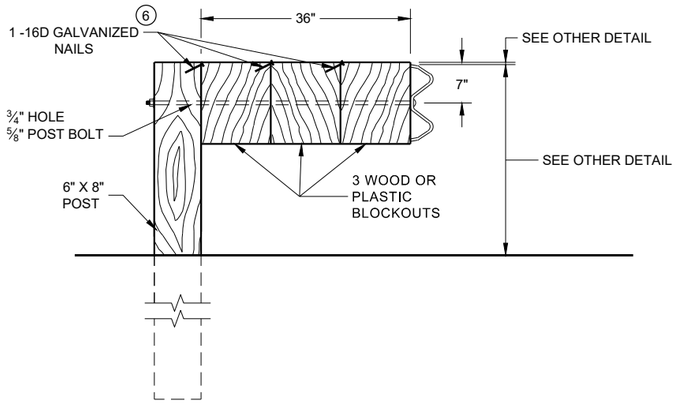
6

SDD 14B42 - 07b



DETAIL FOR 16" BLOCKOUT DEPTH

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



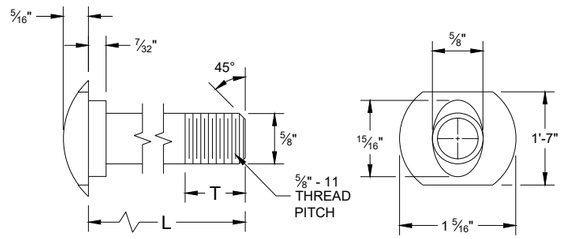
DETAIL FOR 36" BLOCKOUT DEPTH

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

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

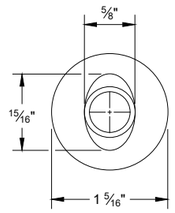
NOTE:

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.

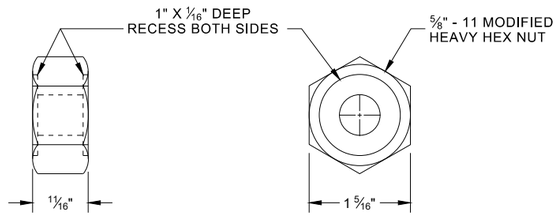


POST BOLT TABLE

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

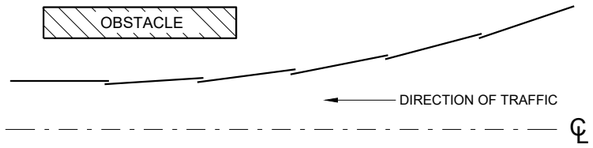


ALTERNATE BOLT HEAD

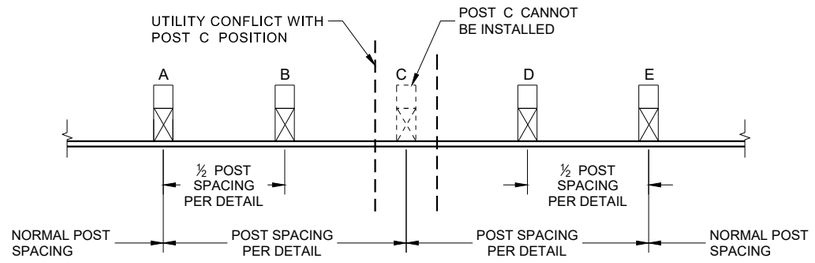


POST BOLT, SPLICE BOLT AND RECESS NUT

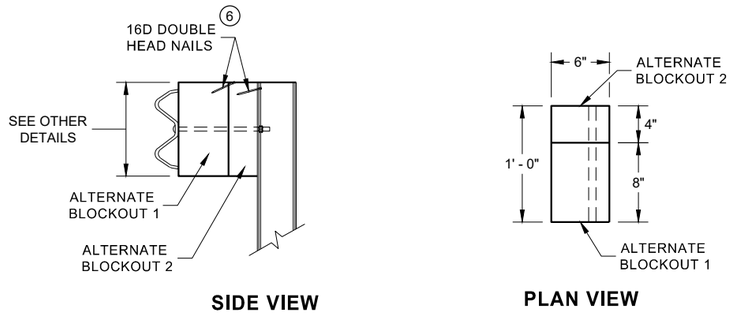
6 WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW

PLAN VIEW

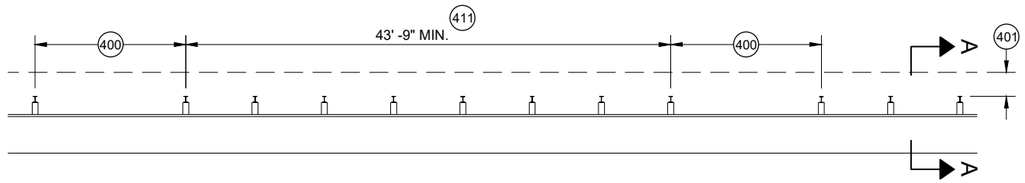
ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

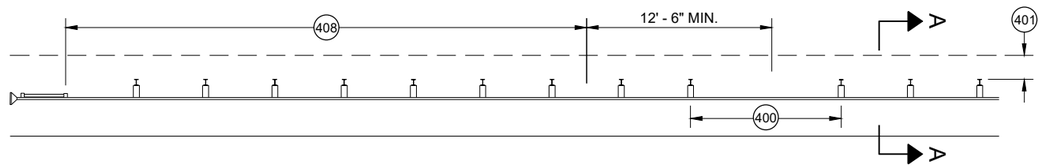
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

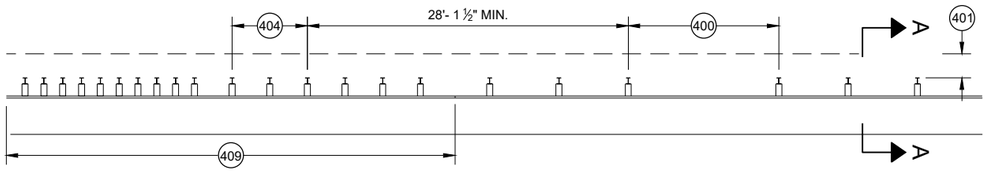
SDD 14B42 - 07c



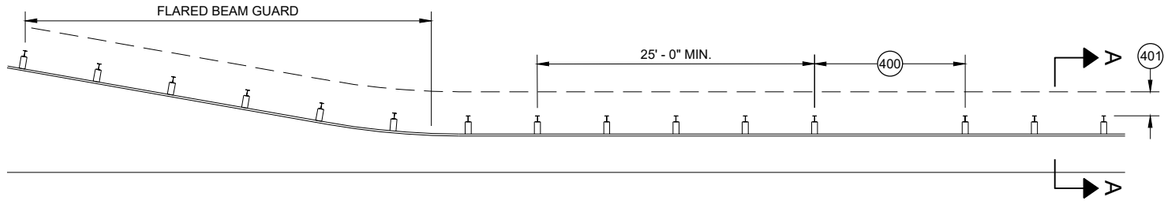
MISSING POST IN MGS GUARDRAIL



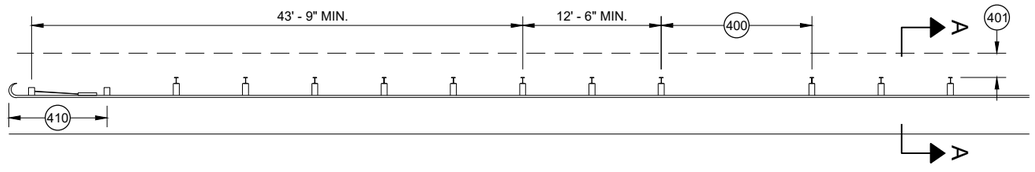
MISSING POST IN MGS GUARDRAIL NEAR EAT



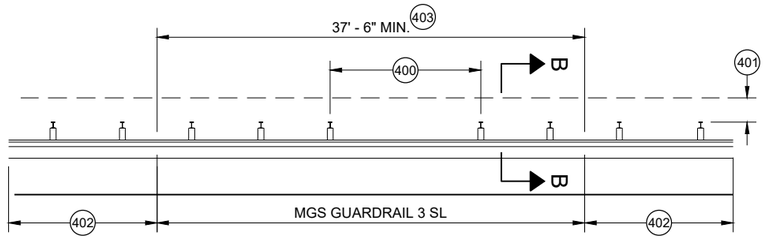
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

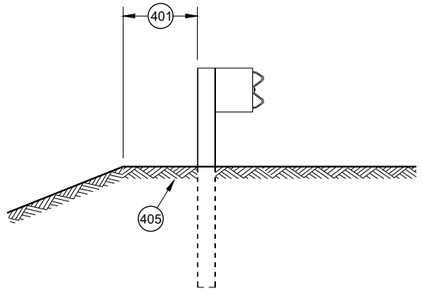


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

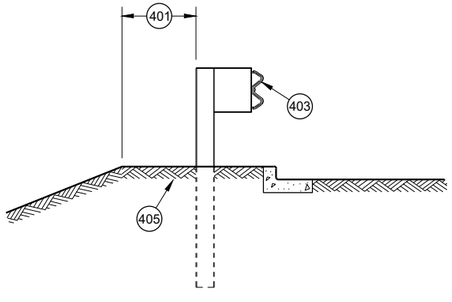


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(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

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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.

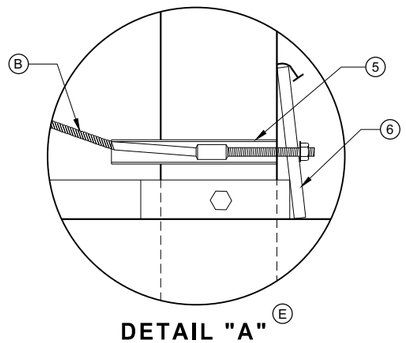
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

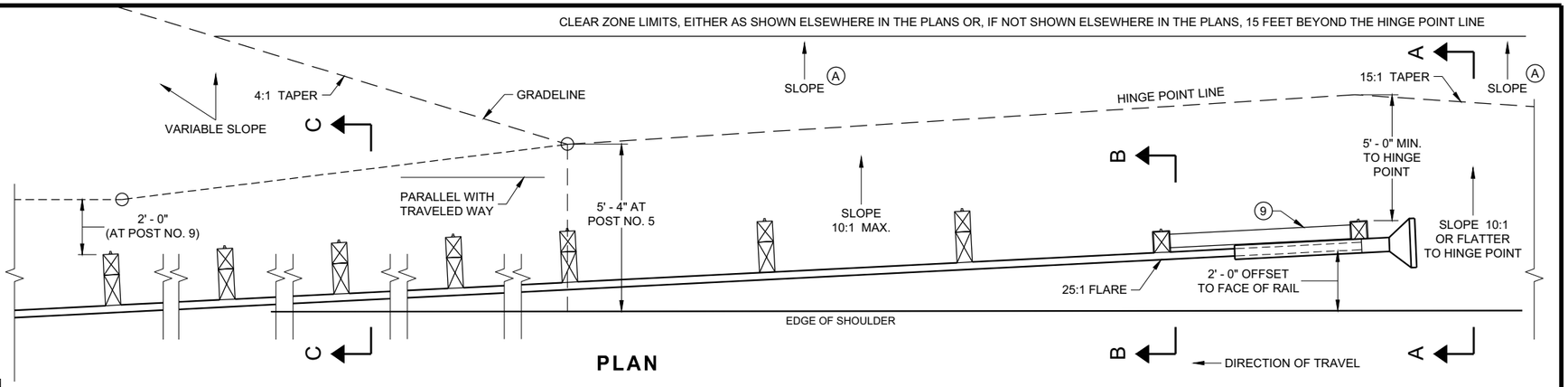
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

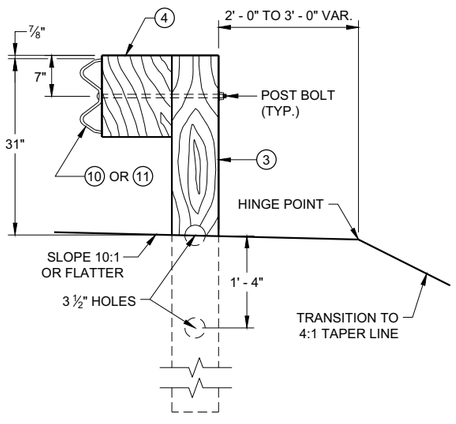
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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.

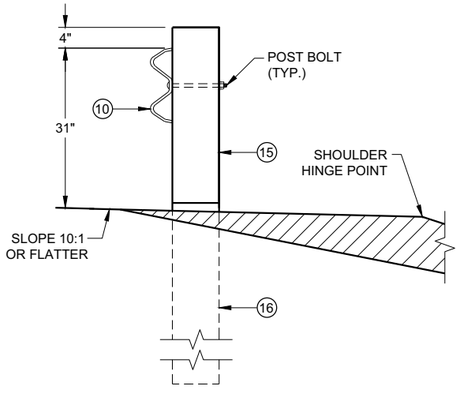


DETAIL "A" (E)

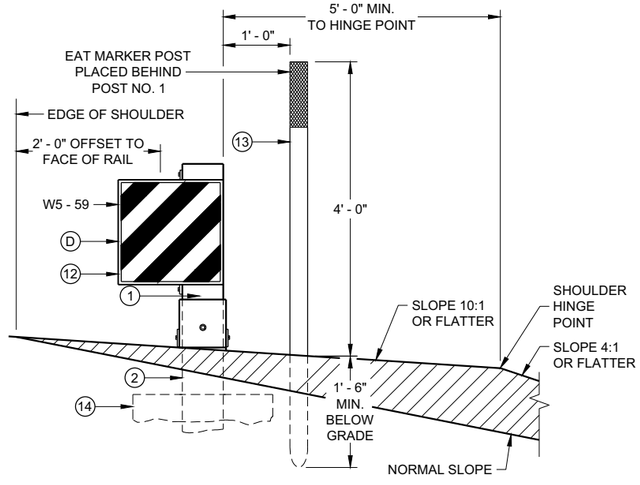




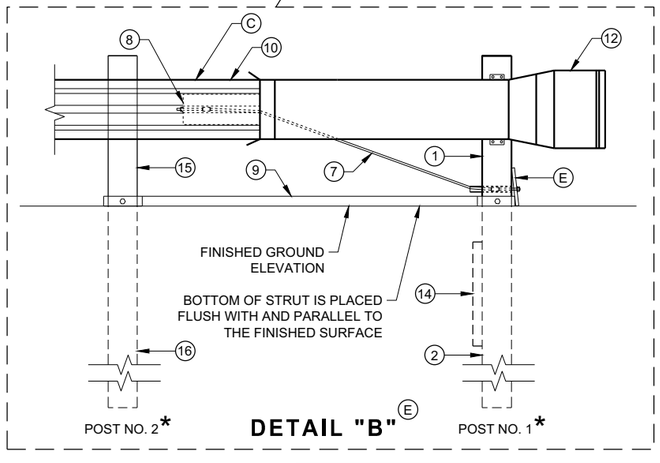
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*

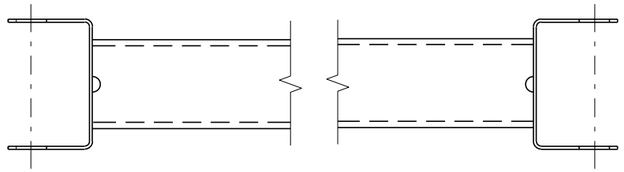


DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

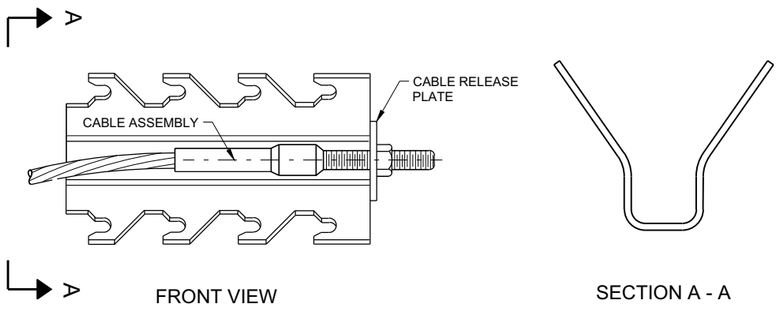
6
SDD 14B44 - 04a



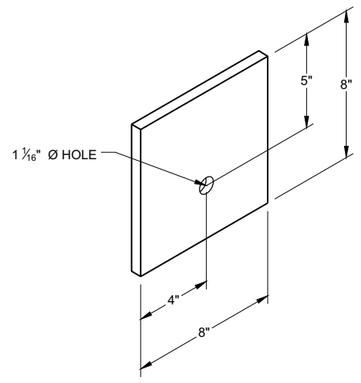
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

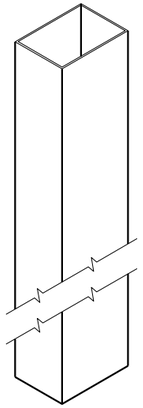
6

SDD 14B44 - 04b

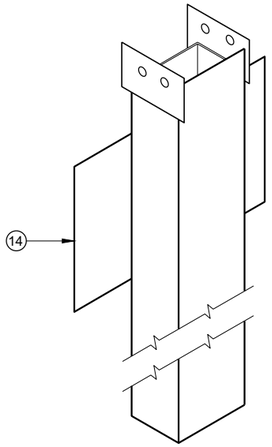
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

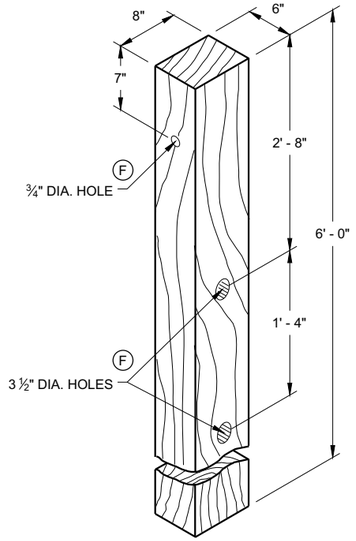
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



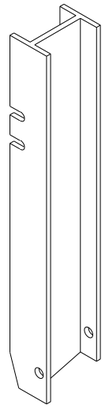
UPPER POST NO. 1 (1) (E)



LOWER POST NO. 1 (2) (E)



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



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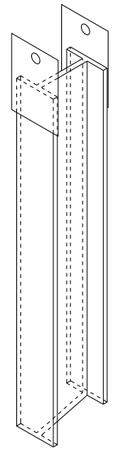

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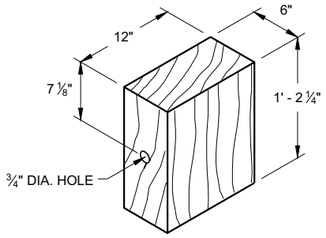
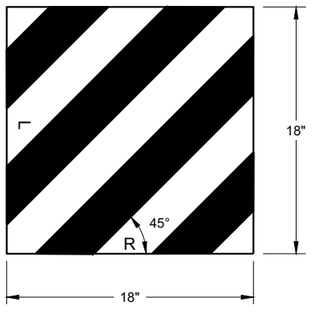
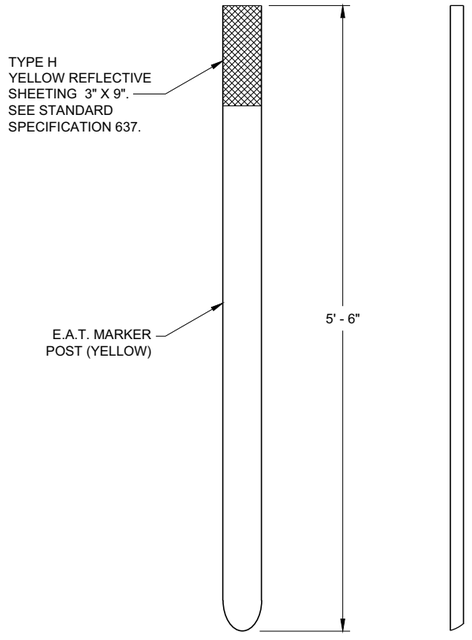


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



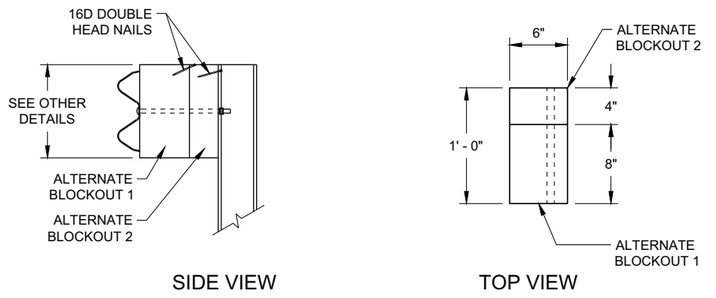
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

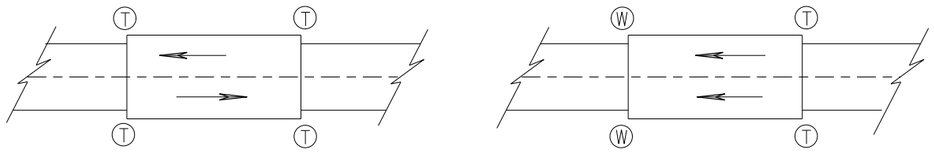
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

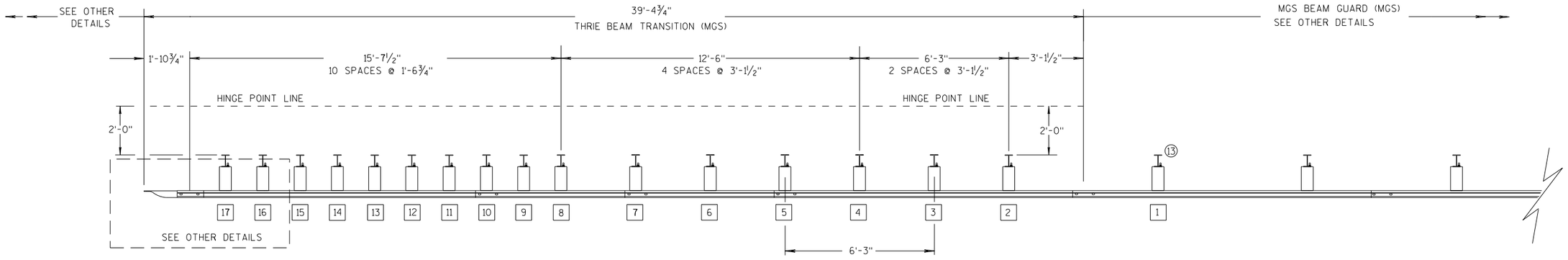
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

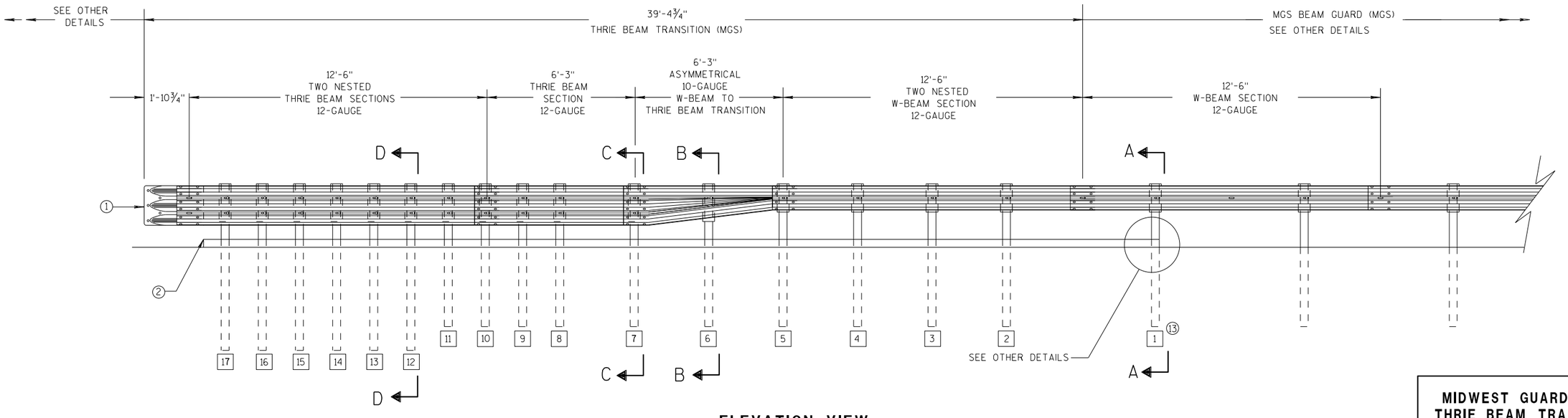
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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

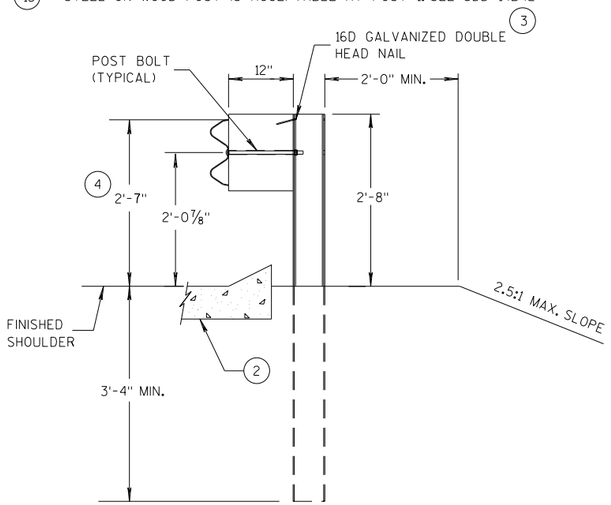
GENERAL NOTES

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

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

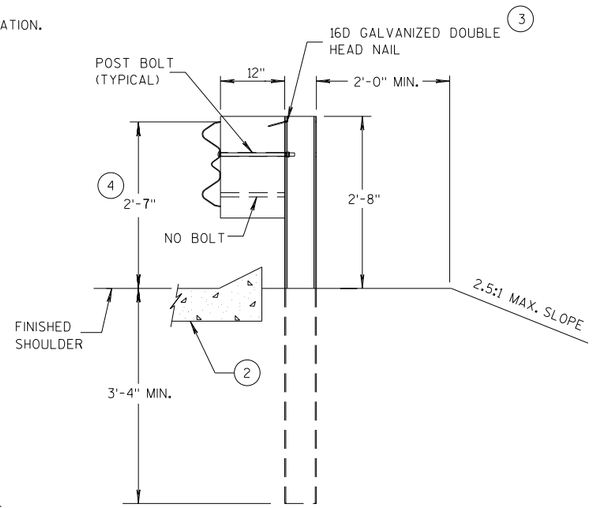
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



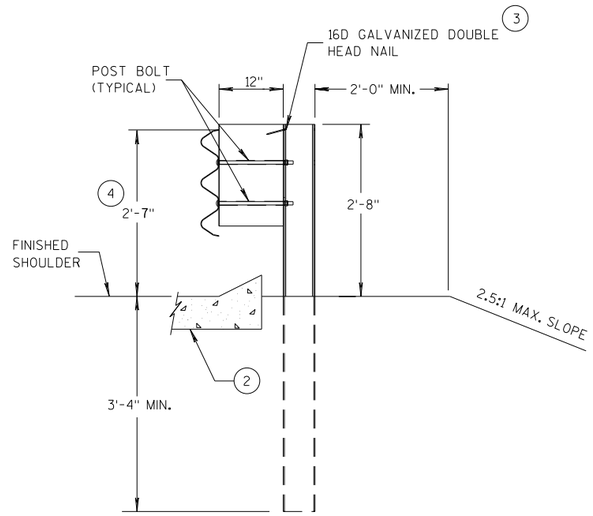
SECTION A-A (13)

POSTS 1-5



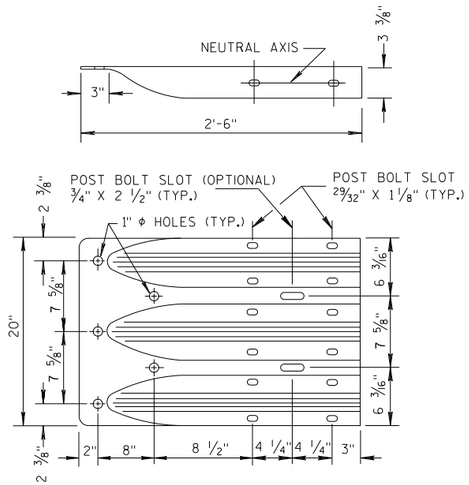
SECTION B-B

POST 6

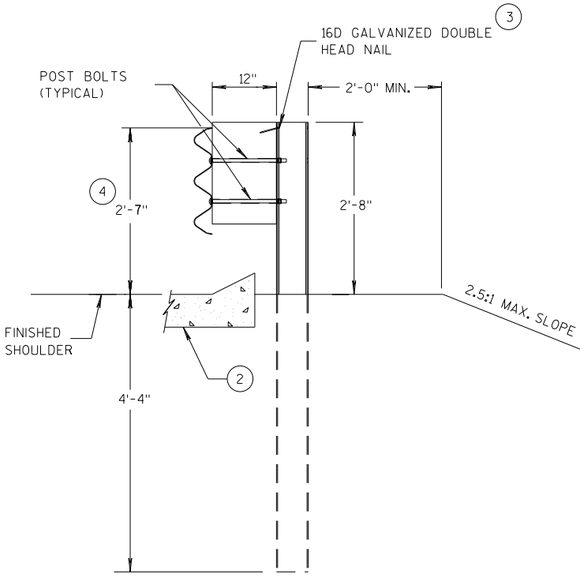


SECTION C-C

POSTS 7-11

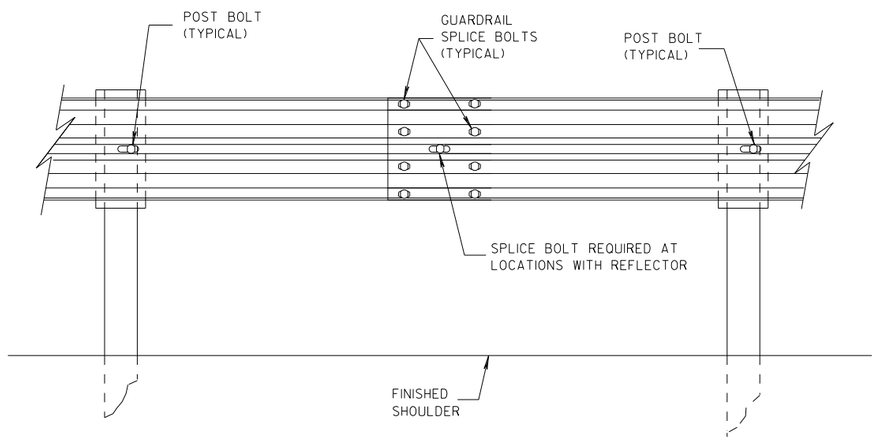


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

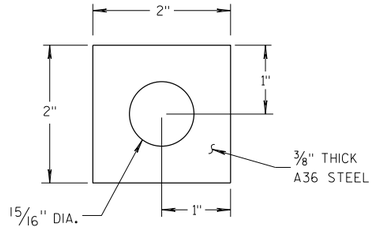
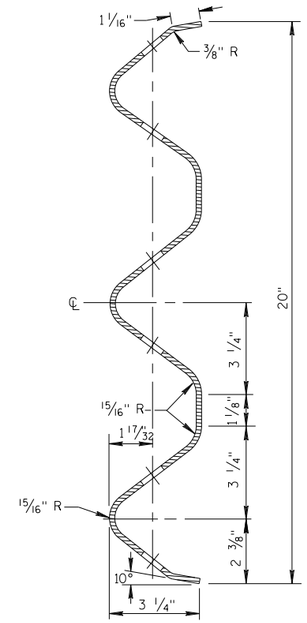


PLATE WASHER DETAIL



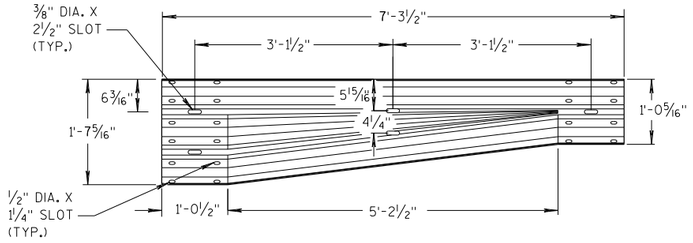
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

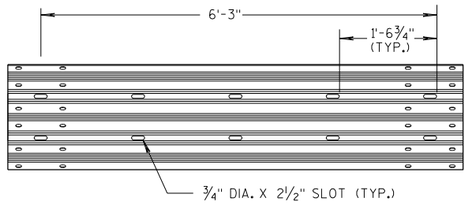
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

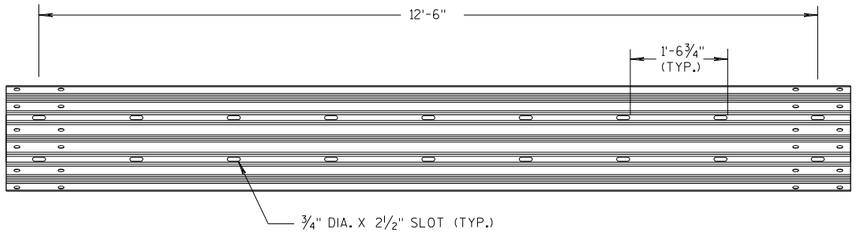
S.D.D. 14 B 45-5b



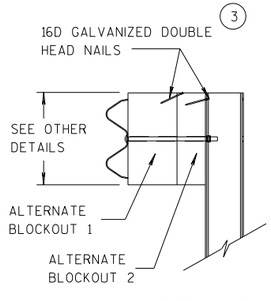
W-BEAM TO THRIE BEAM TRANSITION SECTION



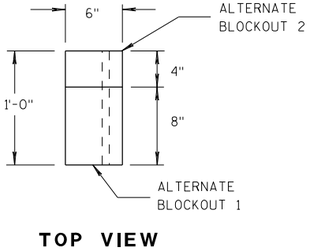
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

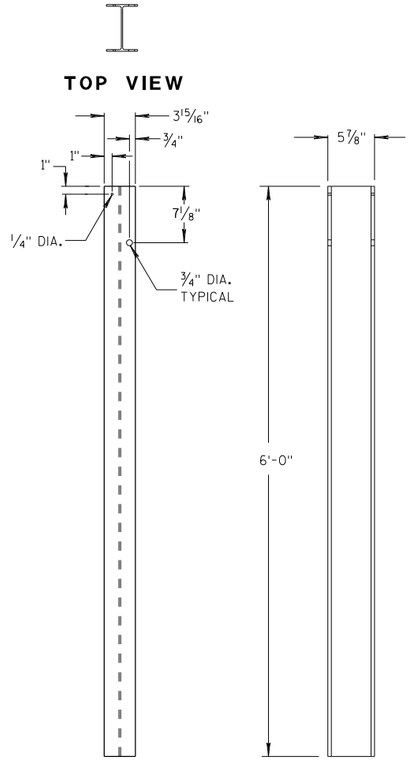


SIDE VIEW



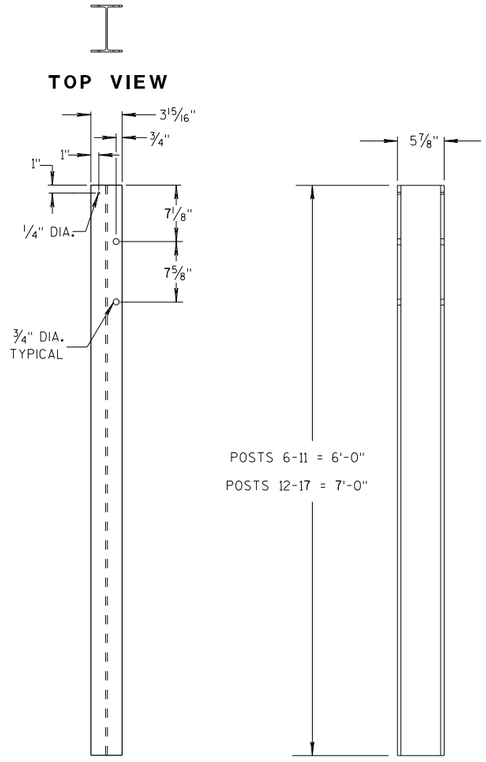
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



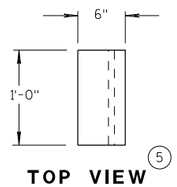
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

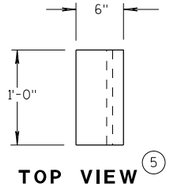


FRONT VIEW SIDE VIEW

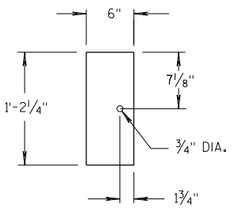
STEEL POSTS 6-17



TOP VIEW (5)

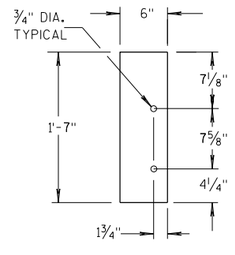


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

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

(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

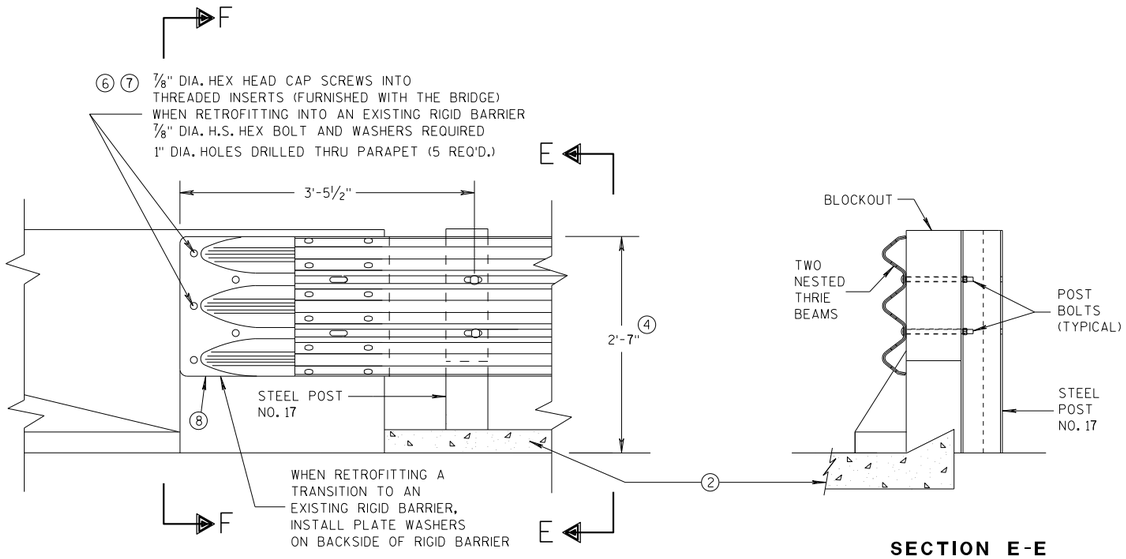
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

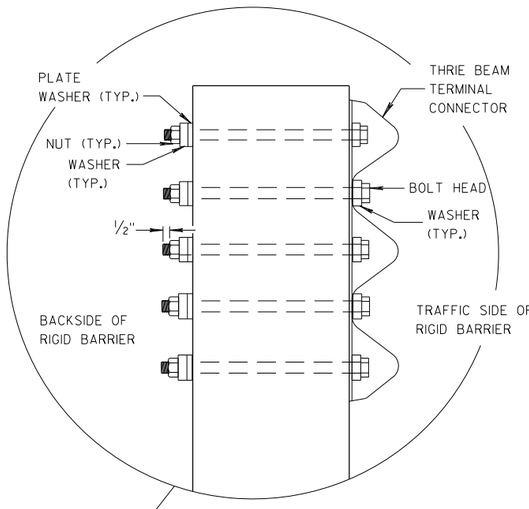
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

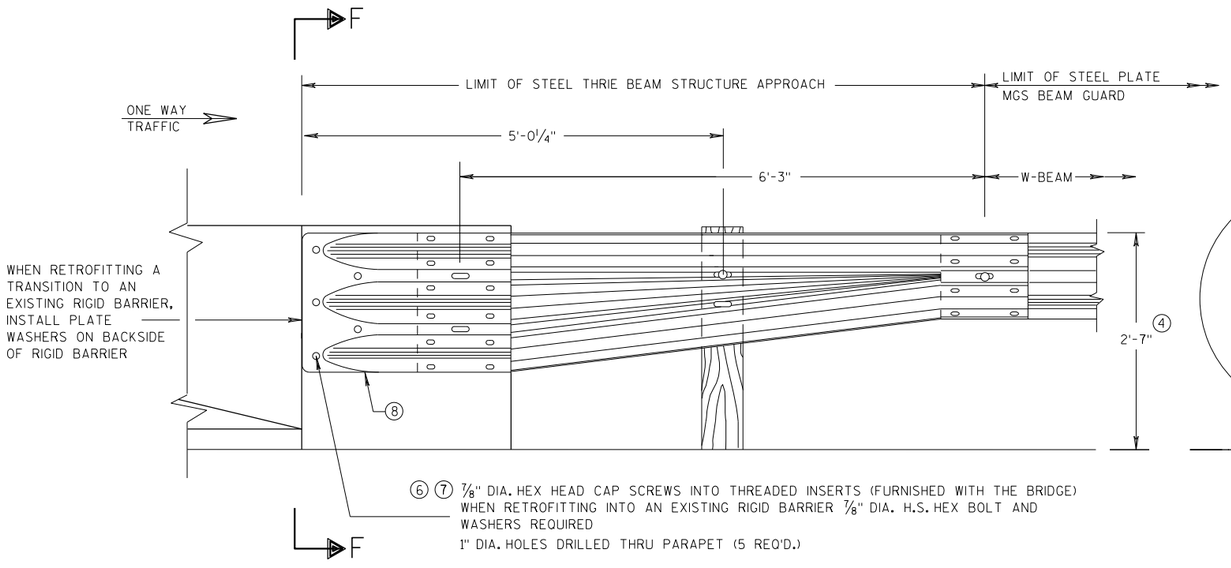
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

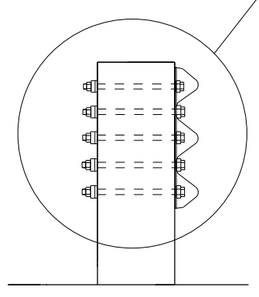
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

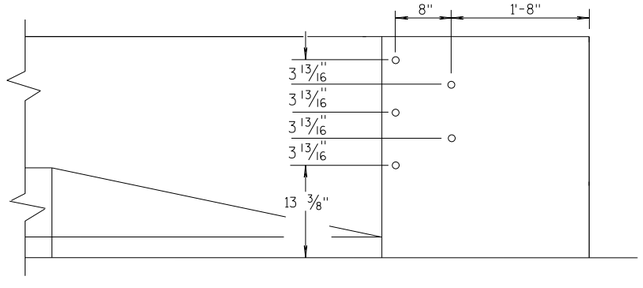




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

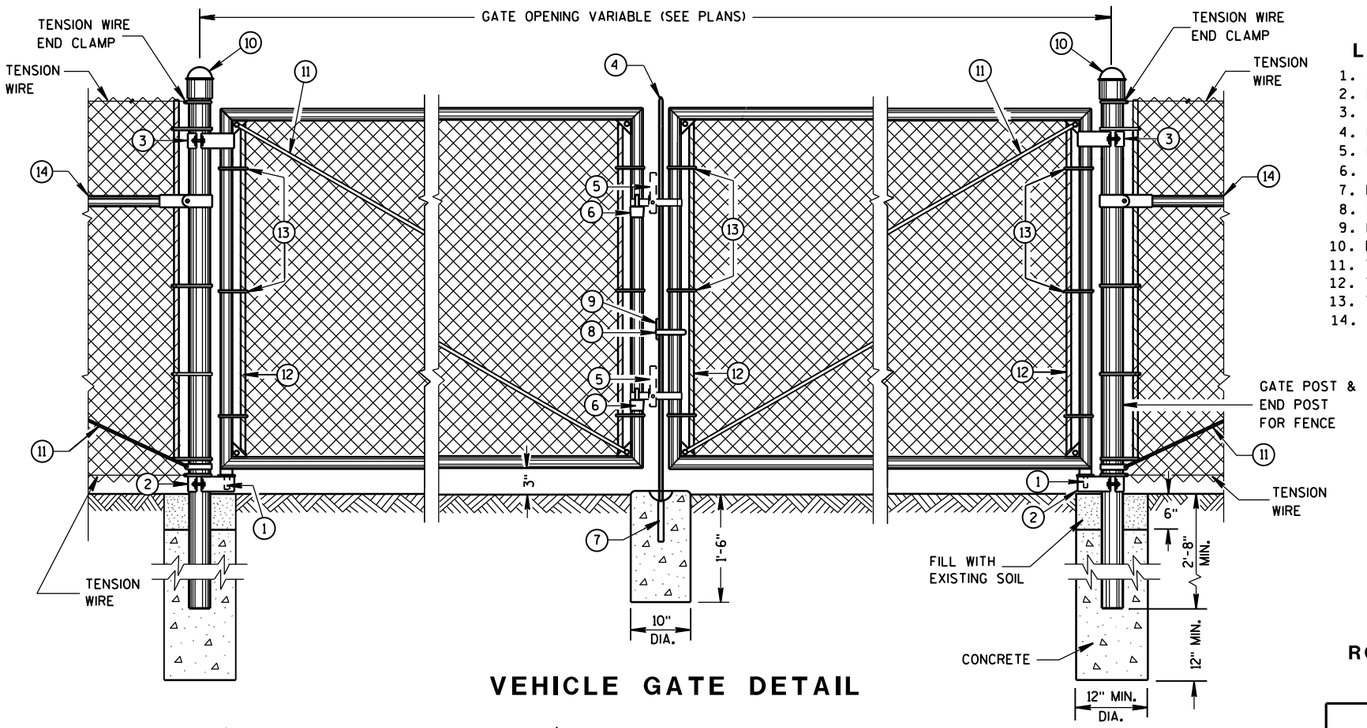
APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D[illegible] UNIT SUPERVIS[illegible]NT
FHWA

6

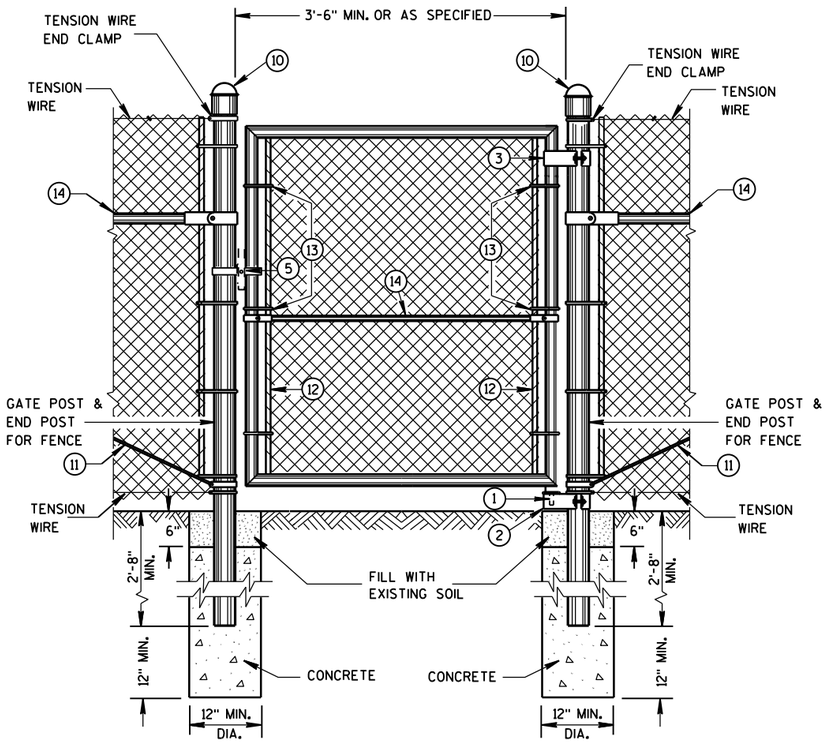
S.D.D. 14 B 45-5d

6

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



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

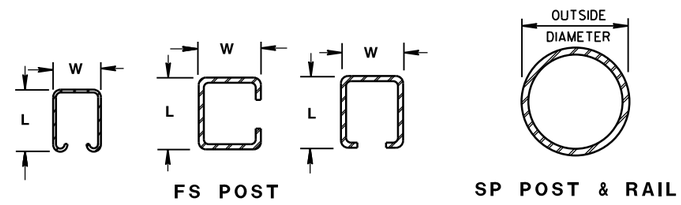
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

USE TYPE 2, CLASS 3, MARCELLED/CRIMPED, TENSION WIRE PER ASTM A 817.



FS POST

SP POST & RAIL

CROSS SECTIONS OF POSTS AND RAILS

ROLLED-FORMED STEEL FENCE POST (2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

ROUND STEEL FENCE POST (1.8 OZ./SQ. FT. COATING)

POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

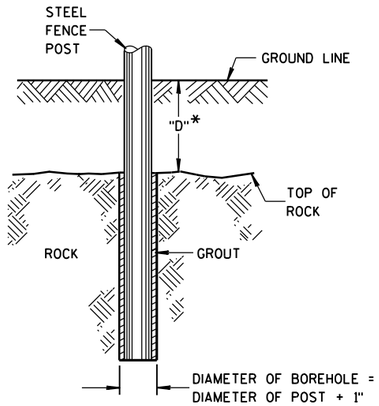
** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

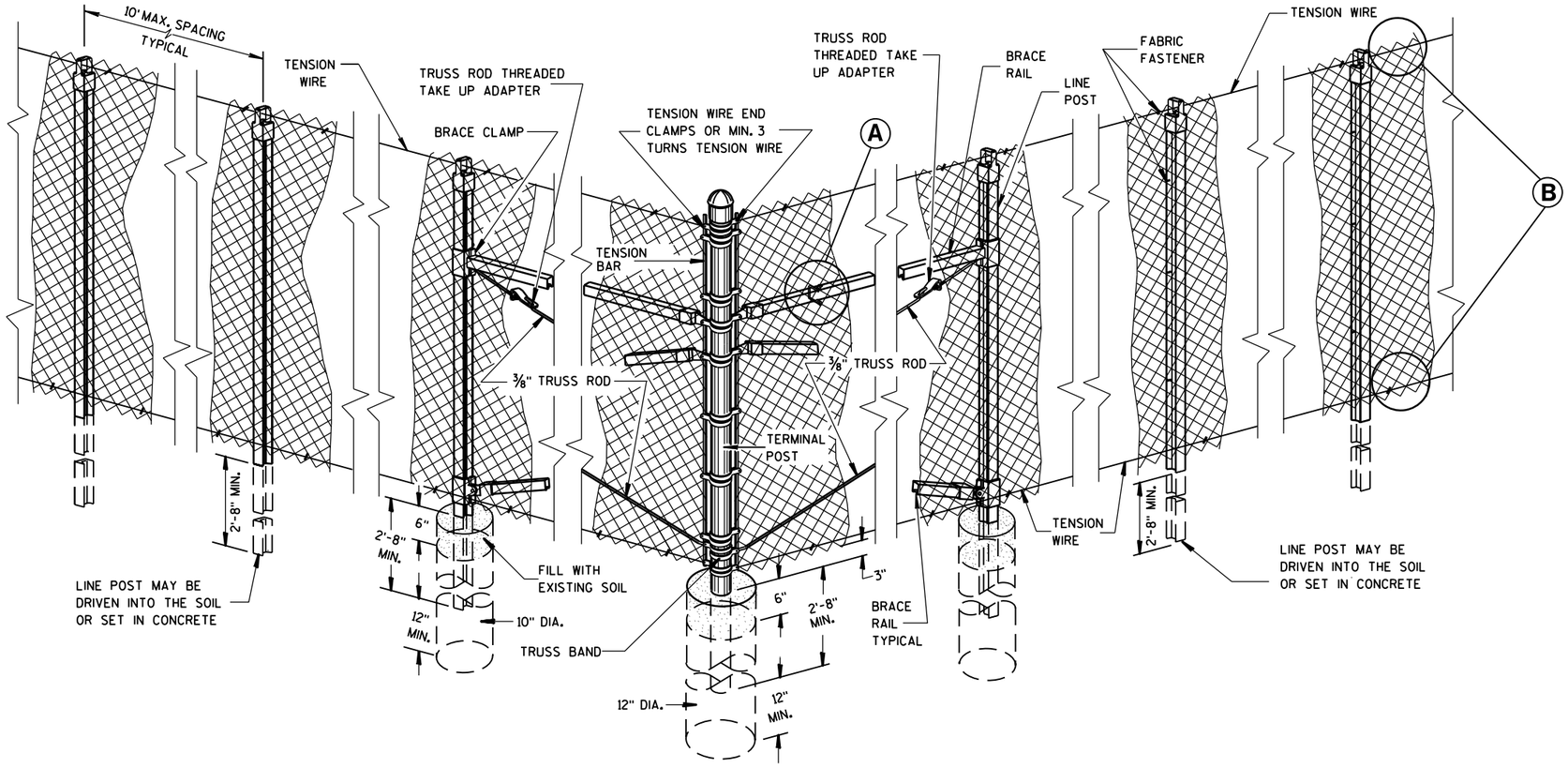
6

S.D.D. 15 B 3-15a

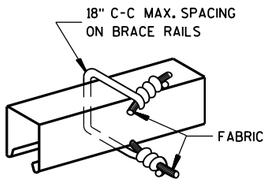


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



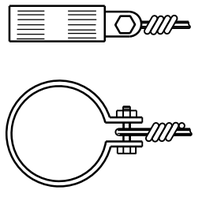
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



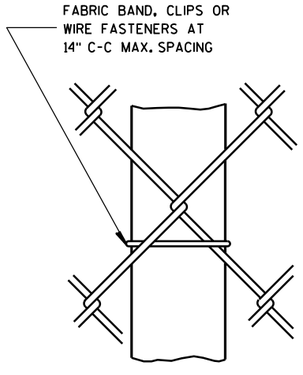
BRACE RAIL

FABRIC FASTENER

Ⓐ



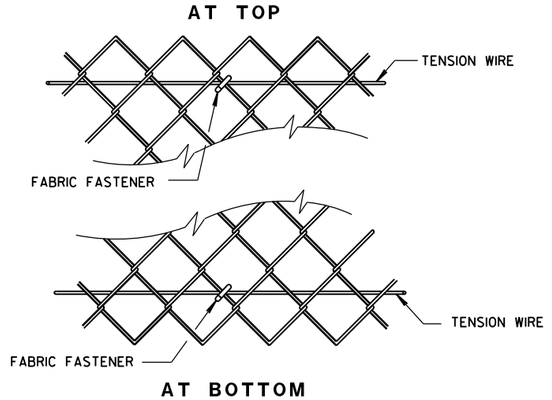
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

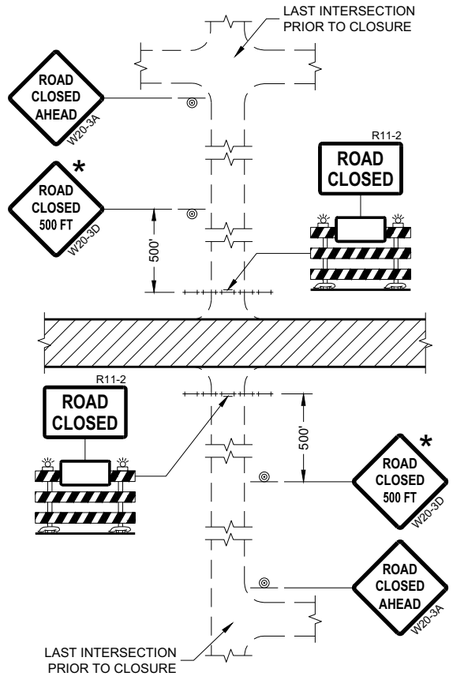
APPROVED
FEB. 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 15 B 3-15b

6

S.D.D. 15 B 3-15b



DETAIL 1
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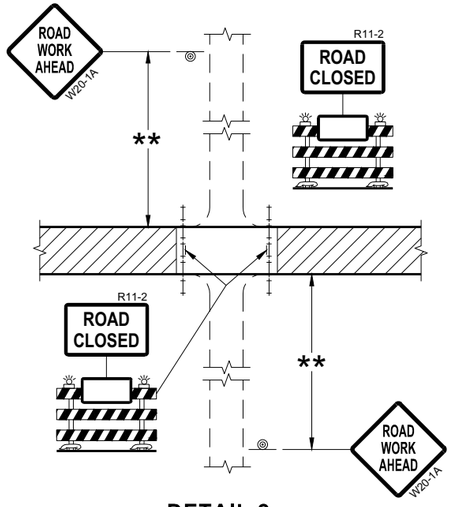
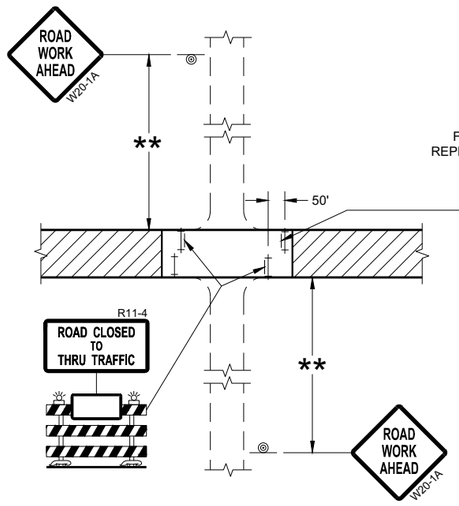
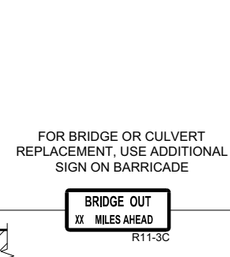
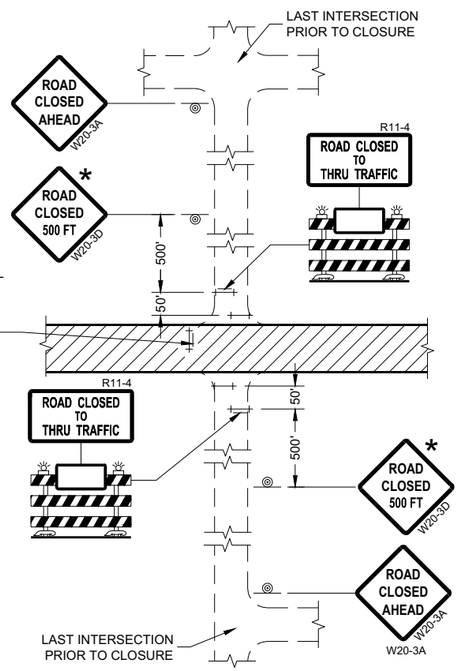


DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)







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

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

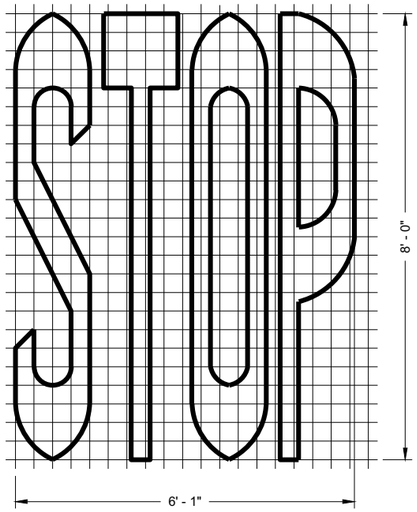
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

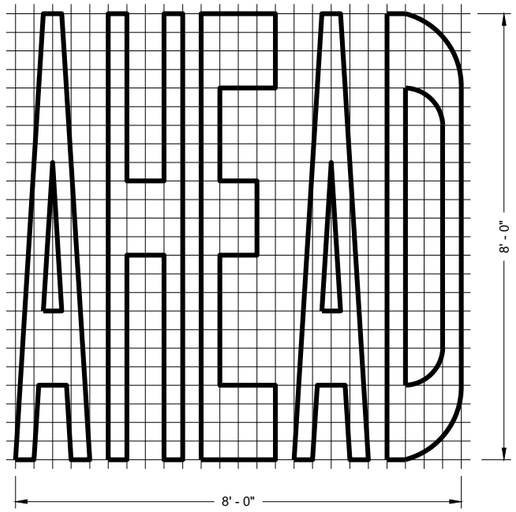
APPROVED
July 2018
DATE

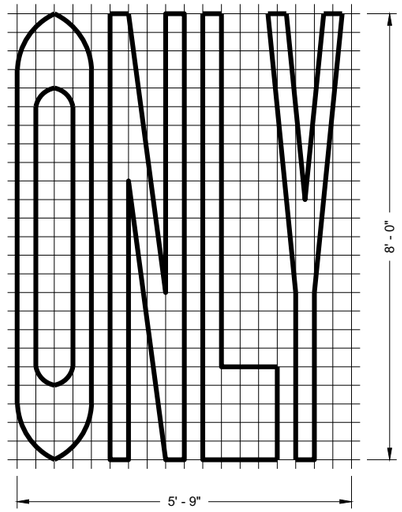
/S/ Andrew Heidtke
WORK ZONE ENGINEE

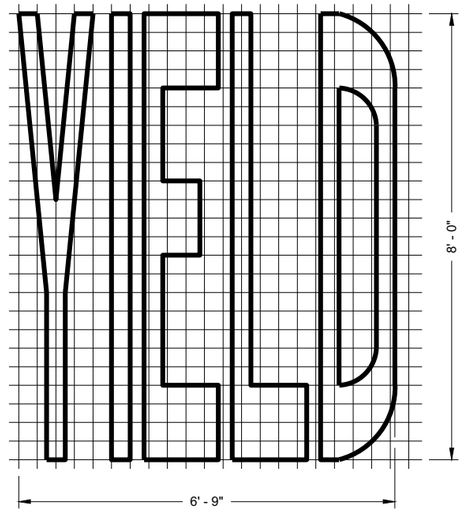
FHWA

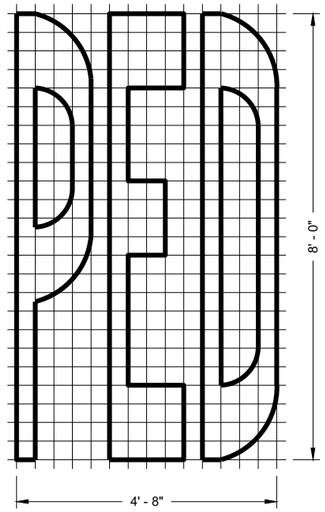
6
SDD 15C03 - 05

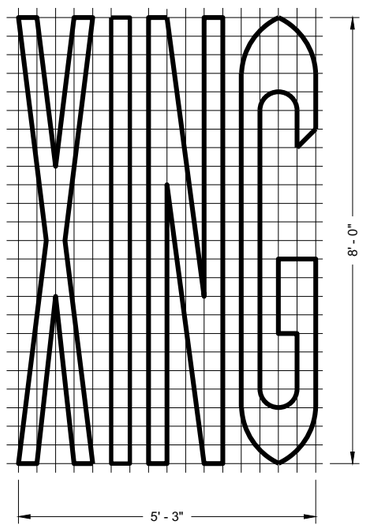


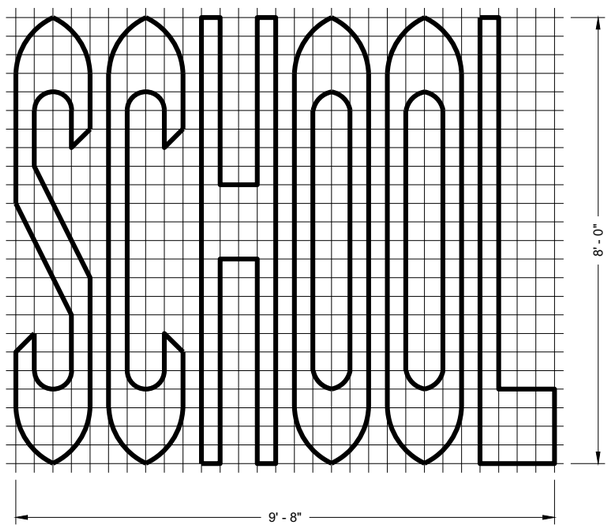




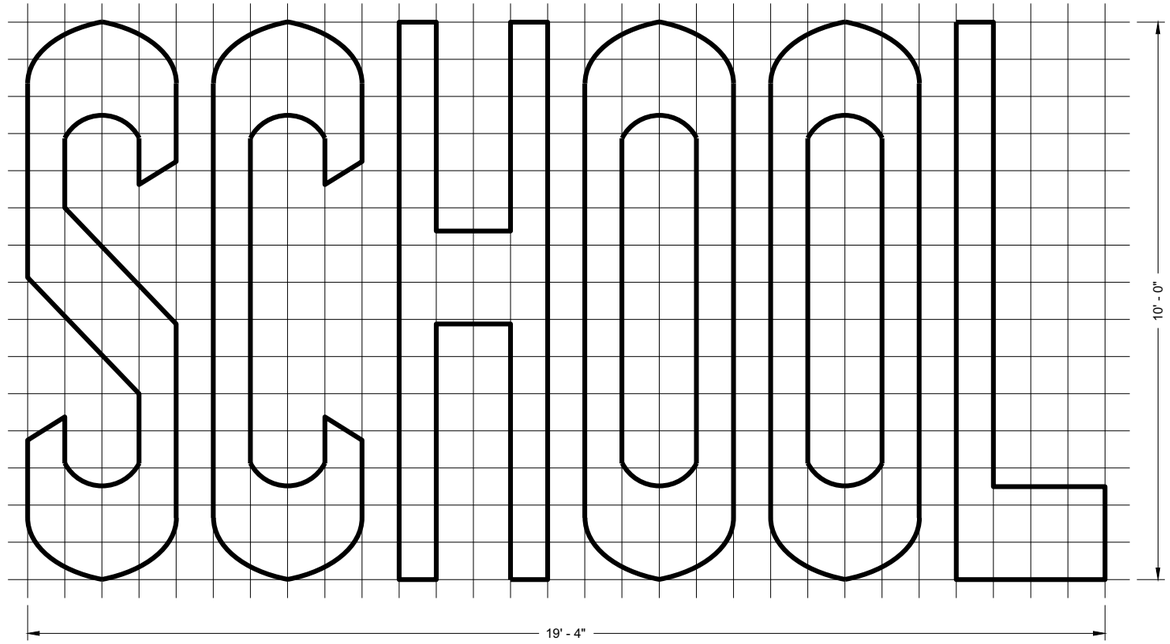








SINGLE LANE



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

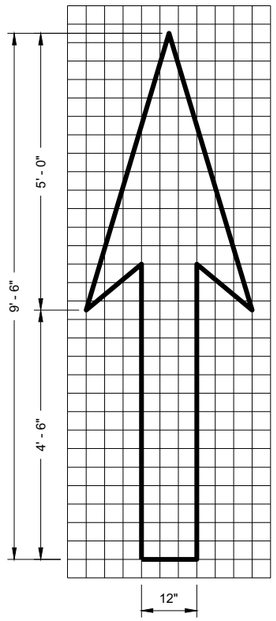
APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

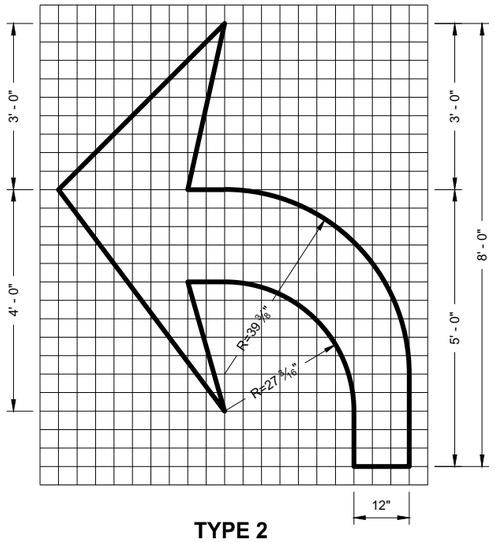
FHWA

6

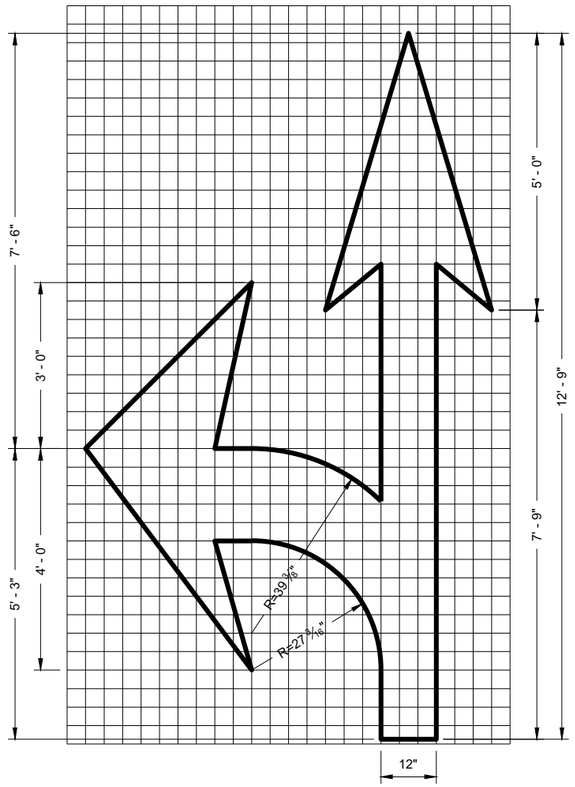
SDD 15C07 - 15b



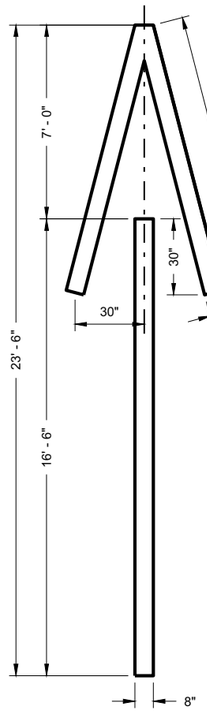
TYPE 1



TYPE 2



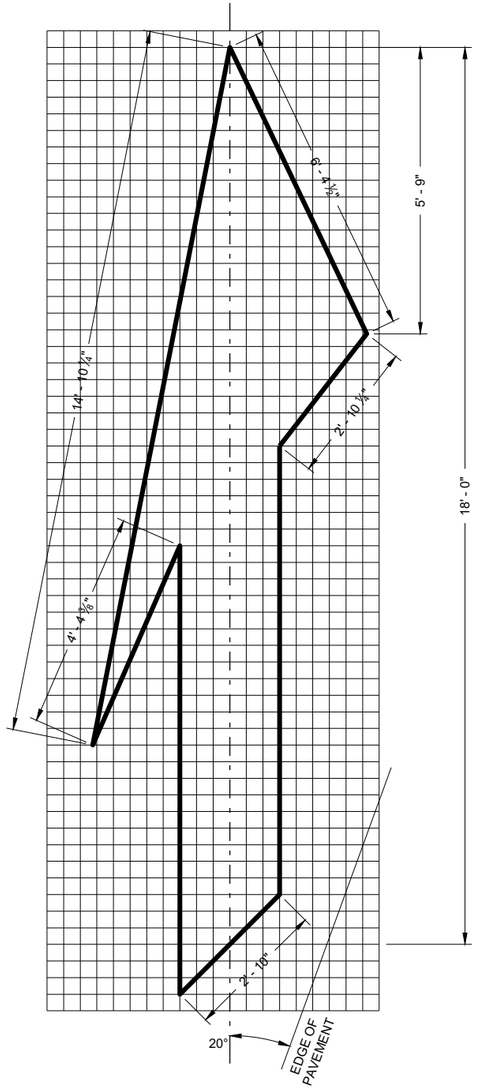
TYPE 3



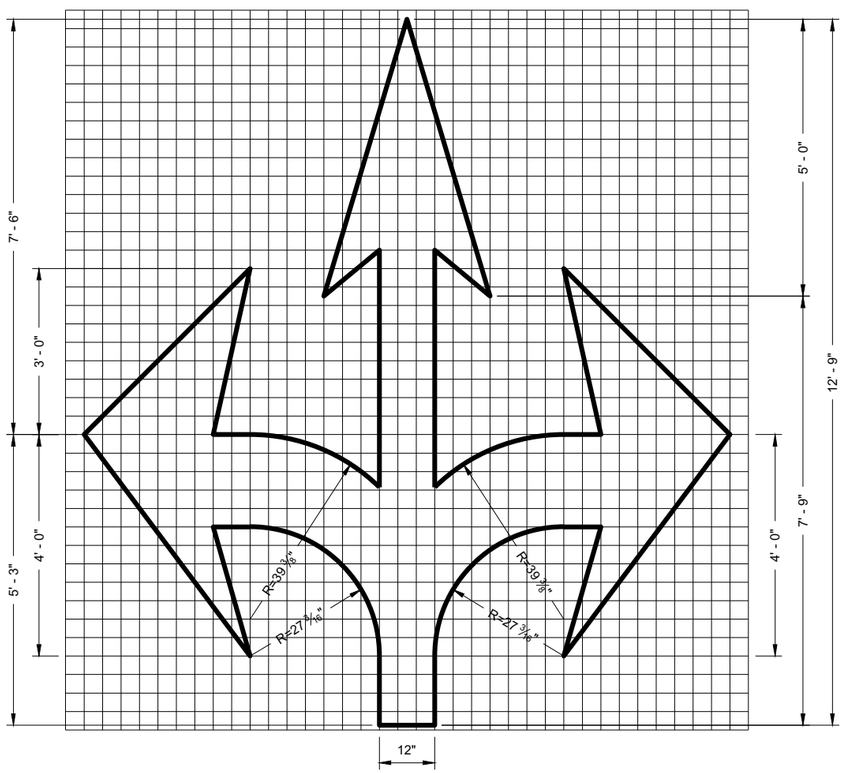
TYPE 4

GENERAL NOTES

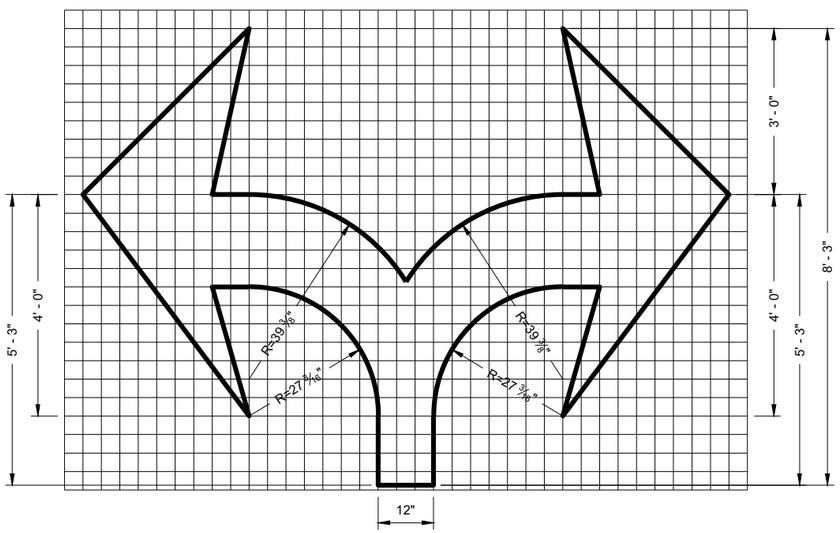
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



TYPE 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 MARKING ENGINEER

FHWA

6

SDD 15C07 - 15c

6

SDD 15C07 - 15c

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

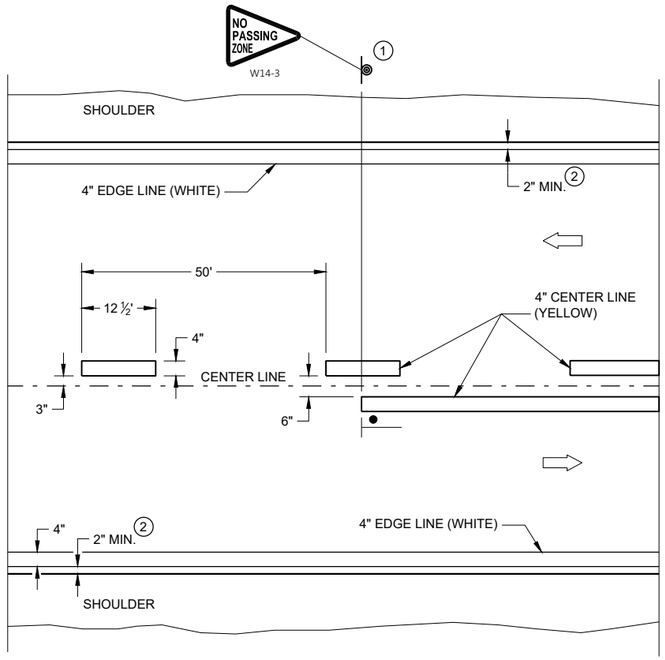
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

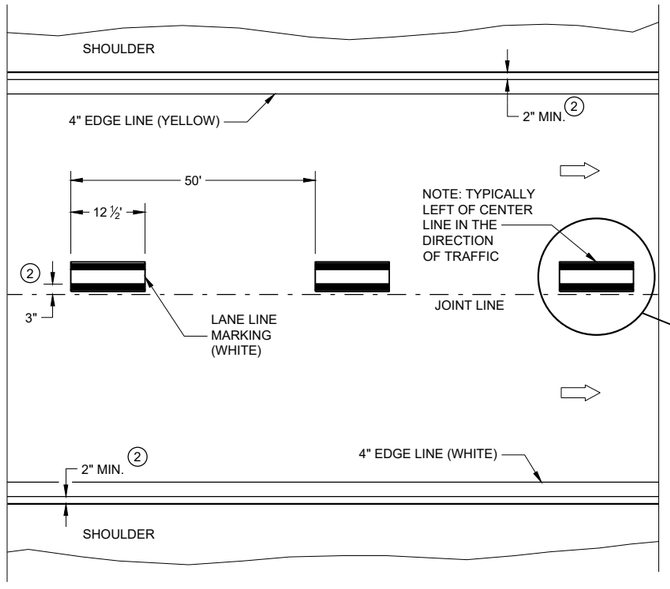
"T" MARKING

SIGN ON PERMANENT SUPPORT

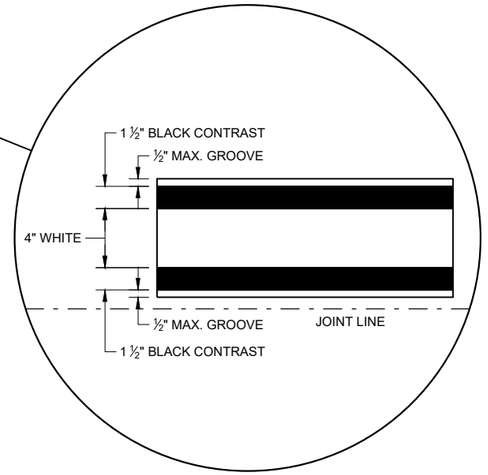
DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC



PERMANENT PAVEMENT MARKING

6

SDD 15C08 - 22a

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

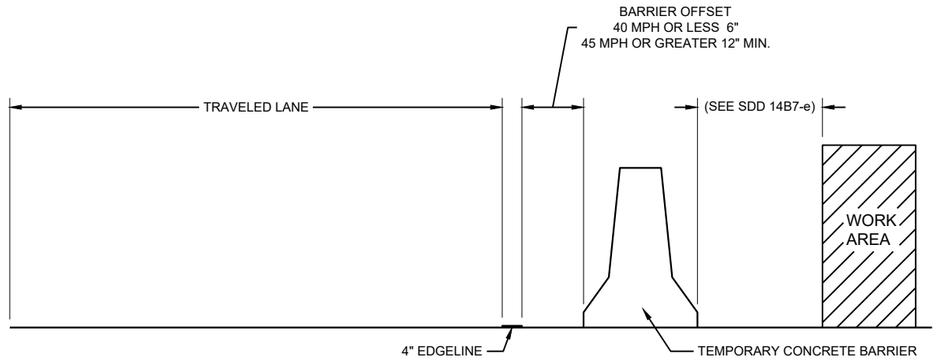
APPROVED
May 2022
DATE

/S/ Jeannie Silver
STATEWIDE SIGNING AND M
ENGINEER

FHWA

6

SDD 15C08 - 22a



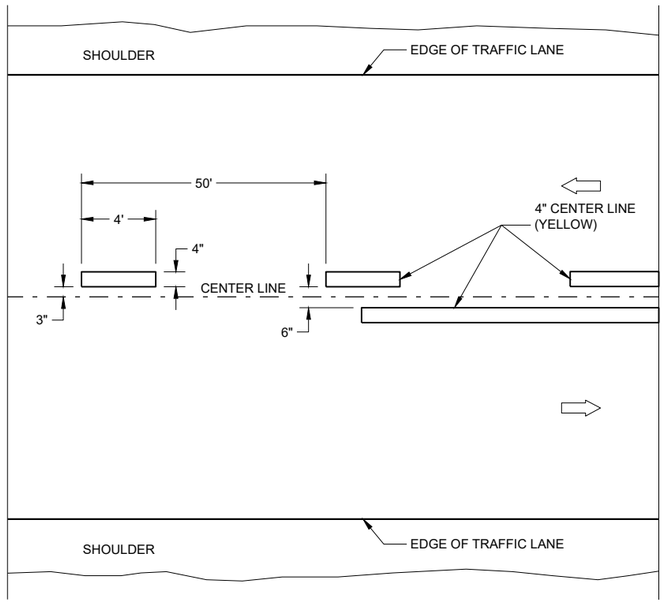
TEMPORARY BARRIER OFFSET FROM EDGELINE

GENERAL NOTES

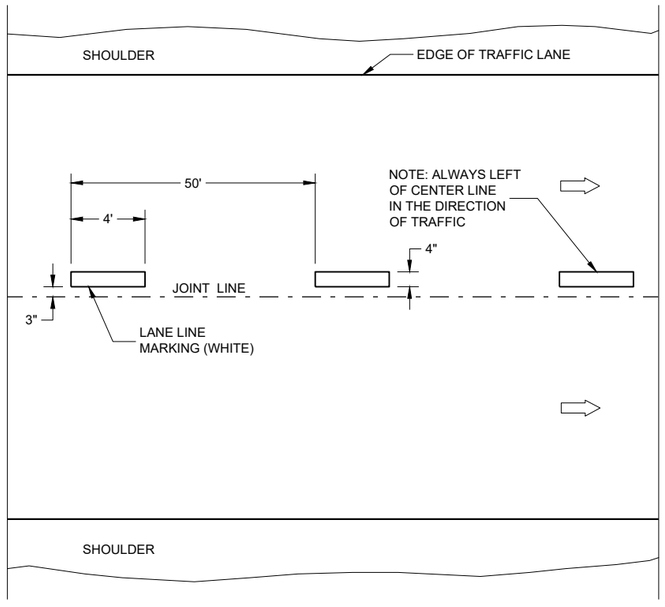
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

LEGEND

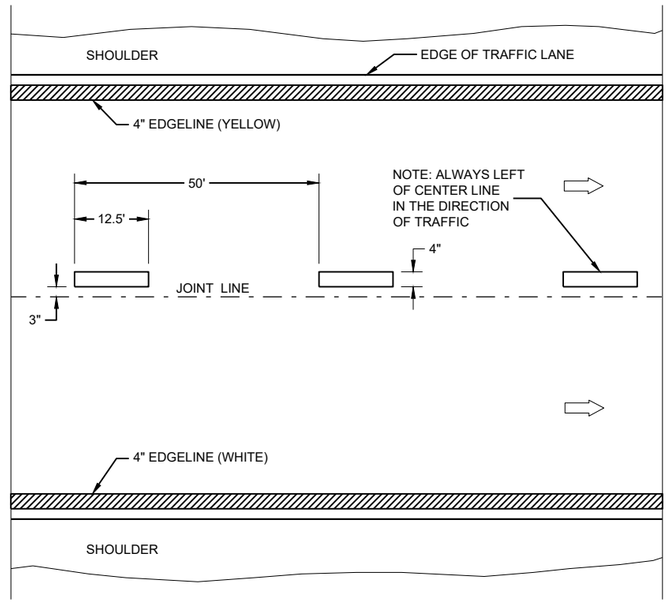
DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2022
DATE

/S/ Jeannie Silver
STATEWIDE SIGNING AND M ENGINEER

FHWA

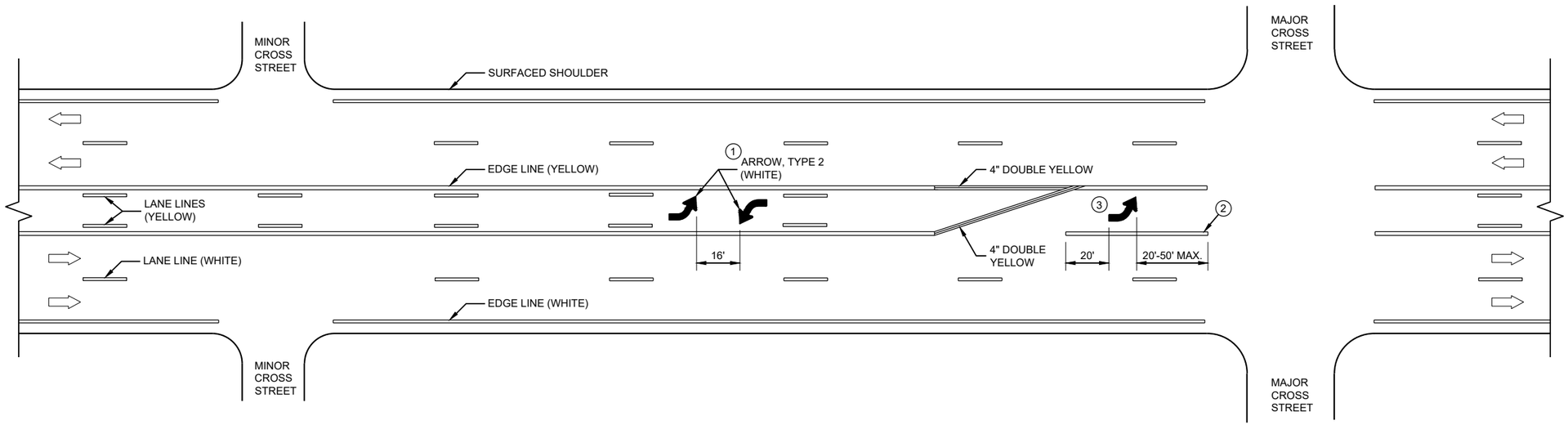
6

SDD 15C08 - 22b

GENERAL NOTES

1. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
2. 8" WHITE
3. TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

DIRECTION OF TRAFFIC



TWO WAY LEFT TURN LANE

6

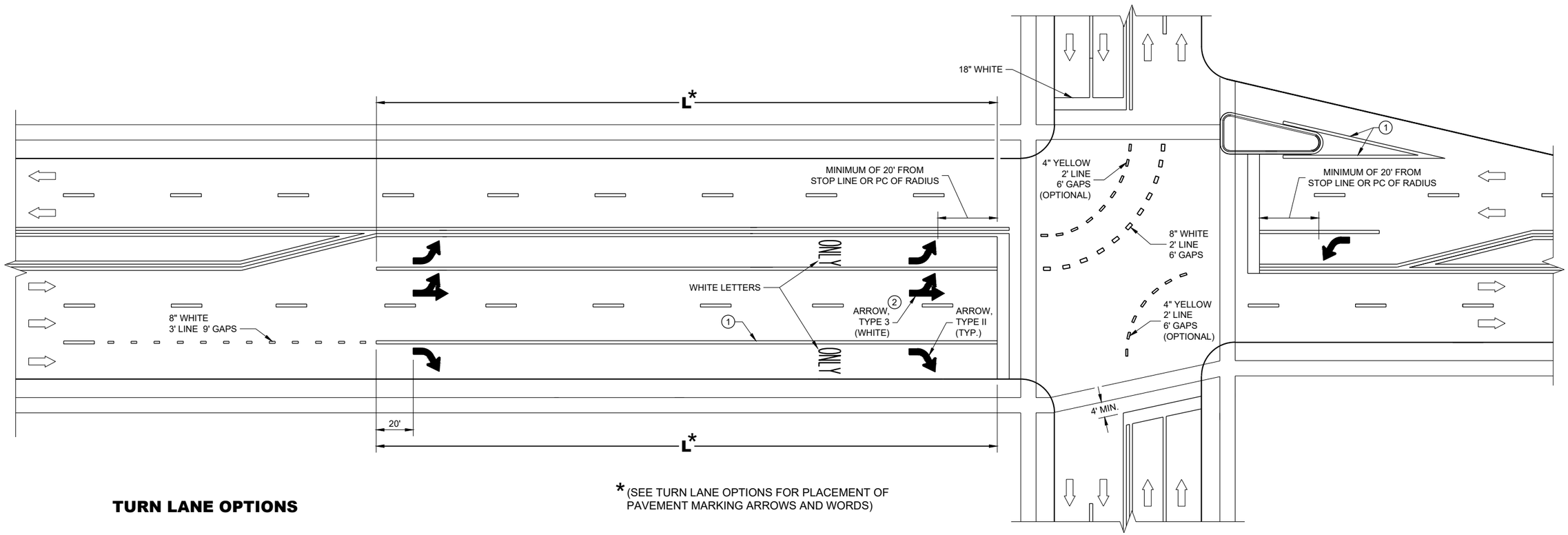
SDD 15C08 - 22c

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

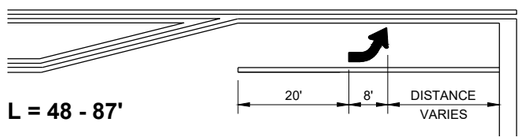
SDD 15C08 - 22c



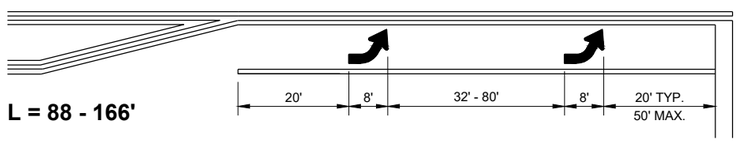
* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

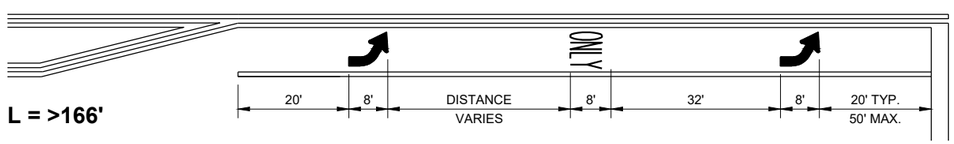
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48 - 87'



L = 88 - 166'



L = >166'

GENERAL NOTES

1. 8" WHITE
2. 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

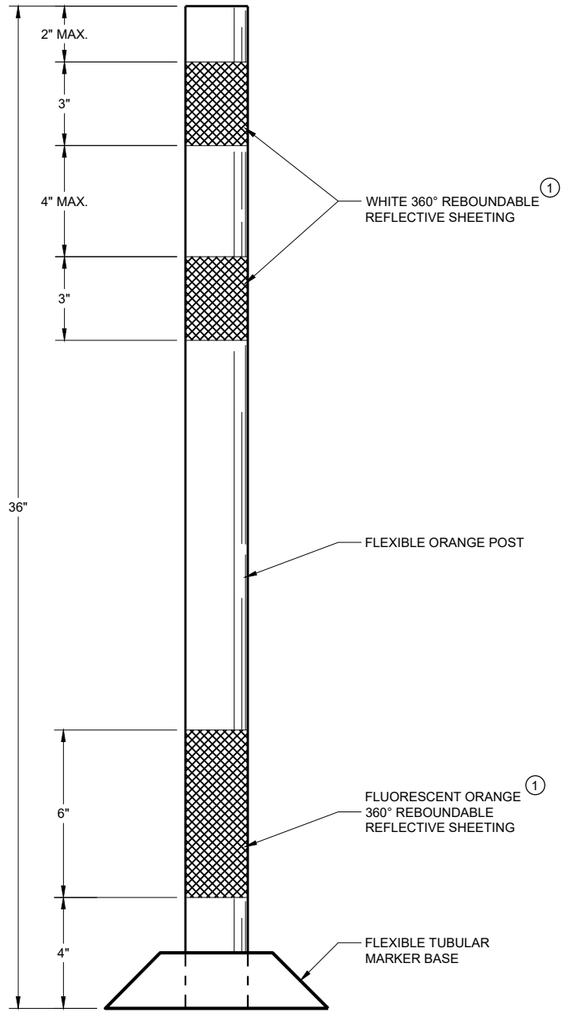
L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15C08 - 22d



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

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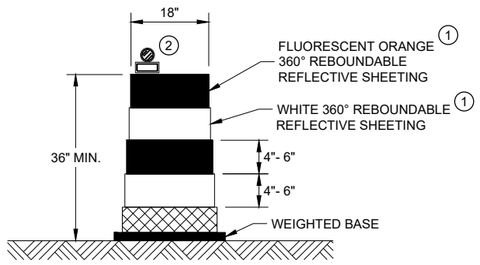
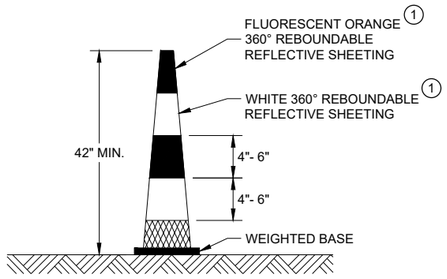
GENERAL NOTES

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

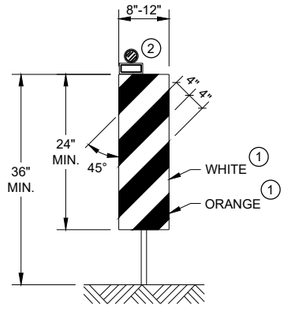
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

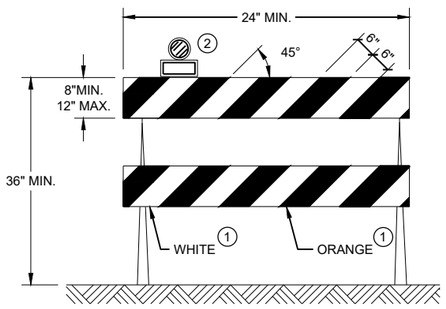
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



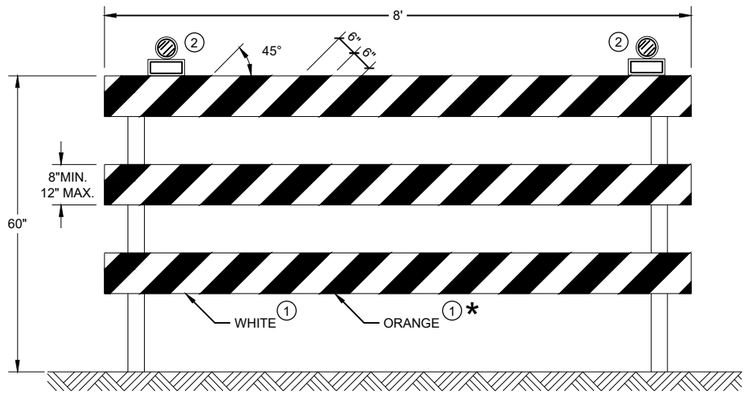
VERTICAL PANEL

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 ENGINEE

FHWA

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SDD 15C11 - 10b

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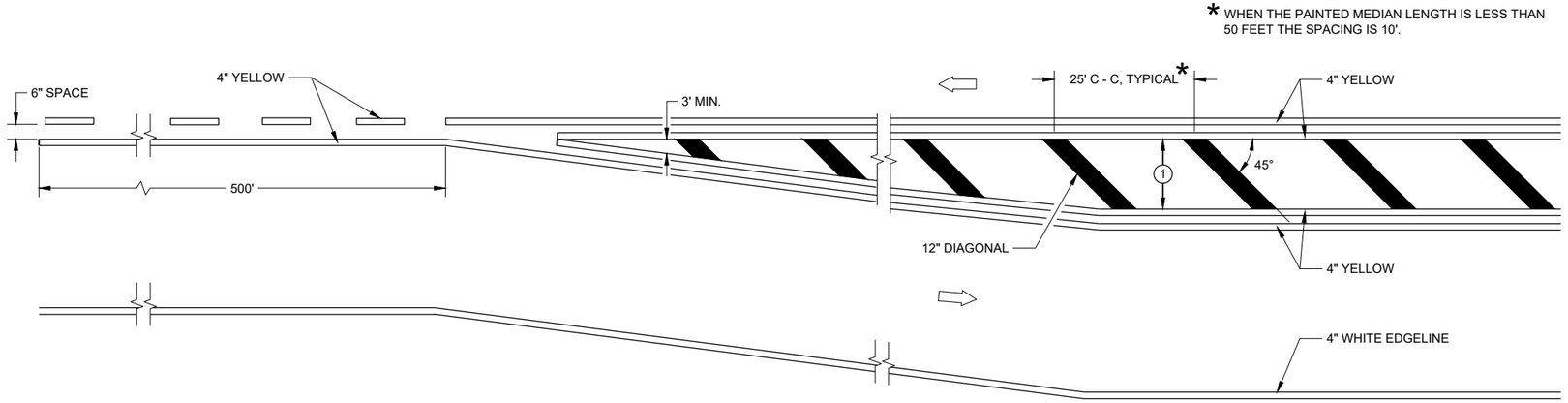
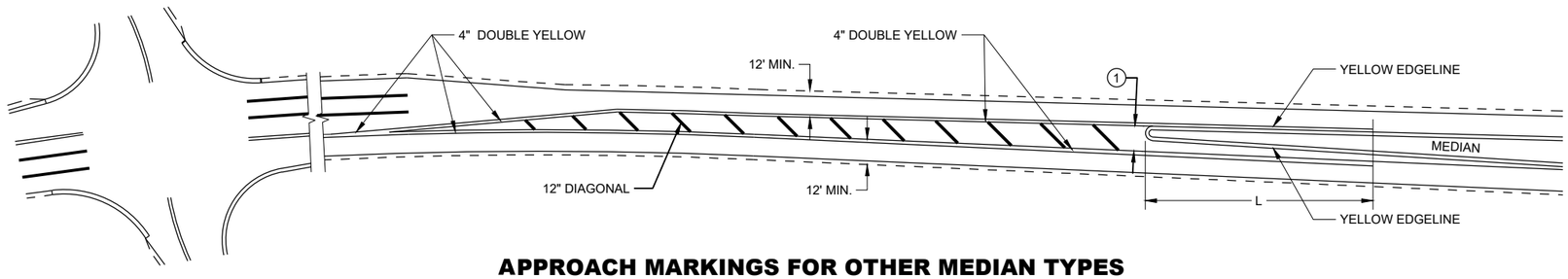


MEDIAN ISLAND DETAIL

GENERAL NOTES

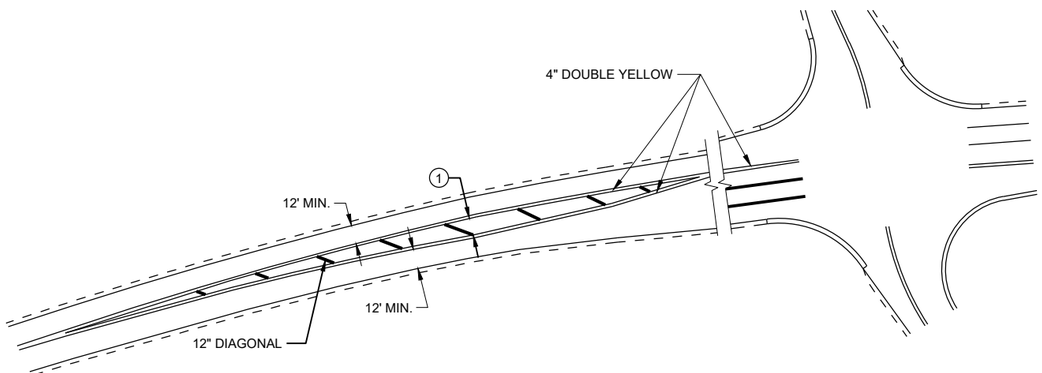
1. DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

DIRECTION OF TRAVEL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES

SPEED LIMIT	L
<35 MPH	5'
35> MPH	50'



NON-APPROACH MARKINGS

6

SDD 15C18 - 07a

MEDIAN ISLAND PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MAF ENGINEER
FHWA

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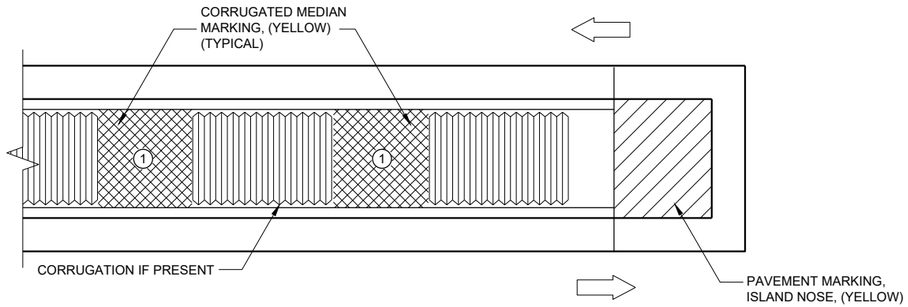
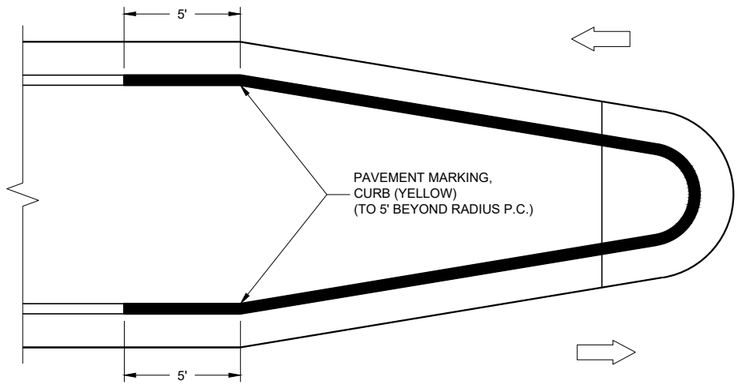
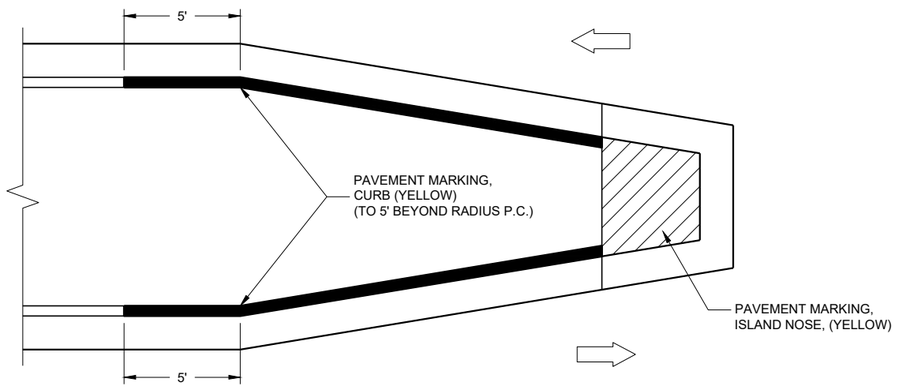


MEDIAN ISLAND WITH SQUARE BLUNT NOSE



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

November 2022
DATE

/S/ Jeannie Silver
STATE SIGNING AND MAF ENGINEER

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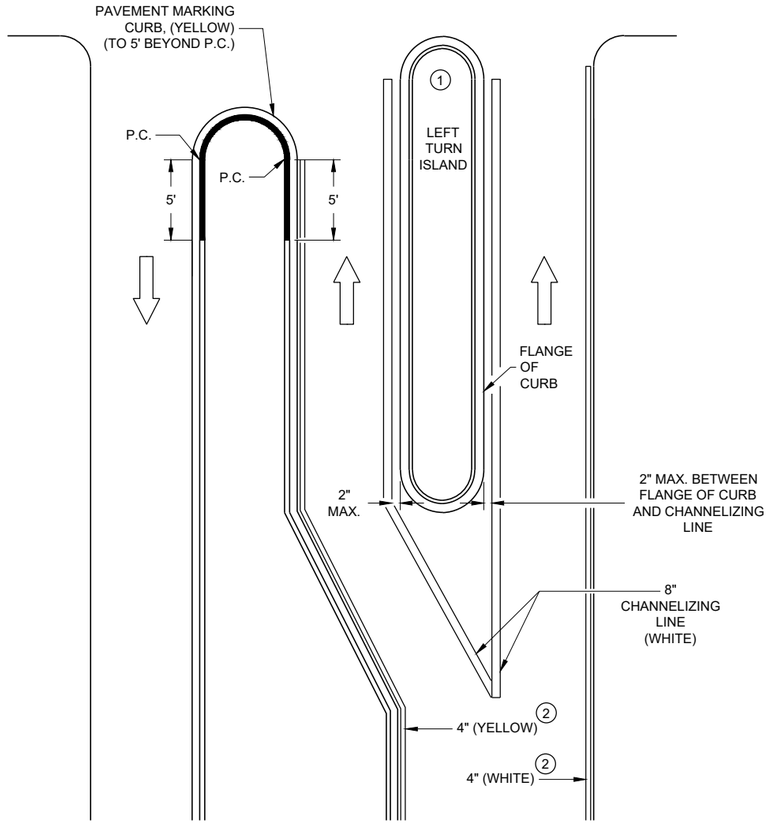
SDD15C18 - 07b

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



LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

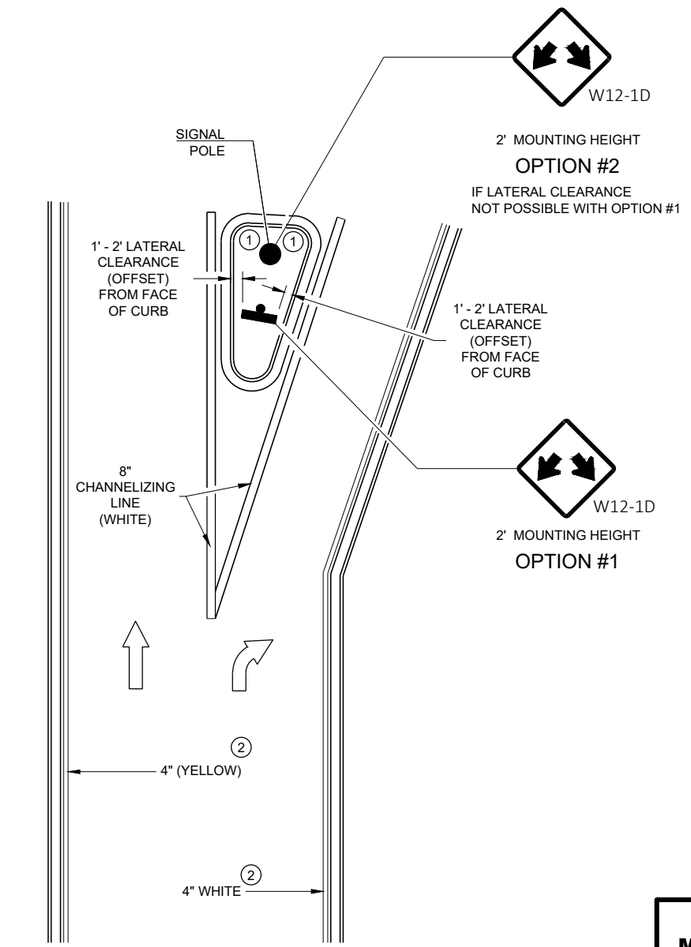
APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

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

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November 2022
DATE

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STATE SIGNING AND MAF ENGINEER

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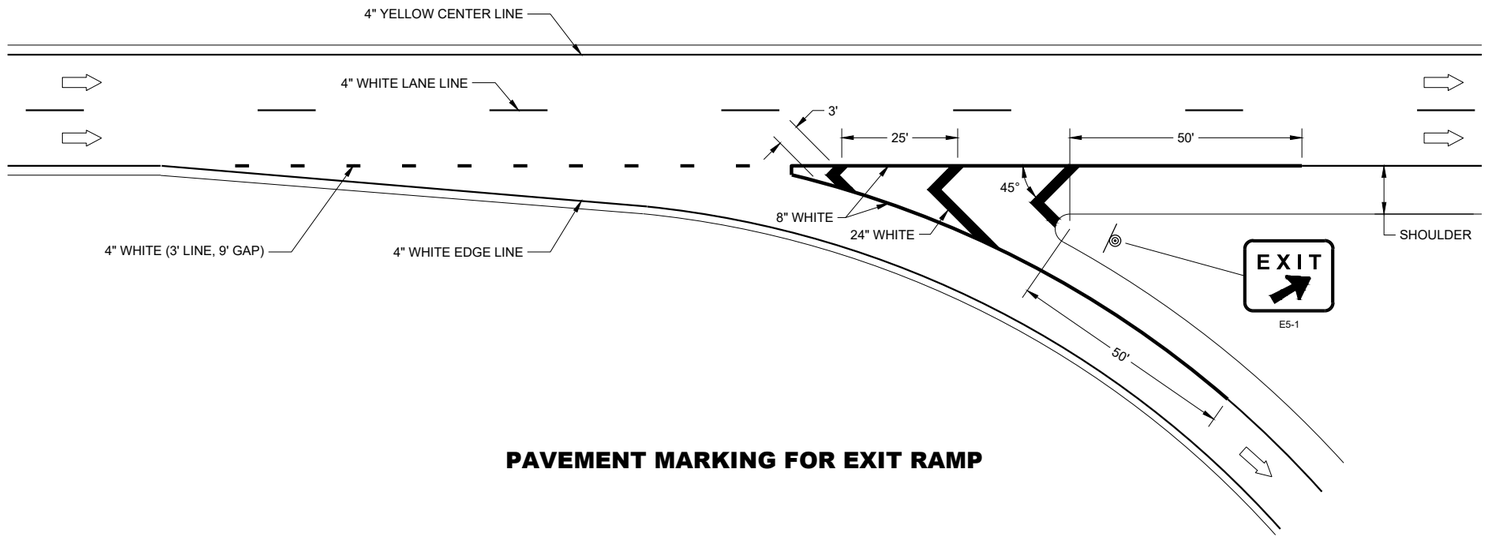
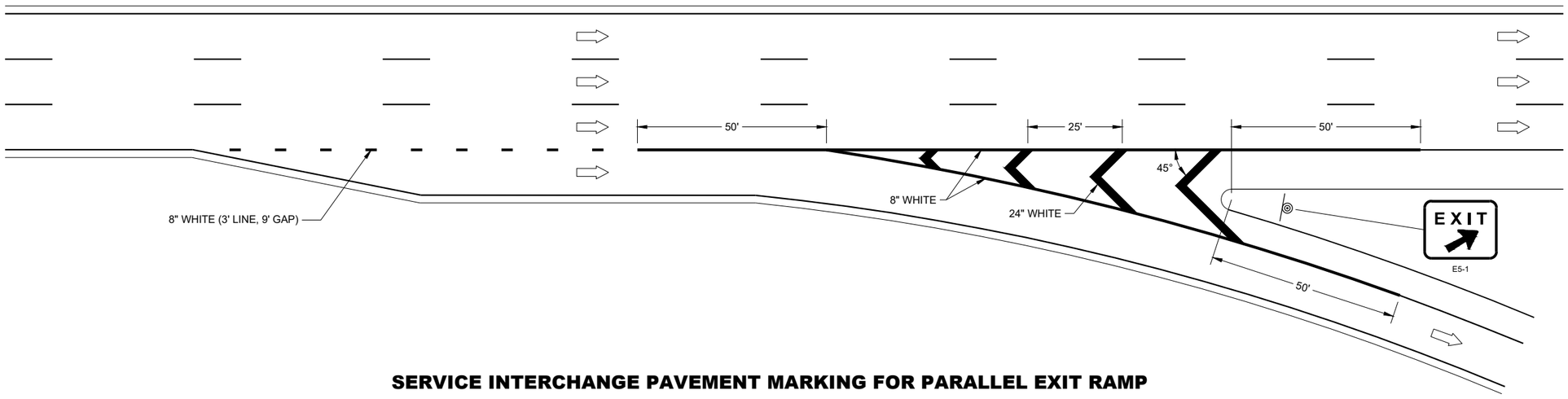


PAVEMENT MARKING FOR EXIT RAMP



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT RAMP

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAVEL

6

SDD 15C31 - 04a

PAVEMENT MARKING, EXIT RAMP AND PARALLEL EXIT RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

SDD 15C31 - 04a

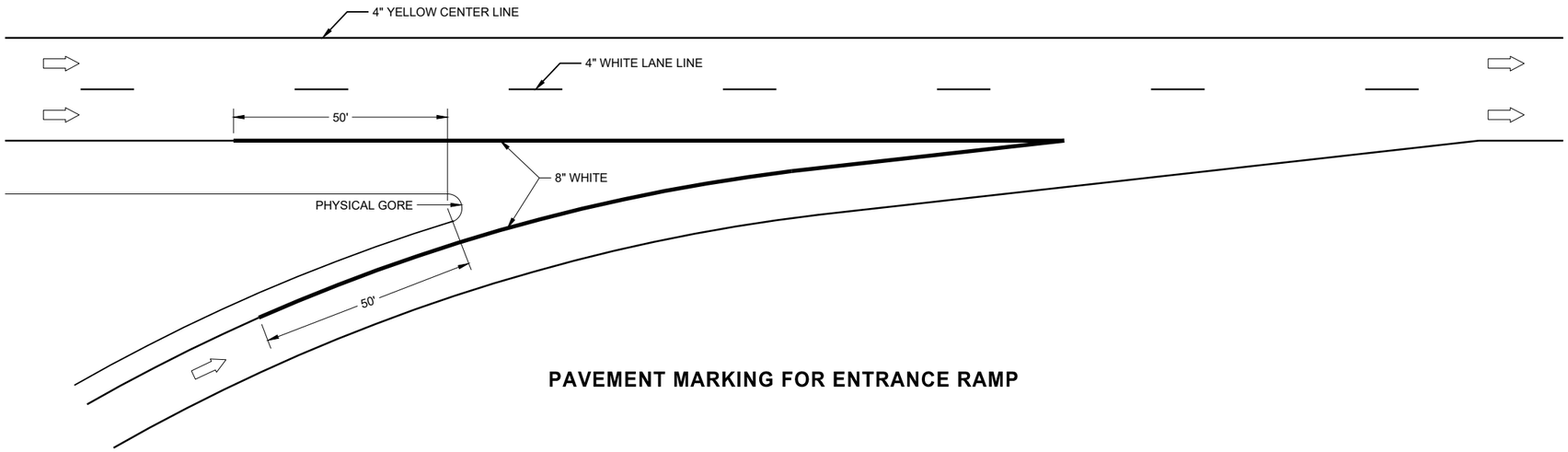
GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

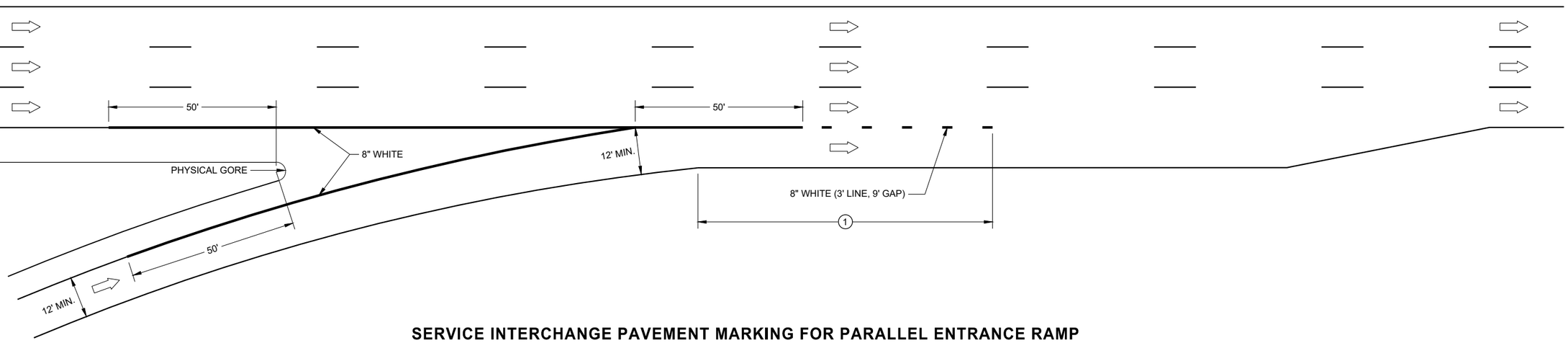
(1) ½ LENGTH OF FULL WIDTH ACCELERATION LANE.

LEGEND

DIRECTION OF TRAVEL



PAVEMENT MARKING FOR ENTRANCE RAMP



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE RAMP

6

6

SDD 14C31 - 04c

SDD 14C31 - 04c

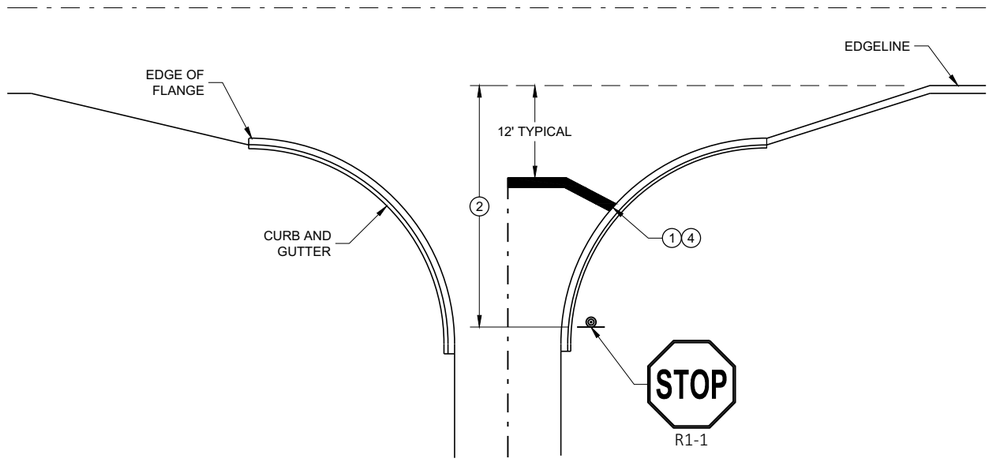
PAVEMENT MARKING, ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

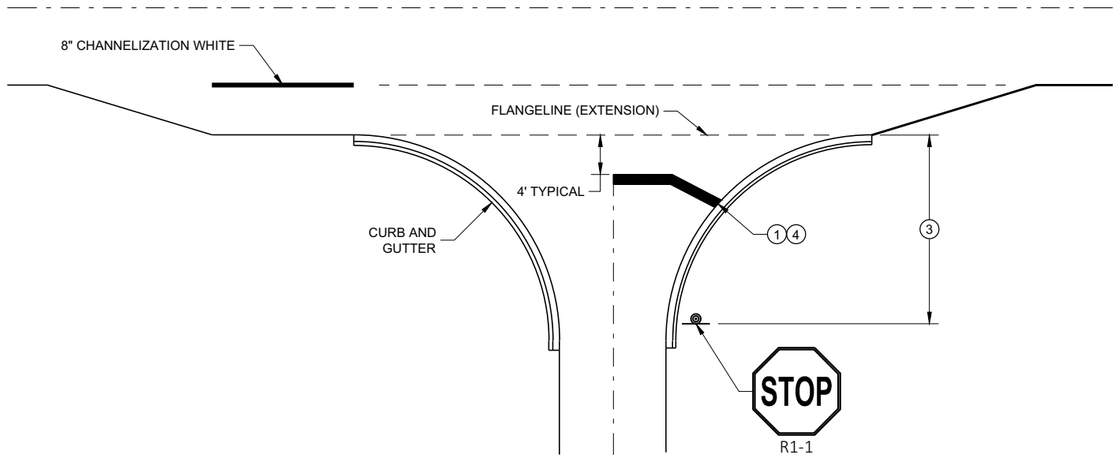
GENERAL NOTES

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

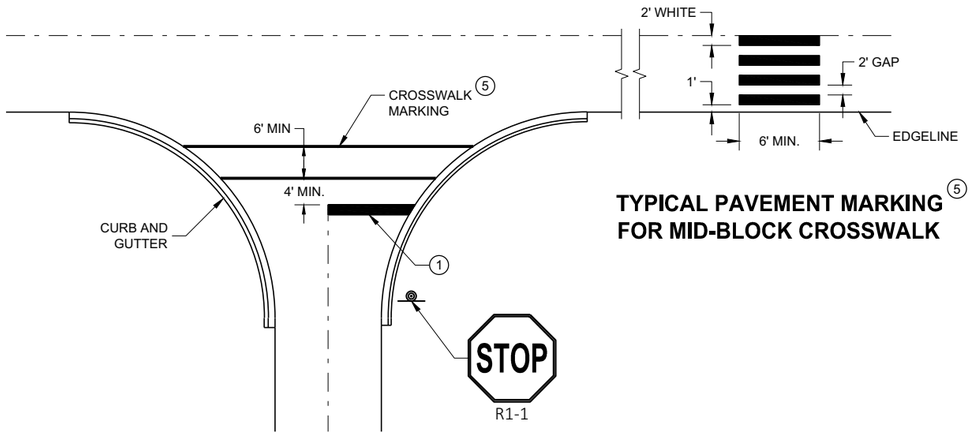
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE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

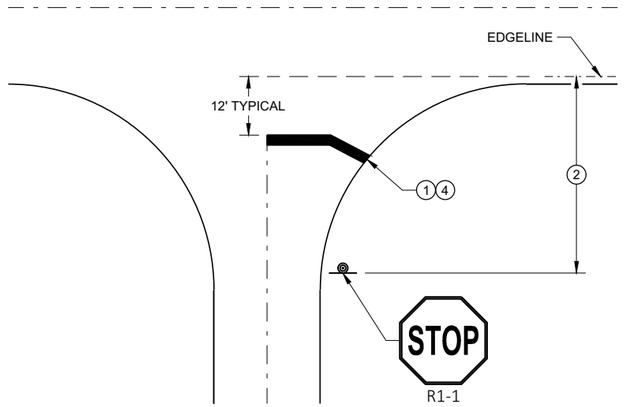


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



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

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SDD 15C33 - 04

6

SDD 15C33 - 04

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

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

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

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

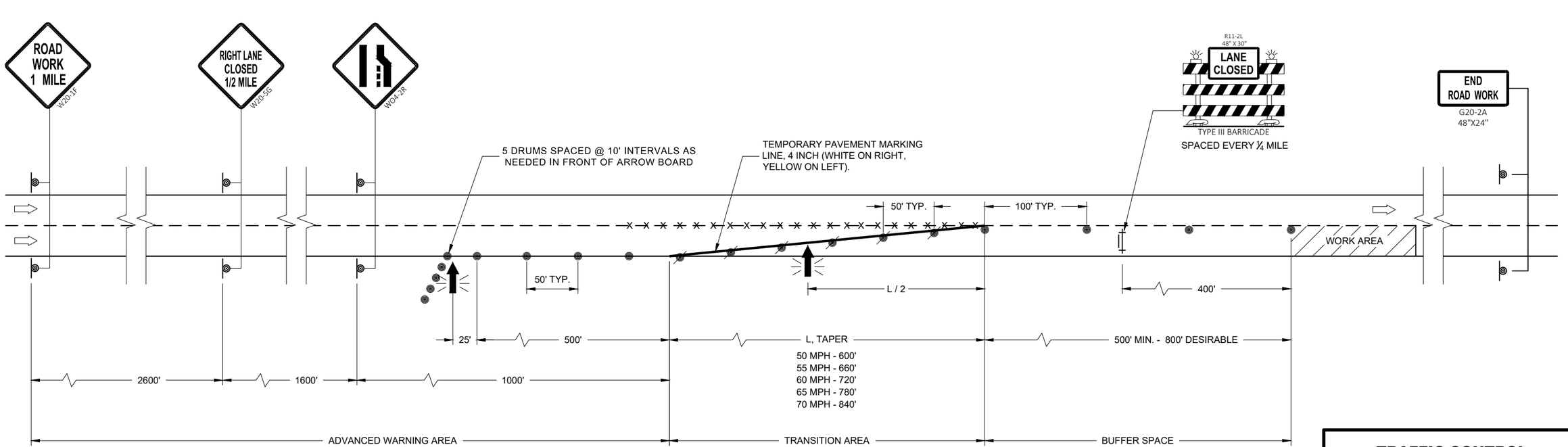
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD



TRAFFIC CONTROL LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15D12 - 10a

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SDD 15D12 - 10a

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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 SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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.

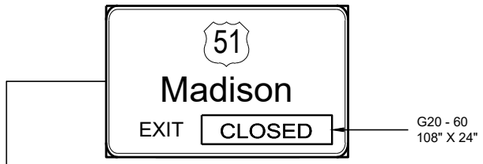
PLACE TEMPORARY PAVEMENT MARKING LINE IF RAMP CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROP OFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN WORK IS NOT IN PROGRESS.

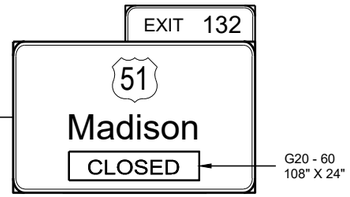
WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12 - HOUR DURATION.

(1) W20 - 1A AND G20 - 2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

(2) PLACE "RAMP CLOSED BEGINNING" SIGN OR PCMS 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



OR



PLACE SIGN G20 - 60 OVER MILEAGE ON EXISTING E1 - 1A SIGN

COVER ARROW ON EXISTING E4 - 1 SIGN (COVERING SIGNS TYPE I)

G20 - 61
120 ' X 30"

OR

PCMS MESSAGING

FRAME 1	FRAME 2
RAMP TO CLOSE	XXXDAY XX XX XX

TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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SDD 15D16 - 05

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.

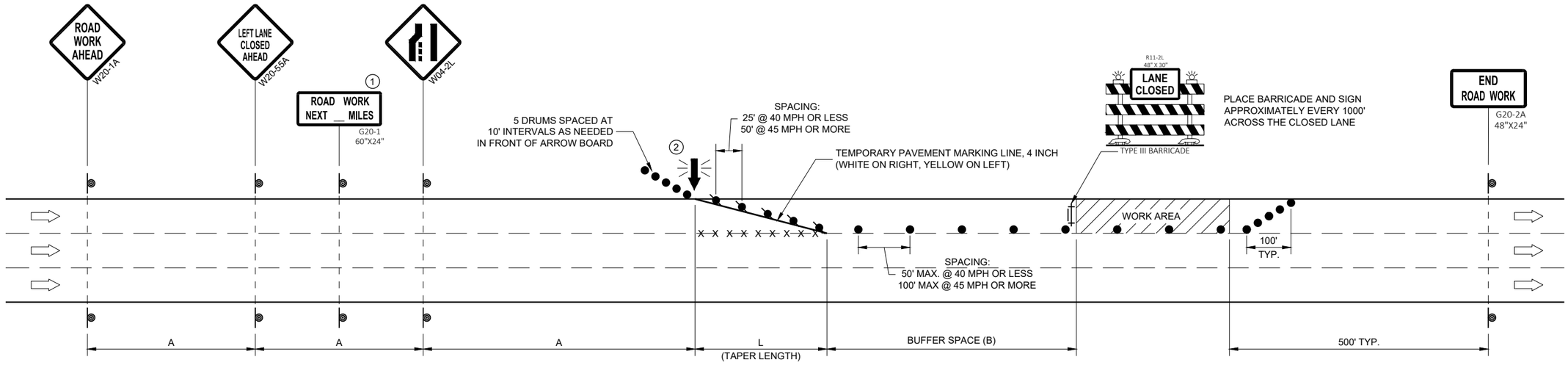
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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
February 2022
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

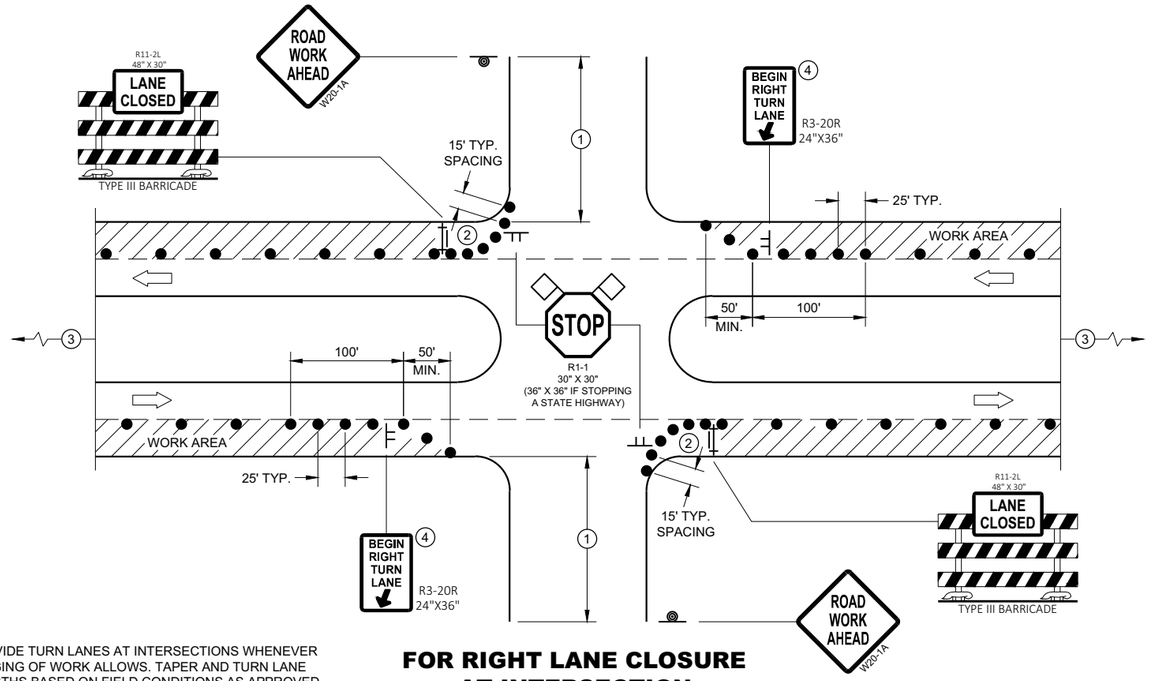
FHWA

6

SDD 15D20 - 06a

6

SDD15D20 - 06a



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.

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

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

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

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

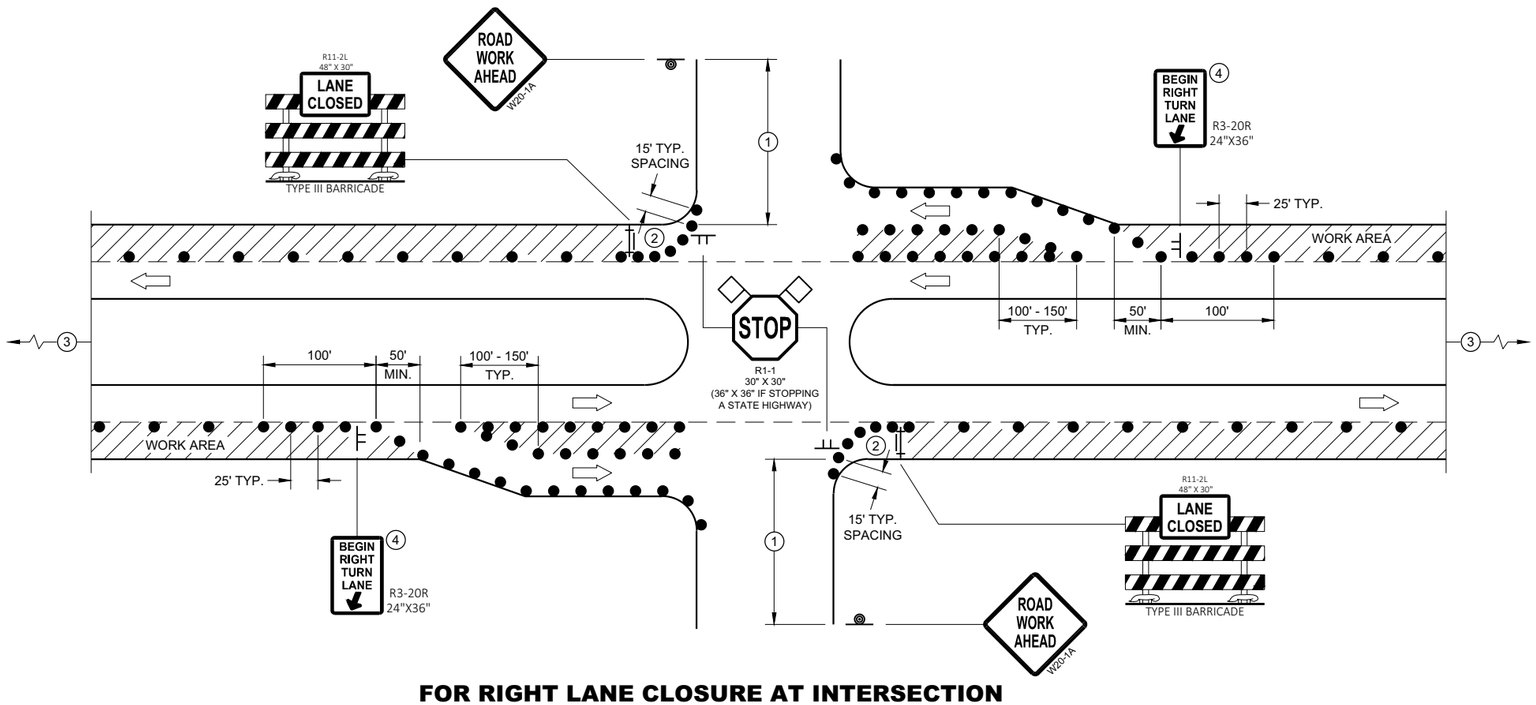
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.

(2) ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.



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

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

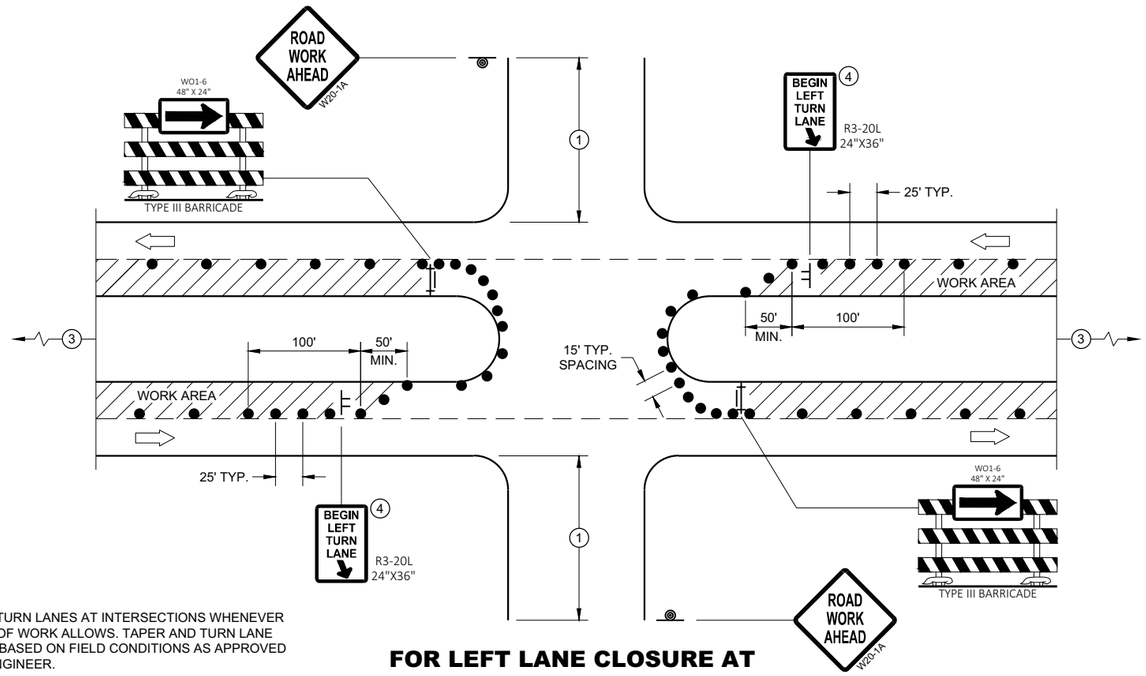
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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.

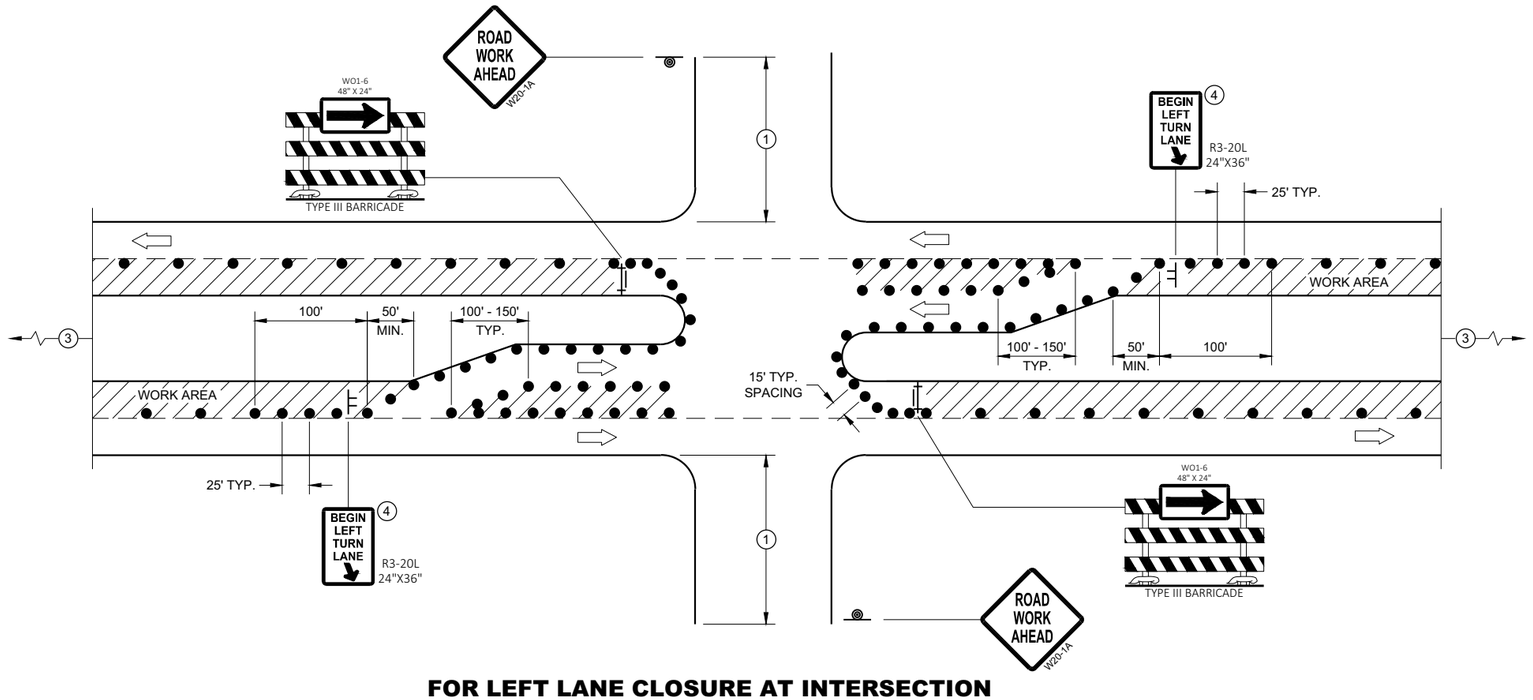
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(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

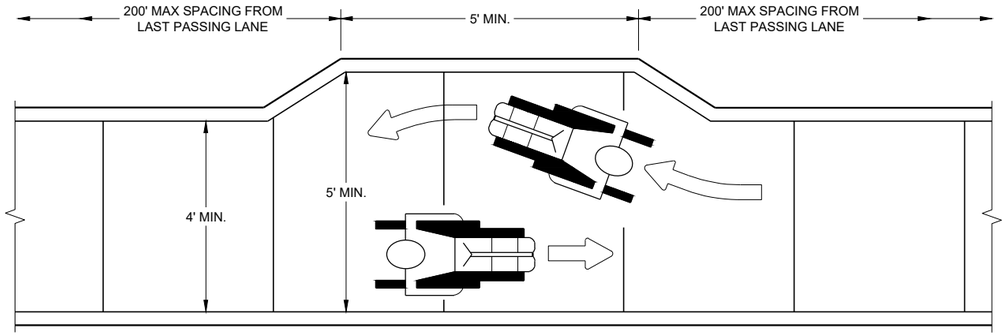
BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

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

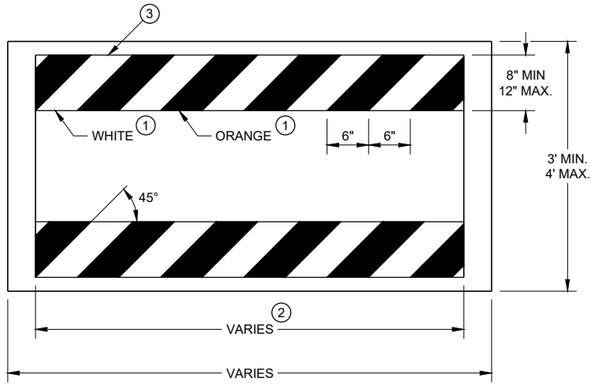
(2) SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

(3) PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

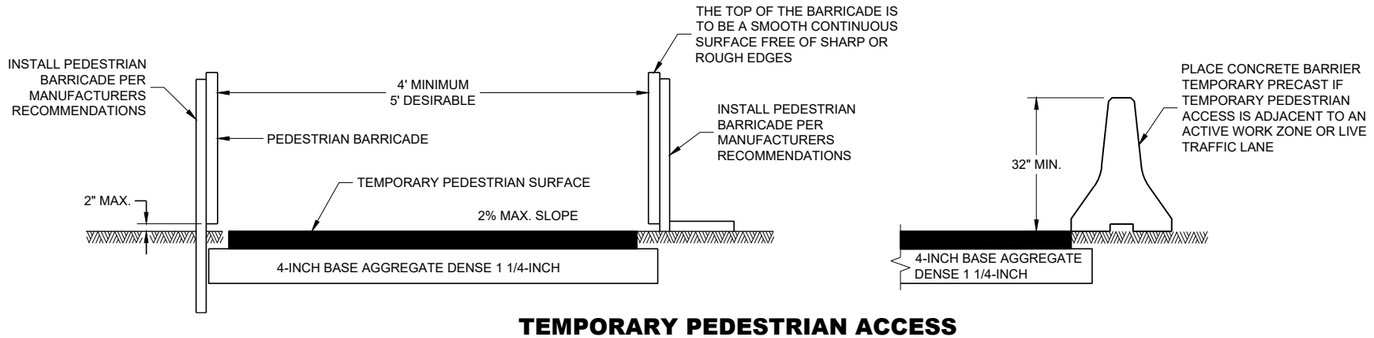
* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.



NARROW SIDEWALK PASSING DETAIL



TEMPORARY PEDESTRIAN BARRICADE*

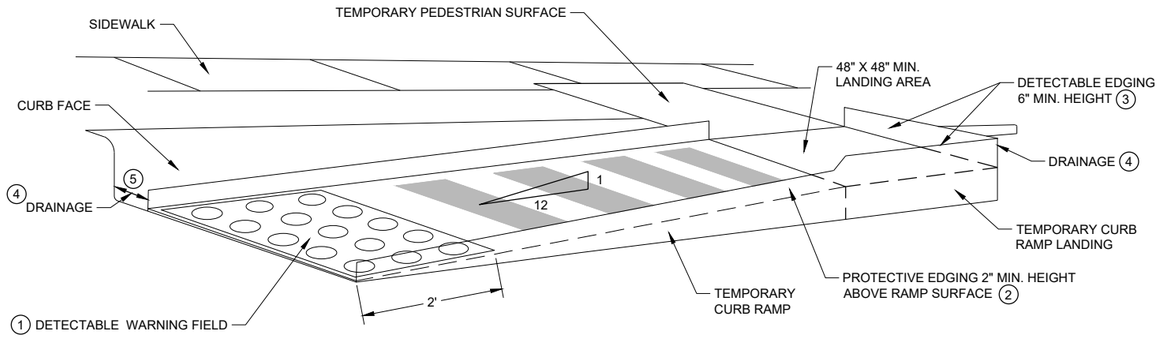


TEMPORARY PEDESTRIAN ACCESS

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

6

SDD 15D30 - 08a



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.

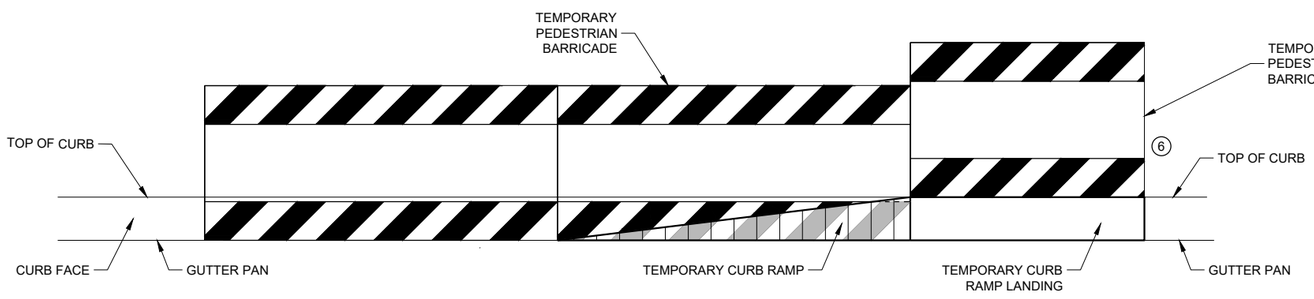
(2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

(3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

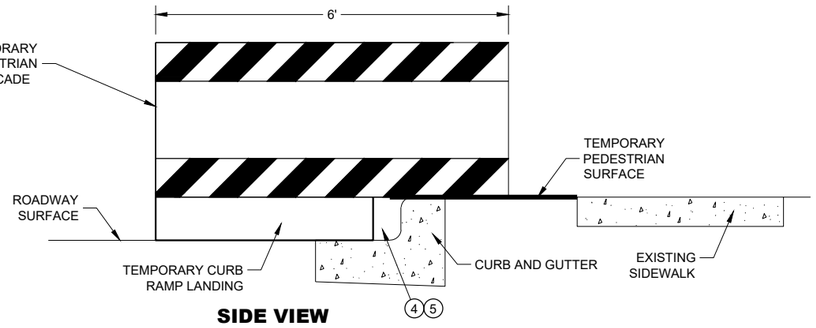
(4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(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

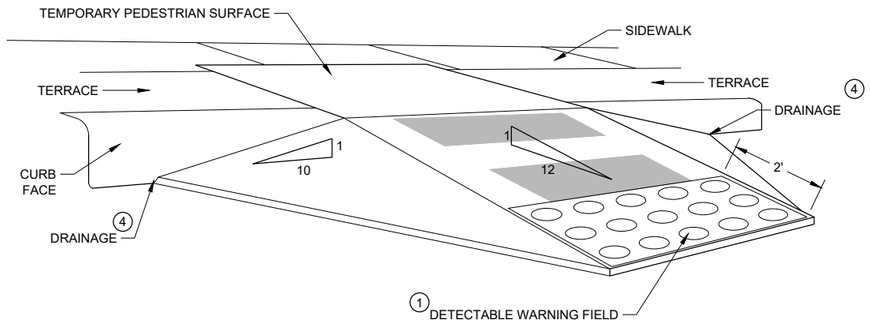
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

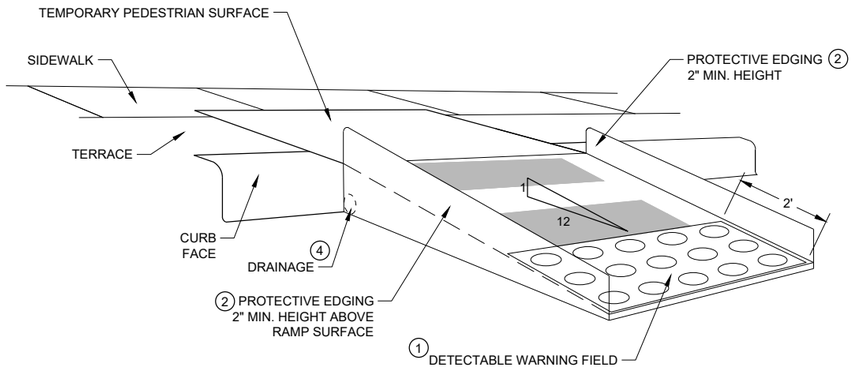
SDD 15D30 - 08b

6

SDD 15D30 - 08b



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.

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- CONCRETE BARRIER TEMPORARY PRECAST

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON ANY "COVERED" OR "DOWNED" SIGNS.

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

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

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

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

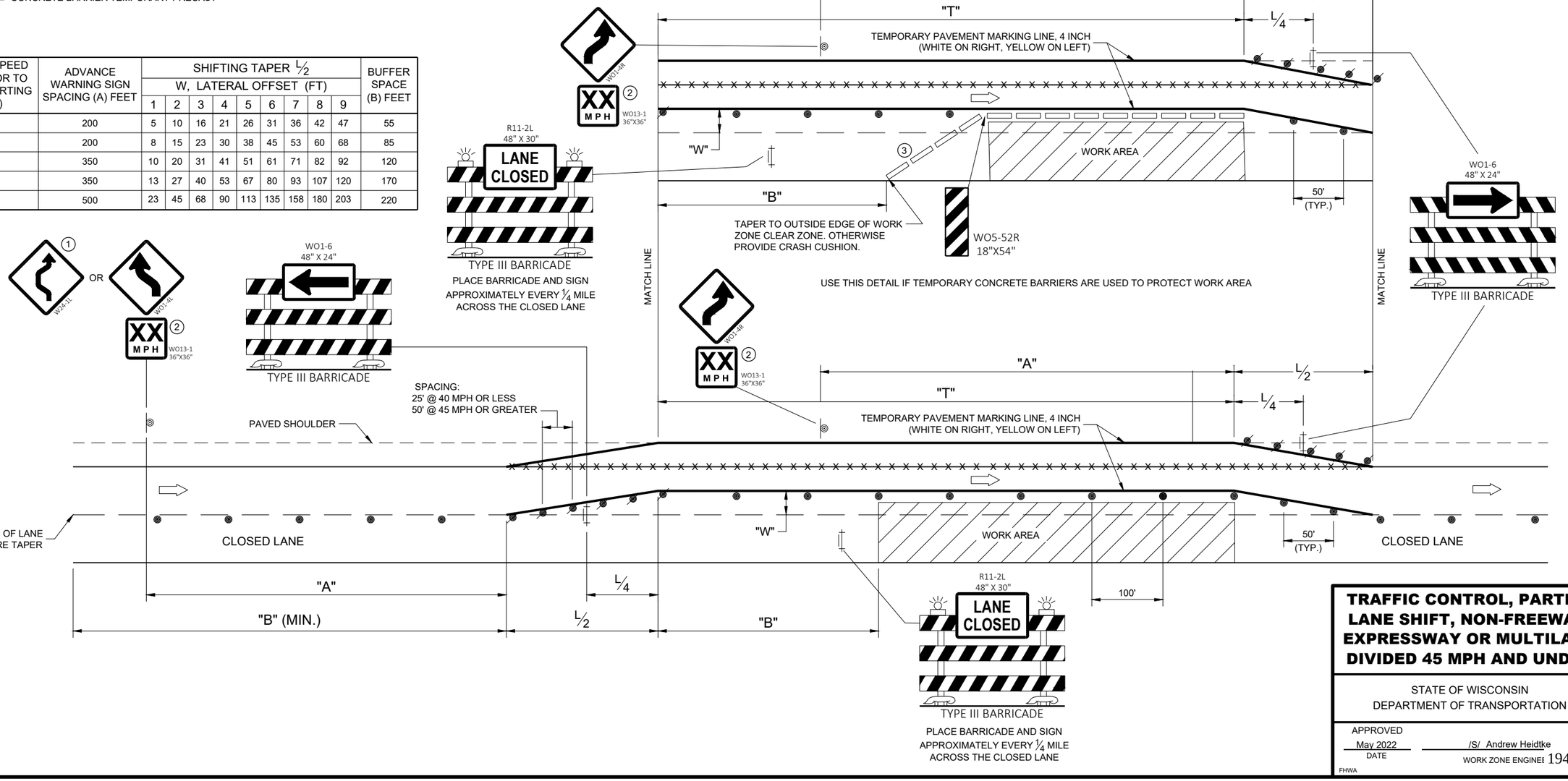
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP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

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

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

(3) BARRIER FLARE RATE: 6:1 @ 40 MPH OR LESS
8:1 @ 45 MPH OR GREATER

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER L/2 W, LATERAL OFFSET (FT)									BUFFER SPACE (B) FEET
		1	2	3	4	5	6	7	8	9	
25	200	5	10	16	21	26	31	36	42	47	55
30	200	8	15	23	30	38	45	53	60	68	85
35	350	10	20	31	41	51	61	71	82	92	120
40	350	13	27	40	53	67	80	93	107	120	170
45	500	23	45	68	90	113	135	158	180	203	220



PLACE BARRICADE AND SIGN APPROXIMATELY EVERY 1/4 MILE ACROSS THE CLOSED LANE

TRAFFIC CONTROL, PARTIAL LANE SHIFT, NON-FREEWAY/ EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15D40 - 04c

SDD 15D40 - 04c

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- CONCRETE BARRIER TEMPORARY PRECAST

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	SHIFTING TAPER L/2 W, LATERAL OFFSET (FT)								
	1	2	3	4	5	6	7	8	9
50	25	50	75	100	125	150	175	200	225
55	28	55	83	110	138	165	193	220	248
60	30	60	90	120	150	180	210	240	270
65	33	65	98	130	163	195	228	260	293
70	35	70	105	140	175	210	245	280	315

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON ANY "COVERED" OR "DOWNED" SIGNS.

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

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

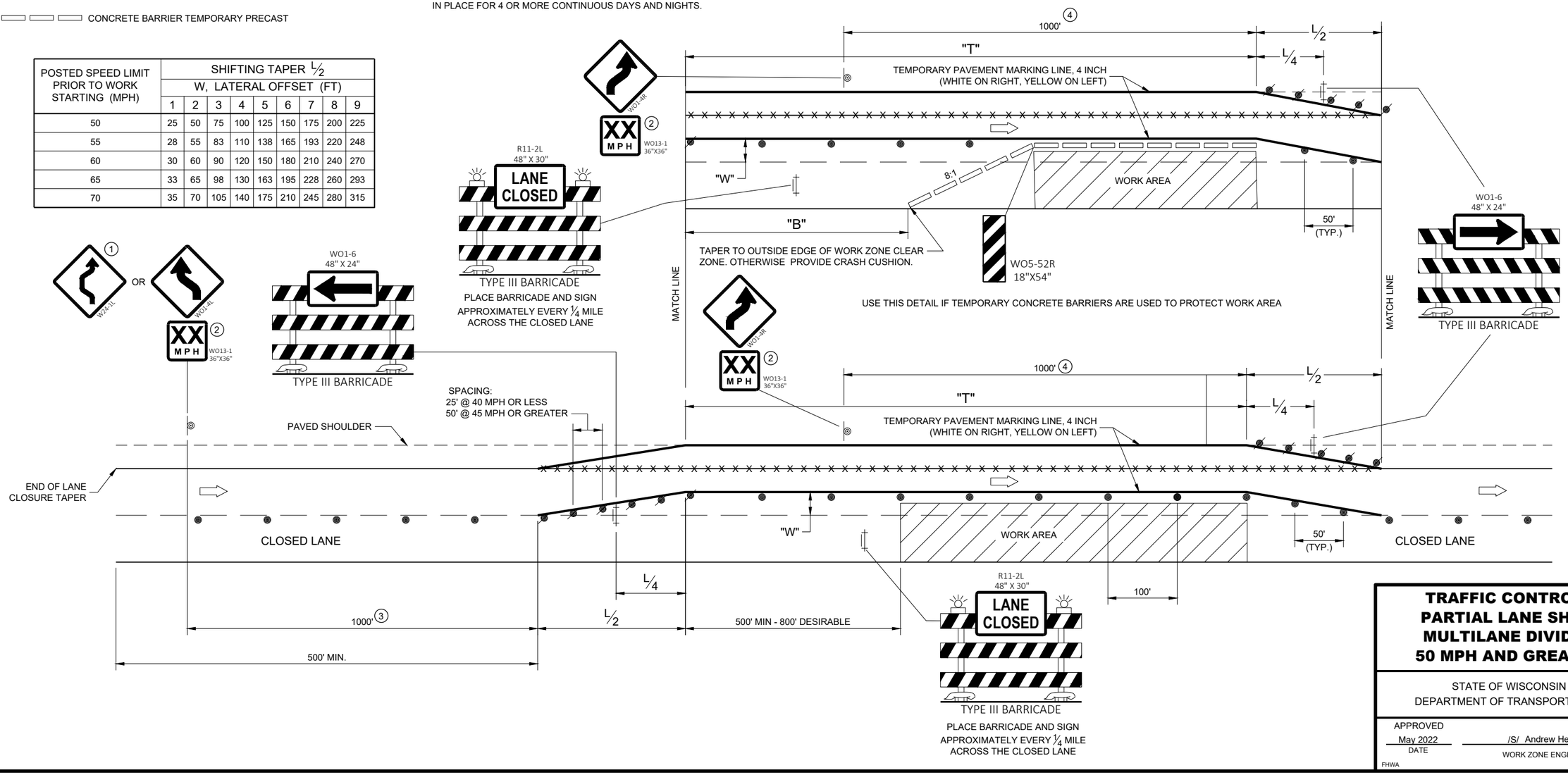
REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

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

1. USE ONLY WHEN T<600', OMIT WO1-4R.
2. IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.
3. IF THE BEGINNING OF LANE SHIFT TAPER IS 1200 FEET OR LESS FROM END OF LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE LANE CLOSURE TAPER.
4. IF THE BEGINNING OF THE SECOND LANE SHIFT TAPER IS 1200 FEET OR LESS FROM END OF THE FIRST LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE FIRST LANE CLOSURE TAPER.



TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

SDD 15D40 - 04d

SDD 15D40 - 04d

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- DELINEATOR, FLEXIBLE TUBULAR MARKER
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- CONSTRUCTION TRAFFIC
- WORK AREA
- CC — CRASH CUSHION TEMPORARY
- EXISTING CONCRETE BARRIER TEMPORARY PRECAST

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"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.

WORK ZONE INGRESS/EGRESS LOCATIONS SHALL BE APPROVED BY THE ENGINEER. LOCATIONS FOR WORK ZONE ACCESS TO/FROM THE FREEWAY SHALL NOT BE USED FOR INGRESS AND EGRESS AT THE SAME TIME.

THIS ACCESS DETAIL IS TYPICAL FOR LEFT LANE ACCESS, FOR RIGHT LANE ACCESS, REVERSE THE TRAFFIC CONTROL

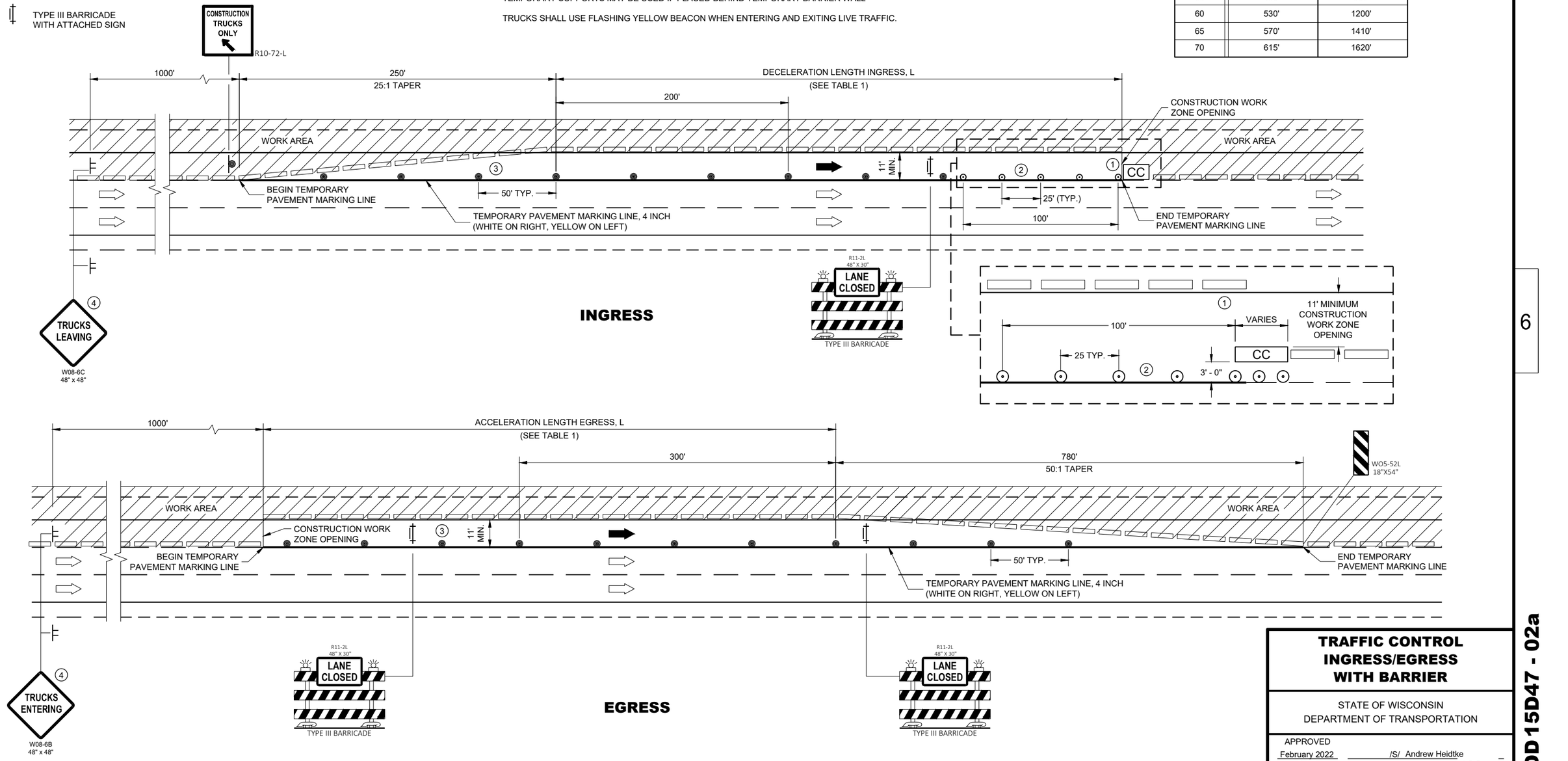
TEMPORARY SUPPORTS MAY BE USED IF PLACED BEHIND TEMPORARY BARRIER WALL

TRUCKS SHALL USE FLASHING YELLOW BEACON WHEN ENTERING AND EXITING LIVE TRAFFIC.

1. WIDEN BARRIER AS NECESSARY TO ACCOMMODATE CRASH CUSHION WIDTH.
2. USE TUBULAR MARKERS TO HELP DELINEATE TEMPORARY CRASH CUSHION.
3. REMOVE DRUMS / BARRICADES WHEN INGRESS / EGRESS ARE IN USE.
4. REMOVE OR COVER WHEN ACCESS IS NOT NEEDED.

TABLE 1

S (MPH)	INGRESS, L	EGRESS, L
50	435'	720'
55	480'	960'
60	530'	1200'
65	570'	1410'
70	615'	1620'



TRAFFIC CONTROL INGRESS/EGRESS WITH BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

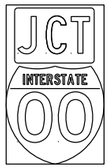
6

SDD 15D47 - 02a

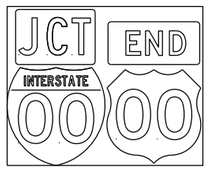
6

SDD 15D47 - 02a

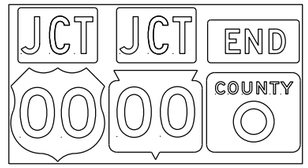
TYPICAL ASSEMBLIES



J1-1



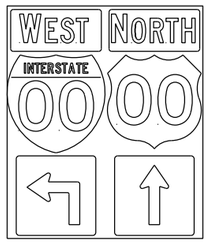
J1-2



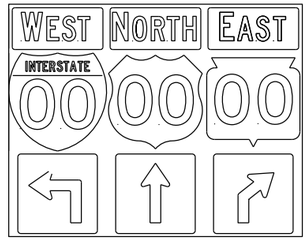
J1-3

JR1-1

J2-1

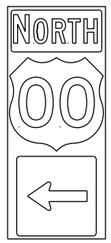


J2-2

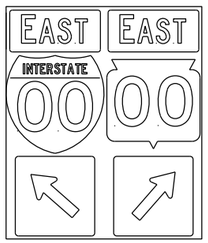


J2-3

JV
(Typical Vertical J-Assembly
See Note 10 and 11)



J3-1



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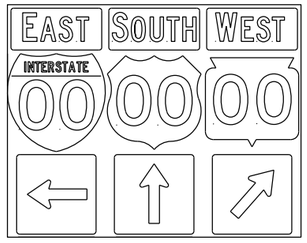
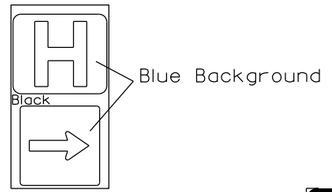
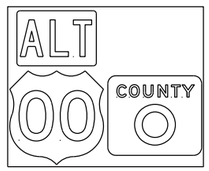


J3-3

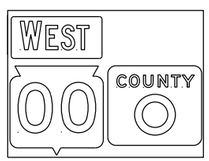


JH-1

J4-1

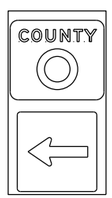


J4-2



J4-2

J12-1



J13-1

J32-1

J33-1

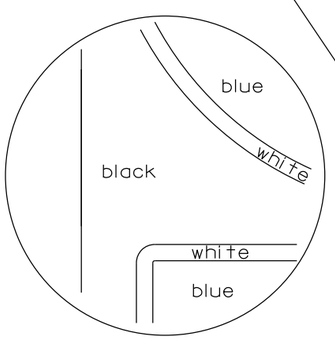
J22-1

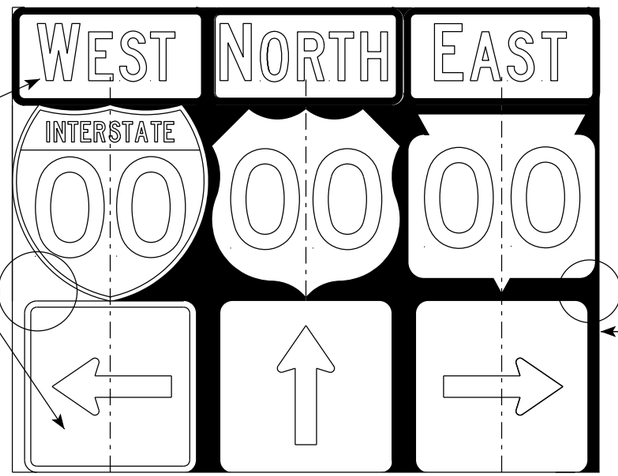
J23-1

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

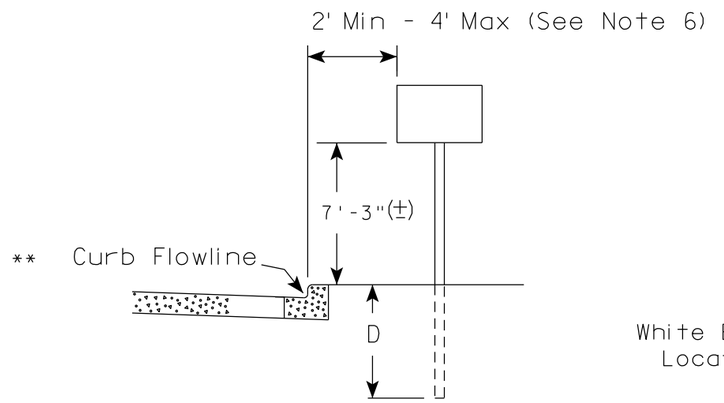
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/21 PLATE NO. A2-1S.9

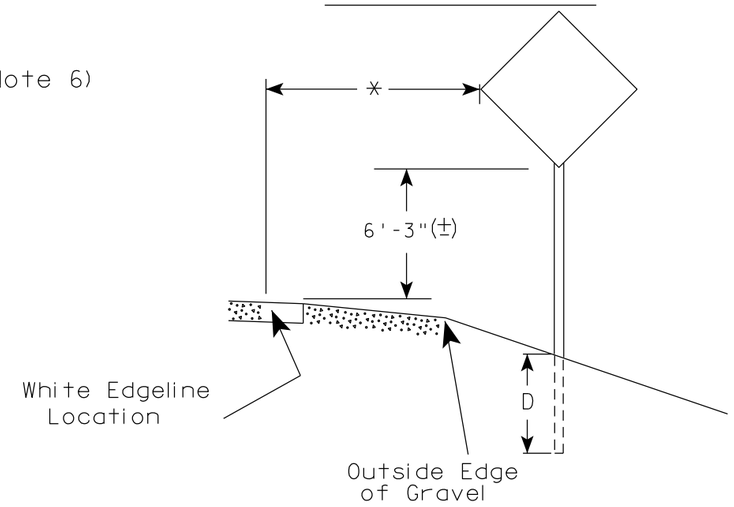
PROJECT NO:

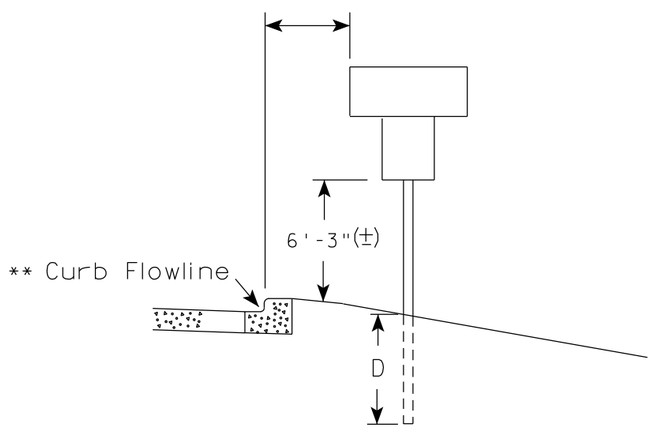
SHEET NO: 197 E

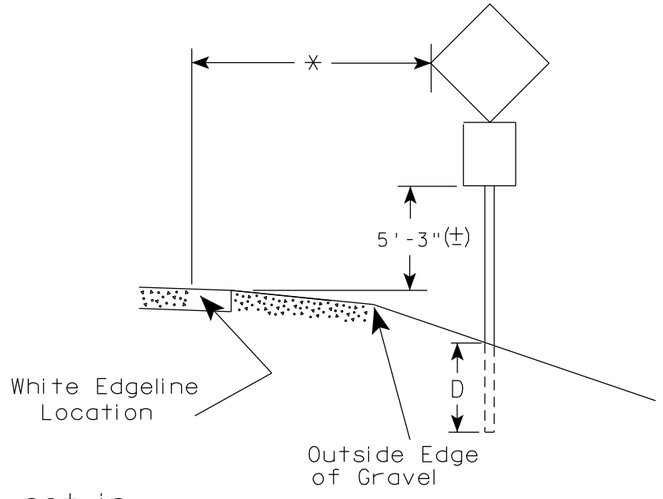
URBAN AREA



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.

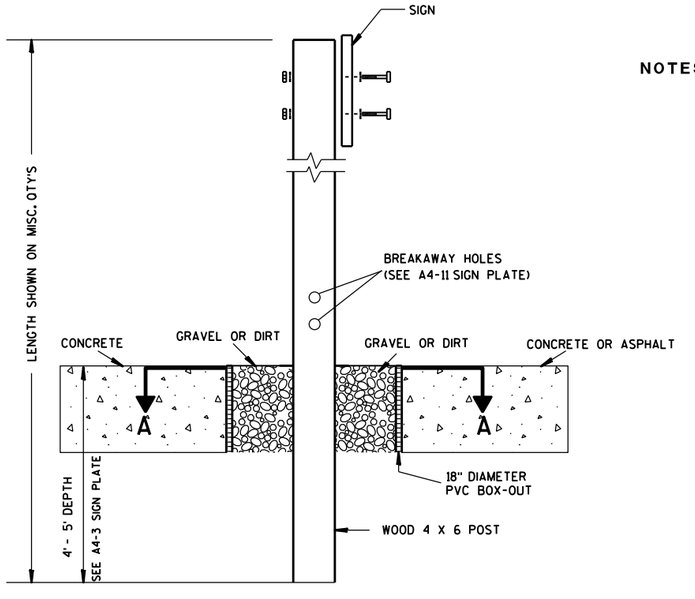
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

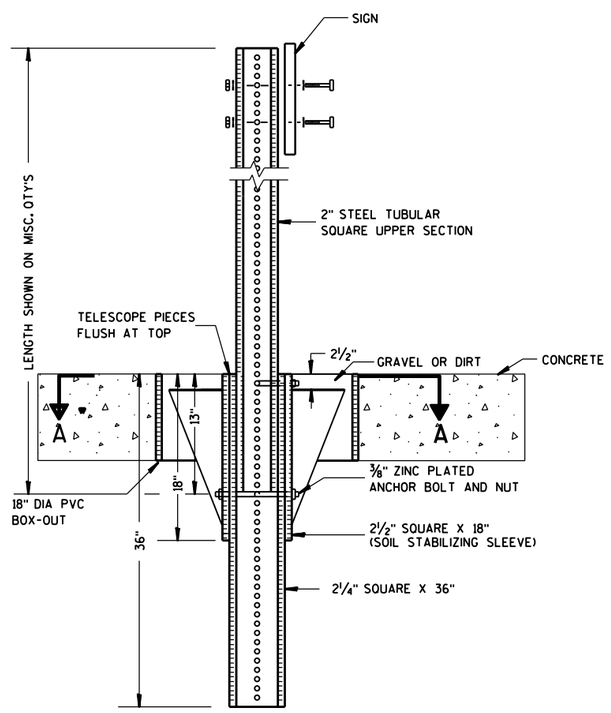
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 198	E



ELEVATION VIEW

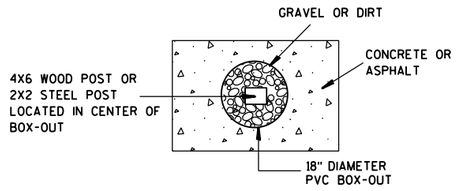
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

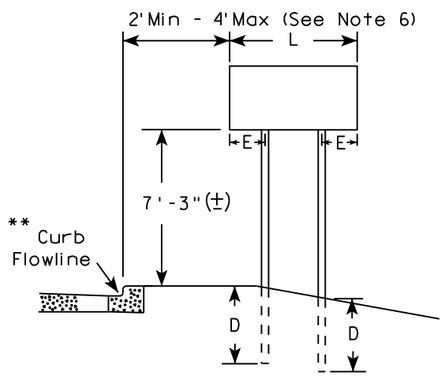
APPROVED Matthew R Rauch
for State Traffic Engineer

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

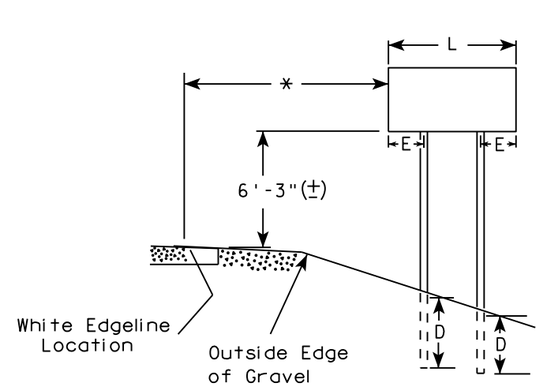
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

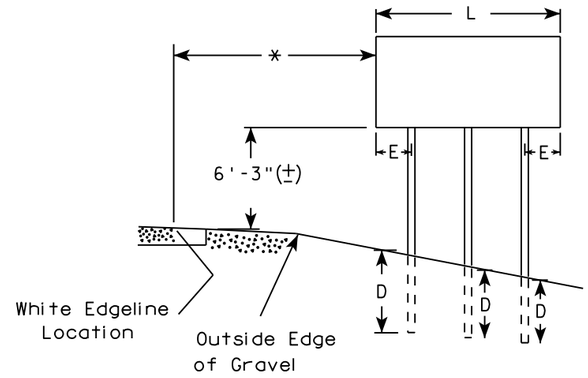
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

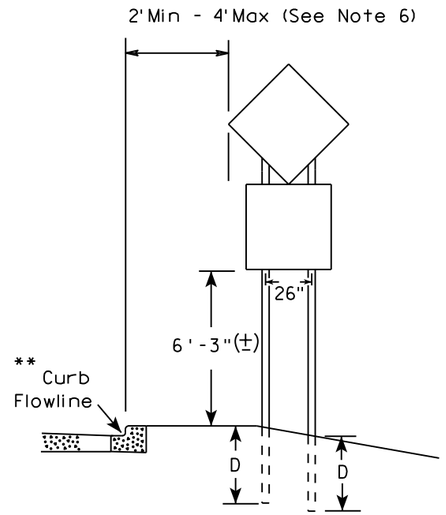
URBAN AREA



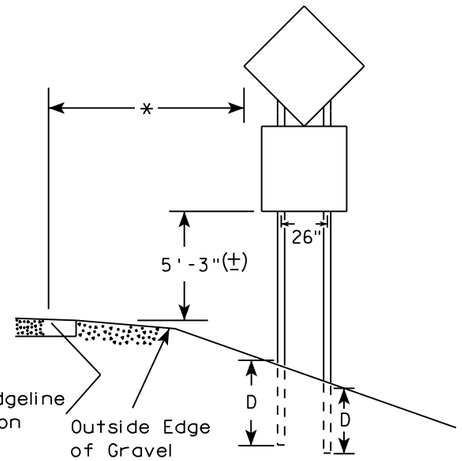
RURAL AREA (See Note 3)







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'

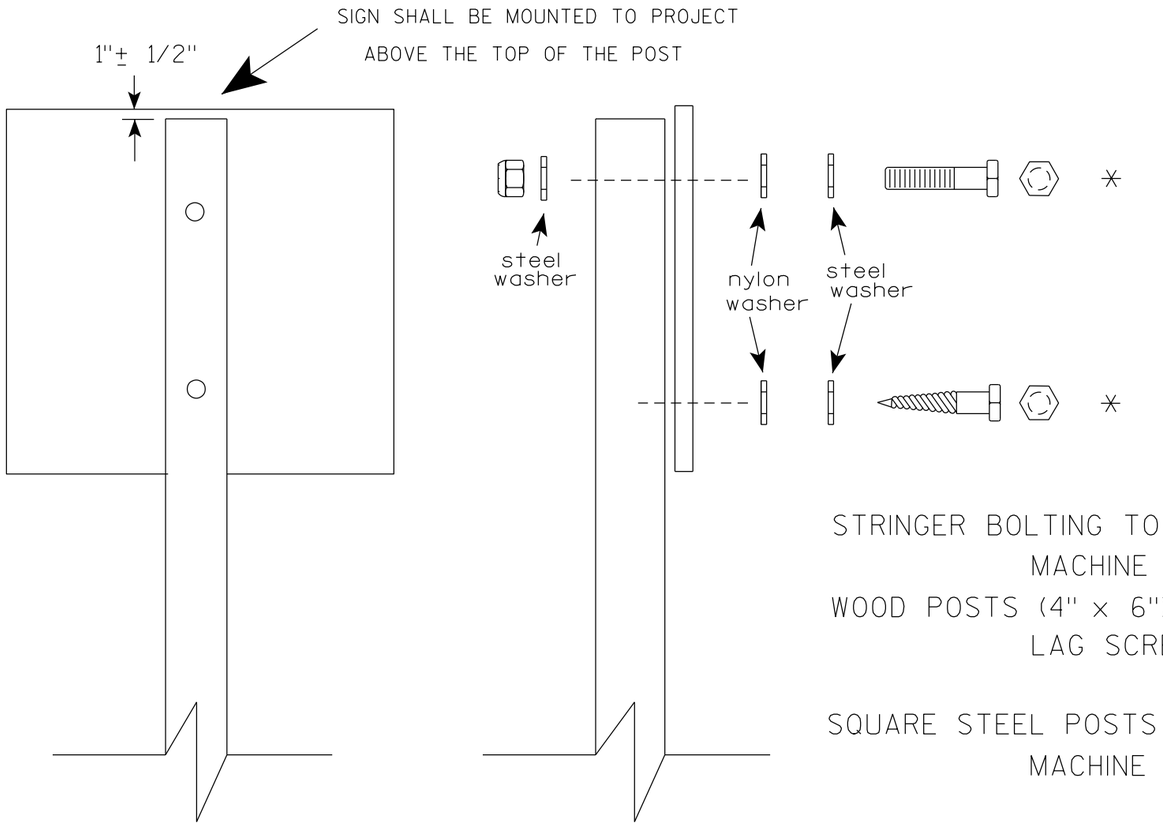
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 200	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

PROJECT NO:

SHEET NO: 201 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 01-APRIL-2020 PLOT BY : dotc4c

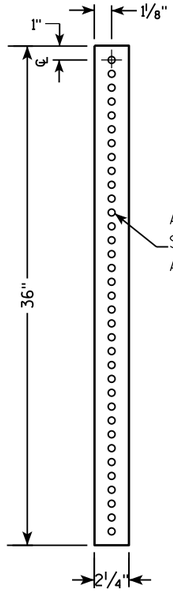
WISDOT/CADDS SHEET 42

7

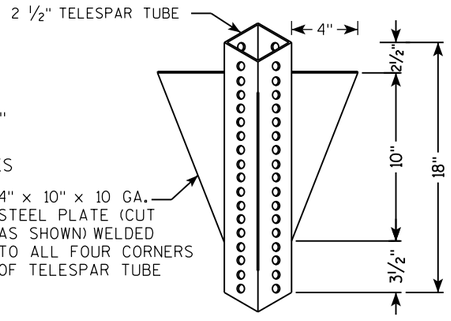
7

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

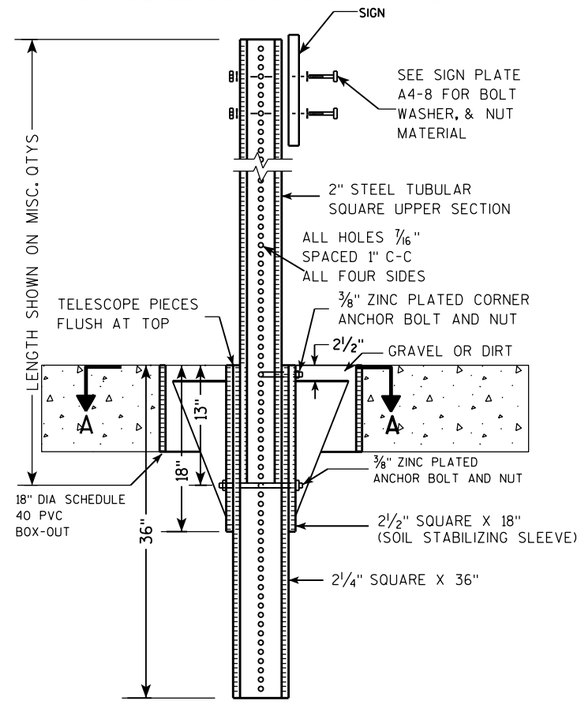
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



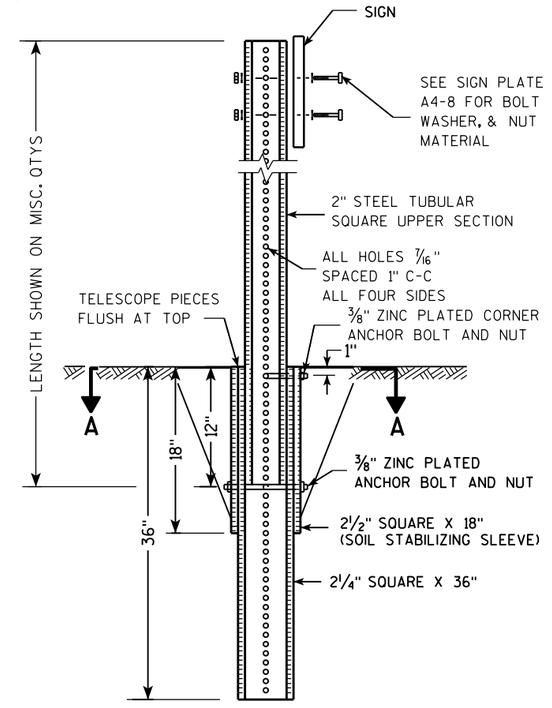
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

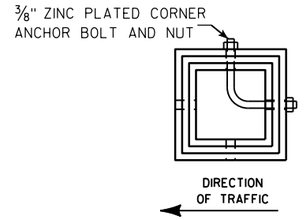


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

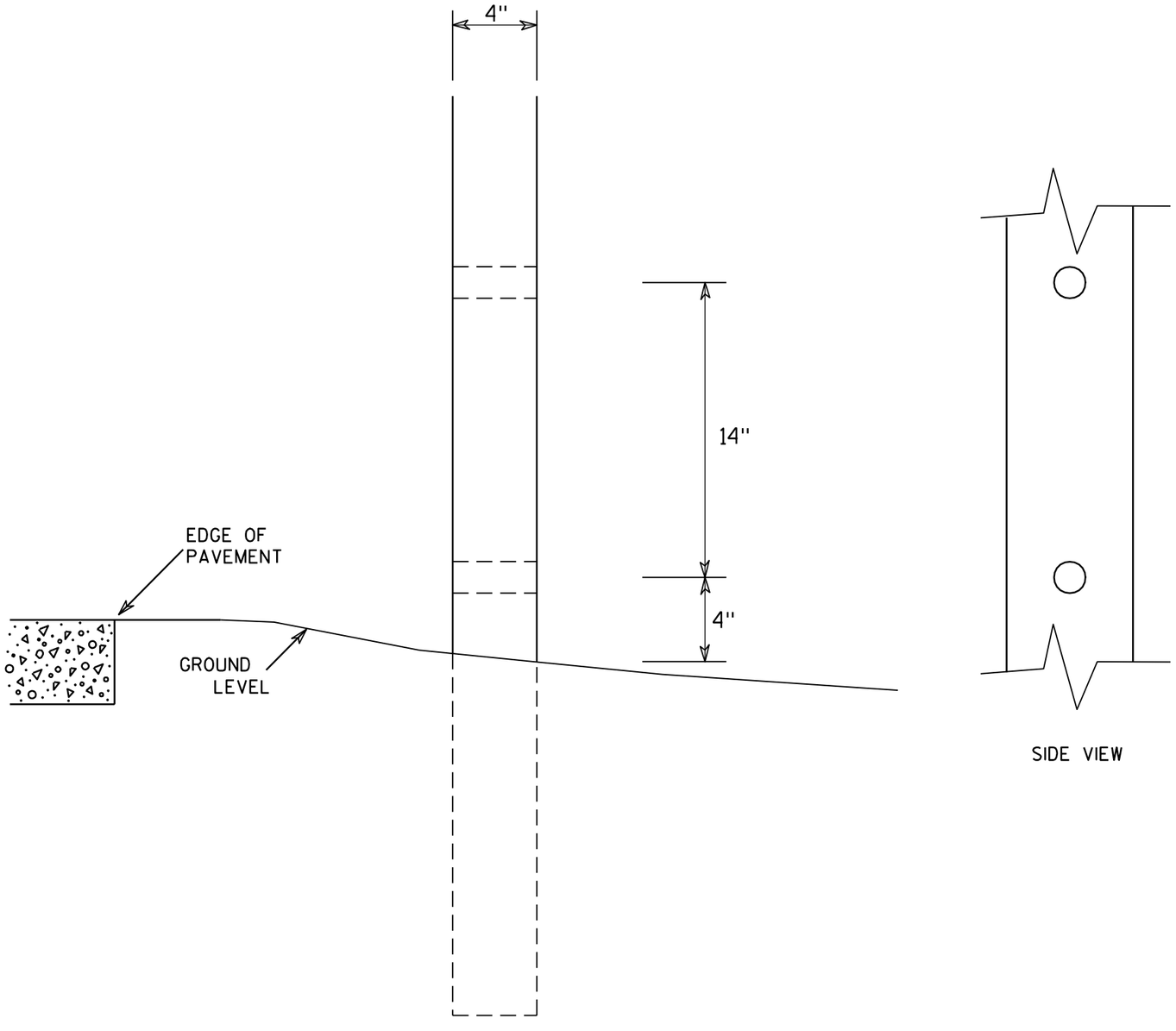
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 202 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

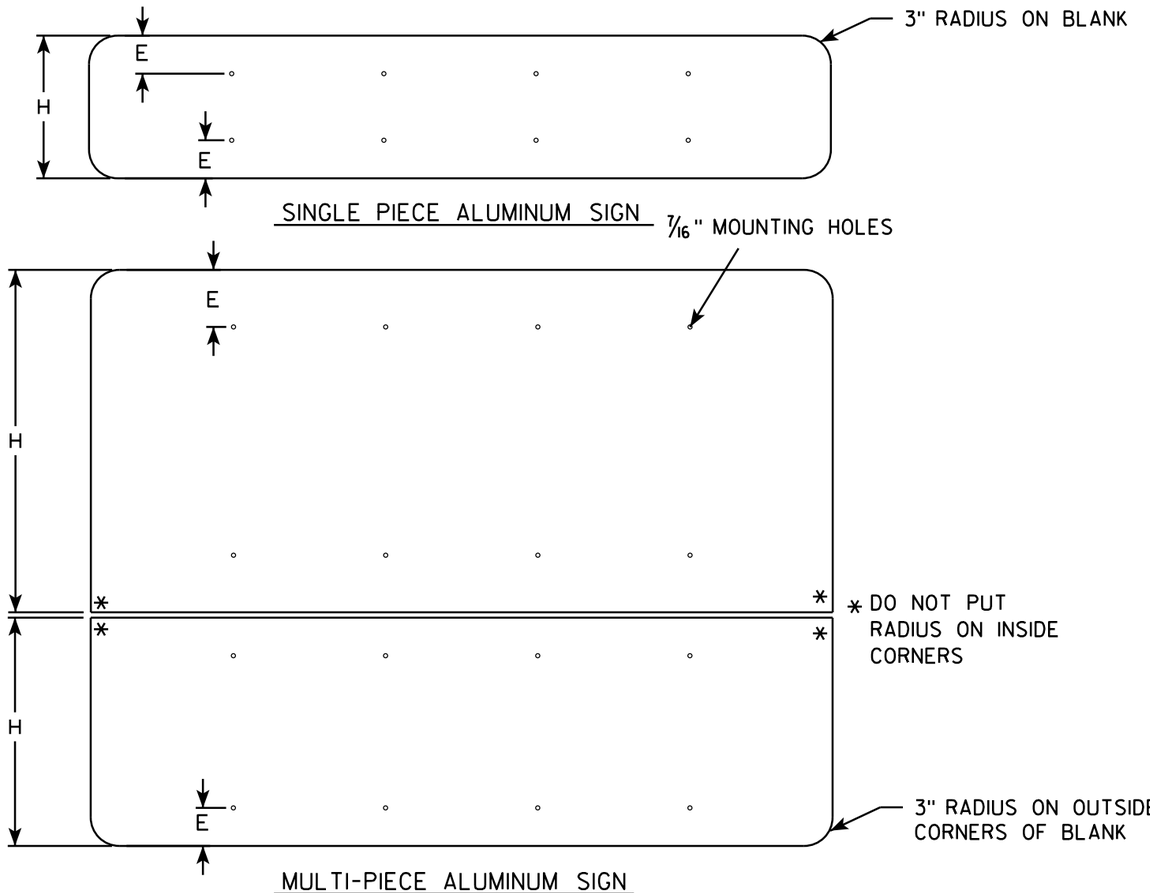
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

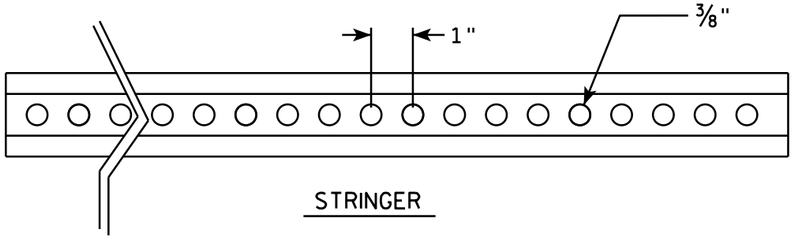
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 203	E



GENERAL NOTES

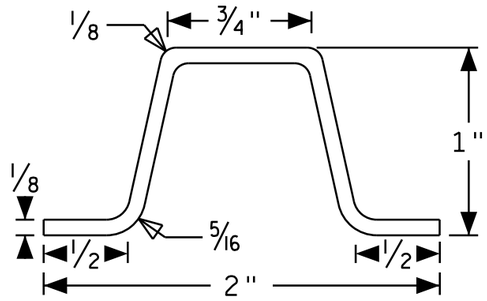
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 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"

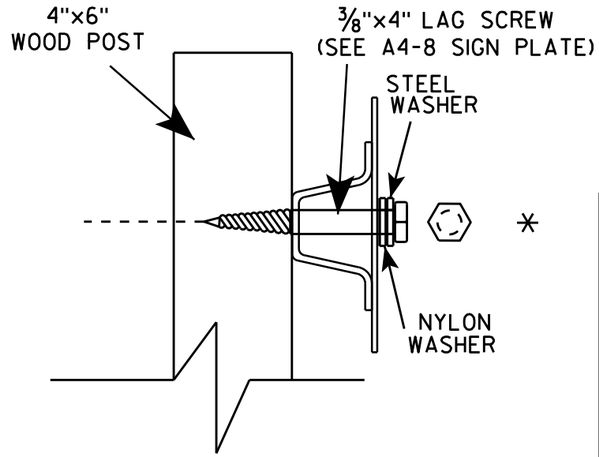


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

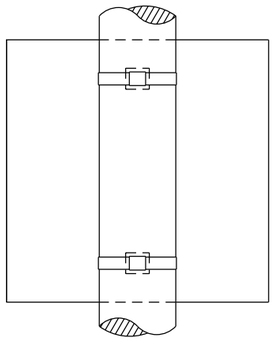
DATE 4/26/16 PLATE NO A4-18.1

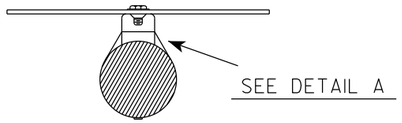
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

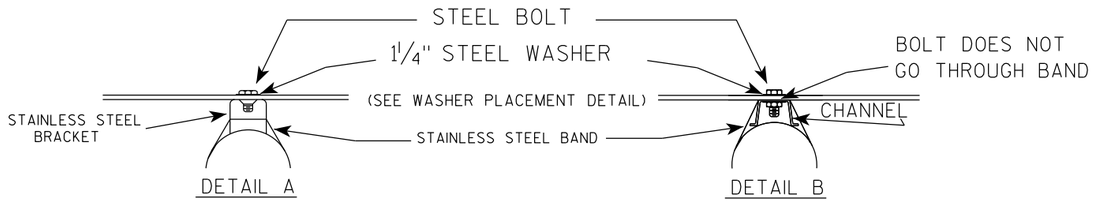
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000 WISDOT/CADDS SHEET 42

BANDING

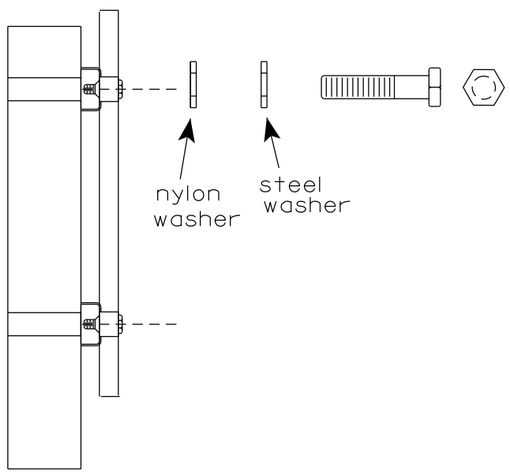
SINGLE SIGN







WASHER PLACEMENT

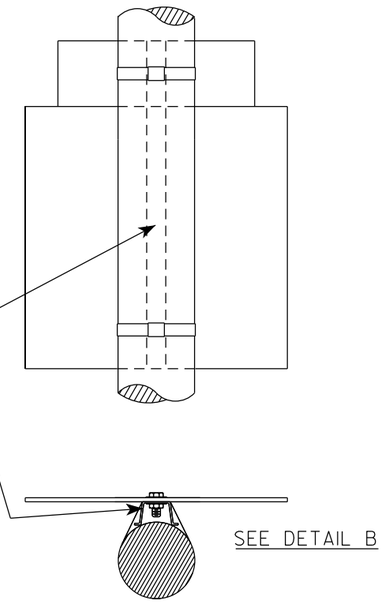


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

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

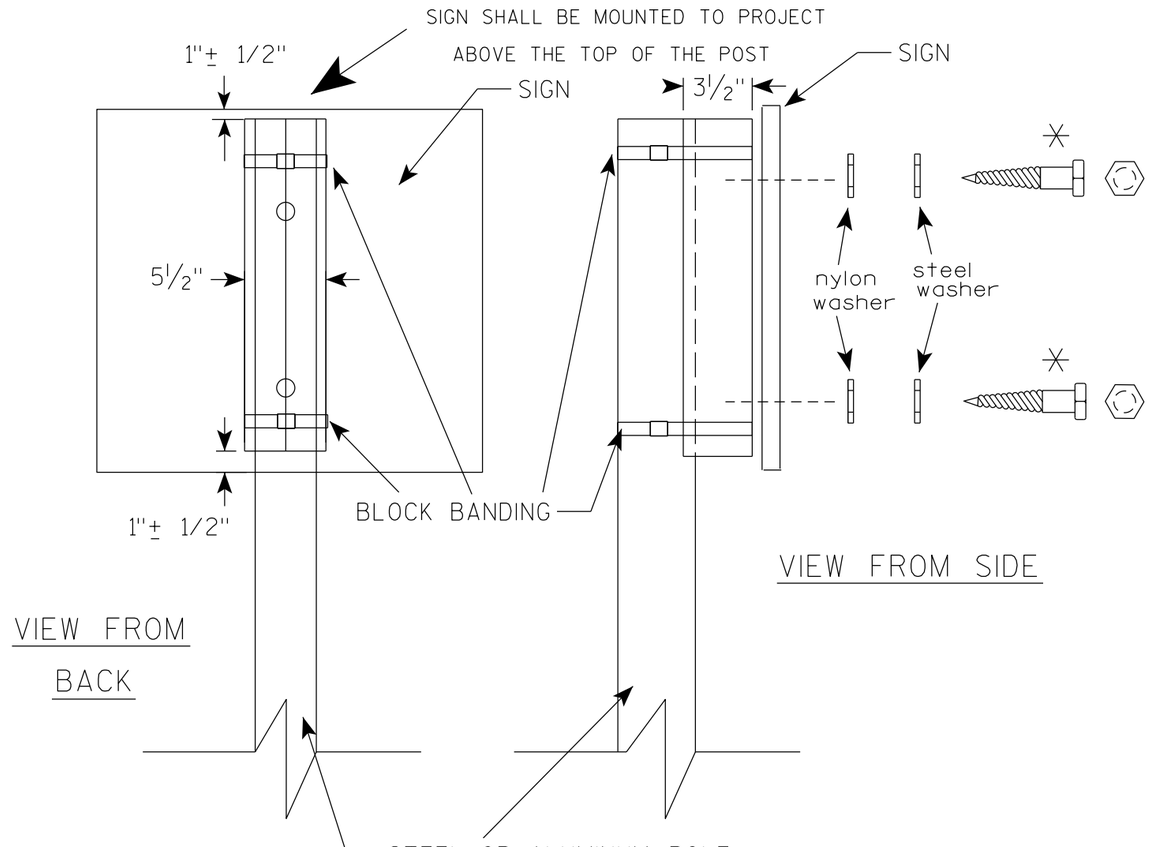
DATE 6/10/19 PLATE NO. A5-9.4

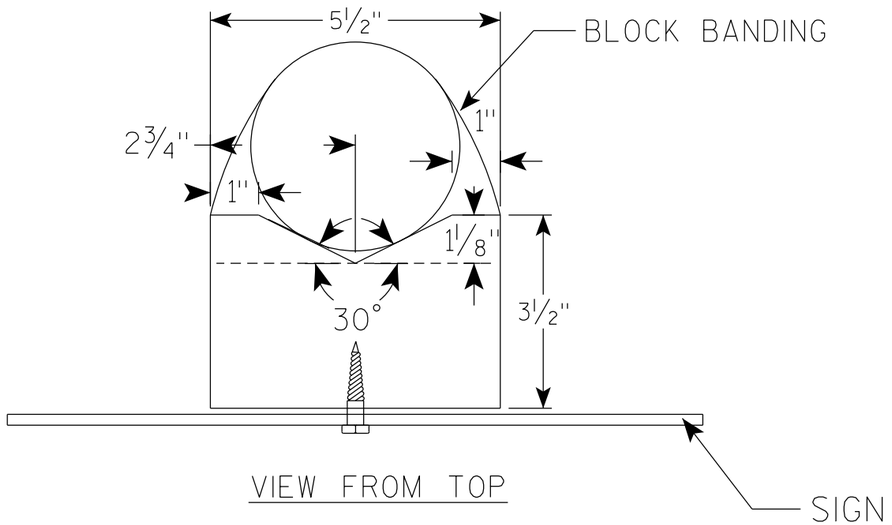
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 205	E

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)

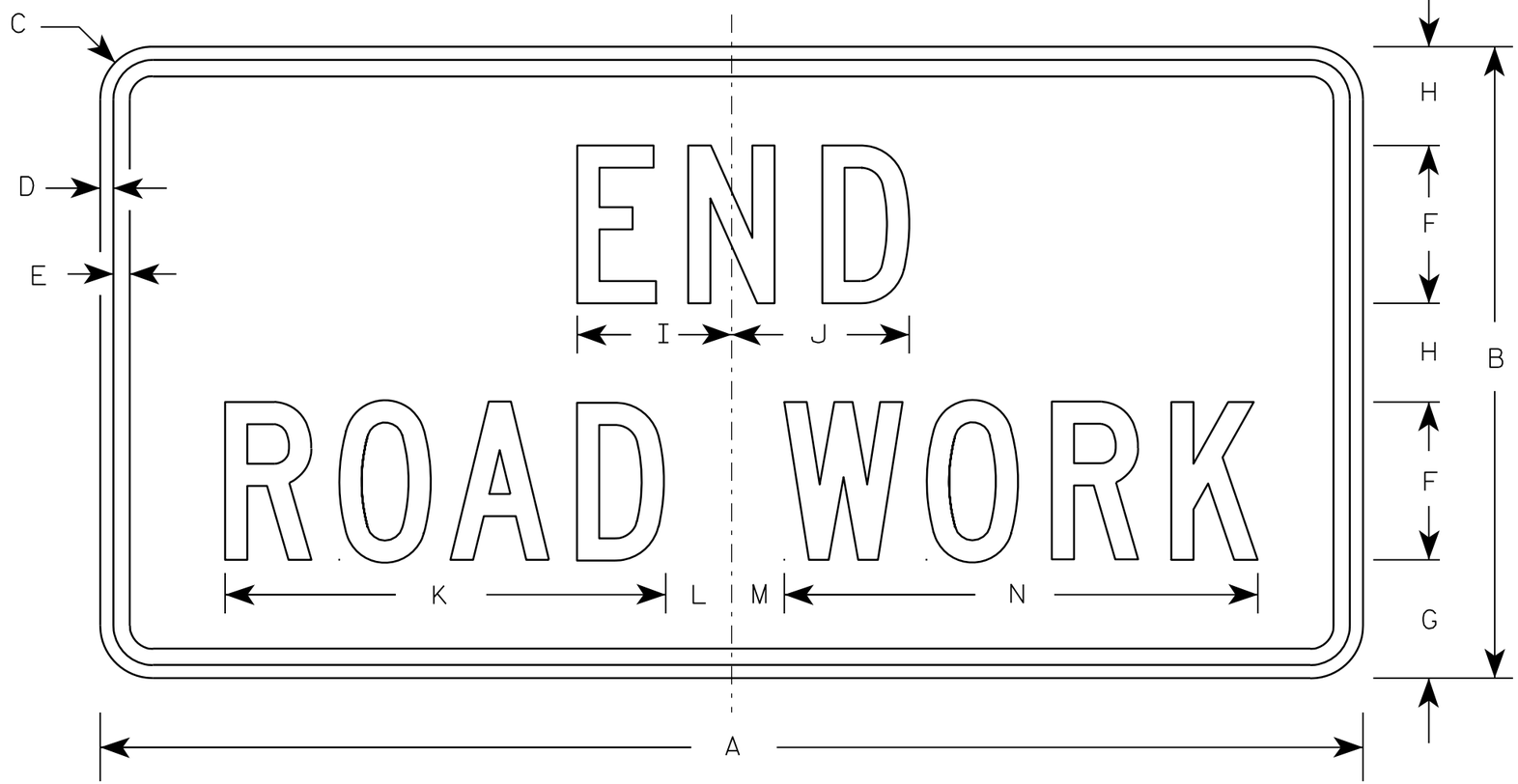
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 206 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

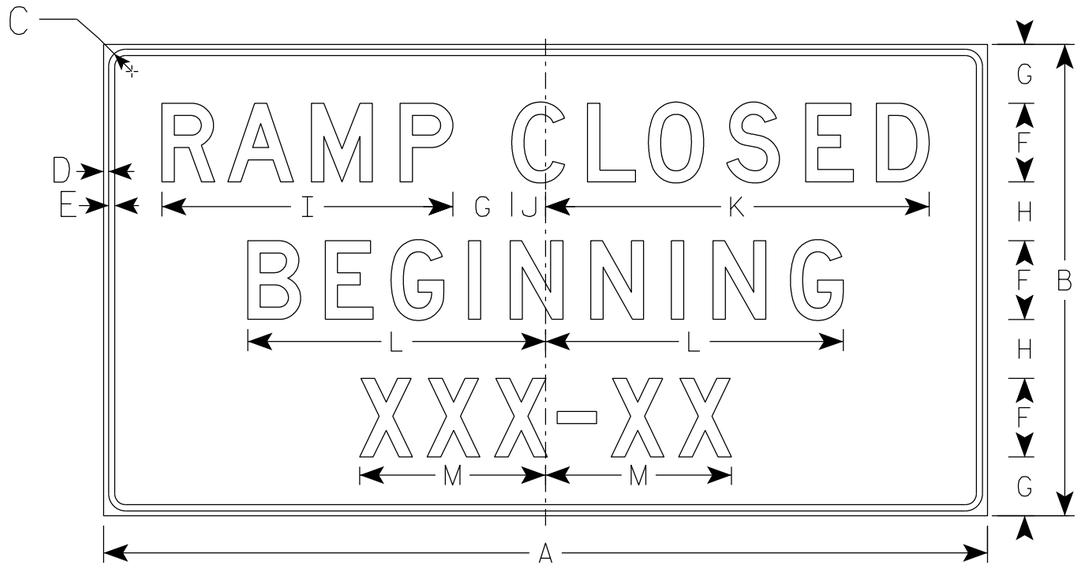
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 207	E

NOTES

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



G20-58

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	72	36	1 5/8	5/8	3/4	6	5	4	22 1/4	2 3/8	29 1/2	22 3/4	14 1/4														18.0
3	90	48	1 5/8	5/8	3/4	8	6	6	29 5/8	3 3/8	39	30 3/8	19														30.0
4																											
5																											

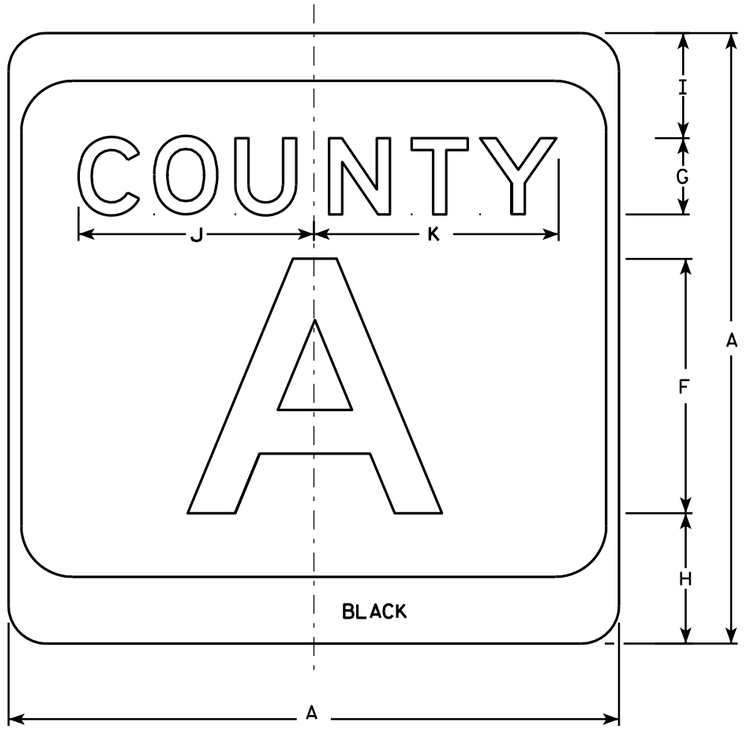
STANDARD SIGN
G20-58

WISCONSIN DEPT OF TRANSPORTATION

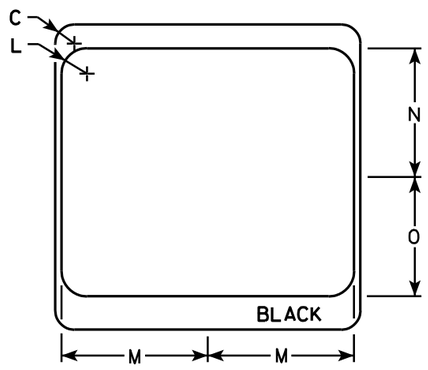
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/19/2020 PLATE NO. G20-58.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 208 | E

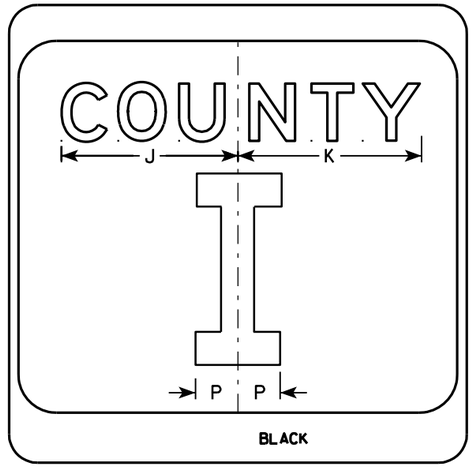


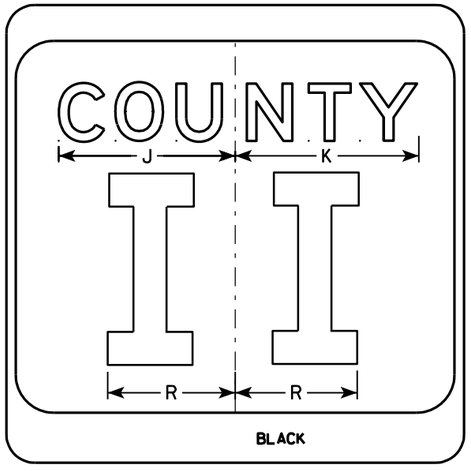
M1-5A



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

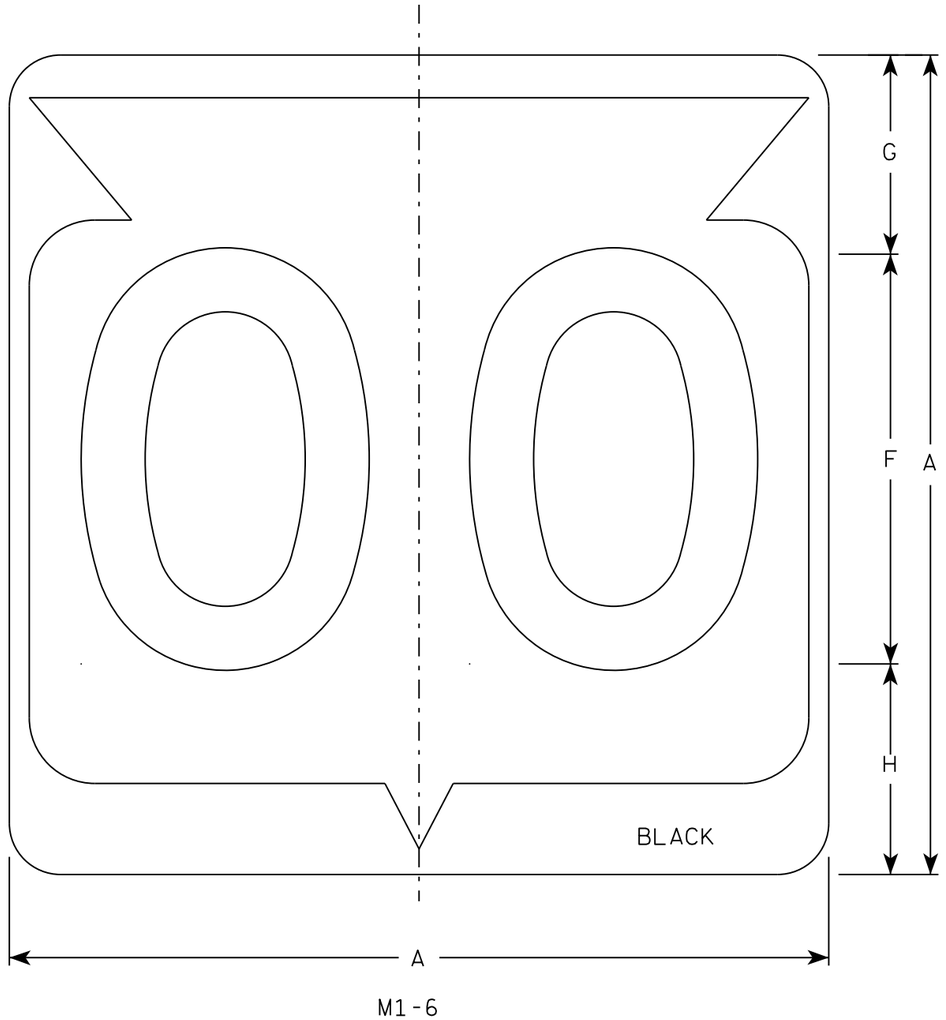
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

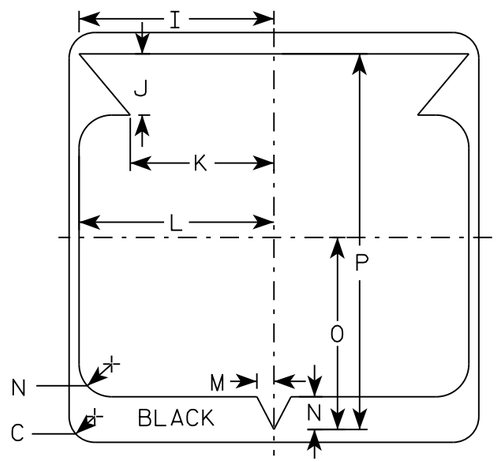
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 209	E



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

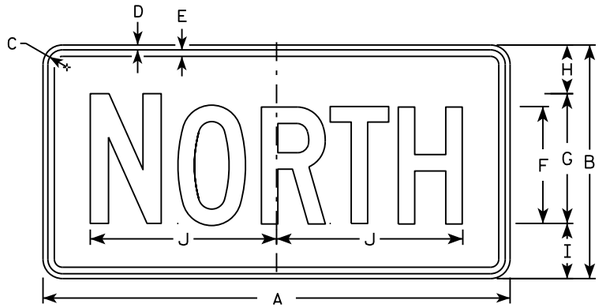
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

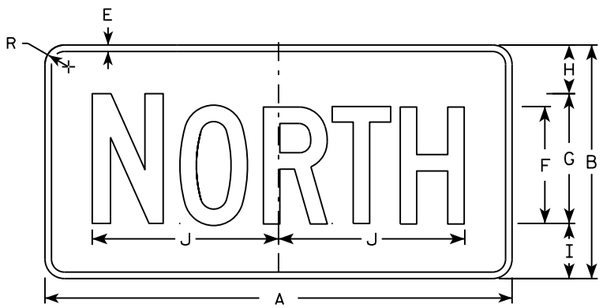
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 210	E



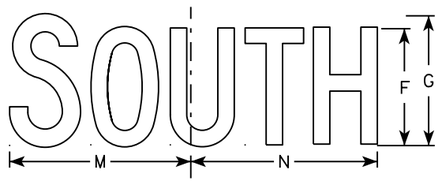
M3-1
MM3-1
MP3-1



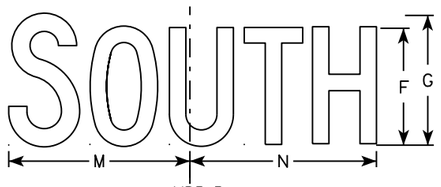
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

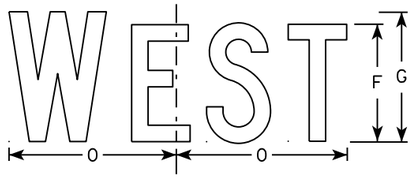
MB3-2
MK3-2
MN3-2



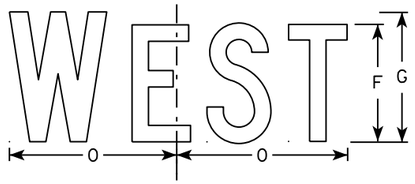
M3-3
MM3-3
MP3-3



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

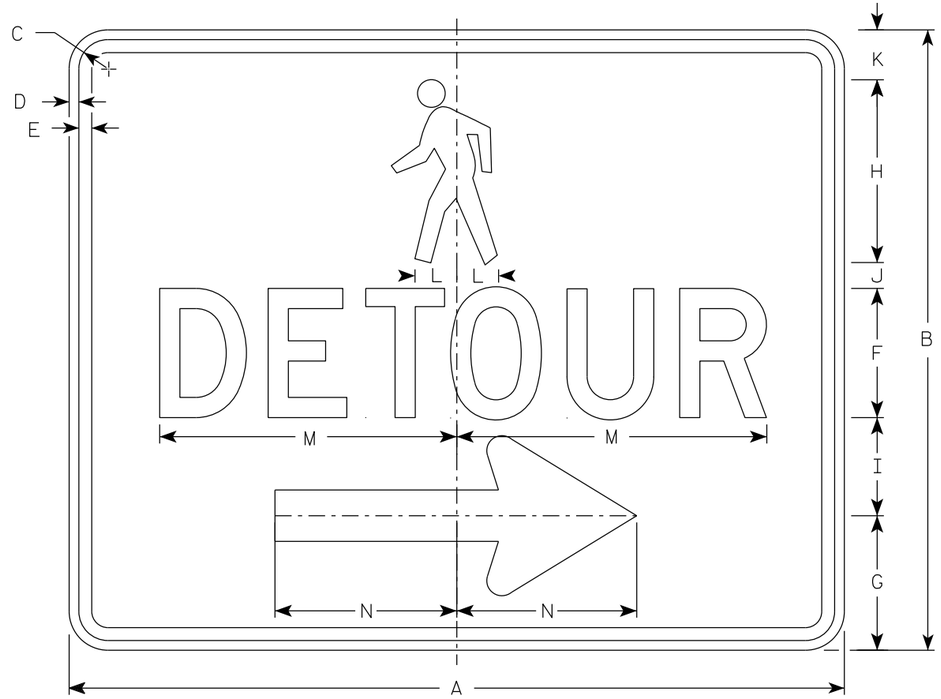
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

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

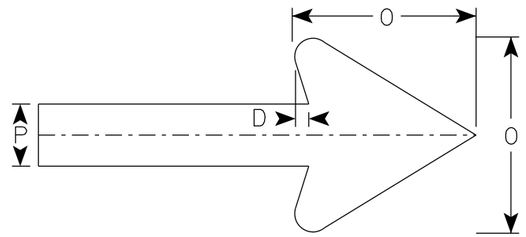
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-9BR

NOTES

1. Sign is Type II-Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9BL is the same as M4-9BR 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	5	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.00
3																											
4																											
5																											

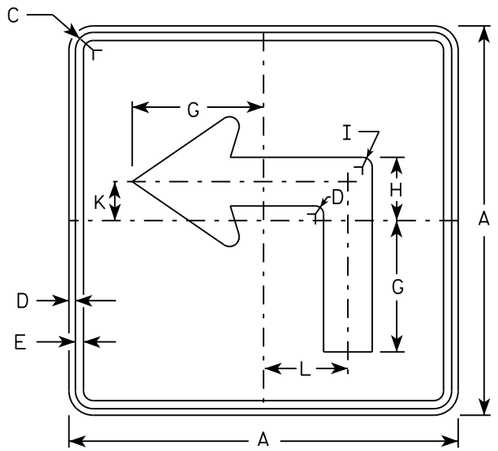
STANDARD SIGN
M4-9B L&R

WISCONSIN DEPT OF TRANSPORTATION

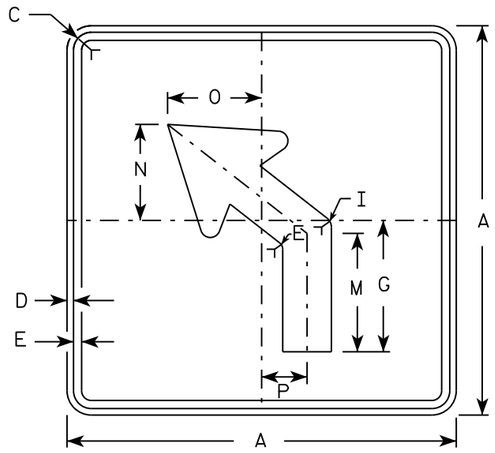
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 7/1/19 PLATE NO. M4-9B.2

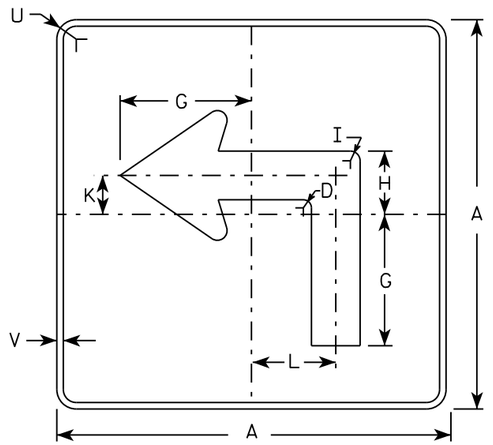
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 212 | E



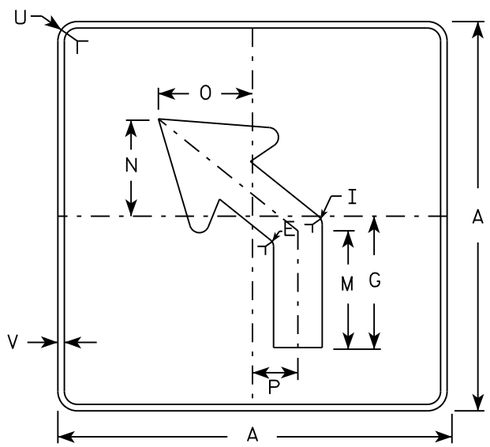
M5-1L
MM5-1L
MO5-1L
MP5-1L



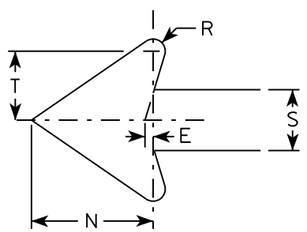
M5-2L
MM5-2L
MO5-2L
MP5-2L



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

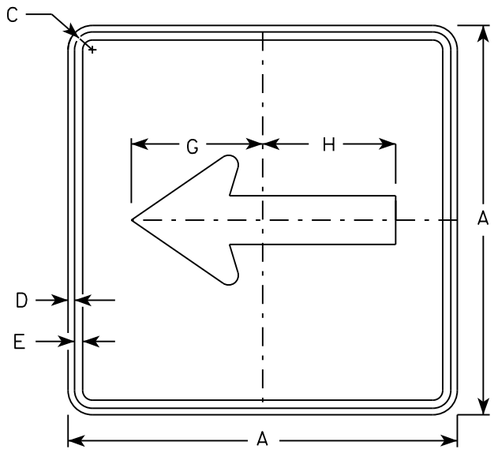
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

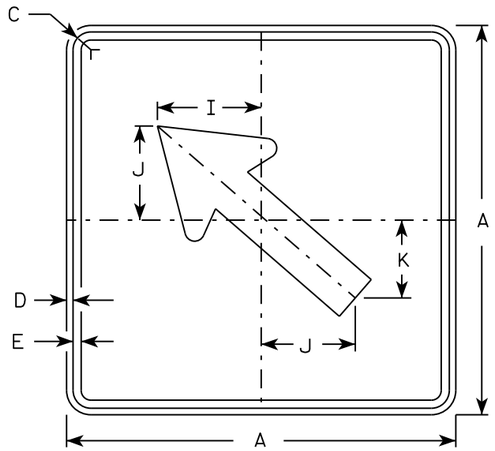
DATE 10/15/15 PLATE NO. M5-1.13

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



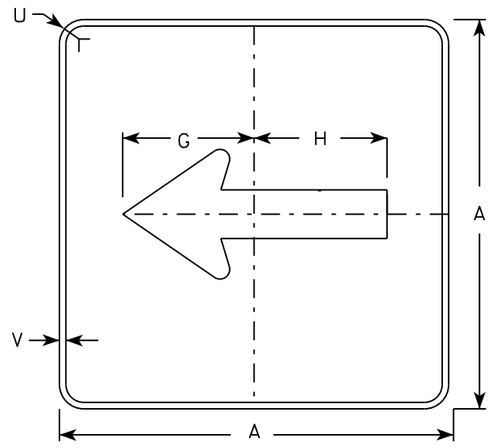
M6-1
MM6-1
MO6-1
MP6-1



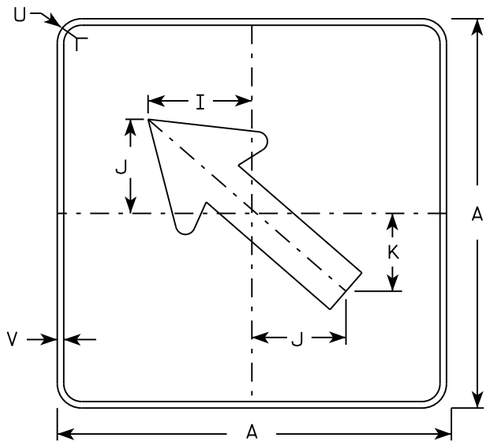
M6-2
MM6-2
MO6-2
MP6-2

NOTES

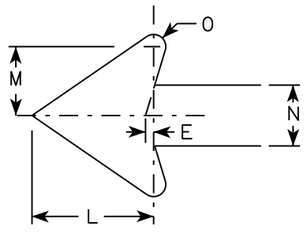
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - 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

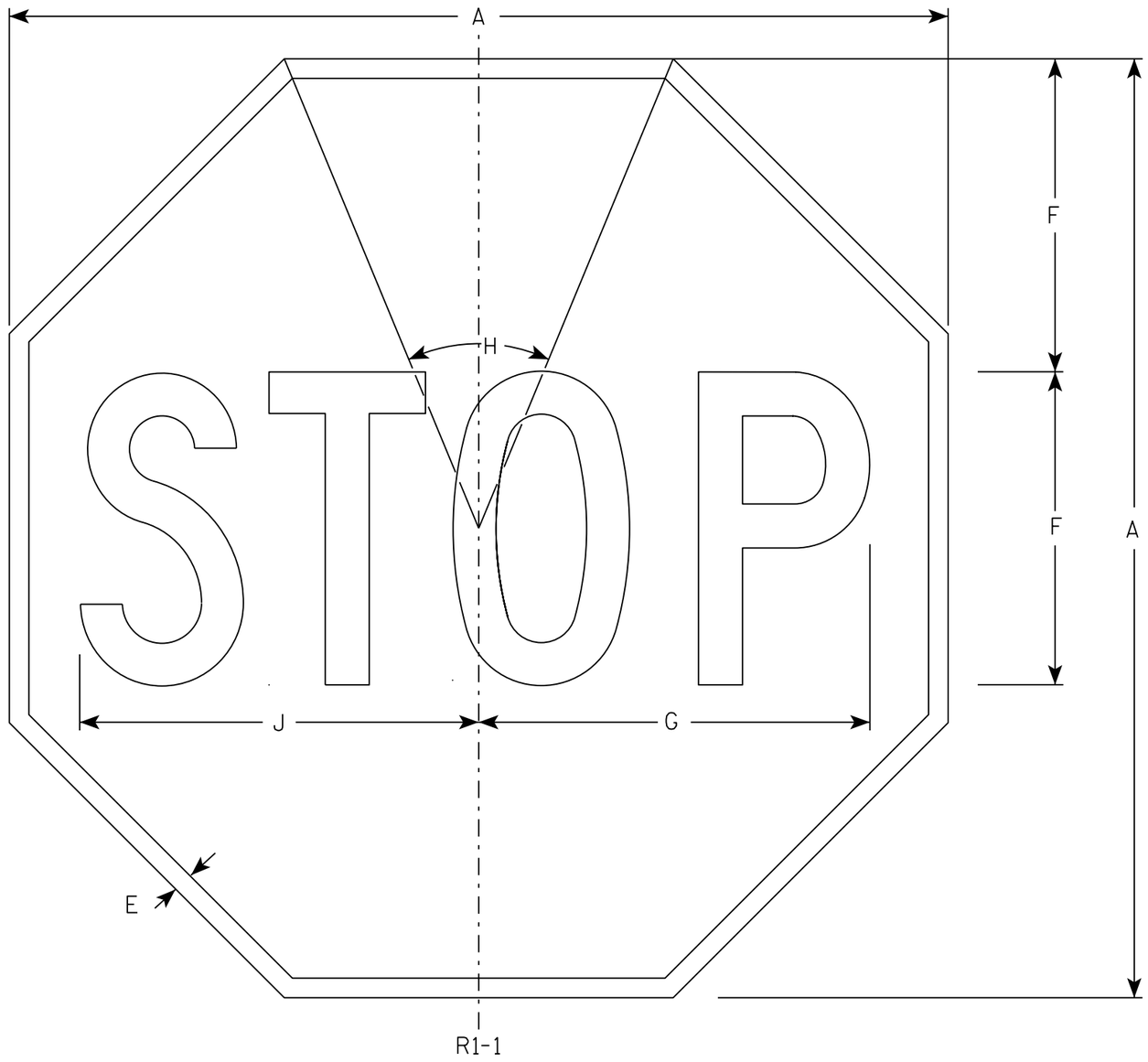
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 214 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

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				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

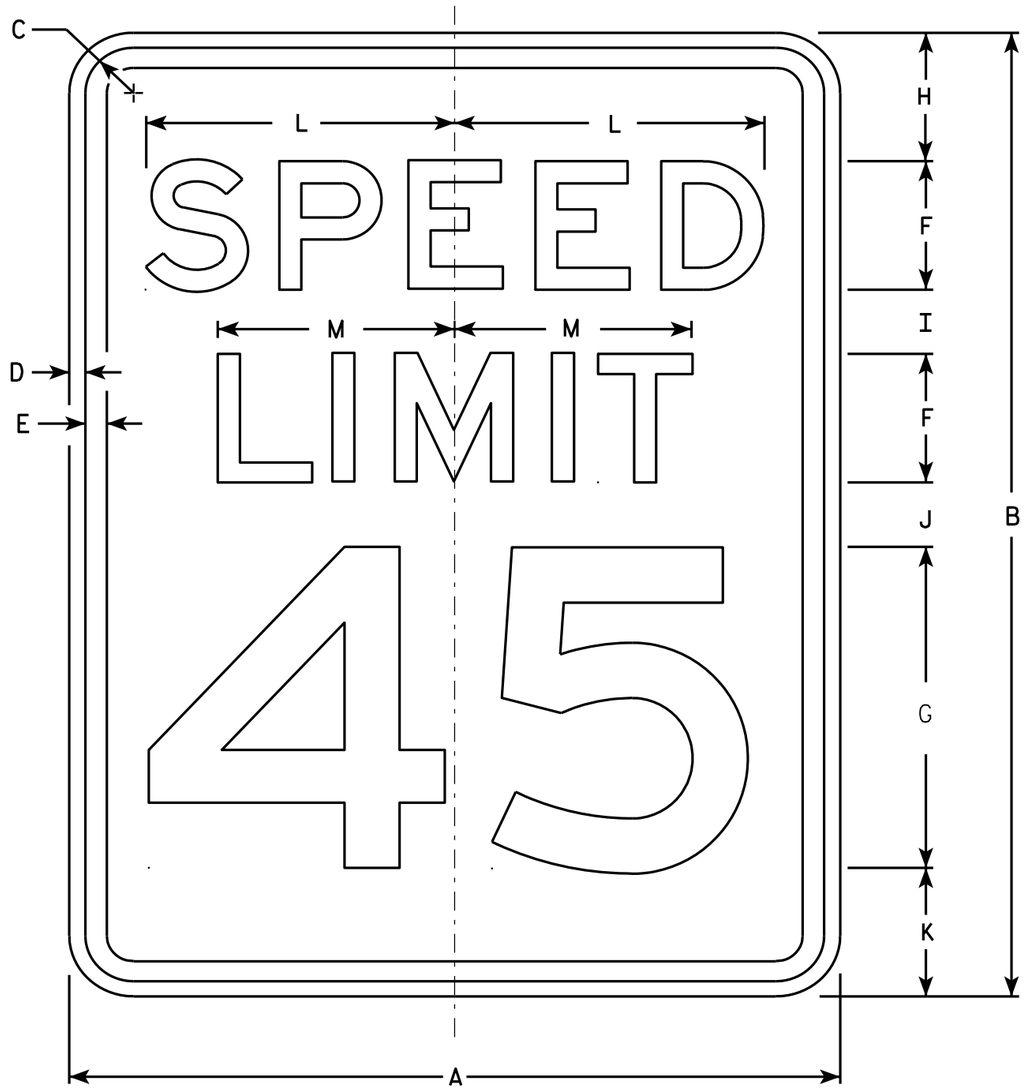
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 215	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

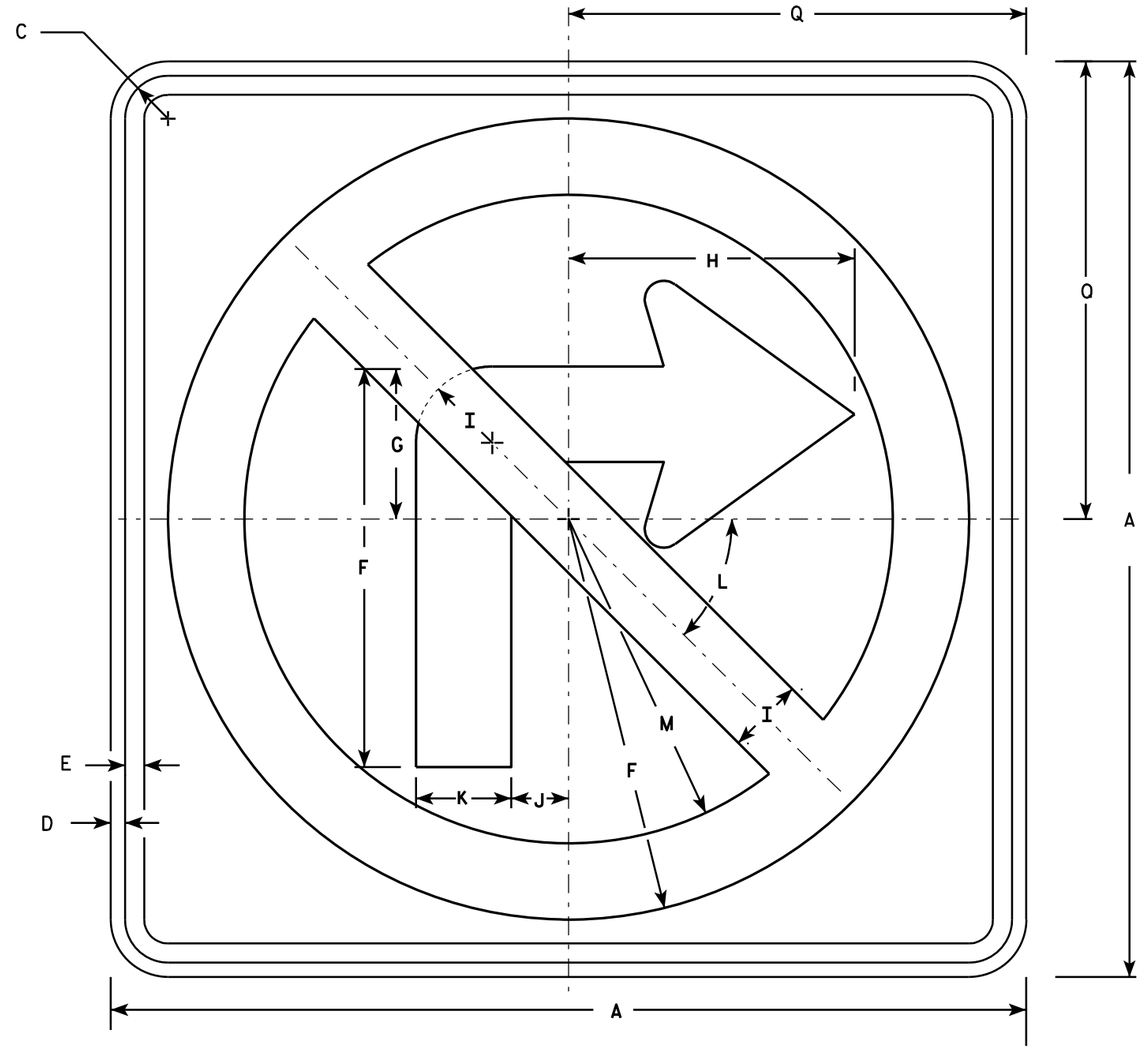
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

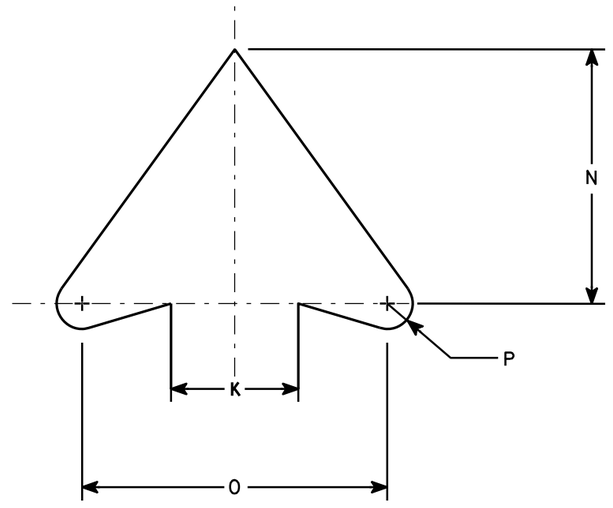
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 216 | E



R3-1

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 - 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	12										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	12										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	18										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	18										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	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

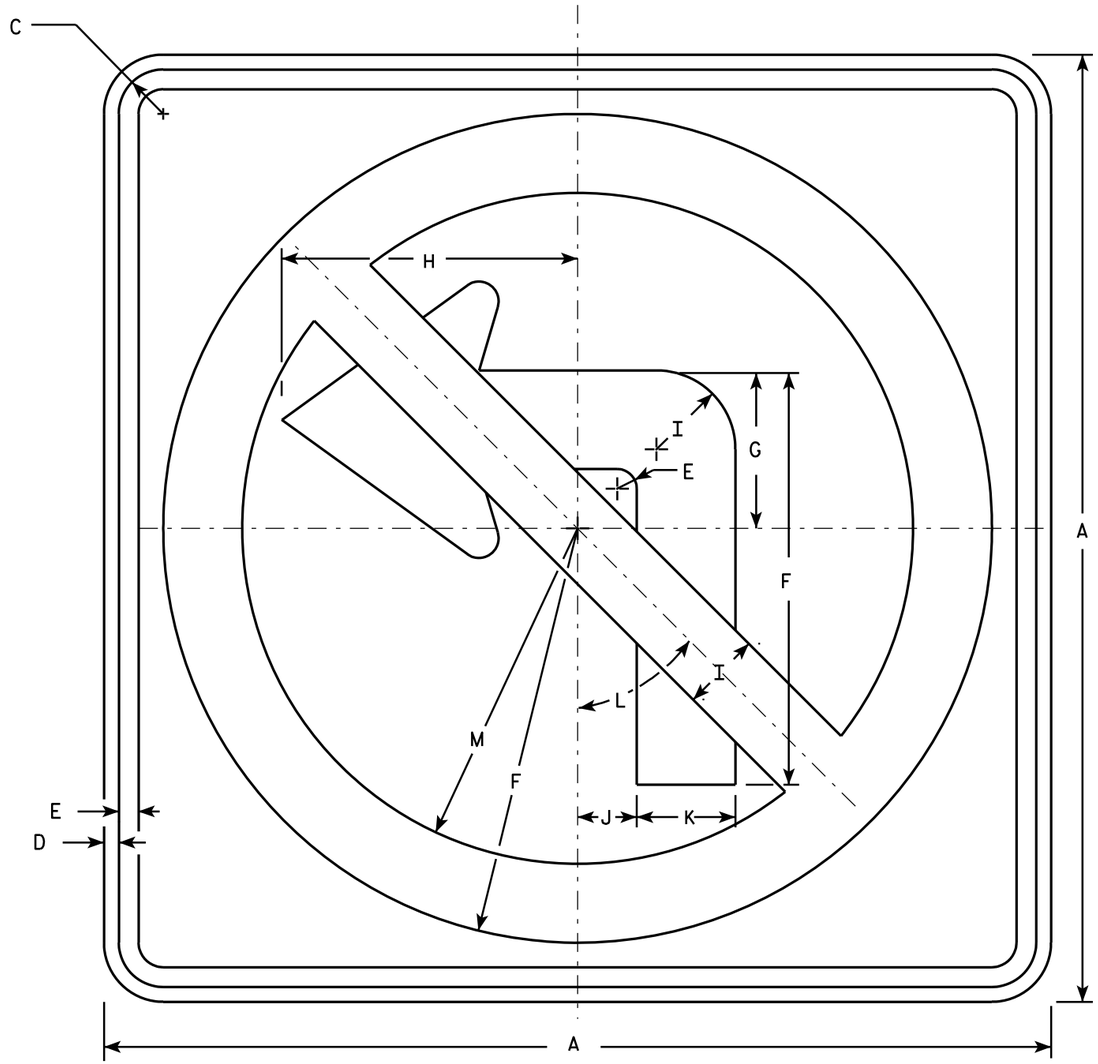
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

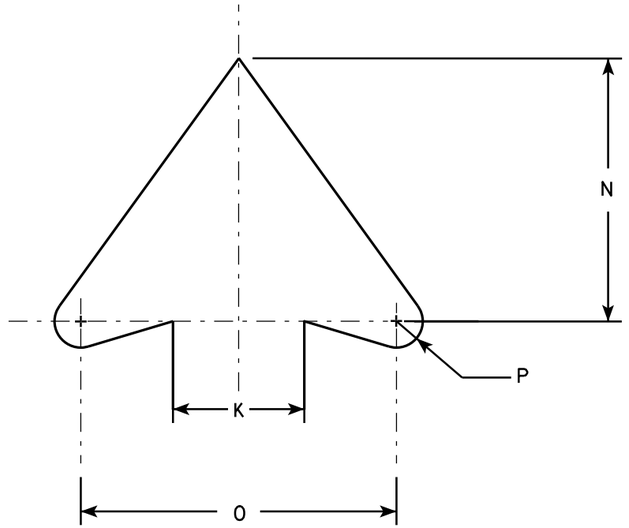
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 217 | E



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

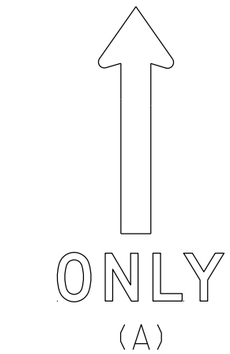
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

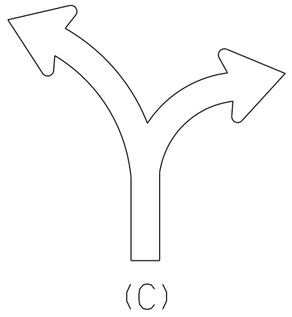
DATE 12/08/10 PLATE NO. R3-2.10

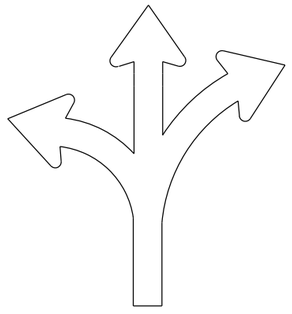
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 218	E

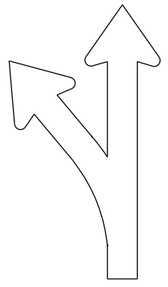


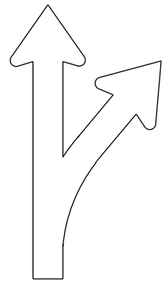
(A)

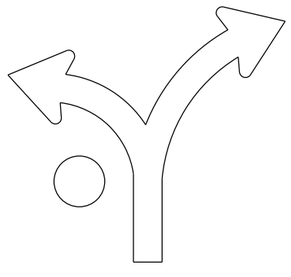
(B)

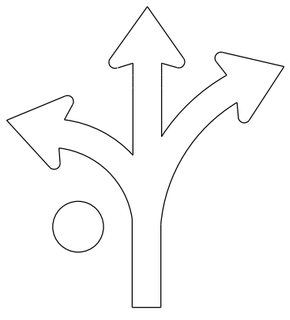

(C)

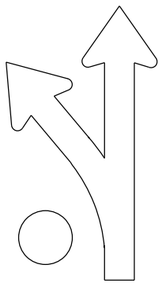

(D)

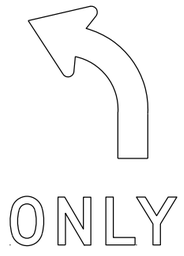

(E)


(F)

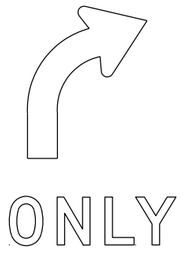

(G)


(H)

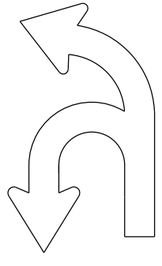

(I)



(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

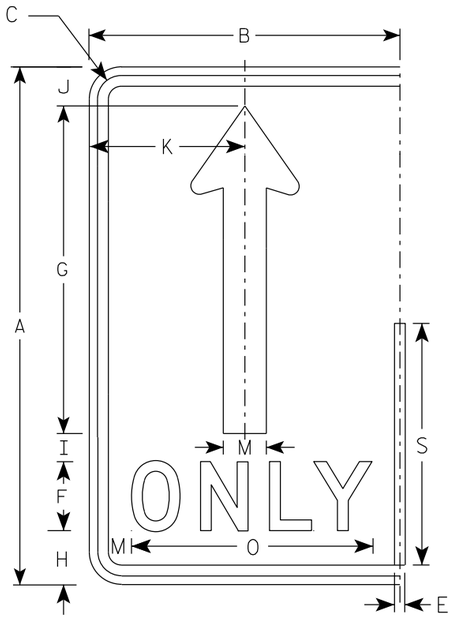
7

PROJECT NO:

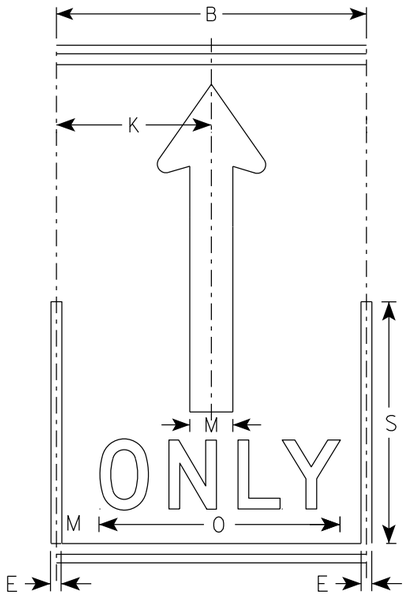
SHEET NO: 219 E

NOTES

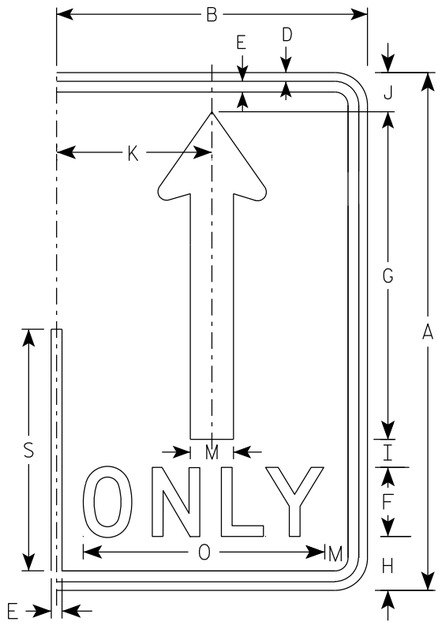
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



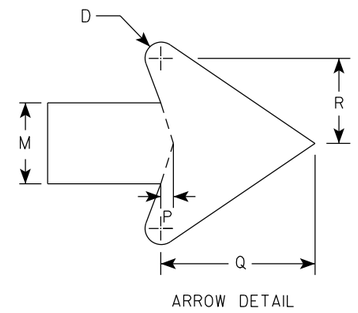
(A)



(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

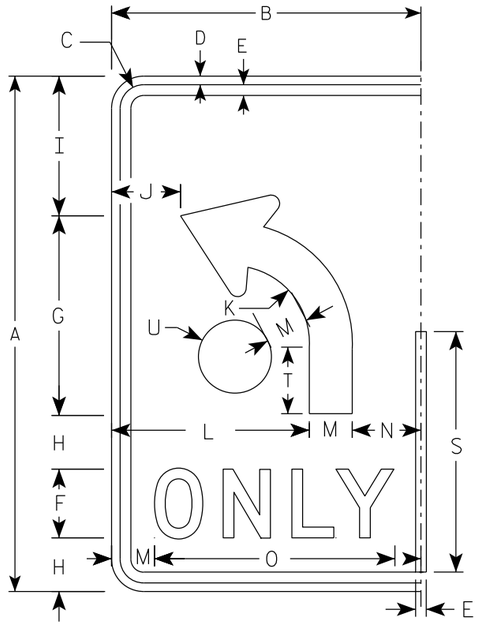
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

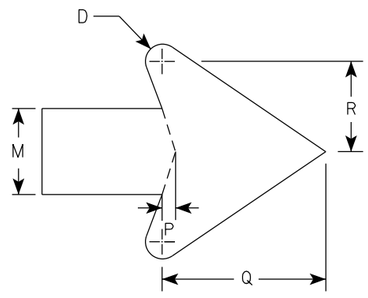
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 220 | E

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

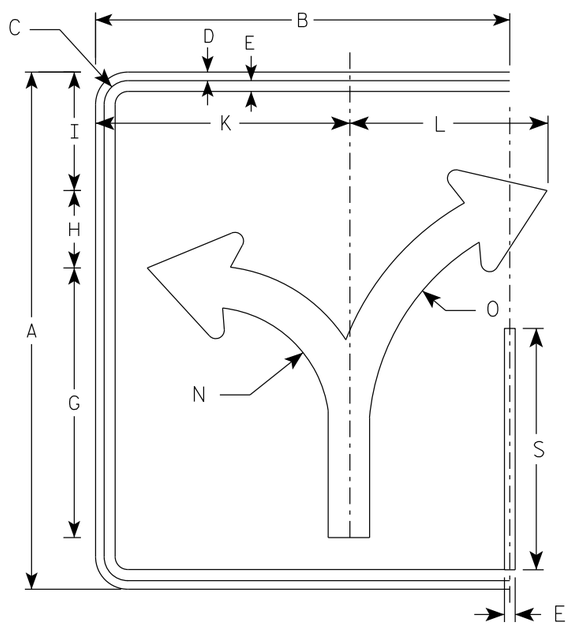
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

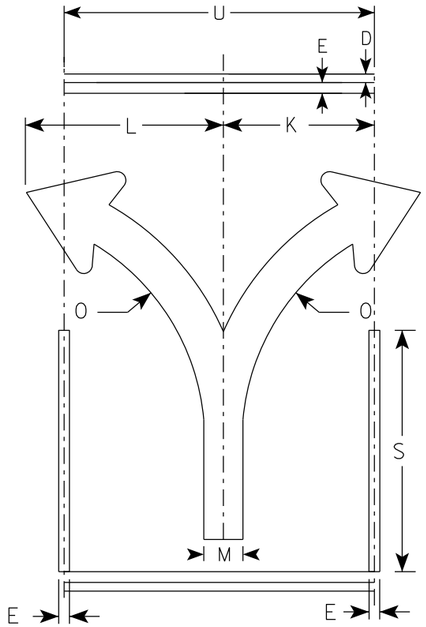
SHEET NO: 221 E

NOTES

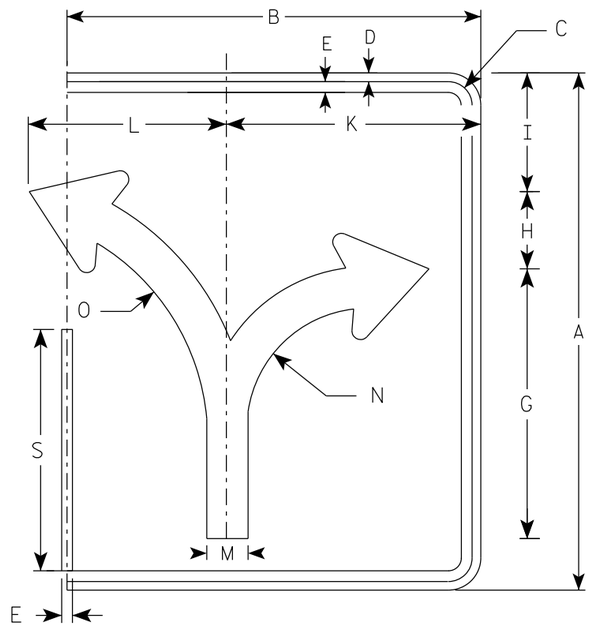
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



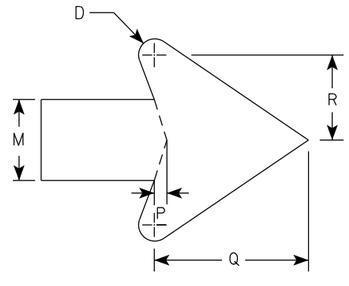
(C)



(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

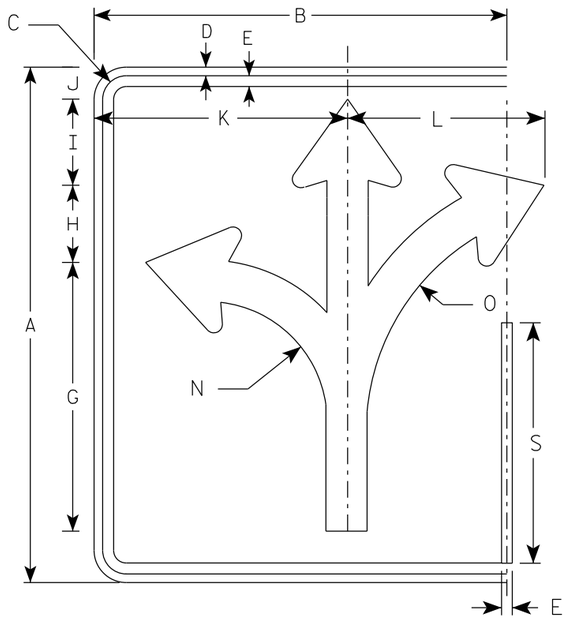
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

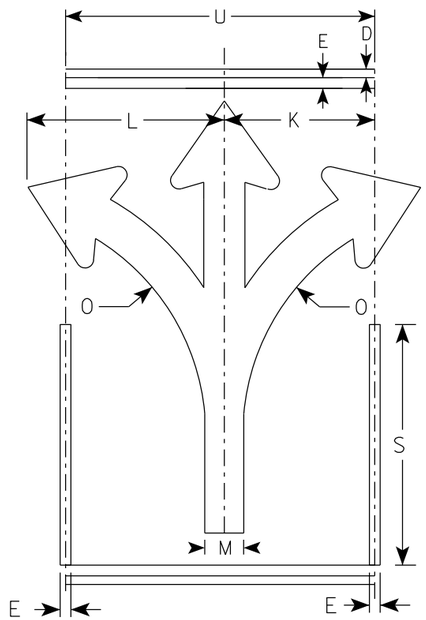
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 222 | E

NOTES

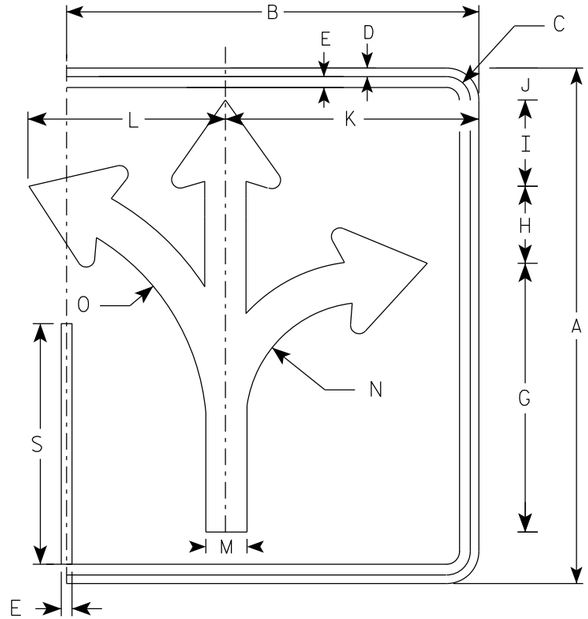
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



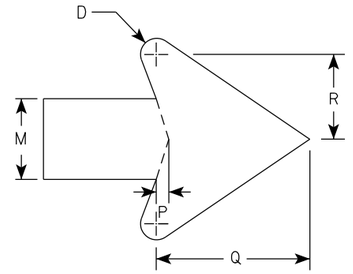
(D)



(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

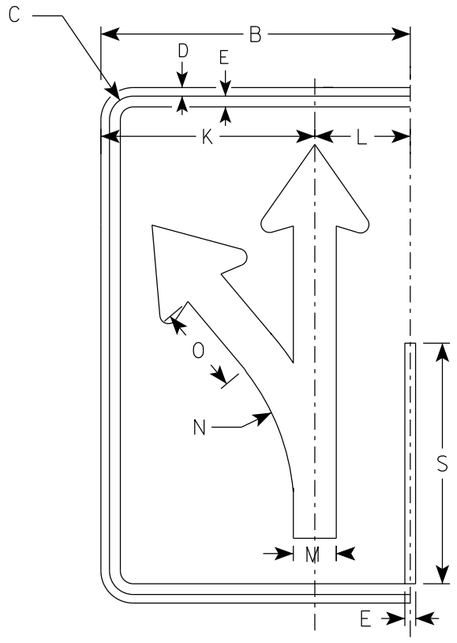
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

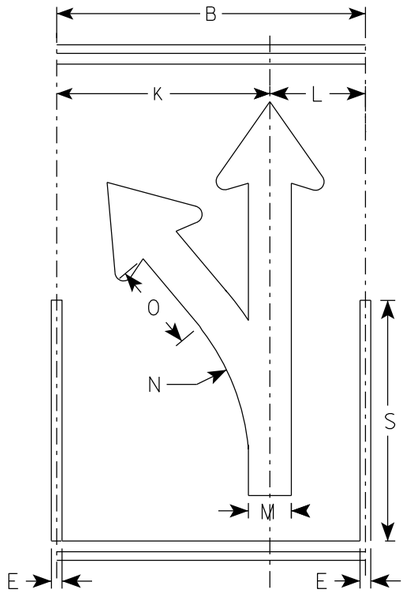
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 223 | E

NOTES

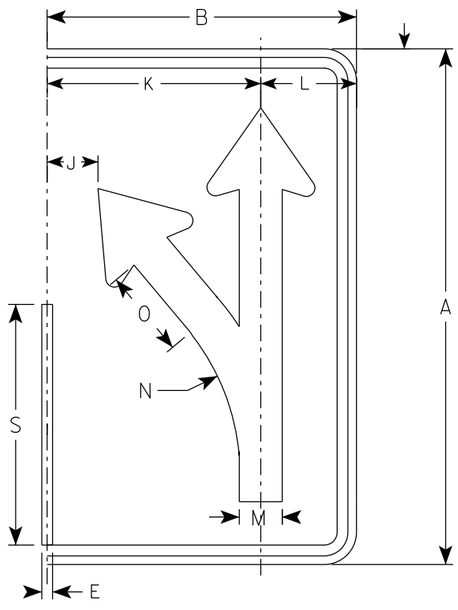
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



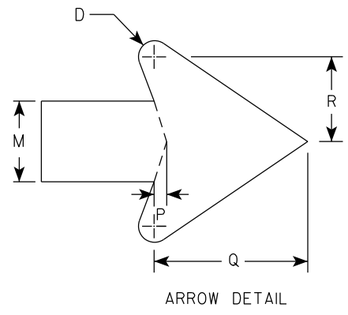
(E)



(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

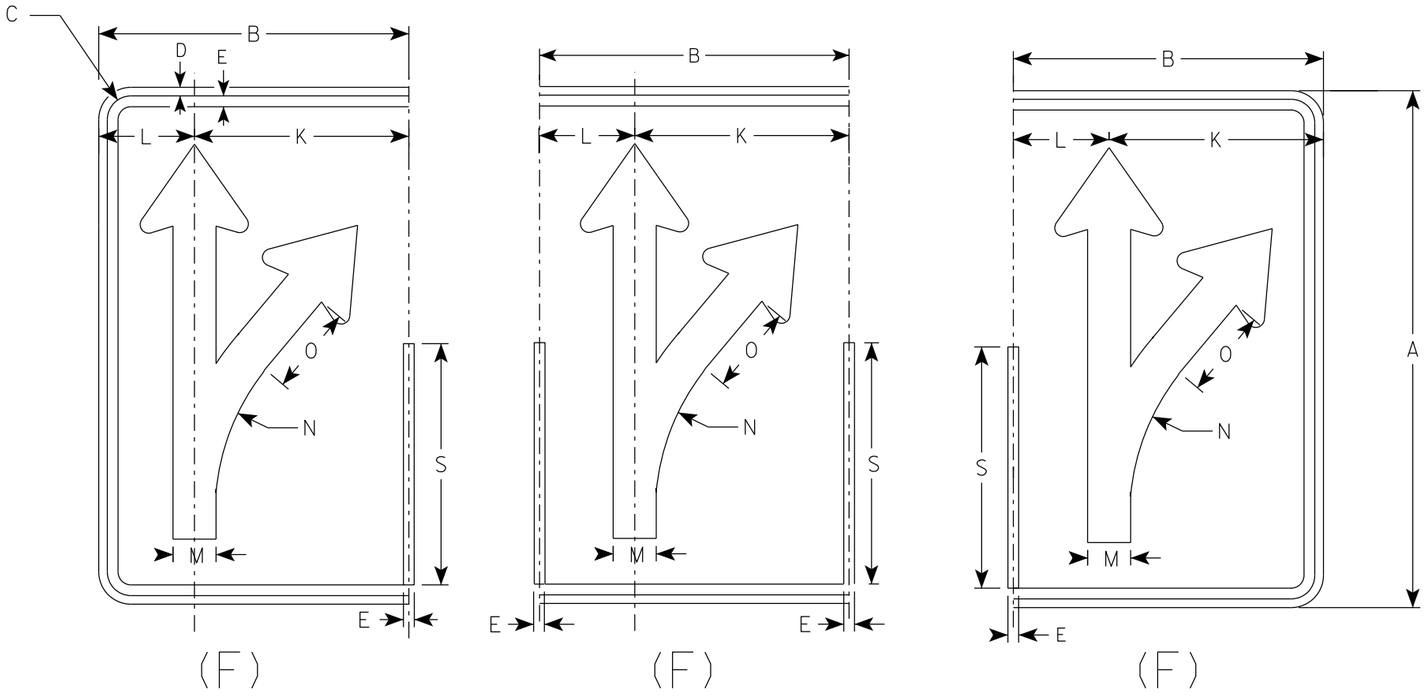
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

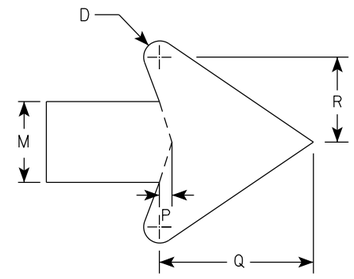
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 224 | E

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

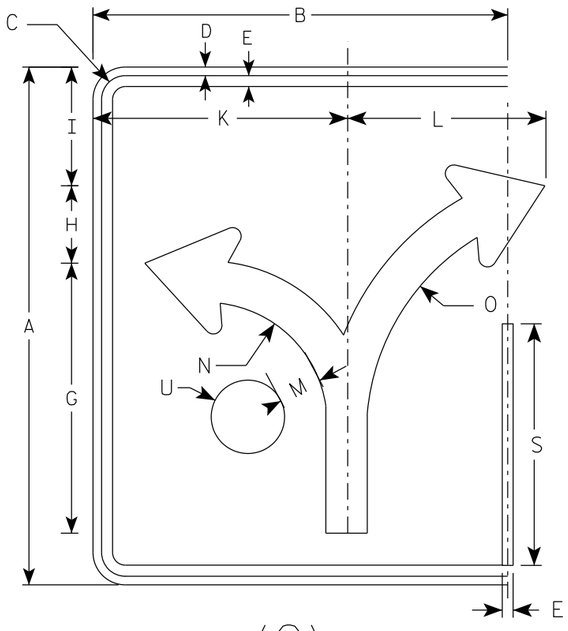
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

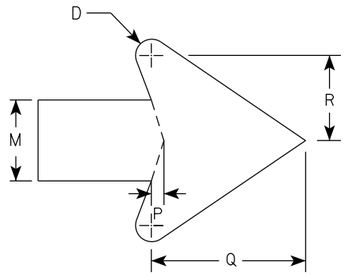
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 225 | E

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

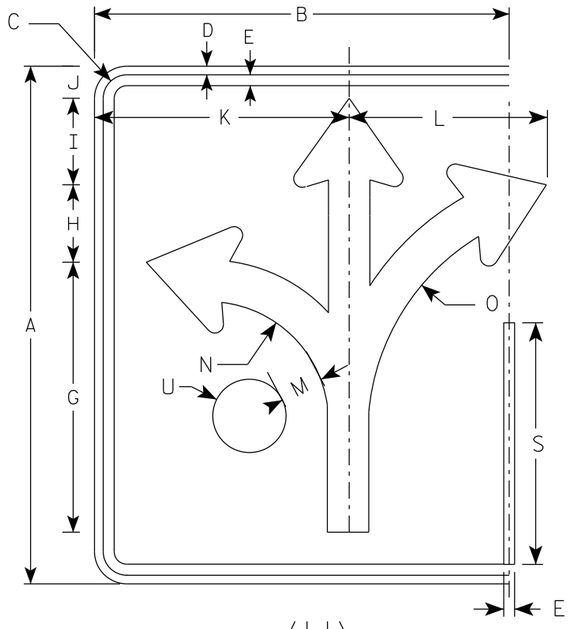
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

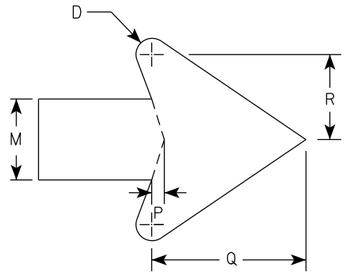
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 226 | E

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

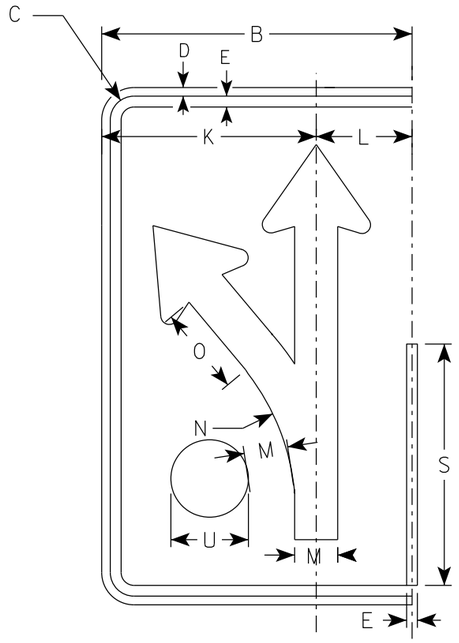
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

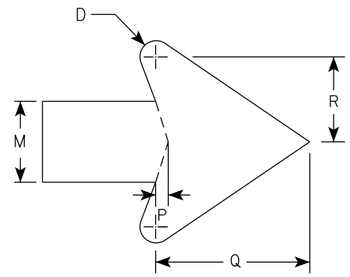
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 227	E

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

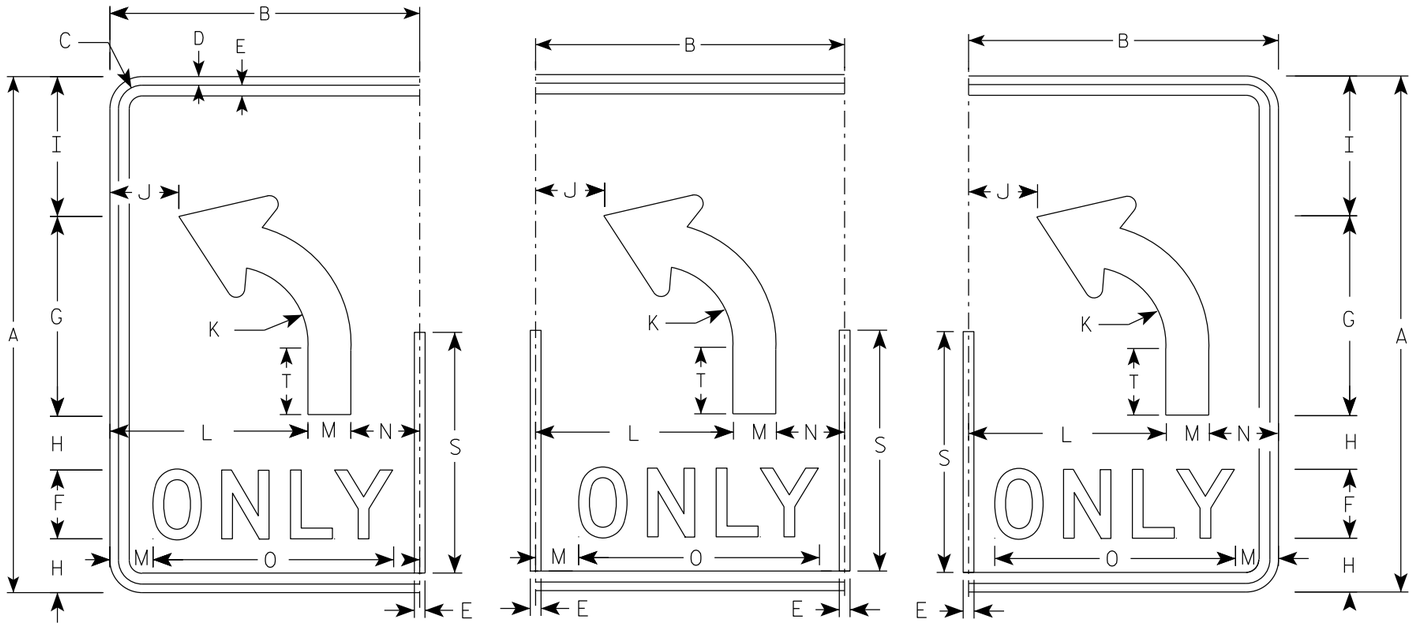
APPROVED Matthew R Rauch
For State Traffic Engineer

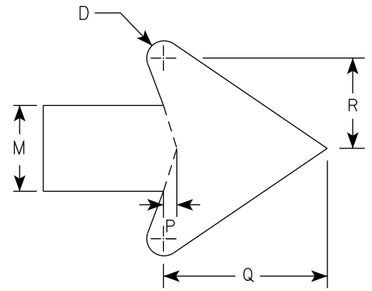
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 228 | 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

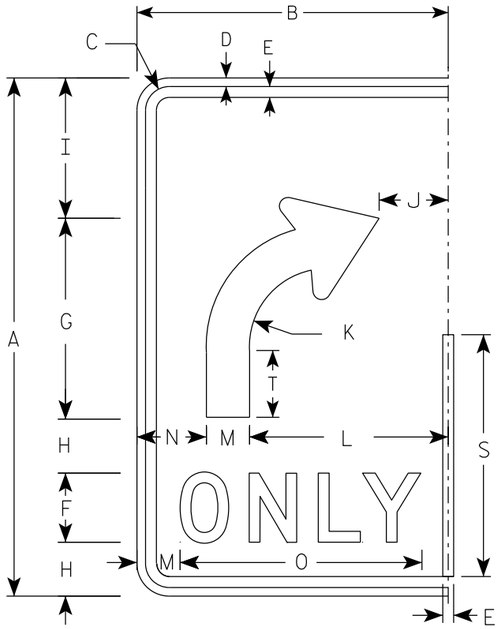
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

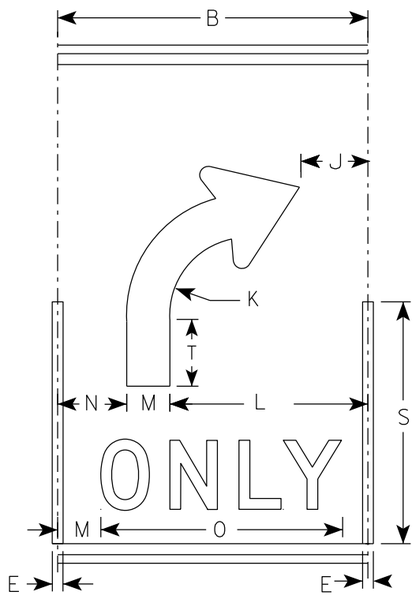
SHEET NO: 229 E

NOTES

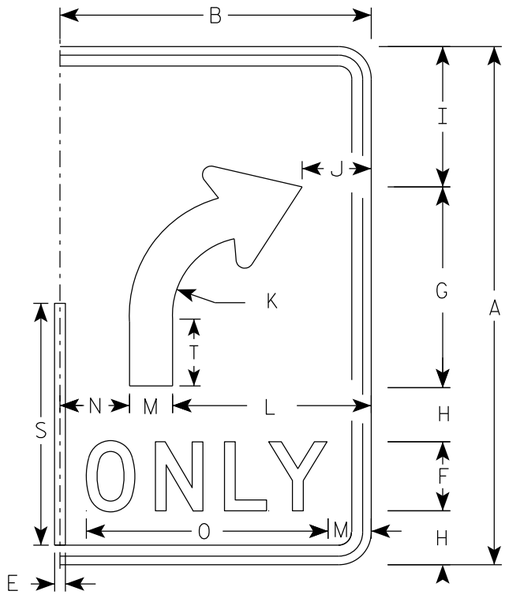
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



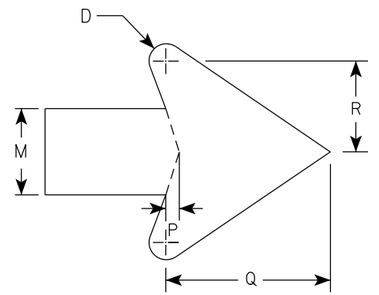
(R)



(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

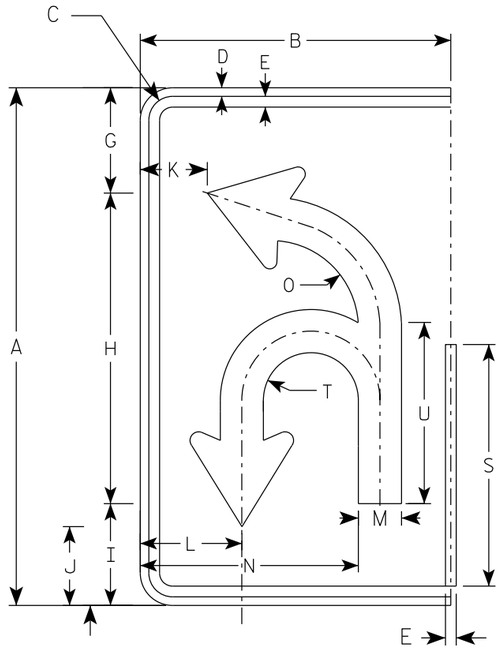
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

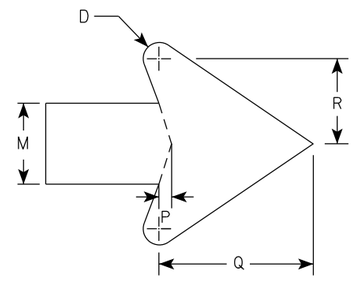
SHEET NO: 230 **E**

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

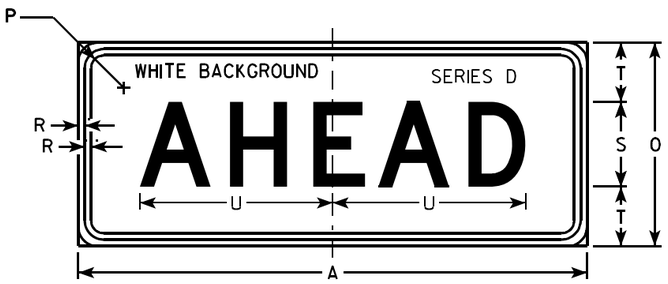
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 231 | E

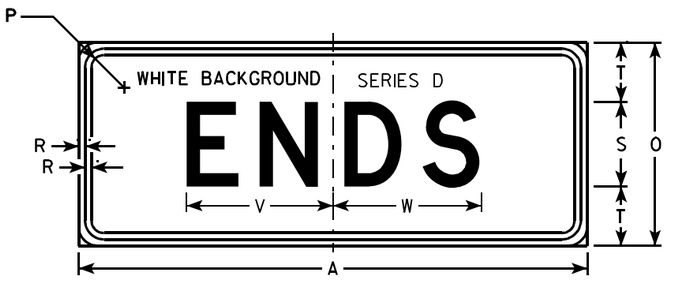
R3-17

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - AS SHOWN
   Message - BLACK
3. Message Series - C or as noted on the Signs.
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.



R3-17ap



R3-17bp

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	R3-17 Area sq. ft.	R3-17ap Area sq. ft.	R3-17bp Area sq. ft.
1																													
2S	30	24	1 1/8	3/8	1/2	2	4	4 1/8	7 7/8	6 3/8	9 1/2	2 5/8	7/8	13	12	1 1/8	3 3/8	3/8	5	3 1/2	11 3/8	8 5/8	8 3/4	2 3/8	15 5/8	8	5.0	2.5	2.5
2M	30	24	1 1/8	3/8	1/2	2	4	4 1/8	7 7/8	6 3/8	9 1/2	2 5/8	7/8	13	12	1 1/8	3 3/8	3/8	5	3 1/2	11 3/8	8 5/8	8 3/4	2 3/8	15 5/8	8	5.0	2.5	2.5
3																													
4																													
5																													

STANDARD SIGN
R3-17 & R3-17a&bp

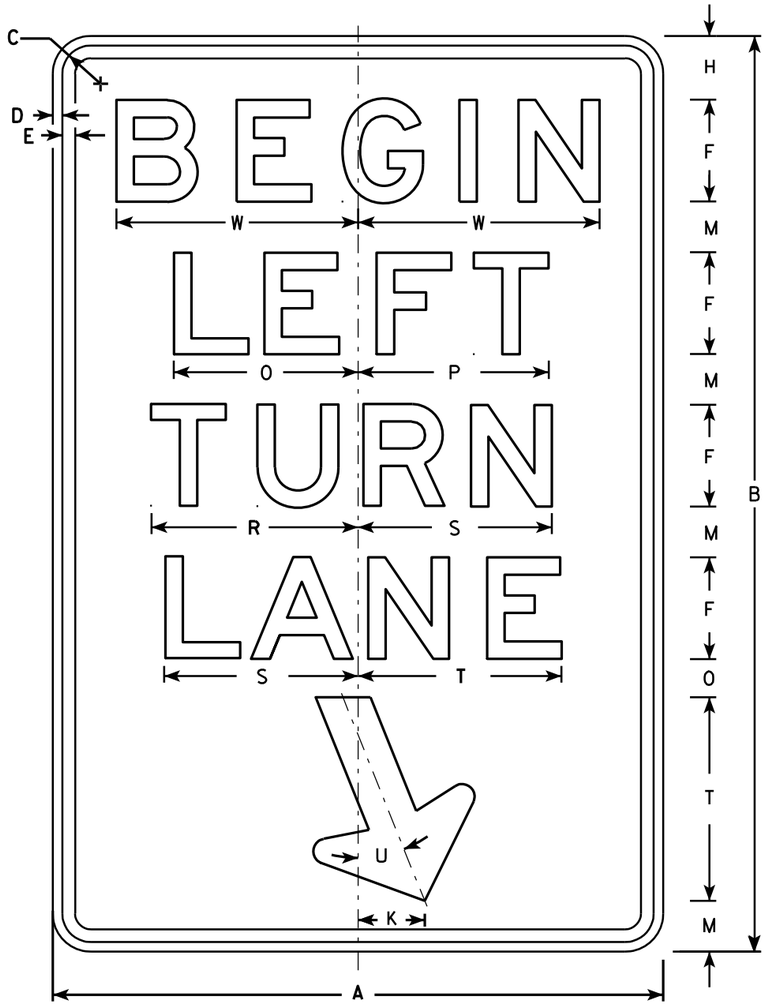
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/12/2011 PLATE NO. R3-17.2

PROJECT NO:

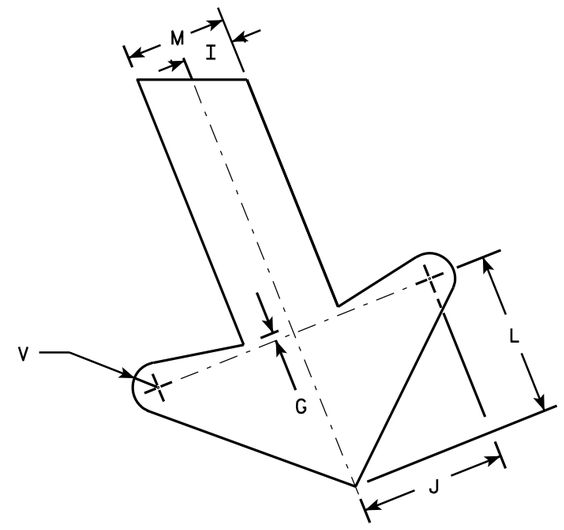
SHEET NO: 232 E



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																											

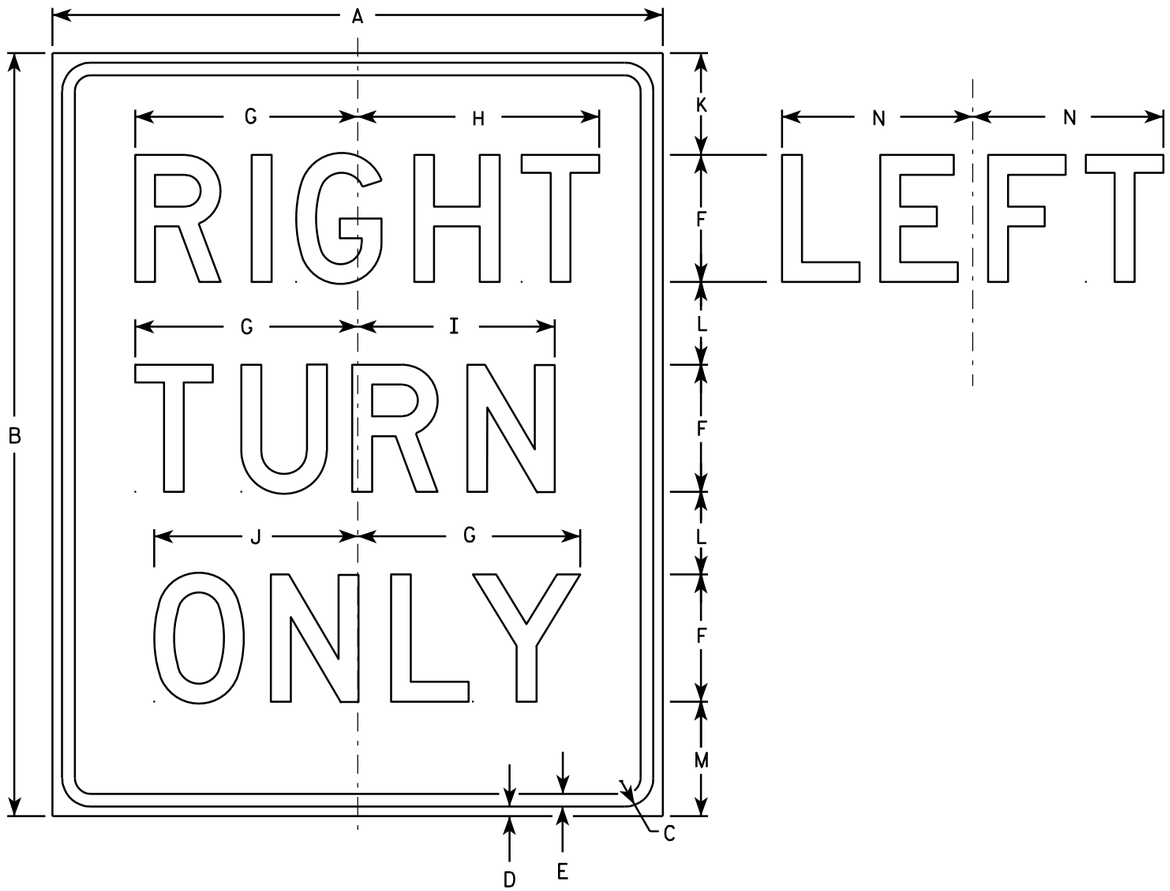
STANDARD SIGN
R3-20L

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: 233 | E



R3-53R

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.
5. R3-53L same as R3-53R except LEFT is substituted for RIGHT.

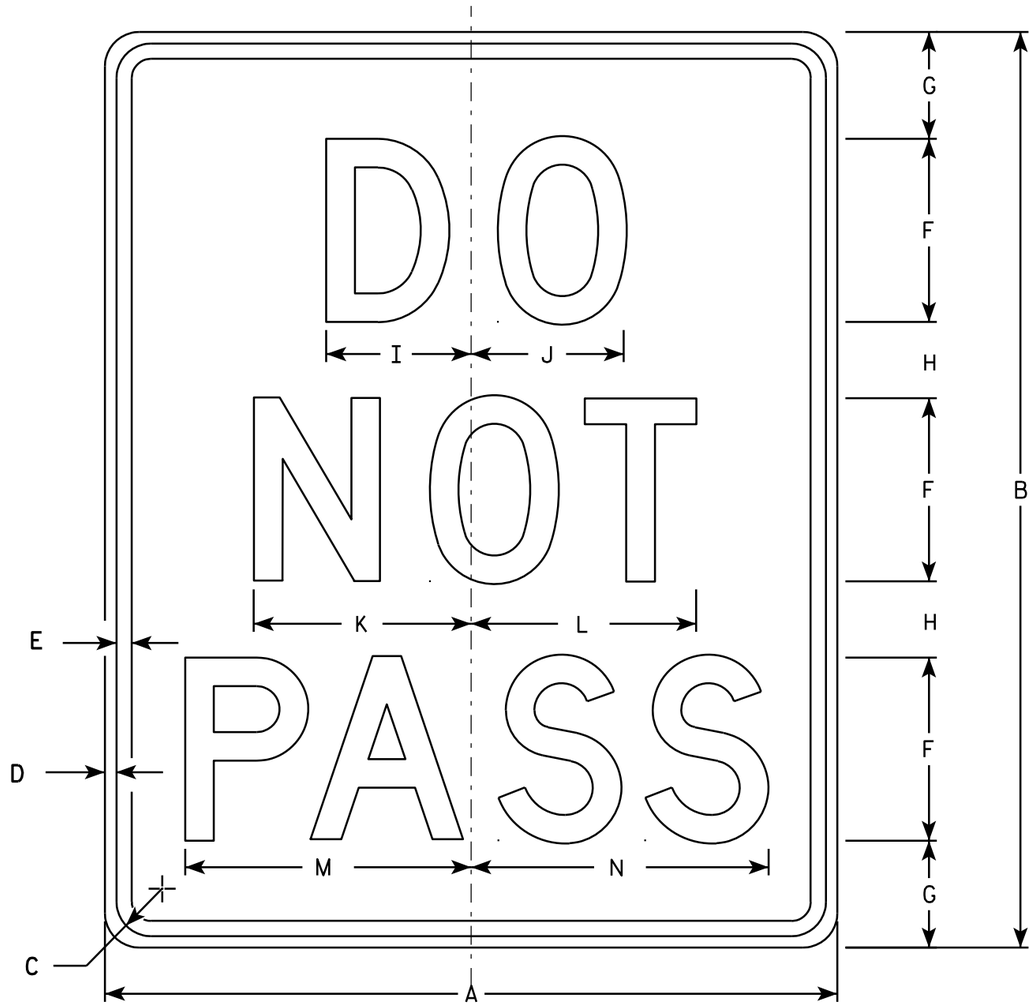
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
2M	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
3	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
4																											
5																											

STANDARD SIGN
R3-53

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/24/2011 PLATE NO. R3-53.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 234	E



R4-1

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 - 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	18	24	1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 1/8	3 1/4	4 3/4	4 7/8	6 1/4	6 1/2													3.0
2S	24	30	1 1/8	3/8	1/2	6	3 1/2	2 1/2	4 3/4	5	7 1/8	7 3/8	9 3/8	9 3/4													5.0
2M	24	30	1 1/8	3/8	1/2	6	3 1/2	2 1/2	4 3/4	5	7 1/8	7 3/8	9 3/8	9 3/4													5.0
3																											
4	36	48	1 5/8	5/8	3/4	8	7	5	6 1/4	6 5/8	9 1/2	9 3/4	12 1/2	13													12.0
5	48	60	2 1/4	3/4	1	10	8	7	7 3/4	8 3/8	11 7/8	12 1/4	15 5/8	16 1/4													20.0

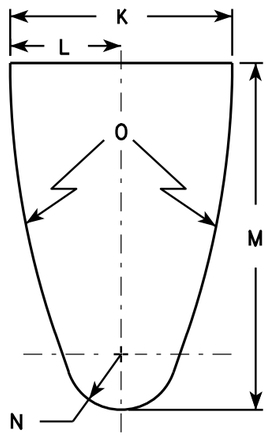
STANDARD SIGN
R4-1

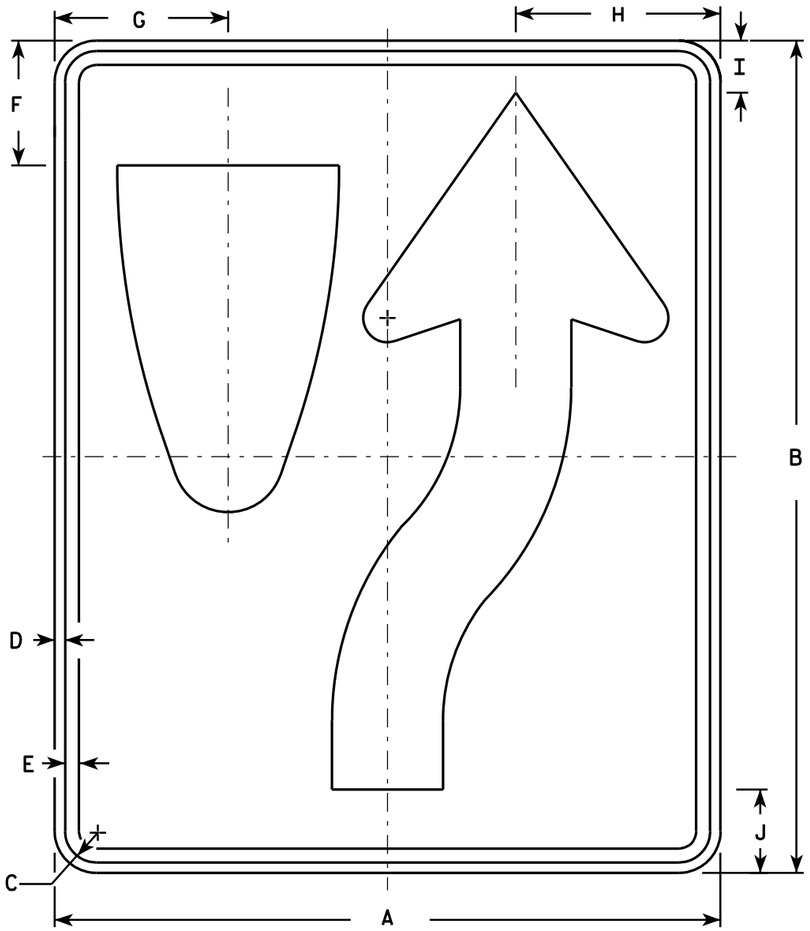
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-1.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 235 | E

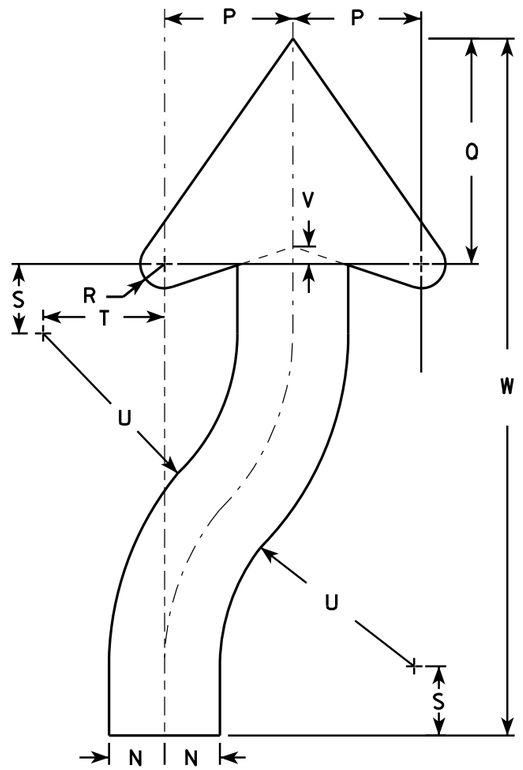




R4-7

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

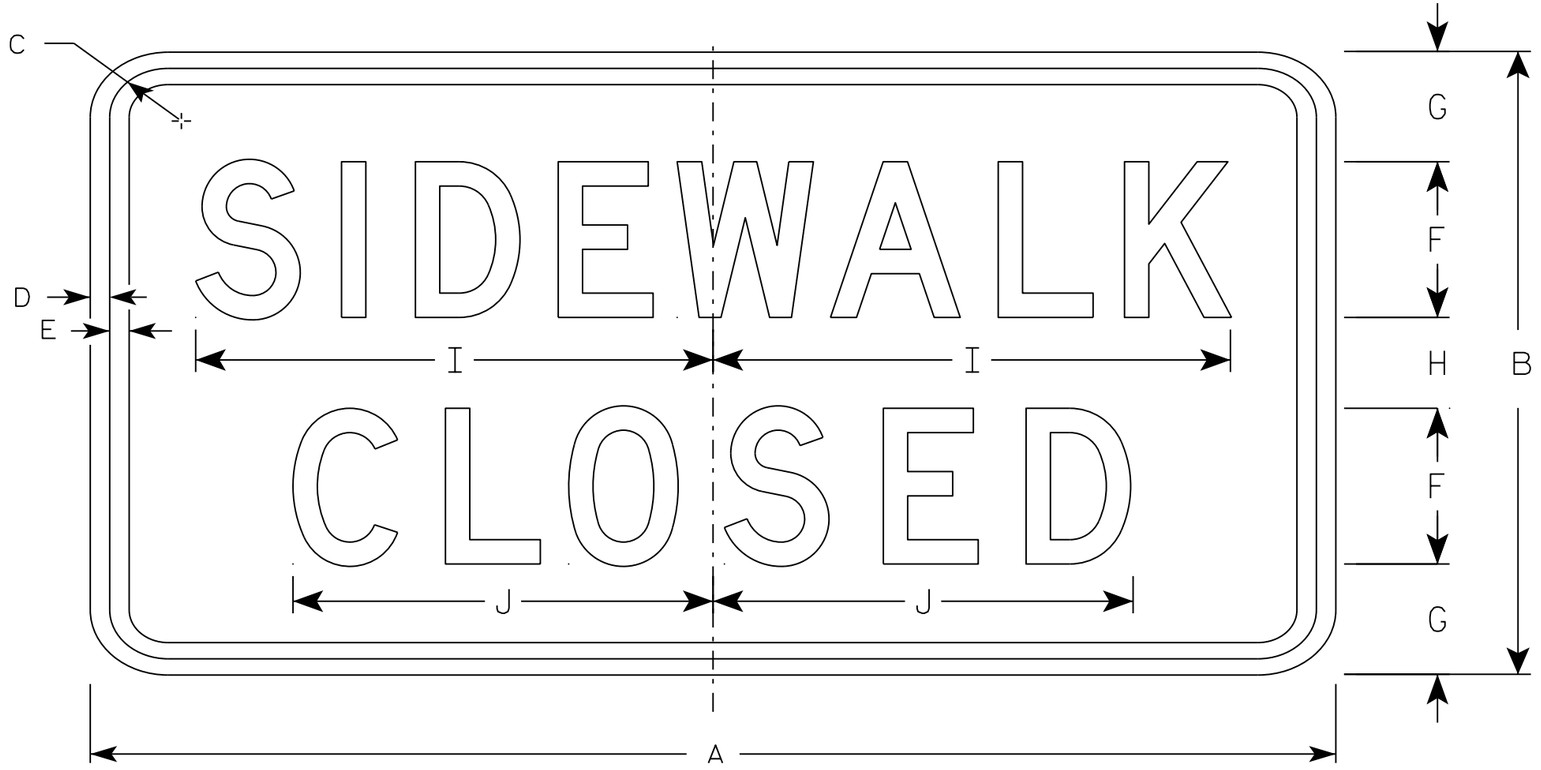
STANDARD SIGN
R4-7 & R4-8

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: 236	E



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

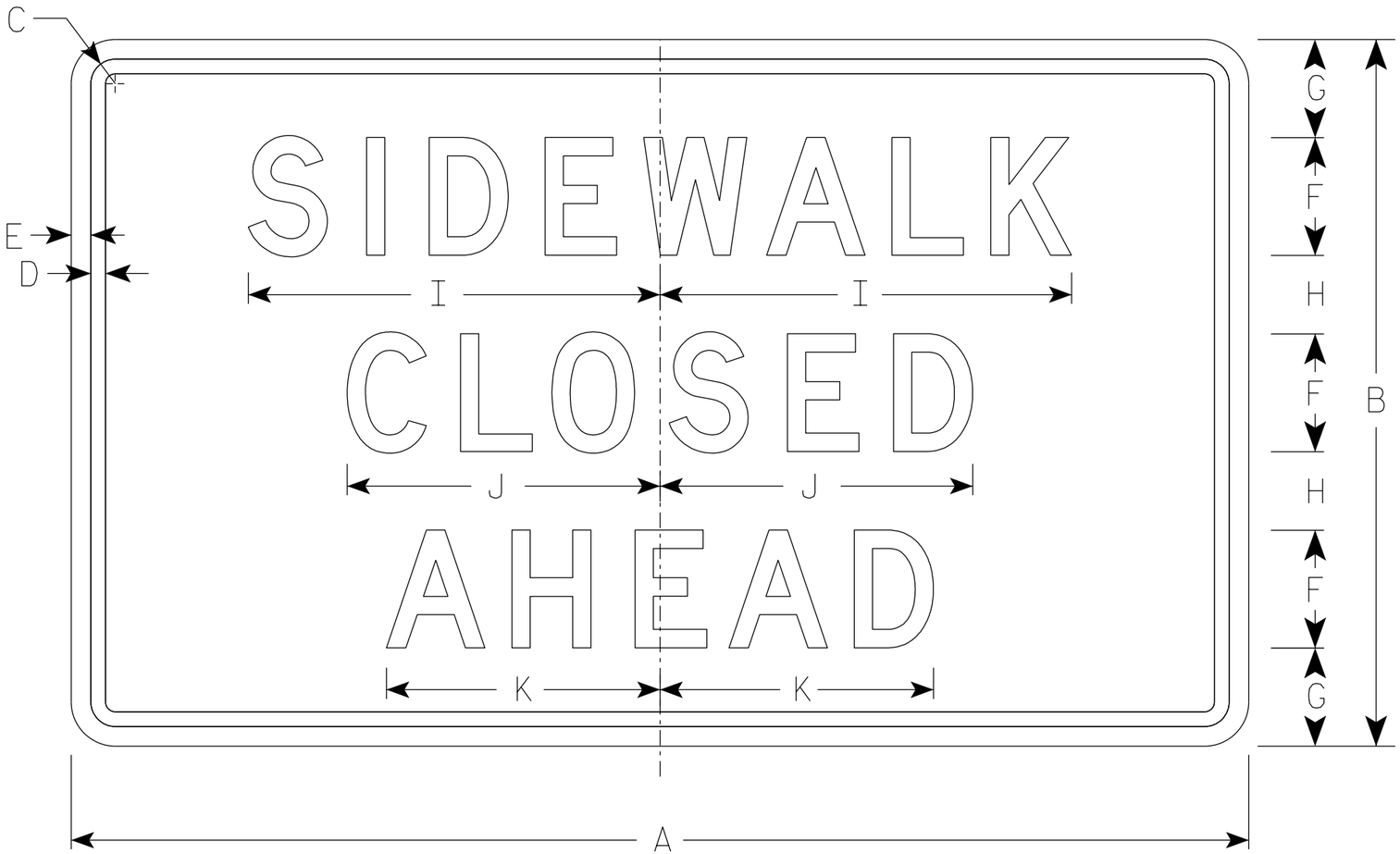
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/11/16 PLATE 237 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																											

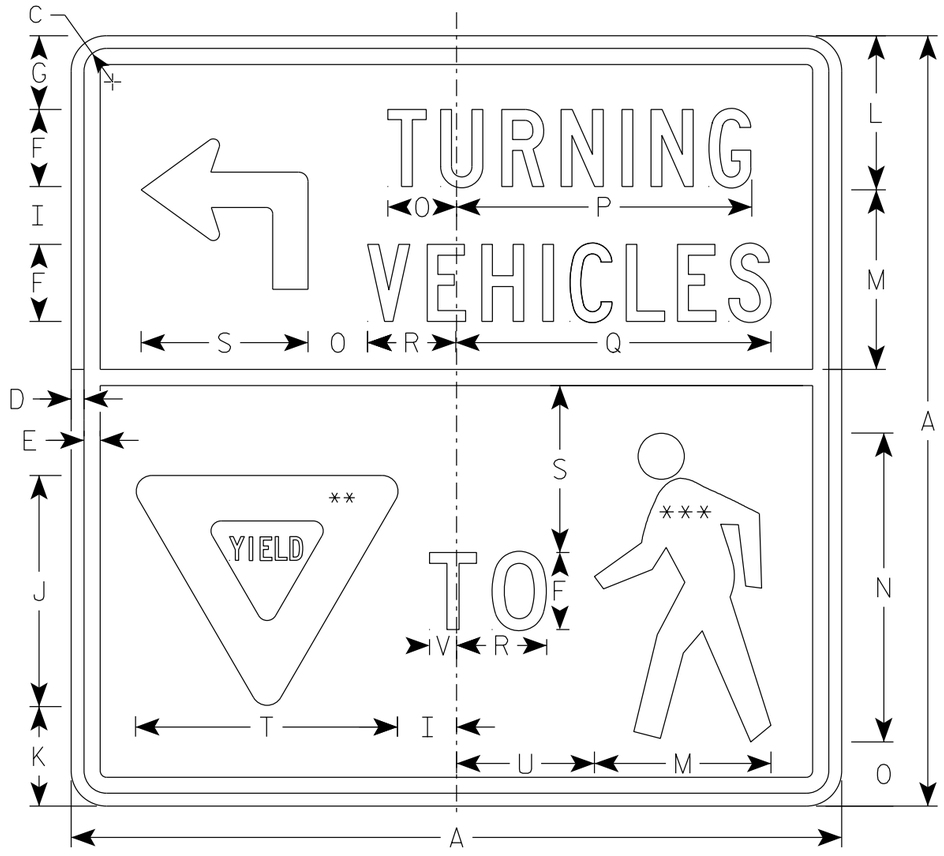
STANDARD SIGN
R9-9A

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: 238 | E



R10-15L

NOTES

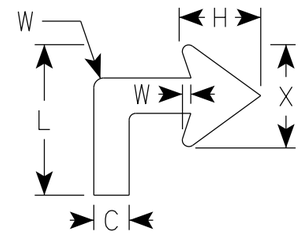
1. Sign is Type II - See Note 2 for Sheeting Type

2. Color:
   - Background - Top Half - Yellow (Type F Reflective)
     Bottom Half - White (Type SH Reflective)
   - Message - Black
   - Yield Symbol - Red on White (Type SH Reflective)
   - Ped Symbol - Black on White (Type SH Reflective)

3. Message Series - C except "TO" Series D

** INSERT R1-2 AND SIZE TO FIT

*** INSERT W11-2 AND SIZE TO FIT



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		1 3/8	1/2	5/8	3	2 7/8	3	2 1/4	9	3 7/8	6	7	12	2 1/2	11 1/2	12 1/4	3 1/2	6 1/2	10 1/4	5 3/8	1	3/8	4			6.25
2M	30		1 3/8	1/2	5/8	3	2 7/8	3	2 1/4	9	3 7/8	6	7	12	2 1/2	11 1/2	12 1/4	3 1/2	6 1/2	10 1/4	5 3/8	1	3/8	4			6.25
3																											
4																											
5																											

STANDARD SIGN
R10-15L

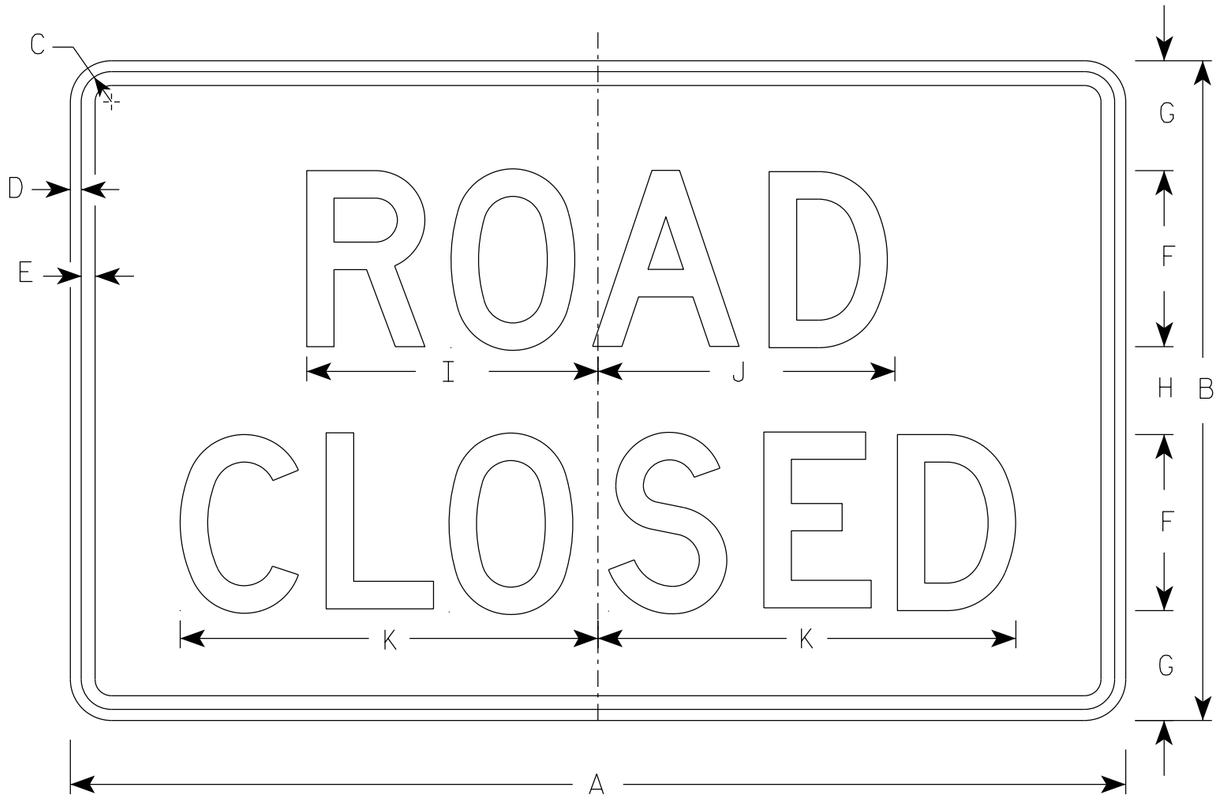
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/28/2020 PLATE NO. R10-15L.2

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

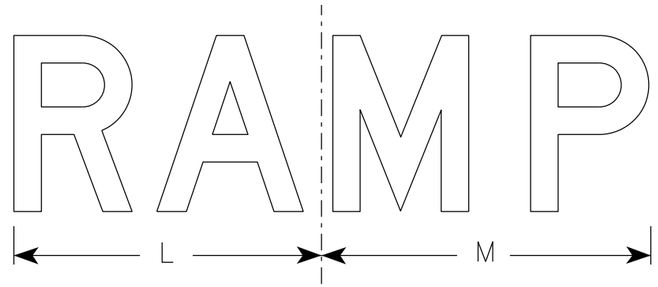
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R1015L.DGN PLOT DATE : 28-JULY-2020 10:45 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



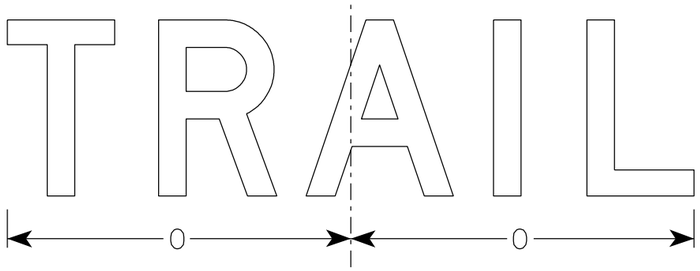
R11-2

NOTES

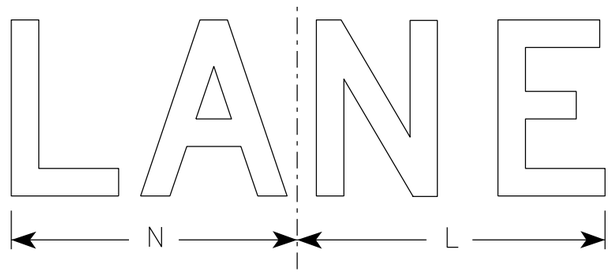
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the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

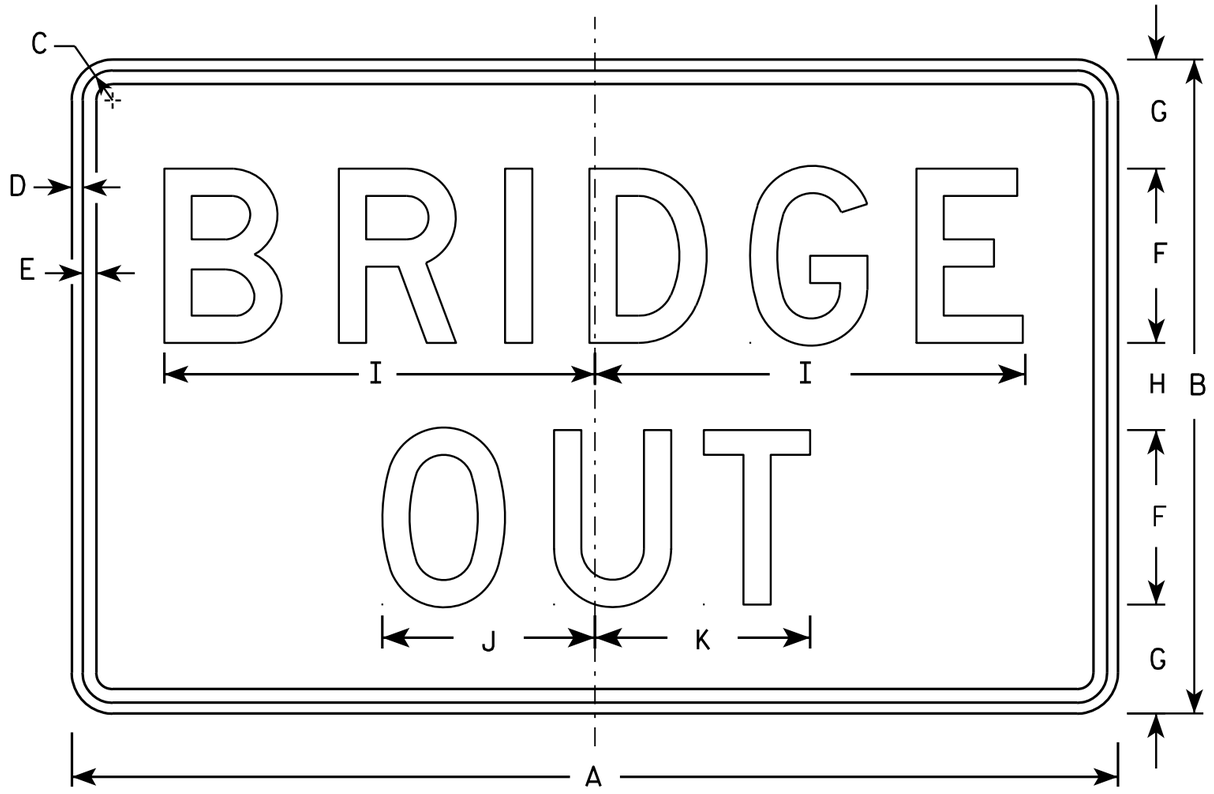
STANDARD SIGN
R11-2

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: 240	E



R11-2B

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.

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	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

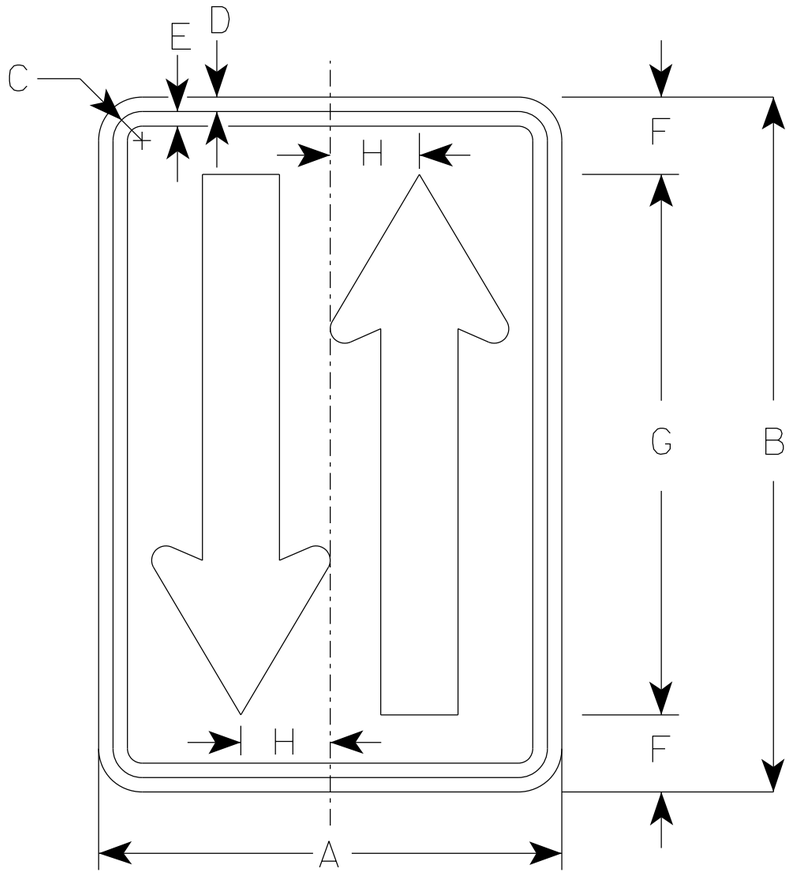
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2B.2

PROJECT NO:

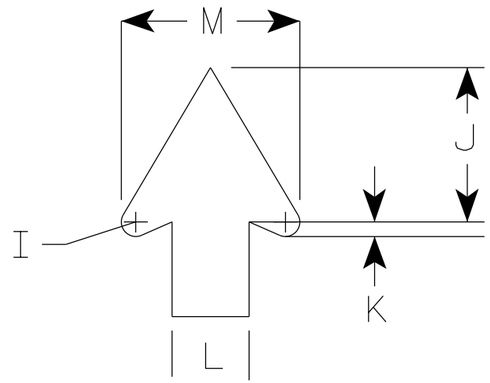
SHEET NO: 241 E



W6-4

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black



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	12	18	1 1/8	3/8	3/8	2	14	2 1/4	3/8	4	1/8	2	4 5/8														1.5
2M	12	18	1 1/8	3/8	3/8	2	14	2 1/4	3/8	4	1/8	2	4 5/8														1.5
3																											
4																											
5																											

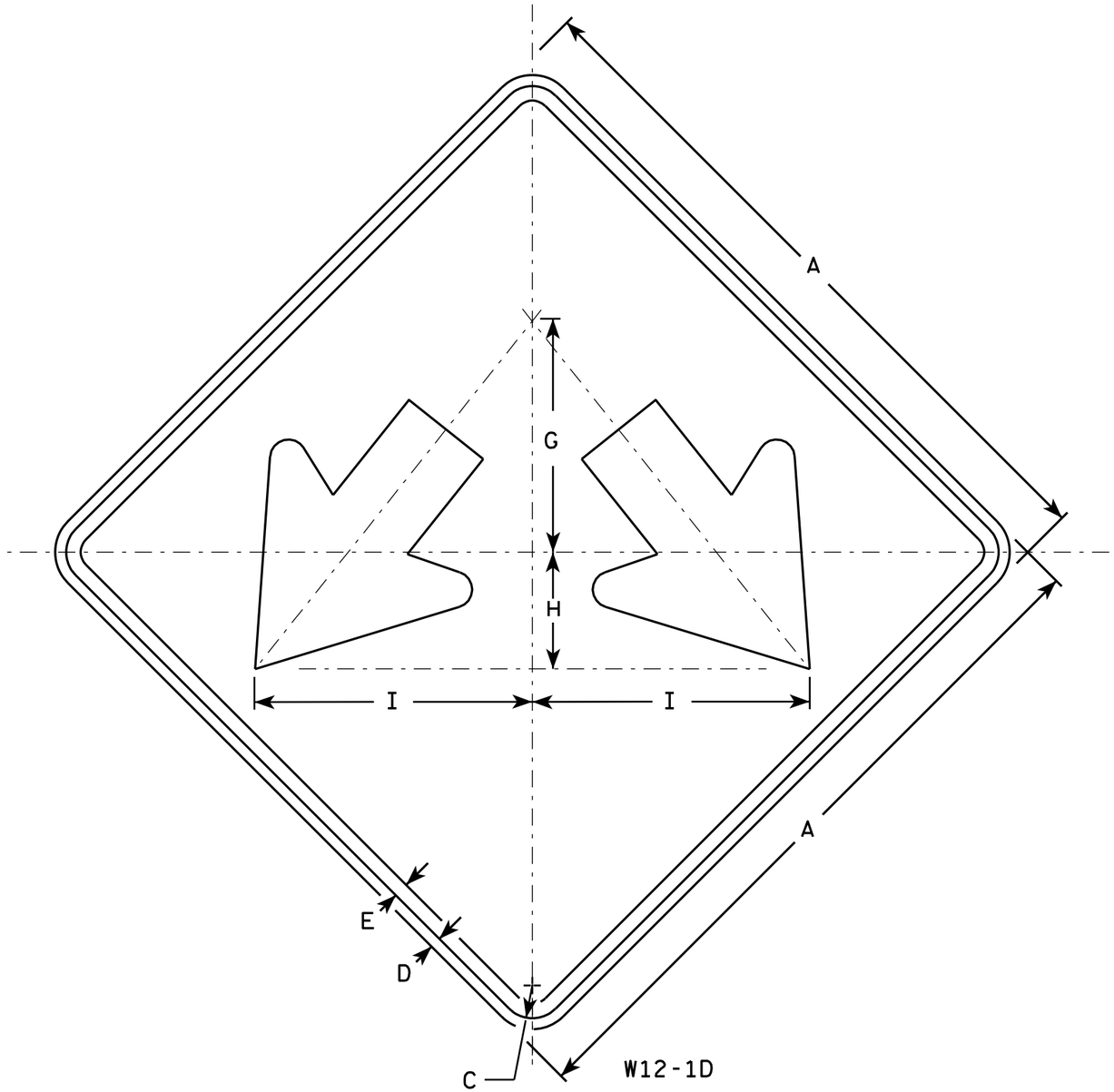
STANDARD SIGN
W6-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

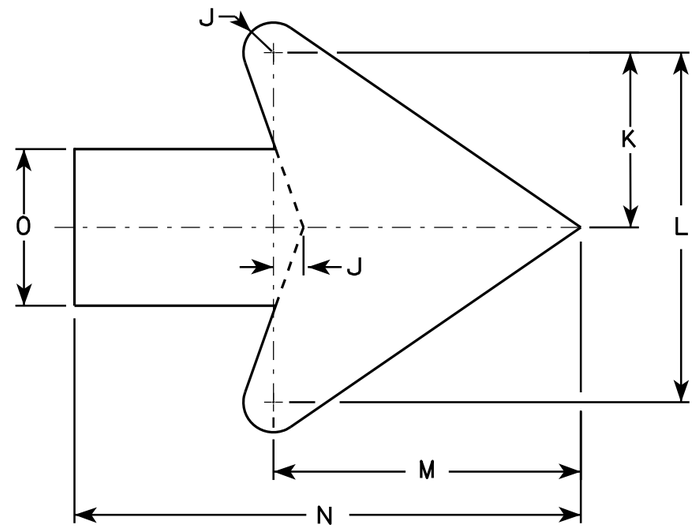
DATE 3/18/2021 PLATE NO. W6-4.1

PROJECT NO:	HWY:	COUNTY:		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 - 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

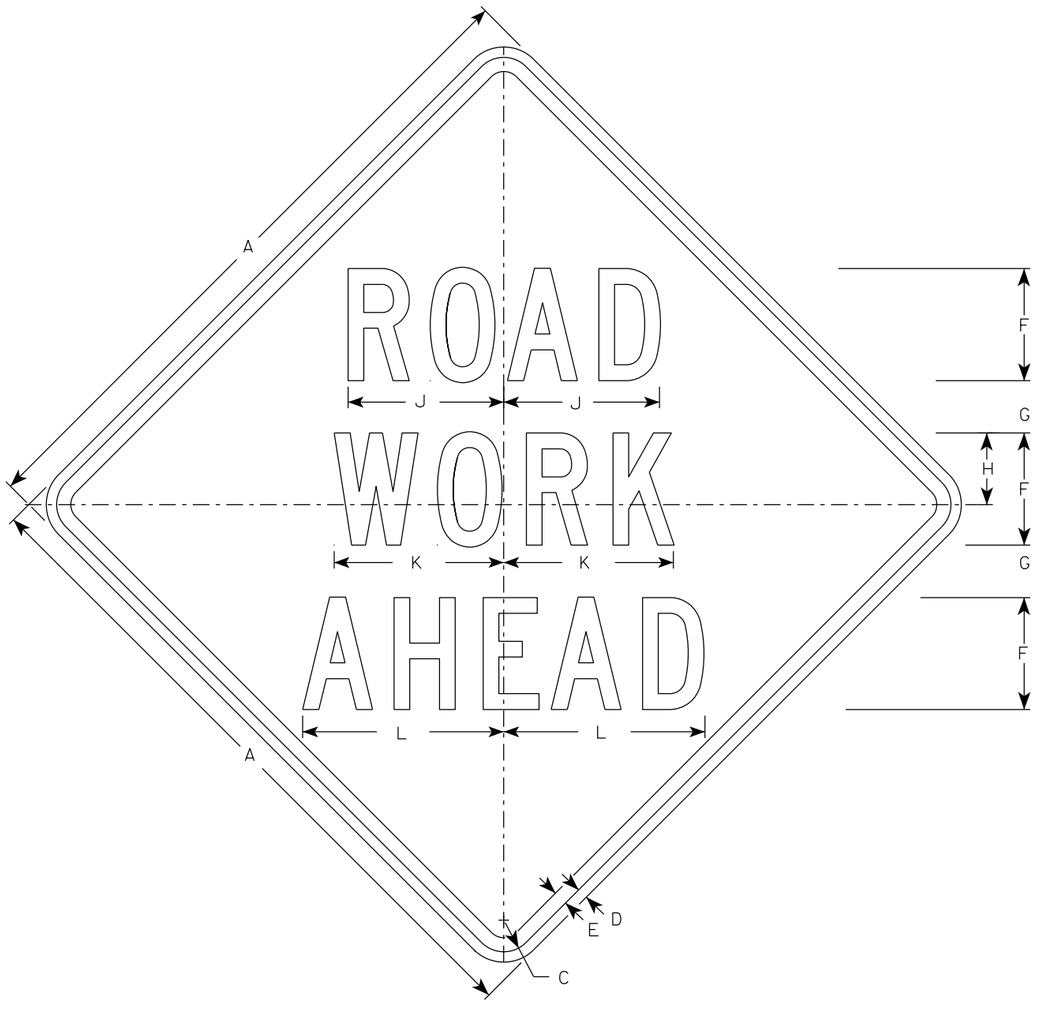
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

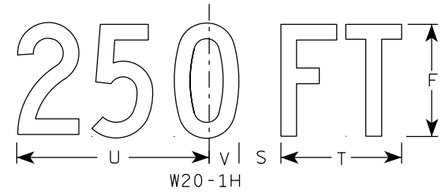
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 243	E

NOTES

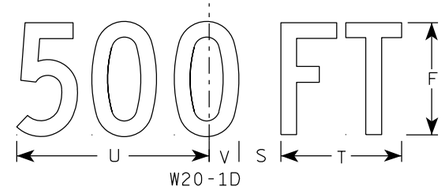
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1A

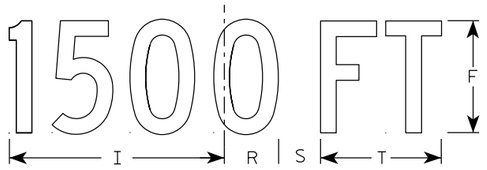


W20-1H

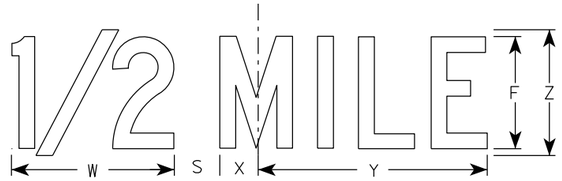


W20-1D

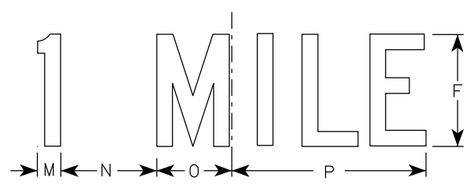
W20-1C



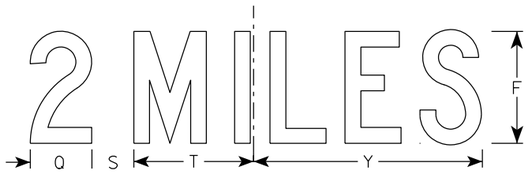
W20-1B



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

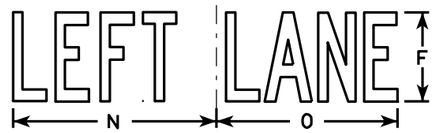
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 25-MARCH-2020 PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

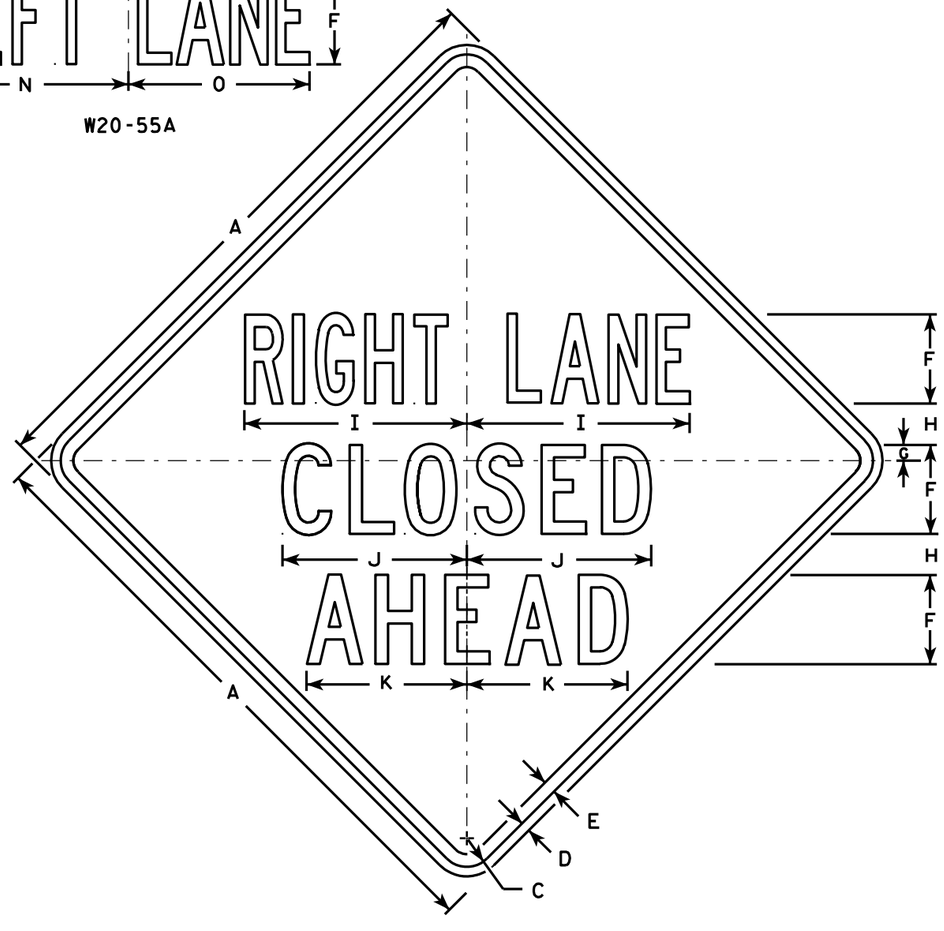
7

7

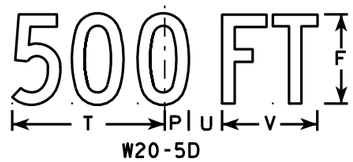
W20-56A



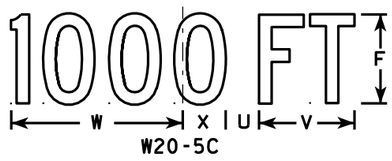
W20-55A



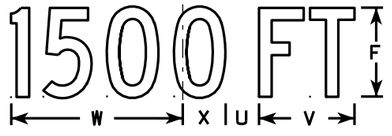
W20-5A



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

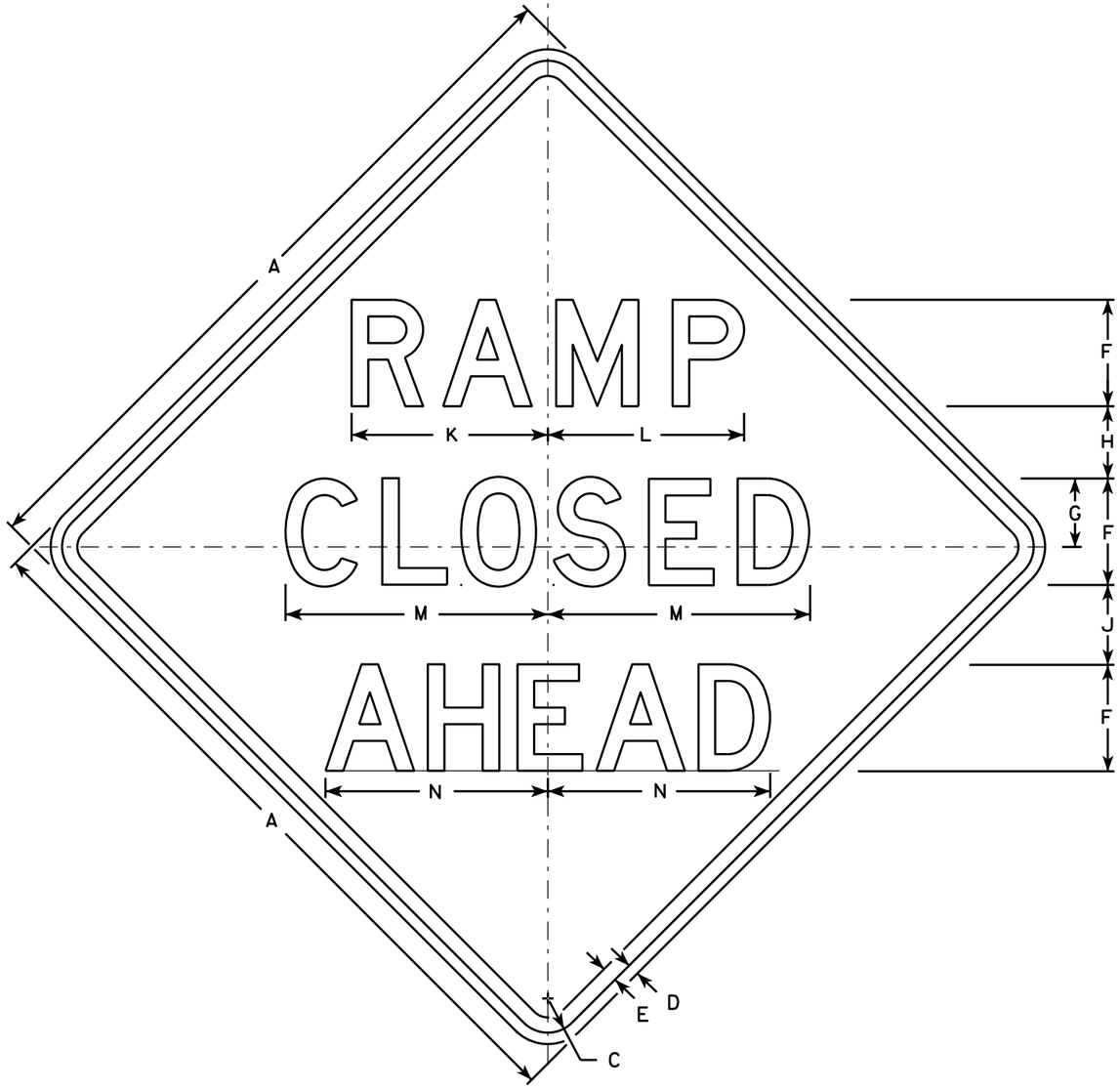
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

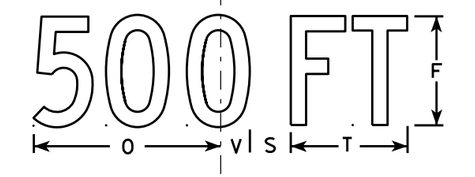
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 245	E

7

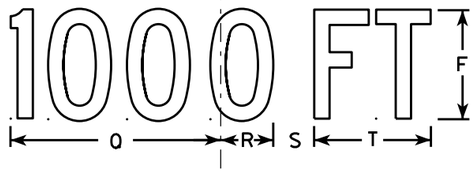
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000
WISDOT/CADDS SHEET 42



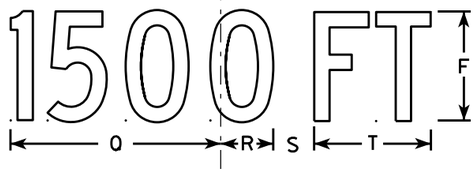
W20-53A



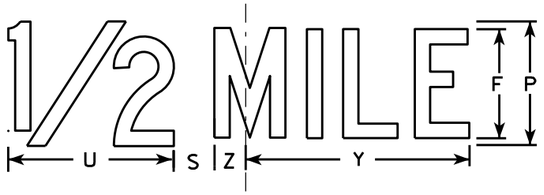
W20-53D



W20-53C



W20-53B



W20-53G

W20-53F

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. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

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

STANDARD SIGN
W20-53A,B,C,D,F,G

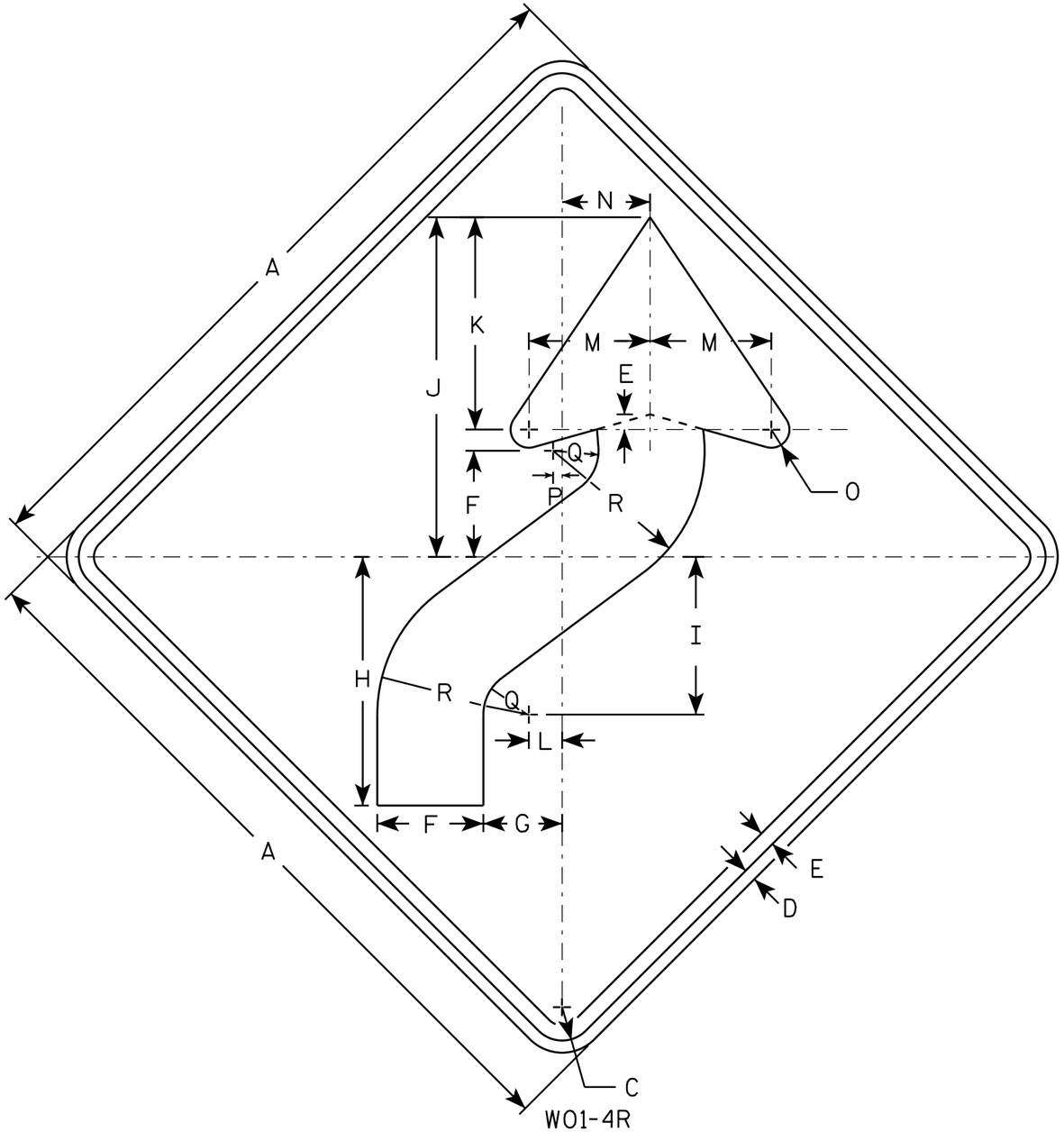
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/27/15 PLATE NO. W20-53.1

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W2053.DGN PLOT DATE : 27-MAY-2015 19:40 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.729210:1.000000
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

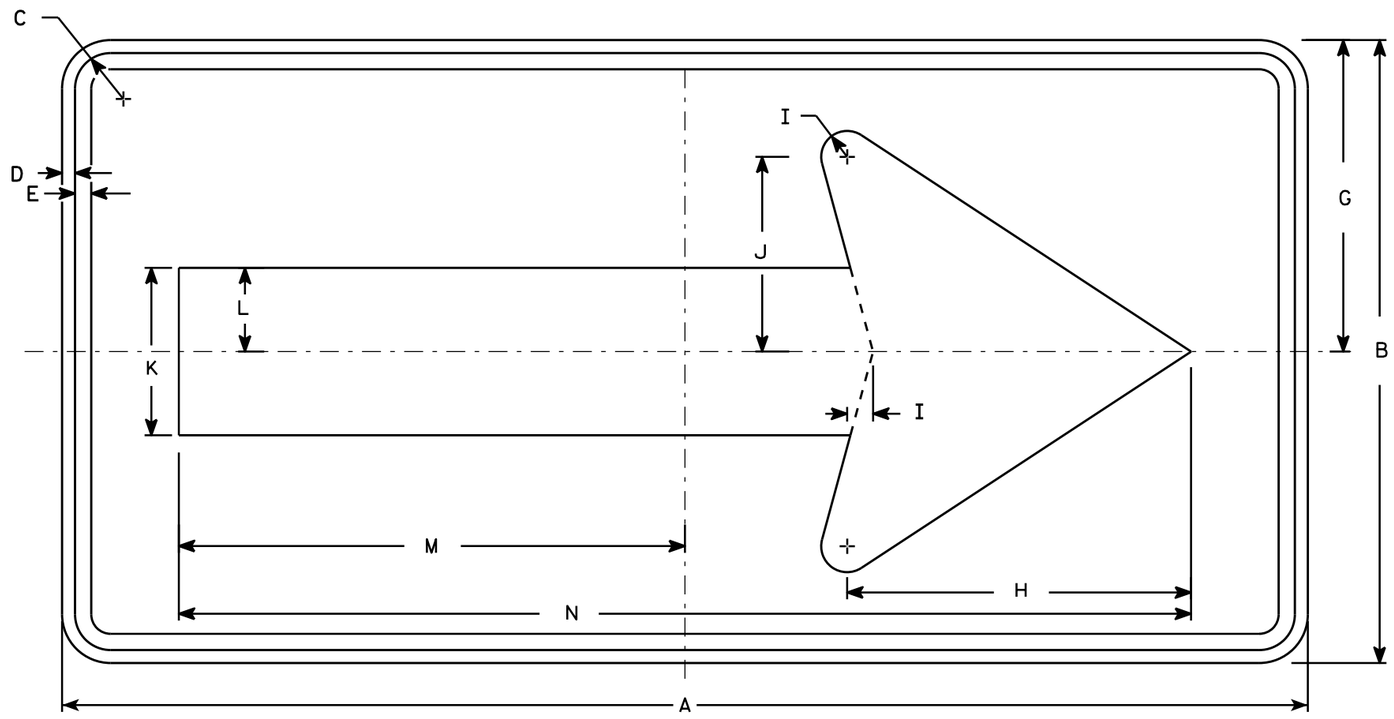
WISCONSIN DEPT OF TRANSPORTATION

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

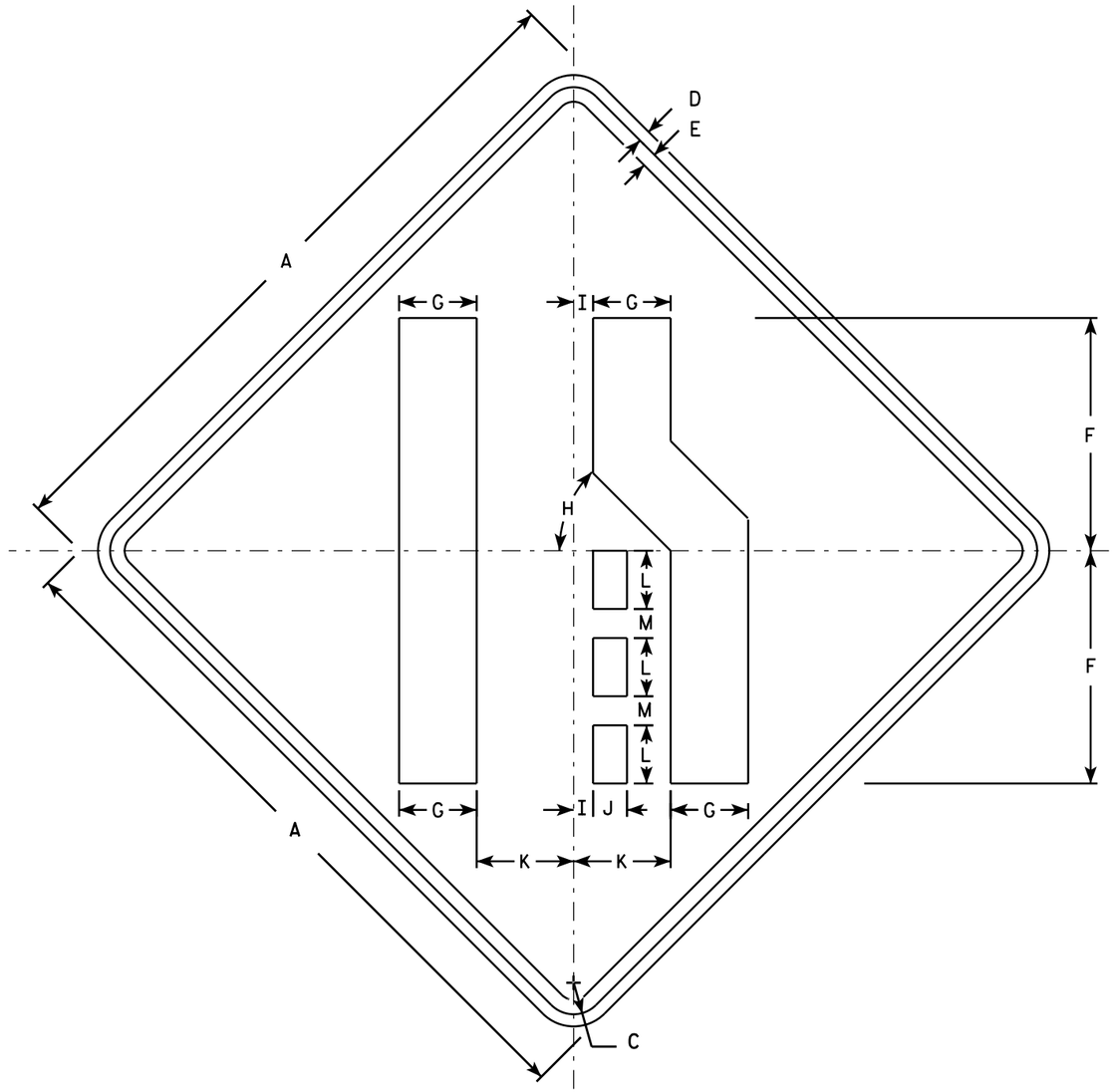
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE 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

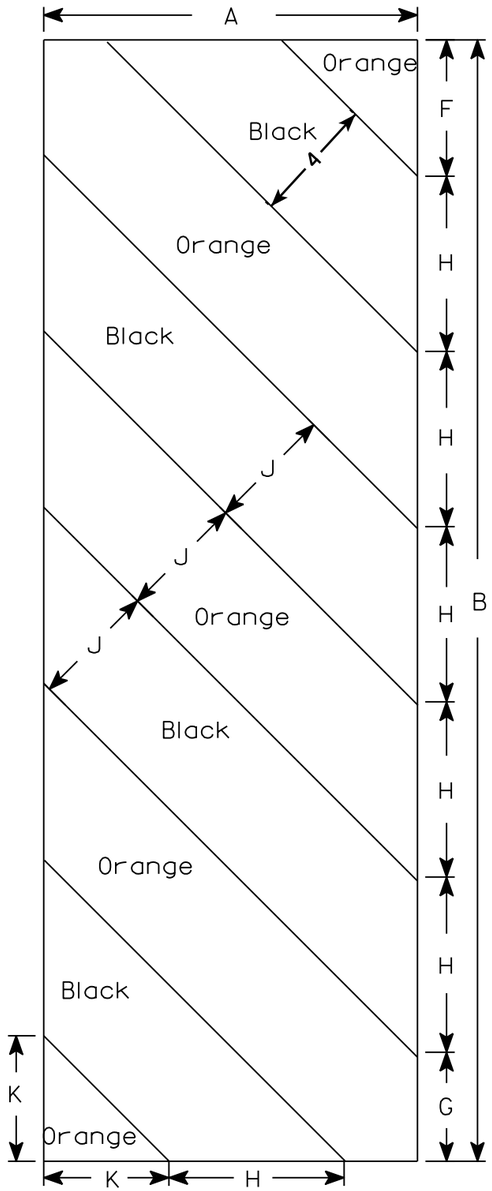
STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

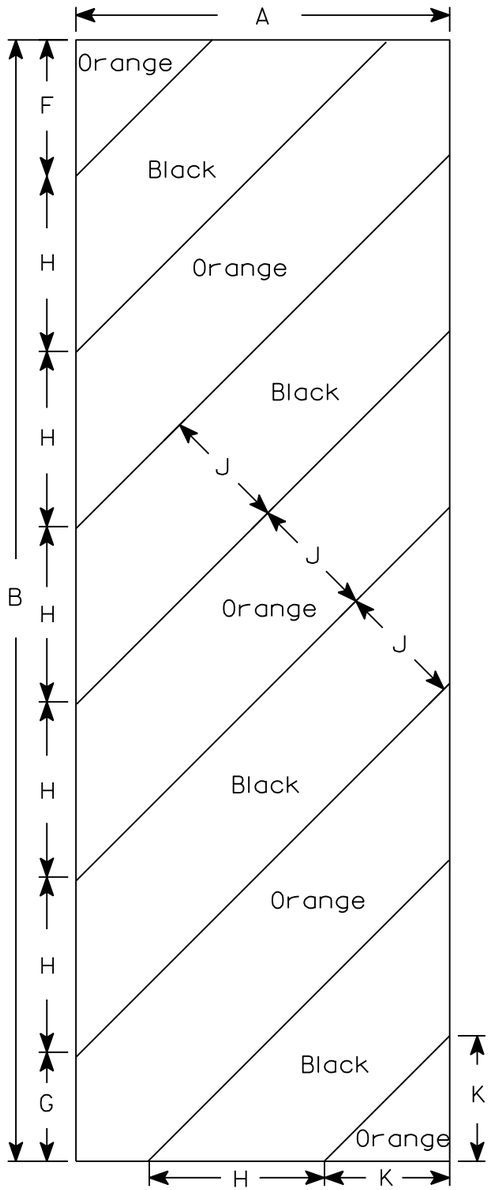
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 249 W04-2.1

PROJECT NO: | SHEET NO: E



W05-52L



W05-52R

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. Alternate colors of stripes as shown.

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	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

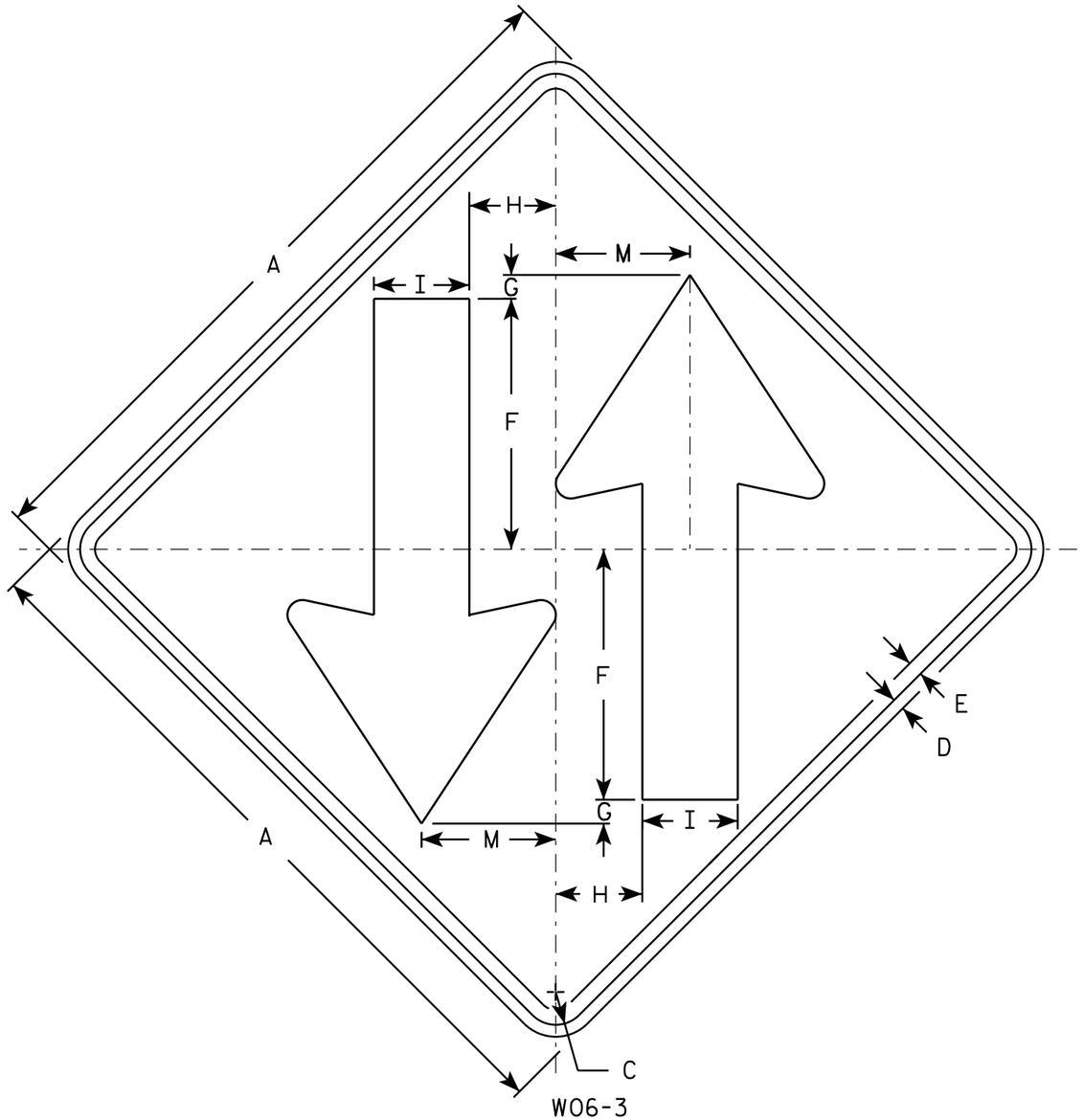
W05-52L & W05-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

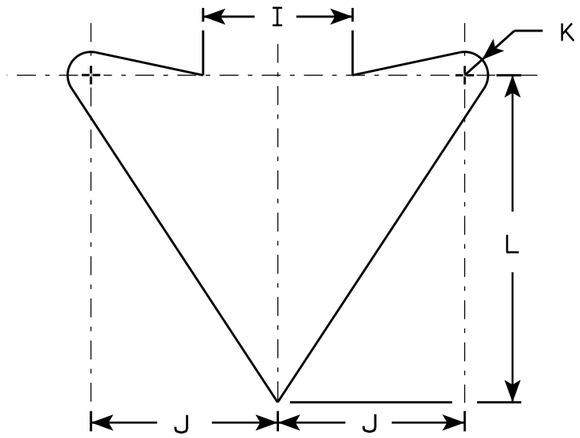
DATE 11/20/13 PLATE W05-52.1

PROJECT NO:	HWY:	COUNTY:		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

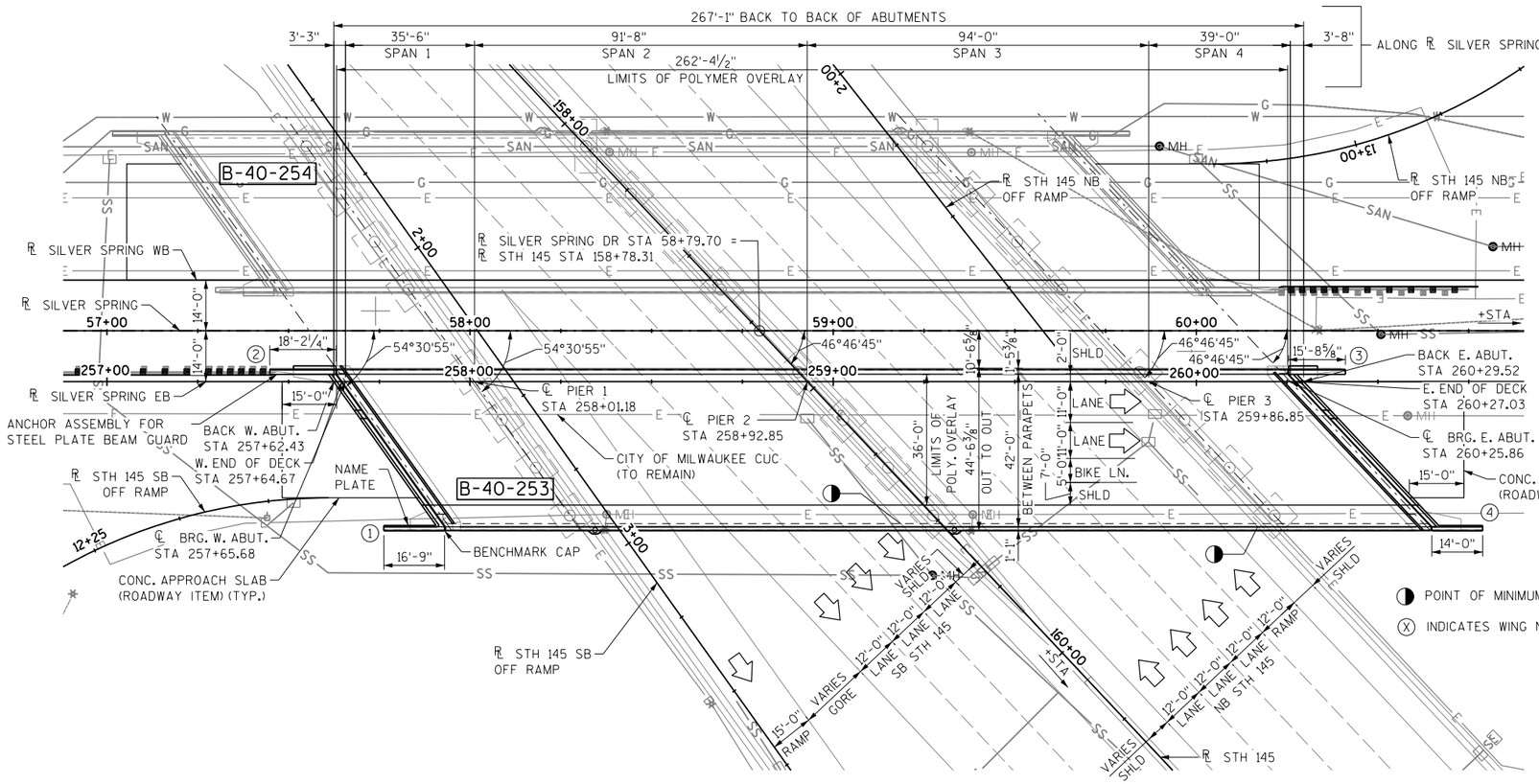
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 251 W06-3.1

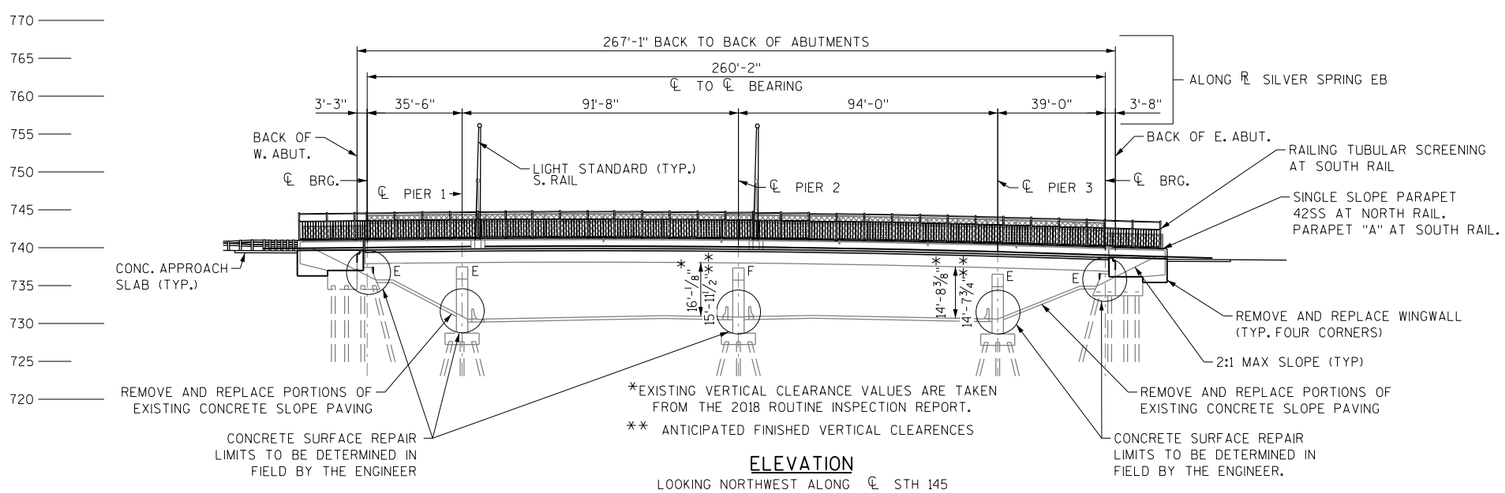
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

STATE PROJECT NUMBER
1360-13-71



PLAN

(4 SPAN - STEEL GIRDERS)
(DECK REPLACEMENT, POLYMER OVERLAY, AND REPAINTING)



ELEVATION

LOOKING NORTHWEST ALONG ℄ STH 145

DESIGN DATA

LIVE LOAD:
DESIGN LOADING HS20
INVENTORY RATING HS16
OPERATING RATING HS30
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV) = 210 KIPS
DESIGN ACCOUNTS FOR FUTURE WEARING SURFACE = 20 PSF

MATERIAL PROPERTIES:
CONCRETE MASONRY
SUBSTRUCTURE ..... f'c = 3,500 psi
SUPERSTRUCTURE ..... f'c = 4,000 psi
BAR STEEL REINFORCEMENT ..... fy = 60,000 psi

EXISTING STRUCTURE

THE EXISTING BRIDGE (B-40-253) IS A 267'-1" LONG, 44'-8" WIDE 4 SPAN STEEL GIRDER BRIDGE SUPPORTED ON REINFORCED CONCRETE PIERS AND ABUTMENTS. THE STRUCTURE BEGINS AT STA 257+62.43 AND ENDS AT STA 260+29.52. PLANS OF THE EXISTING BRIDGE ARE AVAILABLE FOR REVIEW AT WISDOT SE REGION OFFICE, 141 NW BARSTOW ST. WAUKESHA, WI OR THROUGH THE WISDOT STRUCTURES WEBSITE.

BENCHMARKS

NAME	DESCRIPTION	ELEV	STA	OFFSET
525	CP FENO WITH ALUMINUM CAP	734.07	65+63.57	0.85' LT
526	CP FENO WITH ALUMINUM CAP	737.16	48+35.23	5.67' LT

TRAFFIC DATA

W SILVER SPRING DR
AADT (2022) = 24,100
AADT (2042) = 26,400
DESIGN SPEED = 45 MPH.

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
AARON BONK, PE
(608) 261-0261

CONSULTANT:
WILLIAM J. ZIPPEL, PE, SE
ALFRED BENESCH & CO
1300 W CANAL ST, SUITE 150
MILWAUKEE, WI 53233
(414) 308-1321

WISCONSIN
WILLIAM J. ZIPPEL
88868-006
MILWAUKEE, WI
5/4/2023
PROFESSIONAL ENGINEER

LIST OF DRAWINGS:

1. GENERAL PLAN & ELEVATION
2. TYPICAL SECTIONS & QUANTITIES
3. STAGING PLAN & TYP DETAILS
4. SUBSTRUCTURE REMOVALS
5. WEST ABUTMENT MODIFICATIONS
6. WEST ABUTMENT WINGWALL MODIFICATIONS
7. EAST ABUTMENT MODIFICATIONS
8. EAST ABUTMENT WINGWALL MODIFICATIONS
9. BEARING DETAILS
10. HOLD DOWN DEVICE
11. DECK ELEVATIONS
12. SUPERSTRUCTURE REINFORCEMENT
13. SUPERSTRUCTURE DETAILS
14. SINGLE SLOPE PARAPET 42SS
15. VERTICAL FACE PARAPET "A"
16. TUBULAR STEEL RAILING SCREENING
17. STRIP SEAL EXPANSION JOINT
18. COVER PLATE DETAILS
19. LIGHT SUPPORT DETAILS
20. CONDUIT DETAILS
21. SLOPE PAVING DETAILS

NO.	DATE	REVISION	BY

benesch
Alfred Benesch & Company
1300 West Canal Street, Suite 150
Milwaukee, Wisconsin 53233
414-308-1310 Job No. 20288.00

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 05/05/23
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-253

W SILVER SPRING DR EB OVER STH 145

COUNTY	MILWAUKEE
~~TOWN~~/CITY/~~VILLAGE~~	MILWAUKEE
DESIGN SPEC.	REHABILITATION N/A

DESIGNED BY	JAP	DESIGN CK'D.	WJZ	DRAWN BY	NWG	PLANS CK'D.	WJZ

GENERAL PLAN & ELEVATION

SHEET 1 OF 21

252

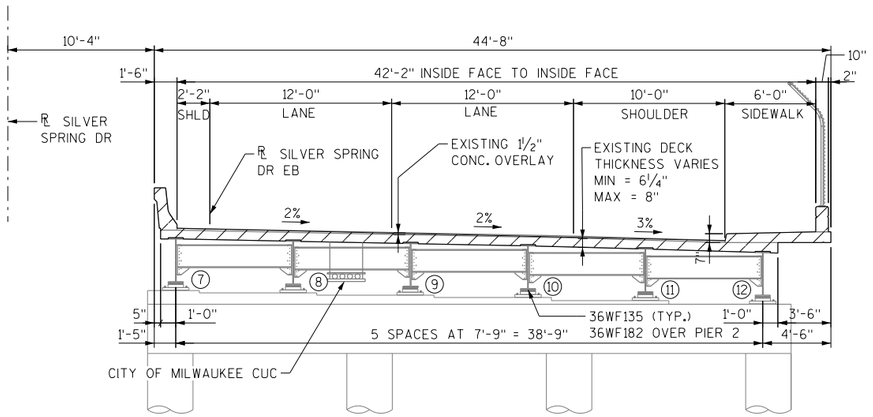
8

8

FILE= B-40-253_10_GP&E.DGN
SCALE = 1:40

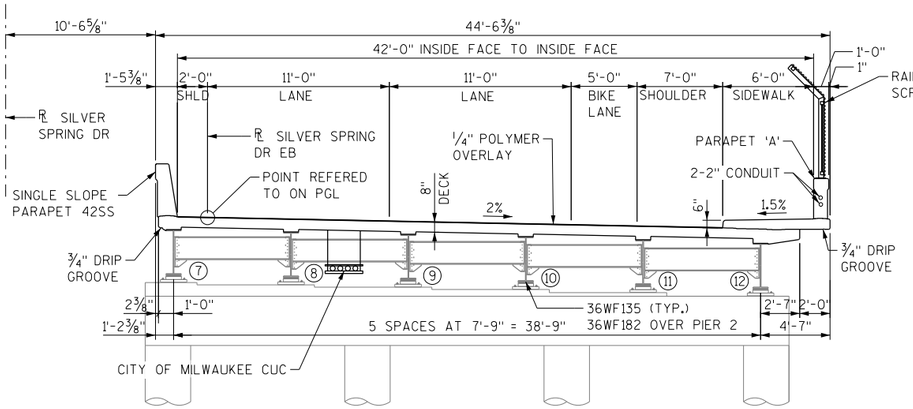
STATE PROJECT NUMBER

1360-13-71



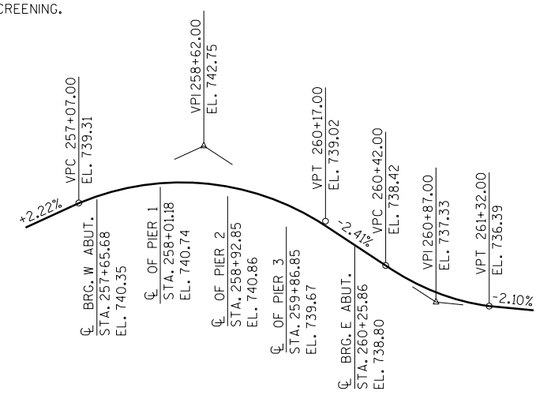
EXISTING TYPICAL SECTION THRU STRUCTURE B-40-253

(LOOKING EAST)



FINISHED TYPICAL SECTION THRU STRUCTURE B-40-253

(LOOKING EAST)



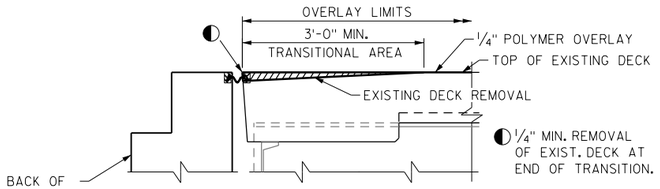
PROFILE GRADE LINE SILVER SPRING EB

GENERAL NOTES

1. DRAWINGS SHALL NOT BE SCALED.
2. EXISTING STRUCTURE DIMENSIONS ARE BASED ON THE ORIGINAL STRUCTURE PLANS.
3. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
4. THE TOP LAYER OF BAR STEEL REINFORCEMENT IN THE DECK SHALL BE PLACED WITH 2½" OF CONCRETE COVER.
5. THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
6. PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND TOP OF THE PARAPETS.
7. BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.
8. ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS NOTED OTHERWISE.
9. ALL STATIONS AND ELEVATIONS ARE IN FEET.
10. THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE DECK REPLACEMENT DETAILS.
11. THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.
12. UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.
13. THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR, 1964.
14. VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.
15. THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-40-253" SHALL BE THE EXISTING GROUNDLINE.
16. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
17. APPLY PROTECTIVE SURFACE TREATMENT TO THE DECK AND SIDEWALK ON THE BRIDGE.
18. ALL CONCRETE REMOVAL SHALL BE DEFINED BY A ½" DEEP SAW CUT UNLESS SHOWN OR NOTED OTHERWISE.
19. AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.
20. THE COLOR OF THE FINISH EPOXY TOP COAT FOR THE GIRDERS AND CONNECTING STRUCTURAL STEEL SHALL BE BLUE (AMS COLOR NO. 25240).
21. CLEAN AND PAINT BEARINGS AT PIERS. COST IS INCLUDED IN THE RELEVANT STRUCTURE PAINTING PAY ITEMS.
22. SHOT BLASTING, DECK SURFACE PREPARATIONS, AND TRANSITIONAL AREAS ARE INCLUDED IN THE BID ITEM "POLYMER OVERLAY".
23. SPECIFIC LOCATIONS OF CONCRETE SURFACE REPAIR AT THE PIERS AND ABUTMENTS ARE TO BE DETERMINED BY THE FIELD ENGINEER.
24. CONCRETE INSERTS TO BE FURNISHED BY THE UTILITY COMPANY AND PLACED BY THE CONTRACTOR. COST OF PLACING INSERTS SHALL BE INCLUDED IN THE BID PRICE FOR CONCRETE MASONRY.

TOTAL ESTIMATE OF QUANTITIES

BID NO.	BID ITEMS	UNIT	W ABUT	PIER 1	PIER 2	PIER 3	E ABUT	SUPER	TOTAL
203.0220	REMOVING STRUCTURE B-40-253	EACH							1
204.0175	REMOVING CONCRETE SLOPE PAVING	SY					58		58
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-40-253	EACH							1
210.1500	BACKFILL STRUCTURE TYPE A	TON	116				110		226
502.0100	CONCRETE MASONRY BRIDGES	CY	30.7				28.2	418.8	477.7
502.3101	EXPANSION DEVICE	LF	52				58		110
502.3200	PROTECTIVE SURFACE TREATMENT	SY						1065	1065
502.3210	PIGMENTED SURFACE SEALER	SY						269	269
502.4112	ADHESIVE ANCHORS 1 1/2-INCH	EACH	24				24		48
502.4205	ADHESIVE ANCHORS NO.5 BAR	EACH	250				248		498
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	4431				4251	101005	109687
506.6000	BEARING ASSEMBLIES EXPANSION B-40-253	EACH	6				6		12
506.7050.S	REMOVING BEARINGS B-40-253	EACH	6				6		12
509.1500	CONCRETE SURFACE REPAIR	SF		35	30	50			115
509.5100.S	POLYMER OVERLAY	SY						1065	1065
513.4091	RAILING TUBULAR SCREENING	LF						303	303
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	14				15		29
517.0901.S	PREPARATION AND COATING OF TOP FLANGES B-40-253	EACH						1	1
517.1801.S	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-253	EACH						1	1
517.4501.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-40-253	EACH						1	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH						1	1
531.8990	ANCHOR ASSEMBLIES POLES ON STRUCTURE	EACH						2	2
604.0400	SLOPE PAVING CONCRETE	SY	28				58		86
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	210				140		350
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1						1
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	46				52		98
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF						24	24
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF						584	584
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH						2	2
NON-BID ITEMS	PREFORMED JOINT FILLER - ½", ¾"								
	NON-BITUMINOUS JOINT SEALER								
	NAME PLATE								



SECTION THRU ABUTMENT TRANSITIONAL AREA ON DECK AT EXPANSION JOINT

(REMOVAL AND OVERLAY THICKNESS NOT TO SCALE)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

DRAWN BY NWG | PLANS CK'D. WJZ

TYPICAL SECTIONS & QUANTITIES

SHEET 2 OF 21

253

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8

FILE= B-40-253_20_TYP&QTY.DGN
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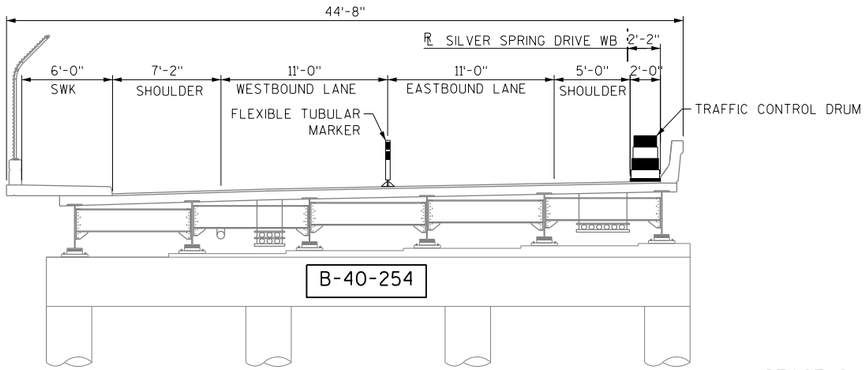
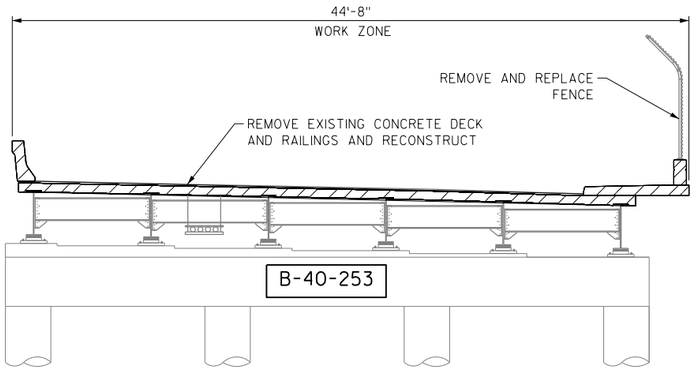
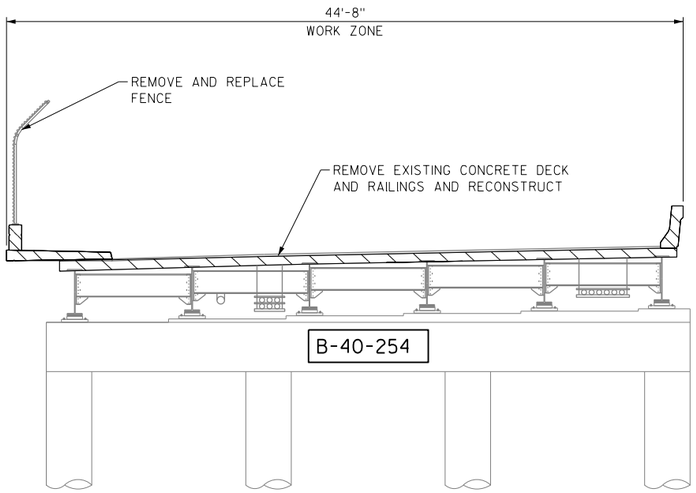
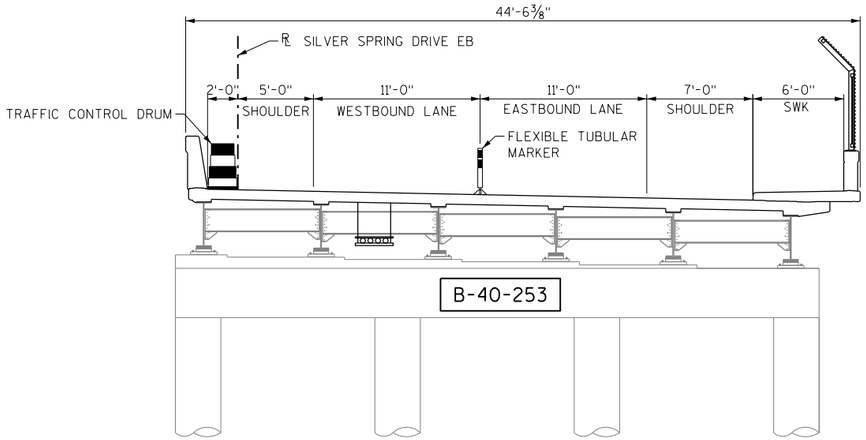
STATE PROJECT NUMBER
1360-13-71



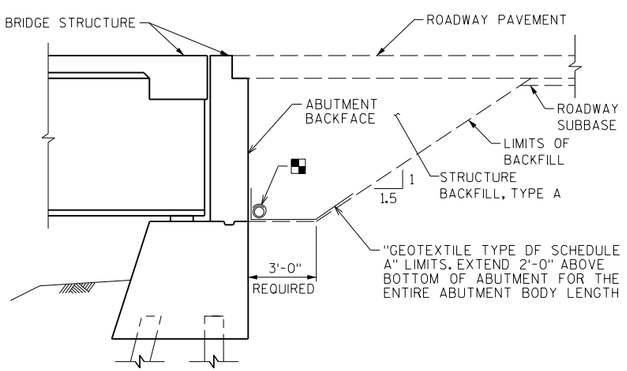


STAGE 2: SECTION
(LOOKING EAST)





STAGE 3: SECTION
(LOOKING EAST)



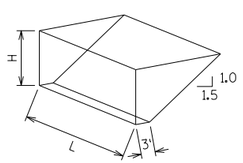
ABUTMENT BACKFILL NOTES

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-40-253" SHALL BE THE EXISTING GROUNDLINE.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY CONTRACTOR.

AT THE BACKFACE 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.

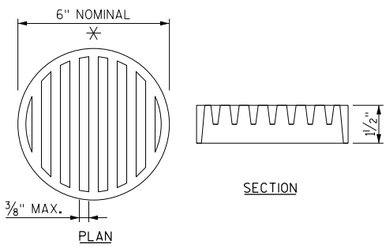
■ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.



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)

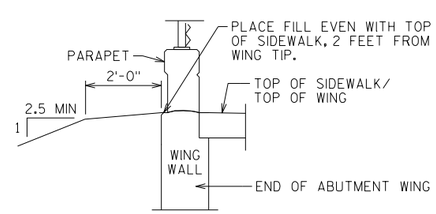


RODENT SHIELD DETAIL

⚹ 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.



TYPICAL FILL SECTION AT WING TIPS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

DRAWN BY NWG | PLANS CK'D. WJZ

STAGING PLAN & TYP DETAILS

SHEET 3 OF 21

254

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8

FILE= B-40-253_30_STAGING.DGN
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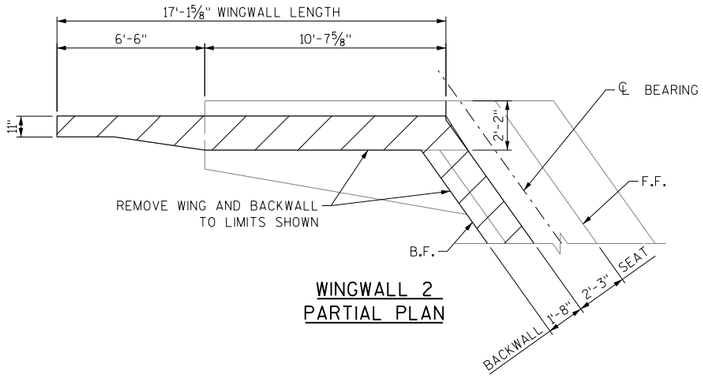
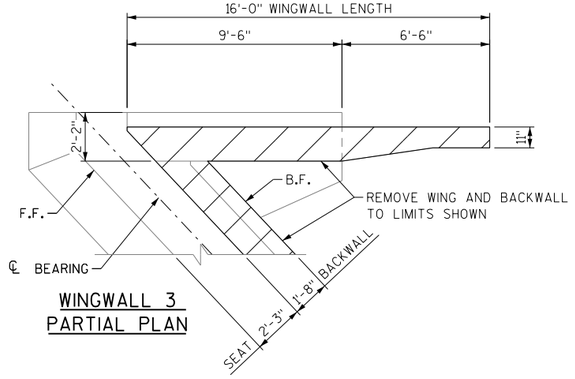
STATE PROJECT NUMBER

1360-13-71

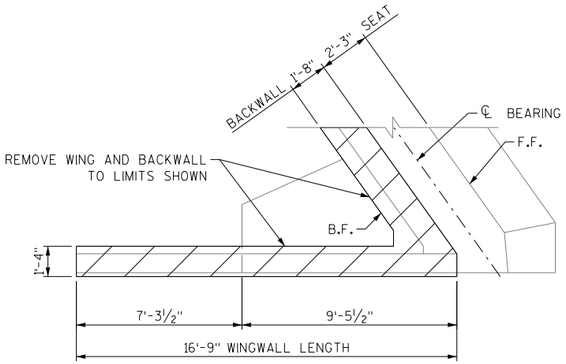


WINGWALL 2
PARTIAL PLAN

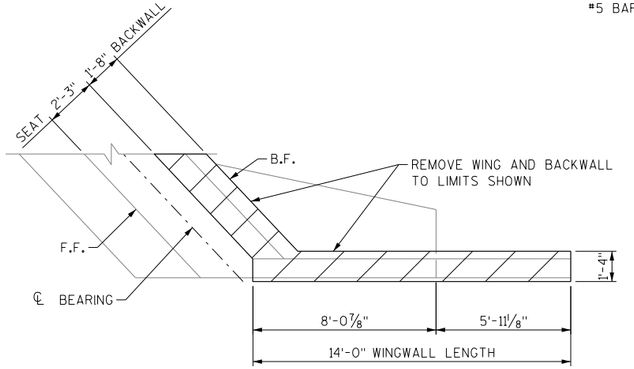


WINGWALL 3
PARTIAL PLAN

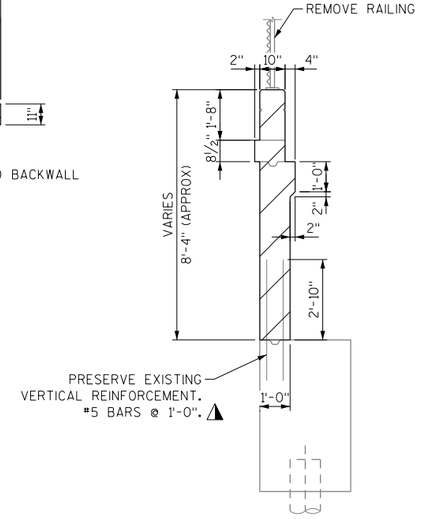
N



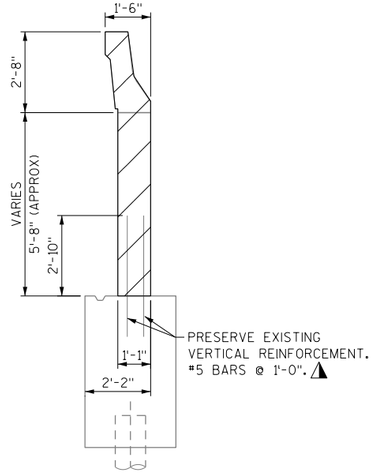
WINGWALL 1
PARTIAL PLAN



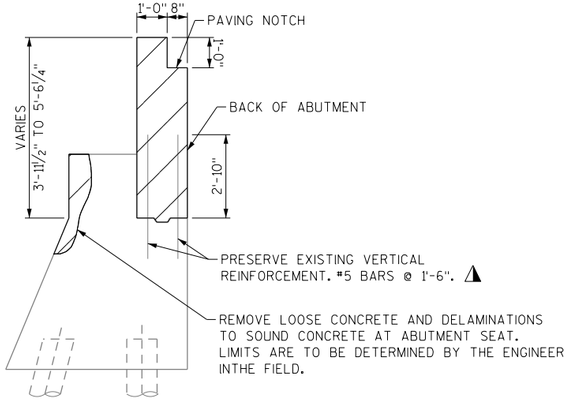
WINGWALL 4
PARTIAL PLAN



SECTION THROUGH
WINGWALLS 1 & 4



SECTION THROUGH
WINGWALLS 2 & 3



SECTION THROUGH
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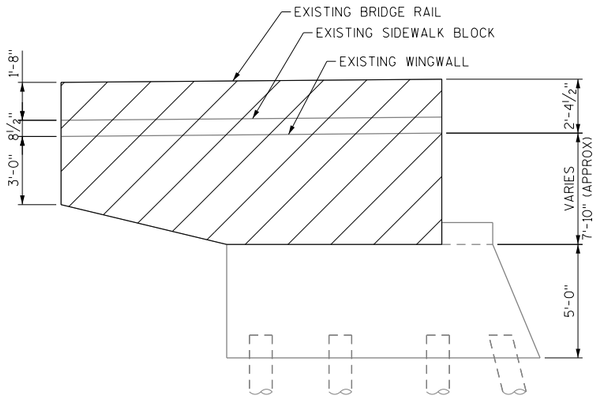
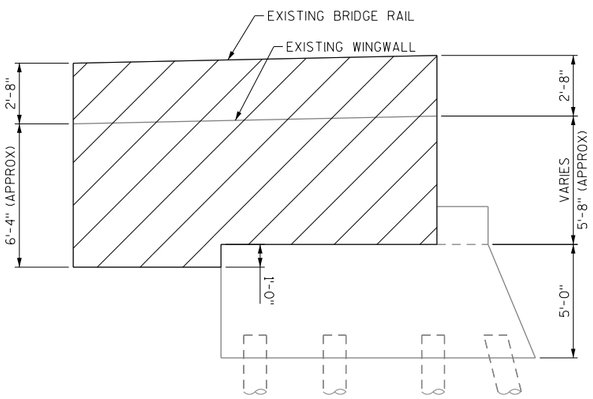


WINGWALL 1 ELEVATION
(WINGWALL 4 IS SIMILAR)



WINGWALL 3 ELEVATION
(WINGWALL 2 IS SIMILAR)

LEGEND

◭ CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW LIMITS SHOWN. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED BY THE ENGINEER.

HATCHED AREAS INDICATE CONCRETE REMOVALS

F.F. - FRONT FACE

B.F. - BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

DRAWN BY NWG | PLANS CK'D. WJZ

SUBSTRUCTURE REMOVALS

SHEET 4 OF 21

255

8

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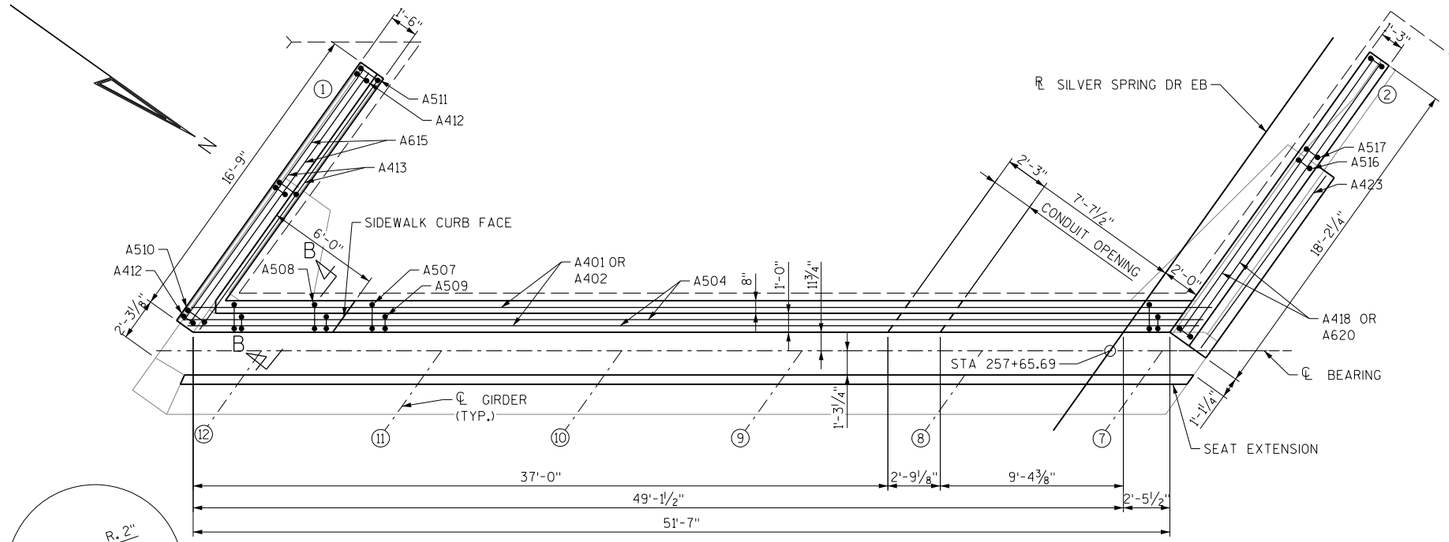
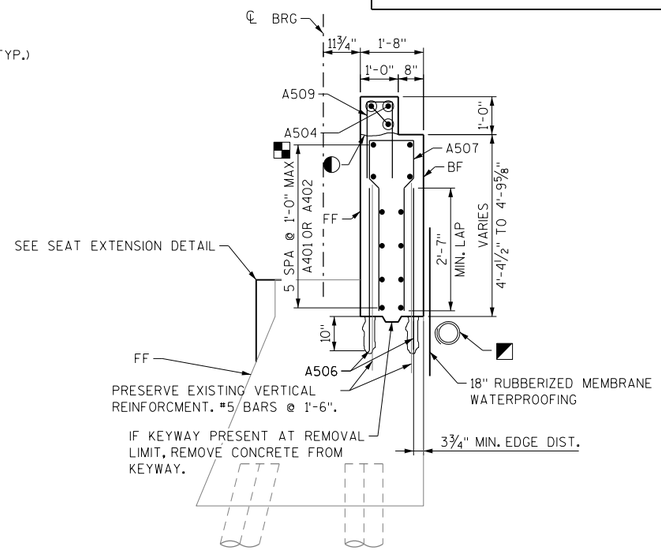
FILE= B-40-253_40_REMOVALS.DGN
SCALE = 1:10

STATE PROJECT NUMBER

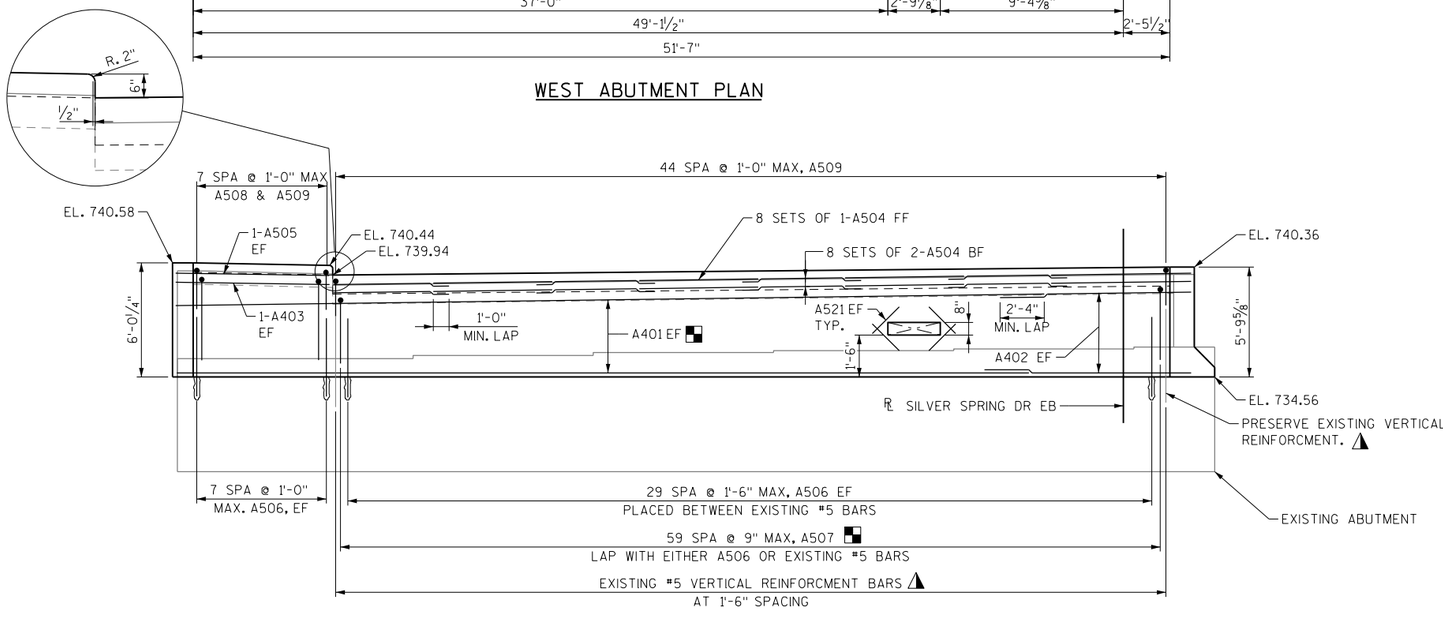
1360-13-71



WEST ABUTMENT PLAN

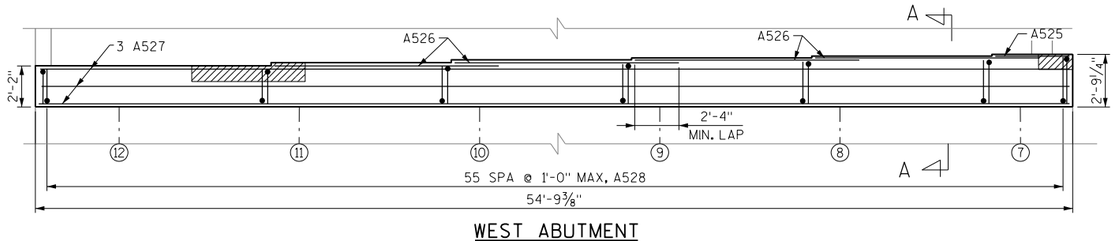


TYPICAL ABUTMENT SECTION

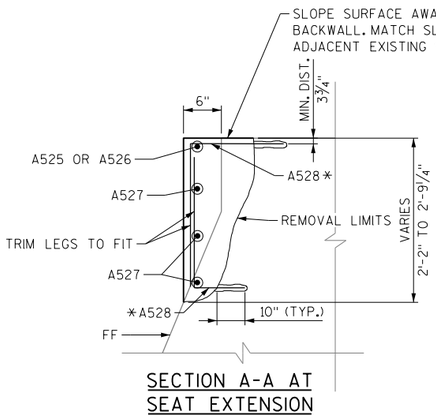


WEST ABUTMENT BACKWALL ELEVATION

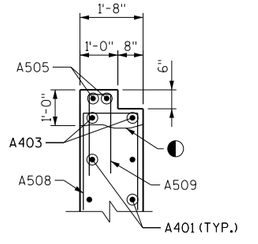
(LOOKING WEST, WINGWALLS NOT SHOWN FOR CLARITY)



WEST ABUTMENT SEAT ELEVATION



SECTION A-A AT SEAT EXTENSION



SECTION B-B AT SIDEWALK NOTCH

PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN.

CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH. POUR CONCRETE ABOVE THIS JOINT AFTER DECK IS IN PLACE.

FIELD CUT OR SHIFT TO MISS UTILITY BLOCK OUT AS DIRECTED IN THE FIELD BY THE ENGINEER.

CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW REMOVAL LIMITS SHOWN ON REMOVAL DRAWING. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED BY THE ENGINEER.

HATCHED AREAS INDICATE UNSOUND CONRETE TO BE REMOVED BEFORE SEAT EXTENSION

* A528-TRIM ENDS OF ADHESIVE ANCHORS AS DIRECTED IN FIELD BY ENGINEER

LEGEND

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

DRAWN BY NWG | PLANS CK'D. WJZ

WEST ABUTMENT MODIFICATIONS

SHEET 5 OF 21

256

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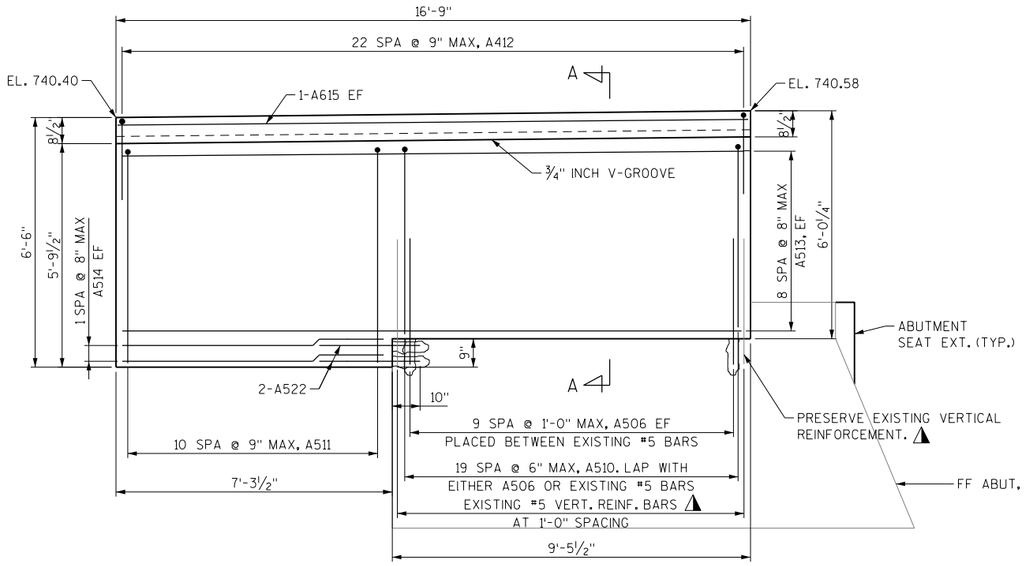
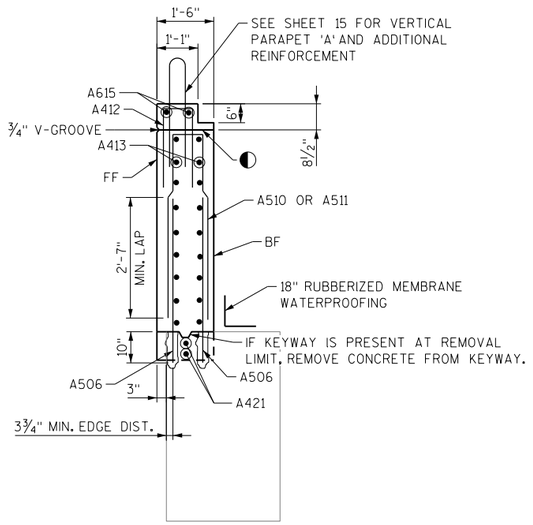
STATE PROJECT NUMBER

1360-13-71



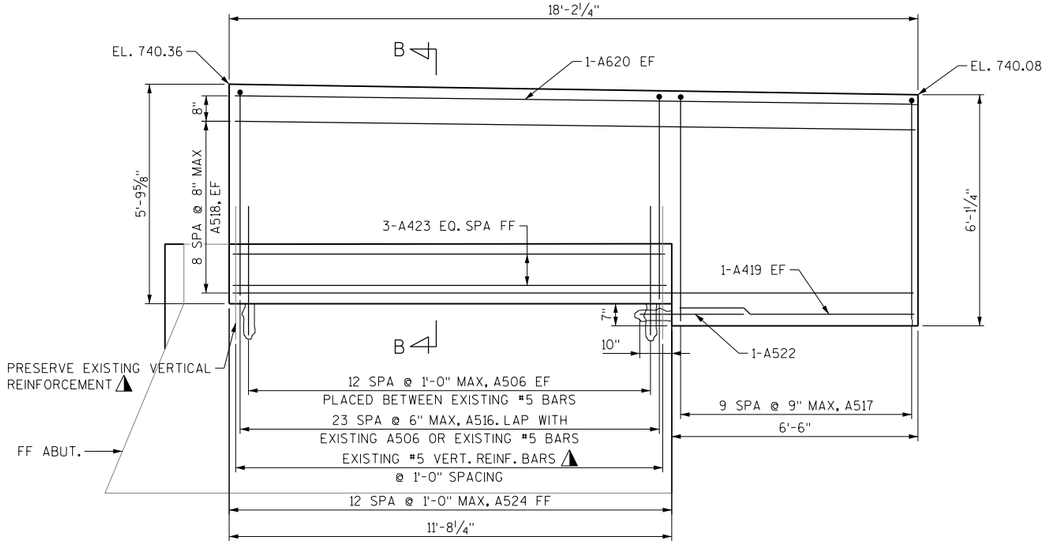
WINGWALL 1 ELEVATION



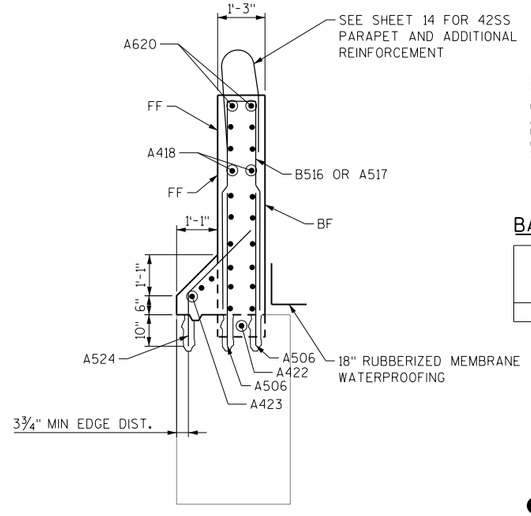
SECTION A-A

BILL OF BARS

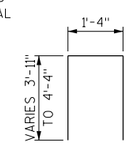
BAR NO.	COATED BAR	NO. REQ'D	LENGTH	BENT BAR	BUNDLED	BAR SERIES	4431 # COATED -- # UNCOATED LOCATION
A401	X	12	45'-0"				BACKWALL HORIZONTAL - FF & BF
A402	X	12	11'-3"				BACKWALL HORIZONTAL - FF & BF
A403	X	2	8'-10"				BACKWALL HORIZONTAL - FF & BF AT SIDEWALK
A504	X	24	6'-7"				PAVING BLOCK HORIZONTAL
A505	X	2	8'-10"				PAVING BLOCK HORIZONTAL - SIDEWALK
A506	X	122	3'-8"				BACKWALL & WINGWALL VERTICAL - ADHESIVE ANCHORS
A507	X	60	9'-4"	X		X	BACKWALL VERTICAL
A508	X	8	9'-11"	X			BACKWALL VERTICAL - SIDEWALK
A509	X	53	4'-5"	X			PAVING BLOCK VERTICAL
A510	X	20	10'-5"	X			WINGWALL 1 VERTICAL
A511	X	11	11'-9"	X			WINGWALL 1 VERTICAL - OVERHANG
A412	X	23	4'-8"	X			WINGWALL 1 VERTICAL - SIDEWALK NOTCH
A513	X	18	16'-5"				WINGWALL 1 HORIZONTAL
A514	X	4	6'-11"				WINGWALL 1 HORIZONTAL - BOTTOM
A615	X	2	16'-5"				WINGWALL 1 HORIZONTAL - SIDEWALK NOTCH
A516	X	24	11'-2"	X			WINGWALL 2 VERTICAL
A517	X	10	12'-2"	X			WINGWALL 2 VERTICAL - OVERHANG
A518	X	18	17'-10"				WINGWALL 2 HORIZONTAL
A519	X	2	6'-2"				WINGWALL 2 HORIZONTAL - BOTTOM
A620	X	2	17'-10"				WINGWALL 2 HORIZONTAL - TOP
A521	X	8	2'-0"				BACKWALL UTILITY BLOCKOUT
A522	X	3	2'-8"				WINGWALLS 1& 2 HORIZONTAL - ADHESIVE ANCHOR
A423	X	3	11'-4"				WINGWALL 2 HORIZONTAL - FF STEP
A524	X	13	3'-9"	X			WINGWALL 2 VERTICAL- BENT ADHESIVE ANCHOR
A525	X	1	3'-11"				SEAT EXTENSION - LONGITUDINAL
A526	X	4	11'-11"				SEAT EXTENSION - LONGITUDINAL
A527	X	3	54'-4"				SEAT EXTENSION - LONGITUDINAL
A528	X	112	4'-0"	X			SEAT EXTENSION - BENT BAR ADHESIVE ANCHOR



WINGWALL 2 ELEVATION



SECTION B-B



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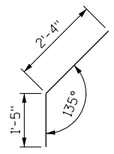

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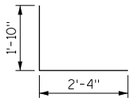

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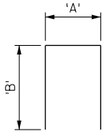

BAR SERIES TABLE

BAR NO	NUMBER REQUIRED	LENGTH
A507	1 SERIES OF 60	8'-11" TO 9'-9"

BAR NO	DIM 'A'	DIM 'B'
A508	1'-4"	4'-5"
A509	8"	2'-0"
A510	1'-2"	4'-9"
A511	1'-2"	5'-5"
A412	9"	2'-1"
A516	11"	5'-3"
A517	11"	5'-9"

LEGEND

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

◐ CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH

◭ CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW LIMITS SHOWN ON REMOVAL PLAN. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED IN THE FIELD BY THE ENGINEER.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

DRAWN BY NWG | PLANS CK'D. WJZ

WEST ABUTMENT WINGWALL MODIFICATIONS

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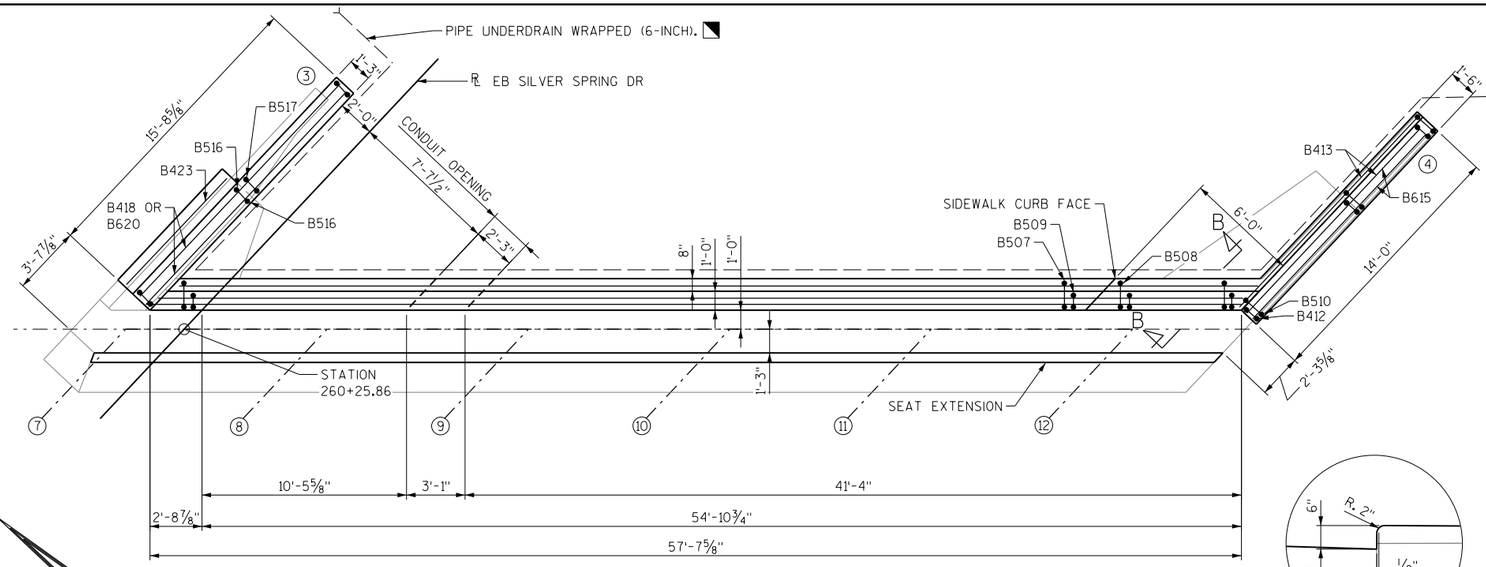
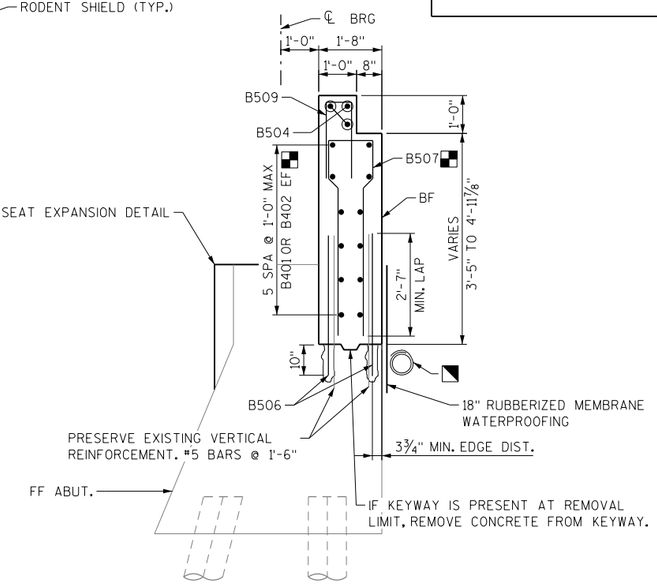
STATE PROJECT NUMBER

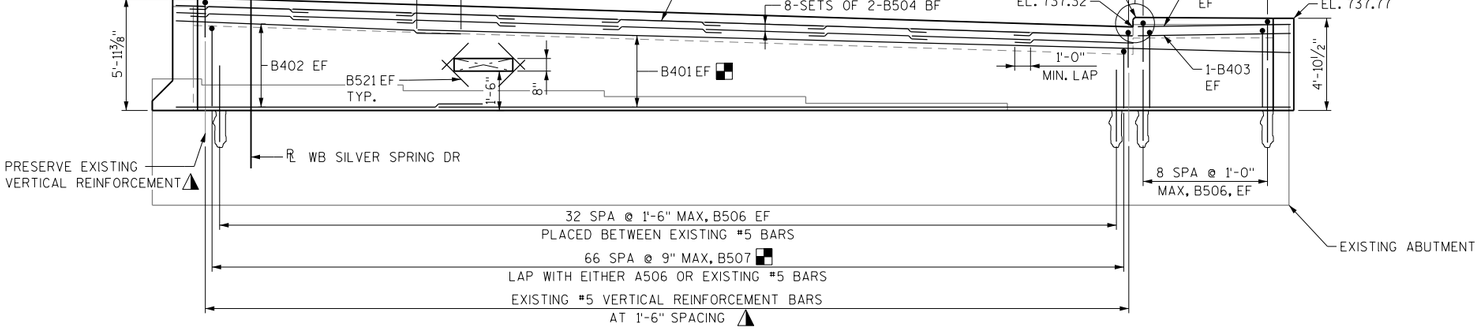
1360-13-71



EAST ABUTMENT PLAN

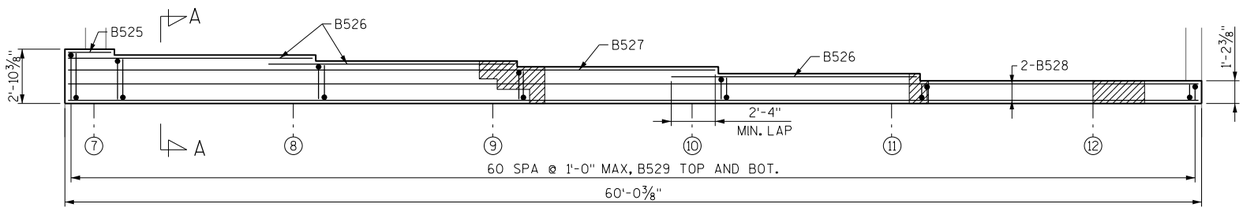


TYPICAL ABUTMENT SECTION

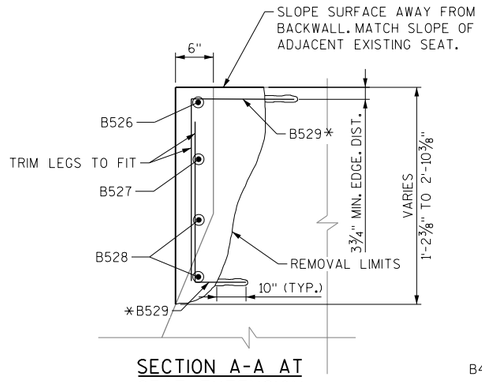


EAST ABUTMENT
BACKWALL ELEVATION

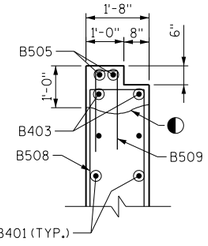
(LOOKING EAST, WINGWALLS NOT SHOWN FOR CLARITY)



EAST ABUTMENT
SEAT ELEVATION



SECTION A-A AT
SEAT EXTENSION



SECTION AT B-B
SIDEWALK NOTCH

PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN.

CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH. POUR CONCRETE ABOVE THIS JOINT AFTER DECK IS IN PLACE.

FIELD CUT OR SHIFT TO MISS UTILITY BLOCK OUT AS DIRECTED BY THE ENGINEER.

CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW REMOVAL LIMITS SHOWN ON REMOVAL DRAWING. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED IN THE FIELD BY THE ENGINEER.

HATCHED AREAS INDICATE UNSOUND CONCRETE TO BE REMOVED BEFORE SEAT EXTENSION

*B529-TRIM END OF ADHESIVE ANCHORS AS DIRECTED IN FIELD BY ENGINEER

LEGEND

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

DRAWN BY NWG | PLANS CK'D. WJZ

EAST ABUTMENT MODIFICATIONS

SHEET 7 OF 21

258

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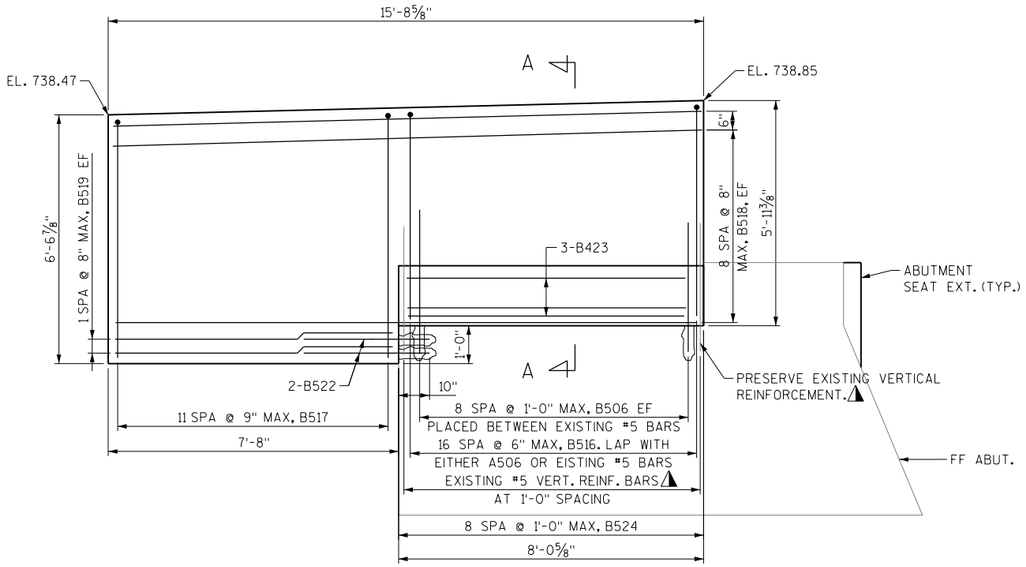
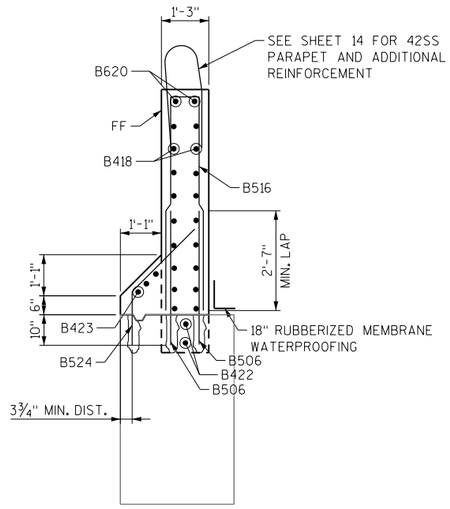
STATE PROJECT NUMBER

1360-13-71



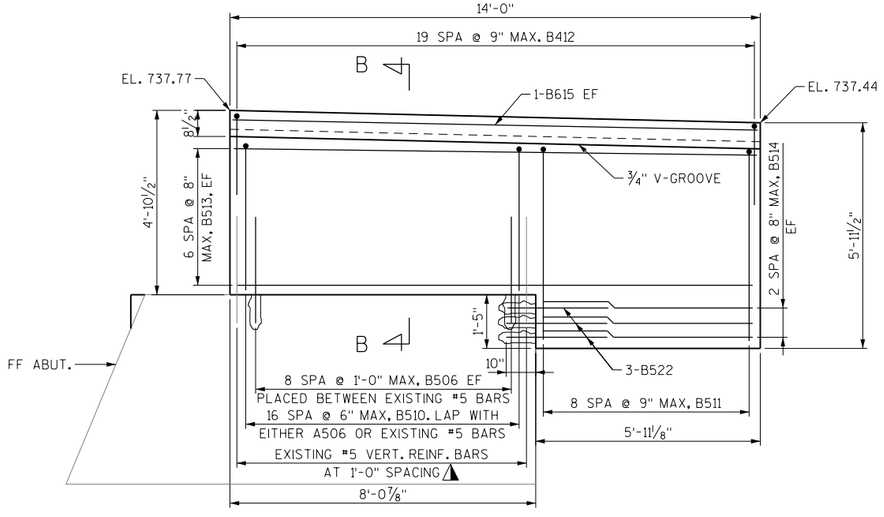
WINGWALL 3 ELEVATION



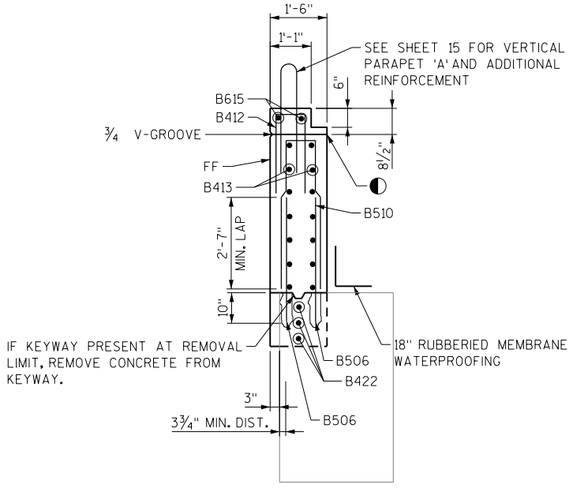
SECTION A-A

BILL OF BARS

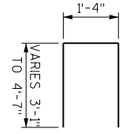
BAR NO.	COATED BAR	NO. REQ'D	LENGTH	BENT BAR	BUNDLED	BAR SERIES	4251 # COATED -- # UNCOATED LOCATION
B401	X	12	45'-0"				BACKWALL HORIZONTAL - FF & BF
B402	X	12	16'-3"				BACKWALL HORIZONTAL - FF & BF
B403	X	2	8'-1"				BACKWALL HORIZONTAL - FF & BF AT SIDEWALK
B504	X	30	5'-10"				PAVING BLOCK HORIZONTAL
B505	X	2	8'-1"				PAVING BLOCK HORIZONTAL - SIDEWALK
B506	X	112	3'-8"				BACKWALL & WINGWALL VERTICAL - ADHESIVE ANCHORS
B507	X	67	8'-9"	X		X	BACKWALL VERTICAL
B508	X	9	9'-1"	X			BACKWALL VERTICAL - SIDEWALK
B509	X	60	4'-5"	X			PAVING BLOCK VERTICAL
B510	X	17	8'-3"	X			WINGWALL 4 VERTICAL
B511	X	9	10'-9"	X			WINGWALL 4 VERTICAL - OVERHANG
B412	X	20	4'-8"	X			WINGWALL 4 VERTICAL - SIDEWALK NOTCH
B513	X	14	13'-8"				WINGWALL 4 HORIZONTAL
B514	X	6	5'-7"				WINGWALL 4 HORIZONTAL - BOTTOM
B615	X	2	18'-8"				WINGWALL 4 HORIZONTAL - SIDEWALK NOTCH
B516	X	17	11'-6"	X			WINGWALL 3 VERTICAL
B517	X	12	13'-2"	X			WINGWALL 3 VERTICAL - OVERHANG
B518	X	18	15'-4"				WINGWALL 3 HORIZONTAL
B519	X	4	7'-4"				WINGWALL 3 HORIZONTAL - BOTTOM
B620	X	2	15'-4"				WINGWALL 3 HORIZONTAL - TOP
B521	X	8	2'-0"				BACKWALL UTILITY BLOCKOUT
B522	X	5	2'-8"				WINGWALLS 3 & 4 HORIZONTAL - ADHESIVE ANCHOR
B423	X	3	7'-8"				WINGWALL 3 HORIZONTAL - FF STEP
B524	X	9	3'-9"				WINGWALL 3 VERTICAL - BENT ADHESIVE ANCHOR
B525	X	1	2'-4"				SEAT EXTENSION - LONGITUDINAL
B526	X	3	13'-0"				SEAT EXTENSION - LONGITUDINAL
B527	X	1	23'-8"				SEAT EXTENSION - LONGITUDINAL
B528	X	2	59'-8"				SEAT EXTENSION - LONGITUDINAL
B529	X	122	4'-3"	X			SEAT EXTENSION - BENT BAR ADHESIVE ANCHOR



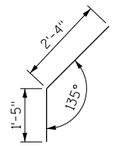
WINGWALL 4 ELEVATION



SECTION B-B

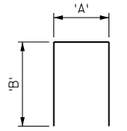


B507



B524

B529



BAR NO	DIM 'A'	DIM 'B'
B508	1'-4"	4'-0"
B509	8"	2'-0"
B510	1'-2"	3'-8"
B511	1'-2"	4'-11"
B412	9"	2'-1"
B516	11"	5'-5"
B517	11"	6'-3"

BAR SERIES TABLE

BAR NO	NUMBER REQUIRED	LENGTH
B507	1 SERIES OF 67	7'-11" TO 8'-11"

LEGEND

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

◐ CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH

⚠ CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW LIMITS SHOWN ON REMOVAL PLAN. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED IN THE FIELD BY THE ENGINEER.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

DRAWN BY NWG | PLANS CK'D. WJZ

EAST ABUTMENT WINGWALL MODIFICATIONS

SHEET 8 OF 21

259

8

8

FILE= B-40-253_80_EABUTWINGS.DGN
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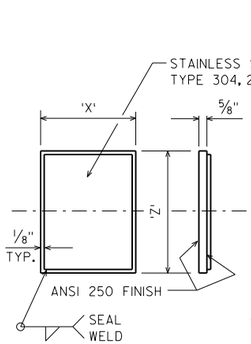
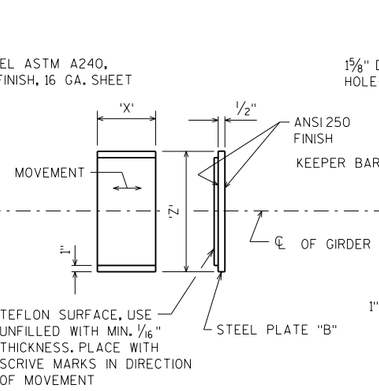
STATE PROJECT NUMBER

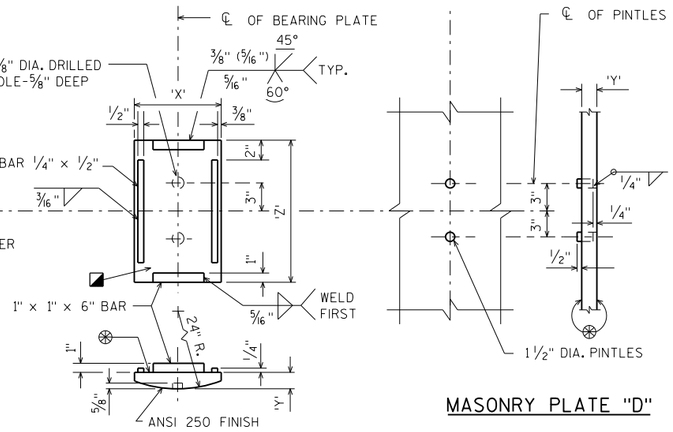
1360-13-71



TOP PLATE "A"



TEFLON SURFACE ON PLATE "B"

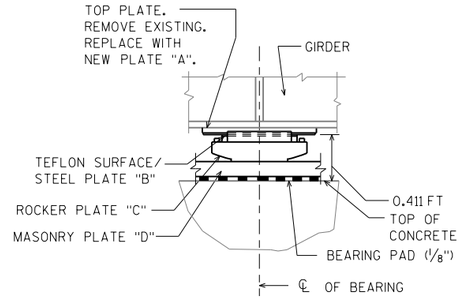


ROCKER PLATE "C"

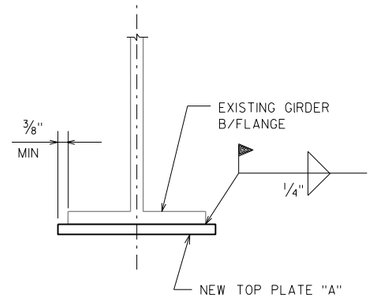
MASONRY PLATE "D"

PLATE "A"		PLATE "B"		PLATE "C"			PLATE "D"			PLATE "D" TYPE	ANCHOR BOLT SIZE	NO. OF BRG'S REQ'D.	LOCATION
'X'	'Z'	'X'	'Z'	'X'	'Y'	'Z'	'X' ◐	'Y'	'Z' ◐				
9"	1'-0 3/4"	5"	1'-0 3/4"	7"	1 7/16"	1'-3"	1'-10 7/8"	1 1/2"	2'-10 7/8"	II	1 1/2"	6	WEST ABUTMENT
9"	1'-0 3/4"	5"	1'-0 3/4"	7"	1 7/16"	1'-3"	2'-0 3/8"	1 1/2"	2'-9 3/8"	II	1 1/2"	6	EAST ABUTMENT

◐ MAXIMUM OUT TO OUT DIMENSIONS SHOWN IN TABLE. SEE DETAILED SKETCHES BELOW FOR EXACT SIZE.



EXPANSION BEARING ASSEMBLY



TOP PLATE 'A' WELD DETAIL

BEARING NOTES

REPLACE ALL BEARINGS AT ABUTMENTS.

⊛ FINISH THESE SURFACES TO ANSI 250 IF 'Y' DIMENSION IS GREATER THAN 2".

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING STAINLESS STEEL SHEET, TEFLON SURFACE, PINTLES, ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BEARING PADS AND HOLD DOWN DEVICE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-40-253"

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE "D" FOR A DRIVING FIT.

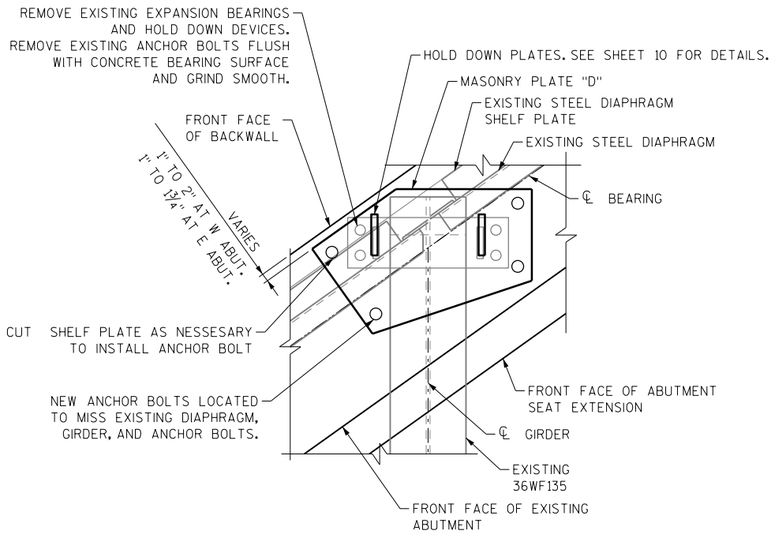
STEEL PINTLES SHALL CONFORM TO ASTM A449 OR ASTM A572 GRADE 50.

ROCKER PLATE "C" AND MASONRY PLATE "D" SHALL BE GALVANIZED. TOP PLATE "A" AND STEEL PLATE "B" SHALL BE SHOP PAINTED. USE A WELDABLE PRIMER ON TOP PLATE "A". DO NOT PAINT STAINLESS STEEL OR TEFLON SURFACES.

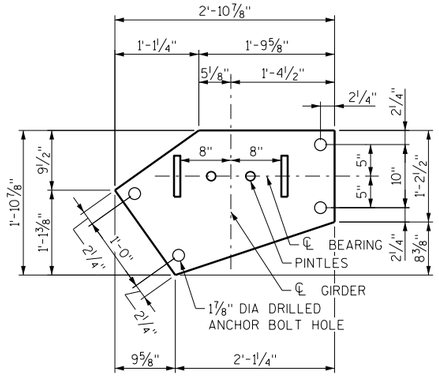
◪ PROVIDE A METHOD FOR HANDLING ROCKER PLATE "C" DURING GALVANIZING.

⚠ BOND STEEL PLATE "B" AND TEFLON WITH ADHESIVE MATERIAL MEETING REQUIREMENTS FOUND IN THE STANDARD SPECIFICATION.

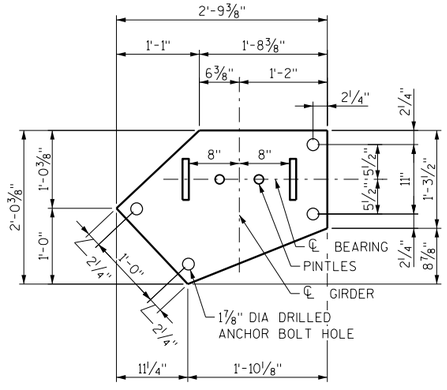
AT INSTALLATION, ENSURE STAINLESS STEEL SLIDING FACE OF THE UPPER ELEMENT AND THE TFE SLIDING FACE OF THE LOWER ELEMENT HAVE THE SURFACE FINISH SPECIFIED AND ARE CLEAN AND FREE OF ALL DUST, MOISTURE, AND OTHER FOREIGN MATTER



ABUTMENT BEARING PLAN



WEST ABUTMENT MASONRY PLATE (PLATE "D")



EAST ABUTMENT MASONRY PLATE (PLATE "D")

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

DRAWN BY NWG | PLANS CK'D. WJZ

BEARING DETAILS

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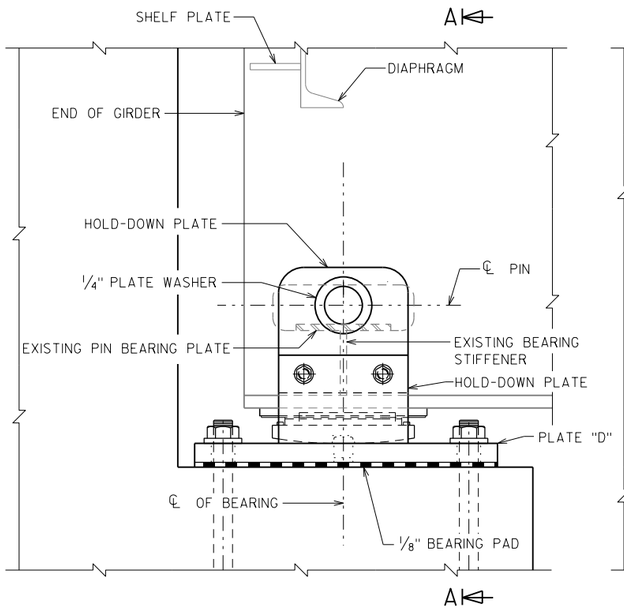
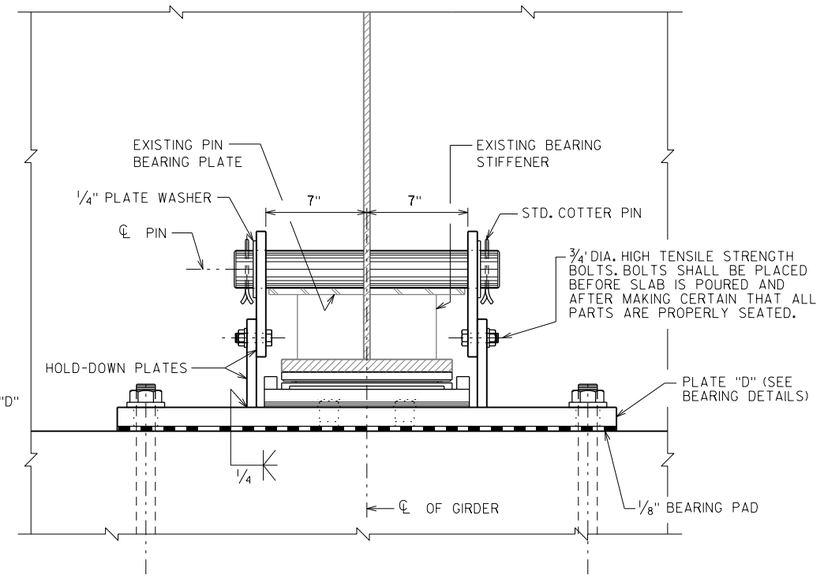
FILE = B-40-253_90_BEARING.DGN
SCALE = 1:1

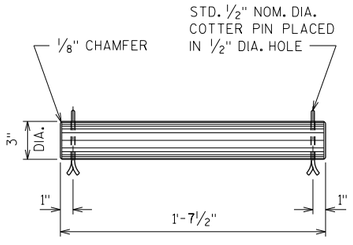


ELEVATION



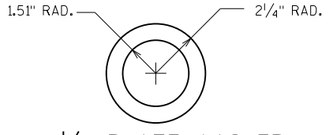
SECTION A-A

PERMANENT HOLD DOWN DEVICE

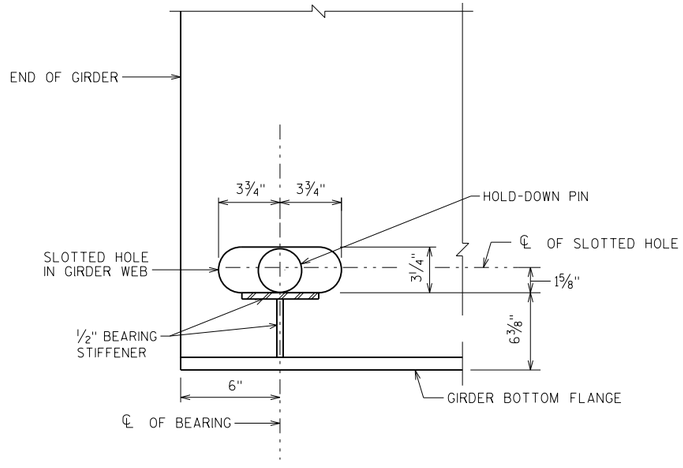


PIN DETAIL

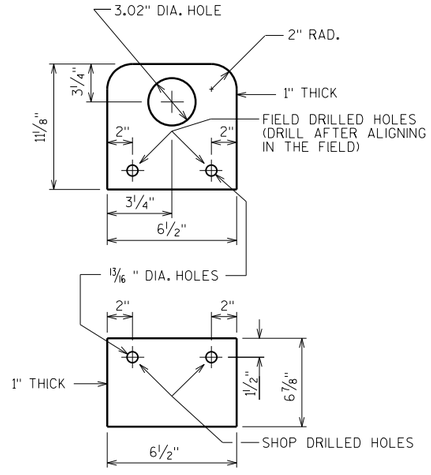
COLD ROLLED STEEL OR CARBON STEEL FORGING.



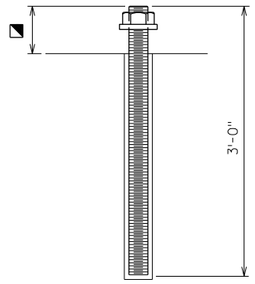
1/4" PLATE WASHER



GIRDER DETAIL



HOLD-DOWN PLATES



ANCHOR BOLT DETAIL

STATE PROJECT NUMBER

1360-13-71

NOTES

ALL STRUCTURAL STEEL PLATES SHALL BE FLAT ROLLED STEEL PLATES 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.

ANCHOR BOLTS SHALL BE 1 1/2" DIAMETER X 3'-0" LONG AND FULLY THREADED ADHESIVE ANCHORS. EMBED IN CONCRETE AS DETAILED. ANCHOR BOLTS SHALL BE PAID FOR AS "ADHESIVE ANCHORS 1 1/2"

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

THE MATERIAL FOR THE HOLD-DOWN PLATES SHALL CONFORM TO ASTM A709 GRADE 50W.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM F1554 GRADE 50 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

PROVIDE 1/8" THICK ELASTOMERIC BEARING PAD THE SAME SIZE AND SHAPE AS PLATE "D" FOR EACH BEARING.

ALL MATERIAL IN HOLD DOWN DEVICES, WHICH INCLUDES HOLD-DOWN PLATES, HIGH TENSILE STRENGTH BOLTS, AND PINS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-40-254"

◥ PROJECT ANCHOR BOLTS, PLATE "D" THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE.

HOLES FOR PIN IN HOLD-DOWN PLATES AND PLATE WASHERS SHALL BE AS STATED IN STANDARD SPECIFICATIONS 506.3.17.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

DRAWN BY NWG | PLANS CK'D. WJZ

HOLD DOWN DEVICE

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FILE= B-40-253_100_HOLDDOWN.DGN
SCALE = 1:1

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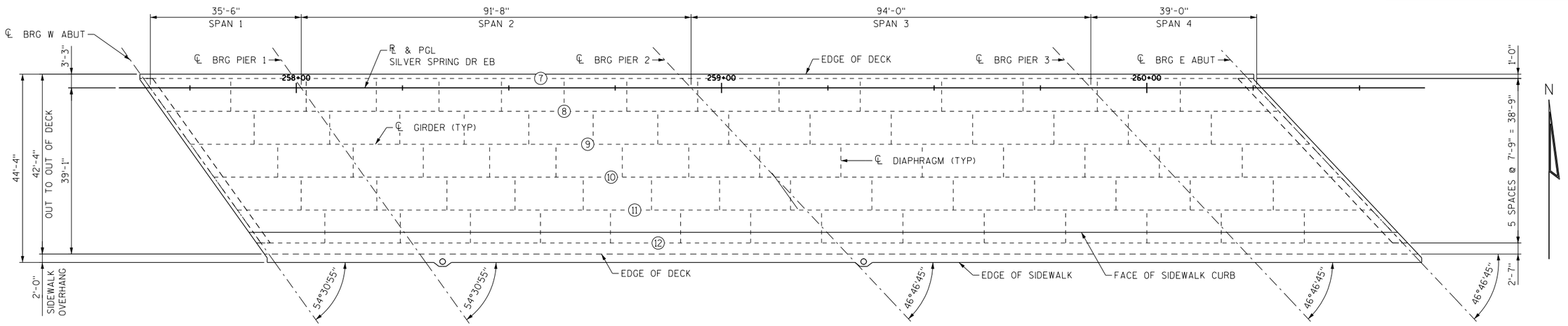
STATE PROJECT NUMBER
1360-13-71



EXISTING GIRDER FRAMING PLAN

(FIELD SPLICES AND COVER PLATES NOT SHOWN)

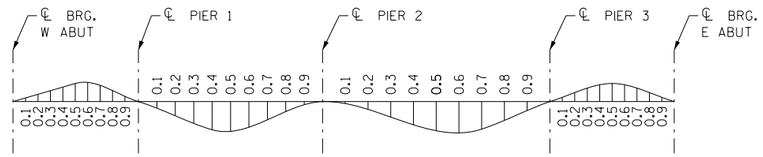
FINISHED TOP OF DECK ELEVATIONS

*THIS ELEVATION IS A CONTINUATION OF THE DECK CROSS SLOPE.

	LOCATION	NORTH EDGE* OF DECK	GIRDER 7*	FACE OF N. PARAPET	PGL SILVER SPRING EB	GIRDER 8	GIRDER 9	GIRDER 10	GIRDER 11	FACE OF S. CURB	GIRDER 12*	SOUTH EDGE* OF DECK
	℄ W ABUT	740.39	740.38	740.38	740.35	740.30	740.21	740.12	740.02	739.96	739.92	739.89
SPAN 1	0.1	740.44	740.43	740.42	740.40	740.34	740.25	740.16	740.06	739.99	739.96	739.92
	0.2	740.48	740.47	740.47	740.45	740.38	740.29	740.19	740.09	740.02	739.99	739.95
	0.3	740.53	740.52	740.51	740.49	740.42	740.33	740.23	740.13	740.05	740.02	739.98
	0.4	740.57	740.56	740.55	740.53	740.46	740.37	740.26	740.16	740.08	740.04	740.01
	0.5	740.61	740.60	740.59	740.57	740.50	740.40	740.29	740.18	740.11	740.07	740.03
	0.6	740.65	740.64	740.63	740.61	740.54	740.43	740.32	740.21	740.13	740.09	740.05
	0.7	740.68	740.67	740.67	740.64	740.57	740.46	740.35	740.24	740.15	740.11	740.07
	0.8	740.72	740.71	740.70	740.68	740.60	740.49	740.38	740.26	740.17	740.13	740.09
	0.9	740.75	740.74	740.74	740.71	740.63	740.52	740.40	740.28	740.19	740.15	740.11
	℄ PIER 1	740.78	740.77	740.77	740.74	740.66	740.54	740.42	740.30	740.21	740.17	740.12
SPAN 2	0.1	740.85	740.84	740.84	740.81	740.72	740.60	740.47	740.34	740.25	740.20	740.16
	0.2	740.91	740.90	740.89	740.86	740.77	740.64	740.51	740.37	740.27	740.22	740.17
	0.3	740.96	740.94	740.94	740.90	740.81	740.67	740.53	740.38	740.28	740.23	740.18
	0.4	740.99	740.98	740.97	740.94	740.84	740.69	740.54	740.38	740.27	740.22	740.16
	0.5	741.01	741.00	740.99	740.95	740.85	740.69	740.53	740.37	740.25	740.19	740.14
	0.6	741.02	741.00	741.00	740.96	740.85	740.68	740.51	740.34	740.21	740.15	740.09
	0.7	741.02	741.00	740.99	740.95	740.83	740.66	740.48	740.29	740.16	740.10	740.03
	0.8	741.00	740.98	740.98	740.93	740.81	740.62	740.43	740.24	740.10	740.03	739.96
	0.9	740.98	740.95	740.95	740.90	740.77	740.57	740.37	740.16	740.02	739.95	739.87
	℄ PIER 2	740.94	740.91	740.91	740.86	740.71	740.51	740.30	740.08	739.92	739.85	739.77
SPAN 3	0.1	740.88	740.86	740.85	740.80	740.65	740.43	740.21	739.98	739.82	739.74	739.66
	0.2	740.81	740.79	740.78	740.72	740.57	740.34	740.11	739.87	739.70	739.62	739.53
	0.3	740.73	740.70	740.70	740.64	740.48	740.24	740.00	739.75	739.57	739.49	739.40
	0.4	740.64	740.61	740.60	740.54	740.37	740.13	739.87	739.61	739.43	739.34	739.25
	0.5	740.53	740.50	740.49	740.43	740.25	740.00	739.73	739.46	739.27	739.18	739.08
	0.6	740.41	740.38	740.37	740.30	740.12	739.85	739.58	739.30	739.10	739.01	738.91
	0.7	740.28	740.24	740.23	740.17	739.97	739.70	739.41	739.12	738.92	738.82	738.72
	0.8	740.13	740.10	740.09	740.01	739.82	739.53	739.23	738.93	738.72	738.62	738.52
	0.9	739.97	739.93	739.92	739.85	739.64	739.35	739.04	738.73	738.51	738.41	738.30
	℄ PIER 3	739.80	739.76	739.75	739.67	739.46	739.15	738.84	738.51	738.29	738.18	738.07
SPAN 4	0.1	739.72	739.68	739.67	739.60	739.38	739.07	738.75	738.42	738.20	738.09	737.98
	0.2	739.64	739.60	739.59	739.52	739.30	738.98	738.66	738.33	738.10	738.00	737.89
	0.3	739.56	739.52	739.51	739.43	739.21	738.89	738.56	738.23	738.01	737.90	737.79
	0.4	739.48	739.44	739.43	739.35	739.12	738.80	738.47	738.14	737.91	737.81	737.70
	0.5	739.40	739.35	739.34	739.26	739.03	738.71	738.38	738.04	737.82	737.71	737.60
	0.6	739.31	739.27	739.26	739.17	738.94	738.61	738.28	737.95	737.73	737.62	737.51
	0.7	739.22	739.18	739.17	739.08	738.85	738.52	738.19	737.86	737.63	737.53	737.42
	0.8	739.13	739.08	739.07	738.99	738.75	738.42	738.09	737.76	737.54	737.43	737.32
	0.9	739.03	738.99	738.98	738.89	738.66	738.33	738.00	737.67	737.44	737.34	737.23
	℄ E ABUT	738.94	738.90	738.89	738.80	738.57	738.24	737.91	737.57	737.35	737.24	737.13

DEAD LOAD DEFLECTIONS ◥

	LOCATION	G7	G8	G9	G10	G11	G12
	℄ W ABUT	0.0	0.0	0.0	0.0	0.0	0.0
SPAN 1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	0.2	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
	0.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
	0.5	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2
	0.6	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2
	0.7	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2
	0.8	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
	0.9	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
	℄ PIER 1	0.0	0.0	0.0	0.0	0.0	0.0
SPAN 2	0.1	0.2	0.3	0.3	0.4	0.4	0.4
	0.2	0.5	0.7	0.8	0.8	0.9	0.9
	0.3	0.7	1.0	1.1	1.3	1.4	1.3
	0.4	0.8	1.2	1.4	1.5	1.6	1.6
	0.5	0.8	1.2	1.4	1.5	1.7	1.6
	0.6	0.7	1.1	1.2	1.3	1.5	1.4
	0.7	0.5	0.8	0.9	1.0	1.1	1.1
	0.8	0.2	0.4	0.5	0.5	0.6	0.6
	0.9	0.1	0.1	0.1	0.2	0.2	0.2
	℄ PIER 2	0.0	0.0	0.0	0.0	0.0	0.0
SPAN 3	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	0.2	0.4	0.5	0.4	0.4	0.4	0.3
	0.3	0.7	0.9	0.8	0.8	0.8	0.7
	0.4	0.9	1.2	1.2	1.1	1.1	0.9
	0.5	1.1	1.4	1.4	1.3	1.3	1.1
	0.6	1.0	1.4	1.3	1.3	1.3	1.1
	0.7	0.9	1.2	1.1	1.1	1.1	1.0
	0.8	0.6	0.8	0.8	0.8	0.7	0.6
	0.9	0.3	0.3	0.3	0.3	0.3	0.3
	℄ PIER 3	0.0	0.0	0.0	0.0	0.0	0.0
SPAN 4	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
	0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
	0.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
	0.5	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
	0.6	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
	0.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
	0.8	0.0	0.0	0.0	0.0	0.0	0.0
	0.9	0.0	0.0	0.0	0.0	0.0	0.0
	℄ E ABUT	0.0	0.0	0.0	0.0	0.0	0.0



DEFLECTION DIAGRAM

◥ DEFLECTIONS ARE GIVEN IN INCHES
NEGATIVE DEFLECTION INDICATES UPWARD DEFLECTION
DEFLECTIONS ARE THEORETICAL AND MAY VARY IN THE FIELD.

NOTES

A 1¼" MINIMUM HAUNCH IS REQUIRED AT THE EDGE OF GIRDER. IF A 1¼" MINIMUM HAUNCH HEIGHT CANNOT BE MAINTAINED THE GRADE LINE MAY BE REVISED BY THE ENGINEER IN THE FIELD 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 AND PROFILE BY MORE THAN ½"

THE FOLLOWING AVERAGE HAUNCH DEPTHS ('T') WERE USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

GIRDER 7-10: 5.0"
GIRDER 11: 5.6"
GIRDER 12: 6.6"

'T' = HAUNCH HEIGHT AT ℄ GIRDER

TO DETERMINE 'T': AFTER EXISTING DECK HAS BEEN REMOVED, AND ABUTMENT BEARINGS HAVE BEEN REPLACED, ELEVATIONS OF THE TOP FLANGES SHALL BE TAKEN AT CENTERLINES OF BEARING AND AT 0.1 POINTS.

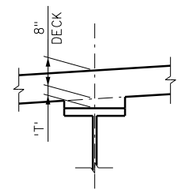
TOP OF DECK ELEVATION AT FINAL GRADE

\- TOP OF STEEL ELEVATION AFTER EXISTING DECK HAS BEEN REMOVED

\+ DEAD LOAD DEFLECTION (DOWNWARD DEFLECTION IS ADDED, UPWARD DEFLECTION IS SUBTRACTED)

\- DECK THICKNESS

= 'T' VALUE FOR SETTING HAUNCH



SLAB HAUNCH DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

DRAWN BY NWG | PLANS CK'D. WJZ

DECK ELEVATIONS

SHEET 11 OF 21

262

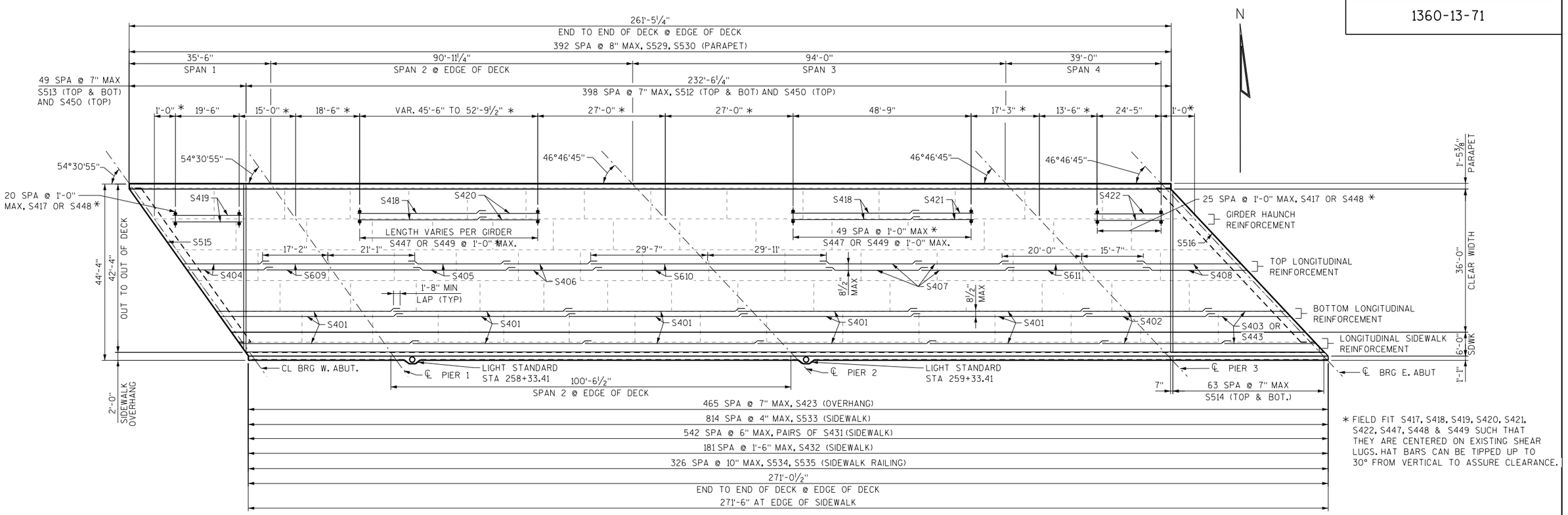
FILE= B-40-253_110_GIRD&SUPER.DGN
SCALE = 1:25

8

8

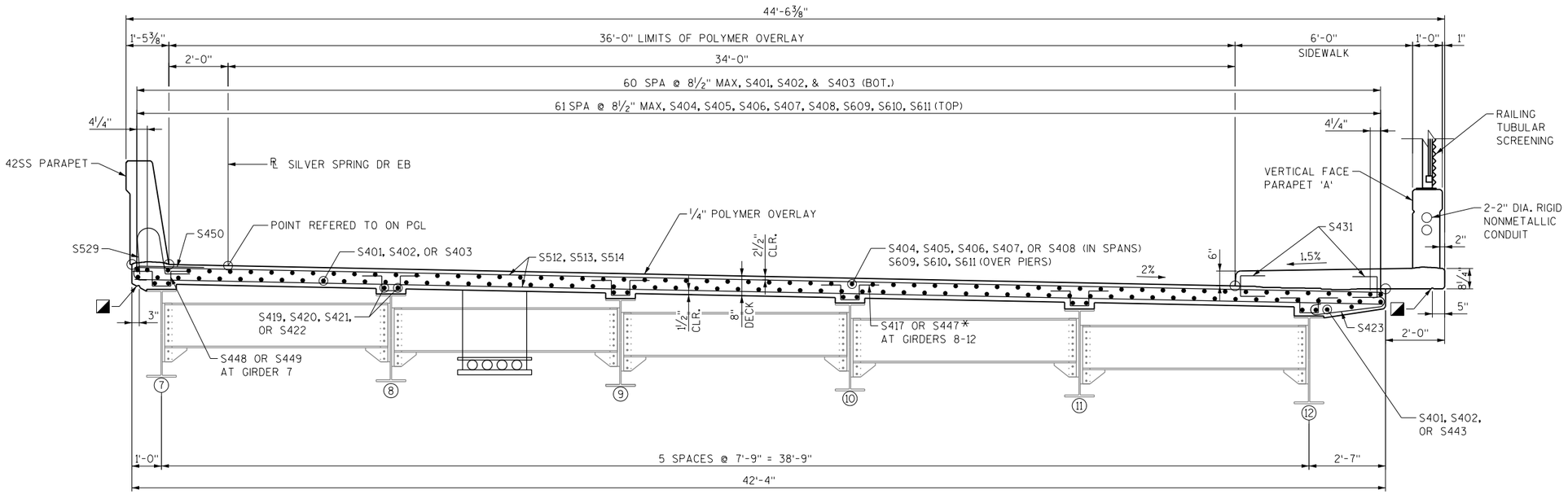
STATE PROJECT NUMBER

1360-13-71



DECK PLAN

* FIELD FIT S417, S418, S419, S420, S421, S422, S447, S448 & S449 SUCH THAT THEY ARE CENTERED ON EXISTING SHEAR LUGS. HAT BARS CAN BE TIPPED UP TO 30° FROM VERTICAL TO ASSURE CLEARANCE.



TYPICAL SECTION THRU DECK
(LOOKING EAST)

NOTES:

SEE SHEET 13 FOR SUPERSTRUCTURE BILL OF BARS AND DECK DETAILS

SEE SHEET 11 FOR TOP OF DECK ELEVATIONS

SEE SHEET 14 FOR 42SS PARAPET DETAILS

SEE SHEET 15 FOR VERTICAL FACE PARAPET 'A' DETAILS

SEE SHEET 16 FOR RAILING TUBULAR SCREENING

SEE SHEET 13 FOR SUPERSTRUCTURE DETAILS

SEE SHEET 19 FOR LIGHT STANDARD DETAIL

○ INDICATES T/SLAB ELEVATION LOCATION

◪ ¾" V-GROOVE TO EXTEND TO 2'-0" FROM FRONT FACE OF ABUTMENT BODY

Ⓧ INDICATES GIRDER NUMBER

ALTERNATE LAP LOCATIONS IN PARAPET, SIDEWALK AND DECK LONGITUDINAL BARS AS SHOWN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

DRAWN BY NWG | PLANS CK'D. WJZ

SUPERSTRUCTURE REINFORCEMENT

SHEET 12 OF 21

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8

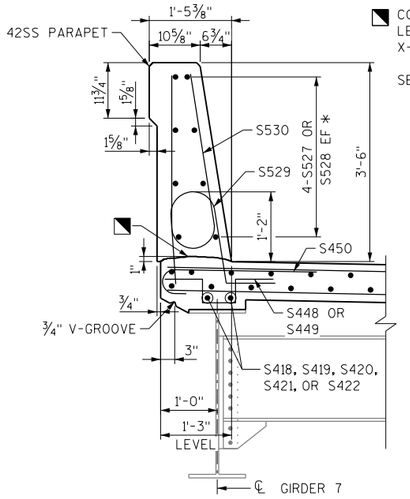
8

FILE= B-40-253_120_SUPERREINF.DGN
SCALE = 1:25

* ±0.5% TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR ENGINEER APPROVAL

CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE.

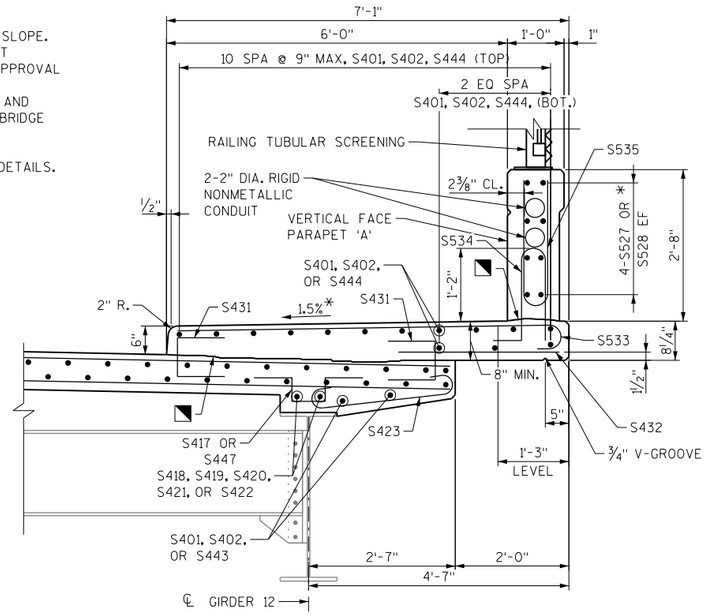
SEE SHEET 15 FOR DEFLECTION JOINT DETAILS.



SECTION THROUGH PARAPET AT NORTH OVERHANG

SPAN 2 HAUNCH TABLE

GIRDER NO	S447 OR S419 QUANTITY
7	47
8	49
9	50
10	52
11	53
12	54



SECTION THROUGH PARAPET AT SOUTH OVERHANG

BILL OF BARS - DECK

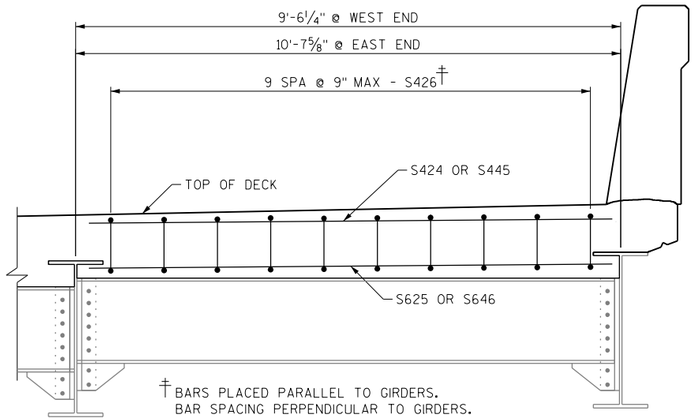
BAR NO.	COATED BAR	NO. REQ'D	LENGTH	BENT BAR	BUNDLED	⚠ BAR SERIES	99,195 # COATED -- # UNCOATED LOCATION
S401	X	385	45'-0"				DECK & SIDEWALK LONGITUDINAL - BOTTOM
S402	X	77	30'-0"				DECK & SIDEWALK LONGITUDINAL - BOTTOM
S403	X	61	20'-11"			X	DECK LONGITUDINAL - BOTTOM
S404	X	62	21'-2"				DECK LONGITUDINAL - TOP SPAN 1
S405	X	62	30'-0"				DECK LONGITUDINAL - TOP SPAN 2
S406	X	62	18'-6"			X	DECK LONGITUDINAL - TOP SPAN 2
S407	X	124	23'-9"				DECK LONGITUDINAL - TOP SPAN 3
S408	X	62	26'-3"				DECK LONGITUDINAL - TOP SPAN 4
S609	X	62	38'-3"				DECK LONGITUDINAL - TOP PIER 1
S610	X	62	59'-6"				DECK LONGITUDINAL - TOP PIER 2
S611	X	62	35'-7"				DECK LONGITUDINAL - TOP PIER 3
S512	X	796	42'-0"				DECK TRANSVERSE - TOP AND BOTTOM
S513	X	100	21'-3"			X	DECK TRANSVERSE - TOP AND BOTTOM WEST END SERIES
S514	X	128	20'-8"			X	DECK TRANSVERSE - TOP AND BOTTOM EAST END SERIES
S515	X	2	51'-8"				DECK TRANSVERSE - DECK ENDS TOP & BOTTOM WEST
S516	X	2	57'-7"				DECK TRANSVERSE - DECK ENDS TOP & BOTTOM EAST
S417	X	235	2'-9"	X			DECK TRANSVERSE - HAUNCH SPANS 1 & 4, GIRDERS 8-12
S418	X	24	30'-0"				DECK LONGITUDINAL - HAUNCH SPAN 2 & 3
S419	X	12	19'-6"				DECK LONGITUDINAL - HAUNCH SPAN 1
S420	X	12	24'-6"				DECK LONGITUDINAL - HAUNCH SPAN 2
S421	X	12	20'-5"				DECK LONGITUDINAL - HAUNCH SPAN 3
S422	X	12	24'-5"				DECK LONGITUDINAL - HAUNCH SPAN 4
S423	X	466	3'-2"	X			DECK TRANSVERSE - OUTSIDE OVERHANG
S424	X	20	9'-2"				DIAPHRAGM & JOINT - TOP (WEST JOINT)
S625	X	25	9'-2"				DIAPHRAGM - BOTTOM (WEST JOINT)
S426	X	100	3'-10"	X			DIAPHRAGM STIRRUPS
S527	X	64	60'-0"				PARAPET HORIZONTAL
S528	X	16	30'-0"				PARAPET HORIZONTAL
S529	X	393	4'-5"	X			42SS PARAPET VERTICAL
S530	X	393	6'-8"	X			42SS PARAPET VERTICAL
S431	X	1086	2'-8"	X			SIDEWALK VERTICAL
S432	X	182	2'-10"				SIDEWALK TRANSVERSE - BOTTOM
S533	X	815	7'-4"	X			SIDEWALK TRANSVERSE - TOP
S534	X	327	4'-4"	X			VERTICAL FACE PARAPET 'A' VERTICAL
S535	X	327	4'-9"	X			VERTICAL FACE PARAPET 'A' VERTICAL
S536	X	8	6'-3"	X			LIGHT STANDARD VERTICAL - PARAPET
S537	X	8	7'-0"	X			LIGHT STANDARD VERTICAL - PARAPET
S638	X	14	10'-3"	X			LIGHT STANDARD HORIZONTAL - PARAPET
S539	X	24	6'-8"				LIGHT STANDARD TRANSVERSE - SIDEWALK BOTTOM
S540	X	4	3'-2"	X			LIGHT STANDARD VERTICAL - PARAPET
S541	X	4	3'-4"	X			LIGHT STANDARD VERTICAL - PARAPET
S542	X	24	7'-4"	X			LIGHT STANDARD TRANSVERSE SIDEWALK TOP
S443	X	2	25'-8"				LONGITUDINAL OVERHANG
S444	X	14	26'-2"				LONGITUDINAL SIDEWALK
S445	X	20	10'-3"				DIAPHRAGM - TOP (EAST JOINT)
S646	X	25	10'-3"				DIAPHRAGM - BOTTOM (EAST JOINT)
S447	X	508	3'-3"	X			DECK TRANSVERSE - HAUNCH SPANS 2 & 3, GIRDERS 8-12
S448	X	47	2'-7"	X			DECK TRANSVERSE - HAUNCH SPANS 1 & 4, GIRDER 7
S449	X	97	3'-1"	X			DECK TRANSVERSE - HAUNCH SPANS 2 & 3, GIRDER 7
S450	X	449	3'-0"	X			DECK TRANSVERSE - GIRDER 7 OVERHANG

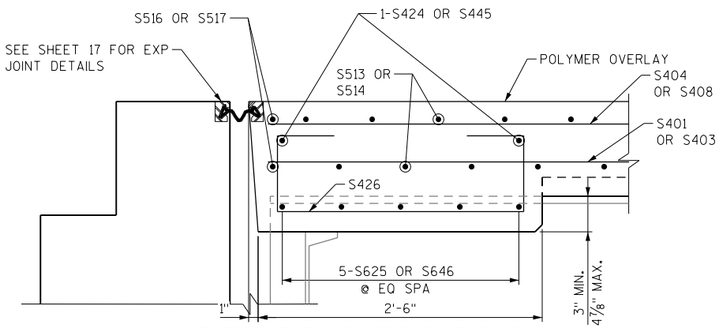
THE FIRST DIGIT OR FIRST TWO DIGITS OF A BAR MARK INDICATE THE BAR SIZE. ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.

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

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MINIMUM OF 1'-9". MINIMUM JOINT SPACING OF 80'-0". DEFINE CONSTRUCTION JOINT WITH A ¾" 'V' GROOVE.

SEE SHEET 19 FOR LIGHT STANDARD DETAILS



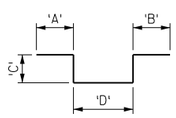


SECTION THROUGH END DIAPHRAGM AND EXPANSION JOINT

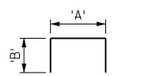
(DIMENSIONS ARE TAKEN NORMAL TO THE ℄ OF THE JOINT)

SECTION AT END DIAPHRAGM

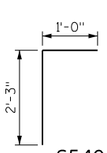
(SHOWING ADDITIONAL DIAPHRAGM REINFORCEMENT ONLY)



BAR NO	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'
S417	8"	8"	6½"	8"
S447	8"	8"	9½"	8"
S448	6"	8"	6½"	8"
S449	6"	8"	9½"	8"



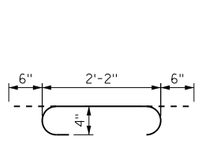
BAR NO	DIM 'A'	DIM 'B'
S431	10"	1'-0"
S536	2'-0"	2'-3"
S541	1'-7"	1'-0"



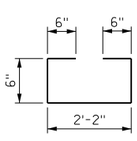
S540

BAR SERIES TABLE

BAR NO	NUMBER REQUIRED	LENGTH
S403	1 SERIES OF 61	16'-1" TO 25'-8"
S406	1 SERIES OF 62	13'-10" TO 23'-0"
S513	2 SERIES OF 50	1'-1" TO 41'-5"
S514	2 SERIES OF 64	1'-2" TO 40'-1"



S423



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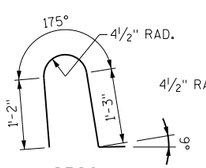

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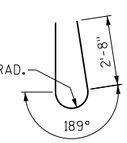

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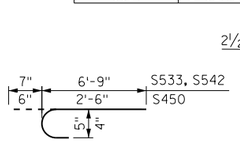
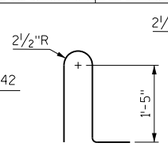


S533, S542 & S450



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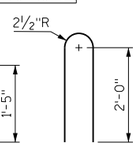

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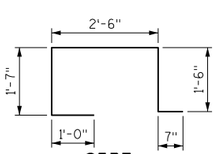
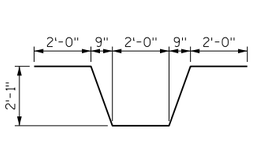


S537



S638

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

DRAWN BY NWG | PLANS CK'D. WJZ

SUPERSTRUCTURE DETAILS

SHEET 13 OF 21

264

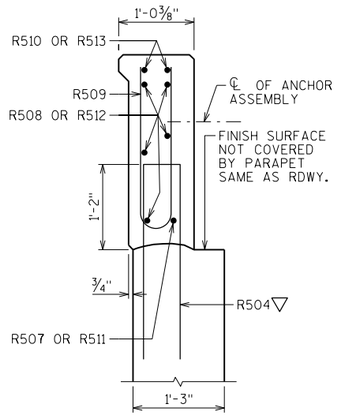
FILE= B-40-253.130_SUPERDETAILDGN
SCALE = 1:2.66667

8

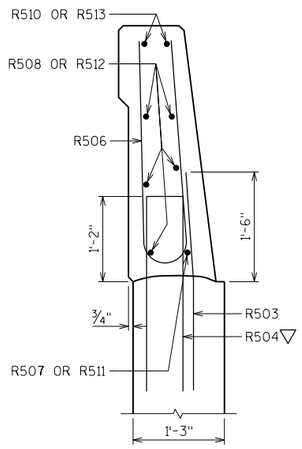
8

STATE PROJECT NUMBER

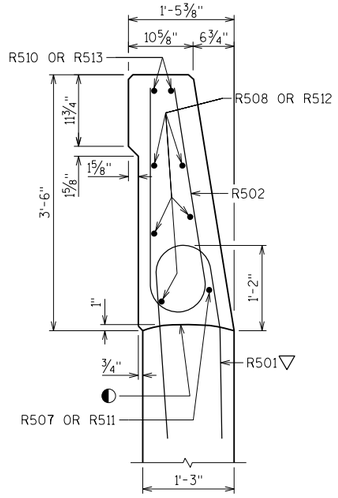
1360-13-71



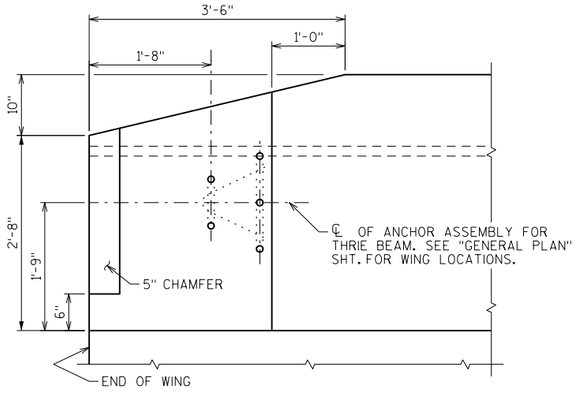
SECTION A-A



SECTION B-B



SECTION C-C



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

BILL OF BARS

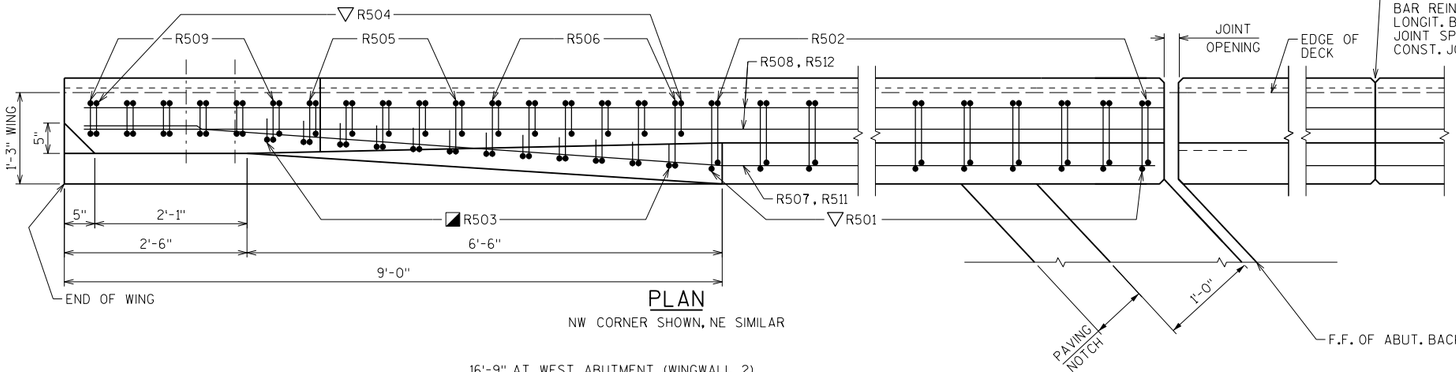
BAR MARK	COAT	NO REQ'D W ABUT.	NO REQ'D E ABUT.	LENGTH	BENT	BAR SERIES	1027# COATED LOCATION
R501	X	13	9	5'-10	X		PARAPET VERT.
R502	X	13	9	6'-8"	X		PARAPET VERT.
R503	X	12	12	3'-0"	X		PARAPET VERT.
R504	X	17	17	5'-7"	X		PARAPET VERT.
R505	X	5	5	6'-5"	X		PARAPET VERT.
R506	X	6	6	6'-6"	X		PARAPET VERT.
R507	X	1		16'-4"	X		PARAPET HORIZ.
R508	X	5		16'-5"			PARAPET HORIZ.
R509	X	6	6	5'-5"	X	▲	PARAPET VERT.
R510	X	2		16'-5"	X		PARAPET HORIZ.
R511	X		1	13'-7"	X		PARAPET HORIZ.
R512	X		5	13'-8"			PARAPET HORIZ.
R513	X		2	13'-8"	X		PARAPET HORIZ.

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

BAR SERIES TABLE

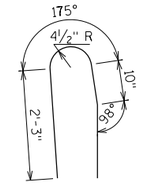
BAR MARK	NO. REQ'D	LENGTH
R509	2 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

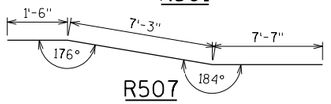


PLAN

NW CORNER SHOWN, NE SIMILAR



R501



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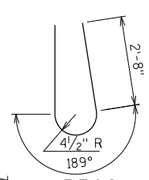
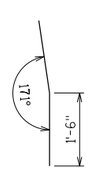


R502



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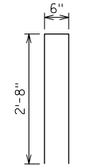

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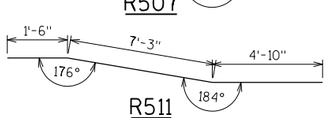

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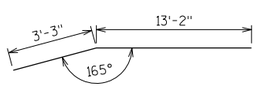

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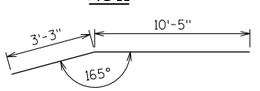

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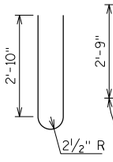

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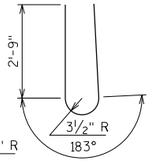

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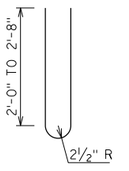

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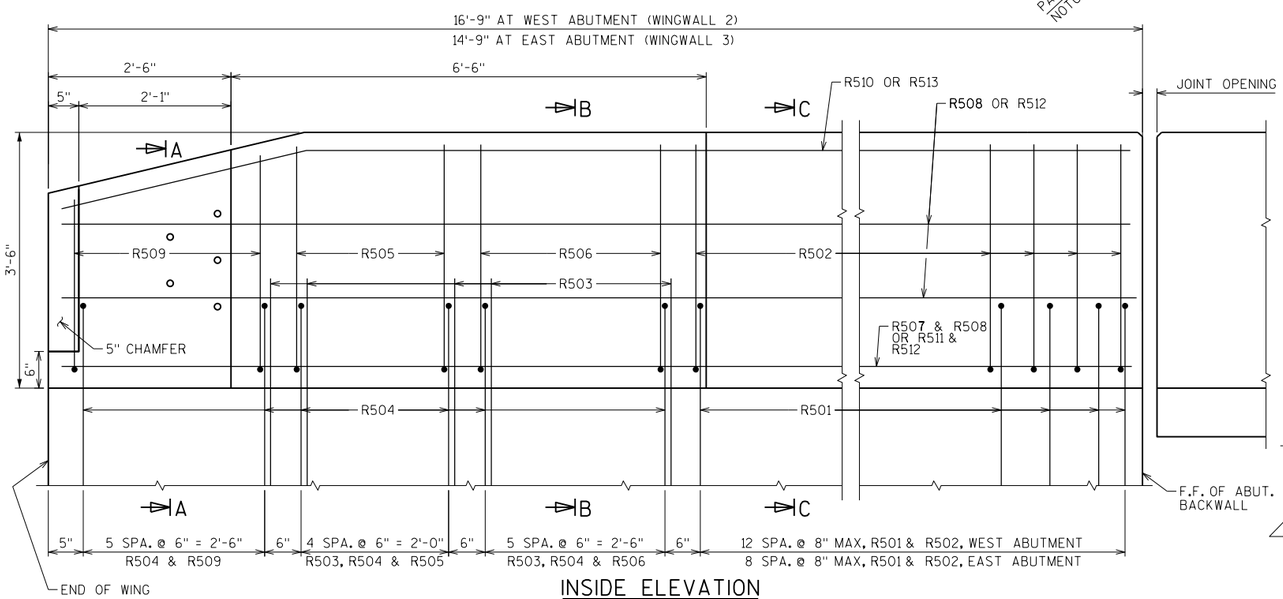
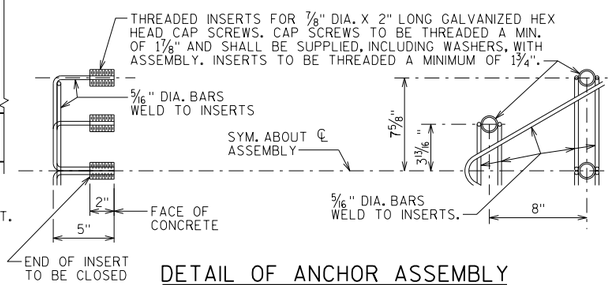


INSIDE ELEVATION

NW CORNER SHOWN, NE SIMILAR



DETAIL OF ANCHOR ASSEMBLY

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

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

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

DRAWN BY NWG | PLANS CK'D. WJZ

SINGLE SLOPE PARAPET 42SS

SHEET 14 OF 21

265

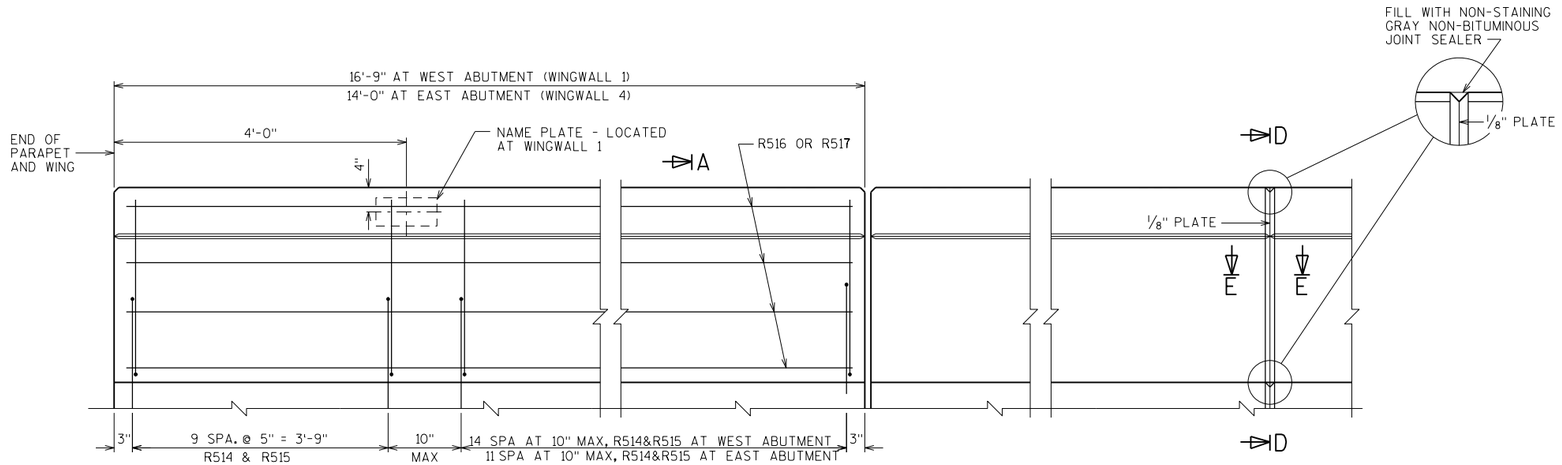
FILE= B-40-253_140_42SS.DGN
SCALE = 1:1

8

8

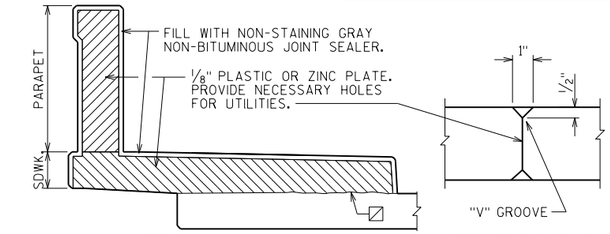
STATE PROJECT NUMBER

1360-13-71



AT ABUTMENTS

AT DEFLECTION JOINTS

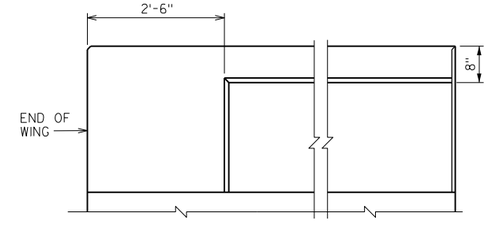


SECTION D-D

SECTION E-E

(SHOWING DEFLECTION JOINT IN PARAPET AND SIDEWALK.)

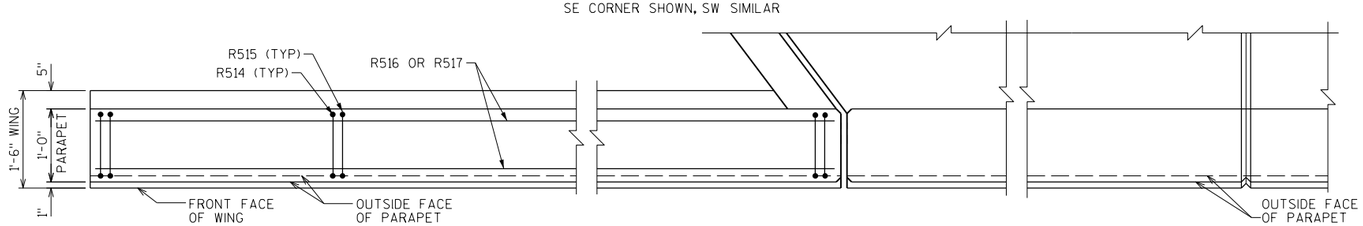
WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION D-D BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.



OUTSIDE FACE OF PARAPET

INSIDE ELEVATION OF PARAPET

SE CORNER SHOWN, SW SIMILAR

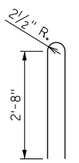


AT ABUTMENTS

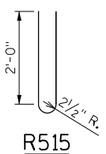
AT DEFLECTION JOINTS

BILL OF BARS

BAR MARK	COAT	NO. REQ'D W ABUT.	NO. REQ'D E ABUT.	LENGTH	BENT	BAR SERIES	783# COATED LOCATION
R514	X	25	22	6'-1"	X		PARAPET VERT.
R515	X	25	22	4'-9"	X		PARAPET VERT.
R516	X	8		16'-5"			PARAPET HORIZ.
R517	X		8	13'-8"			PARAPET HORIZ.



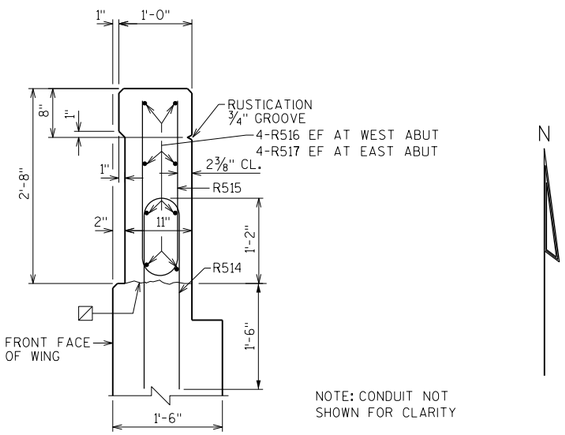
R514



R515

PLAN OF PARAPET

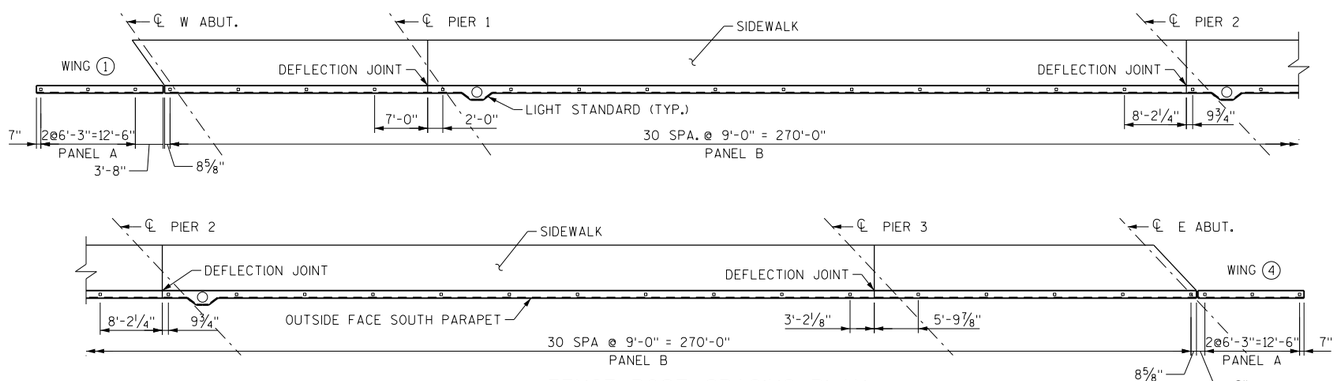
SE CORNER SHOWN, SW SIMILAR



SECTION A-A

NOTE: CONDUIT NOT SHOWN FOR CLARITY

CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.



FENCE POST SPACING PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

DRAWN BY NWG | PLANS CK'D. WJZ

VERTICAL FACE PARAPET "A"

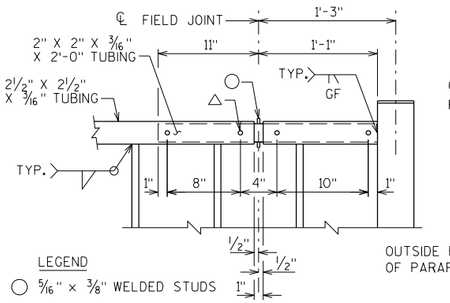
SHEET 15 OF 21

266

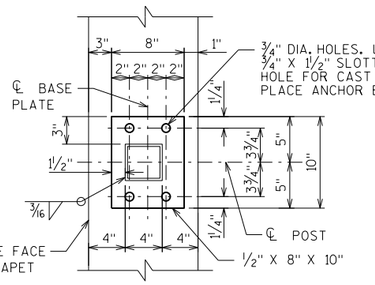
FILE= B-40-253.150.-VERTPPTA.DGN
SCALE = 1:1

8

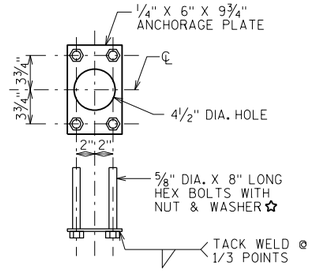
8



RAILING EXPANSION JOINT DETAIL



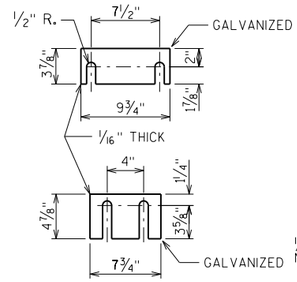
BASE PLATE



ANCHORAGE DETAIL

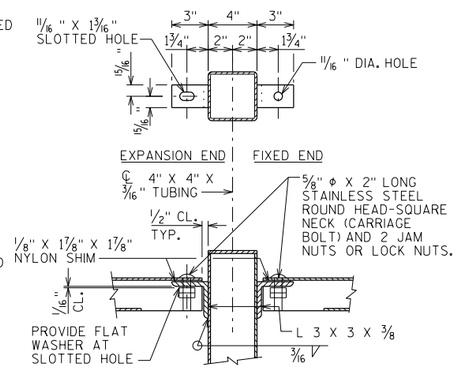
✪ALTERNATIVE ANCHORAGE: ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 AND 502.3.14 OF THE STANDARD SPECIFICATIONS.

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

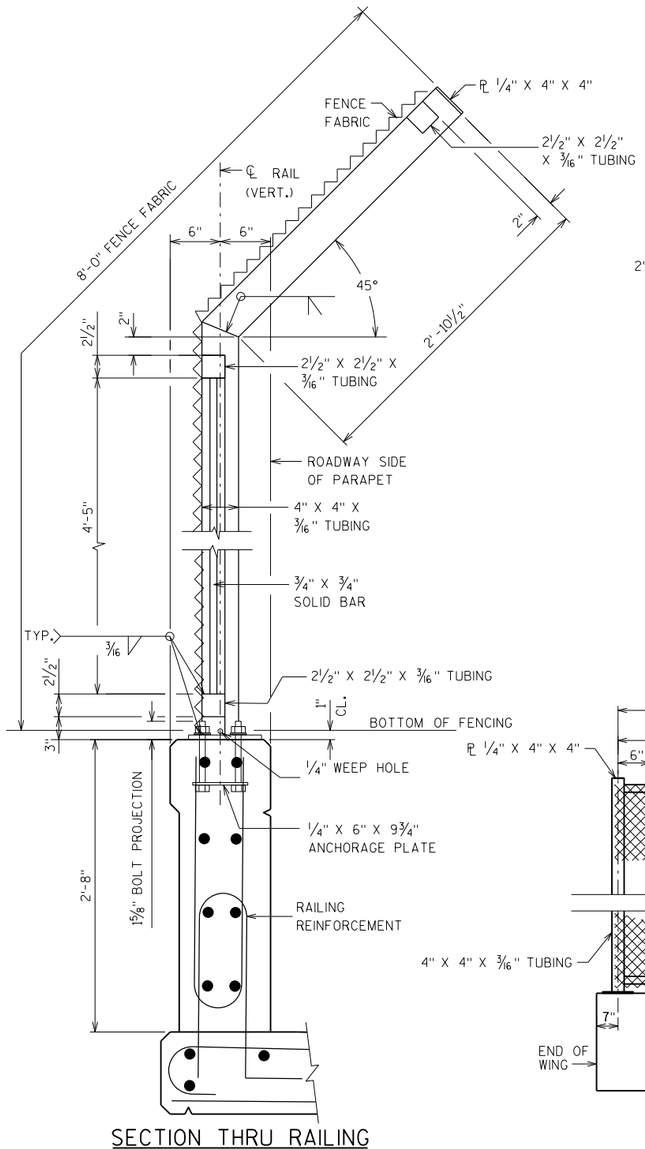


SHIM PLATE DETAILS

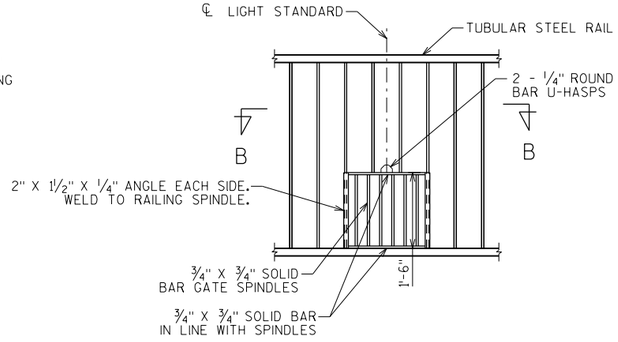
TWO SHIMS OF EACH SIZE REQUIRED PER POST



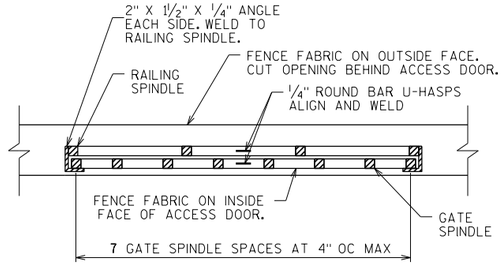
TOP RAIL CONNECTION FOR FENCE W/ BENT TOP



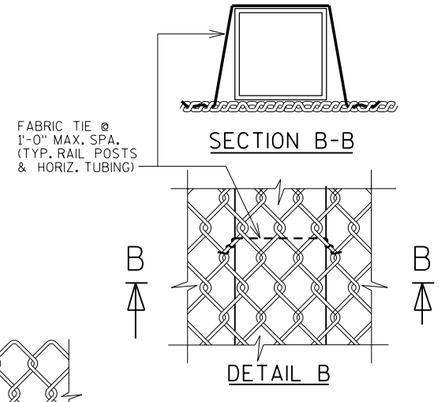
SECTION THRU RAILING

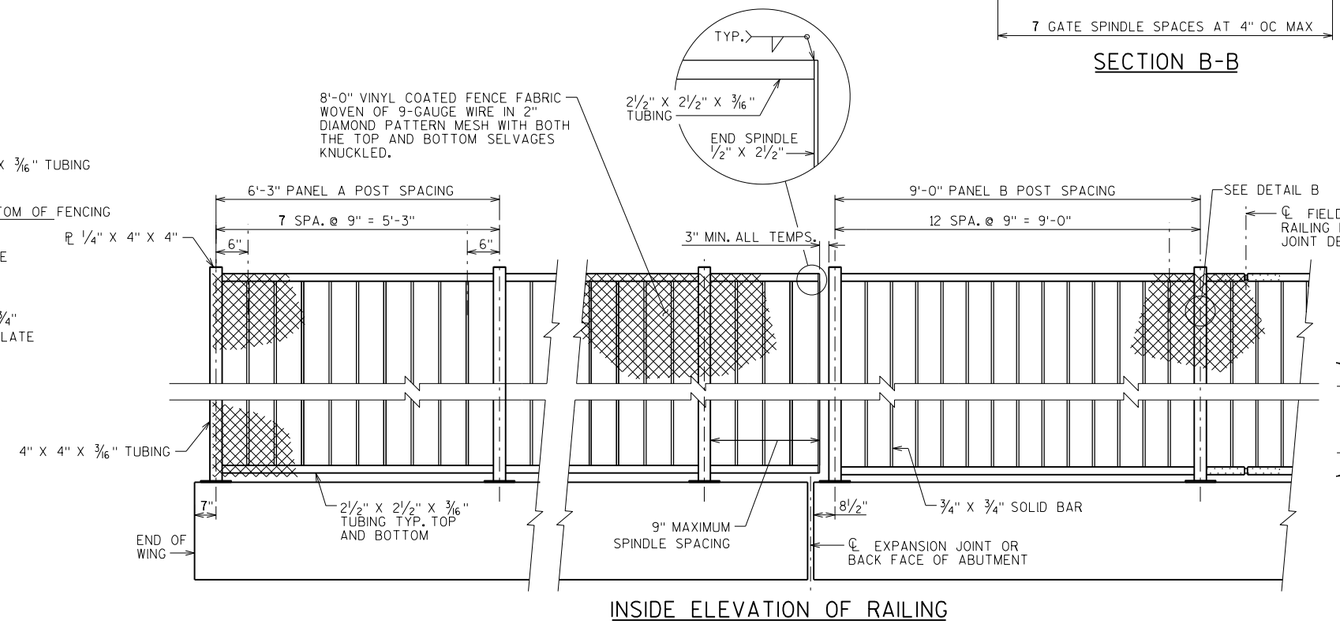


RAILING ACCESS DOOR ELEVATION

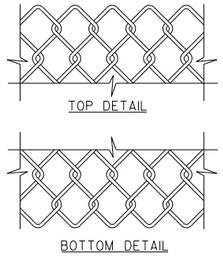


SECTION B-B





INSIDE ELEVATION OF RAILING



FENCE FABRIC

NOTES

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 CUT.

STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B. PLATES, ANGLES, BARS AND SHIMS SHALL CONFORM TO ASTM A709, GRADE 36. FENCE FABRIC SHALL CONFORM TO F668, CLASS 2B.

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

ALL POST SPACINGS ARE TAKEN HORIZONTAL ALONG CENTERLINE OF RAILING AT BASE OF POST.

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

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED. ✪

THE BID ITEM SHALL BE "RAILING TUBULAR SCREENING" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE NOT MORE THAN 3 POSTS.

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

ALL RAILING MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS.

THE END OF THE FABRIC SHALL BE ATTACHED TO THE POST BY MEANS OF A TENSION BAR THREADED THROUGH THE END LOOPS OF THE FABRIC AND SECURED TO THE POST WITH CLAMPS & BOLT. THE FABRIC SHALL BE STRETCHED TO REMOVE ALL SLACK.

STATE PROJECT NUMBER

1360-13-71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

DRAWN BY NWG | PLANS CK'D. WJZ

TUBULAR STEEL RAILING SCREENING

SHEET 16 OF 21

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FILE= B-40-253_160_TUBERAIL.DGN
SCALE = 1:1

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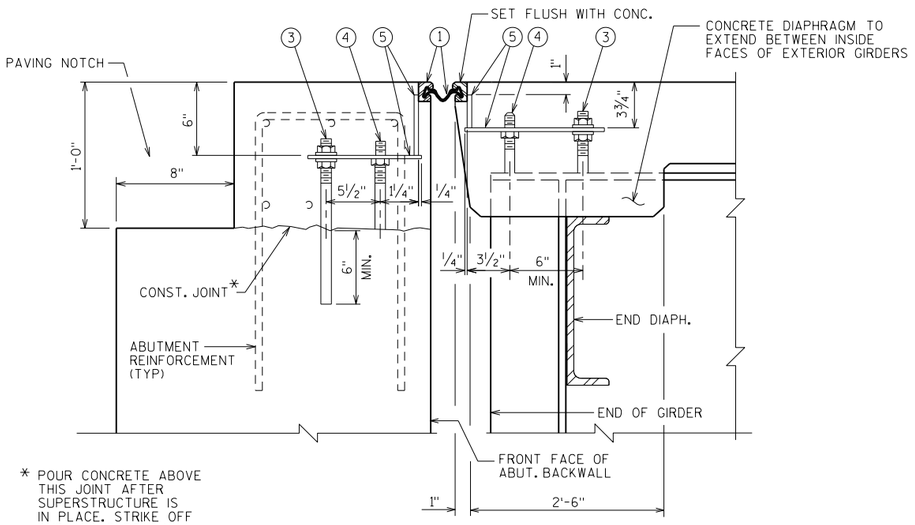
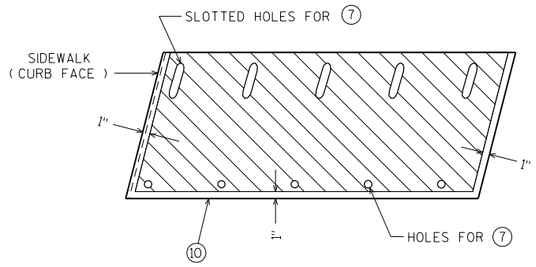
STATE PROJECT NUMBER
1360-13-71



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

SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE



PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE

PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN HATCHED AREA ONLY (NOT ON CURB FACE).

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES		
PRODUCT	MANUFACTURER	CONTACT AT
SLIPNOT GRADE 2, STEEL	W. S. MOLNAR COMPANY	1-800-SLIPNOT
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170

LEGEND

① NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.

② STUDS 5/8"Φ X 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

②A ½" THICK ANCHOR PLATE WITH 5/8"Φ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

③ ¾" Φ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

④ ¾"Φ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

⑤ FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" Φ HOLE FOR NO. 3 & 1" Φ HOLE FOR NO. 4.

⑥ GALVANIZED PLATE ⅜" X 10" X 2'-2" LONG WITH HOLES FOR NO. 7.

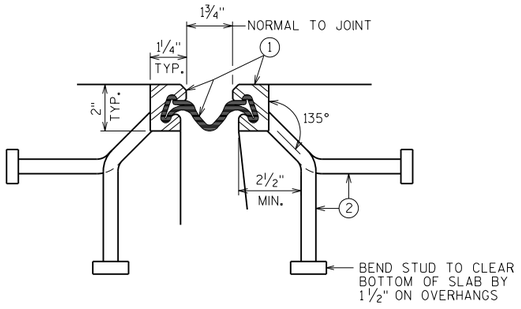
⑦ ¾"Φ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

⑧ ¾"Φ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

⑨ ¾"Φ X 2¼" GALVANIZED THREADED COUPLING.

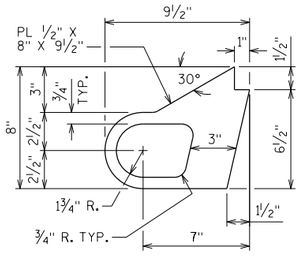
⑩ SIDEWALK COVER PLATE ⅜" X 2'-0" X LIMITS SHOWN. BEND DOWN FACE OF SIDEWALK WITH HOLES FOR NO. 7. GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.

⑪ 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

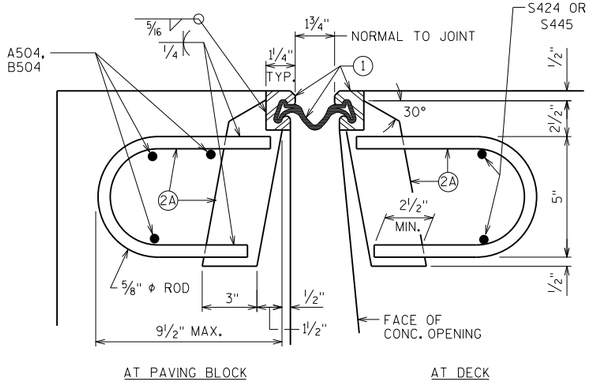


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS AND SIDEWALKS

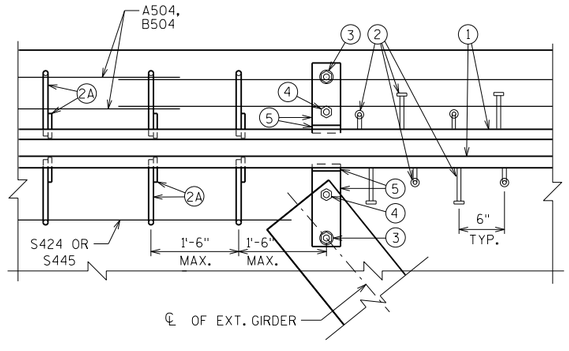


ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



PART PLAN

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, ANCHOR PLATES SHALL BE PROVIDED 3" FROM EACH SIDE OF THE FIELD SPLICE. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

ALL MATERIAL IN THE EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID AT THE UNIT PRICE BID FOR "EXPANSION DEVICE", LF.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

DRAWN BY NWG | PLANS CK'D. WJZ

STRIP SEAL EXPANSION JOINT

SHEET 17 OF 21

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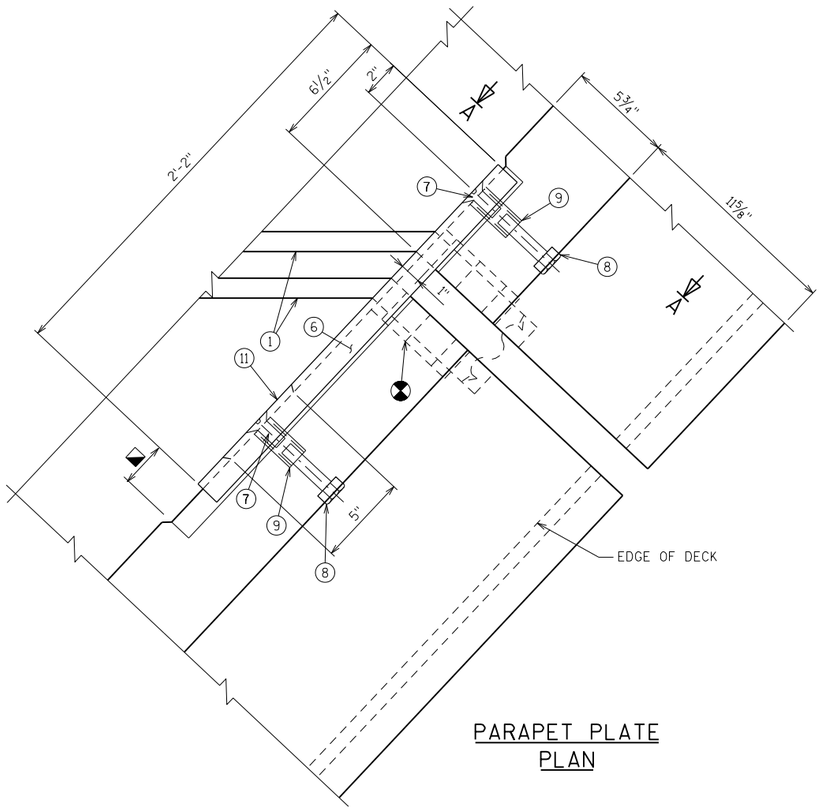
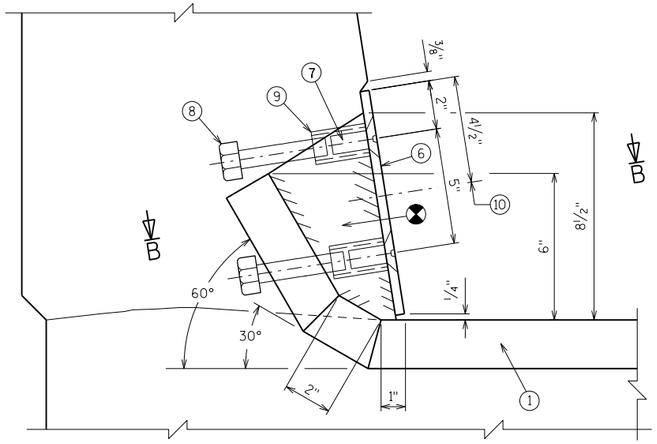
FILE= B-40-253_170_JOINT.DGN
SCALE = 1:1

STATE PROJECT NUMBER

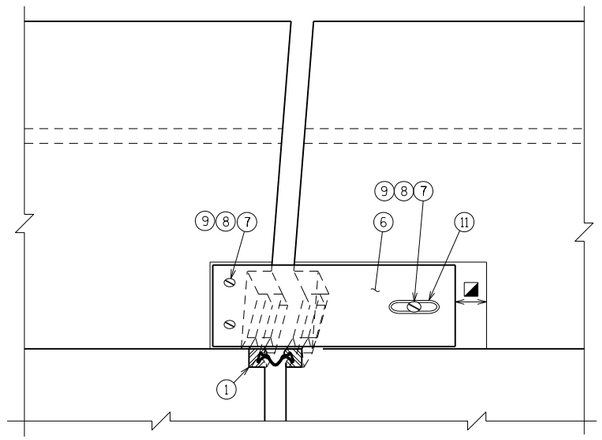
1360-13-71



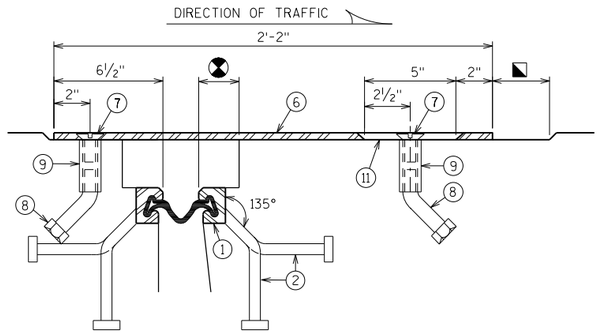
PARAPET PLATE PLAN



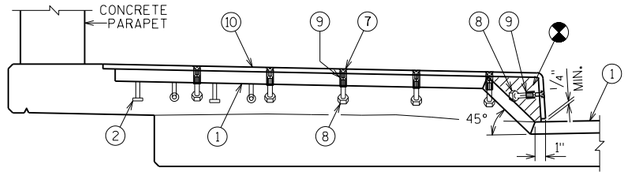
SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY

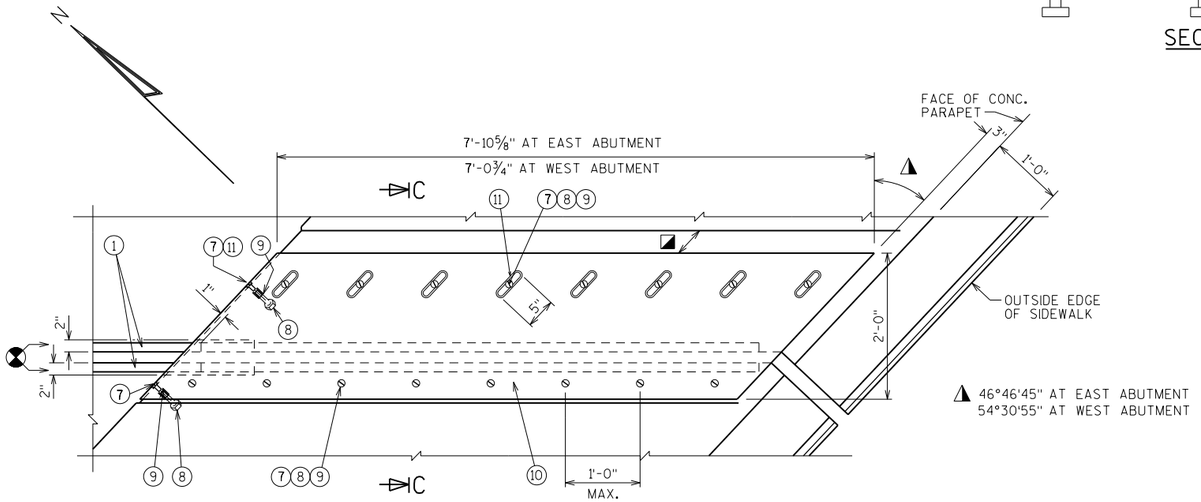


SECTION B-B



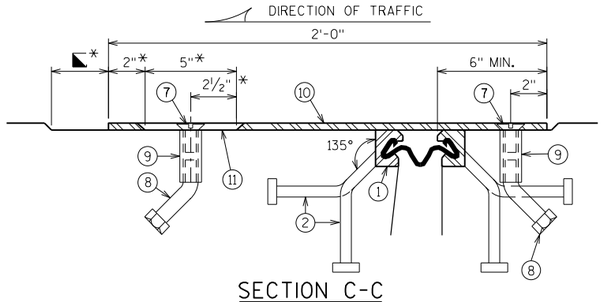
SECTION AT SIDEWALK

(LOOKING WEST)



△ 46°46'45" AT EAST ABUTMENT
54°30'55" AT WEST ABUTMENT

SIDEWALK PLATE PLAN



SECTION C-C

* DIMENSION ALONG DIRECTION OF MOVEMENT

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

◪ JOINT OPENING DIMENSION ALONG SKEW PLUS ½".

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STRUCTURE B-40-253

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COVER PLATE DETAILS

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FILE= B-40-253_180_COVERPLATES.DGN
SCALE = 1:1

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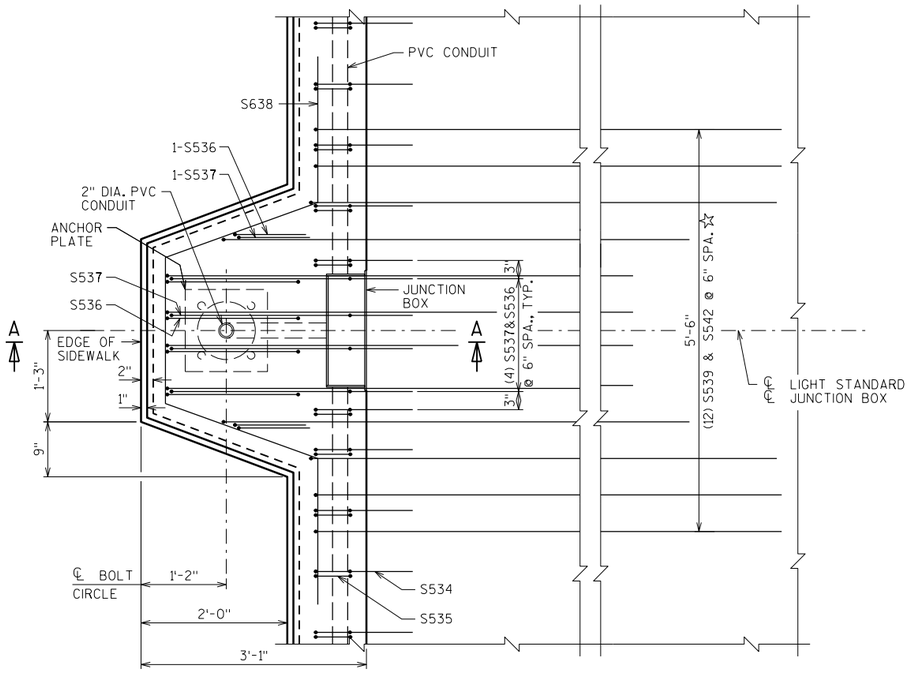
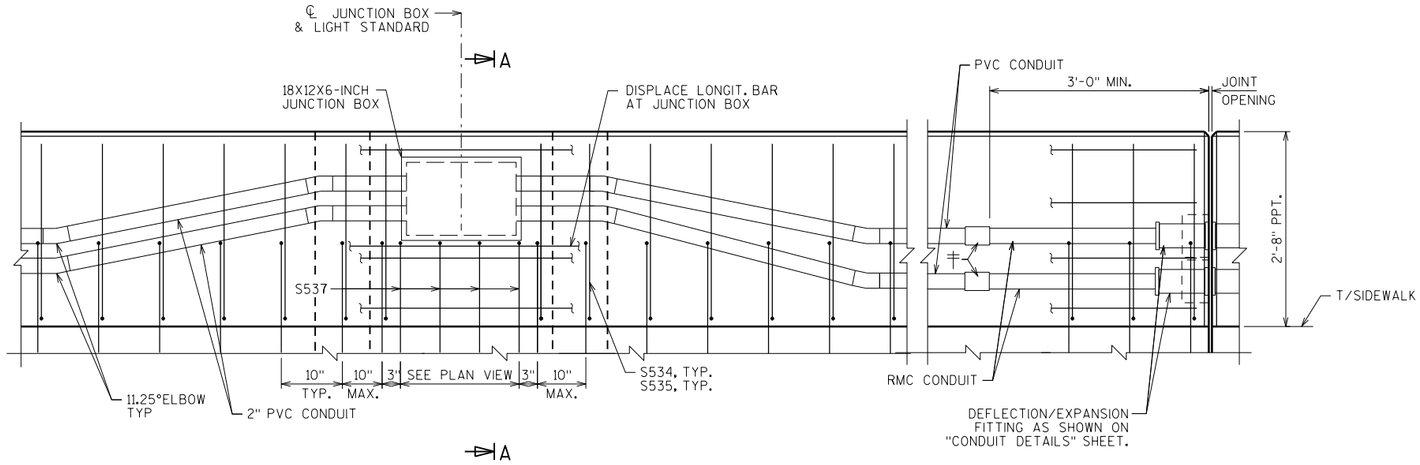
STATE PROJECT NUMBER
1360-13-71



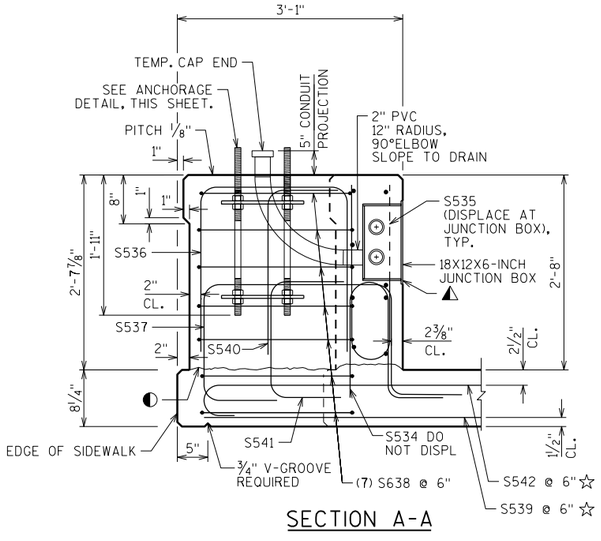
PLAN AT LIGHT STANDARD

(DECK AND SIDEWALK STEEL NOT SHOWN FOR CLARITY)



INSIDE ELEVATION AT JUNCTION BOX

(DECK AND SIDEWALK STEEL NOT SHOWN FOR CLARITY)



SECTION A-A

NOTES

BID ITEM SHALL BE "ANCHOR ASSEMBLIES POLES ON STRUCTURES", EACH

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" DIA. RIGID NONMETALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE.

CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS ARE INCIDENTAL TO CONDUIT WORK.

PROVIDE JUNCTION BOXES FROM THE APPROVED PRODUCTS LIST.

SEE "CONDUIT DETAILS" SHEET FOR ADDITIONAL INFORMATION.

⅜" NYLON PULL WIRE/ROPE IS REQUIRED FOR ALL CONDUIT AND SHALL BE INCIDENTAL TO CONDUIT INSTALLATION

ANCHOR BOLTS FOR ANCHOR ASSEMBLIES MUST BE INSTALLED PERPENDICULAR TO THE HORIZON

THE TOP OF THE LIGHT STANDARD SHALL HAVE A 1/8" PITCH FROM THE OUTSIDE FACE OF THE PARAPET TO THE OUTSIDE FACE OF THE LIGHT STANDARD.

LEGEND

◐ CONSTRUCTION JOINT, STRIKE OFF AS SHOWN.

◭ CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

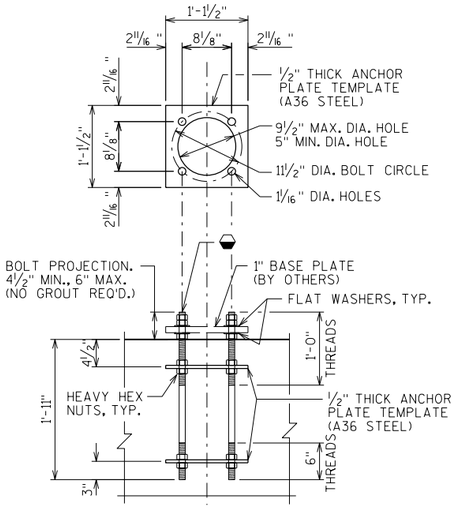
⫩ NONMETALLIC CONDUIT TO METALLIC CONDUIT ADAPTER FITTING (UL OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED).

PVC = POLYVINYL CHLORIDE (RIGID NONMETALLIC) CONDUIT

RMC = RIGID METALLIC CONDUIT

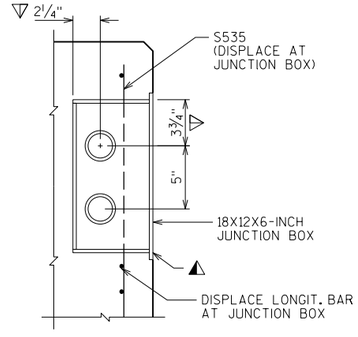
☆ THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN SIDEWALK.

◒ 1" DIA. ANCHOR RODS ASTM F1554 GR 55, HEAVY HEX NUTS ASTM A563, AND WASHERS ASTM F436. ANCHOR ASSEMBLIES SHALL BE GALVANIZED PER SECTION 531 OF THE STANDARD SPECIFICATION. PROVIDE (2) WASHERS AND (7) NUTS PER ANCHOR ROD.



ANCHOR ROD ASSEMBLY DETAIL

(SINGLE ASSEMBLY SHOWN 2 - REQ'D.)
(4) - ANCHOR RODS REQUIRED PER ASSEMBLY



JUNCTION BOX DETAIL

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

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LIGHT SUPPORT DETAILS

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SCALE = 1:1

STATE PROJECT NUMBER

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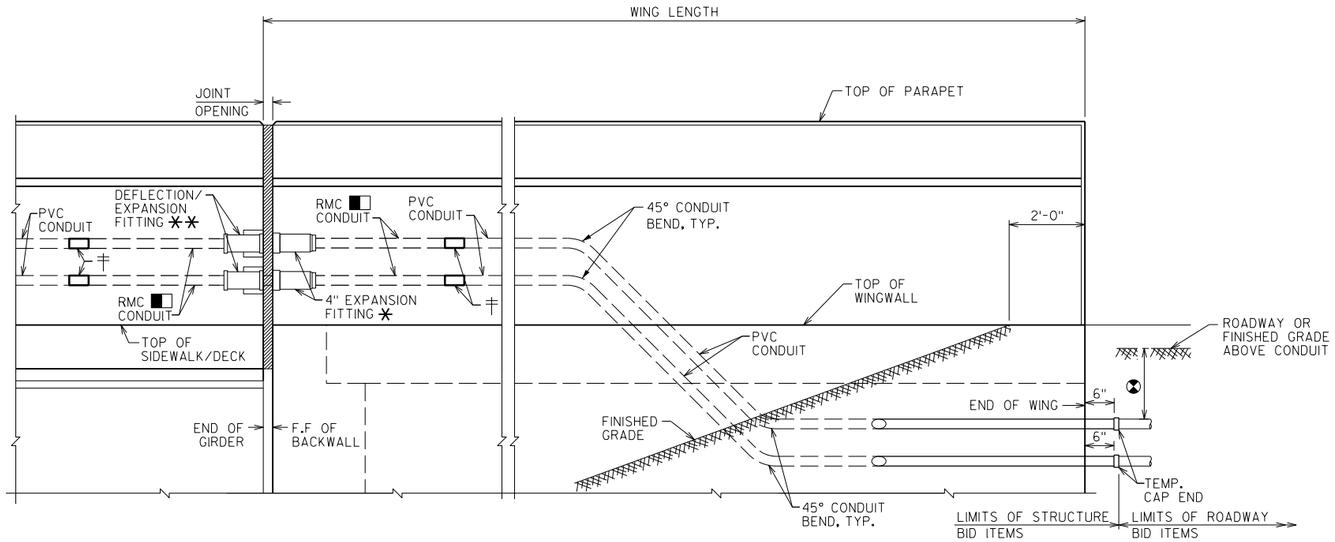
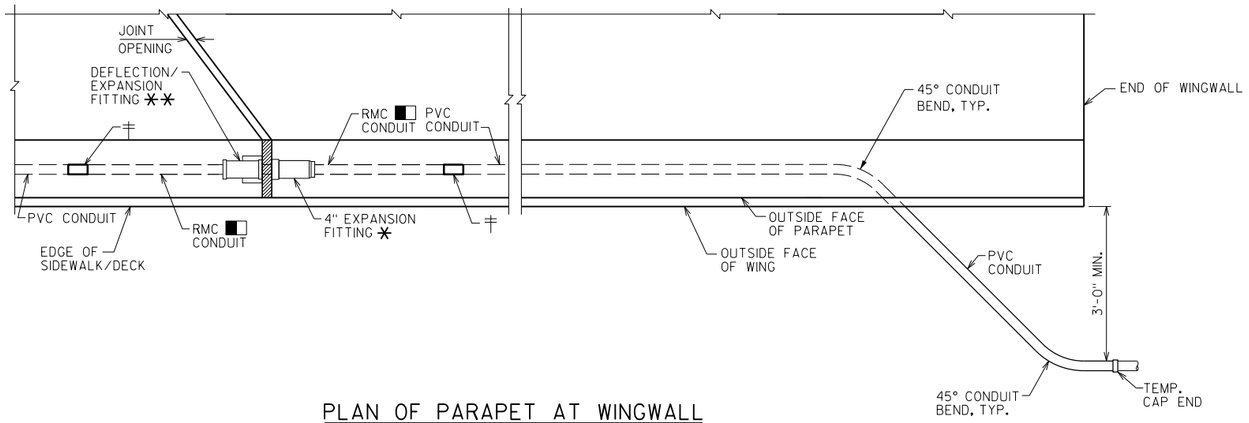
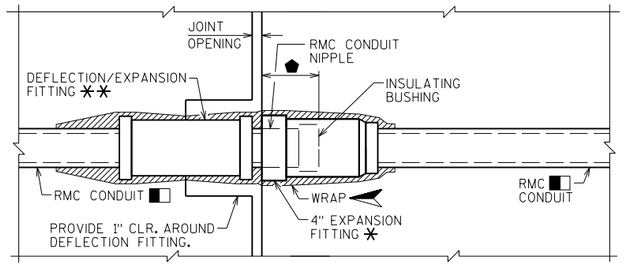


OUTSIDE ELEVATION OF PARAPET AT WINGWALL



PLAN OF PARAPET AT WINGWALL



DEFLECTION/EXPANSION AND 4" EXPANSION FITTING

BOND JUMPER NOT SHOWN FOR CLARITY

LEGEND

■ USE 2" DIA. RIGID METALLIC (RMC) CONDUIT AT FITTINGS. PROVIDE RMC FOR 3'-0" MIN. ON EACH SIDE OF 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 - 1/4" MINIMUM THICKNESS. PROVIDE WRAP FOR THE ENTIRE LENGTH OF THE FITTING OR AS SHOWN. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2 1/2-INCH".

⬟ POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

2'-0" MIN. CONDUIT COVER UNDER ROADWAYS, 1'-6" OTHERWISE. CONDUIT COVER SHOULD NOT EXCEED 3'-0".

✳ EXPANSION FITTING REQUIREMENTS:
- 4" TOTAL MOVEMENT WITH BONDING JUMPER

✳✳ DEFLECTION/EXPANSION FITTING REQUIREMENTS:
- UP TO 3/4" CONDUIT CONTRACTION OR EXPANSION AND UP TO 30° OF ANGULAR MISALIGNMENT IN ANY DIRECTION WITH BONDING JUMPER

NOTES

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" 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.

3/8" NYLON PULL WIRE/ROPE IS REQUIRED FOR ALL CONDUIT AND SHALL BE INCIDENTAL TO CONDUIT INSTALLATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

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CONDUIT DETAILS

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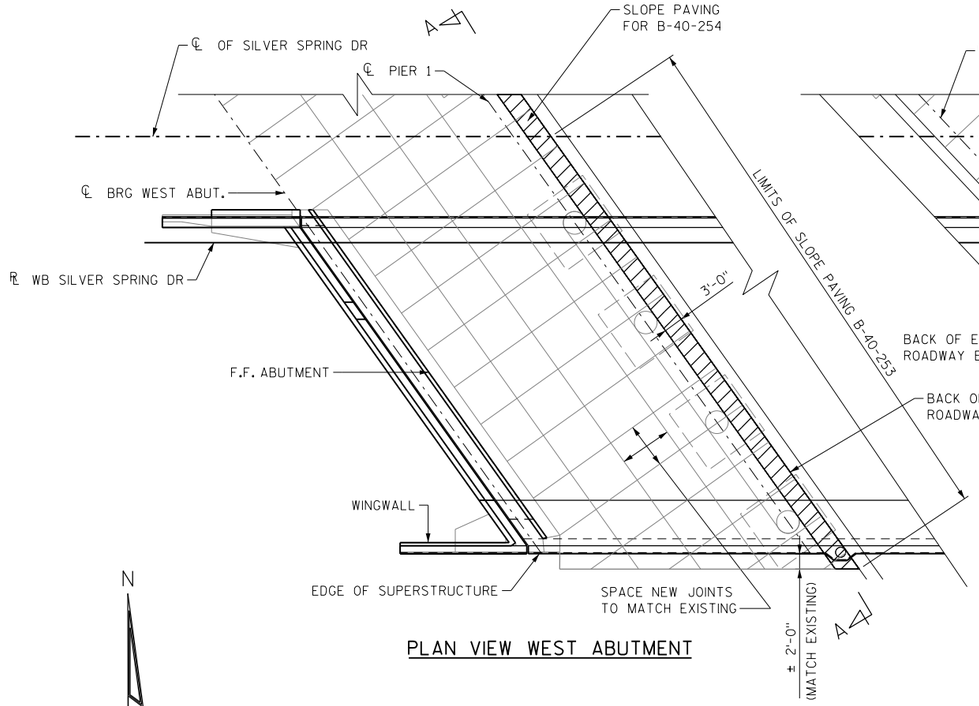
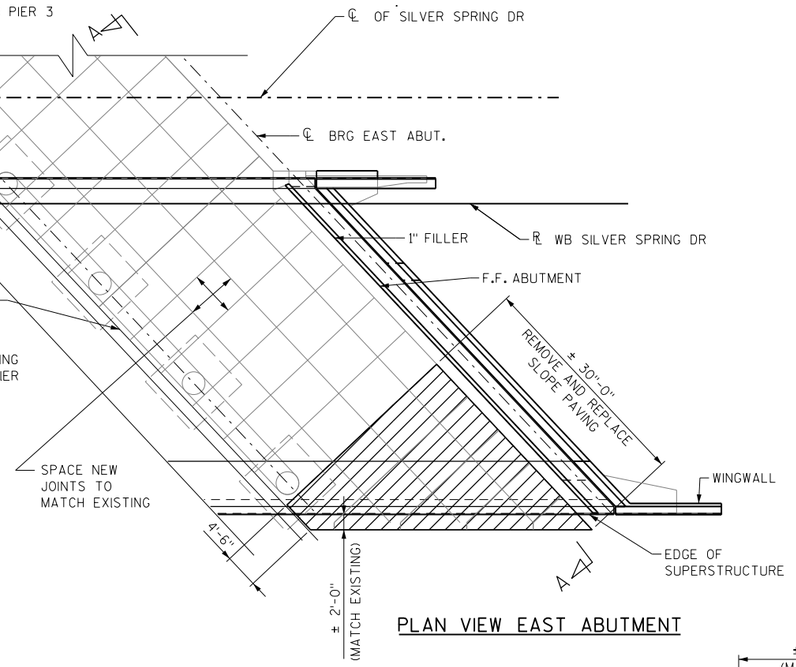
STATE PROJECT NUMBER

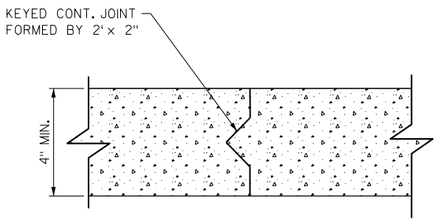
1360-13-71



PLAN VIEW WEST ABUTMENT

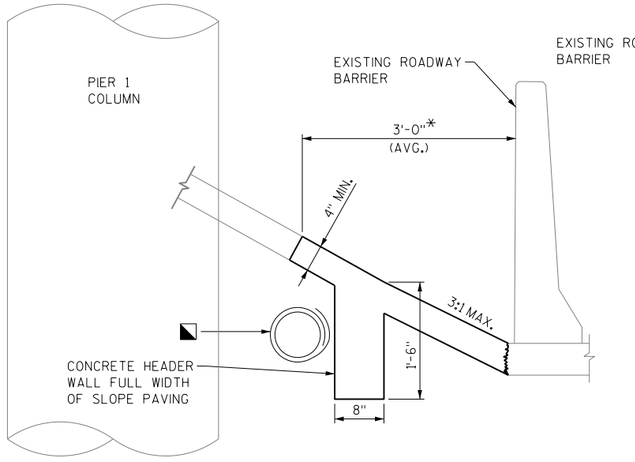


PLAN VIEW EAST ABUTMENT



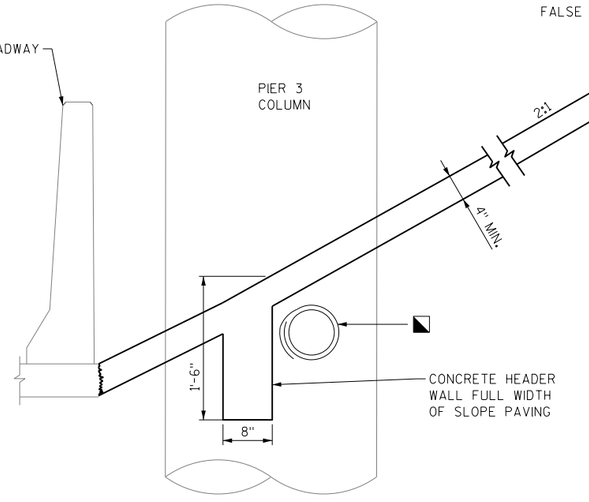
CONSTRUCTION JOINT

N

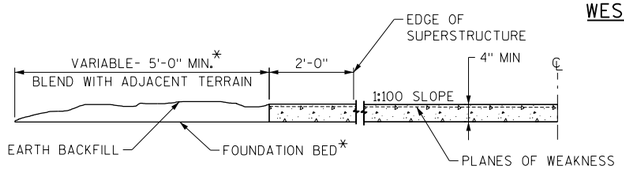


WEST ABUTMENT SLOPE PAVING SECTION

* REMOVE EXISTING COMPACTED GRAVEL AND INSTALL SLOPE PAVING.

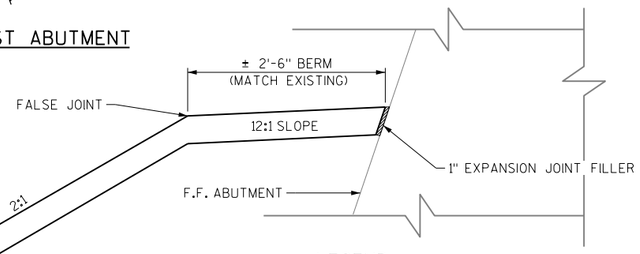


EAST ABUTMENT SLOPE PAVING SECTION



SECTION A-A

*EARTHWORK IS INCIDIENTAL



LEGEND

- PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. (SHOW DETAILS ON PLANS. SEE STD.9.01 FOR DETAILS)
- HATCHED AREAS INDICATE CONCRETE SLOPE PAVING TO BE INSTALLED.

NOTES

DETAILS OF CONSTRUCTION NOT SHOWN HEREIN SHALL CONFORM TO THE PERTINENT REQUIRMENTS OF THE STANDARD SPECIFICATIONS

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-253

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SLOPE PAVING DETAILS

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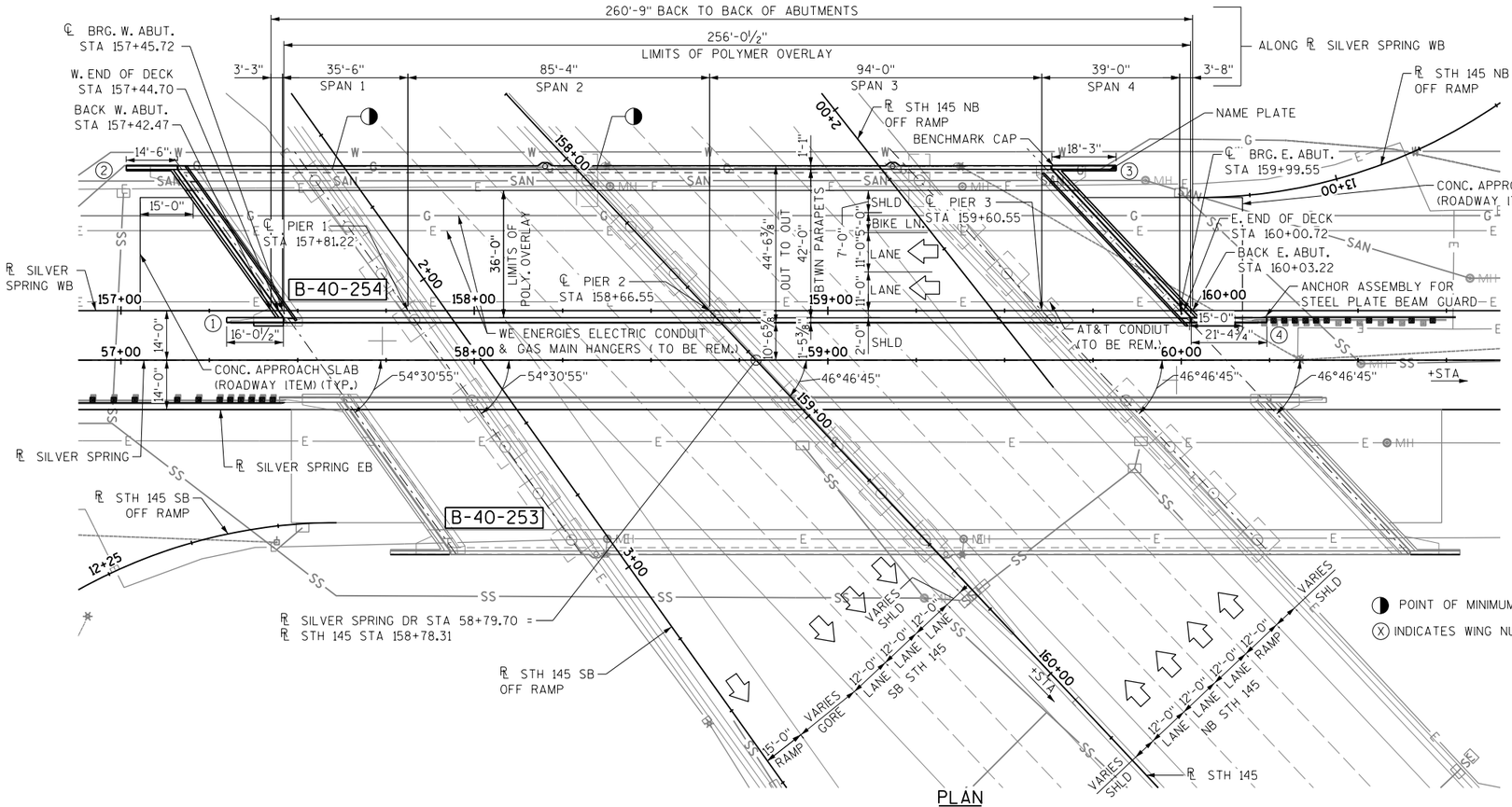
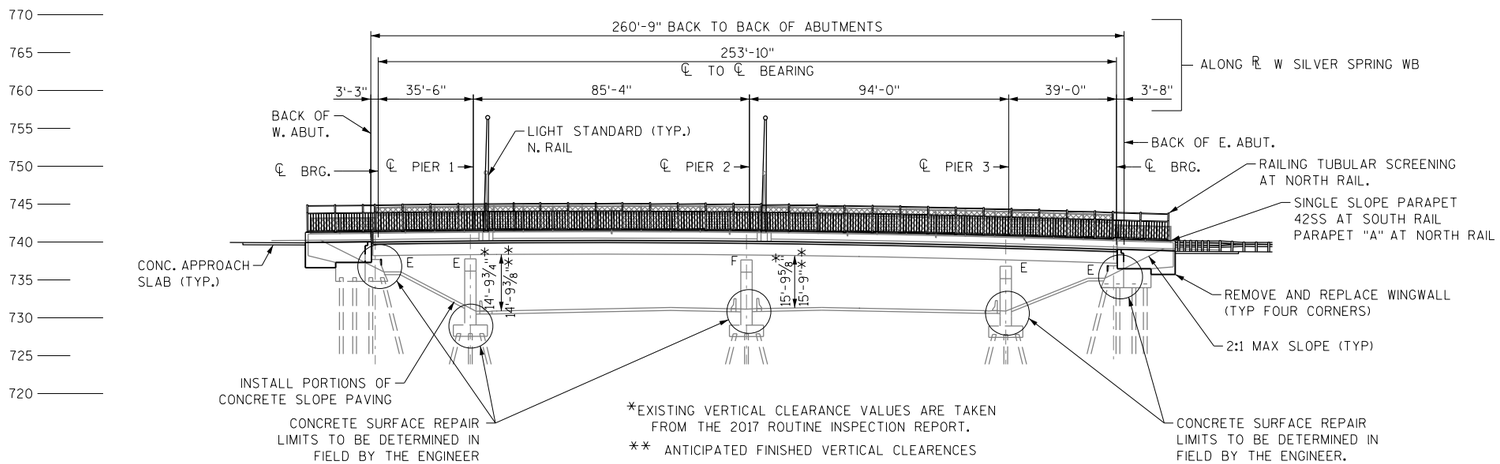
STATE PROJECT NUMBER
1360-13-71



PLAN

(4 SPAN - STEEL GIRDERS)
(DECK REPLACEMENT, POLYMER OVERLAY, AND REPAINTING)



*EXISTING VERTICAL CLEARANCE VALUES ARE TAKEN FROM THE 2017 ROUTINE INSPECTION REPORT.

** ANTICIPATED FINISHED VERTICAL CLEARANCES

ELEVATION

LOOKING NORTHWEST ALONG ℄ STH 145

DESIGN DATA

LIVE LOAD:
DESIGN LOADING HS20
INVENTORY RATING HS18
OPERATING RATING HS32
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV) = 240 KIPS
DESIGN ACCOUNTS FOR FUTURE WEARING SURFACE = 20 PSF

MATERIAL PROPERTIES:
CONCRETE MASONRY
SUBSTRUCTURE ..... f'c = 3.500 psi
SUPERSTRUCTURE ..... f'c = 4,000 psi
BAR STEEL REINFORCEMENT ..... fy = 60,000 psi

EXISTING STRUCTURE

THE EXISTING BRIDGE (B-40-254) IS A 260'-9" LONG, 44'-8" WIDE 4 SPAN STEEL GIRDER BRIDGE SUPPORTED ON REINFORCED CONCRETE PIERS AND ABUTMENTS. THE STRUCTURE BEGINS AT STA 157+42.47 AND ENDS AT STA 160+03.22. PLANS OF THE EXISTING BRIDGE ARE AVAILABLE FOR REVIEW AT WISDOT SE REGION OFFICE, 141 NW BARSTOW ST. WAUKESHA, WI OR THROUGH THE WISDOT STRUCTURES WEBSITE.

BENCHMARKS

NAME	DESCRIPTION	ELEV	STA	OFFSET
525	CP FENO WITH ALUMINUM CAP	734.07	65+63.57	0.85'LT
526	CP FENO WITH ALUMINUM CAP	737.16	48+35.23	5.67'LT

TRAFFIC DATA

W SILVER SPRING DR
AADT (2022) = 24,100
AADT (2042) = 26,400
DESIGN SPEED = 45 MPH.

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
AARON BONK, PE
(608) 261-0261

CONSULTANT:
WILLIAM J. ZIPPEL, PE, SE
ALFRED BENESCH & CO
1300 W CANAL ST, SUITE 150
MILWAUKEE, WI 53233
(414) 308-1321

WISCONSIN
WILLIAM J. ZIPPEL
38868-006
MILWAUKEE, WI
5/4/2023
PROFESSIONAL ENGINEER

LIST OF DRAWINGS:

1. GENERAL PLAN & ELEVATION
2. TYPICAL SECTIONS & QUANTITIES
3. STAGING PLAN & TYP DETAILS
4. SUBSTRUCTURE REMOVALS
5. WEST ABUTMENT MODIFICATIONS
6. WEST ABUTMENT WINGWALL MODIFICATIONS
7. EAST ABUTMENT MODIFICATIONS
8. EAST ABUTMENT WINGWALL MODIFICATIONS
9. BEARING DETAILS
10. HOLD DOWN DEVICE
11. DECK ELEVATIONS
12. SUPERSTRUCTURE REINFORCEMENT
13. SUPERSTRUCTURE DETAILS
14. SINGLE SLOPE PARAPET 42SS
15. VERTICAL FACE PARAPET "A"
16. TUBULAR STEEL RAILING SCREENING
17. STRIP SEAL EXPANSION JOINT
18. COVER PLATE DETAILS
19. LIGHT SUPPORT DETAILS
20. CONDUIT DETAILS
21. SLOPE PAVING DETAILS

NO.	DATE	REVISION	BY

benesch
Alfred Benesch & Company
1300 West Canal Street, Suite 150
Milwaukee, Wisconsin 53233
414-308-1310 Job No. 20288.00

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 05/05/23
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-40-254

W SILVER SPRING DR WB OVER STH 145

COUNTY	MILWAUKEE	~~TOWN~~/CITY/~~VILLAGE~~	MILWAUKEE
DESIGN SPEC.	REHABILITATION N/A		
DESIGNED BY	JAP	DESIGN CK'D.	WJZ
DRAWN BY	NWG	PLANS CK'D.	WJZ

GENERAL PLAN & ELEVATION

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FILE= B-40-254_10_GP&E.DGN
SCALE = 1:40

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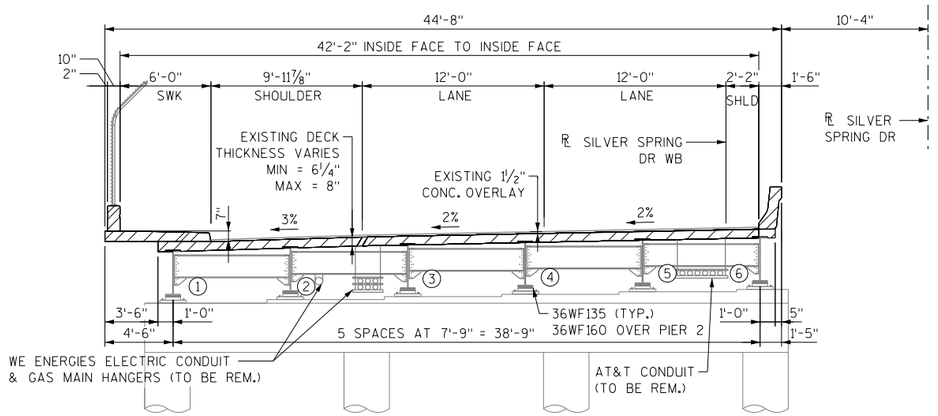
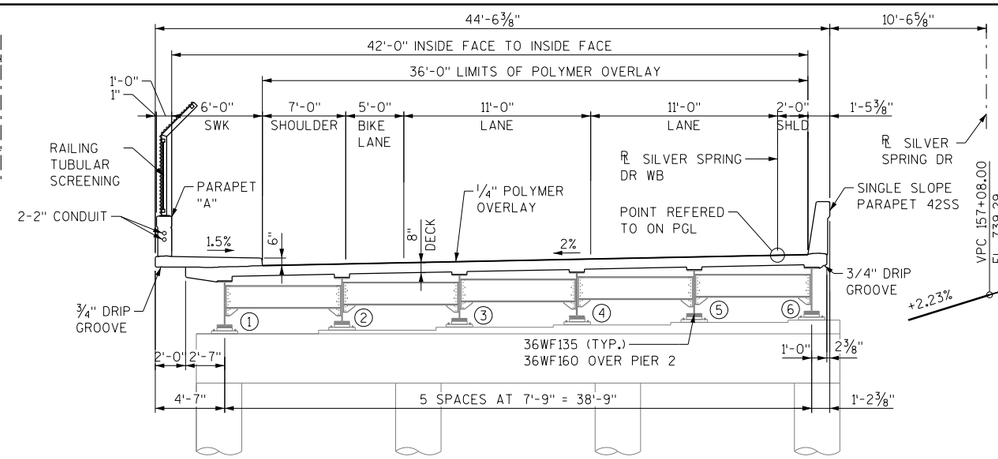


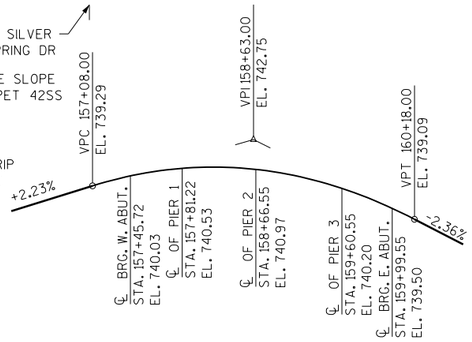
EXISTING TYPICAL SECTION THRU STRUCTURE B-40-254

(LOOKING EAST)



FINISHED TYPICAL SECTION THRU STRUCTURE B-40-254

(LOOKING EAST)



PROFILE GRADE LINE SILVER SPRING DR WB

STATE PROJECT NUMBER

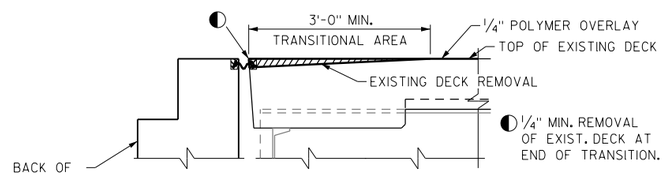
1360-13-71

GENERAL NOTES

1. DRAWINGS SHALL NOT BE SCALED.
2. EXISTING STRUCTURE DIMENSIONS ARE BASED ON THE ORIGINAL STRUCTURE PLANS.
3. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
4. THE TOP LAYER OF BAR STEEL REINFORCEMENT IN THE DECK SHALL BE PLACED WITH 2½" OF CONCRETE COVER.
5. THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
6. PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND TOP OF THE PARAPETS.
7. BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.
8. ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS NOTED OTHERWISE.
9. ALL STATIONS AND ELEVATIONS ARE IN FEET.
10. THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE DECK REPLACEMENT DETAILS.
11. THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.
12. UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.
13. THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR, 1964.
14. VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.
15. THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-40-254" SHALL BE THE EXISTING GROUNDLINE.
16. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
17. APPLY PROTECTIVE SURFACE TREATMENT TO THE DECK AND SIDEWALK ON THE BRIDGE.
18. ALL CONCRETE REMOVAL SHALL BE DEFINED BY A ½" DEEP SAW CUT UNLESS SHOWN OR NOTED OTHERWISE.
19. AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.
20. THE COLOR OF THE FINISH EPOXY TOP COAT FOR THE GIRDERS AND CONNECTING STRUCTURAL STEEL SHALL BE BLUE (AMS COLOR NO. 25240).
21. CLEAN AND PAINT BEARINGS AT PIERS. COST IS INCLUDED IN THE RELEVANT STRUCTURE PAINTING PAY ITEMS.
22. SHOT BLASTING, DECK SURFACE PREPARATIONS, AND TRANSITIONAL AREAS ARE INCLUDED IN THE BID ITEM "POLYMER OVERLAY".
23. SPECIFIC LOCATIONS OF CONCRETE SURFACE REPAIR AT THE PIERS AND ABUTMENTS ARE TO BE DETERMINED BY THE FIELD ENGINEER.

TOTAL ESTIMATE OF QUANTITIES

BID NO.	BID ITEMS	UNIT	W ABUT	PIER 1	PIER 2	PIER 3	E ABUT	SUPER	TOTAL
203.0220	REMOVING STRUCTURE B-40-254	EACH							1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-40-254	EACH							1
210.1500	BACKFILL STRUCTURE TYPE A	TON	96				146		242
502.0100	CONCRETE MASONRY BRIDGES	CY	25.4				40.5	394.6	460.5
502.3101	EXPANSION DEVICE	LF	52				58		110
502.3200	PROTECTIVE SURFACE TREATMENT	SY						1010	1010
502.3210	PIGMENTED SURFACE SEALER	SY						259	259
502.4112	ADHESIVE ANCHORS 1 1/2-INCH	EACH	24				24		48
502.4205	ADHESIVE ANCHORS NO.5 BAR	EACH	240				249		489
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	3828				5303	100282	109413
506.6000	BEARING ASSEMBLIES EXPANSION B-40-254	EACH	6				6		12
506.7050.S	REMOVING BEARINGS B-40-254	EACH	6				6		12
509.1500	CONCRETE SURFACE REPAIR	SF		35	30				115
509.5100.S	POLYMER OVERLAY	SY				50		1010	1010
513.4091	RAILING TUBULAR SCREENING	LF						280	280
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	13				16		29
517.0901.S	PREPARATION AND COATING OF TOP FLANGES B-40-254	EACH						1	1
517.1801.S	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-254	EACH						1	1
517.4501.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-40-254	EACH						1	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH						1	1
531.8990	ANCHOR ASSEMBLIES POLES ON STRUCTURE	EACH						2	2
604.0400	SLOPE PAVING CONCRETE	SY	28						28
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	200				132		332
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH					1		1
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	46				51		97
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF						24	24
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF						539	539
653.0222	JUNCTION BOXES 18X12X6-INCH	EACH						2	2
NON-BID ITEMS	PREFORMED JOINT FILLER - ½", ¾"								
	NON-BITUMINOUS JOINT SEALER								
	NAME PLATE								



SECTION THRU ABUTMENT TRANSITIONAL AREA ON DECK AT EXPANSION JOINT

(REMOVAL AND OVERLAY THICKNESS NOT TO SCALE)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-254

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TYPICAL SECTIONS & QUANTITIES

SHEET 2 OF 21

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SCALE = 1:10

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STATE PROJECT NUMBER
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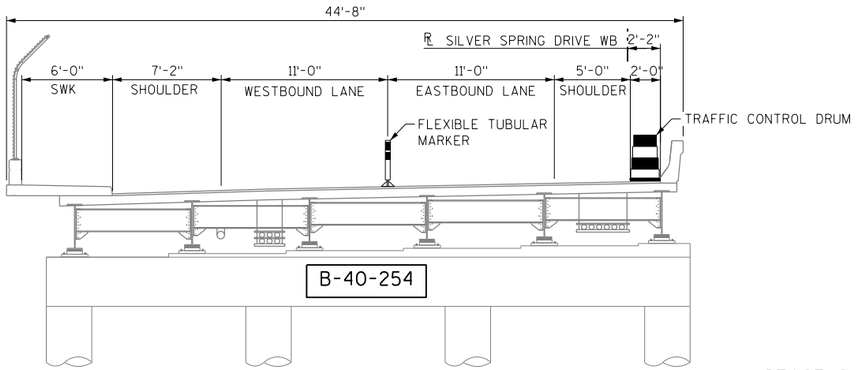
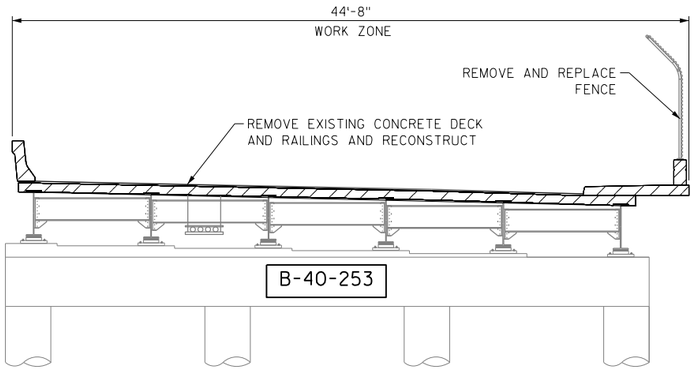
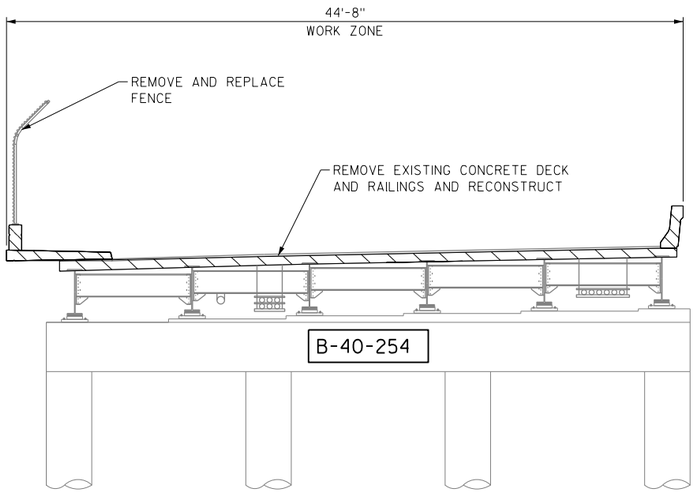
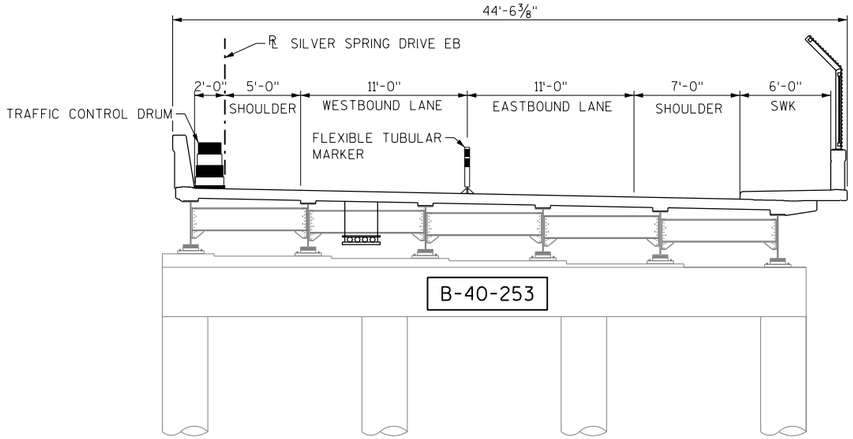




STAGE 2: SECTION
(LOOKING EAST)





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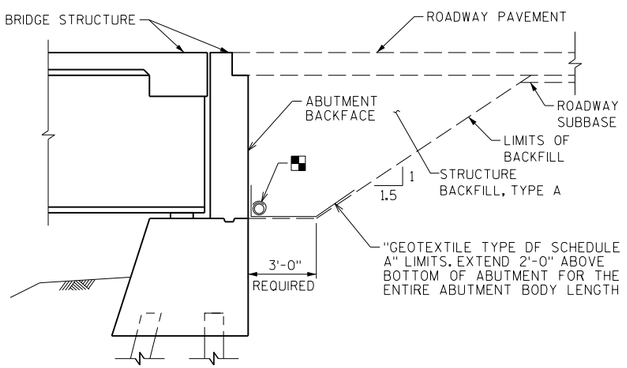


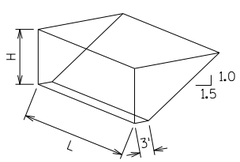
ABUTMENT BACKFILL NOTES

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-40-254" SHALL BE THE EXISTING GROUNDLINE.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURES TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY CONTRACTOR.

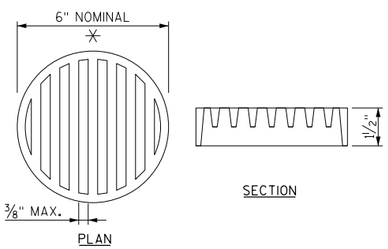
AT THE BACKFACE OF ABUTMENT, ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

■ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.



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)

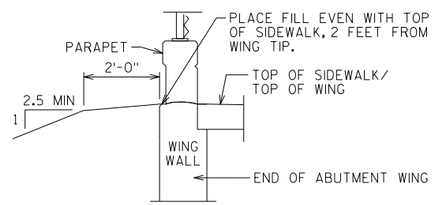


RODENT SHIELD DETAIL

✳ 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.



TYPICAL FILL SECTION AT WING TIPS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-254

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STAGING PLAN & TYP DETAILS

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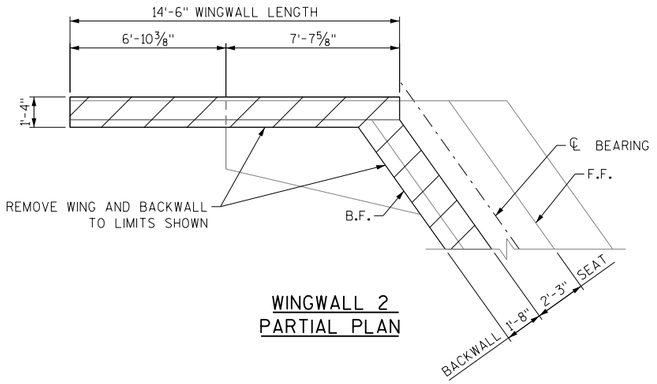
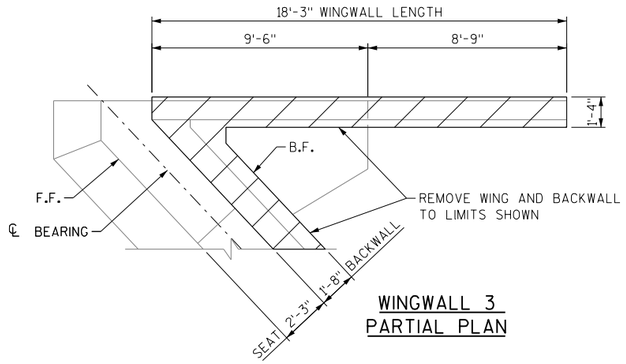
STATE PROJECT NUMBER

1360-13-71



WINGWALL 2
PARTIAL PLAN



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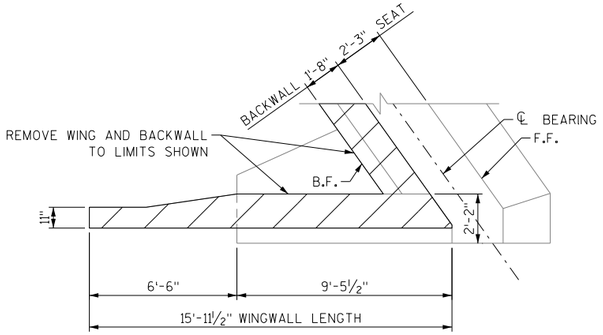
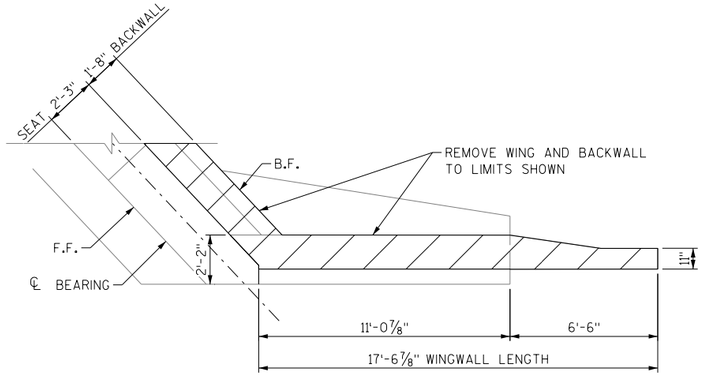
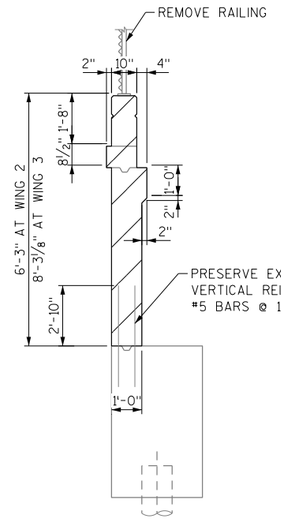
PARTIAL PLAN



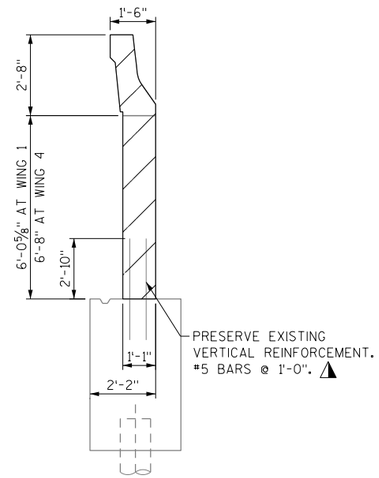
WINGWALL 1
PARTIAL PLAN



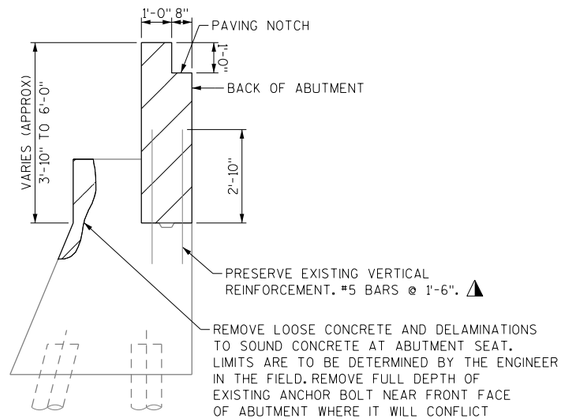
WINGWALL 4
PARTIAL PLAN



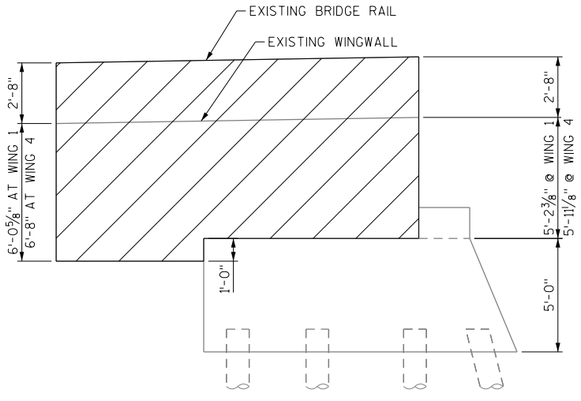
SECTION THROUGH
WINGWALLS 2 & 3



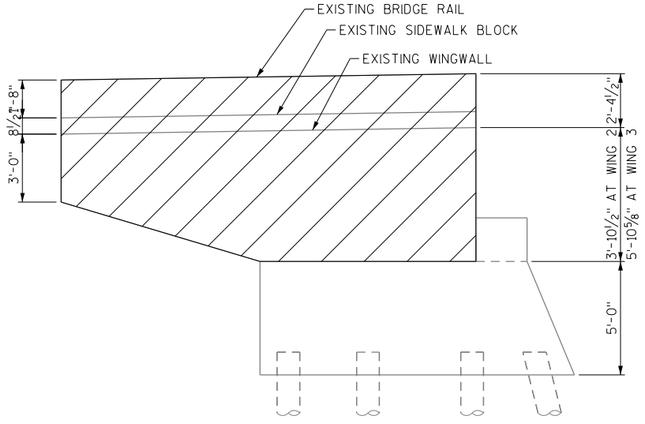
SECTION THROUGH
WINGWALLS 1 & 4



SECTION THROUGH
ABUTMENT



WINGWALL 1 ELEVATION
(WINGWALL 4 IS SIMILAR)



WINGWALL 3 ELEVATION
(WINGWALL 2 IS SIMILAR)

LEGEND

⚠ CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW LIMITS SHOWN. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED BY THE ENGINEER.

HATCHED AREAS INDICATE CONCRETE REMOVALS

F.F. - FRONT FACE

B.F. - BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-254

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SUBSTRUCTURE REMOVALS

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STATE PROJECT NUMBER

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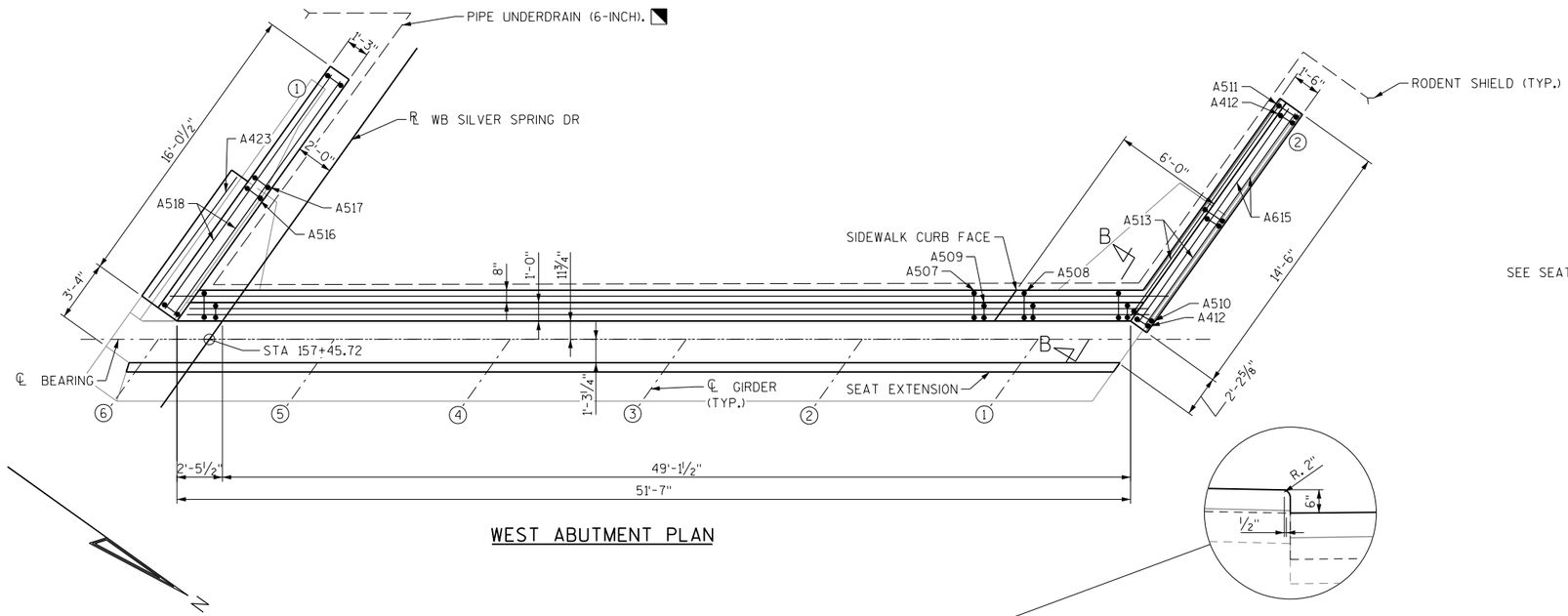
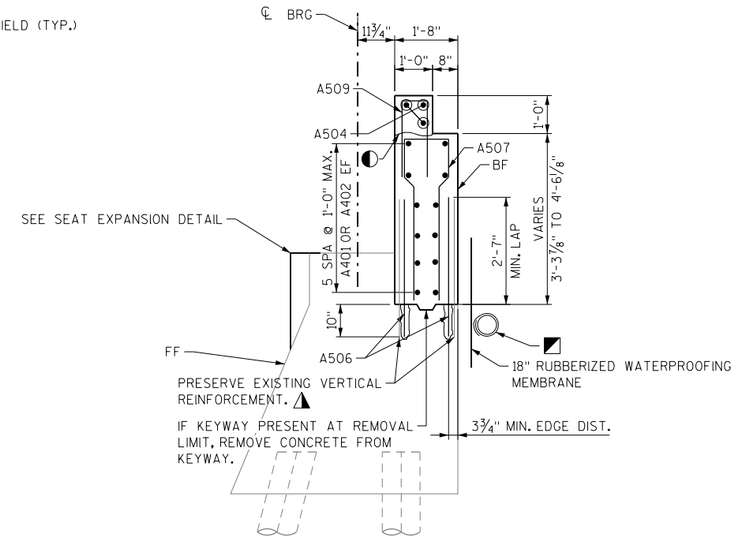
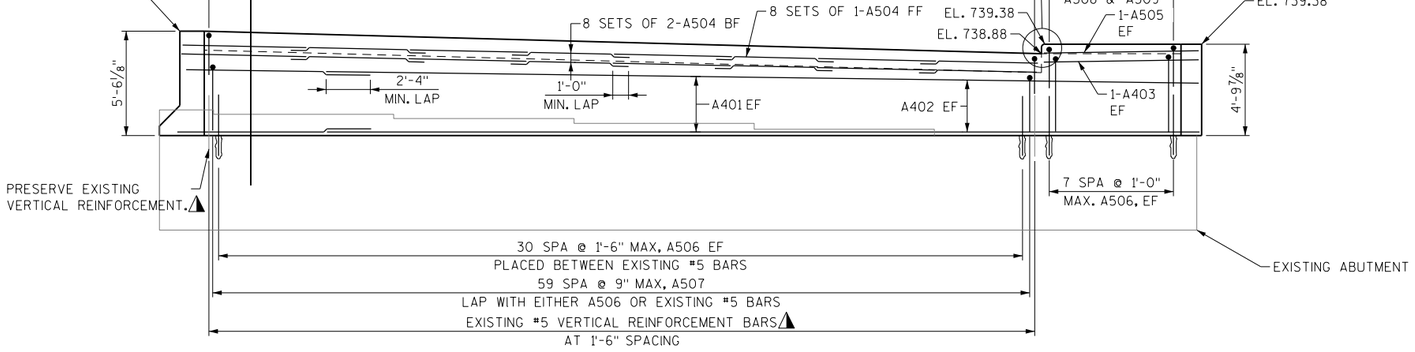


WEST ABUTMENT PLAN

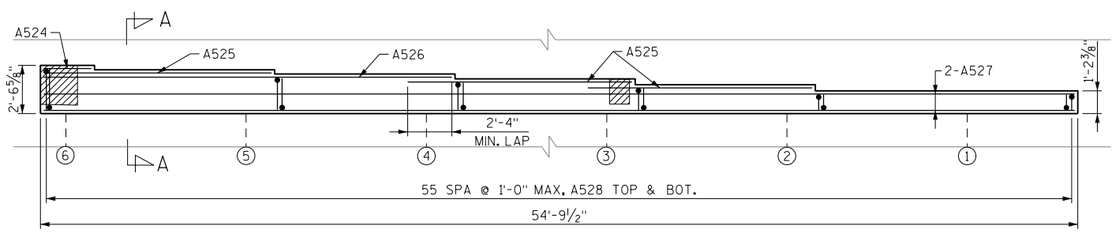


TYPICAL ABUTMENT SECTION

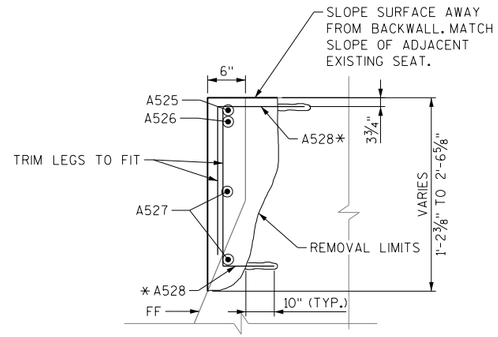


WEST ABUTMENT BACKWALL ELEVATION

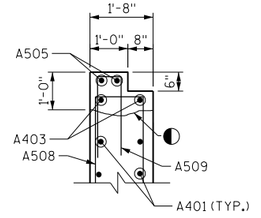
(LOOKING WEST. WINGWALLS NOT SHOWN FOR CLARITY)



WEST ABUTMENT SEAT ELEVATION



SECTION A-A AT SEAT EXTENSION



SECTION AT B-B SIDEWALK NOTCH

LEGEND

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN.

CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH. POUR CONCRETE ABOVE THIS JOINT AFTER DECK IS IN PLACE.

CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW REMOVAL LIMITS SHOWN ON REMOVAL DRAWING. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED BY THE ENGINEER.

HATCHED AREAS INDICATE UNSOUND CONCRETE TO BE REMOVED BEFORE SEAT EXTENSION

*A528-TRIM ENDS OF ADHESIVE ANCHORS AS DIRECTED IN FIELD BY ENGINEER

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-254

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WEST ABUTMENT MODIFICATIONS

SHEET 5 OF 21

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STATE PROJECT NUMBER

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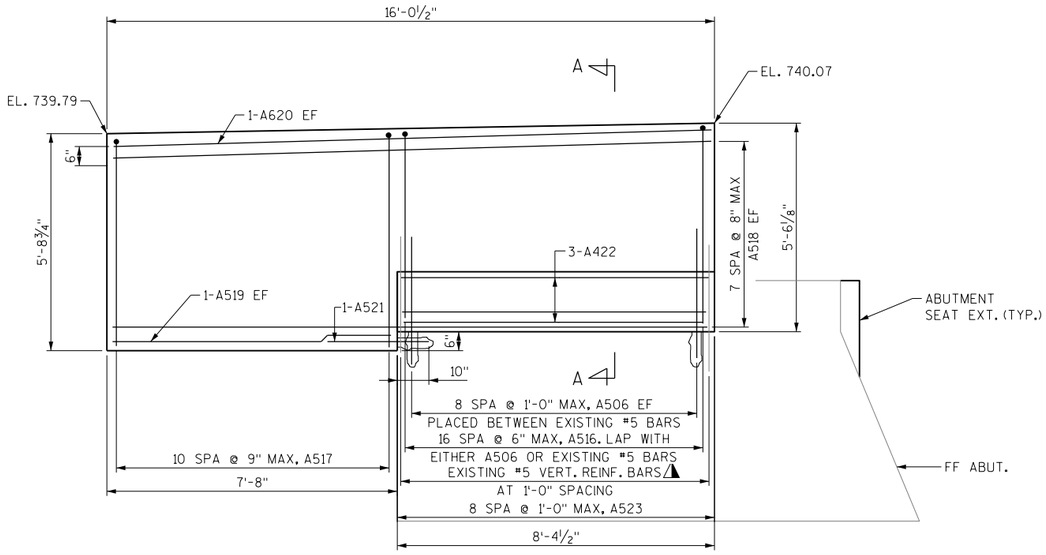
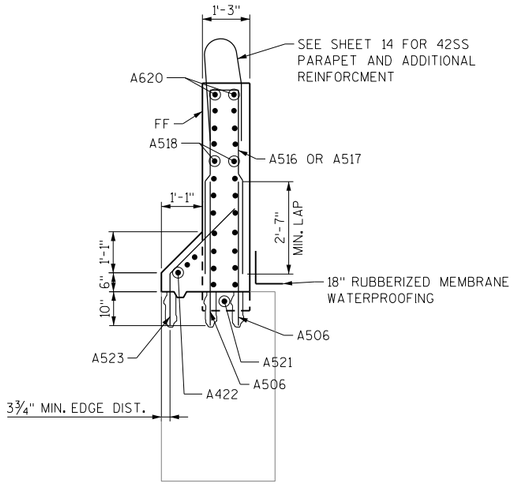


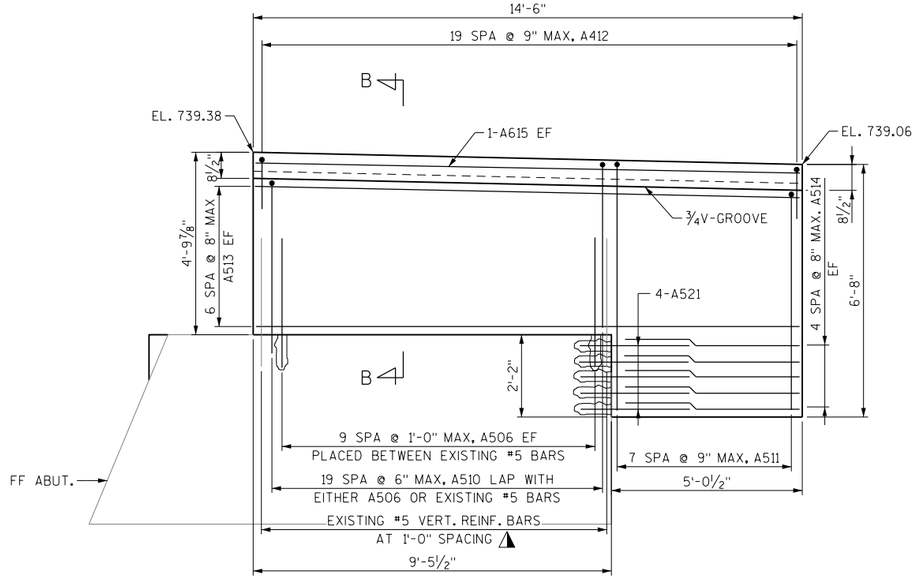
WINGWALL 1 ELEVATION



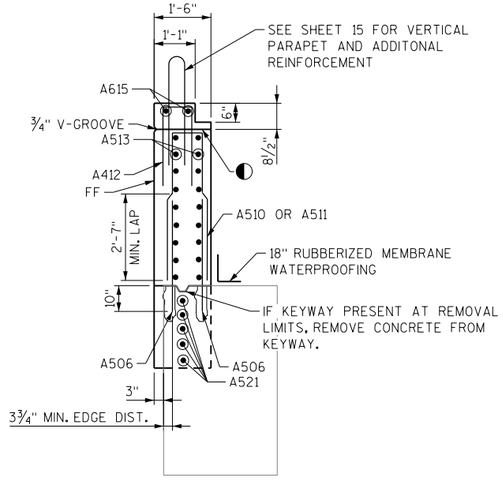
SECTION A-A

BILL OF BARS

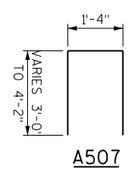
BAR NO.	COATED BAR	NO. REQ'D	LENGTH	BENT BAR	BUNDLED BAR SERIES	3828 # COATED -- # UNCOATED LOCATION
A401	X	12	45'-0"			BACKWALL HORIZONTAL - FF & BF
A402	X	12	11'-4"			BACKWALL HORIZONTAL - FF & BF
A403	X	2	8'-0"			BACKWALL HORIZONTAL - FF & BF AT SIDEWALK
A504	X	30	5'-10"			PAVING BLOCK HORIZONTAL
A505	X	2	8'-1"			PAVING BLOCK HORIZONTAL - SIDEWALK
A506	X	114	3'-8"			BACKWALL & WINGWALL VERTICAL - ADHESIVE ANCHORS
A507	X	60	8'-3"	X	X	BACKWALL VERTICAL
A508	X	8	9'-1"	X		BACKWALL VERTICAL - SIDEWALK
A509	X	53	4'-5"	X		PAVING BLOCK VERTICAL
A510	X	20	9'-3"	X		WINGWALL 2 VERTICAL
A511	X	8	13'-9"	X		WINGWALL 2 VERTICAL - OVERHANG
A412	X	20	4'-8"	X		WINGWALL 2 VERTICAL - SIDEWALK NOTCH
A513	X	12	14'-2"			WINGWALL 2 HORIZONTAL
A514	X	8	4'-8"			WINGWALL 2 HORIZONTAL - BOTTOM
A615	X	2	14'-2"			WINGWALL 2 HORIZONTAL - SIDEWALK NOTCH
A516	X	18	10'-8"	X		WINGWALL 1 VERTICAL
A517	X	11	11'-6"	X		WINGWALL 1 VERTICAL - OVERHANG
A518	X	16	15'-8"			WINGWALL 1 HORIZONTAL
A519	X	2	7'-4"			WINGWALL 1 HORIZONTAL - BOTTOM
A620	X	2	15'-8"			WINGWALL 1 HORIZONTAL - TOP
A521	X	5	2'-8"			WINGWALLS 1 & 2 HORIZONTAL - ADHESIVE ANCHOR
A422	X	3	8'-0"			WINGWALL 1 HORIZONTAL - FF STEP
A523	X	9	3'-9"	X		WINGWALL 1 VERTICAL - BENT ADHESIVE ANCHOR
A524	X	1	2'-6"			SEAT EXTENSION - LONGITUDINAL
A525	X	3	11'-11"			SEAT EXTENSION - LONGITUDINAL
A526	X	1	21'-6"			SEAT EXTENSION - LONGITUDINAL
A527	X	2	54'-5"			SEAT EXTENSION - LONGITUDINAL
A528	X	112	4'-0"	X		SEAT EXTENSION - BENT BAR ADHESIVE ANCHOR



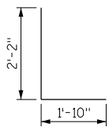
WINGWALL 2 ELEVATION



SECTION B-B



A507



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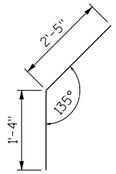

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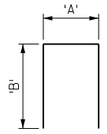

BAR SERIES TABLE

BAR NO	NUMBER REQUIRED	LENGTH
A507	1 SERIES OF 60	7'-1" TO 9'-5"

BAR NO	DIM 'A'	DIM 'B'
A508	1'-4"	4'-0"
A509	8"	2'-0"
A510	1'-2"	4'-2"
A511	1'-2"	6'-4"
A412	9"	2'-1"
A516	11"	5'-0"
A517	11"	5'-5"

LEGEND

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

◐ CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH

⚠ CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW LIMITS SHOWN ON REMOVAL PLAN. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED BY THE ENGINEER.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-254

DRAWN BY NWG | PLANS CK'D. WJZ

WEST ABUTMENT WINGWALL MODIFICATIONS

SHEET 6 OF 21

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FILE= B-40-254_60_WABUTWINGS.DGN
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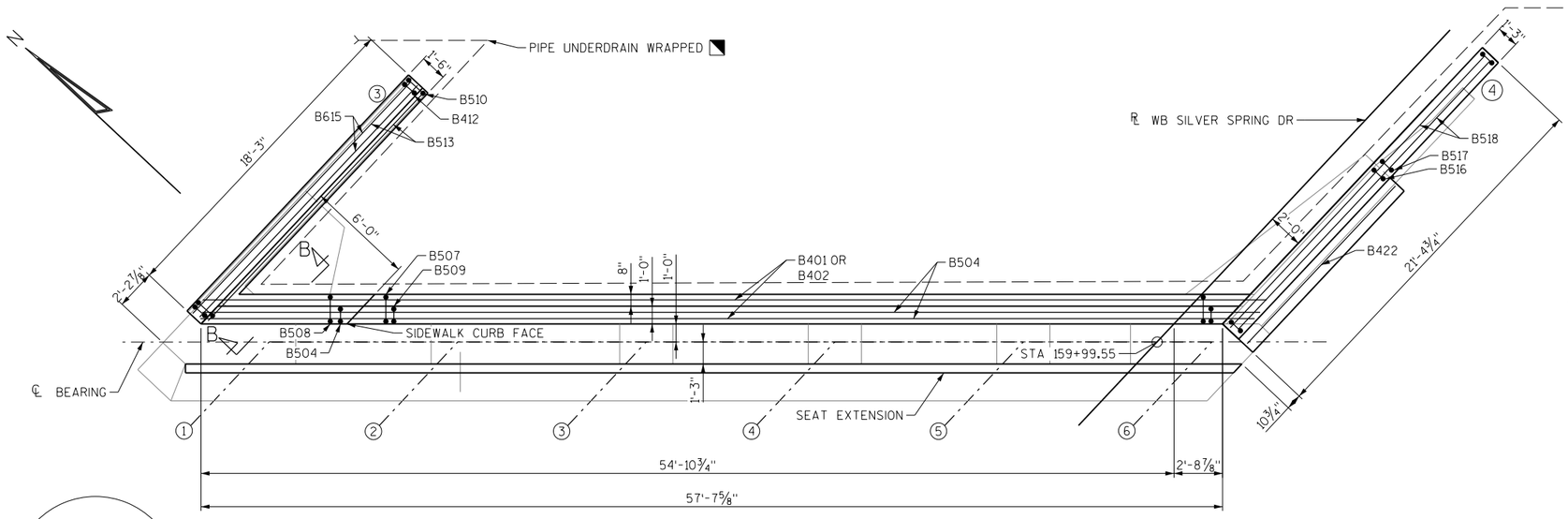
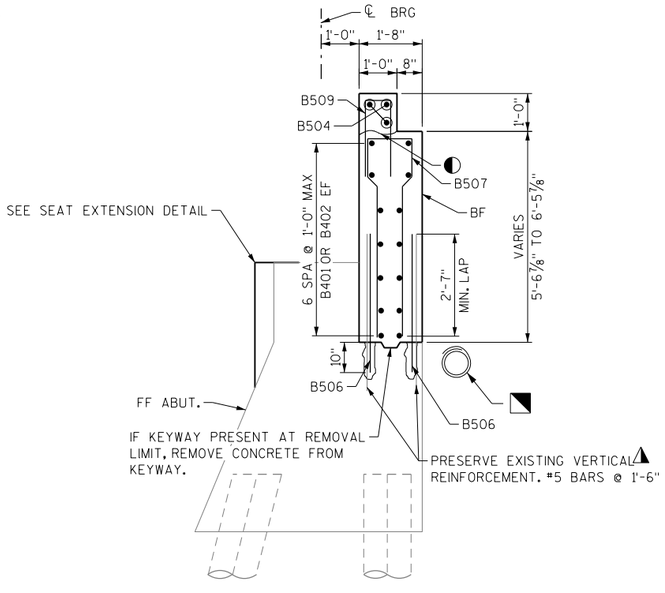
STATE PROJECT NUMBER

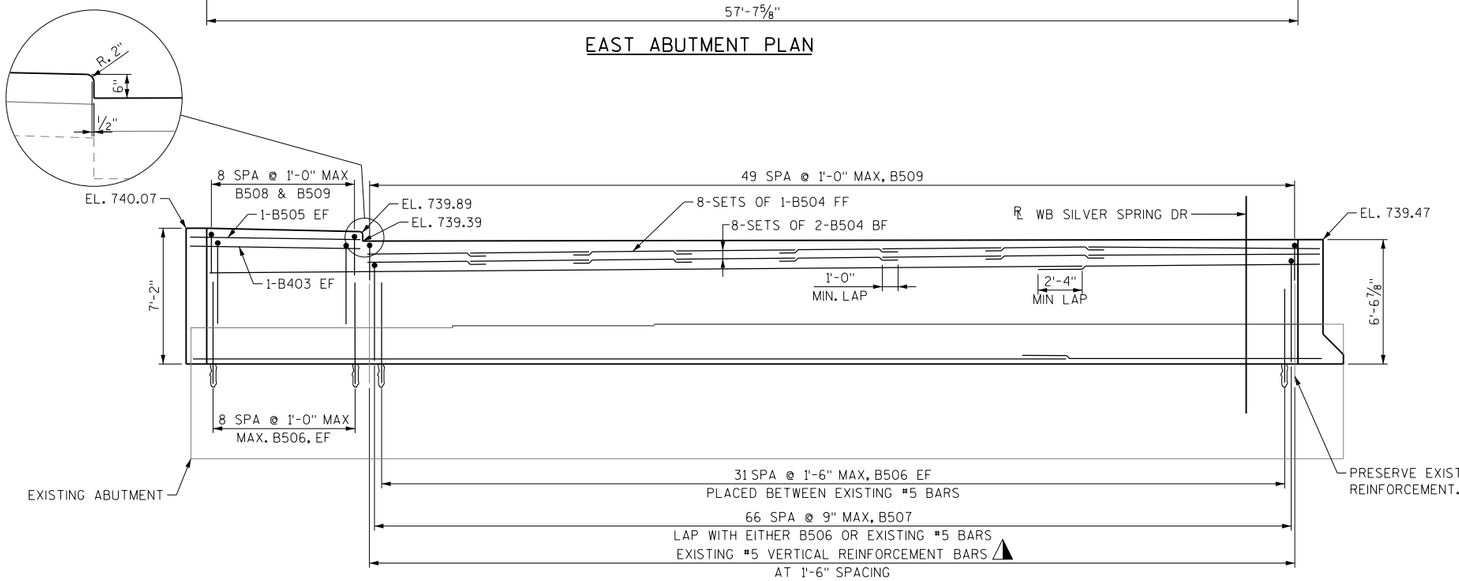
1360-13-71



EAST ABUTMENT PLAN

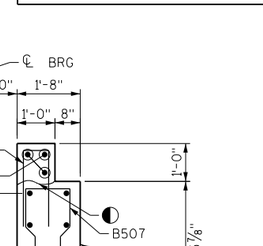


TYPICAL ABUTMENT SECTION

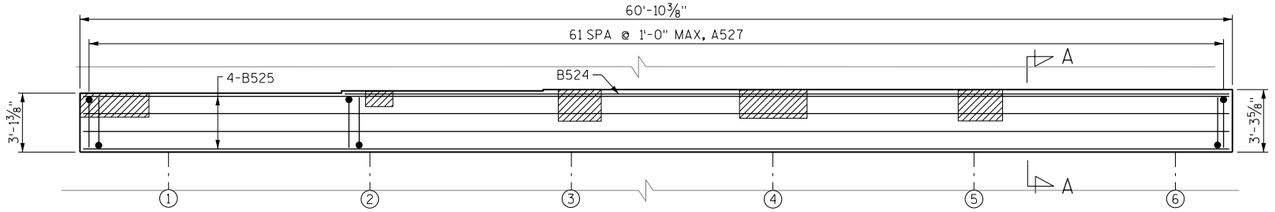


EAST ABUTMENT
BACKWALL ELEVATION
(LOOKING EAST. WINGWALLS NOT SHOWN FOR CLARITY)

SECTION A-A AT SEAT EXTENSION



SECTION AT B-B SIDEWALK NOTCH



EAST ABUTMENT
SEAT ELEVATION

LEGEND

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN.

CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH. POUR CONCRETE ABOVE THIS JOINT AFTER DECK IS IN PLACE.

CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW REMOVAL LIMITS SHOWN ON REMOVAL DRAWING. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED BY THE ENGINEER.

HATCHED AREAS INDICATE UNSOUND CONCRETE TO BE REMOVED BEFORE SEAT EXTENSION

✳ B526-TRIM ENDS OF ADHESIVE ANCHORS AS DIRECTED IN FIELD BY ENGINEER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-254

DRAWN BY NWG | PLANS CK'D. WJZ

EAST ABUTMENT MODIFICATIONS

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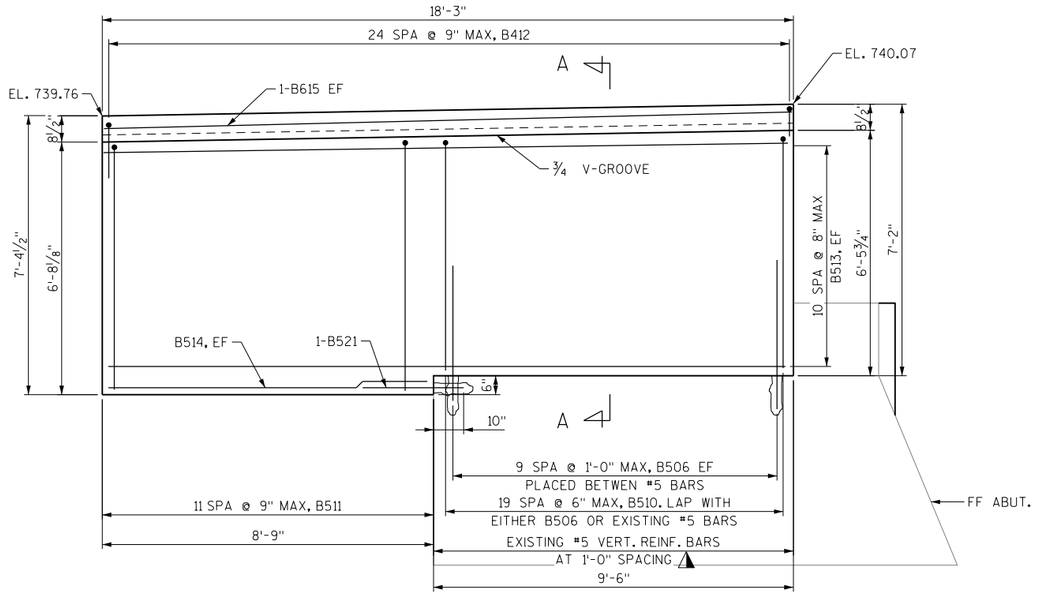
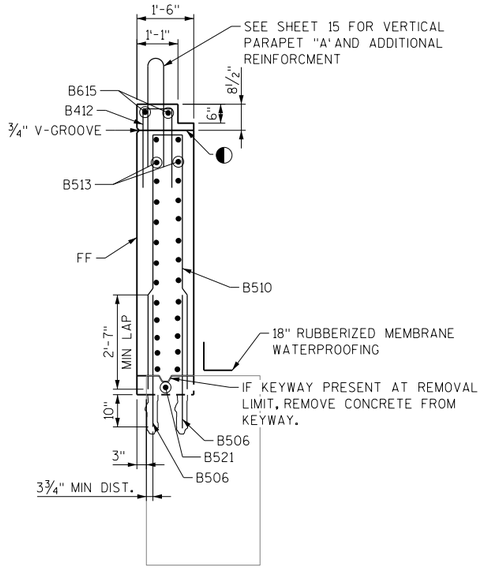
STATE PROJECT NUMBER

1360-13-71



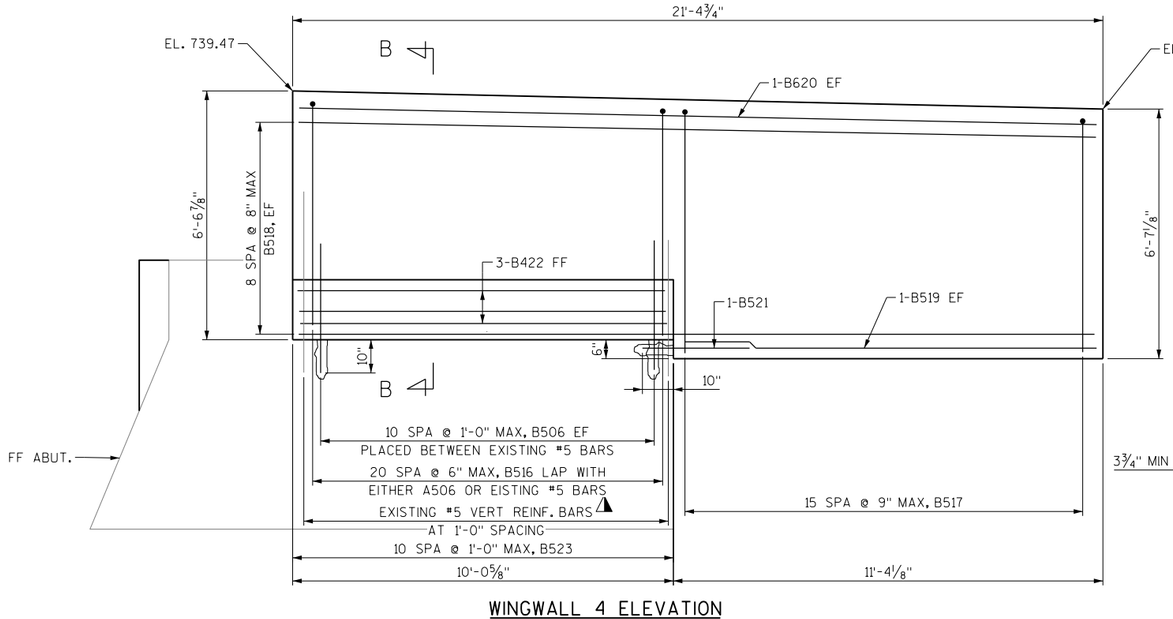
WINGWALL 3 ELEVATION



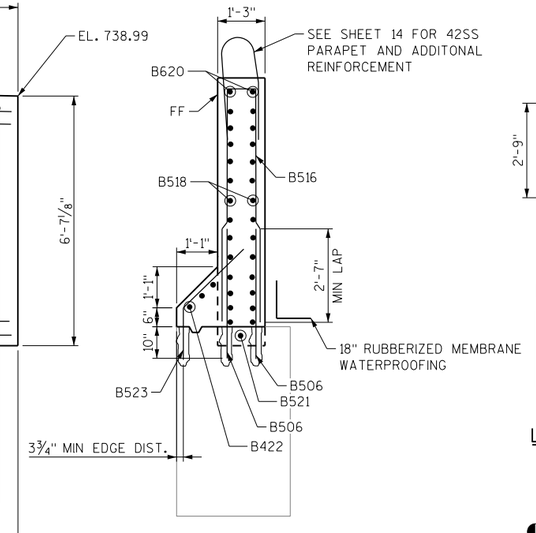
SECTION A-A

BILL OF BARS

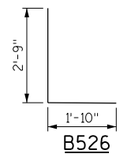
BAR NO.	COATED BAR	NO. REQ'D	LENGTH	BENT BAR	BUNDLED BAR SERIES	5303 # COATED -- # UNCOATED LOCATION
B401	X	14	45'-0"			BACKWALL HORIZONTAL - FF & BF
B402	X	14	17'-4"			BACKWALL HORIZONTAL - FF & BF
B403	X	2	8'-11"			BACKWALL HORIZONTAL - FF & BF AT SIDEWALK
B504	X	24	7'-2"			PAVING BLOCK HORIZONTAL
B505	X	2	8'-11"			PAVING BLOCK HORIZONTAL - SIDEWALK
B506	X	122	3'-8"			BACKWALL & WINGWALL VERTICAL - ADHESIVE ANCHORS
B507	X	67	12'-6"	X	X	BACKWALL VERTICAL
B508	X	9	11'-7"	X		BACKWALL VERTICAL - SIDEWALK
B509	X	59	4'-5"	X		PAVING BLOCK VERTICAL
B510	X	20	11'-9"	X		WINGWALL 3 VERTICAL
B511	X	12	13'-7"	X		WINGWALL 3 VERTICAL - OVERHANG
B412	X	25	4'-8"	X		WINGWALL 3 VERTICAL - SIDEWALK NOTCH
B513	X	22	17'-11"			WINGWALL 3 HORIZONTAL
B514	X	2	8'-5"			WINGWALL 3 HORIZONTAL - BOTTOM
B615	X	2	17'-11"			WINGWALL 3 HORIZONTAL - SIDEWALK NOTCH
B516	X	21	13'-4"	X		WINGWALL 4 VERTICAL
B517	X	16	13'-3"	X		WINGWALL 4 VERTICAL - OVERHANG
B518	X	18	21'-0"			WINGWALL 4 HORIZONTAL
B519	X	2	11'-0"			WINGWALL 4 HORIZONTAL - BOTTOM
B620	X	2	21'-0"			WINGWALL 4 HORIZONTAL - TOP
B521	X	2	2'-8"			WINGWALLS 3 & 4 HORIZONTAL - ADHESIVE ANCHOR
B422	X	3	9'-8"			WINGWALL 4 HORIZONTAL - FF STEP
B523	X	11	3'-9"	X		WINGWALL 4 VERTICAL - BENT ADHESIVE ANCHOR
B524	X	1	46'-8"			SEAT EXTENSION - LONGITUDINAL
B525	X	4	60'-0"			SEAT EXTENSION - LONGITUDINAL
B526	X	124	3'-6"	X		SEAT EXTENSION - BENT BAR ADHESIVE ANCHOR



WINGWALL 4 ELEVATION



SECTION B-B



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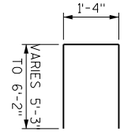

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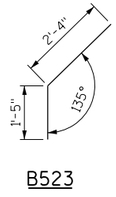

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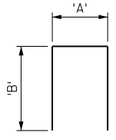

BAR SERIES TABLE

BAR NO	NUMBER REQUIRED	LENGTH
B507	1 SERIES OF 67	11'-7" TO 13'-5"

BAR NO	DIM 'A'	DIM 'B'
B508	1'-4"	5'-3"
B509	8"	2'-0"
B510	1'-2"	5'-5"
B511	1'-2"	6'-4"
B412	9"	2'-1"
B516	11"	6'-4"
B517	11"	6'-3"

LEGEND

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

◐ CONSTRUCTION JOINT STRIKE OFF AND LEAVE ROUGH

⚠ CLEAN, STRAIGHTEN, AND INCORPORATE INTO NEW WORK. DO NOT CUT BELOW LIMITS SHOWN ON REMOVAL PLAN. REPLACE DAMAGED OR CORRODED REINFORCEMENT AS DIRECTED BY THE ENGINEER.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-254

DRAWN BY NWG | PLANS CK'D. WJZ

EAST ABUTMENT WINGWALL MODIFICATIONS

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FILE= B-40-254_80_EABUTWINGS.DGN
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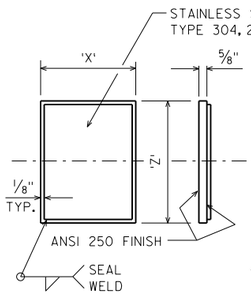
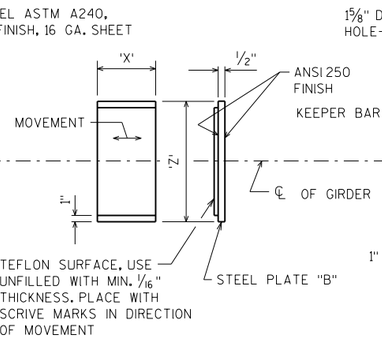
STATE PROJECT NUMBER

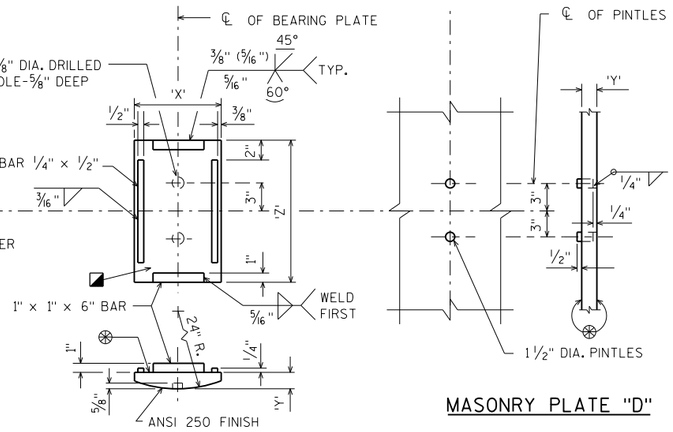
1360-13-71



TOP PLATE "A"



TEFLON SURFACE ON PLATE "B"

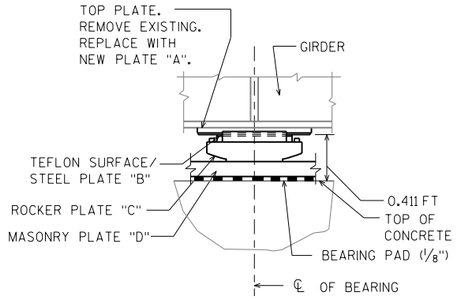


ROCKER PLATE "C"

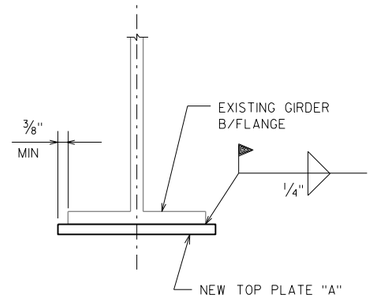
MASONRY PLATE "D"

PLATE "A"		PLATE "B"		PLATE "C"			PLATE "D"			PLATE "D" TYPE	ANCHOR BOLT SIZE	NO. OF BRG'S REQ'D.	LOCATION
'X'	'Z'	'X'	'Z'	'X'	'Y'	'Z'	'X' ◐	'Y'	'Z' ◐				
9"	1'-0¾"	5"	1'-0¾"	7"	1 1/16"	1'-3"	1'-10⅞"	1½"	2'-10⅞"	II	1½"	6	WEST ABUTMENT
9"	1'-0¾"	5"	1'-0¾"	7"	1 1/16"	1'-3"	2'-0⅜"	1½"	2'-9⅜"	II	1½"	6	EAST ABUTMENT

◐ MAXIMUM OUT TO OUT DIMENSIONS SHOWN IN TABLE. SEE DETAILED SKETCHES BELOW FOR EXACT SIZE.



EXPANSION BEARING ASSEMBLY



TOP PLATE 'A' WELD DETAIL

BEARING NOTES

REPLACE ALL BEARINGS AT ABUTMENTS.

⊛ FINISH THESE SURFACES TO ANSI 250 IF 'Y' DIMENSION IS GREATER THAN 2".

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING STAINLESS STEEL SHEET, TEFLON SURFACE, PINTLES, ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BEARING PADS AND HOLD DOWN DEVICE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-40-254"

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

CHAMFER TOP OF PINTLES ⅛". DRILL HOLES FOR ALL PINTLES IN MASONRY PLATE "D" FOR A DRIVING FIT.

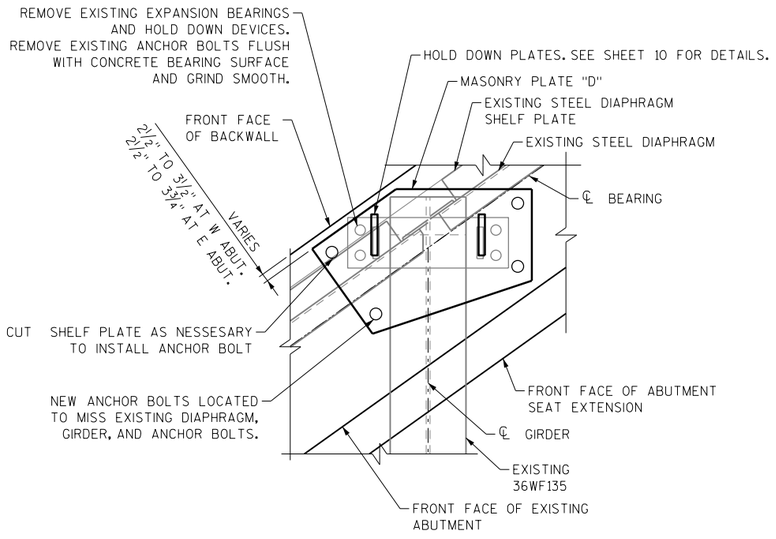
STEEL PINTLES SHALL CONFORM TO ASTM A449 OR ASTM A572 GRADE 50.

ROCKER PLATE "C" AND MASONRY PLATE "D" SHALL BE GALVANIZED. TOP PLATE "A" AND STEEL PLATE "B" SHALL BE SHOP PAINTED. USE A WELDABLE PRIMER ON TOP PLATE "A". DO NOT PAINT STAINLESS STEEL OR TEFLON SURFACES.

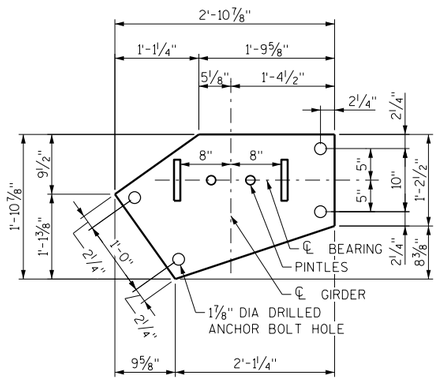
◪ PROVIDE A METHOD FOR HANDLING ROCKER PLATE "C" DURING GALVANIZING.

⚠ BOND STEEL PLATE "B" AND TEFLON WITH ADHESIVE MATERIAL MEETING REQUIREMENTS FOUND IN THE STANDARD SPECIFICATION.

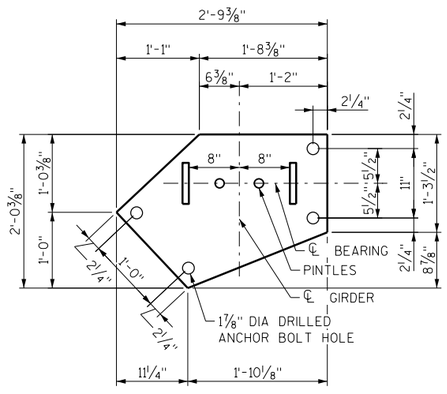
AT INSTALLATION, ENSURE STAINLESS STEEL SLIDING FACE OF THE UPPER ELEMENT AND THE TFE SLIDING FACE OF THE LOWER ELEMENT HAVE THE SURFACE FINISH SPECIFIED AND ARE CLEAN AND FREE OF ALL DUST, MOISTURE, AND OTHER FOREIGN MATTER



ABUTMENT BEARING PLAN



WEST ABUTMENT MASONRY PLATE (PLATE "D")



EAST ABUTMENT MASONRY PLATE (PLATE "D")

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-254

DRAWN BY NWG | PLANS CK'D. WJZ

BEARING DETAILS

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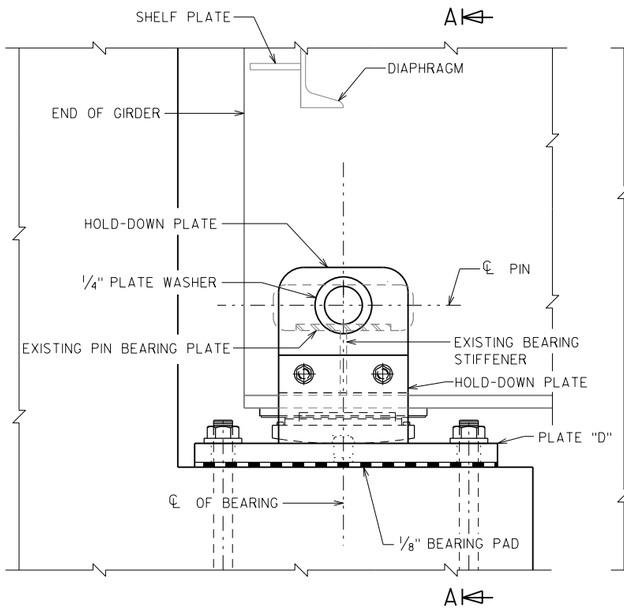

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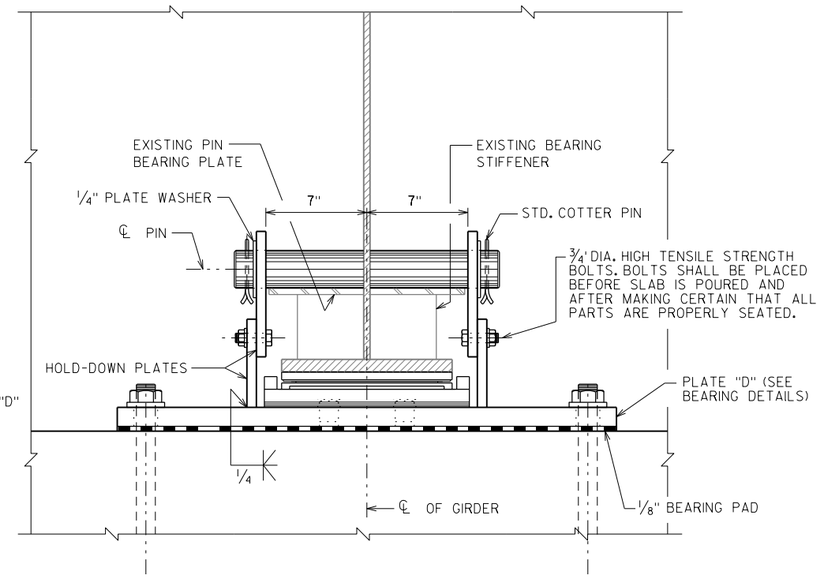
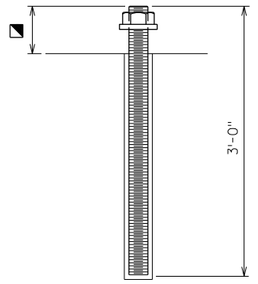


SECTION A-A



ANCHOR BOLT DETAIL

PERMANENT HOLD DOWN DEVICE

NOTES

ALL STRUCTURAL STEEL PLATES SHALL BE FLAT ROLLED STEEL PLATES 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.

ANCHOR BOLTS SHALL BE 1½" DIAMETER X 3'-0" LONG AND FULLY THREADED ADHESIVE ANCHORS. EMBED IN CONCRETE AS DETAILED. ANCHOR BOLTS SHALL BE PAID FOR AS "ADHESIVE ANCHORS 1½"

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

THE MATERIAL FOR THE HOLD-DOWN PLATES SHALL CONFORM TO ASTM A709 GRADE 50W.

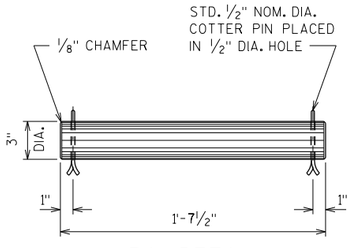
ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM F1554 GRADE 50 OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

PROVIDE 1/8" THICK ELASTOMERIC BEARING PAD THE SAME SIZE AND SHAPE AS PLATE "D" FOR EACH BEARING.

ALL MATERIAL IN HOLD DOWN DEVICES, WHICH INCLUDES HOLD-DOWN PLATES, HIGH TENSILE STRENGTH BOLTS, AND PINS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-40-254"

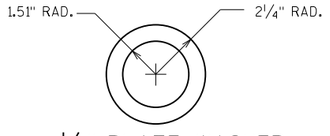
◥ PROJECT ANCHOR BOLTS, PLATE "D" THICKNESS + 2¼", ABOVE TOP OF CONCRETE.

HOLES FOR PIN IN HOLD-DOWN PLATES AND PLATE WASHERS SHALL BE AS STATED IN STANDARD SPECIFICATIONS 506.3.17.

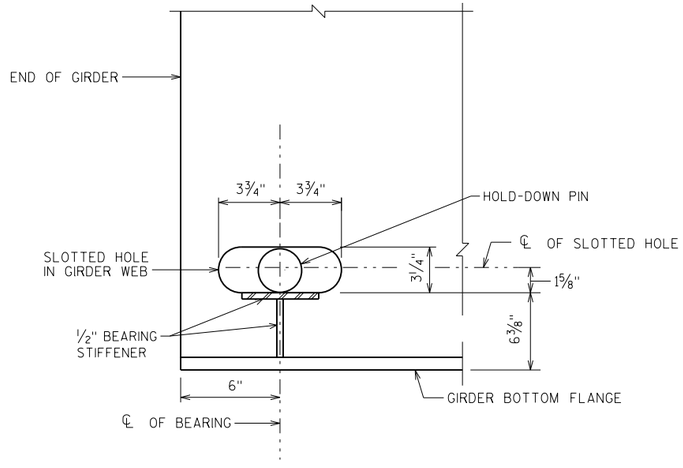


PIN DETAIL

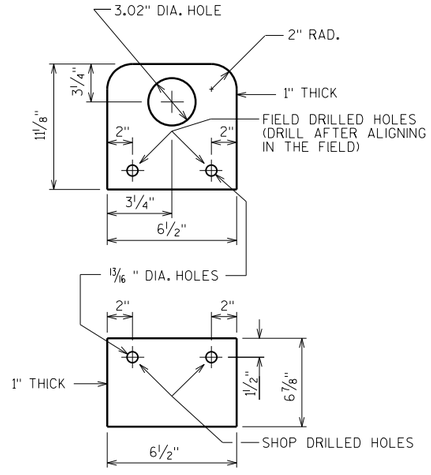
COLD ROLLED STEEL OR CARBON STEEL FORGING.



1/4" PLATE WASHER



GIRDER DETAIL



HOLD-DOWN PLATES

STATE PROJECT NUMBER

1360-13-71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-254

DRAWN BY NWG | PLANS CK'D. WJZ

HOLD DOWN DEVICE

SHEET 10 OF 21

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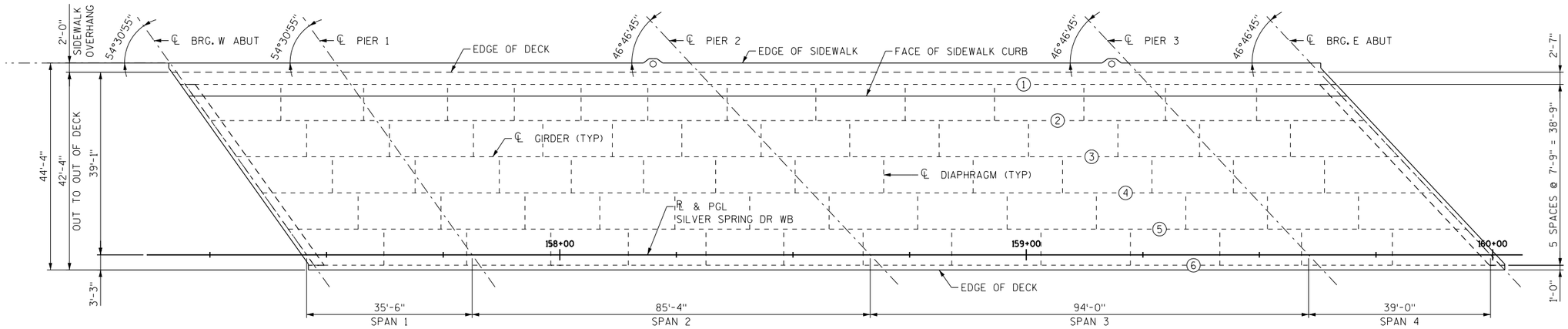
FILE= B-40-254_100_HOLDDOWN.DGN
SCALE = 1:1

STATE PROJECT NUMBER
1360-13-71



N

EXISTING GIRDER FRAMING PLAN

(FIELD SPLICES AND COVER PLATES NOT SHOWN)

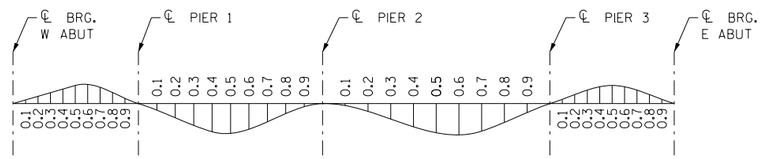
FINISHED TOP OF DECK ELEVATIONS

*THIS ELEVATION IS A CONTINUATION OF THE DECK CROSS SLOPE.

	LOCATION	NORTH EDGE OF DECK*	GIRDER 1*	FACE OF N. CURB	GIRDER 2	GIRDER 3	GIRDER 4	GIRDER 5	PGL SILVER SPRING WB	FACE OF S. PARAPET	GIRDER 6*	SOUTH EDGE OF DECK*
	℄ W ABUT	738.72	738.81	738.90	739.08	739.34	739.60	739.85	740.03	740.09	740.10	740.13
SPAN 1	0.1	738.80	738.89	738.97	739.15	739.41	739.66	739.91	740.09	740.15	740.16	740.19
	0.2	738.87	738.96	739.04	739.22	739.47	739.72	739.97	740.14	740.21	740.21	740.25
	0.3	738.94	739.03	739.11	739.28	739.54	739.78	740.03	740.20	740.26	740.27	740.30
	0.4	739.01	739.09	739.17	739.35	739.60	739.84	740.08	740.25	740.31	740.32	740.35
	0.5	739.07	739.16	739.24	739.41	739.66	739.90	740.14	740.30	740.36	740.37	740.40
	0.6	739.13	739.22	739.30	739.47	739.71	739.95	740.19	740.35	740.41	740.42	740.45
	0.7	739.20	739.28	739.36	739.53	739.77	740.00	740.24	740.40	740.46	740.46	740.49
	0.8	739.26	739.34	739.42	739.58	739.82	740.05	740.28	740.44	740.50	740.51	740.54
	0.9	739.31	739.40	739.47	739.64	739.87	740.10	740.33	740.49	740.54	740.55	740.58
	℄ PIER 1	739.37	739.45	739.53	739.69	739.92	740.15	740.37	740.53	740.59	740.59	740.62
SPAN 2	0.1	739.49	739.56	739.64	739.80	740.03	740.25	740.47	740.62	740.68	740.68	740.71
	0.2	739.59	739.67	739.74	739.90	740.12	740.34	740.55	740.70	740.76	740.76	740.79
	0.3	739.69	739.77	739.84	739.99	740.21	740.42	740.63	740.77	740.83	740.83	740.86
	0.4	739.78	739.85	739.92	740.07	740.29	740.49	740.69	740.83	740.88	740.89	740.92
	0.5	739.86	739.93	740.00	740.14	740.35	740.55	740.75	740.88	740.93	740.94	740.96
	0.6	739.93	740.00	740.07	740.21	740.41	740.60	740.79	740.92	740.97	740.97	741.00
	0.7	739.99	740.06	740.13	740.26	740.46	740.64	740.83	740.95	740.99	741.00	741.02
	0.8	740.05	740.11	740.18	740.31	740.50	740.68	740.85	740.97	741.01	741.01	741.03
	0.9	740.09	740.16	740.22	740.34	740.52	740.70	740.86	740.97	741.01	741.02	741.04
	℄ PIER 2	740.13	740.19	740.25	740.37	740.54	740.71	740.86	740.97	741.01	741.01	741.03
SPAN 3	0.1	740.16	740.22	740.28	740.39	740.55	740.71	740.85	740.95	740.99	740.99	741.01
	0.2	740.18	740.24	740.29	740.40	740.55	740.69	740.83	740.92	740.95	740.96	740.97
	0.3	740.19	740.24	740.29	740.39	740.53	740.67	740.79	740.88	740.91	740.91	740.92
	0.4	740.19	740.23	740.28	740.37	740.50	740.63	740.74	740.82	740.85	740.85	740.86
	0.5	740.17	740.21	740.25	740.34	740.46	740.57	740.68	740.75	740.77	740.78	740.79
	0.6	740.13	740.18	740.22	740.29	740.41	740.51	740.60	740.67	740.69	740.69	740.70
	0.7	740.09	740.13	740.16	740.24	740.34	740.43	740.51	740.57	740.59	740.59	740.60
	0.8	740.03	740.07	740.10	740.16	740.26	740.34	740.41	740.46	740.48	740.48	740.49
	0.9	739.96	739.99	740.02	740.08	740.16	740.23	740.30	740.34	740.35	740.35	740.36
	℄ PIER 3	739.88	739.90	739.93	739.98	740.05	740.12	740.17	740.20	740.21	740.22	740.22
SPAN 4	0.1	739.84	739.86	739.89	739.94	740.00	740.06	740.11	740.14	740.15	740.16	740.16
	0.2	739.80	739.82	739.84	739.89	739.95	740.01	740.05	740.08	740.09	740.09	740.10
	0.3	739.75	739.78	739.80	739.84	739.90	739.95	739.99	740.02	740.02	740.03	740.03
	0.4	739.71	739.73	739.75	739.79	739.84	739.89	739.93	739.95	739.96	739.96	739.96
	0.5	739.66	739.68	739.70	739.74	739.79	739.83	739.86	739.88	739.89	739.89	739.89
	0.6	739.61	739.63	739.65	739.68	739.73	739.76	739.79	739.81	739.81	739.82	739.82
	0.7	739.56	739.58	739.59	739.62	739.67	739.70	739.72	739.74	739.74	739.74	739.74
	0.8	739.50	739.52	739.53	739.56	739.60	739.63	739.65	739.66	739.66	739.66	739.66
	0.9	739.45	739.46	739.48	739.50	739.53	739.56	739.58	739.58	739.58	739.58	739.58
	℄ E ABUT	739.39	739.40	739.41	739.44	739.47	739.49	739.50	739.50	739.50	739.50	739.50

DEAD LOAD DEFLECTIONS ◥

	LOCATION	G1	G2	G3	G4	G5	G6
	℄ W ABUT	0.0	0.0	0.0	0.0	0.0	0.0
SPAN 1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	0.2	0.0	0.0	0.0	0.0	0.0	0.0
	0.3	0.0	0.0	0.0	0.0	0.0	0.0
	0.4	0.0	0.0	0.0	0.0	-0.1	-0.1
	0.5	0.0	0.0	0.0	-0.1	-0.1	-0.1
	0.6	0.0	0.0	-0.1	-0.1	-0.1	-0.1
	0.7	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
	0.8	0.0	0.0	-0.1	-0.1	-0.1	-0.1
	0.9	0.0	-0.1	0.0	0.0	0.0	0.0
	℄ PIER 1	0.0	0.0	0.0	0.0	0.0	0.0
SPAN 2	0.1	0.1	0.1	0.2	0.2	0.2	0.2
	0.2	0.3	0.3	0.4	0.4	0.5	0.4
	0.3	0.4	0.5	0.6	0.7	0.7	0.6
	0.4	0.4	0.6	0.7	0.8	0.9	0.7
	0.5	0.4	0.6	0.6	0.8	0.8	0.7
	0.6	0.3	0.4	0.5	0.6	0.7	0.6
	0.7	0.2	0.3	0.3	0.4	0.5	0.4
	0.8	0.0	0.1	0.1	0.2	0.2	0.2
	0.9	0.0	0.0	0.0	0.0	0.0	0.0
	℄ PIER 2	0.0	0.0	0.0	0.0	0.0	0.0
SPAN 3	0.1	0.2	0.3	0.2	0.2	0.2	0.1
	0.2	0.6	0.7	0.7	0.6	0.6	0.4
	0.3	1.0	1.1	1.1	1.1	1.0	0.7
	0.4	1.3	1.5	1.4	1.4	1.4	1.0
	0.5	1.5	1.6	1.6	1.6	1.5	1.1
	0.6	1.4	1.6	1.5	1.5	1.5	1.1
	0.7	1.2	1.3	1.3	1.3	1.2	0.9
	0.8	0.8	0.9	0.9	0.8	0.8	0.6
	0.9	0.3	0.4	0.4	0.4	0.4	0.3
	℄ PIER 3	0.0	0.0	0.0	0.0	0.0	0.0
SPAN 4	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
	0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
	0.3	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1
	0.4	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1
	0.5	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1
	0.6	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
	0.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
	0.8	-0.1	-0.1	-0.1	-0.1	-0.1	0.0
	0.9	0.0	0.0	0.0	0.0	0.0	0.0
	℄ E ABUT	0.0	0.0	0.0	0.0	0.0	0.0



DEFLECTION DIAGRAM

◥ DEFLECTIONS ARE GIVEN IN INCHES
NEGATIVE DEFLECTION INDICATES UPWARD DEFLECTION
DEFLECTIONS ARE THEORETICAL AND MAY VARY IN THE FIELD.

NOTES

A 1¼" MINIMUM HAUNCH IS REQUIRED AT THE EDGE OF GIRDER. IF A 1¼" MINIMUM HAUNCH HEIGHT CANNOT BE MAINTAINED THE GRADE LINE MAY BE REVISED BY THE ENGINEER IN THE FIELD 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 AND PROFILE BY MORE THAN ½"

THE FOLLOWING AVERAGE HAUNCH DEPTHS ('T') WERE USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

GIRDER 1: 6.1"
GIRDER 2: 5.3"
GIRDER 3-6: 5.0"

'T' = HAUNCH HEIGHT AT ℄ GIRDER

TO DETERMINE 'T': AFTER EXISTING DECK HAS BEEN REMOVED, AND ABUTMENT BEARINGS HAVE BEEN REPLACED, ELEVATIONS OF THE TOP FLANGES SHALL BE TAKEN AT CENTERLINES OF BEARING AND AT 0.1 POINTS.

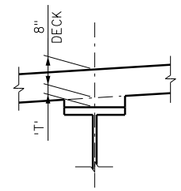
TOP OF DECK ELEVATION AT FINAL GRADE

\- TOP OF STEEL ELEVATION AFTER EXISTING DECK HAS BEEN REMOVED

\+ DEAD LOAD DEFLECTION (DOWNWARD DEFLECTION IS ADDED, UPWARD DEFLECTION IS SUBTRACTED)

\- DECK THICKNESS

= 'T' VALUE FOR SETTING HAUNCH



SLAB HAUNCH DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-254

DRAWN BY NWG | PLANS CK'D. WJZ

DECK ELEVATIONS

SHEET 11 OF 21

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SCALE = 1:25

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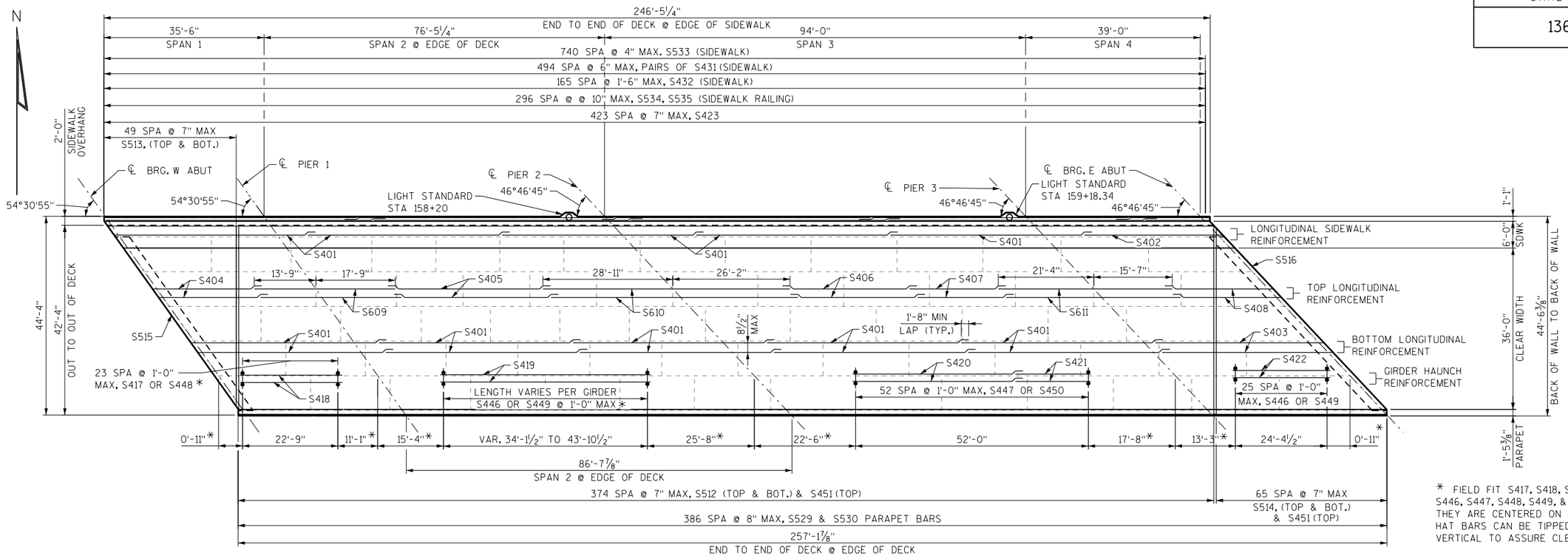
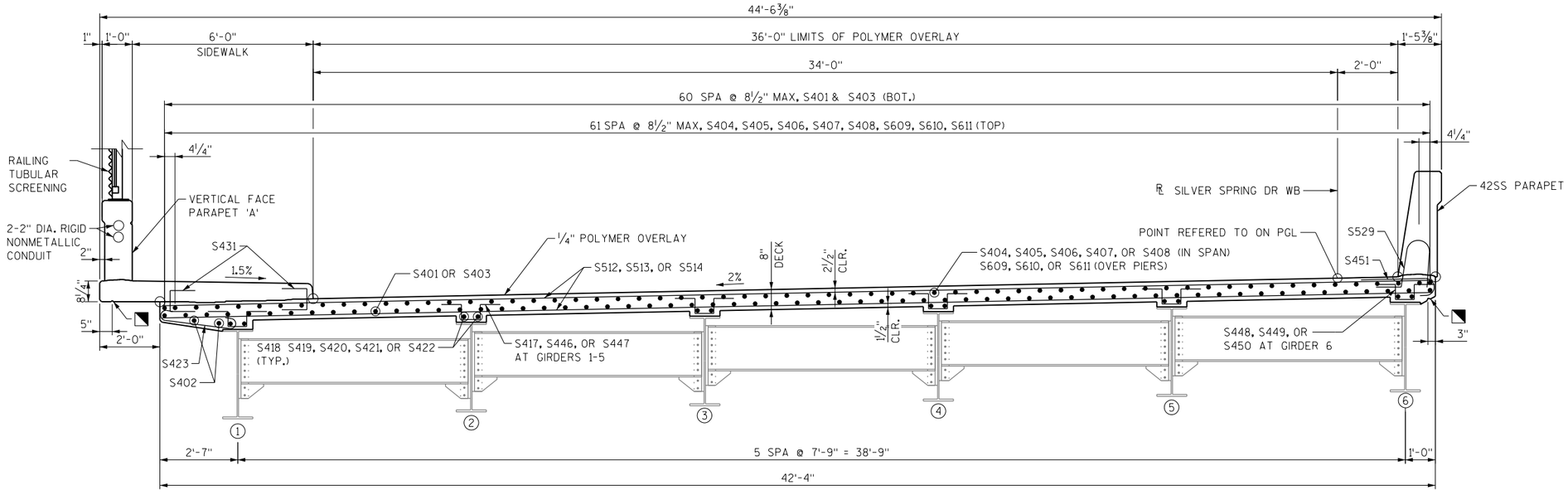
STATE PROJECT NUMBER
1360-13-71



DECK PLAN

* FIELD FIT S417, S418, S419, S420, S421, S422, S446, S447, S448, S449, & S450 SUCH THAT THEY ARE CENTERED ON EXISTING SHEAR LUGS. HAT BARS CAN BE TIPPED UP TO 30° FROM VERTICAL TO ASSURE CLEARANCE.



TYPICAL SECTION THRU DECK
(LOOKING EAST)

NOTES:

SEE SHEET 13 FOR SUPERSTRUCTURE BILL OF BARS AND DECK DETAILS

SEE SHEET 11 FOR TOP OF DECK ELEVATIONS

SEE SHEET 14 FOR 42SS PARAPET DETAILS

SEE SHEET 15 FOR VERTICAL FACE PARAPET 'A' DETAILS

SEE SHEET 16 FOR RAILING TUBULAR SCREENING

SEE SHEET 13 FOR SIDEWALK REINFORCEMENT

SEE SHEET 19 FOR LIGHT STANDARD DETAIL

○ INDICATES T/SLAB ELEVATION LOCATION

◪ ¾" V-GROOVE TO EXTEND TO 2'-0" FROM FRONT FACE OF ABUTMENT BODY

Ⓧ INDICATES GIRDER NUMBER

ALTERNATE LAP LOCATIONS IN PARAPET, SIDEWALK AND DECK LONGITUDINAL BARS AS SHOWN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-254

DRAWN BY NWG | PLANS CK'D. WJZ

SUPERSTRUCTURE REINFORCEMENT

SHEET 12 OF 21

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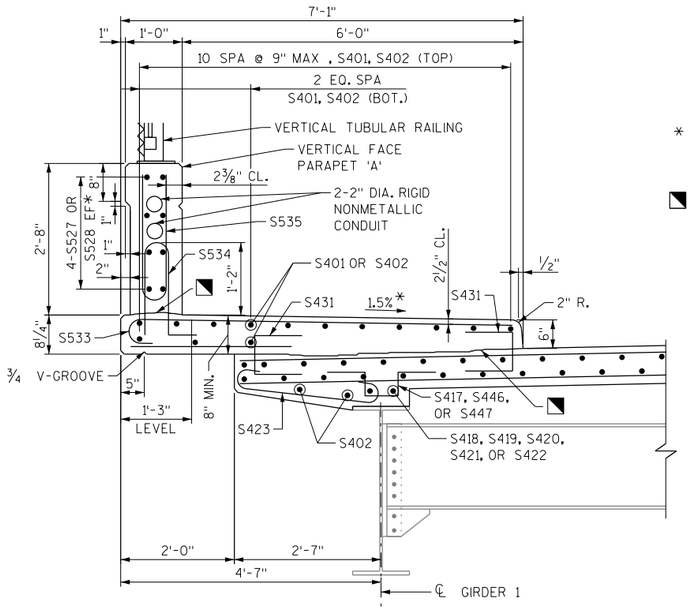
STATE PROJECT NUMBER

1360-13-71



SECTION THROUGH PARAPET AND SIDEWALK AT NORTH OVERHANG

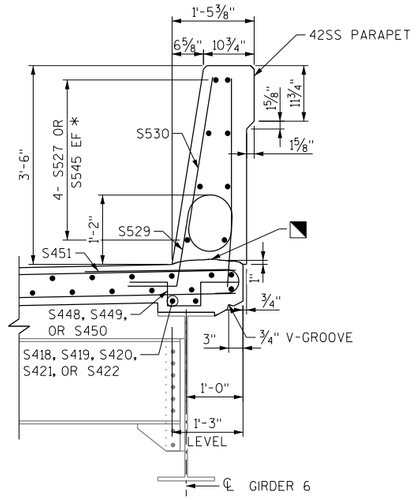
* ±0.5% TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR ENGINEER APPROVAL

◥ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE.

SEE SHEET 15 FOR DEFLECTION JOINT DETAILS.

SPAN 2 HAUNCH TABLE

GIRDER NO	S446 OR S449 QUANTITY
1	36
2	39
3	40
4	42
5	44
6	45



SECTION THROUGH PARAPET AT SOUTH OVERHANG

BILL OF BARS - DECK

98,286 # COATED
-- # UNCOATED

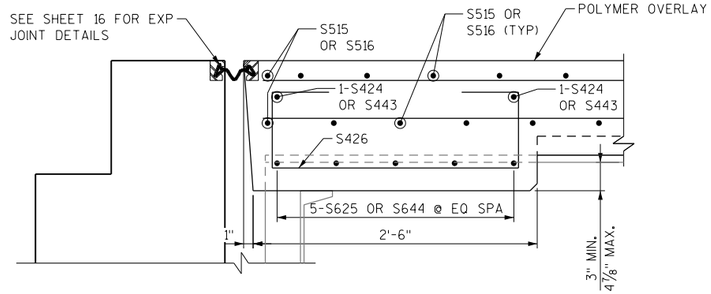
BAR NO.	COATED BAR	NO. REQ'D	LENGTH	BENT BAR	BUNDLED	BAR SERIES	LOCATION
S401	X	375	45'-0"				DECK & SIDEWALK LONGITUDINAL - BOTTOM
S402	X	16	30'-2"				SIDEWALK & OVERHANG LONGITUDINAL - BOTTOM
S403	X	61	35'-1"			X	DECK LONGITUDINAL - BOTTOM
S404	X	62	24'-7"				DECK LONGITUDINAL - TOP SPAN 1
S405	X	62	38'-3"			X	DECK LONGITUDINAL - TOP SPAN 2
S406	X	62	30'-0"				DECK LONGITUDINAL - TOP SPAN 3
S407	X	62	21'-6"				DECK LONGITUDINAL - TOP SPAN 3
S408	X	62	26'-3"				DECK LONGITUDINAL - TOP SPAN 4
S609	X	62	31'-6"				DECK LONGITUDINAL - TOP PIER 1
S610	X	62	51'-1"				DECK LONGITUDINAL - TOP PIER 2
S611	X	62	36'-1"				DECK LONGITUDINAL - TOP PIER 3
S512	X	848	42'-0"				DECK TRANSVERSE - TOP AND BOTTOM
S513	X	100	20'-11"			X	DECK TRANSVERSE - TOP AND BOTTOM WEST END SERIES
S514	X	130	21'-3"			X	DECK TRANSVERSE - TOP AND BOTTOM EAST END SERIES
S515	X	2	51'-7"				DECK TRANSVERSE - DECK WEST END TOP & BOTTOM
S516	X	2	57'-8"				DECK TRANSVERSE - DECK EAST END TOP & BOTTOM
S417	X	120	2'-6"	X			DECK TRANSVERSE - HAUNCH SPAN 1, GIRDERS 1-5
S418	X	12	22'-9"				DECK LONGITUDINAL - HAUNCH SPAN 1
S419	X	12	43'-11"				DECK LONGITUDINAL - HAUNCH SPAN 2 (SEE SPAN 2 HAUNCH TABLE)
S420	X	12	30'-0"				DECK LONGITUDINAL - HAUNCH SPAN 3
S421	X	12	23'-8"				DECK LONGITUDINAL - HAUNCH SPAN 3
S422	X	12	24'-5"				DECK LONGITUDINAL - HAUNCH SPAN 4
S423	X	424	3'-2"	X			DECK TRANSVERSE - OUTSIDE OVERHANG
S424	X	20	9'-2"				DIAPHRAGM & JOINT - TOP W. JT
S625	X	25	9'-2"				DIAPHRAGM - BOTTOM W. JT
S426	X	100	3'-10"	X			DIAPHRAGM STIRRUPS
S527	X	64	60'-0"				PARAPET HORIZONTAL
S528	X	8	12'-9"				PARAPET HORIZONTAL
S529	X	387	4'-5"	X			42SS PARAPET VERTICAL
S530	X	387	6'-8"	X			42SS PARAPET VERTICAL
S431	X	990	2'-8"	X			SIDEWALK VERTICAL
S432	X	166	2'-10"				SIDEWALK TRANSVERSE - BOTTOM
S533	X	741	7'-4"	X			SIDEWALK TRANSVERSE - TOP
S534	X	297	4'-4"	X			VERTICAL FACE PARAPET 'A' VERTICAL
S535	X	297	4'-9"	X			VERTICAL FACE PARAPET 'A' VERTICAL
S536	X	8	6'-3"	X			LIGHT STANDARD VERTICAL - PARAPET
S537	X	8	7'-0"	X			LIGHT STANDARD VERTICAL - PARAPET
S638	X	14	10'-3"	X			LIGHT STANDARD HORIZONTAL - PARAPET
S539	X	24	6'-8"				LIGHT STANDARD TRANSVERSE - SIDEWALK BOTTOM
S540	X	4	3'-2"	X			LIGHT STANDARD VERTICAL - PARAPET
S541	X	4	3'-4"	X			LIGHT STANDARD VERTICAL - PARAPET
S542	X	24	7'-4"	X			LIGHT STANDARD TRANSVERSE SIDEWALK TOP
S443	X	20	10'-3"				DIAPHRAGM AND JOINT EAST JOINT
S644	X	25	10'-3"				DIAPHRAGM - BOTTOM EAST JOINT
S545	X	8	23'-6"				42SS PARAPET HORIZONTAL
S446	X	331	3'-0"	X			DECK TRANSVERSE - HAUNCH SPAN 2 & 4, GIRDERS 1-5
S447	X	265	3'-3"	X			DECK TRANSVERSE - HAUNCH SPAN 3, GIRDERS 1-5
S448	X	24	2'-4"	X			DECK TRANSVERSE - HAUNCH SPAN 1, GIRDER 6
S449	X	71	2'-10"	X			DECK TRANSVERSE - HAUNCH SPAN 2 & 4, GIRDER 6
S450	X	53	3'-1"	X			DECK TRANSVERSE - HAUNCH SPAN 3, GIRDER 6
S451	X	441	3'-0"	X			DECK TRANSVERSE - GIRDER 6 OVERHANG

THE FIRST DIGIT OF FIRST TWO DIGITS OF A BAR MARK INDICATE THE BAR SIZE. ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.

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

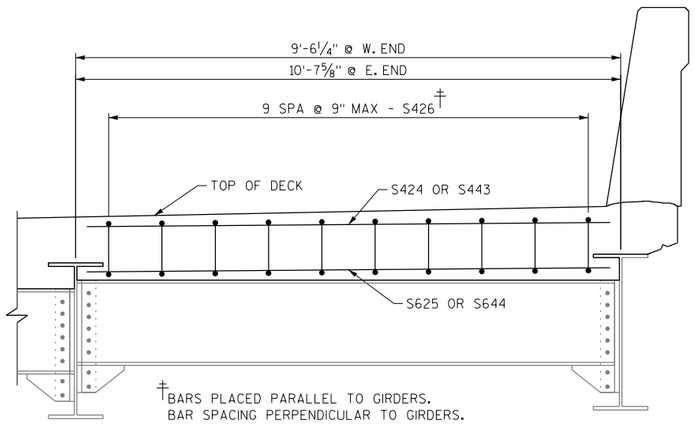
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MINIMUM OF 1'-9". MINIMUM JOINT SPACING OF 80'-0". DEFINE CONSTRUCTION JOINT WITH A 3/4" 'V' GROOVE.

SEE SHEET 19 FOR LIGHT STANDARD DETAILS



SECTION THROUGH END DIAPHRAGM AND EXPANSION JOINT

(DIMENSIONS ARE TAKEN NORMAL TO THE ℄ OF THE JOINT)

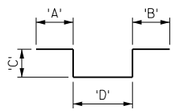


SECTION AT END DIAPHRAGM

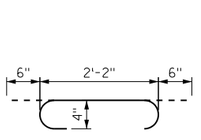
(SHOWING ADDITIONAL DIAPHRAGM REINFORCEMENT ONLY)

BAR SERIES TABLE

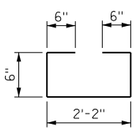
BAR NO	NUMBER REQUIRED	LENGTH
S403	1 SERIES OF 61	29'-11" TO 40'-2"
S405	1 SERIES OF 62	33'-2" TO 43'-4"
S513	2 SERIES OF 50	1'-2" TO 40'-5"
S514	2 SERIES OF 66	1'-1" TO 41'-5"



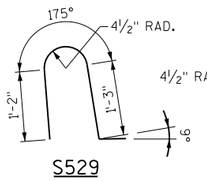
BAR NO	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'
S417	8"	8"	5"	8"
S447	8"	8"	8"	8"
S448	8"	8"	9 1/2"	8"
S449	6"	8"	5"	8"
S448	6"	8"	8"	8"
S450	6"	8"	9 1/2"	8"



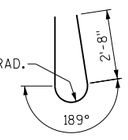
S423



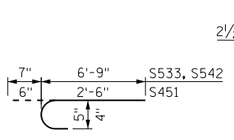
S426



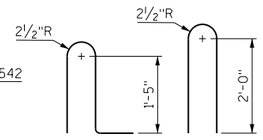
S529



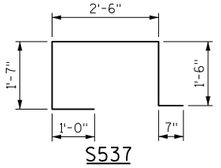
S530



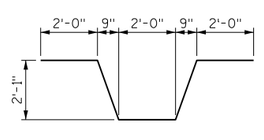
S533, S542, & S451



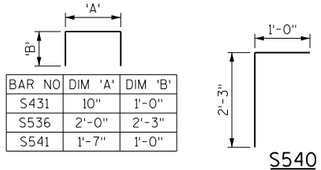
S534 S535



S537



S638



S540

BAR NO	DIM 'A'	DIM 'B'
S431	10"	1'-0"
S536	2'-0"	2'-3"
S541	1'-7"	1'-0"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-254

DRAWN BY NWG | PLANS CK'D. WJZ

SUPERSTRUCTURE DETAILS

SHEET 13 OF 21

285

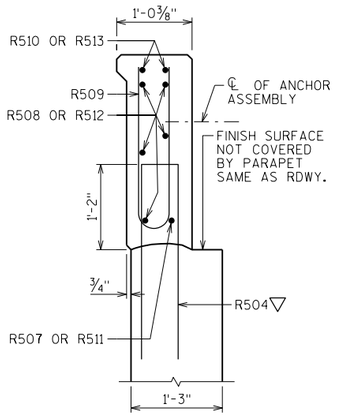
8

8

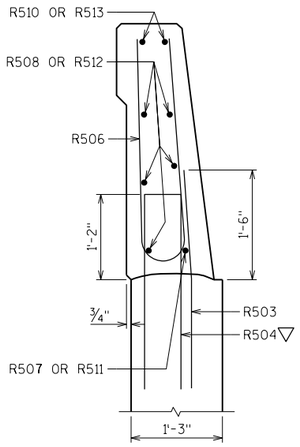
FILE = B-40-254.130_SUPERDETAILDGN
SCALE = 1:2.66667

STATE PROJECT NUMBER

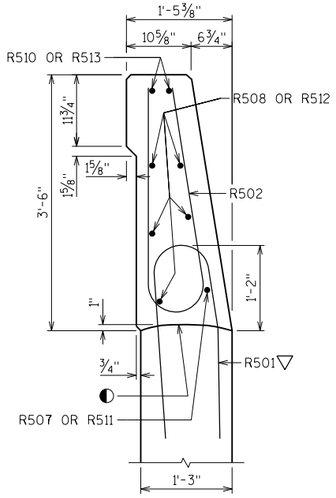
1360-13-71



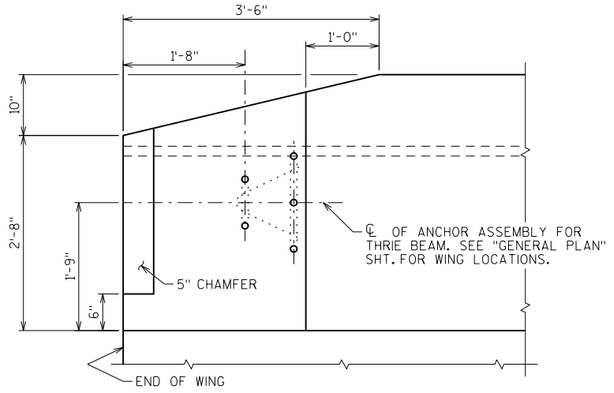
SECTION A-A



SECTION B-B



SECTION C-C



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

BILL OF BARS

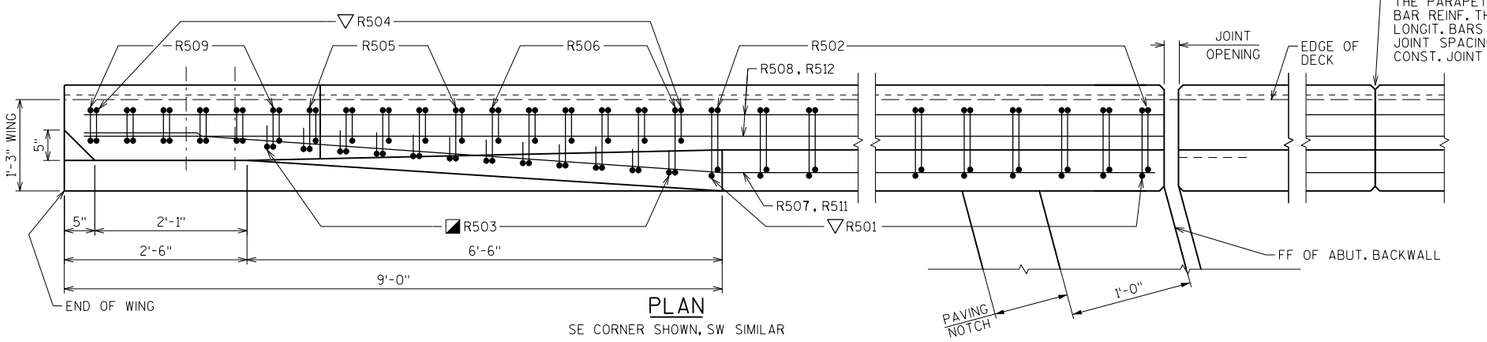
BAR MARK	COAT	NO REQ'D W ABUT.	NO REQ'D E ABUT.	LENGTH	BENT	BAR SERIES	1170# COATED LOCATION
R501	X	12	20	5'-10	X		PARAPET VERT.
R502	X	12	20	6'-8"	X		PARAPET VERT.
R503	X	11	11	3'-0"	X		PARAPET VERT.
R504	X	17	17	5'-7"	X		PARAPET VERT.
R505	X	5	5	6'-5"	X		PARAPET VERT.
R506	X	6	6	6'-6"	X		PARAPET VERT.
R507	X	1		15'-7"	X		PARAPET HORIZ.
R508	X	5		15'-8"			PARAPET HORIZ.
R509	X	6	6	5'-5"	X	▲	PARAPET VERT.
R510	X	2		15'-8"	X		PARAPET HORIZ.
R511	X		1	20'-11"	X		PARAPET HORIZ.
R512	X		5	21'-0"			PARAPET HORIZ.
R513	X		2	21'-0"	X		PARAPET HORIZ.

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

BAR SERIES TABLE

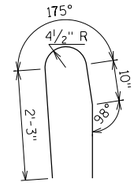
BAR MARK	NO. REQ'D	LENGTH
R509	2 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

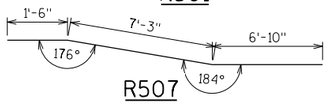


PLAN

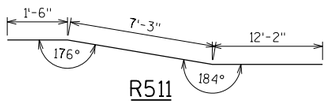
SE CORNER SHOWN, SW SIMILAR



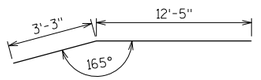
R501



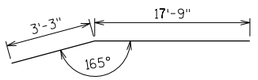
R507



R511



R510



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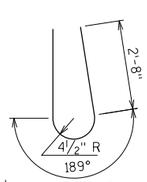
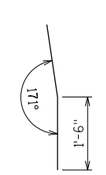
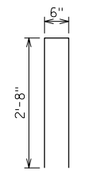


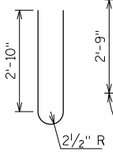
R502



R503



R504



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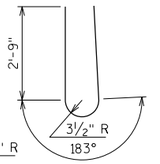

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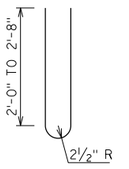
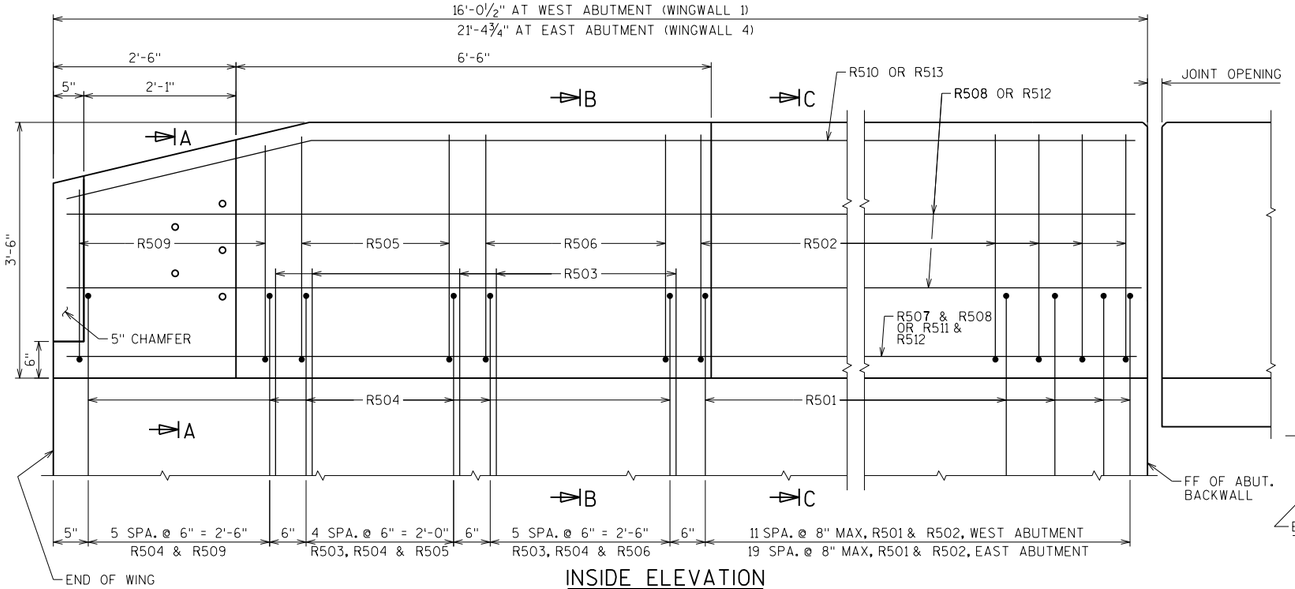
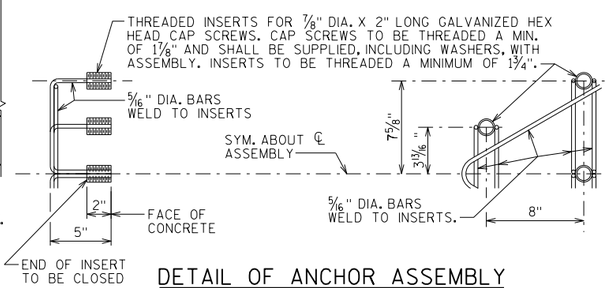


R509



INSIDE ELEVATION

SE CORNER SHOWN, SW SIMILAR



DETAIL OF ANCHOR ASSEMBLY

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

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

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-254

DRAWN BY NWG | PLANS CK'D. WJZ

SINGLE SLOPE PARAPET 42SS

SHEET 14 OF 21

286

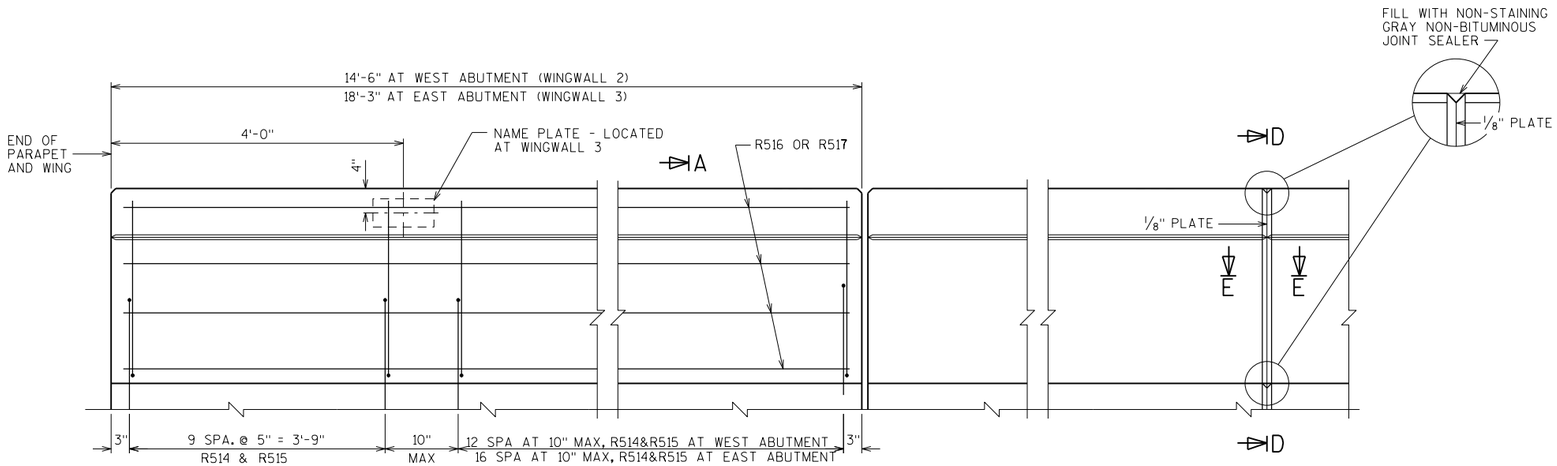
FILE= B-40-254_140_42SS.DGN
SCALE = 1:1

8

8

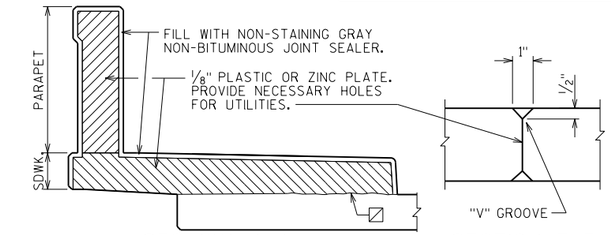
STATE PROJECT NUMBER

1360-13-71



AT ABUTMENTS

AT DEFLECTION JOINTS

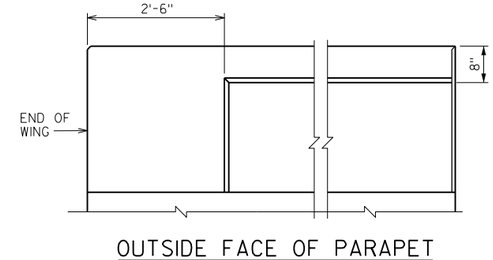


SECTION D-D

SECTION E-E

(SHOWING DEFLECTION JOINT IN PARAPET AND SIDEWALK.)

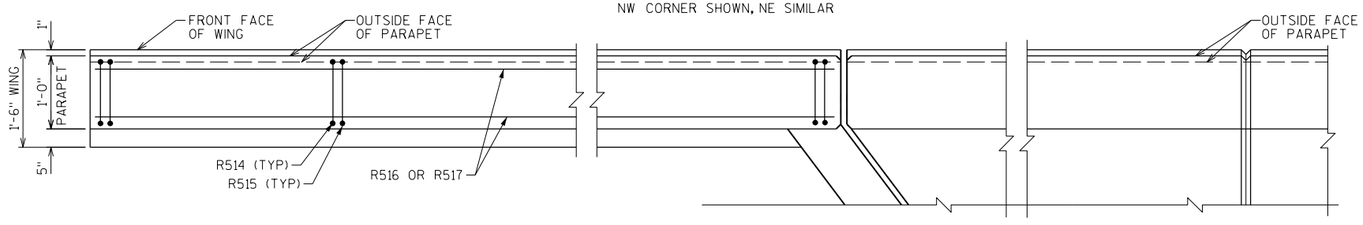
WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION D-D BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.



OUTSIDE FACE OF PARAPET

INSIDE ELEVATION OF PARAPET

NW CORNER SHOWN, NE SIMILAR

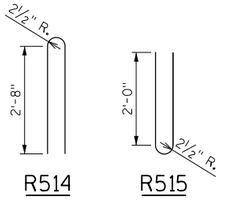


AT ABUTMENTS

AT DEFLECTION JOINTS

BILL OF BARS

BAR MARK	COAT	NO. REQ'D W ABUT.	NO. REQ'D E ABUT.	LENGTH	BENT	BAR SERIES	826# COATED LOCATION
R514	X	23	27	6'-1"	X		PARAPET VERT.
R515	X	23	27	4'-9"	X		PARAPET VERT.
R516	X	8		14'-2"			PARAPET HORIZ.
R517	X		8	17'-11"			PARAPET HORIZ.

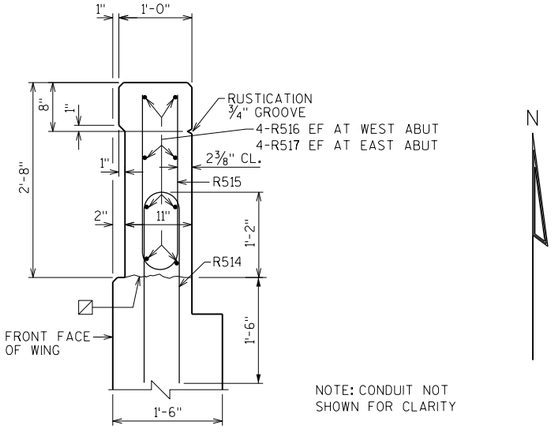


R514

R515

PLAN OF PARAPET

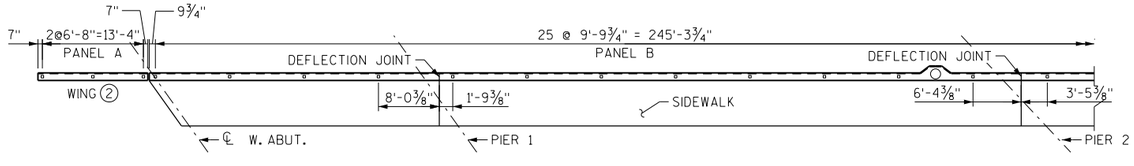
NW CORNER SHOWN, NE SIMILAR

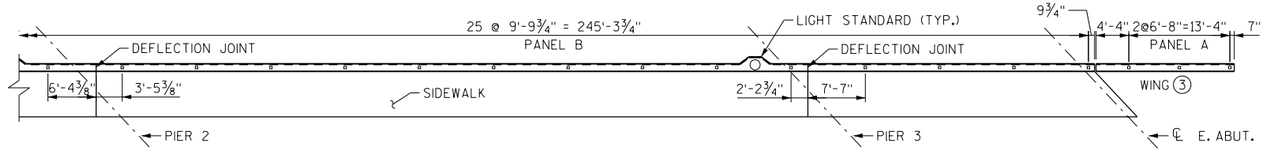


SECTION A-A

NOTE: CONDUIT NOT SHOWN FOR CLARITY

CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.





FENCE POST SPACING PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-254

DRAWN BY NWG | PLANS CK'D. WJZ

VERTICAL FACE PARAPET "A"

SHEET 15 OF 21

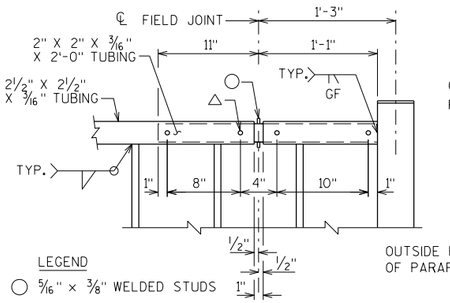
287

8

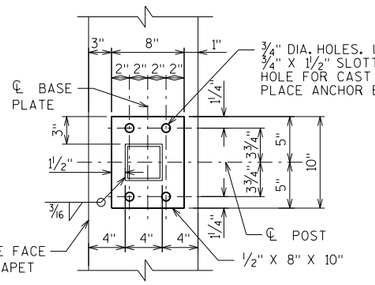
8

FILE= B-40-254_150_VERTPPTA.DGN

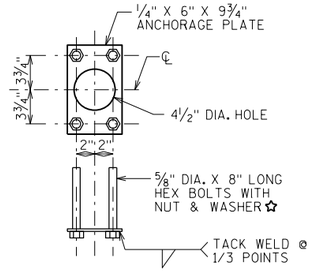
SCALE = 1:1



RAILING EXPANSION JOINT DETAIL



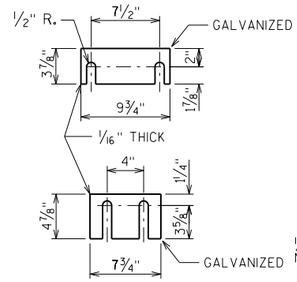
BASE PLATE



ANCHORAGE DETAIL

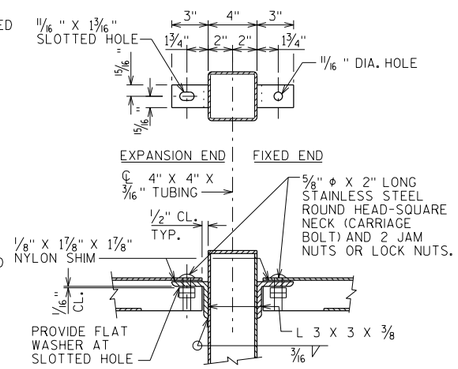
✪ALTERNATIVE ANCHORAGE: ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 AND 502.3.14 OF THE STANDARD SPECIFICATIONS.

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

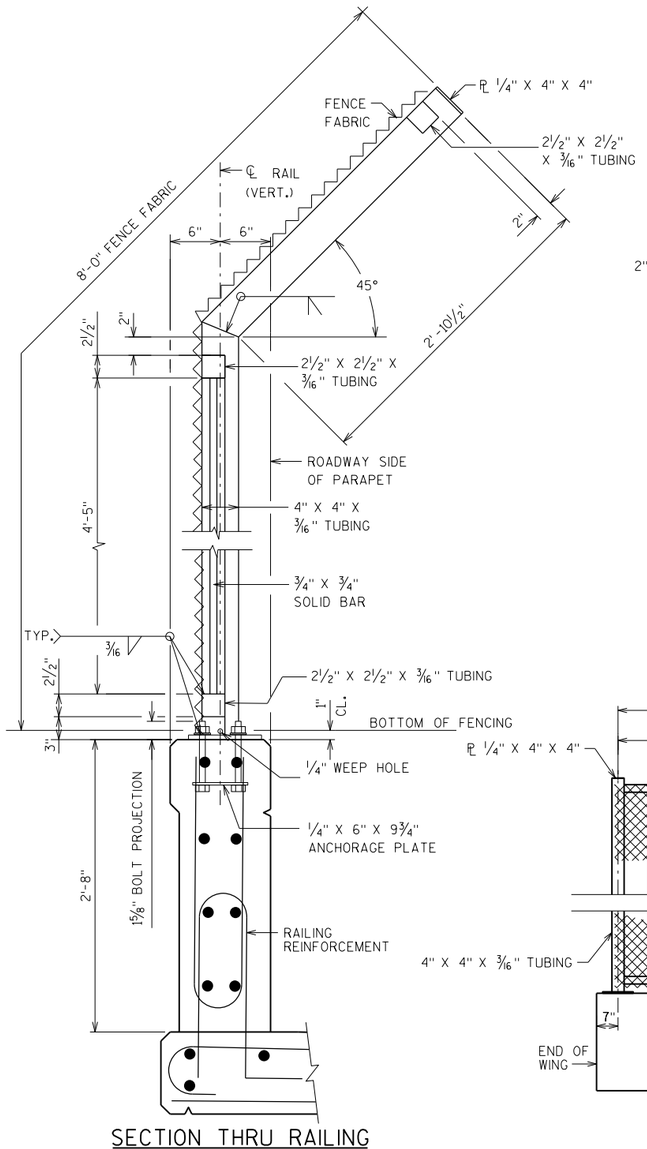


SHIM PLATE DETAILS

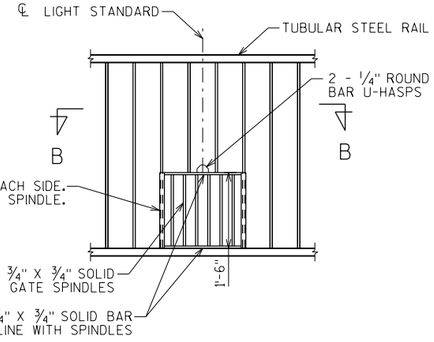
TWO SHIMS OF EACH SIZE REQUIRED PER POST



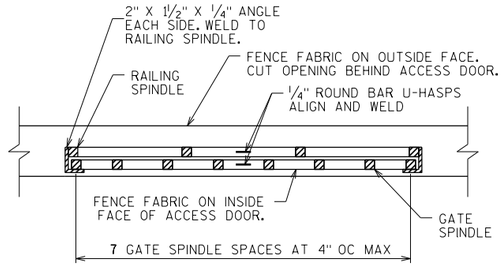
TOP RAIL CONNECTION FOR FENCE W/ BENT TOP



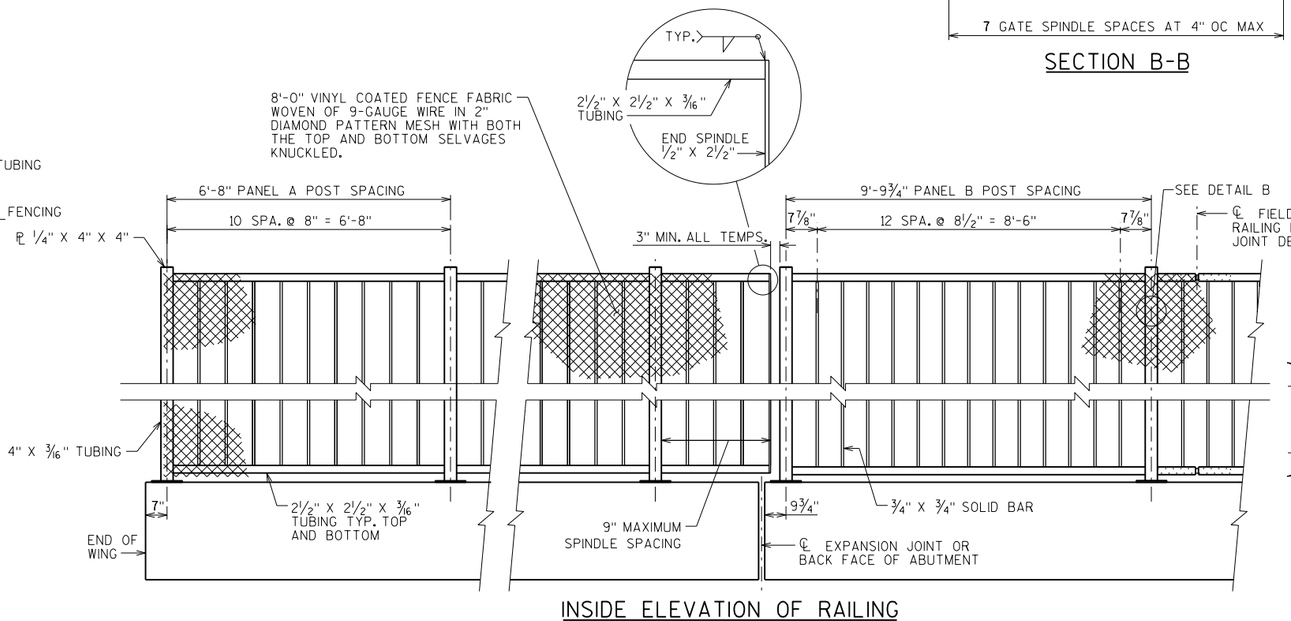
SECTION THRU RAILING



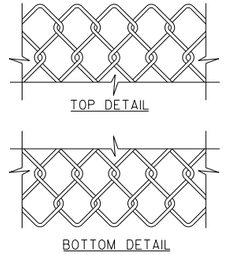
RAILING ACCESS DOOR ELEVATION



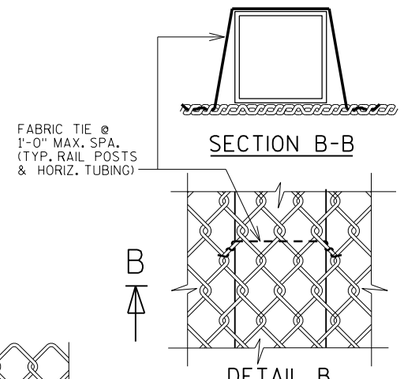
SECTION B-B



INSIDE ELEVATION OF RAILING



FENCE FABRIC



STATE PROJECT NUMBER

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NOTES

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 CUT.

STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B. PLATES, ANGLES, BARS AND SHIMS SHALL CONFORM TO ASTM A709, GRADE 36. FENCE FABRIC SHALL CONFORM TO F668, CLASS 2B.

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

ALL POST SPACINGS ARE TAKEN HORIZONTAL ALONG CENTERLINE OF RAILING AT BASE OF POST.

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

CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CUT BOTTOM OF POST TO MAKE VERTICAL IN TRANSVERSE DIRECTION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED. ✪

THE BID ITEM SHALL BE "RAILING TUBULAR SCREENING" WHICH SHALL INCLUDE ALL ITEMS SHOWN.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE NOT MORE THAN 3 POSTS.

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

ALL RAILING MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS.

THE END OF THE FABRIC SHALL BE ATTACHED TO THE POST BY MEANS OF A TENSION BAR THREADED THROUGH THE END LOOPS OF THE FABRIC AND SECURED TO THE POST WITH CLAMPS & BOLT. THE FABRIC SHALL BE STRETCHED TO REMOVE ALL SLACK.

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STATE OF WISCONSIN
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STRUCTURE B-40-254

DRAWN BY NWG | PLANS CK'D. WJZ

TUBULAR STEEL RAILING SCREENING

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FILE= B-40-254_160_TUBERAIL.DGN
SCALE = 1:1

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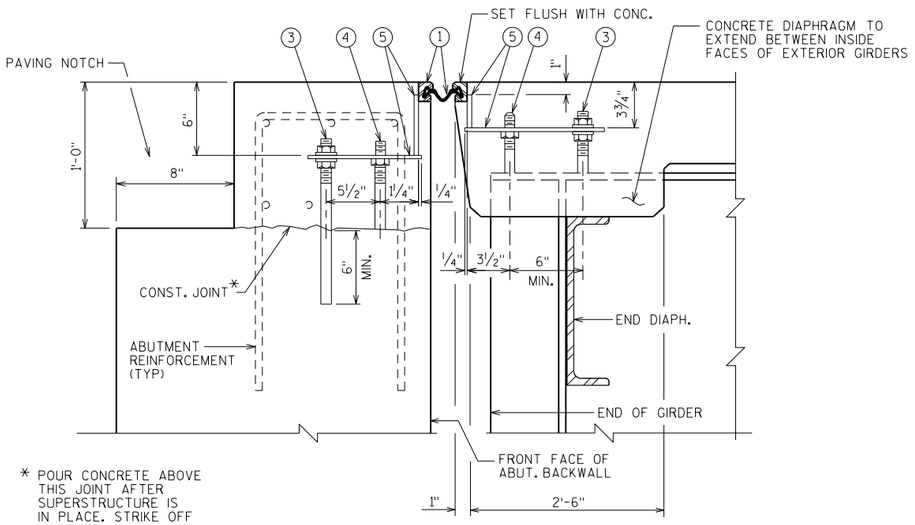
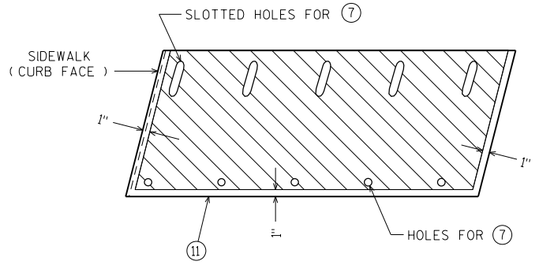


* POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.

SECTION THRU JOINT AT ABUTMENT

NORMAL TO ℄ SUBSTRUCTURE



PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE

PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN HATCHED AREA ONLY (NOT ON CURB FACE).

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES		
PRODUCT	MANUFACTURER	CONTACT AT
SLIPNOT GRADE 2, STEEL	W. S. MOLNAR COMPANY	1-800-SLIPNOT
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170

LEGEND

① NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.

② STUDS ⅝"Φ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝"Φ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

③ ¾" Φ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

④ ¾"Φ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

⑤ FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" Φ HOLE FOR NO. 3 & 1" Φ HOLE FOR NO. 4.

⑥ GALVANIZED PLATE ⅜" X 10" X 2'-2" LONG WITH HOLES FOR NO. 7.

⑦ ¾"Φ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

⑧ ¾"Φ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

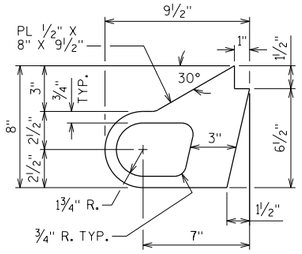
⑨ ¾"Φ X 2¼" GALVANIZED THREADED COUPLING.

⑩ SIDEWALK COVER PLATE ⅜" X 2'-0" X LIMITS SHOWN. BEND DOWN FACE OF SIDEWALK WITH HOLES FOR NO. 7. GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.

⑪ 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS AND SIDEWALKS



ALTERNATE STRIP SEAL ANCHOR

SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

PART PLAN

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, ANCHOR PLATES SHALL BE PROVIDED 3" FROM EACH SIDE OF THE FIELD SPLICE. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

ALL MATERIAL IN THE EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID AT THE UNIT PRICE BID FOR "EXPANSION DEVICE", LF.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-254

DRAWN BY NWG | PLANS CK'D. WJZ

STRIP SEAL EXPANSION JOINT

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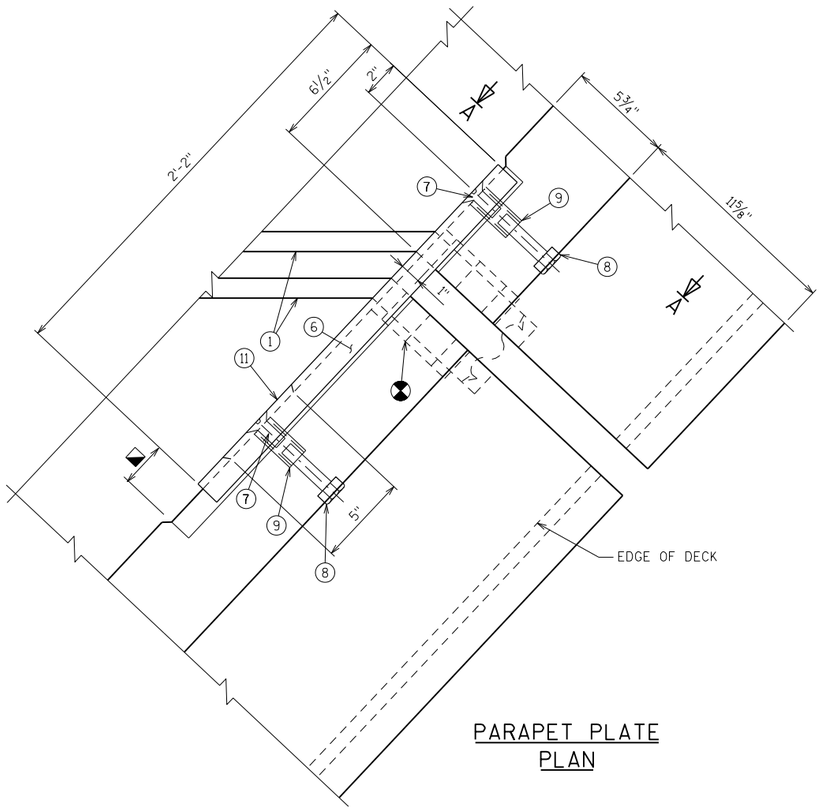
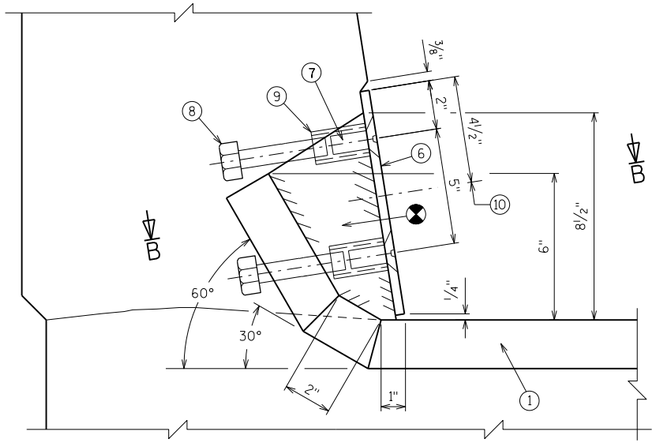
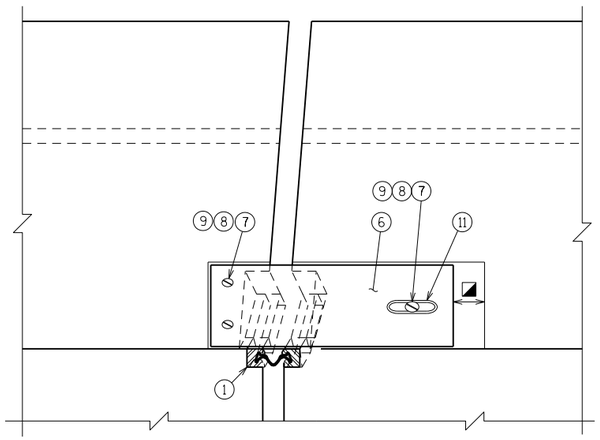


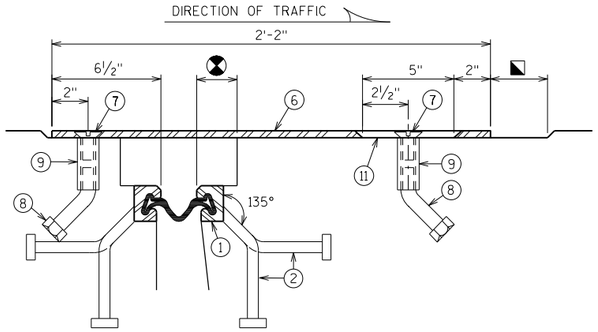
PARAPET PLATE PLAN



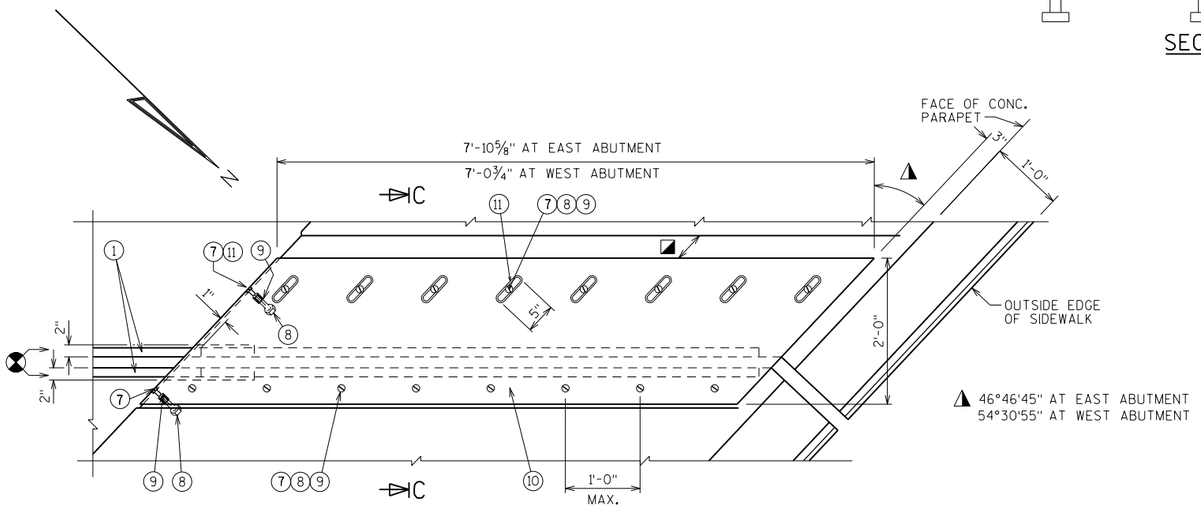
SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY



SECTION B-B

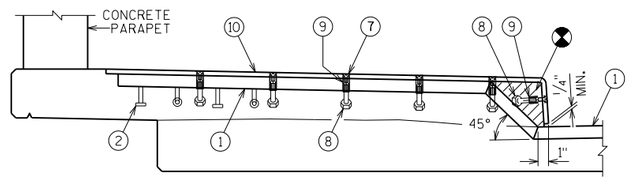


SIDEWALK PLATE PLAN

▲ 46°46'45" AT EAST ABUTMENT
54°30'55" AT WEST ABUTMENT

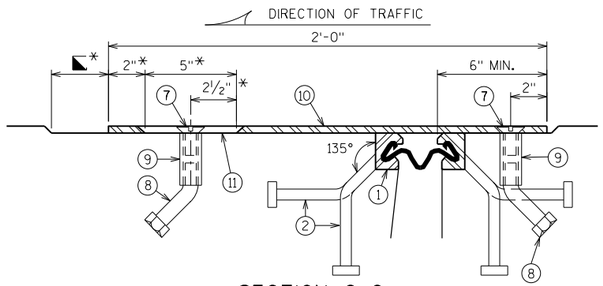
⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

◪ JOINT OPENING DIMENSION ALONG SKEW PLUS ½".



SECTION AT SIDEWALK

(LOOKING EAST)



SECTION C-C

* DIMENSION ALONG DIRECTION OF MOVEMENT

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-254

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COVER PLATE DETAILS

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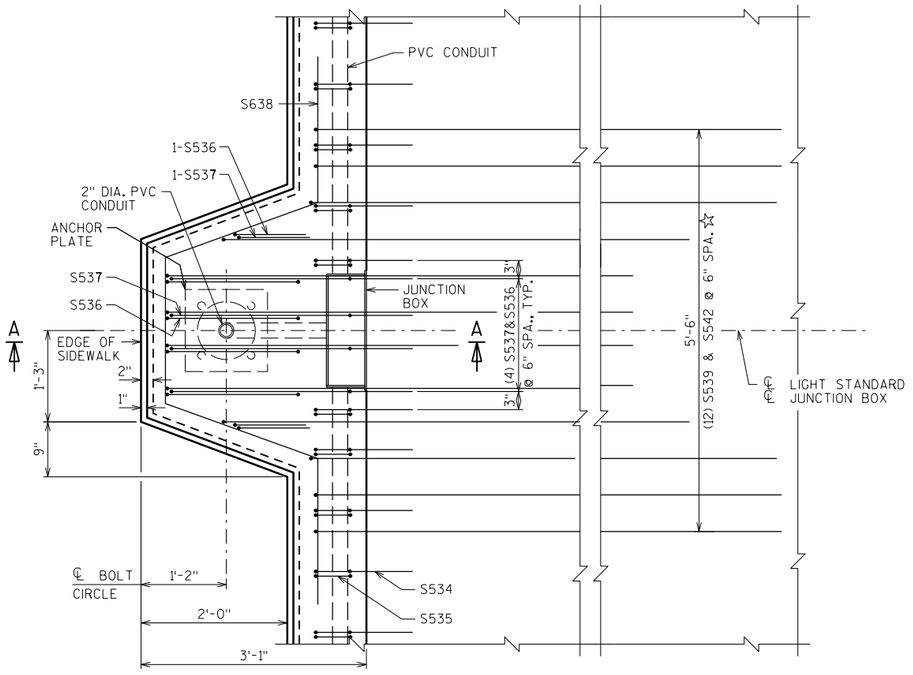
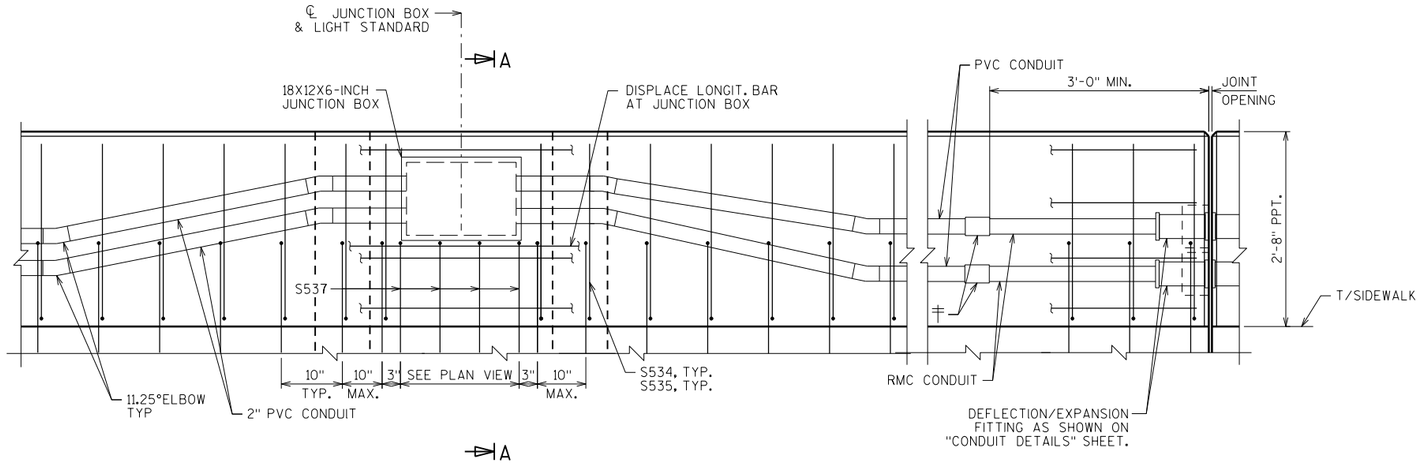


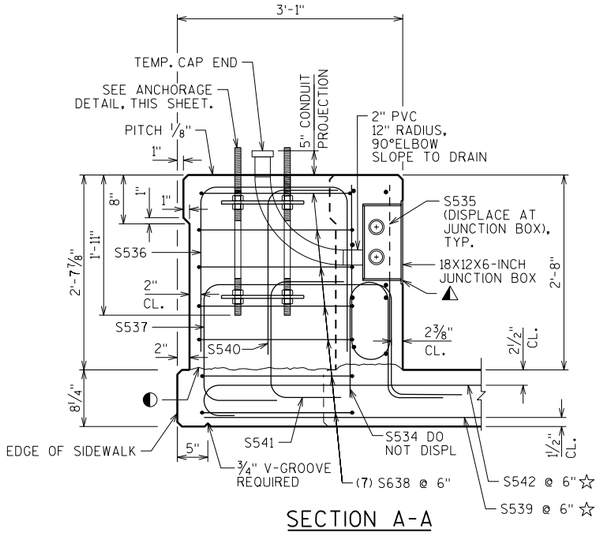
PLAN AT LIGHT STANDARD

(DECK AND SIDEWALK STEEL NOT SHOWN FOR CLARITY)



INSIDE ELEVATION AT JUNCTION BOX

(DECK AND SIDEWALK STEEL NOT SHOWN FOR CLARITY)



SECTION A-A

NOTES

BID ITEM SHALL BE "ANCHOR ASSEMBLIES POLES ON STRUCTURES", EACH

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" DIA. RIGID NONMETALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE.

CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS ARE INCIDENTAL TO CONDUIT WORK.

PROVIDE JUNCTION BOXES FROM THE APPROVED PRODUCTS LIST.

SEE "CONDUIT DETAILS" SHEET FOR ADDITIONAL INFORMATION.

⅜" NYLON PULL WIRE/ROPE IS REQUIRED FOR ALL CONDUIT AND SHALL BE INCIDENTAL TO CONDUIT INSTALLATION

ANCHOR BOLTS FOR ANCHOR ASSEMBLIES MUST BE INSTALLED PERPENDICULAR TO THE HORIZON

THE TOP OF THE LIGHT STANDARD SHALL HAVE A 1/8" PITCH FROM THE OUTSIDE FACE OF THE PARAPET TO THE OUTSIDE FACE OF THE LIGHT STANDARD.

LEGEND

◐ CONSTRUCTION JOINT, STRIKE OFF AS SHOWN.

◭ CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

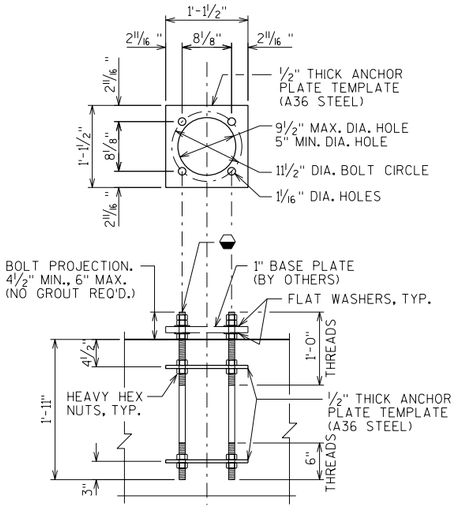
⫩ NONMETALLIC CONDUIT TO METALLIC CONDUIT ADAPTER FITTING (UL OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED).

PVC = POLYVINYL CHLORIDE (RIGID NONMETALLIC) CONDUIT

RMC = RIGID METALLIC CONDUIT

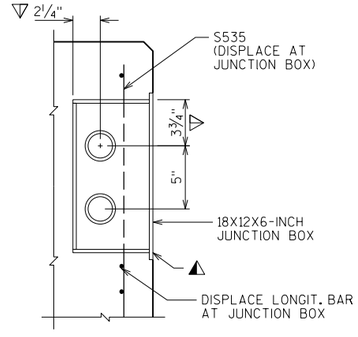
☆ THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN SIDEWALK.

◒ 1" DIA. ANCHOR RODS ASTM F1554 GR 55, HEAVY HEX NUTS ASTM A563, AND WASHERS ASTM F436. ANCHOR ASSEMBLIES SHALL BE GALVANIZED PER SECTION 531 OF THE STANDARD SPECIFICATION. PROVIDE (2) WASHERS AND (7) NUTS PER ANCHOR ROD.



ANCHOR ROD ASSEMBLY DETAIL

(SINGLE ASSEMBLY SHOWN 2 - REQ'D.)
(4) - ANCHOR RODS REQUIRED PER ASSEMBLY



JUNCTION BOX DETAIL

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STRUCTURE B-40-254

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LIGHT SUPPORT DETAILS

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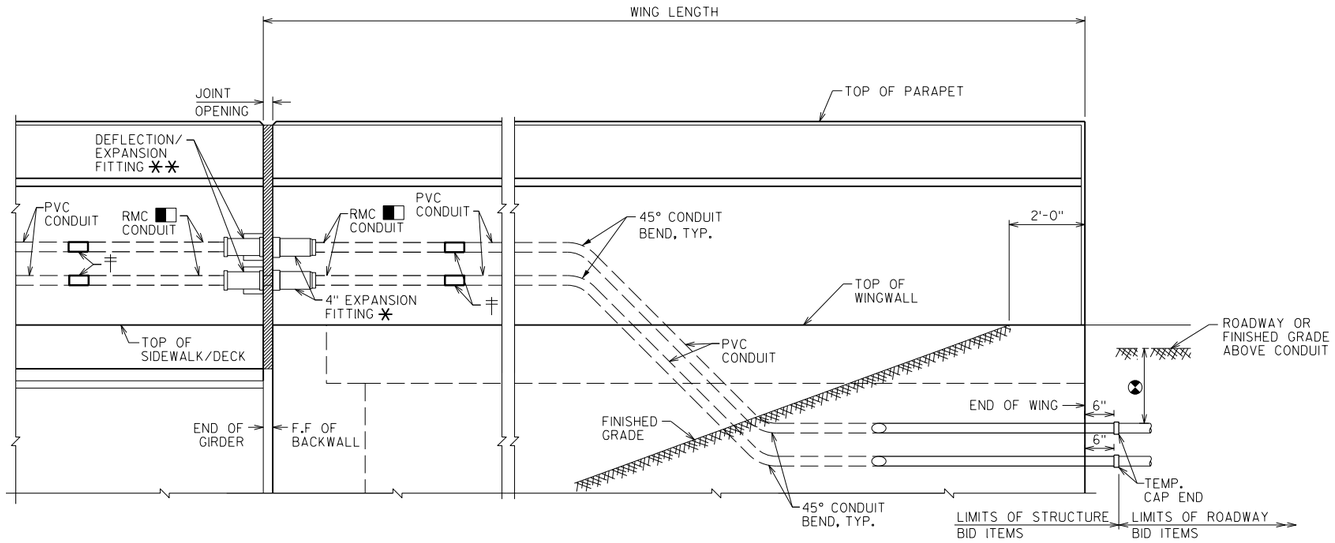
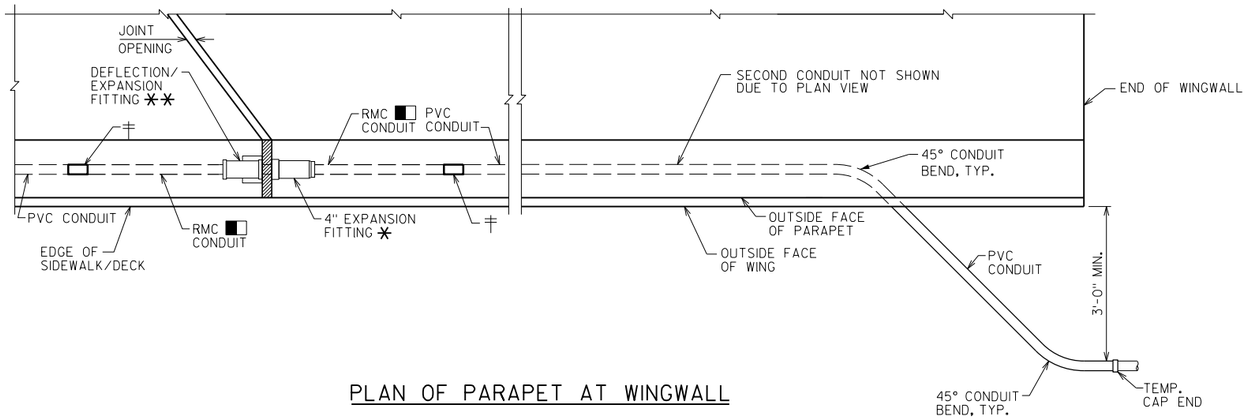
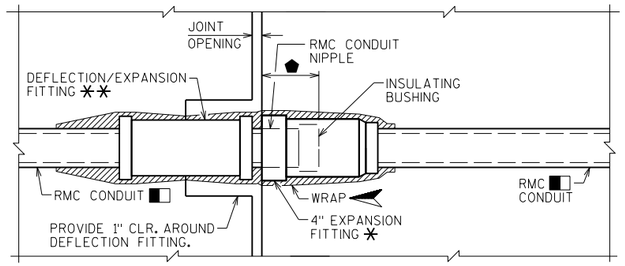
FILE= B-40-254.190_LIGHTSTD.DGN
SCALE = 1:1



OUTSIDE ELEVATION OF PARAPET AT WINGWALL



PLAN OF PARAPET AT WINGWALL



DEFLECTION/EXPANSION AND 4" EXPANSION FITTING

THIS DETAIL ACCOMMODATES A MAXIMUM OF 4" TOTAL MOVEMENT AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION. BOND JUMPER NOT SHOWN FOR CLARITY

LEGEND

■ USE 2" DIA. RIGID METALLIC (RMC) CONDUIT AT FITTINGS. PROVIDE RMC FOR 3'-0" MIN. ON EACH SIDE OF 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 - 1/4" MINIMUM THICKNESS. PROVIDE WRAP FOR THE ENTIRE LENGTH OF THE FITTING OR AS SHOWN. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".

⬟ POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.

☢ 2'-0" MIN. CONDUIT COVER UNDER ROADWAYS, 1'-6" OTHERWISE. CONDUIT COVER SHOULD NOT EXCEED 3'-0".

* EXPANSION FITTING REQUIREMENTS:
- 4" TOTAL MOVEMENT WITH BONDING JUMPER

** DEFLECTION/EXPANSION FITTING REQUIREMENTS:
- UP TO 3/4" CONDUIT CONTRACTION OR EXPANSION AND UP TO 30° OF ANGULAR MISALIGNMENT IN ANY DIRECTION WITH BONDING JUMPER

NOTES

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" 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.

3/8" NYLON PULL WIRE/ROPE IS REQUIRED FOR ALL CONDUIT AND SHALL BE INCIDENTAL TO CONDUIT INSTALLATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-254

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CONDUIT DETAILS

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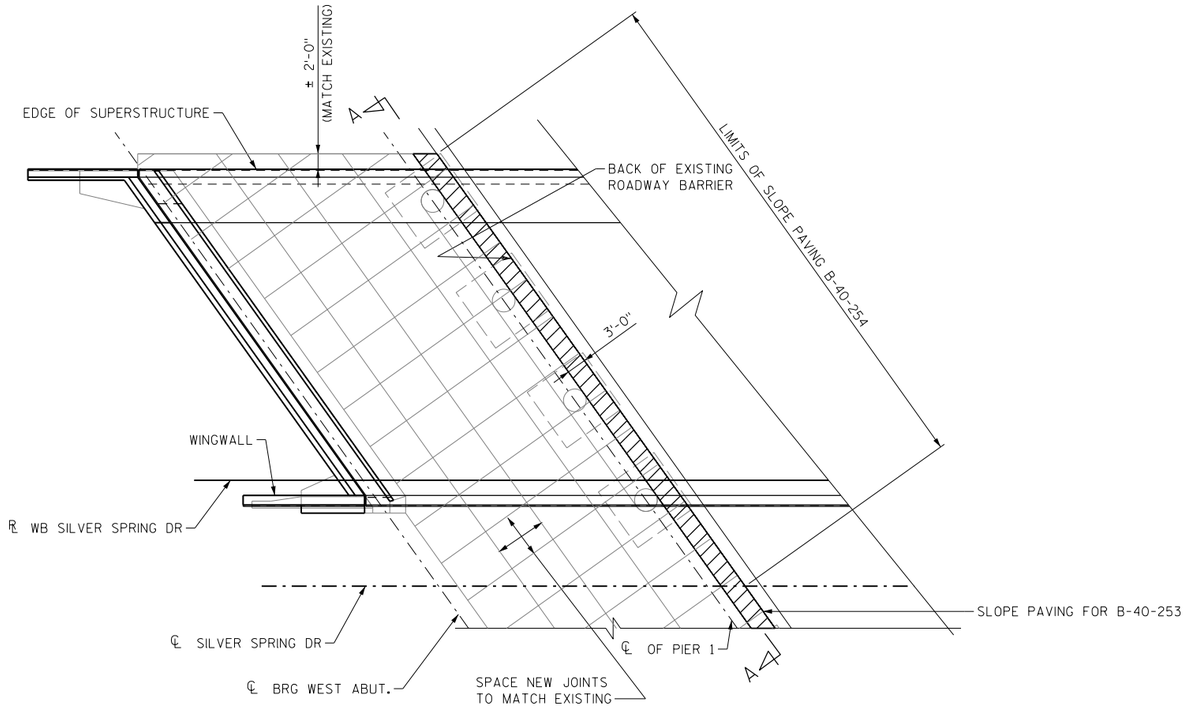
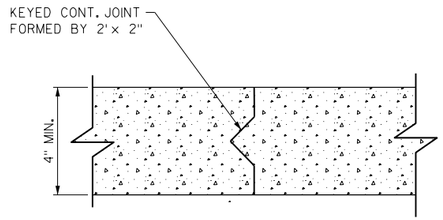
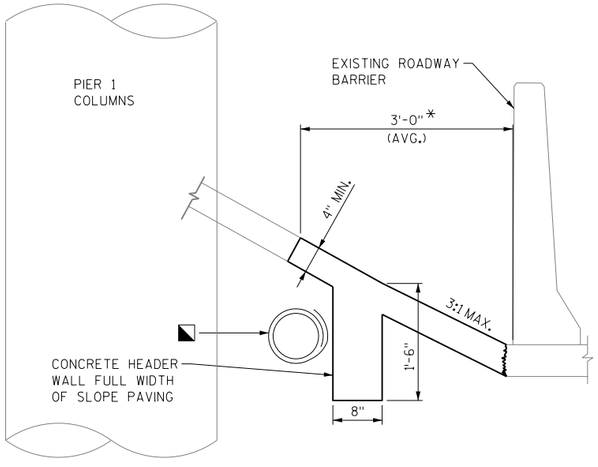
STATE PROJECT NUMBER
1360-13-71



PLAN WEST ABUTMENT

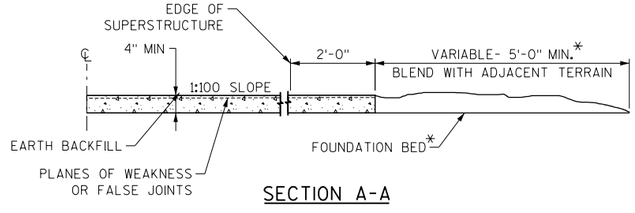


CONSTRUCTION JOINT



WEST ABUTMENT SLOPE PAVING SECTION

* REMOVE EXISTING COMPACTED GRAVEL AND INSTALL SLOPE PAVING.



SECTION A-A

* EARTHWORK IS INCIDENTAL

LEGEND

PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. (SHOW DETAILS ON PLANS. SEE STD.9.01 FOR DETAILS)

HATCHED AREAS INDICATE CONCRETE SLOPE PAVING TO BE INSTALLED.

NOTES

DETAILS OF CONSTRUCTION NOT SHOWN HEREIN SHALL CONFORM TO THE PERTINENT REQUIRMENTS OF THE STANDARD SPECIFICATIONS

N

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-254

DRAWN BY NWG | PLANS CK'D. WJZ

SLOPE PAVING DETAILS

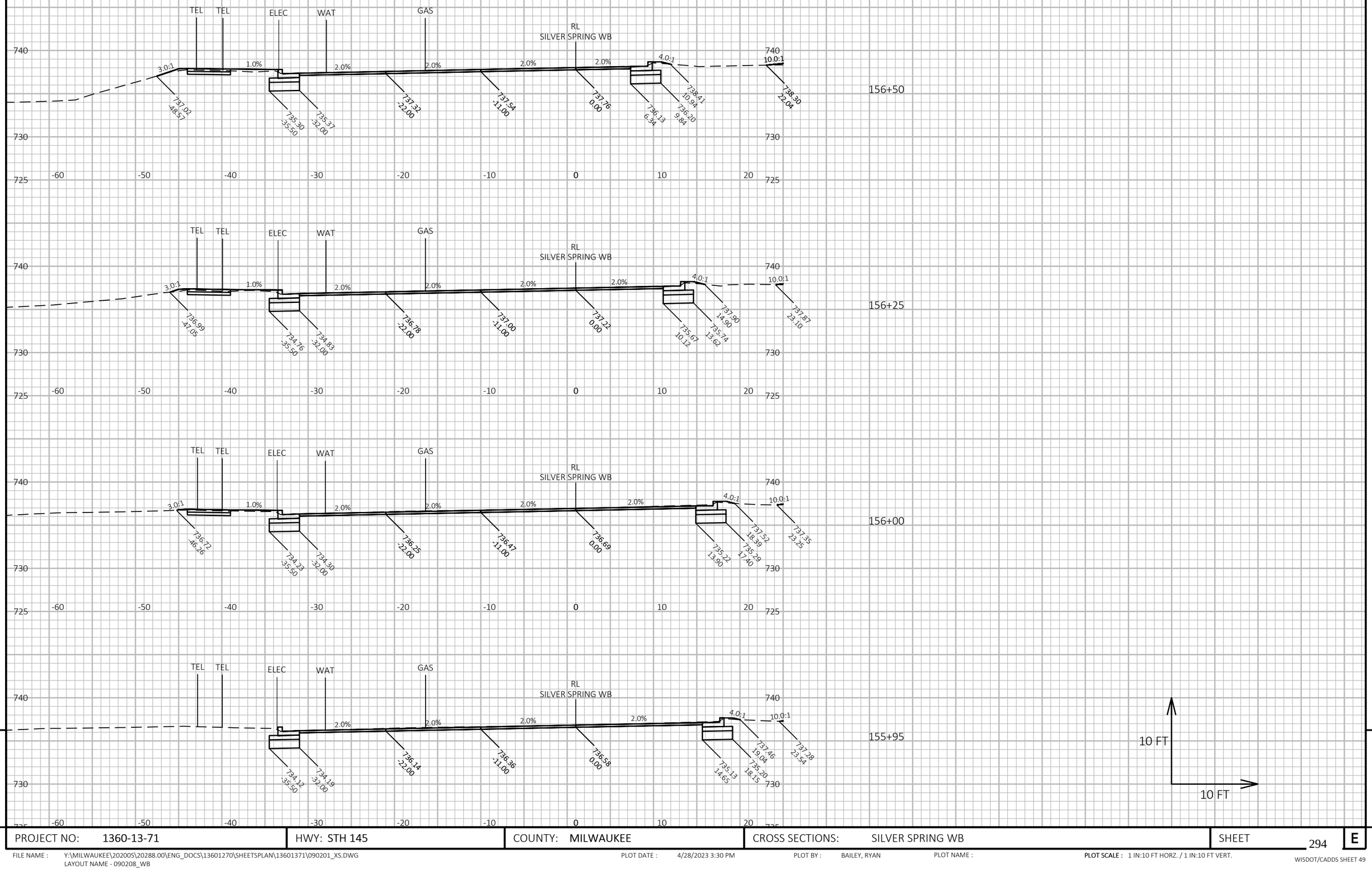
SHEET 21 OF 21

293

8

8

FILE= B-40-254.210_SLOPEPAVING.DGN
SCALE = 1:20



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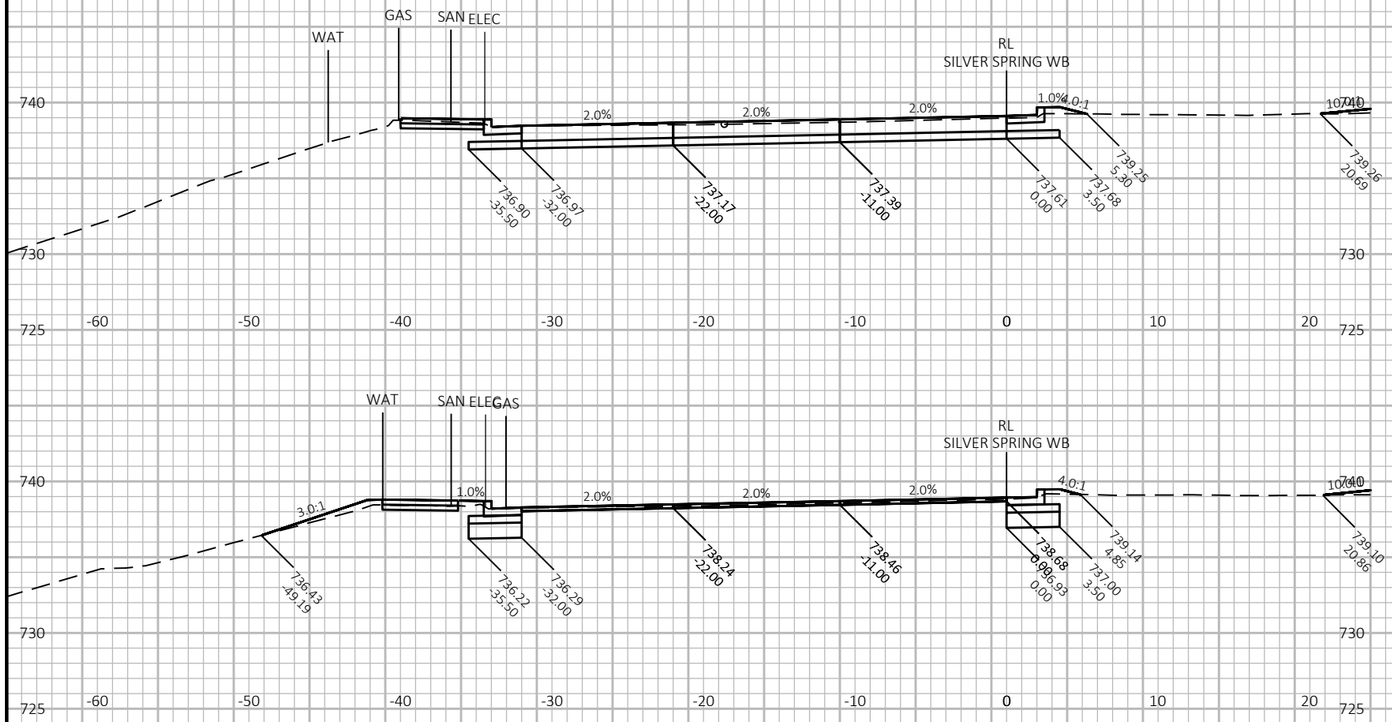
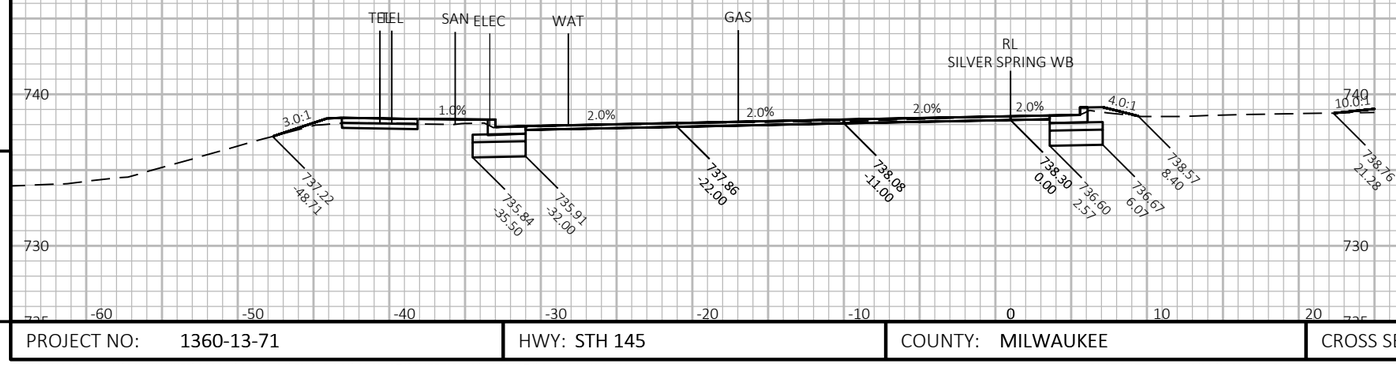
9

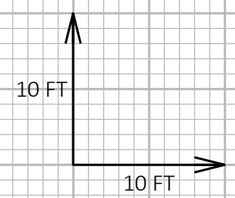
PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: SILVER SPRING WB	SHEET 294	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\090201_XS.DWG
LAYOUT NAME - 090208_WB

PLOT DATE : 4/28/2023 3:30 PM PLOT BY : BAILEY, RYAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.







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PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: SILVER SPRING WB	SHEET 295	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\090201_XS.DWG
LAYOUT NAME - 090209_WB

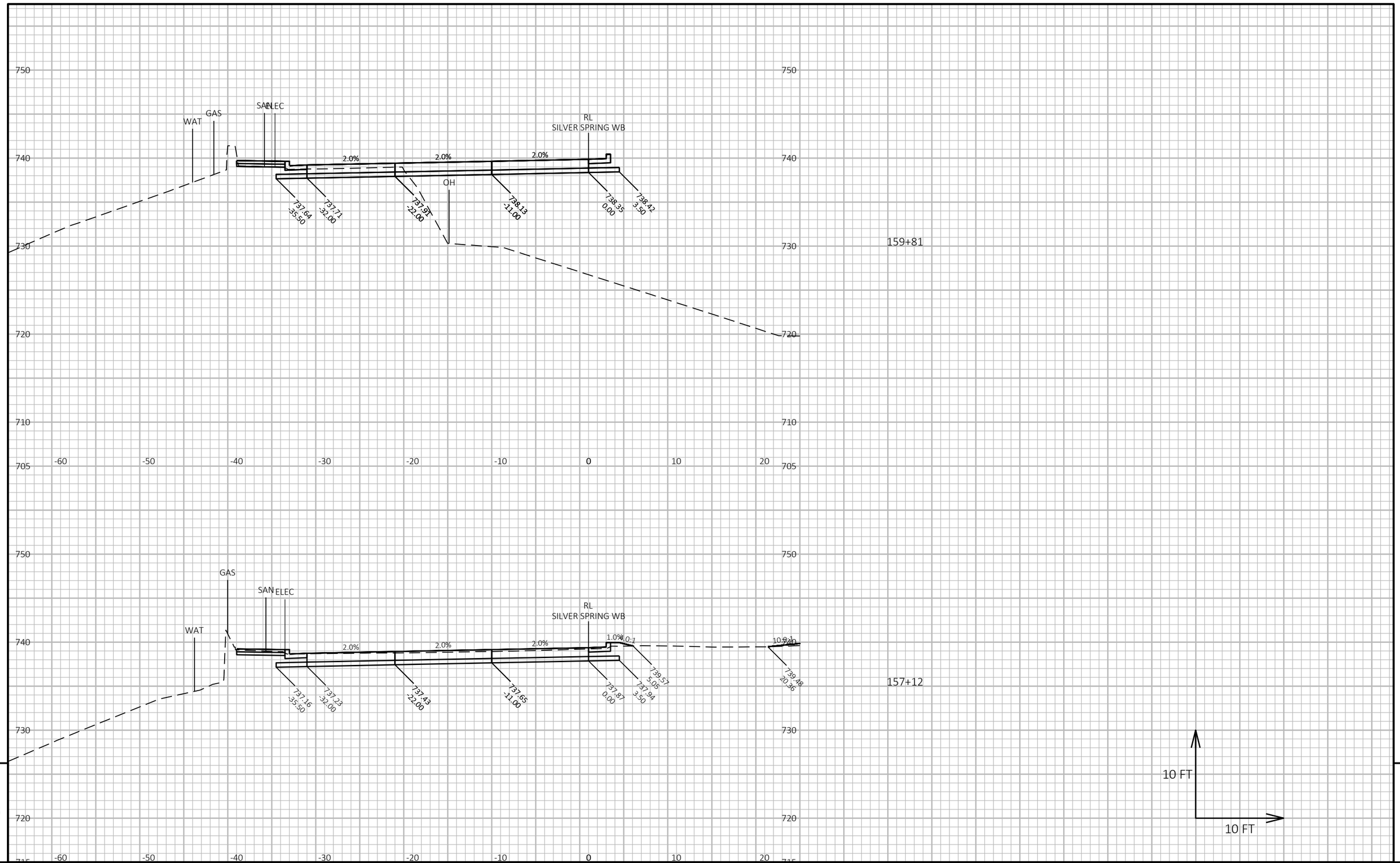
PLOT DATE : 4/28/2023 3:30 PM

PLOT BY : BAILEY, RYAN

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: SILVER SPRING WB	SHEET 296	E

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LAYOUT NAME - 090210_WB

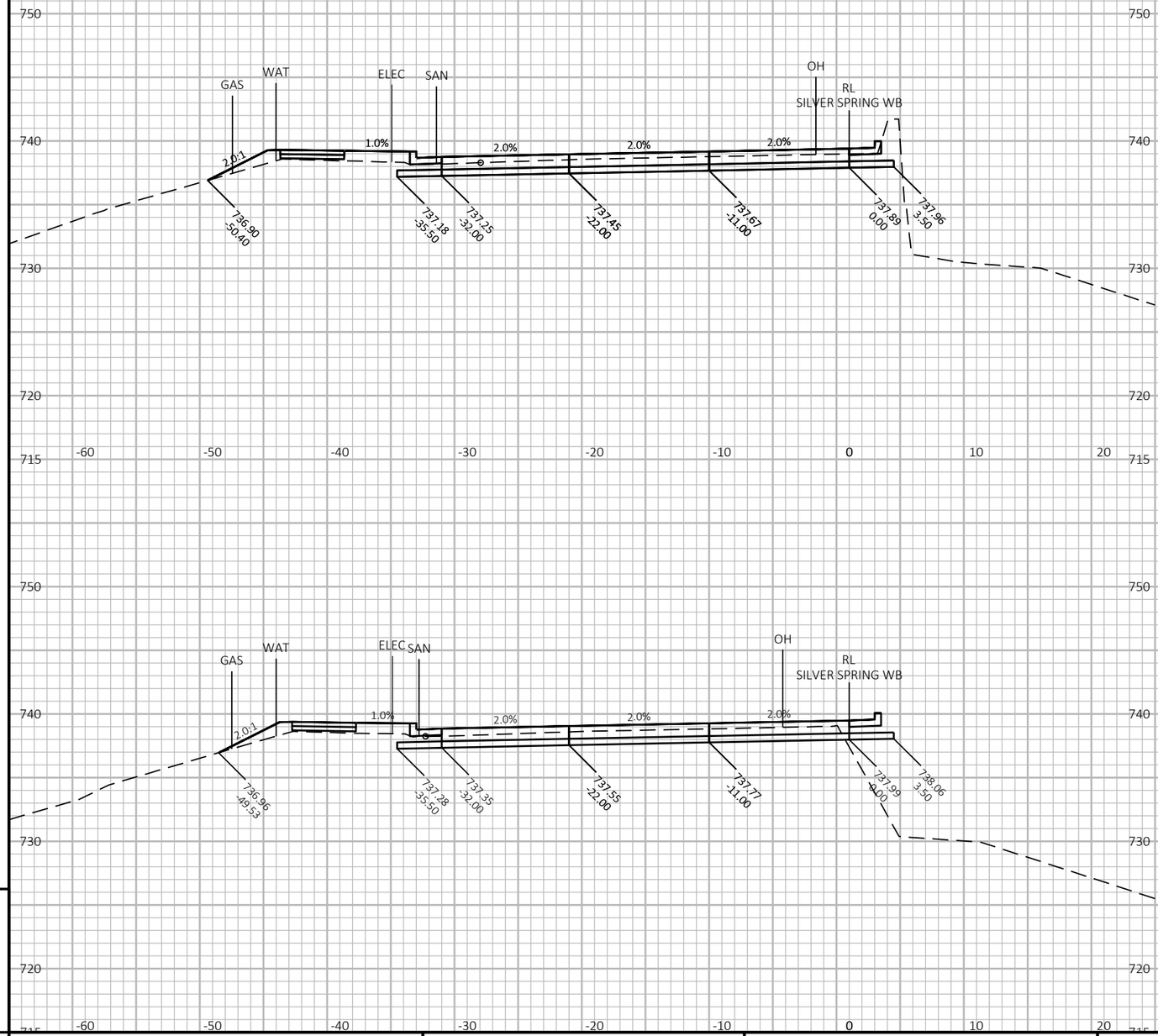
PLOT DATE : 4/28/2023 3:30 PM

PLOT BY : BAILEY, RYAN

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



160+05

160+00

10 FT

10 FT

9

9

PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: SILVER SPRING WB	SHEET 297	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\090201_XS.DWG
LAYOUT NAME - 090211_WB

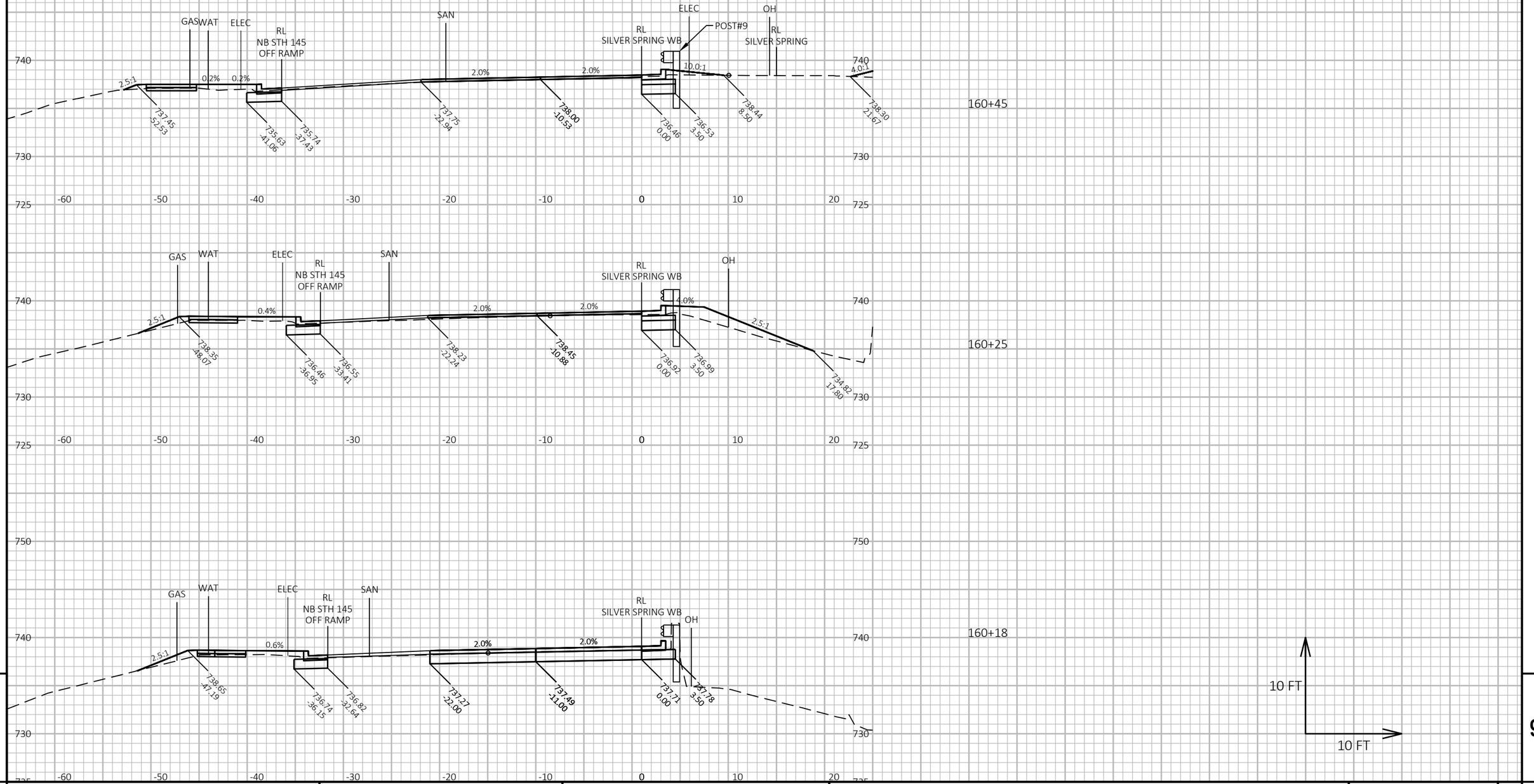
PLOT DATE : 4/28/2023 3:31 PM

PLOT BY : BAILEY, RYAN

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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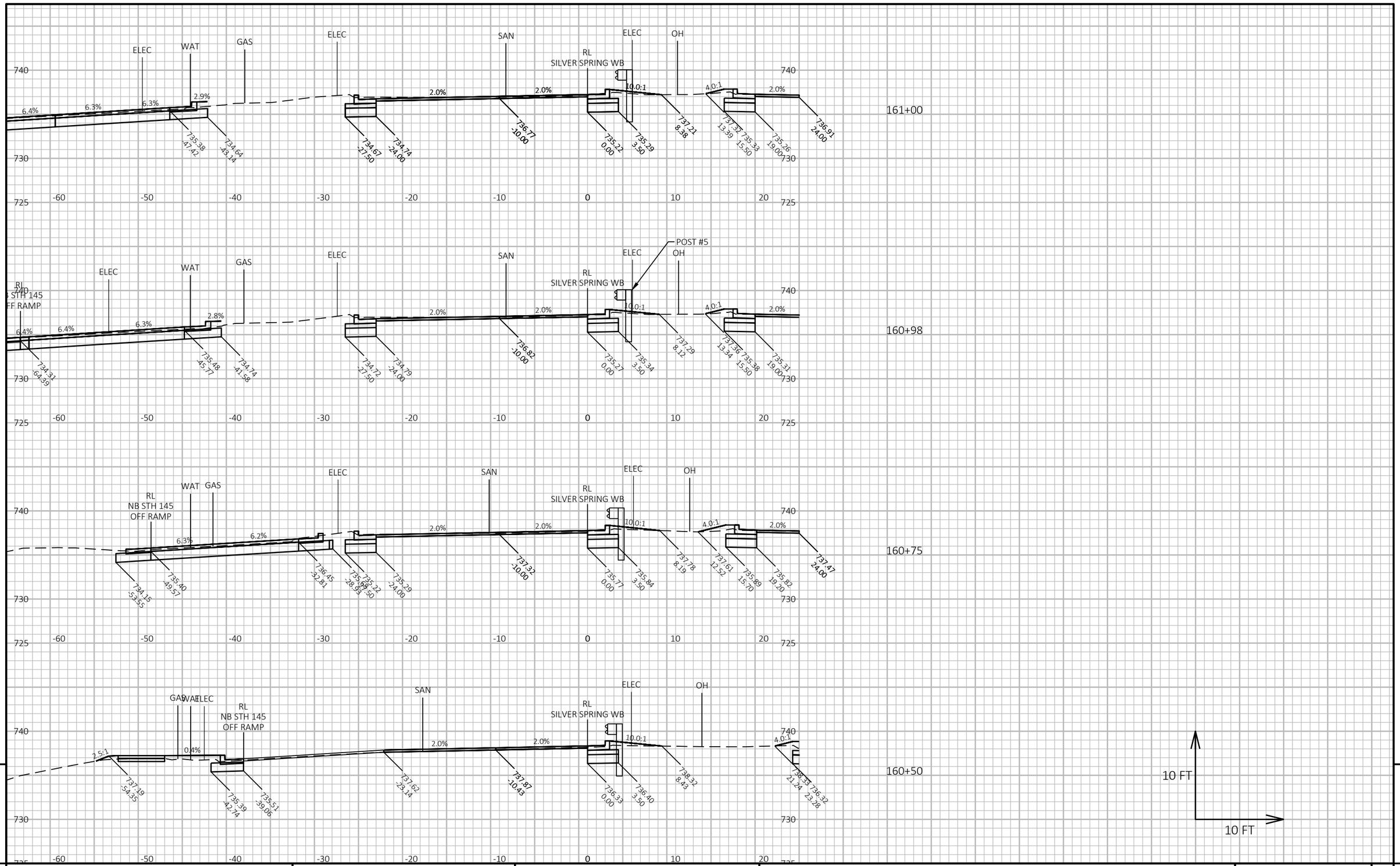
PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: SILVER SPRING WB	SHEET 298	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\090201_XS.DWG
LAYOUT NAME - 090212_WB

PLOT DATE : 4/28/2023 3:31 PM PLOT BY : BAILEY, RYAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: SILVER SPRING WB	SHEET 299	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\090201_XS.DWG
LAYOUT NAME - 090213_WB

PLOT DATE : 4/28/2023 3:31 PM PLOT BY : BAILEY, RYAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

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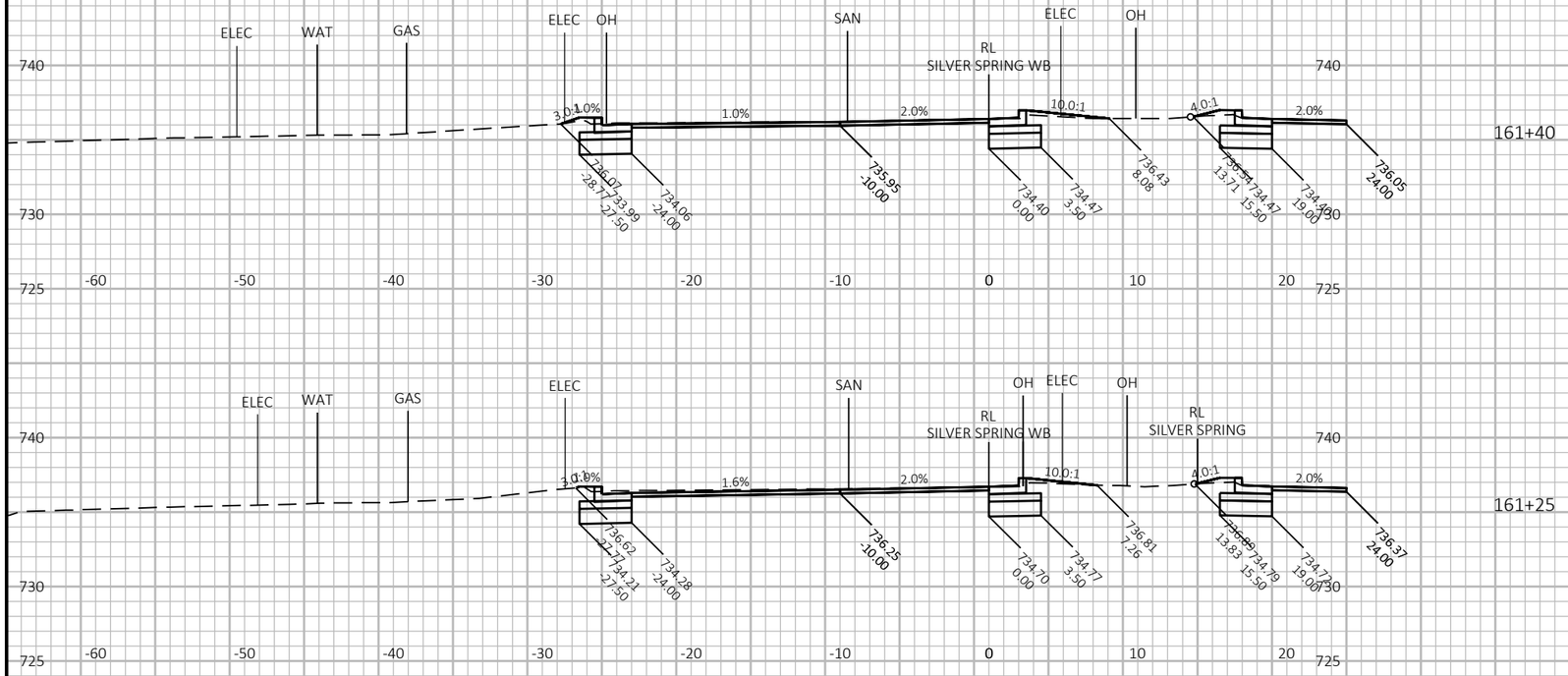

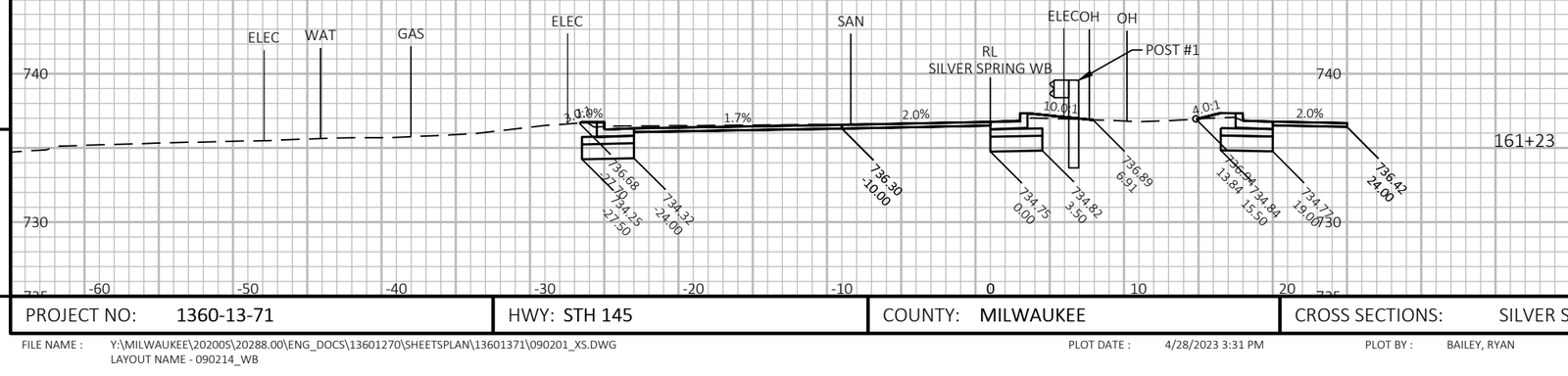

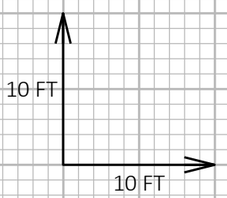

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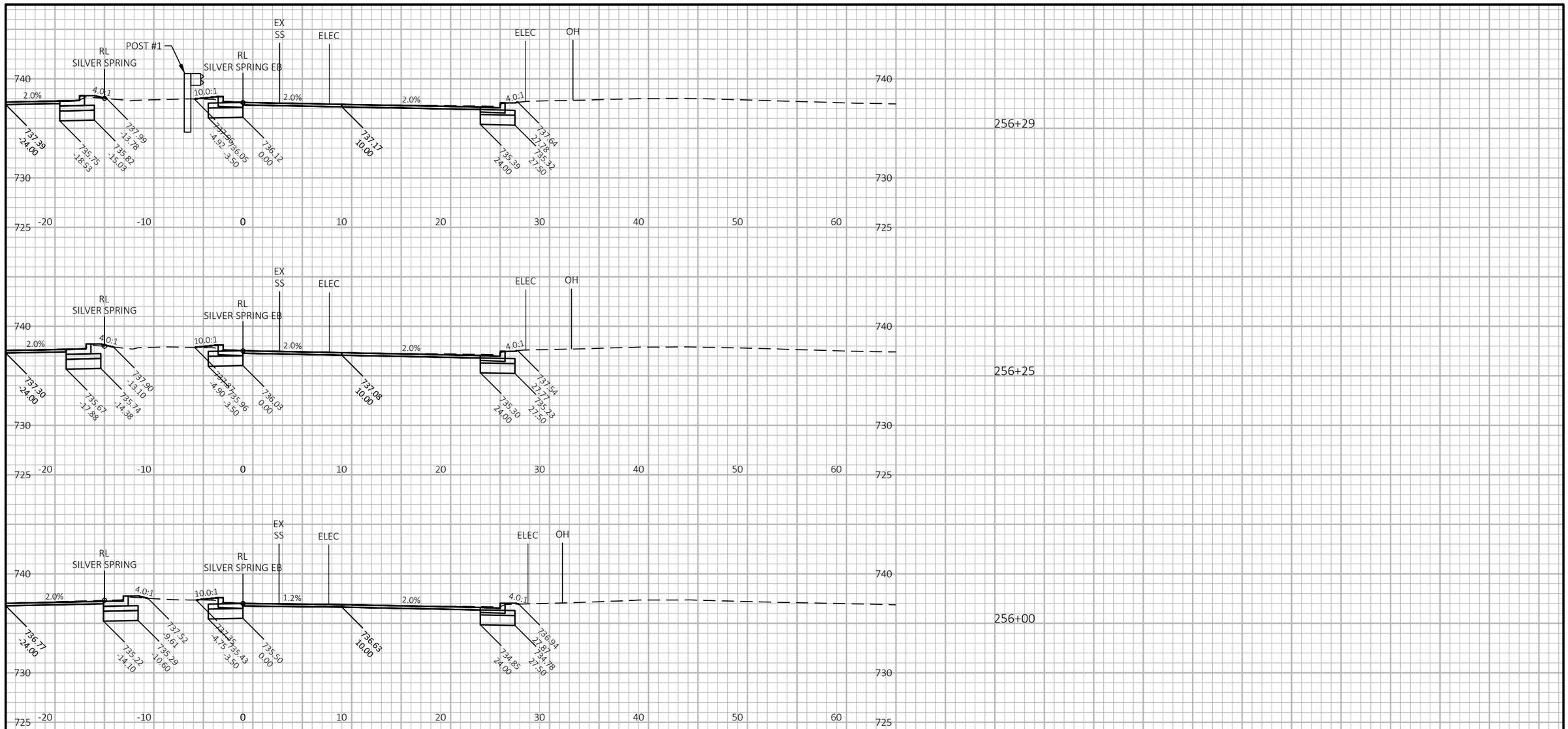
PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: SILVER SPRING WB	SHEET 300	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\090201_XS.DWG
LAYOUT NAME - 090214_WB

PLOT DATE : 4/28/2023 3:31 PM PLOT BY : BAILEY, RYAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: SILVER SPRING EB	SHEET 301	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\090201_XS.DWG
LAYOUT NAME - 090201_EB

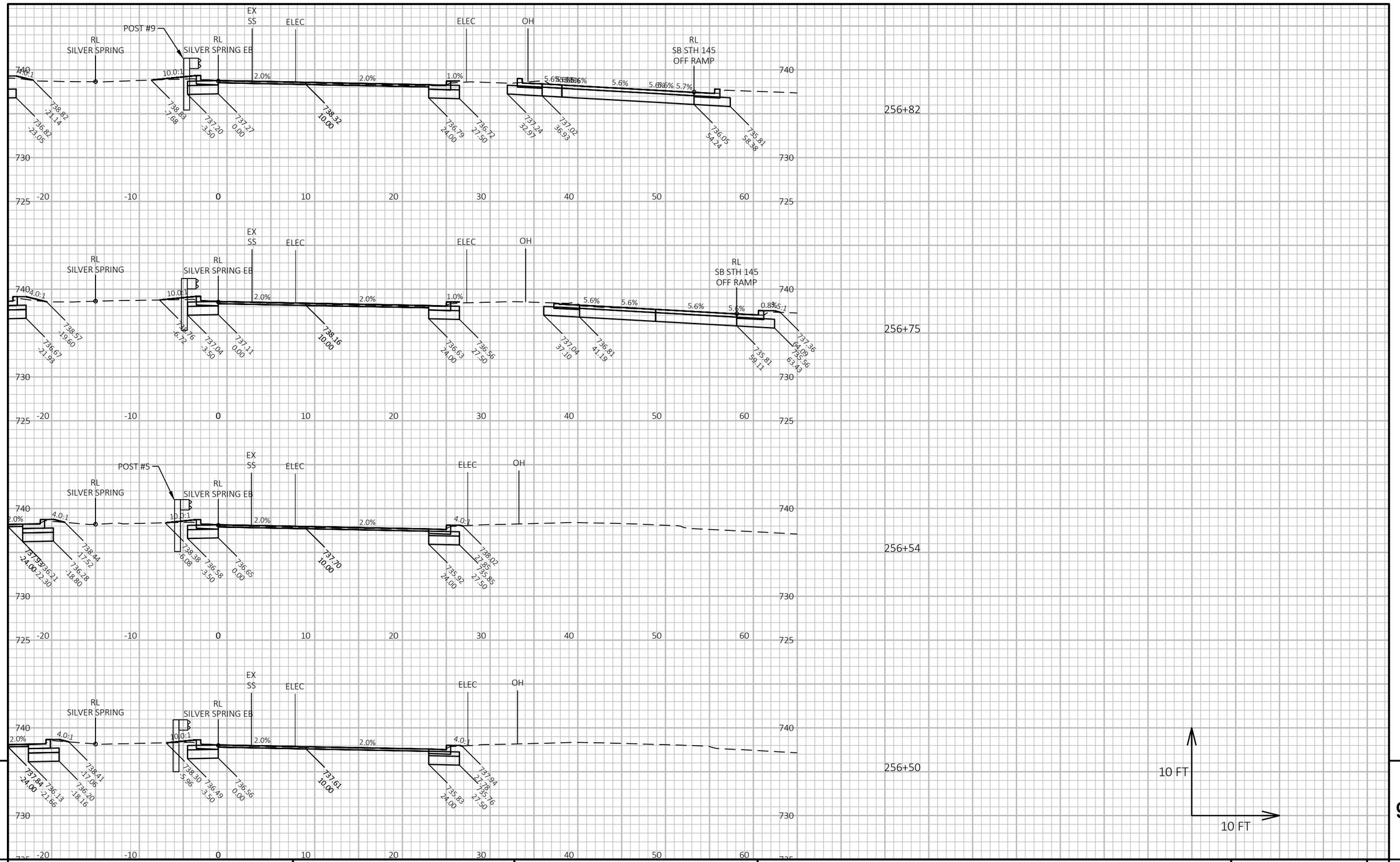
PLOT DATE : 4/28/2023 3:31 PM

PLOT BY : BAILEY, RYAN

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: SILVER SPRING EB	SHEET 302	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\090201_XS.DWG
LAYOUT NAME - 090202_EB

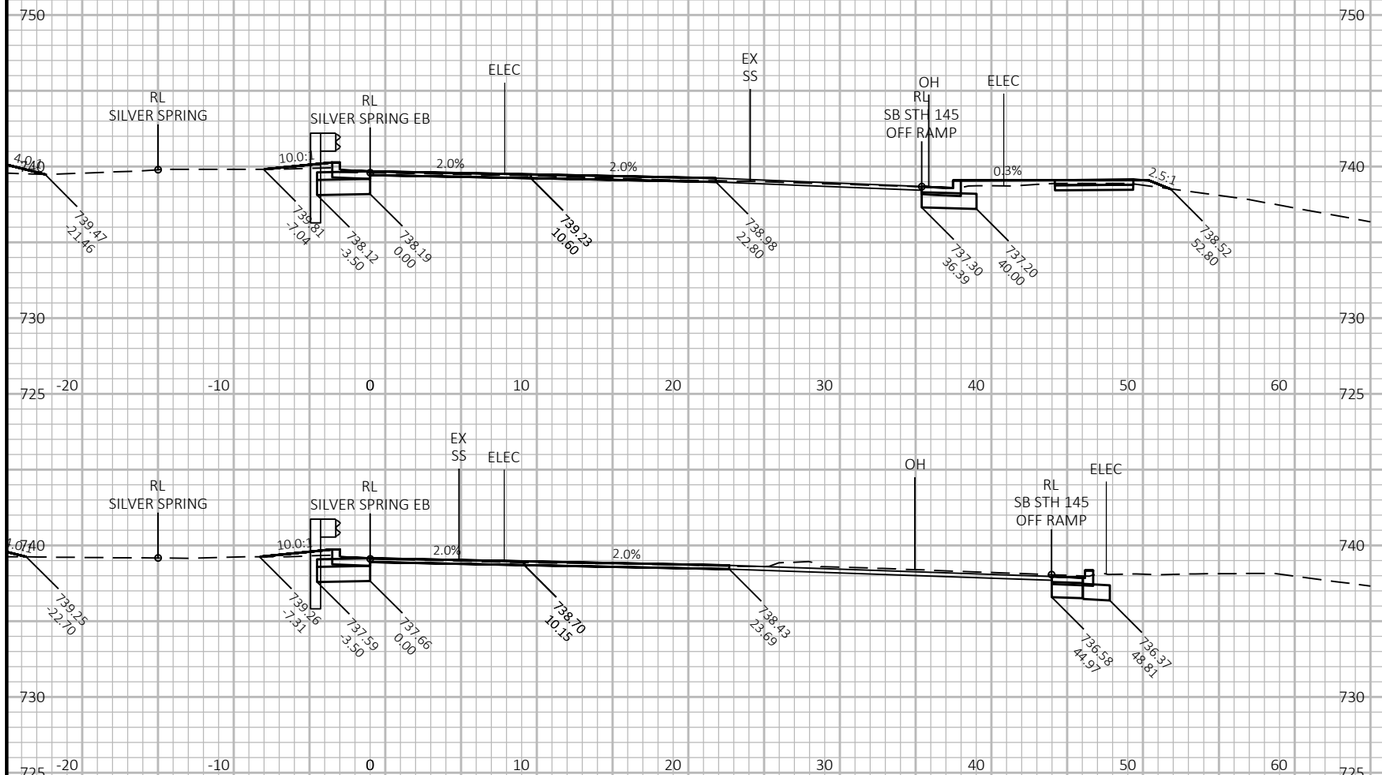
PLOT DATE : 4/28/2023 3:31 PM

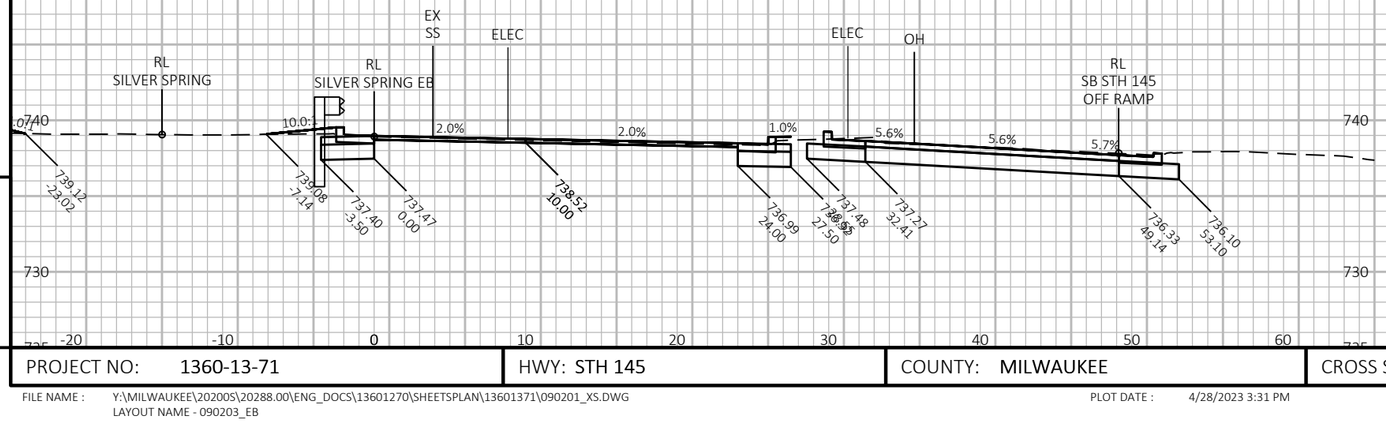
PLOT BY : BAILEY, RYAN

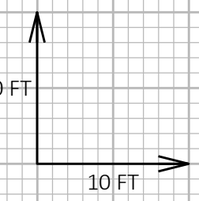
PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49







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PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: SILVER SPRING EB	SHEET 303	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\090201_XS.DWG
LAYOUT NAME - 090203_EB

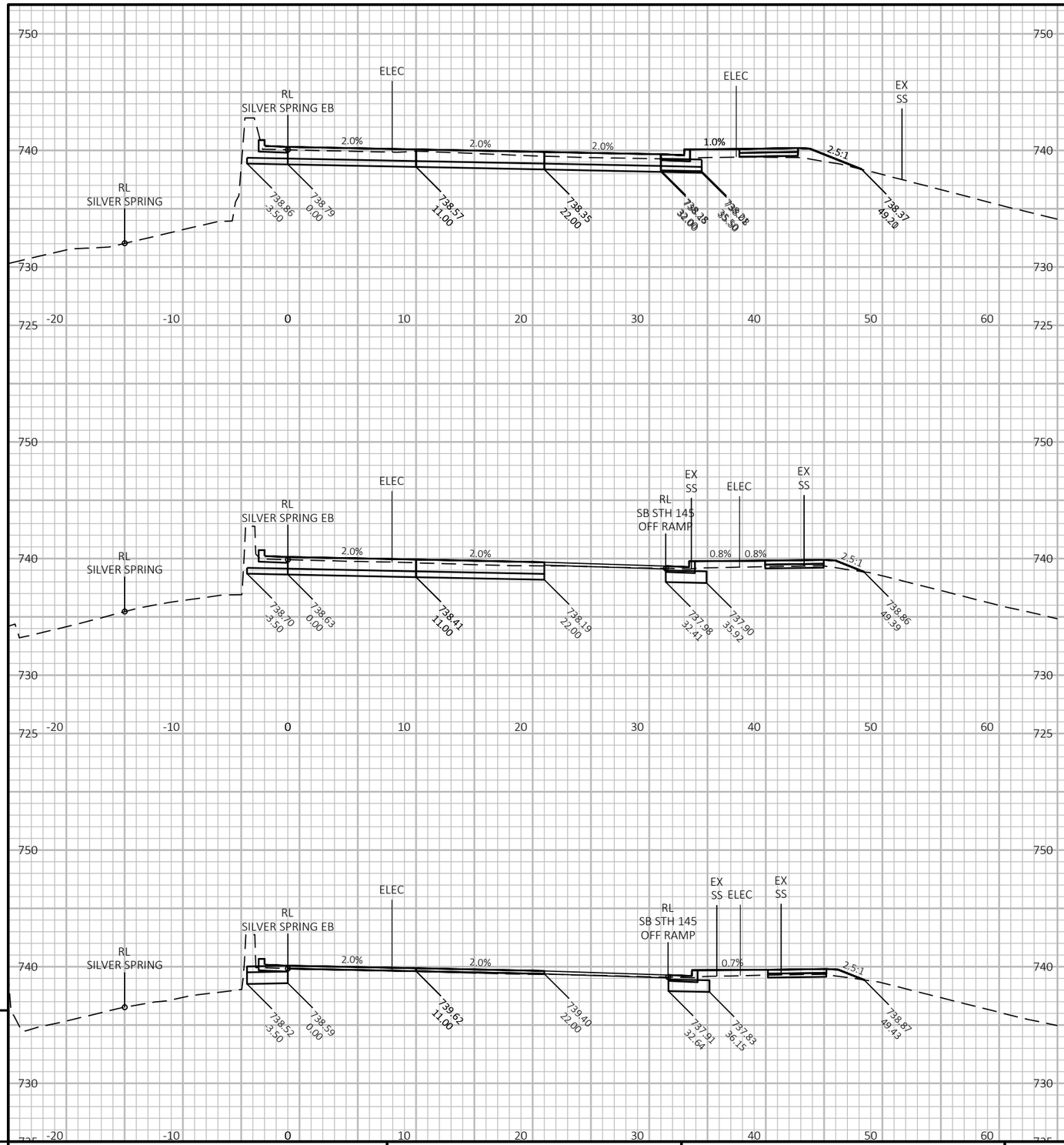
PLOT DATE : 4/28/2023 3:31 PM

PLOT BY : BAILEY, RYAN

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: SILVER SPRING EB	SHEET 304	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\090201_XS.DWG
LAYOUT NAME - 090204_EB

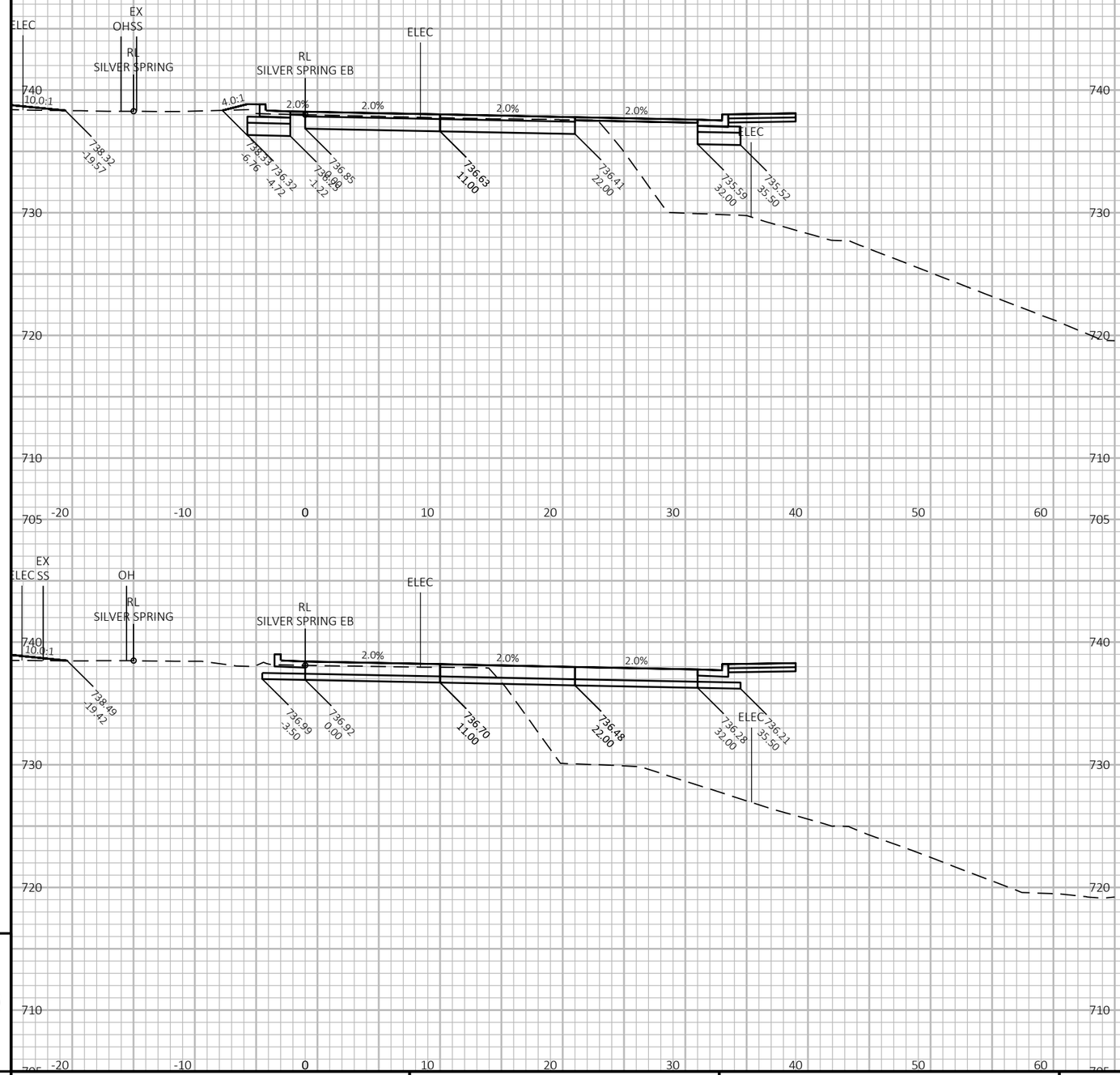
PLOT DATE : 4/28/2023 3:31 PM

PLOT BY : BAILEY, RYAN

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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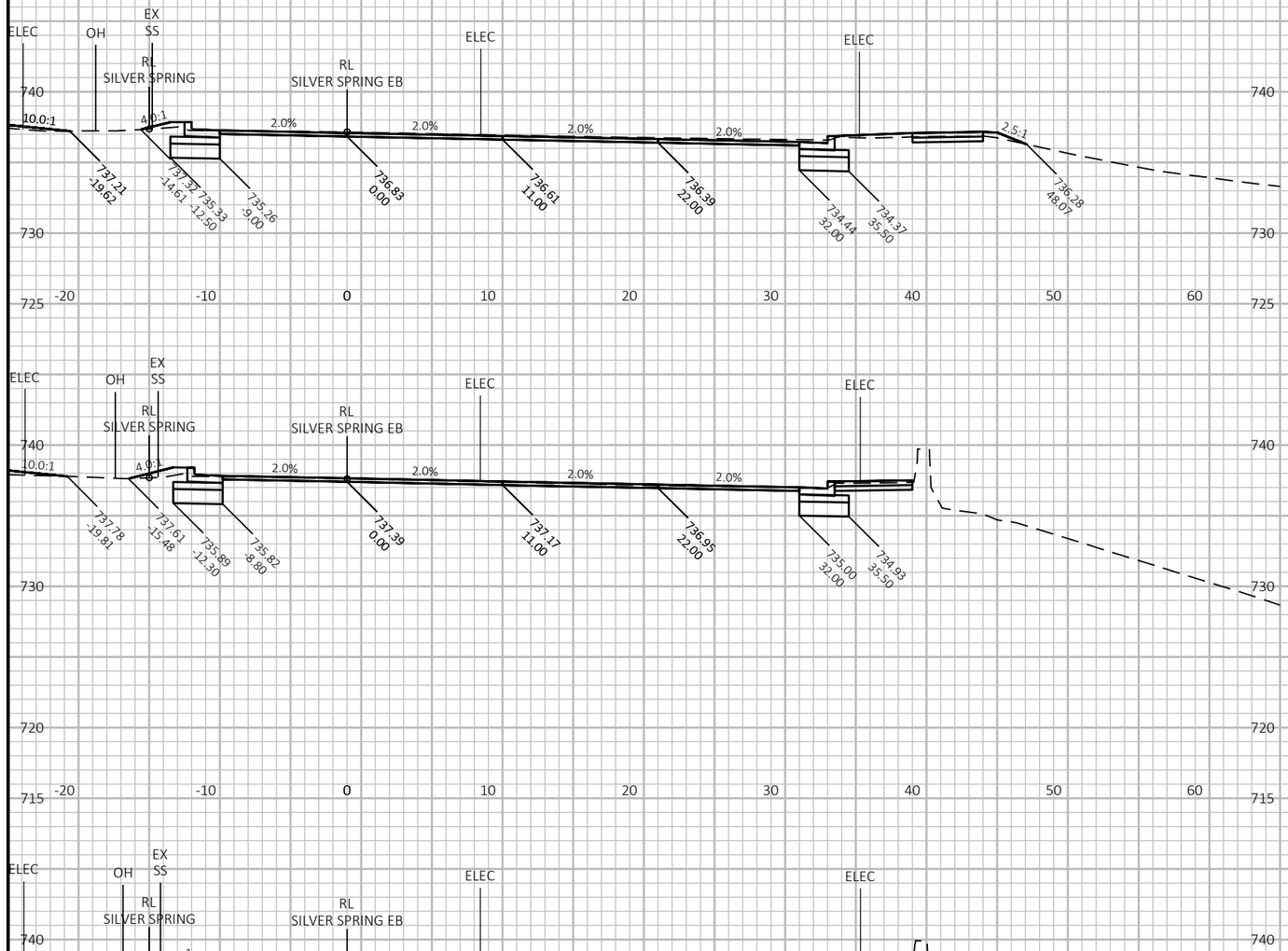
PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: SILVER SPRING EB	SHEET 305	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\090201_XS.DWG
LAYOUT NAME - 090205_EB

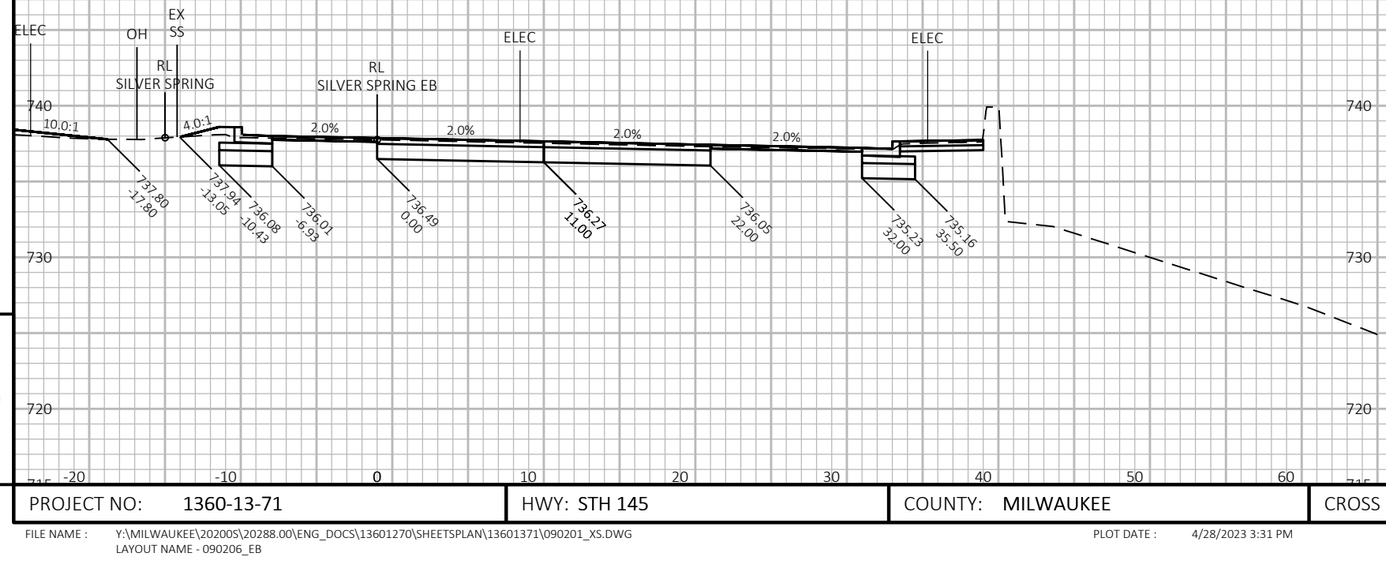
PLOT DATE : 4/28/2023 3:31 PM PLOT BY : BAILEY, RYAN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



261+00

260+75



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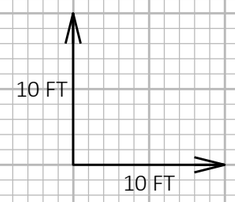

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PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: SILVER SPRING EB	SHEET 306	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\090201_XS.DWG
LAYOUT NAME - 090206_EB

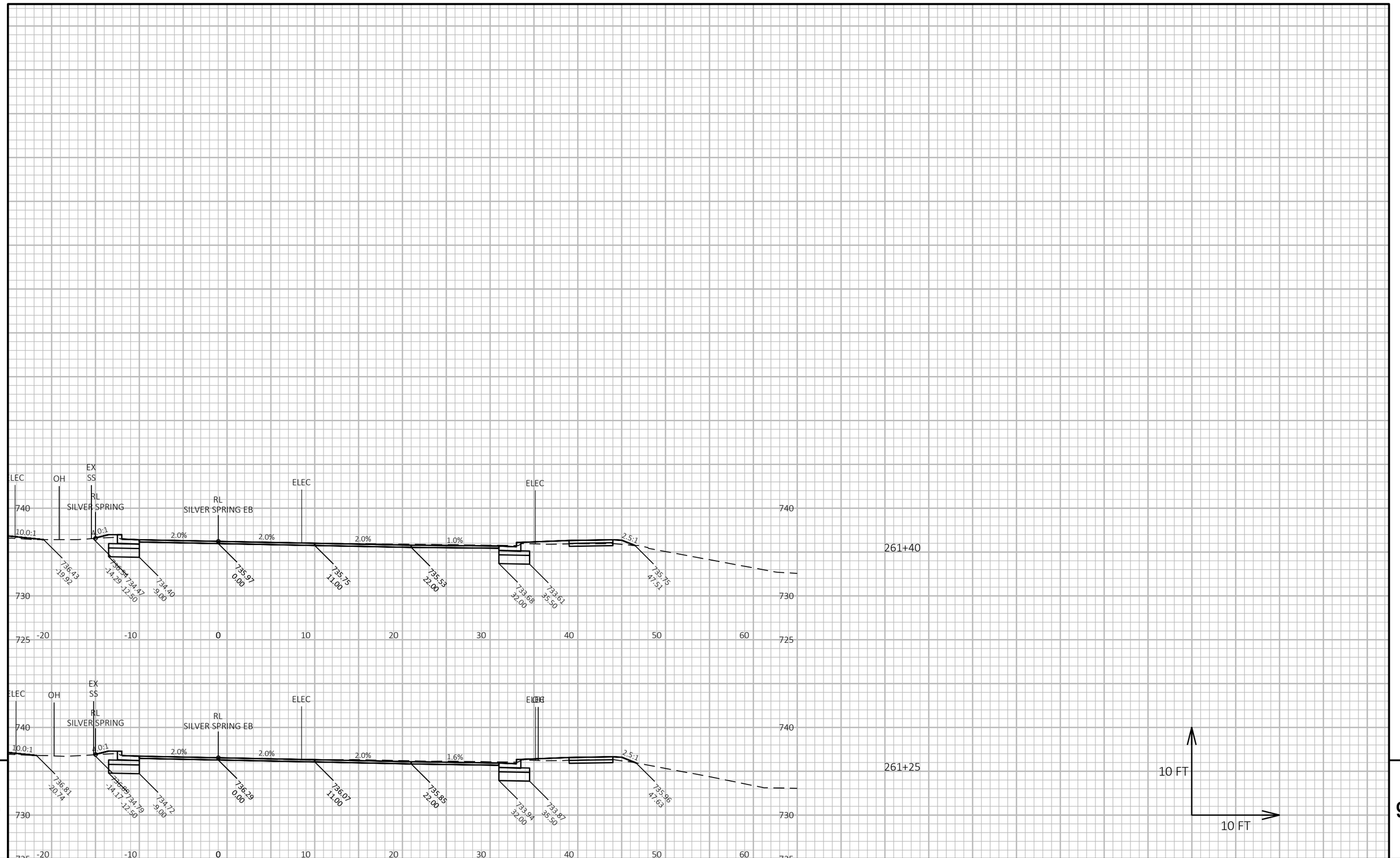
PLOT DATE : 4/28/2023 3:31 PM

PLOT BY : BAILEY, RYAN

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1360-13-71	HWY: STH 145	COUNTY: MILWAUKEE	CROSS SECTIONS: SILVER SPRING EB	SHEET 307	E

FILE NAME : Y:\MILWAUKEE\20200S\20288.00\ENG_DOCS\13601270\SHEETSPLAN\13601371\090201_XS.DWG
LAYOUT NAME - 090207_EB

PLOT DATE : 4/28/2023 3:31 PM

PLOT BY : BAILEY, RYAN

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

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through innovation and exceptional service.

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