WKE

APRIL 2024

PROJECT ID: 1060-10-71

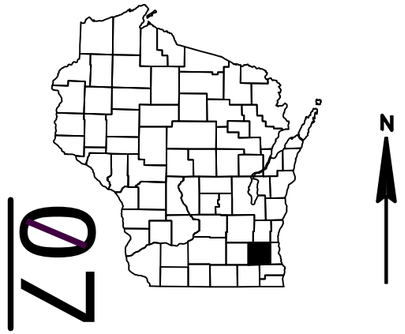
WITH: 1060-47-70, 1330-47-71, 2788-03-70

COUNTY: WAUKESHA

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 = 258



STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1060-10-71	————	——

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

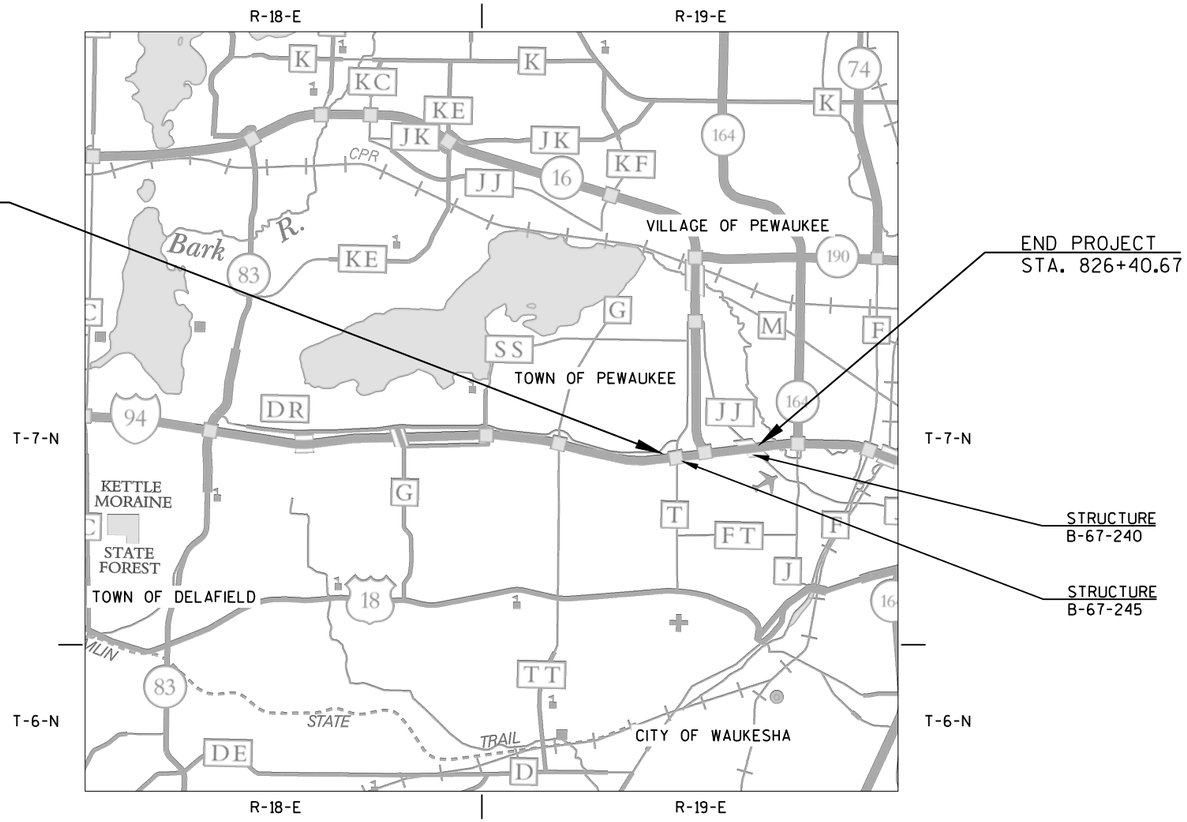
IH 94 EAST WEST FREEWAY

CTH T AND CTH JJ (B-67-240, 245)

IH 94

WAUKESHA COUNTY

STATE PROJECT NUMBER
1060-10-71



DESIGN DESIGNATION			CTH T	CTH JJ
A.A.D.T.	2023	=	23,366	7,200
A.A.D.T.	2043	=	26,075	8,000
D.H.V.		=	3459	914
D.D.		=	59-41	59-41
T.		=	4.6%	-
DESIGN SPEED		=	50 MPH	50 MPH
ESALS		=	5.3%	-

LAYOUT

SCALE 0 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD88 (2012)

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

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE		ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
MARSH AREA		TELEPHONE	T
		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
WOODED OR SHRUB AREA		TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	SURVEYOR
Designer	WISDOT
Project Manager	JAMES SCHUMACHER
Regional Examiner	
Regional Supervisor	WAFA ELOAQ

APPROVED FOR THE DEPARTMENT

DATE: 2/7/2024 *James Schumacher* (Signature)

E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\010101-TI.DWG
LAYOUT NAME - 010101-TI - 010101_TITLE SHEET

PLOT DATE : 2/7/2024 3:05 PM PLOT BY : PAYNE, GREGORY PLOT NAME :

WISDOT/CADDS SHEET 10

STANDARD ABBREVIATIONS

ASPH	ASPHALTIC
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
C/L	CENTER OR CONSTRUCTION LINE
CONC	CONCRETE
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
D	LANE DISTRIBUTION
DHV	DESIGN HOURLY VOLUME
DIM	DIMENSION
EB	EASTBOUND
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
NB	NORTHBOUND
NORM	NORMAL
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PI	POINT OF INTERSECTION
PGL	PROFILE GRADE LINE
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RO	RUN OFF LENGTH
RT	RIGHT
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
SI	SLOPE INTERCEPT
STA	STATION
SY	SQUARE YARD
TYP	TYPICAL
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT
WB	WESTBOUND
V	DESIGN SPEED

ORDER OF SECTION 2 SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
EROSION CONTROL
STORM SEWER PLAN
PAVEMENT MARKING
TRAFFIC CONTROL
STAGE CONSTRUCTION
DETOURS
ALIGNMENT

GENERAL NOTES

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

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER OR THEORETICAL FLANGE POINT OF INTEGRAL CURB AND GUTTER. CURB AND GUTTER RADII ARE MEASURED TO THE FLANGE OF CURB AND GUTTER OR THEORETICAL FLANGE POINT OF INTEGRAL CURB AND GUTTER.

FOR INLET AND CATCH BASIN STRUCTURES LOCATED IN THE CURB OR IN FRONT OF BARRIER, STATION, OFFSET, AND ELEVATIONS ARE GIVEN TO THE FLOW LINE. MH STATION, OFFSET, AND ELEVATIONS ARE GIVEN TO THE CENTER OF STRUCTURE. SEE CONSTRUCTION DETAILS.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES AND PIPES SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

VERIFY THE EXISTING STORM SEWER SYSTEM CONNECTION LOCATIONS AND ELEVATIONS BEFORE ORDERING DRAINAGE STRUCTURES AND PIPES. NOTIFY THE ENGINEER OF ANY DEVIATIONS FROM THE INFORMATION SHOWN ON THE PLANS BEFORE INSTALLING THE PROPOSED STORM SEWER.

CONTACT THE PROJECT ENGINEER, THE COUNTY SURVEYOR, AND SEWRPC AT LEAST TWO WEEKS BEFORE WORKING NEAR ANY SECTION CORNER MONUMENT.

VERIFY EXISTING PAVEMENT ELEVATIONS AT ALL TIE-INS TO EXISTING PAVEMENT PRIOR TO CONSTRUCTION. NOTIFY ENGINEER IF A DISCREPANCY IS FOUND BETWEEN PROPOSED PLAN ELEVATIONS AND EXISTING PAVEMENT ELEVATIONS.

CONSTRUCT PAVEMENT CONSISTENT WITH THE PLAN TYPICAL SECTIONS. 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, TURNING, BIKE OR PARKING LANE, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

SAWCUT EXISTING ASPHALT AND CONCRETE PAVEMENT AT THE MATCHLINE AS INDICATED ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

DO NOT REMOVE ANY TREES OR SHRUBS WITHOUT APPROVAL OF THE ENGINEER.

ALL SIGN LOCATIONS SHALL BE REVIEWED BY THE ENGINEER PRIOR TO INSTALLATION.

EXISTING DRIVEWAYS AND FIELD ENTRANCES SHALL BE RESTORED IN KIND AS DIRECTED BY THE ENGINEER IN THE FIELD AND AT THE LOCATION DETERMINED BY THE ENGINEER.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE FILLED WITH GRANULAR BACKFILL.

PRIOR TO THE PLACEMENT OF STEEL PLATE BEAM GUARD OR MGS GUARDRAIL, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED UNLESS SHOWN OTHERWISE.

ALL PAVEMENT MARKING STATIONS ARE APPROXIMATE AND ARE TO BE VERIFIED BY THE ENGINEER IN THE FIELD.

EROSION CONTROL DEVICES ARE TO BE PLACED IN PROPER SEQUENCE WITH CONSTRUCTION OPERATIONS AND MAINTAINED THROUGHOUT THE PROJECT TO COMPLETION OR AS DETERMINED BY THE ENGINEER.

	PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	LAYERS
B	4 MT 58-28 S	4”	1 4” SINGLE LAYER
E	4 MT 58-28 S	1 3/4”	1 3/4” SINGLE LAYER

2

UTILITY CONTACTS

ATC MANAGEMENT, INC.
CHRIS DAILEY
ATC MANAGEMENT, INC. - ELECTRICITY-TRANSMISSION
P.O. BOX 47
WAUKESHA, WI 53187
(262) 506-6884
CDAILEY@ATCLLC.COM

AT&T LOCAL NETWORK
DALE DEFEVER
AT&T LOCAL NETWORK - COMMUNICATION LINE
39869 LINN ST
CANTON, MI 48147
(586) 242-2671
DD2579@ATT.COM

AT&T WISCONSIN
MATTHEW DINNAUER
AT&T WISCONSIN - COMMUNICATION LINE
220 WISCONSIN AVE
WAUKESHA, WI 53186
(262) 237-0042
MD9542@ATT.COM

SPECTRUM
DAVE YOPPS
SPECTRUM - COMMUNICATION LINE
1320 N. DR. MARTIN LUTHER KING JR DRIVE
MILWAUKEE, WI 53212
(414) 277-4281
DAVE.YOPPS@CHARTER.COM

WE ENERGIES GAS/PETROLEUM
ALEX DANTINNE
WE ENERGIES - GAS/PETROLEUM
500 S 116TH STREET
WEST ALLIS, WI 53214
(920) 621-6903
DISPATCH: (800) 261-5325
ALEX.DANTINNE@WE-ENERGIES.COM

WE ENERGIES ELECTRICITY
JAMES NELSON
WE ENERGIES - ELECTRICITY
7815 NORTHWESTERN AVE
RACINE, WI 53406
(414) 315-1189
DISPATCH: (800) 662-4797
JAMES.NELSON@WE-ENERGIES.COM

WAUKESHA SEWER
CHRISTOPHER LANGEMAK
CITY OF WAUKESHA - SEWER
201 DELAFIELD STREET
WAUKESHA, WI 53188
(262) 524-3598
CLANGEMAK@WAUKESHA-WI.GOV

WAUKESHA WATER
CHRIS WALTER
CITY OF WAUKESHA - WATER
P.O. BOX 1648
WAUKESHA, WI 53187-1648
(262) 521-5272
CWALTER@WAUKESHA-WATER.COM

OTHER CONTACTS

WAUKESHA COMMUNICATION & STREET LIGHTING
JEFF HERNKE
CITY OF WAUKESHA - COMMUNICATION LINE & STREET LIGHTING
201 DELAFIELD STREET
WAUKESHA, WI 53188
(262) 524-3592
JHERNKE@WAUKESHA-WI.GOV

WAUKESHA ROAD FACILITY
ALEX DAMIEN
CITY OF WAUKESHA - ROAD FACILITY
201 DELAFIELD STREET
WAUKESHA, WI 53188
(262) 524-3600
ADAMIEN@WAUKESHA-WI.GOV

WISDOT SIGNALS
JARETT GATES
SIGNAL OPERATIONS LEAD WORKER
141 NW BARSTOW
WAUKESHA, WI 53187 0798
(262) 548-5894
JARRETT.GATES@DOT.WI.GOV

WISDOT COMMUNICATION
JOHN MITTELSTADT
WISDOT COMMNICATION LINE
STE. 300
433 W. ST. PAUL AVE.
MILWAUKEE, WI 53203-3007
(608) 205-7859
JOHN.MITTELSTADT@DOT.WI.GOV

WISDOT TRAFFIC LIGHTING
MR. ERIC PEREA, SE REGION LIGHTING
141 NW BARSTOW ST.
WAUKESHA, WI 53187 0798
PHONE: (262) 574-5422
ERIC.PEREA@DOT.WI.GOV

WAUKESHA SIGNAL
DERRIN WOLFORD
CITY OF WAUKESHA - WISCONSIN SIGNAL
130 DELAFIELD STREET
WAUKESHA, WI 53188
(262) 524-3590
DWOLFORD@WAUKESHA-WI.GOV

WISCONSIN DNR
MR. CRAIG WEBSTER
2300 N. MARTIN LUTHER KING DR.
MILWAUKEE WI 53213
PHONE: (414) 263-8648
FAX: (414) 263-8483
MICHAELC.THOMPSON@WISCONSIN.GOV

WISDOT DESIGN
JIM SCHUMACHER
141 NW BARSTOW ST.
WAUKESHA, WI 53187 0798
PHONE: (262) 521-4428
JAMESD.SCHUMACHER@DOT.WI.GOV

CONSULTANT DESIGN
GREGORY PAYNE
ALFRED BENESCH & COMPANY
5315 WALL ST. SUITE #220
MADISON, WI 53718
PHONE: 414-977-7574
GPAYNE@BENESCH.COM

WISCONSIN
GREGORY A. PAYNE
E-44955
MADISON, WI
PROFESSIONAL ENGINEER

RESPONSIBLE FOR CTH JJ STORM SEWER & GUARDRAIL DESIGN

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

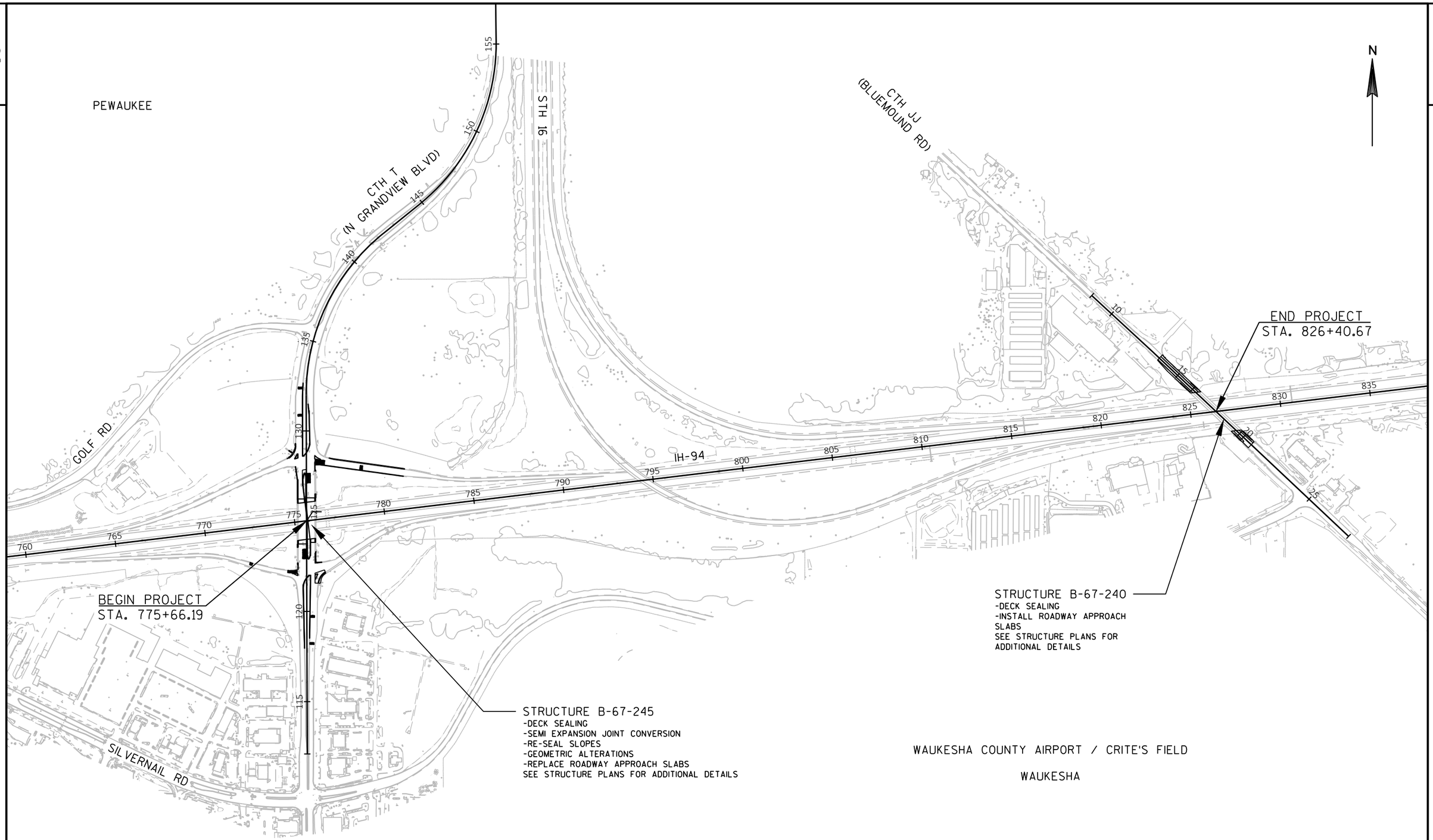
WIS. STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.

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

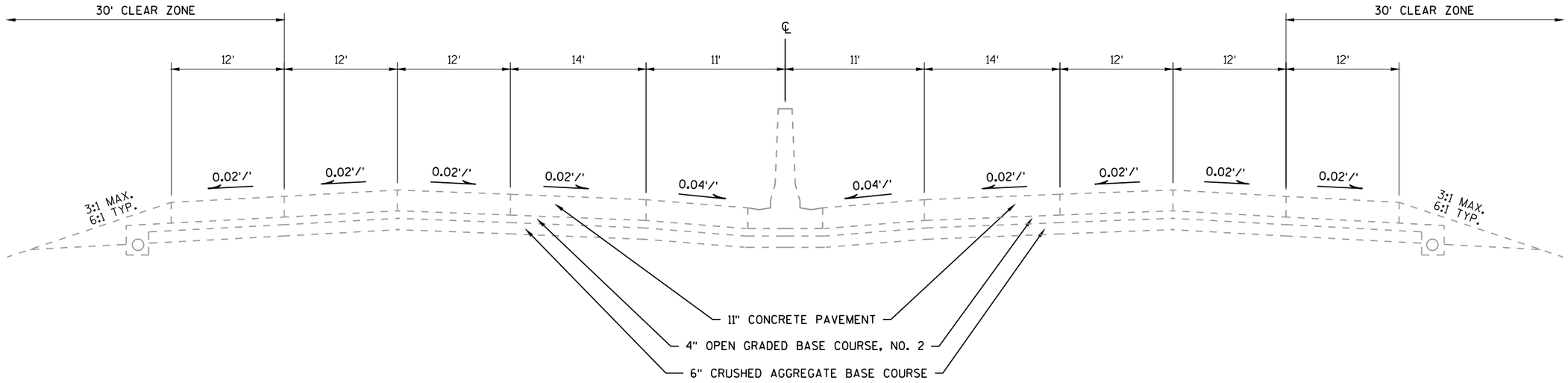
2

PROJECT NO: 1060-10-71	HWY: I-94	COUNTY: WAUKESHA	GENERAL NOTES AND UTILITY CONTACTS	SHEET:	E

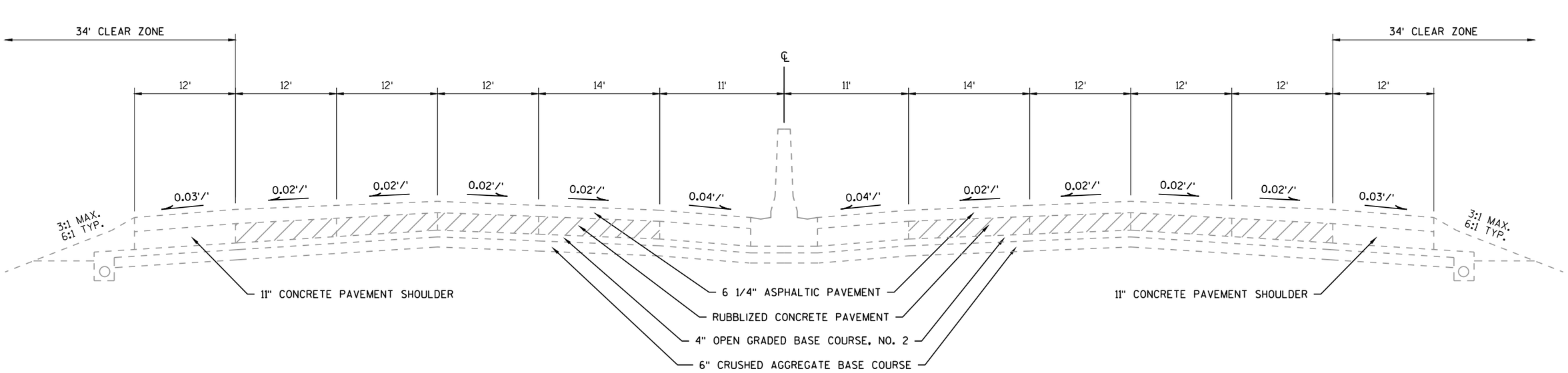
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PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	PROJECT OVERVIEW	SHEET 4	E



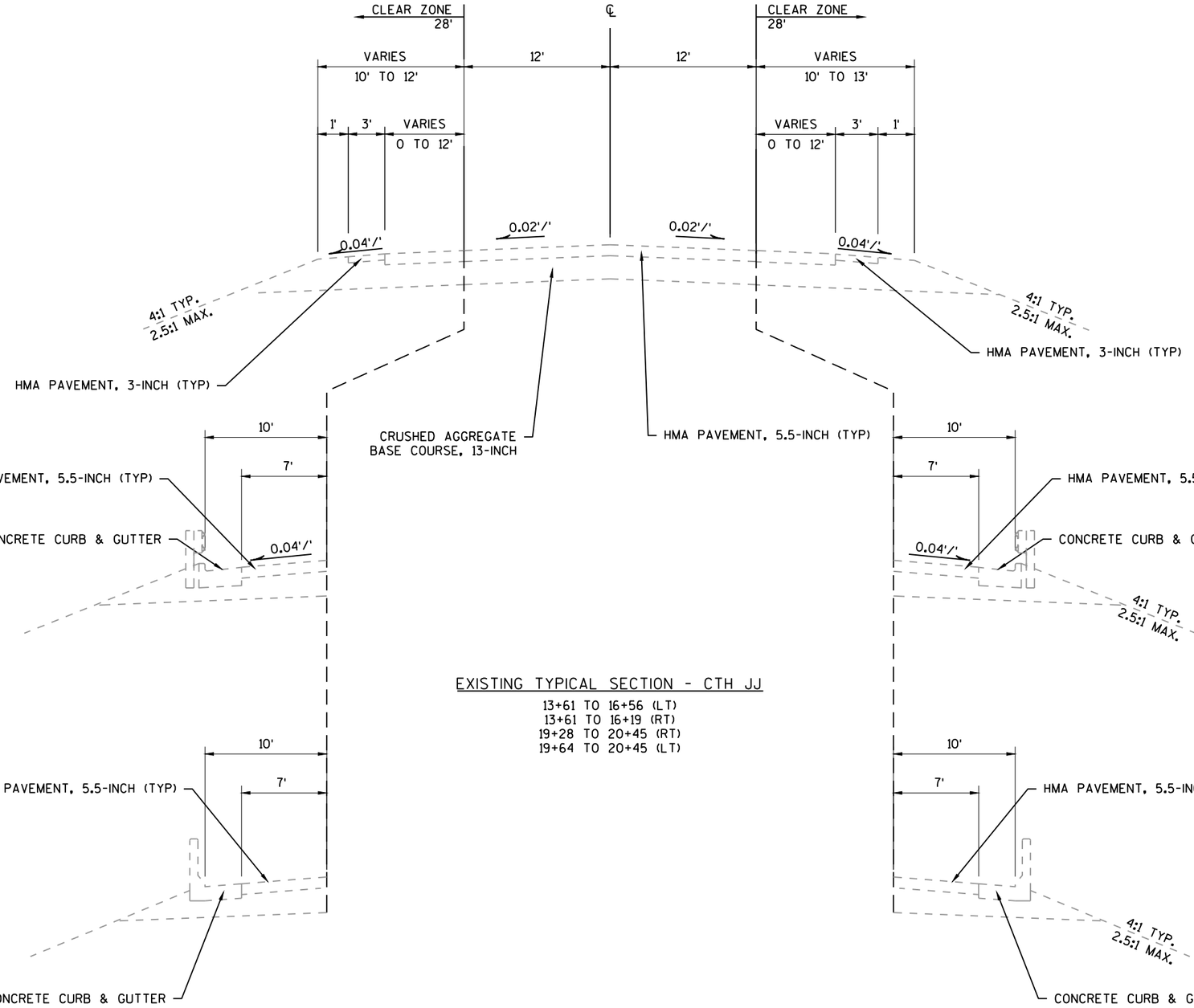
EXISTING TYPICAL SECTION - IH 94 (AT CTH T)



EXISTING TYPICAL SECTION - IH 94 (AT CTH JJ)

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTION - IH 94	SHEET 5	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\020301-TS.DWG
LAYOUT NAME - 020301_TS - EXISTING IH94
PLOT DATE : 8/16/2022 2:23 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



CURB
16+21 TO 16+33
19+91 TO 20+04

PARAPET
16+33 TO 16+56
19+64 TO 19+91

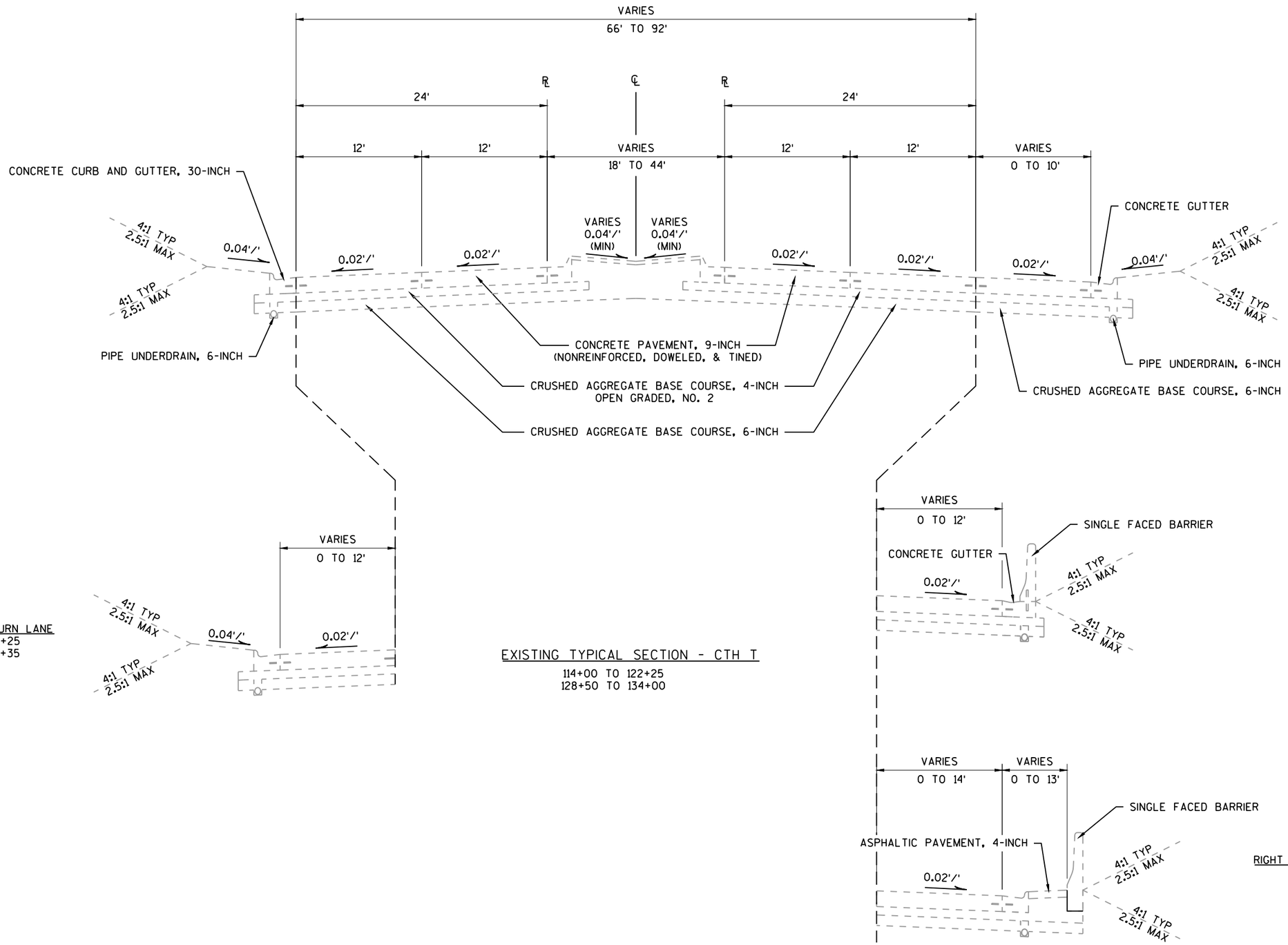
CURB
15+81 TO 15+94
19+52 TO 19+64

PARAPET
15+94 TO 16+19
19+28 TO 19+50

EXISTING TYPICAL SECTION - CTH JJ

13+61 TO 16+56 (LT)
13+61 TO 16+19 (RT)
19+28 TO 20+45 (RT)
19+64 TO 20+45 (LT)

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTION - CTH JJ	SHEET 6	E



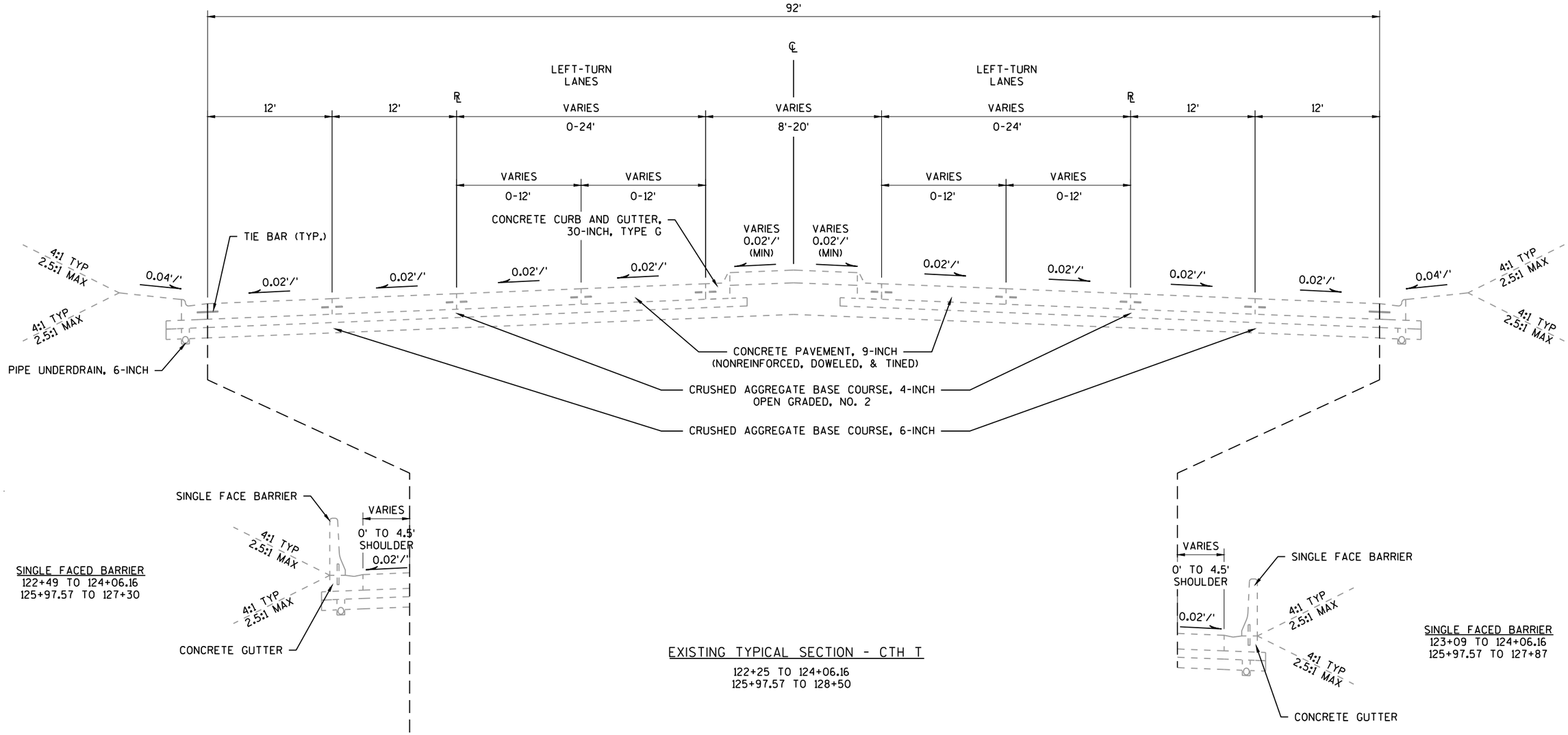
TAPER AND RIGHT TURN LANE
120+40 TO 122+25
128+50 TO 133+35

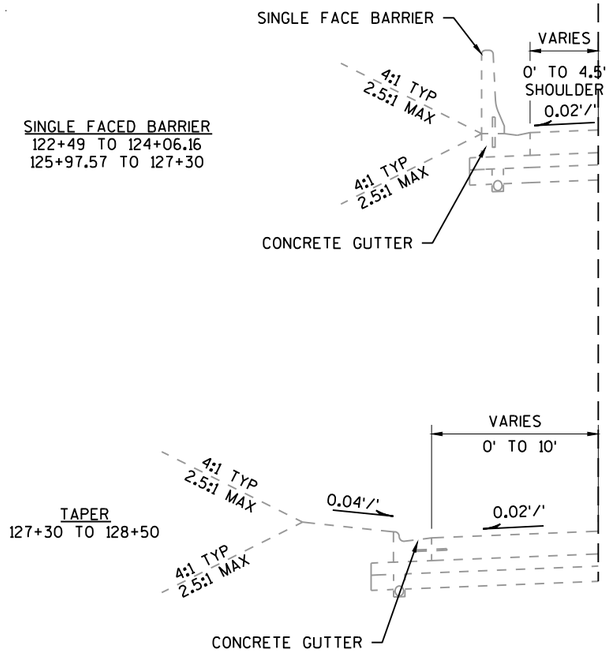
EXISTING TYPICAL SECTION - CTH T
114+00 TO 122+25
128+50 TO 134+00

RIGHT TURN LANE
116+39 TO 121+09

RIGHT TURN LANE WITH WIDENING
121+09 TO 122+25

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTION - CTH T	SHEET 7	E





SINGLE FACED BARRIER
122+49 TO 124+06.16
125+97.57 TO 127+30

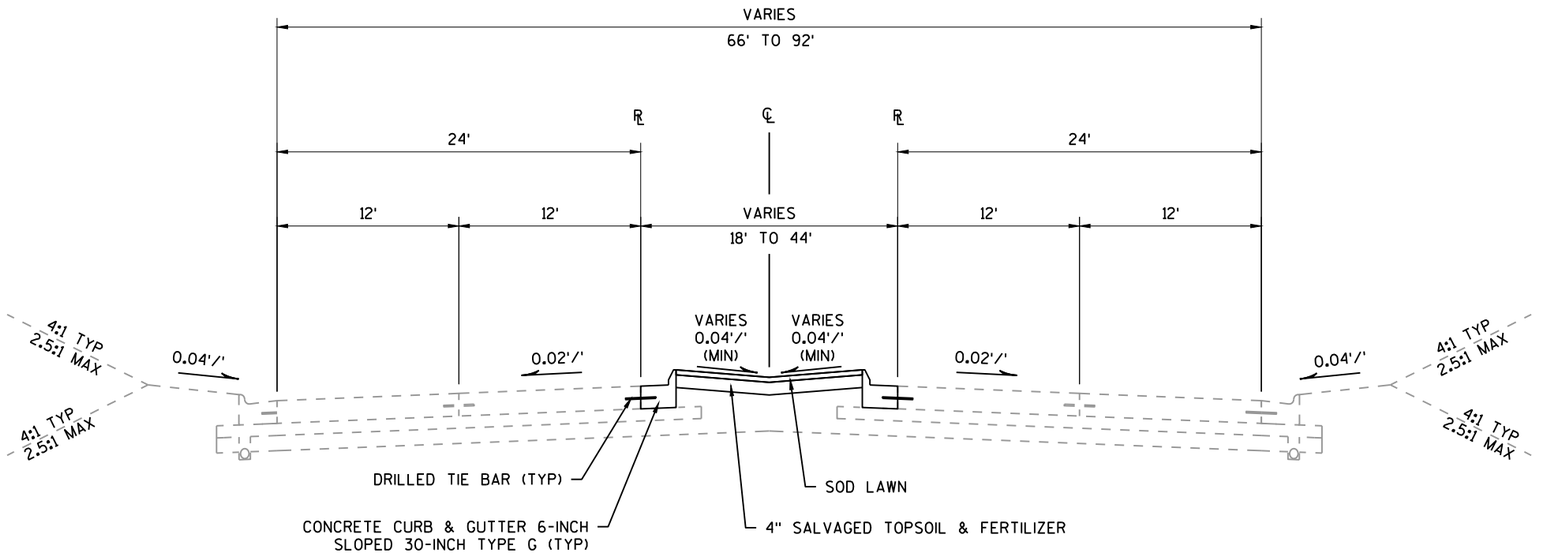
TAPER
127+30 TO 128+50

EXISTING TYPICAL SECTION - CTH T

122+25 TO 124+06.16
125+97.57 TO 128+50

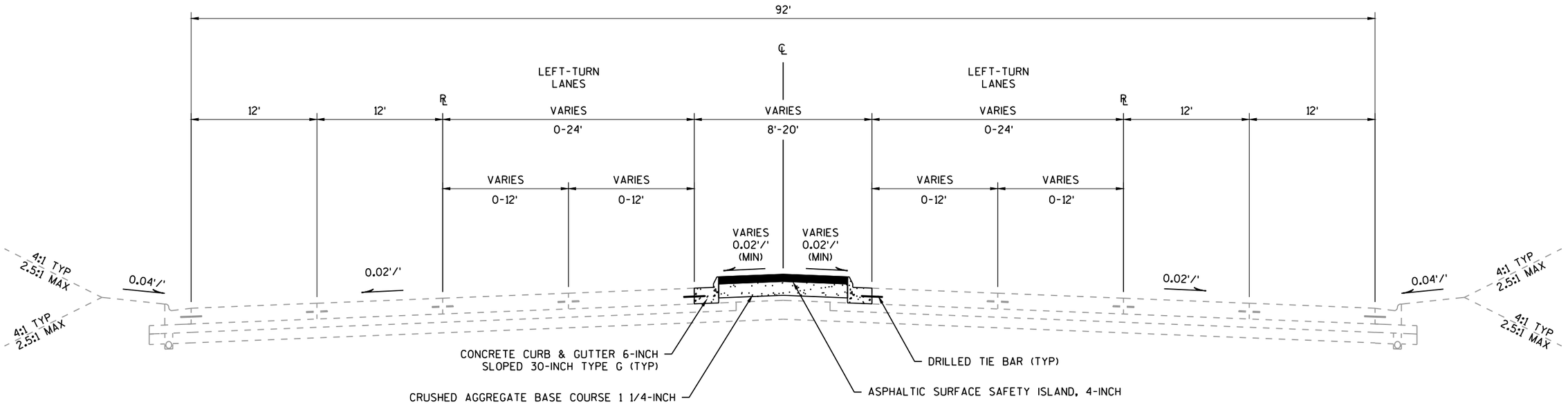
SINGLE FACED BARRIER
123+09 TO 124+06.16
125+97.57 TO 127+87

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTION - CTH T	SHEET 8	E



PROPOSED TYPICAL SECTION - CTH T

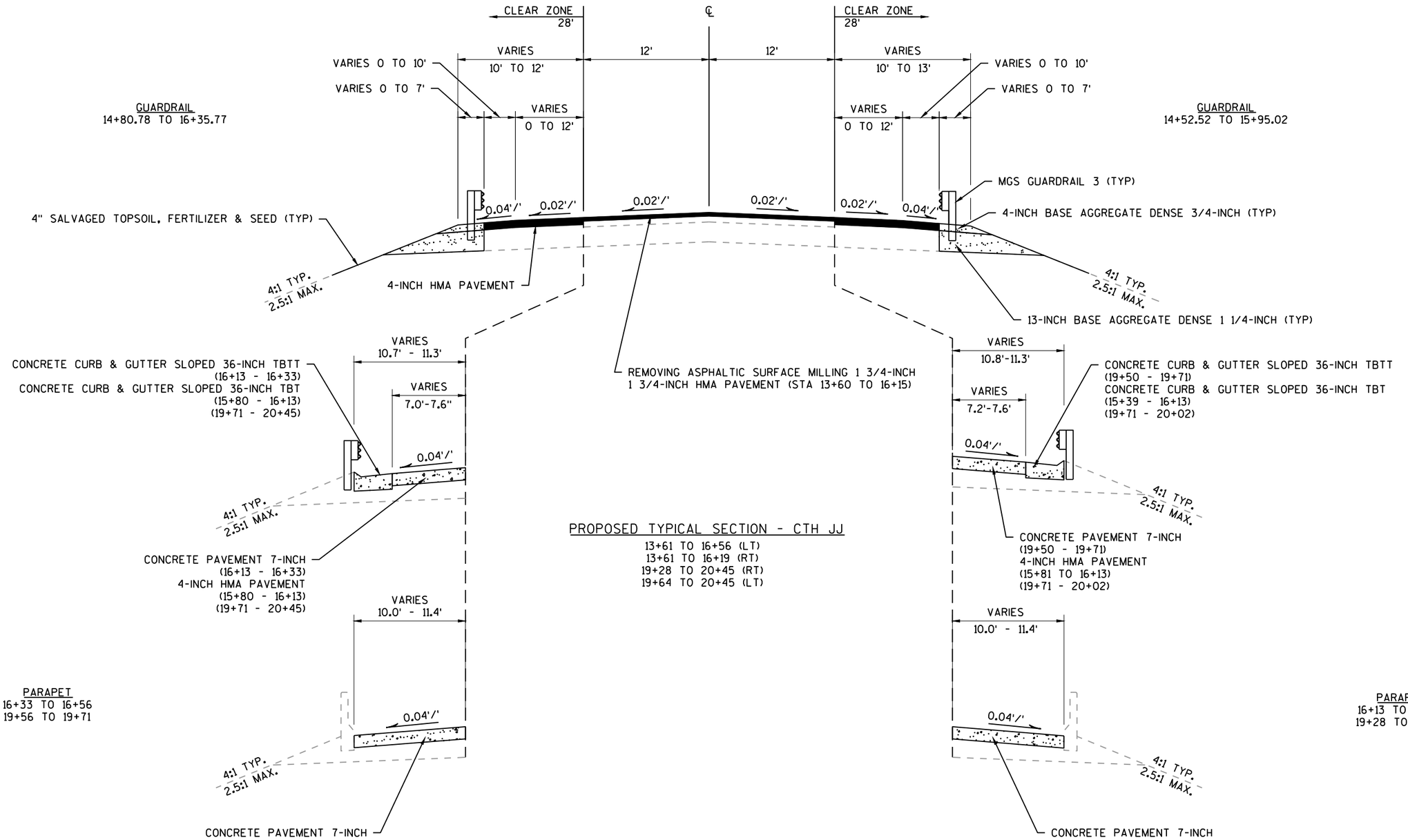
117+95 TO 122+01
128+60 TO 132+66



PROPOSED TYPICAL SECTION - CTH T NEAR STRUCTURE

122+89 TO 124+03
126+03 TO 127+66

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTION - CTH T	SHEET 9	E



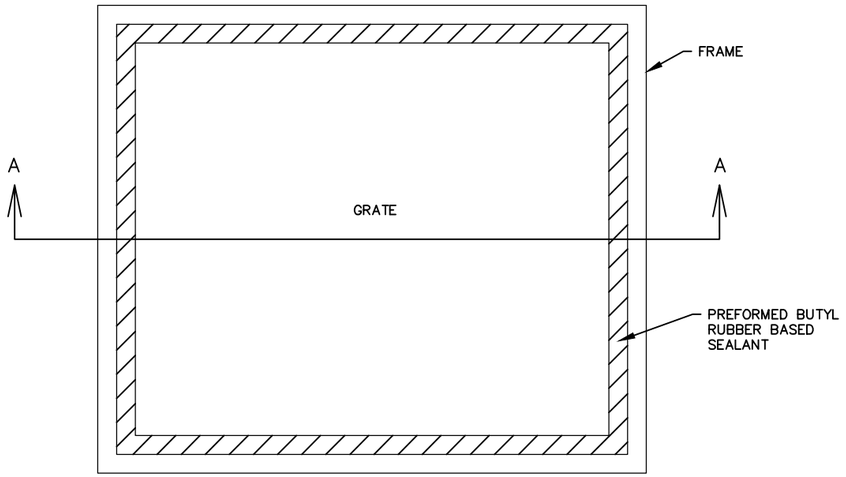
PROPOSED TYPICAL SECTION - CTH JJ

13+61 TO 16+56 (LT)
13+61 TO 16+19 (RT)
19+28 TO 20+45 (RT)
19+64 TO 20+45 (LT)

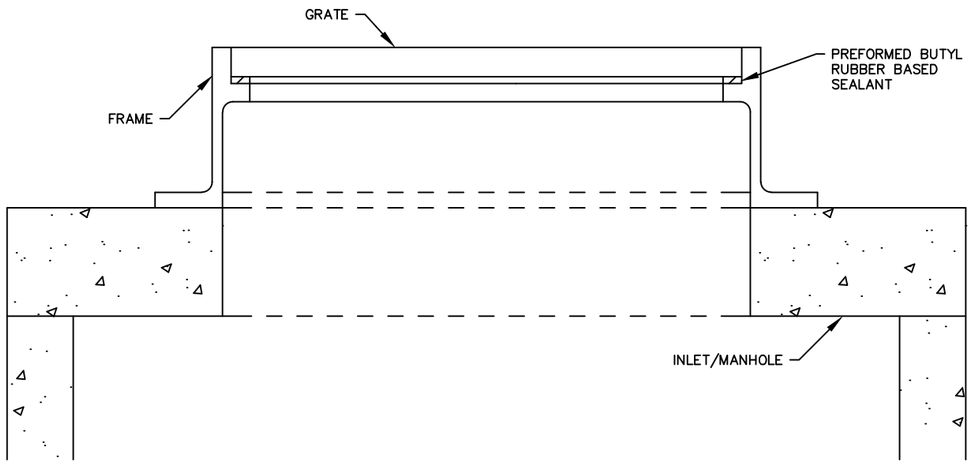
PARAPET
16+33 TO 16+56
19+56 TO 19+71

PARAPET
16+13 TO 16+28
19+28 TO 19+50

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	TYPICAL SECTION - CTH JJ	SHEET 10	E

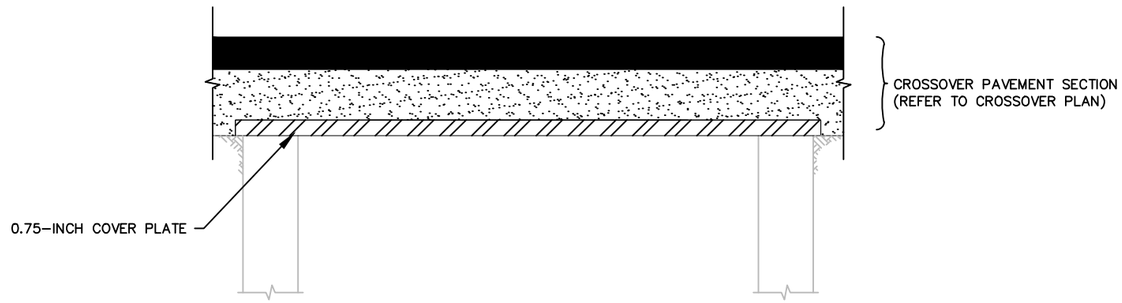


PLAN VIEW

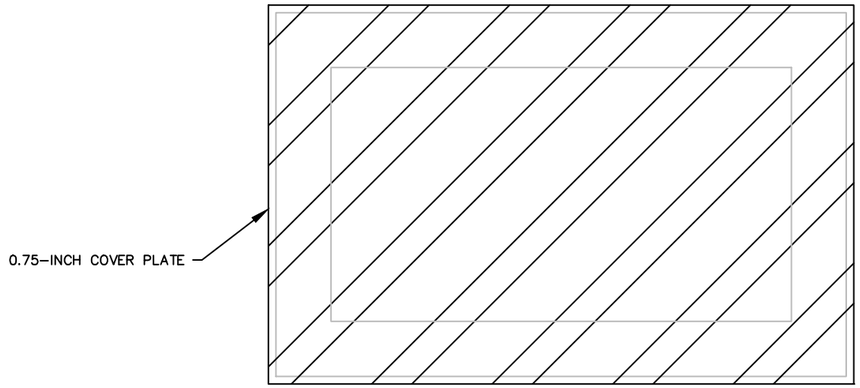


SECTION A–A
ELEVATION VIEW

FASTENING SEWER ACCESS COVERS
(NTS)



ELEVATION VIEW

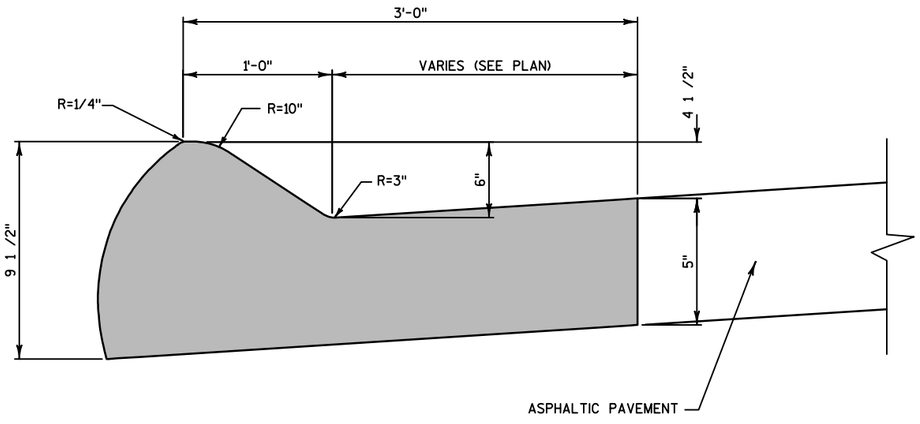


PLAN VIEW

COVER PLATES TEMPORARY
(NTS)

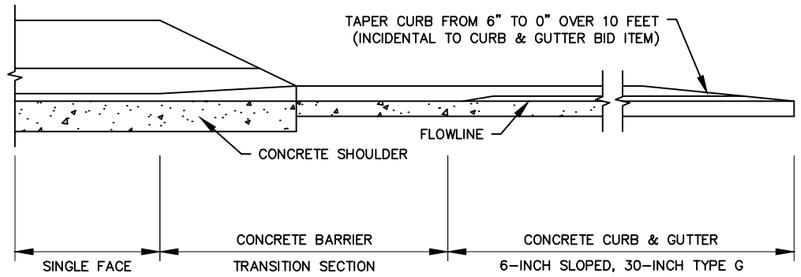
NOTES

1. INSTALL COVER PLATE TO REST FLAT UPON THE EXISTING STRUCTURE.
2. COVER PLATE SHOULD EXTEND OUTSIDE EDGE OF MASONRY

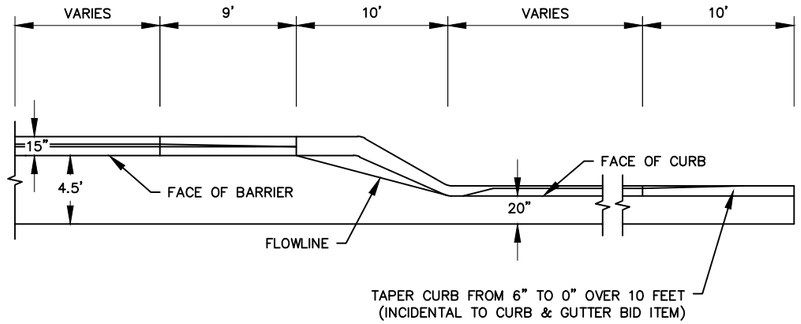


ASPHALTIC CURB

SEE CTH T TEMPORARY CROSSOVER PLAN FOR LOCATIONS



ELEVATION VIEW



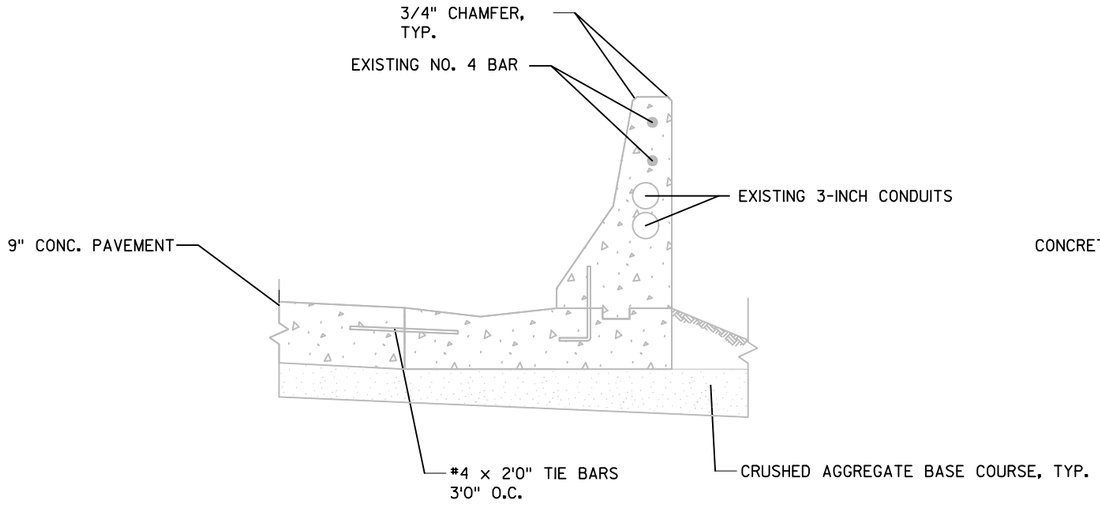
PLAN VIEW

CONCRETE BARRIER TRANSITION TO CURB

CTH T

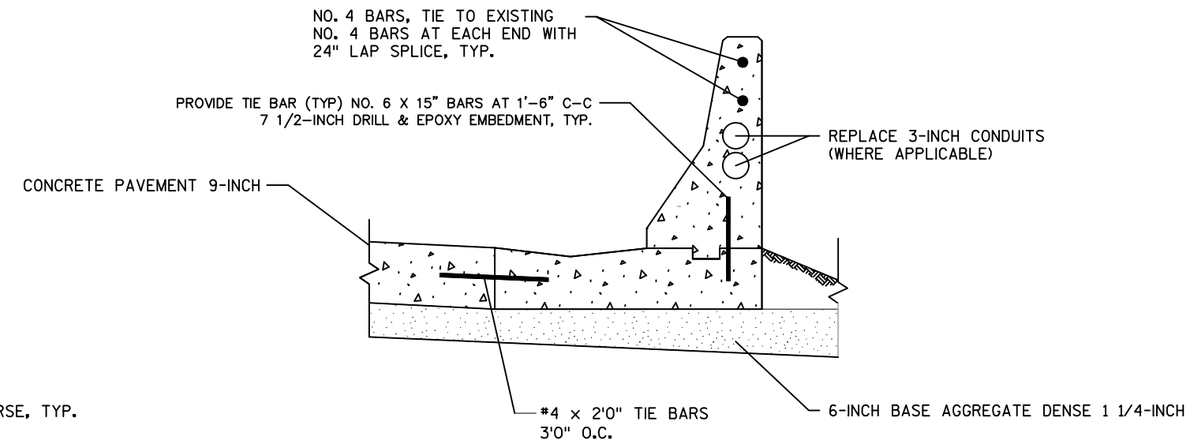
STA 122+32 TO 122+70 LT

STA 127+77 TO 128+14 RT



EXISTING CONCRETE BARRIER SINGLE-FACED 32-INCH

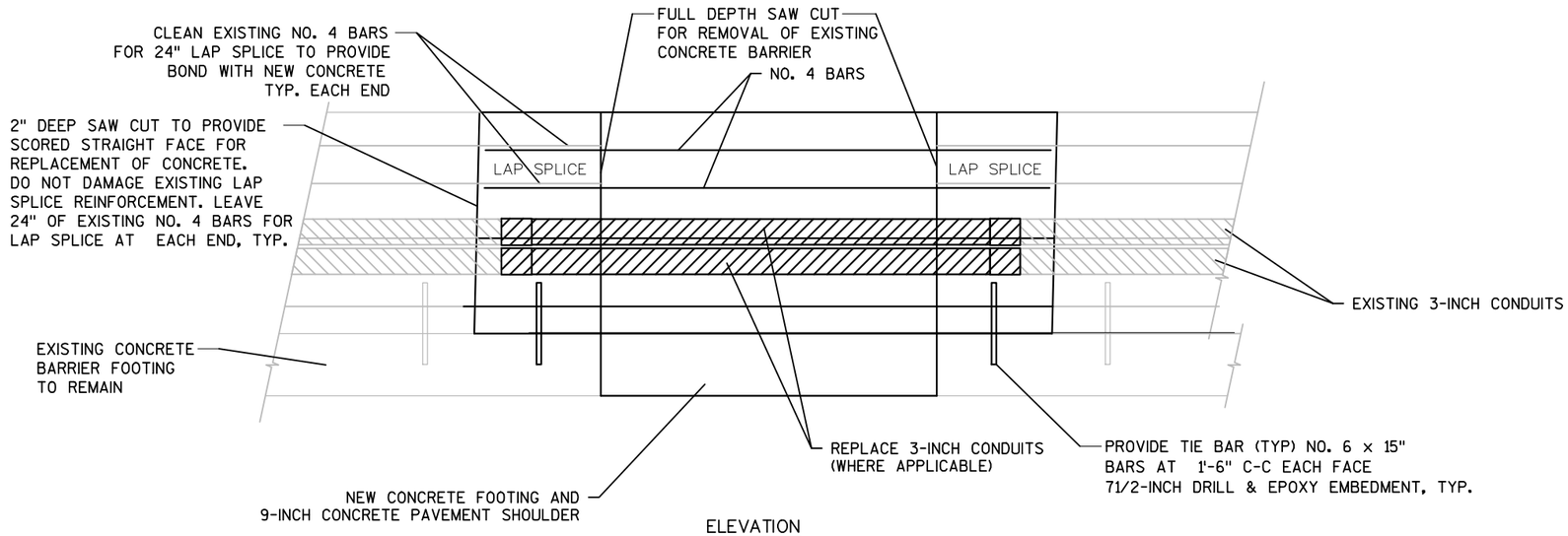
TRANSVERSE SECTION



PROPOSED CONCRETE BARRIER SINGLE-FACED 32-INCH

TRANSVERSE SECTION

2



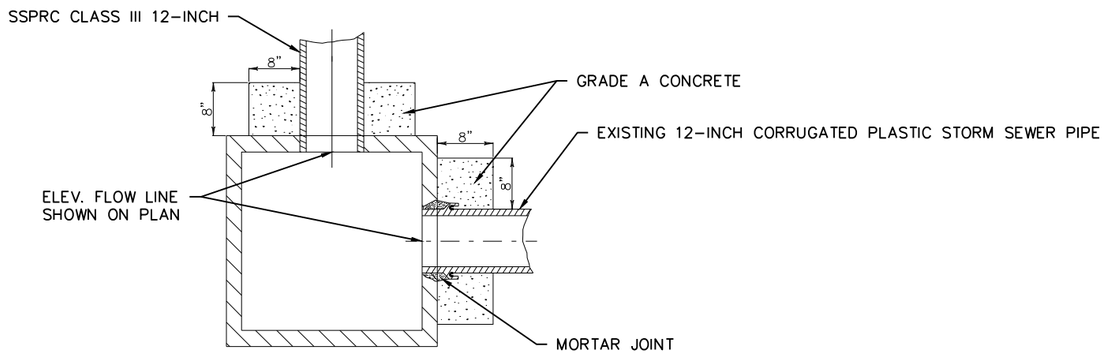
ELEVATION

MID SPAN SECTION REPLACEMENT SHOWN

USE SAME REINFORCEMENT FOR REPLACING BARRIER AT THE END OF SPAN

BARRIER SECTION REPLACEMENT DETAIL

2



AT STORM SEWER INLET

STORM SEWER CONNECTION DETAIL

CTH T STA. 122+91.5"T", 53.27' RT

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	CONSTRUCTION DETAIL	SHEET 14	E

LEGEND

B	HMA PAVEMENT 4 MT 58-28 S, 4-INCH
C	ASPHALTIC SURFACE SAFETY ISLAND, 4-INCH
E	HMA PAVEMENT 4 MT 58-28 S, 1 3/4-INCH
AG01	BASE AGGREGATE DENSE 3/4-INCH
CP01	CONCRETE PAVEMENT 7-INCH
CP07	CONCRETE PAVEMENT 9-INCH, TINED
PV01	CONCRETE PAVEMENT APPROACH SLAB
PV03	CONCRETE SURFACE DRAINS
PV17	ASPHALTIC SURFACE, 4-INCH
CG12	CONCRETE CURB TYPE G
CG49A	CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE G
CG49B	CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE G REVERSE SLOPE
CG60	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CG70	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
CB09	CONCRETE BARRIER SINGLE-FACED 32-INCH
CB36	CONCRETE BARRIER TRANSITION SINGLE-FACED 32 INCH TO CURB & GUTTER
CM01	CONCRETE MEDIAN SLOPED NOSE, TYPE 1
CM02	CONCRETE MEDIAN SLOPED NOSE, TYPE 2
CT01	TAPER CURB FROM FULL HEIGHT TO ZERO INCHES OVER 10 FEET
BG10	GUARD RAIL MOW STRIP ASPHALT
BG15	MGS GUARDRAIL 3
BG16	MGS THRIE BEAM TRANSITION
BG17	MGS GUARDRAIL TERMINAL EAT
IN01	INLETS 2X2.5-FT
IN02	RECONSTRUCT INLET
IN03	REMOVE AND REPLACE INLET
LS01	SOD LAWN
LS02	TOPSOIL, 4-INCH
SW01	SAWING ASPHALT FULL DEPTH
SW03	SAWING ASPHALT 2-INCH

2

SAWCUTS ARE CONCRETE UNLESS INDICATED OTHERWISE

*ADDITIONAL REMOVALS SHOWN ELSEWHERE IN THE PLANS

SAWCUT AT CURB FACE, REMOVE CURB AND ASPHALTIC SURFACE

IH-94 EB OFF RAMP

SAWCUT AT FLANGE, REMOVE CURB & GUTTER AND BARRIER CURB TRANSITION

REMOVE CONCRETE BARRIER

122+69.74"T", -51.62' LT

123+54.88"T", -46.16' LT

19'

SAWCUT AT BARRIER, REMOVE CONCRETE SHOULDER AND APPROACH SLAB

SAWCUT AT FLANGE, REMOVE CURB & GUTTER AND GRASS MEDIAN

121+48.08"T", -21.25' LT

117+94.92"T", -14.37' LT

SAWCUT AT FLANGE, REMOVE CURB & GUTTER AND ASPHALTIC SURFACE

19.7'

CTH T

REMOVE INLET GRATE AND FRAME AND PLATE INLET PRIOR TO PAVING CROSSOVER

REMOVE RAISED CONCRETE MEDIAN SEE STRUCTURE PLAN

118 119 120 121 122 123 124 125

122+00.93"T", 9.37' RT

SAWCUT AT CURB FACE, REMOVE CURB AND ASPHALTIC SURFACE

122+00.93"T", 22.63' RT

118+50.00"T", 16.00' RT

121+56.61"T", 46.06' RT

122+12.30"T", 46.14' RT

19.2'

SAWCUT AT BARRIER, REMOVE CONCRETE SHOULDER AND APPROACH SLAB

SAWCUT AT JOINT, REMOVE PAVEMENT AND CURB & GUTTER

70.0'

123+89.10"T", 50.47' RT

121+56.04"T", 76.17' RT

IH-94 EB ON RAMP

IH-94 EB

IH-94 WB

SAWCUT AT FLANGE, REMOVE CURB & GUTTER AND BARRIER CURB TRANSITION

SAWCUT AT PAVEMENT EDGE, REMOVE CONCRETE SHOULDER AND CONCRETE BARRIER

SAWCUT AT BARRIER, REMOVE ASPHALTIC SURFACE

SW01

RIM=884.69

122+11.89"T", 106.41' RT

122+29.79"T", 98.12' RT

N

SAWCUT AT PAVEMENT EDGE, REMOVE CONCRETE SHOULDER AND CONCRETE BARRIER

SAWCUT AT FLANGE, REMOVE CURB, GUTTER, BARRIER CURB TRANSITION AND ASPHALTIC SURFACE

IH-94 WB ON RAMP

SAWCUT AT CURB FLANGE, REMOVE CURB & GUTTER AND ASPHALTIC SURFACE

REMOVE ASPHALT AS NEEDED FOR CURB REPLACEMENT

105'

5'

SW01

129+30.82"T", -57.95' LT

SIGN

132+65.50"T", -20.21' LT

SAWCUT AT FLANGE, REMOVE CURB & GUTTER AND ASPHALT FLUME

126+17.91"T", -50.50' LT

102.1'

SAWCUT AT FLANGE, REMOVE CURB & GUTTER AND ASPHALTIC SURFACE

127+83.08"T", -22.68' LT

128+59.79"T", -22.18' LT

CTH T

128+59.79"T", -12.43' LT

125 126 127 128 129 130 131 132

129+22.30"T", 20.89' RT

REMOVE INLET GRATE AND FRAME AND PLATE INLET PRIOR TO PAVING CROSSOVER

127+86.52"T", -1.57' LT

131+50.25"T", 11.60' RT

SAWCUT AT BARRIER, REMOVE CONCRETE SHOULDER AND APPROACH SLAB

SAWCUT AT JOINT, REMOVE CONCRETE SHOULDER AND CONCRETE BARRIER

127+76.89"T", 46.21' RT

SAWCUT AT FLANGE, REMOVE CURB & GUTTER AND GRASS MEDIAN

10" RCCP

21.8'

126+28.98"T", 52.33' RT

40.0'

126+50.75"T", 52.30' RT

IH-94 WB

SAWCUT AT JOINT, REMOVE CURB & GUTTER AND BARRIER CURB TRANSITION

IH-94 WB OFF RAMP

2116

SAWCUT AT CURB FACE, REMOVE CURB AND ASPHALTIC SURFACE

REMOVE ASPHALTIC SHOULDER TO STATION 2120+59.24"B"

REMOVE ASPHALTIC SHOULDER FROM STATION 2116+35.32"B" TO STATION 2120+59.24"B"

LEGEND

REMOVING PAVEMENT

REMOVING CONCRETE APPROACH SLAB

XXXX SAWCUT

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	PLAN: CTH T REMOVAL	SHEET 16	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\021202-PD CTH T REMOVALS.DWG
LAYOUT NAME - 021202-PD CTH T REMOVALS

PLOT DATE : 10/12/2022 11:58 AM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

RADII ARE GIVEN TO FACE OF CURB

CONCRETE PAVEMENT REPAIR/REPLACEMENT (REMOVE TO NEAREST JOINT)

2

2

122+09.27"T", -69.05' LT
4114+26.89"D", 4.08' RT
2.0' R

CG12

C

122+07.82"T", -51.59' LT
4114+44.40"D", 4.68' RT
2.5' R

122+01.06"T", -51.14' LT
4114+45.18"D", 11.42' RT
2.5' R

122+31.68"T", -48.47' LT
891.75 GUTTER

INSET DETAIL A

122+69.72"T", -50.48' LT
892.93 TOP
892.50 GUTTER

122+60.84"T", -51.53' LT
892.81 TOP

122+52.64"T", -48.34' LT
892.71 TOP
892.21 GUTTER

CT01

4.5'

CB36

IN02
891.88 GUTTER

CG49A

MATCHLINE 4113+50"D"

IH-94 EB OFF RAMP

4113+89.79"D"

4114+00 "D"

4114+41.31"D"

SEE INSET A

121+87.82"T", -6.98' LT
27' R

CTH T

117+94.92"T", -14.37' LT

CG49B

121+35.19"T", -18.43' LT

IN02

118+00 "T"

119+00 "T"

120+00 "T"

121+00 "T"

122+00 "T"

123+00 "T"

121+98.28"T", 14.78' RT

LS01
LS02

CG49B

CG49A

CM02

121+87.15"T", 20.37' RT
121+96.90"T", 18.83' RT

121+96.36"T", 16.38' RT
2.5' R

BEGIN CONSTRUCTION
STA. 117+94.92

SIGN

118+50.00"T", 16.00' RT

118+14.26"T"

118+24.26"T"

119+64.25"T"

119+74.25"T"

121+31.58"T", 64.10' RT
83' R

IH-94 EB ON RAMP

3115+00 "C"

SEE INSET B

121+81.02"T", 48.31' RT
2.5' R

122+02.96"T", 46.12' RT

122+12.30"T", 46.14' RT
3114+63.62"C", 12.00' RT

122+05.53"T", 58.46' RT
3114+73.26"C", 22.24' RT
2.5' R

CG12

C

121+56.61"T", 46.06' RT

121+81.09"T", 51.23' RT
890.31

121+56.29"T", 63.11' RT
889.43 FLANGE
889.36 GUTTER
889.86 TOP

CP07

17'

18.7'

122+07.88"T", 57.61' RT
890.84

122+04.61"T", 60.82' RT
890.64

122+01.03"T", 58.98' RT
889.57

3115+00 "C"

121+75.28"T", 67.36' RT
889.76 FLANGE
889.69 GUTTER
890.19 TOP

121+91.20"T", 74.95' RT
889.87 FLANGE
889.80 GUTTER
890.30 TOP

122+17.38"T", 100.65' RT
889.60

121+47.96"T", 145.21' RT
3115+30.49"C", 105.38' RT
80.5' R

CG49A

CT01

122+15.70"T", 101.73' RT
889.53

122+29.79"T", 98.12' RT
3115+17.88"C", 12.00' RT

122+18.48"T", 102.36' RT

INSET DETAIL B

4111+80.02"D"

4111+90.02"D"

IH-94 EB OFF RAMP

4113+00 "D"

4112+00 "D"

MATCHLINE 4113+50"D"

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	PLAN: CTH T	SHEET 17	E

RADII ARE GIVEN TO FACE OF CURB

CONCRETE PAVEMENT REPAIR/REPLACEMENT (REMOVE TO NEAREST JOINT)

IH-94 EB OFF RAMP

IH-94 EB

IH-94 WB

IH-94 WB ON RAMP

B-67-245 (REFER TO STRUCTURE PLANS)

123+31.09"T", -73.92' LT
4114+16.11, 117.36' LT
93' R

CB09 38.0' 19'

CP07 19.7'

122+92.50"T"

123+44.41"T"

123+02.17"T", 1.77' RT

122+93.00"T", 7.69' RT

123+00 "T"

123+22.13"T", 3.82' RT

124+00 "T"

125+00 "T"

126+00 "T"

122+93.50"T", 10.14' RT
2.5' R

CM01

C

CTH T

122+92.48"T", 12.43' RT

123+08.52"T", 22.31' RT

CG49B 19.2'

PV01

123+19.25"T", 20.39' RT

124+00.96"T", 18.41' RT

124+01.43"T", 22.35' RT

BG17 BG16 4.5'

CP07

123+48.71"T", 50.45' RT

SEE INSET A

3115+00 "C"

3116+00 "C"

IH-94 EB ON RAMP

774+00

775+00

776+00

127+32.35"T", -154.23' LT
113+91.81"A", 67.81 RT
150.5' R

128+03.11"T", -60.99' LT
MATCH EXISTING

127+74.67"T", -57.03' LT
894.39 GUTTER

127+25.89"T", -50.61' LT

126+72.77"T", -50.63' LT

SLOPE INTERCEPT

BG15 BG16 BG17 4.5'

CG60

127+84.41"T", -58.35' LT
894.25 GUTTER

IN02

CP07

126+60.27"T", -50.64' LT

PV01

126+98.51"T", -18.68' LT

126+94.75"T", -18.44' LT

19.5'

127+29.87"T", -19.27' LT

127+39.17"T", -18.29' LT

127+60.87"T", -13.26' LT

CP07

127+60.08"T", -9.85' LT
2.5' R

C

126+04.16"T", -1.98' LT

CG49B

127+00 "T"

127+32.04"T", -3.75' LT

CM01

127+60.68"T", -6.40' LT

127+58.10"T", -5.97' LT

126+99.26"T", 21.81' RT
40.5' R

127+12.49"T"

127+64.40"T"

PV01

18.8'

CP07

CB09

21' 40.0'

CG49A

127+30.58"T", 18.72' RT
38' R

CB36

2116+00 "B"

2117+00 "B"

IH-94 WB OFF RAMP

INSTALL DRIVEWAY CURB
FROM END OF CURB
TO POST #3

IN03

CP07 CG60

BG10 BG17

122+67.60"T", 46.06' RT
MATCH EXISTING

122+79.80"T", 47.81' RT

122+99.60"T", 50.22' RT
893.20 GUTTER

122+95.58"T", 52.42' RT

122+91.51"T", 50.17' RT
893.00 GUTTER

INSET DETAIL A

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	PLAN: CTH T	SHEET 18 E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\021203-PD CTH T.DWG
LAYOUT NAME - 021204-PD CTH T

PLOT DATE : 10/12/2022 12:00 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

RADII ARE GIVEN TO FACE OF CURB

CONCRETE PAVEMENT REPAIR/REPLACEMENT (REMOVE TO NEAREST JOINT)

IH-94 WB ON RAMP

114+00 "A"

115+00 "A"

129+41.52"T", -89.43' LT

128+90.36"T", -98.40' LT

SEE INSET A

3.8'

5.1'

5.0'

2.0'

128+45.76"T", -107.39' LT

128+48.29"T", -97.03' LT

128+58.08"T", -84.45' LT

VARIABLE FLANGE SLOPE

4.0%

6.25%

22.3'

4'

889.78

892.17

892.11

892.07

892.02

890.14

PV03

CG49A VARIABLE WIDTH FLANGE

129+28.38"T", -154.94' LT

114+52.92"A", 118.17' LT

95' R

892.23

892.20

892.14

892.10

892.01

891.85

128+47.88"T", -62.18' LT

2.5' R

128+52.23"T", -50.09' LT

2.5' R

128+69.40"T", -49.91' LT

2.5' R

129+30.82"T", -57.95' LT

C

CG49B

INSET DETAIL A

128+45.66"T", 48.41' RT

2115+60.19"B", -2.50' LT

2.5' R

128+62.46"T", 46.79' RT

2115+56.23"B", -18.91' LT

1.0' R

CG12

128+38.93"T", 78.03' RT

2115+90.46"B", 0.00'

128+43.11"T", 78.57' RT

2115+90.41"B", -4.21' LT

116+00 "B"

INSET DETAIL B

108' R

CTH T

130+86.02"T"

130+96.02"T"

132+44.33"T"

132+34.70"T"

132+65.50"T", -20.21' LT

128+65.85"T", -20.21' LT

CM02

128+65.85"T", -16.71' LT

3.5' R

128+63.56"T", -14.06' LT

CG49A

CG49B

128+00 "T"

129+00 "T"

130+00 "T"

131+00 "T"

132+00 "T"

133+00 "T"

LS01

LS02

SIGN

SIGN

128+70.90"T", -7.72' LT

IN02

129+43.69"T", 18.55' RT

129+22.30"T", 20.91' RT

131+50.24"T", 11.58' RT

131+12.10"T", 17.34' RT

130+88.90"T", 15.63' RT

END CONSTRUCTION
STA. 132+65.50

2115+61.60"B"

PV17

IH-94 WB OFF RAMP

2116+00 "B"

SEE INSET B

2116+14.21"B"

3.0'

2116+35.32"B", -15.09' LT

MATCHLINE 2116+50"B"

MATCHLINE 2116+50"B"

2117+00 "B"

2118+00 "B"

2119+00 "B"

2120+00 "B"

IH-94 WB OFF RAMP

5'

PV17

2120+59.24"B", -12.00' LT

PV17

2118+14.04"B"

2118+28.04"B"

3'

2120+59.24"B", 24.44' RT

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	PLAN: CTH T	SHEET 19 E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\021203-PD CTH T.DWG
LAYOUT NAME - 021205-PD CTH T

PLOT DATE : 10/12/2022 12:02 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

SCOT DR

BEGIN CONSTRUCTION
STA. 13+60.93

SLOPE INTERCEPT

ABANDONING CULVERT PIPE

REMOVING INLET

REMOVING CURB & GUTTER

REMOVING GUARDRAIL

SW01

SW03

CTH JJ

REMOVING GUARDRAIL

REMOVING INLET

REMOVING CURB & GUTTER

B-67-0240 (SEE STRUCTURE PLANS FOR ADDITIONAL WORK)

ABANDONING CULVERT PIPE

REMOVE WOVEN WIRE FENCE (4-FT)

WB IH 94

EB IH 94

LEGEND

REMOVING ASPHALTIC SURFACE MILLING

REMOVING ASPHALTIC SURFACE

XXXX SAWCUT

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	PLAN: CTH JJ REMOVAL	SHEET 20	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\021206-PD CTH JJ REMOVALS.DWG
LAYOUT NAME - 021206-PD CTH JJ REMOVALS

PLOT DATE : 10/12/2022 12:02 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

WB IH 94

EB IH 94

RIPRAP

FLAG

ABANDONING CULVERT PIPE

REMOVING INLET

REMOVING CURB & GUTTER

REMOVING GUARDRAIL

SW01

END CONSTRUCTION
STA. 20+60.00

SW01

SW03

REMOVING INLET

REMOVING CURB & GUTTER

REMOVING GUARDRAIL

ABANDONING CULVERT PIPE

SIGN

RIPRAP

CTH JJ

19 20 21 22 23 24 25

SIL VERNAIL RD

N

LEGEND

REMOVING ASPHALTIC SURFACE MILLING

REMOVING ASPHALTIC SURFACE

XXXX SAWCUT

2

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	PLAN: CTH JJ REMOVAL	SHEET 21	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\021206-PD CTH JJ REMOVALS.DWG
LAYOUT NAME - 021207-PD CTH JJ REMOVALS

PLOT DATE : 10/12/2022 12:02 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

SCOT DR

15" RCCP

BEGIN CONSTRUCTION
STA. 13+60.93

SLOPE INTERCEPT

STA. 15+80.16, 19.67' LT
FLANGE ELV. 905.42

IN01
BG15
BG16
AG01
BG17
BG15
BG10
CG70
CG60
B
CP01
PV01
E
B
CP01
CG70
AG01
BG10
BG17
BG15
IN01
BG15
BG16

10'
12'
12'
10'

12
13
14
15
16
17

CTH JJ

STA. 14+40.9, 22' RT

STA. 15+39.30, 19.67' RT
FLANGE ELV. 904.65

B-67-0240
(SEE STRUCTURE PLANS FOR ADDITIONAL WORK)

CAUTION

REPLACE WOVEN WIRE FENCE (4-FT)

WB IH 94

EB IH 94

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	PLAN: CTH JJ	SHEET 22	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\021208-PD CTH JJ.DWG
LAYOUT NAME - 021208-PD CTH JJ

PLOT DATE : 10/12/2022 12:03 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

WB IH 94

EB IH 94

RIPRAP

FLAG

SIGN

RIPRAP

BG16 BG15

IN01

STA. 20+45.00, 21.21' LT
FLANGE ELV. 904.76

CP01

CG70

B

END CONSTRUCTION
STA. 20+60.00

19 20 21 22 23 CTH JJ 24 25

12'

PV01

12'

E

CP01

B

CG60 CG70

STA. 20+02.00 21.80' RT
FLANGE ELV. 905.58

BG16 BG15 IN01

B-67-0240
(SEE STRUCTURE PLANS FOR ADDITIONAL WORK)

SIGN

12"

SILVERNAIL RD

N

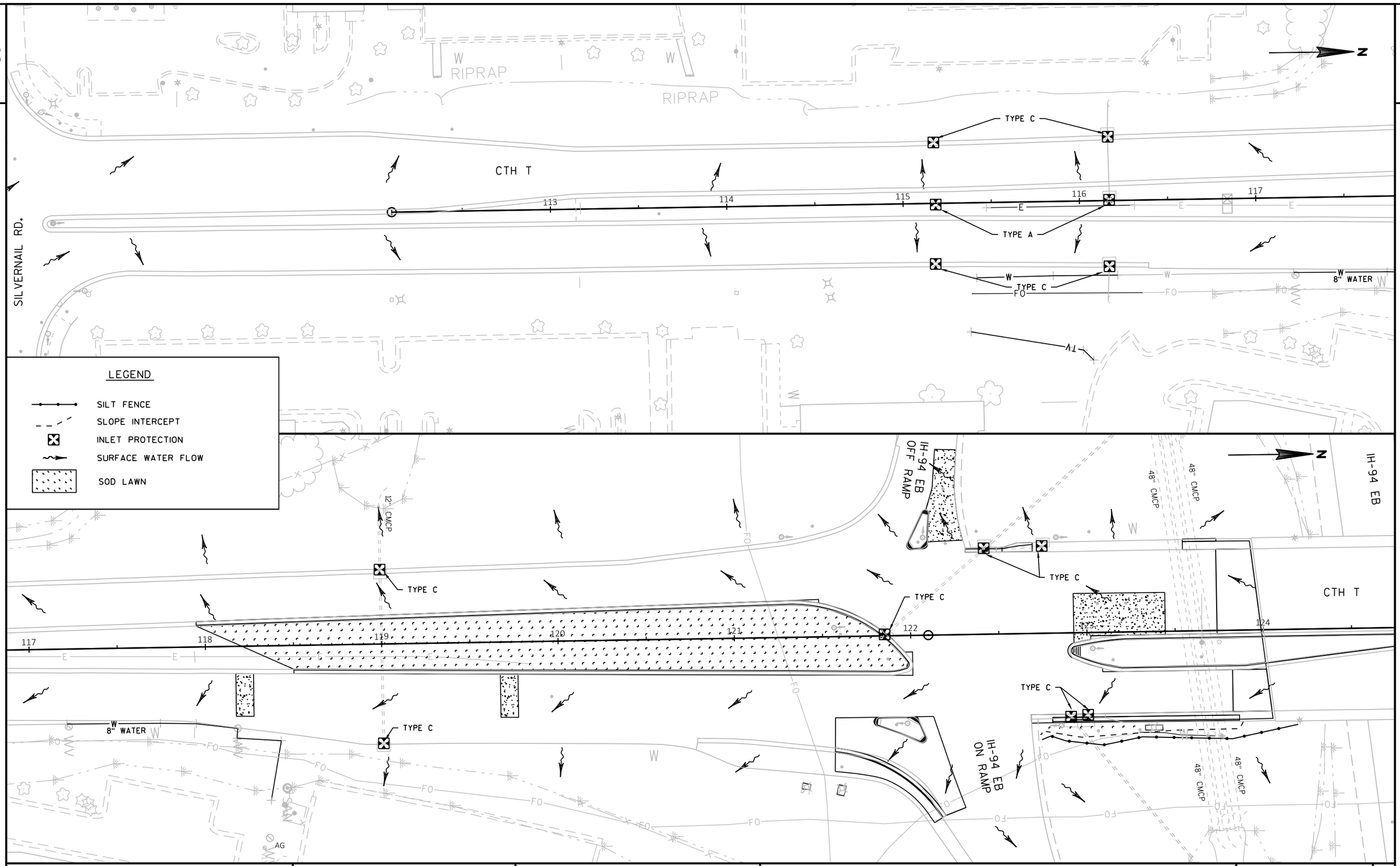
PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	PLAN: CTH JJ	SHEET 23	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\021208-PD CTH JJ.DWG
LAYOUT NAME - 021209-PD CTH JJ

PLOT DATE : 10/12/2022 12:04 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO:1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL: CTH T	SHEET 24	E

2

2

CTH T

IH-94 EB

IH-94 WB

IH-94 WB ON RAMP

IH-94 WB OFF RAMP

GOLF RD.

TYPE C

TYPE A

48" CMCP

10" RCCP

36" RCCP

12" RCCP

SIGN

TEL

124 125 126 127 128 129 130 131 132 133 134 135 136 137

N

LEGEND

- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- RIP RAP
- SURFACE WATER FLOW
- SOD LAWN

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL: CTH T	SHEET 25	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\022001-EC CTH T.DWG
LAYOUT NAME - 022002-EC CTH T

PLOT DATE : 8/29/2022 9:40 AM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

SCOT DR

15" RCCP

TYPE B

TYPE B

12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00

CTH JJ

WB IH-94

EB IH-94

TYPE B

TYPE B

18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00

CTH JJ

24" RCCP

12"

SIL VERNAIL RD,

RIPRAP

SIGN

FLAG

N

LEGEND

- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION
- SURFACE WATER FLOW
- CULVERT PIPE CHECK
- EROSION MAT URBAN CLASS I, TYPE A WITH SEED MIXTURE NO. 20

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	EROSION CONTROL: CTH JJ	SHEET 26	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\022003-EC CTH JJ.DWG
LAYOUT NAME - 022003-EC CTH JJ

PLOT DATE : 8/16/2022 2:40 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

IH-94 EB OFF RAMP

(127) 122+42.78"T", -48.40' LT
RECONSTUCT INLET
SALVAGE INLET COVER
RIM 891.88

(17) 121+84.34"T", 0.10' RT
RECONSTRUCT INLET
SALVAGE INLET COVER
RIM 891.28

CTH T

118 119 120 121 122 123 124 125

P10

(110) 122+99.60"T", 50.22' RT
INLETS 2x2.5-V
RIM 893.20

(19) 122+91.50"T", 53.27' RT
INLETS 2x2.5-V
RIM 893.20

P9

IH-94 EB ON RAMP

IH-94 EB

IH-94 WB

WETLAND BOUNDARY

IH-94 WB OFF RAMP

IH-94 WB ON RAMP

(129) 127+84.43"T", -64.48' LT
RECONSTRUCT INLET
INLET COVERS TYPE V
RIM 894.25

(128) 127+74.67"T", -57.03' LT
RECONSTRUCT INLET
INLET COVERS TYPE V
RIM 894.39

(111) 128+91.48"T", 6.30' RT
RECONSTRUCT INLET
SALVAGE INLET COVER
RIM 893.64

CTH T

125 126 127 128 129 130 131 132

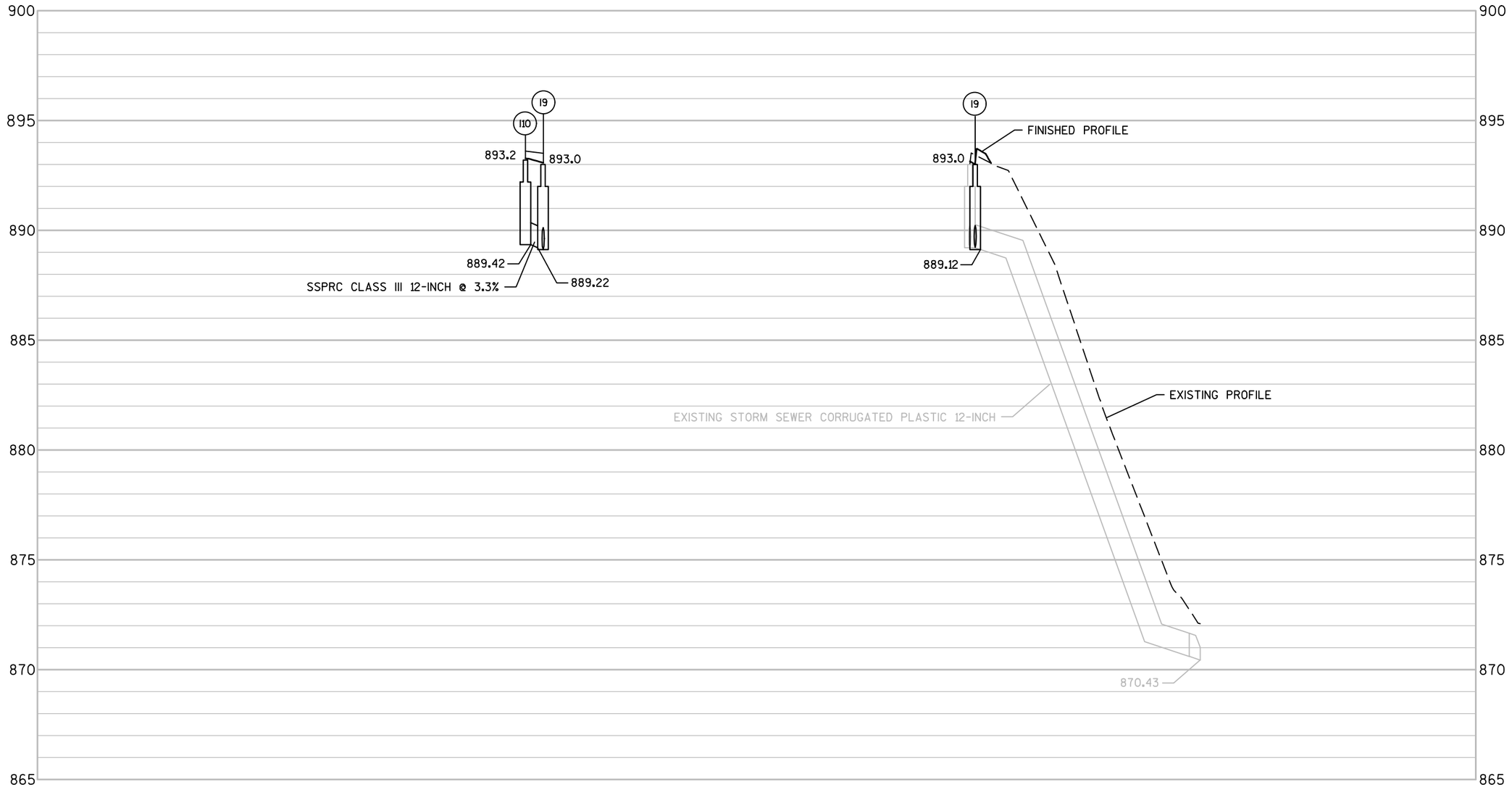
IH-94 WB

IH-94 WB OFF RAMP

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	STORM SEWER: CTH T	SHEET 27	E

FILE NAME : N:\PDS\C3D\10601000\SHEETSPLAN\DRAFT PSE\PLAN\10601071\022501-SS CTH T.DWG
LAYOUT NAME - 022501-SS CTH T
PLOT DATE : 3/6/2018 9:18 AM PLOT BY : JOHANSEN, AMANDA A PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	STORM SEWER: CTH T	SHEET 28	E

2

2

CTH JJ 2.0 EW
STA 15+94, 49.6' LT
APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH

STA 15+88, 20.9' LT
INLETS 2x2.5-V
CTH JJ 2.0

STA 20+31, 51.8' LT
APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH
CTH JJ 4.0 EW

STA 20+38, 22.3' LT
INLETS 2x2.5-V
CTH JJ 4.0

15+00 16+00 17+00 18+00 CTH JJ 19+00 20+00 21+00

CTH JJ 1.0
STA 15+48, 20.9' RT
INLETS 2x2.5-V

CTH JJ 3.0
STA 19+95, 22.4' RT
INLETS 2x2.5-V

MEDIUM RIPRAP
4' WIDE X 25' LONG

CTH JJ EW 1.0
STA 15+49, 40.4' RT
APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH

CTH JJ 3.0 EW
STA 19+63, 56.0' RT
APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH

WB IH-94

EB IH-94

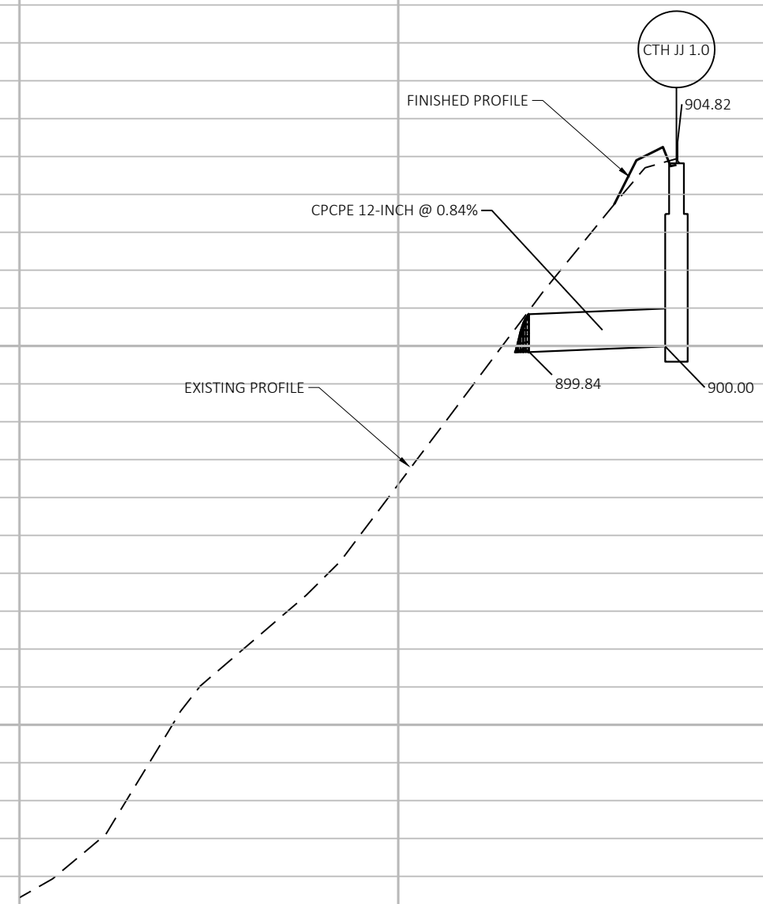
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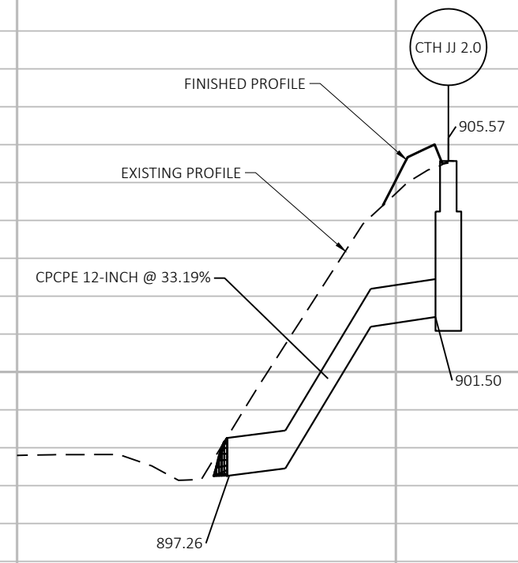
PROJECT NO: 1060-10-70	HWY: IH-94	COUNTY: WAUKESHA	STORM SEWER CTH JJ	SHEET 29	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\022501-SS CTH JJ.DWG
LAYOUT NAME - 01

PLOT DATE : 9/12/2022 9:35 AM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

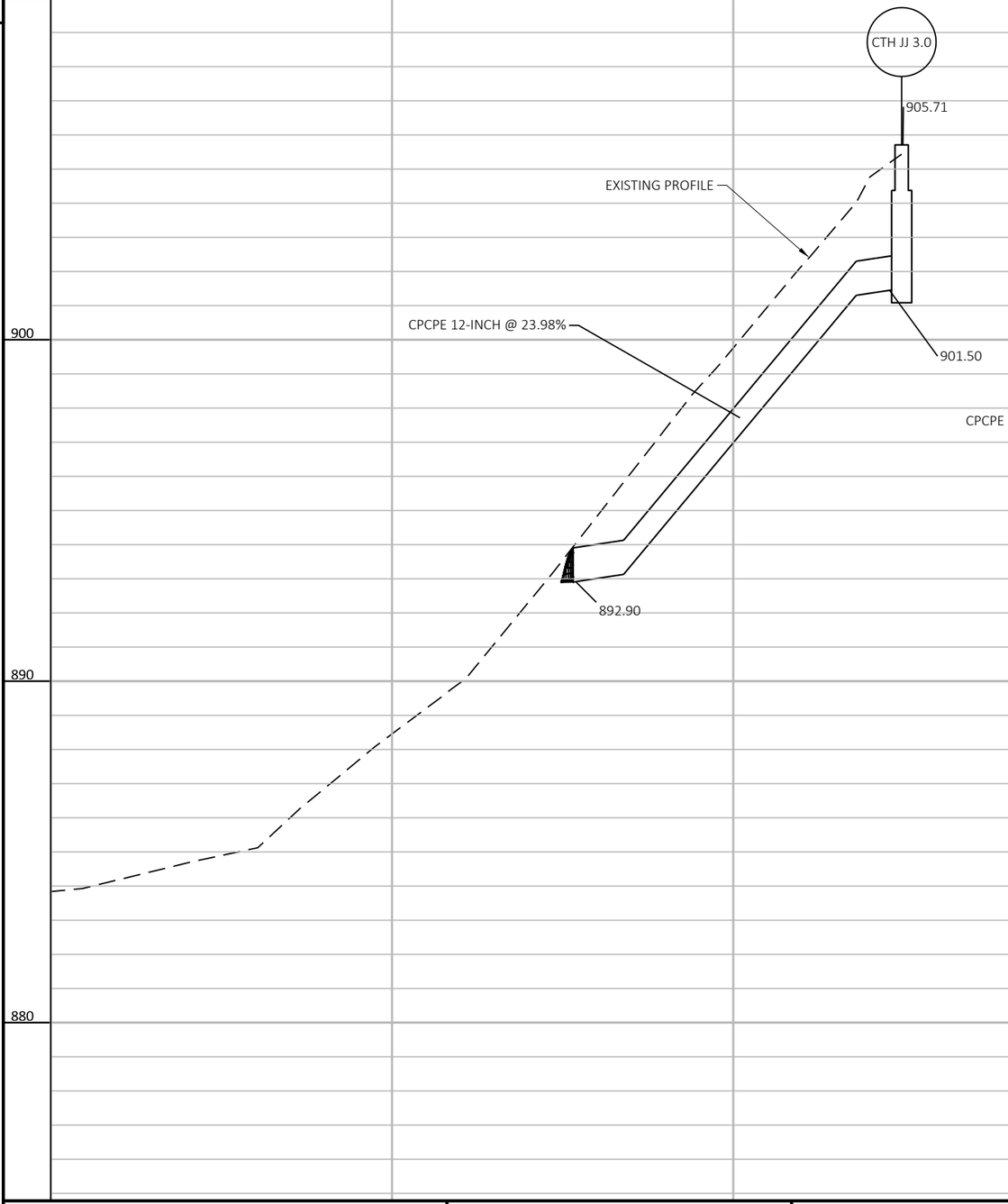


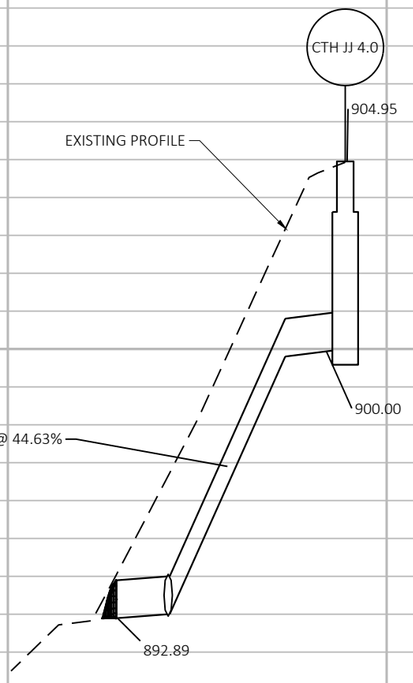


910
900
890
880

2

PROJECT NO: 1060-10-70	HWY: IH-94	COUNTY: WAUKESHA	STORM SEWER CTH JJ	SHEET 30	E



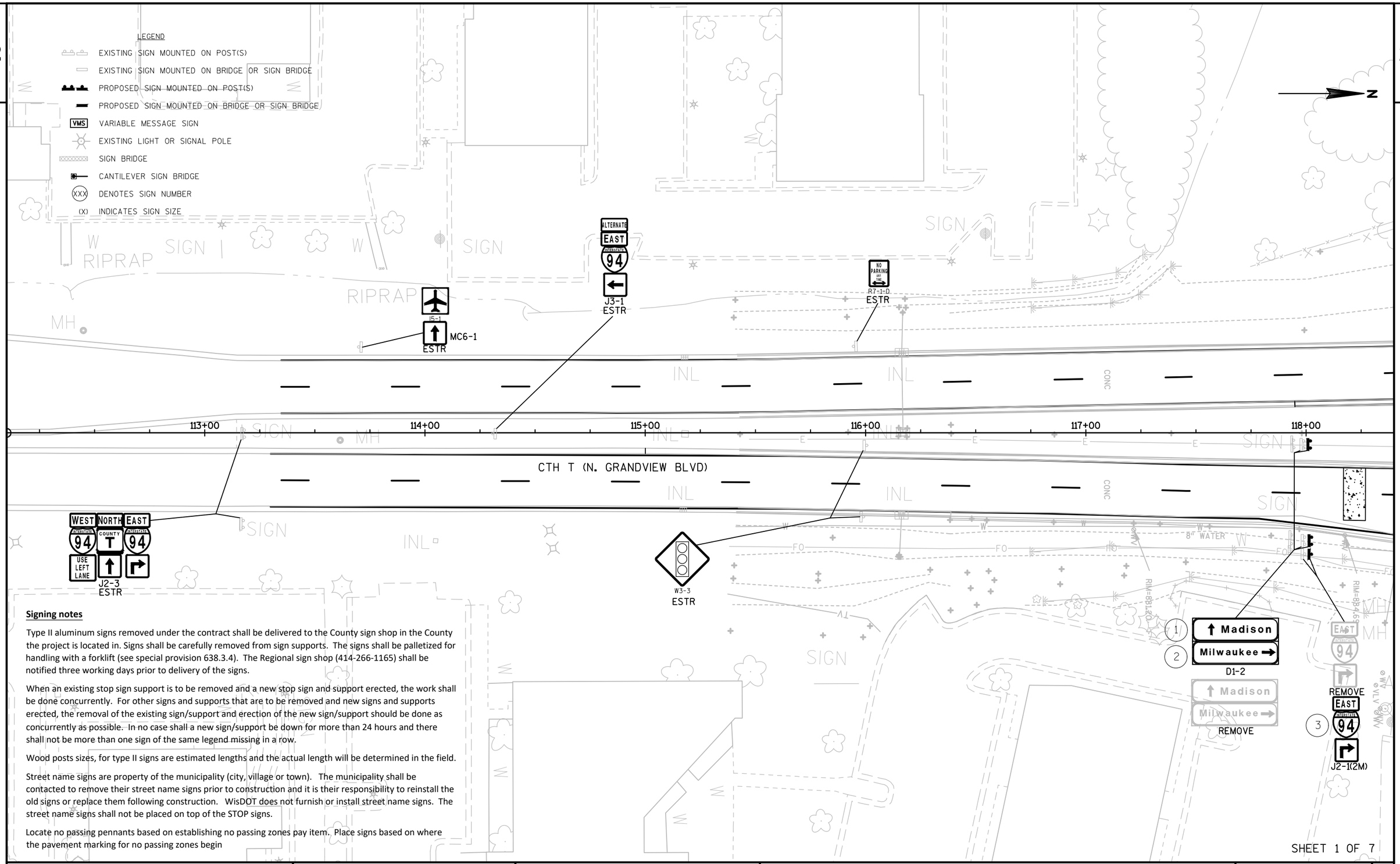


PROJECT NO: 1060-10-70	HWY: IH-94	COUNTY: WAUKESHA	STORM SEWER CTH JJ	SHEET 31	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\022501-SS CTH JJ.DWG
LAYOUT NAME - 03
PLOT DATE : 9/12/2022 9:36 AM
PLOT BY : PAYNE, GREGORY
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

LEGEND

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



Signing notes

Type II aluminum signs removed under the contract shall be delivered to the County sign shop in the County the project is located in. Signs shall be carefully removed from sign supports. The signs shall be palletized for handling with a forklift (see special provision 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 posts 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

SHEET 1 OF 7

PROJECT NO: 1060-10-71	HWY: I-94 @ CTH T	COUNTY: WAUKESHA	PERMANENT SIGNING PLAN	SHEET 32 E

LEGEND

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

27 25 26 24 DO NOT ENTER R5-1(3) WRONG WAY R5-1A(2S) 3' HEIGHT ON SIGNAL POLE In Island

REMOVE DO NOT ENTER REMOVE WRONG WAY REMOVE

28 REMOVE YIELD R1-2(2M)

NORTH COUNTY T SOUTH COUNTY T ALTERNATE EAST INTERSTATE 94 J3-3 ESTR

ASPH CONC CMCP

PI: 4112+96.36

22 REMOVE W12-1D(2M) 2' HEIGHT

23 REMOVE STOP R1-1F(3)

35 36 W3-3(2M)

PARKING RESTRICTION ESTR

29 SPEED LIMIT 45 REMOVE 30 SPEED LIMIT 45 R2-1(2M)

ALTERNATE EAST INTERSTATE 94 REMOVE ALTERNATE EAST INTERSTATE 94 34 J3-1(2M)

31 REMOVE STOP R1-1F(3) ON SIGNAL POLE

PI: 4114+00.00

PT: 4114+15.66

ONE WAY REMOVE 21 ONE WAY R6-2-L(2M)

18 REMOVE STOP R1-1F(3) ON SIGNAL POLE

19 REMOVE R3-1(2M)

20 EAST INTERSTATE 94 REMOVE EAST INTERSTATE 94 J3-1(2M)

16 17 ONLY ONLY R3-5L REMOVE (SEE QTYS) REMOVE OVERHEAD S-67-216 SIGN SUPPORT

119+00 120+00 121+00 122+00 123+00 124+00

PI: 122+10.00

BP: 3114+19.01

FP: 4114+95.82

39 R4-7(2M) 40 R3-18(2M)

C.T.H. T (N. GRANDVIEW BLVD.)

PC: 3114+91.80

3115+00 3116+00

PT: 3116+31.33

ONE WAY REMOVE 10 ONE WAY R6-2-L (2M)

REMOVE NO PARKING R7-1-D(2M) 12

WEST NORTH COUNTY T INTERSTATE 94 REMOVE WEST NORTH COUNTY T INTERSTATE 94 11 J2-2(2M)

WEST INTERSTATE 94 REMOVE RAMP CLOSED USE ALT ROUTE REMOVE WEST INTERSTATE 94 14 J2-1(2M) 13 RAMP CLOSED USE ALT ROUTE R11-54-F(2M)

Milwaukee D1-1 87

REMOVE W5-52R(2M) 4' HEIGHT 15

4 REMOVE WEST INTERSTATE 94 SECOND LEFT SECOND LEFT J2-1(2M)

5 REMOVE EAST INTERSTATE 94 J3-1(2M)

32 REMOVE STOP R1-1F(3) 33 REMOVE R3-18(2M)

38 EAST INTERSTATE 94 REMOVE EAST INTERSTATE 94 J3-1(2M)

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

7 REMOVE YIELD R1-2(2M)

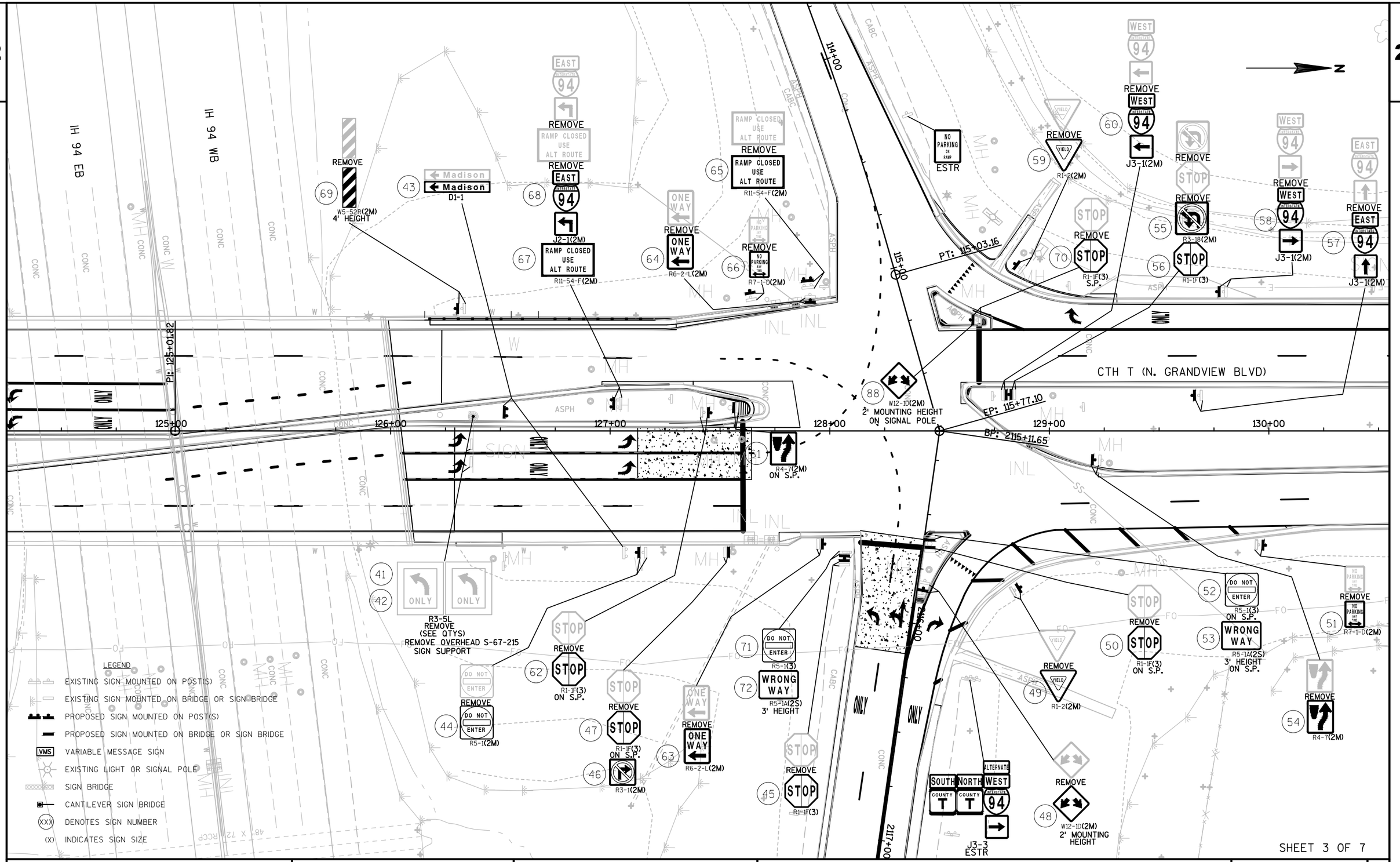
6 RAMP CLOSED USE ALT ROUTE REMOVE RAMP CLOSED USE ALT ROUTE R11-54-F(2M)

9 REMOVE STOP R1-1F(3) ON SIGNAL POLE

37 DO NOT ENTER REMOVE DO NOT ENTER R5-1(2M) ON SIGNAL POLE

SHEET 2 OF 7

PROJECT NO: 1060-10-71	HWY: I-94 & CTH T	COUNTY: WAUKESHA	PERMANENT SIGNING PLAN	SHEET 33 E



PROJECT NO: 1060-10-71	HWY: I-94 & CTH T	COUNTY: WAUKESHA	PERMANENT SIGNING PLAN	SHEET 34 E

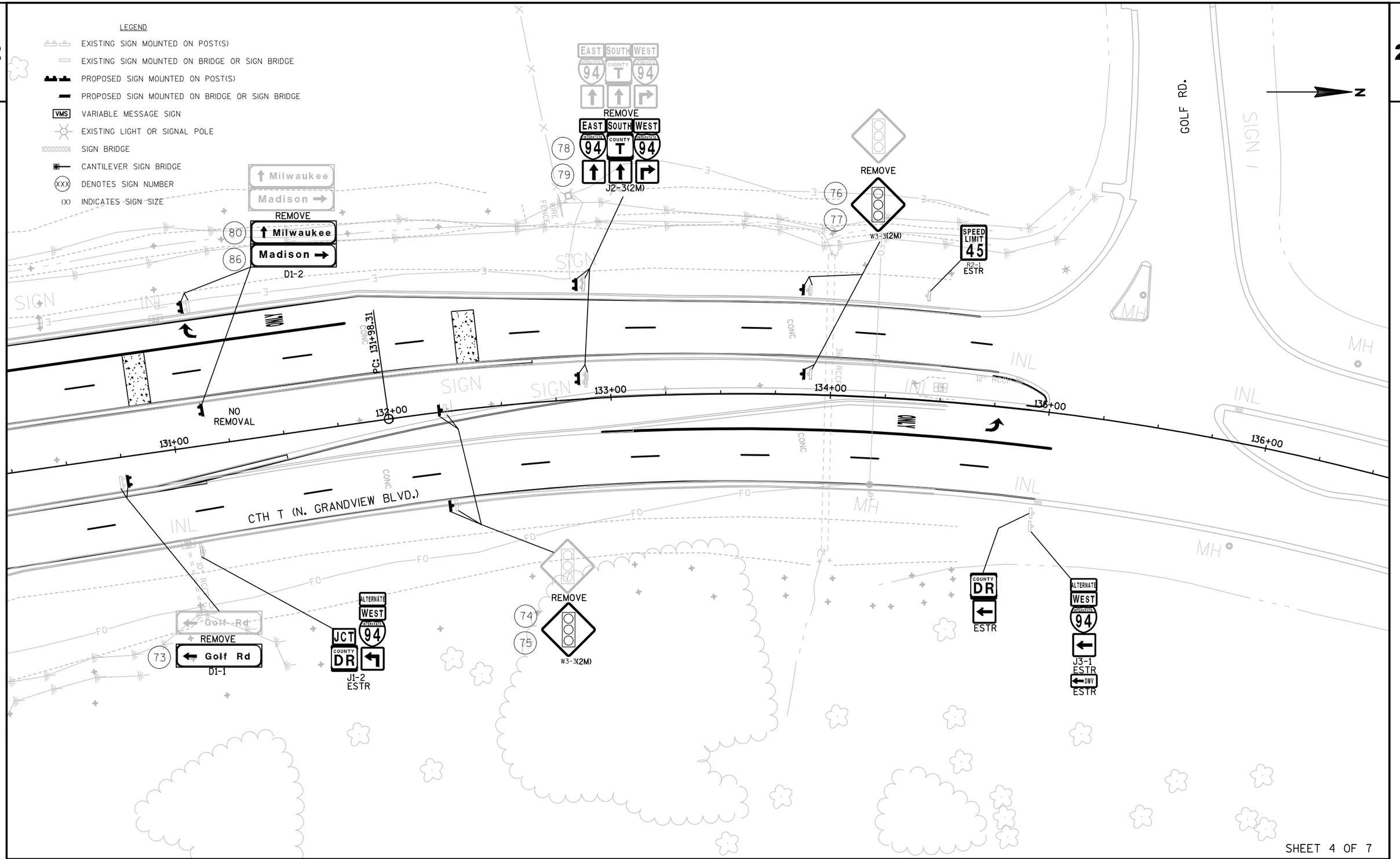
FILE NAME : N:\PDS\C3D\CAD\10601000\71\SIGN\023201_PS_14-16.DWG
LAYOUT NAME - 023203_PS

PLOT DATE : 10/4/2022 9:27 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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE



SHEET 4 OF 7

PROJECT NO: 1060-10-71	HWY: I-94 @ CTH T	COUNTY: WAUKESHA	PERMANENT SIGNING PLAN	SHEET 35 E

FILE NAME : N:\PDS\C3D\CAD\10601000\71\SIGN\023201_PS_14-16.DWG
LAYOUT NAME - 023204_PS

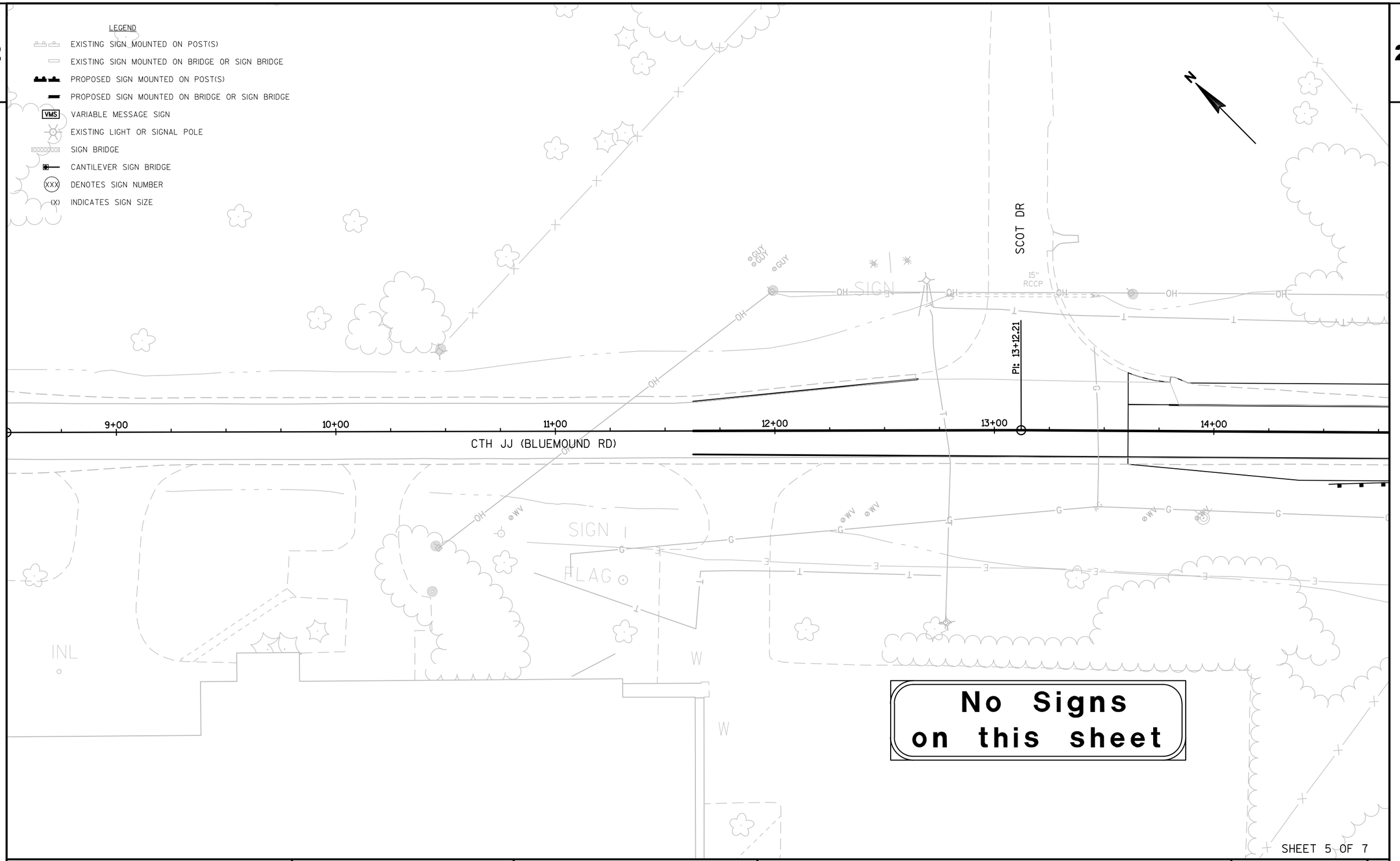
PLOT DATE : 10/4/2022 9:29 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE



SHEET 5 OF 7

PROJECT NO: 1060-10-71	HWY: I-94 @ CTH JJ	COUNTY: WAUKESHA	PERMANENT SIGNING PLAN	SHEET 36 E

FILE NAME : N:\PDS\C3D\CAD\10601000\71\SIGN\023201_PS_14-16.DWG
LAYOUT NAME - 023214_PS

PLOT DATE : 10/4/2022 9:31 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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

N

IH 94 WB

IH 94 EB

CTH JJ (BLUEMOUND RD)

15+00 16+00 17+00 18+00 19+00 20+00

85 REMOVE ROUGH ROAD W8-8(2S)

83 REMOVE W5-52L(2S) 4' HEIGHT

82 REMOVE W5-52R(2S) 4' HEIGHT

81 REMOVE W5-52R(2S) 4' HEIGHT

84 REMOVE W5-52L(2S) 4' HEIGHT

SHEET 6 OF 7

PROJECT NO: 1060-10-71	HWY: I-94 @ CTH JJ	COUNTY: WAUKESHA	PERMANENT SIGNING PLAN	SHEET 37 E

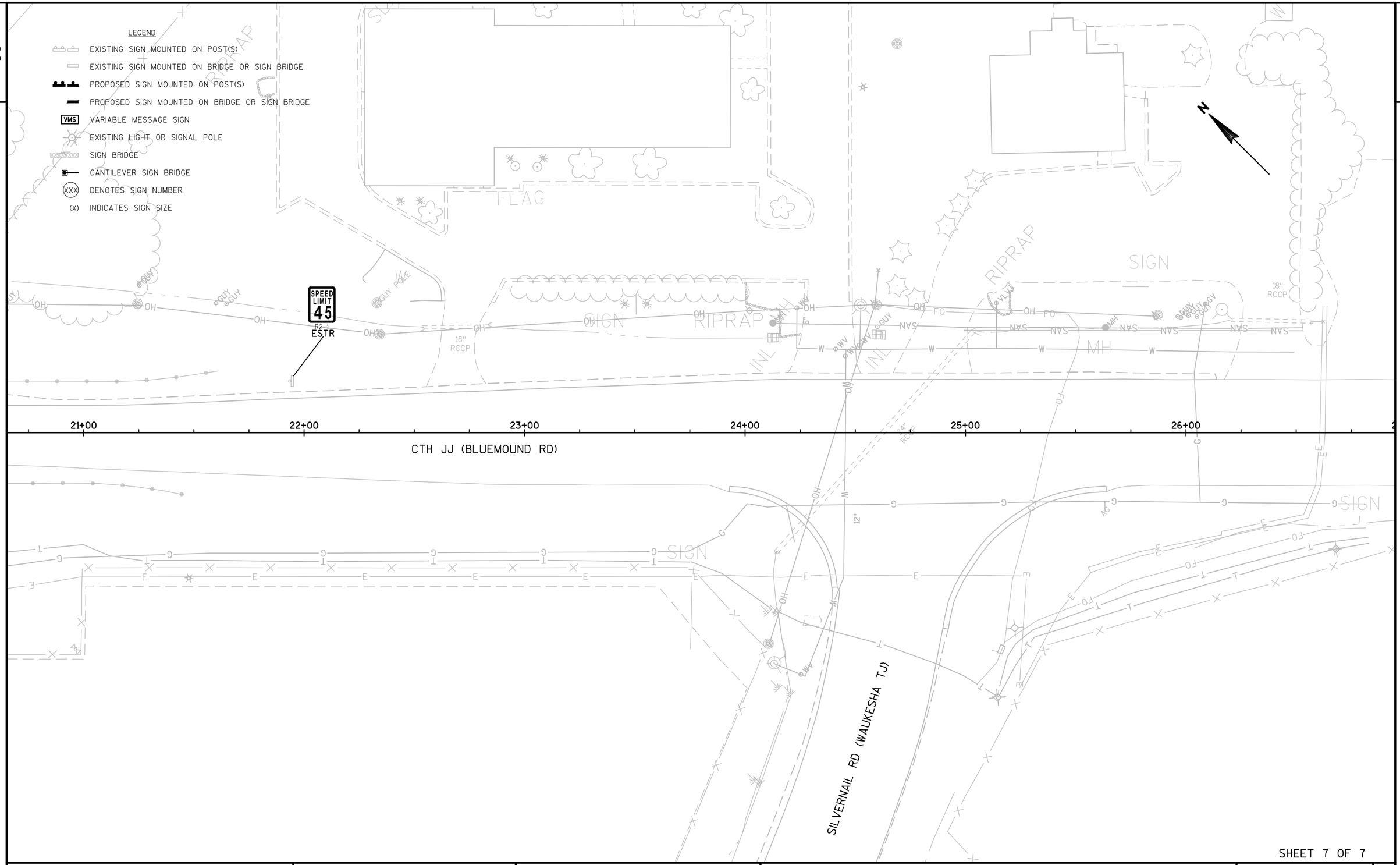
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LAYOUT NAME - 023215_PS

PLOT DATE : 10/4/2022 9:33 AM 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
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE



SHEET 7 OF 7

PROJECT NO: 1060-10-71	HWY: I-94 @ CTH JJ	COUNTY: WAUKESHA	PERMANENT SIGNING PLAN	SHEET 38 E

FILE NAME : N:\PDS\C3D\CAD\10601000\71\SIGN\023201_PS_14-16.DWG
LAYOUT NAME - 023216_PS

PLOT DATE : 10/4/2022 9:36 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

2



N

2

LEGEND

WISDOT OWNED TRAFFIC SIGNAL

SXX-XXXX

(1) INSTALL TEMPORARY TRAFFIC SIGNAL

(2) REMOVE TEMPORARY TRAFFIC SIGNAL UPON PROJECT COMPLETION

PROJECT NO: 1060-10-70	HWY: IH 94	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PROJECT OVERVIEW	SHEET	E

FILE NAME : U:\10601070_CTH_T\023901_sp_tmp_po.dgn PLOT DATE : 31-JUL-2018 10:47 PLOT BY : mscjym PLOT NAME : PLOT SCALE : 375:1

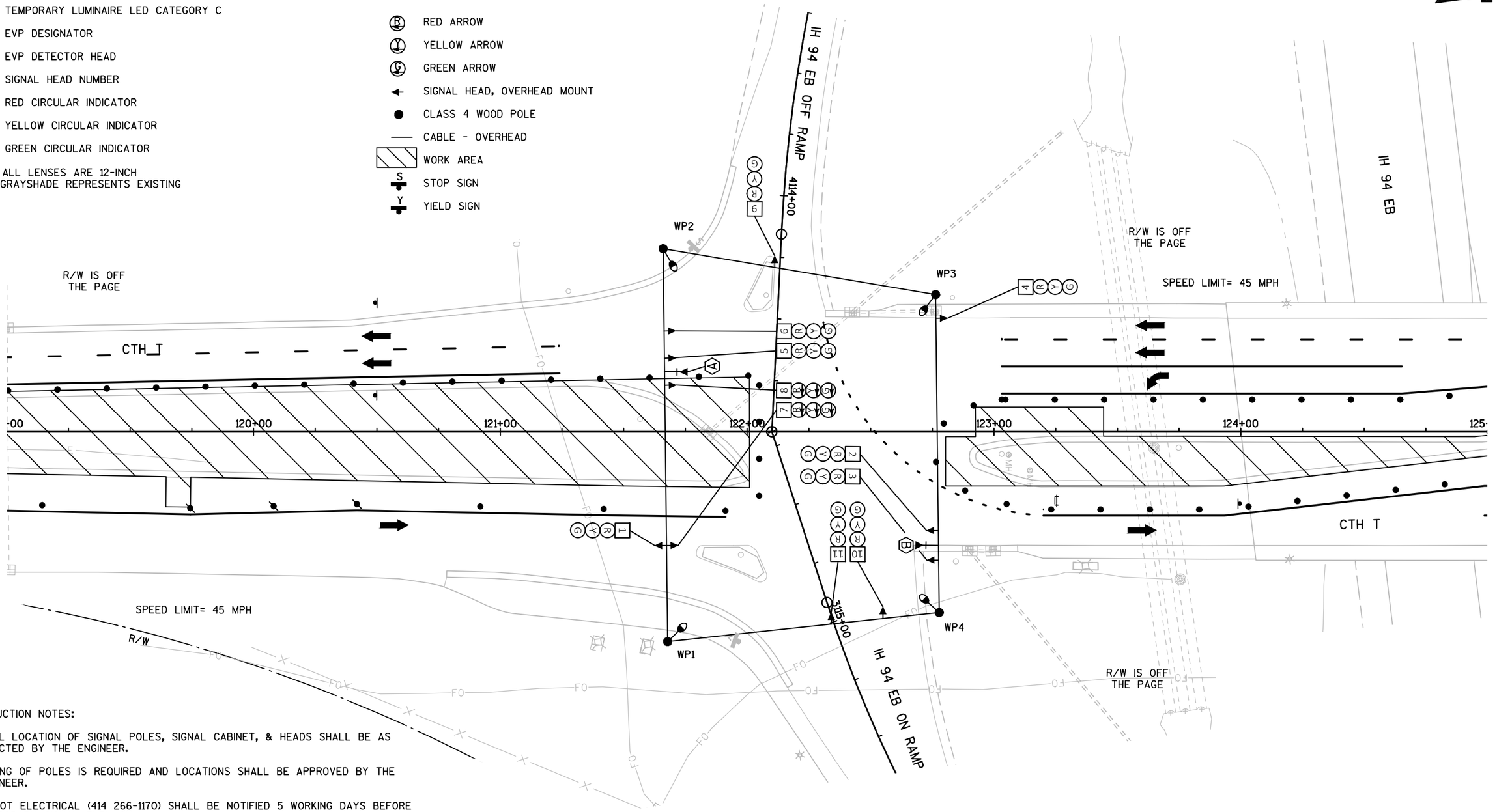
WISDOT/CADDS SHEET 42

LEGEND

- TEMPORARY LUMINAIRE LED CATEGORY C
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- CABLE - OVERHEAD
- WORK AREA
- STOP SIGN
- YIELD SIGN



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. WISDOT ELECTRICAL (414 266-1170) SHALL BE NOTIFIED 5 WORKING DAYS BEFORE TEMPORARY SIGNAL TURN ON.
4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
5. ADJUST TEMPORARY SIGNALS AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD TRAFFIC SIGNAL REQUIREMENTS.
6. INSTALL TEMPORARY AIRPORT OBSTRUCTION LIGHTS ON ALL WOOD POLES.

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & CTH T
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0537

REGION CONTACT: JOYCE MURPHY
DESIGNED BY: HNTB
REVISED BY:

PAGE 1 OF 5

PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET 40 E

FILE NAME : N:\PDS\C3D\CAD\10601000\SIG\TOBOX\T67-0537_STAGE1A.DWG
LAYOUT NAME - S67-0537_STAGE1A_PG1

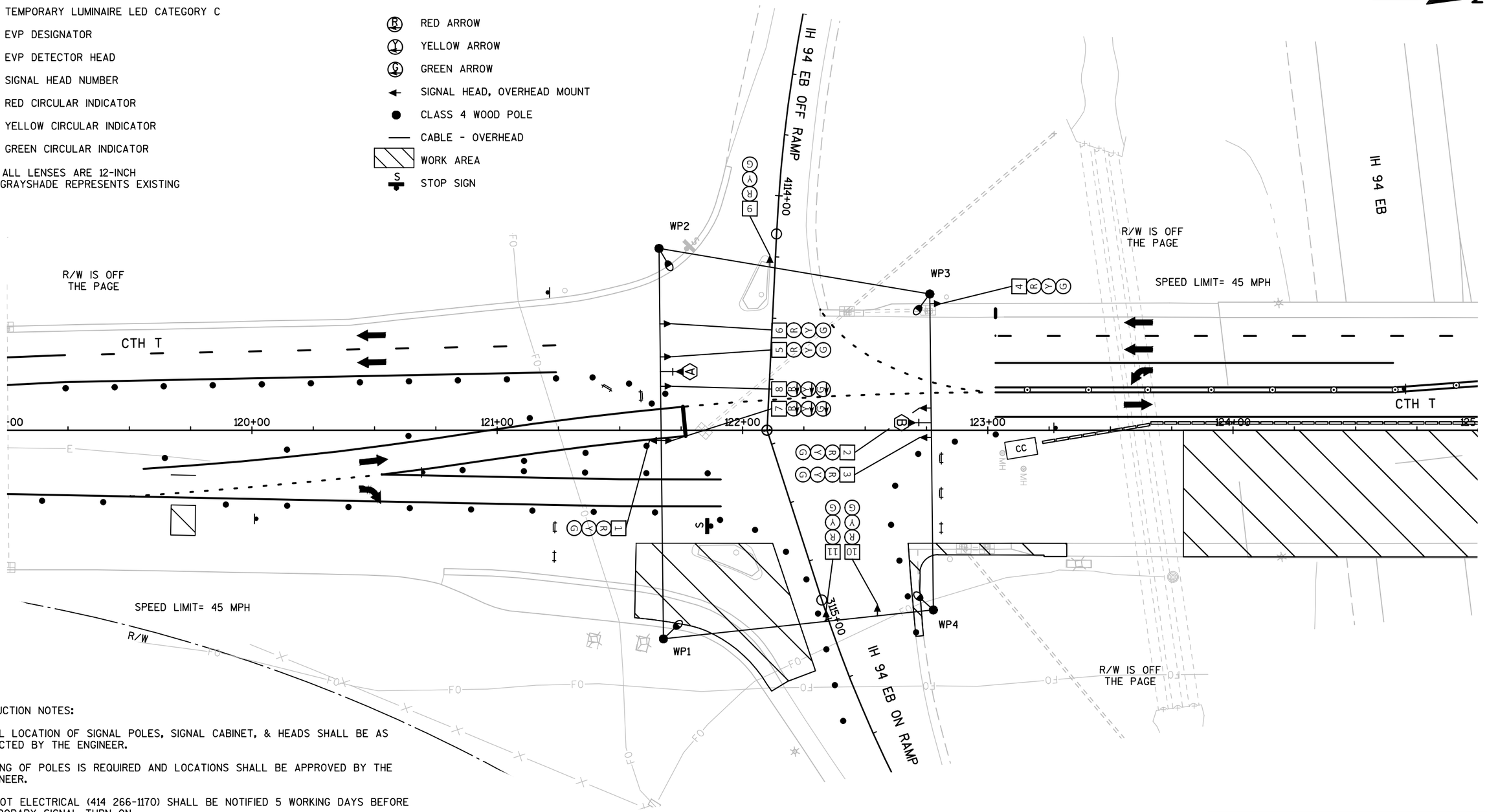
PLOT DATE : 10/3/2022 11:07 AM PLOT BY : SCHUMACHER, JAMES D PLOT NAME : PLOT SCALE : 1 IN:40 FT

LEGEND

- TEMPORARY LUMINAIRE LED CATEGORY C
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- CABLE - OVERHEAD
- WORK AREA
- STOP SIGN



CONSTRUCTION NOTES:

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4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
5. ADJUST TEMPORARY SIGNALS AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD TRAFFIC SIGNAL REQUIREMENTS.
6. INSTALL TEMPORARY AIRPORT OBSTRUCTION LIGHTS ON ALL WOOD POLES.

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & CTH T
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0537

REGION CONTACT: JOYCE MURPHY
DESIGNED BY: HNTB
REVISED BY:

PAGE 2 OF 5

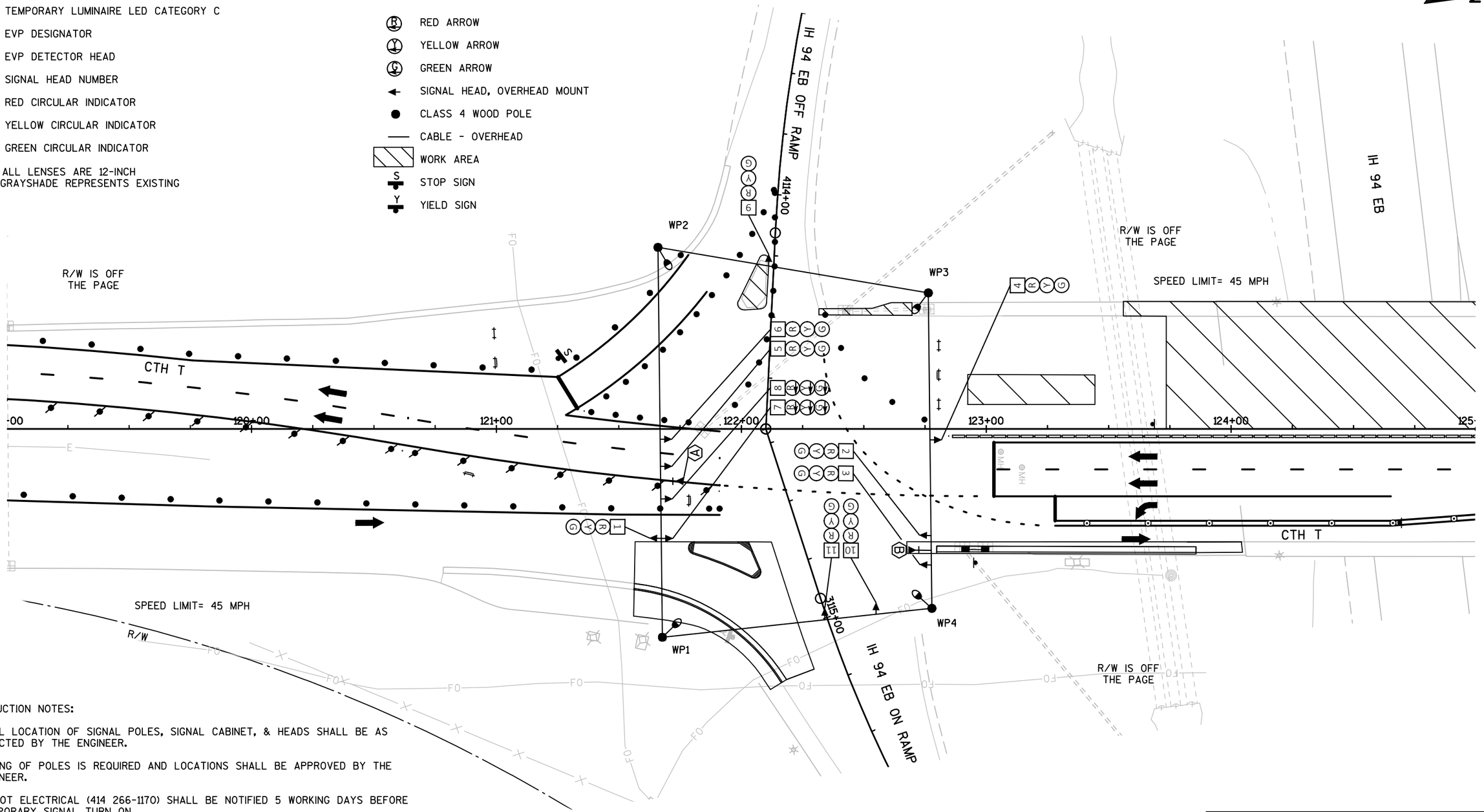
PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1B	SHEET 41 E

LEGEND

- TEMPORARY LUMINAIRE LED CATEGORY C
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- CABLE - OVERHEAD
- WORK AREA
- STOP SIGN
- YIELD SIGN



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. WISDOT ELECTRICAL (414 266-1170) SHALL BE NOTIFIED 5 WORKING DAYS BEFORE TEMPORARY SIGNAL TURN ON.
4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
5. ADJUST TEMPORARY SIGNALS AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD TRAFFIC SIGNAL REQUIREMENTS.
6. INSTALL TEMPORARY AIRPORT OBSTRUCTION LIGHTS ON ALL WOOD POLES.

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & CTH T
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0537

REGION CONTACT: JOYCE MURPHY
DESIGNED BY: HNTB
REVISED BY:

PAGE 3 OF 5

PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1C	SHEET 42 E

FILE NAME : N:\PDS\C3D\CAD\10601000\SIG\TOBOX\T67-0537_STAGE1C.DWG
LAYOUT NAME - S67-0537_STAGE1C_PG1

PLOT DATE : 10/3/2022 10:09 AM PLOT BY : SCHUMACHER, JAMES D PLOT NAME :

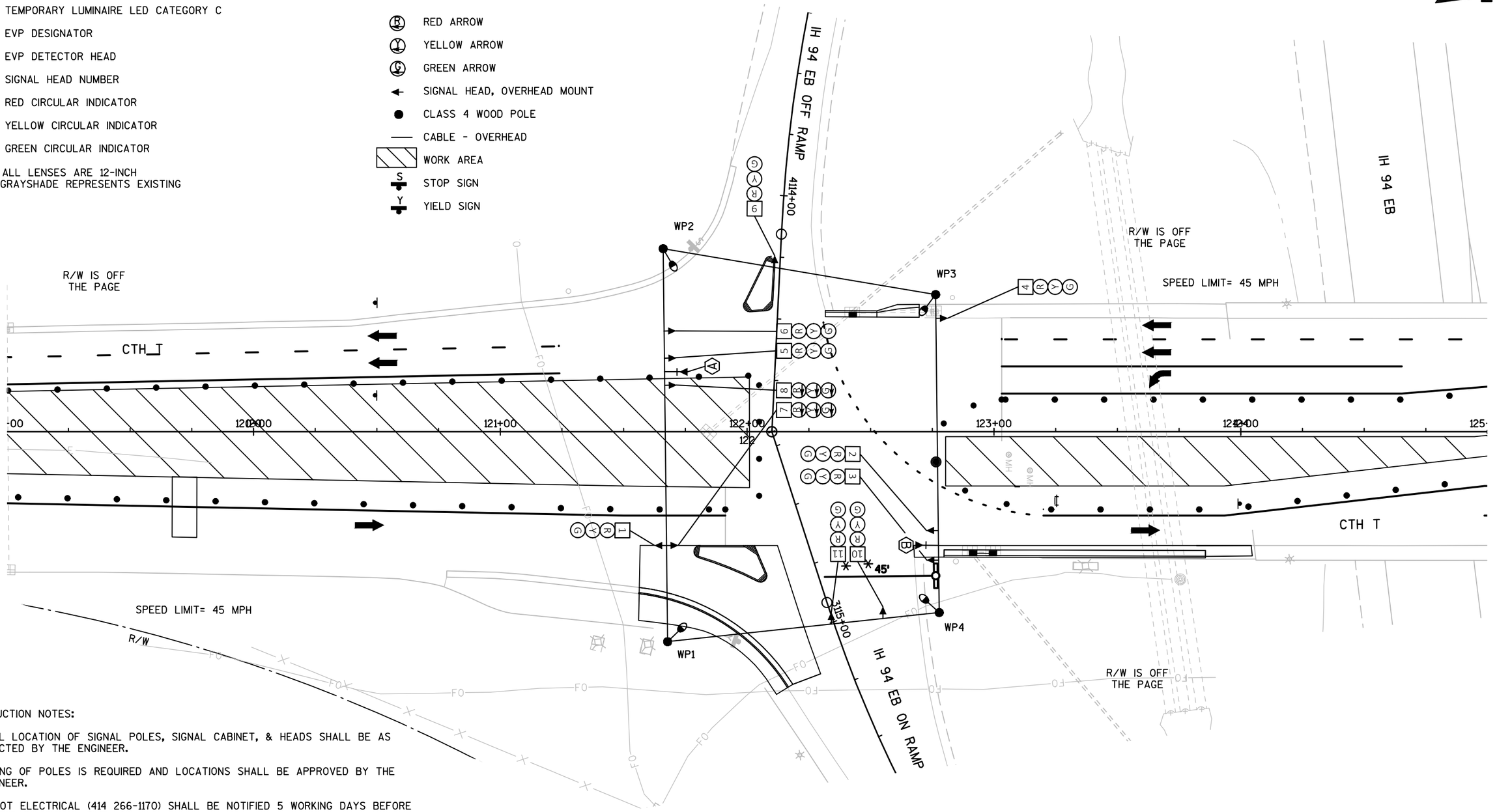
PLOT SCALE : 1 IN:40 FT

LEGEND

- TEMPORARY LUMINAIRE LED CATEGORY C
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- CABLE - OVERHEAD
- WORK AREA
- STOP SIGN
- YIELD SIGN



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
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4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
5. ADJUST TEMPORARY SIGNALS AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD TRAFFIC SIGNAL REQUIREMENTS.
6. INSTALL TEMPORARY AIRPORT OBSTRUCTION LIGHTS ON ALL WOOD POLES.

CONSTRUCTION NOTES CONTINUED:

* THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARMS IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE ARE INSTALLED. IF THE MONOTUBE ARMS OBSTRUCT THE TEMPORARY TRAFFIC SIGNAL HEADS ON THE SPAN WIRE, THE CONTRACTOR SHALL MOVE THE TEMPORARY TRAFFIC SIGNAL HEADS TO THE MONOTUBE ARMS AND HAVE THEM OPERATIONAL WITHIN 2 HOURS OF THE MONOTUBE ARM INSTALLATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE TEMPORARY TRAFFIC SIGNAL HEADS ON THE MONOTUBE ARMS. THE CONTRACTOR SHALL NOT DRILL ADDITIONAL HOLES INTO THE MONOTUBE ARMS TO FEED THE TEMPORARY TRAFFIC SIGNAL HEADS.

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & CTH T
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0537

REGION CONTACT: JOYCE MURPHY
DESIGNED BY: HNTB
REVISED BY:

PAGE 4 OF 5

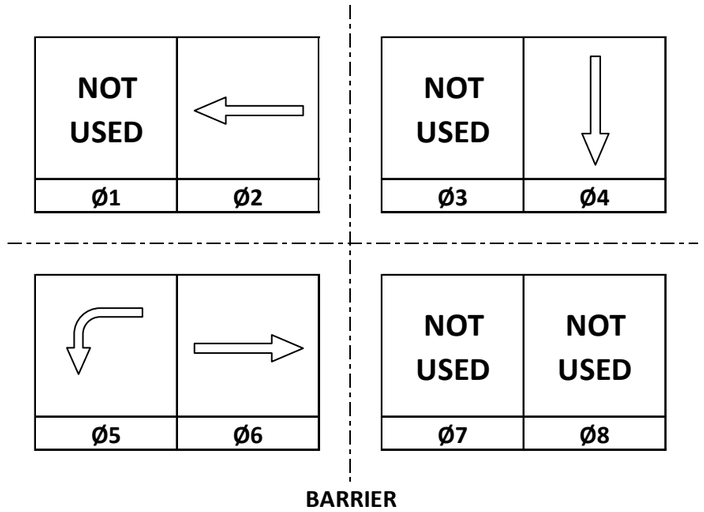
PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1D	SHEET 43 E

FILE NAME : N:\PDS\C3D\CAD\10601000\SIG\TOBOX\T67-0537_STAGE1D.DWG
LAYOUT NAME - S67-0537_STAGE1D_PG1

PLOT DATE : 10/3/2022 10:48 AM PLOT BY : SCHUMACHER, JAMES D PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

	HEAD NUMBERS	FLASH	
Ø1			RING 1
Ø2	4, 5, 6	R	
Ø3			
Ø4	9, 10, 11	R	
Ø5	7, 8	R ←	
Ø6	1, 2, 3	R	
Ø7			
Ø8			RING 2
Ø2P			
Ø4P			
Ø6P			
Ø8P			
OLA			
OLB			
OLC			
OLD			



N

CONTROLLER LOGIC

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

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	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTION	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B
MOVEMENT	←	← →
PHASE	2+5	6+2

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

IH 94 EB RAMPS & CTH T

CITY OF WAUKESHA

WAUKESHA COUNTY

SIGNAL NO: S67-0537 CABINET TYPE:

CONTROLLER TYPE:

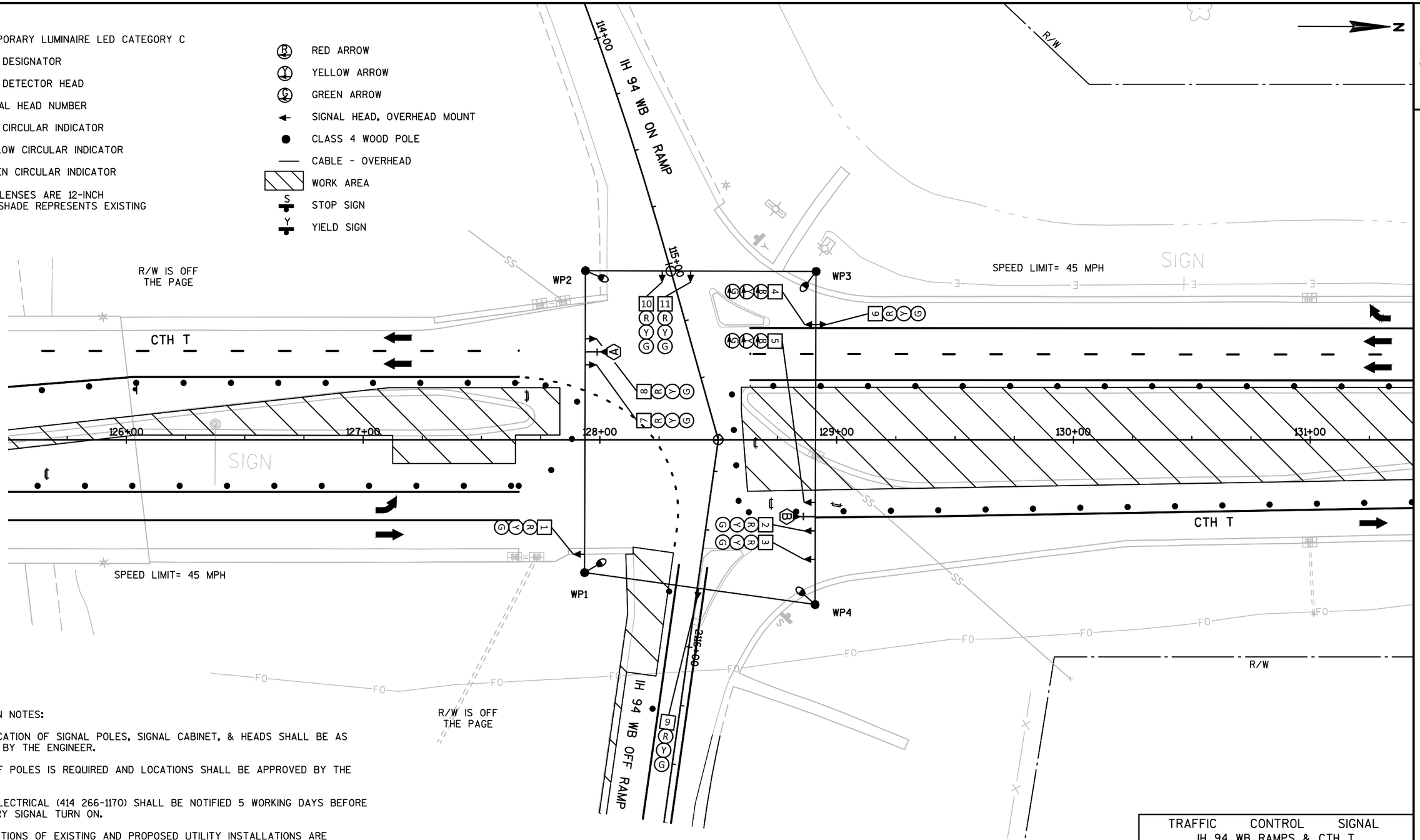
DATE: 08/2018 PAGE NUMBER: 5 OF 5

LEGEND

- TEMPORARY LUMINAIRE LED CATEGORY C
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- CABLE - OVERHEAD
- WORK AREA
- STOP SIGN
- YIELD SIGN



CONSTRUCTION NOTES:

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2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. WISDOT ELECTRICAL (414 266-1170) SHALL BE NOTIFIED 5 WORKING DAYS BEFORE TEMPORARY SIGNAL TURN ON.
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6. INSTALL TEMPORARY AIRPORT OBSTRUCTION LIGHTS ON ALL WOOD POLES.

TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS & CTH T
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0538

REGION CONTACT: JOYCE MURPHY
DESIGNED BY: HNTB
REVISED BY:

PAGE 1 OF 5

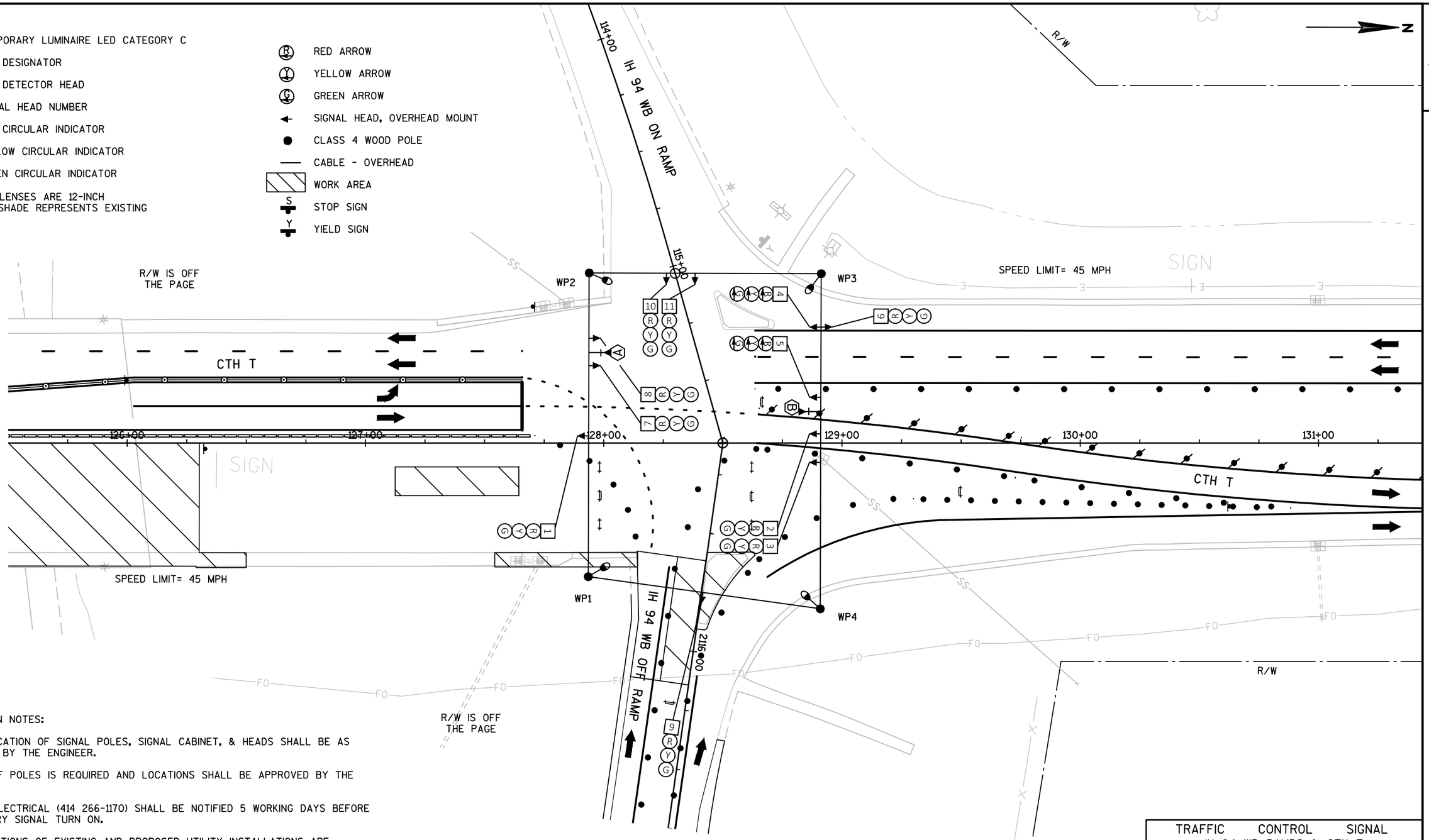
PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET 45 E

LEGEND

- TEMPORARY LUMINAIRE LED CATEGORY C
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

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- YELLOW ARROW
- GREEN ARROW
- SIGNAL HEAD, OVERHEAD MOUNT
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- WORK AREA
- STOP SIGN
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TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS & CTH T
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0538

REGION CONTACT: JOYCE MURPHY
DESIGNED BY: HNTB
REVISED BY:

PAGE 2 OF 5

PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1B	SHEET 46 E

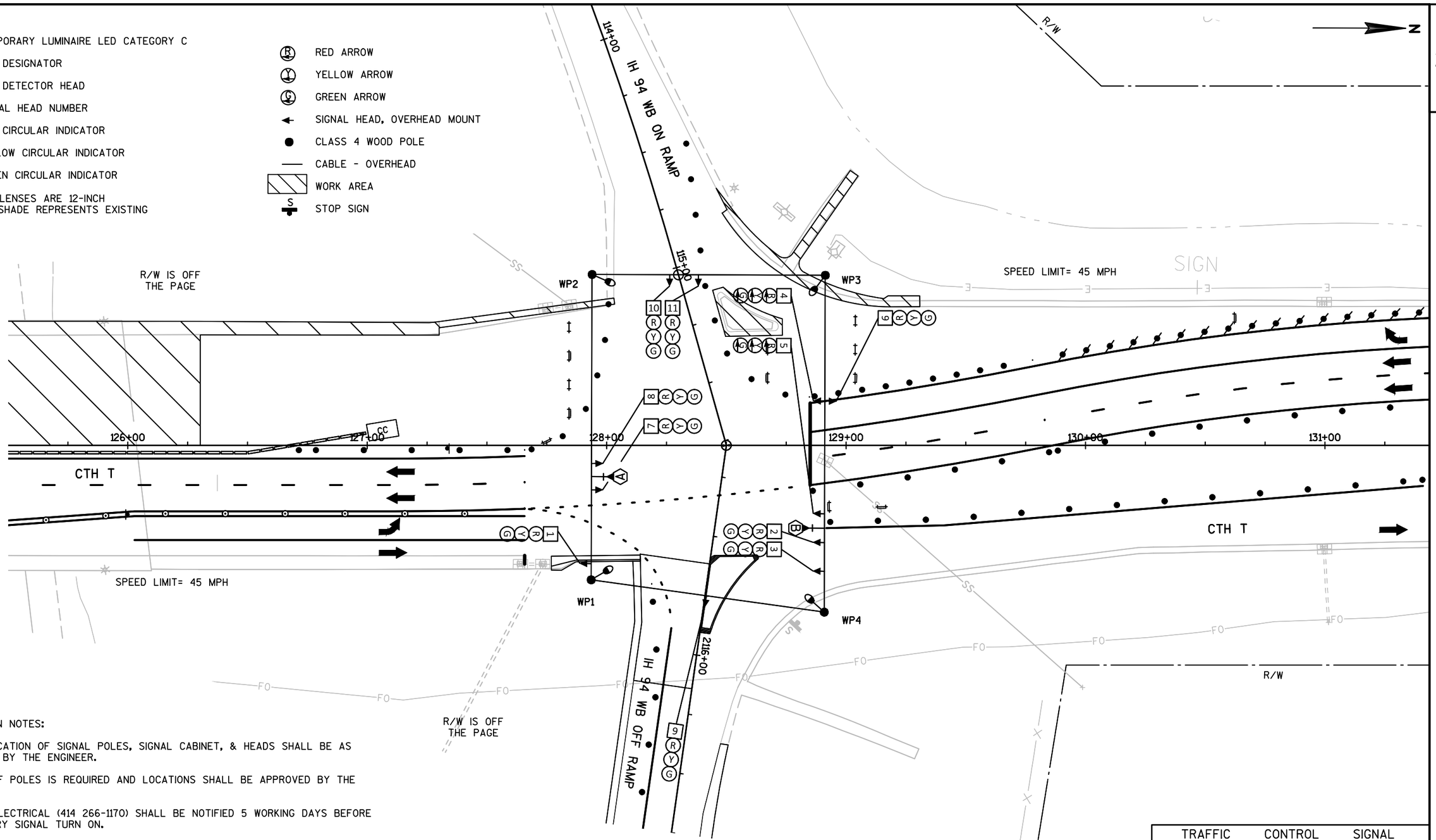
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LAYOUT NAME - S67-0538_STAGE1B_PG1

PLOT DATE : 10/3/2022 11:51 AM PLOT BY : SCHUMACHER, JAMES D PLOT NAME : PLOT SCALE : 1 IN:40 FT

LEGEND

- TEMPORARY LUMINAIRE LED CATEGORY C
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- CABLE - OVERHEAD
- WORK AREA
- STOP SIGN

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



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TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS & CTH T
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0538

REGION CONTACT: JOYCE MURPHY
DESIGNED BY: HNTB
REVISED BY:

PAGE 3 OF 5

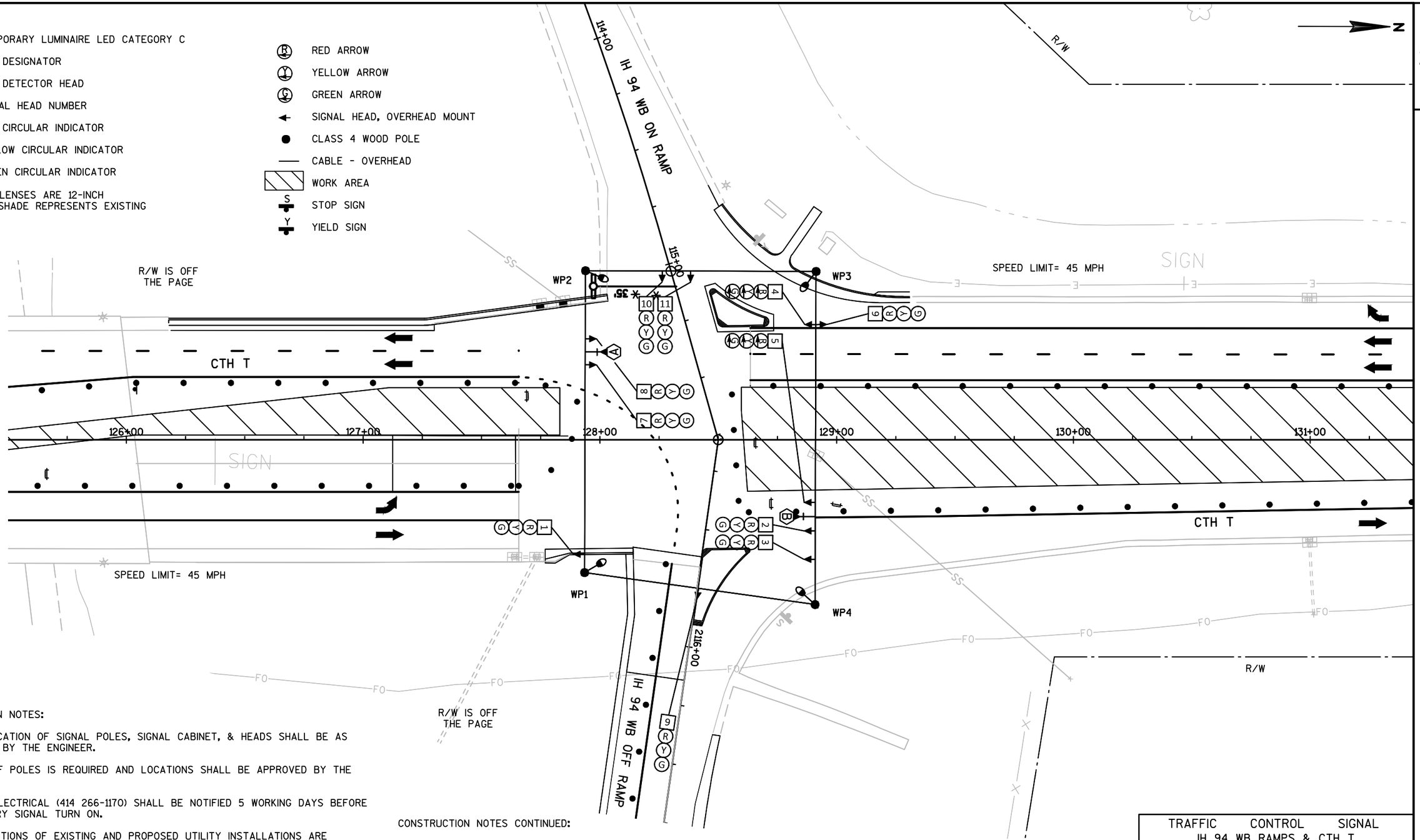
PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1C	SHEET 47 E

LEGEND

- TEMPORARY LUMINAIRE LED CATEGORY C
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- CABLE - OVERHEAD
- WORK AREA
- STOP SIGN
- YIELD SIGN



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CONSTRUCTION NOTES CONTINUED:

* THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARMS IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE ARE INSTALLED. IF THE MONOTUBE ARMS OBSTRUCT THE TEMPORARY TRAFFIC SIGNAL HEADS ON THE SPAN WIRE, THE CONTRACTOR SHALL MOVE THE TEMPORARY TRAFFIC SIGNAL HEADS TO THE MONOTUBE ARMS AND HAVE THEM OPERATIONAL WITHIN 2 HOURS OF THE MONOTUBE ARM INSTALLATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE TEMPORARY TRAFFIC SIGNAL HEADS ON THE MONOTUBE ARMS. THE CONTRACTOR SHALL NOT DRILL ADDITIONAL HOLES INTO THE MONOTUBE ARMS TO FEED THE TEMPORARY TRAFFIC SIGNAL HEADS.

TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS & CTH T
CITY OF WAUKESHA
WAUKESHA COUNTY

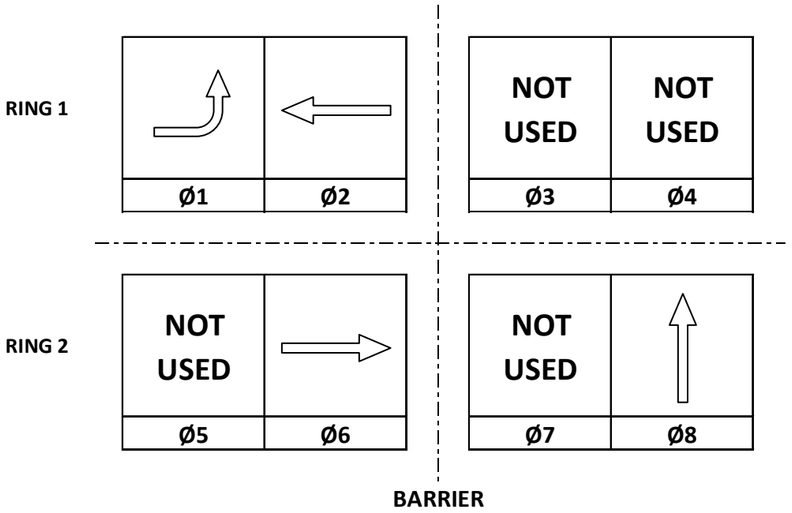
SIGNAL NO. S67-0538

REGION CONTACT: JOYCE MURPHY
DESIGNED BY: HNTB
REVISED BY:

PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1D	SHEET 48 E

FILE NAME : N:\PDS\C3D\CAD\10601000\SIG\TOBOX\S67-0538_STAGE1D.DWG
LAYOUT NAME - S67-0538_STAGE1D_PG1
PLOT DATE : 10/3/2022 12:21 PM PLOT BY : SCHUMACHER, JAMES D PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	4, 5	R ←
Ø2	6, 7, 8	R
Ø3		
Ø4		
Ø5		
Ø6	1, 2, 3	R
Ø7		
Ø8	9, 10, 11	R
Ø2P		
Ø4P		
Ø6P		
Ø8P		
OLA		
OLB		
OLC		
OLD		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6	MAX	X
2	X	6	MAX	X
3				
4				
5				
6	X	2	MAX	X
7				
8			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	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTION	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B
MOVEMENT	← →	→ ↑
PHASE	2+6	6+1

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

IH 94 WB RAMPS & CTH T

CITY OF WAUKESHA

WAUKESHA COUNTY

SIGNAL NO: S67-0538 CABINET TYPE:

CONTROLLER TYPE:

DATE: 08/2018 PAGE NUMBER: 5 OF 5

PROJECT NO: 1060-10-70	HWY: IH 94	COUNTY: WAUKESHA	TEMPORARY SEQUENCE OF OPERATIONS	SHEET NO:	E

2

N

MARKING REMOVAL SPECIAL
MARKING WATER BLASTING
(REMOVE PRIOR TO STAGE 1A)

MARKING REMOVAL LINE
WATER BLASTING WIDE

IH-94 EB OFF RAMP

MARKING REMOVAL LINE
WATER BLASTING 8-INCH

CTH T

IH-94 WB
ON RAMP

CTH T

LEGEND

X X X X = REMOVE PAVEMENT MARKING

N

MARKING REMOVAL LINE
WATER BLASTING 8-INCH

IH-94 WB
OFF RAMP

MARKING REMOVAL LINE
WATER BLASTING WIDE

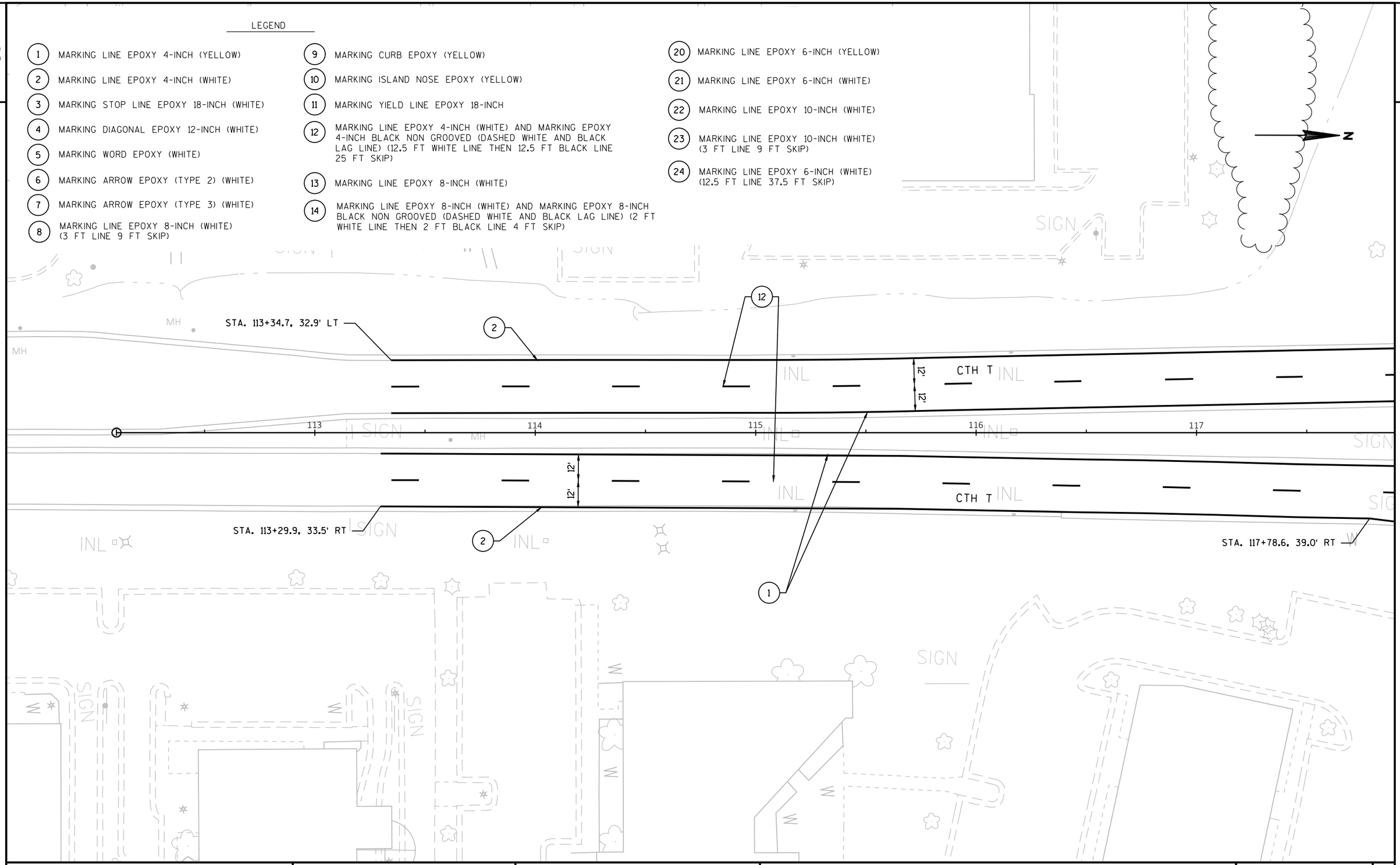
MARKING REMOVAL SPECIAL
MARKING WATER BLASTING
(REMOVE PRIOR TO STAGE 1C)

2

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKING REMOVALS: CTH T	SHEET 50	E

LEGEND

1. MARKING LINE EPOXY 4-INCH (YELLOW)
2. MARKING LINE EPOXY 4-INCH (WHITE)
3. MARKING STOP LINE EPOXY 18-INCH (WHITE)
4. MARKING DIAGONAL EPOXY 12-INCH (WHITE)
5. MARKING WORD EPOXY (WHITE)
6. MARKING ARROW EPOXY (TYPE 2) (WHITE)
7. MARKING ARROW EPOXY (TYPE 3) (WHITE)
8. MARKING LINE EPOXY 8-INCH (WHITE) (3 FT LINE 9 FT SKIP)
9. MARKING CURB EPOXY (YELLOW)
10. MARKING ISLAND NOSE EPOXY (YELLOW)
11. MARKING YIELD LINE EPOXY 18-INCH
12. MARKING LINE EPOXY 4-INCH (WHITE) AND MARKING EPOXY 4-INCH BLACK NON GROOVED (DASHED WHITE AND BLACK LAG LINE) (12.5 FT WHITE LINE THEN 12.5 FT BLACK LINE 25 FT SKIP)
13. MARKING LINE EPOXY 8-INCH (WHITE)
14. MARKING LINE EPOXY 8-INCH (WHITE) AND MARKING EPOXY 8-INCH BLACK NON GROOVED (DASHED WHITE AND BLACK LAG LINE) (2 FT WHITE LINE THEN 2 FT BLACK LINE 4 FT SKIP)
20. MARKING LINE EPOXY 6-INCH (YELLOW)
21. MARKING LINE EPOXY 6-INCH (WHITE)
22. MARKING LINE EPOXY 10-INCH (WHITE)
23. MARKING LINE EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
24. MARKING LINE EPOXY 6-INCH (WHITE) (12.5 FT LINE 37.5 FT SKIP)



PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKINGS: CTH T	SHEET 51	E

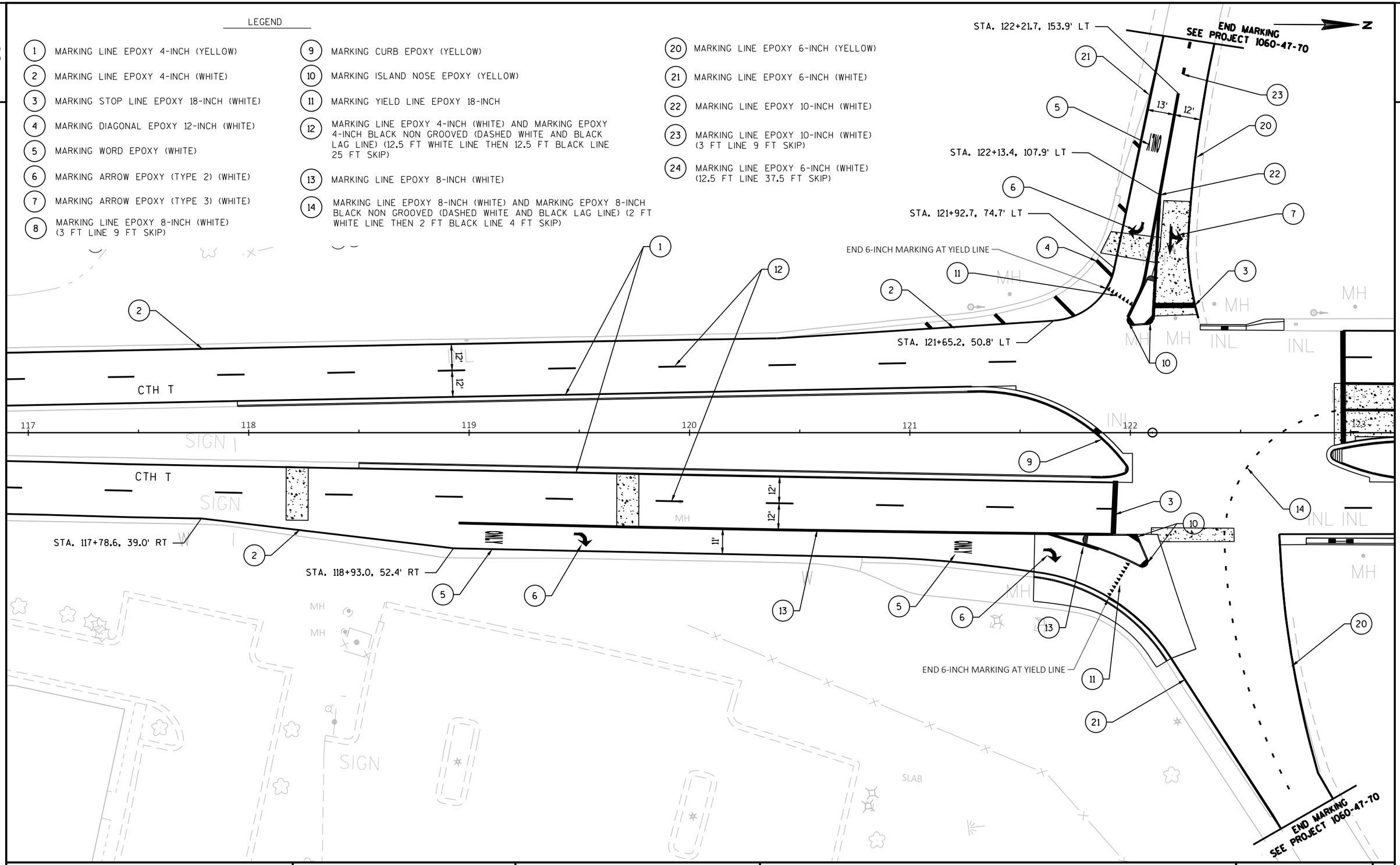
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LAYOUT NAME - 024501-PM CTH T

PLOT DATE : 7/17/2023 8:20 AM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

1. MARKING LINE EPOXY 4-INCH (YELLOW)
2. MARKING LINE EPOXY 4-INCH (WHITE)
3. MARKING STOP LINE EPOXY 18-INCH (WHITE)
4. MARKING DIAGONAL EPOXY 12-INCH (WHITE)
5. MARKING WORD EPOXY (WHITE)
6. MARKING ARROW EPOXY (TYPE 2) (WHITE)
7. MARKING ARROW EPOXY (TYPE 3) (WHITE)
8. MARKING LINE EPOXY 8-INCH (WHITE) (3 FT LINE 9 FT SKIP)
9. MARKING CURB EPOXY (YELLOW)
10. MARKING ISLAND NOSE EPOXY (YELLOW)
11. MARKING YIELD LINE EPOXY 18-INCH
12. MARKING LINE EPOXY 4-INCH (WHITE) AND MARKING EPOXY 4-INCH BLACK NON GROOVED (DASHED WHITE AND BLACK LAG LINE) (12.5 FT WHITE LINE THEN 12.5 FT BLACK LINE 25 FT SKIP)
13. MARKING LINE EPOXY 8-INCH (WHITE)
14. MARKING LINE EPOXY 8-INCH (WHITE) AND MARKING EPOXY 8-INCH BLACK NON GROOVED (DASHED WHITE AND BLACK LAG LINE) (2 FT WHITE LINE THEN 2 FT BLACK LINE 4 FT SKIP)
20. MARKING LINE EPOXY 6-INCH (YELLOW)
21. MARKING LINE EPOXY 6-INCH (WHITE)
22. MARKING LINE EPOXY 10-INCH (WHITE)
23. MARKING LINE EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
24. MARKING LINE EPOXY 6-INCH (WHITE) (12.5 FT LINE 37.5 FT SKIP)



PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKINGS: CTH T	SHEET 52	E

LEGEND

1. MARKING LINE EPOXY 4-INCH (YELLOW)
2. MARKING LINE EPOXY 4-INCH (WHITE)
3. MARKING STOP LINE EPOXY 18-INCH (WHITE)
4. MARKING DIAGONAL EPOXY 12-INCH (WHITE)
5. MARKING WORD EPOXY (WHITE)
6. MARKING ARROW EPOXY (TYPE 2) (WHITE)
7. MARKING ARROW EPOXY (TYPE 3) (WHITE)
8. MARKING LINE EPOXY 8-INCH (WHITE) (3 FT LINE 9 FT SKIP)
9. MARKING CURB EPOXY (YELLOW)
10. MARKING ISLAND NOSE EPOXY (YELLOW)
11. MARKING YIELD LINE EPOXY 18-INCH
12. MARKING LINE EPOXY 4-INCH (WHITE) AND MARKING EPOXY 4-INCH BLACK NON GROOVED (DASHED WHITE AND BLACK LAG LINE) (12.5 FT WHITE LINE THEN 12.5 FT BLACK LINE 25 FT SKIP)
13. MARKING LINE EPOXY 8-INCH (WHITE)
14. MARKING LINE EPOXY 8-INCH (WHITE) AND MARKING EPOXY 8-INCH BLACK NON GROOVED (DASHED WHITE AND BLACK LAG LINE) (2 FT WHITE LINE THEN 2 FT BLACK LINE 4 FT SKIP)
20. MARKING LINE EPOXY 6-INCH (YELLOW)
21. MARKING LINE EPOXY 6-INCH (WHITE)
22. MARKING LINE EPOXY 10-INCH (WHITE)
23. MARKING LINE EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
24. MARKING LINE EPOXY 6-INCH (WHITE) (12.5 FT LINE 37.5 FT SKIP)

N

END MARKING SEE PROJECT 1060-47-70

CTH T

STA. 126+08.8, 22.1' LT

STA. 124+97.8, 22.1' RT

STA. 128+33.2, 111.7' RT

IH-94 EB

IH-94 WB

ONLY

12'

13'

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKINGS: CTH T	SHEET 53	E

2

END MARKING
SEE PROJECT 1060-47-70

END 6-INCH
MARKING AT YIELD LINE

CTH T

11'
12'
12'

STA. 129+02.8, 45.1' RT

END 6-INCH
MARKING AT YIELD LINE

STA. 128+61.0, 75.5' RT

STA. 128+47.9, 114.9' RT

STA. 128+39.9, 153.6' RT

END MARKING
SEE PROJECT 1060-47-70

ONLY

SIGN

INL

MH

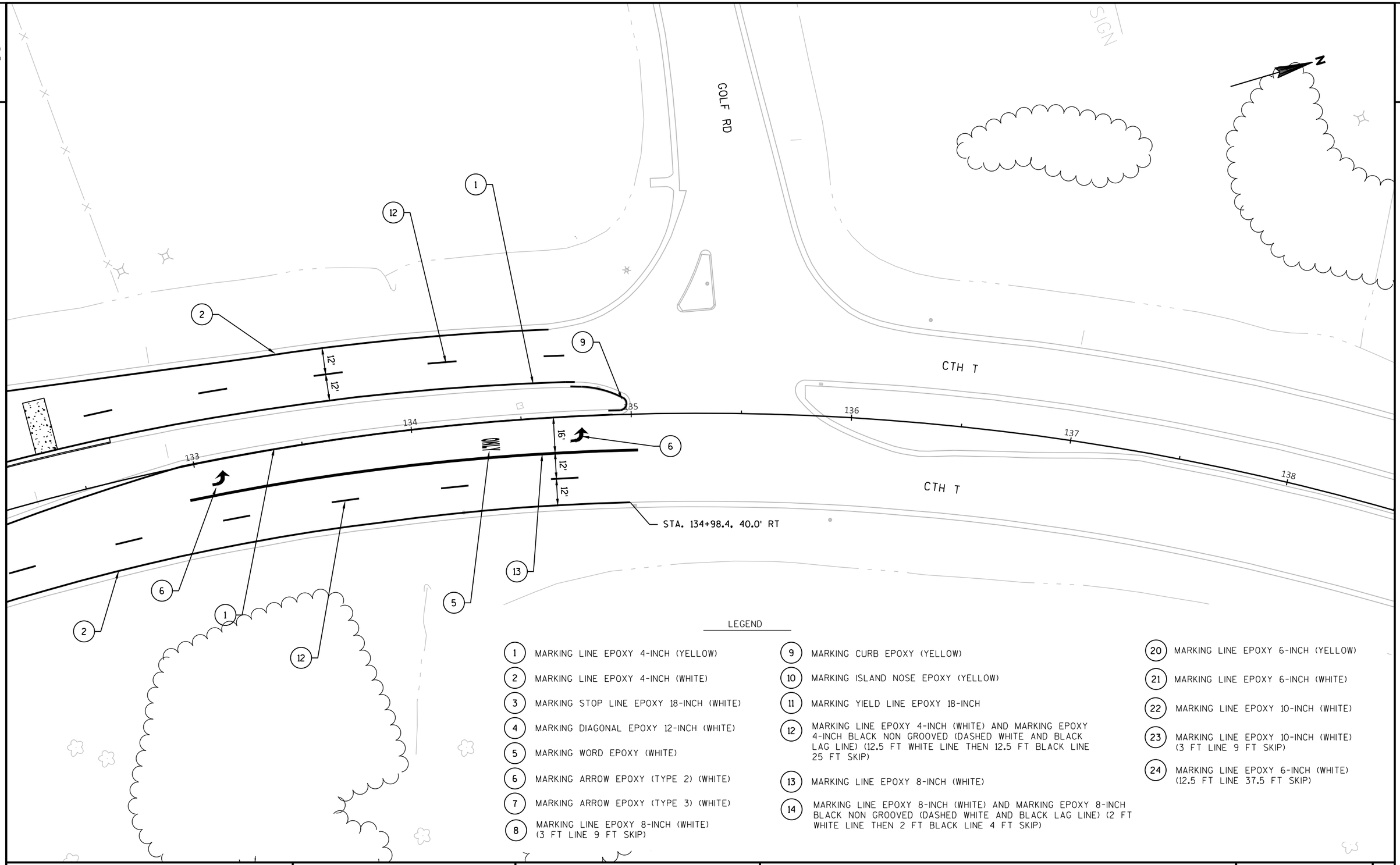
LEGEND

1. MARKING LINE EPOXY 4-INCH (YELLOW)
2. MARKING LINE EPOXY 4-INCH (WHITE)
3. MARKING STOP LINE EPOXY 18-INCH (WHITE)
4. MARKING DIAGONAL EPOXY 12-INCH (WHITE)
5. MARKING WORD EPOXY (WHITE)
6. MARKING ARROW EPOXY (TYPE 2) (WHITE)
7. MARKING ARROW EPOXY (TYPE 3) (WHITE)
8. MARKING LINE EPOXY 8-INCH (WHITE) (3 FT LINE 9 FT SKIP)
9. MARKING CURB EPOXY (YELLOW)
10. MARKING ISLAND NOSE EPOXY (YELLOW)
11. MARKING YIELD LINE EPOXY 18-INCH
12. MARKING LINE EPOXY 4-INCH (WHITE) AND MARKING EPOXY 4-INCH BLACK NON GROOVED (DASHED WHITE AND BLACK LAG LINE) (12.5 FT WHITE LINE THEN 12.5 FT BLACK LINE 25 FT SKIP)
13. MARKING LINE EPOXY 8-INCH (WHITE)
14. MARKING LINE EPOXY 8-INCH (WHITE) AND MARKING EPOXY 8-INCH BLACK NON GROOVED (DASHED WHITE AND BLACK LAG LINE) (2 FT WHITE LINE THEN 2 FT BLACK LINE 4 FT SKIP)
20. MARKING LINE EPOXY 6-INCH (YELLOW)
21. MARKING LINE EPOXY 6-INCH (WHITE)
22. MARKING LINE EPOXY 10-INCH (WHITE)
23. MARKING LINE EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
24. MARKING LINE EPOXY 6-INCH (WHITE) (12.5 FT LINE 37.5 FT SKIP)

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKINGS: CTH T	SHEET 54	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\024501-PM CTH T.DWG
LAYOUT NAME - 024504-PM CTH T
PLOT DATE : 7/17/2023 8:20 AM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2



LEGEND

1. MARKING LINE EPOXY 4-INCH (YELLOW)
2. MARKING LINE EPOXY 4-INCH (WHITE)
3. MARKING STOP LINE EPOXY 18-INCH (WHITE)
4. MARKING DIAGONAL EPOXY 12-INCH (WHITE)
5. MARKING WORD EPOXY (WHITE)
6. MARKING ARROW EPOXY (TYPE 2) (WHITE)
7. MARKING ARROW EPOXY (TYPE 3) (WHITE)
8. MARKING LINE EPOXY 8-INCH (WHITE) (3 FT LINE 9 FT SKIP)
9. MARKING CURB EPOXY (YELLOW)
10. MARKING ISLAND NOSE EPOXY (YELLOW)
11. MARKING YIELD LINE EPOXY 18-INCH
12. MARKING LINE EPOXY 4-INCH (WHITE) AND MARKING EPOXY 4-INCH BLACK NON GROOVED (DASHED WHITE AND BLACK LAG LINE) (12.5 FT WHITE LINE THEN 12.5 FT BLACK LINE 25 FT SKIP)
13. MARKING LINE EPOXY 8-INCH (WHITE)
14. MARKING LINE EPOXY 8-INCH (WHITE) AND MARKING EPOXY 8-INCH BLACK NON GROOVED (DASHED WHITE AND BLACK LAG LINE) (2 FT WHITE LINE THEN 2 FT BLACK LINE 4 FT SKIP)
20. MARKING LINE EPOXY 6-INCH (YELLOW)
21. MARKING LINE EPOXY 6-INCH (WHITE)
22. MARKING LINE EPOXY 10-INCH (WHITE)
23. MARKING LINE EPOXY 10-INCH (WHITE) (3 FT LINE 9 FT SKIP)
24. MARKING LINE EPOXY 6-INCH (WHITE) (12.5 FT LINE 37.5 FT SKIP)

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKINGS: CTH T	SHEET 55	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\024501-PM CTH T.DWG
LAYOUT NAME - 024505-PM CTH T
PLOT DATE : 7/17/2023 8:20 AM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

SCOT DR

SIGN

STA. 11+62.8, 12' LT

STA. 11+62.8, 0.25' LT

STA. 12+65.2, 23' LT

STA. 13+79.7, 11.9' LT

CTH JJ

12'

12'

INL

11 12 13 14 15 16 17

STA. 11+62.8, 0.25' RT

STA. 11+62.8, 12' RT

FLAG

W

W

WB IH-94

EB IH-94

INL

MH

N

LEGEND

1 MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)

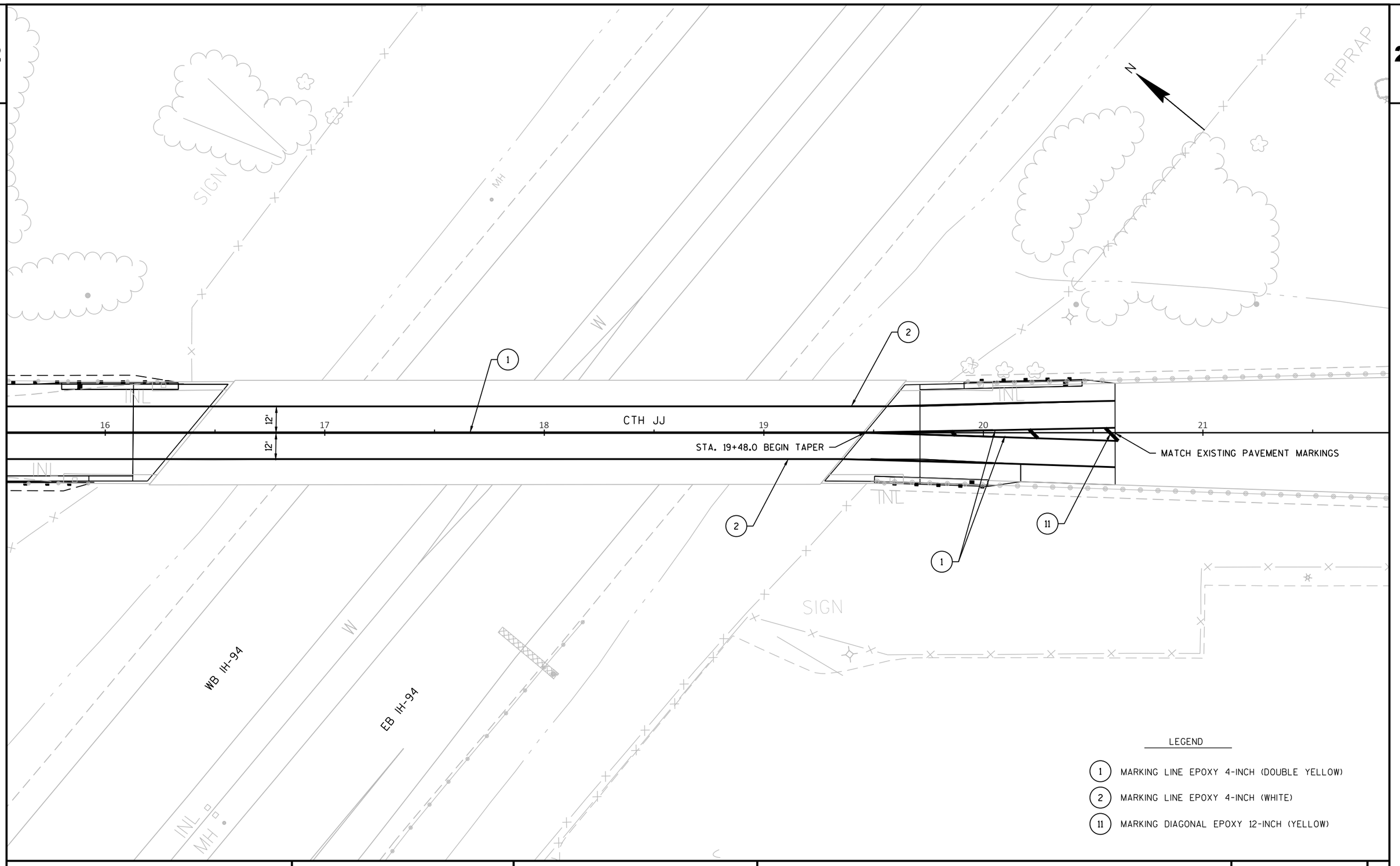
2 MARKING LINE EPOXY 4-INCH (WHITE)

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKINGS: CTH JJ	SHEET 56 E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\024508-PM CTH JJ.DWG
LAYOUT NAME - 024508-PM CTH JJ - 024508-PM CTH JJ

PLOT DATE : 10/12/2022 12:05 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

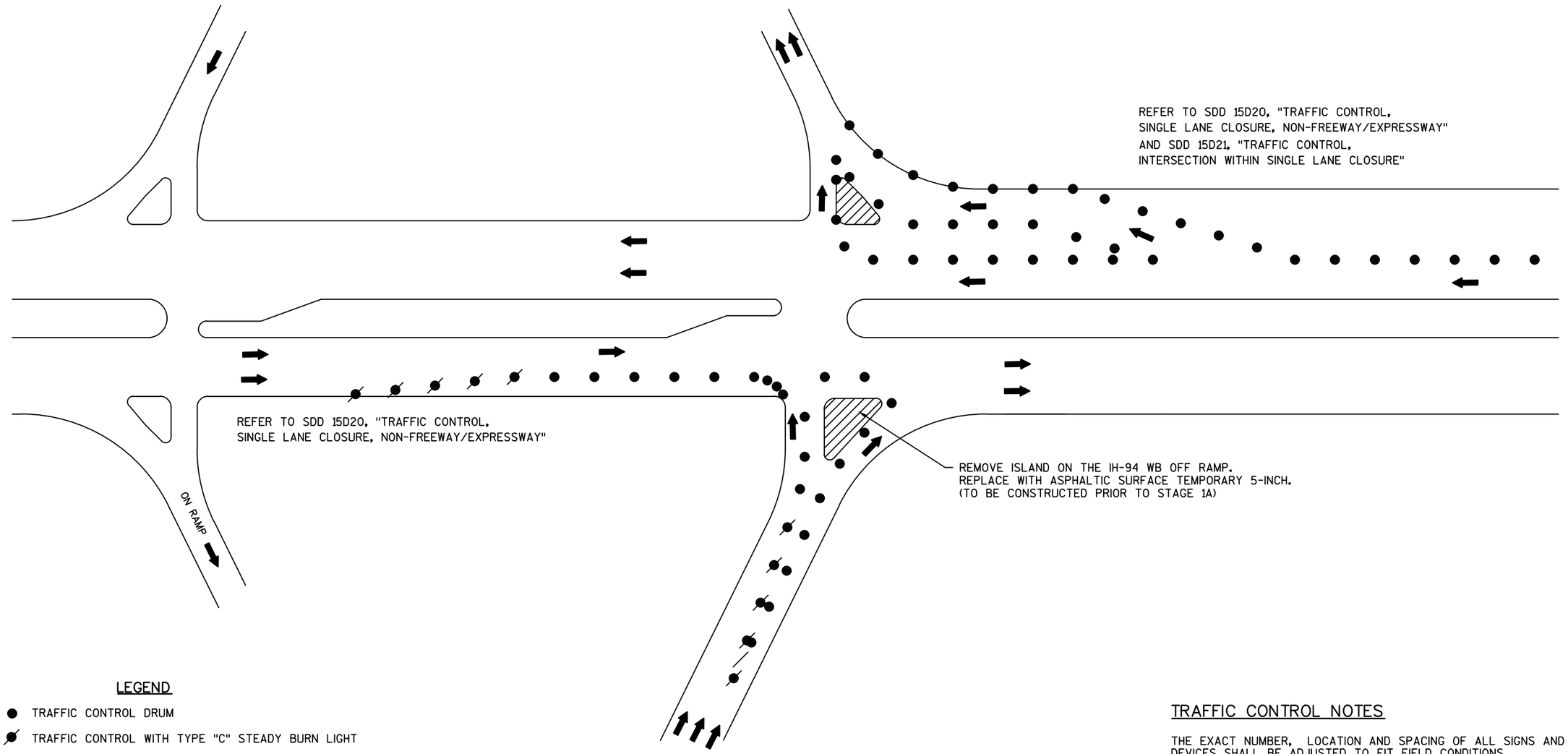


PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	PAVEMENT MARKINGS: CTH JJ	SHEET 57 E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\024508-PM CTH JJ.DWG
LAYOUT NAME - 024508-PM CTH JJ - 024509-PM CTH JJ

PLOT DATE : 10/12/2022 12:05 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:40 FT

2



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH 2 TYPE "A" WARNING LIGHT (FLASHING)
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- WORK ZONE

TRAFFIC CONTROL FOR RAMP ISLAND CLOSURE
SHORT TERM ONLY

TRAFFIC CONTROL NOTES

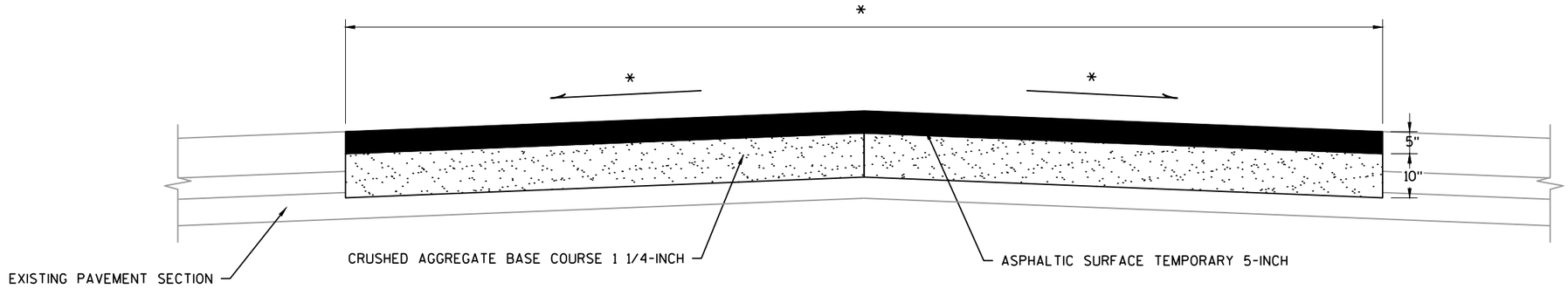
THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

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

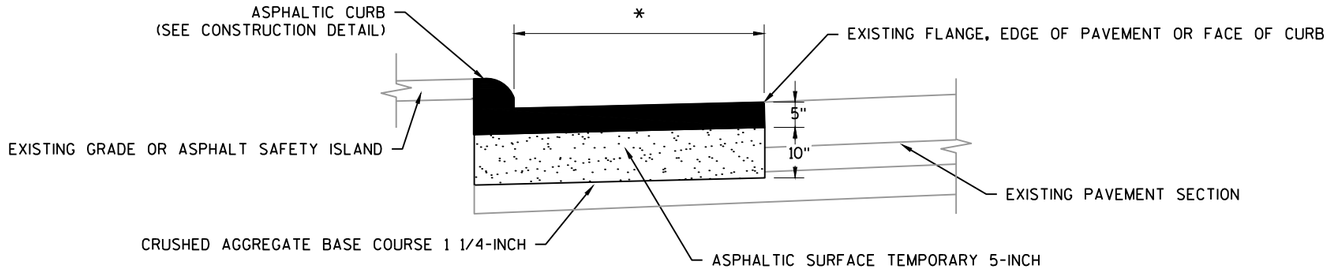
"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SHORT TERM DEFINED AS 7 DAYS/NIGHTS OR LESS. FOR NIGHT TIME OPERATIONS ALL DRUMS IN TAPERS SHALL HAVE WARNING LIGHT, TYPE C (STEADY BURN). MAY BE APPLIED TO ARTERIALS OR LOCAL ROADS.

2



SECTION A-A



SECTION B-B

* VARIES - REFER TO CROSSOVER PLAN

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CROSSOVER DETAIL	SHEET 59	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\025001-TC CTH T CROSSOVER.DWG
LAYOUT NAME - 025001-TC CTH T CROSSOVER
PLOT DATE : 9/22/2022 9:32 AM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : ******
WISDOT/CADDS SHEET 42

LEGEND

- ASPHALTIC SURFACE TEMPORARY 5-INCH
- PV05 ASPHALTIC CURB
- TP01 REMOVE INLET GRATE AND PLATE INLET PRIOR TO PAVING CROSSOVER
- D ASPHALTIC SURFACE TEMPORARY, 5-INCH

117+94.92"T", -14.37' LT
118+00 "T"
119+00 "T"
120+00 "T"
121+00 "T"
122+00 "T"
123+00 "T"
124+00 "T"
125+00 "T"
883.335
884.093
886.776
889.363
-1.4%
-2.3%
-2.7%
-2.1%
-2.9%
-2.2%
-1.8%
-1.1%
-0.9%
PV05
D
TP01
A
SAWCUT AT FLANGE, MATCH EXISTING PAVEMENT
THIS WORK TO BE COMPLETED PRIOR TO STAGE 1C
FASTEN SEWER ACCESS COVERS
COMPLETE THIS WORK PRIOR TO STAGE 1A
122+69.68"T", -46.41' LT
2.7'
4.1'
IH-94 EB OFF RAMP
IH-94 EB ON RAMP
IH-94 WB
IH-94 EB
CTH T
REMOVE RAISED CONCRETE MEDIAN SEE STRUCTURE PLAN.
N

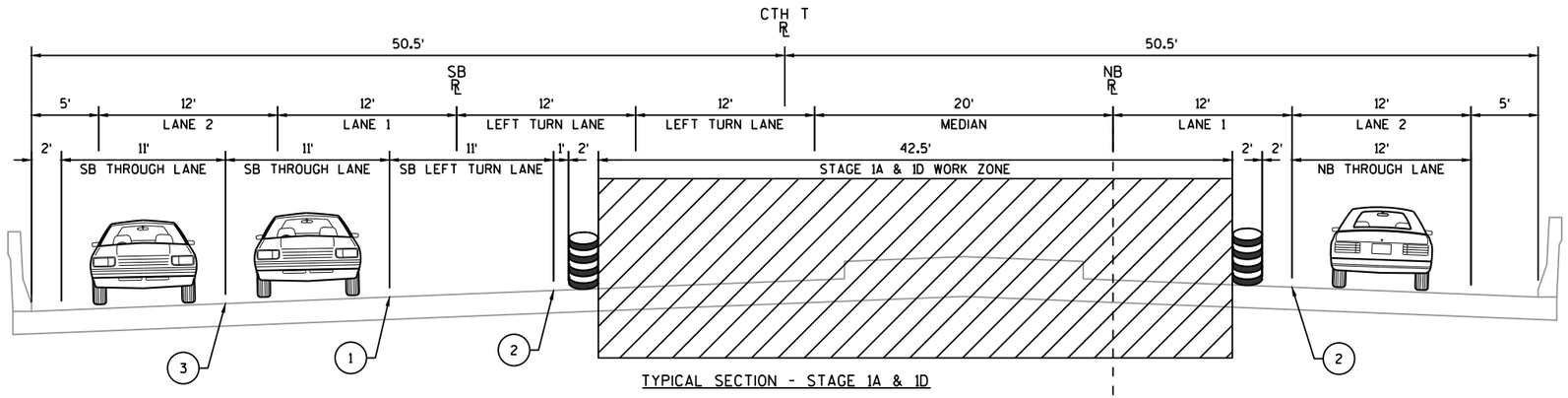
SAWCUT AT FLANGE, MOVE CURB FACE BACK AS NOTED
COMPLETE THIS WORK PRIOR TO STAGE 1A
128+48.87"T", -48.53' LT
128+73.42"T", -48.17' LT
3.0'
2.2'
B
PV05
127+83.08"T", -22.68' LT
132+65.51"T", -20.17' LT
SAWCUT AT FLANGE, MATCH EXISTING PAVEMENT
REMOVE RAISED CONCRETE MEDIAN SEE STRUCTURE PLAN.
CTH T
125+00 "T"
126+00 "T"
127+00 "T"
128+00 "T"
129+00 "T"
130+00 "T"
131+00 "T"
132+00 "T"
896.31
897.33
897.36
896.84
895.58
895.60
893.29
893.673
891.31
891.776
889.51
889.756
887.35
889.31
891.34
893.43
-0.3%
-1.5%
-2.0%
-1.9%
-2.2%
-2.1%
-1.4%
-2.5%
-1.0%
-0.9%
131+50.25"T", 11.60' RT
TP01
SAWCUT AT FACE OF CURB, MOVE CURB FACE BACK AS NOTED
PV05
4.5'
3.5'
1.8'
2.5'
WELD INLET COVERS
127+76.93"T", 50.44' RT
SAWCUT AT LANE EDGE, MOVE CURB BACK AS NOTED
COMPLETE THIS WORK PRIOR TO STAGE 1A
128+14.12"T", 49.06' RT
128+63.06"T", 47.59' RT
COMPLETE THIS WORK PRIOR TO STAGE 1A
128+43.14"T", 48.40' RT
IH-94 WB OFF RAMP
IH-94 WB ON RAMP
IH-94 WB
SIGN

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CROSSOVER CONSTRUCTION	SHEET 60	E

2

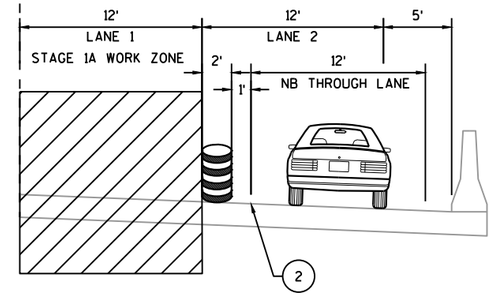
STAGE 1A WORK TO BE PERFORMED
CTH T CROSSOVER CONSTRUCTION
-REMOVE MEDIAN
-REMOVE CURB AND GUTTER
-INSTALL PAVEMENT FOR CROSSOVER
CTH T CONCRETE PAVEMENT REPAIR/REPLACEMENT
IH-94 WB OFF RAMP CONCRETE PAVEMENT REPAIR/REPLACEMENT

STAGE 1D WORK TO BE PERFORMED
CTH T CROSSOVER REMOVAL
-REMOVE CROSSOVER PAVEMENT
-INSTALL CONCRETE PAVEMENT AND CURB & GUTTER
-INSTALL MEDIAN ON BRIDGE
-GRADE MEDIAN



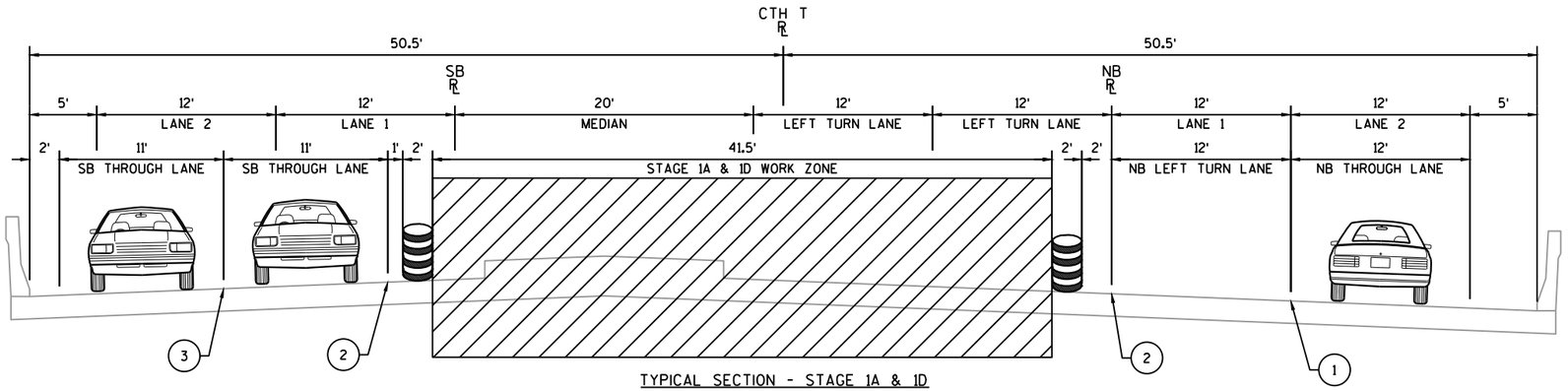
TYPICAL SECTION - STAGE 1A & 1D

CTH T
(SOUTH ABUTMENT)



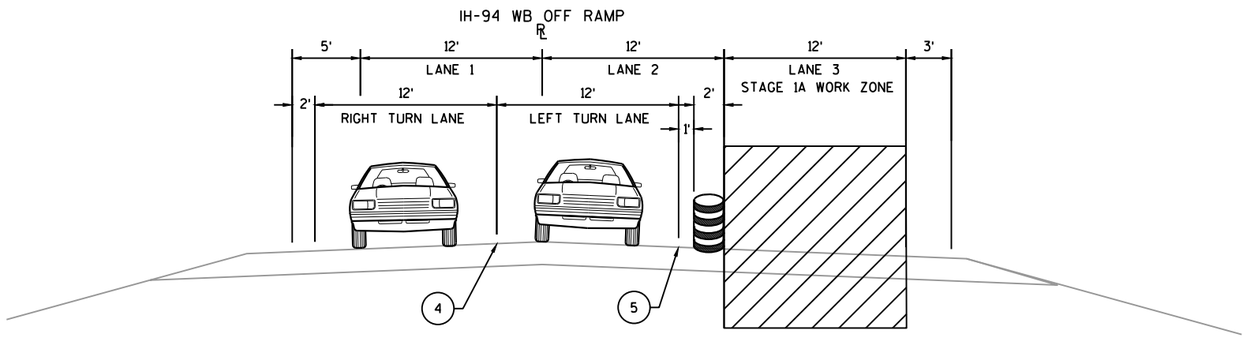
TYPICAL SECTION - STAGE 1A

CTH T
(CONCRETE PAVEMENT REPAIR/REPLACEMENT)



TYPICAL SECTION - STAGE 1A & 1D

CTH T
(NORTH ABUTMENT)



TYPICAL SECTION - STAGE 1A

IH-94 WB OFF RAMP
(CONCRETE PAVEMENT REPAIR/REPLACEMENT)

TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4. TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
5. TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (YELLOW)

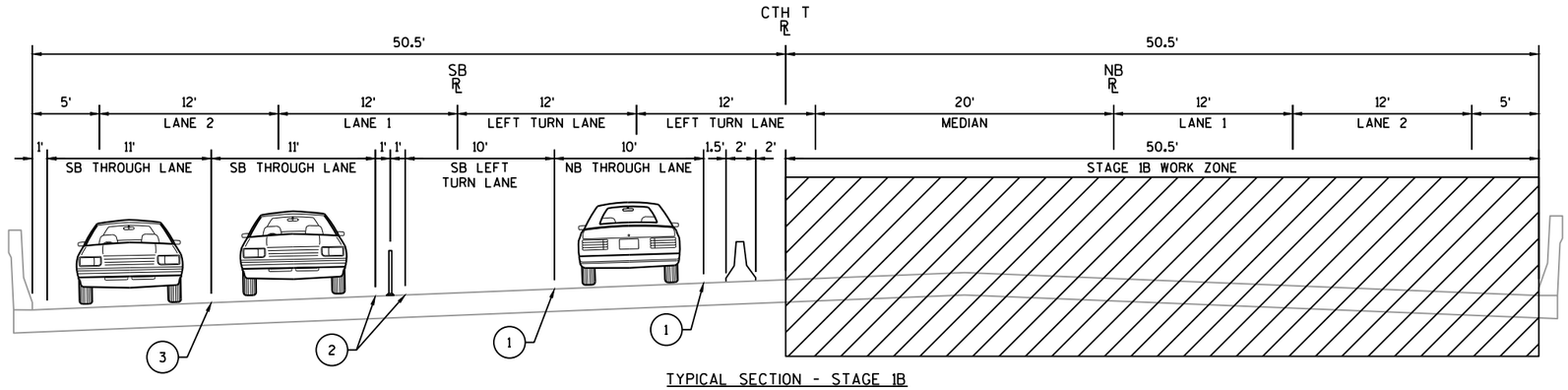
PROJECT NO:1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - TYPICAL SECTIONS	SHEET 61	E

2

STAGE 1B WORK TO BE PERFORMED
CONCRETE OVERLAY ON EAST HALF OF CTH T STRUCTURE
CTH T CONCRETE PAVEMENT REPAIR/REPLACEMENT
IH-94 WB OFF RAMP CONCRETE PAVEMENT REPAIR/REPLACEMENT

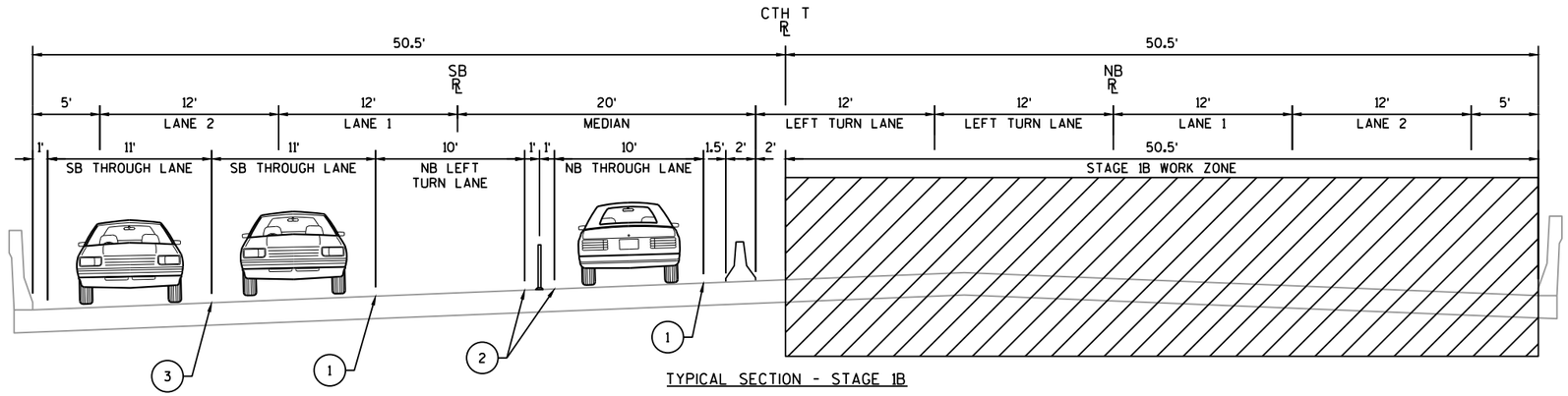
TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4. TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)



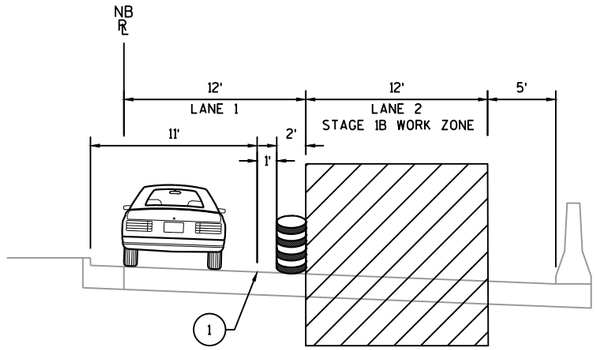
TYPICAL SECTION - STAGE 1B

CTH T
(SOUTH ABUTMENT)



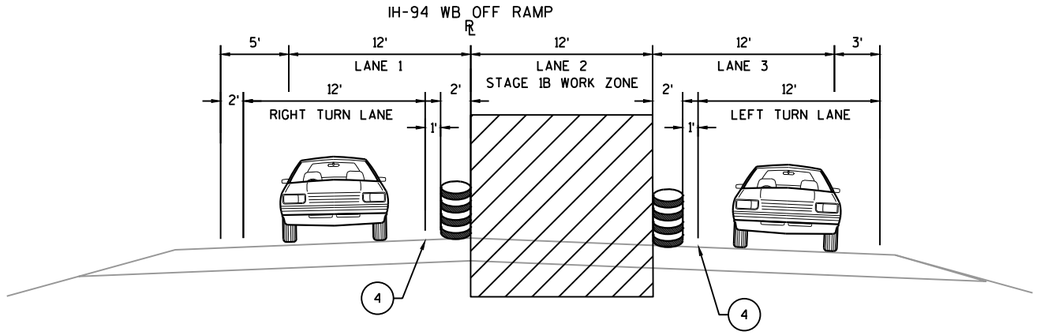
TYPICAL SECTION - STAGE 1B

CTH T
(NORTH ABUTMENT)



TYPICAL SECTION - STAGE 1B

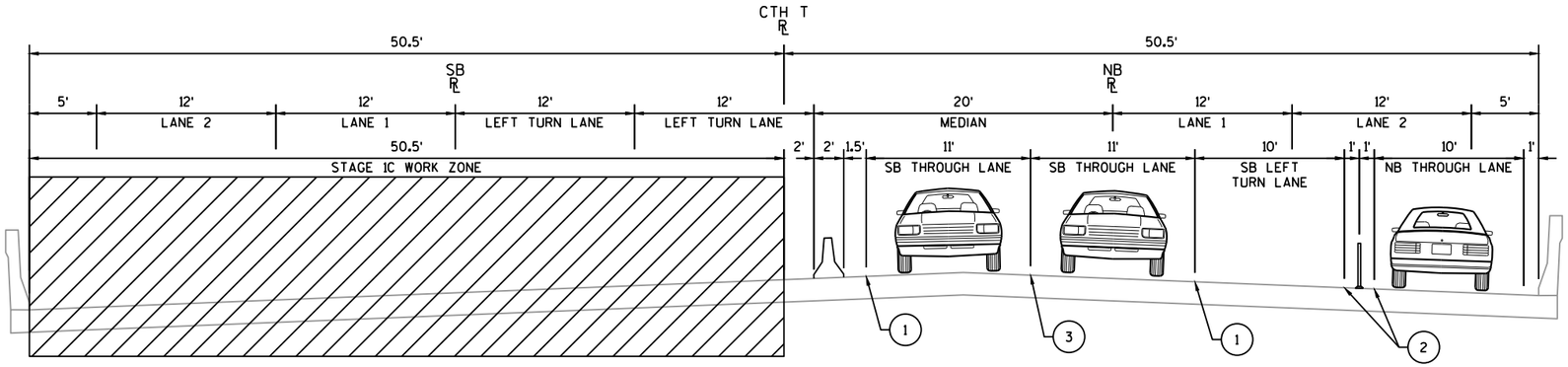
CTH T
(CONCRETE PAVEMENT REPAIR/REPLACEMENT - SOUTH)



TYPICAL SECTION - STAGE 1B

IH-94 WB OFF RAMP
(CONCRETE PAVEMENT REPAIR/REPLACEMENT)

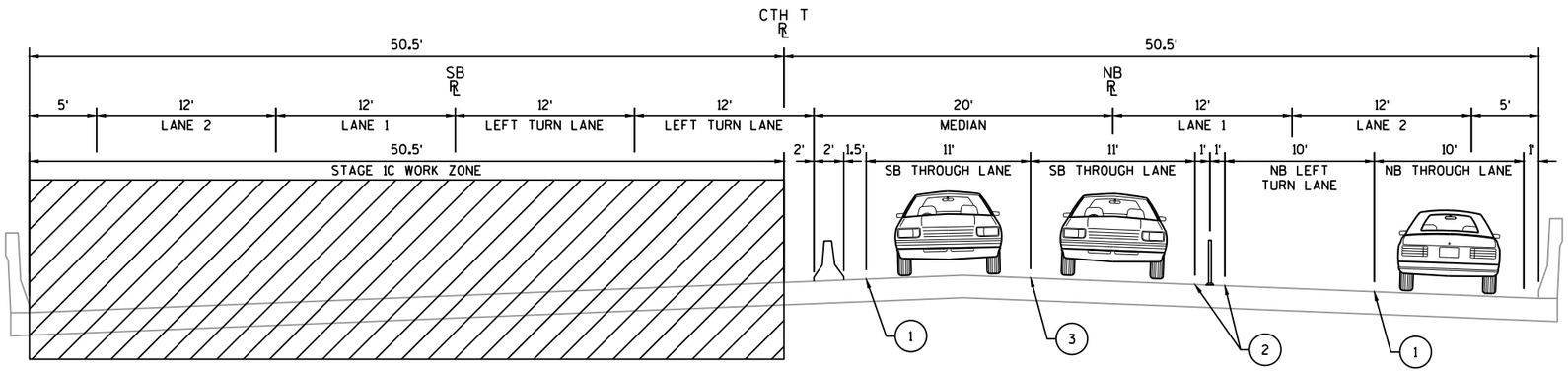
PROJECT NO:1060-10-71	HWY:IH 94	COUNTY:WAUKESHA	TRAFFIC CONTROL - TYPICAL SECTIONS	SHEET 62	E



TYPICAL SECTION - STAGE 1C

CTH T
(SOUTH ABUTMENT)

STAGE 1C WORK TO BE PERFORMED
CONCRETE OVERLAY ON WEST HALF OF CTH T STRUCTURE
CTH T CONCRETE PAVEMENT REPAIR/REPLACEMENT



TYPICAL SECTION - STAGE 1C

CTH T
(NORTH ABUTMENT)

TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)

PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - TYPICAL SECTIONS	SHEET 63	E

2

N

REFER TO SDD 15D-16, "TRAFFIC CONTROL, EXIT RAMP CLOSURE" (TO BE CONSTRUCTED DURING OFF PEAK HOURS). HIGH EARLY STRENGTH CONCRETE REQUIRED.

REFER TO SDD 15D-20, "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" (TO BE CONSTRUCTED DURING OFF PEAK HOURS) HIGH EARLY STRENGTH CONCRETE REQUIRED.

STAGE 1A, CONSTRUCT TEMPORARY CROSSOVER. STAGE 1D, REMOVE CROSSOVER & CONSTRUCT MEDIAN.

STAGE 1C

STAGE 1C

STAGE 1C (OUTSIDE LANE OF PAVEMENT REPLACEMENT)

STAGE 1A (INSIDE LANE OF PAVEMENT REPLACEMENT)

STAGE 1C

STAGE 1C

STAGE 1A, CONSTRUCT TEMPORARY CROSSOVER. STAGE 1D, REMOVE CROSSOVER & CONSTRUCT MEDIAN.

STAGE 1A (INSIDE LANE)

STAGE 1B (OUTSIDE LANE)

STAGE 1C

STAGE 1B

STAGE 1B

PRIOR TO STAGE 1A, REMOVE ISLAND & REPLACE WITH ASPHALTIC SURFACE TEMPORARY. STAGE 1B, CONSTRUCT ISLAND

STAGE 1B (OUTSIDE LANE OF PAVEMENT REPLACEMENT)

STAGE 1A (INSIDE LANE OF PAVEMENT REPLACEMENT)

STAGE 1A (OUTSIDE LANE OF PAVEMENT REPLACEMENT)

STAGE 1B

STAGE 1B (INSIDE LANE OF PAVEMENT REPLACEMENT)

STAGE 1A, CONSTRUCT TEMPORARY CROSSOVER. STAGE 1D, REMOVE CROSSOVER & CONSTRUCT MEDIAN.

COMPLETE PRIOR TO STAGE 1A. REFER TO SDD 15D-27, "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH."

STAGE 1A (OUTSIDE LANE OF PAVEMENT REPAIR)

STAGE 1B (INSIDE LANE OF PAVEMENT REPAIR)

STAGE 1A

PROJECT NO: 1060-10-70	HWY: IH-94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CTH T - STAGE 1 OVERVIEW	SHEET	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\025004_TC CTH T STAGE 1 OVERVIEW.DWG
LAYOUT NAME - 025007B_TC STAGE 1 OVERVIEW

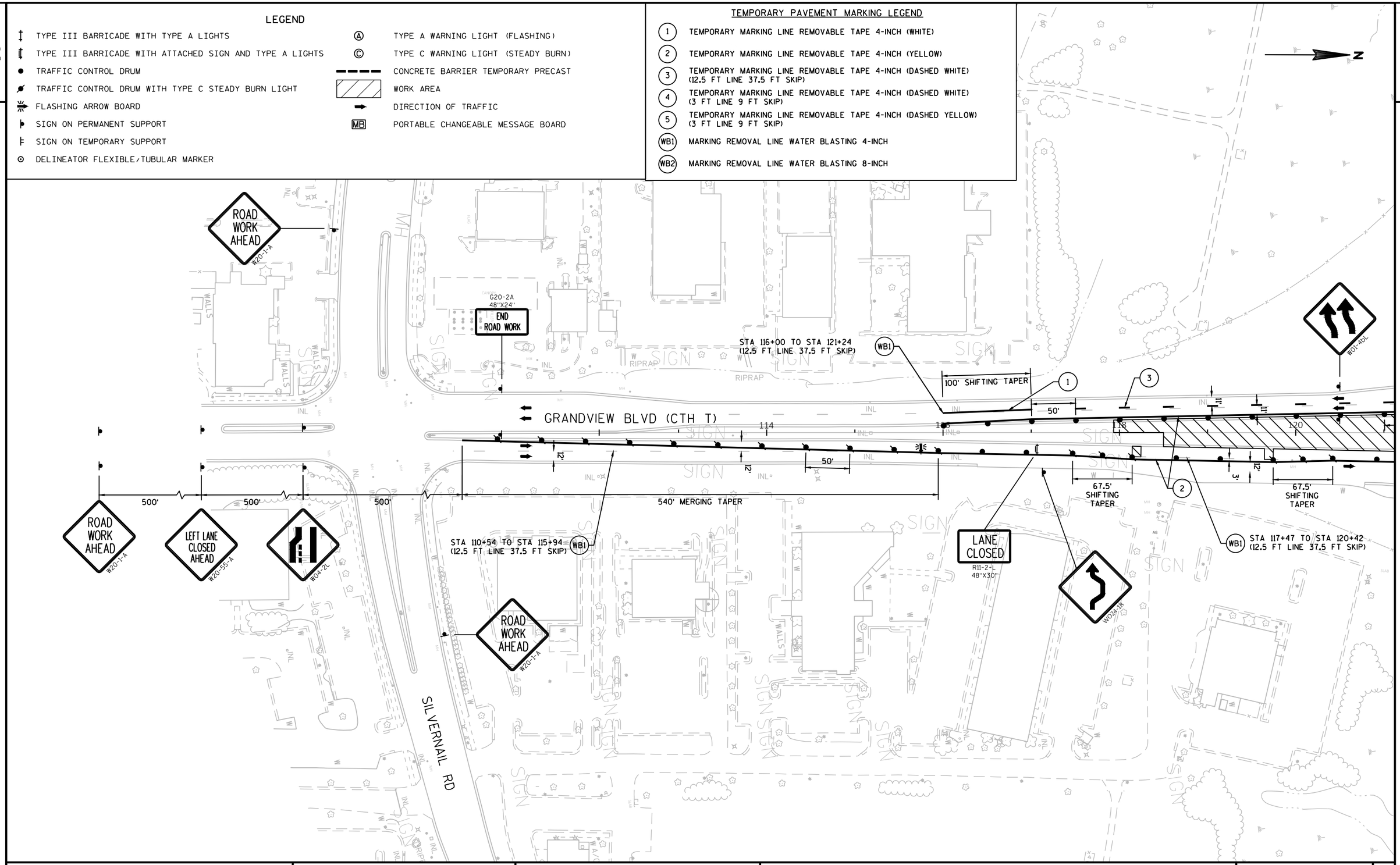
PLOT DATE : 9/19/2022 9:35 AM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:100 FT

LEGEND

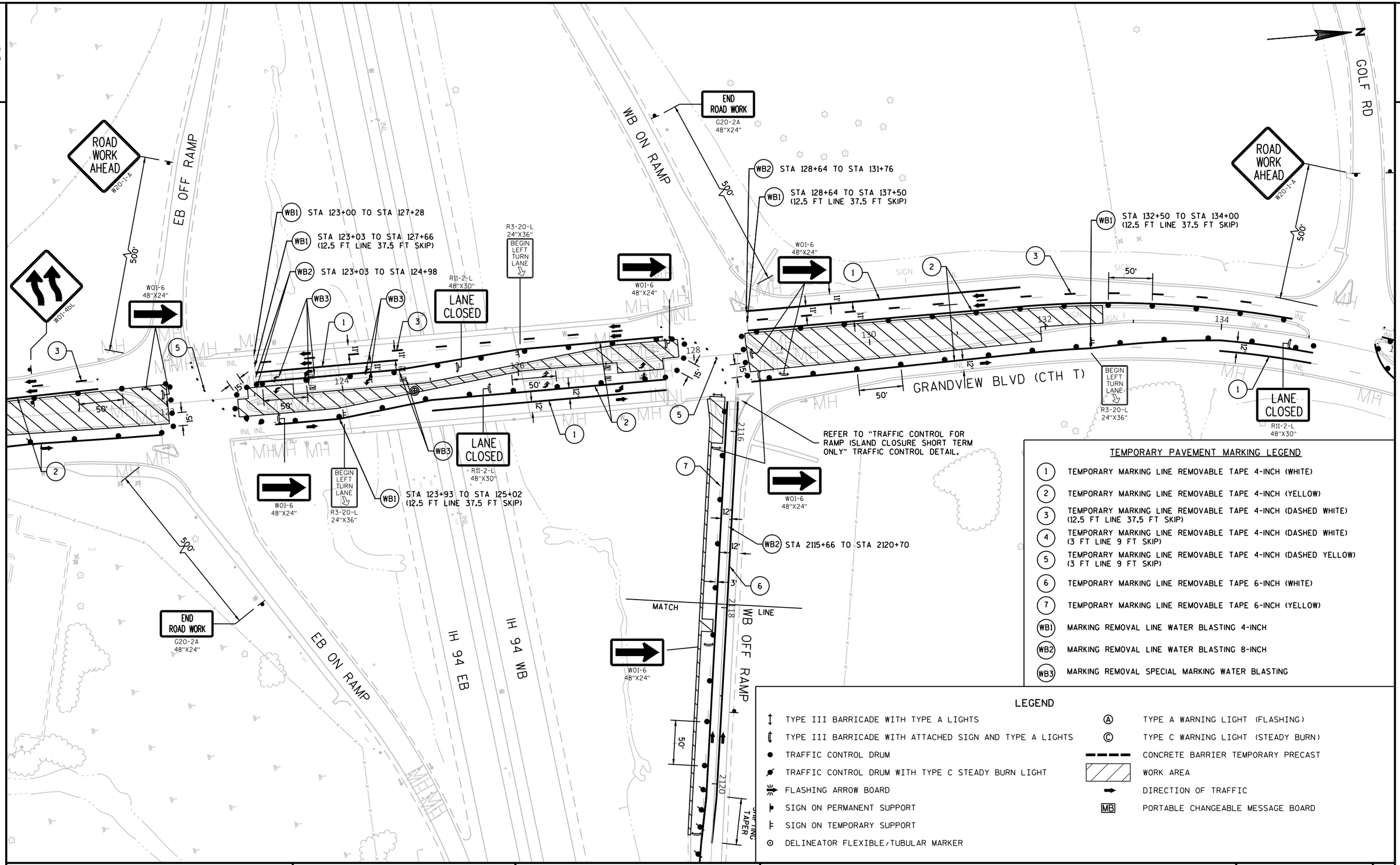
- TYPE III BARRICADE WITH TYPE A LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- (A) TYPE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

TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
5. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED YELLOW) (3 FT LINE 9 FT SKIP)
- WB1 MARKING REMOVAL LINE WATER BLASTING 4-INCH
- WB2 MARKING REMOVAL LINE WATER BLASTING 8-INCH



PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CTH T - STAGE 1A	SHEET 65	E



TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
5. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED YELLOW) (3 FT LINE 9 FT SKIP)
6. TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
7. TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (YELLOW)

WB1 MARKING REMOVAL LINE WATER BLASTING 4-INCH

WB2 MARKING REMOVAL LINE WATER BLASTING 8-INCH

WB3 MARKING REMOVAL SPECIAL MARKING WATER BLASTING

LEGEND

- TYPE III BARRICADE WITH TYPE A LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN AND 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
- (A) TYPE A WARNING LIGHT (FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CTH T - STAGE 1A	SHEET 66	E

2

LEGEND

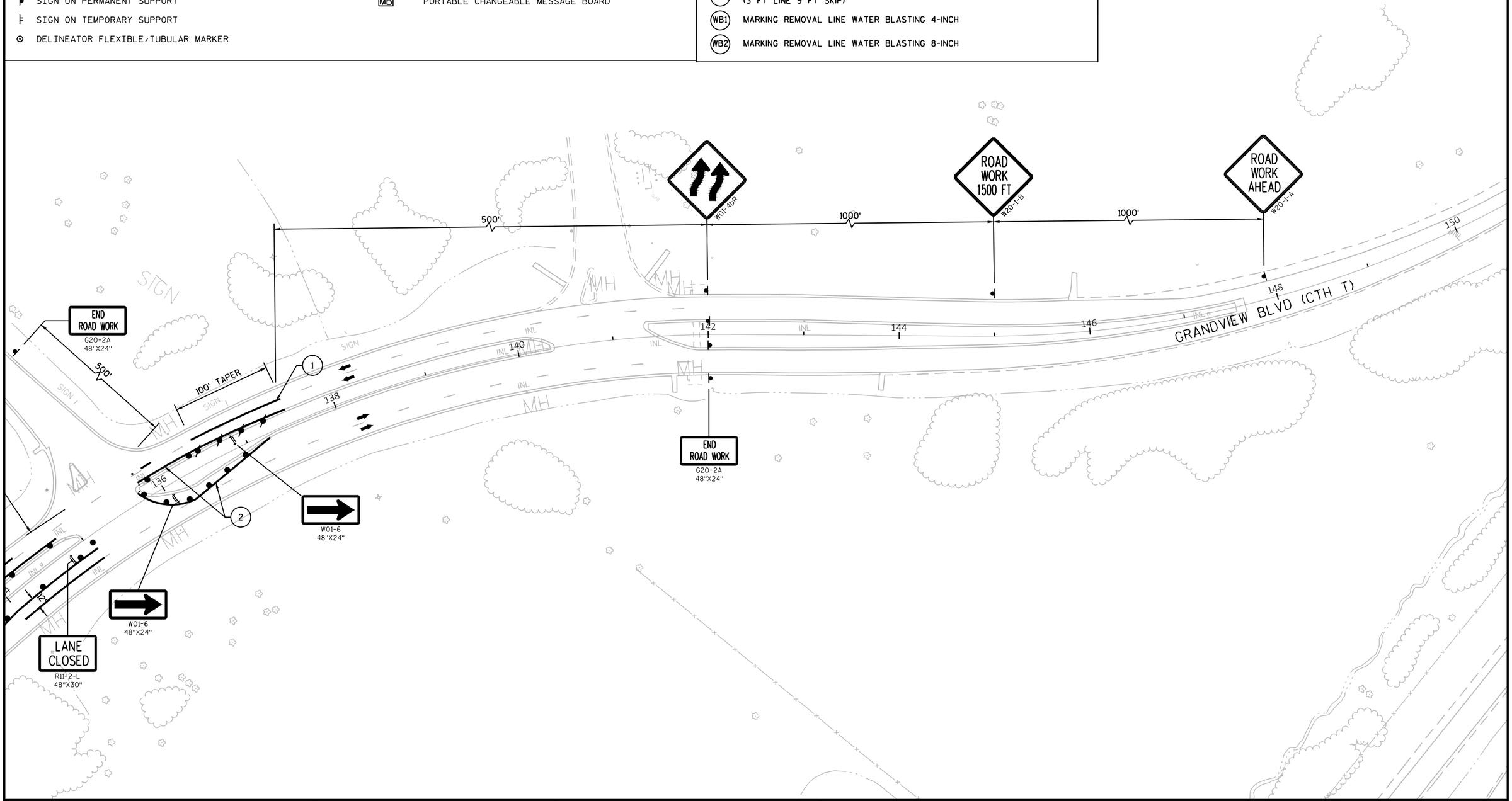
TYPE III BARRICADE WITH TYPE A LIGHTS	TYPE A WARNING LIGHT (FLASHING)
TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS	TYPE C WARNING LIGHT (STEADY BURN)
TRAFFIC CONTROL DRUM	CONCRETE BARRIER TEMPORARY PRECAST
TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	WORK AREA
FLASHING ARROW BOARD	DIRECTION OF TRAFFIC
SIGN ON PERMANENT SUPPORT	PORTABLE CHANGEABLE MESSAGE BOARD
SIGN ON TEMPORARY SUPPORT	
DELINEATOR FLEXIBLE/TUBULAR MARKER	

TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
5. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED YELLOW) (3 FT LINE 9 FT SKIP)

WB1 MARKING REMOVAL LINE WATER BLASTING 4-INCH

WB2 MARKING REMOVAL LINE WATER BLASTING 8-INCH

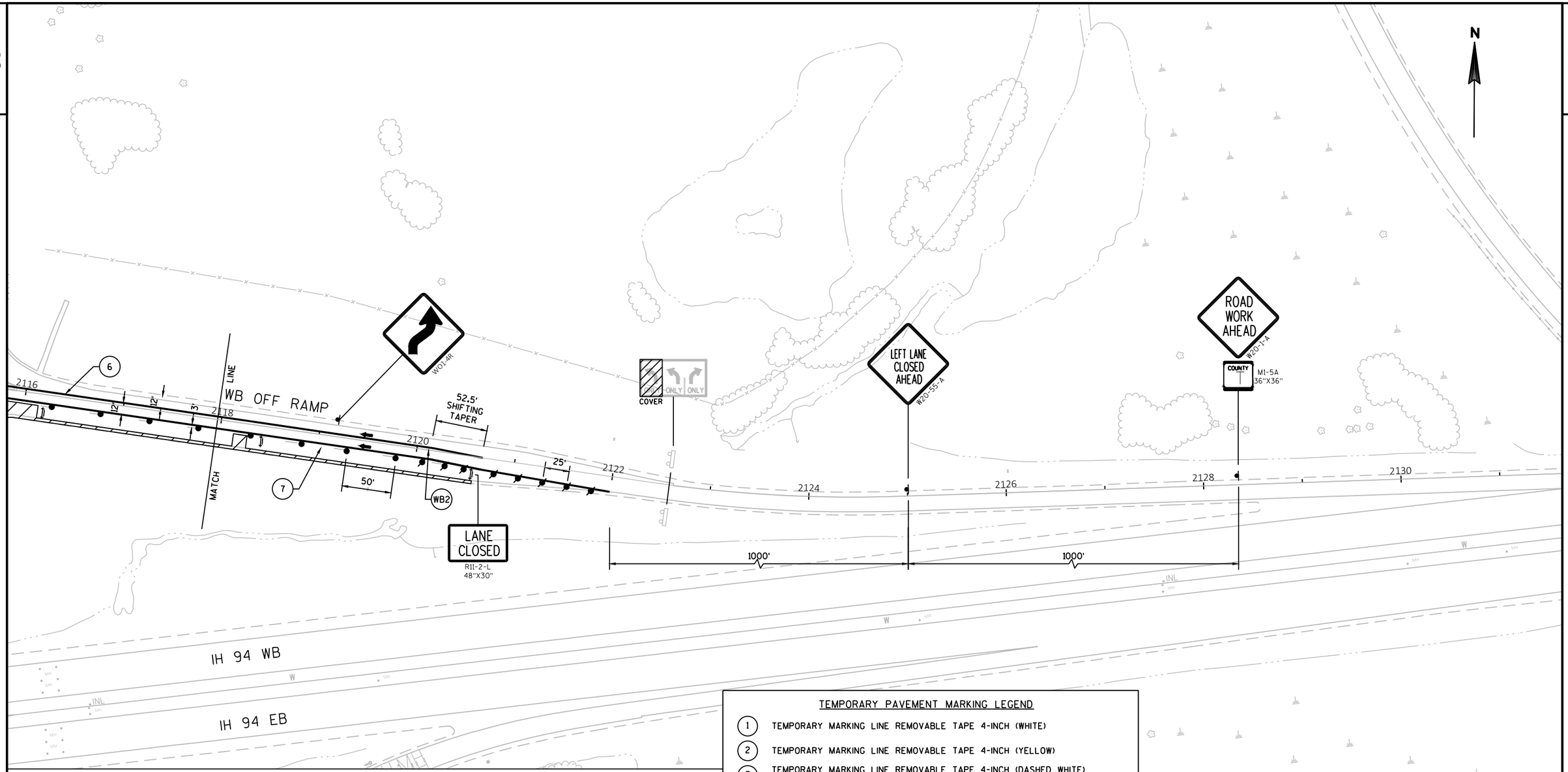


PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CTH T - STAGE 1A	SHEET 67 E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\025008_TC CTH T STAGE 1A.DWG
LAYOUT NAME - 025010_TC CTH T STAGE 1A

PLOT DATE : 2/7/2024 12:08 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



LEGEND

‡	TYPE III BARRICADE WITH TYPE A LIGHTS	Ⓐ	TYPE A WARNING LIGHT (FLASHING)
‡	TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS	Ⓒ	TYPE C WARNING LIGHT (STEADY BURN)
●	TRAFFIC CONTROL DRUM	▬▬▬	CONCRETE BARRIER TEMPORARY PRECAST
◉	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	▨	WORK AREA
➠	FLASHING ARROW BOARD	➡	DIRECTION OF TRAFFIC
⊢	SIGN ON PERMANENT SUPPORT	MB	PORTABLE CHANGEABLE MESSAGE BOARD
⊢	SIGN ON TEMPORARY SUPPORT		
⊙	DELINEATOR FLEXIBLE/TUBULAR MARKER		

TEMPORARY PAVEMENT MARKING LEGEND

1	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
5	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED YELLOW) (3 FT LINE 9 FT SKIP)
6	TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
7	TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (YELLOW)
WB1	MARKING REMOVAL LINE WATER BLASTING 4-INCH
WB2	MARKING REMOVAL LINE WATER BLASTING 8-INCH
WB3	MARKING REMOVAL SPECIAL MARKING WATER BLASTING

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CTH T - STAGE 1A	SHEET 68	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\025008_TC CTH T STAGE 1A.DWG
LAYOUT NAME - 025011_TC CTH T STAGE 1A
PLOT DATE : 2/7/2024 12:08 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

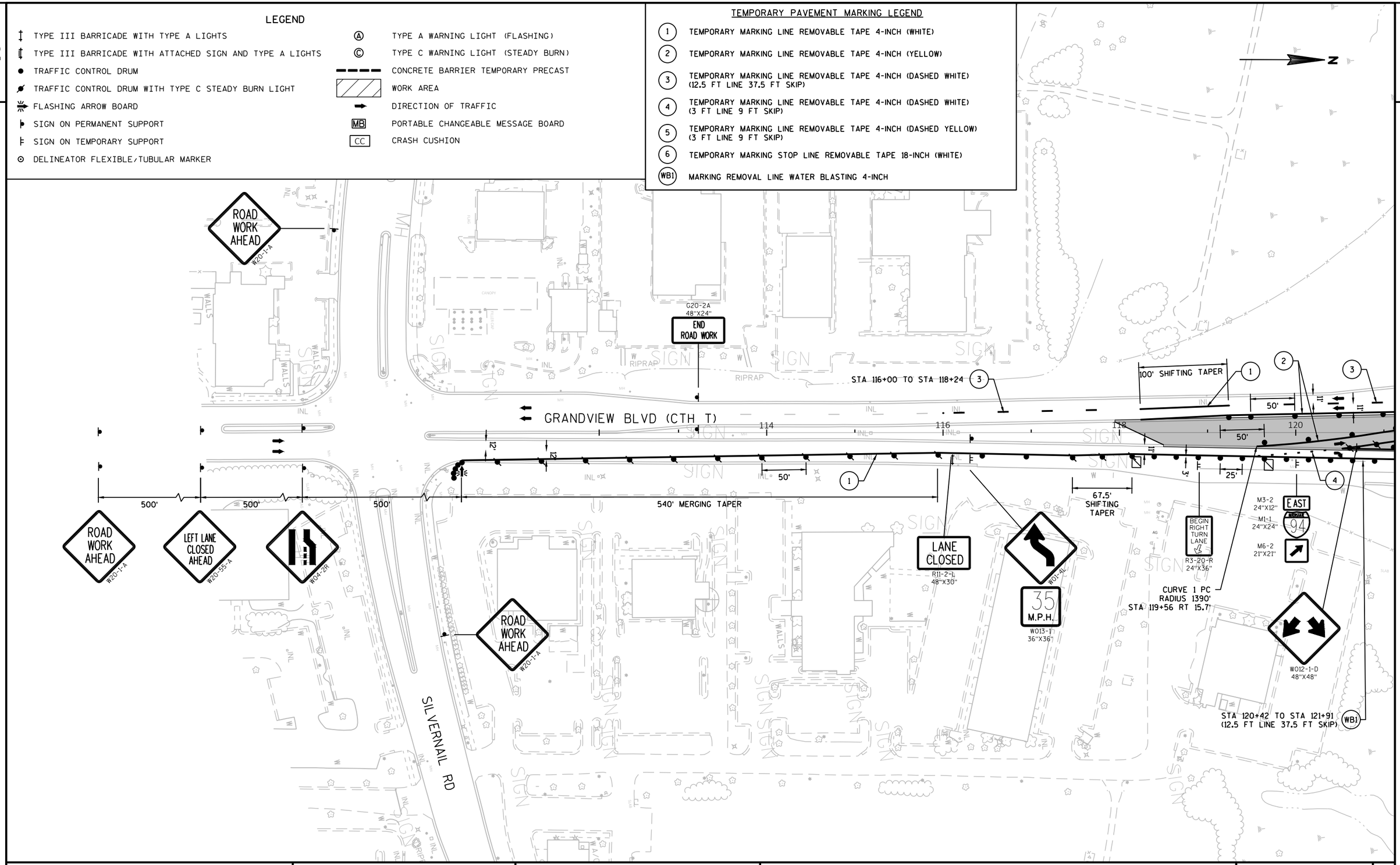
LEGEND

- TYPE III BARRICADE WITH TYPE A LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN AND 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
- (A) TYPE A WARNING LIGHT (FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CC CRASH CUSHION

TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
5. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED YELLOW) (3 FT LINE 9 FT SKIP)
6. TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)

WB1 MARKING REMOVAL LINE WATER BLASTING 4-INCH



PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CTH T - STAGE 1B	SHEET 69	E

2

N

GOLF RD

WB ON RAMP

EB OFF RAMP

ROAD WORK AHEAD W20-1-A

W01-4DL

500'

W01-6 48"X24"

END ROAD WORK G20-2A 48"X24"

CURVE 2 PT
RADIUS 1390'
STA 123+03 LT 15.5'

DOUBLE YELLOW MARKING

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

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

W05-52R 12"X36"

W05-3

CURVE 3 & 4 PCC
RADIUS 1390'
STA 129+75 RT 0.3'

ROAD WORK AHEAD W20-1-A

500'

GRANDVIEW BLVD (CTH T)

CURVE 4 PT
RADIUS 1390'
STA 131+95 RT 16.0'

CURVE 1 & 2 PCC
RADIUS 1390'
STA 120+94 RT 0.3'

LANE CLOSED R11-2-L 48"X30"

STOP R1-1 30"X30"

ROAD CLOSED R11-2 48"X30"

W01-6 48"X24"

W05-52R 12"X36"

W06-3

CURVE 3 PC
RADIUS 1390'
STA 127+66 LT 15.5'

ROAD CLOSED R11-2 48"X30"

LANE CLOSED R11-2-L 48"X30"

W01-4R

35 M.P.H. W13-1 36"X36"

W04-3L 48"X48"

W012-1-D 48"X48"

END ROAD WORK G20-2A 48"X24"

IH 94 EB

IH 94 WB

EB ON RAMP

WB OFF RAMP

MATCH LINE

6:1 TAPER

CC

25'

50'

15'

12'

3'

122

128

130

132

134

2116

2118

2120

TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
5. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED YELLOW) (3 FT LINE 9 FT SKIP)
6. TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
7. TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)

WB1 MARKING REMOVAL LINE WATER BLASTING 4-INCH

WB2 MARKING REMOVAL LINE WATER BLASTING 8-INCH

WB3 MARKING REMOVAL SPECIAL MARKING WATER BLASTING

LEGEND

- TYPE III BARRICADE WITH TYPE A LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN AND 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
- (A) TYPE A WARNING LIGHT (FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CC CRASH CUSHION

PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CTH T - STAGE 1B	SHEET 70	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\025012_TC CTH T STAGE 1B.DWG
LAYOUT NAME - 025013_TC CTH T STAGE 1B

PLOT DATE : 2/7/2024 12:08 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

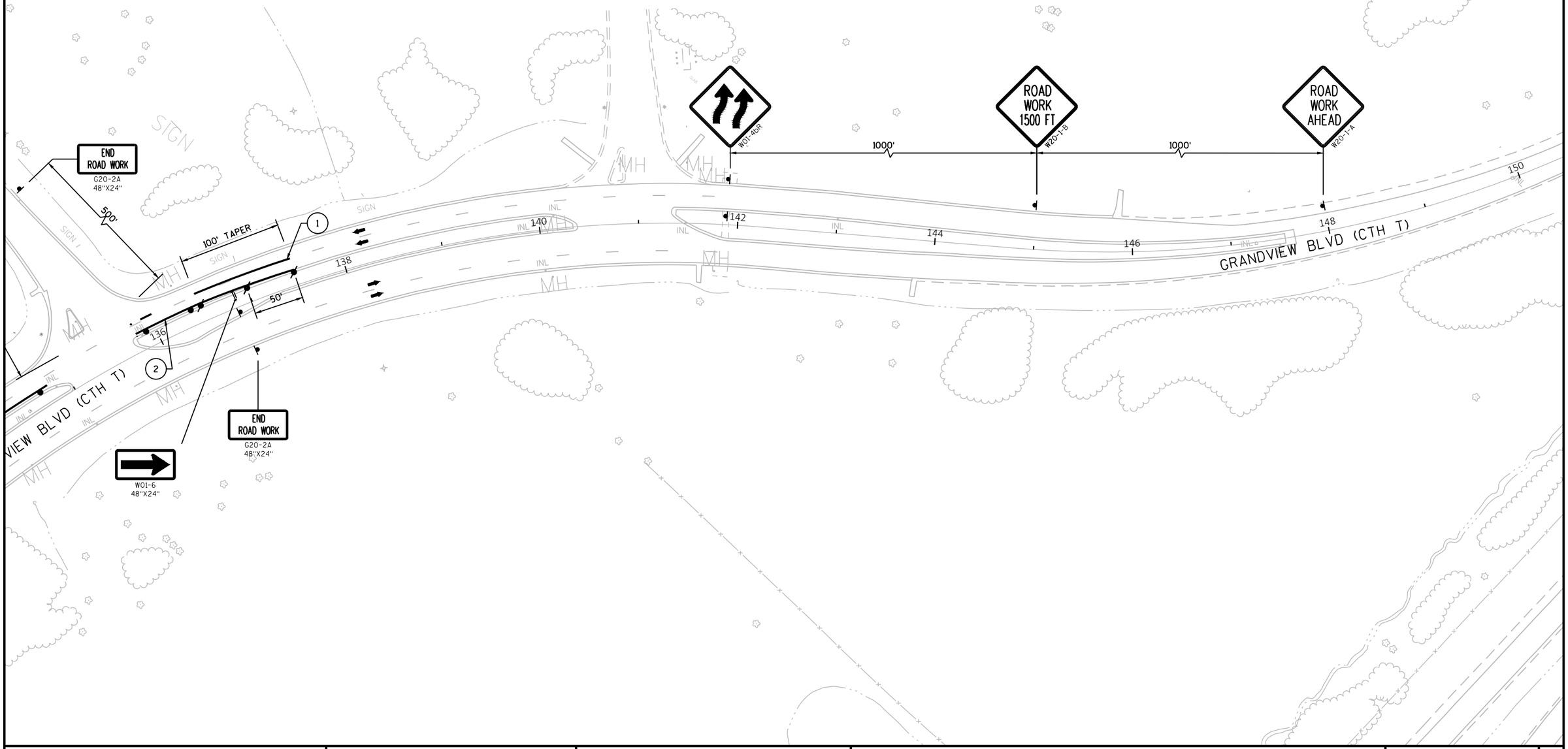
2

LEGEND

- TYPE III BARRICADE WITH TYPE A LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN AND 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
- (A) TYPE A WARNING LIGHT (FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CC CRASH CUSHION

TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
5. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED YELLOW) (3 FT LINE 9 FT SKIP)
6. TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
- WB1 MARKING REMOVAL LINE WATER BLASTING 4-INCH



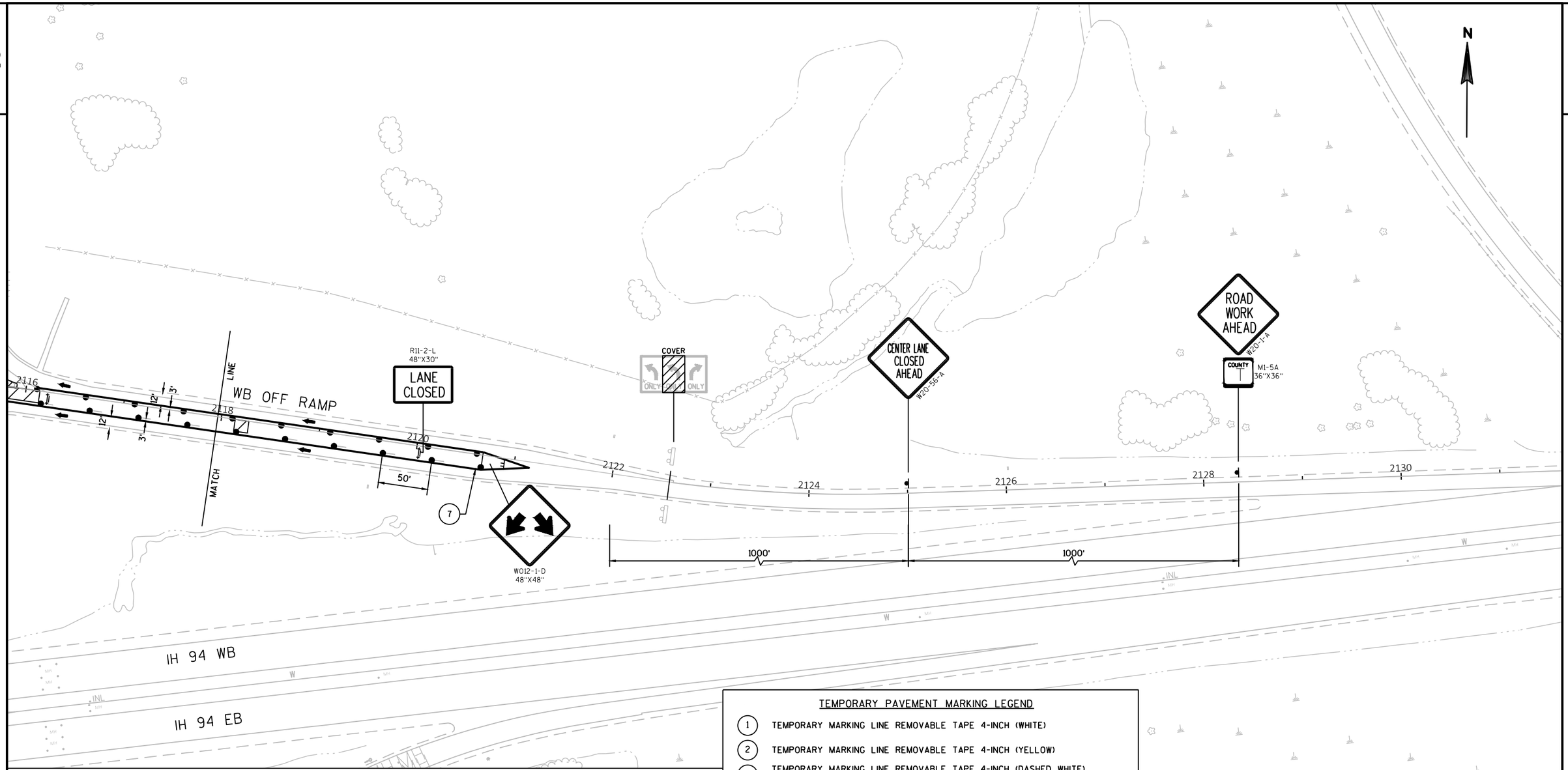
PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CTH T - STAGE 1B	SHEET 71	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\025012_TC CTH T STAGE 1B.DWG
LAYOUT NAME - 025014_TC CTH T STAGE 1B

PLOT DATE : 2/7/2024 12:08 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2



LEGEND

‡	TYPE III BARRICADE WITH TYPE A LIGHTS	Ⓐ	TYPE A WARNING LIGHT (FLASHING)
‡	TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS	Ⓒ	TYPE C WARNING LIGHT (STEADY BURN)
●	TRAFFIC CONTROL DRUM	▬▬▬	CONCRETE BARRIER TEMPORARY PRECAST
◢	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	▨	WORK AREA
⇻	FLASHING ARROW BOARD	➡	DIRECTION OF TRAFFIC
⊢	SIGN ON PERMANENT SUPPORT	MB	PORTABLE CHANGEABLE MESSAGE BOARD
⊢	SIGN ON TEMPORARY SUPPORT	CC	CRASH CUSHION
⊙	DELINEATOR FLEXIBLE/TUBULAR MARKER		

TEMPORARY PAVEMENT MARKING LEGEND

1	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
5	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED YELLOW) (3 FT LINE 9 FT SKIP)
6	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
7	TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
WB1	MARKING REMOVAL LINE WATER BLASTING 4-INCH
WB2	MARKING REMOVAL LINE WATER BLASTING 8-INCH
WB3	MARKING REMOVAL SPECIAL MARKING WATER BLASTING

PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CTH T - STAGE 1B	SHEET 72	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\025012_TC CTH T STAGE 1B.DWG
LAYOUT NAME - 025015_TC CTH T STAGE 1B
PLOT DATE : 2/7/2024 12:09 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

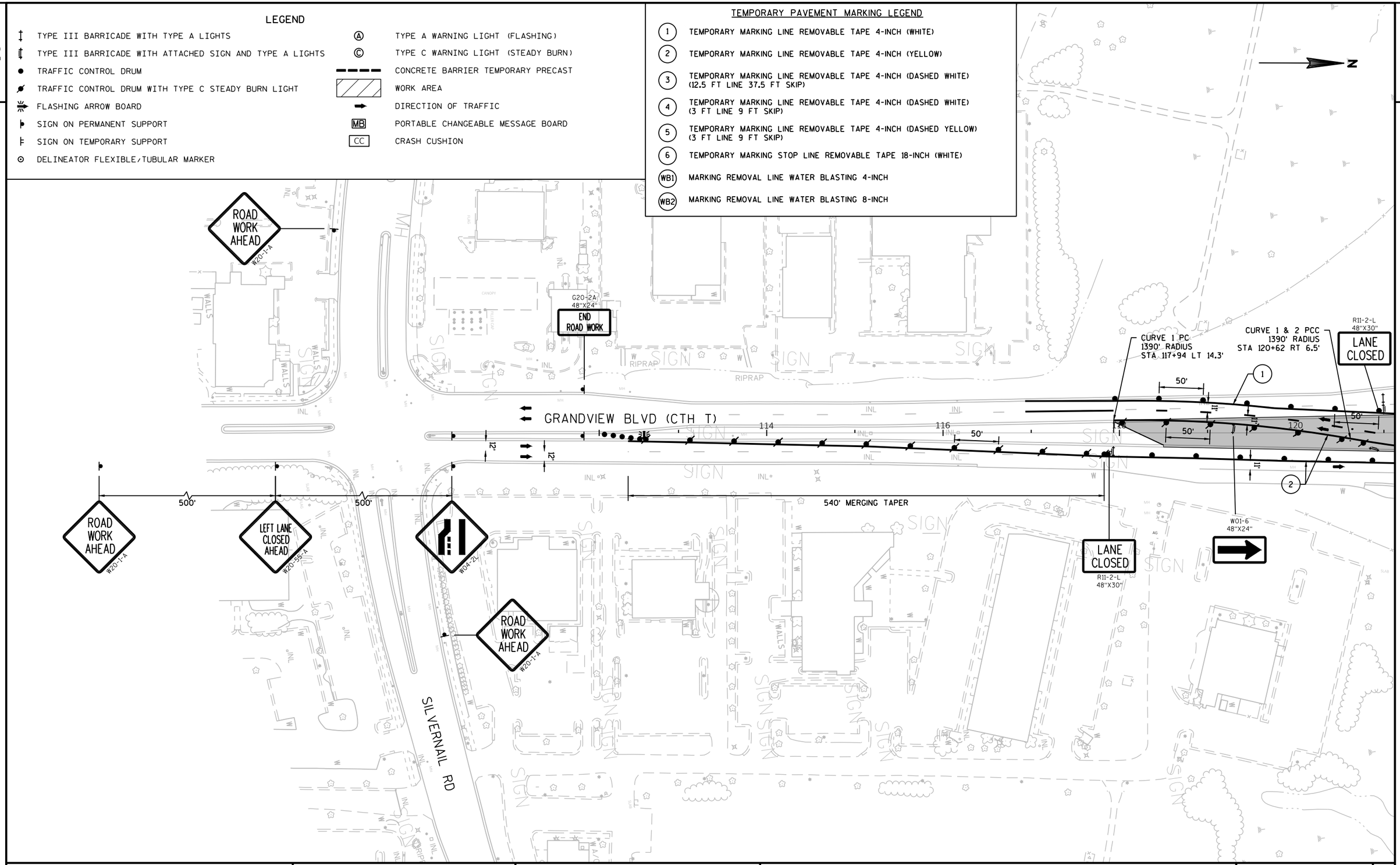
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LEGEND

- TYPE III BARRICADE WITH TYPE A LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN AND 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
- (A) TYPE A WARNING LIGHT (FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CC CRASH CUSHION

TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
5. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED YELLOW) (3 FT LINE 9 FT SKIP)
6. TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
- WB1 MARKING REMOVAL LINE WATER BLASTING 4-INCH
- WB2 MARKING REMOVAL LINE WATER BLASTING 8-INCH

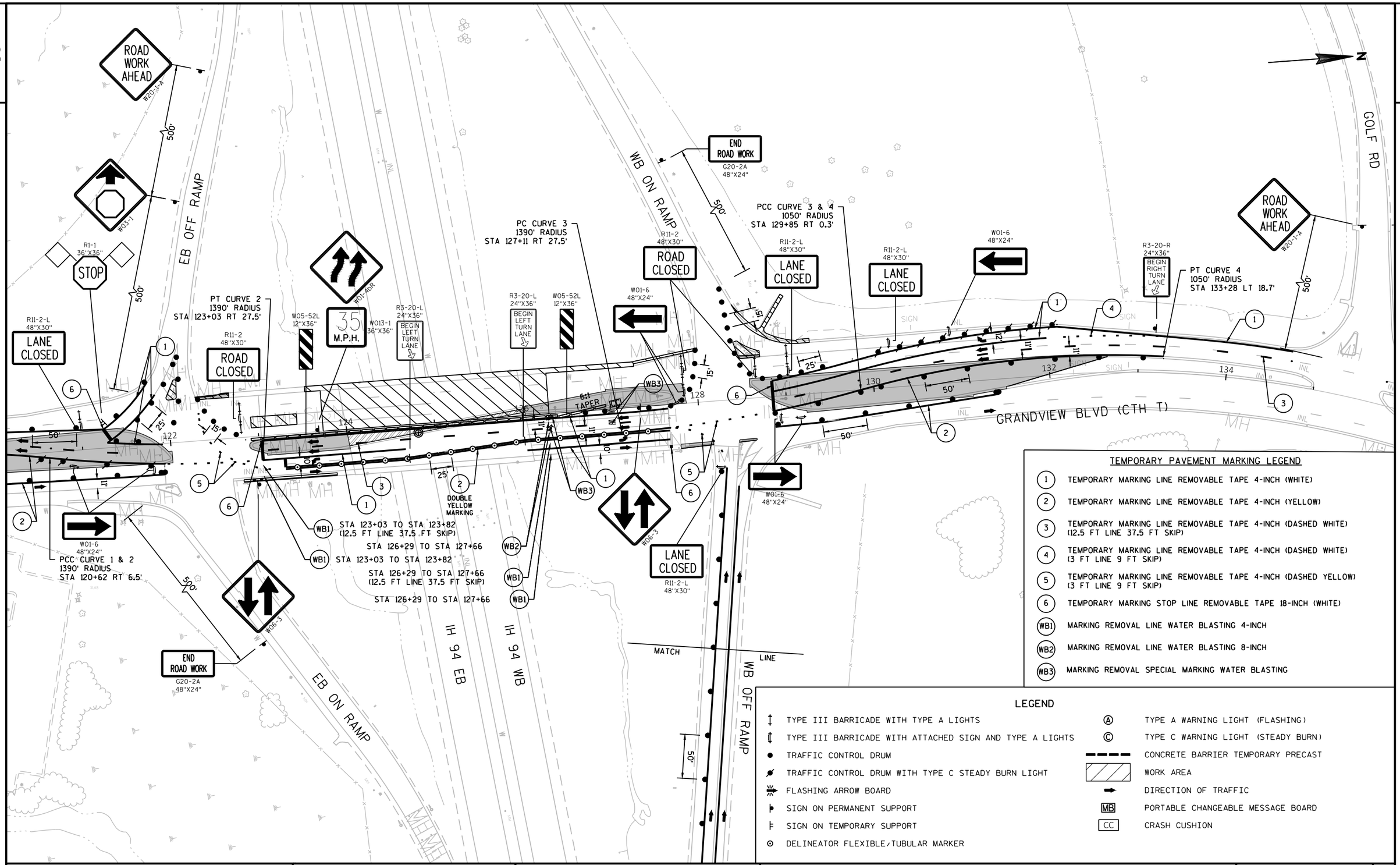


PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CTH T - STAGE 1C	SHEET 73	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\025016_TC CTH T STAGE 1C.DWG
LAYOUT NAME - 025016_TC CTH T STAGE 1C

PLOT DATE : 2/7/2024 12:09 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42



TEMPORARY PAVEMENT MARKING LEGEND

1	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
5	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED YELLOW) (3 FT LINE 9 FT SKIP)
6	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
WB1	MARKING REMOVAL LINE WATER BLASTING 4-INCH
WB2	MARKING REMOVAL LINE WATER BLASTING 8-INCH
WB3	MARKING REMOVAL SPECIAL MARKING WATER BLASTING

LEGEND

↕	TYPE III BARRICADE WITH TYPE A LIGHTS	Ⓐ	TYPE A WARNING LIGHT (FLASHING)
↕	TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS	Ⓒ	TYPE C WARNING LIGHT (STEADY BURN)
●	TRAFFIC CONTROL DRUM	▬▬	CONCRETE BARRIER TEMPORARY PRECAST
◐	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	▨	WORK AREA
⇶	FLASHING ARROW BOARD	→	DIRECTION OF TRAFFIC
▶	SIGN ON PERMANENT SUPPORT	MB	PORTABLE CHANGEABLE MESSAGE BOARD
⊢	SIGN ON TEMPORARY SUPPORT	CC	CRASH CUSHION
⊙	DELINEATOR FLEXIBLE/TUBULAR MARKER		

PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CTH T - STAGE 1C	SHEET 74	E

2

LEGEND

- TYPE III BARRICADE WITH TYPE A LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN AND 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
- (A) TYPE A WARNING LIGHT (FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CC CRASH CUSHION

TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
5. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED YELLOW) (3 FT LINE 9 FT SKIP)
6. TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
- WB1 MARKING REMOVAL LINE WATER BLASTING 4-INCH
- WB2 MARKING REMOVAL LINE WATER BLASTING 8-INCH

N

500'
W01-4DL
1000'
ROAD WORK 1500 FT
W20-1-B
1000'
ROAD WORK AHEAD
W20-1-A

END ROAD WORK
G20-2A
48"X24"
500'
3
1
END ROAD WORK
G20-2A
48"X24"
W01-4DL
35 M.P.H.
W013-1
36"X36"

GRANDVIEW BLVD (CTH T)

140 142 144 146 148 150
138 136

SIGN, MH, INL

PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CTH T - STAGE 1C	SHEET 75	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\025016_TC CTH T STAGE 1C.DWG
LAYOUT NAME - 025018_TC CTH T STAGE 1C

PLOT DATE : 2/7/2024 12:09 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N

WB OFF RAMP

MATCH LINE

7

TEMPORARY MARKING PLACED IN PREVIOUS STAGE

50'

25'

W01-6
48"X24"

COVER

ONLY ONLY

LANE CLOSED
R11-2-L
48"X30"

1000'

1000'

LEFT LANE CLOSED AHEAD
W20-5S-A

ROAD WORK AHEAD
W20-1-A

COUNTY
M1-5A
36"X36"

IH 94 WB

IH 94 EB

LEGEND

↕	TYPE III BARRICADE WITH TYPE A LIGHTS	Ⓐ	TYPE A WARNING LIGHT (FLASHING)
⇕	TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS	Ⓒ	TYPE C WARNING LIGHT (STEADY BURN)
●	TRAFFIC CONTROL DRUM	▬▬▬	CONCRETE BARRIER TEMPORARY PRECAST
◉	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	▨	WORK AREA
⇶	FLASHING ARROW BOARD	➡	DIRECTION OF TRAFFIC
⊩	SIGN ON PERMANENT SUPPORT	MB	PORTABLE CHANGEABLE MESSAGE BOARD
⊢	SIGN ON TEMPORARY SUPPORT	CC	CRASH CUSHION
⊙	DELINEATOR FLEXIBLE/TUBULAR MARKER		

TEMPORARY PAVEMENT MARKING LEGEND

1	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
5	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED YELLOW) (3 FT LINE 9 FT SKIP)
6	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
7	TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (YELLOW)
WB1	MARKING REMOVAL LINE WATER BLASTING 4-INCH
WB2	MARKING REMOVAL LINE WATER BLASTING 8-INCH
WB3	MARKING REMOVAL SPECIAL MARKING WATER BLASTING

PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CTH T - STAGE 1C	SHEET 76	E

FILE NAME : Y:\WILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\025016_TC CTH T STAGE 1C.DWG
LAYOUT NAME - 025019_TC CTH T STAGE 1C

PLOT DATE : 2/7/2024 12:09 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE WITH TYPE A LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN AND 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
- (A) TYPE A WARNING LIGHT (FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
5. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED YELLOW) (3 FT LINE 9 FT SKIP)

ROAD WORK AHEAD W20-1-A

G20-2A 48"X24" END ROAD WORK

GRANDVIEW BLVD (CTH T)

100' SHIFTING TAPER

50'

50'

540' MERGING TAPER

W01-4DL

500'

500'

ROAD WORK AHEAD W20-1-A

LEFT LANE CLOSED AHEAD W20-5S-A

W04-2L

ROAD WORK AHEAD W20-1-A

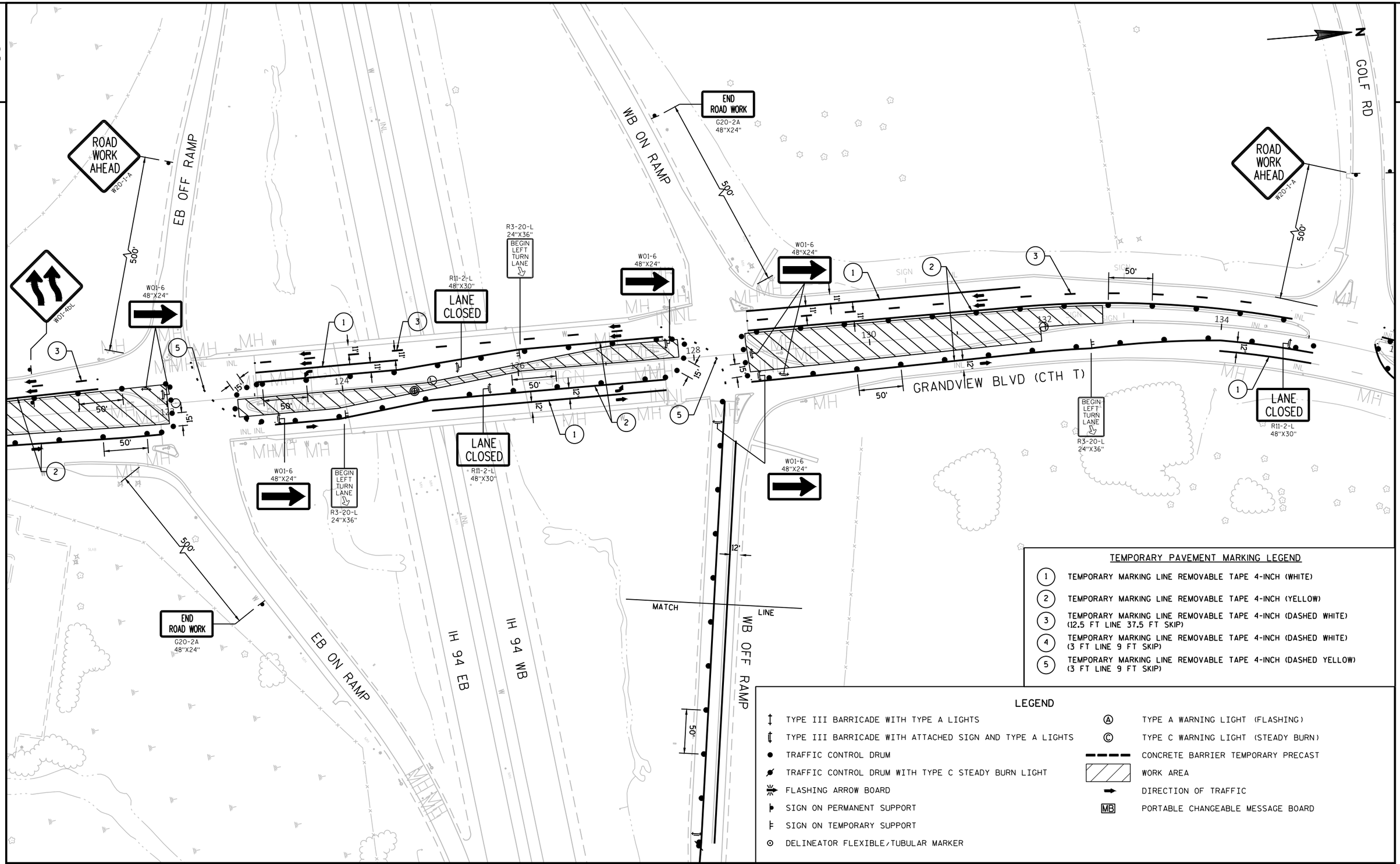
LANE CLOSED R11-2-L 48"X30"

SILVERNAIL RD

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CTH T - STAGE 1D	SHEET 77	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\025019_TC CTH T STAGE 1D.DWG
LAYOUT NAME - 025019A_TC CTH T STAGE 1D
PLOT DATE : 2/7/2024 12:09 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2



TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
5. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED YELLOW) (3 FT LINE 9 FT SKIP)

LEGEND

- TYPE III BARRICADE WITH TYPE A LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN AND 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
- (A) TYPE A WARNING LIGHT (FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- [MB] PORTABLE CHANGEABLE MESSAGE BOARD

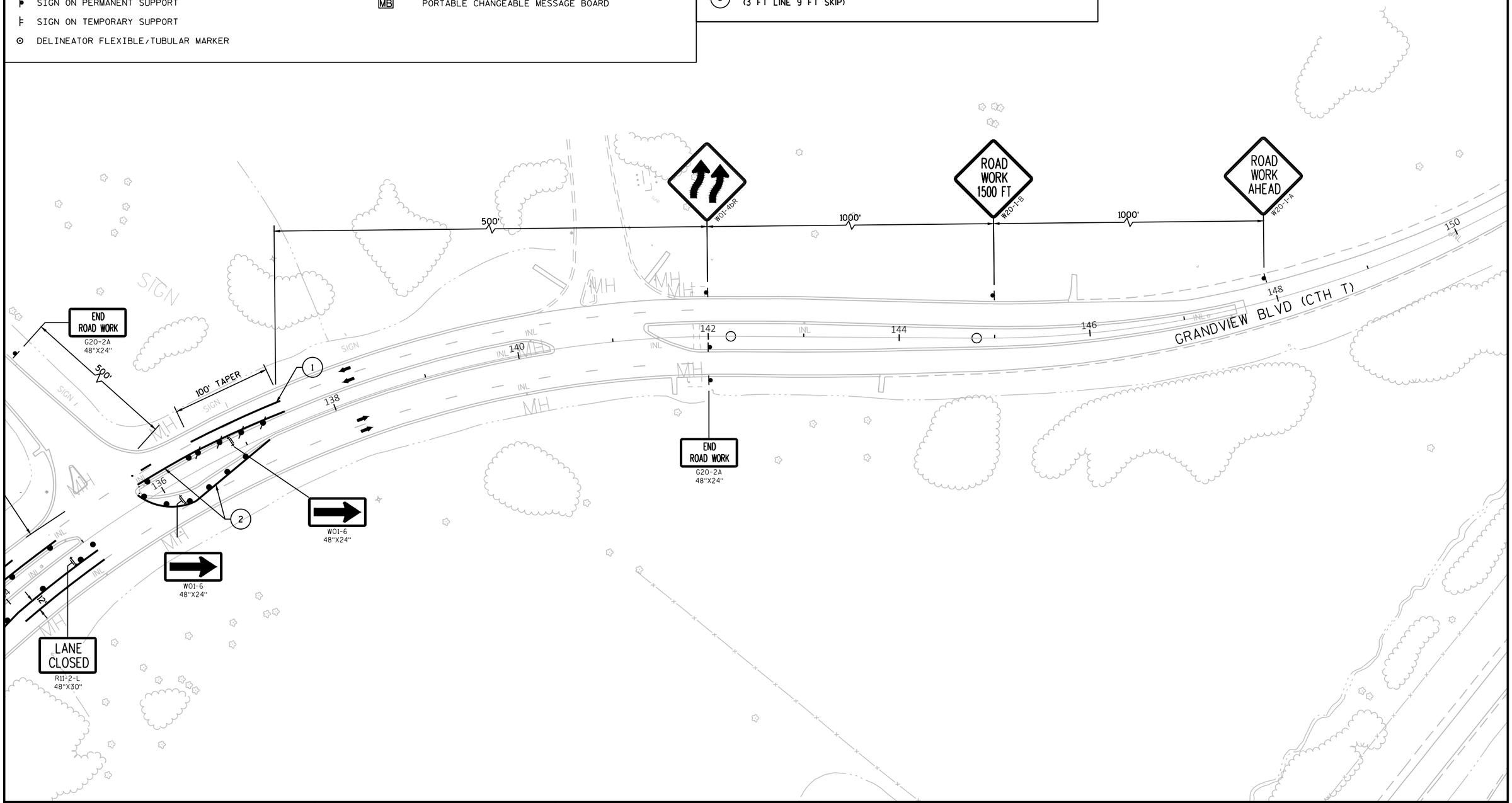
PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CTH T - STAGE 1D	SHEET 78	E

LEGEND

- TYPE III BARRICADE WITH TYPE A LIGHTS
- TYPE III BARRICADE WITH ATTACHED SIGN AND 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
- (A) TYPE A WARNING LIGHT (FLASHING)
- (C) TYPE C WARNING LIGHT (STEADY BURN)
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

TEMPORARY PAVEMENT MARKING LEGEND

1. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
5. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED YELLOW) (3 FT LINE 9 FT SKIP)



PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CTH T - STAGE 1D	SHEET 79	E

2

2

N

WB OFF RAMP

MATCH LINE

12'

TEMPORARY MARKING PLACED IN PREVIOUS STAGE

50'

25'

W01-6
48"X24"

COVER

ONLY ONLY

LANE CLOSED
R11-2-L
48"X30"

LEFT LANE CLOSED AHEAD
W20-55-A

ROAD WORK AHEAD
W20-1-A

COUNTY T
M1-5A
36"X36"

1000'

1000'

IH 94 WB

IH 94 EB

LEGEND

↕	TYPE III BARRICADE WITH TYPE A LIGHTS	Ⓐ	TYPE A WARNING LIGHT (FLASHING)
⇕	TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS	Ⓒ	TYPE C WARNING LIGHT (STEADY BURN)
●	TRAFFIC CONTROL DRUM	▬▬▬	CONCRETE BARRIER TEMPORARY PRECAST
◒	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	▨	WORK AREA
⇉	FLASHING ARROW BOARD	➡	DIRECTION OF TRAFFIC
⊢	SIGN ON PERMANENT SUPPORT	MB	PORTABLE CHANGEABLE MESSAGE BOARD
⊢	SIGN ON TEMPORARY SUPPORT		
⊙	DELINEATOR FLEXIBLE/TUBULAR MARKER		

TEMPORARY PAVEMENT MARKING LEGEND

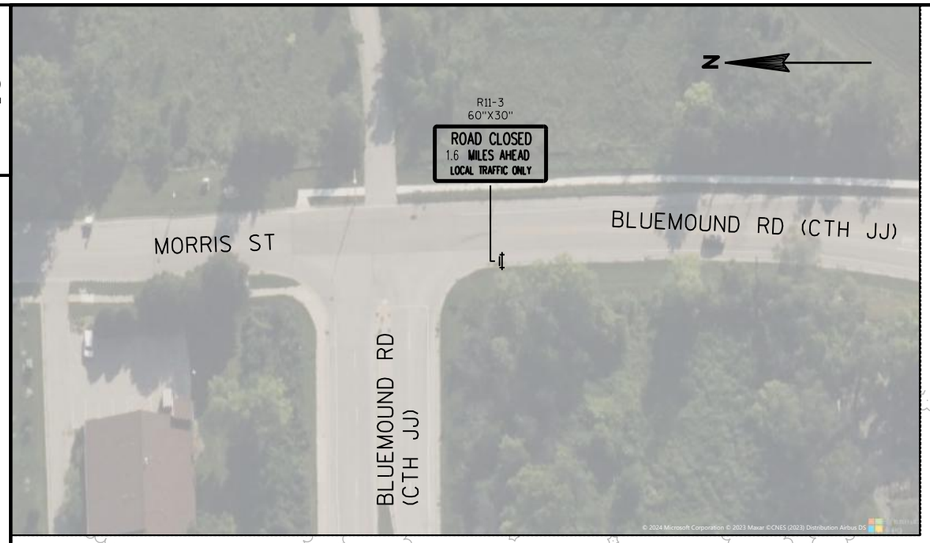
1. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
2. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
3. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
5. TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DASHED YELLOW) (3 FT LINE 9 FT SKIP)

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CTH T - STAGE 1D	SHEET 80	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\025019_TC CTH T STAGE 1D.DWG
LAYOUT NAME - 025019D_TC CTH T STAGE 1D

PLOT DATE : 2/7/2024 12:10 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42



2

N

R11-4
60"X30"
ROAD CLOSED
TO
THRU TRAFFIC

BLUEMOUND RD (CTH JJ)

2000' 500' 500'

ROAD CLOSED AHEAD W20-3-A

ROAD CLOSED 1000 FT W20-3-C

ROAD CLOSED 500 FT W20-3-D

ROAD CLOSED
R11-2
48"X30"

BLUEMOUND RD/
CTH JJ TO
CLOSE BEGINNING
(DATE)
FMXX

IH 94 WB

IH 94 EB

NOTE: SEE DETOUR PLAN FOR DETOUR SIGNING

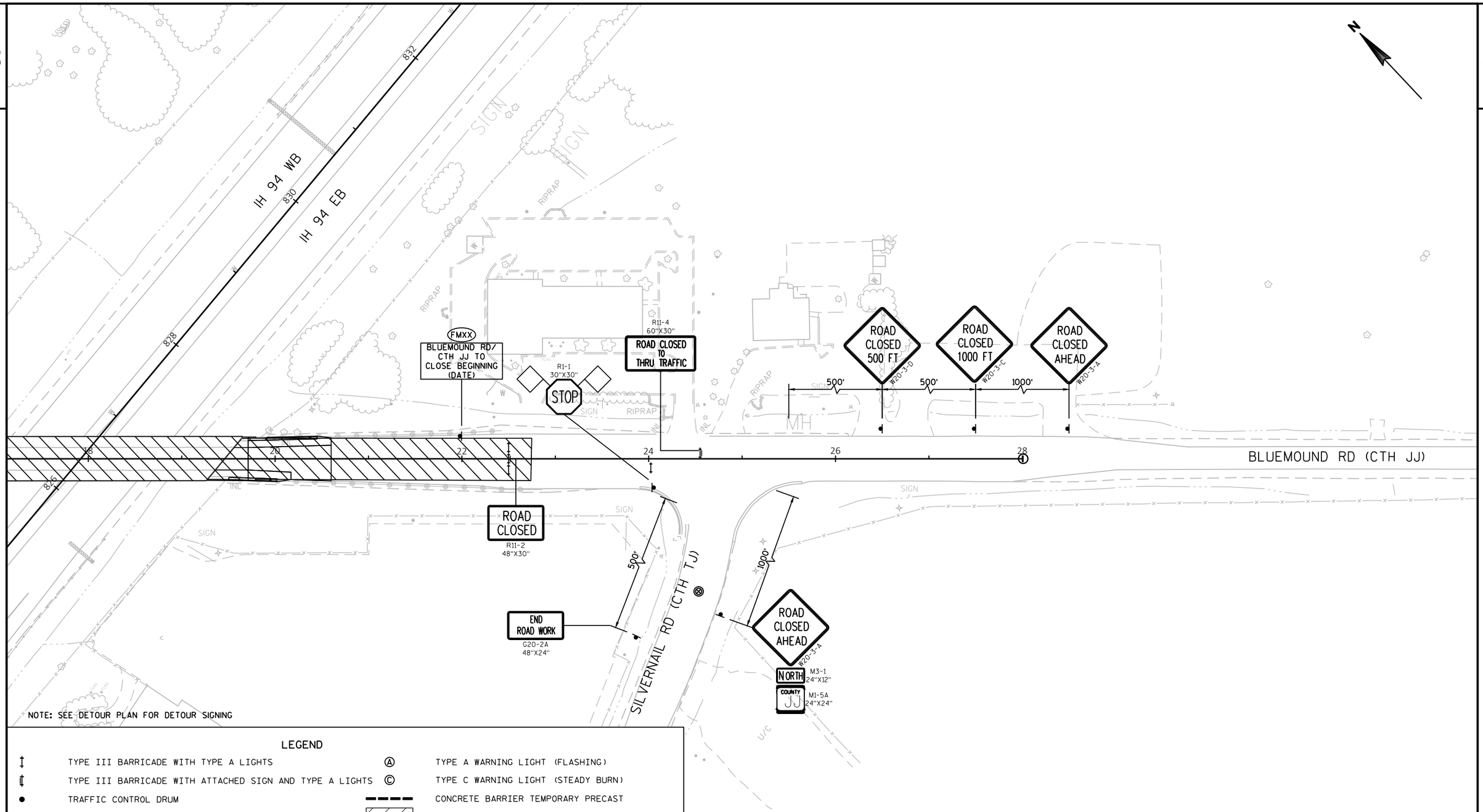
LEGEND

‡	TYPE III BARRICADE WITH TYPE A LIGHTS	Ⓐ	TYPE A WARNING LIGHT (FLASHING)
‡	TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS	Ⓒ	TYPE C WARNING LIGHT (STEADY BURN)
●	TRAFFIC CONTROL DRUM	▬▬▬	CONCRETE BARRIER TEMPORARY PRECAST
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	▨	WORK AREA
	FLASHING ARROW BOARD	➡	DIRECTION OF TRAFFIC
	SIGN ON PERMANENT SUPPORT	MB	PORTABLE CHANGEABLE MESSAGE BOARD
	SIGN ON TEMPORARY SUPPORT		
⊙	DELINEATOR FLEXIBLE/TUBULAR MARKER		

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	TRAFFIC CONTROL - STAGE 2A	SHEET 81	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\025020_TC CTH JJ STAGE 2A.DWG
LAYOUT NAME - 025020_TC CTH JJ STAGE 2A
PLOT DATE : 2/7/2024 12:12 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 42

2



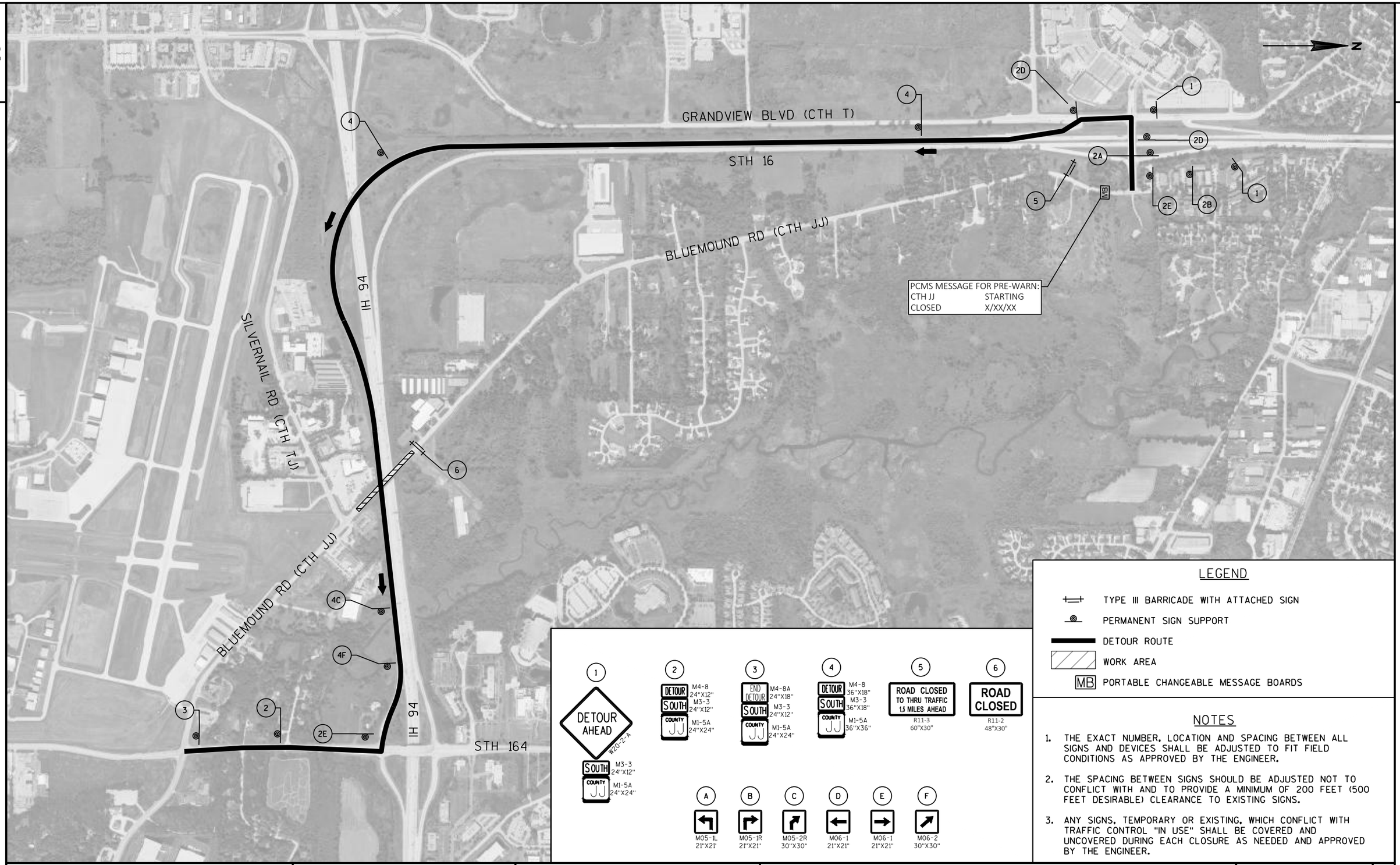
NOTE: SEE DETOUR PLAN FOR DETOUR SIGNING

LEGEND

‡	TYPE III BARRICADE WITH TYPE A LIGHTS	Ⓐ	TYPE A WARNING LIGHT (FLASHING)
‡	TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A LIGHTS	Ⓒ	TYPE C WARNING LIGHT (STEADY BURN)
●	TRAFFIC CONTROL DRUM	▬▬▬	CONCRETE BARRIER TEMPORARY PRECAST
◪	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	▨	WORK AREA
➳	FLASHING ARROW BOARD	➡	DIRECTION OF TRAFFIC
⊢	SIGN ON PERMANENT SUPPORT	MB	PORTABLE CHANGEABLE MESSAGE BOARD
⊢	SIGN ON TEMPORARY SUPPORT		
⊙	DELINEATOR FLEXIBLE/TUBULAR MARKER		

PROJECT NO:1060-10-71	HWY:IH 94	COUNTY:WAUKESHA	TRAFFIC CONTROL - STAGE 2A	SHEET 82	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\025020_TC CTH JJ STAGE 2A.DWG
LAYOUT NAME - 025021_TC CTH JJ STAGE 2A
PLOT DATE : 2/7/2024 12:12 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- PERMANENT SIGN SUPPORT
- DETOUR ROUTE
- WORK AREA
- MB — PORTABLE CHANGEABLE MESSAGE BOARDS

NOTES

1. THE EXACT NUMBER, LOCATION AND SPACING BETWEEN ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
2. THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED NOT TO CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.
3. ANY SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AND UNCOVERED DURING EACH CLOSURE AS NEEDED AND APPROVED BY THE ENGINEER.

PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	DETOUR - CTH JJ SOUTHBOUND	SHEET 83	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\027002_DT CTH JJ SB.DWG
LAYOUT NAME - 027002_DT CTH JJ SB

PLOT DATE : 6/30/2023 8:43 AM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:1000 FT

WISDOT/CADDS SHEET 42

1 — DETOUR AHEAD (WA20-2-A); NORTH M3-1 24"X12"; COUNTY JJ M1-5A 24"X24"

2 — DETOUR M4-8 24"X12"; NORTH M3-1 24"X12"; COUNTY JJ M1-5A 24"X24"

3 — END DETOUR M4-8A 24"X18"; NORTH M3-1 24"X12"; COUNTY JJ M1-5A 24"X24"

4 — DETOUR M4-8 36"X18"; NORTH M3-1 36"X18"; COUNTY JJ M1-5A 36"X36"

5 — ROAD CLOSED TO THRU TRAFFIC 0.5 MILES AHEAD R11-3 60"X30"

6 — ROAD CLOSED R11-2 48"X30"

A — M05-1L 21"X21"

B — M05-1R 21"X21"

C — M05-2R 30"X30"

D — M06-1 21"X21"

E — M06-1 21"X21"

F — M06-1 21"X21"

G — M06-2 30"X30"

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- PERMANENT SIGN SUPPORT
- DETOUR ROUTE
- WORK AREA
- MB PORTABLE CHANGEABLE MESSAGE BOARDS

NOTES

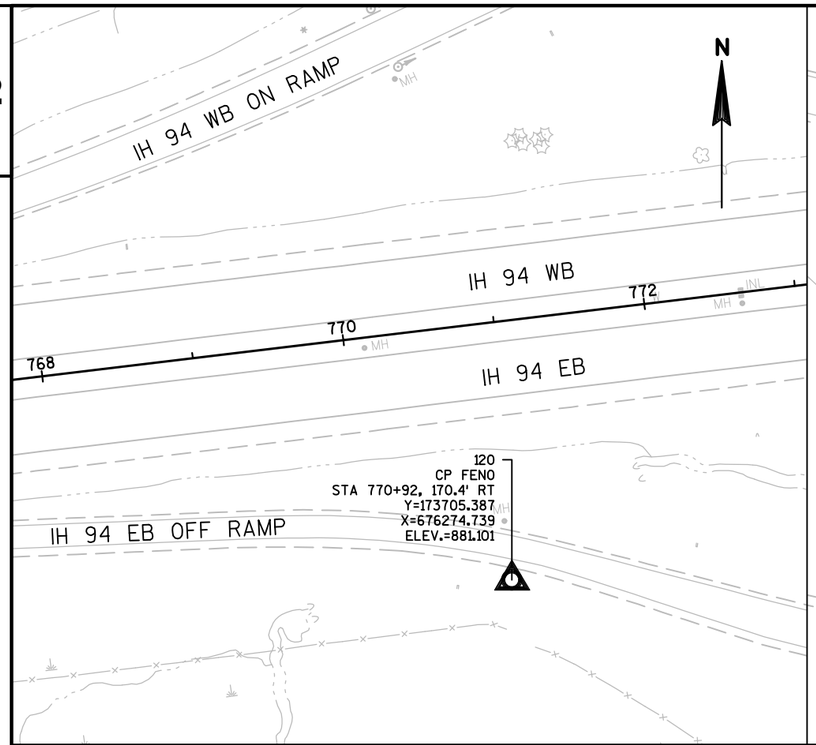
1. THE EXACT NUMBER, LOCATION AND SPACING BETWEEN ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
2. THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED NOT TO CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.
3. ANY SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AND UNCOVERED DURING EACH CLOSURE AS NEEDED AND APPROVED BY THE ENGINEER.

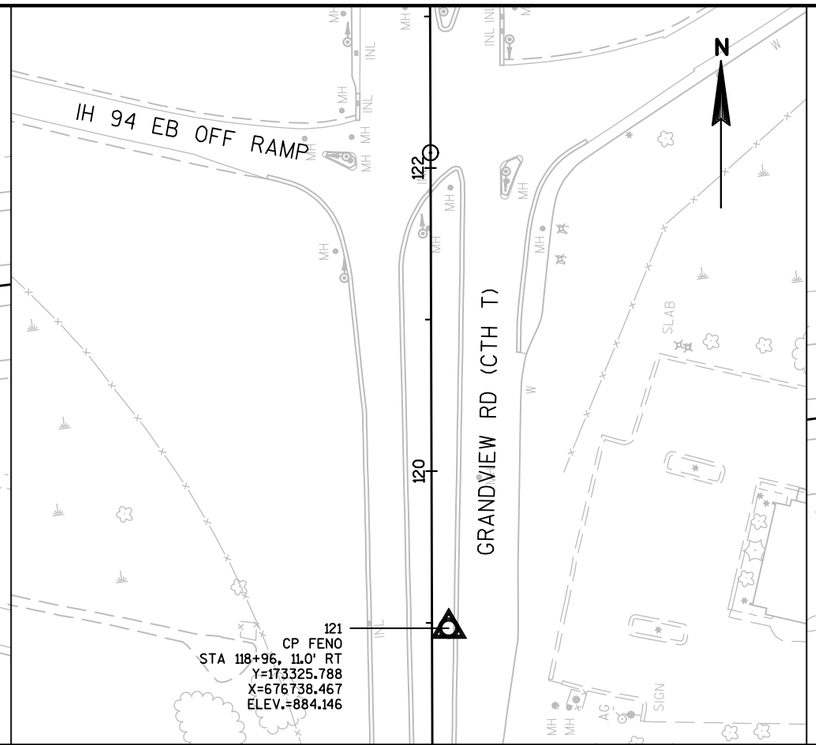
PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	DETOUR - CTH JJ NORTHBOUND	SHEET 84	E

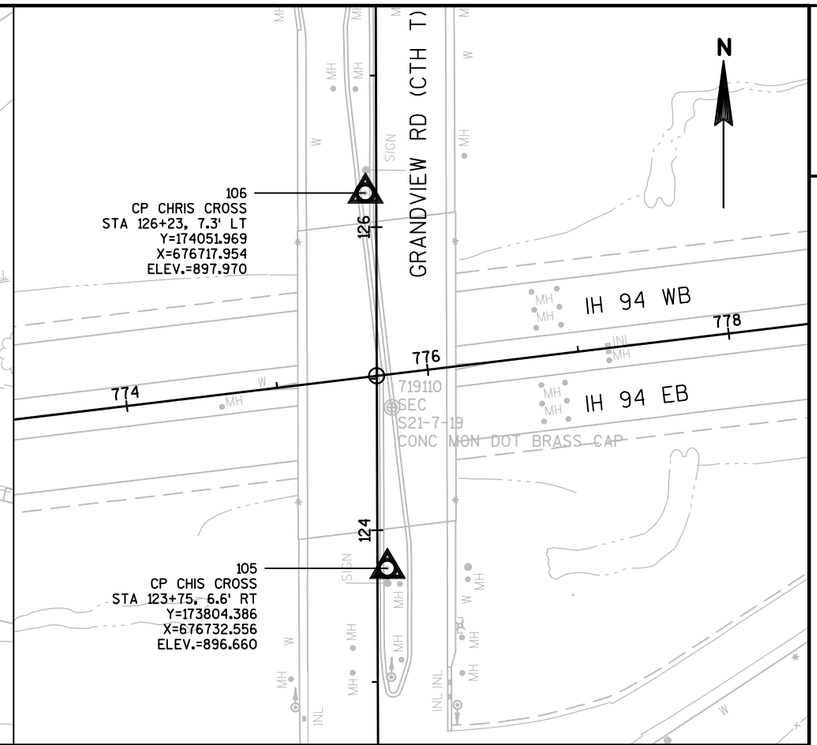
FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\027001_DT CTH JJ NB.DWG
LAYOUT NAME - 027001_DT CTH JJ NB

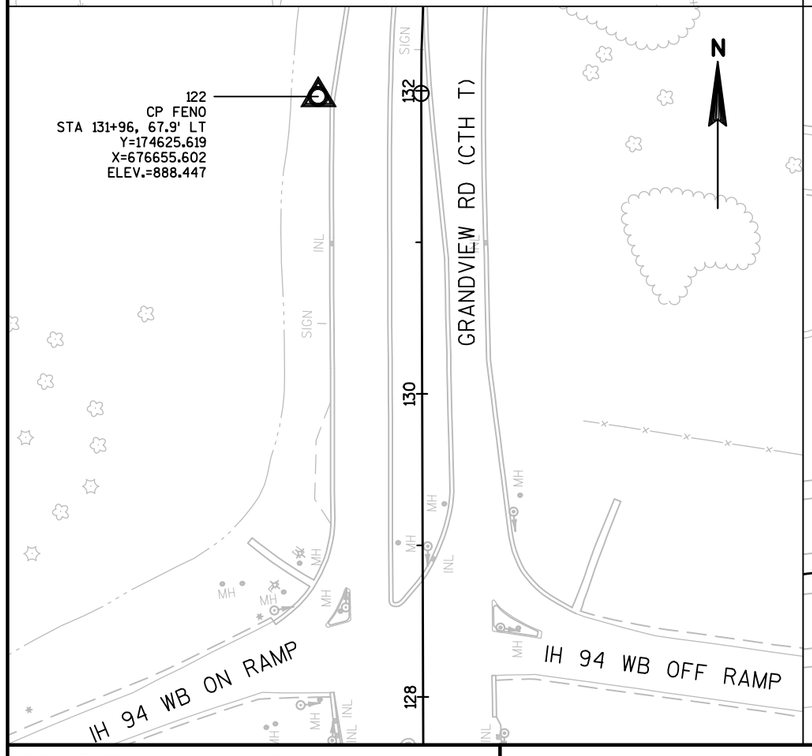
PLOT DATE : 6/29/2023 12:46 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:1000 FT

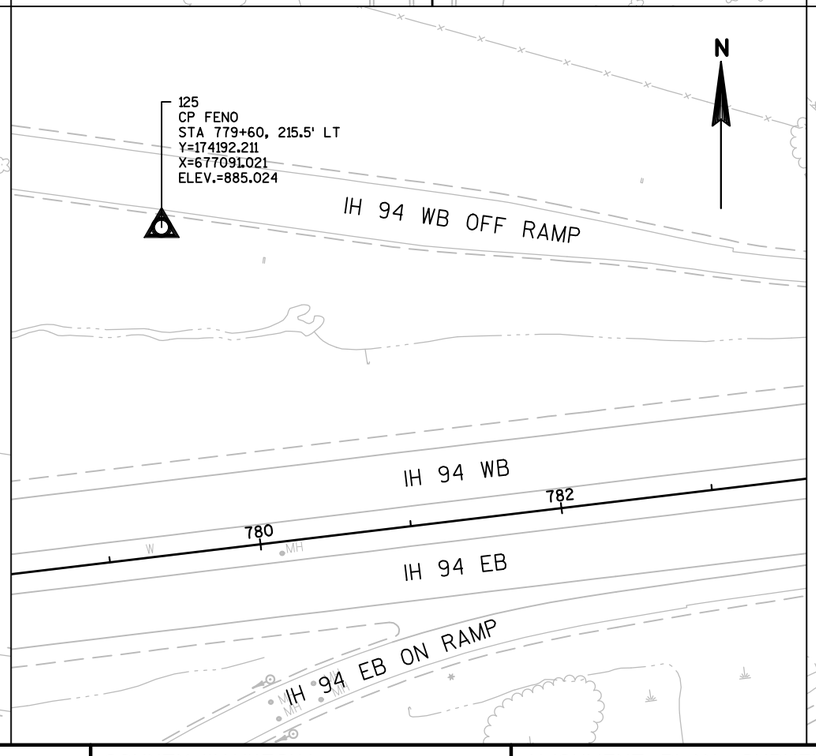
WISDOT/CADDS SHEET 42

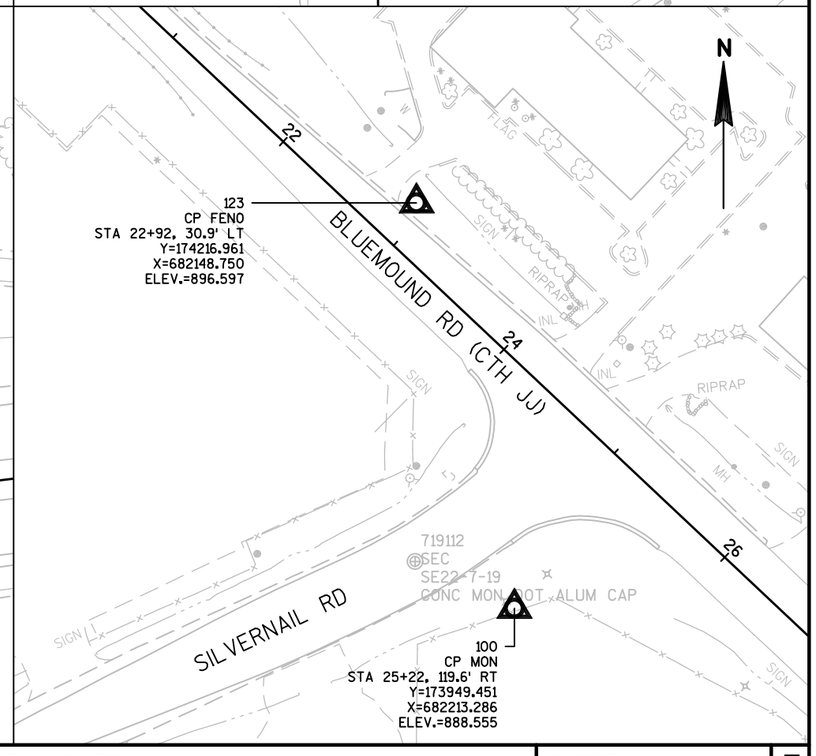






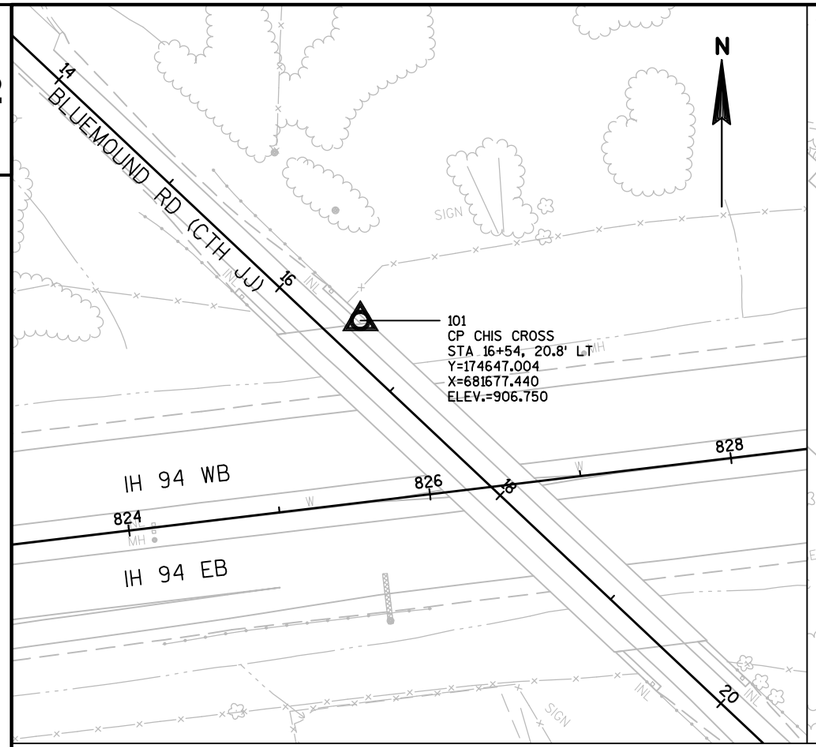


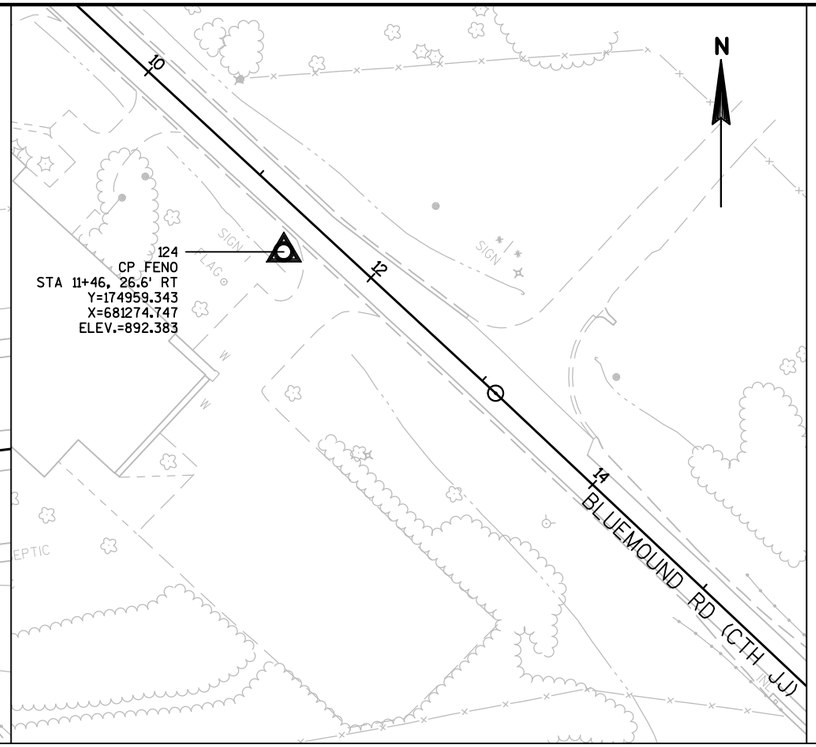




PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	ALIGNMENT PLAN: SURVEY CONTROL	SHEET 85	E

FILE NAME : N:\PDS\C3D\10601000\SHEETSPLAN\DRAFT PSE\PLAN\10601071\027200-AD CONTROL.DWG
LAYOUT NAME - 027200-AD CONTROL-A
PLOT DATE : 5/3/2018 1:27 PM
PLOT BY : JOHANSEN, AMANDA A PLOT NAME :
PLOT SCALE : **********
WISDOT/CADDS SHEET 42





2

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	ALIGNMENT PLAN: SURVEY CONTROL	SHEET 86	E

2

2

CURVE GV1

CURVE GV1
PI STA = 137+48.12
Y = 175177.517
X = 676721.762
DELTA = 51°15'48"
D = 5°00'00"
T = 549.81'
L = 1025.27'
R = 1145.92'
PC STA = 131+98.31
Y = 174627.708
X = 676723.452
PT STA = 142+23.58
Y = 175522.874
X = 677149.572
BK = N00°10'34.2"W
AH = N51°05'13.8"E

N

N=176562.174
E=674117.164

N89° 00' 49"E
815.06'

N0° 38' 31"E
373.66'

PC
122

N=176608.152
E=676787.257

N1° 05' 42"E
386.00'

130

GRANDVIEW 128+50.00
IH-94 WB OFF RAMP 2115+11.65
N=174279.3982
E=676724.5233

S82° 06' 12"E
728.67'

125

2120

PC STA 2122+40.32

N0° 10' 34"W
696.49'

N=173904.104
E=674087.382

106

IH-94 775+76.80
N=173932.486
E=676736.121

GRANDVIEW 125+01.82
IH-94 775+66.20
N=173931.2198
E=676725.5938

780

775

N89° 51' 50"E
811.65'

770

765

760

IH-94

755

PI
719110
896.944
SEC

IH-94 773+88.08
N=173909.950
E=676548.753

IH-94 780+00
N=173983.0228
E=677156.2917

105

N=173910.394
E=676735.699

120

N0° 10' 34"W
291.82'

PI

IH-94 755+00
N=173684.4824
E=674674.1810

N0° 06' 15"E
417.35'

GRANDVIEW RD (CTH T)

120

121

N=171262.978
E=674073.505

N0° 18' 04"E
427.05'

N=171300.486
E=676730.952

N0° 10' 34"W
1000.00'

N89° 11' 29"E
813.26'

115

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	ALIGNMENT PLAN: CTH T	SHEET 87	E

FILE NAME : N:\PDS\C3D\10601000\SHEETSPLAN\DRAFT PSE\PLAN\10601071\027201-AD ALIGNMENT.DWG
LAYOUT NAME - 027201-AD CTH T

PLOT DATE : 8/22/2018 9:27 AM PLOT BY : JOHANSEN, AMANDA A PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

N

S89° 42' 24"E
706.32'

S89° 53' 05"E
695.76'

N=176654.273
E=679488.325

N=176640.389
E=682200.111

N=176635.026
E=684863.506

BP 8+50
N=175180.0570
E=681075.4295

S47° 12' 28"E
462.21'

N0° 00' 51"E
688.82'

N1° 07' 26"E
692.80'

N0° 58' 42"E
694.17'

124

PI

BLUEMOUND RD (CTH JJ)

15

101

IH-94 830+39.56
N=174584.8272
E=682159.7852

IH-94 845+00
N=174759.2279
E=683609.7796

IH-94

815 820 825 830 835 840 845

CTH JJ 17+91.85
IH-94 826+40.67
N=174537.1939
E=681763.7550

IH-94 820+00
N=174460.6875
E=681127.6689

20

S46° 42' 48"E
1488.70'

123

25

N=174008.562
E=679487.676

N=173980.167
E=682147.923

N=173969.539
E=684817.984

S89° 23' 18"E
692.69'

719112
891.149
SEC 100

S89° 46' 19"E
697.53'

BP 28+00.91
N=173845.3353
E=682498.2802

N0° 20' 34"E
116.78'

N0° 25' 08"E
110.71'

N0° 30' 33"E
109.21'

N=171339.250
E=679471.704

N=171333.792
E=682128.577

N=171328.786
E=684794.511

S89° 52' 56"E
692.53'

S89° 53' 33"E
697.35'

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	ALIGNMENT PLAN: CTH JJ	SHEET 88	E

FILE NAME : N:\PDS\C3D\10601000\SHEETSPLAN\DRAFT PSE\PLAN\10601071\027201-AD ALIGNMENT.DWG
LAYOUT NAME - 027202-AD CTH JJ
PLOT DATE : 3/12/2018 3:34 PM PLOT BY : JOHANSEN, AMANDA A PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

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Line	Item	Item Description	Unit	Total	Qty
0018	203.0220	Removing Structure (structure) 004. B-67-245	EACH	1.000	1.000
0020	204.0100	Removing Concrete Pavement	SY	875.000	875.000
0024	204.0110	Removing Asphaltic Surface	SY	5,195.000	5,195.000
0028	204.0120	Removing Asphaltic Surface Milling	SY	985.000	985.000
0032	204.0130	Removing Curb	LF	384.000	384.000
0034	204.0150	Removing Curb & Gutter	LF	2,231.000	2,231.000
0038	204.0157	Removing Concrete Barrier	LF	239.000	239.000
0040	204.0165	Removing Guardrail	LF	328.000	328.000
0042	204.0170	Removing Fence	LF	34.000	34.000
0048	204.0220	Removing Inlets	EACH	4.000	4.000
0054	204.0246	Removing Ancillary Structure (structure) 001. S-67-215	EACH	1.000	1.000
0056	204.0246	Removing Ancillary Structure (structure) 002. S-67-216	EACH	1.000	1.000
0058	204.0270	Abandoning Culvert Pipes	EACH	4.000	4.000
0094	205.0100	Excavation Common	CY	1,901.000	1,901.000
0096	206.1001	Excavation for Structures Bridges (structure) 001. B-67-245	EACH	1.000	1.000
0104	210.1500	Backfill Structure Type A	TON	464.000	464.000
0114	211.0101	Prepare Foundation for Asphaltic Paving (project) 004. 1060-10-71	EACH	0.090	0.090
0122	213.0100	Finishing Roadway (project) 004. 1060-10-71	EACH	1.000	1.000
0124	305.0110	Base Aggregate Dense 3/4-Inch	TON	90.000	90.000
0126	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	879.000	879.000
0132	415.0070	Concrete Pavement 7-Inch	SY	100.000	100.000
0136	415.0090	Concrete Pavement 9-Inch	SY	371.000	371.000
0138	415.0410	Concrete Pavement Approach Slab	SY	507.000	507.000
0144	416.1710	Concrete Pavement Repair	SY	92.000	92.000
0146	416.1715	Concrete Pavement Repair SHES	SY	93.000	93.000
0148	416.1720	Concrete Pavement Replacement	SY	430.000	430.000
0150	416.1725	Concrete Pavement Replacement SHES	SY	105.000	105.000
0152	455.0605	Tack Coat	GAL	88.000	88.000
0162	460.2000	Incentive Density HMA Pavement	DOL	156.000	156.000
0170	460.6224	HMA Pavement 4 MT 58-28 S	TON	244.000	244.000
0178	465.0105	Asphaltic Surface	TON	87.000	87.000
0182	465.0125	Asphaltic Surface Temporary	TON	1,009.000	1,009.000
0184	465.0305	Asphaltic Surface Safety Islands	TON	109.000	109.000
0186	465.0310	Asphaltic Curb	LF	119.000	119.000
0192	502.0100	Concrete Masonry Bridges	CY	201.000	201.000
0194	502.3200	Protective Surface Treatment	SY	156.000	156.000
0196	502.3205	Pigmented Surface Sealer Reseal	SY	473.000	473.000
0198	502.4204	Adhesive Anchors No. 4 Bar	EACH	288.000	288.000
0202	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	19,385.000	19,385.000
0204	505.0904	Bar Couplers No. 4	EACH	4.000	4.000
0206	505.0905	Bar Couplers No. 5	EACH	36.000	36.000
0208	505.0906	Bar Couplers No. 6	EACH	10.000	10.000
0210	506.2610	Bearing Pads Elastomeric Laminated	EACH	8.000	8.000
0212	506.7050.S	Removing Bearings (structure) 001. B-67-245	EACH	8.000	8.000
0214	509.0301	Preparation Decks Type 1	SY	9.000	9.000
0216	509.0302	Preparation Decks Type 2	SY	2.500	2.500
0218	509.0310.S	Sawing Pavement Deck Preparation Areas	LF	111.000	111.000
0220	509.1500	Concrete Surface Repair	SF	58.000	58.000
0222	509.2100.S	Concrete Masonry Deck Repair	CY	1.100	1.100
0224	509.9050.S	Cleaning Parapets	LF	1,201.000	1,201.000

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Line	Item	Item Description	Unit	Total	Qty
0230	511.1200	Temporary Shoring (structure) 003. B-67-245	SF	800.000	800.000
0232	516.0500	Rubberized Membrane Waterproofing	SY	82.000	82.000
0240	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	4.000	4.000
0262	530.0112	Culvert Pipe Corrugated Polyethylene 12-Inch	LF	131.000	131.000
0282	601.0115	Concrete Curb Type G	LF	218.000	218.000
0286	601.0413	Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type G	LF	2,254.000	2,254.000
0288	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	168.000	168.000
0290	601.0590	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBTT	LF	334.000	334.000
0302	602.3010	Concrete Surface Drains	CY	3.000	3.000
0304	603.0105	Concrete Barrier Single-Faced 32-Inch	LF	40.000	40.000
0314	603.8000	Concrete Barrier Temporary Precast Delivered	LF	452.000	452.000
0316	603.8125	Concrete Barrier Temporary Precast Installed	LF	555.000	555.000
0320	604.0500	Slope Paving Crushed Aggregate	SY	672.000	672.000
0322	606.0100	Riprap Light	CY	4.000	4.000
0324	606.0200	Riprap Medium	CY	6.000	6.000
0328	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	8.000	8.000
0332	611.0430	Reconstructing Inlets	EACH	5.000	5.000
0338	611.0654	Inlet Covers Type V	EACH	8.000	8.000
0344	611.3225	Inlets 2x2.5-FT	EACH	6.000	6.000
0352	611.9710	Salvaged Inlet Covers	EACH	3.000	3.000
0366	614.0010	Barrier System Grading Shaping Finishing	EACH	2.000	2.000
0368	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	2.000	2.000
0372	614.0396	Guardrail Mow Strip Asphalt	SY	190.000	190.000
0382	614.0905	Crash Cushions Temporary	EACH	2.000	2.000
0392	614.2300	MGS Guardrail 3	LF	225.000	225.000
0398	614.2500	MGS Thrie Beam Transition	LF	236.000	236.000
0400	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0404	616.0100	Fence Woven Wire (height) 001. 4-FT	LF	34.000	34.000
0410	618.0100	Maintenance and Repair of Haul Roads (project) 001. 1060-10-71	EACH	1.000	1.000
0412	619.1000	Mobilization	EACH	0.090	0.090
0414	620.0300	Concrete Median Sloped Nose	SF	67.000	67.000
0416	624.0100	Water	MGAL	789.000	789.000
0418	625.0100	Topsoil	SY	2,609.000	2,609.000
0420	625.0500	Salvaged Topsoil	SY	410.000	410.000
0422	627.0200	Mulching	SY	100.000	100.000
0424	628.1504	Silt Fence	LF	1,709.000	1,709.000
0426	628.1520	Silt Fence Maintenance	LF	1,709.000	1,709.000
0428	628.1905	Mobilizations Erosion Control	EACH	7.000	7.000
0430	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0432	628.2002	Erosion Mat Class I Type A	SY	492.000	492.000
0438	628.7005	Inlet Protection Type A	EACH	4.000	4.000
0440	628.7010	Inlet Protection Type B	EACH	4.000	4.000
0442	628.7015	Inlet Protection Type C	EACH	23.000	23.000
0446	628.7555	Culvert Pipe Checks	EACH	1.000	1.000
0448	628.7560	Tracking Pads	EACH	2.000	2.000
0450	628.7570	Rock Bags	EACH	10.000	10.000
0454	629.0210	Fertilizer Type B	CWT	2.500	2.500
0456	630.0120	Seeding Mixture No. 20	LB	14.000	14.000
0462	630.0200	Seeding Temporary	LB	4.000	4.000
0464	630.0500	Seed Water	MGAL	10.000	10.000

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Line	Item	Item Description	Unit	Total	Qty
0466	631.0300	Sod Water	MGAL	74.000	74.000
0468	631.1000	Sod Lawn	SY	2,708.000	2,708.000
0470	631.1100	Sod Erosion Control	SY	5.000	5.000
0474	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	71.000	71.000
0476	634.0622	Posts Wood 4x6-Inch X 22-FT	EACH	2.000	2.000
0480	634.0816	Posts Tubular Steel 2x2-Inch X 16-FT	EACH	2.000	2.000
0490	637.2210	Signs Type II Reflective H	SF	480.625	480.625
0492	637.2215	Signs Type II Reflective H Folding	SF	122.060	122.060
0494	637.2230	Signs Type II Reflective F	SF	100.000	100.000
0498	638.2102	Moving Signs Type II	EACH	3.000	3.000
0502	638.2602	Removing Signs Type II	EACH	87.000	87.000
0504	638.3000	Removing Small Sign Supports	EACH	71.000	71.000
0508	643.0300	Traffic Control Drums	DAY	27,469.000	27,469.000
0510	643.0420	Traffic Control Barricades Type III	DAY	4,312.000	4,312.000
0512	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	35.000	35.000
0514	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	35.000	35.000
0516	643.0705	Traffic Control Warning Lights Type A	DAY	7,189.000	7,189.000
0518	643.0715	Traffic Control Warning Lights Type C	DAY	4,838.000	4,838.000
0520	643.0800	Traffic Control Arrow Boards	DAY	258.000	258.000
0522	643.0900	Traffic Control Signs	DAY	15,277.000	15,277.000
0526	643.0920	Traffic Control Covering Signs Type II	EACH	5.000	5.000
0528	643.1000	Traffic Control Signs Fixed Message	SF	32.000	32.000
0530	643.1050	Traffic Control Signs PCMS	DAY	164.000	164.000
0538	643.3150	Temporary Marking Line Removable Tape 4-Inch	LF	26,335.000	26,335.000
0542	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	2,340.000	2,340.000
0552	643.3850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	113.000	113.000
0556	643.5000	Traffic Control	EACH	0.090	0.090
0570	645.0130	Geotextile Type R	SY	19.000	19.000
0572	646.1020	Marking Line Epoxy 4-Inch	LF	12,221.000	12,221.000
0574	646.2020	Marking Line Epoxy 6-Inch	LF	983.000	983.000
0582	646.3020	Marking Line Epoxy 8-Inch	LF	1,769.000	1,769.000
0584	646.4020	Marking Line Epoxy 10-Inch	LF	489.000	489.000
0590	646.5020	Marking Arrow Epoxy	EACH	19.000	19.000
0592	646.5120	Marking Word Epoxy	EACH	14.000	14.000
0600	646.6120	Marking Stop Line Epoxy 18-Inch	LF	249.000	249.000
0602	646.6220	Marking Yield Line Epoxy 18-Inch	EACH	32.000	32.000
0604	646.7120	Marking Diagonal Epoxy 12-Inch	LF	136.000	136.000
0612	646.8120	Marking Curb Epoxy	LF	402.000	402.000
0614	646.8220	Marking Island Nose Epoxy	EACH	8.000	8.000
0618	646.9010	Marking Removal Line Water Blasting 4-Inch	LF	1,976.000	1,976.000
0624	646.9110	Marking Removal Line Water Blasting 8-Inch	LF	832.000	832.000
0628	646.9210	Marking Removal Line Water Blasting Wide	LF	70.000	70.000
0632	646.9310	Marking Removal Special Marking Water Blasting	EACH	11.000	11.000
0638	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	71.000	71.000
0640	652.0240	Conduit Rigid Nonmetallic Schedule 40 4-Inch	LF	24.000	24.000
0770	661.0201	Temporary Traffic Signals for Intersections (location) 071. IH 94 EB Ramps & CTH T	EACH	1.000	1.000
0772	661.0201	Temporary Traffic Signals for Intersections (location) 081. IH 94 WB Ramps & CTH T	EACH	1.000	1.000
0826	690.0150	Sawing Asphalt	LF	837.000	837.000
0828	690.0250	Sawing Concrete	LF	3,289.000	3,289.000
0830	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000

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Line	Item	Item Description	Unit	Total	Qty
0866	SPV.0060	Special 050. Survey Project	EACH	0.090	0.090
0868	SPV.0060	Special 051. Baseline CPM Progress Schedule	EACH	0.090	0.090
0870	SPV.0060	Special 052. Monthly CPM Progress Schedule Updates	EACH	5.000	5.000
0878	SPV.0060	Special 056. Field Facilities Office Space	EACH	0.090	0.090
0880	SPV.0060	Special 057. Utility Line Opening (ULO)	EACH	2.000	2.000
0882	SPV.0060	Special 058. Section Corner Monuments Special	EACH	1.000	1.000
0888	SPV.0060	Special 101. Concrete Barrier Transition to Curb	EACH	2.000	2.000
0890	SPV.0060	Special 102. Fastening Sewer Access Covers	EACH	6.000	6.000
0892	SPV.0060	Special 103. Reset Existing Bearings	EACH	18.000	18.000
0968	SPV.0060	Special 238. Temporary EVP System IH 94 EB Ramps & CTH T	EACH	1.000	1.000
0970	SPV.0060	Special 239. Temporary EVP System IH 94 WB Ramps & CTH T	EACH	1.000	1.000
1004	SPV.0090	Special 002. Marking Epoxy 4-Inch Black Non Grooved	LF	931.000	931.000
1008	SPV.0090	Special 004. Marking Epoxy 8-Inch Black Non Grooved	LF	129.000	129.000
1024	SPV.0180	Special 001. Methacrylate Flood Seal	SY	3,808.000	3,808.000

REMOVALS

CATEGORY	LOCATION	STATION		TO STATION	204.0100 REMOVING PAVEMENT SY	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0130 REMOVING CURB LF	204.0150 REMOVING CURB & GUTTER LF	* 204.0157 REMOVING CONCRETE BARRIER LF	204.0165 REMOVING GUARDRAIL LF	204.017 REMOVING FENCE LF	205.0100 EXCAVATION COMMON CY	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	NOTES
0010	CTH T MAINLINE	117+94.92	-	132+65.50	662	361	--	--	1959	239	--	--	--	--	2539	
		117+94.92	-	123+00.93	--	--	--	--	--	--	--	--	813	--	--	REMOVING GRASS MEDIAN
		117+94.92	-	123+00.93	--	1499	--	--	--	--	--	--	--	--	--	TEMP. ASPH. SURFACE
		122+89.12	-	124+02.00	--	241	--	--	--	--	--	--	--	--	--	TEMP. ASPH. SURFACE
		126+03.17	-	127+86.78	--	382	--	--	--	--	--	--	--	--	--	TEMP. ASPH. SURFACE
		128+59.79	-	132+65.50	--	1448	--	--	--	--	--	--	--	--	--	TEMP. ASPH. SURFACE
		128+59.79	-	132+65.50	--	--	--	--	--	--	--	--	797	--	--	REMOVING GRASS MEDIAN
	EB OFF RAMP	121+50 LT	-	122+50 LT	--	13	--	57	--	--	--	--	--	82	105	
	EB ON RAMP	121+50 RT	-	122+50 RT	214	97	--	148	42	--	--	--	--	--	265	
	WB OFF RAMP	127+50 RT	-	129+00 RT	--	29	--	95	--	--	--	--	--	--	97	
		2115+65B		2120+59B	--	181	--	--	--	--	--	--	--	--	--	REMOVING SHOULDER
		2116+35B		2120+59B	--	239	--	--	--	--	--	--	--	--	--	REMOVING SHOULDER
	WB ON RAMP	128+00 LT	-	129+50 LT	--	47	--	83	180	--	--	--	--	13	284	
	CTH JJ MAINLINE	13+60	-	16+59	--	419	677	--	--	--	--	--	290	567	--	
		14+99 RT	-	15+92 RT	--	--	--	--	--	--	95	--	--	--	--	
		15+81 RT	-	16+30 RT	--	--	--	--	13	--	--	34	--	--	--	
		15+14 LT	-	16+23	--	--	--	--	--	--	120	--	--	--	--	
		16+21 LT	-	16+59 LT	--	--	--	--	12	--	--	--	--	--	--	
		19+27	-	19+64	--	239	308	--	--	--	--	--	--	--	--	
		19+27 RT	-	20+60 RT	--	--	--	--	12	--	55	--	--	--	--	
		19+55 LT	-	20+60 LT	--	--	--	--	13	--	58	--	--	175	--	
TOTAL:					875	5195	985	384	2,231	239	328	34	1,901	837	3,289	

* The Barrier Curb Transition is paid for as Removing Concrete Barrier and includes the Barrier/Curb and adjacent pavement

BASE AGGREGATE

CATEGORY	LOCATION	STATION		TO STATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
0010	CTH T	117+95	-	122+01	--	95
		128+60	-	132+66	--	95
	CTH JJ	13+61	-	16+33	90	549
		19+52	-	20+60	--	140
	TOTAL:				90	879

CPM PROGRESS SCHEDULE

CATEGORY	PROJECT	SPV.0600.051 BASELINE CPM PROGRESS SCHEDULE EACH	SPV.0060.052 BASELINE CPM PROGRESS SCHEDULE UPDATES EACH
0010	1060-10-71	0.09	5
	TOTAL:	0.09	5

CONCRETE ITEMS

CATEGORY	LOCATION	STATION		TO STATION	415.0070 CONCRETE PAVEMENT 7-INCH SY	415.0090 CONCRETE PAVEMENT 9-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	601.0115 CONCRETE CURB TYPE G LF	601.0413 CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE G LF	601.0588 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT LF	601.0590 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT LF	602.3010 CONCRETE SURFACE DRAINS CY	620.0300 CONCRETE MEDIAN SLOPED NOSE SF
0010	CTH T	117+95	-	124+02	--	244	174	132	1063	--	106	--	11
		126+04	-	132+66	--	128	200	86	1191	--	186	3	56
	CTH JJ	13+61	-	16+57	48	--	66	--	--	84	21	--	--
		19+52	-	20+60	52	--	67	--	--	84	21	--	--
	TOTAL:				100	371	507	218	2,254	168	334	3	67

OVERHEAD SIGN SUPPORT

CATEGORY	LOCATION	204.0246 REMOVING ANCILLARY STRUCTURE (S-67-215) EACH	(S-67-216) EACH
0010	CTH T NORTHBOUND AT IH 94 WB RAMP	1	--
	CTH T SOUTHBOUND AT IH 94 EB RAMP	--	1
	TOTAL:	1	1

REMOVE CONCRETE FOOTINGS
2 FEET BELOW FINAL GRADE

PAVEMENT REPAIR

CATEGORY	LOCATION	STATION	TO STATION	416.1710 CONCRETE PAVEMENT REPAIR SY	416.1715 CONCRETE PAVEMENT REPAIR SHES SY	416.1720 CONCRETE PAVEMENT REPLACEMENT SY	416.1725 CONCRETE PAVEMENT REPLACEMENT SHES SY
0010	CTH T	118+14	118+24	27	--	--	--
		119+64	119+74	27	--	--	--
		122+92	123+44	--	26	142	--
		127+12	127+64	--	--	137	--
		130+86	130+96	--	27	--	--
		132+35	132+44	--	27	--	--
	EB OFF RAMP						
		4113+89	4114+41	--	--	--	105
		4111+80	4111+90	--	14	--	--
	WB OFF RAMP						
		2115+62	2116+14	--	--	151	--
		2118+14	2118+28	38	--	--	--
	TOTAL			92	93	430	105

ASPHALTIC ITEMS

CATEGORY	LOCATION	STATION		TO STATION	455.0605 TACK COAT GAL	460.6224 HMA PAVEMENT 4 MT 58-28 S TON	465.0105 ASPHALTIC SURFACE TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	465.0305 ASPHALTIC SURFACE SAFETY ISLAND TON	465.0310 ASPHALTIC CURB LF
0010	CTH T MAINLINE	117+95 LT	-	122+01 LT	--	--	--	412	--	--
		121+50 RT	-	129+00 RT	--	2	--	--	17	--
		121+50 LT	-	129+50 LT	--	--	--	--	7	--
		122+31 LT	-	122+70 LT	--	--	--	--	--	38
		122+90 RT	-	124+02 RT	--	--	--	66	--	--
		123+00	-	128+00	--	--	--	--	77	--
		124+02	-	126+03	8	--	--	17	--	--
		126+03 LT	-	127+87	--	--	--	105	--	--
		127+77 RT	-	128+14 RT	--	--	--	--	--	37
		128+49 LT	-	128+73 LT	--	--	--	--	--	25
		128+43 RT	-	128+63 RT	--	--	--	11	7	19
		128+60 LT	-	132+66 LT	--	--	--	398	--	--
		129+15.54 LT	-	129+30.82 LT	--	--	--	--	1	--
	CTH JJ MAINLINE	13+60	-	16+21	55	182	--	--	--	--
		19+64	-	20+60	25	61	--	--	--	--
	CTH JJ & CTH T				--	--	--	--	--	--
	WB OFF RAMP	2115+65B		2120+59B	--	--	36	--	--	--
		2116+35B		2120+58B	--	--	51	--	--	--
	TOTAL:				88	244	87	1,009	109	119

RECONSTRUCTING INLETS

CATEGORY	ROADWAY	STATION	OFFSET	204.0220 REMOVING INLETS EACH	204.0270 ABANDONING CULVERT PIPES EACH	611.0430 RECONSTRUCTING INLETS EACH	* 611.0654 INLET COVERS TYPE V EACH	611.9710 SALVAGED INLET COVERS EACH
0010	CTH T	121+84.34	0.10' RT	--	--	1	--	1
		122+42.78	48.40' LT	--	--	1	--	1
		127+74.67	57.03' LT	--	--	1	1	--
		127+84.43	64.48' LT	--	--	1	1	--
		128+91.48	6.30' RT	--	--	1	--	1
	CTH JJ	15+63	66.89' RT	1	1	--	--	--
		16+28	20.55' LT	1	1	--	--	--
		19+59	22.39' RT	1	1	--	--	--
		19+99	21.96' LT	1	1	--	--	--
	TOTAL:			4	4	5	2	3

*Additional quantities found elsewhere

STORM SEWER STRUCTURES

CATEGORY	ROADWAY	STRUCTURE	STATION	OFFSET*	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EACH	611.0654 (1) INLET COVERS TYPE V EACH	611.3225 INLETS 2X2.5-FT EACH	RIM** ELEVATION	INVERT*** ELEVATION	DEPTH**** FT	NOTES
0010	CTH T										
		I10	122+99.60	50.22' RT	--	1	1	893.20	889.42	2.45	
		I09	122+91.50	53.27' RT	--	1	1	893.00	889.12	2.55	CONNECT TO EXISTING STORM SEWER
	CTH JJ										
		CTH JJ 1.0	15+47.52	20.89' RT	--	1	1	904.82	900.00	3.49	
		CTH JJ EW 1.0	15+48.51	40.39' RT	1	--	--	--	--	--	
		CTH JJ 2.0	15+88.50	20.89' LT	--	1	1	905.57	901.50	2.74	
		CTH JJ 2.0 EW	15+93.93	49.60' LT	1	--	--	--	--	--	
		CTH JJ 3.0	19+94.70	22.43' RT	--	1	1	905.71	901.50	2.88	
		CTH JJ 3.0 EW	19+62.69	56.01' RT	1	--	--	--	--	--	
		CTH JJ 4.0	20+37.50	22.26' LT	--	1	1	904.95	900.00	3.62	
		CTH JJ 4.0 EW	20+31.17	51.84' LT	1	--	--	--	--	--	
				TOTALS	4	6	6				

REMARKS:

*STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE

**RIM ELEV IS AT THE INLET COVER FLANGE LOCATION

***FOR STRUCTURES WITH SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE SUMP. FOR STRUCTURES WITHOUT SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE LOWEST PIPE FLOW LINE

****DEPTH = RIM ELEV - TOP OF STRUCTURE BASE ELEV - COVER HEIGHT - 6-INCH ADJUSTMENT RING HEIGHT

(1) ADDITIONAL QUANTITES FOUND ELSEWHERE

STORM SEWER PIPES

CATEGORY	ROADWAY	FROM	TO	530.0112 CULVERT PIPE CORRUGATED POLYETHYLENE 12-INCH LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	INLET ELEVATION	DISCHARGE ELEVATION	SLOPE FT/FT
0010	CTH T							
		I09	I10	--	8	889.42	889.22	0.033
	CTH JJ							
		CTH JJ 1.0	CTH JJ EW 1.0	20	--	900.00	899.84	0.0084
		CTH JJ 2.0	CTH JJ 2.0 EW	30	--	901.50	897.26	0.3319
		CTH JJ 3.0	CTH JJ 3.0 EW	49	--	901.50	892.90	0.2398
		CTH JJ 4.0	CTH JJ 4.0 EW	32	--	900.00	892.89	0.4463
				131	8			

GUARDRAIL

CATEGORY	LOCATION	STATION	TO STATION	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING EACH	614.0396 GUARDRAIL MOW STRIP ASPHALT SY	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
0010	CTH T	122+73.80	122+99.60	1	28	--	39.4	1
		126+20.87	127+25.89	1	44	12.50	39.4	1
	CTH JJ	14+52.52	15+92.52	--	57	50.00	39.4	1
		14+80.78	16+35.78	--	61	62.50	39.4	1
		19+48.67	20+01.86	--	--	50.00	39.4	--
		19+92.03	20+45.10	--	--	50.00	39.4	--
	TOTAL:			2	190	225	236	4

FENCING ITEMS

CATEGORY	LOCATION	STATION	TO	STATION	616.0100.001 FENCE WOVEN WIRE (001. 4 FT) LF
0010	CTH JJ MAINLINE	15+81 RT	-	16+30 RT	34
	TOTAL:				34

TEMPORARY SIGNALS

CATEGORY	LOCATION	661.0201.71 TEMPOARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) (71. IH 94 EB RAMPS & CTH T EACH	661.0201.81 TEMPOARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) (81. IH 94 WB RAMPS & CTH T EACH	SPV.0060.238 TEMPOARY EVP SYSTEM IH 94 EB RAMPS & CTH T EACH	SPV.0060.239 TEMPOARY EVP SYSTEM IH 94 WB RAMPS & CTH T EACH
0010	CTH T	1	1	1	1
	TOTAL:	1	1	1	1

3

DUST CONTROL

CATEGORY	LOCATION	624.0100 WATER MGAL	628.7560 TRACKING PADS EACH
0010		789	2
	TOTAL:	789	2

MOBILIZATION

CATEGORY	PROJECT	619.1000 MOBILIZATION EACH	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010		0.09	7	4
	TOTAL:	0.09	7	4

RIPRAP

CATEGORY	STATION	LOCATION	L X W	606.0100 RIPRAP LIGHT CY	606.0100 RIPRAP MEDIUM CY	645.0130 GEOTEXTILE FABRIC TYPE R SY	631.1100 SOD EROSION CONTROL SY
0010	129+00	CTH T LT	4 x 12	4	--	19	5
	115+50	CTH JJ RT	25 x 4	--	6	--	--
		TOTAL:		4	6	19	5

RESTORATION ITEMS

CATEGORY	STATION	TO STATION	LOCATION	625.0100 TOPSOIL SY	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY
0010	117+94.96	122+00.89	CTH T RT, LT	1,279	--	--	0.8	--	--	--	29	1,279
	122+74.10	123+34.98	CTH T RT	29	--	--	0.1	--	--	--	1	29
	126+13.09	128+02.87	CTH T LT	59	--	--	0.1	--	--	--	1	59
	128+59.79	132+65.46	CTH T RT, LT	1,241	--	--	0.8	--	--	--	28	1,241
	13+58.84	16+20.42	CTH JJ RT	--	190	--	0.1	5	2	4	--	--
	13+78.30	16+59.15	CTH JJ LT	--	220	--	0.1	6	1	5	--	--
			UNDISTRIBUTED	--	--	100	0.5	3	1	1	15	100
	TOTAL:			2,609	410	100	2.5	14	4	10	74	2,708

EROSION CONTROL

CATEGORY	LOCATION	STATION	TO STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2002 EROSION MAT CLASS I TYPE A SY	628.7005 INLET PROTECTION TYPE A EA	628.701 INLET PROTECTION TYPE B EA	628.7015 INLET PROTECTION TYPE C EA	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH
0010	CTH T	115+36.37		RT, LT	--	--	--	1	--	2	--	--
		116+17.16		RT, LT	--	--	--	1	--	2	--	--
		119+00.00		RT, LT	--	--	--	--	--	2	--	--
		121+84.75		LT	--	--	--	--	--	1	--	--
		122+42.48		LT	--	--	--	--	--	1	--	--
		122+74.10	123+34.98	RT	86	86	--	--	--	--	--	--
		122+76.39		LT	--	--	--	--	--	1	--	--
		122+90.59		RT	--	--	--	--	--	1	--	--
		122+99.70		RT	--	--	--	--	--	1	--	--
		126+13.09	128+02.87	LT	195	195	--	--	--	--	--	--
		127+64.00		RT	--	--	--	--	--	1	--	--
		127+73.90		LT	--	--	--	--	--	1	--	--
		127+74.67		RT	--	--	--	--	--	1	--	--
		127+85.06		LT	--	--	--	--	--	1	--	--
		128+45.90	129+45.31	LT	187	187	--	--	--	--	--	--
		128+92.09		RT	--	--	--	--	--	1	--	--
		130+99.27		RT, LT	--	--	--	--	--	2	--	--
		134+50.00		LT	--	--	--	1	--	--	--	--
	CTH JJ	13+46.85			--	--	--	--	--	--	1	--
		13+58.84	16+20.42	RT	308	308	190	--	--	--	--	--
		13+78.30	16+59.15	LT	291	291	220	--	--	--	--	--
		15+57.19	15+73.87	RT	27	27	--	--	--	--	--	--
		15+86.37		RT	--	--	--	--	1	--	--	--
		16+24.16	16+38.00	LT	24	24	--	--	--	--	--	--
		16+25.99		LT	--	--	--	--	1	--	--	--
		19+25.88	20+60.00	RT	140	140	--	--	1	--	--	--
		19+63.89	20+60.00	LT	108	108	--	--	1	--	--	--
		UNDISTRIBUTED			342	342	82	1	--	5	--	10
		TOTAL:			1709	1709	492	4	4	23	1	10

TRAFFIC CONTROL

CATEGORY	STAGE	LOCATION	* DAYS	643.0300 DRUMS EACH	643.0300 DRUMS DAY	643.0420 BARRICADES TYPE III EACH	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A EACH	643.0705 WARNING LIGHTS TYPE A DAY	643.0715 WARNING LIGHTS TYPE C EACH	643.0715 WARNING LIGHTS TYPE C DAY	643.0800 ARROW BOARDS EACH	643.0800 ARROW BOARDS DAY	643.0900 SIGNS EACH	643.0900 SIGNS DAY	643.1050 SIGNS PCMS DAY
0010																
	1A	CTH T	21	135	2835	15	315	16	336	21	441	1	21	46	966	--
	1B	CTH T	42	158	6636	19	798	26	1092	25	1050	1	42	50	2100	--
	1C	CTH T	42	124	5208	25	1050	50	2100	35	1470	1	42	49	2058	--
	1D	CTH T	42	132	5544	15	630	30	1260	21	882	1	42	42	1764	--
		IH 94 - SHOULDER CLOSURE EB	14	30	420	--	--	--	--	--	--	1	14	4	56	--
		IH 94 - SHOULDER CLOSURE WB	14	30	420	--	--	--	--	--	--	1	14	4	56	--
		IH 94 - EB LANE CLOSURE	2	45	90	1	2	2	4	17	34	2	4	9	18	--
	2	CTH JJ	35	--	--	11	385	12	420	--	--	--	--	17	595	--
		IH 94 - SHOULDER CLOSURE EB	14	30	420	--	--	--	--	--	--	1	14	4	56	--
		IH 94 - SHOULDER CLOSURE WB	14	30	420	--	--	--	--	--	--	1	14	4	56	--
	DETOURS	CTH JJ NB	45	--	--	3	135	6	270	--	--	--	--	51	2295	7
		CTH JJ SB	45	--	--	3	135	6	270	--	--	--	--	49	2205	7
		STAGE 1 & 2 UNDISTRIBUTED	--	--	5476	--	862	--	1437	--	961	--	51	--	3052	150
		TOTAL:			27469		4312		7189		4838		258		15277	164

* FOR INFORMATION ONLY

TRAFFIC CONTROL COVERING SIGNS

CATEGORY	STAGE	LOCATION	643.0920 COVERING SIGNS TYPE II EACH	NUMBER OF CYCLES*	NUMBER OF SIGNS*
0010					
	1A	CTH T	1	1	1
	1B	CTH T	1	1	1
	1C	CTH T	1	1	1
	1D	CTH T	1	1	1
		STAGE 1 & 2 UNDISTRIBUTED	1	1	1
		TOTAL:	5		

* FOR INFORMATION ONLY

FIXED MESSAGE SIGNS

CATEGORY	STAGE	LOCATION	SIGN NO.	SIZE	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	NOTES
0010	2	CTH JJ NB		8.0' x 2.0'	16	
	2	CTH JJ SB		8.0' x 2.0'	16	
	TOTAL:				32	

TUBULAR MARKERS

CATEGORY	STAGE	STATION	TO STATION	LOCATION	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS EACH	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES EACH
0010	1B	123+00	127+50	CTH T LT	18	18
	1C	123+00	127+50	CTH T RT	17	17
	TOTAL:				35	35

CONCRETE BARRIER

CATEGORY	LOCATION	STATION	TO STATION	603.0105 CONCRETE BARRIER SINGLE-FACED 32-INCH LF	SPV.0060.101 CONCRETE BARRIER TRANSITION TO CURB EACH	NOTES
0010	CTH T	122+53	122+61 LT	--	1	INCLUDES CONCRETE SHOULDER
		123+23	123+32 RT	--	--	
		123+56	123+75 LT	19	--	
		126+31	126+52 RT	21	--	
		127+77	127+87 RT	--	1	INCLUDES CONCRETE SHOULDER
	TOTAL:			40	2	

TRAFFIC CONTROL

CATEGORY	LOCATION	643.5000 TRAFFIC CONTROL EACH
0010	PROJECT 1060-10-71	0.09
	TOTAL	0.09

3

TEMPORARY PAVEMENT MARKINGS

CATEGORY	LOCATION	STAGE	STATION	TO STATION	646.9010 MARKING LINE WATER BLASTING 4-INCH LF	646.9110 MARKING LINE WATER BLASTING 8-INCH LF	646.9210 MARKING REMOVAL WIDE LF	646.9310 SPECIAL MARKING WATER BLASTING EACH	YELLOW LF	WHITE LF	643.3150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH DASHED WHITE 12.5 FT LINE 37.5 FT SKIP LF	DASHED WHITE (3 FT LINE 9 FT SKIP) LF	DASHED YELLOW (3 FT LINE 9 FT SKIP) LF	643.3850 TEMPORARY MARKING STOP LINE REMOVABLE TAPE (18-INCH) (WHITE) LF
0010	CTH T	1A	110+25	137+25	1669	0	--	7	4614	1049	395	62	--	--
	CTH T	1B	112+00	137+50	37	--	--	--	2571	4430	377	--	79	32
	CTH T	1C	112+00	137+50	270	274	--	4	3538	2683	383	34	--	81
	CTH T	1D	113+00	137+25	--	--	--	--	4614	1049	395	62	--	--
	WB OFF RAMP	1A			--	430	--	--	--	--	--	--	--	--
	EB OFF RAMP				--	64	35	--	--	--	--	--	--	--
	WB OFF RAMP				--	64	35	--	--	--	--	--	--	--
				SUBTOTAL:	1976	832	70	11	15337	9211	1551	157	79	113
				TOTAL:	1976	832	70	11			26335			113

TEMPORARY PAVEMENT MARKINGS CONTINUED

CATEGORY	LOCATION	STAGE		643.3180 TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH YELLOW LF	WHITE LF
0010	WB OFF RAMP	1A		630	500
	WB OFF RAMP	1B		---	600
	WB OFF RAMP	1C		610	
			SUBTOTAL:	1240	1100
			TOTAL:	2340	

TEMPORARY CONCRETE BARRIER

CATEGORY	STAGE	LOCATION	STATION	TO STATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF
0010	1B	CTH T	123+22	127+50	452	452
	1C	CTH T	123+22	123+66	--	44
	1C	CTH T	126+43	127+02	--	59
		TOTAL:			452	555

TEMPORARY CRASH CUSHIONS

CATEGORY	STAGE	LOCATION	STATION	614.0905 CRASH CUSHION TEMPORARY EACH	BACK WIDTH (FT)	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS
0010	1B	CTH T	123+22	1	2	OM-3R (W05- 58R)	TL-3	UNIDIRECTIONAL	L	TEMPORARY CONCRETE BARRIER IN MEDIAN
	1C	CTH T	127+02	1	2	OM-3L (W05-58L)	TL-3	UNIDIRECTIONAL	R	TEMPORARY CONCRETE BARRIER IN MEDIAN
	TOTAL:			2						

3

PAVEMENT MARKINGS

CATEGORY	LOCATION	STATION	TO STATION	646.1020 MARKING LINE EPOXY 4-INCH YELLOW LF	646.1020 MARKING LINE EPOXY 4-INCH WHITE LF	646.1020 MARKING LINE EPOXY 4-INCH 12.5 FT LINE 25 FT SKIP DASHED WHITE LF	646.2020 MARKING LINE EPOXY 6-INCH YELLOW LF	646.2020 MARKING LINE EPOXY 6-INCH WHITE LF	646.2020 MARKING LINE EPOXY 6-INCH 12.5 FT LINE 25 FT SKIP DASHED WHITE LF	646.3020 MARKING LINE EPOXY 8-INCH WHITE LF	646.3020 MARKING LINE EPOXY 8-INCH 2 FT LINE 4 FT SKIP DASHED WHITE LF	646.3020 MARKING LINE EPOXY 8-INCH 3 FT LINE 9 FT SKIP DASHED WHITE LF	646.4020 MARKING LINE EPOXY 10-INCH WHITE LF	646.4020 MARKING LINE EPOXY 10-INCH 3 FT LINE 9 FT SKIP DASHED WHITE LF	SPV.0090.002 MARKING EPOXY 4-INCH BLACK NON GROOVED 12.5 FT LINE 25 FT SKIP DASHED BLACK LF	SPV.0090.004 MARKING EPOXY 8-INCH BLACK NON GROOVED 2 FT LINE 4 FT SKIP DASHED BLACK LF
0010	CTH T	117+95	- 123+00	1658	1724	418	--	--	--	323	52	--	--	--	418	52
		123+00	- 128+00	873	1001	219	--	--	--	715	78	55	--	--	219	78
		128+00	- 135+00	1158	1243	294	--	--	--	547	--	--	--	--	294	--
	CTH JJ	11+63	- 20+60	2022	1612	--	--	--	--	--	--	--	--	--	--	--
	EB OFF RAMP	--	--	--	--	--	124	119	--	--	--	--	160	6	--	--
	WB ON RAMP	--	--	--	--	--	126	118	--	--	--	--	--	--	--	--
	EB ON RAMP	--	--	--	--	--	120	119	15	--	--	--	--	--	--	--
	WB OFF RAMP	--	--	--	--	--	124	118	--	--	--	--	323	--	--	--
	SUBTOTAL			5,711	5,580	931	494	474	15	1585	129	55	483	6	931	129
	TOTAL:				12,221			983			1,769			489	931	129

PAVEMENT MARKINGS (CONTINUED)

CATEGORY	LOCATION	STATION	TO STATION	646.5020 MARKING ARROW EPOXY TYPE 2 EACH	646.5020 MARKING ARROW EPOXY TYPE 3 EACH	646.5120 MARKING WORD EPOXY WHITE 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 WHITE LF	646.7120 MARKING DIAGONAL EPOXY 12-INCH YELLOW LF	646.8120 MARKING CURB EPOXY YELLOW LF	646.8220 MARKING ISLAND NOSE EPOXY YELLOW EACH
0010	CTH T	117+95	- 123+00	2	--	2	24	--	--	--	103	4
		123+00	- 128+00	8	--	6	101	--	--	--	154	--
		128+00	- 135+00	4	--	3	26	--	--	--	145	4
	CTH JJ	11+63	- 20+60	--	--	--	--	--	--	17	--	--
	EB OFF RAMP	--	--	1	1	1	20	7	41	--	--	--
	WB ON RAMP	--	--	--	--	--	27	9	--	--	--	--
	EB ON RAMP	--	--	--	--	--	24	9	78	--	--	--
	WB OFF RAMP	--	--	2	1	2	28	7	--	--	--	--
	SUBTOTAL			17	2	14	249	32	119	17	402	8
	TOTAL:			19		14	249	32	136		402	8

ROADWAY ITEMS

CATEGORY	LOCATION	211.0101 PREPARE FOUNDATION FOR ASPHALTIC PAVING (1060-10-71) EACH	213.0100 FINISHING ROADWAY (1060-10-71) EACH	618.0100 MAINTENANCE AND REPAIR HAUL ROADS (1060-10-71) EACH	SPV.0060.050 SURVEY PROJECT EACH	SPV.0060.056 FIELD FACILITIES OFFICE SPACE EACH
0010	CTH JJ	0.09	--	--	--	--
0010	PROJECT WIDE	--	1	1	0.09	0.09
	TOTAL:	0.09	1	1	0.09	0.09

FASTENING SEWER ACCESS COVERS

CATEGORY	LOCATION	STATION	OFFSET	SPV.0060.102 FASTENING SEWER ACCESS COVERS EACH
0010	CTH T	122+42	47' LT	1
		122+76	47' LT	1
		122+92	48' RT	1
		122+99	48' RT	1
		127+64	49' RT	1
		127+74	49' RT	1
			TOTAL:	6

SURVEY MONUMENTS

CATEGORY	LOCATION	STATION	OFFSET	SPV.0060.058 SECTION CORNER MONUMENTS SPECIAL EACH
0010	CTH T	124+80.96	10.4' RT	1
			TOTAL:	1

UTILITY LINE OPENING

CATEGORY	LOCATION	SPV.0060.057 UTILITY LINE OPENING (U (ULO) EACH
0010	CTH JJ	2
	TOTAL:	2

TYPE II SIGNING

1060-10-71 IH 94 AT CTH T

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]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0622 POSTS WOOD 4" X 6" X 22' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
1	D1-2	MADISON (UP ARROW) MILWAUKEE (RIGHT ARROW)	72 x 30	15.000			1.000	2.000		2				
2	D1-2	MADISON (UP ARROW) MILWAUKEE (RIGHT ARROW)	72 30	15.000			1.000	2.000		2				
3	J2-1(2M) MB3-2 M1-1 MB5-1R	 IH 94 	24 X 57 24 X 12 24 X 24 21 X 21	9.500			1.000	1.000		1				
4	J2-1(2M) MB3-4 M1-1 MB4-22L	 IH 94 	24 X 57 24 X 12 24 X 24 24 X 21	9.500			1.000	1.000		1				
5	J3-1(2M) MB3-2 M1-1 MB6-1	 IH 94 	24 X 57 24 X 12 24 X 24 21 X 21	9.500			1.000	1.000		1				
6	R11-54F(2M) MB6-1	 	48 X 30 21 X 21			10.000	1.000	2.000		2				
7	R1-2(2M)		48 X 42	7.000			1.000	1.000		1				
8	W12-1D(2S)		24 X 24		4.000		1.000	1.000		1				2 FOOT MOUNTING HEIGHT
9	R1-1F(3)		36 X 36			7.460	1.000							MOUNT ON SIGNAL POLE
10	R6-2L(2M)		30 X 36	7.500			1.000	1.000		1				
11	J2-2(2M) MB3-4 M1-1 MB5-1L M3-1 M1-5A M6-1	 IH 94 CTH T 	48 X 57 24 X 12 24 X 24 21 X 21 24 X 12 24 X 24 21 X 21	19.000			1.000	1.000		1				
12	R7-1D(2M)		24 X 30	5.000			1.000	1.000		1				
13	R11-54F(2M)		48 X 30			10.000	1.000	2.000		2				
14	J2-1(2M)		24 X 57	9.500			1.000							MOUNT ABOVE SIGN # 13
15	W5-52R(2M)		12 X 36		6.000		1.000	1.000		1				4 FOOT MOUNTING HEIGHT
16	R3-5L						1.000							MOUNTED ON S-67-216
17	R3-5L						1.000							MOUNTED ON S-67-216
18	R1-1F(3)		36 X 36			7.460	1.000							MOUNT ON SIGNAL POLE
19	R3-1(2M)		36 X 36	9.000			1.000	1.000		1				
20	J3-1(2M) MB3-2 M1-1 MB6-1	 IH 94 	24 X 57 24 X 12 24 X 24 21 X 21	9.500			1.000	1.000		1				

SHEET: 1 OF 4

PROJECT NO: 1060-10-71	HWY: IH 94 at CTH T and JJ	COUNTY: WAUKESHA	MISCELLANEOUS QUANTITIES PERMANENT SIGNING	SHEET:	E

TYPE II SIGNING

1060-10-71 IH 94 AT CTH T

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]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	634.0622 POSTS WOOD 4" X 6" X 22' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
21	R6-2L(2M)		24 X 30	5.000			1.000	1.000		1				
22	W12-1D(2M)		24 X 24		4.000		1.000	1.000		1				2 FOOT MOUNTING HEIGHT
23	R1-1F(3)		36 X 36			7.460	1.000	1.000		1				
24	R5-1A(2S)		24 X 36	6.000			1.000							MOUNT ON SIGNAL POLE
25	R5-1(3)		36 X 36	9.000			1.000						24	MOUNT ON SIGNAL POLE
26	R5-1A(2S)		24 X 36	6.000			1.000						23	MOUNT BACK OF SIGN # 23
27	R5-1(3)		36 X 36	9.000			1.000						26	
28	R1-2(2M)		48 X 42	7.000			1.000	1.000		1				
29	R2-1(2M)	45 MPH	30 X 36	7.500			1.000	1.000		1				
30	R2-1(2M)	45 MPH	30 X 36	7.500			1.000	1.000		1				
31	R1-1F(3)		36 X 36			7.460	1.000							ON SIGNAL POLE
32	R3-18(2M)		36 X 36	9.000			1.000	1.000		1				
33	R1-1F(3)		36 X 36			7.460	1.000						32	
34	J3-1(2M)		24 X 69	11.500			1.000	1.000		1				
	MB4-1		24 X 12											
	MB3-2		24 X 12											
	M1-1	IH 94	24 X 24											
	MB6-1		21 X 21											
35	W3-3(2M)		36 X 36		9.000		1.000	1.000		1				
36	W3-3(2M)		36 X 36		9.000		1.000	1.000		1				
37	R5-1(2M)		36 X 36	9.000			1.000							SIGNAL POLE
38	J3-1(2M)		24 X 57	9.500			1.000						32	
	MB3-2		24 X 12											
	M1-1		24 X 24											
	MB6-1		21 X 21											
39	R4-7(2M)		24 X 30	5.000			1.000	1.000		1				
40	R3-18(2M)		36 X 36	9.000			1.000						39	
41	R3-5L						1.000							MOUNTED ON S-67-215
42	R3-5L						1.000							MOUNTED ON S-67-215
43	D1-1	MADISON (ARROW LEFT)	66 X 15	6.875			1.000	2.000		2				
44	R5-1(2M)		36 X 36	9.000			1.000	1.000		1				
45	R1-1F(3)		36 X 36			7.460	1.000	1.000		1				
46	R3-1(2M)		36 X 36	9.000			1.000						47	ON SIGNAL POLE
47	R1-1F(3)		36 X 36			7.460	1.000							ON SIGNAL POLE
48	W12-1D(2M)		24 X 24		4.000		1.000	1.000		1				2 FOOT MOUNTNING HEIGHT
49	R1-2(2M)		48 X 42	7.000			1.000	1.000		1				
50	R1-1F(3)		36 X 36			7.460	1.000							ON SIGNAL POLE

SHEET: 2 OF 4

PROJECT NO: 1060-10-71	HWY: IH 94 at CTH T and JJ	COUNTY: WAUKESHA	MISCELLANEOUS QUANTITIES PERMANENT SIGNING	SHEET:	E

TYPE II SIGNING

1060-10-71 IH 94 AT CTH T

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]	**637.2215** SIGNS TYPE II REFLECTIVE H FOLDING [SF]	**638.2602** REMOVING SIGNS TYPE II EACH	**638.3000** REMOVING SMALL SIGN SUPPORTS [EA]	**638.2102** MOVING SIGNS TYPE II [EA]	**634.0618** POSTS WOOD 4" X 6" X 18' [EA]	**634.0622** POSTS WOOD 4" X 6" X 22' [EA]	**634.0816** POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
51	R7-1D(2M)		24 X 30	5.000			1.000	1.000		1				
52	R5-1(3)		36 X 36	9.000			1.000							ON SIGNAL POLE
53	R5-1A(2S)		24 X 30	5.000			1.000						52	ON SIGNAL POLE
54	R4-7(2M)		24 X 30	5.000			1.000	1.000		1				
55	R3-18(2M)		36 X 36	9.000			1.000	1.000		1				
56	R1-1F(3)		36 X 36			7.460	1.000						55	
57	J3-1(2M)		24 X 57	9.500			1.000	1.000		1				
	MB3-2		24 X 12											
	M1-1	IH 94	24 X 24											
	MB6-1		21 X 21											
58	J3-1(2M)		24 X 57	9.500			1.000	1.000		1				
	MB3-4		24 X 12											
	M1-1	IH 94	24 X 24											
	MB6-1		21 X 21											
59	R1-2(2M)		48 X 42	7.000			1.000	1.000		1				
60	J3-1(2M)		24 X 57	9.500			1.000						55	
	MB3-4		24 X 12											
	M1-1	IH 94	24 X 24											
	MB6-1		21 X 21											
61	R4-7(2M)		24 X 30	5.000			1.000							ON SIGNAL POLE
62	R1-1F(3)		36 X 36			7.460	1.000							ON SIGNAL POLE
63	R6-2L(2M)		24 X 30	5.000			1.000	1.000		1				
64	R6-2L(2M)		24 X 30	5.000			1.000	1.000		1				
65	R11-54F(2M)		48 X 30			10.000	1.000	2.000		2				
66	R7-1D(2M)		24 X 30	5.000			1.000	1.000		1				
67	R11-54F(2M)		48 X 30			10.000	1.000	2.000		2				
68	J2-1(2M)		24 X 57	9.500			1.000						67	
	MB3-2		24 X 12											
	M1-1	IH 94	24 X 24											
	MB5-1L		21 X 21											
69	W5-52R(2M)		12 X 36		3.000		1.000	1.000		1				4 FOOT MOUNTING HEIGHT
70	R1-1F(3)		36 X 36			7.460	1.000							ON SIGNAL POLE
71	R5-1(3)		36 X 36	9.000			1.000						45	
72	R5-1A(2S)		36 X 24	6.000			1.000						71	
73	D1-1	GOLF RD (ARROW LEFT)	60 X 15	6.250			1.000	2.000		2				
74	W3-3(2M)		36 X 36		9.000		1.000	1.000		1				
75	W3-3(2M)		36 X 36		9.000		1.000	1.000		1				
76	W3-3(2M)		36 X 36		9.000		1.000	1.000		1				
77	W3-3(2M)		36 X 36		9.000		1.000	1.000		1				

TYPE II SIGNING

1060-10-71 IH 94 AT CTH T

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]	**637.2215** SIGNS TYPE II REFLECTIVE H FOLDING [SF]	**638.2602** REMOVING SIGNS TYPE II EACH	**638.3000** REMOVING SMALL SIGN SUPPORTS [EA]	**638.2102** MOVING SIGNS TYPE II [EA]	**634.0618** POSTS WOOD 4" X 6" X 18' [EA]	**634.0622** POSTS WOOD 4" X 6" X 22' [EA]	**634.0816** POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
78	J2-3(2M)		72 X 57	28.500			1.000	2.000		2				
	MB3-2		24 X 12											
	M1-1	IH 94	24 X 24											
	MB6-1		21 X 21											
	M3-3		24 X 12											
	M1-5A	CTH T	24 X 24											
	M6-1		21 X 21											
	MB3-4		24 X 12											
	M1-1	IH 94	24 X 24											
	MB5-1R		21 X 21											
79	J2-3(2M)		72 X 57	28.500			1.000	2.000		2				
	MB3-2		24 X 12											
	M1-1	IH 94	24 X 24											
	MB6-1		21 X 21											
	M3-3		24 X 12											
	M1-5A	CTH T	24 X 24											
	M6-1		21 X 21											
	MB3-4		24 X 12											
	M1-1	IH 94	24 X 24											
	MB5-1R		21 X 21											
80	D1-2	MILWAUKEE (ARROW UP) MADISON (ARROW RIGHT)	72 X 30	15			1.000	2.000		2				
81	W5-52R(2S)		12 X 36		3.000		1.000	1.000		1				4 FOOOT MOUNTING HEIGHT
82	W5-52R(2S)		12 X 36		3.000		1.000	1.000		1				4 FOOOT MOUNTING HEIGHT
83	W5-52L(2S)		12 X 36		3.000		1.000	1.000		1				4 FOOOT MOUNTING HEIGHT
84	W5-52L(2S)		12 X 36		3.000		1.000	1.000		1				4 FOOOT MOUNTING HEIGHT
85	W8-8(2S)		36 X 36		9.000		1.000	1.000		1				
86	D1-2	MILWAUKEE (ARROW UP) MADISON (ARROW RIGHT)	72 X 30	15			1.000	2.000		2				
87	D1-1	MILWAUKEE (ARROW LEFT)	72 X 15	7.500			1.000	2.000		2				
88	W12-1D(2M)		24 x 24		4.000									MOUNT ON SIGNAL POLE
UNDISTRIBUTED				--	--	--	--	--	3	--	2	2	--	--
TOTALS				480.625	100.000	122.060	87.000	71.000	3	71	2	2	--	--

SHEET: 4 OF 4

PROJECT NO: 1060-10-71	HWY: IH 94 at CTH T and JJ	COUNTY: WAUKESHA	MISCELLANEOUS QUANTITIES PERMANENT SIGNING	SHEET:	E

Standard Detail Drawing List

08A05-20C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-08A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D03-09A	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D03-09B	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
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
11B02-02	CONCRETE MEDIAN NOSE
12A03-10	NAME PLATE (STRUCTURES)
13A03-07	CONCRETE PAVEMENT SHOULDERS
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13B02-09B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-17A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-17B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-17C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
14B28-04A	GUARDRAIL MOW STRIP
14B28-04B	GUARDRAIL MOW STRIP
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)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A04-07D	CHANNELIZING DEVICES, PERMANENT FLEXIBLE TUBULAR MARKER POST
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-09G	TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-23C	PAVEMENT MARKING (TURN LANES)
15C08-23D	PAVEMENT MARKING (TURN LANES)
15C11-10A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

6

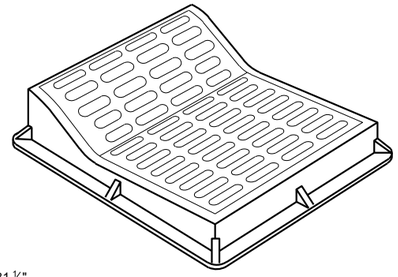
Standard Detail Drawing List

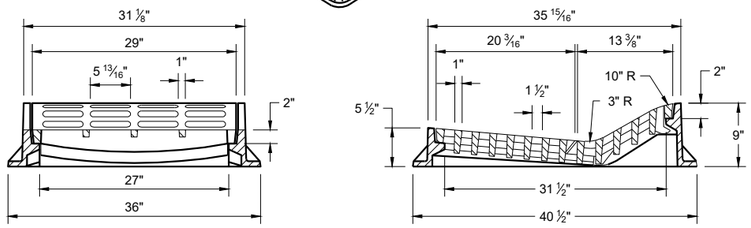
15C18-08A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C18-08B	MEDIAN ISLAND MARKING MEDIAN ISLAND NOSE
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D12-11A	TRAFFIC CONTROL, LANE CLOSURE
15D20-07B	TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D40-05A	TRAFFIC CONTROL, FULL LANE SHIFT NON-FREEWAY OR MULTILANE DIVIDED 45 MPH AND UNDER
15D49-02	TRAFFIC CONTROL, SYSTEM RAMP CLOSURE
16A01-07	LANDMARK REFERENCE MONUMENTS AND COVERS

GENERAL NOTES

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

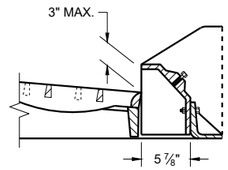
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.





TYPE "F"

USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"

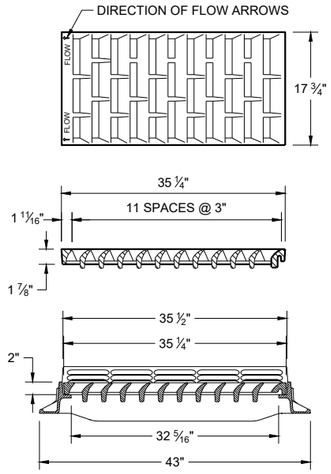


ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

USE WITH TYPES "G" AND "J" CONCRETE CURB AND GUTTER, 30 INCH
NOTED AS TYP "HM-GJ" ON DRAINAGE TABLE

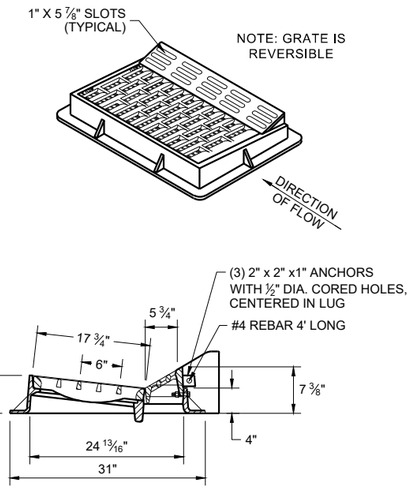
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.



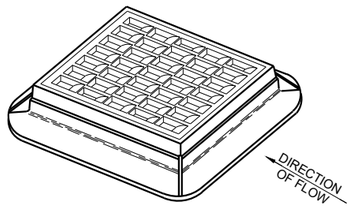
TYPE "HM"

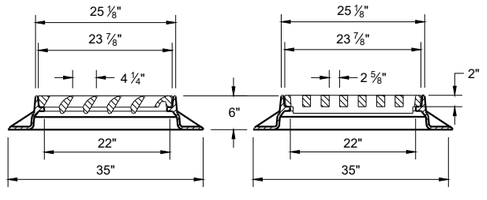
USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"



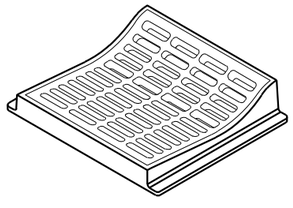
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

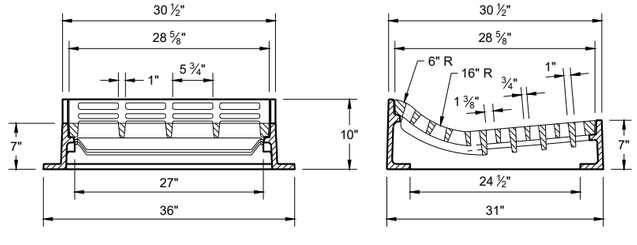
NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.





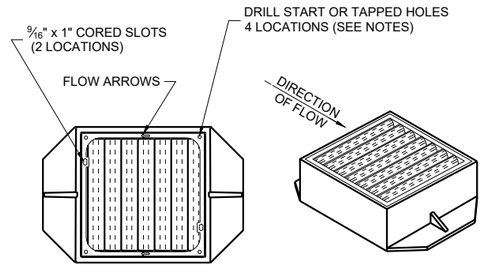
TYPE "S"

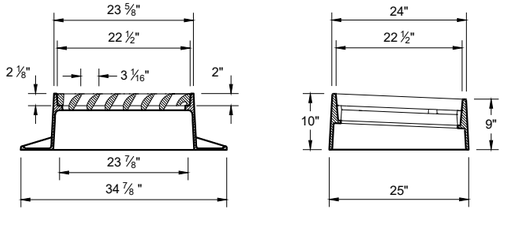




TYPE "T"

USE WITH TYPES "R" AND "T" CONCRETE CURB AND GUTTER, 36"

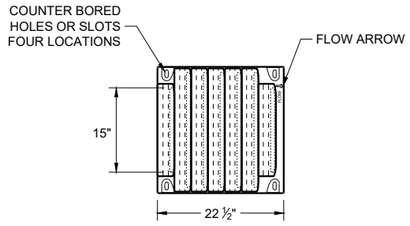




TYPE "V"

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER ALL DRILLING AND TAPPING GRATES AND FRAMES BY CASTING MANUFACTURER

TYPE V
FRAME - CAST GRAY IRON ASTM A48 CLASS 40A
3/8" DIA. X 1/16" DRILL START IN 4 LOCATIONS
GRATE - CAST GRAY IRON ASTM A-48, CLASS 35B



BOLT DOWN GRATE FOR TYPE "V" COVER

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER NOTED AS TYPE "V-B" ON DRAINAGE TABLE

TAP 1/2" -13 HOLES IN FOUR LOCATIONS IN FRAME TO BOLT GRATE
FRAME - CAST GRAY IRON ASTM A48 CLASS 40A

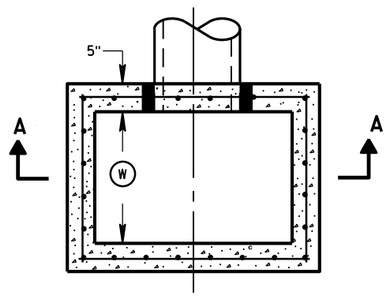
GRATE - CAST DUCTILE IRON ASTM A536, 55+KSI YIELD
BOLTS - 1/2" -13 STAINLESS STEEL BOLTS WITH WASHERS
TORQUE BOLTS TO MANUFACTURER SPECIFICATION DO NOT OVERTIGHTEN.

INLET COVERS
TYPES F, HM, HM-S, S, T, V, HM-GJ AND HM-GJ-S

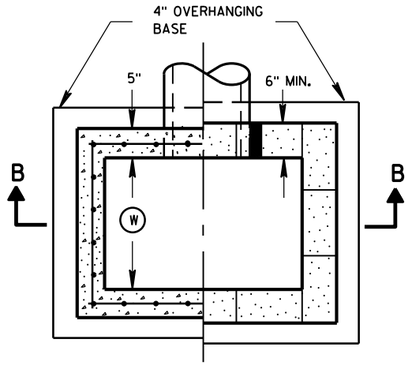
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

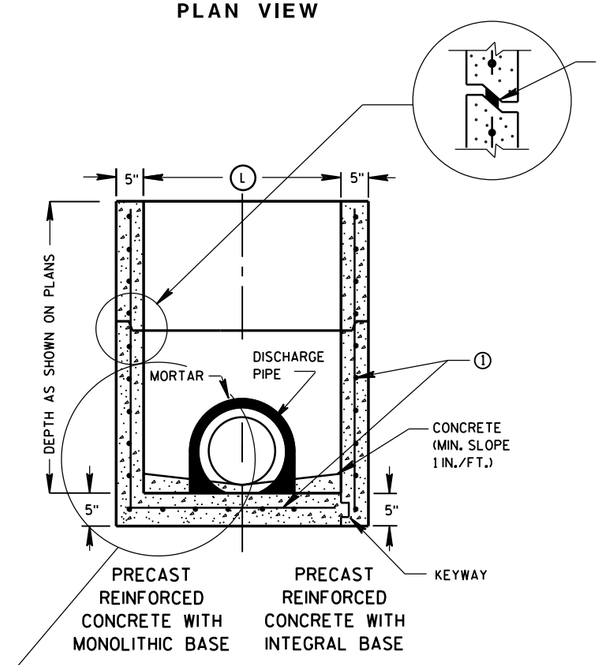
FHWA



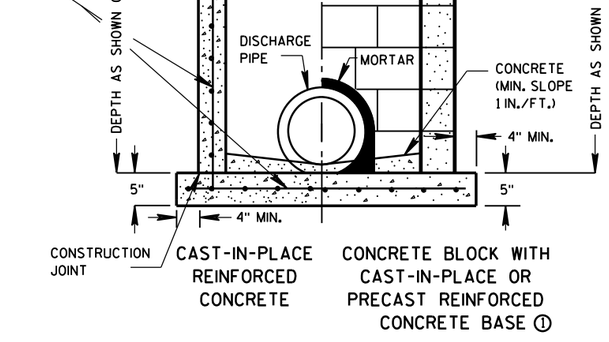
PLAN VIEW



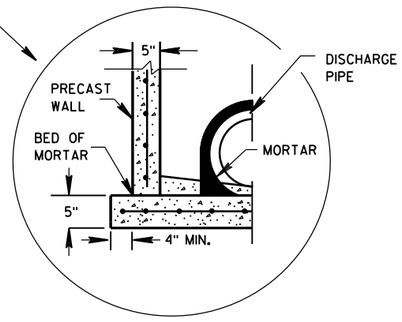
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

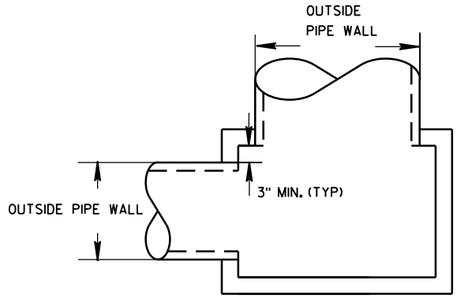
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



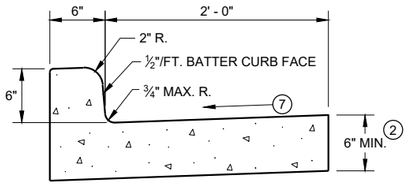
DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

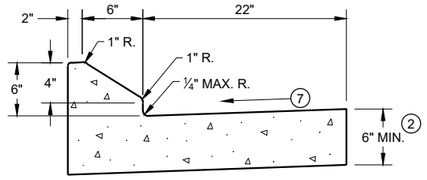
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT UNIT SUPERVIS
FHWA

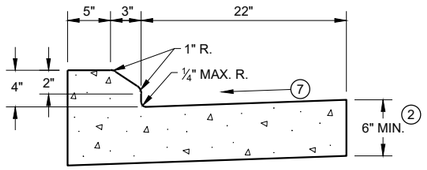
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT



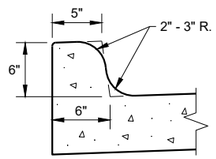
TYPES A (1) & D



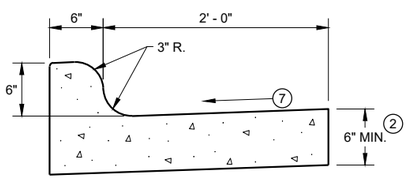
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

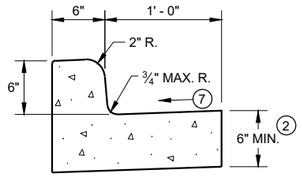


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



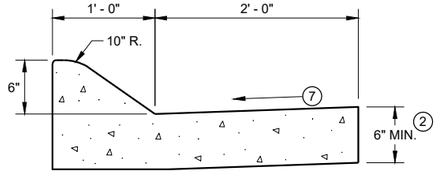
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

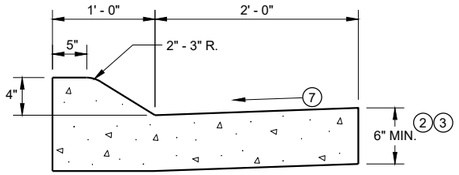


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

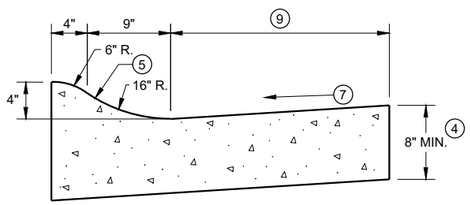


6" SLOPED CURB TYPES A (1) & D



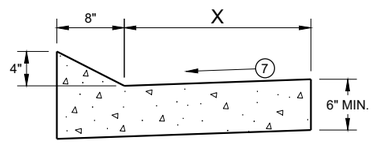
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

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

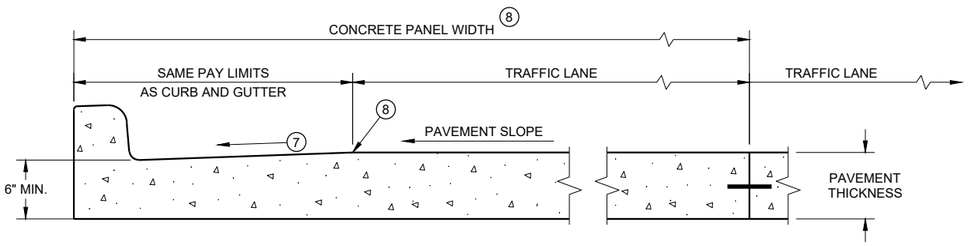


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

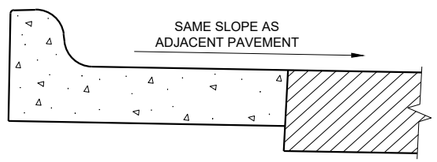
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

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

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

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

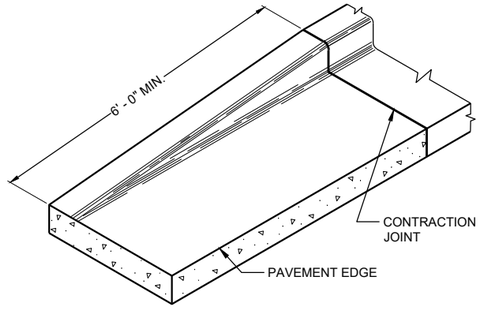
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

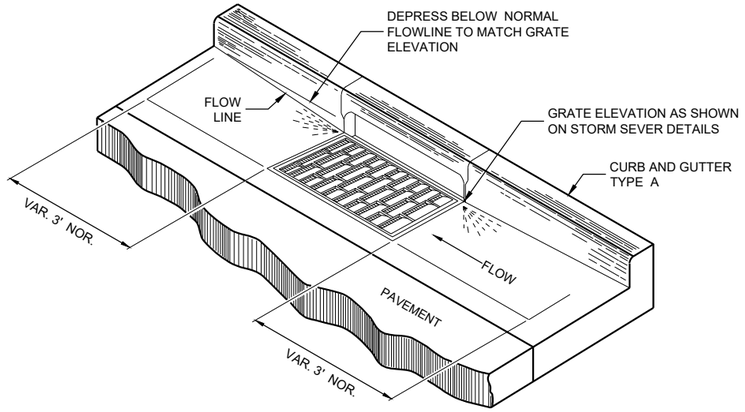
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D01 - 23a



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

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

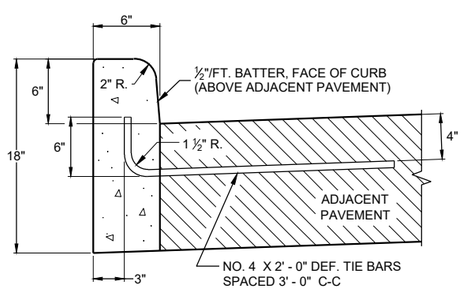
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

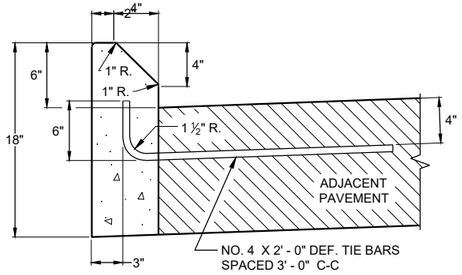
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(10) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

(11) PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

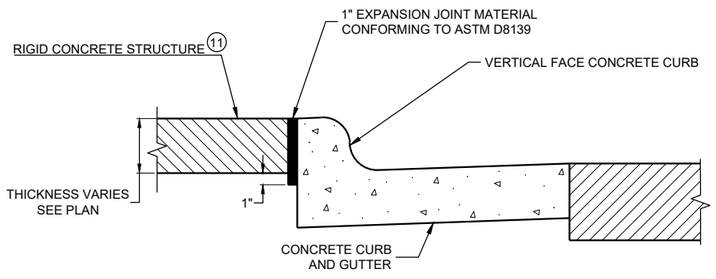


TYPES A(1) & D

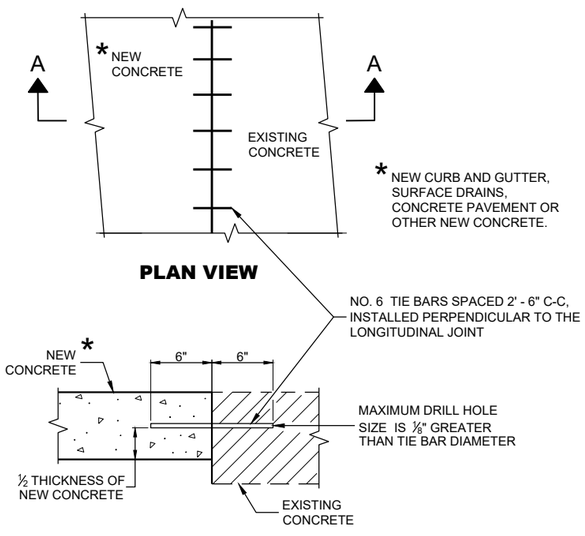


TYPES G(1) & J

CONCRETE CURB



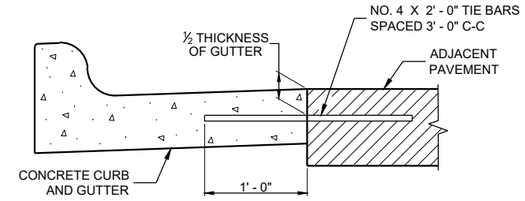
EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE(11)



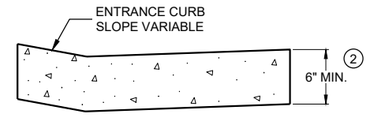
PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION(1)



DRIVEWAY ENTRANCE CURB(10)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD08D01 - 23b

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.

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

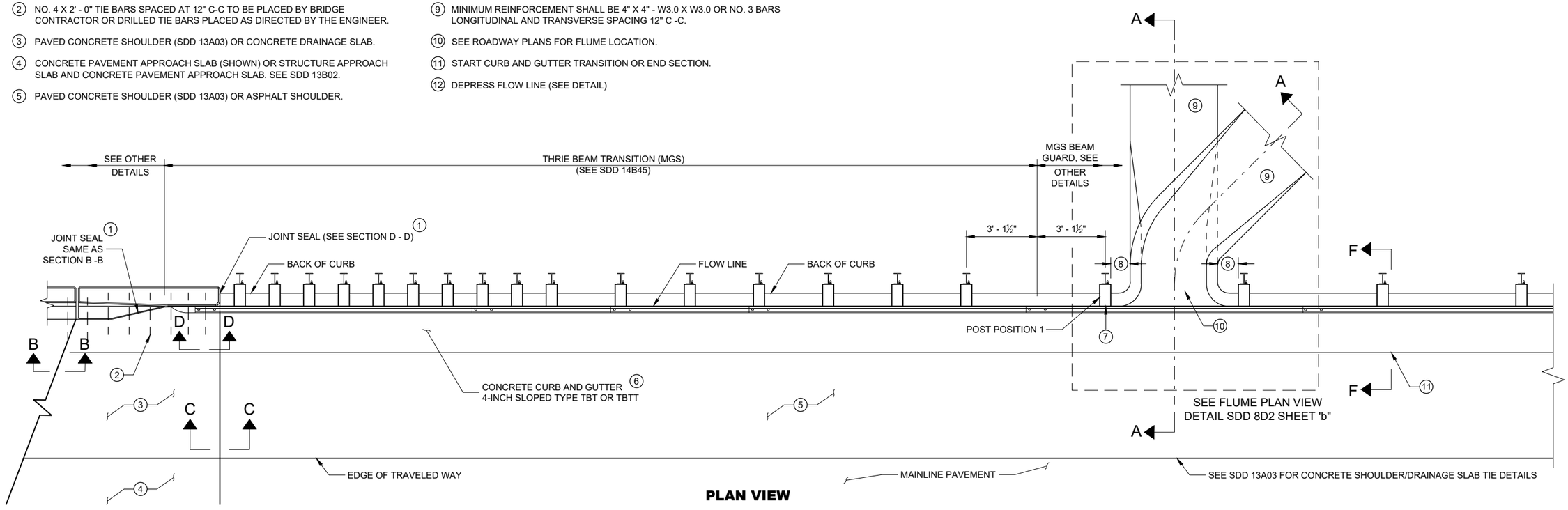
(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

(9) MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.

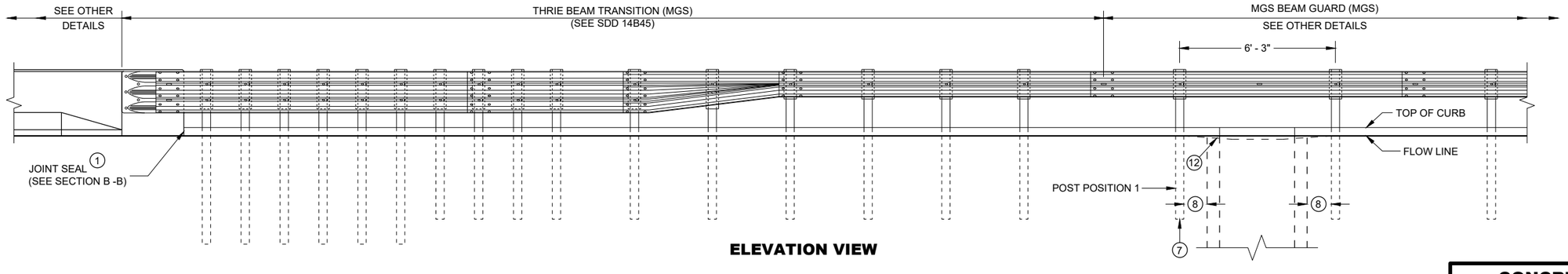
(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

(11) START CURB AND GUTTER TRANSITION OR END SECTION.

(12) DEPRESS FLOW LINE (SEE DETAIL)



PLAN VIEW



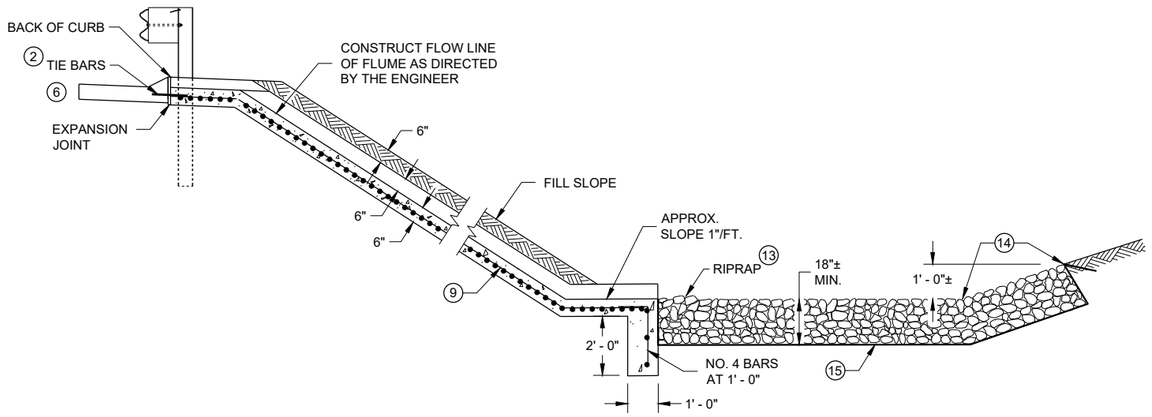
ELEVATION VIEW

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

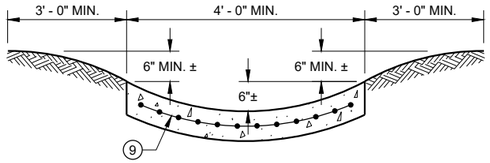
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

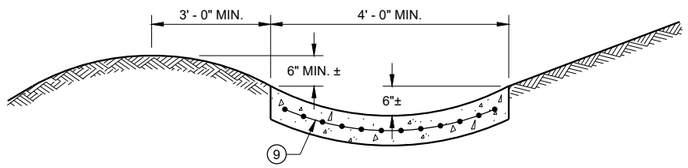
SDD 08D02 - 08a



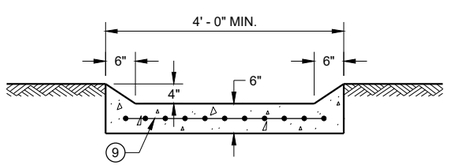
SECTION A - A



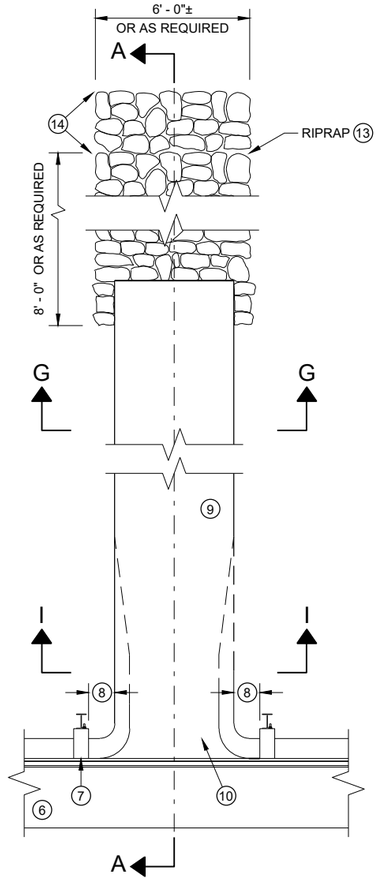
SECTION G - G



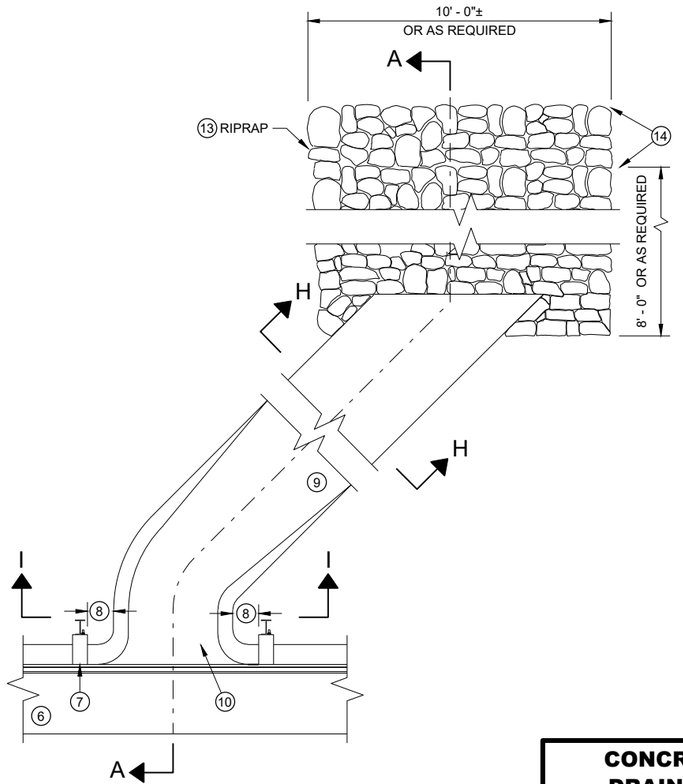
SECTION H - H



SECTION I - I



PLAN VIEW PERPENDICULAR FLUME



PLAN VIEW SKEWED FLUME

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.

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

1. USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
2. NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
3. PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
4. CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
5. PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
6. CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
7. PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
8. CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
9. MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.
10. SEE ROADWAY PLANS FOR FLUME LOCATION.
11. START CURB AND GUTTER TRANSITION OR END SECTION.
12. DEPRESS FLOW LINE (SEE DETAIL)
13. MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
14. LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
15. GEOTEXTILE TYPE HR.

6

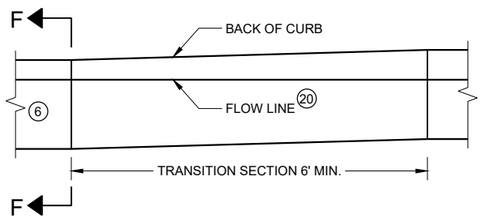
SDD 08D02 - 08b

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

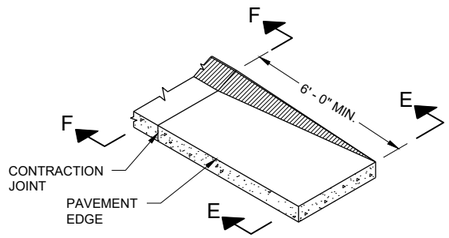
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTAT

6

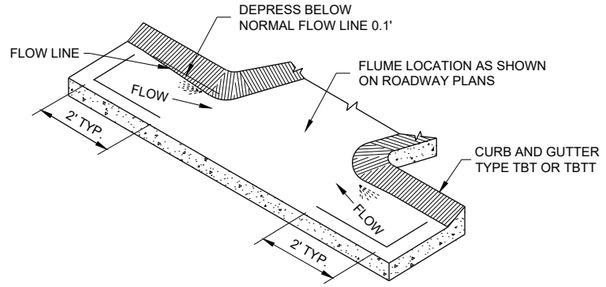
SDD 08D02 - 08b



**CURB AND GUTTER TRANSITION SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT**



**CURB AND GUTTER END SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT**



**CURB AND GUTTER FLOW LINE DEPRESSION
AT FLUMES CONCRETE CURB AND GUTTER
4-INCH SLOPED 36 INCH TYPE TBT OR TBTT**

GENERAL NOTES

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(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

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(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

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(7) PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

(9) MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.

(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

(11) START CURB AND GUTTER TRANSITION OR END SECTION.

(12) DEPRESS FLOW LINE (SEE DETAIL)

(13) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

(14) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

(15) GEOTEXTILE TYPE HR.

(16) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.

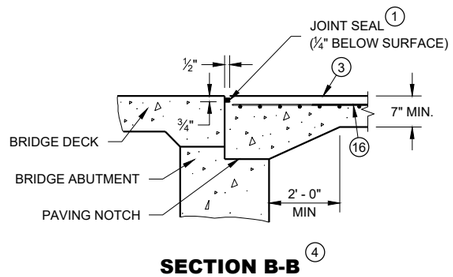
(17) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

(18) MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.

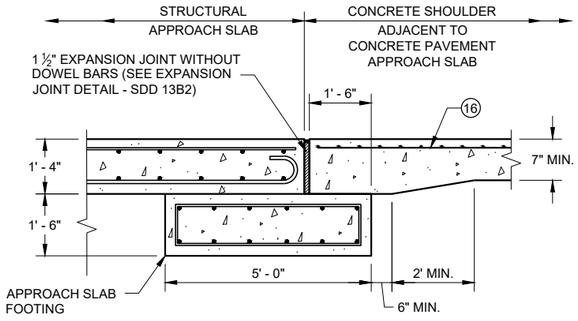
(19) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

(20) MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.

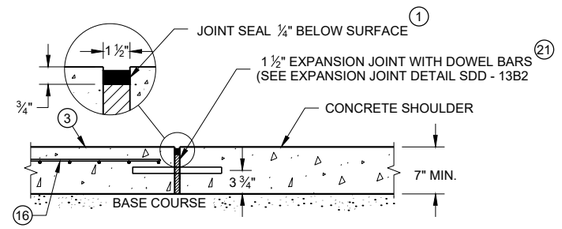
(21) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



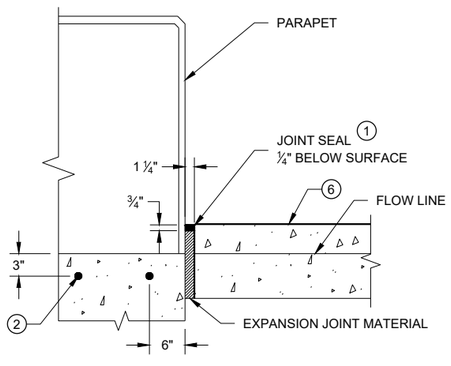
SECTION B-B (4)



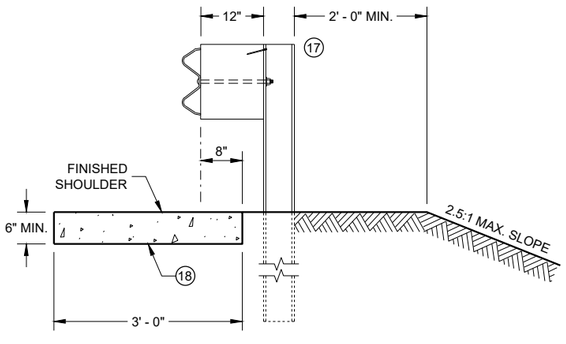
SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



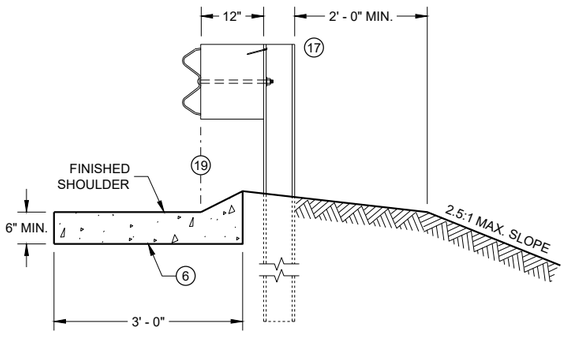
SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS



SECTION D - D



SECTION E - E



SECTION F - F

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

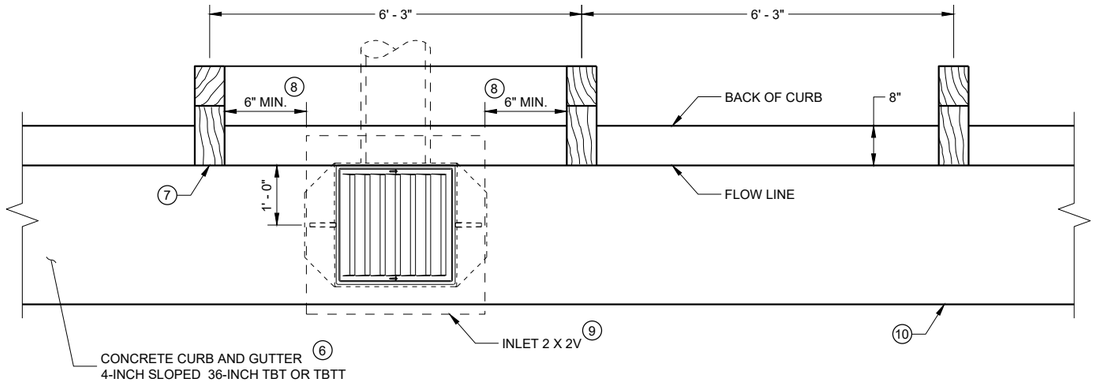
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SDD 08D02 - 08c

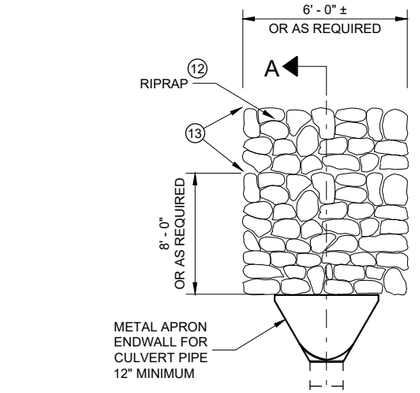
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SDD 08D02 - 08c



INLET PLAN VIEW

(NOTE: RAIL NOT SHOWN FOR CLARITY)



GENERAL NOTES

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(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE DRAINAGE STRUCTURE BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

(8) CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.

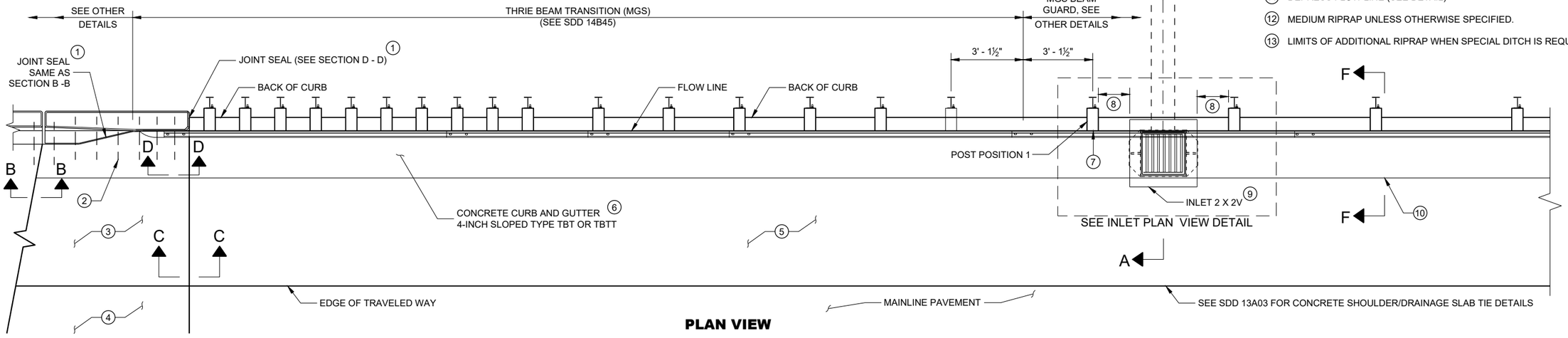
(9) SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.

(10) START CURB AND GUTTER TRANSITION OR END SECTION.

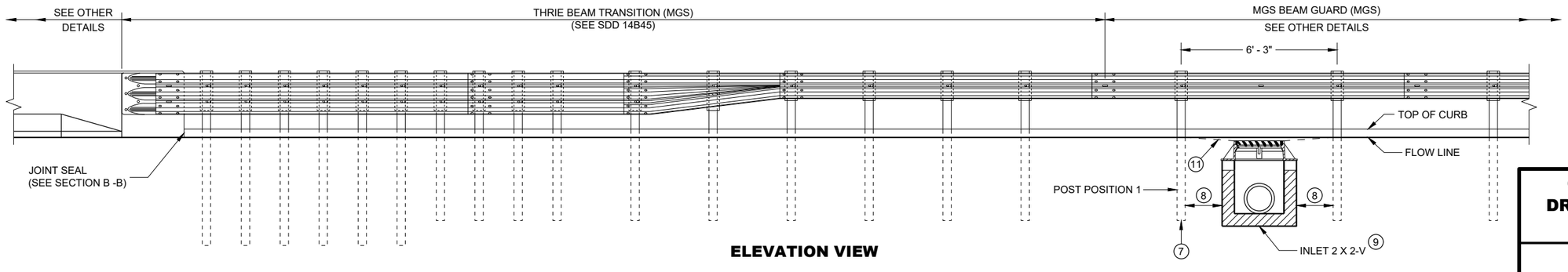
(11) DEPRESS FLOW LINE (SEE DETAIL)

(12) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

(13) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.



PLAN VIEW



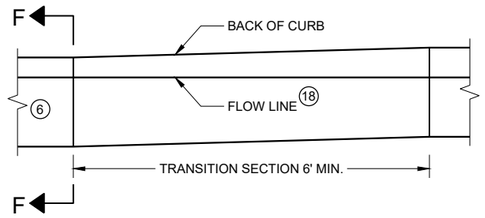
ELEVATION VIEW

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

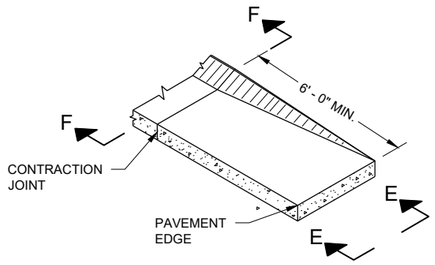
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D03 - 09a

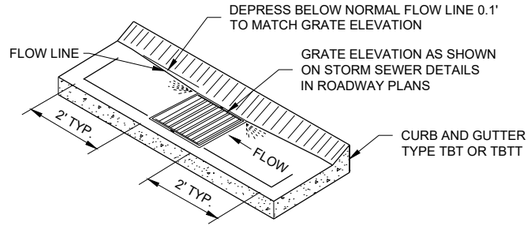
SDD 08D03 - 09a



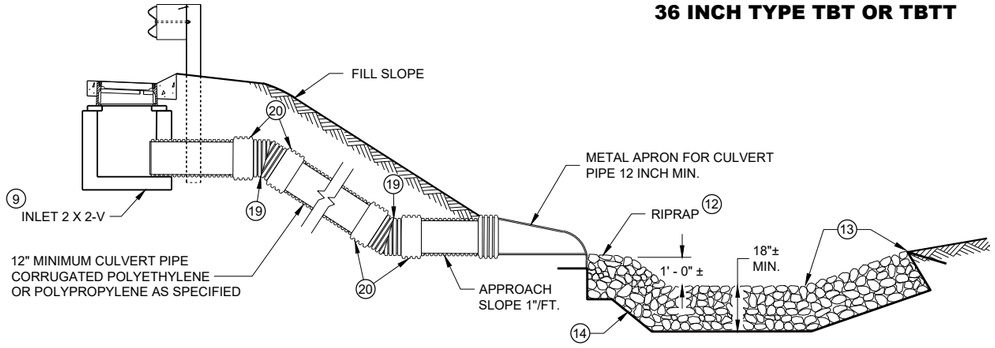
CURB AND GUTTER TRANSITION SECTION CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



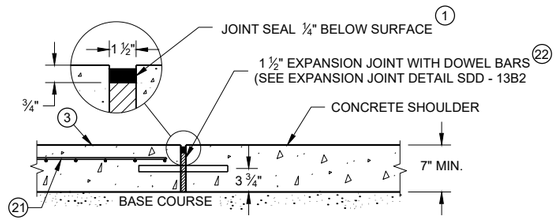
CURB AND GUTTER END SECTION CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



CURB AND GUTTER FLOW LINE DEPRESSION AT INLETS CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT

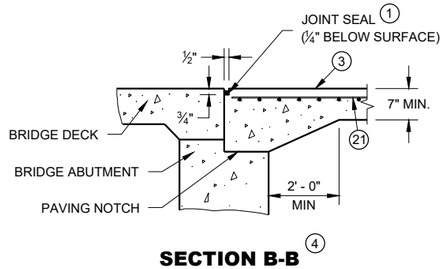


SECTION A - A

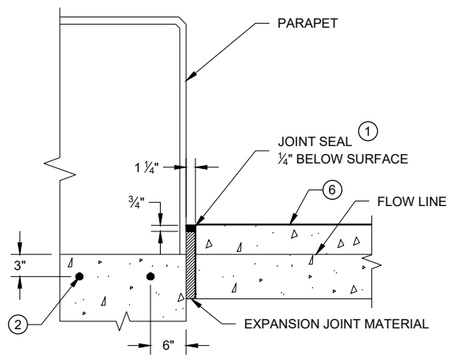


SECTION C - C

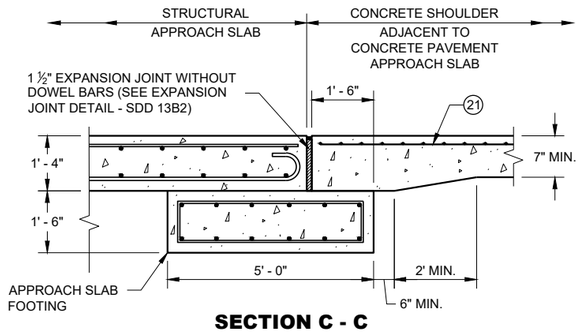
JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS



SECTION B-B 4

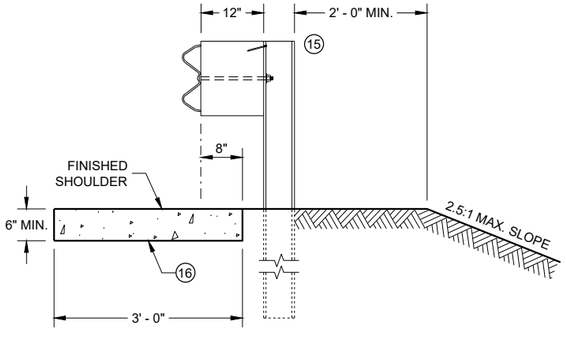


SECTION D - D

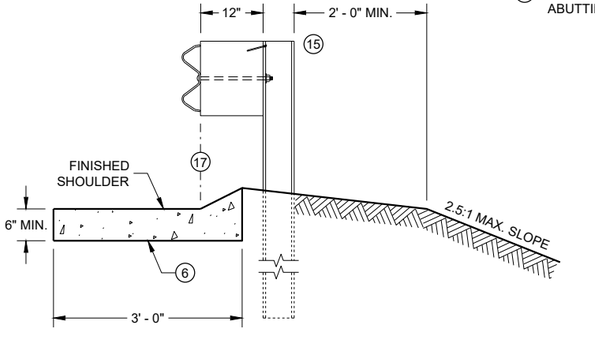


SECTION C - C

JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



SECTION E - E



SECTION F - F

GENERAL NOTES

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7. PLACE DRAINAGE STRUCTURE BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
8. CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.
9. SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.
10. START CURB AND GUTTER TRANSITION OR END SECTION.
11. DEPRESS FLOW LINE (SEE DETAIL)
12. MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
13. LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
14. GEOTEXTILE TYPE HR.
15. MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.
16. MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.
17. ALIGN FACE OF POST BLOCK WITH FLOW LINE.
18. MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.
19. MANUFACTURER SUPPLIED BEND.
20. MANUFACTURER SUPPLIED EXTERNAL MECHANICAL COUPLING OR A MANUFACTURER RECOMMENDED COUPLING WITH A MASTIC IMPREGNATED GEOTEXTILE WRAP AND MECHANICAL FASTENING BANDS.
21. MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
22. DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

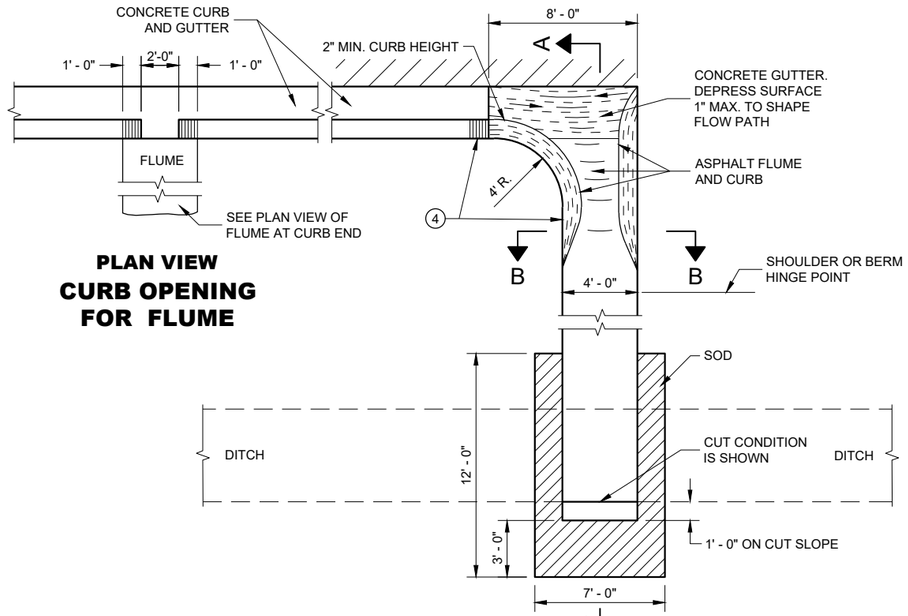
FHWA

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SDD 08D03 - 09b

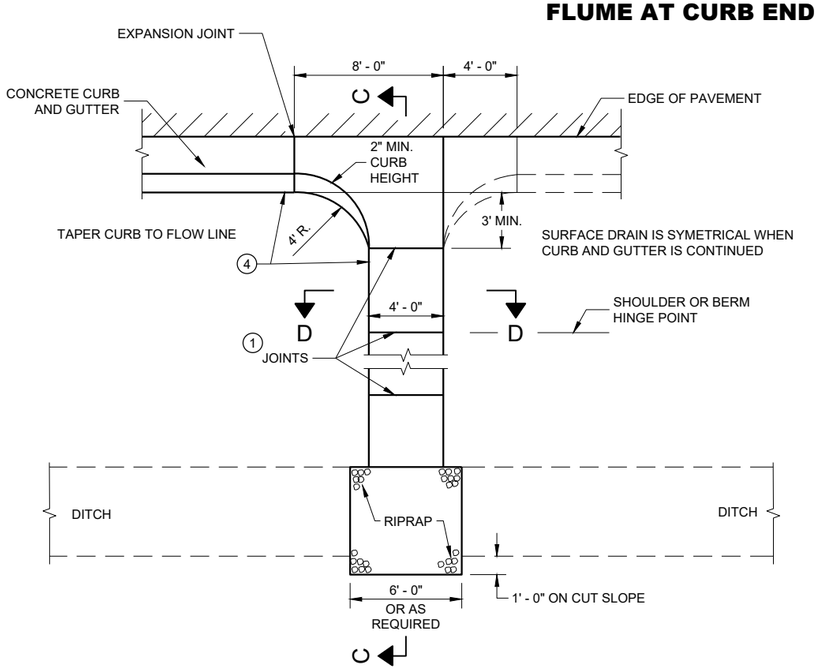
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



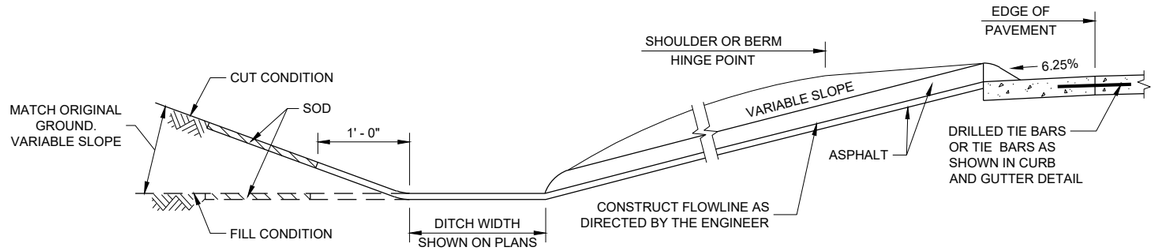
PLAN VIEW
CONCRETE SURFACE DRAIN

GENERAL NOTES

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

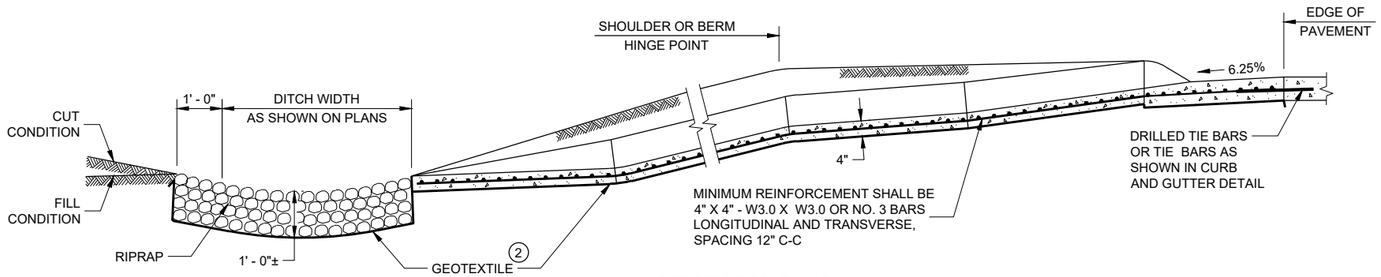
4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

1. JOINTS SHALL BE ⅛" TO ¼" WIDE BY 1½" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
2. GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
3. CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
4. ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.

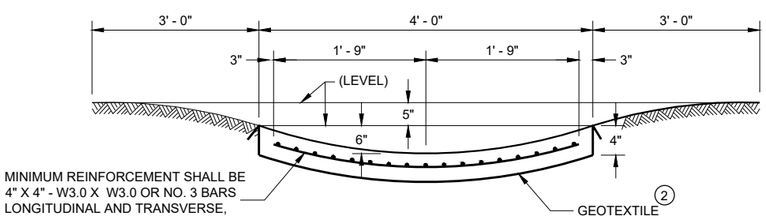


SECTION A - A

SECTION B - B



SECTION C - C



SECTION D - D

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

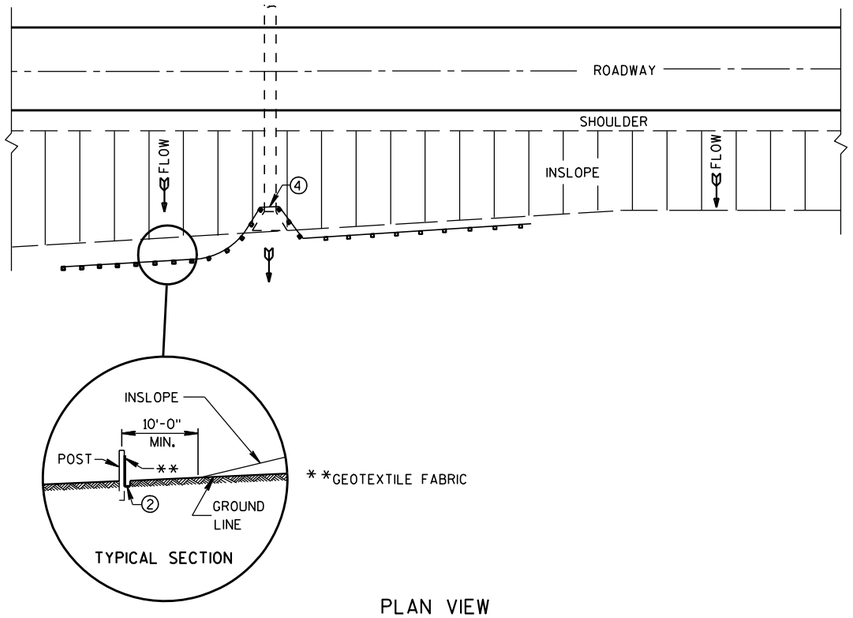
FHWA

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SDD 08D04 - 07

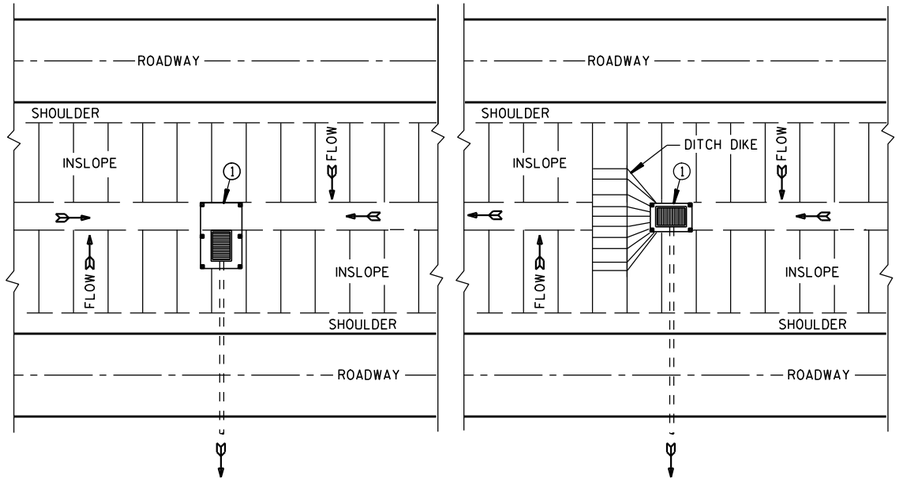
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SDD 08D04 - 07



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



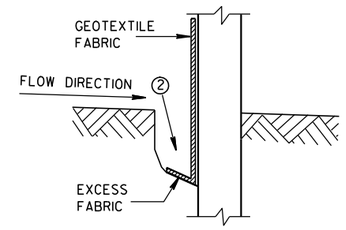
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

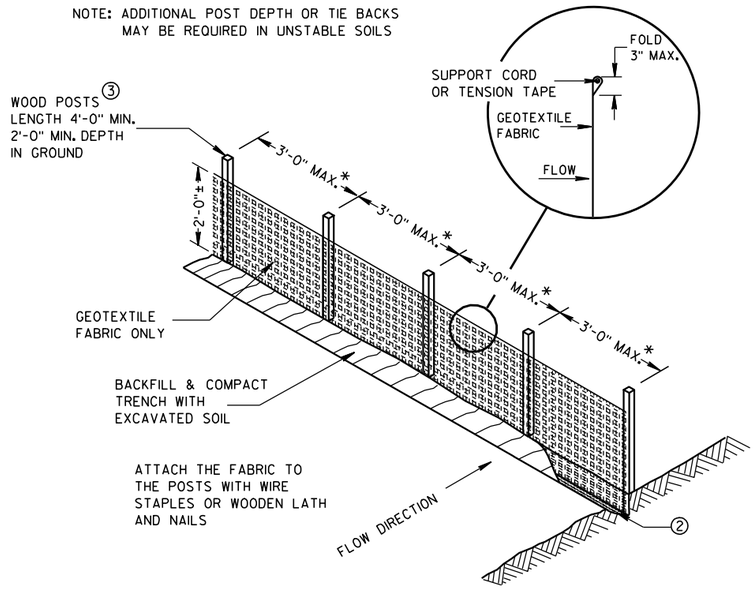
GENERAL NOTES

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

1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

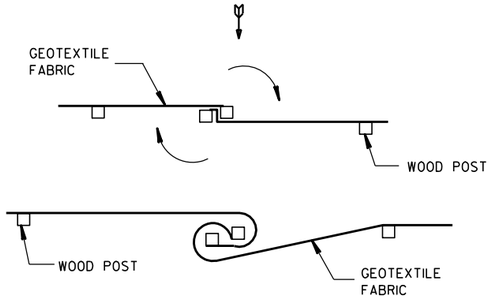


TRENCH DETAIL

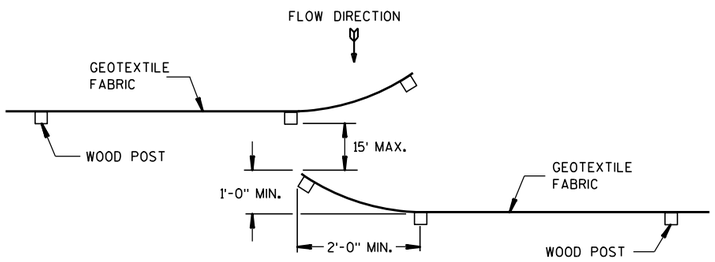


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

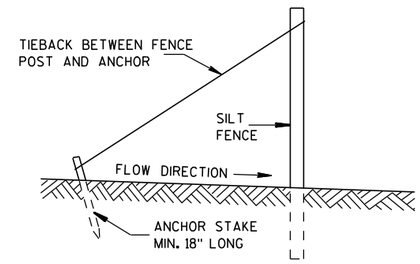


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

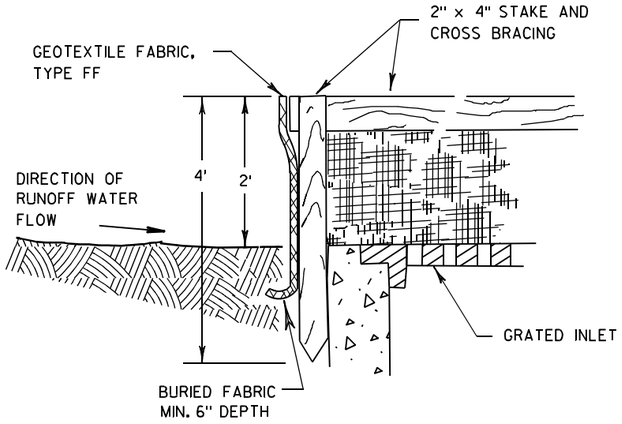
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

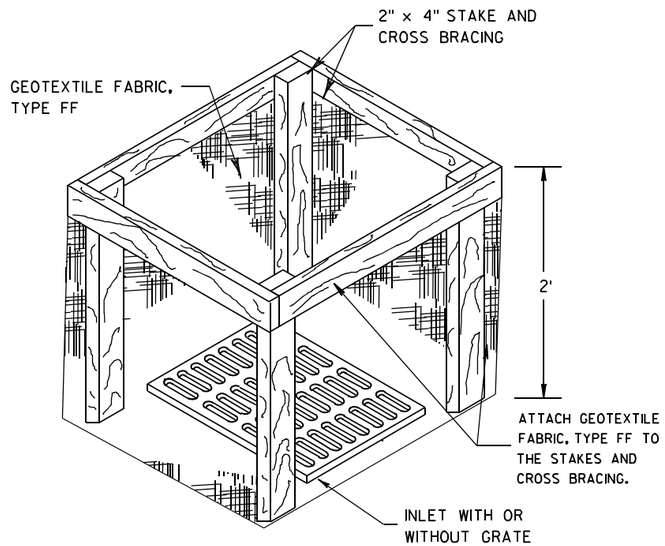
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S.D.D. 8 E 9-6

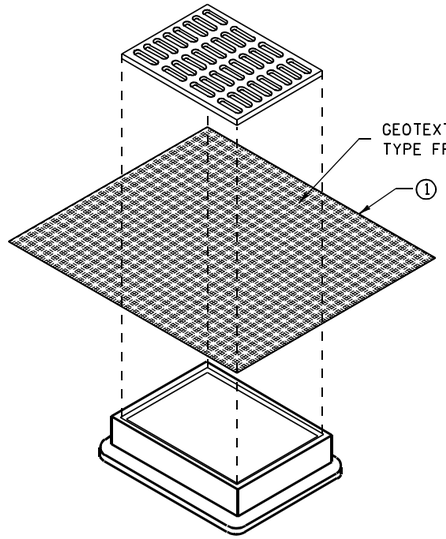
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S.D.D. 8 E 9-6



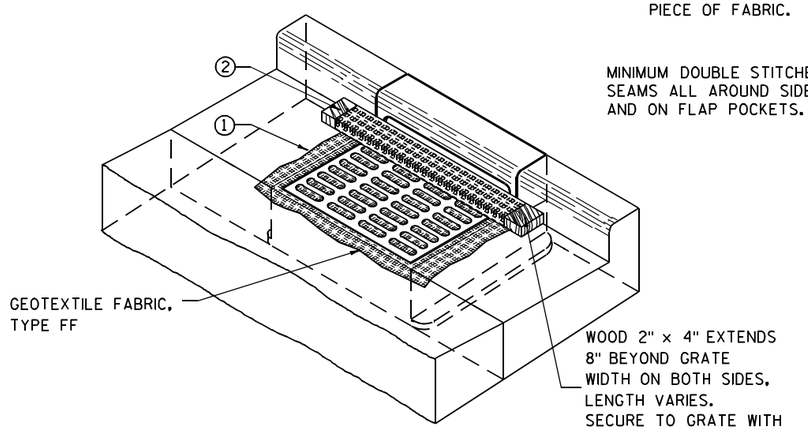


INLET PROTECTION, TYPE A

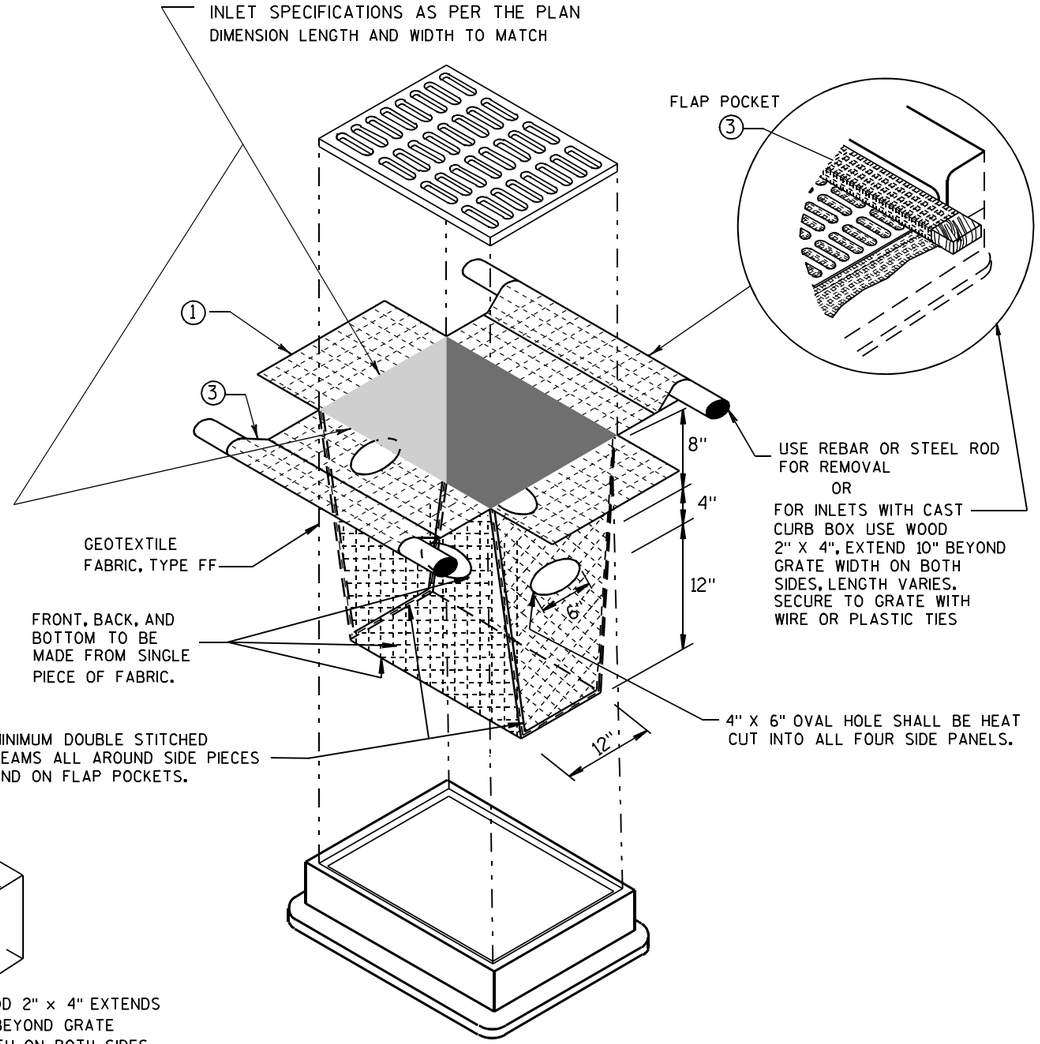


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

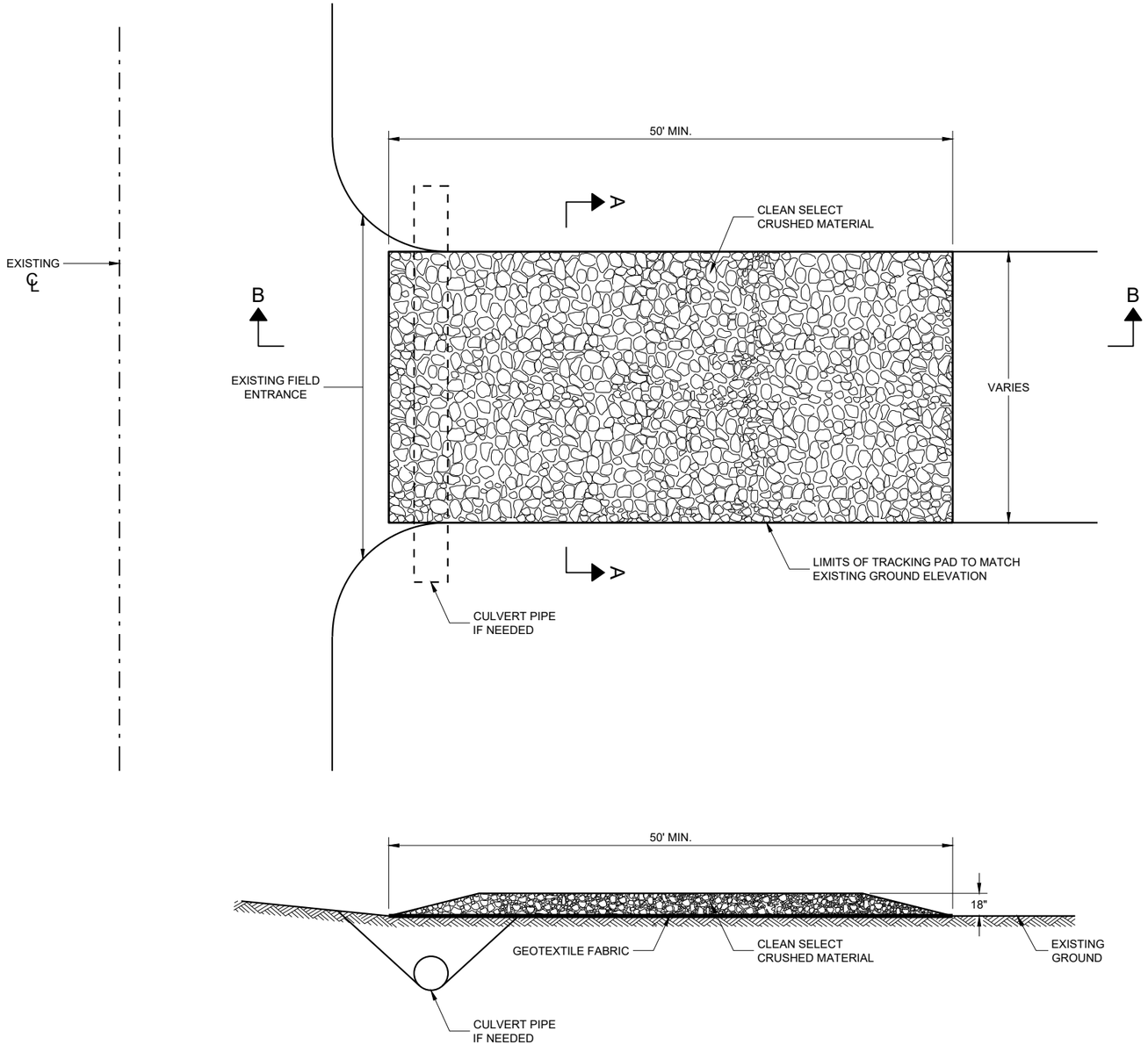
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 8 E 10-2



SECTION B - B

GENERAL NOTES

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

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

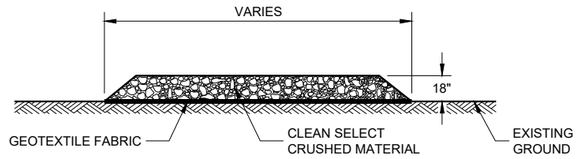
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A - A

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SDD 08E14 - 01

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

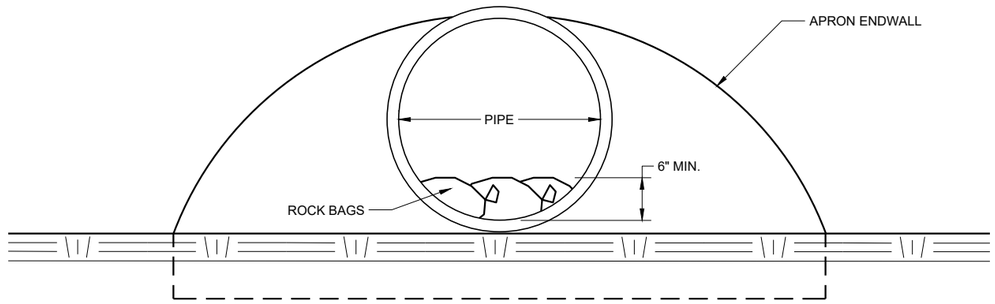
3/24/2011
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVE ENGINEER

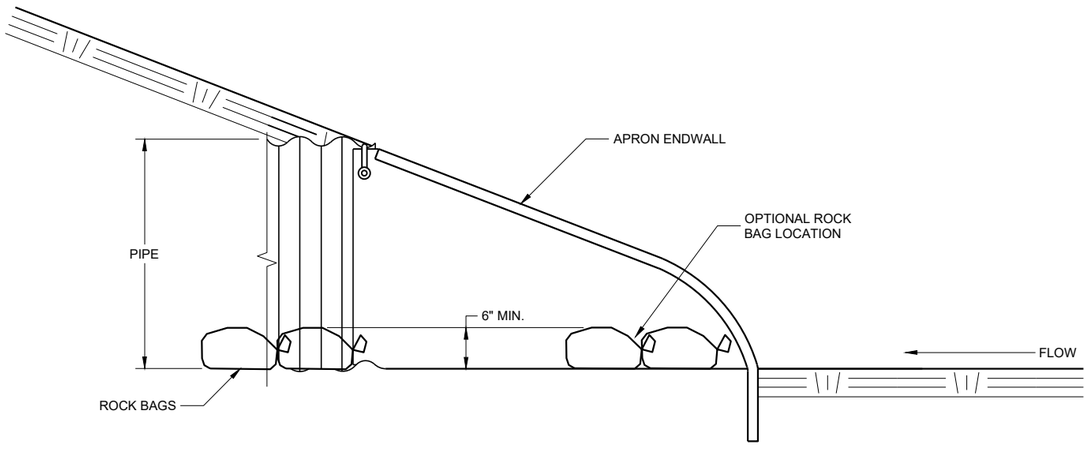
FHWA

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SDD 08E14 - 01



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE
/S/ Daniel Schave
EROSION CONTROL ENGI

FHWA

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SDD 08E15 - 01

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SDD 08E15 - 01

METAL APRON ENDWALLS

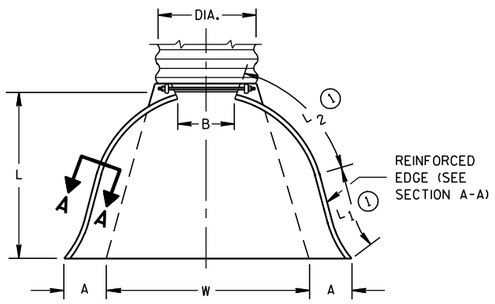
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

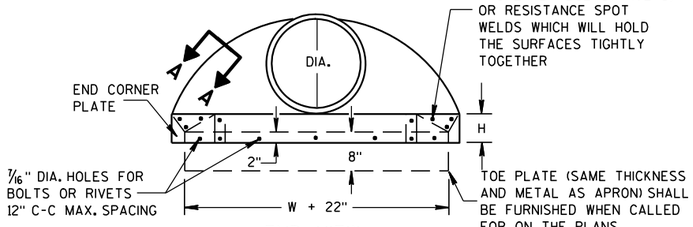
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

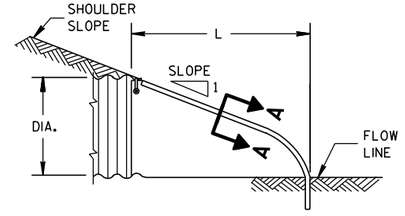
*MINIMUM
**MAXIMUM



PLAN VIEW

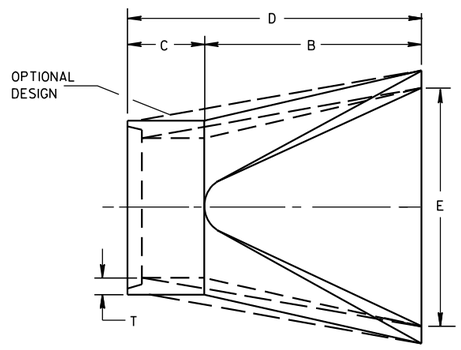


END VIEW

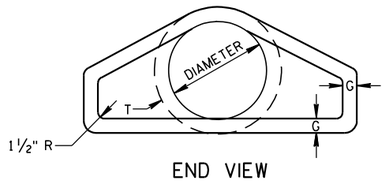


SIDE ELEVATION

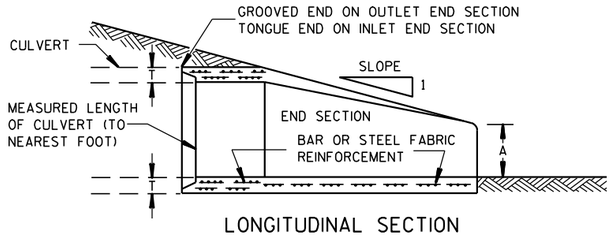
METAL ENDWALLS



PLAN

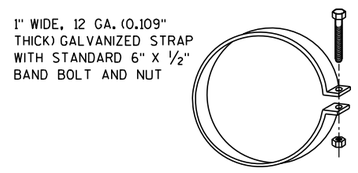


END VIEW



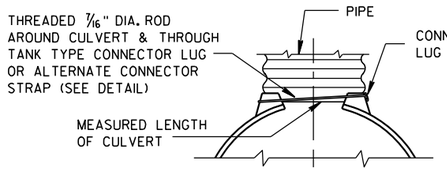
LONGITUDINAL SECTION

CONCRETE ENDWALLS

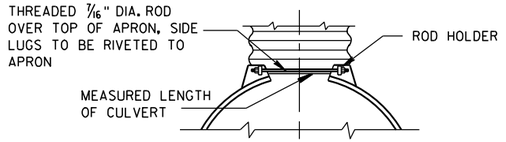


ALTERNATE FOR TYPE 1 CONNECTION

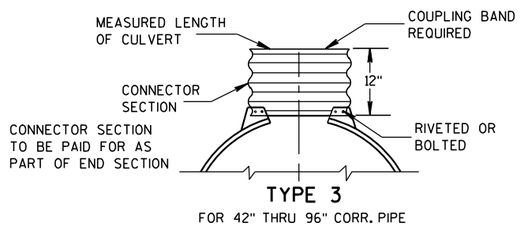
END SECTION CONNECTOR STRAP



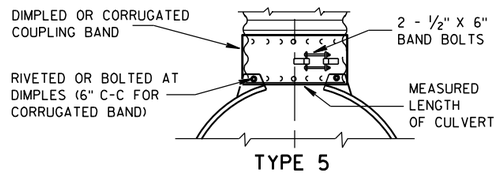
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

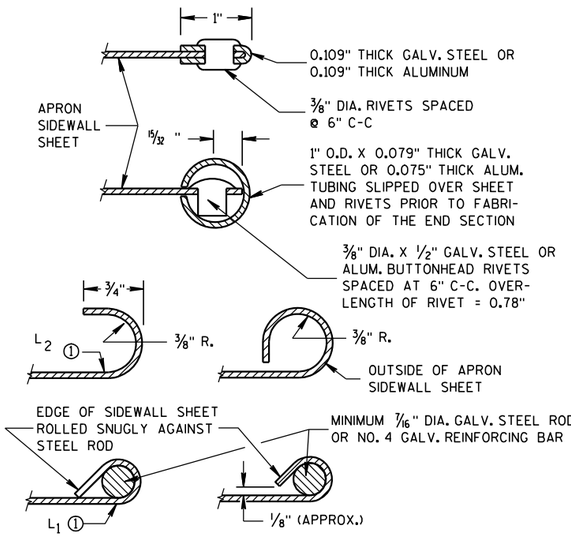
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

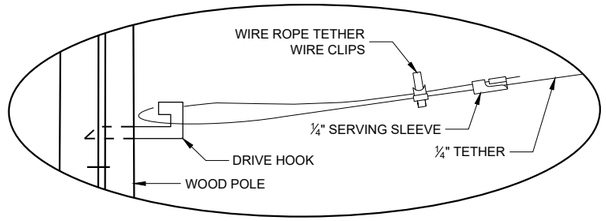
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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S.D.D. 8 F 1-11

MINIMUM POLE LENGTHS	POLE BURIAL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

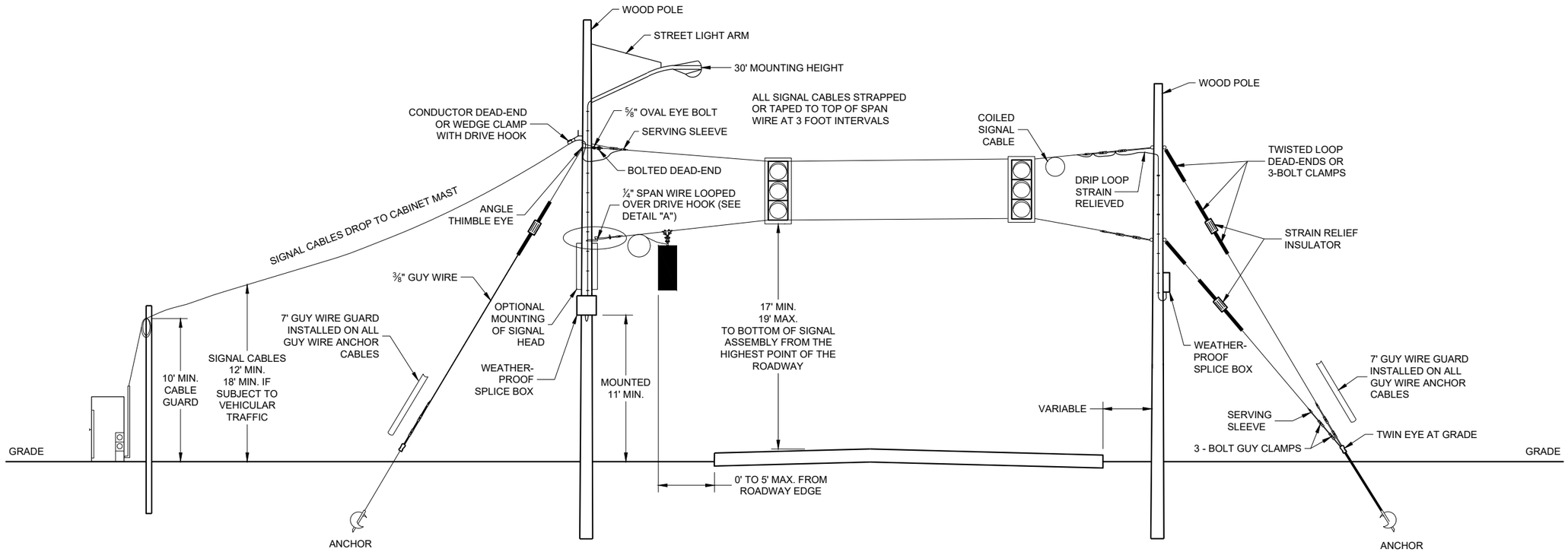


DETAIL "A"

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

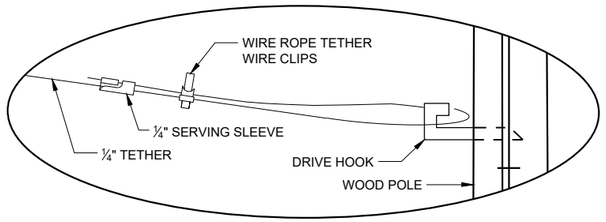
APPROVED
June 2015
DATE
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI

FHWA

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SDD09G01 - 04a

MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

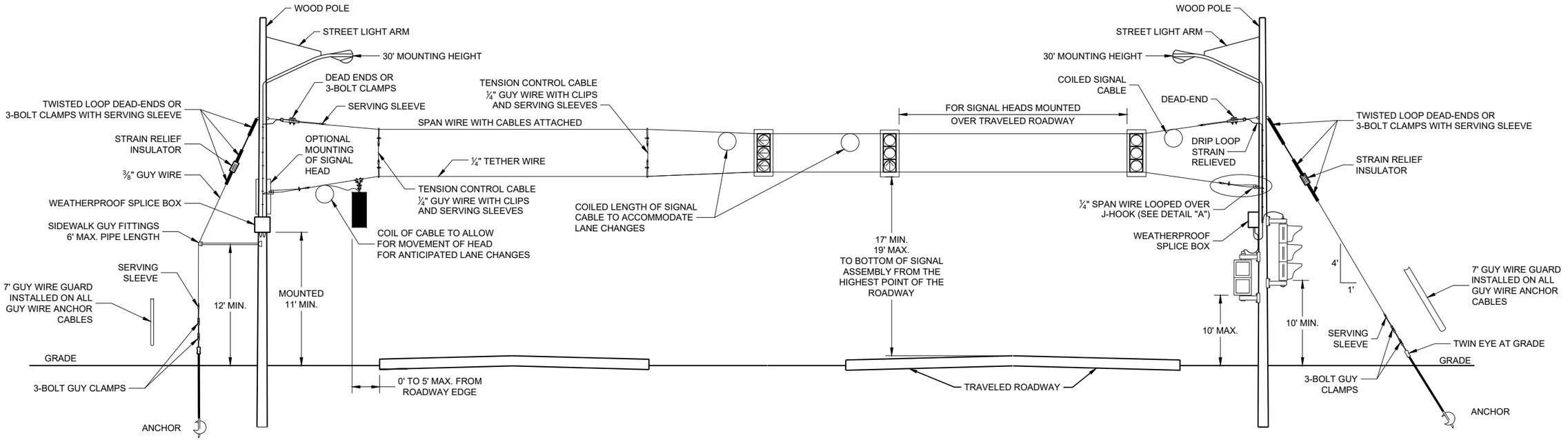


DETAIL "A"

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   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
3. SPAN WIRE:
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SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

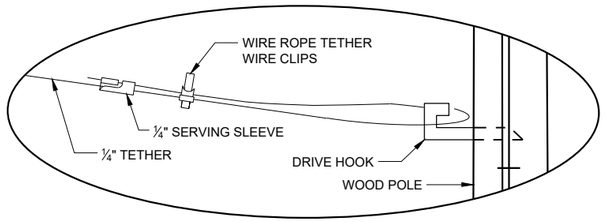
APPROVED
June 2015
DATE
/S/ Ahmet Demerbilek
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SDD09G01 - 04b

MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

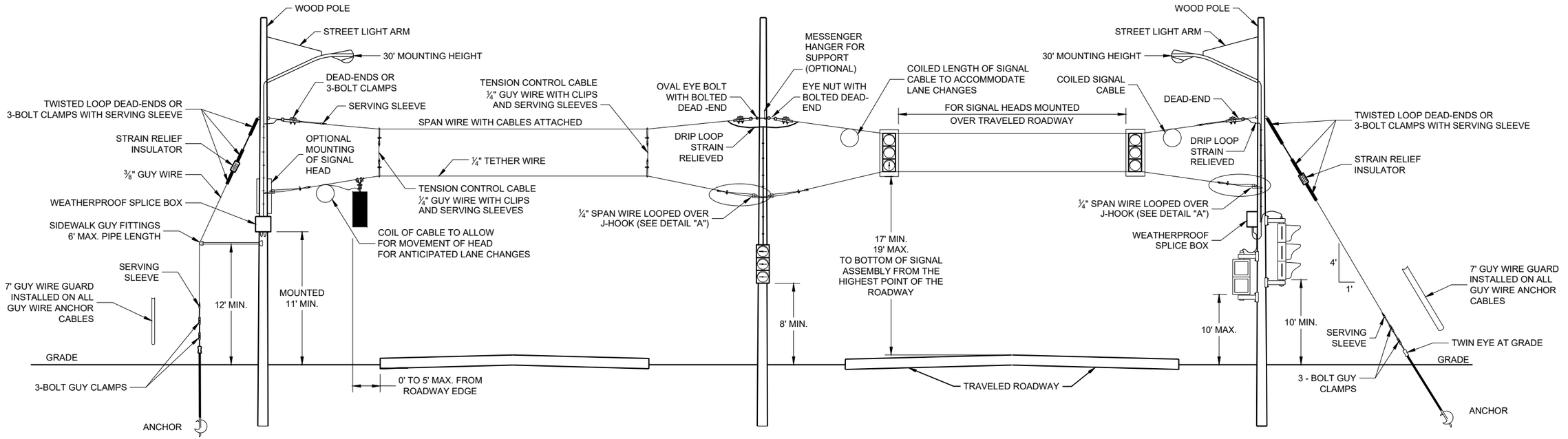


DETAIL "A"

GENERAL NOTES

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SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

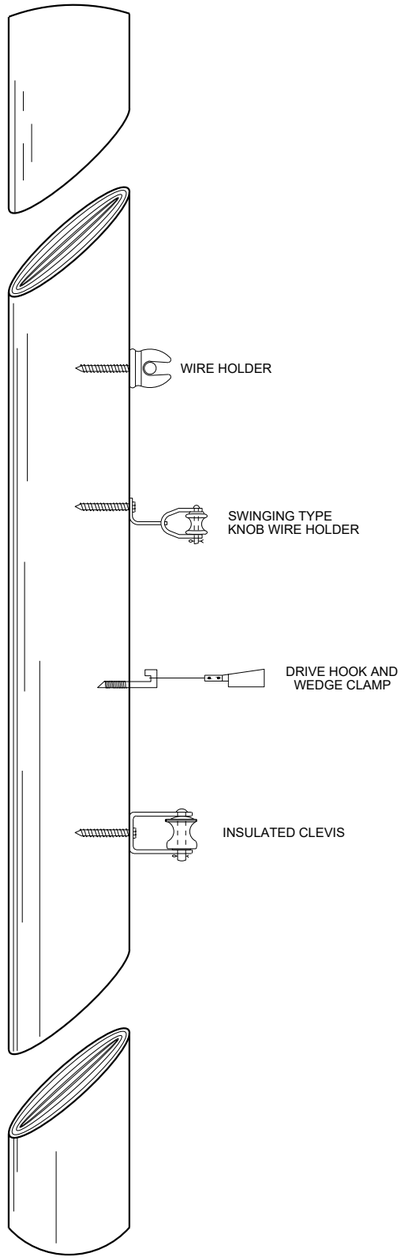
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

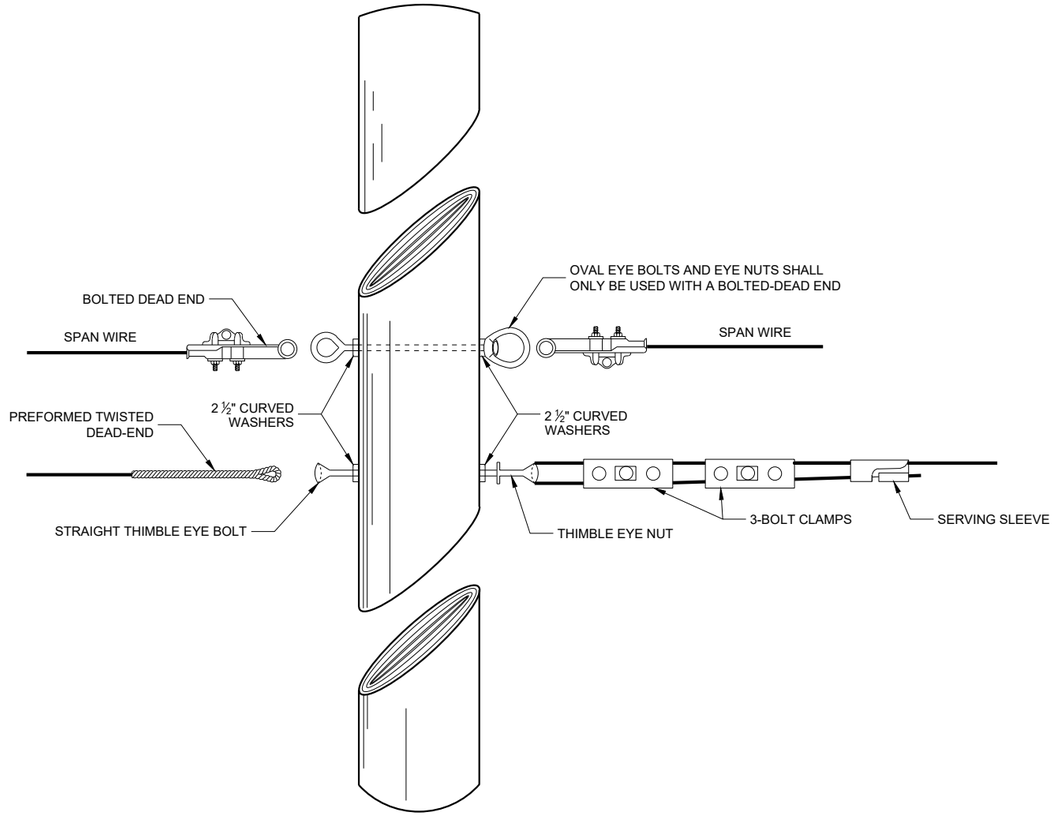
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June 2015
DATE
/S/ Ahmet Demerbilek
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SPAN WIRE TEMPORARY TRAFFIC SIGNAL

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DATE

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ROADWAY STANDARDS DEVE ENGINEER

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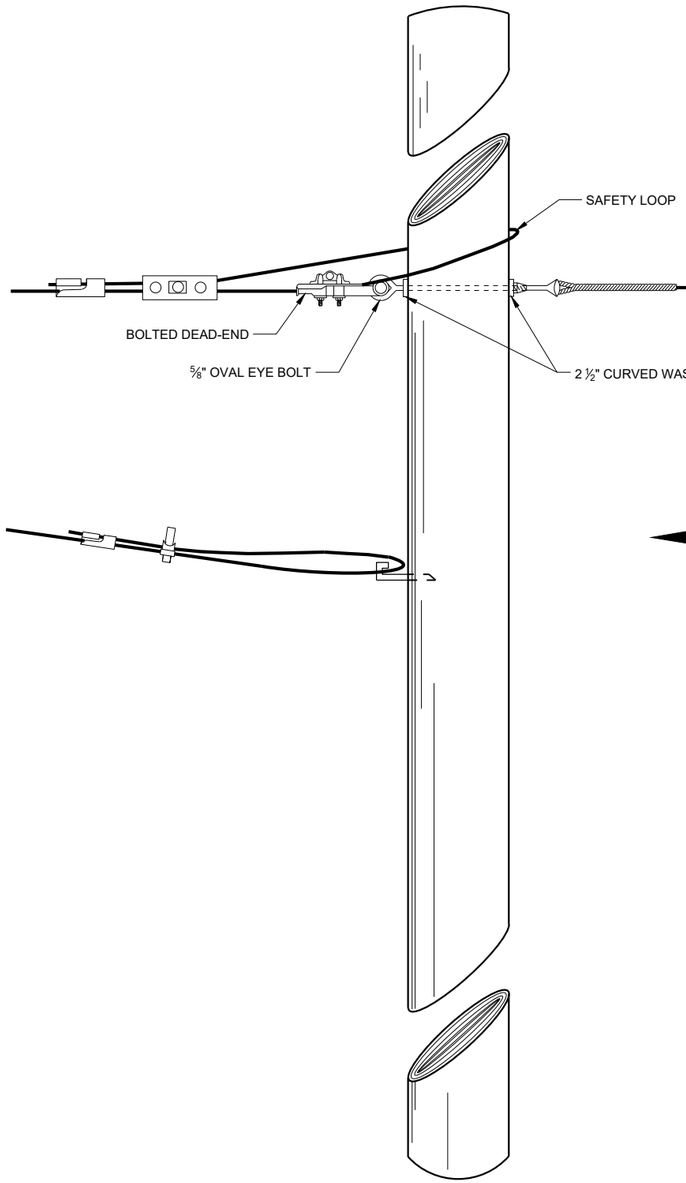
SDD 09G01 - 4d

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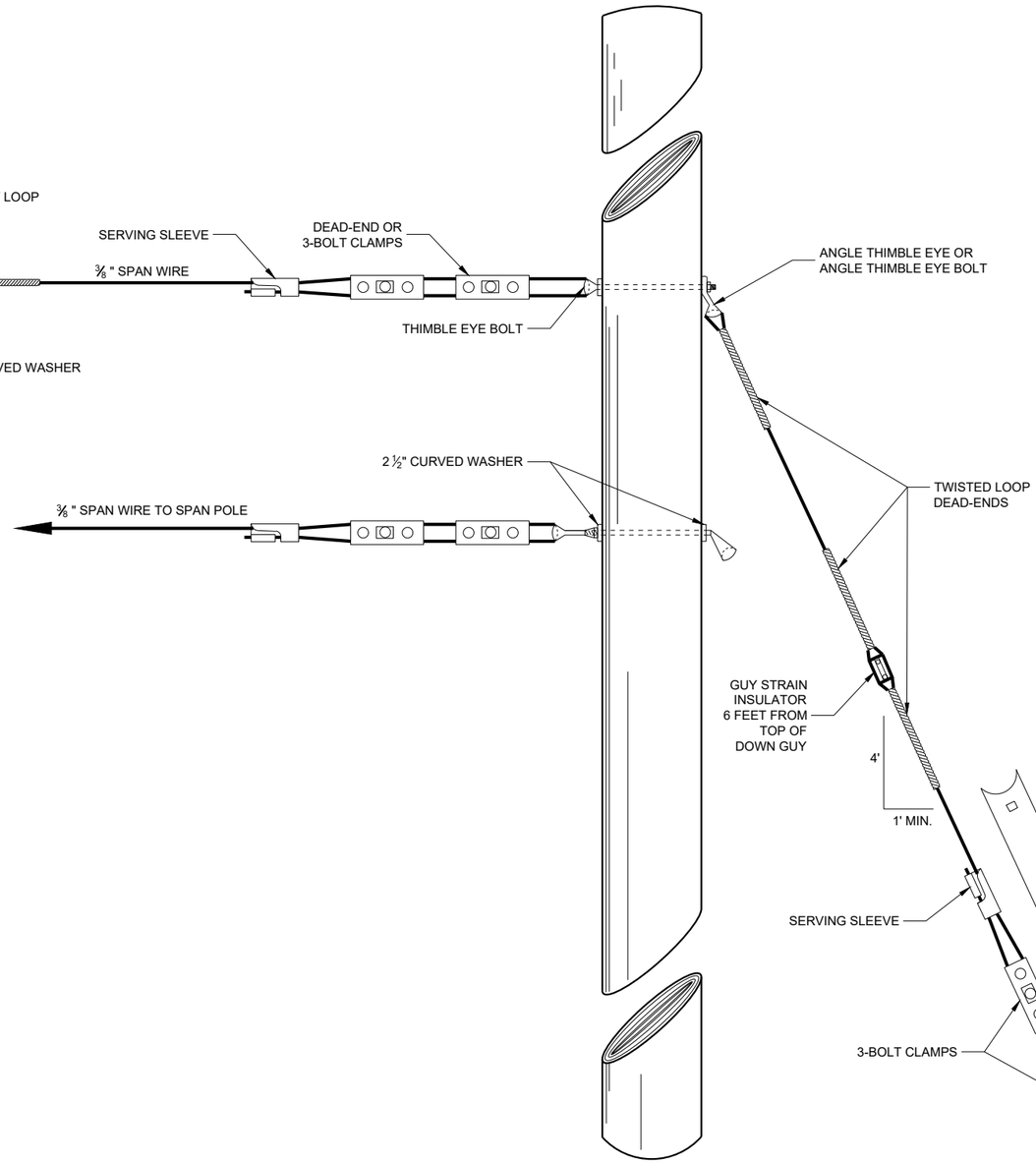
SDD 09G01 - 4d

GENERAL NOTES

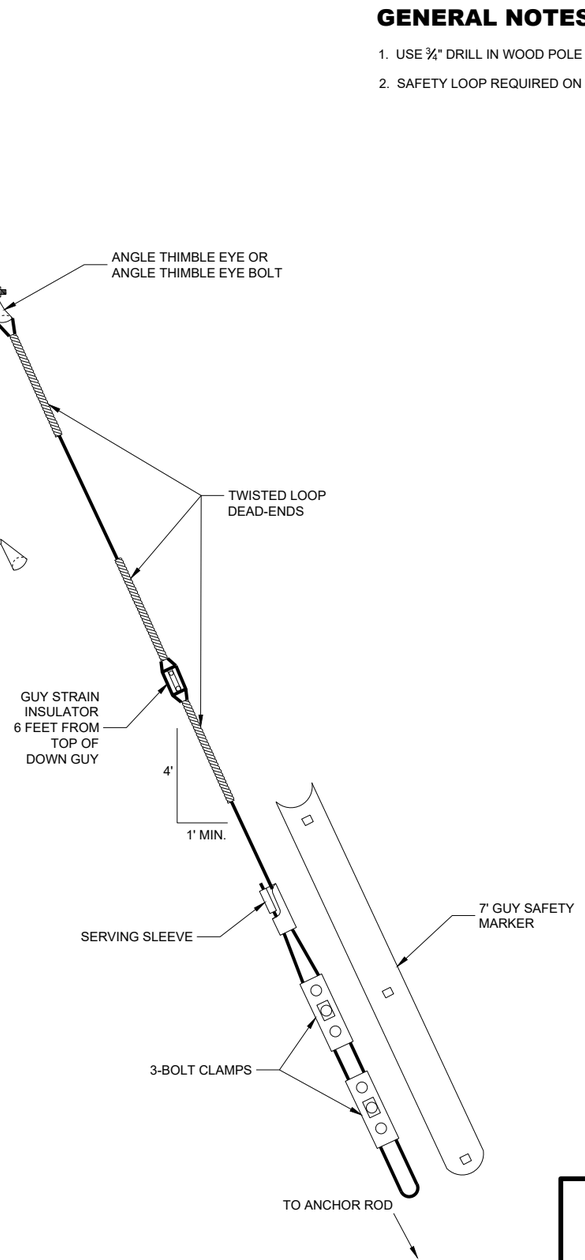
1. USE ¾" DRILL IN WOOD POLE TO PROVIDE FOR ⅝" BOLTS.
2. SAFETY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



SPAN WIRE POLE



GUY POLE



TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

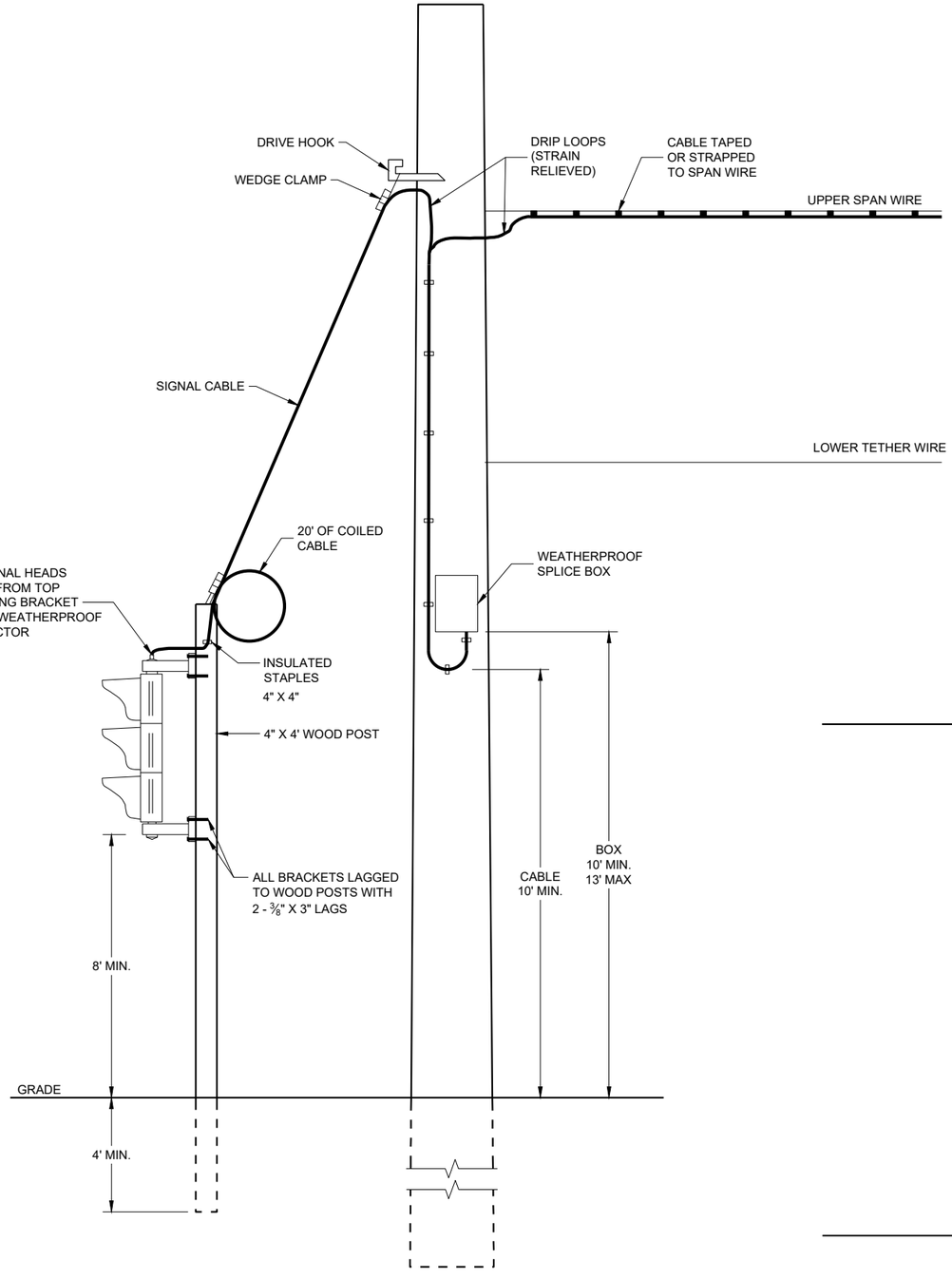
APPROVED
June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

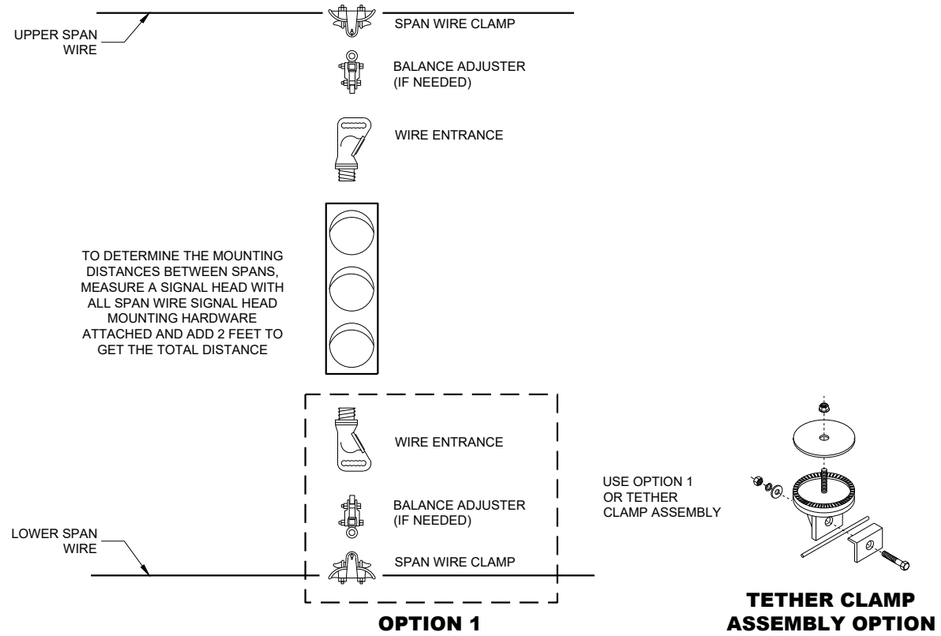
FHWA

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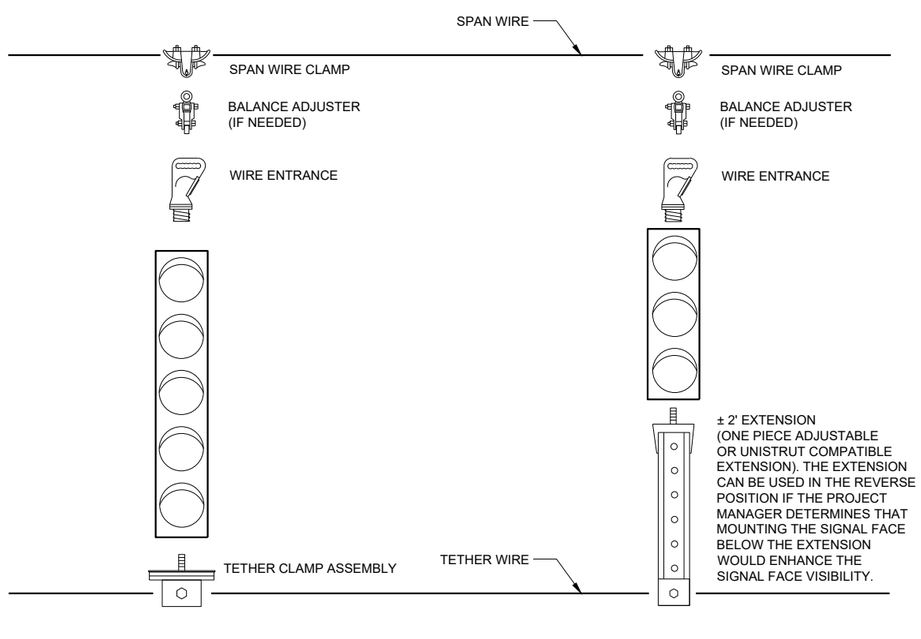
SDD 09G01 - 4e



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

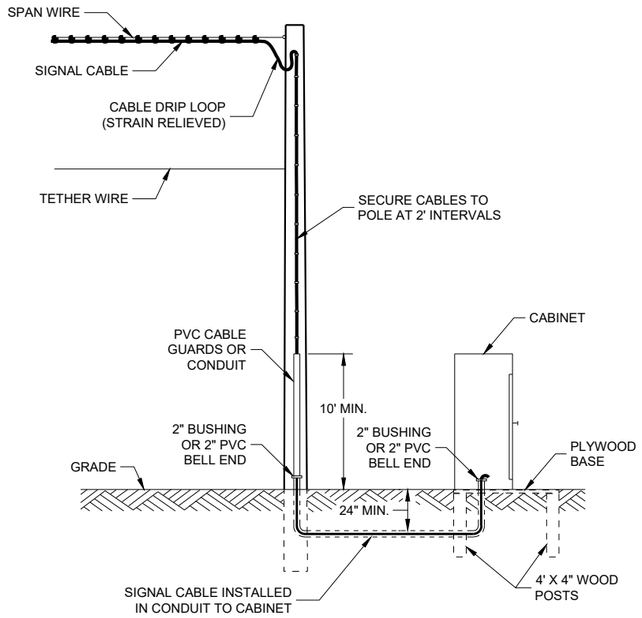
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

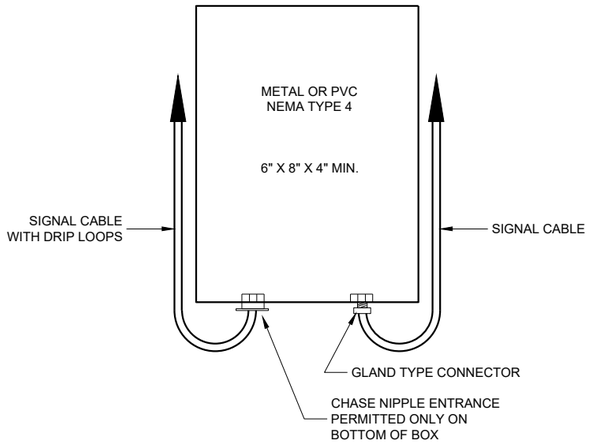
APPROVED
June 2015 — DATE
/S/ Ahmet Demerbilek — ROADWAY STANDARDS DEVE ENGINEER

FHWA

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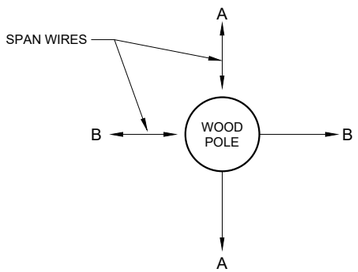
SDD 09G01 - 4f





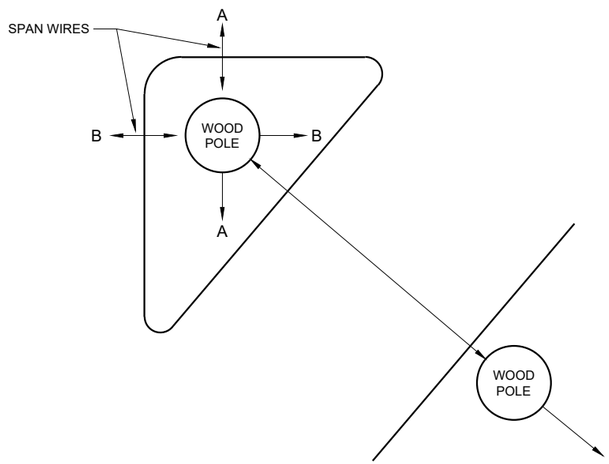
SPLICE BOX

TYPICAL SKID TYPE TEMPORARY

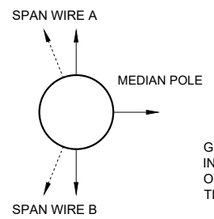


ALL DOWN OR SIDEWALK GUYS
SHALL BE INSTALLED IN THE
OPOSITE DIRECTION OF THE
STRAIN OF THE SPAN WIRE

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

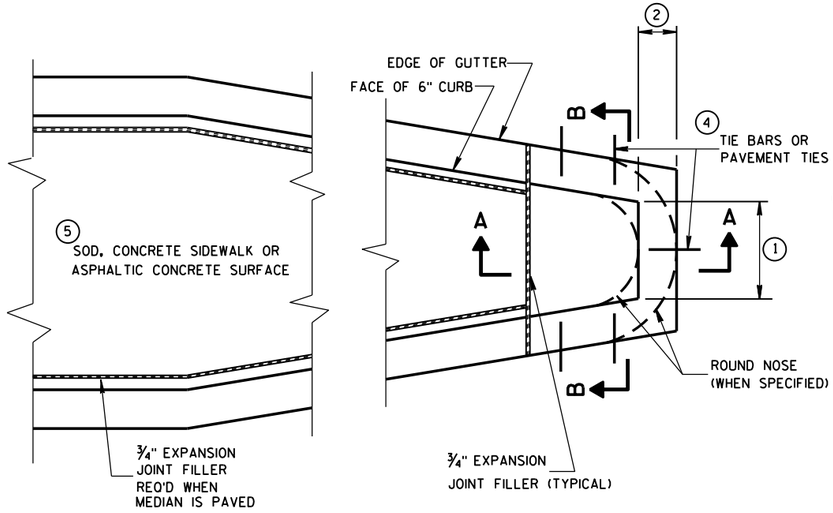
APPROVED
June 2015
DATE

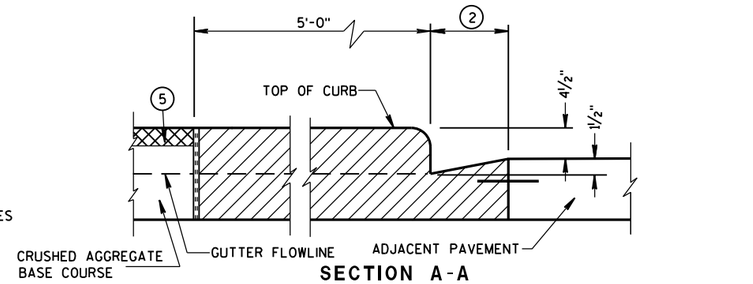
/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

FHWA

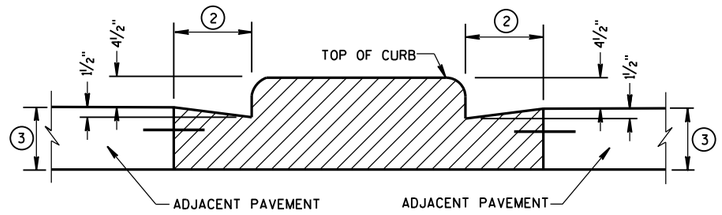
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SDD 09G01 - 4g





SECTION A-A



SECTION B-B

CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

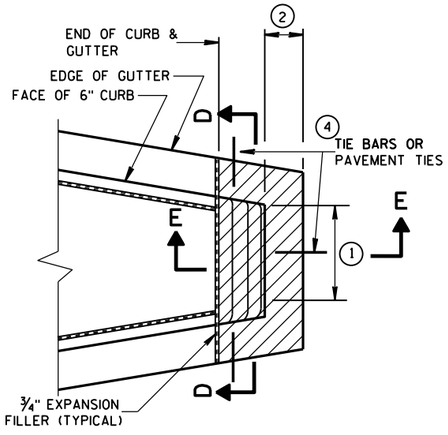
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

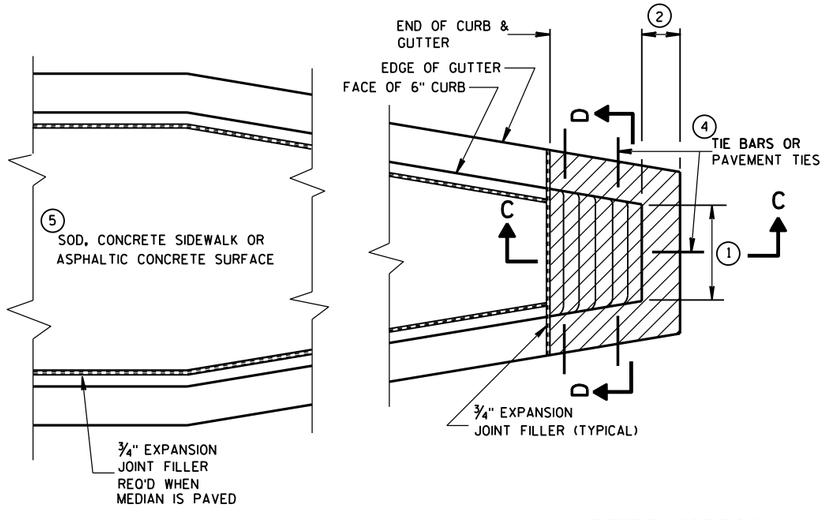
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

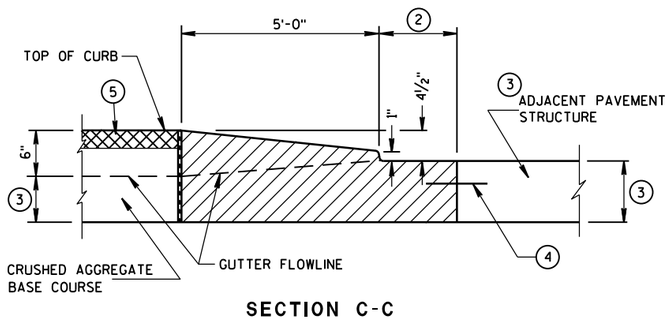
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

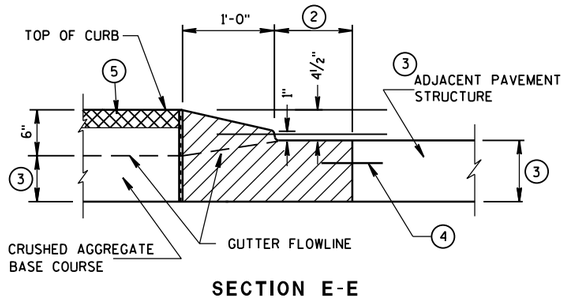




CONCRETE MEDIAN SLOPED NOSE TYPE 1

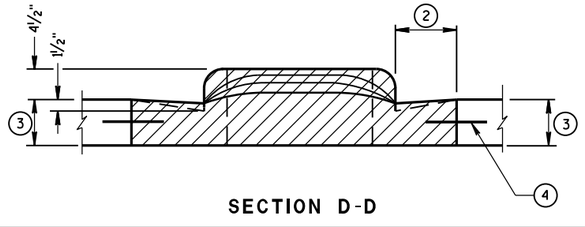


SECTION C-C



SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 2



SECTION D-D

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

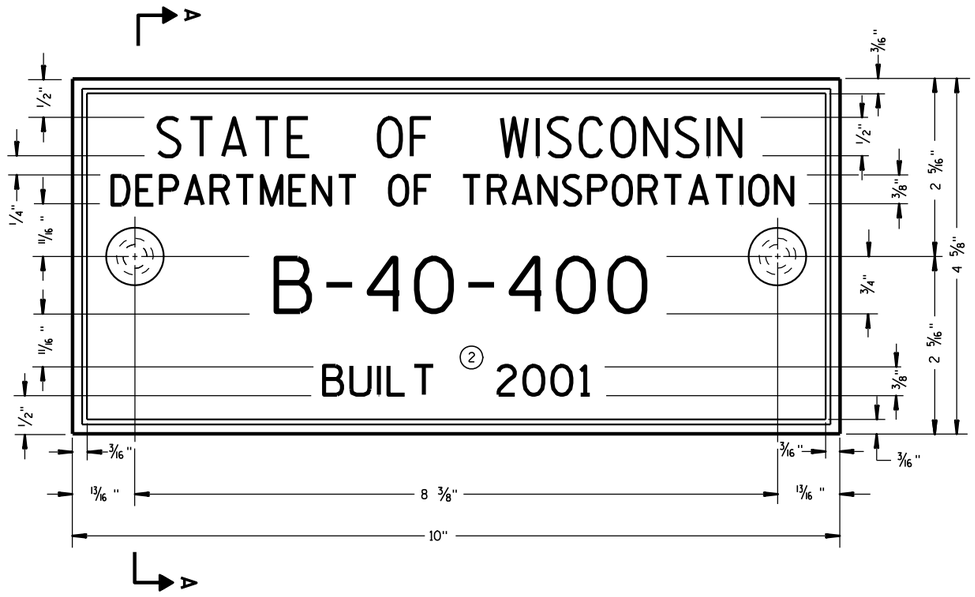
APPROVED
6/8/2006 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 11 B 2-2

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S.D.D. 11 B 2-2



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

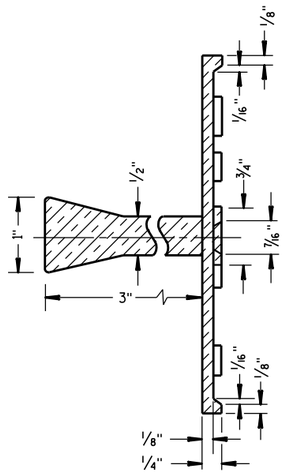
GENERAL NOTES

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.

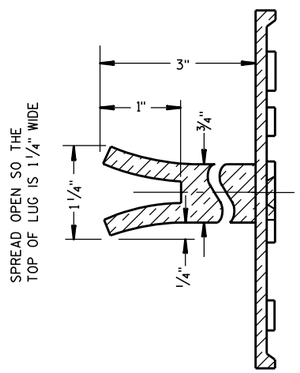
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

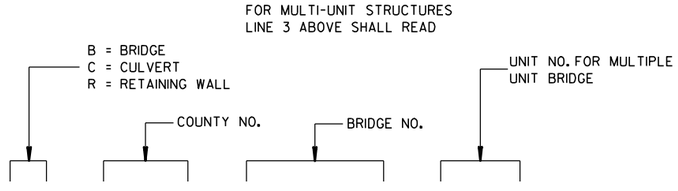
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



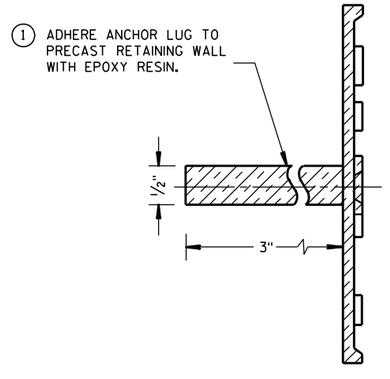
SECTION A-A



ALTERNATE LUG



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck-- CHIEF STRUCTURAL DEVELOP ENGINEER

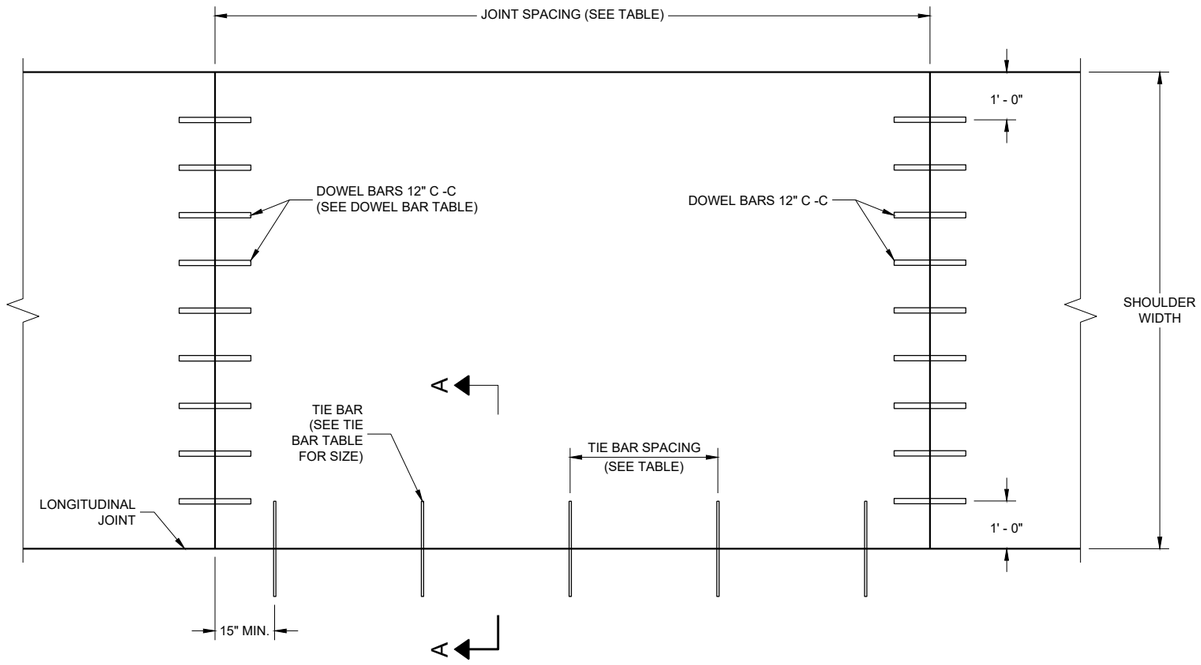
FHWA

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S.D.D. 12 A 3-10

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S.D.D. 12 A 3-10



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

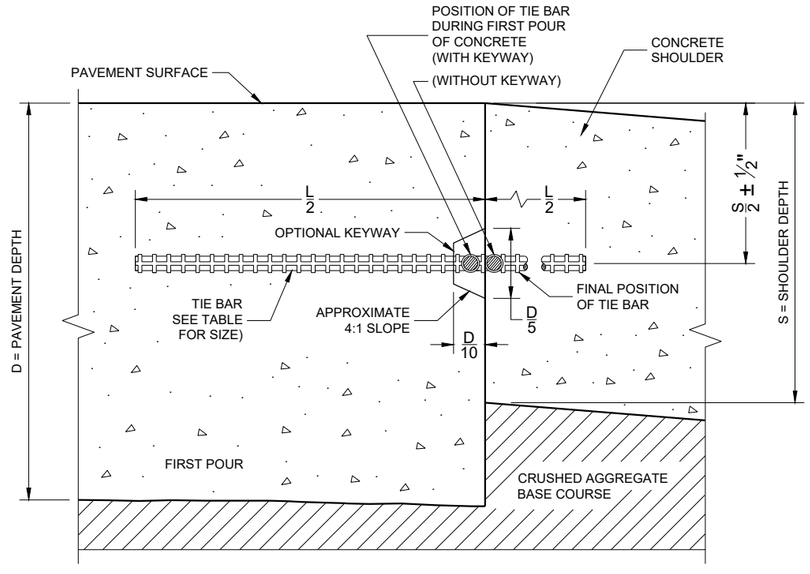
GENERAL NOTES

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.



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

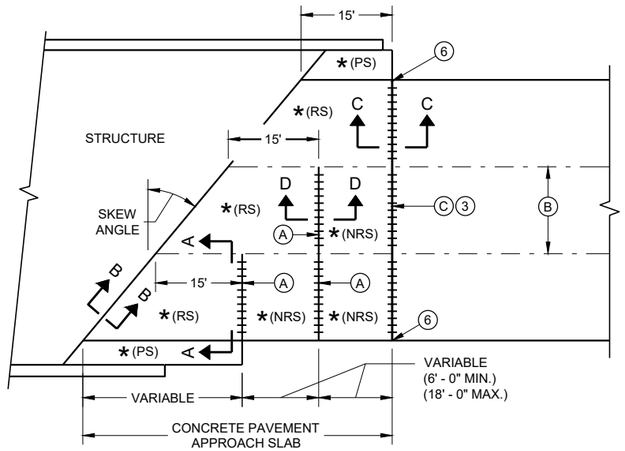
APPROVED
November 2022
DATE

/S/ Peter Kemp
PAVEMENT SUPERVIS

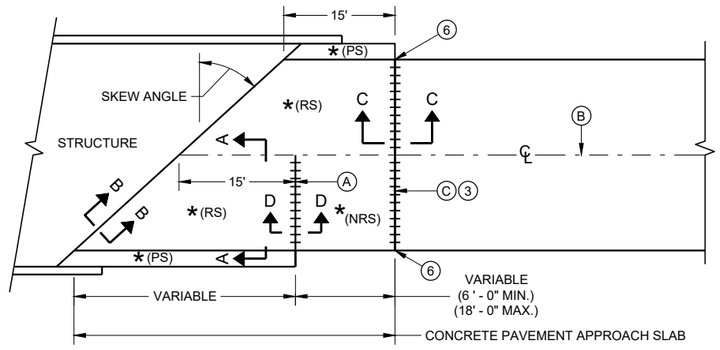
FHWA

SDD 13A03 - 07

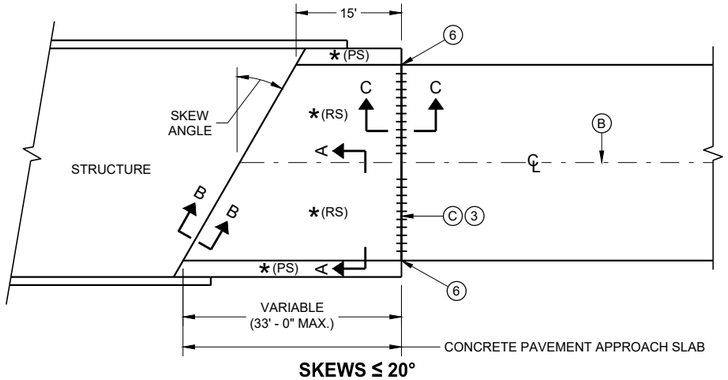
SDD 13A03 - 07



SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)



SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

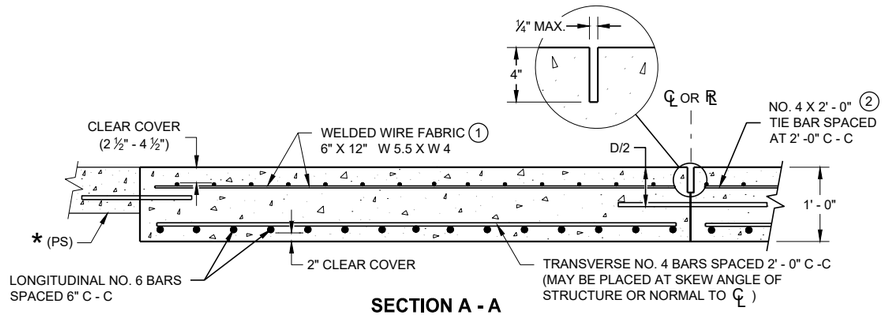
APPROACH SLAB AND ADJACENT PAVEMENT

* (RS) = REINFORCED CONCRETE SLAB

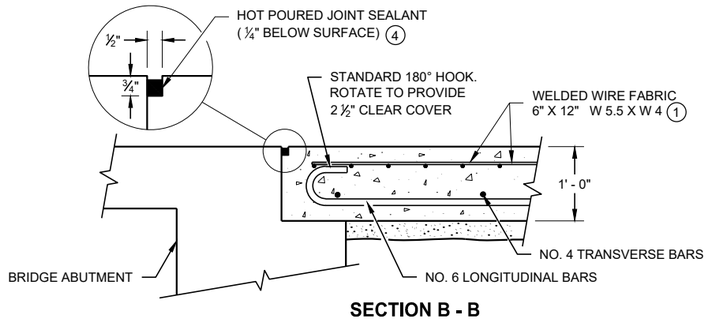
* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

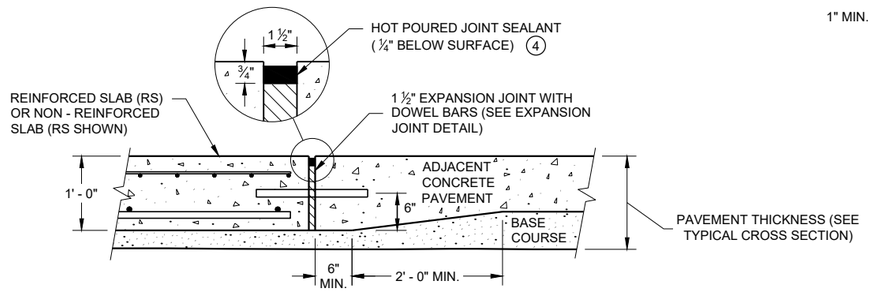
*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL



SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

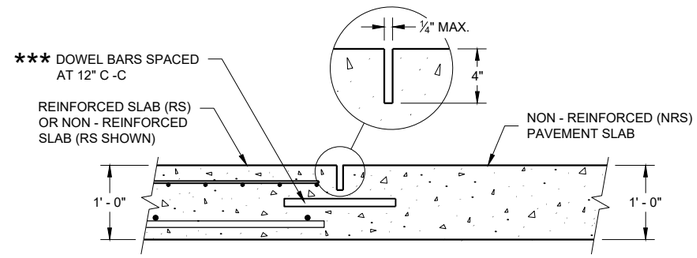
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

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

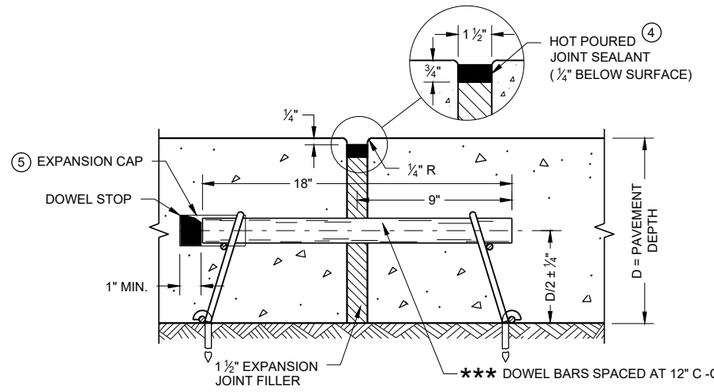
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

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



SECTION D - D
CONTRACTION JOINT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

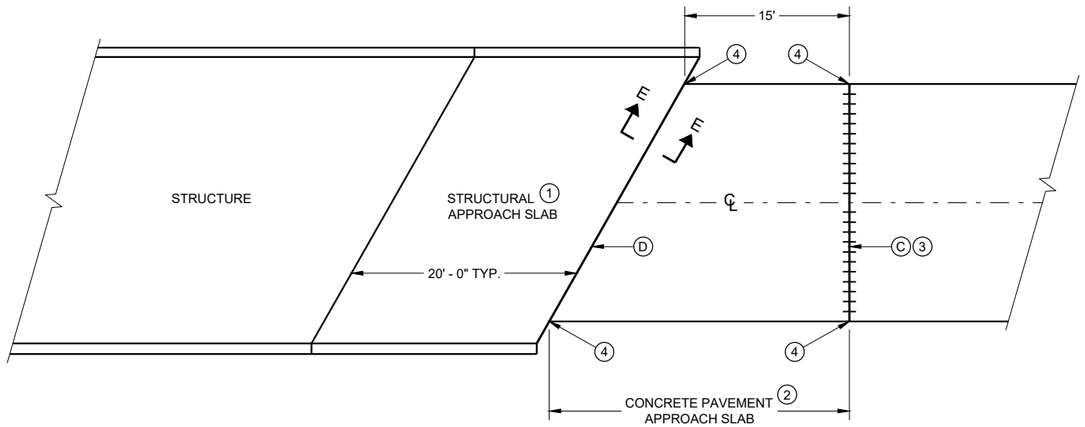
APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVIS

FHWA

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SDD 13B02 - 09a



BRIDGE APPROACHES

GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

(1) SEE BRIDGE PLAN.

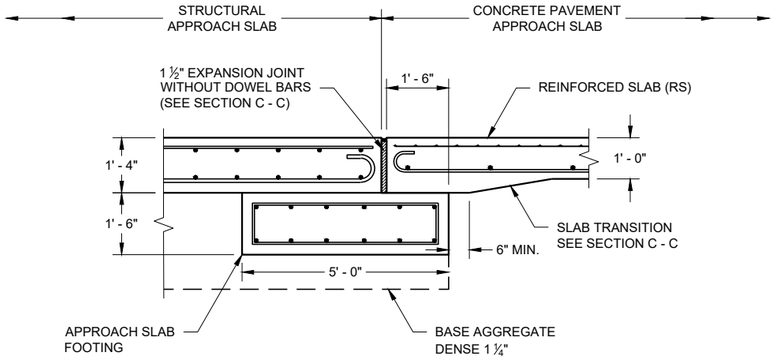
(2) CONFORM TO SDD 13B02 SHEET A FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

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

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

(D) 1 ½" EXPANSION JOINT (NO DOWELS)



SECTION E - E
FOOTING DETAIL
STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

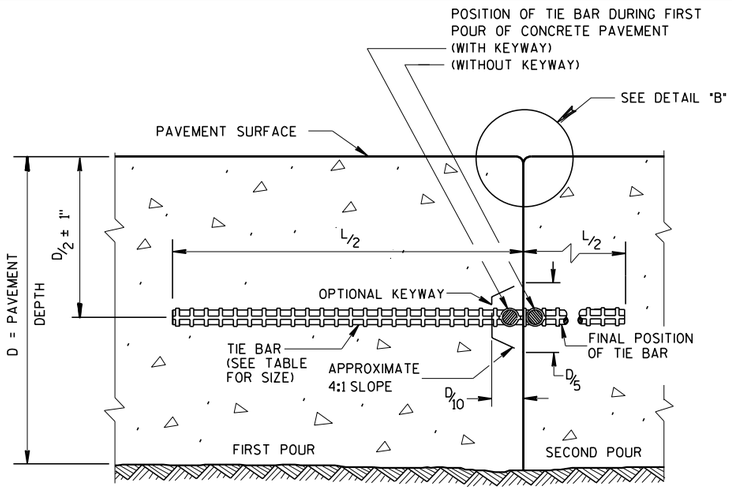
FHWA

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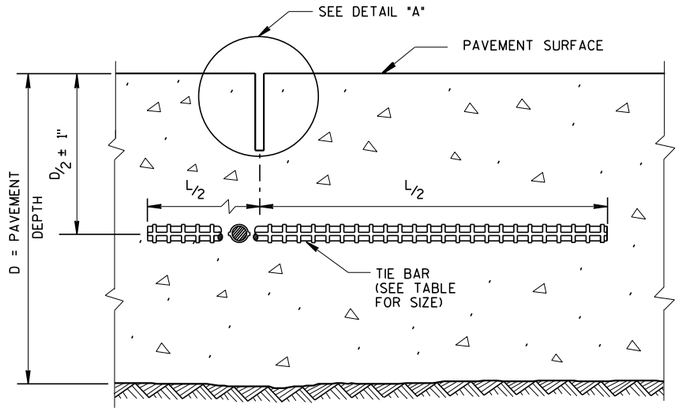
SDD 13B02 - 09b

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SDD 13B02 - 09b



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

PLAN VIEW

SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

DETAIL "A"

DETAIL "B"

DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

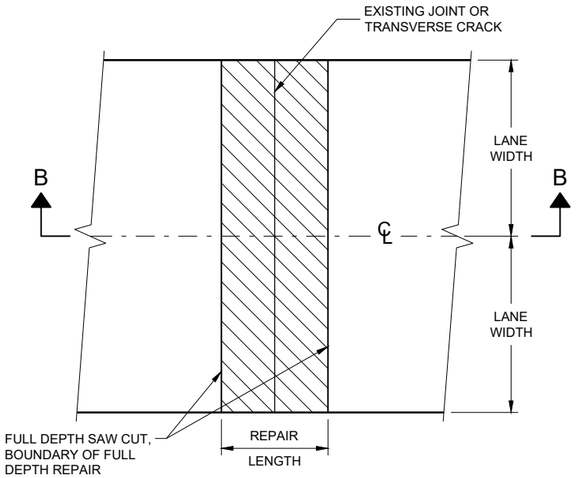
PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

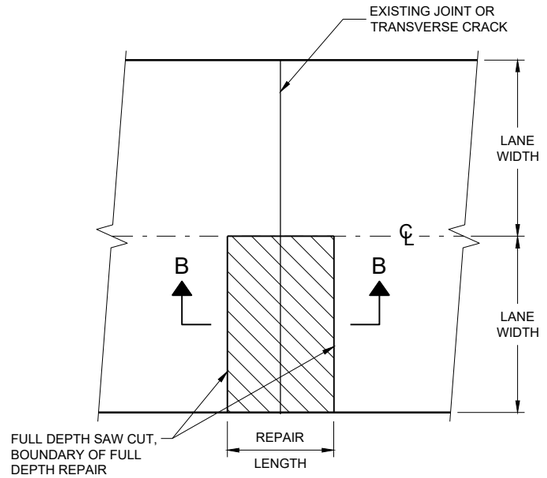
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPE
FHWA

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S.D.D. 13 C 1-19



PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

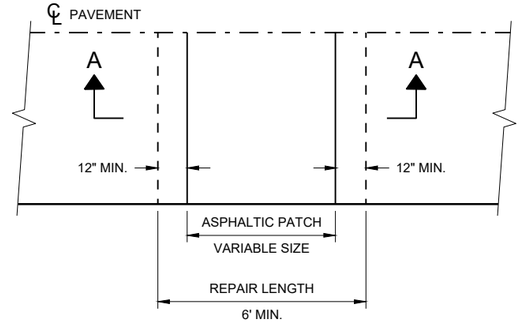
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

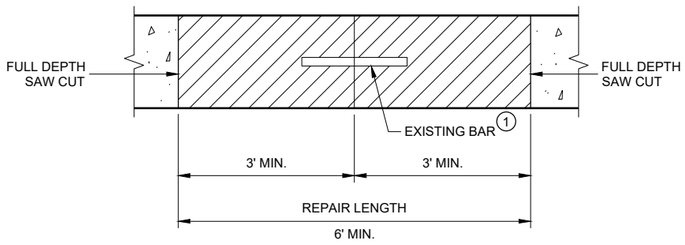
THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

(1) DOWEL BARS MAY NOT BE PRESENT.



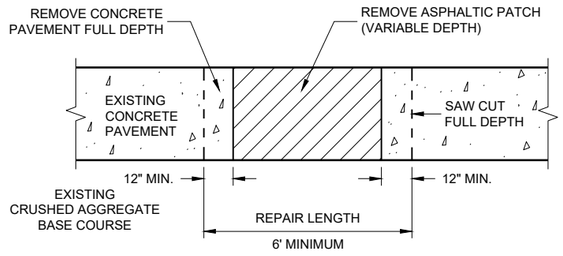
PLAN VIEW

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION B - B

CONCRETE REMOVAL



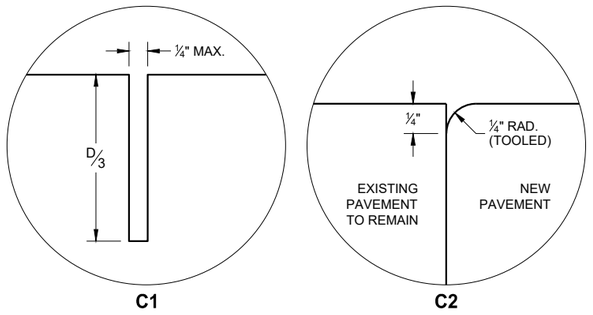
SECTION A - A

HMA PATCH REMOVAL

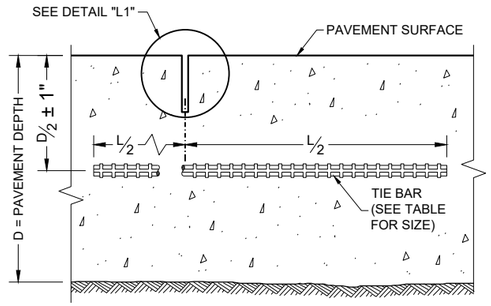
CONCRETE PAVEMENT REPAIR AND REPLACEMENT

SDD13C09 - 17a

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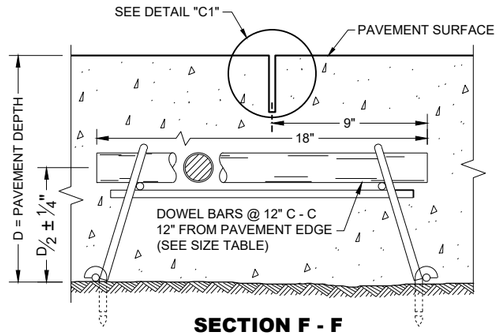


TRANSVERSE JOINTS



SECTION C - C

SAWED LONGITUDINAL JOINT



SECTION F - F

DOWELED CONTRACTION JOINT

GENERAL NOTES

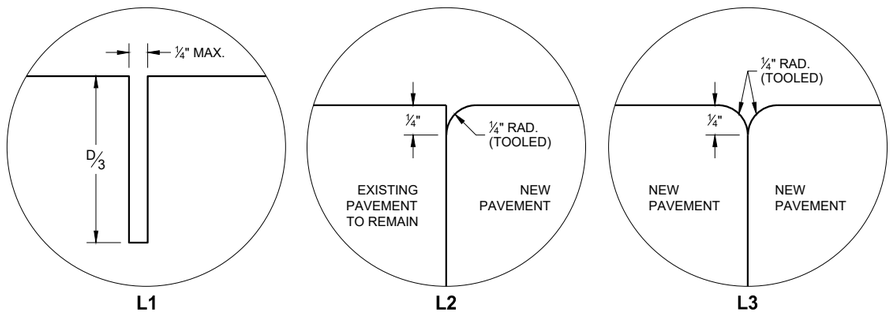
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE PAVEMENT REPAIRS OF EXISTING NON-DOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

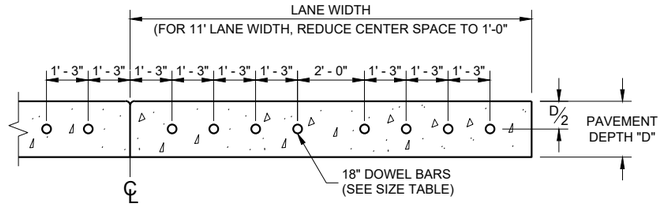
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

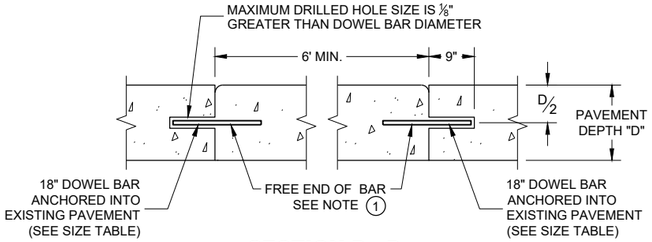


LONGITUDINAL JOINTS



SECTION E - E

DRILLED DOWEL BAR CONSTRUCTION JOINT



SECTION D - D

TIE BAR TABLE

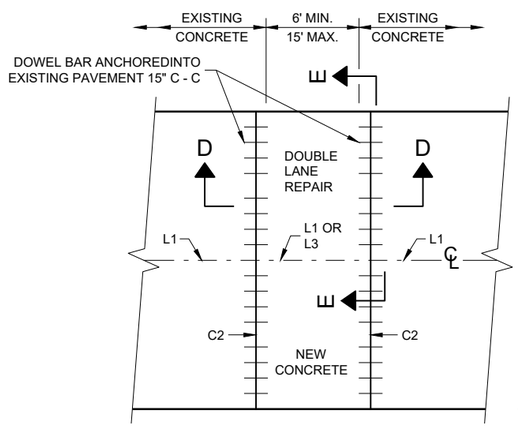
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* 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.

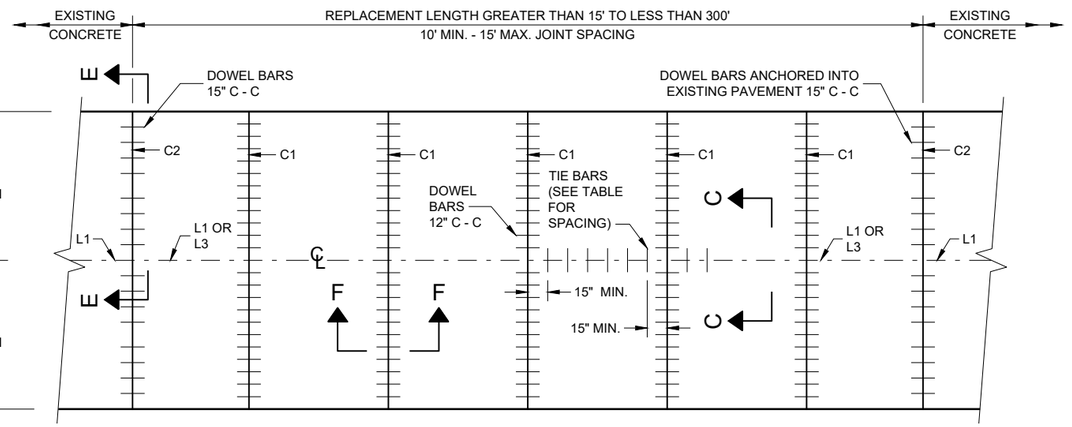
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	NONE	12'
7", 7 ½"	1"	1"	14'
8" & ABOVE	1 ¼"	1 ¼"	15'



PLAN VIEW

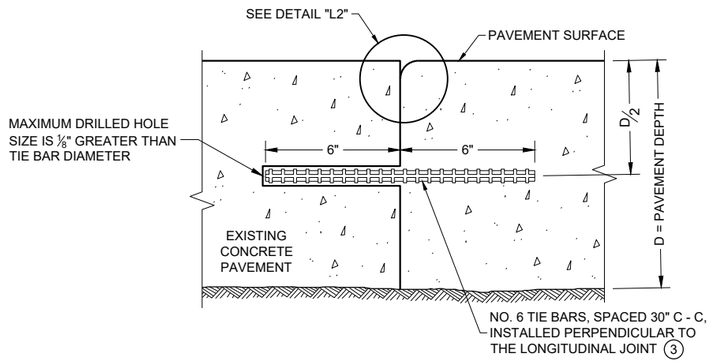
MULTILANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

MULTILANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

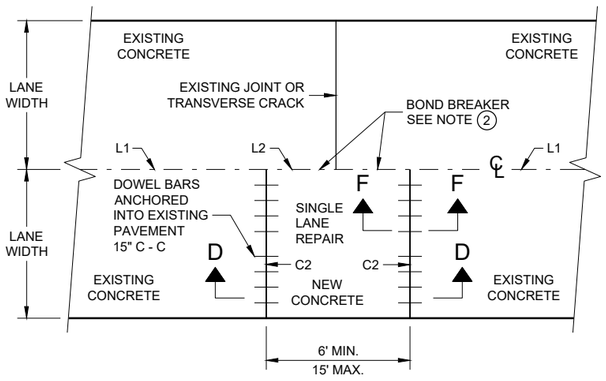


SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

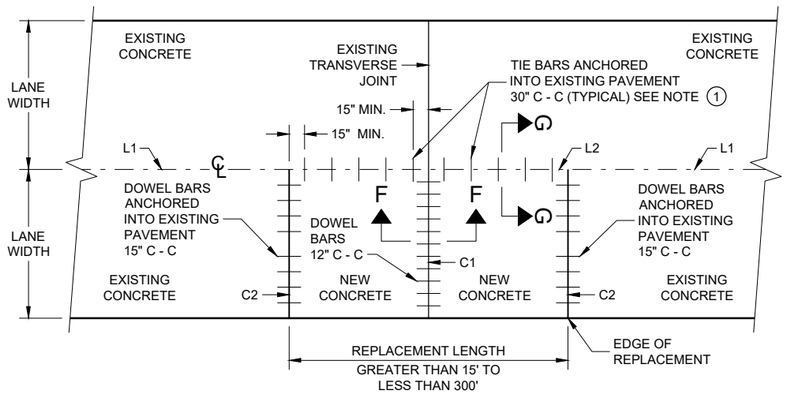
GENERAL NOTES

1. WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
2. USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
3. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE REPAIR AND REPLACEMENT

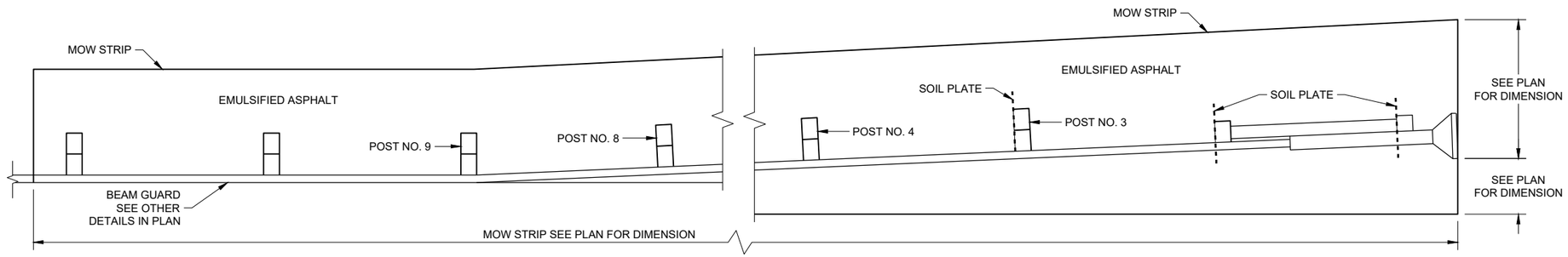
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE
/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

FHWA

6

SDD 13C09 - 17c



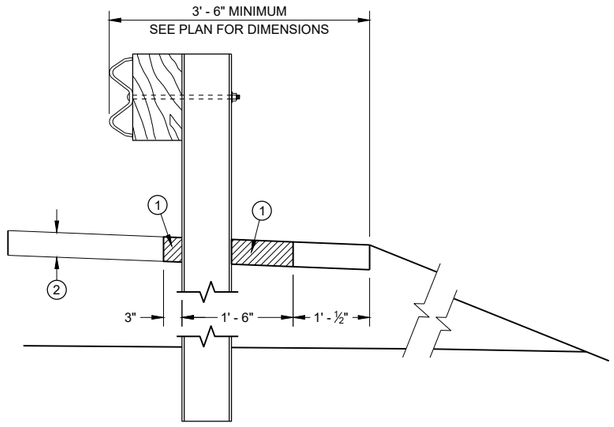
PLAN VIEW

MOW STRIP LAYOUT FOR ENERGY ABSORBING TERMINAL

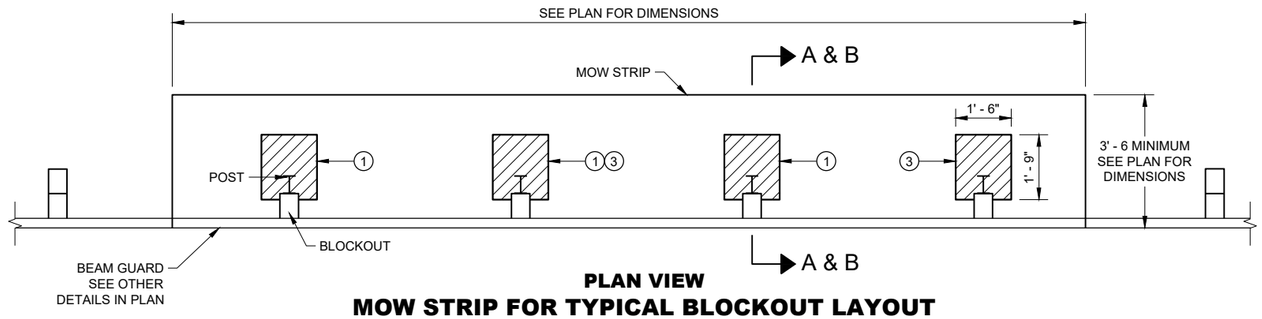
GENERAL NOTES

ONLY USE STEEL POSTS IN CONCRETE AND ASPHALT MOW STRIPS.

1. CONTROLLED LOW-STRENGTH BACKFILL OR EMULSIFIED ASPHALT.
2. DEPTH OF MOW STRIP:
   ASPHALT - 4"
   CONCRETE - 4"
   EMULSIFIED ASPHALT - 1" OR LESS
3. FOR EMULSIFIED ASPHALT, MOW STRIP STRIP LEAVE OUTS NOT REQUIRED. (TYPICAL FOR ALL POSTS)

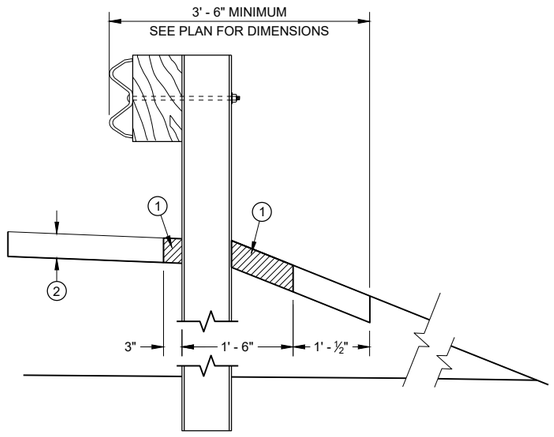


SECTION A - A

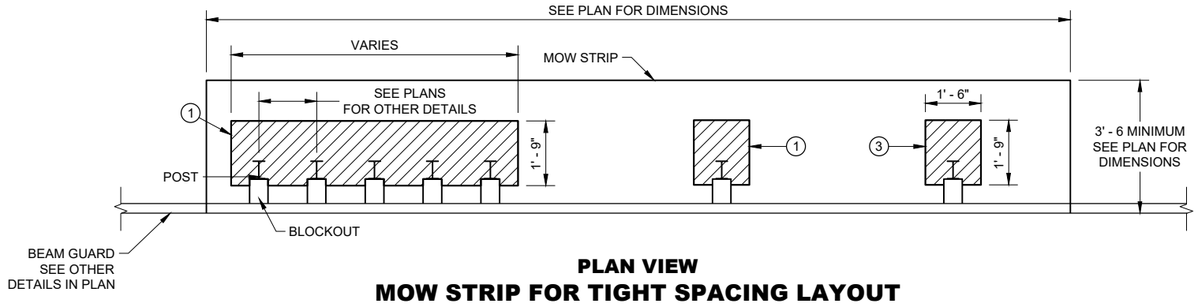


PLAN VIEW

MOW STRIP FOR TYPICAL BLOCKOUT LAYOUT

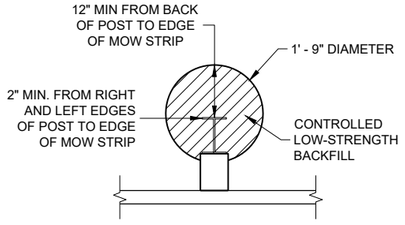


SECTION B - B

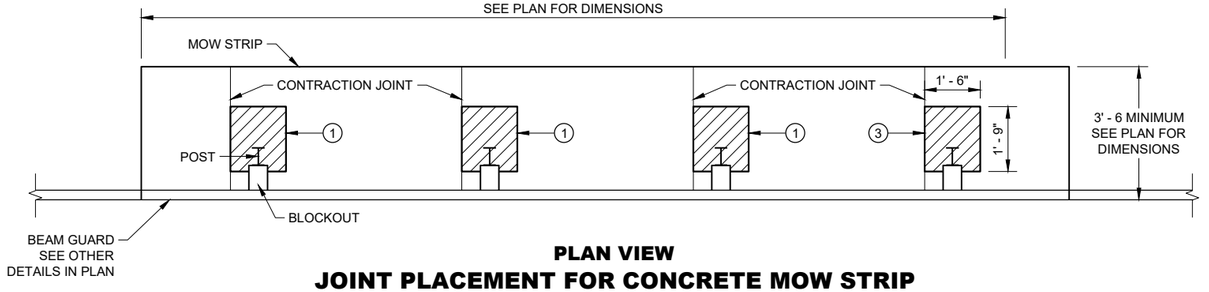


PLAN VIEW

MOW STRIP FOR TIGHT SPACING LAYOUT



ALTERNATIVE HMA MOW STRIP DESIGN



PLAN VIEW

JOINT PLACEMENT FOR CONCRETE MOW STRIP

GUARDRAIL MOW STRIP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B28 - 04a

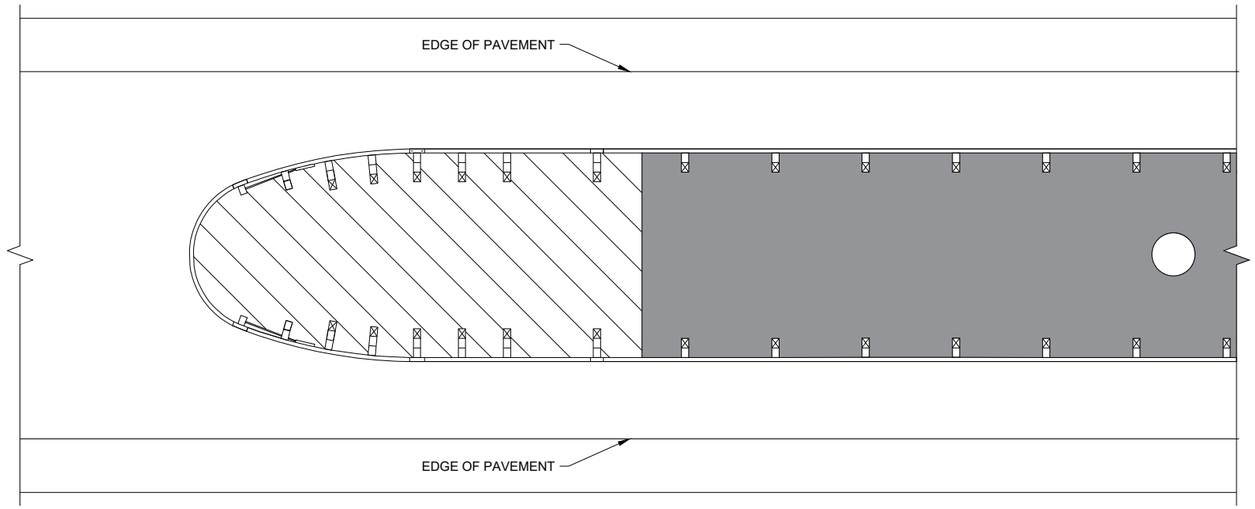
LEGEND

CONCRETE, ASPHALT, OR EMULSIFIED ASPHALT MOW STRIP (SEE OTHER DETAILS)

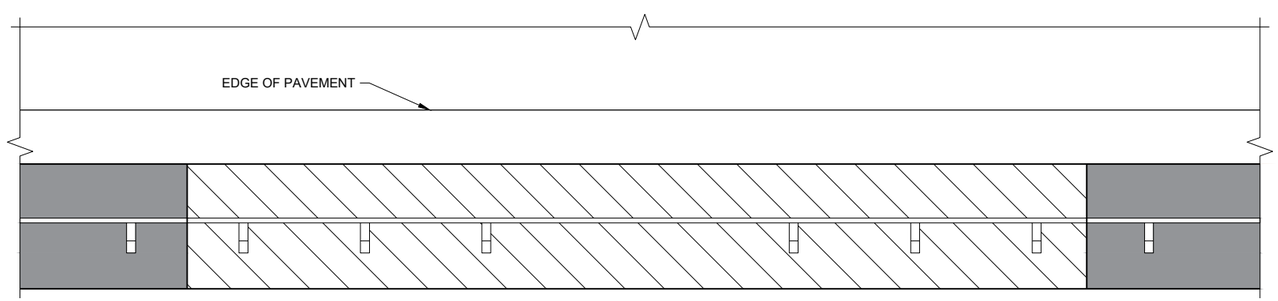
EMULSIFIED ASPHALT MOW STRIP (SEE OTHER DETAILS)

GENERAL NOTES

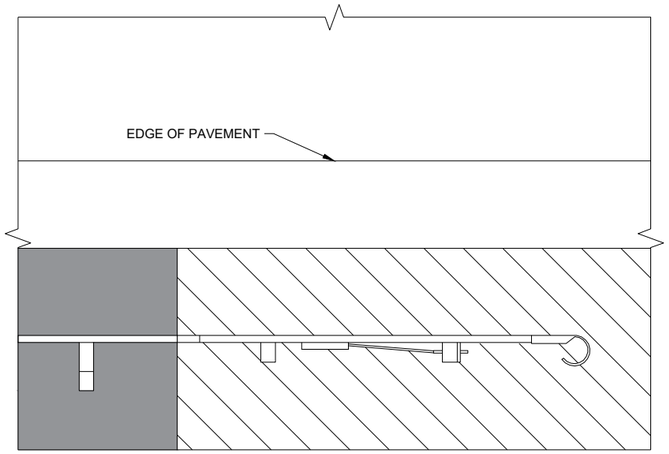
EXISTING THRIE BEAM BULLNOSES MAY HAVE WOOD POSTS. NEW THRIE BEAM BULLNOSE WILL HAVE STEEL POSTS.



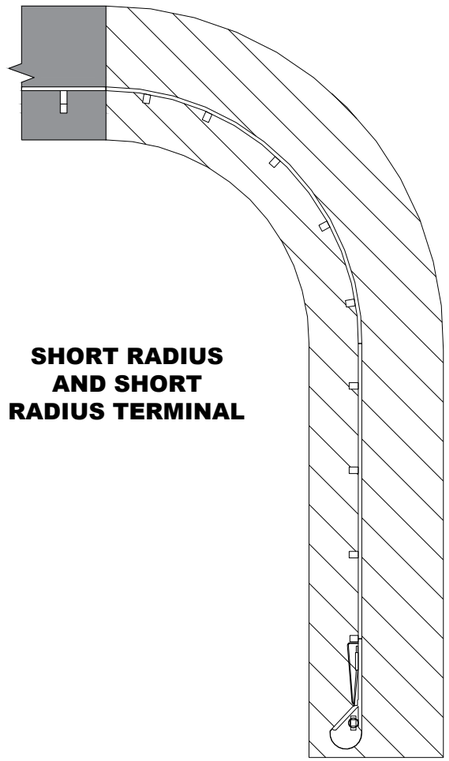
THRIE BEAM BULLNOSE



LONG - SPAN



TYPE 2 TERMINAL



SHORT RADIUS AND SHORT RADIUS TERMINAL

GUARDRAIL MOW STRIP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 14B28 - 04b

6

SDD 14B28 - 04b

(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.

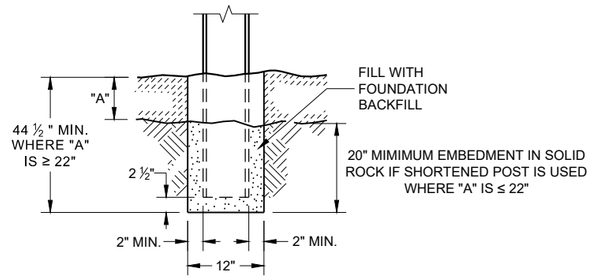
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

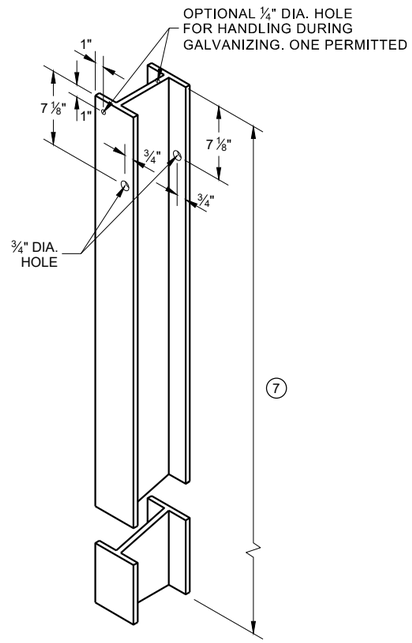
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

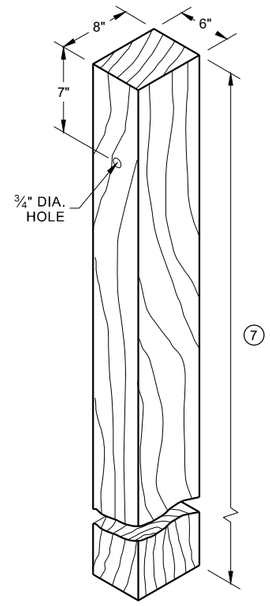
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



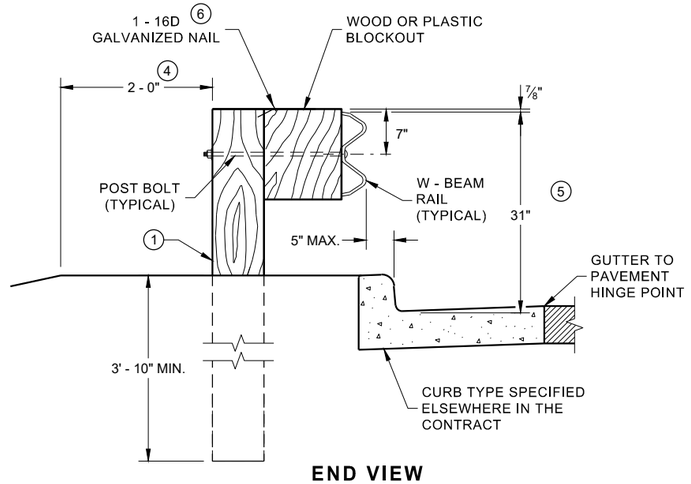
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



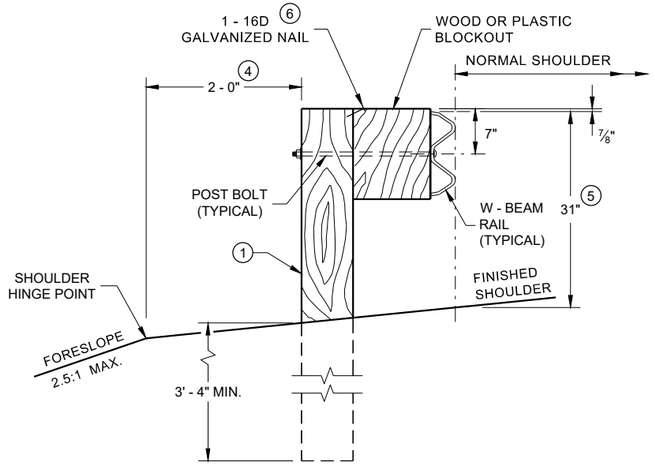
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



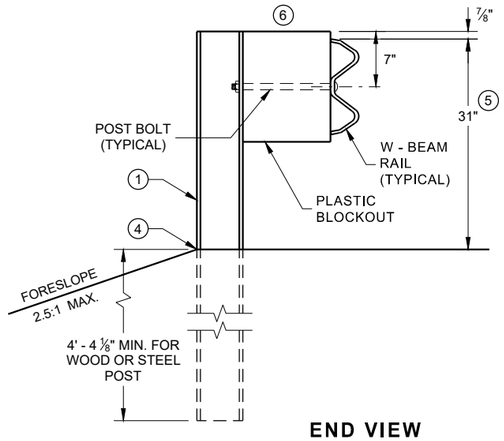
WOOD POST (6" X 8") NOMINAL (1)



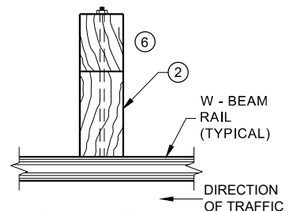
END VIEW
LOCATED ALONG A CURBED ROADWAY



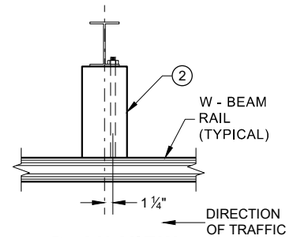
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



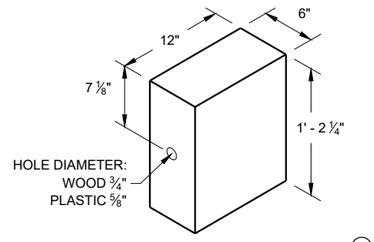
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

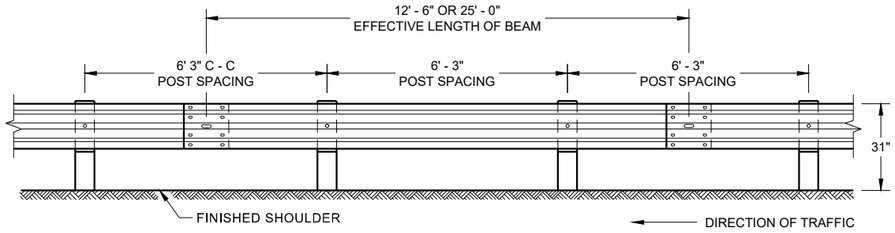
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

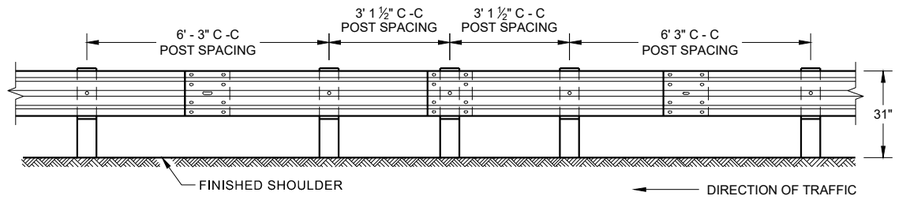
SDD 14B42 - 07a

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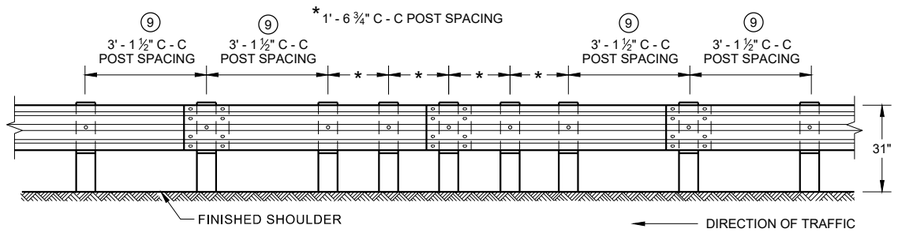
SDD 14B42 - 07a



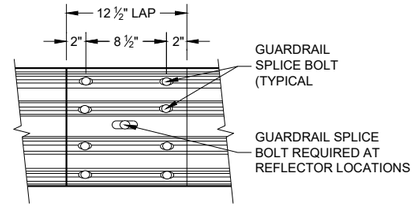
FRONT VIEW
POST SPACING STANDARD INSTALLATION



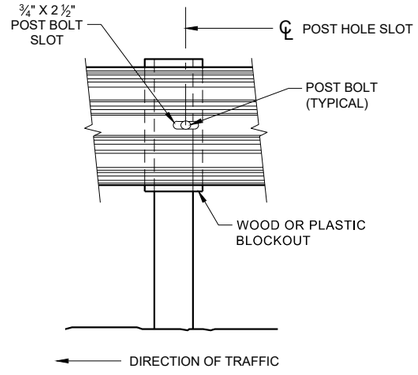
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



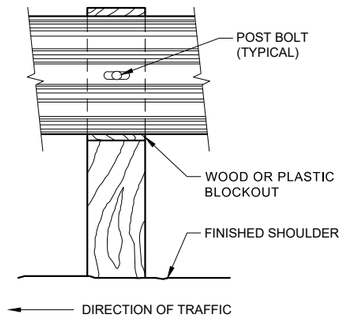
FRONT VIEW
QUARTER POST SPACING (QS)



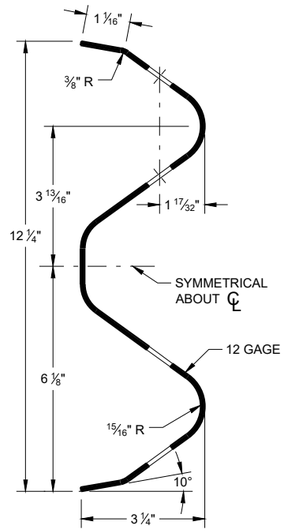
FRONT VIEW
MID-SPAN BEAM SPLICE



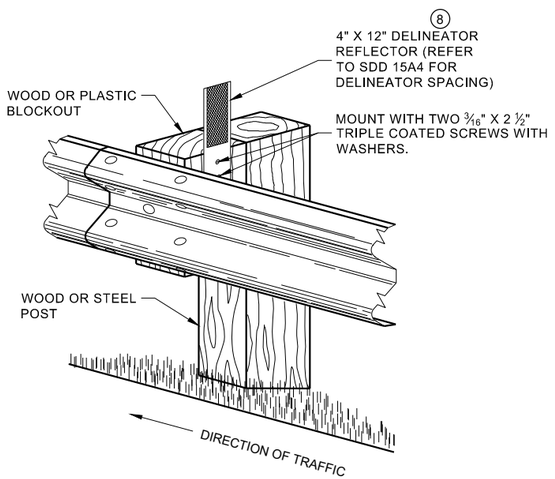
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

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.

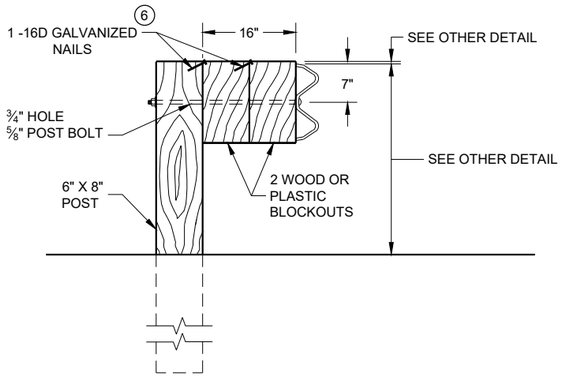
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B42 - 07b
SDD 14B42 - 07b

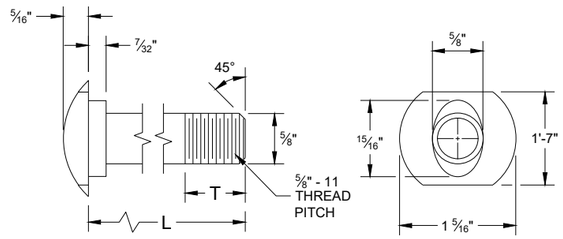


DETAIL FOR 16" BLOCKOUT DEPTH

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.

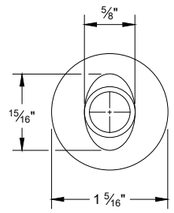
NOTE:

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.

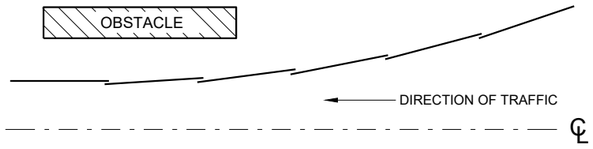


POST BOLT TABLE

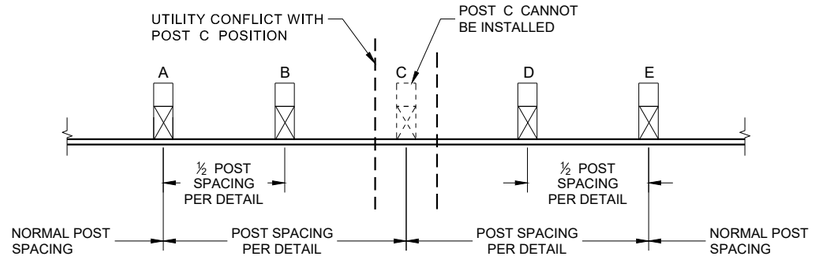
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



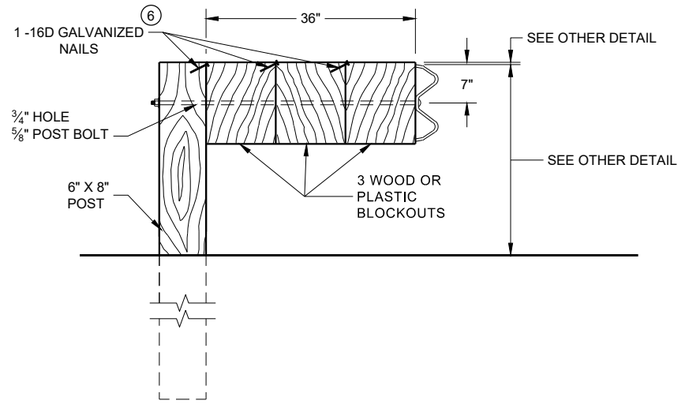
ALTERNATE BOLT HEAD



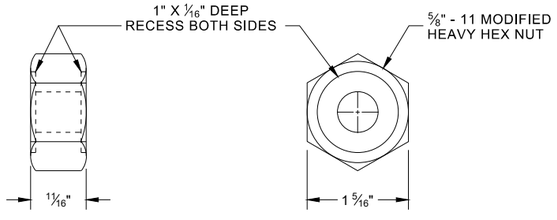
PLAN VIEW
BEAM LAPPING DETAIL



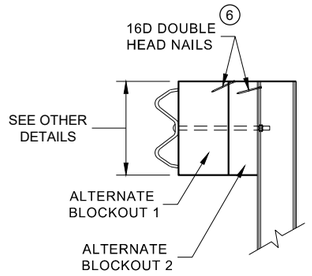
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



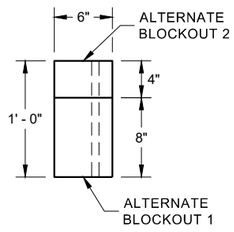
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

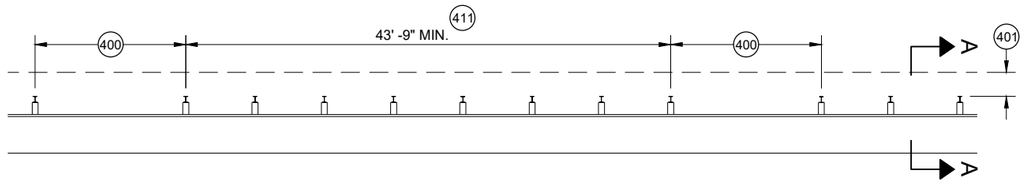
ALTERNATE WOOD BLOCKOUT DETAIL

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.

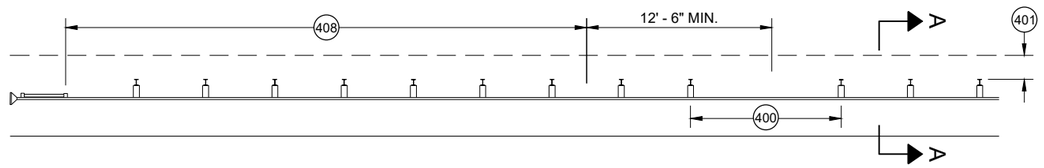
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(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.

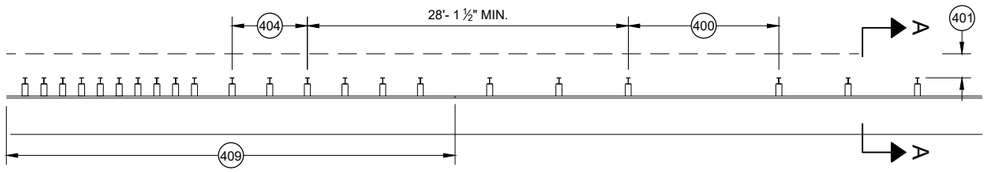
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



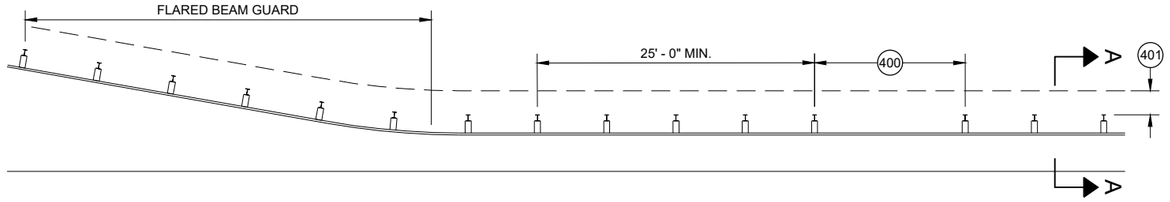
MISSING POST IN MGS GUARDRAIL



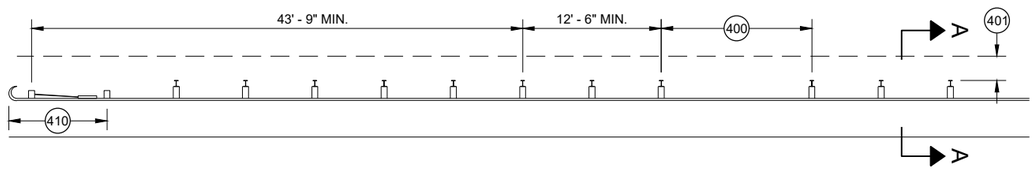
MISSING POST IN MGS GUARDRAIL NEAR EAT



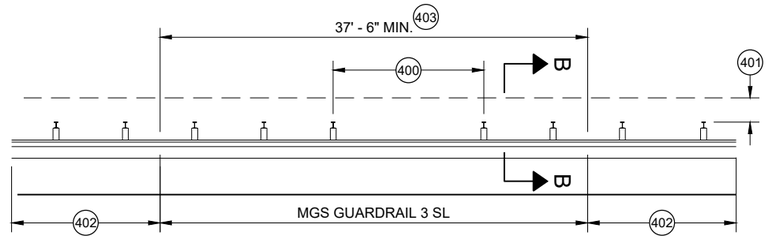
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

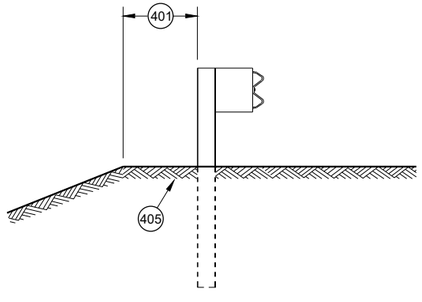


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

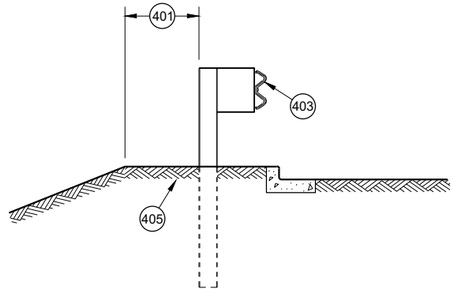


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(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.

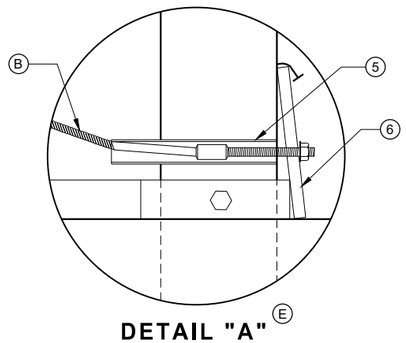
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

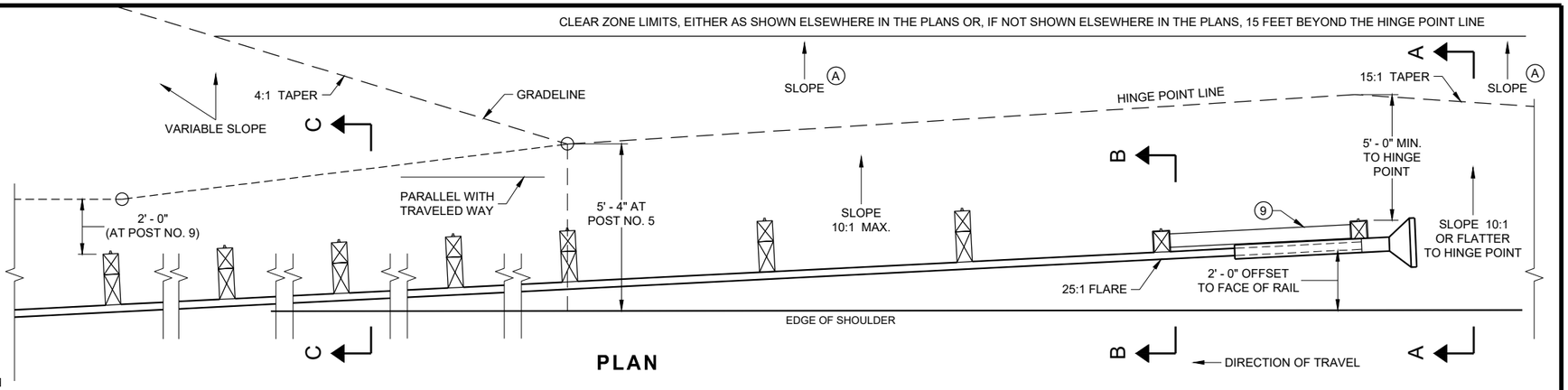
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

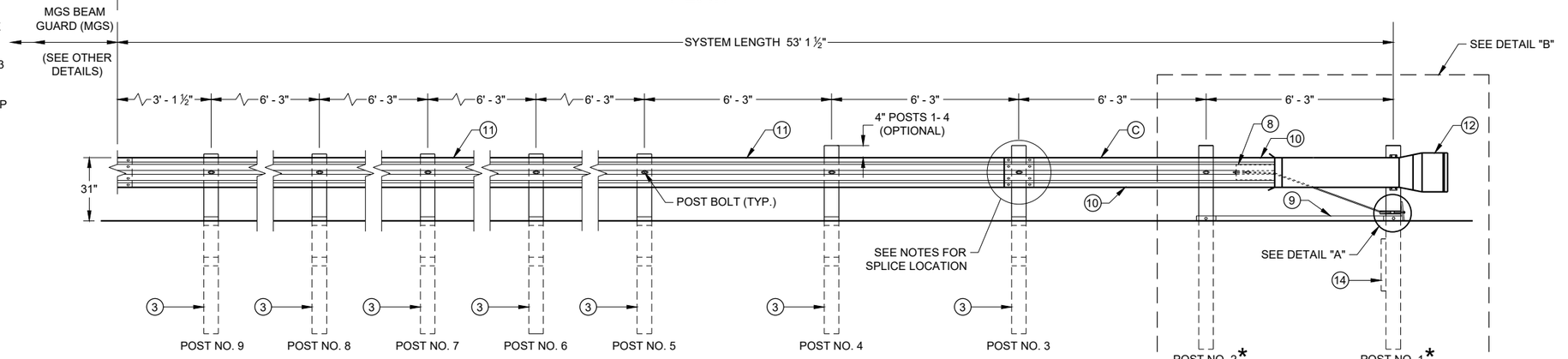
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



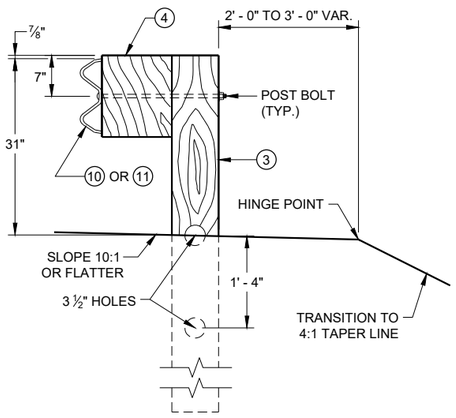
DETAIL "A" (E)



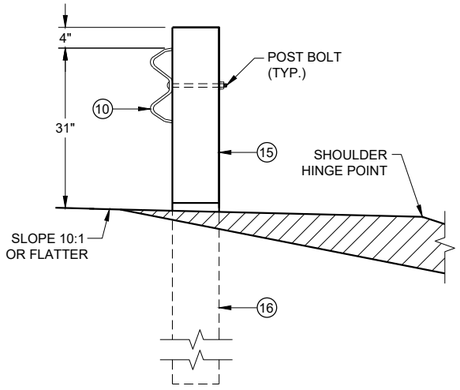
PLAN



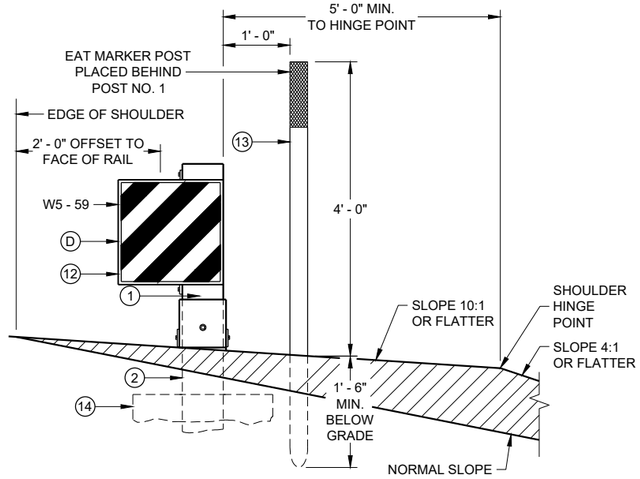
ELEVATION



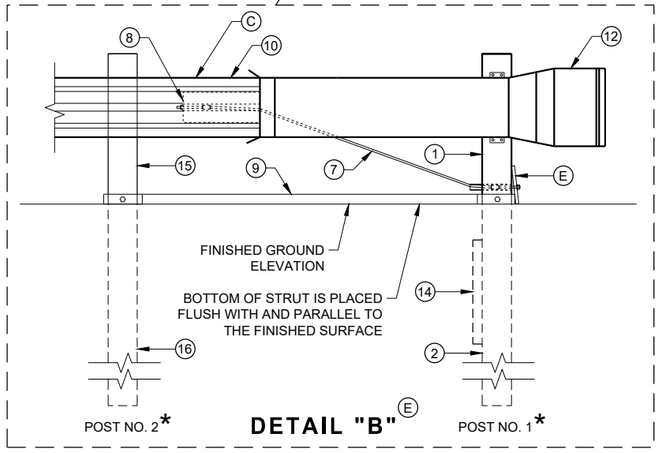
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



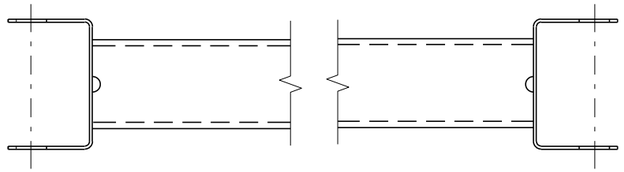
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

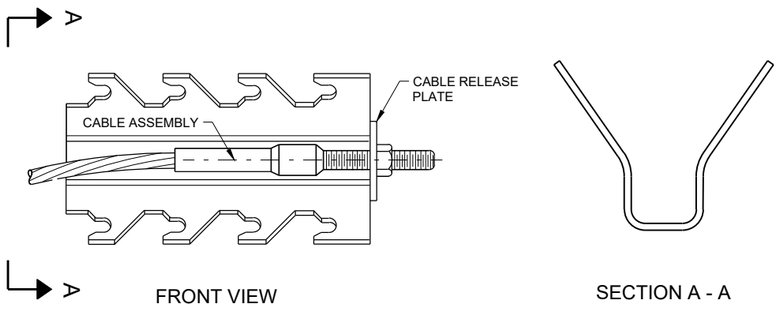
SDD 14B44 - 04a



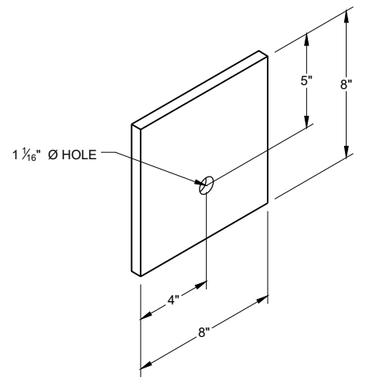
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

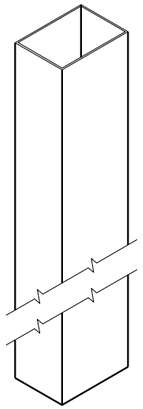
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SDD 14B44 - 04b

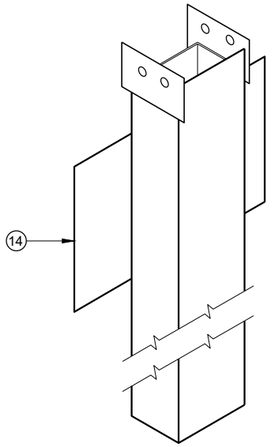
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

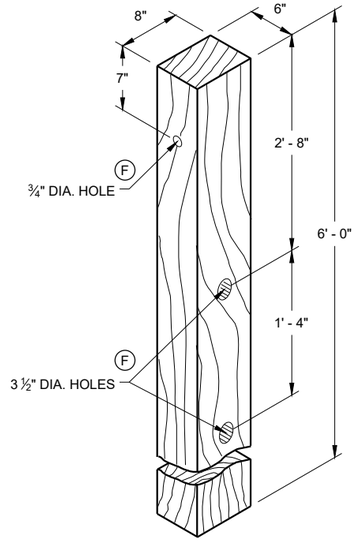
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



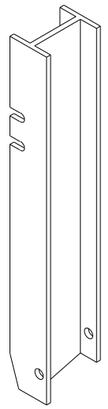
UPPER POST NO. 1 (1) (E)



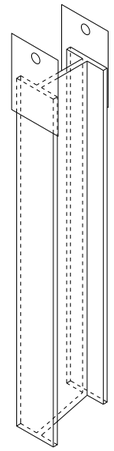
LOWER POST NO. 1 (2) (E)



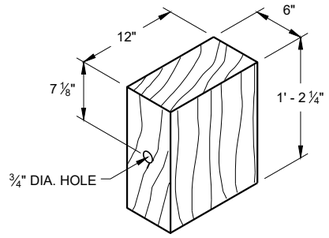
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



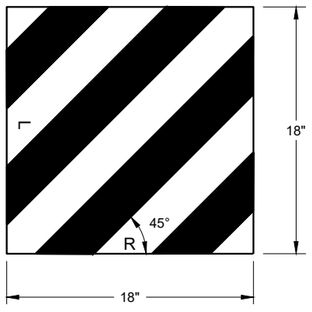
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

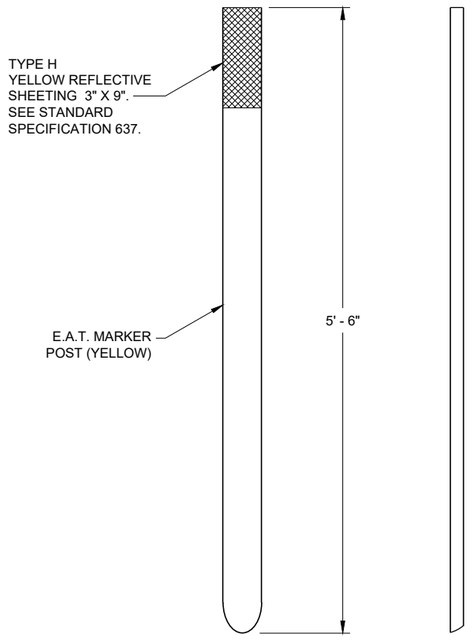


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



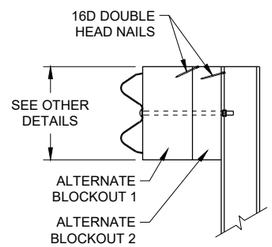
W5 - 59

REFLECTIVE SHEETING DETAIL (E)

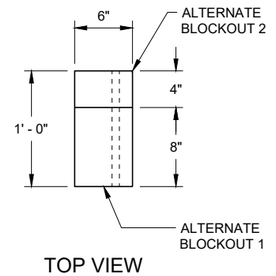


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

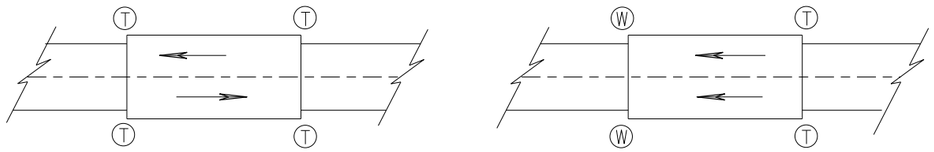
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

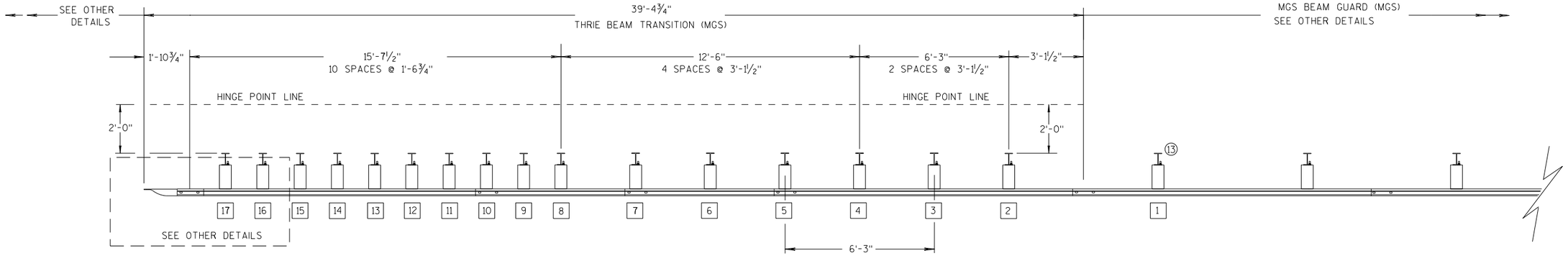
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

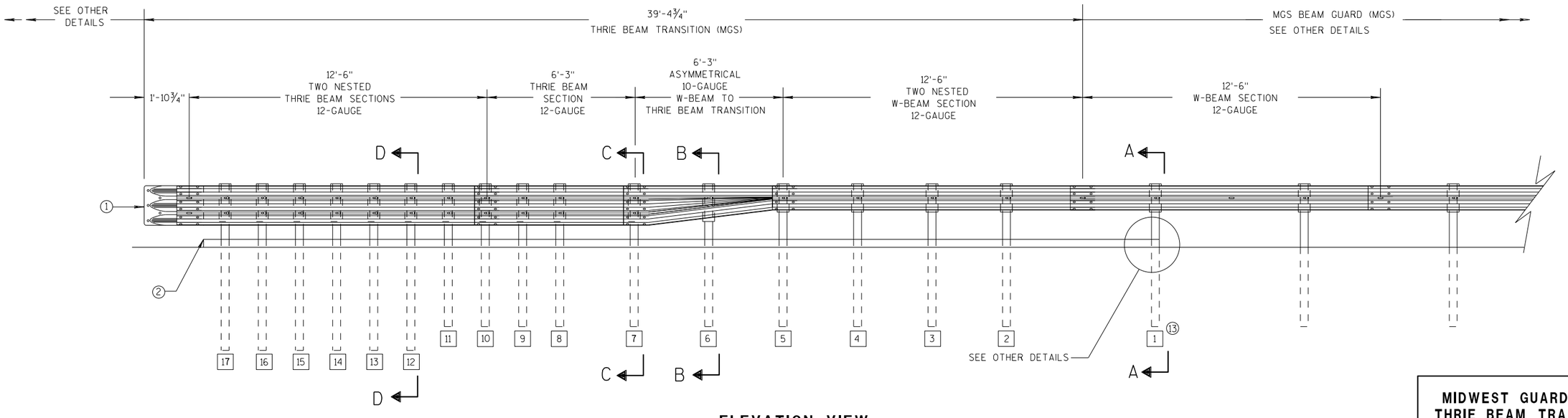
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

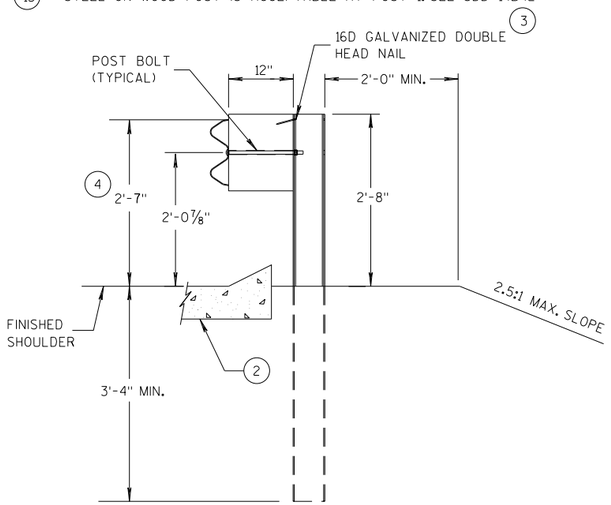
GENERAL NOTES

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

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

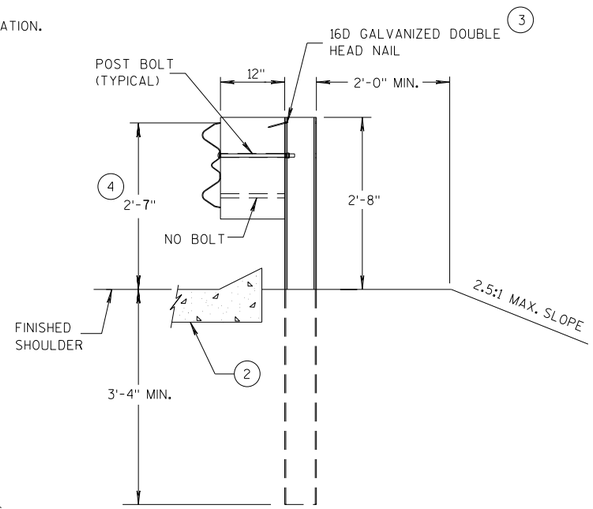
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



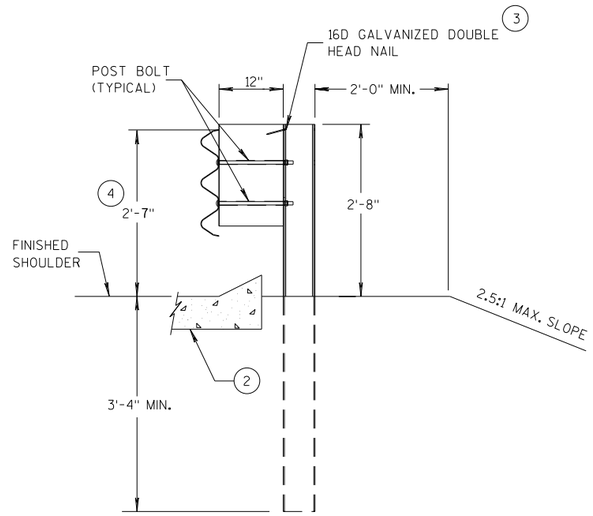
SECTION A-A (13)

POSTS 1-5



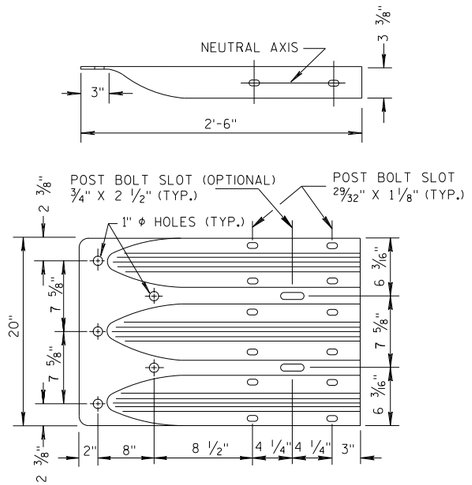
SECTION B-B

POST 6

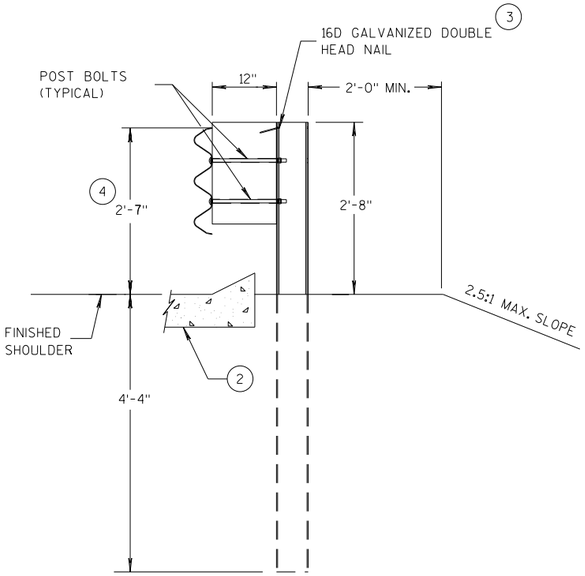


SECTION C-C

POSTS 7-11

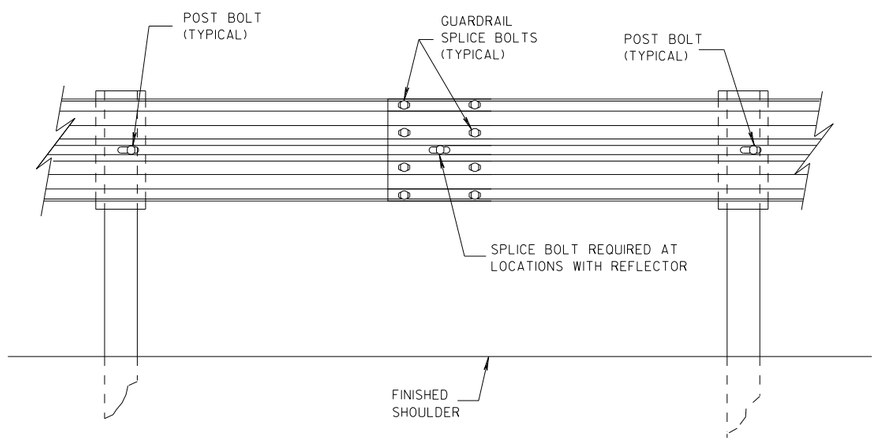


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

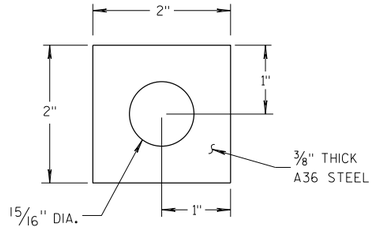
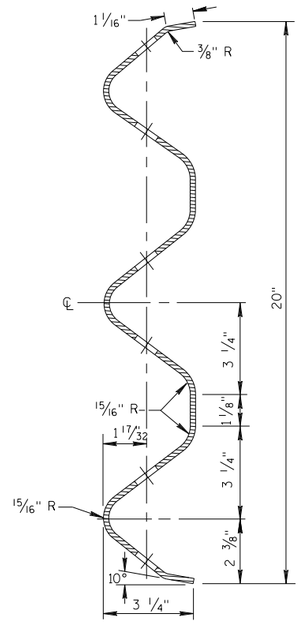


PLATE WASHER DETAIL



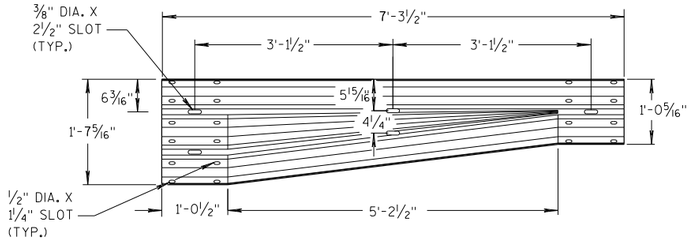
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

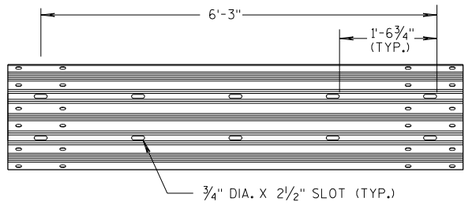
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

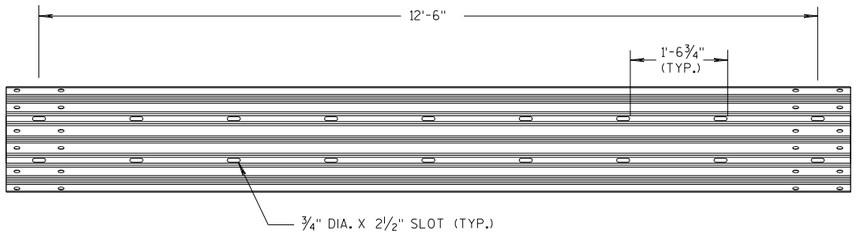
S.D.D. 14 B 45-5b



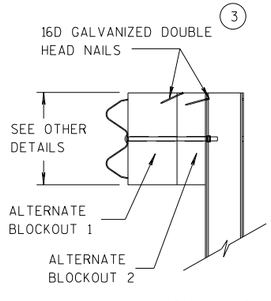
W-BEAM TO THRIE BEAM TRANSITION SECTION



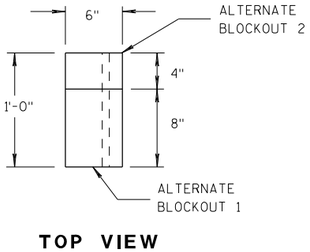
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

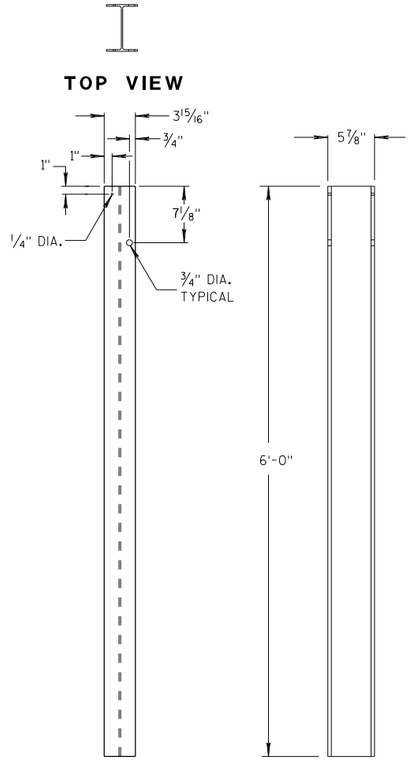


SIDE VIEW



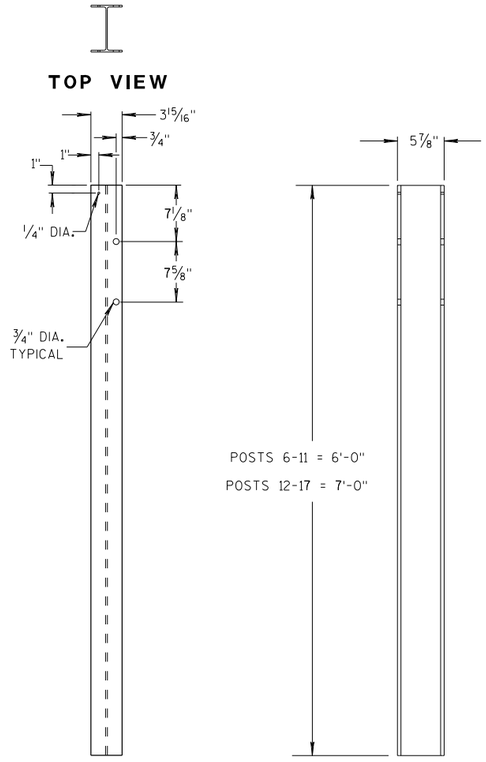
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



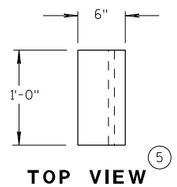
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

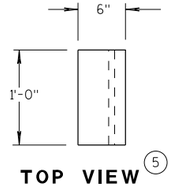


FRONT VIEW SIDE VIEW

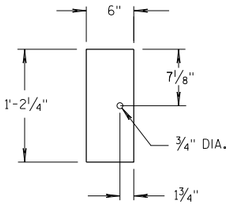
STEEL POSTS 6-17



TOP VIEW (5)

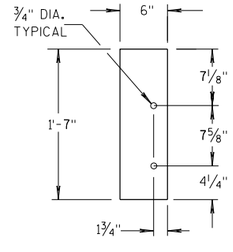


TOP VIEW (5)



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)

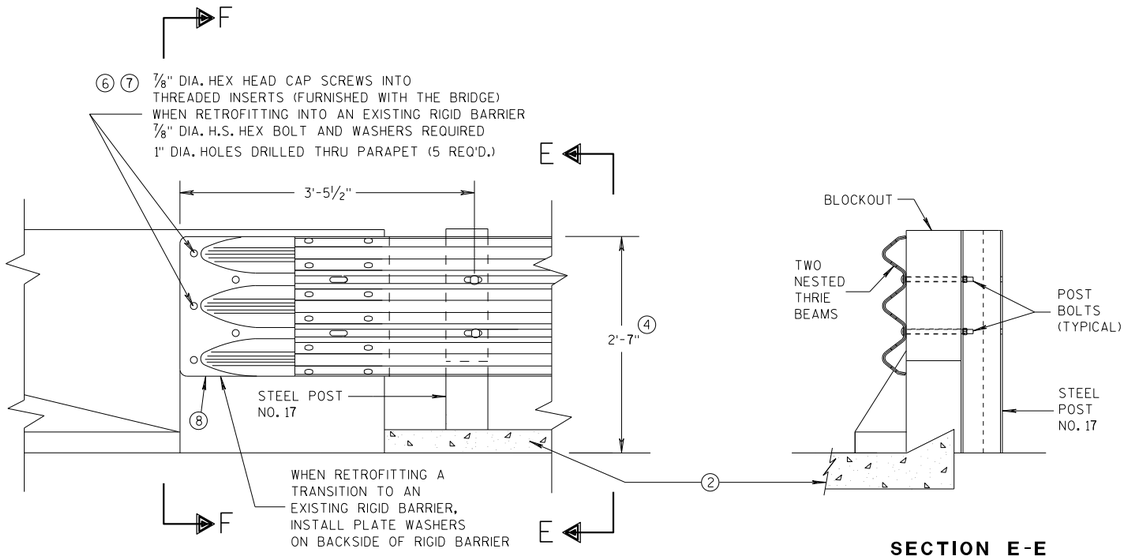
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF 153

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

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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.

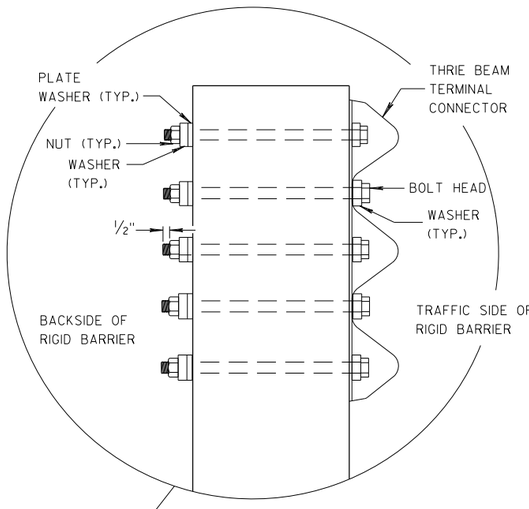
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

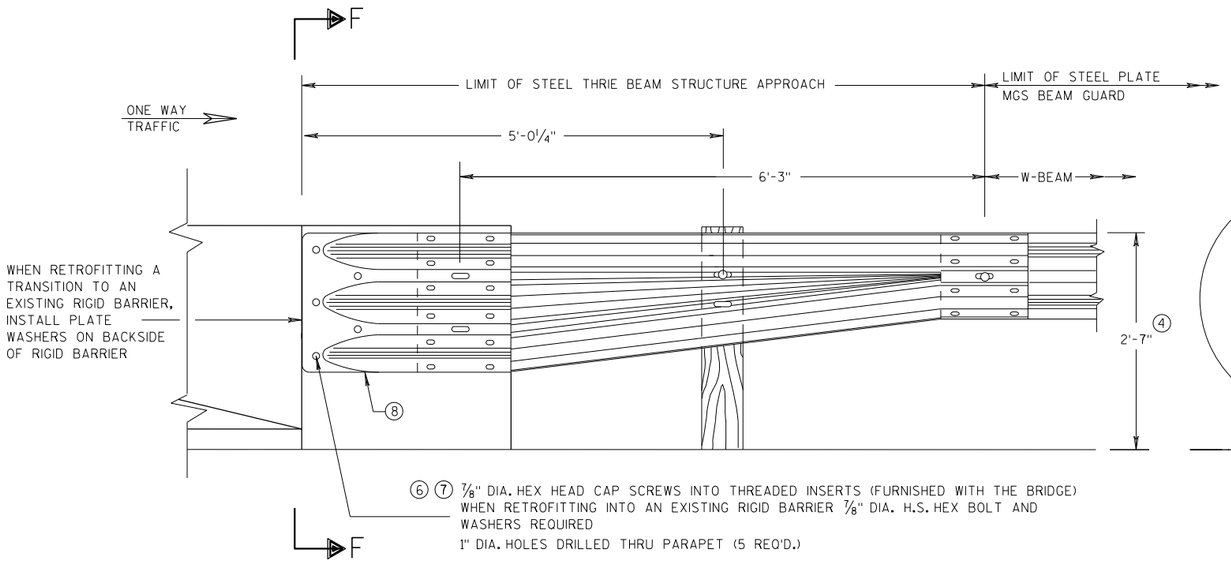
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

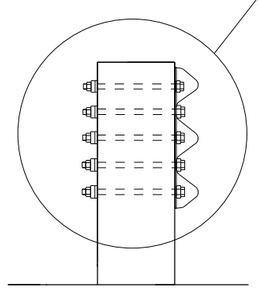
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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".

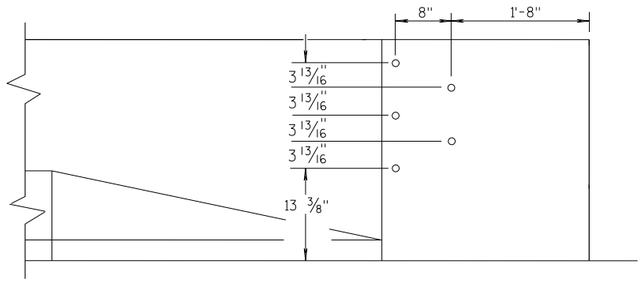




FRONT VIEW



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
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/S/ Rodney Taylor — ROADWAY STANDARDS D UNIT SUPERVIS
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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.

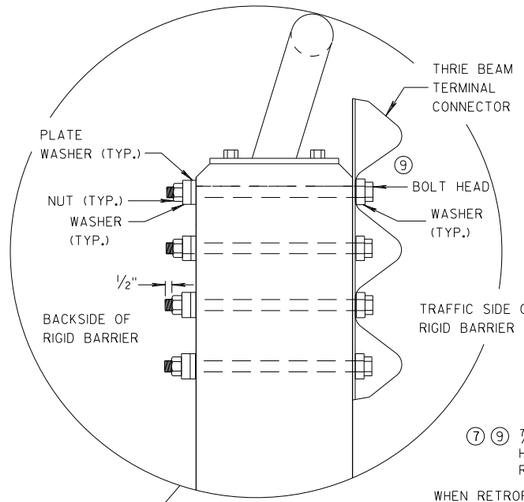
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

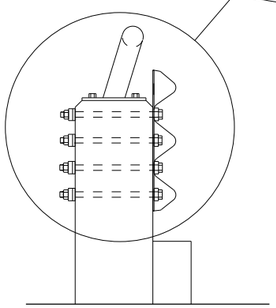
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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.

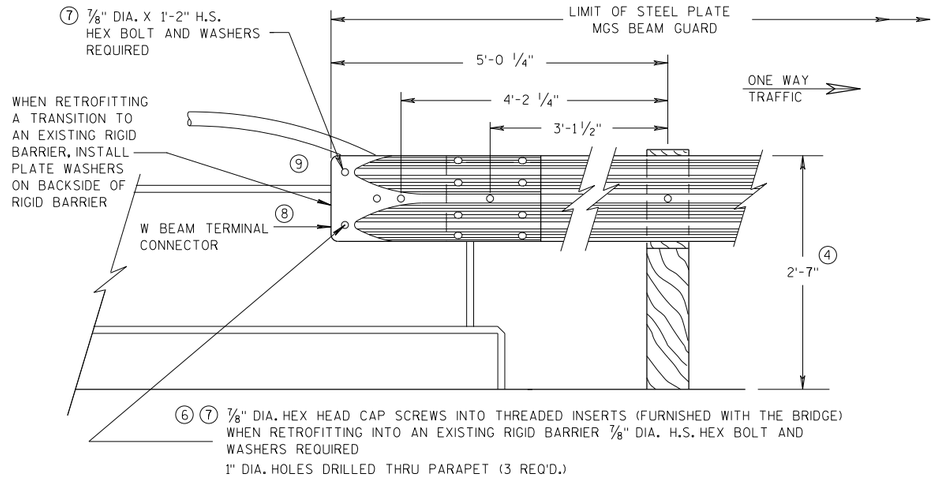
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





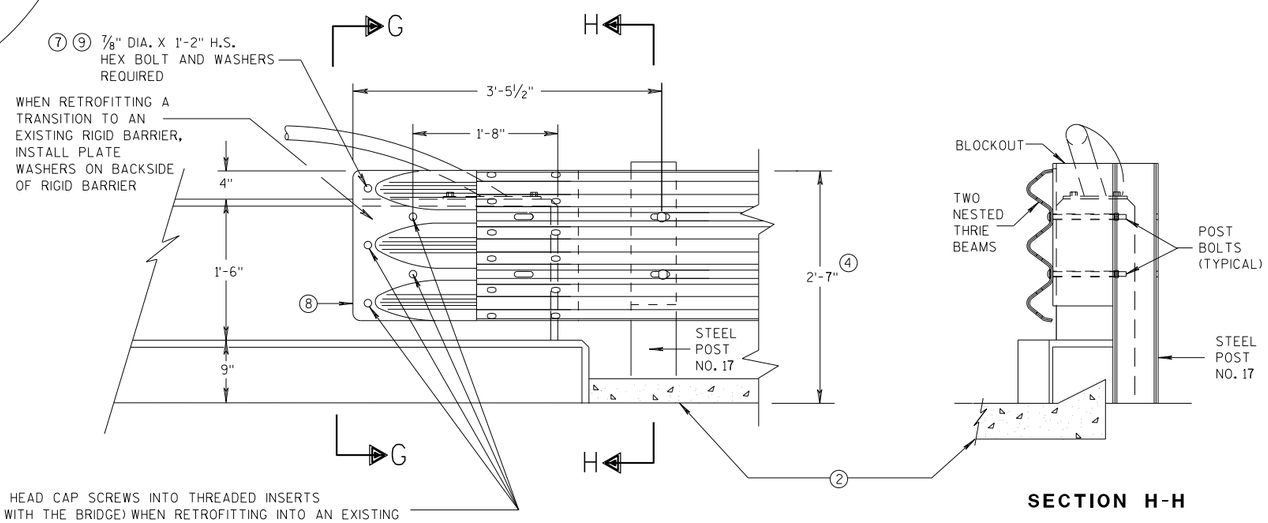
SECTION G-G



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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DATE
FHWA

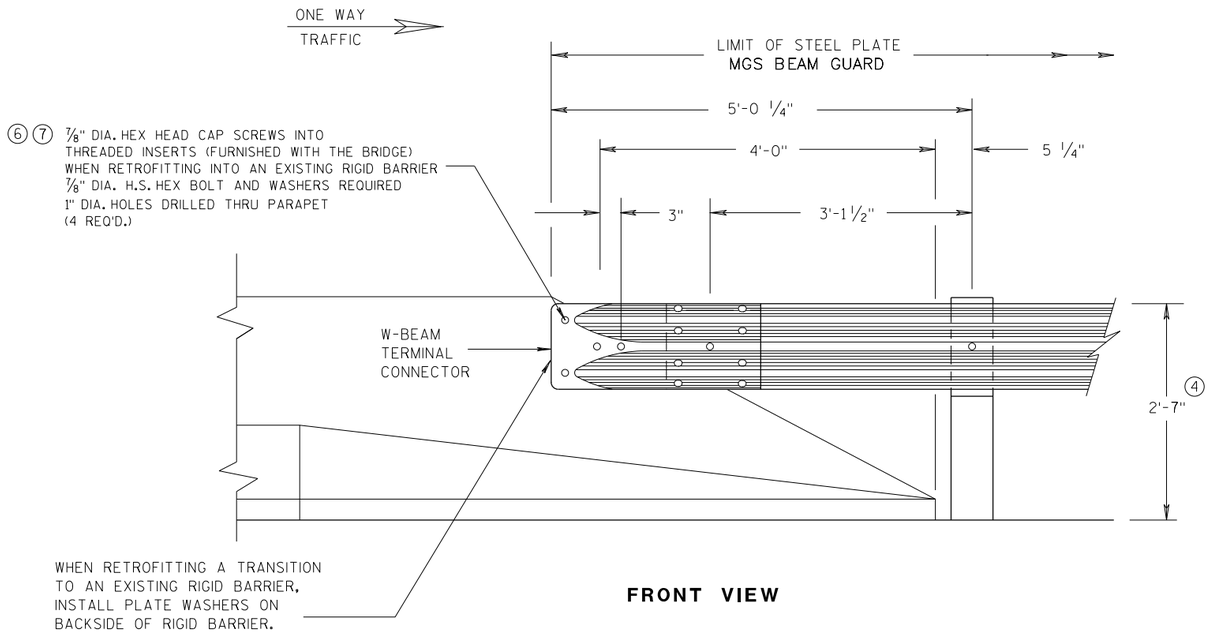
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVIS NT

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



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

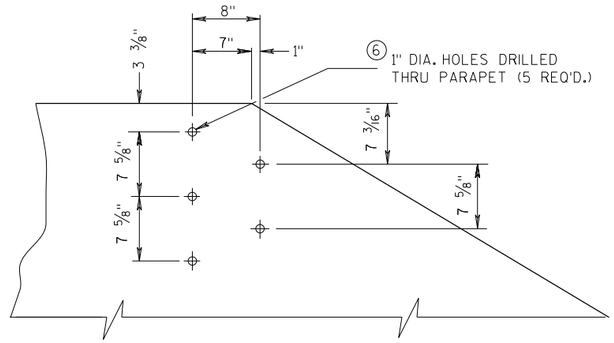
GENERAL NOTES

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

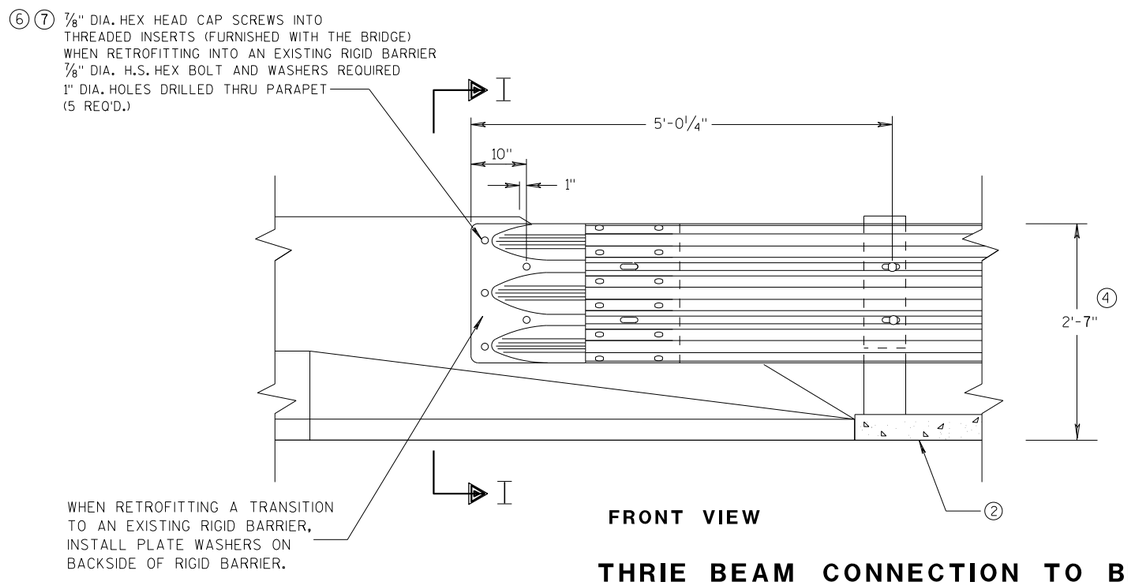
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

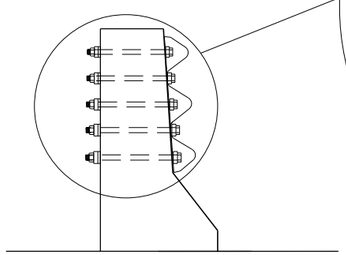
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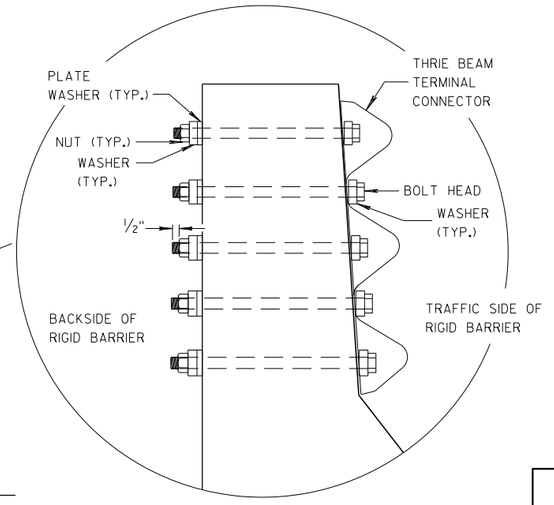
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



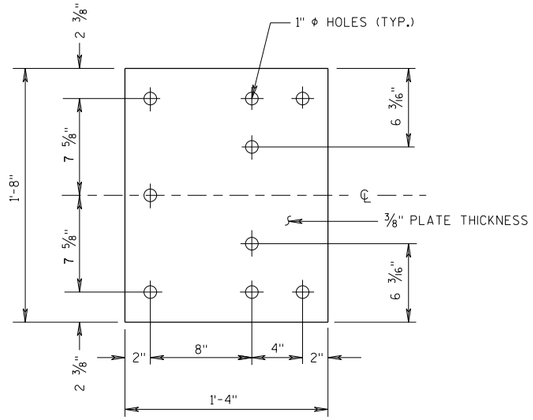
THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

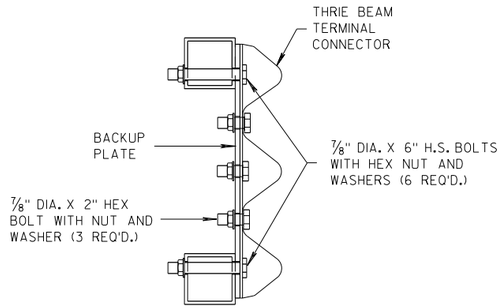
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ROADWAY STANDARDS [illegible] UNIT SUPERVI[illegible]ENT
FHWA

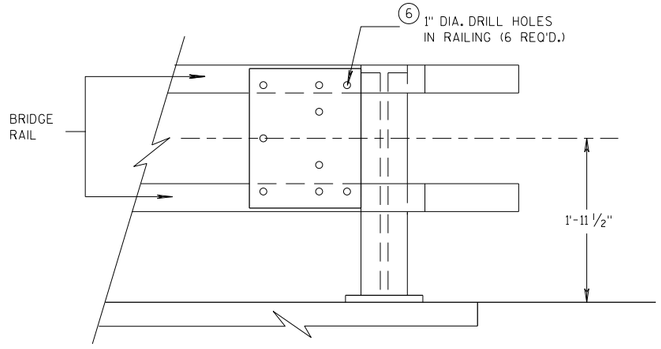
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BACK-UP PLATE DETAIL



SECTION J-J

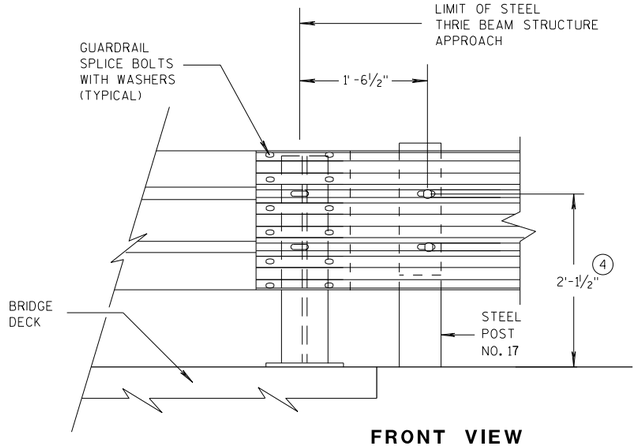


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

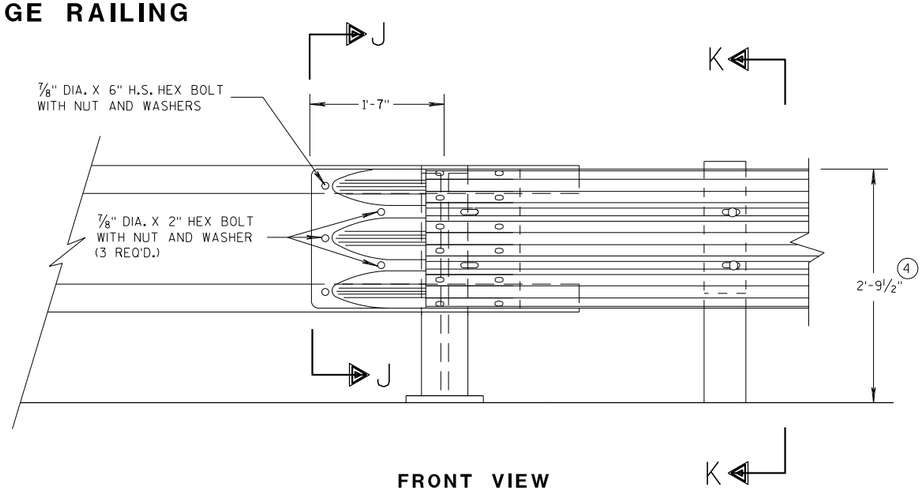
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

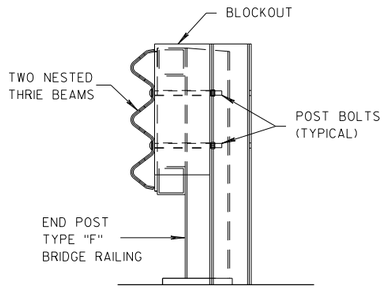


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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/S/ Rodney Taylor 157
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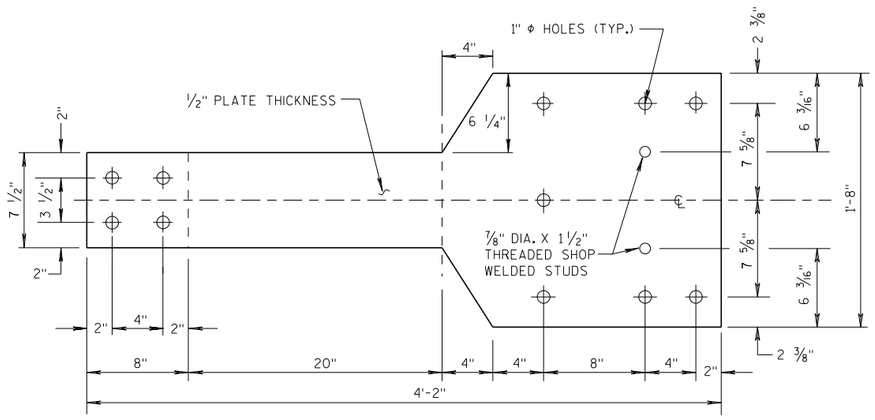
S.D.D. 14 B 45-5g

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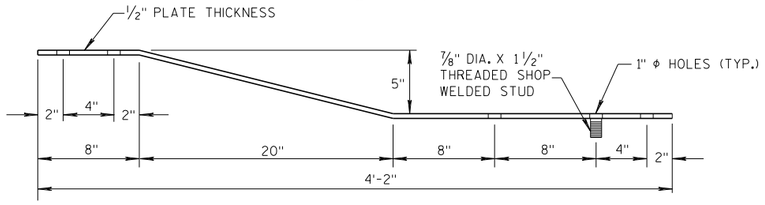
S.D.D. 14 B 45-5g

GENERAL NOTES

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

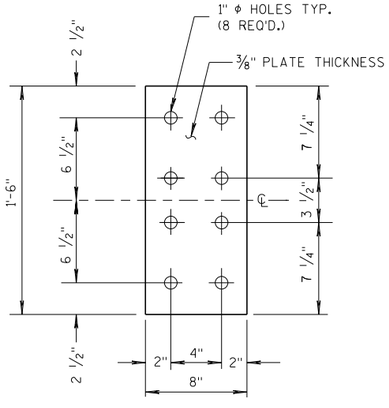


FRONT VIEW



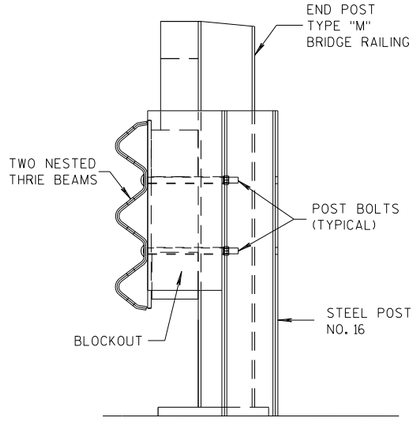
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

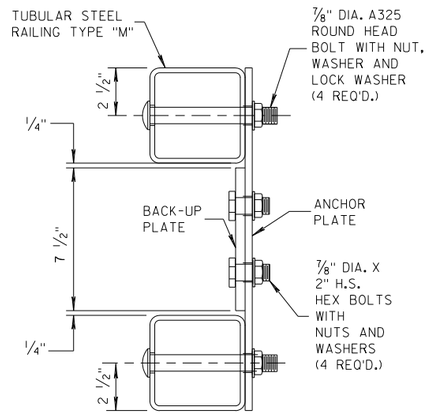


FRONT VIEW

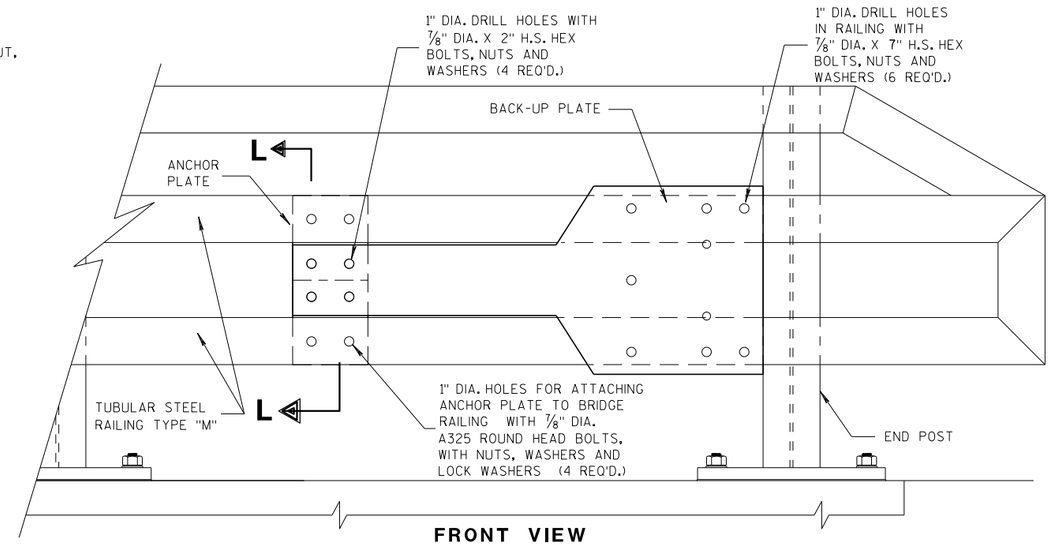
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

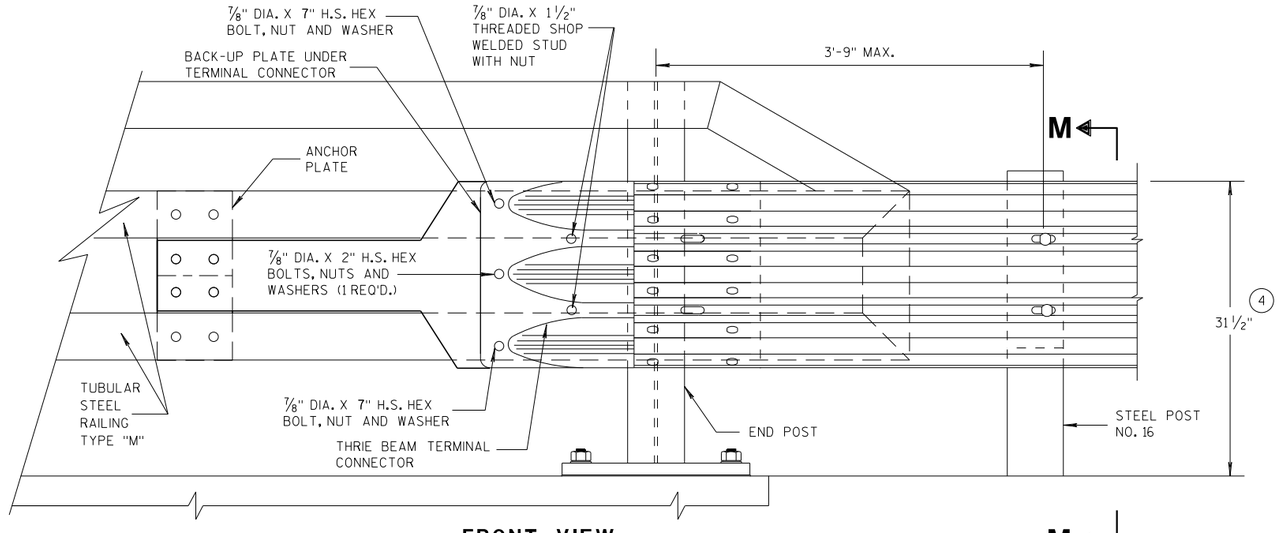


SECTION L-L

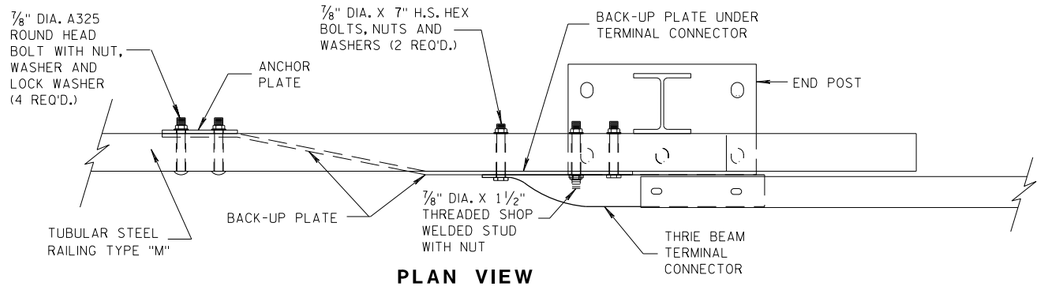


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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S.D.D. 14 B 45-5h

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

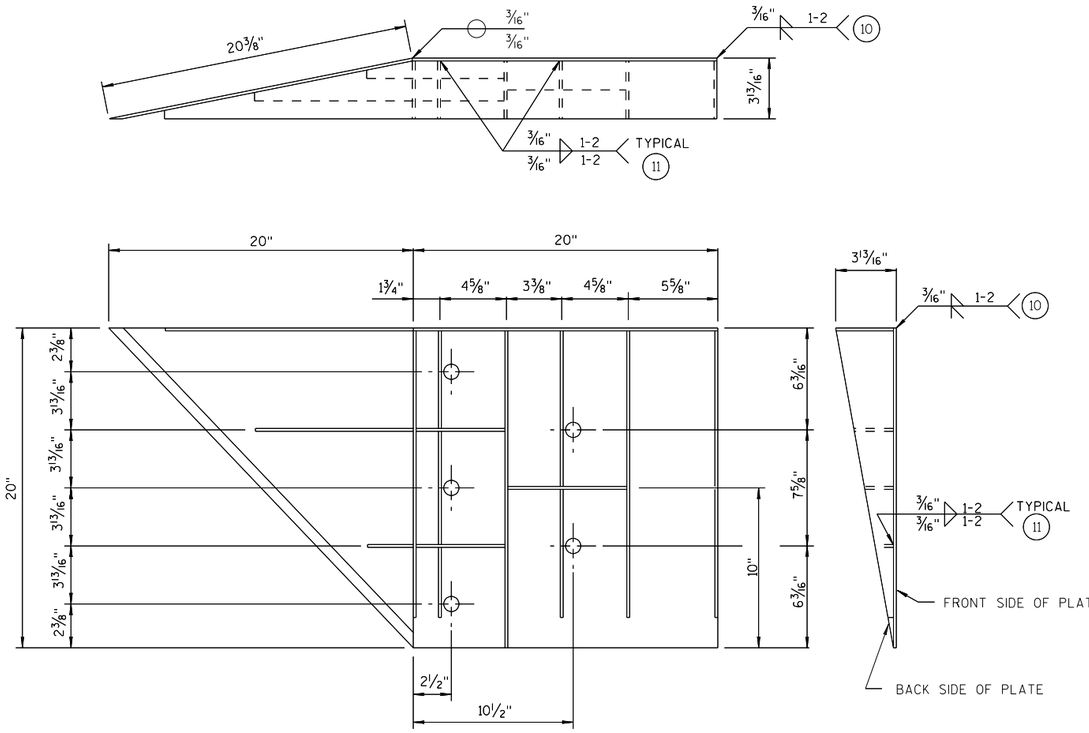
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

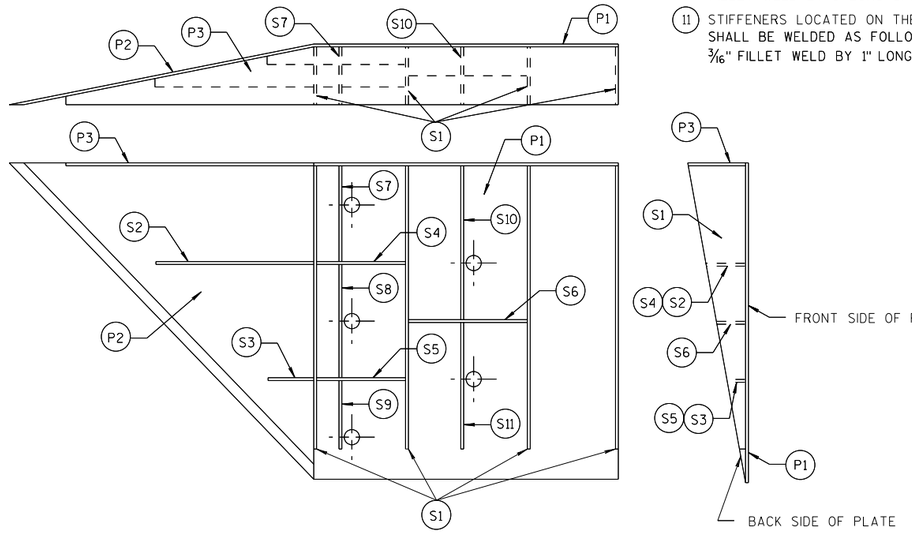


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

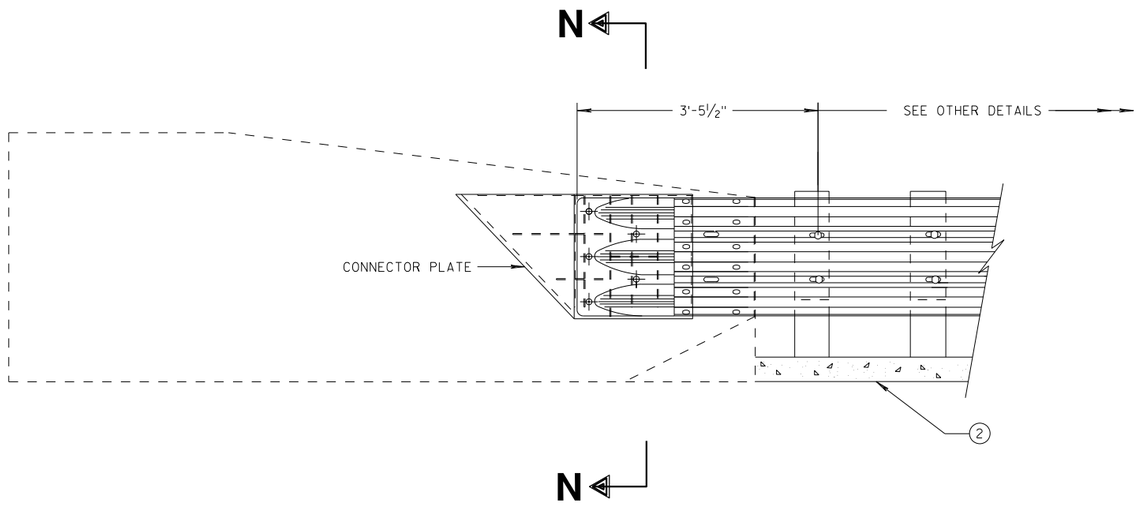
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

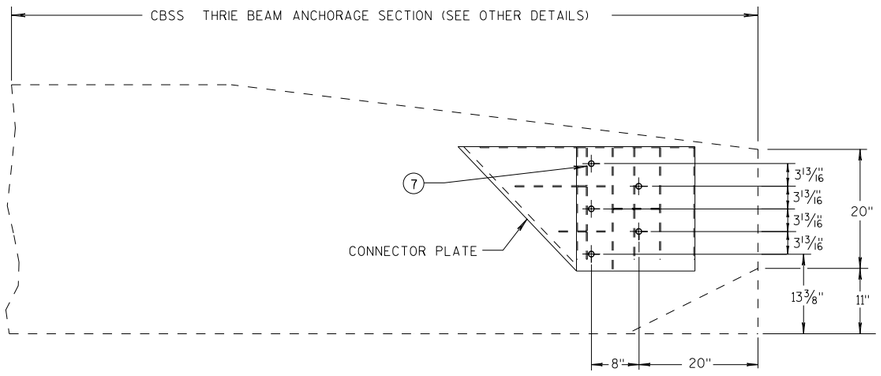
/S/ Rodney Taylor
ROADWAY STANDARDS I
UNIT SUPERVI

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



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



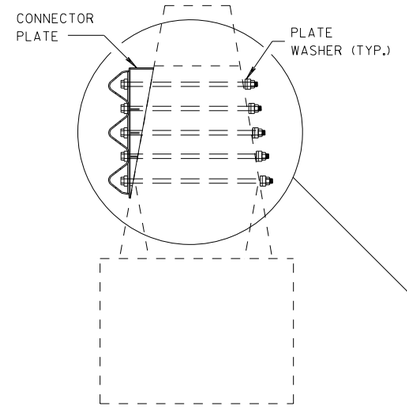
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

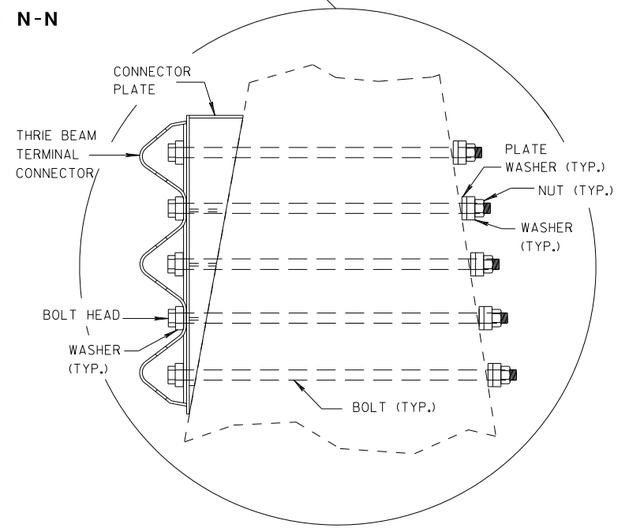
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

(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.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

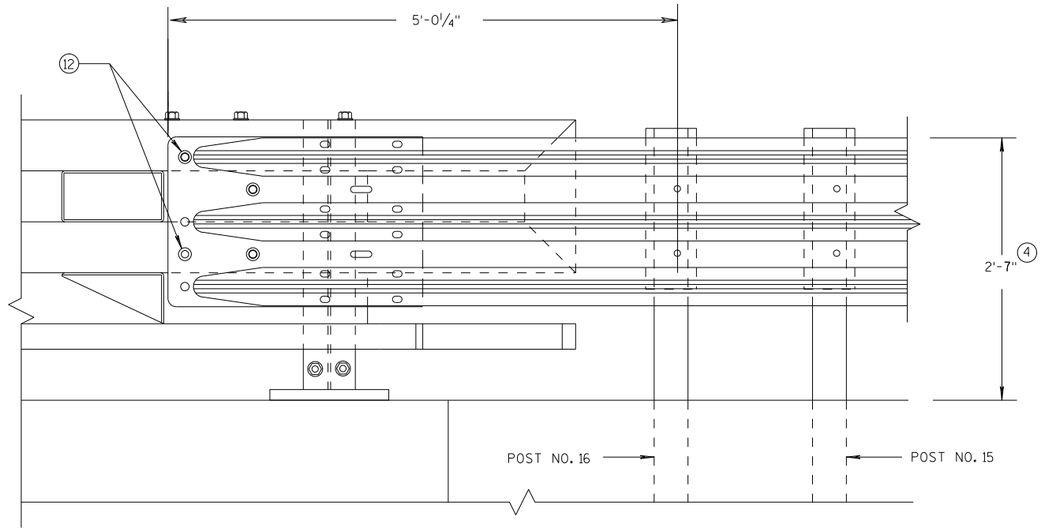
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DI UNIT SUPERVIS

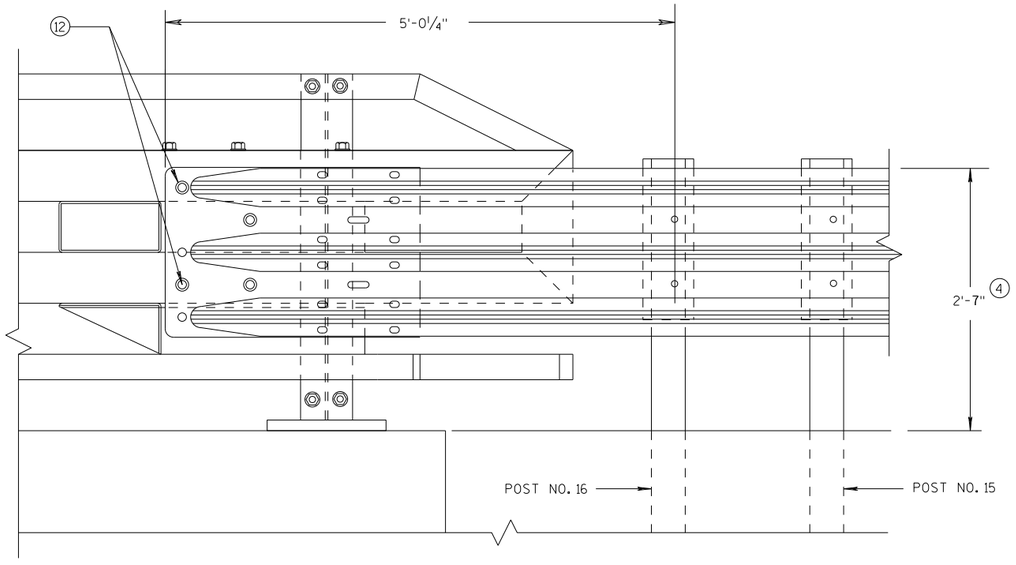
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S.D.D. 14 B 45-5j



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

(12) 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. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

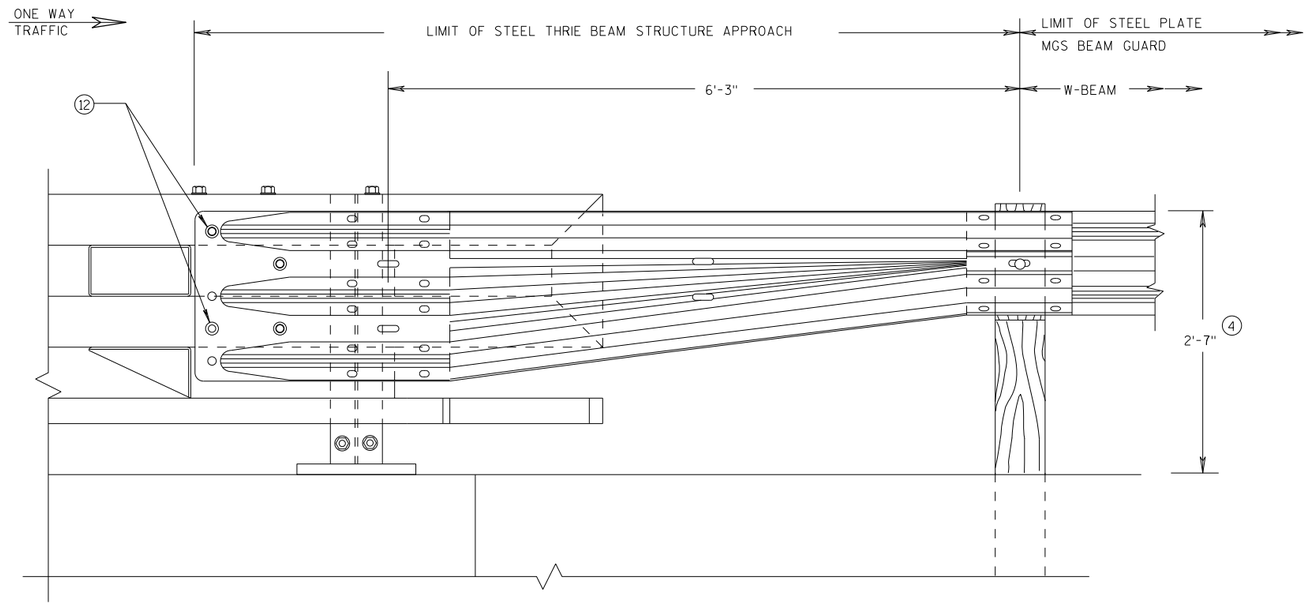
APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS
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FHWA

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

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



FRONT VIEW

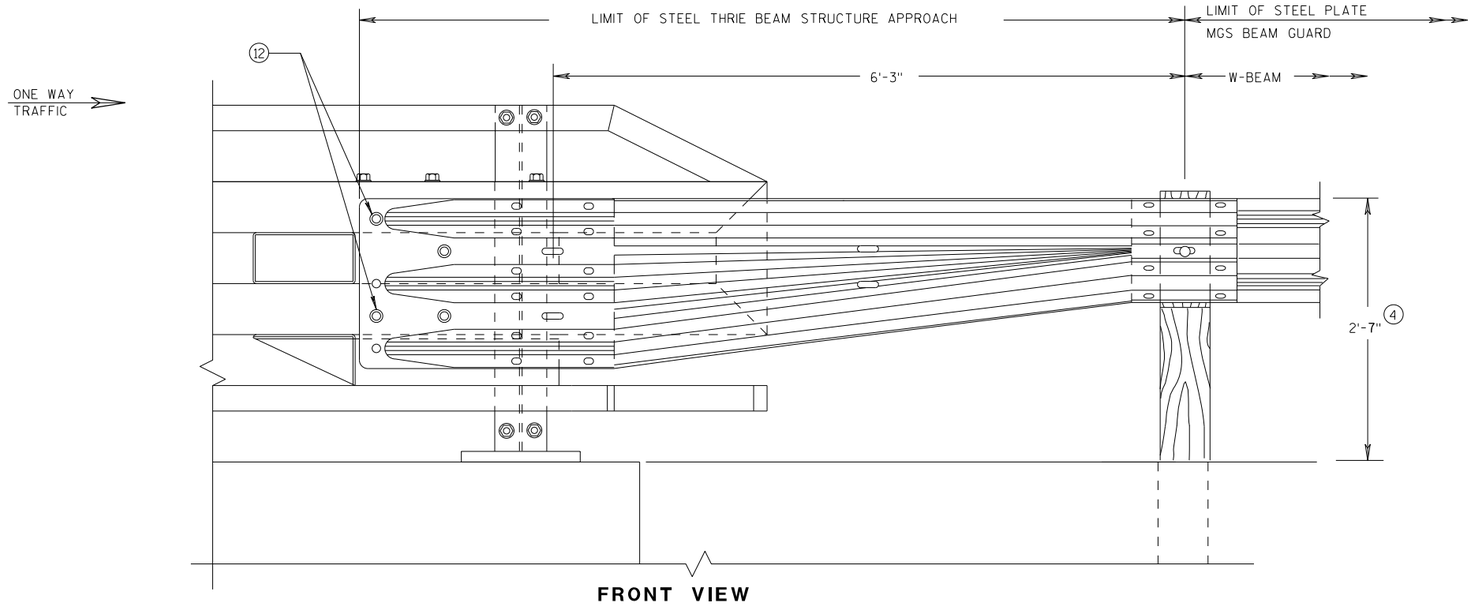
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

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

(12) 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. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

(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
7/2018 DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS

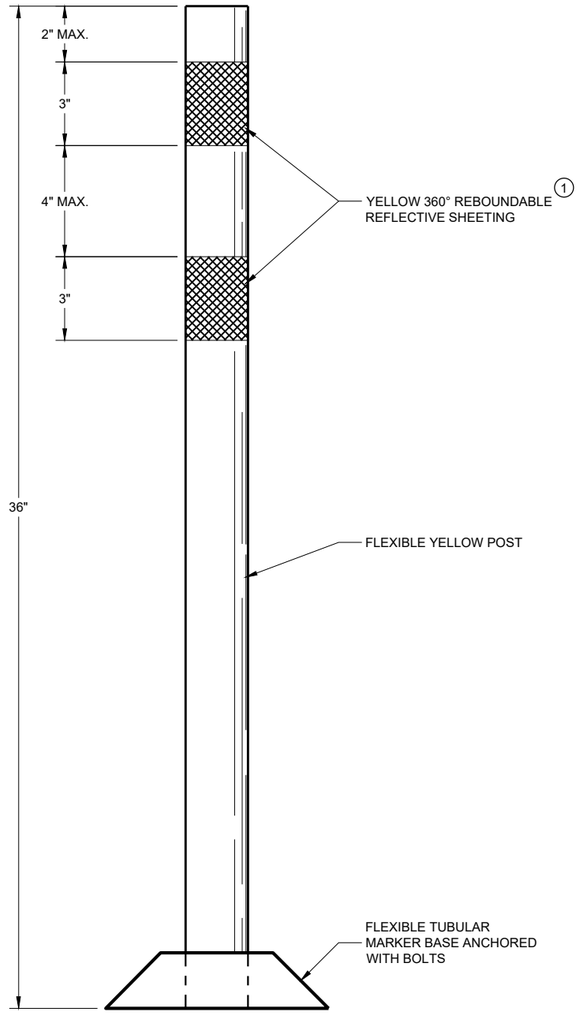
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S.D.D. 14 B 45-5L

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



PERMANENT FLEXIBLE TUBULAR MARKER POST

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.

6

SDD 15A04 - 07d

CHANNELIZING DEVICES
PERMANENT FLEXIBLE
TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

November 2021
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF
ENGINEER

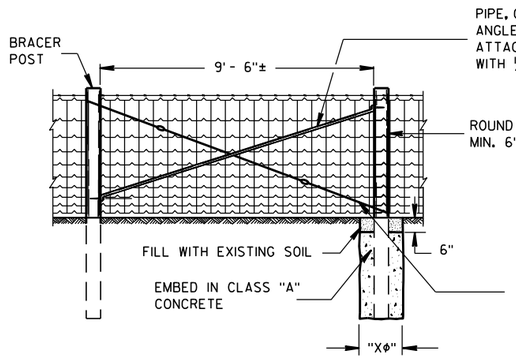
FHWA

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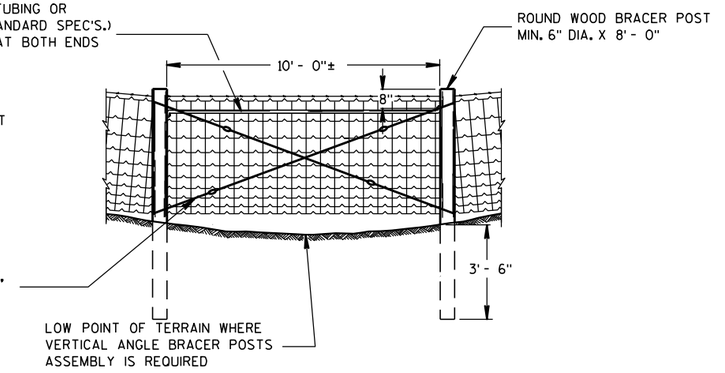
SDD 15A04 - 07d

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

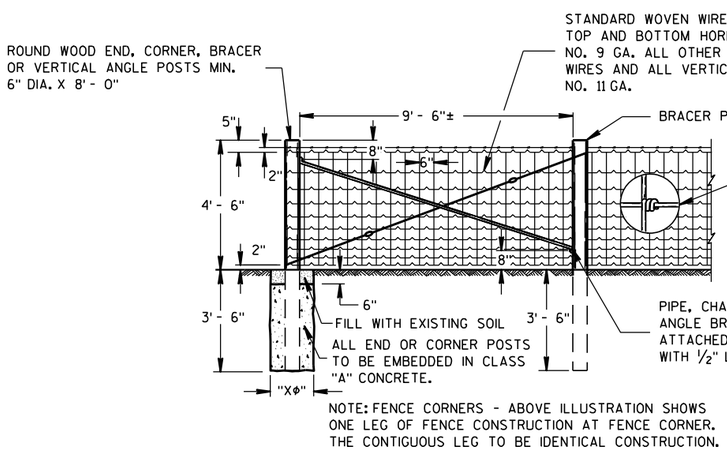
GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

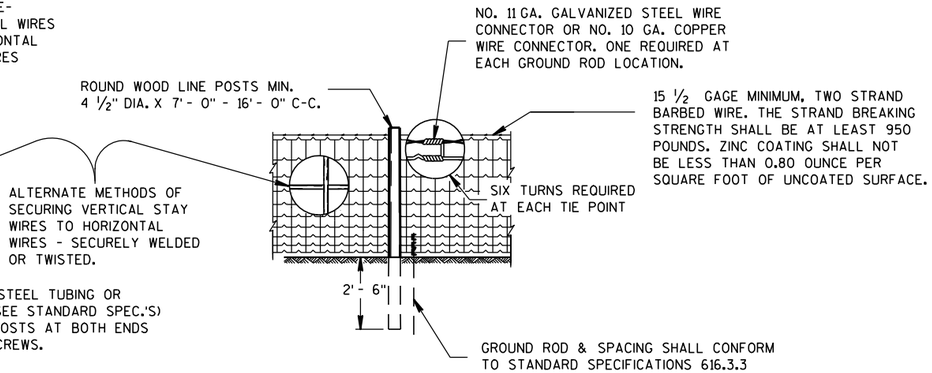
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.



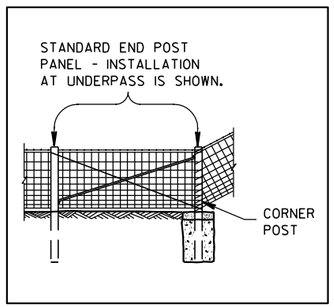
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

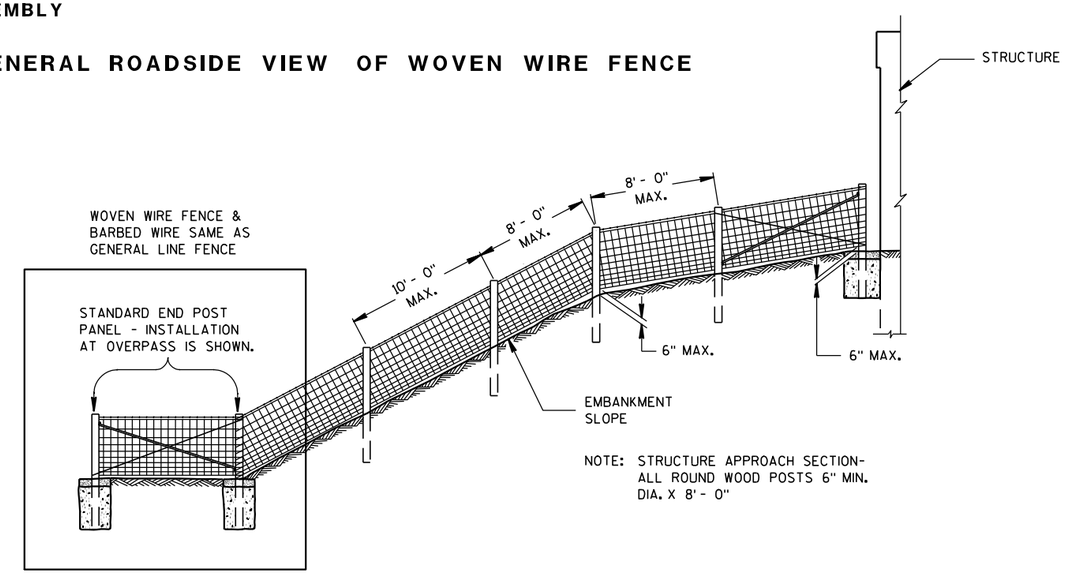


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

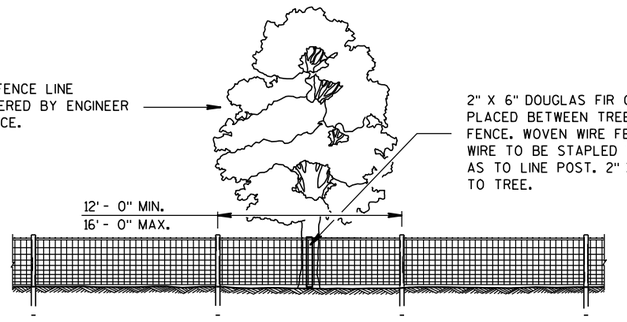
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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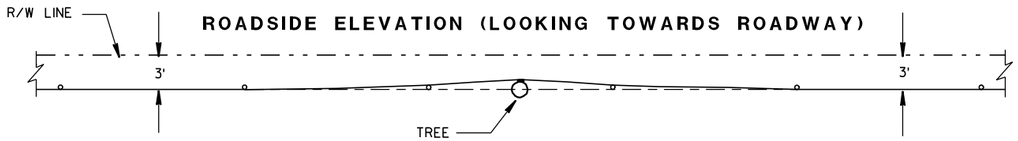
S.D.D. 15 B 1-8a

NOTE: TREE IN NORMAL FENCE LINE SPECIFICALLY ORDERED BY ENGINEER TO REMAIN IN PLACE.

2" X 6" DOUGLAS FIR OR SO. YELLOW PINE PLACED BETWEEN TREE AND WOVEN WIRE FENCE. WOVEN WIRE FENCE AND BARBED WIRE TO BE STAPLED TO 2" X 6" LIKE AS TO LINE POST. 2" X 6" NOT FASTENED TO TREE.

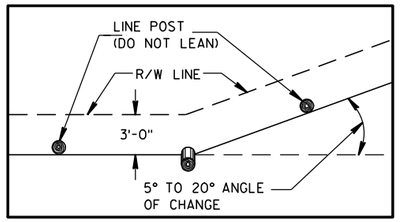


ROADSIDE ELEVATION (LOOKING TOWARDS ROADWAY)

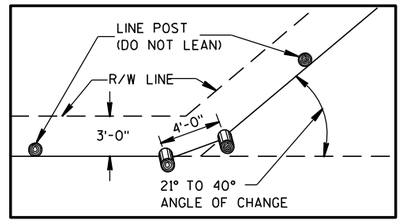


PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



PLAN VIEW
SINGLE POST CORNER

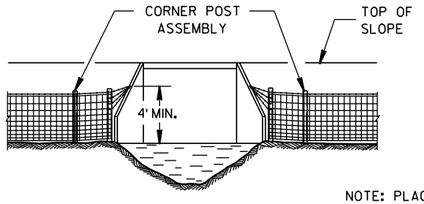


PLAN VIEW
DOUBLE POST CORNER

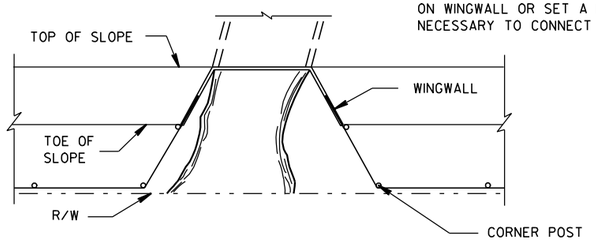
RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

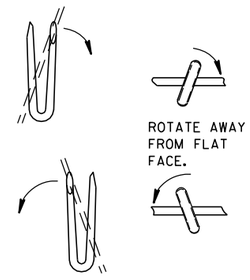
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



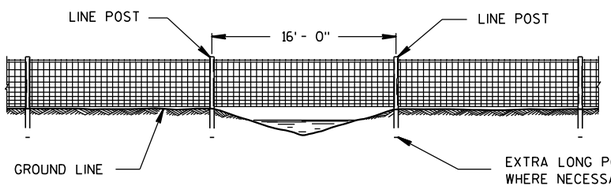
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



FENCE INSTALLATION TO WINGWALLS

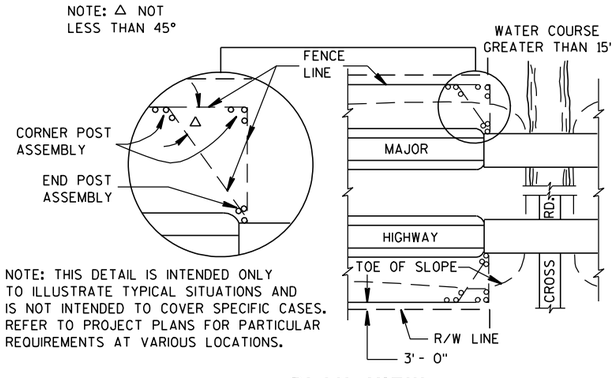


LINE POST



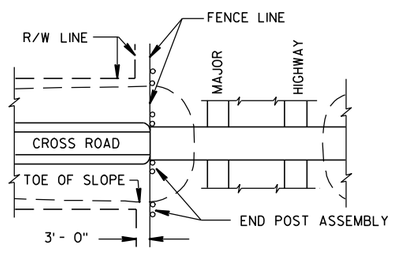
FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH

NOTE: △ NOT LESS THAN 45°



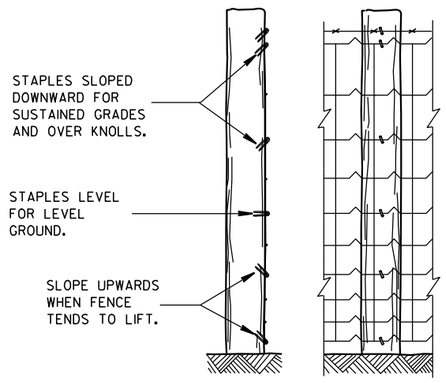
NOTE: THIS DETAIL IS INTENDED ONLY TO ILLUSTRATE TYPICAL SITUATIONS AND IS NOT INTENDED TO COVER SPECIFIC CASES. REFER TO PROJECT PLANS FOR PARTICULAR REQUIREMENTS AT VARIOUS LOCATIONS.

PLAN VIEW
MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW
MAJOR HIGHWAY UNDERPASS

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.



END ELEVATION — FARM SIDE ELEVATION

FENCE MOUNTING DETAIL

FENCE LOCATION AT STRUCTURES

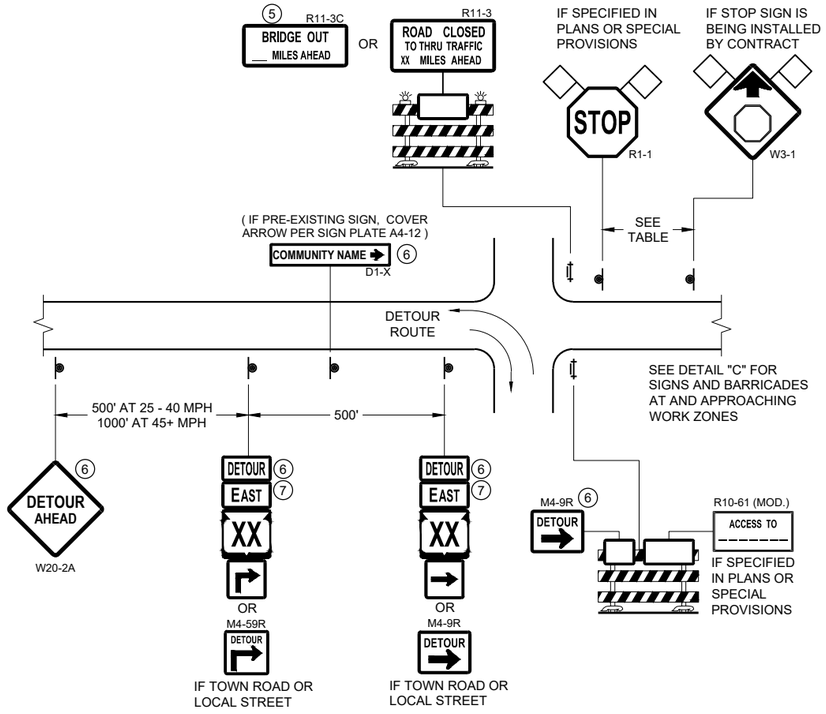
FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/4/2008
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS [illegible] ENGINEER
FHWA

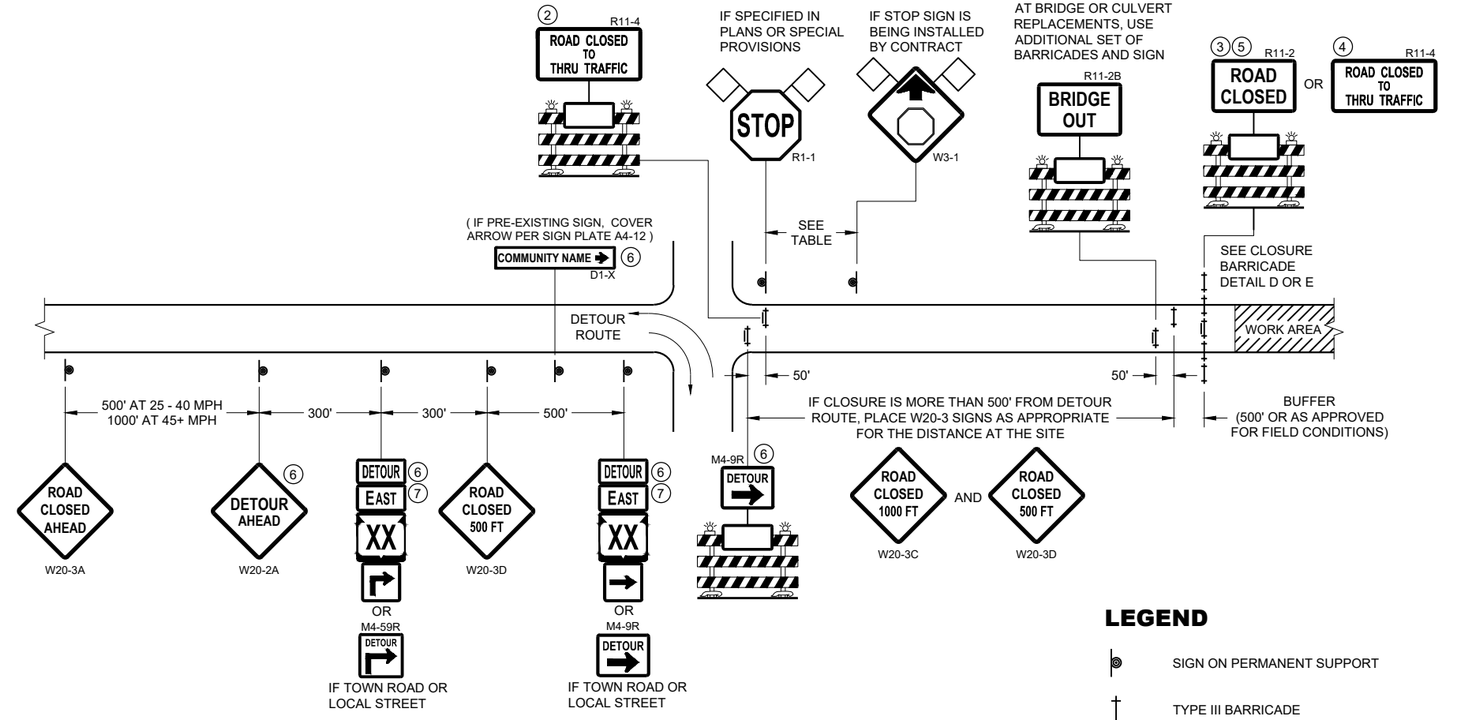
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S.D.D. 15 B 1-8b



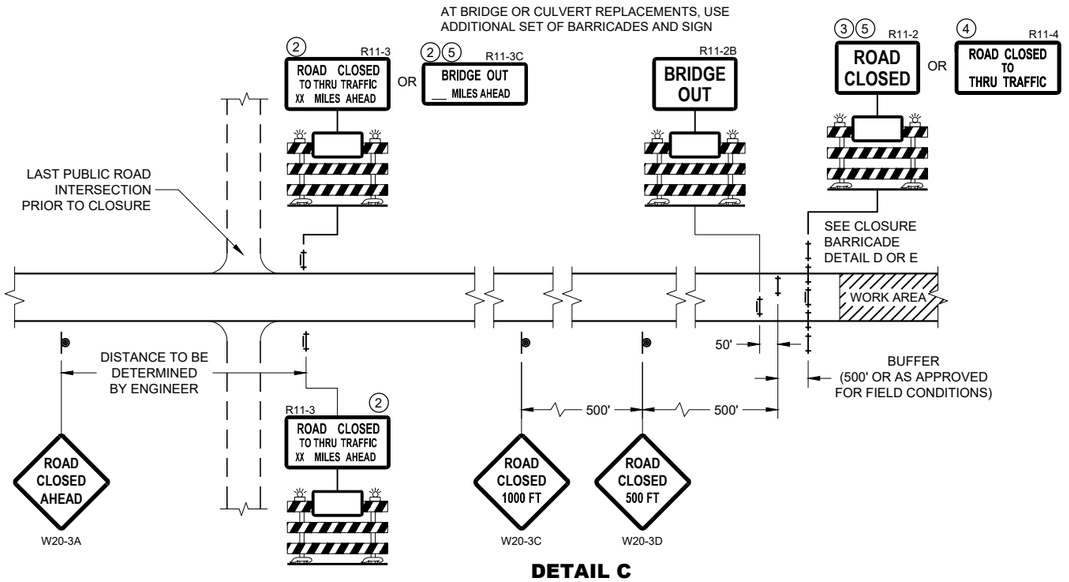
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

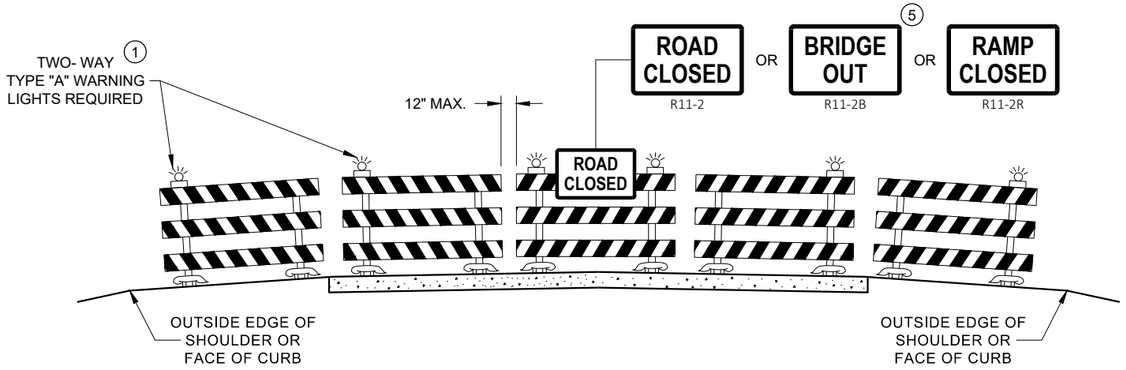
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

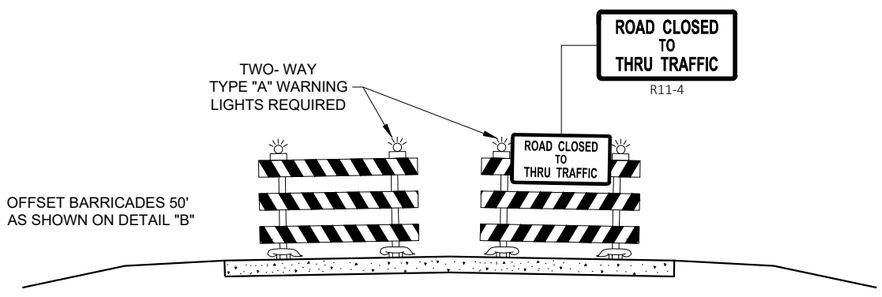
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SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

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SDD 15C02 - 09b

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

LEGEND

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

GENERAL NOTES

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

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

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

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

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

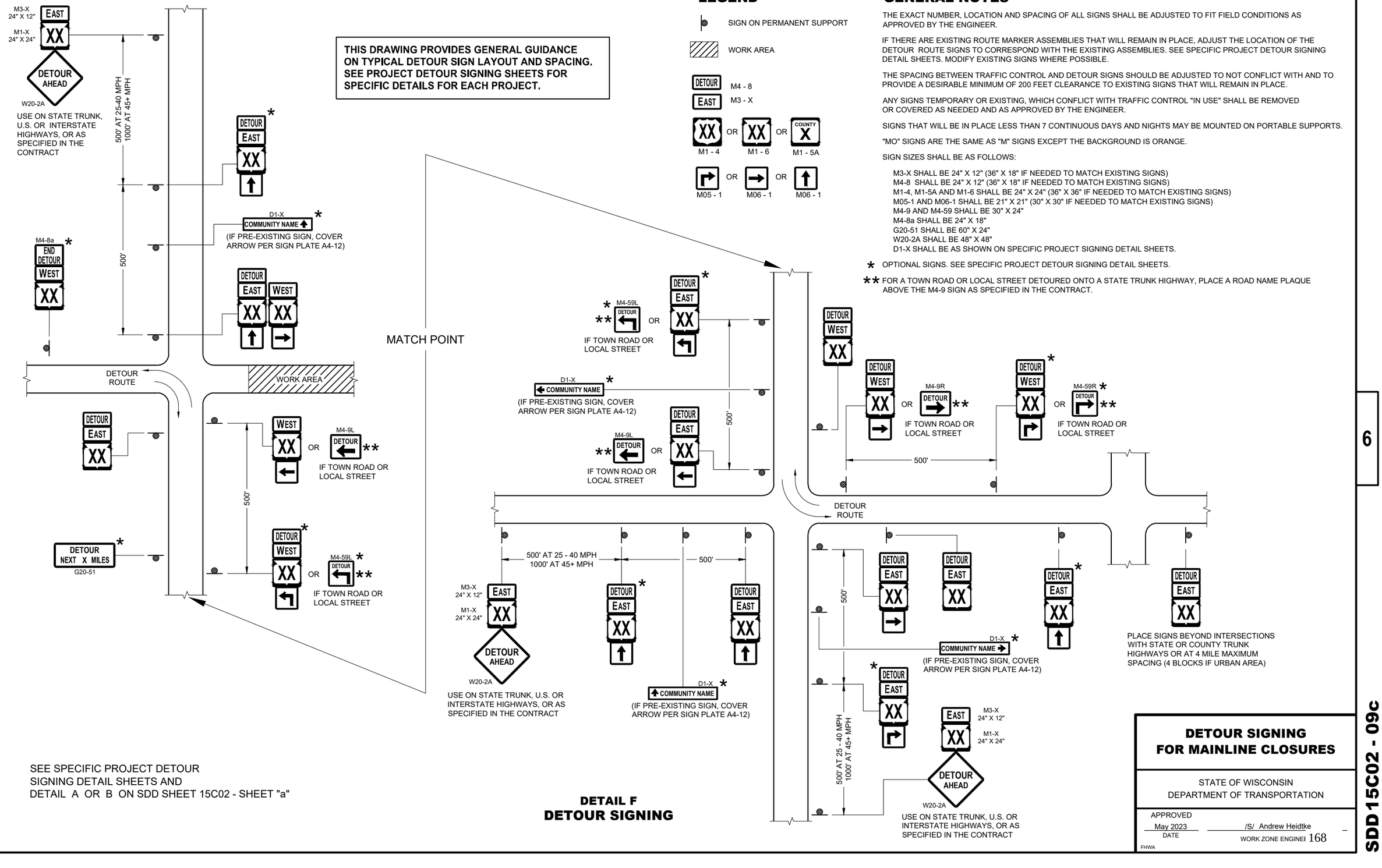
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

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

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

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



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

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
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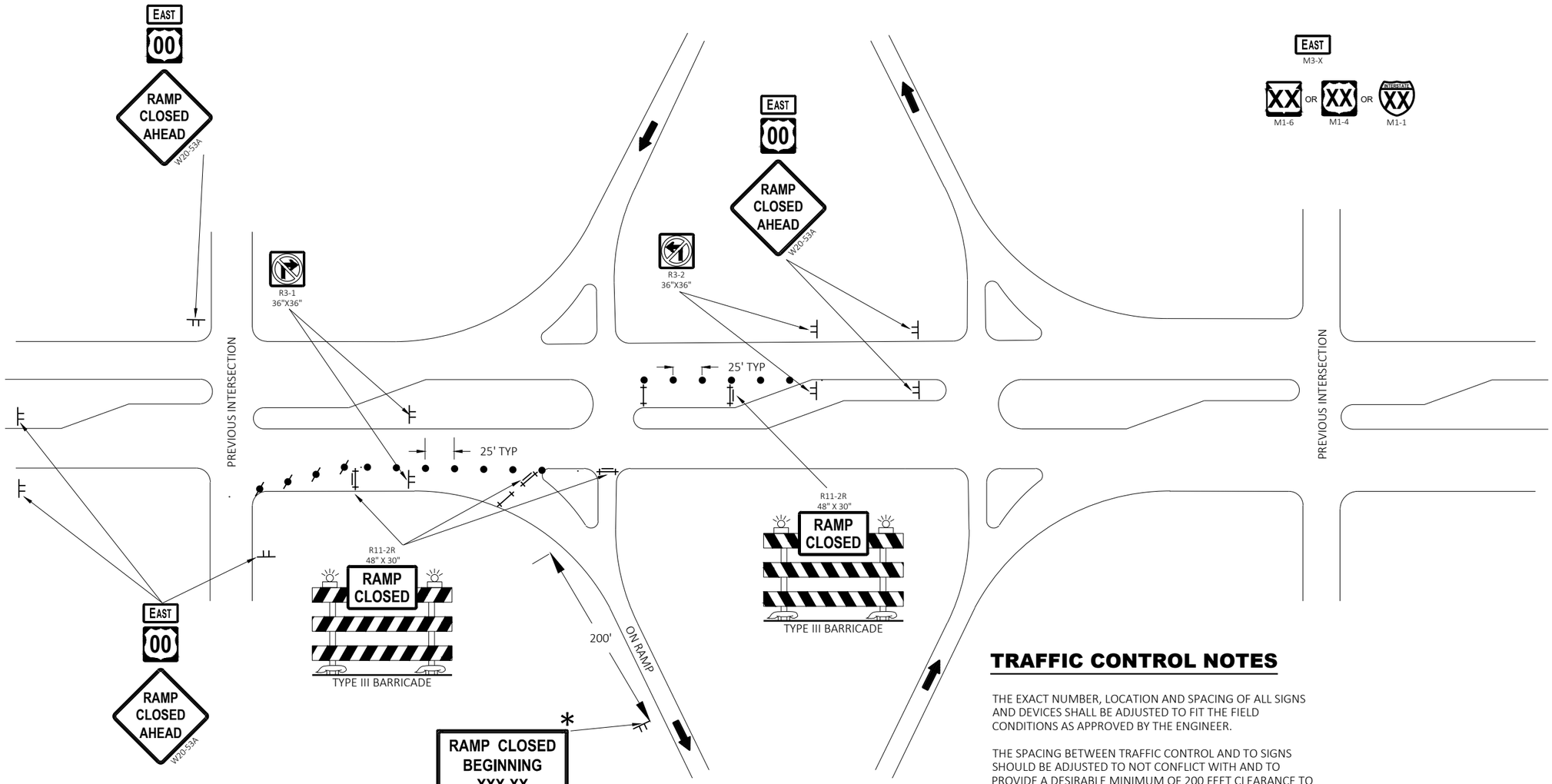
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DATE

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SDD 15C02 - 09c



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL NOTES

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24"x24" (36" x18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-1, M1-4, AND M1-6 SHALL BE 24"x24" (36"x36" IF NEEDED TO MATCH EXISTING SIGNS)
- W20-53A SHALL BE 48"X48"

* PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR LAYOUT.

TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

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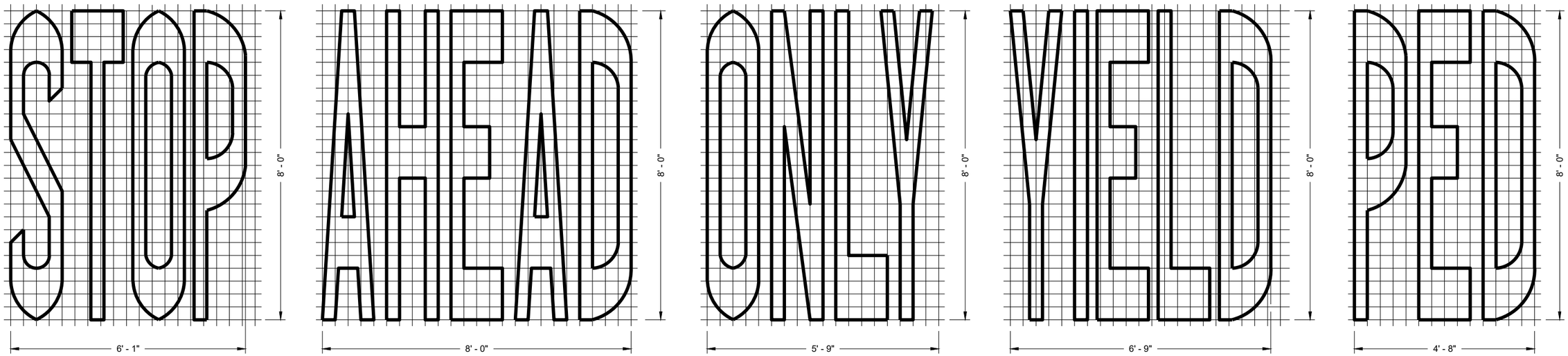
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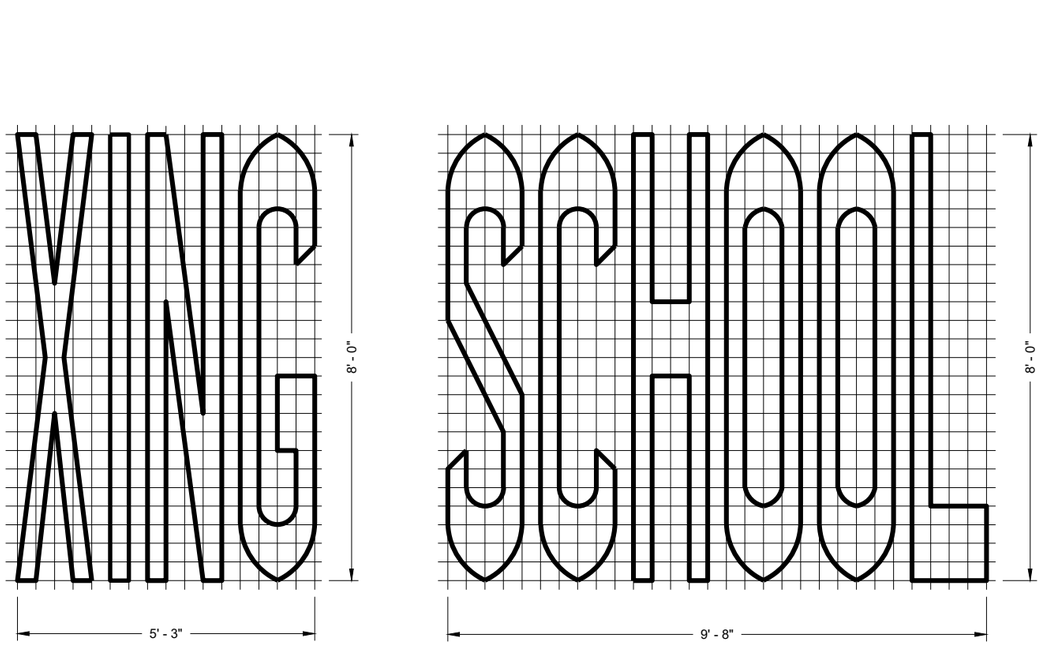
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SDD 15C02-09g

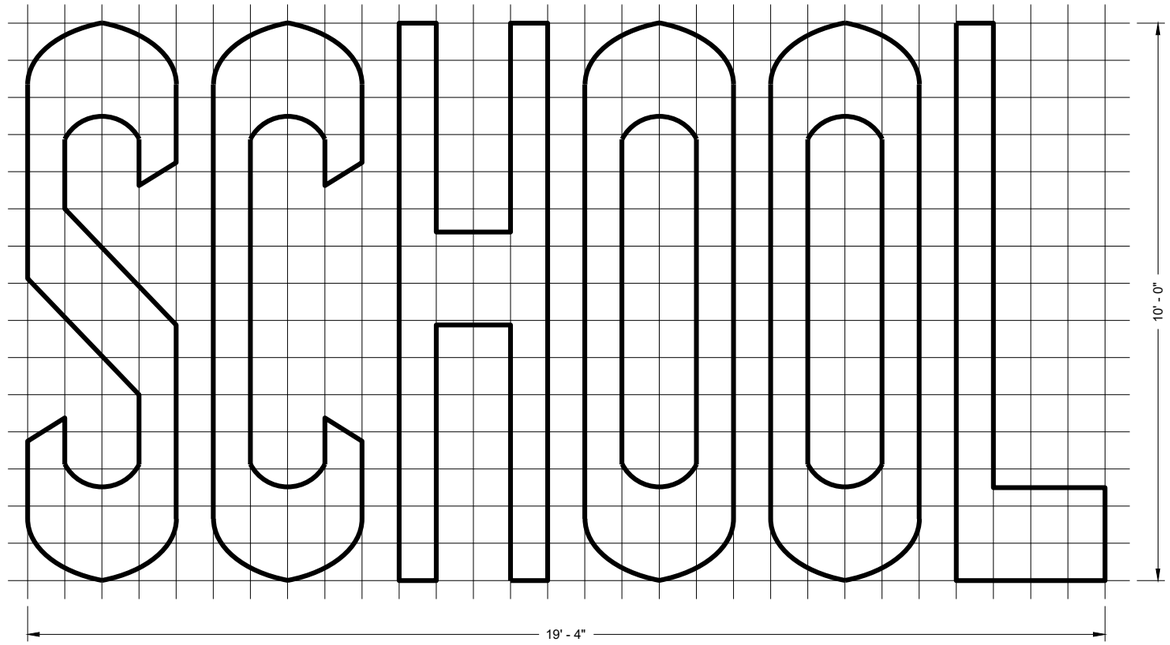
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SDD 15C02-09g





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
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APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

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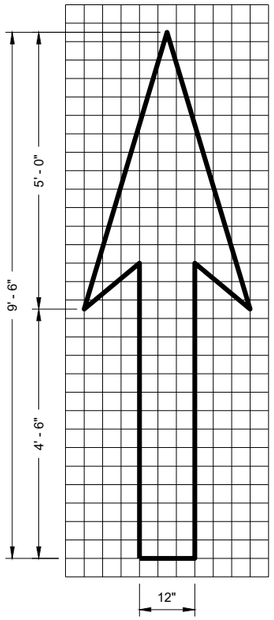
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SDD 15C07 - 15b

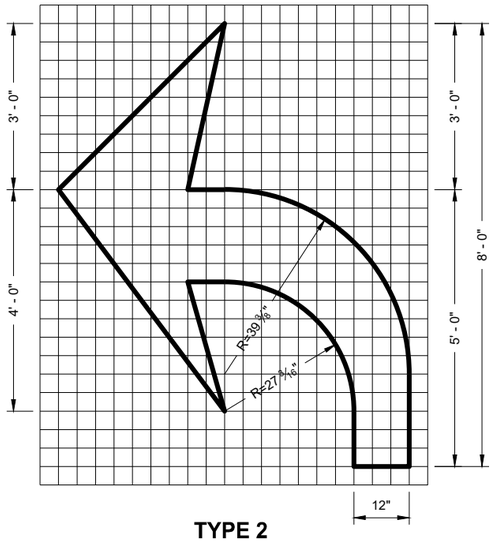
SDD 15C07 - 15b

GENERAL NOTES

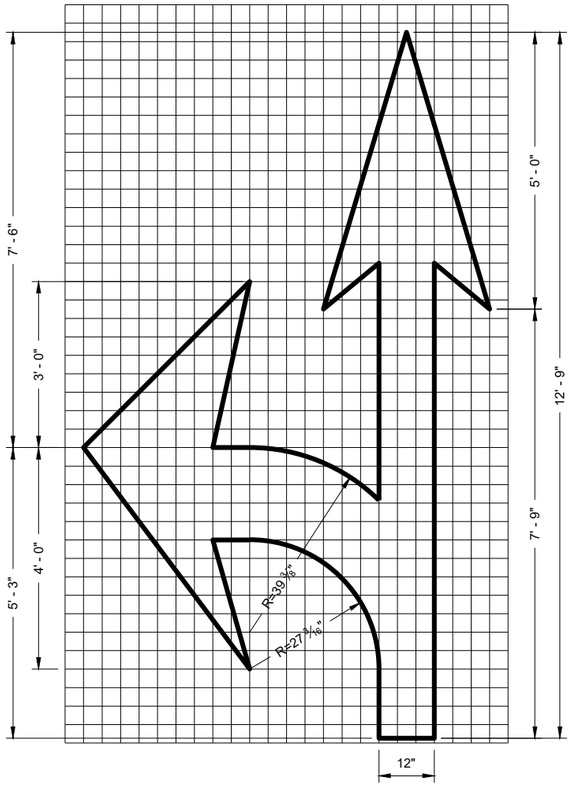
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



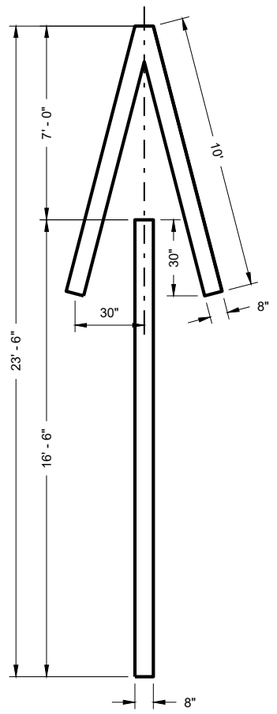
TYPE 1



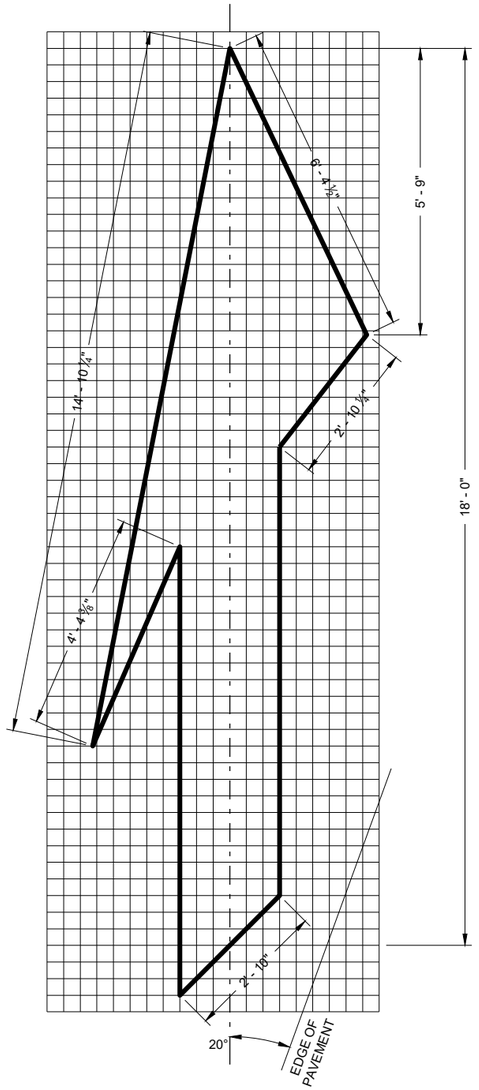
TYPE 2



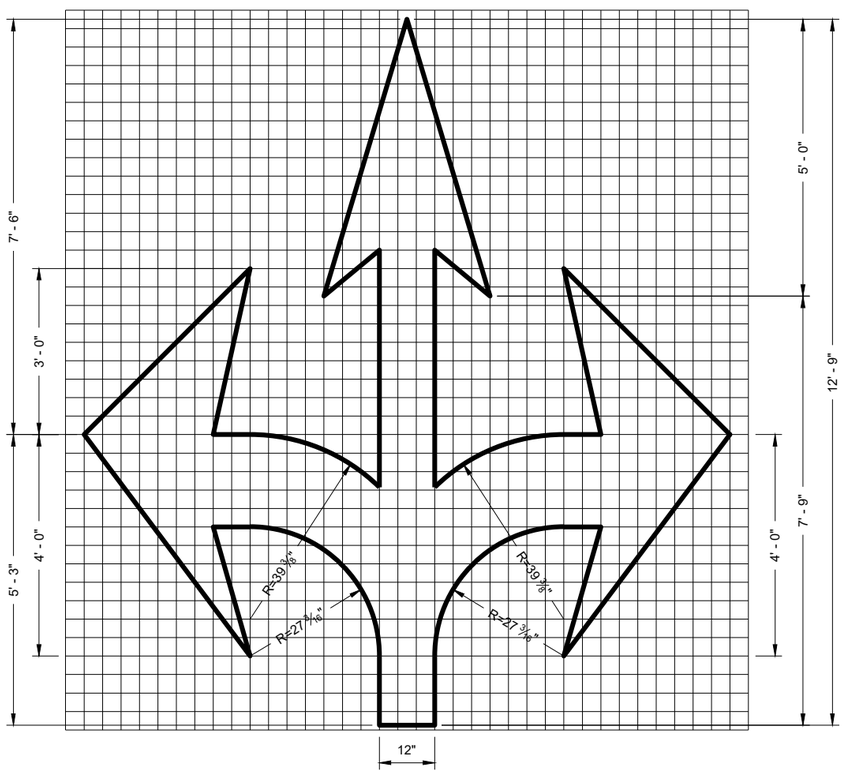
TYPE 3



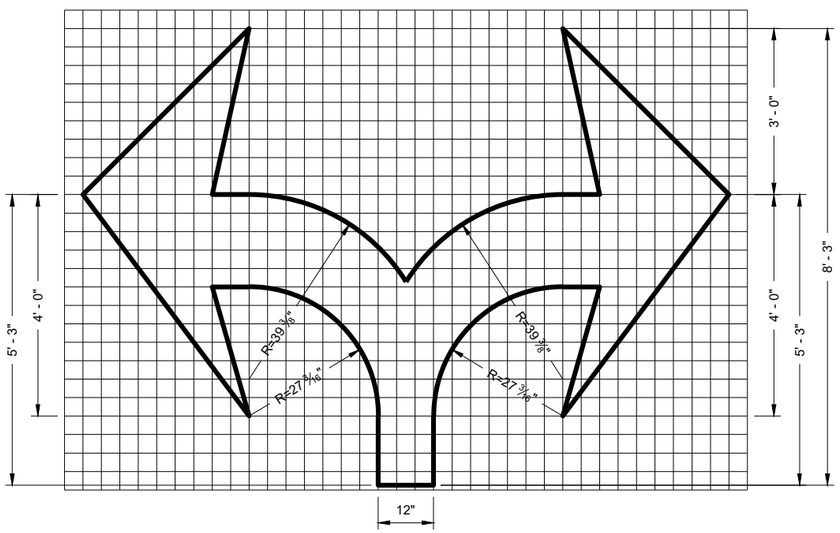
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

PAVEMENT MARKING ARROWS

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SDD 15C07 - 15c

6

SDD 15C07 - 15c

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

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

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

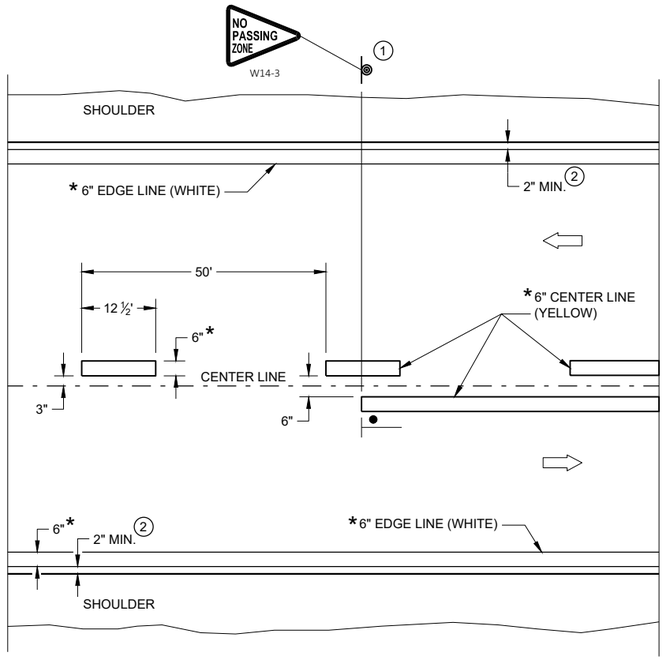
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

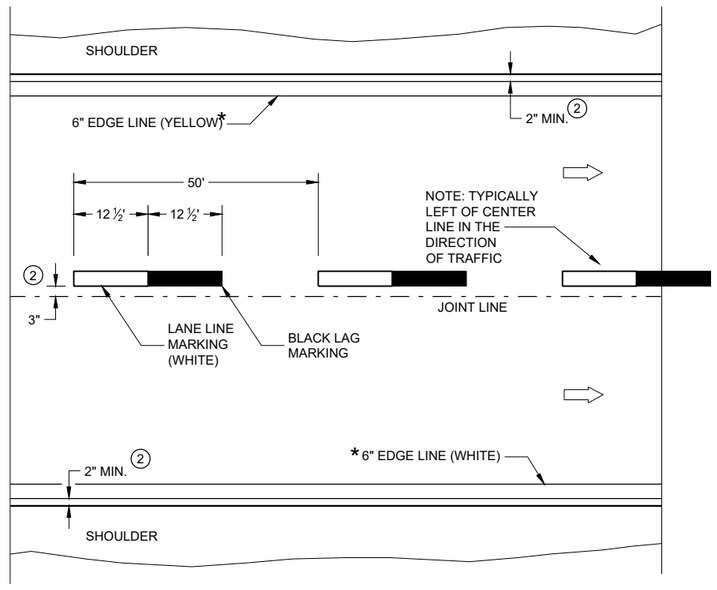
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

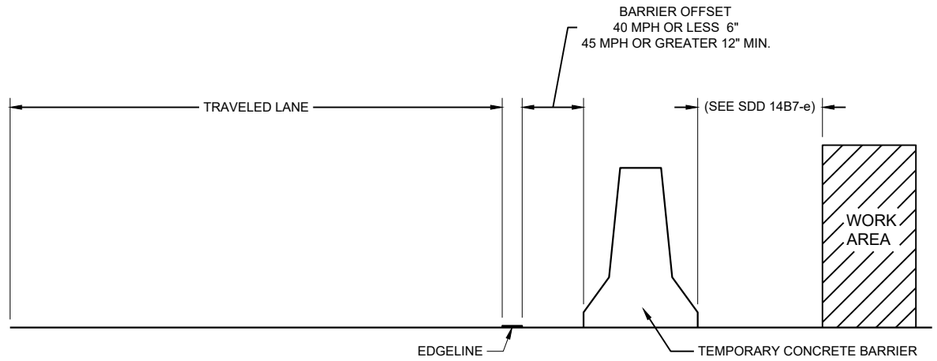
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SDD 15C08-23a



TEMPORARY BARRIER OFFSET FROM EDGELINE

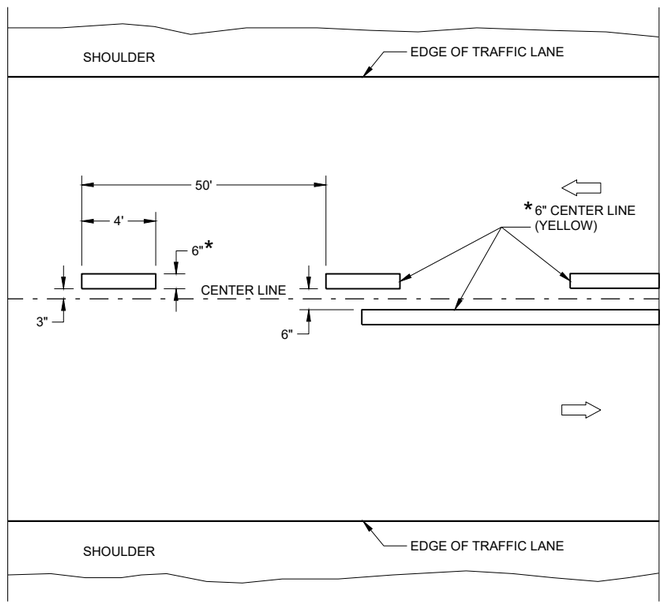
GENERAL NOTES

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

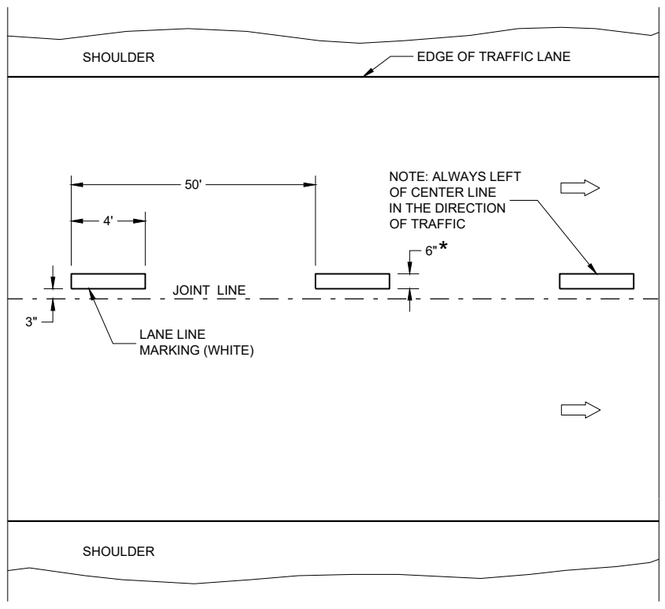
LEGEND

⇨ DIRECTION OF TRAFFIC

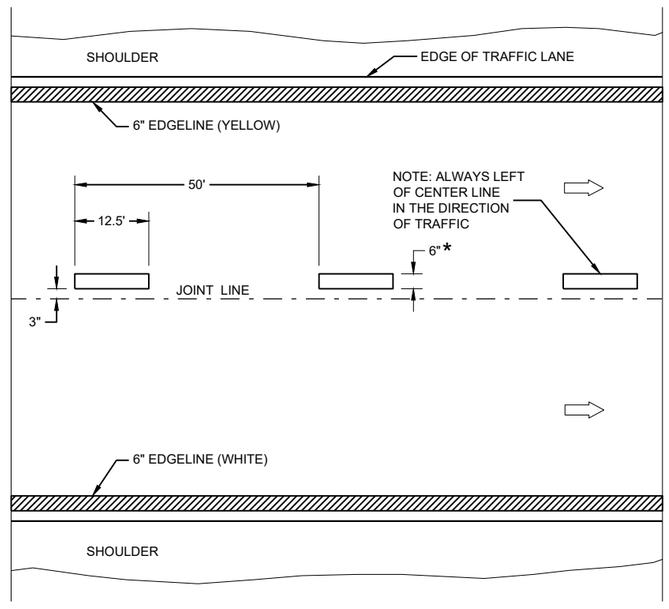
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

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SDD 15C08-23b

6

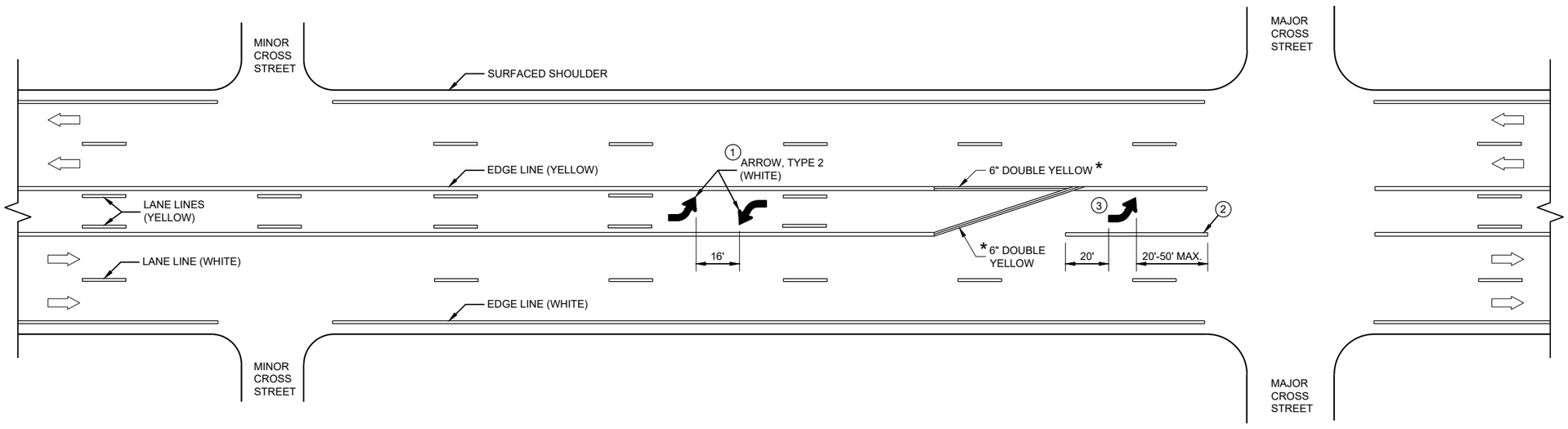
SDD 15C08-23b

GENERAL NOTES

1. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
2. 10" WHITE
3. TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

DIRECTION OF TRAFFIC

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



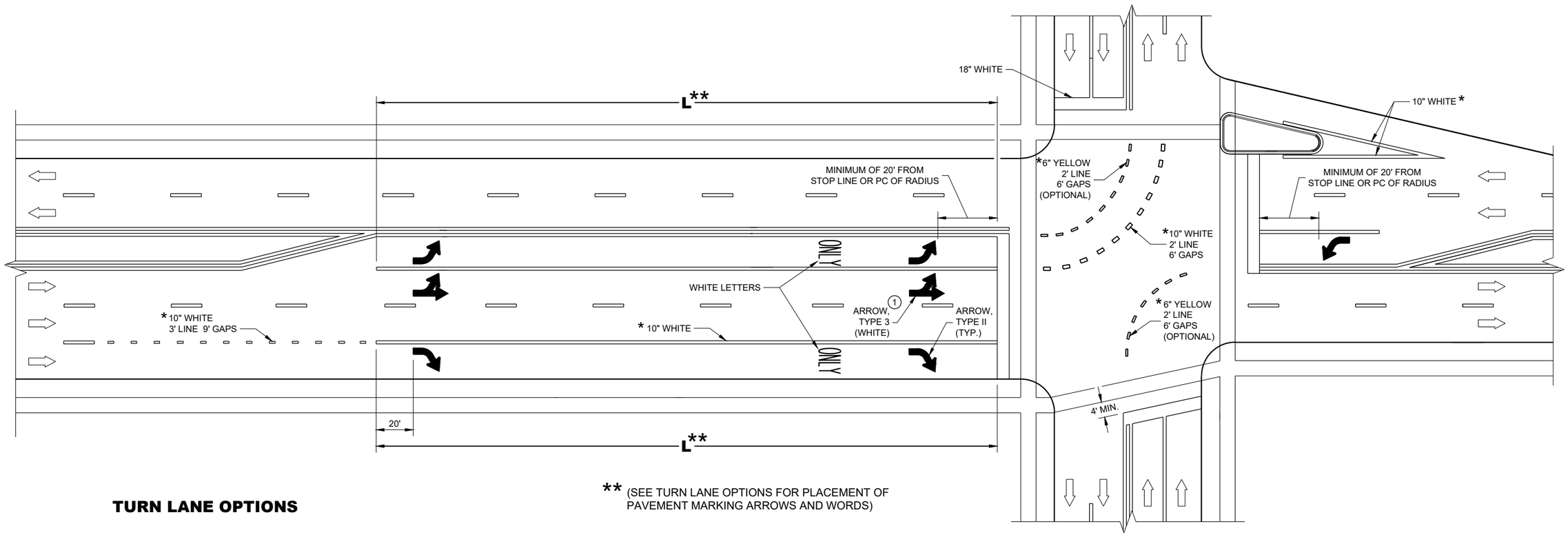
TWO WAY LEFT TURN LANE

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA· 174

SDD 15C08-23c

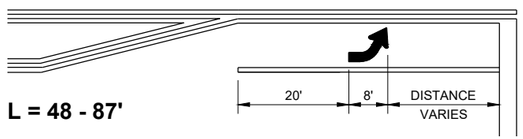
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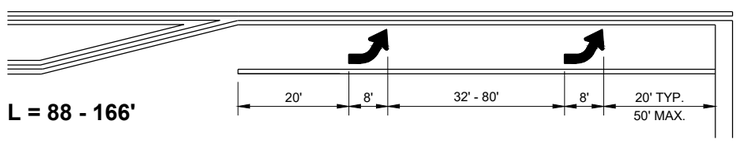
** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

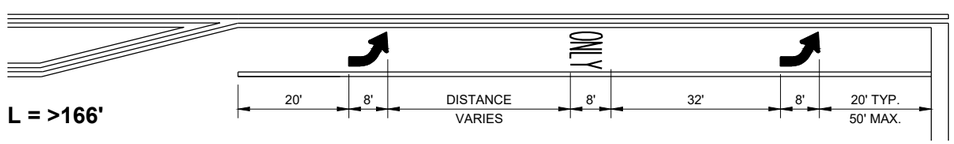
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48 - 87'



L = 88 - 166'



L = >166'

GENERAL NOTES

(1) QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

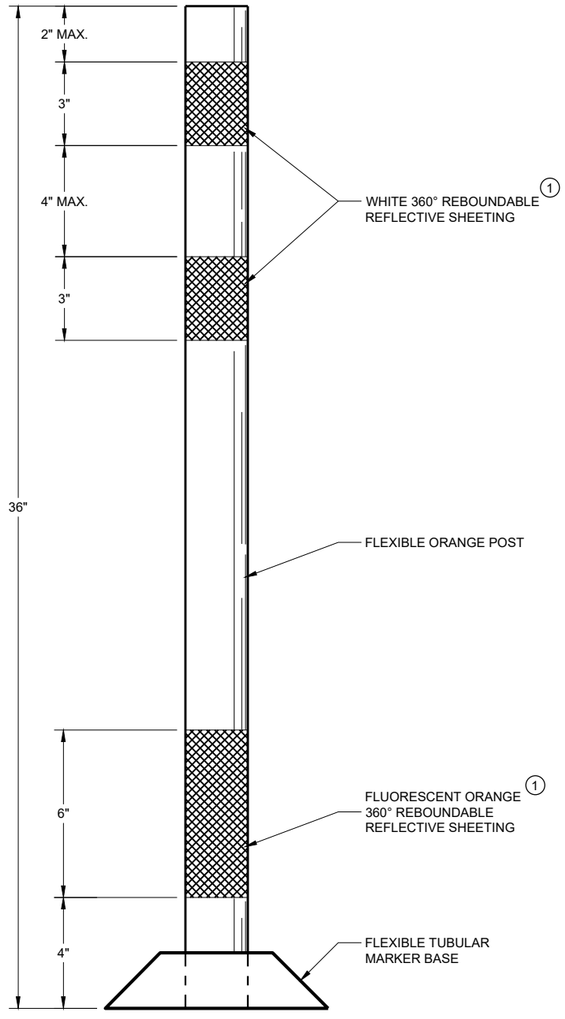
PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 15C08-23d

SDD 15C08-23d



FLEXIBLE TUBULAR MARKER POST WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

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

CHANNELIZING DEVICES
FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

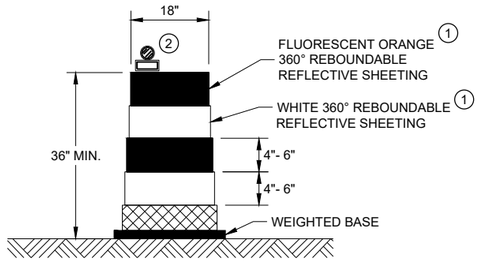
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SDD15C11 - 10a

SDD15C11 - 10a

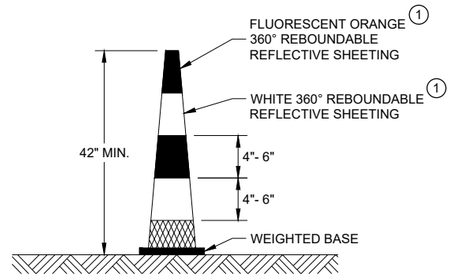
GENERAL NOTES

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



DRUM

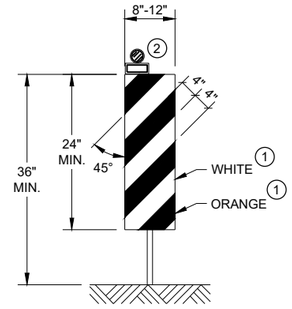
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

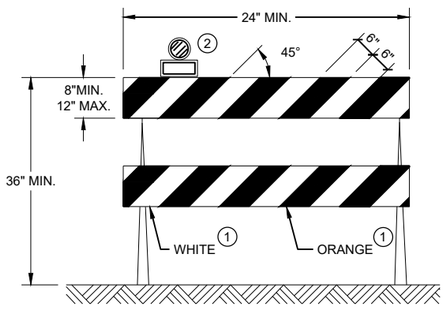
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



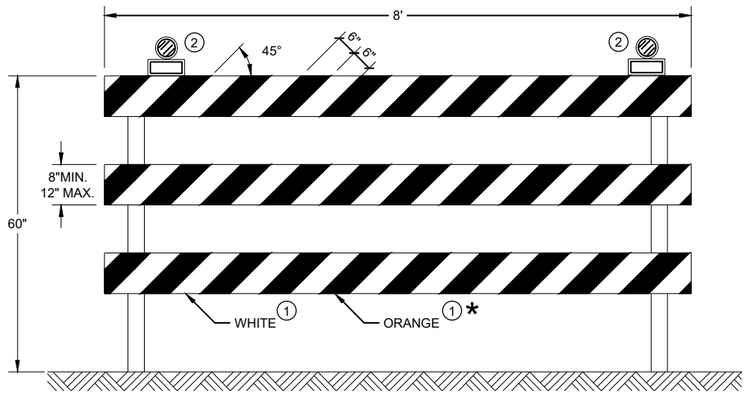
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

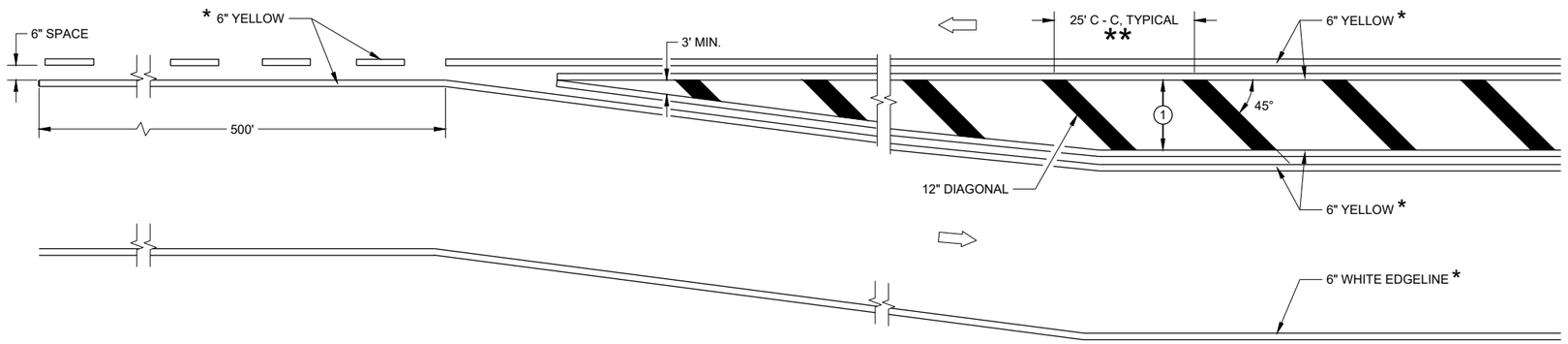
FHWA

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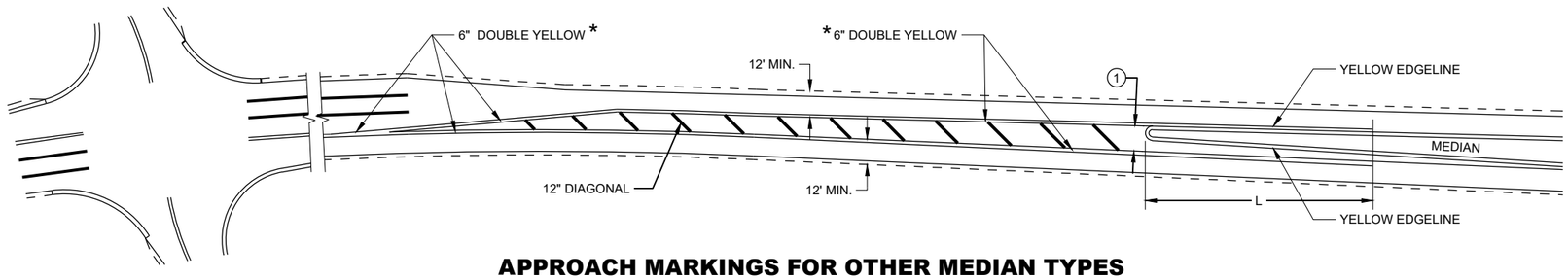
SDD 15C11 - 10b

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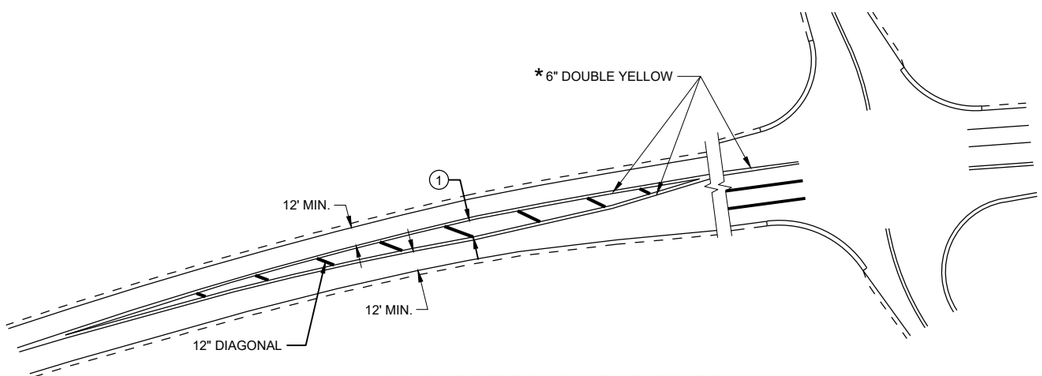
SDD 15C11 - 10b



MEDIAN ISLAND DETAIL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

GENERAL NOTES

1. DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

⇨ DIRECTION OF TRAVEL

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

SPEED LIMIT	L
<35 MPH	5'
35> MPH	50'

MEDIAN ISLAND PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

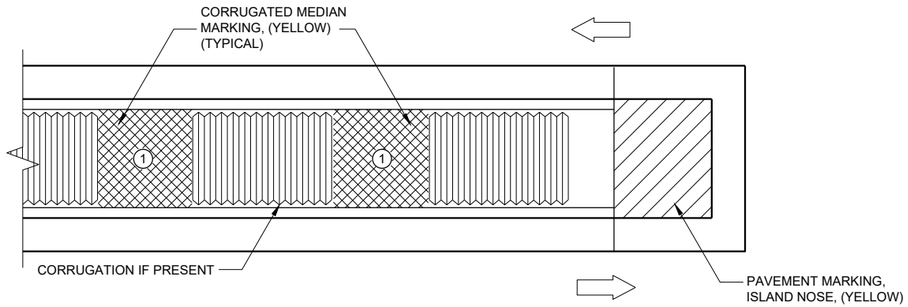
APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MAF ENGINEER
FHWA

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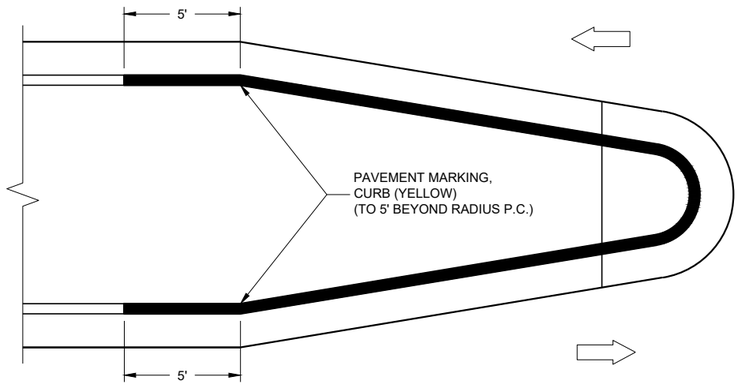
SDD 15C18-08a

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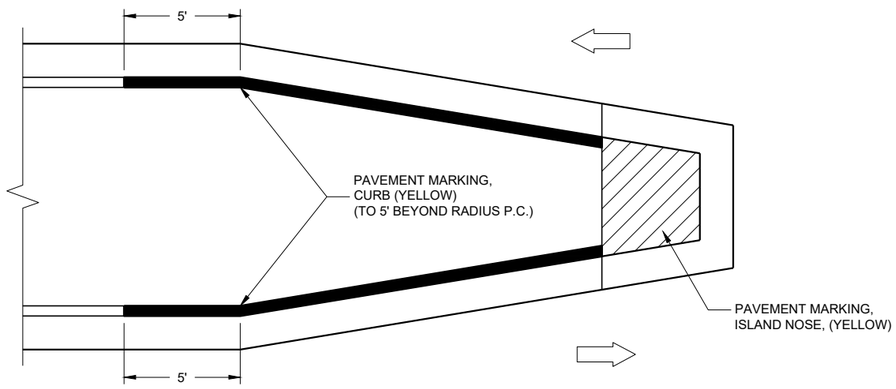
SDD 15C18-08a



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

(1) APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.

ISLAND NOSE MARKING

CURB MARKING

CORRUGATED MEDIAN MARKING

DIRECTION OF TRAVEL

PAVEMENT MARKINGS, MEDIAN ISLAND NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023
DATE

/S/ Jeannie Silver
STATE SIGNING AND MAR ENGINEER

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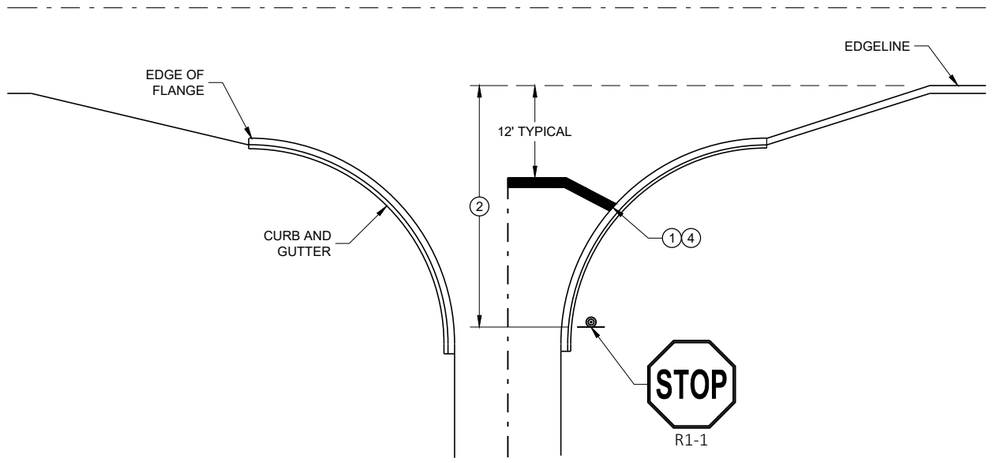
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SDD 15C18-08b

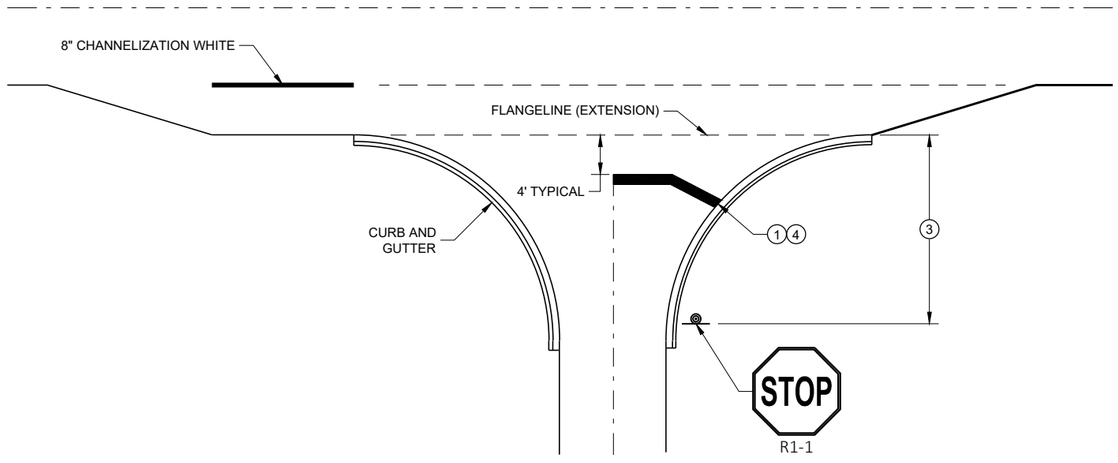
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

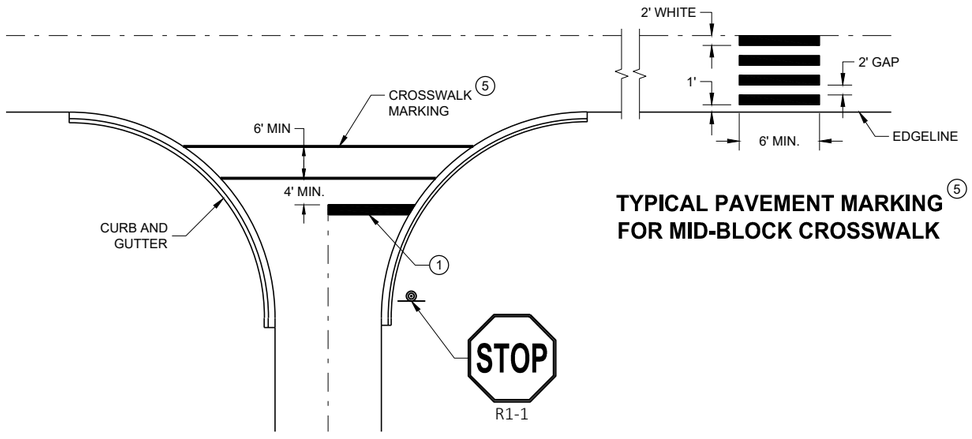
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE 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

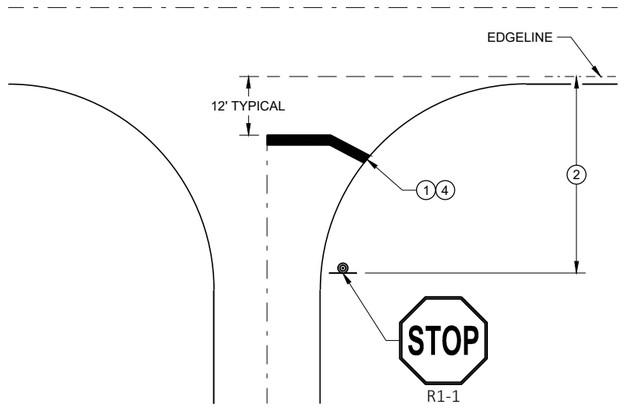


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



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

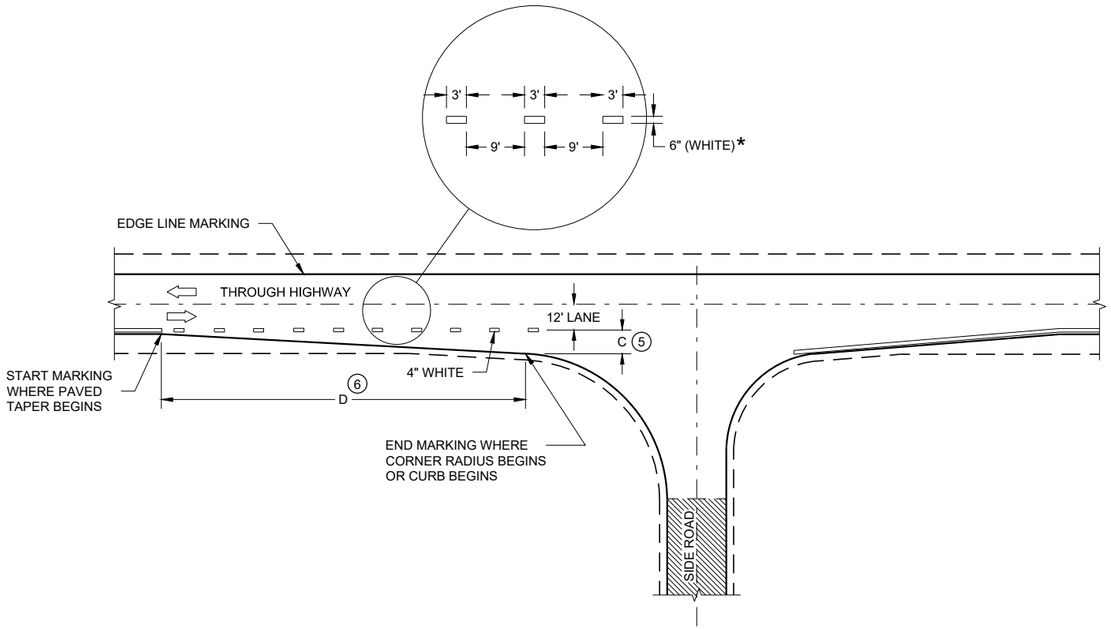
APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MARKING ENGINEER

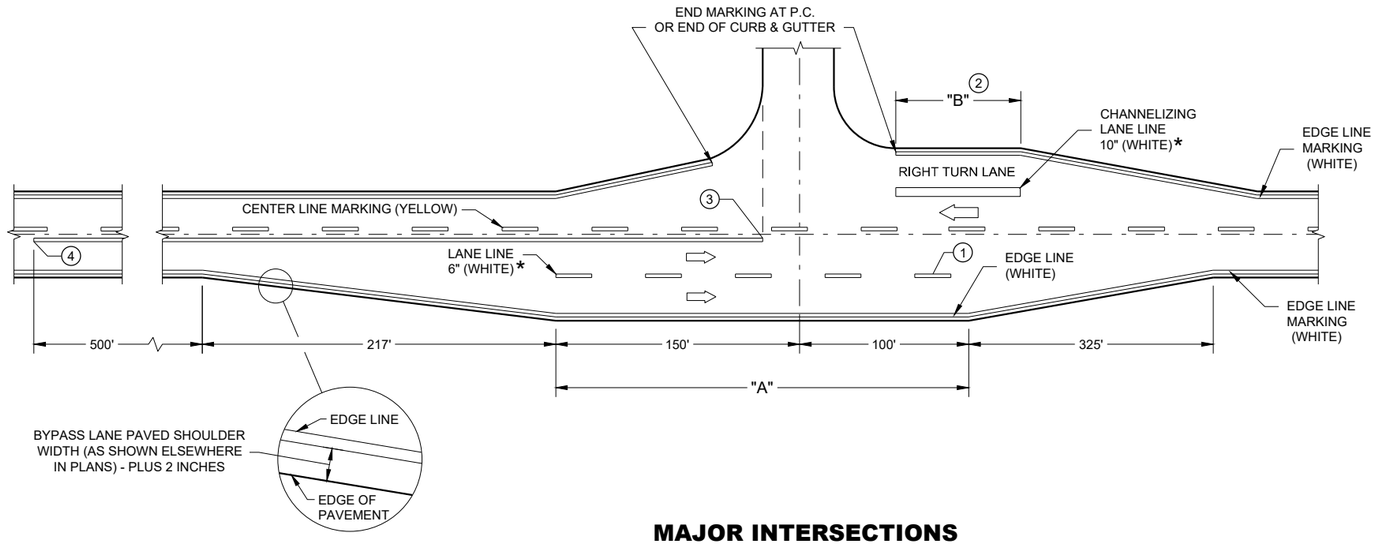
FHWA

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SDD 15C33 - 04



MINOR INTERSECTION



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

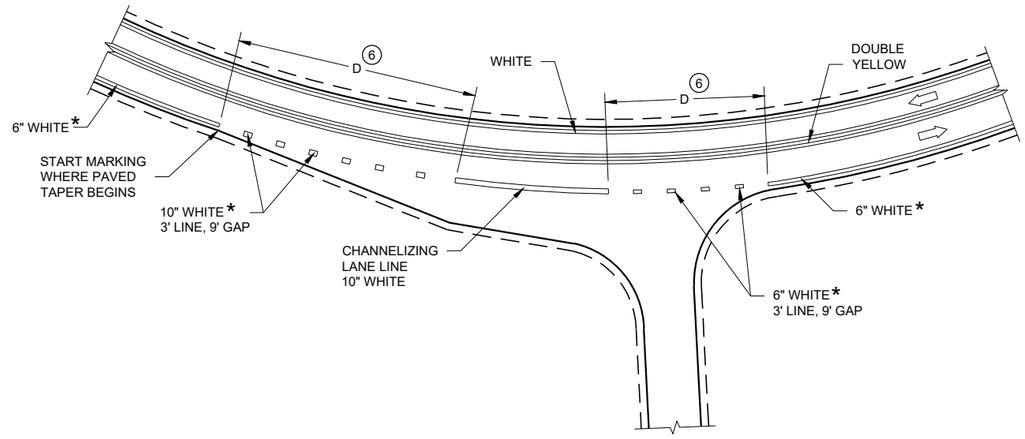
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
5. WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
6. WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING (INTERSECTIONS)

SDD 15C35-06a

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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.

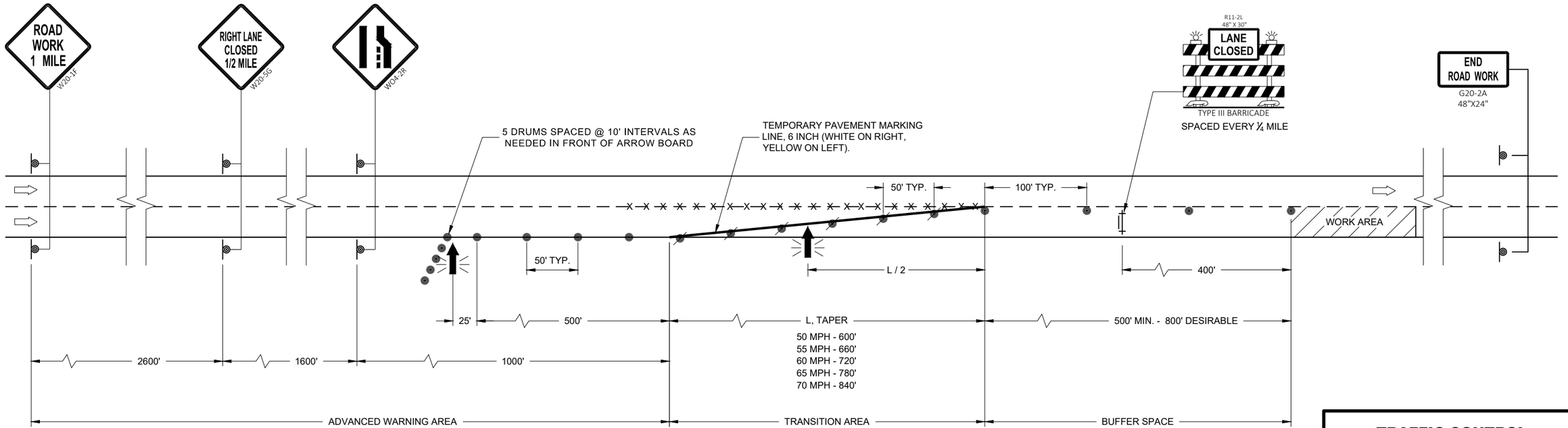
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15D12 - 11a

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SDD 15D12 - 11a

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA



GENERAL NOTES

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

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

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

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

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

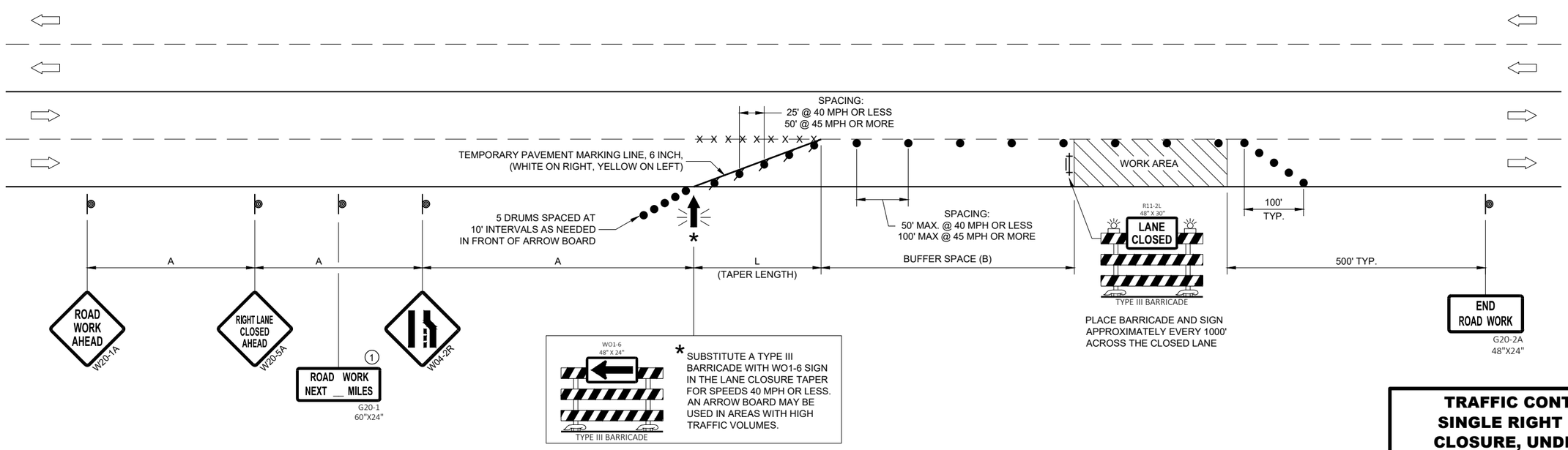
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

(1) OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'





TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

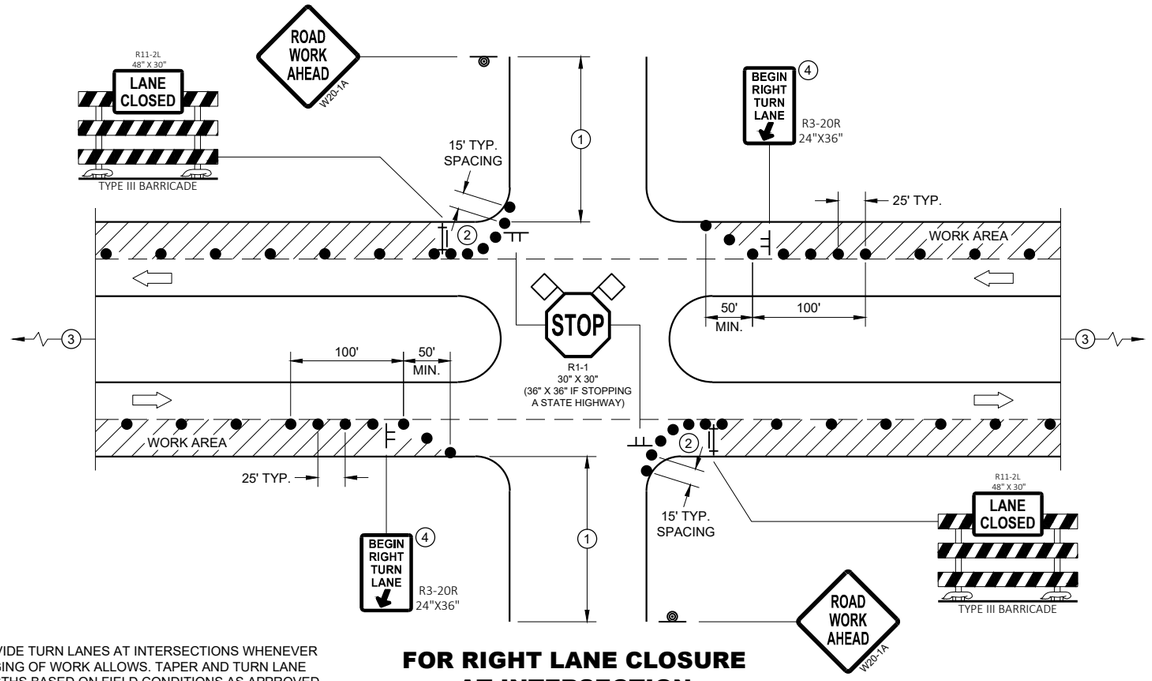
FHWA

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SDD 15D20-07b

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SDD 15D20-07b



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.

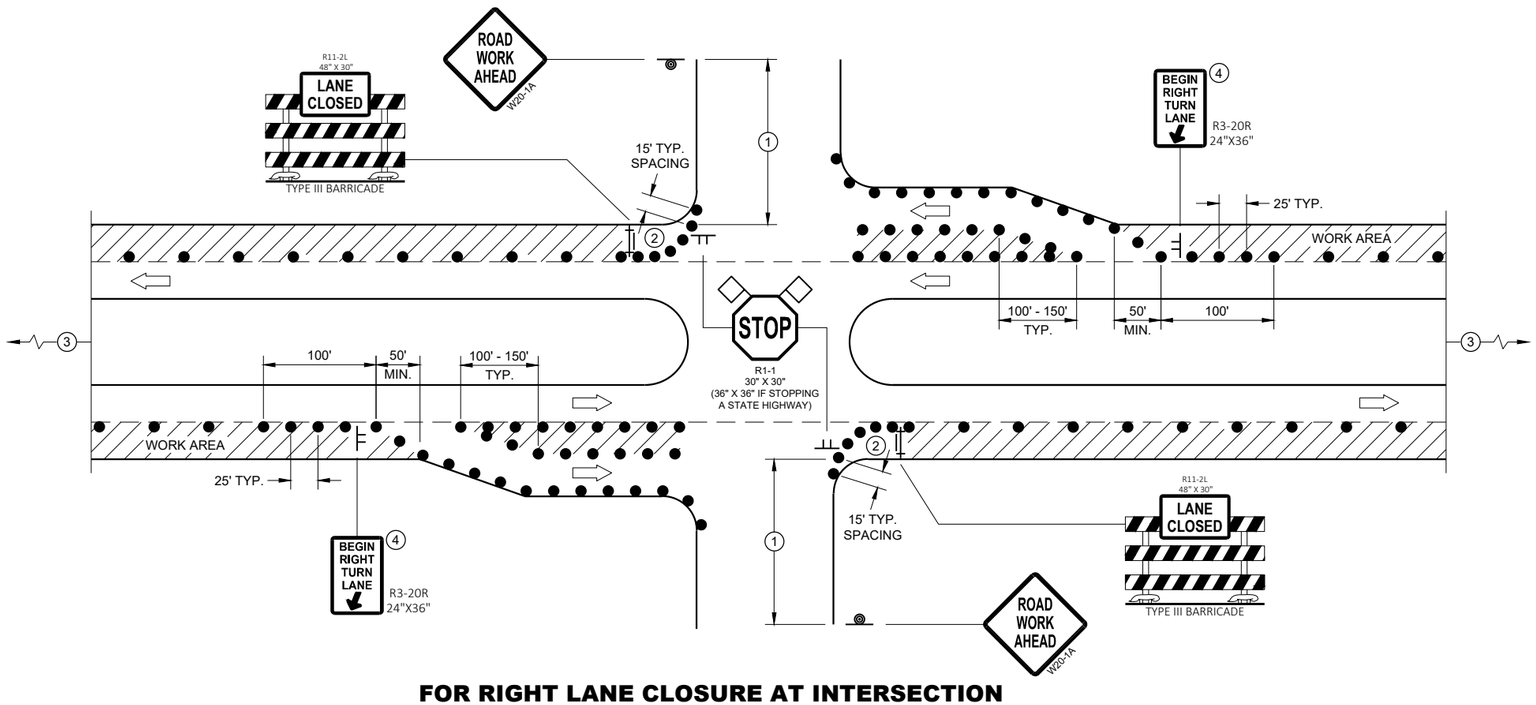
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(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)

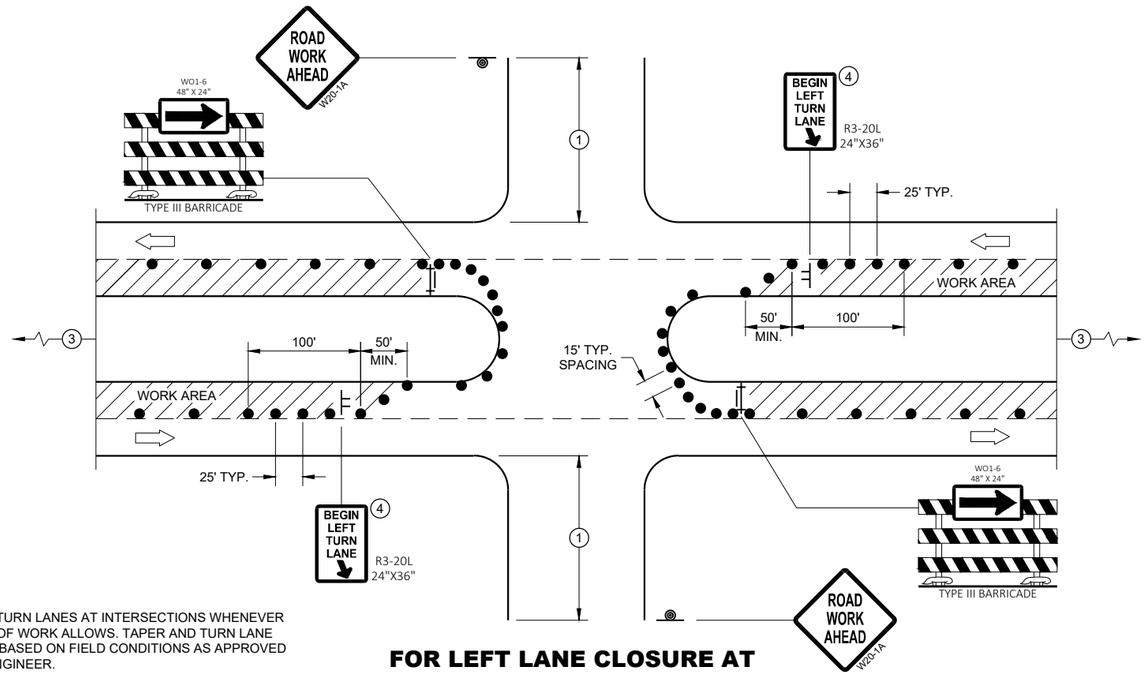
LEGEND

- 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

SDD 15D21 - 07a

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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.

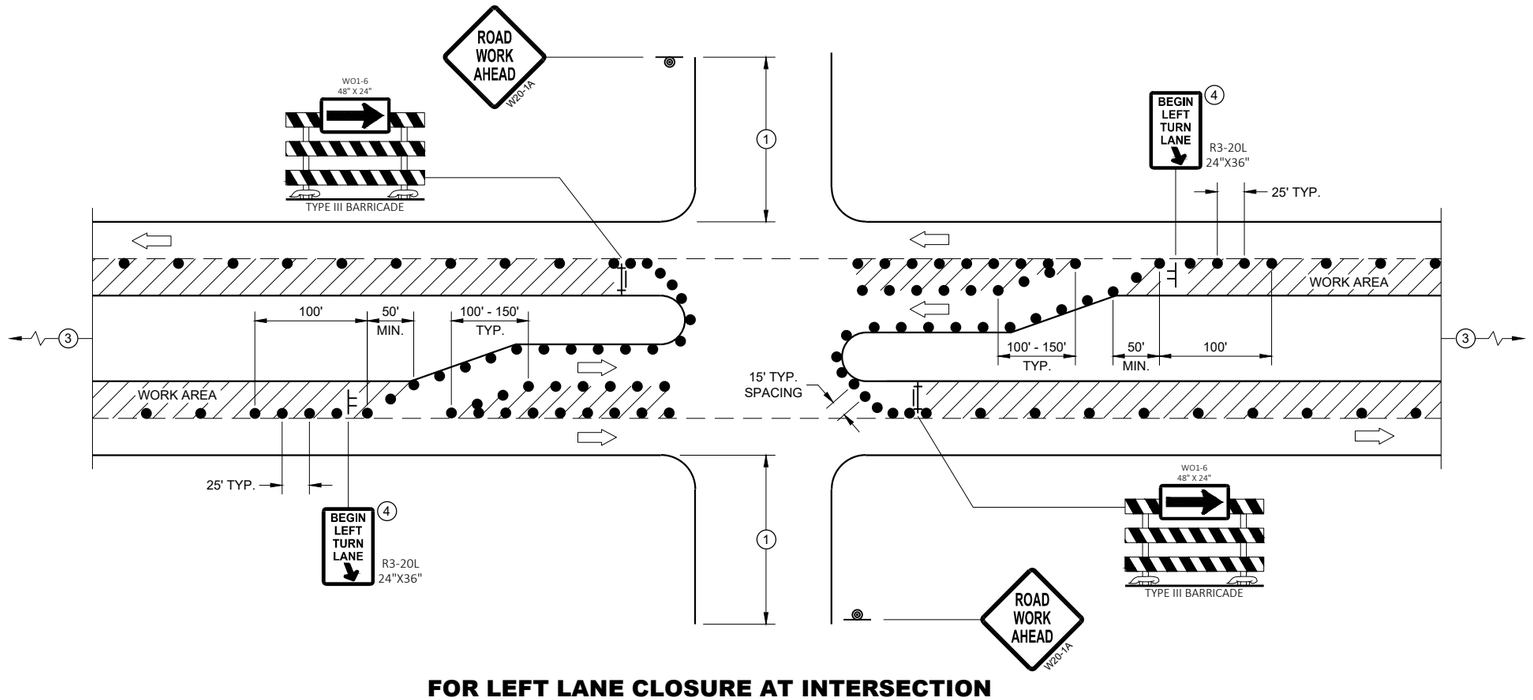
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(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

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)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER L/2 W, LATERAL OFFSET (FT)					BUFFER SPACE (B) FEET
		10	11	12	13	14	
25	200	52	57	63	68	73	55
30	200	75	83	90	98	105	85
35	350	102	112	123	133	143	120
40	350	133	147	160	173	187	170
45	500	225	248	270	293	315	220

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

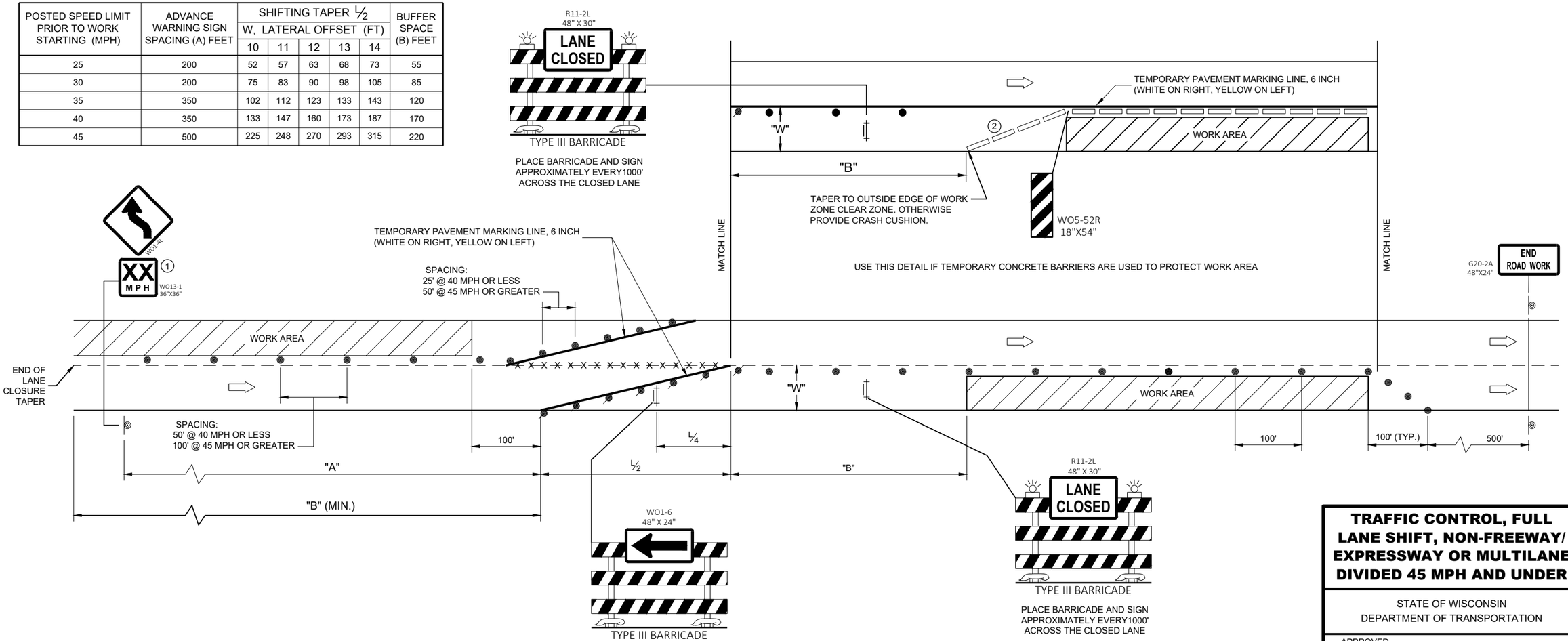
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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 IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.

(2) BARRIER FLARE RATE: 6:1 @ 40 MPH OR LESS
8:1 @ 45 MPH OR GREATER



TRAFFIC CONTROL, FULL LANE SHIFT, NON-FREEWAY/ EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D40-05a

6

SDD 15D40-05a

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS, INCLUDING PCMS 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" SIGNS ARE THE SAME AS "W" SIGNS 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. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED SIGNS.

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 IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

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

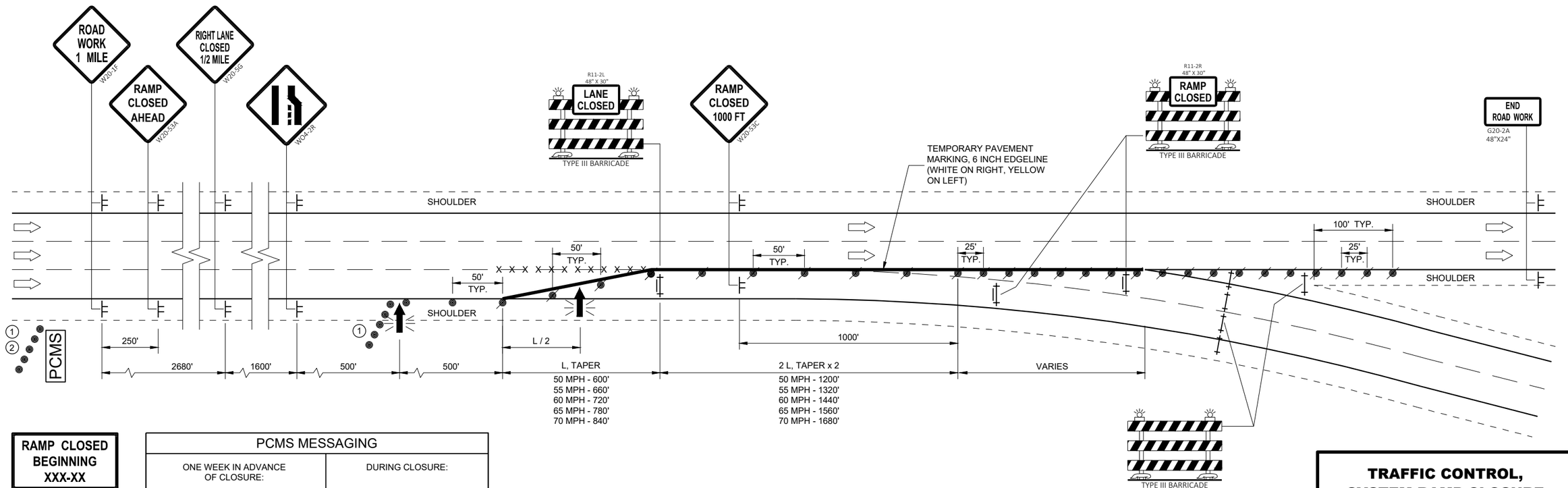
REMOVE ALL ARROW BOARDS AND DEVICES BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS.

REFER TO SDD 15C2 FOR SETTING DETOUR SIGNAGE.

ADD FREEWAY SHIELD AND DIRECTION IF APPLICABLE. COVER EXISTING RAMP AND LANE SIGNS IF APPLICABLE.

(1) 5 DRUMS SPACED AT 10 FOOT INTERVALS.

(2) DURING THE PRE-WARNING PERIOD, PLACE THE PCMS AT THE SYSTEM RAMP THAT IS TO BE CLOSED. DURING CLOSURE PERIOD, PLACE PCMS OR FMS AT LAST AVAILABLE EXIT IN ADVANCE OF SYSTEM RAMP CLOSURE. IF DYNAMIC MESSAGE SIGNS (DMS) ARE AVAILABLE, COORDINATE POTENTIAL SIGN MESSAGES WITH THE TRAFFIC MANAGEMENT CENTER (TMC).



SEE SDD 15C2 (SHEET "b"), DETAIL "D" "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" PLACE BARRICADES TO FULLY SEAL OFF ROAD

RAMP CLOSED BEGINNING XXX-XX
G20-58

PCMS MESSAGING

ONE WEEK IN ADVANCE OF CLOSURE:

FRAME 1	FRAME 2
RAMP TO CLOSE	XXXDAY XX XX XX

DURING CLOSURE:

FRAME 1	FRAME 2
HWY XX RAMP CLOSED	USE ALT ROUTE

TRAFFIC CONTROL, SYSTEM RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

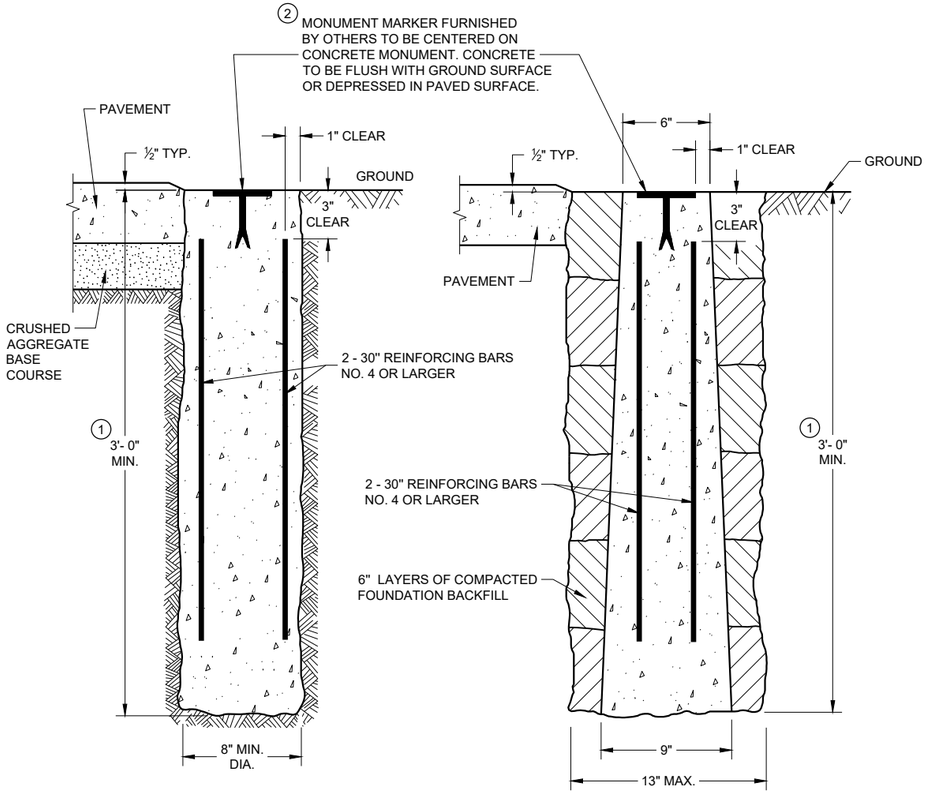
FHWA

6

SDD 15D49-02

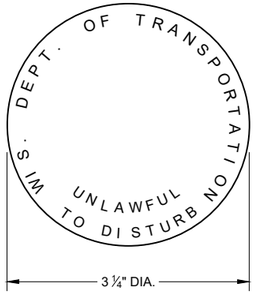
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SDD 15D49-02



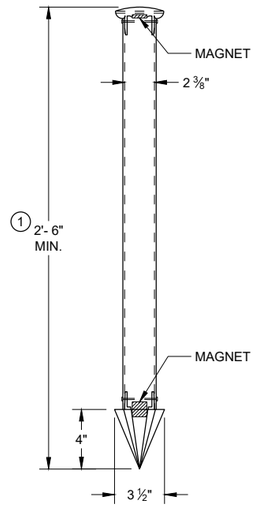
CAST-IN-PLACE **PRECAST**

CONCRETE MONUMENTS
TYPE A

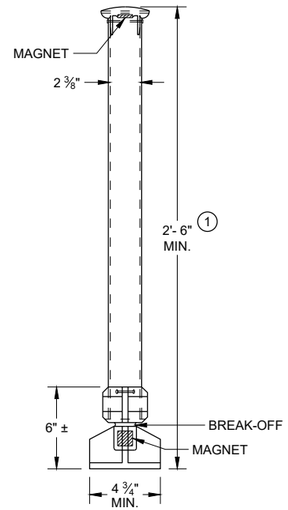


② **WIS DOT MONUMENT MARKER LOGO**

FOR TYPES "A", "C" & "D"

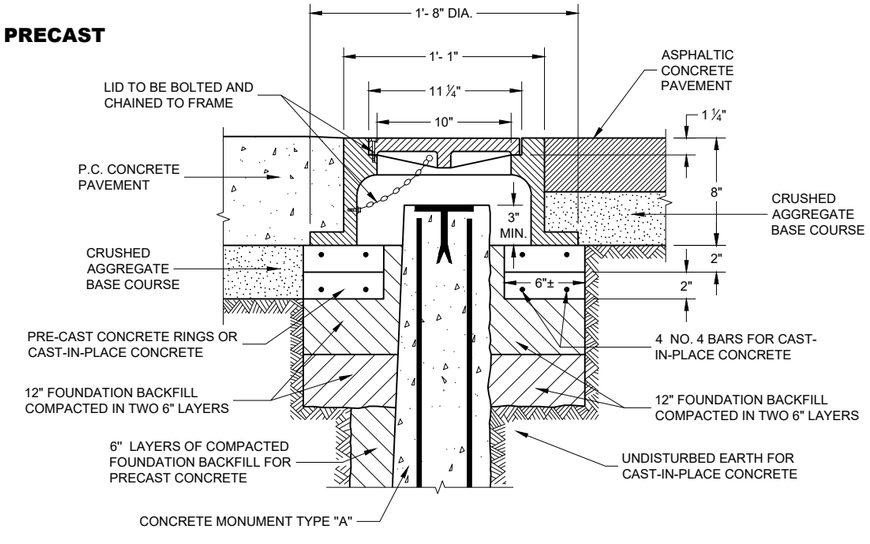


TYPE C
DRIVEN MONUMENT



TYPE D
NON-DRIVEN
BREAK-OFF MONUMENT

ALUMINUM MONUMENTS
(INCLUDES MARKER)



CAST IRON MONUMENT COVER
(APPROXIMATE WEIGHT 95 LBS)

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.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

PERMANENT MAGNETS SHALL BE INSERTED NEAR THE TOP AND BOTTOM OF ALL ALUMINUM MONUMENTS SO THE MONUMENT CAN EASILY BE DETECTED BY A METAL DETECTOR.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

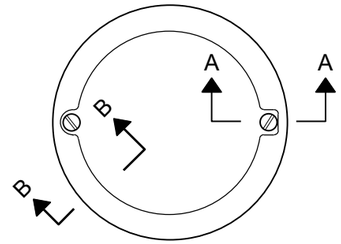
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

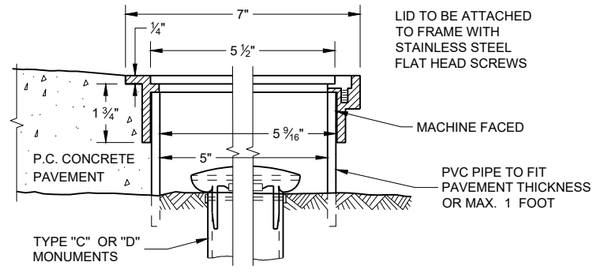
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WISDOT MARKER.



TOP VIEW



SECTION B-B **SECTION A-A**

ALUMINUM MONUMENT COVER
(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)

LANDMARK REFERENCE MONUMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Raymond A. Kumapayii
CHIEF SURVEYING AND MAPPING ENGINEER

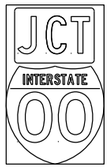
FHWA

SDD 16A01 - 07

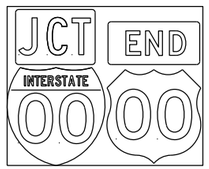
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SDD 16A01 - 07

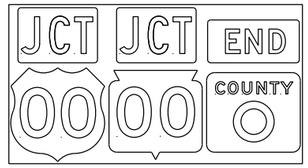
TYPICAL ASSEMBLIES



J1-1



J1-2



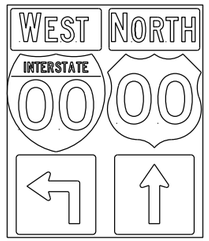
J1-3



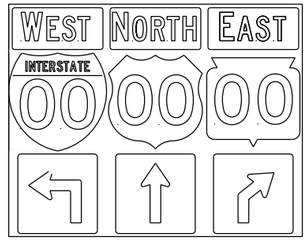
JR1-1



J2-1



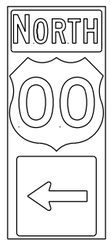
J2-2



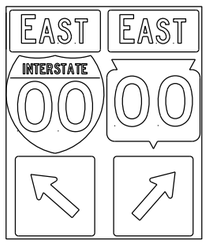
J2-3



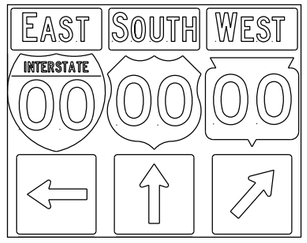
JV
(Typical Vertical J-Assembly
See Note 10 and 11)



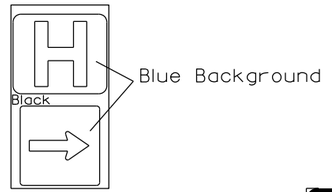
J3-1



J3-2



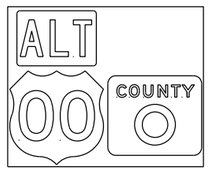
J3-3



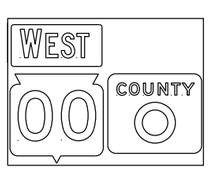
JH-1



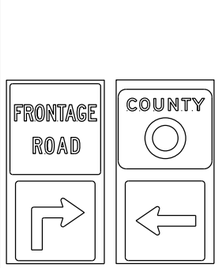
J4-1



J4-2



J4-2



J12-1

J13-1



J32-1



J33-1



J22-1



J23-1



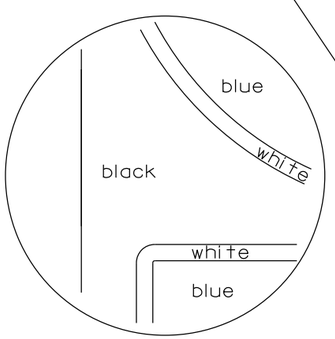
JR13-1

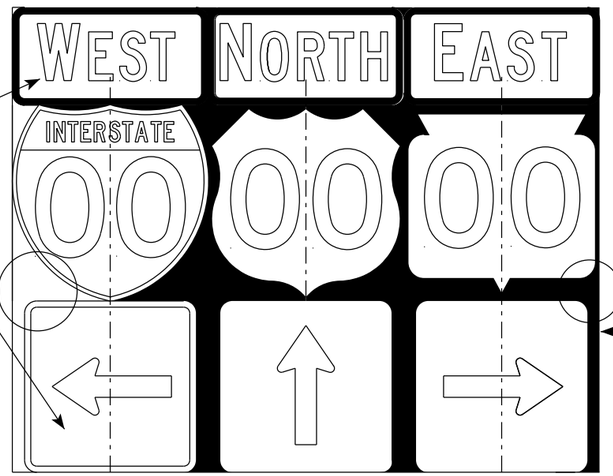


JR23-1



JR99-1





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: 189 E

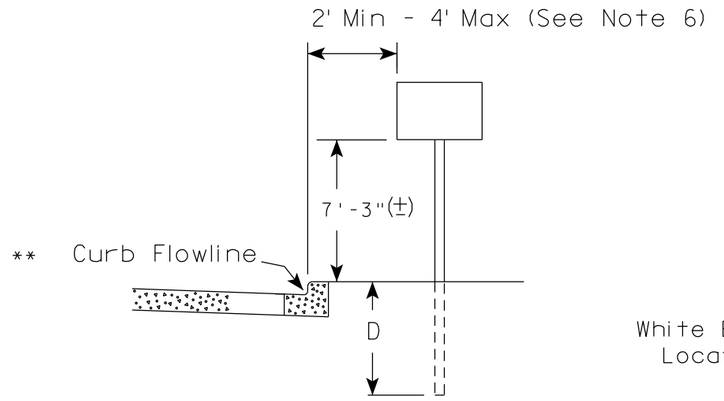
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WISDOT/CADDS SHEET 42

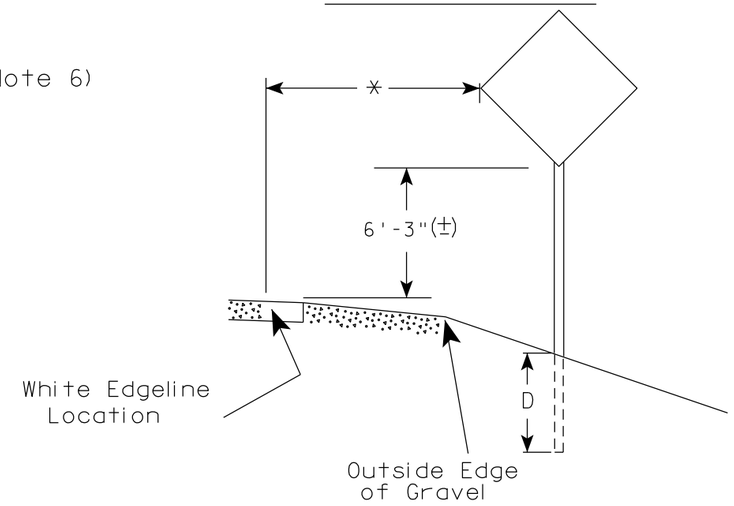
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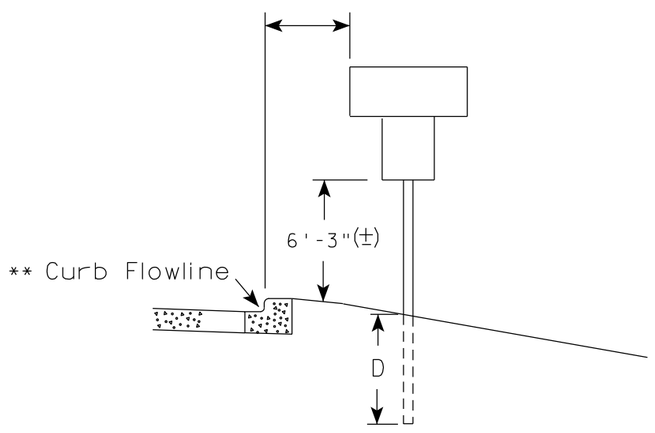
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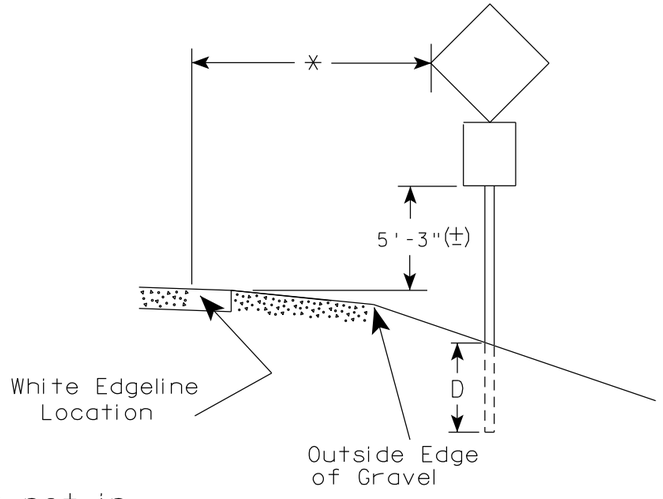
URBAN AREA



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.

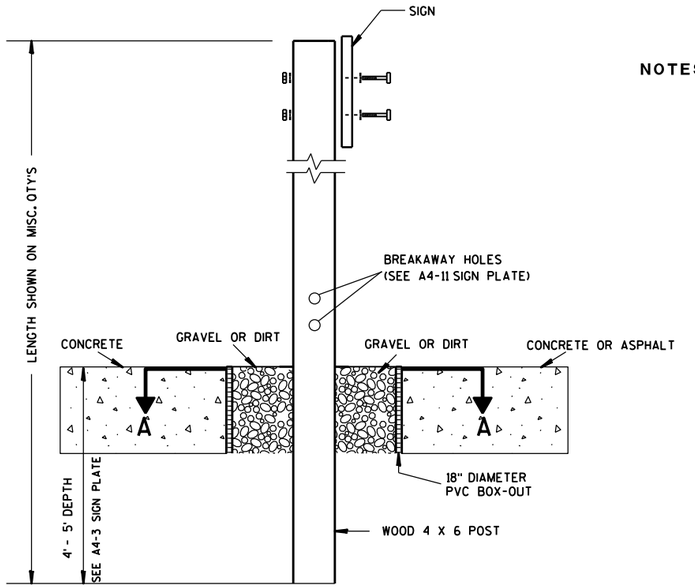
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

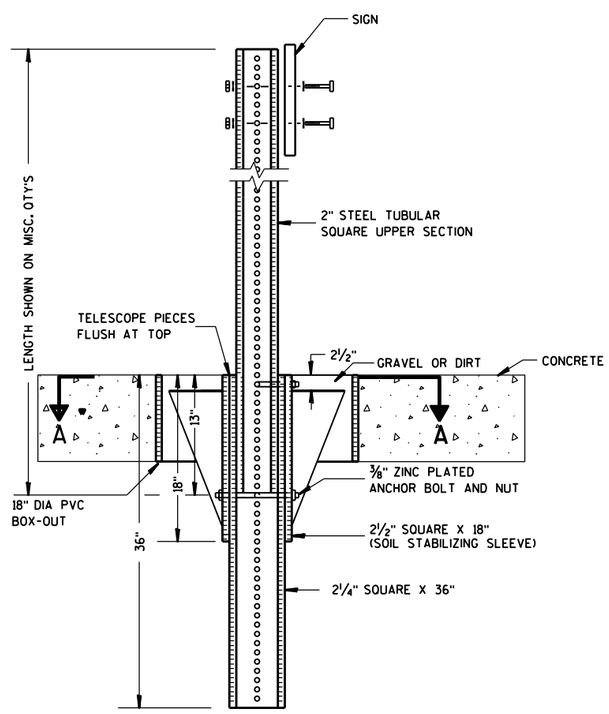
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 190	E



ELEVATION VIEW

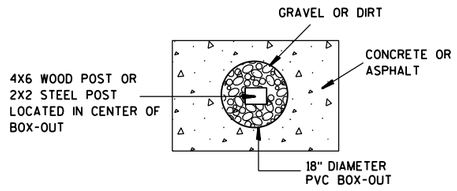
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

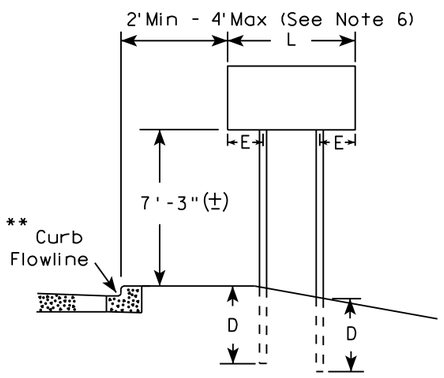
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

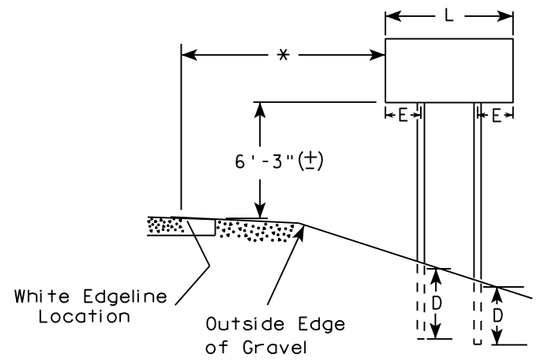
DATE 1/27/14 PLATE NO. A4-3B.1

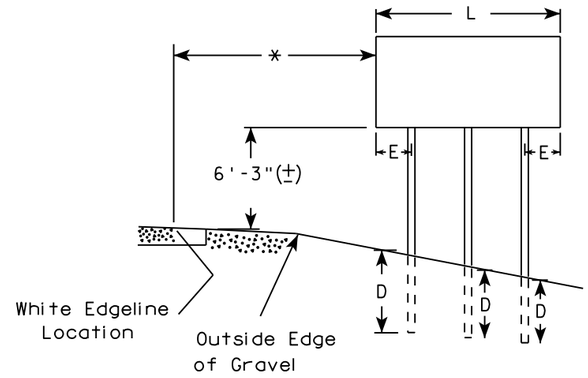
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

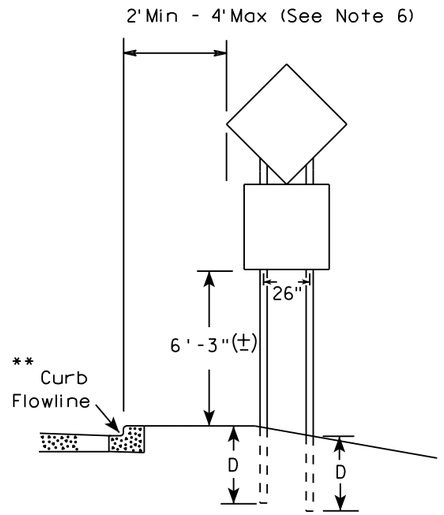
URBAN AREA



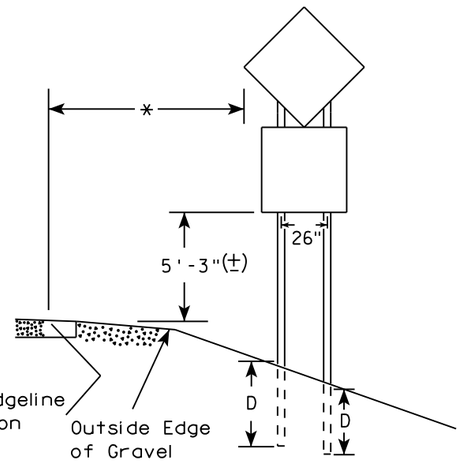
RURAL AREA (See Note 3)







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'

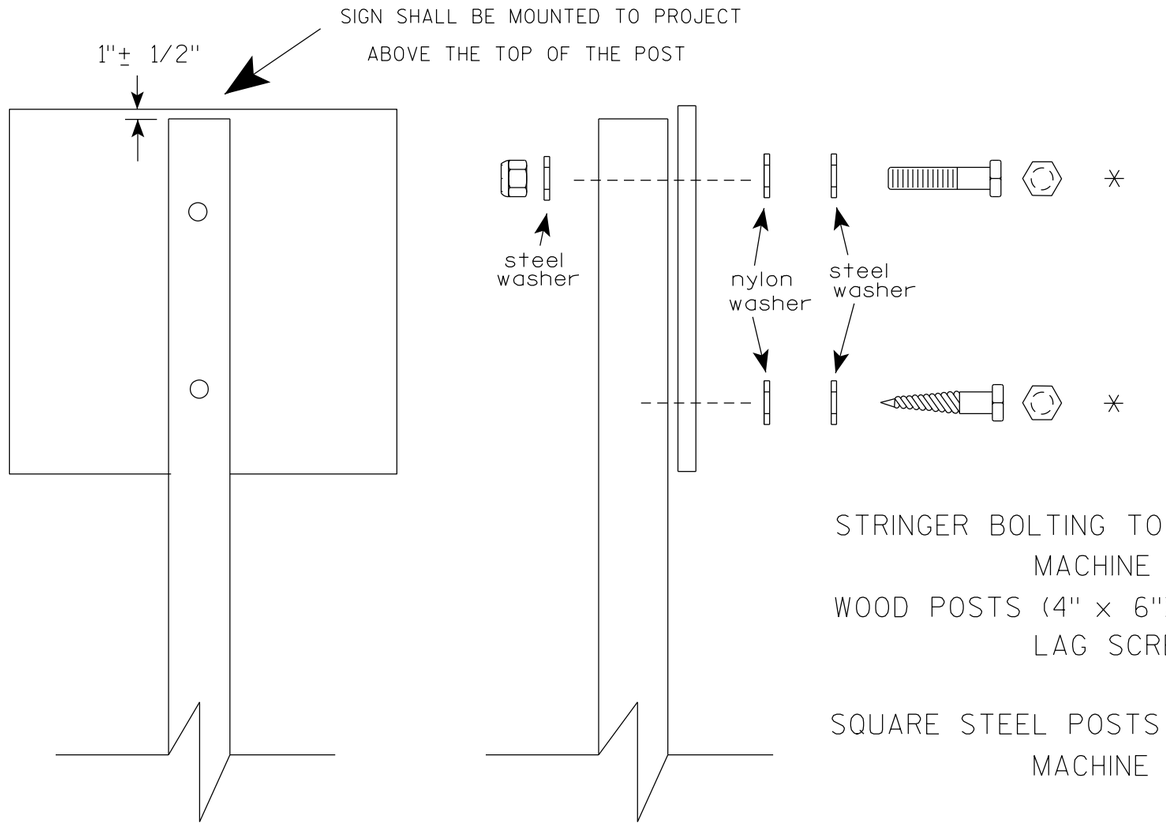
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 192	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

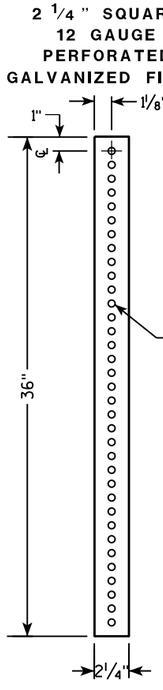
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

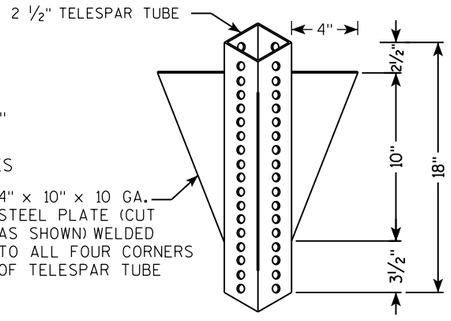
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

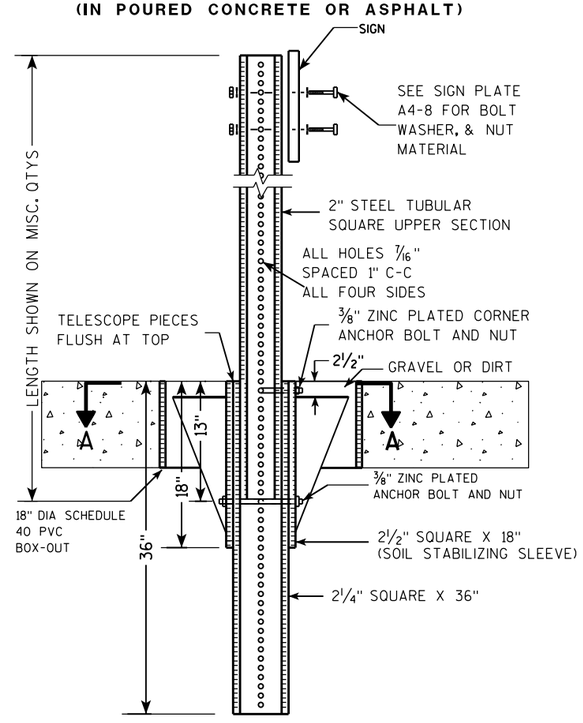
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



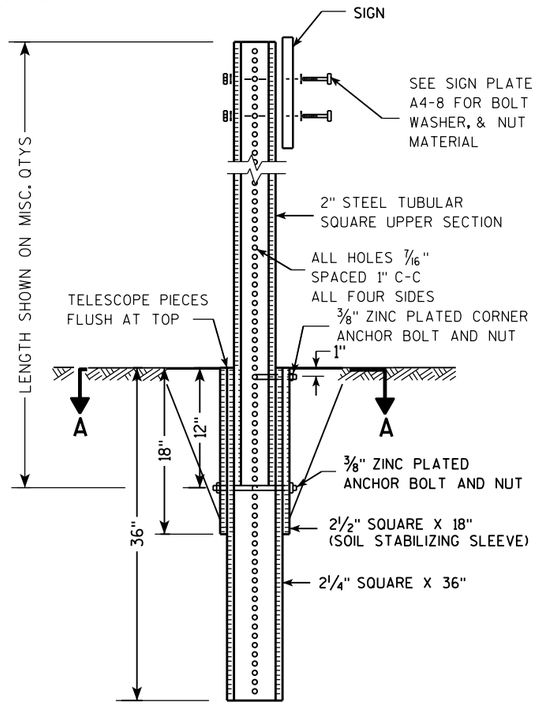
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

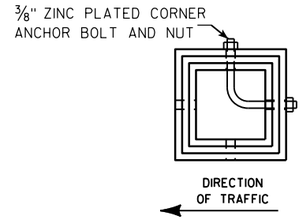


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

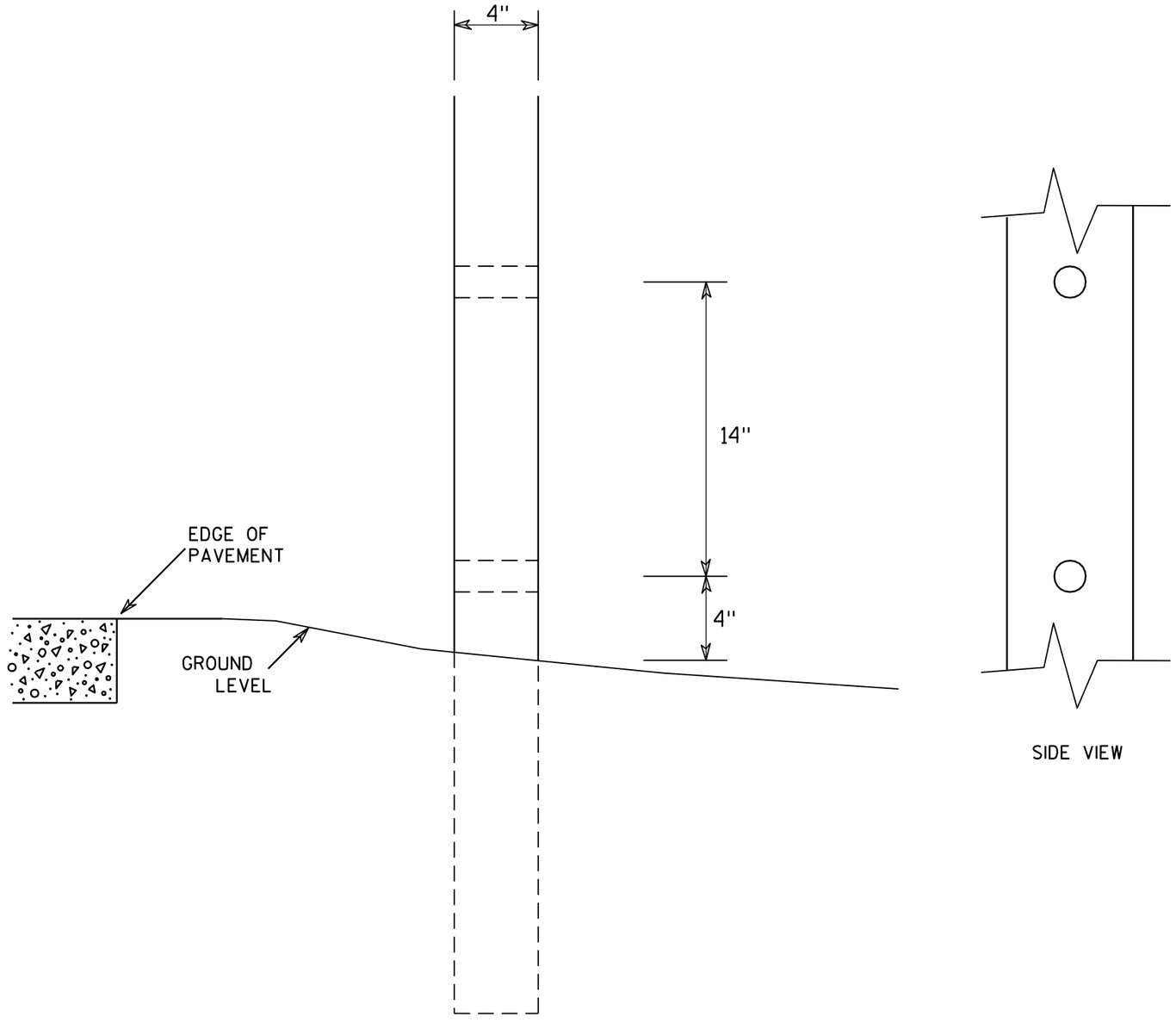
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000
WISDOT/CADDS SHEET 42



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.

7

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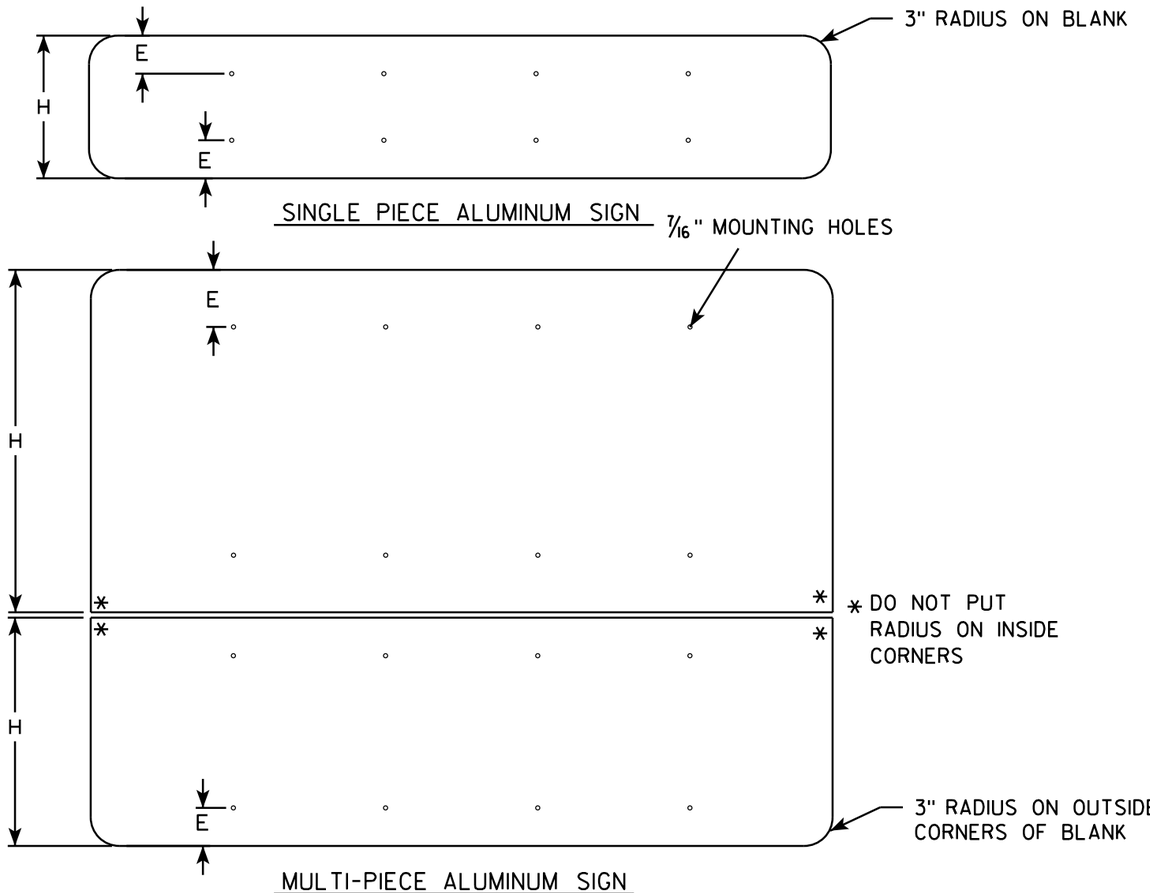
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

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

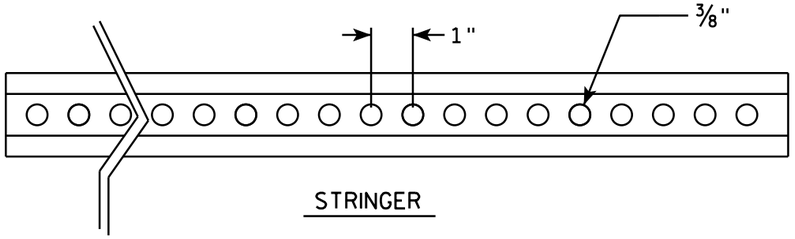
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 195	E



GENERAL NOTES

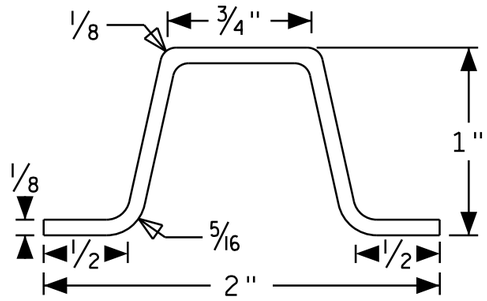
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 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"

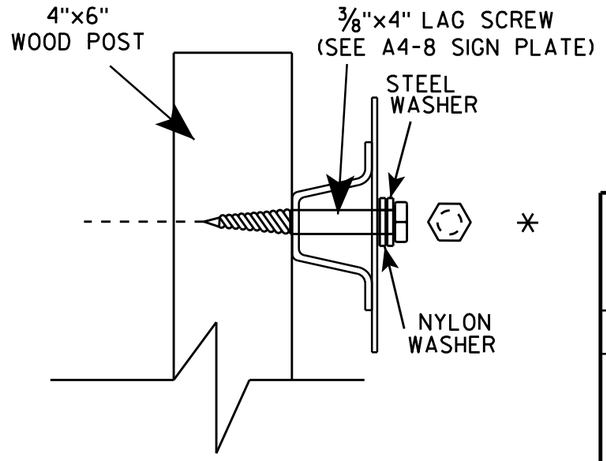


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

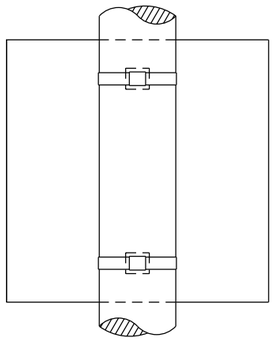
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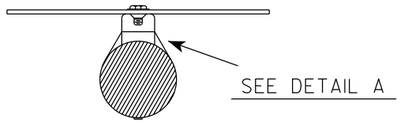
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

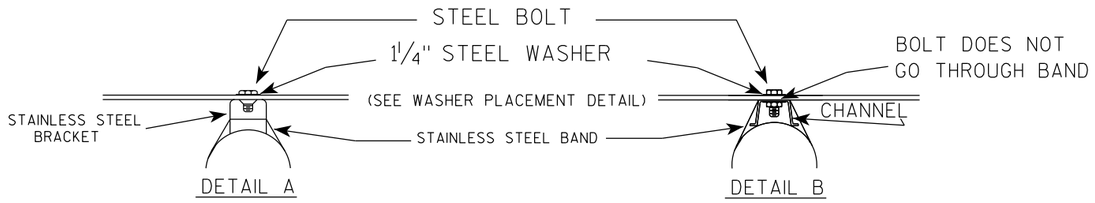
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BANDING

SINGLE SIGN



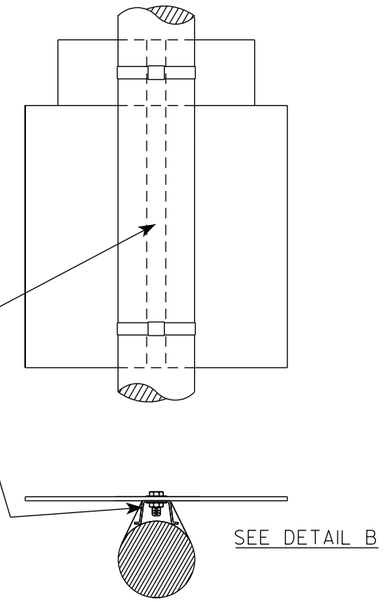




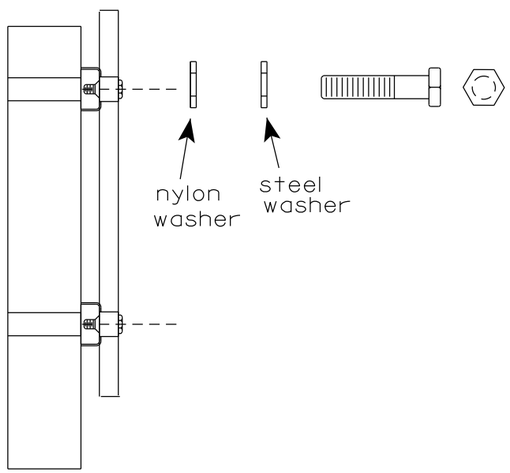
GENERAL NOTES

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



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

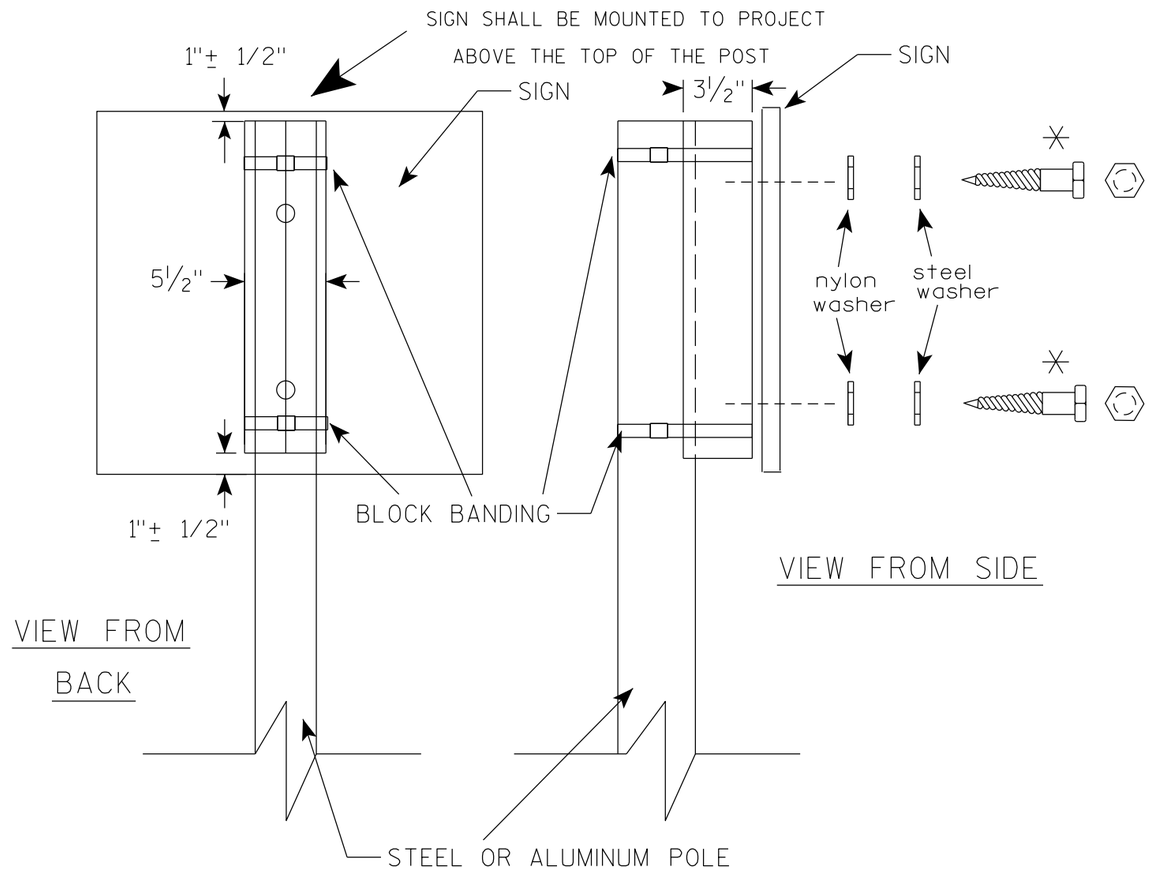
DATE 6/10/19 PLATE NO. A5-9.4

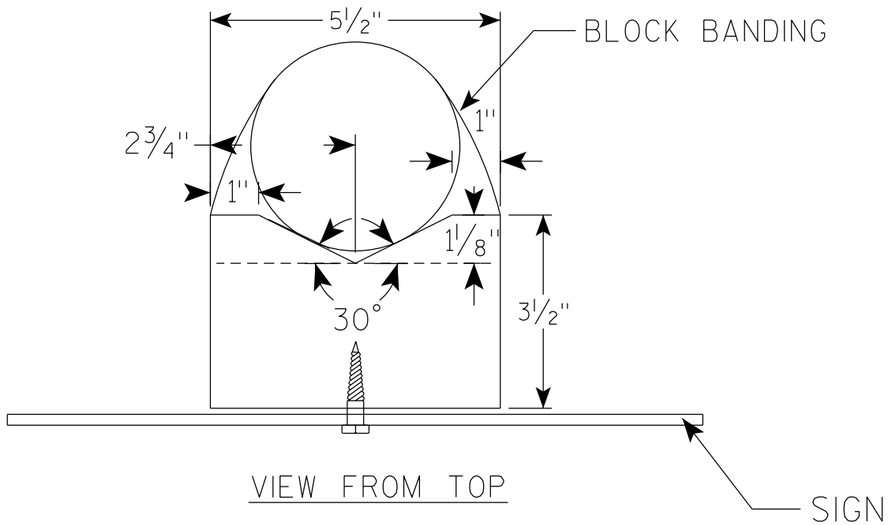
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 197	E

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

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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)

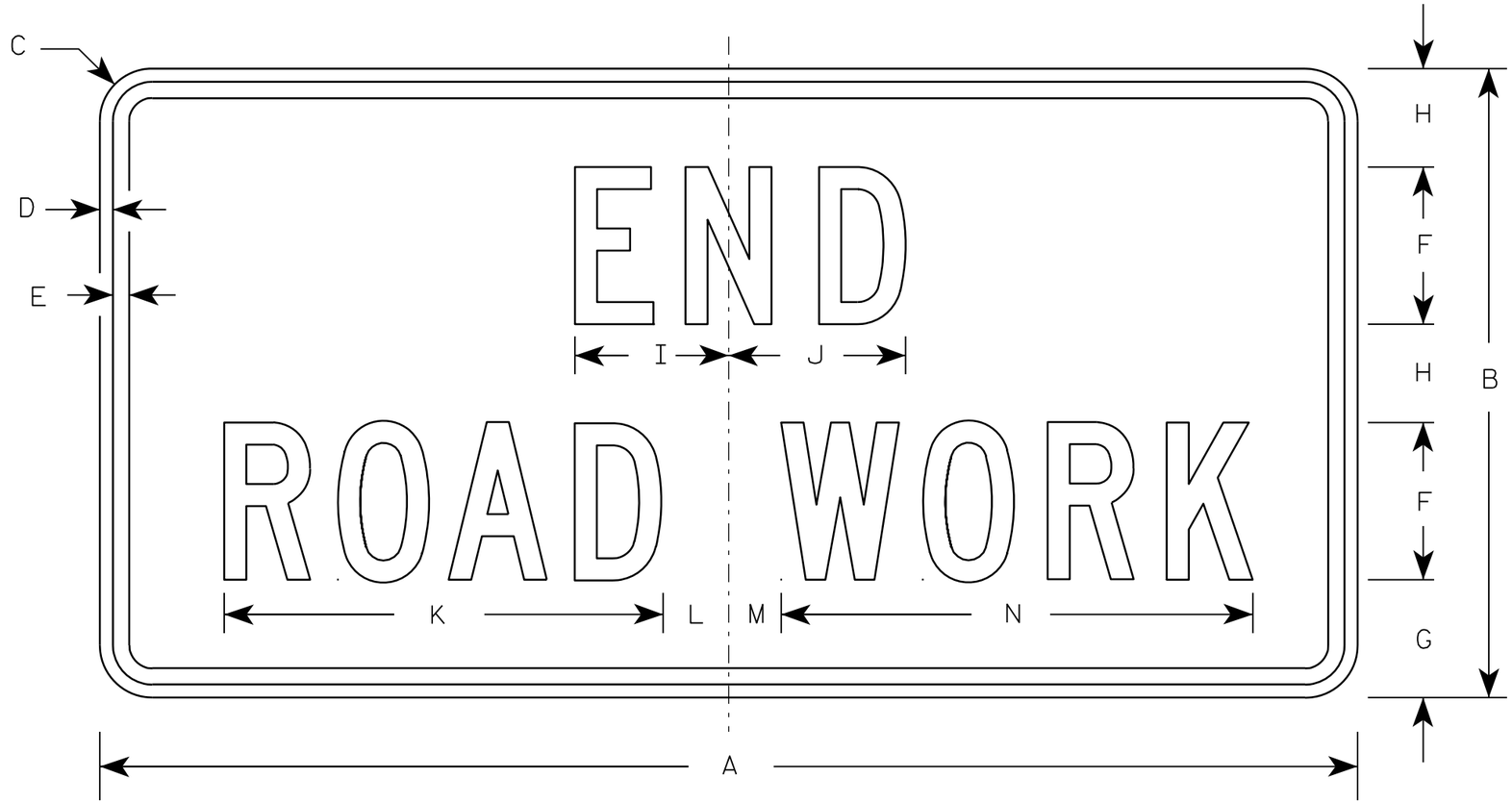
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 198 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

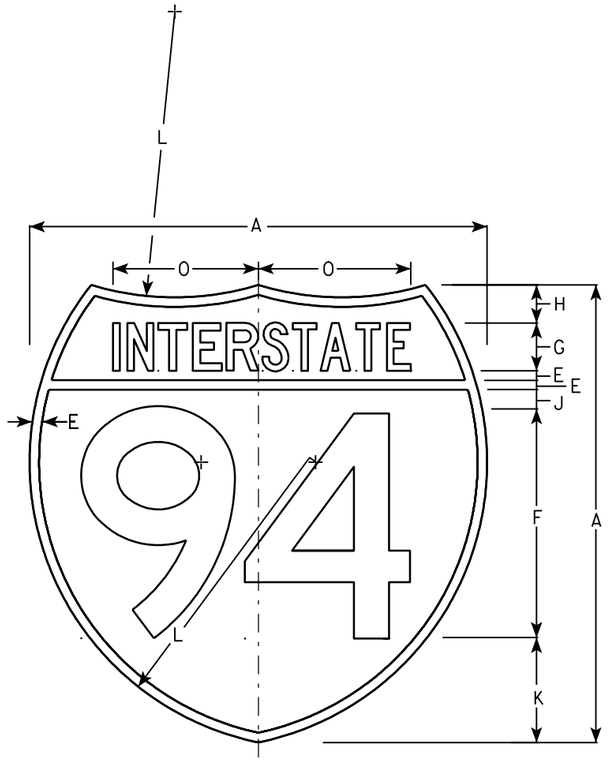
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

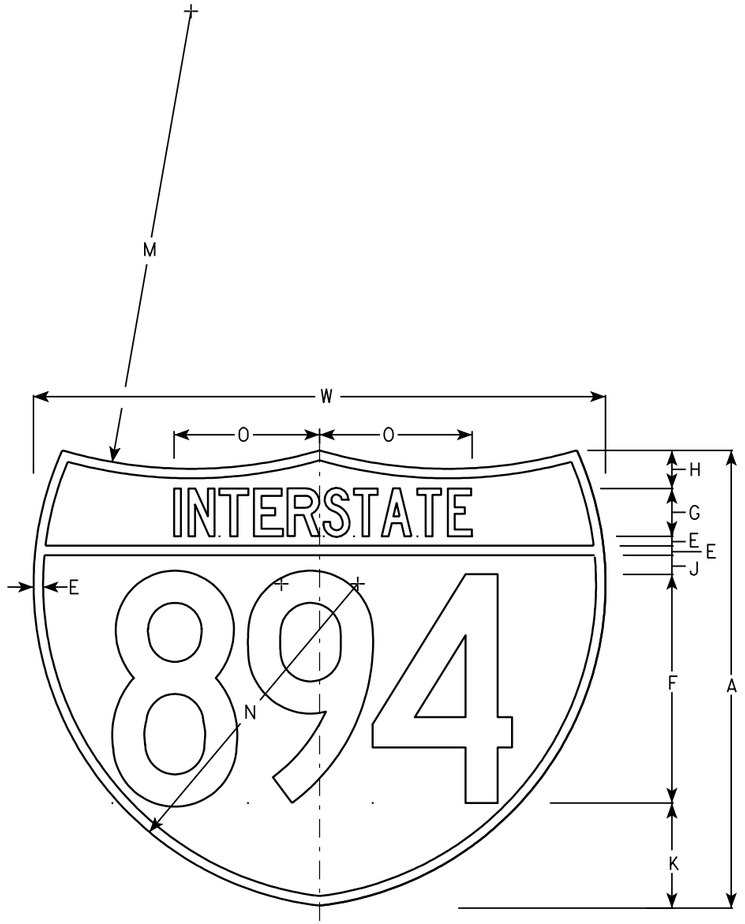
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 199	E



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 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	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

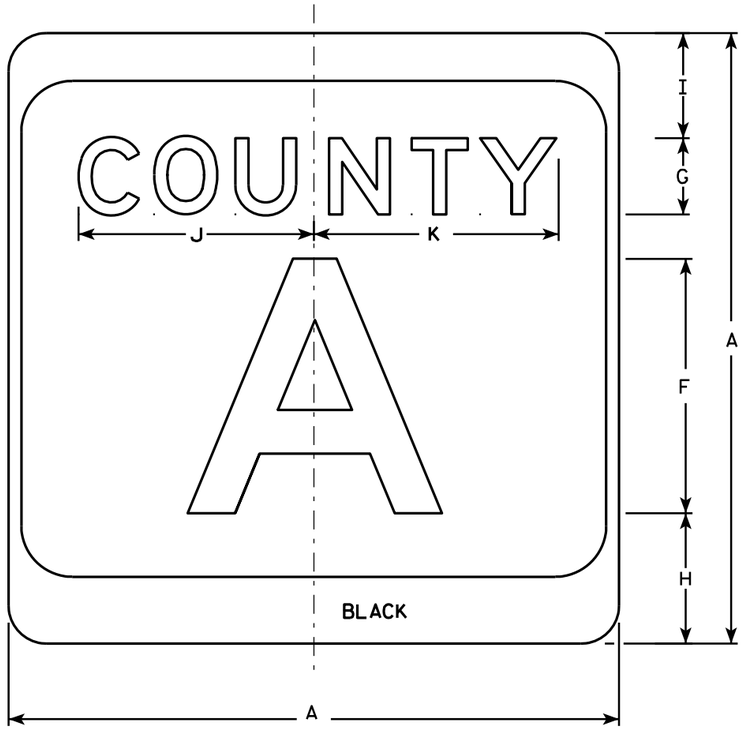
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

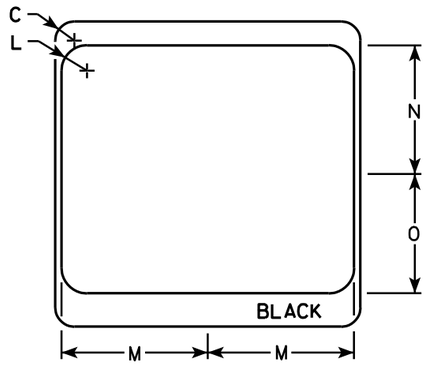
APPROVED Matthew R Rauch
for State Traffic Engineer

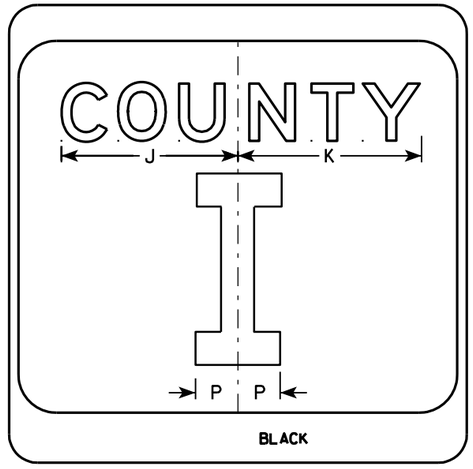
DATE 08/23/05 PLATE NO. M1-1.8

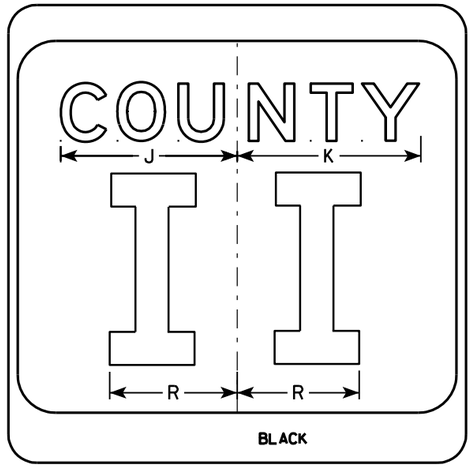
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 200	E



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

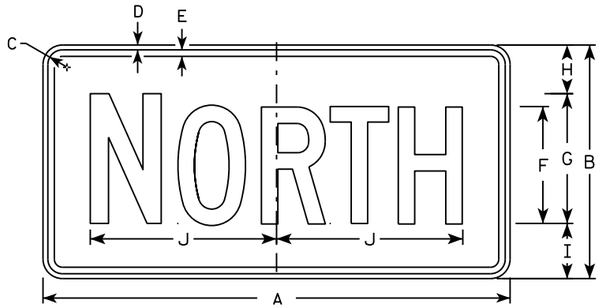
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

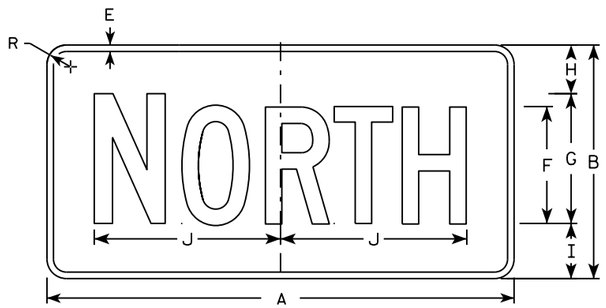
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 201 | E



M3-1
MM3-1
MP3-1



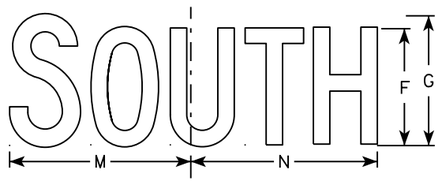
MB3-1
MK3-1
MN3-1



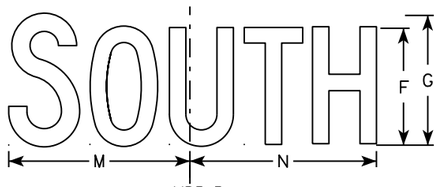
M3-2
MM3-2
MP3-2



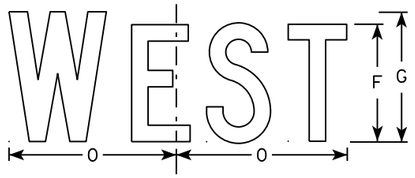
MB3-2
MK3-2
MN3-2



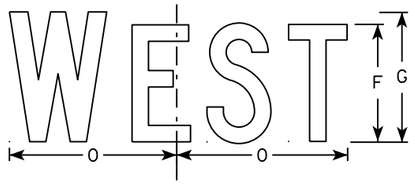
M3-3
MM3-3
MP3-3



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

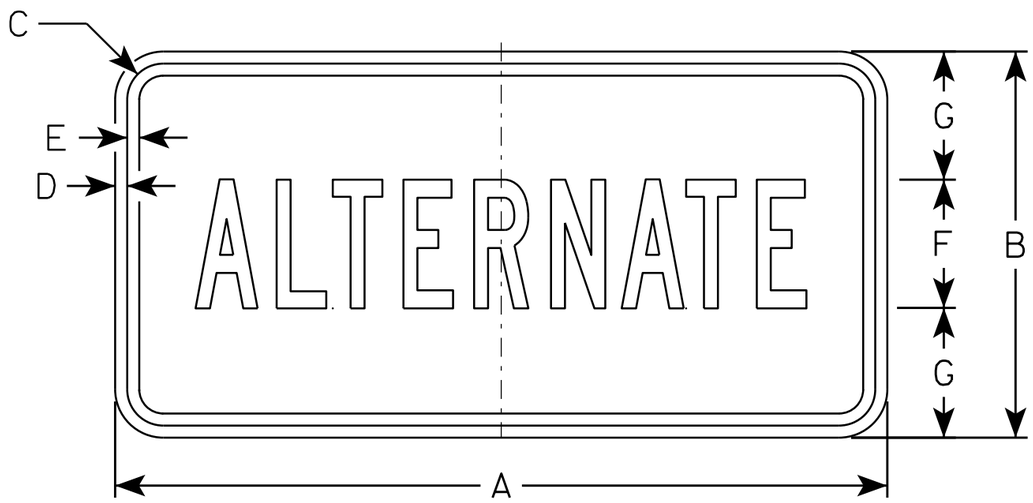
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

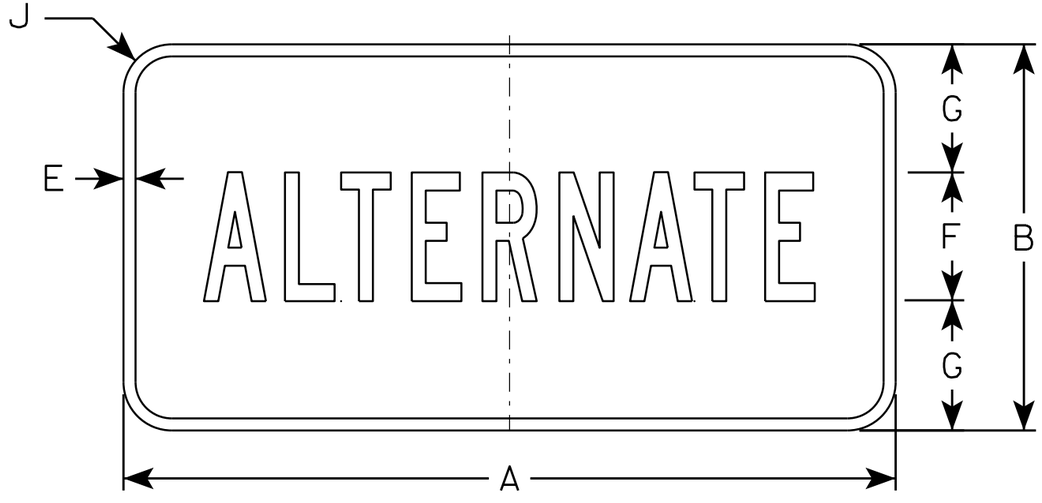
DATE 10/15/15 PLATE NO M3-1.14

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 : $$ platuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-1
M04-1



MB4-1

NOTES

1. Sign is Type II - Type H except as Shown
2. Color:
   Background - See Note 5
   Message - See note 5
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-1 Background - White
   Message - Black

   MB4-1 Background - Blue
   Message - White

   M04-1 Background - Orange - Type F
   Message - Black

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	4	4	9 3/4	9 1/2	1 1/2																	2.00
3	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
4	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
5	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5

STANDARD SIGN
M4-1

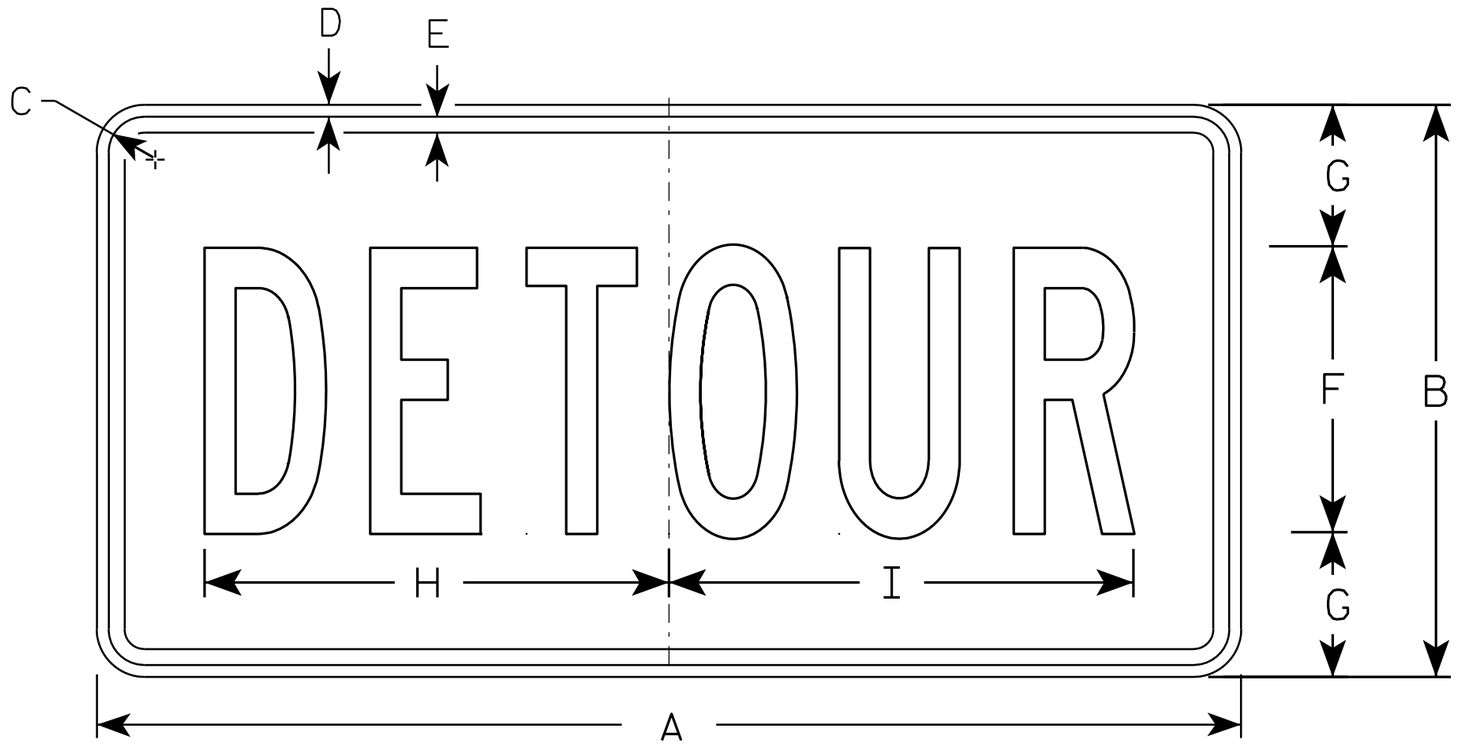
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/30/14 PLATE 14-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M41.DGN PLOT DATE : 30-JUN-2014 15:38 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.708937:1.000000
WISDOT/CADDS SHEET 42



M4-8

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 - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

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

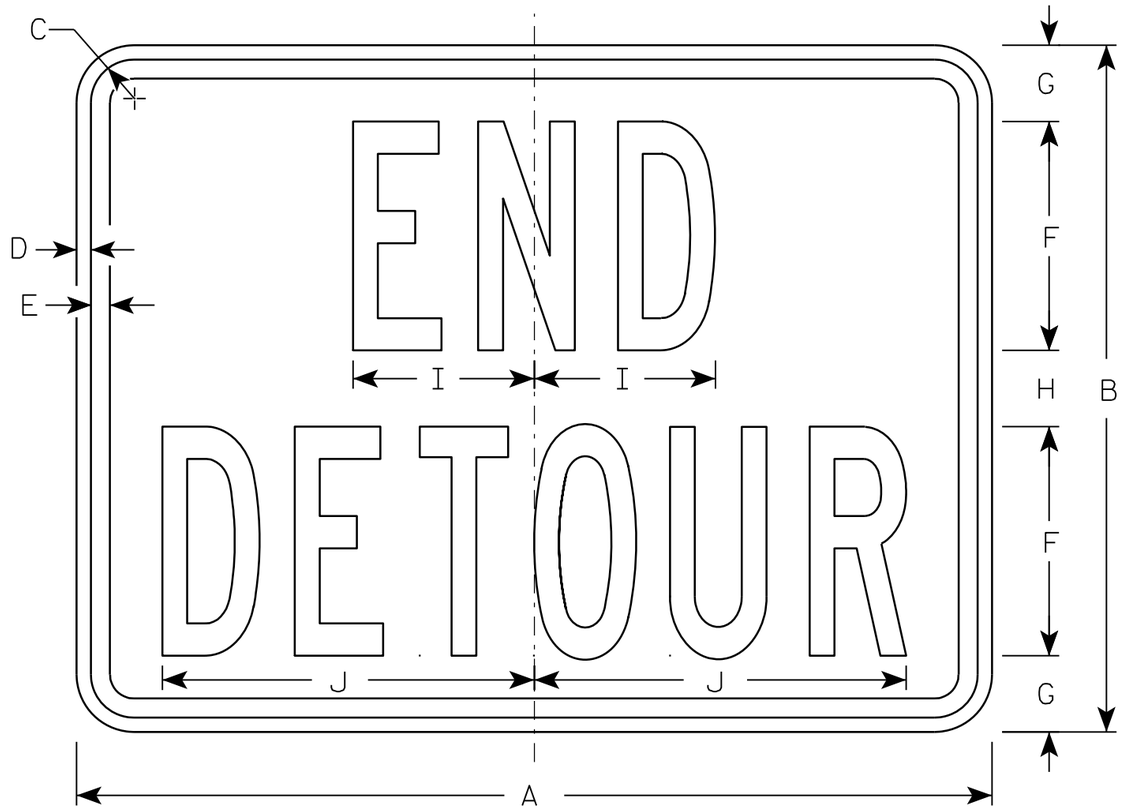
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 204	E



M4-8A

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 - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

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

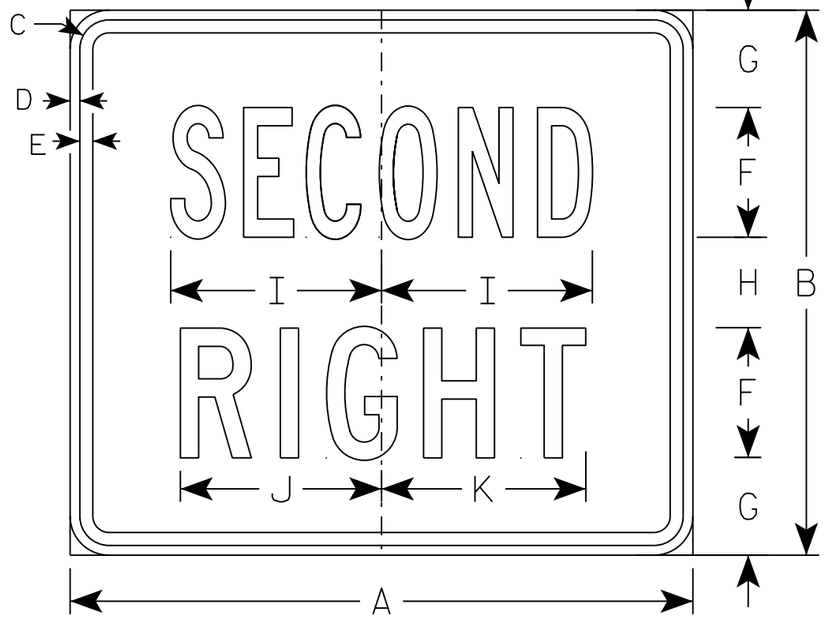
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

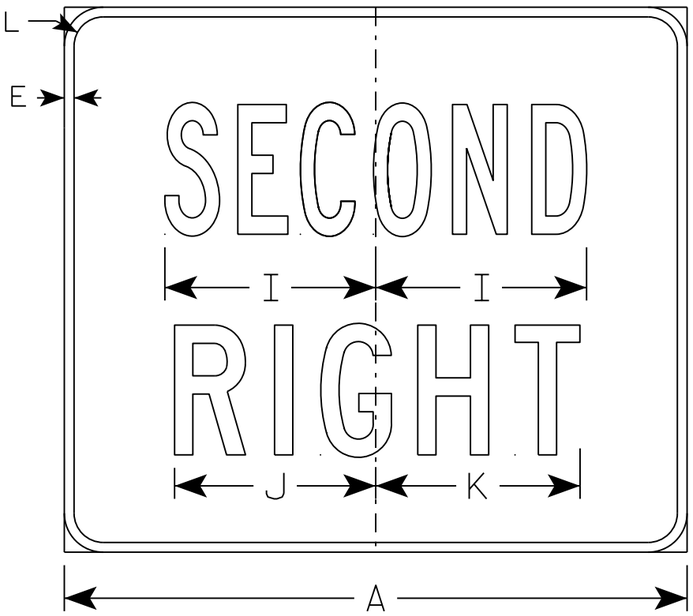
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

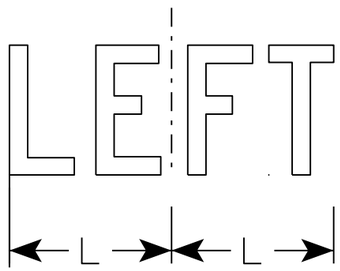
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 205	E



M4-22R
MM4-22R
M04-22R
MP4-22R



MB4-22R
MK4-22R
MN4-22R
MR4-22R



M4-22L
MB4-22L
MK4-22L
MM4-22L
MN4-22L
M04-22L
MP4-22L
MR4-22L

NOTES

1. Sign is Type II - Type H except as Shown
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-22 Background - White
   Message - Black
   MB4-22 Background - Blue
   Message - White
   MK4-22 Background - Green
   Message - White
   MM4-22 Background - White
   Message - Green
   MN4-22 Background - Brown
   Message - White
   M04-22 Background - Orange - Type F Reflective
   Message - Black
   MP4-22 Background - White
   Message - Blue
   MR4-22 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	21	1 1/8	3/8	1/2	5	3 3/4	3 1/2	8 1/8	7 3/4	7 7/8	1 1/2															3.5
3	36	30	1 5/8	5/8	3/4	8	4 3/4	4 1/2	13 1/8	12 5/8	12 1/2	1 7/8															7.5
4																											
5																											

STANDARD SIGN
M4-22

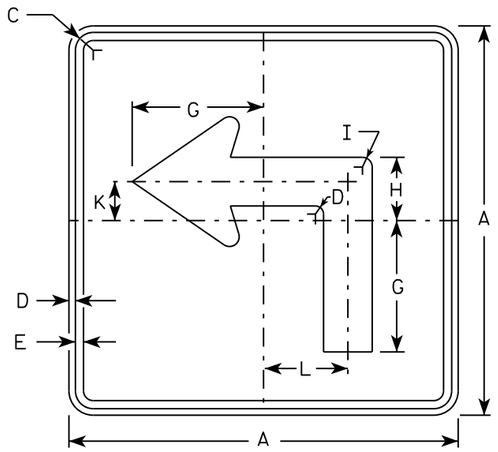
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

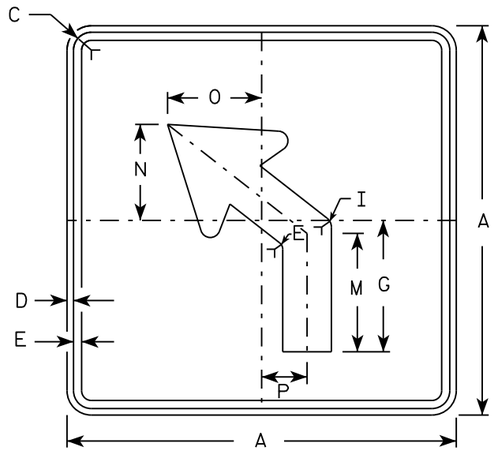
DATE 10/15/15 PLATE NO. M4-22.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

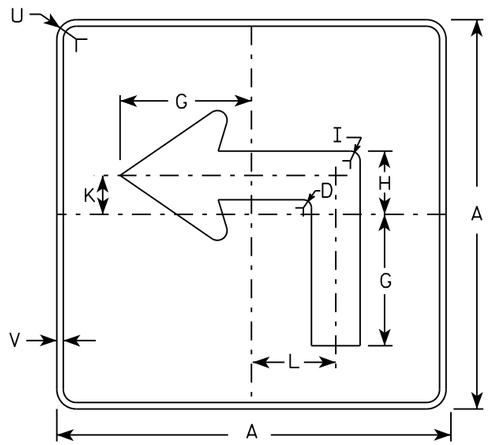
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M422.DGN PLOT DATE : 01-DEC-2015 18:04 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.837526:1.000000



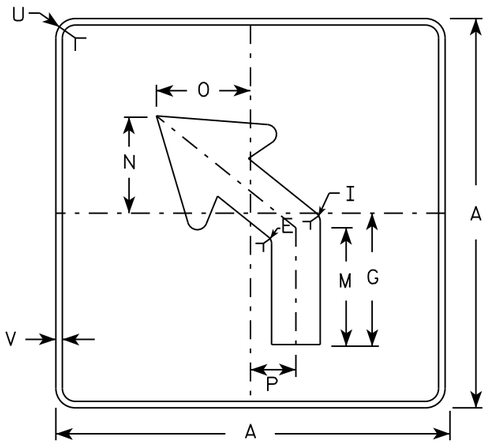
M5-1L
MM5-1L
MO5-1L
MP5-1L



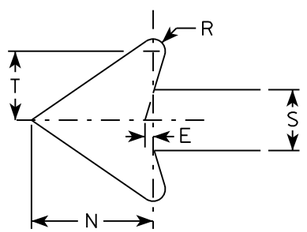
M5-2L
MM5-2L
MO5-2L
MP5-2L



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

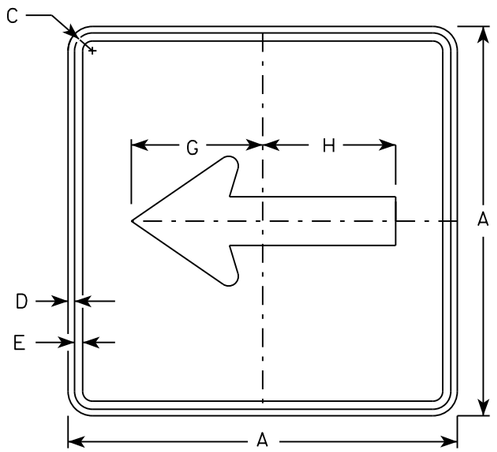
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

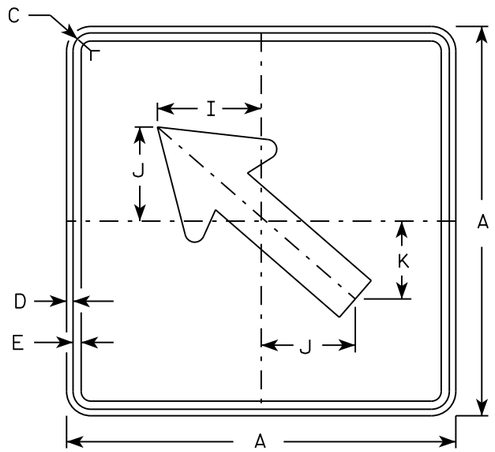
DATE 10/15/15 PLATE NO. M5-1.13

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



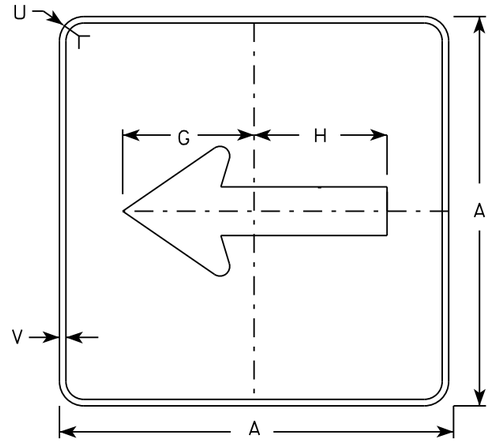
M6-1
MM6-1
MO6-1
MP6-1



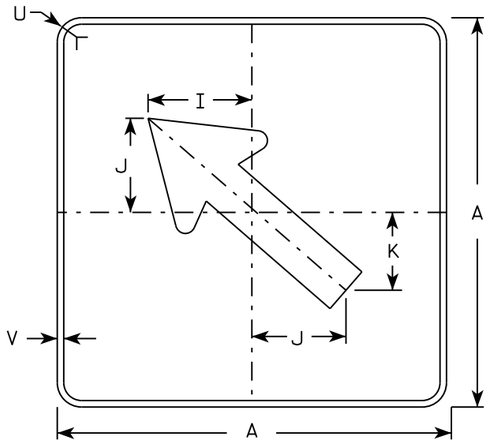
M6-2
MM6-2
MO6-2
MP6-2

NOTES

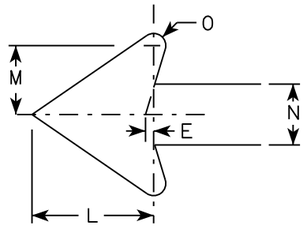
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - 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

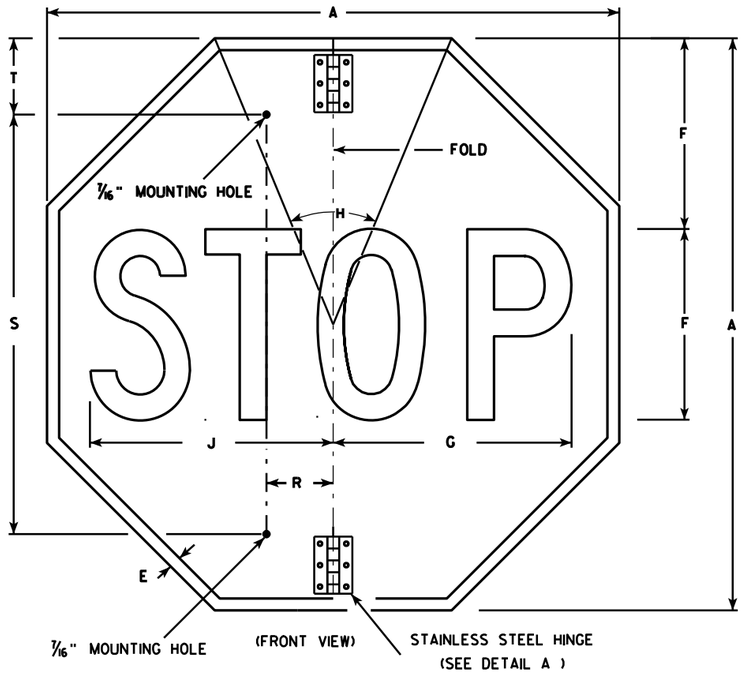
WISCONSIN DEPT OF TRANSPORTATION

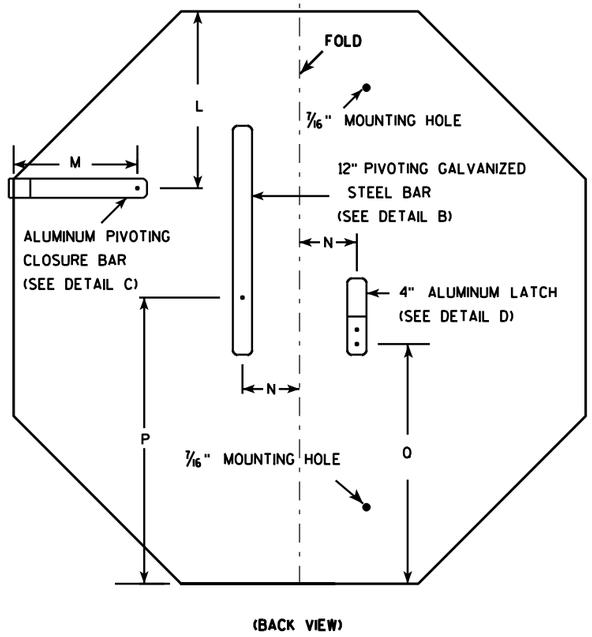
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATI 208 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

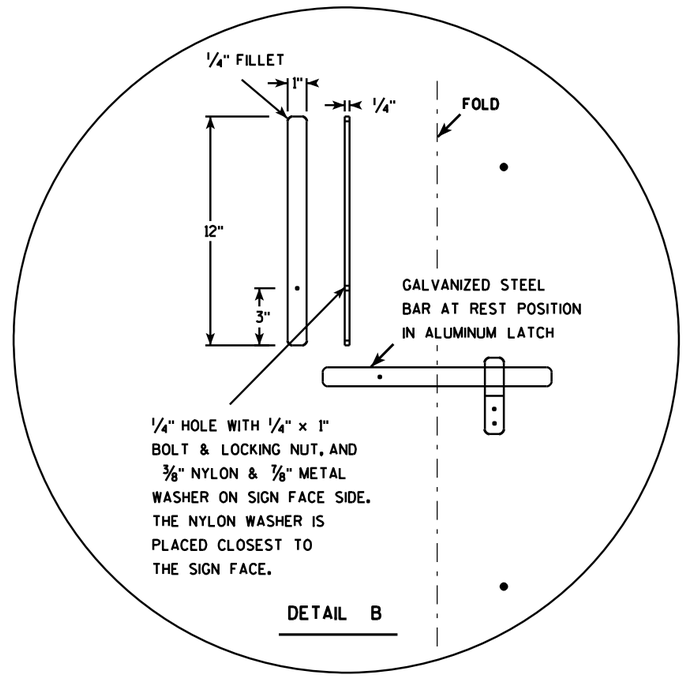
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 01-DEC-2015 17:57 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000

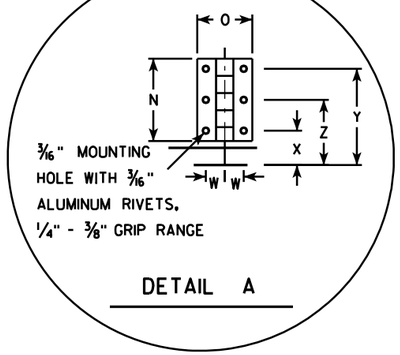


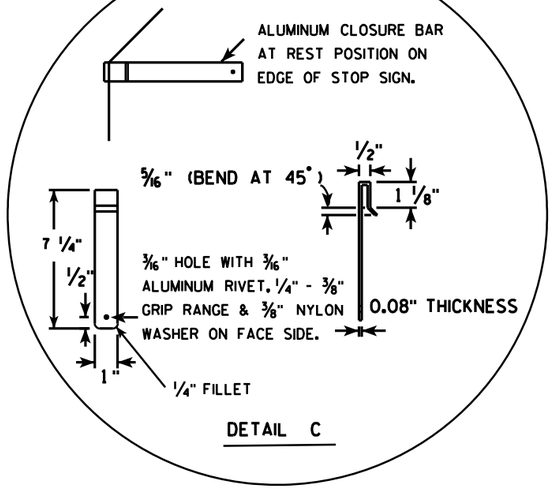


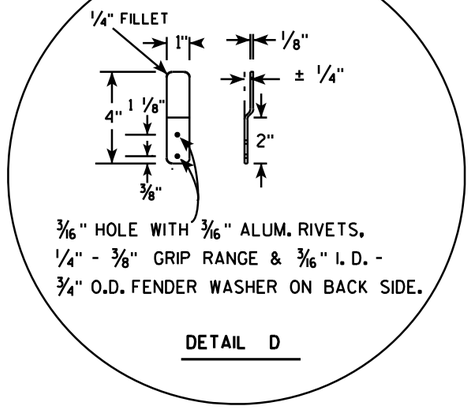
NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.









SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

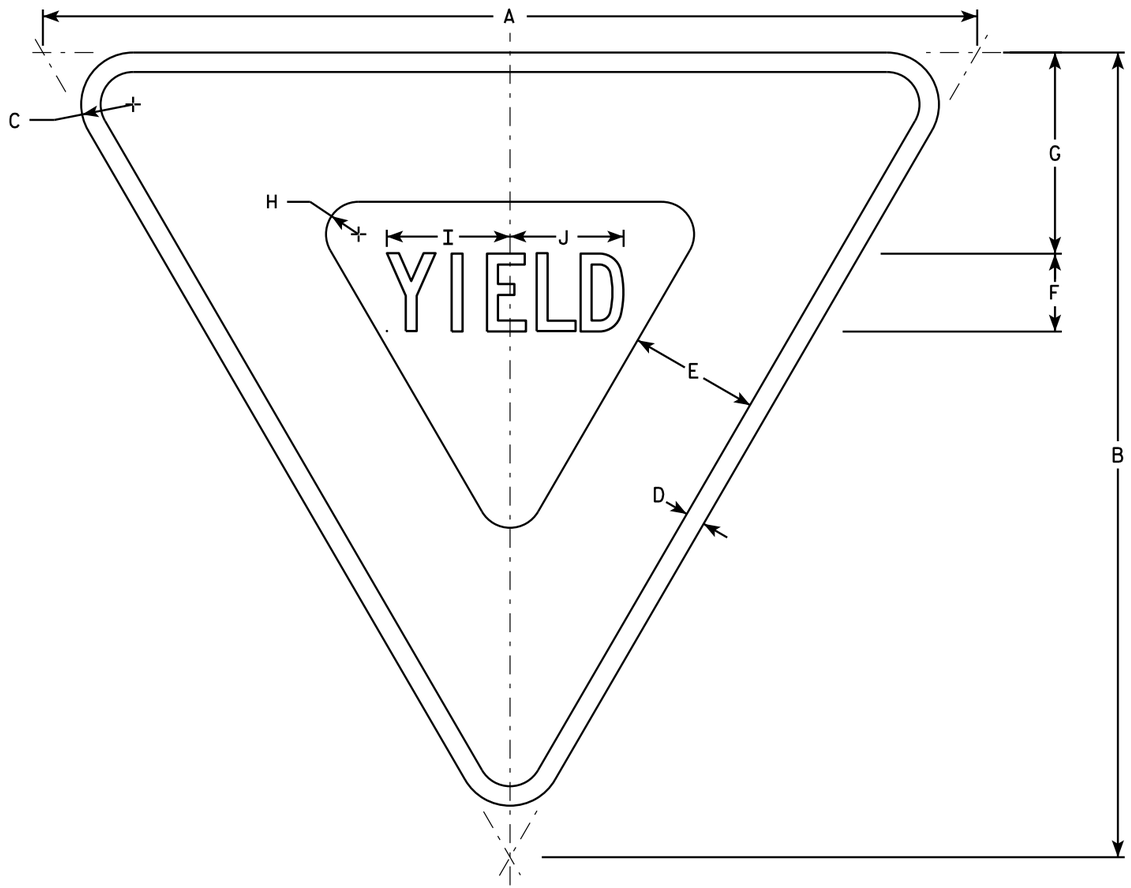
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 209 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R11F.DGN PLOT DATE : 02-DEC-2010 15:26 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 7.945391:1.000000

WISDOT/CADDS SHEET 42

7

7



R1-2

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 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. The border strip and word message are reflectorized red.

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	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

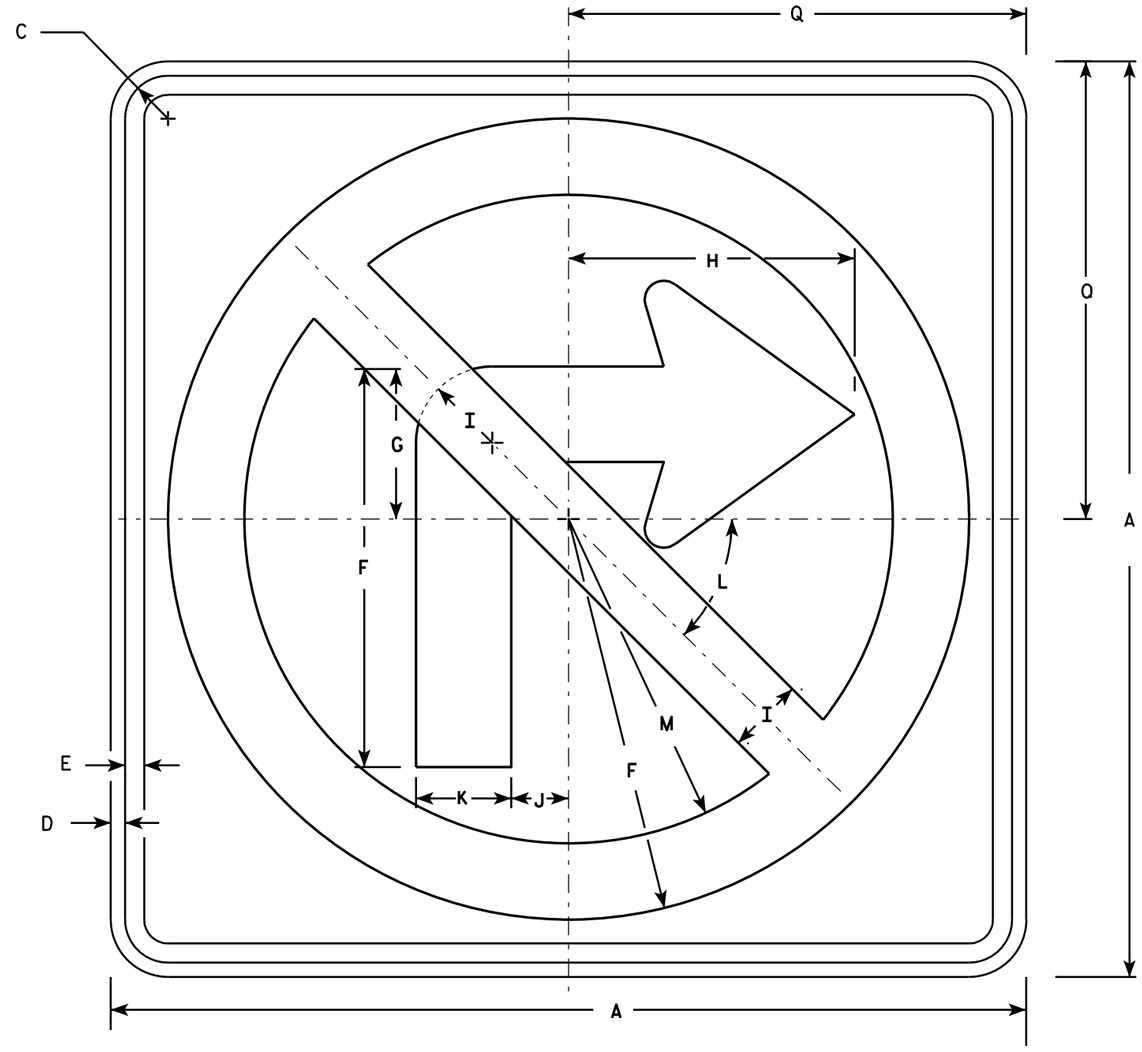
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE R1-2.12

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

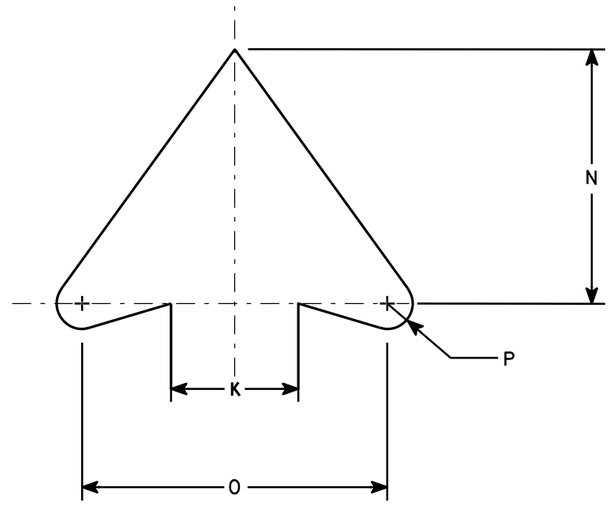
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



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

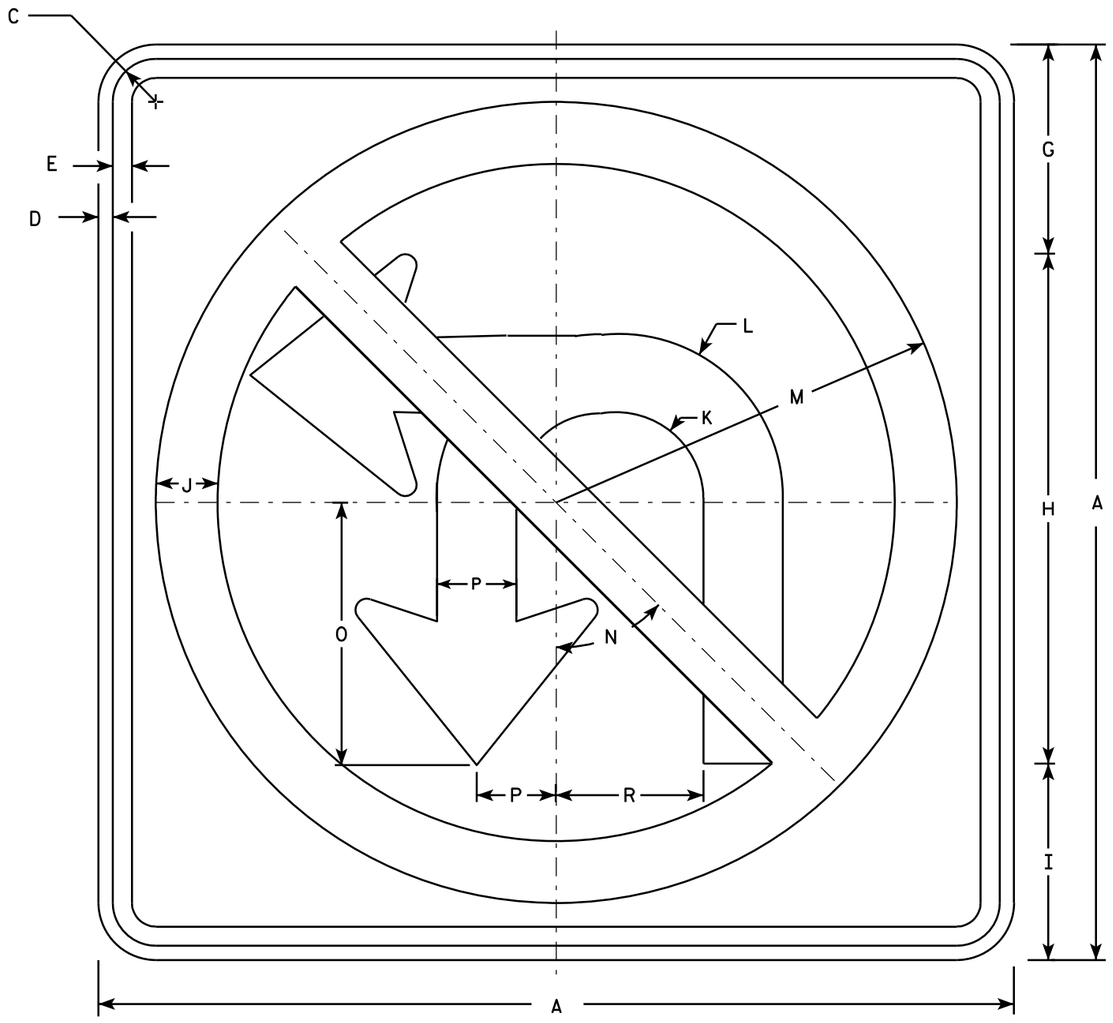
STANDARD SIGN
R3-1

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: 211	E



R3-18

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.

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	3/8	1/2		5 1/2	13 3/8	5 1/8	1 5/8	2 1/4	4 1/4	10 1/2	45°	6 7/8	2 1/8		3 7/8									4.0
2M	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45°	10 3/8	3 1/8		5 3/4									9.0
3	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
4	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
5	48		2 1/4	3/4	1		11	26 3/4	10 1/4	3 1/4	4 5/8	8 5/8	21	45°	13 3/4	4 1/8		7 3/4									16.0

STANDARD SIGN
R3-18

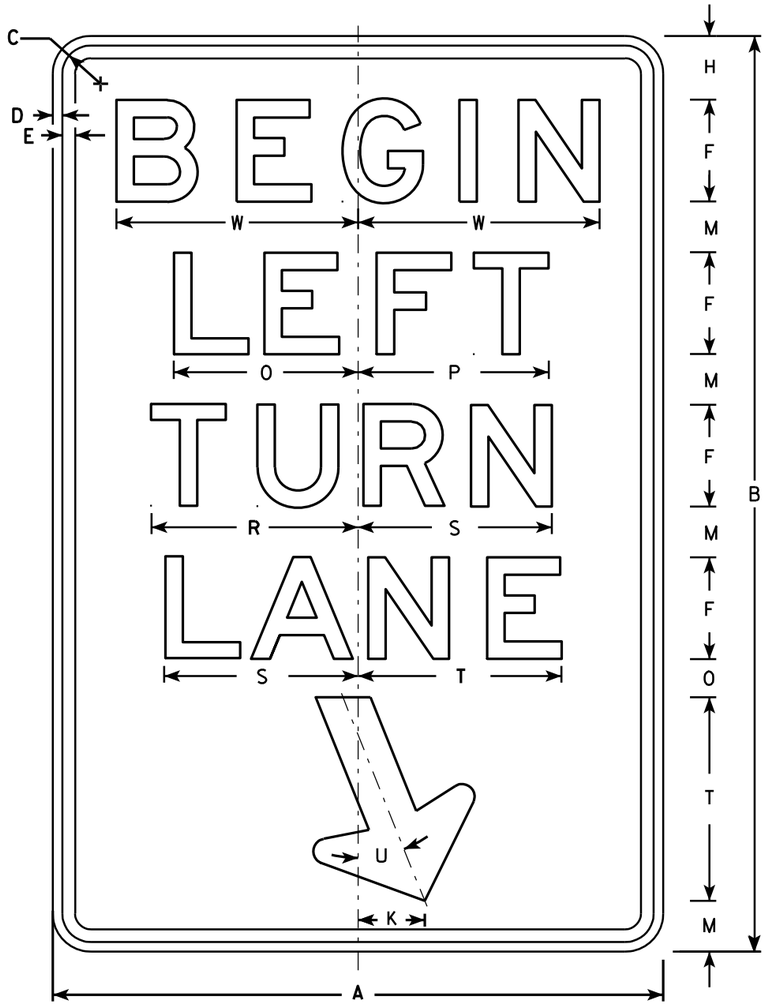
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/10 PLATE NO. R3-18.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 212 | E

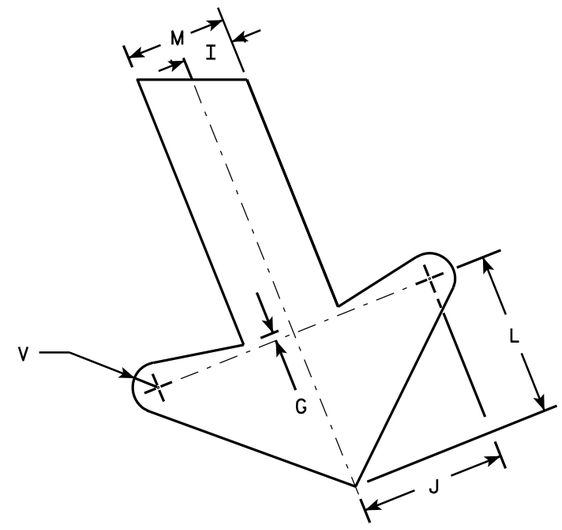
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R318.DGN PLOT DATE : 21-DEC-2010 10:58 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 5.959043:1.000000
WISDOT/CADDS SHEET 42



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																											

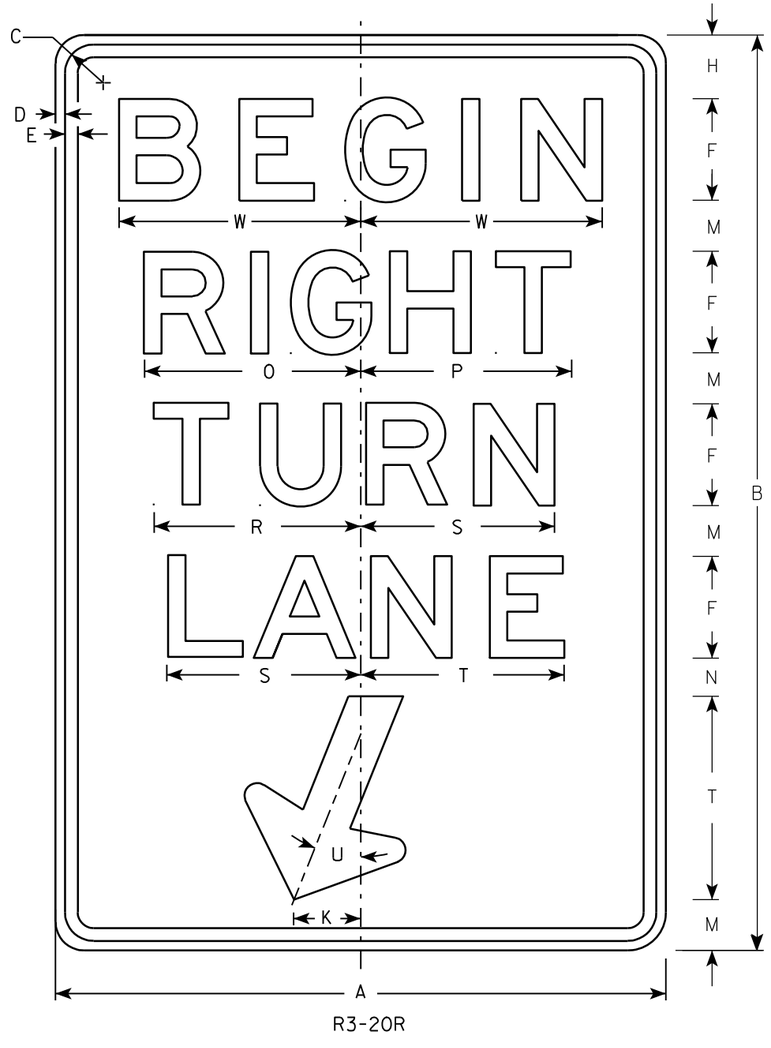
STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

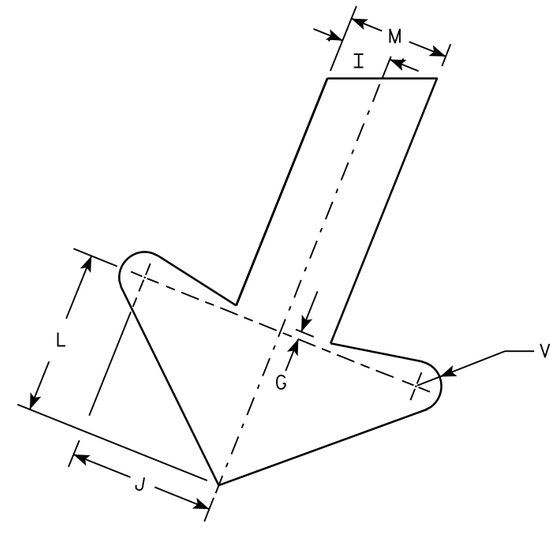
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 213 | E



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																											

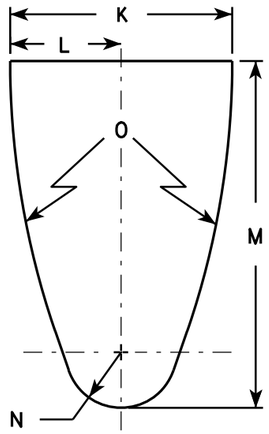
STANDARD SIGN
R3-20R

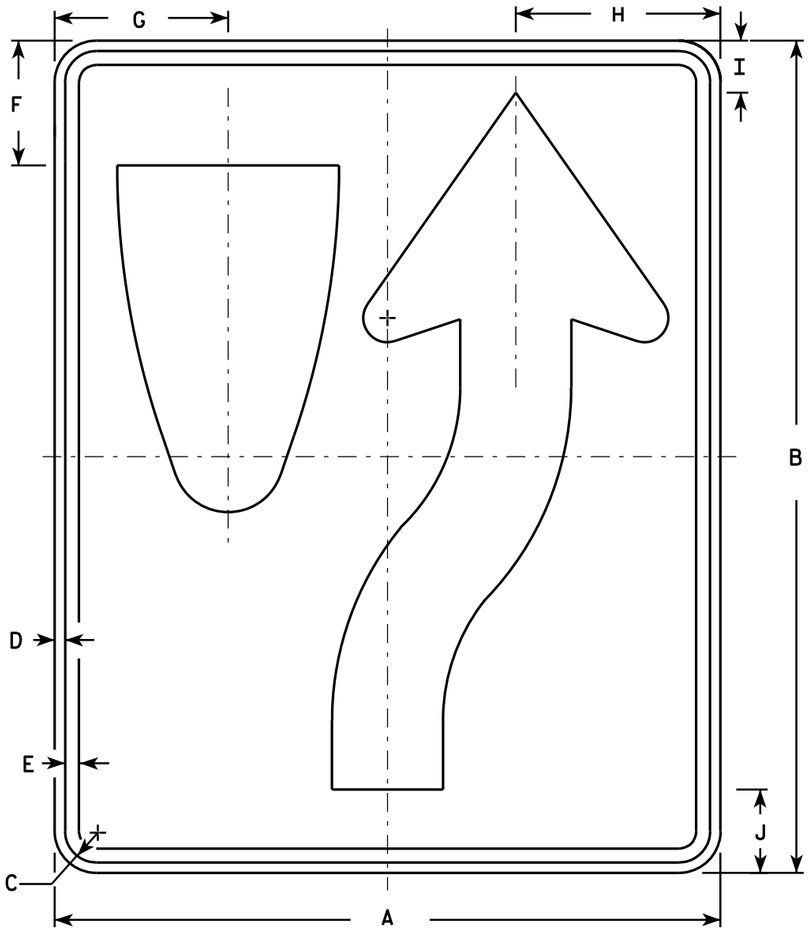
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20R.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 214 | E

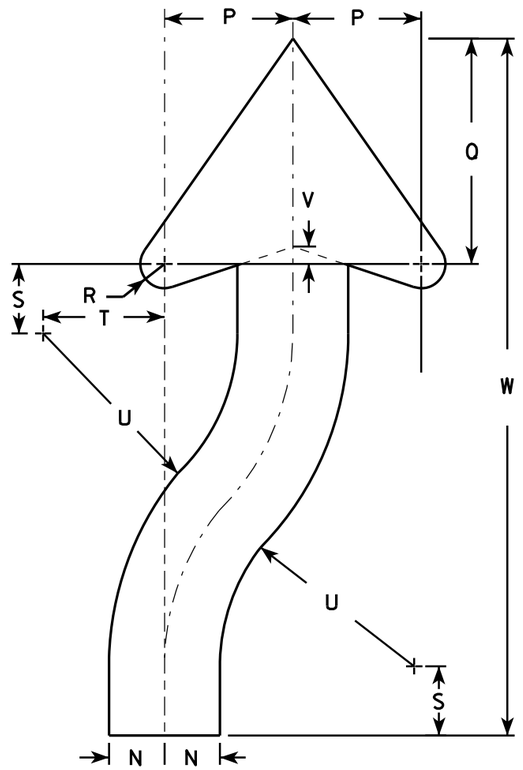




R4-7

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

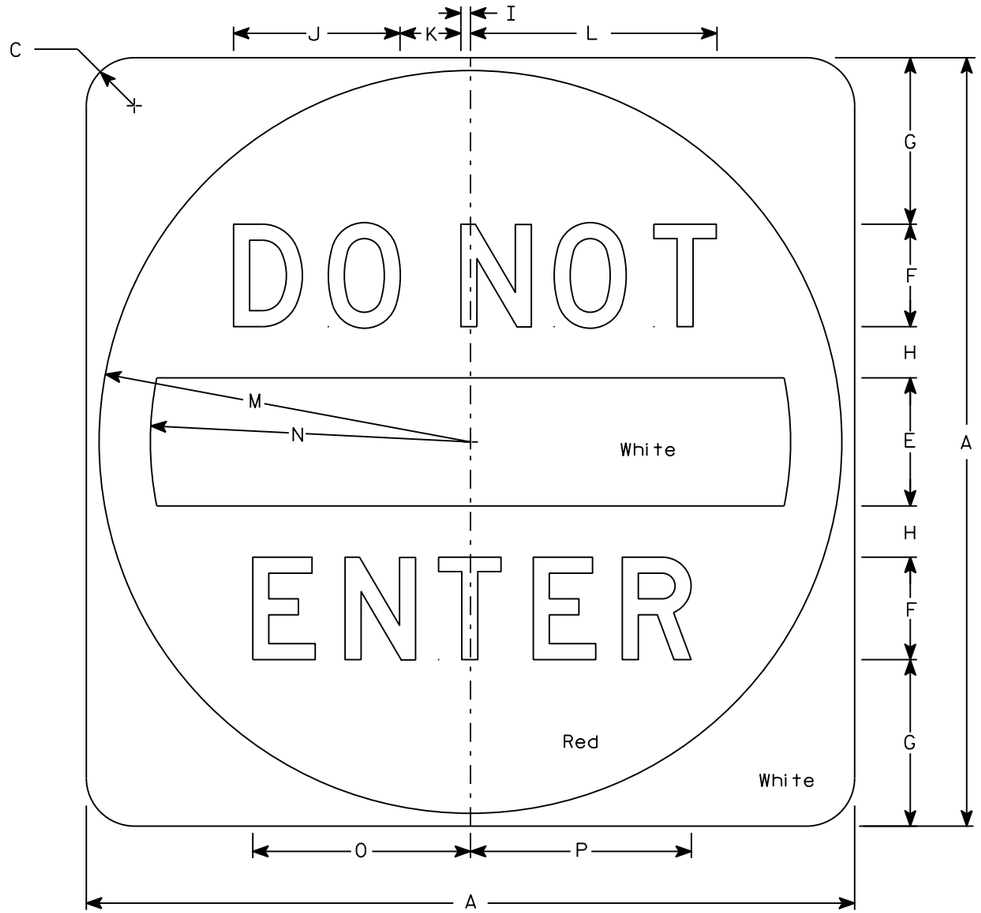
STANDARD SIGN
R4-7 & R4-8

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: 215	E



R5-1

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.25
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

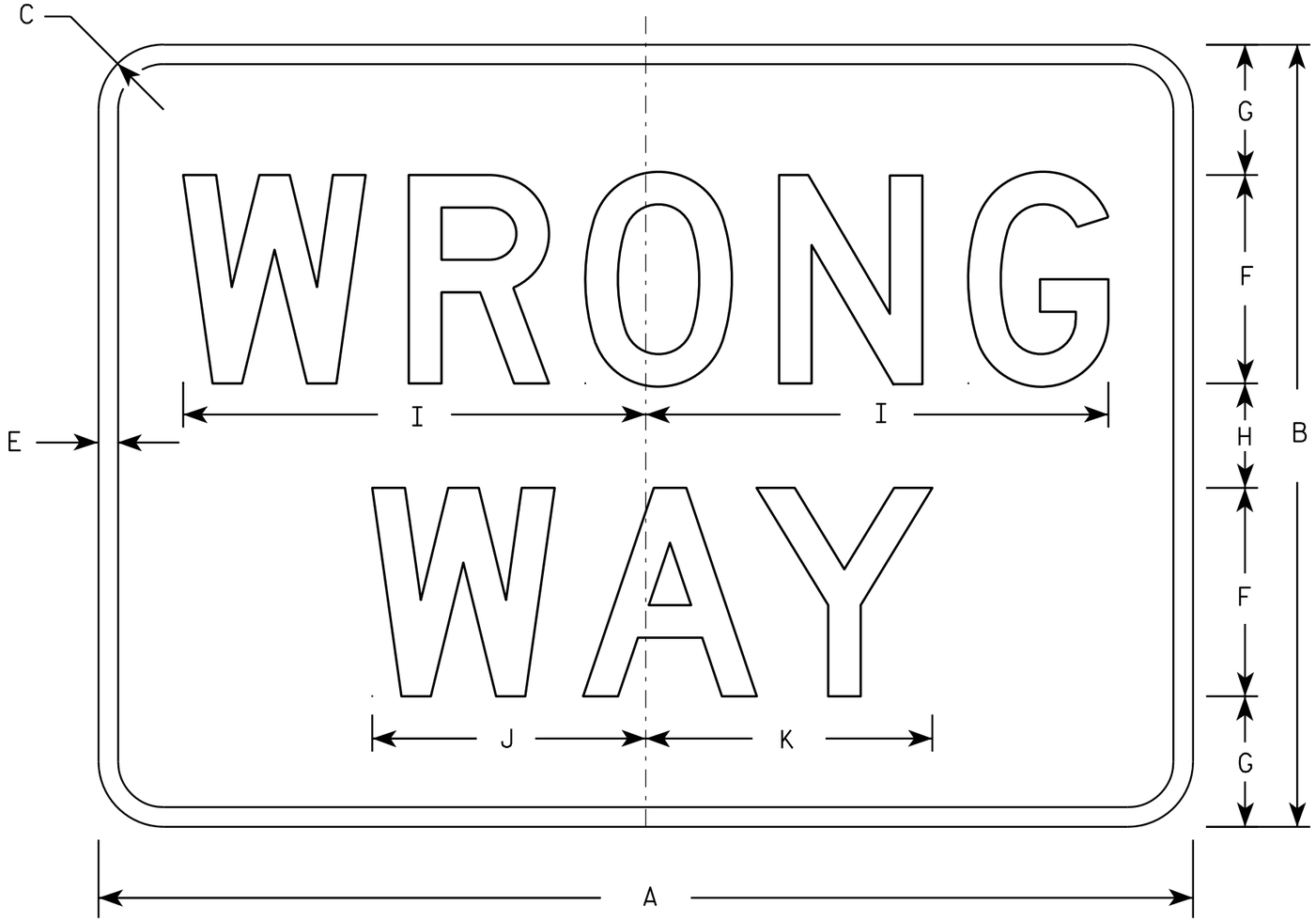
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 216 | E



R5-1A

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 - 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	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

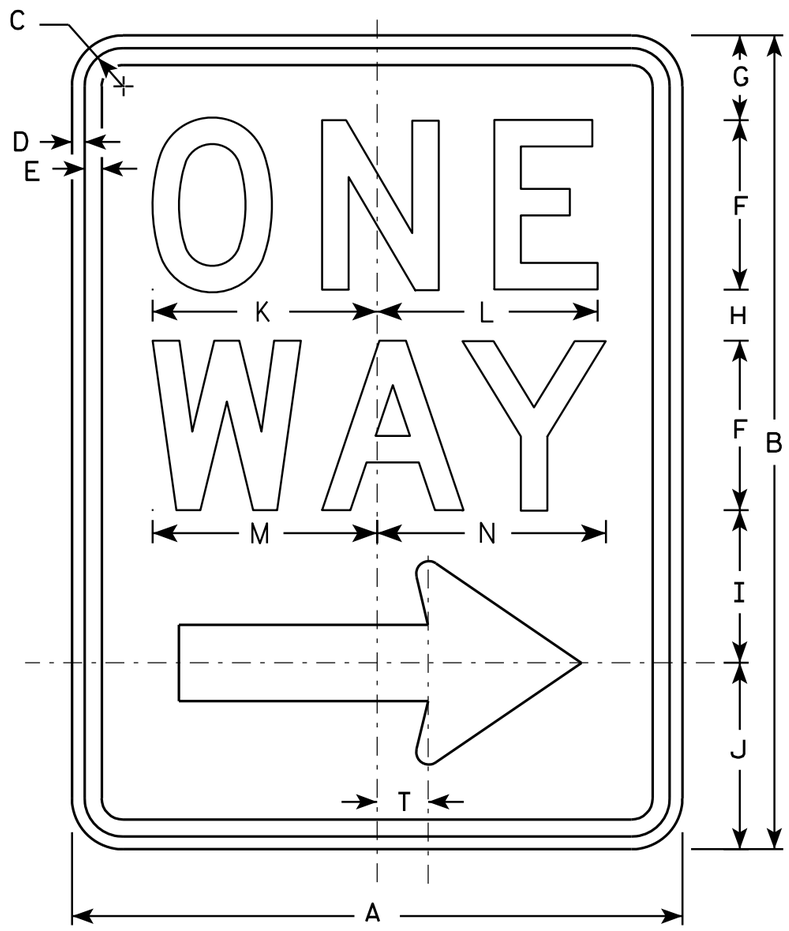
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

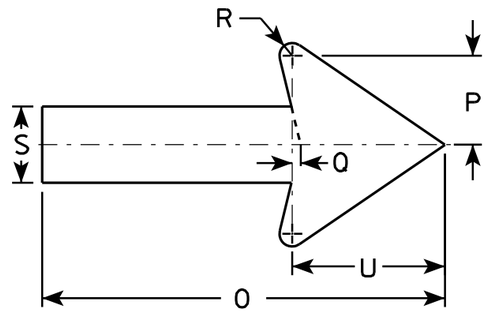
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 217 | E



R6-2R

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. R6-2L same as R6-2R except arrow points to the left.



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
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

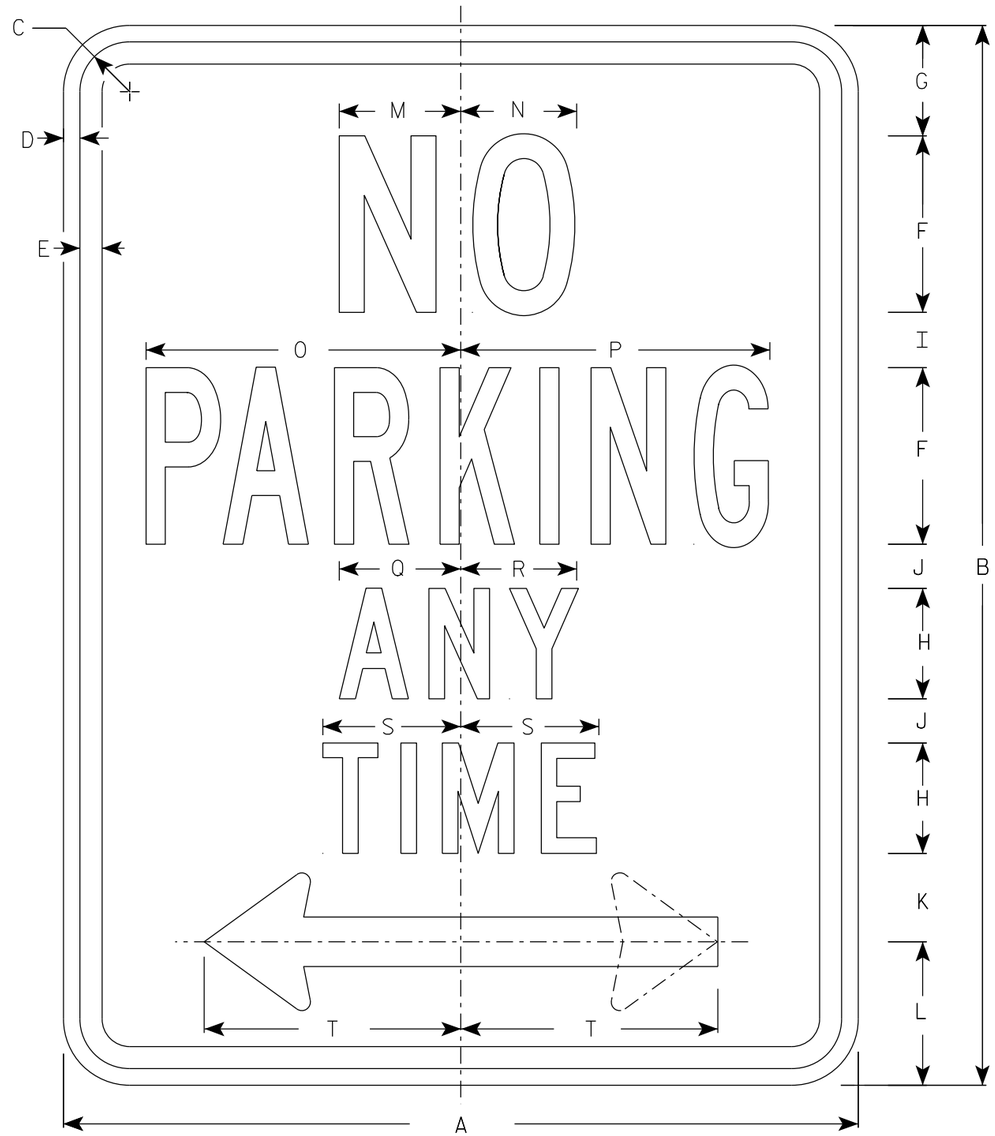
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

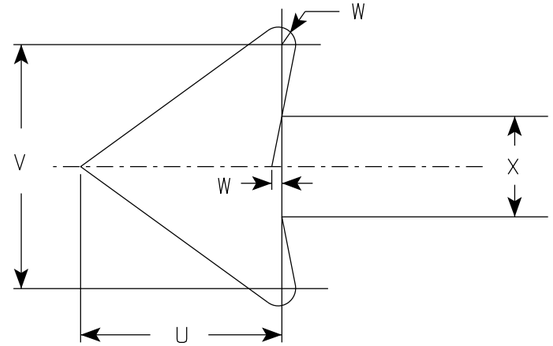
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 218	E



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																											

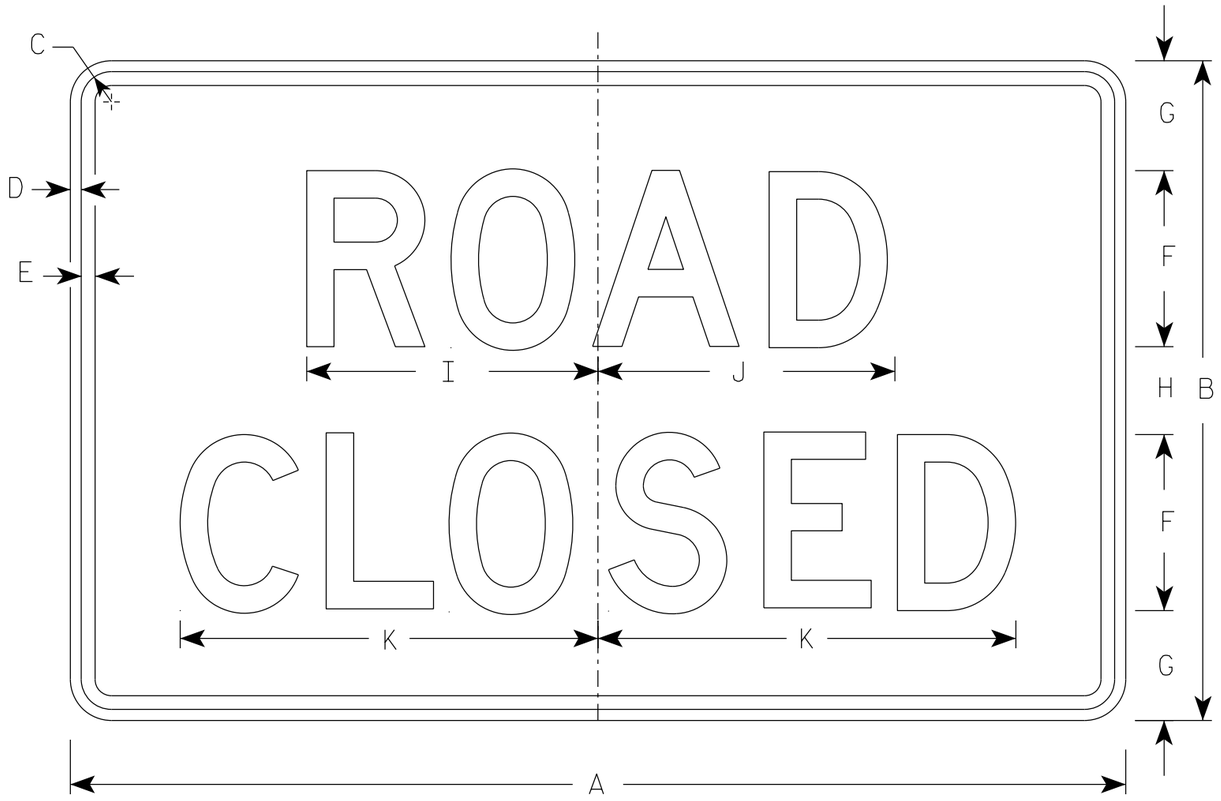
STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2021 PLATE NO. R7-1.10

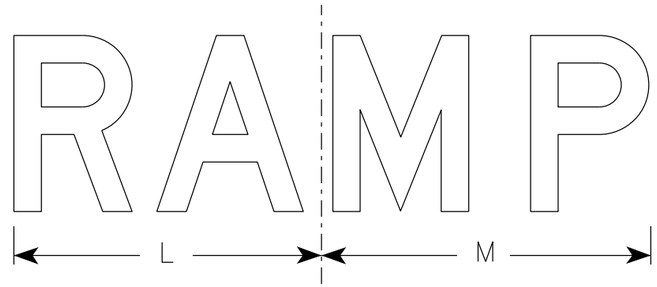
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 219 E



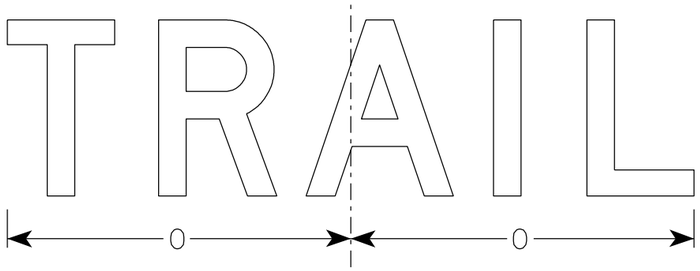
R11-2

NOTES

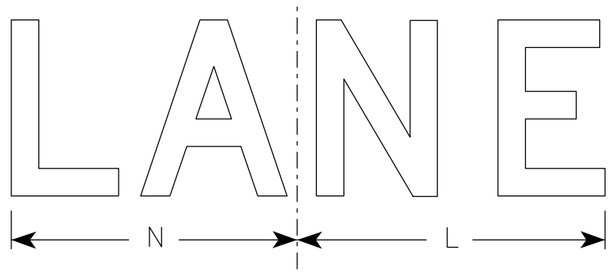
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the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

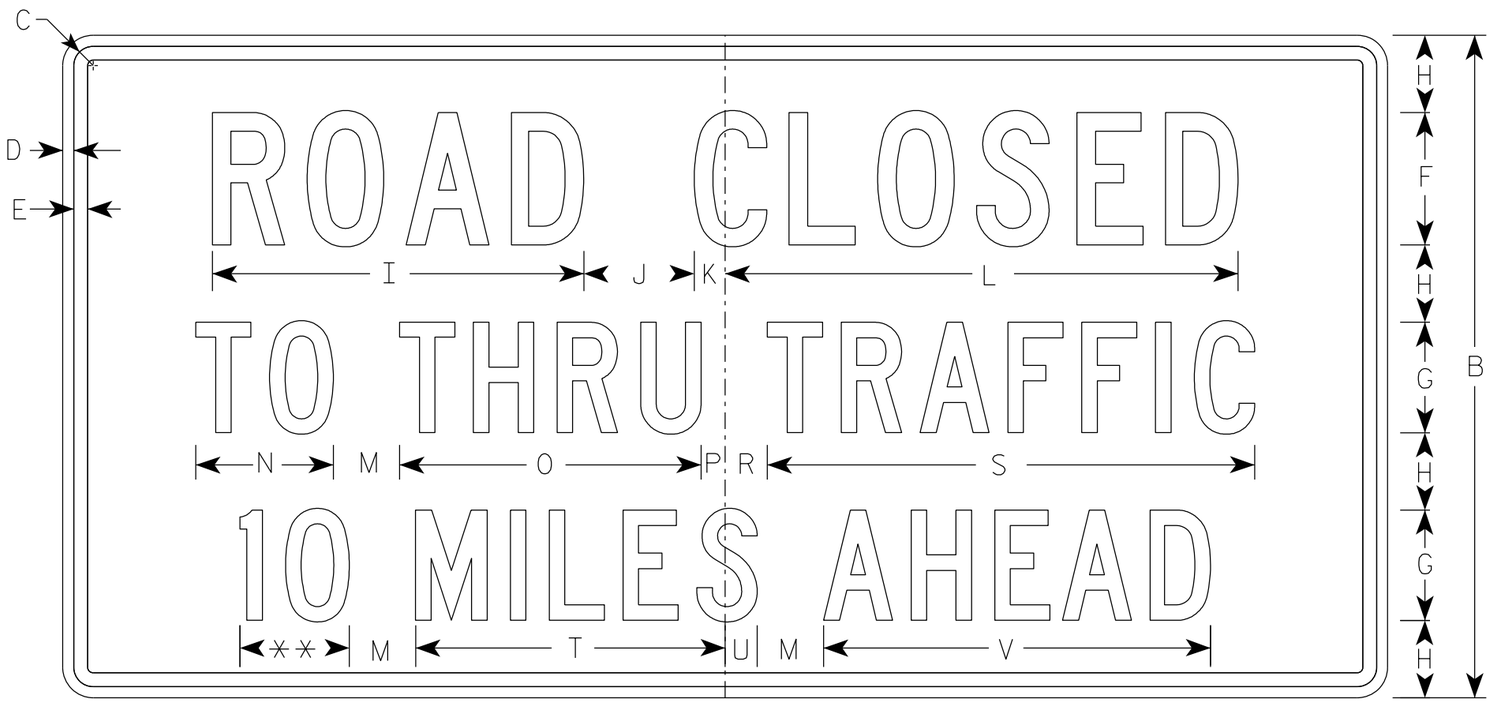
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2021 PLATE NO. R11-2.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 220	E

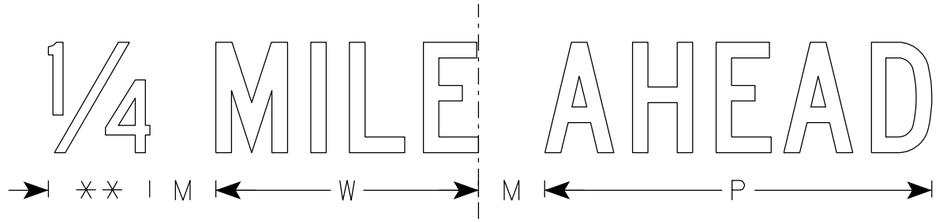
NOTES

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



R11-3

** See Note 5



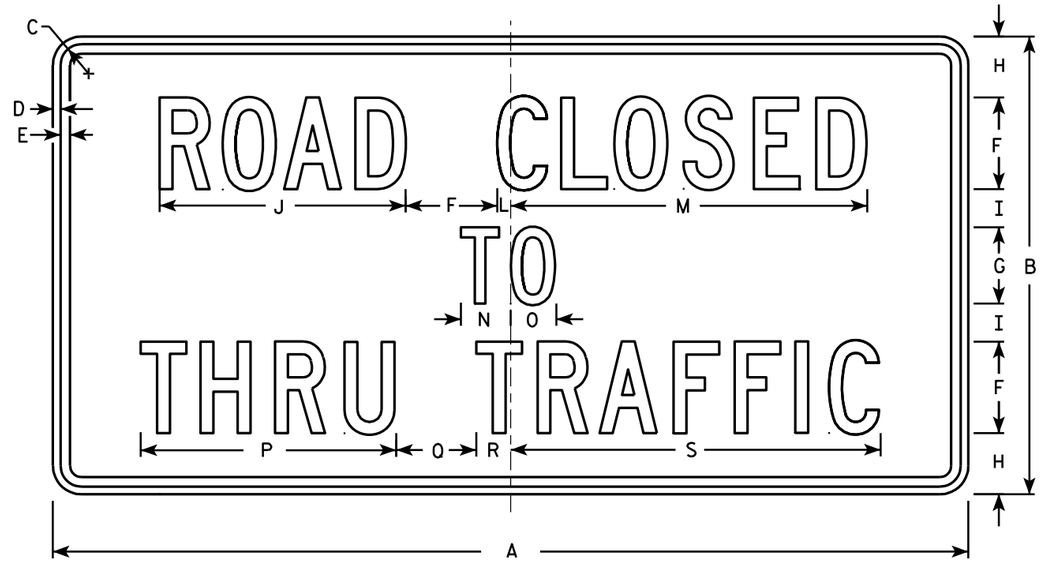
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/4	3/8	3/8	4	3	2	11 1/4	3	1 1/8	15 3/8	2	3 3/4	8 1/4	5/8		1 3/8	13 1/4	8 3/8	7/8	10 1/2	7 1/8				4.5
2S	60	30	1 3/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
2M	60	30	1 3/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
3																											
4																											
5																											

STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 6/14/2021 PLATE NO. R11-3.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 221	E



R11-4

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 - 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																											
2S	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

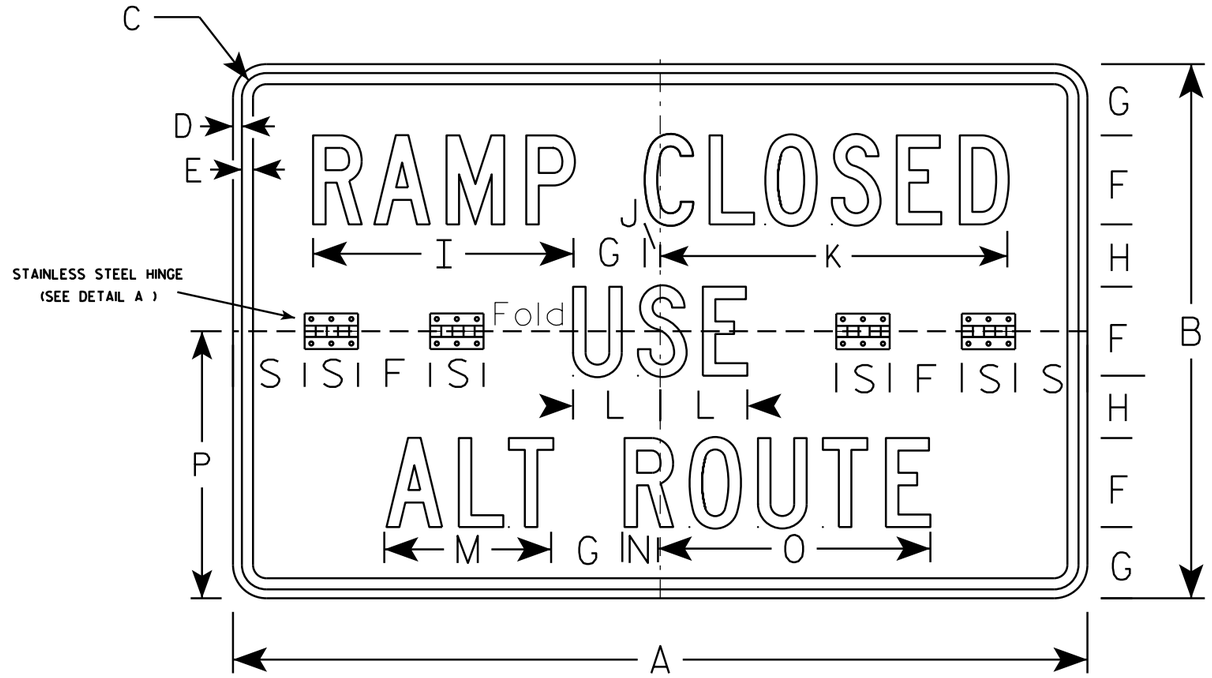
STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

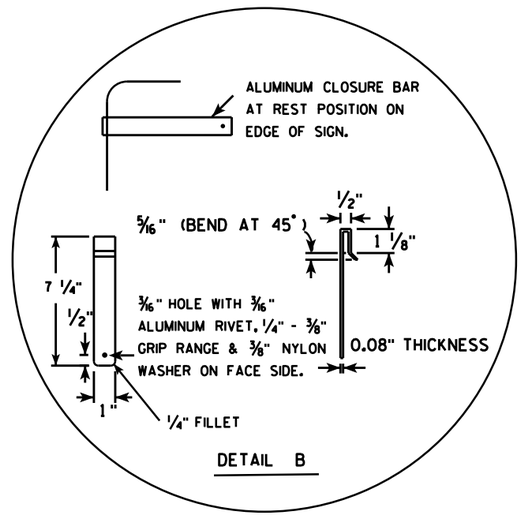
DATE 4/1/11 PLATE NO. R11-4.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 222 | E



R11-54F

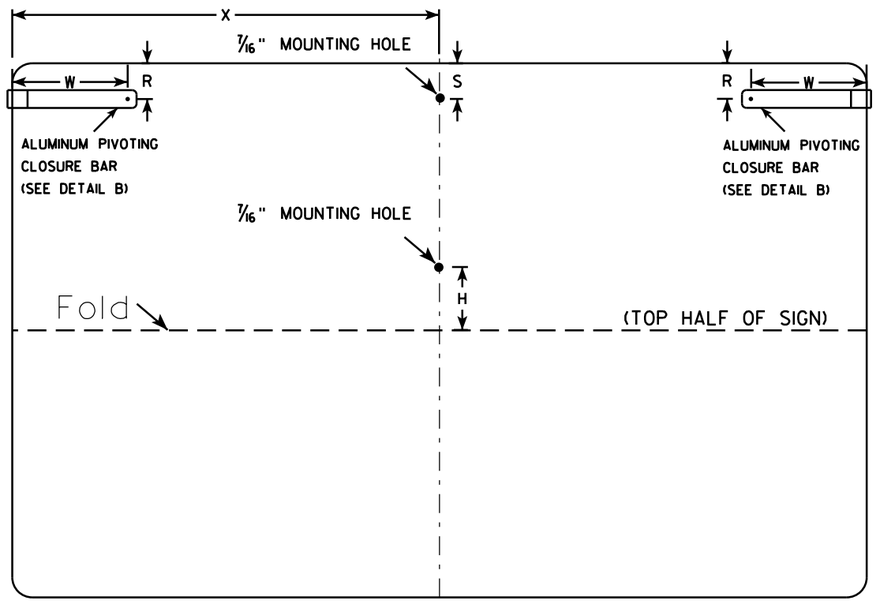
DETAIL A



DETAIL B

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - C
4. Sign Base Material shall be aluminum, corners and borders shall be rounded.
5. All hardware used on the folding sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.
6. Refer to plate A5-3A for sign blank layout.



(BACK VIEW)

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	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
2M	48	30	1 3/8	1/2	5/8	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
3																											
4																											
5																											

STANDARD SIGN
R11-54F

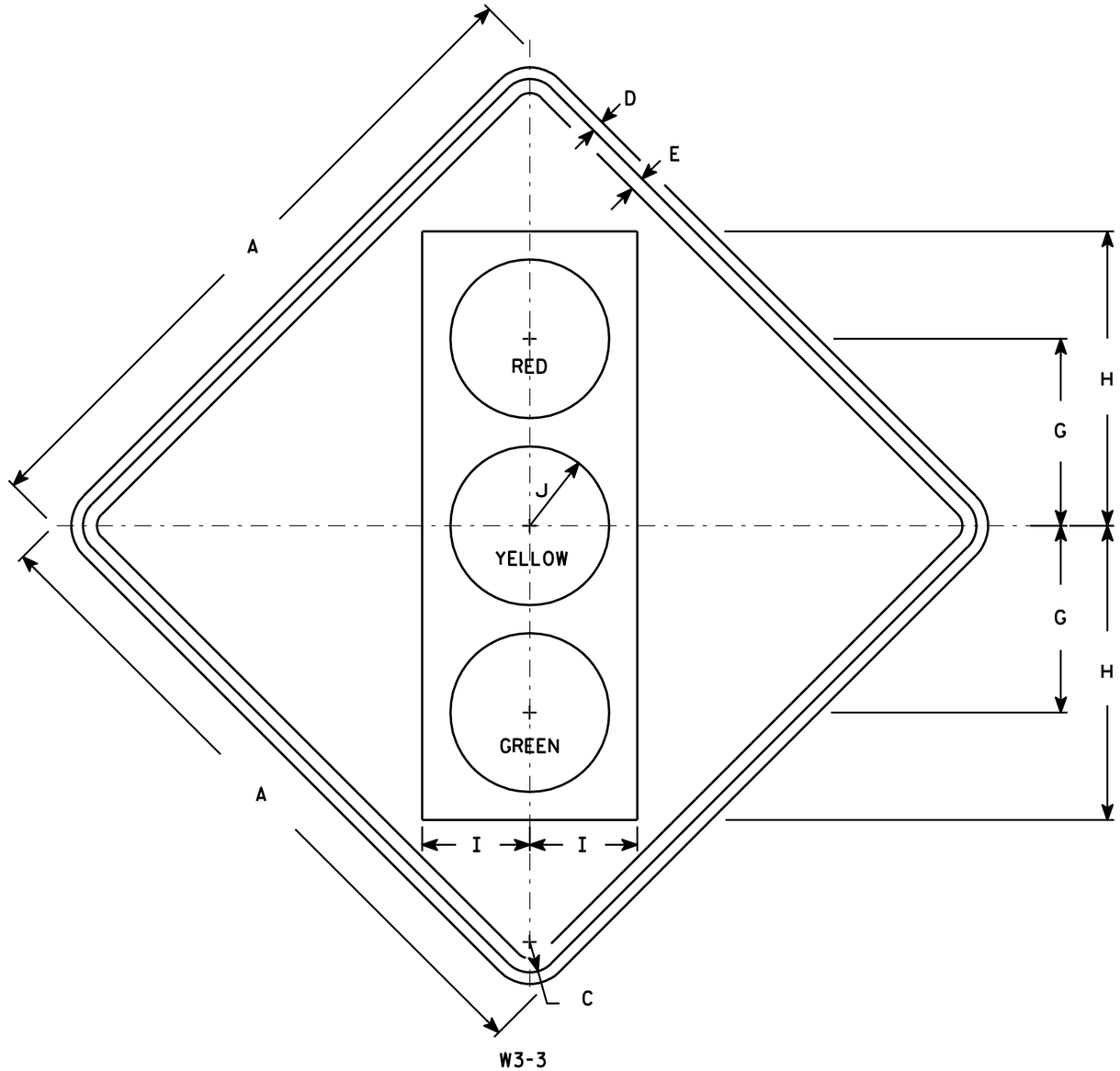
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/28/14 PLATE NO. R11-54F.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R1154F.DGN PLOT DATE : 28-MAY-2014 14:15 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 8.511110:1.000000
WISDOT/CADDS SHEET 42



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN
W3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

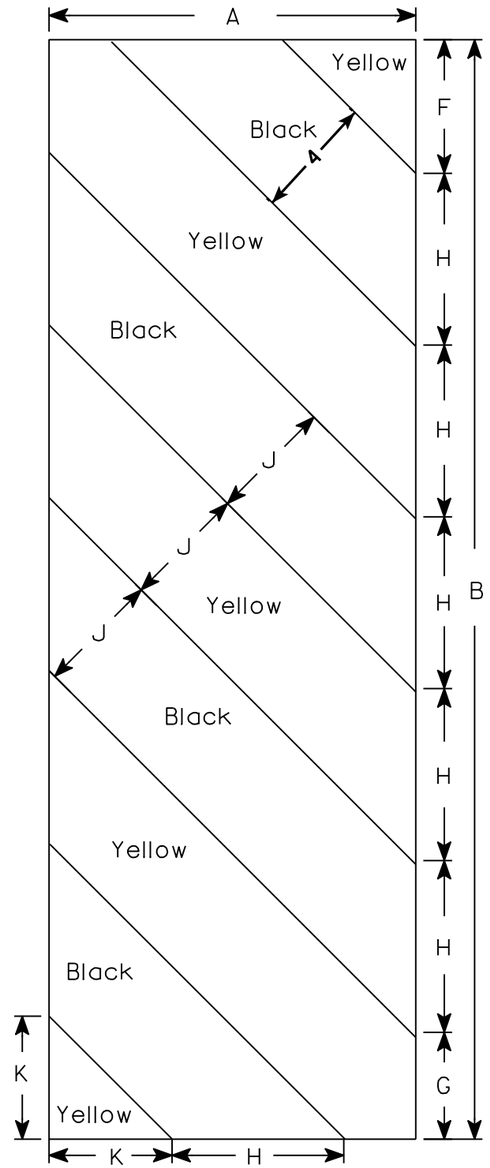
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 224 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W33.DGN PLOT DATE : 07-JUN-2010 13:07 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 7.448805:1.000000

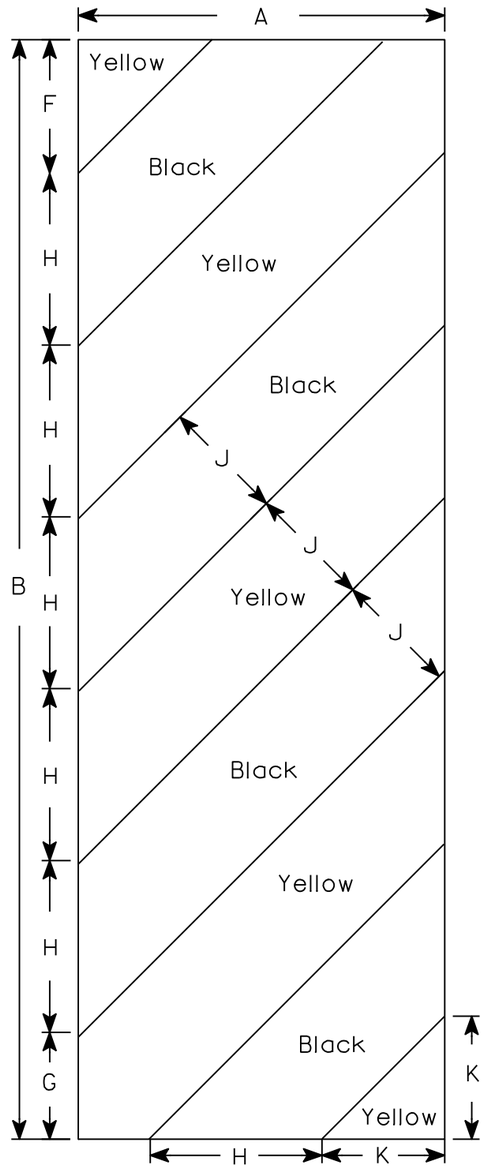
WISDOT/CADDS SHEET 42

7

7



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

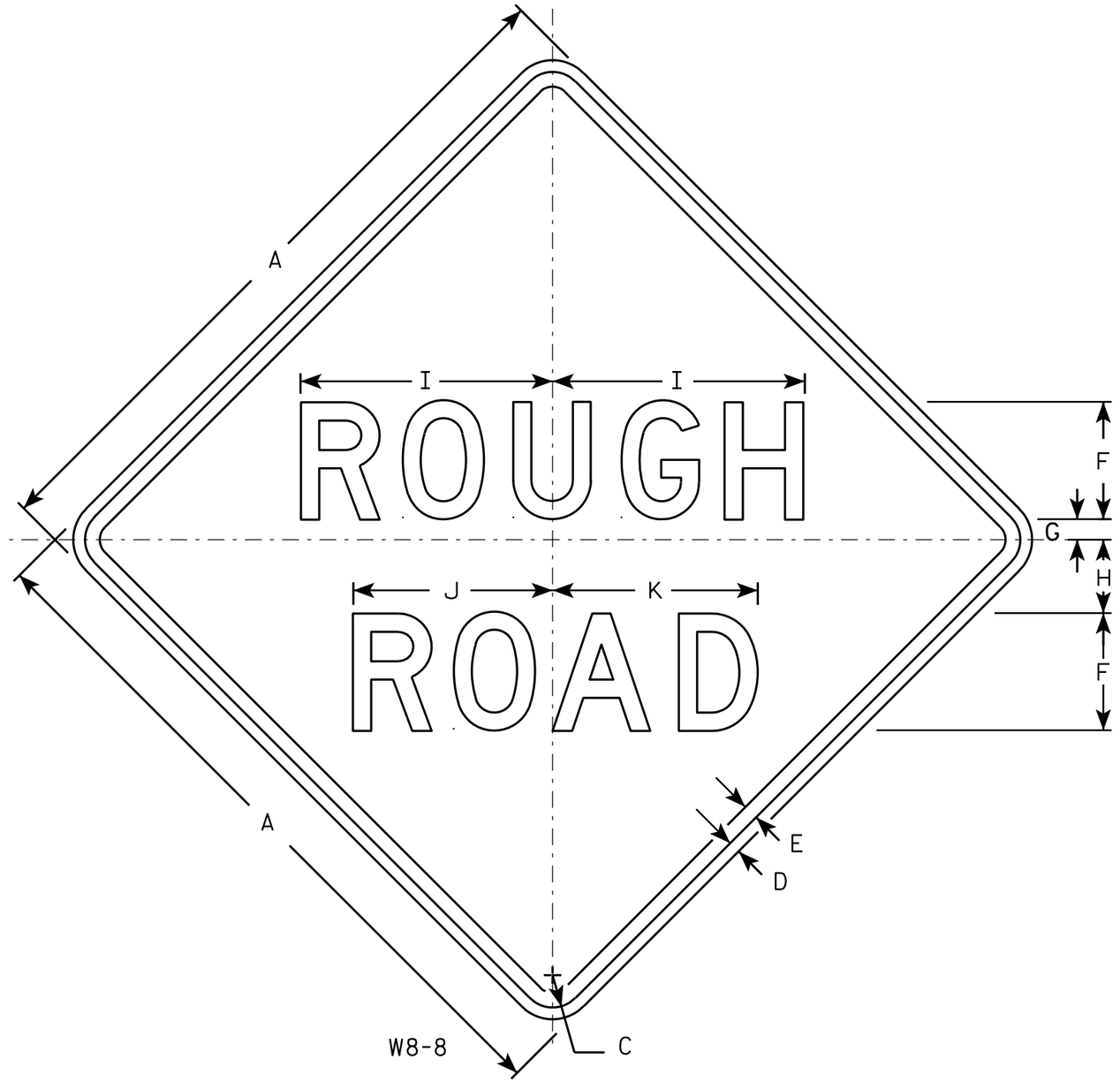
W5-52L & W5-52R

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: 225	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. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	4	3/4	3	8 5/8	6 3/4	7																4.0
2S	36		1 5/8	5/8	3/4	6	1	5	12 7/8	10 1/8	10 1/2																9.0
2M	36		1 5/8	5/8	3/4	6	1	5	12 7/8	10 1/8	10 1/2																9.0
3	36		1 5/8	5/8	3/4	6	1	5	12 7/8	10 1/8	10 1/2																9.0
4	36		1 5/8	5/8	3/4	6	1	5	12 7/8	10 1/8	10 1/2																9.0
5	48		2 1/4	3/4	1	8	1 1/2	6	17 1/8	13 1/2	14																16.0

STANDARD SIGN
W8-8

WISCONSIN DEPT OF TRANSPORTATION

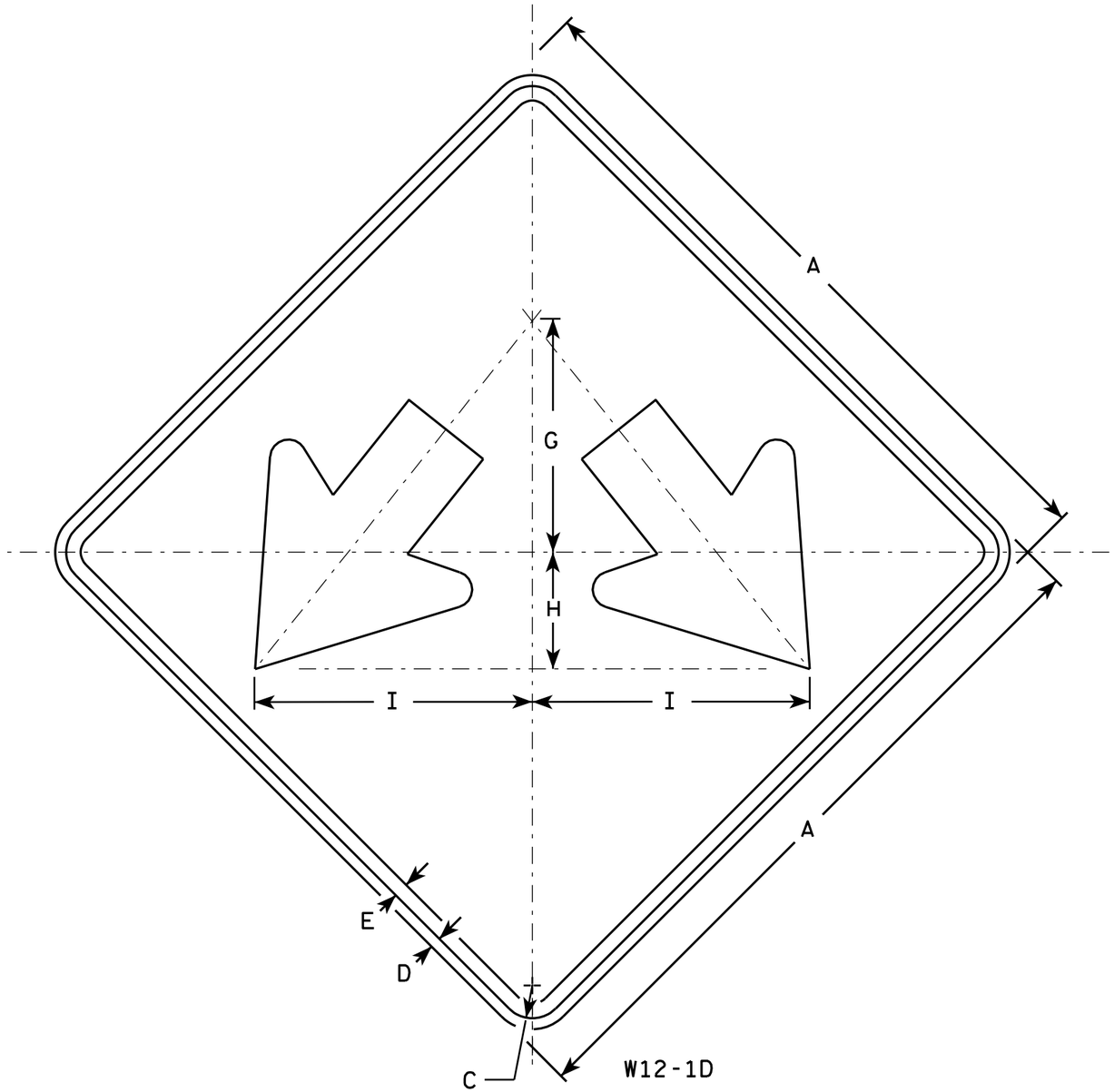
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/14/13 PLATE NO. W8-8.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 226 | E

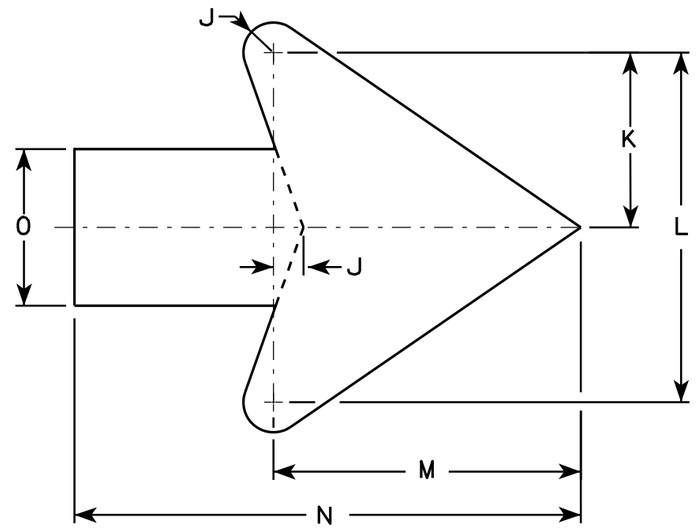
7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W88.DGN PLOT DATE : 14-MAR-2013 09:59 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.706180:1.000000
WISDOT/CADDS SHEET 42



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - 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

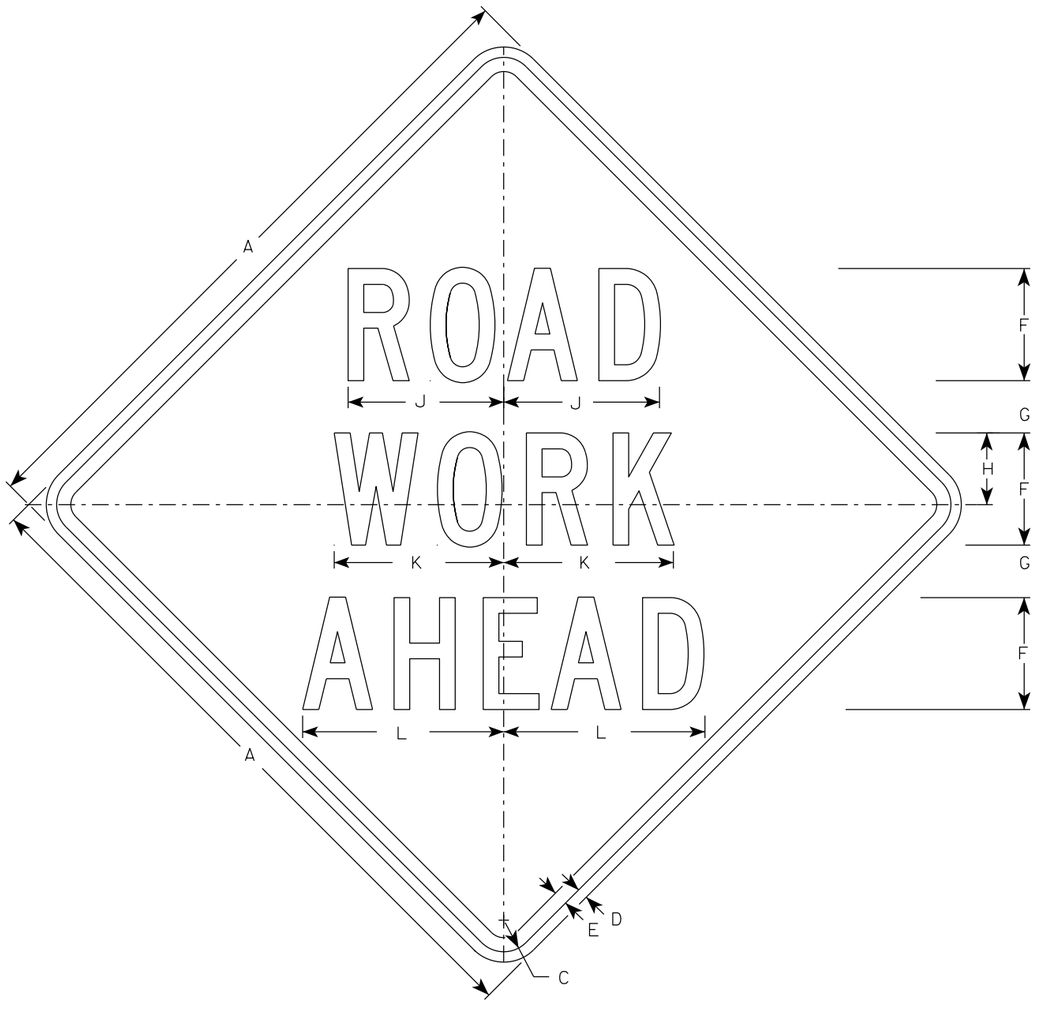
STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

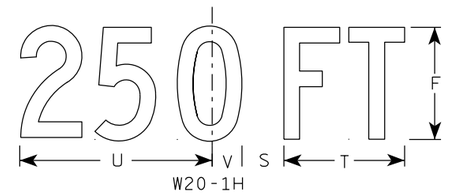
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

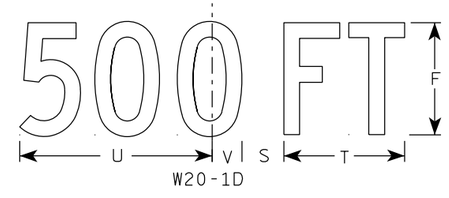
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 227	E



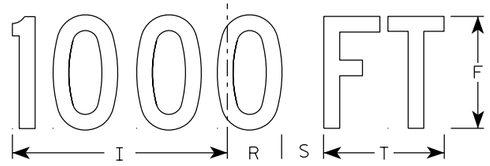
W20-1A



W20-1H



W20-1D



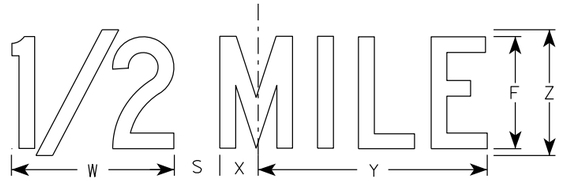
W20-1C



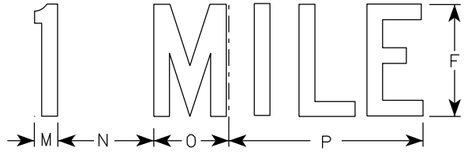
W20-1B

NOTES

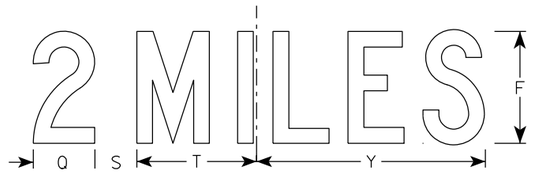
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



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:

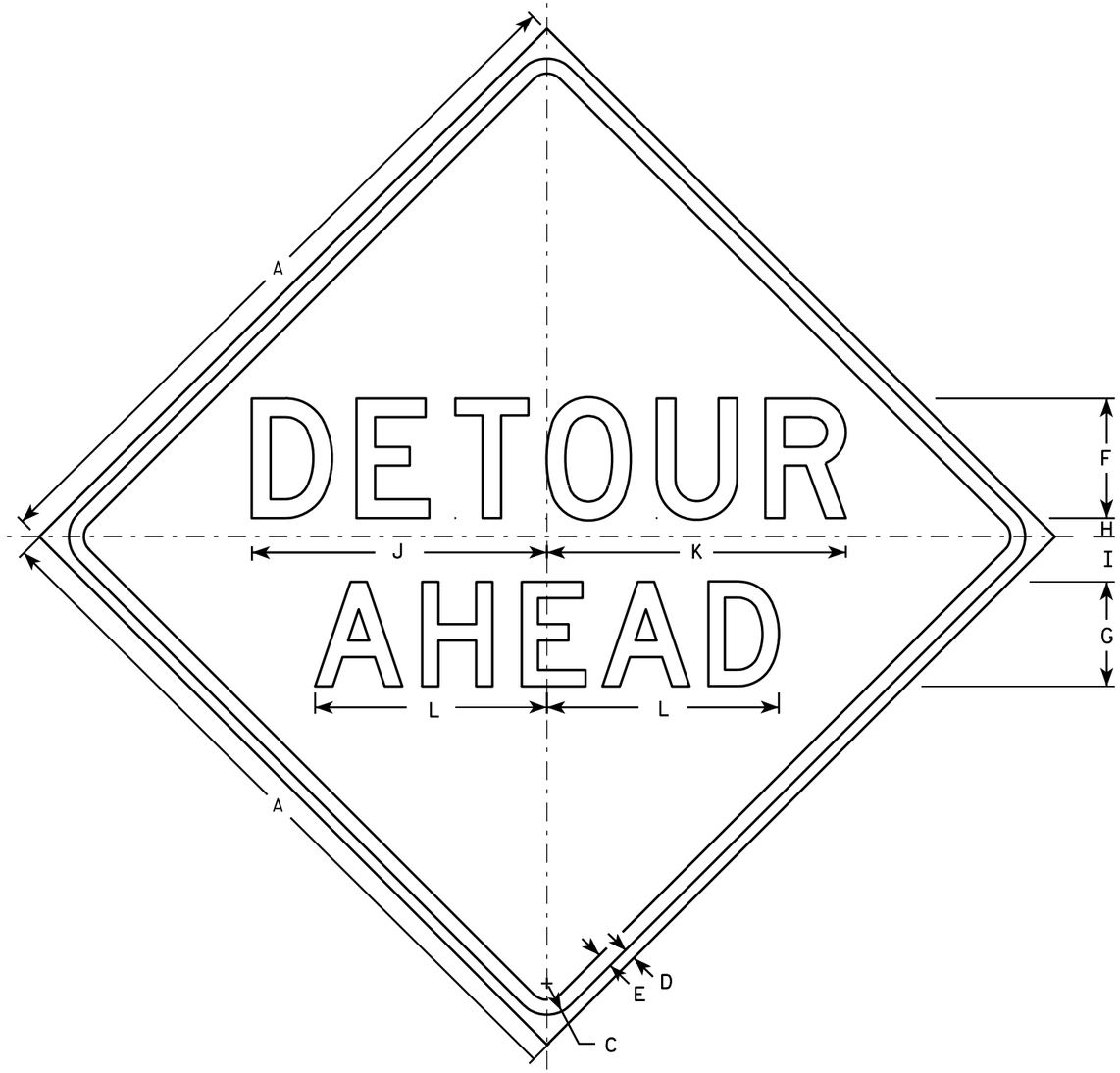
SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 25-MARCH-2020 PLOT BY : dotc4c

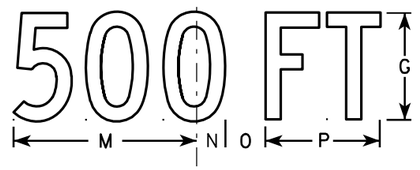
WISDOT/CADDS SHEET 42

7

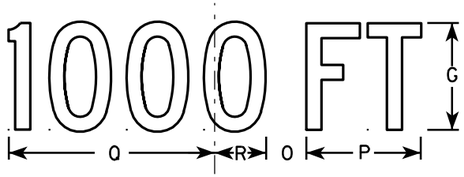
7



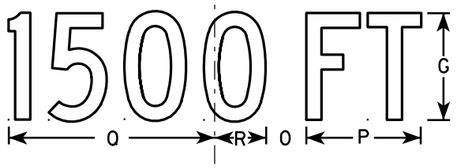
W20-2A



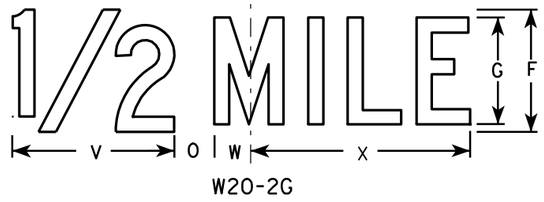
W20-2D



W20-2C



W20-2B



W20-2G



W20-2F

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. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

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

STANDARD SIGN
W20-2A,B,C,D,F & G

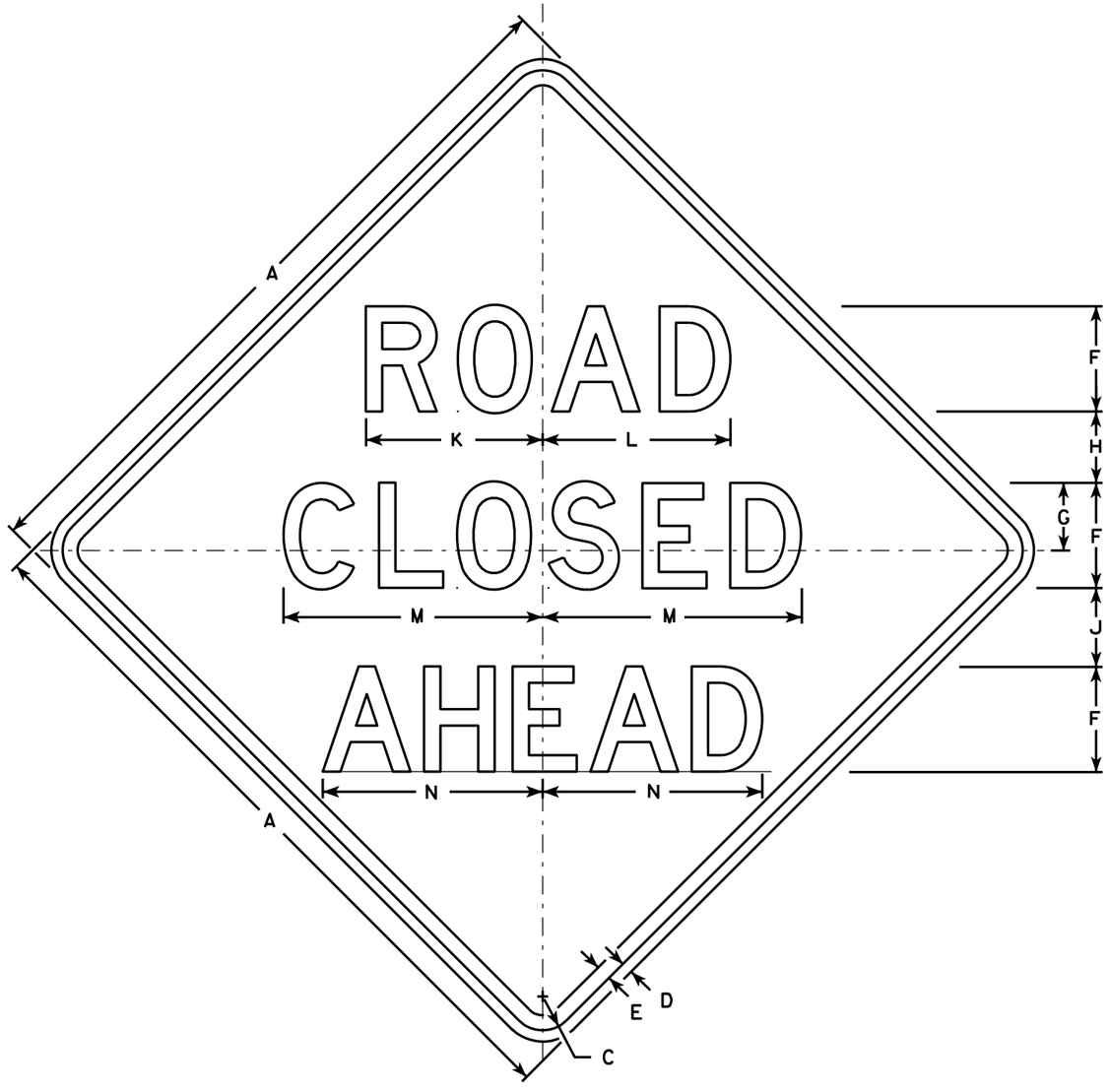
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

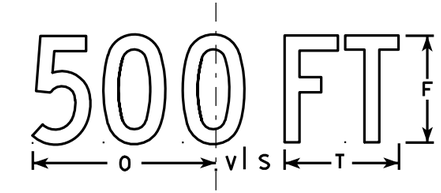
DATE 3/18/11 PLATE NO. W20-2.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 229 | E

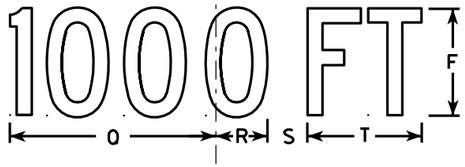
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W202.DGN PLOT DATE : 18-MAR-2011 10:00 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42



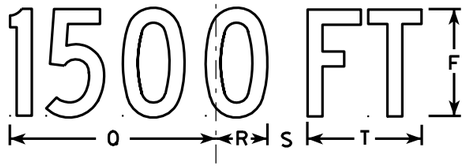
W20-3A



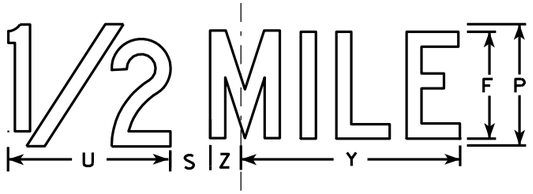
W20-3D



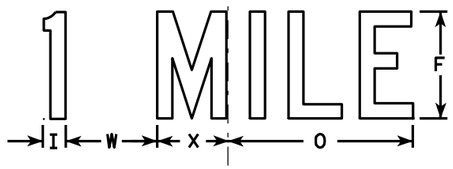
W20-3C



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

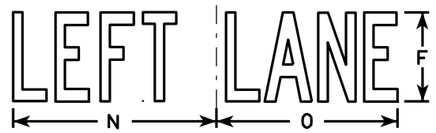
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 230 | E

7

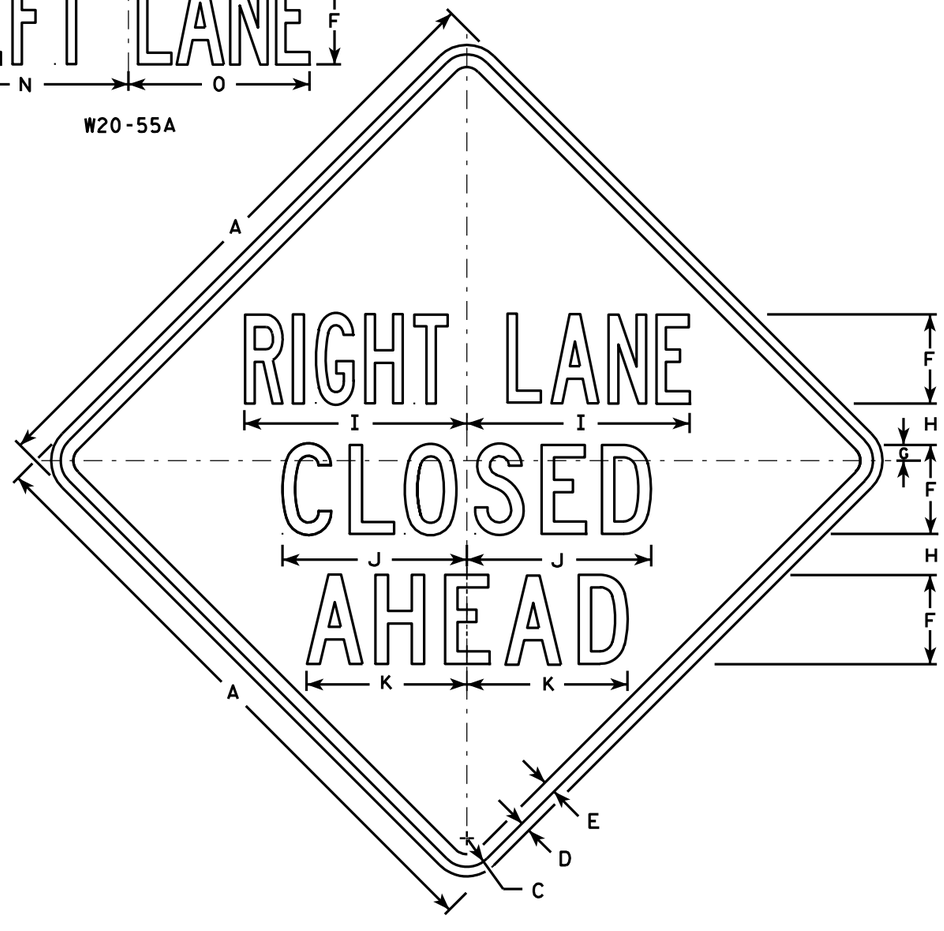
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42



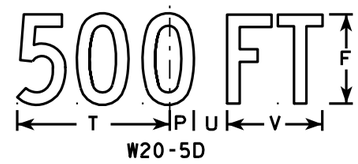
W20-56A



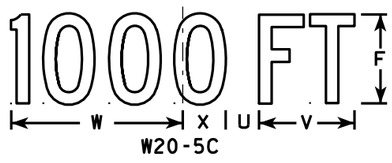
W20-55A



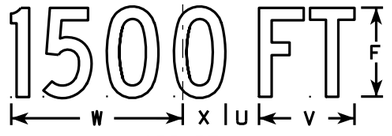
W20-5A



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

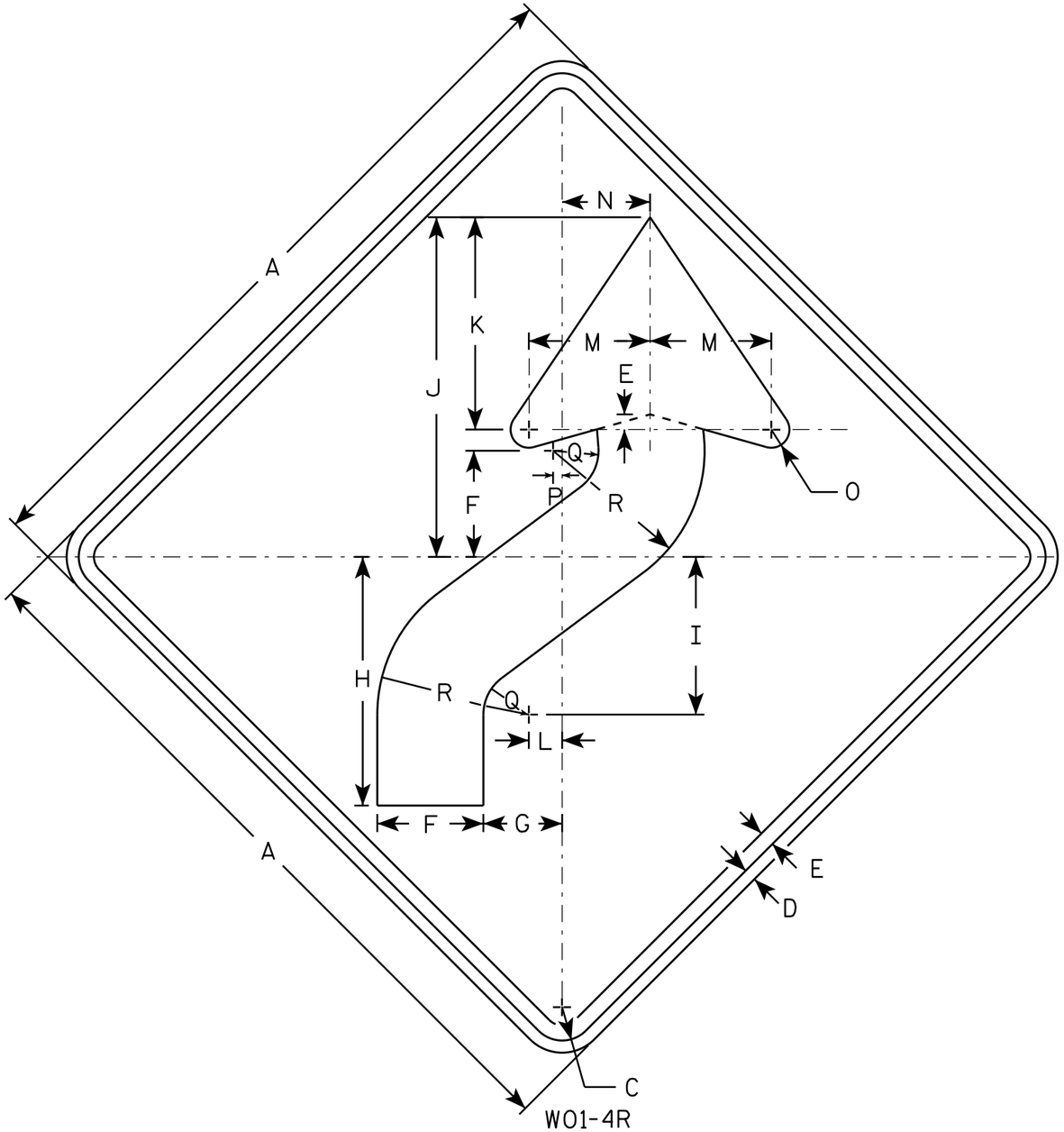
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 231 | 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

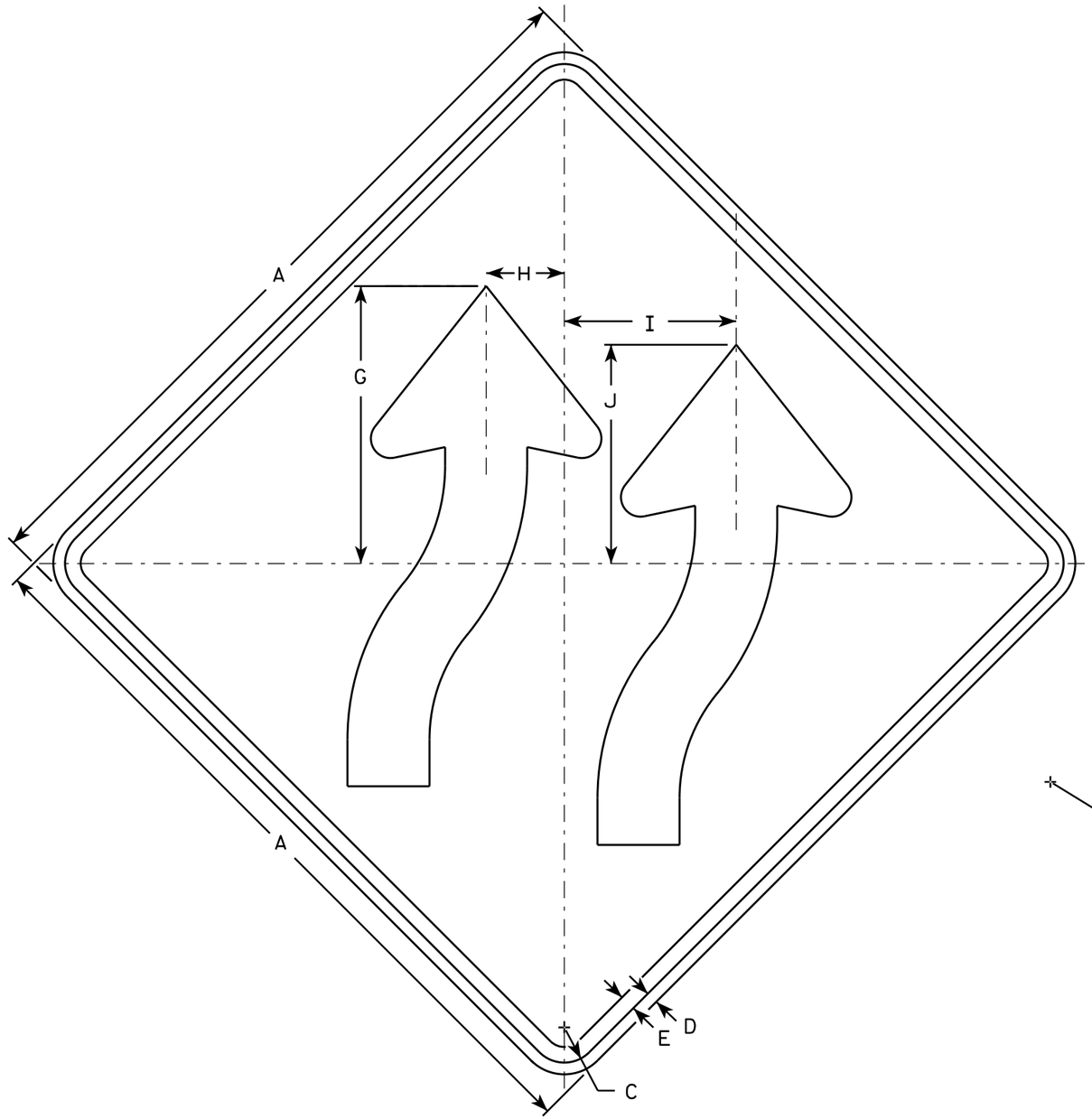
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

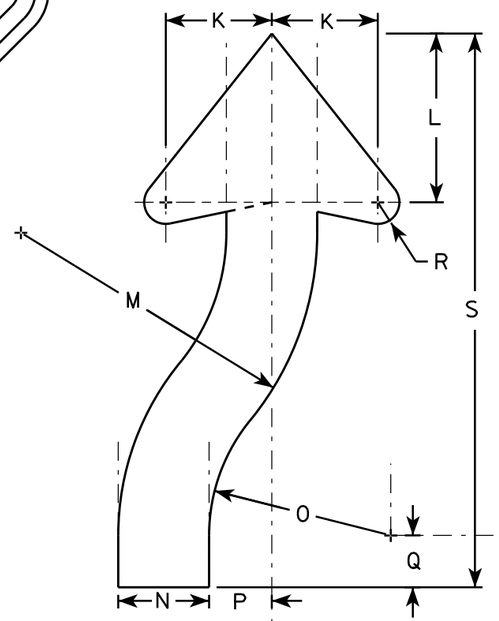
DATE 11/18/13 PLATE NO W01-4.1

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



W01-4bR



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. W01-4bL is the same as W014-bR exept arrows are 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		13 3/8	3 3/4	8 1/4	10 1/2	4 5/8	7 3/8	12 7/8	3 7/8	7 7/8	2 3/4	2 1/4	7/8	24								9.0
2S	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
2M	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
3	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
4	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
5	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0

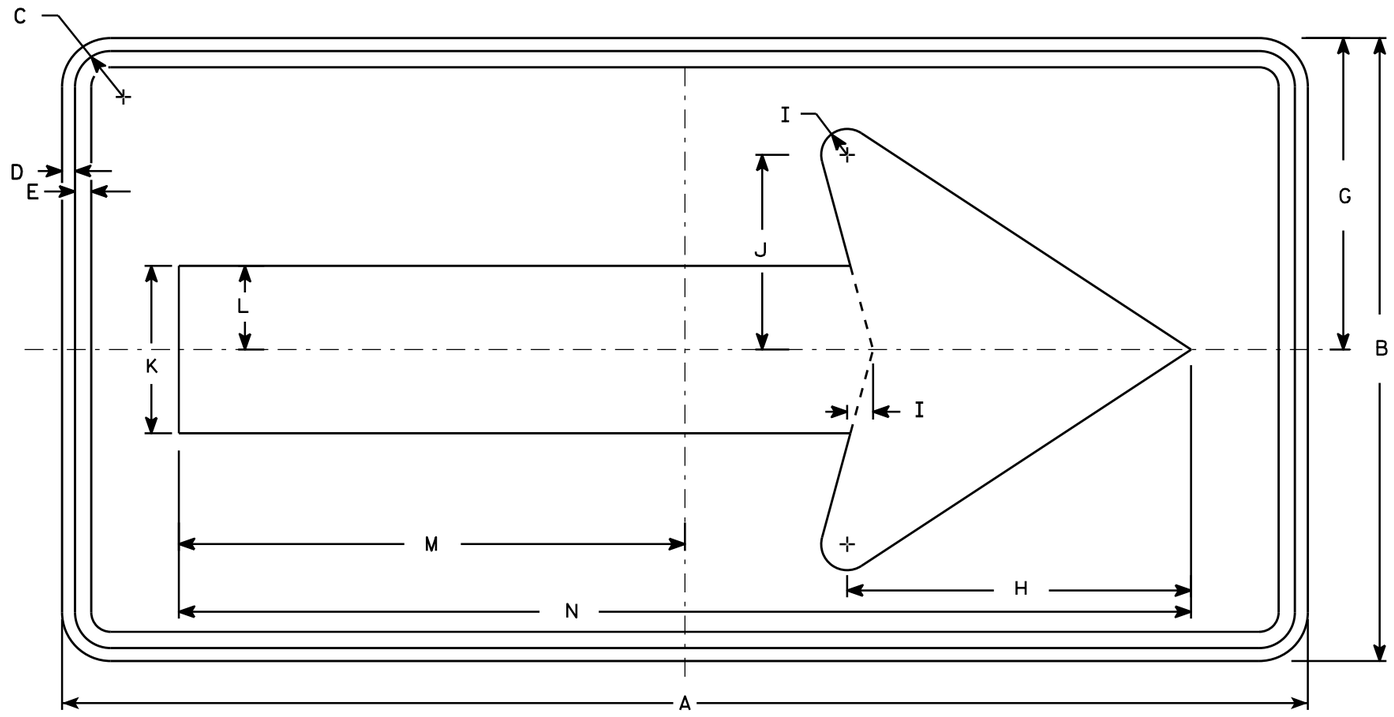
STANDARD SIGN
W01-4b

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4b.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



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

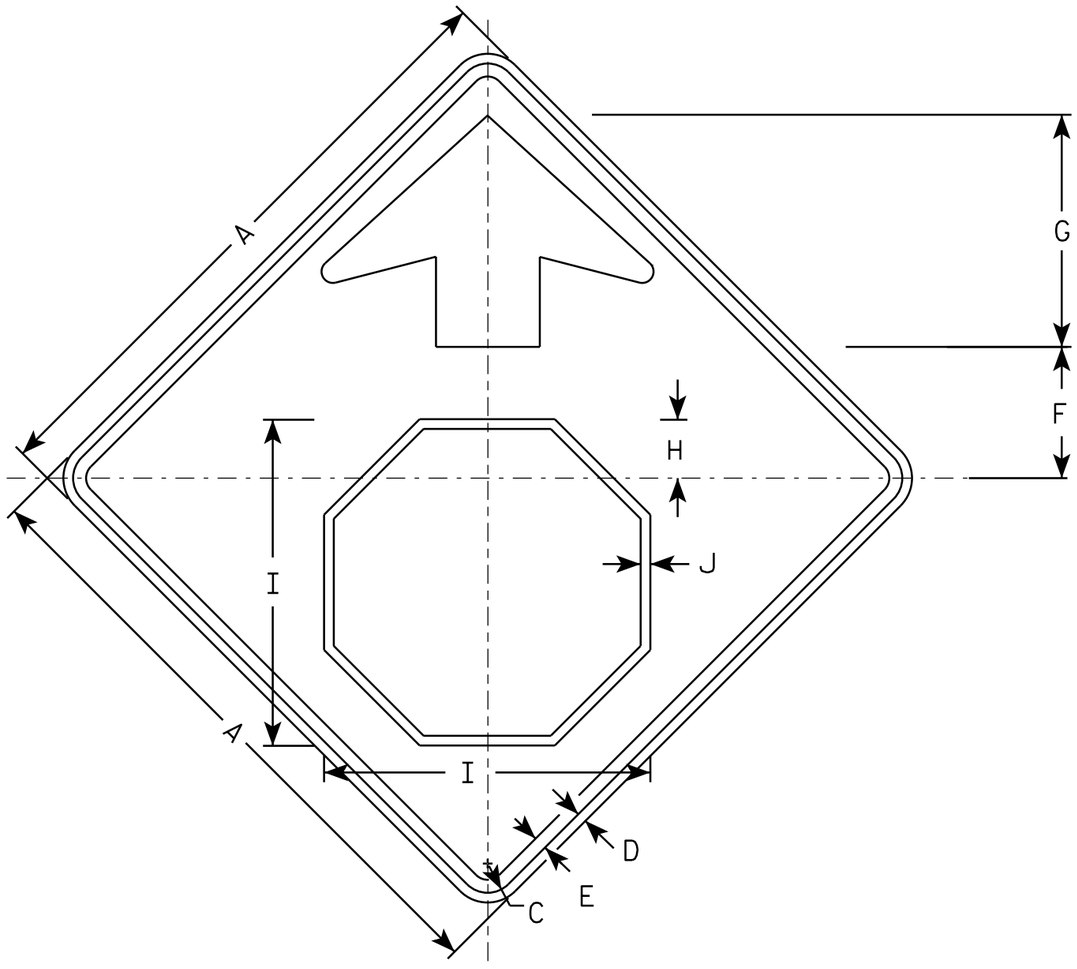
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

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

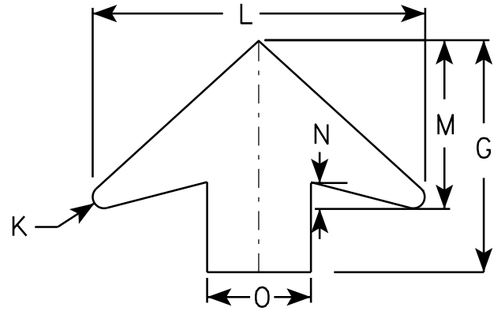
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



W03-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - ORANGE
   Arrow & Border - BLACK
   Stop Symbol - WHITE BORDER ON RED BACKGROUND



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	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2S	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
2M	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
3	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W03-1

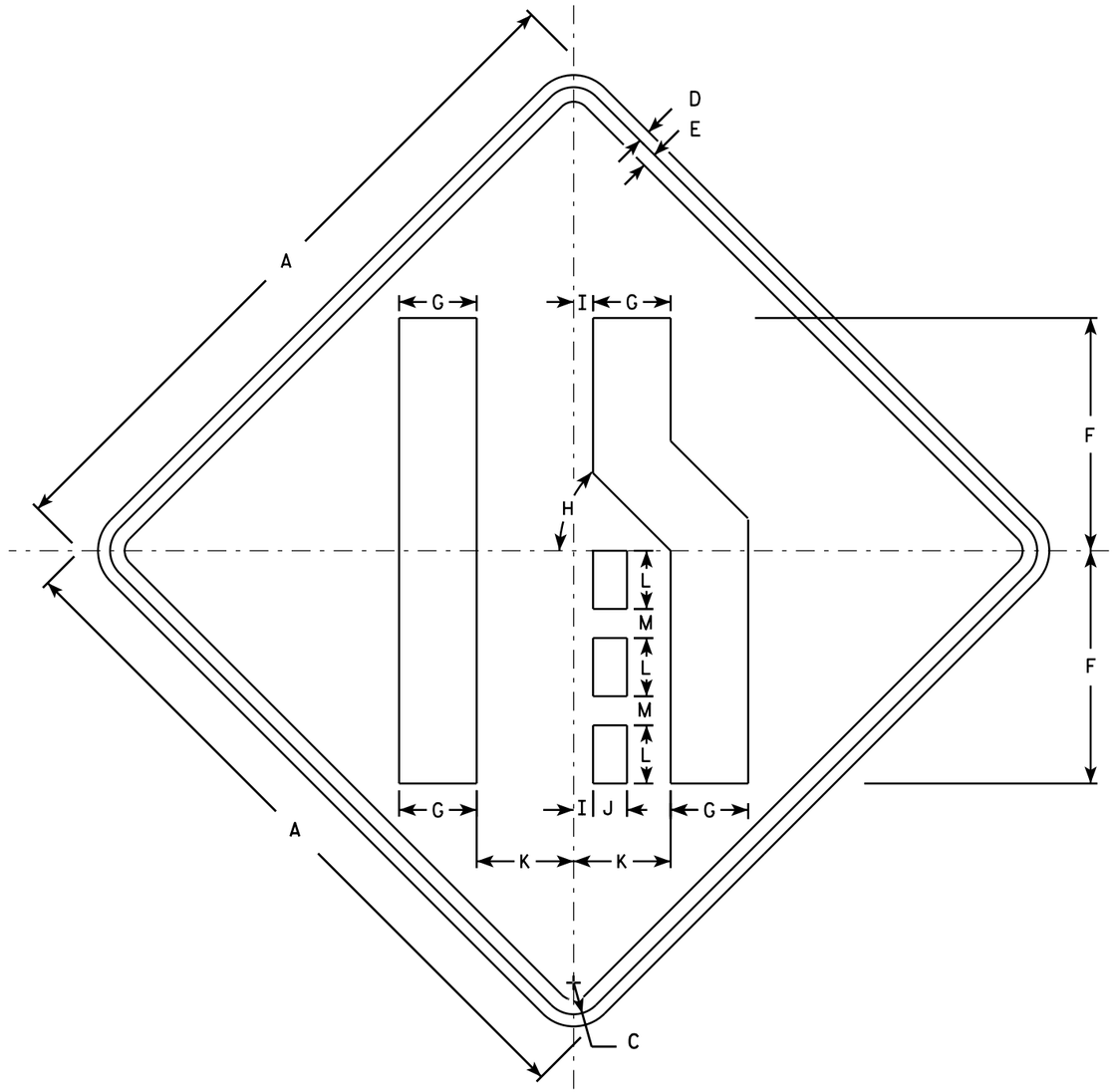
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 235 03-1.1

PROJECT NO: | SHEET NO: E

7 7



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

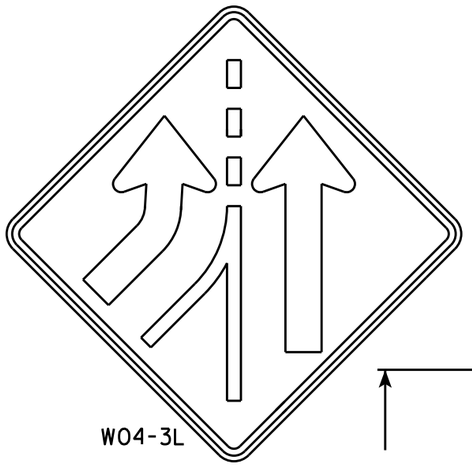
WISCONSIN DEPT OF TRANSPORTATION

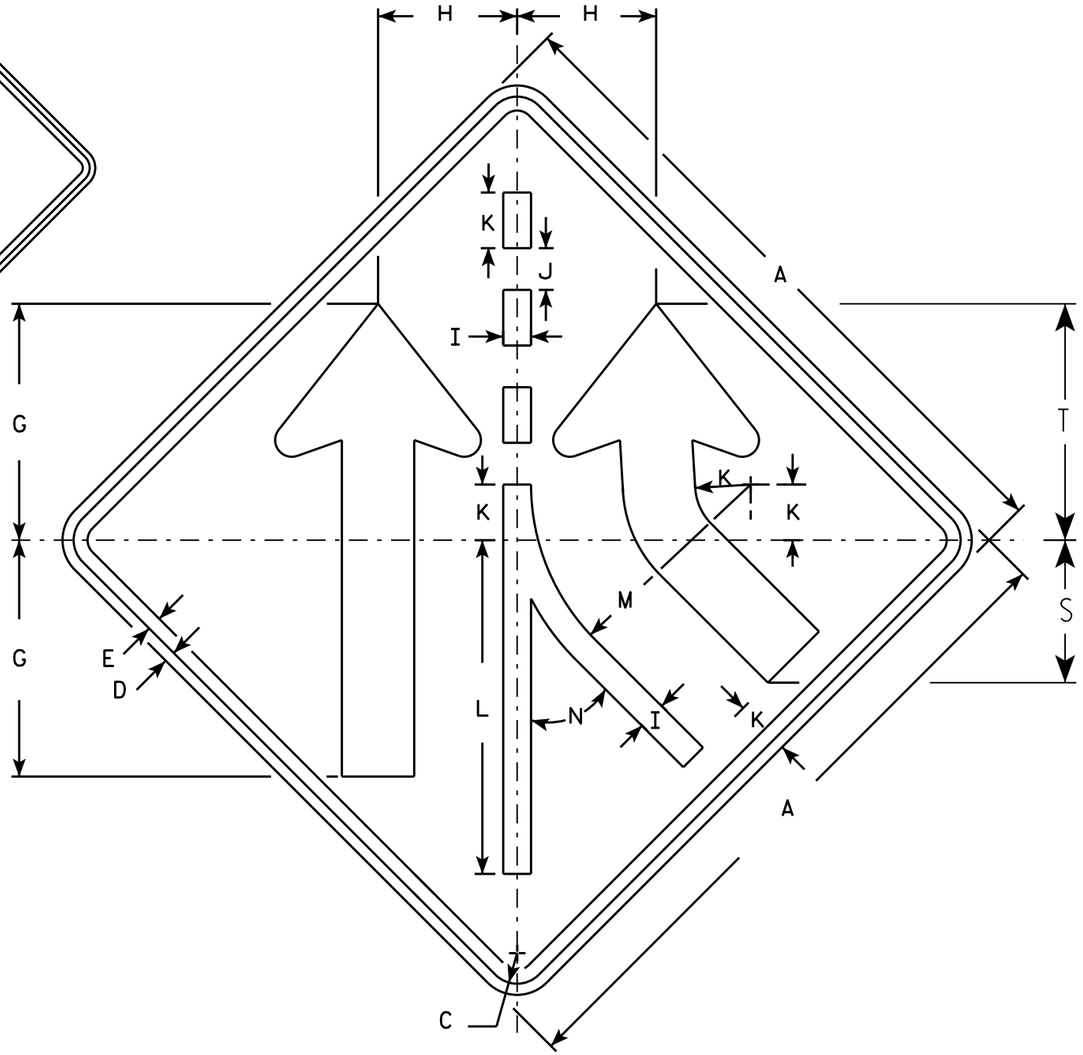
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 236 W04-2.1

PROJECT NO:

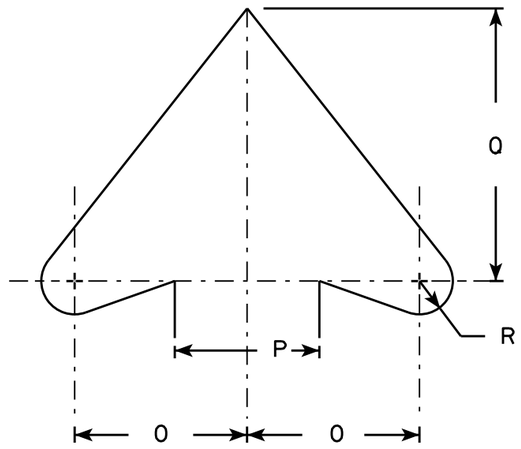
SHEET NO: E





NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-3 L is the same as W04-3 R except the arrow is reversed along the vertical centerline.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		12 3/4	7 1/2	1 1/2	2 1/4	3	18	11 7/8	45°	4 5/8	4	7 3/8	7/8	7 3/4	12 3/4							9.0
2S	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0
2M	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0
3	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0
4	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0
5	48		2 1/4	3/4	1		17	10	2	3	4	24	15 3/4	45°	6 1/4	5 1/2	9 7/8	1 1/4	10 1/4	17							16.0

STANDARD SIGN

W0433

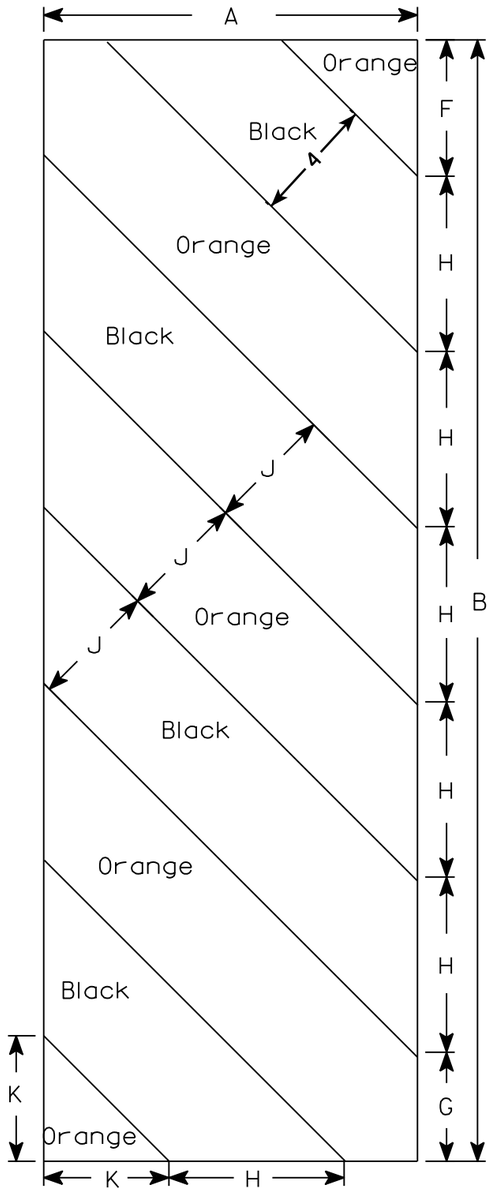
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

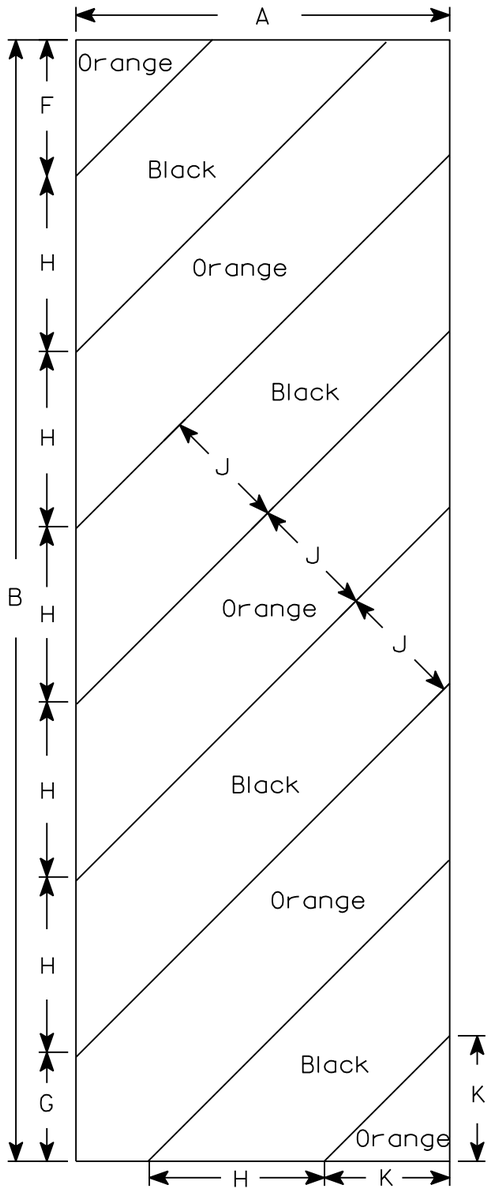
DATE 11/20/13 PLATE NO. W04-3.1

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

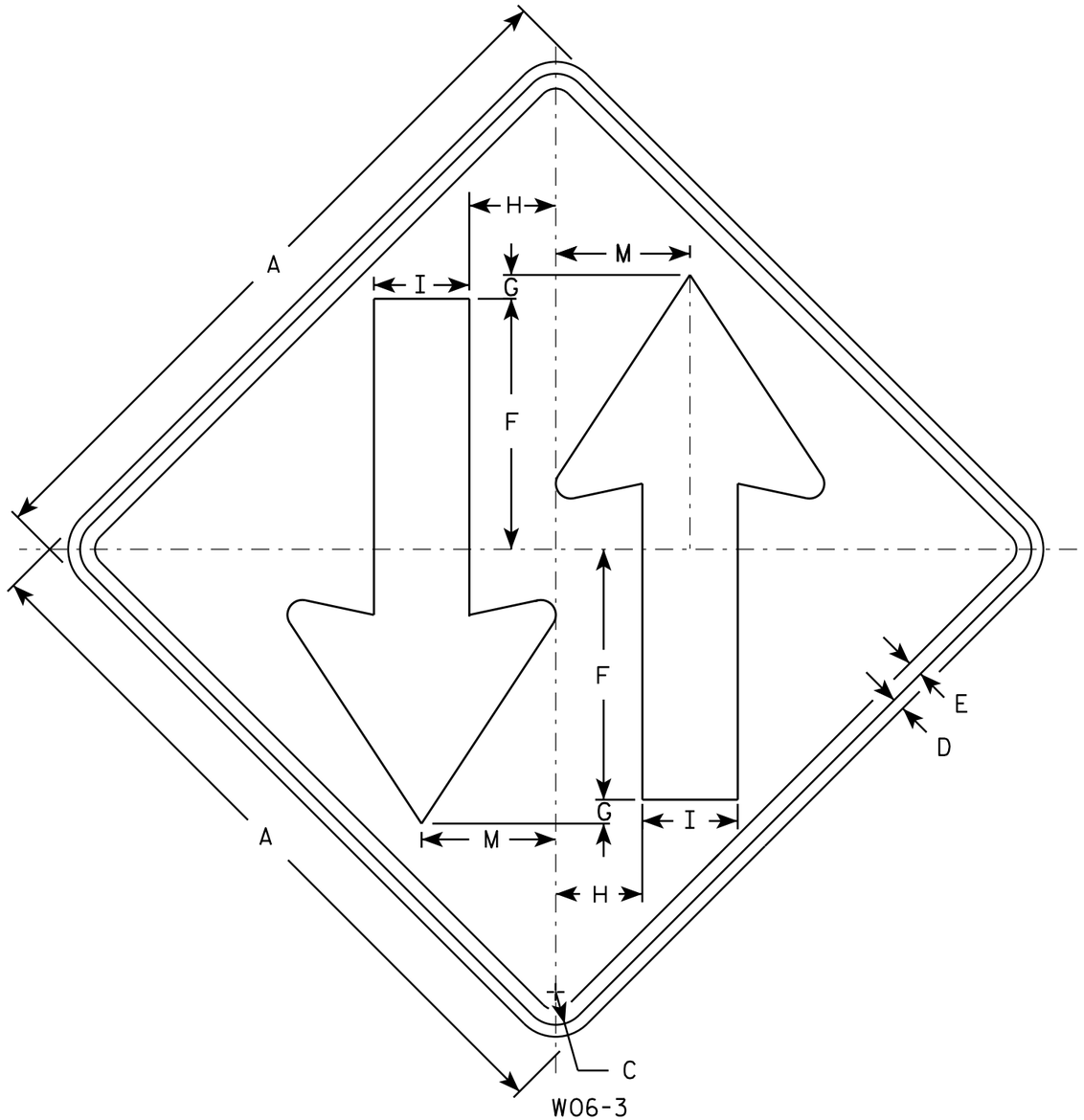
W05-52L & W05-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W05-52.1

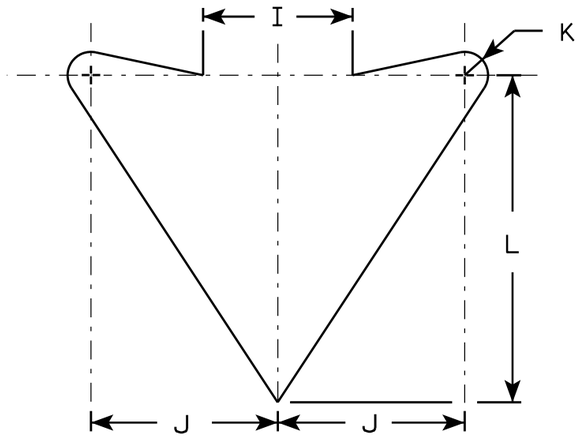
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W06-3

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

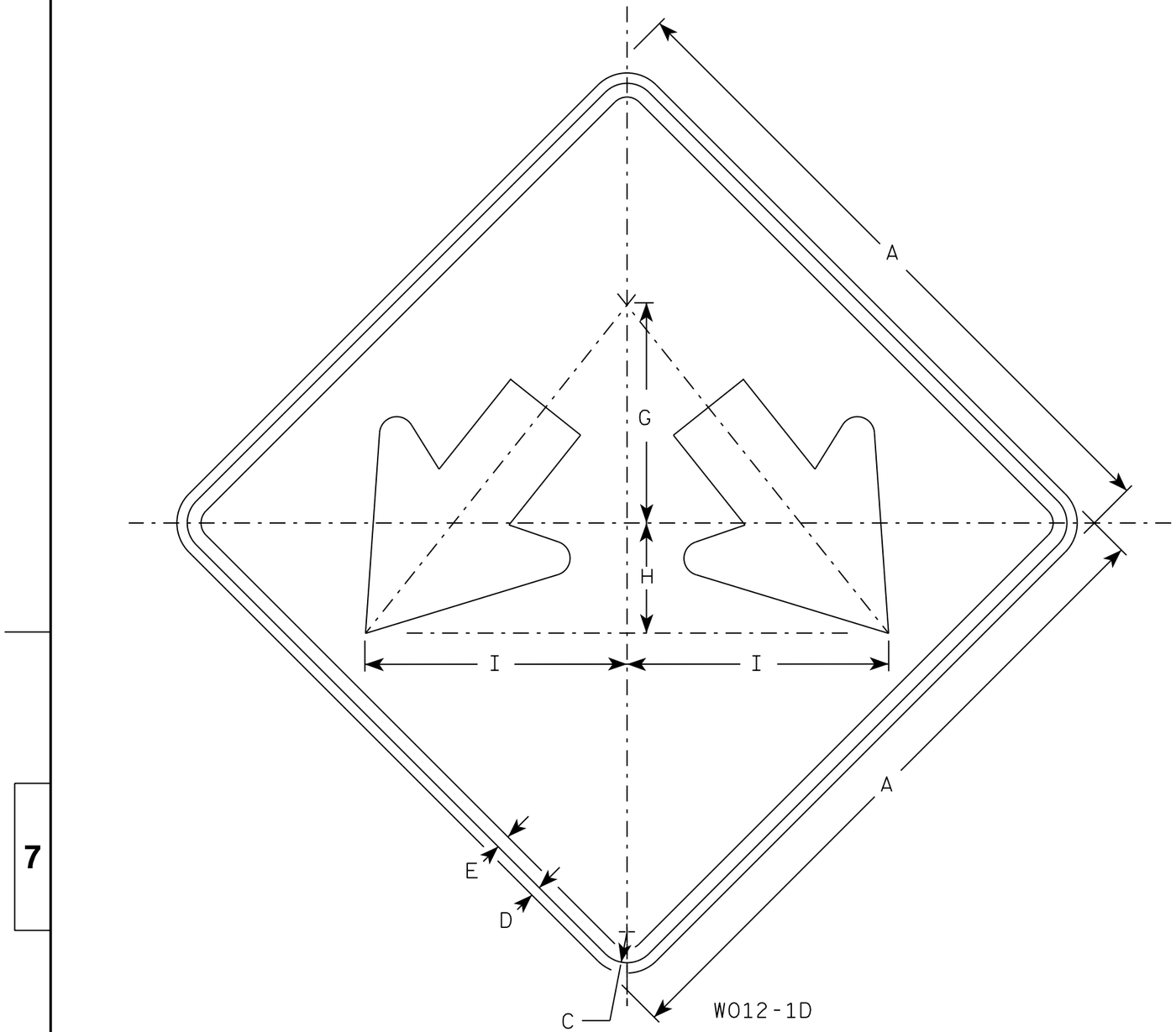
STANDARD SIGN
W06-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 239 W06-3.1

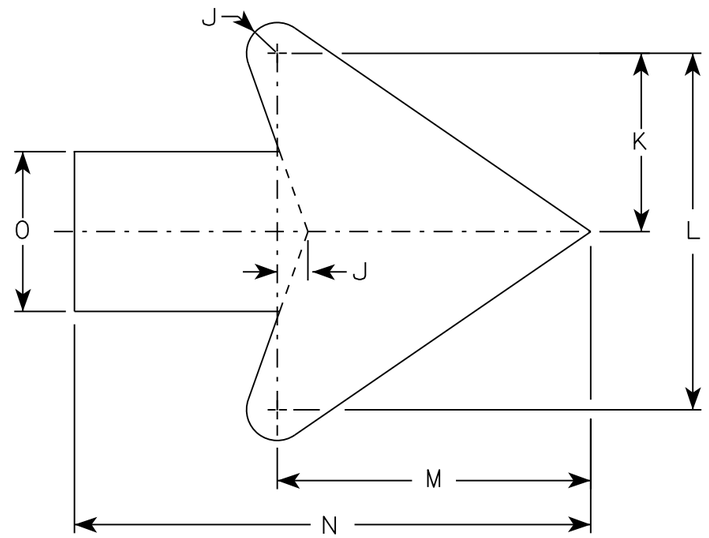
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W012-1D

NOTES

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



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0

STANDARD SIGN
W012-1D

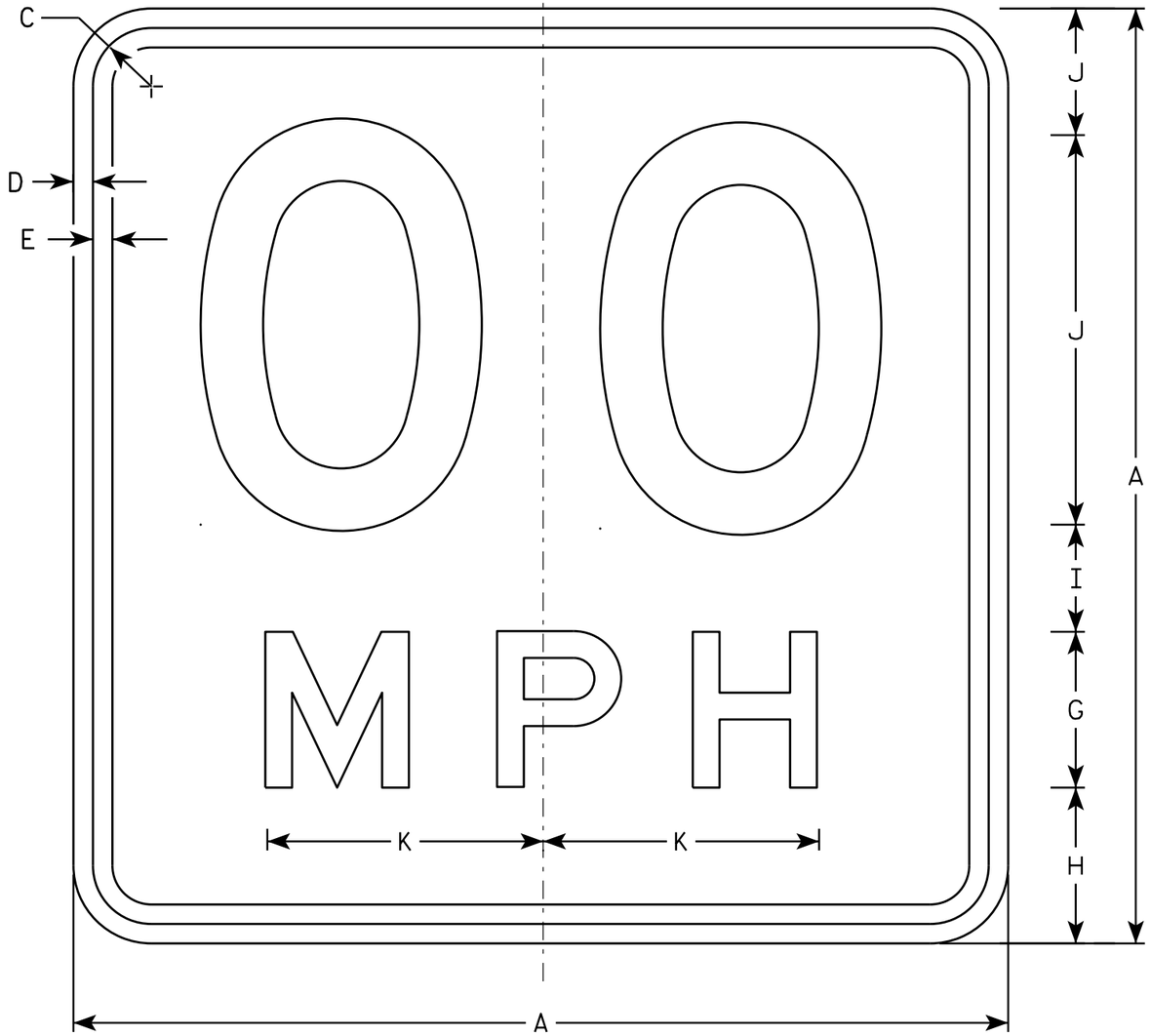
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/28/16 PLATE NO W012-1D.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CADfiles\Projects\tr_stdplate\W0121D.DGN PLOT DATE : 11-AUG-2016 11:28 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.621375:1.000000



W013-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

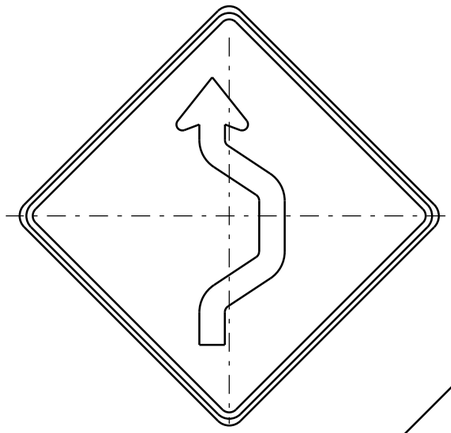
STANDARD SIGN
W013-1

WISCONSIN DEPT OF TRANSPORTATION

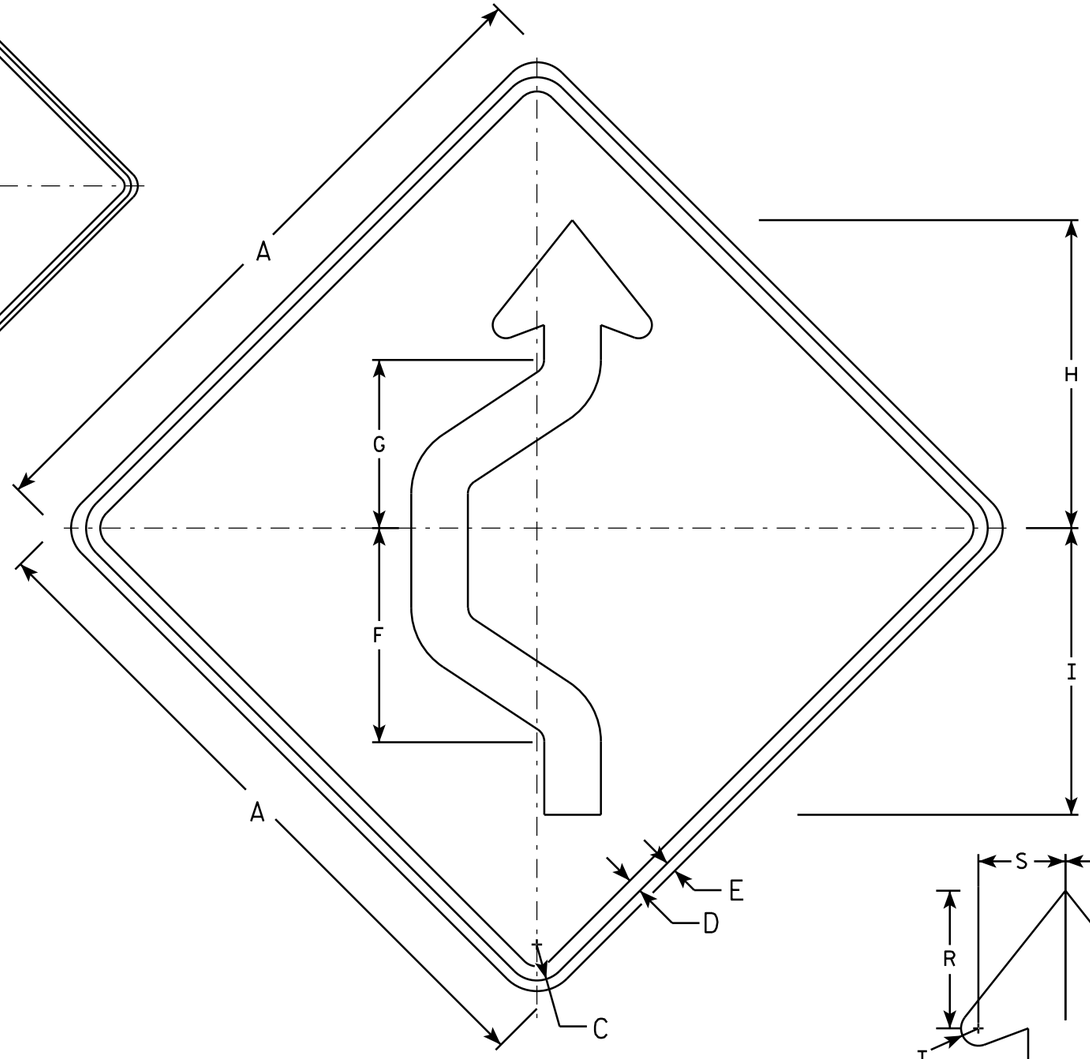
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/13 PLATE 241 W013-1.1

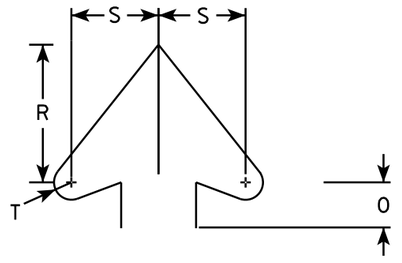
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W024-1R



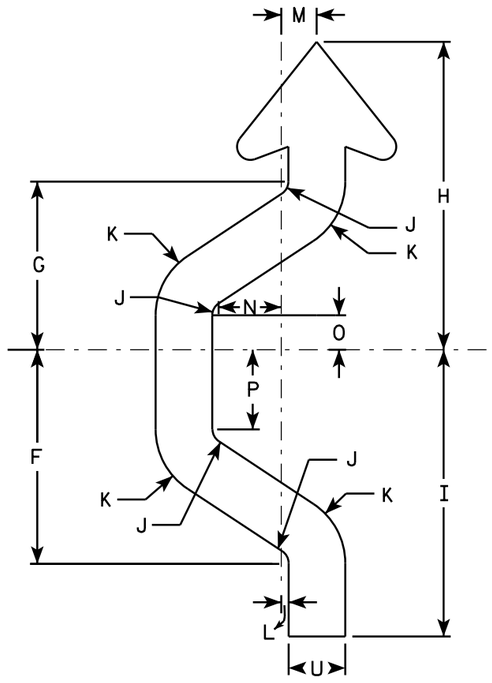
W024-1L



Arrowhead Detail

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. W024-1R is the same as W024-1L except reversed along the vertical centerline.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	5/8	1/2	11 3/8	8 7/8	16 3/8	15 1/4	3/4	3 3/4	3/8	2	3 3/8	1 7/8	4 1/4		5 1/2	3 1/2	5/8	3						9
2S	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
2M	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
3	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
4	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
5	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16

STANDARD SIGN
W024-1 L & R

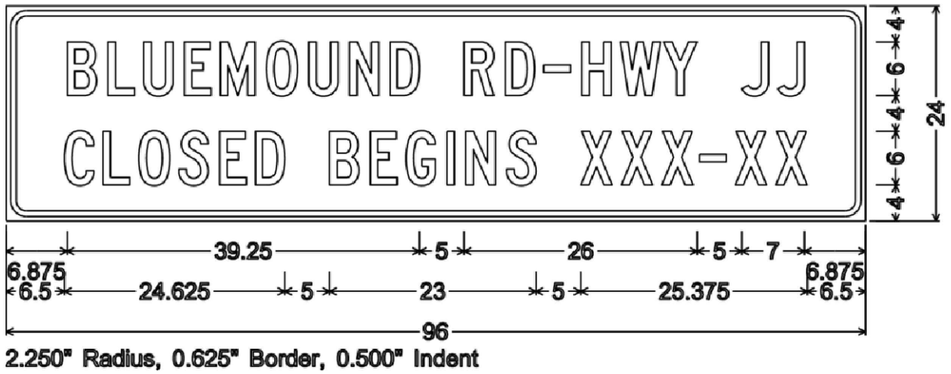
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/25/2013 PLATE NO. W024-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W0241.DGN PLOT DATE : 25-SEP-2013 13:08 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 10.702132:1.000000 WISDOT/CADDS SHEET 42



2.250" Radius, 0.625" Border, 0.500" Indent

NOTES

1. All Signs Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C

7

7

PROJECT NO: 1060-10-71	HWY: IH-94	COUNTY: WAUKESHA	TEMPORARY SIGNING	SHEET 243	E

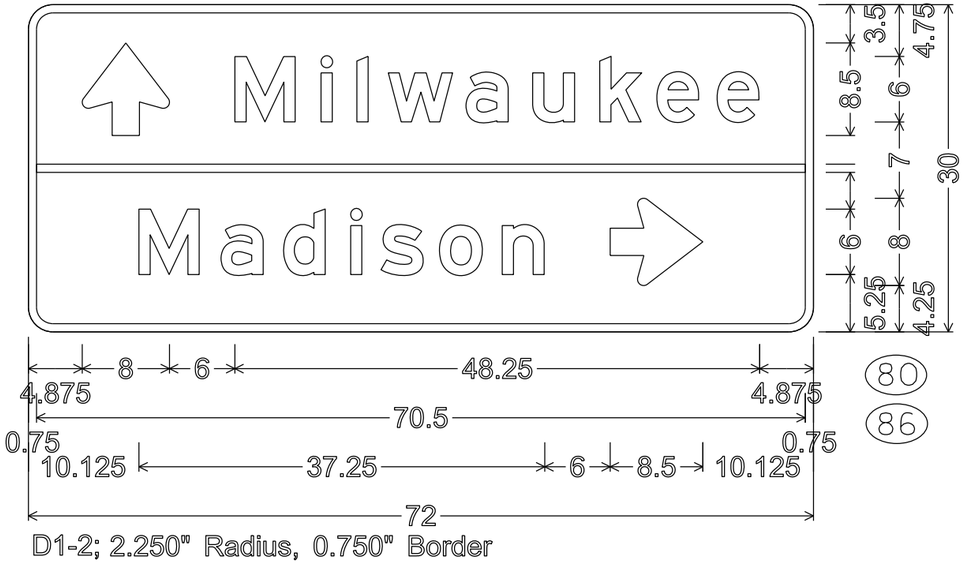
FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\025020_TC CTH JJ STAGE 2A.DWG
LAYOUT NAME - 01

PLOT DATE : 7/17/2023 12:13 PM PLOT BY : PAYNE, GREGORY PLOT NAME : PLOT SCALE : 1 IN:20 FT

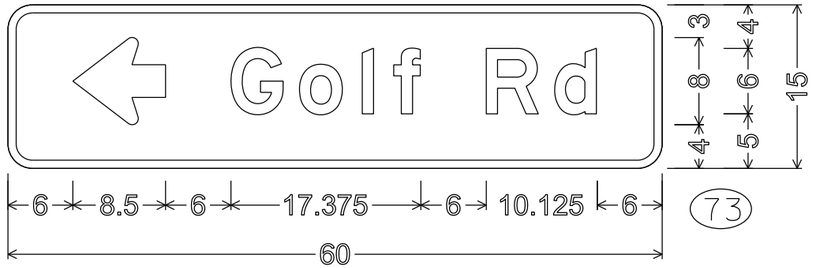
WISDOT/CADDS SHEET

NOTES

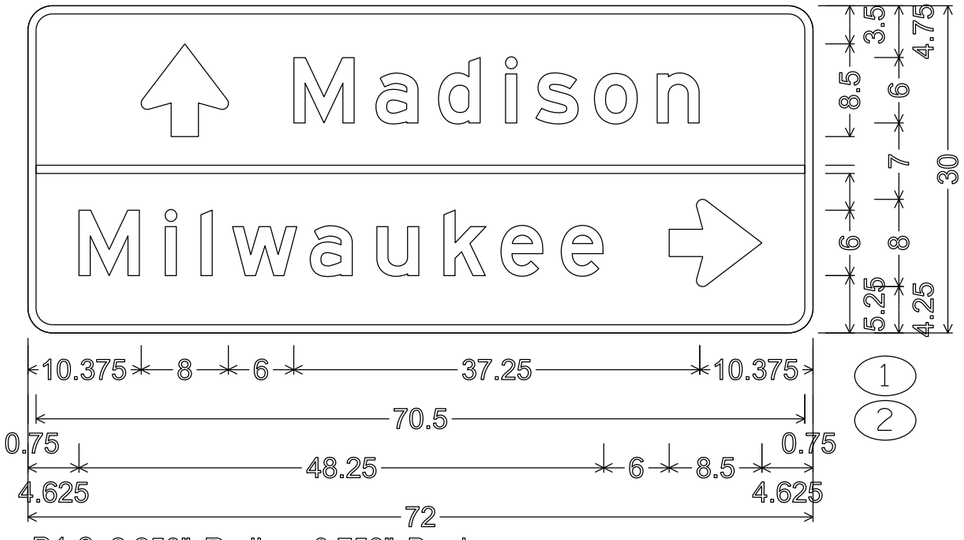
1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



D1-2; 2.250" Radius, 0.750" Border



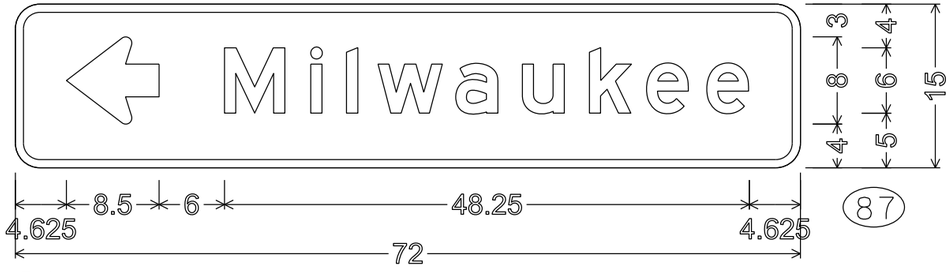
D1-1; 2.250" Radius, 0.750" Border



D1-2; 2.250" Radius, 0.750" Border

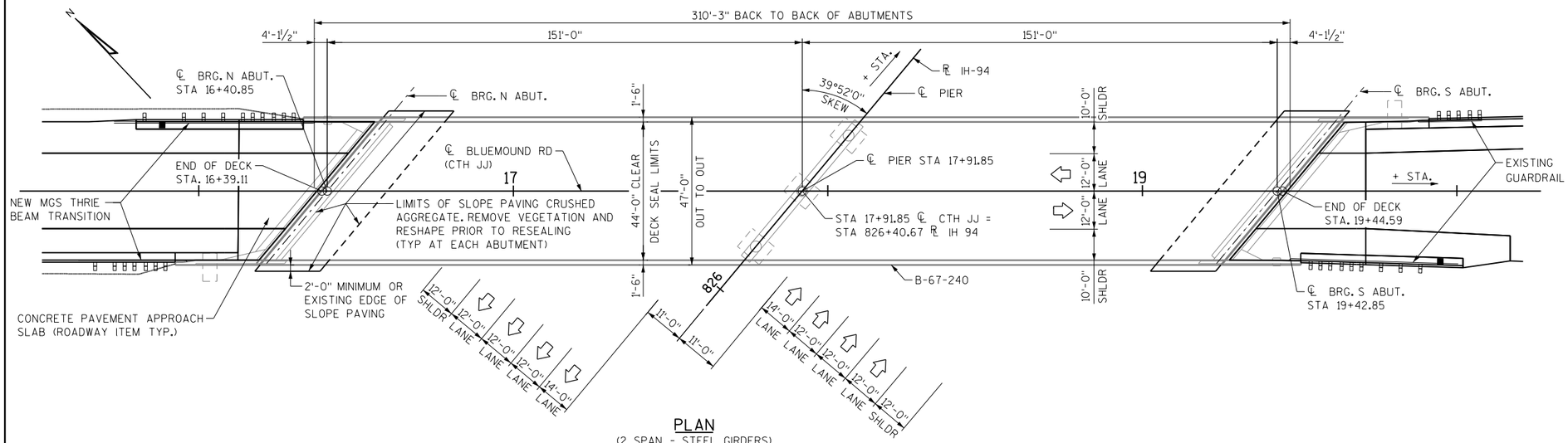


D1-1; 2.250" Radius, 0.750" Border

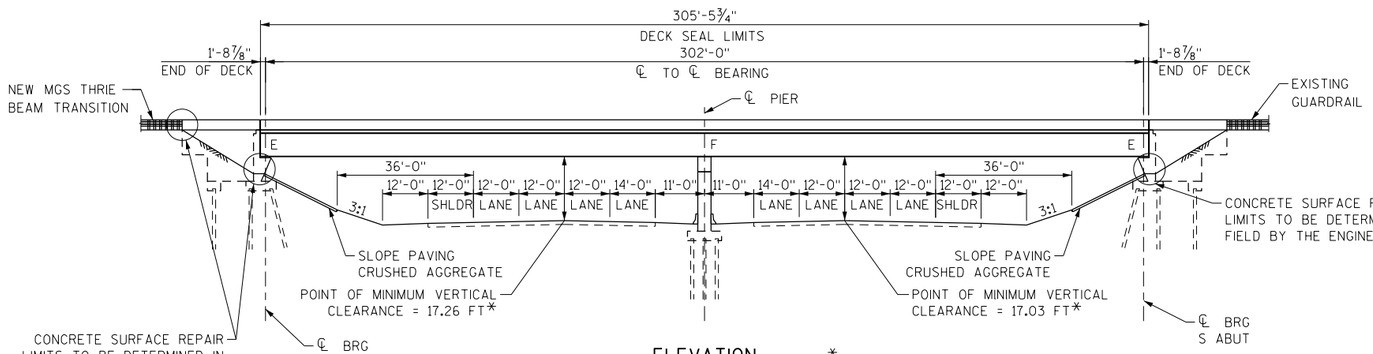


D1-1; 2.250" Radius, 0.750" Border

STATE PROJECT NUMBER
1060-10-71

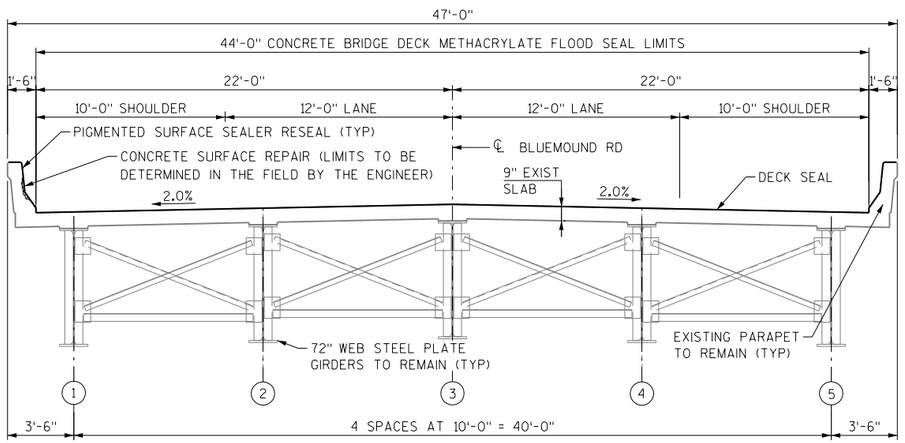


PLAN
(2 SPAN - STEEL GIRDERS)
DECK SEALING AND CONCRETE REPAIRS



ELEVATION
LOOKING EAST

*VERTICAL CLEARANCE VALUES ARE TAKEN FROM THE 2022 ROUTINE BRIDGE INSPECTION REPORT.



TYPICAL SECTION THRU BLUEMOUND ROAD
(LOOKING SOUTH)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS20
INVENTORY RATING: HS27
OPERATING RATING: HS45
WISCONSIN STANDARD PERMIT VEHICLE LOAD = 250 KIPS

EXISTING RATING VALUES SHOWN ARE TAKEN FROM CURRENT RATING IN HSI DATED 1/10/2013.

EXISTING STRUCTURE

THE EXISTING STRUCTURE IS A TWO SPAN STEEL GIRDER BRIDGE FOUNDED ON A REINFORCED CONCRETE PIER AND ABUTMENTS. THE BRIDGE IS 310'-3" LONG AND 47'-0" WIDE. THE EXISTING FOUNDATIONS ARE SUPPORTED ON STEEL HP10x42 PILES

NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS NOTED OTHERWISE.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

PIGMENTED SURFACE SEALER RESEAL SHALL BE APPLIED TO THE FRONT FACE AND TOP OF PARAPETS AFTER CLEANING, INCLUDING WINGWALLS.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "CONCRETE BRIDGE DECK METHACRYLATE FLOOD SEAL".

AREAS OF DECK PREPARATION TYPE 1 AND CONCRETE SURFACE REPAIR SHALL BE DEFINED BY A 1" DEEP SAWCUT.

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

TRAFFIC DATA

BLUEMOUND RD	IH-94
AADT (2020) = 7,200	AADT (2023) = 95,978
AADT (2040) = 8,000	AADT (2043) = 107,319
D = 59/41	DESIGN SPEED = 70 MPH
DESIGN SPEED = 50 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

LIST OF DRAWINGS:

1. GENERAL PLAN AND ELEVATION

WISCONSIN
WILLIAM J. ZIPPEL
38868-006
MILWAUKEE, WI
2/13/2024
PROFESSIONAL ENGINEER

TOTAL ESTIMATE OF QUANTITIES

ITEM NO.	BID ITEMS	UNIT	NORTH ABUT.	SOUTH ABUT.	SUPER	TOTAL
502.3205	PIGMENTED SURFACE SEALER RESEAL	SY	-	-	273	273
509.0301	PREPARATION DECKS TYPE 1	SY	-	-	1.0	1.0
509.0302	PREPARATION DECKS TYPE 2	SY	-	-	0.5	0.5
509.1500	CONCRETE SURFACE REPAIR	SF	7	7	12	26
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	-	-	15	15
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	-	-	0.1	0.1
509.9050.S	CLEANING PARAPETS	LF	-	-	716	716
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	163	163	-	326
SPV.0180.001	METHACRYLATE FLOOD SEAL	SY	-	-	1494	1494

NO.	DATE	REVISION	BY

benesch
Alfred Benesch & Company
1300 West Canal Street, Suite 150
Milwaukee, Wisconsin 53233
414-308-1310 Job No. 20205.00

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 02/14/24
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-67-240

CTH-JJ (BLUEMOUND RD) OVER IH-94

COUNTY	WAUKESHA	~~TOWN/CITY/VILLAGE~~	PEWAUKEE
DESIGN SPEC.	REHABILITATION	N/A	
DESIGNED BY	JAP	DESIGN CK'D.	WJZ
DRAWN BY	JAP	PLANS CK'D.	WJZ

GENERAL PLAN AND ELEVATION

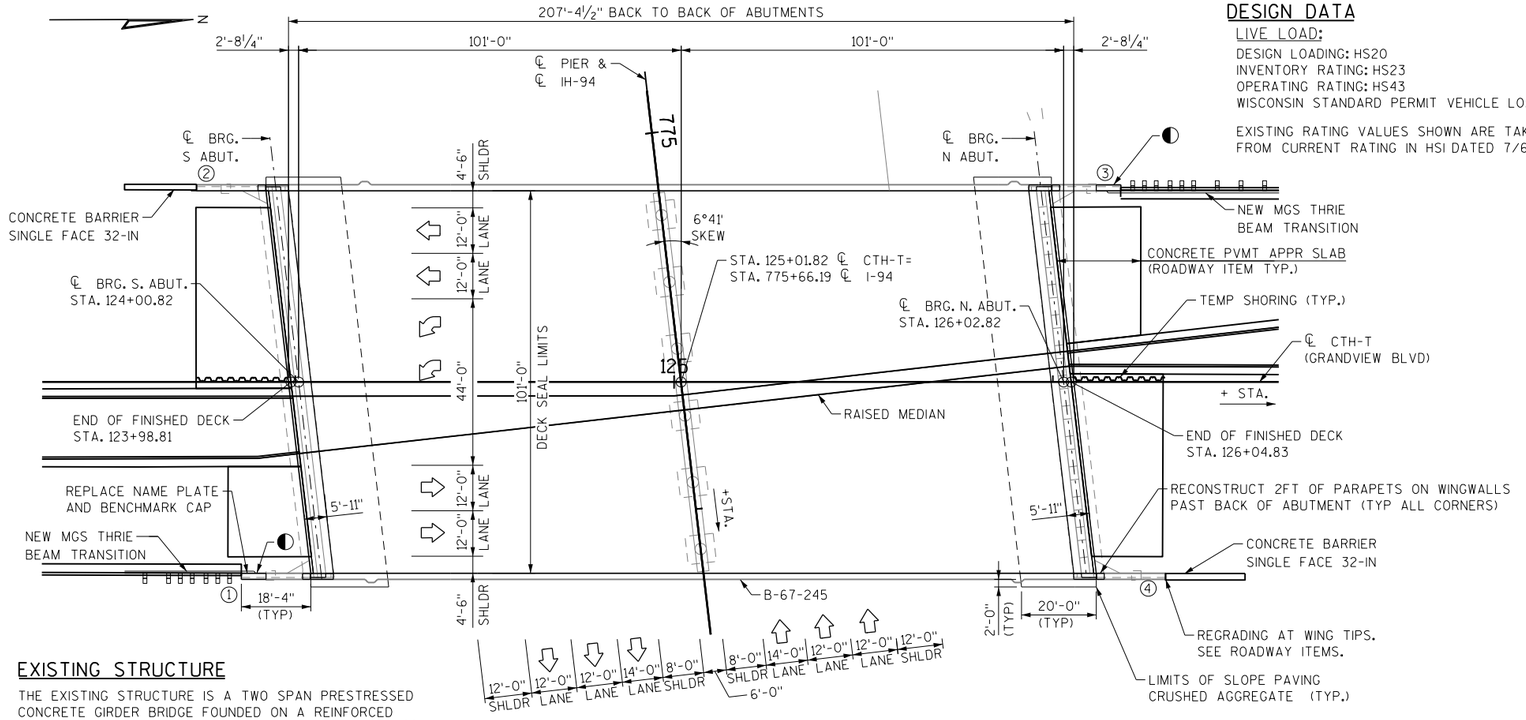
SHEET 1 OF 1

245

8

8

FILE= B67240_10_GP&E.DGN
SCALE = 1:40



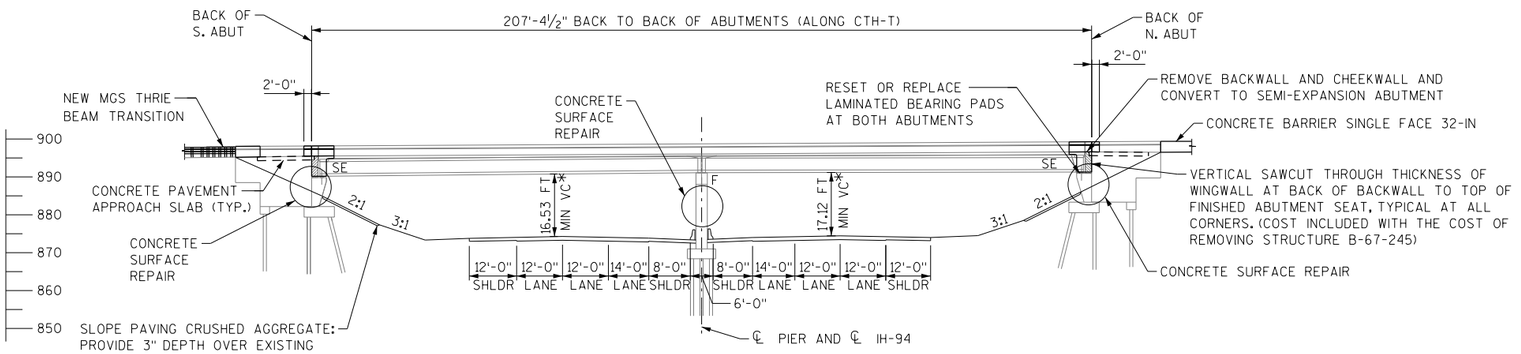
EXISTING STRUCTURE

THE EXISTING STRUCTURE IS A TWO SPAN PRESTRESSED CONCRETE GIRDER BRIDGE FOUNDED ON A REINFORCED CONCRETE PIER AND ABUTMENTS. THE BRIDGE IS 207'-4½" LONG AND 104'-2" WIDE. THE EXISTING FOUNDATIONS ARE SUPPORTED ON STEEL HP10x42 PILES.

PLAN

(2 SPAN - PRESTRESSED GIRDERS)
DECK SEALING, CONCRETE REPAIRS, AND ABUTMENT MODIFICATIONS

◐ REMOVE AND REPLACE WING TIP AND INSTALL ANCHOR ASSEMBLY STEEL PLATE BEAM GUARD



*VERTICAL CLEARANCE VALUES ARE TAKEN FROM THE 2022 ROUTINE BRIDGE INSPECTION REPORT.

ELEVATION

(LOOKING WEST)

BENCHMARKS

NAME	ELEVATION	DESCRIPTION	STATION	OFFSET
BM105	896.66	CP CHIS CROSS	123+75	6.6 RT
BM106	897.97	CP CHIS CROSS	126+23	7.3 LT

MATERIAL PROPERTIES (NEW WORK)

CONCRETE MASONRY f'c= 4000 PSI
STEEL REINFORCEMENT HIGH STRENGTH BAR, GRADE 60 fy= 60 KSI

LIST OF DRAWINGS:

1. GENERAL PLAN AND ELEVATION
2. STAGING PLAN
3. TYPICAL SECTION AND QUANTITIES
4. ABUTMENT MODIFICATIONS
5. DIAPHRAGM DETAILS
6. PARAPET DETAILS
7. ELASTOMERIC BEARINGS

TRAFFIC DATA

CTH-T	IH-94
AADT (2023) = 23,366	AADT (2023) = 95,978
AADT (2043) = 26,075	AADT (2043) = 107,319
DESIGN SPEED = 50 MPH.	DESIGN SPEED = 70 MPH.

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20
INVENTORY RATING: HS23
OPERATING RATING: HS43
WISCONSIN STANDARD PERMIT VEHICLE LOAD = 250 KIPS

EXISTING RATING VALUES SHOWN ARE TAKEN FROM CURRENT RATING IN HSI DATED 7/6/2012.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS NOTED OTHERWISE.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

BEVEL EXPOSED EDGES OF CONCRTE ¾" UNLESS NOTED OTHERWISE.

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

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-67-245" SHALL BE THE EXISTING GROUNDLINE.

BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

AT ABUTMENTS, ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE FINISHED STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.

PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE FRONT FACE AND TOP OF PARAPETS AFTER CLEANING, INCLUDING WINGWALLS.

MASK EXISTING INSET DELINEATOR REFLECTORS IN DECK SURFACE BEFORE APPLYING DECK SEALER.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "CONCRETE BRIDGE DECK METHACRYLATE FLOOD SEAL."

AREAS OF DECK PREPARATION TYPE 1, CONCRETE SURFACE REPAIR, AND CONCRETE REMOVAL LIMITS SHALL BE DEFINED BY A 1" DEEP SAWCUT UNLESS NOTED OTHERWISE.

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

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

SPECIFIC LOCATIONS OF CONCRETE SURFACE REPAIR AT THE NORTH AND SOUTH ABUTMENTS AND AT THE PIER ARE TO BE DETERMINED BY THE FIELD ENGINEER.

REMOVE LOOSE CONCRETE AT GIRDER ENDS AS DIRECTED BY THE ENGINEER PRIOR TO POURING NEW CONCRETE DIAPHRAGMS.

COST OF PARTIAL REMOVAL OF DECK, ABUTMENTS, AND WINGWALLS IS INCLUDED IN COST OF "REMOVING STRUCTURE B-67-245."

Ⓧ INDICATES WING WALL NUMBER

THE CONTRACTOR SHALL DETERMINE REQUIRED CONSTRUCTION STAGING ON THE STRUCTURE TO ACCOMPLISH APPLICATION OF THE CONCRETE BRIDGE DECK METHACRYLATE FLOOD SEAL INCLUDING LOCATION OF THE CONCRETE BRIDGE DECK METHACRYLATE FLOOD SEAL CONSTRUCTION JOINTS BETWEEN STAGES AS PERMITTED BY THE CONTRACT AND AS APPROVED BY THE ENGINEER. SEE ROADWAY PLANS AND SPECIAL PROVISIONS FOR MAINTENANCE OF TRAFFIC. PERMISSIBLE LANE CLOSURES AND CONSTRUCTION STAGING REQUIREMENTS.

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.



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

NO.	DATE	REVISION	BY

benesch
Alfred Benesch & Company
1300 West Canal Street, Suite 150
Milwaukee, Wisconsin 53233
414-308-1310 Job No. 20205.00

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 02/14/24
CHIEF STRUCTURES DESIGN ENGINEER DATE

STATE PROJECT NUMBER
1060-10-71

STRUCTURE B-67-245

CTH-T (GRANDVIEW BLVD) OVER IH-94

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
WAUKESHA	PEWAUKEE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JAP	WJZ	WMN	JAP

GENERAL PLAN AND ELEVATION

SHEET 1 OF 7

246

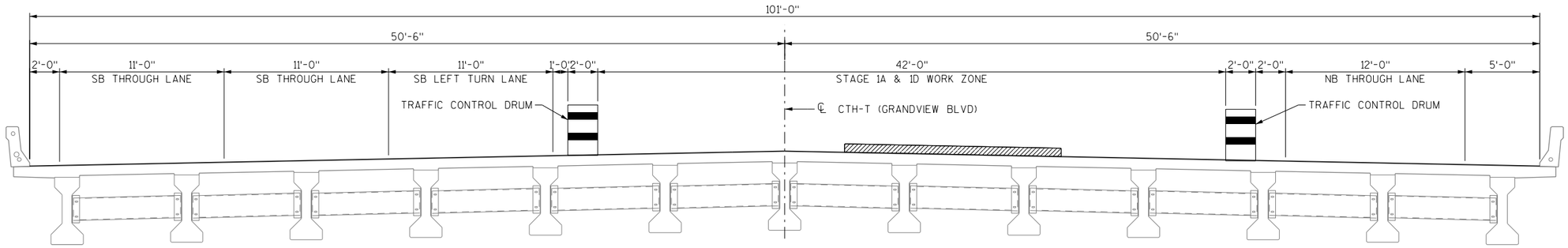
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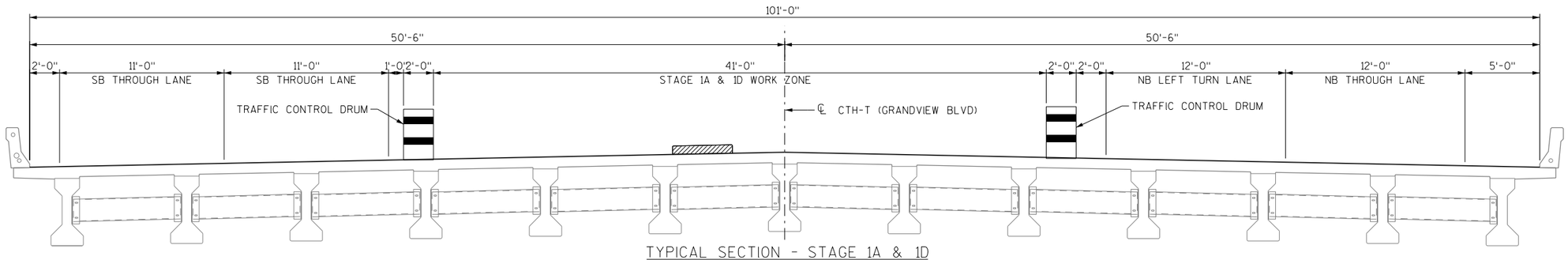
STATE PROJECT NUMBER

1060-10-71



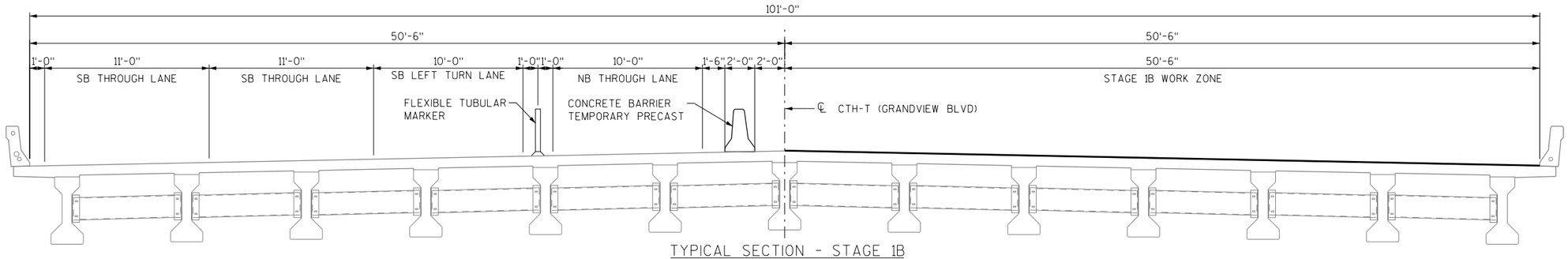
TYPICAL SECTION - STAGE 1A & 1D

(LOOKING NORTH AT SOUTH ABUTMENT)



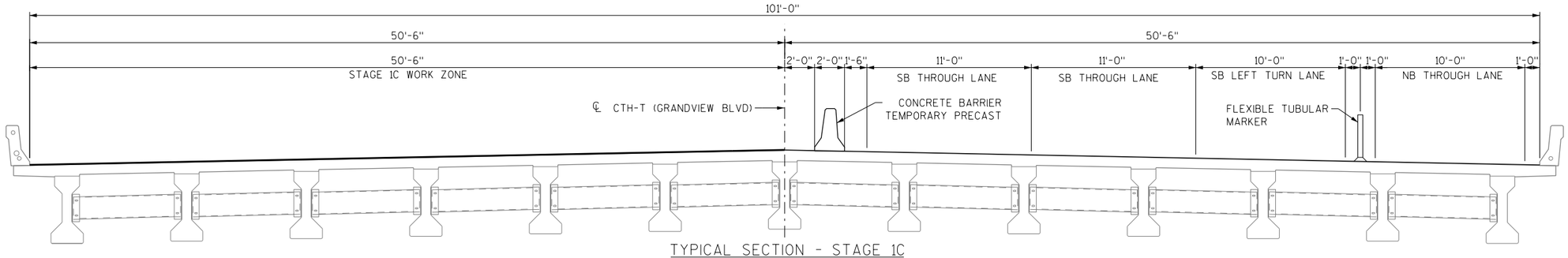
TYPICAL SECTION - STAGE 1A & 1D

(LOOKING NORTH AT NORTH ABUTMENT)



TYPICAL SECTION - STAGE 1B

(LOOKING NORTH)



TYPICAL SECTION - STAGE 1C

(LOOKING NORTH)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-67-245

DRAWN BY JAP | PLANS CK'D. WJZ

STAGING PLAN

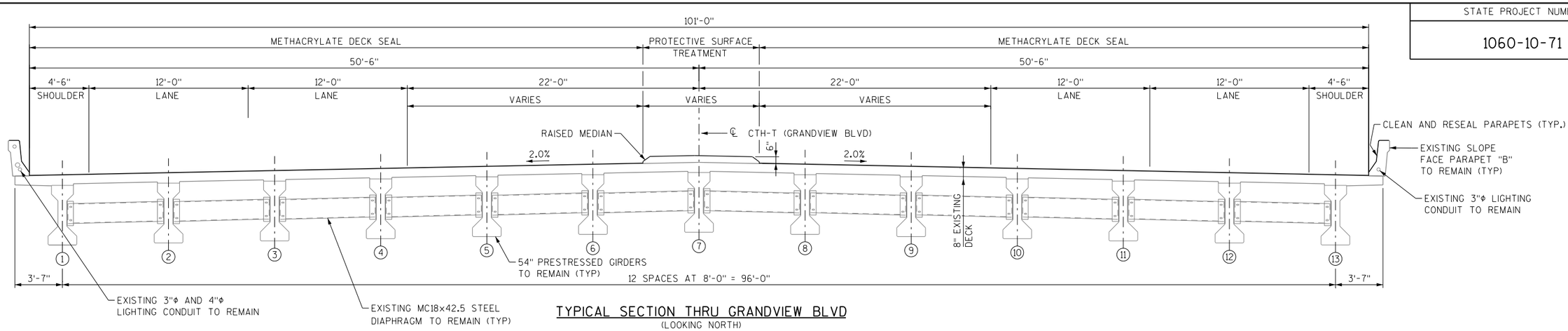
SHEET 2 OF 7

247

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STATE PROJECT NUMBER

1060-10-71

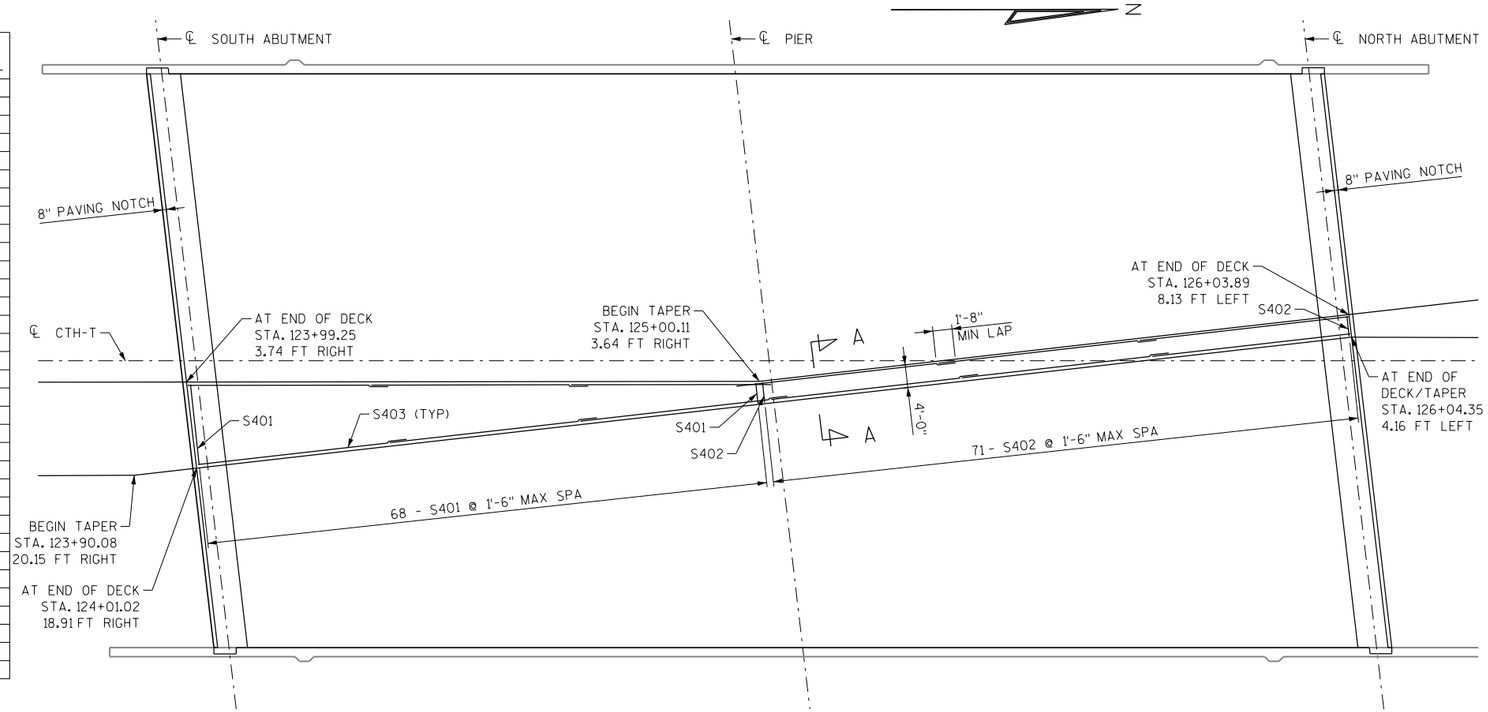


TYPICAL SECTION THRU GRANDVIEW BLVD

(LOOKING NORTH)

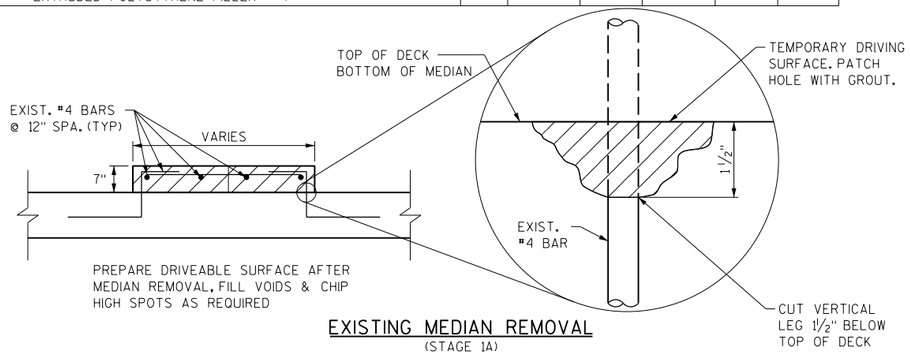
TOTAL ESTIMATE OF QUANTITIES

BID NO.	BID ITEMS	UNIT	S ABUT	PIER	N ABUT	SUPER	TOTAL
203.0220.004	REMOVING STRUCTURE B-67-245	EACH					1
206.1001.001	EXCAVATION FOR STRUCTURES BRIDGES B-67-245	EACH	0.5		0.5		1
210.1500	BACKFILL STRUCTURE TYPE A	TON	232		232		464
502.0100	CONCRETE MASONRY BRIDGES	CY	11		13	177	201
502.3200	PROTECTIVE SURFACE TREATMENT	SY				156	156
502.3205	PIGMENTED SURFACE SEALER RESEAL	SY				200	200
502.4204	ADHESIVE ANCHORS NO. 4 BAR	EACH	144		144		288
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	965		965	17455	19385
505.0904	BAR COUPLERS NO.4	EACH	2		2		4
505.0905	BAR COUPLERS NO.5	EACH				36	36
505.0906	BAR COUPLERS NO.6	EACH				10	10
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	3		5		8
506.7050.S	REMOVING BEARINGS B-67-245	EACH	3		5		8
509.0301	PREPARATION DECKS TYPE 1	SY				8	8
509.0302	PREPARATION DECKS TYPE 2	SY				2	2
509.1500	CONCRETE SURFACE REPAIR	SF	5	2	5	20	32
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF				96	96
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY				0.8	1
509.9050.S	CLEANING PARAPETS	LF				485	485
511.1200.003	TEMPORARY SHORING B-67-245	SF	400		400		800
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	41		41		82
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	173		173		346
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1		1		2
652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	24		47		71
652.0240	CONDUIT RIGID NONMETALLIC SCHEDULE 40 4-INCH	LF	8		16		24
SPV.0060.103	RESET EXISTING BEARINGS	EACH	10		8		18
SPV.0180.001	METHACRYLATE FLOOD SEAL	SY				2314	2314
NON-BID ITEMS							
NAME PLATE							
JOINT FILLER - 1/2", 3/4", AND 4"							
EXTRUDED POLYSTYRENE FILLER - 4"							



LAYOUT PLAN MEDIAN

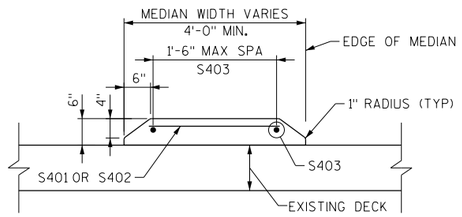
NOTE: SEE DIAPHRAGM DETAILS (SHEET 5) FOR BILL OF BARS



EXISTING MEDIAN REMOVAL

(STAGE 1A)

(COST INCLUDED WITH COST OF REMOVING OLD STRUCTURE STA 123+98)



SECTION A-A

CLEAN ALL LOOSE MATERIAL ON THE DECK AT THE MEDIAN LOCATION PRIOR TO MEDIAN PLACEMENT USING HIGH PRESSURE WATER OR AIR ENSURING ALL FREE-STANDING WATER IS REMOVED PRIOR TO MEDIAN PLACEMENT. NEAT CEMENT IS REQUIRED AS PER 509.3.9.2 OF THE STANDARD SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-67-245

DRAWN BY JAP | PLANS CK'D. WJZ

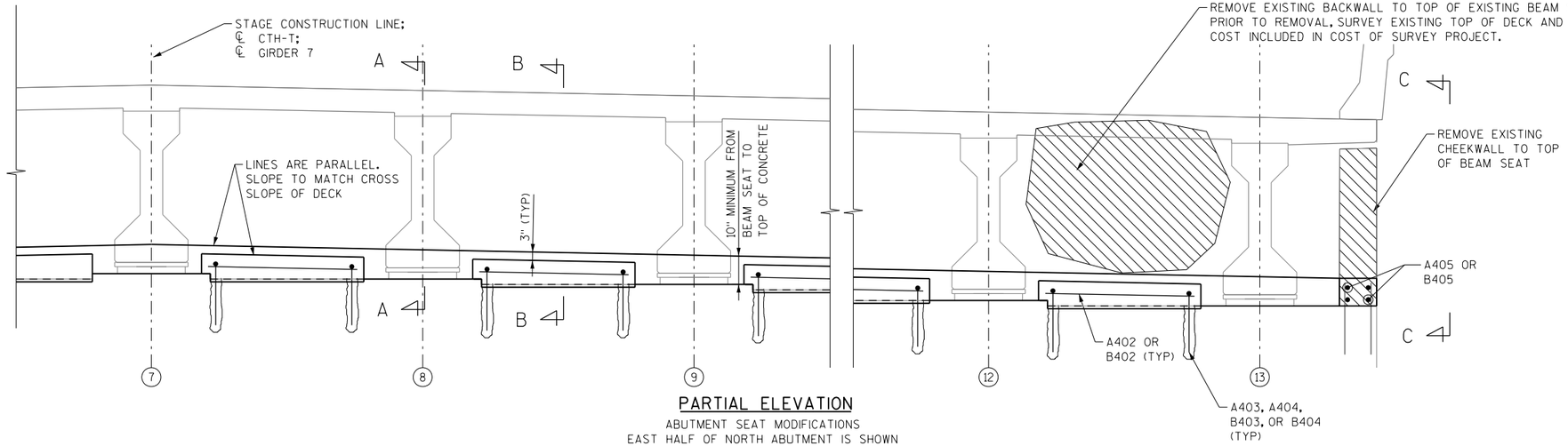
TYPICAL SECTION AND QUANTITIES

SHEET 3 OF 7

248

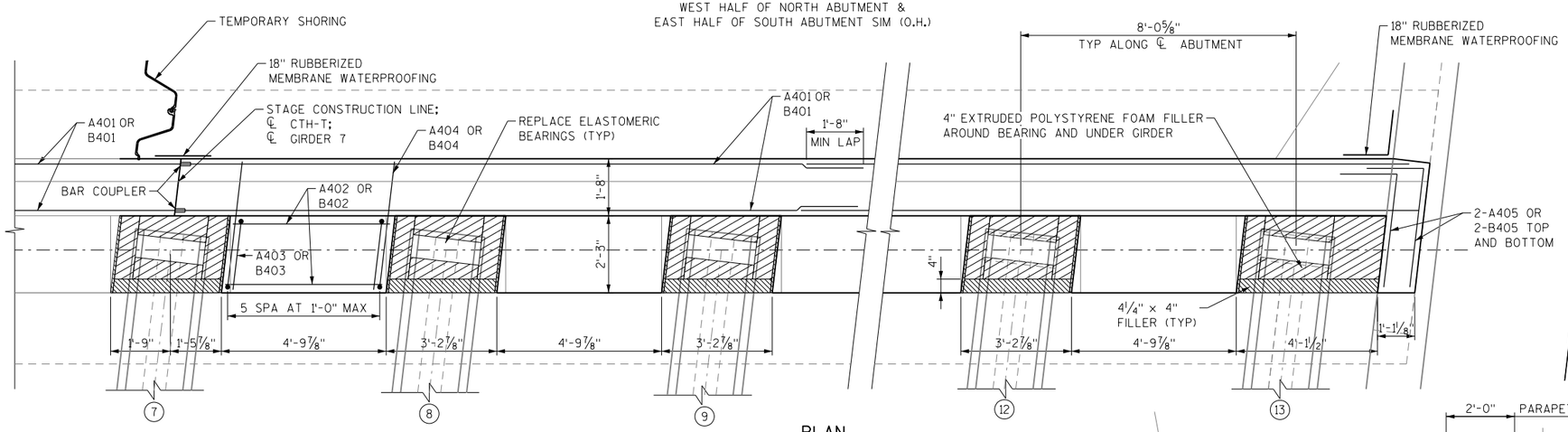
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STATE PROJECT NUMBER
1060-10-71



PARTIAL ELEVATION

ABUTMENT SEAT MODIFICATIONS
EAST HALF OF NORTH ABUTMENT IS SHOWN
WEST HALF OF SOUTH ABUTMENT SIM.
WEST HALF OF NORTH ABUTMENT &
EAST HALF OF SOUTH ABUTMENT SIM (O.H.)



PLAN

ABUTMENT SEAT MODIFICATIONS

BILL OF BARS - SOUTH ABUTMENT

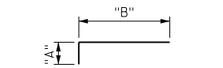
BAR NO.	COATED BAR	NO. REQ'D	LENGTH	BENT BAR	BUNDLED	▲ BAR SERIES COUPLERS ROD	965 # COATED 0 # UNCOATED LOCATION
A401	X	8	26'-9"			X	BACKWALL LONGITUDINAL
A402	X	24	4'-6"				SEAT LONGITUDINAL
A403	X	72	2'-10"	X			SEAT TRANSVERSE
A404	X	72	4'-8"	X			SEAT/BACKWALL TRANSVERSE
A405	X	8	5'-1"	X			END TRANSVERSE

PARAPET REINFORCEMENT QUANTITIES ARE INCLUDED IN THE TOTAL REINFORCEMENT QUANTITY FOR THE SOUTH ABUTMENT SEE SHEET 6 FOR BAR TABLE.

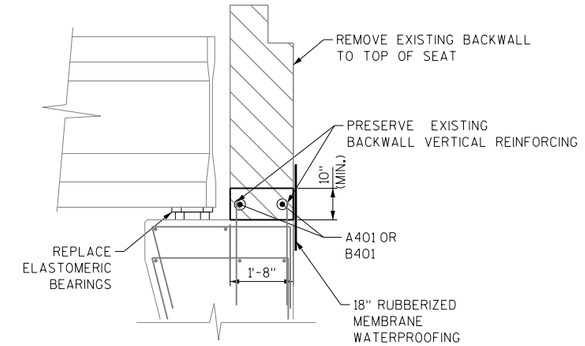
BILL OF BARS - NORTH ABUTMENT

BAR NO.	COATED BAR	NO. REQ'D	LENGTH	BENT BAR	BUNDLED	▲ BAR SERIES COUPLERS ROD	965 # COATED 0 # UNCOATED LOCATION
B401	X	8	26'-9"			X	BACKWALL LONGITUDINAL
B402	X	24	4'-6"				SEAT LONGITUDINAL
B403	X	72	2'-10"	X			SEAT TRANSVERSE
B404	X	72	4'-8"	X			SEAT/BACKWALL TRANSVERSE
B405	X	8	5'-1"	X			END TRANSVERSE

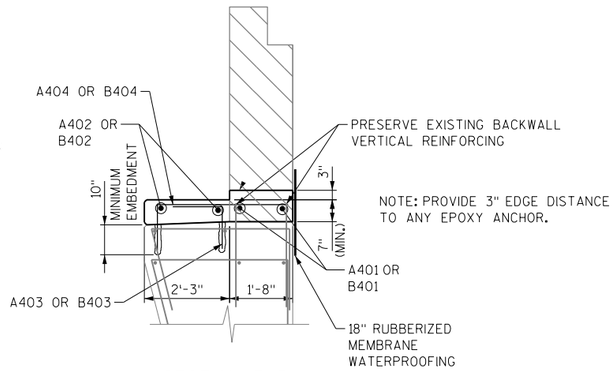
PARAPET REINFORCEMENT QUANTITIES ARE INCLUDED IN THE TOTAL REINFORCEMENT QUANTITY FOR THE NORTH ABUTMENT SEE SHEET 6 FOR BAR TABLE.



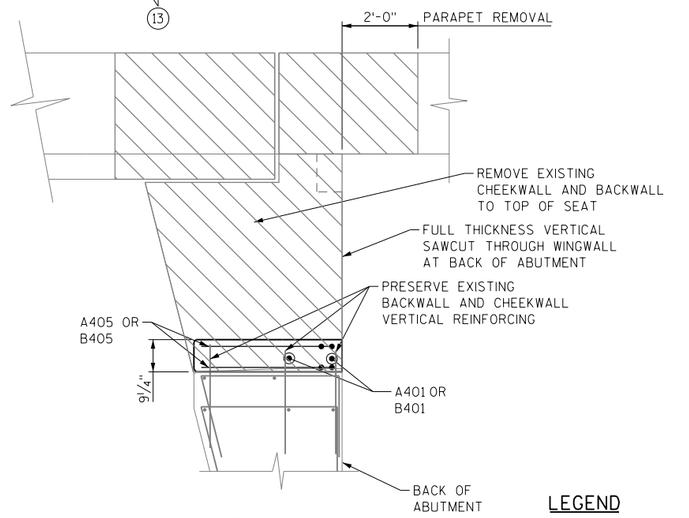
BAR NO.	DIM "A"	DIM "B"
A403/B403	1'-3"	1'-8"
A404/B404	1'-3"	3'-6"
A405/B405	1'-8"	3'-6"



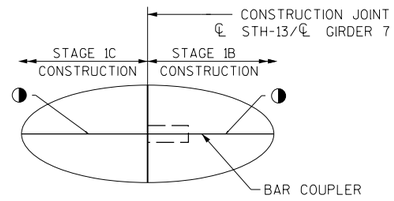
SECTION A-A



SECTION B-B



SECTION C-C



◑ BAR COUPLER DETAIL

A401 & B401, BAR LENGTHS HAVE BEEN COMPUTED TO ℄ OF LONGIT. CONST. JOINT. MODIFY LENGTHS TO BAR COUPLER MANUFACTURER RECOMMENDATIONS.

LEGEND

OH = OPPOSITE HAND

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-67-245

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ABUTMENT MODIFICATIONS

SHEET 4 OF 7

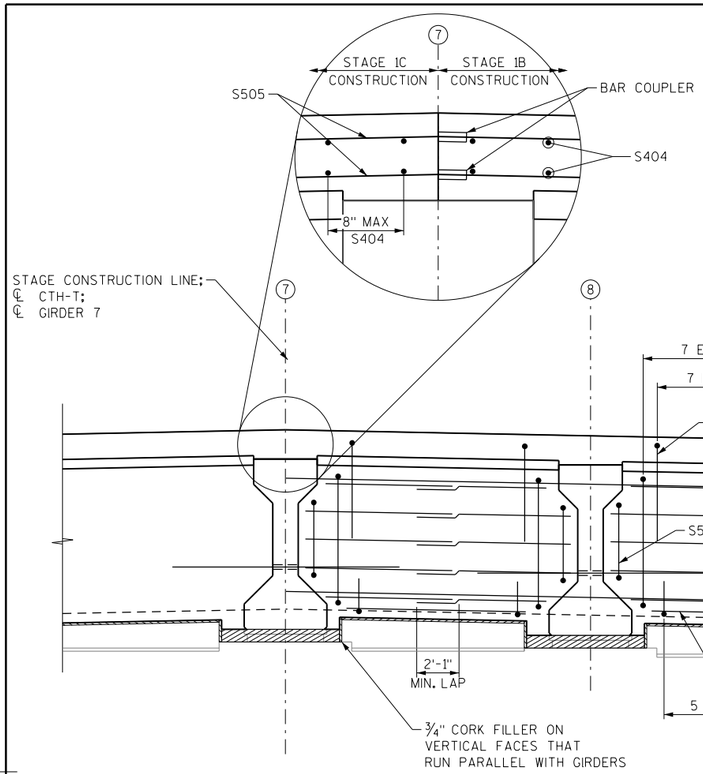
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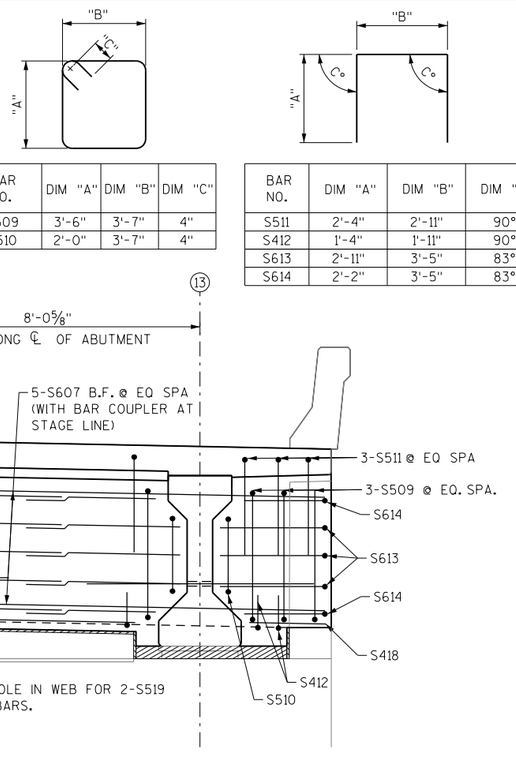
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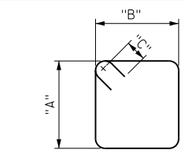
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STATE PROJECT NUMBER
1060-10-71



PARTIAL ELEVATION





BAR NO.	DIM "A"	DIM "B"	DIM "C"
S509	3'-6"	3'-7"	4"
S510	2'-0"	3'-7"	4"

BAR NO.	DIM "A"	DIM "B"	DIM "C"
S511	2'-4"	2'-11"	90°
S412	1'-4"	1'-11"	90°
S613	2'-11"	3'-5"	83°
S614	2'-2"	3'-5"	83°

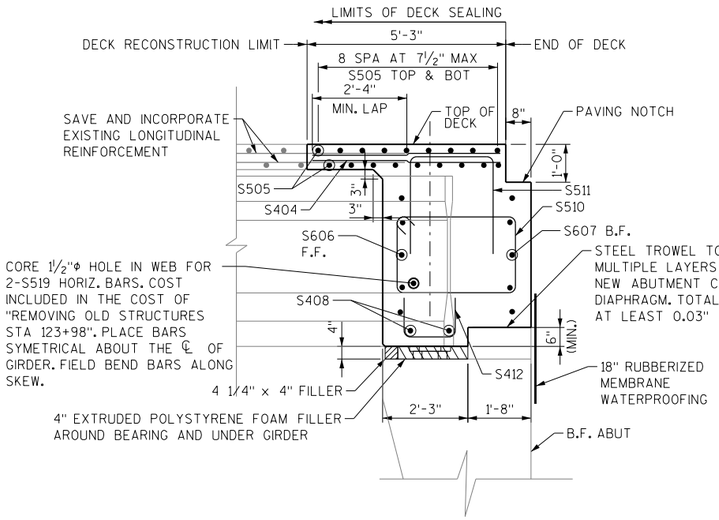
BILL OF BARS - NORTH & SOUTH ABUT DIAPHRAGMS

BAR NO.	COATED BAR	NO. REQ'D	LENGTH	BENT BAR BUNDLED	▲ BAR SERIES	COUPLERS ROD	17455 = COATED 0 = UNCOATED LOCATION
S401	X	68	8'-8"		X		MEDIAN TRANSVERSE SPAN 1
S402	X	71	3'-0"				MEDIAN TRANSVERSE SPAN 2
S403	X	38	34'-10"				MEDIAN LONGITUDINAL
S404	X	624	5'-0"				DECK LONGITUDINAL
S505	X	72	51'-9"			X	DECK TRANSVERSE
S606	X	240	4'-6"				DIAPHRAGM LONGITUDINAL F.F.
S607	X	20	51'-9"			X	DIAPHRAGM LONGITUDINAL B.F.
S408	X	48	5'-6"				DIAPHRAGM SEAT LONGIDUDINAL
S509	X	204	14'-10"	X			DIAPHRAGM LARGE STIRRUP
S510	X	52	11'-10"	X			DIAPHRAGM SMALL STIRRUP
S511	X	204	7'-4"	X			DIAPHRAGM TOP U-BAR
S412	X	152	4'-4"	X			DIAPHRAGM BOT U-BAR
S613	X	12	8'-7"	X			DIAPHRAGM END U-BAR - LARGE
S614	X	8	7'-9"	X			DIAPHRAGM END U-BAR - SMALL
S415	X	36	4'-4"	X			PARAPET TANSVERSE
S416	X	36	4'-4"	X			PARAPET TANSVERSE
S517	X	20	5'-9"				PARAPET LONGITUDINAL
S418	X	8	2'-2"				DIAPH SEAT LONGIT. AT END
S519	X	52	6'-0"				DIAPHRAGM THRU GIRDER

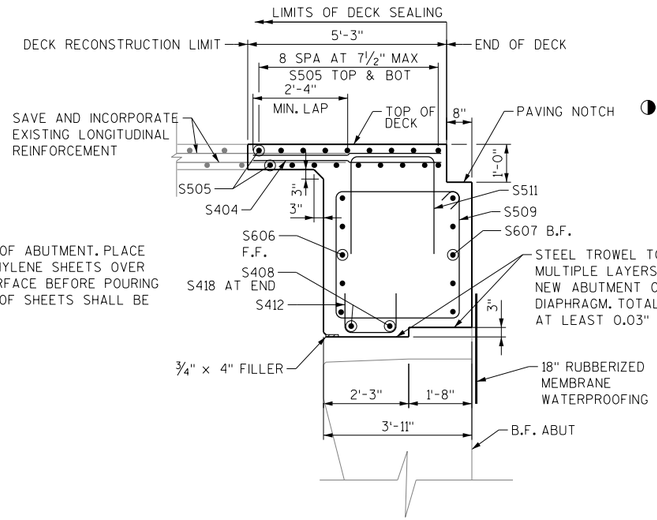
NOTE: SEE TYPICAL SECTION AND QUANTITIES (SHEET 3) FOR S401, S402, AND S403 LOCATIONS. SEE PARAPET DETAILS (SHEET 6) FOR S415, S416, AND S417.

BAR NO.	NUMBER REQUIRED	LENGTH
S401	1 SERIES OF 64	3'-0" TO 14'-3"

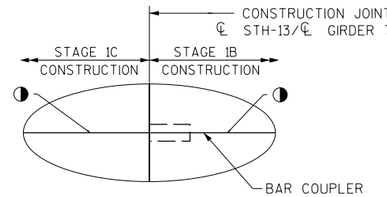
▲ LENGTH SHOWN FOR BAR SERIES IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS.



SECTION AT GIRDER
(DIMENSIONS PERPENDICULAR TO ABUTMENT)

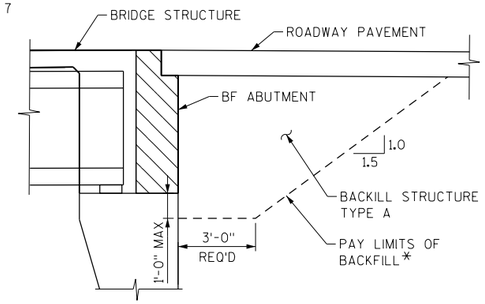


SECTION BETWEEN GIRDERS
(DIMENSIONS PERPENDICULAR TO ABUTMENT)



◑ BAR COUPLER DETAIL

S505 & S607, BAR LENGTHS HAVE BEEN COMPUTED TO ℄ OF LONGIT. CONST. JOINT. MODIFY LENGTHS TO BAR COUPLER MANUFACTURER RECOMMENDATIONS.



* BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

SECTION THROUGH ABUTMENT BACKFILL

LEGEND
F.F FRONT FACE
B.F. BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-67-245

DRAWN BY JAP | PLANS CK'D. WJZ

DIAPHRAGM DETAILS

SHEET 5 OF 7

250

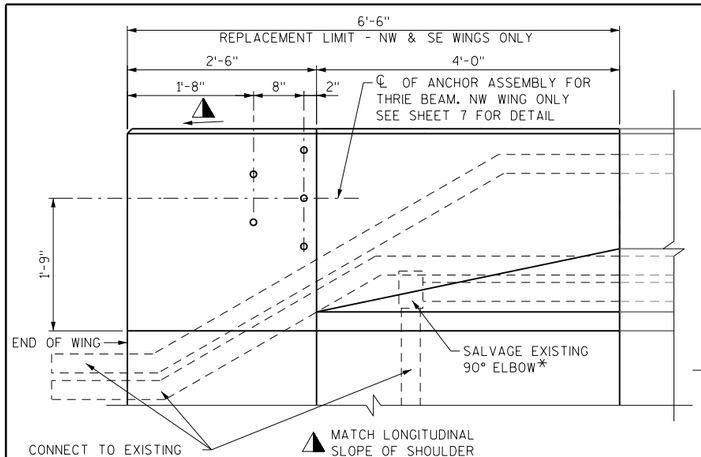
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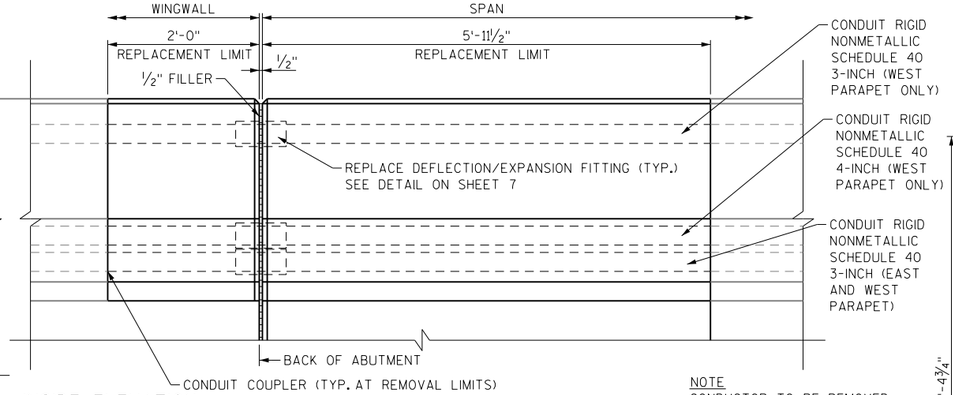
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STATE PROJECT NUMBER

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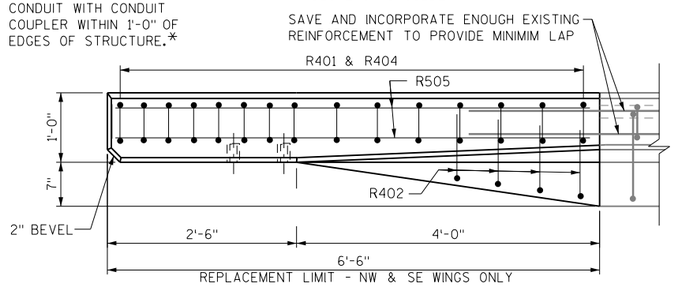


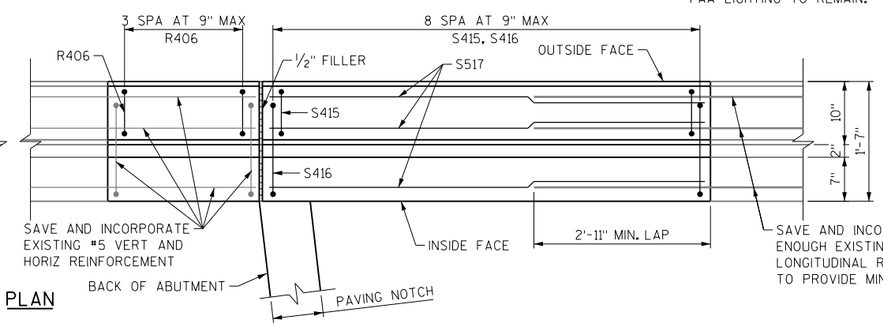


INSIDE ELEVATION

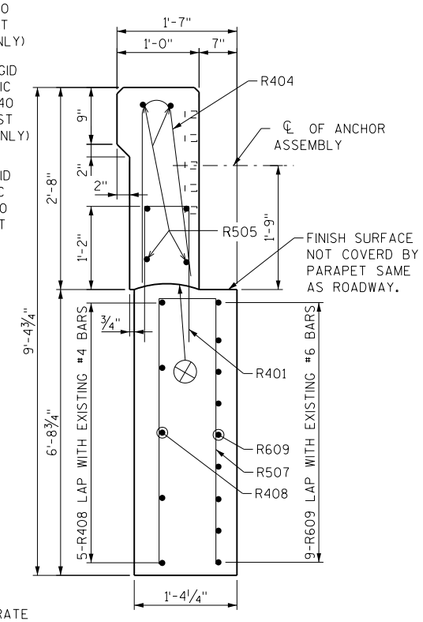
*LOCATE EXISTING CONDUIT PRIOR TO CONCRETE REMOVAL. REPLACE IN ORIGINAL LOCATIONS.

NOTE
CONDUCTOR TO BE REMOVED UNDER PROJECT 1060-47-70. FAA LIGHTING TO REMAIN.

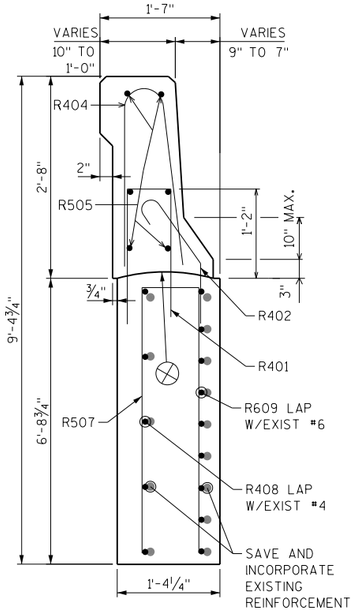




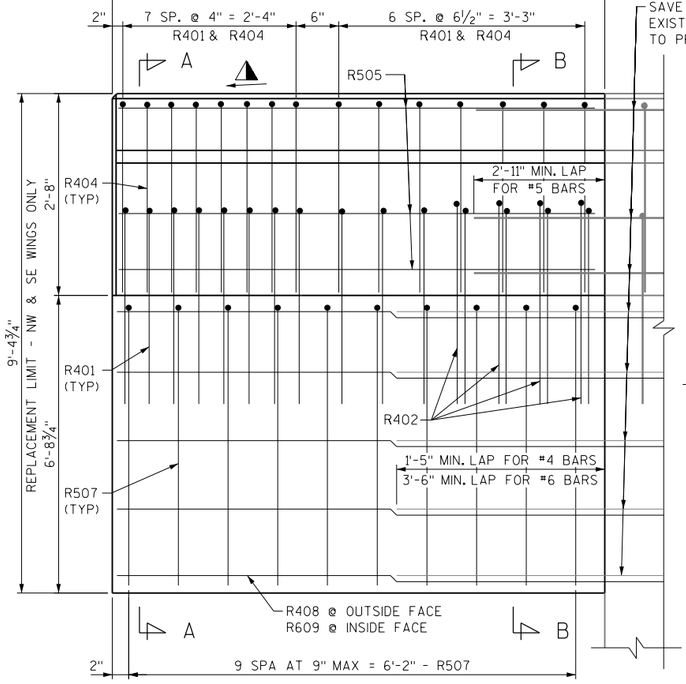
PLAN

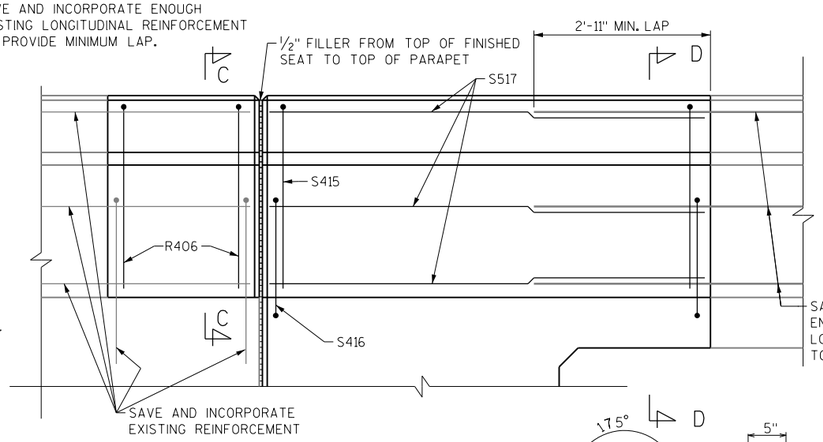


SECTION A-A

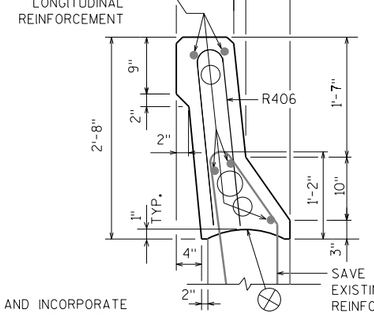


SECTION B-B

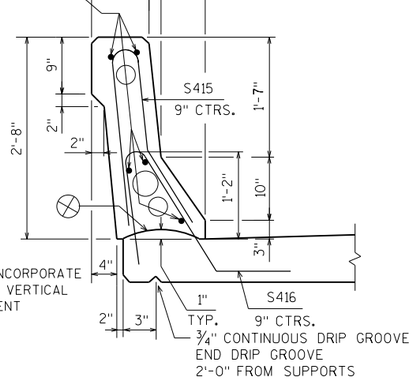




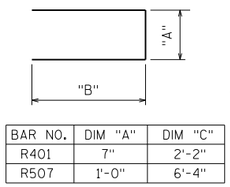
OUTSIDE ELEVATION



SECTION C-C

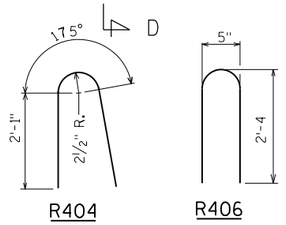


SECTION D-D



BAR NO.	DIM "A"	DIM "C"
R401	7"	2'-2"
R507	1'-0"	6'-4"

R402



R404 R406

⊗ CONST. JOINT - STRIKE OFF AS SHOWN.

BILL OF BARS
FOR ABUTMENT PARAPETS

BAR MARK	NO. REQ'D. NORTH ABUT.	NO. REQ'D. SOUTH ABUT.	LENGTH	BENT	LOCATION
R401	15	15	4'-9"	X	NW & SE WINGS
R402	4	4	3'-1"	X	NW & SE WINGS
R404	15	15	4'-9"	X	NW & SE WINGS
R505	6	6	6'-2"		NW & SE WINGS
R406	8	8	4'-11"	X	ALL WINGS
R507	10	10	13'-5"		NW & SE WINGS
R408	5	5	6'-2"		NW & SE WINGS
R609	9	9	6'-2"		NW & SE WINGS

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.
EPOXY COAT ALL PARAPET REINF.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-67-245

DRAWN BY JAP | PLANS CK'D. WJZ

PARAPET DETAILS

SHEET 6 OF 7

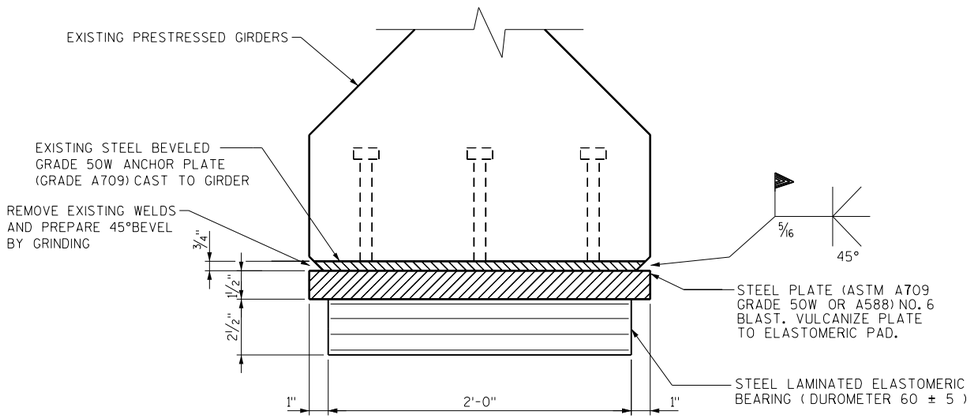
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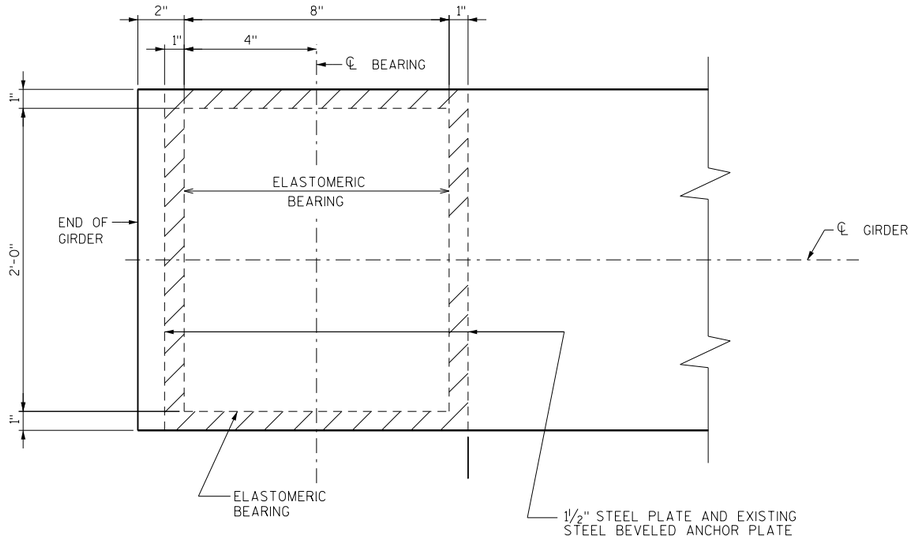
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8

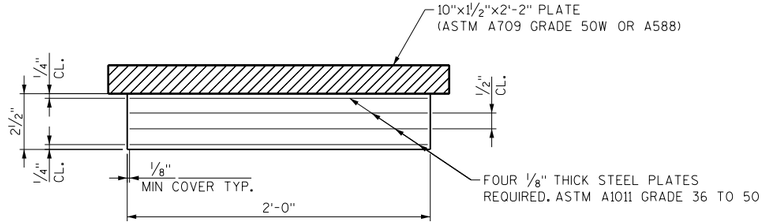
STATE PROJECT NUMBER
1060-10-71



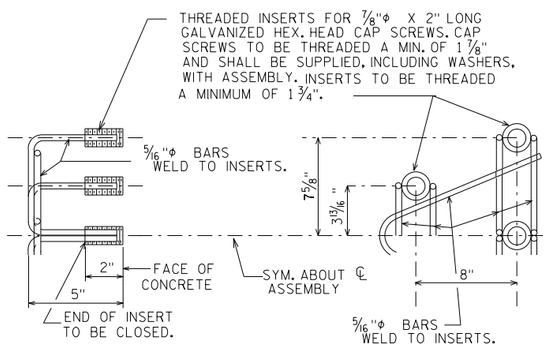
END VIEW



PLAN VIEW

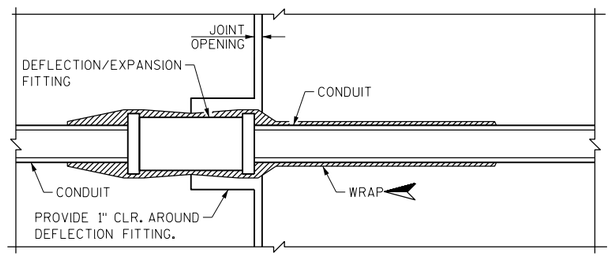


SECTION THRU ELASTOMERIC BEARING



DETAIL OF ANCHOR ASSEMBLY

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



DEFLECTION/EXPANSION FITTING

BOND JUMPER NOT SHOWN FOR CLARITY

SPONGE RUBBER WRAP TO BE AASHTO M153, TYPE 1OR 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"

NOTES

REMOVE AND REPLACE ELASTOMERIC BEARINGS AT THE FOLLOWING LOCATIONS:
GIRDERS 1, 6, AND 8 AT THE SOUTH ABUTMENT.
GIRDERS 1, 2, 3, 4, AND 8 AT THE NORTH ABUTMENT.
RESET ALL OTHER BEARINGS.

BEARINGS SHALL NOT BE PLACED AT A TEMPERATURE GREATER THAN 85° F.

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED."

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED 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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-67-245

DRAWN BY JAP | PLANS CK'D. WJZ

ELASTOMERIC BEARINGS

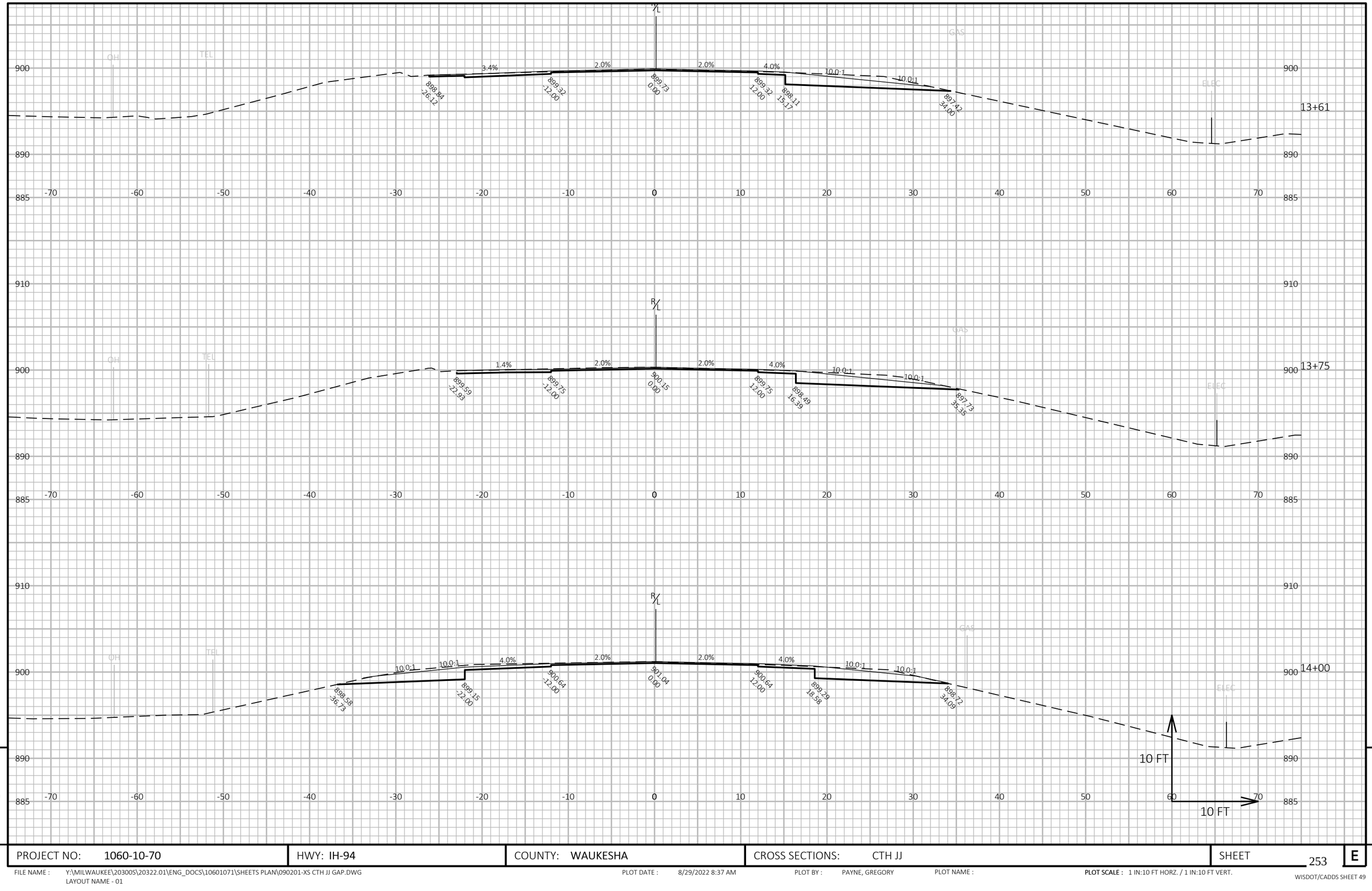
SHEET 7 OF 7

252

8

8

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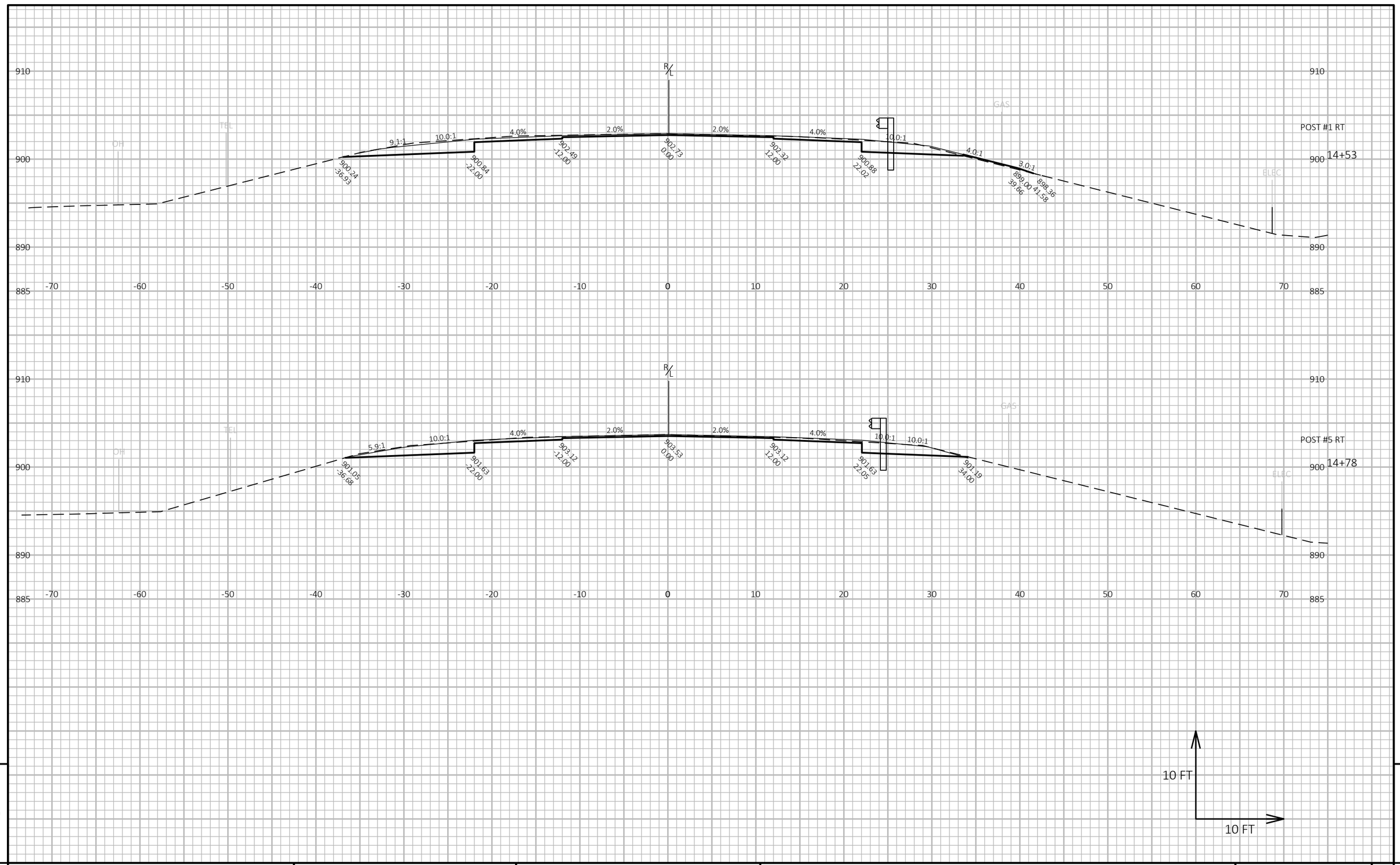
PROJECT NO: 1060-10-70	HWY: IH-94	COUNTY: WAUKESHA	CROSS SECTIONS: CTH JJ	SHEET 253	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\090201-XS CTH JJ GAP.DWG
LAYOUT NAME - 01

PLOT DATE : 8/29/2022 8:37 AM PLOT BY : PAYNE, GREGORY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

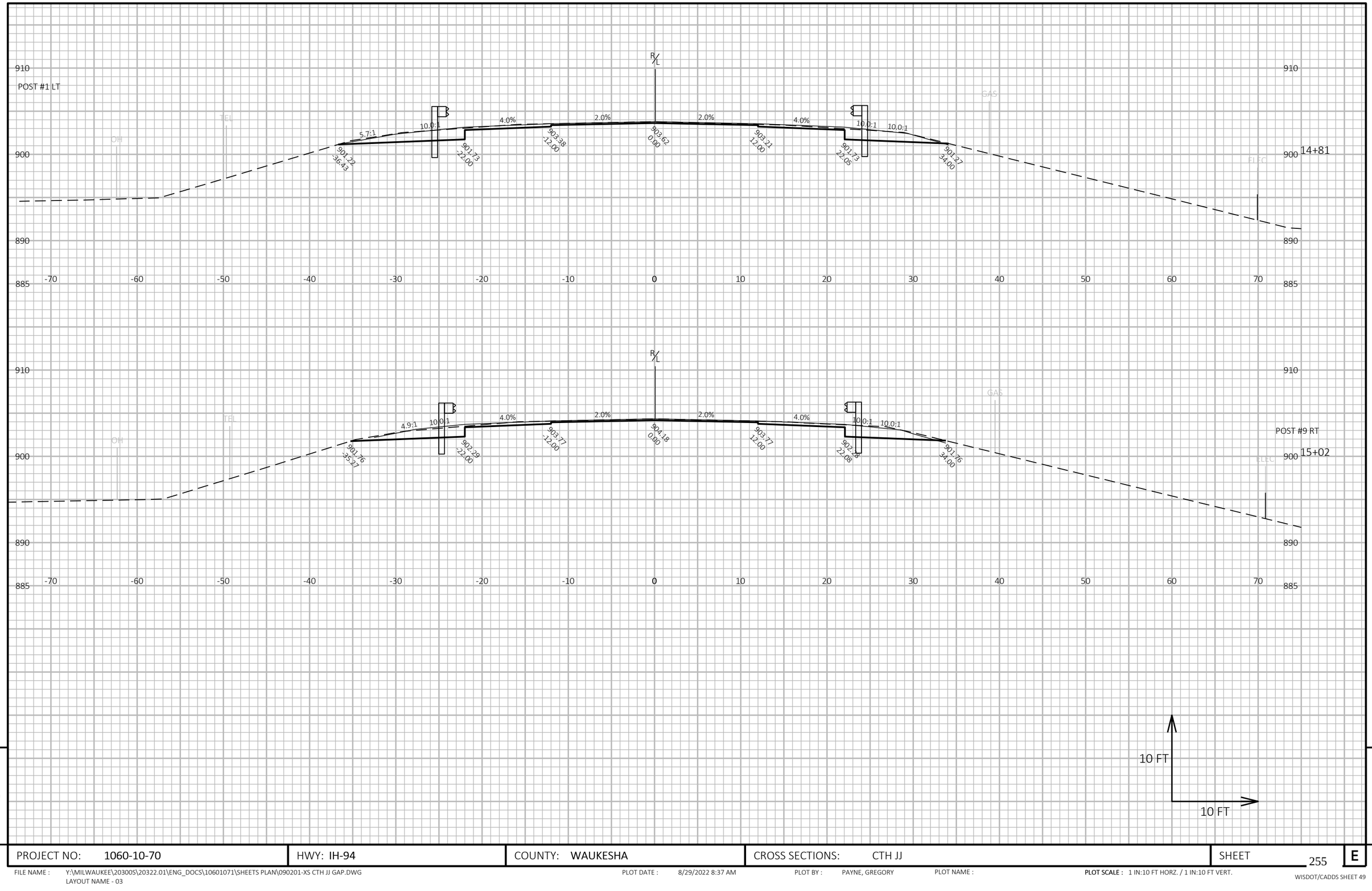
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PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

PROJECT NO: 1060-10-70	HWY: IH-94	COUNTY: WAUKESHA	CROSS SECTIONS: CTH JJ	SHEET 255	E

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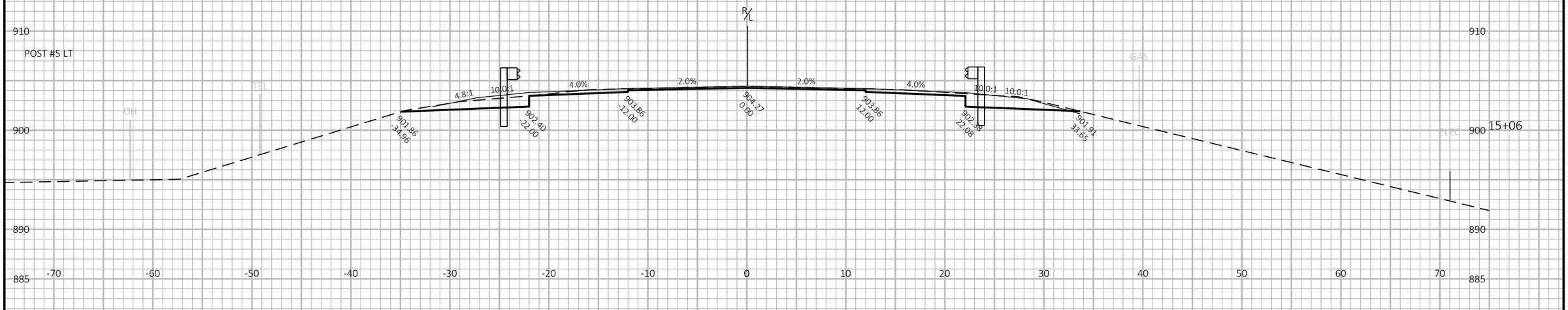
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PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

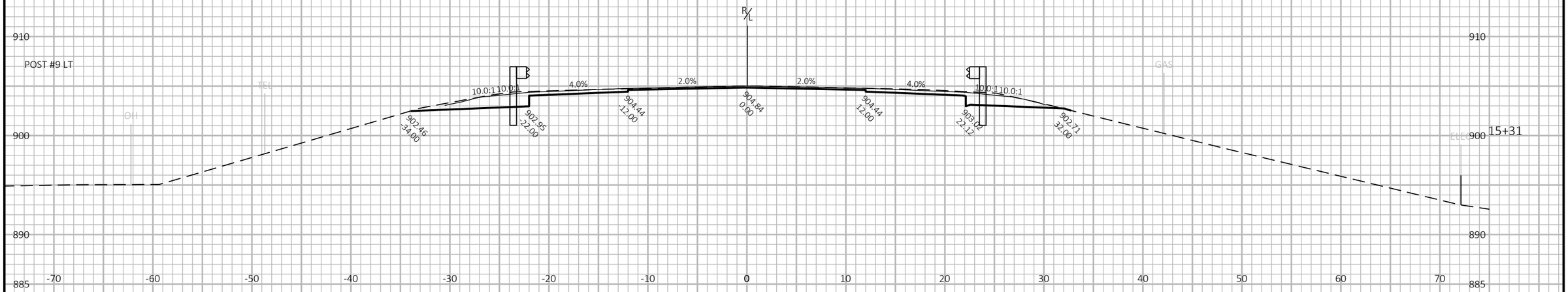
WISDOT/CADDS SHEET 49

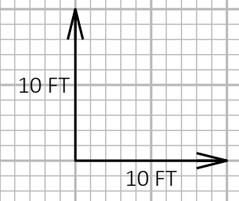
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POST #5 LT



POST #9 LT





9

9

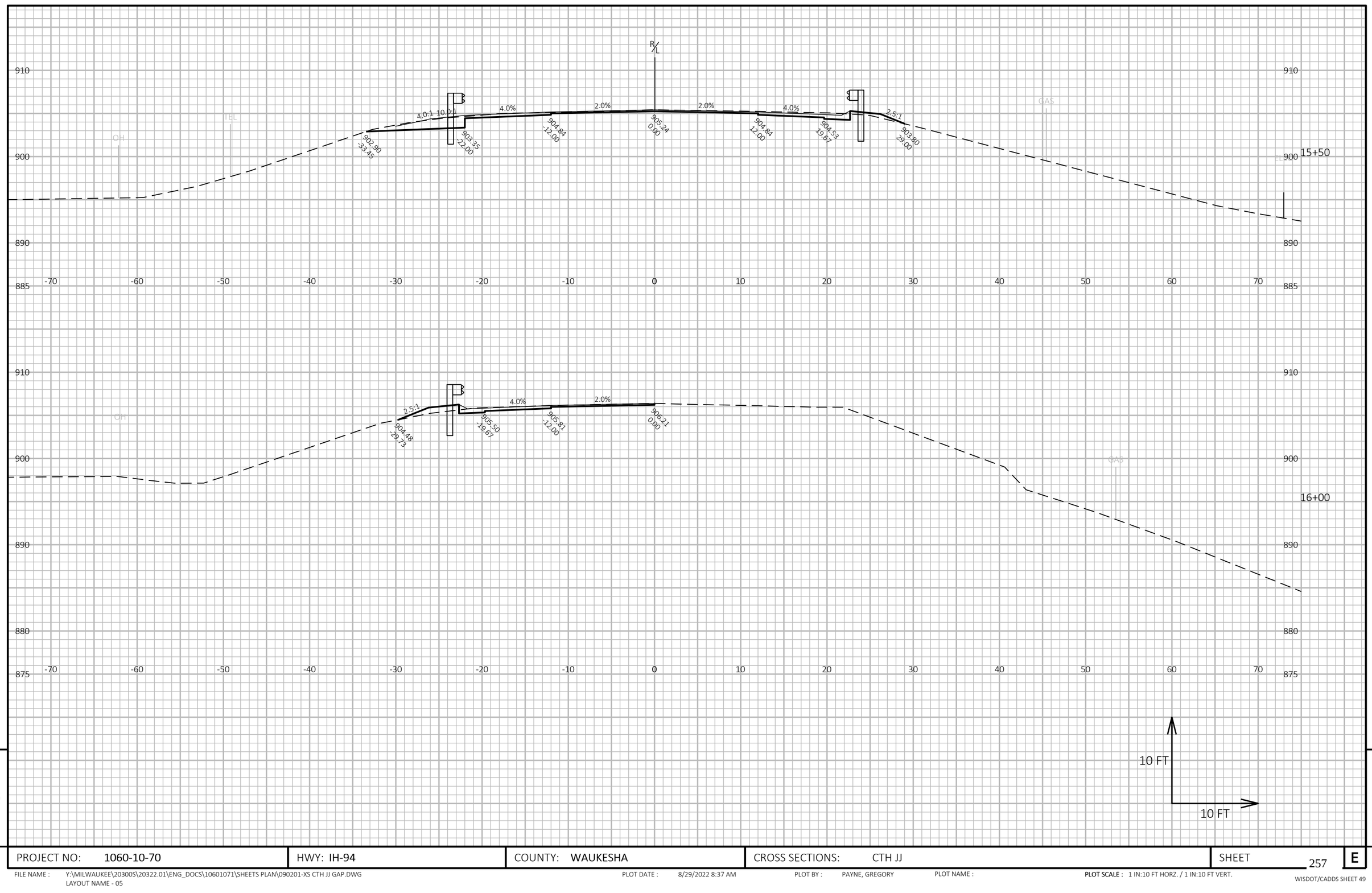
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LAYOUT NAME - 04

PLOT DATE : 8/29/2022 8:37 AM PLOT BY : PAYNE, GREGORY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

PROJECT NO: 1060-10-70	HWY: IH-94	COUNTY: WAUKESHA	CROSS SECTIONS: CTH JJ	SHEET 257	E

FILE NAME : Y:\MILWAUKEE\20300S\20322.01\ENG_DOCS\10601071\SHEETS PLAN\090201-XS CTH JJ GAP.DWG
LAYOUT NAME - 05

PLOT DATE : 8/29/2022 8:37 AM PLOT BY : PAYNE, GREGORY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

9

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

WKE APRIL 2024

PROJECT ID: 1060-47-70, 1330-47-71, 2788-03-70

WITH: 1060-10-71

COUNTY: WAUKESHA

07

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 = 836



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1060-47-70		
1330-47-71		
2788-03-70		
1060-10-71		

IH 94 EAST WEST FREEWAY
STH 83 TO STH 16

IH 94

WAUKESHA COUNTY

STATE PROJECT NUMBER
1060-47-70

CITY OF DELAFIELD, STATE ROAD 83
NAGAWAUKEE PARK AND RIDE LOT

STATE ROAD 83

WAUKESHA COUNTY

STATE PROJECT NUMBER
1330-47-71

CITY OF WAUKESHA MEADOWBROOK ROAD
ROLLING RIDGE DR TO IH 94 EB RAMPS

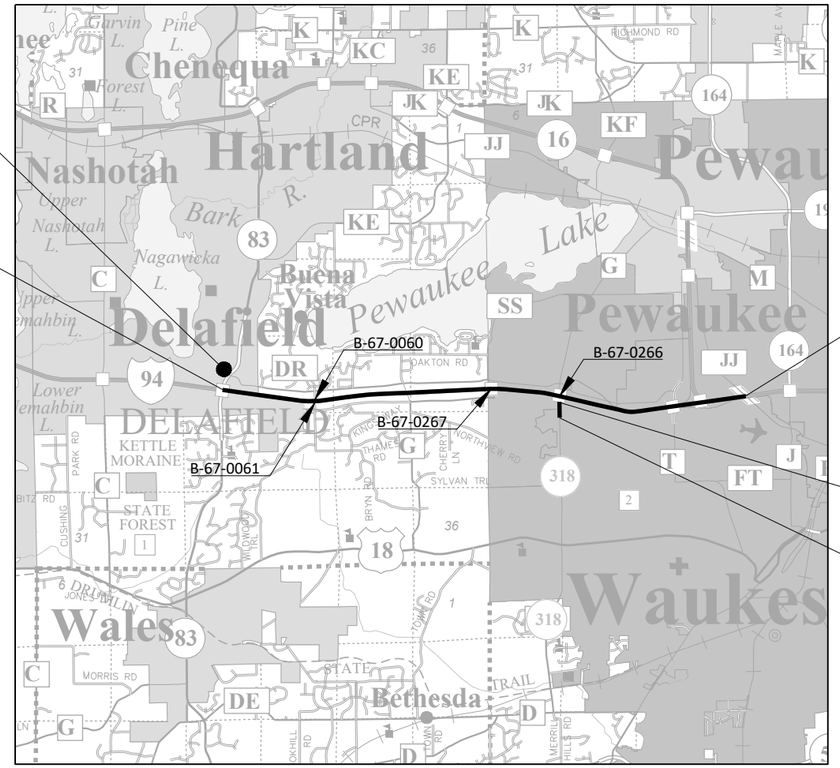
MEADOWBROOK ROAD

WAUKESHA COUNTY

STATE PROJECT NUMBER
2788-03-70

R- 17 -E R- 18 -E R- 19 -E

T- 8 -N



PROJECT 1330-47-71
LOT 67-50

BEGIN PROJECT 1060-47-70
STA. 459+29.80
X = 645389.82
Y = 175680.07

B-67-0060
B-67-0266
B-67-0267
B-67-0061

END PROJECT 1060-47-70
STA. 825+63.00

T- 7 -N

END PROJECT 2788-03-70
STA. 280+00.00

BEGIN PROJECT 2788-03-70
STA. 268+83.00
X = 668747.25
Y = 173317.95

T- 6 -N

DESIGN DESIGNATION 1060-47-70

A.A.D.T.	2023	=	95,978
A.A.D.T.	2043	=	107,319
D.H.V.		=	9.6
D.D.		=	54/46
T.		=	10.3%
DESIGN SPEED		=	70 MPH
ESALS		=	21,000,000

CONVENTIONAL SYMBOLS

PLAN
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (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 2 MI

TOTAL NET LENGTH OF CENTERLINE (1060-47-70) = 6.938 MI
TOTAL NET LENGTH OF CENTERLINE (1330-47-71) = 0.000 MI
TOTAL NET LENGTH OF CENTERLINE (2788-03-70) = 0.212 MI

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

ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM, NAVD 88 (2012).

ORIGINAL PLANS PREPARED BY
Lakeside ENGINEERS

WISCONSIN
CHRISTOPHER M QUESNELL
E-37621
NEW BERLIN WI
PROFESSIONAL ENGINEER

2/9/2024 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	DAAR ENGINEERING, INC.
Designer	LAKESIDE ENGINEERS, LLC
Project Manager	CHRISTOPHER ZACHARIAS, P.E.
Regional Examiner	STEVE CHOJNACKI, P.E.
Regional Supervisor	WILLIAM MOHR, P.E.

APPROVED FOR THE DEPARTMENT
DATE: 2/9/2024 (Signature)

E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\010101_TI.DWG PLOT DATE : 2/8/2024 2:41 PM PLOT BY : JOE MAAS PLOT NAME :

GENERAL NOTES

DO NOT REMOVE ANY TREES OR SHRUBS WITHOUT APPROVAL OF THE ENGINEER.

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

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH DIGGERS HOTLINE AND AFFECTED UTILITIES TO FIELD LOCATE UTILITIES PRIOR TO THE START OF WORK. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE SEPARATELY.

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

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. TOPSOIL SHALL BE REPLACED WITH 6-INCH TYPICAL DEPTH.

A SAWED JOINT IS REQUIRED WHERE NEW HMA PAVEMENT MEETS EXISTING HMA PAVEMENT.

RE-TOPSOIL OF GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITH IN THOSE AREAS. SEED, FERTILIZE, AND EROSION 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 FIVE (5) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED AND EROSION MAT.

WETLAND AND STREAM BANK AREAS, AS DESIGNATED BY THE ENGINEER, SHALL BE RESTORED WITHIN 48 HOURS OF ANY DISTURBANCE.

STOCKPILE EXCESS MATERIAL OR SOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOOD PLAINS, AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FIVE (5) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED AND EROSION MAT.

EROSION CONTROL DEVICES ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTORS ECIP AND BY THE ENGINEER. EROSION CONTROL BMPS SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

THE EXACT LOCATION OF EXCAVATION BELOW SUBGRADE (EBS) WILL BE DETERMINED BY THE ENGINEER.

SQUEEGEE ALL SAWCUT SLURRY TO THE AGGREGATE SHOULDER AND/OR REMOVE INCIDENTAL TO SAWCUTTING.

CONTACT THE PROJECT ENGINEER AND THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION (SEWRPC) AT LEAST TWO WEEKS PRIOR TO WORK NEAR ANY PUBLIC SURVEY MONUMENT.

ALL TYPES OF HMA PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLWING LAYERS AND GRADATIONS:

PAVEMENT APPLICATION	PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	LAYER
1060-47-70			
RESURFACING IH-94 STH 83 TO CTH SS	4 SMA 58-28 V	1 ¾"	UPPER
	3 HT 58-28 H	2 ¼"	LOWER
	4 SMA 58-28 V	1 ¾"	SHOULDERS
RESURFACING IH-94 CTH SS TO CTH T	4 SMA 58-28 V	2"	UPPER
	3 HT 58-28 H	2 ¼", 2 ½"-4", 2 ¼"-3 ¾"	LOWER
	4 SMA 58-28 V	2", 3"	SHOULDERS
RESURFACING CTH SS, STH 318	4 MT 58-28 S	2 ½"	UPPER
RESURFACING PARK & RIDE LOTS	4 MT 58-28 S	2"	UPPER
RESURFACING LOOP INSTALL PRIOR TO MILL AND OVERLAY	ASPHALTIC SURFACE	EXISTING PAVEMENT DEPTH	--
SHARED USE PATH	ASPHALTIC SURFACE	5"	--
CURB AND GUTTER REPLACEMENT	ASPHALTIC SURFACE	EXISTING PAVEMENT DEPTH	--

PAVEMENT APPLICATION	PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	LAYER
1060-47-70			
IH 94 MEDIAN CROSSOVER	ASPHALTIC SURFACE	EXISTING PAVEMENT DEPTH	--
GOLF ROAD CROSS CULVERT REPLACEMENT	ASPHALTIC SURFACE	EXISTING PAVEMENT DEPTH	--
1330-47-71			
RESURFACING PARK & RIDE LOTS	4 MT 58-28 S	2"	UPPER
CURB AND GUTTER REPLACEMENT	ASPHALTIC SURFACE	EXISTING PAVEMENT DEPTH	--
2788-03-70			
RESURFACING STH 318	4 MT 58-28 S	2 ½"	UPPER
RESURFACING LOOP INSTALL PRIOR TO MILL AND OVERLAY	ASPHALTIC SURFACE	EXISTING PAVEMENT DEPTH	--
SHARED USE PATH	ASPHALTIC SURFACE	EXISTING PAVEMENT DEPTH	--
CURB AND GUTTER REPLACEMENT	ASPHALTIC SURFACE	EXISTING PAVEMENT DEPTH	--

LOCAL AGENCIES

Waukesha County Department of Public Works - Road Facility
Karen Braun
1230 Pewaukee Road
Waukesha, WI 53188
(262) 424-9032
kbraun@waukeshacounty.gov

STATE AGENCIES

Wisconsin Department of Transportation
Chris Zacharias
141 NW Barstow St
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(262) 548-6716
Christopher.Zacharias@dot.wi.gov

Wisconsin Department of Natural Resources
Craig Webster
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Waukesha, WI 53188
(262) 574-2141
Craig.Webster@wisconsin.gov

Wisconsin Department of Transportation ATR Pull Boxes - Electricity
Chad Bigler
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P.O. Box 2583
Madison, WI 53704-2583
(608) 535-7413
chad.bigler@dot.wi.gov

Wisconsin Department of Transportation - Traffic Signals
Jarrett Gates
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Waukesha, WI 53188
(262) 548-5894
jarrett.gates@dot.wi.gov

Wisconsin Department of Transportation - Communication Line
Jeff Madson
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433 W. St. Paul Ave.
Milwaukee, WI 53203-3007
(414) 225-3723
Jeffrey.Madson@dot.wi.gov

Wisconsin Department of Transportation - Street Lighting
Eric Perea
141 NW Barstow Street
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(262) 574-5422
Eric.Perea@dot.wi.gov

OTHER AGENCIES

City of Waukesha - Communication Line
Jeff Hernke
201 Delafield Street
Waukesha, WI 53188
(262) 524-3592
jhernke@waukesha-wi.gov

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P.O. Box 1607
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(262) 953-4289
rmerry@sewrpc.org

Waukesha Metro
Brian Engelking
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Waukesha, WI 53188
(262) 524-3634
bengelki@waukesha-wi.gov

Waukesha County Department of Park and Land Use
Rebecca Mattano
515 W. Moreland Blvd
Waukesha, WI 53188
(262) 548-7807
rmattano@waukeshacounty.gov

DESIGNER

Lakeside Engineers, LLC
Chris Quesnell
909 N Mayfair Rd
Wauwatosa, WI 53226
(262) 789-8200
Chris.Quesnell@lakesideengineers.com

ORDER OF SECTION 2 SHEETS

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
RAMP GATES
CURB RAMP DETAILS
ROADSIDE BARRIER DETAILS
FTMS
EROSION CONTROL
STORM SEWER
PERMANENT SIGNING
LIGHTING
TRAFFIC SIGNALS
SIGNAL INTERCONNECT
PAVEMENT MARKING
TRAFFIC CONTROL
DETOUR PLAN
FENCING
ALIGNMENT PLAN
CONTROL SURVEY

ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC
AGG	AGGREGATE
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
CB	CATCH BASIN
C&G	CURB AND GUTTER
C-C	CENTER TO CENTER
CONC	CONCRETE
CSD	CONCRETE SURFACE DRAIN
CTR	CENTER
CWT	HUNDREDWEIGHT
CY	CUBIC YARD
D	DEGREE OF CURVE
Δ	DELTA
DD	DIRECTIONAL DISTRIBUTION
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
E	EAST
EB	EASTBOUND
EL OR ELEV	ELEVATION
EXIST	EXISTING
FS	FULL SUPERELEVATION
FT	FOOT
HE	HIGHWAY EASEMENT
HMA	HOT MIX ASPHALT
INCID	INCIDENTAL
INL	INLET
L	LENGTH OF CURVE
LF	LINEAR FOOT
LONG	LONGITUDINAL
LT	LEFT
MH	MANHOLE
MIN	MINIMUM
ML OR M/L	MATCH LINE
N	NORTH
NB	NORTHBOUND
NC	NORMAL CROWN
NTS	NOT TO SCALE
PAVT	PAVEMENT
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS
RCPSS	REINFORCED CONCRETE PIPE STORM SEWER
REQD	REQUIRED
R/L	REFERENCE LINE
RO	RUN OFF LENGTH
RT	RIGHT
RW OR R/W	RIGHT-OF-WAY
S	SOUTH
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SHT	SHEET
SI	SLOPE INTERCEPT
SS	STORM SEWER
STA	STATION
SY	SQUARE YARD
SYM	SYMMETRICAL
T	TANGENT LENGTH
TEMP	TEMPORARY
TYP	TYPICAL
V	VELOCITY OR DESIGN SPEED
VAR	VARIABLE OR VARIES
W	WEST
WB	WESTBOUND
YD	YARD

UTILITIES

2

AT&T Wisconsin - Communication Line

Matthew Dinnauer
435 South 95th Street
Milwaukee, WI 53214-1226
(262) 896-7690
md9542@att.com

ATC Management, Inc. - Electricity-Transmission

Trans 220 Mailbox
801 O'keefe Road
De Pere, WI 54115
(920) 338-6582
dl-ATCDOTNotifications@atcllc.com

Century Link - Communication Line

Kevin Zickert
224 Industrial Dr
North Prairie, WI 53153
(262) 392-5200
relocations@lumen.com

City of Pewaukee Department of Public Works - Water

Magdelene Wagner
W240 N3065 Pewaukee Road
Pewaukee, WI 53072
(262) 691-0804
wagner@pewaukee.wi.us

City of Waukesha - Sewer

Christopher Langemak
201 Delafield Street
Waukesha, WI 53188
(262) 524-3598
clangemak@waukesha-wi.gov

Everstream - Communication Line

Everstream Utility Coordination
324 E Wisconsin Ave, Suite 730
Milwaukee, WI 53202
(414) 409-1709
WI-Relocations@everstream.net

Level 3 Communications LLC - Communication Line

Network Relocations
1025 Eldorado Blvd
Broomfield, CO 80021
relocations@lumen.com

Midwest Fiber Networks LLC - Communication Line

MWFN Utility Coordinator
6070 North Flint Rd
Glendale, WI 53209
(414) 672-5612
RelocationRequests@midwestfibernetworks.com

Spectrum - Communication Line

Dave Yopps
1320 N Dr Martin Luther King Jr Dr
Milwaukee, WI 53212
(414) 277-4281
chtr_wi_const@charter.com

Verizon Business - Communication Line

RJ Cicatello Jr.
15725 West Ryerson Road
New Berlin, WI 53151
(262) 782-9836
randy.cicatello@verizon.com

Waukesha Water Utility - Water

Chris Walter
P.O. Box 1648
Waukesha, WI 53187-1648
(262) 521-5272
CWalter@waukesha-water.com

We Energies - Electricity

We Energies Utility Coordinator
500 S 116th Street
West Allis, WI 53214
(414) 221-2738
We-Utility-relocations@we-energies.com

We Energies - Gas/Petroleum

We Energies Utility Coordinator
500 S 116th Street
West Allis, WI 53214
(414) 221-2738
We-Utility-relocations@we-energies.com

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

2

UTILITIES

ATC Management, Inc. - Electricity-Transmission

Trans 220 Mailbox
801 O'keefe Road
De Pere, WI 54115
(920) 338-6582
dl-ATCDOTNotifications@atcllc.com

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md9542@att.com

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Pewaukee, WI 53072
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wagner@pewaukee.wi.us

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clangemak@waukesha-wi.gov

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www.DiggersHotline.com

DAAR
ENGINEERING, INC.
www.daarcorp.com
Milwaukee, WI 53202
414-225-9817

WISCONSIN
ANTHONY F. BACIAK, JR.
E-37379
Milwaukee, WI
PROFESSIONAL ENGINEER

10/24/22

(DATE) (Professional Engineer Signature)

RESPONSIBLE FOR:
- ROADSIDE BARRIER DETAILS AND PLANS
- EROSION CONTROL PLAN (MAINLINE IH 94 ONLY)
- ALIGNMENT PLAN
- CONTROL SURVEY
- CROSS SECTIONS

WISDOT RESPONSIBLE FOR:
- FTMS
- SIGNING
- LIGHTING

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\020104_GN.DWG
LAYOUT NAME - 020105
PLOT DATE : 10/24/2022 8:17 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

PROJECT 1330-47-71
LOT 67-50, NAGAWAUKEE
PARK & RIDE LOT

C-67-0025

BEGIN PROJECT 1060-47-70
STA 459+30

B-67-0060

B-67-0061

MAPLE AVE

B-67-0369
(NO WORK)

C-67-0865

C-67-0866

C-67-1570

CTH DR/GOLF RD

IH 94

SILVERNAIL RD

CTH G/ELMHURST RD

455 460 465 470 475 480 485 490 495 500 505 510 515 520 525 530 535 540 545 550 555 560 565 570 575 580 585 590 595 600 605 610 615 620 625 630 635 640 64

2

N

STH 83

CTH SS

END CONSTRUCTION
STA 38+45
MATCH EXISTING
SAW CUT REQ'D

S67-0819
(NO WORK)

S67-0818

B-67-0267

BEGIN CONSTRUCTION
STA 32+26
MATCH EXISTING
SAW CUT REQ'D

B-67-0266

CTH G/MEADOWBROOK RD

END CONSTRUCTION
STA 287+82
MATCH EXISTING
SAW CUT REQ'D

MEADOWBROOK PARK & RIDE

S67-0749

S67-0748

S67-1426

R-67-0049

ROLLING RIDGE DR

STH 318

END PROJECT 2788-03-70
STA 280+00

BEGIN PROJECT 2788-03-70
STA 268+83

CTH DR/GOLF RD

SILVERNAIL RD

IH 94

640 645 650 655 660 665 670 675 680 685 690 695 700 705 710 715 720 725 730 735 740 745 750 755 760 765 770 775 780 785 790 795 800 805 810 815 820 825 830

N

STH 16

CTH IJ/BLUEMOUND RD

CTH T

S67-0538

B-67-0245
SEE PROJECT 1060-10-71

S67-0537

GRANDVIEW BLVD

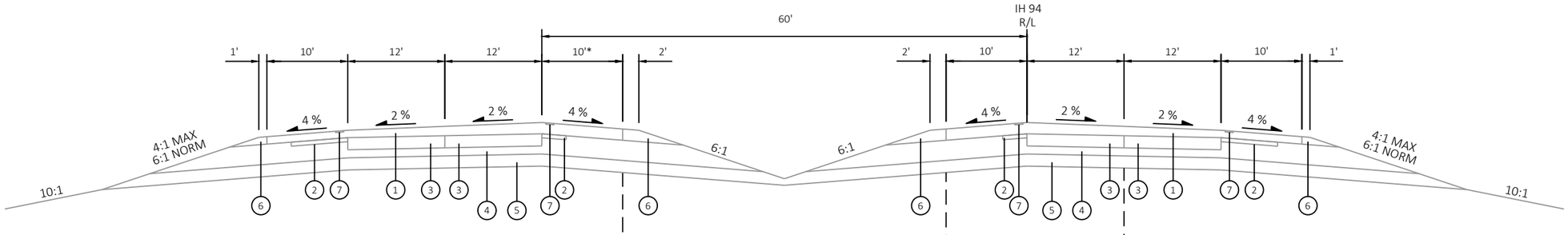
END PROJECT 1060-47-70
STA 825+63

WAUKESHA COUNTY AIRPORT

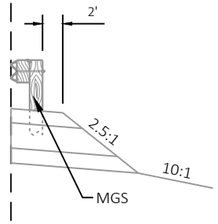
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FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\020201_PO.DWG
LAYOUT NAME - 020201_po

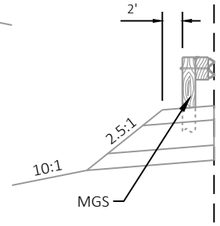
PLOT DATE : 7/10/2023 11:36 AM PLOT BY : CIERRA SMITH PLOT NAME : PLOT SCALE : 1 IN:1200 FT



*12' SHOULDER FROM STA 459+30 TO STA 522+00



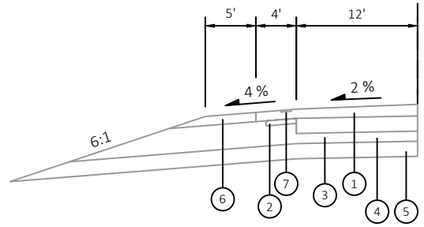
STA 587+00 TO STA 619+37
STA 620+06 TO STA 639+48



STA 585+39 TO STA 619+30
STA 619+98 TO STA 639+52

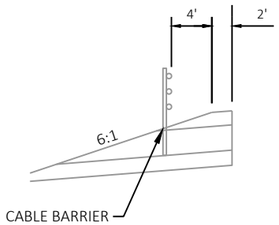
NORMAL CROWN:
STA 470+96 - STA 489+00 EB
STA 497+00 - STA 511+50 EB
STA 529+50 - STA 534+00 EB
STA 597+00 - STA 640+00 EB
STA 623+00 - STA 640+00 WB

SUPERELEVATED:
STA 511+50 - STA 529+50



STA 465+00 TO STA 518+40

STA 483+83 TO STA 510+77
STA 538+04 TO STA 568+78



STA 510+21 TO STA 515+77
STA 526+18 TO STA 538+95
STA 568+21 TO STA 586+25

LEGEND

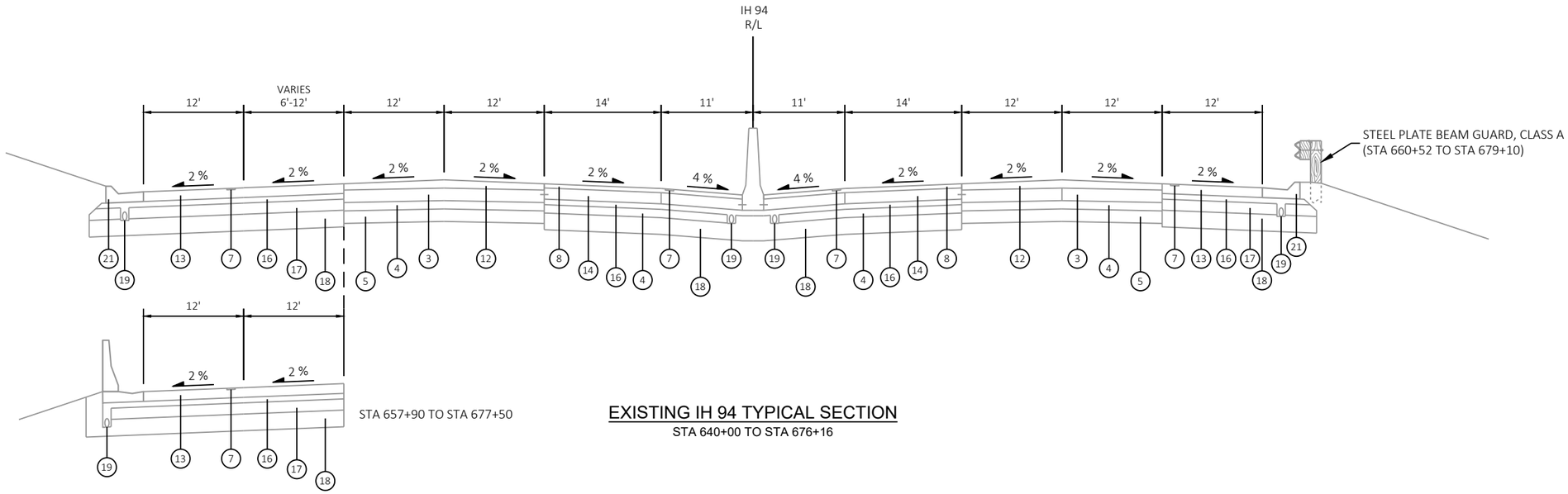
1. ASPHALTIC PAVEMENT VARIES, 5-1/2-INCH TO 8-1/2-INCH
2. ASPHALTIC PAVEMENT, 3-INCH
3. CONCRETE PAVEMENT, 9-INCH (1% CROSS SLOPE)
4. CRUSHED AGGREGATE BASE COURSE, 6-INCH
5. GRANULAR SUBBASE COURSE, 9-INCH
6. BASE AGGREGATE DENSE 3/4-INCH
7. RUMBLE STRIPS

EXISTING IH 94 TYPICAL SECTION

STA 459+30 TO STA 640+00
(REVERSE CROWN SHOWN. SEE TABLE FOR VARYING CROSS SLOPES.)

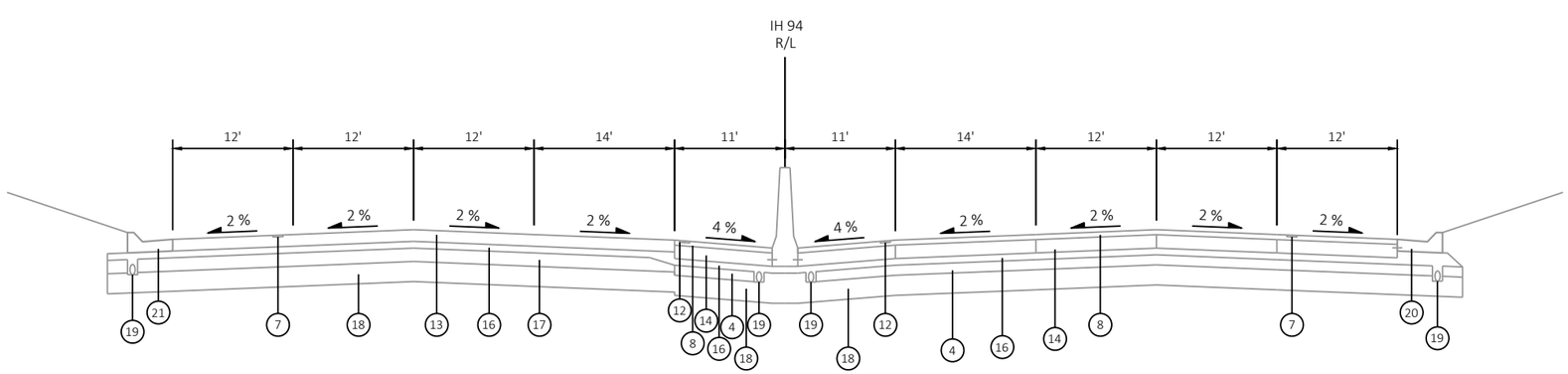
PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 8	E

2



EXISTING IH 94 TYPICAL SECTION

STA 640+00 TO STA 676+16



EXISTING IH 94 TYPICAL SECTION

STA 676+16 TO STA 707+16

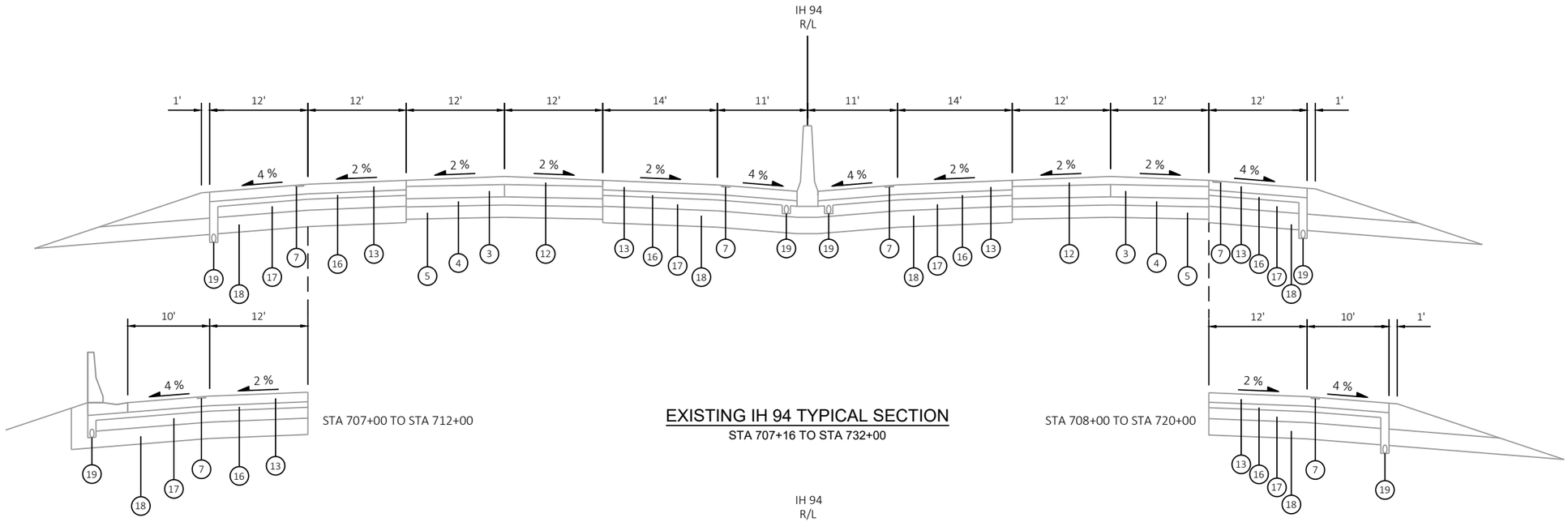
LEGEND

3. CONCRETE PAVEMENT, 9-INCH (1% CROSS SLOPE)
4. CRUSHED AGGREGATE BASE COURSE, 6-INCH
5. GRANULAR SUBBASE COURSE, 9-INCH
6. BASE AGGREGATE DENSE 3/4-INCH
7. RUMBLE STRIPS
8. ASPHALTIC PAVEMENT, 3-INCH
9. ASPHALTIC PAVEMENT, 4 1/4-INCH
10. ASPHALTIC PAVEMENT VARIES, 3-INCH TO 4 1/2-INCH
11. ASPHALTIC PAVEMENT VARIES, 4 1/4-INCH TO 5 3/4-INCH
12. ASPHALTIC PAVEMENT VARIES, 4 1/2-INCH TO 6-INCH
13. ASPHALTIC PAVEMENT, 7-INCH
14. CONCRETE PAVEMENT, 8-INCH (2% LANE, 4% SHOULDER)
15. CONCRETE PAVEMENT, 9-INCH (2% LANE, 4% SHOULDER)
16. OPEN GRADED BASE COURSE, 4-INCH
17. CRUSHED AGGREGATE BASE COURSE, 8-INCH
18. BREAKER RUN, 12-INCH
19. PIPE UNDERDRAIN, 6-INCH
20. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
21. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 9	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\020301_TS.DWG
LAYOUT NAME - 020302_ts
PLOT DATE : 6/13/2022 3:06 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:15 FT
WISDOT/CADDS SHEET 42

2

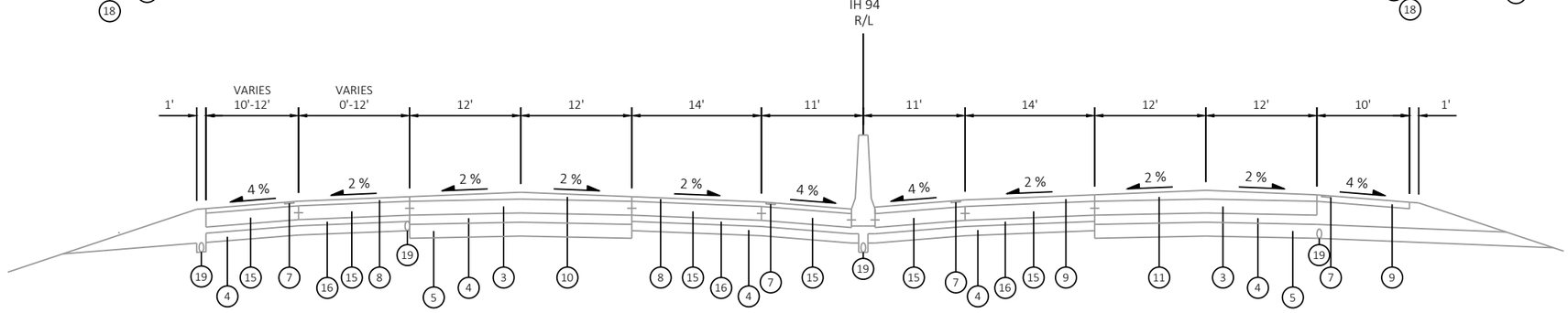


STA 707+00 TO STA 712+00

STA 708+00 TO STA 720+00

EXISTING IH 94 TYPICAL SECTION

STA 707+16 TO STA 732+00



EXISTING IH 94 TYPICAL SECTION

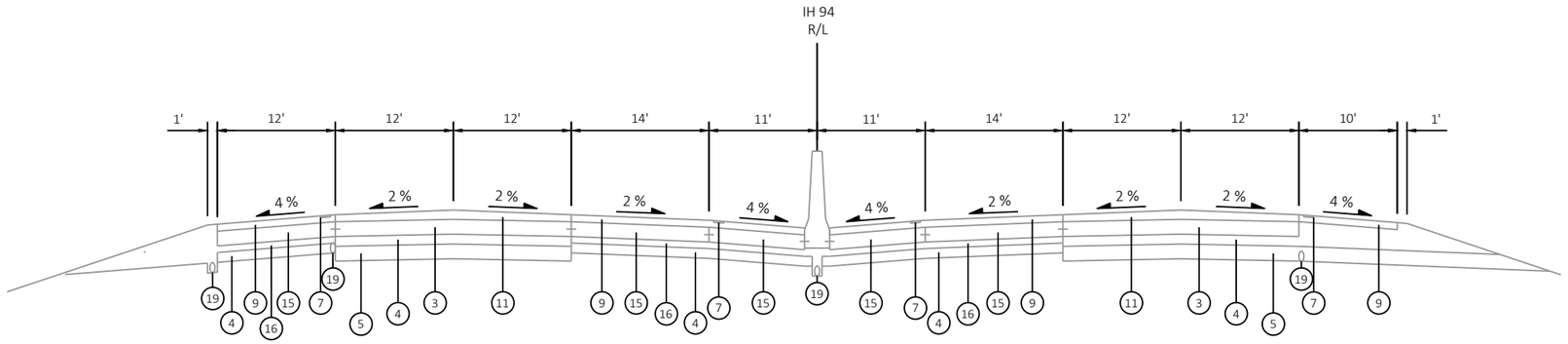
STA 732+00 TO STA 750+00

LEGEND

3. CONCRETE PAVEMENT, 9-INCH (1% CROSS SLOPE)
4. CRUSHED AGGREGATE BASE COURSE, 6-INCH
5. GRANULAR SUBBASE COURSE, 9-INCH
6. BASE AGGREGATE DENSE 3/4-INCH
7. RUMBLE STRIPS
8. ASPHALTIC PAVEMENT, 3-INCH
9. ASPHALTIC PAVEMENT, 4 1/4-INCH
10. ASPHALTIC PAVEMENT VARIES, 3-INCH TO 4 1/2-INCH
11. ASPHALTIC PAVEMENT VARIES, 4 1/4-INCH TO 5 3/4-INCH
12. ASPHALTIC PAVEMENT VARIES, 4 1/2-INCH TO 6-INCH
13. ASPHALTIC PAVEMENT, 7-INCH
14. CONCRETE PAVEMENT, 8-INCH (2% LANE, 4% SHOULDER)
15. CONCRETE PAVEMENT, 9-INCH (2% LANE, 4% SHOULDER)
16. OPEN GRADED BASE COURSE, 4-INCH
17. CRUSHED AGGREGATE BASE COURSE, 8-INCH
18. BREAKER RUN, 12-INCH
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20. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
21. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 10	E

2

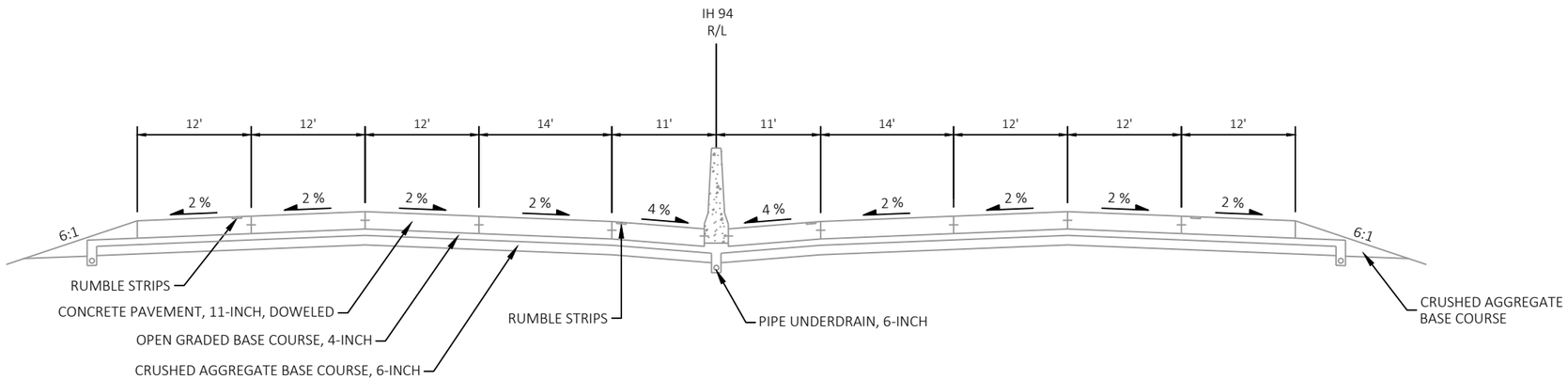


EXISTING IH 94 TYPICAL SECTION

STA 750+00 TO STA 772+14

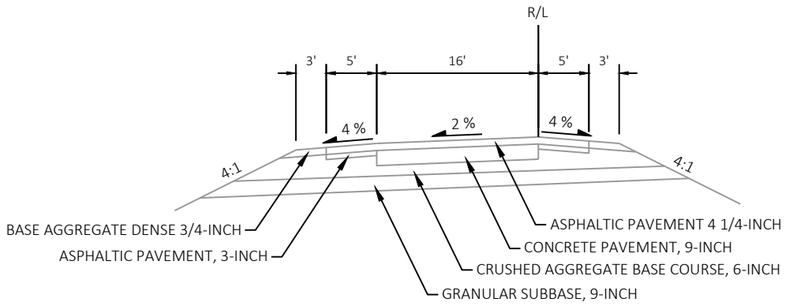
LEGEND

3 CONCRETE PAVEMENT, 9-INCH (1% CROSS SLOPE)
4 CRUSHED AGGREGATE BASE COURSE, 6-INCH
5 GRANULAR SUBBASE COURSE, 9-INCH
6 BASE AGGREGATE DENSE 3/4-INCH
7 RUMBLE STRIPS
8 ASPHALTIC PAVEMENT, 3-INCH
9 ASPHALTIC PAVEMENT, 4 1/4-INCH
10 ASPHALTIC PAVEMENT VARIES, 3-INCH TO 4 1/2-INCH
11 ASPHALTIC PAVEMENT VARIES, 4 1/4-INCH TO 5 3/4-INCH
12 ASPHALTIC PAVEMENT VARIES, 4 1/2-INCH TO 6-INCH
13 ASPHALTIC PAVEMENT, 7-INCH
14 CONCRETE PAVEMENT, 8-INCH (2% LANE, 4% SHOULDER)
15 CONCRETE PAVEMENT, 9-INCH (2% LANE, 4% SHOULDER)
16 OPEN GRADED BASE COURSE, 4-INCH
17 CRUSHED AGGREGATE BASE COURSE, 8-INCH
18 BREAKER RUN, 12-INCH
19 PIPE UNDERDRAIN, 6-INCH
20 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
21 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D



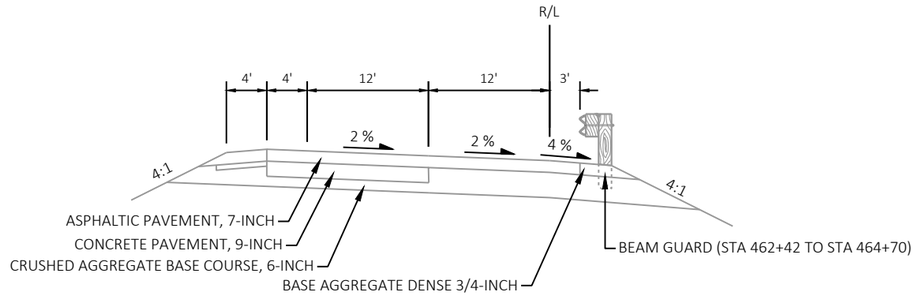
EXISTING IH 94 TYPICAL SECTION

STA 772+14 TO STA 825+63 EB
STA 772+14 TO STA 810+65 WB



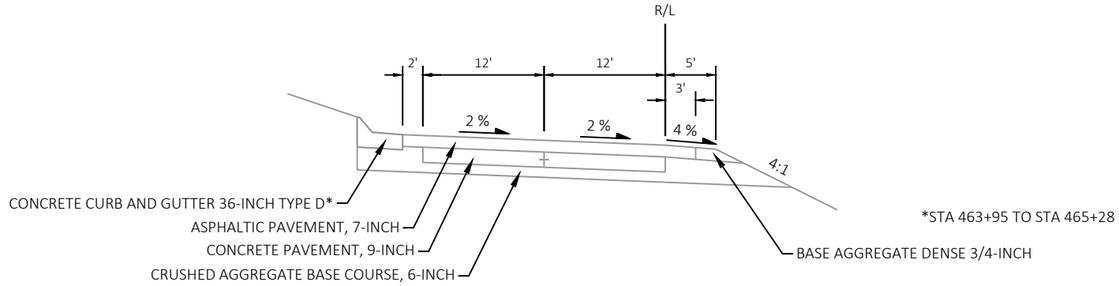
EXISTING STH 83 RAMP TYPICAL SECTION

STA 459+20 TO STA 474+20 (RAMP D - WB EXIT)



EXISTING STH 83 RAMP TYPICAL SECTION

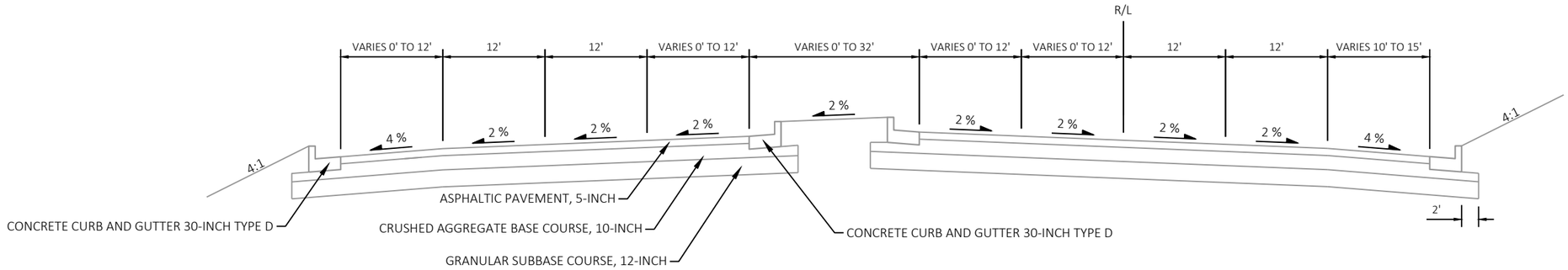
STA 458+90 TO STA 463+59 (RAMP C - EB ENTRANCE)



EXISTING STH 83 RAMP TYPICAL SECTION

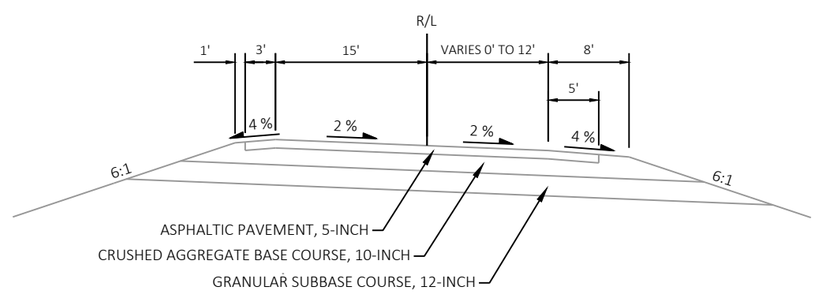
STA 463+59 TO STA 465+28 (RAMP C - EB ENTRANCE)

2



EXISTING CTH SS TYPICAL SECTION

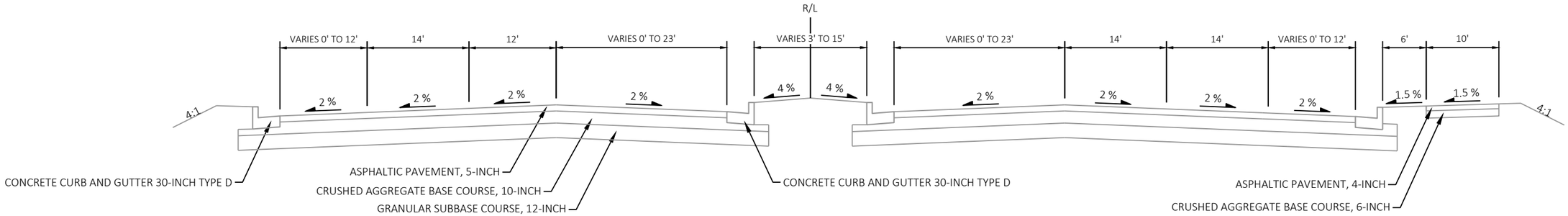
STA 31+00 TO STA 41+50



EXISTING CTH SS RAMP TYPICAL SECTION

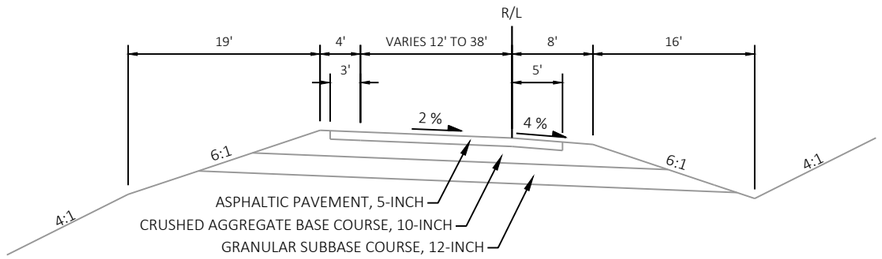
STA 1164+63 TO STA 1178+40 (RAMP A - WB ENTRANCE)
STA 1179+20 TO STA 1192+62 (RAMP B - WB EXIT)
STA 1181+30 TO STA 1195+62 (RAMP C - EB ENTRANCE)
STA 1157+77 TO STA 1180+20 (RAMP D - EB EXIT)

2



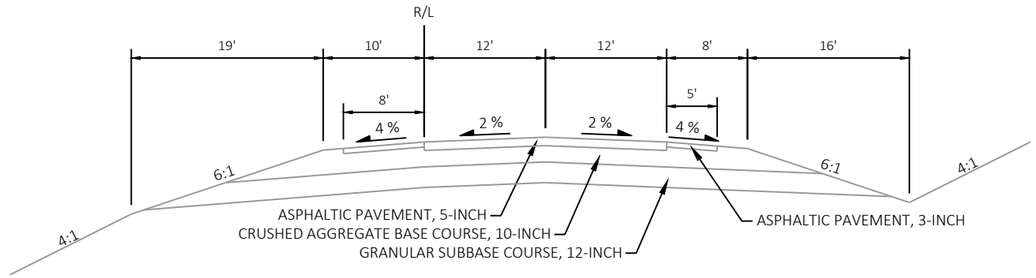
EXISTING STH 318/CTH G TYPICAL SECTION

STA 280+00 TO STA 291+62



EXISTING STH 318/CTH G RAMP TYPICAL SECTION

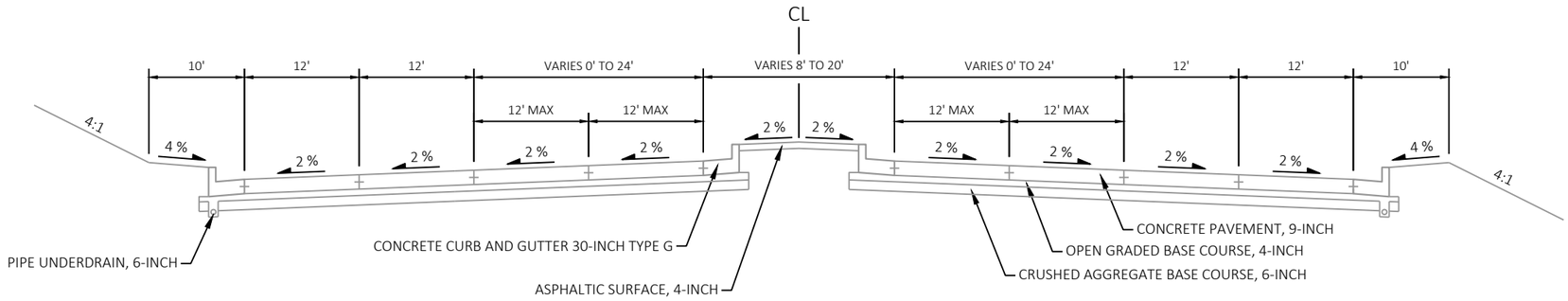
STH 226+90 TO STA 241+70 (RAMP A - WB ENTRANCE)
STA 244+40 TO STA 257+20 (RAMP C - EB ENTRANCE)
STA 227+67 TO STA 243+15 (RAMP D - EB EXIT)



EXISTING STH 318/CTH G RAMP TYPICAL SECTION

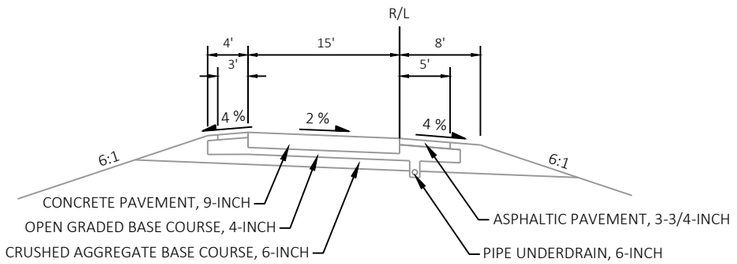
STA 250+45 TO STA 256+70 (RAMP B -WB EXIT)

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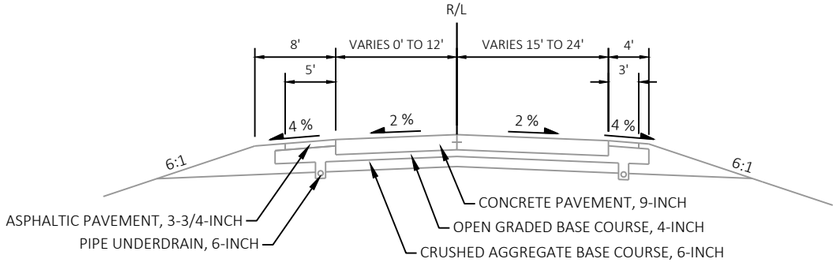
EXISTING CTH T TYPICAL SECTION

STA 113+00 TO STA 135+00



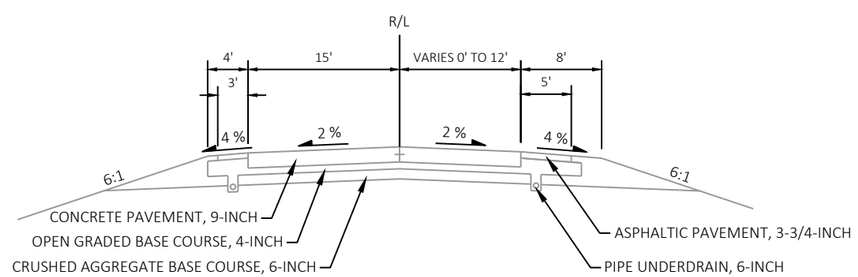
EXISTING CTH T RAMP TYPICAL SECTION

STA 3114+67 TO STA 3122+00 (RAMP C - EB ENTRANCE)
STA 4099+50 TO STA 4110+65 (RAMP D - EB EXIT)



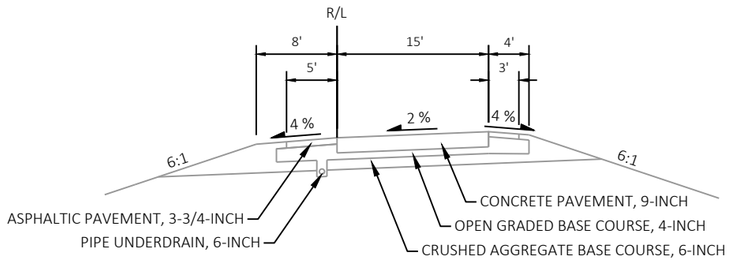
EXISTING CTH T RAMP TYPICAL SECTION

STA 91+00 TO STA 115+20 (RAMP A - WB ENTRANCE)
STA 2122+60 TO STA 2133+52 (RAMP B - WB EXIT)



EXISTING CTH T RAMP TYPICAL SECTION

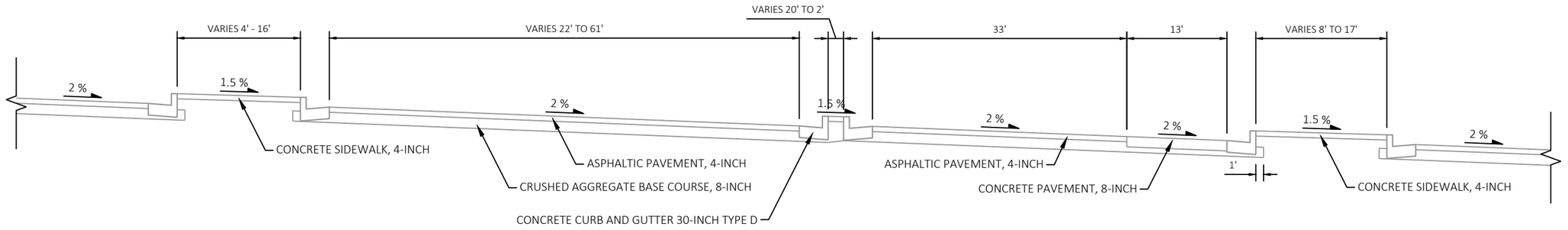
STA 3122+00 TO STA 3132+81 (RAMP C - EB ENTRANCE)
STA 4110+65 TO STA 4114+50 (RAMP D - EB EXIT)



EXISTING CTH T RAMP TYPICAL SECTION

STA 2115+58 TO STA 2122+60 (RAMP B - WB EXIT)

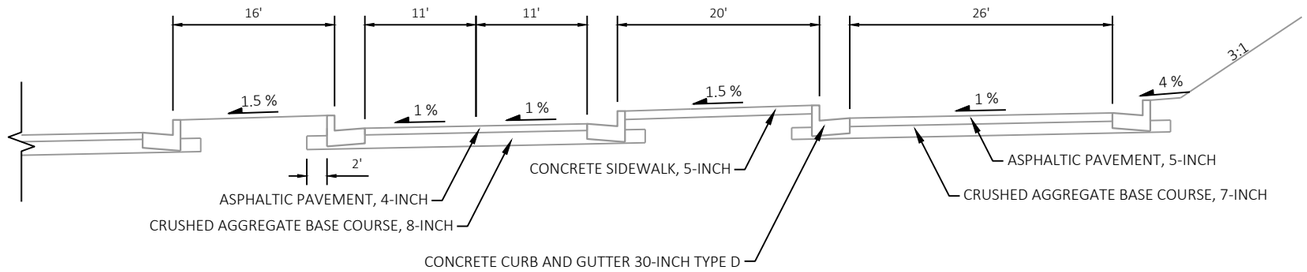
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EXISTING TYPICAL SECTION

MEADOWBROOK PARK AND RIDE

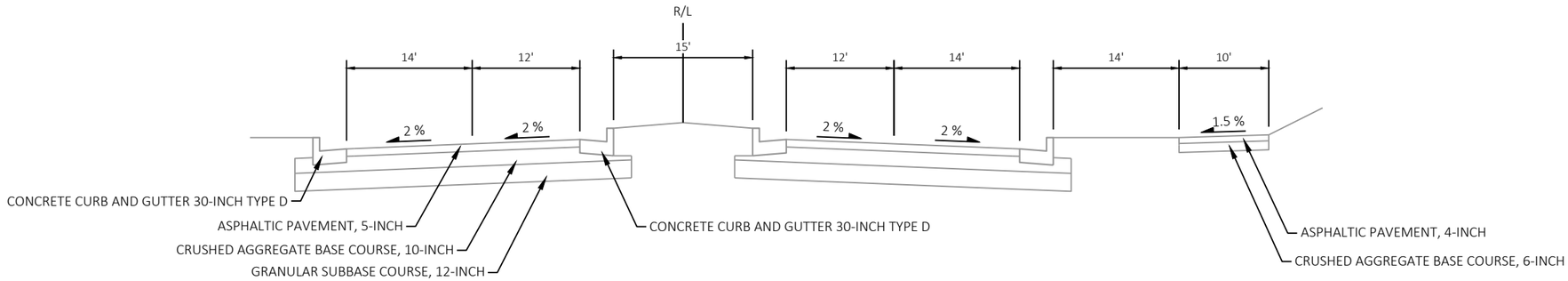
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EXISTING TYPICAL SECTION

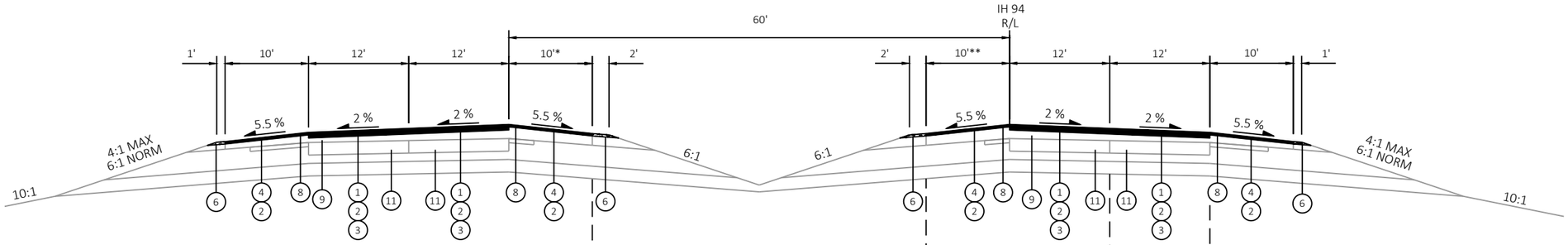
NAGAWAUKEE PARK AND RIDE

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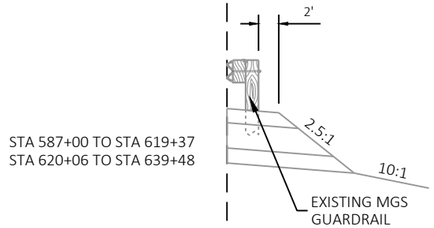


EXISTING STH 318 TYPICAL SECTION

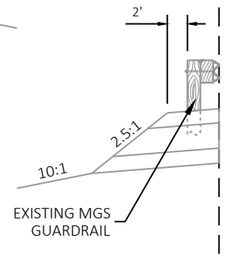
STA 268+83 TO STA 280+00



*12' SHOULDER FROM STA 459+30 TO STA 522+00

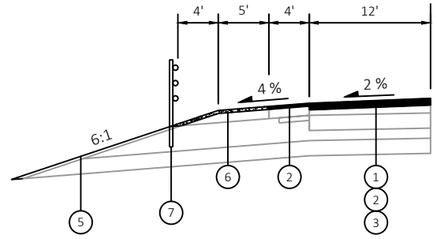


STA 587+00 TO STA 619+37
STA 620+06 TO STA 639+48

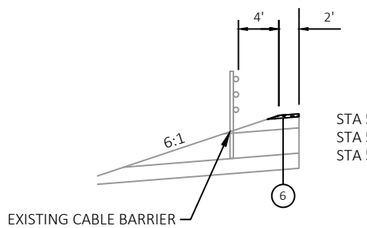


STA 585+39 TO STA 619+30
STA 619+98 TO STA 639+52

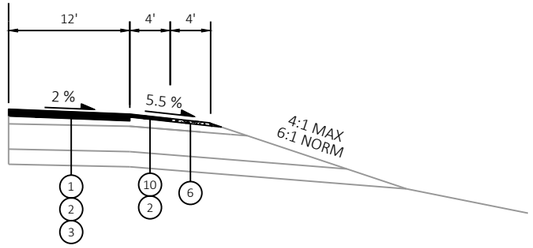
STA 483+83 TO STA 510+77
STA 538+04 TO STA 568+78



STA 461+00 TO STA 482+83



STA 510+21 TO STA 515+77
STA 526+18 TO STA 538+95
STA 568+21 TO STA 586+25



STA 465+28 TO STA 482+50

NORMAL CROWN:
STA 470+96 - STA 489+00 EB
STA 497+00 - STA 511+50 EB
STA 529+50 - STA 534+00 EB
STA 597+00 - STA 640+00 EB
STA 623+00 - STA 640+00 WB

SUPERELEVATED:
STA 511+50 - STA 529+50

LEGEND

1. 2 1/4" REMOVING ASPHALTIC SURFACE MILLING
2. 1 3/4" HMA PAVEMENT 4 SMA 58-28 V (UPPER)
3. 2 1/4" HMA PAVEMENT 3 HT 58-28 H (LOWER)
4. 0"-1 3/4" REMOVING ASPHALTIC SURFACE MILLING
5. TOPSOIL, SEED, FERTILIZER, AND EROSION MAT
6. 1 3/4" BASE AGGREGATE DENSE 3/4-INCH
7. CABLE BARRIER TYPE 1
8. ASPHALTIC RUMBLE STRIPS, SHOULDER DIVIDED ROADWAY
9. EXISTING ASPHALTIC PAVEMENT TO REMAIN VARIES, 3 1/4-INCH TO 6 1/4-INCH
10. 0"-3/4" REMOVING ASPHALTIC SURFACE MILLING
11. EXISTING CONCRETE PAVEMENT, 9-INCH

-- BASE PATCHING CONCRETE SHES AS DIRECTED BY THE ENGINEER

PROPOSED IH 94 TYPICAL SECTION

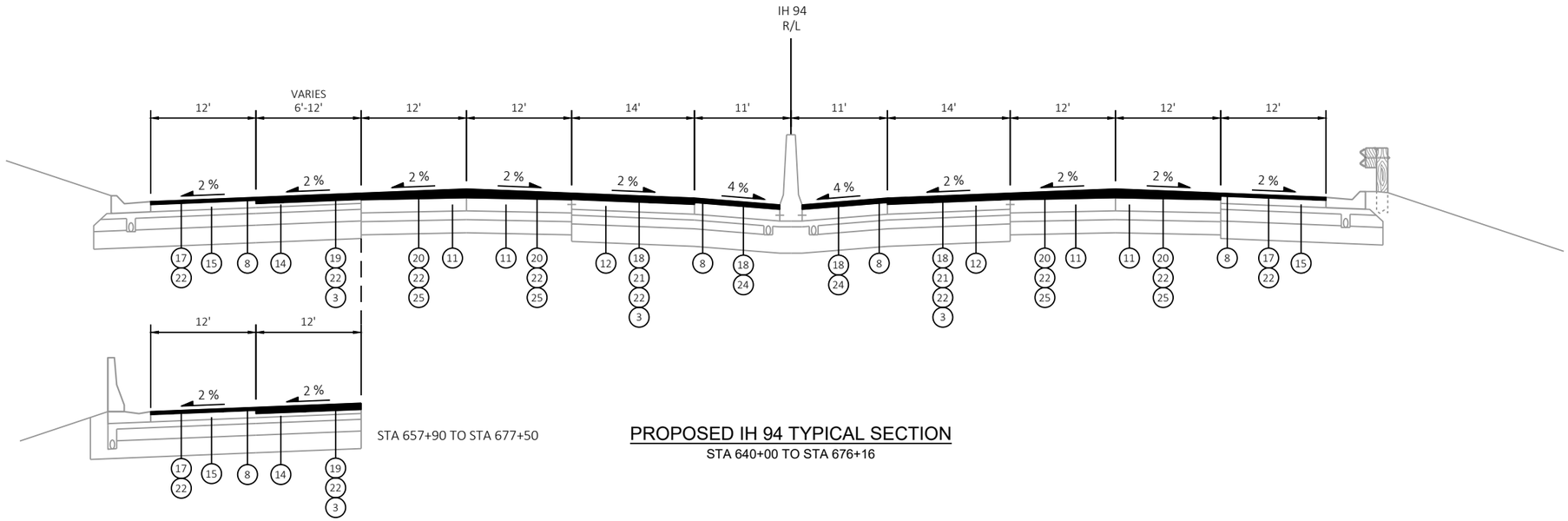
STA 459+30 TO STA 640+00
(REVERSE CROWN SHOWN. SEE TABLE FOR VARYING CROSS SLOPES.)

NOTE: MATCH EXISTING SUPERELEVATED CURVE CROSS SLOPES

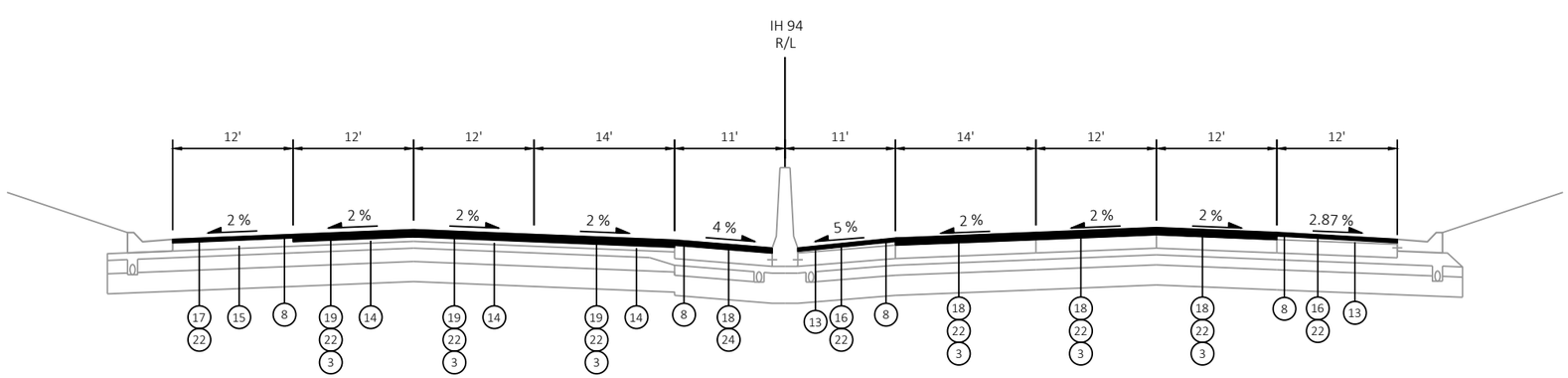
PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 19	E

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LAYOUT NAME - 020401_ts
PLOT DATE : 1/11/2024 11:22 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:15 FT
WISDOT/CADDS SHEET 42

2



PROPOSED IH 94 TYPICAL SECTION
STA 640+00 TO STA 676+16



PROPOSED IH 94 TYPICAL SECTION
STA 676+16 TO STA 707+16

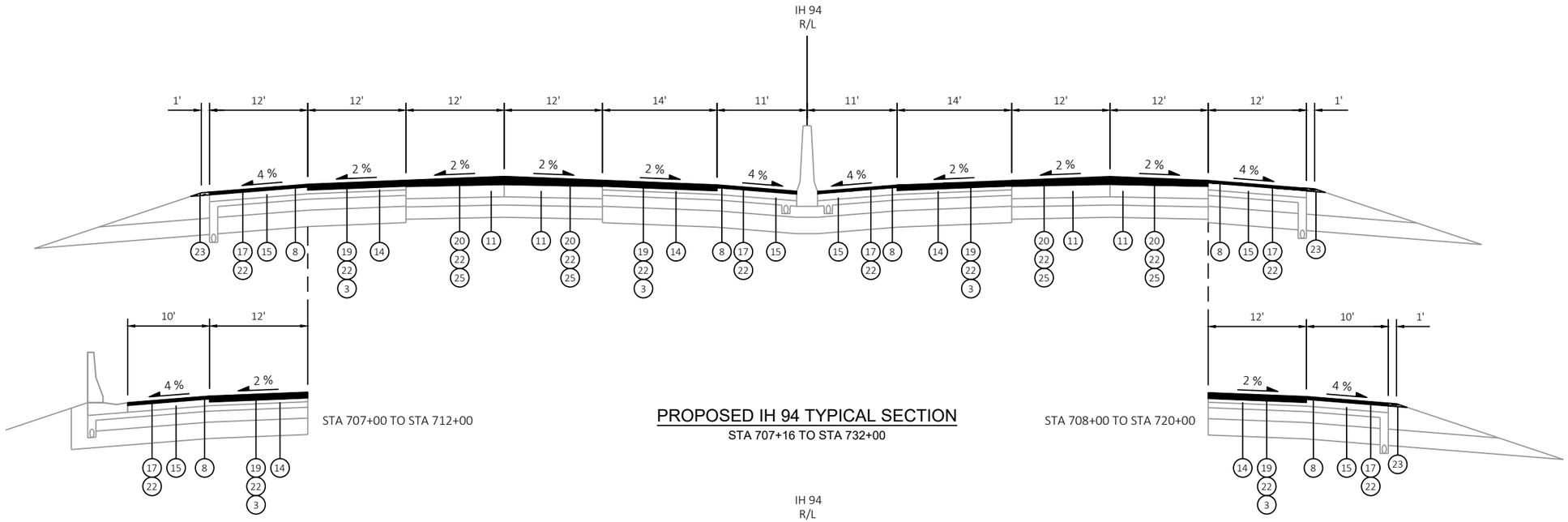
LEGEND

3. 2 1/4" HMA PAVEMENT 3 HT 58-28 H (LOWER)
8. ASPHALTIC RUMBLE STRIPS, SHOULDER DIVIDED ROADWAY
11. EXISTING CONCRETE PAVEMENT, 9-INCH
-- BASE PATCHING CONCRETE SHES AS DIRECTED BY THE ENGINEER
12. EXISTING CONCRETE PAVEMENT, 6 3/4-INCH TO REMAIN AFTER MILLING
-- BASE PATCHING CONCRETE SHES AS DIRECTED BY THE ENGINEER
13. EXISTING ASPHALTIC PAVEMENT, 1 TO 2 1/4-INCH TO REMAIN
14. EXISTING ASPHALTIC PAVEMENT, 2 3/4-INCH TO REMAIN
15. EXISTING ASPHALTIC PAVEMENT, 5-INCH TO REMAIN
16. 3/4"-2" REMOVING ASPHALTIC SURFACE MILLING
17. 2" REMOVING ASPHALTIC SURFACE MILLING
18. 3" REMOVING ASPHALTIC SURFACE MILLING
19. 4 1/4" REMOVING ASPHALTIC SURFACE MILLING
20. 4 1/2"-6" REMOVING ASPHALTIC SURFACE MILLING
21. 1 1/4" REMOVING CONCRETE SURFACE PARTIAL DEPTH
22. 2" HMA PAVEMENT 4 SMA 58-28 V (UPPER)
23. 2" BASE AGGREGATE DENSE 3/4-INCH
24. 3" HMA PAVEMENT 4 SMA 58-28 V (SHOULDER)
25. 2 1/2"-4" HMA PAVEMENT 3 HT 58-28 H (LOWER)
26. EXISTING ASPHALTIC PAVEMENT, 2 1/4-INCH TO REMAIN
27. 2 1/4"-3 3/4" HMA PAVEMENT 3 HT 58-28 H (LOWER)
28. 3"-4 1/2" REMOVING ASPHALTIC SURFACE MILLING
29. 4 1/4"-5 3/4" REMOVING ASPHALTIC SURFACE MILLING

NOTE: MATCH EXISTING SUPERELEVATED CURVE CROSS SLOPES

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 20	E

2

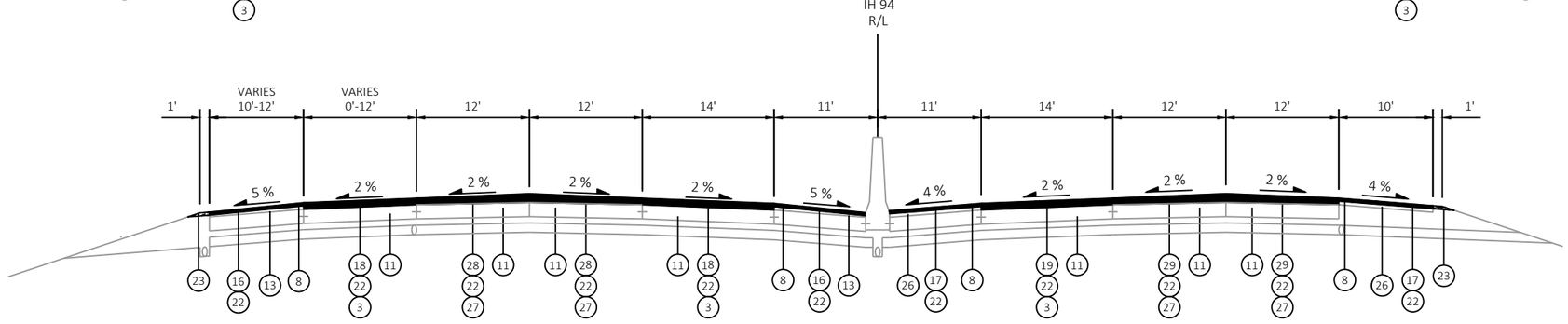


STA 707+00 TO STA 712+00

PROPOSED IH 94 TYPICAL SECTION

STA 707+16 TO STA 732+00

STA 708+00 TO STA 720+00



PROPOSED IH 94 TYPICAL SECTION

STA 732+00 TO STA 750+00

LEGEND

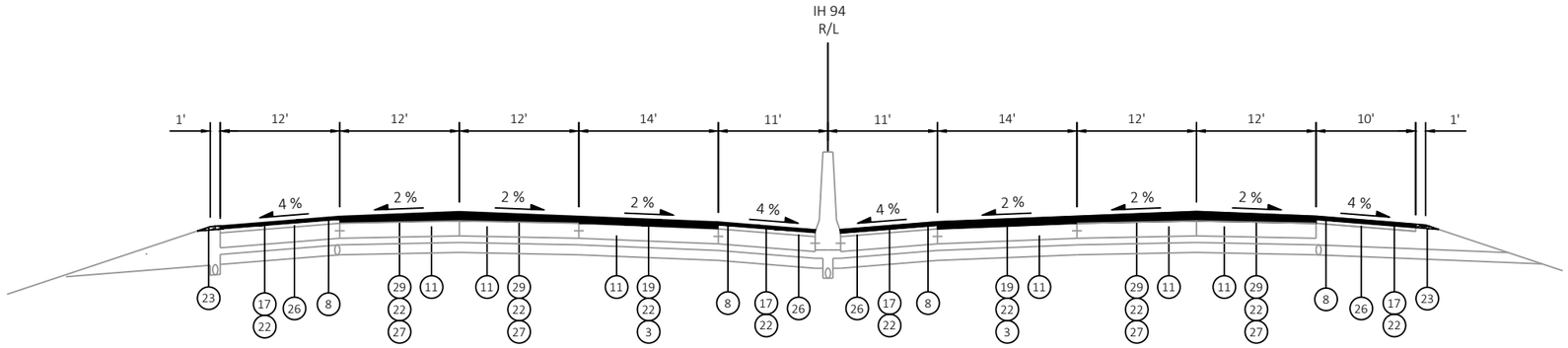
(3) 2 1/4" HMA PAVEMENT 3 HT 58-28 H (LOWER)
(8) ASPHALTIC RUMBLE STRIPS, SHOULDER DIVIDED ROADWAY
(11) EXISTING CONCRETE PAVEMENT, 9-INCH
-- BASE PATCHING CONCRETE SHES AS DIRECTED BY THE ENGINEER
(12) EXISTING CONCRETE PAVEMENT, 6 3/4-INCH TO REMAIN AFTER MILLING
-- BASE PATCHING CONCRETE SHES AS DIRECTED BY THE ENGINEER
(13) EXISTING ASPHALTIC PAVEMENT, 1 TO 2 1/4-INCH TO REMAIN
(14) EXISTING ASPHALTIC PAVEMENT, 2 3/4-INCH TO REMAIN
(15) EXISTING ASPHALTIC PAVEMENT, 5-INCH TO REMAIN
(16) 3/4"-2" REMOVING ASPHALTIC SURFACE MILLING
(17) 2" REMOVING ASPHALTIC SURFACE MILLING
(18) 3" REMOVING ASPHALTIC SURFACE MILLING
(19) 4 1/4" REMOVING ASPHALTIC SURFACE MILLING
(20) 4 1/2"-6" REMOVING ASPHALTIC SURFACE MILLING
(21) 1 1/4" REMOVING CONCRETE SURFACE PARTIAL DEPTH
(22) 2" HMA PAVEMENT 4 SMA 58-28 V (UPPER)
(23) 2" BASE AGGREGATE DENSE 3/4-INCH
(24) 3" HMA PAVEMENT 4 SMA 58-28 V (SHOULDER)
(25) 2 1/2"-4" HMA PAVEMENT 3 HT 58-28 H (LOWER)
(26) EXISTING ASPHALTIC PAVEMENT, 2 1/4-INCH TO REMAIN
(27) 2 1/4"-3 3/4" HMA PAVEMENT 3 HT 58-28 H (LOWER)
(28) 3"-4 1/2" REMOVING ASPHALTIC SURFACE MILLING
(29) 4 1/4"-5 3/4" REMOVING ASPHALTIC SURFACE MILLING

NOTE: MATCH EXISTING SUPERELEVATED CURVE CROSS SLOPES

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 21	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\020401_TS.DWG
LAYOUT NAME - 020403_ts
PLOT DATE : 1/11/2024 11:22 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:15 FT
WISDOT/CADDS SHEET 42

2

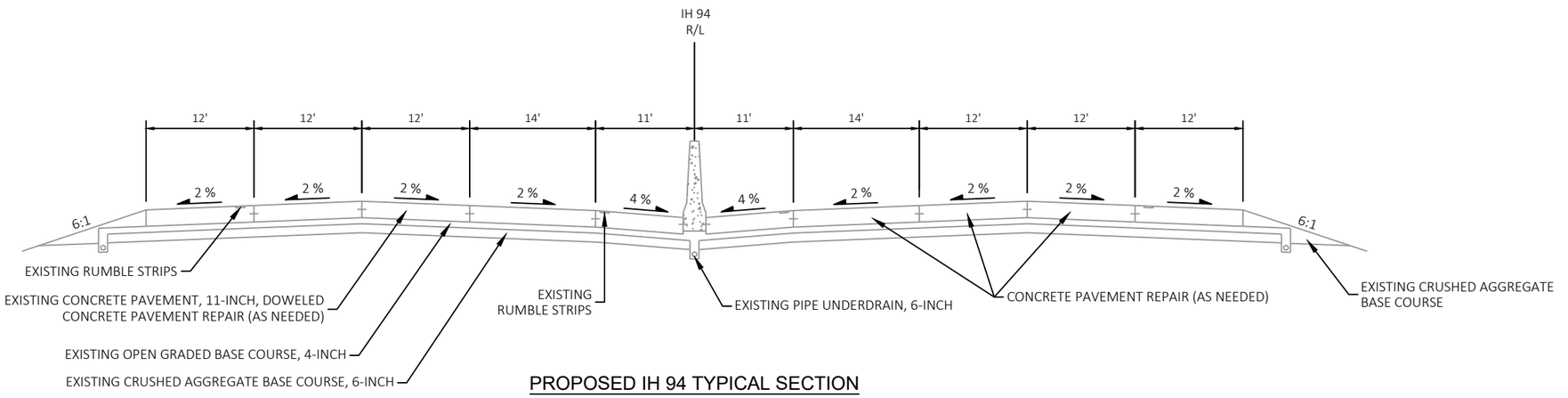


PROPOSED IH 94 TYPICAL SECTION

STA 750+00 TO STA 772+14

LEGEND

(3) 2 1/4" HMA PAVEMENT 3 HT 58-28 H (LOWER)
(8) ASPHALTIC RUMBLE STRIPS, SHOULDER DIVIDED ROADWAY
(11) EXISTING CONCRETE PAVEMENT, 9-INCH
-- BASE PATCHING CONCRETE SHES AS DIRECTED BY THE ENGINEER
(12) EXISTING CONCRETE PAVEMENT, 6 3/4-INCH TO REMAIN AFTER MILLING
-- BASE PATCHING CONCRETE SHES AS DIRECTED BY THE ENGINEER
(13) EXISTING ASPHALTIC PAVEMENT, 1 TO 2 1/4-INCH TO REMAIN
(14) EXISTING ASPHALTIC PAVEMENT, 2 3/4-INCH TO REMAIN
(15) EXISTING ASPHALTIC PAVEMENT, 5-INCH TO REMAIN
(16) 3/4"-2" REMOVING ASPHALTIC SURFACE MILLING
(17) 2" REMOVING ASPHALTIC SURFACE MILLING
(18) 3" REMOVING ASPHALTIC SURFACE MILLING
(19) 4 1/4" REMOVING ASPHALTIC SURFACE MILLING
(20) 4 1/2"-6" REMOVING ASPHALTIC SURFACE MILLING
(21) 1 1/4" REMOVING CONCRETE SURFACE PARTIAL DEPTH
(22) 2" HMA PAVEMENT 4 SMA 58-28 V (UPPER)
(23) 2" BASE AGGREGATE DENSE 3/4-INCH
(24) 3" HMA PAVEMENT 4 SMA 58-28 V (SHOULDER)
(25) 2 1/2"-4" HMA PAVEMENT 3 HT 58-28 H (LOWER)
(26) EXISTING ASPHALTIC PAVEMENT, 2 1/4-INCH TO REMAIN
(27) 2 1/4"-3 3/4" HMA PAVEMENT 3 HT 58-28 H (LOWER)
(28) 3"-4 1/2" REMOVING ASPHALTIC SURFACE MILLING
(29) 4 1/4"-5 3/4" REMOVING ASPHALTIC SURFACE MILLING



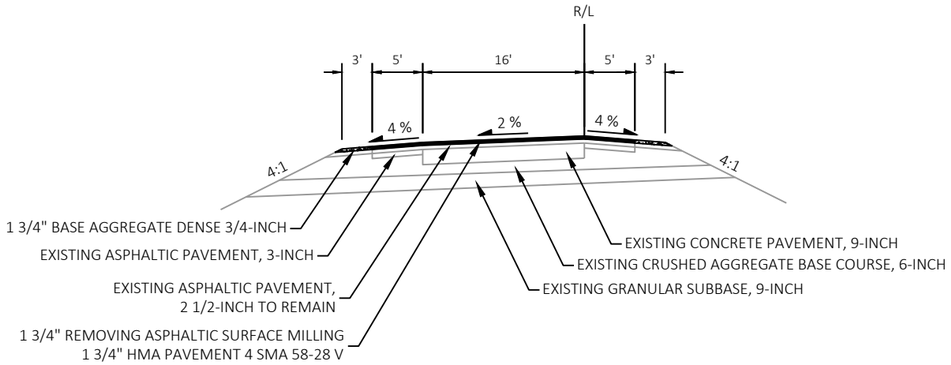
PROPOSED IH 94 TYPICAL SECTION

STA 772+14 TO STA 825+63 EB
STA 772+14 TO STA 810+65 WB

NOTE: MATCH EXISTING SUPERELEVATED CURVE CROSS SLOPES

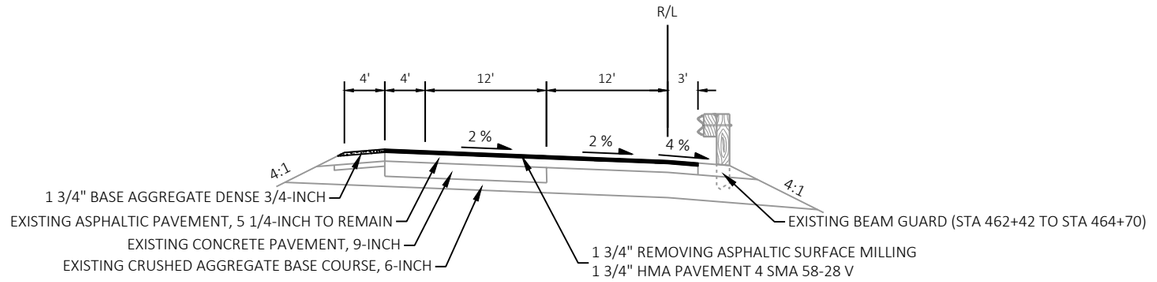
PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 22	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\020401_TS.DWG
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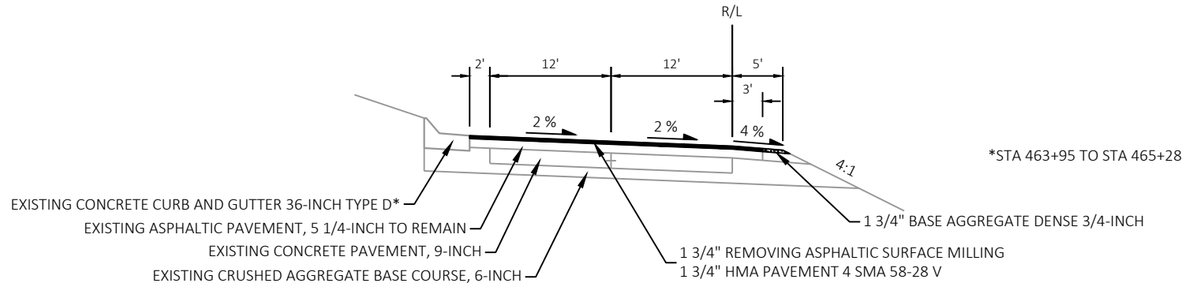
PROPOSED STH 83 RAMP TYPICAL SECTION

STA 459+20 TO STA 474+20 (RAMP D - WB EXIT)



PROPOSED STH 83 RAMP TYPICAL SECTION

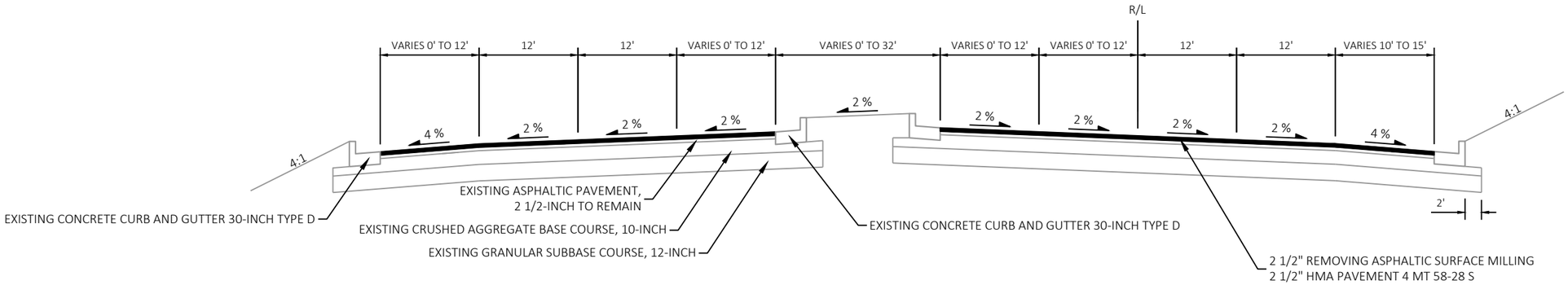
STA 459+25 TO STA 463+59 (RAMP C - EB ENTRANCE)



PROPOSED STH 83 RAMP TYPICAL SECTION

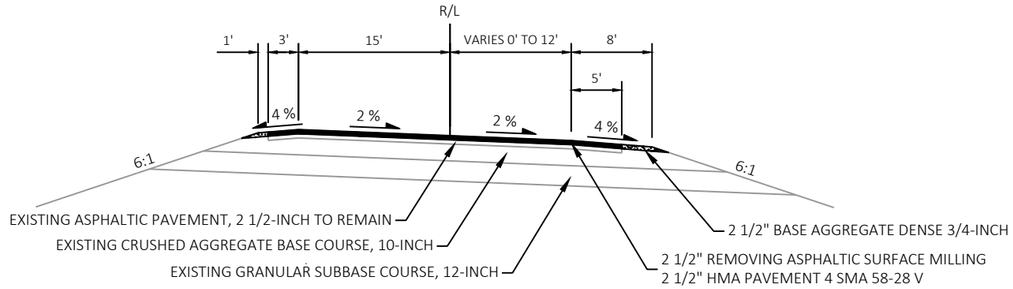
STA 463+59 TO STA 465+28 (RAMP C - EB ENTRANCE)

2



PROPOSED CTH SS TYPICAL SECTION

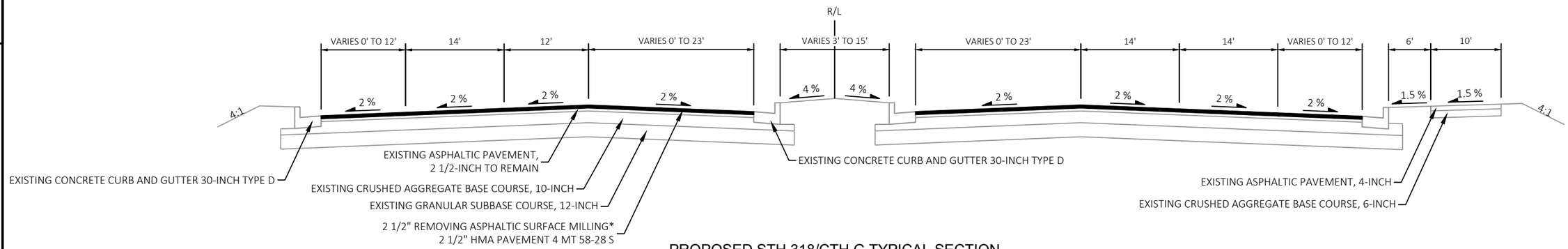
STA 31+00 TO STA 41+50



PROPOSED CTH SS RAMP TYPICAL SECTION

STA 1164+63 TO STA 1178+40 (RAMP A - WB ENTRANCE)
STA 1179+20 TO STA 1192+62 (RAMP B - WB EXIT)
STA 1181+30 TO STA 1195+62 (RAMP C - EB ENTRANCE)
STA 1157+77 TO STA 1180+20 (RAMP D - EB EXIT)

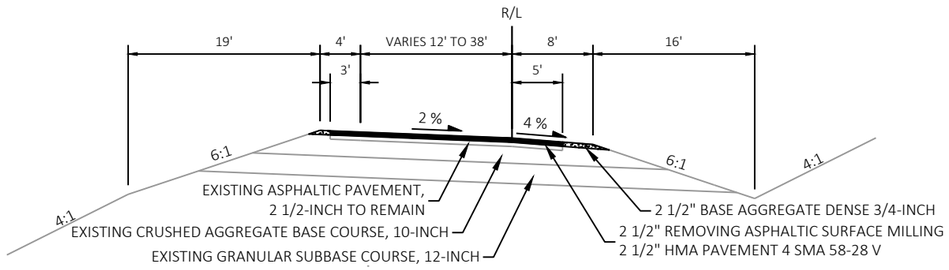
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PROPOSED STH 318/CTH G TYPICAL SECTION

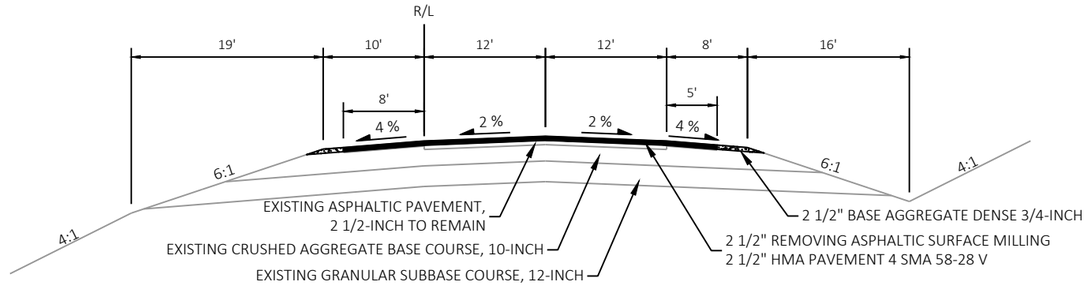
STA 280+00 TO STA 291+62

*WORK TO BE COMPLETED AFTER SIGNAL LOOP INSTALL
ASPHALTIC SURFACE PAVEMENT REPLACEMENT



PROPOSED STH 318/CTH G RAMP TYPICAL SECTION

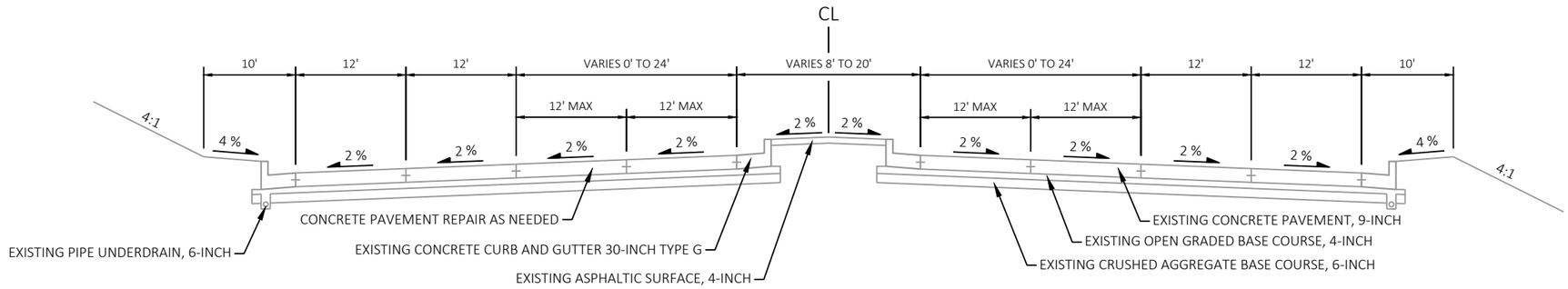
STH 226+90 TO STA 241+70 (RAMP A - WB ENTRANCE)
STA 244+40 TO STA 257+20 (RAMP C - EB ENTRANCE)
STA 227+67 TO STA 243+15 (RAMP D - EB EXIT)



PROPOSED STH 318/CTH G RAMP TYPICAL SECTION

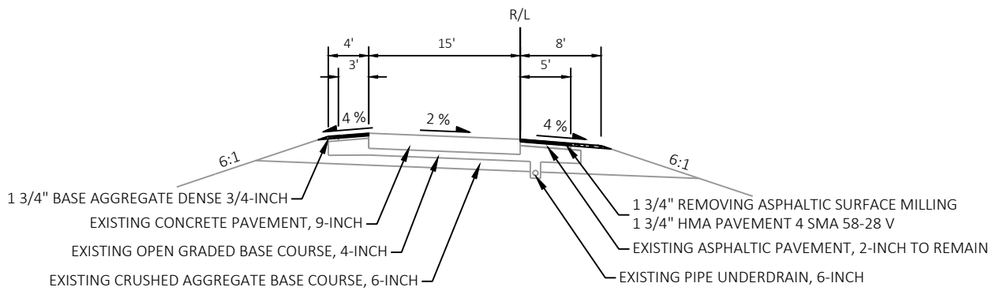
STA 250+45 TO STA 256+70 (RAMP B -WB EXIT)

2



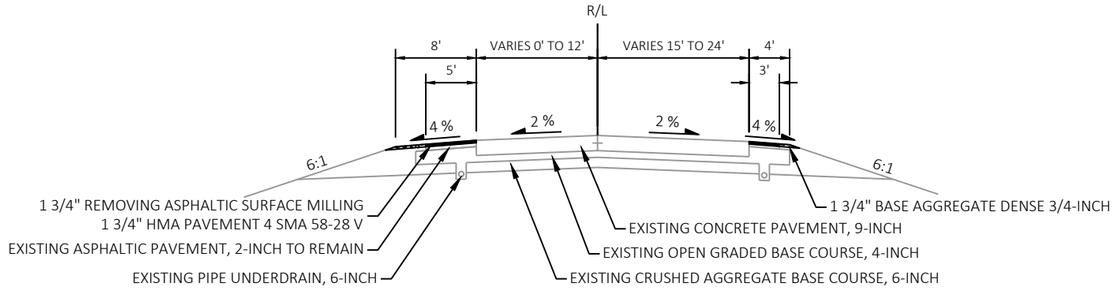
PROPOSED CTH T TYPICAL SECTION

STA 113+00 TO STA 135+00



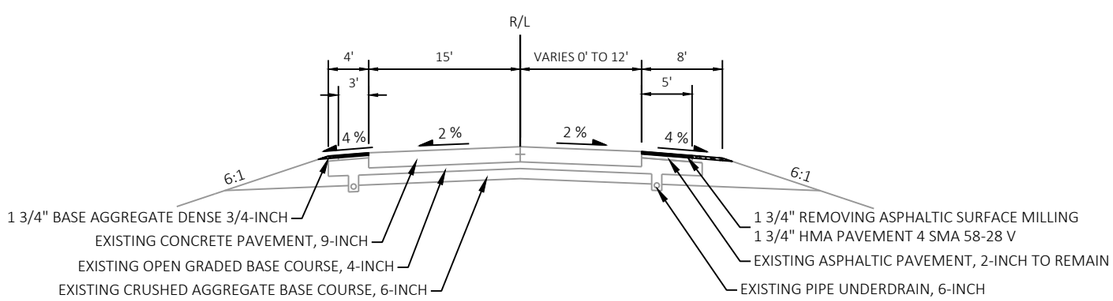
PROPOSED CTH T RAMP TYPICAL SECTION

STA 3114+67 TO STA 3122+00 (RAMP C - EB ENTRANCE)
STA 4099+50 TO STA 4110+65 (RAMP D - EB EXIT)



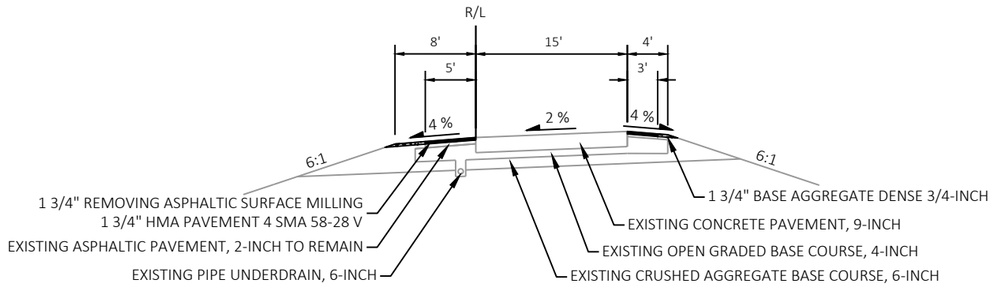
PROPOSED CTH T RAMP TYPICAL SECTION

STA 91+00 TO STA 115+20 (RAMP A - WB ENTRANCE)
STA 2122+60 TO STA 2133+52 (RAMP B - WB EXIT)



PROPOSED CTH T RAMP TYPICAL SECTION

STA 3122+00 TO STA 3132+81 (RAMP C - EB ENTRANCE)
STA 4110+65 TO STA 4114+50 (RAMP D - EB EXIT)



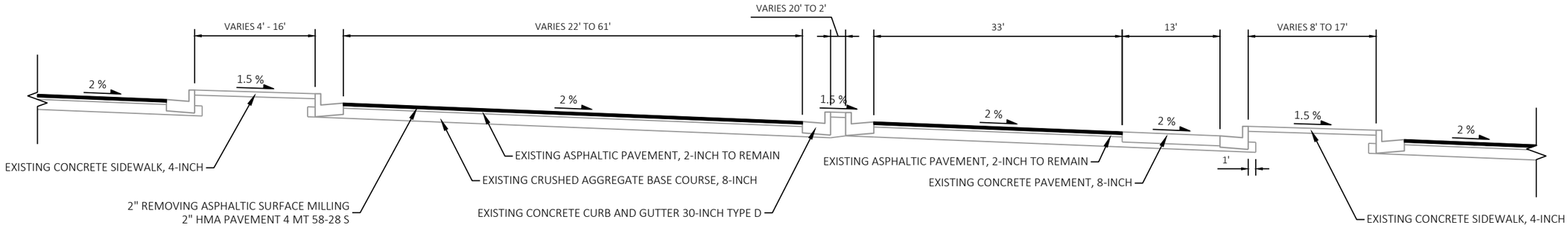
PROPOSED CTH T RAMP TYPICAL SECTION

STA 2115+58 TO STA 2122+60 (RAMP B - WB EXIT)

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 26	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\020401_TS.DWG
LAYOUT NAME - 020408_ts
PLOT DATE : 1/11/2024 11:22 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:15 FT

2



PROPOSED TYPICAL SECTION

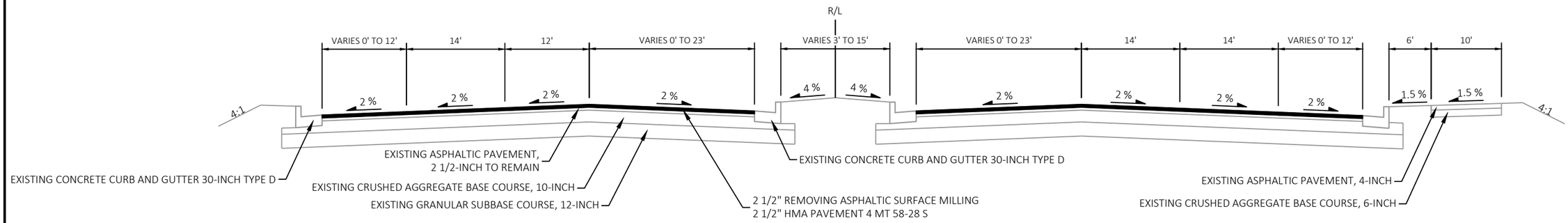
MEADOWBROOK PARK AND RIDE

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 27	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\020401_TS.DWG
LAYOUT NAME - 020409_ts

PLOT DATE : 1/11/2024 11:22 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:15 FT

2



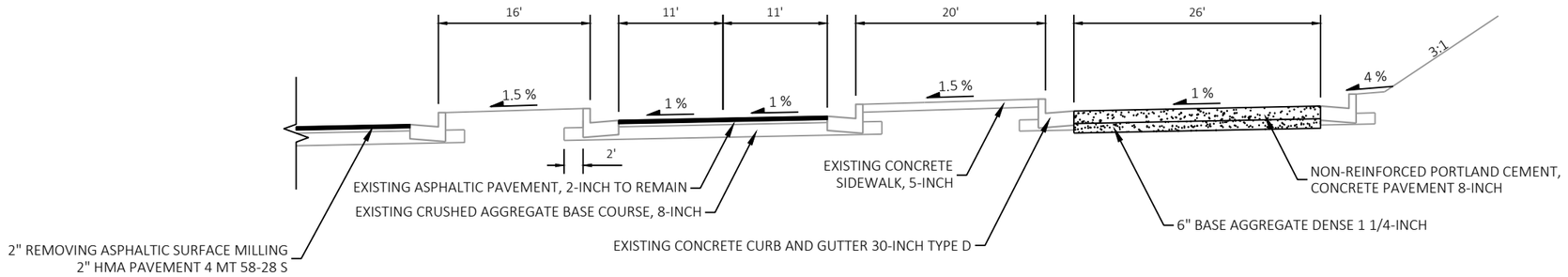
PROPOSED STH 318/CTH G TYPICAL SECTION

STA 287+82 TO STA 291+62

PROJECT NO: 1060-47-00	HWY: IH 94	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 28	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\020401_TS.DWG
LAYOUT NAME - 020412_ts
PLOT DATE : 1/11/2024 11:22 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:15 FT
WISDOT/CADDS SHEET 42

2



PROPOSED TYPICAL SECTION

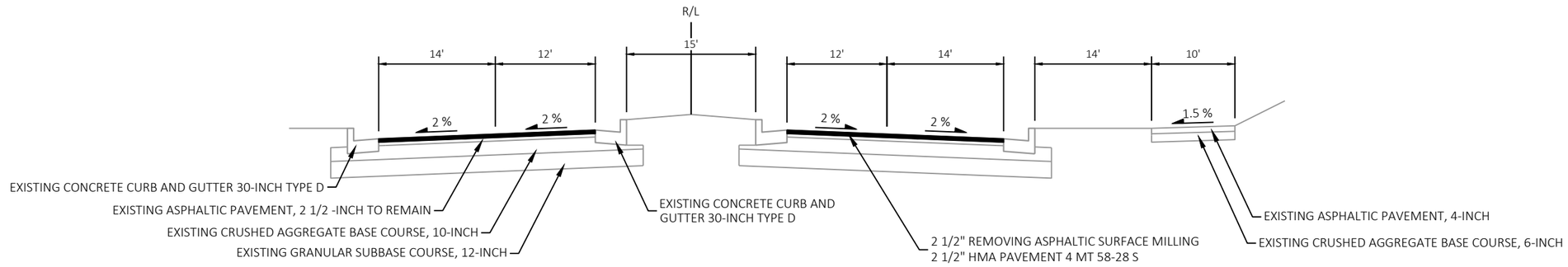
NAGAWAUKEE PARK AND RIDE

PROJECT NO: 1330-47-71	HWY: STH 83	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 29	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\020401_TS.DWG
LAYOUT NAME - 020410_ts

PLOT DATE : 1/11/2024 11:22 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:15 FT

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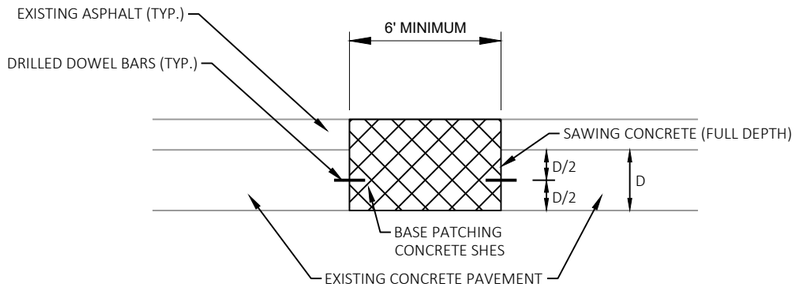


PROPOSED STH 318 TYPICAL SECTION

STA 268+83 TO STA 280+00

PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	TYPICAL SECTIONS	SHEET 30	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\020401_TS.DWG
LAYOUT NAME - 020411_ts
PLOT DATE : 1/11/2024 11:22 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:15 FT
WISDOT/CADDS SHEET 42

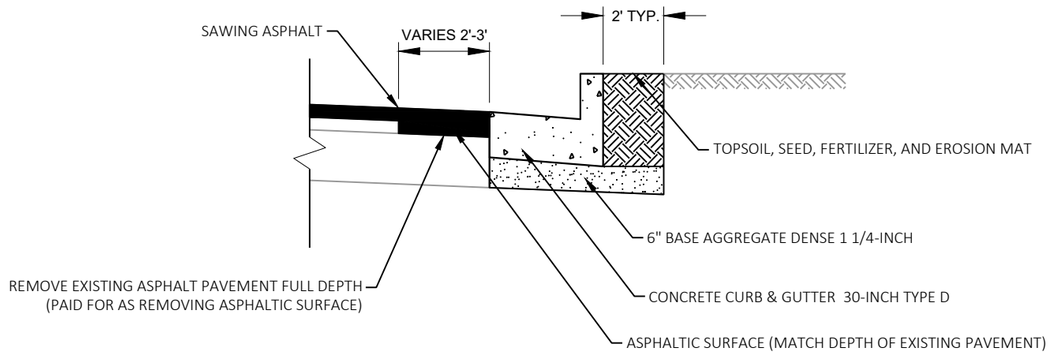


DETAIL OF BASE PATCHING CONCRETE SHES

DETAIL TO BE USED IN LOCATIONS WHERE THE ROADWAY HAS TO BE OPENED TO TRAFFIC DURING THE DAY (NIGHT-WORK ONLY).
SEE S.D.D. "BASE PATCHING CONCRETE" FOR ADDITIONAL DETAILS

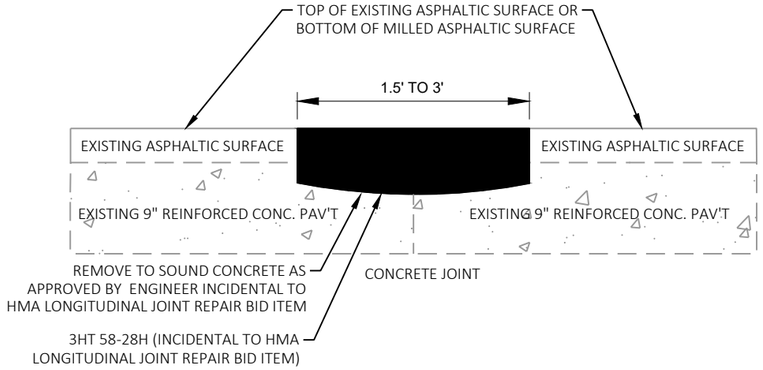
NOTES: CONTRACTOR SHALL REMOVE ALL UNSUITABLE MATERIAL BELOW BASE PATCH AREA AND REPLACE WITH BASE AGGREGATE DENSE 1-1/4".

LOCATION AND AREA OF BASE PATCHING SHALL BE AS DIRECTED BY THE ENGINEER.



CURB & GUTTER REPLACEMENT DETAILS

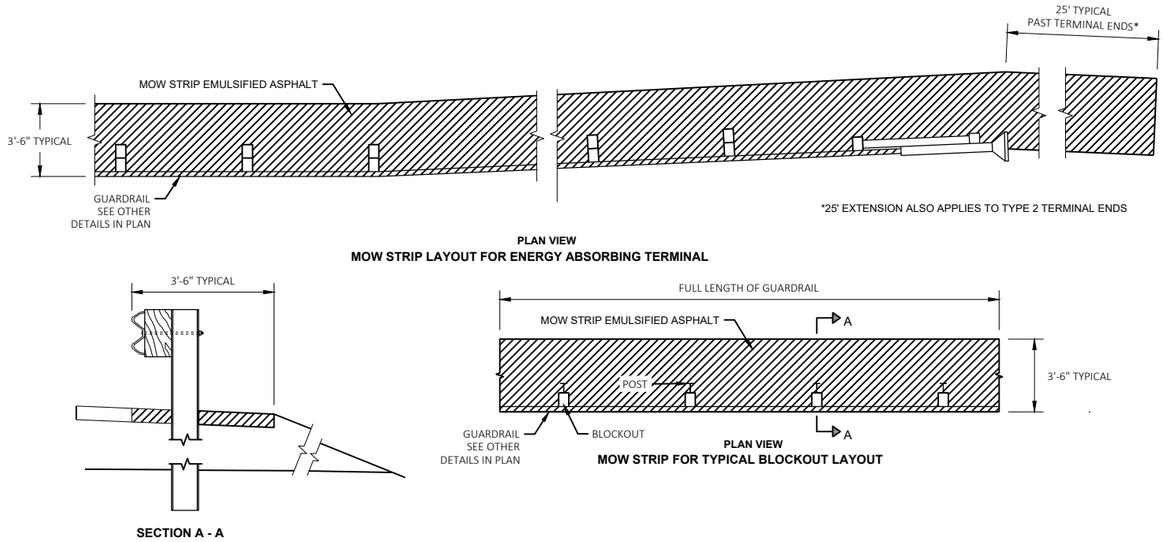
NOTES: EXCAVATION/REMOVAL OF EXISTING BASE AGGREGATE IS INCIDENTAL TO CONCRETE CURB & GUTTER 30-INCH TYPE D



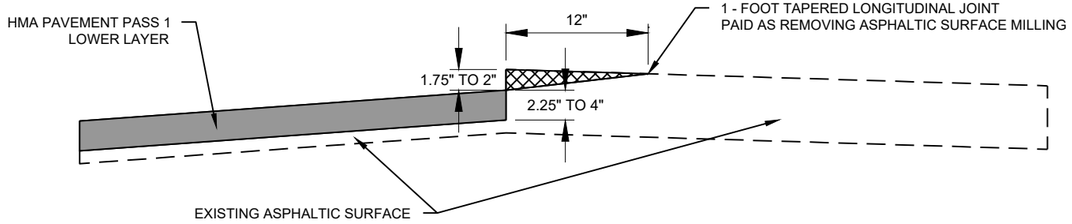
HMA LONGITUDINAL JOINT REPAIR DETAIL

NOTE:

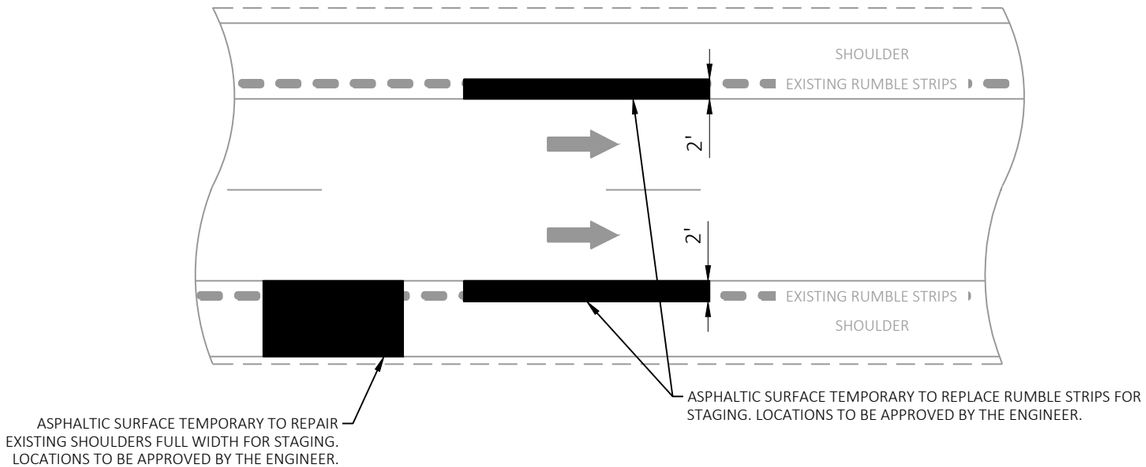
1) IN ALL AREAS OF JOINT REPAIR, REMOVE ASPHALTIC MATERIAL AND/OR LOOSE, DETERIORATED CONCRETE. CLEAN AND REPLACE WITH HMA PAVEMENT AS DIRECTED BY THE ENGINEER.
2) LOCATIONS FOR JOINT REPAIR TO BE APPROVED BY THE ENGINEER PRIOR TO THE START OF THE REPAIR WORK.
3) ACTUAL WIDTH TO BE DETERMINED BY THE ENGINEER.



GUARDRAIL MOW STRIP EMULSIFIED ASPHALT DETAIL

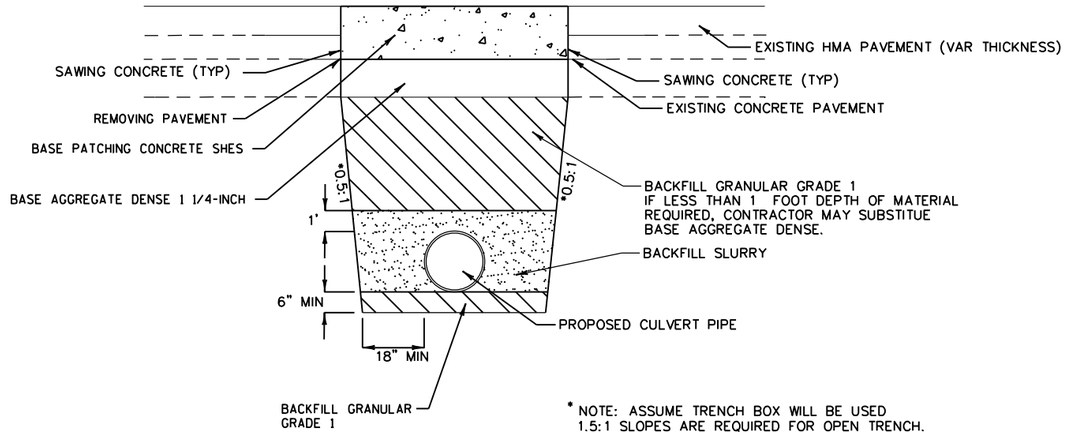


DAY END CONSTRUCTION - MILLED WEDGE LONGITUDINAL JOINT DETAIL



ASPHALTIC SURFACE TEMPORARY DETAIL

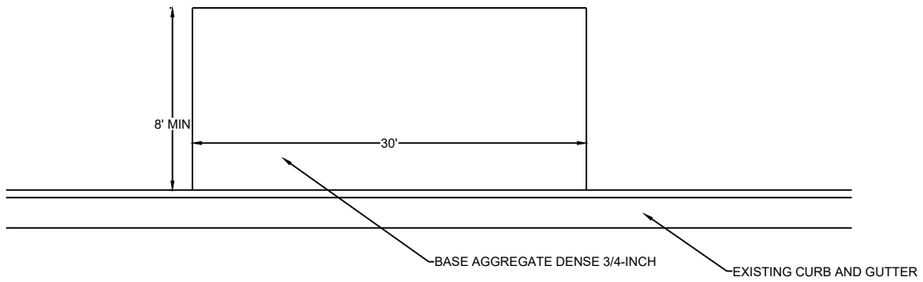
2



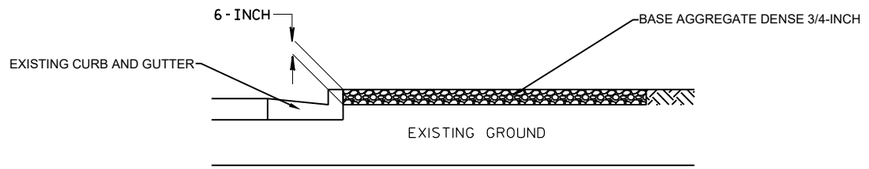
LEGEND:

- BACKFILL GRANULAR GRADE 1
- BACKFILL SLURRY

DETAIL FOR INSTALLATION OF CULVERT PIPES
IH 94 CULVERT CROSSING



PLAN VIEW



SECTION VIEW

MAINTENANCE PAD DETAIL

2

LEGEND

ASPHALTIC REPAIR

SSSSSS VERTICAL MILLED EDGE
SAW CUTTING AT THE CONTRACTORS DISCRETION

TTTTTTT TACK COAT

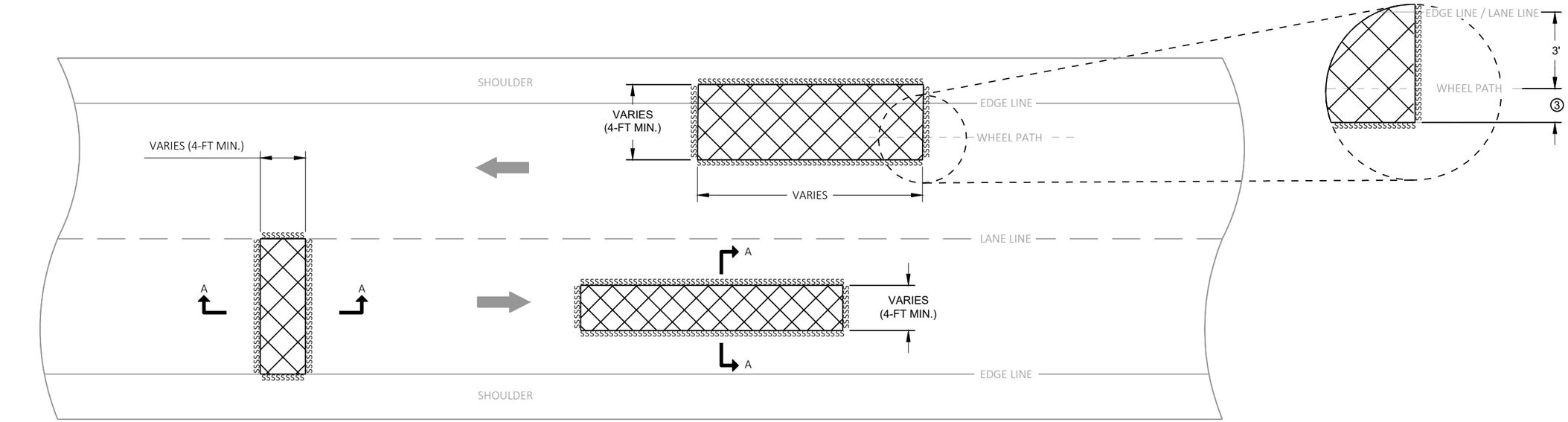
GENERAL NOTES

① EXACT LOCATION, DEPTH AND SIZE OF REPAIR TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

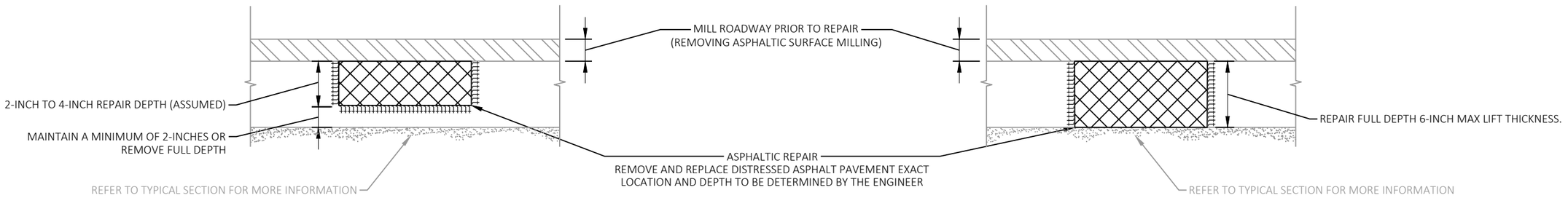
② MILL PAVEMENT PER PLAN PRIOR TO MAKING ASPHALTIC REPAIR.

③ LOCATE LONGITUDINAL REPAIR JOINTS OUTSIDE OF WHEEL PATH. 12-INCH MINIMUM (24-INCH RECOMMENDED) FROM THE CENTER OF THE WHEEL PATH.

④ ASPHALTIC REPAIR PAVING TO BE DONE ON THE SAME DAY AS REMOVAL.



PLAN VIEW



PARTIAL DEPTH

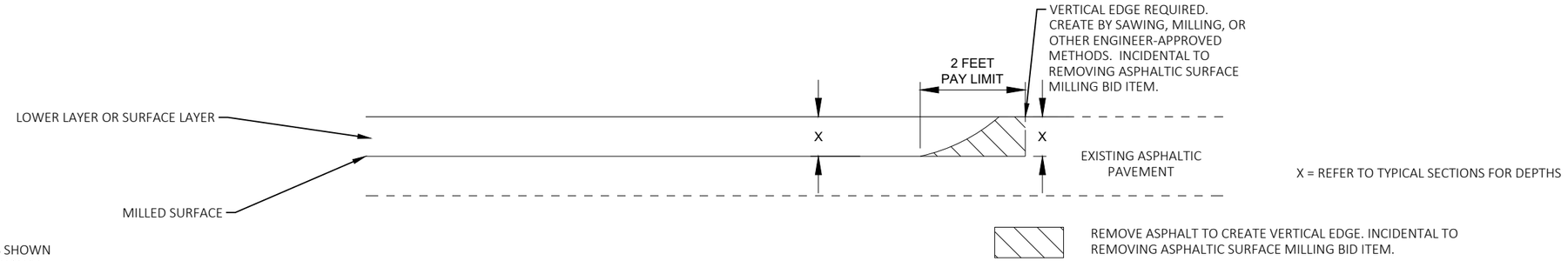
FULL DEPTH

SECTION A-A

ASPHALTIC REPAIR

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SHEET 34	E

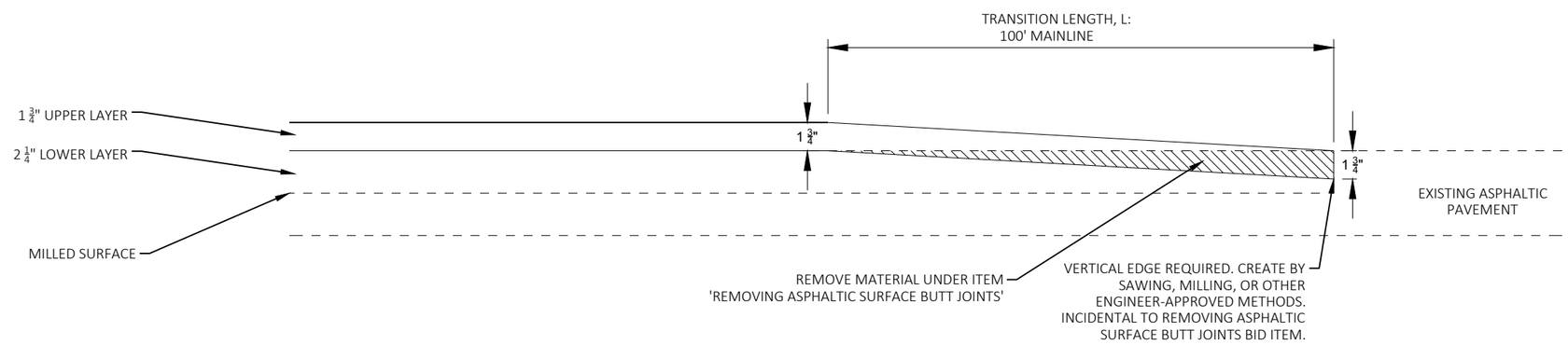
2



OPERATIONS
- REMOVING ASPHALTIC SURFACE MILLING AS SHOWN
- PAVE LOWER LAYER OR SURFACE LAYER AS SHOWN

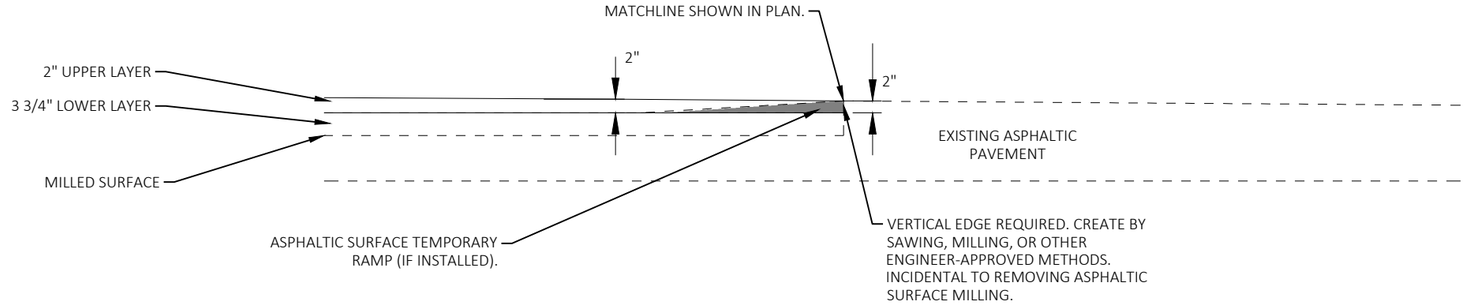
MILLING AND PAVING LOWER LAYER
OR SURFACE LAYER

- REMOVING ASPHALTIC SURFACE BUTT JOINT TO DIMENSIONS SHOWN
- PAVE UPPER LAYER



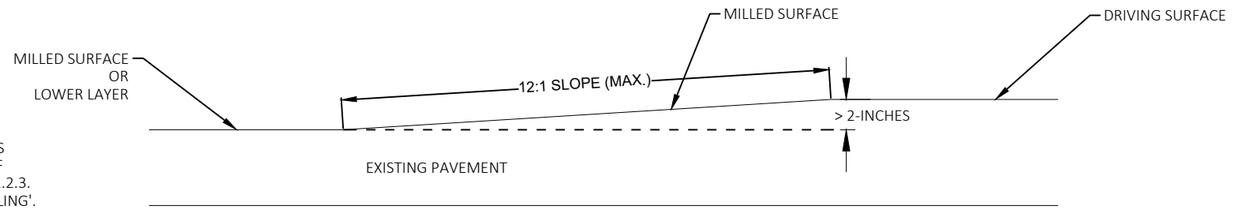
MILLING BUTT JOINT AND PAVING UPPER LAYER
IN TWO LANE SECTION

2

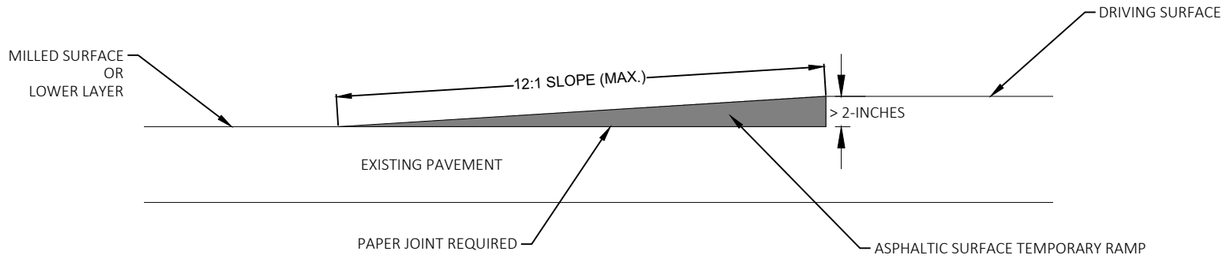


MILLING AND PAVING DETAIL IN THREE LANE SECTION

NOTES:
- THESE CONSTRUCTION DETAILS AND THE SPECIAL PROVISIONS SUPPLEMENT THE REQUIREMENTS FOR PROVIDING DROP-OFF PROTECTION AS STATED IN STANDARD SPECIFICATION 104.6.1.2.3.
- MILLING RAMP PAID AS 'REMOVING ASPHALTIC SURFACE MILLING'.
- ASPHALTIC SURFACE TEMPORARY RAMP INCIDENTAL TO HMA PAVEMENT BID ITEMS



MILLED RAMP



ASPHALTIC SURFACE TEMPORARY RAMP

EXCAVATING, PREPARING THE FOUNDATION, AND SHIMMING ARE INCIDENTAL TO THE CONCRETE CURB & GUTTER AND ADJUSTING/RECONSTRUCTING INLET BID ITEMS.

THE DEPARTMENT WILL PAY SEPARATELY FOR SAWING ASPHALT, SAWING CONCRETE, CONCRETE CURB & GUTTER AND DRILLED TIE BARS.

MONOLITHIC SHIM CONCRETE, CONCRETE PLACEMENT, AND FINISHING ARE INCIDENTAL TO THE CONCRETE CURB & GUTTER AND ADJUSTING/RECONSTRUCTING INLET BID ITEMS.

PREVENT CONCRETE AND OTHER DEBRIS FROM FALLING INTO STRUCTURE.

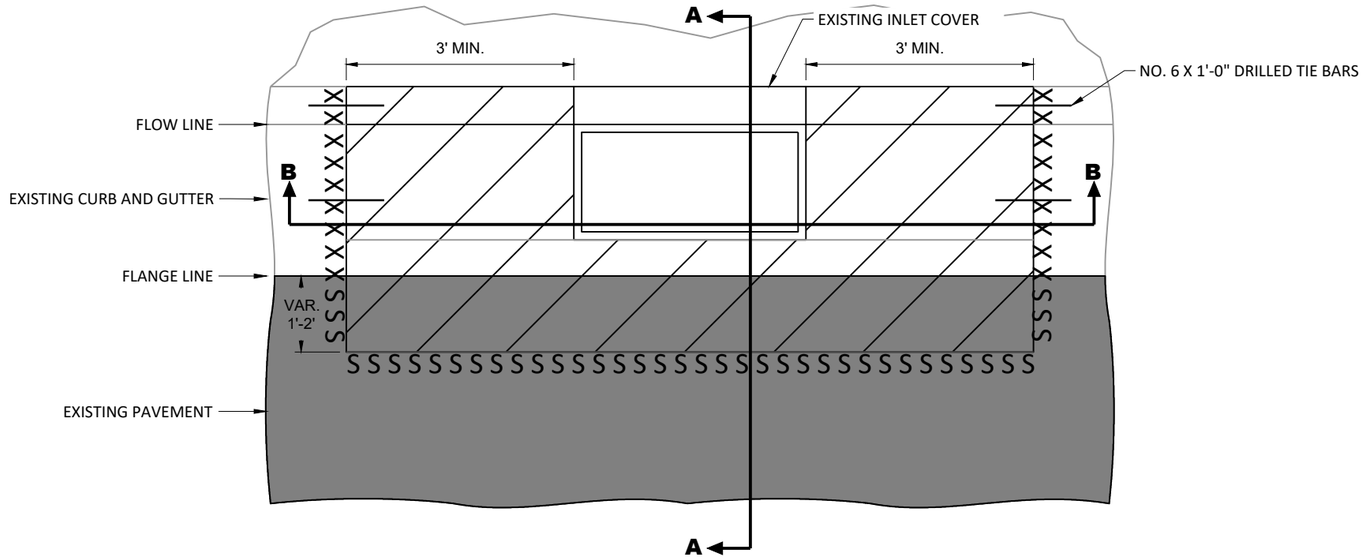
REFER TO PLAN DETAILS AND MISCELLANEOUS QUANTITIES FOR ADDITIONAL INFORMATION.

S S S SAWING ASPHALT

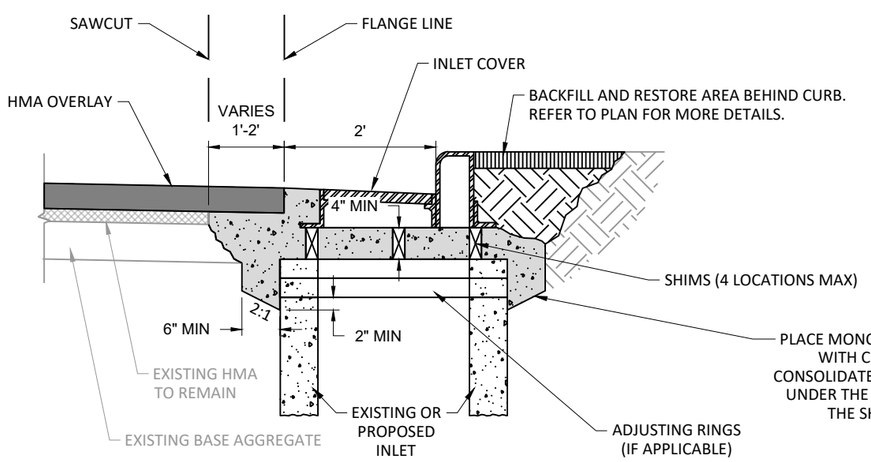
X X X SAWING CONCRETE

REMOVING CURB & GUTTER AND REMOVING ASPHALTIC SURFACE

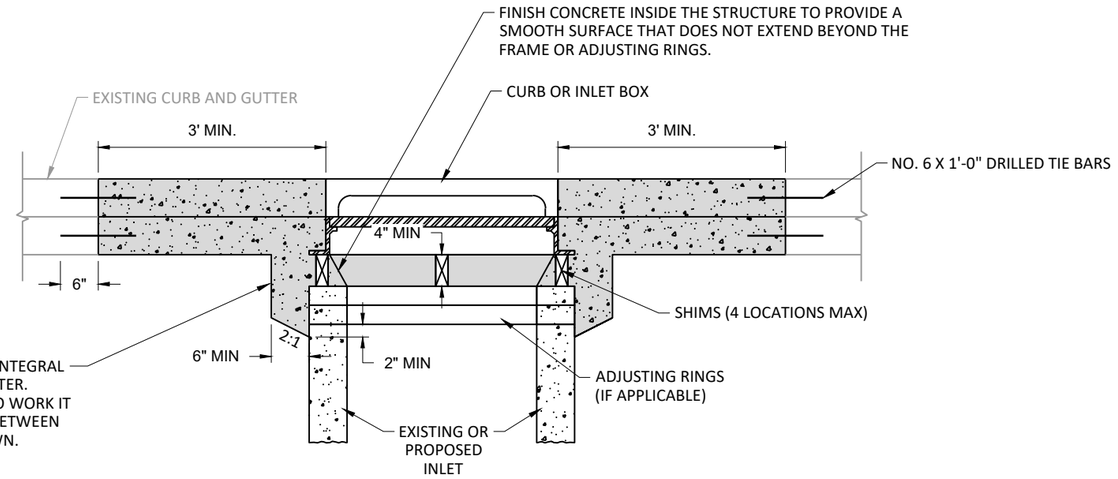
MONOLITHIC CONCRETE



PLAN VIEW



SECTION A-A



SECTION B-B

MONOLITHIC SHIM - INLETS IN CURB AND GUTTER

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SHEET 37	E

REMOVING PAVEMENT TO THE LIMITS SHOWN IS PAID AS REMOVING PAVEMENT FOR BASE PATCHING.

EXCAVATING, PREPARING THE FOUNDATION AND SHIMMING ARE INCIDENTAL TO THE ADJUSTING OR RECONSTRUCTING BID ITEMS.

THE DEPARTMENT WILL PAY SEPARATELY FOR SAWING CONCRETE AND DRILLED TIE BARS.

MONOLITHIC SHIM CONCRETE, CONCRETE PLACEMENT AND FINISHING ARE INCIDENTAL TO THE BASE PATCHING CONCRETE SHES BID ITEM.

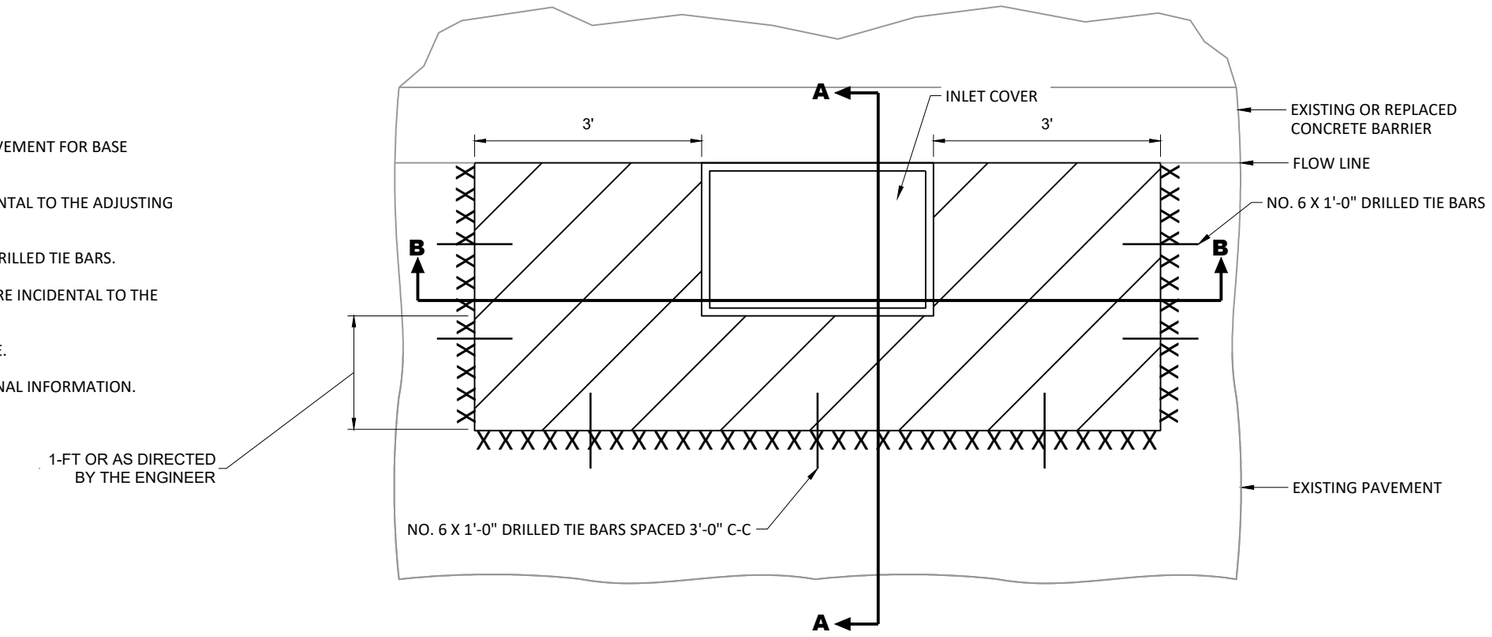
PREVENT CONCRETE AND OTHER DEBRIS FROM FALLING INTO STRUCTURE.

REFER TO PLAN DETAILS AND MISCELLANEOUS QUANTITIES FOR ADDITIONAL INFORMATION.

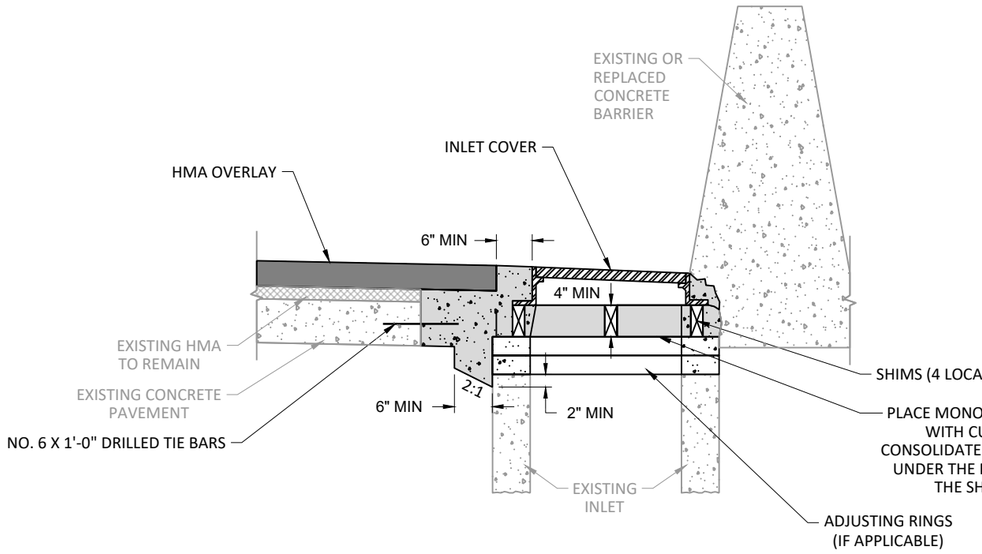
X X X SAWING CONCRETE

REMOVING PAVEMENT

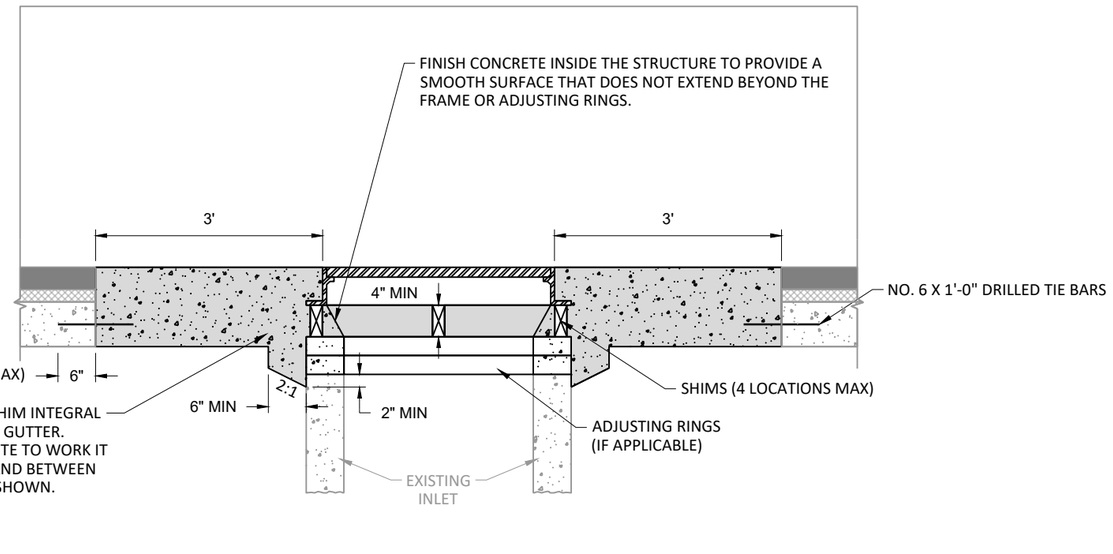
MONOLITHIC CONCRETE



PLAN VIEW

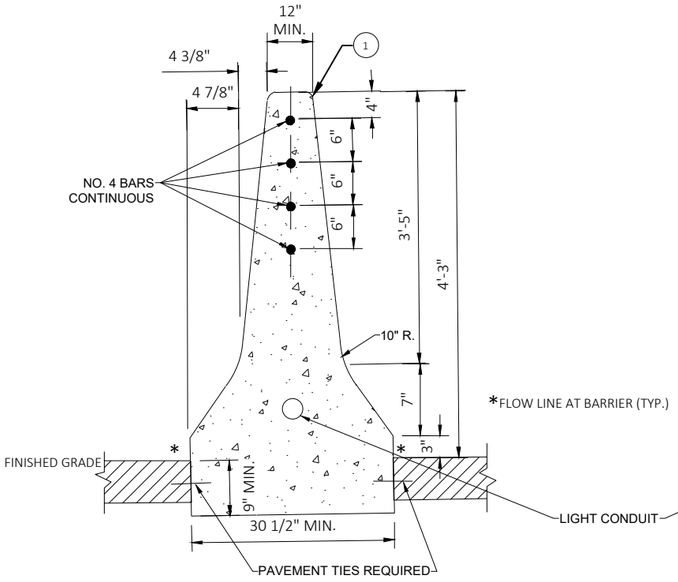


SECTION A-A

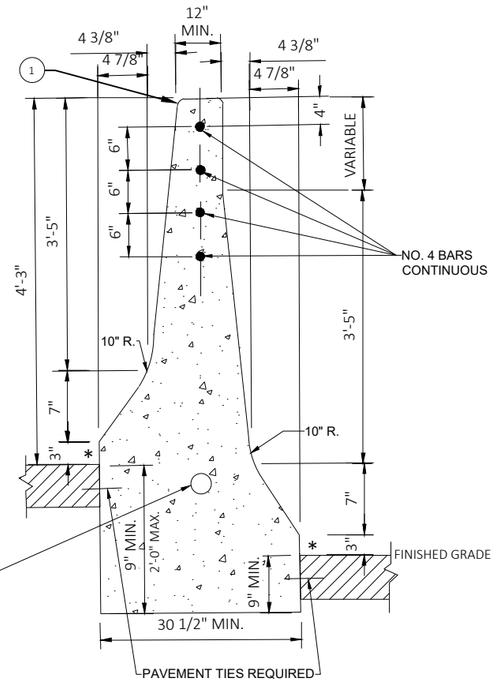


SECTION B-B

MONOLITHIC SHIM - INLETS ADJACENT TO CONCRETE BARRIER



CONCRETE MEDIAN BARRIER WITH INTEGRAL FOOTING
CAST-IN-PLACE



CONCRETE MEDIAN BARRIER WITH INTEGRAL FOOTING
IN STEPPED MEDIAN
CAST-IN-PLACE

GENERAL NOTES

ALL CONSTRUCTION INFORMATION NOT INDICATED ON THE DETAIL SHALL BE IN ACCORDANCE WITH S.D.D. "CONCRETE BARRIER (DOUBLE FACED)".

ALTERNATE DESIGNS FOR CONCRETE MEDIAN BARRIER MAY BE USED UPON WRITTEN PERMISSION OF THE ENGINEER.

BARRIER SHALL BE CAST-IN-PLACE UNLESS OTHERWISE SPECIFIED IN THE CONTRACT.

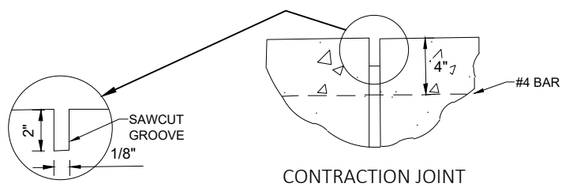
SAWED CONTRACTION JOINTS SHALL BE PROVIDED IN THE SIDES AND TOP OF THE CONCRETE MEDIAN BARRIER, SPACED AT 20 FOOT INTERVALS AND AT INLET EDGES.

SPLICES OF LONGITUDINAL BARS SHALL BE MADE WITH THE BARS LAPPED AT LEAST 18 INCHES AND FIRMLY TIED OR FASTENED TOGETHER.

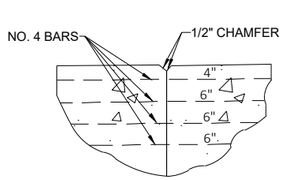
(1) 3/4 BEVEL OR 1 INCH RADIUS (TYPICAL)

(2) NO. 4 BARS SHALL BE CONTINUED THROUGH CONSTRUCTION JOINTS.

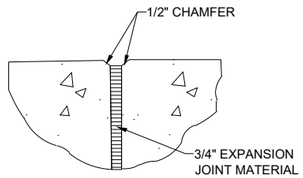
EXISTING CONCRETE BARRIER WALL 51-INCH SPECIAL (DOUBLE FACED)



CONTRACTION JOINT



(2) CONTSTRUCTION JOINT



EXPANSION JOINT

JOINT DETAILS

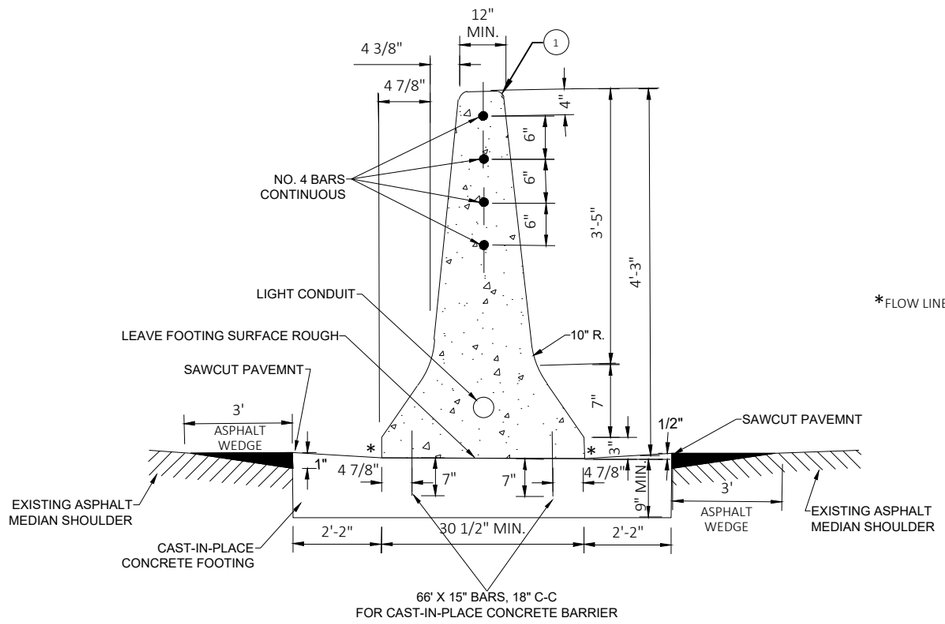
CONSTRUCTION NOTES

A. AT EXPANSION JOINTS, PLACE CONDUIT COUPLINGS WITHOUT GLUE FOR USE AS EXPANSION COUPLINGS.

B. SEE LIGHTING DETAIL FOR PLACEMENT OF LIGHTING CONDUIT.

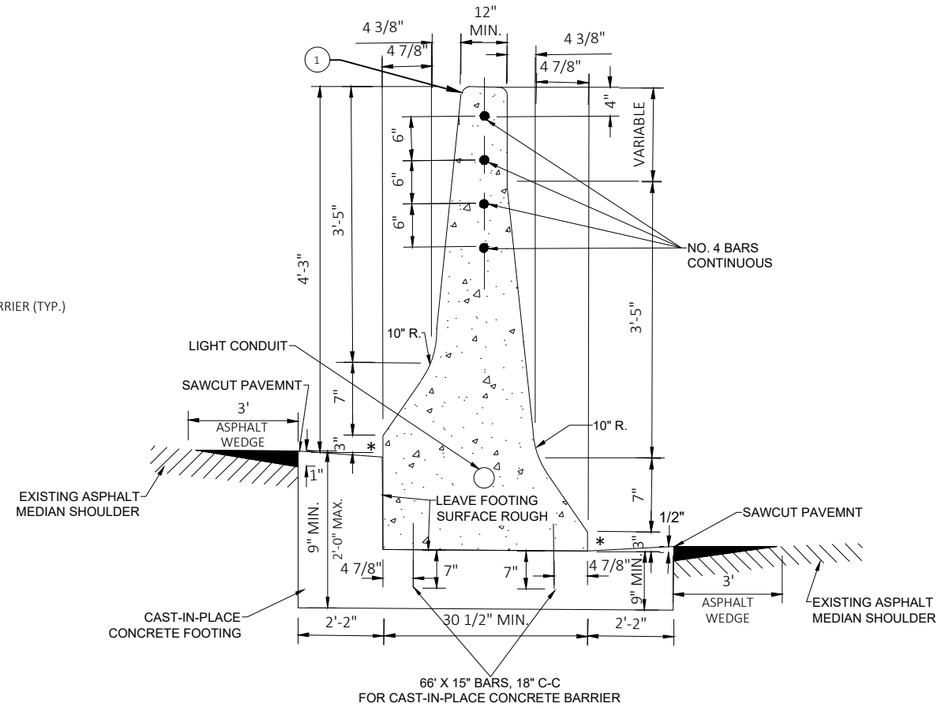
C. A GREY PIGMENTED ANTISPALLING COMPOUND SHALL BE USED TO COAT THE FACE OF THE BARRIER WALL.

D. EXPANSION JOINTS ARE TO BE PLACED AT EXISTING EXPANSION JOINTS IN THE PAVEMENT AND AT STRUCTURES AND AT A MAXIMUM OF 300 FOOT INTERVALS.



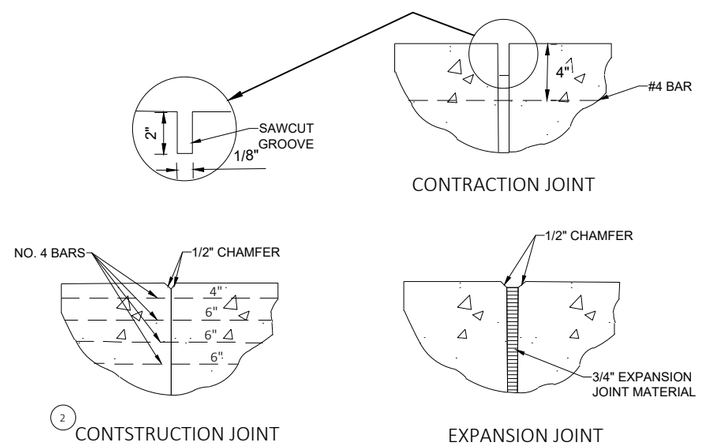
CONCRETE MEDIAN BARRIER WITH INTEGRAL FOOTING
CAST-IN-PLACE

*FLOW LINE AT BARRIER (TYP.)



CONCRETE MEDIAN BARRIER WITH INTEGRAL FOOTING IN STEPPED MEDIAN
CAST-IN-PLACE

CONCRETE BARRIER WITH FOOTING, DOUBLE FACE, SPECIAL



JOINT DETAILS

GENERAL NOTES

ALL CONSTRUCTION INFORMATION NOT INDICATED ON THE DETAIL SHALL BE IN ACCORDANCE WITH S.D.D. "CONCRETE BARRIER (DOUBLE FACED)".

ALTERNATE DESIGNS FOR CONCRETE MEDIAN BARRIER MAY BE USED UPON WRITTEN PERMISSION OF THE ENGINEER.

BARRIER SHALL BE CAST-IN-PLACE UNLESS OTHERWISE SPECIFIED IN THE CONTRACT.

SAWED CONTRACTION JOINTS SHALL BE PROVIDED IN THE SIDES AND TOP OF THE CONCRETE MEDIAN BARRIER, SPACED AT 20 FOOT INTERVALS AND AT INLET EDGES.

SPLICES OF LONGITUDINAL BARS SHALL BE MADE WITH THE BARS LAPPED AT LEAST 18 INCHES AND FIRMLY TIED OR FASTENED TOGETHER.

(1) 3/4 BEVEL OR 1 INCH RADIUS (TYPICAL)

(2) NO. 4 BARS SHALL BE CONTINUED THROUGH CONSTRUCTION JOINTS.

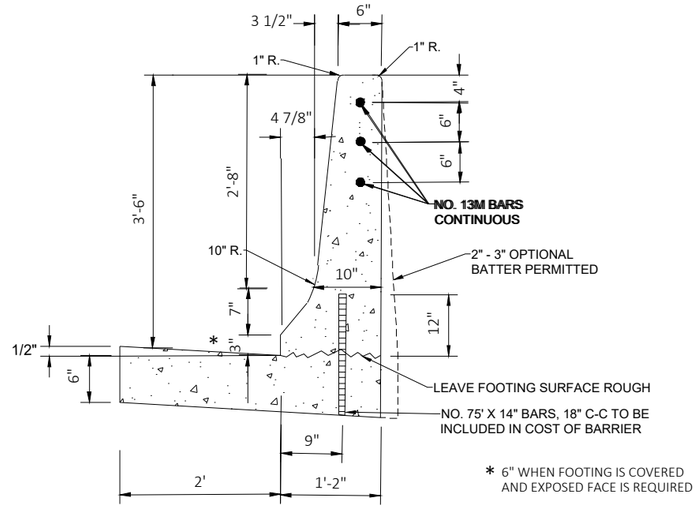
CONSTRUCTION NOTES

A. AT EXPANSION JOINTS, PLACE CONDUIT COUPLINGS WITHOUT GLUE FOR USE AS EXPANSION COUPLINGS.

B. SEE LIGHTING DETAIL FOR PLACEMENT OF LIGHTING CONDUIT.

C. A GREY PIGMENTED ANTISPALLING COMPOUND SHALL BE USED TO COAT THE FACE OF THE BARRIER WALL.

D. EXPANSION JOINTS ARE TO BE PLACED AT EXISTING EXPANSION JOINTS IN THE PAVEMENT AND AT STRUCTURES AND AT A MAXIMUM OF 300 FOOT INTERVALS.



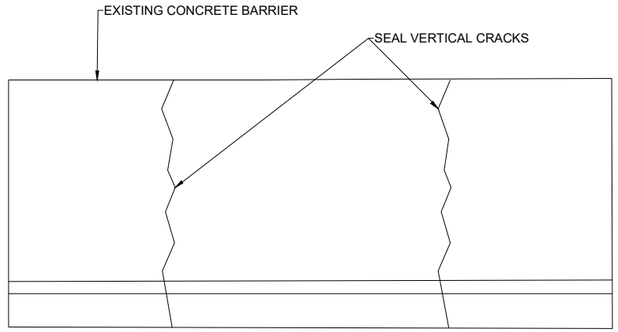
CONCRETE BARRIER, SINGLE FACED, TYPE HF, SPECIAL

CONSTRUCTION NOTES:

A. EXPANSION JOINTS ARE TO BE PLACED AT EXISTING EXPANSION JOINTS IN THE PAVEMENT AND AT STRUCTURES AND AT A MINIMUM OF 120 FOOT INTERVALS.

NOTE:

ALL CONSTRUCTION INFORMATION NOT INDICATED ON THIS DETAIL SHALL BE IN ACCORDANCE WITH S.D.D. "CONCRETE BARRIER (SINGLE FACED)".



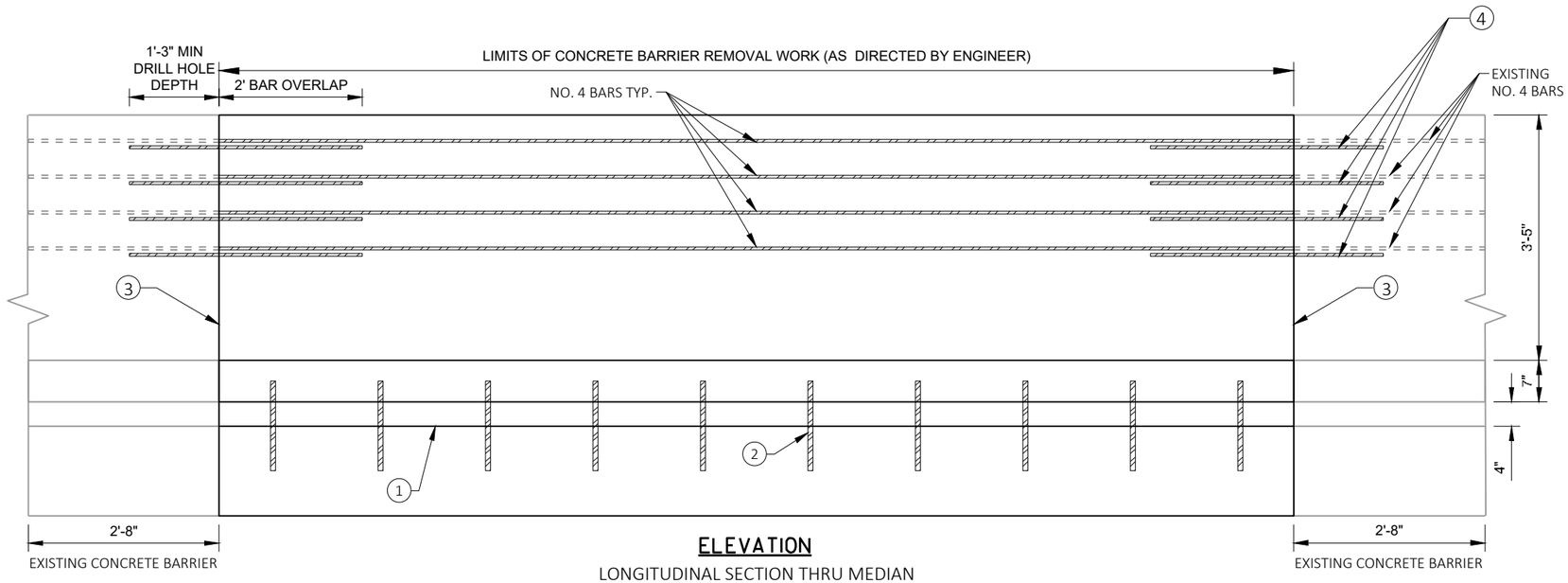
DETAIL OF CONCRETE BARRIER CRACK REPAIR

CONSTRUCTION NOTES

A. CLEAN AND SEAL VERTICAL CRACKS AS DIRECTED BY THE ENGINEER.

B. PRIOR TO COMMENCING WORK, ALL CRACKS SHALL BY REVIEWED AND VERIFIED PRIOR TO COMPLETING THE WORK.

C. USE AN APPROVED EPOXY CRACK SEALANT. SEE SPECIFICATIONS FOR APPROVED PRODUCTS.



ELEVATION

LONGITUDINAL SECTION THRU MEDIAN

CONCRETE BARRIER DOUBLE-FACED 51-INCH, SPECIAL - CAST-IN-PLACE IN SYMMETRICAL MEDIAN

GENERAL NOTES

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

ALL BAR STEEL REINFORCEMENT USING EPOXY SHALL BE COATED IN CONFORMANCE WITH SUBSECTION 505.2.4 OF STANDARD SPEC.

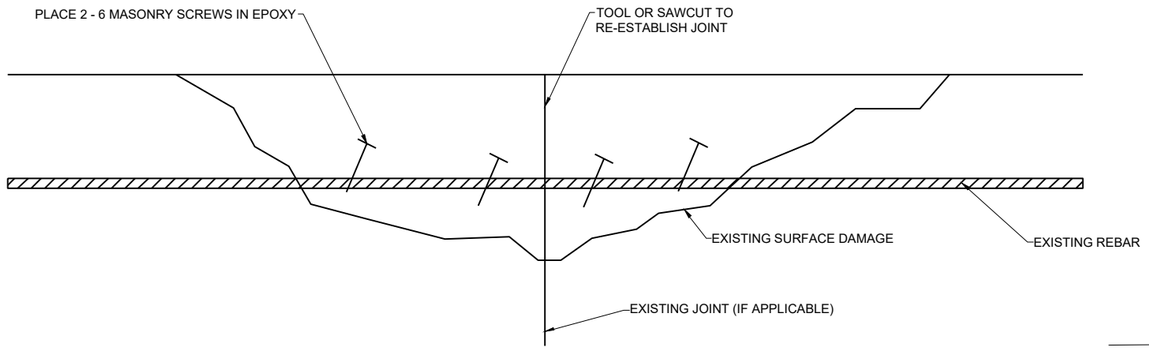
1 OPTIONAL CONSTRUCTION JOINT WITH ROUGH SURFACE FINISH.

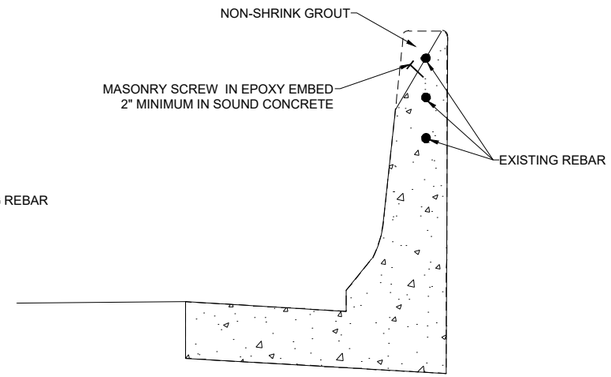
2 NO. 6 X 15" BARS AT 1'-6" C-C TO BE USED WHEN OPTIONAL CONSTRUCTION JOINT IS USED. BARS MAY BE PLACED AFTER CONCRETE IS POURED OR IF THE FOOTING IS LEFT IN PLACE 7 1/2" DRILL & EPOXY EMBEDMENT, TYP.

3 SAW CUT TO PROVIDE STRAIGHT FACE FOR REPLACEMENT OF CONCRETE.

4 NO. 4 TIE BARS ANCHORED WITH MASONRY ANCHORS TYPE S - ¾", TYP. INCIDENTAL TO CONCRETE BARRIER WALL REPLACEMENT.

DETAIL OF CONCRETE BARRIER WALL 51-INCH SPECIAL (DOUBLE FACED) BARRIER REPLACEMENT





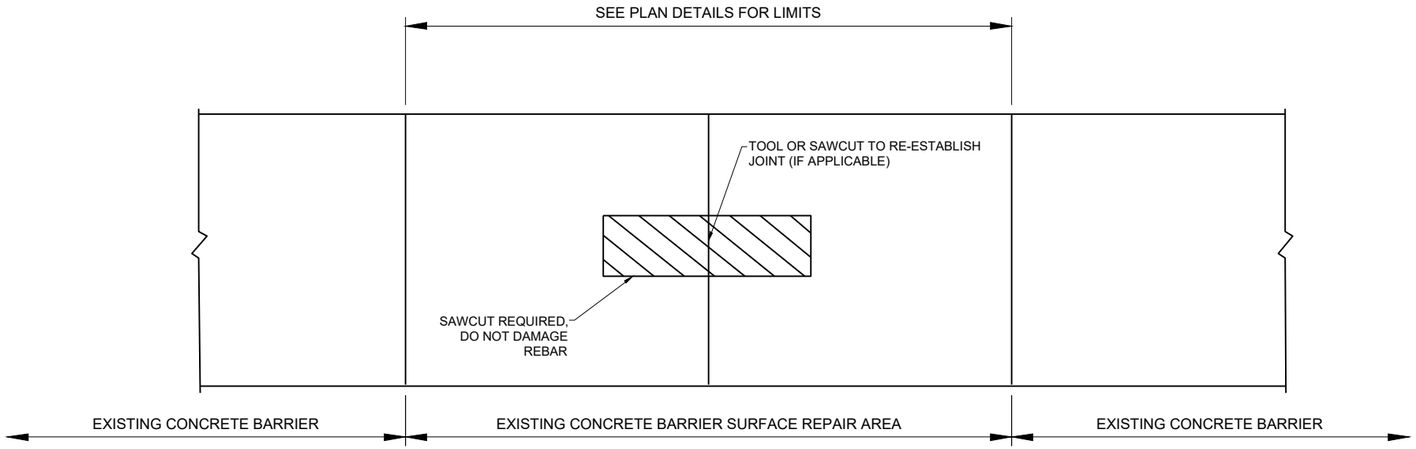
CONSTRUCTION NOTES:

A. CLEAN CORROSION FROM EXPOSED BAR STEEL.
B. REMOVE LOOSE OR UNSOUND CONCRETE MASONRY FROM FACE OF DAMAGED AREA.
C. PLACE NON-SHRINK GROUT TO REESTABLISH STANDARD BARRIER SHAPE.
D. DO NOT PLACE DELINEATOR BRACKETS IN REPAIR AREA.
E. SAWCUT REQUIRED AS DIRECTED BY THE ENGINEER. INCIDENTAL TO CONCRETE BARRIER SURFACE REPAIR ITEM.

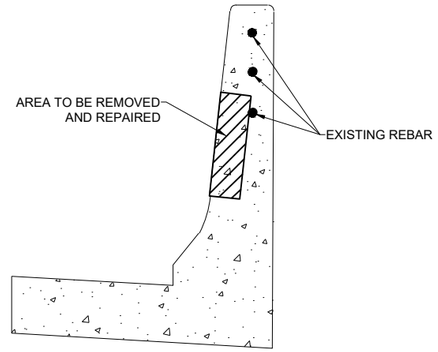
DETAIL OF CONCRETE BARRIER SURFACE REPAIR, TOP

NOTE:

ALL CONSTRUCTION INFORMATION NOT INDICATED ON THIS DETAIL SHALL BE IN ACCORDANCE WITH S.D.D. "CONCRETE BARRIER (SINGLE FACED)".



PLAN VIEW



SECTION A - A

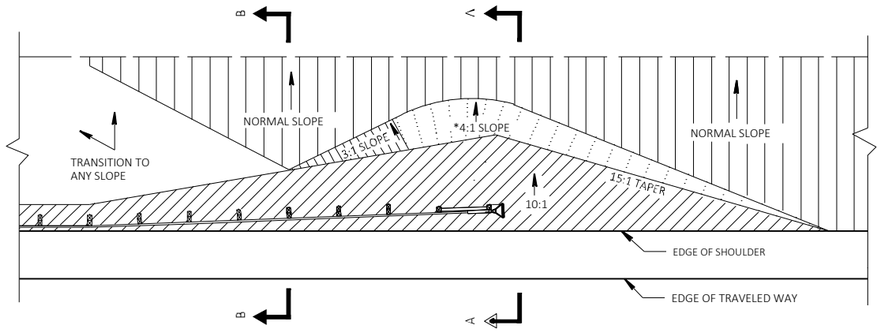
CONSTRUCTION NOTES:

A. CLEAN CORROSION FROM EXPOSED BAR STEEL.
B. REMOVE LOOSE OR UNSOUND CONCRETE MASONRY FROM DAMAGED AREA.
C. PLACE NON-SHRINK GROUT TO REESTABLISH STANDARD BARRIER SHAPE.
D. EXACT LOCATIONS AND LIMITS OF SURFACE REPAIR TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
E. SAWCUT REQUIRED AS DIRECTED BY THE ENGINEER. INCIDENTAL TO CONCRETE BARRIER SURFACE REPAIR ITEM.

DETAIL OF CONCRETE BARRIER SURFACE REPAIR, MIDSECTION

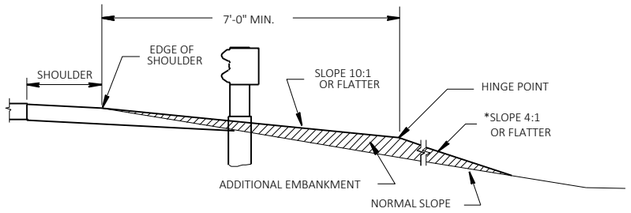
NOTE:

ALL CONSTRUCTION INFORMATION NOT INDICATED ON THIS DETAIL SHALL BE IN ACCORDANCE WITH S.D.D. "CONCRETE BARRIER (SINGLE FACED)".

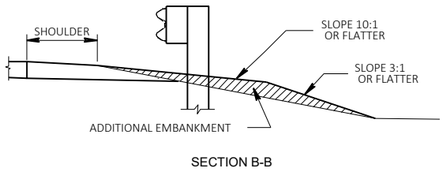


PLAN VIEW

*A 3:1 MAXIMUM SLOPE MAY BE USED FOR INSTALLATIONS ON EXISTING HIGHWAYS.

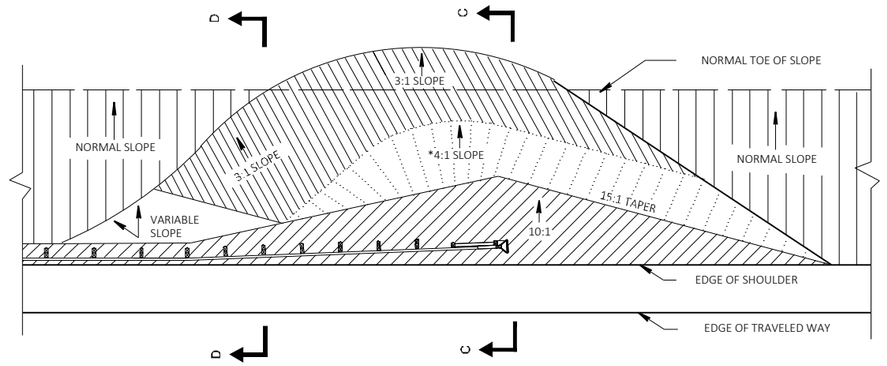


SECTION A-A



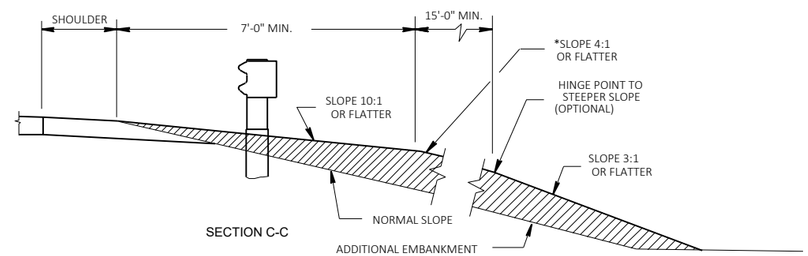
SECTION B-B

FILL AREA AT BEAM GUARD

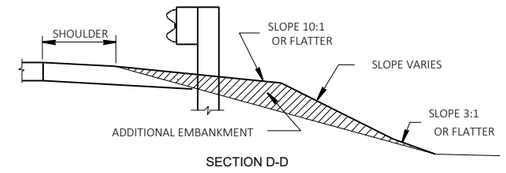


PLAN VIEW

*A 3:1 MAXIMUM SLOPE MAY BE USED FOR INSTALLATIONS ON EXISTING HIGHWAYS.

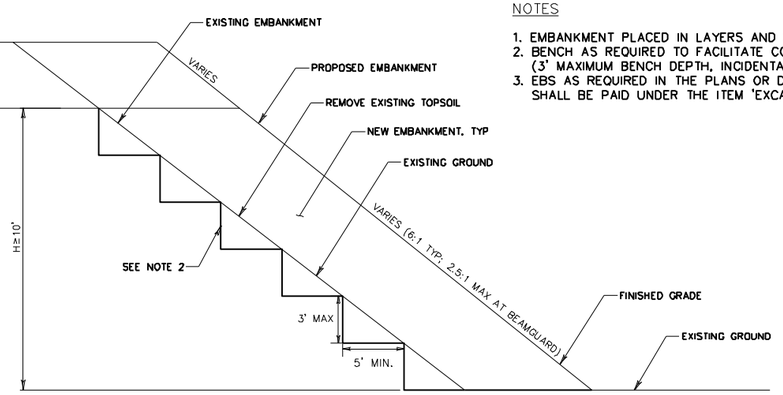


SECTION C-C



SECTION D-D

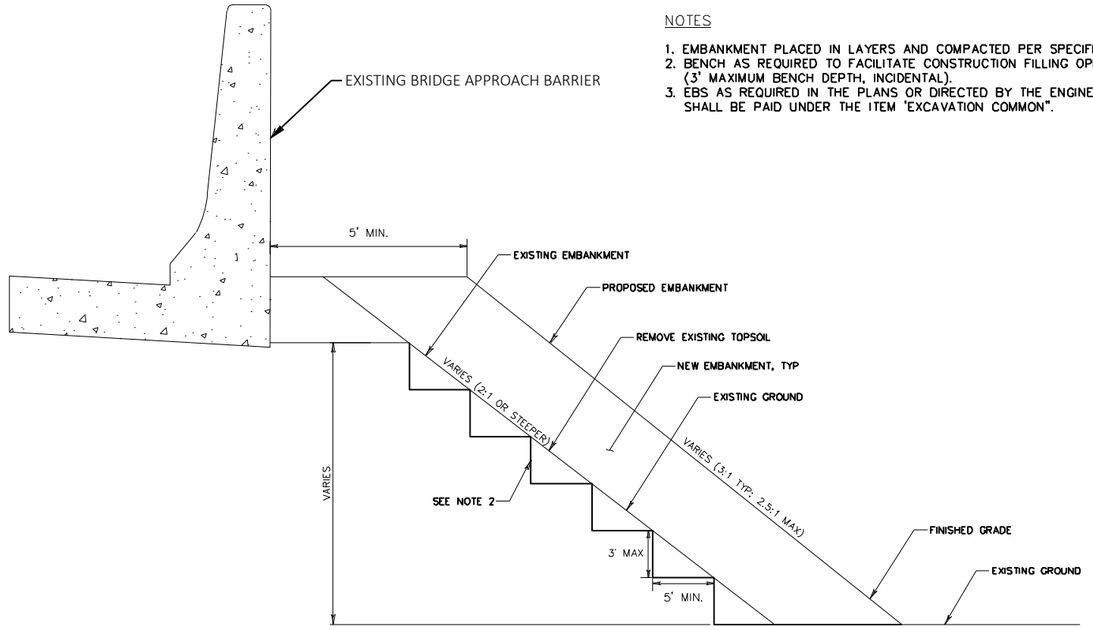
FILL AREA AT BEAM GUARD



NOTES

1. EMBANKMENT PLACED IN LAYERS AND COMPACTED PER SPECIFICATIONS.
2. BENCH AS REQUIRED TO FACILITATE CONSTRUCTION FILLING OPERATIONS (3' MAXIMUM BENCH DEPTH, INCIDENTAL).
3. EBS AS REQUIRED IN THE PLANS OR DIRECTED BY THE ENGINEER SHALL BE PAID UNDER THE ITEM 'EXCAVATION COMMON".

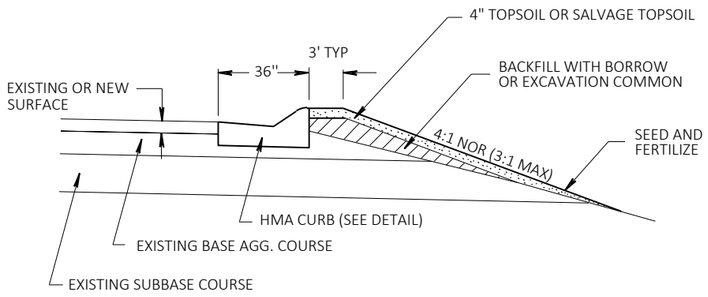
STEPPED EMBANKMENT AT FILL AREAS



NOTES

1. EMBANKMENT PLACED IN LAYERS AND COMPACTED PER SPECIFICATIONS.
2. BENCH AS REQUIRED TO FACILITATE CONSTRUCTION FILLING OPERATIONS (3' MAXIMUM BENCH DEPTH, INCIDENTAL).
3. EBS AS REQUIRED IN THE PLANS OR DIRECTED BY THE ENGINEER SHALL BE PAID UNDER THE ITEM 'EXCAVATION COMMON".

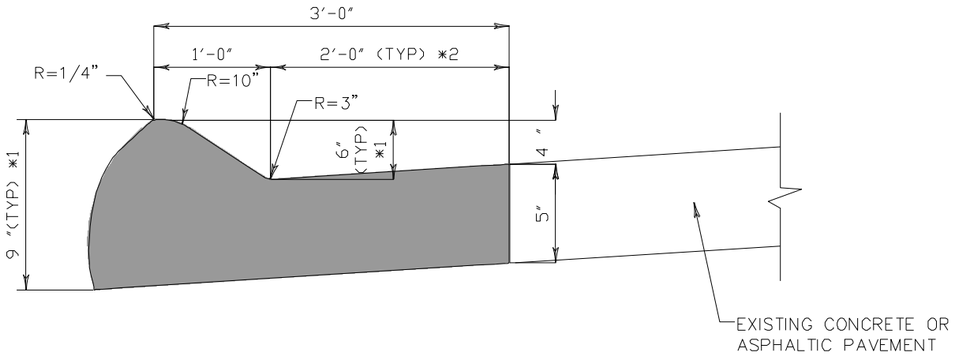
STEPPED EMBANKMENT AT STRUCTURE FILL AREAS



DETAIL OF HMA CURB & GUTTER AND BERM INSTALLATION

*NOTES

1. FOR MOUNTABLE CURB REDUCED DIMENSION BY 2 INCHES
2. ADJUST GUTTER PAN WIDTH TO FIT FIELD CONDITIONS OR AS DIRECTED BY THE ENGINEER
3. HMA CURB TO BE CONSTRUCTED UNIFORMILY. HAND PLACEMENT OF MATERIALS TO BE APPROVED BY THE ENGINEER.



DETAIL OF HMA CURB & GUTTER

2

2

N

IH 94 WB

SHOULDER

EXISTING CONCRETE BARRIER
TYPE F51DF

STA 639+95.11, -27.53' LT

STA 640+21.12, 26.92' LT

STA 640+31.63, -26.36' LT

26'

10'

15'

STA 640+46.65, -26.62' LT

4'

STA 640+46.65, -24.08' LT

STA 639+95.06, 23.53' LT

CONCRETE BARRIER TRANSITION TYPE F51DF TO S42

CONCRETE PAD FOR CRASH CUSHION

STA 640+31.64, -24.36' LT

CRASH CUSHION PERMANENT LOW MAINTENANCE
TL-3, UNIDIRECTIONAL

CONCRETE BARRIER TYPE S42 END ANCHORAGE

SHOULDER

639

640

641

STA 640+21.15, -22.92' LT

R/L IH94

IH 94 EB

NOTES:
SELECT PERMANENT CRASH CUSHION FROM CURRENT WISDOT APPOROVED PRODUCT LIST. LENGTHS OF APPROVED PRODUCTS VARY. ADJUST LENGTH OF CONCRETE BARRIER AS NECESSARY TO MAINTIAN LENGTH.

SEE MANUFACTURER'S SPECIFICATIONS FOR FOUNDATION PAD REQUIREMENTS. THE FOUDATION PAD IS INCIDENTAL TO THE ITEM PERMANENT CRASH CUSHION.

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SHEET 48	E

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\021003-CD.DWG
LAYOUT NAME - 01
PLOT DATE : 7/1/2022 6:55 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

2

2

IH 94 WB

IH 94 EB

SHOULDER

SHOULDER

R/L IH94

696

695

245+00

N

R/L EB ON RAMP

STA 282+37.21, 72.66' RT

STA 282+46.95, 70.31' RT

STA 282+53.70, 69.03' RT

STA 282+22.47, 75.45' RT

7'

10'

15'

4'

STA 282+21.72, 71.52' RT

PC: 244+20.59

EXISTING CONCRETE BARRIER
TYPE F32SF

CONCRETE PAD FOR
CRASH CUSHION

CRASH CUSHION PERMANENT
TL-2, UNIDIRECTIONAL

STA 282+52.99, 65.21' RT

244+00

CONCRETE BARRIER TRANSITION
TYPE F32SF TO S32

STA 282+36.46, 68.73' RT

CONCRETE BARRIER TYPE S32
END ANCHORAGE

STA 282+46.26, 66.42' RT

MEADOWBROOK RD.

R/L CTH G

BP: 243+50.90

EP: 243+53.34

283+00

282+00

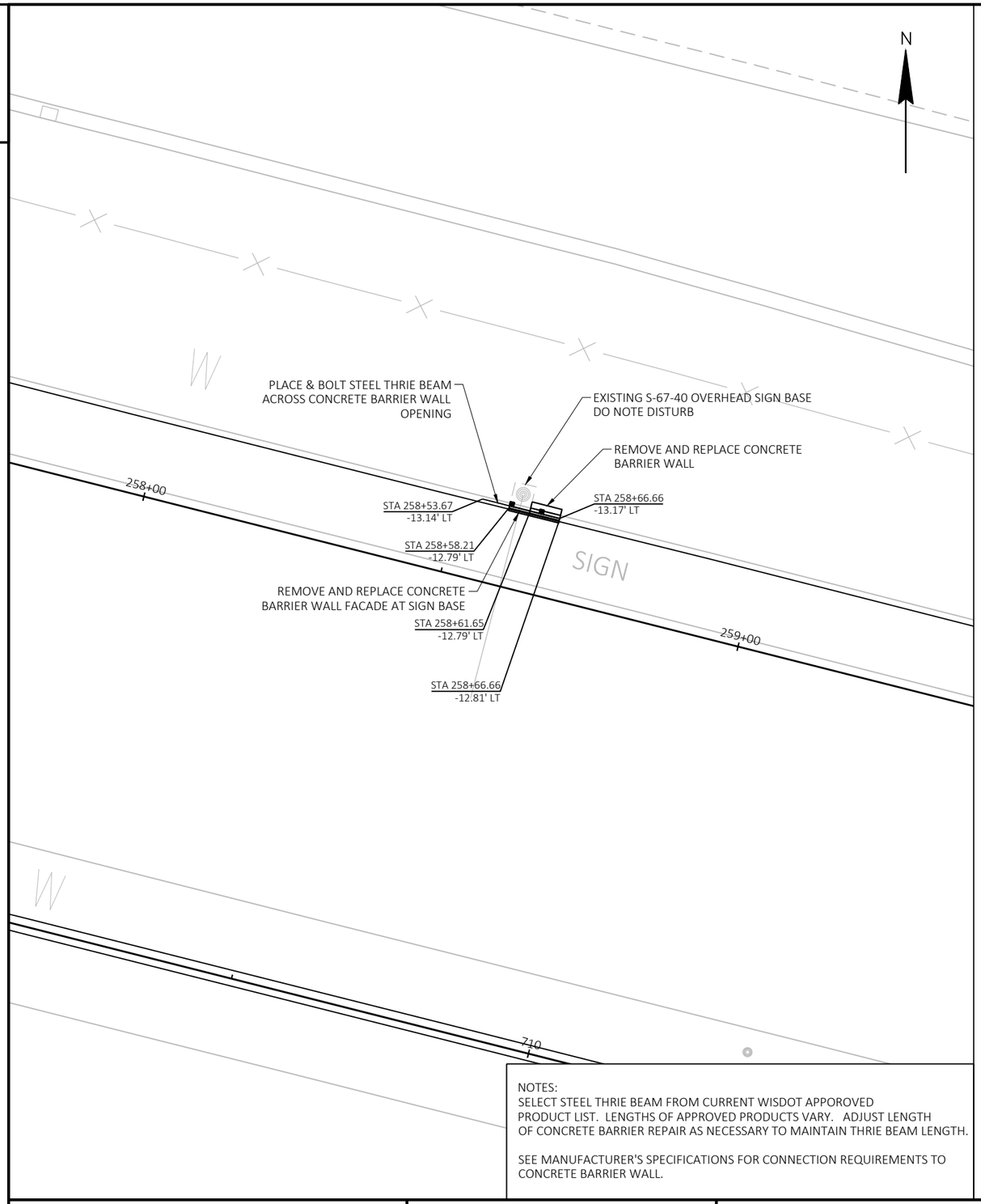
281+00

SIGN

NOTES:
SELECT PERMANENT CRASH CUSHION FROM CURRENT WISDOT APPOROVED PRODUCT LIST. LENGTHS OF APPROVED PRODUCTS VARY. ADJUST LENGTH OF CONCRETE BARRIER AS NECESSARY TO MAINTIAN LENGTH.

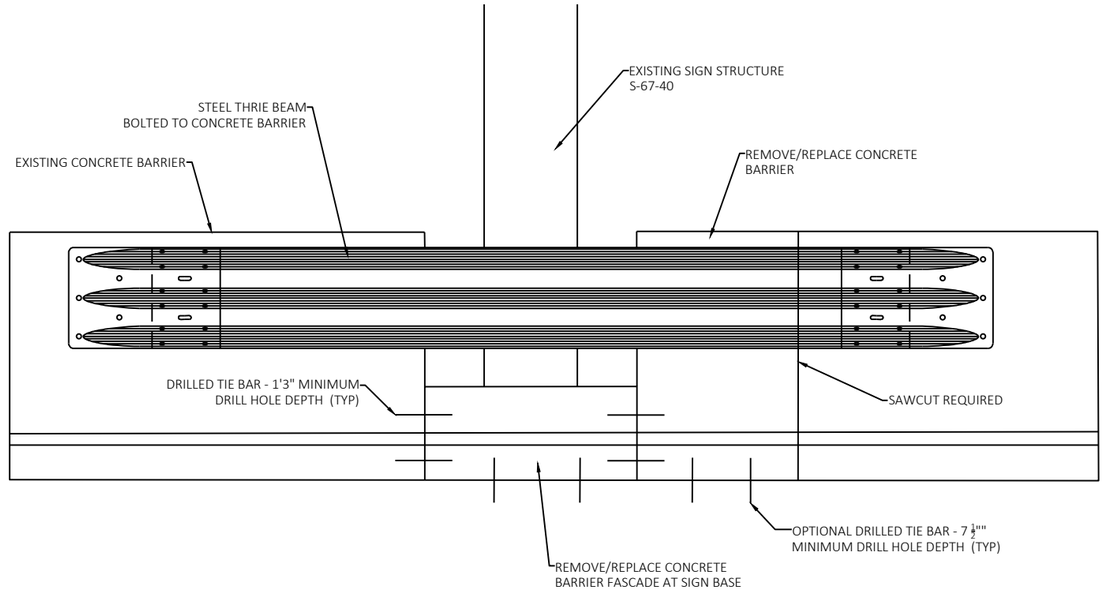
SEE MANUFACTURER'S SPECIFICATIONS FOR FOUNDATION PAD REQUIREMENTS. THE FOUDATION PAD IS INCIDENTAL TO THE ITEM PERMANENT CRASH CUSHION.

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CONSTRUCTION DETAILS	SHEET 49	E



NOTES:
SELECT STEEL THRIE BEAM FROM CURRENT WISDOT APPOROVED PRODUCT LIST. LENGTHS OF APPROVED PRODUCTS VARY. ADJUST LENGTH OF CONCRETE BARRIER REPAIR AS NECESSARY TO MAINTAIN THRIE BEAM LENGTH.

SEE MANUFACTURER'S SPECIFICATIONS FOR CONNECTION REQUIREMENTS TO CONCRETE BARRIER WALL.



DETAIL OF BARRIER REPAIR AT SIGN BASE STRUCTURE

GENERAL NOTES:

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

ALL BAR STEEL REINFORCEMENT USING EPOXY SHALL BE COATED IN CONFORMANCE WITH SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.

DRILLED TIE BAR USE NO. 4 X 39" BARS ANCHORED WITHMASONRY ANCHORS TYPE S - ¾", TYP. DRILL 1'3" MINIMUM AND PROVIDE A 2' BAR OVERLAP.

USE OF AN OPTIONAL CONSTRUCTION JOINT SHALL HAVE A ROUGH SURFACE FINISH.

USE NO. 6 X 15" BARS AT 1'6" C-C WHEN OPTIONAL CONSTRUCTION JOINT IS USED. BARS MAYBE PLACED AFTER CONCRETE IS POURED OR IF THE FOOTING IN LEFT IN PLACE DRILL 7 ½" & EPOXY EMBEDMENT, TYPICAL.

1) REMOVAL OF BARRIER FASCADE AT THE SIGN BASE IS PAID FOR AS REMOVING CONCRETE BARRIER.
2) DRILLED TIE BARS ARE INCIDENTAL WITH CONCRETE BARRIER PAY ITEMS.
3) DRILLED HOLES FOR MOUNTING/ATTACHING THE STEEL THRIE BEAM ARE INCLUDED FOR PAYMENT IN THE STEEL THRIE BEAM PAY ITEM.
4) THRIE BEAM TERMINAL CONNECTOR IS INCIDENTAL AND INCLUDED FOR PAYMENT WITH THE STEEL THRIE BEAM PAY ITEM.
5) ADJUST DRILLED HOLE LOCATIONS FOR THRIE BEAM CONNECTIONS AS NEEDED TO MISS STEEL REINFORCEMENT.

2

IH 94 WB

N

SEE SDD "MAINTENANCE CROSSOVERS FOR FREEWAYS" FOR ADDITIONAL INFORMATION

SLOPE INTERCEPT

STA 539+08.01
-31.09' LT

STA 539+20
-30.82' LT

32'

STA 539+92
-30.83' LT

STA 540+04
-28.77' LT

SLOPE INTERCEPT

R20'

R20'

APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH

APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH

CULVERT PIPE REINFORCED CONCRETE CLASS IV 12-INCH

539+00

540+00

541+00

IH 94 EB

R/L IH 94

PLAN VIEW

STA 538+36.44
EL 969.73

STA 538+83.98
EL 968.32

STA 539+01.09
EL 967.80

Station=539+56.00
Elev. = 969.55

PROPOSED CROSSOVER SURFACE

EXISTING SURFACE
ALONG R/L IH 94

STA 540+09.80
EL 965.63

STA 540+26.97
EL 965.53

STA 541+22.08
EL 964.97

EXISTING FLOW LINE

PROPOSED FLOW LINE

970

965

-2.98%

-2.98%

3.00%

-2.00%

-2.00%

-2.00%

-2.00%

-7.00%

-2.00%

-0.58%

-0.58%

967.68

965.75

PROFILE VIEW

980

975

970

965

960

VCL = 20.00

K = 7.16

STA 0+24.37
EL 970.11

STA 0+34.86
EL 969.70

STA 0+36.00
EL 969.65

LP STA 0+51.15
LP EL 969.54

STA 0+72.00
EL 969.80

STA 0+73.97
EL 969.86

STA 0+85.05
EL 970.24

VPC STA 0+43.97
VPC EL 969.57

VPI STA 0+53.97
VPI EL 969.47

VPT STA 0+63.97
VPT EL 969.65

-3.91%

-3.91%

-1.00%

1.79%

3.39%

3.39%

STA 539+56 SECTION VIEW

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	CONSTRUCTION DETAILS - MAINTENANCE CROSSOVER	SHEET 51	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\021002_CD.DWG
LAYOUT NAME - 021002_cd

PLOT DATE : 1/11/2024 11:32 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

N

STH 318

IH 94 EB OFF RAMP

IH 94 EB ON RAMP

R/L STH 318

280+00

281+00

282+00

REMOVING CURB & GUTTER

REVERSE SLOPE C & G

CONCRETE CURB & GUTTER 30-INCH TYPE D

CONCRETE CURB & GUTTER 30-INCH TYPE D

CONCRETE CURB & GUTTER 30-INCH TYPE D

+19.72
-45.78' LT
954.66

953.89
+37.62
-48.04' LT

953.44
+47.67
-49.00' LT

+11.85
-2.88' LT
954.81
955.23

953.68
+78.01
-9.62' LT

952.89

R25'

+77.06
15.36' RT

+97.87
18.18' RT

R4'

+01.83
18.72' RT

952.72

952.97

+97.87
22.18' RT

+22.75
23.13' RT
958.02

957.65
+32.70
22.15' RT

954.98

+11.51
71.23' RT
955.17

954.70
+25.68
71.24' RT

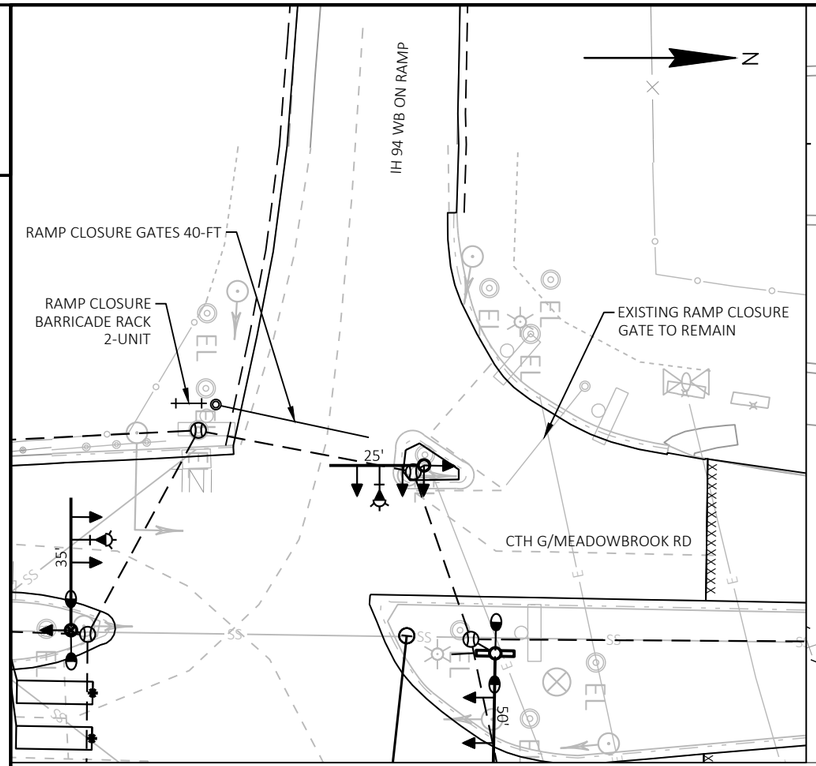
R50'

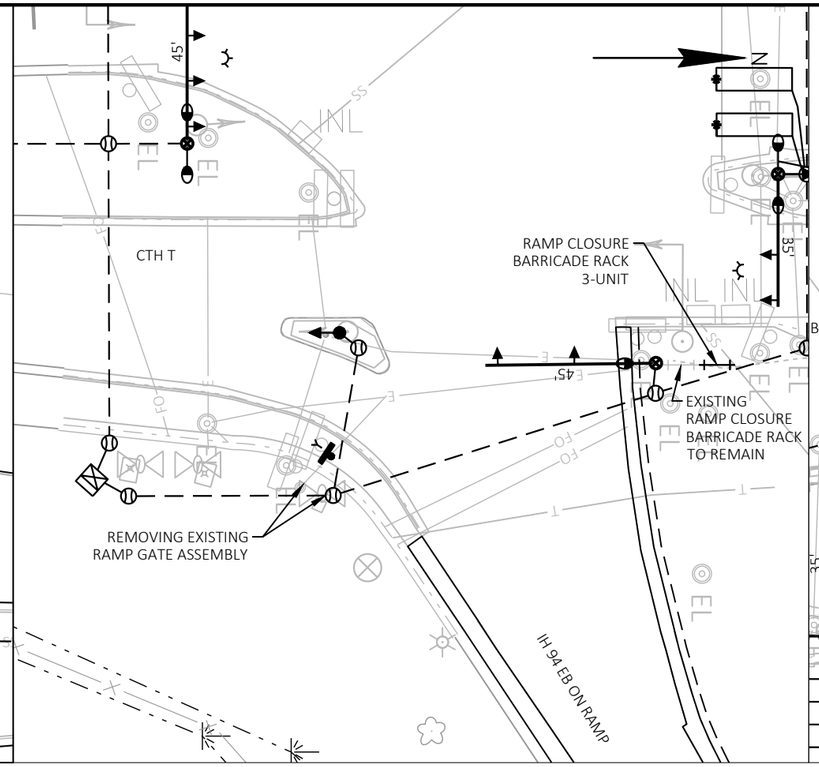
+25.62
120.94' RT

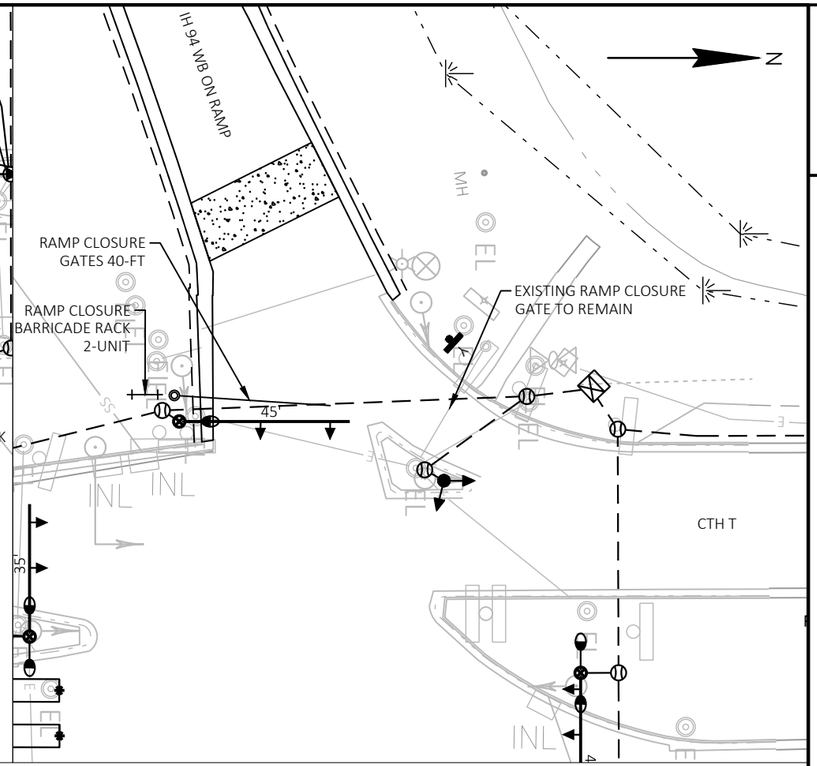
+74.25
131.21' RT
950.72

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	CONSTRUCTION DETAILS - STH 318 MEDIAN	SHEET 52	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\021003_CD.DWG
LAYOUT NAME - 021003_cd
PLOT DATE : 1/11/2024 11:35 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42



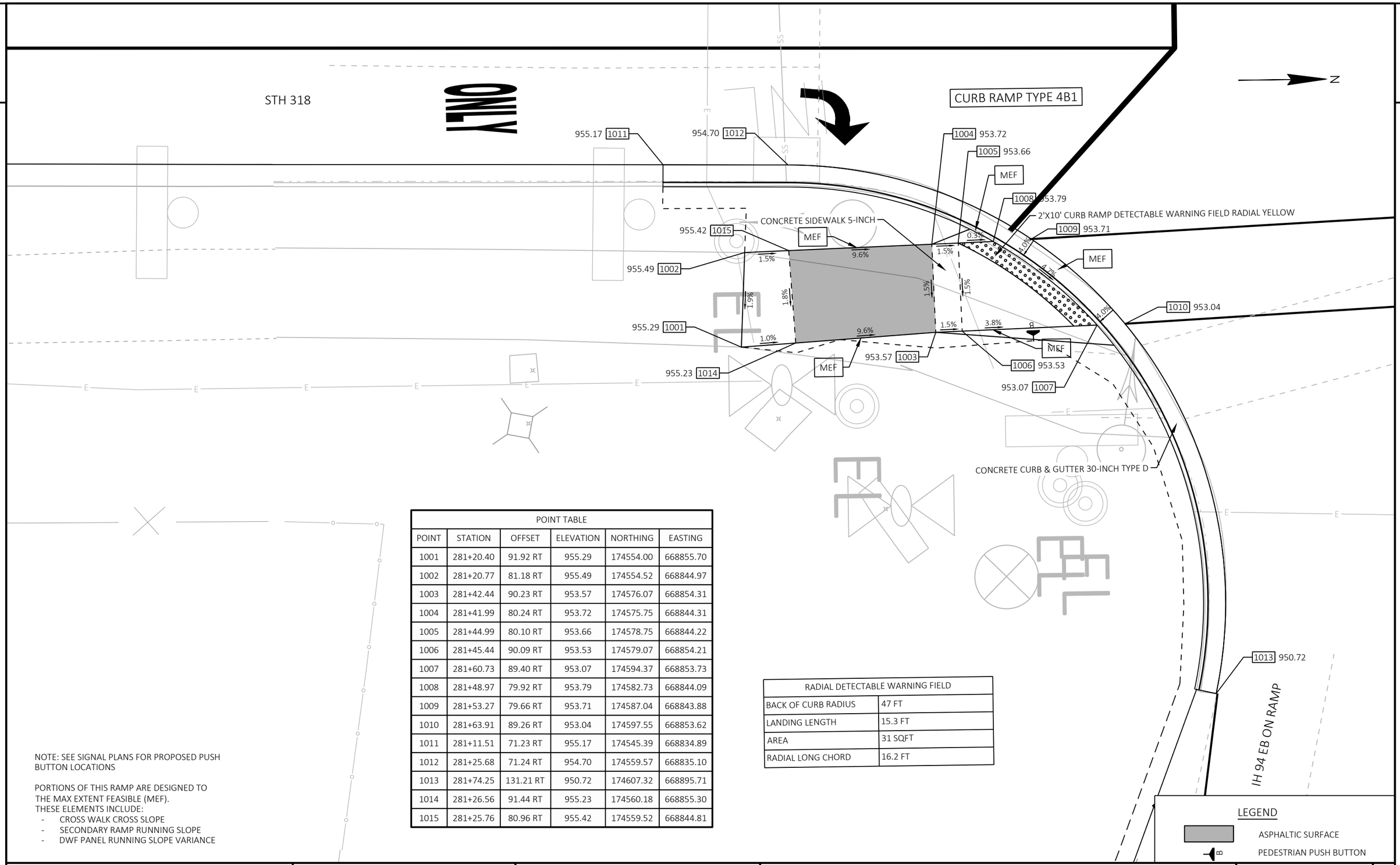




2

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	RAMP GATE DETAIL	SHEET 53	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\021101-ID.DWG
LAYOUT NAME - 021101-id
PLOT DATE : 6/21/2023 2:14 PM
PLOT BY : CIERRA SMITH
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42



POINT TABLE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1001	281+20.40	91.92 RT	955.29	174554.00	668855.70
1002	281+20.77	81.18 RT	955.49	174554.52	668844.97
1003	281+42.44	90.23 RT	953.57	174576.07	668854.31
1004	281+41.99	80.24 RT	953.72	174575.75	668844.31
1005	281+44.99	80.10 RT	953.66	174578.75	668844.22
1006	281+45.44	90.09 RT	953.53	174579.07	668854.21
1007	281+60.73	89.40 RT	953.07	174594.37	668853.73
1008	281+48.97	79.92 RT	953.79	174582.73	668844.09
1009	281+53.27	79.66 RT	953.71	174587.04	668843.88
1010	281+63.91	89.26 RT	953.04	174597.55	668853.62
1011	281+11.51	71.23 RT	955.17	174545.39	668834.89
1012	281+25.68	71.24 RT	954.70	174559.57	668835.10
1013	281+74.25	131.21 RT	950.72	174607.32	668895.71
1014	281+26.56	91.44 RT	955.23	174560.18	668855.30
1015	281+25.76	80.96 RT	955.42	174559.52	668844.81

RADIAL DETECTABLE WARNING FIELD	
BACK OF CURB RADIUS	47 FT
LANDING LENGTH	15.3 FT
AREA	31 SQFT
RADIAL LONG CHORD	16.2 FT

NOTE: SEE SIGNAL PLANS FOR PROPOSED PUSH BUTTON LOCATIONS

PORTIONS OF THIS RAMP ARE DESIGNED TO THE MAX EXTENT FEASIBLE (MEF). THESE ELEMENTS INCLUDE:
- CROSS WALK CROSS SLOPE
- SECONDARY RAMP RUNNING SLOPE
- DWF PANEL RUNNING SLOPE VARIANCE

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	CURB RAMP DETAILS - STH 318	SHEET 54	E

2

N

STH 318

IH 94 EB ON RAMP

IH 94 EB

ELEVEL

ELEVEL

1108 951.65

951.74 1107

CONCRETE SIDEWALK 5-INCH

1101 951.32

951.79 1106

951.63 1105

1102 951.15

1103 951.48

1104 951.59

2'X10' CURB RAMP DETECTABLE WARNING FIELD YELLOW

1.6%
3.0%
3.0%
1.9%
1.5%
1.5%
1.7%
2.9%
2.9%
1.5%

NOTE: SEE SIGNAL PLANS FOR PROPOSED PUSH BUTTON LOCATIONS

POINT TABLE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1101	282+37.56	73.20 RT	951.32	174671.40	668838.55
1102	282+39.28	81.88 RT	951.15	174673.01	668847.25
1103	282+28.50	85.22 RT	951.48	174662.18	668850.45
1104	282+24.60	85.44 RT	951.59	174658.28	668850.62
1105	282+21.60	85.60 RT	951.63	174655.29	668850.74
1106	282+21.05	75.62 RT	951.79	174654.87	668840.75
1107	282+24.05	75.45 RT	951.74	174657.86	668840.62
1108	282+27.07	75.28 RT	951.65	174660.89	668840.50

LEGEND

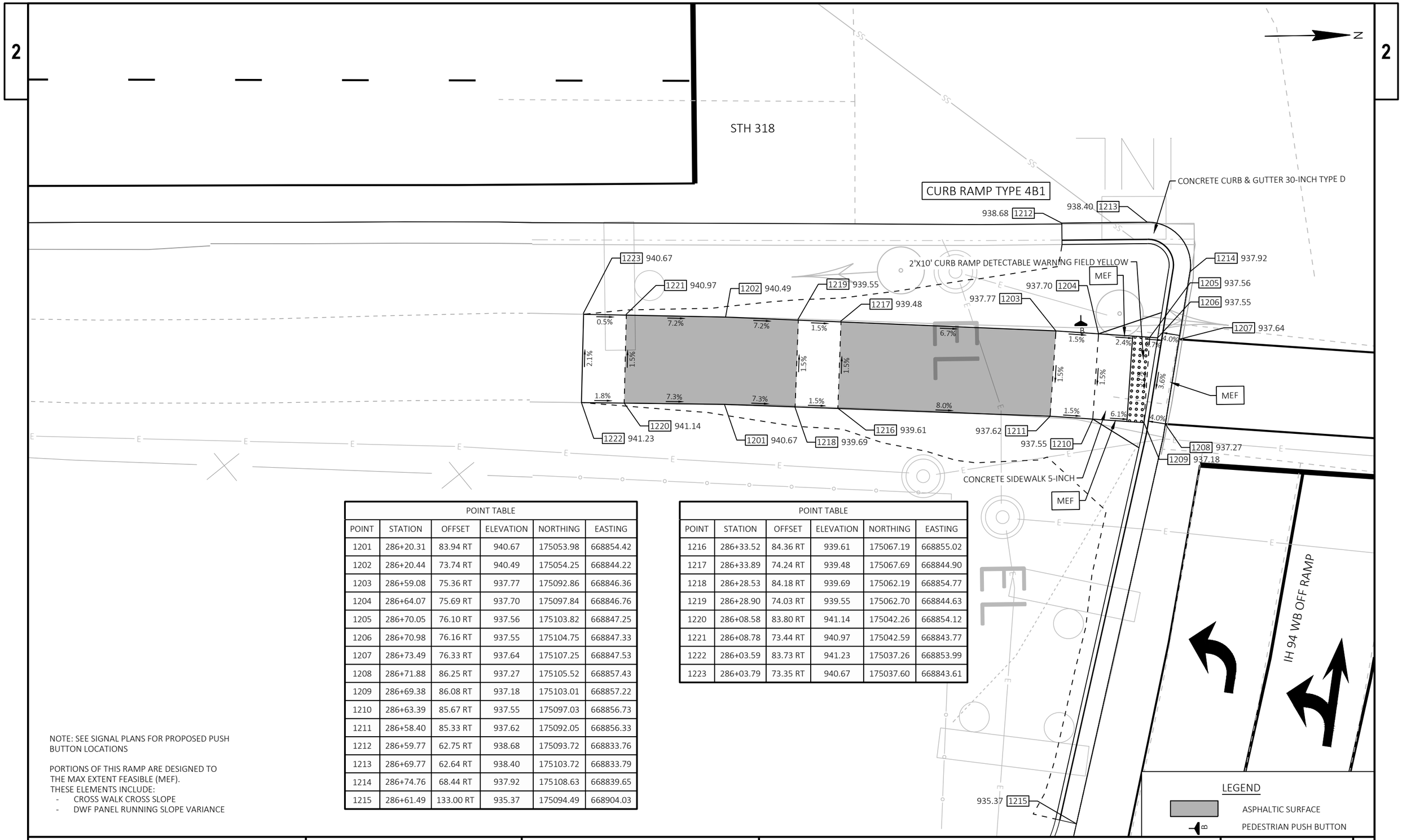
ASPHALTIC SURFACE

PEDESTRIAN PUSH BUTTON

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	CURB RAMP DETAILS - STH 318	SHEET 55	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\021110-ID.DWG
LAYOUT NAME - 021111

PLOT DATE : 1/8/2024 10:29 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:10 FT



POINT TABLE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1201	286+20.31	83.94 RT	940.67	175053.98	668854.42
1202	286+20.44	73.74 RT	940.49	175054.25	668844.22
1203	286+59.08	75.36 RT	937.77	175092.86	668846.36
1204	286+64.07	75.69 RT	937.70	175097.84	668846.76
1205	286+70.05	76.10 RT	937.56	175103.82	668847.25
1206	286+70.98	76.16 RT	937.55	175104.75	668847.33
1207	286+73.49	76.33 RT	937.64	175107.25	668847.53
1208	286+71.88	86.25 RT	937.27	175105.52	668857.43
1209	286+69.38	86.08 RT	937.18	175103.01	668857.22
1210	286+63.39	85.67 RT	937.55	175097.03	668856.73
1211	286+58.40	85.33 RT	937.62	175092.05	668856.33
1212	286+59.77	62.75 RT	938.68	175093.72	668833.76
1213	286+69.77	62.64 RT	938.40	175103.72	668833.79
1214	286+74.76	68.44 RT	937.92	175108.63	668839.65
1215	286+61.49	133.00 RT	935.37	175094.49	668904.03

POINT TABLE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1216	286+33.52	84.36 RT	939.61	175067.19	668855.02
1217	286+33.89	74.24 RT	939.48	175067.69	668844.90
1218	286+28.53	84.18 RT	939.69	175062.19	668854.77
1219	286+28.90	74.03 RT	939.55	175062.70	668844.63
1220	286+08.58	83.80 RT	941.14	175042.26	668854.12
1221	286+08.78	73.44 RT	940.97	175042.59	668843.77
1222	286+03.59	83.73 RT	941.23	175037.26	668853.99
1223	286+03.79	73.35 RT	940.67	175037.60	668843.61

NOTE: SEE SIGNAL PLANS FOR PROPOSED PUSH BUTTON LOCATIONS

PORTIONS OF THIS RAMP ARE DESIGNED TO THE MAX EXTENT FEASIBLE (MEF).
THESE ELEMENTS INCLUDE:
- CROSS WALK CROSS SLOPE
- DWF PANEL RUNNING SLOPE VARIANCE

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	CURB RAMP DETAILS - STH 318	SHEET 56	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\021110-ID.DWG
LAYOUT NAME - 021112
PLOT DATE : 1/8/2024 10:30 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2

N

STH 318

CURB RAMP TYPE 4B1

2'X10' CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW

CONCRETE CURB & GUTTER 30-INCH TYPE D

CONCRETE SIDEWALK 5-INCH

MEF

935.79 1305

935.96 1306

936.08 1312

936.19 1314

1313 935.66

1304 935.87

1303 935.96

1302 935.78

1301 934.91

1307 935.07

1311 936.00

1310 936.02

1309 936.11

1308 935.93

1.8%

4.0%

1.2%

1.5%

2.2%

3.0%

1.6%

0.2%

1.8%

IH 94 WB OFF RAMP

POINT TABLE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1301	287+84.94	77.21 RT	934.91	175218.68	668849.90
1302	287+55.99	81.11 RT	935.78	175189.68	668853.42
1303	287+47.77	81.37 RT	935.96	175181.46	668853.56
1304	287+41.79	80.96 RT	935.87	175175.48	668853.08
1305	287+37.02	80.64 RT	935.79	175170.72	668852.69
1306	287+32.25	80.32 RT	935.96	175165.96	668852.31
1307	287+85.56	87.47 RT	935.07	175219.17	668860.17
1308	287+56.89	91.08 RT	935.93	175190.45	668863.40
1309	287+47.10	91.35 RT	936.11	175180.65	668863.53
1310	287+41.11	90.94 RT	936.02	175174.67	668863.04
1311	287+24.87	89.84 RT	936.00	175158.45	668861.72
1312	287+21.73	89.77 RT	936.08	175155.32	668861.61
1313	287+42.57	75.95 RT	935.66	175176.34	668848.07
1314	287+17.64	96.62 RT	936.19	175151.13	668868.41

RADIAL DETECTABLE WARNING FIELD	
BACK OF CURB RADIUS	34 FT
LANDING LENGTH	16.3 FT
AREA	32 SQFT
RADIAL LONG CHORD	17.2 FT

NOTE: SEE SIGNAL PLANS FOR PROPOSED PUSH BUTTON LOCATIONS

PORTIONS OF THIS RAMP ARE DESIGNED TO THE MAX EXTENT FEASIBLE (MEF). THESE ELEMENTS INCLUDE:
- DWF PANEL RUNNING SLOPE VARIANCE

LEGEND

ASPHALTIC SURFACE

PEDESTRIAN PUSH BUTTON

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	CURB RAMP DETAILS - STH 318	SHEET 57	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\021110-ID.DWG
LAYOUT NAME - 021113

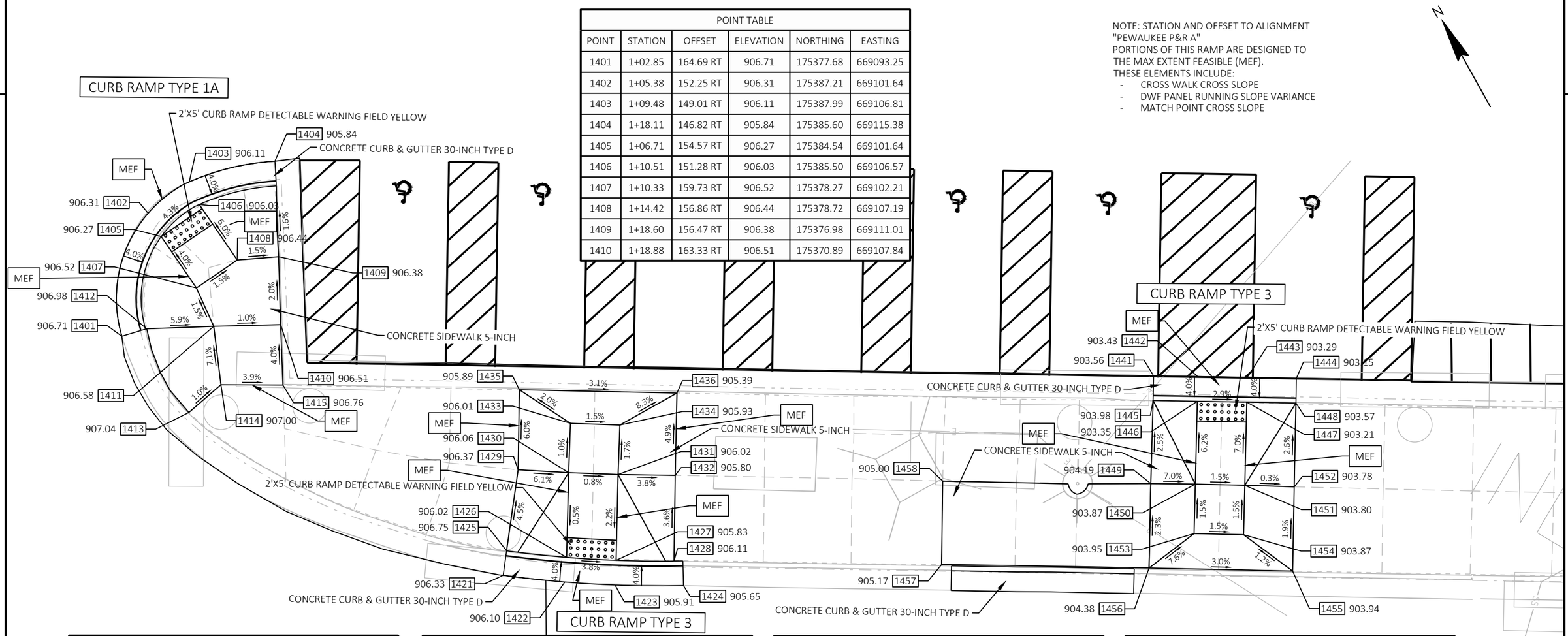
PLOT DATE : 1/8/2024 10:30 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 42

2

POINT TABLE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1401	1+02.85	164.69 RT	906.71	175377.68	669093.25
1402	1+05.38	152.25 RT	906.31	175387.21	669101.64
1403	1+09.48	149.01 RT	906.11	175387.99	669106.81
1404	1+18.11	146.82 RT	905.84	175385.60	669115.38
1405	1+06.71	154.57 RT	906.27	175384.54	669101.64
1406	1+10.51	151.28 RT	906.03	175385.50	669106.57
1407	1+10.33	159.73 RT	906.52	175378.27	669102.21
1408	1+14.42	156.86 RT	906.44	175378.72	669107.19
1409	1+18.60	156.47 RT	906.38	175376.98	669111.01
1410	1+18.88	163.33 RT	906.51	175370.89	669107.84

NOTE: STATION AND OFFSET TO ALIGNMENT "PEWAUKEE P&R A"
PORTIONS OF THIS RAMP ARE DESIGNED TO THE MAX EXTENT FEASIBLE (MEF).
THESE ELEMENTS INCLUDE:
- CROSS WALK CROSS SLOPE
- DWF PANEL RUNNING SLOPE VARIANCE
- MATCH POINT CROSS SLOPE



POINT TABLE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1411	1+12.12	163.58 RT	906.58	175374.03	669101.85
1412	1+05.35	163.91 RT	906.98	175377.12	669095.81
1413	1+09.71	172.32 RT	907.04	175367.65	669095.41
1414	1+12.92	169.47 RT	907.00	175368.53	669099.61
1415	1+19.18	169.43 RT	906.76	175365.45	669105.07
1421	1+41.67	188.39 RT	906.33	175337.82	669115.15
1422	1+47.91	189.00 RT	906.10	175334.18	669120.25
1423	1+53.00	189.24 RT	905.91	175331.44	669124.55
1424	1+59.90	189.21 RT	905.65	175328.03	669130.55
1425	1+41.98	185.91 RT	906.75	175339.81	669116.65

POINT TABLE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1426	1+48.06	186.50 RT	906.02	175336.27	669121.63
1427	1+53.06	186.74 RT	905.83	175333.58	669125.85
1428	1+58.91	186.74 RT	906.11	175330.67	669130.92
1429	1+43.05	177.71 RT	906.37	175346.39	669121.66
1430	1+48.16	177.94 RT	906.06	175343.65	669125.97
1431	1+53.16	178.07 RT	906.02	175341.06	669130.25
1432	1+58.93	178.08 RT	905.80	175338.17	669135.25
1433	1+48.28	172.94 RT	906.01	175347.92	669128.56
1434	1+53.28	173.07 RT	905.93	175345.33	669132.84
1435	1+43.08	169.62 RT	905.89	175353.40	669125.70

POINT TABLE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1436	1+59.01	169.76 RT	905.39	175345.35	669139.45
1441	2+07.15	167.44 RT	903.56	175323.42	669182.37
1442	2+11.61	167.47 RT	903.43	175321.18	669186.23
1443	2+16.61	167.50 RT	903.29	175318.67	669190.55
1444	2+21.58	167.53 RT	903.15	175316.17	669194.84
1445	2+07.13	169.94 RT	903.98	175321.26	669181.11
1446	2+11.60	169.97 RT	903.35	175319.02	669184.97
1447	2+16.60	170.00 RT	903.21	175316.51	669189.29
1448	2+21.56	170.03 RT	903.57	175314.01	669193.59
1449	2+06.99	178.34 RT	904.19	175314.05	669176.82

POINT TABLE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1450	2+11.49	178.33 RT	903.87	175311.81	669180.72
1451	2+16.49	178.40 RT	903.80	175309.27	669185.03
1452	2+21.49	178.49 RT	903.78	175306.70	669189.32
1453	2+11.43	183.33 RT	903.95	175307.51	669178.18
1454	2+16.43	183.39 RT	903.87	175304.97	669182.49
1455	2+21.43	187.00 RT	903.94	175299.35	669185.03
1456	2+06.93	186.87 RT	904.38	175306.67	669172.51
1457	1+85.96	186.77 RT	905.17	175317.19	669154.37
1458	1+85.97	178.34 RT	905.00	175324.50	669158.57

LEGEND
- ASPHALTIC SURFACE
- PEDESTRIAN PUSH BUTTON

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	CURB RAMP DETAILS - MEADOWBROOK PARK & RIDE	SHEET 58	E

2

CURB RAMP TYPE 3

CONCRETE SIDEWALK 5-INCH

2'X5' CURB RAMP DETECTABLE WARNING FIELD YELLOW

CONCRETE CURB & GUTTER 30-INCH TYPE D

1503 898.17

1504 898.13

898.26 1502

1506 898.09

898.32 1501

MEF

1508 898.37

898.18 1505

1511 898.49

MEF

898.44 1507

1510 898.28

898.82 1517

899.06 1516

898.37 1509

1512 898.10

898.33 1518

1513 898.14

899.08 1515

1514 898.09

4.0%

1.8%

4.0%

3.3%

4.0%

1.4%

1.5%

1.4%

1.7%

0.5%

2.3%

4.7%

CONCRETE SIDEWALK 5-INCH

CONCRETE CURB & GUTTER 30-INCH TYPE D

NOTE: STATION AND OFFSET TO ALIGNMENT
"PEWAUKEE P&R A"
PORTIONS OF THIS RAMP ARE DESIGNED TO
THE MAX EXTENT FEASIBLE (MEF).
THESE ELEMENTS INCLUDE:
- DWF PANEL RUNNING SLOPE VARIANCE

POINT TABLE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1501	3+27.40	94.36 RT	898.32	175327.01	669323.04
1502	3+27.55	91.45 RT	898.26	175329.46	669324.62
1503	3+27.54	86.61 RT	898.17	175333.66	669327.01
1504	3+27.38	83.75 RT	898.13	175336.22	669328.30
1505	3+30.05	91.52 RT	898.18	175328.15	669326.75
1506	3+30.04	86.52 RT	898.09	175332.50	669329.23
1507	3+36.56	91.62 RT	898.44	175324.83	669332.35
1508	3+38.50	86.65 RT	898.37	175328.18	669336.51
1509	3+40.73	94.38 RT	898.37	175320.36	669334.59
1510	3+43.62	90.16 RT	898.28	175322.59	669339.21
1511	3+40.11	81.80 RT	898.49	175331.58	669340.31
1512	3+50.85	86.23 RT	898.10	175322.40	669347.43
1513	3+48.64	93.60 RT	898.14	175317.11	669341.85
1514	3+50.29	94.73 RT	898.09	175315.31	669342.72
1515	3+34.04	119.51 RT	899.08	175301.89	669316.29
1516	3+24.77	115.07 RT	899.06	175310.35	669310.46
1517	3+30.41	102.53 RT	898.82	175318.43	669321.59
1518	3+47.63	98.97 RT	898.33	175312.95	669338.30

LEGEND

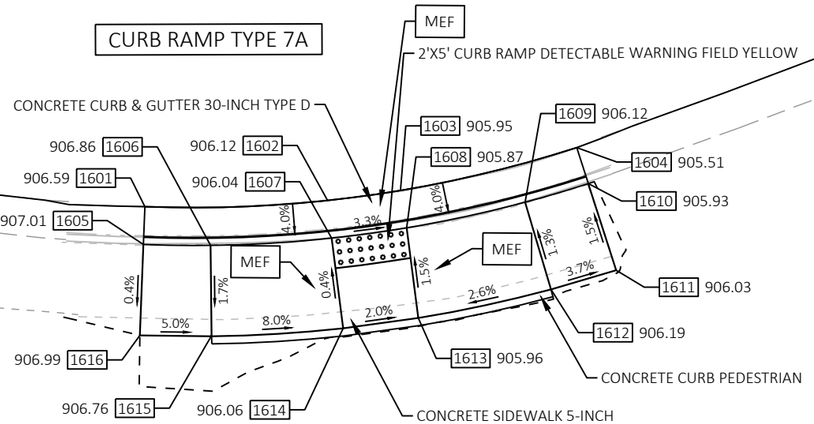
ASPHALTIC SURFACE

PEDESTRIAN PUSH BUTTON

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	CURB RAMP DETAILS - MEADOWBROOK PARK & RIDE	SHEET 59	E

2

N



POINT TABLE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1601	2+42.79	321.46 RT	906.59	175172.08	669136.68
1602	2+51.58	313.19 RT	906.12	175174.88	669148.42
1603	2+54.75	309.52 RT	905.95	175176.48	669153.00
1604	2+61.63	299.72 RT	905.51	175181.57	669163.84
1605	2+44.36	323.40 RT	907.01	175169.61	669137.08
1606	2+47.73	320.52 RT	906.86	175170.44	669141.44
1607	2+53.42	314.88 RT	906.04	175172.50	669149.18
1608	2+56.69	311.10 RT	905.87	175174.15	669153.90
1609	2+61.44	304.68 RT	906.12	175177.36	669161.21
1610	2+63.77	301.00 RT	905.93	175179.39	669165.06
1611	2+68.92	304.08 RT	906.03	175174.16	669168.00
1612	2+66.53	307.87 RT	906.19	175172.06	669164.04
1613	2+61.20	315.08 RT	905.96	175168.47	669155.83
1614	2+57.93	318.86 RT	906.06	175166.81	669151.11
1615	2+51.72	325.00 RT	906.76	175164.57	669142.68
1616	2+48.14	328.06 RT	906.99	175163.69	669138.05

NOTE: STATION AND OFFSET TO ALIGNMENT
"PEWAUKEE P&R A"
PORTIONS OF THIS RAMP ARE DESIGNED TO
THE MAX EXTENT FEASIBLE (MEF).
THESE ELEMENTS INCLUDE:
- CROSS WALK CROSS SLOPE
- DWF PANEL RUNNING SLOPE VARIANCE

LEGEND

ASPHALTIC SURFACE

PEDESTRIAN PUSH BUTTON

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	CURB RAMP DETAILS - MEADOWBROOK PARK & R	SHEET 60	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\021110-ID.DWG
LAYOUT NAME - 021116
PLOT DATE : 1/8/2024 10:32 AM
PLOT BY : TONY BUBLITZ
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

POINT TABLE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1701	4+21.86	129.43 RT	977.09	176906.85	645785.28
1702	4+24.43	127.98 RT	977.19	176908.56	645787.68
1703	4+28.32	125.26 RT	977.35	176911.67	645791.27
1704	4+30.48	123.44 RT	977.41	176913.72	645793.21
1705	4+25.74	130.11 RT	977.11	176906.58	645789.21
1706	4+29.87	127.23 RT	977.27	176909.88	645793.01
1707	4+30.23	135.04 RT	977.01	176902.15	645794.19
1708	4+33.94	131.70 RT	977.06	176905.87	645797.54
1709	4+35.03	140.32 RT	976.90	176897.41	645799.53
1710	4+37.29	135.37 RT	976.99	176902.57	645801.25
1711	4+44.05	149.39 RT	976.12	176889.35	645809.46
1712	4+44.37	140.52 RT	976.80	176898.20	645808.84

POINT TABLE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1713	4+44.56	135.48 RT	976.87	176903.23	645808.49
1714	4+44.83	127.74 RT	977.29	176910.96	645807.94
1715	4+55.03	127.62 RT	977.38	176912.15	645818.07
1716	4+55.05	135.50 RT	977.00	176904.32	645818.92
1717	4+55.06	140.50 RT	976.93	176899.35	645819.46
1718	4+55.07	149.79 RT	976.32	176890.11	645820.46
1750	4+27.05	63.06 RT	978.90	176973.39	645783.42
1751	4+27.05	57.88 RT	979.05	176978.55	645782.87
1752	4+27.04	52.88 RT	979.19	176983.52	645782.33
1753	4+27.04	47.21 RT	979.35	176989.15	645781.73
1754	4+24.55	57.88 RT	978.97	176978.28	645780.38
1755	4+24.54	52.88 RT	979.11	176983.25	645779.85

POINT TABLE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1756	4+24.55	63.06 RT	979.32	176973.13	645780.93
1757	4+24.46	47.22 RT	979.76	176988.87	645779.17
1758	4+14.63	63.18 RT	979.26	176971.96	645771.08
1759	4+14.56	57.90 RT	979.50	176977.20	645770.45
1760	4+14.57	52.90 RT	979.57	176982.18	645769.94
1761	4+14.67	47.26 RT	979.75	176987.80	645769.43
1762	4+09.56	57.89 RT	979.42	176976.69	645765.48
1763	4+09.57	52.89 RT	979.50	176981.66	645764.96
1764	4+05.76	63.33 RT	979.11	176970.87	645762.27
1765	4+05.75	47.20 RT	979.58	176986.91	645760.56

N

MH

CURB RAMP TYPE 4B1

1701 977.09
CONCRETE CURB & GUTTER 30-INCH TYPE D
977.11 1705
1702 977.19
MEF
MEF
1703 977.35
2'X5' CURB RAMP DETECTABLE WARNING FIELD YELLOW
977.01 1707
1704 977.41
CONCRETE SIDEWALK 5-INCH
1706 977.27
MEF
976.90 1709
1708 977.06
1710 976.99
976.12 1711
976.80 1712
1713 976.87
1714 977.29
976.32 1718
976.93 1717
1716 977.00
1715 977.38
CONCRETE SIDEWALK 5-INCH

CURB RAMP TYPE 3

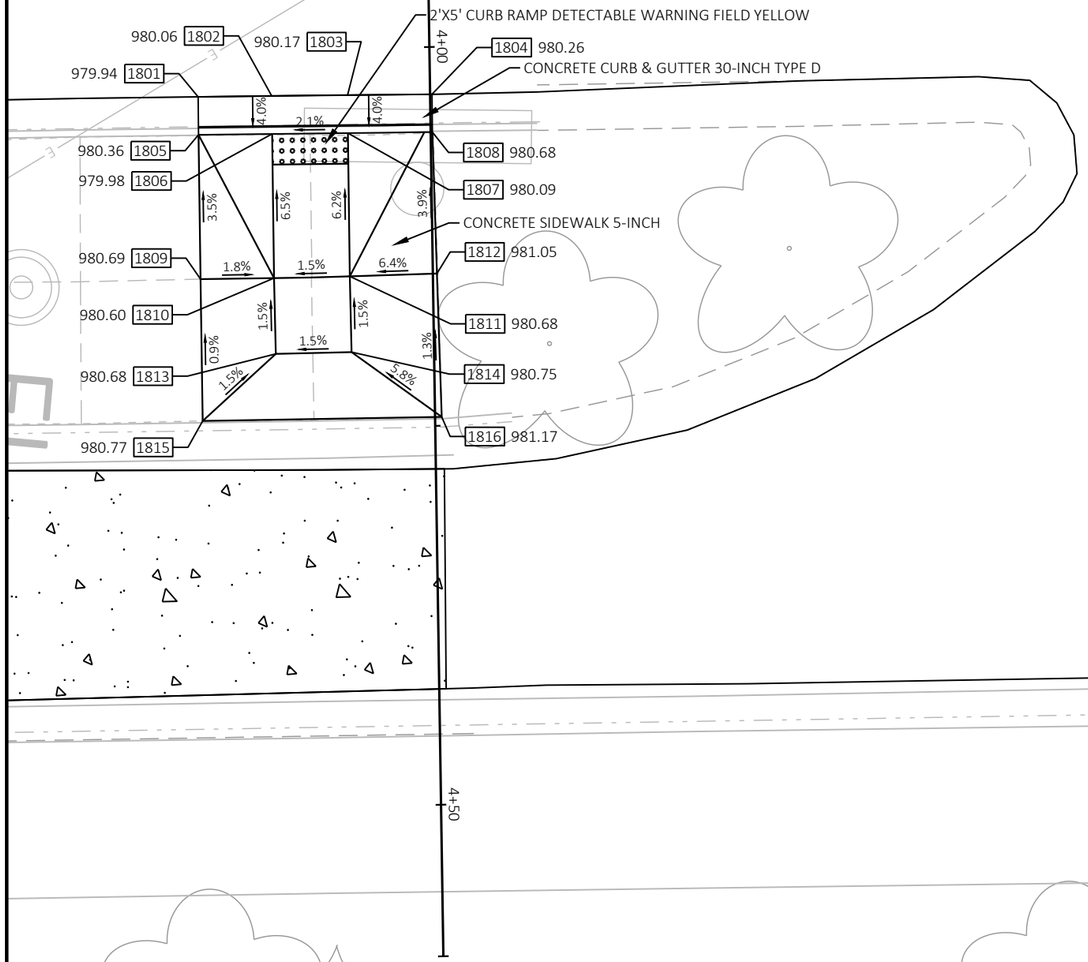
CONCRETE SIDEWALK 5-INCH
CONCRETE CURB & GUTTER 30-INCH TYPE D
979.11 1764
1765 979.58
979.42 1762
1763 979.50
979.50 1759
1760 979.57
979.26 1758
1761 979.75
MEF
MEF
2'X5' CURB RAMP DETECTABLE WARNING FIELD YELLOW
979.32 1756
1755 979.11
1757 979.76
978.97 1754
1753 979.35
978.90 1750
1752 979.19
979.05 1751
CONCRETE CURB & GUTTER 30-INCH TYPE D
MEF

NOTE: PORTIONS OF THIS RAMP ARE DESIGNED TO THE MAX EXTENT FEASIBLE (MEF).
THESE ELEMENTS INCLUDE:
- CROSS WALK CROSS SLOPE
- DWF PANEL RUNNING SLOPE VARIANCE

LEGEND
ASPHALTIC SURFACE
PEDESTRIAN PUSH BUTTON

PROJECT NO: 1330-47-71	HWY: STH 83	COUNTY: WAUKESHA	CURB RAMP DETAILS - NAGAWAUKEE PARK & RIDE	SHEET 61	E

CURB RAMP TYPE 3



POINT TABLE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1801	4+03.05	15.31 RT	979.94	177018.34	645754.50
1802	4+03.07	10.45 RT	980.06	177023.17	645754.01
1803	4+03.10	5.45 RT	980.17	177028.15	645753.50
1804	4+03.12	0.13 LT	980.26	177033.69	645752.94
1805	4+05.55	15.32 RT	980.36	177018.59	645756.99
1806	4+05.57	10.46 RT	979.98	177023.43	645756.50
1807	4+05.60	5.46 RT	980.09	177028.40	645755.99
1808	4+05.62	0.12 LT	980.68	177033.95	645755.42
1809	4+15.08	15.34 RT	980.69	177019.58	645766.47
1810	4+15.09	10.48 RT	980.60	177024.41	645765.96
1811	4+15.05	5.48 RT	980.68	177029.38	645765.39
1812	4+14.95	0.27 LT	981.05	177035.08	645764.69
1813	4+20.09	10.44 RT	980.68	177024.98	645770.93
1814	4+20.05	5.44 RT	980.75	177029.94	645770.36
1815	4+24.44	15.34 RT	980.77	177020.57	645775.77
1816	4+24.42	0.44 LT	981.17	177036.26	645774.08

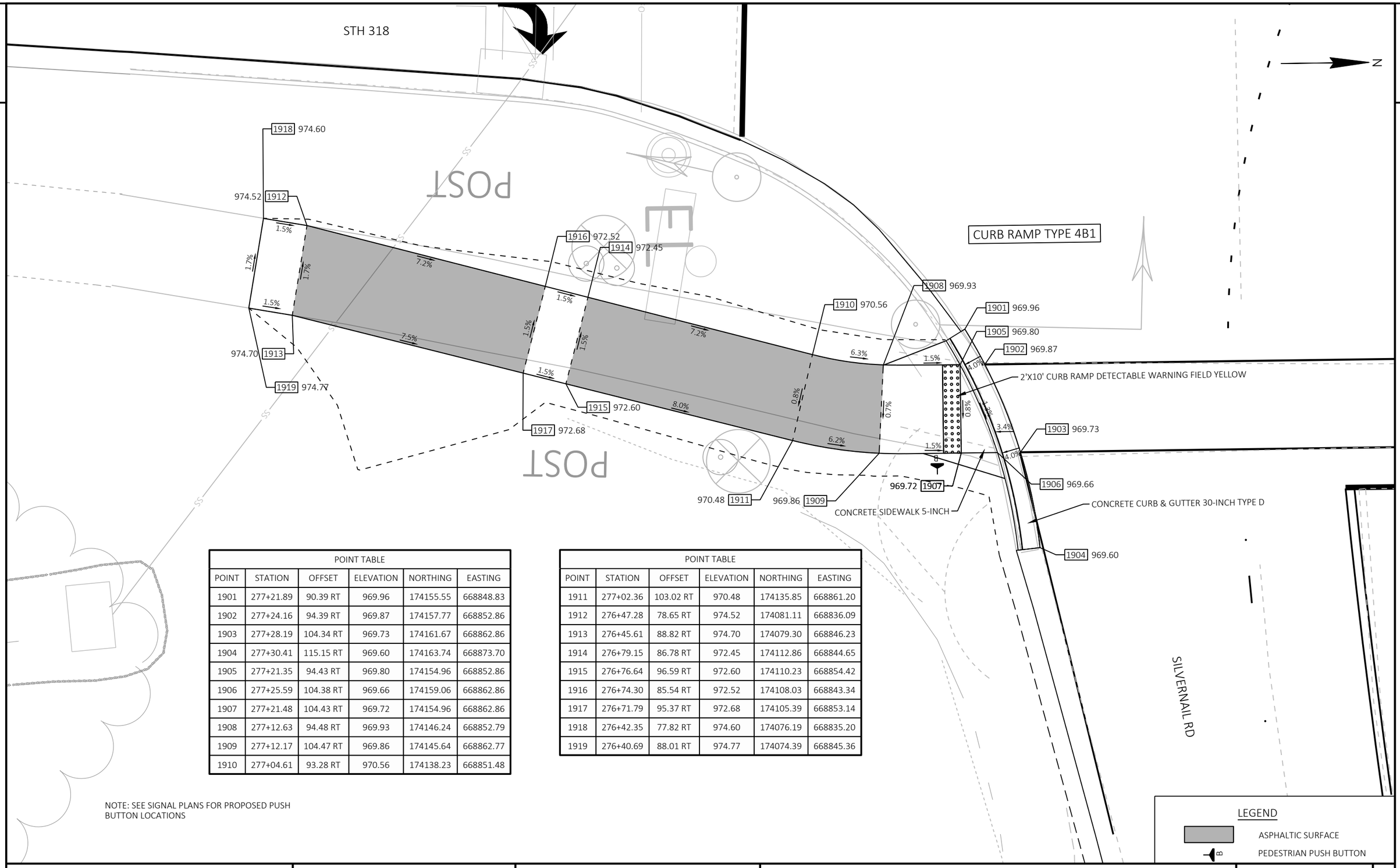


LEGEND

ASPHALTIC SURFACE

PEDESTRIAN PUSH BUTTON

PROJECT NO: 1330-47-71	HWY: STH 83	COUNTY: WAUKESHA	CURB RAMP DETAILS - NAGAWAUKEE PARK & RIDE	SHEET 62	E



POINT TABLE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1901	277+21.89	90.39 RT	969.96	174155.55	668848.83
1902	277+24.16	94.39 RT	969.87	174157.77	668852.86
1903	277+28.19	104.34 RT	969.73	174161.67	668862.86
1904	277+30.41	115.15 RT	969.60	174163.74	668873.70
1905	277+21.35	94.43 RT	969.80	174154.96	668852.86
1906	277+25.59	104.38 RT	969.66	174159.06	668862.86
1907	277+21.48	104.43 RT	969.72	174154.96	668862.86
1908	277+12.63	94.48 RT	969.93	174146.24	668852.79
1909	277+12.17	104.47 RT	969.86	174145.64	668862.77
1910	277+04.61	93.28 RT	970.56	174138.23	668851.48

POINT TABLE					
POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1911	277+02.36	103.02 RT	970.48	174135.85	668861.20
1912	276+47.28	78.65 RT	974.52	174081.11	668836.09
1913	276+45.61	88.82 RT	974.70	174079.30	668846.23
1914	276+79.15	86.78 RT	972.45	174112.86	668844.65
1915	276+76.64	96.59 RT	972.60	174110.23	668854.42
1916	276+74.30	85.54 RT	972.52	174108.03	668843.34
1917	276+71.79	95.37 RT	972.68	174105.39	668853.14
1918	276+42.35	77.82 RT	974.60	174076.19	668835.20
1919	276+40.69	88.01 RT	974.77	174074.39	668845.36

NOTE: SEE SIGNAL PLANS FOR PROPOSED PUSH BUTTON LOCATIONS

PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	CURB RAMP DETAILS - STH 318	SHEET 63	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\021110-ID.DWG
LAYOUT NAME - 021119

PLOT DATE : 1/8/2024 10:33 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 42

2

2

STH 318

N

SS

SS

CURB RAMP TYPE 4B1

MEF

2004 965.48

965.52 2006

2008 965.81

2010 965.88

2012 965.52

965.75 2003

CONCRETE CURB & GUTTER 30-INCH TYPE D

MEF

2'X10' CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW

966.23 2002

966.27 2001

2005 965.94

2007 965.99

2009 966.03

2011 965.72

MEF

CONCRETE SIDEWALK 5-INCH

4.0%

4.0%

1.8%

1.0%

B

0.9%

1.8%

1.5%

0.3%

1.5%

0.7%

EL

EL

SILVERNAIL RD

RADIAL DETECTABLE WARNING FIELD	
BACK OF CURB RADIUS	47 FT
LANDING LENGTH	15.8 FT
AREA	32 SQFT
RADIAL LONG CHORD	16.6 FT

NOTE: SEE SIGNAL PLANS FOR PROPOSED PUSH BUTTON LOCATIONS

PORTIONS OF THIS RAMP ARE DESIGNED TO THE MAX EXTENT FEASIBLE (MEF).
THESE ELEMENTS INCLUDE:
- CROSS WALK CROSS SLOPE
- DWF PANEL RUNNING SLOPE VARIANCE

POINT TABLE

POINT	STATION	OFFSET	ELEVATION	NORTHING	EASTING
2001	278+07.72	104.14 RT	966.27	174241.19	668863.73
2002	278+08.36	103.27 RT	966.23	174241.85	668862.86
2003	278+18.60	93.13 RT	965.75	174252.22	668852.86
2004	278+24.53	89.36 RT	965.48	174258.20	668849.17
2005	278+11.57	103.22 RT	965.94	174245.06	668862.86
2006	278+23.11	93.08 RT	965.52	174256.73	668852.88
2007	278+27.38	103.01 RT	965.99	174260.87	668862.86
2008	278+27.25	93.01 RT	965.81	174260.87	668852.86
2009	278+33.38	102.93 RT	966.03	174266.87	668862.86
2010	278+33.25	92.93 RT	965.88	174266.87	668852.86
2011	278+57.30	102.57 RT	965.72	174290.79	668862.82
2012	278+56.39	92.62 RT	965.52	174290.01	668852.86

LEGEND

ASPHALTIC SURFACE

B PEDESTRIAN PUSH BUTTON

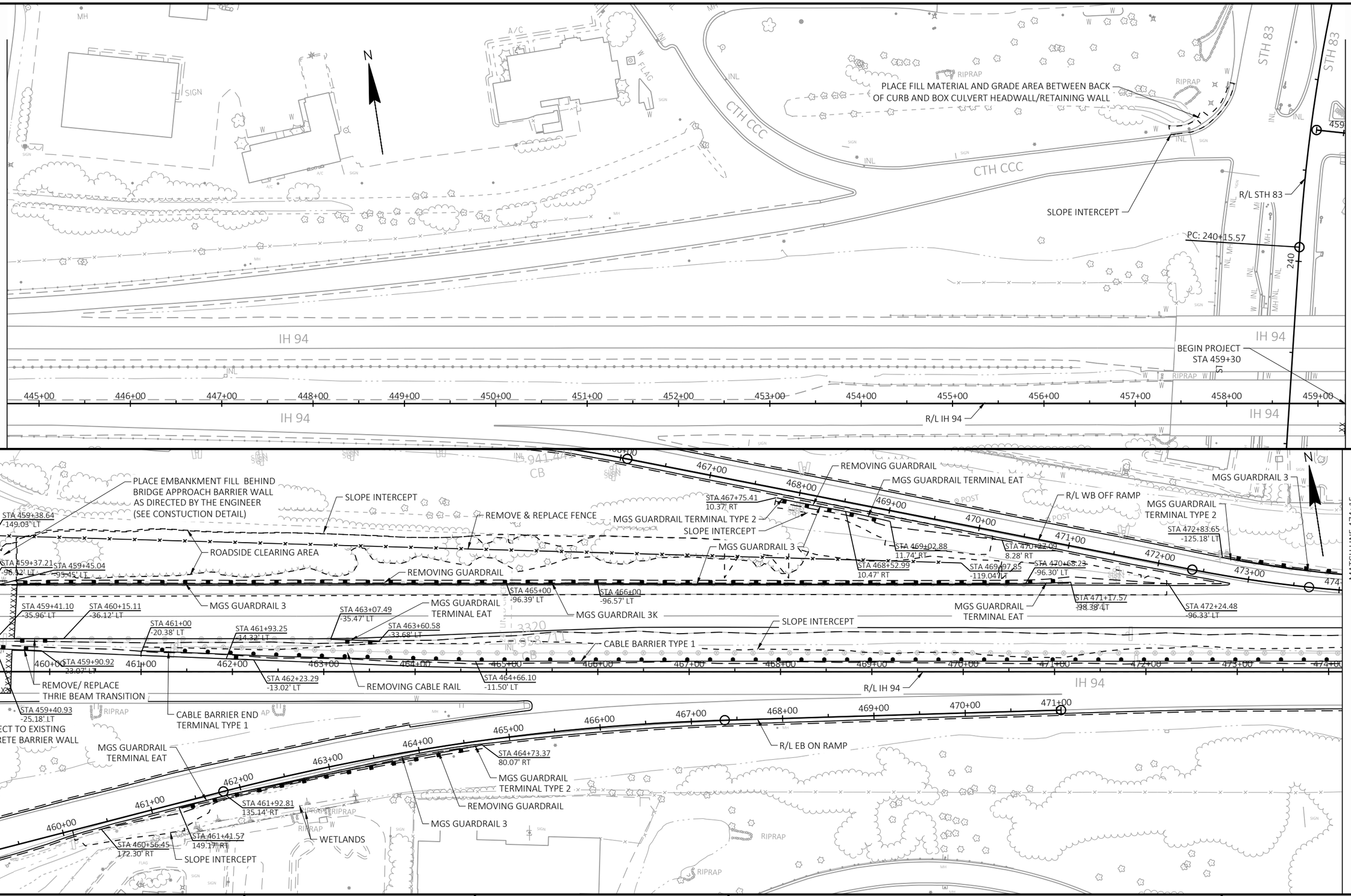
PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	CURB RAMP DETAILS - STH 318	SHEET 64	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\021110-ID.DWG
LAYOUT NAME - 021120

PLOT DATE : 1/8/2024 10:33 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	PLAN DETAILS - ROADSIDE BARRIER	SHEET 65	E

2

REMOVNG GUARDRAIL RAIL

MGS GUARDRAIL 3

STA 486+36.18
-95.27' LT

STA 488+05.22
-96.51' LT

MGS GUARDRAIL
TERMINAL EAT

STA 486+86.10
-97.47' LT

SLOPE INTERCEPT

REMOVING CABLE RAIL

CABLE BARRIER END TERMINAL TYPE 1

CABLE BARRIER TYPE 1

STA 482+83.38
-11.50' LT

IH 94

R/L IH 94

MATCH LINE 474+15

MATCH LINE 488+90

2

MATCH LINE 488+90

STA 490+78.80
36.21' RT

STA 491+78.98
37.00' RT

STA 492+28.88
35.62' RT

MGS GUARDRAIL
TERMINAL EAT

MGS GUARDRAIL 3

R/L IH 94

IH 94

REMOVING GUARDRAIL

STA 502+55.37
34.66' RT

MGS GUARDRAIL
TERMINAL TYPE 2

SLOPE INTERCEPT

HILLSIDE DR

AUSTIN CIR

REMOVING GUARDRAIL

MGS GUARDRAIL 3

STA 501+02.79
-94.48' LT

GOLF RD

SLOPE INTERCEPT

STA 497+23.76
-95.07' LT

STA 501+52.76
-96.66' LT

MGS GUARDRAIL
TERMINAL TYPE 2

MGS GUARDRAIL
TERMINAL EAT

IH 9

MATCH LINE 503+65

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	PLAN DETAILS - ROADSIDE BARRIER	SHEET 66	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 17

PLOT DATE : 1/16/2024 11:23 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

GOLF RD

RIPRAP

N

MATCH LINE 518+40

PC: 512+72.86

18" CMP

IH 94

504+00 505+00 506+00 507+00 508+00 509+00 510+00 511+00 512+00 513+00 514+00 515+00 516+00 517+00 518+00

R/L IH 94

IH 94

MATCH LINE 503+65

HILLSIDE DR

INL

RIPRAP

RIPRAP

INL

CONNECT TO EXISTING CONCRETE BARRIER WALL

SLOPE INTERCEPT

MGS GUARDRAIL THRIE BEAM TRANSITION

MGS GUARDRAIL TERMINAL TYPE 2

25 LF ASPHALTIC CURB

STA 521+06.68 -95.82' LT

STA 522+84.62 -94.95' LT

STA 522+59.19 -95.24' LT

MGS GUARDRAIL 3K

STA 522+44.66 -23.03' LT

STA 522+87.47 -23.04' LT

519+00 520+00 521+00 522+00 523+00

STA 519+17.07 35.74' RT

STA 520+35.39 37.73' RT

STA 520+85.50 36.19' RT

STA 522+80.22 34.36' RT

SLOPE INTERCEPT

MGS GUARDRAIL TERMINAL EAT

REMOVING GUARDRAIL

MGS GUARDRAIL 3

MGS GUARDRAIL THRIE BEAM TRANSITION

MATCH LINE 518+40

HILLSIDE DR

CTH E/MAPLE AVE

STA 523+87.17 -95.07' LT

STA 524+00.66 -94.05' LT

SLOPE INTERCEPT

16 LF ASPHALTIC CURB

STA 524+14.36 -93.79' LT

MGS GUARDRAIL THRIE BEAM TRANSITION

STA 523+84.27 -37.52' LT

MGS GUARDRAIL 3

STA 524+30.40 -36.60' LT

524+00 525+00 526+00 527+00 528+00

REMOVE/REPLACE THRIE BEAM TRANSITION

CONNECT TO EXISTING CONCRETE BARRIER WALL

REMOVING GUARDRAIL

STA 525+76.23 -95.86' LT

STA 526+27.14 -98.77' LT

SLOPE INTERCEPT

MGS GUARDRAIL TERMINAL EAT

R/L IH 94

SLOPE INTERCEPT

PT: 528+04.97

STA 527+05.23 -37.34' LT

STA 527+55.53 -36.27' LT

GOLF RD

N

MATCH LINE 533+15

IH 94

529+00 530+00 531+00 532+00 533+00

IH 94

SILVERNAIL RD

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	PLAN DETAILS - ROADSIDE BARRIER	SHEET 67	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 18

PLOT DATE : 1/16/2024 11:24 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

MATCH LINE 533+15

N

GOLF RD

REMOVING CABLE RAIL

STA 538+04.83
-42.75' LT

STA 539+91.41
-42.69' LT

STA 540+10.16
-42.79' LT

IH 94

CABLE BARRIER END TERMINAL TYPE 1

534+00 535+00 536+00 537+00 538+00 539+00 540+00 541+00 542+00 543+00 544+00 545+00 546+00 547+00

18" CMCP

8" LINED CMCP

IH 94

R/L IH 94

PROPOSED MEDIAN MAINTENANCE CROSSOVER
SEE ROAD PLANS FOR DETAILS

SILVERNAIL RD

SUBSTATION

SLAB

RIPRAP

SOUTHAMPTON

SOUTHAMPTON

W

MATCH LINE 547+90

2

MATCH LINE 547+90

N

GOLF RD

36" CMCP

36" LINED CMCP

INL

INL

PC: 548+54.87

36" RCCP

36" RCCP

IH 94

8" LINED CMCP

INL

548+00 549+00 550+00 551+00 552+00 553+00 554+00 555+00 556+00 557+00 558+00 559+00 560+00 561+00 562+00

IH 94

R/L IH 94

INL

INL

36" CMCP

36" CMCP

SILVERNAIL RD

WALLS

W

SIGN

FOUND

MATCH LINE 562+65

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	PLAN DETAILS - ROADSIDE BARRIER	SHEET 68	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 19

PLOT DATE : 1/16/2024 11:25 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

N

GOLF RD

IH 94

PT: 568+02.87

12" LINED CSP

24" RCCP

MATCH LINE 577+40

563+00 564+00 565+00 566+00 567+00 568+00 569+00 570+00 571+00 572+00 573+00 574+00 575+00 576+00 577+00

IH 94

R/L IH 94

SILVERNAIL RD

MATCH LINE 562+65

CROSS CREEK CT

N

GOLF RD

WETLANDS (TYP)

MHURST RD

PROPOSED SIGN STRUCTURE
S-67-420. SEE STRUCTURE PLANS

MGS GUARDRAIL
TERMINAL TYPE 2

MGS GUARDRAIL 3

STA 589+90.93
-96.12' LT

STA 591+90.93
-94.90' LT

MATCH LINE 592+15

IH 94

12" CMP UNDERDRAIN

MGS GUARDRAIL
TERMINAL EAT

STA 589+97.80
-49.73' LT

STA 590+22.81
-49.76' LT

578+00 579+00 580+00 581+00 582+00 583+00 584+00 585+00 586+00 587+00 588+00 589+00 590+00 591+00 592+00

IH 94

R/L IH 94

STA 586+10.96
36.65' RT

STA 586+60.90
34.20' RT

STA 584+91.87
36.03' RT

MGS GUARDRAIL 3

MGS GUARDRAIL
TERMINAL EAT

REMOVING GUARDRAIL

SALVAGE RAIL (25 LF)
FOR ACCESS TO CONSTRUCT
OVERHEAD SIGN BRIDGE BASE

WETLANDS (TYP)

WETLANDS (TYP)

SILVERNAIL RD

MATCH LINE 577+40

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	PLAN DETAILS - ROADSIDE BARRIER	SHEET 69	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 20

PLOT DATE : 1/16/2024 11:26 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

REMOVE/REPLACE CULVERT (CPCS 18-INCH)
CONNECT TO EXISTING MEDIAN INLETS TYPE 3 WITH CONCRETE COLLAR
SEE STRUCTURE PLANS FOR CONNECTION TO BOX CULVERT REQUIREMENTS

SLOPE INTERCEPT

STA 592+44.01
97.27' LT

STA 593+55.45
96.53' LT

MGS GUARDRAIL
TERMINAL EAT

WETLANDS (TYP)

GOLF RD

IH 94

8" LINED CMP

18" CMP

INL

593+00 594+00 595+00 596+00 597+00 598+00 599+00 600+00 601+00 602+00 603+00 604+00 605+00 606+00

STA 606+74.21
34.17' RT

STA 596+57.15
34.92' RT

R/L IH 94

STA 601+79.30
35.18' RT

STA 602+96.85
36.81' RT

STA 603+46.81
34.81' RT

MGS GUARDRAIL
TERMINAL EAT

REMOVING GUARDRAIL

MGS GUARDRAIL 3

MGS GUARDRAIL
TERMINAL TYPE 2

SLOPE INTERCEPT

WETLANDS (TYP)

MATCH LINE 592+15

MATCH LINE 606+90

20748
908.347
UPOL OWH1 ST

OWH1

N

REMOVING GUARDRAIL

MGS GUARDRAIL 3

MGS GUARDRAIL
TERMINAL TYPE 2

RIPRAP

STA 620+19.24
97.59' LT

GOLF RD

IH 94

8" LINED CMP

18" CMP

SIGN

607+00 608+00 609+00 610+00 611+00 612+00 613+00 614+00 615+00 616+00 617+00 618+00 619+00 620+00 621+00

R/L IH 94

WETLANDS (TYP)

FOOTBRIDGE

MATCH LINE 606+90

MATCH LINE 621+65

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	PLAN DETAILS - ROADSIDE BARRIER	SHEET 70	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 21

PLOT DATE : 1/16/2024 11:27 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

GOLF RD

36" CMCP

MGS GUARDRAIL 3

R/L WB ON RAMP

SLOPE INTERCEPT

STA 1166+96.75
-11.25' LT

1165

8" LINED CMP

IH 94

36" RCCP

CMCP

STA 1168+65.96
-11.13' LT

STA 1167+46.70
-13.31' LT

MGS GUARDRAIL TERMINAL EAT

INL

622+00 623+00 624+00 625+00 626+00 627+00 628+00 629+00 630+00 631+00 632+00 633+00 634+00 635+00 636+00

IH 94

R/L IH 94

1160

1165

R/L EB OFF RAMP

STA 1168+58.78
8.82' RT

MATCH LINE 621+65

MATCH LINE 636+40

SILVERNAIL RD

1180

RIPRAP

MGS GUARDRAIL 3

MGS GUARDRAIL TERMINAL EAT

STA 1178+10.11
-26.65' LT

STA 1178+29.45
17.84' RT

REMOVING GUARDRAIL

SLOPE INTERCEPT

STA 1177+60.28
-22.73' LT

1175

R/L WB OFF RAMP

REPLACING GUARDRAIL POSTS AND BLOCKS
(POSTS DEGRADING)

STA 1172+56
-15.79' LT

R/L WB ON RAMP

1170

STA 1173+13.66
21.61' RT

MGS GUARDRAIL 3

MGS GUARDRAIL TERMINAL EAT

STA 648+46.06
-101.66' LT

STA 649+64.58
-96.90' LT

MGS GUARDRAIL TERMINAL TYPE 2

REMOVING GUARDRAIL

STA 645+65.62
-100.45' LT

STA 647+96.66
-101.29' LT

PC: 649+02.10

MATCH LINE 651+15

REMOVE 25' CONCRETE BARRIER.
CONSTRUCT CRASH CUSHION (TL-3)
AND CONCRETE BARRIER END ANCHORAGE
(SEE CONSTRUCTION DETAIL)

STA 640+21.12
-27.36' LT

STA 639+95.11
-27.38' LT

STA 639+95.15
-23.38' LT

STA 640+46.64
-25.35' LT

STA 640+21.13
-23.36' LT

STA 640+31.63
-25.36' LT

MGS GUARDRAIL 3

STA 649+09.81
-21.92' LT

637+00 638+00 639+00 640+00 641+00 642+00 643+00 644+00 645+00 646+00 647+00 648+00 649+00 650+00 651+00

IH 94

R/L IH 94

CONCRETE BARRIER WALL
SURFACE REPAIR

MGS GUARDRAIL
TERMINAL EAT

STA 1170+89.02
-23.38' LT

STA 1171+41.37
-20.44' LT

MGS GUARDRAIL 3

REMOVING GUARDRAIL

MGS GUARDRAIL TERMINAL TYPE 2

STA 1175+38.45
-19.86' LT

1170

STA 1170+31.59
21.85' LT

1175

CONNECT TO EXISTING
CONCRETE BARRIER WALL

STA 1170+62.83
10.33' RT

MGS GUARDRAIL
THRIE BEAM TRANSITION

R/L EB OFF RAMP

2819
941.618
PVC 12

STA 1170+27.60
11.44' RT

1180

R/L EB ON RAMP

R/L CTH SS

STA 1169+77.48
13.76' RT

MATCH LINE 636+40

RIPRAP

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	PLAN DETAILS - ROADSIDE BARRIER	SHEET 71	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 22

PLOT DATE : 1/16/2024 11:28 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

GOLF RD

IH 94

SILVERNAIL RD

RIVERLAND DR

R/L WB OFF RAMP

PI STA 657+10.40

CC-3

CONCRETE BARRIER WALL
SURFACE REPAIR

STA 659+00.40
0.05' RT

R/L IH 94

MGS GUARDRAIL
TERMINAL EAT

STA 1188+34.17
12.50' RT

R/L EB ON RAMP

STA 660+55.45
70.21' RT

CONNECT TO EXISTING
CONCRETE BARRIER WALL

MGS GUARDRAIL
THRIE BEAM TRANSITION

STA 1186+29.35
22.16' RT

STA 1187+48.84
19.25' RT

STA 1188+01.88
14.52' RT

MGS GUARDRAIL 3

REMOVING GUARDRAIL

MATCH LINE 651+15

MATCH LINE 665+90

MATCH LINE 665+90

MATCH LINE 680+65

R/L WB ON RAMP

CONCRETE BARRIER WALL
SURFACE REPAIR

STA 672+10.02
0.00'

STA 672+00
0.00'

R/L IH 94

R/L EB OFF RAMP

STA 679+09.93
64.55' RT

MGS GUARDRAIL
TERMINAL TYPE 2

MGS GUARDRAIL 3

REMOVING GUARDRAIL

R/L SILVERNAIL RD

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	PLAN DETAILS - ROADSIDE BARRIER	SHEET 72	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 23

PLOT DATE : 1/16/2024 11:29 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

REPLACING GUARDRAIL RAIL AND HARDWARE
(MISSING BOLTS)

MGS GUARDRAIL
TERMINAL TYPE 2

R/L WB ON RAMP

PC: 681+52.07

PT: 689+06.49

SLOPE INTERCEPT
STA 694+97.30
-64.46' LT

CONCRETE BARRIER WALL
SURFACE REPAIR

STA 682+05.04
0.10' LT

STA 684+99.98
0.03' LT

STA 684+94.93
0.00'

STA 681+99.99
-0.08' LT

CONCRETE BARRIER WALL
SURFACE REPAIR

CONCRETE BARRIER WALL
SURFACE REPAIR

R/L IH 94

STA 693+40.05
-0.31' LT

MGS GUARDRAIL 3

STA 692+99.99
-0.52' LT

MEADOWBROOK RD

R/L CTH G

R/L EB ON RAMP

SLOPE INTERCEPT

STA 238+88.76
-21.47' LT

STA 239+87.71
-24.05' LT

STA 240+38.11
-25.38' LT

REMOVING GUARDRAIL

STA 242+80.22
-47.36' LT

R = 20'

STA 242+90.11
-92.89' LT

MATCH LINE 680+65

R/L SILVERNAIL RD

SILVERNAIL RD

RIPRAP

MGS GUARDRAIL 3

STA 242+79.58
-28.38' LT

MGS GUARDRAIL TERMINAL EAT

MGS GUARDRAIL 3

REMOVING GUARDRAIL

MGS GUARDRAIL TERMINAL EAT

SLOPE INTERCEPT

STA 696+48.96
67.67' LT

STA 697+90.17
-63.60' LT

STA 695+95.91
-64.69' LT

STA 696+65.02
-0.26' LT

STA 696+60.01
-0.27' LT

CONCRETE BARRIER WALL
SURFACE REPAIR

R/L WB OFF RAMP

REMOVE/REPLACE 13' CONCRETE BARRIER 51-INCH
INSTALL THRIE BEAM ACROSS BARRIER OPENING

CONCRETE BARRIER WALL
SURFACE REPAIR

GOLF RD

STA 256+50.04
-12.58' LT

STA 256+55.04
-12.58' LT

STA 709+70.57
-85.88' LT

STA 709+83.57
-85.91' LT

MATCH LINE 710+15

R/L IH 94

IH 94

SALVAGED RAIL
REPLACING GUARDRAIL POSTS AND BLOCKS
ADJUST HEIGHT OF GUARDRAIL

SLOPE INTERCEPT

STA 248+35.31
-23.66' LT

STA 244+57.13
-24.53' LT

R/L EB ON RAMP

R/L SILVERNAIL RD

SILVERNAIL RD

MATCH LINE 695+40

REMOVE AND REPLACE CRASH CUSHION
(SEE DETAIL SHEET)

RIPRAP

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	PLAN DETAILS - ROADSIDE BARRIER	SHEET 73	E

2

MATCH LINE 710+15

REPLACING GUARDRAIL RAIL AND HARDWARE
(MISSING BOLTS)

GOLF RD

R/L WB OFF RAMP

RIPRAP

260

STA 716+04.97
77.92' LT

CONCRETE BARRIER WALL
SURFACE REPAIR

STA 714+29.49
-0.10' LT

R/L IH 94

CONCRETE BARRIER WALL
SURFACE REPAIR

STA 722+04.99
-0.56' LT

711+00 712+00 713+00 714+00 715+00 716+00 717+00 718+00 719+00 720+00 721+00 722+00 723+00 724+00

STA 714+24.40
-0.12' LT

STA 721+99.90
-0.58' LT

260 265

R/L EB ON RAMP

105 110

R/L SILVERNAIL RD

SILVERNAIL RD

SUSSEX LN

MATCH LINE 724+90

2

MATCH LINE 724+90

GOLF RD

RIPRAP

STA 728+76.35
-75.30' LT

REPLACING GUARDRAIL RAIL AND HARDWARE
REPLACING GUARDRAIL POSTS AND BLOCKS
(2 DAMAGED RAIL SECTIONS AND POSTS)

STA 729+01.35
-76.58' LT

R/L IH 94

IH 94

CONCRETE BARRIER WALL
SURFACE REPAIR

725+00 726+00 727+00 728+00 729+00 730+00 731+00 732+00 733+00 734+00 735+00 736+00 737+00 738+00 739+00

IH 94

STA 739+20.10
-0.91' LT

STA 739+25.14
-0.94' LT

STA 739+30.10
-0.87' LT

STA 739+35.14
-0.86' LT

SILVERNAIL RD

MATCH LINE 739+65

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	PLAN DETAILS - ROADSIDE BARRIER	SHEET 74	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 25
PLOT DATE : 1/16/2024 11:31 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

GOLF RD

RIPRAP

PC: 740+81.02

REMOVE/REPLACE 275 FT
CONCRETE BARRIER 51-INCH

REMOVE/REPLACE 100 FT
CONCRETE BARRIER 51-INCH

RIPRAP

PT: 749+84.50

CONCRETE BARRIER WALL
SURFACE REPAIR

MATCH LINE 754+40

740+00
741+00
742+00
743+00
744+00
745+00
746+00
747+00
748+00
749+00
750+00
751+00
752+00
753+00
754+00

STA 740+74.98
-1.53' LT

STA 743+49.10
-6.59' LT

STA 744+49.90
-7.29' LT

STA 744+59.94
-7.29' LT

STA 744+44.89
-7.27' LT

STA 744+54.93
-7.31' LT

STA 745+00.14
-7.49' LT

STA 745+99.62
7.35' LT

STA 750+35.38
-0.02' LT

STA 750+30.38
0.00'

STA 753+24.92
-0.18' LT

STA 753+34.94
-0.15' LT

STA 753+19.91
-0.19' LT

STA 753+29.94
-0.17' LT

IH 94

R/L IH 94

CONCRETE BARRIER WALL
SURFACE REPAIR

CONCRETE BARRIER WALL
SURFACE REPAIR

MATCH LINE 739+65

SILVERNAIL RD

INL

W

MH

SIGN

FLAG

A/C

N

RIPRAP

RIPRAP

RIPRAP

RIPRAP

95

100

105

4100

4105

STA 755+89.97
-0.16' LT

STA 756+00.02
-0.13' LT

STA 755+84.95
-0.18' LT

STA 755+94.98
-0.15' LT

CONCRETE BARRIER WALL
SURFACE REPAIR

STA 759+05.09
0.25' RT

STA 759+00.08
0.30' RT

R/L IH 94

755+00
756+00
757+00
758+00
759+00
760+00
761+00
762+00
763+00
764+00
765+00
766+00
767+00
768+00
769+00

IH 94

MATCH LINE 769+15

MATCH LINE 754+40

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	PLAN DETAILS - ROADSIDE BARRIER	SHEET 75	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 26

PLOT DATE : 1/16/2024 11:32 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

MATCH LINE 769+15

MATCH LINE 783+90

MATCH LINE 783+90

MATCH LINE 798+65

N

N

CTH T/GRANDVIEW BLVD.

IH 94

IH 94

STH 16

R/L IH 94

R/L IH 94

PI: 125+01.82

STA 772+00
0.33' RT

STA 772+60.05
0.28' RT

STA 773+54.54
0.30' RT

STA 773+69.54
0.27' RT

STA 773+79.54
0.33' RT

STA 773+84.54
0.35' RT

CONCRETE BARRIER WALL
SURFACE REPAIR

REMOVE/REPLACE 60 FT
CONCRETE BARRIER 51-INCH

STA 777+59.93
0.23' RT

STA 777+69.97
0.25' RT

STA 777+54.93
0.21' RT

STA 777+64.96
0.24' RT

CONCRETE BARRIER WALL
SURFACE REPAIR

STA 780+00
0.10' RT

STA 780+10
0.10' RT

STA 779+94.99
0.11' RT

STA 780+04.99
0.10' RT

CONCRETE BARRIER WALL
SURFACE REPAIR

REMOVE/REPLACE 100 FT
CONCRETE BARRIER 51-INCH

CONCRETE BARRIER WALL
SURFACE REPAIR

STA 781+00
0.00' RT

STA 782+00
0.00'

STA 783+40
-0.01' LT

STA 783+35
0.00' LT

STA 784+00
-0.01' RT

STA 784+50.03
0.03' RT

CONCRETE BARRIER WALL
SURFACE REPAIR

STA 787+60.21
-0.07' LT

STA 787+55.19
-0.10' LT

CONCRETE BARRIER WALL
SURFACE REPAIR

STA 790+25.29
0.09' RT

STA 790+20.29
0.07' RT

CONCRETE BARRIER WALL
SURFACE REPAIR

STA 792+85.51
0.07' RT

STA 792+80.50
0.10' RT

CONCRETE BARRIER WALL
SURFACE REPAIR

STA 796+10.09
0.04' RT

STA 796+05.04
0.06' RT

REMOVE/REPLACE 50 FT
CONCRETE BARRIER 51-INCH

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	PLAN DETAILS - ROADSIDE BARRIER	SHEET 76	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 27

PLOT DATE : 1/16/2024 11:32 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

MATCH LINE 798+65

STH 16

CONCRETE BARRIER WALL
SURFACE REPAIR

STA 801+35.15
-0.10' LT

STA 801+30.14
-0.11' LT

REMOVE/REPLACE 10 FT
CONCRETE BARRIER 51-INCH

STA 804+00.02
-0.19' LT

STA 805+00
-0.07' LT

STA 803+90.01
-0.18' LT

IH 94

STA 804+19.96
-0.21' LT

REMOVE/REPLACE 80 FT
CONCRETE BARRIER 51-INCH

R/L IH 94

STA 813+10
0.00' RT

CONCRETE BARRIER WALL
SURFACE REPAIR

STA 813+05
0.00' RT

799+00 800+00 801+00 802+00 803+00 804+00 805+00 806+00 807+00 808+00 809+00 810+00 811+00 812+00 813+00

MATCH LINE 813+40

2

MATCH LINE 813+40

BG-35

CONCRETE BARRIER WALL
SURFACE REPAIR

STA 815+60.32
-0.05' LT

STA 815+55.32
-0.06' LT

IH 94

CONCRETE BARRIER WALL
SURFACE REPAIR

STA 817+85.37
0.10' RT

STA 817+80.36
0.10' RT

R/L IH 94

CONCRETE BARRIER WALL
SURFACE REPAIR

STA 822+80.10
0.33' RT

STA 822+75.05
0.37' RT

CONCRETE BARRIER WALL
SURFACE REPAIR

STA 823+60.10
0.43' RT

STA 823+50.07
0.40' RT

END PROJECT
STA 825+63

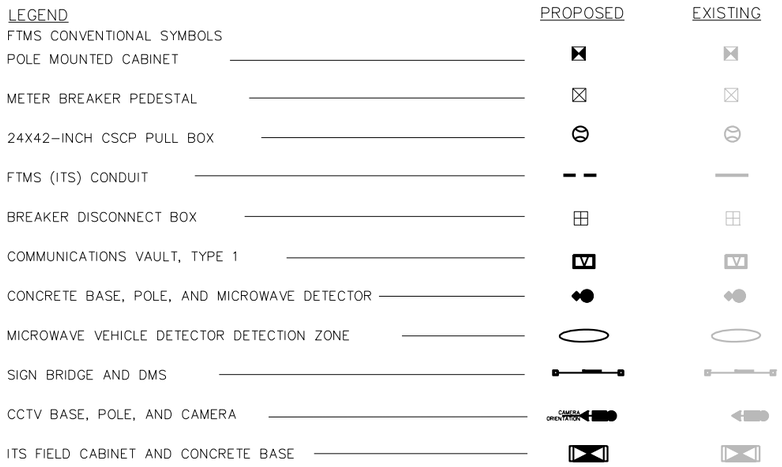
814+00 815+00 816+00 817+00 818+00 819+00 820+00 821+00 822+00 823+00 824+00 825+00 826+00 827+00 828+00

CTH JJ/BLUEMOUND RD

MATCH LINE 828+15

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	PLAN DETAILS - ROADSIDE BARRIER	SHEET 77	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 28
PLOT DATE : 1/16/2024 11:33 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



FTMS STANDARD ABBREVIATIONS

CB	CONTROLLER CABINET
CCTV	CLOSED CIRCUIT TELEVISION SITE
CV	COMMUNICATIONS VAULT
PB	PULL BOX
EX	EXISTING
SDS	SYSTEM DETECTOR STATION
FOC	FIBER OPTIC CABLE
F.O.	FIBER OPTIC
MD	MICROWAVE DETECTOR
S–F	STATE–FURNISHED
DMS	DYNAMIC MESSAGE SIGN

1. THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND TECHNICAL SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE APPLICATION OF ALL WORK SHOWN IN THE PLANS TO THE ACTUAL PHYSICAL FIELD CONDITIONS TO PROVIDE A COMPLETE AND ACCEPTED PROJECT. IN THE EVENT THAT ACTUAL PHYSICAL FIELD CONDITIONS AFFECT OR PREVENT THE APPLICATION OR PROGRESSION OF ANY WORK SHOWN IN THE PLANS OR TECHNICAL SPECIAL PROVISIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, AND PRIOR TO ANY FURTHER WORK ACTIVITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY LOCATION CHANGES OTHER THAN MINOR ADJUSTMENTS.

2. BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.

3. BE AWARE THAT NO TEST BORINGS WERE MADE WHERE CONDUITS, PULLBOXES, POLES, CABINET FOUNDATIONS, OR OTHER EQUIPMENT IS TO BE INSTALLED. THE CONTRACTOR IS FULLY RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.

4. NO TREES (AND/OR SHRUBS) SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

5. AREAS WITHIN THE RIGHT-OF-WAY DISTURBED SPECIFICALLY FOR FTMS CONSTRUCTION SHALL BE RESTORED TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER, SEED, AND EROSION MAT, AND SHALL BE INCLUDED IN THE COST OF INSTALLING FTMS ITEMS. RESTORATION FOR AREAS DISTURBED FOR OTHER CONSTRUCTION OPERATIONS BUT ALSO CONTAINING FTMS CONSTRUCTION SHALL BE DONE ACCORDING TO REQUIREMENTS AND PAYMENT PROVISIONS FOR THE OTHER CONSTRUCTION OPERATIONS.

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

7. DUE TO RAMP, LANE, SHOULDER CLOSURE RESTRICTIONS, AND WORK UNDER OTHER CONTRACTS, SOME WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT.

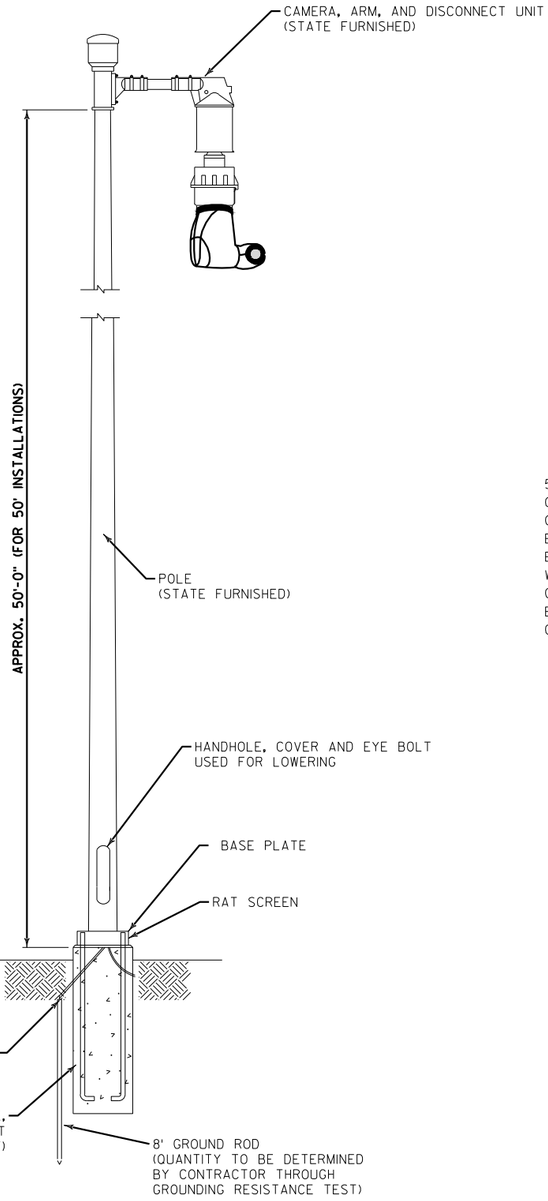
8. THE CONTRACTOR IS FULLY RESPONSIBLE FOR COORDINATING RAMP, LANE, SHOULDER, AND ROADWAY CLOSURES WITH OTHER CONTRACTS IN THE AREA.

9. THE CONTRACTOR SHALL CONTACT THE WISDOT STATEWIDE TRAFFIC OPERATIONS CENTER AT (414)227-2166 FIVE (5) WORKING DAYS PRIOR TO ENTERING ANY EXISTING WISDOT FTMS OR ITS CABINET.

10. ALL LOOP DETECTORS ARE STATIONED TO CENTER OF LEADING EDGE AS APPROACHED BY NORMAL VEHICLE PATH.

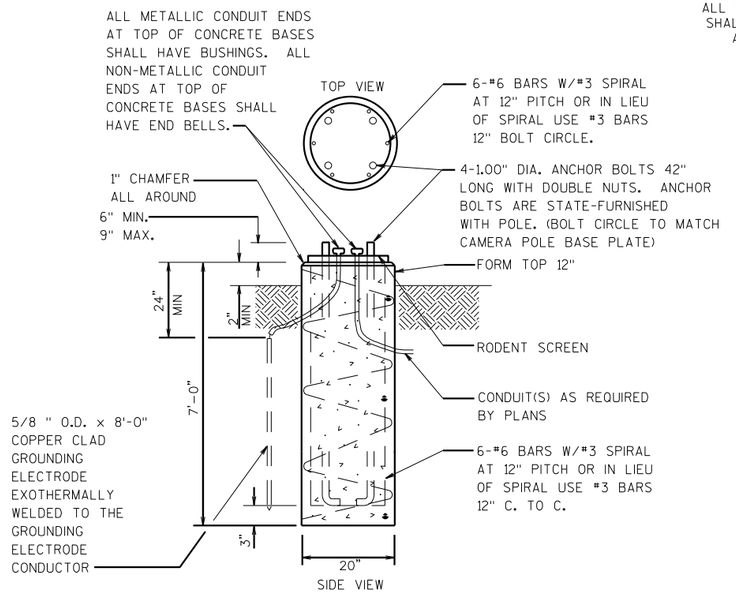
11. HAND DIG TRENCHES CROSSING EXISTING CONDUIT CONTAINING FIBER OPTIC CABLE.

12. VISUALLY VERIFY DEPTHS OF EXISTING CONDUITS CONTAINING FIBER OPTIC CABLE PRIOR TO CROSSING BY DIRECTIONAL BORE OR SPECIAL METHOD.

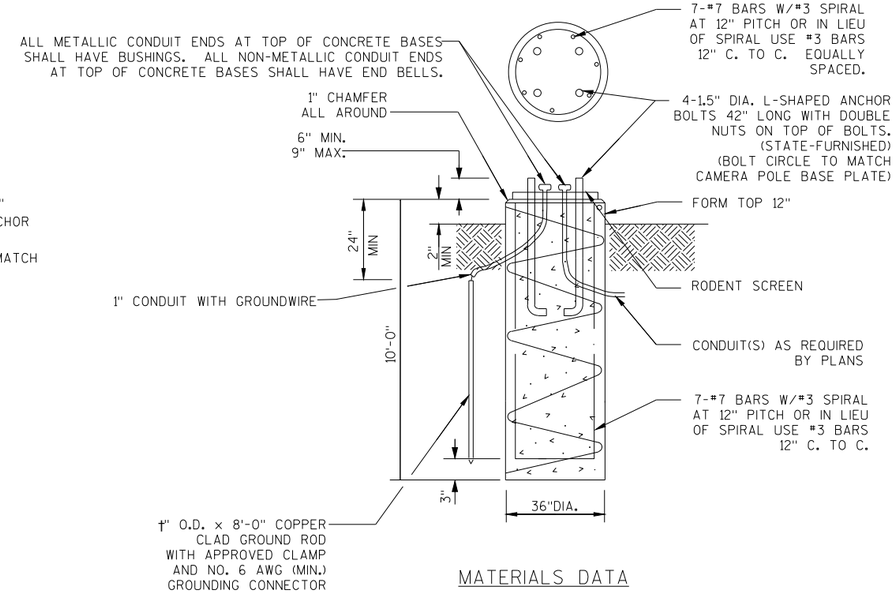


CAMERA POLE WITH CAMERA LOWERING HARDWARE

WITHOUT POLE MOUNTED CABINET



CONCRETE BASE, 30' CAMERA POLE



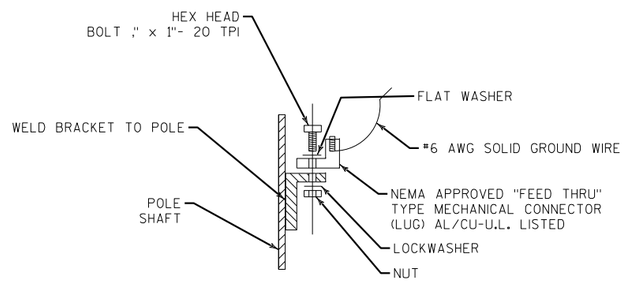
MATERIALS DATA

CONCRETE f'c=3,500 psi

HIGH STRENGTH BAR STEEL REINFORCEMENT fy = 60,000 psi

CONCRETE BASE, 50' CAMERA POLE

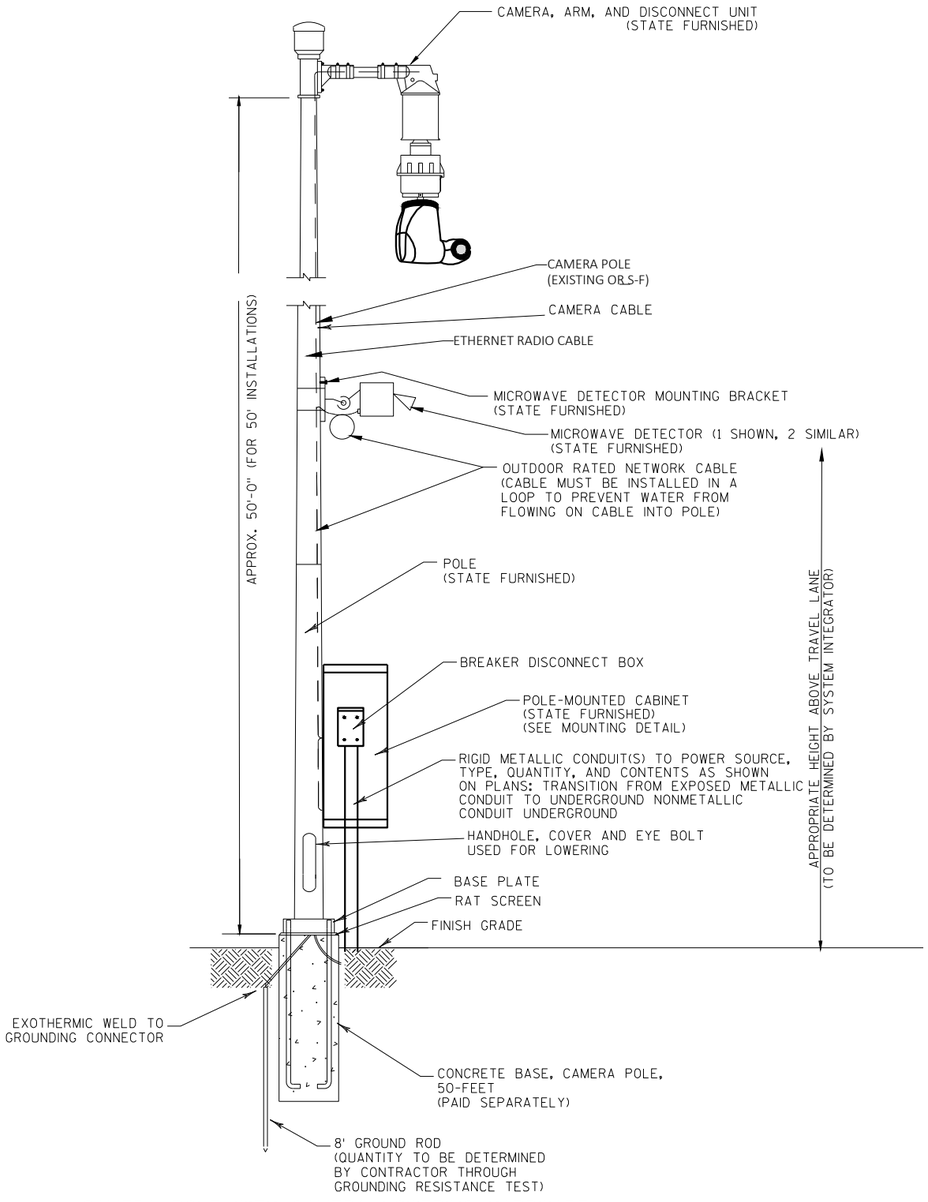
NOT TO SCALE



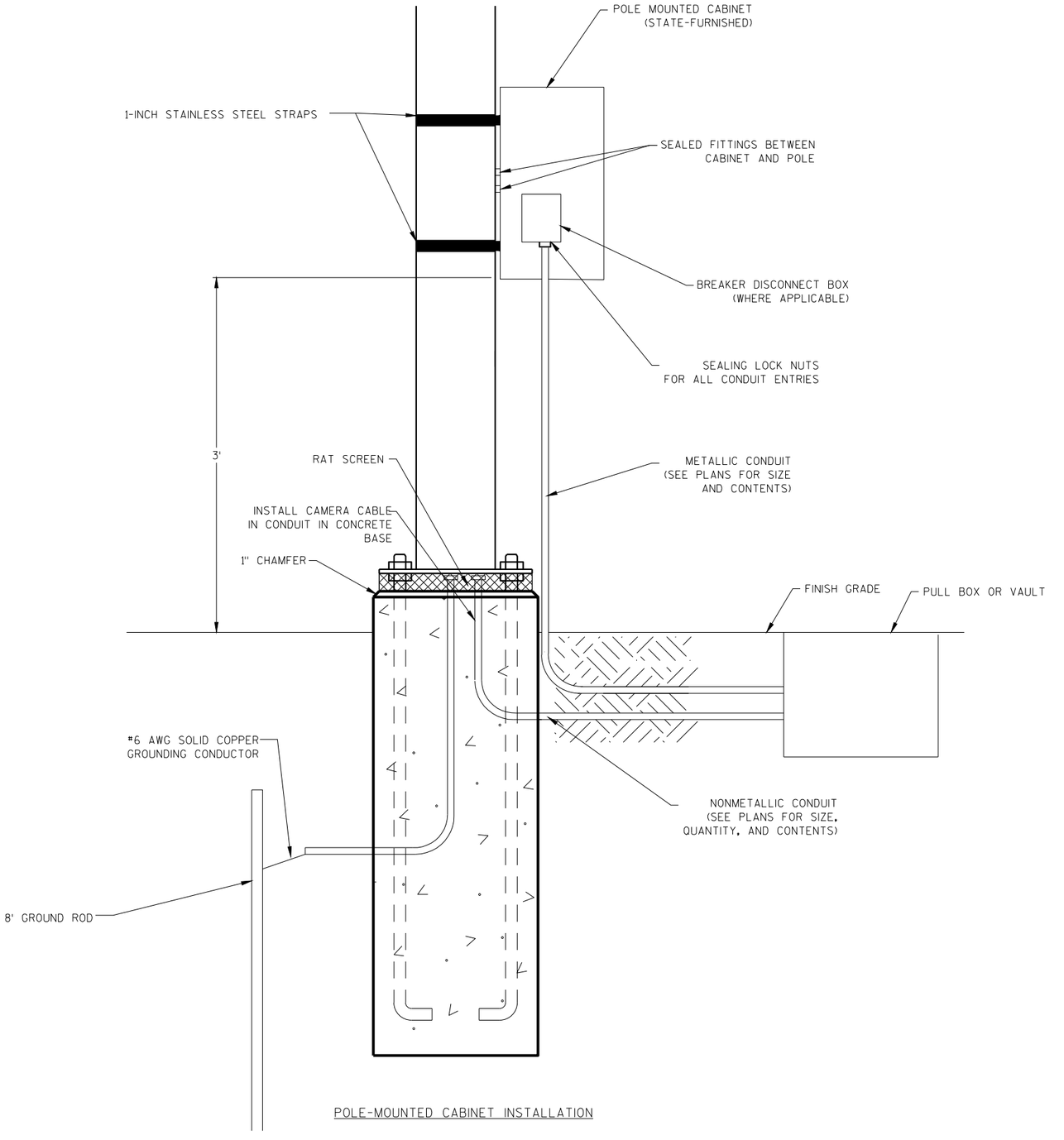
FIELD INSTALLED GROUNDING LUG

NOTES

1) ALL HARDWARE AND FASTENERS SHALL BE STAINLESS STEEL
2) POLE DRAWINGS SHOWN FOR BIDDING INFORMATION PURPOSES ONLY. POLES WILL BE STATE FURNISHED.
3) CONTRACTOR SHALL CONFIRM BOLT PATTERN OF CAMERA POLE PRIOR TO CONSTRUCTION OF CONCRETE BASE.
4) CONTRACTOR SHALL INSTALL GROUNDING LUG AS SHOWN

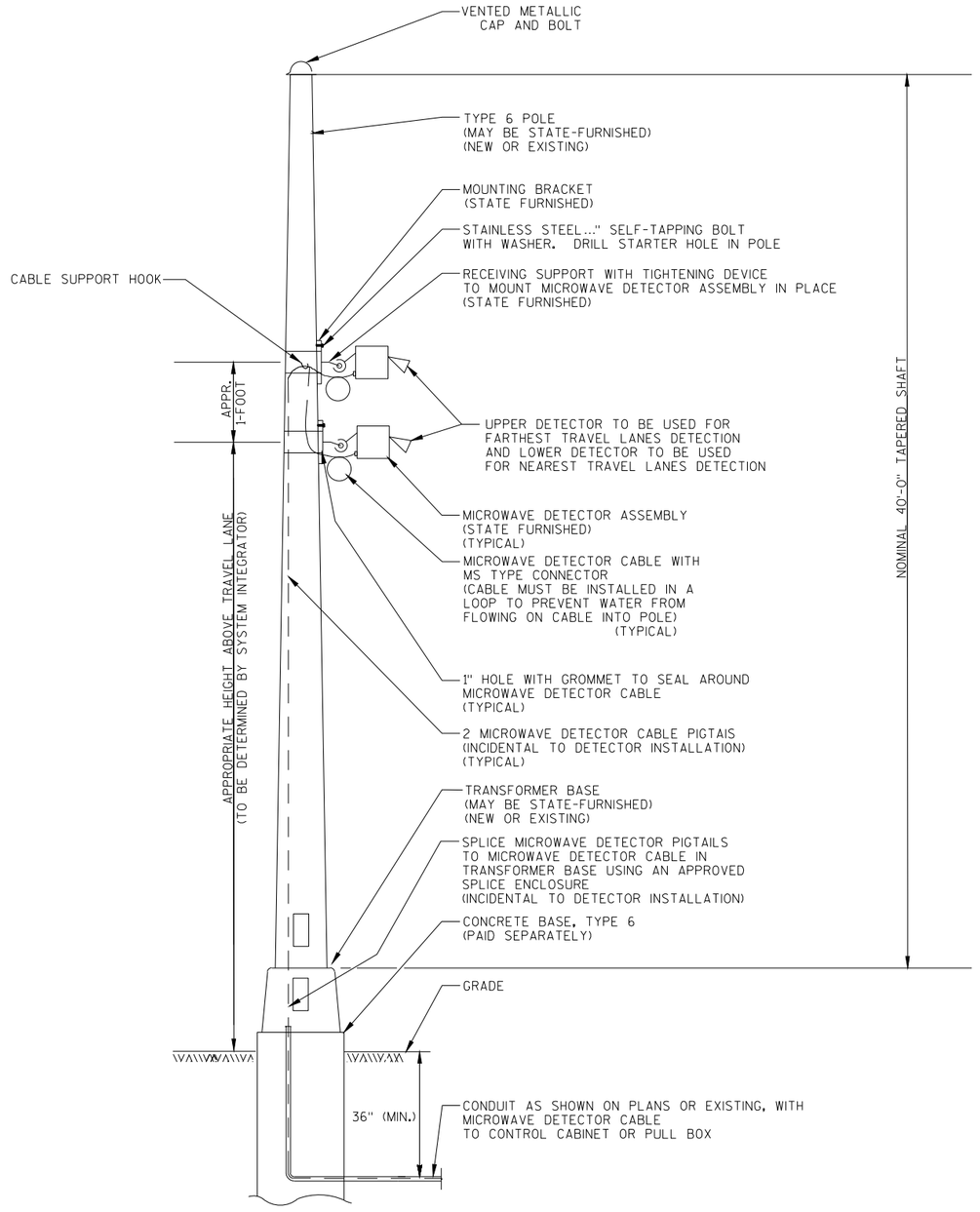


CAMERA POLE WITH CAMERA LOWERING HARDWARE



POLE-MOUNTED CABINET INSTALLATION

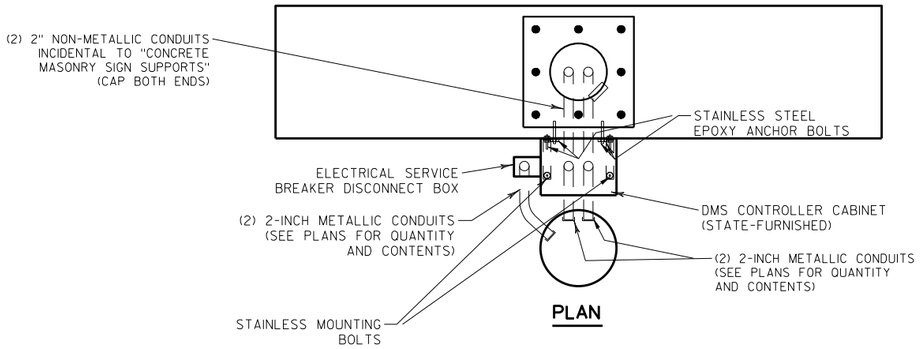
2



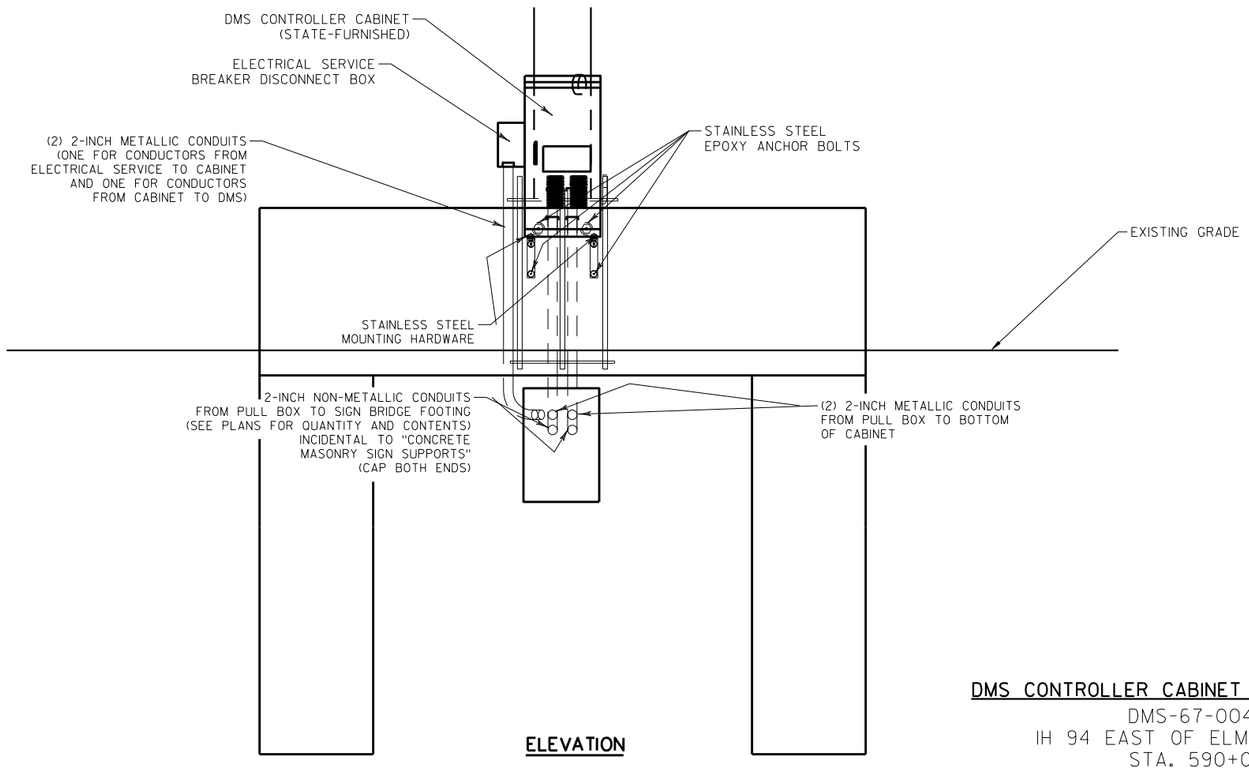
MICROWAVE DETECTOR INSTALLATION

ON TYPE 6 POLE

2

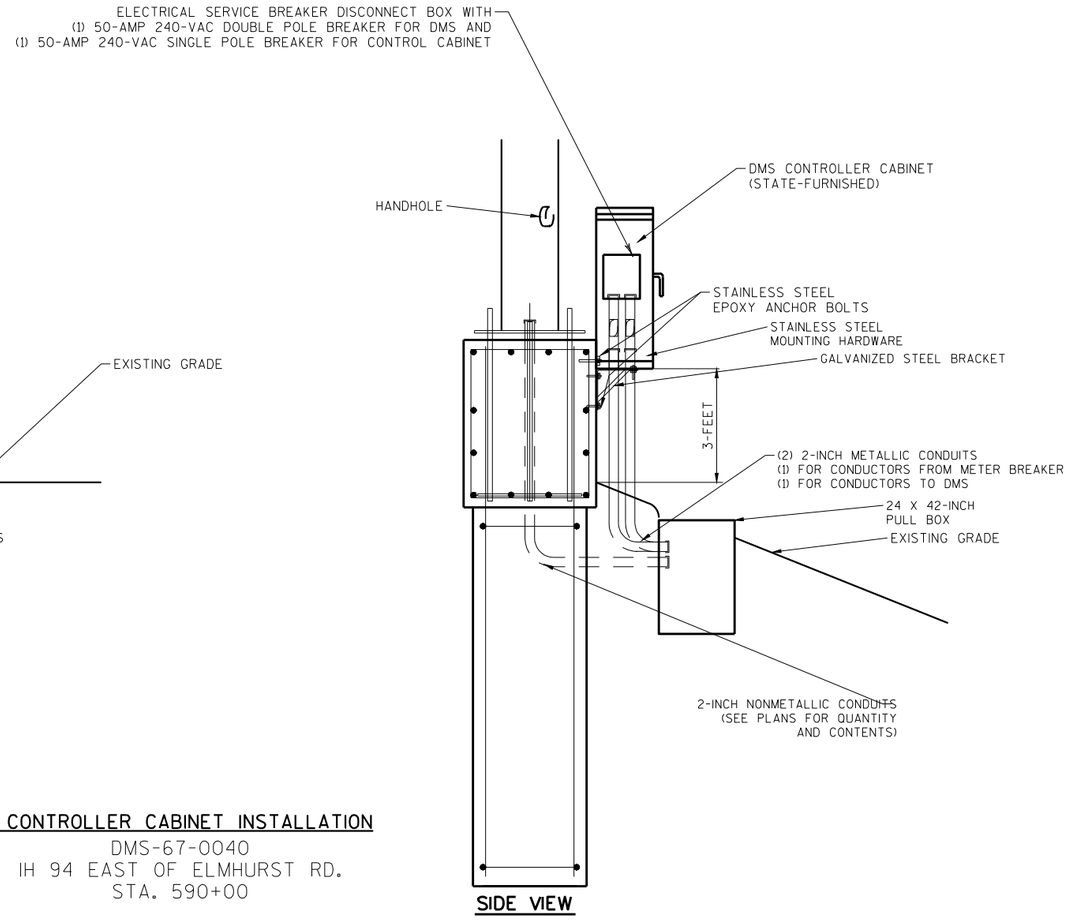


PLAN



ELEVATION

LOOKING SOUTH (DMS-67-0040)



SIDE VIEW

LOOKING WEST (DMS-67-0040)

DMS CONTROLLER CABINET INSTALLATION

DMS-67-0040
IH 94 EAST OF ELMHURST RD.
STA. 590+00

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	FTMS CONSTRUCTION DETAILS	SHEET 82	E

2

2

N

RIPRAP

EXDP520
(1) REMOVE EXISTING POLE
(STORE EQUIPMENT ON POLE FOR PICK UP BY DEPARTMENT REPRESENTATIVES)
(1) REMOVE CONCRETE BASE

PB525
(1) 2-INCH METALLIC CONDUIT WITH
(3) NO. 6 AWG TRAFFIC SIGNAL WIRES

PC: 514+72.86

S 80°05'38" E

S 88°50'53" E

S 88°25'13" E

S 87°38'55" E

INL

515

520

525

I 94

HILLSIDE DRIVE

EXCV520
(1) INSTALL PROPOSED CONDUIT INTO EXISTING VAULT
(4) F.O. SPLICES IN NEW F.O. SPLICE ENCLOSURE (S-F)

(2) 2-INCH NONMETALLIC CONDUITS, SPECIAL
(1) WITH (1) 6-COUNT FOC (S-F) AND
(1) NO. 10 AWG TRAFFIC SIGNAL WIRE

CCTV-67-0244 / SDS-67-0100
(1) 50-FOOT CAMERA POLE BASE
(1) 50-FOOT CAMERA POLE (S-F)
(1) CCTV CAMERA (S-F)
(2) ETHERNET MICROWAVE VEHICLE DETECTORS (S-F)
(1) POLE-MOUNTED CABINET (S-F)
(1) BREAKER DISCONNECT ASSEMBLY
(1) 12-COUNT F.O. TERMINATION PANEL (S-F)
(6) F.O. TERMINATIONS
(1) ETHERNET SWITCH (S-F)

MAPLE AVENUE

MAPLE RD.

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) 6-COUNT FOC (S-F) AND
(1) NO. 10 AWG TRAFFIC SIGNAL WIRE

(1) 2-INCH NONMETALLIC CONDUIT WITH
(3) NO. 6 AWG TRAFFIC SIGNAL WIRES

MBCCTV670244
(1) ELECTRICAL SERVICE METER BREAKER PEDESTAL

RIPRAP

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	FTMS PLANS	SHEET 83	E

2

EXDP590
(1) REMOVE EXISTING POLE
(STORE EQUIPMENT ON POLE FOR PICK UP BY DEPARTMENT REPRESENTATIVES)
(1) REMOVE CONCRETE BASE

EXCV590
(1) INSTALL PROPOSED CONDUIT INTO EXISTING VAULT
(4) F.O. SPLICES IN NEW F.O. SPLICE ENCLOSURE (S-F)

PB590

MBDMS670040
(1) ELECTRICAL SERVICE METER BREAKER PEDESTAL

PB588

CCTV-67-0243
(1) 50-FOOT CAMERA POLE BASE
(1) 50-FOOT CAMERA POLE (S-F)
(1) CAMERA ASSEMBLY (S-F)
(2) ETHERNET MICROWAVE VEHICLE DETECTORS (S-F)

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) CAMERA CABLE AND
(2) OUTDOOR RATED NETWORK CABLES

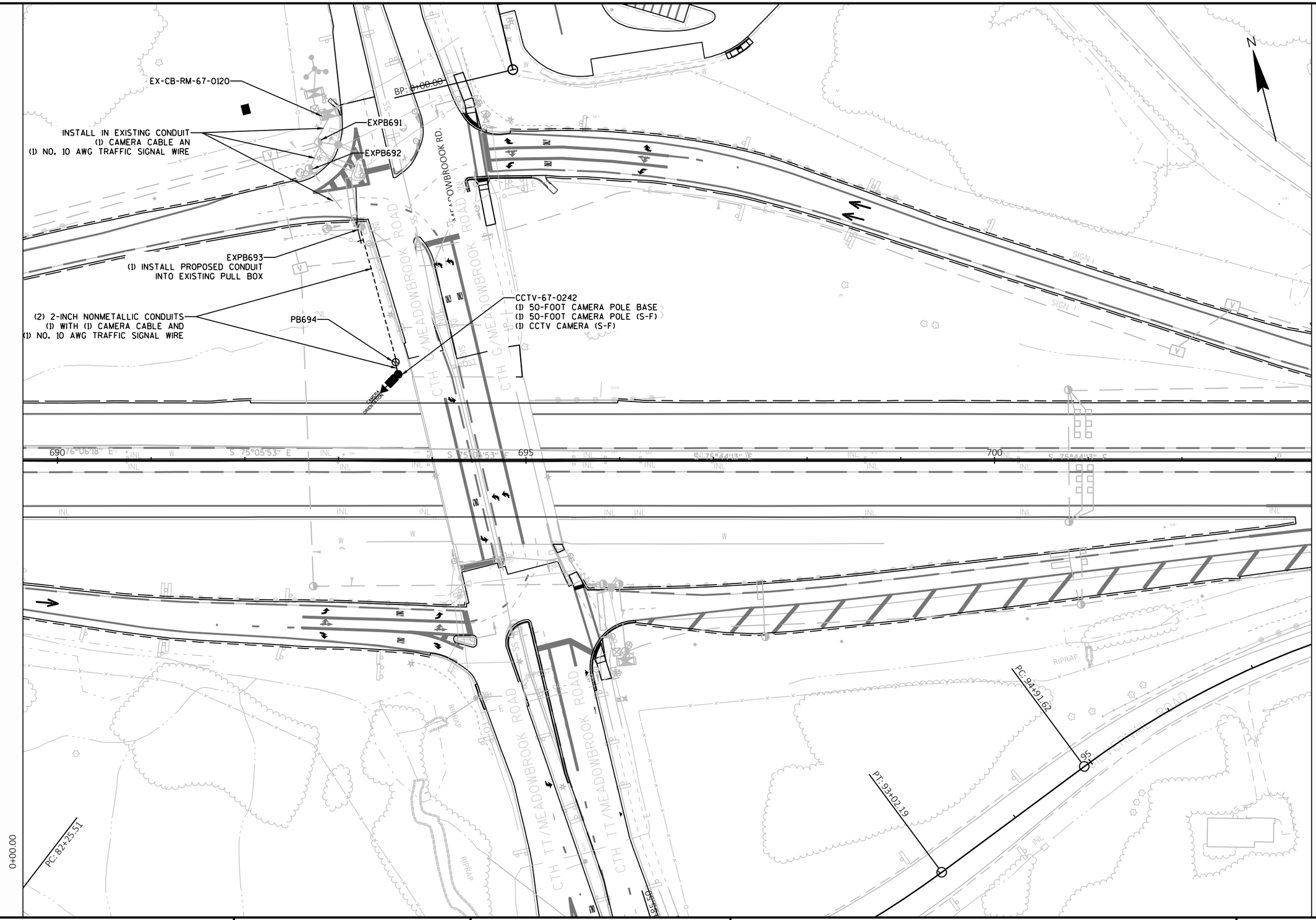
(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH DMS POWER WIRES
(1) WITH DMS CONTROL CABLE

S-67-420 / DMS-67-0040 / SDS-67-0104
(1) OVERHEAD FREEWAY DMS (S-F)
(1) POLE-MOUNTED CABINET (S-F)
(1) BREAKER DISCONNECT BOX
(1) 12-COUNT F.O. TERMINATION PANEL (S-F)
(6) F.O. TERMINATIONS
(1) ETHERNET SWITCH (S-F)

DMS-67-0040 CONDUIT AND CABLE
MBDMS670040 - PB590
(1) 2-INCH NONMETALLIC CONDUIT WITH
(4) NO. 2 AWG TRAFFIC SIGNAL WIRES
PB590 - BREAKER DISCONNECT BOX
(1) 2-INCH METALLIC CONDUIT WITH
(4) NO. 2 AWG TRAFFIC SIGNAL WIRES
PB590 - CB-DMS-67-0040
(3) 2-INCH METALLIC CONDUITS
(1) WITH (1) 6-COUNT FOC (S-F), AND
(1) NO. 10 AWG TRAFFIC SIGNAL WIRE
(1) WITH DMS CONTROL CABLE
(1) WITH DMS POWER WIRES
PB590 - S-67-420 FOUNDATION
(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH DMS CONTROL CABLE
(1) WITH DMS POWER WIRES
EXCV590 - PB590
(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) 6-COUNT FOC (S-F) AND
(1) NO. 10 AWG TRAFFIC SIGNAL WIRE

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	FTMS PLANS	SHEET 84	E

2



PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	FTMS PLANS	SHEET 85	E

FILE NAME : I:\77532\BASE\WAUKESHA_CO\10604700_FTMST.DWG
LAYOUT NAME - Sheet - (51)

PLOT DATE : 10/10/2022 3:37 PM PLOT BY : PAUL KUTZ PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

EX-CB-RM-67-0113
(1) 12-CNT F.O. TERMINATION PANEL (S-F)
(6) F.O. TERMINATIONS
(1) ETHERNET SWITCH (S-F)

INSTALL IN EXISTING CONDUIT
(1) WITH (1) CAMERA CABLE,
(1) 6-COUNT FOC (S-F),
(1) 2/C NO. AWG GROUNDED CABLE, AND
(1) NO. 10 AWG TRAFFIC SIGNAL WIRE

EXPB115

INSTALL IN EXISTING CONDUIT
(1) 6-COUNT FOC (A-F),
(1) 2/C NO. AWG GROUNDED CABLE, AND
(1) NO. 10 AWG TRAFFIC SIGNAL WIRE

EXPB114

EXPB774

EXPB773

EXPB775
(1) INSTALL PROPOSED CONDUIT
INTO EXISTING PULL BOX

PB775

(2) 2-INCH NONMETALLIC CONDUITS
(1) WITH (1) CAMERA CABLE,
(1) 2/C NO. AWG GROUNDED CABLE, AND
(1) NO. 10 AWG TRAFFIC SIGNAL WIRE

CCTV-67-0129
(1) 30-FOOT CAMERA POLE CONCRETE BASE
(1) 11-1/2-INCH TRANSFORMER BASE (S-F)
(1) 30-FOOT CAMERA POLE (S-F))
(1) AIRPORT OBSTRUCTION LIGHT
(1) CCTV CAMERA (S-F)

EXCV775

EXCV776

IN EXISTING CONDUIT
(1) 6-COUNT FOC (S-F) AND
(1) NO. 10 AWG TRAFFIC SIGNAL
WIRE

REMOVE CABLES

EXPB3118

REMOVE CABLES

EX-CCTV-67-0129
(1) REMOVE 50-FOOT CAMERA POLE
(1) REMOVE CONCRETE BASE
(1) REMOVE CCTV CAMERA

EXCV777

IN EXISTING CONDUIT
(1) 6-COUNT FOC (S-F) AND
(1) NO. 10 AWG TRAFFIC SIGNAL
WIRE

EX-CB-RM-67-0069
(REMOVE CABINET, CONTENTS,
AND CONCRETE BASE. SALVAGE
CABINET AND CONTENTS FOR
REINSTALLATION)

PB3115 TO BREAKER DISCONNECT BOX
(1) 2-INCH METALLIC CONDUIT WITH
(3) POWER WIRES (SALVAGED)
PB3115 TO CB-RM-67-0069
(6) 2-INCH NONMETALLIC CONDUITS
(1) WITH LDLIC (SALVAGED)
(1) WITH MULTICONDUCTOR TRAFFIC
SIGNAL CABLES (SALVAGED)
(1) WITH (1) 6-COUNT FOC (S-F),
(1) 6-COUNT FOC (SALVAGED)
(1) NO. 10 AWG TRAFFIC SIGNAL WIRE

REMOVE CABLES
(COIL CABLES AT EXPB3116 FOR
REINSTALLATION INTO RELOCATED
CB-RM-67-0069)
(DISPOSE OF CAMERA CABLES)

PB3115

EXPB3115
(1) REMOVE PULL BOX

CB-RM-67-0069 (RELOCATED)
INSTALL
(1) ITS FIELD CABINET CONCRETE BASE
(1) ITS FIELD CABINET (SALVAGED)
(1) BREAKER DISCONNECT BOX
(1) RAMP METER CONTROLLER (SALVAGED)
(1) ETHERNET SWITCH (SALVAGED)
(1) F.O. TERMINATION PANEL (SALVAGED)
(12) F.O. TERMINATIONS

EXPB3117

(3) 2-INCH NONMETALLIC CONDUITS
(1) WITH LDLIC (SALVAGED)
(1) WITH MULTICONDUCTOR TRAFFIC
SIGNAL CABLES (SALVAGED) AND
POWER WIRES (SALVAGED)
(1) WITH (1) 6-COUNT FOC (S-F),
(1) 6-COUNT FOC (SALVAGED) AND
(1) NO. 10 AWG TRAFFIC SIGNAL WIRE

REMOVE CABLES
(COIL CABLES AT EXPB3116 FOR
REINSTALLATION INTO RELOCATED
CB-RM-67-0069)

EXPB3116
(1) INSTALL PROPOSED CONDUIT
INTO EXISTING PULL BOX
(COIL CABLES FOR REINSTALLATION)

IN EXISTING CONDUIT
(1) 6-COUNT FOC (S-F) AND
(1) NO. 10 AWG TRAFFIC SIGNAL
WIRE

N

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	FTMS PLANS	SHEET 86	E

2

2

N

RAMP TO NB STH 16

RAMP FROM SB STH 16

I 94

800

805

810

N 83°08'49" E

EX-CB-DMS-67-0020
(1) 12-COUNT F.O. TERMINATION PANEL (S-F)
(6) F.O. TERMINATIONS
(1) ETHERNET SWITCH (S-F)

EXPB809

EXPB811

INSTALL IN EXISTING CONDUIT
(1) 6-COUNT FOC (S-F) AND
(1) NO. 10 AWG TRAFFIC SIGNAL WIRE

EXPB810
(1) INSTALL PROPOSED CONDUIT
INTO EXISTING PULL BOX

EXCV812

INSTALL IN EXISTING CONDUIT
(1) 6-COUNT FOCS (S-F) AND
(1) NO. 10 AWG TRAFFIC SIGNAL WIRE

(2) 2-INCH NONMETALLIC CONDUITS
(W) WITH (1) 6-COUNT FOC (S-F) AND
(1) NO. 10 AWG TRAFFIC SIGNAL WIRE

INSTALL IN EXISTING CONDUIT
(2) 6-COUNT FOCS (S-F) AND
(1) NO. 10 AWG TRAFFIC SIGNAL WIRE

EXCV808
(1) INSTALL PROPOSED CONDUIT
INTO EXISTING VAULT
(4) F.O. SPLICES IN NEW F.O. SPLICE
ENCLOSURE (S-F)

EX-CB-SDS-67-0038
(1) 12-COUNT F.O. TERMINATION PANEL
(12) F.O. TERMINATIONS
(1) ETHERNET SWITCH (S-F)

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	FTMS PLANS	SHEET 87	E

2

240+00

RIPRAP MEDIUM

R/L WB OFF RAMP

470+00

IH 94

459+00 460+00 461+00 462+00 463+00 464+00 465+00 466+00 467+00 468+00 469+00 470+00 471+00 472+00 473+00

R/L IH 94

470+00

465+00

R/L EB ON RAMP

SILT FENCE

460+00

WETLANDS

SLOPE INTERCEPT

RIPRAP

LEGEND

- EROSION MAT CLASS I TYPE B
- RIPRAP MEDIUM
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE DENOTED)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

MATCH LINE 0+00

R/L WB OFF RAMP

SILT FENCE

SLOPE INTERCEPT

IH 94

474+00 475+00 476+00 477+00 478+00 479+00 480+00 481+00 482+00 483+00 484+00 485+00 486+00 487+00 488+00

R/L IH 94

IH 94

RIPRAP

2

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 88	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 01

PLOT DATE : 2/8/2024 4:29 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

MATCH LINE 0+00

LEGEND

- EROSION MAT CLASS I TYPE B
- RIPRAP MEDIUM
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE DENOTED)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

N

GOLF RD

SLOPE INTERCEPT

SILT FENCE

IH 94

18" CMEP

30" RCP

489+00 490+00 491+00 492+00 493+00 494+00 495+00 496+00 497+00 498+00 499+00 500+00 501+00 502+00 503+00

IH 94

R/L IH 94

SLOPE INTERCEPT

SILT FENCE

HILLSIDE DR

RIPRAP

AUSTIN CIR

MATCH LINE 0+00

N

GOLF RD

RIPRAP

IH 94

18" CMEP

504+00 505+00 506+00 507+00 508+00 509+00 510+00 511+00 512+00 513+00 514+00 515+00 516+00 517+00 518

IH 94

R/L IH 94

HILLSIDE DR

RIPRAP

RIPRAP

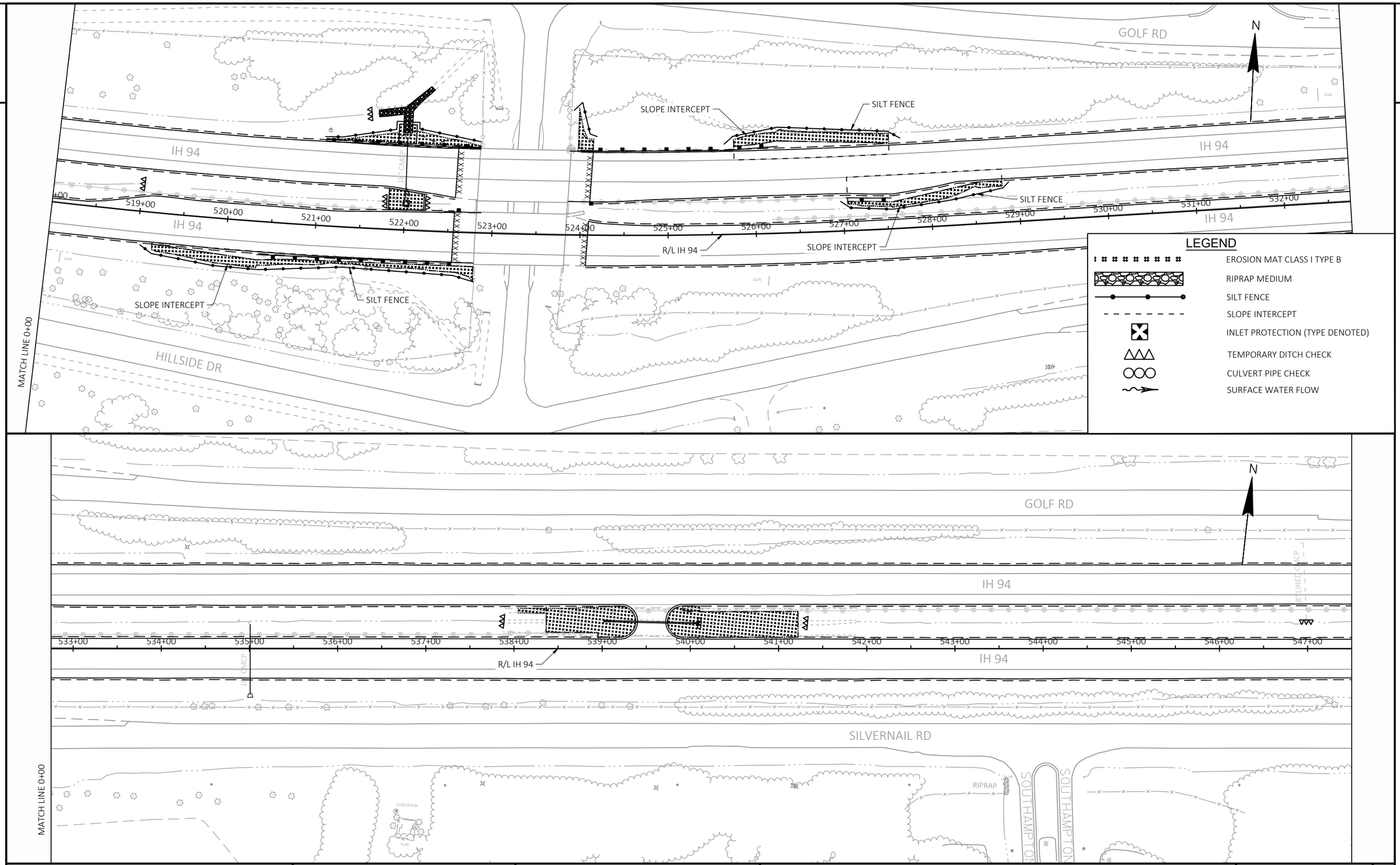
PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 89	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 02

PLOT DATE : 2/8/2024 4:29 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2



PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 90	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 03

PLOT DATE : 2/8/2024 4:29 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

GOLF RD

IH 94

SILVERNAIL RD

MATCH LINE 0+00

36" CMCP

36" LINED CMCP

36" RCCP

INL

SIGN

WALLS

548+00 549+00 550+00 551+00 552+00 553+00 554+00 555+00 556+00 557+00 558+00 559+00 560+00 561+00 562+00

R/L IH 94

N

LEGEND

- EROSION MAT CLASS I TYPE B
- RIPRAP MEDIUM
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE DENOTED)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

GOLF RD

IH 94

SILVERNAIL RD

MATCH LINE 0+00

24" RCCP

FOUND

563+00 564+00 565+00 566+00 567+00 568+00 569+00 570+00 571+00 572+00 573+00 574+00 575+00 576+00 577

R/L IH 94

CROSS CREEK CT

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 91	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 04

PLOT DATE : 2/8/2024 4:29 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

GOLF RD

IH 94

L MHURST RD

WETLANDS

SLOPE INTERCEPT

SILT FENCE

12" LINED CMCP

A

INL

578+00 579+00 580+00 581+00 582+00 583+00 584+00 585+00 586+00 587+00 588+00 589+00 590+00 591+00 592+00 593+00

R/L IH 94

SILT FENCE

WETLANDS

SILVERNAIL RD

LEGEND

- EROSION MAT CLASS I TYPE B
- RIPRAP MEDIUM
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE DENOTED)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

N

WETLANDS

SILT FENCE

SLOPE INTERCEPT

GOLF RD

18" LINED CMCP

18" CMCP

IH 94

594+00 595+00 596+00 597+00 598+00 599+00 600+00 601+00 602+00 603+00 604+00 605+00 606+00 607

R/L IH 94

WETLANDS

SLOPE INTERCEPT

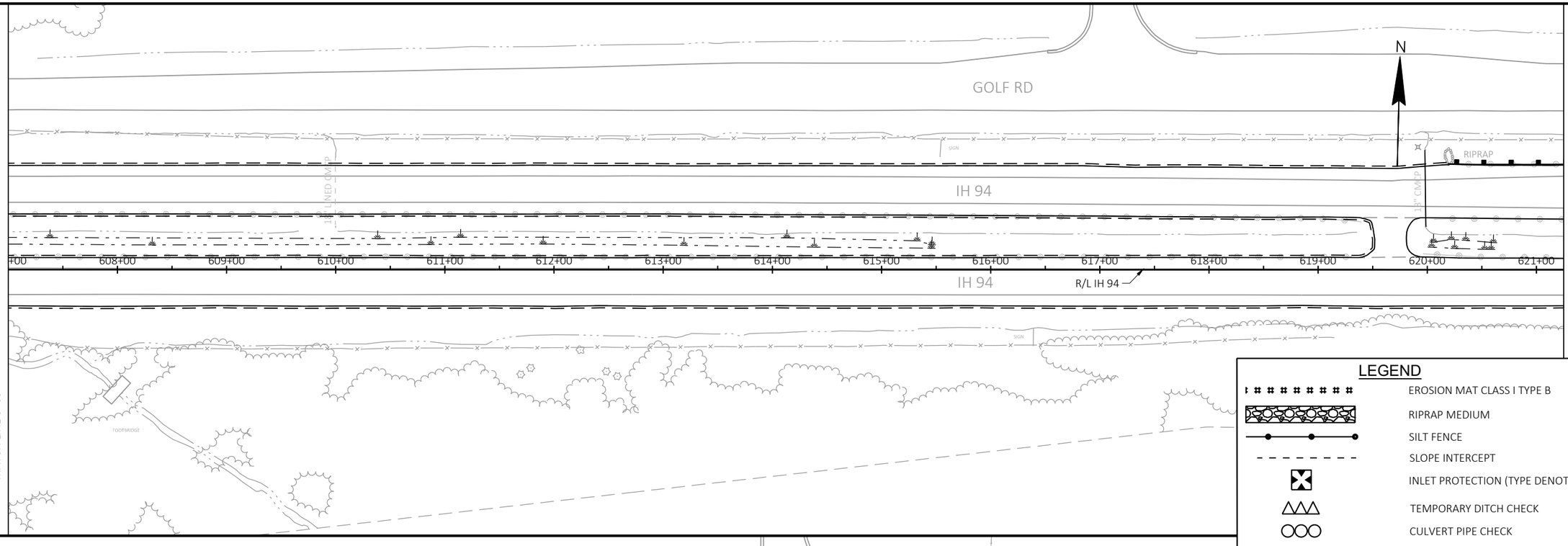
SILT FENCE

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 92	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 05

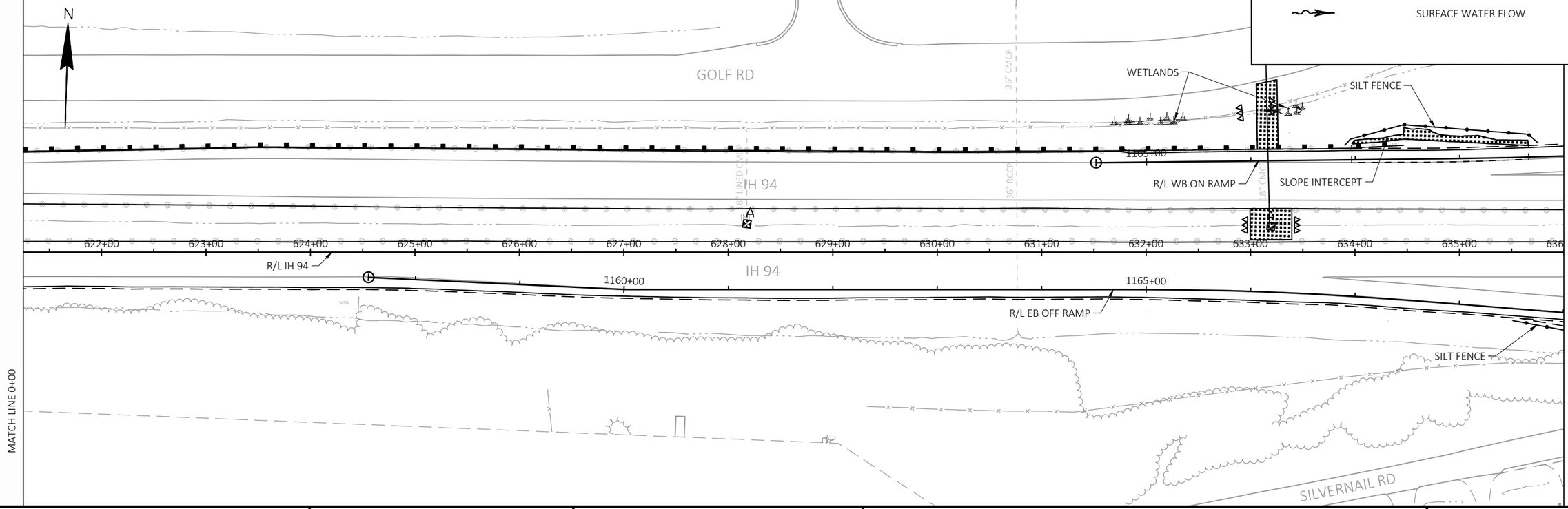
PLOT DATE : 2/8/2024 4:29 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



LEGEND

- EROSION MAT CLASS I TYPE B
- RIPRAP MEDIUM
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE DENOTED)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW



PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 93	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 06

PLOT DATE : 2/8/2024 4:30 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

WETLANDS
SILT FENCE
SLOPE INTERCEPT
R/L WB ON RAMP
R/L IH 94
R/L EB OFF RAMP
R/L WB OFF RAMP
IH 94
GOLF RD
SILVERNAIL RD
MATCH LINE 0+00
1170+00
1175+00
1180+00
1185+00
1190+00
1195+00
637+00
638+00
639+00
640+00
641+00
642+00
643+00
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648+00
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651+00
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655+00
656+00
657+00
658+00
659+00
660+00
661+00
662+00
663+00
664+00
665+00
RIPRAP
INL
W
MH
SIGN
WALLS
POST
SEPTIC
A/C

LEGEND

- EROSION MAT CLASS I TYPE B
- RIPRAP MEDIUM
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE DENOTED)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 94	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 07
PLOT DATE : 2/8/2024 4:30 PM
PLOT BY : JOE MAAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

2

2

LEGEND

- EROSION MAT CLASS I TYPE B
- RIPRAP MEDIUM
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE DENOTED)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

MATCH LINE 0+00

RIVERLAND DR

GOLF RD

RIPRAP

R/L WB ON RAMP

225+00

IH 94

666+00 667+00 668+00 669+00 670+00 671+00 672+00 673+00 674+00 675+00 676+00 677+00 678+00 679+00 680+00

R/L IH 94

IH 94

R/L EB OFF RAMP

65+00

70+00

SILVERNAIL RD

R/L SILVERNAIL RD

POST

DR

RIPRAP

MATCH LINE 0+00

235+00

R/L WB ON RAMP

230+00

N

282+00

R/L CTH G

MEADOW BROOK RD

IH 94

681+00 682+00 683+00 684+00 685+00 686+00 687+00 688+00 689+00 690+00 691+00 692+00 693+00 694+00

R/L IH 94

IH 94

230+00

235+00

R/L EB OFF RAMP

SLOPE INTERCEPT

SILT FENCE

75+00

SILVERNAIL RD

R/L SILVERNAIL RD

RIPRAP

240+00

WETLANDS

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 95	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 08

PLOT DATE : 2/8/2024 4:30 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

WETLANDS

SLOPE INTERCEPT

SILT FENCE

R/L IH 94

IH 94

R/L WB OFF RAMP

SIGN

250+00

255+00

GOLF RD

RIPRAP

POST

INL

W

695+00 696+00 697+00 698+00 699+00 700+00 701+00 702+00 703+00 704+00 705+00 706+00 707+00 708+00 709+00

BROOK RD

MATCH LINE 0+00

SLOPE INTERCEPT

SILT FENCE

245+00

250+00

255+00

100+00

R/L EB ON RAMP

WETLANDS

R/L SILVERNAIL RD

WALLS

LEGEND

- EROSION MAT CLASS I TYPE B
- RIPRAP MEDIUM
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE DENOTED)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

N

POST

GOLF RD

R/L WB OFF RAMP

RIPRAP

260+00

IH 94

710+00 711+00 712+00 713+00 714+00 715+00 716+00 717+00 718+00 719+00 720+00 721+00 722+00 723+00 724+00

R/L IH 94

IH 94

260+00

265+00

R/L EB ON RAMP

105+00

110+00

SILVERNAIL RD

R/L SILVERNAIL RD

SUSSEX LN

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 96	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 09

PLOT DATE : 2/8/2024 4:30 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

WETLANDS

GOLF RD

RIPRAP

IH 94

725+00 726+00 727+00 728+00 729+00 730+00 731+00 732+00 733+00 734+00 735+00 736+00 737+00 738+00 739+00

R/L IH 94

IH 94

MATCH LINE 0+00

LEGEND

- EROSION MAT CLASS I TYPE B
- RIPRAP MEDIUM
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE DENOTED)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

R/L WB ON RAMP

RIPRAP

RIPRAP

740+00 741+00 742+00 743+00 744+00 745+00 746+00 747+00 748+00 749+00 750+00 751+00 752+00 753+00 754

R/L IH 94

IH 94

IH 94

MATCH LINE 0+00

SILVERNAIL RD

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 97	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 10

PLOT DATE : 2/8/2024 4:30 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

LEGEND

- EROSION MAT CLASS I TYPE B
- RIPRAP MEDIUM
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE DENOTED)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

MATCH LINE 0+00

RIPRAP
RIPRAP
RIPRAP
R/L WB ON RAMP
95+00
100+00
105+00
IH 94
755+00
756+00
757+00
758+00
759+00
760+00
761+00
762+00
763+00
764+00
765+00
766+00
767+00
768+00
R/L IH 94
4100+00
4105+00
R/L EB OFF RAMP
110+00
R/L WB ON RAMP
WETLANDS
2120+00
R/L WB OFF RAMP
WETLANDS
CTH T/GRANDVIEW BLVD.
R/L CTH T
770+00
771+00
772+00
773+00
774+00
775+00
776+00
777+00
778+00
779+00
780+00
781+00
782+00
125+00
R/L IH 94
WETLANDS
4110+00
R/L EB OFF RAMP
WETLANDS
3120+00
R/L EB ON RAMP
WETLANDS

MATCH LINE 0+00

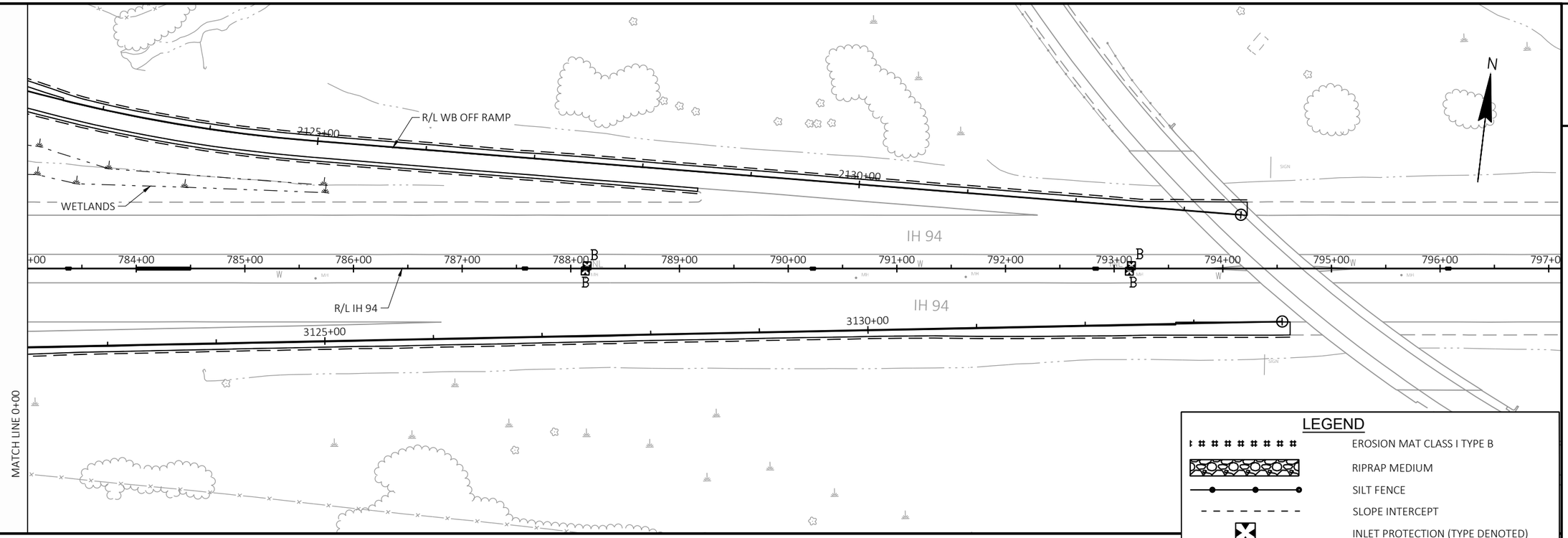
PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 98	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 11

PLOT DATE : 2/8/2024 4:30 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

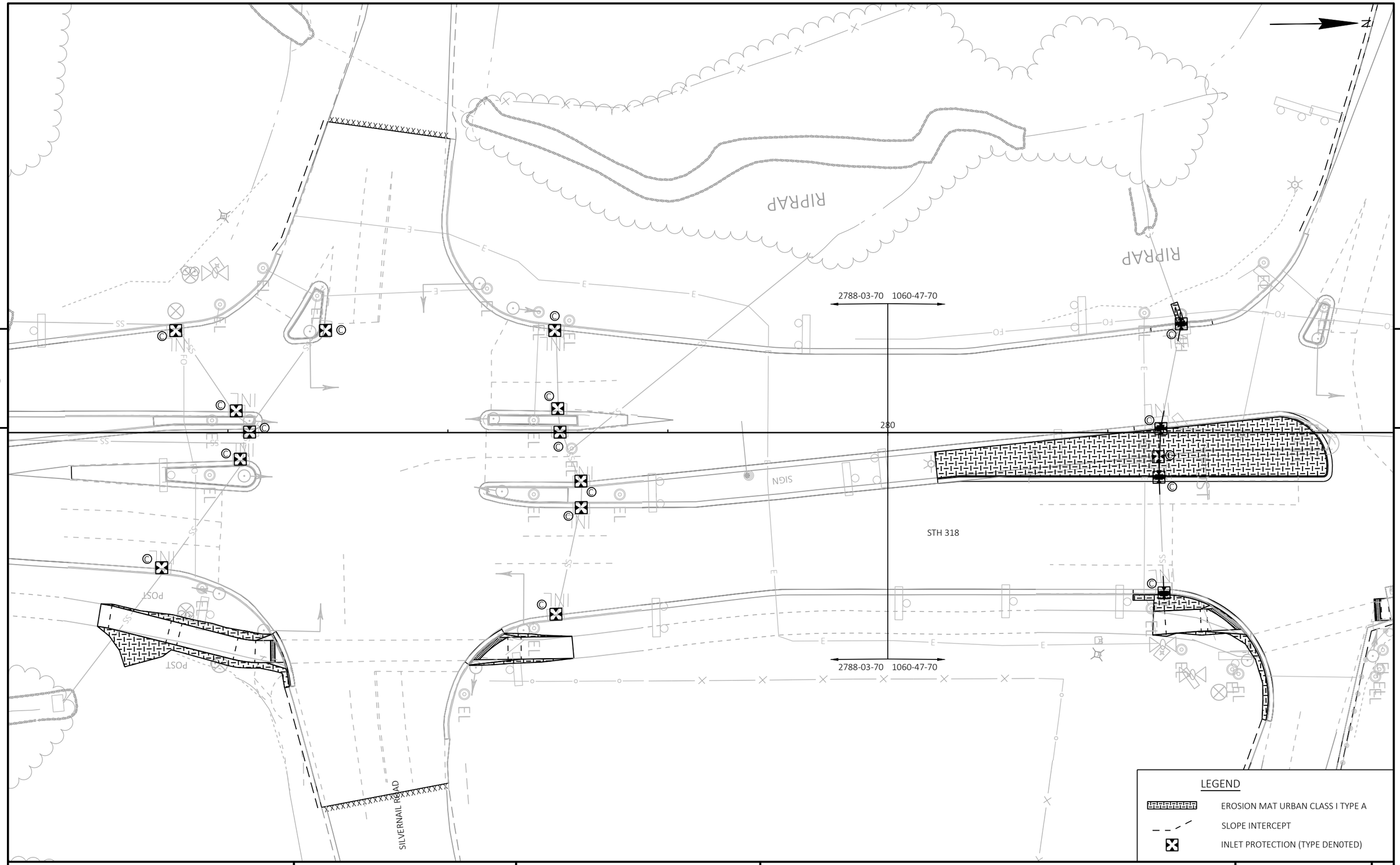


LEGEND

- EROSION MAT CLASS I TYPE B
- RIPRAP MEDIUM
- SILT FENCE
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE DENOTED)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 99	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 12
PLOT DATE : 2/8/2024 4:30 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

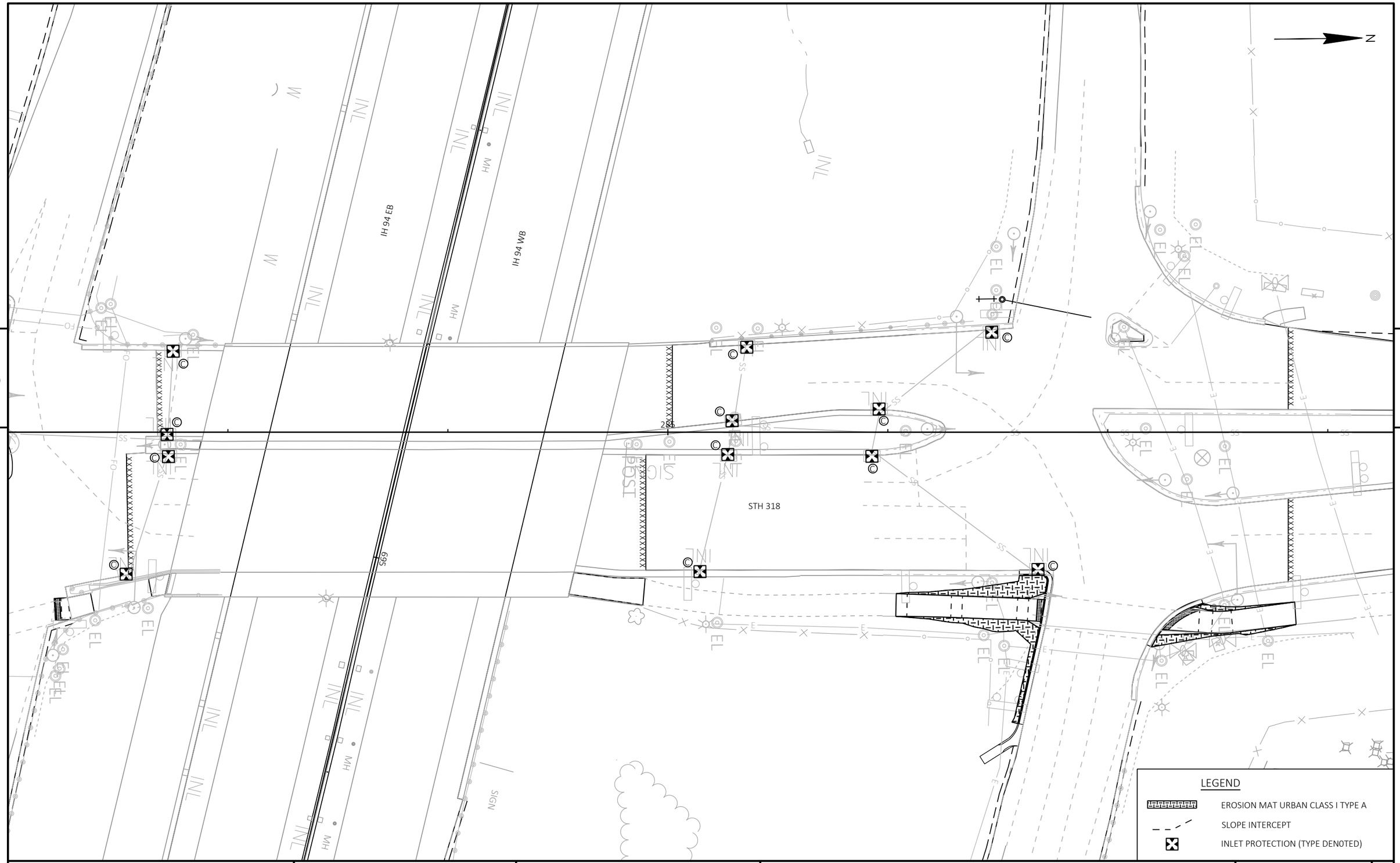


PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 100	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022001

PLOT DATE : 1/11/2024 10:06 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



5

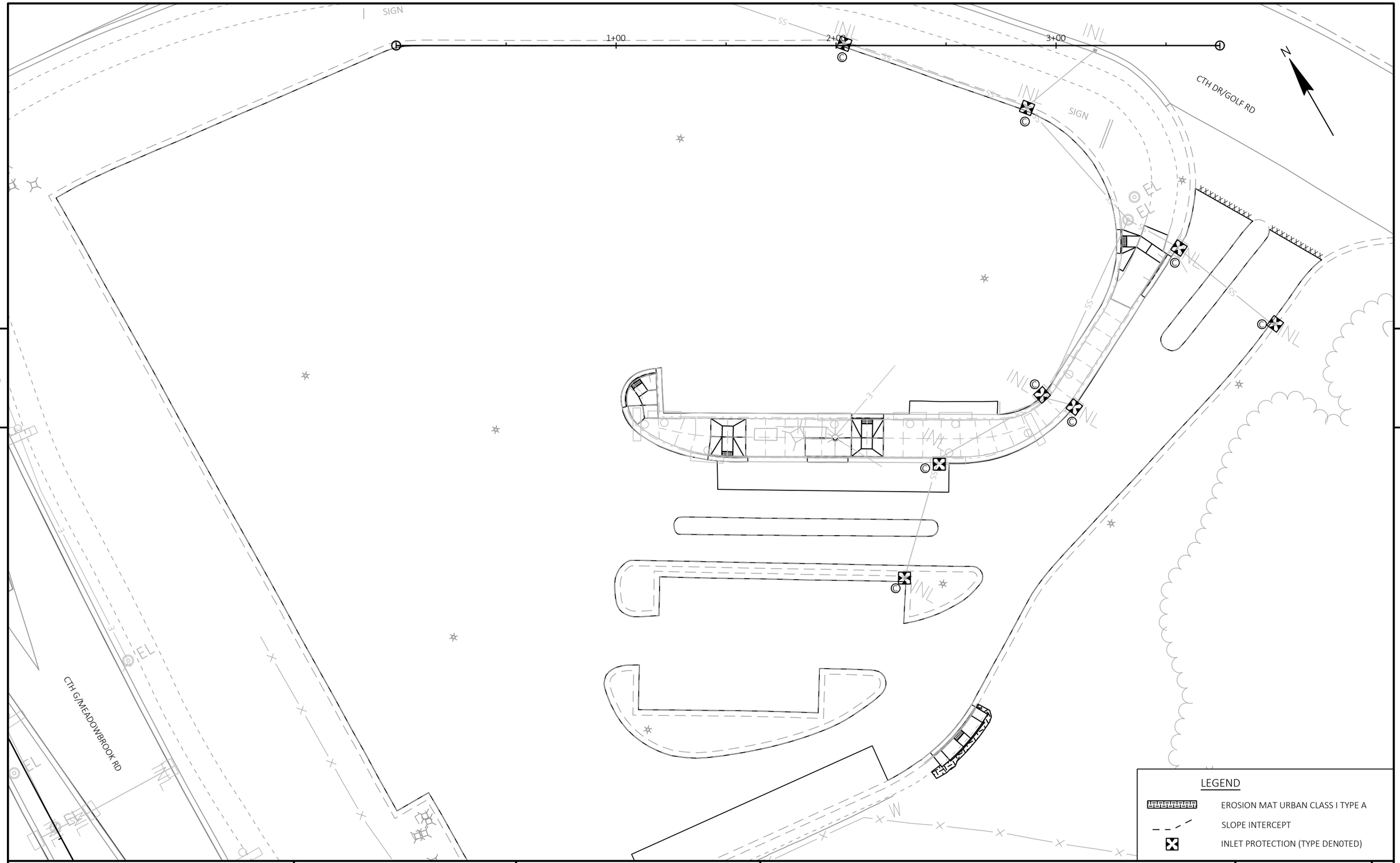
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PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 101	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022002

PLOT DATE : 1/11/2024 10:07 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



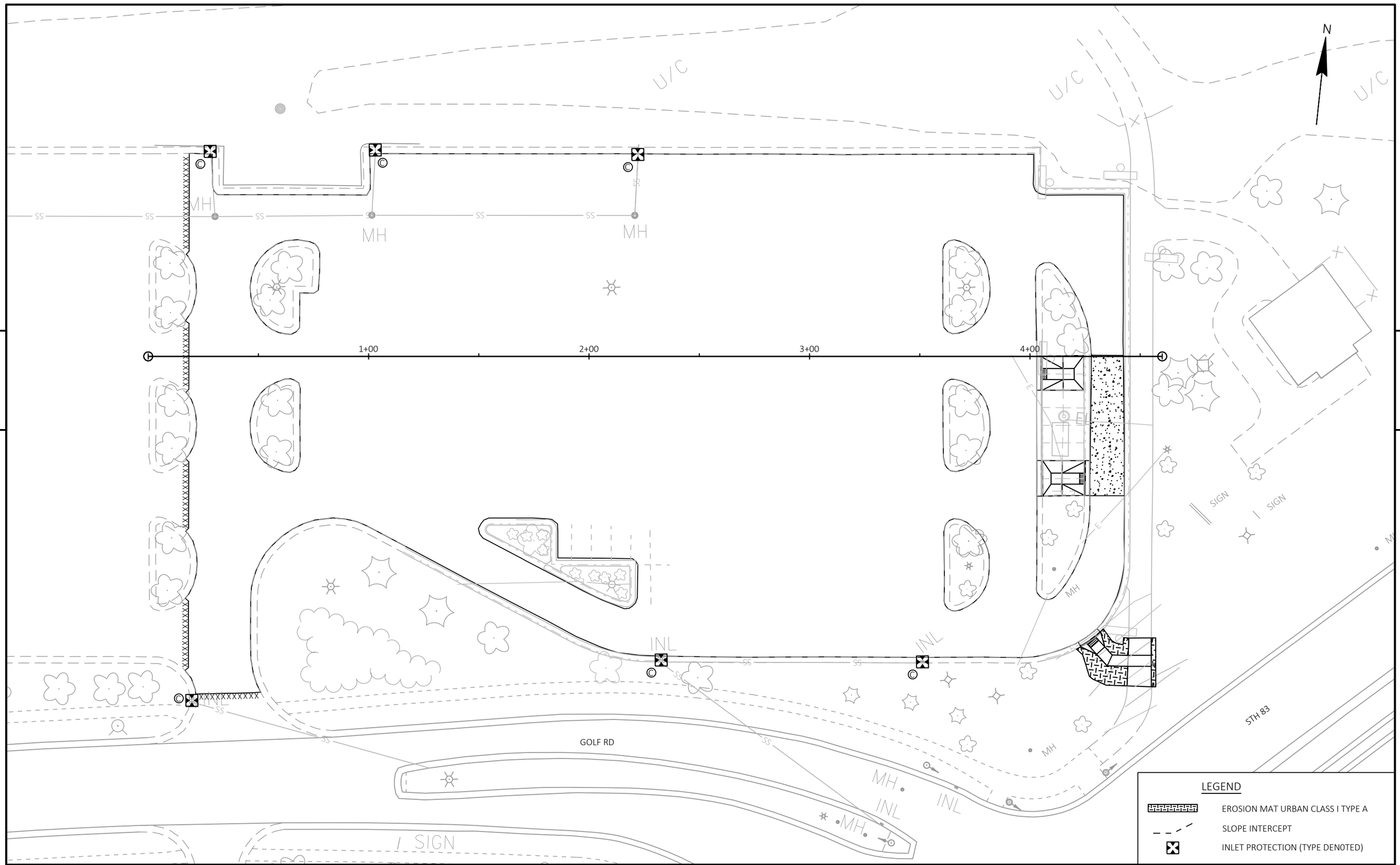
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PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 102	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022003

PLOT DATE : 1/11/2024 10:07 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT



5

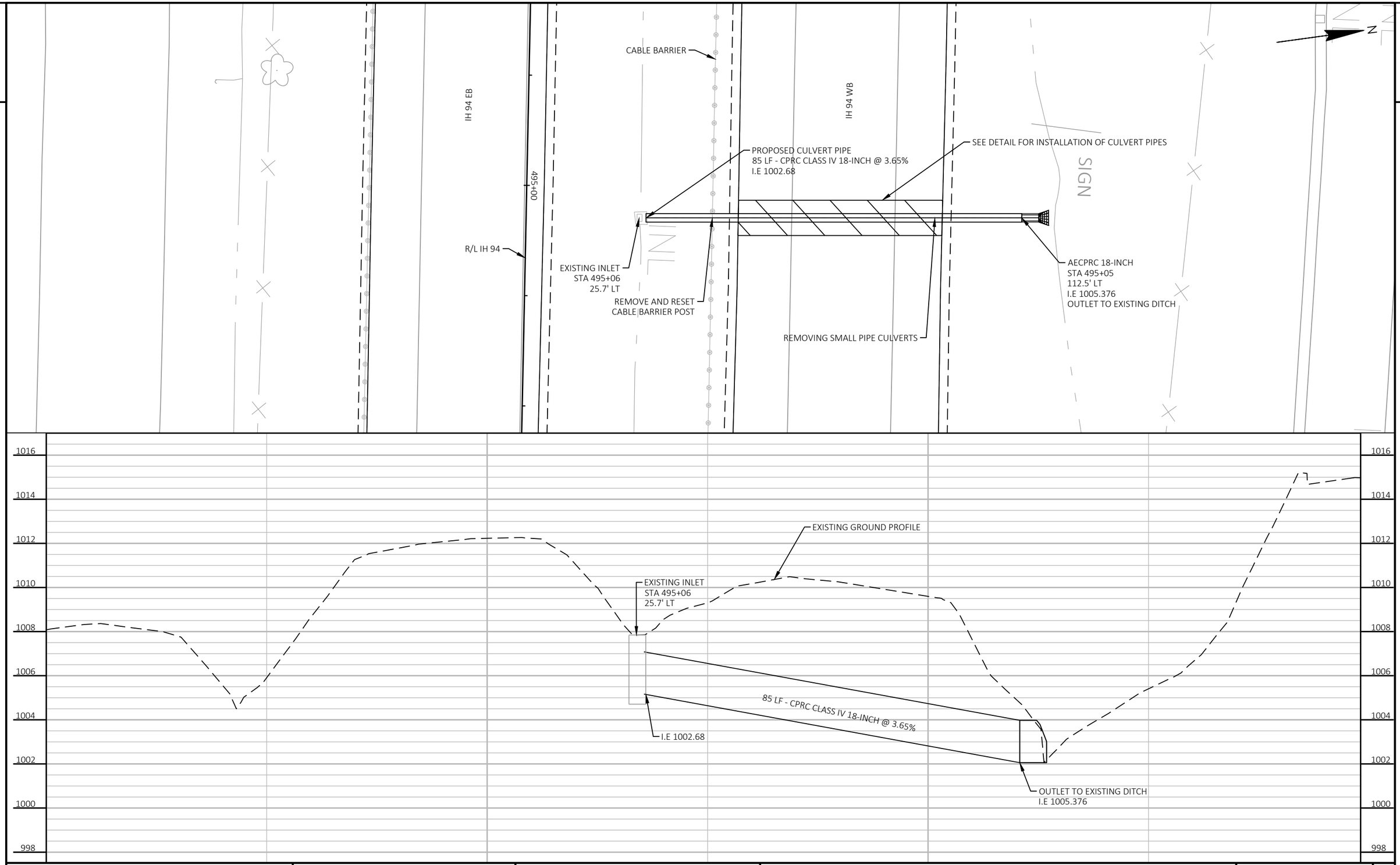
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PROJECT NO: 1330-47-71	HWY: STH 83	COUNTY: WAUKESHA	EROSION CONTROL PLAN	SHEET 103	E

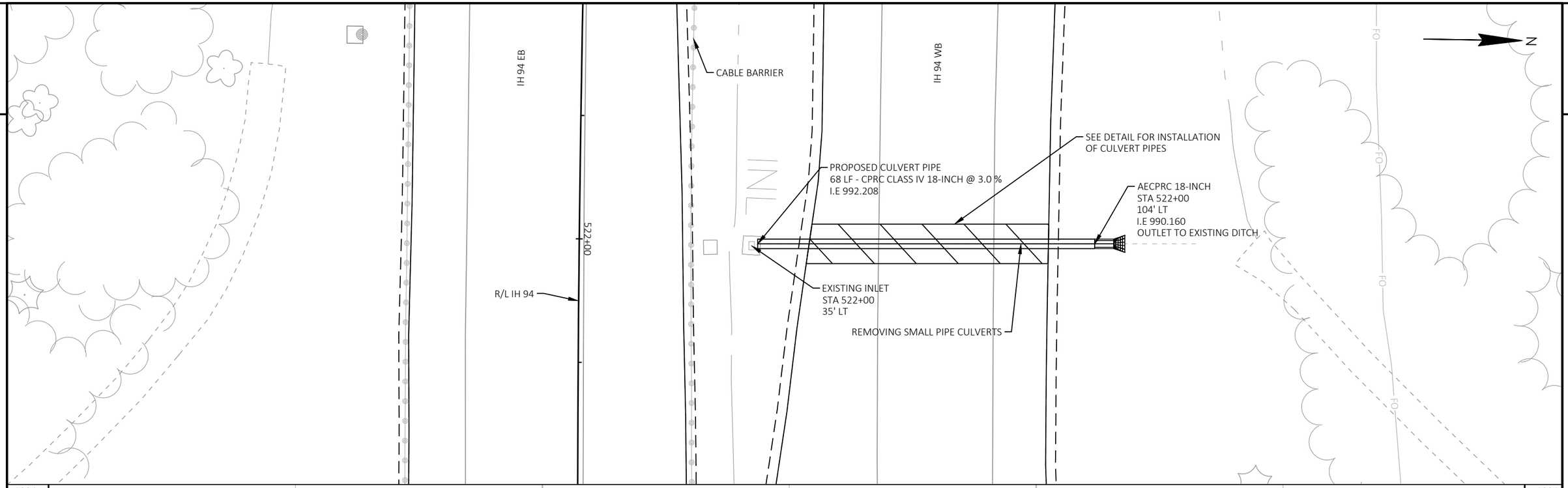
FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 022004

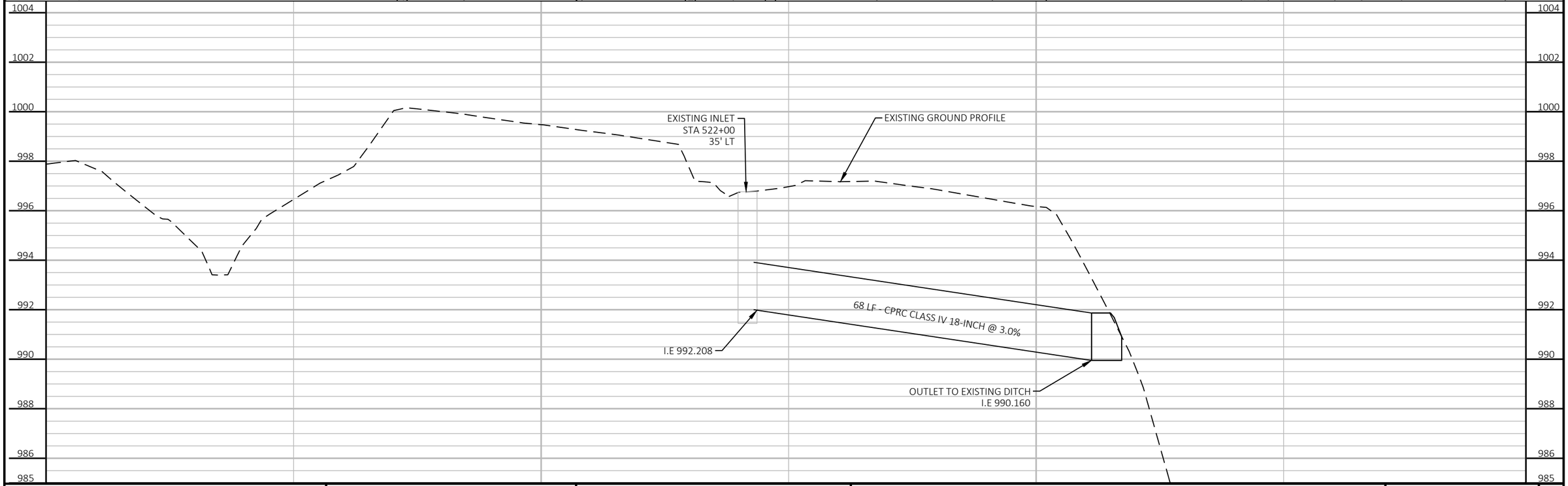
PLOT DATE : 1/11/2024 10:07 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	CROSS CULVERT DETAILS	SHEET 104	E

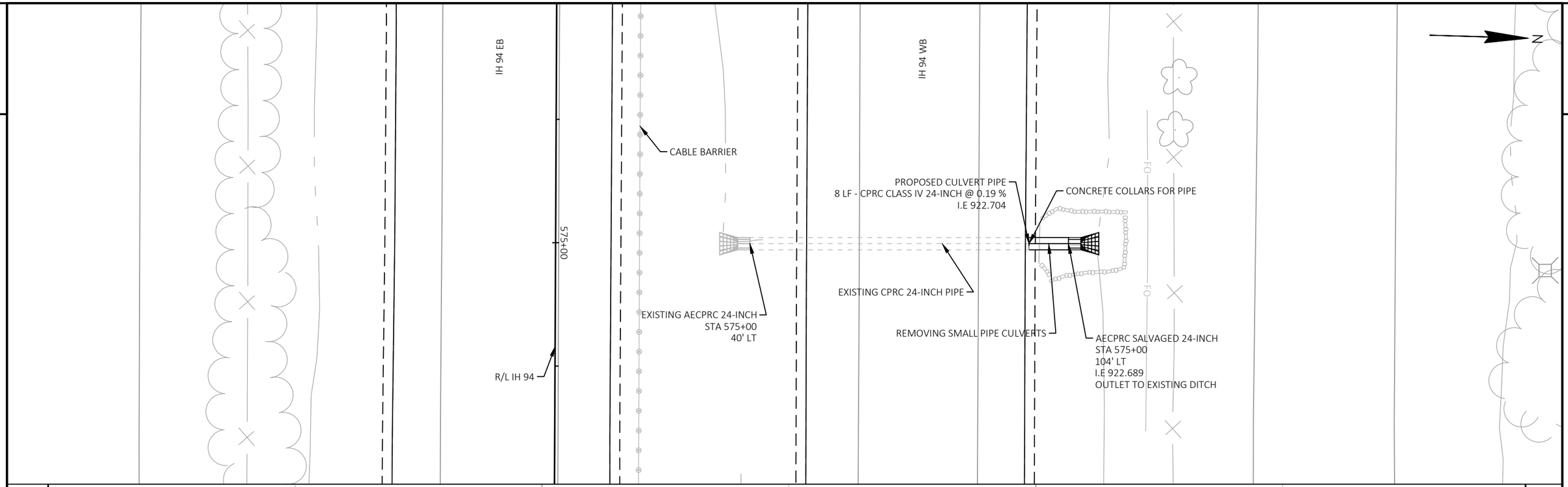




PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	CROSS CULVERT DETAILS	SHEET 105	E

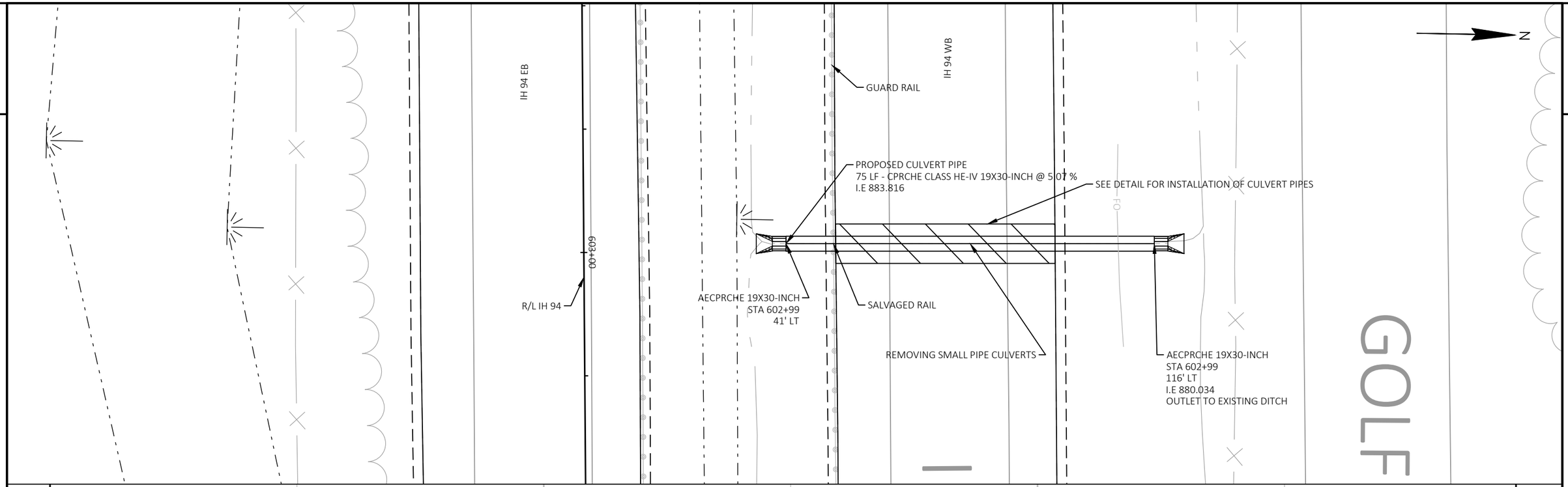
FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022502_SS.DWG
LAYOUT NAME - 022502_ss_02

PLOT DATE : 1/11/2024 12:01 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:20 FT



PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	CROSS CULVERT DETAILS	SHEET 106	E

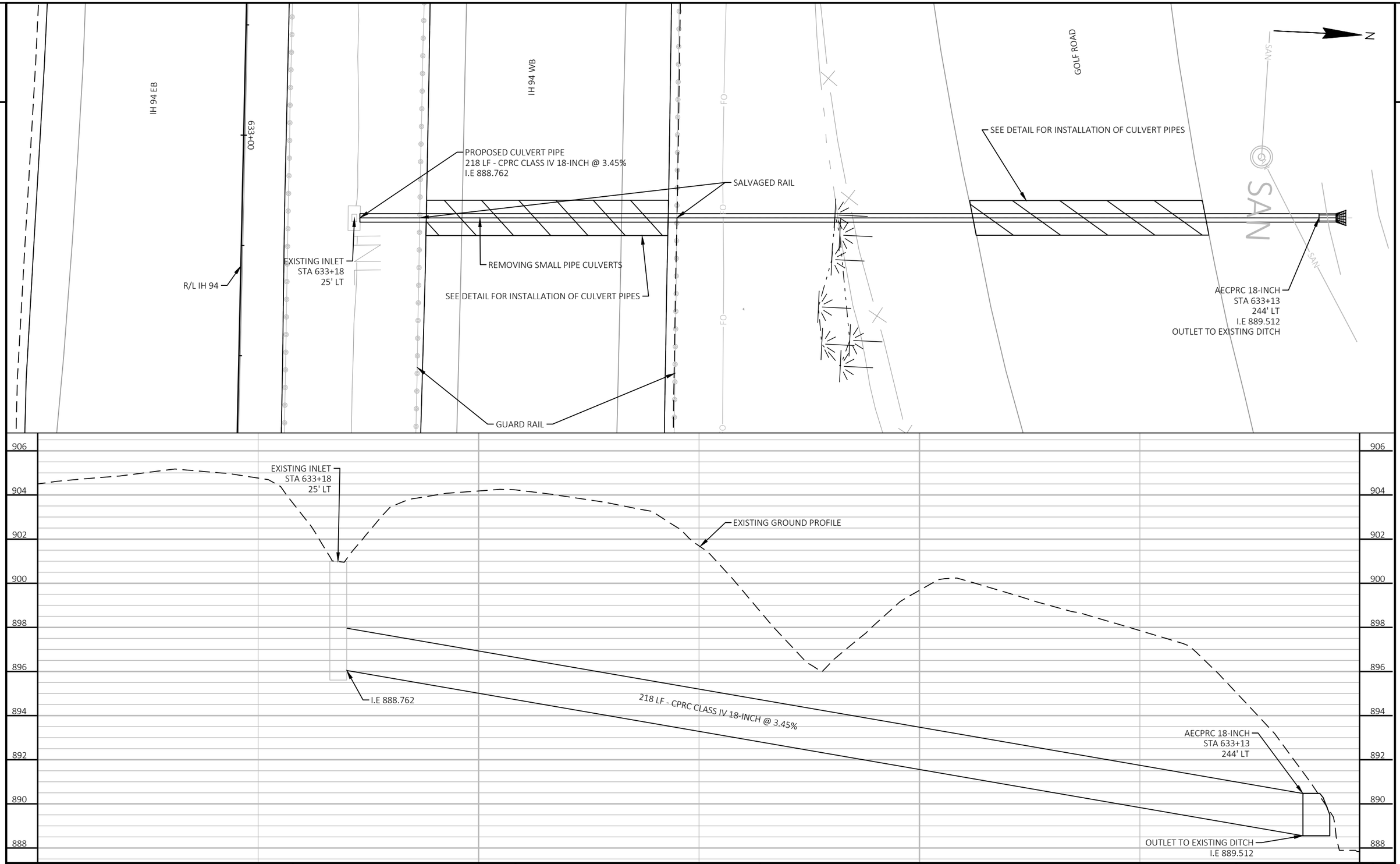
FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022502_SS.DWG
LAYOUT NAME - 022502_ss_03
PLOT DATE : 1/11/2024 12:02 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 41



PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	CROSS CULVERT DETAILS	SHEET 107	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022502_SS.DWG
LAYOUT NAME - 022502_ss_04

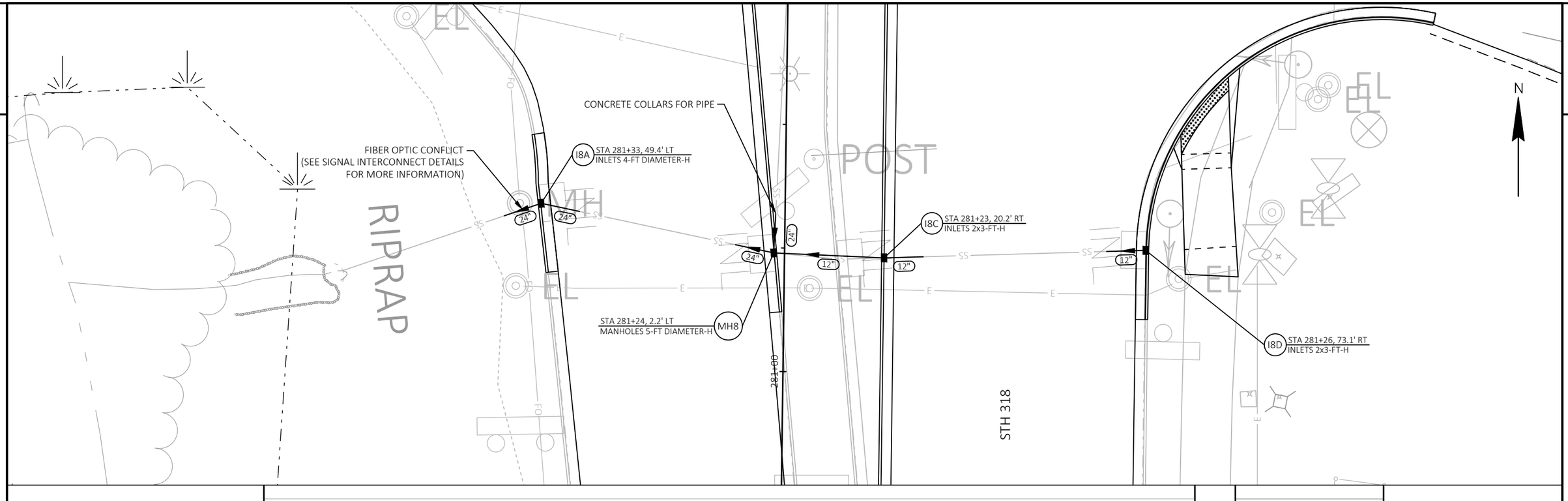
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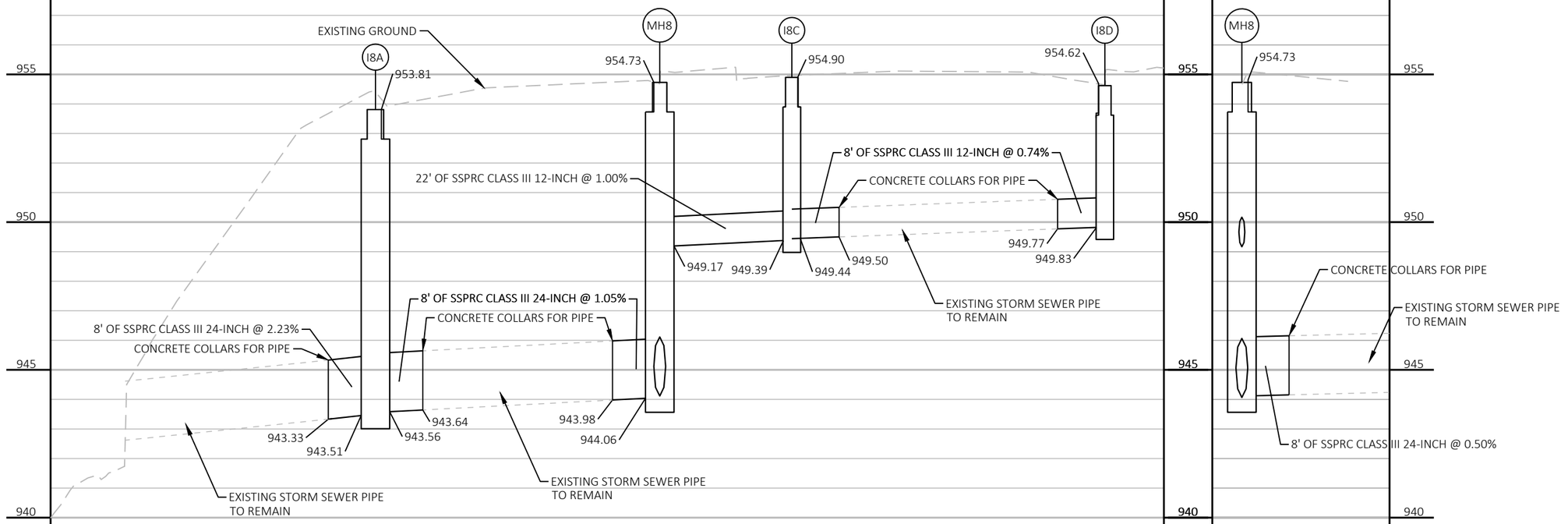


PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	CROSS CULVERT DETAILS	SHEET 108	E

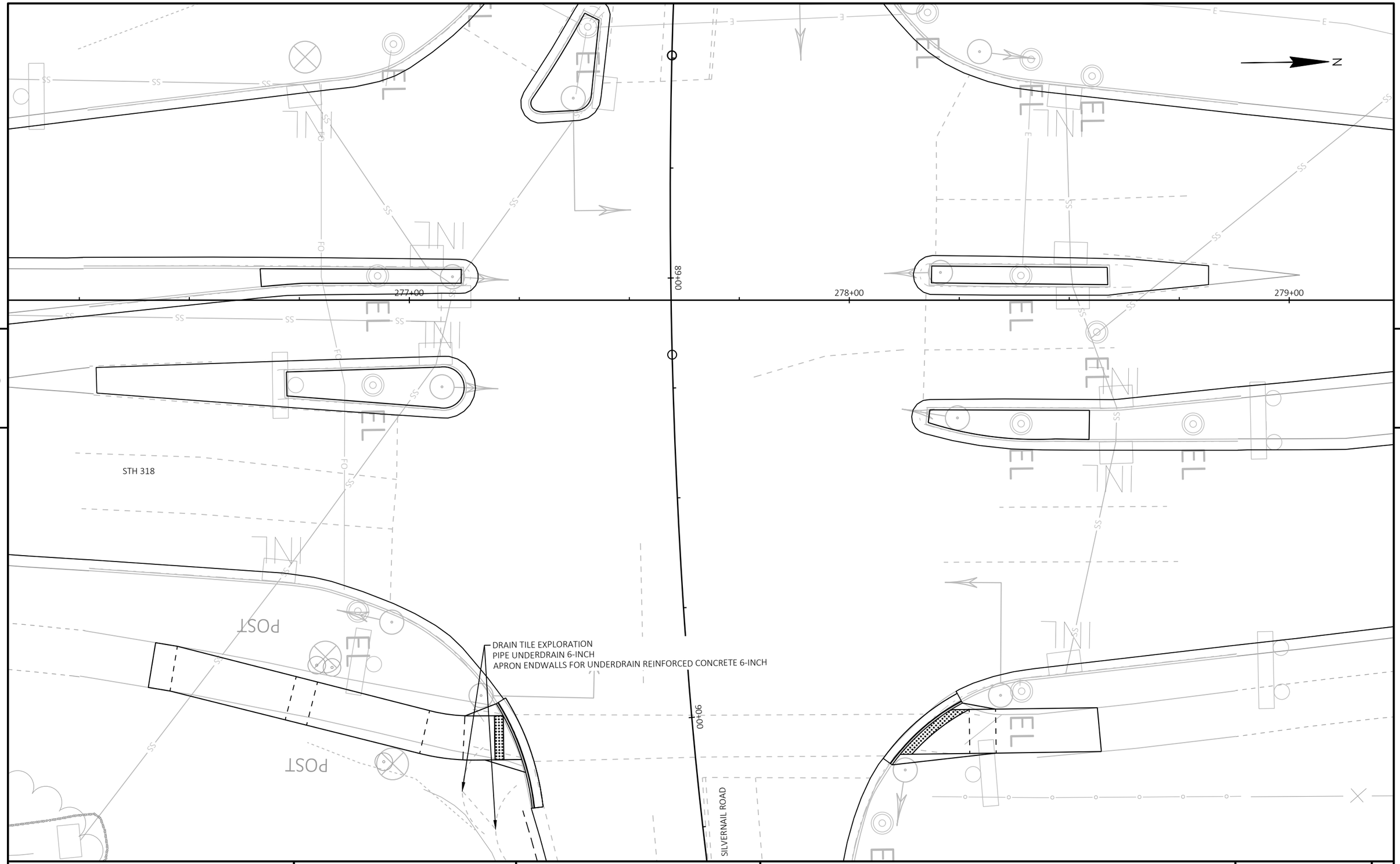
FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\022502_SS.DWG
LAYOUT NAME - 022502_ss_05

PLOT DATE : 1/11/2024 12:04 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:20 FT





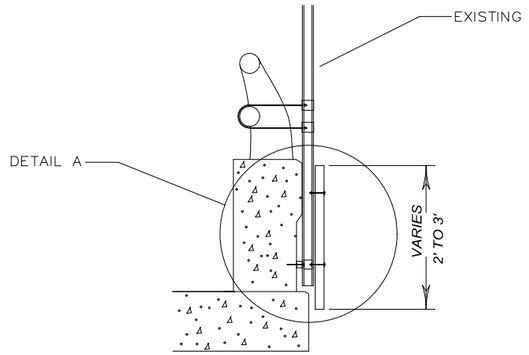
PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	STORM SEWER	SHEET 109	E



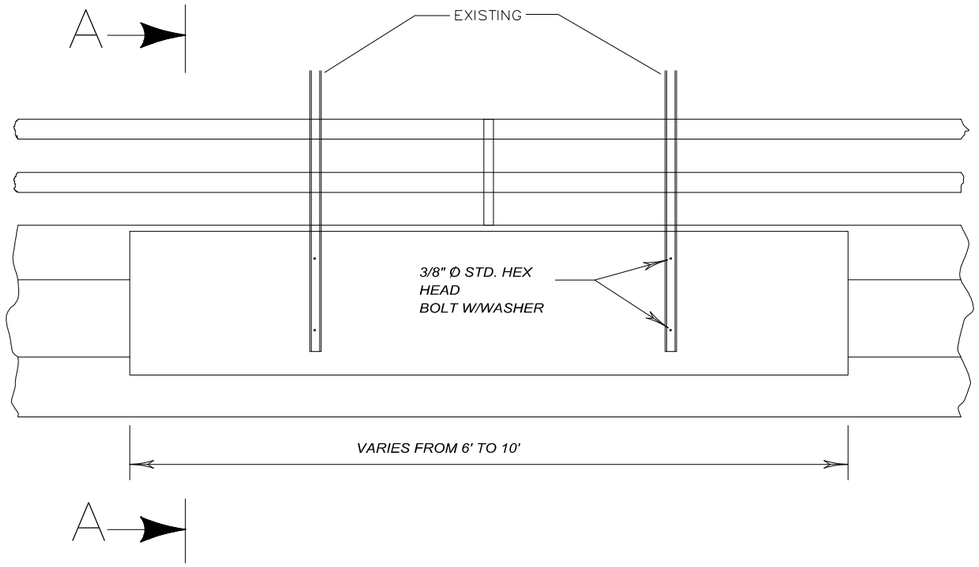
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5

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	STORM SEWER	SHEET 110	E



SECTION A–A
SIDE VIEW

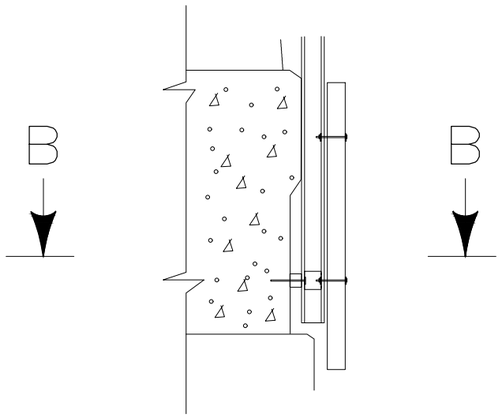


FRONT VIEW

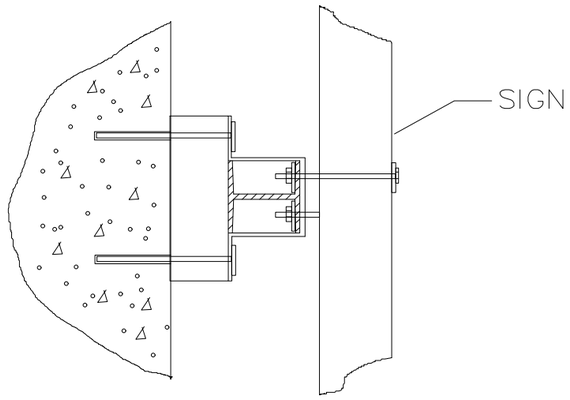
NOTES:

PROVIDE NEW BOLTS.

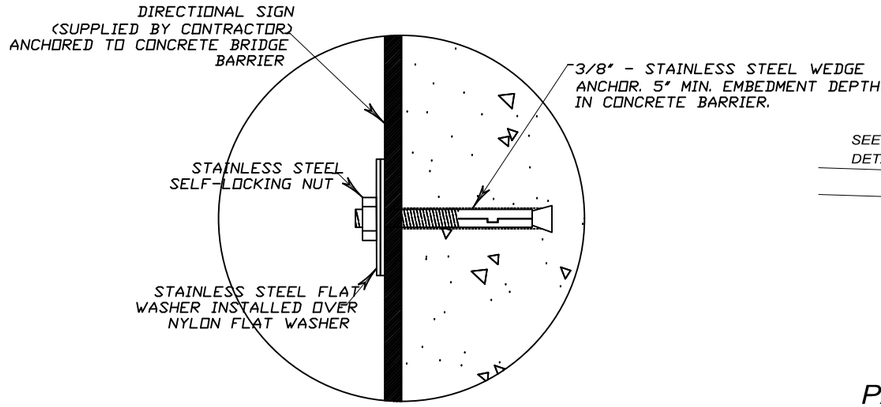
MOUNTING DETAIL COSTS ARE INCIDENTAL TO PAY ITEM "TYPE II SIGNS, REFLECTIVE".



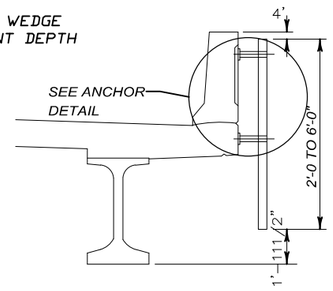
DETAIL A



SECTION B–B
TOP VIEW



ANCHOR DETAIL
N.T.S.



PARAPET OPTION
WITHOUT RAIL

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	SIGN MOUNTING DETAIL ON BRIDGE	SHEET 111 E

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
- ( ) YEAR OF EXISTING SIGN

NOTE: OTHER SIGNS NOT SHOWN WILL BE REPLACED IN FUTURE BY CORRIDOR SIGNING (BTO)

CABLE GUARD BEING REPLACED 2300 FEET

REMOVE REMOVE

D10-5(5) D10-5(5)

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

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 112	E

SHEET 1 OF 35

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 1

PLOT DATE : 6/15/2023 7:43 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 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
- ( ) YEAR OF EXISTING SIGN

PRC: 464+34.27
PT: 466+07.43
PT: 467+36.59
EP: 471+04.90
PC: 472+37.57
EP: 474+96.17
IH 94
REMOVE
WEST 94 MILE 287 .6
D10-5 (5)
EAST 94 MILE 287 .6
D10-5 (5)
RIPRAP
INL
SIGN
POST

SHEET 2 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 113	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 2

PLOT DATE : 6/15/2023 7:43 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 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
- ( ) YEAR OF EXISTING SIGN

EXIT 287

83

Hartland
Wales

REMOVE

EXIT 287

5 5A

83

Hartland
Wales

(2007)

TYPE I
REPLACE STEEL POSTS

GAS
(SIS)
EXIT 287

WISC BUSINESS
SIGN TO REMAIN
TYPE I

IH 94

480 485 490

EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES

R3-4B
ESTR

Traffic Info
Tune Radio
To 1610

TYPE I
HAS BEEN REMOVED

SHEET 3 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 114	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 3

PLOT DATE : 6/15/2023 7:43 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN
- ( ) YEAR OF EXISTING SIGN

N

GAS
(SIS)
EXIT 287

WISC BUSINESS
LOGOS SIGN
TYPE I
ESTR

Ten Chimneys
Nat'l Historic Landmark
EXIT 287

REMOVE

Ten Chimneys
Nat'l Historic Landmark
EXIT 287

6
(NO DATE)

BROWN SIGN
REPLACE STEEL POSTS

IH 94

495

500

505

IH 94

RIPRAP
INL
W
MH
SIGN
FLAG
WALLS
SLAB

SHEET 4 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 115	E

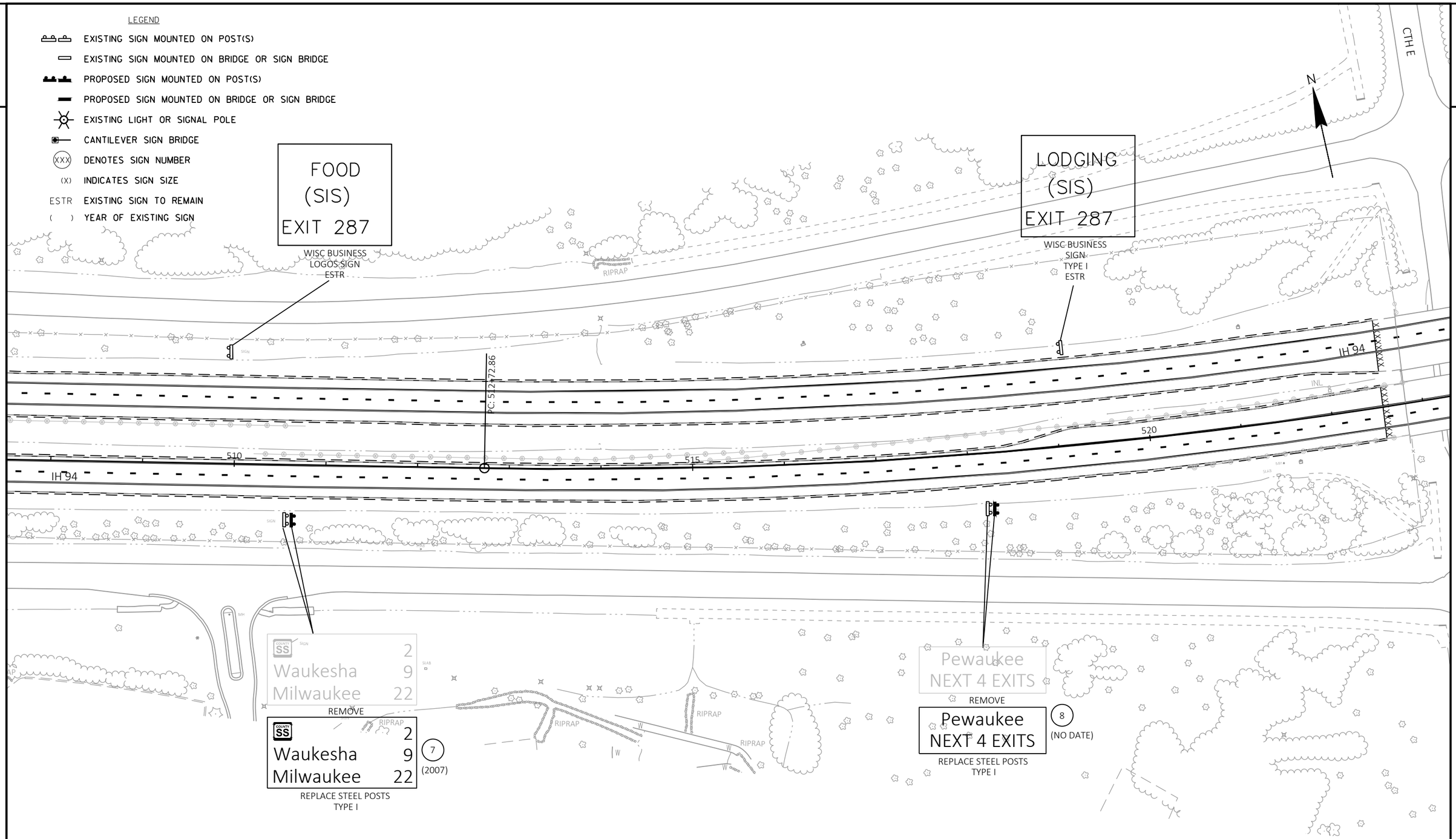
FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 4

PLOT DATE : 6/15/2023 7:44 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 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
- ( ) YEAR OF EXISTING SIGN



SHEET 5 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 116	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 5

PLOT DATE : 6/15/2023 7:44 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

CTH E

EXIT 287
83
Hartland
Wales
1 MILE

REMOVE

EXIT 287
83
Hartland
Wales
1 MILE

10 10A

(2007)

REMOVE STEEL POSTS
TYPE I

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
- ( ) YEAR OF EXISTING SIGN

N

IH 94

PT 5+80.097

525 530 535

INL

IH 94

Downtown
Pewaukee
EXIT 291

REMOVE

Downtown
Pewaukee
EXIT 291

9
(NO DATE)

REPLACE STEEL POSTS
TYPE I

ATHLETIC FIELD

ATHLETIC FIELD

SUBSTATION

SLAB

CTH E

RIPRAP

SHEET 6 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 117	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 6

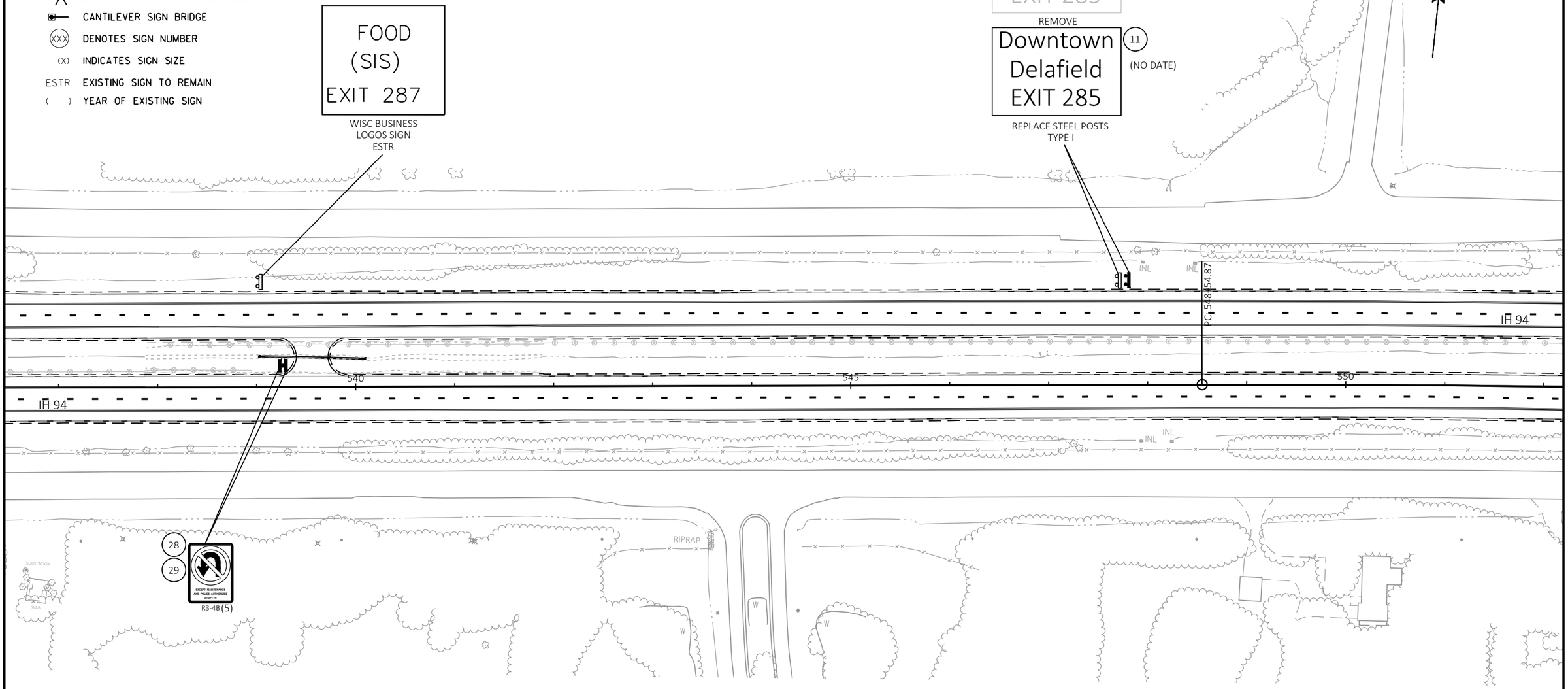
PLOT DATE : 6/15/2023 7:44 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

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
- ( ) YEAR OF EXISTING SIGN



SHEET 7 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 118	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 7

PLOT DATE : 6/15/2023 7:44 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 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
- ( ) YEAR OF EXISTING SIGN

Delafield
NEXT 2 EXITS

REMOVE

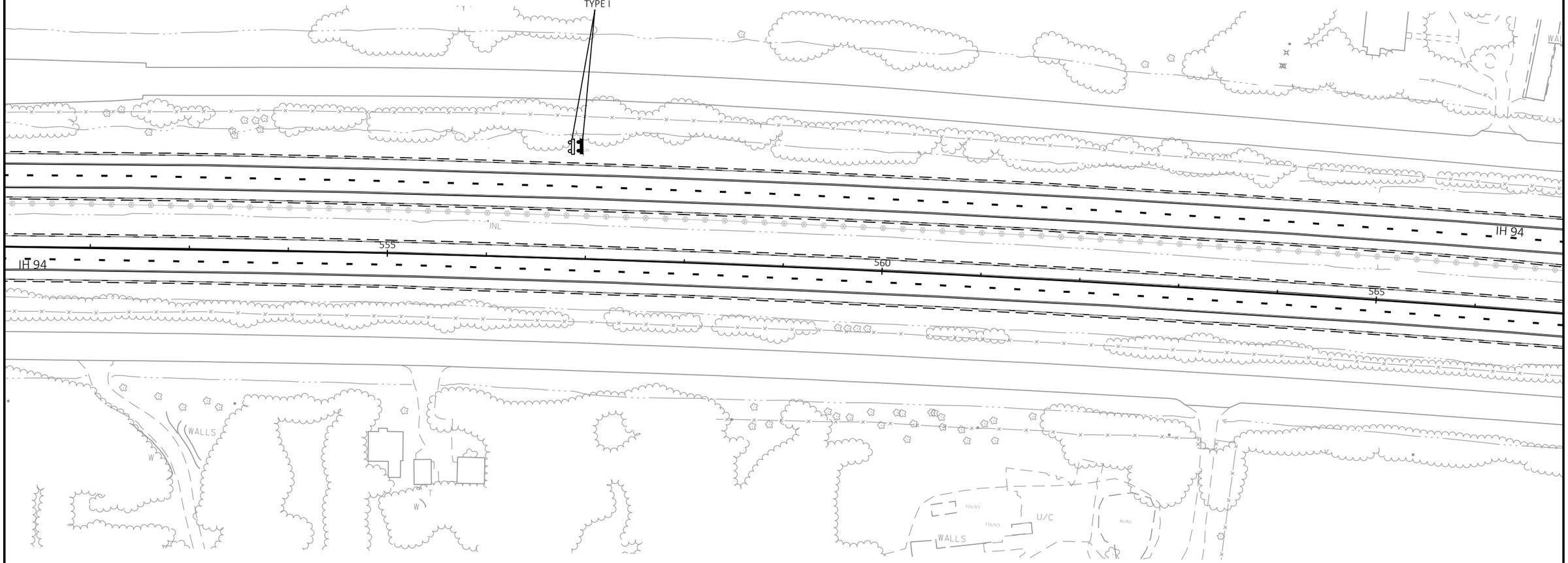
Delafield
NEXT 2 EXITS

12

(NO DATE)

REPLACE STEEL POSTS
TYPE I

N



2

SHEET 8 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 119	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 8

PLOT DATE : 6/15/2023 7:45 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN
- ( ) YEAR OF EXISTING SIGN

N

PT 1568+02.87

IH 94

570

575

580

IH 94

EXIT 290

COUNTY SS

Pewaukee

1 MILE

REMOVE

EXIT 290

13 13A

COUNTY SS

Pewaukee

1 MILE

(2012)

REPLACE STEEL POSTS
TYPE I

SHEET 9 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 120	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 9

PLOT DATE : 6/15/2023 7:45 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN
- ( ) YEAR OF EXISTING SIGN

N

NO SIGNS
THIS SHEET

CTW G (ELMHURST RD)

S-67-420
STA 590+10
DMS

IH 94

585 590 595

IH 94

CTW G (ELMHURST RD)

RIPRAP

INL

W

SHEET 10 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 121	E

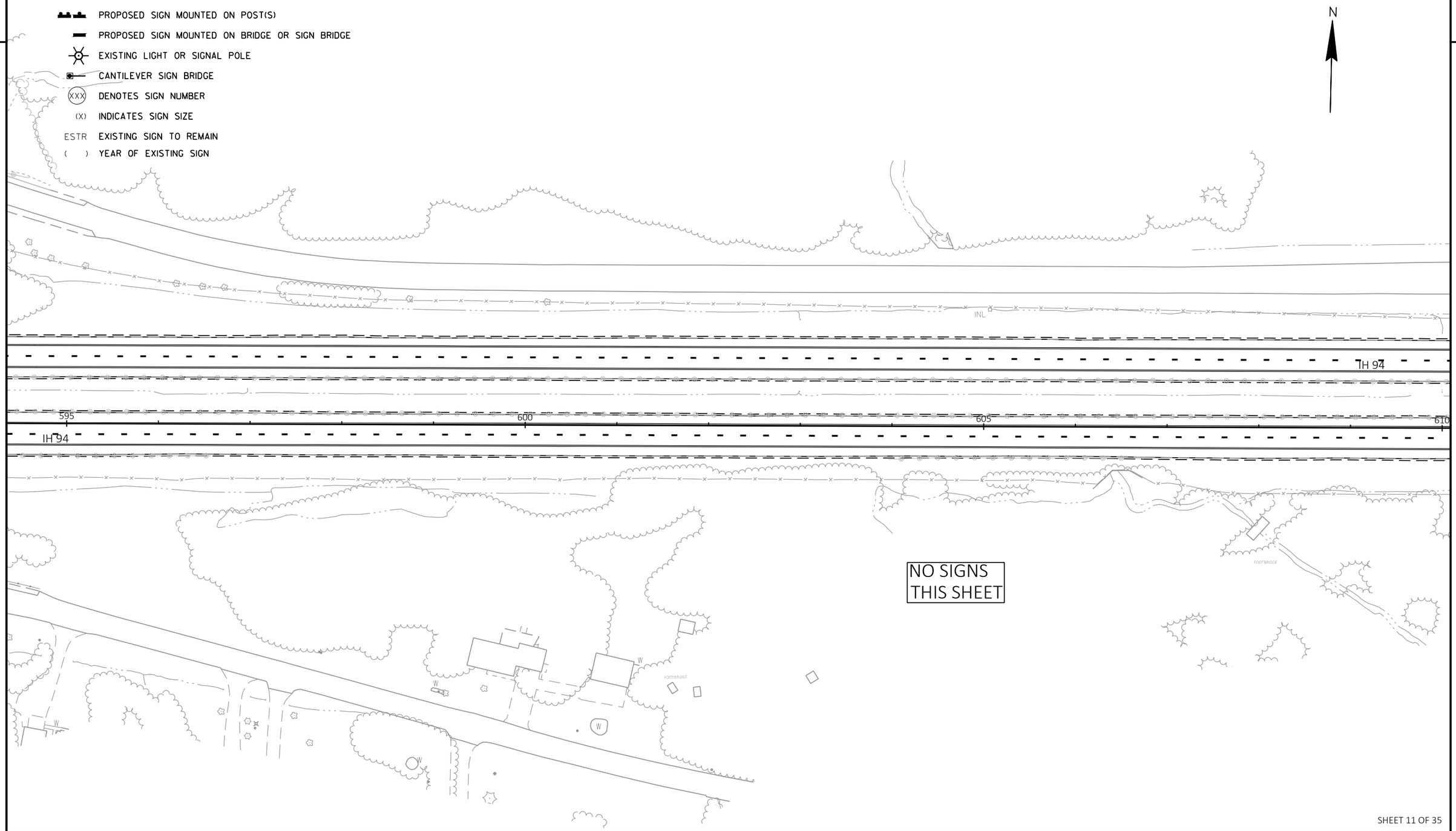
FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 10

PLOT DATE : 6/15/2023 7:45 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 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
- ( ) YEAR OF EXISTING SIGN



2

SHEET 11 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 122	E

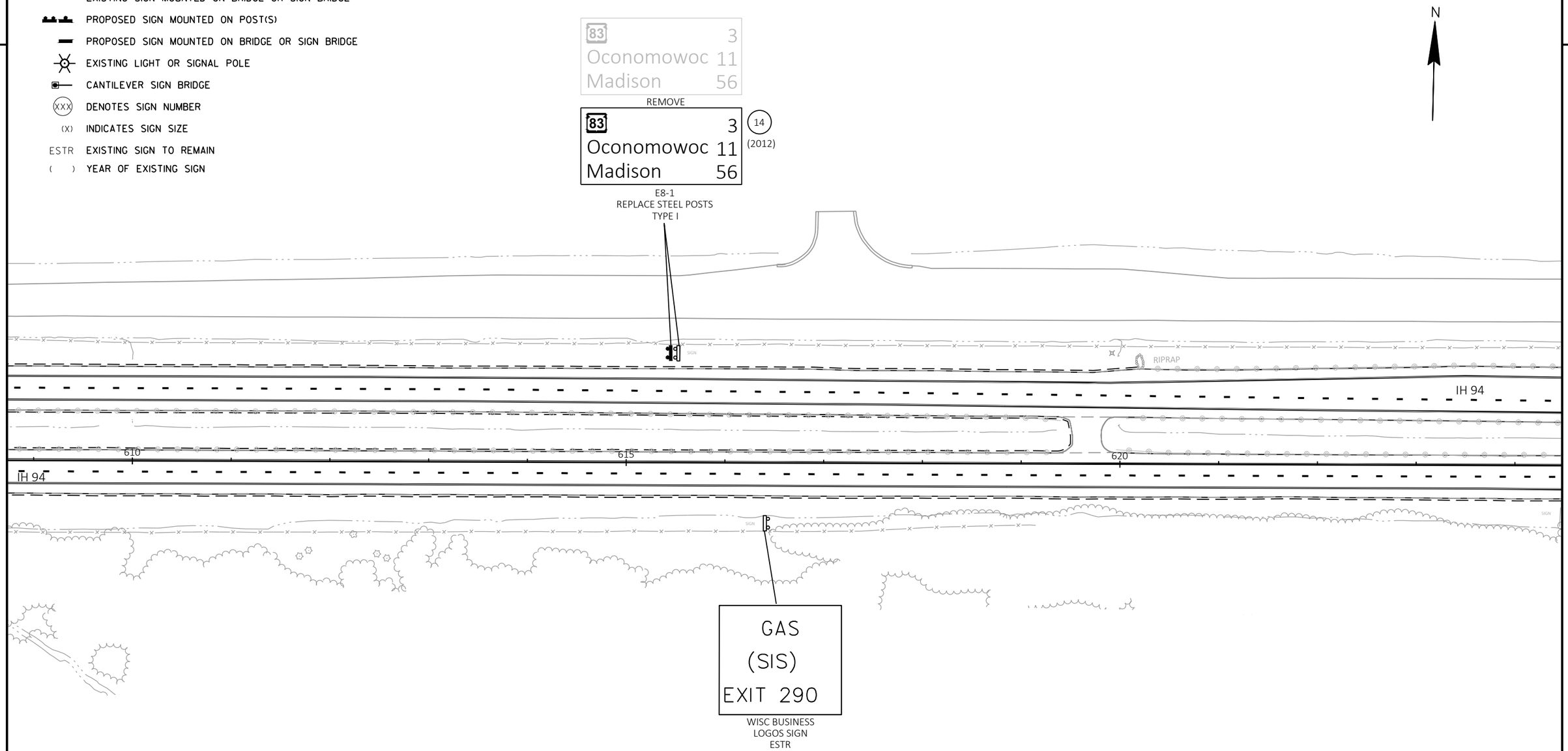
FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 11

PLOT DATE : 6/15/2023 7:46 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 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
- ( ) YEAR OF EXISTING SIGN



SHEET 12 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 123	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 12

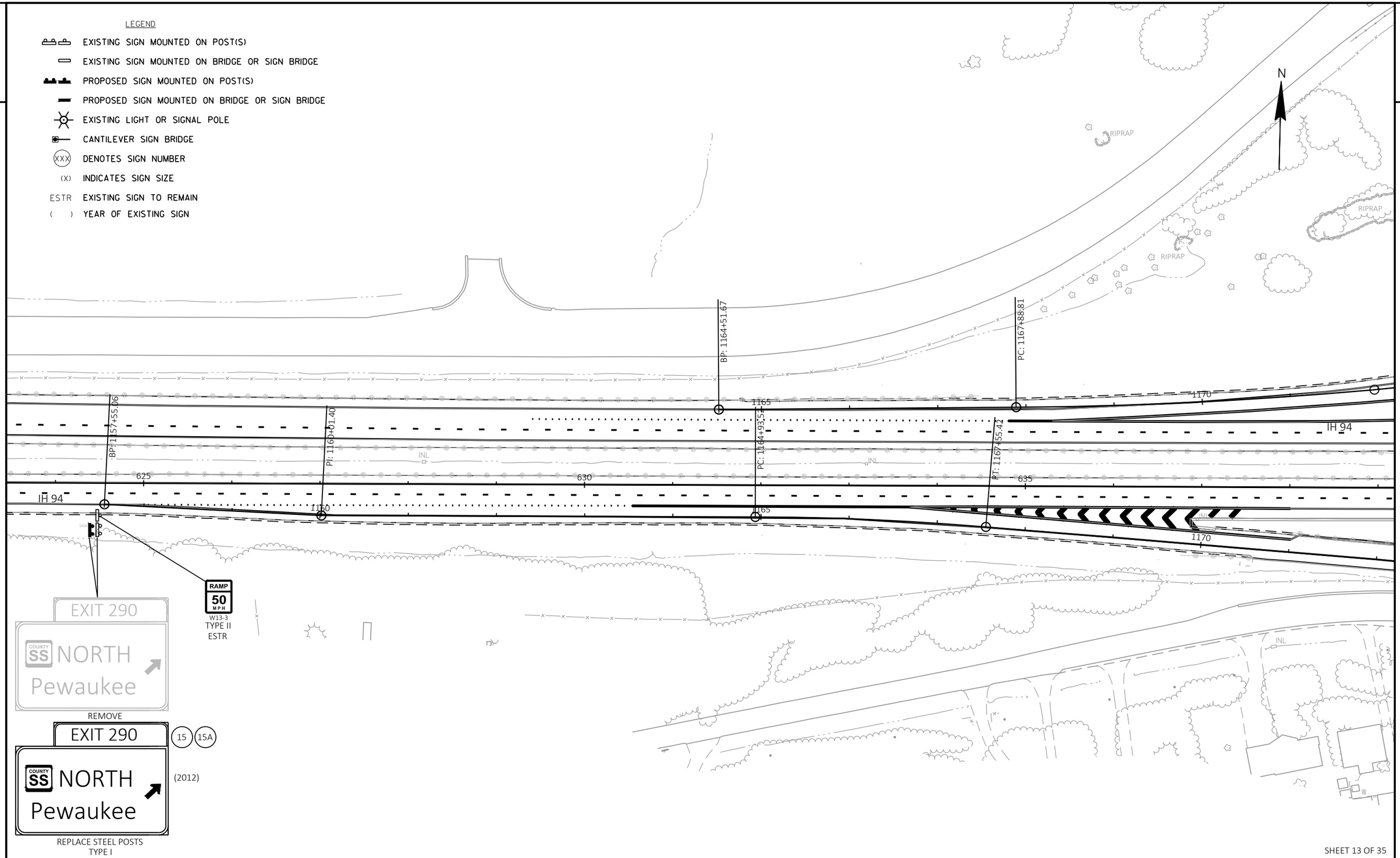
PLOT DATE : 6/15/2023 7:46 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

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
- ( ) YEAR OF EXISTING SIGN



SHEET 13 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 124	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 13

PLOT DATE : 6/15/2023 7:46 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN
- ( ) YEAR OF EXISTING SIGN

N

CTH G

PC: 38+82.51

PT: 1176+02.64

PT: 1176+13.53

PC: 1177+29.64

PT: 1179+25.26

EP: 1178+78.81

PC: 1179+49.03

PT: 1182+08.12

EP: 1180+57.35

BP: 1180+80.52

PC: 1181+16.67

PC: 649+02.10

PT: 32+48.00

PC: 117+69.43

IH 94

640 645 650

1175 1180 1185

INL RIPRAP W MH XXXXX

17 REMOVE THIS LANE ENDS W9-62 ON BRIDGE TYPE I

19 REMOVE LANE ENDS 800 FT W9-63(MOD) S-67-XX TYPE I

16 REMOVE Waukesha NEXT 5 EXITS (2012) REPLACE STEEL POSTS TYPE I

Waukesha NEXT 5 EXITS

EXIT 291

318 COUNTY G To 18 Pewaukee Waukesha ½ MILE (2019) TYPE I ESTR

SILVERNAIL RD

SHEET 14 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 125	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023226_PS_20.DWG
LAYOUT NAME - 14

PLOT DATE : 6/15/2023 7:49 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 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
- ( ) YEAR OF EXISTING SIGN

REMOVE
EXIT 290
SS NORTH
Pewaukee
EXIT ONLY

EXIT 290
SS NORTH
Pewaukee
EXIT ONLY
TYPE I
20 20A
(2012)

EXIT
50
MPH
W13-2
TYPE II
ON UPRIGHT
ESTR

S-67-42
PC: 1186+78.08
PT: 1657+10.40
EP: 1192+27.77
EP: 1196+28.31

Waukesha
Bypass
EXIT 291

Downtown
Waukesha
EXIT 295
(2019)
TYPE I
ESTR

IH 94
655
660
665
1190
1195
INL
W
POST
RIPRAP
A/C
SEPTIC
WALLS
SIGN
POOL
MH

N

SHEET 15 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 126	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023226_PS_20.DWG
LAYOUT NAME - 15

PLOT DATE : 6/15/2023 7:49 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 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
- ( ) YEAR OF EXISTING SIGN

REMOVE

EXIT 290
SS NORTH
Pewaukee
EXIT ONLY

21 21A

(2012)

TYPE I

S-67-41

BLANK
(SIS)

WISC BUSINESS
LOGOS SIGN
TO REMAIN
TYPE I

BP: 223+91.74

BP: 227+88.98

PI: 229+19.38

PC: 230+28.52

PT: 231+52.07

PC: 68+11.08

BP: 61+88.88

IH 94

RIPRAP

POST

REMOVE

Meadowbrook
PARK & RIDE
EXIT 291

REPLACE STEEL POSTS
TYPE I

Meadowbrook
PARK & RIDE
EXIT 291

22

(2012)

EXIT 291
318 COUNTY G To 18
Pewaukee
Waukesha

(2019)

ESTR

SHEET 16 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 127	E

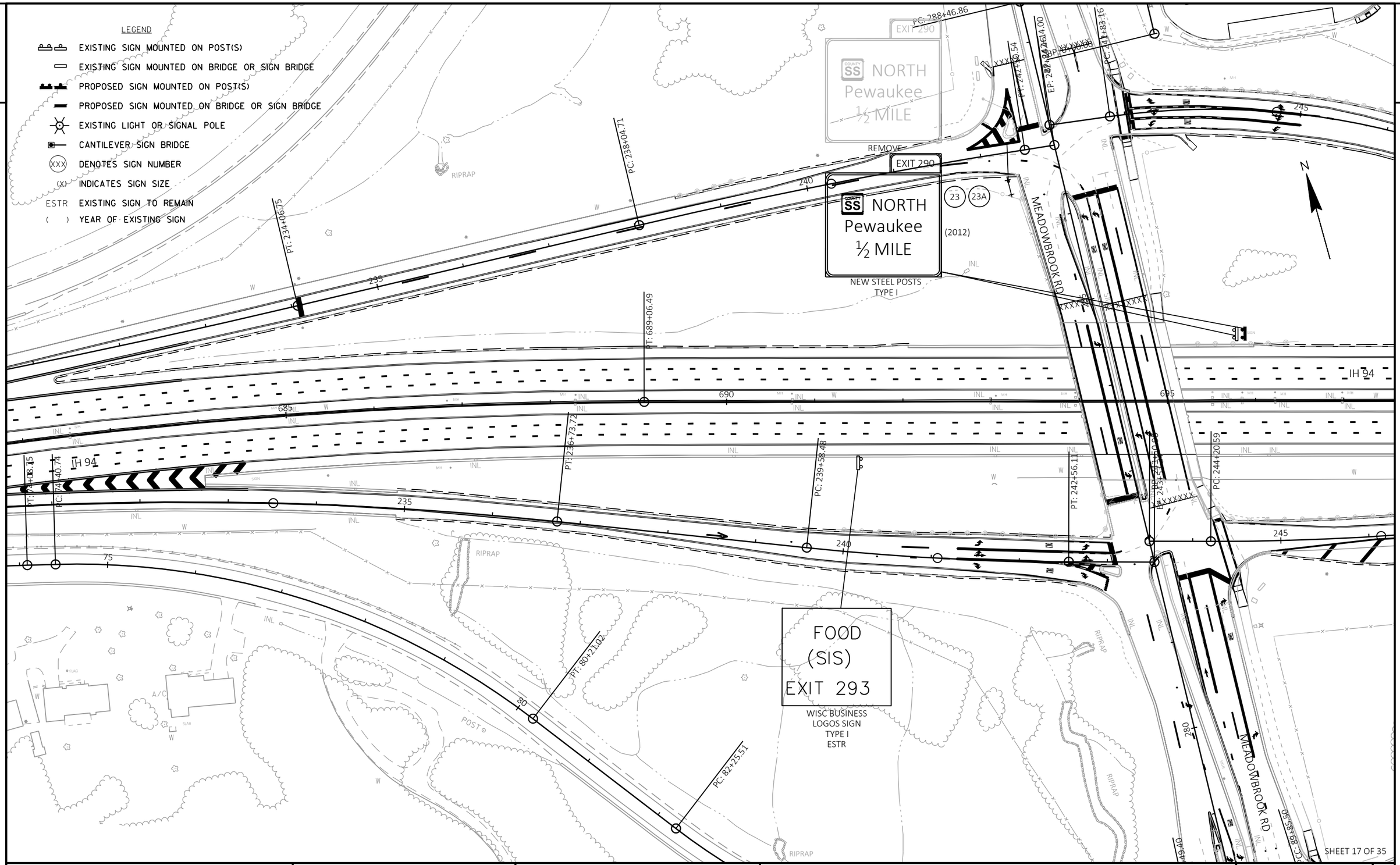
FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023226_PS_20.DWG
LAYOUT NAME - 16

PLOT DATE : 6/15/2023 7:49 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 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
- ( ) YEAR OF EXISTING SIGN



2

SHEET 17 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 128 E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023226_PS_20.DWG
LAYOUT NAME - 17

PLOT DATE : 6/15/2023 7:50 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

EXIT 291

318 COUNTY G To 18

Pewaukee

Waukesha

EXIT ONLY

(2019)

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
- ( ) YEAR OF EXISTING SIGN

N

PT: 246+62.24

PC: 251+45.49

SIGN

250

SIGN

TYPE I
ESTR

PT: 255+92.50

EXIT
50
MPH
W13-2

ON UPRIGHT
ESTR

S-67-40

EP: 260+51.78

RIPRAP

RIPRAP

RIPRAP

255

260

IH 94

700

705

710

PT: 297+49.88

IH 94

PT: 248+07.06

PC: 250+02.05

250

255

260

100+00.47

100

105

RIPRAP

PC: 96+91.62

95

PT: 93+02.19

FOOD
(SIS)
EXIT 293

WISC BUSINESS
LOGOS SIGN
TYPE I
ESTR

SHEET 18 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 129	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023226_PS_20.DWG
LAYOUT NAME - 18

PLOT DATE : 6/15/2023 7:50 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

PROPOSED SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

EXISTING LIGHT OR SIGNAL POLE

CANTILEVER SIGN BRIDGE

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

ESTR EXISTING SIGN TO REMAIN

( ) YEAR OF EXISTING SIGN

Waukesha Bypass EXIT 291 (2009)

TYPE I
ESTR

N

IH 94

IH 94

EXIT 293

COUNTY T

Waukesha
Pewaukee
¾ MILE

REMOVE

EXIT 293

COUNTY T

25 25A

Waukesha
Pewaukee
¾ MILE

(2012)

REPLACE STEEL POSTS
TYPE I

UW Milwaukee
Waukesha
Waukesha Co.
Tech College
EXIT 293

(2019)

ESTR

SHEET 19 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 130	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023251_PS_20.DWG
LAYOUT NAME - 19

PLOT DATE : 6/15/2023 7:58 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 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
- ( ) YEAR OF EXISTING SIGN

EXIT 291

318 COUNTY G To 18

Pewaukee

Waukesha

EXIT ONLY

(2019)

TYPE I
ESTR

EXIT 291

GAS | FOOD

(SIS)

WISC BUSINESS
LOGOS SIGN
TYPE I
ESTR

S-67-39

BIKE PATH

GOLF COURSE

RIPRAP

IH 94

GAS–EXIT 293

LODGING–EXIT 293
(SIS)

WISC BUSINESS
LOGOS SIGN
TYPE I
ESTR

SHEET 20 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 131	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023251_PS_20.DWG
LAYOUT NAME - 20

PLOT DATE : 6/15/2023 7:58 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN
- ( ) YEAR OF EXISTING SIGN

N

Meadowbrook
PARK & RIDE
EXIT 291

REMOVE

Meadowbrook
PARK & RIDE
EXIT 291

26

(2012)

REPLACE STEEL POSTS
TYPE I

IH 94

RIPRAP

INL

W

MH

SIGN

FLAG

RAMP

A/C

SHEET 21 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 132	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023251_PS_20.DWG
LAYOUT NAME - 21

PLOT DATE : 6/15/2023 7:59 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 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
- (–) YEAR OF EXISTING SIGN

N

RIPRAP

EXIT 291

318 COUNTY G To 18

Pewaukee

Waukesha

1 MILE

(2019)

TYPE I

ESTR

IH 94

EXIT 50 MPH

W13-2

TYPE II

ESTR

EXIT 293

COUNTY T

Waukesha

Pewaukee

REMOVE

EXIT 293

COUNTY T

Waukesha

Pewaukee

27 27A

(2012)

REPLACE STEEL POSTS

TYPE I

SHEET 22 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 133	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023251_PS_20.DWG
LAYOUT NAME - 22

PLOT DATE : 6/15/2023 7:59 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

PROPOSED SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

EXISTING LIGHT OR SIGNAL POLE

CANTILEVER SIGN BRIDGE

XXX DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

ESTR EXISTING SIGN TO REMAIN

( ) YEAR OF EXISTING SIGN

N

CTH T

NO SIGNS
THIS SHEET

IH 94

IH 94

CTH T

SHEET 23 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 134	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023251_PS_20.DWG
LAYOUT NAME - 23

PLOT DATE : 6/15/2023 7:59 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 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
- ( ) YEAR OF EXISTING SIGN

N

EXIT 293

COUNTY T

Waukesha
Pewaukee

(2016)

TYPE I
ESTR

STH 16

IH 94

EXIT 294

NORTH 164 SOUTH COUNTY J

Waukesha
Pewaukee
1 MILE

(2016)

TYPE I
ESTR

STH 16

SHEET 24 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 135	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023251_PS_20.DWG
LAYOUT NAME - 24

PLOT DATE : 6/15/2023 7:59 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 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
- ( ) YEAR OF EXISTING SIGN

FOOD
(SIS)
EXIT 293

WISC BUSINESS
LOGOS SIGN
TYPE I
ESTR

STH 16

IH 94

IH 94

S-67-406
SIGN BRIDGE
DMS

FOOD
(SIS)
EXIT 294

WISC BUSINESS
LOGOS SIGN
TYPE I
ESTR

STH 16

N

2

SHEET 25 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 136	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023251_PS_20.DWG
LAYOUT NAME - 25

PLOT DATE : 6/15/2023 8:00 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- EXISTING LIGHT OR SIGNAL POLE
- CANTILEVER SIGN BRIDGE
- (XXX) DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN
- ( ) YEAR OF EXISTING SIGN

N

EXIT 293C
16 WEST
Pewaukee
EXIT ONLY
(2016)
TYPE I
ESTR

EXIT 293
COUNTY T
Waukesha
Pewaukee
½ MILE
(2016)
TYPE I
ESTR

COUNTY T
318 COUNTY G
COUNTY SS
½
2
3
(2016)
E8-1
TYPE I
ESTR

S-67-19

S-67-204

CTH JJ

IH 94

IH 94

164 NORTH
COUNTY F
18 COUNTY JJ
½
1 ½
3 ½
(2016)
E8-1
TYPE I
ESTR

S-67-31

EXIT 294
NORTH SOUTH
164
COUNTY J
Waukesha
Pewaukee
(2016)
TYPE I
ESTR

CTH JJ

SHEET 26 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 137	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023251_PS_20.DWG
LAYOUT NAME - 26

PLOT DATE : 6/15/2023 8:00 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 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
- ( ) YEAR OF EXISTING SIGN

N

EXIT 293C

16 WEST
Pewaukee
¼ MILE
EXIT ONLY

(2016)

TYPE I
ESTR

IH 94

S-67-29

IH 94

EXIT 293

COUNTY T
Waukesha
Pewaukee
¾ MILE

(2016)

TYPE I
ESTR

RIPRAP

RIPRAP

RIPRAP

Waukesha Co
Airport
EXPO CENTER
EXIT 294

TYPE I
ESTR

SIGN

RIPRAP

INL

SIGN

INL

SHEET 27 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 138	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023251_PS_20.DWG
LAYOUT NAME - 27

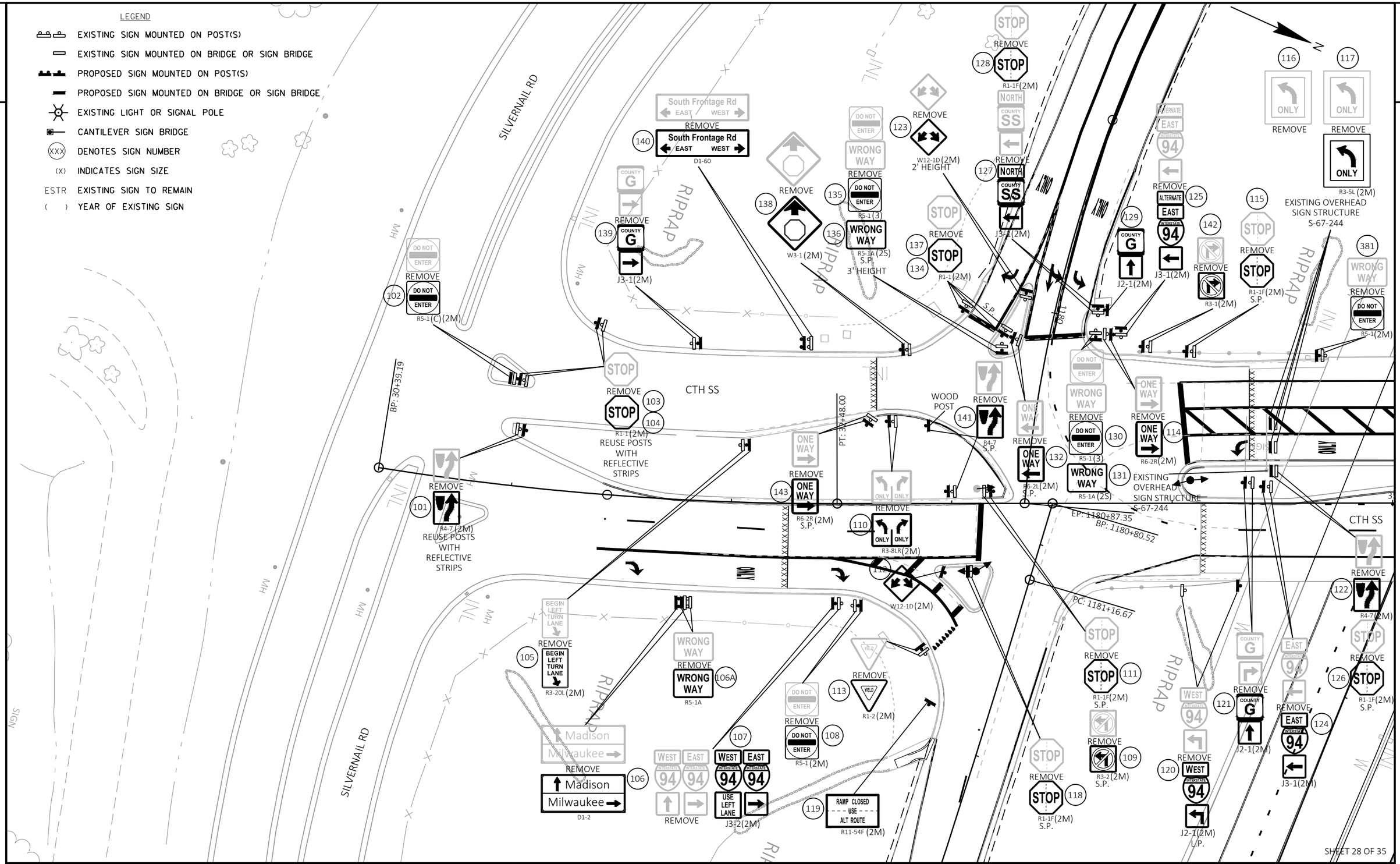
PLOT DATE : 6/15/2023 8:00 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:100 FT

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
- ( ) YEAR OF EXISTING SIGN



PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 139	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 28

PLOT DATE : 6/15/2023 10:03 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

EXISTING SIGN MOUNTED ON POST(S)
EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
PROPOSED SIGN MOUNTED ON POST(S)
PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
EXISTING LIGHT OR SIGNAL POLE
CANTILEVER SIGN BRIDGE
(XXX) DENOTES SIGN NUMBER
(X) INDICATES SIGN SIZE
ESTR EXISTING SIGN TO REMAIN
( ) YEAR OF EXISTING SIGN

IH 94
645
RIPRAP
HW
CTH SS
35
40
PC: 1179+93.03
PT: 1178+78.81
PC: 38+82.51
EP: 1178+55.36
1180
EXISTING SIGN STRUCTURE S-67-245
EXISTING OVERHEAD S-67-246
UPRIGHT OF SIGN STRUCTURE
WOOD POST
SURFACE APPLIED
OFF BRIDGE
2' HEIGHT
3' HEIGHT
L.P.
S.P.

148 REMOVE Madison D1-1
186 REMOVE Milwaukee D1-1
187 REMOVE EAST INTERSTATE 94 J2-1(2M)
188 BEGIN LEFT TURN LANE REMOVE R3-20L (2M)
189 REMOVE R4-7 (2M)
185 REMOVE ONE WAY R6-2L (2M) S.P.
168 RAMP CLOSED USE ALT ROUTE R11-54F (2M)
181 REMOVE STOP R1-1F (2M) S.P.
175 REMOVE W12-1D (2M) 2' HEIGHT
182 REMOVE YIELD R1-2 (2M)
171 REMOVE Milwaukee Madison D1-2
166 REMOVE ONLY R3-5L (2M)
167 REMOVE ONLY R3-5L (2M)
169 REMOVE ALTERNATE WEST INTERSTATE 94 J2-1(2M)
170 REMOVE COUNTY DR J13-1(2M)
168 RAMP CLOSED USE ALT ROUTE R11-54F (2M)
184 REMOVE DO NOT ENTER R5-1 (2M)
159 REMOVE R3-18 (2M) UPRIGHT OF SIGN STRUCTURE
178 REMOVE R4-7 (2M) S.P.
172 REMOVE EAST INTERSTATE 94 WEST INTERSTATE 94
174 REMOVE EAST INTERSTATE 94 J3-1(2M)
REMOVE EAST INTERSTATE 94 WEST INTERSTATE 94 J3-2(2M)
WRONG WAY REMOVE WRONG WAY R5-1A (2S) 173
161 REMOVE R4-7 (2M) WOOD POST
176 REMOVE STOP R1-1F (2M)
179 REMOVE STOP R1-1F (2M) S.P.
162 BEGIN LEFT TURN LANE REMOVE R3-20L (2M)
145 146 RAMP CLOSED USE ALT ROUTE R11-54F (2M) SURFACE APPLIED
144 REMOVE WEST INTERSTATE 94 J2-1(2M) OFF BRIDGE
180 REMOVE WEST INTERSTATE 94 J2-1(2M)
147 WRONG WAY REMOVE WRONG WAY R5-1A (2M)
177 REMOVE DO NOT ENTER R5-1 (2M)
150 REMOVE R3-1 (2M) WOOD POST
153 REMOVE STOP R1-1F (2M) S.P.
156 REMOVE YIELD R1-2 (2M) L.P.
152 REMOVE STOP R1-1F (2M) S.P.
151 REMOVE STOP R1-1F (2M) S.P.
149 REMOVE W12-1D (2M) 2' HEIGHT
160 REMOVE ONE WAY R6-2R (2M)
163 REMOVE ALTERNATE WEST INTERSTATE 94 COUNTY SS J3-2(2M)
154 REMOVE DO NOT ENTER R5-1 (3)
155 WRONG WAY R5-1A (2S) 3' HEIGHT
157 RIGHT LANE ENDS REMOVE W9-1R (2M)
158A WRONG WAY REMOVE WRONG WAY R5-1A (2S)
158 REMOVE COUNTY DR COUNTY G J2-2(2M)
164 North Frontage Rd WEST EAST REMOVE D1-60
165 REMOVE ALT EAST INTERSTATE 94 J2-1(2M)

SHEET 29 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 140	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023201_PS_20.DWG
LAYOUT NAME - 29
PLOT DATE : 6/15/2023 7:47 AM
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
- ( ) YEAR OF EXISTING SIGN

SILVERNAIL RD

RIPRAP

PCC: 88+49.40

PCC: 89+85.50

MEADOWBROOK RD

1060-47-70

280

SEE 2788-03-70

SIGN

EXISTING OVERHEAD SIGN STRUCTURE S-67-239

198 REMOVE SOUTH FRONTAGE RD J13-1(2M)

197 REMOVE South Frontage Rd EAST WEST D1-60

194 REMOVE ALTERNATE EAST 94 J3-1(2M)

216 REMOVE YIELD R1-2(2S)

195 WEST 94 ONLY

196

193 WEST 94 ONLY

192 STOP REMOVE STOP R1-1(2M) S.P.

191 RAMP CLOSED USE ALT ROUTE REMOVE RAMP CLOSED USE ALT ROUTE R11-54F(2M)

190 REMOVE EAST 94 J3-1(2M)

W3-3 ESTR SB ON TRAIL

NO MOTOR VEHICLES TRAIL SIGN ESTR

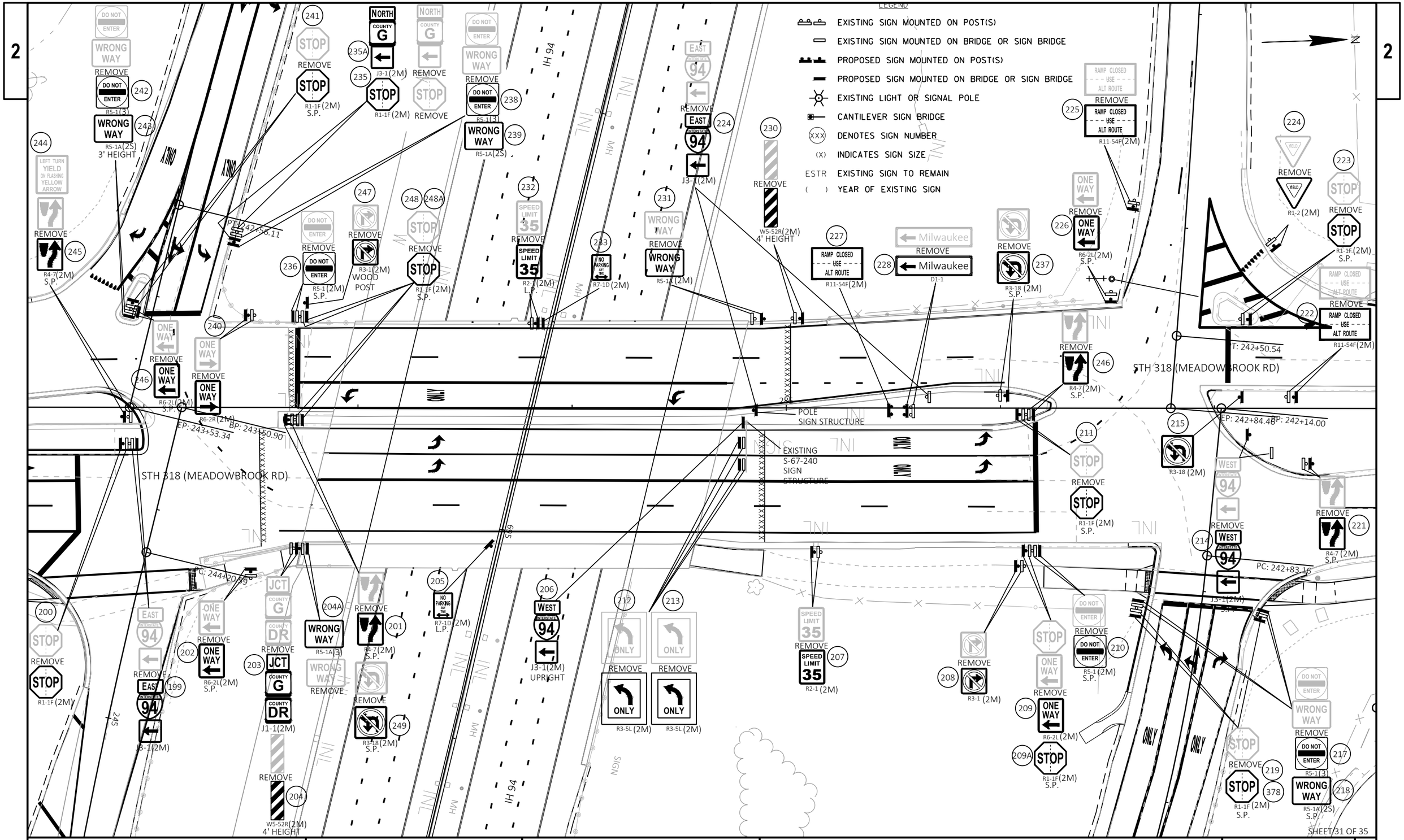
SHEET 30 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 141	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023226_PS_20.DWG
LAYOUT NAME - 30

PLOT DATE : 6/15/2023 7:50 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42



PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 142	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023226_PS_20.DWG
LAYOUT NAME - 31

PLOT DATE : 6/15/2023 10:10 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
- ( ) YEAR OF EXISTING SIGN

2

2

N

GOLF RD

MH

SIGN

INL

MEADOWBROOK RD

Waukesha Bypass AHEAD ESTR

PC: 288+46.86

14.00

290

BP: 0+00.00

EP: 3+79.76

1+00

2+00

3+00

267 REMOVE RAMP CLOSED USE ALT ROUTE R11-54F(2M)

266 REMOVE WEST INTERSTATE 94 J3-1(2M)

265 REMOVE EAST INTERSTATE 94 USE LEFT LANE J3-1(2M)

254 REMOVE SOUTH COUNTY G J3-1(2M)

263 264 REMOVE EAST WEST INTERSTATE 94 J2-2(2M)

257 258 259 REMOVE STOP R1-1F(2M) S.P.

R1-2 ESTR

W12-1D ESTR

R1-1F ESTR S.P.

260 REMOVE R4-7(2M) S.P.

R1-1F ESTR S.P.

R5-1 ESTR S.P.

W12-1D ESTR

R4-7(2M) ESTR S.P.

269 REMOVE DO NOT ENTER R5-1(2M) S.P.

250 REMOVE END 318 J4-1(2M)

268 REMOVE BEGIN LEFT TURN LANE R3-20L(2M)

251 REMOVE COUNTY DR COUNTY G J3-2(2M)

252 REMOVE ALTERNATE WEST INTERSTATE 94 J3-1(2M)

253 REMOVE BEGIN LEFT TURN LANE R3-20LL(2M)

255 REMOVE EAST COUNTY DR J3-1(2M)

Food Lodging REMOVE PARK & RIDE 256 REMOVE PARK & RIDE D4-2R(2M)

262 ONE WAY R6-2L(2M) S.P.

261 REMOVE STOP R1-1F(2M) S.P.

RIPRAP

SHEET 32 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 143	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023226_PS_20.DWG
LAYOUT NAME - 32

PLOT DATE : 6/15/2023 7:51 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
- ( ) YEAR OF EXISTING SIGN

N

GOLF RD

MH

INL

SIGN

MEADOWBROOK RD

295

REMOVE

379

PARK & RIDE

D4-2L

EP: 3+79.76

RIPRAP

SHEET 33 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 144	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023226_PS_20.DWG
LAYOUT NAME - 33

PLOT DATE : 6/15/2023 7:51 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

MEADOWBROOK RD

MH

INL

XXXXXXXX

XXXXX

XXXXXXXXXXXX

EP: 3+79.76

BP: 0+00.00

GOLF RD

SIGN

REMOVE

NO PARKING ANY TIME

277

R7-1R(2S)

274

R7-1D(2S)

273

R7-1D(2S)

NO PARKING EXCEPT

276

REMOVE

NO PARKING EXCEPT

275

REMOVE

NO PARKING EXCEPT

3+00

2+00

1+00

290

LONG TERM PARKING

12X19

ESTR

L.P.

271

272

BACK TO BACK (2017)

Meadowbrook

PARK & RIDE

REMOVE

REUSE STEEL POSTS TYPE I

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

( ) YEAR OF EXISTING SIGN

N

282

283

284

R7-8A

VAN ACCESSIBLE (2S)

282A

283A

284A

R7-8V(2S)

278

DO NOT ENTER

REMOVE

DO NOT ENTER

R5-1(2S)

STEEL POST

279

NO PARKING BUS STOP

REMOVE

NO PARKING BUS STOP

STEEL POST

BUS STOP ROUTE 904-905

STEEL POST ESTR BY OTHERS

DESIGNATED LONG TERM PARKING

REMOVE

DESIGNATED LONG TERM PARKING

L.P.

280

Motorcycle Parking Only

REMOVE

Motorcycle Parking Only

STEEL POST

285

281

REMOVE

NO PARKING ANY TIME

R7-1L(2S)

270

REMOVE

NO PARKING ANY TIME

R7-1D(2S)

WOOD POST

SHEET 34 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 145 E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023226_PS_20.DWG
LAYOUT NAME - 34

PLOT DATE : 6/15/2023 7:51 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

3+00

2+00

1+00

0+00

BP: 0+00.00

EP: 3+74.47

N

INL

W

SIGN

GOLF RD

MH

DO NOT ENTER
R5-1
ESTR

15 MIN PARKING
GOOD HOPE ESTR

15 MIN PARKING
ESTR

15 MIN PARKING
ESTR
GOOD HOPE

15 MIN PARKING
ESTR
GOOD HOPE

DESIGNATED LONG TERM PARKING ONLY
REMOVE

297
DESIGNATED LONG TERM PARKING ONLY
L.P.

NO PARKING BUS STOP
REMOVE

380
NO PARKING BUS STOP

BUSES
PARKING
REMOVE
BUSES

296
295
P PARKING
D4-1

NO PARKING ANY TIME
REMOVE

294
NO PARKING ANY TIME
R7-1D (2S)

289
R4-7 (2S)

290
RIDESHARE INFO CALL
1 - 800 - 455 - POOL
D12-2A (2S)

DO NOT ENTER
R5-1

298
R5-2 (2S)

300
5 TONS OR OVER
R5-2A (2S)

NO DETACHED TRAILER PARKING
299

PARKING RESTRICTED TO DESIGNATED STALLS ONLY
292

PARK & RIDE PARKING ONLY
VEHICLES-BOATS-ITEMS FOR SALE
WILL BE TOWED AT OWNERS EXPENSE
BY ORDER OF WISDOT
STATUTE 346.55(4)

ESTR BY OTHERS

NO DETACHED TRAILER PARKING

PARKING RESTRICTED TO DESIGNATED STALLS ONLY
REMOVE

STOP
REMOVE

293
STOP
R1-1 (2S)

EXIT
REMOVE

286
EXIT

NO PARKING LOADING ZONE
REMOVE

287
288
NO PARKING LOADING ZONE
12X18

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
- ( ) YEAR OF EXISTING SIGN

SHEET 35 OF 35

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 146	E

FILE NAME : N:\PDS\C3D\CAD\10604700\SIGN\70\023226_PS_20.DWG
LAYOUT NAME - 35

PLOT DATE : 6/15/2023 7:52 AM

PLOT BY : WAGNER, SCOTT H

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

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.

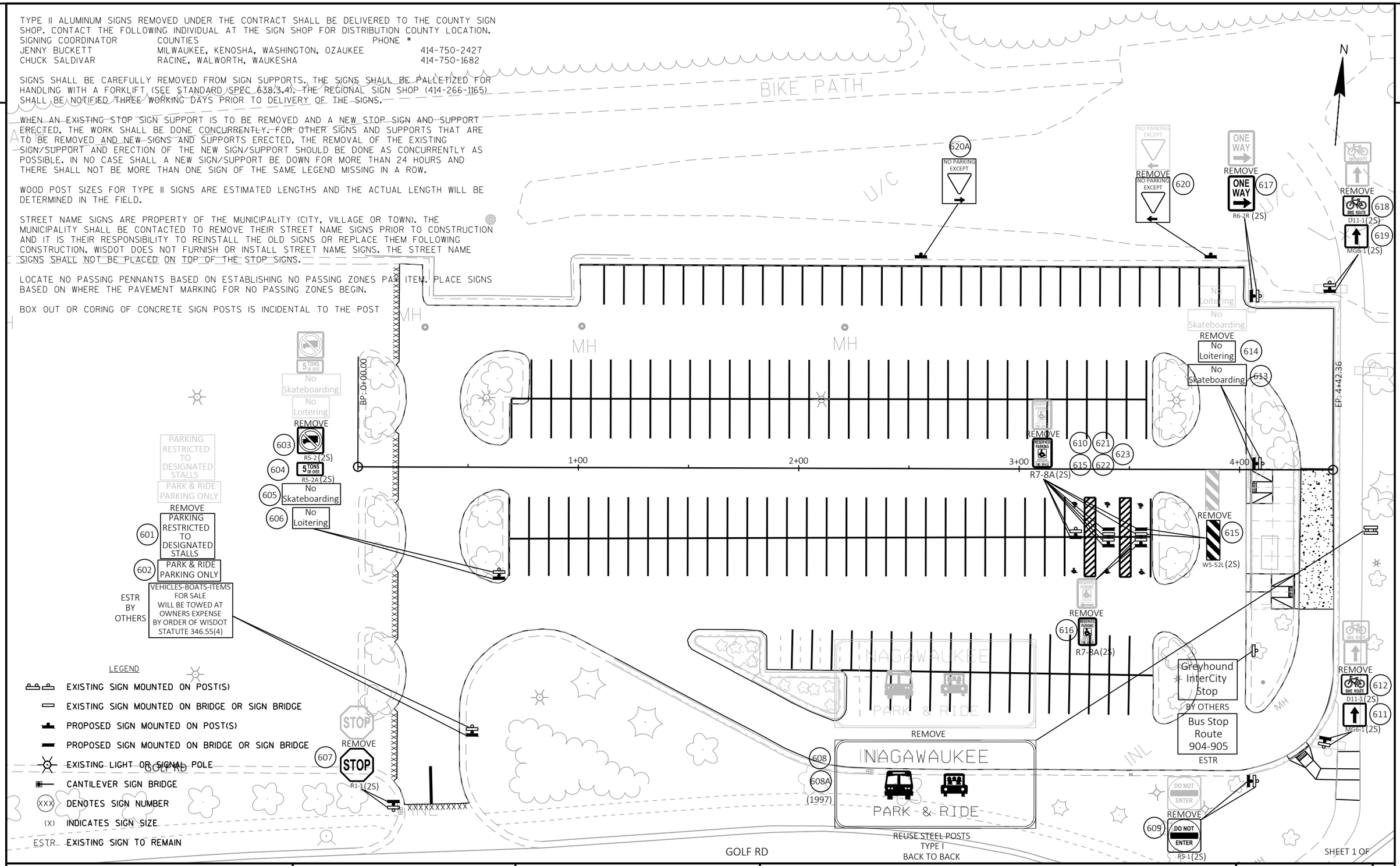
WHEN AN EXISTING STOP SIGN SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED, THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD 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



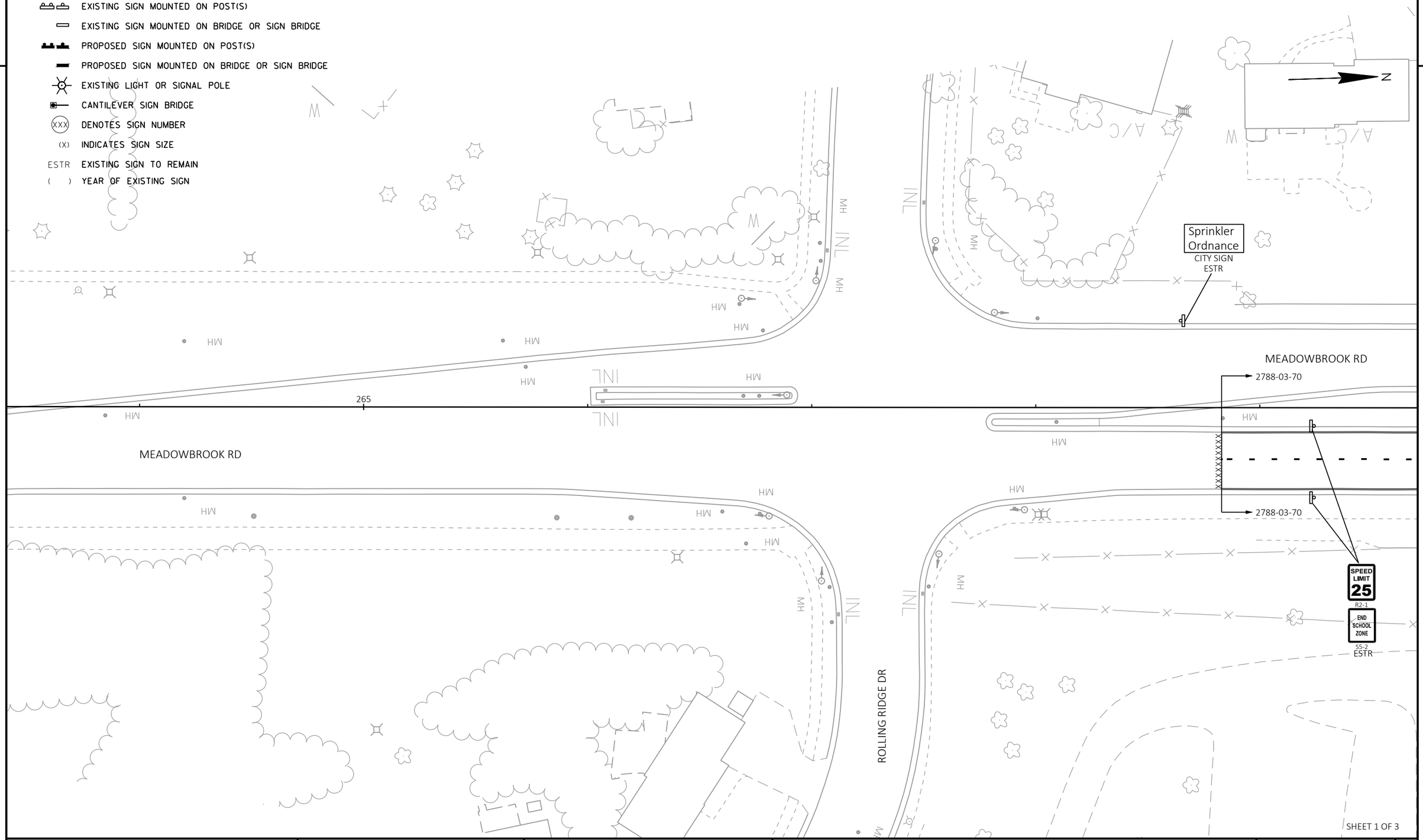
PROJECT NO: 1330-47-71	HWY: STH 83	COUNTY: WAUKESHA	PERMANENT SIGNING - PARK & RIDE LOT	SHEET 147	E

FILE NAME : N:\PDS\C3D\CAD\13304701\SIGN\023201_PS_20.DWG
LAYOUT NAME - 01
PLOT DATE : 9/20/2022 7:42 AM
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
- ( ) YEAR OF EXISTING SIGN



SHEET 1 OF 3

PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 148	E

FILE NAME : N:\PDS\C3D\CAD\27880300\SIGN\023226_PS_20.DWG
LAYOUT NAME - 01

PLOT DATE : 5/31/2022 7:58 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
- ( ) YEAR OF EXISTING SIGN

Historic Downtown Waukesha
CITY SIGN
ESTR

REMOVE
514
515
W3-3 (2M)

REMOVE
513
SCHOOL SPEED LIMIT 15 WHEN CHILDREN ARE PRESENT
S4-51

REMOVE
SPEED LIMIT 25
511
512
R2-1 (2M)

AHEAD
FINES HIGHER
REMOVE
509 510
S1-1 (2M)
AHEAD 509A 510A
S16-9P (2M)
FINES HIGHER 509B 510B
R2-6P (2M)

MEADOWBROOK RD

W3-3
FOR SB TRAIL
ESTR

REMOVE
501
502
W3-3 (2M)

South Frontage Rd
WEST EAST
REMOVE
504
South Frontage Rd
WEST EAST
D1-60

REMOVE
TO USH 94
503
TO USH 94
I2-1(2M)

SPEED LIMIT 35
REMOVE
505
SPEED LIMIT 35
R2-1 (2M)

BEGIN RIGHT TURN LANE
REMOVE
506
BEGIN RIGHT TURN LANE
R3-20R (2M)

RIGHT LANE MUST TURN RIGHT
REMOVE
507
RIGHT LANE MUST TURN RIGHT
R3-7R (2M)

WRONG WAY
REMOVE
508
WRONG WAY
R5-1A (2M)

RIPRAP

SHEET 2 OF 3

PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 149	E

FILE NAME : N:\PDS\C3D\CAD\27880300\SIGN\023226_PS_20.DWG
LAYOUT NAME - 02
PLOT DATE : 5/31/2022 7:58 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
- ( ) YEAR OF EXISTING SIGN

N

SILVERNAIL RD

538 Meadowbrook Rd 318 M1-94S SIGNAL ARM

539 STOP REMOVE STOP R1-1F (2M) S.P.

540 SOUTH 318 TO 18 REMOVE SOUTH 318 TO 18 J4-2(2M)

541 ONE WAY R6-2L (2M) S.P.

543 Silvernail Rd M1-94 SIGNAL ARM

542 REMOVE R4-7(2M) S.P.

536 W12-2D 2' HEIGHT S.P.

537 DO NOT ENTER REMOVE DO NOT ENTER R5-1 (2M) S.P.

544 DO NOT ENTER REMOVE DO NOT ENTER R5-1 (3) S.P.

STOP REMOVE STOP R1-1F (2M) S.P. 533 534 535

Waukesha Bypass Ahead ESTR

531 ONLY REMOVE ONLY R3-5L (2M)

532 ONLY REMOVE ONLY R3-5L (2M)

529 ALTERNATE EAST INTERSTATE 94 ALTERNATE WEST INTERSTATE 94 REMOVE ALTERNATE EAST INTERSTATE 94 ALTERNATE WEST INTERSTATE 94 J3-2(2M)

2788-03-70

MEADOWBROOK RD

280

EXISTING S-67-602 SIGN STRUCTURE

522 REMOVE W12-1D 2' HEIGHT

521 DO NOT ENTER REMOVE DO NOT ENTER R5-1 (2M) S.P.

524 REMOVE R4-7(2M) S.P.

523 Silvernail Rd M1-94 SIGNAL ARM

516 DO NOT ENTER R5-1 (2M)

517 518 519 STOP REMOVE STOP R1-1F (2M) S.P.

520 Meadowbrook Rd 318 M1-94S SIGNAL ARM

528 STOP REMOVE STOP R1-1F (2M) S.P.

NO MOTOR VEHICLES ESTR

525 ONE WAY R6-2L (2M) S.P.

WEST INTERSTATE 94 EAST INTERSTATE 94 REMOVE WEST INTERSTATE 94 EAST INTERSTATE 94 J2-2(2M)

527 WEST INTERSTATE 94 EAST INTERSTATE 94 USE LEFT LANE J2-2(2M)

526 Milwaukee REMOVE Milwaukee D1-1

530 RAMP CLOSED USE ALT ROUTE REMOVE RAMP CLOSED USE ALT ROUTE R11-54F (2M)

2788-03-70 1060-47-70

SILVERNAIL RD

SHEET 1 OF 3

PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET 150	E

FILE NAME : N:\PDS\C3D\CAD\27880300\SIGN\023226_PS_20.DWG
LAYOUT NAME - 03

PLOT DATE : 5/31/2022 7:59 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

GENERAL NOTES

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

LOCATIONS OF THE PVC CONDUITS ARE IDENTIFIED IN THE PLANS WHERE THEY ARE REQUIRED. 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.

THE TRENCH SHALL NOT BE BACK FILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL CONDUITS SHALL BE CAPPED OR PLUGGED WITH ENGINEER APPROVED FITTINGS IMMEDIATELY AFTER INSTALLATION.

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.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS.

PRIOR TO CONDUIT ACCEPTANCE, ALL CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND BE CAPPED 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.

CONDUIT RUNS SHALL BE THE SAME SIZE PIPE FROM ONE END TO THE OTHER (FROM PULL BOX-TO-PULL BOX OR JUNCTION BOX OR BASE-TO-BASE, ETC.) UNLESS OTHERWISE NOTED ON PLANS.

PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUITS.

CONTRACTOR SHALL SUPPLY AS-BUILT DRAWING FOR ALL THE WORK BEING DONE.

INSTALLATION OF LATERAL UNDERGROUND CONDUIT UNDER PAVEMENT SHALL BE INSTALLED MINIMUM 30 INCHES BELOW PROPOSED GRADE. CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ROADWAY CONSTRUCTION FOR CONDUIT LATERALS INSTALLATION.

PITCH ALL CONDUITS TOWARD PULL BOXES. INSTALL A 2" DRAIN DUCT TO STORM SEWER OR DRAIN SUMP AS REQUIRED FOR DRAINAGE. THE 2" DRAIN DUCT OR SUMP IS INCIDENTAL TO THE PULL BOX BID ITEM AND IS NOT SHOWN.

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.

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

EXISTING CONDUIT AND CID NO LONGER BEING USED IS ABANDONED IN PLACE. THE CONTRACTOR MAY REMOVE ABANDONED WIRING AT THE CONTRACTOR'S EXPENSE. ABANDONED PULL BOX REMOVAL IS INCIDENTAL TO THE ROAD CONSTRUCTION.

ALL UNDERGROUND WIRING AND CONDUIT FOR POLES BEING REMOVED IS ABANDONED IN PLACE UNLESS NOTED OTHERWISE. CONTRACTOR MAY SALVAGE ABANDONED WIRING AT HIS OWN EXPENSE.

IF CID CONTAINS PHASE CONDUCTOR(S) THAT WILL NOT BE USED FOR FURTHER POLES, I.E. AT THE END OF A CIRCUIT, DO NOT ENERGIZE THE CONDUCTOR(S) LEAVING THE LAST POLE THE PHASE WAS UTILIZED. REMOVE EXCESS CONDUCTOR(S) IN ALL SUBSEQUENT POLES.

SEAL THE ENDS OF ALL CID RACEWAY WITH A UL RECOGNIZED CONDUIT SEALANT. PROVIDE A 1#2" NYLON ROPE EXTENDING BEYOND THE PLUG TO ASSIST IN REMOVING THE PLUG IN THE FUTURE.

SEE DETAIL "CONDUIT DETAILS AT STRUCTURE PARAPET TO ROADWAY BARRIER INTERFACE" WHEN CONDUIT EXITS TO GRADE FROM A BRIDGE PARAPET OR RETAINING WALL. RIGID METALLIC CONDUIT IN CONCRETE BARRIER IS INCIDENTAL TO THE RIGID NONMETALLIC CONDUIT.

PROVIDE MINIMUM CABLE SLACK AS NOTED BELOW:

PULL BOXES:	5-FT ONE WAY IN OR OUT
EMBEDDED JUNCTION BOXES:	3-FT
DISTRIBUTION CENTER/LOAD CENTER:	10-FT

STAGING NOTES

MAINTAIN LIGHTING AT ALL TIMES DURING CONSTRUCTION USING EXISTING LIGHTING, PROPOSED TEMPORARY, FINAL LIGHTING OR COMBINATIONS.

DO NOT REMOVE EXISTING LIGHTING UNTIL THE NEW OR TEMPORARY LIGHTING IS OPERATIONAL. REFER TO DRAWINGS FOR STAGING INFORMATION.

MAINTAINING SYSTEM CONTINUITY SHALL BE INCIDENTAL TO THE "REMOVE EXISTING STREET LIGHTS" BID ITEM.

DUE TO THE PHASING OF CONSTRUCTION SOME FINAL LIGHTING UNITS MAY BE ORPHANED UNTIL A LATER STAGE IS COMPLETE. IT IS AT THE DISCRETION OF THE CONTRACTOR TO SCHEDULE THESE ITEMS. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THE PLACEMENT OF RACEWAY THAT SPANS TWO DIFFERENT PHASES OF CONSTRUCTION.

TEMPORARY OR FINAL LIGHTING MUST ILLUMINATE AN AREA BEFORE EXISTING LIGHTING UNITS IN AN AREA CAN BE REMOVED. THE SCHEDULING OF REMOVAL IS AT THE DISCRETION OF THE CONTRACTOR WITH THE PROVISION THAT LIGHTING OF THE ROADWAY IS PROVIDED AT ALL TIMES.

COORDINATE POLE REMOVAL WITH TRAFFIC CONTROL.

2

2

2

N

IH 94 WB ENTRANCE RAMP

110

115

IH 94 WB EXIT RAMP

2120

CTH T (N. GRANDVIEW BLVD)

IH 94 - WB

775

780

IH 94 - EB

770

CTH T (N. GRANDVIEW BLVD)

3120

IH 94 EB ENTRANCE RAMP

4110

IH 94 EB EXIT RAMP

3115

EXISTING CONTROLLER
TO BE MODIFIED

HL-67-TC	
AVIATION LTG.	
1,3	ORANGE
2,4	BROWN
N	GREY/WHITE
GND	GREEN OR BARE
HIGHWAY LTG.	
A,C	RED
B,C	BLACK
N	WHITE
GND	GREEN OR BARE
1,2,3,4	30 A
A,B,C,D	30 A
120/240 VAC 3 WIRE ISOLATED NEUTRAL	

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	LIGHTING PLANS - DISTRIBUTION CENTER OVERVIEW	SHEET 152	E

FILE NAME : W:\PROJECTS\15158.02 - 1060-10-00\DRAWINGS\CADD SHEETS\1060-10-70 LIGHTING PLANS - DISTRIBUTION CENTER OVERVIEW_UPDATED.DWG
LAYOUT NAME - 01

PLOT DATE : 10/18/2022 7:02 AM PLOT BY : ARKADIUSZ KRUPA PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

EXISTING CONTROLLER TO REMAIN

HL-67-MD	
A,C,E,G	RED
B,D,F,H	BLACK
N	WHITE
GND	GREEN OR BARE
A,B,C,D E,F,G,H	30 A
240/480 VAC 3 WIRE ISOLATED NEUTRAL	

N

GOLF RD

GOLF RD

CTH G (MEADOWVIEW RD)

CTH G (MEADOWVIEW RD)

IH 94 WB ENTRANCE RAMP

IH 94 WB EXIT RAMP

IH 94 EB EXIT RAMP

IH 94 EB ENTRANCE RAMP

SILVERNAIL RD

SILVERNAIL RD

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	LIGHTING PLAN - DISTRIBUTION CENTER OVERVIEW	SHEET 153	E

FILE NAME : W:\PROJECTS\15158.02 - 1060-10-00\DRAWINGS\CADD SHEETS\1060-10-70 LIGHTING PLANS - DISTRIBUTION CENTER OVERVIEW_UPDATED.DWG
LAYOUT NAME - 02

PLOT DATE : 10/18/2022 7:02 AM PLOT BY : ARKADIUSZ KRUPA PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

N

114+75.06, -34.61' LT
BTC7

113+03.06, -28.60' LT
ATC8

111+27.98, -28.57' LT
BTC9

109+54.10, -27.33' LT
ATC10

CONNECT TO
EXISTING STUB

ATC6

1TC5

115

110

IH 94 WB ENTRANCE RAMP

*8 A,B,N,G

*8 A,N,G

*8 A,B,N,G
*6 1,2,N

114+71.22, 40.54' RT
EX. LPB-TC-107

*8 A,B,N,G
*6 1,2,N

125+92.23, -51.99' LT
ATC4

*8 A,B,N
*6 1,2,N

2TC3

125+8.6
UDL STUB

CTH T (N. GRANDVIEW BLVD)

129+01.40, 3.44' RT
ATC6 / BTC6

128+99.28, 80.27' RT
EX. LPB-TC-108

*8 A,B,N
*12 2,N

2TC4

127+56.97, -11.14' LT
ATC5 / BTC5

1TC4

IH 94 WB EXIT RAMP

2120

127+53.01, 74.89' RT
EX. LPB-TC-106

*12 A,B,N
*12 1,N

*8 A,B,N
*8 1,2,N

125+93.00, 51.21' RT
BTC4

1TC3

778+14

780

782+52
HF-TW18

779+98
HF-TW17

777+39
HF-TW16

3/4" MET.

775

770

771+13
HF-TW14

768+50
HF-TW13

IH 94 - WB

IH 94 - EB

124+20.12, -52.04' LT
BTC3

773+74
HF-TW15

1TC2

*12 A,B,N
*12 2,N
(PULL BOX
TO POLE)

123+05.29, 8.92' RT
ATC2 / BTC2

2TC2

124+21.12, 50.78' RT
ATC3

*8 A,B,N
*8 1,2,N

122+99.33, 73.51' RT
EX. LPB-TC-103

3120

3120+35.09, 21.30' RT
CTC3

*8 C,N

3118+74.55, 21.52' RT
DTC2

*8 C,D,N

*8 C,N

IH 94 EB ENTRANCE RAMP

2TC1

122+99.25, 5.75' RT
EX. LPB-TC-104

122+96.44, -65.33' LT
EX. LPB-TC-105

*8 A,B,N
*6 1,2,N

*6 A,B,N
*6 1,2,N

4110

IH 94 EB EXIT RAMP

3117+37.70, 32.16' RT
EX. LPB-TC-109
SPLICE CIRCUITS C AND D
IN EXISTING PULL BOX.

3117+09.54, 25.29' RT
CTC1
(BEHIND BARRIER)

3115

*6 3,4,N
(OPEN)

*6 C,D,N
*6 3,4,N (OPEN)

2TC5

3115+46.22, 28.96' RT
ATC7

121+69.44, -7.50' LT
EX. LPB-TC-102

1TC1

121+55.78, -3.26' LT
ATC1 / BTC1

*12 A,N
*12 2,N

2-3"

121+62.34, 117.42' RT
EX. LPB-TC-101

*6 A,B,N
*12 A,B,N
*12 A,N
*6 1,2,N
*6 3,4,N (OPEN)
*8 1,2,N
*12 2,N

*6 A,B,N
*6 C,D,N
*12 A,B,N
*12 A,N
*6 1,2,N
*6 3,4,N (OPEN)
*8 1,2,N
*12 2,N

*12 A, B, N
*8 1, 2, N

120+52.11, 101.26' RT
DISTRIBUTION
CENTER
HL-67-7C

3"

LEGEND

- AVIATION LIGHTS
- TWIN ARM FREEWAY LIGHTING UNIT, AVIATION LIGHTS
- SINGLE ARM FREEWAY LIGHTING UNIT, AVIATION LIGHTS
- DISTRIBUTION CENTER
- CONDUIT STUBOUT
- PULLBOX 24" x 42"
- JUNCTION BOX
- CONDUIT - 2" UNLESS OTHERWISE SHOWN

EXISTING CONTROLLER

HL-67-TC	
AVIATION LTG.	
1,3	ORANGE
2,4	BROWN
N	GREY/WHITE
GND	GREEN OR BARE
HIGHWAY LTG.	
A,C	RED
B,C	BLACK
N	WHITE
GND	GREEN OR BARE
1,2,3,4	30 A
A,B,C,D	30 A
120/240 VAC 3 WIRE ISOLATED NEUTRAL	

CIRCUITS 3 AND 4 ARE RESERVED FOR AVIATION OBSTRUCTION LIGHTING ON CTH T RAMP POLES AND MEDIAN POLES IN THE EXTENTS OF THE RAMPS.

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	LIGHTING PLANS - REMOVALS	SHEET 154	E

2

2

LEGEND

TWIN ARM FREEWAY LIGHTING UNIT

CONDUIT - 2" UNLESS OTHERWISE SHOWN

EXISTING CONTROLLER	
HL-67-MD	
A,C,E,G B,D,F,H N GND	RED BLACK WHITE GREEN OR BARE
A,B,C,D E,F,G,H	30 A
240/480 VAC 3 WIRE ISOLATED NEUTRAL	

N

CTH G (MEADOWVIEW RD)

GOLF RD

GOLF RD

CTH G (MEADOWVIEW RD)

IH 94 WB ENTRANCE RAMP

IH 94 WB EXIT RAMP

RIPRAP

RIPRAP

RIPRAP

290+45, 2'LT
FMD3/EMD3

288+78, 5'RT
EMD2/FMD2

#10 E,F,N

#6 E,F,N (LINE)
#6 E,F,N (LOAD)
#8 E,F,N (LOAD)

#8 E,F,N

287+12, 5' RT
FMD1/EMD1

#6 E,F,N

241+99, 13'BOC
EMD11

#8 E,F,N

#6 E,F,N

236+06, 33'LT
FMD8

238+02, 33'LT
EMD9

239+99, 33'LT
FMD10

#6 E,F,N

EXISTING
CONTROL CABINET TO REMAIN
HL-67-MD

#2 A,B,N*
#2 C,D,N*
#8 E,F,N
#6 G,H,N
3-#10 PCMD

#8 E,F,N
3-#10 PCMD

243+27, 33'LT
FMD12

245+24, 33'LT
EMD13

#8 E,F,N

#2 A,B,N
#2 C,D,N
#6 G,H,N

235

240

245

290

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	LIGHTING PLANS - REMOVALS	SHEET 155	E

LEGEND

OH — OVERHEAD CABLE (AERIAL ALUMINUM)

N

114+75.06, -34.61' LT
BTC7

113+03.06, -28.60' LT
ATC8

111+27.98, -28.57' LT
BTC9

109+54.10, -27.33' LT
ATC10

CONNECT TO EXISTING STUB

ATC6

1TC5

2TC4

129+01.40, 3.44' RT
ATC6 / BTC6

128+99.28, 80.27' RT
EX. LPB-TC-108

#8 A,B,N
#12 2,N

115

3"

IH 94 WB ENTRANCE RAMP

110

#8 A,B,N,G

#8 A,N,G

#6 TRIPLEX

114+71.22, 40.54' RT
EX. LPB-TC-107

OH

3"

IH 94 WB EXIT RAMP

2120

127+56.97, -11.14' LT
ATC5 / BTC5

1TC4

127+53.01, 74.89' RT
EX. LPB-TC-106

#12 A,B,N
#12 1,N

3"

#8 A,B,N
#8 1,2,N

CTH T (N. GRANDVIEW BLVD)

125+92.23, -51.99' LT
ATC4

125+93.00, 51.21' RT
BTC4

2TC3

OH

1TC3

#6 TRIPLEX

125+8.6
UDL STUB

778+14

780

782+52
HF-TW18

779+98
HF-TW17

777+39
HF-TW16

3/4" MET.

775

IH 94 - WB

IH 94 - EB

770

771+13
HF-TW14

768+50
HF-TW13

773+74
HF-TW15

124+20.12, -52.04' LT
BTC3

1TC2

OH

124+21.12, 50.78' RT
ATC3

#6 TRIPLEX

2TC2

122+99.33, 73.51' RT
EX. LPB-TC-103

#12 A,B,N
#12 2,N
(PULL BOX TO POLE)

123+05.29, 8.92' RT
ATC2 / BTC2

#8 C,N

3120

3120+35.09, 21.30' RT
CTC3

#8 C,N

3118+74.55, 21.52' RT
DTC2

#8 C,D,N

2TC1

122+99.25, 5.75' RT
EX. LPB-TC-104

122+96.44, -65.33' LT
EX. LPB-TC-105

#8 A,B,N
#6 1,2,N

#6 A,B,N
#6 1,2,N

IH 94 EB ENTRANCE RAMP

3117+37.70, 32.16' RT
EX. LPB-TC-109
SPLICE CIRCUITS C AND D
IN EXISTING PULL BOX.

3117+09.54, 25.29' RT
CTC1
(BEHIND BARRIER)

4110

IH 94 EB EXIT RAMP

3115

3"

#6 3,4,N
(OPEN)

#6 C,D,N
#6 3,4,N (OPEN)

2TC5

3115+46.22, 28.96' RT
ATC7

121+69.44, -7.50' LT
EX. LPB-TC-102

121+55.78, -3.26' LT
ATC1 / BTC1

1TC1

#12 A,N
#12 2,N

2-3"

121+62.34, 117.42' RT
EX. LPB-TC-101

#12 A, B, N
#8 1, 2, N

120+52.11, 101.26' RT
DISTRIBUTION CENTER
HL-67-7C

#6 A,B,N
#12 A,B,N
#12 A,N
#6 1,2,N
#6 3,4,N (OPEN)
#8 1,2,N
#12 2,N

#6 A,B,N
#6 C,D,N
#12 A,B,N
#12 A,N
#6 1,2,N
#6 3,4,N (OPEN)
#8 1,2,N
#12 2,N

EXISTING CONTROLLER

HL-67-TC	
AVIATION LTG.	
1,3	ORANGE
2,4	BROWN
N	GREY/WHITE
GND	GREEN OR BARE
HIGHWAY LTG.	
A,C	RED
B,C	BLACK
N	WHITE
GND	GREEN OR BARE
1,2,3,4	30 A
A,B,C,D	30 A
120/240 VAC 3 WIRE ISOLATED NEUTRAL	

CIRCUITS 3 AND 4 ARE RESERVED FOR AVIATION OBSTRUCTION LIGHTING ON CTH T RAMP POLES AND MEDIAN POLES IN THE EXTENTS OF THE RAMPS.

NOTES

1. TEMPORARY LIGHTING SHALL BE COMPLETE PRIOR TO BRIDGE PARAPET WORK ASSOCIATED WITH PROJECT 1060-10-71

1. INSTALL ALL LIGHTING CONDUCTORS; CAP CIRCUITS A & B UNTIL BRIDGE PARAPET WORK COMPLETE UNDER PROJECT 1060-10-71

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	LIGHTING PLANS - TEMPORARY	SHEET 156	E

FILE NAME : W:\PROJECTS\15158.02 - 1060-10-00\DRAWINGS\CADD SHEETS\1060-10-70 LIGHTING PLANS - TEMPORARY.DWG
LAYOUT NAME - 023501_LP
PLOT DATE : 10/17/2022 9:43 AM
PLOT BY : ARKADIUSZ KRUPA
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

N

2 #6 A,N,B
#6 G,N,H
#8 G,N,H
2 #8 GND

114+74.16, -34.21' LT
ATC2

114+14.36, -34.13' LT
LPB-TC-107
INTERCEPT EXISTING
CONDUIT

113+03.47, -28.56' LT
BTC2

#6 A,N,B,GND

111+28.74, -28.41' LT
ATC3

#6 B,N,GND

109+54.32, -27.17' LT
BTC3

GTC2

HTC2

IH 94 WB ENTRANCE RAMP

IH 94 WB EXIT RAMP

CTH T (N. GRANDVIEW BLVD)

114+71.19, 40.43' RT
EX. LPB-TC-106
PULL BACK THE
WIRE/CABLE TO
THIS PULL BOX

127+48.66, 72.34' RT
EX LPB-TC-105

EMPTY CONDUIT

125+93.01, 51.19' RT
DTC1

#6 A,N,B
#6 G,N,H
2 #8 GND

HTC1

FTC1

125+88.66, -52.13' LT
BTC1

IH 94 - WB

IH 94 - EB

3/4" MET.

778+14

780

779+98
HF-TW17

782+52
HF-TW18

777+39
HF-TW16

775

773+74
HF-TW15

771+13
HF-TW14

770

768+50
HF-TW13

124+21.13, 50.93' RT
CTC1

#8 C,N,D
#8 E,N,F
2 #8 GND

GTC1

ETC1

124+16.71, -52.05' LT
ATC1

122+99.32, 73.49' RT
EX. LPB-TC-102

#6 A,N,B
#8 C,N,D
#8 E,N,F
#6 G,N,H
4 #8 GND

3120

3120+35.09, 21.30' RT
DTC3

#8 D,N,GND

3118+74.57, 21.52' RT
CTC3

#8 C,N,D,GND

123+01.44, -69.74' LT
EX. LPB-TC-104

#6 A,N,B
#6 G,N,H
2 #8 GND

IH 94 EB EXIT RAMP

IH 94 EB ENTRANCE RAMP

3117+34.81, 37.34' RT
EX. LPB-TC-108

3117+09.60, 25.29' RT
DTC2

FTC2

#8 C,N,D,GND

3115

ETC2

3115+45.96, 33.09' RT
CTC2

#8 C,N,D
#8 E,N,F
2 #8 GND

2-3"

121+63.14, 120.15' RT
EX. LPB-TC-101

#6 A,N,B
#6 G,N,H
2 #8 GND

#8 C,N,D
#8 E,N,F
2 #8 GND

120+52.11, 101.26' RT
MODIFIED
DISTRIBUTION CENTER
HL-67-TC

122+94.27, 10.75' RT
LPB-TC-103

LEGEND

- AVIATION LIGHTS
- PROPOSED SINGLE ARM FREEWAY LIGHTING UNIT, AVIATION LIGHTS
- DISTRIBUTION CENTER
- CONDUIT STUBOUT
- PULLBOX 24" x 42"
- JUNCTION BOX
- CONDUIT - 2" UNLESS OTHERWISE SHOWN

MODIFIED CONTROLLER

HL-67-TC	
AVIATION LTG.	
E,G	ORANGE
F,H	BROWN
N	GREY/WHITE
GND	GREEN OR BARE
HIGHWAY LTG.	
A,C	RED
B,D	BLACK
N	WHITE
GND	GREEN OR BARE
E,F,G,H	30 A
A,B,C,D	30 A
120/240 VAC 3 WIRE ISOLATED NEUTRAL	

CIRCUITS J AND K ARE RESERVED FOR AVIATION OBSTRUCTION LIGHTING ON CTH T RAMP POLES AND MEDIAN POLES IN THE EXTENTS OF THE RAMPS.

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	LIGHTING PLANS - FINAL	SHEET 157	E

2

2

LEGEND

CONDUIT - 2" UNLESS OTHERWISE SHOWN

EXISTING CONTROLLER

HL-67-MD	
A,C,E,G	RED
B,D,F,H	BLACK
N	WHITE
GND	GREEN OR BARE
A,B,C,D E,F,G,H	30 A
240/480 VAC 3 WIRE ISOLATED NEUTRAL	

N

CTH G (MEADOWVIEW RD)

GOLF RD

GOLF RD

IH 94 WB ENTRANCE RAMP

IH 94 WB EXIT RAMP

RIPRAP

RIPRAP

RIPRAP

290+45, 2'LT
FMD3/EMD3

288+78, 5'RT
EMD2/FMD2

#10 E,F,N

#8 E,F,N

236+06, 33'LT
FMD8

238+02, 33'LT
EMD9

239+99, 33'LT
FMD10

241+99, 13'BOC
EMD11

#8 E,F,N

#6 E,F,N

#6 E,F,N

#6 E,F,N
#8 E,F,N

EXISTING
CONTROL CABINET TO REMAIN
HL-67-MD

#2 A,B,N*
#2 C,D,N*
#8 E,F,N
#6 G,H,N
3-#10 PCMD

#8 E,F,N
3-#10 PCMD

243+27, 33'LT
FMD12

245+24, 33'LT
EMD13

#8 E,F,N

#2 A,B,N
#2 C,D,N
#6 G,H,N

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	LIGHTING PLANS - FINAL	SHEET 158	E

2



LEGEND

- SXX-XXXX — WISDOT OWNED TRAFFIC SIGNAL
- (1) — INSTALL TEMPORARY TRAFFIC SIGNAL
- (2) — REMOVE TEMPORARY TRAFFIC SIGNAL UPON PROJECT COMPLETION
- (3) — SAME DAY TRAFFIC SIGNAL REMOVAL AND INSTALLATION

*NOTE: SEE ID:1060-10-71

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TEMPORARY TRAFFIC SIGNAL PROJECT OVERVIEW	SHEET 159	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024100_SPO_TEMP.DWG
LAYOUT NAME - 024100_spo_temp

PLOT DATE : 1/4/2024 10:50 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:1200 FT

2

LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- SIGNAL HEAD, OVERHEAD MOUNT
- PEDESTRIAN HEAD
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- LUMINAIRE
- LANE DESIGNATION
- YIELD SIGN
- WORK AREA
- WALK/DON'T WALK INDICATOR
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT

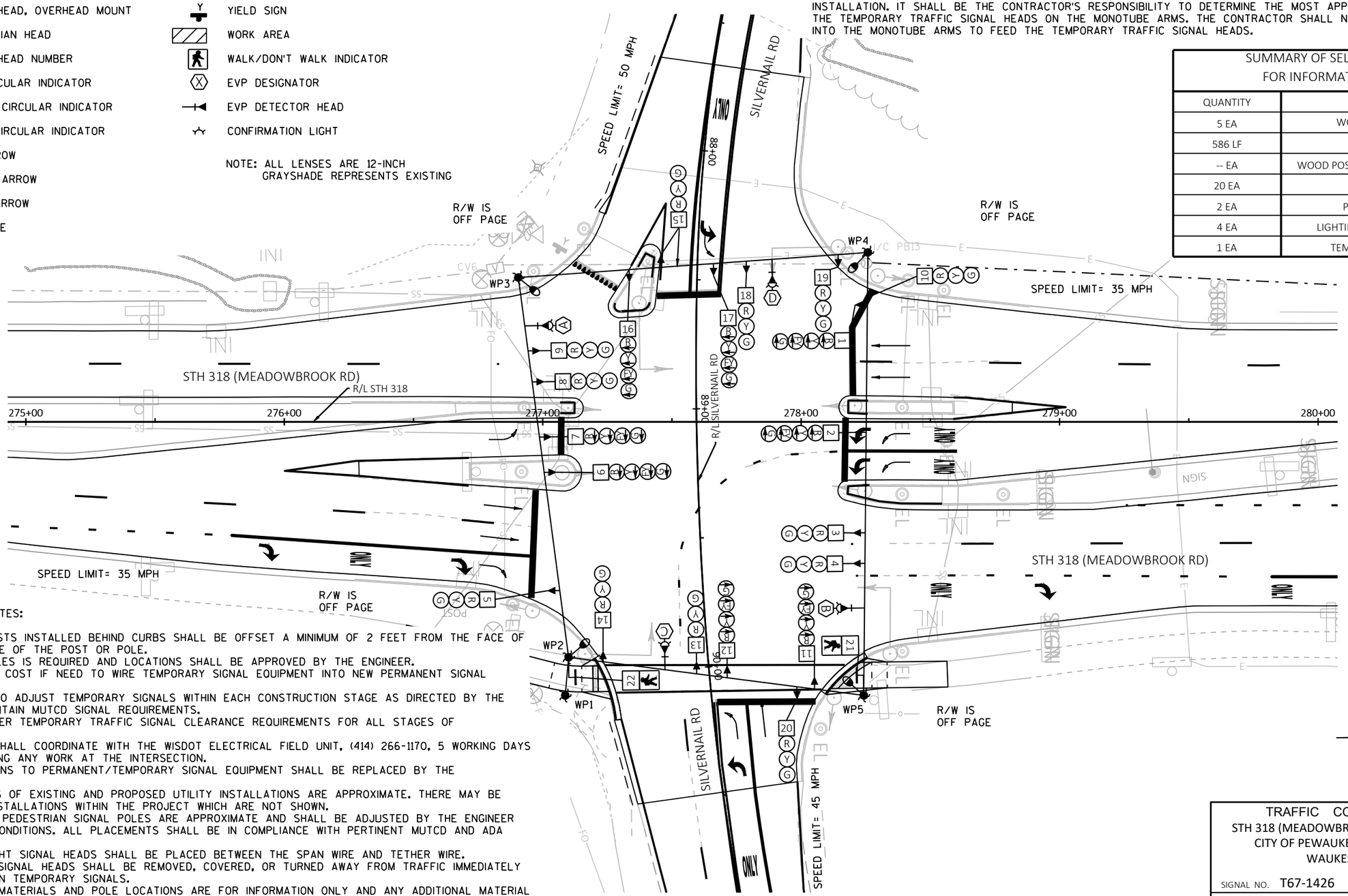
NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES CONTINUED:

* THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARMS IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE ARE INSTALLED. IF THE MONOTUBE ARMS OBSTRUCT THE TEMPORARY TRAFFIC SIGNAL HEADS ON THE SPAN WIRE, THE CONTRACTOR SHALL MOVE THE TEMPORARY TRAFFIC SIGNAL HEADS TO THE MONOTUBE ARMS AND HAVE THEM OPERATIONAL WITHIN 2 HOURS OF THE MONOTUBE ARM INSTALLATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE TEMPORARY TRAFFIC SIGNAL HEADS ON THE MONOTUBE ARMS. THE CONTRACTOR SHALL NOT DRILL ADDITIONAL HOLES INTO THE MONOTUBE ARMS TO FEED THE TEMPORARY TRAFFIC SIGNAL HEADS.

SUMMARY OF SELECTED ITEMS
FOR INFORMATION ONLY

QUANTITY	DESCRIPTION
5 EA	WOOD POLES, CLASS 4
586 LF	SPAN WIRE
-- EA	WOOD POST OR SKID TYPE TEMPORARY
20 EA	SIGNAL HEADS
2 EA	PEDESTRIAN HEADS
4 EA	LIGHTING LED-C OR 250 W HPS
1 EA	TEMPORARY EVP SYSTEM



CONSTRUCTION NOTES:

1. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. NO ADDITIONAL COST IF NEED TO WIRE TEMPORARY SIGNAL EQUIPMENT INTO NEW PERMANENT SIGNAL EQUIPMENT.
4. CONTRACTOR TO ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
5. MAINTAIN PROPER TEMPORARY TRAFFIC SIGNAL CLEARANCE REQUIREMENTS FOR ALL STAGES OF CONSTRUCTION.
6. CONTRACTOR SHALL COORDINATE WITH THE WISDOT ELECTRICAL FIELD UNIT, (414) 266-1170, 5 WORKING DAYS PRIOR TO BEGINNING ANY WORK AT THE INTERSECTION.
7. ANY KNOCKDOWNS TO PERMANENT/TEMPORARY SIGNAL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR.
8. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
9. LOCATIONS OF PEDESTRIAN SIGNAL POLES ARE APPROXIMATE AND SHALL BE ADJUSTED BY THE ENGINEER TO MEET FIELD CONDITIONS. ALL PLACEMENTS SHALL BE IN COMPLIANCE WITH PERTINENT MUTCD AND ADA REQUIREMENTS.
10. ALL NEAR RIGHT SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
11. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
12. SUMMARY OF MATERIALS AND POLE LOCATIONS ARE FOR INFORMATION ONLY AND ANY ADDITIONAL MATERIAL NEEDS ARE CONTRACTOR COST.

TRAFFIC CONTROL SIGNAL
STH 318 (MEADOWBROOK RD) & SILVERNAIL RD
CITY OF PEWAUKEE/CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. T67-1426 CONTROLLER TYPE: TEMP

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	TRAFFIC SIGNAL TEMPORARY	SHEET 160	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024141_ST.DWG
LAYOUT NAME - 024141
PLOT DATE : 8/15/2022 2:27 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- WOOD POST OR SKID TYPE TEMPORARY
- SIGNAL HEAD, OVERHEAD MOUNT
- PEDESTRIAN HEAD
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- LUMINAIRE
- LANE DESIGNATION
- YIELD SIGN
- WORK AREA
- WALK/DON'T WALK INDICATOR
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT

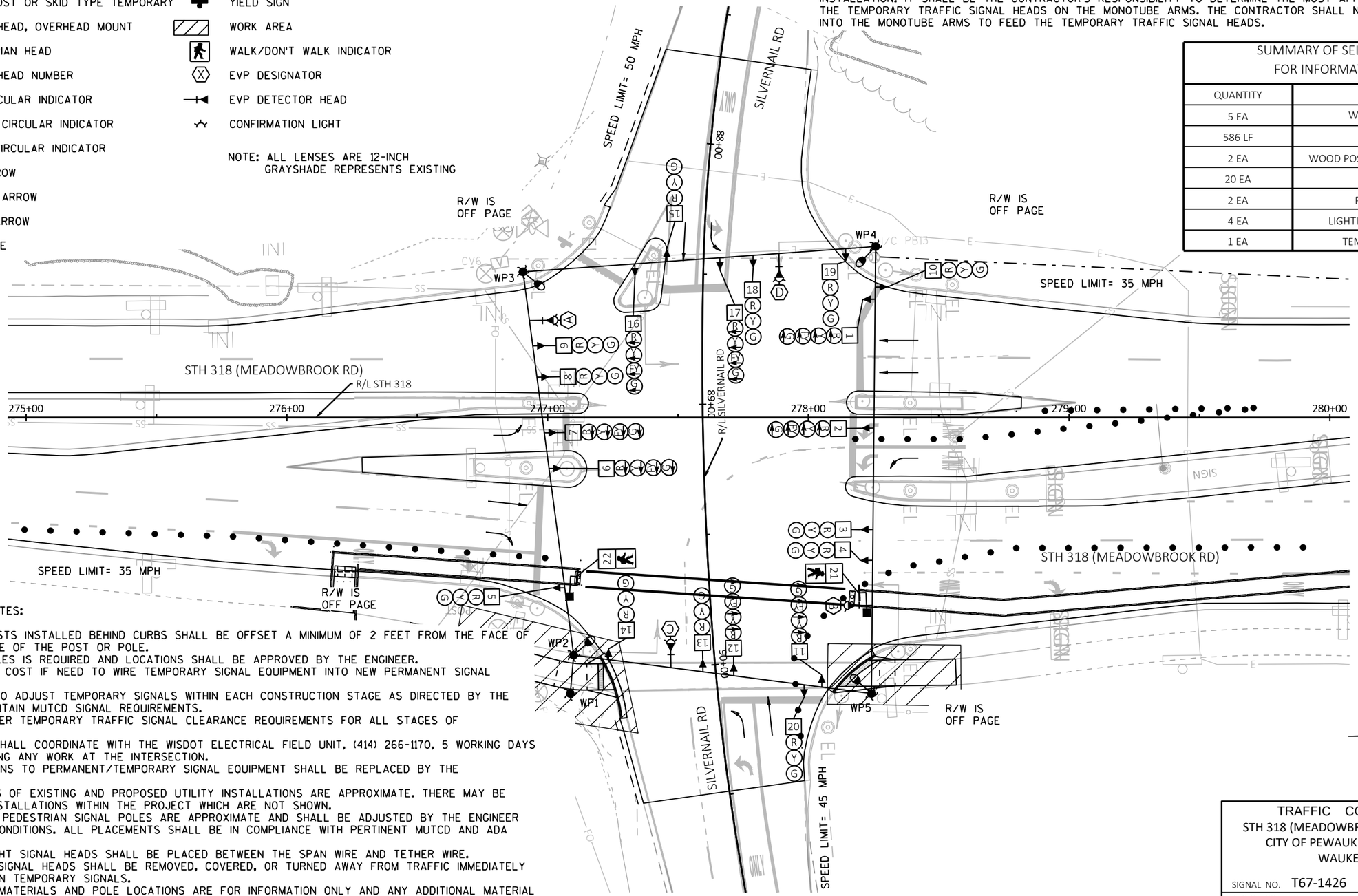
NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES CONTINUED:

* THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARMS IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE ARE INSTALLED. IF THE MONOTUBE ARMS OBSTRUCT THE TEMPORARY TRAFFIC SIGNAL HEADS ON THE SPAN WIRE, THE CONTRACTOR SHALL MOVE THE TEMPORARY TRAFFIC SIGNAL HEADS TO THE MONOTUBE ARMS AND HAVE THEM OPERATIONAL WITHIN 2 HOURS OF THE MONOTUBE ARM INSTALLATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE TEMPORARY TRAFFIC SIGNAL HEADS ON THE MONOTUBE ARMS. THE CONTRACTOR SHALL NOT DRILL ADDITIONAL HOLES INTO THE MONOTUBE ARMS TO FEED THE TEMPORARY TRAFFIC SIGNAL HEADS.

SUMMARY OF SELECTED ITEMS
FOR INFORMATION ONLY

QUANTITY	DESCRIPTION
5 EA	WOOD POLES, CLASS 4
586 LF	SPAN WIRE
2 EA	WOOD POST OR SKID TYPE TEMPORARY
20 EA	SIGNAL HEADS
2 EA	PEDESTRIAN HEADS
4 EA	LIGHTING LED-C OR 250 W HPS
1 EA	TEMPORARY EVP SYSTEM



CONSTRUCTION NOTES:

1. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. NO ADDITIONAL COST IF NEED TO WIRE TEMPORARY SIGNAL EQUIPMENT INTO NEW PERMANENT SIGNAL EQUIPMENT.
4. CONTRACTOR TO ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
5. MAINTAIN PROPER TEMPORARY TRAFFIC SIGNAL CLEARANCE REQUIREMENTS FOR ALL STAGES OF CONSTRUCTION.
6. CONTRACTOR SHALL COORDINATE WITH THE WISDOT ELECTRICAL FIELD UNIT, (414) 266-1170, 5 WORKING DAYS PRIOR TO BEGINNING ANY WORK AT THE INTERSECTION.
7. ANY KNOCKDOWNS TO PERMANENT/TEMPORARY SIGNAL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR.
8. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
9. LOCATIONS OF PEDESTRIAN SIGNAL POLES ARE APPROXIMATE AND SHALL BE ADJUSTED BY THE ENGINEER TO MEET FIELD CONDITIONS. ALL PLACEMENTS SHALL BE IN COMPLIANCE WITH PERTINENT MUTCD AND ADA REQUIREMENTS.
10. ALL NEAR RIGHT SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
11. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
12. SUMMARY OF MATERIALS AND POLE LOCATIONS ARE FOR INFORMATION ONLY AND ANY ADDITIONAL MATERIAL NEEDS ARE CONTRACTOR COST.

TRAFFIC CONTROL SIGNAL
STH 318 (MEADOWBROOK RD) & SILVERNAIL RD
CITY OF PEWAUKEE/CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. T67-1426 CONTROLLER TYPE: TEMP

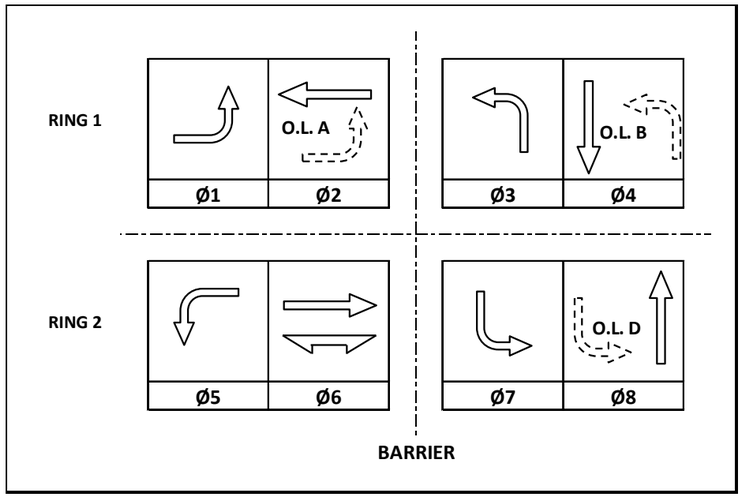
REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	TRAFFIC SIGNAL TEMPORARY - STH 318 ON RAMP CLOSURE	SHEET 161	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024142_ST.DWG
LAYOUT NAME - 024141
PLOT DATE : 8/15/2022 3:27 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

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

N



PHASES 3 AND 7 WILL ONLY ACTIVATE DURING EVP

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	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	
HARDWIRE	
OTHER	
CONFIRMATION LIGHTS	X
LIFT BRIDGE	
QUEUE DETECTION	

CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT				
PHASE	6+1	2+5	4+7	8+3

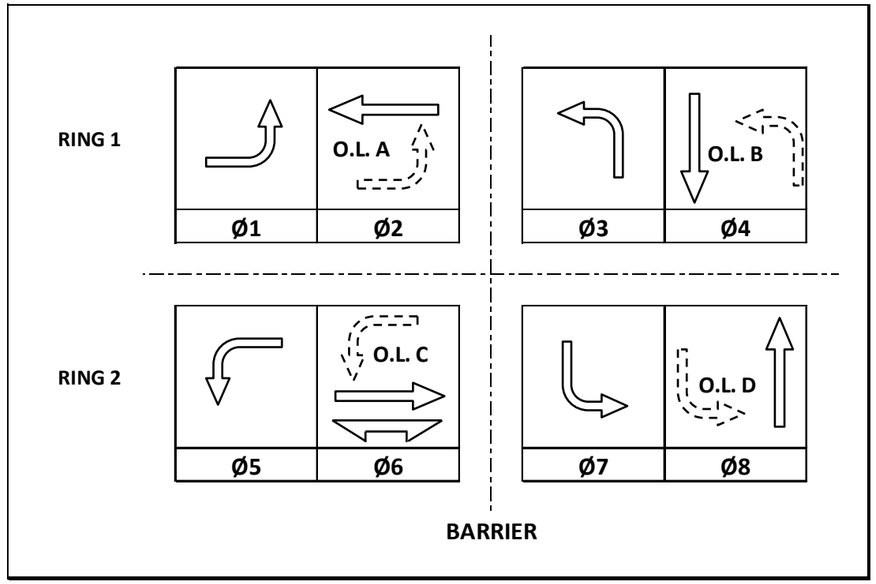
AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.
AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

STH 318 (MEADOWBROOK RD) & SILVERNAIL RD
CITY OF PEWAUKEE/CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO:	T67-1426	CABINET TYPE: TEMP
		CONTROLLER TYPE: TEMP
DATE:	10/2022	PAGE NUMBER: 3 OF 4

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

N



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	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	
HARDWIRE	
OTHER	
CONFIRMATION LIGHTS	X
LIFT BRIDGE	
QUEUE DETECTION	

CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT				
PHASE	6+1	2+5	4+7	8+3

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.
AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

STH 318 (MEADOWBROOK RD) & SILVERNAIL RD
CITY OF PEWAUKEE/CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO:	T67-1426	CABINET TYPE: TEMP	
		CONTROLLER TYPE: TEMP	
DATE:	10/2022	PAGE NUMBER: 4 OF 4	

2

LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- WOOD POST OR SKID TYPE TEMPORARY
- SIGNAL HEAD, OVERHEAD MOUNT
- PEDESTRIAN HEAD
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- LANE DESIGNATION
- YIELD SIGN
- WORK AREA
- WALK/DON'T WALK INDICATOR
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

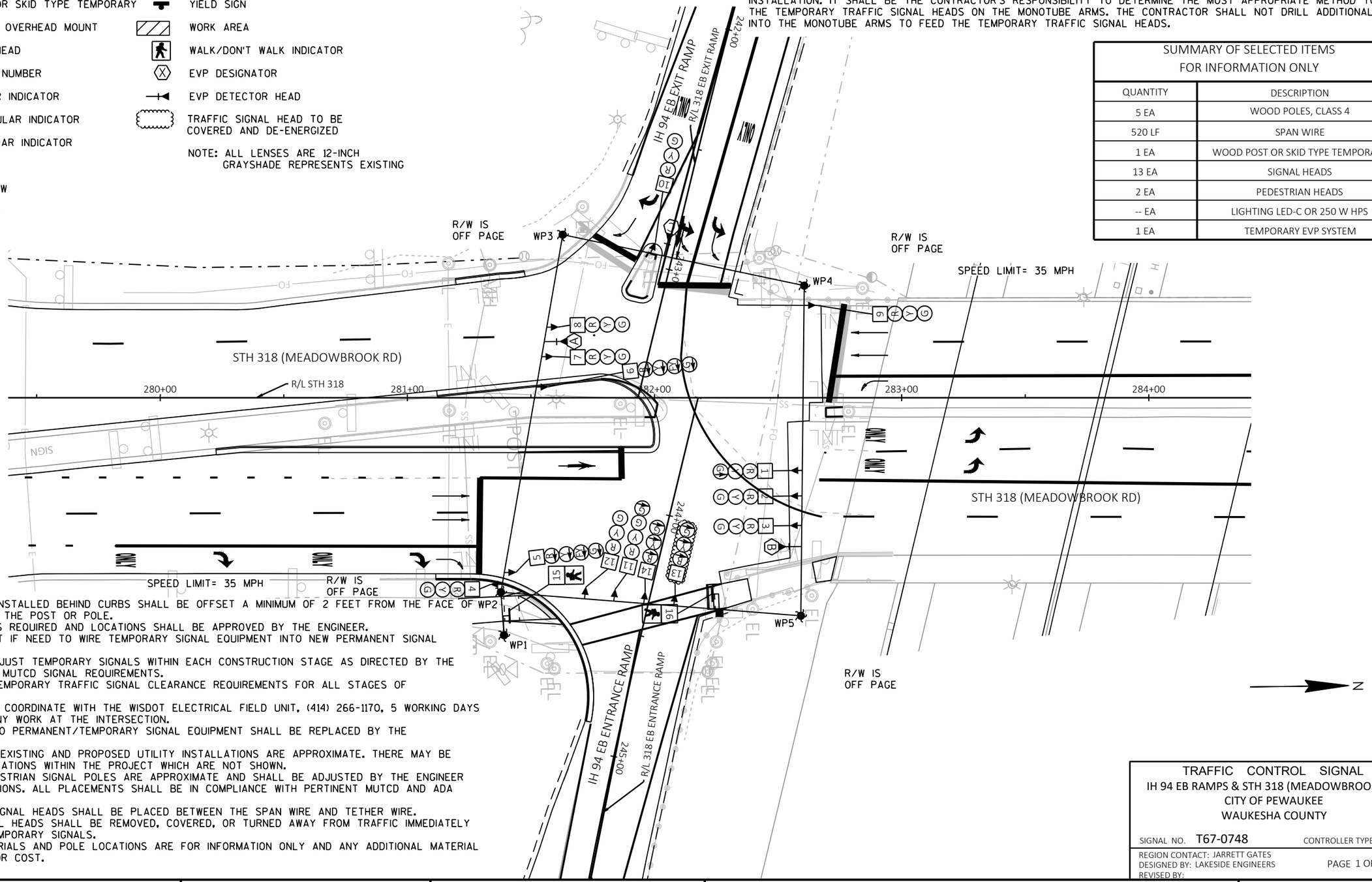
NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES CONTINUED:

* THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARMS IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE ARE INSTALLED. IF THE MONOTUBE ARMS OBSTRUCT THE TEMPORARY TRAFFIC SIGNAL HEADS ON THE SPAN WIRE, THE CONTRACTOR SHALL MOVE THE TEMPORARY TRAFFIC SIGNAL HEADS TO THE MONOTUBE ARMS AND HAVE THEM OPERATIONAL WITHIN 2 HOURS OF THE MONOTUBE ARM INSTALLATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE TEMPORARY TRAFFIC SIGNAL HEADS ON THE MONOTUBE ARMS. THE CONTRACTOR SHALL NOT DRILL ADDITIONAL HOLES INTO THE MONOTUBE ARMS TO FEED THE TEMPORARY TRAFFIC SIGNAL HEADS.

SUMMARY OF SELECTED ITEMS
FOR INFORMATION ONLY

QUANTITY	DESCRIPTION
5 EA	WOOD POLES, CLASS 4
520 LF	SPAN WIRE
1 EA	WOOD POST OR SKID TYPE TEMPORARY
13 EA	SIGNAL HEADS
2 EA	PEDESTRIAN HEADS
-- EA	LIGHTING LED-C OR 250 W HPS
1 EA	TEMPORARY EVP SYSTEM



CONSTRUCTION NOTES:

1. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. NO ADDITIONAL COST IF NEED TO WIRE TEMPORARY SIGNAL EQUIPMENT INTO NEW PERMANENT SIGNAL EQUIPMENT.
4. CONTRACTOR TO ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
5. MAINTAIN PROPER TEMPORARY TRAFFIC SIGNAL CLEARANCE REQUIREMENTS FOR ALL STAGES OF CONSTRUCTION.
6. CONTRACTOR SHALL COORDINATE WITH THE WISDOT ELECTRICAL FIELD UNIT, (414) 266-1170, 5 WORKING DAYS PRIOR TO BEGINNING ANY WORK AT THE INTERSECTION.
7. ANY KNOCKDOWNS TO PERMANENT/TEMPORARY SIGNAL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR.
8. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
9. LOCATIONS OF PEDESTRIAN SIGNAL POLES ARE APPROXIMATE AND SHALL BE ADJUSTED BY THE ENGINEER TO MEET FIELD CONDITIONS. ALL PLACEMENTS SHALL BE IN COMPLIANCE WITH PERTINENT MUTCD AND ADA REQUIREMENTS.
10. ALL NEAR RIGHT SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
11. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
12. SUMMARY OF MATERIALS AND POLE LOCATIONS ARE FOR INFORMATION ONLY AND ANY ADDITIONAL MATERIAL NEEDS ARE CONTRACTOR COST.

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & STH 318 (MEADOWBROOK RD)
CITY OF PEWAUKEE
WAUKESHA COUNTY

SIGNAL NO. T67-0748 CONTROLLER TYPE: TEMP

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL TEMPORARY	SHEET 164	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024151_ST.DWG
LAYOUT NAME - 024151
PLOT DATE : 8/24/2022 7:47 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- WOOD POST OR SKID TYPE TEMPORARY
- SIGNAL HEAD, OVERHEAD MOUNT
- PEDESTRIAN HEAD
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- FY YELLOW ARROW
- FG GREEN ARROW
- LANE DESIGNATION
- Y YIELD SIGN
- WORK AREA
- WALK/DON'T WALK INDICATOR
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

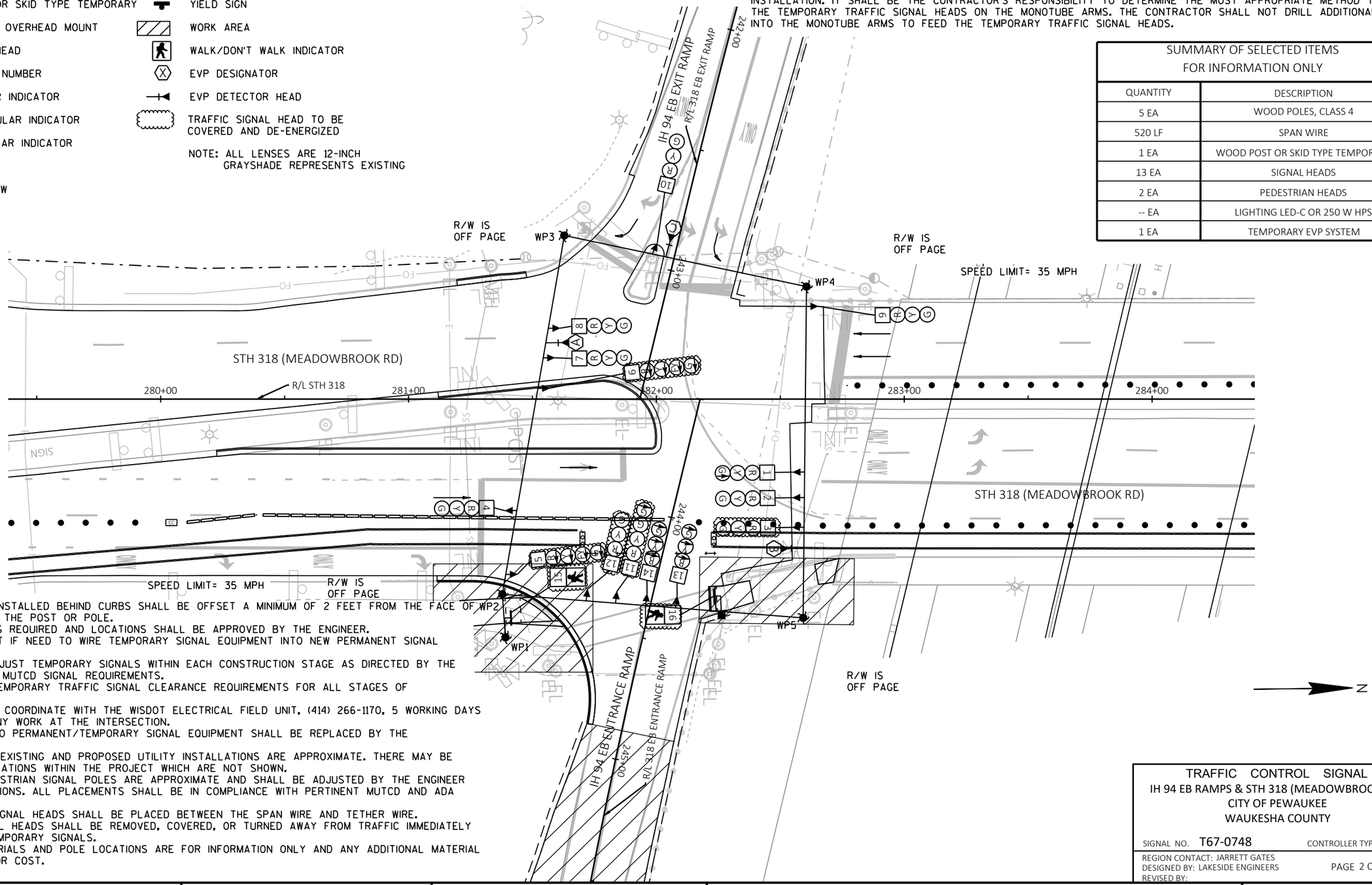
NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES CONTINUED:

* THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARMS IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE ARE INSTALLED. IF THE MONOTUBE ARMS OBSTRUCT THE TEMPORARY TRAFFIC SIGNAL HEADS ON THE SPAN WIRE, THE CONTRACTOR SHALL MOVE THE TEMPORARY TRAFFIC SIGNAL HEADS TO THE MONOTUBE ARMS AND HAVE THEM OPERATIONAL WITHIN 2 HOURS OF THE MONOTUBE ARM INSTALLATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE TEMPORARY TRAFFIC SIGNAL HEADS ON THE MONOTUBE ARMS. THE CONTRACTOR SHALL NOT DRILL ADDITIONAL HOLES INTO THE MONOTUBE ARMS TO FEED THE TEMPORARY TRAFFIC SIGNAL HEADS.

SUMMARY OF SELECTED ITEMS
FOR INFORMATION ONLY

QUANTITY	DESCRIPTION
5 EA	WOOD POLES, CLASS 4
520 LF	SPAN WIRE
1 EA	WOOD POST OR SKID TYPE TEMPORARY
13 EA	SIGNAL HEADS
2 EA	PEDESTRIAN HEADS
-- EA	LIGHTING LED-C OR 250 W HPS
1 EA	TEMPORARY EVP SYSTEM



CONSTRUCTION NOTES:

1. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. NO ADDITIONAL COST IF NEED TO WIRE TEMPORARY SIGNAL EQUIPMENT INTO NEW PERMANENT SIGNAL EQUIPMENT.
4. CONTRACTOR TO ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
5. MAINTAIN PROPER TEMPORARY TRAFFIC SIGNAL CLEARANCE REQUIREMENTS FOR ALL STAGES OF CONSTRUCTION.
6. CONTRACTOR SHALL COORDINATE WITH THE WISDOT ELECTRICAL FIELD UNIT, (414) 266-1170, 5 WORKING DAYS PRIOR TO BEGINNING ANY WORK AT THE INTERSECTION.
7. ANY KNOCKDOWNS TO PERMANENT/TEMPORARY SIGNAL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR.
8. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
9. LOCATIONS OF PEDESTRIAN SIGNAL POLES ARE APPROXIMATE AND SHALL BE ADJUSTED BY THE ENGINEER TO MEET FIELD CONDITIONS. ALL PLACEMENTS SHALL BE IN COMPLIANCE WITH PERTINENT MUTCD AND ADA REQUIREMENTS.
10. ALL NEAR RIGHT SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
11. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
12. SUMMARY OF MATERIALS AND POLE LOCATIONS ARE FOR INFORMATION ONLY AND ANY ADDITIONAL MATERIAL NEEDS ARE CONTRACTOR COST.

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & STH 318 (MEADOWBROOK RD)
CITY OF PEWAUKEE
WAUKESHA COUNTY

SIGNAL NO. T67-0748 CONTROLLER TYPE: TEMP

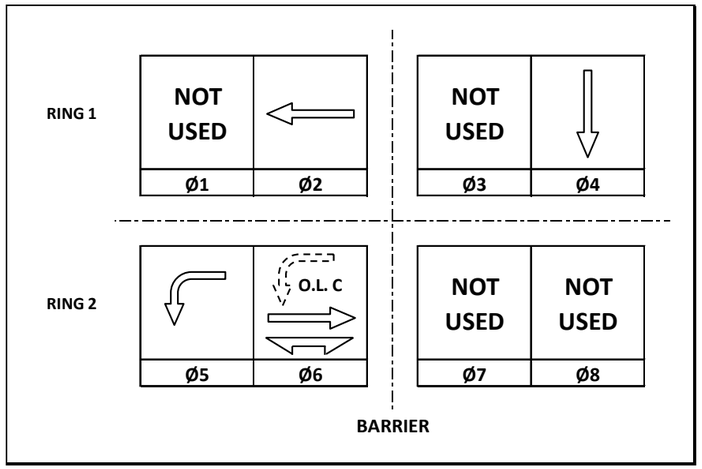
REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL TEMPORARY - STH 318 ON RAMP CLOSURE	SHEET 165	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024152_ST.DWG
LAYOUT NAME - 024151
PLOT DATE : 8/24/2022 7:49 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

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

N



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	
IN SEPARATE DOT LIGHTING CABINET	X

CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C
MOVEMENT	←	←	↓
PHASE	2+5	6+2	4

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

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

IH 94 EB & STH 318 (MEADOWBROOK RD)
CITY OF PEWAUKEE
WAUKESHA COUNTY

SIGNAL NO: T67-0748 CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP
DATE: 10/2022 PAGE NUMBER: 3 OF 3

2

LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- WOOD POST OR SKID TYPE TEMPORARY
- SIGNAL HEAD, OVERHEAD MOUNT
- PEDESTRIAN HEAD
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- LANE DESIGNATION
- Y YIELD SIGN
- WORK AREA
- WALK/DON'T WALK INDICATOR
- X EVP DESIGNATOR
- EVP DETECTOR HEAD

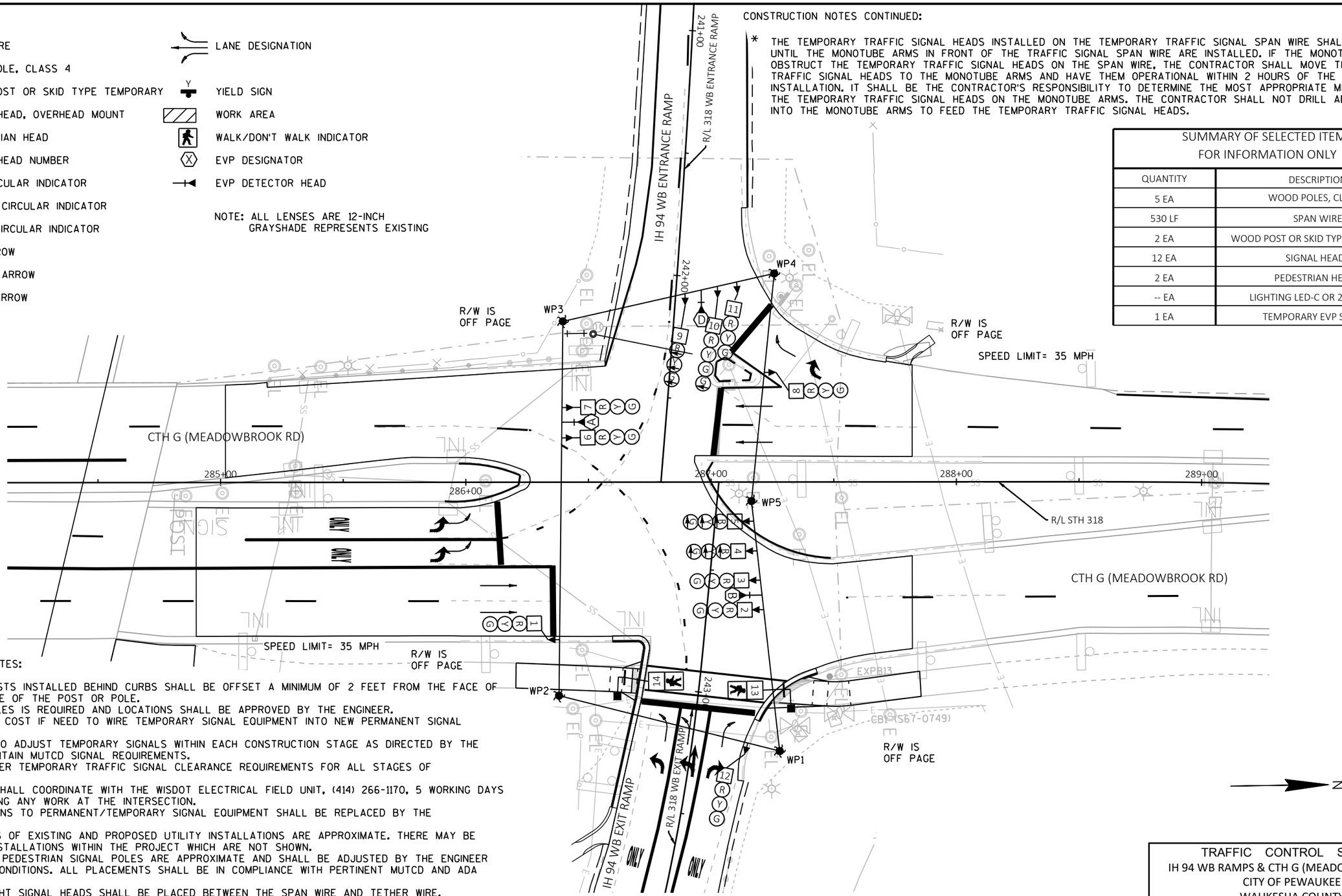
NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES CONTINUED:

* THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARMS IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE ARE INSTALLED. IF THE MONOTUBE ARMS OBSTRUCT THE TEMPORARY TRAFFIC SIGNAL HEADS ON THE SPAN WIRE, THE CONTRACTOR SHALL MOVE THE TEMPORARY TRAFFIC SIGNAL HEADS TO THE MONOTUBE ARMS AND HAVE THEM OPERATIONAL WITHIN 2 HOURS OF THE MONOTUBE ARM INSTALLATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE TEMPORARY TRAFFIC SIGNAL HEADS ON THE MONOTUBE ARMS. THE CONTRACTOR SHALL NOT DRILL ADDITIONAL HOLES INTO THE MONOTUBE ARMS TO FEED THE TEMPORARY TRAFFIC SIGNAL HEADS.

SUMMARY OF SELECTED ITEMS
FOR INFORMATION ONLY

QUANTITY	DESCRIPTION
5 EA	WOOD POLES, CLASS 4
530 LF	SPAN WIRE
2 EA	WOOD POST OR SKID TYPE TEMPORARY
12 EA	SIGNAL HEADS
2 EA	PEDESTRIAN HEADS
-- EA	LIGHTING LED-C OR 250 W HPS
1 EA	TEMPORARY EVP SYSTEM



CONSTRUCTION NOTES:

1. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. NO ADDITIONAL COST IF NEED TO WIRE TEMPORARY SIGNAL EQUIPMENT INTO NEW PERMANENT SIGNAL EQUIPMENT.
4. CONTRACTOR TO ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
5. MAINTAIN PROPER TEMPORARY TRAFFIC SIGNAL CLEARANCE REQUIREMENTS FOR ALL STAGES OF CONSTRUCTION.
6. CONTRACTOR SHALL COORDINATE WITH THE WISDOT ELECTRICAL FIELD UNIT, (414) 266-1170, 5 WORKING DAYS PRIOR TO BEGINNING ANY WORK AT THE INTERSECTION.
7. ANY KNOCKDOWNS TO PERMANENT/TEMPORARY SIGNAL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR.
8. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
9. LOCATIONS OF PEDESTRIAN SIGNAL POLES ARE APPROXIMATE AND SHALL BE ADJUSTED BY THE ENGINEER TO MEET FIELD CONDITIONS. ALL PLACEMENTS SHALL BE IN COMPLIANCE WITH PERTINENT MUTCD AND ADA REQUIREMENTS.
10. ALL NEAR RIGHT SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
11. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
12. SUMMARY OF MATERIALS AND POLE LOCATIONS ARE FOR INFORMATION ONLY AND ANY ADDITIONAL MATERIAL NEEDS ARE CONTRACTOR COST.

TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS & CTH G (MEADOWBROOK RD)
CITY OF PEWAUKEE
WAUKESHA COUNTY

SIGNAL NO. T67-0749 CONTROLLER TYPE: TEMP

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL TEMPORARY	SHEET 167	E

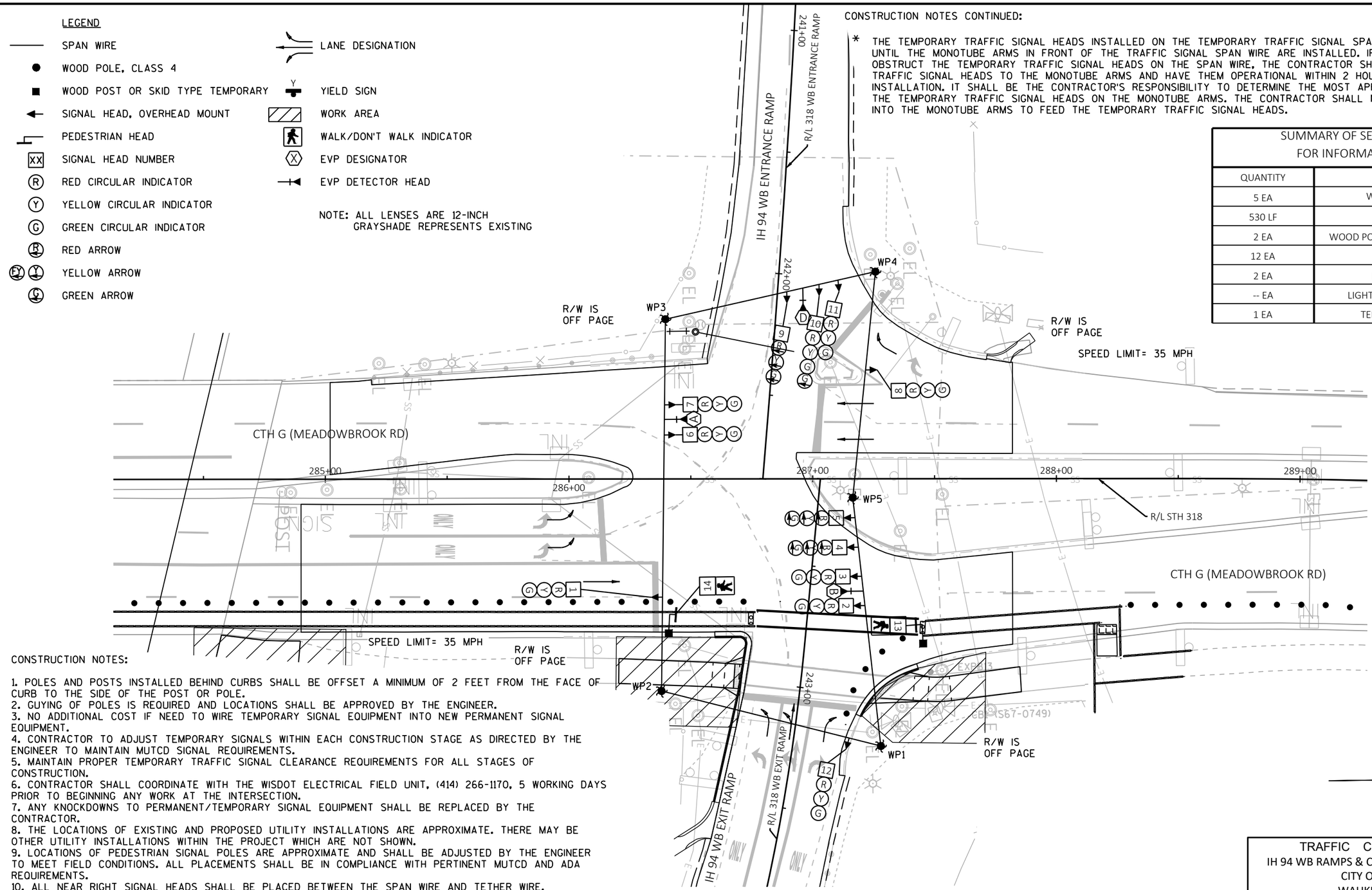
FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024161_ST.DWG
LAYOUT NAME - 024161
PLOT DATE : 8/24/2022 7:55 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- WOOD POST OR SKID TYPE TEMPORARY
- SIGNAL HEAD, OVERHEAD MOUNT
- PEDESTRIAN HEAD
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- LANE DESIGNATION
- YIELD SIGN
- WORK AREA
- WALK/DON'T WALK INDICATOR
- EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES CONTINUED:

* THE TEMPORARY TRAFFIC SIGNAL HEADS INSTALLED ON THE TEMPORARY TRAFFIC SIGNAL SPAN WIRE SHALL BE ACTIVE UNTIL THE MONOTUBE ARMS IN FRONT OF THE TRAFFIC SIGNAL SPAN WIRE ARE INSTALLED. IF THE MONOTUBE ARMS OBSTRUCT THE TEMPORARY TRAFFIC SIGNAL HEADS ON THE SPAN WIRE, THE CONTRACTOR SHALL MOVE THE TEMPORARY TRAFFIC SIGNAL HEADS TO THE MONOTUBE ARMS AND HAVE THEM OPERATIONAL WITHIN 2 HOURS OF THE MONOTUBE ARM INSTALLATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE MOST APPROPRIATE METHOD TO FEED THE TEMPORARY TRAFFIC SIGNAL HEADS ON THE MONOTUBE ARMS. THE CONTRACTOR SHALL NOT DRILL ADDITIONAL HOLES INTO THE MONOTUBE ARMS TO FEED THE TEMPORARY TRAFFIC SIGNAL HEADS.

SUMMARY OF SELECTED ITEMS
FOR INFORMATION ONLY

QUANTITY	DESCRIPTION
5 EA	WOOD POLES, CLASS 4
530 LF	SPAN WIRE
2 EA	WOOD POST OR SKID TYPE TEMPORARY
12 EA	SIGNAL HEADS
2 EA	PEDESTRIAN HEADS
-- EA	LIGHTING LED-C OR 250 W HPS
1 EA	TEMPORARY EVP SYSTEM

CONSTRUCTION NOTES:

1. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. NO ADDITIONAL COST IF NEED TO WIRE TEMPORARY SIGNAL EQUIPMENT INTO NEW PERMANENT SIGNAL EQUIPMENT.
4. CONTRACTOR TO ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
5. MAINTAIN PROPER TEMPORARY TRAFFIC SIGNAL CLEARANCE REQUIREMENTS FOR ALL STAGES OF CONSTRUCTION.
6. CONTRACTOR SHALL COORDINATE WITH THE WISDOT ELECTRICAL FIELD UNIT, (414) 266-1170, 5 WORKING DAYS PRIOR TO BEGINNING ANY WORK AT THE INTERSECTION.
7. ANY KNOCKDOWNS TO PERMANENT/TEMPORARY SIGNAL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR.
8. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
9. LOCATIONS OF PEDESTRIAN SIGNAL POLES ARE APPROXIMATE AND SHALL BE ADJUSTED BY THE ENGINEER TO MEET FIELD CONDITIONS. ALL PLACEMENTS SHALL BE IN COMPLIANCE WITH PERTINENT MUTCD AND ADA REQUIREMENTS.
10. ALL NEAR RIGHT SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
11. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
12. SUMMARY OF MATERIALS AND POLE LOCATIONS ARE FOR INFORMATION ONLY AND ANY ADDITIONAL MATERIAL NEEDS ARE CONTRACTOR COST.

TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS & CTH G (MEADOWBROOK RD)
CITY OF PEWAUKEE
WAUKESHA COUNTY

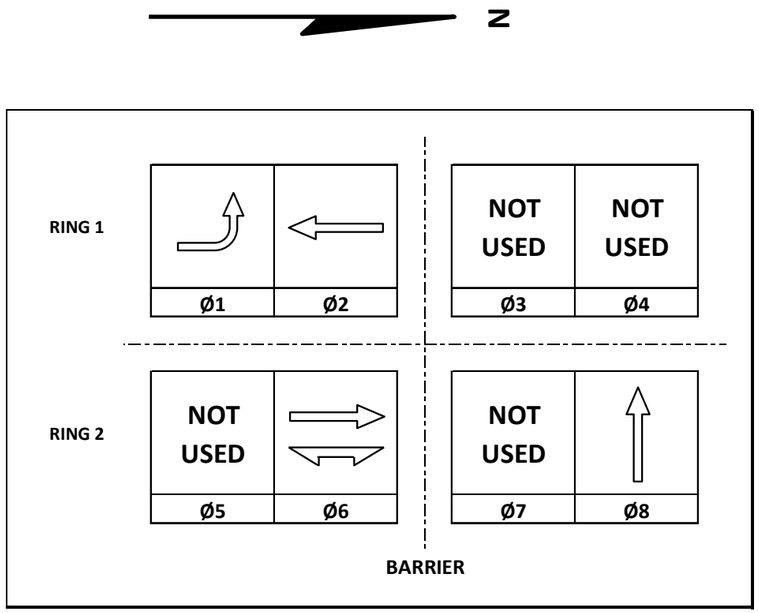
SIGNAL NO. T67-0749 CONTROLLER TYPE: TEMP

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL TEMPORARY - STH 318 ON RAMP CLOSURE	SHEET 168	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024162_ST.DWG
LAYOUT NAME - 024161
PLOT DATE : 8/24/2022 8:12 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	4,5	R ←
Ø2	6,7,8	R
Ø3		
Ø4		
Ø5		
Ø6	1,2,3	R
Ø7		
Ø8	9,10,11,12	R, R ←
Ø2P		
Ø4P		
Ø6P	13,14	
Ø8P		
OLE		
OLF		
OLG		
OLH		



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

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

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	D
MOVEMENT	← →	↗ →	↑
PHASE	2+6	6+1	8

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

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

CONTROLLER LOGIC

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

IH 94 WB & CTH G (MEADOWBROOK RD)
CITY OF PEWAUKEE
WAUKESHA COUNTY

SIGNAL NO: T67-0749 CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP
DATE: 10/2022 PAGE NUMBER: 3 OF 3

2



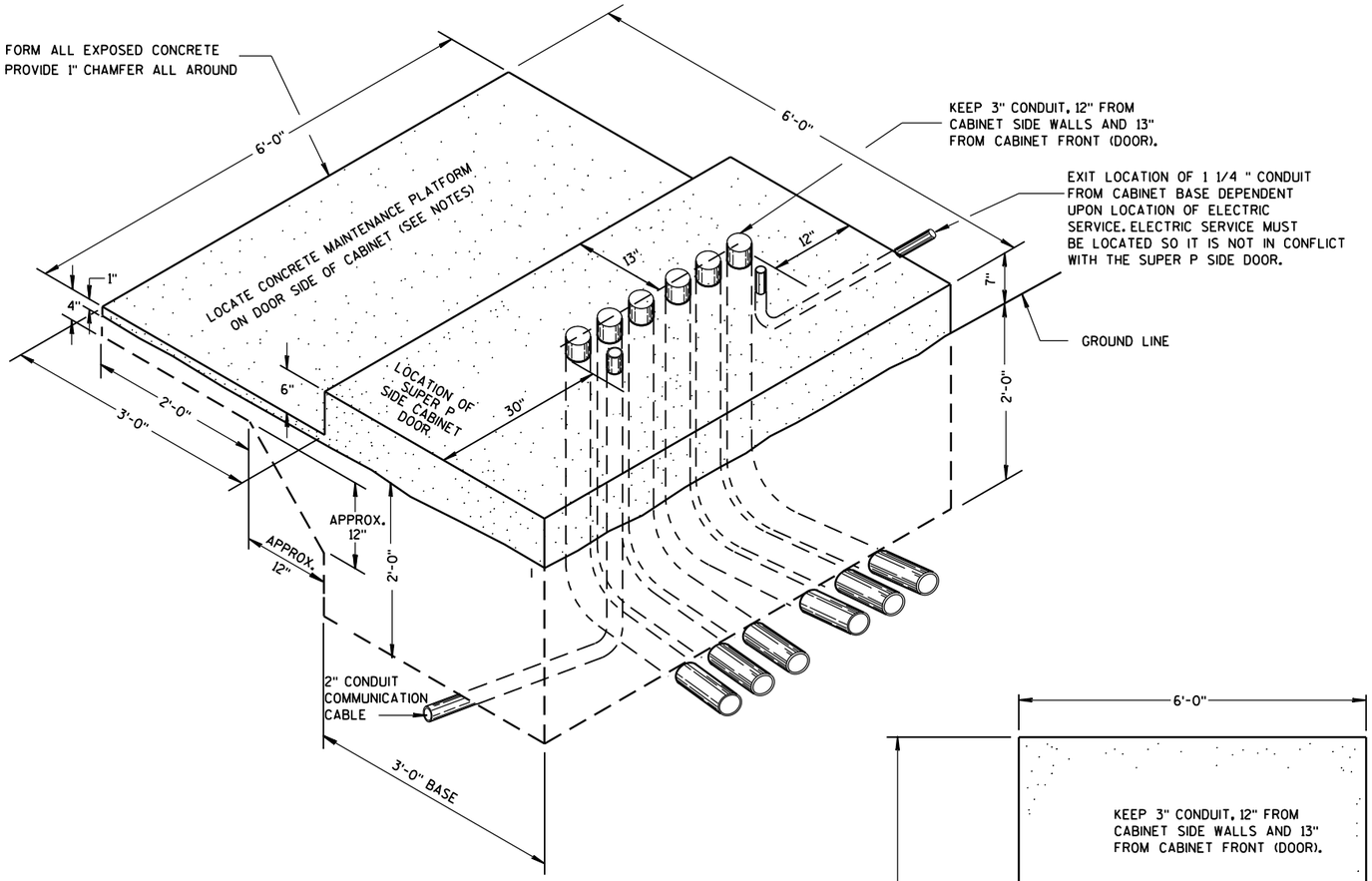
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PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL PROJECT OVERVIEW	SHEET 170	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024000_SPO.DWG
LAYOUT NAME - 024000_spo

PLOT DATE : 8/24/2022 10:51 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:1200 FT

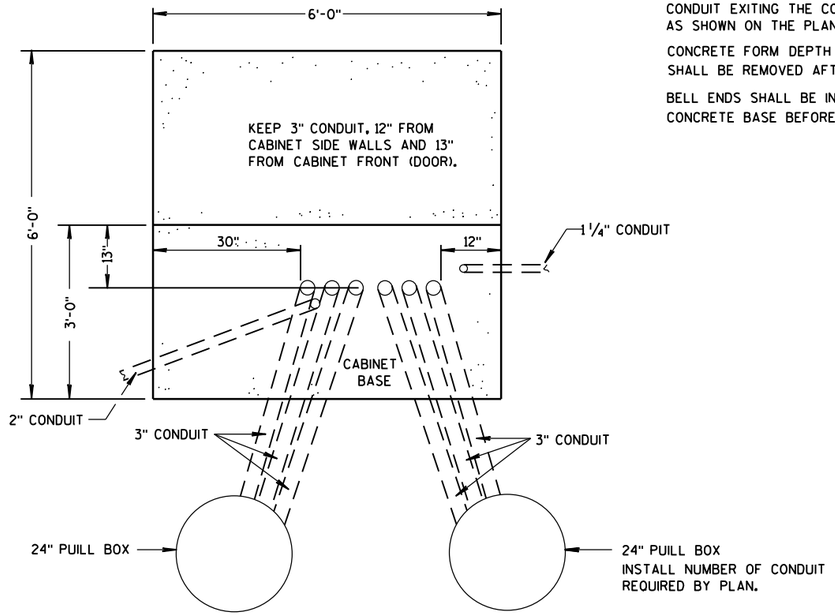
WISDOT/CADDS SHEET 44



ISOMETRIC VIEW

TYPE 9, SPECIAL SUPER P

(C.Y. CONCRETE = APPROX. 2.11)



PLAN VIEW

GENERAL NOTES

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

INSTALL FOUR ½ INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

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

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

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

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONDUIT EXITING THE CONCRETE BASE (SIX THREE INCH) SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE CONTROL CABINET BASE, TYPE 9 SPECIAL SUPER P

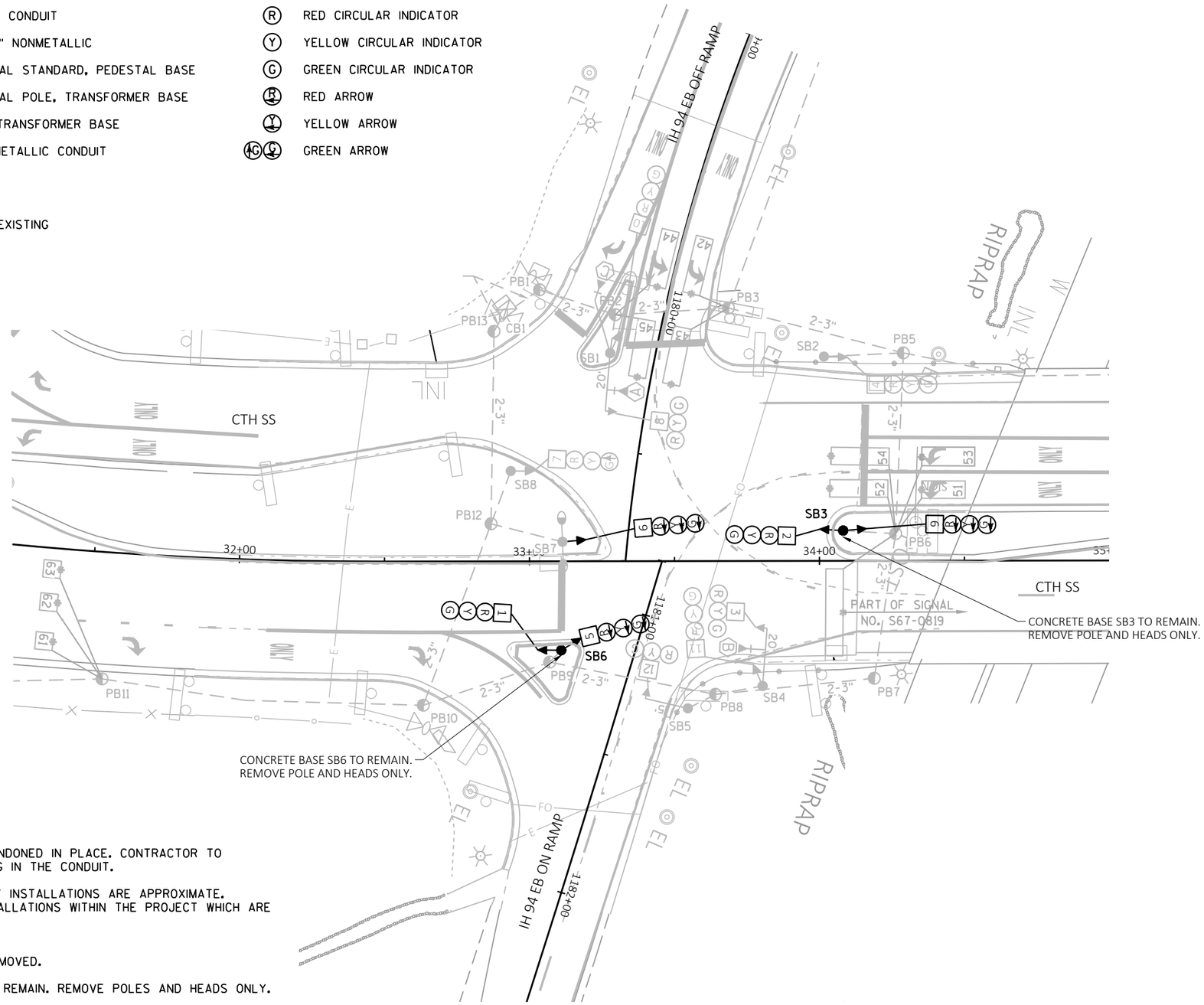
PROJECT NO: 1060-10-71	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL DETAILS	SHEET 171	E

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
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

- PULL BOX, 24" X 36"
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW



CONSTRUCTION NOTES:

1. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
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.
4. CONCRETE BASES SB3 AND SB6 TO REMAIN. REMOVE POLES AND HEADS ONLY.

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & CTH SS
CITY OF PEWAUKEE
WAUKESHA COUNTY

SIGNAL NO. S67-0818

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 172	E

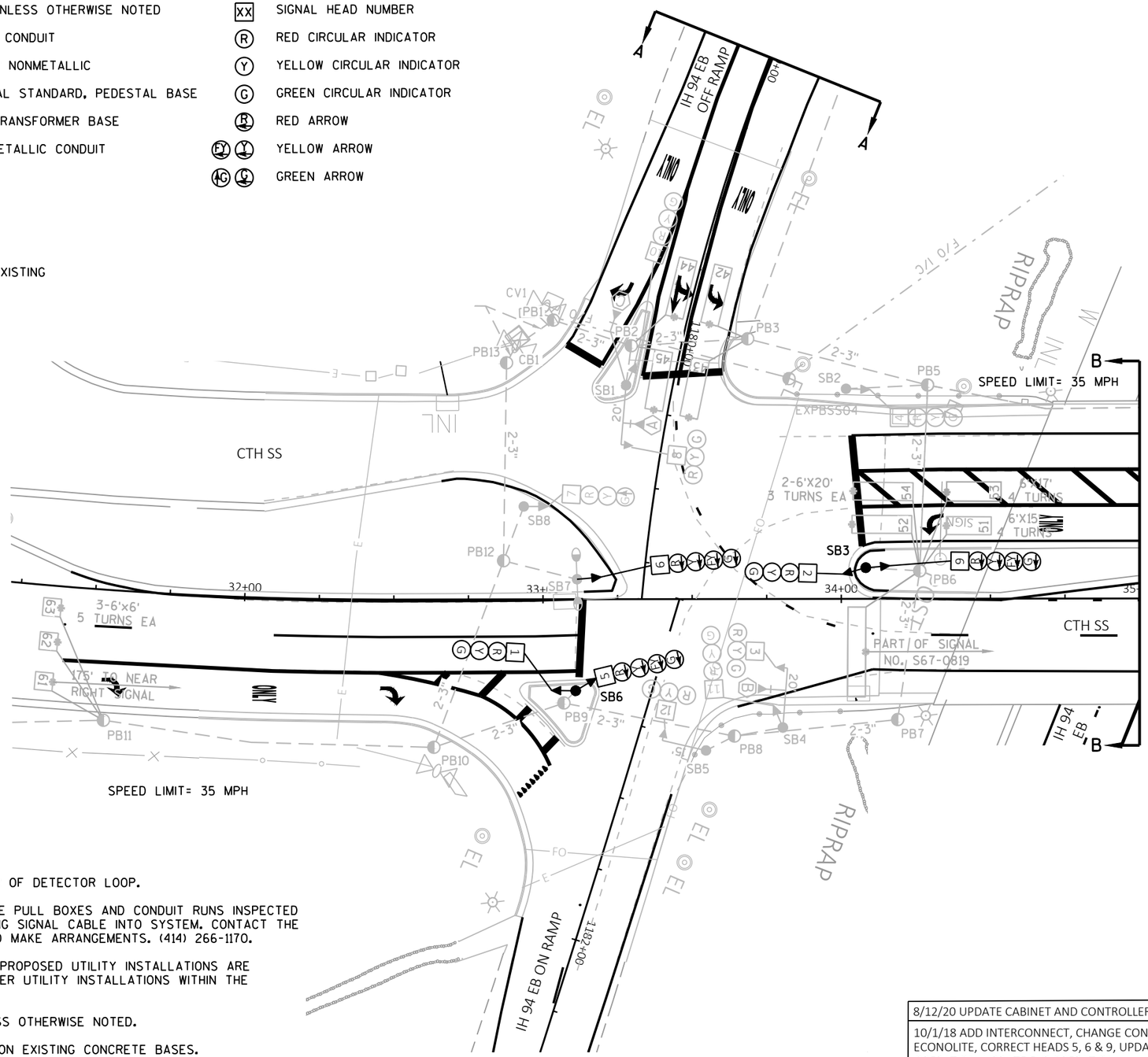
FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024021_SR.DWG
LAYOUT NAME - 024021_sr
PLOT DATE : 8/16/2022 10:23 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- NONMETALLIC INTERCONNECT CONDUIT
- LOOP DETECTOR CONDUIT, 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- PULL BOX, 24" X 36"
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. ALL LUMINAIRES ARE LED-C UNLESS OTHERWISE NOTED.
5. PLACE POLES FOR SB3 AND SB6 ON EXISTING CONCRETE BASES.

8/12/20 UPDATE CABINET AND CONTROLLER

10/1/18 ADD INTERCONNECT, CHANGE CONTROLLER TO ECONOLITE, CORRECT HEADS 5, 6 & 9, UPDATE SIGNAL OPERATION, UPDATE EVP OPERATION.

2/15/12 REVISED EVP LOCATION FOR "C" TO SB1

10/06/10 ADD EVP NB, SB AND EB

WISCONSIN PROFESSIONAL ENGINEER
CHRISTOPHER M QUESNELL
E-37621
NEW BERLIN
WI
10/18/22

REVISION

REV. NO.	INSTALL SB FYA			
	APPROVAL RECOMMENDED		APPROVED	
	REGION		CENTRAL OFFICE	
5	DATE	BY	DATE	BY
	10-17-22	JMG	10-20-22	JR

10-18-22

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & CTH SS
CITY OF PEWAUKEE
WAUKESHA COUNTY

SIGNAL NO. S67-0818
CABINET TYPE: TS2-S
CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
DATE 8/21/00 — MITZI M DOBERSEK P.E., REGION TRAFFIC ENGINEER

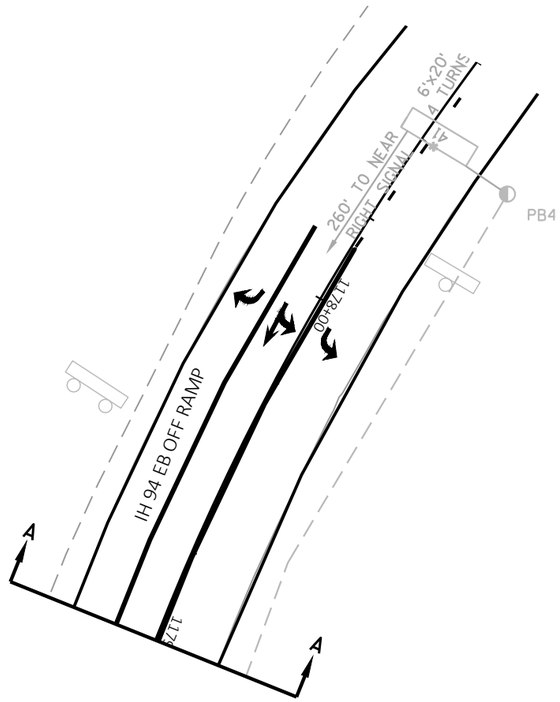
APPROVED
DATE 9/8/00 — WILLIAM GILDING, STATE TRAFFIC ENGINEER

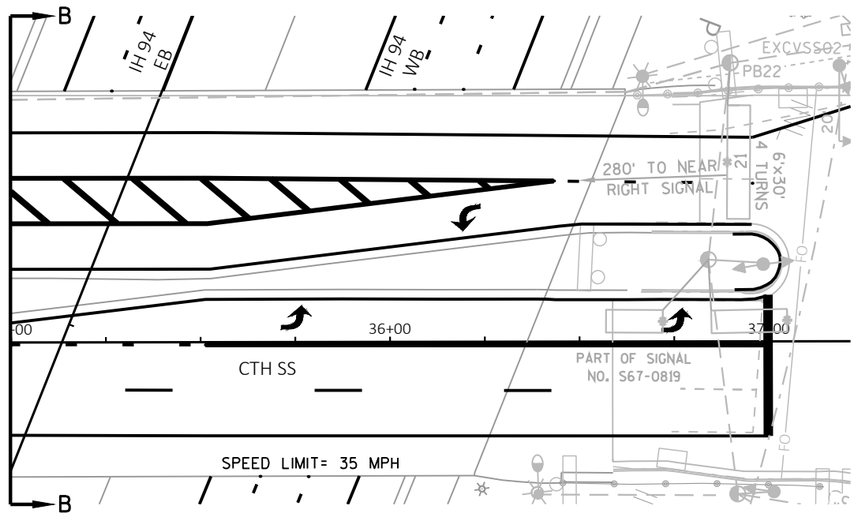
REGION CONTACT: JARRETT GATES
DESIGNED BY:
REVISED BY: LAKESIDE ENGINEERS

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 173	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024221_SP.DWG
LAYOUT NAME - 024221_sp
PLOT DATE : 10/14/2022 8:05 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

2





TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & CTH SS
CITY OF PEWAUKEE
WAUKESHA COUNTY

SIGNAL NO. S67-0818

REGION CONTACT: JARRETT GATES
DESIGNED BY:
REVISED BY: LAKESIDE ENGINEERS

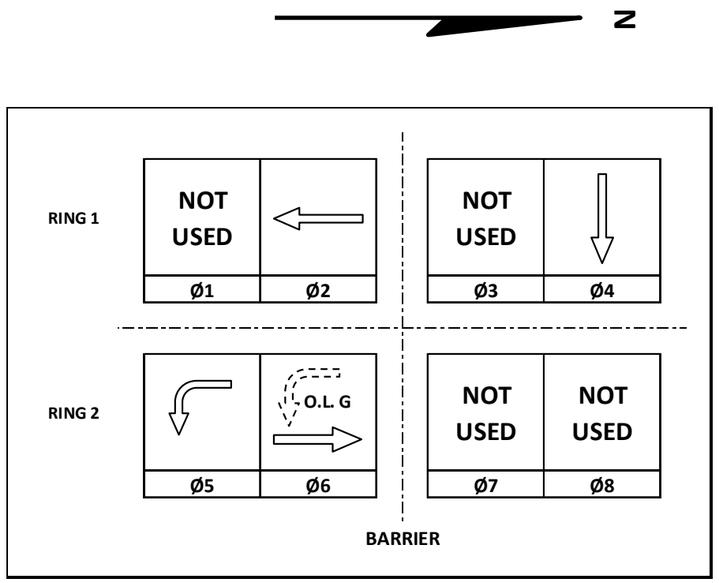
PAGE 2 OF 3

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 174	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024221_SP.DWG
LAYOUT NAME - 024222_sp

PLOT DATE : 10/14/2022 8:05 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

	HEAD NUMBERS	FLASH
Ø1		
Ø2	4,7,8	R
Ø3		
Ø4	10,11,12	R
Ø5	5,6,9	R ←
Ø6	1,2,3	R
Ø7		
Ø8		
Ø2P		
Ø4P		
Ø6P		
Ø8P		
OLE		
OLF		
OLG	5,6,9	-
OLH		



CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C
MOVEMENT	←	←	↓
PHASE	2+5	6+2	4

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	21	42	44	51	53	61	63	
CALLED PHASE	2	4	4	5	5	6	6	
CALL OPTION	X	X	X	X	X	X	X	
DELAY TIME					X			
EXTENTION OPTION	X	X	X	X	X	X	X	
EXTEND TIME								
USE ADDED INITIAL	X					X	X	
CROSS SWITCH PHASE				6				

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

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	41	43	45	52	54	62		
CALLED PHASE	4	4	4	5	5	6		
CALL OPTION		X	X	X	X	X		
DELAY TIME					X			
EXTENTION OPTION	X	X	X	X	X	X		
EXTEND TIME	X							
USE ADDED INITIAL						X		
CROSS SWITCH PHASE				6				

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

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

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

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

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

IH 94 EB & CTH SS
CITY OF PEWAUKEE
WAUKESHA COUNTY

SIGNAL NO: S67-0818 CABINET TYPE: TS2-S
CONTROLLER TYPE: ECONOLITE
DATE: 10/2022 PAGE NUMBER: 3 OF 3

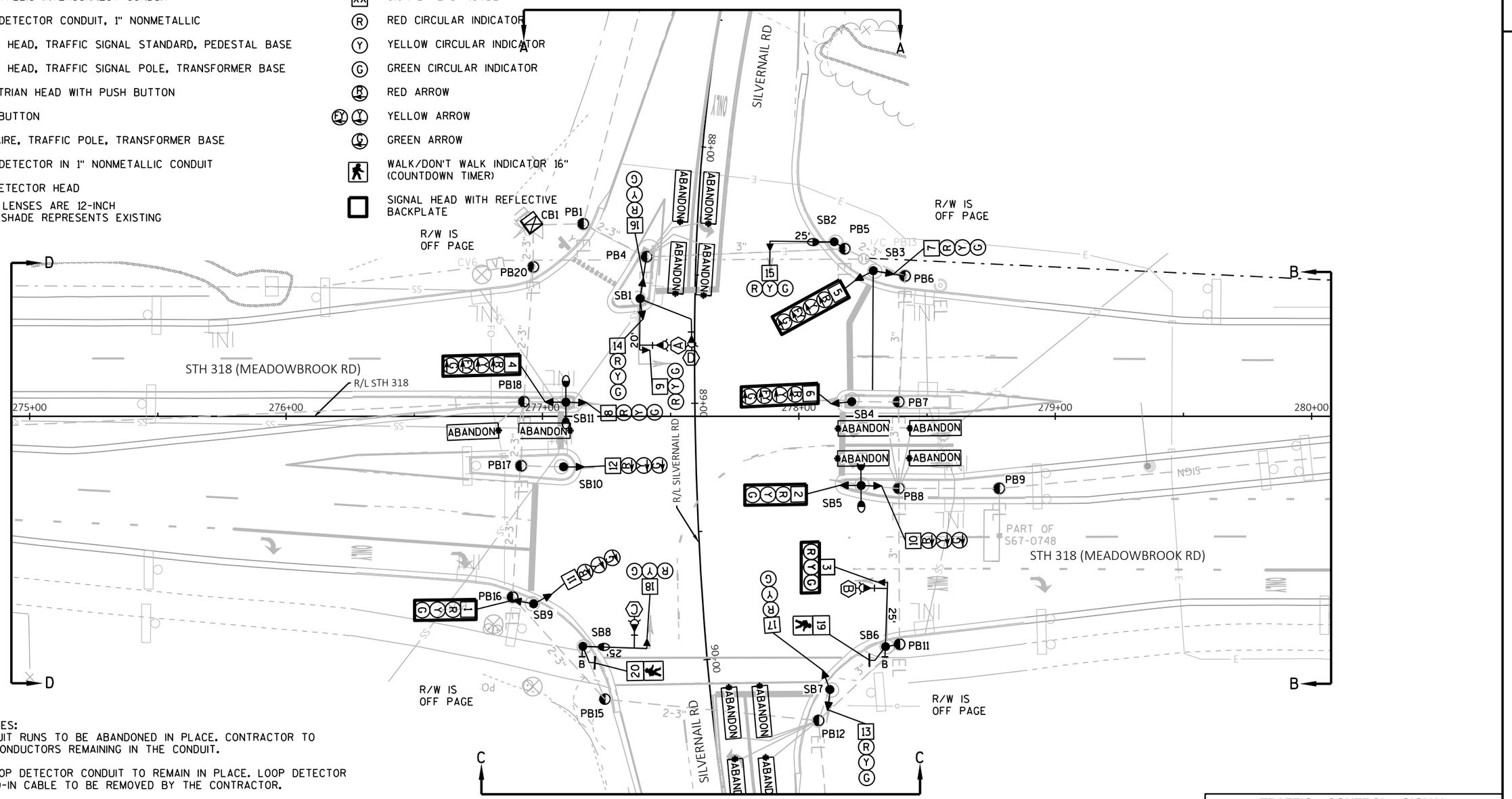
FILE NAME : PLOT DATE : 10/21/2022 7:12 AM PLOT BY : PLOT NAME : 024301_ph PLOT SCALE : 1.000000:1.000000
WISDOT / CADDS SHEET 42

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, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

- 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
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- SIGNAL HEAD WITH REFLECTIVE BACKPLATE



CONSTRUCTION NOTES:

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

TRAFFIC CONTROL SIGNAL

STH 318 (MEADOWBROOK RD) & SILVERNAIL RD
CITY OF PEWAUKEE/CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-1426

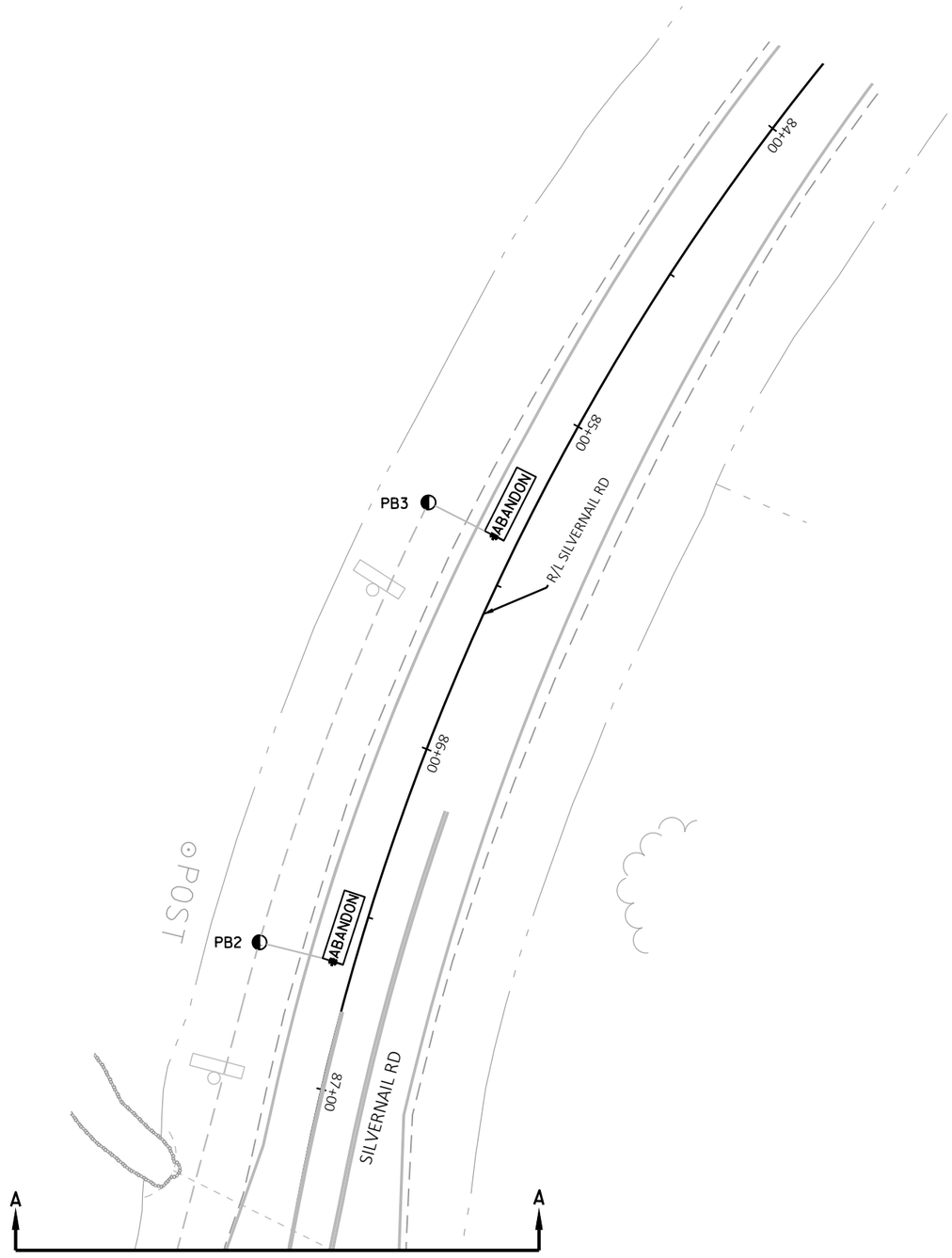
REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

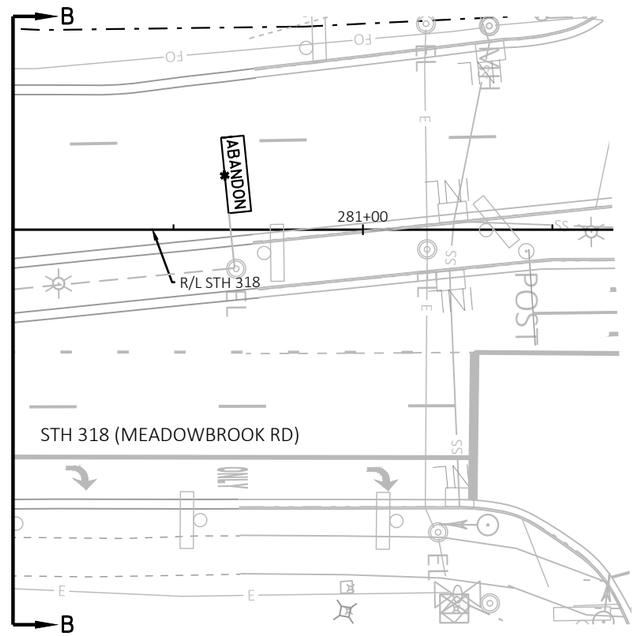
PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 176	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024041_SR.DWG
LAYOUT NAME - 024041
PLOT DATE : 10/14/2022 8:59 AM
PLOT BY : TONY BUBLITZ
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

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TRAFFIC CONTROL SIGNAL
STH 318 (MEADOWBROOK RD) & SILVERNAIL RD
CITY OF PEWAUKEE/CITY OF WAUKESHA
WAUKESHA COUNTY

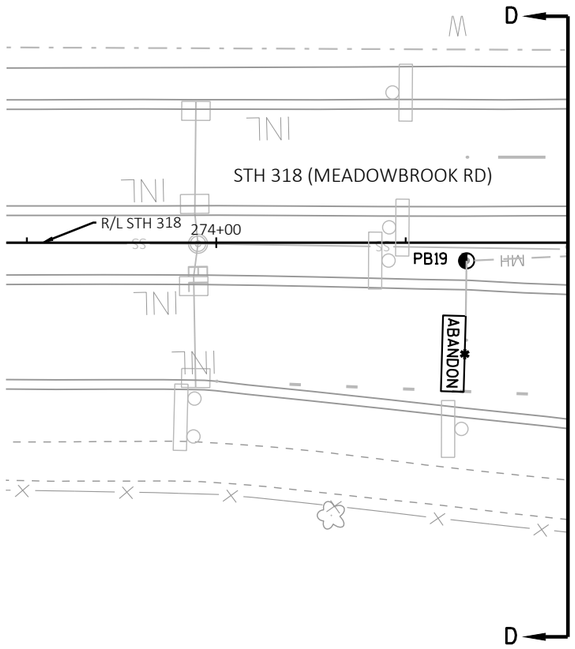
SIGNAL NO. S67-1426

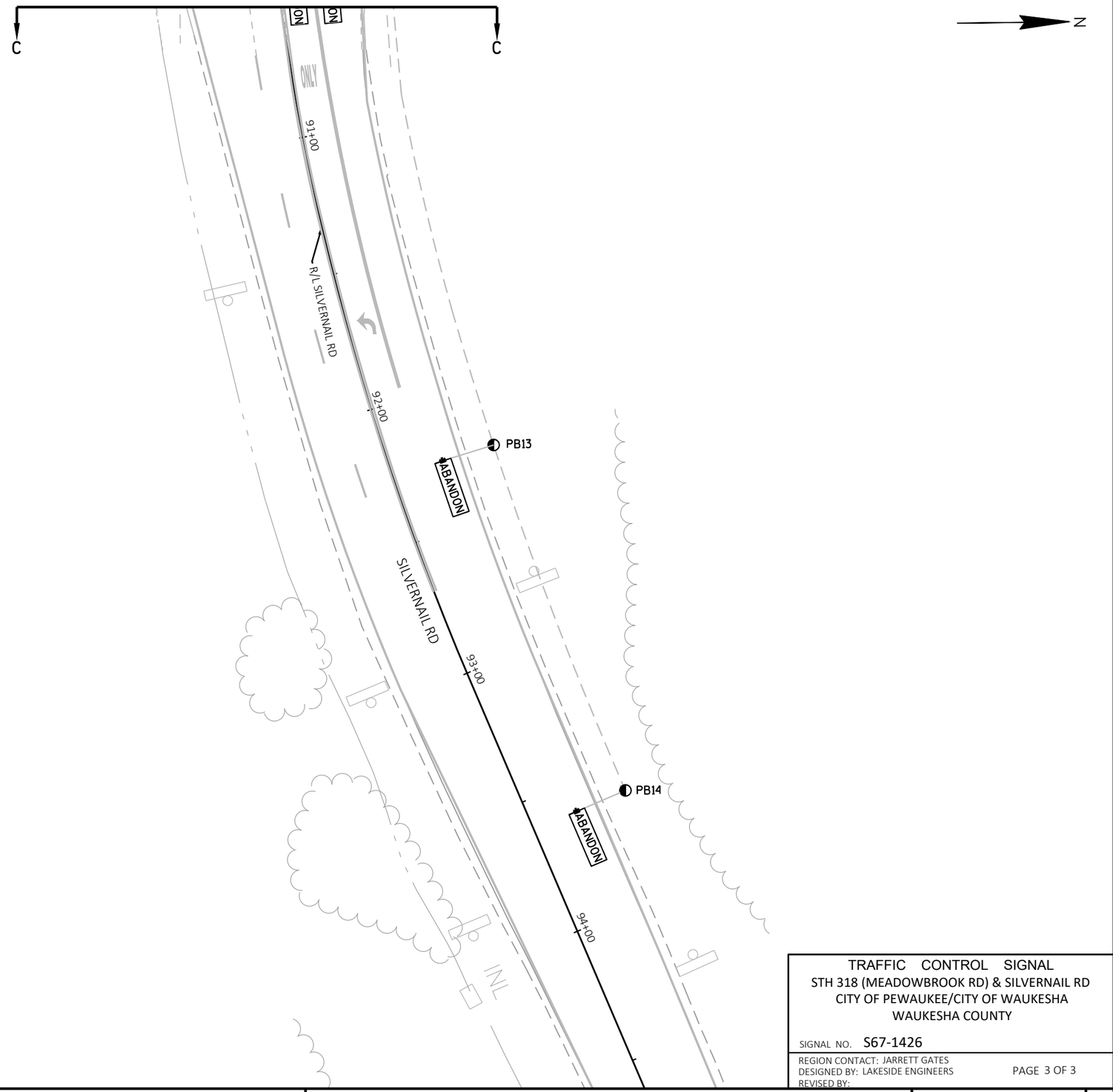
REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 177	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024041_SR.DWG
LAYOUT NAME - 024042

PLOT DATE : 8/16/2022 11:21 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : ##########





TRAFFIC CONTROL SIGNAL
STH 318 (MEADOWBROOK RD) & SILVERNAIL RD
CITY OF PEWAUKEE/CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-1426

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PAGE 3 OF 3

PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 178	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024041_SR.DWG
LAYOUT NAME - 024043

PLOT DATE : 8/16/2022 11:21 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

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) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-45' ARM
- (XX) MONOTUBE BASE, POLE, 50'-55' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- SIGNAL HEAD WITH REFLECTIVE BACKPLATE
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT

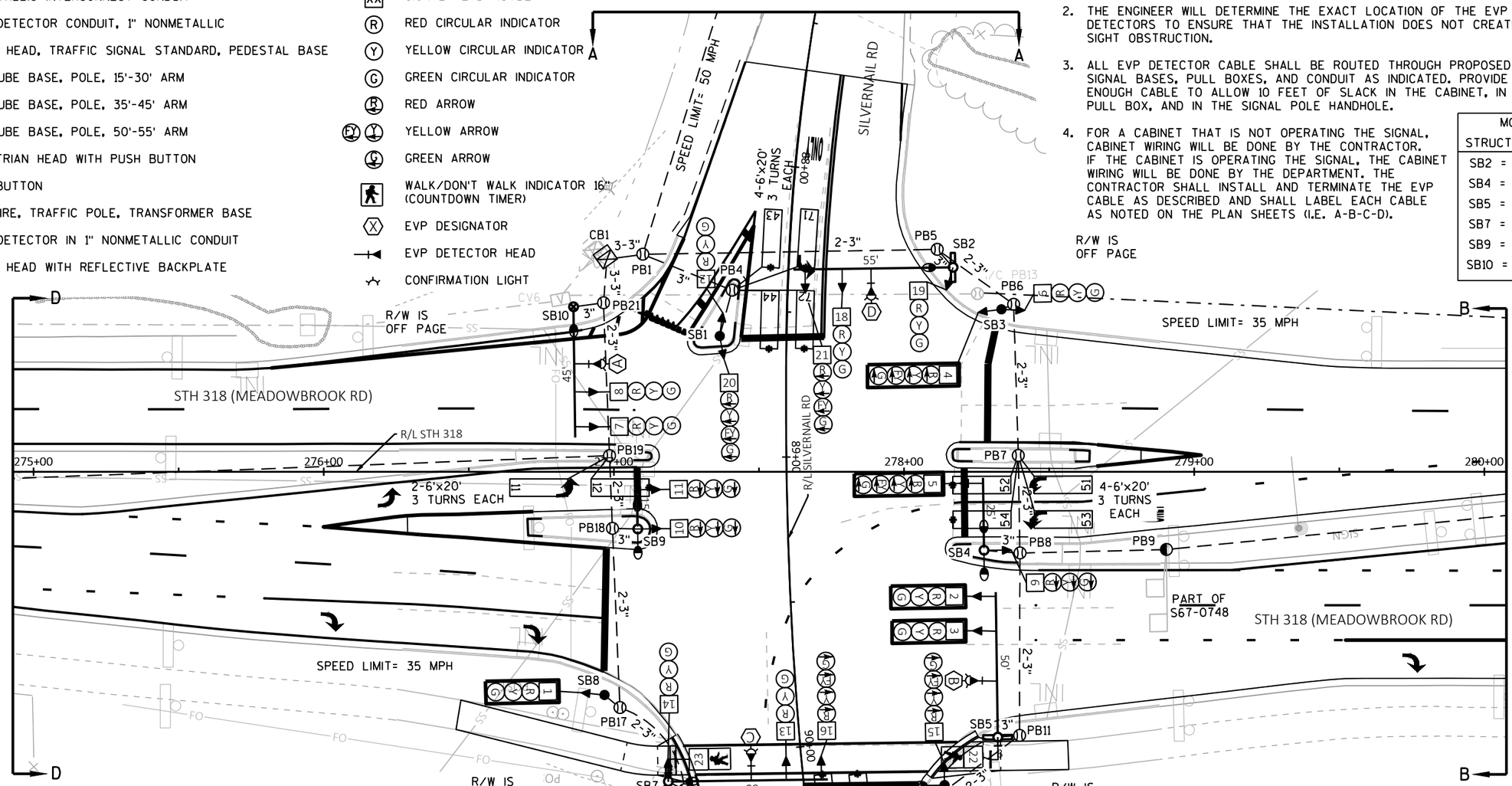
NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

EVP CONSTRUCTION NOTES:

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

R/W IS OFF PAGE

MONOTUBE STRUCTURE NUMBERS
SB2 = S-67-1491-01
SB4 = S-67-1491-02
SB5 = S-67-1491-03
SB7 = S-67-1491-04
SB9 = S-67-1491-05
SB10 = S-67-1491-06



CONSTRUCTION NOTES:

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

WISCONSIN
CHRISTOPHER M QUESNELL
E-37621
NEW BERLIN WI
PROFESSIONAL ENGINEER
10/18/22

TRAFFIC CONTROL SIGNAL
STH 318 (MEADOWBROOK RD) & SILVERNAIL RD
CITY OF PEWAUKEE/CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-1426
CABINET TYPE: TS2-S
CONTROLLER TYPE: Econolite

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
DATE 10-17-22
REGION TRAFFIC ENGINEER

APPROVED
DATE 10-20-22
STATE TRAFFIC ENGINEER

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

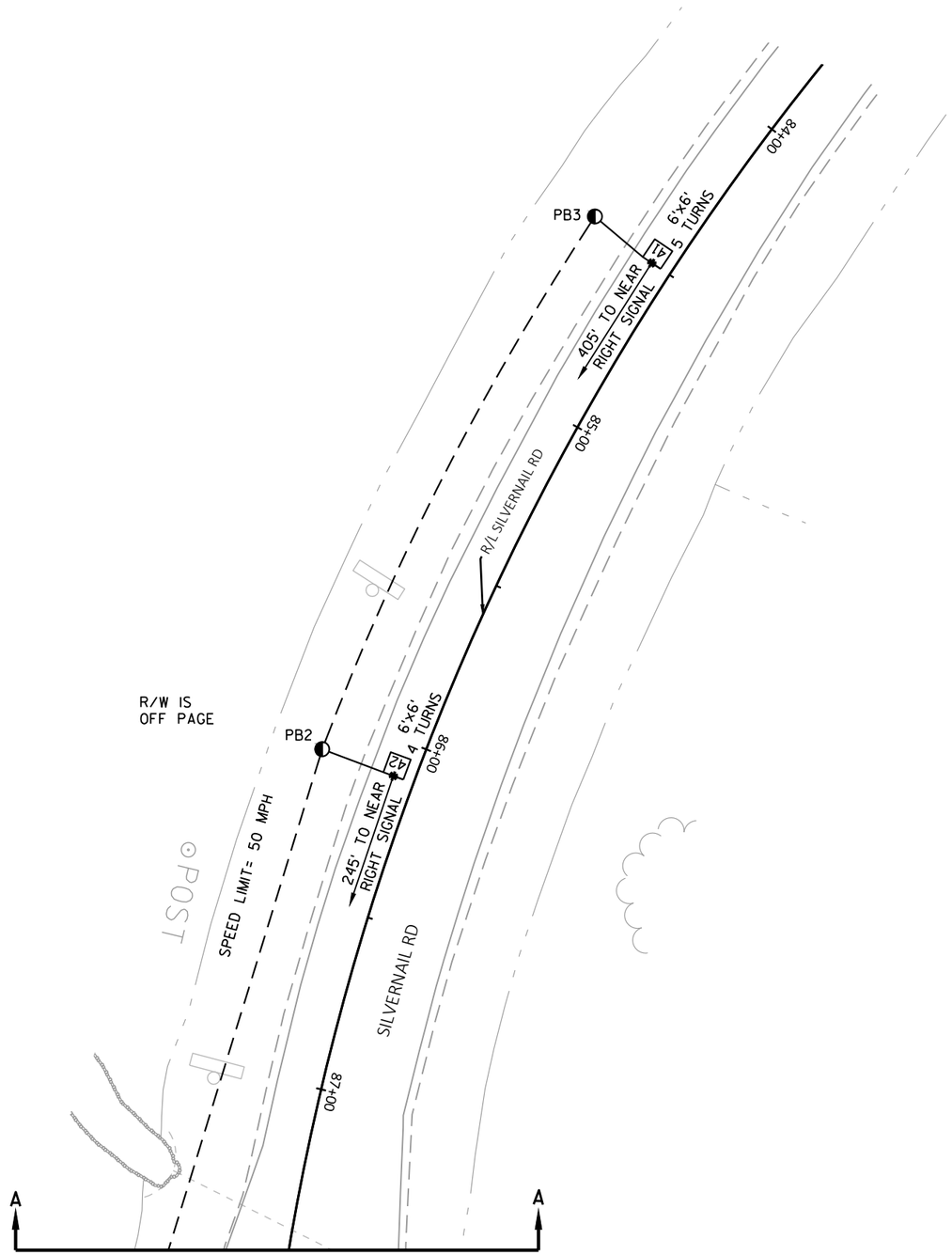
DAB 10-18-22

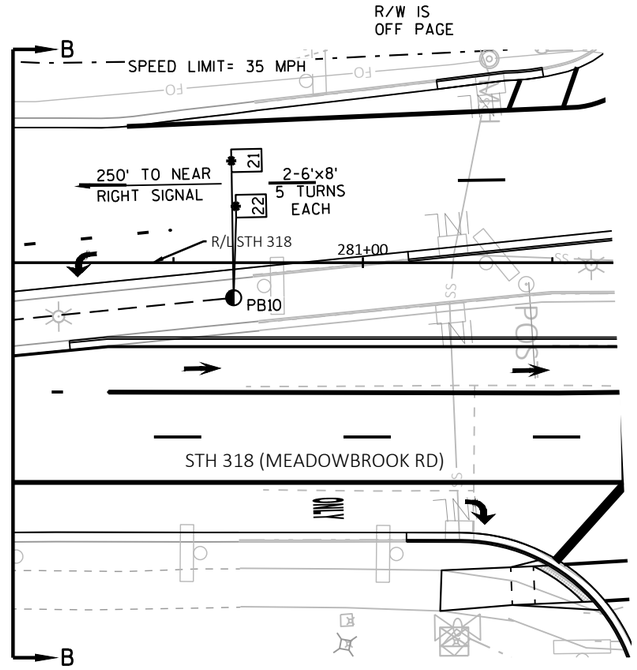
PAGE 1 OF 4

PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 179	E

2

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TRAFFIC CONTROL SIGNAL
STH 318 (MEADOWBROOK RD) & SILVERNAIL RD
CITY OF PEWAUKEE/CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-1426

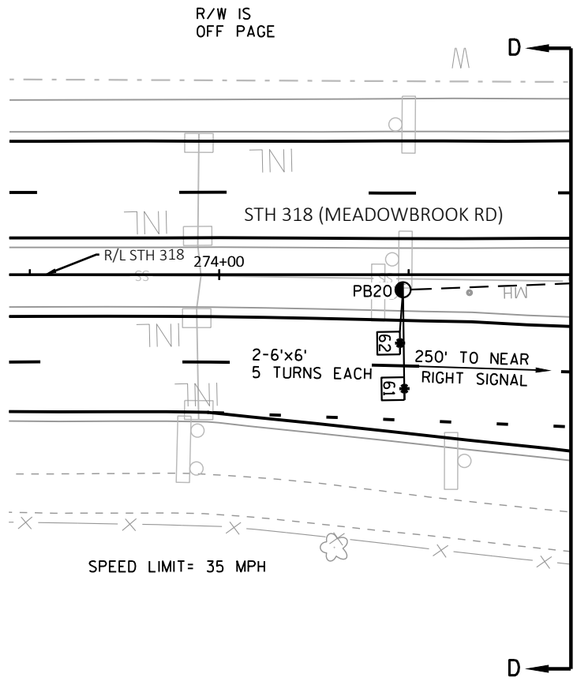
REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

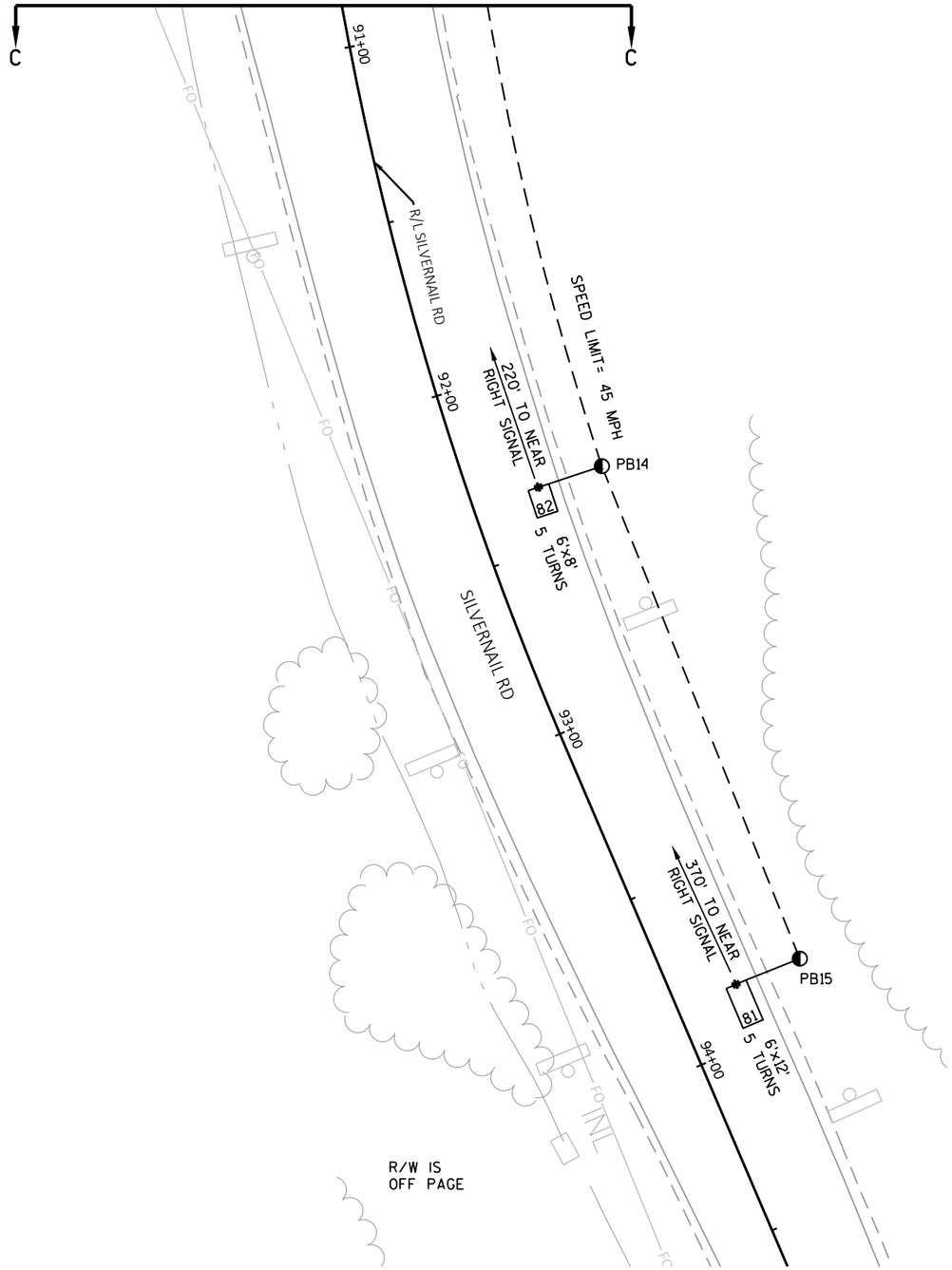
PAGE 2 OF 4

PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 180	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024241_SP.DWG
LAYOUT NAME - 024242
PLOT DATE : 8/17/2022 8:39 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

2





N

TRAFFIC CONTROL SIGNAL
STH 318 (MEADOWBROOK RD) & SILVERNAIL RD
CITY OF PEWAUKEE/CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-1426

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

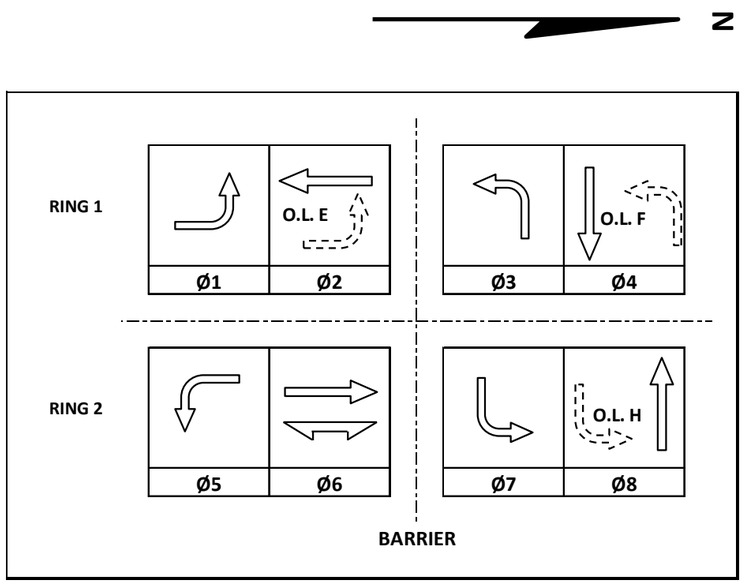
PAGE 3 OF 4

PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 181	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024241_SP.DWG
LAYOUT NAME - 024243

PLOT DATE : 8/17/2022 8:40 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

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



CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT				
PHASE	2+5	6+1	4+7	8+3

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.
AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	X
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	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	X
HARDWIRE	
OTHER	
CONFIRMATION LIGHTS	X
LIFT BRIDGE	
QUEUE DETECTION	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13	19	17	23	21	27	25	31	29	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	11	21	31	41	43	51	53	61	71	81	83						PLAN LOOP DETECTOR*(S)
CALLED PHASE	1	2	3	4	4	5	5	6	7	8	8						CALLED PHASE
CALL OPTION	X	X	X		X	X	X	X	X		X						CALL OPTION
DELAY TIME											X						DELAY TIME
EXTENTION OPTION	X	X	X	X	X	X	X	X	X	X	X						EXTENTION OPTION
EXTEND TIME				X						X							EXTEND TIME
USE ADDED INITIAL		X						X									USE ADDED INITIAL
CROSS SWITCH PHASE	2		4						8								CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14	20	18	24	22	28	26	32	30	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	12	22	32	42	44	52	54	62	72	82	84						PLAN LOOP DETECTOR*(S)
CALLED PHASE	1	2	3	4	4	5	5	6	7	8	8						CALLED PHASE
CALL OPTION	X	X	X		X	X	X	X	X		X						CALL OPTION
DELAY TIME			X						X		X						DELAY TIME
EXTENTION OPTION	X	X	X	X	X	X	X	X	X	X	X						EXTENTION OPTION
EXTEND TIME				X						X							EXTEND TIME
USE ADDED INITIAL		X						X									USE ADDED INITIAL
CROSS SWITCH PHASE	2		4						8								CROSS SWITCH PHASE

STH 318 (MEADOWBROOK RD) & SILVERNAIL RD
CITY OF PEWAUKEE/CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO: S67-1426 CABINET TYPE: TS2-S
CONTROLLER TYPE: ECONOLITE
DATE: 10/2022 PAGE NUMBER: 4 OF 4

PROJECT ID:	2278-03-70
INTERSECTION:	STH 318 (MEADOWBROOK RD) & SILVERNAIL RD

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	AWG 14 NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON	OTHER
SB1	12	12	RED	ORG	GRN								
		20				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
SB2	12	18	RED	ORG	GRN								
		19	RED	ORG	GRN								
		21				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
SB3	12	4				RED	ORG	GRN	BLK/WHT				
		6	RED/BLK	ORG/BLK	GRN/BLK								
SB4	12	5				RED	ORG	GRN	BLK/WHT				
		9				RED/BLK	ORG/BLK	GRN/BLK					
SB5	12	2	RED	ORG	GRN								
		3	RED	ORG	GRN								
		22								BLK	BLU		
		BUTTON										WHT/BLK	
SB6	12	15				RED	ORG	GRN	BLK/WHT				
		17	RED/BLK	ORG/BLK	GRN/BLK								
SB7	12	13	RED	ORG	GRN								
		14	RED	ORG	GRN								
		16				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
		23								BLK	BLU		
		BUTTON										WHT/BLK	
SB8	7	1	RED	ORG	GRN								
SB9	7	10				RED	ORG	GRN					
		11				RED	ORG	GRN					
SB10	7	7	RED	ORG	GRN								
		8	RED	ORG	GRN								

NOTES: USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB4	SB1
PB5	SB2
PB6	SB3
PB8	SB4
PB11	SB5
PB12	SB6
PB16	SB7
PB17	SB8
PB18	SB9
PB21	SB10

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB2 (HEAD D)
CB1	SB5 (HEAD B)
CB1	SB7 (HEAD C)
CB1	SB10 (HEAD A)

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB2
SB2	SB4
SB4	SB6
CB1	SB10
SB10	SB9
SB9	SB7

PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	CABLE ROUTING – STH 318 (MEADOWBROOK RD) & SILVERNAIL RD	SHEET:	E

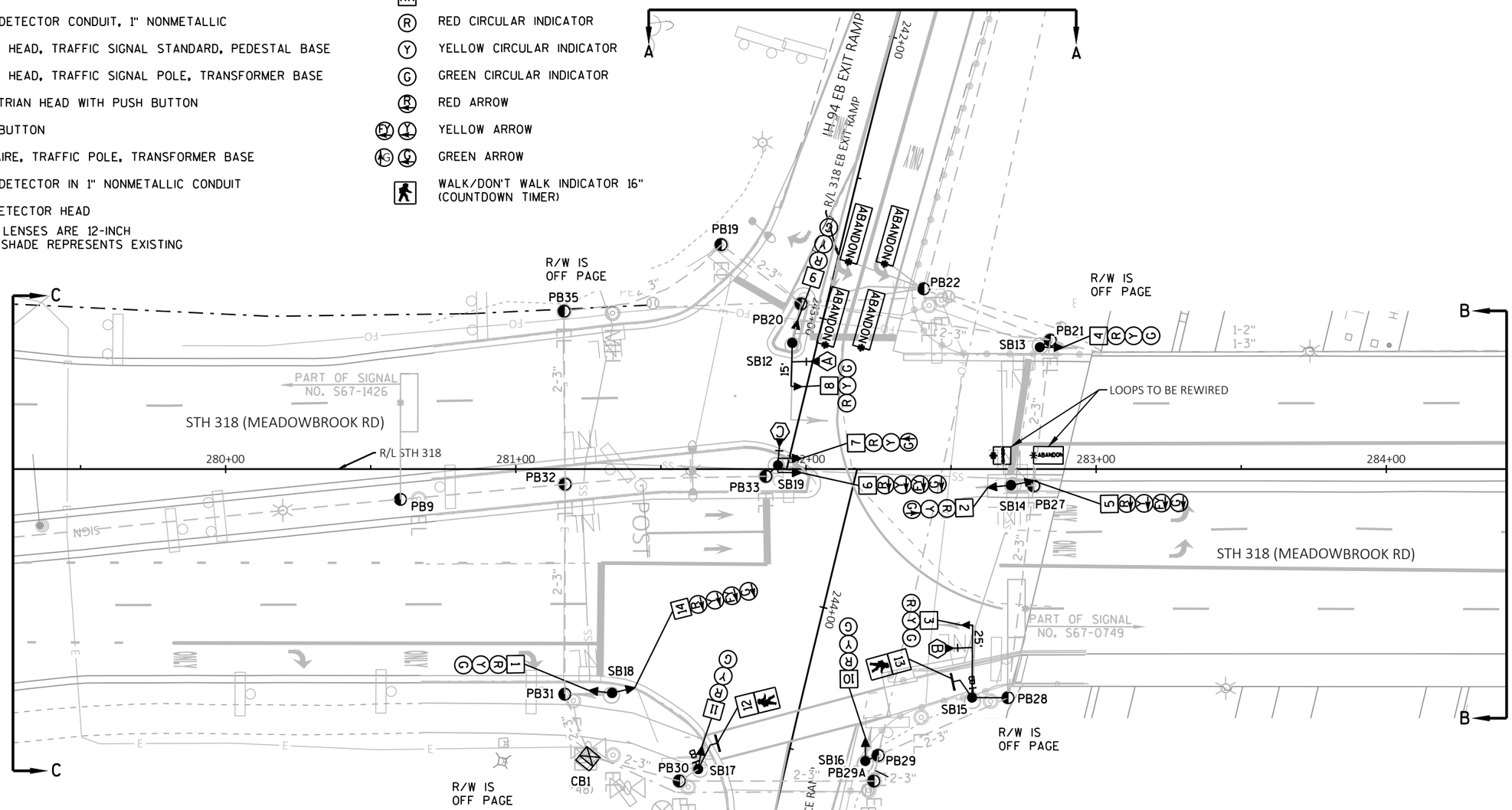
2

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, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- FY YELLOW ARROW
- AG GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)



CONSTRUCTION NOTES:

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

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & STH 318 (MEADOWBROOK RD)
CITY OF PEWAUKEE
WAUKESHA COUNTY

SIGNAL NO. S67-0748

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

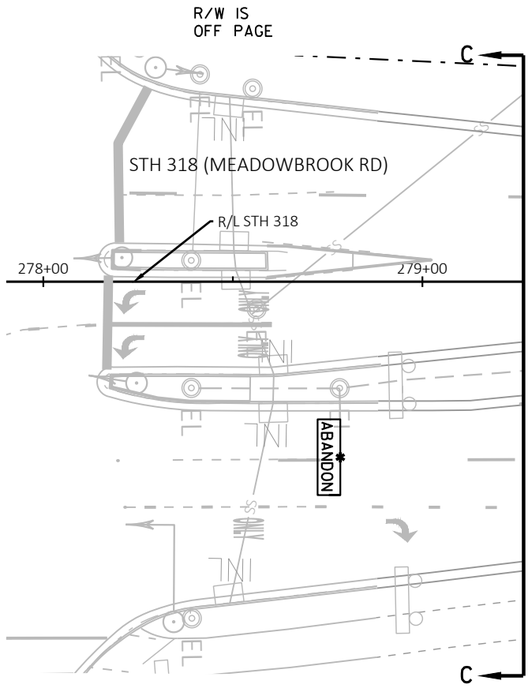
PAGE 1 OF 2

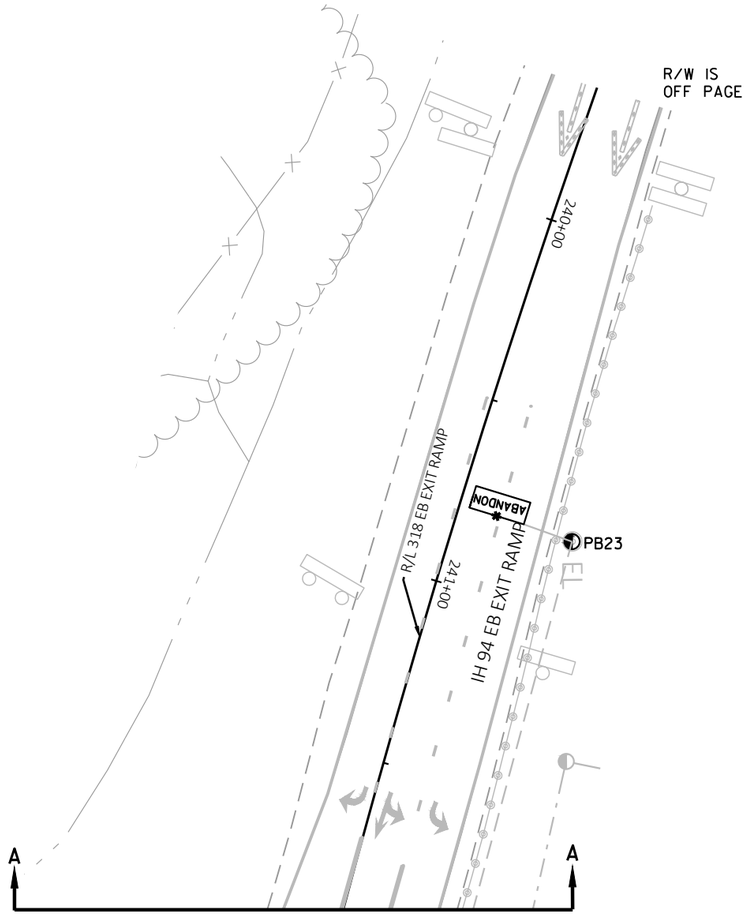
PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 184	E

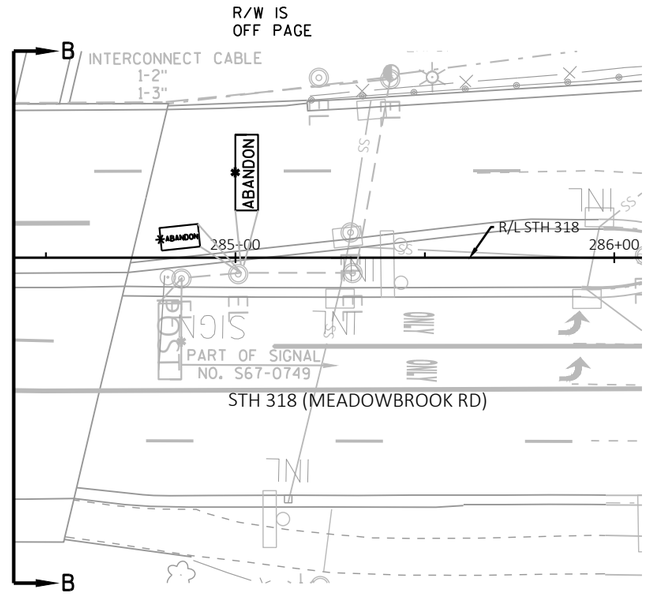
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LAYOUT NAME - 024051
PLOT DATE : 8/17/2022 10:02 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N







TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & STH 318 (MEADOWBROOK RD)
CITY OF PEWAUKEE
WAUKESHA COUNTY

SIGNAL NO. S67-0748

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 185	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024051_SR.DWG
LAYOUT NAME - 024052

PLOT DATE : 8/17/2022 10:03 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

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) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-45' ARM
- (XX) MONOTUBE BASE, POLE, 50'-55' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT

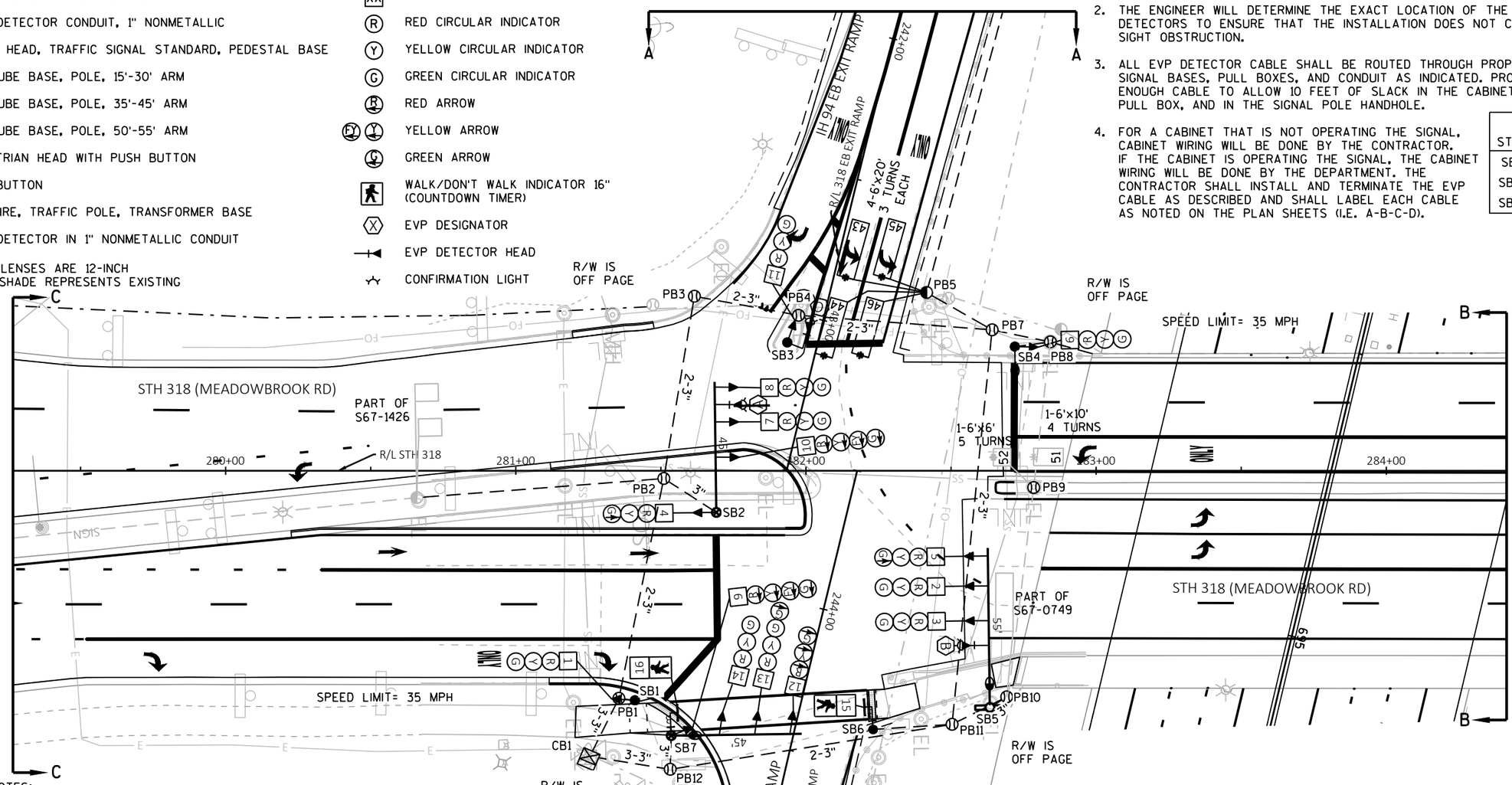
NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- 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)
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT

EVP CONSTRUCTION NOTES:

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

MONOTUBE STRUCTURE NUMBERS
SB2 = S-67-1492-01
SB5 = S-67-1492-02
SB7 = S-67-1492-03



CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
5. ALL LUMINAIRES ARE LED-C UNLESS OTHERWISE NOTED.
6. LOOP 51 AND 52 TO BE REWIRED IN EXISTING LOOP DETECTOR CONDUIT.
7. ANY CASINGS ARE INCIDENTAL TO THE CONRETE SIGNAL BASE ITEMS.

WISCONSIN
CHRISTOPHER M QUESNELL
E-37621
NEW BERLIN WI
PROFESSIONAL ENGINEER
10/18/22

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & STH 318 (MEADOWBROOK RD)
CITY OF PEWAUKEE
WAUKESHA COUNTY

SIGNAL NO. S67-0748
CABINET TYPE: TS2-S
CONTROLLER TYPE: Econolite

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
DATE 10-17-22
REGION TRAFFIC ENGINEER

APPROVED
DATE 10-20-22
STATE TRAFFIC ENGINEER

10-18-22

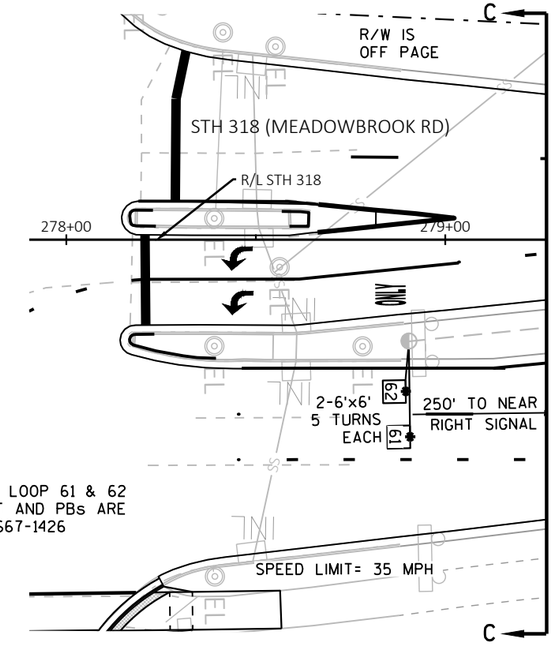
REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PAGE 1 OF 3

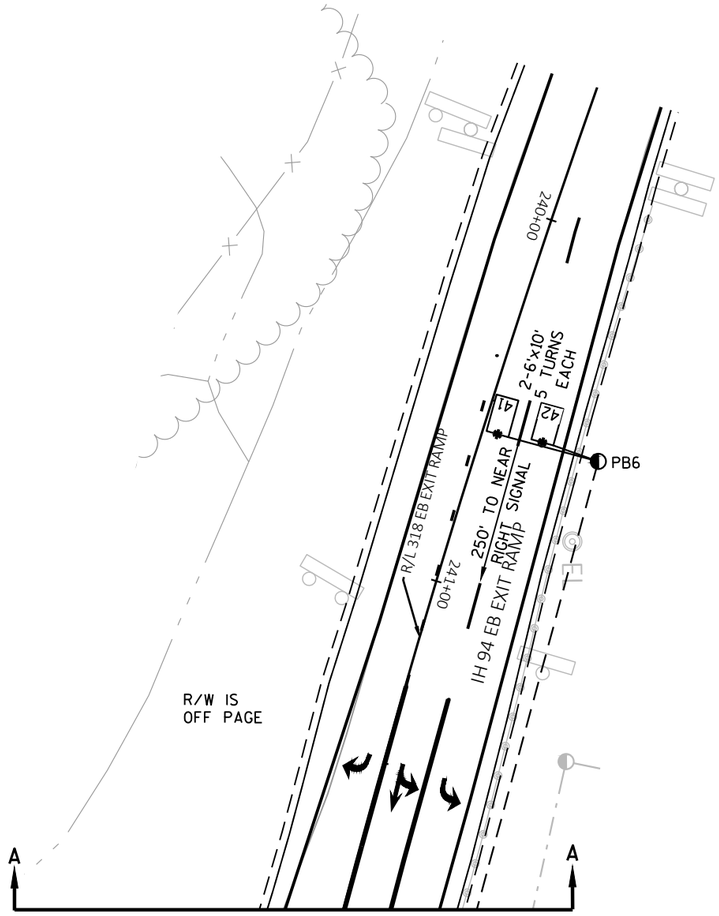
PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 186	E

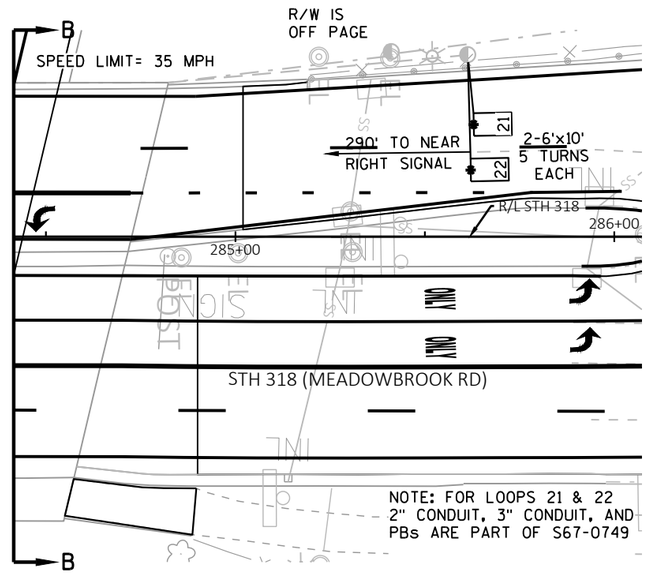
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LAYOUT NAME - 024251
PLOT DATE : 8/17/2022 11:31 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2



NOTE: FOR LOOP 61 & 62
2" CONDUIT AND PBs ARE
PART OF S67-1426





NOTE: FOR LOOPS 21 & 22
2" CONDUIT, 3" CONDUIT, AND
PBs ARE PART OF S67-0749

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & STH 318 (MEADOWBROOK RD)
CITY OF PEWAUKEE
WAUKESHA COUNTY

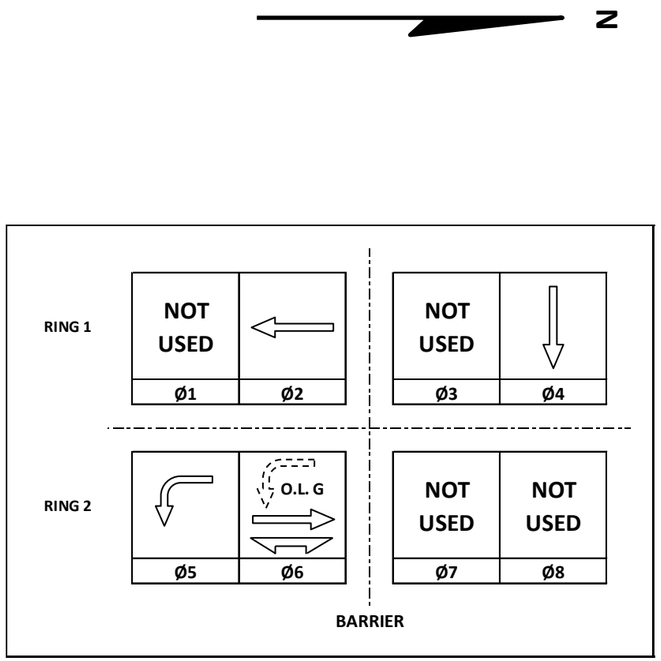
SIGNAL NO. S67-0748

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 187	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024251_SP.DWG
LAYOUT NAME - 024252
PLOT DATE : 8/17/2022 11:32 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

	HEAD NUMBERS	FLASH
Ø1		
Ø2	6,7,8	R
Ø3		
Ø4	11,12,13,14	R, R ←
Ø5	9,10	R ←
Ø6	1,2,3,4,5	R
Ø7		
Ø8		
Ø2P		
Ø4P		
Ø6P	15,16	
Ø8P		
OLE		
OLF		
OLG	9,10	-
OLH		



CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C
MOVEMENT	←	←	↓
PHASE	2+5	6+2	4

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

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	X
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	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	X
HARDWIRE	
OTHER	
CONFIRMATION LIGHTS	X
LIFT BRIDGE	
QUEUE DETECTION	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	21	41	43	45	51	61		
CALLED PHASE	2	4	4	4	5	6		
CALL OPTION	X		X	X	X	X		
DELAY TIME								
EXTENTION OPTION	X	X	X	X	X	X		
EXTEND TIME		X						
USE ADDED INITIAL	X					X		
CROSS SWITCH PHASE					6			

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

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	22	42	44	46	52	62		
CALLED PHASE	2	4	4	4	5	6		
CALL OPTION	X		X	X	X	X		
DELAY TIME								
EXTENTION OPTION	X	X	X	X	X	X		
EXTEND TIME		X						
USE ADDED INITIAL	X					X		
CROSS SWITCH PHASE					6			

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

IH 94 EB & STH 318 (MEADOWBROOK RD)
CITY OF PEWAUKEE
WAUKESHA COUNTY

SIGNAL NO: S67-0748 CABINET TYPE: TS2-S
CONTROLLER TYPE: ECONOLITE
DATE: 10/2022 PAGE NUMBER: 3 OF 3

PROJECT ID:	1060-47-70
INTERSECTION:	IH 94 EB & STH 318 (MEADOWBROOK RD)

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	AWG 14 NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON	OTHER
SB1	7	1	RED	ORG	GRN								
SB2	15	4	RED	ORG				GRN					
		7	RED/BLK	ORG/BLK	GRN/BLK								
		8	RED/BLK	ORG/BLK	GRN/BLK								
		10				RED/WHT	BLU/WHT	GRN/WHT	BLK/WHT				
SB3	7	11	RED	ORG	GRN								
SB4	7	6	RED	ORG	GRN								
SB5	7	2	RED	ORG				GRN					
		3	RED	ORG	GRN								
		5	RED	ORG	GRN								
SB6	7	15								BLK	BLU		
		BUTTON										WHT/BLK	
SB7	12	9				RED	ORG	GRN	BLK/WHT				
		12				RED/BLK	ORG/BLK	GRN/BLK					
		13	RED/BLK	ORG/BLK	GRN/BLK			GRN/BLK					
		14	RED/BLK	ORG/BLK	GRN/BLK								
		16								BLK	BLU		
		BUTTON										WHT/BLK	

NOTES: USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	SB1
PB2	SB2
PB3	SB3
PB4	SB3
PB7	SB4
PB8	SB4
PB10	SB5
PB11	SB5
PB12	SB7

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB2 (HEAD A)
CB1	SB3 (HEAD C)
CB1	SB5 (HEAD B)

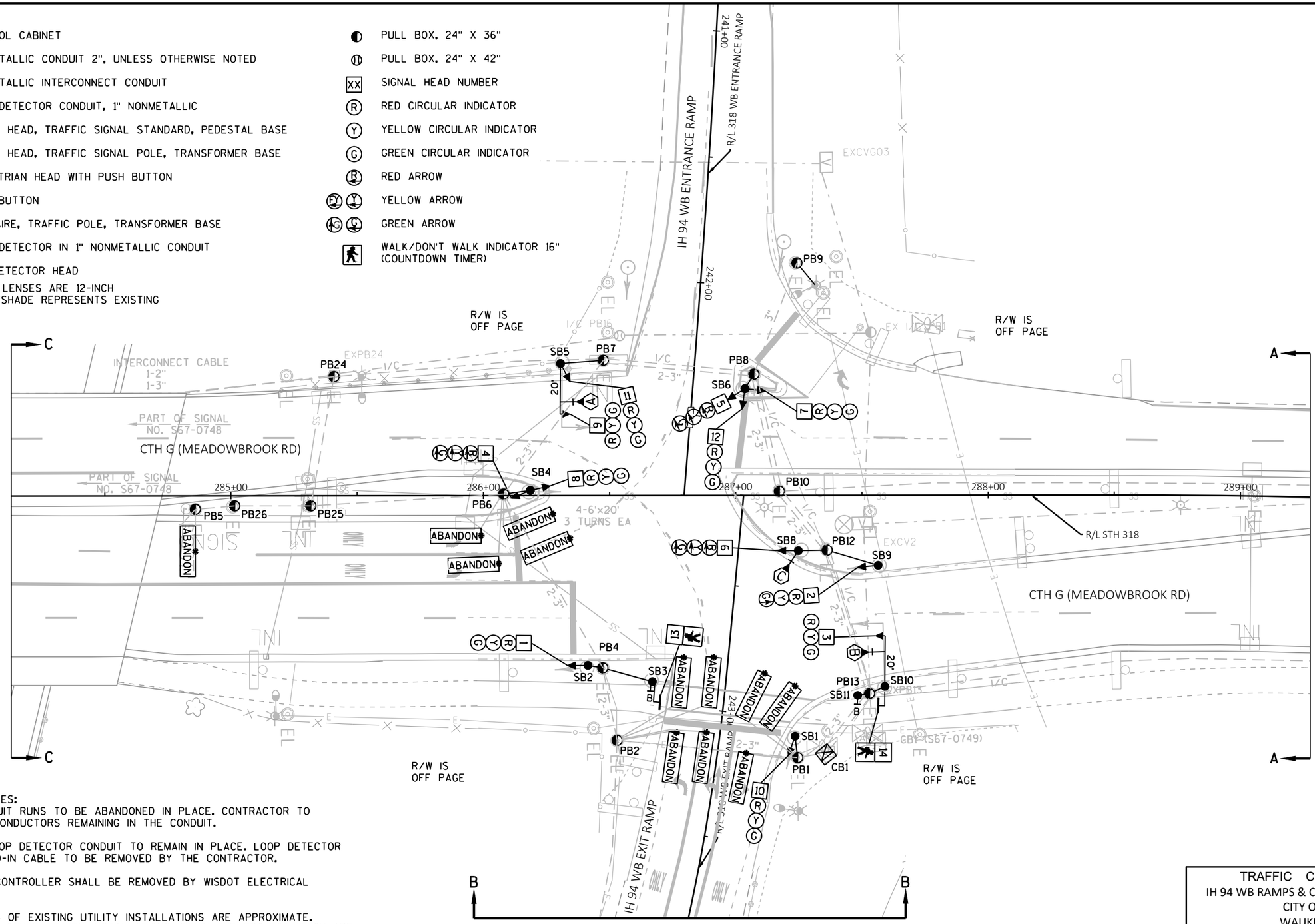
LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB7
SB7	SB5
SB5	SB4

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, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

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



CONSTRUCTION NOTES:

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

TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS & CTH G (MEADOWBROOK RD)
CITY OF PEWAUKEE
WAUKESHA COUNTY

SIGNAL NO. S67-0749

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 190	E

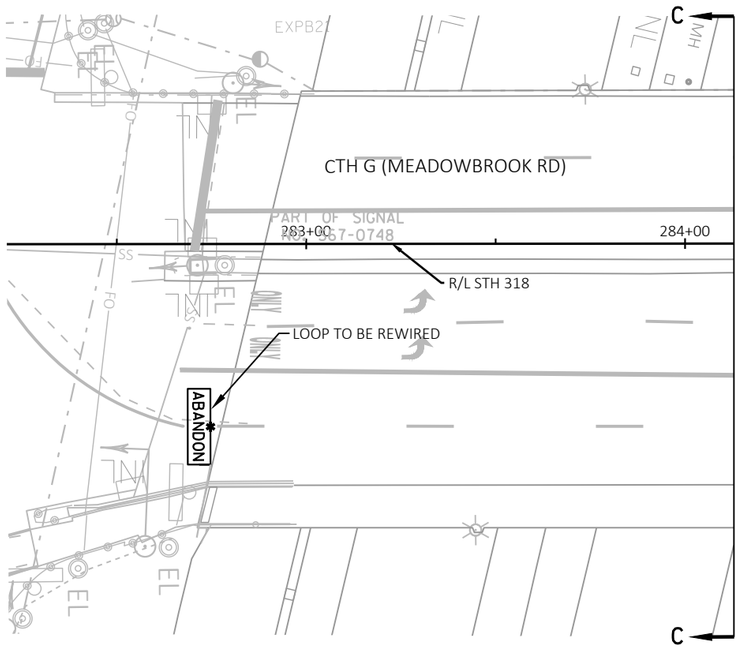
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LAYOUT NAME - 024061

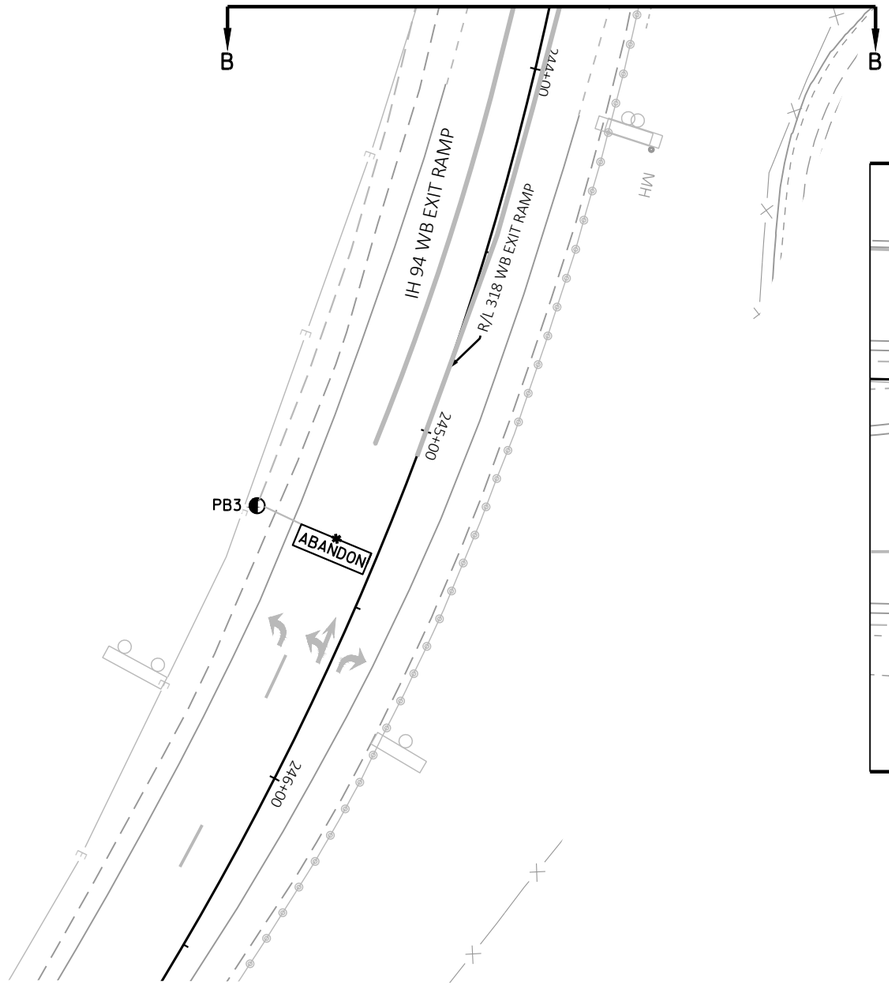
PLOT DATE : 8/22/2022 3:19 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

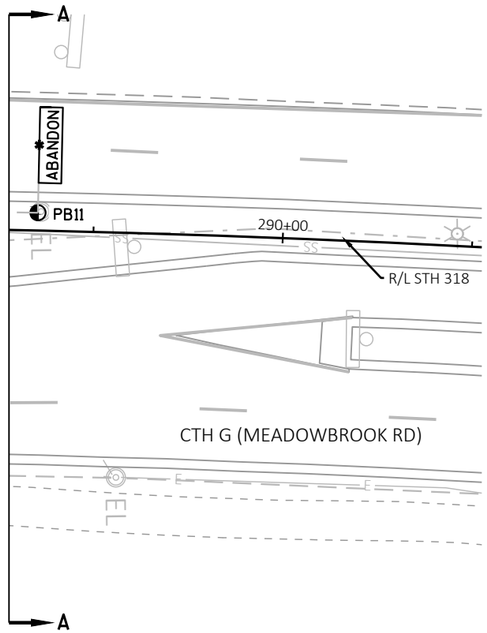
WISDOT/CADDS SHEET 42

2

N







TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS & CTH G (MEADOWBROOK RD)
CITY OF PEWAUKEE
WAUKESHA COUNTY

SIGNAL NO. S67-0749

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 191	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024061_SR.DWG
LAYOUT NAME - 024062

PLOT DATE : 8/22/2022 3:20 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

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) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-45' ARM
- (XX) MONOTUBE BASE, POLE, 50'-55' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT

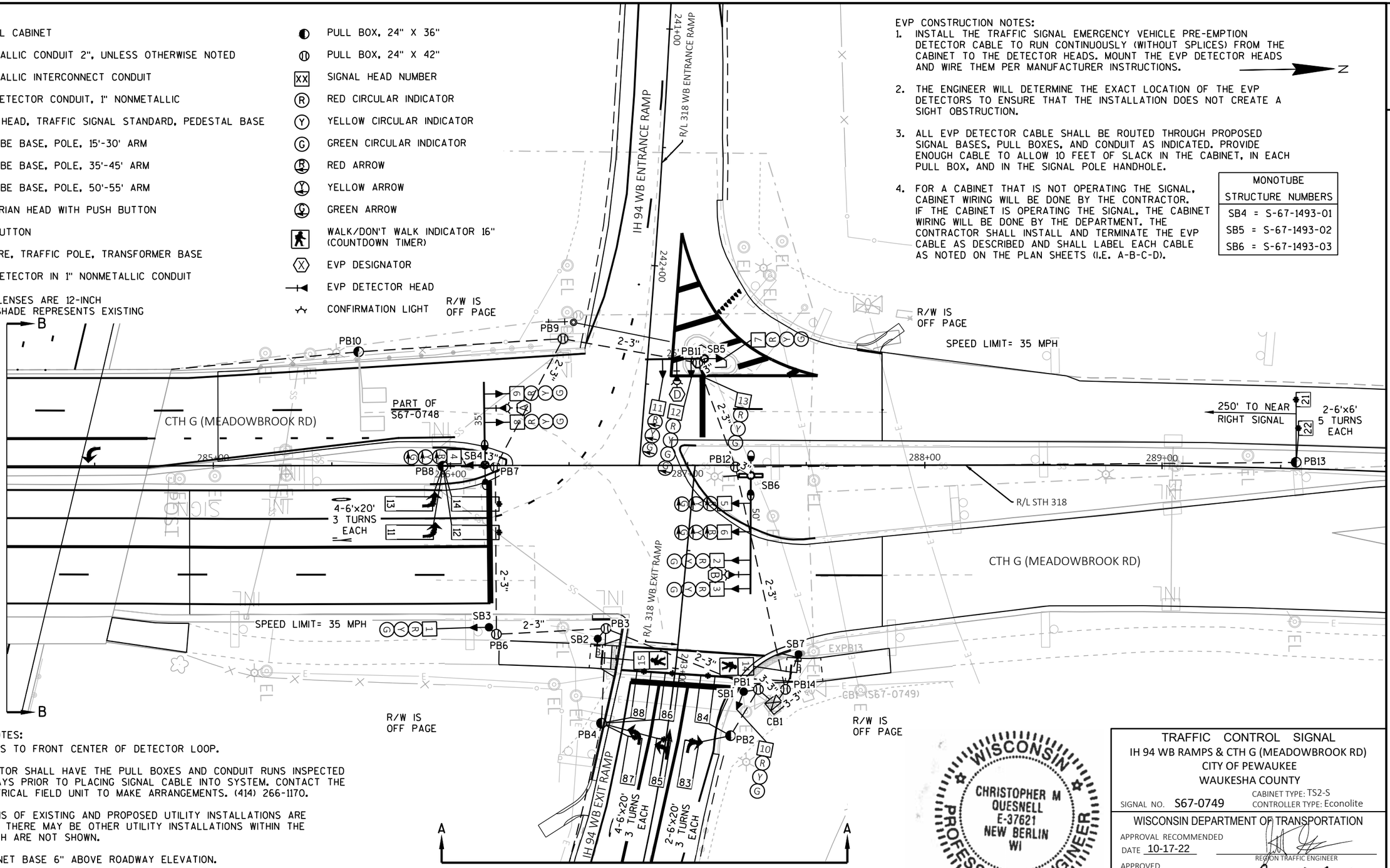
NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONFIRMATION LIGHT

EVP CONSTRUCTION NOTES:

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

MONOTUBE STRUCTURE NUMBERS
SB4 = S-67-1493-01
SB5 = S-67-1493-02
SB6 = S-67-1493-03



CONSTRUCTION NOTES:

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

WISCONSIN
CHRISTOPHER M QUESNELL
E-37621
NEW BERLIN WI
PROFESSIONAL ENGINEER
10/18/22

TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS & CTH G (MEADOWBROOK RD)
CITY OF PEWAUKEE
WAUKESHA COUNTY

SIGNAL NO. S67-0749
CABINET TYPE: TS2-S
CONTROLLER TYPE: Econolite

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
DATE 10-17-22 REGION TRAFFIC ENGINEER

APPROVED
DATE 10-20-22 STATE TRAFFIC ENGINEER

10-18-22

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PAGE 1 OF 3

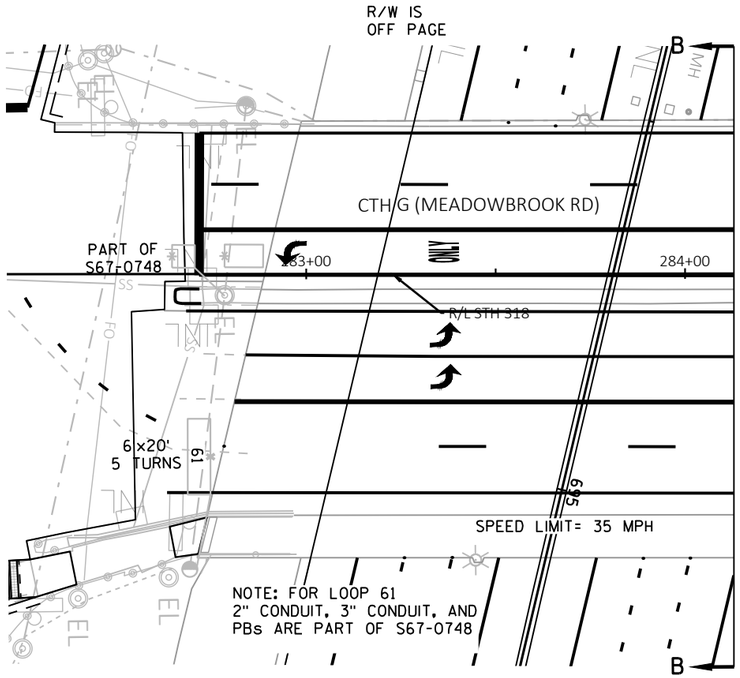
PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 192	E

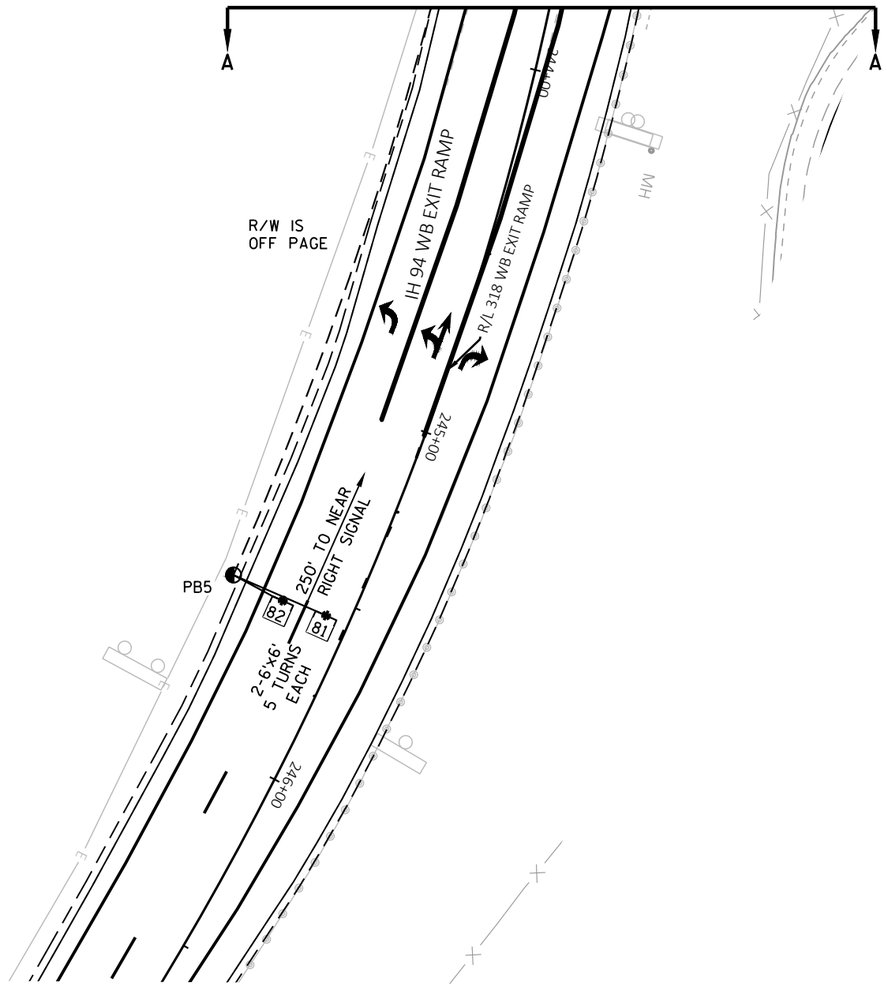
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LAYOUT NAME - 024261
PLOT DATE : 10/10/2022 10:25 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

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TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS & CTH G (MEADOWBROOK RD)
CITY OF PEWAUKEE
WAUKESHA COUNTY

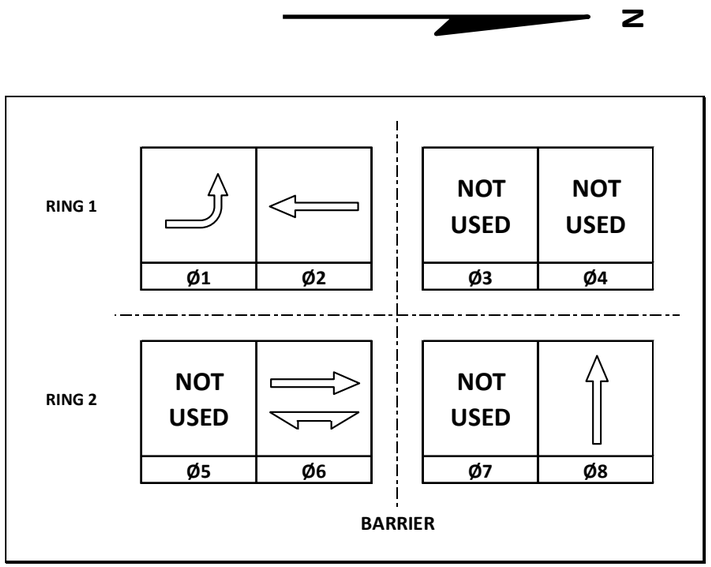
SIGNAL NO. S67-0749

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 193	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024261_SP.DWG
LAYOUT NAME - 024262
PLOT DATE : 9/23/2022 11:13 AM
PLOT BY : TONY BUBLITZ
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø1	4,5,6	R ←
Ø2	7,8,9	R
Ø3		
Ø4		
Ø5		
Ø6	1,2,3	R
Ø7		
Ø8	10,11,12,13	R, R ←
Ø2P		
Ø4P		
Ø6P	14,15	
Ø8P		
OLE		
OLF		
OLG		
OLH		



CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	D
MOVEMENT	← →	↱ →	↑
PHASE	2+6	6+1	8

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

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	X
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	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	X
HARDWIRE	
OTHER	
CONFIRMATION LIGHTS	X
LIFT BRIDGE	
QUEUE DETECTION	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	11	9	15	13	19	17	23	21	27	25	31	29		DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	11	13	21	61	82	84	86	88									PLAN LOOP DETECTOR*(S)
CALLED PHASE	1	1	2	6	8	8	8	8									CALLED PHASE
CALL OPTION	X	X	X	X		X	X	X									CALL OPTION
DELAY TIME						X											DELAY TIME
EXTENTION OPTION	X	X	X	X	X	X	X	X									EXTENTION OPTION
EXTEND TIME					X												EXTEND TIME
USE ADDED INITIAL			X	X													USE ADDED INITIAL
CROSS SWITCH PHASE																	CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	12	10	16	14	20	18	24	22	28	26	32	30		DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	12	14	22	81	83	85	87										PLAN LOOP DETECTOR*(S)
CALLED PHASE	1	1	2	8	8	8	8										CALLED PHASE
CALL OPTION	X	X	X		X	X	X										CALL OPTION
DELAY TIME					X												DELAY TIME
EXTENTION OPTION	X	X	X	X	X	X	X										EXTENTION OPTION
EXTEND TIME				X													EXTEND TIME
USE ADDED INITIAL			X														USE ADDED INITIAL
CROSS SWITCH PHASE																	CROSS SWITCH PHASE

IH 94 WB & CTH G (MEADOWBROOK RD)
CITY OF PEWAUKEE
WAUKESHA COUNTY

SIGNAL NO: S67-0749 CABINET TYPE: TS2-S
CONTROLLER TYPE: ECONOLITE
DATE: 10/2022 PAGE NUMBER: 3 OF 3

2

PROJECT ID:	1060-47-70
INTERSECTION:	IH 94 WB & STH 318 (MEADOWBROOK RD)

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	AWG 14 NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON	OTHER
SB1	7	10	RED	ORG	GRN								
SB2	7	15								BLK	BLU		
		BUTTON										WHT/BLK	
SB3	7	1	RED	ORG	GRN								
SB4	12	4				RED	ORG	GRN					
		8	RED/BLK	ORG/BLK	GRN/BLK								
		9	RED/BLK	ORG/BLK	GRN/BLK								
SB5	12	7	RED	ORG	GRN								
		11				RED/BLK	ORG/BLK	GRN/BLK					
		12	RED/BLK	ORG/BLK	GRN/BLK			GRN/BLK					
		13	RED/BLK	ORG/BLK	GRN/BLK								
SB6	12	2	RED	ORG	GRN								
		3	RED	ORG	GRN								
		5				RED/BLK	ORG/BLK	GRN/BLK					
		6				RED/BLK	ORG/BLK	GRN/BLK					
SB7	7	14								BLK	BLU		
		BUTTON										WHT/BLK	

NOTES: USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	SB1
PB3	SB2
PB6	SB3
PB7	SB4
PB9	SB5
PB11	SB5
PB12	SB6
PB13	CB1

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB4 (HEAD A)
CB1	SB5 (HEAD D)
CB1	SB6 (HEAD B)

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB4
CB1	SB6

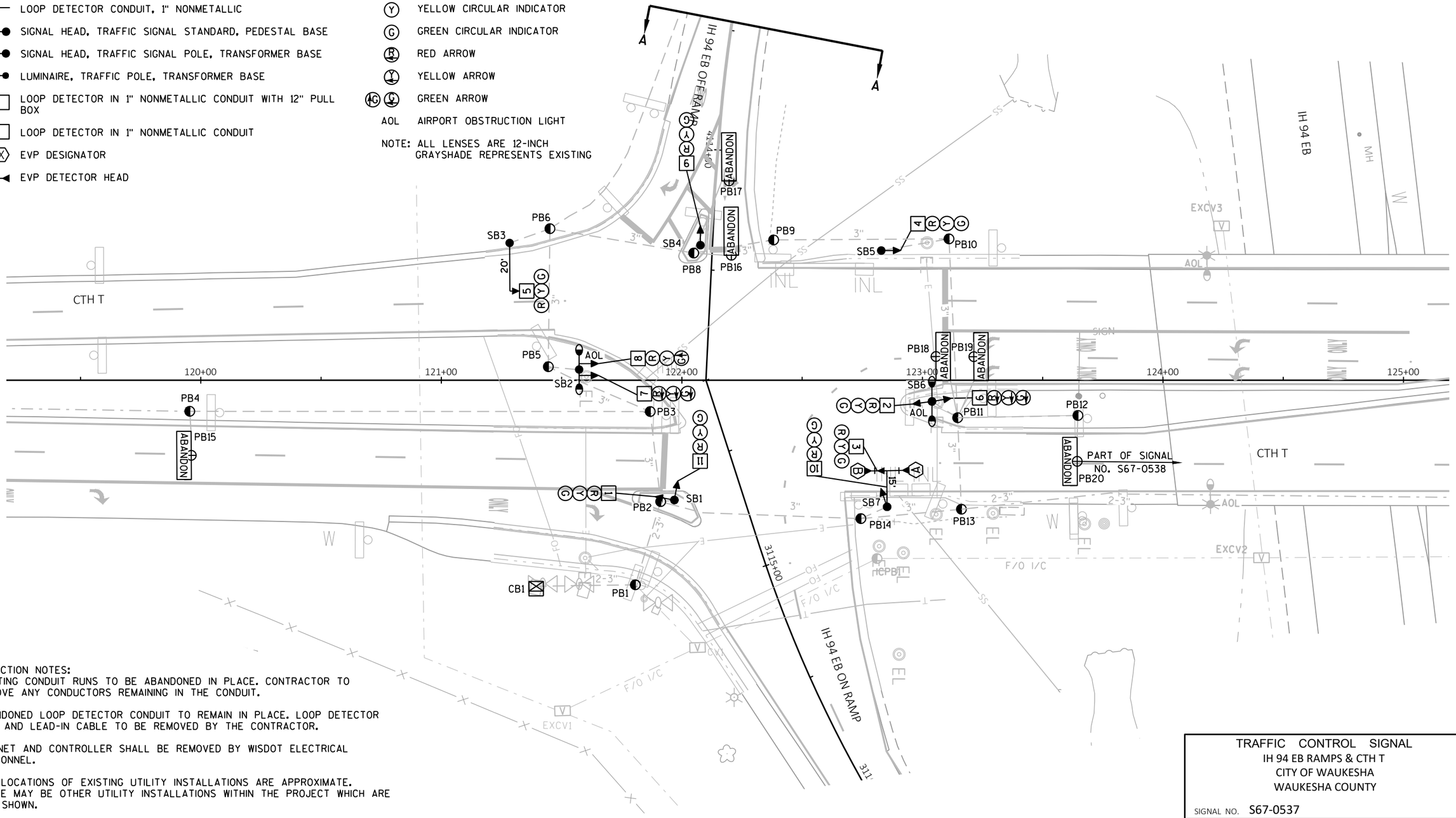
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LEGEND

- 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
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT WITH 12" PULL BOX
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- PULL BOX, 24" X 36"
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (AG) (G) GREEN ARROW
- AOL AIRPORT OBSTRUCTION LIGHT

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N



CONSTRUCTION NOTES:

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

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & CTH T
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0537

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PAGE 1 OF 2

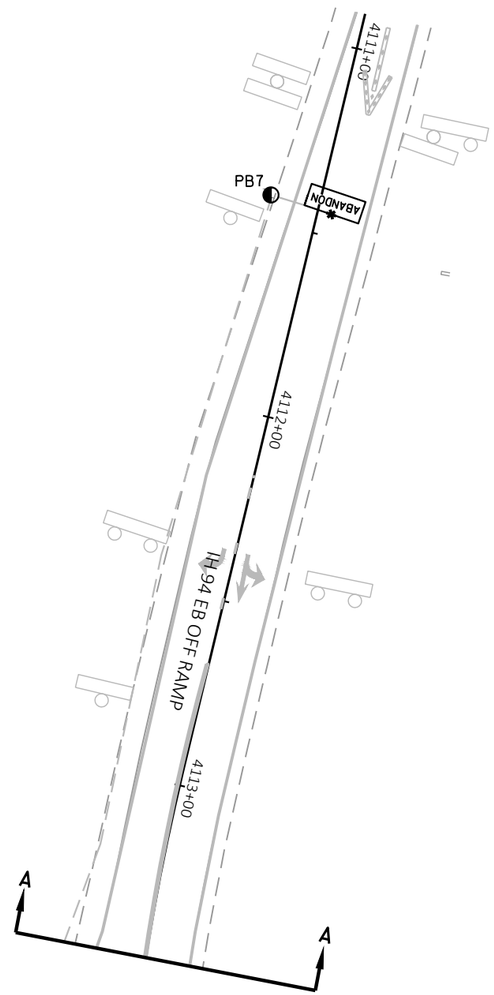
PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 196	E

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LAYOUT NAME - 024071_sr
PLOT DATE : 8/17/2022 3:56 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N



TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & CTH T
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0537

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 197	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024071_SR.DWG
LAYOUT NAME - 024072_sr

PLOT DATE : 8/17/2022 3:56 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

LEGEND

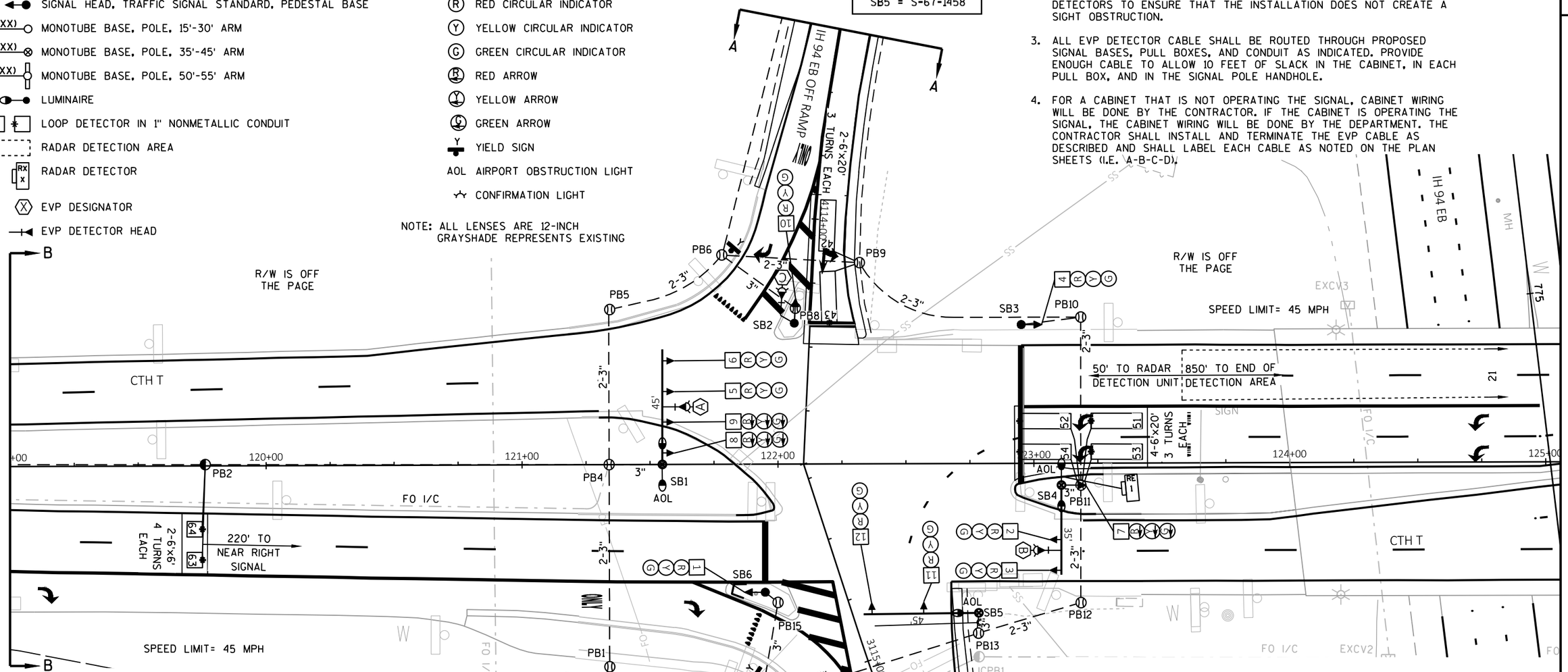
- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT, 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-45' ARM
- (XX) MONOTUBE BASE, POLE, 50'-55' ARM
- LUMINAIRE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- RADAR DETECTION AREA
- RX RADAR DETECTOR
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- 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
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- Y YIELD SIGN
- AOL AIRPORT OBSTRUCTION LIGHT
- CONFIRMATION LIGHT

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

MONOTUBE STRUCTURE NUMBERS
SB1 = S-67-1456
SB4 = S-67-1457
SB5 = S-67-1458

EVP CONSTRUCTION NOTES:

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



CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. INSTALL CABINET BASE 6" ABOVE FINAL ROADWAY ELEVATION.
5. ALL LUMINAIRES ARE LED-C UNLESS OTHERWISE NOTED.
6. AIRPORT OBSTRUCTION LIGHTS TO BE INSTALLED ON SB1, SB4, AND SB5.
7. ANY CASINGS ARE INCIDENTAL TO THE CONCRETE SIGNAL BASE ITEMS.



TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & CTH T
CITY OF WAUKESHA
WAUKESHA COUNTY
CABINET TYPE: TS2-S
SIGNAL NO. S67-0537 CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVAL RECOMMENDED
DATE 10-17-22 REGION TRAFFIC ENGINEER
APPROVED
DATE 10-20-22 STATE TRAFFIC ENGINEER

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PAGE 1 OF 3

DAS 10-18-22

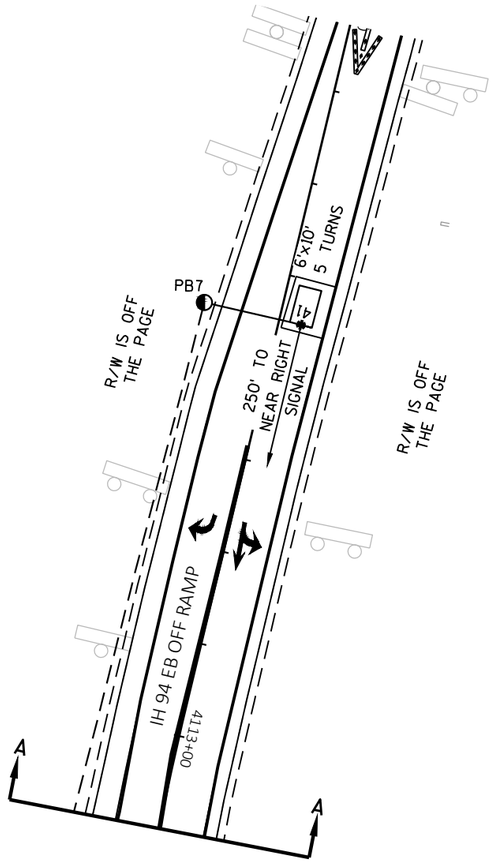
PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 198 E

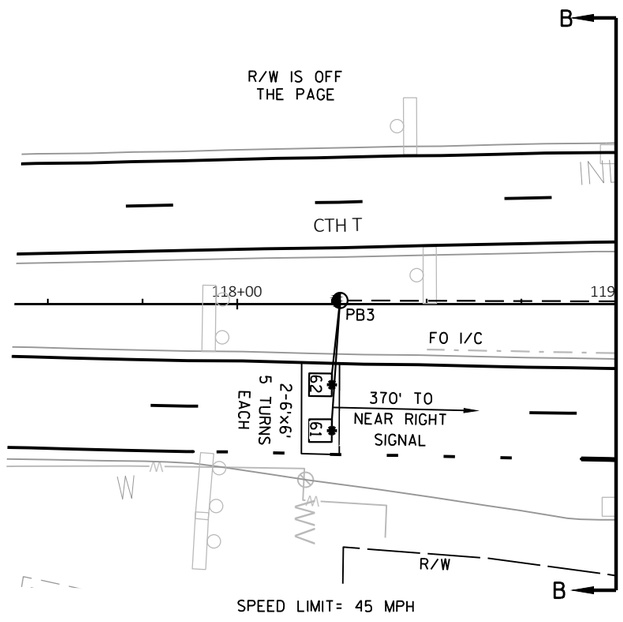
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LAYOUT NAME - 024271_sp
PLOT DATE : 8/18/2022 11:31 AM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N





TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & CTH T
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0537

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

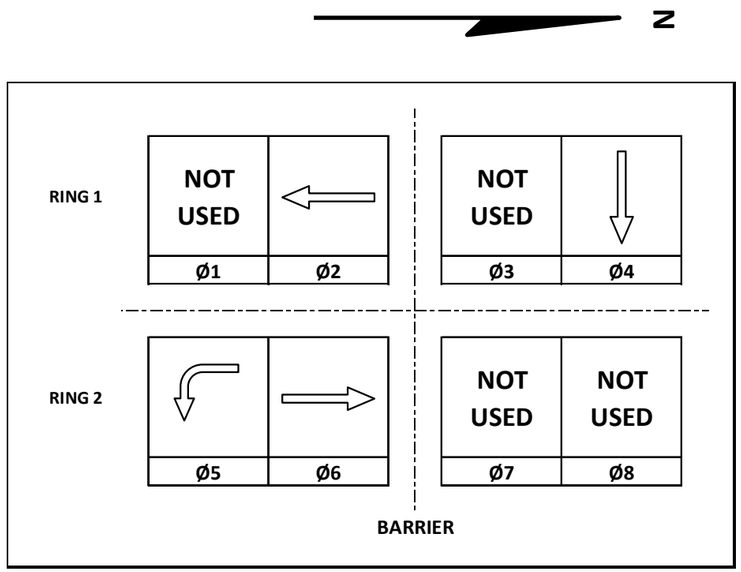
PAGE 2 OF 3

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 199	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024271_SP.DWG
LAYOUT NAME - 024272_sp

PLOT DATE : 8/18/2022 11:31 AM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:40 FT

	HEAD NUMBERS	FLASH
Ø1		
Ø2	4,5,6	R
Ø3		
Ø4	10,11,12	R
Ø5	7,8,9	R ←
Ø6	1,2,3	R
Ø7		
Ø8		
Ø2P		
Ø4P		
Ø6P		
Ø8P		
OLE		
OLF		
OLG		
OLH		



CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C
MOVEMENT	← ↙	← →	↓
PHASE	2+5	6+2	4

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

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	X
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	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	X
HARDWIRE	
OTHER	
CONFIRMATION LIGHTS	X
LIFT BRIDGE	
QUEUE DETECTION	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	41	43	52	54	62	64		
CALLED PHASE	4	4	5	5	6	6		
CALL OPTION		X	X	X	X	X		
DELAY TIME								
EXTENTION OPTION	X	X	X	X	X	X		
EXTEND TIME	X							
USE ADDED INITIAL					X	X		
CROSS SWITCH PHASE								

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

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	42	51	53	61	63			
CALLED PHASE	4	5	5	6	6			
CALL OPTION	X	X	X	X	X			
DELAY TIME								
EXTENTION OPTION	X	X	X	X	X			
EXTEND TIME								
USE ADDED INITIAL				X	X			
CROSS SWITCH PHASE								

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

GENERAL NOTES:

1. CABINET IS EQUIPPED WITH A BATTERY BACKUP

IH 94 EB & CTH T
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO: S67-0537 CABINET TYPE: TS2-S
CONTROLLER TYPE: ECONOLITE
DATE: 10/2022 PAGE NUMBER: 3 OF 3

PROJECT ID:	1060-47-70
INTERSECTION:	IH 94 EB & CTH T

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	AWG 14 NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON	OTHER
SB1	12	5	RED	ORG	GRN								
		6	RED	ORG	GRN								
		8				RED/BLK	ORG/BLK	GRN/BLK					
		9				RED/BLK	ORG/BLK	GRN/BLK					
SB2	7	10	RED	ORG	GRN								
SB3	7	4	RED	ORG	GRN								
SB4	12	2	RED	ORG	GRN								
		3	RED	ORG	GRN								
		7				RED/BLK	ORG/BLK	GRN/BLK					
SB5	7	11	RED	ORG	GRN								
		12	RED	ORG	GRN								
SB6	7	1	RED	ORG	GRN								

NOTES: USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	CB1

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB1
CB1	SB5
SB5	SB4

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB4	SB1
PB5	SB1
PB6	SB2
PB8	SB2
PB9	SB3
PB10	SB3
PB11	SB4
PB12	SB5
PB13	SB5
PB14	SB6
PB15	SB6
PB16	CB1

RADAR DETECTION CABLE	
FROM	TO
CB1	SB4 (RE 1)

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB1 (HEAD A)
CB1	SB2 (HEAD C)
CB1	SB4 (HEAD B)

OBSTRUCTION LIGHTS UF 8 AWG W/ GROUND	
FROM	TO
CB1	SB5
SB5	SB4
CB1	SB1

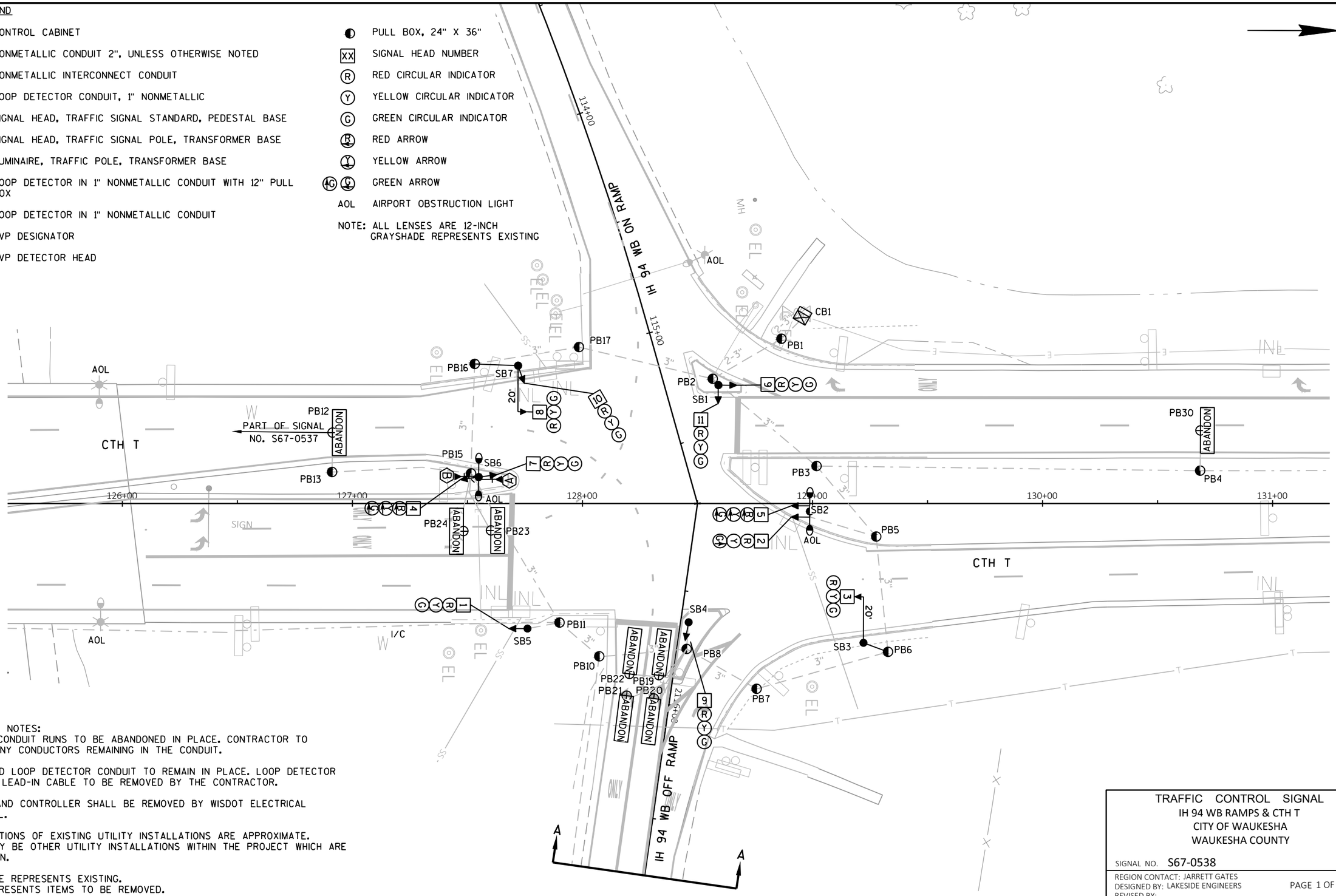
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LEGEND

- 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
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT WITH 12" PULL BOX
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- PULL BOX, 24" X 36"
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (AG) (G) GREEN ARROW
- AOL AIRPORT OBSTRUCTION LIGHT

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

N



CONSTRUCTION NOTES:

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

TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS & CTH T
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0538

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 202	E

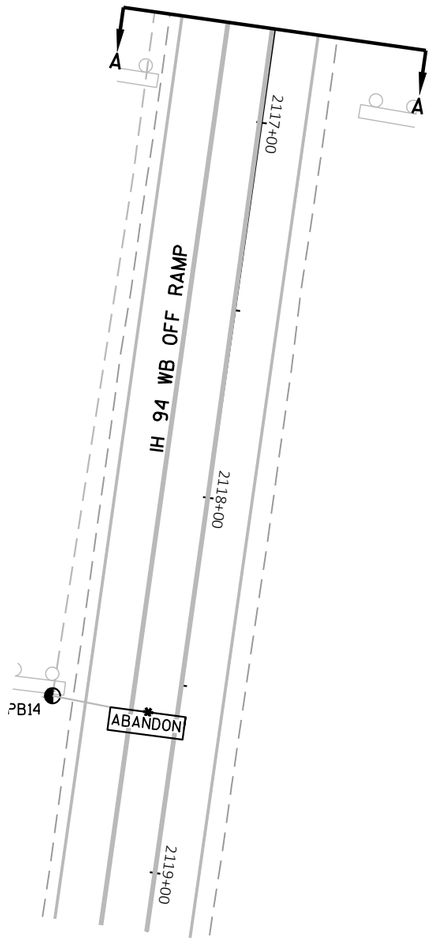
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LAYOUT NAME - 024081_sr

PLOT DATE : 10/14/2022 9:35 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N



TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS & CTH T
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0538

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 203	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024081_SR.DWG
LAYOUT NAME - 024082_sr

PLOT DATE : 8/18/2022 9:06 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : ##########

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT, 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) MONOTUBE BASE, POLE, 35'-45' ARM
- LUMINAIRE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- RADAR DETECTION AREA
- RADAR DETECTOR
- EVP DESIGNATOR
- EVP DETECTOR HEAD

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

- 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
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- YIELD SIGN
- AOL AIRPORT OBSTRUCTION LIGHT
- CONFIRMATION LIGHT

EVP CONSTRUCTION NOTES:

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

MONOTUBE STRUCTURE NUMBERS
SB1 = S-67-1459
SB4 = S-67-1460
SB5 = S-67-1461

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. INSTALL CABINET BASE 6" ABOVE FINAL ROADWAY ELEVATION.
5. ALL LUMINAIRES ARE LED-C UNLESS OTHERWISE NOTED.
6. AIRPORT OBSTRUCTION LIGHTS TO BE INSTALLED ON SB1, SB4, AND SB5.
7. ANY CASINGS ARE INCIDENTAL TO THE CONCRETE SIGNAL BASE ITEMS.

WISCONSIN PROFESSIONAL ENGINEER
CHRISTOPHER M QUESNELL
E-37621
NEW BERLIN WI
10/18/22

TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS & CTH T
CITY OF WAUKESHA
WAUKESHA COUNTY
SIGNAL NO. S67-0538
CABINET TYPE: TS2-S
CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVAL RECOMMENDED
DATE 10-17-22 REGION TRAFFIC ENGINEER
APPROVED
DATE 10-20-22 STATE TRAFFIC ENGINEER
10-18-22

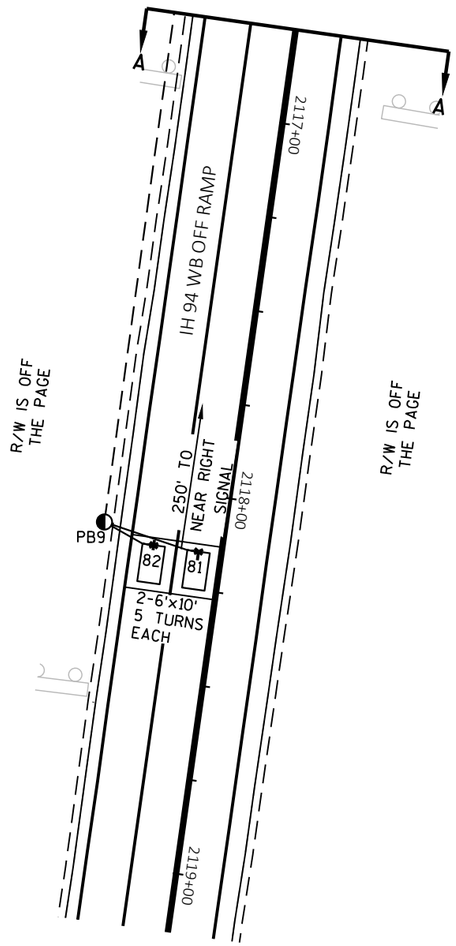
REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:
PAGE 1 OF 3

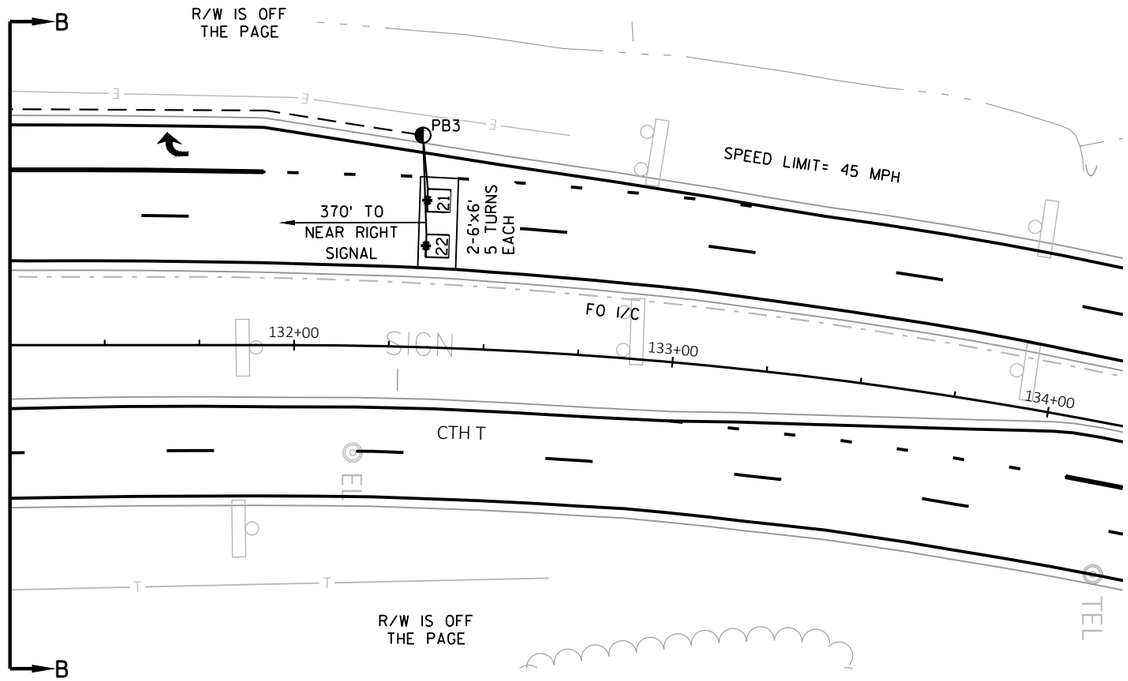
PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 204	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024281_SP.DWG
LAYOUT NAME - 024281_sp
PLOT DATE : 8/18/2022 10:23 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

N





TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS & CTH T
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0538

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

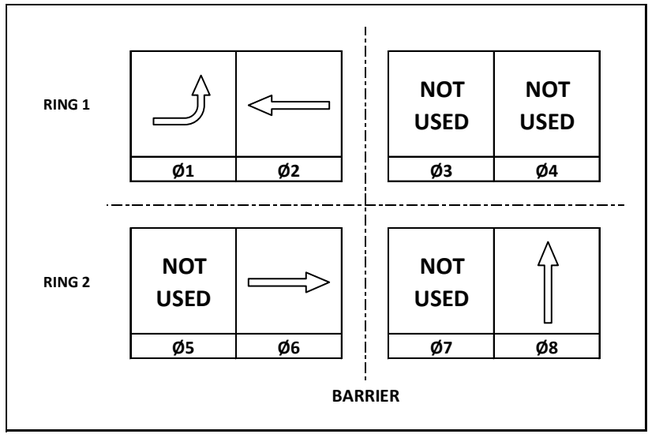
PAGE 2 OF 3

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL PLAN	SHEET 205	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024281_SP.DWG
LAYOUT NAME - 024282_sp
PLOT DATE : 8/18/2022 10:24 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

	HEAD NUMBERS	FLASH
Ø1	4,5,6	R ←
Ø2	7,8,9	R
Ø3		
Ø4		
Ø5		
Ø6	1,2,3	R
Ø7		
Ø8	10,11,12,13	R, R ←
Ø2P		
Ø4P		
Ø6P		
Ø8P		
OLE		
OLF		
OLG		
OLH		

N



CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	D
MOVEMENT	⇄	↱	↑
PHASE	2+6	6+1	8

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

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	X
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	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	X
HARDWIRE	
OTHER	
CONFIRMATION LIGHTS	X
LIFT BRIDGE	
QUEUE DETECTION	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13	19	17	23	21	27	25	31	29	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	11	13	21	23	81	83	85		61								PLAN LOOP DETECTOR*(S)
CALLED PHASE	1	1	2	2	8	8	8		6								CALLED PHASE
CALL OPTION	X	X	X	X		X	X		X								CALL OPTION
DELAY TIME																	DELAY TIME
EXTENTION OPTION	X	X	X	X	X	X	X		X								EXTENTION OPTION
EXTEND TIME					X												EXTEND TIME
USE ADDED INITIAL			X	X													USE ADDED INITIAL
CROSS SWITCH PHASE																	CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14	20	18	24	22	28	26	32	30	DETECTOR INPUT
PLAN LOOP DETECTOR*(S)	12	14	22	24	82	84	86										PLAN LOOP DETECTOR*(S)
CALLED PHASE	1	1	2	2	8	8	8										CALLED PHASE
CALL OPTION	X	X	X	X		X	X										CALL OPTION
DELAY TIME																	DELAY TIME
EXTENTION OPTION	X	X	X	X	X	X	X										EXTENTION OPTION
EXTEND TIME					X												EXTEND TIME
USE ADDED INITIAL			X	X													USE ADDED INITIAL
CROSS SWITCH PHASE																	CROSS SWITCH PHASE

GENERAL NOTES:

1. CABINET IS EQUIPPED WITH A BATTERY BACKUP

IH 94 WB & CTH T
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO: S67-0538 CABINET TYPE: TS2-S
CONTROLLER TYPE: ECONOLITE
DATE: 10/2022 PAGE NUMBER: 3 OF 3

PROJECT ID:	1060-47-70
INTERSECTION:	IH 94 WB & CTH T

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	AWG 14 NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED BUTTON	OTHER
SB1	12	2	RED	ORG	GRN								
		3	RED	ORG	GRN								
		5				RED/BLK	ORG/BLK	GRN/BLK					
		6				RED/BLK	ORG/BLK	GRN/BLK					
SB2	7	10	RED	ORG	GRN								
SB3	7	1	RED	ORG	GRN								
SB4	12	4				RED	ORG	GRN					
		8	RED/BLK	ORG/BLK	GRN/BLK								
		9	RED/BLK	ORG/BLK	GRN/BLK								
SB5	7	11				RED	ORG	GRN					
		12	RED	ORG	GRN			GRN					
SB6	12	7	RED	ORG	GRN								
		13	RED/BLK	ORG/BLK	GRN/BLK								

NOTES: USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	CB1

LIGHTING UF 10 AWG W/ GROUND	
FROM	TO
CB1	SB1
CB1	SB5
SB5	SB4

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB4	SB1
PB5	SB1
PB6	SB2
PB7	SB2
PB8	SB3
PB10	SB3
PB11	SB4
PB12	SB5
PB13	SB5
PB14	CB1
PB15	SB6

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB1 (HEAD B)
CB1	SB2 (HEAD D)
CB1	SB4 (HEAD A)

RADAR DETECTION CABLE	
FROM	TO
CB1	SB4 (RE 1)

OBSTRUCTION LIGHTS UF 8 AWG W/ GROUND	
FROM	TO
CB1	SB1
CB1	SB5
SB5	SB4

PAGE 1 OF 1

2



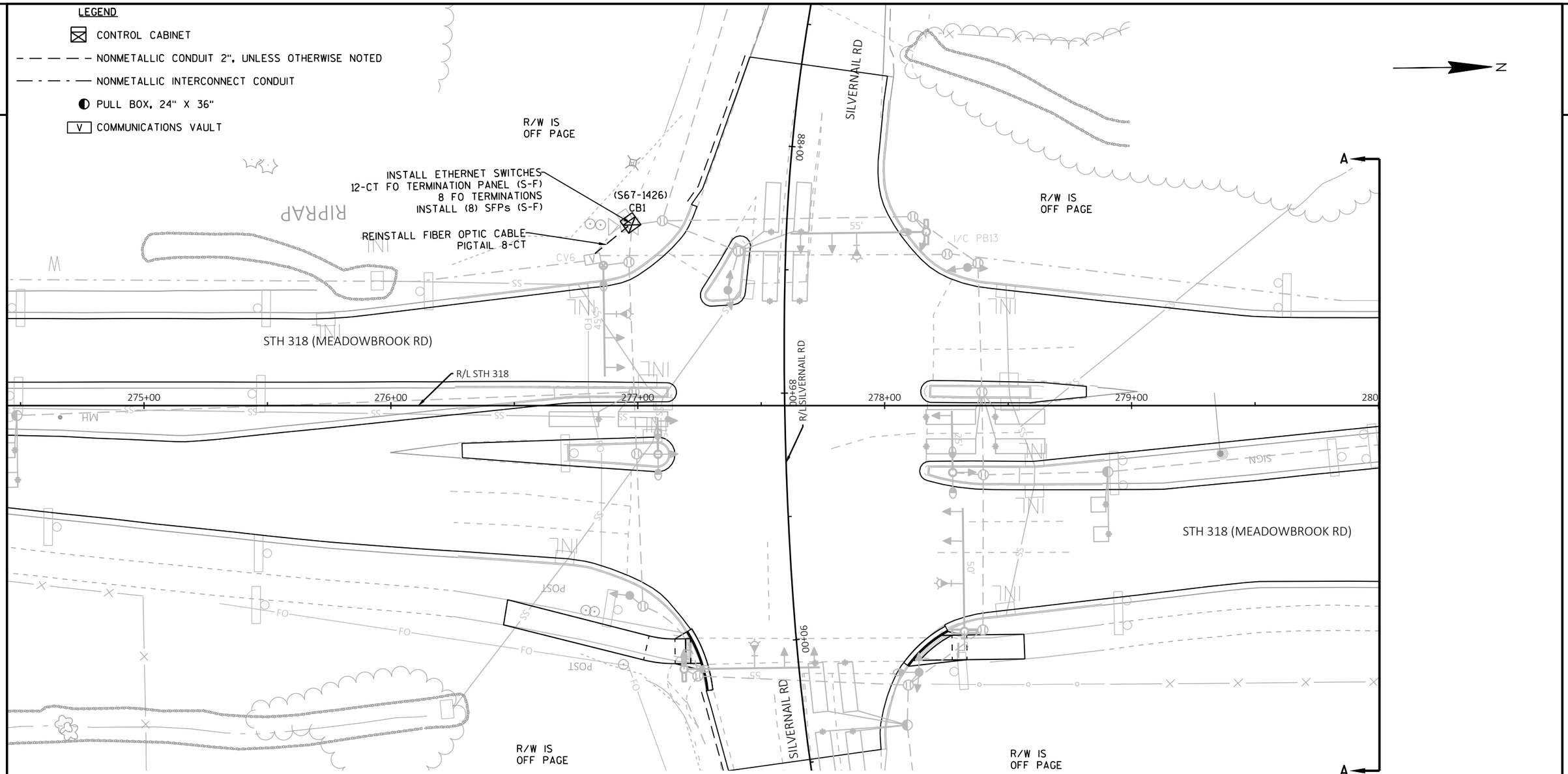
PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL INTERCONNECT PROJECT OVERVIEW	SHEET 208	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024290_ICO.DWG
LAYOUT NAME - 024000_spo

PLOT DATE : 9/23/2022 11:36 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:1200 FT

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- NONMETALLIC INTERCONNECT CONDUIT
- PULL BOX, 24" X 36"
- V COMMUNICATIONS VAULT



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. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT PIGTAIL COILED IN EACH COMMUNICATIONS VAULT AND 30-FEET IN EACH PULL BOX.
4. THE ENTIRE MAINLINE FIBER OPTIC CABLE SHALL NOT BE CUT AND/OR SPLICED IN THE VAULTS NEAREST THE TRAFFIC SIGNAL CABINET WHILE MAKING THE PIGTAIL CONNECTION. ONLY THE REQUIRED BUFFER TUBE SHALL BE CUT AND SPLICED WITH THE PIGTAIL CONNECTION.
5. PROPOSED STORM SEWER, LIGHTING, AND TRAFFIC SIGNAL ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

TRAFFIC SIGNAL INTERCONNECT

STH 318/CTH G
CITY OF PEWAUKEE/CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-1426, S67-0748, S67-0749

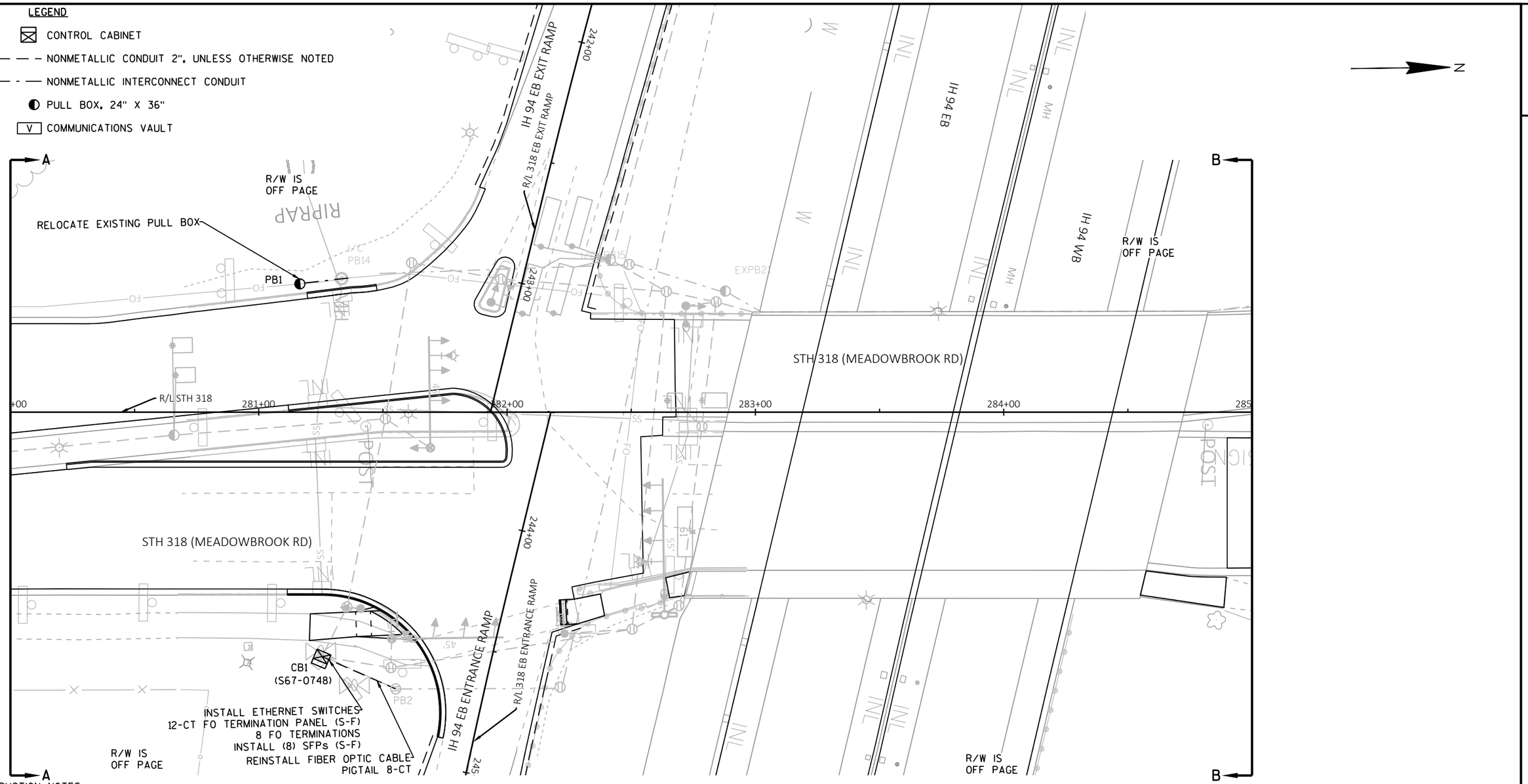
REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET 209	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024294_IC.DWG
LAYOUT NAME - 024294
PLOT DATE : 9/23/2022 11:44 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- NONMETALLIC INTERCONNECT CONDUIT
- PULL BOX, 24" X 36"
- V COMMUNICATIONS VAULT



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. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT PIGTAIL COILED IN EACH COMMUNICATIONS VAULT AND 30-FEET IN EACH PULL BOX.
4. THE ENTIRE MAINLINE FIBER OPTIC CABLE SHALL NOT BE CUT AND/OR SPLICED IN THE VAULTS NEAREST THE TRAFFIC SIGNAL CABINET WHILE MAKING THE PIGTAIL CONNECTION. ONLY THE REQUIRED BUFFER TUBE SHALL BE CUT AND SPLICED WITH THE PIGTAIL CONNECTION.
5. PROPOSED STORM SEWER, LIGHTING, AND TRAFFIC SIGNAL ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

TRAFFIC SIGNAL INTERCONNECT
STH 318/CTH G
CITY OF PEWAUKEE/CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-1426, S67-0748, S67-0749

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET 210	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024294_IC.DWG
LAYOUT NAME - 024295
PLOT DATE : 9/23/2022 11:44 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- NONMETALLIC INTERCONNECT CONDUIT
- PULL BOX, 24" X 36"
- V COMMUNICATIONS VAULT

N

B

R/W IS OFF PAGE

IH 94 WB ENTRANCE RAMP

R/L 318 WB ENTRANCE RAMP

242+00

I/C PB16

EXPB24

EXCVG03

EX I/C PB1

25'

R/W IS OFF PAGE

STH 318 (MEADOWBROOK RD)

286+00

287+00

288+00

289+00

290+00

291+00

R/L STH 318

EXCV2

50'

CTH G (MEADOWBROOK RD)

IH 94 WB EXIT RAMP

R/L 318 WB EXIT RAMP

243+00

CB1
(S67-0749)

REINSTALL FIBER OPTIC CABLE
PIGTAIL 8-CT

INSTALL ETHERNET SWITCHES
12-CT FO TERMINATION PANEL (S-F)
8 FO TERMINATIONS
INSTALL (8) SFPs (S-F)

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R/W IS OFF PAGE

B

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. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT PIGTAIL COILED IN EACH COMMUNICATIONS VAULT AND 30-FEET IN EACH PULL BOX.
4. THE ENTIRE MAINLINE FIBER OPTIC CABLE SHALL NOT BE CUT AND/OR SPLICED IN THE VAULTS NEAREST THE TRAFFIC SIGNAL CABINET WHILE MAKING THE PIGTAIL CONNECTION. ONLY THE REQUIRED BUFFER TUBE SHALL BE CUT AND SPLICED WITH THE PIGTAIL CONNECTION.
5. PROPOSED STORM SEWER, LIGHTING, AND TRAFFIC SIGNAL ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

TRAFFIC SIGNAL INTERCONNECT
STH 318/CTH G
CITY OF PEWAUKEE/CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-1426, S67-0748, S67-0749

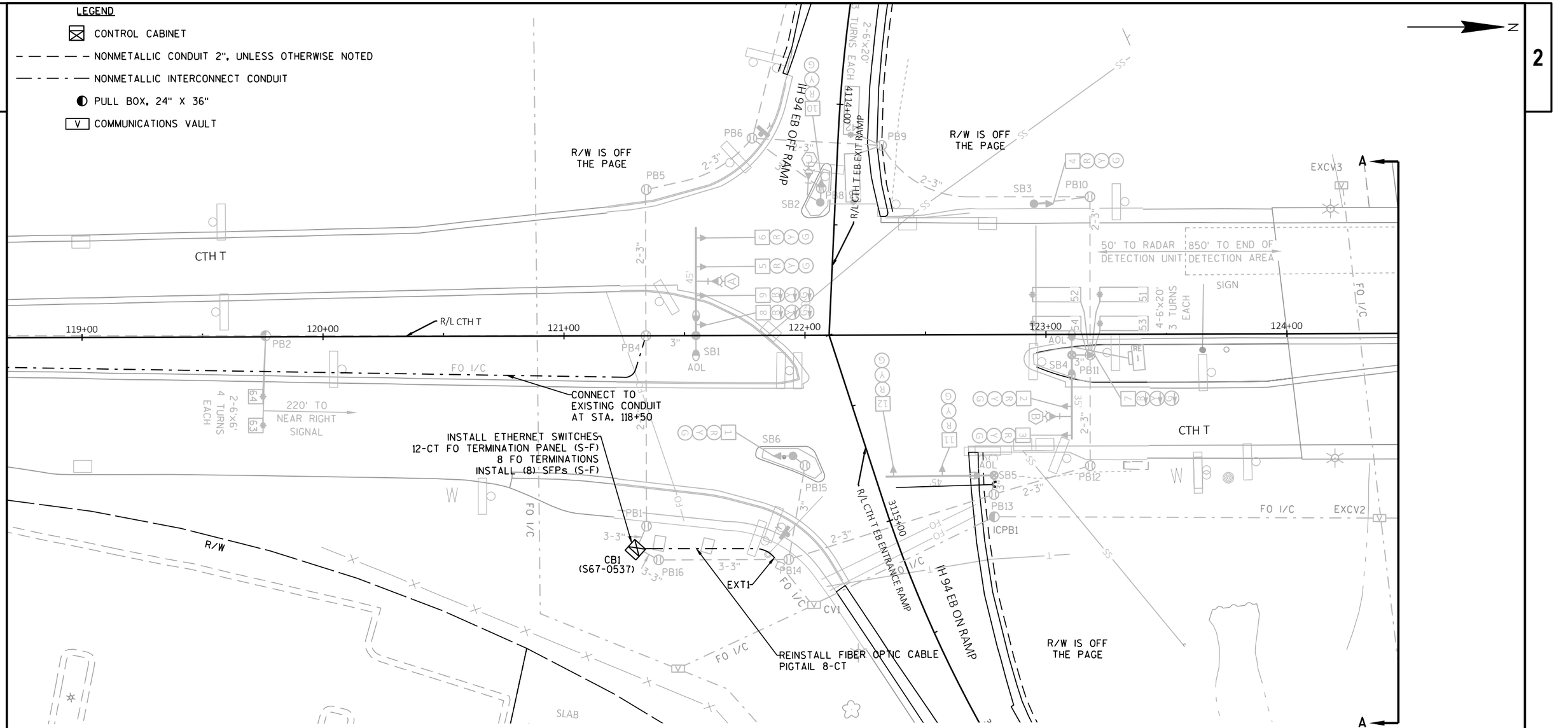
REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET 211	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024294_IC.DWG
LAYOUT NAME - 024296
PLOT DATE : 9/23/2022 11:44 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- NONMETALLIC INTERCONNECT CONDUIT
- PULL BOX, 24" X 36"
- V COMMUNICATIONS VAULT



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. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT PIGTAIL COILED IN EACH COMMUNICATIONS VAULT AND 30-FEET IN EACH PULL BOX.
4. THE ENTIRE MAINLINE FIBER OPTIC CABLE SHALL NOT BE CUT AND/OR SPLICED IN THE VAULTS NEAREST THE TRAFFIC SIGNAL CABINET WHILE MAKING THE PIGTAIL CONNECTION. ONLY THE REQUIRED BUFFER TUBE SHALL BE CUT AND SPLICED WITH THE PIGTAIL CONNECTION.
5. PROPOSED STORM SEWER, LIGHTING, AND TRAFFIC SIGNAL ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

TRAFFIC SIGNAL INTERCONNECT
IH 94 & CTH T INTERCHANGE
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0537, S67-0538

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

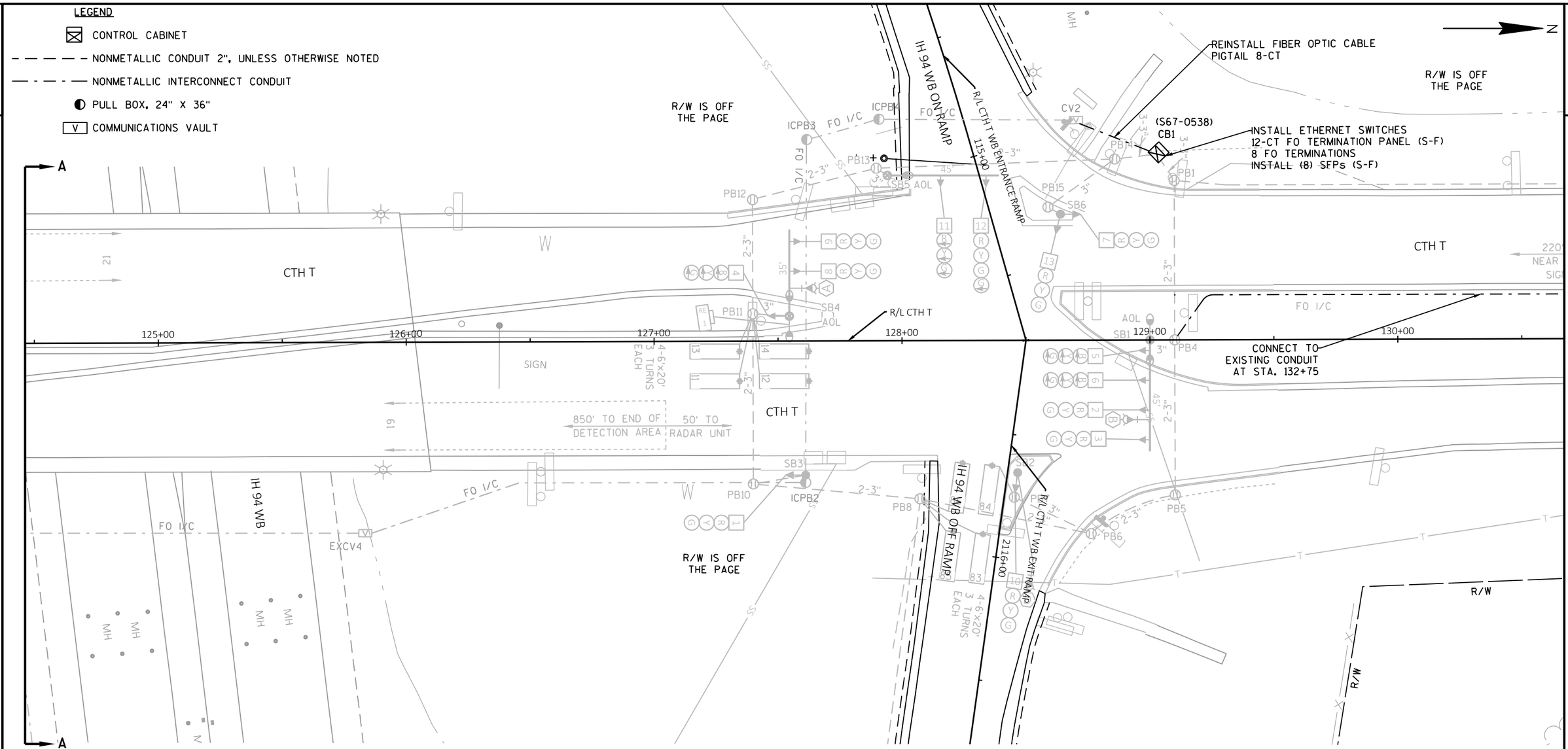
PAGE 1 OF 2

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET 212	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024297_IC.DWG
LAYOUT NAME - 024279_ic
PLOT DATE : 9/23/2022 11:51 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- NONMETALLIC INTERCONNECT CONDUIT
- PULL BOX, 24" X 36"
- V COMMUNICATIONS VAULT



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. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT PIGTAIL COILED IN EACH COMMUNICATIONS VAULT AND 30-FEET IN EACH PULL BOX.
4. THE ENTIRE MAINLINE FIBER OPTIC CABLE SHALL NOT BE CUT AND/OR SPLICED IN THE VAULTS NEAREST THE TRAFFIC SIGNAL CABINET WHILE MAKING THE PIGTAIL CONNECTION. ONLY THE REQUIRED BUFFER TUBE SHALL BE CUT AND SPLICED WITH THE PIGTAIL CONNECTION.
5. PROPOSED STORM SEWER, LIGHTING, AND TRAFFIC SIGNAL ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

TRAFFIC SIGNAL INTERCONNECT
IH 94 & CTH T INTERCHANGE
CITY OF WAUKESHA
WAUKESHA COUNTY

SIGNAL NO. S67-0537, S67-0538

REGION CONTACT: JARRETT GATES
DESIGNED BY: LAKESIDE ENGINEERS
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET 213	E

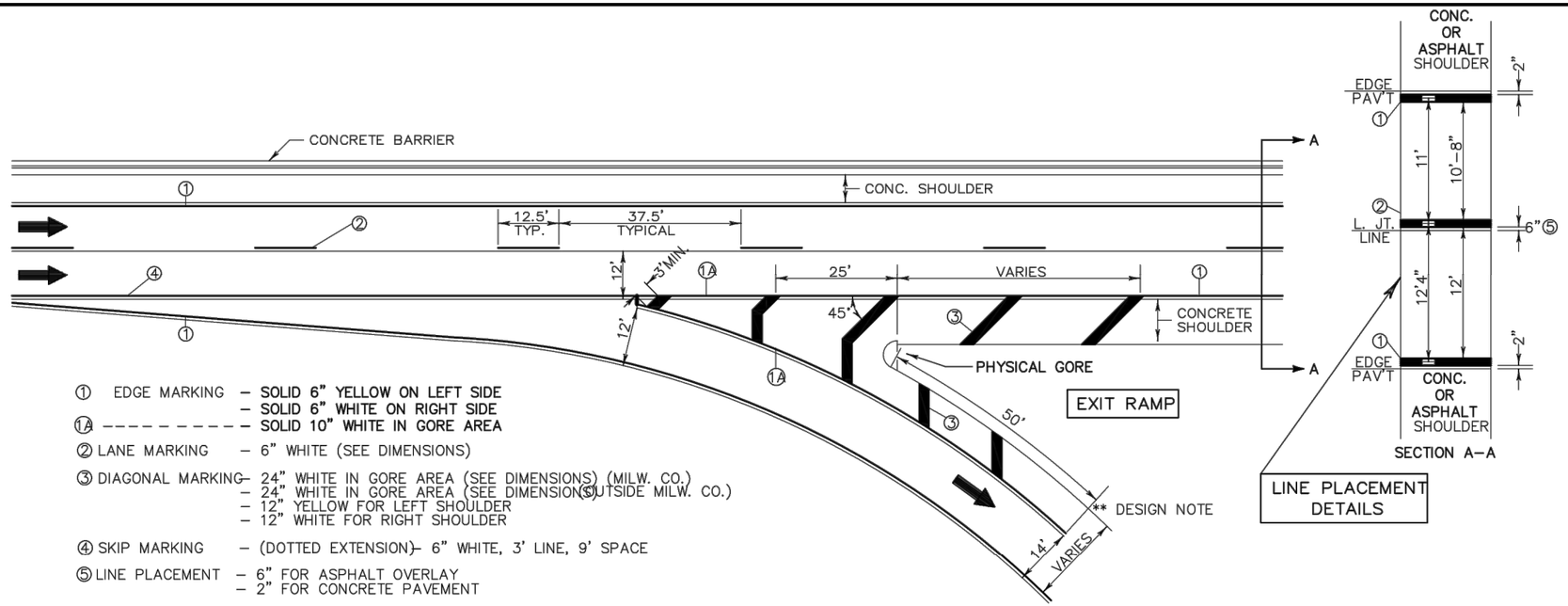
FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024297_IC.DWG
LAYOUT NAME - 024280_ic
PLOT DATE : 9/23/2022 11:51 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

PAVEMENT MARKING LEGEND

1. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (WHITE)
2. MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (YELLOW)
3. MARKING LINE GROOVED PERMANENT TAPE 6-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
4. MARKING LINE GROOVED PERMANENT TAPE 10-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
5. MARKING LINE GROOVED PERMANENT TAPE 6-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
6. MARKING LINE GROOVED PERMANENT TAPE 10-INCH
7. MARKING LINE EPOXY 6-INCH (WHITE)
8. MARKING LINE EPOXY 6-INCH (YELLOW)
9. MARKING LINE EPOXY 6-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
10. MARKING LINE EPOXY 4-INCH (WHITE)
11. MARKING LINE EPOXY 4-INCH (YELLOW)
12. MARKING LINE EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
13. MARKING LINE EPOXY 10-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
14. MARKING LINE EPOXY 10-INCH (WHITE)
15. MARKING LINE EPOXY 8-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
16. MARKING LINE EPOXY 8-INCH (WHITE)
17. MARKING DIAGONAL EPOXY 12-INCH
18. MARKING YIELD LINE EPOXY 18-INCH
19. MARKING CHEVRON EPOXY 24-INCH (WHITE)
20. MARKING STOP LINE EPOXY 18-INCH
21. MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
22. MARKING CORRUGATED MEDIAN EPOXY
23. MARKING CURB EPOXY
24. MARKING ISLAND NOSE EPOXY
25. MARKING ARROW EPOXY TYPE 1
26. MARKING ARROW EPOXY TYPE 2
27. MARKING ARROW EPOXY TYPE 3
28. MARKING ARROW EPOXY TYPE 4
29. MARKING ARROW EPOXY TYPE 5
30. MARKING WORD EPOXY (ONLY)
31. MARKING SYMBOL EPOXY
32. MARKING LINE GROOVED BLACK EPOXY 6-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
33. MARKING LINE GROOVED BLACK EPOXY 10-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
34. MARKING LINE BLACK EPOXY NON GROOVED 6-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
35. MARKING LINE BLACK EPOXY NON GROOVED 10-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)
36. MARKING LINE BLACK EPOXY NON GROOVED 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
37. MARKING LINE BLACK EPOXY NON GROOVED 8-INCH (DASHED WHITE) (3 FT LINE 9 FT SKIP)

NOTE:
SEE CONSTRUCTION DETAILS FOR ADDITIONAL PAVEMENT MARKING ON RAMPS



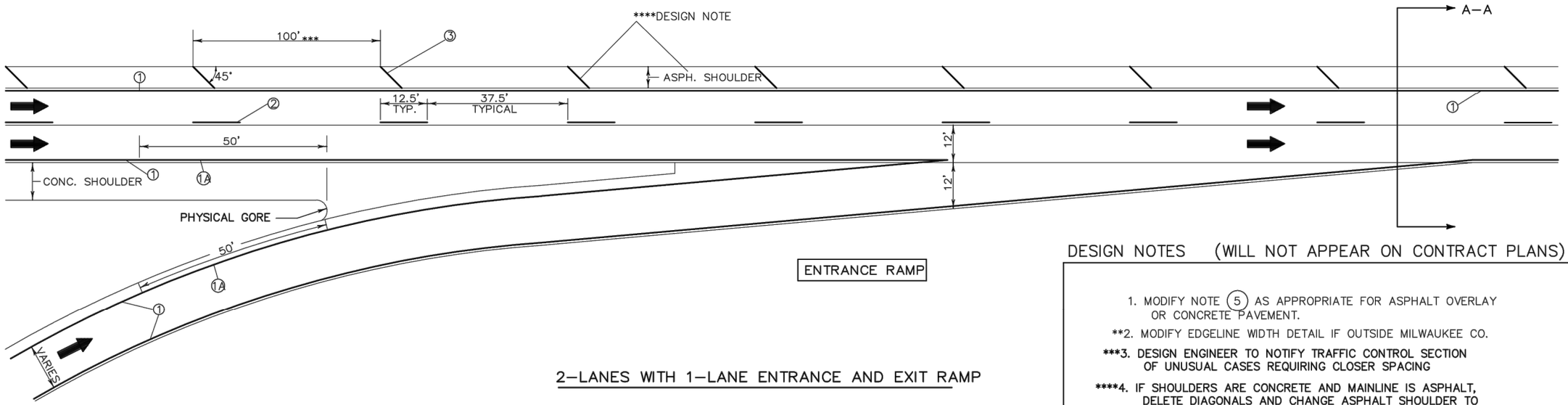
① EDGE MARKING – SOLID 6" YELLOW ON LEFT SIDE
– SOLID 6" WHITE ON RIGHT SIDE
①A – – – – – – – – – – SOLID 10" WHITE IN GORE AREA
② LANE MARKING – 6" WHITE (SEE DIMENSIONS)
③ DIAGONAL MARKING – 24" WHITE IN GORE AREA (SEE DIMENSIONS) (MILW. CO.)
– 24" WHITE IN GORE AREA (SEE DIMENSIONS) (OUTSIDE MILW. CO.)
– 12" YELLOW FOR LEFT SHOULDER
– 12" WHITE FOR RIGHT SHOULDER
④ SKIP MARKING – (DOTTED EXTENSION)– 6" WHITE, 3' LINE, 9' SPACE
⑤ LINE PLACEMENT – 6" FOR ASPHALT OVERLAY
– 2" FOR CONCRETE PAVEMENT

SECTION A–A

LINE PLACEMENT DETAILS

NOTES:

1. THE 12" WIDE DIAGONAL SHOULDER MARKING SHALL BE USED ONLY WHERE THE ASPHALTIC CONCRETE SHOULDER ABUTS ASPHALTIC CONC. PAV'T. IF THERE ARE CONTINUOUS RUMBLE STRIPS, DO NOT USE DIAGONAL SHOULDER MARKING.
2. WHERE THE DOTTED EXTENSION OF THE RIGHT EDGE LINE IS SHOWN ON THE PLAN, IT SHALL BE 4" WIDE, WITH A LINE SKIP PATTERN CONSISTING OF A 3' LONG LINE AND A 9' SKIP.
3. PAVEMENT LANE MARKINGS SHALL BE LOCATED 6" OFF THE LONGITUDINAL JOINT OF THE UNDERLYING CONC. PAVEMENT.
4. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.
5. SPOTTING FOR PAVEMENT LANE MARKINGS AND EDGE LINES SHALL BE 4"x4" PIECES OF REFLECTORIZED PAV'T MARKING TAPE SPACED AT 50' INTERVALS, INCIDENTAL TO PAV'T MARKING.



ENTRANCE RAMP

2–LANES WITH 1–LANE ENTRANCE AND EXIT RAMP

DESIGN NOTES (WILL NOT APPEAR ON CONTRACT PLANS)

1. MODIFY NOTE (5) AS APPROPRIATE FOR ASPHALT OVERLAY OR CONCRETE PAVEMENT.

**2. MODIFY EDGELINE WIDTH DETAIL IF OUTSIDE MILWAUKEE CO.

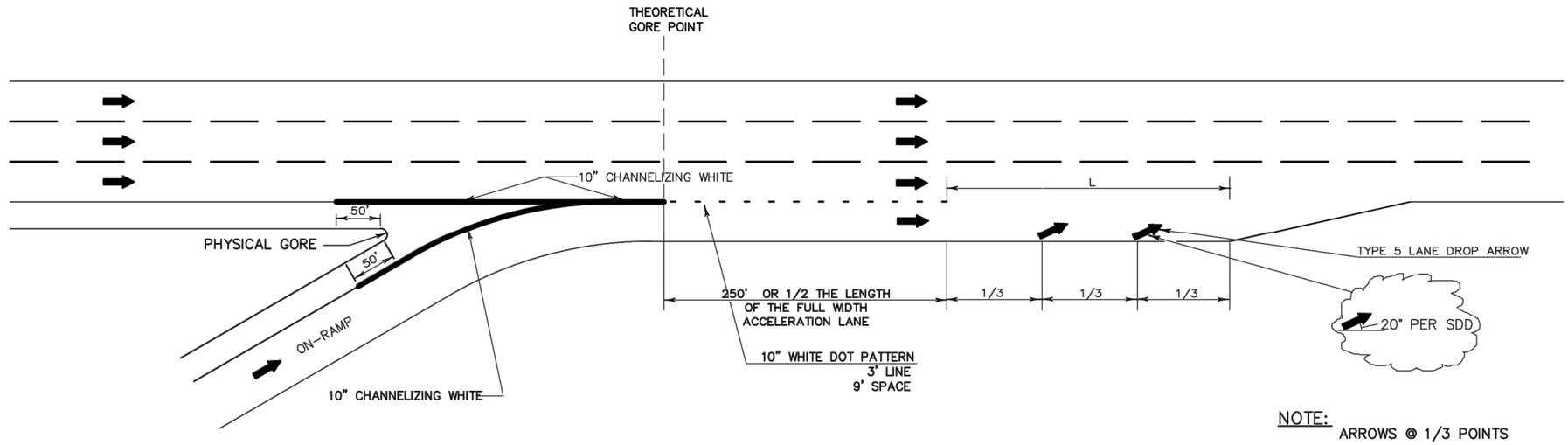
***3. DESIGN ENGINEER TO NOTIFY TRAFFIC CONTROL SECTION OF UNUSUAL CASES REQUIRING CLOSER SPACING

****4. IF SHOULDERS ARE CONCRETE AND MAINLINE IS ASPHALT, DELETE DIAGONALS AND CHANGE ASPHALT SHOULDER TO CONCRETE

GORES, FREEWAYS, & EXPRESSWAYS (EPOXY)

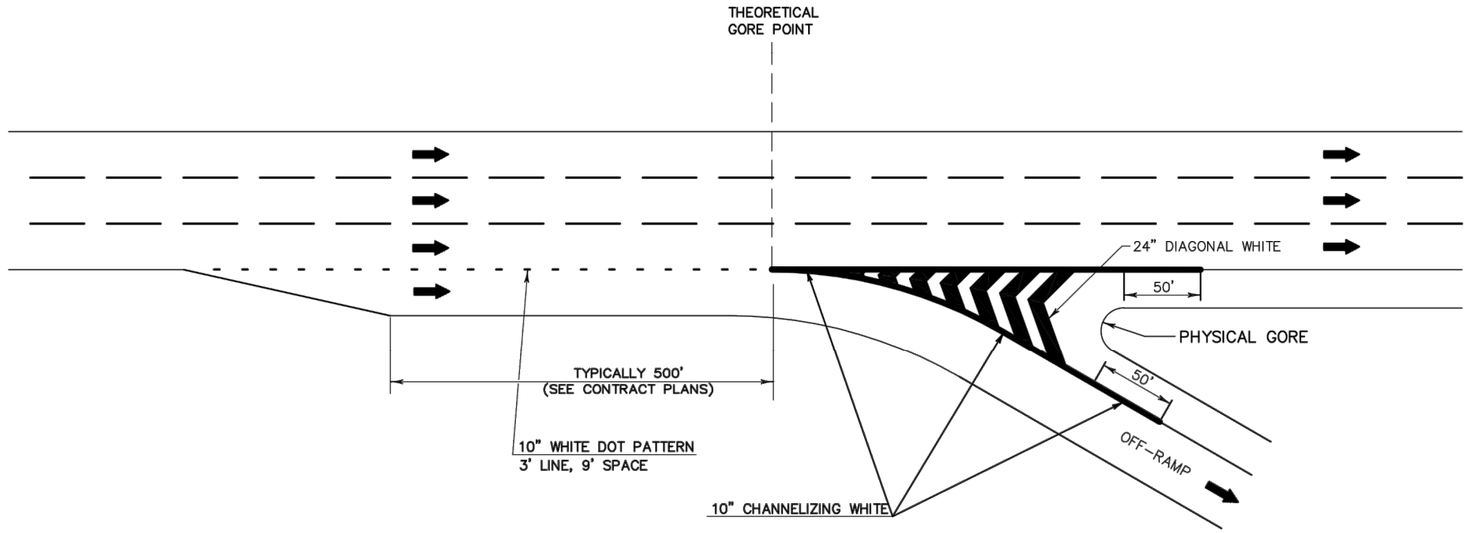
PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PAVEMENT MARKING - CONSTRUCTION DETAILS	SHEET 215	E

2

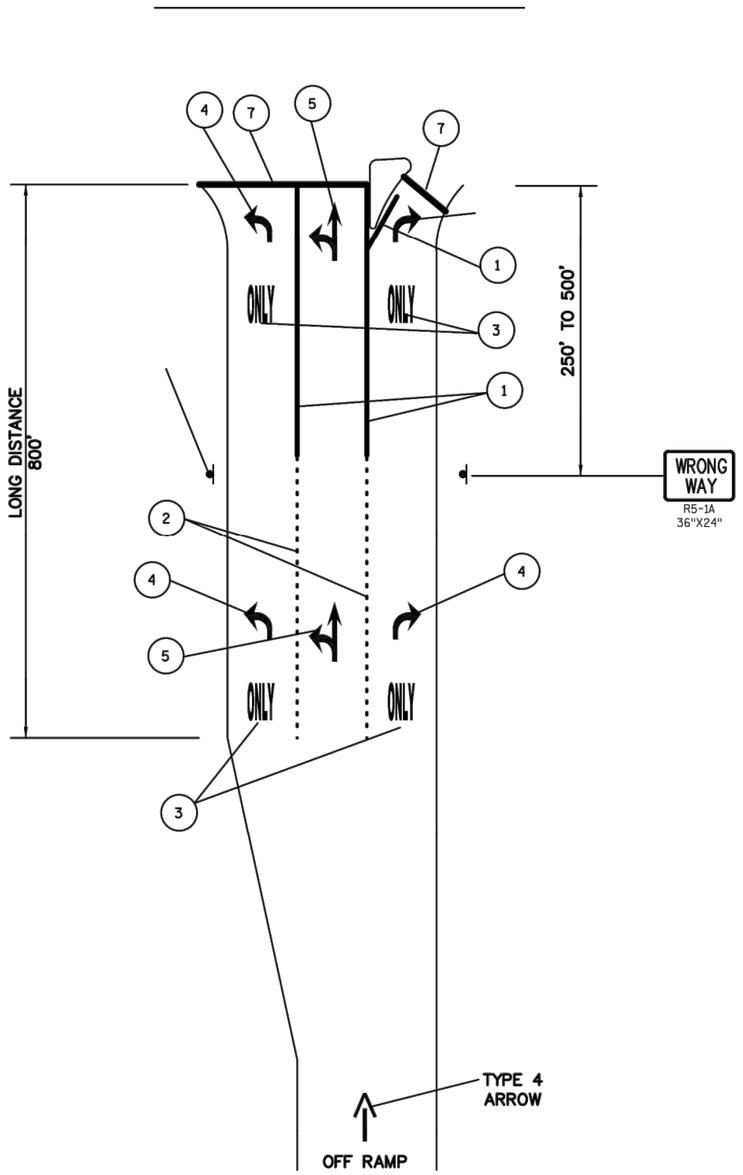


NOTE: ARROWS @ 1/3 POINTS

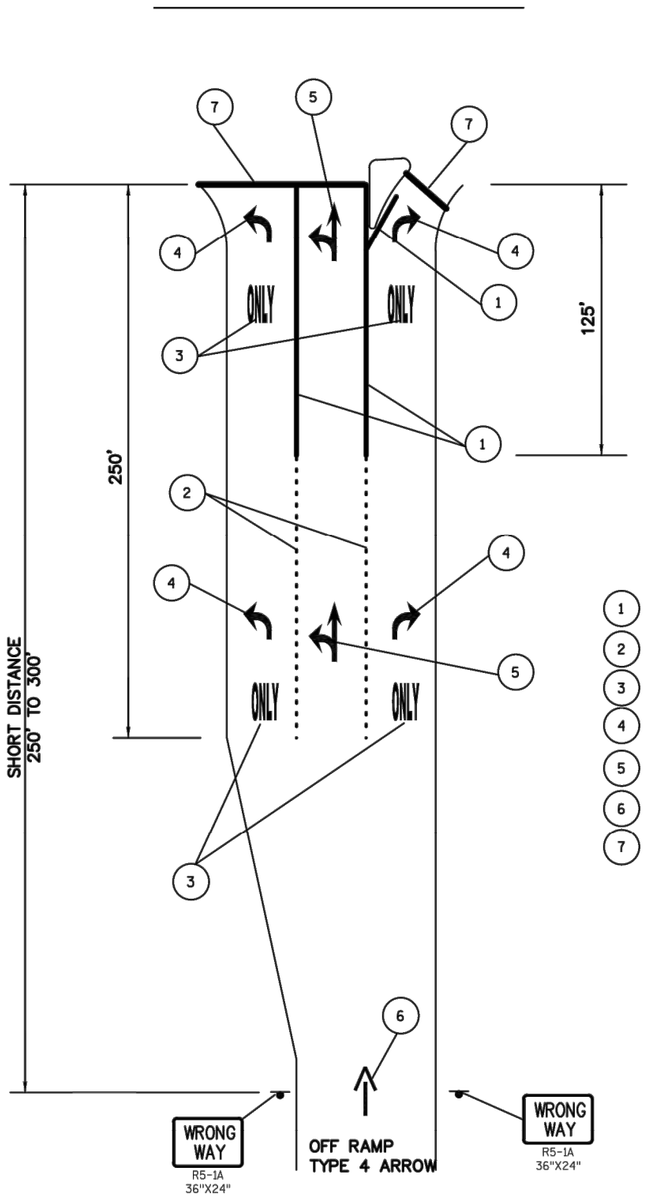
SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ON–RAMP



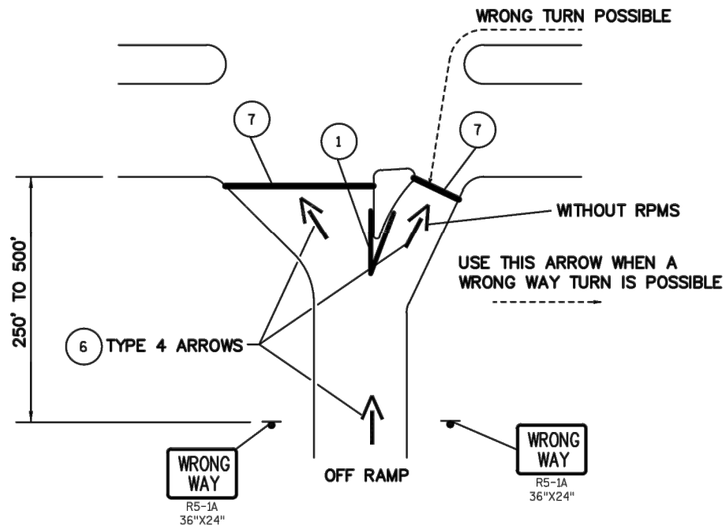
SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL OFF–RAMP



EXIT RAMP
LONG TURN LANES



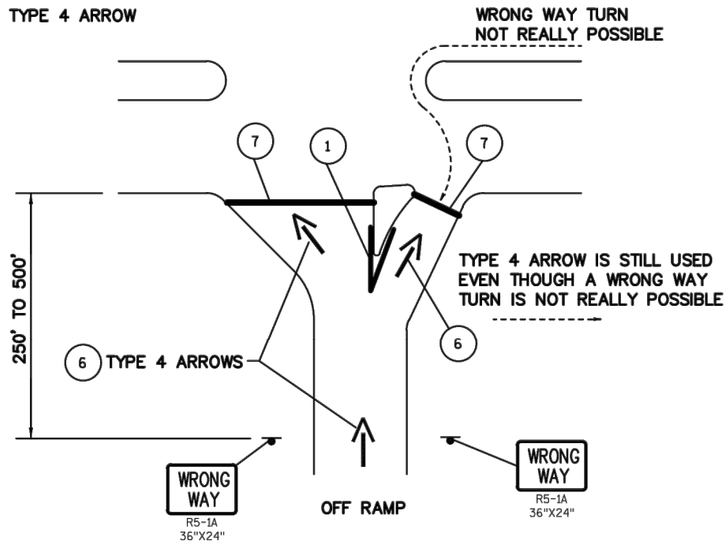
EXIT RAMP
250' OR SHORTER TURN LANES



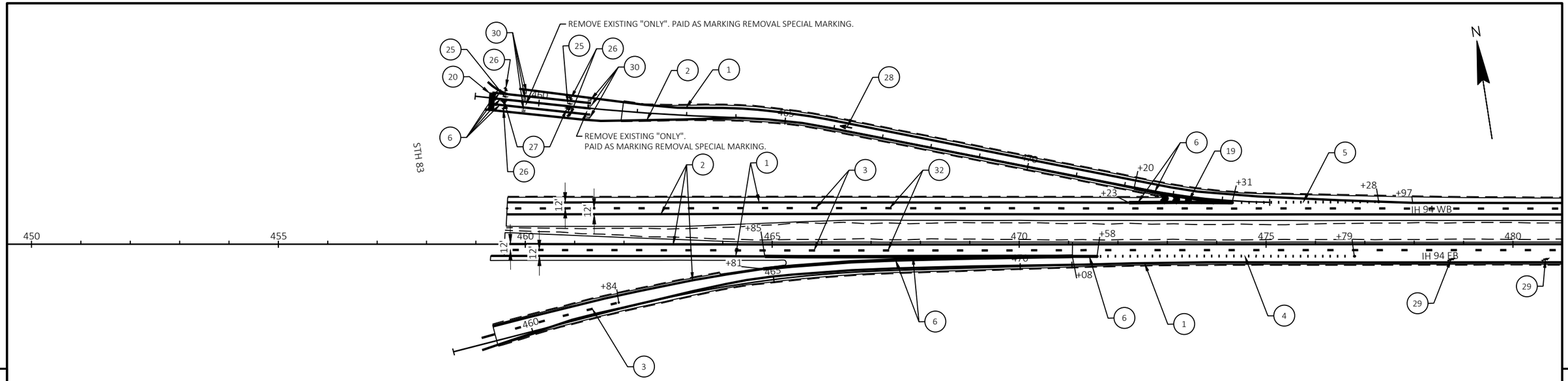
EXIT RAMP
(SIMPLE)

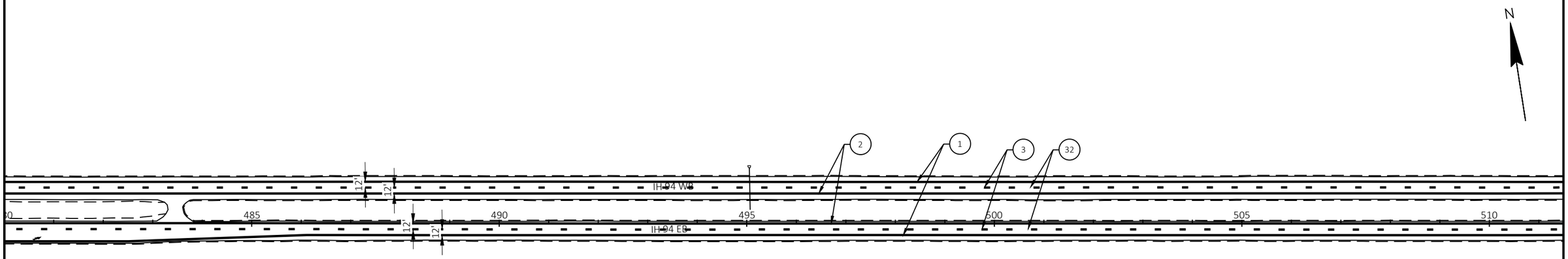
LEGEND

1. PAVEMENT MARKING 10" CHANNELIZING WHITE
2. PAVEMENT MARKING 10" WHITE (3' LINE, 9' SPACE)
3. PAVEMENT MARKING WORDS
4. PAVEMENT MARKING TYPE 2 ARROW
5. PAVEMENT MARKING TYPE 3 ARROW
6. PAVEMENT MARKING TYPE 4 ARROW
7. 18" STOP BAR

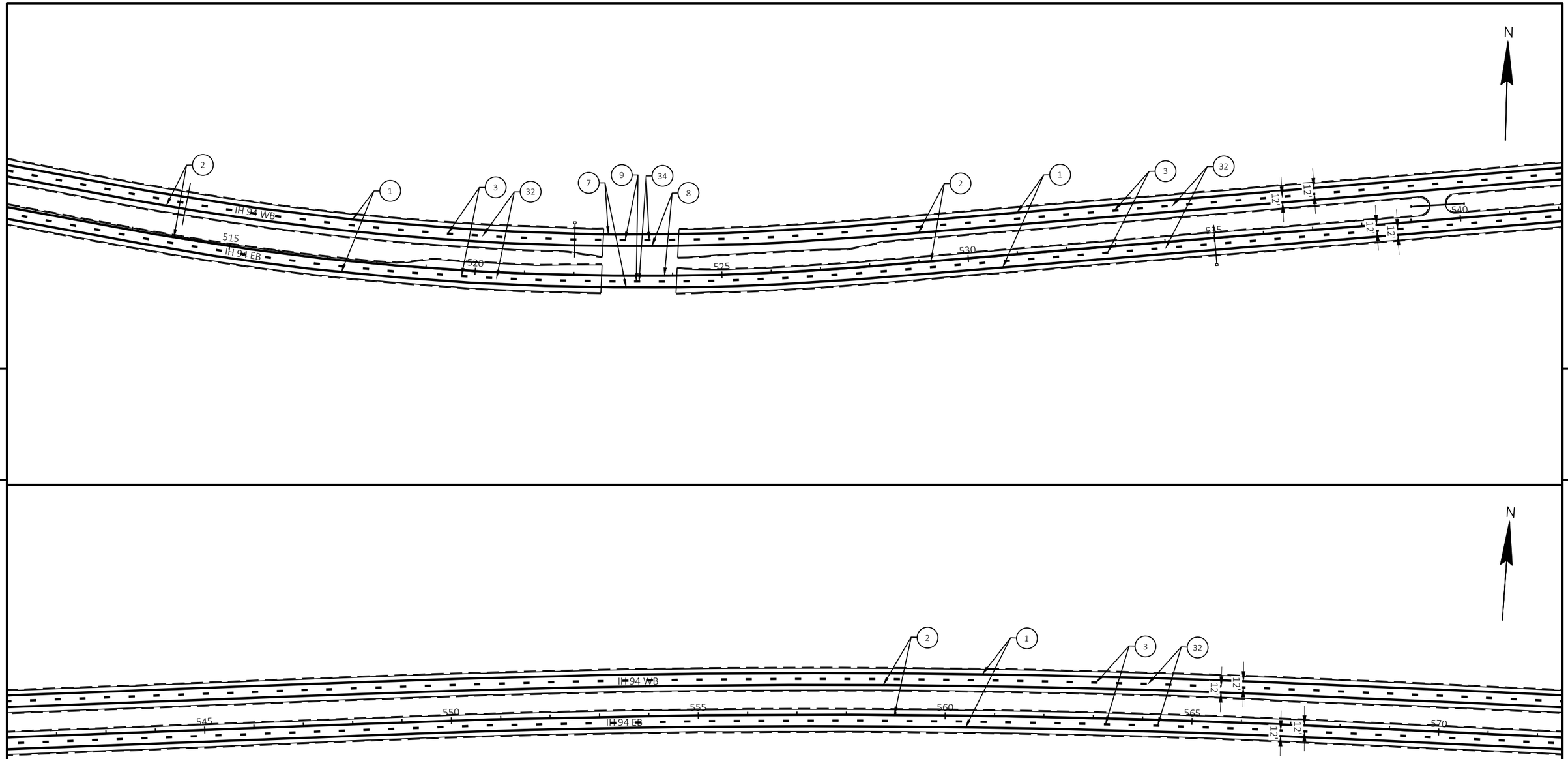


EXIT RAMP
(SIMPLE)





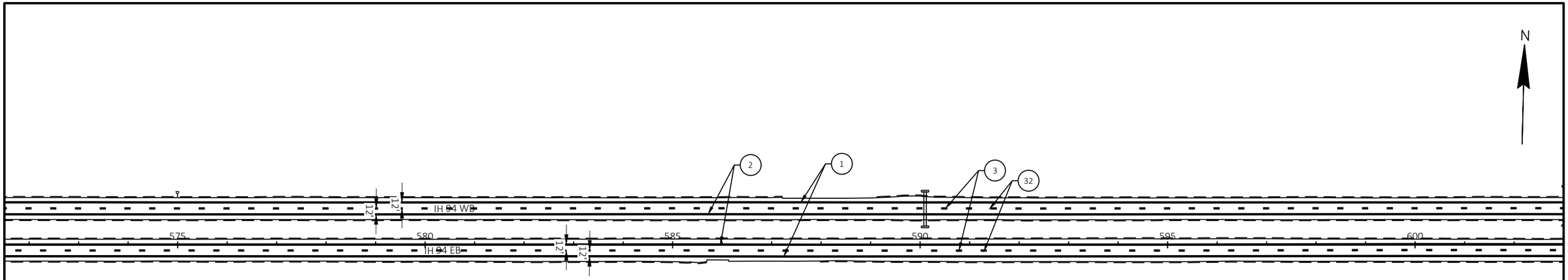
PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 218	E



5

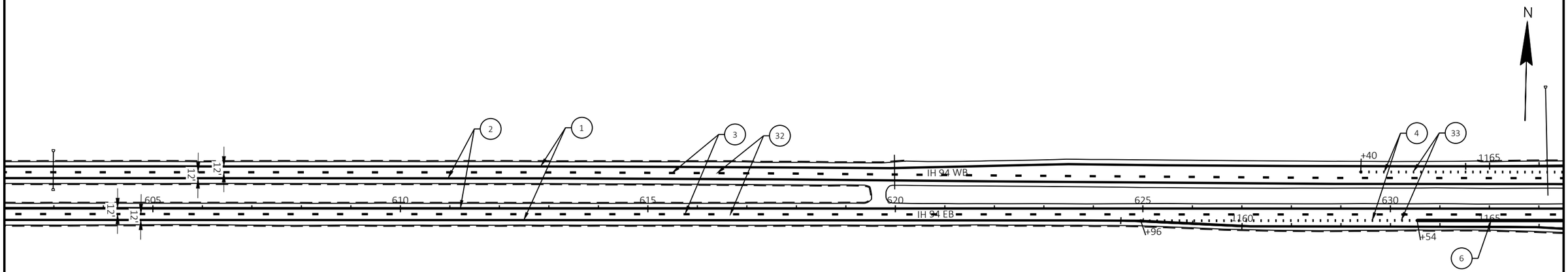
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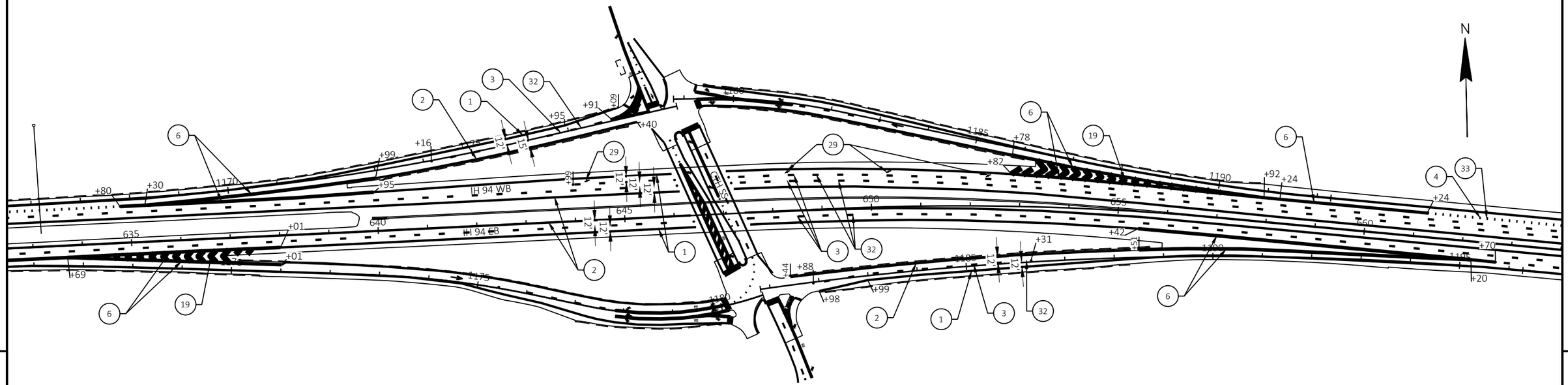
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PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PAVEMENT MARKING	SHEET 220	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024503

PLOT DATE : 1/4/2024 3:41 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:200 FT

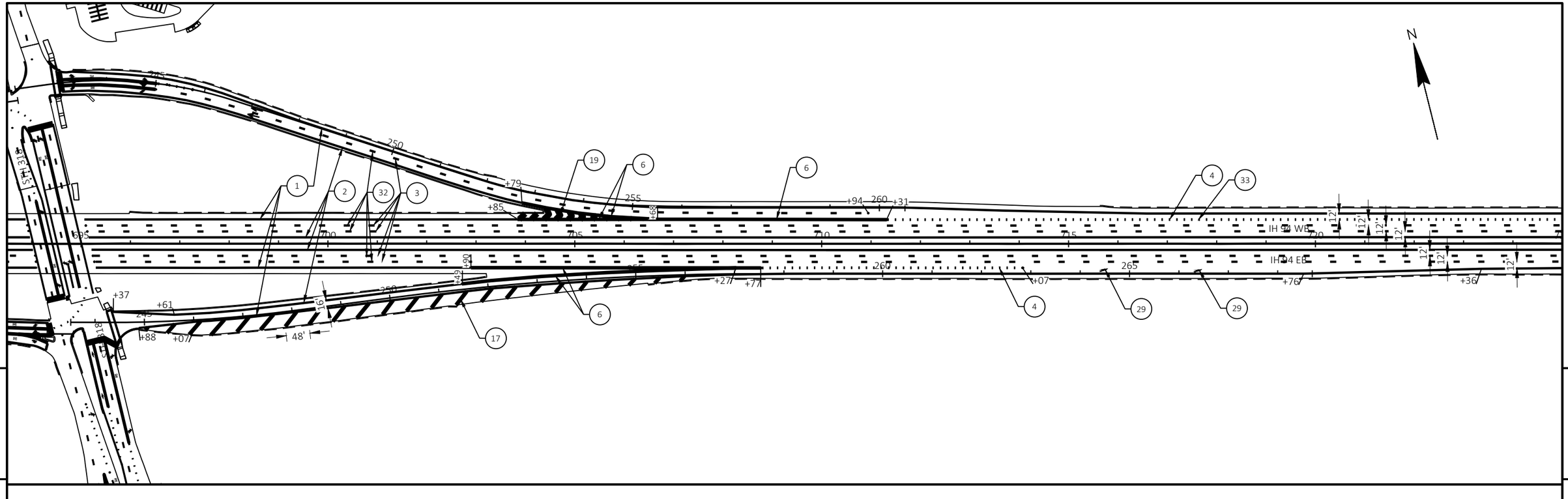


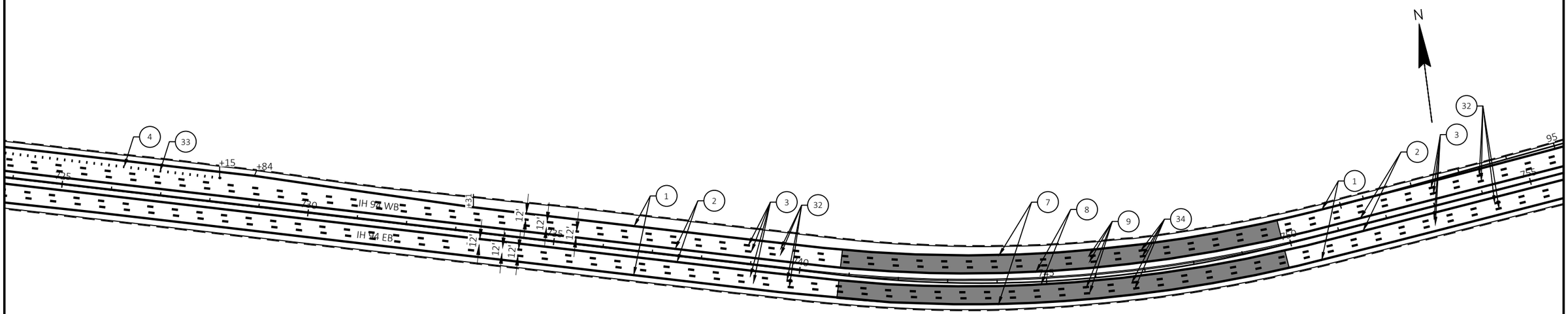
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LAYOUT NAME - 024504

PLOT DATE : 1/4/2024 3:41 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44

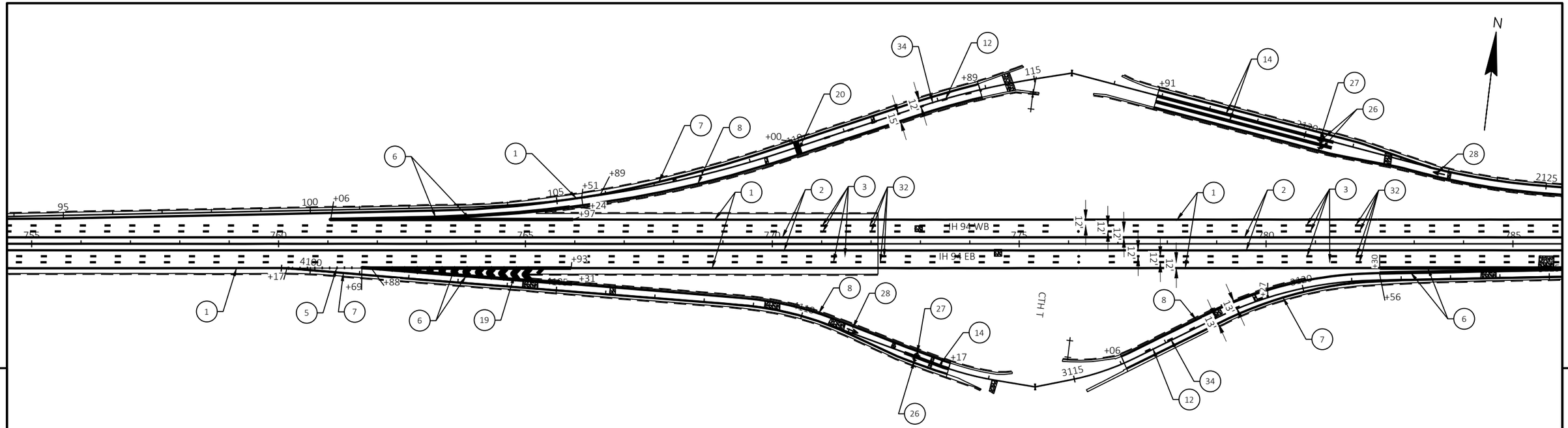


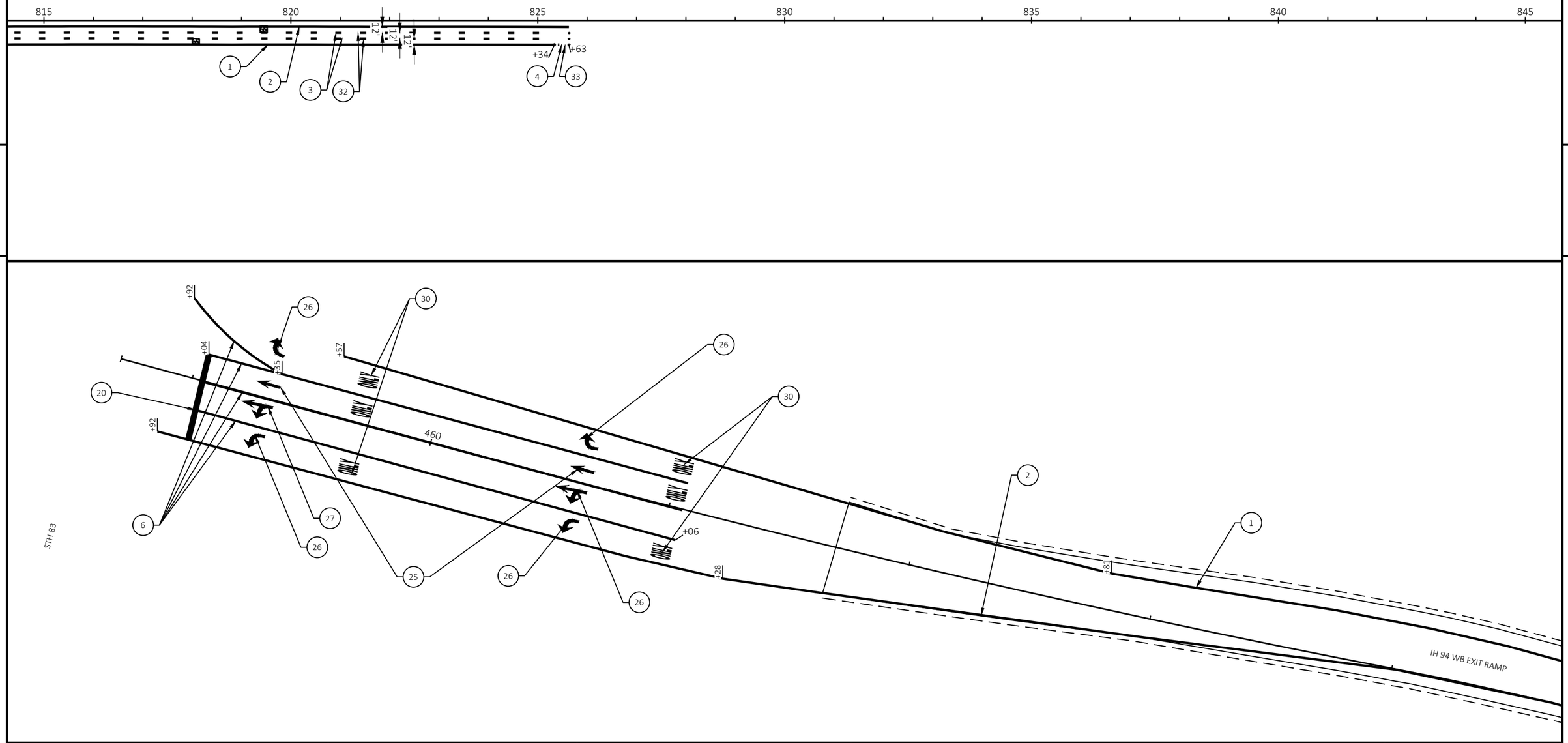


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LAYOUT NAME - 024505

PLOT DATE : 1/4/2024 3:41 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:200 FT


N
IH 94 WB
IH 94 EB
CTH T
2125
2130
3115
3130
4130
+06
+17
+24
+31
+51
+56
+69
+88
+89
+91
+93
+97
+00
+36
+29
+22
+57
95
100
105
115
750
755
760
765
770
775
780
785
790
795
800
805
810
815
12'
13'
15'



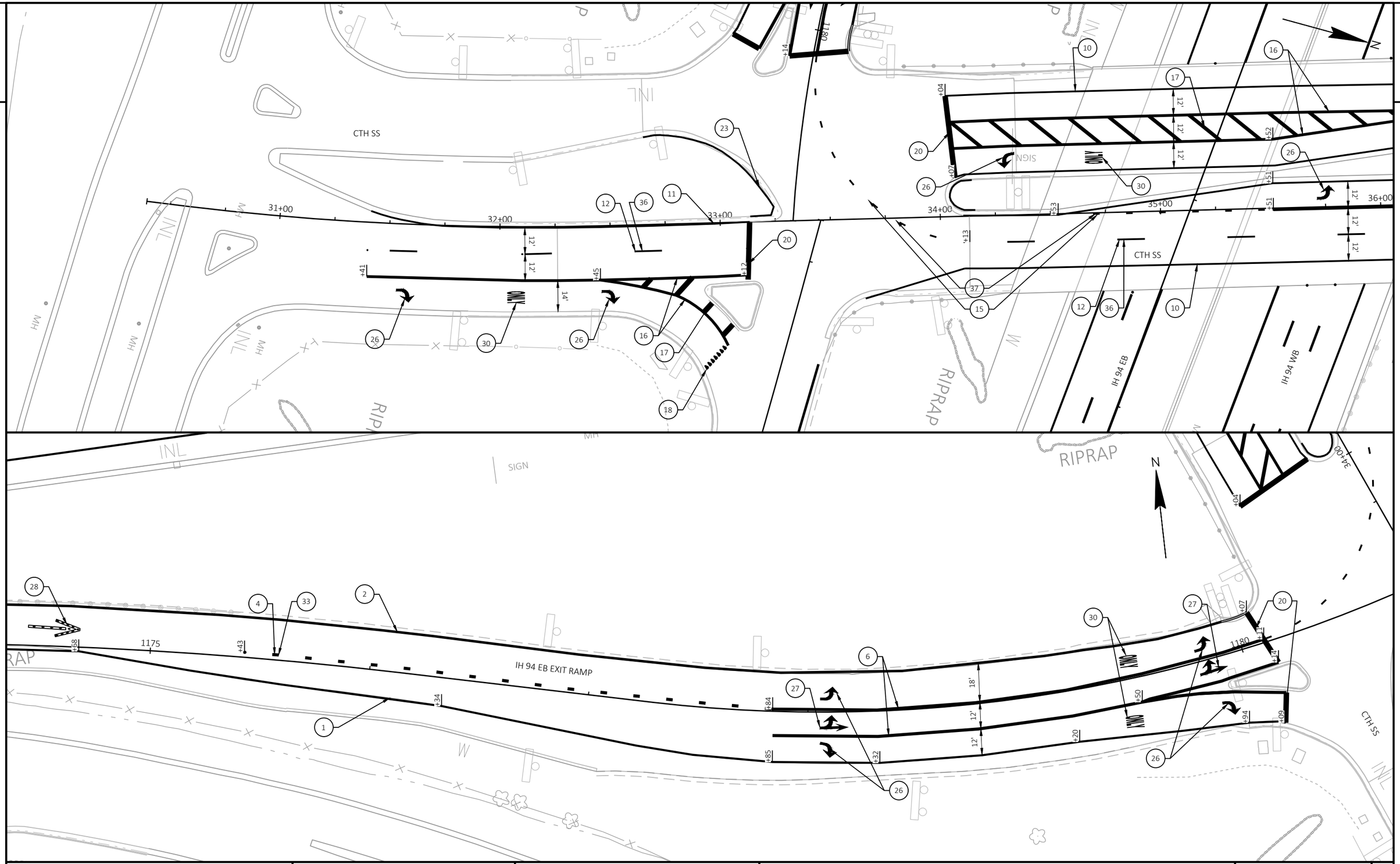
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FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 024507

PLOT DATE : 1/4/2024 3:41 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44

2



PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PAVEMENT MARKING - CTH SS	SHEET 225 E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024502_PM.DWG
LAYOUT NAME - 024507
PLOT DATE : 7/17/2023 9:43 AM
PLOT BY : CIERRA SMITH
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2

IH 94 WB

CTH SS

IH 94 WB EXIT RAMP

RIPRAP

INL

MH

1180

37+00

38+00

39+00

40+00

41+00

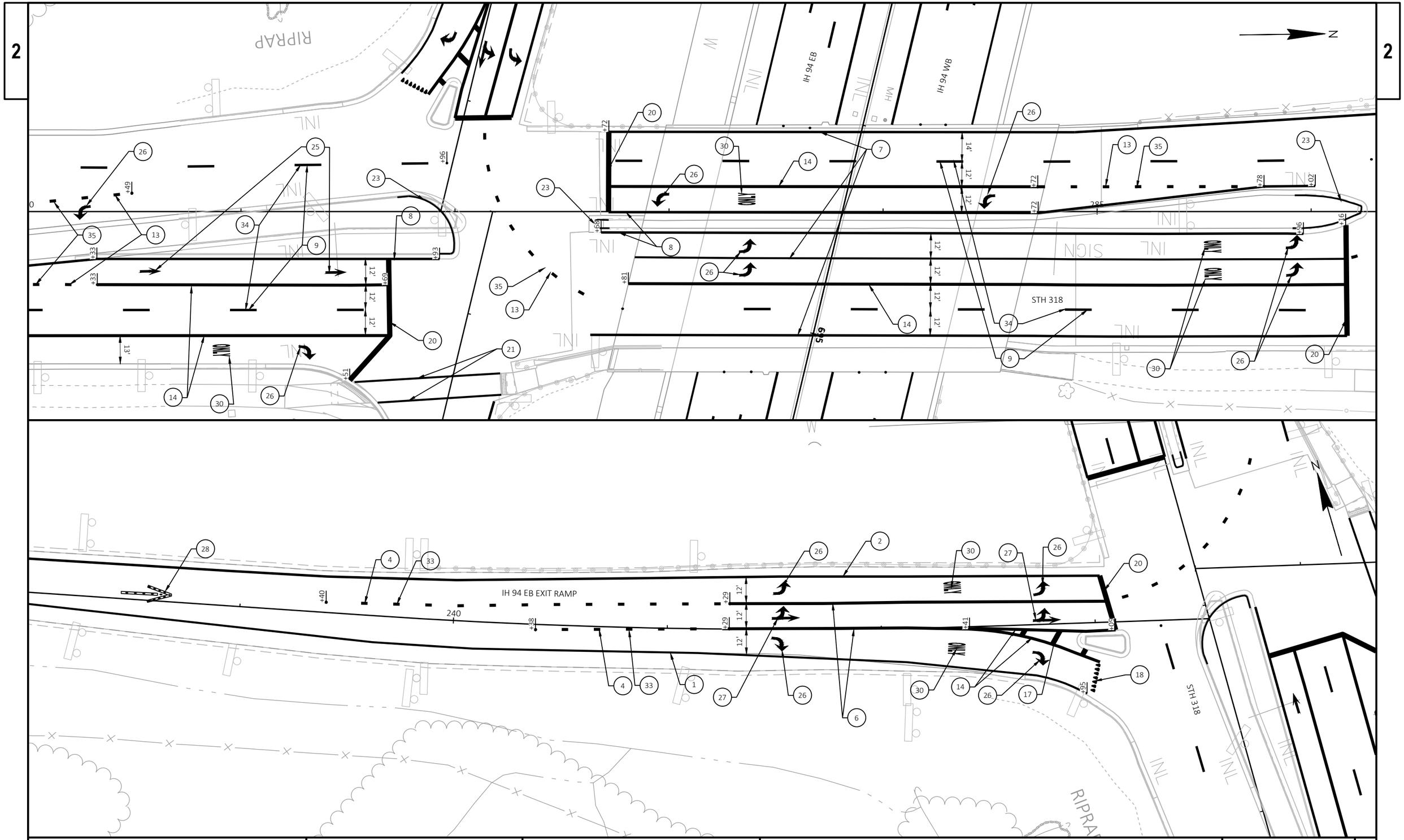
42+00

N

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PAVEMENT MARKING - CTH SS	SHEET 226 E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024502_PM.DWG
LAYOUT NAME - 024508

PLOT DATE : 7/17/2023 9:31 AM PLOT BY : CIERRA SMITH PLOT NAME : PLOT SCALE : 1 IN:40 FT



PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PAVEMENT MARKING - STH 318	SHEET 227 E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024502_PM.DWG
LAYOUT NAME - 024511

PLOT DATE : 7/17/2023 9:23 AM PLOT BY : CIERRA SMITH PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

CATEGORY 0010 CATEGORY 0170

CTH G/MEADOWBROOK RD

STH 318

290

CATEGORY 0010 CATEGORY 0170

IH 94 WB EXIT RAMP

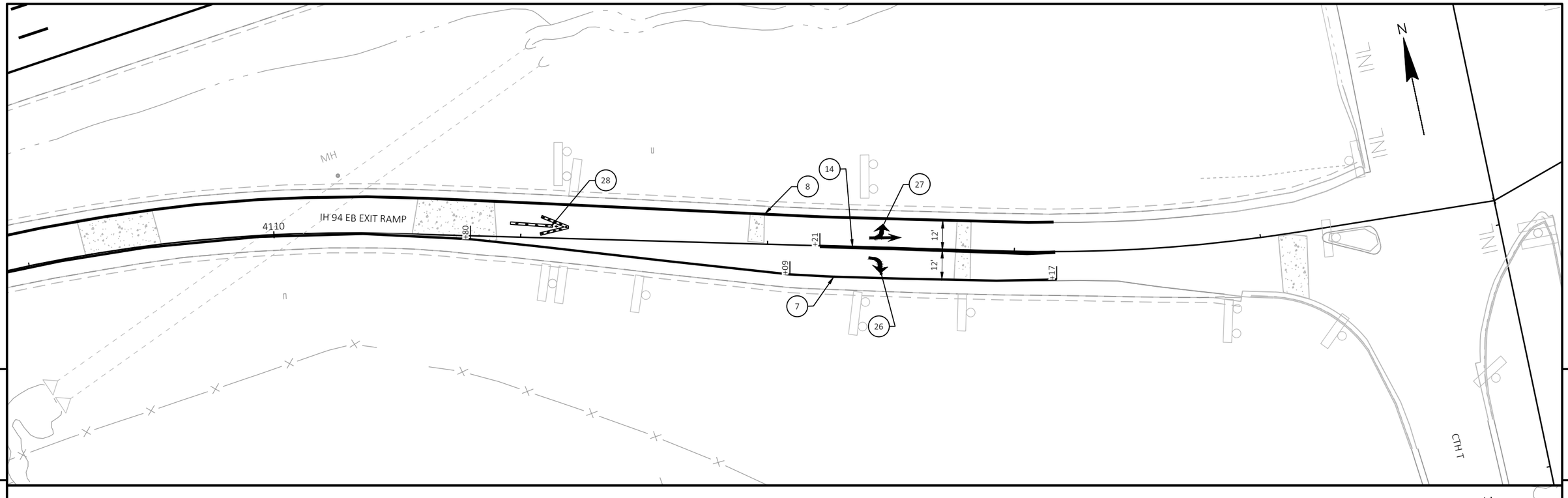
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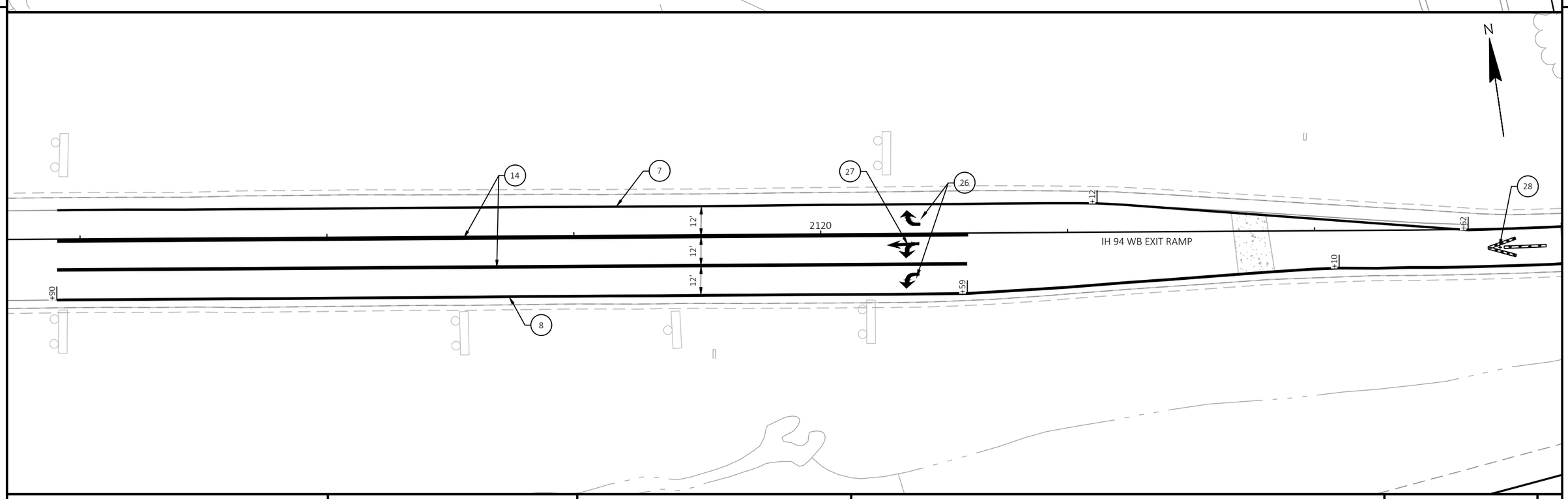
STH 318

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PAVEMENT MARKING - STH 318/CTH G	SHEET 228	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024502_PM.DWG
LAYOUT NAME - 024512

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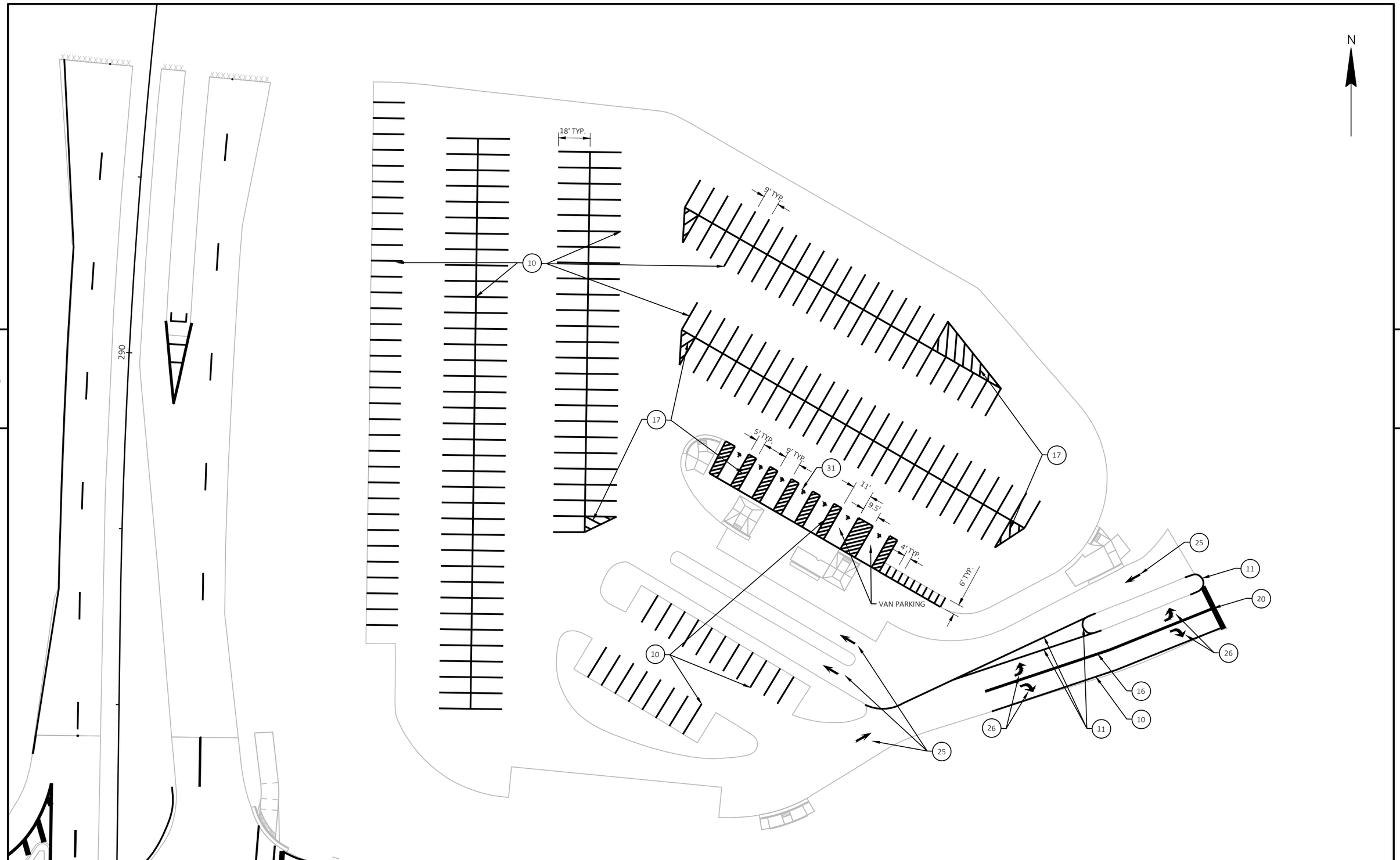




PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PAVEMENT MARKING - CTH T	SHEET 229	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024502_PM.DWG
LAYOUT NAME - 024513

PLOT DATE : 7/10/2023 5:00 PM PLOT BY : CIERRA SMITH PLOT NAME : PLOT SCALE : 1 IN:40 FT

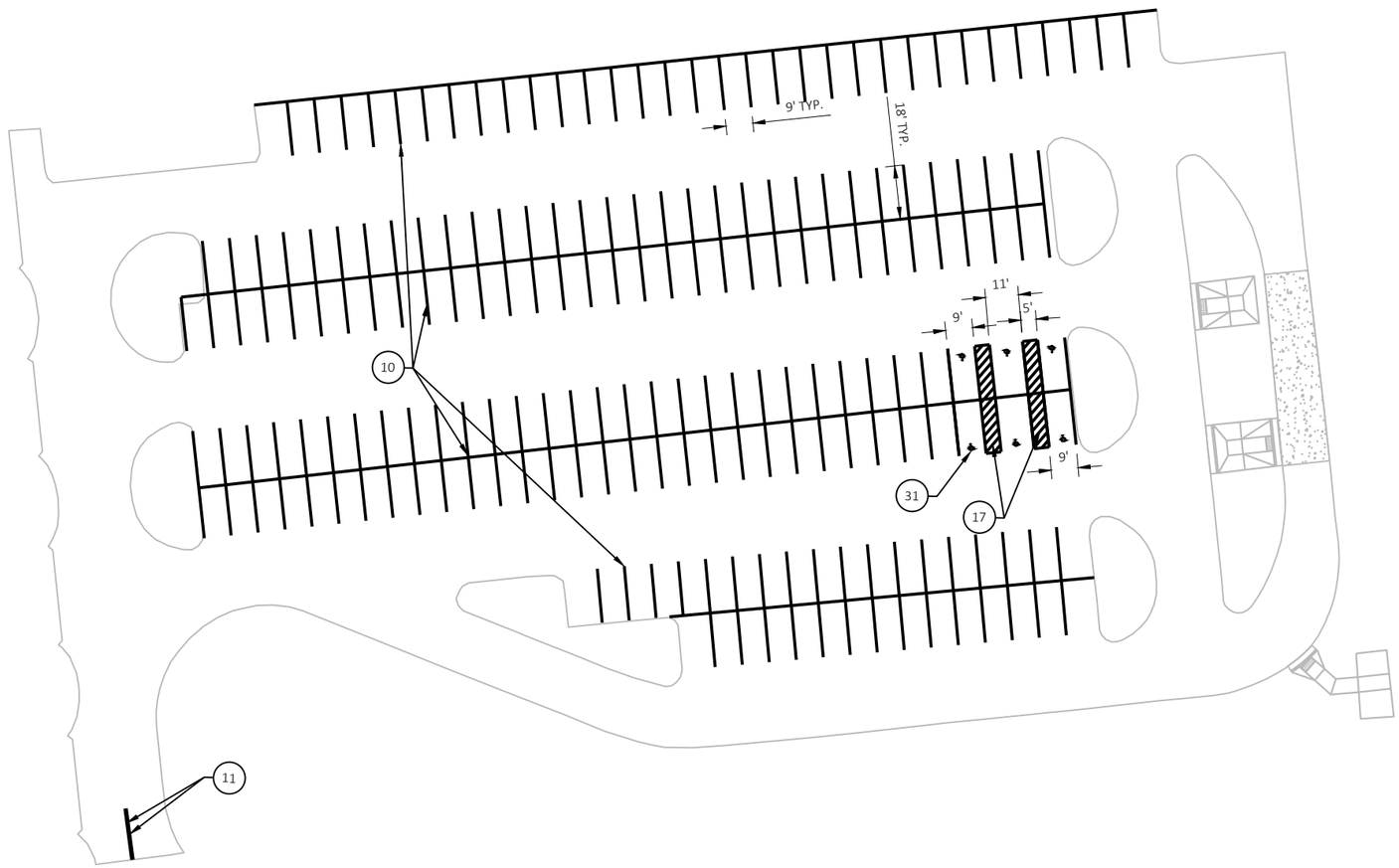


PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PAVEMENT MARKING - MEADOWBROOK PARK & RIDE LOT	SHEET 230	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024503_PM.DWG
LAYOUT NAME - 024510

PLOT DATE : 6/28/2023 11:05 AM PLOT BY : CIERRA SMITH PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1330-47-71	HWY: STH 83	COUNTY: WAUKESHA	PAVEMENT MARKING - NAGAWAUKEE PARK & ROAD LOT	SHEET 231	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024503_PM.DWG
LAYOUT NAME - 024511

PLOT DATE : 6/28/2023 11:05 AM PLOT BY : CIERRA SMITH PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

2

N

7

8

9

34

13'

12'

+47

270

12'

13'

STH 318

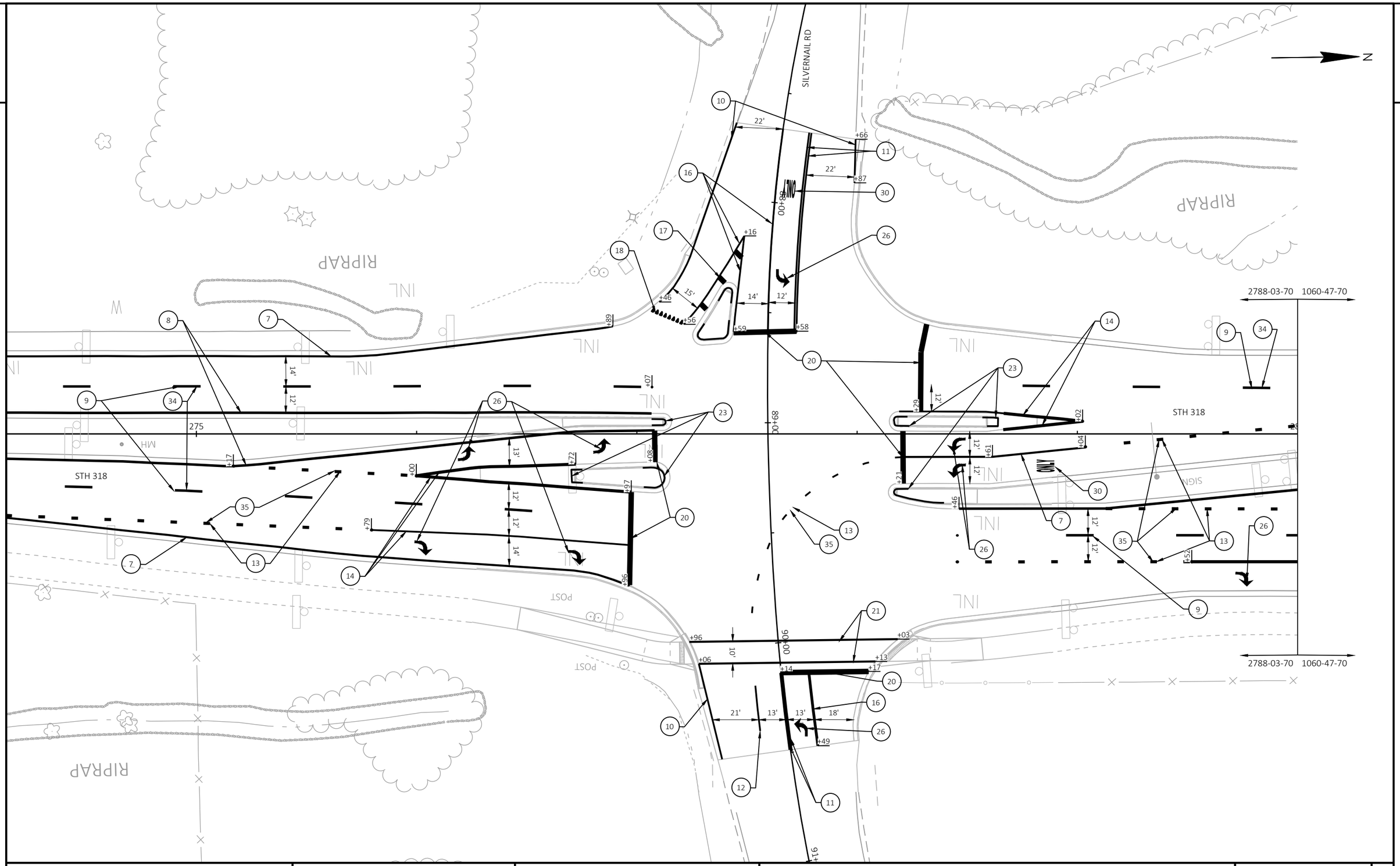
+83

+94

RIPRAP

RIPRAP

PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	PAVEMENT MARKING - STH 318	SHEET 232	E



PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	PAVEMENT MARKING - STH 318	SHEET 233	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\024502_PM.DWG
LAYOUT NAME - 024510
PLOT DATE : 7/17/2023 9:29 AM
PLOT BY : CIERRA SMITH
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

GENERAL NOTES FOR TRAFFIC CONTROL

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

2) A FLAGGER MAY BE REQUIRED WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE WORK AREAS IF WARRANTED BY CONDITIONS OR AS DIRECTED BY THE ENGINEER. FLAGGING IS NOT PERMITTED ON FREEWAY LANES.

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

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

5) FOR NIGHTTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A TYPE C STEADY BURN WARNING LIGHT.

6) ALL TYPE III BARRICADES SHALL BE 8' WIDE, UNLESS OTHERWISE NOTED, AND EQUIPPED WITH TWO TYPE "A" (LOW INTENSITY FLASHING) LIGHTS.

7) DIMENSIONS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE FACE OF BARRIER ADJACENT TO TRAFFIC. STATION CALL-OUTS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE FACE OF BARRIER.

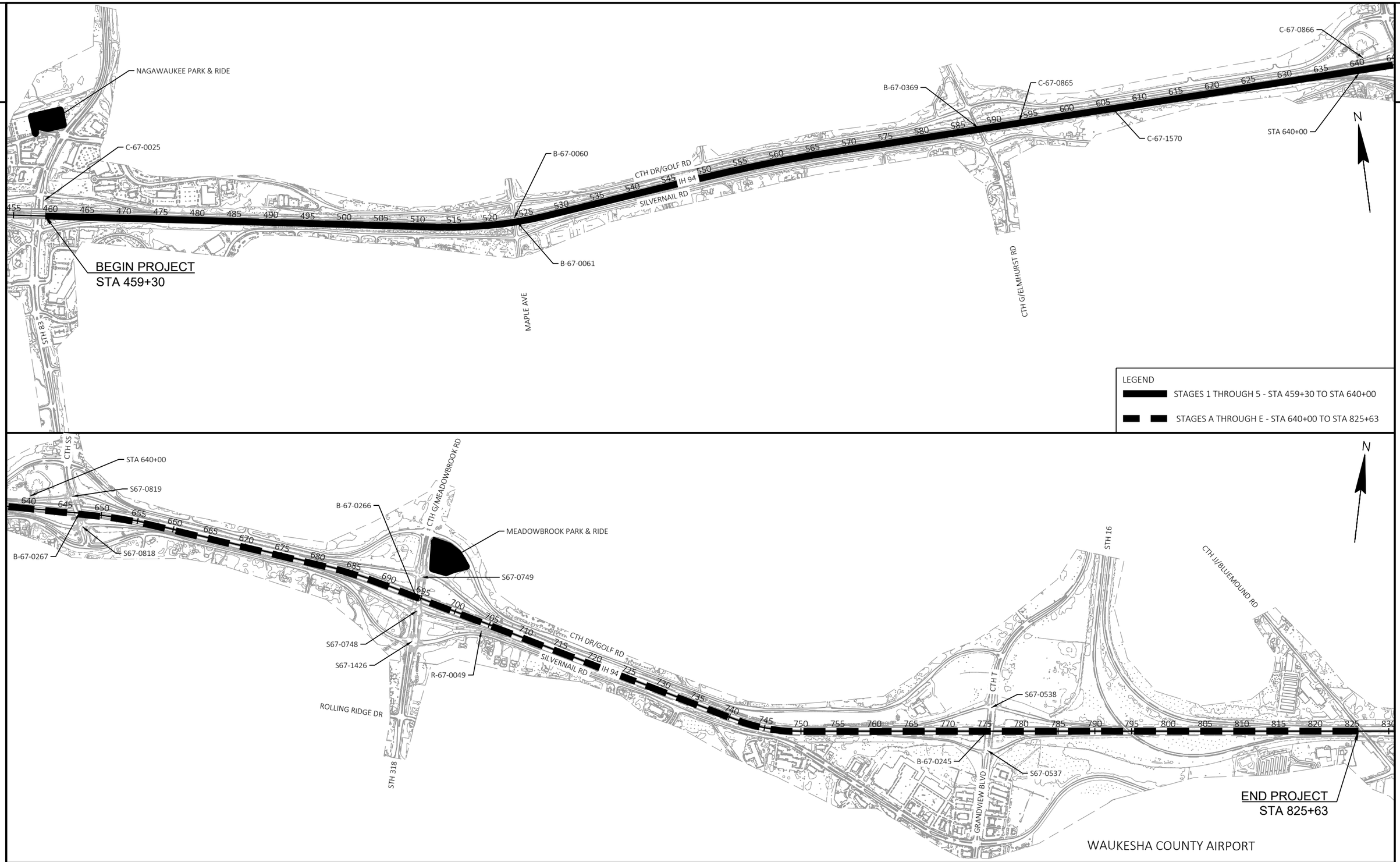
8) TRAFFIC CONTROL DRUM SPACING SHALL BE 100' UNLESS OTHERWISE NOTED.

9) 16" X 16" ORANGE FLAGS SHALL BE INCIDENTAL TO TRAFFIC CONTROL SIGN BID ITEM.

10) 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.

TRAFFIC CONTROL LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" WARNING LIGHTS
- TYPE III BARRICADE WTH TWO TYPE "A" WARNING LIGHTS AND ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD
- CC — CRASH CUSHION
- REMOVE PAVEMENT MARKING
- DWF — TEMPORARY PEDESTRIAN DETECTABLE WARNING FIELD
- T4W — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- T4Y — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
- T8W — TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- TPB — TEMPORARY PEDESTRIAN BARRICADE
- TPCR — TEMPORARY PEDESTRIAN CURB RAMP
- TPSA — TEMPORARY PEDESTRIAN SURFACE ASPHALT
- TPSP — TEMPORARY PEDESTRIAN SURFACE PLATE
- TSL — TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
- MDP — MARKING DIAGONAL PAINT (PAID FOR AS TEMPORARY MARKING LINE PAINT 4-INCH)
- MDT — MARKING DIAGONAL TAPE (PAID FOR AS TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH)
- MSP — MARKING SYMBOL PAINT
- TEMPORARY MARKING RAISED PAVEMENT MARKER TYPE I
- TRAFFIC CONTROL COVERING SIGNS TYPE II



PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL OVERVIEW	SHEET 235	E

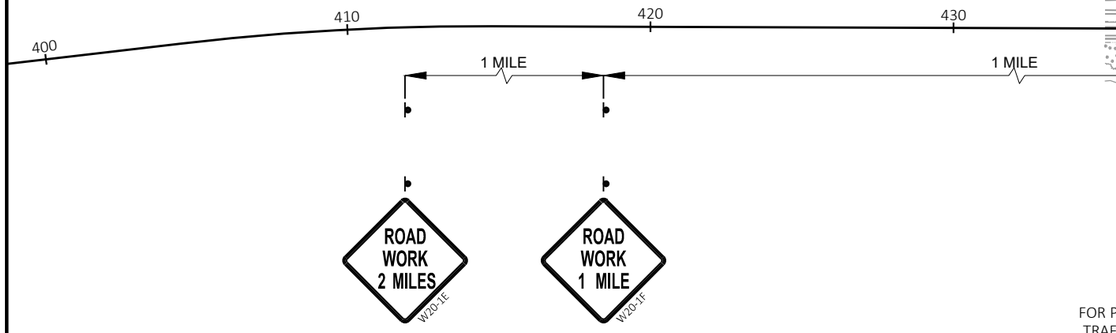
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LAYOUT NAME - 026000

PLOT DATE : 10/4/2022 2:13 PM PLOT BY : CIERRA SMITH PLOT NAME : PLOT SCALE : 1 IN:1200 FT

WISDOT/CADDS SHEET 44

*REDUCED SPEED LIMITS MAY BE USED FOR NIGHT TIME LANE CLOSURES WITH WORK OCCURRING IN CLOSE PROXIMITY TO TRAFFIC AND/OR WHEN TRAFFIC IS SHIFTED ONTO THE SHOULDER

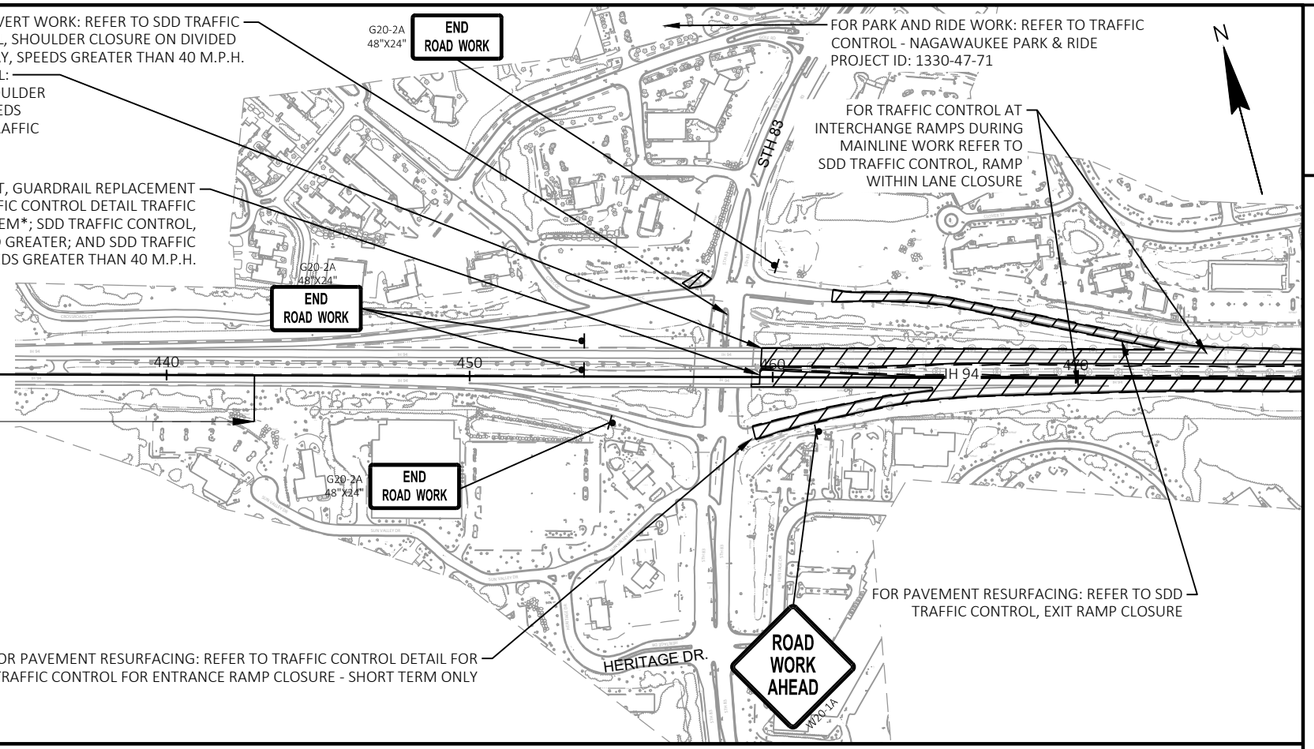




FOR CULVERT WORK: REFER TO SDD TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.

FOR GRADING WORK NEAR WINGWALL: REFER TO SDD TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H, AND SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

FOR MAINLINE PAVEMENT WORK, CABLE BARRIER REPLACEMENT, GUARDRAIL REPLACEMENT AND MAINTENANCE CROSSOVER WORK: REFER TO TRAFFIC CONTROL DETAIL TRAFFIC CONTROL, LANE CLOSURE, DIGITAL SPEED REDUCTION SYSTEM*; SDD TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER; AND SDD TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.



FOR PARK AND RIDE WORK: REFER TO TRAFFIC CONTROL - NAGAWAUKEE PARK & RIDE PROJECT ID: 1330-47-71

FOR TRAFFIC CONTROL AT INTERCHANGE RAMPS DURING MAINLINE WORK REFER TO SDD TRAFFIC CONTROL, RAMP WITHIN LANE CLOSURE

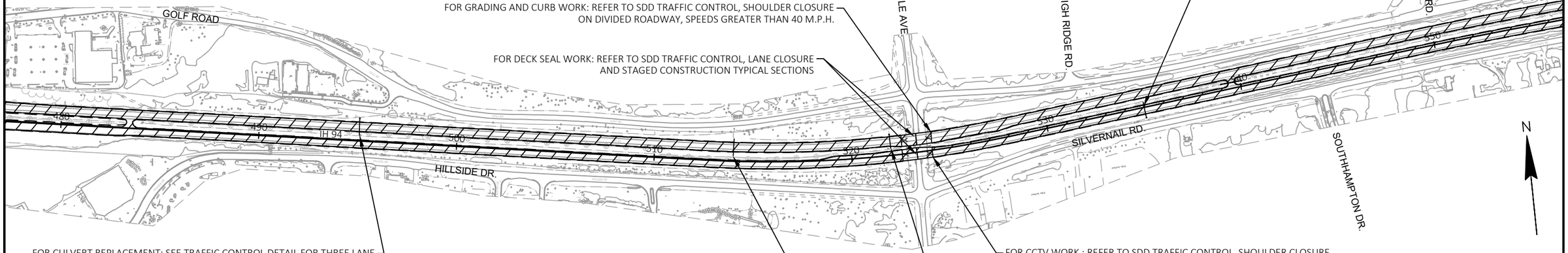
FOR PAVEMENT RESURFACING: REFER TO SDD TRAFFIC CONTROL, EXIT RAMP CLOSURE

FOR PAVEMENT RESURFACING: REFER TO TRAFFIC CONTROL DETAIL FOR TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE - SHORT TERM ONLY

FOR CULVERT LINING: REFER TO SDD TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.

FOR GRADING AND CURB WORK: REFER TO SDD TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.

FOR DECK SEAL WORK: REFER TO SDD TRAFFIC CONTROL, LANE CLOSURE AND STAGED CONSTRUCTION TYPICAL SECTIONS



FOR CULVERT REPLACEMENT: SEE TRAFFIC CONTROL DETAIL FOR THREE LANE FULL FREEWAY CLOSURE AND REFER TO SDD TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.

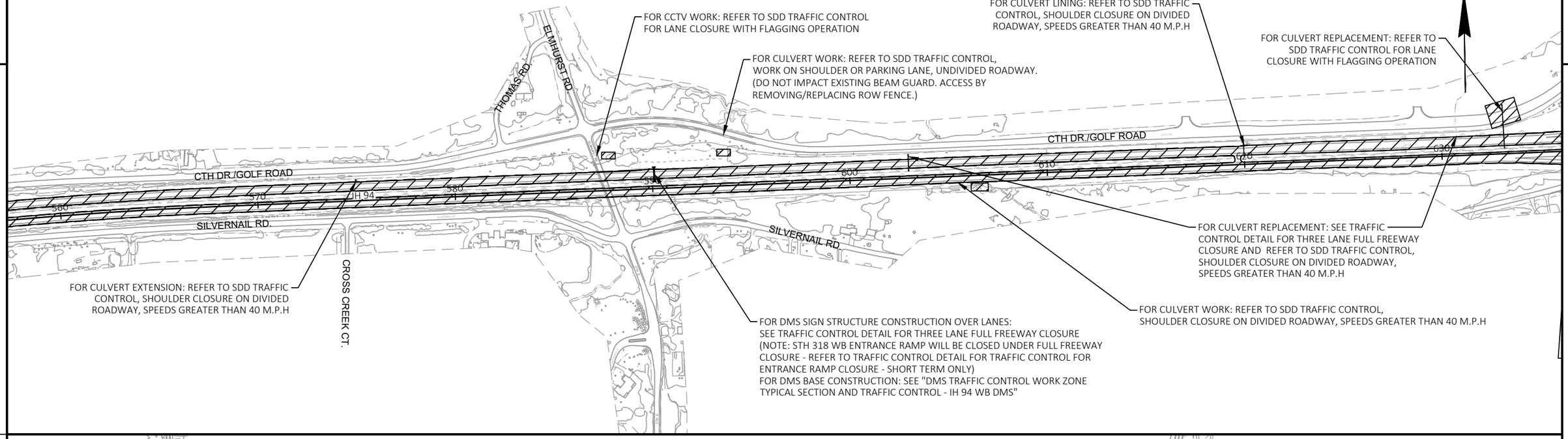
FOR CULVERT LINING: REFER TO SDD TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.

FOR CULVERT REPLACEMENT: SEE TRAFFIC CONTROL DETAIL FOR THREE LANE FULL FREEWAY CLOSURE AND REFER TO SDD TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.

FOR CCTV WORK : REFER TO SDD TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL OVERVIEW	SHEET 236	E

2



PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL OVERVIEW	SHEET 237	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\026002_ST.DWG
LAYOUT NAME - 026002_ST - 07
PLOT DATE : 1/17/2024 2:27 PM
PLOT BY : JOE MAAS
PLOT NAME :
PLOT SCALE : 1 IN:500 FT
WISDOT/CADDS SHEET 44

2

CTH DR./GOLF ROAD

SILVERNAIL RD

SUSSEX LN.

N. UNIVERSITY DR.

IH 94

730 740 750 760 770 780 790

FOR PAVEMENT WORK AND SIGNAL WORK: REFER TO SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

FOR PAVEMENT RESURFACING: REFER TO TRAFFIC CONTROL DETAIL FOR TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE - SHORT TERM ONLY

FOR TRAFFIC CONTROL AT INTERCHANGE RAMPS DURING MAINLINE WORK REFER TO SDD TRAFFIC CONTROL, RAMP WITHIN LANE CLOSURE

ROAD WORK AHEAD W20-1A

N. GRANDVIEW BLVD

G20-2A 48"X24" END ROAD WORK

STH 16

SEE 1060-10-71 PLANS FOR ADDITIONAL STRUCTURE WORK

FOR PAVEMENT RESURFACING: REFER TO SDD TRAFFIC CONTROL, EXIT RAMP CLOSURE

*REDUCED SPEED LIMITS MAY BE USED FOR NIGHT TIME LANE CLOSURES WITH WORK OCCURRING IN CLOSE PROXIMITY TO TRAFFIC AND/OR WHEN TRAFFIC IS SHIFTED ONTO THE SHOULDER

SPEED LIMIT 55

*G20-2A 48"X24" END ROAD WORK

FOR PAVEMENT RESURFACING: REFER TO SDD TRAFFIC CONTROL, EXIT RAMP CLOSURE

C.T.H. T

ROAD WORK AHEAD W20-1A

FOR TRAFFIC CONTROL AT INTERCHANGE RAMPS DURING MAINLINE WORK REFER TO SDD TRAFFIC CONTROL, RAMP WITHIN LANE CLOSURE

N

2

G20-2A 48"X24" END ROAD WORK

FOR MAINLINE PAVEMENT WORK, CABLE BARRIER REPLACEMENT, GUARDRAIL REPLACEMENT AND MAINTENANCE CROSSOVER WORK: REFER TO TRAFFIC CONTROL DETAIL TRAFFIC CONTROL, LANE CLOSURE, DIGITAL SPEED REDUCTION SYSTEM*; SDD TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER; AND TO SDD TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.

BLUEMOUND RD.

1 MILE 1 MILE

ROAD WORK 1 MILE W20-1F

** ROAD WORK 2 MILES W20-1E

**DO NOT PLACE ANY TRAFFIC CONTROL SIGNS OR DEVICES WITHIN 100' OF THE RAILROAD BRIDGE EAST OF COUNTY F

N

STH 16

800 810 820 830 IH 94 840 850 860 870

STH 16

SEE 1060-10-71 PLANS FOR ADDITIONAL STRUCTURE WORK

G20-2A 48"X24" END ROAD WORK

FOR FTMS: REFER TO SDD TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

ROAD WORK AHEAD W20-1A

FOR WB PAVEMENT WORK REQUIRING DUAL LANE CLOSURES, CLOSE STH 164 WB ENTRANCE RAMP - REFER TO TRAFFIC CONTROL DETAIL FOR TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE - SHORT TERM ONLY

SILVERNAIL RD.

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL OVERVIEW	SHEET 238	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\026002_ST.DWG
LAYOUT NAME - 026002_ST - 08

PLOT DATE : 1/17/2024 2:27 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:500 FT

2

ROAD WORK AHEAD W20-1A

G20-2A 48"X24" END ROAD WORK

FOR PAVEMENT RESURFACING AND SIGNAL WORK: REFER TO SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY AND SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

FOR PAVEMENT RESURFACING AND SIGNAL WORK: REFER TO SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY AND SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STH 318

266 268 270 272 274 276 278 280

ROLLING RIDGE DR

SILVERNAIL RD

500'

1000'

SEE TRAFFIC CONTROL - STH 318 ON RAMP CLOSURE DETAIL FOR MORE INFORMATION ON CURB RAMP CONSTRUCTION

SEE 1060-47-70

84 86 88 90 92 94

RIPRAP

POST

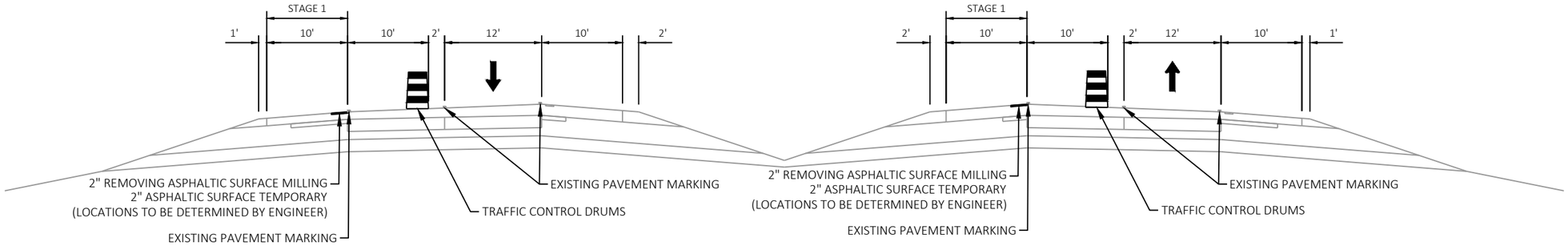
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PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	TRAFFIC CONTROL OVERVIEW	SHEET 239	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\025103_TC.DWG
LAYOUT NAME - 025103_tc

PLOT DATE : 10/4/2022 2:35 PM PLOT BY : CIERRA SMITH PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42



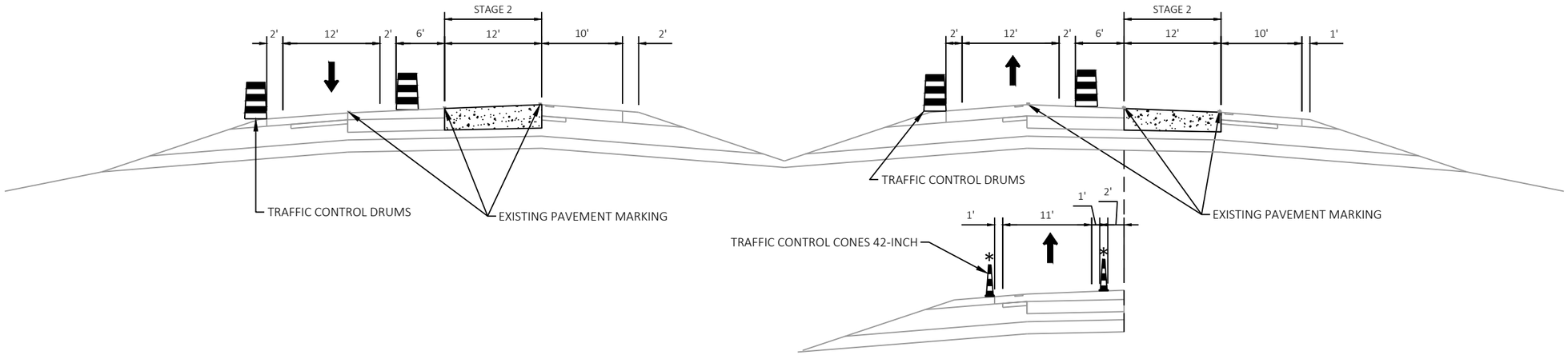
RIGHT LANE CLOSURE
(OUTSIDE SHOULDER WORK)

STAGE 1
STA 459+30 TO STA 640+00

LEFT LANE CLOSURE
(INSIDE SHOULDER WORK)

CONSTRUCTION:
- SHOULDER REPAIR AS NEEDED
- MILL AND PAVE SHOULDER RUMBLE STRIPS AS NEEDED FOR SHIFTS ONTO THE SHOULDER

TRAFFIC:
- SHORT TERM SINGLE LANE CLOSURES PERMITTED DURING NIGHT TIME HOURS ONLY IN ACTIVE WORK ZONE WHERE WORK IS OCCURRING
- ALL LANES OPEN DURING PEAK HOURS



LEFT LANE CLOSURE WITH SHIFT
(LANE 1 WORK)

STAGE 2
STA 459+30 TO STA 640+00

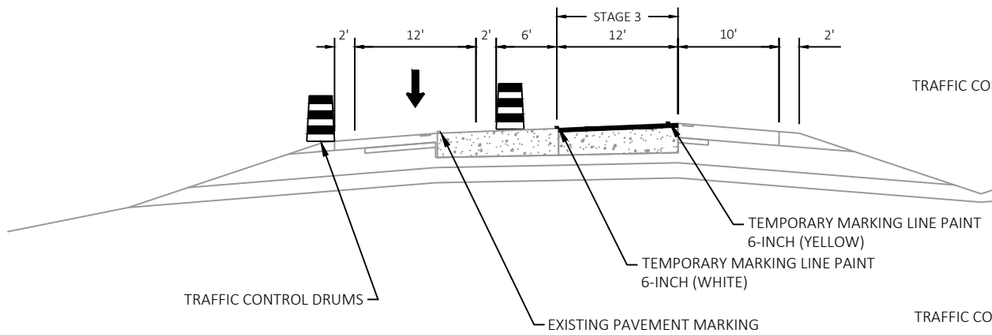
RIGHT LANE CLOSURE WITH SHIFT
(LANE 2 WORK)

* TRAFFIC CONTROL CONES 42-INCHES
  EB FROM STA 465+00 - STA 518+40
  (EXISTING 4' PAVED LEFT SHOULDER)
  1/2 SPACING OF DRUMS
* SEE SDD "ADVANCED WIDTH RESTRICTION SIGNING" FOR ADDITIONAL SIGNING

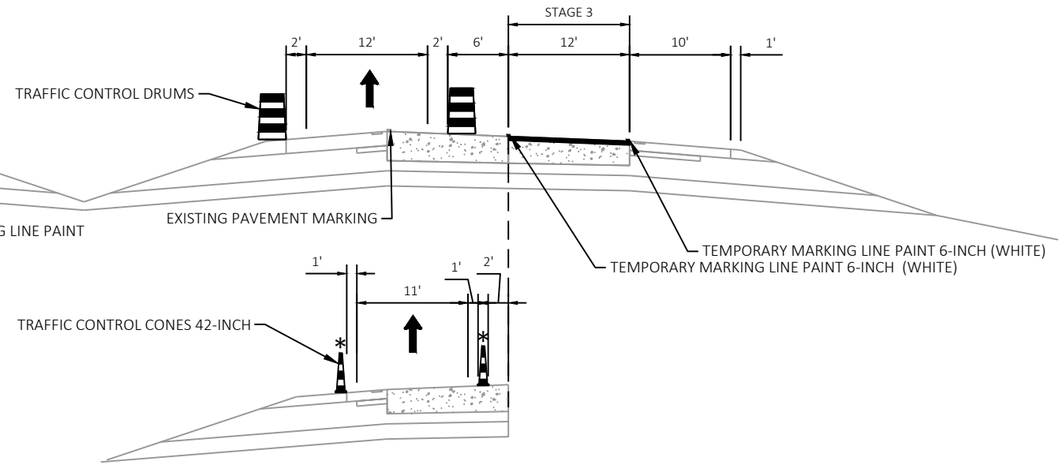
CONSTRUCTION:
- LANE 1 AND LANE 2 BASE PATCHING CONCRETE

TRAFFIC:
- SHIFT TRAFFIC PARTIALLY ON SHOULDERS DURING SINGLE LANE CLOSURES
- SHORT TERM SINGLE LANE CLOSURES PERMITTED DURING NIGHT TIME HOURS ONLY IN ACTIVE WORK ZONE WHERE WORK IS OCCURRING
- ALL LANES OPEN DURING PEAK HOURS
- USE PCMS 7, SEE TRAFFIC CONTROL - FIXED MESSAGE SIGNS AND PCMS

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	STAGED CONSTRUCTION - TYPICAL SECTIONS	SHEET 240	E



LEFT LANE CLOSURE WITH SHIFT
(LANE 1 WORK)



RIGHT LANE CLOSURE WITH SHIFT
(LANE 2 WORK)

STAGE 3
STA 459+30 TO STA 640+00

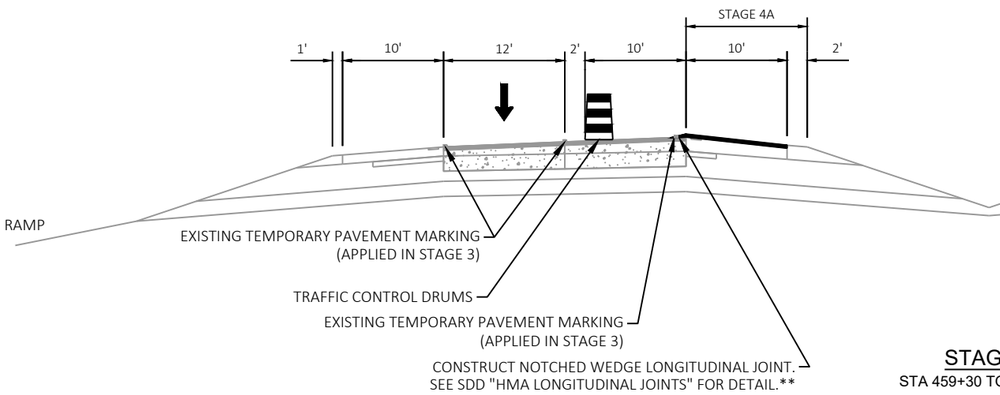
* TRAFFIC CONTROL CONES 42-INCHES EB FROM STA 465+00 - STA 518+40 (EXISTING 4' PAVED LEFT SHOULDER) 1/2 SPACING OF DRUMS
* SEE SDD "ADVANCED WIDTH RESTRICTION SIGNING" FOR ADDITIONAL SIGNING

CONSTRUCTION:
- LANE 1 AND LANE 2 MILL AND OVERLAY LOWER LAYER

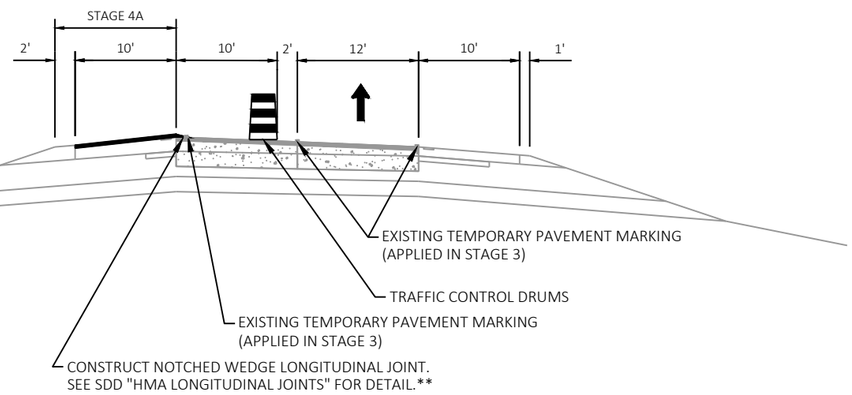
TRAFFIC:
- SHIFT TRAFFIC PARTIALLY ON SHOULDERS DURING SINGLE LANE CLOSURES
- SHORT TERM SINGLE LANE CLOSURES PERMITTED DURING NIGHT TIME HOURS ONLY IN ACTIVE WORK ZONE WHERE WORK IS OCCURRING
- ALL LANES OPEN DURING PEAK HOURS
- USE PCMS 7, SEE TRAFFIC CONTROL - FIXED MESSAGE SIGNS AND PCMS

R4-5
24"X30"

PLACE SIGNS AT BEGINNING OF WORK ZONE AND AT ENTRANCE RAMP WHERE WEDGING IS PRESENT



LEFT LANE CLOSURE
(INSIDE SHOULDER WORK)



LEFT LANE CLOSURE
(INSIDE SHOULDER WORK)

STAGE 4A
STA 459+30 TO STA 640+00

CONSTRUCTION:
- INSIDE SHOULDER MILL AND OVERLAY UPPER LAYER

** NOTCHED WEDGE LONGITUDINAL JOINT TO REMAIN. REPLACE SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC AS DIRECTED BY THE ENGINEER.

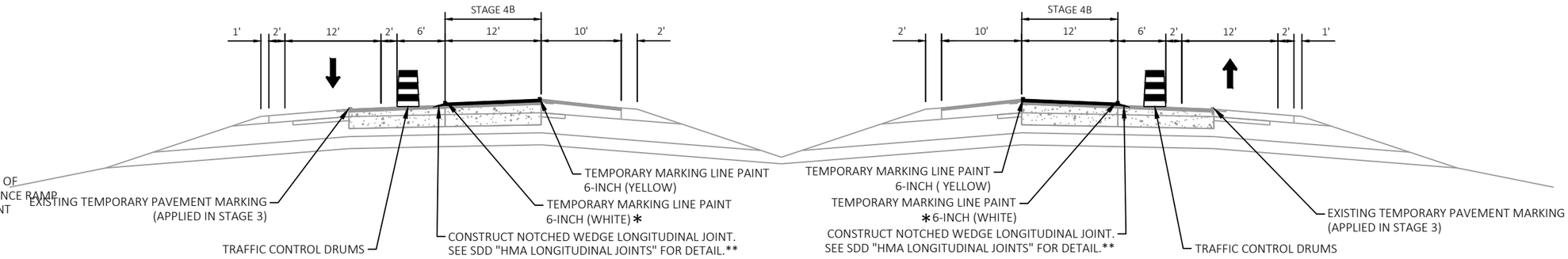
TRAFFIC:
- MILLED SURFACE ON SHOULDER CAN REMAIN DURING THE DAY WITH SHOULDER CLOSURES IN PLACE
- SHORT TERM SINGLE LANE CLOSURES PERMITTED DURING NIGHT TIME HOURS ONLY IN ACTIVE WORK ZONE WHERE WORK IS OCCURRING
- ALL LANES OPEN DURING PEAK HOURS

2



R4-5
24"X30"

PLACE SIGNS AT BEGINNING OF WORK ZONE AND AT ENTRANCE RAMP WHERE WEDGING IS PRESENT



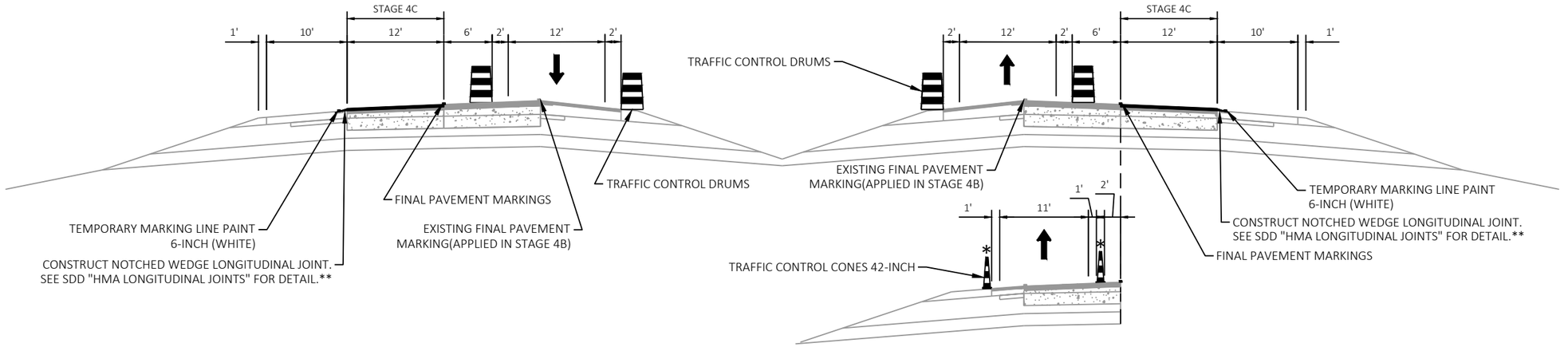
LEFT LANE CLOSURE WITH SHIFT
(LANE 1 WORK)

STAGE 4B
STA 459+30 TO STA 640+00

LEFT LANE CLOSURE WITH SHIFT
(LANE 1 WORK)

CONSTRUCTION:
- INSIDE/LANE 1 OVERLAY UPPER LAYER
- ** REMOVE NOTCHED WEDGE PRIOR TO PAVING ADJACENT LANE. PAID AS REMOVING ASPHALTIC LONGITUDINAL NOTCHED WEDGE JOINT MILLING. SEE SDD "TRAFFIC CONTROL, DROP -OFF SIGNING".

TRAFFIC:
- SHIFT TRAFFIC PARTIALLY ON SHOULDERS DURING SINGLE LANE CLOSURES
- SHORT TERM SINGLE LANE CLOSURES PERMITTED DURING NIGHT TIME HOURS ONLY IN ACTIVE WORK ZONE WHERE WORK IS OCCURRING
- ALL LANES OPEN DURING PEAK HOURS
- USE PCMS 7, SEE TRAFFIC CONTROL - FIXED MESSAGE SIGNS AND PCMS
- * PLACE SKIPS IN FINAL LOCATION



RIGHT LANE CLOSURE WITH SHIFT
(LANE 2 WORK)

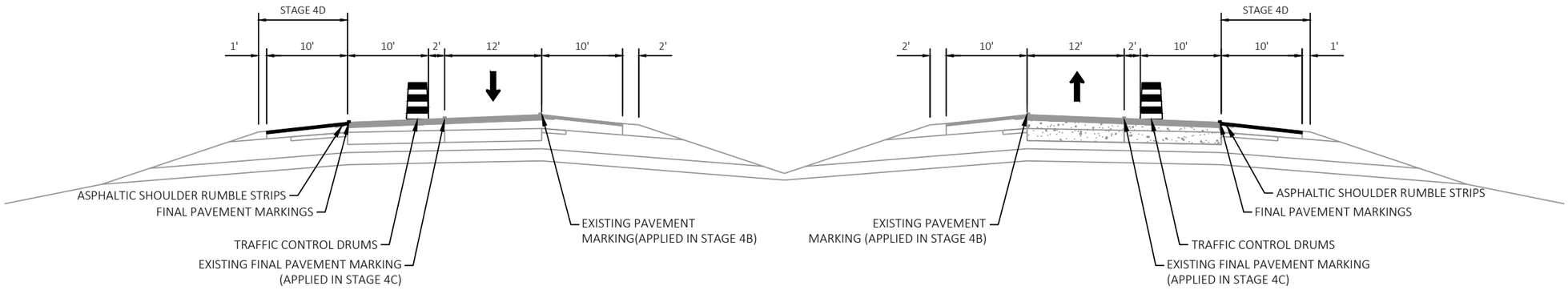
STAGE 4C
STA 459+30 TO STA 640+00

- * TRAFFIC CONTROL CONES 42-INCHES EB FROM STA 465+00 - STA 518+40 (EXISTING 4' PAVED LEFT SHOULDER) 1/2 SPACING OF DRUMS
- * SEE SDD "ADVANCED WIDTH RESTRICTION SIGNING" FOR ADDITIONAL SIGNING

RIGHT LANE CLOSURE WITH SHIFT
(LANE 2 WORK)

CONSTRUCTION:
- OUTSIDE/LANE 2 OVERLAY UPPER LAYER
- INSTALL FINAL PAVEMENT MARKINGS ONCE STAGE 4C PAVING IS COMPLETE
- INSTALL OUTSIDE BARRIER
- ** NOTCHED WEDGE LONGITUDINAL JOINT TO REMAIN. REPLACE SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC AS DIRECTED BY THE ENGINEER.

TRAFFIC:
- SHIFT TRAFFIC PARTIALLY ON SHOULDERS DURING SINGLE LANE CLOSURES
- SHORT TERM SINGLE LANE CLOSURES PERMITTED DURING NIGHT TIME HOURS ONLY IN ACTIVE WORK ZONE WHERE WORK IS OCCURRING
- ALL LANES OPEN DURING PEAK HOURS



STAGE 4D

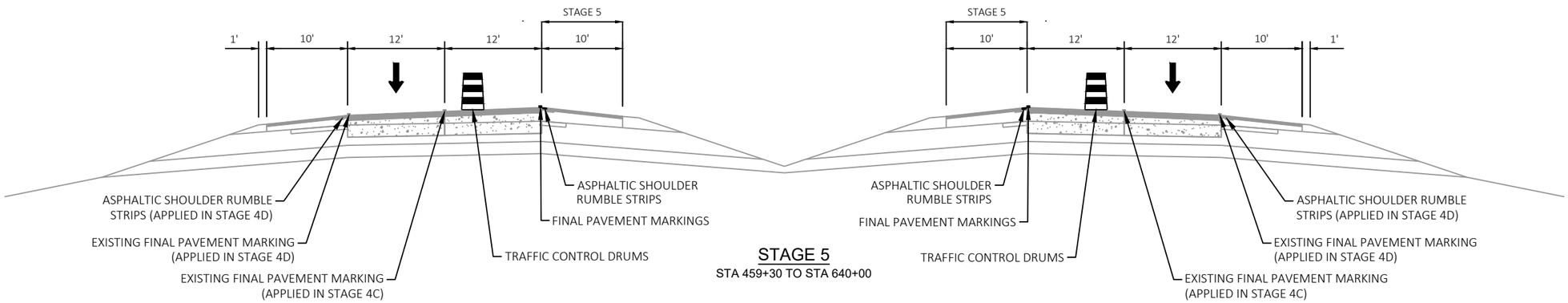
STA 459+30 TO STA 640+00

RIGHT LANE CLOSURE
OUTSIDE SHOULDER

RIGHT LANE CLOSURE
OUTSIDE SHOULDER

CONSTRUCTION:
- OUTSIDE SHOULDER MILL AND OVERLAY UPPER LAYER
- INSTALL SHOULDER RUMBLES AND FINAL PAVEMENT MARKINGS ONCE STAGE 4D PAVING IS COMPLETE

TRAFFIC:
- MILLED SURFACE ON SHOULDER CAN REMAIN DURING THE DAY WITH SHOULDER CLOSURES IN PLACE
- SHORT TERM SINGLE LANE CLOSURES PERMITTED DURING NIGHT TIME HOURS ONLY IN ACTIVE WORK ZONE WHERE WORK IS OCCURRING
- ALL LANES OPEN DURING PEAK HOURS



STAGE 5

STA 459+30 TO STA 640+00

LEFT LANE CLOSURE
(INSIDE SHOULDER WORK)

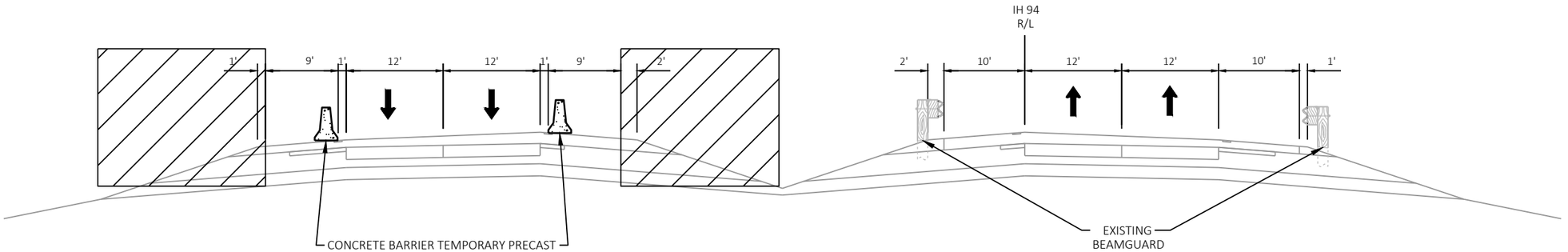
LEFT LANE CLOSURE
(INSIDE SHOULDER WORK)

CONSTRUCTION:
- INSTALL/REPLACE MEDIAN BARRIER
- INSTALL INSIDE SHOULDER RUMBLES
- INSTALL FINAL PAVEMENT MARKINGS

TRAFFIC:
- SHORT TERM SINGLE LANE CLOSURES PERMITTED DURING NIGHT TIME HOURS ONLY IN ACTIVE WORK ZONE WHERE WORK IS OCCURRING
- ALL LANES OPEN DURING PEAK HOURS

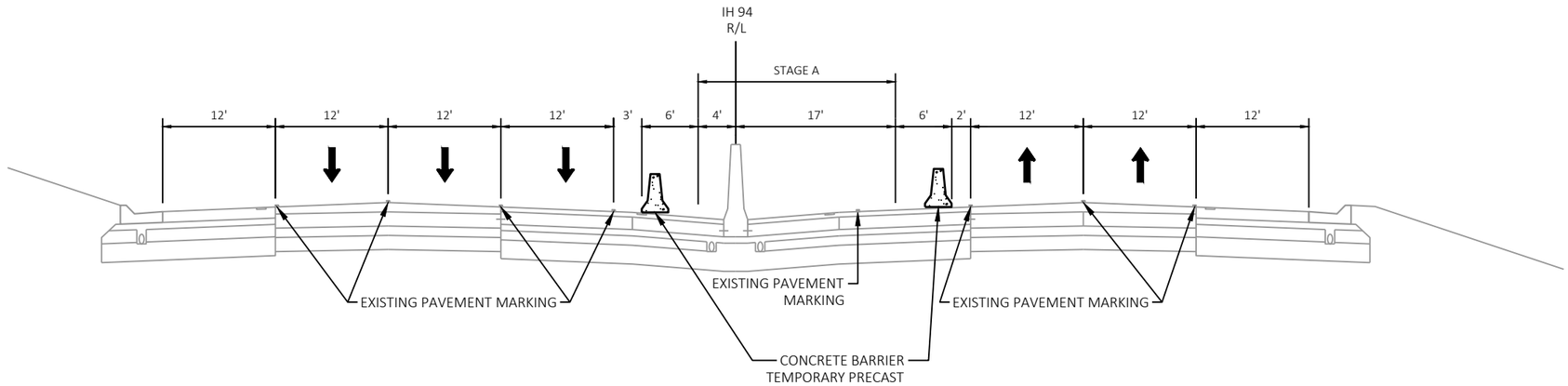
PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	STAGED CONSTRUCTION - TYPICAL SECTIONS	SHEET 243	E

2



DMS TRAFFIC CONTROL

STA 588+00 TO STA 595+00

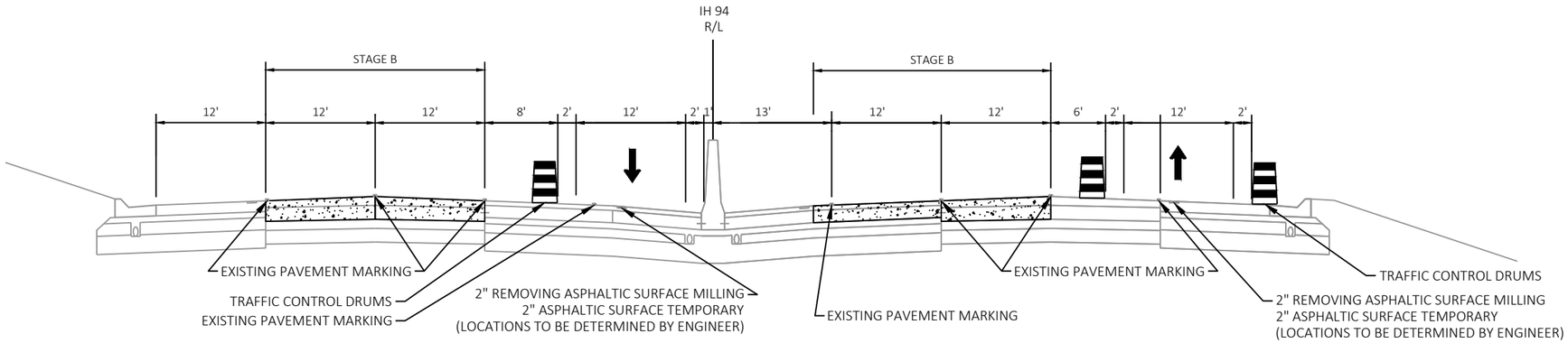


MEDIAN BARRIER REPAIR - STAGE A

STA 640+00 TO STA 825+63

CONSTRUCTION:
- MEDIAN BARRIER REPAIR

TRAFFIC:
- SHORT TERM SINGLE LANE CLOSURES PERMITTED DURING NIGHT TIME HOURS ONLY IN ACTIVE WORK ZONE WHERE WORK IS OCCURRING
- DAYTIME INGRESS/EGRESS ONLY FROM IH 94 EB
- EB LANE 1 LONG-TERM SINGLE LANE CLOSURE WITH TRAFFIC SHIFT FROM LANES 1 AND 2 INTO LANES 2 AND 3
- CTH SS EB ENTRANCE RAMP LONG TERM CLOSURE
- TRAFFIC CONTROL DETAIL FOR MEDIAN BARRIER REPAIR DETAIL - STAGE A
- TEMPORARY MARKING LINE PAINT 6-INCH WILL BE REMOVED AFTER STAGE A IS COMPLETE



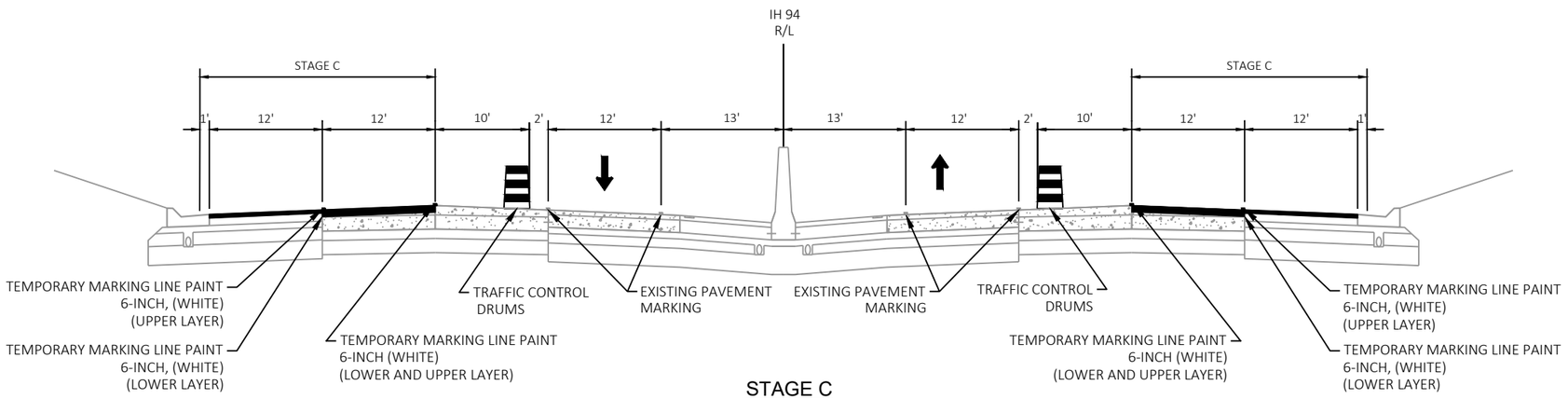
DUAL RIGHT LANE CLOSURE WITH SHIFT
(LANE 2 & 3 BASE PATCHING)

STAGE B
STA 640+00 TO STA 825+63

DUAL LEFT LANE CLOSURE WITH SHIFT
(LANE 1 & 2 BASE PATCHING)

CONSTRUCTION:
- SHOULDER REPAIR AS NEEDED
- MILL AND PAVE SHOULDER RUMBLE STRIPS AS NEEDED FOR TRAFFIC TAPERS
- LANE 1, 2 & 3 BASE PATCHING

TRAFFIC:
- SHIFT TRAFFIC PARTIALLY ON SHOULDERS DURING DUAL LANE CLOSURES
- SHORT TERM DUAL LANE CLOSURES PERMITTED DURING NIGHT TIME HOURS ONLY IN ACTIVE WORK ZONE WHERE WORK IS OCCURRING
- ALL LANES OPEN DURING PEAK HOURS
- USE PCMS 7, SEE TRAFFIC CONTROL - FIXED MESSAGE SIGNS AND PCMS



DUAL RIGHT LANE CLOSURE

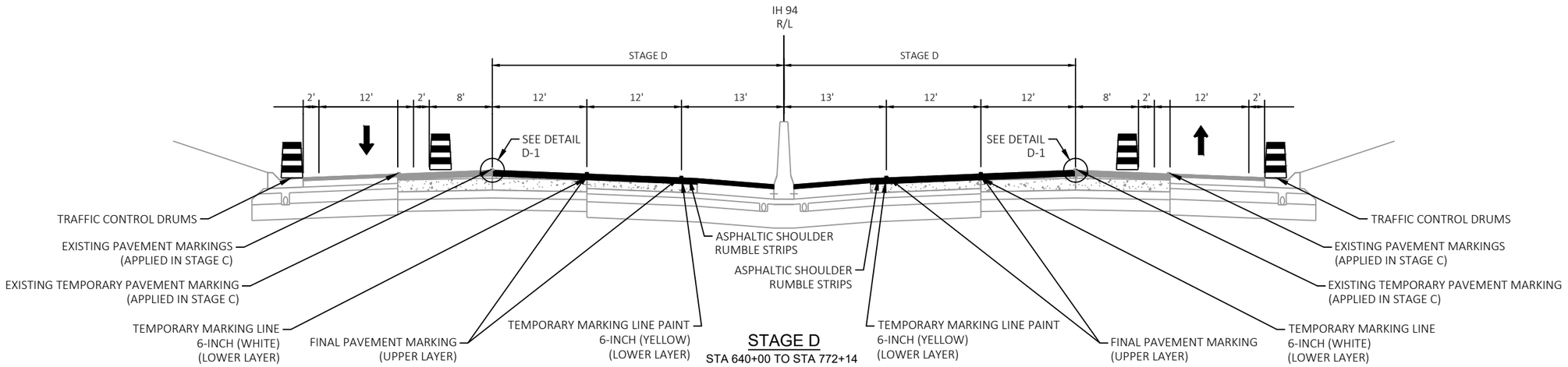
STAGE C
STA 640+00 TO STA 772+14

DUAL RIGHT LANE CLOSURE

CONSTRUCTION:
- MILL OUTSIDE SHOULDER. SEE CONSTRUCTION DETAIL "DAY END CONSTRUCTION - MILLED WEDGE LONGITUDINAL JOINT DETAIL" FOR THE JOINT BETWEEN LANE 3 AND THE OUTSIDE SHOULDER.
- MILL AND OVERLAY LOWER LAYER LANE 3. SEE CONSTRUCTION DETAIL "DAY END CONSTRUCTION - MILLED WEDGE LONGITUDINAL JOINT DETAIL" FOR THE JOINT BETWEEN LANES 2 AND 3. SEE SDD "TRAFFIC CONTROL, DROP-OFF SIGNING".
- UPPER LAYER LANE 3. NOTCHED WEDGE LONGITUDINAL JOINT TO REMAIN BETWEEN LANE 3 AND OUTSIDE SHOULDER. REPLACE SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC AS DIRECTED BY THE ENGINEER. EXTEND UPPER LAYER TO FILL JOINT BETWEEN LANES 2 AND 3.
- UPPER LAYER SHOULDER

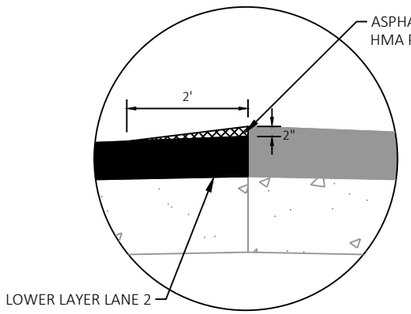
TRAFFIC:
- MILLED SURFACE ON SHOULDER CAN REMAIN DURING THE DAY WITH SHOULDER CLOSURES IN PLACE
- SHORT TERM DUAL LANE CLOSURES PERMITTED DURING NIGHT TIME HOURS ONLY IN ACTIVE WORK ZONE WHERE WORK IS OCCURRING
- ALL LANES OPEN DURING PEAK HOURS

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	STAGED CONSTRUCTION - TYPICAL SECTIONS	SHEET 245	E



STAGE D
STA 640+00 TO STA 772+14

DUAL LEFT LANE CLOSURE WITH SHIFT

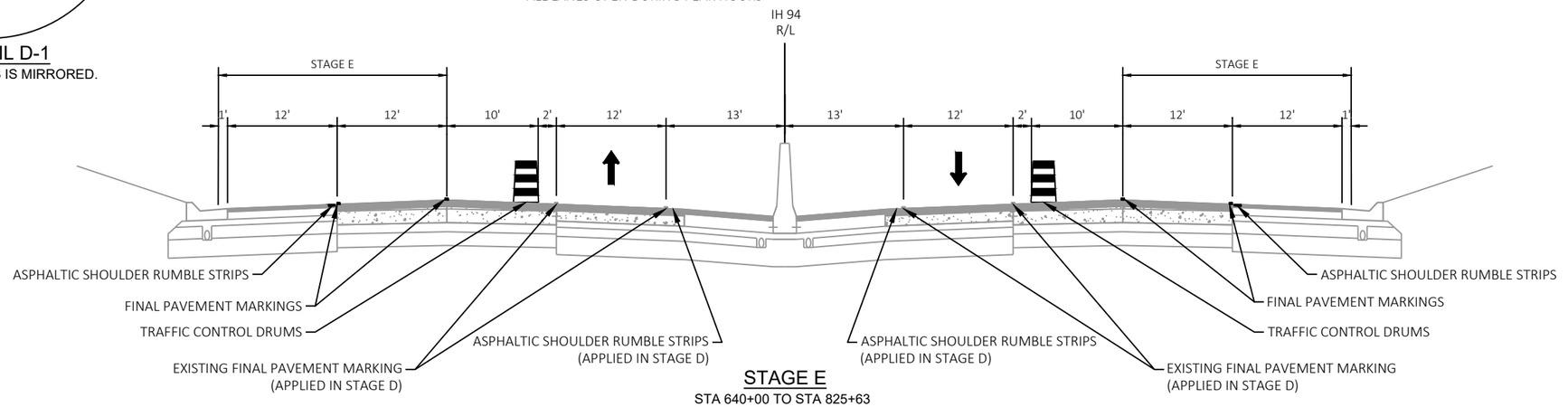


DETAIL D-1
EB SHOWN. WB IS MIRRORED.

CONSTRUCTION:
- MILL INSIDE SHOULDER. SEE CONSTRUCTION DETAIL "DAY END CONSTRUCTION - MILLED WEDGE LONGITUDINAL JOINT DETAIL" FOR THE JOINT BETWEEN LANE 1 AND THE INSIDE SHOULDER.
- MILL AND OVERLAY LOWER LAYER LANE 1. SEE CONSTRUCTION DETAIL "DAY END CONSTRUCTION - MILLED WEDGE LONGITUDINAL JOINT DETAIL" FOR THE JOINT BETWEEN LANES 1 AND 2. SEE SDD "TRAFFIC CONTROL, DROP-OFF SIGNING".
- MILL AND OVERLAY LOWER LAYER LANE 2. SEE DETAIL D-1. REMOVE ASPHALT WEDGE PRIOR TO PAVING UPPER LAYER LANE 2. PAID AS REMOVING ASPHALTIC SURFACE MILLING. SEE SDD "TRAFFIC CONTROL, DROP-OFF SIGNING".
- UPPER LAYER LANE 2. REMOVE NOTCHED WEDGE PRIOR TO PAVING ADJACENT LANE. PAID AS REMOVING ASPHALTIC LONGITUDINAL NOTCHED WEDGE JOINT MILLING. SEE SDD "TRAFFIC CONTROL, DROP -OFF SIGNING".
- UPPER LAYER LANE 1. NOTCHED WEDGE LONGITUDINAL JOINT TO REMAIN BETWEEN LANE 1 AND INSIDE SHOULDER. REPLACE SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC AS DIRECTED BY THE ENGINEER.
- UPPER LAYER SHOULDER
- FINAL PAVEMENT MARKINGS AND INSIDE RUMBLE STRIPS WHEN STAGE D PAVING IS COMPLETE

TRAFFIC:
- SHIFT TRAFFIC PARTIALLY ON SHOULDERS DURING DUAL LANE CLOSURES
- MILLED SURFACE ON SHOULDER CAN REMAIN DURING THE DAY WITH SHOULDER CLOSURES IN PLACE
- SHORT TERM DUAL LANE CLOSURES PERMITTED DURING NIGHT TIME HOURS ONLY IN ACTIVE WORK ZONE WHERE WORK IS OCCURRING
- ALL LANES OPEN DURING PEAK HOURS

DUAL LEFT LANE CLOSURE WITH SHIFT



STAGE E
STA 640+00 TO STA 825+63

DUAL RIGHT LANE CLOSURE

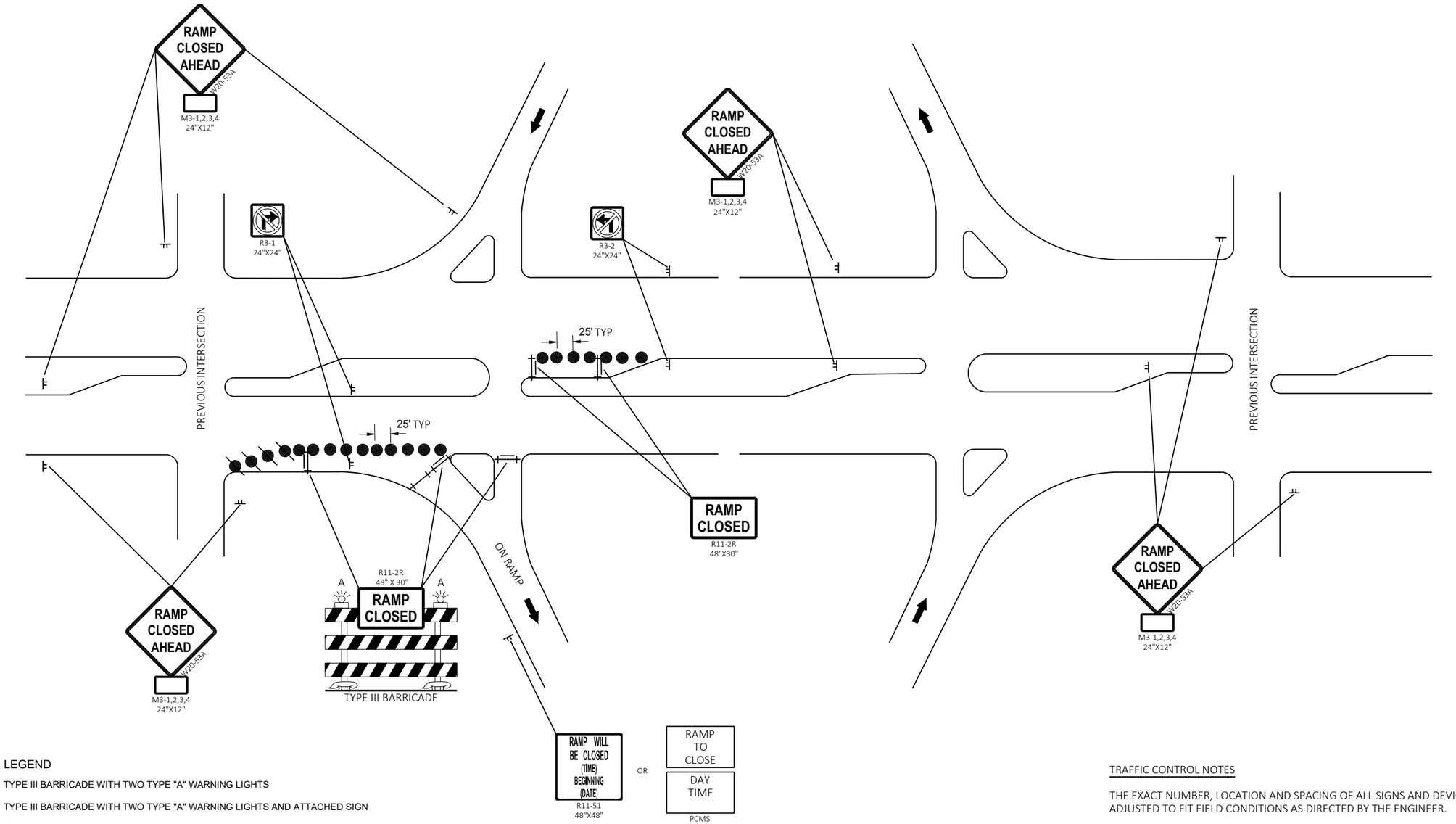
DUAL RIGHT LANE CLOSURE

CONSTRUCTION:
- OUTSIDE RUMBLE STRIPS AND FINAL PAVEMENT MARKINGS

TRAFFIC:
- SHORT TERM DUAL LANE CLOSURES PERMITTED DURING NIGHT TIME HOURS ONLY IN ACTIVE WORK ZONE WHERE WORK IS OCCURRING
- ALL LANES OPEN DURING PEAK HOURS

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	STAGED CONSTRUCTION - TYPICAL SECTIONS	SHEET 246	E

2



LEGEND

- TYPE III BARRICADE WITH TWO TYPE "A" WARNING LIGHTS
- TYPE III BARRICADE WITH TWO TYPE "A" WARNING LIGHTS AND ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE
STH 83, CTH SS, STH 318, CTH T & STH 164 - SHORT TERM ONLY

TRAFFIC CONTROL NOTES

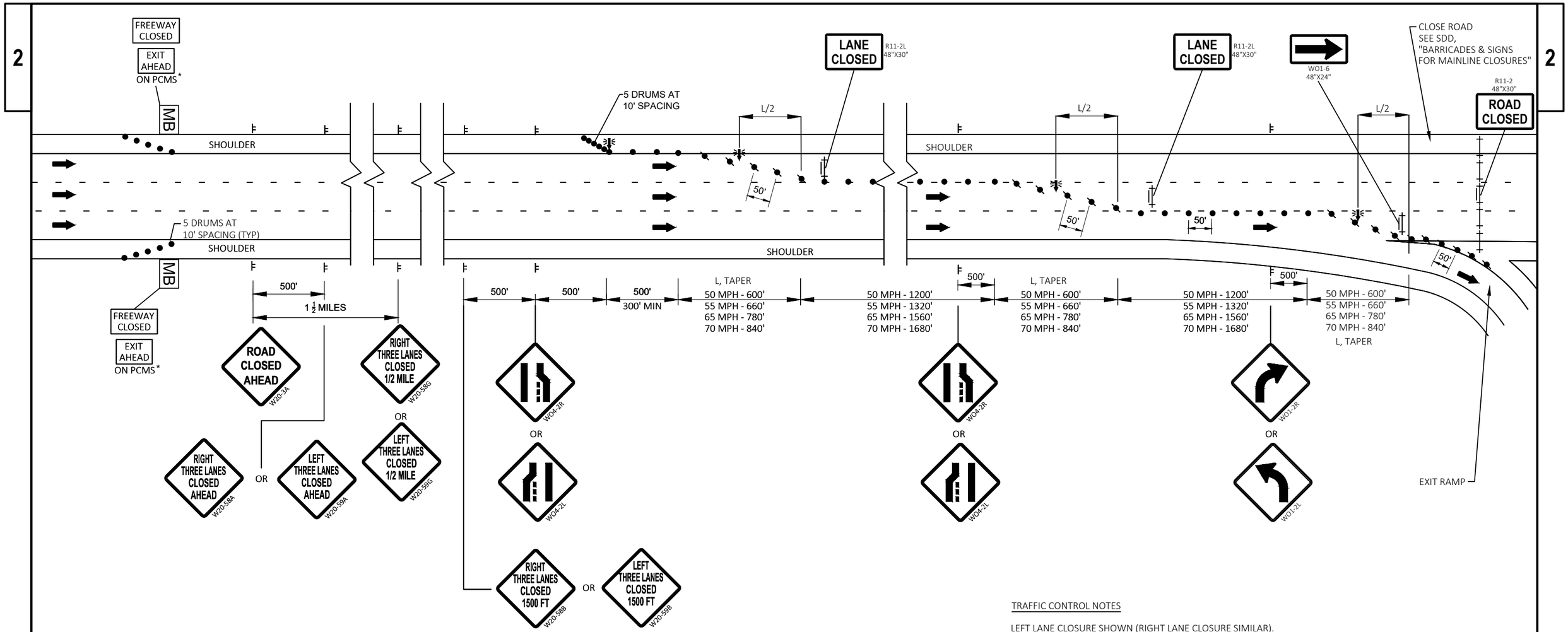
THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

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

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

FOR NIGHT TIME OPERATIONS ALL DRUMS IN TAPERS SHALL HAVE WARNING LIGHT, TYPE C (STEADY BURN). MAY BE APPLIED TO ARTERIALS OR LOCAL ROADS.

R11-51 OR PCMS TO BE PLACED 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER.



LEGEND

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

THREE LANE FULL FREEWAY CLOSURE

TRAFFIC CONTROL NOTES

LEFT LANE CLOSURE SHOWN (RIGHT LANE CLOSURE SIMILAR).

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

FOR NIGHTTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A WARNING LIGHT. TYPE C (STEADY BURN).

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

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

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

IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1/4 MILE ACROSS EACH CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

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' IN FRONT OF DRUMS, WITH LANE CLOSED SIGN.

REFER TO DETOUR ROUTES FOR TRAFFIC CLOSING SIGNS.

* PLACE PCMS PRIOR TO STH 16 FOR WB TRAFFIC

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" SIGNS ARE THE SAME AS "W" SIGNS 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.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE 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 LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

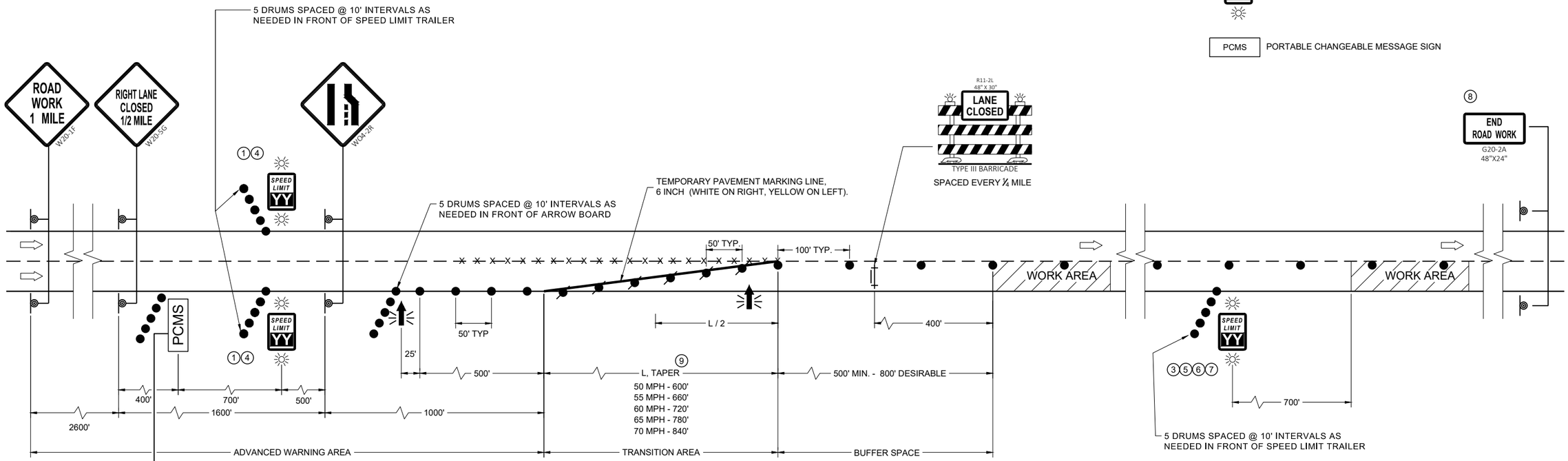
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE 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.

1. EXISTING POST MOUNTED SPEED LIMIT SIGNS SHOULD BE COVERED OR REMOVED.
2. PCMS SHALL FOLLOW ARROW BOARD STANDARDS WHEN DISPLAYING FLASHING FOUR CORNER CAUTION MODE.
3. PLACE A DIGITAL SPEED LIMIT TRAILER 700' FEET UPSTREAM OF EACH ACTIVE WORK AREA WHERE WORKERS ARE PRESENT.
4. A DIGITAL SPEED LIMIT TRAILER SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP.
5. IF WORK AREA STARTS LESS THAN 1,000 FEET FROM END OF LANE CLOSURE TAPER, OMIT DIGITAL SPEED LIMIT TRAILER AT THAT LOCATION.
6. PLACE A DIGITAL SPEED LIMIT TRAILER A MINIMUM OF EVERY ONE MILE. MODIFY PLACEMENT AS DIRECTED BY ENGINEER WHEN DIGITAL SPEED LIMIT TRAILER IS LOCATED IN CLOSE PROXIMITY TO AN ACCELERATION LANE OF AN ENTRANCE RAMP.
7. OMIT DRUM DELINEATION FOR DIGITAL SPEED LIMIT TRAILER WITHIN A CLOSURE.
8. INCLUDE NON-DIGITAL R2-1 RESUME SPEED LIMIT SIGNS 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END ROAD WORK" SIGN.
9. IF THE SPEED LIMIT WILL CHANGE BASED ON THE PRESENCE OF WORKERS, USE THE TAPER LENGTH THAT MATCHES THE HIGHER OF THE TWO SPEEDS FOR A CONTINUOUS LANE CLOSURE.

LEGEND

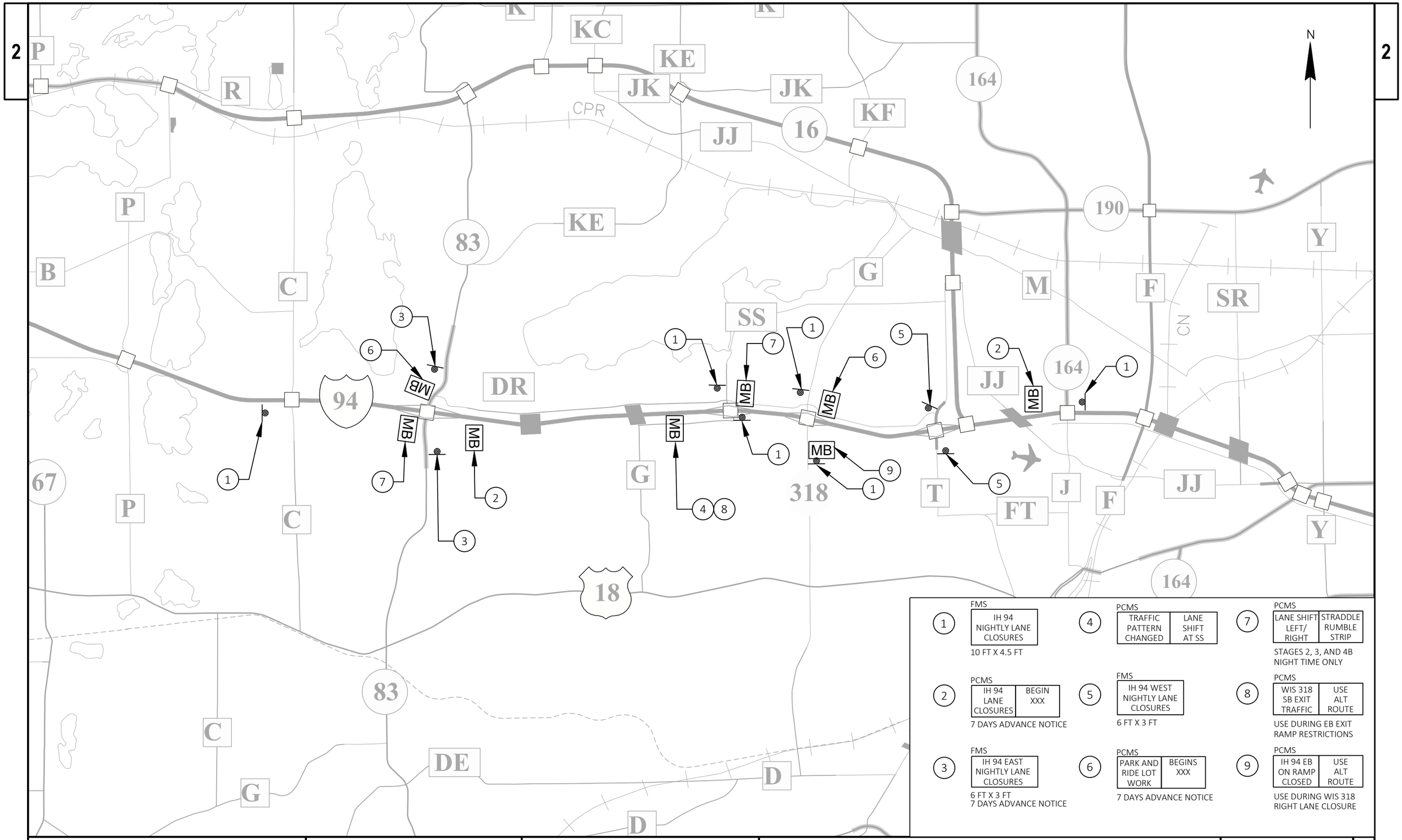
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD
- DIGITAL SPEED LIMIT TRAILER
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN



② PCMS MESSAGING

POSTED SPEED REDUCTION		NO SPEED REDUCTION
FRAME 1	FRAME 2	
REDUCED SPEED AHEAD	XX MPH	(FLASHING CAUTION MODE)

TRAFFIC CONTROL, LANE CLOSURE, DIGITAL SPEED REDUCTION SYSTEM



PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - FIXED MESSAGE SIGNS AND PCMS	SHEET 250	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\025102_TC.DWG
LAYOUT NAME - 025102_tc
PLOT DATE : 1/8/2024 2:18 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:1 MI

LEGEND

PTS PORTABLE TRAFFIC SENSOR

FBS FLASHING BEACON SIGN

STOPPED OR SLOW TRAFFIC WHEN FLASHING

WO8-76
96"X48"

FBS #2
STA 645+50*
1
3

FBS #1 & PTS #1
STA 713+00*
1
2
3

FBS #3

PTS #2
STA 810+43*
1
2
3

N

G

SS

G

M

JJ

164

318

T

FT

J

1 5 DRUMS SPACE AT 10 FOOT INTERVALS

2 IF THERE ARE MORE THAN TWO LANES OR IF SPECIFIED IN THE PLANS, PLACE FBS ON BOTH SIDE OF THE ROADWAY.

3 IF THERE IS AN APPROVED TEMPORARY SPEED DECLARATION, ADD WO-3-5 SIGNS 400 FEET AFTER THE W20-5G SIGNS AND ADD R2-1 SIGNS (48"X60") 700 FEET AFTER THE WO3-5 SIGNS. A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A "RESUME SPEED LIMIT" SIGN 200 FEET MINIMUM (800 FEET DESIRABLE) BEYOND THE G30-3A "END ROAD WORK" SIGN.

*SEE "TRAFFIC CONTROL-MEDIAN BARRIER REPAIR DETAIL - STAGE A" FOR THE SPECIFIC LOCATION

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - BASIC TRAFFIC QUEUE WARNING SYSTEM	SHEET 251	E

NOTE: SEE SDD TRAFFIC CONTROL, INGRESS/EGRESS WITH BARRIER AND TRAFFIC CONTROL, INGRESS/EGRESS WITHOUT BARRIER FOR WORK ZONE ACCESS

WO5-52L
12"X36"

+85.50
-4.45'LT

+95.00
-3.00'LT

+96.00
-3.00'LT

50'

635

640

645

1000'

500'

LEFT SHOULDER CLOSED AHEAD
W21-5BL

LEFT SHOULDER CLOSED
W21-5AL

F B S 2

SEE "TRAFFIC CONTROL - BASIC QUEUE WARNING SYSTEM" FOR ADDITIONAL INFORAMTION

SEE TRAFFIC CONTROL - CTH SS ON RAMP CLOSURE DETAIL

650

655

660

+70.33
12.83'RT

+70.02
24.85'RT

+70.40
37.36'RT

TEMPORARY MARKING LINE PAINT, 6-INCH (WHITE)

WO1-4BR

COVER

IH 94

SILVERNAIL RD

GOLF RD

CTH SS

RIPRAP

INL

LEGEND

WORK ZONE - PATCHING WITH EPOXY CONCRETE

WORK ZONE - MEDIAN BARRIER REPAIR/REPLACEMENT

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - MEDIAN BARRIER REPAIR DETAIL - STAGE A	SHEET 252	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\025100_TC.DWG
LAYOUT NAME - 01

PLOT DATE : 1/11/2024 1:34 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

RIVERLAND DR

GOLF RD

RIPRAP

420' SHIFTING TAPER

W01-6
48"X24"

IH 94

665

50'

670

675

+90.70
24.85'RT

+90.35
37.08'RT

50'

+90.00
49.15'RT

TEMPORARY MARKING LINE PAINT, 6-INCH (YELLOW)

TEMPORARY MARKING LINE PAINT, 6-INCH (WHITE)

TEMPORARY MARKING LINE PAINT, 6-INCH (WHITE)

SILVERNAIL RD

LANE CLOSED
R11-2L
48"X30"

A/C

POST

680

685

690

695

MEADOWBROOK RD

STH 318

LANE CLOSED
R11-2L
48"X30"

TEMPORARY MARKING LINE PAINT, 6-INCH (YELLOW)

LEGEND

WORK ZONE - PATCHING WITH EPOXY CONCRETE

WORK ZONE - MEDIAN BARRIER REPAIR/REPLACEMENT

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - MEDIAN BARRIER REPAIR DETAIL - STAGE A	SHEET 253	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\025100_TC.DWG
LAYOUT NAME - 02

PLOT DATE : 1/11/2024 1:35 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

TEMPORARY MARKING LINE PAINT, 6-INCH (YELLOW)

TEMPORARY MARKING LINE PAINT, 6-INCH (WHITE)

LANE CLOSED
R11-2L
48"X30"

ROAD WORK AHEAD
W20-1A

W05-52R
12"X36"

+60.60
-76.99'LT

+31.86
-77.14'LT

+08.42
-82.75'LT

IH 94

GOLF RD

SILVERNAIL RD

RIPRAP

POST

F B S 1

P T S 1

SEE "TRAFFIC CONTROL - BASIC QUEUE WARNING SYSTEM" FOR ADDITIONAL INFORAMTION

LEGEND

WORK ZONE - PATCHING WITH EPOXY CONCRETE

WORK ZONE - MEDIAN BARRIER REPAIR/REPLACEMENT

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - MEDIAN BARRIER REPAIR DETAIL - STAGE A	SHEET 254	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\025100_TC.DWG
LAYOUT NAME - 03

PLOT DATE : 1/11/2024 1:36 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

GOLF RD

RIPRAP

WO5-52L
12"X36"

IH 94

730

735

740

+70.00
-9.99'LT

+65.86
14.53'RT

+20.00
21.11'RT

TEMPORARY MARKING LINE PAINT, 6-INCH (YELLOW)

LANE CLOSED

R11-2L
48"X30"

SILVERNAIL RD

GOLF RD

WO5-52L
12"X36"

RIPRAP

IH 94

+00.00
-15.62'LT

+30.08
-11.92'LT

750

755

+50.00
14.88'RT

LANE CLOSED

R11-2L
48"X30"

SILVERNAIL RD

LEGEND

WORK ZONE - PATCHING WITH EPOXY CONCRETE

WORK ZONE - MEDIAN BARRIER REPAIR/REPLACEMENT

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - MEDIAN BARRIER REPAIR DETAIL - STAGE A	SHEET 255	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\025100_TC.DWG
LAYOUT NAME - 04

PLOT DATE : 1/11/2024 1:37 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

2

RIPRAP

RIPRAP

RIPRAP

IH 94

760

765

770

INL

W

MH

WO5-52L
12"X36"

+83.30
-3.50'LT

+41.65
-9.00'LT

+50.00
-9.00'LT

+68.56
17.02'RT

+00.00
22.00'RT

+96.08
22.00'RT

WO5-52L
12"X36"

N

R11-2L
48"X30"

LANE
CLOSED

SIGN

IH 94

775

780

785

CTH T

SEE 1060-10-71 PLANS FOR DETAILS

WO5-52L
12"X36"

+52.81
-9.00'LT

+57.01
17.02'RT

+88.45
22.00'RT

+05.52
22.00'RT

WO5-52L
12"X36"

ROAD
WORK
AHEAD
W20-1A

LEGEND

WORK ZONE - PATCHING WITH EPOXY CONCRETE

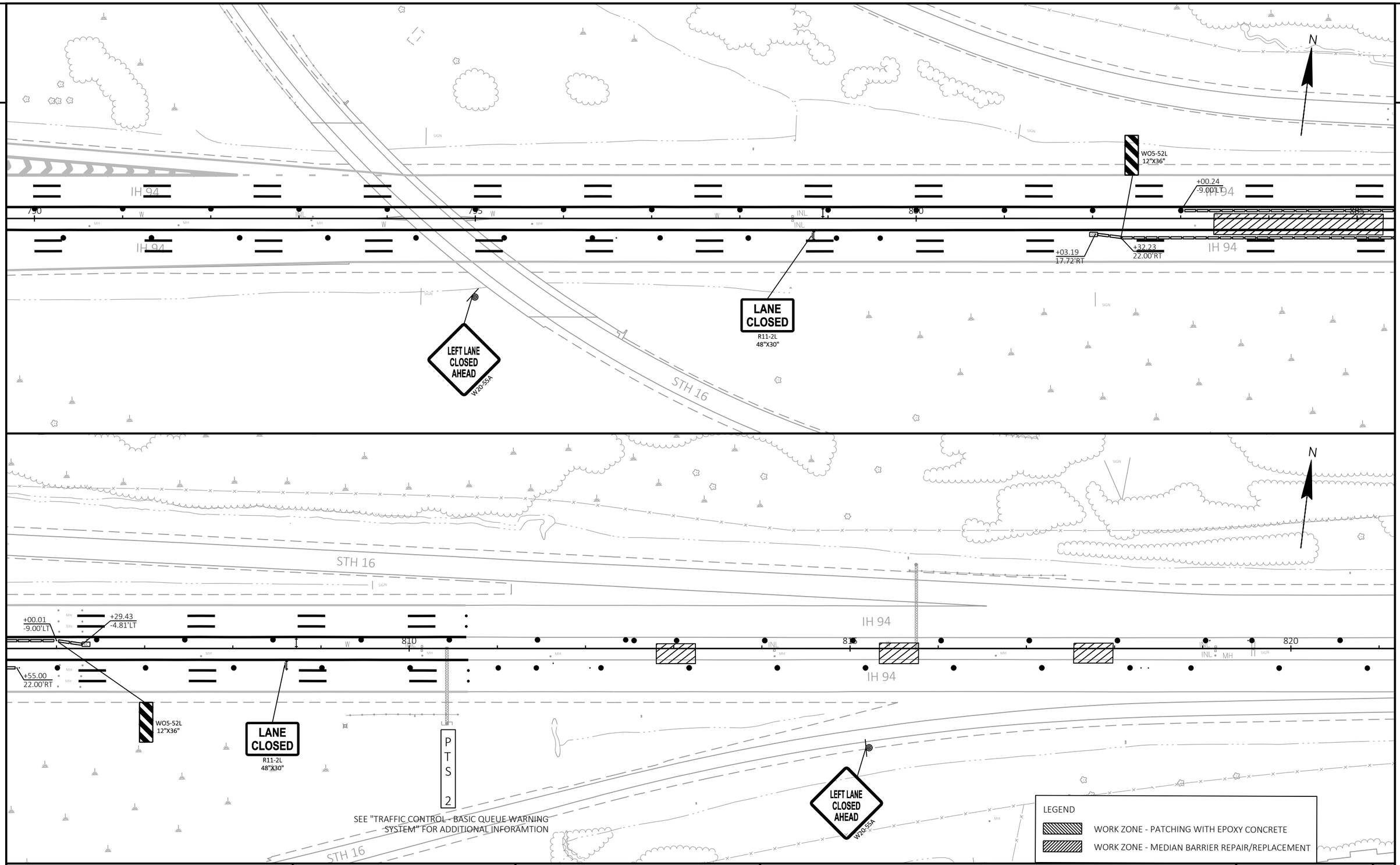
WORK ZONE - MEDIAN BARRIER REPAIR/REPLACEMENT

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - MEDIAN BARRIER REPAIR DETAIL - STAGE A	SHEET 256	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\025100_TC.DWG
LAYOUT NAME - 05

PLOT DATE : 1/11/2024 1:37 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

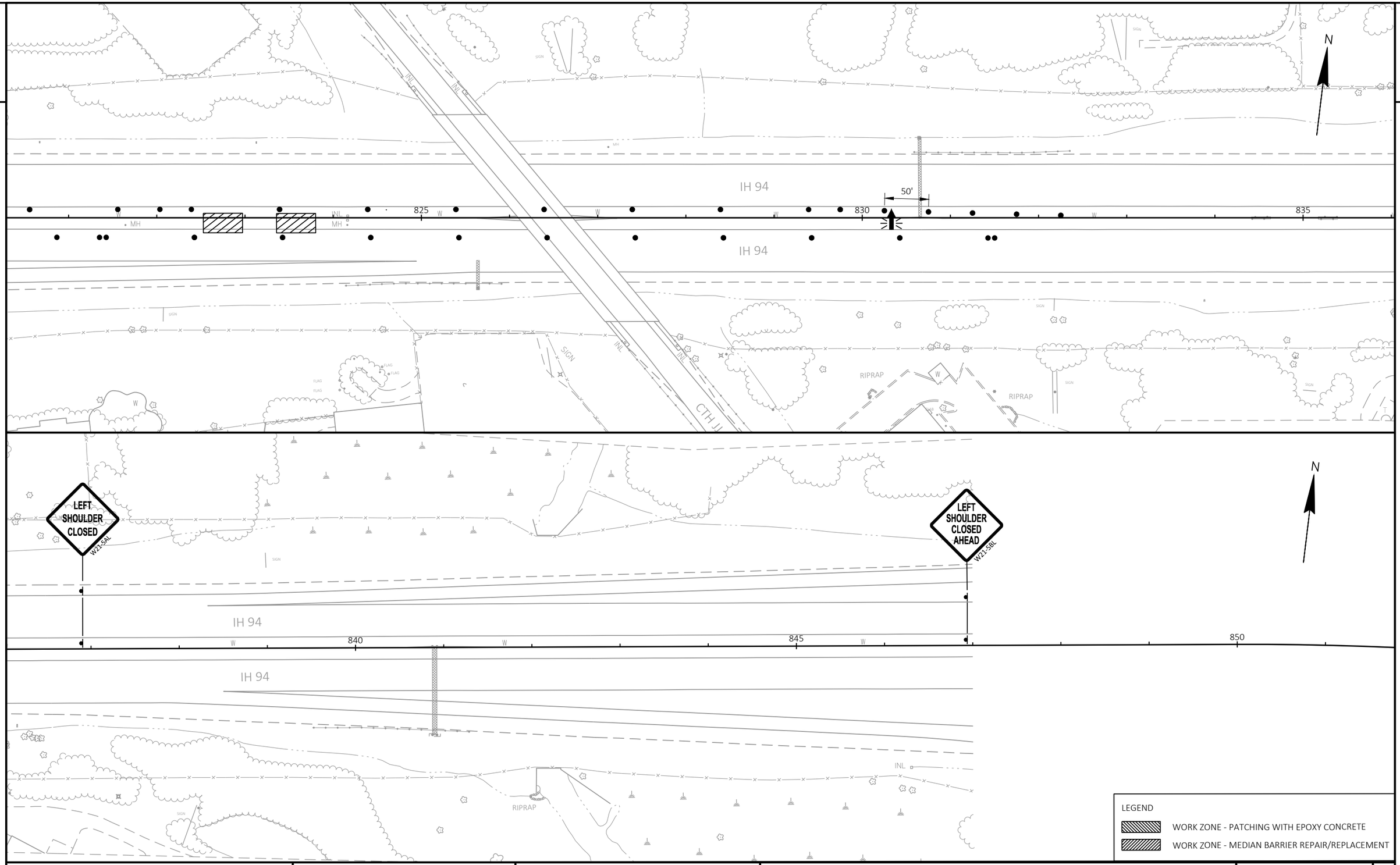


PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - MEDIAN BARRIER REPAIR DETAIL - STAGE A	SHEET 257	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\025100_TC.DWG
LAYOUT NAME - 06

PLOT DATE : 1/11/2024 1:38 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - MEDIAN BARRIER REPAIR DETAIL - STAGE A	SHEET 258	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\025100_TC.DWG
LAYOUT NAME - 07

PLOT DATE : 1/11/2024 1:39 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

EAST INTERSTATE 94
RAMP CLOSED AHEAD
W20-53A

R3-1
24"X24"

RAMP CLOSED
R11-2R
48"X30"

WEST EAST
INTERSTATE 94 INTERSTATE 94
SEE DETOUR PLAN

MADISON
MILWAUKEE
COVER

SILVERNAIL RD

CTH SS

GOLF RD

RIPRAP

INL

W

SIGN

MH

WALLS

FLAG

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 44+00 45+00

645+00 646+00 647+00 648+00 649+00

R3-2
24"X24"

N

1+00 652+00 653+00 654+00 655+00 656+00 657+00 658+00 659+00 660+00 661+00 662+00

IH 94

1500' FROM CTH SS INTERSECTION

RAMP CLOSED BEGINNING XXX-XX
G20-58
90"X48"

SPRING HILL DR

POST

A/C

SEPTIC

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - CTH SS ON RAMP CLOSURE DETAIL	SHEET 259	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\026003_ST.DWG
LAYOUT NAME - 026003-01
PLOT DATE : 1/10/2024 8:30 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

ROAD WORK AHEAD W20-1A

END ROAD WORK G20-2A 48"X24"

ROLLING RIDGE DR.

270'

N

261+00 262+00 263+00 264+00 265+00 266+00 267+00 268+00 269+00 270+00 271+00 272+00 273+00 274+00 275+00

STH 318

25'

T4W

245' TAPER

25'

LANE CLOSED R11-2L 48"X30"

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

RIPRAP

TPSA

210'

ROAD WORK AHEAD W20-1A

ROAD WORK AHEAD W20-1A

350'

RIGHT LANE CLOSED AHEAD W20-5A

350'

WO1-2R

EAST INTERSTATE 94

RAMP CLOSED AHEAD W20-53A

G20-2A 48"X24"

END ROAD WORK

SILVERNAIL RD.

EAST INTERSTATE 94

END ROAD WORK G20-2A 48"X24"

LANE CLOSED R11-2L 48"X30"

RAMP CLOSED AHEAD W20-53A

IH 94

2+00

693+00

RAMP CLOSED R11-2R 48"X30"

R11-2R 48"X30"

25'

R3-2 24"X24"

EAST INTERSTATE 94

RAMP CLOSED AHEAD W20-53A

EAST INTERSTATE 94

RAMP CLOSED AHEAD W20-53A

EAST WEST INTERSTATE 94 94

SEE DETOUR PLAN

WO1-6 48"X24"

SEE DETOUR PLAN

COVER

COVER

T8W

276+00 277+00 278+00 279+00 280+00 281+00 282+00 283+00 284+00 285+00 286+00 287+00 288+00 289+00 290+00 291+00

+06.34 48.70' RT

25'

STH 318

+13.82 58.27' RT

DWF

T8W

+17.79 66.06' RT

+09.90 49.84' RT

+77.24 54.70' RT

+44.76 58.50' RT

TPB

T8W

TPCR

TPSA

+38.52 46.70' RT

+17.38 72.05' RT

TPB

TPB

+77.16 60.70' RT

+45.20 64.50' RT

SEE DETAIL-A

SEE DETAIL-A

TPCR

TPSA

WALK BIKE ON SIDEWALK FMS

TPB

+12.90 64.27' RT

TSL

T8W

T4Y

R3-1 24"X24"

WALK BIKE ON SIDEWALK FMS

DWF

M4-60R 30"X24"

5' MIN

10'

LANE CLOSED R11-2L 48"X30"

M4-60L 30"X24"

25'

RAMP CLOSED AHEAD W20-53A

RAMP CLOSED R11-2R 48"X30"

COVER

COVER

EAST INTERSTATE 94

RAMP CLOSED AHEAD W20-53A

LANE CLOSED R11-2L 48"X30"

DETAIL-A

END ROAD WORK

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - STH 318 ON RAMP CLOSURE DETAIL	SHEET 260	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\026003_ST.DWG
LAYOUT NAME - 026003-02

PLOT DATE : 1/15/2024 4:55 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

EAST INTERSTATE 94
RAMP CLOSED AHEAD
W20-53A

EAST INTERSTATE 94
RAMP CLOSED AHEAD
W20-53A

ROAD WORK AHEAD
W20-1A

EAST INTERSTATE 94
RAMP CLOSED AHEAD
W20-53A

CTH DR/GOLF RD

CTH G/MEADOWBROOK RD

292+00 293+00 294+00 295+00 296+00 297+00 298+00 299+00 300+00 301+00 302+00 303+00 304+00 305+00 306+00

RIPRAP

IH 94

680+00 681+00

705+00 706+00 707+00 708+00 709+00 710+00

RAMP CLOSED BEGINNING XXX-XX
G20-58
90"X48"
PLACE 7 DAYS PRIOR TO CLOSURE

END ROAD WORK
G20-2A
48"X24"

SILVERNAIL RD.

SILVERNAIL RD

SPRING HILL DR

ROAD WORK AHEAD
W20-1A

EAST INTERSTATE 94
RAMP CLOSED AHEAD
W20-53A

EAST INTERSTATE 94
RAMP CLOSED AHEAD
W20-53A

ROAD WORK AHEAD
W20-1A

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - STH 318 ON RAMP CLOSURE DETAIL	SHEET 261	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\026003_ST.DWG
LAYOUT NAME - 026003-03

PLOT DATE : 1/10/2024 8:32 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:100 FT

RIGHT LANE CLOSURE DURING SOUTHBOUND
SHOULDER STORM SEWER WORK AND RESTORATION

INSTALL OUTSIDE LANE SHIFT PER SDD
"TRAFFIC CONTROL, FULL LANE SHIFT, NON-FREEWAY/
EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER"

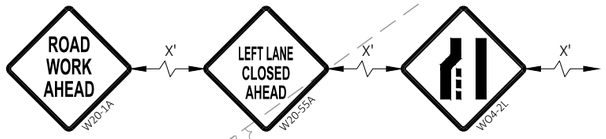
CLOSE RAMP AS NEEDED DURING OFF PEAK HOURS.

RIGHT LANE CLOSED AHEAD W20-5A
350'
W04-2R
25'
R11-2L 48"X30"
LANE CLOSED
LANE CLOSED
LANE CLOSED
LANE CLOSED
LANE CLOSED
LANE CLOSED
END ROAD WORK G20-2A 48"X24"
W04-2L
350'
LEFT LANE CLOSED AHEAD W20-5A
350'
ROAD WORK AHEAD W20-1A
N
ROAD WORK AHEAD W20-1A
350'
RIGHT LANE CLOSED AHEAD W20-5A
350'
W04-2R
BEGIN LEFT TURN LANE R3-20L 24"X36"
END ROAD WORK G20-2A 48"X24"
ROAD WORK AHEAD W20-1A
STH 318/MEADOWBROOK RD
MEADOWBROOK RD
SILVERNAIL RD
287+00
286+00
285+00
284+00
283+00
282+00
281+00
280+00
279+00
278+00
695
700
RIPRAP
POST
SIGN
INL
W
MH

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - STH 318 STORM SEWER AND MEDIAN WORK	SHEET 262 E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\025105_TC.DWG
LAYOUT NAME - 025105
PLOT DATE : 1/26/2024 8:28 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:100 FT

CONTINUE DRUMS UNTIL THE NORTH END OF THE MEDIAN. INSTALL ADVANCE WARNING SIGNS NORTH OF THAT IN ACCORDANCE WITH SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE DIVIDED NON-FREEWAY/EXPRESSWAY



N

R11-2L 48"X30" LANE CLOSED

R11-2L 48"X30" LANE CLOSED

R11-2L 48"X30" LANE CLOSED

297+00
296+00
295+00
294+00
293+00
292+00
291+00
290+00
289+00
288+00

CTH G/MEADOWBROOK RD

CTH DR / GOLF ROAD

RIPRAP

RIPRAP

MH

SIGN

INL

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - STH 318 STORM SEWER AND MEDIAN WORK	SHEET 263	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\025105_TC.DWG
LAYOUT NAME - 025105

PLOT DATE : 1/10/2024 10:12 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

N

GOLF RD.

RIGHT SHOULDER CLOSED
W21-5A

50'

50'

CONCRETE BARRIER TEMPORARY PRECAST

+40
-87.64' LT

+15
-87.64' LT

+43.53
-91.20' LT

IH 94

+40
-59.64' LT

+15
-59.64' LT

+43.53
-55.71' LT

590

595

600

IH 94

ELMHURST ROAD

8" LINED CMCP

RIPRAP

INL

W

LEFT SHOULDER CLOSED
W21-5AL

SILVERNAIL RD.

FOOTBRIDGE

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - IH 94 WB DMS	SHEET 264	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\025104_TC.DWG
LAYOUT NAME - 025104_tc

PLOT DATE : 10/5/2022 10:58 AM PLOT BY : CIERRA SMITH PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

N

1+00

2+00

3+00

5'

NO PARKING ANY TIME
R7-1D
18"X24"

MDP

MSP

TEMPORARY HANDICAP PARKING AREA

R7-8A
12"X18"

TEMPORARY BUS STOP PICK UP LOCATION

DWF

DETOUR
M4-9BL
30"X24"

TPSP

TPCR

TPB

T4Y

REMOVE WORDS AND ARROWS

INL

SIGN

MH

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - MEADOWBROOK PARK & RIDE	SHEET 265	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\025202_TC.DWG
LAYOUT NAME - 025202_tc

PLOT DATE : 1/15/2024 5:07 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

N

1+00

2+00

3+00

NO PARKING ANY
R7-1D
18"X24"

FINAL PAVEMENT MARKING

T4Y

5'

6'

NOTE: WORK IN EXIT LANE TO BE COMPLETED UNDER FLAGGING OPERATION

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TRAFFIC CONTROL - MEADOWBROOK PARK & RIDE	SHEET 266	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\025203_TC.DWG
LAYOUT NAME - 025203_tc
PLOT DATE : 1/15/2024 5:13 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

N

BIKE PATH

BIKE PATH

PATH

U/C

U/C

U/C

MH

MH

MH

MH

5'

5'

5'

1+00

2+00

3+00

4+00

MDP

NO PARKING ANY TIME
R7-1D
18"X24"

TEMPORARY BUS STOP
PICK UP LOCATION

TEMPORARY HANDICAP
PARKING AREA

MSP

R7-8A
12"X18"

NO PARKING BUS STOP
R7-7D
18"X24"

MSP

MDP

NO PARKING ANY TIME
R7-1D
18"X24"

MDP

TPCR

DETOUR
M4-9BR
30"X24"

TPSP

DETOUR
M4-9BL
30"X24"

INL

GOLF RD

GOLF RD

MH

INL

INL

I SIGN

TPCR

SIGN

SIGN

DETOUR
M4-9BR
30"X24"

TPB

DETOUR
M4-9BL
30"X24"

SIDEWALK CLOSED
R9-9
24"X12"

TPB

MH

MH

MH

INL

INL

PROJECT NO: 1330-47-71	HWY: STH 83	COUNTY: WAUKESHA	TRAFFIC CONTROL - NAGAWAUKEE PARK & RIDE	SHEET 267	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\025200_TC.DWG
LAYOUT NAME - 025200_tc

PLOT DATE : 1/11/2024 1:55 PM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

N

BIKE PATH

PATH

U/C

MH

INL

SIGN

NO PARKING ANY TIME
R7-1D
18"X24"

5'

1+00

2+00

3+00

4+00

TEMPORARY HANDICAP PARKING AREA

MDT

MSP

FINAL PAVEMENT MARKING

PLACE SIGNS ON BOTH SIDES OF THE TEMPORARY SUPPORT

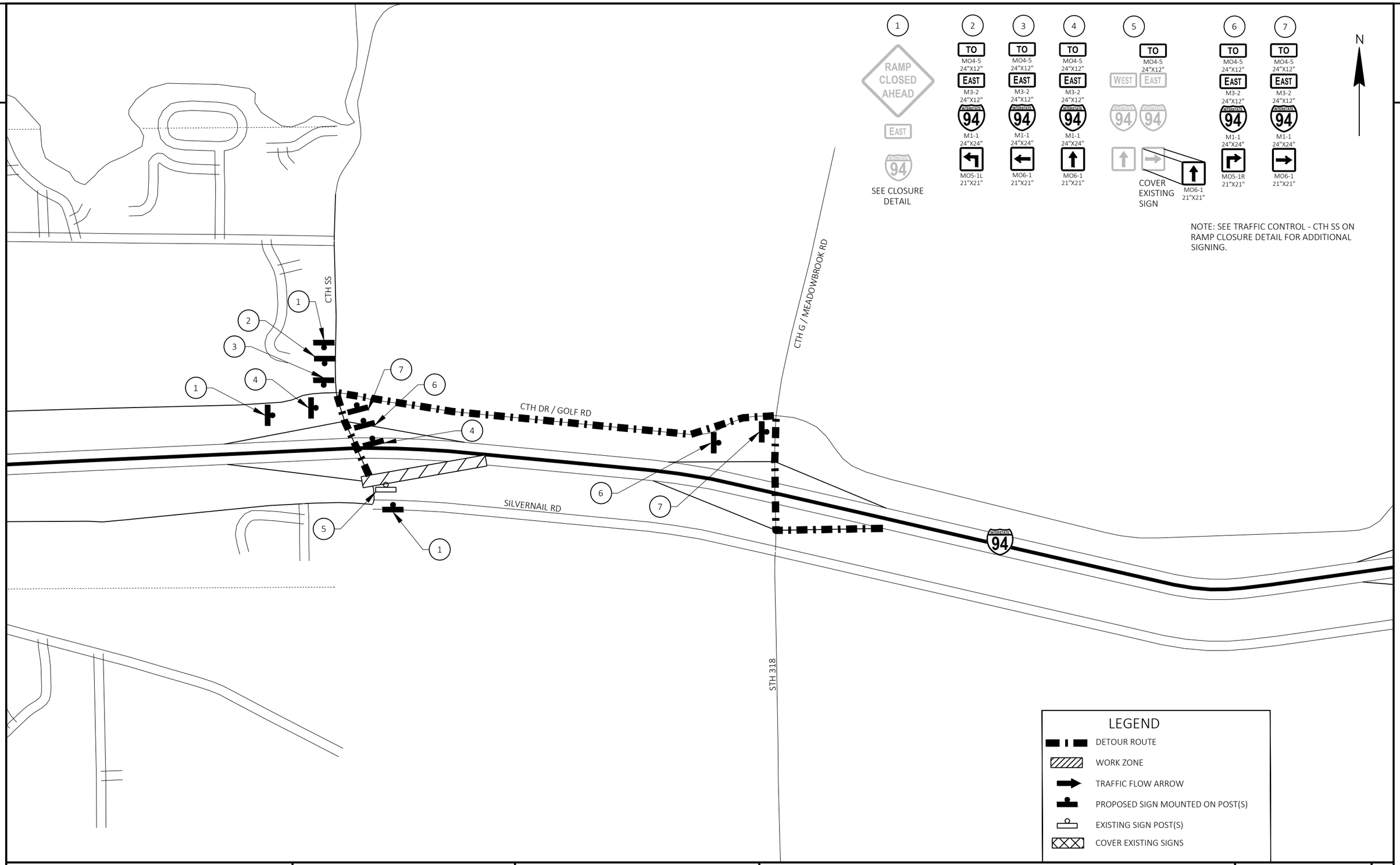
R7-8A
12"X18"

GOLF RD

PROJECT NO: 1330-47-71	HWY: STH 83	COUNTY: WAUKESHA	TRAFFIC CONTROL - NAGAWAUKEE PARK & RIDE	SHEET 268	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\025201_TC.DWG
LAYOUT NAME - 025201_tc

PLOT DATE : 1/11/2024 10:58 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:50 FT



1 — RAMP CLOSED AHEAD; EAST; INTERSTATE 94; SEE CLOSURE DETAIL

2 — TO MO4-5 24"X12"; EAST M3-2 24"X12"; INTERSTATE 94 M1-1 24"X24"; MO5-1L 21"X21"

3 — TO MO4-5 24"X12"; EAST M3-2 24"X12"; INTERSTATE 94 M1-1 24"X24"; MO6-1 21"X21"

4 — TO MO4-5 24"X12"; EAST M3-2 24"X12"; INTERSTATE 94 M1-1 24"X24"; MO6-1 21"X21"

5 — TO MO4-5 24"X12"; WEST EAST; INTERSTATE 94 INTERSTATE 94; COVER EXISTING SIGN; MO6-1 21"X21"

6 — TO MO4-5 24"X12"; EAST M3-2 24"X12"; INTERSTATE 94 M1-1 24"X24"; MO5-1R 21"X21"

7 — TO MO4-5 24"X12"; EAST M3-2 24"X12"; INTERSTATE 94 M1-1 24"X24"; MO6-1 21"X21"

N

NOTE: SEE TRAFFIC CONTROL - CTH SS ON RAMP CLOSURE DETAIL FOR ADDITIONAL SIGNING.

LEGEND

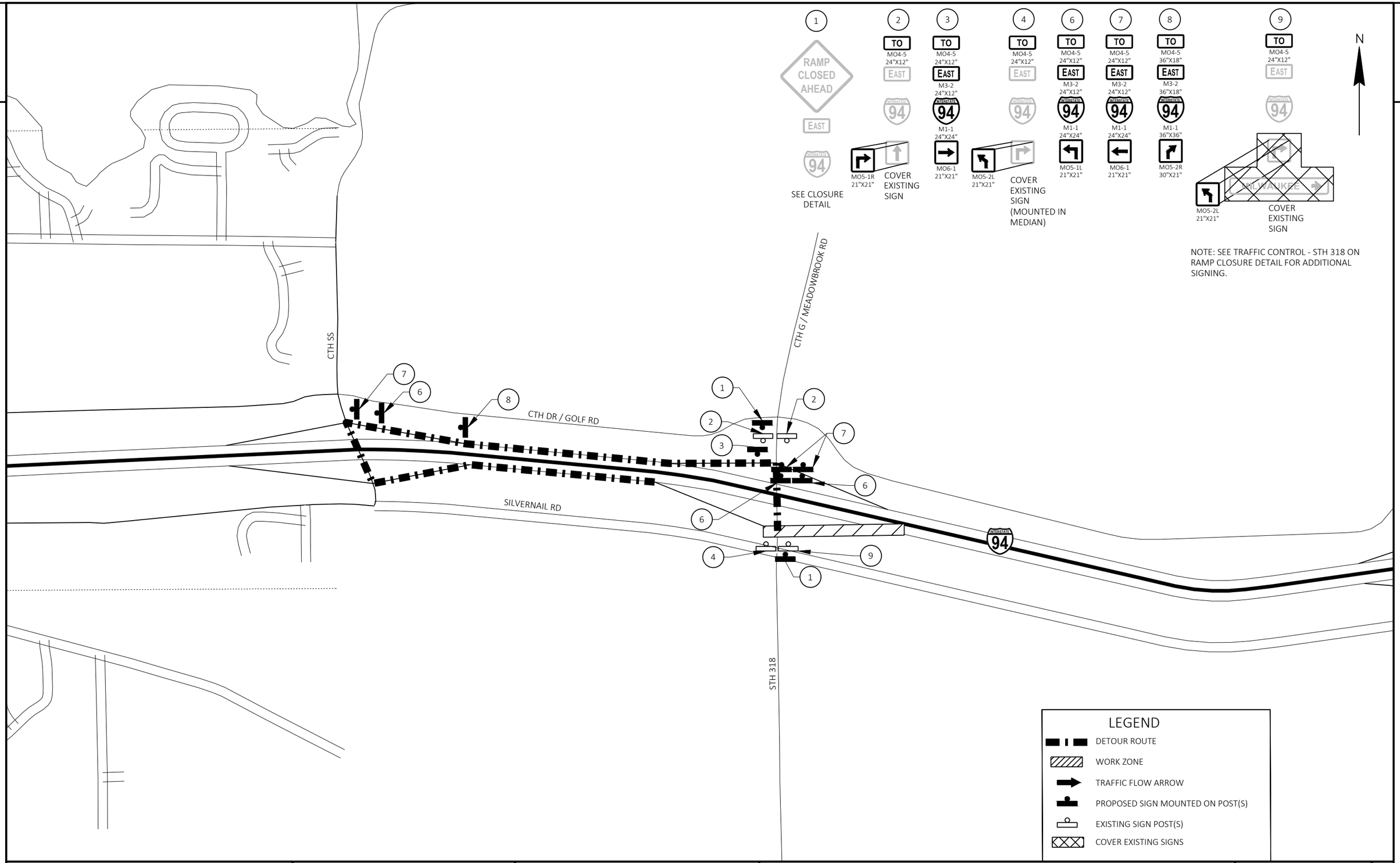
- DETOUR ROUTE
- WORK ZONE
- TRAFFIC FLOW ARROW
- PROPOSED SIGN MOUNTED ON POST(S)
- EXISTING SIGN POST(S)
- COVER EXISTING SIGNS

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	DETOUR PLAN : CTH SS EB ENTRANCE RAMP	SHEET 269	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - 027001

PLOT DATE : 10/27/2022 9:05 AM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:1000 FT

WISDOT/CADDS SHEET 42



1 — RAMP CLOSED AHEAD (EAST); SEE CLOSURE DETAIL

2 — TO MO4-5 24"X12"; EAST; 94; MO5-1R 21"X21"; COVER EXISTING SIGN

3 — TO MO4-5 24"X12"; EAST M3-2 24"X12"; 94 M1-1 24"X24"; MO6-1 21"X21"

4 — TO MO4-5 24"X12"; EAST; 94; MO5-2L 21"X21"; COVER EXISTING SIGN (MOUNTED IN MEDIAN)

6 — TO MO4-5 24"X12"; EAST M3-2 24"X12"; 94 M1-1 24"X24"; MO5-1L 21"X21"

7 — TO MO4-5 24"X12"; EAST M3-2 24"X12"; 94 M1-1 24"X24"; MO6-1 21"X21"

8 — TO MO4-5 36"X18"; EAST M3-2 36"X18"; 94 M1-1 36"X36"; MO5-2R 30"X21"

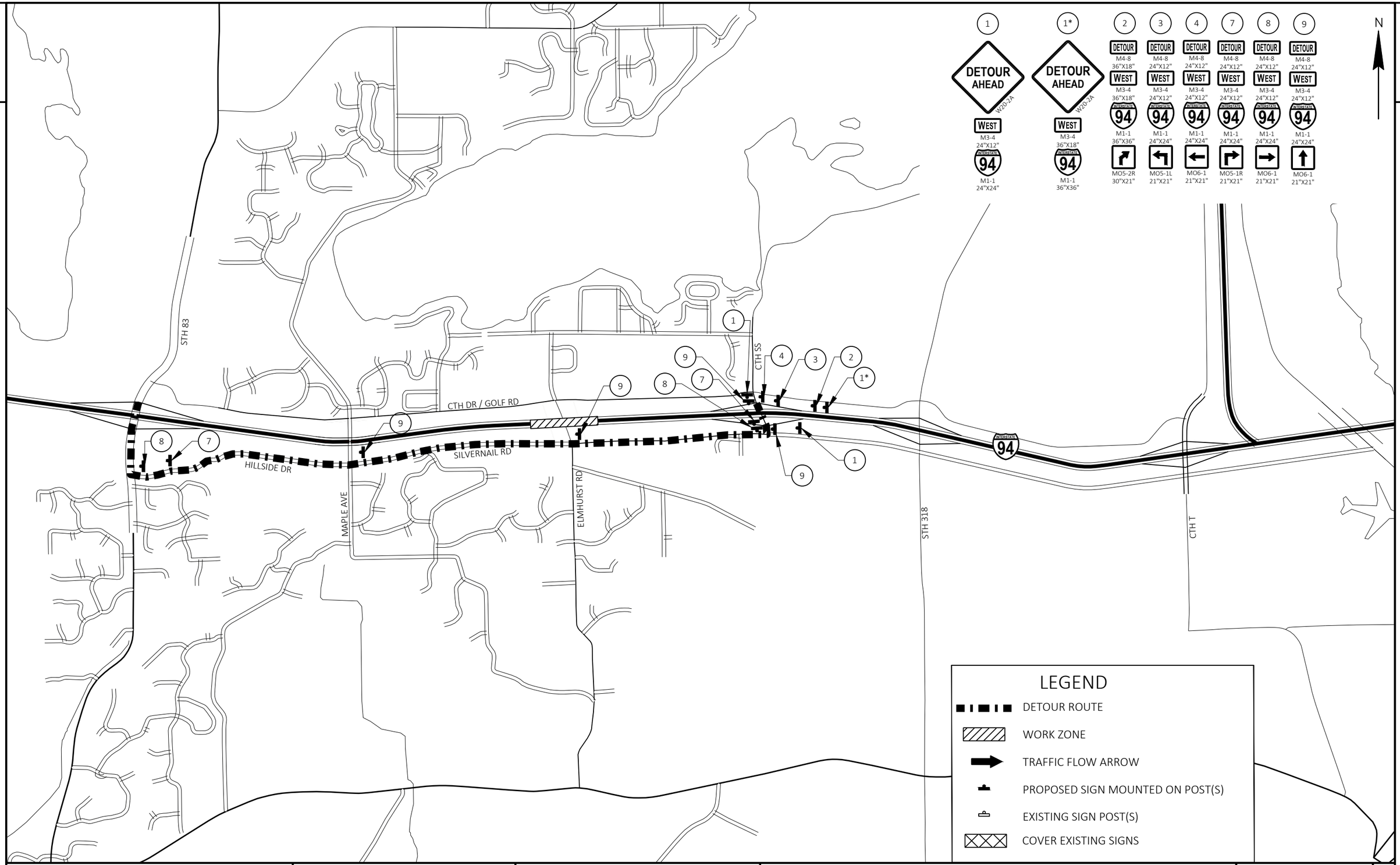
9 — TO MO4-5 24"X12"; EAST; 94; MILWAUKEE; MO5-2L 21"X21"; COVER EXISTING SIGN

NOTE: SEE TRAFFIC CONTROL - STH 318 ON RAMP CLOSURE DETAIL FOR ADDITIONAL SIGNING.

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	DETOUR PLAN : STH 318 EB ENTRANCE RAMP	SHEET 270	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\027002_DT.DWG
LAYOUT NAME - 027002

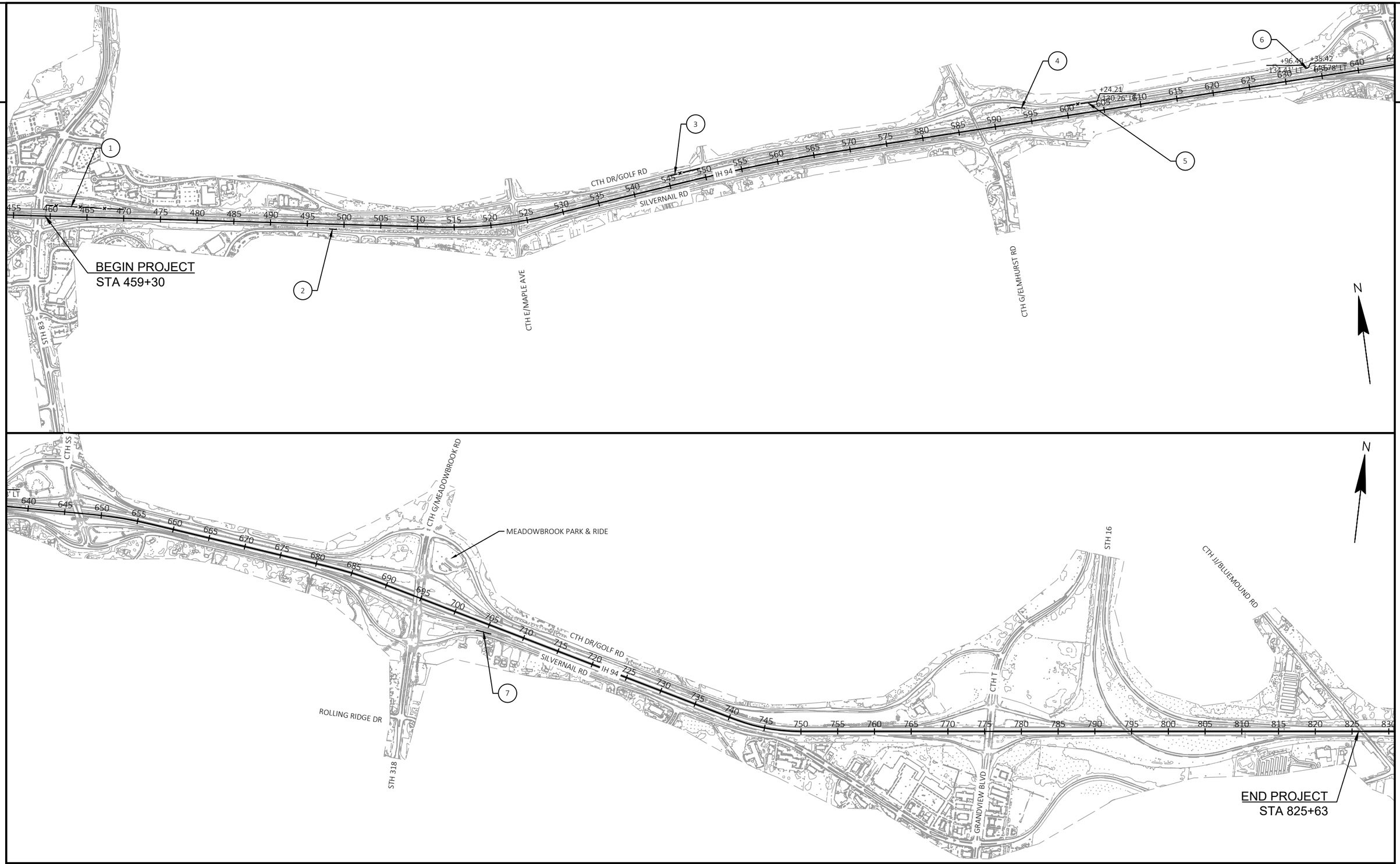
PLOT DATE : 10/5/2022 3:03 PM PLOT BY : CIERRA SMITH PLOT NAME : PLOT SCALE : 1 IN:1000 FT



2

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	DETOUR PLAN : IH 94 WB FULL CLOSURE AT ELMHURST	SHEET 271	E

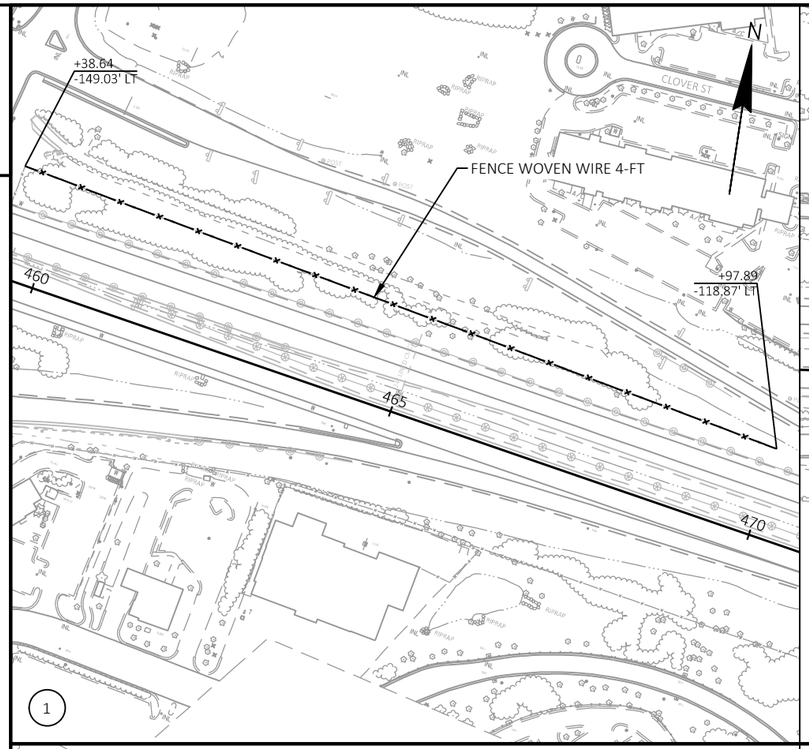
FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\027003_DT.DWG
LAYOUT NAME - 027003
PLOT DATE : 1/4/2024 3:49 PM
PLOT BY : TONY BUBLITZ
PLOT NAME :
PLOT SCALE : 1 IN:0.5 MI
WISDOT/CADDS SHEET 42

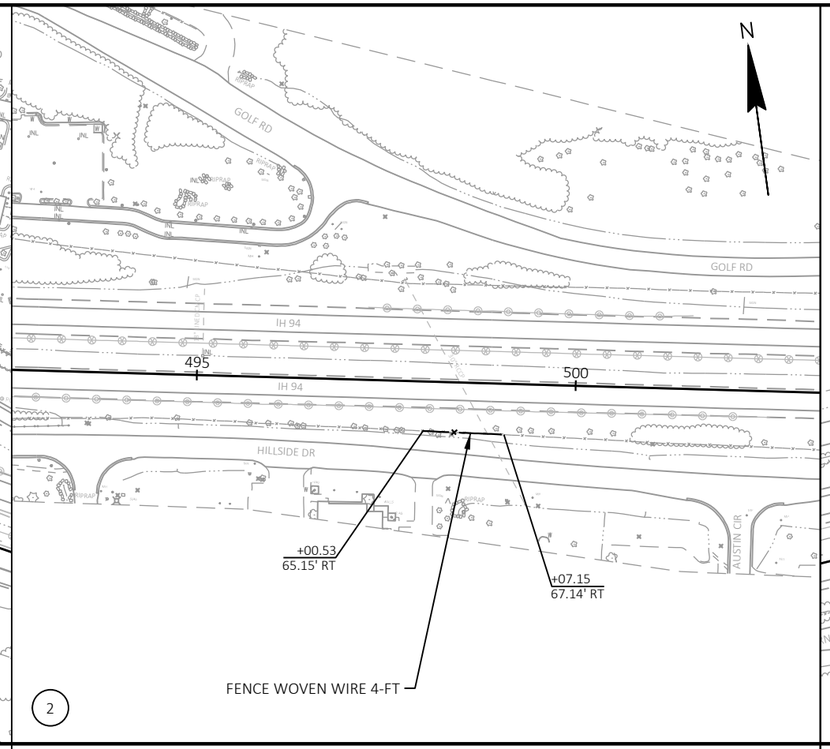


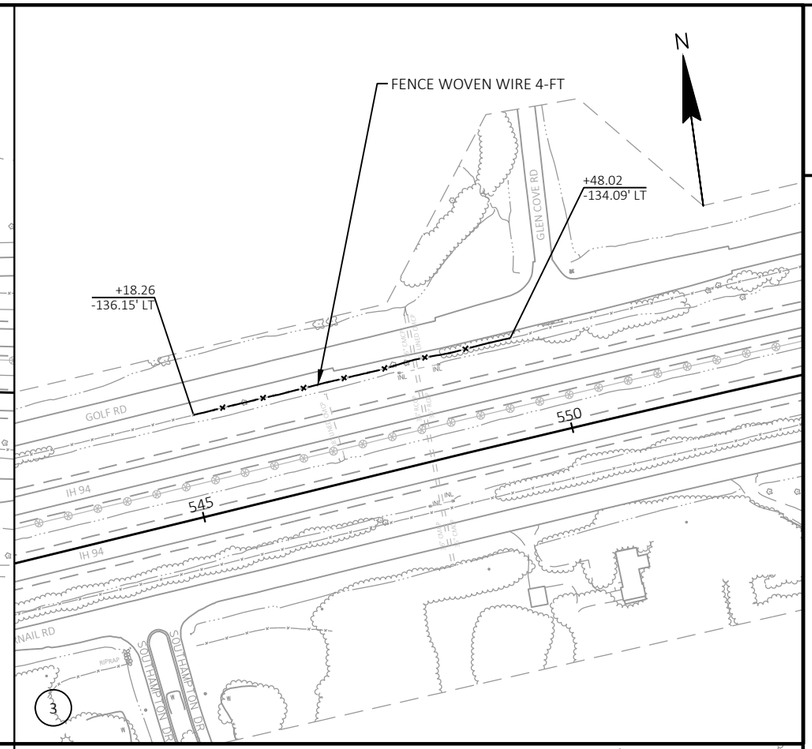
PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	FENCING PLAN	SHEET 272	E

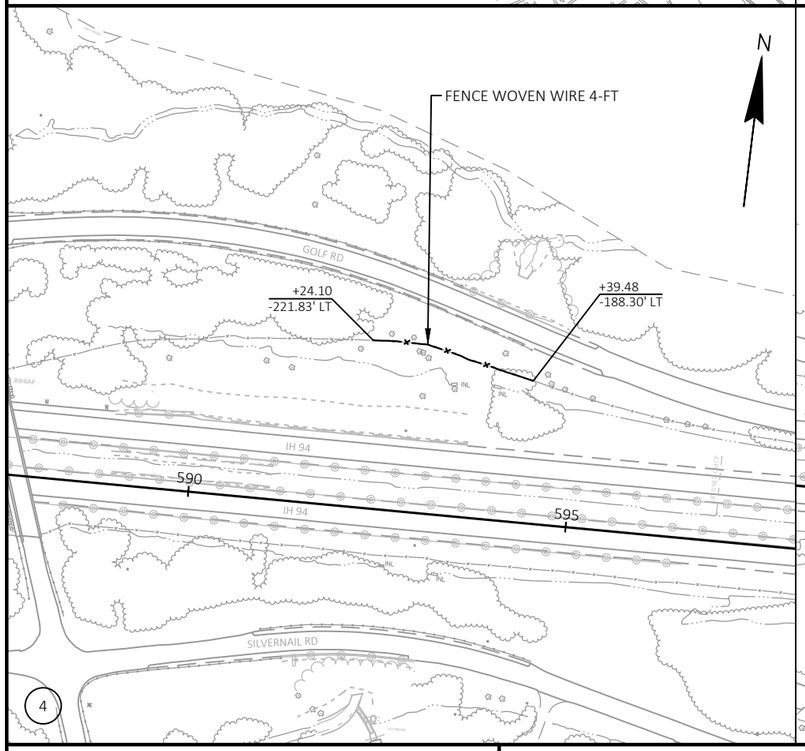
FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\027101_FN.DWG
LAYOUT NAME - 027101

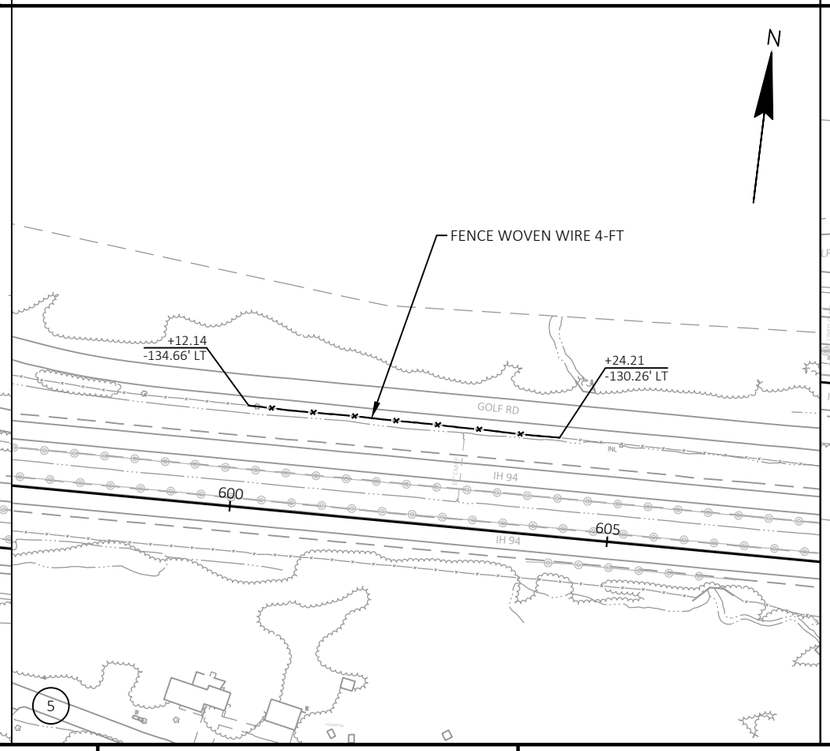
PLOT DATE : 10/7/2022 10:37 AM PLOT BY : CIERRA SMITH PLOT NAME : PLOT SCALE : 1 IN:1200 FT

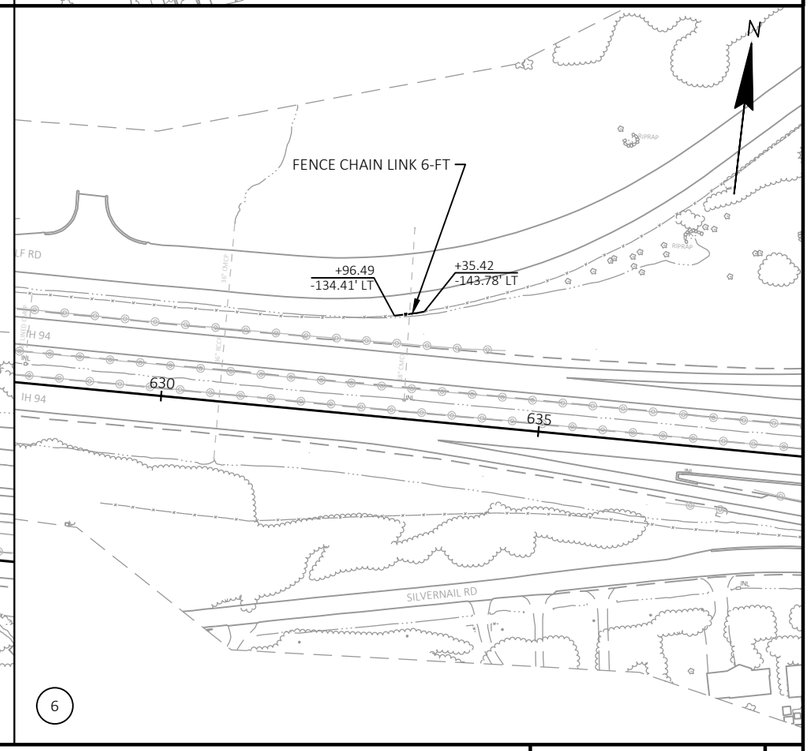




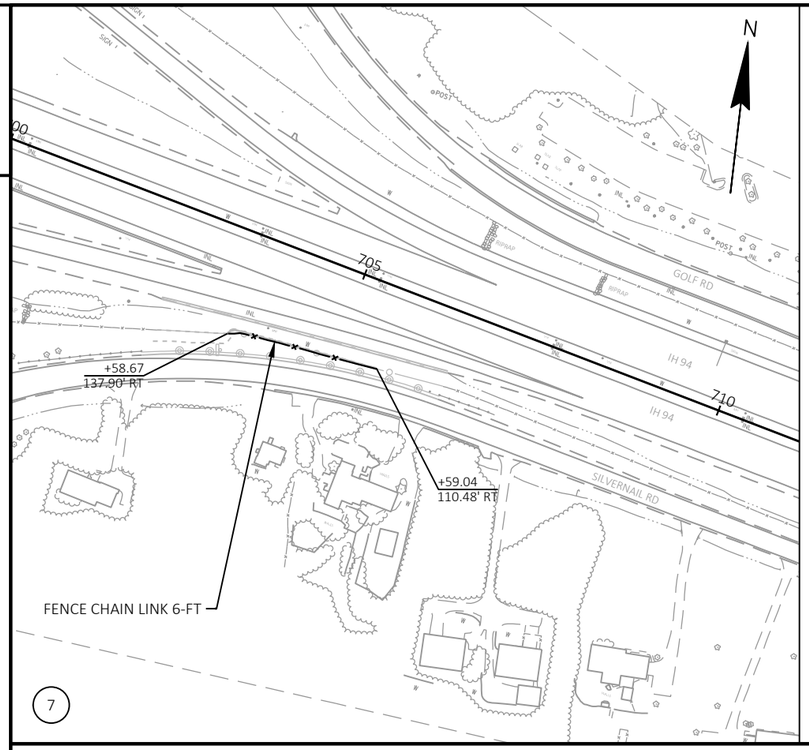








PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	FENCING PLAN	SHEET 273	E



2

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	FENCING PLAN	SHEET 274	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\027101_FN.DWG
LAYOUT NAME - 027103
PLOT DATE : 10/7/2022 10:40 AM PLOT BY : CIERRA SMITH PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 44

2

2

N

MATCH LINE 477+00

STH 83

245

240

PC: 240+15.57

450

455

460

465

BEGIN PROJECT
459+30

IH 94

470

9796.85' S81°00'57"E

475

R/L IH 94

235

PT: 232+91.33

230

PC: 229+05.82

PT: 228+06.47

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - IH 94	SHEET 275	E

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 01

PLOT DATE : 7/1/2022 9:33 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

N

MATCH LINE 504+00

2

480

485

9796.85' S81°00'57"E

490

495

IH 94

500

R/L IH 94

MATCH LINE 477+00

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - IH 94	SHEET 276	E

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 02

PLOT DATE : 7/1/2022 9:33 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

N

MATCH LINE 531+00

505

9796.85' S81°00'57"E

510

PC: 512+72.86

515

520 CURVE ML1

525

PT: 528+04.97

530

IH 94

R/L IH 94

PI: 520+43.52

CURVE ML1
PI STA = 520+43.52
Y = 174748.560
X = 651432.201
DELTA = 15°19'16" LT
D = 1°00'00"
T = 770.65'
L = 1532.11'
R = 5729.58'
PC STA = 512+72.86
Y = 174868.908
X = 650671.002
PT STA = 528+04.97
Y = 174833.621
X = 652198.145
DB = S81°00'57"E
DA = N83°39'47"E

MATCH LINE 504+00

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - IH 94	SHEET 277	E

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 03

PLOT DATE : 7/1/2022 9:33 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

N

MATCH LINE 531+00

MATCH LIN

535

540

545

550

555

2049.89' N83°39'47"E

PC: 548+54.87

IH 94

CURVE ML2

R/L IH 94

CURVE ML2

PI STA = 558+29.46
Y = 175167.446
X = 655204.147
DELTA = 4°51'50" RT
D = 0°14'59"
T = 974.59'
L = 1948.00'
R = 22946.99'
PC STA = 548+54.87
Y = 175059.877
X = 654235.516
PT STA = 568+02.87
Y = 175192.498
X = 656178.410
DB = N83°39'47"E
DA = N88°31'37"E

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - IH 94	SHEET 278	E

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 04

PLOT DATE : 7/1/2022 9:33 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

N

MATCH LINE 584+00

PI: 558+29.46

PT: 568+02.87

560

565

570

8099.23' N88°31'37"E

575

580

8099.23' N88°31'37"E

IH 94

R/L IH 94

MATCH LINE 557+00

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - IH 94	SHEET 279	E

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 05

PLOT DATE : 7/1/2022 9:33 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

N

MATCH LINE 610+00

585

590

595

600

605

IH 94

8099.23' N88°31'37"E

R/L IH 94

MATCH LINE 584+00

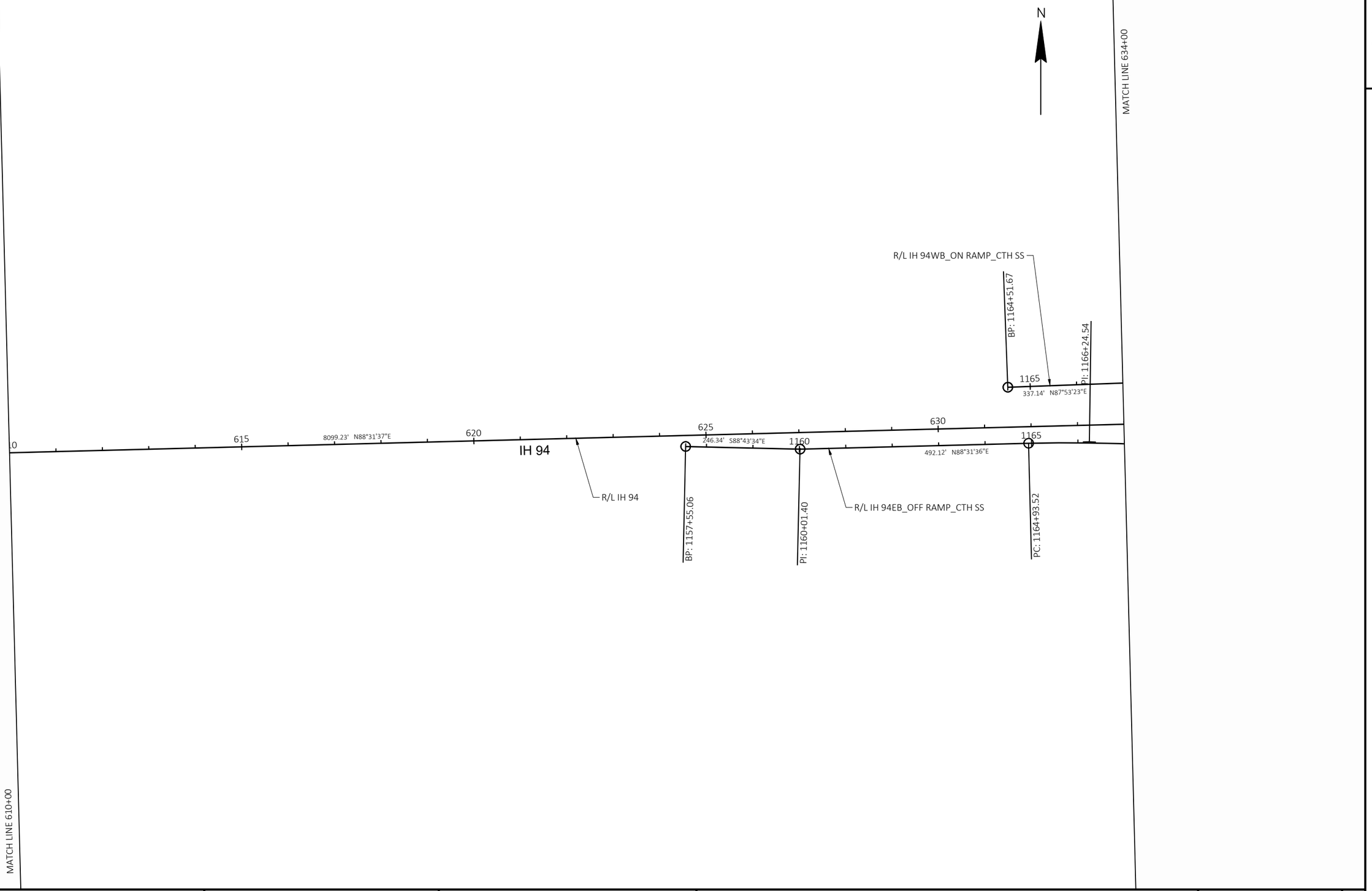
PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - IH 94	SHEET 280	E

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 06

PLOT DATE : 7/1/2022 9:33 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - IH 94	SHEET 281	E

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 07
PLOT DATE : 7/1/2022 9:33 AM
PLOT BY : TONY BACIAK
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

N

CURVE SS1

PI STA = 1171+96.66
Y = 175468.910
X = 663267.764
DELTA = 9°28'33" LT
D = 1°09'52"
T = 407.84'
L = 813.83'
R = 4920.81'
PC STA = 1167+88.81
Y = 175453.894
X = 662860.196
PT STA = 1176+02.64
Y = 175550.821
X = 663667.299
DB = N87°53'24"E
DA = N78°24'51"E

CURVE SS2

PI STA = 1180+79.10
Y = 175628.530
X = 664177.386
DELTA = 12°34'11" RT
D = 4°51'06"
T = 130.07'
L = 259.09'
R = 1180.98'
PC STA = 1179+49.03
Y = 175629.547
X = 664047.324
PT STA = 1182+08.12
Y = 175599.233
X = 664304.109
DB = S89°33'08"E
DA = S76°58'57"E

CURVE SS3

PI STA = 1189+53.21
Y = 175431.401
X = 665030.055
DELTA = 6°24'01" LT
D = 1°09'52"
T = 275.13'
L = 549.69'
R = 4920.82'
PC STA = 1186+78.08
Y = 175493.374
X = 664761.995
PT STA = 1192+27.77
Y = 175399.696
X = 665303.354
DB = S76°58'57"E
DA = S83°22'58"E

PT: 43+46.07
PC: 1167+88.81
PT: 1176+02.64
PC: 38+82.51
EP: 1179+25.26
BP: 1178+78.81
PC: 1179+49.03
PI: 1180+79.10
PT: 1182+08.12
PC: 649+02.10
PI: 653+06.92
PC: 1186+78.08
PI: 1188+75.85
PT: 657+10.40
EP: 1192+27.77
EP: 1196+28.31
PI: 1174+41.92
EP: 1180+87.35
BP: 1180+80.52
PC: 1181+16.67
IH 94
R/L IH 94
CURVE SS1
CURVE SS2
CURVE SS3
CURVE ML3
CURVE SS4
CURVE SS5
CURVE SS6
1170
1175
1180
1185
1190
1195
635
640
645
650
655
660
469.96' S76°58'57"E
2441.67' S83°22'36"E
514.01' S86°53'57"E
PI: 1171+96.66
PT: 1167+55.42
PC: 1172+69.43
PT: 1176+13.53
PC: 1177+29.64
PI: 1179+13.06
PI: 1189+53.21
PT: 32+48.00
BP: 30+39.19
MATCH LINE 634+00

CURVE ML3

PI STA = 653+06.92
Y = 175411.099
X = 664679.653
DELTA = 8°05'47" RT
D = 1°00'06"
T = 404.82'
L = 808.30'
R = 5720.11'
PC STA = 649+02.10
Y = 175400.693
X = 664274.963
PT STA = 657+10.40
Y = 175364.406
X = 665081.775
DB = N88°31'37"E
DA = S83°22'36"E

CURVE SS6

PI STA = 1174+41.92
Y = 175280.125
X = 663515.316
DELTA = 10°00'59" RT
D = 2°54'39"
T = 172.49'
L = 344.10'
R = 1968.32'
PC STA = 1172+69.43
Y = 175289.456
X = 663343.077
PT STA = 1176+13.53
Y = 175240.979
X = 663683.306
DB = S86°53'57"E
DA = S76°52'58"E

CURVE SS5

PI STA = 1179+13.06
Y = 175173.003
X = 663975.019
DELTA = 31°14'14" LT
D = 8°43'58"
T = 183.42'
L = 357.70'
R = 656.10'
PC STA = 1177+29.64
Y = 175214.629
X = 663796.387
PT STA = 1180+87.35
Y = 175230.047
X = 664149.341
DB = S76°52'58"E
DA = N71°52'48"E

CURVE SS4

PI STA = 1188+75.85
Y = 175332.390
X = 664934.499
DELTA = 13°12'03" RT
D = 0°52'24"
T = 759.18'
L = 1511.64'
R = 6561.06'
PC STA = 1181+16.67
Y = 175245.798
X = 664180.271
PT STA = 1196+28.31
Y = 175244.457
X = 665688.571
DB = N83°27'02"E
DA = S83°20'55"E

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - IH 94	SHEET 282	E

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 08
PLOT DATE : 7/1/2022 9:33 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

2

N

CURVE G5

PI STA = 228+99.65
Y = 175157.993
X = 667386.753
DELTA = 5°38'28" LT
D = 0°33'21"
T = 507.92'
L = 1015.01'
R = 10309.55'
PC STA = 223+91.74
Y = 175216.554
X = 666882.223
PT STA = 234+06.75
Y = 175149.309
X = 667894.595
DB = S83°22'46"E
DA = S89°01'13"E

CURVE ML4

PI STA = 685+29.83
Y = 175039.205
X = 667882.385
DELTA = 7°32'41" RT
D = 1°00'00"
T = 377.76'
L = 754.42'
R = 5729.26'
PC STA = 681+52.07
Y = 175082.777
X = 667507.150
PT STA = 689+06.49
Y = 174946.744
X = 668248.650
DB = S83°22'36"E
DA = S75°49'55"E

CURVE G1

PI STA = 233+51.80
Y = 174951.526
X = 667816.160
DELTA = 9°07'49" RT
D = 1°24'54"
T = 323.29'
L = 645.21'
R = 4048.95'
PC STA = 230+28.51
Y = 175013.905
X = 667498.946
PT STA = 236+73.72
Y = 174839.603
X = 668119.457
DB = S78°52'30"E
DA = S69°44'41"E

MATCH LINE 664+00

MATCH LINE 690+00

665 670 675 680 685 690

225 230 235

2441.67' S83°22'36"E

R/L IH 94

BP: 223+91.74

BP: 227+68.98

PI: 228+99.65

PI: 229+19.38

PC: 230+28.51

PC: 681+52.07

PI: 233+51.80

PI: 685+29.83

PT: 234+06.75

PC: 238+04.71

PT: 689+06.49

PT: 236+73.72

150.40' S78°52'30"E

397.96' S89°01'13"E

284.76' S69°44'41"E

CURVE ML4

CURVE G1

CURVE G5

PI:

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - IH 94	SHEET 283	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 09

PLOT DATE : 1/18/2024 1:17 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

N

CURVE G2
PI STA = 241+07.43
Y = 174689.451
X = 668526.342
DELTA = 5°50'28" LT
D = 1°57'45"
T = 148.94'
L = 297.63'
R = 2919.48'
PC STA = 239+58.48
Y = 174741.017
X = 668386.609
PT STA = 242+56.11
Y = 174652.374
X = 668670.598
DB = S69°44'40"E
DA = S75°35'08"E

CURVE G3
PI STA = 246+14.12
Y = 174586.938
X = 669020.023
DELTA = 7°43'47" LT
D = 2°00'00"
T = 193.53'
L = 386.47'
R = 2864.61'
PC STA = 244+20.59
Y = 174635.120
X = 668832.591
PT STA = 248+07.06
Y = 174564.404
X = 669212.233
DB = S75°35'01"E
DA = S83°18'48"E

CURVE G4
PI STA = 253+76.50
Y = 174498.099
X = 669777.797
DELTA = 7°28'44" RT
D = 1°00'00"
T = 374.45'
L = 747.84'
R = 5729.16'
PC STA = 250+02.05
Y = 174541.700
X = 669405.894
PT STA = 257+49.88
Y = 174406.462
X = 670140.861
DB = S83°18'48"E
DA = S75°50'04"E

CURVE G6
PI STA = 240+27.73
Y = 175138.690
X = 668515.489
DELTA = 4°27'31" RT
D = 1°00'00"
T = 223.03'
L = 445.83'
R = 5729.29'
PC STA = 238+04.71
Y = 175142.504
X = 668292.494
PT STA = 242+50.54
Y = 175117.553
X = 668737.512
DB = S89°01'13"E
DA = S84°33'42"E

CURVE G7
PI STA = 244+75.97
Y = 175109.409
X = 669032.013
DELTA = 25°47'37" RT
D = 6°48'15"
T = 192.81'
L = 379.08'
R = 842.07'
PC STA = 242+83.16
Y = 175130.413
X = 668840.352
PT STA = 246+62.24
Y = 175007.100
X = 669195.440
DB = S83°44'45"E
DA = S57°57'09"E

CURVE G8
PI STA = 253+70.82
Y = 174631.112
X = 669796.037
DELTA = 17°52'53" LT
D = 4°00'01"
T = 225.34'
L = 447.01'
R = 1432.31'
PC STA = 251+45.49
Y = 174750.680
X = 669605.039
PT STA = 255+92.50
Y = 174575.965
X = 670014.521
DB = S57°57'10"E
DA = S75°50'03"E

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - IH 94	SHEET 284	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 10
PLOT DATE : 1/18/2024 1:18 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

2

N

MATCH LINE 740+00

EP: 268+70.00

720

725

730

735

R/L IH 94

5174.53' S75°49'55"E

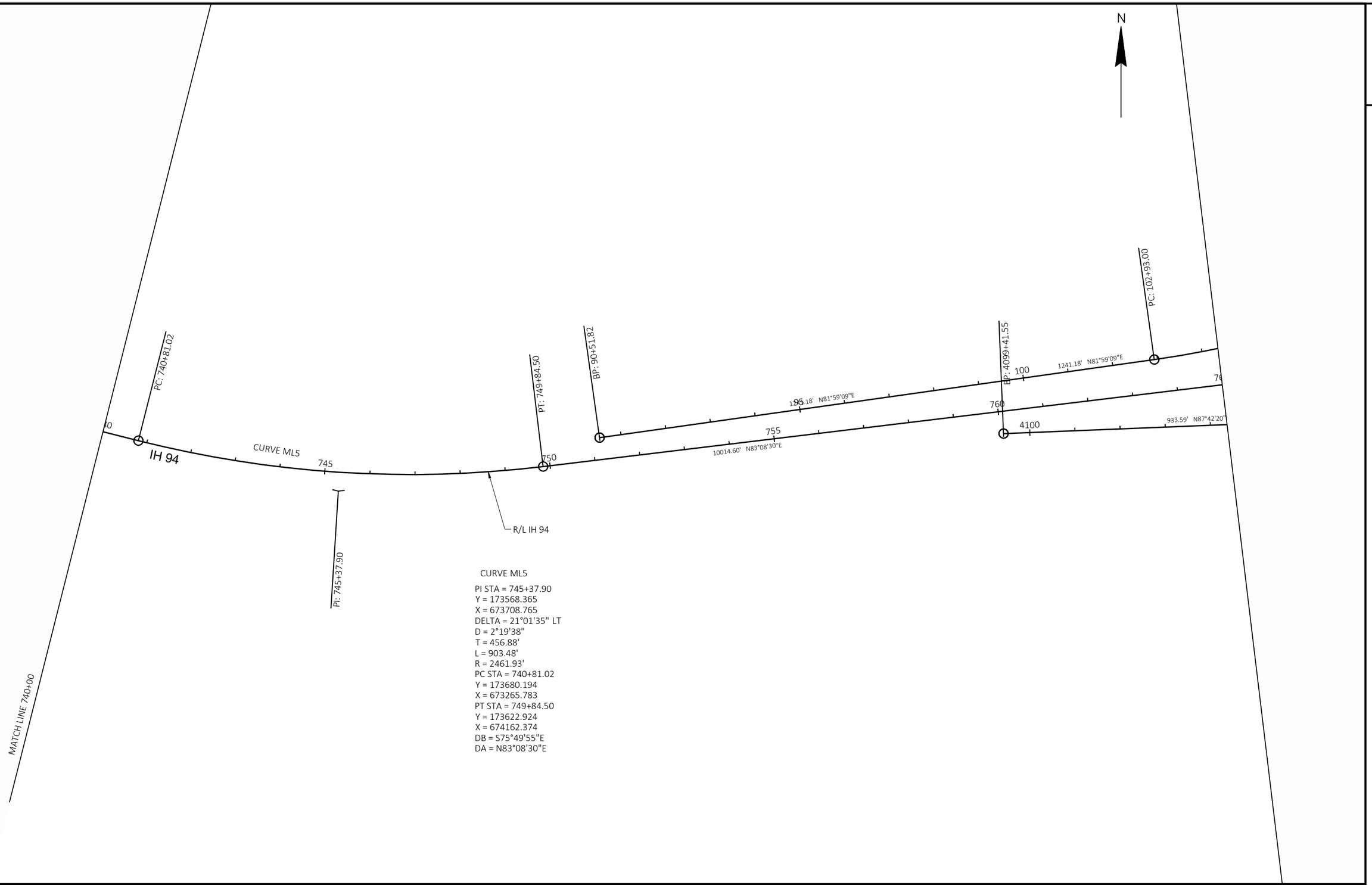
PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - IH 94	SHEET 285	E

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 11

PLOT DATE : 7/1/2022 9:33 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2



CURVE ML5

PI STA = 745+37.90
Y = 173568.365
X = 673708.765
DELTA = 21°01'35" LT
D = 2°19'38"
T = 456.88'
L = 903.48'
R = 2461.93'
PC STA = 740+81.02
Y = 173680.194
X = 673265.783
PT STA = 749+84.50
Y = 173622.924
X = 674162.374
DB = S75°49'55"E
DA = N83°08'30"E

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - IH 94	SHEET 286	E

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 12
PLOT DATE : 7/1/2022 9:33 AM
PLOT BY : TONY BACIAK
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

N

CURVE RAMP A1
PI STA = 106+39.00
Y = 173908.166
X = 675859.032
DELTA = 17°10'14" LT
D = 2°30'00"
T = 346.00'
L = 686.82'
R = 2291.83'
PC STA = 102+93.00
Y = 173859.927
X = 675516.407
PT STA = 109+79.82
Y = 174055.404
X = 676172.144
DB = N81°59'09"E
DA = N64°48'55"E

CURVE RAMP A2
PI STA = 113+78.66
Y = 174225.128
X = 676533.077
DELTA = 9°21'29" RT
D = 3°45'00"
T = 125.05'
L = 249.55'
R = 1527.89'
PC STA = 112+53.61
Y = 174171.913
X = 676419.911
PT STA = 115+03.16
Y = 174259.234
X = 676653.389
DB = N64°48'55"E
DA = N74°10'24"E

CURVE RAMP B1
PI STA = 2123+68.05
Y = 174161.738
X = 677572.802
DELTA = 10°11'29" LT
D = 4°00'00"
T = 127.73'
L = 254.78'
R = 1432.39'
PC STA = 2122+40.32
Y = 174179.287
X = 677446.287
PT STA = 2124+95.10
Y = 174166.852
X = 677700.427
DB = S82°06'12"E
DA = N87°42'20"E

PC: 131+98.31

PI: 115+03.16

PI: 115+71.30

BP: 2115+11.65

PC: 112+53.61

PT: 109+79.82

PC: 2122+40.32

PT: 2124+95.10

CURVE RAMP A2

CURVE RAMP B1

N87°42'20"E 857.27'

PI: 3119+79.01

PT: 3121+43.39

PC: 3118+09.19

PI: 2123+68.05

PI: 4108+75.14

PI: 4109+62.55

PT: 4110+48.88

PI: 125+01.82

IH 94

PC: 4112+96.36

PT: 4114+15.66

PT: 3116+31.33

R/L IH 94

CURVE RAMP C2

CURVE RAMP D1

CURVE RAMP D2

CURVE RAMP C1

PI: 122+10.00

PI: 4113+56.18

PI: 3115+61.97

PI: 1060+39.00

CURVE RAMP D1
PI STA = 4109+62.55
Y = 173736.853
X = 676202.580
DELTA = 15°38'12" RT
D = 9°00'00"
T = 87.41'
L = 173.74'
R = 636.62'
PC STA = 4108+75.14
Y = 173733.354
X = 676115.236
PT STA = 4110+48.88
Y = 173716.681
X = 676287.633
DB = N87°42'20"E
DA = S76°39'28"E

CURVE RAMP D2
PI STA = 4113+56.18
Y = 173645.765
X = 676586.646
DELTA = 10°44'12" LT
D = 8°59'59"
T = 59.83'
L = 119.30'
R = 636.64'
PC STA = 4112+96.36
Y = 173659.571
X = 676528.435
PT STA = 4114+15.66
Y = 173643.046
X = 676646.409
DB = S76°39'28"E
DA = S87°23'40"E

CURVE RAMP C1
PI STA = 3115+61.97
Y = 173683.790
X = 676862.385
DELTA = 15°00'00" LT
D = 10°45'01"
T = 70.17'
L = 139.53'
R = 532.97'
PC STA = 3114+91.80
Y = 173662.004
X = 676795.687
PT STA = 3116+31.33
Y = 173722.097
X = 676921.172
DB = N71°54'38"E
DA = N56°54'38"E

CURVE RAMP C2
PI STA = 3119+79.01
Y = 173911.909
X = 677212.460
DELTA = 25°03'55" RT
D = 7°30'00"
T = 169.82'
L = 334.20'
R = 763.94'
PC STA = 3118+09.19
Y = 173819.198
X = 677070.184
PT STA = 3121+43.39
Y = 173935.614
X = 677380.614
DB = N56°54'38"E
DA = N81°58'33"E

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - IH 94	SHEET 287	E

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 13
PLOT DATE : 7/1/2022 9:33 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

2

N

MATC

EP: 2133+52.38

EP: 3133+81.31

10014.60' N83°08'30"E

795

800

805

810

815

IH 94

R/L IH 94

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - IH 94	SHEET 288	E

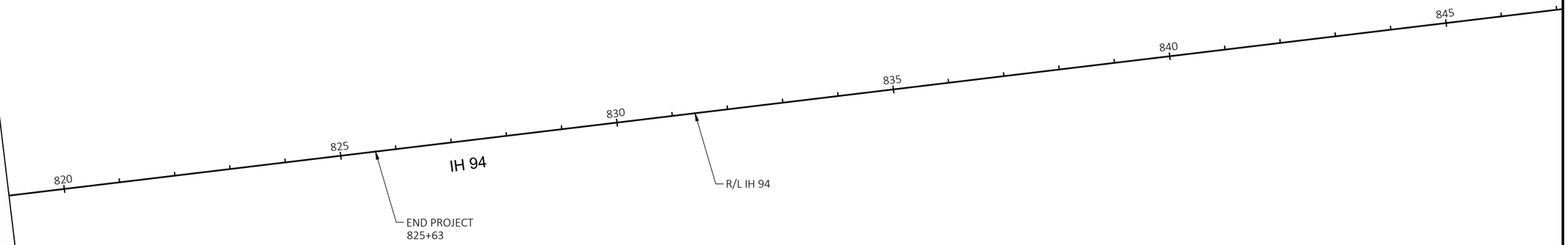
FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 14

PLOT DATE : 7/1/2022 9:33 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

N

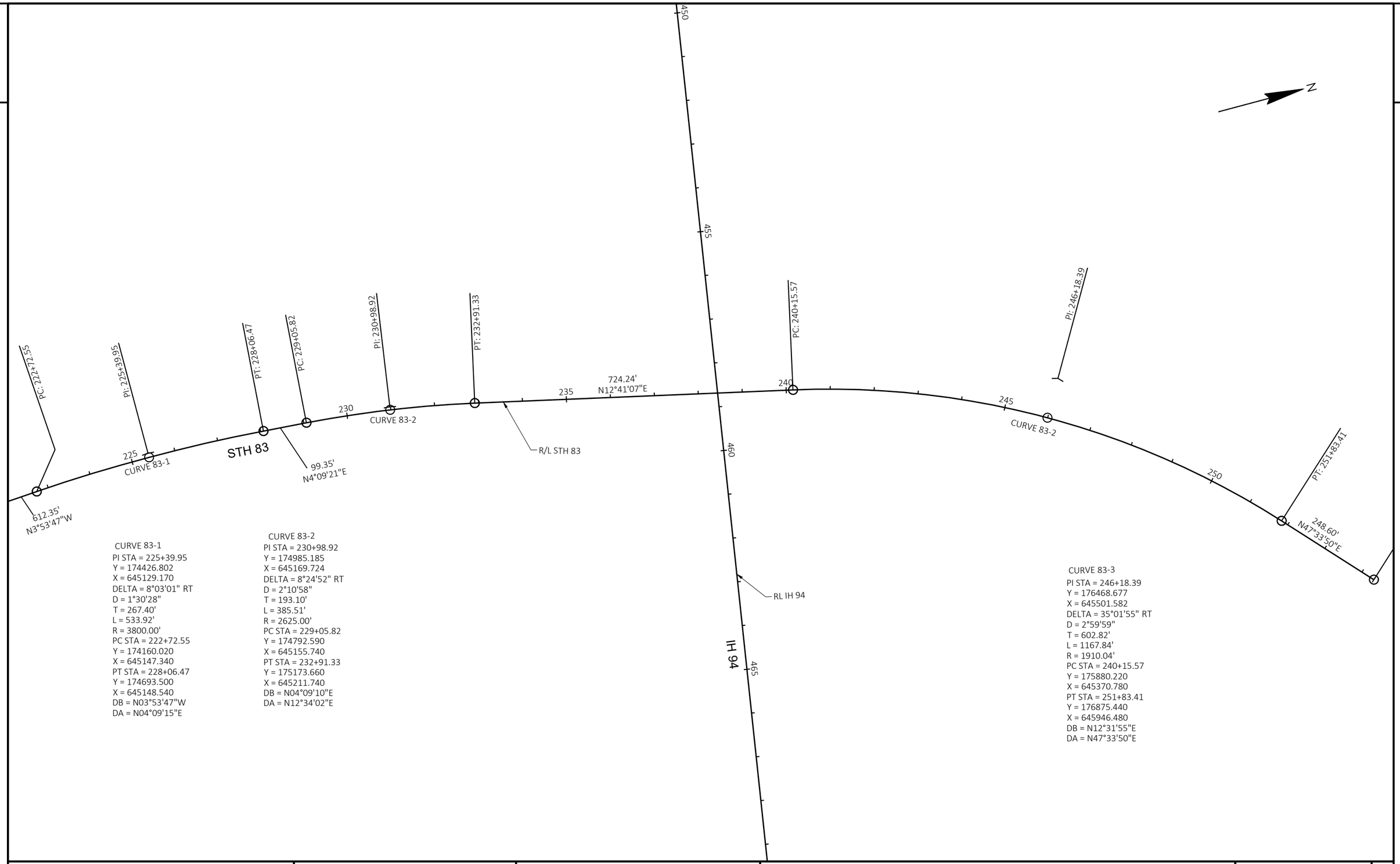


PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - IH 94	SHEET 289	E

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 15

PLOT DATE : 7/1/2022 9:33 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:200 FT

2



CURVE 83-1
PI STA = 225+39.95
Y = 174426.802
X = 645129.170
DELTA = 8°03'01" RT
D = 1°30'28"
T = 267.40'
L = 533.92'
R = 3800.00'
PC STA = 222+72.55
Y = 174160.020
X = 645147.340
PT STA = 228+06.47
Y = 174693.500
X = 645148.540
DB = N03°53'47"W
DA = N04°09'15"E

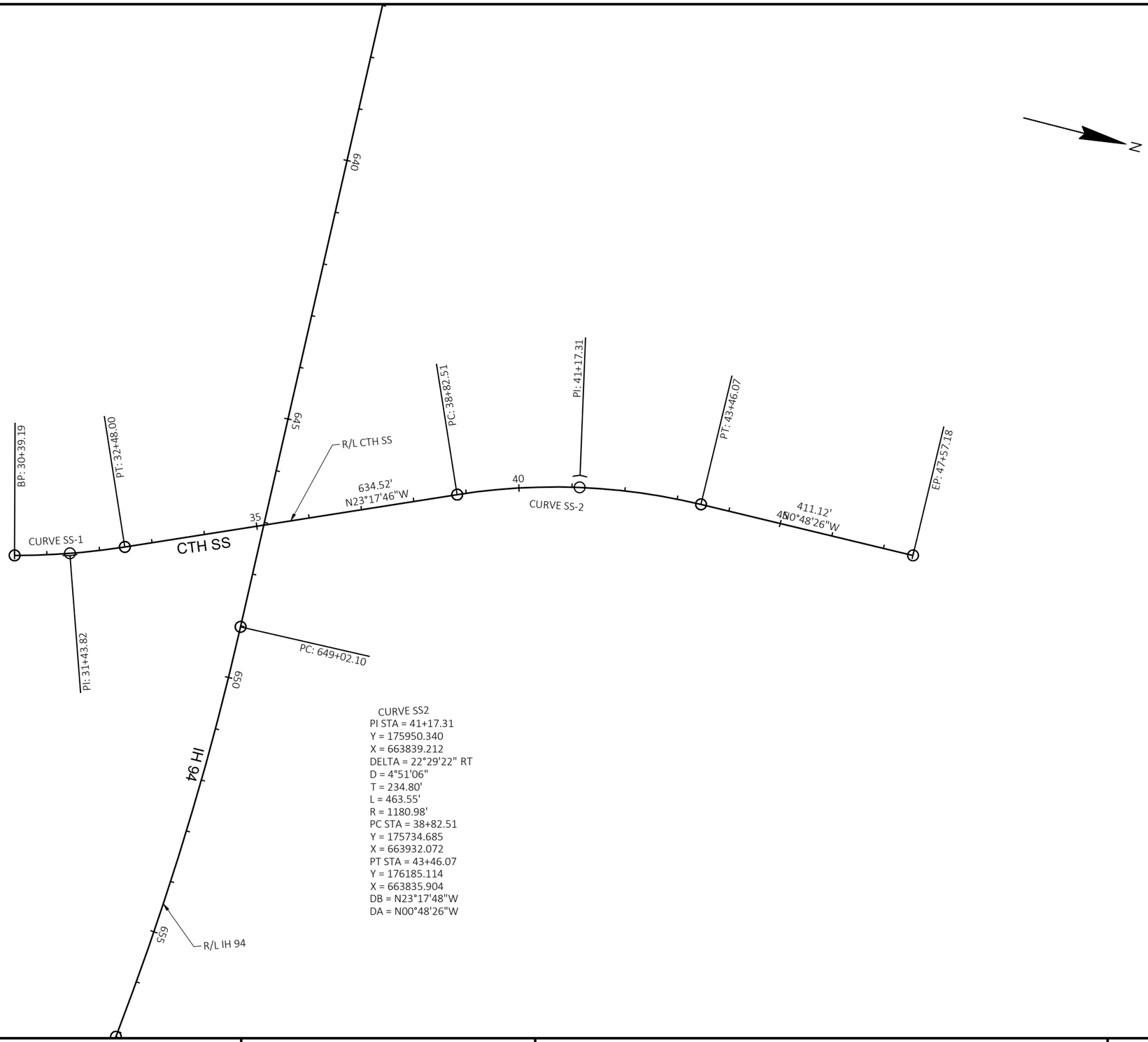
CURVE 83-2
PI STA = 230+98.92
Y = 174985.185
X = 645169.724
DELTA = 8°24'52" RT
D = 2°10'58"
T = 193.10'
L = 385.51'
R = 2625.00'
PC STA = 229+05.82
Y = 174792.590
X = 645155.740
PT STA = 232+91.33
Y = 175173.660
X = 645211.740
DB = N04°09'10"E
DA = N12°34'02"E

CURVE 83-3
PI STA = 246+18.39
Y = 176468.677
X = 645501.582
DELTA = 35°01'55" RT
D = 2°59'59"
T = 602.82'
L = 1167.84'
R = 1910.04'
PC STA = 240+15.57
Y = 175880.220
X = 645370.780
PT STA = 251+83.41
Y = 176875.440
X = 645946.480
DB = N12°31'55"E
DA = N47°33'50"E

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - STH 83	SHEET 290	E

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027202-AD.DWG
LAYOUT NAME - 01
PLOT DATE : 7/1/2022 9:35 AM
PLOT BY : TONY BACIAK
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2



CURVE SS-1
PI STA = 31+43.82
Y = 175055.805
X = 664224.391
DELTA = 9°07'05" LT
D = 4°22'00"
T = 104.63'
L = 208.81'
R = 1312.10'
PC STA = 30+39.19
Y = 174954.367
X = 664250.019
PT STA = 32+48.00
Y = 175151.900
X = 664183.012
DB = N14°10'44"W
DA = N23°17'49"W

CURVE SS2
PI STA = 41+17.31
Y = 175950.340
X = 663839.212
DELTA = 22°29'22" RT
D = 4°51'06"
T = 234.80'
L = 463.55'
R = 1180.98'
PC STA = 38+82.51
Y = 175734.685
X = 663932.072
PT STA = 43+46.07
Y = 176185.114
X = 663835.904
DB = N23°17'48"W
DA = N00°48'26"W

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - CTH-SS	SHEET 291	E

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027203-AD.DWG
LAYOUT NAME - 01
PLOT DATE : 7/1/2022 9:37 AM
PLOT BY : TONY BACIAK
PLOT NAME :
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

2

N

685

690

695

700

PT: 689+06.49

PI: 275+09.46

PC: 288+46.86

PI: 293+24.78

265

1435.68' N00°45'50"E

270

275

280

285

1337.41' N00°46'06"E

290

295

CTH G

R/L CTH G

CTH G STA 283+81

IH 94

R/L IH 94

CURVE G1

PI STA = 293+24.78
Y = 175759.512
X = 668779.938
DELTA = 14°15'52" RT
D = 1°30'00"
T = 477.92'
L = 950.89'
R = 3819.47'
PC STA = 288+46.86
Y = 175281.638
X = 668773.529
PT STA = 297+97.76
Y = 176221.074
X = 668903.896
DB = N00°46'06"E
DA = N15°01'58"E

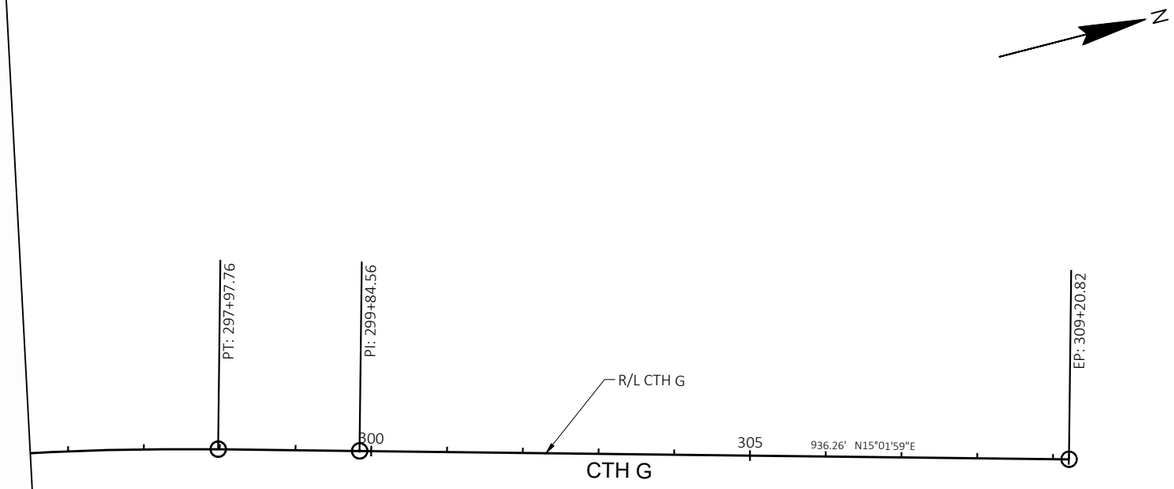
PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - CTH G	SHEET 292	E

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027204-AD.DWG
LAYOUT NAME - 01

PLOT DATE : 7/1/2022 9:39 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2



MATCH LINE 295+50

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - CTH G	SHEET 293	E

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027204-AD.DWG
LAYOUT NAME - 02
PLOT DATE : 7/1/2022 9:39 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 42

2

2

N

PC: 4108+75.14

PT: 109+79.82

770

4110

PT: 4110+48.88

PC: 112+53.61

R/L RAMP A

R/L RAMP B

PI: 122+00.00

PC: 4112+96.36

PI: 125+01.82

PT: 115+03.16

PC: 131+98.31

PI: 137+48.12

775

PT: 4114+19.06

BP: 3114+19.06

EP: 1199+10 N00°10'34"W 696.49'

CTH T

115

120

130

135

EP: 4114+09.80

PC: 3114+46.82

BP: 2115+11.65

CURVE T-1

R/L CTH T

IH 94

PT: 3116+31.33

PC: 3118+09.19

R/L RAMP C

R/L IH-94

780

2120

R/L RAMP D

3120

PT: 3121+43.39

PC: 2122+40.32

785

PT: 2124+95.10

140

PT: 142+23.58

N51°05'14"E 257.49'

145

CURVE T-1

PI STA = 137+48.12
Y = 175177.517
X = 676721.762
DELTA = 51°15'48" RT
D = 5°00'00"
T = 549.81'
L = 1025.27'
R = 1145.92'
PC STA = 131+98.31
Y = 174627.708
X = 676723.452
PT STA = 142+23.58
Y = 175522.874
X = 677149.572
DB = N00°10'34"W
DA = N51°05'14"E

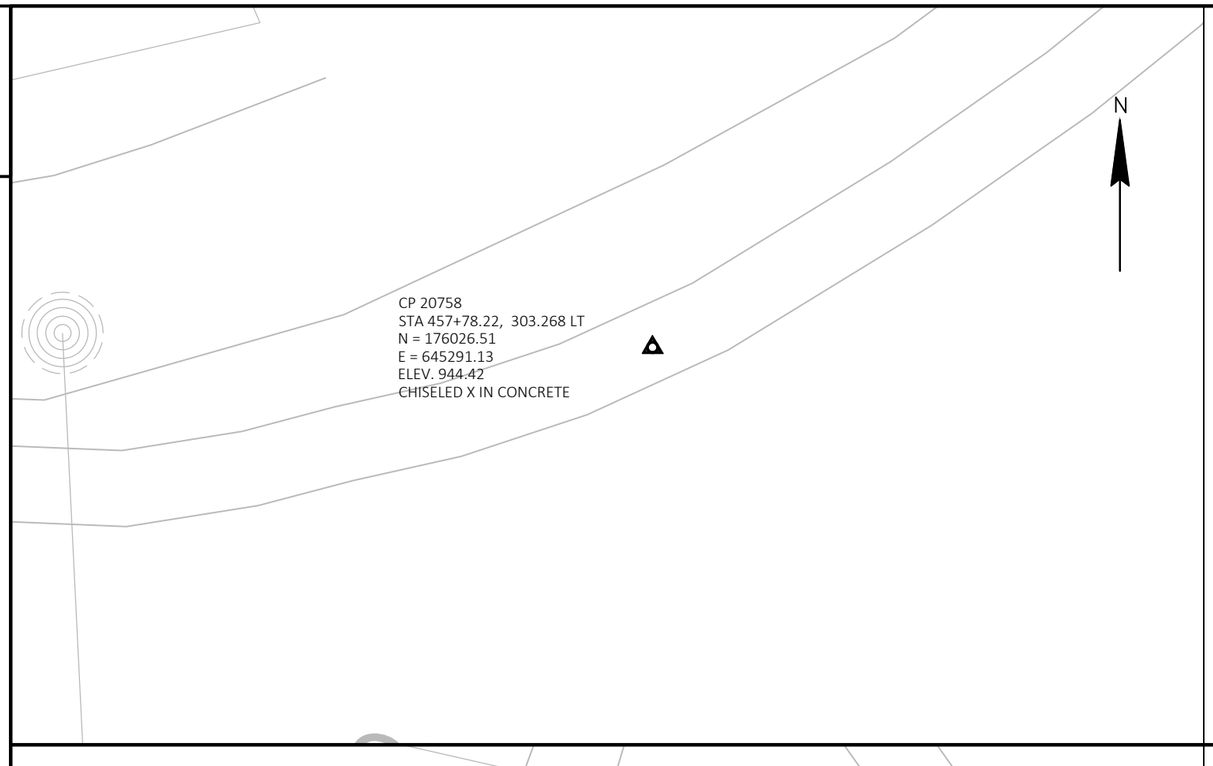
PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	ALIGNMENT PLAN - CTH T	SHEET 294	E

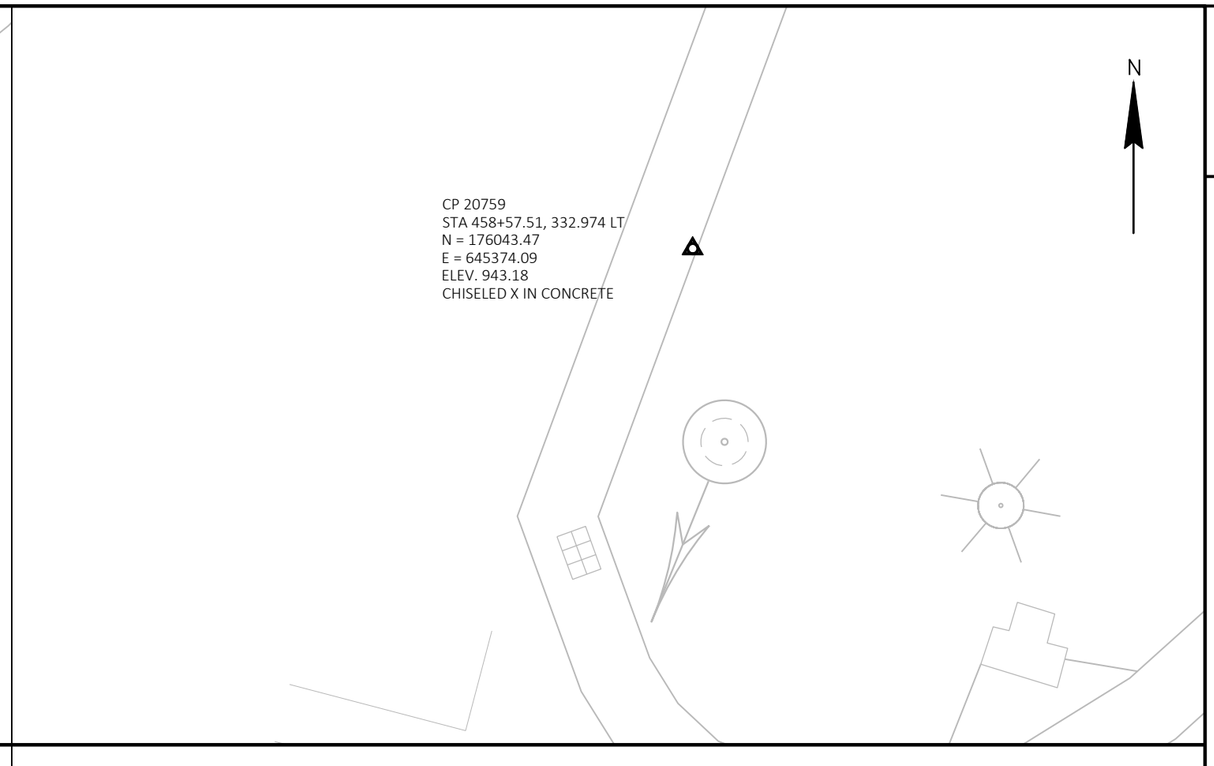
FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027205-AD.DWG
LAYOUT NAME - 01

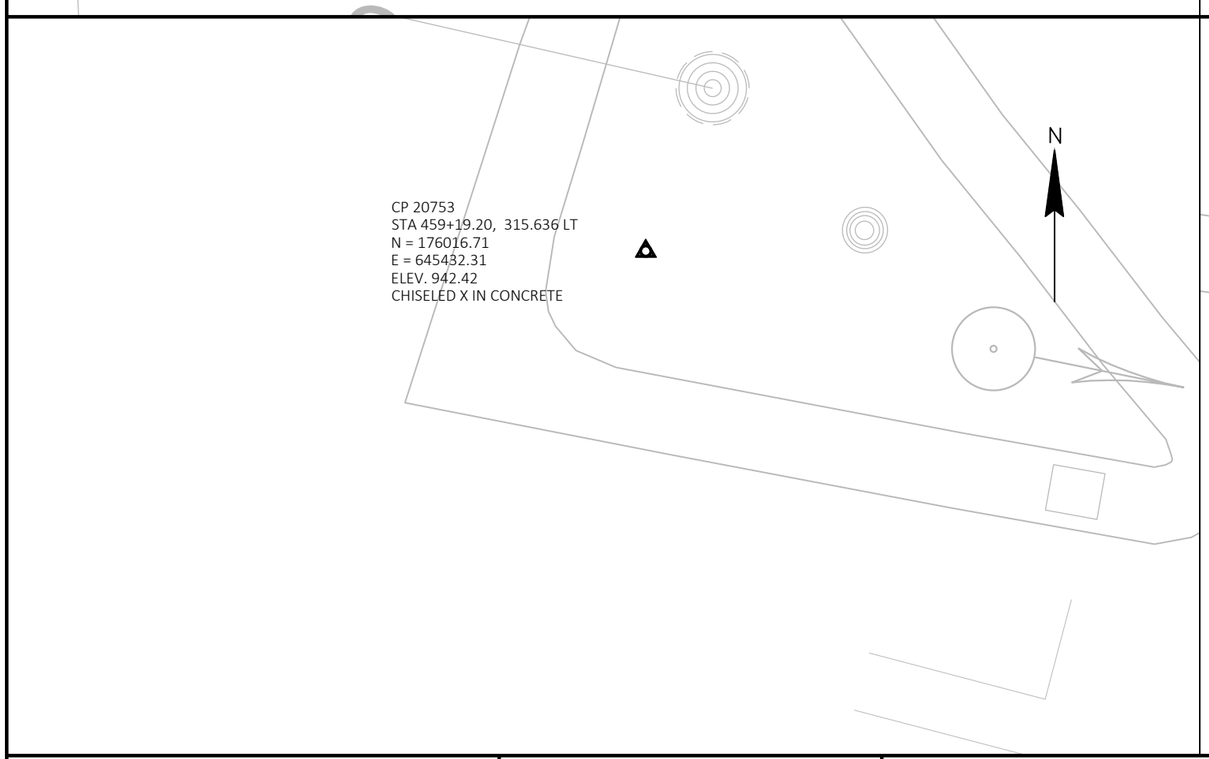
PLOT DATE : 7/1/2022 9:47 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:200 FT

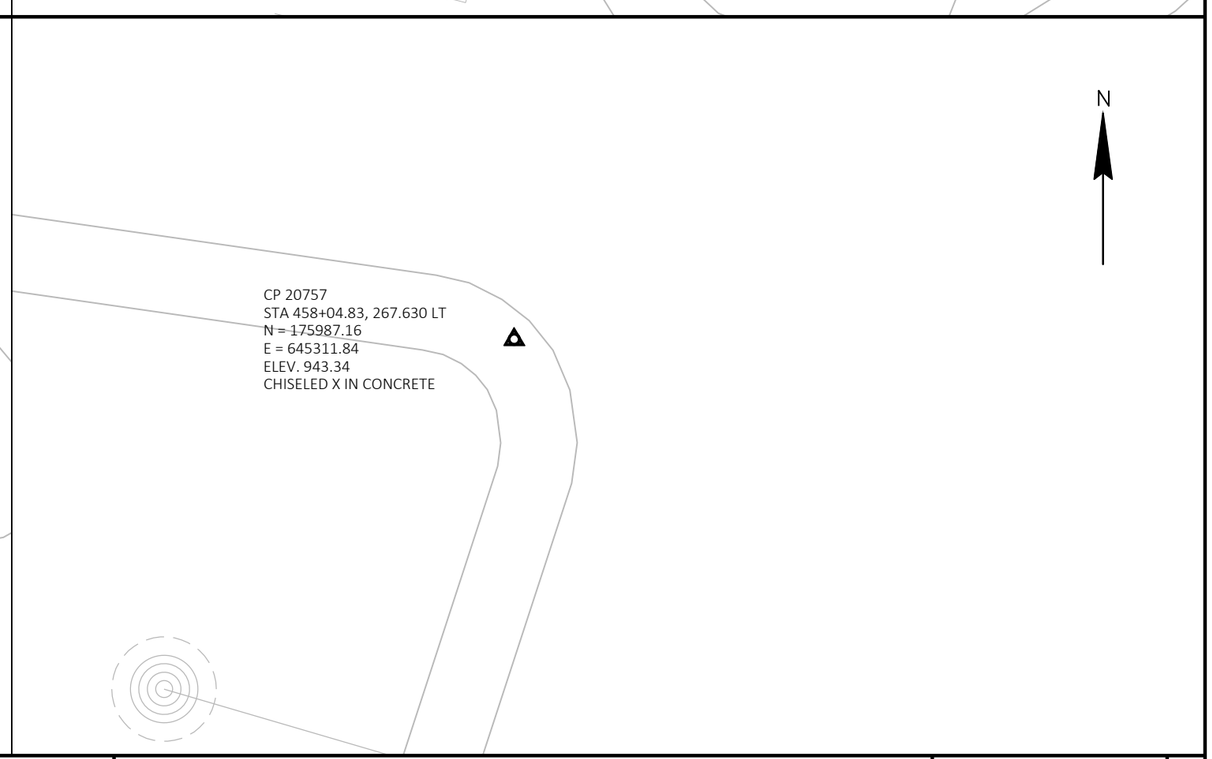
WISDOT/CADDS SHEET 42

2

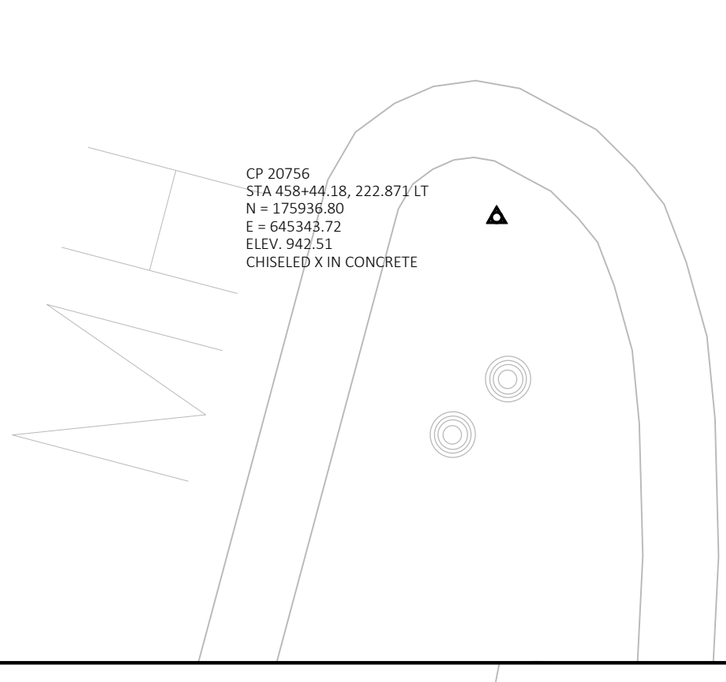




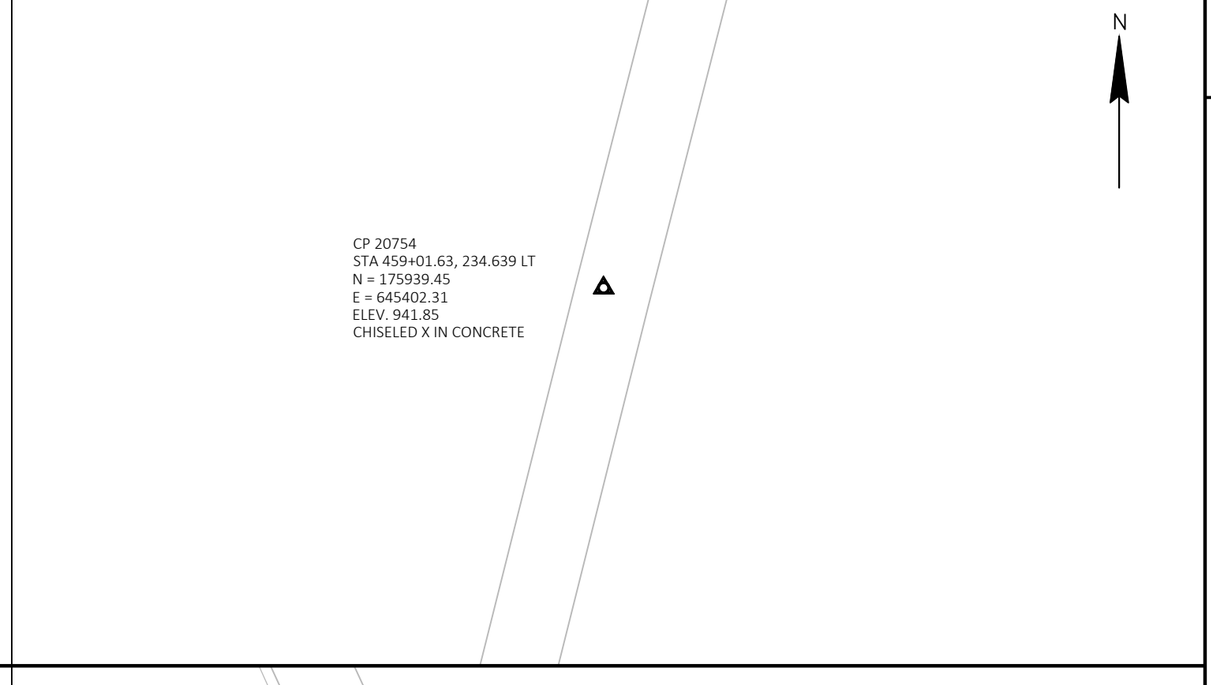




PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CONTROL SURVEY	SHEET 295	E

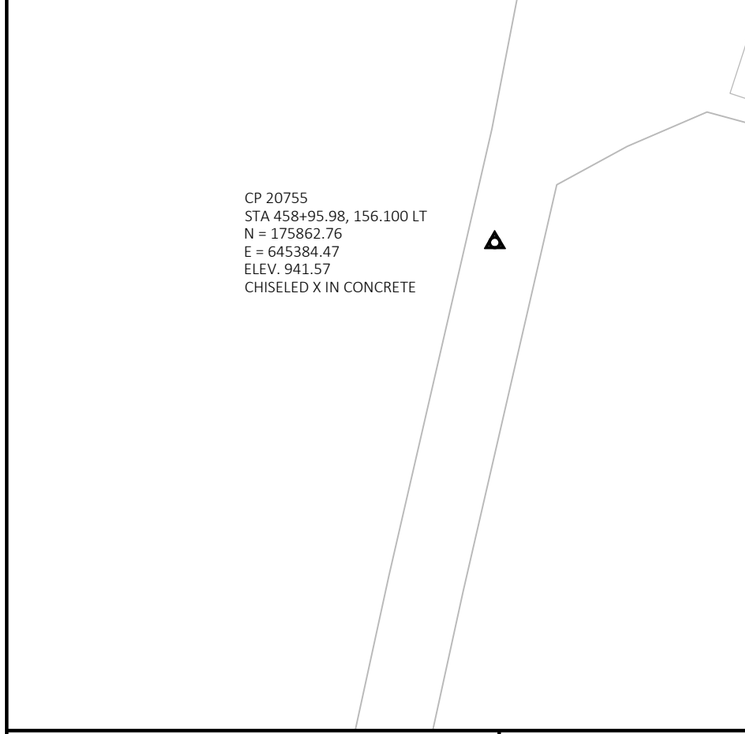


CP 20756
STA 458+44.18, 222.871 LT
N = 175936.80
E = 645343.72
ELEV. 942.51
CHISELED X IN CONCRETE

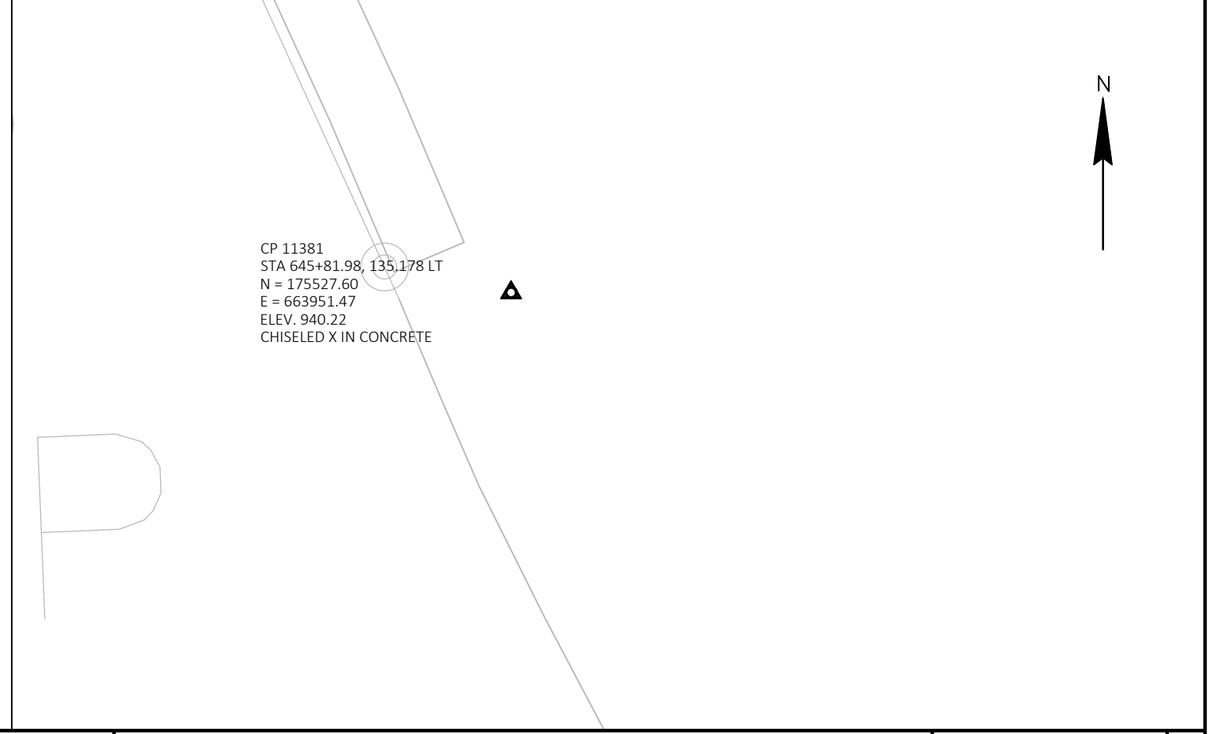


CP 20754
STA 459+01.63, 234.639 LT
N = 175939.45
E = 645402.31
ELEV. 941.85
CHISELED X IN CONCRETE

2



CP 20755
STA 458+95.98, 156.100 LT
N = 175862.76
E = 645384.47
ELEV. 941.57
CHISELED X IN CONCRETE



CP 11381
STA 645+81.98, 135.178 LT
N = 175527.60
E = 663951.47
ELEV. 940.22
CHISELED X IN CONCRETE

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CONTROL SURVEY	SHEET 296	E

2

N

CP 11350
STA 646+16.53, 168.744 LT
N = 175562.04
E = 663985.15
ELEV. 940.44
CHISELED X IN CONCRETE

N

CP 11349
STA 646+88.62, 4.599 LT
N = 175399.80
E = 664061.43
ELEV. 945.18
CHISELED X IN CONCRETE

R/L IH 94

647

IH 94

2

N

CP 11348
STA 647+34.48, 104.957 RT
N = 175291.46
E = 664110.10
ELEV. 945.43
CHISELED X IN CONCRETE

N

CP 10684
STA 695+13.13, 563.296 RT
N = 174252.10
E = 668698.96
ELEV. 964.32
CHISELED X IN CONCRETE

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CONTROL SURVEY	SHEET 297	E

FILE NAME : C:\USERS\TONY.BACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\027210-AD.DWG
LAYOUT NAME - 03
PLOT DATE : 10/10/2022 1:02 AM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : Custom
WISDOT/CADDS SHEET 44

					1060-47-70	1330-47-71	2788-03-70
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**
0002	201.0105	Clearing	STA	9.000	9.000		
0004	201.0120	Clearing	ID	50.000	50.000		
0006	201.0205	Grubbing	STA	9.000	9.000		
0008	201.0220	Grubbing	ID	50.000	50.000		
0010	203.0100	Removing Small Pipe Culverts	EACH	6.000	6.000		
0012	203.0220	Removing Structure (structure) 001. C-67-25	EACH	1.000	1.000		
0014	203.0220	Removing Structure (structure) 002. C-67-865	EACH	1.000	1.000		
0016	203.0220	Removing Structure (structure) 003. R-67-49	EACH	1.000	1.000		
0020	204.0100	Removing Concrete Pavement	SY	70.000	70.000		
0022	204.0109.S	Removing Concrete Surface Partial Depth	SF	101,248.000	101,248.000		
0024	204.0110	Removing Asphaltic Surface	SY	4,970.000	3,972.000	147.000	851.000
0026	204.0115	Removing Asphaltic Surface Butt Joints	SY	4,783.000	4,783.000		
0028	204.0120	Removing Asphaltic Surface Milling	SY	491,512.000	472,844.000	8,748.000	9,920.000
0030	204.0126.S	Removing Asphaltic Longitudinal Notched Wedge Joint Milling	LF	70,112.000	70,112.000		
0034	204.0150	Removing Curb & Gutter	LF	761.000	655.000	58.000	48.000
0036	204.0155	Removing Concrete Sidewalk	SY	337.000	155.000	67.000	115.000
0038	204.0157	Removing Concrete Barrier	LF	731.000	731.000		
0040	204.0165	Removing Guardrail	LF	12,362.000	12,362.000		
0042	204.0170	Removing Fence	LF	2,470.000	2,470.000		
0044	204.0195	Removing Concrete Bases	EACH	56.000	44.000		12.000
0046	204.0210	Removing Manholes	EACH	1.000	1.000		
0048	204.0220	Removing Inlets	EACH	3.000	3.000		
0050	204.0245	Removing Storm Sewer (size) 001. 12-Inch	LF	39.000	39.000		
0052	204.0245	Removing Storm Sewer (size) 002. 24-Inch	LF	32.000	32.000		
0060	204.9060.S	Removing (item description) 001. Crash Cushion	EACH	2.000	2.000		
0062	204.9060.S	Removing (item description) 002. Bicycle Rack	EACH	1.000		1.000	
0064	204.9060.S	Removing (item description) 003. Existing Ramp Gate Assembly	EACH	1.000	1.000		
0066	204.9060.S	Removing (item description) 021. Traffic Signals IH 94 EB Ramps & CTH SS	EACH	1.000	1.000		
0068	204.9060.S	Removing (item description) 041. Removing Traffic Signals STH 318 & Silvernail Rd.	EACH	1.000			1.000
0070	204.9060.S	Removing (item description) 042. Removing Loop Detector Wire & Lead-in Cable STH 318 & Silvernail Rd.	EACH	1.000			1.000
0072	204.9060.S	Removing (item description) 051. Traffic Signals IH 94 EB Ramps & STH 318	EACH	1.000	1.000		
0074	204.9060.S	Removing (item description) 052. Loop Detector Wire and Lead In Cable IH 94 EB Ramps & STH 318	EACH	1.000	1.000		
0076	204.9060.S	Removing (item description) 061. Traffic Signals IH 94 WB Ramps & STH 318	EACH	1.000	1.000		
0078	204.9060.S	Removing (item description) 062. Loop Detector Wire and Lead In Cable IH 94 WB Ramps & STH 318	EACH	1.000	1.000		
0080	204.9060.S	Removing (item description) 071. Traffic Signals IH 94 EB Ramps & CTH T	EACH	1.000	1.000		
0082	204.9060.S	Removing (item description) 072. Loop Detector Wire and Lead In Cable IH 94 EB Ramps & CTH T	EACH	1.000	1.000		
0084	204.9060.S	Removing (item description) 081. Traffic Signals IH 94 WB Ramps & CTH T	EACH	1.000	1.000		
0086	204.9060.S	Removing (item description) 082. Loop Detector Wire and Lead In Cable IH 94 WB Ramps & CTH T	EACH	1.000	1.000		
0088	204.9060.S	Removing (item description) 401. Lighting Units	EACH	5.000	5.000		
0090	204.9060.S	Removing (item description) 402. Luminaires	EACH	12.000	12.000		
0092	204.9090.S	Removing (item description) 001. Cable Barrier	LF	2,348.000	2,348.000		
0094	205.0100	Excavation Common	CY	1,059.000	1,059.000		
0098	206.2001	Excavation for Structures Culverts (structure) 001. C-67-25	EACH	1.000	1.000		
0100	208.0100	Borrow	CY	2,469.000	2,469.000		
0102	209.1100	Backfill Granular Grade 1	CY	476.000	476.000		
0106	210.2500	Backfill Structure Type B	TON	38.000	38.000		

					1060-47-70	1330-47-71	2788-03-70
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**
0108	211.0101	Prepare Foundation for Asphaltic Paving (project) 001. 1060-47-70	EACH	0.880	0.880		
0110	211.0101	Prepare Foundation for Asphaltic Paving (project) 002. 1330-47-71	EACH	0.010		0.010	
0112	211.0101	Prepare Foundation for Asphaltic Paving (project) 003. 2788-03-70	EACH	0.020			0.020
0116	213.0100	Finishing Roadway (project) 001. 1060-47-70	EACH	1.000	1.000		
0118	213.0100	Finishing Roadway (project) 002. 1330-47-71	EACH	1.000		1.000	
0120	213.0100	Finishing Roadway (project) 003. 2788-03-70	EACH	1.000			1.000
0124	305.0110	Base Aggregate Dense 3/4-Inch	TON	2,593.000	2,589.000		4.000
0126	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	717.000	565.000	83.000	69.000
0128	390.0100	Removing Pavement for Base Patching	CY	4,162.000	4,162.000		
0130	390.0405	Base Patching Concrete SHES	CY	4,162.000	4,162.000		
0134	415.0080	Concrete Pavement 8-Inch	SY	107.000		107.000	
0140	416.0610	Drilled Tie Bars	EACH	669.000	669.000		
0142	416.0620	Drilled Dowel Bars	EACH	21,530.000	21,530.000		
0146	416.1715	Concrete Pavement Repair SHES	SY	731.000	731.000		
0150	416.1725	Concrete Pavement Replacement SHES	SY	484.000	484.000		
0152	455.0605	Tack Coat	GAL	45,819.000	44,442.000	614.000	763.000
0154	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000		
0156	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000	2.000		
0158	460.0115.S	HMA Pavement Test Strip Volumetrics	EACH	1.000	1.000		
0160	460.0120.S	HMA Pavement Test Strip Density	EACH	3.000	3.000		
0162	460.2000	Incentive Density HMA Pavement	DOL	35,420.000	35,420.000		
0164	460.2005	Incentive Density PWL HMA Pavement	DOL	34,580.000	34,580.000		
0166	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	17,800.000	17,800.000		
0168	460.2010	Incentive Air Voids HMA Pavement	DOL	34,580.000	34,580.000		
0170	460.6224	HMA Pavement 4 MT 58-28 S	TON	6,369.000	3,836.000	1,050.000	1,483.000
0172	460.7423	HMA Pavement 3 HT 58-28 H	TON	34,577.000	34,577.000		
0174	460.8624	HMA Pavement 4 SMA 58-28 V	TON	49,422.000	49,422.000		
0176	460.9000.S	Material Transfer Vehicle 001. 1060-47-70	EACH	1.000	1.000		
0178	465.0105	Asphaltic Surface	TON	622.000	398.000	5.000	219.000
0180	465.0115	Asphaltic Surface Detours	TON	585.000	585.000		
0182	465.0125	Asphaltic Surface Temporary	TON	1,135.000	1,135.000		
0186	465.0310	Asphaltic Curb	LF	41.000	41.000		
0188	465.0315	Asphaltic Flumes	SY	11.000	11.000		
0190	465.0510	Asphaltic Rumble Strips, Shoulder Divided Roadway	LF	124,424.000	124,424.000		
0198	502.4204	Adhesive Anchors No. 4 Bar	EACH	10.000	10.000		
0200	504.0100	Concrete Masonry Culverts	CY	6.100	6.100		
0202	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	520.000	520.000		
0220	509.1500	Concrete Surface Repair	SF	60.000	60.000		
0226	511.1200	Temporary Shoring (structure) 001. C-67-25	SF	50.000	50.000		
0228	511.1200	Temporary Shoring (structure) 002. R-67-159	SF	1,000.000	1,000.000		
0232	516.0500	Rubberized Membrane Waterproofing	SY	6.000	6.000		
0234	520.8000	Concrete Collars for Pipe	EACH	11.000	11.000		
0236	520.9700.S	Culvert Pipe Liners (size) 001. 18-Inch	LF	236.000	236.000		
0238	520.9750.S	Cleaning Culvert Pipes for Liner Verification	EACH	3.000	3.000		
0242	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	1.000	1.000		
0244	521.3118	Culvert Pipe Corrugated Steel 18-Inch	LF	40.000	40.000		
0246	522.0412	Culvert Pipe Reinforced Concrete Class IV 12-Inch	LF	96.000	96.000		
0248	522.0418	Culvert Pipe Reinforced Concrete Class IV 18-Inch	LF	371.000	371.000		
0250	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	8.000	8.000		
0252	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	2.000	2.000		

					1060-47-70	1330-47-71	2788-03-70
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**
0254	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	3.000	3.000		
0256	522.2419	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 19x30-Inch	LF	75.000	75.000		
0258	522.2619	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 19x30-Inch	EACH	2.000	2.000		
0260	524.0624	Apron Endwalls for Culvert Pipe Salvaged 24-Inch	EACH	1.000	1.000		
0264	531.1100	Concrete Masonry Ancillary Structures Type NS	CY	36.000	36.000		
0266	531.1140	Steel Reinforcement HS Ancillary Structures Type NS	LB	4,968.000	4,968.000		
0268	531.2020	Drilling Shaft 20-Inch	LF	7.000	7.000		
0270	531.2024	Drilling Shaft 24-Inch	LF	304.000	304.000		
0272	531.2036	Drilling Shaft 36-Inch	LF	118.000	118.000		
0274	531.4030	Foundation Camera Pole 30-FT	EACH	1.000	1.000		
0276	531.4050	Foundation Camera Pole 50-FT	EACH	3.000	3.000		
0278	531.6120	Foundation Two-Shaft Type FF-II (structure) 001. S-67-420	EACH	1.000	1.000		
0280	532.6120	Truss Full Span 4-Chord Type II (structure) 001. S-67-420	EACH	1.000	1.000		
0284	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	768.000	662.000	58.000	48.000
0292	601.0600	Concrete Curb Pedestrian	LF	23.000	23.000		
0294	602.0405	Concrete Sidewalk 4-Inch	SF	1,272.000	266.000		1,006.000
0296	602.0410	Concrete Sidewalk 5-Inch	SF	3,736.000	2,347.000	950.000	439.000
0298	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	140.000	90.000	30.000	20.000
0300	602.0605	Curb Ramp Detectable Warning Field Radial Yellow	SF	95.000	63.000		32.000
0306	603.1132	Concrete Barrier Type S32	LF	10.000	10.000		
0308	603.1142	Concrete Barrier Type S42	LF	10.000	10.000		
0310	603.3211	Concrete Barrier Transition Type F32SF to S32	EACH	1.000	1.000		
0312	603.3475	Concrete Barrier Transition Type F51DF to S42	EACH	1.000	1.000		
0314	603.8000	Concrete Barrier Temporary Precast Delivered	LF	5,938.000	5,938.000		
0316	603.8125	Concrete Barrier Temporary Precast Installed	LF	5,938.000	5,938.000		
0318	604.0400	Slope Paving Concrete	SY	11.000	11.000		
0324	606.0200	Riprap Medium	CY	51.000	51.000		
0326	606.0300	Riprap Heavy	CY	28.000	28.000		
0328	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	38.000	38.000		
0330	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	32.000	32.000		
0332	611.0430	Reconstructing Inlets	EACH	11.000	11.000		
0334	611.0530	Manhole Covers Type J	EACH	6.000	6.000		
0336	611.0624	Inlet Covers Type H	EACH	4.000	4.000		
0338	611.0654	Inlet Covers Type V	EACH	17.000	17.000		
0340	611.2005	Manholes 5-FT Diameter	EACH	1.000	1.000		
0342	611.3004	Inlets 4-FT Diameter	EACH	1.000	1.000		
0346	611.3230	Inlets 2x3-FT	EACH	2.000	2.000		
0348	611.8110	Adjusting Manhole Covers	EACH	6.000	6.000		
0350	611.8115	Adjusting Inlet Covers	EACH	9.000	7.000	2.000	
0354	612.0106	Pipe Underdrain 6-Inch	LF	70.000	70.000		
0356	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	235.000	235.000		
0358	612.0700	Drain Tile Exploration	LF	70.000	70.000		
0360	612.0806	Apron Endwalls for Underdrain Reinforced Concrete 6-Inch	EACH	2.000	2.000		
0362	613.1100.S	Cable Barrier Type 1	LF	2,183.000	2,183.000		
0364	613.1200.S	Cable Barrier End Terminal Type 1	EACH	3.000	3.000		
0366	614.0010	Barrier System Grading Shaping Finishing	EACH	13.000	13.000		
0370	614.0230	Steel Thrie Beam	LF	13.000	13.000		
0374	614.0397	Guardrail Mow Strip Emulsified Asphalt	SY	5,499.000	5,499.000		
0376	614.0400	Adjusting Steel Plate Beam Guard	LF	378.000	378.000		
0378	614.0800	Crash Cushions Permanent	EACH	1.000	1.000		

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Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**
0380	614.0805	Crash Cushions Permanent Low Maintenance	EACH	1.000	1.000		
0382	614.0905	Crash Cushions Temporary	EACH	13.000	13.000		
0384	614.0920	Salvaged Rail	LF	478.000	478.000		
0386	614.0950	Replacing Guardrail Posts and Blocks	EACH	75.000	75.000		
0388	614.0951	Replacing Guardrail Rail and Hardware	LF	49.000	49.000		
0390	614.0952	Replacing Guardrail Reflectors	EACH	2.000	2.000		
0392	614.2300	MGS Guardrail 3	LF	10,926.000	10,926.000		
0394	614.2330	MGS Guardrail 3 K	LF	275.000	275.000		
0396	614.2350	MGS Guardrail Short Radius	LF	33.000	33.000		
0398	614.2500	MGS Thrie Beam Transition	LF	438.000	438.000		
0400	614.2610	MGS Guardrail Terminal EAT	EACH	22.000	22.000		
0402	614.2620	MGS Guardrail Terminal Type 2	EACH	15.000	15.000		
0404	616.0100	Fence Woven Wire (height) 001. 4-FT	LF	2,228.000	2,228.000		
0406	616.0206	Fence Chain Link 6-FT	LF	242.000	242.000		
0408	616.0700.S	Fence Safety	LF	2,470.000	2,470.000		
0412	619.1000	Mobilization	EACH	0.910	0.880	0.010	0.020
0416	624.0100	Water	MGAL	60.000	55.000	2.000	3.000
0418	625.0100	Topsoil	SY	380.000	380.000		
0420	625.0500	Salvaged Topsoil	SY	11,161.000	11,032.000	36.000	93.000
0424	628.1504	Silt Fence	LF	8,650.000	8,650.000		
0426	628.1520	Silt Fence Maintenance	LF	8,650.000	8,650.000		
0428	628.1905	Mobilizations Erosion Control	EACH	8.000	8.000		
0430	628.1910	Mobilizations Emergency Erosion Control	EACH	11.000	11.000		
0434	628.2004	Erosion Mat Class I Type B	SY	10,875.000	10,875.000		
0436	628.2006	Erosion Mat Urban Class I Type A	SY	665.000	536.000	36.000	93.000
0438	628.7005	Inlet Protection Type A	EACH	10.000	10.000		
0440	628.7010	Inlet Protection Type B	EACH	115.000	115.000		
0442	628.7015	Inlet Protection Type C	EACH	43.000	25.000	6.000	12.000
0444	628.7504	Temporary Ditch Checks	LF	80.000	80.000		
0446	628.7555	Culvert Pipe Checks	EACH	10.000	10.000		
0452	629.0205	Fertilizer Type A	CWT	4.000	2.000	1.000	1.000
0454	629.0210	Fertilizer Type B	CWT	100.000	100.000		
0458	630.0130	Seeding Mixture No. 30	LB	50.000	50.000		
0460	630.0140	Seeding Mixture No. 40	LB	10.000	8.000	1.000	1.000
0462	630.0200	Seeding Temporary	LB	65.000	65.000		
0464	630.0500	Seed Water	MGAL	276.000	273.000	1.000	2.000
0472	633.5200	Markers Culvert End	EACH	65.000	65.000		
0474	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	217.000	183.000	6.000	28.000
0476	634.0622	Posts Wood 4x6-Inch X 22-FT	EACH	5.000	2.000	3.000	
0478	634.0814	Posts Tubular Steel 2x2-Inch X 14-FT	EACH	25.000	8.000	12.000	5.000
0482	634.0885	Posts Tubular Steel 2x2-Inch X 8.5-FT	EACH	12.000	6.000		6.000
0484	635.0200	Sign Supports Structural Steel HS	LB	20,900.000	20,900.000		
0486	637.1220	Signs Type I Reflective SH	SF	3,074.000	2,879.000	195.000	
0488	637.1230	Signs Type I Reflective F	SF	90.000	90.000		
0490	637.2210	Signs Type II Reflective H	SF	2,238.080	1,886.530	69.550	282.000
0492	637.2215	Signs Type II Reflective H Folding	SF	463.320	393.640		69.680
0494	637.2230	Signs Type II Reflective F	SF	128.000	58.000	1.000	69.000
0496	638.2101	Moving Signs Type I	EACH	2.000	2.000		
0498	638.2102	Moving Signs Type II	EACH	15.000	5.000	5.000	5.000
0500	638.2601	Removing Signs Type I	EACH	25.000	23.000	2.000	

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Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**
0502	638.2602	Removing Signs Type II	EACH	287.000	238.000	15.000	34.000
0504	638.3000	Removing Small Sign Supports	EACH	201.000	163.000	15.000	23.000
0506	638.3100	Removing Structural Steel Sign Supports	EACH	36.000	36.000		
0508	643.0300	Traffic Control Drums	DAY	114,343.000	112,754.000	1,589.000	
0510	643.0420	Traffic Control Barricades Type III	DAY	5,505.000	5,204.000	301.000	
0516	643.0705	Traffic Control Warning Lights Type A	DAY	11,010.000	10,408.000	602.000	
0518	643.0715	Traffic Control Warning Lights Type C	DAY	11,032.000	11,032.000		
0520	643.0800	Traffic Control Arrow Boards	DAY	1,449.000	1,449.000		
0522	643.0900	Traffic Control Signs	DAY	24,171.000	23,744.000	427.000	
0524	643.0910	Traffic Control Covering Signs Type I	EACH	4.000	4.000		
0526	643.0920	Traffic Control Covering Signs Type II	EACH	14.000	14.000		
0528	643.1000	Traffic Control Signs Fixed Message	SF	346.000	346.000		
0530	643.1050	Traffic Control Signs PCMS	DAY	511.000	504.000	7.000	
0532	643.1070	Traffic Control Cones 42-Inch	DAY	8,544.000	8,544.000		
0534	643.1500	Traffic Control Speed Radar Trailer	DAY	260.000	260.000		
0536	643.3105	Temporary Marking Line Paint 4-Inch	LF	1,246.000	665.000	581.000	
0538	643.3150	Temporary Marking Line Removable Tape 4-Inch	LF	1,607.000	1,289.000	318.000	
0540	643.3165	Temporary Marking Line Paint 6-Inch	LF	304,294.000	304,294.000		
0544	643.3250	Temporary Marking Line Removable Tape 8-Inch	LF	505.000	505.000		
0546	643.3265	Temporary Marking Line Paint 10-Inch	LF	33,703.000	33,703.000		
0548	643.3760	Temporary Marking Raised Pavement Marker Type I	EACH	24.000	24.000		
0550	643.3770	Temporary Marking Raised Pavement Marker Type II	EACH	282.000	282.000		
0552	643.3850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	37.000	37.000		
0554	643.4100	Traffic Control Interim Lane Closure	EACH	291.000	291.000		
0556	643.5000	Traffic Control	EACH	0.910	0.880	0.010	0.020
0558	644.1410	Temporary Pedestrian Surface Asphalt	SF	192.000	192.000		
0560	644.1430	Temporary Pedestrian Surface Plate	SF	208.000	97.000	111.000	
0562	644.1601	Temporary Pedestrian Curb Ramp	DAY	118.000	58.000	60.000	
0564	644.1605	Temporary Pedestrian Detectable Warning Field	SF	70.000	70.000		
0566	644.1810	Temporary Pedestrian Barricade	LF	2,578.000	2,182.000	396.000	
0568	645.0120	Geotextile Type HR	SY	30.000	30.000		
0572	646.1020	Marking Line Epoxy 4-Inch	LF	14,276.000	9,238.000	4,622.000	416.000
0574	646.2020	Marking Line Epoxy 6-Inch	LF	19,300.000	15,751.000		3,549.000
0576	646.2025	Marking Line Grooved Black Epoxy 6-Inch	LF	28,347.000	28,347.000		
0578	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	153,923.000	153,923.000		
0580	646.2050	Marking Line Grooved Permanent Tape 6-Inch	LF	28,347.000	28,347.000		
0582	646.3020	Marking Line Epoxy 8-Inch	LF	1,844.000	1,625.000		219.000
0584	646.4020	Marking Line Epoxy 10-Inch	LF	2,714.000	2,005.000		709.000
0586	646.4025	Marking Line Grooved Black Epoxy 10-Inch	LF	194.000	194.000		
0588	646.4050	Marking Line Grooved Permanent Tape 10-Inch	LF	16,851.000	16,851.000		
0590	646.5020	Marking Arrow Epoxy	EACH	87.000	78.000		9.000
0592	646.5120	Marking Word Epoxy	EACH	22.000	20.000		2.000
0594	646.5205	Marking Symbol Paint	EACH	12.000	4.000	8.000	
0596	646.5220	Marking Symbol Epoxy	EACH	13.000	7.000	6.000	
0598	646.5520	Marking Outfall Epoxy	EACH	5.000	5.000		
0600	646.6120	Marking Stop Line Epoxy 18-Inch	LF	735.000	546.000		189.000
0602	646.6220	Marking Yield Line Epoxy 18-Inch	EACH	50.000	42.000		8.000
0604	646.7120	Marking Diagonal Epoxy 12-Inch	LF	1,880.000	1,687.000	182.000	11.000
0606	646.7220	Marking Chevron Epoxy 24-Inch	LF	1,726.000	1,726.000		
0608	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	409.000	234.000		175.000

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Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**
0610	646.8020	Marking Corrugated Median Epoxy	SF	72.000	72.000		
0612	646.8120	Marking Curb Epoxy	LF	608.000	447.000		161.000
0614	646.8220	Marking Island Nose Epoxy	EACH	1.000	1.000		
0616	646.9000	Marking Removal Line 4-Inch	LF	599.000	416.000	183.000	
0620	646.9055	Marking Removal Line Grooved Contrast Permanent Tape 4-Inch	LF	4,600.000	4,600.000		
0622	646.9100	Marking Removal Line 8-Inch	LF	280.000	280.000		
0626	646.9200	Marking Removal Line Wide	LF	55.000	55.000		
0630	646.9300	Marking Removal Special Marking	EACH	12.000	8.000	4.000	
0634	652.0125	Conduit Rigid Metallic 2-Inch	LF	85.000	85.000		
0636	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	5,402.000	4,728.000		674.000
0638	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	1,977.000	1,755.000		222.000
0642	652.0605	Conduit Special 2-Inch	LF	800.000	800.000		
0644	652.0615	Conduit Special 3-Inch	LF	3,951.000	3,418.000		533.000
0646	652.0700.S	Install Conduit into Existing Item	EACH	12.000	12.000		
0648	652.0800	Conduit Loop Detector	LF	4,295.000	2,939.000		1,356.000
0650	653.0135	Pull Boxes Steel 24x36-Inch	EACH	22.000	14.000		8.000
0652	653.0140	Pull Boxes Steel 24x42-Inch	EACH	64.000	51.000		13.000
0654	653.0905	Removing Pull Boxes	EACH	96.000	77.000		19.000
0656	654.0101	Concrete Bases Type 1	EACH	13.000	10.000		3.000
0658	654.0102	Concrete Bases Type 2	EACH	5.000	4.000		1.000
0660	654.0105	Concrete Bases Type 5	EACH	2.000	2.000		
0662	654.0110	Concrete Bases Type 10	EACH	3.000	1.000		2.000
0664	654.0113	Concrete Bases Type 13	EACH	5.000	2.000		3.000
0666	654.0120	Concrete Bases Type 10-Special	EACH	10.000	9.000		1.000
0668	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	3.000	2.000		1.000
0670	654.1239	Concrete Control Cabinet Bases ITS	EACH	1.000	1.000		
0672	655.0210	Cable Traffic Signal 3-14 AWG	LF	4,259.000	3,296.000		963.000
0674	655.0230	Cable Traffic Signal 5-14 AWG	LF	2,713.000	2,080.000		633.000
0676	655.0240	Cable Traffic Signal 7-14 AWG	LF	4,374.000	3,677.000		697.000
0678	655.0260	Cable Traffic Signal 12-14 AWG	LF	3,535.000	1,675.000		1,860.000
0680	655.0270	Cable Traffic Signal 15-14 AWG	LF	158.000	158.000		
0682	655.0320	Cable Type UF 2-10 AWG Grounded	LF	4,018.000	3,134.000		884.000
0684	655.0510	Electrical Wire Traffic Signals 12 AWG	LF	432.000	432.000		
0686	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	10,975.000	9,272.000		1,703.000
0688	655.0610	Electrical Wire Lighting 12 AWG	LF	4,464.000	3,312.000		1,152.000
0690	655.0615	Electrical Wire Lighting 10 AWG	LF	280.000	280.000		
0692	655.0620	Electrical Wire Lighting 8 AWG	LF	9,930.000	9,930.000		
0694	655.0625	Electrical Wire Lighting 6 AWG	LF	10,420.000	10,420.000		
0696	655.0635	Electrical Wire Lighting 2 AWG	LF	160.000	160.000		
0698	655.0640	Electrical Wire Lighting 1 AWG	LF	18.000	18.000		
0700	655.0700	Loop Detector Lead In Cable	LF	20,435.000	14,716.000		5,719.000
0702	655.0800	Loop Detector Wire	LF	12,982.000	8,919.000		4,063.000
0704	655.0900	Traffic Signal EVP Detector Cable	LF	4,259.000	3,296.000		963.000
0706	656.0201	Electrical Service Meter Breaker Pedestal (location) 041. STH 318 & Silvernail Rd.	EACH	1.000			1.000
0708	656.0201	Electrical Service Meter Breaker Pedestal (location) 051. IH 94 EB Ramps & STH 318	EACH	1.000	1.000		
0710	656.0201	Electrical Service Meter Breaker Pedestal (location) 061. IH 94 WB Ramps & STH 318	EACH	1.000	1.000		
0712	656.0201	Electrical Service Meter Breaker Pedestal (location) 071. IH 94 EB Ramps & CTH T	EACH	1.000	1.000		
0714	656.0201	Electrical Service Meter Breaker Pedestal (location) 081. IH 94 WB Ramps & CTH T	EACH	1.000	1.000		
0716	656.0201	Electrical Service Meter Breaker Pedestal (location) 300. MBDMS670040	EACH	1.000	1.000		
0718	656.0201	Electrical Service Meter Breaker Pedestal (location) 301. MBCCTV670244	EACH	1.000	1.000		

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Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**
0720	656.0501	Electrical Service Breaker Disconnect Box (location) 300. DMS670040	EACH	1.000	1.000		
0722	656.0501	Electrical Service Breaker Disconnect Box (location) 301. CCTV670244	EACH	1.000	1.000		
0724	657.0100	Pedestal Bases	EACH	15.000	12.000		3.000
0726	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	8.000	7.000		1.000
0728	657.0305	Poles Type 2	EACH	3.000	3.000		
0730	657.0310	Poles Type 3	EACH	2.000	1.000		1.000
0732	657.0420	Traffic Signal Standards Aluminum 13-FT	EACH	8.000	7.000		1.000
0734	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	4.000	2.000		2.000
0736	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	3.000	3.000		
0738	657.0609	Luminaire Arms Single Member 4-Inch Clamp 6-FT	EACH	2.000	1.000		1.000
0740	658.0173	Traffic Signal Face 3S 12-Inch	EACH	64.000	49.000		15.000
0742	658.0174	Traffic Signal Face 4S 12-Inch	EACH	14.000	8.000		6.000
0744	658.0416	Pedestrian Signal Face 16-Inch	EACH	6.000	4.000		2.000
0746	658.0500	Pedestrian Push Buttons	EACH	6.000	4.000		2.000
0748	658.5070	Signal Mounting Hardware (location) 021. IH 94 EB Ramps & CTH SS	EACH	1.000	1.000		
0750	658.5070	Signal Mounting Hardware (location) 041. STH 318 & Silvernail Rd.	EACH	1.000			1.000
0752	658.5070	Signal Mounting Hardware (location) 051. IH 94 EB Ramps & STH 318	EACH	1.000	1.000		
0754	658.5070	Signal Mounting Hardware (location) 061. IH 94 WB Ramps & STH 318	EACH	1.000	1.000		
0756	658.5070	Signal Mounting Hardware (location) 071. IH 94 EB Ramps & CTH T	EACH	1.000	1.000		
0758	658.5070	Signal Mounting Hardware (location) 081. IH 94 WB Ramps and CTH T	EACH	1.000	1.000		
0760	659.1125	Luminaires Utility LED C	EACH	29.000	21.000		8.000
0762	659.5000.S	Lamp, Ballast, LED, Switch Disposal by Contractor	EACH	127.000	101.000		26.000
0764	661.0201	Temporary Traffic Signals for Intersections (location) 041. STH 318 & Silvernail Rd.	EACH	1.000		1.000	
0766	661.0201	Temporary Traffic Signals for Intersections (location) 051. IH 94 EB Ramps & STH 318	EACH	1.000	1.000		
0768	661.0201	Temporary Traffic Signals for Intersections (location) 061. IH 94 WB Ramps & STH 318	EACH	1.000	1.000		
0774	662.1040.S	Ramp Closure Gates 40-FT	EACH	2.000	2.000		
0776	662.6020.S	Ramp Closure Barricade Rack 2-Unit	EACH	2.000	2.000		
0778	662.6030.S	Ramp Closure Barricade Rack 3-Unit	EACH	1.000	1.000		
0780	670.0101	Field System Integrator 071. Traffic Signal Interconnect	EACH	1.000	1.000		
0782	670.0101	Field System Integrator 300. FTMS	EACH	1.000	1.000		
0784	670.0201	ITS Documentation 071. Traffic Signal Interconnect	EACH	1.000	1.000		
0786	670.0201	ITS Documentation 300. FTMS	EACH	1.000	1.000		
0788	673.1200.S	Install ITS Field Cabinet	EACH	1.000	1.000		
0790	673.1225.S	Install Pole Mounted Cabinet	EACH	2.000	2.000		
0792	674.0300	Remove Cable	LF	130.000	130.000		
0794	674.0400	Reinstall Cable	LF	60.000	60.000		
0796	675.0100	Install Controller Ramp Meter Processor Assembly	EACH	1.000	1.000		
0798	675.0300	Install Mounted Controller Microwave Detector Assembly	EACH	4.000	4.000		
0800	677.0130	Install Camera Pole 30-FT	EACH	1.000	1.000		
0802	677.0150	Install Camera Pole 50-FT	EACH	3.000	3.000		
0804	677.0200	Install Camera Assembly	EACH	4.000	4.000		
0806	677.9051.S	Removing 50-FT Camera Pole	EACH	1.000	1.000		
0808	677.9200.S	Removing CCTV Camera	EACH	1.000	1.000		
0810	678.0006	Install Fiber Optic Cable Outdoor Plant 6-CT	LF	2,630.000	2,630.000		
0812	678.0100.S	Install Overhead Freeway DMS Full Matrix	EACH	1.000	1.000		
0814	678.0200	Fiber Optic Splice Enclosure	EACH	3.000	3.000		
0816	678.0300	Fiber Optic Splice	EACH	12.000	12.000		
0818	678.0400	Fiber Optic Termination	EACH	82.000	82.000		
0820	678.0501	Communication System Testing 071. Traffic Signal Interconnect	EACH	1.000	1.000		
0822	678.0501	Communication System Testing 300. FTMS	EACH	1.000	1.000		

					1060-47-70	1330-47-71	2788-03-70
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**
0824	678.0600	Install Ethernet Switches	EACH	11.000	11.000		
0826	690.0150	Sawing Asphalt	LF	8,635.000	7,573.000	72.000	990.000
0828	690.0250	Sawing Concrete	LF	46,259.000	46,259.000		
0832	740.0440	Incentive IRI Ride	DOL	58,000.000	58,000.000		
0834	999.1950.S	Bicycle Rack Asphalt or Concrete-Mounted	EACH	2.000	1.000	1.000	
0836	SPV.0035	Special 001. Backfill Slurry	CY	180.000	180.000		
0838	SPV.0045	Special 001. Basic Traffic Queue Warning System	DAY	30.000	30.000		
0840	SPV.0045	Special 002. Digital Speed Reduction System (DSRS)	DAY	291.000	291.000		
0842	SPV.0060	Special 001. Tension Anchor Rods	EACH	64.000	64.000		
0844	SPV.0060	Special 002. Remove Grout Pad	EACH	2.000	2.000		
0846	SPV.0060	Special 003. Remove Debris and Regrade	EACH	1.000	1.000		
0848	SPV.0060	Special 004. Adjust Sign	EACH	2.000	2.000		
0850	SPV.0060	Special 005. U-Bolt	EACH	16.000	16.000		
0852	SPV.0060	Special 006. Remove Catwalk	EACH	5.000	5.000		
0854	SPV.0060	Special 007. Lower Structure	EACH	3.000	3.000		
0856	SPV.0060	Special 008. Re-install Truss/Arm	EACH	2.000	2.000		
0858	SPV.0060	Special 009. Vertical Sign Support	EACH	1.000	1.000		
0860	SPV.0060	Special 010. Strapping C-67-1570	EACH	2.000	2.000		
0862	SPV.0060	Special 011. Catwalk Repair	EACH	1.000	1.000		
0864	SPV.0060	Special 012. Replace Conduit Connector	EACH	6.000	6.000		
0866	SPV.0060	Special 050. Survey Project	EACH	0.910	0.880	0.010	0.020
0868	SPV.0060	Special 051. Baseline CPM Progress Schedule	EACH	0.910	0.880	0.010	0.020
0870	SPV.0060	Special 052. Monthly CPM Progress Schedule Updates	EACH	9.000	5.000	1.000	3.000
0872	SPV.0060	Special 053. Traffic Control Close-Open Freeway Entrance Ramp	EACH	45.000	45.000		
0874	SPV.0060	Special 054. Traffic Control Full Freeway Closure	EACH	10.000	10.000		
0876	SPV.0060	Special 055. Mobilization Emergency Pavement Repair	EACH	8.000	8.000		
0878	SPV.0060	Special 056. Field Facilities Office Space	EACH	0.910	0.880	0.010	0.020
0880	SPV.0060	Special 057. Utility Line Opening (ULO)	EACH	13.000	9.000		4.000
0882	SPV.0060	Special 058. Section Corner Monuments Special	EACH	1.000			1.000
0884	SPV.0060	Special 059. Remove and Reset Cable Barrier Post	EACH	1.000	1.000		
0886	SPV.0060	Special 060. Curb Ramp Grading and Shaping	EACH	9.000	6.000	1.000	2.000
0894	SPV.0060	Special 201. Install Poles Type 9	EACH	1.000	1.000		
0896	SPV.0060	Special 202. Install Poles Type 9 Special	EACH	1.000	1.000		
0898	SPV.0060	Special 203. Install Poles Type 10	EACH	2.000			2.000
0900	SPV.0060	Special 204. Install Poles Type 10 Special	EACH	9.000	8.000		1.000
0902	SPV.0060	Special 205. Install Poles Type 12	EACH	1.000			1.000
0904	SPV.0060	Special 206. Install Poles Type 13	EACH	4.000	2.000		2.000
0906	SPV.0060	Special 207. Install Monotube Arms 15-FT	EACH	1.000			1.000
0908	SPV.0060	Special 208. Install Monotube Arms 25-FT	EACH	2.000	1.000		1.000
0910	SPV.0060	Special 209. Install Monotube Arms 35-FT-Special	EACH	3.000	3.000		
0912	SPV.0060	Special 210. Install Monotube Arms 45-FT-Special	EACH	7.000	6.000		1.000
0914	SPV.0060	Special 211. Install Monotube Arms 50-FT	EACH	2.000	1.000		1.000
0916	SPV.0060	Special 212. Install Monotube Arms 55-FT	EACH	3.000	1.000		2.000
0918	SPV.0060	Special 213. Install Luminaire Arms Steel 15-FT	EACH	23.000	16.000		7.000
0920	SPV.0060	Special 214. Traffic Signal Reflective Backplate 3S	EACH	3.000			3.000
0922	SPV.0060	Special 215. Traffic Signal Reflective Backplate 4S	EACH	2.000			2.000
0924	SPV.0060	Special 216.Trnspt & Install State Furn Traffic Signal Cabinet STH 318 & Silvernail Road	EACH	1.000			1.000
0926	SPV.0060	Special 217. Trnspt & Install State Furn Traffic Signal Cabinet IH 94 EB Ramps & STH 318	EACH	1.000	1.000		
0928	SPV.0060	Special 218. Trnspt & Install State Furn Traffic Signal Cabinet IH 94 WB Ramps & STH	EACH	1.000	1.000		

					1060-47-70	1330-47-71	2788-03-70
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty
		318					
0930	SPV.0060	Special 219. Trnspt & Install State Furn Traffic Signal Cabinet IH 94 EB Ramps & CTH T	EACH	1.000	1.000		
0932	SPV.0060	Special 220. Trnspt & Install State Furn Traffic Signal Cabinet IH 94 WB Ramps & CTH T	EACH	1.000	1.000		
0934	SPV.0060	Special 221. Trnspt & Install State Furn EVP Heads & Con Light STH 318 & Silvernail Road	EACH	1.000			1.000
0936	SPV.0060	Special 222. Trnspt & Install State Furn EVP Heads & Con Light IH 94 EB Ramps & STH 318	EACH	1.000	1.000		
0938	SPV.0060	Special 223. Trnspt & Install State Furn EVP Heads & Con Light IH 94 WB Ramps & STH 318	EACH	1.000	1.000		
0940	SPV.0060	Special 224. Trnspt & Install State Furn EVP Heads & Con Light IH 94 EB Ramps & CTH T	EACH	1.000	1.000		
0942	SPV.0060	Special 225. Trnspt & Install State Furn EVP Heads & Con Light IH 94 WB Ramps & CTH T	EACH	1.000	1.000		
0944	SPV.0060	Special 226. Trnspt Traffic Signals & Inter Lighting Materials STH 318 & Silvernail Road	EACH	1.000			1.000
0946	SPV.0060	Special 227. Trnspt Traffic Signals & Inter Lighting Materials IH 94 EB Ramps & STH 318	EACH	1.000	1.000		
0948	SPV.0060	Special 228. Trnspt Traffic Signals & Inter Lighting Materials IH 94 WB Ramps & STH 318	EACH	1.000	1.000		
0950	SPV.0060	Special 229. Trnspt Traffic Signals & Inter Lighting Materials IH 94 EB Ramps & CTH T	EACH	1.000	1.000		
0952	SPV.0060	Special 230. Trnspt Traffic Signals & Inter Lighting Materials IH 94 WB Ramps & CTH T	EACH	1.000	1.000		
0954	SPV.0060	Special 231. Trnspt & Install S-F Radar Detection System IH 94 EB Ramps & CTH T	EACH	1.000	1.000		
0956	SPV.0060	Special 232. Trnspt & Install S-F Radar Detection System IH 94 WB Ramps & CTH T	EACH	1.000	1.000		
0958	SPV.0060	Special 233. Airport Obstruction Lights L810	EACH	15.000	15.000		
0960	SPV.0060	Special 234. Concrete Control Cabinet Bases Type 9 Special Super P	EACH	2.000	2.000		
0962	SPV.0060	Special 235. Temporary EVP System STH 318 & Silvernail Road	EACH	1.000			1.000
0964	SPV.0060	Special 236. Temporary EVP System IH 94 EB Ramps & STH 318	EACH	1.000	1.000		
0966	SPV.0060	Special 237. Temporary EVP System IH 94 WB Ramps & STH 318	EACH	1.000	1.000		
0972	SPV.0060	Special 250. Remove and Reinstall Fiber Optic Pigtail STH 318 & Silvernail Road	EACH	1.000	1.000		
0974	SPV.0060	Special 251. Remove and Reinstall Fiber Optic Pigtail IH 94 EB Ramps & STH 318	EACH	1.000	1.000		
0976	SPV.0060	Special 252. Remove and Reinstall Fiber Optic Pigtail IH 94 WB Ramps & STH 318	EACH	1.000	1.000		
0978	SPV.0060	Special 253. Remove and Reinstall Fiber Optic Pigtail IH 94 EB Ramps & CTH T	EACH	1.000	1.000		
0980	SPV.0060	Special 254. Remove and Reinstall Fiber Optic Pigtail IH 94 WB Ramps & CTH T	EACH	1.000	1.000		
0982	SPV.0060	Special 255. Relocate Existing Pull Box	EACH	1.000	1.000		
0984	SPV.0060	Special 300. Remove Pole	EACH	2.000	2.000		
0986	SPV.0060	Special 301. Ground Rod	EACH	5.000	5.000		
0988	SPV.0060	Special 302. Refocus Vehicle Detector Assembly	EACH	24.000	24.000		
0990	SPV.0060	Special 303. Removing Controller Cabinet Base	EACH	1.000	1.000		
0992	SPV.0060	Special 304. Removing Controller Cabinet	EACH	1.000	1.000		
0994	SPV.0060	Special 401. Modify Lighting Control Cabinets 120/240	EACH	1.000	1.000		
0996	SPV.0060	Special 402. Maintenance of Lighting Systems (1060-47-70)	EACH	1.000	1.000		
0998	SPV.0060	Special 403. Lighting System Integrator (1060-47-70)	EACH	1.000	1.000		
1000	SPV.0060	Special 404. Lighting System Survey (1060-47-70)	EACH	1.000	1.000		
1002	SPV.0090	Special 001. Concrete Barrier 51-Inch Special	LF	688.000	688.000		
1004	SPV.0090	Special 002. Marking Epoxy 4-Inch Black Non Grooved	LF	115.000	115.000		
1006	SPV.0090	Special 003. Marking Epoxy 6-Inch Black Non Grooved	LF	1,896.000	1,446.000		450.000
1008	SPV.0090	Special 004. Marking Epoxy 8-Inch Black Non Grooved	LF	92.000	92.000		
1010	SPV.0090	Special 005. Marking Epoxy 10-Inch Black Non Grooved	LF	290.000	120.000		170.000
1012	SPV.0090	Special 006. Concrete Barrier Wall Epoxy Crack Sealing	LF	850.000	850.000		
1014	SPV.0090	Special 300. Outdoor Rated Network Cable	LF	360.000	360.000		
1016	SPV.0090	Special 401. Cable Aerial Aluminum 6 AWG Triplex	LF	1,030.000	1,030.000		

					1060-47-70	1330-47-71	2788-03-70
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**	**Qty**
1018	SPV.0165	Special 001. Repair Galvanized Coating	SF	26.000	26.000		
1020	SPV.0165	Special 002. Wall Modular Block Mechanically Stabilized Earth R-67-159	SF	1,240.000	1,240.000		
1022	SPV.0165	Special 003. Concrete Barrier Wall Surface Repair	SF	640.000	640.000		
1024	SPV.0180	Special 001. Methacrylate Flood Seal	SY	5,136.000	5,136.000		
1026	SPV.0180	Special 002. Resin Binder High Friction Surface Treatment	SY	7,274.000	7,274.000		
1028	SPV.0180	Special 003. Micromilling for Base Patching	SY	45,212.000	45,212.000		
1030	SPV.0195	Special 001. HMA Longitudinal Joint Repair	TON	2,100.000	2,100.000		
1032	SPV.0195	Special 002. Asphaltic Repair	TON	183.000	132.000	21.000	30.000

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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CLEARING AND GRUBBING

CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET	201.0105 CLEARING* STA	201.0120 CLEARING* ID	201.0205 GRUBBING STA	201.0220 GRUBBING ID
0010	**PROJECT ID 1060-47-70**								
	IH 94	459+45		468+45	LT	9	--	9	--
	IH 94	522+00			152' LT	--	4	--	4
	IH 94	522+10			145' LT	--	6	--	6
	IH 94	522+10			155' LT	--	4	--	4
	IH 94	522+15			160' LT	--	6	--	6
	IH 94	606+67			50' RT	--	12	--	12
	IH 94	640+77			218' LT	--	8	--	8
	IH 94	640+77			221' LT	--	10	--	10
					CONTRACT TOTAL	9	50	9	50

*ALL TREE CUTTING TO BE COMPLETED BY OTHERS (SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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REMOVING SMALL PIPE CULVERTS

CATEGORY	ROADWAY	STATION	203.0100* REMOVING SMALL PIPE CULVERTS EACH	COMMENTS
0010	**PROJECT ID 1060-47-70**			
	IH 94	495+00	1	18"x91' CMCP
		522+00	1	18"x90' CMCP
		603+00	1	18"x80' CMCP
		633+00	1	18"x225' CMCP
		CONTRACT TOTAL	4*	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING ASPHALTIC SURFACE BUTT JOINTS

CATEGORY	LOCATION	STATION	TO	STATION	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY
0010	**PROJECT ID 1060-47-70**				
	IH 94 WB	459+60		460+60	646
		521+58		522+58	623
		524+11		525+11	622
		638+50		639+50	543
	IH 94 EB	459+58		460+58	626
		521+56		522+56	626
		524+08		525+08	564
		638+50		639+50	533
			CONTRACT TOTAL		4783

REMOVING ASPHALTIC LONGITUDINAL NOTCHED WEDGE JOINT MILLING

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	204.0126.S REMOVING ASPHALTIC LONGITUDINAL NOTCHED WEDGE JOINT MILLING LF
0010	**PROJECT ID 1060-47-70**					
	4B	IH 94 EB LANE 1/2 JOINT	459+30		640+00	18070
	4B	IH 94 WB LANE 1/2 JOINT	459+30		640+00	18070
	C	IH 94 WB LANE 3/AUX JOINT	657+90		677+50	1960
	C	WB EXIT AT STH 318 RAMP 1/2 JOINT	704+00		716+00	1200
	C	IH 94 WB LANE 3/AUX JOINT	706+00		733+00	2700
	C	IH 94 EB LANE 3/AUX JOINT	707+16		724+00	1684
	D	IH 94 EB LANE 1/2 JOINT	640+00		772+14	13214
	D	IH 94 WB LANE 1/2 JOINT	640+00		772+14	13214
				CONTRACT TOTAL		70112

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

REMOVING PAVEMENT

CATEGORY	ROADWAY	STATION	TO	STATION	204.0109.S REMOVING CONCRETE SURFACE PARTIAL DEPTH SF	204.0100 REMOVING CONCRETE PAVEMENT SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY
0010	**PROJECT ID 1060-47-70**						
	IH 94 EB AND RAMPS	459+30		640+00	--	--	96152
	IH 94 WB AND RAMPS	459+30		640+00	--	70*	97092
	IH 94 EB AND RAMPS	640+00		676+16	50624	--	33993
	IH 94 WB AND RAMPS	640+00		676+16	50624	--	35700
	IH 94 EB AND RAMPS	676+16		707+16	--	--	31317
	IH 94 WB AND RAMPS	676+16		707+16	--	--	34317
	IH 94 EB AND RAMPS	707+16		732+00	--	--	18346
	IH 94 WB AND RAMPS	707+16		732+00	--	--	19738
	IH 94 EB AND RAMPS	732+00		794+62	--	--	29263
	IH 94 WB AND RAMPS	732+00		794+22	--	--	32613
	IH 94 EB LANE 1/INSIDE SHOULDER JOINT	640+00		772+14	--	--	1468
	IH 94 WB LANE 1/INSIDE SHOULDER JOINT	640+00		772+14	--	--	1468
	IH 94 EB LANE 1/2 JOINT	640+00		772+14	--	--	1468
	IH 94 WB LANE 1/2 JOINT	640+00		772+14	--	--	1468
	IH 94 EB LANE 2/3 JOINT (STAGE C)	640+00		772+14	--	--	1468
	IH 94 WB LANE 2/3 JOINT (STAGE C)	640+00		772+14	--	--	1468
	IH 94 EB LANE 2/3 JOINT (STAGE D)	640+00		772+14	--	--	2936
	IH 94 WB LANE 2/3 JOINT (STAGE D)	640+00		772+14	--	--	2936
	IH 94 EB LANE 3/OUTSIDE SHOULDER JOINT	640+00		772+14	--	--	1468
	IH 94 WB LANE 3/OUTSIDE SHOULDER JOINT	640+00		772+14	--	--	1468
	CTH SS	31+00		41+50	--	--	3577
	STH 318	280+00		291+62	--	--	6174
0130	MEADOWBROOK PARK & ROAD	0A+00		3A+74	--	--	13951
				SUBTOTAL	101248	70	469851
0010	**PROJECT ID 1330-47-71**						
	NAGAWAUKEE PARK & RIDE	0+18		4+42	--	--	8748
				SUBTOTAL	--	--	8748
0010	**PROJECT ID 2788-03-70**						
	STH 318	268+83		280+00	--	--	9920
				SUBTOTAL	--	--	9920
	PROJECT ID 1060-47-70 TOTAL				101248	70	469851
	PROJECT ID 1330-47-71 TOTAL				--	--	8748
	PROJECT ID 2788-03-70 TOTAL				--	--	9920
				CONTRACT TOTAL	101248	70	488519

*NOTE: QUANTITIES INCLUDE REMOVING CONCRETE PAVEMENT FOR CULVERT REPLACEMENTS

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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REMOVING ASPHALTIC SURFACE

CATEGORY	ROADWAY	STATION	TO STATION	OFFSET	204.0110 REMOVING ASPHALTIC SURFACE SY	COMMENTS
0010	**PROJECT ID 1060-47-70**					
	IH 94 WB	495+01	495+09	49' LT	17	CROSS CULVERT
		521+96	522+04	46' LT	18	CROSS CULVERT
		602+95	603+03	51' LT	15	CROSS CULVERT
		633+14	633+22	42' LT	14	CROSS CULVERT
	GOLF ROAD	633+12	633+18	195' LT	39	CROSS CULVERT
	STH 318	280+23	282+00	0'	83	CURB AND GUTTER REMOVAL
		280+64	280+76	39' LT	51	SIGNAL LOOPS
		281+12	281+72	69' RT	32	CURB AND GUTTER REMOVAL
		281+19	281+47	43' LT	10	CURB AND GUTTER REMOVAL
		281+20	281+63	81' RT	54	SHARED USE PATH
		282+02	280+33	20' RT	149	MEDIAN
		282+21	282+39	76' RT	19	SHARED USE PATH
		282+64	282+74	65' RT	8	SHARED USE PATH
		284+55	284+90	66' RT	40	SHARED USE PATH
		285+60	285+74	41' LT	47	SIGNAL LOOPS
		285+72	286+22	33' RT	139	SIGNAL LOOPS
		286+20	286+71	76' RT	59	SHARED USE PATH
		287+23	287+86	80' RT	65	SHARED USE PATH
		289+55	289+64	35' LT	3	SIGNAL LOOPS
	HILLSIDE DR				919	ASPHALTIC SURFACE DETOURS
	SILVERNAIL RD				1690	ASPHALTIC SURFACE DETOURS
	STH 318 EB OFF RAMP	240+45	240+59	21' LT	35	SIGNAL LOOPS
		242+59	243+14	25' LT	157	SIGNAL LOOPS
	STH 318 WB OFF RAMP	242+82	243+53	20' RT	30	CURB AND GUTTER REMOVAL
		242+87	243+09	21' LT	11	CURB AND GUTTER REMOVAL
		243+00	243+53	0'	264	SIGNAL LOOPS
		245+54	245+63	24' RT	25	SIGNAL LOOPS
0130	MEADOWBROOK PARK & RIDE	0A+99	1A+18	144' RT	9	CURB AND GUTTER REMOVAL
		2A+07	2A+22	164' RT	5	CURB AND GUTTER REMOVAL
		2A+44	2A+62	300' RT	7	CURB AND GUTTER REMOVAL
		3A+24	3A+27	84' RT	4	CURB AND GUTTER REMOVAL
		3A+29	3A+51	90' RT	49	SHARED USE PATH
		3A+40	3A+55	97' RT	8	CURB AND GUTTER REMOVAL
			SUBTOTAL		3972	

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REMOVING ASPHALTIC SURFACE

CATEGORY	ROADWAY	STATION	TO STATION	OFFSET	204.0110 REMOVING ASPHALTIC SURFACE SY	COMMENTS
0010	**PROJECT ID 1330-47-71**					
	NAGAWAUKEE PARK & RIDE	4+00	4+03	0'	5	CURB AND GUTTER REMOVAL
		4+00	4+03	47' RT	5	CURB AND GUTTER REMOVAL
		4+21	4+31	121' RT	4	CURB AND GUTTER REMOVAL
		4+28	4+42	63' RT	107	BUS STOP
		4+45	4+55	130' RT	26	SHARED USE PATH
			SUBTOTAL		147	
0010	**PROJECT ID 2788-03-70**					
	STH 318	274+41	274+50	12' RT	30	SIGNAL LOOPS
		276+46	277+26	90' RT	93	SHARED USE PATH
		276+63	277+13	15' RT	82	SIGNAL LOOPS
		277+22	277+33	90' RT	9	CURB AND GUTTER REMOVAL
		278+05	278+25	90' RT	8	CURB AND GUTTER REMOVAL
		278+10	278+56	100' RT	48	SHARED USE PATH
		278+16	278+66	23' RT	133	SIGNAL LOOPS
		278+82	278+92	34' RT	24	SIGNAL LOOPS
	SILVERNAIL ROAD	84+43	84+51	12' RT	11	SIGNAL LOOPS
		86+03	86+11	12' RT	12	SIGNAL LOOPS
		88+13	88+64	0'	147	SIGNAL LOOPS
		90+09	90+62	20' LT	189	SIGNAL LOOPS
		92+32	92+42	24' LT	28	SIGNAL LOOPS
		93+82	93+96	24' LT	37	SIGNAL LOOPS
			SUBTOTAL		851	

PROJECT ID 1060-47-70 TOTAL	3972
PROJECT ID 1330-47-71 TOTAL	147
PROJECT ID 2788-03-70 TOTAL	851
CONTRACT TOTAL	4970

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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REMOVING CURB & GUTTER

CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET	204.0150 REMOVING CURB & GUTTER LF
0010	**PROJECT ID 1060-47-70**					
	STH 318	280+23		282+01	0'	276
		281+12		281+72	73' RT	99
		281+19		281+47	48' LT	28
	IH 94 WB OFF RAMP TO STH 318	242+82		243+53	27' RT	81
		242+87		243+09	26' LT	32
0130	MEADOWBROOK PARK & RIDE	1A+04		1A+18	149' RT	24
		1A+42		1A+60	187' RT	18
		1A+87		2A+05	187' RT	19
		2A+07		2A+22	170' RT	14
		2A+44		2A+63	301' RT	30
		3A+29		3A+29	84' RT	11
		3A+39		3A+51	94' RT	23
				SUBTOTAL		655
0010	**PROJECT ID 1330-47-71**					
	NAGAWAUKEE PARK & RIDE	4+05		4+05	0'	15
		4+05		4+05	47' RT	16
		4+23		4+32	125' RT	11
		4+25		4+25	47' RT	16
				SUBTOTAL		58
0010	**PROJECT ID 2788-03-70**					
	STH 318	277+20		277+28	92' RT	26
		278+09		278+26	92' RT	22
				SUBTOTAL		48
	PROJECT ID 1060-47-70 TOTAL					655
	PROJECT ID 1330-47-71 TOTAL					58
	PROJECT ID 2788-03-70 TOTAL					48
				CONTRACT TOTAL		761

REMOVING SIDEWALK

CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET	204.0155 REMOVING CONCRETE SIDEWALK SY
0010	**PROJECT ID 1060-47-70**					
	STH 318	281+89		281+97	42' LT	12
		282+36		282+88	4' RT	8
		287+02		287+16	44' LT	11
0130	MEADOWBROOK PARK & RIDE	1A+05		1A+19	150' RT	28
		1A+43		1A+59	177' RT	31
		1A+86		2A+07	178' RT	20
		2A+07		2A+22	170' RT	28
		2A+44		2A+63	300' RT	17
				SUBTOTAL		155
0010	**PROJECT ID 1330-47-71**					
	NAGAWAUKEE PARK & RIDE	4+05		4+25	0'	33
		4+05		4+25	47' RT	34
				SUBTOTAL		67
0010	**PROJECT ID 2788-03-70**					
	STH 318	276+66		277+12	7' LT	17
		276+72		277+12	16' RT	34
		277+28		277+43	45' LT	22
		278+18		278+55	25' RT	24
		278+19		278+59	3' LT	18
				SUBTOTAL		115
	PROJECT ID 1060-47-70 TOTAL					155
	PROJECT ID 1330-47-71 TOTAL					67
	PROJECT ID 2788-03-70 TOTAL					115
				CONTRACT TOTAL		337

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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REMOVING STORM SEWER

CATEGORY	ROADWAY	STATION	OFFSET	TO	STATION	OFFSET	204.0210 REMOVING MANHOLES EACH	204.0220 REMOVING INLETS EACH	204.0245.001 REMOVING STORM SEWER 12-INCH LF	204.0245.002 REMOVING STORM SEWER 24-INCH LF
0010	**PROJECT ID 1060-47-70**									
	STH 318	281+23	11' RT		281+24	28' RT	--	1	18	--
		281+24	2' LT		EXISTING		1	--	--	16
		281+24	2' LT		281+23	11' RT	--	--	13	--
		281+26	73' RT		EXISTING		--	1	8	--
		281+33	49' LT		EXISTING		--	1	--	16
					CONTRACT TOTAL		1	3	39	32

FINISHING ROADWAY

CATEGORY	LOCATION	213.0100 FINISHING ROADWAY EACH
0010	**PROJECT ID 1060-47-70**	
	PROJECT	1
	PROJECT ID 1330-47-71	
	PROJECT	1
	PROJECT ID 2788-03-70	
	PROJECT	1
	CONTRACT TOTAL	3

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EARTHWORK SUMMARY

DIVISION	FROM/TO STATION	LOCATION	205.0100 EXCAVATION COMMON (1) CUT (2)	205.0100 EXCAVATION COMMON (1) EBS EXCAVATION (3)	SALVAGED/ UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	205.0500 MARSH EXCAVATION (6)	205.0200 ROCK EXCAVATION (7)	REDUCED MARSH IN FILL (8) FACTOR 0.60	REDUCED EBS IN FILL (9) FACTOR 0.80	EXPANDED MARSH BACKFILL (10) FACTOR 1.50	EXPANDED EBS BACKFILL (11) FACTOR 1.30	EXPANDED ROCK (12) FACTOR 1.10	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.25	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT
DIVISION 1																			
QR-MEDIAN CABLE RAIL	459+63.61/483+00	IH-94 MEDIAN, CABLE RAIL	670	0	0	670	0	0	0	0	0	0	0	69	86	584	584	0	
QR-BG 2	490+59.108/502+50	IH-94 MAINLINE, RT	78	0	0	78	0	0	0	0	0	0	0	110	138	-60	0	60	
QR-BG 3	519+00/522+79.784	IH-94 MAINLINE, RT	1	0	0	1	0	0	0	0	0	0	0	54	68	-67	0	67	
QR-BG 5	601+79.233/606+74.216	IH-94 MAINLINE, RT	29	0	0	29	0	0	0	0	0	0	0	41	51	-22	0	22	
QR-BG 31	694+93.098/697+50	IH-94 MAINLINE, LT	10	0	0	10	0	0	0	0	0	0	0	25	31	-21	0	21	
QR-BG 20	459+63.61/472+22.33	IH-94 MAINLINE, LT	131	0	0	131	0	0	0	0	0	0	0	2,068	2,585	-2,454	0	1,870	USE CABLE RAIL WASTE
QR-BG 9	238+00/242+79.395	CTH G EB OFF RAMP,LT	7	0	0	7	0	0	0	0	0	0	0	52	65	-58	0	58	
QR-BG 21	467+75.418/470+19.452	STH 83 RAMP D	5	0	0	5	0	0	0	0	0	0	0	129	161	-156	0	156	
QR-BG 26	1172+55.67/1178+28.057	CTH SS WB ON RAMP,LT	16	0	0	16	0	0	0	0	0	0	0	16	20	-4	0	4	
QR-BG10	244+57.136/248+36.025	CTH G WB OFF RAMP,LT	0	0	0	0	0	0	0	0	0	0	0	115	144	-144	0	144	
QR-BOXCULVFILL	241+21.155/241+82.254	STH 83 - BOX CULVERT FILL	0	0	0	0	0	0	0	0	0	0	0	5	6	-6	0	6	
QR-STH83 BRIDGE FILL	459+37.209/459+64.273	IH 94 - STH 83, BRIDGE FILL	0	0	0	0	0	0	0	0	0	0	0	34	43	-43	0	43	
QR-BG 32 & HMA CURB NW QUADRANT	521+06.729/522+84.622	IH 94 - MAINLINE, LT NW QUAD	0	0	0	0	0	0	0	0	0	0	0	4	5	-5	0	5	
QR-HMA CURB NE QUADRANT	523+97.209/524+14.365	IH 94 - NE QUADRANT	0	0	0	0	0	0	0	0	0	0	0	7	9	-9	0	9	
WB Cross Culvert	575+00	IH 94 WB Outside	0	0	0	0	0	0	0	0	0	0	0	4	5	-5	0	5	
Maintenance Crossover	538+36/541+22	IH 94 Median	112	0	0	112	0	0	0	0	0	0	0	89	112	0	0	0	
DIVISION 1 SUBTOTAL			1,059	0	0	1,059	0	0	0	0	0	0	0	2,822	3,528	-2,469	584	2,469	0
GRAND TOTAL			1,059	0	0	1,059	0	0	0	0	0	0	0	2,822	3,528	-2,469	584	2,469	
TOTAL EXCAVATION COMMON			1,059																

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 SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL.
(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
(6) MARSH EXCAVATION - TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL. ITEM NUMBER 205.0500
(7) ROCK EXCAVATION ITEM NUMBER 205.0200
(8) REDUCED MARSH IN FILL - EXCAVATED MARSH MATERIAL IS USUABLE IN FILLS OUTSIDE THE 1:1 SLOPE. MARSH IN FILL REDUCTION FACTOR = 0.60
(9) REDUCED EBS IN FILL - EXCAVATED EBS MATERIAL IS USUABLE IN FILLS OUTSIDE THE 1:1 SLOPE. EBS IN FILL REDUCTION FACTOR = 0.80
(10) EXPANDED MARSH BACKFILL - THIS IS TO BE FILLED WITH BORROW MATERIAL. MARSH BACKFILL FACTOR = 1.50. ITEM NUMBER 208.0100
(11) EXPANDED EBS BACKFILL - THIS IS TO BE FILLED WITH BORROW MATERIAL. EBS BACKFILL FACTOR = 1.30. ITEM NUMBER 208.0100
(12) EXPANDED ROCK FACTOR = 1.10
(13) EXPANDED FILL FACTOR = 1.25 EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH - REDUCED EBS) * FILL FACTOR
(14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
(15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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BASE AGGREGATE ITEMS

CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET	209.1100 BACKFILL GRANULAR GRADE 1 CY	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL	COMMENTS
0010	**PROJECT ID 1060-47-70**									
	IH 94 WB	459+30		633+00	LT	476	12	151	3	CROSS CULVERTS
	IH 94 EB SHOULDER	459+58		465+00	LT	--	47	--	1	
	IH 94 WB SHOULDERS	459+60		465+00	LT	--	37	--	1	
	IH 94 EB SHOULDERS	465+00		522+56	LT & RT	--	386	--	6	
	IH 94 WB SHOULDERS	465+00		522+59	LT	--	317	--	5	
	IH 94 EB SHOULDERS	524+06		640+00	LT & RT	--	376	--	6	
	IH 94 WB SHOULDERS	524+10		640+00	LT	--	387	--	6	
	IH 94 EB SHOULDER	706+48		772+14	RT	--	151	--	3	
	IH 94 WB SHOULDER	682+43		772+14	LT	--	184	--	3	
	STH 83 RAMP SHOULDERS	--		--		--	72	--	2	
	CTH SS RAMP SHOULDERS	--		--		--	170	--	3	
	STH 318 RAMP SHOULDERS	--		--		--	195	--	3	
	CTH T RAMP SHOULDERS	--		--		--	208	--	4	
	IH 94 MEDIAN CROSSOVER	539+20		539+92	11' LT	--	6	172	3	MEDIAN CROSSOVER
	STH 318	280+00		291+62		--	--	165	3	CURB AND GUTTER, CURB RAMPS
	CTH SS	38+56		38+86	66' LT	--	12	--	1	MAINTENANCE PAD
0130	MEADOWBROOK PARK & ROAD	--		--		--	--	77	2	CURB AND GUTTER, CURB RAMPS
				SUBTOTAL		476	2560	565	55	
0010	**PROJECT ID 1330-47-71**									
	NAGAWAUKEE PARK & RIDE	4+28		4+42	63' RT	--	--	36	1	BUS STOP
	NAGAWAUKEE PARK & RIDE	0+18		4+42		--	--	47	1	CURB AND GUTTER, CURB RAMPS
				SUBTOTAL		--	--	83	2	
0010	**PROJECT ID 2788-03-70**									
	STH 318	276+00		279+00		--	--	69	2	CURB AND GUTTER, CURB RAMPS
	SILVERNAIL RD	87+66		90+71		--	4	--	1	
				SUBTOTAL		--	4	69	3	
	PROJECT ID 1060-47-70 TOTAL					476	2560	565	55	
	PROJECT ID 1330-47-71 TOTAL					--	--	83	2	
	PROJECT ID 2788-03-70 TOTAL					--	4	69	3	
				CONTRACT TOTAL		476	2564	717	60	

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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						ASPHALTIC PAVEMENT					
						455.0605	460.6224	460.7423	460.8624	465.0125	465.0510
CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET	TACK COAT GAL	HMA PAVEMENT 4 MT 58-28 S TON	HMA PAVEMENT 3 HT 58-28 H TON	HMA PAVEMENT 4 SMA 58-28 V TON	ASPHALTIC SURFACE TEMPORARY TON	ASPHALTIC RUMBLE STRIPS, SHOULDER DIVIDED ROADWAY LF
0010	**PROJECT ID 1060-47-70**										
	IH 94 EB AND RAMPS	459+30		640+00		9552	--	7088	10265	350	35800
	IH 94 WB AND RAMPS	459+62		640+00		9739	--	6872	10575	350	35768
	IH 94 EB LANE 1/2 JOINT	459+58		640+00		100	--	--	119	--	--
	IH 94 WB LANE 1/2 JOINT	459+62		640+00		100	--	--	119	--	--
	IH 94 EB AND RAMPS	640+00		676+16		2782	--	2747	3664	51	7232
	IH 94 WB AND RAMPS	640+00		676+16		3316	--	3347	4192	51	7232
	IH 94 EB AND RAMPS	676+16		707+16		2861	--	1904	3891	44	6200
	IH 94 WB AND RAMPS	676+16		707+16		2991	--	1897	4388	44	6200
	IH 94 EB AND RAMPS	707+16		732+00		1960	--	2186	2161	35	4968
	IH 94 WB AND RAMPS	707+16		732+00		2249	--	2470	2477	35	4968
	IH 94 EB AND RAMPS	732+00		794+62		2892	--	2770	3376	88	8028
	IH 94 WB AND RAMPS	732+00		794+23		3212	--	2942	3819	87	8028
	IH 94 EB LANE 1/2 JOINT	640+00		772+14		74	--	--	99	--	--
	IH 94 WB LANE 1/2 JOINT	640+00		772+14		74	--	--	99	--	--
	IH 94 EB LANE 2/3 JOINT	640+00		772+14		103	--	177	88	--	--
	IH 94 WB LANE 2/3 JOINT	640+00		772+14		103	--	177	88	--	--
	CTH SS	31+00		41+50		301	643	--	--	--	--
	STH 318	280+00		291+62		500	1070	--	--	--	--
	ASPHALTIC SURFACE LOCATIONS					278	--	--	--	--	--
	ASPHALTIC REPAIR					46	--	--	--	--	--
0130	MEADOWBROOK PARK & RIDE	0A+00		3A+74		999	1674	--	--	--	--
				SUBTOTAL		44232	3387	34577	49422	1135	124424
0010	**PROJECT ID 1330-47-71**										
	NAGAWAUKEE PARK & RIDE	0+18		4+42		614	1050	--	--	--	--
				SUBTOTAL		614	1050	--	--	--	--
0010	**PROJECT ID 2788-03-70**										
	STH 318	268+83		280+00		763	1483	--	--	--	--
				SUBTOTAL		763	1483	--	--	--	--
	PROJECT ID 1060-47-70 TOTAL					44232	3387	34577	49422	1135	124424
	PROJECT ID 1330-47-71 TOTAL					614	1050	--	--	--	--
	PROJECT ID 2788-03-70 TOTAL					763	1483	--	--	--	--
				CONTRACT TOTAL		45609	5919	34577	49422	1135	124424

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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ASPHALTIC SURFACE

CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET	465.0105 ASPHALTIC SURFACE TON	465.0115 ASPHALTIC SURFACE DETOURS TON	COMMENTS
0010	**PROJECT ID 1060-47-70**							
	IH 94 WB	495+01		495+09	49' LT	7	--	CROSS CULVERT
	IH 94 WB	521+96		522+04	46' LT	7	--	CROSS CULVERT
	IH 94 WB	602+95		603+03	51' LT	6	--	CROSS CULVERT
	IH 94 WB	633+14		633+22	42' LT	6	--	CROSS CULVERT
	IH 94 MEDIAN	539+20		539+92	11' LT	40	--	MEDIAN CROSSOVER
	GOLF ROAD	633+12		633+18	195' LT	11	--	CROSS CULVERT
	STH 318	280+23		282+00	0'	24	--	CURB AND GUTTER REPLACEMENT
		280+64		280+76	39' LT	15		SIGNAL LOOPS
		281+12		281+72	69' RT	9	--	CURB AND GUTTER REPLACEMENT
		281+19		281+47	43' LT	3	--	CURB AND GUTTER REPLACEMENT
		281+20		281+39	80' RT	6	--	SHARED USE PATH
		282+24		282+40	75' RT	5	--	SHARED USE PATH
		282+64		282+74	65' RT	3	--	SHARED USE PATH
		284+55		284+90	66' RT	12	--	SHARED USE PATH
		285+60		285+74	41' LT	14	--	SIGNAL LOOPS
		285+72		286+22	33' RT	39	--	SIGNAL LOOPS
		286+20		286+59	75' RT	15	--	SHARED USE PATH
		287+48		287+86	81' RT	12	--	SHARED USE PATH
		289+55		289+64	35' LT	7	--	SIGNAL LOOPS
	HILLSIDE DR					--	206	STH 83 TO MAPLE AVE
	SILVERNAIL RD					--	379	CTH SS TO MAPLE AVE
	STH 318 EB OFF RAMP	240+45		240+59	21' LT	10	--	SIGNAL LOOPS
		242+59		243+14	25' LT	44	--	SIGNAL LOOPS
	STH 318 WB OFF RAMP	242+82		243+53	20' RT	9	--	CURB AND GUTTER REPLACEMENT
		242+87		243+09	21' LT	4	--	CURB AND GUTTER REPLACEMENT
		243+00		243+53	0'	74	--	SIGNAL LOOPS
		245+54		245+63	24' RT	7	--	SIGNAL LOOPS
0130	MEADOWBROOK PARK & RIDE	0A+99		1A+18	144' RT	2	--	CURB AND GUTTER REPLACEMENT
		2A+07		2A+22	164' RT	2	--	CURB AND GUTTER REPLACEMENT
		2A+44		2A+62	300' RT	2	--	CURB AND GUTTER REPLACEMENT
		3A+24		3A+27	84' RT	1	--	CURB AND GUTTER REPLACEMENT
		3A+40		3A+55	97' RT	2	--	CURB AND GUTTER REPLACEMENT
				SUBTOTAL		398	585	

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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ASPHALTIC SURFACE

CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET	465.0105 ASPHALTIC SURFACE TON	465.0115 ASPHALTIC SURFACE DETOURS TON	COMMENTS
0010	**PROJECT ID 1330-47-71**							
	NAGAWAUKEE PARK & RIDE	4+00		4+03	0'	2	--	CURB AND GUTTER REPLACEMENT
		4+00		4+03	47' RT	2	--	CURB AND GUTTER REPLACEMENT
		4+21		4+31	121' RT	1	--	CURB AND GUTTER REPLACEMENT
				SUBTOTAL		5	--	
0010	**PROJECT ID 2788-03-70**							
	STH 318	274+41		274+50	12' RT	9	--	SIGNAL LOOPS
		276+45		277+26	93' RT	20	--	SHARED USE PATH
		276+63		277+13	15' RT	23	--	SIGNAL LOOPS
		277+22		277+33	90' RT	3	--	CURB AND GUTTER REPLACEMENT
		278+05		278+25	90' RT	3	--	CURB AND GUTTER REPLACEMENT
		278+33		278+58	93' RT	8	--	SHARED USE PATH
		278+16		278+66	23' RT	38	--	SIGNAL LOOPS
		278+82		278+92	34' RT	7	--	SIGNAL LOOPS
	SILVERNAIL ROAD	84+43		84+51	12' RT	2	--	SIGNAL LOOPS
		86+03		86+11	12' RT	2	--	SIGNAL LOOPS
		88+13		88+64	0'	42	--	SIGNAL LOOPS
		90+09		90+62	20' LT	53	--	SIGNAL LOOPS
		92+32		92+42	24' LT	4	--	SIGNAL LOOPS
		93+82		93+96	24' LT	5	--	SIGNAL LOOPS
				SUBTOTAL		219	--	
	PROJECT ID 1060-47-70 TOTAL					398	585	
	PROJECT ID 1330-47-71 TOTAL					5	--	
	PROJECT ID 2788-03-70 TOTAL					219	--	
				CONTRACT TOTAL		622	585	

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FOUNDATION FOR ASPHALTIC PAVING

CATEGORY	LOCATION	211.0101 PREPARE FOUNDATION FOR ASPHALTIC PAVING EACH
0010	**PROJECT ID 1060-47-70**	
	PROJECT	0.88
0010	**PROJECT ID 1330-47-71**	
	PROJECT	0.01
0010	**PROJECT ID 2788-03-70**	
	PROJECT	0.02
	CONTRACT TOTAL	0.91

CONCRETE PAVEMENT

CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET	415.0080 CONCRETE PAVEMENT 8-INCH SY
0010	**PROJECT ID 1330-47-71**					
	NAGAWAUKEE PARK & RIDE	4+28		4+42	63' RT	107
				CONTRACT TOTAL		107

ASPHALTIC FLUMES

CATEGORY	ROADWAY	STATION	OFFSET	ADD FORUMLAS HERE AREA SF	465.0315 ASPHALTIC FLUMES SY
0010	**PROJECT ID 1060-47-70**				
	STH 318 WB OFF RAMP	243+53	26' RT	97.2	11
		CONTRACT TOTAL			11

HIGH FRICTION SURFACE TREATMENT

CATEGORY	ROADWAY	STATION	TO	STATION	DIRECTION	SPV.0180.002 RESIN BINDER HIGH FRICTION SURFACE TREATMENT SY
0030	**PROJECT ID 1060-47-70**					
	IH 94	740+80		749+85	WB	3604
		740+80		749+85	EB	3670
				CONTRACT TOTAL		7274

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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PAVEMENT REPAIR - CONCRETE PAVEMENT REPAIR/REPLACEMENT

CATEGORY	ROADWAY	STATION	TO	STATION	DIRECTION	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	416.1715 CONCRETE PAVEMENT REPAIR SHES SY	416.1725 CONCRETE PAVEMENT REPLACEMENT SHES SY	690.0250 SAWING CONCRETE LF
0010	**PROJECT ID 1060-47-70**									
	IH 94	772+50		796+00	EB	110	184	255	194	998
	IH 94	772+50		819+00	WB	75	162	231	87	764
	CTH T EB EXIT RAMP					59	86	72	153	490
	CTH T EB ENTRANCE RAMP					21	31	28	50	180
	CTH T WB EXIT RAMP					9	33	53	--	124
	CTH T WB ENTRANCE RAMP					16	58	91	--	214
					SUBTOTAL	290	554	731	484	2770
				CONTRACT TOTAL		SEE BELOW	SEE BELOW	731	484	SEE BELOW

PAVEMENT REPAIR - BASE PATCHING, JOINT REPAIR, ASPHALTIC REPAIR

CATEGORY	ROADWAY	STATION	TO	STATION	390.0100 REMOVING PAVEMENT FOR BASE PATCHING CY	390.0405 BASE PATCHING CONCRETE SHES CY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF	SPV.0060.055 MOBILIZATION EMERGENCY PAVEMENT REPAIR EACH	SPV.0180.003 MICROMILLING FOR BASE PATCHING SY	SPV.0195.001 HMA LONGITUDINAL JOINT REPAIR TON	SPV.0195.002 ASPHALTIC REPAIR TON
0010	**PROJECT ID 1060-47-70**													
	IH 94	459+30		825+63	4119	4119	211	20848	5700	41456	8	45212	2100	--
	IH 94 WB CROSS CULVERTS	459+30		640+00	31	31	--	128	301	192	--	--	--	--
	IH 94 MEDIAN DRAINAGE	640+00		825+63	12	12	168	--	--	294	--	--	--	--
	IH 94 RAMPS	459+30		772+14	--	--	--	--	--	--	--	--	--	64
	CTH SS	31+00		41+50	--	--	--	--	--	--	--	--	--	13
	STH 318/CTH G	280+00		291+62	--	--	--	--	1375	--	--	--	--	21
0130	MEADOWBROOK PARK & RIDE	0A+00		3A+74	--	--	--	--	108	--	--	--	--	33
				SUBTOTAL	4162	4162	379	20976	7483	41942	8	45212	2100	132
0010	**PROJECT ID 1330-47-71**													
	NAGAWAUKEE PARK & RIDE	0+18		4+42	--	--	--	--	72	--	--	--	--	21
				SUBTOTAL	--	--	--	--	72	--	--	--	--	21
0010	**PROJECT ID 2788-03-70**													
	STH 318	268+83		280+00	--	--	--	--	990	--	--	--	--	30
				SUBTOTAL	--	--	--	--	990	--	--	--	--	30
	PROJECT ID 1060-47-70 TOTAL				4162	4162	669	21530	7483	44712	8	45212	2100	132
	PROJECT ID 1330-47-71 TOTAL				--	--	--	--	72	--	--	--	--	21
	PROJECT ID 2788-03-70 TOTAL				--	--	--	--	990	--	--	--	--	30
				CONTRACT TOTAL	4162	4162	669	21530	8545	44712	8	45212	2100	183

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		QMP ITEMS			
		460.0105.S	460.0110.S	460.0115.S	460.0120.S
CATEGORY	LOCATION	HMA PWL TEST STRIP VOLUMETRICS EACH	HMA PWL TEST STRIP DENSITY EACH	HMA PAVEMENT TEST STRIPS VOLUMETRICS EACH	HMA PAVEMENT TEST STRIPS DENSITY EACH
0010	**PROJECT ID 1060-47-70**				
		1	2	1	3
	CONTRACT TOTAL	1	2	1	3

LOCATION	STATION	MIXTURE USE	UNDERLYING SURFACE	BID TIEM	TONS	THICKNESS	QMP TO BE USED FOR:	
							MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12 FOOT DRIVING LANES	459+30 TO 640+00	LOWER LAYER	MILLED EXISTING HMA SURFACE	HMA PAVEMENT 3 HT 58-28 H	13960	2-1/4"	PWL Incentive Air Voids, HMA pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
10 FOOT SHOULDERS	459+30 TO 640+00	UPPER LAYER	MILLED EXISTING HMA SURFACE	HMA PAVEMENT 4 SMA 58-28 V	8911	1-3/4"	QMP as per SS 460	Incentive Density HMA Pavement 460.2000
12 FOOT DRIVING LANES	459+30 TO 640+00	UPPER LAYER	HMA PAVEMENT 3 HT 58-28 H	HMA PAVEMENT 4 SMA 58-28 V	12167	1-3/4"	QMP as per SS 460	Incentive Density HMA Pavement 460.2000
12 FOOT DRIVING LANES	640+00 TO 772+14	LOWER LAYER	MILLED EXISTING HMA SURFACE OR EXISTING CONCRETE PAVEMENT	HMA PAVEMENT 3 HT 58-28 H	20617	2-1/4" TO 4"	PWL Incentive Air Voids, HMA pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
10 TO 12 FOOT SHOULDERS AND RAMP SHOULDERS	640+00 TO 772+14	UPPER LAYER	MILLED EXISTING HMA SURFACE OR EXISTING CONCRETE PAVEMENT	HMA PAVEMENT 4 SMA 58-28 V	10591	2" TO 3"	QMP as per SS 460	Incentive Density HMA Pavement 460.2000
12 FOOT DRIVING LANES	640+00 TO 772+14	UPPER LAYER	HMA PAVEMENT 3 HT 58-28 H	HMA PAVEMENT 4 SMA 58-28 V	17753	2"	QMP as per SS 460	Incentive Density HMA Pavement 460.2000
LANE/SHOULDER	CTH SS	UPPER LAYER	MILLED EXISTING HMA SURFACE	HMA PAVEMENT 4 MT 58-28 S	643	2-1/2"	QMP as per SS 460	Incentive Density HMA Pavement 460.2000
LANE/SHOULDER	STH 318	UPPER LAYER	MILLED EXISTING HMA SURFACE	HMA PAVEMENT 4 MT 58-28 S	2552	2-1/2"	QMP as per SS 460	Incentive Density HMA Pavement 460.2000
PARK AND RIDE LOT	NAGAWAUKEE	UPPER LAYER	MILLED EXISTING HMA SURFACE	HMA PAVEMENT 4 MT 58-28 S	1050	2"	QMP as per SS 460	Incentive Density HMA Pavement 460.2000
PARK AND RIDE LOT	MEADOWBROOK	UPPER LAYER	MILLED EXISTING HMA SURFACE	HMA PAVEMENT 4 MT 58-28 S	1674	2"	QMP as per SS 460	Incentive Density HMA Pavement 460.2000
VARIES	VARIES	UPPER LAYER	VARIES	ASPHALTIC SURFACE, ASPHALTIC SURFACE DETOURS, & ASPHALTIC SURFACE TEMPORARY	2342	VARIES	QMP as per SS 465	Acceptance by ordinary compaction

CULVERT ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS* EACH	520.8000 CONCRETE COLLARS FOR PIPE EACH	521.3118 CULVERT PIPE CORRUGATED STEEL 18-INCH LF	REMARKS
0010	593+25	-	593+45	Mainline, LT	1	2	20	Remove and replace 18" CMP pipes
0010	593+60	-	593+80	Mainline, LT	1	2	20	Remove and replace 18" CMP pipes
		-						
				TOTAL 0010	2	4	40	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

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CABLE BARRIER ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	204.9090.S.001 REMOVING (ITEM DESCRIPTION) (001. CABLE BARRIER) LF	613.1100.S CABLE BARRIER TYPE 1 LF	613.1200.S CABLE BARRIER END TERMINAL TYPE 1 EACH	REMARKS
0010	461+00	-	482+83	LT	2,183	2,183	2	Removal includes the end terminal
0010	538+26	-	539+91	LT	165		1	For new Median Emergency Access
		-						
				TOTAL 0010	2,348	2,183	3	

ASPHALTIC CURB ITEMS

CATEGORY	STATION	TO	STATION	OFFSET	465.0310 ASPHALTIC CURB LF	REMARKS
0010	522+59	-	522+85	95' LT	25	NW WINGWALL
0010	524+01	-	524+14	94' LT	16	NE WINGWALL
				TOTAL 0010	41	

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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								CULVERT PIPE							
			520.8000*	520.9700.S.001	520.9750.S	521.1018	522.0412	522.0418	522.0424	522.1012	522.1018	522.2419	522.2619	524.0624	
ROADWAY	STATION	OFFSET	CONCRETE COLLARS FOR PIPE EACH	CULVERT PIPE LINERS 18-INCH LF	CLEANING CULVERT PIPES FOR LINER VERIFICATION EACH	APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH EACH	CULVERT PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	CULVET PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF	CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONRETE 18-INCH EACH	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 19X30-INCH LF	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 19X30-INCH EACH	APRON ENDWALL FOR CULVERT PIPE SALVAGED 24-INCH EACH	COMMENTS
PROJECT ID 1060-47-70															
IH 94	495+00	LT	--	--	--	--	--	85	--	--	1	--	--	--	
	514+00	LT	--	87	1	--	--	--	--	--	--	--	--	--	
	522+00	LT	--	--	--	--	--	68	--	--	1	--	--	--	
	535+00	RT	--	79	1	1	--	--	--	--	--	--	--	--	
	539+01	0'	--	--	--	--	96	--	--	2	--	--	--	--	MEDIAN CROSSOVER
	575+00	LT	1	--	--	--	--	--	8	--	--	--	--	1	
	603+00	LT	--	--	--	--	--	--	--	--	--	75	2	--	
	620+00	LT	--	70	1	--	--	--	--	--	--	--	--	--	
	633+00	LT	--	--	--	--	--	218	--	--	1	--	--	--	
CONTRACT TOTAL			1*	236	3	1	96	371	8	2	3	75	2	1	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE CURB & GUTTER

CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	601.0600 CONCRETE CURB PEDESTRIAN LF
0010	**PROJECT ID 1060-47-70**						
	STH 318	280+23		282+00	0'	283	--
		281+12		281+72	73' RT	99	--
		281+19		281+47	48' LT	28	--
	IH 94 WB OFF RAMP TO STH 318	242+82		243+53	27' RT	81	--
		242+87		243+09	26' LT	32	--
0130	MEADOWBROOK PARK & RIDE	1A+04		1A+18	149' RT	24	--
		1A+42		1A+60	187' RT	18	--
		1A+87		2A+05	187' RT	19	--
		2A+07		2A+22	170' RT	14	--
		2A+44		2A+63	301' RT	30	23
		3A+29		3A+29	84' RT	11	--
		3A+39		3A+51	94' RT	23	--
				SUBTOTAL		662	23
0010	**PROJECT ID 1330-47-71**						
	NAGAWAUKEE PARK & RIDE	4+05		4+05	0'	15	--
		4+05		4+05	47' RT	16	--
		4+23		4+32	125' RT	11	--
		4+25		4+25	47' RT	16	--
				SUBTOTAL		58	--
0010	**PROJECT ID 2788-03-70**						
	STH 318	277+20		277+28	92' RT	26	--
		278+09		278+26	92' RT	22	--
				SUBTOTAL		48	--
	PROJECT ID 1060-47-70 TOTAL					662	23
	PROJECT ID 1330-47-71 TOTAL					58	--
	PROJECT ID 2788-03-70 TOTAL					48	--
				CONTRACT TOTAL		768	23

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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CONCRETE SIDEWALK

CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET	602.0405 CONCRETE SIDEWALK 4-INCH SF	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	602.0605 CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW SF	SPV.0060.060 CURB RAMP GRADING AND SHAPING EACH
0010	**PROJECT ID 1060-47-70**									
	STH 318	281+39		281+63	80' RT	--	220	--	31	1
		281+89		281+97	42' LT	103	--	--	--	--
		282+21		282+24	75' RT	--	30	20	--	1
		282+69		282+88	4' RT	66	--	--	--	--
		286+03		286+71	75' RT	--	237	20	--	1
		287+02		287+16	44' LT	97	--	--	--	--
		287+23		287+48	80' RT	--	209	--	32	1
0130	MEADOWBROOK PARK AND RIDE	1A+19		1A+05	150' RT	--	248	10	--	--
		1A+43		1A+59	177' RT	--	273	10	--	--
		1A+86		2A+21	170' RT	--	421	10	--	--
		2A+44		2A+69	305' RT	--	185	10	--	1
		3A+28		3A+50	95' RT	--	524	10	--	1
				SUBTOTAL		266	2347	90	63	6
0010	**PROJECT ID 1330-47-71**									
	NAGAWAUKEE PARK AND RIDE	4+05		4+15	0'	--	294	10	--	--
		4+05		4+25	47' RT	--	300	10	--	--
		4+23		4+55	125' RT	--	356	10	--	1
				SUBTOTAL		--	950	30	--	1
0010	**PROJECT ID 2788-03-70**									
	STH 318	276+41		277+26	93' RT	--	240	20	--	1
		276+66		277+12	7' LT	150	--	--	--	--
		276+72		277+12	16' RT	298	--	--	--	--
		277+28		277+43	45' LT	190	--	--	--	--
		278+10		278+33	93' RT	--	199	--	32	1
		278+18		278+55	25' RT	212	--	--	--	--
		278+19		278+59	3' LT	156	--	--	--	--
				SUBTOTAL		1006	439	20	32	2
	PROJECT ID 1060-47-70 TOTAL					266	2347	90	63	6
	PROJECT ID 1330-47-71 TOTAL					--	950	30	--	1
	PROJECT ID 2788-03-70 TOTAL					1006	439	20	32	2
				CONTRACT TOTAL		1272	3736	140	95	9

CONCRETE BARRIER ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	204.0157 REMOVING CONCRETE BARRIER LF	603.1132 CONCRETE BARRIER TYPE S32 LF	603.1142 CONCRETE BARRIER TYPE S42 LF	603.3211 CONCRETE BARRIER TRANSITION TYPE F32SF TO S32 EACH	603.3475 CONCRETE BARRIER TRANSITION TYPE F51DF TO S42 EACH	690.0250 SAWING CONCRETE LF	SPV.0165.003 SPECIAL (003. CONCRETE BARRIER WALL SURFACE REPAIR) SF	SPV.0090.001 SPECIAL (001. CONCRETE BARRIER WALL 51-INCH SPECIAL) LF	SPV.0090.006 SPECIAL (006. CONCRETE BARRIER WALL EPOXY CRACK SEALING) LF	REMARKS
0010	640+21	-	640+47	Mainline , LT	26	--	10	--	1	61	--	--	--	Install Barrier end anchorage for crash cushion
0010	282+36	-	282+53	STH 318, RT	17	10	--	1	--	43	--	--	--	Install Barrier end anchorage for crash cushion
0010	649+10	-	659+00	LT	--	--	--	--	--	--	280	--	--	Multiple locations within station range
0010	672+00	-	672+10	R/L	--	--	--	--	--	--	10	--	--	
0010	682+00	-	682+05	R/L	--	--	--	--	--	--	10	--	--	
0010	684+95	-	685+00	R/L	--	--	--	--	--	--	10	--	--	
0010	693+00	-	693+40	R/L	--	--	--	--	--	--	10	--	--	
0010	256+50	-	256+55	STH 318 WB OFF RAMP, LT	--	--	--	--	--	--	10	--	--	STH 318 WB Off Ramp Stationing
0010	696+60	-	696+65	R/L	--	--	--	--	--	--	10	--	--	
0010	709+71	-	709+84	LT	13	--	--	--	--	35	10	13	--	At Sign Structure Base
0010	714+25	-	714+30	R/L	--	--	--	--	--	--	10	--	--	
0010	722+00	-	722+05	R/L	--	--	--	--	--	--	10	--	--	
0010	739+25	-	739+30	R/L	--	--	--	--	--	--	20	--	--	
0010	740+75	-	743+50	R/L	275	--	--	--	--	559	--	275	--	
0010	744+50	-	744+55	R/L	--	--	--	--	--	--	20	--	--	
0010	745+00	-	746+00	R/L	100	--	--	--	--	209	--	100	--	
0010	750+25	-	750+30	R/L	--	--	--	--	--	--	10	--	--	
0010	753+20	-	753+25	R/L	--	--	--	--	--	--	10	--	--	
0010	753+20	-	753+25	R/L	--	--	--	--	--	--	10	--	--	
0010	753+30	-	753+35	R/L	--	--	--	--	--	--	10	--	--	
0010	755+85	-	755+90	R/L	--	--	--	--	--	--	10	--	--	
0010	755+95	-	756+00	R/L	--	--	--	--	--	--	10	--	--	
0010	759+00	-	759+05	R/L	--	--	--	--	--	--	10	--	--	
0010	772+00	-	772+60	R/L	60	--	--	--	--	129	--	60	--	
0010	773+70	-	773+75	R/L	--	--	--	--	--	--	10	--	--	
0010	773+80	-	773+85	R/L	--	--	--	--	--	--	10	--	--	
0010	777+55	-	777+60	R/L	--	--	--	--	--	--	10	--	--	
0010	777+65	-	777+70	R/L	--	--	--	--	--	--	10	--	--	
0010	779+95	-	780+00	R/L	--	--	--	--	--	--	10	--	--	
0010	780+05	-	780+10	R/L	--	--	--	--	--	--	10	--	--	
0010	781+00	-	782+00	R/L	100	--	--	--	--	209	--	100	--	
0010	783+35	-	783+40	R/L	--	--	--	--	--	--	10	--	--	
0010	784+00	-	784+50	R/L	50	--	--	--	--	109	--	50	--	
0010	787+55	-	787+60	R/L	--	--	--	--	--	--	10	--	--	
0010	790+20	-	790+25	R/L	--	--	--	--	--	--	10	--	--	
0010	792+80	-	792+85	R/L	--	--	--	--	--	--	10	--	--	
0010	796+05	-	796+10	R/L	--	--	--	--	--	--	10	--	--	
0010	801+30	-	801+35	R/L	--	--	--	--	--	--	10	--	--	
0010	803+90	-	804+00	R/L	10	--	--	--	--	29	--	10	--	
0010	804+20	-	805+00	R/L	80	--	--	--	--	169	--	80	--	
0010	813+05	-	813+10	R/L	--	--	--	--	--	--	10	--	--	
0010	815+55	-	815+60	R/L	--	--	--	--	--	--	10	--	--	
0010	817+80	-	817+85	R/L	--	--	--	--	--	--	10	--	--	
0010	822+75	-	822+80	R/L	--	--	--	--	--	--	10	--	--	
0010	823+50	-	823+60	R/L	--	--	--	--	--	--	10	--	--	
0010	640+35	-	825+63	R/L	--	--	--	--	--	--	--	--	850	Median Barrier throughout replacement areas
				TOTAL 0010	731	10	10	1	1	1,547	640	688	850	

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TRAFFIC CONTROL BARRIER ITEMS

CATEGORY	STAGE	ROADWAY	LOCATION	TO	LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF
0010		**PROJECT ID 1060-47-70**					
	A	IH 94 WB	709+32	-	711+08	188	188
			738+70	-	747+30	863	863
			771+50	-	773+83	238	238
			780+53		785+94	550	550
			803+00	-	806+29	325	325
		IH 94 EB	638+85	-	640+96	213	213
			737+66	-	746+50	888	888
			770+68	-	772+96	238	238
			779+57	-	785+05	525	525
			802+03	-	805+55	363	363
	DMS TRAFFIC CONTROL	IH 94 WB OUT. SHLDR.	589+40	-	594+44	513	513
		IH 94 WB INS. SHLDR.	589+40	-	594+44	513	513
	RAMP CLOSURE	STH 318 NB	280+10	-	282+06	525	525
					CONTRACT TOTAL	5938	5938

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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STORM SEWER

CATEGORY	ROADWAY	STRUCTURE NO.	STATION	OFFSET	RIM OR FLOW ELEVATION	STRUCTURE TYPE	INLET/MANHOLE COVER TYPE	DEPTH[1] (FT)	STRUCTURE FROM	STRUCTURE TO	ELEVATION INLET	ELEVATION DISCH	SLOPE %	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	520.8000* CONCRETE COLLARS FOR PIPE EACH
0010	**PROJECT ID 1060-47-70**															
	STH 318	I8D	281+26	73.1' RT	954.62	INLETS 2x3-FT	H	4.79	I8D	I8C	949.83	949.44	0.74	16		2
		I8C	281+23	20.2' RT	954.90	INLETS 2x3-FT	H	5.51	I8C	MH8	949.39	949.17	1.00	22	--	--
		MH8	281+24	2.2' LT	954.73	MANHOLES 5-FT DIAMETER	H	10.67	MH8	I8A	944.06	943.56	1.05	--	16	2
		I8A	281+33	49.4' LT	953.81	INLETS 4-FT DIAMETER	H	10.30	I8A	EXISTING	943.51	943.33	2.23	--	8	1
		--	--	--	--	--	--	--	MH8	EXISTING	--	--	--	--	8	1
												CONTRACT TOTAL		38	32	6*

[1]STRUCTURE DEPTH = RIM ELEVATION - INLET ELEVATION
* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STORM SEWER STRUCTURE SUMMARY

CATEGORY	ROADWAY	611.0624 INLET COVERS TYPE H EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3230 INLETS 2X3-FT EACH
0010	**PROJECT ID 1060-47-70**				
	STH 318	4	1	1	2
	CONTRACT TOTAL	4	1	1	2

ALL ITEMS ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

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ADJUSTING STRUCTURES

CATEGORY	ROADWAY	STATION	TO STATION	OFFSET	611.0430 RECONSTRUCTING INLETS EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0654 INLET COVERS TYPE V EACH	611.8110 ADJUSTING MANHOLE COVERS EACH	611.8115 ADJUSTING INLET COVERS EACH
0010	**PROJECT ID 1060-47-70**								
	CTH SS	32+68		66' LT	--	--	--	--	1
	IH 94	640+00	825+63		--	5	5	5	5
		640+23		LT	1	--	1	--	--
		640+23		RT	1	--	1	--	--
		735+60		LT	--	--	1	--	1
		741+36		RT	1	--	1	--	--
		741+36		LT	1	--	1	--	--
		752+64		RT	--	1	--	1	--
		757+36		RT	1	--	1	--	--
		762+47		RT	1	--	1	--	--
		766+65		RT	1	--	1	--	--
		772+66		LT	1	--	1	--	--
		772+66		RT	1	--	1	--	--
		805+02		LT	1	--	1	--	--
		805+02		RT	1	--	1	--	--
				SUBTOTAL	11	6	17	6	7
0010	**PROJECT ID 1330-47-71**								
	NAGAWAUKEE PARK AND RIDE	0+27		92' LT	--	--	--	--	1
		3+51		139' RT	--	--	--	--	1
				SUBTOTAL	--	--	--	--	2
	PROJECT ID 1060-47-70 TOTAL				11	6	17	6	7
	PROJECT ID 1330-47-71 TOTAL				--	--	--	--	2
				CONTRACT TOTAL	11	6	17	6	9

PIPE UNDERDRAIN

CATEGORY	ROADWAY	STATION	OFFSET	612.0106 PIPE UNDERDRAIN 6-INCH LF	612.0700 DRAIN TILE EXPLORATION LF	612.0806 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH EACH
0010	**PROJECT ID 2788-03-70**					
	STH 318	277+12	111' RT	48	48	1
		277+20	120' RT	22	22	1
			CONTRACT TOTAL	70	70	2

GUARDRAIL ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING EACH	614.0230 STEEL THRIE BEAM LF	614.0400 ADJUSTING STEEL PLATE BEAM GUARD LF	614.0920 SALVAGED RAIL* LF	614.0950 REPLACING GUARDRAIL POSTS AND BLOCKS EACH	614.0951 REPLACING GUARDRAIL RAIL AND HARDWARE LF	614.0952 REPLACING GUARDRAIL REFLECTORS EACH	614.2300 MGS GUARDRAIL 3 LF	614.2330 MGS GUARDRAIL 3 K LF	614.2350 MGS GUARDRAIL SHORT RADIUS LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH	REMARKS
0010	459+41	-	459+81	Mainline, LT	40	--	--	--	--	--	--	--	--	--	--	39	--	--	Replace Thrie Beam Ancorage & Transition
0010	459+41	-	459+91	Mainline, LT	50	--	--	--	--	--	--	--	--	--	--	39	--	--	Replace Thrie Beam Ancorage & Transition
0010	459+45	-	471+18	Mainline, LT	1,173	--	--	--	--	--	--	--	981	100	--	39	1	--	Longer Posts STA 465+00 to 466+00
0010	463+07	-	463+61	Mainline, LT	54	1	--	--	--	--	--	--	--	--	--	--	1	--	Remove/Replace EAT, Connect Exist Guardrail
0010	491+79	-	502+55	Mainline, RT	1,076	--	--	--	--	--	--	--	1,023	--	--	--	1	1	
0010	520+35	-	522+80	Mainline, RT	245	--	--	--	--	--	--	--	153	--	--	39	1	--	
0010	586+11	-	596+50	Mainline, RT	1,039	1	--	--	--	--	--	--	986	--	--	--	1	1	
0010	589+91	-	592+44	Mainline, LT	--	1	--	--	--	--	--	--	200	--	--	--	1	1	New Install for S-67-420
0010	602+97	-	606+74	Mainline, RT	377	--	--	--	--	--	--	--	324	--	--	--	1	1	
0010	620+19	-	634+50	Mainline, LT	1,431	1	--	--	--	--	--	--	1,378	--	--	--	1	1	
0010	645+65	-	648+46	Mainline, LT	281	1	--	--	--	--	--	--	228	--	--	--	1	1	
0010	660+55	-	679+10	Mainline, RT	1,855	--	--	--	--	--	--	--	1,763	--	--	39	--	1	
0010	694+97	-	696+49	Mainline, LT	152	--	--	--	--	--	--	--	99	--	--	--	1	1	
0010	1169+77	-	1170+63	CTH SS EB Off Ramp,RT	86	1	--	--	--	--	--	--	--	--	--	39	1	--	
0010	1170+89	-	1175+38	CTH SS EB Off Ramp,LT	449	1	--	--	--	--	--	--	396	--	--	--	1	1	
0010	461+93	-	464+74	STH 83 EB on ramp, RT	281	1	--	--	--	--	--	--	238	--	--	--	1	1	
0010	244+57	-	248+35	STH 318 WB Off Ramp,LT	--	--	--	378	378	60	--	--	--	--	--	--	--	--	salvage rail, regrade area, install & adjust
0010	467+75	-	469+03	STH 83 WB off ramp, RT	128	--	--	--	--	--	--	--	75	--	--	--	1	1	
0010	472+84	-	486+86	Mainline, LT	1,402	1	--	--	--	--	--	--	1,349	--	--	--	1	1	
0010	497+24	-	501+53	Mainline, LT	429	1	--	--	--	--	--	--	376	--	--	--	1	1	
0010	521+06	-	522+85	Mainline, LT	--	--	--	--	--	--	--	--	--	175	--	8	--	1	
0010	522+45	-	522+87	Mainline, LT	42	--	--	--	--	--	--	--	--	--	--	39	--	--	Remove/Replace
0010	523+87	-	526+27	Mainline, LT	240	1	--	--	--	--	--	--	148	--	--	39	1	--	
0010	523+84	-	524+30	Mainline, LT	46	--	--	--	--	--	--	--	--	--	--	39	--	--	Remove/Replace
0010	527+05	-	527+56	Mainline, LT	51	1	--	--	--	--	--	--	--	--	--	--	1	--	Remove/Replace EAT, Connect Exist Guardrail
0010	589+98	-	590+23	Mainline, LT	--	--	--	--	25	--	--	--	--	--	--	--	--	--	salvage & reinstall for sign bridge base
0010	1173+14	-	1178+29	CTH SS WB On Ramp,RT	515	--	--	--	--	--	--	--	462	--	--	--	1	--	connect to existing rail on CTH SS
0010	1172+56	-	1178+10	CTH SS WB On Ramp,LT	554	--	--	--	--	--	--	--	501	--	--	--	1	1	
0010	1187+49	-	1188+34	CTH SS EB On Ramp,RT	85	1	--	--	--	--	--	--	--	--	--	39	1	--	
0010	239+87	-	242+90	STH 318 EB Off Ramp,LT	371	--	--	--	--	--	--	--	246	--	33	39	1	--	Radius = 20'
0010	285+25	-	286+40	STH 318, LT	--	--	--	--	--	3	16	1	--	--	--	--	--	--	1 damaged section & Missing Bolts - 3 Locations
0010	36+50	-	37+50	CTH SS, RT	--	--	--	--	--	6	3	--	--	--	--	--	--	--	Posts are degrading, bolts missing
0010	709+71	-	709+84	Mainline, LT	--	--	13	--	--	--	2	--	--	--	--	--	--	--	Bolt to Concrete Barrier
0010	716+05	-	716+05	Mainline, LT	--	--	--	--	--	--	3	--	--	--	--	--	--	--	Missing Bolts only - 3 locations
0010	728+76	-	729+01	Mainline, LT	--	--	--	--	--	6	25	1	--	--	--	--	--	--	2 damaged sections
		-																	
				TOTAL 0010	12,362	13	13	378	403	75	49	2	10,926	275	33	438	22	15	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

BARRIER SYSTEM GRADING, SHAPING AND FINISHING - INFORMATION ONLY

STATION	TO	STATION	LOCATION	EXCAVATION COMMON*	BORROW*	SALVAGED TOPSOIL*	FERTILIZER TYPE B*	SEEDING MIXTURE NO. 30*	MULCHING*
				CY	CY	SY	CWT	LB	SY
463+07	--	463+61	Mainline, LT	0	15	75	5	5	75
584+91	--	586+61	Mainline, RT	0	29	95	5	5	95
591+91	--	593+55	Mainline, LT	14	181	550	5	5	550
633+97	--	635+66	Mainline, LT	0	11	125	5	5	125
647+97	--	649+82	Mainline, LT	25	0	85	5	5	85
1169+77	--	1170+63	CTH SS EB Off Ramp,RT	0	20	85	5	5	85
1170+89	--	1171+43	CTH SS EB Off Ramp,LT	0	20	85	5	5	85
460+11	--	461+80	STH 83 EB on ramp, RT	6	52	340	5	5	340
486+13	--	488+05	Mainline, LT	0	75	150	5	5	150
501+03	--	502+72	Mainline, LT	0	44	125	5	5	125
525+76	--	527+56	Mainline, LT	21	80	175	5	5	175
527+05	--	528+82	Mainline, LT	23	20	130	5	5	130
1187+49	--	1188+34	CTH SS EB On Ramp,RT	0	6	80	5	5	80
			TOTALS:	89	553	2100	65	65	2100

* ITEMS AND QUANTITIES LISTED ARE FOR BID INFORMATION ONLY. LOCATIONS ARE PAID PER EACH FOR ITEM 614.0010

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CRASH CUSHION ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	204.9060.S.001 REMOVING (ITEM DESCRIPTION) (001. CRASH CUSHION) EACH	614.0800 CRASH CUSHIONS PERMANENT EACH	614.0805 CRASH CUSHIONS PERMANENT LOW MAINTENANCE EACH	BACK WIDTH FT	OBJECT MARKER PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS	REMARKS
0010	639+90	-	640+20	Mainline IH-94 Median	1	--	--	--	--	--	--	--	--	REACT 350 - EXISTING
0010	282+37	-	282+21	CTH G (MEADOWBROOK RD)	1	--	--	--	--	--	--	--	--	QUADGUARD II - EXISTING
0010	639+95	-	640+21	Mainline IH-94 Median	--	--	1	2	OM-3C (W5-58M)	TL-3	UNIDIRECTIONAL	L and R	Permanent Concrete Median Barrier	
0010	282+37	-	282+21	CTH G (MEADOWBROOK RD)	--	1	--	2	OM-3R (W5-58R)	TL-2	UNIDIRECTIONAL	L and R	Permanent Concrete Barrier on Shoulder	
				TOTAL 0010	2	1	1							

FILE NAME : Documents-SE-Design\1060-47-00 I-94 Waukesha County\C3D\10604700\SheetsPlan\030101-mq.pptx PLOT DATE : February 9, 2024 PLOT BY : DAAR ENGINEERING PLOT NAME : PLOT SCALE : 1:1

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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MOW STRIP

ROADWAY	STATION	TO	STATION	OFFSET	614.0397 GUARDRAIL MOW STRIP EMULSIFIED ASPHALT SY
PROJECT ID 1060-47-70					
IH 94	459+45		471+18	LT	603
	472+84		486+86	LT	564
	491+79		502+55	RT	502
	497+24		501+53	LT	187
	520+35		522+80	RT	152
	521+06		522+85	LT	78
	523+87		526+27	LT	101
	586+11		596+50	RT	416
	589+09		592+44	LT	147
	602+97		606+74	RT	166
	620+19		634+50	LT	574
	645+65		648+46	LT	128
	660+55		679+10	RT	732
	694+97		696+49	LT	64
STH 83 WB OFF RAMP	467+75		469+03	RT	79
STH 83 EB ON RAMP	467+75		469+03	RT	108
CTH SS WB ON RAMP	1172+56		1178+10	LT	261
	1173+14		1178+29	RT	204
CTH SS EB ON RAMP	1187+49		1188+34	RT	42
CTH SS EB OFF RAMP	1169+77		1170+63	RT	43
	1170+89		1175+38	LT	195
STH 318 EB OFF RAMP	239+87		242+90	LT	153
			CONTRACT TOTAL		5499

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SALVAGED RAIL

ROADWAY	STATION	OFFSET	614.0920* SALVAGED RAIL LF
PROJECT ID 1060-47-70			
IH 94	603+00	LT	25
	633+00	LT	50
		CONTRACT TOTAL	75*

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

MOBILIZATION

CATEGORY	LOCATION	619.1000 MOBILIZATION EACH
0010	**PROJECT ID 1060-47-70**	
	PROJECT	0.88
	PROJECT ID 1330-47-71	
	PROJECT	0.01
	PROJECT ID 2788-03-70	
	PROJECT	0.02
	CONTRACT TOTAL	0.91

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FENCING

CATEGORY	ROADWAY	STATION	TO	STATION	204.0170 REMOVING FENCE LF	616.0100.001 FENCE WOVEN WIRE 4-FT LF	616.0206 FENCE CHAIN LINK 6-FT LF	616.0700.S FENCE SAFETY LF
0010	**PROJECT ID 1060-47-70**							
	IH 94	459+39		470+98	1060	1060	--	1060
		498+01		499+07	105	105	--	105
		545+18		549+48	430	430	--	430
		592+24		594+39	220	220	--	220
		600+12		604+24	413	413	--	413
		632+96		633+34	40	--	40	40
		700+50		705+50	202	--	202	202
		CONTRACT TOTAL			2470	2228	242	2470

BICYCLE RACKS

CATEGORY	LOCATION	204.9060.S.002 REMOVING BICYCLE RACK EACH	999.1950.S BICYCLE RACK ASPHALT OR CONCRETE-MOUNTED EACH
	PROJECT ID 1060-47-70		
0130	MEADOWBROOK PARK & RIDE	--	1
	SUBTOTAL	--	1
	PROJECT ID 1330-47-71		
0010	NAGAWAUKEE PARK & RIDE	1	1
	SUBTOTAL	1	1
	PROJECT ID 1060-47-70 TOTAL	--	1
	PROJECT ID 1330-47-71 TOTAL	1	1
	CONTRACT TOTAL	1	2

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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	628.2004 EROSION MAT CLASS I TYPE B SY	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	REMARKS
0010	459+30	-	842+00	Project POB to POE	7,862	7,862	3	6	9,125	10	115	62	6	Project Wide
0010	494+75	-	495+25	LT, WB IH 94	--	--	1	1	117	--	--	4	1	Cross Culvert Remove/Replace
0010	521+75	-	522+25	LT, WB IH 94	--	--	1	1	133	--	--	3	1	Cross Culvert Remove/Replace
0010	574+75	-	575+25	LT, WB IH 94	--	--	1	1	34	--	--	3		Cross Culvert Repair End
0010	602+75	-	603+25	LT, WB IH 94	--	--	1	1	144	--	--	4	1	Cross Culvert Remove/Replace
0010	632+75	-	633+50	LT, WB IH 94	--	--	1	1	329	--	--	4	1	Cross Culvert Remove/Replace
0010				UNDISTRIBUTED	788	788	--	--	993	--	--	--	--	
				TOTAL 0010	8,650	8,650	8	11	10,875	10	115	80	10	

RESTORATION

CATEGORY	STATION	TO	STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	625.0500 SALVAGED TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL	REMARKS
0010	459+30	-	842+00	Project POB to POE	--	9,125	65	20	30	205	Project Wide
0010	465+00	-		LT, WB IH 94	4	--	--	--	--	--	End Exist Culvert to Concrete Flume
0010	494+75	-	495+25	LT, WB IH 94	--	117	5	5	5	5	Cross Culvert Remove/Replace Area
0010	521+75	-	522+25	LT, WB IH 94	41	133	5	5	5	5	Cross Culvert Remove/Replace Area
0010	574+75	-	575+25	LT, WB IH 94	--	34	5	5	5	5	Cross Culvert Repair End Area
0010	602+75	-	603+25	LT, WB IH 94	6	144	5	5	5	5	Cross Culvert Remove/Replace Area
0010	632+75	-	633+50	LT, WB IH 94	--	329	5	5	5	10	Cross Culvert Remove/Replace Area
0010				UNDISTRIBUTED	--	993	10	5	10	25	
				TOTAL 0010	51	10,875	100	50	65	260	

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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						RESTORATION						
						625.0100	625.0500*	628.2006	628.7015	629.0205	630.0140	630.0500*
							SALVAGED	EROSION MAT	INLET		SEEDING	
						TOPSOIL	TOPSOIL	URBAN CLASS I	PROTECTION	FERTILIZER	MIXTURE	
CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET	TYPE A	TYPE C	NO. 40	SEED WATER			
						SY	SY	SY	EACH	CWT	LB	MGAL
	PROJECT ID 1060-47-70											
0010	STH 318	280+00		288+00		380	144	523	17	1	7	12
0130	MEADOWBROOK PARK & RIDE	2A+48		2A+70	310' RT	--	13	13	8	1	1	1
				SUBTOTAL		380	157	536	25	2	8	13
	PROJECT ID 1330-47-71											
0010	NAGAWAUKEE PARK & RIDE	4+23		4+56	130' RT	--	36	36	6	1	1	1
				SUBTOTAL		--	36	36	6	1	1	1
	PROJECT ID 2788-03-70											
0010	STH 318	276+40		278+60		--	93	93	12	1	1	2
				SUBTOTAL		--	93	93	12	1	1	2
	PROJECT ID 1060-47-70 TOTAL					380	157	536	25	2	8	13
	PROJECT ID 1330-47-71 TOTAL					--	36	36	6	1	1	1
	PROJECT ID 2788-03-70 TOTAL					--	93	93	12	1	1	2
				CONTRACT TOTAL		380	286*	665	43	4	10	16*

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CULVERTS AND EDGEDRAIN MARKERS

CATEGORY	ROADWAY	STATION	OFFSET	633.5200 MARKERS CULVERT END EACH	646.5520 MARKING OUTFALL EPOXY EACH
0010	**PROJECT ID 1060-47-70**				
	IH 94	465+05	30' LT	1	--
		465+05	110' LT	1	--
		475+03	26' LT	1	--
		475+03	116' LT	1	--
		476+17	101' RT	1	--
		476+17	164' LT	1	--
		484+01	114' LT	1	--
		484+08	32' LT	1	--
		495+07	27' LT	1	--
		495+07	114' LT	1	--
		497+70	134' LT	1	--
		499+37	158' RT	1	--
		514+00	28' LT	1	--
		514+00	114' LT	1	--
		522+01	32' LT	1	--
		522+04	133' LT	1	--
		535+00	51' RT	1	--
		535+00	27' LT	1	--
		546+95	119' LT	1	--
		546+99	34' LT	1	--
		547+95	124' LT	1	--
		548+03	134' RT	1	--
		548+07	134' RT	1	--
		548+20	195' LT	1	--
		548+24	195' LT	1	--
		548+48	122' LT	1	--
		556+00	35' LT	1	--
		556+00	109' LT	1	--
		564+96	109' LT	1	--
		564+99	36' LT	1	--
		575+00	42' LT	1	--
		575+00	104' LT	1	--
		575+70	53' LT	--	1
		586+06	116' LT	1	--
		586+41	39' LT	1	--
			SUBTOTAL	34	1

CULVERTS AND EDGEDRAIN MARKERS

CATEGORY	ROADWAY	STATION	OFFSET	633.5200 MARKERS CULVERT END EACH	646.5520 MARKING OUTFALL EPOXY EACH
0010	**PROJECT ID 1060-47-70**				
	IH 94	596+97	112' LT	1	--
		596+97	39' LT	1	--
		602+99	115' LT	1	--
		602+99	39' LT	1	--
		609+99	42' LT	1	--
		609+99	103' LT	1	--
		619+99	39' LT	1	--
		619+99	109' LT	1	--
		628+18	27' LT	1	--
		628+18	117' LT	1	--
		630+75	237' LT	1	--
		630+77	76' RT	1	--
		633+12	251' LT	1	--
		633+20	25' LT	1	--
		682+45	61' LT	--	1
		684+02	62' RT	--	1
		686+84	70' RT	1	--
		692+73	150' LT	1	--
		703+21	62' RT	--	1
		704+37	65' LT	--	1
		735+76	92' RT	1	--
		741+38	100' RT	1	--
		757+25	87' RT	1	--
		762+45	103' RT	1	--
		766+63	134' RT	1	--
		769+58	180' RT	1	
		771+82	111' RT	1	
		772+64	94' RT	1	--
		777+65	94' LT	1	--
		777+65	77' RT	1	--
		780+85	118' RT	1	--
		780+85	110' LT	1	--
		784+63	183' LT	1	--
		784+75	75' RT	1	--
		793+14	74' RT	1	--
			SUBTOTAL	31	4
			CONTRACT TOTAL	65	5

*FOR PROJECT INFORMATION ONLY
**ADDITIONAL QUANITIES SHOWN ELSEWHERE
***ALL COVERED SIGNS TO BE COVERED FOR DURATION OF WORK IN AREA, ONE CYCLE ONLY

								TRAFFIC CONTROL																			
								643.0300		643.0420		643.0705		643.0715		643.0800		643.0900**		643.0910	643.0920**	643.1050		643.1070		643.4100	SPV.0060.053	SPV.0060.054
								TRAFFIC CONTROL DRUMS		TRAFFIC CONTROL BARRICADES TYPE III		TRAFFIC CONTROL WARNING LIGHTS TYPE A		TRAFFIC CONTROL WARNING LIGHTS TYPE C		TRAFFIC CONTROL ARROW BOARDS		TRAFFIC CONTROL SIGNS		TRAFFIC CONTROL COVERING SIGNS TYPE I	TRAFFIC CONTROL COVERING SIGNS TYPE II	TRAFFIC CONTROL SIGNS PCMS		TRAFFIC CONTROL CONES 42-INCH		TRAFFIC CONTROL INTERIM LANE CLOSURE	TRAFFIC CONTROL CLOSE-OPEN FREEWAY ENTRANCE RAMP	TRAFFIC CONTROL FULL FREEWAY CLOSURE
CATEGORY	STAGE	LOCATION	CLOSURE TYPE	WORK DESCRIPTION	DURATION (CALENDAR DAYS)*	NO OF LOCATIONS	DISTANCE	NO.*	DAY	NO.*	DAY	NO.*	DAY	NO.*	DAY	NO.*	DAY	NO.*	DAY	EA	EA	NO.*	DAY	NO.*	DAY	EA	EA	EA
0010			**PROJECT ID 1060-47-70**																									
			ADVANCED WARNING		171	--	--	--	--	--	--	--	--	--	--	--	--	--	--	25	4275	--	--	--	--	--	--	--	--
		WB IH 94	SHOULDER CLOSURE	GRADING, CULVERT REPAIR, FTMS INSTALLATION, AND OTHER WORK	5	4	1500	100	500	--	--	--	--	--	--	4	20	16	80	--	--	--	--	--	--	--	--	--
		WB ENTRANCE RAMP SS	SHOULDER CLOSURE	CULVERT REPAIR	5	1	780	23	115	--	--	--	--	--	--	--	--	5	25	--	--	--	--	--	--	--	--	--
		EB IH 94	SHOULDER CLOSURE	GRADING, CULVERT REPAIR, FTMS INSTALLATION AND OTHER WORK	5	4	1500	100	500	--	--	--	--	--	--	4	20	16	80	--	--	--	--	--	--	--	--	--
		WB IH 94	SHOULDER CLOSURE	CABLE GUARD	28	1	1500	25	700	--	--	--	--	--	--	1	28	4	112	--	--	--	--	--	--	--	--	--
		EB IH 94	SHOULDER CLOSURE	CABLE GUARD	28	1	1500	25	700	--	--	--	--	--	--	1	28	4	112	--	--	--	--	--	--	--	--	--
		STH 83 SB	SHOULDER CLOSURE	CULVERT REPAIR	5	1	780	18	90	--	--	--	--	--	--	1	5	4	20	--	--	--	--	--	--	--	--	--
		STH 16 ON RAMP	SHOULDER CLOSURE	FTMS INSTALLATION	5	1	780	23	115	--	--	--	--	--	--	--	--	5	25	--	--	--	--	--	--	--	--	--
	A	WB IH 94	SHORT TERM LANE CLOSURE		10	1	7920	116	1160	7	70	14	140	14	140	2	20	17	170	--	--	--	--	--	--	10	--	--
	A	EB IH 94	SHORT TERM LANE CLOSURE		10	1	7920	116	1160	7	70	14	140	14	140	2	20	17	170	--	--	--	--	--	--	10	--	--
		GOLF ROAD	SHORT TERM FLAGGING	CULVERT REPAIR	5	1	780	32	160	--	--	--	--	--	--	--	--	8	40	--	--	2	24	--	--	--	--	--
		CTH SS	SHORT TERM LANE CLOSURE		7	2	780	76	532	2	14	4	28	20	140	2	14	20	140	--	--	2	14	--	--	7	--	--
		STH 318	SHORT TERM LANE CLOSURE		28	2	2500	145	4060	6	168	12	336	20	560	2	56	28	784	--	--	2	14	--	--	28	--	--
		IH 94 WB ENTRANCE RAMPS	NIGHT TIME FULL CLOSURE		5	3	--	63	315	18	90	36	180	12	60	--	--	87	435	--	--	1	45	--	--	--	15	--
		IH 94 EB ENTRANCE RAMPS	NIGHT TIME FULL CLOSURE		5	4	--	84	420	24	120	48	240	16	80	--	--	116	580	--	--	1	60	--	--	--	20	--
		IH 94 WB EXIT RAMPS	NIGHT TIME FULL CLOSURE		5	4	--	72	360	16	80	32	160	--	--	--	--	36	180	2	--	1	60	--	--	--	--	--
		IH 94 EB EXIT RAMPS	NIGHT TIME FULL CLOSURE		5	3	--	54	270	12	60	24	120	--	--	--	--	27	135	2	--	1	45	--	--	--	--	--
	A		CTH SS ON RAMP CLOSURE DETAIL		30	1	--	27	810	10	300	20	600	4	120	--	--	32	960	--	7	--	--	--	--	--	--	--
			STH 318 ON RAMP CLOSURE DETAIL		14	1	--	127	1778	9	126	18	252	9	126	1	14	80	1120	--	5	1	14	--	--	--	--	--
			IH 94 DMS DETAIL		28	1	--	22	616	--	--	--	--	--	--	2	56	2	56	--	--	--	--	--	--	--	--	--
		IH 94	NIGHT TIME FULL CLOSURE		10	5	--	144	1440	8	80	16	160	56	560	4	40	18	180	--	--	2	60	--	--	--	--	10
			STH 164 ON RAMP CLOSURE		10	1	--	21	210	6	60	12	120	4	40	--	--	29	290	--	--	1	30	--	--	--	10	--
			STH 318 STORM SEWER AND MEDIAN DETAIL		21	1	--	145	3045	10	210	20	420	0	0	0	0	24	504	--	--	1	7	--	--	21	--	--
	1	WB & EB IH 94	SINGLE LANE CLOSURE		7	2	7920	232	1624	14	98	28	196	28	196	4	28	40	280	--	--	2	14	--	--	7	--	--
	2	WB & EB IH 94	SINGLE LANE CLOSURE		23	2	7920	464	10672	14	322	28	644	28	644	4	92	60	1380	--	--	2	46	214	4913	23	--	--
	3	WB & EB IH 94	SINGLE LANE CLOSURE		12	2	7920	464	5568	14	168	28	336	28	336	4	48	60	720	--	--	2	24	214	2563	12	--	--
	4A	WB & EB IH 94	SINGLE LANE CLOSURE		5	2	7920	232	1160	14	70	28	140	28	140	4	20	40	200	--	--	--	--	--	--	5	--	--
	4B	WB & EB IH 94	SINGLE LANE CLOSURE		5	2	7920	232	1160	14	70	28	140	28	140	4	20	48	240	--	--	2	10	--	--	5	--	--
	4C	WB & EB IH 94	SINGLE LANE CLOSURE		5	2	7920	464	2320	14	70	28	140	28	140	4	20	68	340	--	--	--	--	214	1068	5	--	--
	4D	WB & EB IH 94	SINGLE LANE CLOSURE		5	2	7920	232	1160	14	70	28	140	28	140	4	20	40	200	--	--	--	--	--	--	5	--	--
	5	WB & EB IH 94	SINGLE LANE CLOSURE	MARKING, GUARDRAIL, CABLE BARRIER	40	2	7920	232	9280	14	560	28	1120	28	1120	4	160	40	1600	--	--	--	--	--	--	40	--	--
	A	IH 94	MEDIAN BARRIER REPAIR DETAIL		30	1	--	403	12090	21	630	42	1260	9	270	2	60	33	990	--	1	1	30	--	--	3	--	--
	B	IH 94 WB & EB	DUAL LANE CLOSURE		23	2	7920	456	10488	12	276	24	552	54	1242	6	138	34	782	--	--	--	--	--	--	23	--	--
	C	IH 94 WB & EB	DUAL LANE CLOSURE		20	2	7920	304	6080	12	240	24	480	54	1080	6	120	42	840	--	--	--	--	--	--	20	--	--
	D	IH 94 WB & EB	DUAL LANE CLOSURE		27	2	7920	608	16416	12	324	24	648	54	1458	6	162	42	1134	--	--	--	--	--	--	27	--	--
	E	IH 94 WB & EB	DUAL LANE CLOSURE	MARKING, GUARDRAIL, HFST	40	2	7920	304	12160	12	480	24	960	54	2160	6	240	34	1360	--	--	--	--	--	--	40	--	--
		CTH SS	PAVEMENT MARKING		7	1	--	50	347	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		STH 318	PAVEMENT MARKING		7	1	--	182	1276	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0130			MEADOWBROOK PARK AND RIDE STAGE ONE		21	1	--	67	1407	14	294	28	588	--	--	--	--	11	231	--	--	1	7	--	--	--	--	--
0130			MEADOWBROOK PARK AND RIDE STAGE TWO		7	1	--	70	490	12	84	24	168	--	--	--	--	2	14	--	--	--	--	--	--	--	--	--
			SUBTOTAL					6554	112754	342	5204	684	10408	618	11032	84	1449	1214	20784	4	13	25	504	641	8544	291	45	10
0010			**PROJECT ID 1330-47-71**																									
			NAGAWAUKEE PARK AND RIDE STAGE ONE		21	1	--	49	1029	12	252	24	504	--	--	--	--	17	357	--	--	1	7	--	--	--	--	--
			NAGAWAUKEE PARK AND RIDE STAGE TWO		7	1	--	80	560	7	49	14	98	--	--	--	--	10	70	--	--	--	--	--	--	--	--	--
			SUBTOTAL					129	1589	19	301	38	602	--	--	--	--	27	427	--	--	1	7	--	--	--	--	--
			PROJECT ID 1060-47-70 TOTAL					6554	112754	342	5204	684	10408	618	11032	84	1449	1214	20784	4	13	25	504	641	8544	291	45	10
			PROJECT ID 1330-47-71 TOTAL					129	1589	19	301	38	602	--	--	--	--	27	427	--	--	1	7	--	--	--	--	--
			CONTRACT TOTAL					6683	114343	361	5505	722	11010	618	11032	84	1449	1241	21211	4***	13***	26	511	641	8544	291	45	10

3

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CRASH CUSHION

ROADWAY	STAGE	LOCATION	614.0905 CRASH CUSHIONS TEMPORARY EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS
PROJECT ID 1060-47-70									
IH 94 WB	A	INSIDE SHOULDER	4	2	OM-3L (WO5-52L)	TL-3	Unidirectional	R	Temp Barrier Wall
IH 94 WB	A	OUTSIDE SHOULDER	1	2	OM-3R (WO5-52R)	TL-3	Unidirectional	L	Temp Barrier Wall
IH 94 WB	DMS	INSIDE SHOULDER	1	2	OM-3L (WO5-52L)	TL-3	Unidirectional	R	Temp Barrier Wall
IH 94 WB	DMS	OUTSIDE SHOULDER	1	2	OM-3R (WO5-52R)	TL-4	Unidirectional	L	Temp Barrier Wall
IH 94 EB	A	INSIDE SHOULDER	5	2	OM-3L (WO5-52L)	TL-3	Unidirectional	R	Temp Barrier Wall
STH 318 NB		OUTSIDE SHOULDER	1	2	OM-3R (WO5-52R)	TL-3	Unidirectional	L	Temp Barrier Wall
		CONTRACT TOTAL	13						

DETOUR TRAFFIC CONTROL

CATEGORY	DETOUR PLAN	DURATION DAYS	643.0920* TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.0900* TRAFFIC CONTROL SIGNS NO.**	643.0900* TRAFFIC CONTROL SIGNS DAYS
0010	**PROJECT ID 1060-47-70**				
	CTH SS EB ENTRANCE RAMP	30	--	34	1020
	STH 318 EB ENTRANCE RAMP	21	1	40	840
	IH 94 FULL CLOSURE AT ELMHURST	10	--	110	1100
	CONTRACT TOTAL		1***		2960

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

** FOR PROJECT INFORMATION ONLY

***ALL COVERED SIGNS TO BE COVERED FOR DURATION OF WORK IN AREA, ONE CYCLE ONLY

SPEED RADAR TRAILER

CATEGORY	ROADWAY	DURATION (CALENDER DAYS)*	643.1500 TRAFFIC CONTROL SPEED RADAR TRAILER NO	643.1500 TRAFFIC CONTROL SPEED RADAR TRAILER DAYS
0010	**PROJECT ID 1060-47-70**			
	IH 94 WB	130	1	130
	IH 94 EB	130	1	130
	CONTRACT TOTAL			260

*FOR PROJECT INFORMATION ONLY

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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TRAFFIC CONTROL PROJECT

PROJECT	643.5000 TRAFFIC CONTROL EACH
PROJECT ID 1060-47-70	
PROJECT	0.88
PROJECT ID 1330-47-71	
PROJECT	0.01
PROJECT ID 2788-03-70	
PROJECT	0.02
CONTRACT TOTAL	0.91

FIXED MESSAGE SIGNS

CATEGORY	ROADWAY	LOCATION	SIGN NUMBER	NUMBER REQUIRED	SIGN SIZE W X H FT	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF
0010	**PROJECT ID 1060-47-70**					
	IH 94 EB	WEST OF GENESSE ST, OUTSIDE	1	1	10.0 x 4.5	45
	STH 83 SB	NORTH OF GOLF RD, OUTSIDE	3	1	6.0 x 3.0	18
	STH 83 NB	NORTH OF HILLSIDE DR, OUTSIDE	3	1	6.0 x 3.0	18
	CTH SS SB	NORTH OF GOLF RD, OUTSIDE	1	1	10.0 x 4.5	45
	CTH SS NB	NORTH OF SILVERNAIL RD, OUTSIDE	1	1	10.0 x 4.5	45
	STH 318 SB	NORTH OF GOLF RD, OUTSIDE	1	1	10.0 x 4.5	45
	STH 318 NB	NORTH OF SILVERNAIL RD, OUTSIDE	1	1	10.0 x 4.5	45
	CTH T SB	NORTH OF GOLF RD, OUTSIDE	5	1	6.0 x 3.0	18
	CTH T NB	NORTH OF SILVERNAIL RD, OUTSIDE	5	1	6.0 x 3.0	18
	IH 94 WB	EAST OF STH 164, OUTSIDE	1	1	10.0 x 4.5	45
	STH 318	SOUTH OF SILVERNAIL RD		1	1.0 x 2.0	2
	STH 318	NORTH OF IH 94 WB EXIT RAMP		1	1.0 x 2.0	2
		CONTRACT TOTAL	12			346

BASIC TRAFFIC QUEUE WARNING SYSTEM

CATEGORY	ROADWAY	STAGE	FLASHING BEACON SIGN (FBS)	PORTABLE TRAFFIC SENSORS (PTS)	SPV.0045.001 BASIC TRAFFIC QUEUE WARNING SYSTEM (DAY)
0010	**PROJECT ID 1060-47-70**				
	IH 94 & WIS 16	A	3	2	30
	CONTRACT TOTAL				30

DIGITAL SPEED REDUCTION SYSTEM (DSRS)

CATEGORY	ROADWAY	PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)	DIGITAL SPEED LIMIT TRAILERS	SPV.0045.002 DIGITAL SPEED REDUCTION SYSTEM (DAY)
0010	**PROJECT ID 1060-47-70**			
	IH 94 EB	1	9	146
	IH 94 WB	1	9	146
	CONTRACT TOTAL			291

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			TEMPORARY PAVEMENT MARKING											
			643.3105	643.3165		643.3150		643.3250	643.3265	643.3760	643.3770	643.3850	646.5205	
			TEMPORARY MARKING LINE PAINT 4-INCH	TEMPORARY MARKING LINE PAINT 6-INCH		TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH		TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH	TEMPORARY MARKING LINE PAINT 10-INCH	TEMPORARY MARKING RAISED PAVEMENT MARKER TYPE I	TEMPORARY MARKING RAISED PAVEMENT MARKER TYPE II	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH	MARKING SYMBOL PAINT	
CATEGORY	ROADWAY	STAGE	WHITE LF	YELLOW LF	WHITE LF	YELLOW LF	WHITE LF	WHITE LF	WHITE LF	EACH	EACH	WHITE LF	EACH	COMMENTS
0010	**PROJECT ID 1060-47-70**													
	IH 94	MEDIAN BARRIER REPAIR	--	7712	1812	--	--	--	--	24	--	--	--	
		3	--	36140	45175	--	--	--	5112	--	--	--	--	LOWER LIFT
		4	--	36140	45175	--	--	--	5112	--	--	--	--	UPPER LIFT
		C	--	--	33035	--	--	--	11739	--	--	--	--	LOWER LIFT
		C	--	--	33035	--	--	--	11739	--	--	--	--	UPPER LIFT
		D	--	26428	6607	--	--	--	--	--	--	--	--	LOWER LIFT
		D	--	26428	6607	--	--	--	--	--	--	--	--	UPPER LIFT
	STH 318	ON RAMP CLOSURE	--	--	--	33	246	505		--	--	37	--	
	STH 318	--	--	--	--	--	--	--	--	--	212	--	--	
	CTH SS	--	--	--	--	--	--	--	--	--	70	--	--	
0130	MEADOWBROOK PARK AND RIDE	STAGE 1	665	--	--	336	--	--	--	--	--	--	4	
		STAGE 2	--	--	--	674	--	--	--	--	--	--	--	
		SUBTOTAL	665	132848	171446	1043	246	505	33703	24	282	37	4	
0010	**PROJECT ID 1330-47-71**													
	NAGAWAUKEE PARK AND RIDE	STAGE 1	581	--	--	--	--	--	--	--	--	--	4	
	NAGAWAUKEE PARK AND RIDE	STAGE 2	--	--	--	--	318	--	--	--	--	--	4	
		SUBTOTAL	581	--	--	--	318	--	--	--	--	--	8	
	PROJECT ID 1060-47-70 TOTAL		665	132848	171446	1043	246	505	33703	24	282	37	4	
	PROJECT ID 1330-47-71 TOTAL		581	--	--	--	318	--	--	--	--	--	8	
		CONTRACT TOTAL	305540	304294		1607		505	33703	24	282	37	12	

PAVEMENT MARKING REMOVAL

CATEGORY	STAGE	LOCATION	646.9000 MARKING REMOVAL LINE 4-INCH LF	646.9055 MARKING REMOVAL LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH LF	646.9100 MARKING REMOVAL LINE 8-INCH LF	646.9200 MARKING REMOVAL LINE WIDE LF	646.9300 MARKING REMOVAL SPECIAL MARKING EACH
0010		**PROJECT ID 1060-47-70**					
		IH 94 - E OF CTH T	--	4600	--	--	--
	A	IH 94 - E OF CTH SS	212	--	--	--	--
		STH 318 ON RAMP	75	--	280	39	--
		STH 83 WB EXIT RAMP	--	--	--	--	2
0130	1	MEADOWBROOK PARK & RIDE	129	--	--	16	6
		SUBTOTAL	416	4600	280	55	8
0010		**PROJECT ID 1330-47-71**					
	1 & 2	NAGAWAUKEE PARK & RIDE	183	--	--	--	4
		SUBTOTAL	183	--	--	--	4
		PROJECT ID 1060-47-70 TOTAL	416	4600	280	55	8
		PROJECT ID 1330-47-71 TOTAL	183	--	--	--	4
		CONTRACT TOTAL	599	4600	280	55	12

TEMPORARY PEDESTRIAN ITEMS

CATEGORY	ROADWAY	LOCATION	TO	LOCATION	644.1410 TEMPORARY PEDESTRIAN SURFACE ASPHALT SF	644.1430 TEMPORARY PEDESTRIAN SURFACE PLATE SF	644.1601 TEMPORARY PEDESTRIAN CURB RAMP NO	644.1601 TEMPORARY PEDESTRIAN CURB RAMP DAYS	644.1605 TEMPORARY PEDESTRIAN DETECTABLE WARNING FIELD SF	644.1810 TEMPORARY PEDESTRIAN BARRICADE LF
	PROJECT ID 1060-47-70									
0010	STH 318 NB	276+00		289+00	192	--	2	28	50	1828
0130	MEADOWBROOK PARK AND RIDE	2A+73		3A+72	--	97	1	30	20	354
				SUBTOTAL	192	97	3	58	70	2182
	PROJECT ID 1330-47-71									
	NAGAWAUKEE PARK AND RIDE	2+68		4+45	--	111	2	60	--	396
				SUBTOTAL	--	111	2	60	--	396
	PROJECT ID 1060-47-70 TOTAL				192	97		58	70	2182
	PROJECT ID 1330-47-71 TOTAL				--	111		60	--	396
				CONTRACT TOTAL	192	208		118	70	2578

PAVEMENT MARKING ITEMS

CATEGORY	ROADWAY	STATION	TO	STATION	646.1020 MARKING LINE EPOXY 4-INCH 12.5 FT LINE 37.5 FT SKIP WHITE LF	646.1020 MARKING LINE EPOXY 4-INCH 12.5 FT LINE 37.5 FT SKIP YELLOW LF	646.1020 MARKING LINE EPOXY 4-INCH 12.5 FT LINE 37.5 FT SKIP WHITE LF	646.2020 MARKING LINE EPOXY 6-INCH 12.5 FT LINE 37.5 FT SKIP WHITE LF	646.2020 MARKING LINE EPOXY 6-INCH 12.5 FT LINE 37.5 FT SKIP YELLOW LF	646.2020 MARKING LINE EPOXY 6-INCH 12.5 FT LINE 37.5 FT SKIP WHITE LF	646.2025 MARKING LINE GROOVED BLACK EPOXY 6-INCH 3 FT LINE 9 FT SKIP BLACK LF	646.2025 MARKING LINE GROOVED BLACK EPOXY 6-INCH 12.5 FT LINE 37.5 FT SKIP BLACK LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH YELLOW LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH WHITE LF	646.2050 MARKING LINE GROOVED PERMANENT TAPE 6-INCH 3 FT LINE 9 FT SKIP WHITE LF	646.2050 MARKING LINE GROOVED PERMANENT TAPE 6-INCH 12.5 FT LINE 37.5 FT SKIP WHITE LF	646.3020 MARKING LINE EPOXY 8-INCH 3 FT LINE 9 FT SKIP WHITE LF	646.3020 MARKING LINE EPOXY 8-INCH 3 FT LINE 9 FT SKIP WHITE LF	646.4020 MARKING LINE EPOXY 10-INCH 3 FT LINE 9 FT SKIP WHITE LF	646.4020 MARKING LINE EPOXY 10-INCH 3 FT LINE 9 FT SKIP WHITE LF	646.4025 MARKING LINE GROOVED BLACK EPOXY 10-INCH 3 FT LINE 9 FT SKIP BLACK LF	646.4050 MARKING LINE GROOVED PERMANENT TAPE 10-INCH 3 FT LINE 9 FT SKIP WHITE LF	646.4050 MARKING LINE GROOVED PERMANENT TAPE 10-INCH 3 FT LINE 9 FT SKIP WHITE LF	SPV.0090.002 MARKING EPOXY 4-INCH BLACK NON GROOVED 12.5 FT LINE 37.5 FT SKIP BLACK LF	SPV.0090.003 MARKING EPOXY 6-INCH BLACK NON GROOVED 12.5 FT LINE 37.5 FT SKIP BLACK LF	SPV.0090.004 MARKING EPOXY 8-INCH BLACK NON GROOVED 3 FT LINE 9 FT SKIP BLACK LF	SPV.0090.005 MARKING EPOXY 10-INCH BLACK NON GROOVED 3 FT LINE 9 FT SKIP BLACK LF
0010	**PROJECT ID 1060-47-70**																									
	IH 94 WB	459+30		825+63	--	--	--	483	1049	1036	1087	12817	34042	31622	1087	12817	--	--	--	--	--	--	--	--	483	--	--
	IH 94 EB	459+30		825+63	--	--	--	494	1059	1072	500	13103	35547	31494	500	13103	--	--	--	--	--	--	--	--	494	--	--
	STH 83 WB OFF RAMP	462+00		475+00	--	--	--	--	--	--	--	--	1330	1534	--	--	--	--	--	--	--	1060	--	--	--	--	--
	STH 83 EB ON RAMP	459+00		470+00	--	--	--	--	--	--	--	72	559	1240	--	72	--	--	--	--	--	1301	--	--	--	--	--
	CTH SS WB ON RAMP	1165+00		1179+50	--	--	--	--	--	--	--	88	542	700	--	88	--	--	--	--	--	985	--	--	--	--	--
	CTH SS WB OFF RAMP	1179+50		1192+50	--	--	--	--	--	--	--	--	644	1294	--	--	--	--	--	--	45	1647	45	--	--	--	--
	CTH SS EB OFF RAMP	1158+00		1181+00	--	--	--	--	--	--	--	--	903	1426	--	--	--	--	--	--	60	1706	60	--	--	--	--
	CTH SS EB ON RAMP	1181+00		1196+00	--	--	--	--	--	--	--	111	709	1432	--	111	--	--	--	--	--	1399	--	--	--	--	--
	STH 318 WB ON RAMP	224+00		243+00	--	--	--	--	--	--	--	200	959	1167	--	200	--	--	--	--	--	1290	--	--	--	--	--
	STH 318 WB OFF RAMP	243+00		260+00	--	--	--	--	--	--	--	369	964	1407	--	369	--	--	--	--	19	1411	19	--	--	--	--
	STH 318 EB OFF RAMP	228+00		243+50	--	--	--	--	--	--	--	--	980	1530	--	--	--	--	--	--	70	1167	70	--	--	--	--
	STH 318 EB ON RAMP	243+50		268+50	--	--	--	--	--	--	--	--	710	1192	--	--	--	--	--	--	--	1143	--	--	--	--	--
	CTH T WB ON RAMP	90+50		116+00	--	--	--	97	867	837	--	--	--	--	--	--	--	--	--	--	--	977	--	--	97	--	--
	CTH T WB OFF RAMP	2119+00		2135+00	--	--	--	--	1085	1662	--	--	--	--	--	--	--	--	738	--	--	787	--	--	--	--	--
	CTH T EB OFF RAMP	3115+00		3135+00	--	--	--	--	789	1362	--	--	--	--	--	--	--	--	95	--	--	833	--	--	--	--	--
	CTH T EB ON RAMP	4099+50		4115+00	--	--	--	80	555	1047		--	--	--	--	--	--	--	--	--	--	952	--	--	80	--	--
	CTH SS	31+00		41+50	115	990	667	--	--	--	--	--	--	--	--	--	1301	92	--	--	--	--	--	115	--	92	--
	STH 318	280+00		287+82	--	--	--	291	852	1033	--	--	--	--	--	--	--	--	1052	120	--	--	--	--	--	291	--	120
0130	MEADOWBROOK PARK AND RIDE	0+00		3+74	--	274	6617	--	--	--	--	--	--	--	--	--	138	--	--	--	--	--	--	--	--	--	--
					115	1264	7284	1446	6256	8049	1587	26760	77887	76036	1587	26760	1439	92	1885	120	194	16658	194	115	1446	92	120
				SUBTOTAL		8662			15751			28347		153923		28347		1531		2005		194		16851	115	1446	92	120
0010	**PROJECT ID 1330-47-71**																											
	NAGAWAUKEE PARK AND RIDE	0+18		4+42	--	34	4588	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
				SUBTOTAL		4622			--			--		--		--		--		--		--		--	--	--	--	--
0010	**PROJECT ID 2788-03-70**																											
	STH 318	268+83		280+00	10	252	154	450	1640	1459	--	--	--	--	--	--	219	--	540	170	--	--	--	--	450	--	170
				SUBTOTAL		416			3549			--		--		--		219		709		--		--	--	450	--	170
	PROJECT ID 1060-47-70 TOTAL				115	1264	7284	1446	6256	8049	1587	26760	77887	76036	1587	26760	1439	92	1885	120	194	16658	194	115	1446	92	120
	PROJECT ID 1330-47-71 TOTAL				--	34	4588	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	PROJECT ID 2788-03-70 TOTAL				10	252	154	450	1640	1459	--	--	--	--	--	--	219	--	540	170	--	--	--	--	--	--	--	--
				CONTRACT TOTAL		13700			15752			28347		153923		28347		1750		2715		194		16851	115	1896	92	290

PAVEMENT MARKING ITEMS

ROADWAY	STATION	TO	STATION	646.5020 MARKING ARROW EPOXY TYPE 1 EACH	646.5020 MARKING ARROW EPOXY TYPE 2 EACH	646.5020 MARKING ARROW EPOXY TYPE 3 EACH	646.5020 MARKING ARROW EPOXY TYPE 4 EACH	646.5020 MARKING ARROW EPOXY TYPE 5 EACH	646.5120 MARKING WORD EPOXY EACH	646.5220 MARKING SYMBOL EPOXY EACH	646.6120 MARKING STOP LINE EPOXY 18-INCH WHITE 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 WHITE LF	646.7420 MARKING CROSSWALK EPOXY TRANVERSE LINE 6-INCH LF	646.8120 MARKING CURB EPOXY LF
PROJECT ID 1060-47-70																
IH 94 WB	459+30		825+63	--	--	--	--	4	--	--	--	--	--	--	--	--
IH 94 EB	459+30		825+63	--	--	--	--	4	--	--	--	--	--	--	--	--
STH 83 WB OFF RAMP	462+00		475+00	2	4	2	1	--	6	--	36	--	--	64	--	--
STH 83 EB ON RAMP	459+00		470+00	--	--	--	--	--	--	--	--	--	--	--	--	--
CTH SS WB ON RAMP	1165+00		1179+50	--	--	--	--	--	--	--	--	--	--	--	--	--
CTH SS WB OFF RAMP	1179+50		1192+50	--	2	2	1	--	1	--	19	7	--	410	--	--
CTH SS EB OFF RAMP	1158+00		1181+00	--	4	2	1	--	2	--	41	--	--	282	--	--
CTH SS EB ON RAMP	1181+00		1196+00	--	--	--	--	--	--	--	--	--	--	--	--	--
STH 318 WB ON RAMP	224+00		243+00	--	--	--	--	--	--	--	24	--	--	--	--	--
STH 318 WB OFF RAMP	243+00		260+00	--	4	2	2	--	2	--	42	--	--	158	--	--
STH 318 EB OFF RAMP	228+00		243+50	--	4	2	1	--	2	--	27	7	15	276	--	--
STH 318 EB ON RAMP	243+50		268+50	--	--	--	--	--	--	--	--	--	695	--	--	--
CTH T WB ON RAMP	90+50		116+00	--	--	--	--	--	--	--	26	--	--	--	--	--
CTH T WB OFF RAMP	2119+00		2135+00	--	2	1	1	--	--	--	--	--	--	277	--	--
CTH T EB OFF RAMP	3115+00		3135+00	--	1	1	1	--	--	--	--	--	--	259	--	--
CTH T EB ON RAMP	4099+50		4115+00	--	--	--	--	--	--	--	--	--	--	--	--	--
CTH SS	31+00		41+50	1	8	--	--	--	3	--	127	14	303	--	--	213
STH 318	280+00		287+82	2	8	--	--	--	4	--	179	14	61	--	234	215
MEADOWBROOK PARK AND RIDE	0+00		3+74	4	4	--	--	--	--	7	27	--	613	--	--	--
				9	41	12	8	8	20	7	546	42	1687	1726	234	428
			SUBTOTAL			78			20	7	546	42	1687	1726	234	428
PROJECT ID 1330-47-71																
NAGAWAUKEE PARK AND RIDE	0+18		4+42	--	--	--	--	--	--	6	--	--	182	--	--	--
			SUBTOTAL			--			--	6	--	--	182	--	--	--
PROJECT ID 2788-03-70																
STH 318	268+83		280+00	--	9	--	--	--	2	--	189	8	11	--	175	161
			SUBTOTAL			9			2	--	189	8	11	--	175	161
PROJECT ID 1060-47-70 TOTAL				9	41	12	8	8	20	7	546	42	1687	1726	234	428
PROJECT ID 1330-47-71 TOTAL				--	--	--	--	--	--	6	--	--	182	--	--	--
PROJECT ID 2788-03-70 TOTAL				--	9	--	--	--	2	--	189	8	11	--	175	161
			CONTRACT TOTAL			87			22	13	735	50	1880	1726	409	589

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

CATEGORY	ROADWAY	STATION	OFFSET	204.9060.S.003 REMOVING EXISTING RAMP GATE ASSEMBLY EACH	RAMP GATE 654.0105 CONCRETE BASES TYPE 5 EACH	657.0255* TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	662.1040.S RAMP CLOSURE GATES 40-FT EACH	662.6020.S RAMP CLOSURE BARRICADE RACK 2-UNIT EACH	662.6030.S RAMP CLOSURE BARRICADE RACK 3-UNIT EACH
0010	**PROJECT ID 1060-47-70**								
	STH 318 WB ON RAMP	241+91	31' RT	--	1	1	1	1	--
	CTH T WB ON RAMP	114+91	35' RT	--	1	1	1	1	--
	CTH T EB ON RAMP	3115+00	46' LT	1	--	--	--	--	1
		CONTRACT TOTAL		1	2	2	2	2	1

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

3

FIELD FACILITIES OFFICE SPACE

CATEGORY	LOCATION	SPV.0060.056 FIELD FACILITIES OFFICE SPACE EACH
0010	**PROJECT ID 1060-47-70**	
	PROJECT	0.88
	PROJECT ID 1330-47-71	
	PROJECT	0.01
	PROJECT ID 2788-03-70	
	PROJECT	0.02
	CONTRACT TOTAL	0.91

SURVEY PROJECT

CATEGORY	LOCATION	SPV.0060.050 SURVEY PROJECT EACH
0010	**PROJECT ID 1060-47-70**	
	PROJECT	0.88
	PROJECT ID 1330-47-71	
	PROJECT	0.01
	PROJECT ID 2788-03-70	
	PROJECT	0.02
	CONTRACT TOTAL	0.91

CPM SCHEDULE

CATEGORY	LOCATION	SPV.0060.051 BASELINE CPM PROGRESS SCHEDULE EACH	SPV.0060.052 MONTHLY CPM PROGRESS SCHEDULE UPDATES EACH
0010	**PROJECT ID 1060-47-70**		
	PROJECT	0.88	5
	PROJECT ID 1330-47-71		
	PROJECT	0.01	1
	PROJECT ID 2788-03-70		
	PROJECT	0.02	3
	CONTRACT TOTAL	0.91	9

MATERIAL TRANSFER VEHICLE

CATEGORY	LOCATION	460.9000.S.001 MATERIAL TRANSFER VEHICLE 1060-47-70 EACH
0010	**PROJECT ID 1060-47-70**	
	PROJECT	1
	CONTRACT TOTAL	1

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

UTILITY LINE OPENING

LOCATION	SPV.0060.057 UTILITY LINE OPENING (ULO) EACH
PROJECT ID 1060-47-70	
IH 94 EB RAMPS & STH 318	2
IH 94 WB RAMPS & STH 318	2
IH 94 EB RAMPS & CTH T	1
IH 94 WB RAMPS & CTH T	1
STA 522+00, 162' LT	1
STA 603+00, 108' LT	1
STA 633+00, 109' LT	1
SUBTOTAL	9
PROJECT ID 2788-03-70	
STH 318 & SILVERNAIL RD	4
SUBTOTAL	4
PROJECT ID 1060-47-70 TOTAL	9
PROJECT ID 2788-03-70 TOTAL	4
CONTRACT TOTAL	13

SECTION CORNERS

ROADWAY	STATION	OFFSET	SPV.0060.058 SECTION CORNER MONUMENTS SPECIAL EACH
PROJECT ID 2788-03-70			
STH 318	275+36	10' RT	1
CONTRACT TOTAL			1

BACKFILL SLURRY

CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET	SPV.0035.001 BACKFILL SLURRY CY	COMMENTS
0010	**PROJECT ID 1060-47-70**						
	IH 94	459+30		465+00		180	CROSS CULVERTS
					CONTRACT TOTAL	180	

REMOVE AND RESET CABLE BARRIER POST

ROADWAY	STATION	OFFSET	SPV.0060.059 REMOVE AND RESET CABLE BARRIER POST EACH
PROJECT ID 1060-47-70			
IH 94	495+06	42' LT	1
CONTRACT TOTAL			1

3

REMOVING PAVEMENT

CATEGORY	ROADWAY	STATION	TO	STATION	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY
	PROJECT ID 1060-47-70				
0170	MEADOWBROOK RD	287+82		291+62	2993
				CONTRACT TOTAL	2993

AGGREGATE & ASPHALTIC PAVEMENT

CATEGORY	ROADWAY	STATION	TO	STATION	OFFSET	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	455.0605 TACK COAT GAL	460.6224 HMA PAVEMENT 4 MT 58-28 S TON
	PROJECT ID 1060-47-70							
0170	MEADOWBROOK RD	287+82		291+62		29	210	449
				CONTRACT TOTAL		29	210	449

3

PAVEMENT MARKING

CATEGORY	ROADWAY	STATION	TO	STATION	646.1020 MARKING LINE EPOXY 4-INCH 12.5 FT LINE 37.5 FT SKIP WHITE LF	646.3020 MARKING LINE EPOXY 8-INCH WHITE LF	646.8020 MARKING CORRUGATED MEDIAN EPOXY WHITE LF	646.8120 MARKING CURB EPOXY SF	646.8220 MARKING ISLAND NOSE EPOXY LF	EACH
	PROJECT ID 1060-47-70									
0170	MEADOWBROOK RD	287+82		291+62	189	385	94	72	19	1
		CONTRACT TOTAL			575		94	72	19	1

SAWING

CATEGORY	ROADWAY	690.0150 SAWING ASPHALT LF
	PROJECT ID 1060-47-70	
0170	MEADOWBROOK RD	90
	CONTRAC TOTAL	90

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	638.2602 REMOVING SIGNS TYPE II (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 (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	638.2101 MOVING SIGNS TYPE I [EA]	638.2601 REMOVE SIGNS TYPE I (EA)	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS (EA)	531.2024 DRILLING SHAFT 24 INCH LF (EST)	531.1140 (EST) STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	531.1100 (EST) CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
1	D10-5(5)	MILE 287/4	21 X 60	8.750				1	1	1														
2	D10-5(5)	MILE 287/4	21 X 60	8.750										1										
3	D10-5(5)	MILE 287/6	21 X 60	8.750				1	1	1														
4	D10-5(5)	MILE 287/6	21 X 60	8.750				1	1	1														
5	E4-1A	83 HARTLAND WALES (TILT ARROW RIGHT)														18 X 11	198.00			1	2	20	360	2.40	1600.00
5A	E1-5P	EXIT 287												5		10 X 2.5	25.00								
6	NONE	TEN CHIMNEYS NAT'L HISTORIC LANDMARK EXIT 287														14 X 9	126.00			1	2	17.00	302	2.00	1200.00
7	E8-1	SS 2 WAUKESHA 9 MILWAUKEE 22														16 X 7	112.00			1	2	17	302	2.00	1200.00
8	NONE	PEWAUKEE NEXT 4 EXITS														11 X 4.5	49.50			1	2	13	142	1.60	600.00
9	NONE	DOWNTOWN PEWAUKEE EXIT 291														11 X 7	77.00			1	2	15	204	1.80	800.00
10	E1-1A	83 HARTLAND WALES 1 MILE														14 X 13.5	189.00			1	2	20.00	360	2.40	1600.00
10A	E1-5P	EXIT 287												10		10 X 2.5	25.00								
11	NONE	DOWNTOWN DELAFIELD EXIT 285														11 X 7	77.00			1	2	15	204	1.80	800.00
12	NONE	DELAFIELD NEXT 2 EXITS														11 X 4.5	49.50			1	2	13	142	1.60	600.00
13	E1-1A	SS PEWAUKEE 1 MILE														15 X 10	150.00			1	2	17	302	2.00	1200.00
13A	E1-5P	EXIT 290												13		10 X 2.5	25.00								
14	E8-1	83 3 OCONOMOWOC 11														17 X 7.5	127.50			1	2	17	302	2.00	1200.00
15	E4-1A	MADISON 56 SS NORTH PEWAUKEE TILT ARROW RIGHT														19 X 7.5	142.50			1	2	20	360	2.40	1600.00
15A	E1-5P	EXIT 290												15		10 X 2.5	25.00								
16	NONE	WAUKESHA NEXT 5 EXITS														11 X 4.5	49.50			1	2	13	142	1.60	600.00
17	W9-62(5)	THIS LANE ENDS													MOUNT ON BRIDGE . BRACKETS INCIDENTAL - SEE DETAIL USE TYPE I NOT TYPE II	6 X 7.5		45.00		1				
18	NOT USED																								
19	W9-63(5)	LANE ENDS 800 FT													MOUNT ON EXISTING OVERHEAD SIGN STRUCTURE I BEAMS INCIDENTAL USE TYPE I NOT TYPE II	6 X 7.5		45.00		1				
20	E6-1	SS NORTH PEWAUKEE EXIT ONLY TILT ARROW RIGHT													MOUNT ON EXISTING SIGN STRUCTURE, I BEAMS INCIDENTAL S-67-42	14 X 10	140.00			1				
20A	E1-5P	EXIT 290												20		10 X 2.5	25.00								
21	E6-51	SS NORTH PEWAUKEE EXIT ONLY (DOWN ARROW)													MOUNT ON OVERHEAD SIGN STRUCTURE S-67-41 EXISTING I BEAMS INCIDENTAL	14 X 9.5	133.00			1				
21A	E1-5P	EXIT 290												21		10 X 2.5	25.00								
22	NONE	MEADOWBROOK PARK AND RIDE EXIT 291														14 X 9.5	133.00			1	2	17	302	2.00	1200.00
23	E1-1A	SS NORTH PEWAUKEE 1/2 MILE														15 X 10	150.00			1	2	17	302	2.00	1200.00
23A	E1-5P	EXIT 290												23		10 X 2.5	25.00								

TYPE I & II PERMANENT SIGNING 1060-47-70

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	638.2602 REMOVING SIGNS TYPE II (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 (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	638.2101 MOVING SIGNS TYPE I [EA]	638.2601 REMOVE SIGNS TYPE I (EA)	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS (EA)	531.2024 DRILLING SHAFT 24 INCH LF (EST)	531.1140 (EST) STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	531.1100 (EST) CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
24	NOT USED																							
25	E1-1A	T WAUKESHA PEWAUKEE 3/4 MILE														16 X 13	208.00			1	2	20	360	2.40	1600.00
25A	E1-5P	EXIT 293												25		10 X 2.5	25.00								
26	NONE	MEADOWBROOK PARK AND RIDE EXIT 291														14 X 9.5	133.00			1	2	17	302	2.00	1200.00
27	E4-1A	T WAUKESHA PEWAUKEE TILT ARROW RIGHT														19 X 10.5	199.50			1	2	20	360	2.40	1600.00
27A	E1-5P	EXIT 293												27		10 X 2.5	25.00								
28	R3-4B(5)		36 X 48	12.000						1					SHEET 7									
29	R3-4B(5)		36 X 48	12.000										28	SHEET 7									
30-100	NOT USED																							
101	R4-7(2M)		24 X 30	5.000											REUSE POST WITH REFLECTIVE STRIPS									
102	R5-1C (2M)		36 X 36	9.000				1	1	1					TRIMMED DO NOT ENTER SINCE ON BACK OF STOP SIGN									
103	R1-1(2M)		36 X 36	7.460					1					102										
104	R1-1(2M)		36 X 36	7.460						1														
105	R3-20L(2M		24 X 36	6.000				1	1	1														
106	D1-2	MADISON AHEAD ARROW MILWAUKEE RIGHT ARROW	72 X 30	15.000				2	1	2														
106a	R5-1A(2s)		36 x 24	6.000					1					106	REMOVAL OF POST PART OF # 106									
107	J3-2(2M)		48 X 60	20.000				2	1	2														
	MB3-4		24 X 12																					
	M1-1	IH 94	24 X 24																					
	MB4-20L		24 X 24																					
	MB3-2		24 X 12																					
	M1-1	IH 94	24 X 24																					
	MB6-1		21 X 21																					
108	R5-1(2M)		36 X 36	9.000				1	1	1														
109	R3-2(2M)		36 X 36	9.000					1						SIGNAL POLE									
110	R3-8LR(2M)		30 X 36	7.500				1	1	1														
111	R1-1F(2M)		36 X 36		7.460				1						SIGNAL POLE									
112	W12-1D(2M)		24 X 24			4.000				1					2 FOOT MOUNTING HEIGHT									
113	R1-2(2M)		48 X 42	7.000				1	1	1														
114	R6-2R(2M)		30 X 36	7.500				1	1	1														
115	R1-1F(2M)		36 X 36	7.460					1						SIGNAL POLE									
116	R3-5L		-- X --	--					1						REMOVE FROM S-67-244									
117	R3-5L(2M)		42 X 48	14.000					1						MOUNT ON S-67-244 - I BEAMS INCIDENTAL									
118	R1-1F(2M)		36 X 36	7.460					1						SIGNAL POLE									
119	R11-54F(2M)		48 X 30		10.000					2														
120	J2-1(2M)		24 X 57	9.500					1						LIGHT POLE									
	MB3-4		24 X 12																					
	M1-1	IH 94	24 X 24																					
	MB5-1L		21 X 21																					
121	J2-1(2M)		24 X 45	7.500				1	1	1														
	M1-5A	CTH G	24 X 24																					
	M6-1		21 X 21																					
122	R4-7(2M)		24 X 30	5.000				1	1	1														
123	W12-1D(2M)		24 X 24			4.000		1	1	1					2 FOOT MOUNTING HEIGHT									
124	J3-1(2M)		24 X 57	9.500				1	1	1														
	MB3-2		24 X 12																					
	M1-1	IH 94	24 X 24																					
	MB6-1		21 X 21																					
125	J3-1(2M)		24 X 69	11.500				1	1	1														
126	R1-1F(2M)		36 X 36		7.460									122										
127	J3-1(2M)		24 X 57	9.500				1	1	1														
	M3-1		24 X 12																					
	M1-5A	CTH SS	24 X 24																					
	M6-1		21 X 21																					
128	R1-1F(2M)		36 X 36		7.460									127										
129	J2-1(2M)		24 X 45	7.500				1	1	1														
	M1-5A	CTH G	24 X 24																					

SHEET: 2 OF 7

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	638.2602 REMOVING SIGNS TYPE II (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 (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.]	x	H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	638.2101 MOVING SIGNS TYPE I [EA]	638.2601 REMOVE SIGNS TYPE I (EA)	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS (EA)	531.2024 DRILLING SHAFT 24 INCH LF (EST)	531.1140 (EST) STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	531.1100 (EST) CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
	M6-1		21	X	21																							
130	R5-1(3)		36	X	36	9.000				1	1	1																
131	R5-1A(2S)		36	X	24	6.000										130	3 FOOT MOUNTING HEIGHT											
132	R6-2L(2M)		30	X	36	7.500				1	1	1																
133	NOT USED																											
134	R1-1(2M)		36	X	36	7.460				1	1	1																
135	R5-1(3)		36	X	36	9.000				1	1	1																
136	R5-1A(2S)		36	X	24	6.000										135												
137	R1-1(2M)		36	X	36	7.460				1	1	1																
138	W3-1(2M)		36	X	36			9.000		1	1	1																
139	J3-1(2M)		24	X	45	7.500				1	1	1																
	M1-5A	CTH G	24	X	24																							
	M6-1		21	X	21																							
140	D1-60	SOUTH FRONTAGE RD	102	X	24	17.000				2	1	2																
		EAST WEST																										
141	R4-7(2M)		24	X	30	5.000				1	1	1																
142	NOT USED																											
143	R6-2R(2M)		30	X	36	7.500				1	1	1																
144	J2-1(2M)		24	X	57	9.500				1	1	1																
	MB3-4		24	X	12																							
	M1-1	IH 94	24	X	24																							
	MB5-1L		21	X	21																							
145	R11-54F(2M)		48	X	30		10.000					2																
146	R11-54F(2M)		48	X	30		10.000									145												
147	R5-1A(2M)		42	X	30	8.750				1	1	1																
148	D1-1	MADISON LEFT ARROW	66	X	15	6.875				2	1	2																
149	W12-1D(2M)		24	X	24			4.000		1	1	1					2 FOOT HEIGHT											
150	R3-1(2M)		36	X	36	9.000				1	1	1																
151	R1-1F(2M)		36	X	36	7.460					1						SIGNAL POLE											
152	R1-1F(2M)		36	X	36		7.460				1						SIGNAL POLE											
153	R1-1F(2M)		36	X	36		7.460				1						SIGNAL POLE											
154	R5-1(3)		36	X	36	9.000					1						SIGNAL POLE											
155	R5-1A(2S)		36	X	24	6.000					1					154	3 FOOT HEIGHT											
156	R1-2(2M)		48	X	42	7.000				1	1						LIGHT POLE											
157	W9-1R(2M)		36	X	36			9.000		1	1	1																
158	J2-2(2M)		48	X	45	15.000				2	1	1																
	M1-5A	CTH DR	24	X	24																							
	M6-4		21	X	21																							
	M1-5A	CTH G	24	X	24																							
	M1-5R		21	X	21																							
158A	R5-1A(2S)		36	X	24	6.000					1					158	REMOVAL OF POST PART OF # 158											
159	R3-18(2M)		36	X	36	9.000					1						MOUNT ON UPRIGHT OF SIGN STRUCTURE S-67-245											
160	R6-2R(2M)		30	X	36	7.500					1						SIGNAL POLE											
161	R4-7(2M)		24	X	30	5.000				1	1	1																
162	R3-20L(2M)		24	X	36	6.000				1	1	1																
163	J3-2(2M)		48	X	69	23.000				1	1	2																
	M1-5A	CTH SS	24	X	24																							
	M6-1		21	X	21																							
	MB4-1		24	X	12																							
	MB3-4		24	X	12																							
	M1-1	IH 94	24	X	24																							
	MB6-1		21	X	21																							
164	D1-60	NORTH FRONTAGE RD	102	X	24	17.000						2																
		WEST EAST																										
165	J2-1(2M)		24	X	69	11.500							1															
	MB4-1		24	X	12																							
	MB3-2		24	X	12																							
	M1-1	IH 94	24	X	24																							
	MB5-1R		21	X	21																							
166	R3-5L(2M)		42	X	48	14.000					1						MOUNT ON S-67-246 I BEAMS INCIDENTAL											
167	R3-5L(2M)		42	X	48	14.000					1						MOUNT ON S-67-246 I BEAMS INCIDENTAL											
168	R11-54F(2M)		48	X	30		10.000					2																
169	J2-1(2M)		24	X	69	11.500				1	1		1															
	MB4-1		24	X	12																							
	MB3-4		24	X	12																							
	M1-1	IH 94	24	X	24																							
	MB5-1L		21	X	21																							
170	J13-1(2M)		24	X	36	6.000					1					169												

SHEET: 3 OF 7

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	MISCELLANEOUS QUANTITIES – PERMANENT SIGNING	SHEET: 350	E

TYPE I & II PERMANENT SIGNING 1060-47-70

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	638.2602 REMOVING SIGNS TYPE II (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 (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	638.2101 MOVING SIGNS TYPE I [EA]	638.2601 REMOVE SIGNS TYPE I (EA)	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS (EA)	531.2024 DRILLING SHAFT 24 INCH LF (EST)	531.1140 (EST) STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	531.1100 (EST) CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
	M1-5A	CTH DR	24 X 24																					
	M6-4		21 X 21																					
171	D1-2	MILWAUKEE AHEAD ARROW	72 X 30	15.000						2														
		MADISON RIGHT ARROW																						
172	J3-2(2M)		48 X 57	19.000				1	1	1														
	MB3-2		24 X 12																					
	M1-1	IH 94	24 X 24																					
	MB6-1		21 X 21																					
	MB3-4		24 X 12																					
	M1-1	IH 94	24 X 24																					
	MB6-1		21 X 21																					
173	R5-1A(2S)		36 X 24	6.000				1	1	1														
174	J3-1(2M)		24 X 57	19.000					1						MOUNT ON S-67-245 I BEAMS INCIDENTAL									
	MB3-2		24 X 12																					
	M1-1	IH 94	24 X 24																					
	MB6-1		21 X 21																					
175	W12-1D(2M)		24 X 24			4.000		1	1	1					2 FOOT MOUNTING HEIGHT									
176	R1-1F(2M)		36 X 36		7.460				1						SIGNAL POLE									
177	R5-1(2M)		36 X 36	9.000				1	1	1														
178	R4-7(2M)		24 X 30	5.000					1						SIGNAL POLE									
179	R1-1F(2M)		36 X 36		7.460				1						SIGNAL POLE									
180	J2-1(2M)		24 X 57	9.500					1	1														
	MB3-4		24 X 12																					
	M1-1	IH 94	24 X 24																					
	MB6-1		21 X 21																					
181	R1-1F(2M)		36 X 36		7.460				1						SIGNAL POLE									
182	R1-2(2M)		42 X 48	7.000				1	1	1														
183	NOT USED																							
184	R5-1(2M)		36 X 36	9.000					1					172										
185	R6-2L(2M)		30 X 36	7.500					1						SIGNAL POLE									
186	D1-1	MILWAUKEE ARROW LEFT	72 X 15	7.500				2	1	2														
187	J2-1(2M)		24 X 57	9.500				1	1	1														
	MB3-2		24 X 12																					
	M1-1	IH 94	24 X 24																					
	MB5-1L		21 X 21																					
188	R3-20L(2M)		24 X 36	6.000				1	1	1														
189	R4-7(2M)		24 X 30	5.000					1						SIGNAL POLE									
190	J3-1(2M)		24 X 57	9.500				1	1	1														
	MB3-2		24 X 12																					
	M1-1	IH 94	24 X 24																					
	MB6-1		21 X 21																					
191	R11-54F(2M)		48 X 30		10.000			1	1	1														
192	R1-1F(2M)		36 X 36		7.460				1						SIGNAL POLE									
193	D16-1A	WEST 94 ONLY ARROW	36 x 72	18.000											MOUNT ON S-67-239 I BEAMS INCIDENTAL									
194	J3-1(2M)		24 X 69	11.500				1	1	1														
	MB4-1		24 X 12																					
	MB3-2		24 X 12																					
	M1-1	IH 94	24 X 24																					
	MB6-1		21 X 21																					
195	D16-1A								1						ON S-67-239									
196	D16-1A								1						ON S-67-239									
197	D1-60	SOUTH FRONTAGE RD	102 X 24	17.000				2	1	2														
		EAST WEST																						
198	J13-1(2M)		24 X 45	7.500				1	1	1														
	M1-95A	SOUTH FRONTAGE RD	24 X 24																					
	M6-4		21 X 21																					
199	J3-1(2M)		24 X 57	9.500				1	1	1														
	MB3-2		24 X 12																					
	M1-1	IH 94	24 X 24																					
	MB6-1		21 X 21																					
200	R1-1F(2M)		36 X 36		7.460				1					199										
201	R4-7(2M)		24 X 30	5.000					1						SIGNAL POLE									
202	R6-2L(2M)		30 X 36	7.500					1						SIGNAL POLE									
203	J1-1(2M)		24 X 60	10.000				1	1	1														
	M2-1		24 X 12																					
	M1-5A	CTH G	24 X 24																					
	M1-5A	CTH DR	24 X 24																					
204	W5-52R(2M)		12 X 36			3.000			1					203	4 FOOT MOUNTING HEIGHT									
204A	R5-1A(3)		42 X 30	8.750										203	BACK OF SIGN #203									

SHEET: 4 OF 7

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	MISCELLANEOUS QUANTITIES – PERMANENT SIGNING	SHEET: 351	E

FILE NAME : N:\SPO\Operations\Signing\Miscellaneous Quantities\1060-47-70\030501_MQ.pptx PLOT DATE : 6/15/2023 PLOT BY : DOTTAH PLOT NAME : 030501_MQ.pdf PLOT SCALE : 1:1

TYPE I & II PERMANENT SIGNING 1060-47-70

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	638.2602 REMOVING SIGNS TYPE II (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 (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	638.2101 MOVING SIGNS TYPE I [EA]	638.2601 REMOVE SIGNS TYPE I (EA)	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS (EA)	531.2024 DRILLING SHAFT 24 INCH LF (EST)	531.1140 (EST) STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	531.1100 (EST) CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
205	R7-1D(2M)		24 X 30	5.000						1														
206	J3-1(2M)		24 X 57	9.500					1							ON UPRIGHT OF SIGN STRUCTURE									
207	R2-1(2M)	SPEED LIMIT 35	30 X 36	7.500				1	1	1														
208	R3-1(2M)		36 X 36	9.000				1	1	1														
209	R6-2L(2M)		30 X 36	7.500					1							SIGNAL POLE									
209A	R1-1F(2M)		36 X 36		7.460				1							SIGNAL POLE									
210	R5-1(2M)		36 X 36	9.000					1							SIGNAL POLE									
211	R1-1F(2M)		36 X 36		7.460				1							SIGNAL POLE									
212	R3-5L(2M)		42 X 48	14.000					1							S-67-240 I BEAMS INCIDENTAL									
213	R3-5L(2M)		42 X 48	14.000					1							S-67-240 I BEAMS INCIDENTAL									
214	J3-1(2M)		24 X 57	9.500				1	1	1														
	MB3-4		24 X 12																					
	M1-1	IH 94	24 X 24																					
	MB6-1		21 X 21																					
215	R3-18(2M)		36 X 36	9.000						1														
216	R1-2(2S)		36 X 31	3.880				1	1	1						SHEET 30									
217	R5-1(3)		36 X 36	9.000					1							SIGNAL POLE									
218	R5-1A(2S)		36 X 24	6.000												SIGNAL POLE									
219	R1-1F(2M)		36 X 36		7.460				1							SIGNAL POLE									
220	NOT USED																							
221	R4-7(2M)		24 X 30	5.000					1							SIGNAL POLE									
222	R11-54F(2M)		48 X 30		10.000			1	1	1														
223	R1-1F(2M)		36 X 36		7.460				1							SIGNAL POLE									
224	R1-2(2M)		42 X 48	7.000				1	1	1														
225	R11-54F(2M)		48 X 30		10.000			1	1	1														
226	R6-2L(2M)		30 X 36	7.500				1	1	1														
227	R11-54F(2M)		48 X 30		10.000					1														
228	D1-1	MILWAUKEE ARROW LEFT	72 X 15	7.500				2	1	2														
229	NOT USED																							
230	W5-52R(2M)		12 X 36			3.000		1	1	1						4 FOOT MOUNTING HEIGHT									
231	R5-1A(2M)		42 X 30	8.750				1	1	1														
232	R2-1(2M)	SPEED LIMIT 35	30 X 36	7.500					1							LIGHT POLE									
233	R7-1D(2M)		24 X 30	5.000											232	LIGHT POLE									
234	NOT USED		X																					
235	R1-1F(2M)		36 X 36		7.460			1	1	1														
235A	J3-1(2M)		24 X 57	9.500											235									
	M3-1		24 X 12																					
	M1-5A	CTH G	24 X 24																					
	M6-1		21 X 21																					
236	R5-1(2M)		36 X 36	9.000											235									
237	NOT USED																							
238	R5-1(3)		36 X 36	9.000				1	1	1														
239	R5-1A(2S)		36 X 24	6.000											238									
240	R6-2R(2M)		30 X 36	7.500					1						235									
241	R1-1F(2M)		36 X 36		7.460				1							SIGNAL POLE									
242	R5-1(2M)		36 X 36	9.000					1							SIGNAL POLE									
243	R5-1A(2S)		36 X 24	6.000					1						242									
244	R10-50L								1															
245	R4-7(2M)		24 X 30	5.000					1							SIGNAL POLE									
246	R6-2L(2M)		30 X 36	7.500					1							SIGNAL POLE									
247	R3-1(2M)		36 X 36	9.000					1	1														
248	R1-1F(2M)		36 X 36		7.460				1							SIGNAL POLE									
248A	R1-1F(2M)		36 X 36		7.460											SIGNAL POLE									
249	R3-18(2M)		36 X 36	9.000					1						201									
250	J4-1(2M)		24 X 36	6.000				1	1	1														
	M4-6		24 X 12																					
	M1-6	STH 318	24 X 24																					
251	J3-2(2M)		48 X 45	15.000				1	1	1														
	M1-5A	CTH DR	24 X 24																					
	M6-4		21 X 21																					
	M1-5A	CTH G	24 X 24																					
	M6-1		21 X 21																					
252	J2-1(2M)		24 X 69	11.500				1	1	1														
	MB4-1		24 X 12																					
	MB3-4		24 X 12																					
	M1-1	IH 94	24 X 24																					
	MB5-1L		21 X 21																					
253	R3-20LL(2M)		24 X 36	6.000				1	1	1														
254	J3-1(2M)		24 X 57	9.500				1	1	1														
	M3-3		24 X 12																					

3

3

SHEET: 5 OF 7

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	638.2602 REMOVING SIGNS TYPE II (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 (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	637.1230 SIGNS TYPE I REFLECTIVE F (SF)	638.2101 MOVING SIGNS TYPE I [EA]	638.2601 REMOVE SIGNS TYPE I (EA)	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS (EA)	531.2024 DRILLING SHAFT 24 INCH LF (EST)	531.1140 (EST) STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	531.1100 (EST) CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
	M1-5A	CTH G	24 X 24																						
	M6-1		21 X 21																						
255	J3-1(2M)		24 X 57	9.500				1	1	1															
	M3-2		24 X 12																						
	M1-5A	CTH DR	24 X 24																						
	M6-1		21 X 21																						
256	D4-2R(2M)		30 X 36	7.500				1	1	1															
257	R1-1F(2M)		36 X 36		7.460				1						SIGNAL POLE										
258	R1-1F(2M)		36 X 36		7.460				1						SIGNAL POLE										
259	R1-1F(2M)		36 X 36		7.460				1						SIGNAL POLE										
260	R4-7(2M)		24 X 30	5.000					1						SIGNAL POLE										
261	R1-1F(2M)		36 X 36		7.460				1						SIGNAL POLE										
262	R6-2L(2M)		30 X 36	7.500					1						SIGNAL POLE										
263	J2-2(2M)		48 X 57	19.000				1	1	1															
	MB3-2		24 X 12																						
	M1-1	IH 94	24 X 24																						
	MB6-1		21 X 21																						
	M3-4		24 X 12																						
	M1-1	IH 94	24 X 24																						
	MB5-1R		21 X 21																						
264	J2-2(2M)		48 X 57	19.000				1	1	1															
	MB3-2		24 X 12																						
	M1-1	IH 94	24 X 24																						
	MB6-1		21 X 21																						
	M3-4		24 X 12																						
	M1-1	IH 94	24 X 24																						
	MB5-1R		21 X 21																						
265	J3-1(2M)		24 X 60	10.000				1	1	1															
	MB3-2		24 X 12																						
	M1-1	IH 94	24 X 24																						
	MB4-20L		24 X 24																						
266	J3-1(2M)		24 X 57	9.500				1	1	1															
	MB3-4		24 X 12																						
	M1-1	IH 94	24 X 24																						
	MB6-1		21 X 21																						
267	R11-54F(2M)		48 X 30		10.000			1	1	1															
268	R3-20L(2M)		24 X 36	6.000				1	1	1															
269	R5-1(2M)		36 X 36	9.000					1						SIGNAL POLE										
270	R7-1D(2S)		18 X 24	3.000				1	1	1															
271	NONE	MEADOWBROOK PARK AND RIDE														14 X 7.5	105.00			1	2	16	220	2.00	1100.00
272	NONE	MEADOWBROOK PARK AND RIDE													BACK TO BACK WITH # 271	14 X 7.5	105.00			1					
273	R7-1D(2S)		18 X 24	3.000				1	1	1															
274	R7-1D(2S)		18 X 24	3.000				1	1	1															
275	NONE	NO PARKING EXCEPT XXX	24 X 30	5.000				1	1	1															
276	NONE	NO PARKING EXCEPT XXX	24 X 30	5.000				1	1	1															
277	R7-1R(2S)		18 X 24	3.000				1	1	1															
278	R5-1(2S)		30 X 30	6.250				1	1			1													
279	NONE	NO PARKING BUS STOP	24 X 30	5.000				1	1			1													
280	NONE	DESIGNATED LONG TERM PARKIN	24 X 18	3.000					1						LIGHT POLE										
281	R7-1L(2S)		18 X 24	3.000				1	1	1															
282	R7-8A(2S)		12 X 18	1.500				1	1	1															
282A	R7-8V(2S)		12 X 6	0.500										282											
283	R7-8A(2S)		12 X 18	1.500				1	1	1															
283A	R7-8V(2S)		12 X 6	0.500										282											
284	R7-8A(2S)		12 X 18	1.500				1	1	1															
284A	R7-8V(2S)		12 X 6	0.500				1	1			1		282											

TYPE I & II PERMANENT SIGNING 1060-47-70

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	**637.2210** SIGNS TYPE II REFLECTIVE H [SF]	**637.2215** SIGNS TYPE II REFLECTIVE H FOLDING SF	**637.2230** SIGNS TYPE II RELFECTIVE F [SF]	**638.2102** MOVING SIGNS TYPE II [EA]	**638.3000** REM SMALL SIGN SUP [EA]	**638.2602** REMOVING SIGNS TYPE II (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 (EA)	**634.0885** POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.]	x	H [FT.]	**637.1220** SIGNS TYPE I REFLECTIVE SH [SF]	**637.1230** SIGNS TYPE I REFLECTIVE F (SF)	**638.2101** MOVING SIGNS TYPE I [EA]	**638.2601** REMOVE SIGNS TYPE I (EA)	**638.3100** REMOVING STRUCTURAL STEEL SIGN SUPPORTS (EA)	**531.2024** DRILLING SHAFT 24 INCH LF (EST)	**531.1140 (EST)** STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS- LBS	**531.1100 (EST)** CONCRETE MASONRY ANCILLIARY STRUCTURES TYPE NS - CY	**635.0200** SIGN SUPPORTS STRUCTURAL STEEL HS EST LBS
285	NONE	MOTORCYCLE PARKING ONLY	24	X	18	3.000																							
286	NONE	EXIT ARROW	36	X	36	9.000				1	1	1																	
287	NONE	NO PARKING LOADING ZONE	24	X	30	5.000				1	1	1																	
288	NONE	NO PARKING LOADING ZONE	24	X	30	5.000				1	1	1																	
289	R4-7(2S)		24	X	30	5.000						1																	
290	D12-2A(2S)		60	X	36	15.000						2																	
291	NOT USED																												
292	NONE	PARKING RESTRICTED TO DESIGNATED STALLS ONLY	24	X	36	6.000				1	1	2																	
293	R1-1(2S)		30	X	30	5.180				1	1	1																	
294	R7-1D(2S)		18	X	24	3.000				1	1	1																	
295	D4-1		30	X	24	5.000				1	1	1																	
296	NONE	BUSES ARROW	X	X	X	X										295													
297	NONE	DESIGNATED PARKING LONG TERM ONLY	24	X	18	3.000				1	1	1																	
298	R5-2(2S)		24	X	24	4.000										292													
299	NONE	NO DETACHED TRAILER PARKING	30	X	30	6.250										292													
300	R5-2A(2S)		24	X	12	2.000										292													
301-377	NOT USED																												
378	R1-1F(2M)		36	X	36		7.460			1	1	1					SHEET 31												
379	D4-2L(2M)		30	X	36	7.500				1	1	1					SHEET 33												
380	NONE	NO PARKING BUS STOP ARROW	24	X	30	5.000				1	1	1					SHEET 35												
381	R5-1(2M)		36	X	36	9.000				1	1	1					SHEET 28												
UNDISTRIBUTED									5					5	6							2							
TOTALS						1886.530	393.640	58.000	5	163	238	183	2	8	6	--	--				2879.000	90.000	2	23	36	304	4968	36	20900

SHEET: 7 OF 7

TYPE I & II PERMANENT SIGNING 1330-47-71

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]	638.3000 REM SMALL SIGN SUP [EA]	638.2602 REMOVING SIGNS TYPE II (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 (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.]	x	H [FT.]	637.1220 SIGNS TYPE I REFLECTIVE SH [SF]	638.2601 REMOVE SIGNS TYPE I (EA)
601	NONE	PARKING RESTRICTED TO DESIGNATED STALLS	24	X	30	5.000			1	1		1								
602	NONE	PARK AND RIDE PARKING ONLY	30	X	12	2.500								601	REMOVAL PART OF 601					
603	R5-2(2S)		24	X	24	4.000			1	1		1								
604	R5-2A(2S)		24	X	12	2.000								603	REMOVAL PART OF 603					
605	NONE	NO SKATEBOARDING	30	X	12	2.500								603	REMOVAL PART OF 603					
606	NONE	NO LOITERING	24	X	12	2.000								603	REMOVAL PART OF 603					
607	R1-1(2S)		30	X	30	5.180			1	1	1									
608	NONE	NAGAWAUKEE PARK AND RIDE													MOUNT BACK TO BACK WITH SIGN 608A REUSE STEEL POSTS	13	X	7.5	97.50	1
608A	NONE	NAGAWAUKEE PARK AND RIDE													MOUNT BACK TO BACK WITH SIGN # 608	13	X	7.5	97.50	1
609	R5-1(2S)		30	X	30	6.250			1	1	1									
610	R7-8A(2S)		12	X	18	1.500			1	1			1							
611	MG6-1(2S)		21	X	21	3.060			1	1			1							
612	D11-1(2S)		24	X	18	3.000								611	REMOVAL PART OF 611					
613	NONE	NO SKATEBOARDING	30	X	12	2.500			1	1	1									
614	NONE	NO LOITERING	24	X	12	2.000								613	REMOVAL PART OF 613					
615	W5-52L(2S)		12	X	36	3.000			1	1			1							
616	R7-8A(2S)		12	X	18	1.500			1	1		1								
617	R6-2R(2S)		18	X	24	3.000			1	1	1									
618	D11-1(2S)		24	X	18	3.000			1	1			1							
619	MG6-1(2S)		21	X	21	3.060								618	REMOVAL PART OF 618					
620	NONE	NO PARKING EXCEPT ARROW LEFT	24	X	30	5.000			1	1	1									
620A	NONE	NO PARKING EXCEPT ARROW RIGHT	24	X	30	5.000					1									
621	R7-8A(2S)		12	X	18	1.500			1	1			1							
622	R7-8A(2S)		12	X	18	1.500			1	1			1							
623	R7-8A(2S)		12	X	18	1.500			1	1			1							
UNDISTRIBUTED							1.000	5					5							
TOTALS						69.550	1.000	5	15	15	6	3	12	--	--				195.000	2

SHEET: 1 OF 1

TYPE II PERMANENT SIGNING 2788-03-70

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	638.2602 REMOVING SIGNS TYPE II (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 (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
501	W3-3(2M)		36	X	36			9.000		1	1	1					
502	W3-3(2M)		36	X	36			9.000		1	1	1					
503	J2-1(2M)		24	X	57	9.500				1	1	1					
	MB4-5		24	X	12												
	M1-1	IH 94	24	X	24												
	MB6-1		21	X	21												
504	D1-60	SOUTH FRONTAGE RD	102	X	24	17.000				2	1	2					
		WEST EAST															
505	R2-1(2M)	SPEED LIMIT 35	30	X	36	7.500				1	1	1					
506	R3-20R(2M)		24	X	36	6.000				1	1	1					
507	R3-7R(2M)		30	X	30	6.250				1	1	1					
508	R5-1A(2M)		42	X	30	8.750						1				507	REMOVAL PART OF 507
509	S1-1(2M)		36	X	36			6.750		1	1	1					
509A	S16-9P(2M)		30	X	18			3.750								509	REMOVAL PART OF 509
509B	R2-6P(2M)		36	X	24	6.000										509	REMOVAL PART OF 509
510	S1-1(2M)		36	X	36			6.750		1	1	1					
510A	S16-9P(2M)		30	X	18			3.750								509	REMOVAL PART OF 510
510B	R2-6P(2M)		36	X	24	6.000										509	REMOVAL PART OF 510
511	R2-1(2M)		30	X	36	7.500				1	1	1					
512	R2-1(2M)		30	X	36	7.500				1	1	1					
513	S4-51(2M)		24	X	48			8.000		1	1	1					
514	W3-3(2M)		36	X	36			9.000		1	1	1					
515	W3-3(2M)		36	X	36			9.000		1	1	1					
516	R5-1(2M)		36	X	36	9.000						1					
517	R1-1F(2M)		36	X	36		7.460				1	1					
518	R1-1F(2M)		36	X	36		7.460				1						SIGNAL POLE
519	R1-1F(2M)		36	X	36		7.460				1						
520	M1-94S	318 MEADOWBROOK RD	102	X	18	12.750											MOUNT ON SIGNAL ARM
521	R5-1(2M)		36	X	36	9.000					1						SIGNAL POLE
522	NOT USED																
523	M1-94	SILVERNAIL RD	96	X	18	12.000											MOUNT ON SIGNAL ARM
524	R4-7(2M)		24	X	30	5.000					1						SIGNAL POLE
525	R6-2L(2M)		30	X	36	7.500											SIGNAL POLE
526	D1-1	MILWAUKEE ARROW RIGHT	72	X	15	7.500				2	1	2					
527	J2-2(2M)		48	X	57	19.000				2	1	2					
	MB3-4		24	X	12												
	M1-1	IH 94	24	X	24												
	MB5-2L		21	X	21												
	MB3-2		24	X	12												
	M1-1	IH 94	24	X	24												

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SHEET: 1 OF 2

TYPE II PERMANENT SIGNING 2788-03-70

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLECTIVE H [SF]	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II RELFECTIVE F [SF]	638.2102 MOVING SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	638.2602 REMOVING SIGNS TYPE II (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 (EA)	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
	MB5-1R		21	X	21												
528	R1-1F(2M)		36	X	36		7.460				1						SIGNAL POLE
529	J3-2(2M)		48	X	69	23.000				2	1	2					
	MB4-1		24	X	12												
	MB3-2		24	X	12												
	M1-1	IH 94	24	X	24												
	MB6-1		21	X	21												
	MB4-1		24	X	12												
	MB3-4		24	X	12												
	M1-1	IH 94	24	X	24												
	MB6-1		21	X	21												
530	R11-54F(2M)		48	X	30		10.000			1	1	1					
531	R3-5L(2M)		42	X	48	14.000					1						MOUNT ON S-67-602 , I BEAMS INCIDENTAL
532	R3-5L(2M)		42	X	48	14.000					1						MOUNT ON S-67-602 , I BEAMS INCIDENTAL
533	R1-1F(2M)		36	X	36		7.460				1	1					
534	R1-1F(2M)		36	X	36		7.460				1						SIGNAL POLE
535	R1-1F(2M)		36	X	36		7.460				1						SIGNAL POLE
536	W12-1D(2M)		24	X	24			4.000				1					2 FOOT HEIGHT
537	R5-1(2M)		36	X	36	9.000					1						SIGNAL POLE
538	M1-94S	318 MEADOWBROOK RD	102	X	18	12.750											MOUNT ON SIGNAL ARM
539	R1-1F(2M)		36	X	36		7.460				1						SIGNAL POLE
540	J4-2(2M)		48	X	36	12.000				1	1	1					
	M3-3		24	X	12												
	M1-6	STH 318	24	X	24												
	M4-5		24	X	12												
	M1-4	USH 18	24	X	24												
541	R6-2L(2M)		30	X	36	7.500											SIGNAL POLE
542	R4-7(2M)		24	X	30	5.000					1					517	
543	M1-94	SILVERNAIL RD	96	X	18	12.000											MOUNT ON SIGNAL ARM
544	R5-1(2M)		36	X	36	9.000					1					533	
UNDISTRIBUTED									5					5	6		
TOTALS						282.000	69.680	69.000	5	23 *	34	28	0	5	6	--	--

SHEET: 2 OF 2

PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	MISCELLANEOUS QUANTITIES – PERMANENT SIGNING	SHEET: 357	E

FILE NAME : N:\SPO\Operations\Signing\Miscellaneous Quantities\2788-03-70\030501_MQ.pptx PLOT DATE : 6/15/2023 PLOT BY : DOTTAH PLOT NAME : 030501_MQ.pdf PLOT SCALE : 1:1

IH 94 EB RAMPS & CTH SS

ALL ITEMS ARE CATEGORY 0140 UNLESS OTHERWISE NOTED

3

REMOVE TRAFFIC SIGNALS
IH 94 EB RAMPS & CTH SS

LOCATION	204.9060.S.021 REMOVING TRAFFIC SIGNALS EACH
IH 94 EB RAMPS & CTH SS	1
TOTALS	1

SIGNAL MOUNTING HARDWARE
IH 94 EB RAMPS & CTH SS

LOCATION	658.5070.021 SIGNAL MOUNTING HARDWARE EACH
IH 94 EB RAMPS & CTH SS	1
TOTALS	1

3

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230* CABLE TRAFFIC SIGNAL 5-14 AWG LF
SB3	HEAD 2	21
SB3	HEAD 9	22
SB6	HEAD 1	21
SB6	HEAD 5	22
SB7	HEAD 6	22
	TOTALS	108

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL FACES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0173* TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0174* TRAFFIC SIGNAL FACE 4S 12-INCH EACH
1	SB6	1	--
2	SB3	1	--
5	SB6	--	1
6	SB7	--	1
9	SB3	--	1
	TOTALS	2	3

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LAMP, BALLAST, LED, SWITCH DISPOSAL
IH 94 EB RAMPS & CTH SS

FIXTURE TYPE	659.5000.S.021* LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR EACH
TRAFFIC SIGNAL, THREE SECTION	5
TOTALS	5

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CAST BASES, POLES, STANDARDS, MONOTUBE ARMS, LUMINAIRES

SIGNAL BASE NO.	657.0100* PEDESTAL BASES EACH	657.0425* TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH
SB3	1	1
SB6	1	1
TOTALS	2	2

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CABINET WITH CONTROLLER
2	EACH	POLES TYPE 10
1	EACH	POLES TYPE 10 SPECIAL
1	EACH	POLES TYPE 12
2	EACH	POLES TYPE 13
1	EACH	MONOTUBE ARMS 15-FT
1	EACH	MONOTUBE ARMS 25-FT
1	EACH	MONOTUBE ARMS 45 FT-SPECIAL
1	EACH	MONOTUBE ARMS 50-FT
2	EACH	MONOTUBE ARMS 55-FT
7	EACH	LUMINAIRE ARMS STEEL 15-FT
1	EACH	EVP CABINET EQUIPMENT
4	EACH	EVP DETECTOR HEADS (HEADS A, B, C, D)

REMOVE TRAFFIC SIGNALS
STH 318 & SILVERNAIL RD

LOCATION	204.9060.S.041 REMOVING TRAFFIC SIGNALS EACH	204.9060.S.042 REMOVING LOOP DETECTOR WIRE AND LEAD-IN CABLE EACH
STH 318 & SILVERNAIL RD	1	1
TOTALS	1	1

REMOVING CONCRETE BASES

EXISTING BASE NO.	204.0195* REMOVING CONCRETE BASES EACH
CB1	1
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
SB7	1
SB8	1
SB9	1
SB10	1
SB11	1
TOTALS	12

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LAMP, BALLAST, LED, SWITCH DISPOSAL
STH 318 & SILVERNAIL ROAD

FIXTURE TYPE	659.5000.S.041* LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR EACH
LUMINARES, UTILITY, LED C	6
PEDESTRIAN SIGNAL - 16 INCH	2
TRAFFIC SIGNAL, THREE SECTION	15
TRAFFIC SIGNAL, FOUR SECTION	3
TOTALS	26

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

CONDUIT

FROM	TO	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615* CONDUIT SPECIAL 3-INCH LF
CB1	PB1	--	51	--
PB1	PB2	235	--	--
PB2	PB3	168	--	--
PB1	PB4	--	--	33
PB4	SB1	16	--	--
PB1	PB5	--	--	202
PB5	SB2	--	8	--
PB5	PB6	--	66	--
PB6	SB3	5	--	--
PB6	PB7	--	--	104
PB7	PB8	--	--	68
PB8	PB9	51	--	--
PB9	PB10	176	--	--
PB8	SB4	--	13	--
PB8	PB11	--	--	126
PB11	SB5	--	8	--
PB11	PB12	--	76	--
PB12	SB6	7	--	--
PB12	PB13	16	--	--
PB13	PB14	185	--	--
PB14	PB15	147	--	--
PB12	PB16	--	--	170
PB16	SB7	--	6	--
PB16	PB17	--	76	--
PB17	SB8	7	--	--
PB17	PB18	--	--	124
PB18	SB9	--	9	--
PB18	PB19	--	--	50
PB19	PB20	250	--	--
PB19	PB21	--	--	106
PB21	SB10	--	10	--
PB21	CB1	--	60	--
	TOTALS	674	222	533

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING PULL BOXES

EXISTING PULL BOX NO.	653.0905* REMOVING PULL BOXES EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
PB7	1
PB8	1
PB9	1
PB11	1
PB12	1
PB13	1
PB14	1
PB15	1
PB16	1
PB17	1
PB18	1
PB19	1
PB20	1
TOTALS	19

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STH 318 & SILVERNAIL ROAD

ALL ITEMS ARE CATEGORY 0020 UNLESS OTHERWISE NOTED

3

LOOP DETECTOR SCHEDULE

LOOP NUMBER	HOMERUN PB	STATION	LOCATION	SIZE (FT) X (FT)	NO. OF TURNS	PAVEMENT TYPE	SDD INSTALLATION REFERENCE	652.0800* CONDUIT LOOP DETECTOR LF	655.0700* LOOP DETECTOR LEAD IN CABLE LF	655.0800* LOOP DETECTOR WIRE LF
11	PB19	276+84	5.5' RT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	68	73	188
12	PB19	277+12	5.5' RT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	62	73	176
21	PB10	280+65	27' LT	6' X 8'	5	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	61	464	206
22	PB10	280+66	15' LT	6' X 8'	5	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	49	464	182
31	PB13	90+38	7' LT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	83	299	218
32	PB13	90+10	7' LT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	84	299	220
41	PB3	84+50	6' RT	6' X 6'	5	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	42	420	156
42	PB2	86+10	6' RT	6' X 6'	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	45	252	138
43	PB4	88+35	6' LT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	65	50	182
44	PB4	88+63	6' LT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	62	50	176
51	PB7	278+45	4' RT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	61	204	173.8
52	PB7	278+17	5' RT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	60	204	171.2
53	PB7	278+45	16' RT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	72	204	195.6
54	PB7	278+17	17' RT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	71	204	194.4
61	PB20	274+49	30' RT	6' X 6'	5	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	47	323	166
62	PB20	274+48	18' RT	6' X 6'	5	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	35	323	142
71	PB4	88+34	6' LT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	76	50	204
72	PB4	88+63	6' LT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	74	50	200
81	PB15	93+83	18' LT	6' X 12'	5	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	52	632	212
82	PB14	92+33	19' LT	6' X 8'	5	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	43	485	170
83	PB13	90+40	18' LT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	71	299	194
84	PB13	90+11	19' LT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	73	299	198
							TOTALS	1356	5719	4063

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

** LOCATION ID TO FRONT CENTER OF DETECTOR LOOP

*** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

3

3

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0135* PULL BOXES STEEL 24X36-INCH EACH	653.0140* PULL BOXES STEEL 24X42-INCH EACH
PB1	277+10	75' LT	--	1
PB2	86+10	27' RT	1	--
PB3	84+48	26.5' RT	1	--
PB4	277+41	62.5' LT	--	1
PB5	278+11	77' LT	--	1
PB6	278+37	58' LT	--	1
PB7	278+40	5' LT	--	1
PB8	278+41	28' RT	--	1
PB9	278+90	27' RT	1	--
PB10	280+66	9' RT	1	--
PB11	278+39	91' RT	--	1
PB12	278+10	113' RT	--	1
PB13	90+40	41' LT	1	--
PB14	92+33	38' LT	1	--
PB15	93+84	37' LT	1	--
PB16	277+24	110' RT	--	1
PB17	277+02	81' LT	--	1
PB18	276+99	19.5' RT	--	1
PB19	276+99	5.5' LT	--	1
PB20	274+48	4' RT	1	--
PB21	276+96	58' LT	--	1
		TOTALS	8	13

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101* CONCRETE BASES TYPE 1 EACH	654.0102* CONCRETE BASES TYPE 2 EACH	654.0110* CONCRETE BASES TYPE 10 EACH	654.0120* CONCRETE BASES TYPE 10-SPECIAL EACH	654.0113* CONCRETE BASES TYPE 13 EACH	654.0217* CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	276+98	73' LT	--	--	--	--	--	1
SB1	277+36	47' LT	1	--	--	--	--	--
SB2	278+17	70' LT	--	--	--	--	1	--
SB3	278+34	56' LT	1	--	--	--	--	--
SB4	278+28	27' RT	--	--	1	--	--	--
SB5	278+32	91' RT	--	--	--	--	1	--
SB6	278+14	108' RT	--	1	--	--	--	--
SB7	277+19	107' RT	--	--	--	--	1	--
SB8	276+97	77' RT	1	--	--	--	--	--
SB9	277+08	20' RT	--	--	1	--	--	--
SB10	276+86	57' LT	--	--	--	1	--	--
		TOTALS	3	1	2	1	3	1

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

3

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230* CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240* CABLE TRAFFIC SIGNAL 7-14 AWG LF
SB1	HEAD 12	21	--
SB1	HEAD 20	--	21
SB2	HEAD 18	63	--
SB2	HEAD 19	21	--
SB2	HEAD 21	--	76
SB3	HEAD 4	--	21
SB3	HEAD 6	21	--
SB4	HEAD 5	--	48
SB4	HEAD 9	21	--
SB5	HEAD 2	74	--
SB5	HEAD 3	62	--
SB5	HEAD 22	21	--
SB6	HEAD 15	--	21
SB6	HEAD 17	21	--
SB7	HEAD 13	66	--
SB7	HEAD 14	21	--
SB7	HEAD 16	--	78
SB7	HEAD 23	21	--
SB8	HEAD 1	21	--
SB9	HEAD 10	21	--
SB9	HEAD 11	38	--
SB10	HEAD 7	66	--
SB10	HEAD 8	54	--
	TOTALS	633	265

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS

FROM	TO	655.0515* ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	101
SB1	SB2	193
SB2	SB3	79
SB3	SB4	153
SB4	SB5	117
SB5	SB6	86
SB6	SB7	132
SB7	SB8	85
SB8	SB9	111
SB9	SB10	147
SB10	CB1	47
PB1	CB1	35
PB4	SB1	34
PB5	SB2	26
PB6	SB3	23
PB7	SB4	80
PB8	SB4	30
PB11	SB5	26
PB12	SB6	25
PB16	SB7	24
PB17	SB8	25
PB18	SB9	27
PB19	SB9	68
PB21	SB10	29
	TOTALS	1703

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0240* CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260* CABLE TRAFFIC SIGNAL 12-14 AWG LF
CB1	SB1	--	99
CB1	SB2	--	159
CB1	SB3	--	204
CB1	SB4	--	330
CB1	SB5	--	399
CB1	SB6	--	386
CB1	SB7	--	284
CB1	SB8	231	--
CB1	SB9	155	--
CB1	SB10	47	--
	TOTALS	432	1860

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900* TRAFFIC SIGNAL EVP DETECTOR CABLE LF	655.0210** CABLE TRAFFIC SIGNAL 3-14 AWG LF
CB1	SB2 (HEAD D)	224	224
CB1	SB5 (HEAD B)	420	420
CB1	SB7 (HEAD C)	320	320
CB1	SB10 (HEAD A)	113	113
	TOTALS	963	963

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

**ITEM 655.0210 TO BE USED WITH STATE SUPPLIED EVP CONFIMRATION LIGHTS

LIGHTING WIRE

FROM	TO	655.0320* CABLE TYPE UF 2-10 AWG GROUNDED LF	655.0610* ELECTRICAL WIRE LIGHTING 12 AWG LF
CB1	SB2	159	--
SB2	LUMIN (1)	--	144
SB2	SB4	203	--
SB4	LUMIN (2)	--	288
SB4	SB6	168	--
SB6	LUMIN (1)	--	144
CB1	SB10	47	--
SB10	LUMIN (1)	--	144
SB10	SB9	145	--
SB9	LUMIN (2)	--	288
SB9	SB7	163	--
SB7	LUMIN (1)	--	144
	TOTALS	884	1152

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
STH 318 & SILVERNAIL RD

BASE NO.	656.0201.041 ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH
CB1	1
TOTALS	1

*** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

STH 318 & SILVERNAIL ROAD

ALL ITEMS ARE CATEGORY 0020 UNLESS OTHERWISE NOTED

3

3

CAST BASES, POLES, STANDARDS, MONOTUBE ARMS, LUMINAIRES

SIGNAL BASE NO.	657.0100* PEDESTAL BASES EACH	657.0255* TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0310* POLES TYPE 3 EACH	657.0420* TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0425* TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	SPV.0060.203 INSTALL POLES TYPE 10 EACH	SPV.0060.204* INSTALL POLES TYPE 10 SPECIAL EACH	SPV.0060.205 INSTALL POLES TYPE 12 EACH	SPV.0060.206* INSTALL POLES TYPE 13 EACH	SPV.0060.207 INSTALL MONOTUBE ARMS 15-FT EACH	SPV.0060.208* INSTALL MONOTUBE ARMS 25-FT EACH	SPV.0060.210* INSTALL MONOTUBE ARMS 45-FT -SPECIAL EACH	SPV.0060.211* INSTALL MONOTUBE ARMS 50-FT EACH	SPV.0060.212* INSTALL MONOTUBE ARMS 55-FT EACH	SPV.0060.213* INSTALL LUMINAIRE ARMS STEEL 15-FT EACH	657.0609* LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	659.1125* LUMINAIRES UTILITY LED C EACH
SB1	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--
SB2	--	--	--	--	--	--	--	--	1	--	--	--	--	1	1	--	1
SB3	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--
SB4	--	--	--	--	--	1	--	--	--	--	1	--	--	--	2	--	2
SB5	--	--	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--
SB6	--	1	1	--	--	--	--	--	--	--	--	--	--	--	--	1	1
SB7	--	--	--	--	--	--	--	--	1	--	--	--	--	1	1	--	1
SB8	1	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
SB9	--	--	--	--	--	1	--	--	--	1	--	--	--	--	2	--	2
SB10	--	--	--	--	--	--	1	--	--	--	--	1	--	--	1	--	1
TOTAL:	3	1	1	1	2	2	1	1	2	1	1	1	1	2	7	1	8

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL FACES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0173* TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0174* TRAFFIC SIGNAL FACE 4S 12-INCH EACH	658.0416* PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0500* PEDESTIAN PUSH BUTTONS EACH	SPV.0060.214 TRAFFIC SIGNAL REFLECTIVE BACKPLATE 3S EACH	SPV.0060.215 TRAFFIC SIGNAL REFLECTIVE BACKPLATE 4S EACH
1	SB8	1	--	--	--	1	--
2	SB5	1	--	--	--	1	--
3	SB5	1	--	--	--	1	--
4	SB3	--	1	--	--	--	1
5	SB4	--	1	--	--	--	1
6	SB3	1	--	--	--	--	--
7	SB10	1	--	--	--	--	--
8	SB10	1	--	--	--	--	--
9	SB4	1	--	--	--	--	--
10	SB9	1	--	--	--	--	--
11	SB9	1	--	--	--	--	--
12	SB1	1	--	--	--	--	--
13	SB7	1	--	--	--	--	--
14	SB7	1	--	--	--	--	--
15	SB6	--	1	--	--	--	--
16	SB7	--	1	--	--	--	--
17	SB6	1	--	--	--	--	--
18	SB2	1	--	--	--	--	--
19	SB2	1	--	--	--	--	--
20	SB1	--	1	--	--	--	--
21	SB2	--	1	--	--	--	--
22	SB5	--	--	1	1	--	--
23	SB7	--	--	1	1	--	--
	TOTAL	15	6	2	2	3	2

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STH 318 & SILVERNAIL ROAD

ALL ITEMS ARE CATEGORY 0020 UNLESS OTHERWISE NOTED

3

TRANSPORT AND INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET
STH 318 & SILVERNAIL RD

LOCATION	SPV.0060.216 TRNSPT & INSTALL STATE FURN TRAFFIC SIGNAL CABINET EACH
STH 318 & SILVERNAIL RD	1
TOTALS	1

SIGNAL MOUNTING HARDWARE
STH 318 & SILVERNAIL RD

LOCATION	658.5070.041 SIGNAL MOUNTING HARDWARE EACH
STH 318 & SILVERNAIL RD	1
TOTALS	1

3

TRANSPORT AND INSTALL STATE FURNISHED EMERGENCY VEHICLE PREEMPTION (EVP) DETECTOR HEADS & CONFIRMATION LIGHTS
STH 318 & SILVERNAIL RD

LOCATION	SPV.0060.221 TRNSPT & INSTALL STATE FURN EVP HEADS & CON LIGHT EACH
STH 318 & SILVERNAIL RD	1
TOTALS	1

TRANSPORT AND INSTALL SIGNAL AND INTERSECTION LIGHTING MATERIALS
STH 318 & SILVERNAIL RD

LOCATION	SPV.0060.226 TRNSPT TRAFFIC SIGNALS & INTER LIGHTING MATERIALS EACH
STH 318 & SILVERNAIL RD	1
TOTALS	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS
STH 318 & SILVERNAIL RD

LOCATION	661.0201.041 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS EACH
STH 318 & SILVERNAIL RD	1
TOTALS	1

TEMPORARY EVP SYSTEM
STH 318 & SILVERNAIL RD

LOCATION	SPV.0060.235 TEMPORARY EVP SYSTEM EACH
STH 318 & SILVERNAIL RD	1
TOTALS	1

3

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CABINET WITH CONTROLLER
1	EACH	POLES TYPE 9 SPECIAL
1	EACH	POLES TYPE 10 SPECIAL
1	EACH	POLES TYPE 13
2	EACH	MONOTUBE ARMS 45-FT-SPECIAL
1	EACH	MONOTUBE ARMS 55-FT
2	EACH	LUMINAIRE ARMS STEEL 15-FT
1	EACH	EVP CABINET EQUIPMENT
3	EACH	EVP DETECTOR HEADS (HEADS A, B, C)

REMOVE TRAFFIC SIGNALS
IH 94 EB RAMPS & STH 318

LOCATION	204.9060.S.051 REMOVING TRAFFIC SIGNALS EACH	204.9060.S.052 REMOVING LOOP DETECTOR WIRE AND LEAD-IN CABLE EACH
IH 94 EB RAMPS & STH 318	1	1
TOTALS	1	1

REMOVING CONCRETE BASES

EXISTING BASE NO.	204.0195* REMOVING CONCRETE BASES EACH
CB1	1
SB12	1
SB13	1
SB14	1
SB15	1
SB16	1
SB17	1
SB18	1
SB19	1
TOTALS	9

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LAMP, BALLAST, LED, SWITCH DISPOSAL
IH 94 EB RAMPS & STH 318

FIXTURE TYPE	659.5000.S.051* LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR EACH
PEDESTRIAN SIGNAL - 16 INCH	2
TRAFFIC SIGNAL, THREE SECTION	9
TRAFFIC SIGNAL, FOUR SECTION	3
TOTALS	14

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

REMOVING PULL BOXES

EXISTING PULL BOX NO.	653.0905* REMOVING PULL BOXES EACH
PB9	1
PB19	1
PB20	1
PB21	1
PB22	1
PB23	1
PB27	1
PB28	1
PB29	1
PB29A	1
PB30	1
PB31	1
PB32	1
PB33	1
PB35	1
TOTALS	15

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONDUIT

FROM	TO	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615* CONDUIT SPECIAL 3-INCH LF
CB1	PB1	--	81	--
PB1	SB1	6	--	--
PB1	PB2	--	--	154
PB2	SB2	--	22	--
PB2	PB10 S67-1426	85	--	--
PB2	PB3	--	--	128
PB3	PB4	--	--	74
PB4	SB3	10	--	--
PB4	PB7	--	--	134
PB7	PB5	26	--	--
PB5	PB6	223	--	--
PB7	PB8	20	--	--
PB8	SB4	12	--	--
PB8	B-67-0266	15	--	--
PB7	PB11	--	--	274
PB11	PB10	--	21	--
PB10	SB5	--	7	--
PB11	SB6	27	--	--
PB11	PB12	--	--	197
PB12	SB7	--	12	--
PB12	CB1	--	99	--
	TOTALS	424	242	961

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

3

LOOP DETECTOR SCHEDULE

LOOP NUMBER	HOMERUN PB	STATION	LOCATION	SIZE (FT) X (FT)	NO. OF TURNS	PAVEMENT TYPE	SDD INSTALLATION REFERENCE	652.0800* CONDUIT LOOP DETECTOR LF	655.0700* LOOP DETECTOR LEAD IN CABLE LF	655.0800* LOOP DETECTOR WIRE LF
21	PB10 S67-0749	285+63	30' LT	6' X 10'	5	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	47	567	190
22	PB10 S67-0749	285+62	18' LT	6' X 10'	5	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	59	567	214
41	PB6	240+58	4' LT	6' X 10'	5	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	57	514	210
42	PB6	240+57	16' LT	6' X 10'	5	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	45	514	186
43	PB5	242+83	4' LT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	77	294	207
44	PB5	243+12	3' LT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	80	294	212
45	PB5	242+81	16' LT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	65	294	182
46	PB5	243+09	15' LT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	67	294	186
61	PB9 S67-1426	278+91	52' RT	6' X 6'	5	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	46	367	164
62	PB9 S67-1426	278+89	40' RT	6' X 6'	5	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	34	367	140
							TOTALS	577	4071	1891

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

** LOCATION ID TO FRONT CENTER OF DETECTOR LOOP

*** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

3

3

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0135* PULL BOXES STEEL 24X36-INCH EACH	653.0140* PULL BOXES STEEL 24X42-INCH EACH
PB1	281+35	78' RT	--	1
PB2	281+51	3' RT	--	1
PB3	281+62	60' LT	--	1
PB4	281+97	54' LT	--	1
PB5	282+42	61' LT	1	--
PB6	240+57	32' LT	1	--
PB7	282+64	59' LT	--	1
PB8	282+84	44' LT	--	1
PB9	282+78	6' RT	--	1
PB10	282+69	78' RT	--	1
PB11	282+50	87' RT	--	1
PB12	281+53	103' RT	--	1
		TOTALS	2	10

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

3

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101* CONCRETE BASES TYPE 1 EACH	654.0102* CONCRETE BASES TYPE 2 EACH	654.0120* CONCRETE BASES TYPE 10-SPECIAL EACH	654.0113* CONCRETE BASES TYPE 13 EACH	654.0217* CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	281+25	98' RT	--	--	--	--	1
SB1	281+41	79' RT	1	--	--	--	--
SB2	281+69	14' RT	--	--	1	--	--
SB3	281+93	44' LT	--	1	--	--	--
SB4	282+72	43' LT	--	1	--	--	--
SB5	282+63	82' RT	--	--	--	1	--
SB6	282+23	89' RT	1	--	--	--	--
SB7	281+54	91' RT	--	--	1	--	--
		TOTALS	2	2	2	1	1

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0240* CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260* CABLE TRAFFIC SIGNAL 12-14 AWG LF	655.0270* CABLE TRAFFIC SIGNAL 15-14 AWG LF
CB1	SB1	49	--	--
CB1	SB2	--	--	158
CB1	SB3	279	--	--
CB1	SB4	365	--	--
CB1	SB5	208		--
CB1	SB6	191	--	--
CB1	SB7	--	61	--
	TOTALS	1091	61	158

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230* CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240* CABLE TRAFFIC SIGNAL 7-14 AWG LF
SB1	HEAD 1	21	--
SB2	HEAD 4	21	--
SB2	HEAD 7	56	--
SB2	HEAD 8	68	--
SB2	HEAD 10	--	45
SB3	HEAD 11	21	--
SB4	HEAD 6	21	--
SB5	HEAD 2	67	--
SB5	HEAD 3	55	--
SB5	HEAD 5	77	--
SB6	HEAD 15	15	--
SB7	HEAD 9	--	22
SB7	HEAD 12	66	--
SB7	HEAD 13	--	55
SB7	HEAD 14	42	--
SB7	HEAD 16	15	--
	TOTALS	545	122

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS

FROM	TO	655.0515* ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	51
SB1	SB2	138
SB2	SB3	182
SB3	SB4	160
SB4	SB5	263
SB5	SB6	89
SB6	SB7	171
SB7	CB1	63
PB1	SB1	23
PB2	SB2	40
PB3	SB3	81
PB4	SB3	28
PB7	SB4	67
PB8	SB4	30
PB10	SB5	25
PB11	SB5	62
PB12	SB7	30
	TOTALS	1503

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

3

LIGHTING WIRE

FROM	TO	655.0320* CABLE TYPE UF 2-10 AWG GROUNDED LF	655.0610* ELECTRICAL WIRE LIGHTING 12 AWG LF
CB1	SB7	77	--
SB7	LUMIN (1)	--	144
SB7	SB5	186	--
SB5	LUMIN (1)	--	144
SB5	SB4	261	--
SB4	LUMIN (1)	--	144
	TOTALS	524	432

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900* TRAFFIC SIGNAL EVP DETECTOR CABLE LF	655.0210** CABLE TRAFFIC SIGNAL 3-14 AWG LF
CB1	SB2 (HEAD A)	232	232
CB1	SB3 (HEAD C)	296	296
CB1	SB5 (HEAD B)	256	256
	TOTALS	784	784

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

**ITEM 655.0210 TO BE USED WITH STATE SUPPLIED EVP CONFIRMATION LIGHTS

ELECTRICAL SERVICE METER BREAKER PEDESTAL
IH 94 EB RAMPS & STH 318

BASE NO.	656.0201.051 ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH
CB1	1
TOTALS	1

*** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

3

3

CAST BASES, POLES, STANDARDS, MONOTUBE ARMS, LUMINAIRES

SIGNAL BASE NO.	657.0100* PEDESTAL BASES EACH	657.0255* TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0305* POLES TYPE 2 EACH	657.0310* POLES TYPE 3 EACH	657.0420* TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	656.0430* TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	SPV.0060.202 INSTALL POLES TYPE 9 SPECIAL EACH	SPV.0060.204* INSTALL POLES TYPE 10 SPECIAL EACH	SPV.0060.206* INSTALL POLES TYPE 13 EACH	SPV.0060.210* INSTALL MONOTUBE ARMS 45-FT -SPECIAL EACH	SPV.0060.212* INSTALL MONOTUBE ARMS 55-FT EACH	SPV.0060.213* INSTALL LUMINAIRE ARMS STEEL 15-FT EACH	657.0609* LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	659.1125* LUMINAIRES UTILITY LED C EACH
SB1	1	--	--	--	1	--	--	--	--	--	--	--	--	--
SB2	--	--	--	--	--	--	1	--	--	1	--	--	--	--
SB3	--	1	1	--	--	--	--	--	--	--	--	--	--	--
SB4	--	1	--	1	--	--	--	--	--	--	--	--	1	1
SB5	--	--	--	--	--	--	--	--	1	--	1	1	--	1
SB6	1	--	--	--	--	1	--	--	--	--	--	--	--	--
SB7	--	--	--	--	--	--	--	1	--	1	--	1	--	1
TOTAL:	2	2	1	1	1	1	1	1	1	2	1	2	1	3

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

3

TRAFFIC SIGNAL FACES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0173* TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0174* TRAFFIC SIGNAL FACE 4S 12-INCH EACH	658.0416* PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0500* PEDESTRIAN PUSH BUTTONS EACH
1	SB1	1	--	--	--
2	SB5	1	--	--	--
3	SB5	1	--	--	--
4	SB2	1	--	--	--
5	SB5	1	--	--	--
6	SB4	1	--	--	--
7	SB2	1	--	--	--
8	SB2	1	--	--	--
9	SB7	--	1	--	--
10	SB2	--	1	--	--
11	SB3	1	--	--	--
12	SB7	1	--	--	--
13	SB7	--	1	--	--
14	SB7	1	--	--	--
15	SB6	--	--	1	1
16	SB7	--	--	1	1
	TOTAL	11	3	2	2

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

TRANSPORT AND INSTALL SIGNAL AND INTERSECTION LIGHTING MATERIALS
IH 94 EB RAMPS & STH 318

LOCATION	SPV.0060.227 TRNSPT TRAFFIC SIGNALS & INTER LIGHTING MATERIALS EACH
IH 94 EB RAMPS & STH 318	1
TOTALS	1

SIGNAL MOUNTING HARDWARE
IH 94 EB RAMPS & STH 318

LOCATION	658.5070.051 SIGNAL MOUNTING HARDWARE EACH
IH 94 EB RAMPS & STH 318	1
TOTALS	1

3

TRANSPORT AND INSTALL STATE FURNISHED EMERGENCY VEHICLE PREEMPTION (EVP) DETECTOR HEADS & CONFIRMATION LIGHTS
IH 94 EB RAMPS & STH 318

LOCATION	SPV.0060.222 TRNSPT & INSTALL STATE FURN EVP HEADS & CON LIGHT EACH
IH 94 EB RAMPS & STH 318	1
TOTALS	1

TRANSPORT AND INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET
IH 94 EB RAMPS & STH 318

LOCATION	SPV.0060.217 TRNSPT & INSTALL STATE FURN TRAFFIC SIGNAL CABINET EACH
IH 94 EB RAMPS & STH 318	1
TOTALS	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS
IH 94 EB RAMPS & STH 318

LOCATION	661.0201.051 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS EACH
IH 94 EB RAMPS & STH 318	1
TOTALS	1

TEMPORARY EVP SYSTEM
IH 94 EB RAMPS & STH 318

LOCATION	SPV.0060.236 TEMPORARY EVP SYSTEM EACH
IH 94 EB RAMPS & STH 318	1
TOTALS	1

3

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CABINET WITH CONTROLLER
1	EACH	POLES TYPE 9
1	EACH	POLES TYPE 10 SPECIAL
1	EACH	POLES TYPE 13
1	EACH	MONOTUBE ARMS 25-FT
1	EACH	MONOTUBE ARMS 35-FT-SPECIAL
1	EACH	MONOTUBE ARMS 50-FT
4	EACH	LUMINAIRE ARMS STELEL 15-FT
1	EACH	EVP CABINET EQUIPMENT
3	EACH	EVP DETECTOR HEADS (HEADS A, B, D)

REMOVE TRAFFIC SIGNALS
IH 94 WB RAMPS & STH 318

LOCATION	204.9060.S.061 REMOVING TRAFFIC SIGNALS EACH	204.9060.S.062 REMOVING LOOP DETECTOR WIRE AND LEAD-IN CABLE EACH
IH 94 WB RAMPS & STH 318	1	1
TOTALS	1	1

REMOVING CONCRETE BASES

EXISTING BASE NO.	204.0195* REMOVING CONCRETE BASES EACH
CB1	1
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
SB8	1
SB9	1
SB10	1
SB11	1
TOTALS	11

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LAMP, BALLAST, LED, SWITCH DISPOSAL
IH 94 WB RAMPS & STH 318

FIXTURE TYPE	659.5000.S.061* LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR EACH
PEDESTRIAN SIGNAL - 16 INCH	2
TRAFFIC SIGNAL, THREE SECTION	12
TRAFFIC SIGNAL, FOUR SECTION	--
TOTALS	14

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

REMOVING PULL BOXES

EXISTING PULL BOX NO.	653.0905* REMOVING PULL BOXES EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
PB7	1
PB8	1
PB9	1
PB10	1
PB11	1
PB12	1
PB13	1
PB24	1
PB25	1
PB26	1
TOTALS	16

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONDUIT

FROM	TO	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615* CONDUIT SPECIAL 3-INCH LF
CB1	PB1	--	42	--
PB1	SB1	6	--	--
PB1	PB2	23	--	--
PB1	PB3	--	--	138
PB3	SB2	7	--	--
PB3	PB4	40	--	--
PB4	PB5	219	--	--
PB3	PB6	--	92	--
PB6	SB3	4	--	--
PB6	PB7	--	--	140
PB7	SB4	--	4	--
PB7	PB8	22	--	--
PB7	PB9	--	--	122
PB9	PB10	87	--	--
PB10	B-67-0266	79	--	--
PB9	PB11	--	--	114
PB11	SB5	--	3	--
PB11	PB12	--	--	94
PB12	PB13	236	--	--
PB12	SB6	--	8	--
PB12	PB14	--	--	192
PB14	SB7	16	--	--
PB14	CB1	--	39	--
	TOTALS	723	149	608

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

3

LOOP DETECTOR SCHEDULE

LOOP NUMBER	HOMERUN PB	STATION	LOCATION	SIZE (FT) X (FT)	NO. OF TURNS	PAVEMENT TYPE	SDD INSTALLATION REFERENCE	652.0800* CONDUIT LOOP DETECTOR LF	655.0700* LOOP DETECTOR LEAD IN CABLE LF	655.0800* LOOP DETECTOR WIRE LF
11	PB8	285+93	28' RT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	77	221	206
12	PB8	286+20	28' RT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	77	221	206
13	PB8	285+92	16' RT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	66	221	184
14	PB8	286+20	16' RT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	65	221	182
21	PB13	289+56	29' LT	6' X 6'	5	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	47	345	166
22	PB13	289+57	17' LT	6' X 6'	5	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	35	345	142
61	PB10 S67-0748	282+75	48' RT	6' X 20'	5	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)		780	
81	PB5	245+55	6' RT	6' X 6'	5	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	48	342	168
82	PB5	245+56	18' RT	6' X 6'	5	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	36	342	144
83	PB2	243+29	11' LT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	66	36	184
84	PB2	243+01	14' LT	6' X 20'	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	62	36	176
85	PB4	243+30	1' RT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	76	123	204
86	PB4	243+02	1' RT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	76	123	204
87	PB4	243+31	13' RT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	65	123	182
88	PB4	243+03	13' RT	6' X 20'	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	65	123	182
							TOTALS	861	3603	2530

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

** LOCATION ID TO FRONT CENTER OF DETECTOR LOOP

*** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

3

3

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0135* PULL BOXES STEEL 24X36-INCH EACH	653.0140* PULL BOXES STEEL 24X42-INCH EACH
PB1	287+30	95' RT	--	1
PB2	243+25	27' LT	1	--
PB3	286+65	69' RT	--	1
PB4	243+27	28' RT	1	--
PB5	245+55	33' RT	1	--
PB6	286+19	71' RT	--	1
PB7	286+19	0'	--	1
PB8	285+97	0'	1	--
PB9	286+48	54' LT	--	1
PB10	285+61	48' LT	1	--
PB11	287+04	43' LT	--	1
PB12	287+20	0'	--	1
PB13	289+56	2.5' LT	1	--
PB14	287+41	95' RT	--	1
		TOTALS	6	8

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

3

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101* CONCRETE BASES TYPE 1 EACH	654.0110* CONCRETE BASES TYPE 10 EACH	654.0120* CONCRETE BASES TYPE 10-SPECIAL EACH	654.0113* CONCRETE BASES TYPE 13 EACH	654.0217* CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
CB1	287+36	100' RT	--	--	--	--	1
SB1	287+23	95' RT	1	--	--	--	--
SB2	286+62	74' RT	1	--	--	--	--
SB3	286+16	68' RT	1	--	--	--	--
SB4	286+14	0'	--	--	1	--	--
SB5	287+07	45' LT	--	1	--	--	--
SB6	287+27	4' RT	--	--	--	1	--
SB7	287+47	70' RT	1	--	--	--	--
		TOTALS	4	1	1	1	1

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

3

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0240* CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260* CABLE TRAFFIC SIGNAL 12-14 AWG LF
CB1	SB1	36	--
CB1	SB2	120	--
CB1	SB3	181	--
CB1	SB4	--	268
CB1	SB5	--	207
CB1	SB6	--	148
CB1	SB7	44	--
	TOTALS	382	622

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230* CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240* CABLE TRAFFIC SIGNAL 7-14 AWG LF
SB1	HEAD 10	21	--
SB2	HEAD 15	15	--
SB3	HEAD 1	21	--
SB4	HEAD 4	21	--
SB4	HEAD 8	43	--
SB4	HEAD 9	55	--
SB5	HEAD 7	21	--
SB5	HEAD 11	43	--
SB5	HEAD 12	--	32
SB5	HEAD 13	21	--
SB6	HEAD 2	61	--
SB6	HEAD 3	73	--
SB6	HEAD 5	37	--
SB6	HEAD 6	49	--
SB7	HEAD 14	15	--
	TOTALS	496	32

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS

FROM	TO	655.0515* ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	37
SB1	SB2	115
SB2	SB3	90
SB3	SB4	113
SB4	SB5	177
SB5	SB6	91
SB6	SB7	154
SB7	CB1	46
PB1	SB1	24
PB3	SB2	24
PB6	SB3	22
PB7	SB4	23
PB9	SB5	95
PB11	SB5	22
PB12	SB6	26
PB14	CB1	31
	TOTALS	1090

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

3

LIGHTING WIRE

FROM	TO	655.0320* CABLE TYPE UF 2-10 AWG GROUNDED LF	655.0610* ELECTRICAL WIRE LIGHTING 12 AWG LF
CB1	SB4	252	--
SB4	LUMIN (2)	--	288
CB1	SB6	148	--
SB6	LUMIN (2)	--	288
	TOTALS	400	576

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900* TRAFFIC SIGNAL EVP DETECTOR CABLE LF	655.0210** CABLE TRAFFIC SIGNAL 3-14 AWG LF
CB1	SB4 (HEAD A)	309	309
CB1	SB5 (HEAD D)	246	246
CB1	SB6 (HEAD B)	227	227
	TOTALS	782	782

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

**ITEM 655.0210 TO BE USED WITH STATE SUPPLIED EVP CONFIRMATION LIGHTS

ELECTRICAL SERVICE METER BREAKER PEDESTAL
IH 94 WB RAMPS & STH 318

BASE NO.	656.0201.061 ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH
CB1	1
TOTALS	1

*** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

3

3

CAST BASES, POLES, STANDARDS, MONOTUBE ARMS, LUMINAIRES

SIGNAL BASE NO.	657.0100* PEDESTAL BASES EACH	657.0420* TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	656.0430* TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	SPV.0060.201 INSTALL POLES TYPE 9 EACH	SPV.0060.204* INSTALL POLES TYPE 10 SPECIAL EACH	SPV.0060.206* INSTALL POLES TYPE 13 EACH	SPV.0060.208* INSTALL MONOTUBE ARMS 25-FT EACH	SPV.0060.209* INSTALL MONOTUBE ARMS 35-FT -SPECIAL EACH	SPV.0060.211* INSTALL MONOTUBE ARMS 50-FT EACH	SPV.0060.213* INSTALL LUMINAIRE ARMS STEEL 15-FT EACH	659.1125* LUMINAIRES UTILITY LED C EACH
SB1	1	1	--	--	--	--	--	--	--	--	--
SB2	1	--	1	--	--	--	--	--	--	--	--
SB3	1	1	--	--	--	--	--	--	--	--	--
SB4	--	--	--	--	1	--	--	1	--	2	2
SB5	--	--	--	1	--	--	1	--	--	--	--
SB6	--	--	--	--	--	1	--	--	1	2	2
SB7	1	--	1	--	--	--	--	--	--	--	--
TOTAL:	4	2	2	1	1	1	1	1	1	4	4

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

3

TRAFFIC SIGNAL FACES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0173* TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0174* TRAFFIC SIGNAL FACE 4S 12-INCH EACH	658.0416* PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0500* PEDESTRIAN PUSH BUTTONS EACH
1	SB3	1	--	--	--
2	SB6	1	--	--	--
3	SB6	1	--	--	--
4	SB4	1	--	--	--
5	SB6	1	--	--	--
6	SB6	1	--	--	--
7	SB5	1	--	--	--
8	SB4	1	--	--	--
9	SB4	1	--	--	--
10	SB1	1	--	--	--
11	SB5	1	--	--	--
12	SB5	--	1	--	--
13	SB5	1	--	--	--
14	SB7	--	--	1	1
15	SB2	--	--	1	1
	TOTAL	12	1	2	2

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

TRANSPORT AND INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET
IH 94 WB RAMPS & STH 318

LOCATION	SPV.0060.218 TRNSPT & INSTALL STATE FURN TRAFFIC SIGNAL CABINET EACH
IH 94 WB RAMPS & STH 318	1
TOTALS	1

SIGNAL MOUNTING HARDWARE
IH 94 WB RAMPS & STH 318

LOCATION	658.5070.061 SIGNAL MOUNTING HARDWARE EACH
IH 94 WB RAMPS & STH 318	1
TOTALS	1

3

TRANSPORT AND INSTALL STATE FURNISHED EMERGENCY VEHICLE PREEMPTION (EVP) DETECTOR HEADS & CONFIRMATION LIGHTS
IH 94 WB RAMPS & STH 318

LOCATION	SPV.0060.223 TRNSPT & INSTALL STATE FURN EVP HEADS & CON LIGHT EACH
IH 94 WB RAMPS & STH 318	1
TOTALS	1

TRANSPORT AND INSTALL SIGNAL AND INTERSECTION LIGHTING MATERIALS
IH 94 WB RAMPS & STH 318

LOCATION	SPV.0060.228 TRNSPT TRAFFIC SIGNALS & INTER LIGHTING MATERIALS EACH
IH 94 WB RAMPS & STH 318	1
TOTALS	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS
IH 94 WB RAMPS & STH 318

LOCATION	661.0201.061 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS EACH
IH 94 WB RAMPS & STH 318	1
TOTALS	1

TEMPORARY EVP SYSTEM
IH 94 WB RAMPS & STH 318

LOCATION	SPV.0060.237 TEMPORARY EVP SYSTEM EACH
IH 94 WB RAMPS & STH 318	1
TOTALS	1

3

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CABINET WITH CONTROLLER AND BATTERY BACK-UP
3	EACH	POLES TYPE 10 SPECIAL
1	EACH	MONOTUBE ARMS 35-FT-SPECIAL
2	EACH	MONOTUBE ARMS 45-FT-SPECIAL
5	EACH	LUMINAIRE ARMS STEEL 15-FT
1	EACH	EVP CABINET EQUIPMENT
3	EACH	EVP DETECTOR HEADS (HEADS A, B, C)
1	EACH	RADAR DETECTION SYSTEM

REMOVING CONCRETE BASES

EXISTING BASE NO.	204.0195* REMOVING CONCRETE BASES EACH
CB1	1
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
SB7	1
TOTALS	8

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LAMP, BALLAST, LED, SWITCH DISPOSAL
IH 94 EB RAMPS & CTH T

FIXTURE TYPE	659.5000.S.071* LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR EACH
HIGH PRESSURE SODIUM LAMP	4
AIRPORT OBSTRUCTION LIGHT	2
TRAFFIC SIGNAL, THREE SECTION	11
BALLAST	4
TOTALS	21

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVE TRAFFIC SIGNALS
IH 94 EB RAMPS & CTH T

LOCATION	204.9060.S.071 REMOVING TRAFFIC SIGNALS EACH	204.9060.S.072 REMOVING LOOP DETECTOR WIRE AND LEAD-IN CABLE EACH
IH 94 EB RAMPS & CTH T	1	1
TOTALS	1	1

3

REMOVING PULL BOXES

EXISTING PULL BOX NO.	653.0905* REMOVING PULL BOXES EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
PB7	1
PB8	1
PB9	1
PB10	1
PB11	1
PB12	1
PB13	1
PB14	1
PB15	1
PB16	1
PB17	1
PB18	1
PB19	1
PB20	1
TOTALS	20

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONDUIT

FROM	TO	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615* CONDUIT SPECIAL 3-INCH LF
CB1	PB1	--	45	--
PB1	PB4	--	--	158
PB4	PB2	158	--	--
PB2	PB3	149	--	
PB4	SB1	--	21	--
PB4	PB5	--	--	122
PB5	PB6	--	100	--
PB6	PB8	--	--	35
PB8	SB2	6	--	--
PB6	PB7	234	--	--
PB6	PB9	--	--	108
PB9	PB10	--	188	--
PB10	SB3	23	--	--
PB10	PB11	--	--	132
PB11	SB4	--	8	--
PB11	PB12	--	--	92
PB12	PB13	--	84	--
PB13	SB5	--	8	--
PB13	PB14	--	--	178
PB14	PB15	--	--	40
PB15	SB6	6	--	--
PB14	PB16	--	162	--
PB16	CB1	--	45	--
	TOTALS	576	661	865

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

3

LOOP DETECTOR SCHEDULE

LOOP NUMBER	HOMERUN PB	STATION	LOCATION	SIZE (FT) X (FT)	NO. OF TURNS	PAVEMENT TYPE	SDD INSTALLATION REFERENCE	652.0800* CONDUIT LOOP DETECTOR LF	655.0700* LOOP DETECTOR LEAD IN CABLE LF	655.0800* LOOP DETECTOR WIRE LF
41	PB7	4111+87	6' LT	6' X 10'	5	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	55	439	206
42	PB9	4114+12	5' LT	6' X 20'	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	63	258	178
43	PB9	4114+40	8' LT	6' X 20'	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	62	258	176
51	PB11	123+22	16.5' LT	6' X 20'	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	74	246	200
52	PB11	122+95	16.5' LT	6' X 20'	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	74	246	200
53	PB11	123+22	4.5' LT	6' X 20'	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	63	246	178
54	PB11	122+95	4.5' LT	6' X 20'	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	63	246	178
61	PB3	118+25	33' RT	6' X 6'	5	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	55	401	182
62	PB3	118+25	21' RT	6' X 6'	5	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	43	401	158
63	PB2	119+75	37' RT	6' X 6'	4	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	58	252	164
64	PB2	119+75	25' RT	6' X 6'	4	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	46	252	140
							TOTALS	656	3244	1960

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

** LOCATION ID TO FRONT CENTER OF DETECTOR LOOP

*** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

3

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0135* PULL BOXES STEEL 24X36-INCH EACH	653.0140* PULL BOXES STEEL 24X42-INCH EACH
PB1	121+34	79' RT	--	1
PB2	119+76	0'	1	--
PB3	118+27	1' LT	1	--
PB4	121+34	0'	--	1
PB5	121+34	61' LT	--	1
PB6	121+78	82' LT	--	1
PB7	4111+87	20' RT	1	--
PB8	122+07	61' LT	--	1
PB9	122+32	79' LT	--	1
PB10	123+18	57' LT	--	1
PB11	123+18	8' RT	--	1
PB12	123+18	54' RT	--	1
PB13	122+78	66' RT	--	1
PB14	121+93	93' RT	--	1
PB15	122+00	54' RT	--	1
PB16	121+39	93' RT	--	1
		TOTALS	3	13

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101* CONCRETE BASES TYPE 1 EACH	654.0102* CONCRETE BASES TYPE 2 EACH	654.0120* CONCRETE BASES TYPE 10-SPECIAL EACH	SPV.0060.234* CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL SUPER P EACH
CB1	121+30	88' RT	--	--	--	1
SB1	121+55	0'	--	--	1	--
SB2	122+06	55' LT	--	1	--	--
SB3	122+95	54' LT	1	--	--	--
SB4	123+10	8.5' RT	--	--	1	--
SB5	122+78	58' RT	--	--	1	--
SB6	121+95	50' RT	1	--	--	--
		TOTALS	2	1	3	1

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

3

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0240* CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260* CABLE TRAFFIC SIGNAL 12-14 AWG LF
CB1	SB1	--	147
CB1	SB2	326	--
CB1	SB3	431	--
CB1	SB4	--	334
CB1	SB5	214	--
CB1	SB6	163	--
	TOTALS	1135	480

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230* CABLE TRAFFIC SIGNAL 5-14 AWG LF
SB1	HEAD 5	54
SB1	HEAD 6	66
SB1	HEAD 8	30
SB1	HEAD 9	42
SB2	HEAD 10	21
SB3	HEAD 4	21
SB4	HEAD 2	46
SB4	HEAD 3	58
SB4	HEAD 7	21
SB5	HEAD 11	47
SB5	HEAD 12	67
SB6	HEAD 1	21
	TOTALS	493

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS

FROM	TO	655.0515* ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	149
SB1	SB2	239
SB2	SB3	279
SB3	SB4	131
SB4	SB5	153
SB5	SB6	193
SB6	CB1	165
PB1	CB1	33
PB4	SB1	39
PB5	SB1	115
PB6	SB2	75
PB8	SB2	24
PB9	SB3	152
PB10	SB3	41
PB11	SB4	26
PB12	SB5	84
PB13	SB5	26
PB14	SB6	80
PB15	SB6	24
PB16	CB1	17
	TOTALS	2045

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

IH 94 EB RAMPS & CTH T

ALL ITEMS ARE CATEGORY 0140 UNLESS OTHERWISE NOTED

3

LIGHTING WIRE

FROM	TO	655.0320* CABLE TYPE UF 2-10 AWG GROUNDED LF	655.0610* ELECTRICAL WIRE LIGHTING 12 AWG LF
CB1	SB5	429	--
SB5	LUMIN (1)	--	144
SB5	AOL (1)	--	144
CB1	SB1	293	--
SB1	LUMIN (2)	--	288
SB1	AOL (1)	--	144
SB5	SB4	302	--
SB4	LUMIN (2)	--	288
SB4	AOL (1)	--	144
	TOTALS	1024	1152

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900* TRAFFIC SIGNAL EVP DETECTOR CABLE LF	655.0210** TRAFFIC SIGNAL EVP DETECTOR CABLE LF
CB1	SB1 (HEAD A)	207	207
CB1	SB2 (HEAD C)	333	333
CB1	SB4 (HEAD B)	360	360
	TOTALS	899	899

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

**ITEM 655.0210 TO BE USED WITH STATE SUPPLIED EVP CONFIRMATION LIGHTS

3

CAST BASES, POLES, STANDARDS, MONOTUBE ARMS, LUMINAIRES

SIGNAL BASE NO.	657.0100* PEDESTAL BASES EACH	657.0255* TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0305* POLES TYPE 2 EACH	657.0420* TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	SPV.0060.204* INSTALL POLES TYPE 10 SPECIAL EACH	SPV.0060.209* INSTALL MONOTUBE ARMS 35-FT -SPECIAL EACH	SPV.0060.210* INSTALL MONOTUBE ARMS 45-FT -SPECIAL EACH	SPV.0060.213* INSTALL LUMINAIRE ARMS STEEL 15-FT EACH	659.1125* LUMINAIRES UTILITY LED C EACH
SB1	--	--	--	--	1	--	1	2	2
SB2	--	1	1	--	--	--	--	--	--
SB3	1	--	--	1	--	--	--	--	--
SB4	--	--	--	--	1	1	--	2	2
SB5	--	--	--	--	1	--	1	1	1
SB6	1	--	--	1	--	--	--	--	--
TOTAL:	2	1	1	2	3	1	2	5	5

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

TRAFFIC SIGNAL FACES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0173* TRAFFIC SIGNAL FACE 3S 12-INCH EACH
1	SB6	1
2	SB4	1
3	SB4	1
4	SB3	1
5	SB1	1
6	SB1	1
7	SB4	1
8	SB1	1
9	SB1	1
10	SB2	1
11	SB5	1
12	SB5	1
	TOTAL	12

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SIGNAL MOUNTING HARDWARE
IH 94 EB RAMPS & CTH T

LOCATION	658.5070.071 SIGNAL MOUNTING HARDWARE EACH
IH 94 EB RAMPS & CTH T	1
TOTALS	1

3

ELECTRICAL SERVICE METER BREAKER PEDESTAL
IH 94 EB RAMPS & CTH T

BASE NO.	656.0201.071 ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH
CB1	1
TOTALS	1

*** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

TRANSPORT AND INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET
IH 94 EB RAMPS & CTH T

LOCATION	SPV.0060.219 TRNSPT & INSTALL STATE FURN TRAFFIC SIGNAL CABINET EACH
IH 94 EB RAMPS & CTH T	1
TOTALS	1

3

TRANSPORT AND INSTALL STATE FURNISHED EMERGENCY VEHICLE PREEMPTION (EVP) DETECTOR HEADS & CONFIRMATION LIGHTS
IH 94 EB RAMPS & CTH T

LOCATION	SPV.0060.224 TRNSPT & INSTALL STATE FURN EVP HEADS & CON LIGHT EACH
IH 94 EB RAMPS & CTH T	1
TOTALS	1

AIRPORT OBSTRUCTION LIGHTS L810
IH 94 EB RAMPS & CTH T

LOCATION	BASE NO.	SPV.0060.233 AIRPORT OBSTRUCTION LIGHTS L810 EACH
IH 94 EB RAMPS & CTH T	SB1	1
	SB4	1
	SB5	1
TOTALS		3

TRANSPORT AND INSTALL SIGNAL AND INTERSECTION LIGHTING MATERIALS
IH 94 EB RAMPS & CTH T

LOCATION	SPV.0060.229 TRNSPT TRAFFIC SIGNALS & INTER LIGHTING MATERIALS EACH
IH 94 EB RAMPS & CTH T	1
TOTALS	1

TRANSPORT AND INSTALL STATE FURNISHED RADAR DETECTION SYSTEM
IH 94 EB RAMPS & CTH T

LOCATION	SPV.0060.231 TRNSPT & INSTALL S-F RADAR DETECTION SYSTEM EACH
IH 94 EB RAMPS & CTH T	1
TOTALS	1

3

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CABINET WITH CONTROLLER AND BATTERY BACK-UP
3	EACH	POLES TYPE 10 SPECIAL
1	EACH	MONOTUBE ARMS 35-FT-SPECIAL
2	EACH	MONOTUBE ARMS 45-FT-SPECIAL
5	EACH	LUMINAIRE ARMS STEEL 15-FT
1	EACH	EVP CABINET EQUIPMENT
3	EACH	EVP DETECTOR HEADS (HEADS A, B, D)
1	EACH	RADAR DETECTION SYSTEM

REMOVING CONCRETE BASES

EXISTING BASE NO.	204.0195* REMOVING CONCRETE BASES EACH
CB1	1
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
SB7	1
TOTALS	8

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

LAMP, BALLAST, LED, SWITCH DISPOSAL
IH 94 WB RAMPS & CTH T

FIXTURE TYPE	659.5000.S.081* LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR EACH
HIGH PRESSURE SODIUM LAMP	4
AIRPORT OBSTRUCTION LIGHT	2
TRAFFIC SIGNAL, THREE SECTION	11
BALLAST	4
TOTALS	21

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVE TRAFFIC SIGNALS
IH 94 WB RAMPS & CTH T

LOCATION	204.9060.S.081 REMOVING TRAFFIC SIGNALS EACH	204.9060.S.082 REMOVING LOOP DETECTOR WIRE AND LEAD-IN CABLE EACH
IH 94 WB RAMPS & CTH T	1	1
TOTALS	1	1

3

REMOVING PULL BOXES

EXISTING PULL BOX NO.	653.0905* REMOVING PULL BOXES EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
PB7	1
PB8	1
PB10	1
PB11	1
PB12	1
PB13	1
PB14	1
PB15	1
PB16	1
PB17	1
PB19	1
PB20	1
PB21	1
PB22	1
PB23	1
PB24	1
PB30	1
TOTALS	23

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

CONDUIT

FROM	TO	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615* CONDUIT SPECIAL 3-INCH LF
CB1	PB1	--	53	--
PB1	PB2	172	--	--
PB2	PB3	153	--	--
PB1	PB4	--	--	128
PB4	SB1	--	10	--
PB4	PB5	--	--	126
PB5	PB6	--	76	--
PB6	PB7	--	--	34
PB7	SB2	10	--	--
PB6	PB8	--	--	141
PB8	PB9	230	--	--
PB8	PB10	--	135	--
PB10	SB3	21	--	--
PB10	PB11	--	--	138
PB11	SB4	--	15	
PB11	PB12	--	--	92
PB12	PB13	--	103	--
PB13	SB5	--	5	--
PB13	PB14	--	--	192
PB14	PB15	--	--	33
PB15	SB6	6	--	--
PB14	CB1	--	66	--
	TOTALS	592	463	884

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

3

LOOP DETECTOR SCHEDULE

LOOP NUMBER	HOMERUN PB	STATION	LOCATION	SIZE (FT) X (FT)	NO. OF TURNS	PAVEMENT TYPE	SDD INSTALLATION REFERENCE	652.0800* CONDUIT LOOP DETECTOR LF	655.0700* LOOP DETECTOR LEAD IN CABLE LF	655.0800* LOOP DETECTOR WIRE LF
11	PB11	127+34	16' RT	6' X 20'	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	77	210	206
12	PB11	127+62	16' RT	6' X 20'	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	76	210	204
13	PB11	127+34	4' RT	6' X 20'	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	65	210	182
14	PB11	127+62	4' RT	6' X 20'	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	64	210	180
21	PB3	132+34	39' LT	6' X 6'	5	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	38	338	148
22	PB3	132+34	27' LT	6' X 6'	5	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	50	338	172
23	PB2	130+84	40' LT	6' X 6'	4	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	43	185	134
24	PB2	130+84	28' LT	6' X 6'	4	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	55	185	158
81	PB9	2118+15	6.5' RT	6' X 10'	5	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	55	478	206
82	PB9	2118+15	18.5' RT	6' X 10'	5	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	44	478	183
83	PB8	2115+92	6.5' RT	6' X 20'	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	79	248	210
84	PB7	2115+64	6.5' RT	6' X 20'	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	66	212	183
85	PB8	2115+92	18.5' RT	6' X 20'	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	69	248	190
86	PB8	2115+64	18.5' RT	6' X 20'	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	65	248	182
							TOTALS	845	3798	2538

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

** LOCATION ID TO FRONT CENTER OF DETECTOR LOOP

*** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0135* PULL BOXES STEEL 24X36-INCH EACH	653.0140* PULL BOXES STEEL 24X42-INCH EACH
PB1	129+10	64' LT	--	1
PB2	130+82	63' LT	1	--
PB3	132+32	56' LT	1	--
PB4	129+10	0'	--	1
PB5	129+10	63' RT	--	1
PB6	128+76	78' RT	--	1
PB7	128+45	63' RT	--	1
PB8	128+07	64' RT	--	1
PB9	2118+11	32' RT	1	--
PB10	127+40	58' RT	--	1
PB11	127+40	11' LT	--	1
PB12	127+40	57' LT	--	1
PB13	127+90	70' LT	--	1
PB14	128+86	73' LT	--	1
PB15	128+59	54' LT	--	1
		TOTALS	3	12

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101* CONCRETE BASES TYPE 1 EACH	654.0102* CONCRETE BASES TYPE 2 EACH	654.0120* CONCRETE BASES TYPE 10-SPECIAL EACH	SPV.0060.234* CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL SUPER P EACH
CB1	129+03	75' LT	--	--	--	1
SB1	129+00	0'	--	--	1	--
SB2	128+46	53' RT	--	1	--	--
SB3	127+61	54' RT	1	--	--	--
SB4	127+55	10' LT	--	--	1	--
SB5	127+94	67' LT	--	--	1	--
SB6	128+64	51' LT	1	--	--	--
		TOTALS	2	1	3	1

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

3

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0240* CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260* CABLE TRAFFIC SIGNAL 12-14 AWG LF
CB1	SB1	--	124
CB1	SB2	307	--
CB1	SB3	386	--
CB1	SB4	--	295
CB1	SB5	156	--
CB1	SB6	--	93
	TOTALS	849	512

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230* CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240* CABLE TRAFFIC SIGNAL 7-14 AWG LF
SB1	HEAD 2	53	--
SB1	HEAD 3	65	--
SB1	HEAD 5	29	--
SB1	HEAD 6	41	--
SB2	HEAD 10	21	--
SB3	HEAD 1	21	--
SB4	HEAD 4	21	--
SB4	HEAD 8	43	--
SB4	HEAD 9	55	--
SB5	HEAD 11	47	--
SB5	HEAD 12	--	66
SB6	HEAD 7	21	--
SB6	HEAD 13	21	--
	TOTALS	438	66

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS

FROM	TO	655.0515* ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	126
SB1	SB2	221
SB2	SB3	270
SB3	SB4	139
SB4	SB5	168
SB5	SB6	191
SB6	CB1	95
PB1	CB1	36
PB4	SB1	28
PB5	SB1	107
PB6	SB2	78
PB7	SB2	28
PB8	SB3	123
PB10	SB3	39
PB11	SB4	33
PB12	SB5	91
PB13	SB5	23
PB14	CB1	40
PB15	SB6	24
	TOTALS	1859

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

LIGHTING WIRE

FROM	TO	655.0320* CABLE TYPE UF 2-10 AWG GROUNDED LF	655.0610* ELECTRICAL WIRE LIGHTING 12 AWG LF
CB1	SB1	248	--
SB1	LUMIN (2)	--	288
SB1	AOL (1)	--	144
CB1	SB5	311	--
SB5	LUMIN (1)	--	144
SB5	AOL (1)	--	144
SB5	SB4	331	--
SB4	LUMIN (2)	--	288
SB4	AOL (1)	--	144
	TOTALS	891	1152

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900* TRAFFIC SIGNAL EVP DETECTOR CABLE LF	655.0210** CABLE TRAFFIC SIGNAL 3-14 AWG LF
CB1	SB1 (HEAD B)	193	193
CB1	SB2 (HEAD D)	314	314
CB1	SB4 (HEAD A)	323	323
	TOTALS	831	831

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

**ITEM 655.0210 TO BE USED WITH STATE SUPPLIED EVP CONFIRMATION LIGHTS

CAST BASES, POLES, STANDARDS, MONOTUBE ARMS, LUMINAIRES

SIGNAL BASE NO.	657.0100* PEDESTAL BASES EACH	657.0255* TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0305* POLES TYPE 2 EACH	657.0420* TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	SPV.0060.204* INSTALL POLES TYPE 10 SPECIAL EACH	SPV.0060.209* INSTALL MONOTUBE ARMS 35-FT -SPECIAL EACH	SPV.0060.210* INSTALL MONOTUBE ARMS 45-FT -SPECIAL EACH	SPV.0060.213* INSTALL LUMINAIRE ARMS STEEL 15-FT EACH	659.1125* LUMINAIRES UTILITY LED C EACH
SB1	--	--	--	--	1	--	1	2	2
SB2	--	1	1	--	--	--	--	--	--
SB3	1	--	--	1	--	--	--	--	--
SB4	--	--	--	--	1	1	--	2	2
SB5	--	--	--	--	1	--	1	1	1
SB6	1	--	--	1	--	--	--	--	--
TOTAL:	2	1	1	2	3	1	2	5	5

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

ELECTRICAL SERVICE METER BREAKER PEDESTAL
IH 94 WB RAMPS & CTH T

BASE NO.	656.0201.081 ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH
CB1	1
TOTALS	1

*** FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

SIGNAL MOUNTING HARDWARE
IH 94 WB RAMPS & CTH T

LOCATION	658.5070.081 SIGNAL MOUNTING HARDWARE EACH
IH 94 WB RAMPS & CTH T	1
TOTALS	1

3

TRAFFIC SIGNAL FACES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0173* TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0174* TRAFFIC SIGNAL FACE 4S 12-INCH EACH
1	SB3	1	--
2	SB1	1	--
3	SB1	1	--
4	SB4	1	--
5	SB1	1	--
6	SB1	1	--
7	SB6	1	--
8	SB4	1	--
9	SB4	1	--
10	SB2	1	--
11	SB5	1	--
12	SB5	--	1
13	SB6	1	--
	TOTAL	12	1

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRANSPORT AND INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET
IH 94 WB RAMPS & CTH T

LOCATION	SPV.0060.220 TRNSPT & INSTALL STATE FURN TRAFFIC SIGNAL CABINET EACH
IH 94 WB RAMPS & CTH T	1
TOTALS	1

3

TRANSPORT AND INSTALL STATE FURNISHED EMERGENCY VEHICLE PREEMPTION (EVP) DETECTOR HEADS & CONFIRMATION LIGHTS
IH 94 WB RAMPS & CTH T

LOCATION	SPV.0060.225 TRNSPT & INSTALL STATE FURN EVP HEADS & CON LIGHT EACH
IH 94 WB RAMPS & CTH T	1
TOTALS	1

AIRPORT OBSTRUCTION LIGHTS L810
IH 94 WB RAMPS & CTH T

LOCATION	BASE NO.	SPV.0060.233 AIRPORT OBSTRUCTION LIGHTS L810 EACH
IH 94 WB RAMPS & CTH T	SB1	1
	SB4	1
	SB5	1
TOTALS		3

3

TRANSPORT AND INSTALL SIGNAL AND INTERSECTION LIGHTING MATERIALS
IH 94 WB RAMPS & CTH T

LOCATION	SPV.0060.230 TRNSPT TRAFFIC SIGNALS & INTER LIGHTING MATERIALS EACH
IH 94 WB RAMPS & CTH T	1
TOTALS	1

TRANSPORT AND INSTALL STATE FURNISHED RADAR DETECTION SYSTEM
IH 94 WB RAMPS & CTH T

LOCATION	SPV.0060.232 TRNSPT & INSTALL S-F RADAR DETECTION SYSTEM EACH
IH 94 WB RAMPS & CTH T	1
TOTALS	1

COMMUNICATIONS

ALL ITEMS ARE CATEGORY 0140 UNLESS OTHERWISE NOTED

3

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
5	EACH	ETHERNET SWITCH
5	EACH	TERMINATION PANEL
40	EACH	SFP

CONDUIT

LOCATION	FROM	TO	652.0225* CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
STH 318 & SILVERNAIL RD	CB1 (S67-1426)	CV6	19	1
IH 94 EB RAMPS & STH 318	CB1 (S67-0748)	PB2	32	1
IH 94 WB RAMPS & STH 318	PB14 (S67-0749)	PB13 (S67-0749)	20	1
IH 94 EB RAMPS & CTH T	CB1 (S67-0537)	EXT1	58	--
	188+50	PB4 (S67-0537)	296	1
IH 94 WB RAMPS & CTH T	CB1 (S67-0538)	CV2	33	1
	132+75	PB4 (S67-0538)	375	1
TOTALS			833	6

*ADDITIONAL QUANTITES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS

LOCATION	FROM	TO	655.0510 ELECTRICAL WIRE TRAFFIC SIGNALS 12 AWG LF
STH 318 & SILVERNAIL RD	CB1 (S67-1426)	CV6	31
IH 94 EB RAMPS & STH 318	CB1 (S67-0748)	PB2	44
IH 94 WB RAMPS & STH 318	PB14 (S67-0749)	PB13	32
IH 94 EB RAMPS & CTH T	CB1 (S67-0537)	EXT1	101
	188+50	PB4 (S67-0537)	308
IH 94 WB RAMPS & CTH T	CB1 (S67-0538)	CV2	45
	132+75	PB4 (S67-0538)	387
TOTALS			432

COMMUNICATIONS

ALL ITEMS ARE CATEGORY 0140 UNLESS OTHERWISE NOTED

3

RELOCATE EXISTING PULL BOX

PULL BOX NO	LOCATION	STATION	OFFSET	SPV.0060.255 RELOCATE EXISTING PULL BOX EACH
PB1	IH 94 EB RAMPS & STH 318	281+17	52' LT	1
TOTALS				1

TRAFFIC SIGNAL INTERCONNECT

LOCATION	670.0101.071 FIELD SYSTEM INTEGRATOR EACH	670.0201.071 ITS DOCUMENTATION EACH	678.0501.071 COMMUNICATION SYSTEM TESTING EACH
TRAFFIC SIGNAL INTERCONNECT	1	1	1
TOTALS	1	1	1

INSTALL FIBER OPTIC

LOCATION	CABINET	SPV.0060.250 REMOVE AND REINSTALL FIBER OPTIC PIGTAIL STH 318 & SILVERNAIL ROAD EACH	SPV.0060.251 REMOVE AND REINSTALL FIBER OPTIC PIGTAIL IH 94 EB RAMPS & STH 318 EACH	SPV.0060.252 REMOVE AND REINSTALL FIBER OPTIC PIGTAIL IH 94 WB RAMPS & STH 318 EACH	SPV.0060.253 REMOVE AND REINSTALL FIBER OPTIC PIGTAIL IH 94 EB RAMPS & CTH T EACH	SPV.0060.254 REMOVE AND REINSTALL FIBER OPTIC PIGTAIL IH 94 WB RAMPS & CTH T EACH	678.0400 FIBER OPTIC TERMINATION EACH	678.0600 INSTALL ETHERNET SWITCHES EACH
STH 318 & SILVERNAIL RD	CB1 (S67-1426)	1	--	--	--	--	8	1
IH 94 EB RAMPS & STH 318	CB1 (S67-0748)	--	1	--	--	--	8	1
IH 94 WB RAMPS & STH 318	CB1 (S67-0749)	--	--	1	--	--	8	1
IH 94 EB RAMPS & CTH T	CB1 (S67-0537)	--	--	--	1	--	8	1
IH 94 WB RAMPS & CTH T	CB1 (S67-0538)	--	--	--	--	1	8	1
TOTALS	TOTALS	1	1	1	1	1	40	5

3

LIGHTING - REMOVALS

204.0195 REMOVING CONCRETE BASES
204.9060.S.401 REMOVING LIGHTING UNITS
204.9060.S.402 REMOVING LUMINAIRES
653.0905 REMOVING PULL BOXES
659.5000.S LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR*

CATEGORY	STAGE	SYSTEM	DESCRIPTION	LOCATION	OFFSET	204.0195 REMOVING CONCRETE BASES EACH	204.9060.S.401 REMOVING LIGHTING UNITS EACH	204.9060.S.402 REMOVING LUMINAIRES EACH	653.0905 REMOVING PULL BOXES EACH	659.5000.S* LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR EACH	COMMENTS
0150	1 - 3	HL-67-TC	HL-67-TC	120+52.11	101.26' RT	--	--	--	--	--	EXISTING CABINET TO BE MODIFIED
			ATC1/BTC1/1TC1	121+55.78	3.26' LT	1	1	--	--	3	--
			EX. LPB-TC-101	121+62.34	117.42' RT	--	--	--	--	--	EXISTING PULL BOX TO REMAIN
			EX. LPB-TC-102	121+69.44	7.50' LT	--	--	--	1	--	--
			EX. LPB-TC-103	122+99.33	73.51' RT	--	--	--	--	--	EXISTING PULL BOX TO REMAIN
			EX. LPB-TC-104	122+99.25	5.75' RT	--	--	--	1	--	--
			EX. LPB-TC-105	122+96.44	65.33' LT	--	--	--	--	--	EXISTING PULL BOX TO REMAIN
			ATC2/BTC2/2TC1	123+05.29	8.92' RT	1	1	--	--	3	--
			BTC3/1TC2	124+20.12	52.04' LT	--	--	2	--	2	AVIATION LIGHT
			ATC3/2TC2	124+21.12	50.78' RT	--	--	2	--	2	"
			ATC4/2TC3	125+92.23	51.99' LT	--	--	2	--	2	"
			BTC4/1TC3	125+93.00	51.2' RT	--	--	2	--	2	"
			ATC5/BTC5/1TC4	127+56.97	11.14' LT	1	1	--	--	3	--
			EX. LPB-TC-106	127+53.01	74.89' RT	--	--	--	--	--	EXISTING PULL BOX TO REMAIN
			EX. LPB-TC-108	128+99.29	80.27' RT	--	--	--	--	--	EXISTING PULL BOX TO REMAIN
			ATC6/BTC6/2TC4	129+01.40	3.44' RT	1	1	--	--	3	--
			EX. LPB-TC-107	114+71.22	40.54' RT	--	--	--	--	--	EXISTING PULL BOX TO REMAIN
			BTC7/1TC5	114+75.06	34.61' LT	--	--	2	--	2	AVIATION LIGHT
			ATC7/2TC5	3115+46.22	28.96' RT	--	--	2	--	2	"
			EX. LPB-TC-109	3117+37.70	32.16' RT	--	--	--	--	--	EXISTING PULL BOX TO REMAIN
		HL-67-MD	FMD1/EMD1	287+12.00	5.00' RT	1	1	--	--	2	--
					SUBTOTAL	5	5	12	2	26	
0150					TOTALS	5	5	12	2	26	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	MISCELLANEOUS QUANTITIES	SHEET:	E

LIGHTING - TEMPORARY LIGHTING WIRES

SPV.0090.401 CABLE AERIAL ALUMINUM 6 AWG TRIPLEX

CATEGORY	STAGE	SYSTEM	CIRCUIT	FROM	TO	SPV.0090.401 CABLE AERIAL ALUMINUM 6 AWG TRIPLEX LF	COMMENTS
0150	1 - 3	HL-67-TC	A/N/GND	ATC7	ATC3	250	--
				ATC3	BTC4	200	--
				BTC4	ATC4	120	--
				ATC4	BTC7	260	--
				ATC3	BTC3	200	--
		HL-67-TC	SUBTOTAL			1,030	
0150					TOTALS	1,030	

LIGHTING - CONDUIT AND WIRE

652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
652.0615 CONDUIT SPECIAL 3-INCH
655.0620 ELECTRICAL WIRE LIGHTING 8 AWG
655.0625 ELECTRICAL WIRE LIGHTING 6 AWG

CATEGORY	STAGE	SYSTEM	CIRCUIT	FROM	TO	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	COMMENTS
0150	STAGE 1-3	HL-67-TC	C/N/D/GND	HL-67-TC	EX. LPB-TC-101	240	--	360	--	USE EXISTING CABINET AND PULL BOX
				EX. LPB-TC-101	CTC2	--	--	180	--	--
				HL-67-TC	EX. LPB-TC-101	--	--	480	--	--
				EX. LPB-TC-101	EX. LPB-TC-108	--	--	920	--	EXISTING CONDUIT
				EX. LPB-TC-108	DTC2	--	--	240	--	--
			E/N/F/GND	HL-67-TC	EX. LPB-TC-101	--	--	360	--	--
				EX. LPB-TC-101	ETC2	--	--	180	--	TO AVIATION LIGHT ON TOP OF THE POLE
				HL-67-TC	EX. LPB-TC-101	--	--	360	--	--
				EX. LPB-TC-101	EX. LPB-TC-108	--	--	690	--	--
				EX. LPB-TC-108	FTC2	--	--	90	--	TO AVIATION LIGHT ON TOP OF THE POLE
			C/N/D/GND	HL-67-TC	EX. LPB-TC-101	--	--	480	--	--
				EX. LPB-TC-101	EX. LPB-TC-102	--	--	600	--	--
				EX. LPB-TC-102	CTC1	--	--	600	--	--
				CTC1	DTC1	--	--	510	--	EMBEDDED CONDUIT
			E/N/F/GND	HL-67-TC	EX. LPB-TC-101	--	--	480	--	--
				EX. LPB-TC-101	EX. LPB-TC-102	--	--	600	--	--
				EX. LPB-TC-102	ETC1	--	--	600	--	TO AVIATION LIGHT ON TOP OF THE POLE
				ETC1	FTC1	--	--	510	--	"
			A/N/B/GND	HL-67-TC	EX. LPB-TC-101	--	--	--	480	--
				EX. LPB-TC-101	EX. LPB-TC-102	--	--	--	600	--
				EX. LPB-TC-102	LPB-TC-103	--	--	--	280	--
				LPB-TC-103	EX. LPB-TC-104	--	--	--	280	--
				EX. LPB-TC-104	ATC1	--	--	--	480	--
				ATC1	BTC1	--	--	--	680	EMBEDDED CONDUIT
				BTC1	EX. LPB-TC-106	--	--	--	800	
				EX. LPB-TC-106	LPB-TC-107	--	100	--	400	
				LPB-TC-107	ATC2	--	--	--	280	
				ATC2	LPB-TC-107	--	--	--	280	
				LPB-TC-107	BTC2				440	
			G/N/H/GND	HL-67-TC	EX. LPB-TC-101	--	--	--	480	--
				EX. LPB-TC-101	EX. LPB-TC-102	--	--	--	600	--
				EX. LPB-TC-102	LPB-TC-103	--	--	--	280	--
				LPB-TC-103	EX. LPB-TC-104	--	--	--	280	--
				EX. LPB-TC-104	GTC1	--	--	--	480	TO AVIATION LIGHT ON TOP OF THE POLE
				GTC1	HTC1	--	--	--	680	"
				HTC1	EX. LPB-TC-106	--	--	--	800	--
				EX. LPB-TC-106	LPB-TC-107	--	--	--	400	--
				LPB-TC-107	GTC2	--	--	--	280	TO AVIATION LIGHT ON TOP OF THE POLE
				GTC2	LPB-TC-107	--	--	280	--	--
				LPB-TC-107	HTC2	--	--	330	--	TO AVIATION LIGHT ON TOP OF THE POLE
		HL-67-MD	E/N/F/GND	HL-67-MD	EMD2/FMD2	--	--	1,080	--	--
				HL-67-MD	EMD11	--	--	--	960	--
					SUBTOTAL	240	100	9,930	10,240	
0150					TOTALS	240	100	9,930	10,240	

3

3

LIGHTING - PULL BOXES

653.0140 PULL BOXES STEEL 24X42-INCH
655.0615 ELECTRICAL WIRE LIGHTING 10 AWG

CATEGORY	STAGE	SYSTEM	DESCRIPTION	LOCATION	OFFSET	653.0140 PULL BOXES STEEL 24X42-INCH EACH	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG LF	COMMENTS
0150	STAGE 1-3	HL-67-TC	LPB-TC-103	122+94.27	10.75' RT	1	220	--
			LPB-TC-107	114+14.36	34.13' LT	1	60	--
		HL-67-TC			SUBTOTAL	2	280	
0150					TOTALS	2	280	

SHEET 4 OF 6

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	MISCELLANEOUS QUANTITIES	SHEET:	E

3

LIGHTING - LUMINAIRES

659.1125 LUMINAIRE UTILITY LED C
SPV.0060.233 AIRPORT OBSTRUCTION LIGHTS L810*

CATEGORY	STAGE	SYSTEM	DESCRIPTION	STATION	OFFSET	659.1125 LUMINAIRES UTILITY LED C EACH	SPV.0060.233* AIRPORT OBSTRUCTION LIGHTS L810 EACH	COMMENTS
0150	STAGE 1-3	HL-67-TC	ATC1/GTC1	124+16.71	52.05' LT	1	1	PROVIDE NEW CIRCUIT PLAQUE
			BTC1/HTC1	125+88.66	52.13' LT	1	1	"
			ATC2/GTC2	114+74.16	34.21' LT	--	1	"
			BTC2/HTC2	113+03.47	28.56' LT	--	1	"
			ATC3	111+28.74	28.41' LT	--	--	"
			BTC3	109+54.32	27.17' LT	--	--	PROVIDE NEW CIRCUIT PLAQUE
			CTC1/ETC1	124+21.13	50.93' RT	1	1	"
			DTC1/FTC1	125+93.01	51.19' RT	1	1	"
			CTC2/ETC2	3115+45.96	33.09' RT	--	1	"
			DTC2/FTC2	3117+09.60	25.29' RT	--	1	"
			CTC3	3118+74.57	21.52' RT	--	--	PROVIDE NEW CIRCUIT PLAQUE
			DTC3	3120+35.09	21.30' RT	--	--	"
		HL-67-TC			SUBTOTAL	4	8	
0150					TOTALS	4	8	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

LIGHTING - CONTROL, SERVICES AND SYSTEMS
120/240 VAC 3-WIRE

655.0640 ELECTRICAL WIRE LIGHTING 1 AWG
SPV.0060.401 MODIFY LIGHTING CONTROL CABINETS 120/240
SPV.0105.402 MAINTENANCE OF LIGHTING SYSTEMS (1060-47-70)
SPV.0105.403 LIGHTING SYSTEM INTEGRATOR (1060-47-70)
SPV.0105.404 LIGHTING SYSTEM SURVEY (1060-47-70)

CATEGORY	STAGE	DESCRIPTION	SYSTEM	LOCATION	655.0640 ELECTRICAL WIRE LIGHTING 1 AWG	SPV.0060.401 MODIFY LIGHTING CONTROL CABINETS 120/240	SPV.0060.402 MAINTENANCE OF LIGHTING SYSTEMS (1060-47-70)	SPV.0060.403 LIGHTING SYSTEM INTEGRATOR (1060-47-70)	SPV.0060.404 LIGHTING SYSTEM SURVEY (1060-47-70)	COMMENTS
					LF	EACH	EACH	EACH	EACH	
0150	STAGE 1-3	PROJECT (1060-47-70)	HL-67-TC	CTH T OVER IH 94	18	1	0.75	0.75	1	EXISTING CABINET TO BE MODIFIED
			HL-67-MD	CTH G OVER IH 94	--	--	0.25	0.25	--	--
		PROJECT (1060-47-70)		SUBTOTAL	18	1	1	1	1	
0150				TOTALS	18	1	1	1	1	

PLAQUE TEXT HL-67-TC
2 - 240 VAC WARNING (2 REQUIRED PER LOCATION; METER PEDESTAL AND CABINET DOOR)

3

MISCELLANEOUS ITEMS

CATEGORY	ROADWAY	670.0101.300 FIELD SYSTEM INTEGRATOR EACH	670.0201.300 ITS DOCUMENTATION EACH	678.0501.300 COMMUNICATION SYSTEM TESTING EACH	SPV.0060.302 REFOCUS VEHICLE DETECTOR ASSEMBLY EACH
0160	IH 94				
	PROJECT	1	1	1	24
	TOTALS	1	1	1	24

FTMS CABLE REMOVALS

CATEGORY	ROADWAY	ITEM ID	674.0300 REMOVE CABLE LF
0160	IH 94		
		EX-CB-RM-67-0069 - EXPB3115	10
		EXPB3115 - EXPB3118	45
		EXPB3115 - EX-CCTV-67-0129	10
		EXPB3115 - EXPB3116	65
		TOTAL	130

3

FTMS PULL BOXES AND VAULTS

CATEGORY	ROADWAY	ITEM ID.	LOCATION STATION	LOCATION OFFSET	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH	653.0140 PULL BOXES STEEL 24 X 42 - INCH EACH	678.0200 FIBER OPTIC SPLICE ENCLOSURE EACH	678.0300 FIBER OPTIC SPLICE EACH
0160	IH 94							
		EXCV520	--		1	--	1	4
		PB525	524+55	45' RT	--	1	--	--
		PB588	588+28	117' LT	--	1	--	--
		PB590	589+86	122' LT	--	1	--	--
		EXCV590	--		1	--	1	4
		PB694	693+62	105' LT	--	1	--	--
		EXPB693	--		1	--	--	--
		PB775	775+25	157' LT	--	1	--	--
		EXPB775	--		1	--	--	--
		EXCV808	--		1	--	1	4
		EXPB810	--		1	--	--	--
		PB3115	776+25	185' RT	--	1	--	--
		TOTALS			6	6	3	12

FTMS ELECTRICAL SERVICE

CATEGORY	ROADWAY	ITEM ID	LOCATION STATION	LOCATION OFFSET	656.0201.300 ELECTRICAL SERVICE METER BREAKER PEDESTAL (MBDMS670040) EACH	656.0201.301 ELECTRICAL SERVICE METER BREAKER PEDESTAL (MBCCTV670244) EACH	656.0501.300 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (DMS670040) EACH	656.0501.301 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (CCTV670244) EACH
0160	IH 94							
		MBCCTV670244	525+95	72' RT	--	1	--	--
		CCTV-67-0244	--		--	--	--	1
		MBDMS670040	1077SB+67	87' LT	1	--	--	--
		DMS-67-0040	590+00	--	--	--	1	--
		TOTALS			1	1	1	1

FTMS EACH REMOVALS

CATEGORY	ROADWAY	ITEM ID.	LOCATION	OFFSET	204.0195 REMOVING CONCRETE BASES EACH	653.0905 REMOVING PULL BOXES EACH	677.9051.S REMOVING 50-FOOT CAMERA POLE EACH	677.9200.S REMOVING CCTV CAMERA EACH	SPV.0060.300 REMOVE POLE EACH	SPV.0060.303 REMOVING CONTROLLER CABINET BASE EACH	SPV.0060.304 REMOVING CONTROLLER CABINET EACH
0160	IH 94										
		EXDP520			1	--	--	--	1	--	--
		EXDP590			1	--	--	--	1	--	--
		EX-CCTV-67-0129			1	--	1	1	--	--	--
		EXPB3115			--	1	--	--	--	--	--
		EX-CB-RM-67-0069			--	--	--	--	--	1	1
		TOTALS			3	1	1	1	2	1	1

FTMS BASES AND POLES

CATEGORY	ROADWAY	ITEM ID.	LOCATION STATION	LOCATION OFFSET	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	654.1239 BASE ITS CONTROLLER CABINET EACH	673.1200.S INSTALL ITS FIELD CABINET EACH	673.1225.S INSTALL POLE MOUNTED CABINET EACH	675.0100 INSTALL CONTROLLER RAMP METER PROCESSOR ASSEMBLY EACH	675.0300 INSTALL MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY EACH	677.0130 INSTALL CAMERA POLE 30-FT EACH	677.0150 INSTALL CAMERA POLE 50-FT EACH	677.0200 INSTALL CAMERA ASSEMBLY EACH	678.0100.S INSTALL OVERHEAD FREEWAY DMS FULL MATRIX EACH	678.0400 FIBER OPTIC TERMINATION EACH	678.0600 INSTALL ETHERNET SWITCHES EACH	SPV.0060.233 AIRPORT OBSTRUCTION LIGHTS EACH	SPV.0060.301 GROUND ROD EACH
0160	IH 94																	
		CCTV-67-0244	524+35	47' RT	--	--	--	1	--	2	--	1	1	--	6	1	--	1
		CCTV-67-0243	588+13	125' LT	--	--	--	--	--	2	--	1	1	--	--	--	--	1
		S-67-240 / DMS-67-0040	590+00	--	--	--	--	1	--	--	--	--	--	1	6	1	--	1
		CCTV-67-0242	693+64	92' LT	--	--	--	--	--	--	--	1	1	--	--	--	--	1
		CCTV-67-0129	775+23	145' LT	1	--	--	--	--	--	1	--	1	--	--	--	1	1
		CB-RM-67-0069	776+16	176' RT	--	1	1	--	1	--	--	--	--	--	12	1	--	--
		EX-CB-DMS-67-0020	--		--	--	--	--	--	--	--	--	--	--	6	1	--	--
		EX-CB-SDS-67-0038	--		--	--	--	--	--	--	--	--	--	--	6	1	--	--
		EX-CB-RM-67-0113	--		--	--	--	--	--	--	--	--	--	--	6	1	--	--
		TOTALS			1	1	1	2	1	4	1	3	4	1	42	6	1	5

FTMS CAMERA POLE BASES

CATEGORY	ROADWAY	ITEM ID.	LOCATION STATION	LOCATION OFFSET	531.2020 DRILLING SHAFT 20-INCH LF	531.2036 DRILLING SHAFT 36-INCH LF	531.4030 FOUNDATION CAMERA POLE 30-FT EACH	531.4050 FOUNDATION CAMERA POLE 50-FT EACH
0160	IH 94							
		CCTV-67-0244	524+35	47' RT	--	10	--	1
		CCTV-67-0243	588+13	125' LT	--	10	--	1
		CCTV-67-0242	693+64	92' LT	--	10	--	1
		CCTV-67-0129	775+23	145' LT	7	--	1	--
		TOTALS			7	30	1	3

FTMS CONDUIT AND WIRE

CATEGORY	ROADWAY	ITEM ID	-- LINEAR DISTANCE	--	652.0125 CONDUIT RIGID METALLIC 2-INCH LF	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH LF	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED LF	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	655.0635 ELECTRICAL WIRE LIGHTING 2 AWG LF	674.0400 REINSTALL CABLE LF	678.0006 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT LF	SPV.0090.300 OUTDOOR RATED NETWORK CABLE LF
0160	IH 94													
		EXCV520 - PB525	400	--	--	800	--	400	--	--	--	400	--	
		EXCV520	--	--	--	--	--	--	--	--	--	100	--	
		MBCCTV670244 - PB525	45	--	45	--	--	--	135	--	--	--	--	
		PB525 - CCTV-67-0244	15	15	30	--	--	15	45	--	--	15	--	
		MBDMS670040 - PB590	25	--	25	--	--	--	--	100	--	--	--	
		PB590 - S-67-420	15	60	30	--	--	15	--	60	--	15	30	
		EXCV590 - PB590	25	--	50	--	--	50	--	--	--	50	--	
		EXCV590	--	--	--	--	--	--	--	--	--	100	--	
		PB588 - PB590	155	--	310	--	--	155	--	--	--	--	310	
		PB588 - CCTV-67-0243	10	--	20	--	--	10	--	--	--	--	20	
		CCTV-67-0242 - PB694	10	--	20	--	--	10	--	--	--	--	--	
		PB694 - EXPB693	140	--	280	--	--	140	--	--	--	--	--	
		EXPB693 - EXPB692	75	--	--	--	--	75	--	--	--	--	--	
		EXPB692 - EXPB691	25	--	--	--	--	25	--	--	--	--	--	
		EXPB691 - EX-CB-RM-67-0120	25	--	--	--	--	25	--	--	--	--	--	
		CCTV-67-0129 - PB775	10	--	20	--	40	10	--	--	--	--	--	
		PB775 - EXPB775	145	--	290	--	145	145	--	--	--	--	--	
		EXPB775 - EXPB114	55	--	--	--	55	55	--	--	--	55	--	
		EXPB114 - EXPB115	30	--	--	--	30	30	--	--	--	30	--	
		EXPB115 - EX-CB-RM-67-0113	25	--	--	--	25	25	--	--	--	25	--	
		EXPB3116 - EXPB3117	40	--	--	--	--	40	--	--	--	40	--	
		EXPB3117 - EXCV777	155	--	--	--	--	155	--	--	--	155	--	
		EXCV777	--	--	--	--	--	--	--	--	--	100	--	
		EXCV777 - EXCV776	145	--	--	--	--	145	--	--	--	145	--	
		EXCV776	--	--	--	--	--	--	--	--	--	50	--	
		EXCV776 - EXCV775	160	--	--	--	--	160	--	--	--	160	--	
		EXCV775 - EXPB773	265	--	--	--	--	265	--	--	--	265	--	
		EXPB773 - EXPB774	130	--	--	--	--	130	--	--	--	130	--	
		EXPB774 - EXPB775	20	--	--	--	--	20	--	--	--	20	--	
		EXPB3116 - PB3115	50	--	150	--	--	50	--	--	50	50		
		PB3115 - CB-RM-67-0069	10	10	60	--	--	10	--	--	10	10		
		EXCV808 - EXPB810	125	--	250	--	--	125	--	--	--	125	--	
		EXPB810 - EX-CB-67-0038	10	--	--	--	--	10	--	--	--	10	--	
		EXPB810 - EXCV812	190	--	--	--	--	190	--	--	--	190	--	
		EXCV812	--	--	--	--	--	--	--	--	--	100	--	
		EXCV812 - EXPB811	150	--	--	--	--	150	--	--	--	150	--	
		EXPB811 - EXPB809	130	--	--	--	--	130	--	--	--	130	--	
		EXPB809 - EX-CB-DMS-67-0020	10	--	--	--	--	10	--	--	--	10	--	
		TOTALS		85	1,580	800	295	2,775	180	160	60	2,630	360	

C-67-0025
NW/SW WINGWALL REPLACEMENT &
CONCRETE SURFACE REPAIRS

BEGIN PROJECT
STA 459+30

ADD FILL BEHIND CURB
AT WINGWALL

TREE CUTTING TO BE COMPLETED BY OTHERS.
CLEARING AND GRUBBING WITHIN SLOPE INTERCEPTS
THAT ARE SHOWN ON THE ROADSIDE BARRIER PLAN.

REMOVING ASPHALTIC
SURFACE BUTT JOINTS

R/L IH 94

MILL AND OVERLAY WITH
BASE PATCHING

REPLACE CABLE BARRIER
(SEE ROADSIDE BARRIER DETAILS)

R/L STH 83

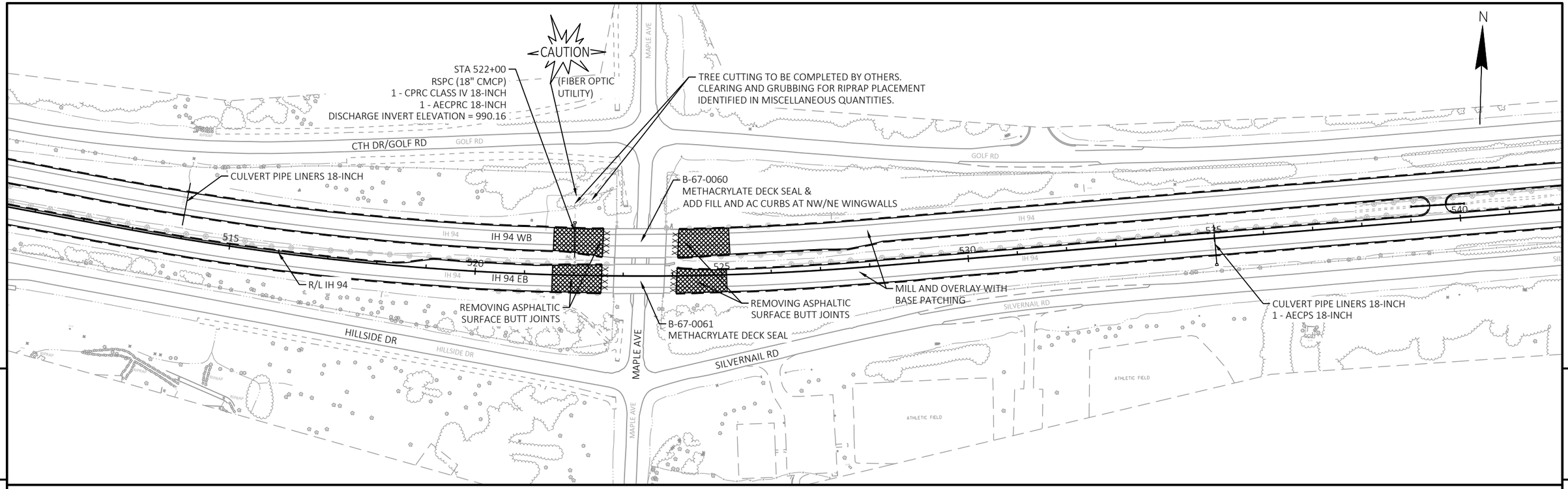
EXISTING RAMP GATES
TO REMAIN

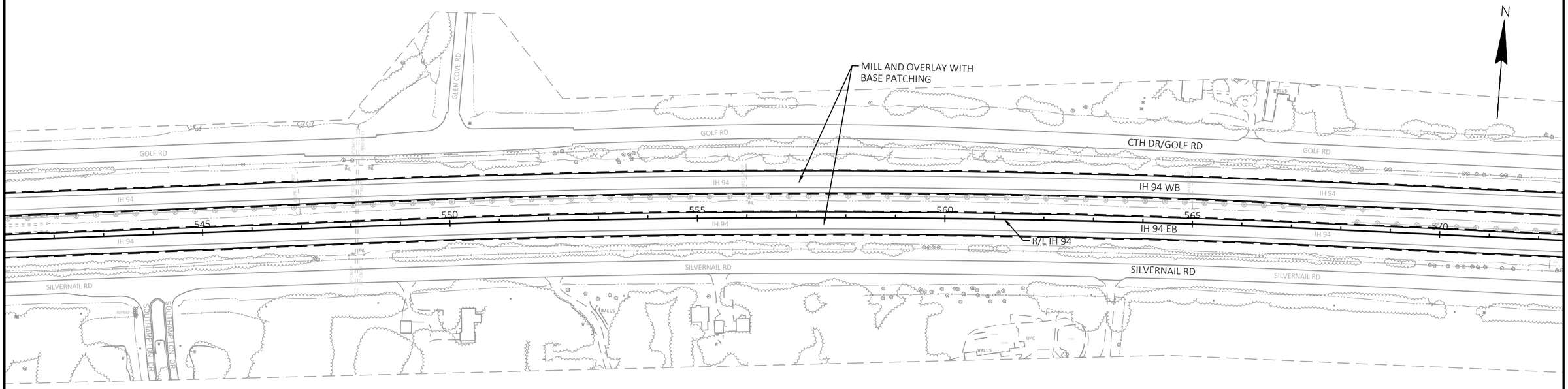
STA 495+00
RSPC (18" CMCP)
1 - CPRC CLASS IV 18-INCH
1 - AECPRC 18-INCH
MATCH EXISTING INVERTS

REMOVE AND RESET CABLE BARRIER POST

MILL AND OVERLAY WITH
BASE PATCHING

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PLAN SHEETS	SHEET 416	E

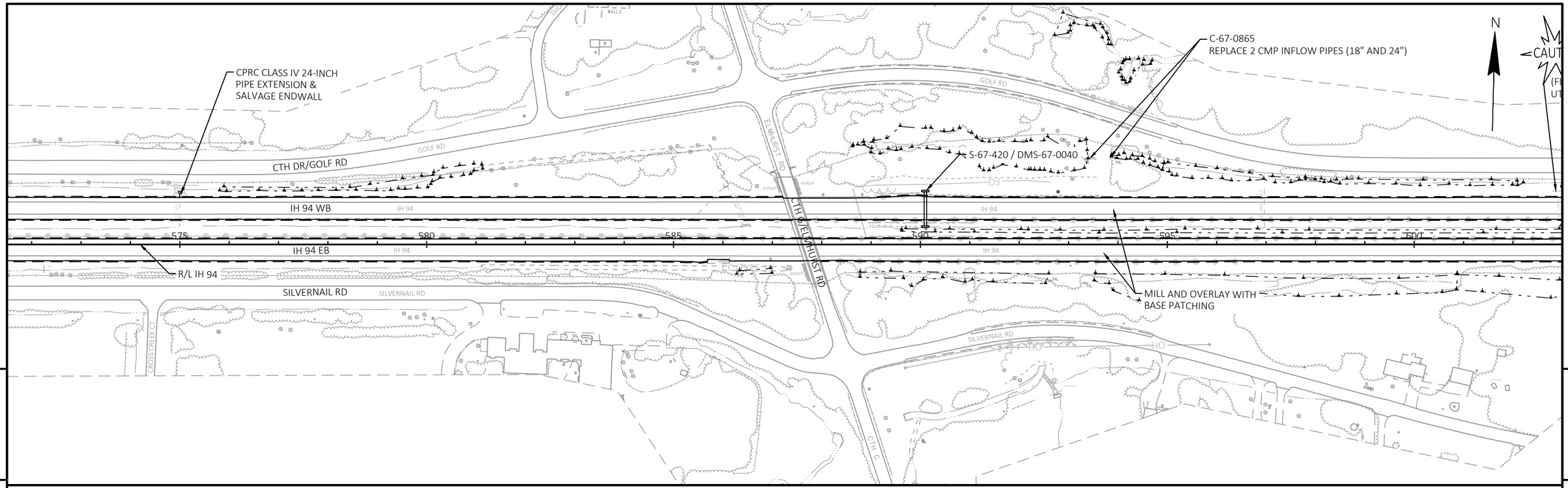


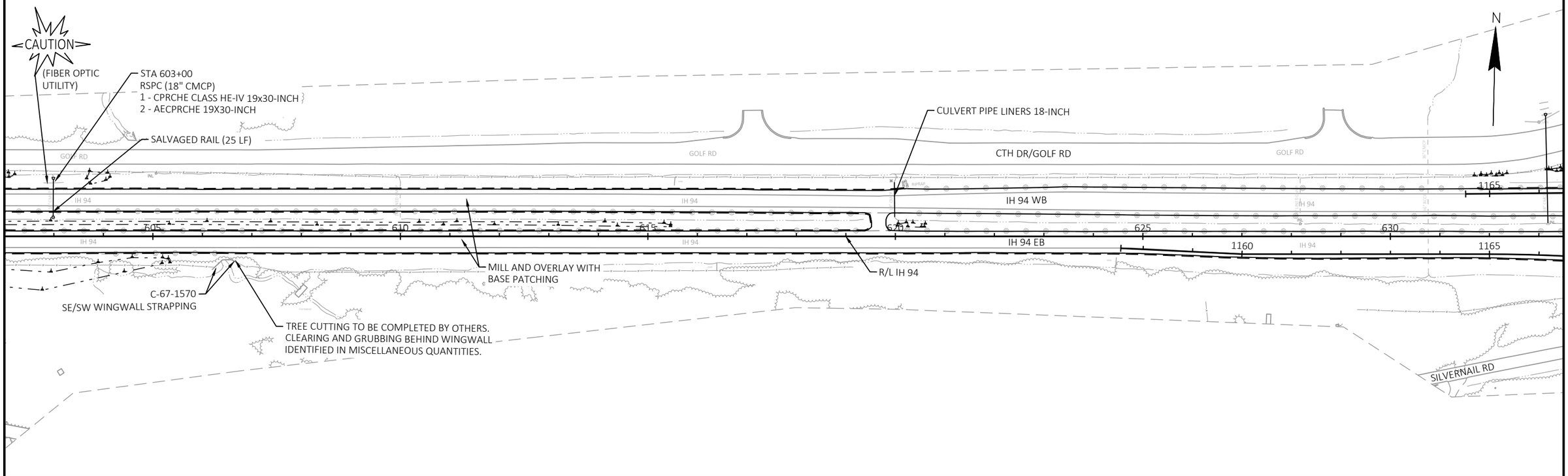


PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PLAN SHEETS	SHEET 417	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050202_pn

PLOT DATE : 1/5/2024 7:54 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:200 FT

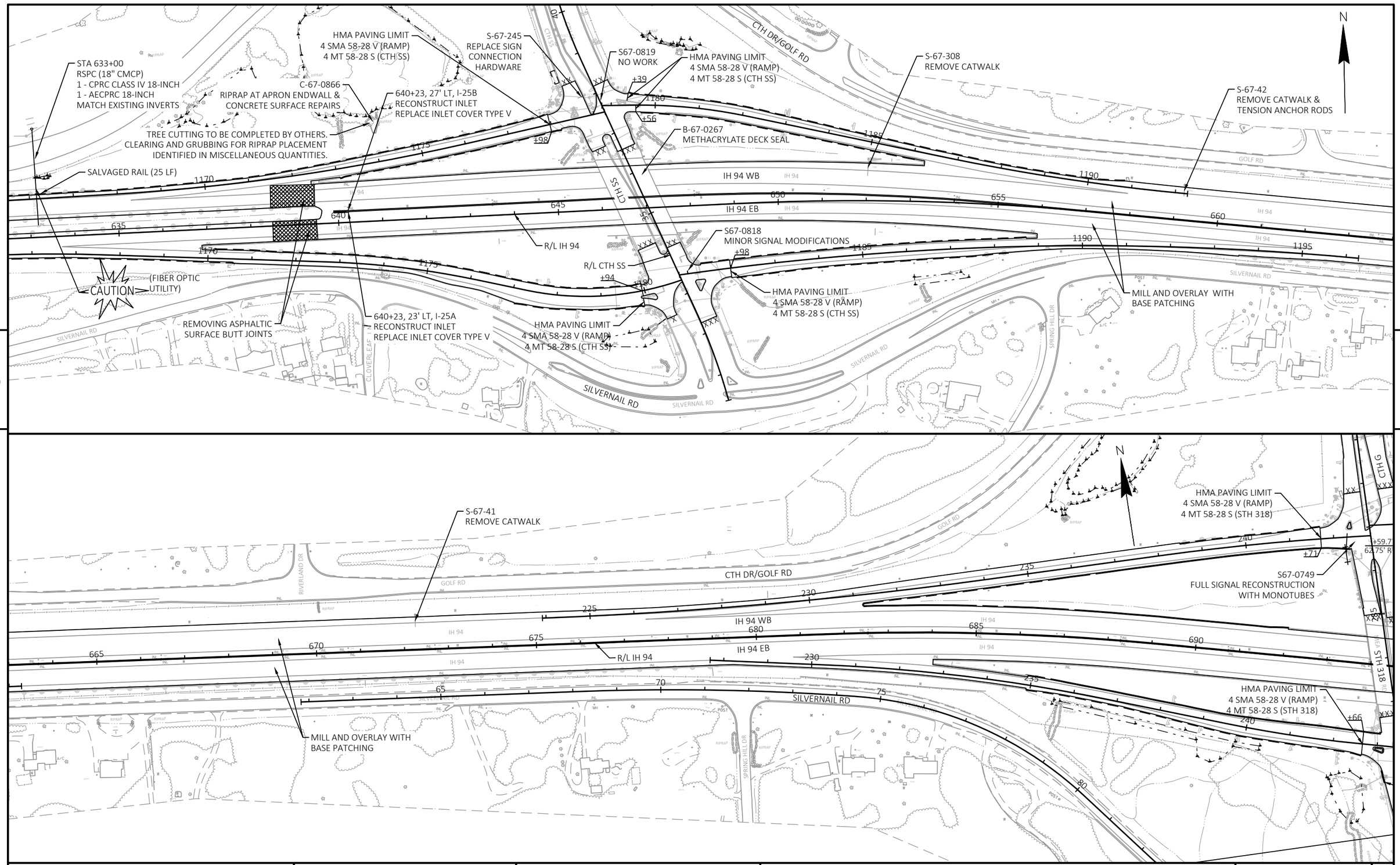




PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PLAN SHEETS	SHEET 418	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050203_pn

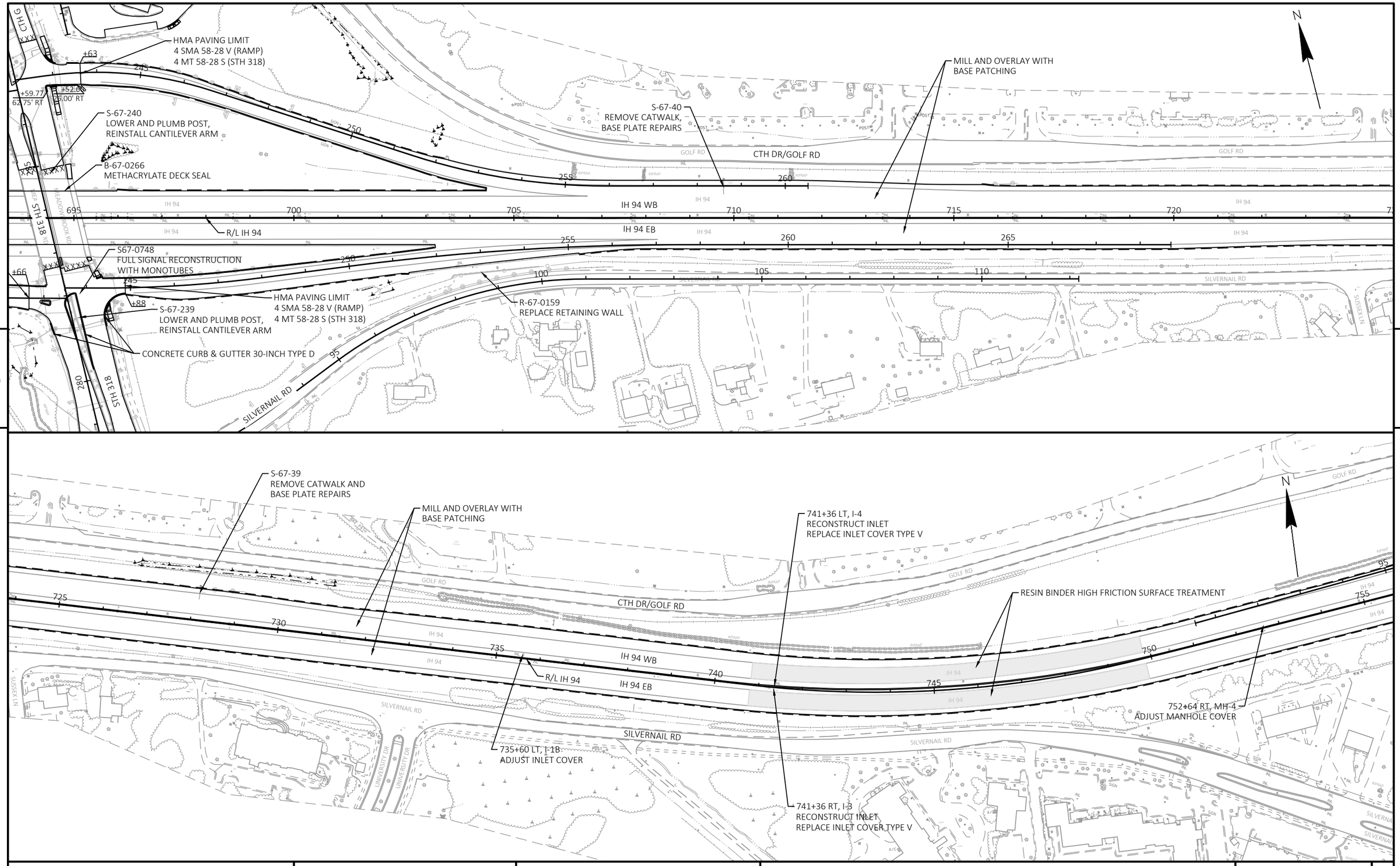
PLOT DATE : 1/5/2024 7:55 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:200 FT



PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PLAN SHEETS	SHEET 419	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050204_pn

PLOT DATE : 1/5/2024 7:56 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:200 FT



PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PLAN SHEETS	SHEET 420	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050205_pn

PLOT DATE : 1/5/2024 7:56 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44

5

5

MILL AND OVERLAY ASPHALT SHOULDERS

CONCRETE PAVEMENT REPAIR AS NEEDED

STA 772+66 RT, I-11 RECONSTRUCT INLET REPLACE INLET COVER TYPE V

S67-0538 FULL SIGNAL RECONSTRUCTION WITH MONOTUBES

MILL AND OVERLAY ASPHALT SHOULDERS

CONCRETE PAVEMENT REPAIR AS NEEDED

MILL AND OVERLAY WITH BASE PATCHING

STA 757+36 RT, I-5 RECONSTRUCT INLET

STA 762+47 RT, I-7 RECONSTRUCT INLET

R/L IH 94

STA 766+65 RT, I-9 RECONSTRUCT INLET

CONCRETE PAVEMENT REPAIR AS NEEDED

MILL AND OVERLAY ASPHALT SHOULDERS

STA 772+66 LT, I-12 RECONSTRUCT INLET REPLACE INLET COVER TYPE V

MILL AND OVERLAY ASPHALT SHOULDERS

S67-0537 FULL SIGNAL RECONSTRUCTION WITH MONOTUBES

STA 805+02 LT, I-22 RECONSTRUCT INLET REPLACE INLET COVER TYPE V

CONCRETE PAVEMENT REPAIR AS NEEDED

S-67-19 MINOR CONCRETE REPAIRS

END CONSTRUCTION STA 810+65

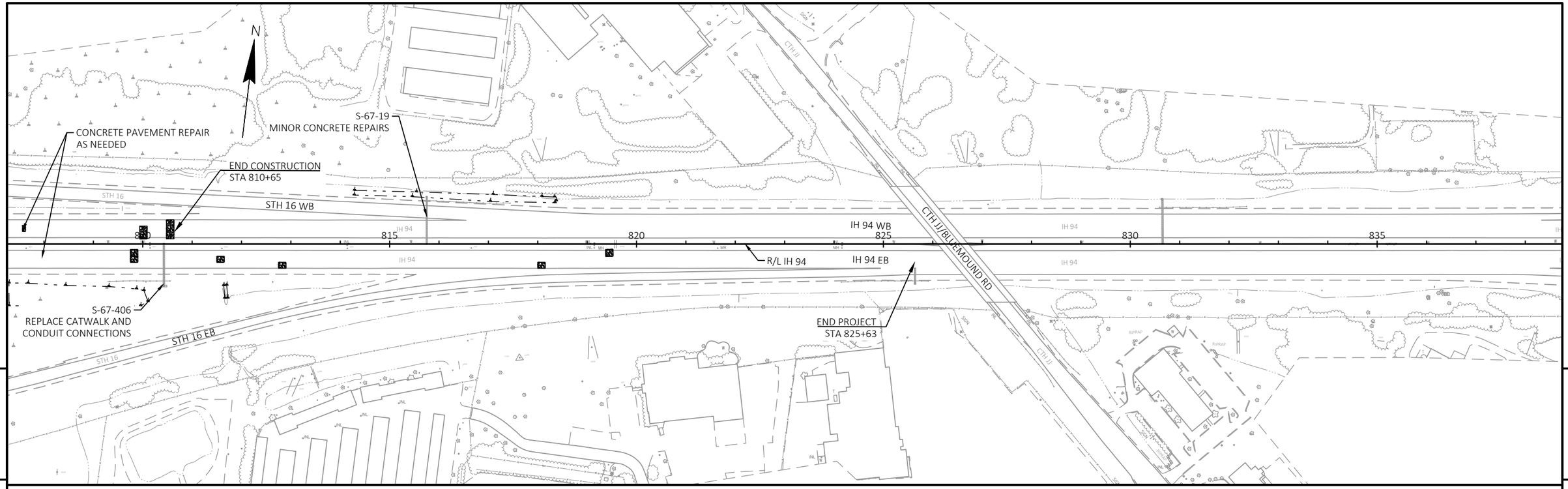
MILL AND OVERLAY ASPHALT SHOULDERS

MILL AND OVERLAY ASPHALT SHOULDER

STA 805+02 RT, I-23 RECONSTRUCT INLET REPLACE INLET COVER TYPE V

S-67-406 REPLACE CATWALK AND CONDUIT CONNECTIONS

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PLAN SHEETS	SHEET 421	E



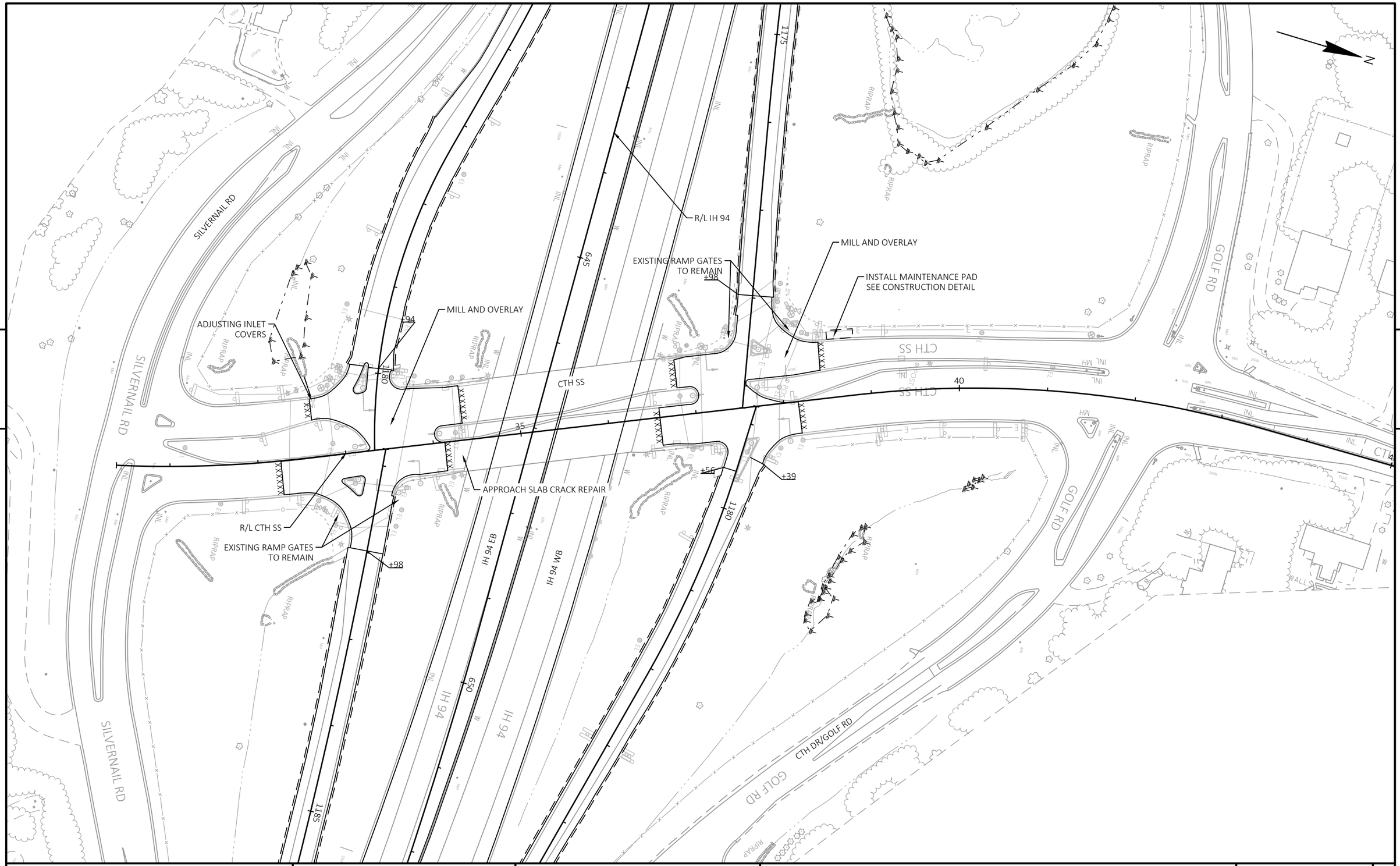
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PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PLAN SHEETS	SHEET 422	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050207_pn

PLOT DATE : 1/5/2024 7:57 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:200 FT



PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PLAN SHEETS	SHEET 423 E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050208_pn

PLOT DATE : 1/5/2024 7:58 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

REMOVING CONCRETE SIDEWALK AND CONCRETE SIDEWALK 4-INCH

SEE STORM SEWER PLANS FOR REPLACEMENT DETAILS

MILL AND OVERLAY

REMOVING CONCRETE SIDEWALK AND CONCRETE SIDEWALK 4-INCH

MILL AND OVERLAY

CATEGORY 0010 CATEGORY 0170

R/L STH 318/CTH G

MILL AND OVERLAY

CTH G

CTH G/MEADOWBROOK RD

STH 318

DETECTABLE WARNING FIELD IN CONCRETE

RESURFACE PATH AT BRIDGE MATCH POINT CURB RAMP TYPE 4B1

CURB RAMP TYPE 4B1

CONCRETE CURB & GUTTER 30-INCH TYPE D

ASPHALT FLUME

EXISTING RAMP GATES TO REMAIN

CATEGORY 0010 CATEGORY 0170

IH 94 EB

IH 94 WB

IH 94

GOLF RD

MEADOWBROOK RD

RIPRAP

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PLAN SHEETS	SHEET 424	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050210_pn

PLOT DATE : 1/5/2024 7:59 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

CONCRETE PAVEMENT REPAIR AS NEEDED

CONCRETE PAVEMENT REPAIR AS NEEDED

EXISTING RAMP GATE TO REMAIN

R/L CTH T

CTH T/GRANDVIEW BLVD

EXISTING RAMP GATE TO REMAIN

CONCRETE PAVEMENT REPAIR AS NEEDED

CONCRETE PAVEMENT REPAIR AS NEEDED

CTH T

CTH T

CTH T

CTH T

ASPH

ASPH

CONC

CONC

IH 94 EB

IH 94 WB

IH 94

IH 94

120

125

130

775

3115

780

115

N

5

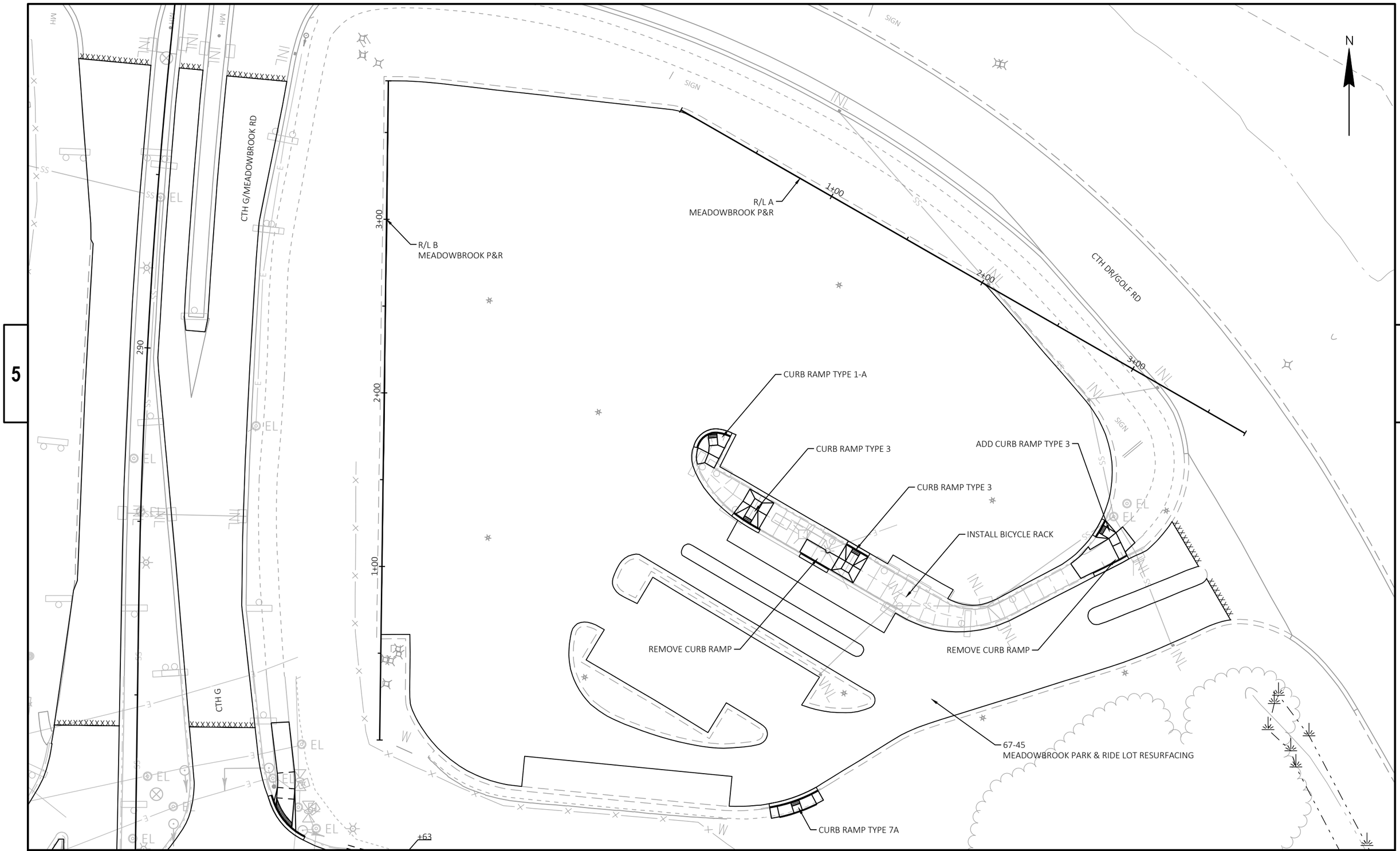
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PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PLAN SHEETS	SHEET 425	E

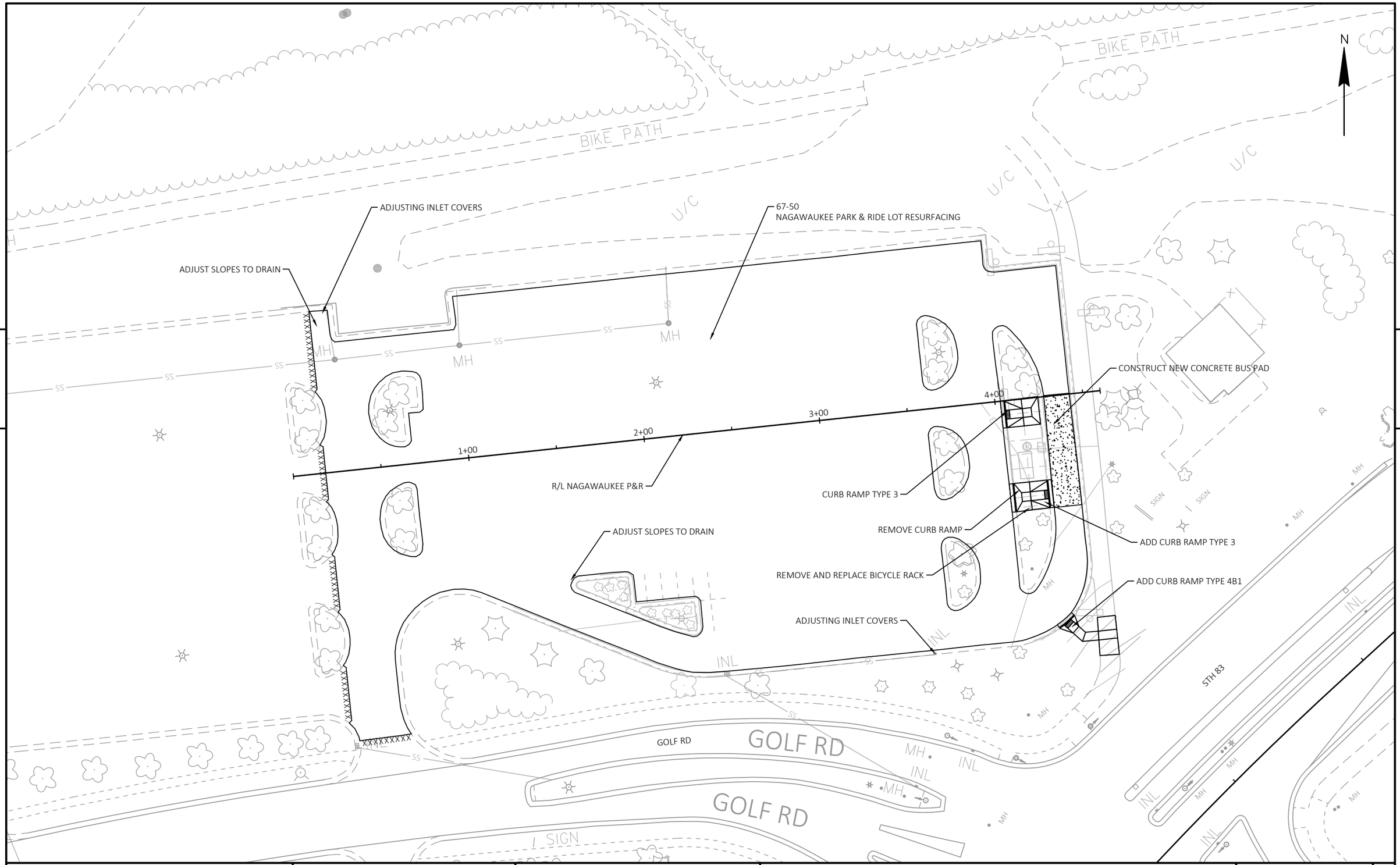
FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050211_pn

PLOT DATE : 1/5/2024 7:59 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PLAN SHEETS	SHEET 426	E



PROJECT NO: 1330-47-71	HWY: STH 83	COUNTY: WAUKESHA	PLAN SHEETS	SHEET 427	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050212_pn

PLOT DATE : 1/5/2024 7:59 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

5

5

S67-1426
FULL SIGNAL RECONSTRUCTION
WITH MONOTUBES

REMOVING CONCRETE SIDEWALK
AND CONCRETE SIDEWALK 4-INCH

S-67-602
MISCELLANEOUS
REPAIRS

STH 318

265

270

275

280

85

90

N

SILVERNAIL RD

ROLLING RIDGE DR

R/L STH 318/CTH G

MILL AND OVERLAY

SECTION CORNER MONUMENT

CURB RAMP TYPE 4B1

CURB RAMP
TYPE 4B1

RIPRAP

POST

07
T N
19 20
30 29
R E
19

PROJECT NO: 2788-03-70	HWY: STH 318	COUNTY: WAUKESHA	PLAN SHEETS	SHEET 428	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050209_pn

PLOT DATE : 1/5/2024 7:58 AM PLOT BY : TONY BUBLITZ PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

Standard Detail Drawing List

08A05-20A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-20C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-20D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-03	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-21A	CURB RAMPS TYPES 1 AND 1-A
08D05-21B	CURB RAMPS TYPES 2 AND 3
08D05-21C	CURB RAMPS TYPES 4A AND 4A1
08D05-21D	CURB RAMPS TYPE 4B AND 4B1
08D05-21E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-21F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-21G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D15-05A	EDGEDRAIN OUTLET AND OUTFALL MARKERS
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F07-05	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS
09B02-10	CONDUIT
09B04-12	PULL BOX
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C11-10	CONCRETE BASE TYPE 10
09C12-09A	CONCRETE BASE TYPE 13
09C12-09B	CONCRETE BASE TYPE 13
09C15-01	CONCRETE BASE TYPE 10 SPECIAL
09C16-01	CONCRETE BASE TYPE 10 SPECIAL EXTENSION
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09E01-15B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-15D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-06	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-09A	TYPE 9 POLE 15'-30' MONOTUBE ARM
09E08-09D	TYPE 9 SPECIAL POLE 45' MONOTUBE ARM
09E08-09E	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-09F	TYPE 10 SPECIAL POLE 35' MONOTUBE ARM
09E08-09H	TYPE 10 SPECIAL POLE 45' MONOTUBE ARM
09E08-09I	TYPE 12 POLE 35'-55' MONOTUBE ARM
09E08-09J	TYPE 13 POLE 35'-55' MONOTBE ARM
09E08-09K	GENERAL NOTES,HARDWARE DETAILS FOR TYPE 9/10,9/10 SPECIAL,12 & 13 POLES W/MONOTUBE ARMS
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
09G01-04A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09H03-01	2 CIRCUIT METER BREAKER PEDESTAL
09H11-01	IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS
10A02-03	IDENTIFICATION PLAQUES LIGHT POLES
10A03-03	CIRCUIT IDENTIFICATION PLAQUES SIGN BRIDGES
10A05-03	ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
10A08-03	ELECTRICAL DETAILS STRUCTURE MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
10A18-05A	LUMINAIRE ARMS, SINGLE MEMBER 6-INCH CLAMP
11A01-06	MAINTENANCE CROSSOVER FOR FREEWAYS

6

Standard Detail Drawing List

12A03-10	NAME PLATE (STRUCTURES)
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13A05-06A	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A05-06B	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-17A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-17B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-17C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C14-07A	BASE PATCHING CONCRETE
13C14-07B	BASE PATCHING CONCRETE
13C14-07C	BASE PATCHING CONCRETE
13C19-03	HMA LONGITUDINAL JOINTS
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
14B32-10A	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10B	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10C	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10D	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10E	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10F	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10G	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10H	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B36-02A	32-INCH SINGLE-FACED F SHAPE CONCRETE BARRIER TO 32-INCH SSCB TRANSITION
14B36-02B	32-INCH SINGLE-FACED F SHAPE CONCRETE BARRIER TO 32-INCH SSCB TRANSITION
14B36-02C	32-INCH SINGLE-FACED F SHAPE CONCRETE BARRIER TO 36-INCH SSCB TRANSITION
14B36-02D	32-INCH SINGLE-FACED F SHAPE CONCRETE BARRIER TO 36-INCH SSCB TRANSITION
14B36-02E	42-INCH SINGLE-FACED F SHAPE CONCRETE BARRIER TO 42-INCH SSCB TRANSITION
14B36-02F	42-INCH SINGLE-FACED F SHAPE CONCRETE BARRIER TO 42-INCH SSCB TRANSITION
14B36-02G	51-INCH SINGLE-FACED F SHAPE CONCRETE BARRIER TO 42-INCH SSCB TRANSITION
14B36-02H	51-INCH SINGLE-FACED F SHAPE CONCRETE BARRIER TO 42-INCH SSCB TRANSITION
14B36-02I	51-INCH SINGLE-FACED F SHAPE CONCRETE BARRIER TO 56-INCH SSCB TRANSITION
14B36-02J	51-INCH SINGLE-FACED F SHAPE CONCRETE BARRIER TO 56-INCH SSCB TRANSITION
14B38-02A	32-INCH DOUBLE-FACED F SHAPE CONCRETE BARRIER TO 32-INCH SSCB TRANSITION
14B38-02B	32-INCH DOUBLE-FACED F SHAPE CONCRETE BARRIER TO 32-INCH SSCB TRANSITION
14B38-02C	32-INCH DOUBLE-FACED F SHAPE CONCRETE BARRIER TO 36-INCH SSCB TRANSITION
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)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

6

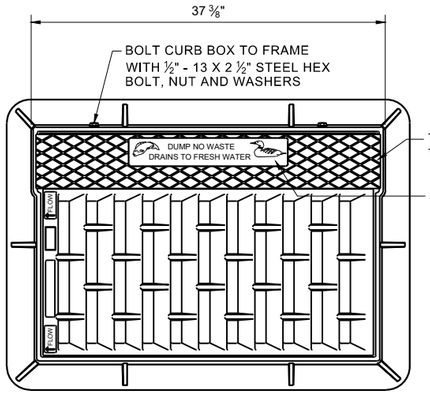
Standard Detail Drawing List

14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-05A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05D	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05E	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05F	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05G	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B52-03A	CABLE BARRIER TYPE 1 LAYOUT
14B52-03B	CABLE BARRIER TYPE 1 LAYOUT
14B52-03C	CABLE BARRIER TYPE 1 LAYOUT
14B53-02A	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02B	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02C	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02D	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02E	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02F	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02G	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02H	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-02I	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A04-07B	BARRIER WALL DELINEATOR WITH REFLECTIVE SHEETING
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-09D	ON RAMP LANE CLOSURE
15C02-09E	OFF RAMP LANE CLOSURE
15C02-09F	ADVANCED WIDTH RESTRICTION SIGNING
15C02-09G	TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE
15C02-09H	MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING
15C07-15A	PAVEMENT MARKING SYMBOLS
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-23D	PAVEMENT MARKING (TURN LANES)
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C18-08A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C18-08B	MEDIAN ISLAND MARKING MEDIAN ISLAND NOSE
15C18-08C	MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT
15C20-02	YIELD MARKING
15C31-06A	PAVEMENT MARKING EXIT RAMP AND PARALLEL EXIT RAMP
15C31-06C	PAVEMENT MARKING ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP
15C31-06D	PAVEMENT MARKING LANE DROP AND LANE REDUCTION
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C34-04	STANDARD APPLICATION FOR TEMPORARY RAISED PAVEMENT MARKER, TYPE 2
15C36-01	PARKING STALL MARKING
15D12-12A	TRAFFIC CONTROL, LANE CLOSURE, WITH TEMPORARY RUMBLE STRIPS
15D12-12B	TEMPORARY EMERGENCY PULLOUTS
15D12-12D	TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE
15D14-06	TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY
15D15-07A	TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07B	TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07C	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07E	TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE
15D16-06	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-07A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

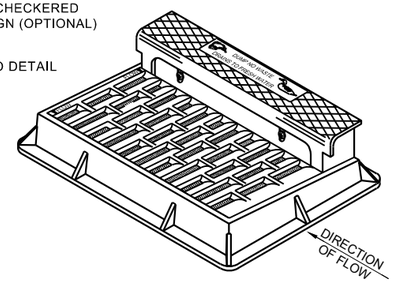
6

Standard Detail Drawing List

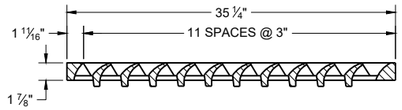
15D20-07B	TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D20-07C	TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D30-09A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09B	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09E	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09H	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09J	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D35-03A	RAMP GATE HARD WIRED
15D35-03B	RAMP GATE HARD WIRED
15D35-03C	RAMP GATE HARD WIRED
15D36-01	BARRICADE RACK
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D40-05A	TRAFFIC CONTROL, FULL LANE SHIFT NON-FREEWAY OR MULTILANE DIVIDED 45 MPH AND UNDER
15D40-05D	TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER
15D41-04A	TRAFFIC CONTROL, MULTIPLE LANE SHIFT, MULTILANE DIVIDED ROAD
15D41-04B	TRAFFIC CONTROL, MULTIPLE LANE SHIFT DIVIDED ROAD TEMPORARY RUMBLE STRIPS
15D42-01	TRAFFIC CONTROL, TWO LANE FULL FREEWAY CLOSURE
15D47-03A	TRAFFIC CONTROL, INGRESS/EGRESS WITH BARRIER
15D47-03B	TRAFFIC CONTROL, INGRESS/EGRESS WITHOUT BARRIER

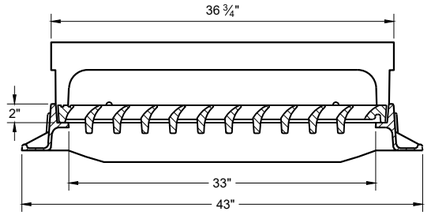


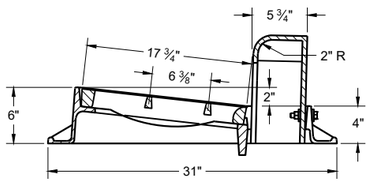
NOTE: EITHER CASTING IS ACCEPTABLE

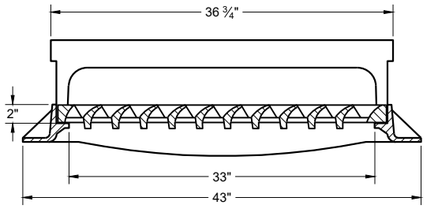


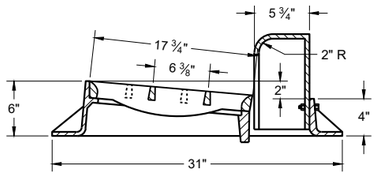
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"







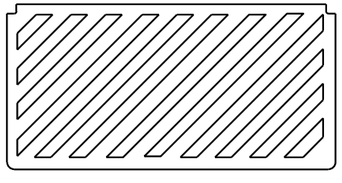




TYPE "H"

NOTE: EITHER CASTING IS ACCEPTABLE

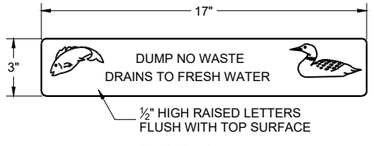
1 ⅛" DIAGONAL BARS WITH 1 ⅝" OPENINGS



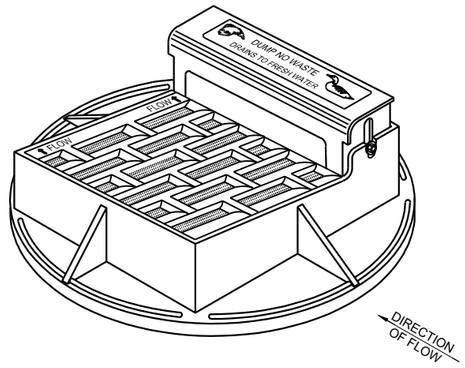
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35" X 17 ¾" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

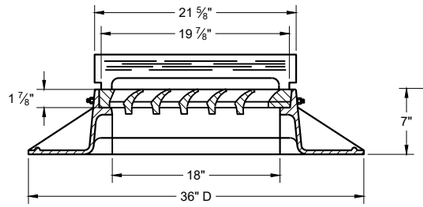


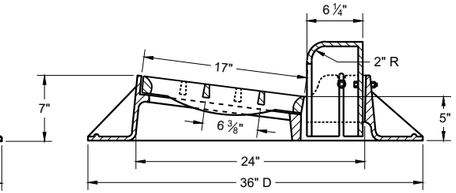
LOGO DETAIL



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

NOTE: EITHER CASTING IS ACCEPTABLE





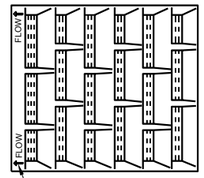
TYPE "A"

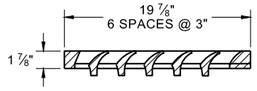
GENERAL NOTES

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

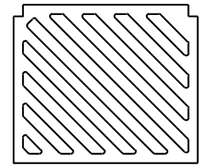
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.





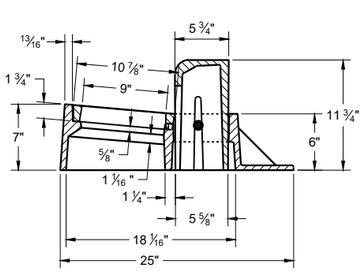
1" DIAGONAL BARS WITH 1 ½" OPENINGS



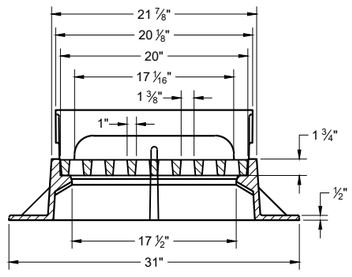
SPECIAL GRATE FOR TYPE "A" COVER

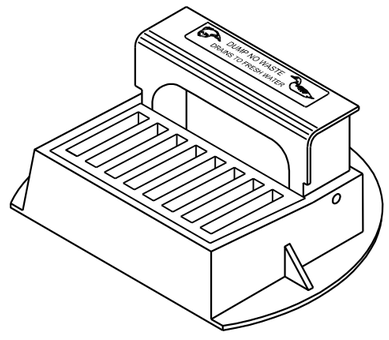
(MEASURES 19 ¾" X 17" X 1 ⅞")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "Z"





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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2023
DATE

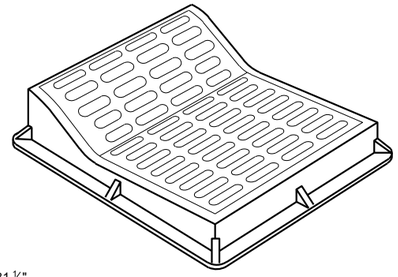
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

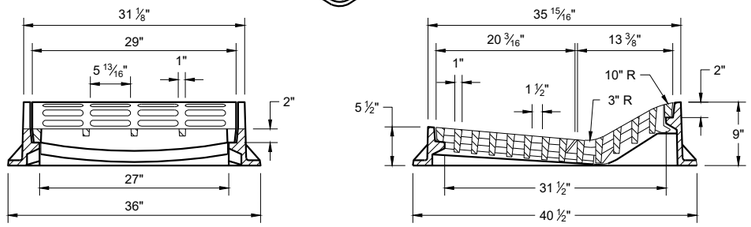
FHWA

GENERAL NOTES

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

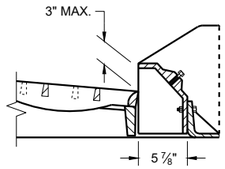
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.





TYPE "F"

USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"

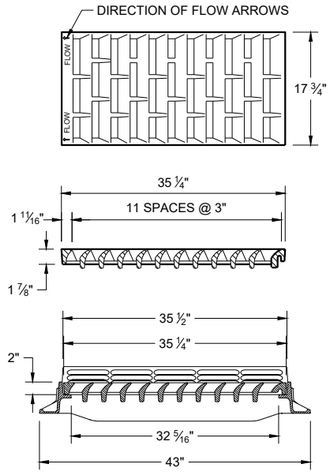


ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

USE WITH TYPES "G" AND "J" CONCRETE CURB AND GUTTER, 30 INCH
NOTED AS TYP "HM-GJ" ON DRAINAGE TABLE

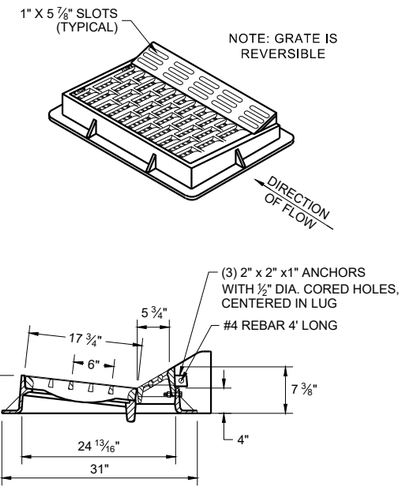
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.



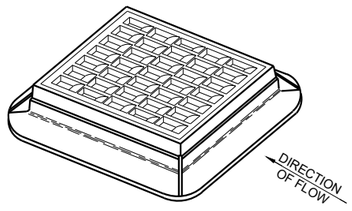
TYPE "HM"

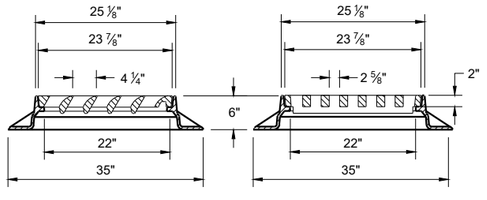
USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"



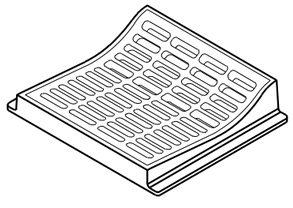
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

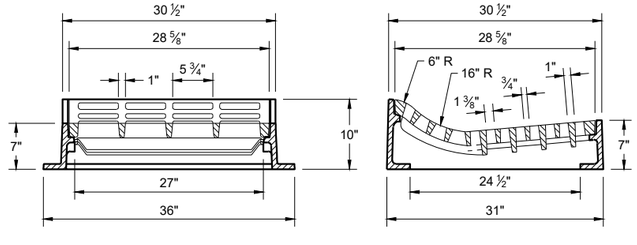
NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.





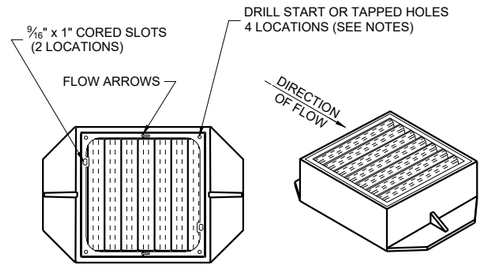
TYPE "S"

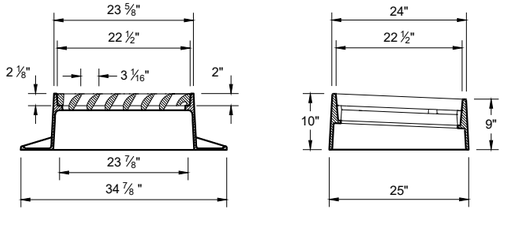




TYPE "T"

USE WITH TYPES "R" AND "T" CONCRETE CURB AND GUTTER, 36"

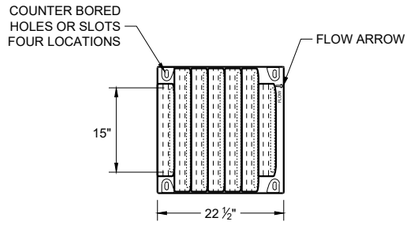




TYPE "V"

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER ALL DRILLING AND TAPPING GRATES AND FRAMES BY CASTING MANUFACTURER

TYPE V
FRAME - CAST GRAY IRON ASTM A48 CLASS 40A
⅜" DIA. X 1⅛" DRILL START IN 4 LOCATIONS
GRATE - CAST GRAY IRON ASTM A-48, CLASS 35B



BOLT DOWN GRATE FOR TYPE "V" COVER

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER NOTED AS TYPE "V-B" ON DRAINAGE TABLE

TAP ½" -13 HOLES IN FOUR LOCATIONS IN FRAME TO BOLT GRATE
FRAME - CAST GRAY IRON ASTM A48 CLASS 40A

GRATE - CAST DUCTILE IRON ASTM A536, 55+KSI YIELD
BOLTS - ½" -13 STAINLESS STEEL BOLTS WITH WASHERS
TORQUE BOLTS TO MANUFACTURER SPECIFICATION DO NOT OVERTIGHTEN.

INLET COVERS TYPES F, HM, HM-S, S, T, V, HM-GJ AND HM-GJ-S

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July 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

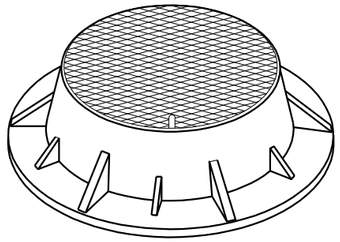
FHWA

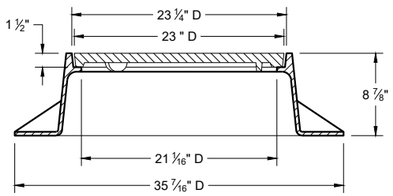
GENERAL NOTES

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DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

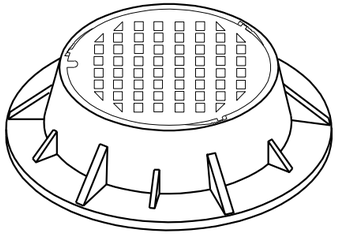
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

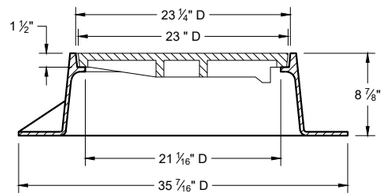




TYPE "J"

NOTE: EITHER CASTING IS ACCEPTABLE

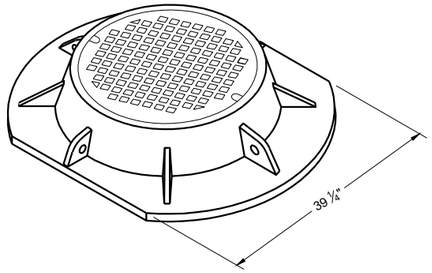


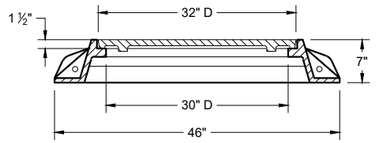


TYPE "J" SPECIAL

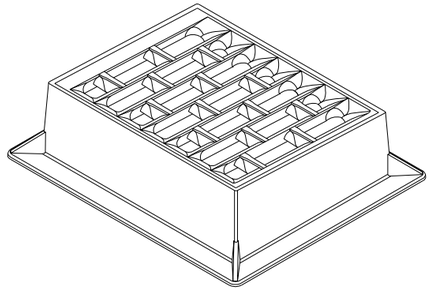
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

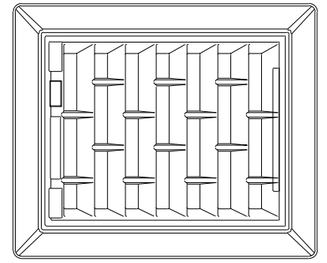
NOTE: EITHER CASTING IS ACCEPTABLE

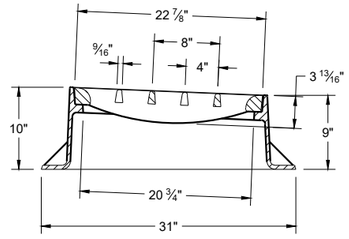


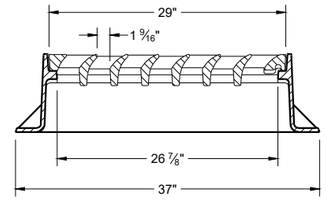


TYPE "K"

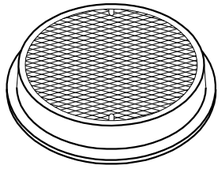


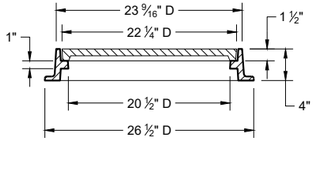




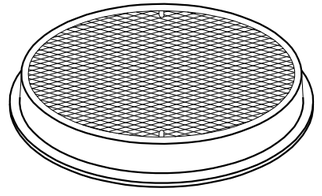


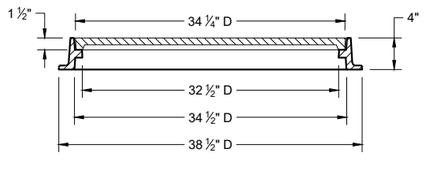
INLET COVER TYPE "BW"





TYPE "L"





TYPE "M"

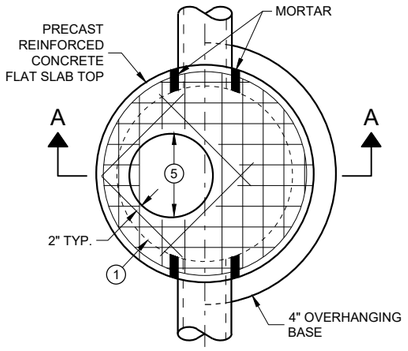
INLET COVERS TYPES BW
MANHOLE COVERS TYPES K, J, J-S, L, AND M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

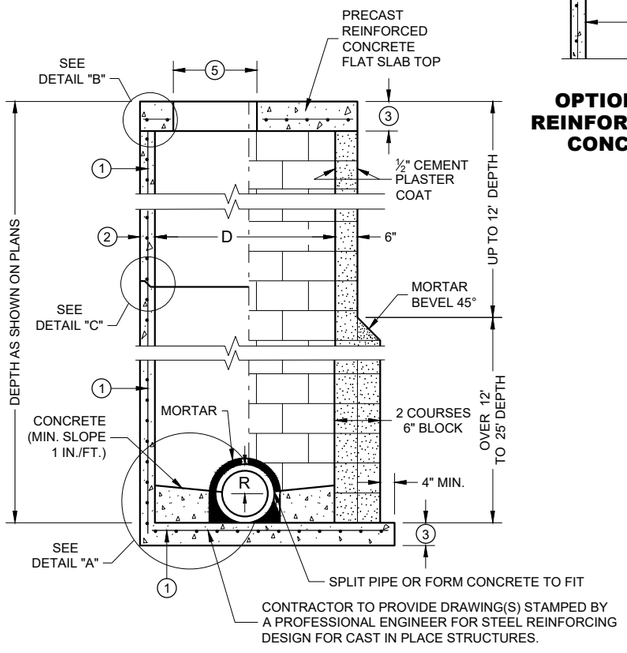
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SDD 08A05-20d



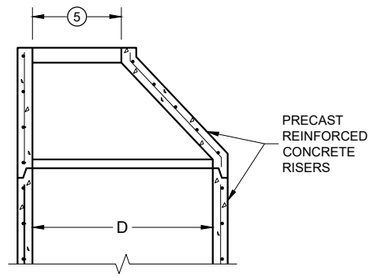
PLAN VIEW
CIRCULAR OPENING



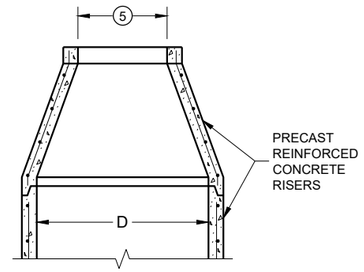
SECTION A - A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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



OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP



OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

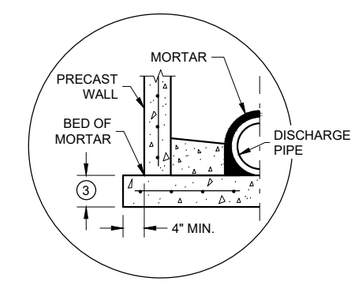
MANHOLE COVER OPENING MATRIX

OPENING SIZE (FT.) \ MANHOLE COVER TYPE	C	ALL J'S	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

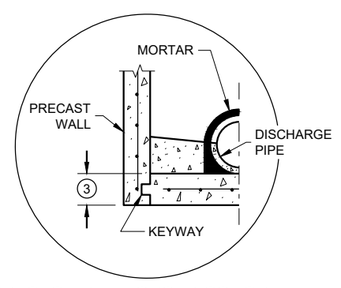
PIPE MATRIX

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES		MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
	180° SEPARATION (IN)	90° SEPARATION (IN)		
3-FT	15	12	4	6
4-FT	24	18	4	6
5-FT	36	24	5	8
6-FT	42	36	6	8
7-FT	48	36/42*	7	8
8-FT	60	42	8	8
9-FT	66	54	9	10
10-FT	72	60	10	10

*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES.
SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.

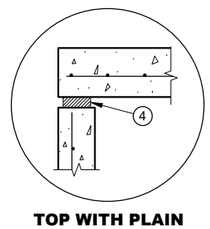


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

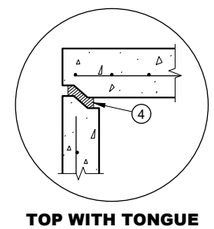


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

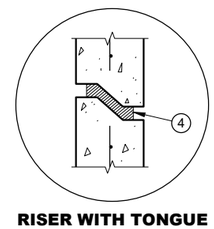
DETAIL "A"



TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B" **DETAIL "C"**

GENERAL NOTES

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

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

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

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

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½ INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

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

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

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

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

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

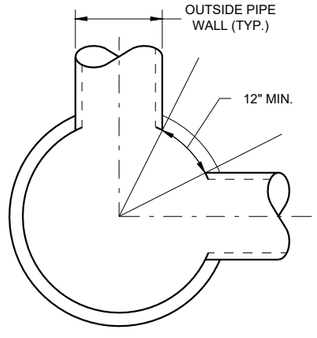
(1) FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

(2) SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES

(3) SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.

(4) JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP.).

(5) SEE MANHOLE COVER OPENING MATRIX.



MINIMUM HORIZONTAL PIPE SEPARATION

MANHOLES, 3-FT, 4-FT 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

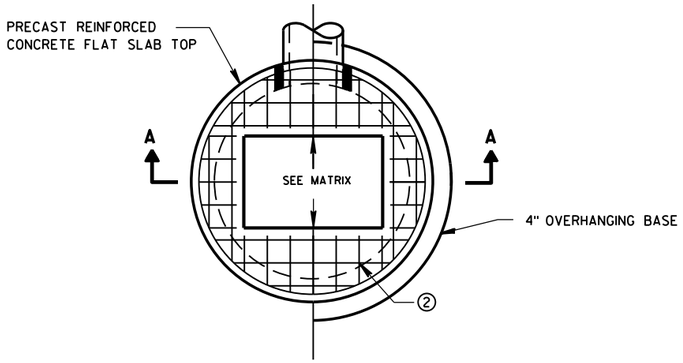
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
436
FHWA

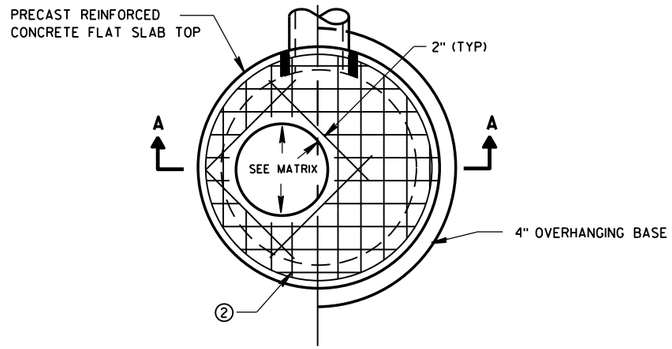
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

6

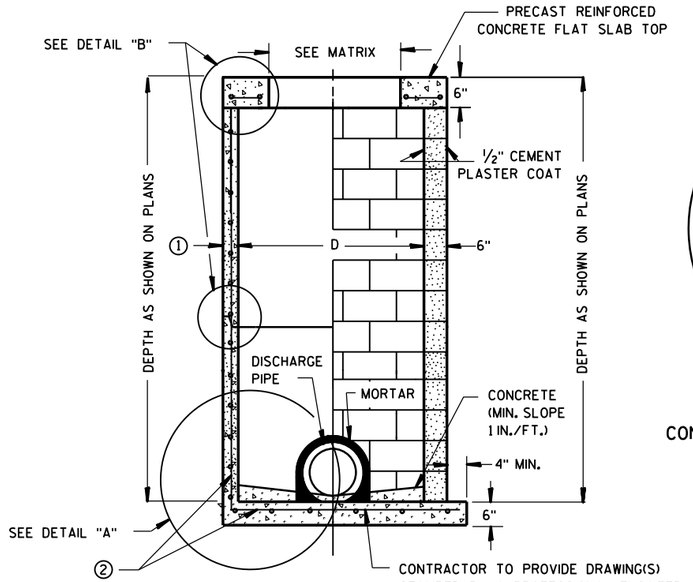
SDD 08B09 - 03



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

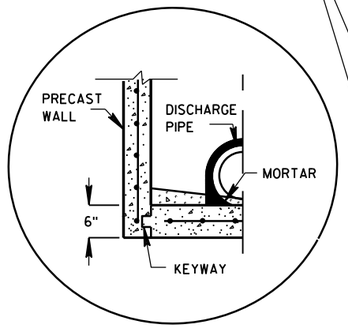


SECTION A-A

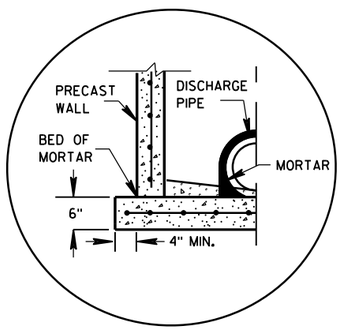
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

CIRCULAR INLETS W/ FLAT TOP

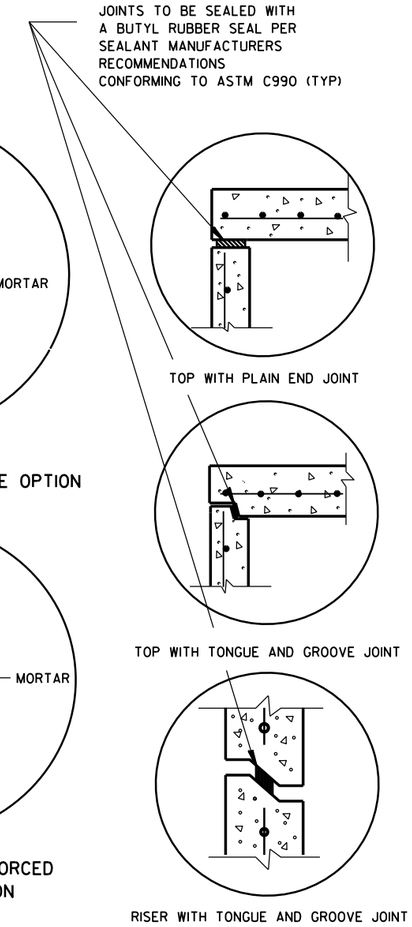


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

GENERAL NOTES

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

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

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

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

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

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

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

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

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

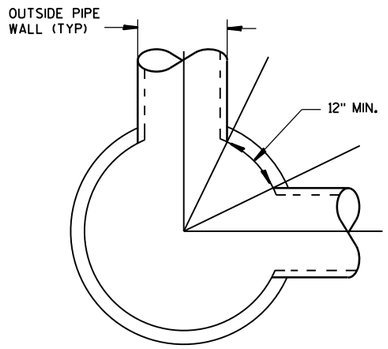
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

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

INLETS 3-FT AND 4-FT DIAMETER

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DEPARTMENT OF TRANSPORTATION

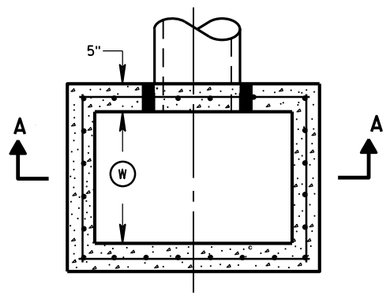
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Sept., 2016 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS | ENT
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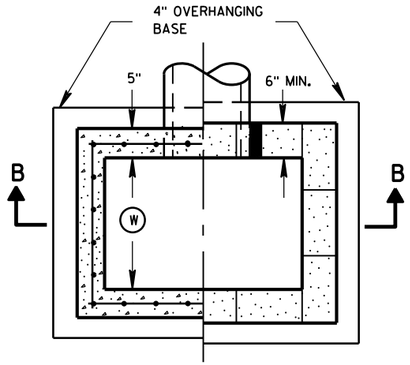
S.D.D. 8 C 6-2

6

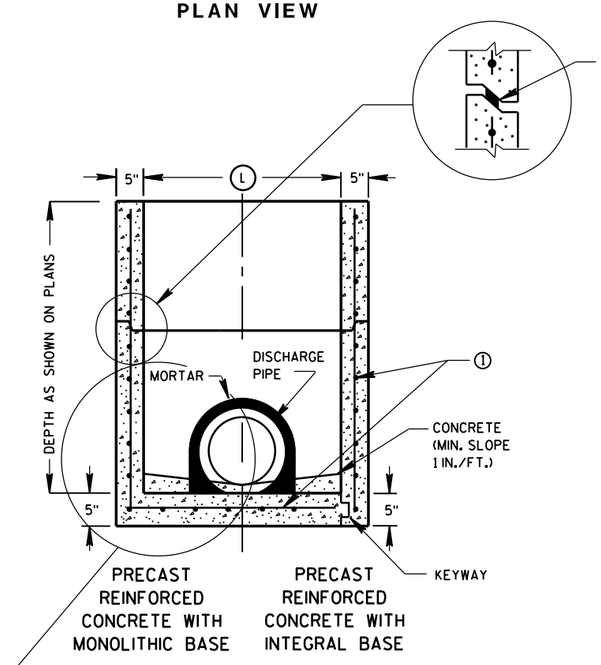
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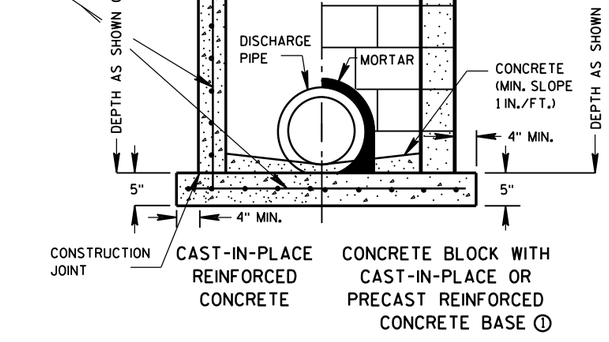
PLAN VIEW



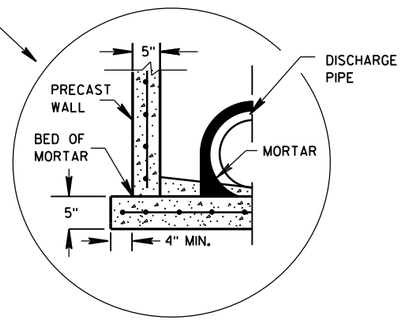
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

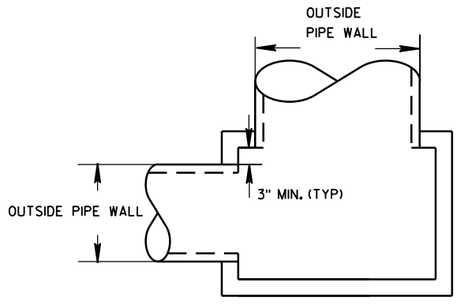
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



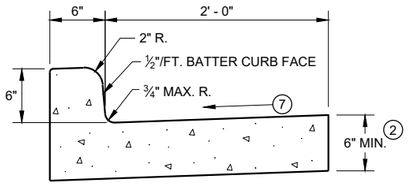
DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

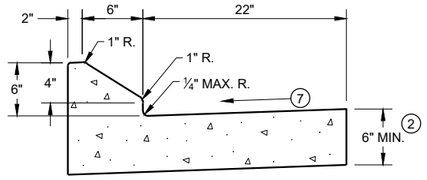
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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Sept., 2016
DATE
/S/ Rodney Taylor
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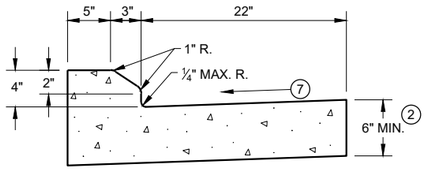
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S.D.D. 8 C 7-2



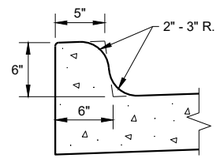
TYPES A (1) & D



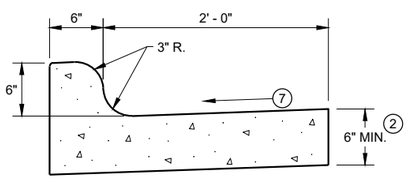
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

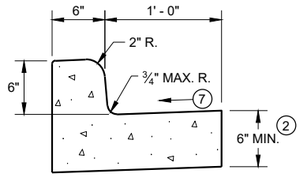


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



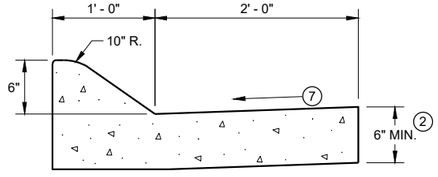
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

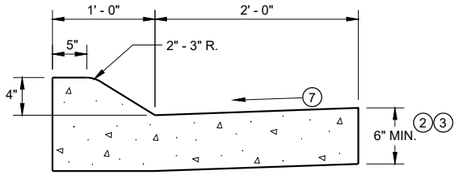


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

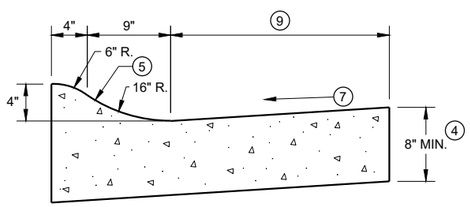


6" SLOPED CURB TYPES A (1) & D



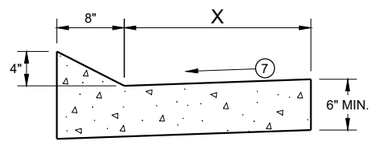
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

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

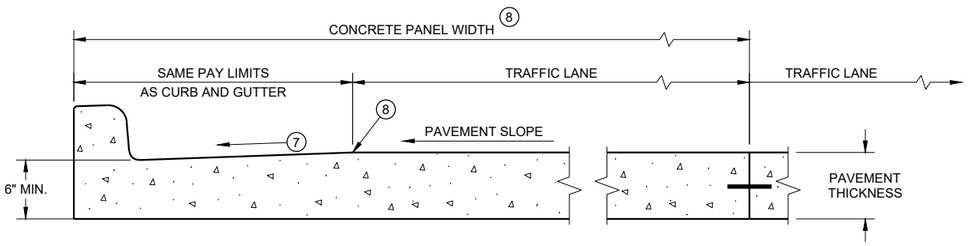


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

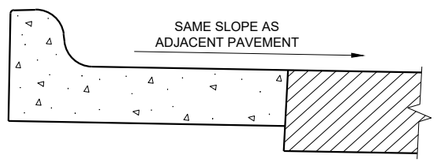
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

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

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

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

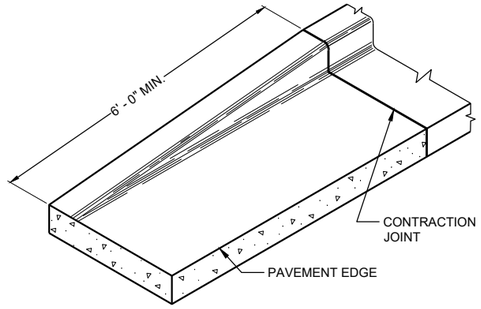
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

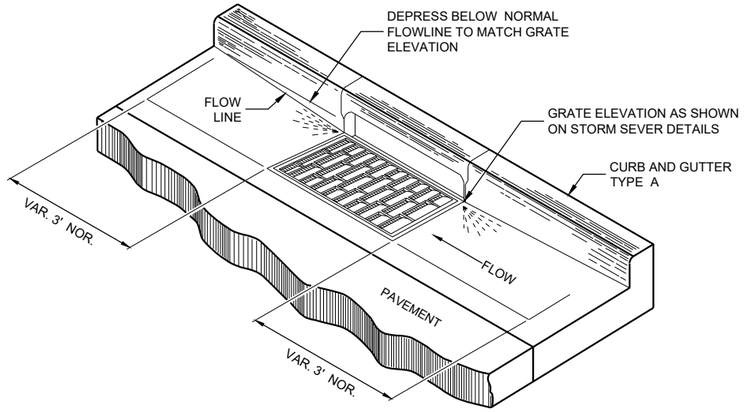
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D01 - 23a



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

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

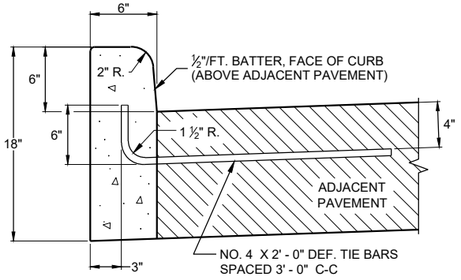
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

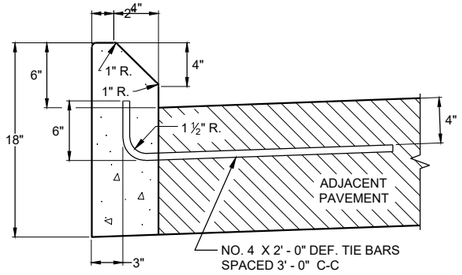
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(10) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

(11) PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

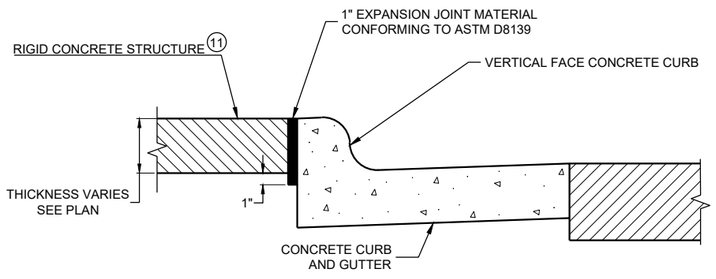


TYPES A(1) & D

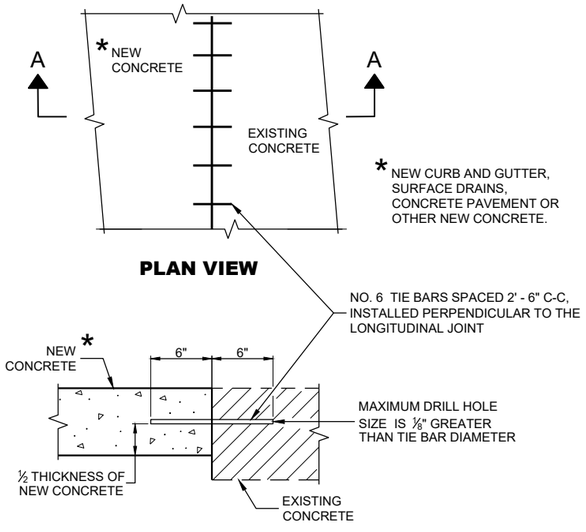


TYPES G(1) & J

CONCRETE CURB



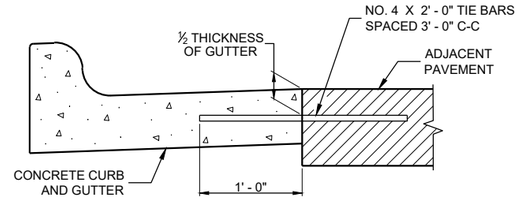
EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE(11)



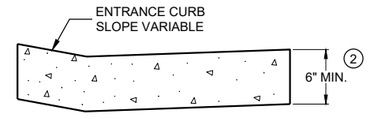
PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION(1)



DRIVEWAY ENTRANCE CURB(10)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

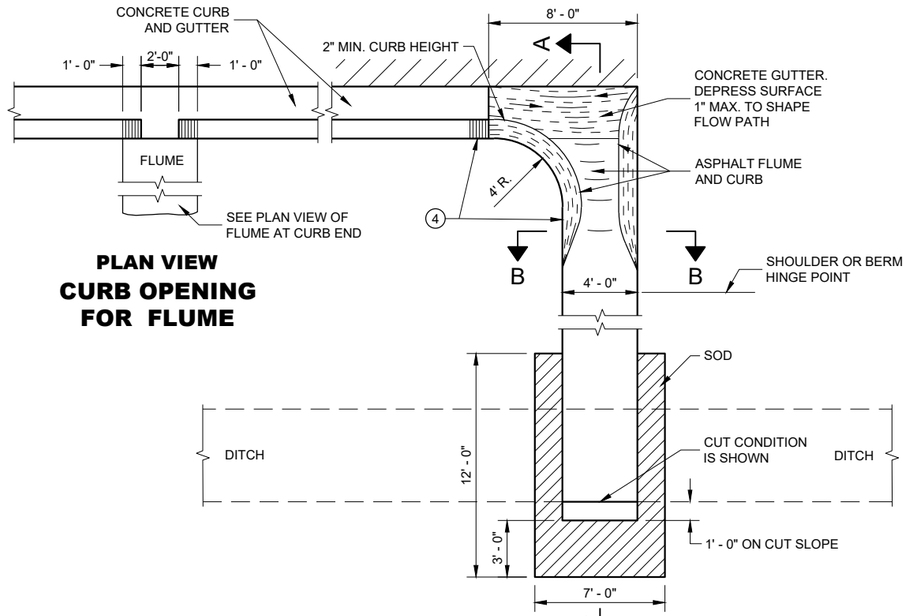
FHWA

6

SDD08D01 - 23b

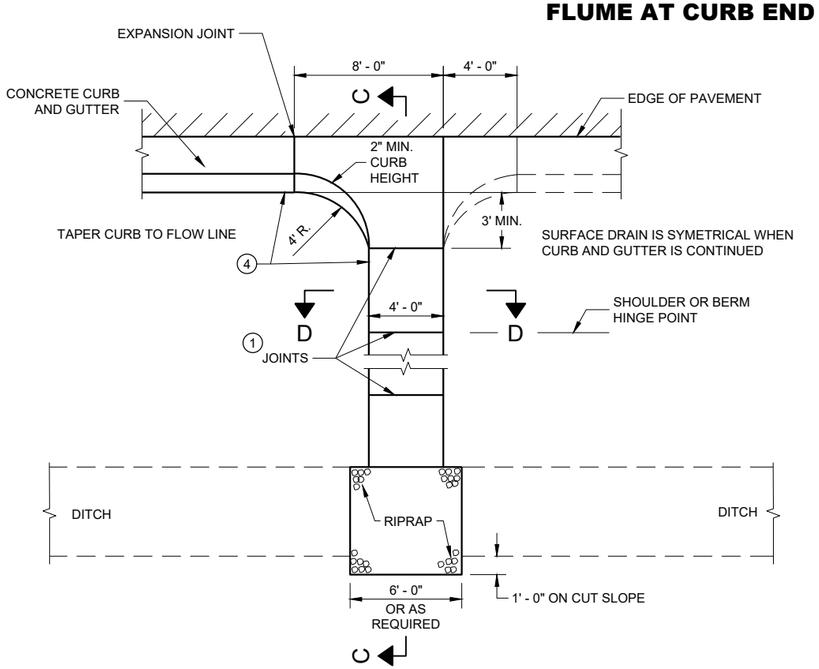
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



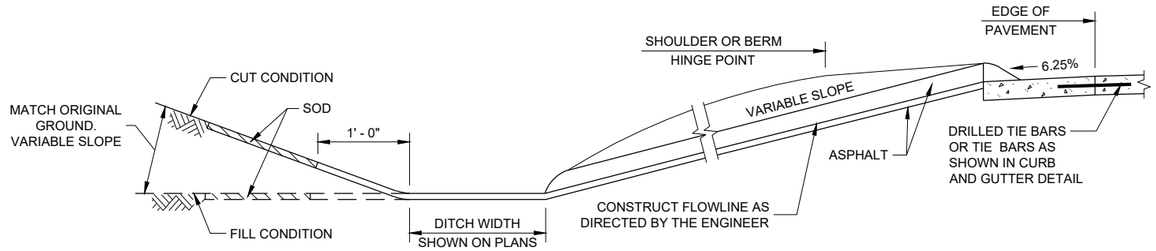
PLAN VIEW
CONCRETE SURFACE DRAIN

GENERAL NOTES

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

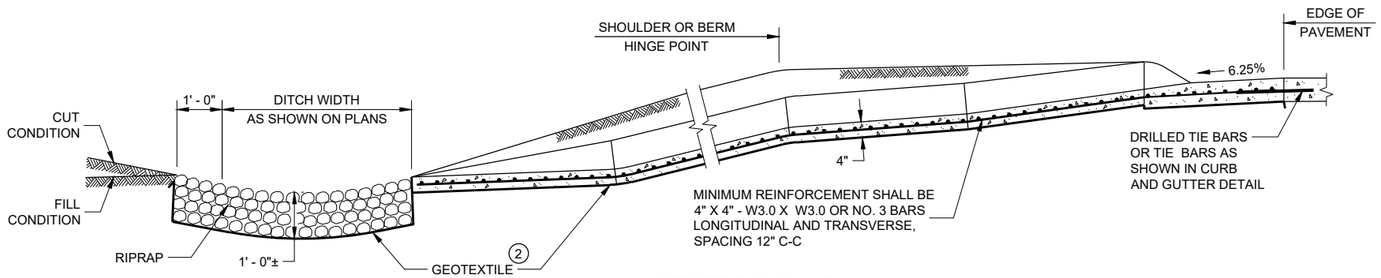
4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

1. JOINTS SHALL BE ⅛" TO ¼" WIDE BY 1½" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
2. GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
3. CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
4. ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.

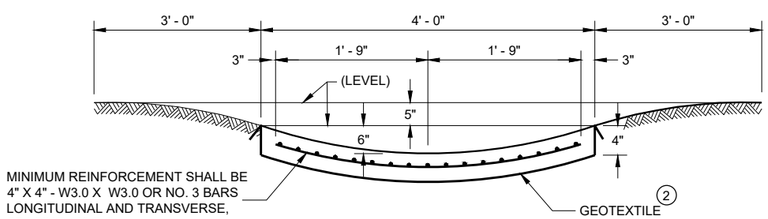


SECTION A - A

SECTION B - B



SECTION C - C



SECTION D - D

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

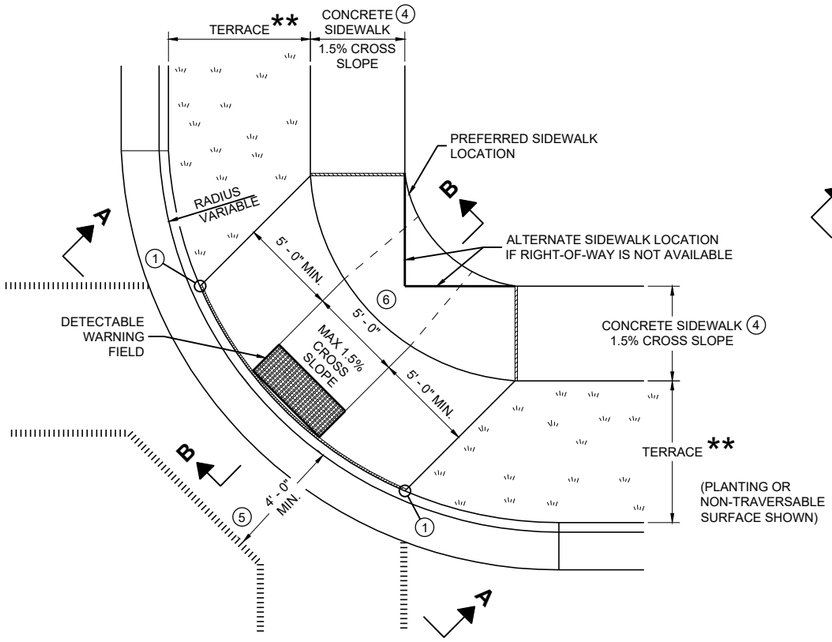
FHWA

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SDD 08D04 - 07

6

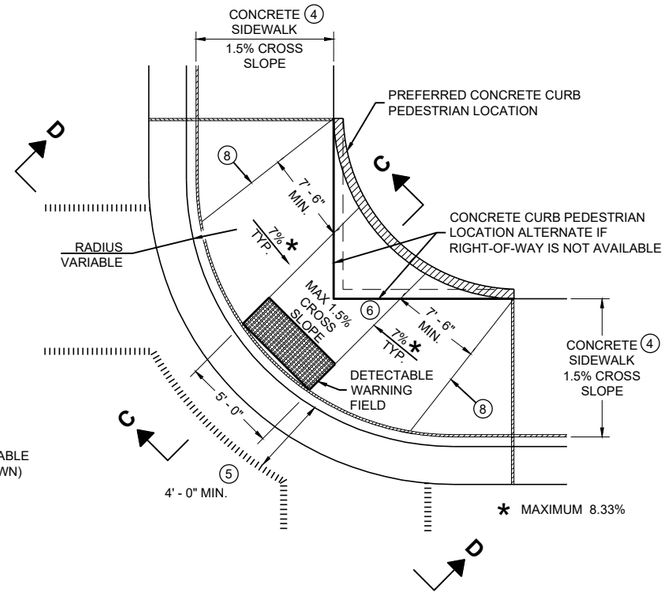
SDD 08D04 - 07



PLAN VIEW

CURB RAMP TYPE 1

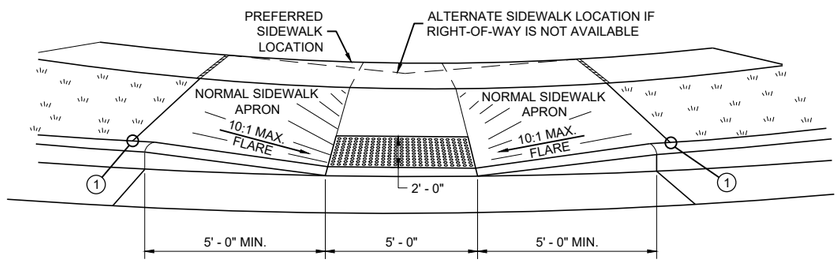
(CENTER OF CORNER RADIUS)



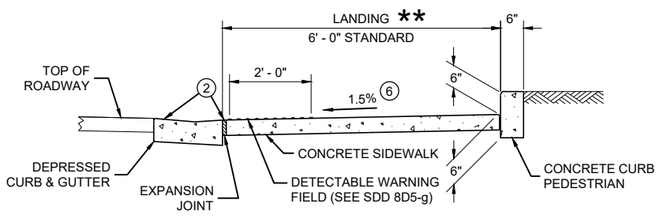
PLAN VIEW

CURB RAMP TYPE 1 - A

(NO TERRACE)

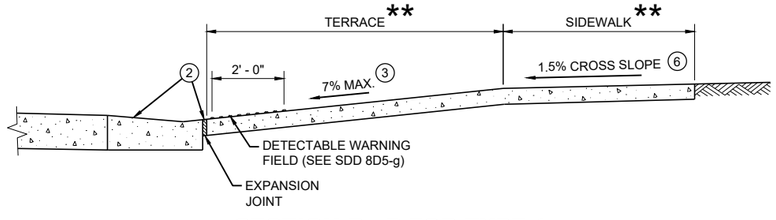


VIEW A - A FOR TYPE 1

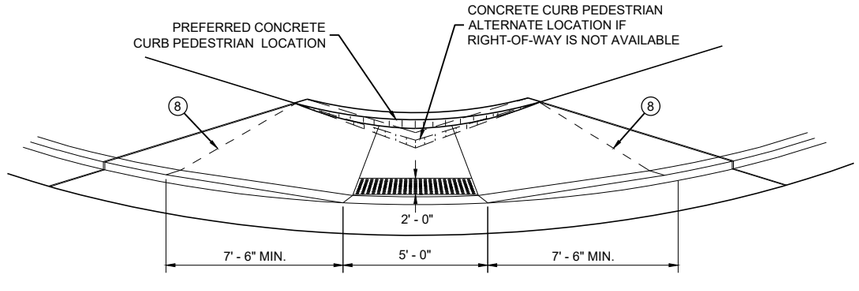


SECTION C - C FOR TYPE 1 - A

** 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. 4 FOOT WIDTH IS MEASURED FROM THE FLANGE LINE

(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.

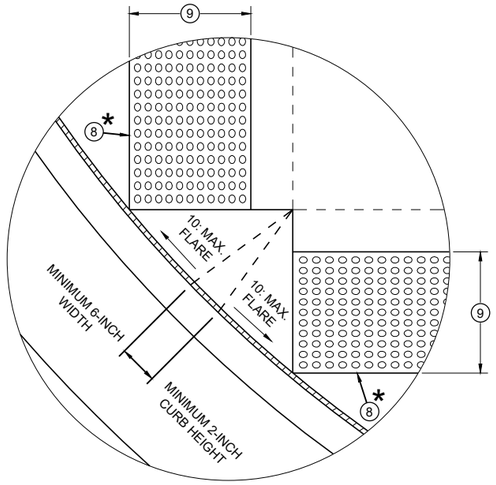
LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

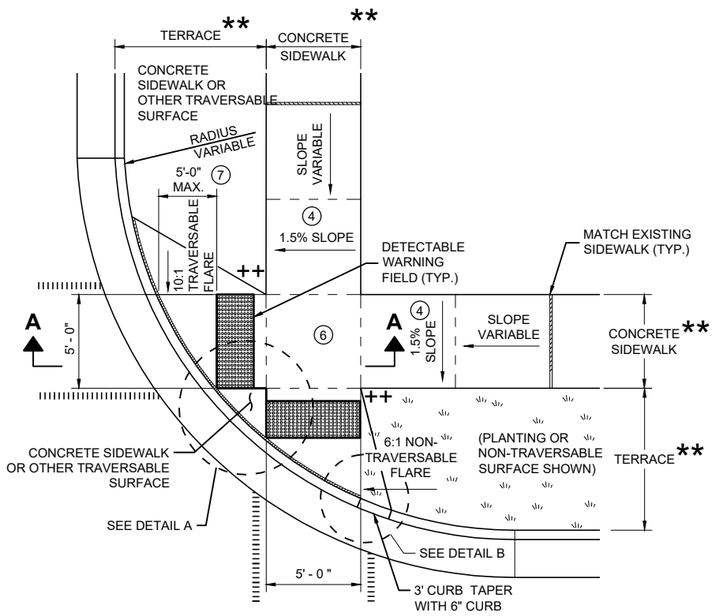
CURB RAMPS TYPE 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D05-21a



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.

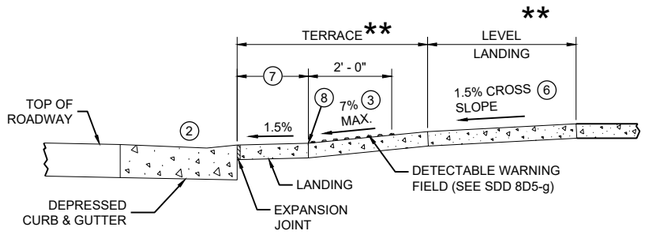
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(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.

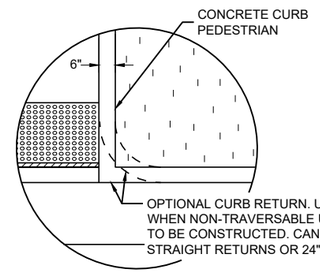


SECTION A - A FOR TYPE 2

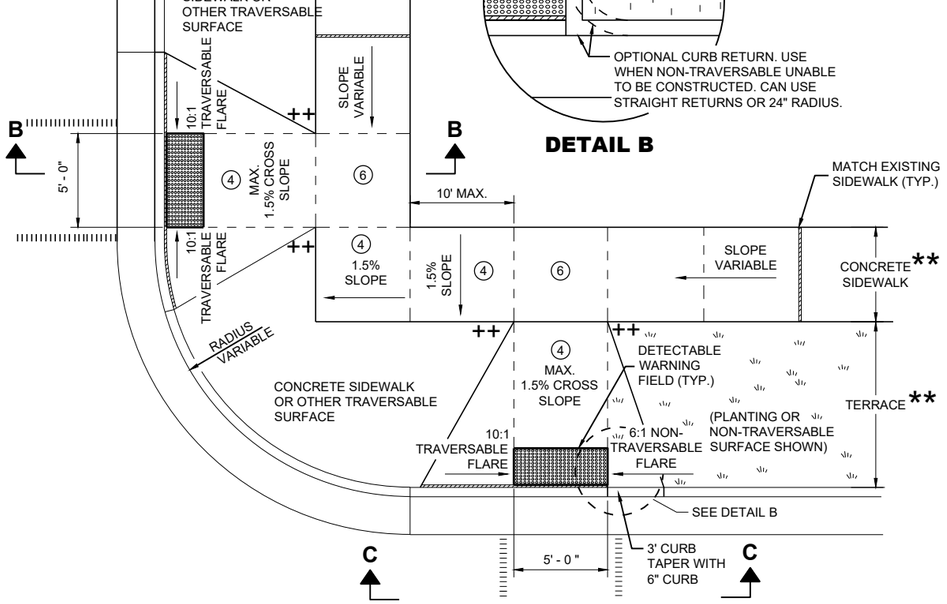
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

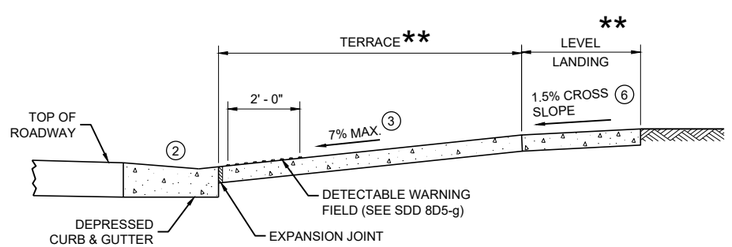
++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



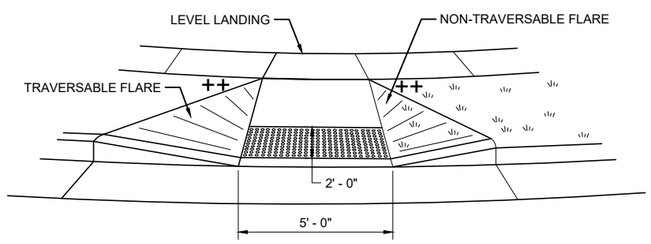
DETAIL B



PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3

LEGEND

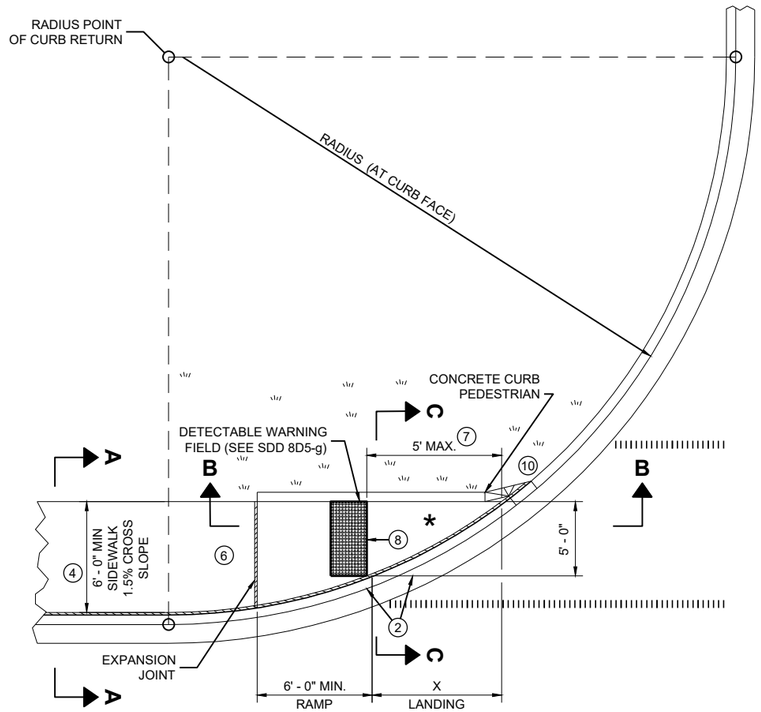
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

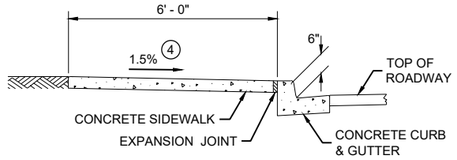


PLAN VIEW

CURB RAMP TYPE 4A

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"

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.

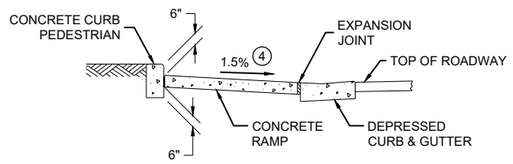
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

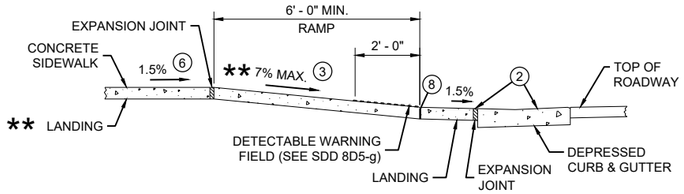
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)

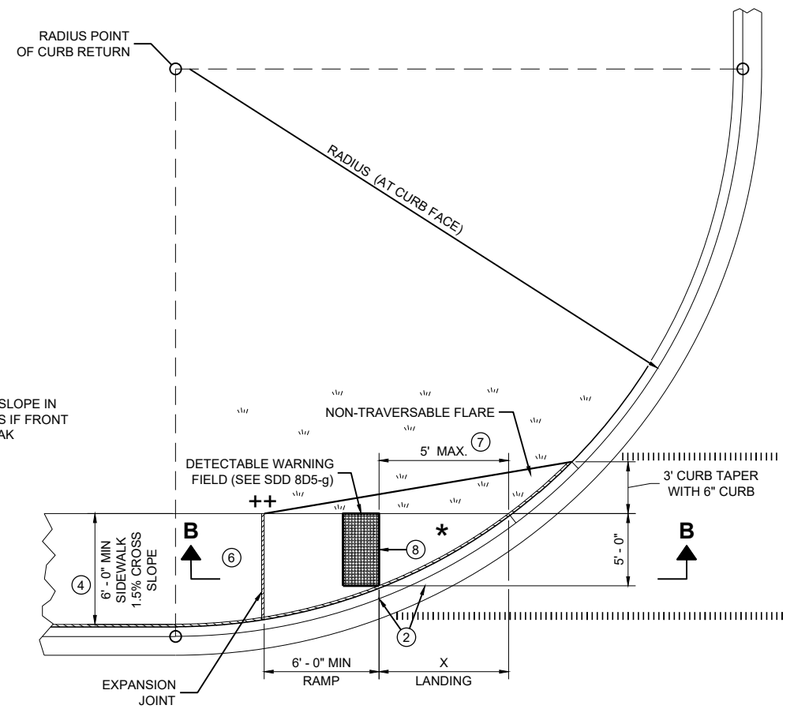


SECTION C - C FOR TYPE 4A



SECTION B - B FOR TYPE 4A AND TYPE 4A1

** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

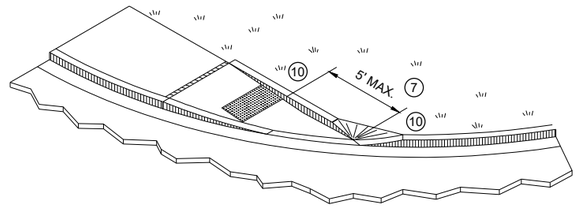


* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

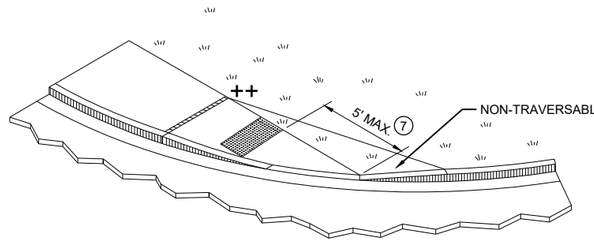
PLAN VIEW

CURB RAMP TYPE 4A1

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



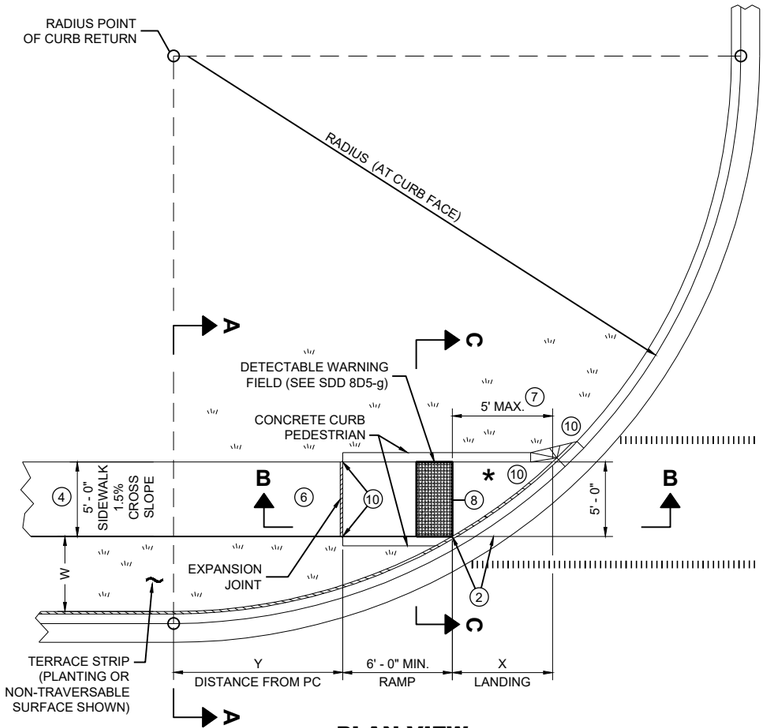
ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

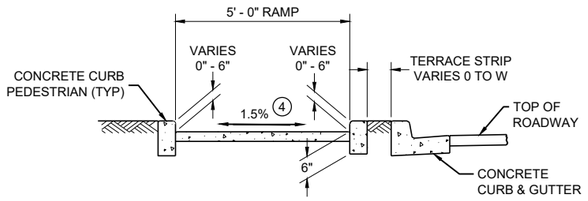
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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 1/4"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 1/4"	3' - 0 1/4"						
15 FEET	4' - 6 3/4"	2' - 1 3/4"	3' - 9"	3' - 5 3/4"	3' - 1 1/4"	4' - 6"	2' - 6 3/4"	5' - 4 1/2"	2' - 1"	6' - 1"	1' - 8"	6' - 8 1/2"	1' - 3 1/4"	7' - 2 1/2"	0' - 10 3/4"	7' - 7 1/4"
20 FEET			4' - 11 1/2"	5' - 1 3/4"	4' - 3 1/4"	6' - 5 1/2"	3' - 8 3/4"	7' - 7"	3' - 3"	8' - 6 1/2"	2' - 10"	9' - 4 1/2"	2' - 5 1/2"	10' - 1 1/4"	2' - 1 1/4"	10' - 9"
30 FEET									4' - 10 3/4"	12' - 5 3/4"	4' - 5 1/2"	13' - 7 3/4"	4' - 0 3/4"	14' - 8 1/2"	3' - 8 1/2"	15' - 8 1/4"
40 FEET															4' - 10 3/4"	19' - 8 1/4"

INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



SECTION C - C FOR TYPE 4B

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

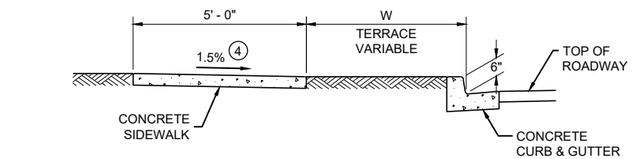
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

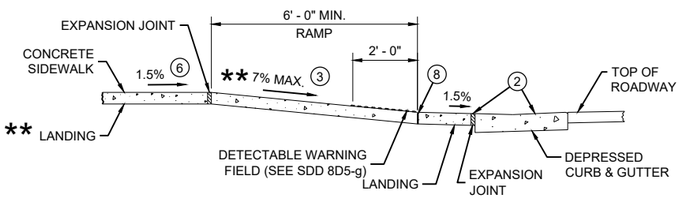
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

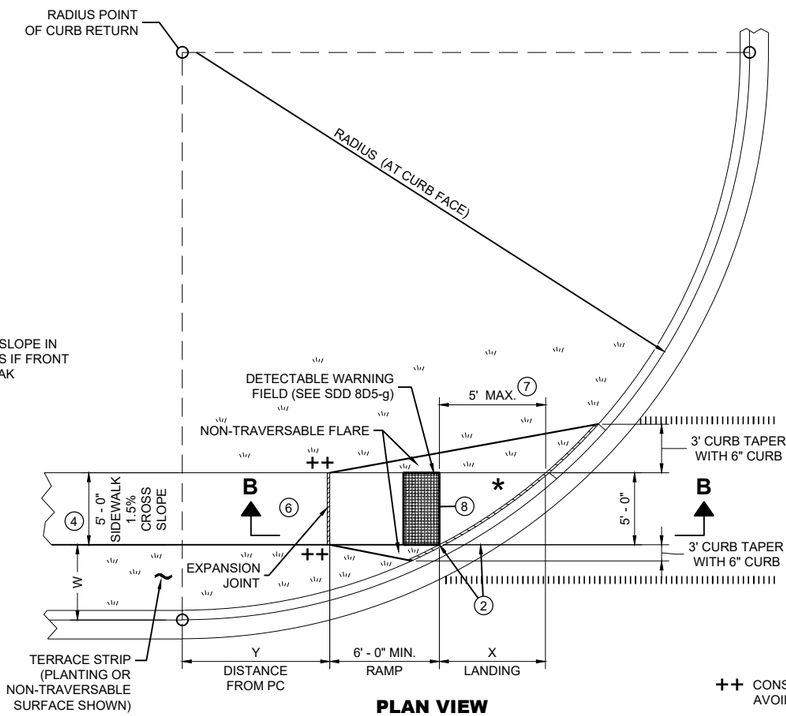


SECTION A - A FOR TYPE 4B



SECTION B - B FOR TYPE 4B AND TYPE 4B1

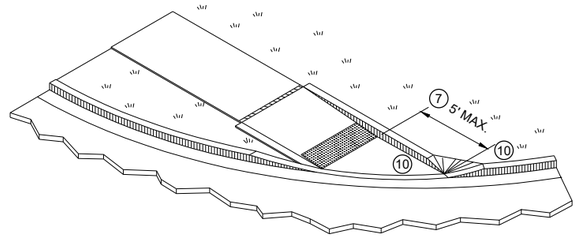
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED



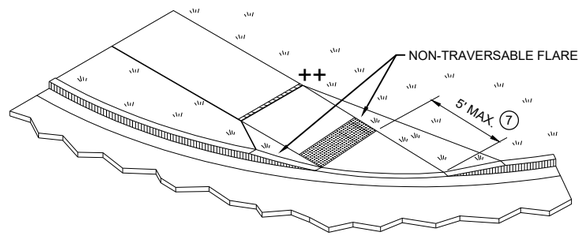
PLAN VIEW
CURB RAMP TYPE 4B1

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



ISOMETRIC VIEW FOR TYPE 4B



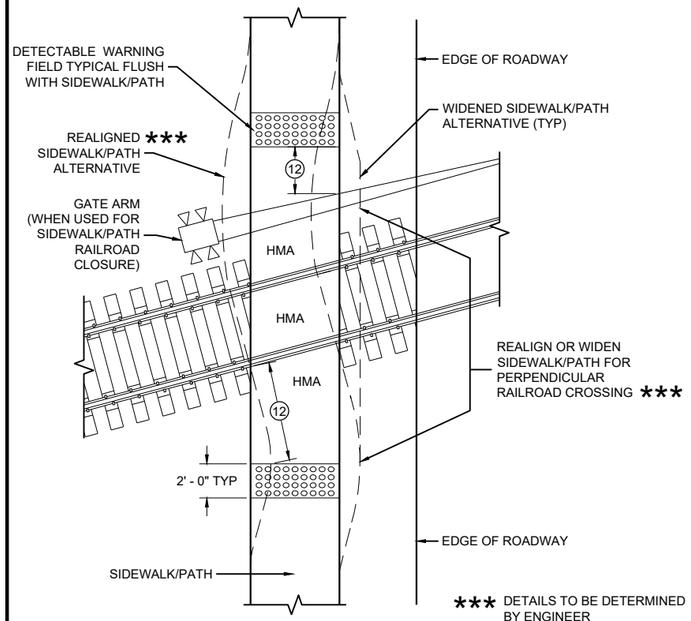
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

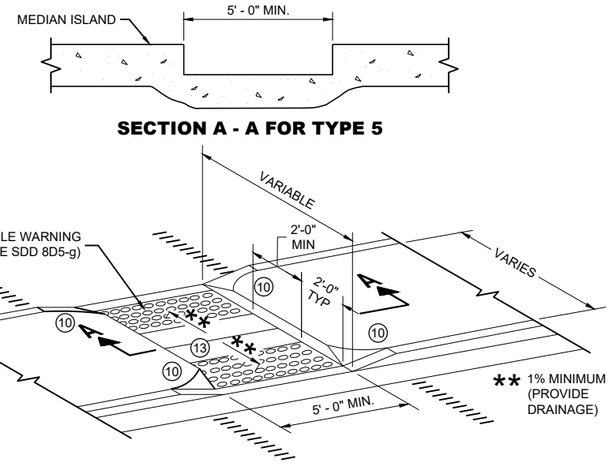
6

SDD 08D05-21d



CURB RAMP TYPE 8

DETECTABLE WARNINGS FOR SIDEWALKS OR SHARED USE PATHS AT RAILROAD CROSSINGS



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 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.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

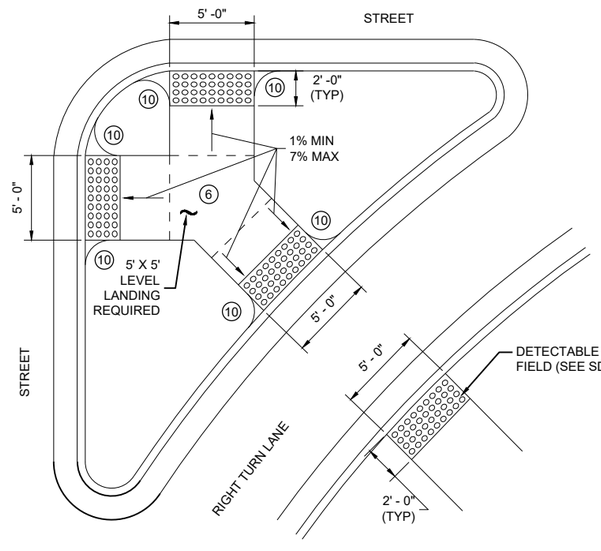
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(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/PATH. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD TRACK IS 15 FEET MAXIMUM AND 12 FEET MINIMUM, 15 FEET TYPICAL 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

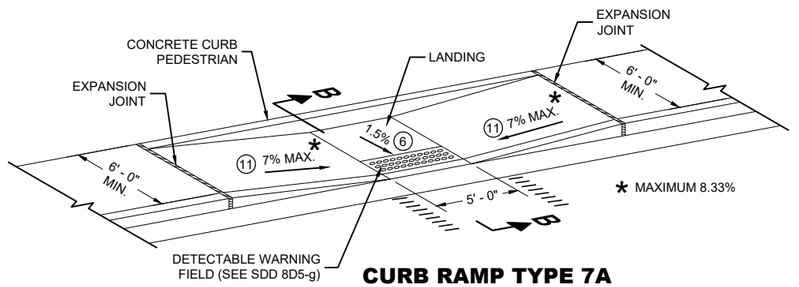
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



CURB RAMP TYPE 6

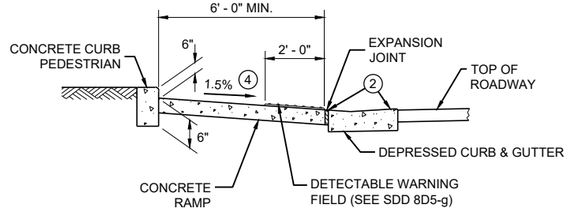
DETECTABLE WARNING AT ISLANDS

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS

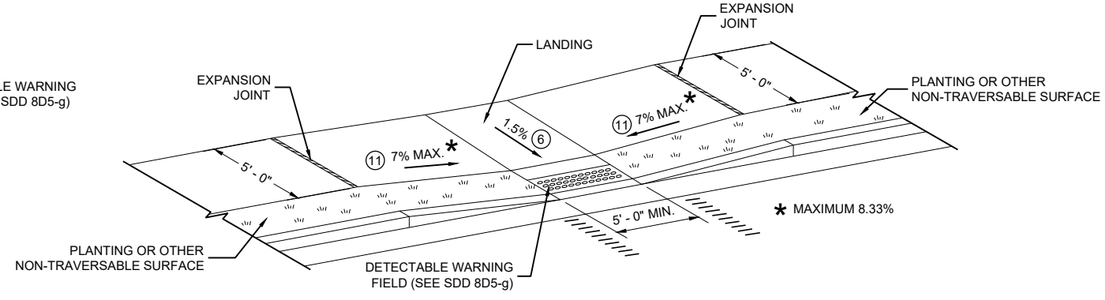


CURB RAMP TYPE 7A

FOR INTERSECTIONS AND MID BLOCK CROSSINGS



SECTION B - B FOR TYPE 7A



CURB RAMP TYPE 7B

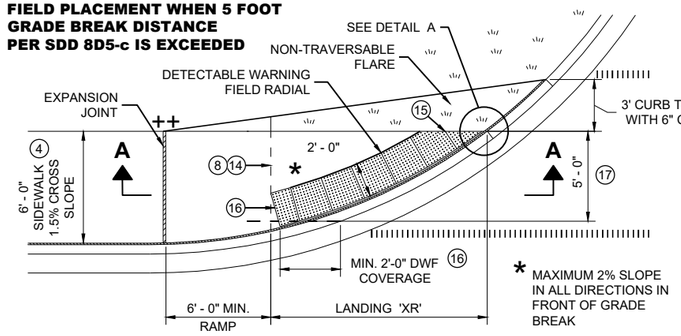
FOR INTERSECTIONS AND MID BLOCK CROSSINGS

CURB RAMPS TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

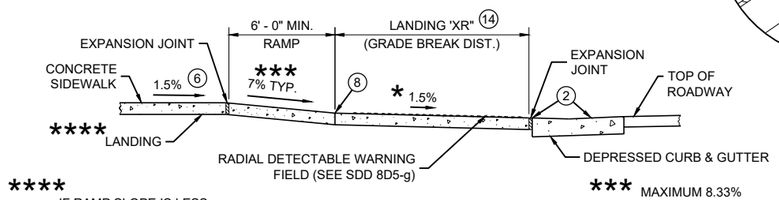
SDD 08D05-21e

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



PLAN VIEW

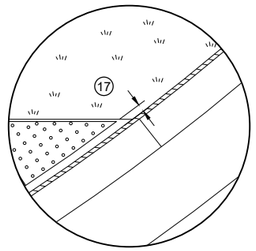
CURB RAMP TYPE 4A1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION A - A FOR TYPE 4A1



DETAIL A

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.

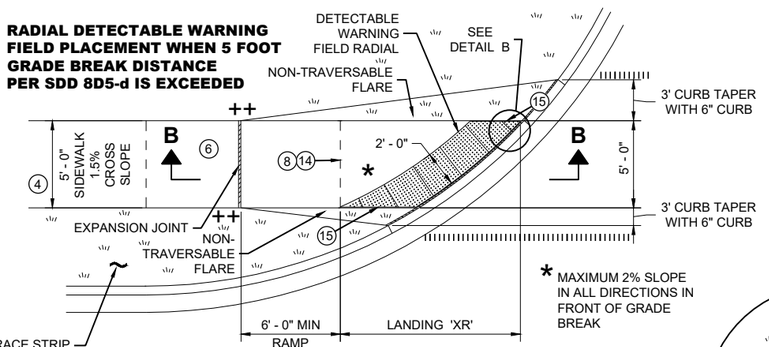
(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(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.

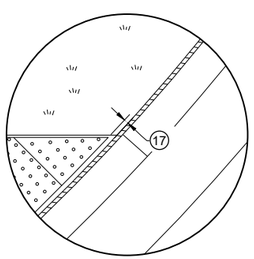
(17) A MAXIMUM 3 INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED

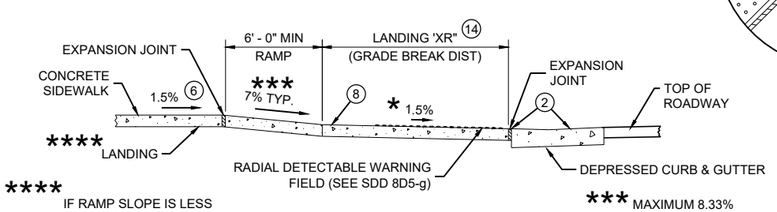


PLAN VIEW

CURB RAMP TYPE 4B1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL B

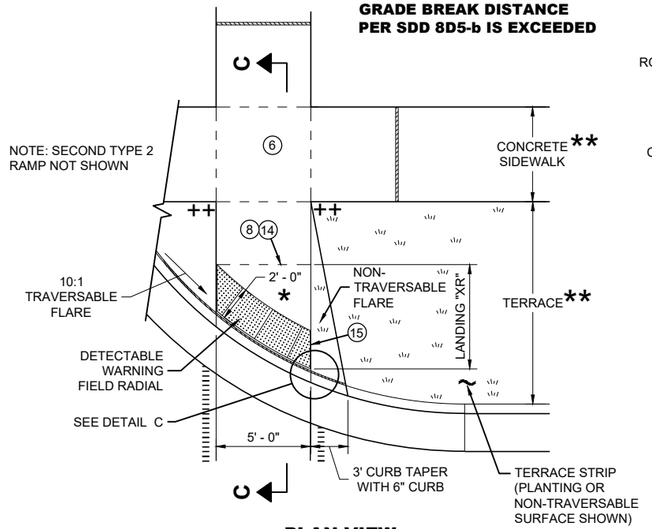


**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

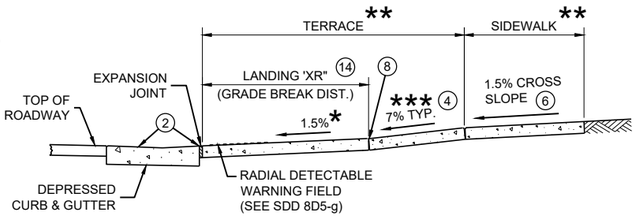
SECTION B - B FOR TYPE 4B1

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED

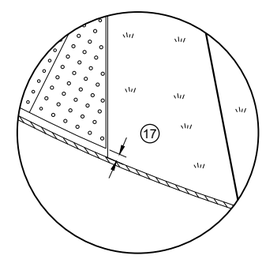


PLAN VIEW

CURB RAMP TYPE 2
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)



SECTION C - C FOR TYPE 2



DETAIL C

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

CURB RAMPS
RADIAL DETECTABLE WARNING

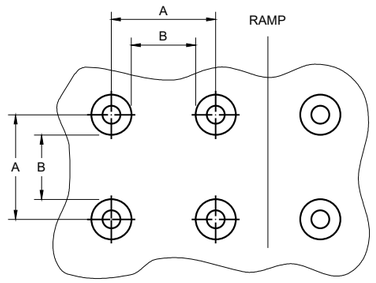
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

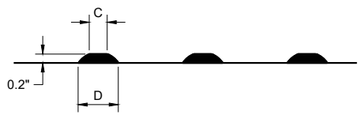
SDD 08D05-21f

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

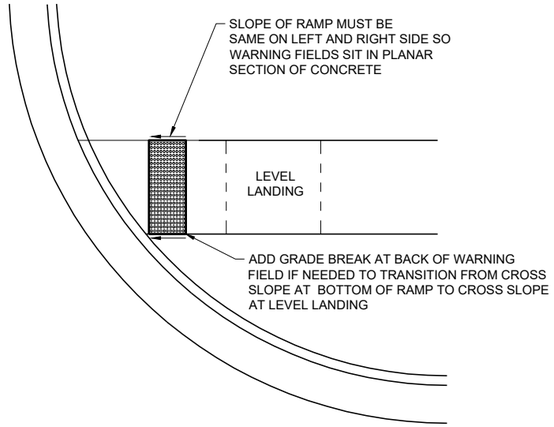
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



PLAN VIEW



ELEVATION VIEW



DETECTABLE WARNING FIELD
PLANAR INSTALLATION

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.

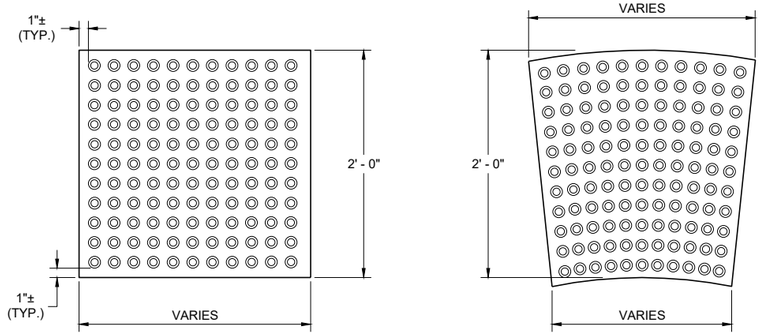
FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. 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.

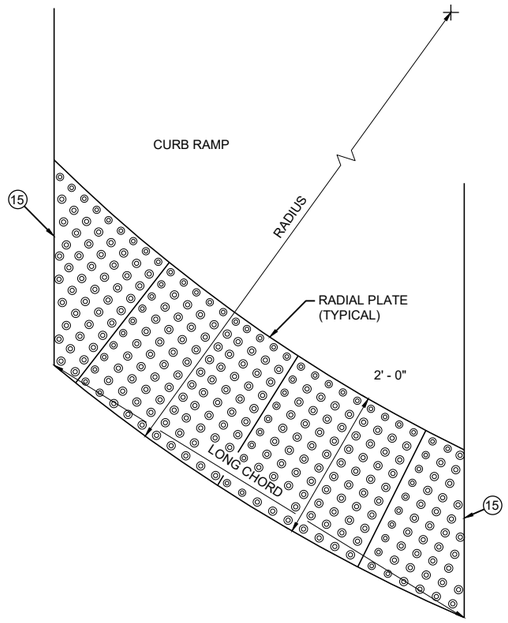
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



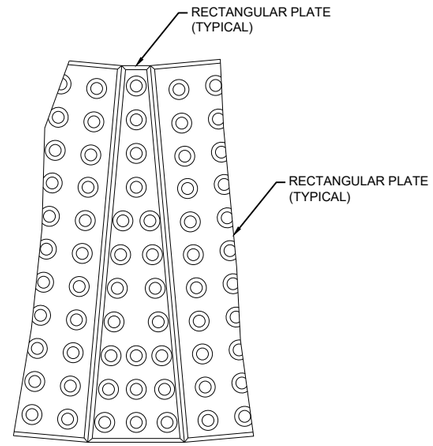
RECTANGULAR PLATES

RADIAL PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)



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

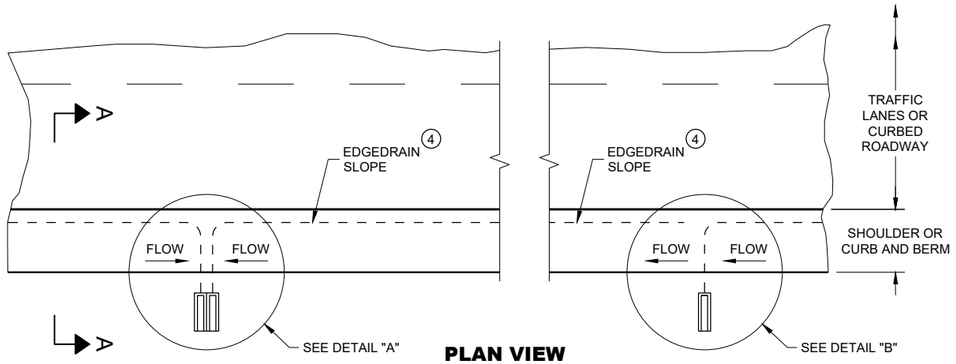
APPROVED

July 2023 — DATE

/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

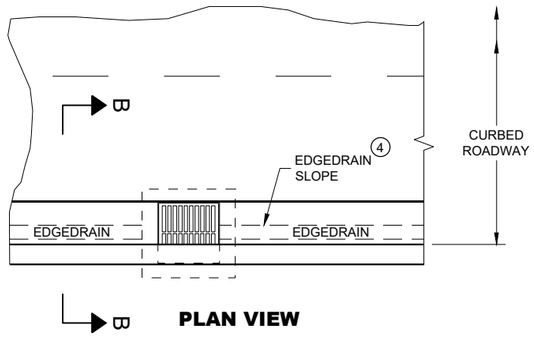
FHWA

6
SDD 08D05-21g



PLAN VIEW

ROADWAY WITH SHOULDERS OR CURBS
(EDGEDRAIN CONNECTS TO ROADSIDE) (2)



PLAN VIEW

ROADWAY WITH CURBS
(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)

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) UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:

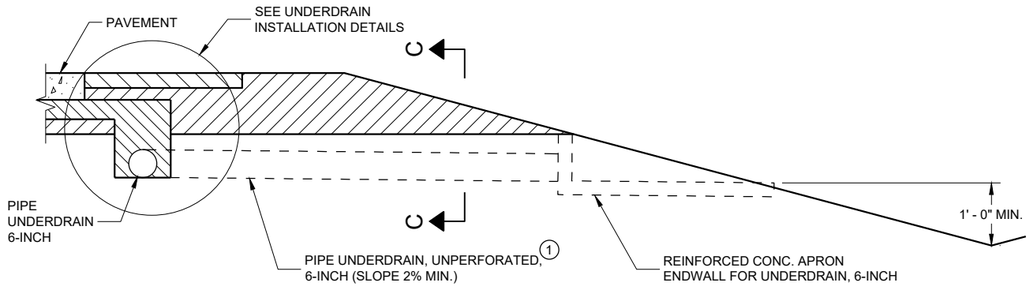
POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.

TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM D 3034, SDR 23.5 PVC SEWER PIPE.

(2) MAXIMUM SPACING OF EDGEDRAIN OUTLETS SHALL BE 250 FEET UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.

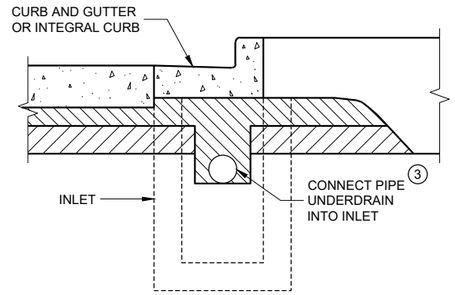
(3) EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.

(4) EDGEDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF ROADWAY.



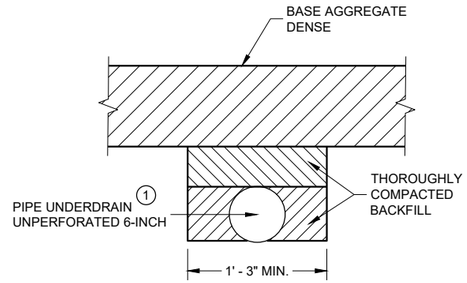
SECTION A - A

RURAL CROSS SECTION



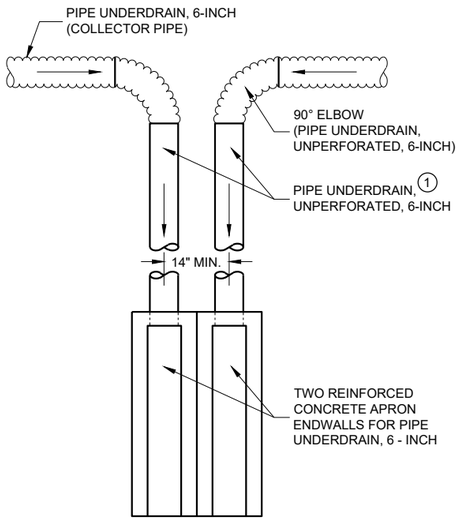
SECTION B - B

URBAN CROSS SECTION

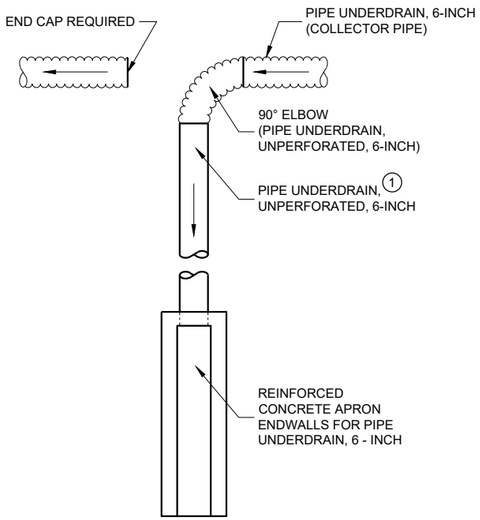


SECTION C - C

TRENCH FOR OUTFALL PIPE

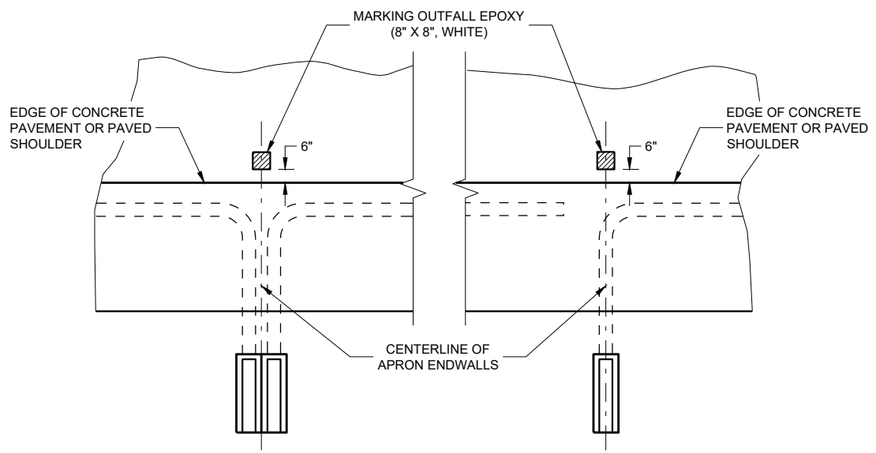


DETAIL "A"
TO BE USED AT LOW POINT LOCATIONS



DETAIL "B"
TO BE USED AT INTERMEDIATE LOCATIONS

TYPICAL DRAIN OUT DETAILS



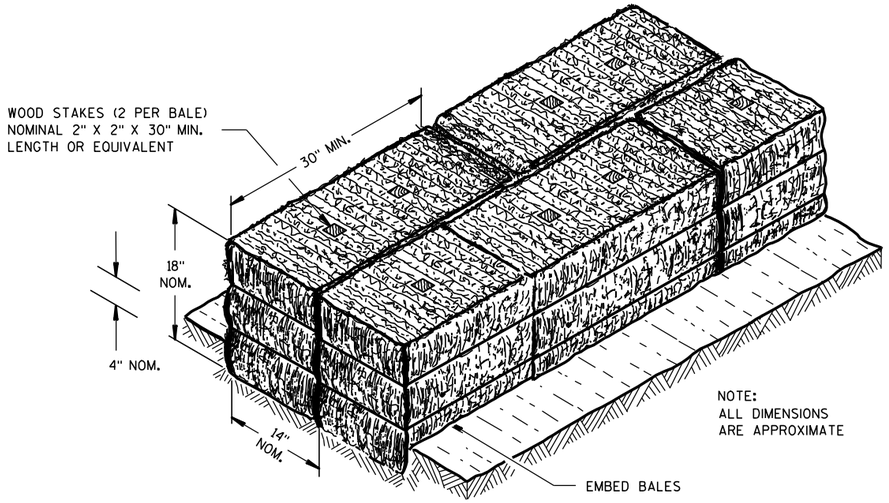
LOW POINT LOCATIONS — INTERMEDIATE LOCATIONS

PAVEMENT MARKINGS FOR OUTFALL MARKERS

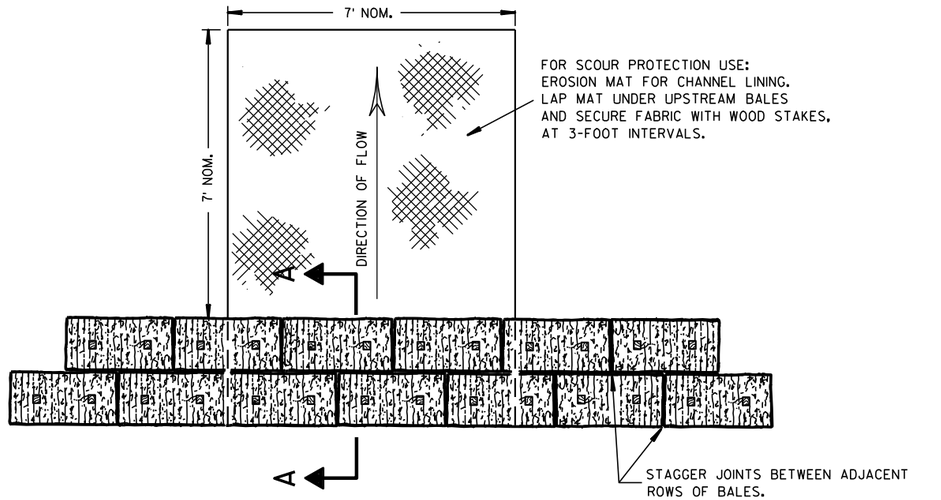
EDGEDRAIN OUTLET AND OUTFALL MARKERS

6

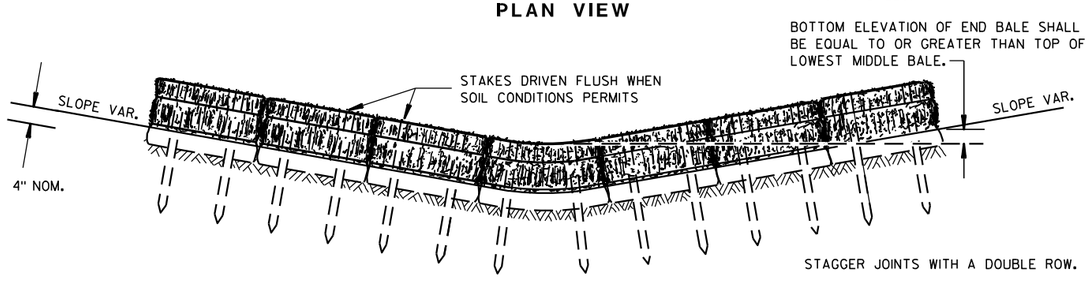
SDD08D15 - 05a



SECTION A-A



PLAN VIEW



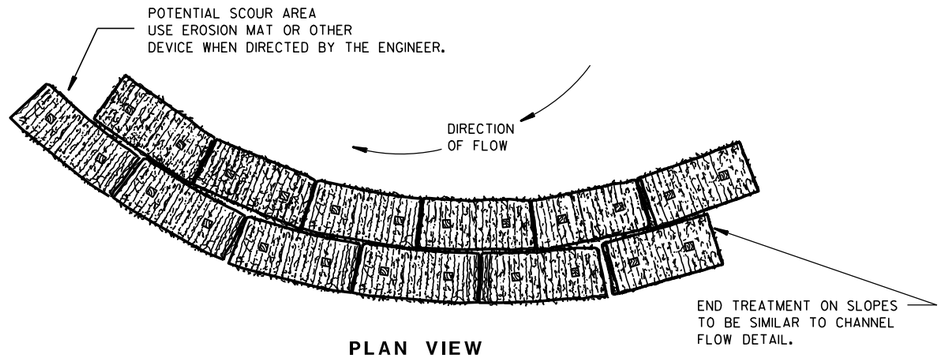
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

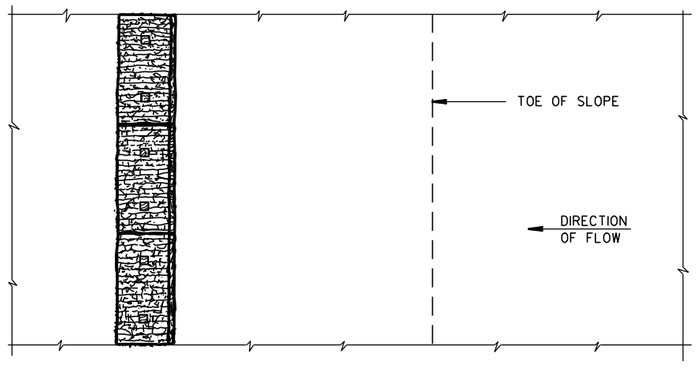
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

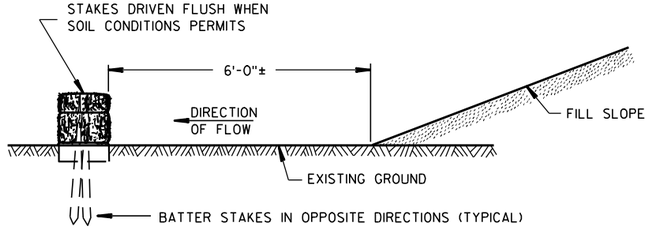


PLAN VIEW

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

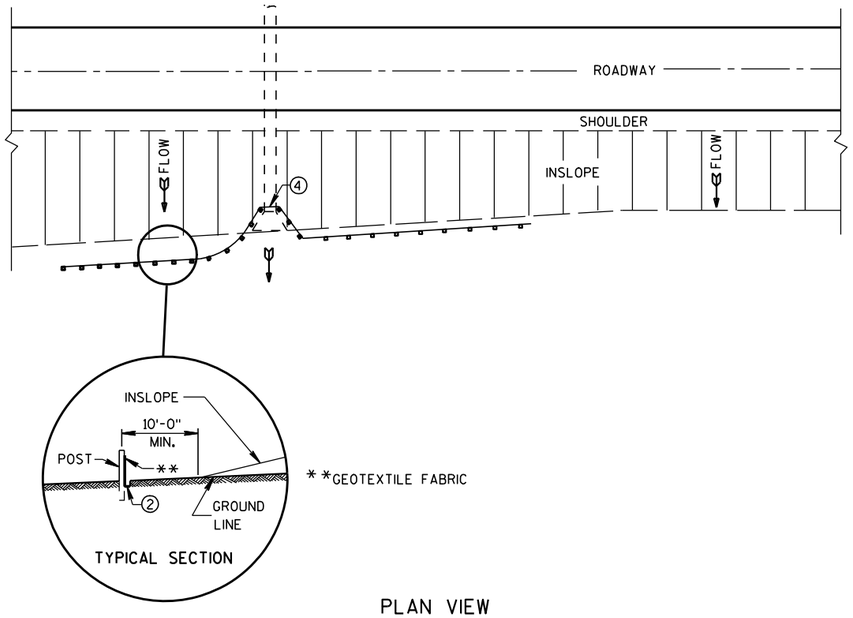
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

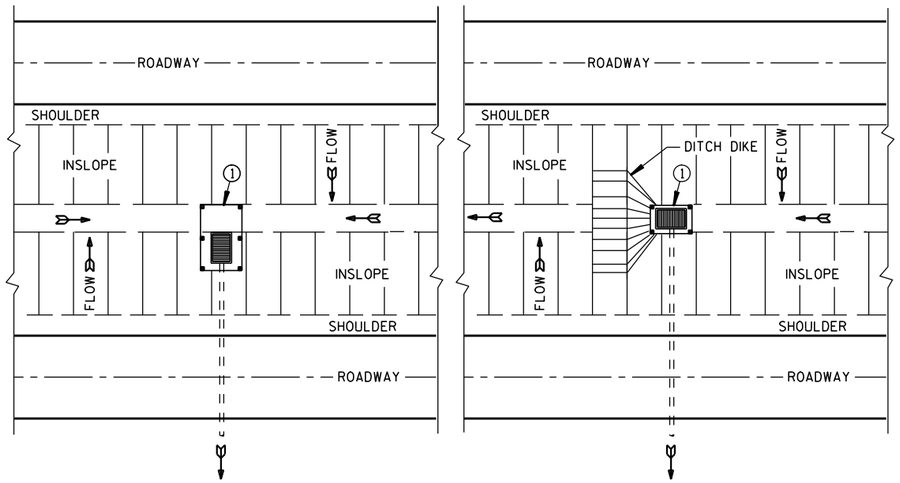
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



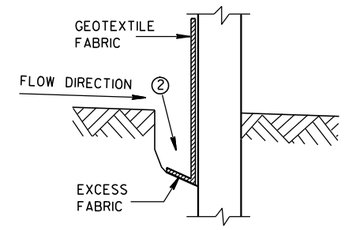
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

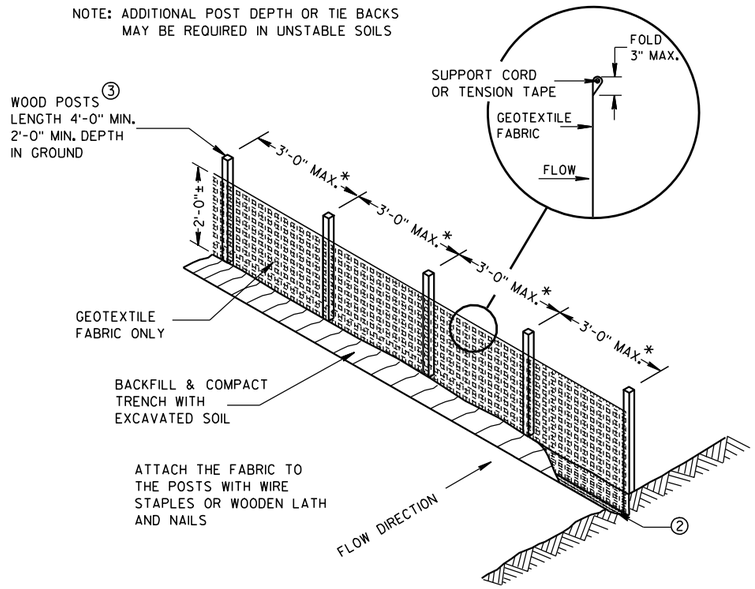
GENERAL NOTES

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

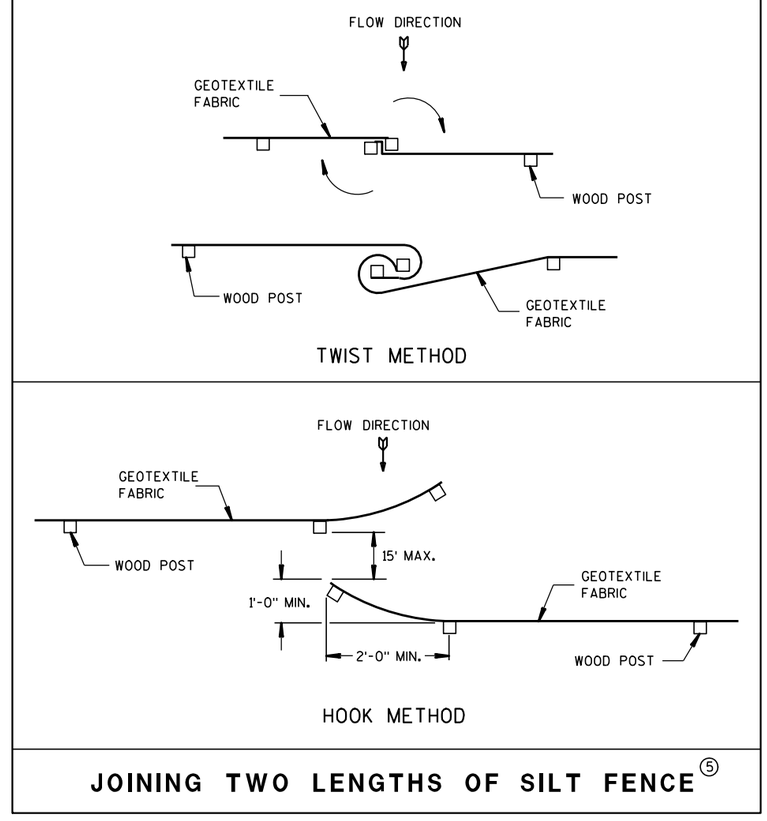
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL 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.



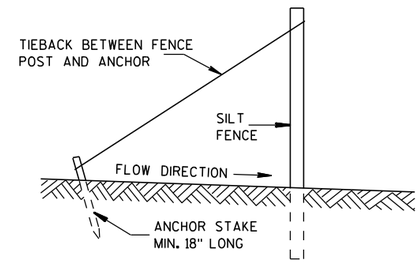
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

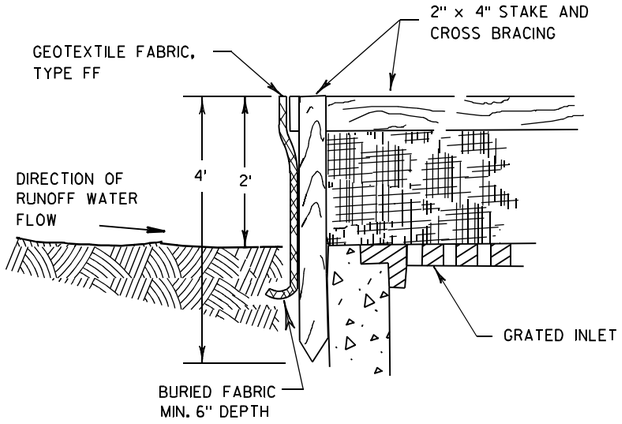
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

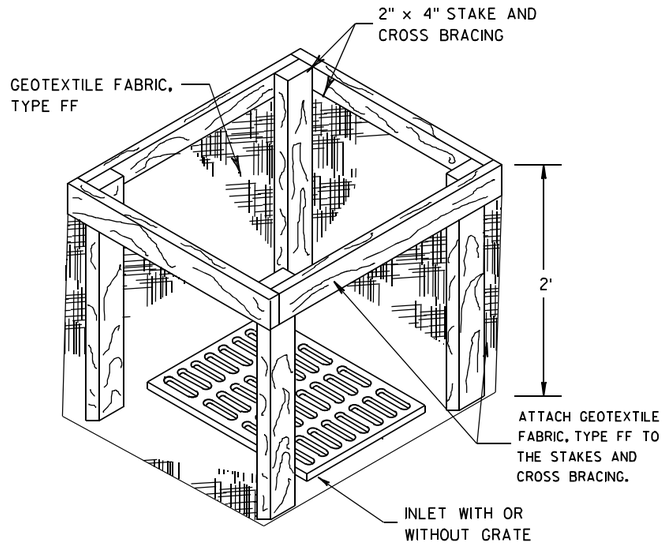
6

S.D.D. 8 E 9-6

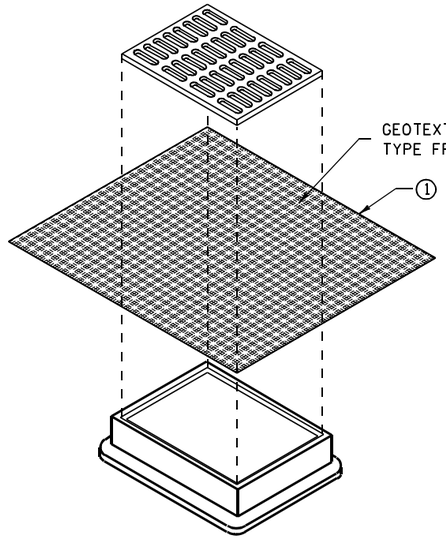
6

S.D.D. 8 E 9-6



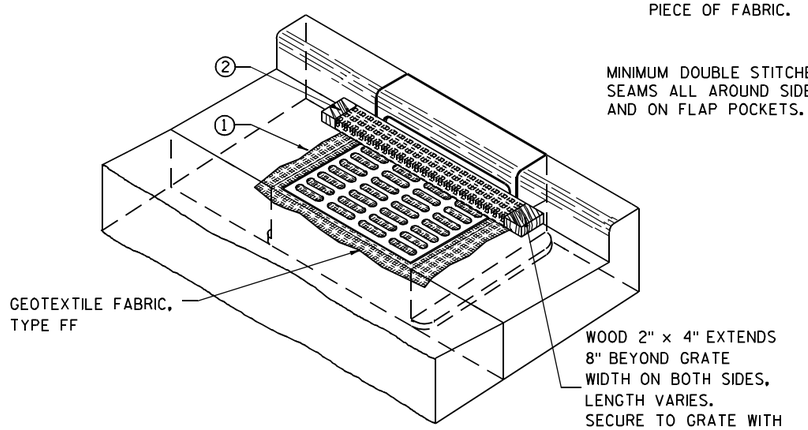


INLET PROTECTION, TYPE A

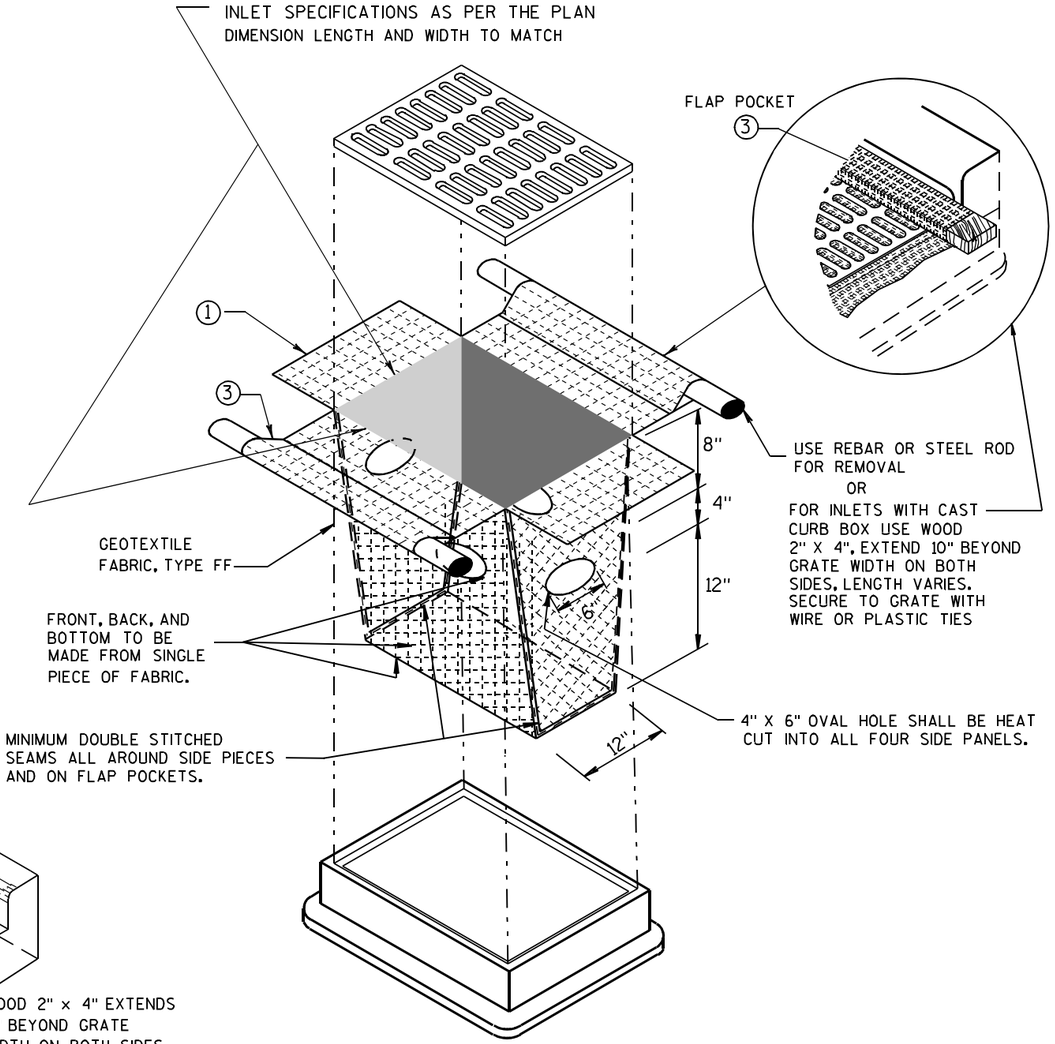


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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.

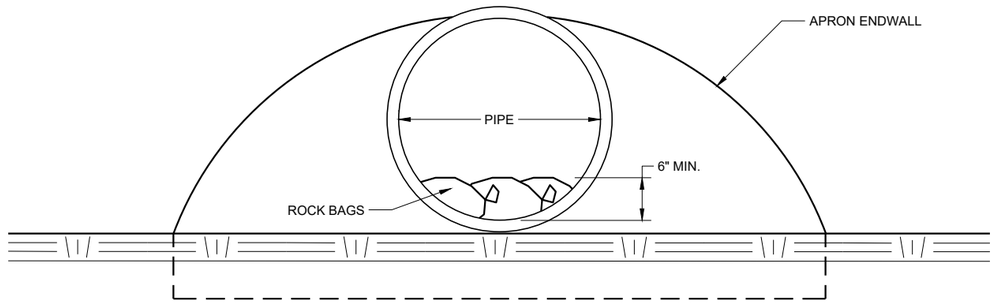
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

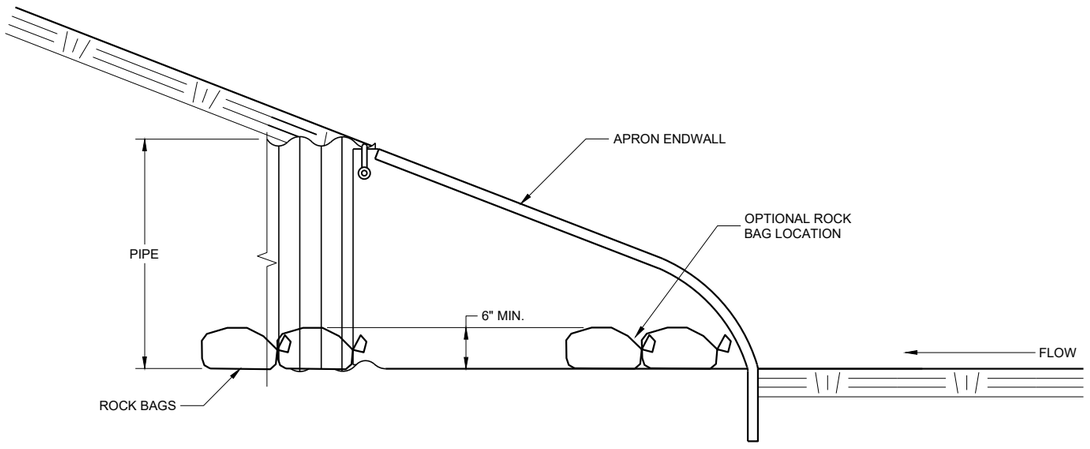
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 8 E 10-2



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Daniel Schave
EROSION CONTROL ENGI

FHWA

6

SDD 08E15 - 01

6

SDD 08E15 - 01

METAL APRON ENDWALLS

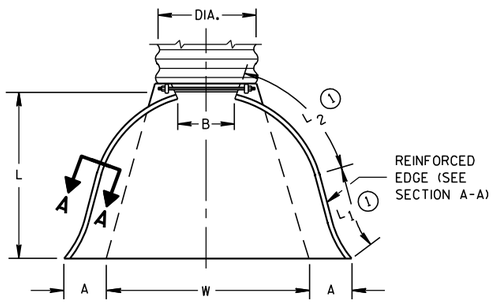
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

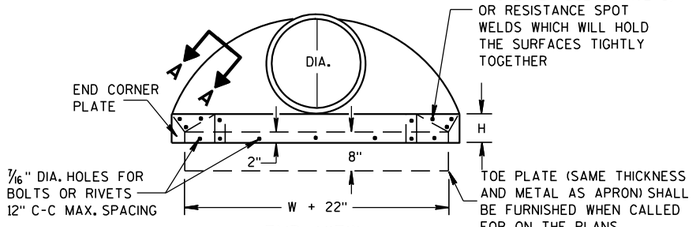
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

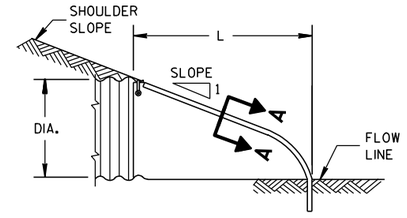
*MINIMUM
**MAXIMUM



PLAN VIEW

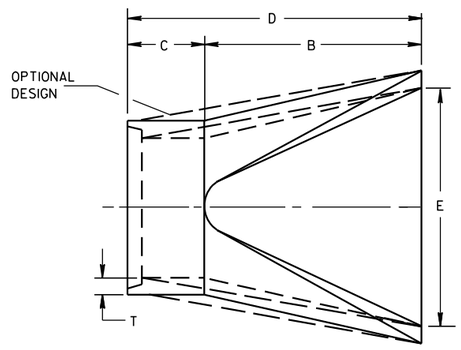


END VIEW

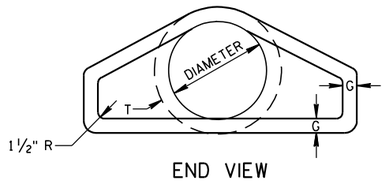


SIDE ELEVATION

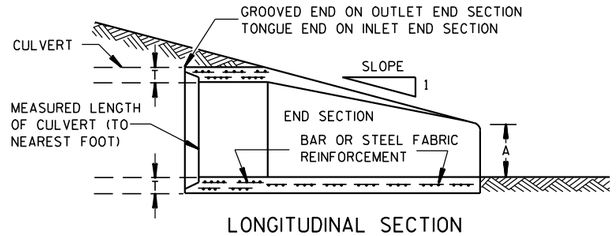
METAL ENDWALLS



PLAN

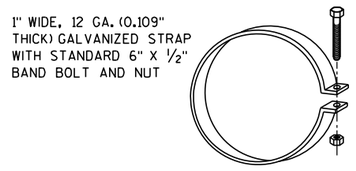


END VIEW



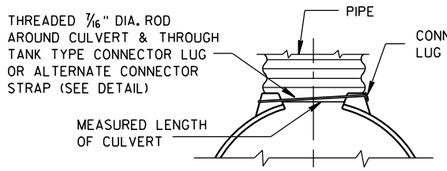
LONGITUDINAL SECTION

CONCRETE ENDWALLS

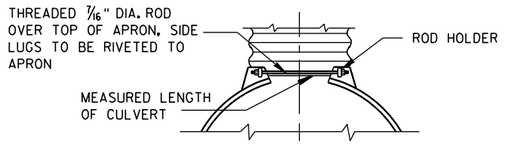


ALTERNATE FOR TYPE 1 CONNECTION

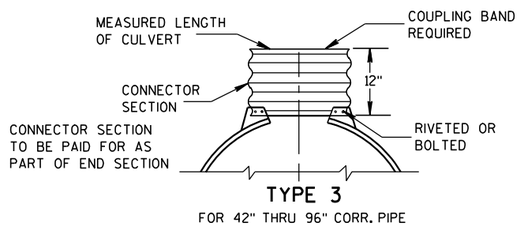
END SECTION CONNECTOR STRAP



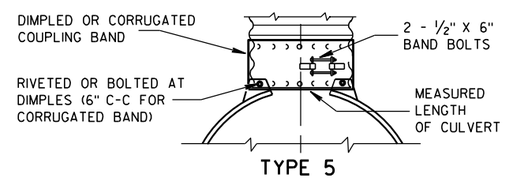
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

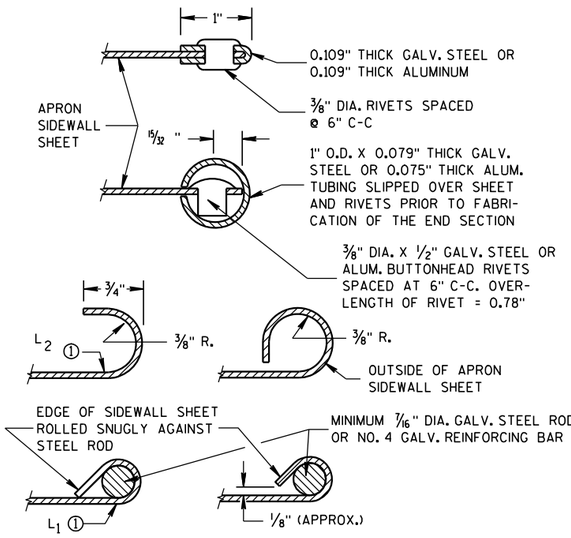
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

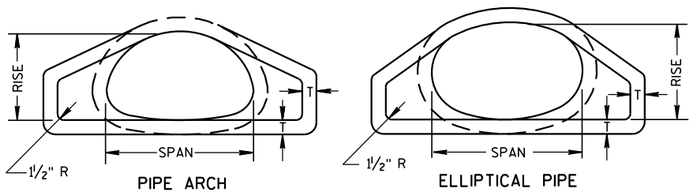
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

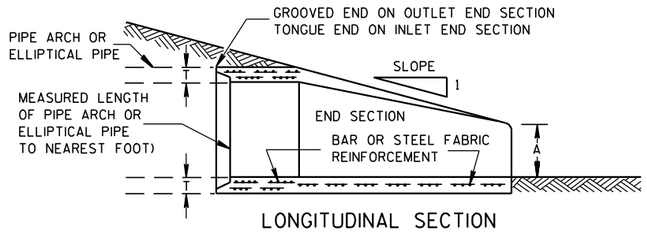
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOP 454 NEER
FHWA

6

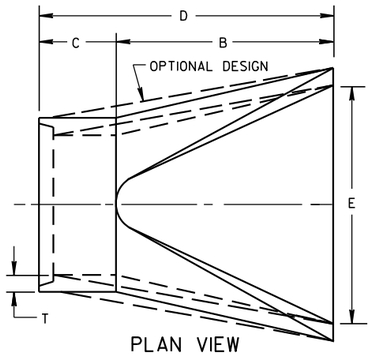
S.D.D. 8 F 1-11



END VIEW

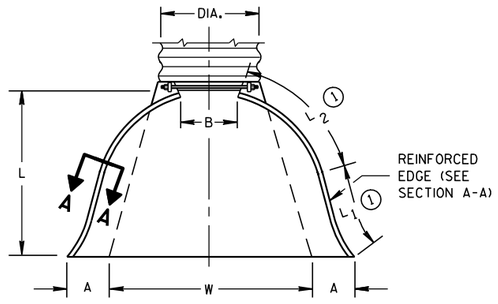


LONGITUDINAL SECTION

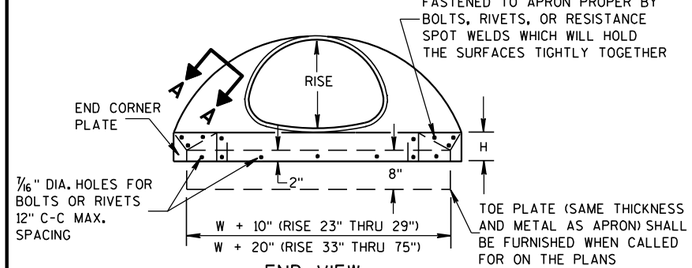


PLAN VIEW

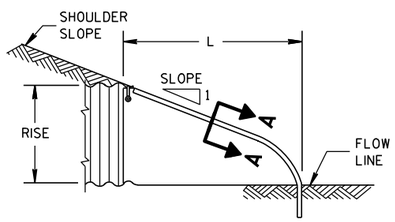
CONCRETE ENDWALLS



PLAN VIEW

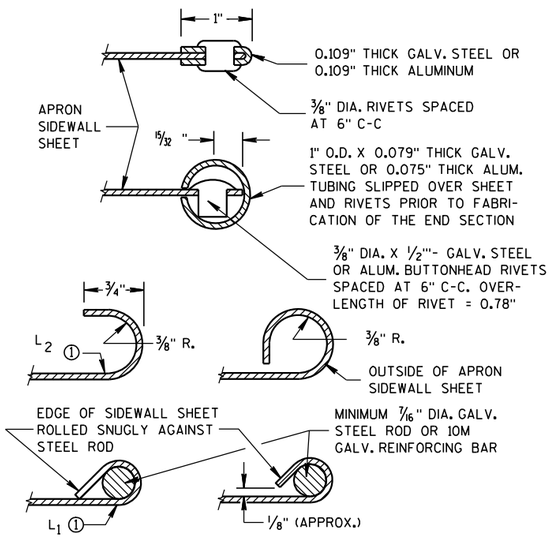


END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

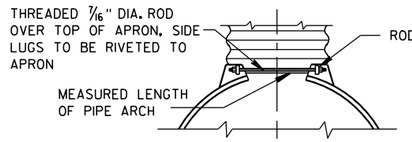
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

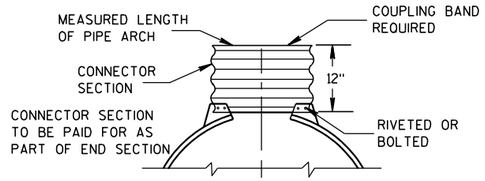
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



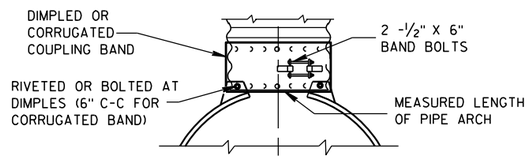
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

GENERAL NOTES

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

CONCRETE APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

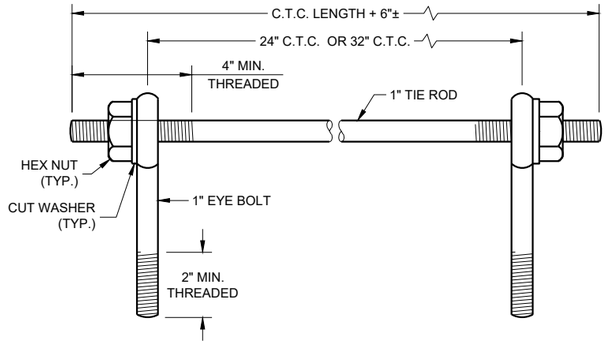
APPROVED

11/30/94 — DATE

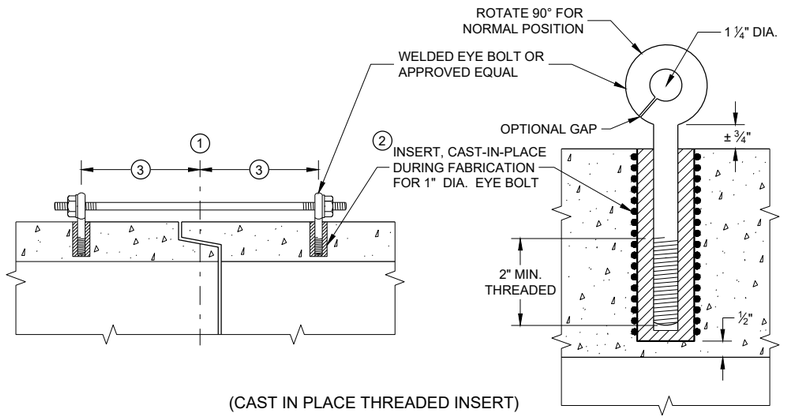
/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6
S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

(1) CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

(2) THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

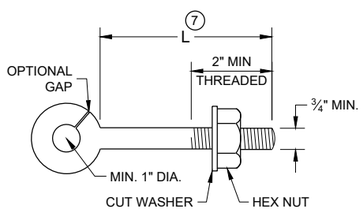
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

(4) BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

(5) OPENING TO BE ROD DIAMETER PLUS 1 INCH.

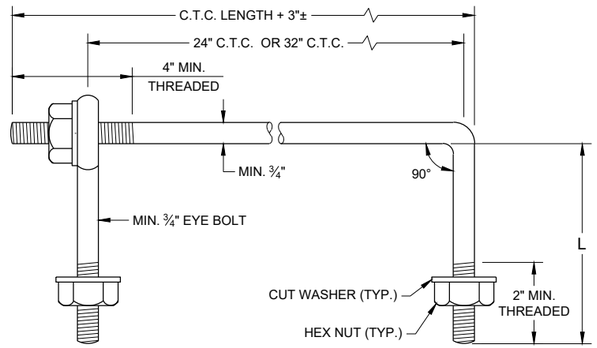
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

(7) EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

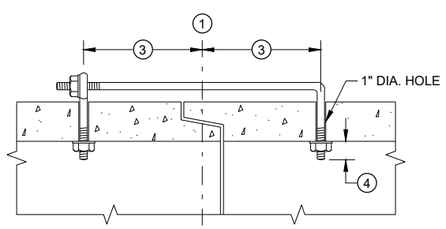


EYE BOLT (7)

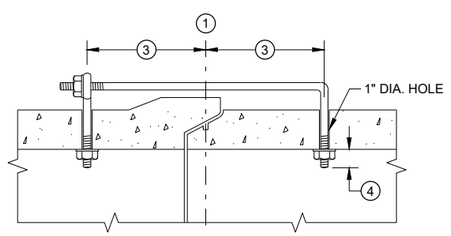
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

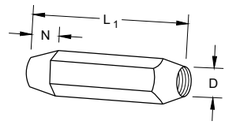
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

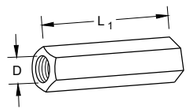
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12 - 60	⅝	⅝	5	½
66 - 84	¾	¾	5	½
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES



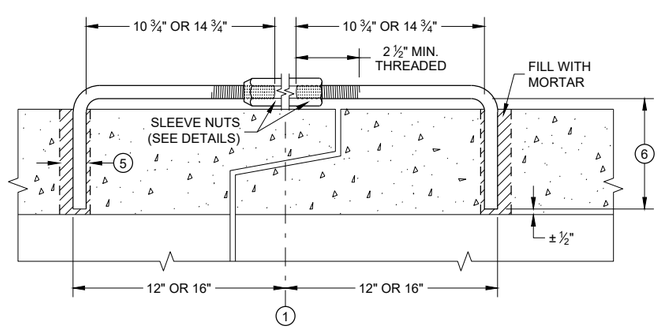
TAPERED



PLAIN

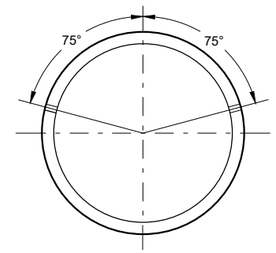
RIGHT AND LEFT THREADS

SLEEVE NUTS



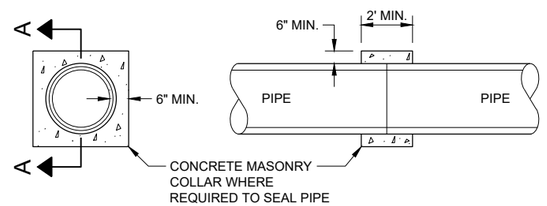
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A - A

CONCRETE COLLAR DETAIL

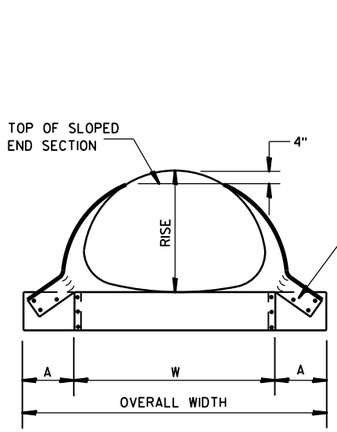
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

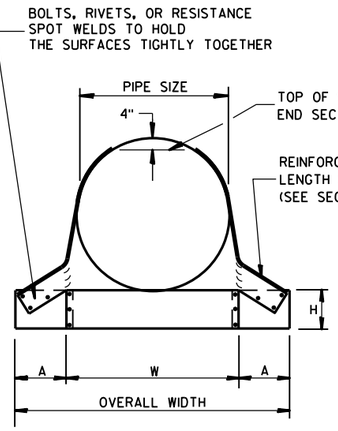
APPROVED
November 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER
FHWA

SDD 08F04 - 08

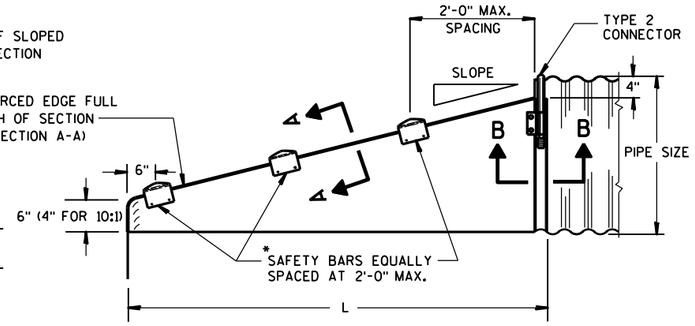
SDD 08F04 - 08



FRONT VIEW



FRONT VIEW



SIDE VIEW

GENERAL NOTES

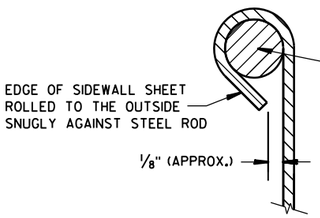
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

SLOPED END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, SECTION 521 FOR STEEL APRON ENDWALLS.

SAFETY BARS SHALL BE FABRICATED FROM GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL.

STEEL APRON ENDWALLS FOR CULVERT PIPE
SLOPED SIDE DRAINS

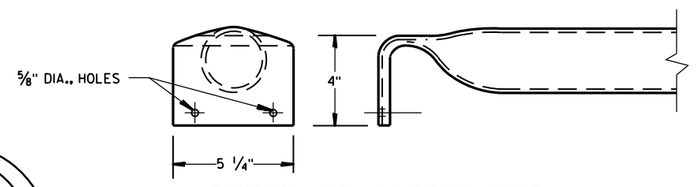
PIPE DIA. (IN.)	MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS					
		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	.064	8	6	21	37	4:1	20	6:1	30	10:1	70
18	.064	8	6	24	40	4:1	32	6:1	48	10:1	100
21	.064	8	6	27	43	4:1	44	6:1	66	10:1	130
24	.064	8	6	30	46	4:1	56	6:1	84	10:1	160
30	.109	12	9	36	60	4:1	80	6:1	120	10:1	220
36	.109	12	9	42	66	4:1	104	6:1	156	10:1	280
42	.109	16	12	48	80	4:1	128	6:1	192	——	——
48	.109	16	12	54	86	4:1	152	6:1	228	——	——
54	.109	16	12	60	92	4:1	176	6:1	264	——	——
60	.109	16	12	66	98	4:1	200	6:1	300	——	——



SECTION A-A

*NOTE:
THREE SAFETY BARS ARE SHOWN. ACTUAL NUMBER OF BARS REQUIRED AT A 2'-0" C-C MAX. SPACING WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

3" GALVANIZED PIPE. FLATTEN ENDS, THEN BEND OUTSIDE 4" TO MATCH END SECTION SIDES.

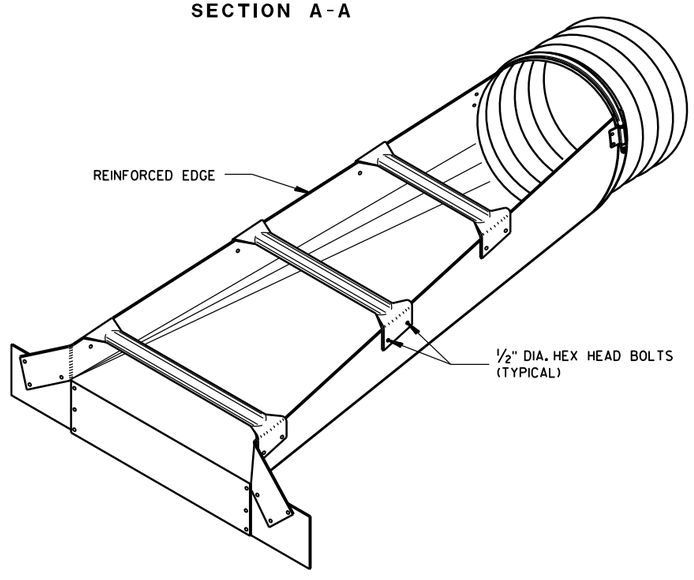


DETAIL OF SAFETY BAR

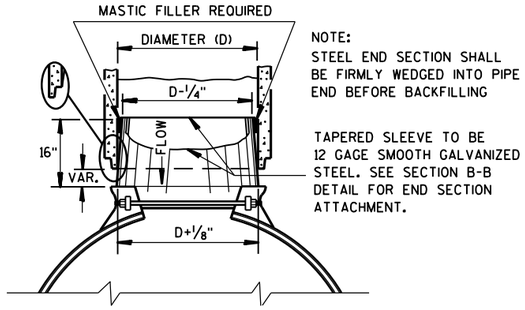
STEEL APRON ENDWALLS FOR PIPE ARCH
SLOPED SIDE DRAINS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) ①	DIMENSIONS (Inches) A	H	W	OVERALL WIDTH	L DIMENSIONS SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	17	13	.064 *	7	6	30	44	4:1	19	6:1	30	10:1 ②	70
18	21	15	.064 *	8	6	27	43	4:1	20	6:1	30	10:1	70
21	24	18	.064 *	8	6	30	46	4:1	32	6:1	48	10:1	100
24	28	20	.064 *	8	6	34	50	4:1	40	6:1	60	10:1	120
30	35	24	.079 *	12	9	41	65	4:1	56	6:1	84	10:1	160
36	42	29	.109 *	12	9	48	72	4:1	76	6:1	114	10:1	210
42	49	33	.109	16	12	55	87	4:1	92	6:1	138	——	——
48	57	38	.109	16	12	63	95	4:1	112	6:1	168	——	——
54	64	43	.109	16	12	70	102	4:1	132	6:1	198	——	——

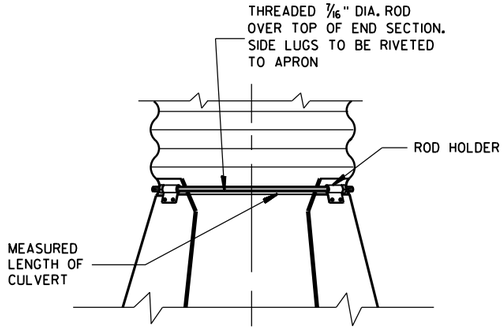
① * MINIMUM THICKNESS OF ALL 10:1 SLOPED SIDE DRAINS IS 0.109".
② ACTUAL SLOPE GREATER THAN 10:1.



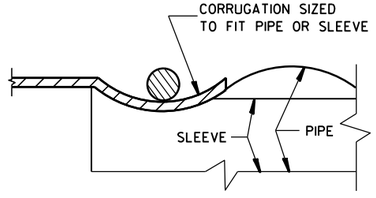
ISOMETRIC VIEW



STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



TYPE 2
CONNECTION DETAIL



SECTION B-B

STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

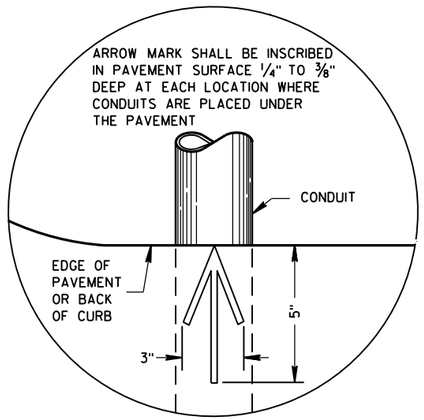
APPROVED
9/14/2012 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 8 F 7-5

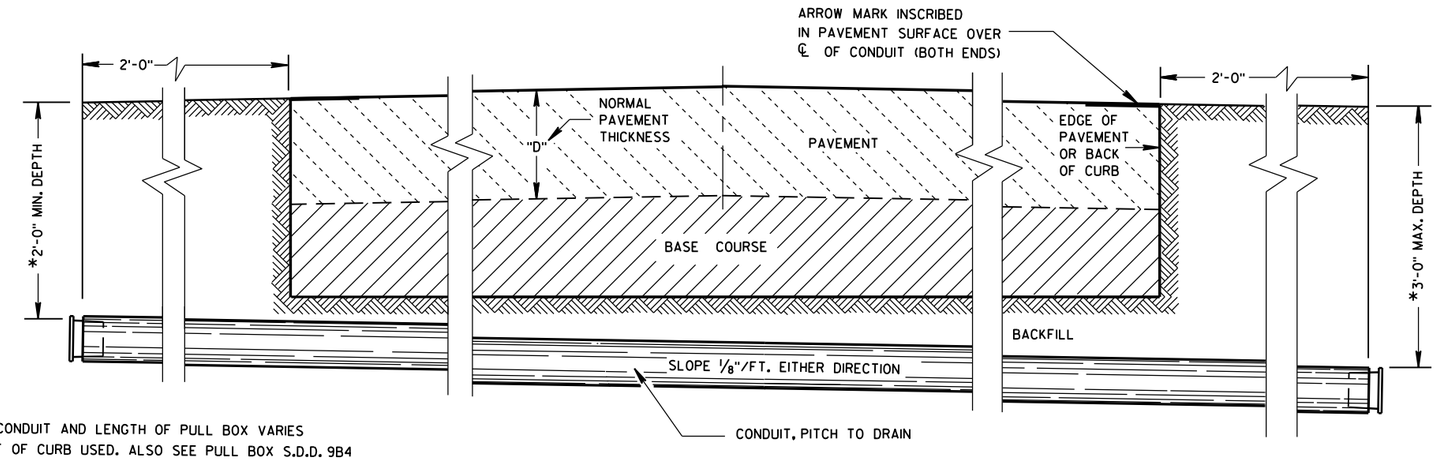
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S.D.D. 8 F 7-5



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.

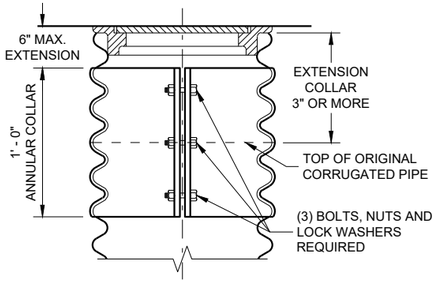
CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

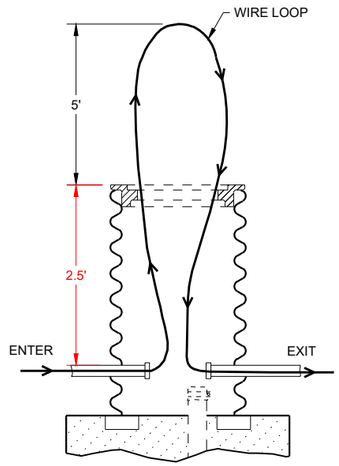
APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
458
FHWA

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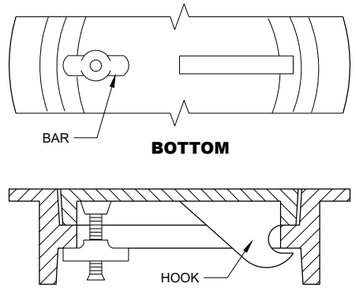
S.D.D. 9 B 2-10



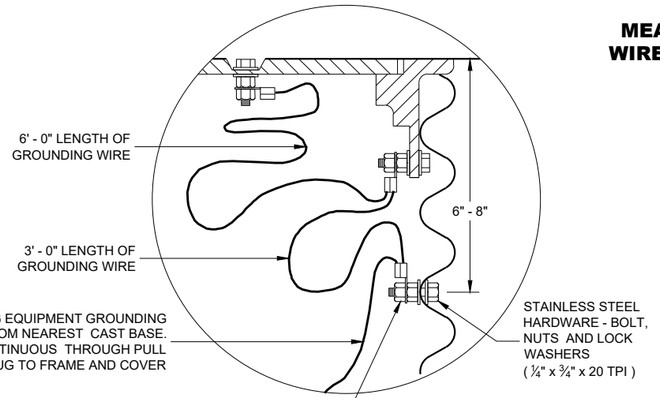
CORRUGATED PIPE EXTENDER



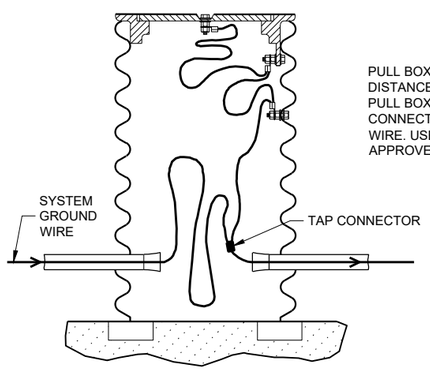
MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



ALTERNATE COVER (LOCKING)
TIGHTENING BAR TYPE

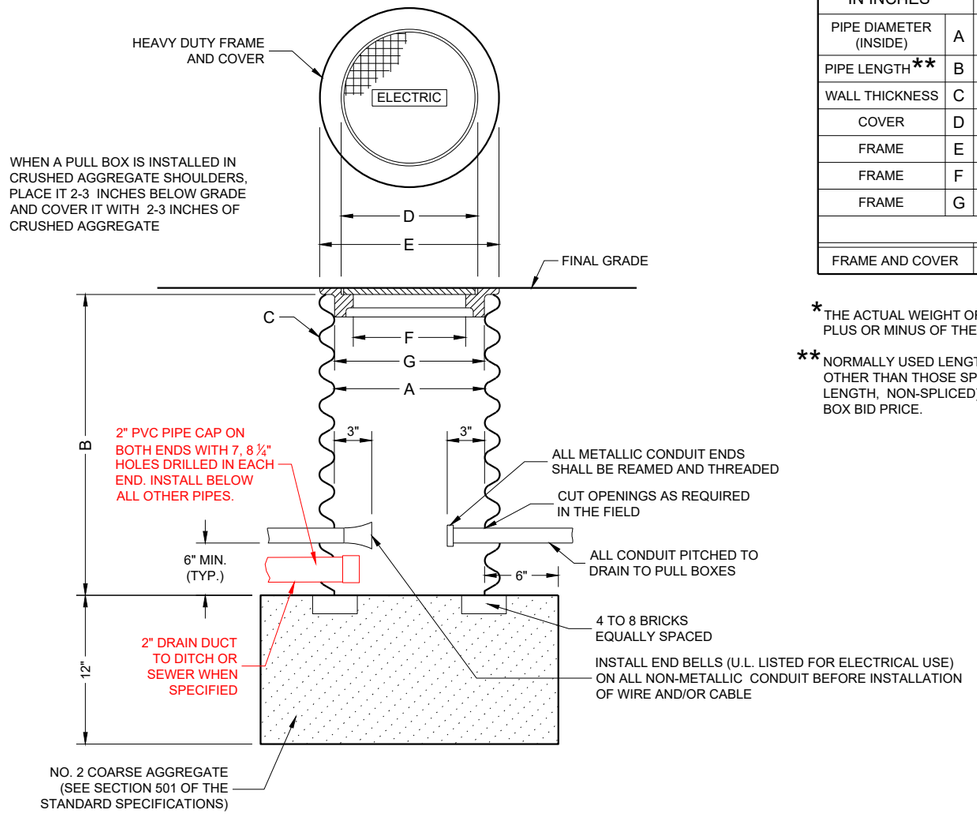


EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



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

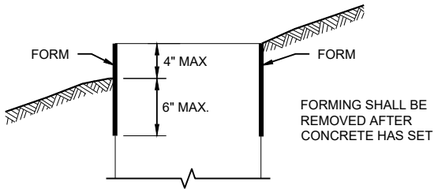
APPROVED
May 2022
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 459

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.

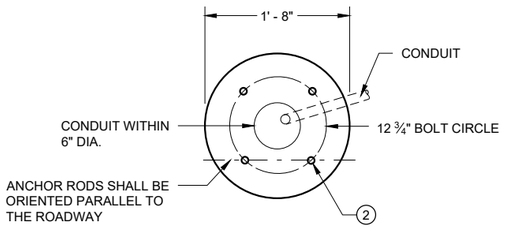
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

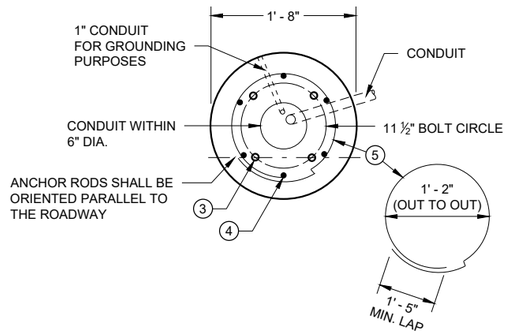
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

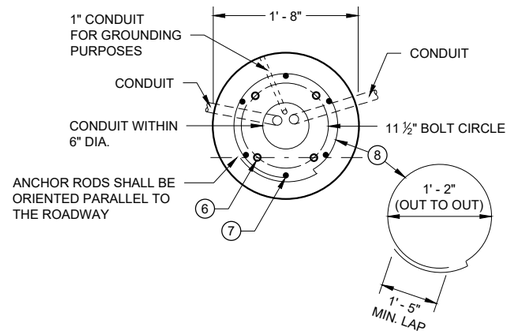
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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

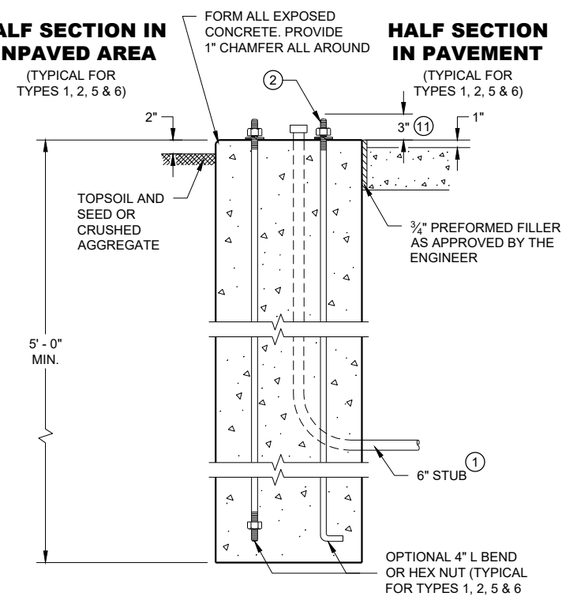
(10) ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

(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.

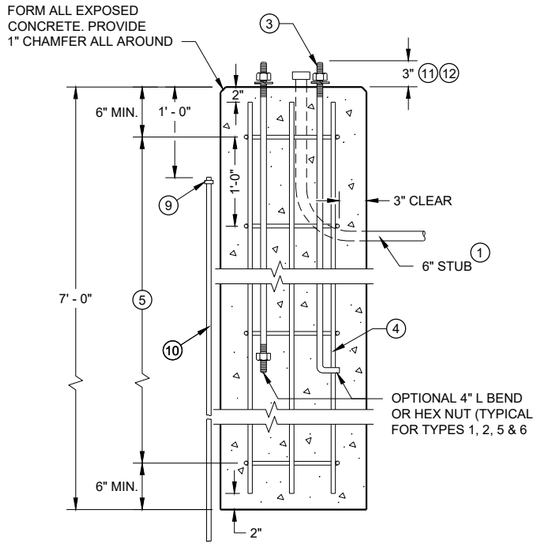
(12) FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5 & 6)

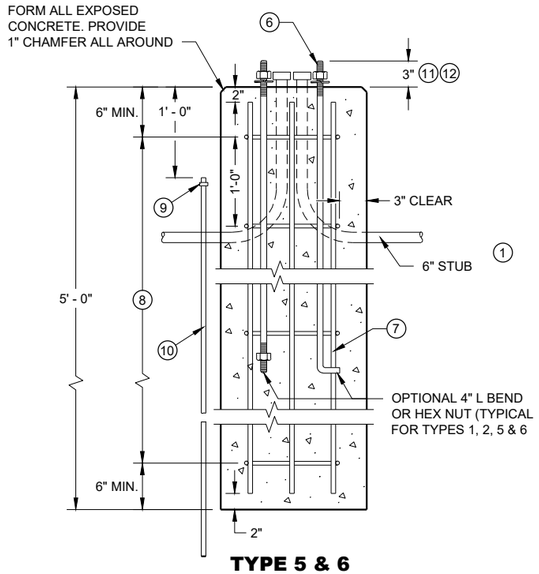
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5 & 6)



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 460

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.

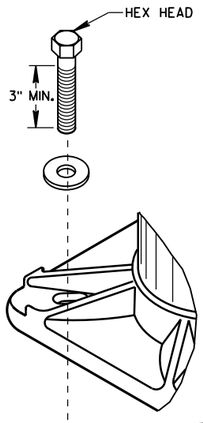
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

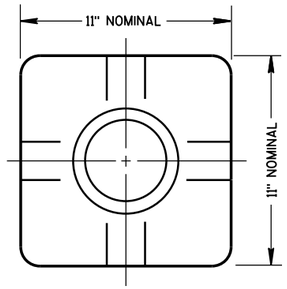
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

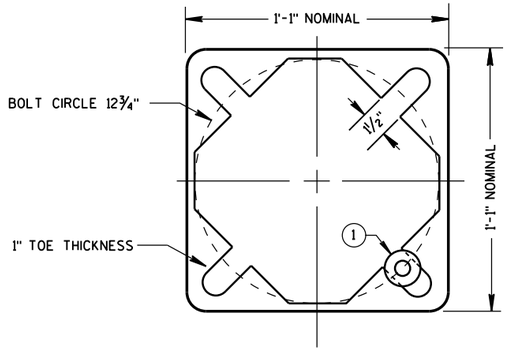
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

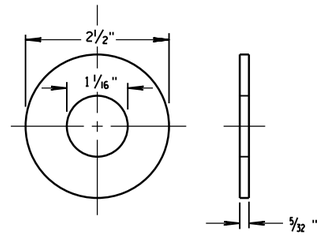




TOP VIEW
(PEDESTAL BASE)

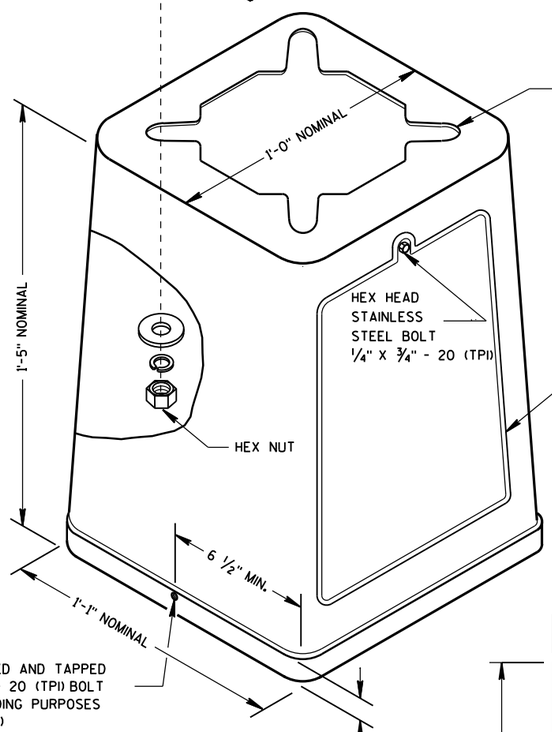


BOTTOM VIEW
(PEDESTAL BASE)

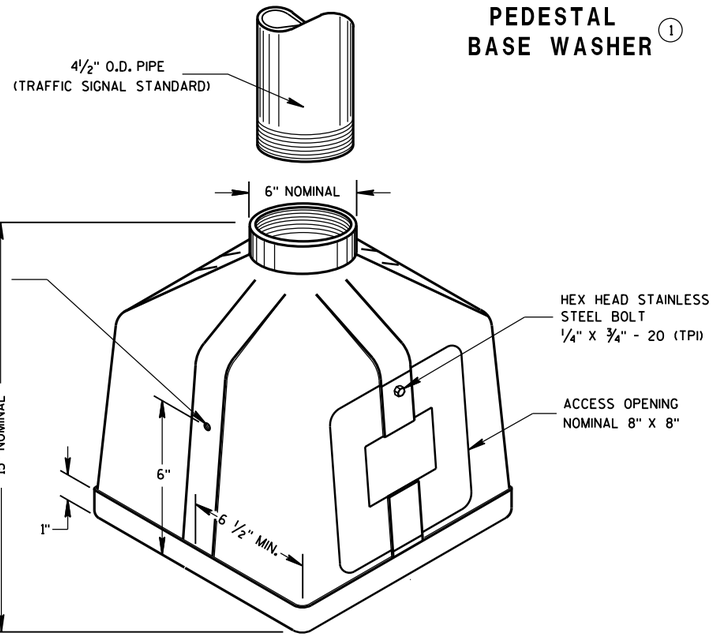


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

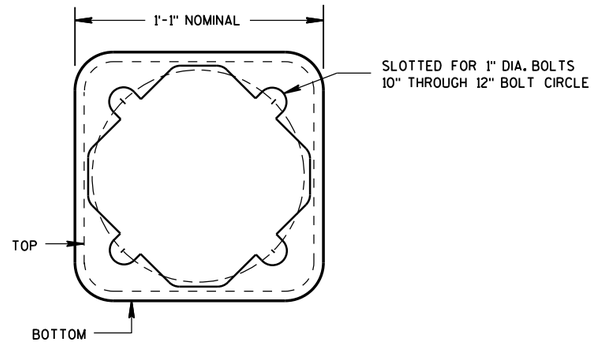


ISOMETRIC VIEW

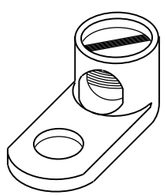


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

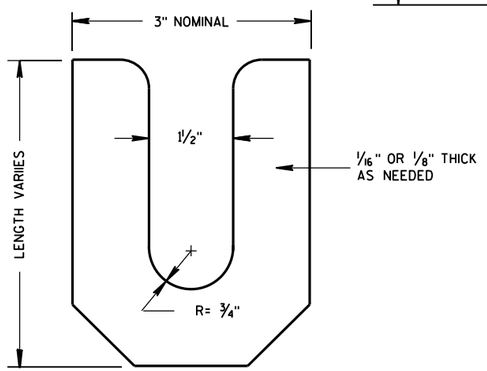


TYPICAL MECHANICAL CONNECTOR LUG

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

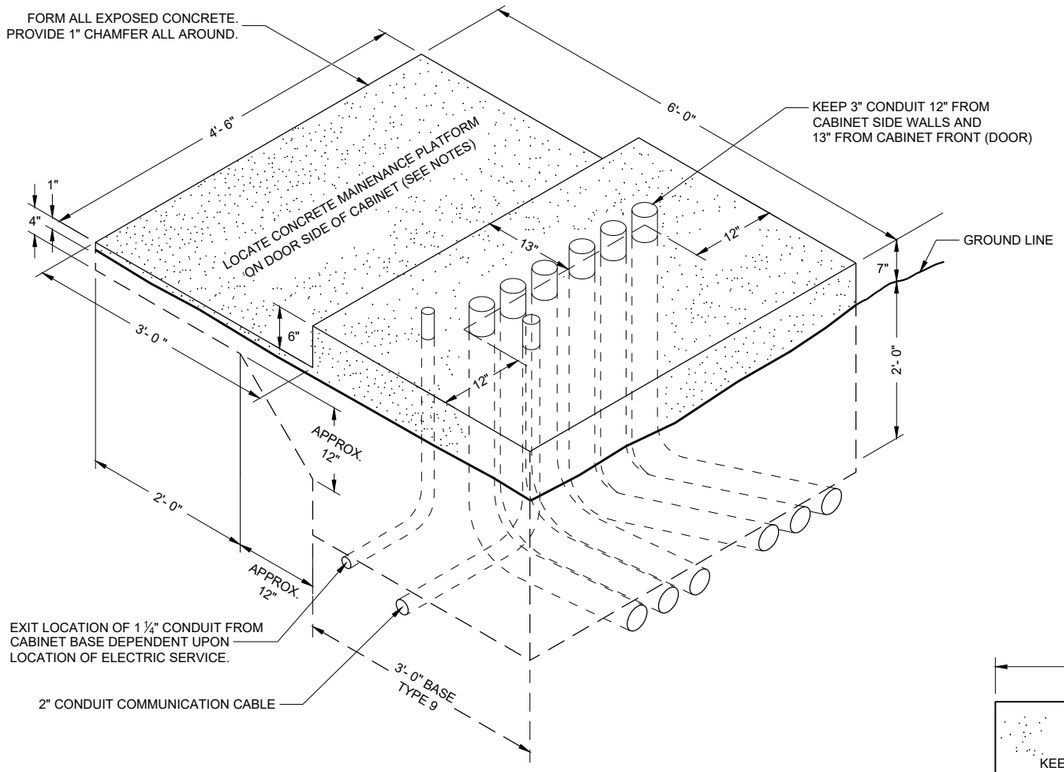
6

S.D.D. 9 C 3-4

6

S.D.D. 9 C 3-4

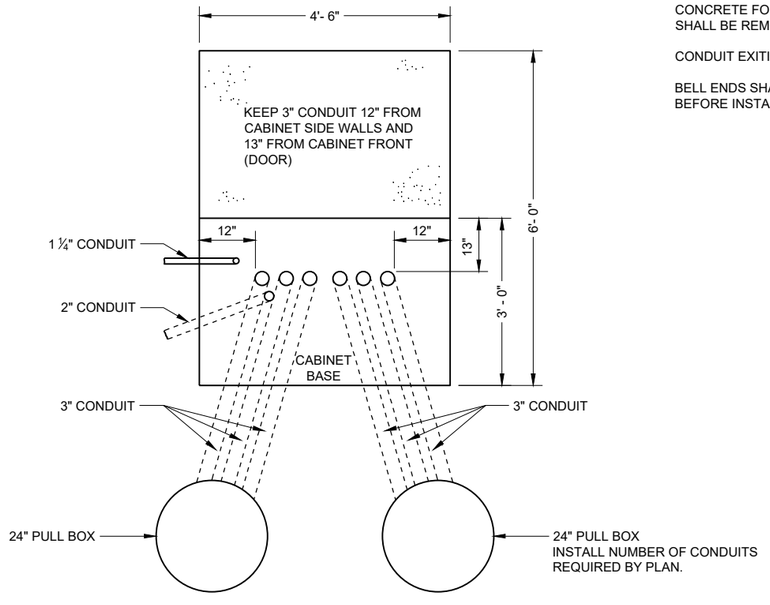
SDD 09C06 Concrete Control Cabinet Base, Type 9, Special



ISOMETRIC VIEW

TYPE 9 SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9 SPECIAL

GENERAL NOTES

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

INSTALL FOUR INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NON - METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U. L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

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

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

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

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT EQUALS 6 TIMES THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NON - METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON - METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCHES MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

CONDUIT EXITING THE CONCRETE BASE (SIX 3") SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE CONTROL CABINET BASE TYPE 9, SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2014
DATE
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI 462

FHWA

6

SDD 09C06 - 07

GENERAL NOTES

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

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING. A STEEL CASING OR CORRUGATED METAL PIPE IS ALLOWED TO REMAIN. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BASE IN LAYERS OF ONE FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 TIMES THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NON-METALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER RUN) EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

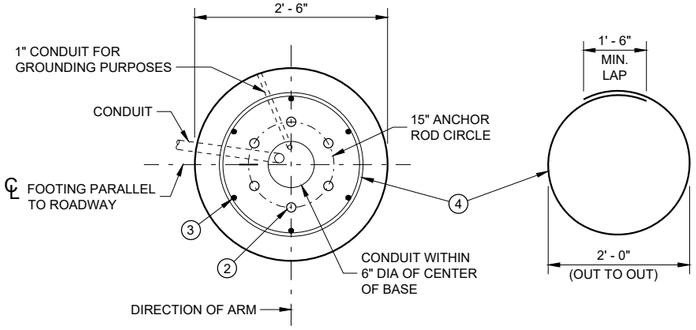
(2) (6) 1 ½ DIA. X 4' - 4" ANCHOR RODS

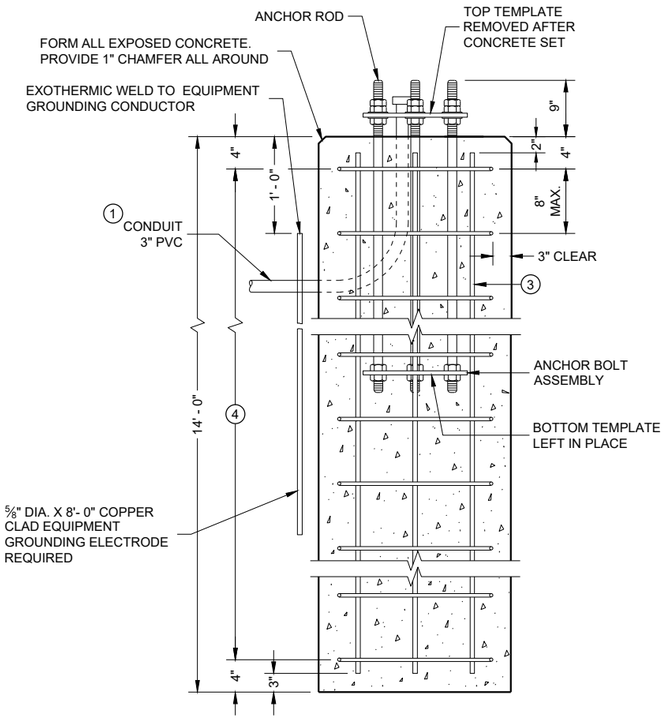
(3) (6) NO. 6 X 13' - 7" BAR STEEL REINFORCEMENT.

(4) (21) NO. 5 X 7'-10" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.

CONCRETE MASONRY.....fc = 3,500 p.s.i
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE .....fy = 55,000 p.s.i.
WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION)
TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.

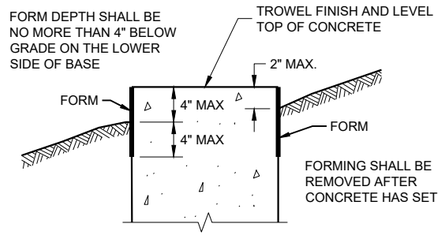
QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	172
LBS. OF VERTICAL BAR STEEL	122



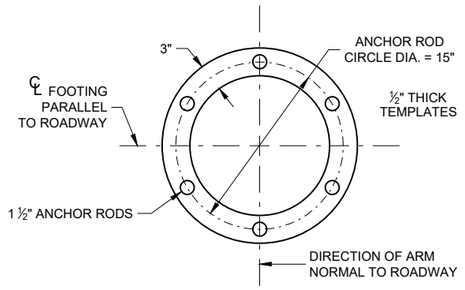


CONCRETE BASE, TYPE 10
(FOR TYPE 9, TYPE 10 AND OVER HEIGHT (OH) POLES)

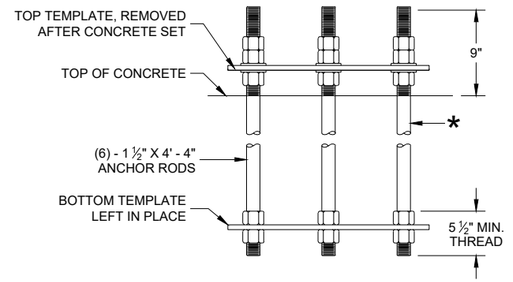
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE SDD 9C13 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



FORMING DETAIL



TOP AND BOTTOM TEMPLATE



ANCHOR ROD ASSEMBLY DETAILS

* THREAD TOP 10" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 ½" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

CONCRETE BASE TYPE 10

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2017 — DATE
/S/ Ahmet Demerbilek — WIND LOADED STRUCTU PROGRAM LEADER
FHWA

6

SDD 09C11 - 10

GENERAL NOTES

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

BASES (SHAFT), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, 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.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

CONDUIT SIZE AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4 ½ INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTOR FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1-INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4-FOOT COIL OF WIRE ABOVE THE CONCRETE BASE, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL WAY SHALL BE 24-INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18-INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36-INCHES, (GREATER THAN 36-INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.

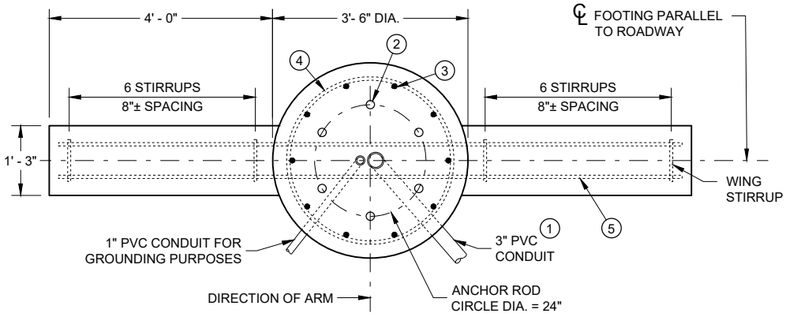
(2) (6) 1 ¾" DIA. X 7' - 2" ANCHOR RODS

(3) (10) NO. 6 X 14' - 1" BAR STEEL VERTICAL REINFORCEMENT.

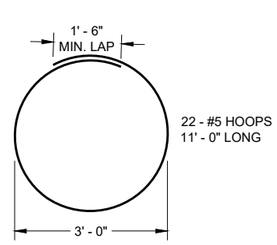
(4) (22) NO. 5 X 11'- 0" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.

(5) (10) NO. 5 X 11' - 0" BAR STEEL HORIZONTAL REINFORCEMENT

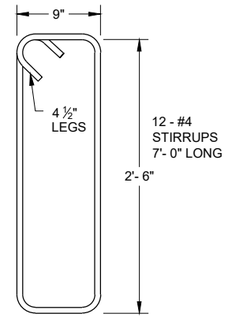
CONCRETE MASONRY.....fc = 3,500 p.s.i
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE .....fy = 55,000 p.s.i.
WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION)
TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.



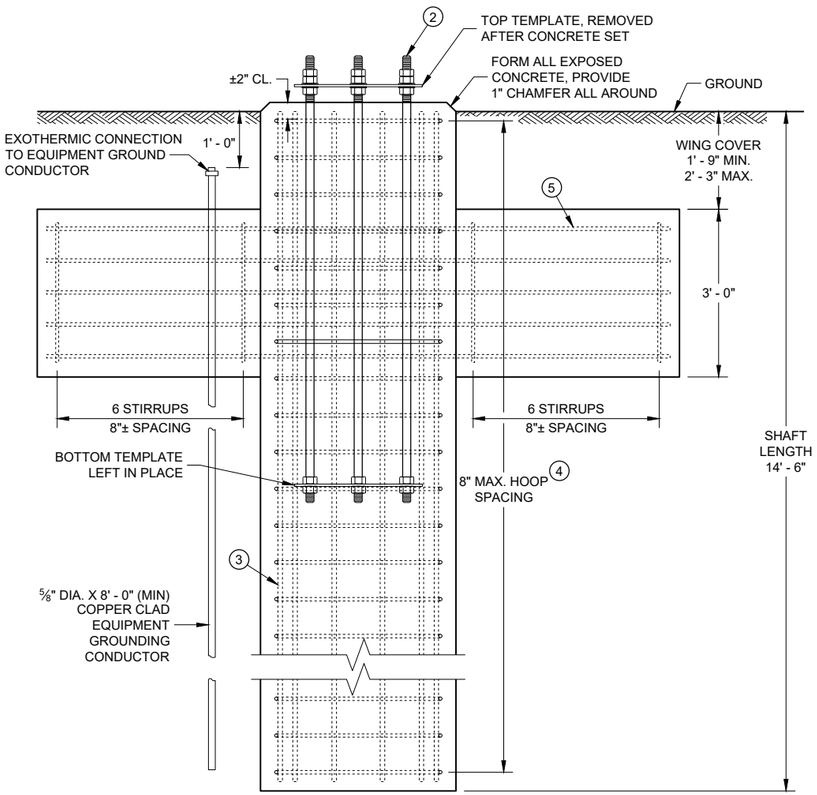
PLAN VIEW



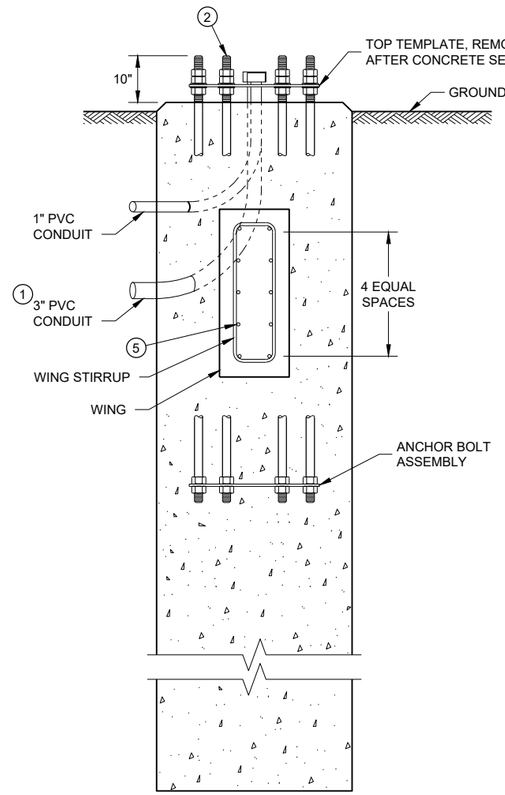
HOOP DETAIL



WING STIRRUP DETAIL



ELEVATION VIEW
(CONDUITS NOT SHOWN ON THIS VIEW FOR CLARITY)



(HOOPS AND VERTICAL SHAFT REINFORCEMENT NOT SHOWN ON THIS VIEW FOR CLARITY)

CONCRETE BASE, TYPE 13
(FOR TYPE 12, TYPE 13 AND OVER HEIGHT (OH) POLES)

CONCRETE = 6.3 CUBIC YARD
H.S. REINFORCEMENT = 635 LBS.

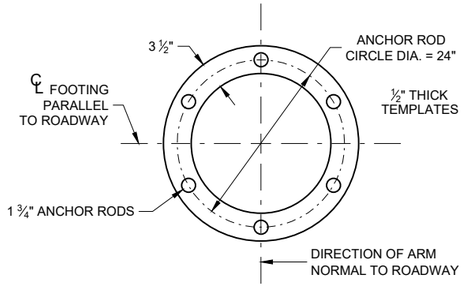
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE 9C13 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION

CONCRETE BASE TYPE 13

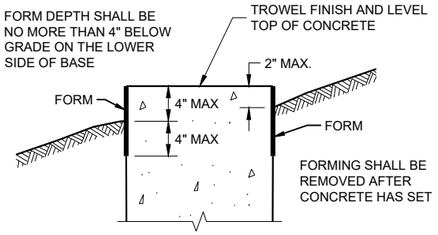
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

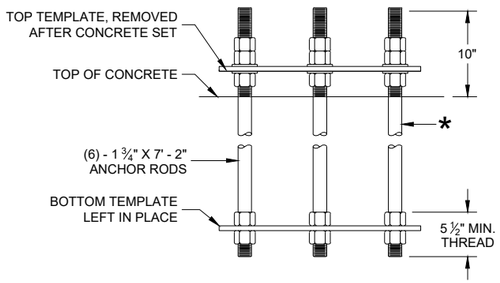
SDD 09C12 - 09a



TOP AND BOTTOM TEMPLATE



FORMING DETAIL



ANCHOR ROD ASSEMBLY DETAILS

* THREAD TOP 11" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 ½" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2017
DATE

/S/ Ahmet Demirbilek
WIND LOADED STRUCTU
PROGRAM LEADER

FHWA

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SDD 09C12 - 09b

GENERAL NOTES

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

THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING. A STEEL CASING OR CORRUGATED METAL PIPE IS ALLOWED TO REMAIN. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BASE IN LAYERS OF ONE FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

ANY DAMAGE TO THE CONCRETE BASE AND ANCHOR RODS DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

THE REINFORCEMENT AND ANCHOR RODS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR RODS STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

FORM ALL EXPOSED CONCRETE CORNERS WITH 1" CHAMFER ALL AROUND. TOP OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 TIMES THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 ½" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NON-METALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

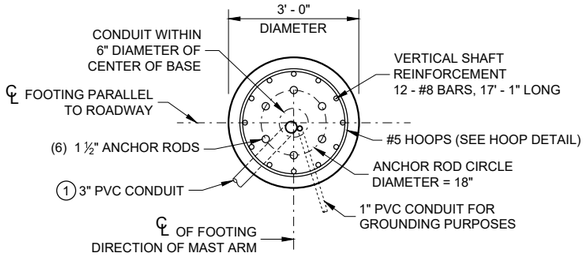
A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

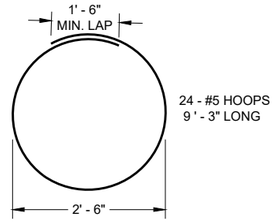
THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER RUN) EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

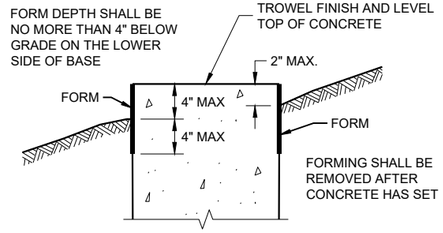
CONCRETE MASONRY.....fc = 3,500 p.s.i
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION).....fy = 55,000 p.s.i.
TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.



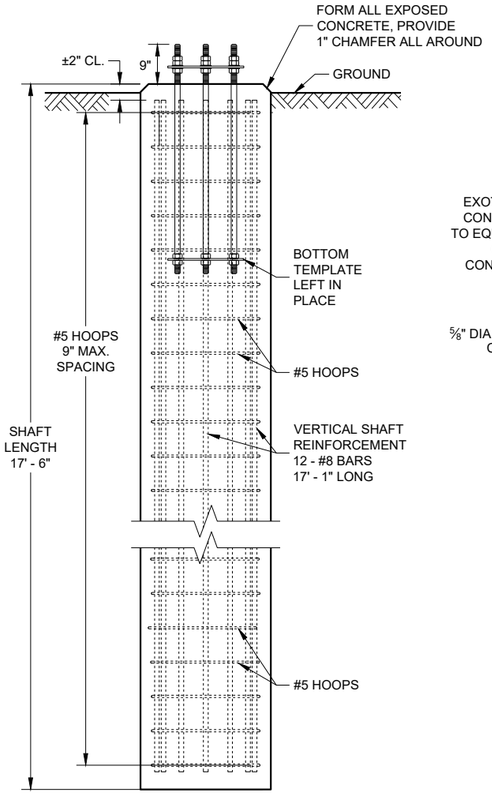
PLAN VIEW



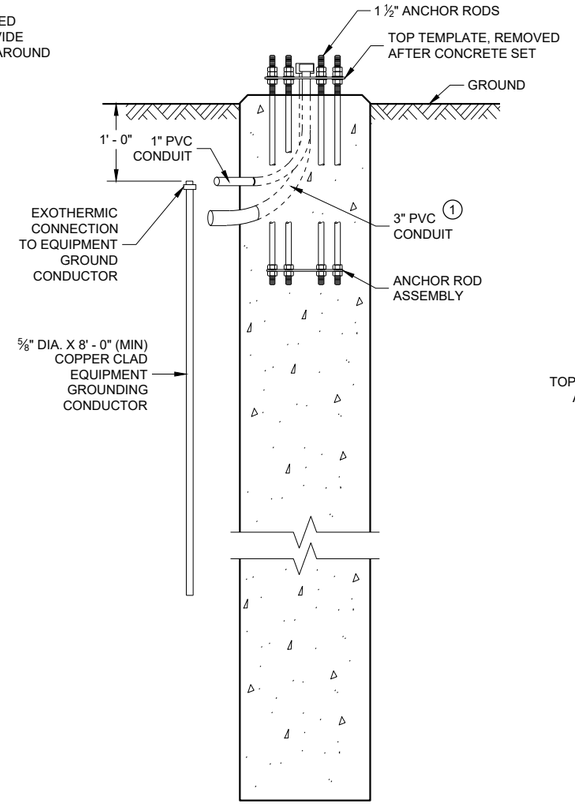
HOOP DETAIL



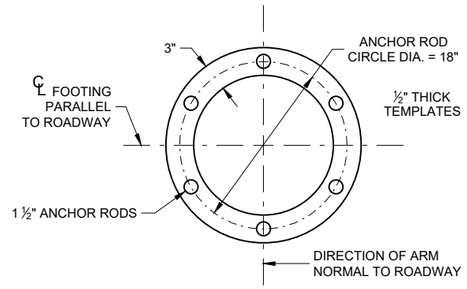
FORMING DETAIL



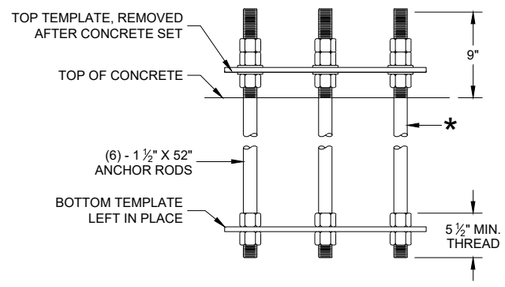
ELEVATION VIEW
(CONDUITS NOT SHOWN ON THIS VIEW FOR CLARITY)



SIDE VIEW
(HOOPS AND VERTICAL SHAFT REINFORCEMENT NOT SHOWN ON THIS VIEW FOR CLARITY)



TOP AND BOTTOM TEMPLATE



ANCHOR ROD ASSEMBLY DETAILS

* THREAD TOP 10" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 ½" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

CONCRETE BASE, TYPE 10 SPECIAL
(FOR TYPE 9 SPECIAL AND TYPE 10 SPECIAL POLES)

CONCRETE = 4.6 CUBIC YARD
H.S. REINFORCEMENT = 779 LBS.

FOR USE WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.

CONCRETE BASE TYPE 10 SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

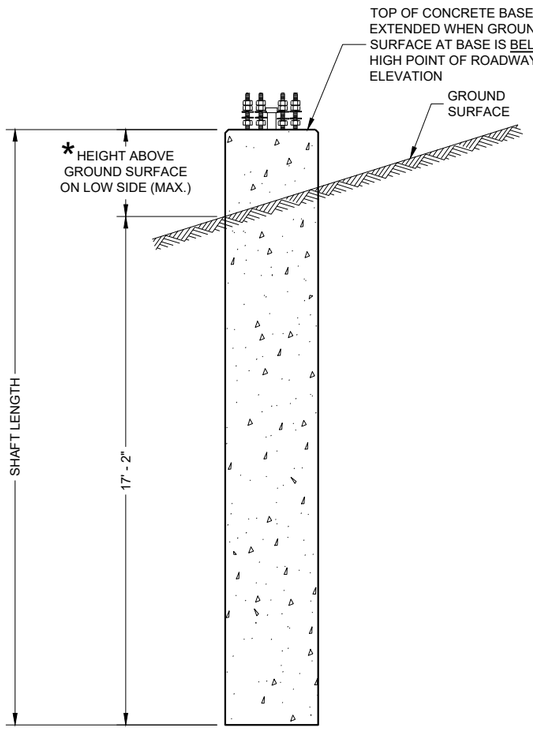
APPROVED
August 2020 — DATE
/S/ Alex Crabtree — WIND LOADED STRUCTU PROGRAM LEADER
FHWA

6

SDD 09C15 - 01

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 10 SPECIAL CONCRETE BASE

HEIGHT INCREASE REQUIRED	*HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAX.)	SHAFT LENGTH	LENGTH OF #8 VERTICAL REINF.	NO. OF #5 HOOPS	CU. YD. OF CONCRETE	LBS. OF HOOP BAR STEEL	LBS. OF VERTICAL STEEL
>0" TO 6"	10"	18' - 0"	17' - 7"	25	4.7	241	563
>6" TO 1' - 0"	1' - 4"	18' - 6"	18' - 1"	25	4.8	241	579
>1' - 0" TO 1' - 6"	1' - 10"	19' - 0"	18' - 7"	26	5.0	251	595
>1' - 6" TO 2 - 0"	2' - 4"	19' - 6"	19' - 1"	27	5.1	260	611



CONCRETE BASE TYPE 10 SPECIAL (EXTENDED)

CONCRETE BASE TYPE 10 SPECIAL EXTENSION

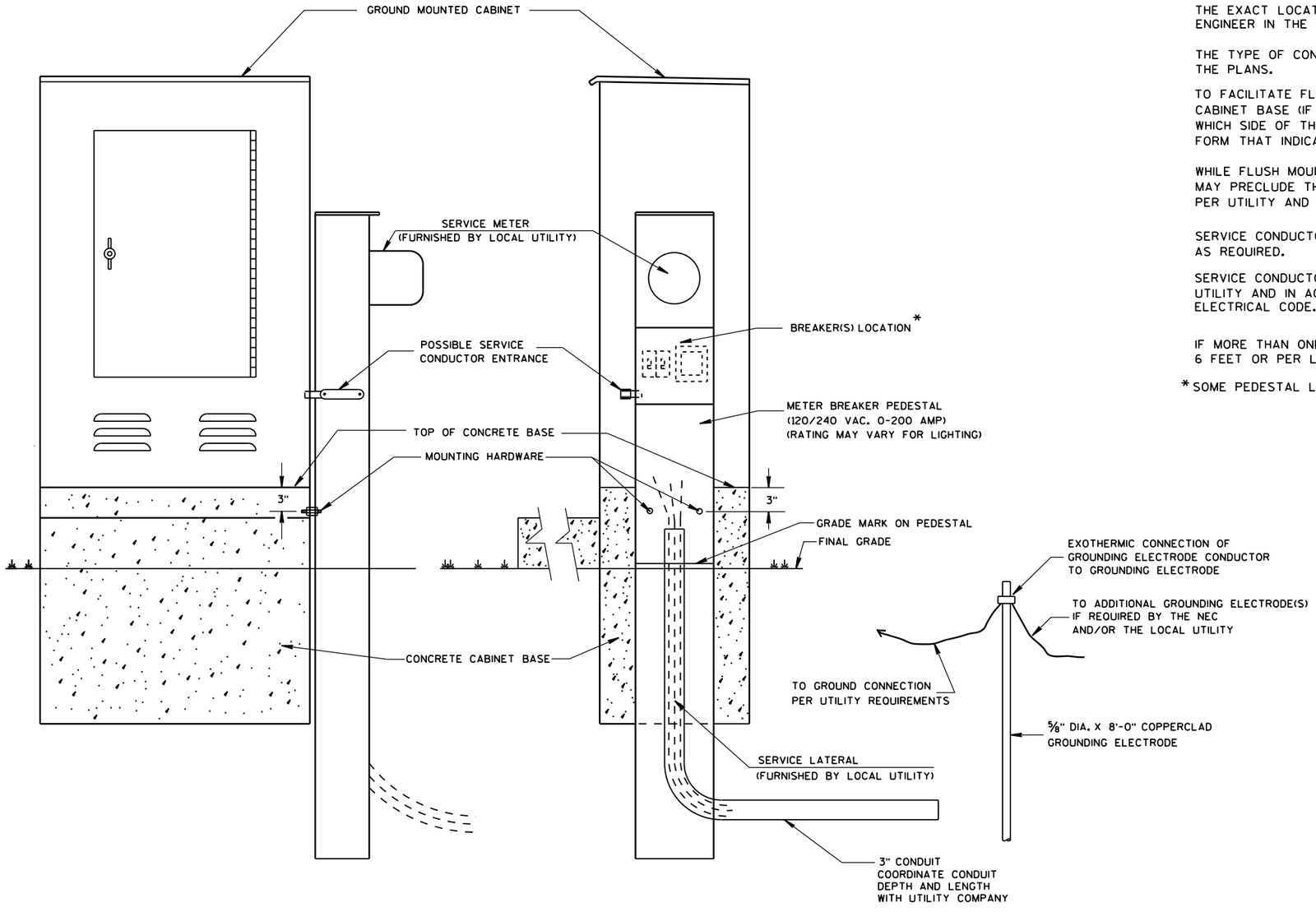
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 467

FHWA

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SDD 09C16-01



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

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S.D.D. 9 D 1-5

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S.D.D. 9 D 1-5

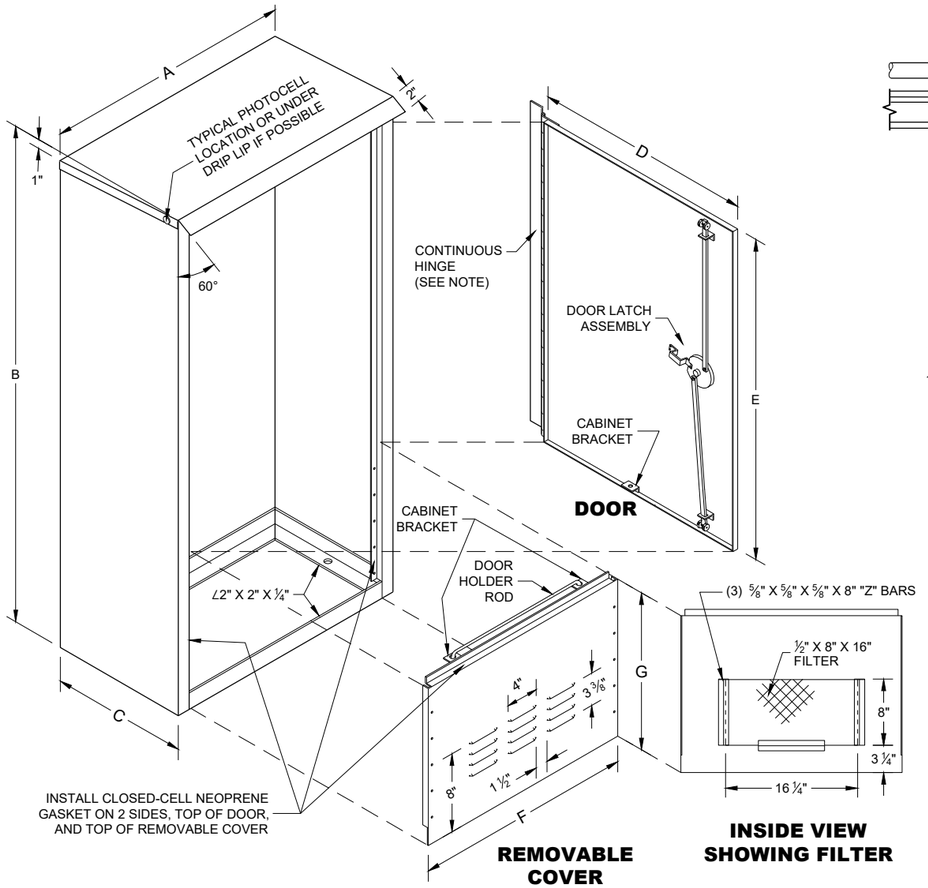
CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

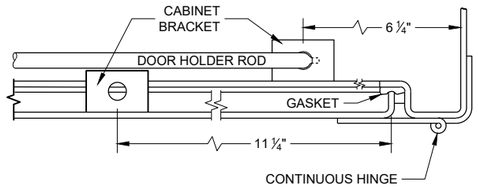
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

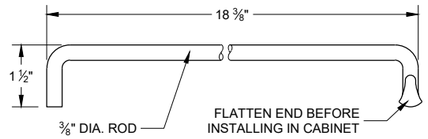
/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA

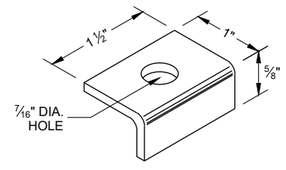




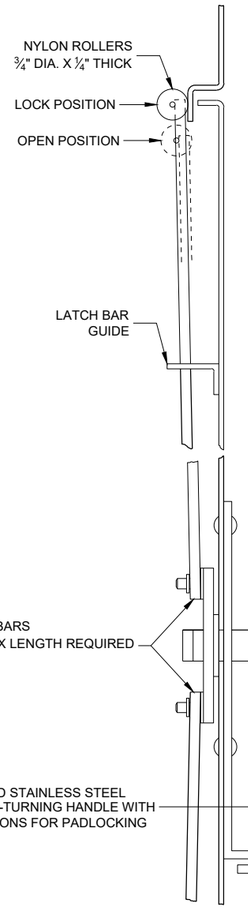
HINGE AND DOOR HOLDER



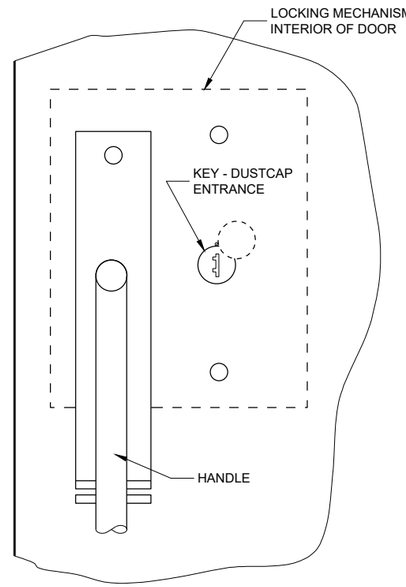
HOLDER ROD



CABINET BRACKET



SIDE VIEW



FRONT VIEW

LATCH ASSEMBLY

GENERAL NOTES

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

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

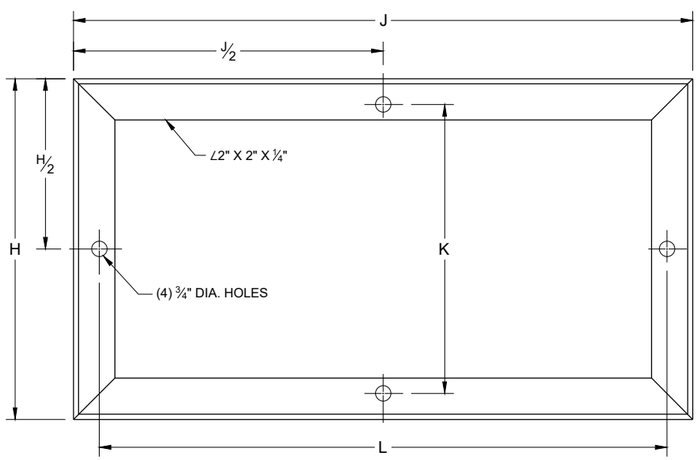
ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH ¼" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH ¼" X 20 TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH - NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST.

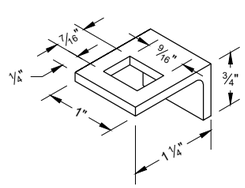
DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.



MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 ½	16 ½	24
D	26 ½	34 ¾	33 ¾
E	38 ¾	38 ¾	38 ¾
F	26 ½	34 ¾	33 ¾
G	19	19	25
H	16 ½	16 ½	24
H/2	8 ¼	8 ¼	12
J	30	38	38
J/2	15	19	19
K	13 ¾	13 ¾	21 ¼
L	27 ½	35 ½	35 ½



LATCH BAR GUIDE

SIGNAL CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2014
DATE

/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI 469

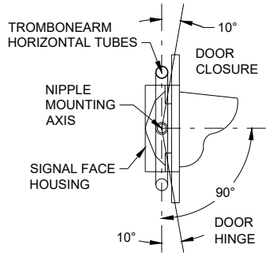
FHWA

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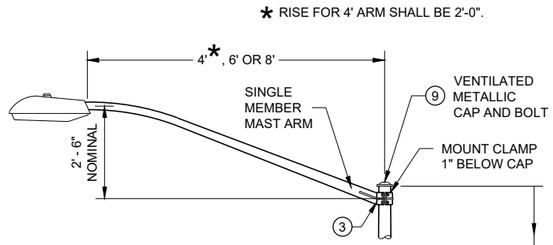
SDD 09D02 - 03

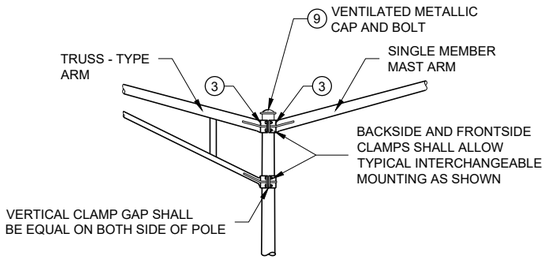
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SDD 09D02 - 03

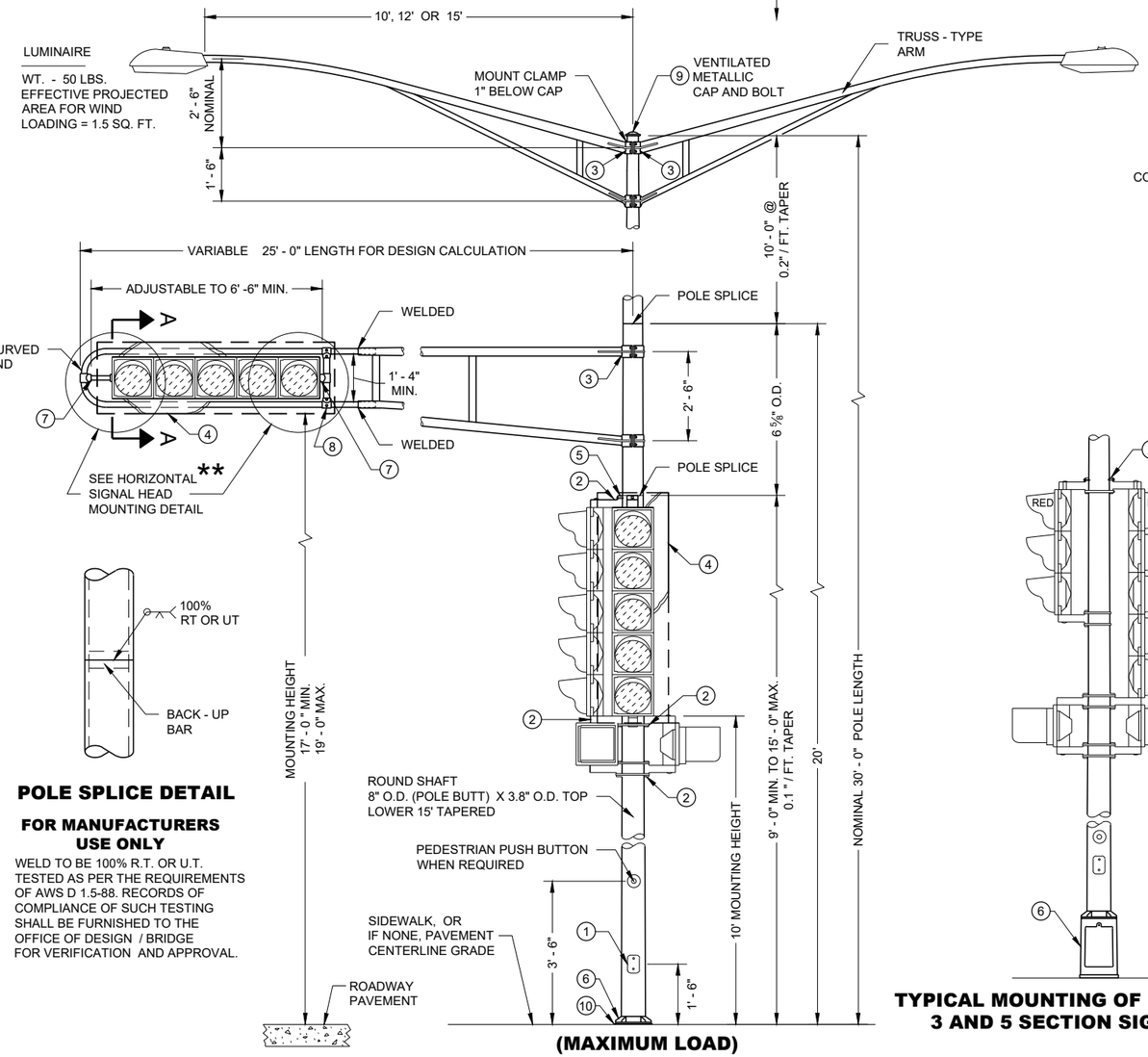


SECTION A-A



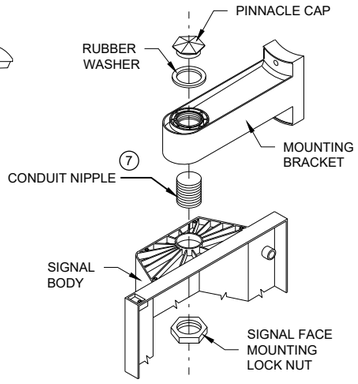


INTERCHANGEABLE MOUNTING DETAIL

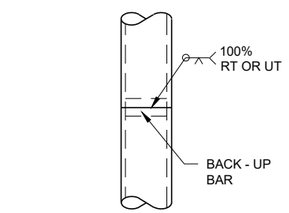


(MAXIMUM LOAD)

TYPE 3 POLE MOUNTING CONFIGURATION



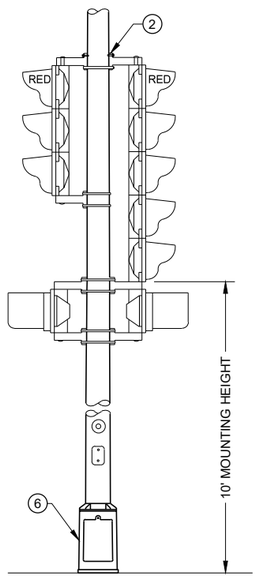
SIGNAL FACE MOUNTING DETAIL
(BANDED)



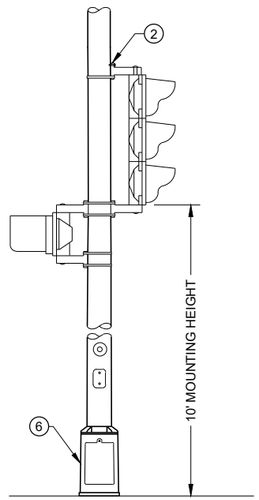
POLE SPLICE DETAIL

FOR MANUFACTURERS USE ONLY

WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN / BRIDGE FOR VERIFICATION AND APPROVAL.



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

GENERAL NOTES

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

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE / ROPE SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.

(3) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED. UNDER MAX LOADING, TYPE 3 POLE SHALL BE MOUNTED DIRECTLY TO ITS CONCRETE BASE.

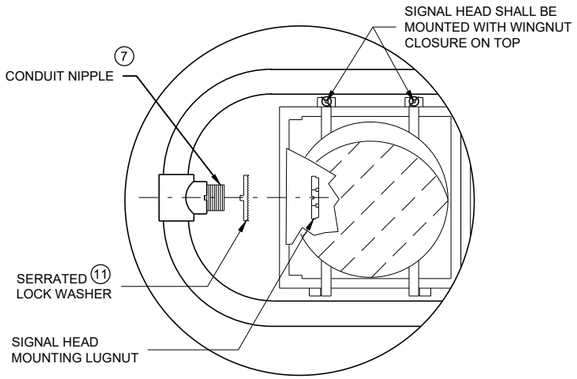
(7) USE 1 ½" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 ½" OPENING IN SIGNAL FACES AND BRACKET ENDS.

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

(9) FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.



HORIZONTAL SIGNAL HEAD ** MOUNTING DETAIL

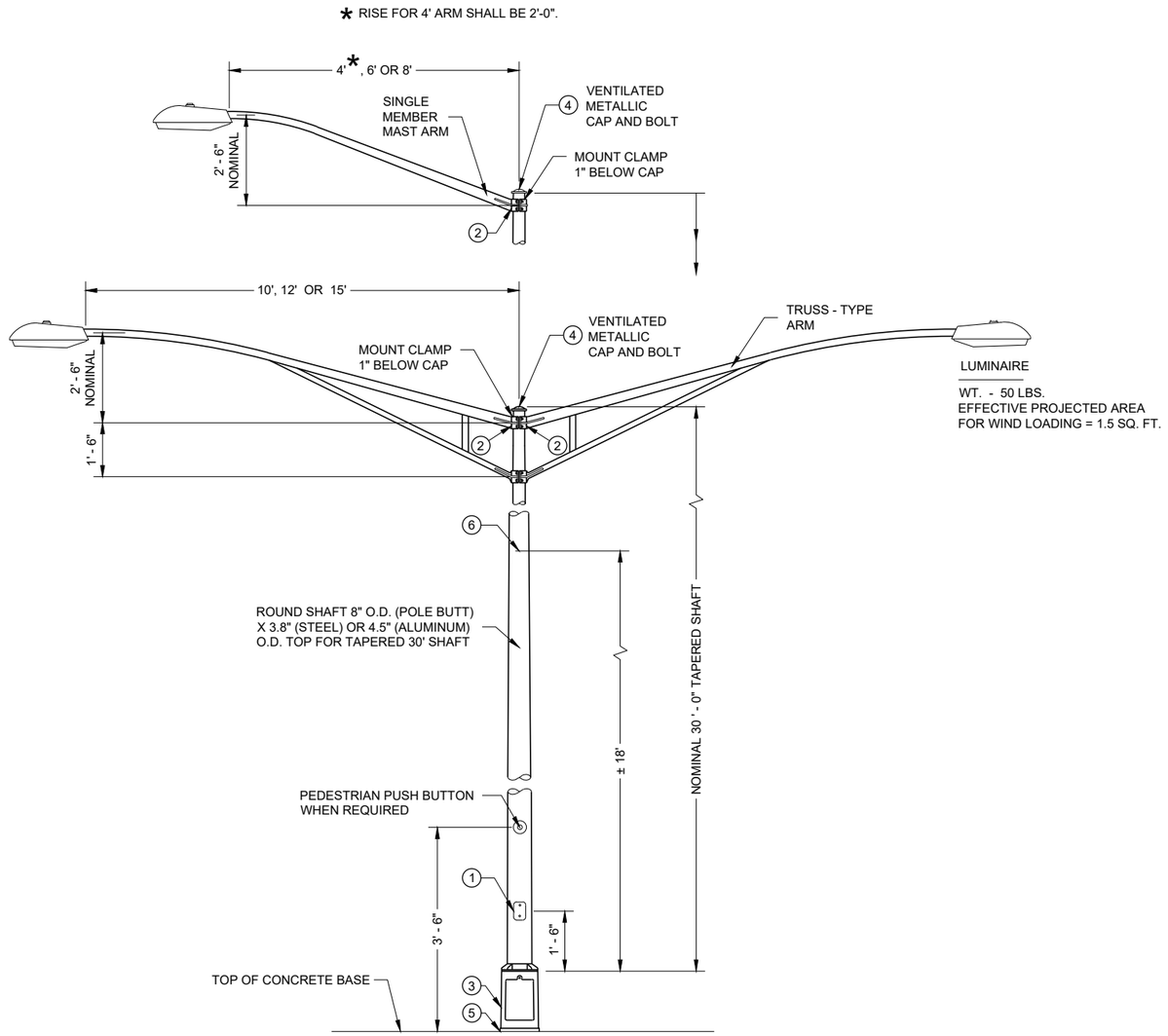
** SIGNAL HEAD ATTACHMENT ALSO APPLIES TO MOUNTING AT CROSS BAR

POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS TYPE 3 (HEAVY DUTY)

STATE OF WISCONSIN
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TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY

GENERAL NOTES

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

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.1888".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 ⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

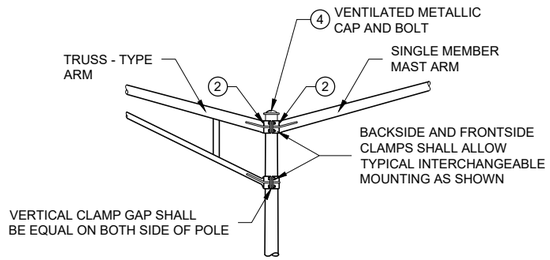
(2) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

(6) INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.



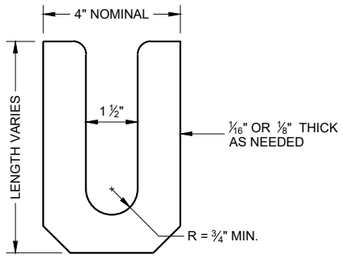
INTERCHANGEABLE MOUNTING DETAIL

POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)

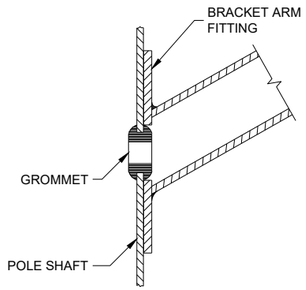
STATE OF WISCONSIN
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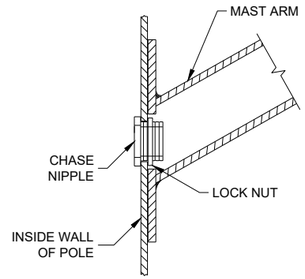
SDD 09E01 - 15d



LEVELING SHIM (1)
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

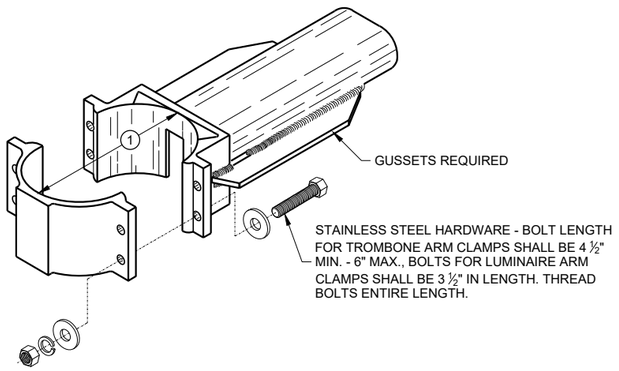
(1) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(2) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

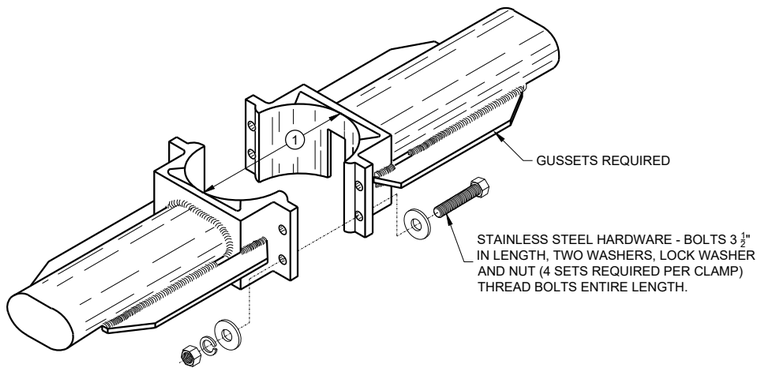
(3) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(4) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

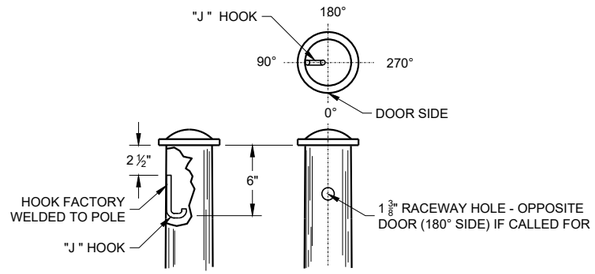
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



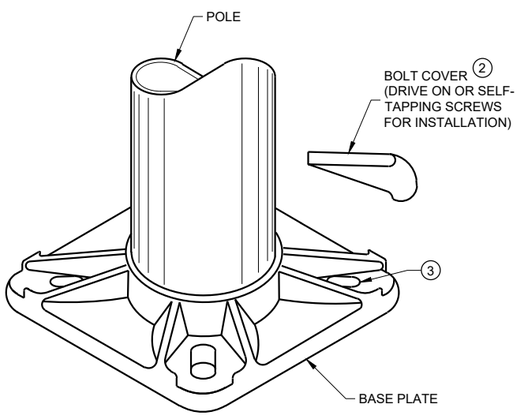
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



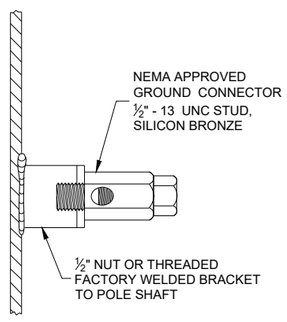
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

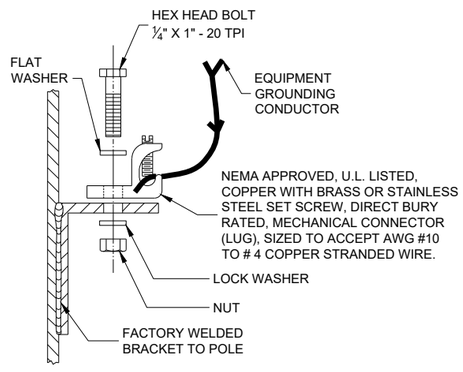


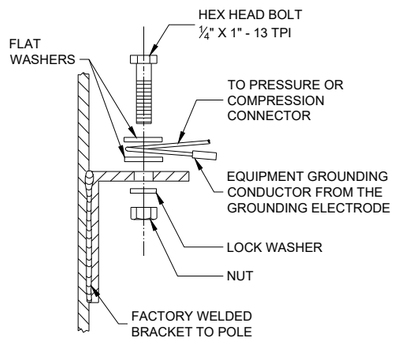
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 472

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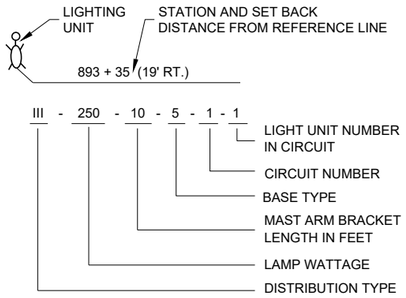
SDD 09E01 - 15g

GENERAL NOTES

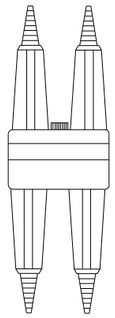
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

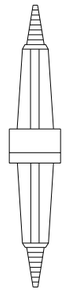
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.



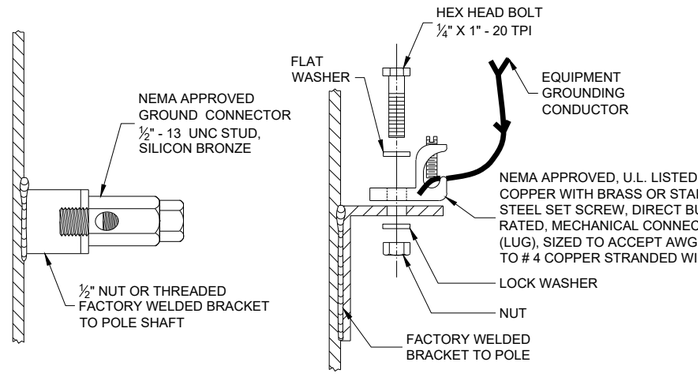
LIGHTING UNIT CODE
(TYPICAL)



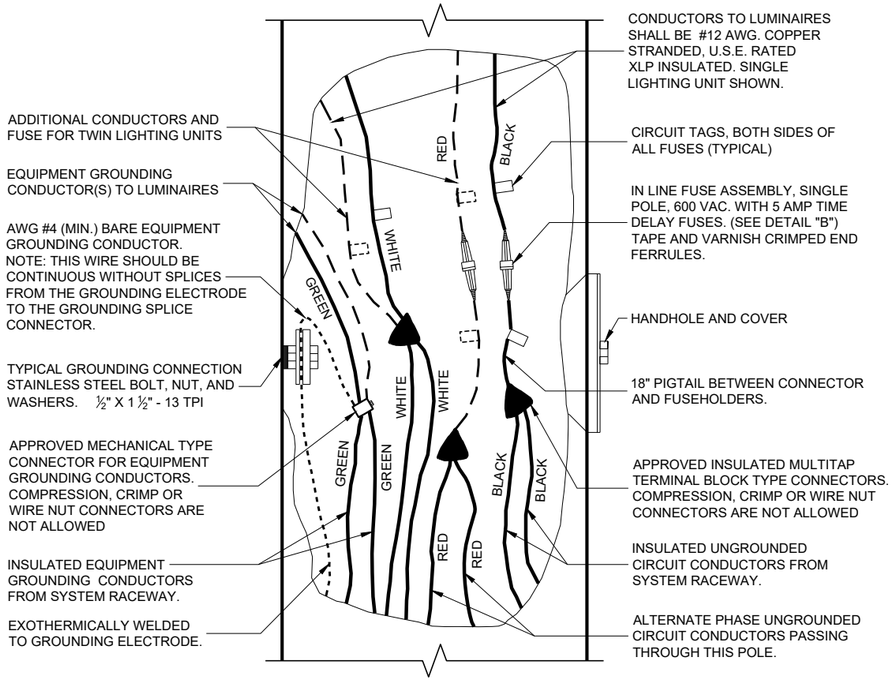
DETAIL "A"
BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



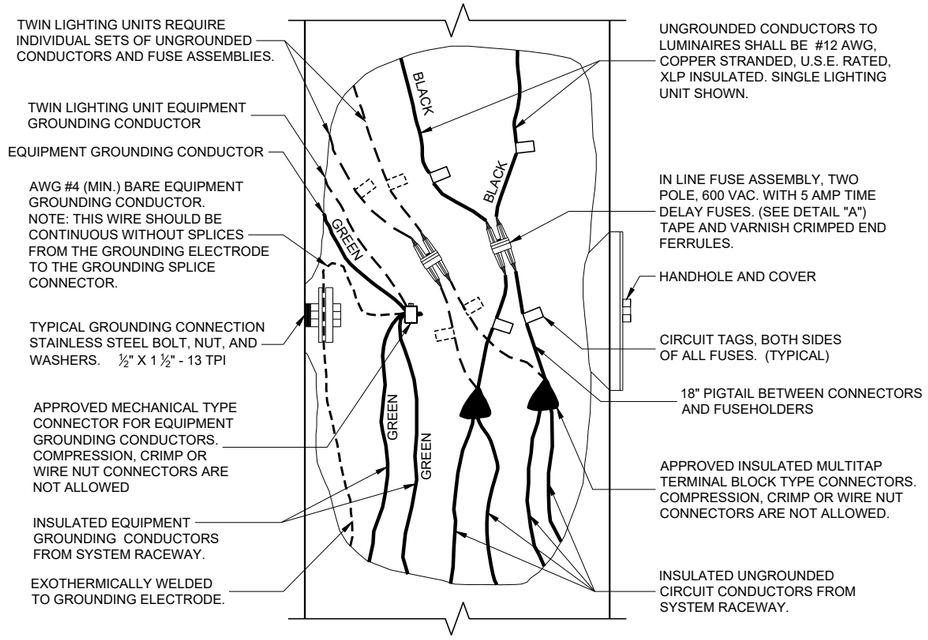
DETAIL "B"
BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH GROUNDING CONDUCTOR AND EQUIPMENT GROUNDING CONDUCTOR



2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

NON - FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 473

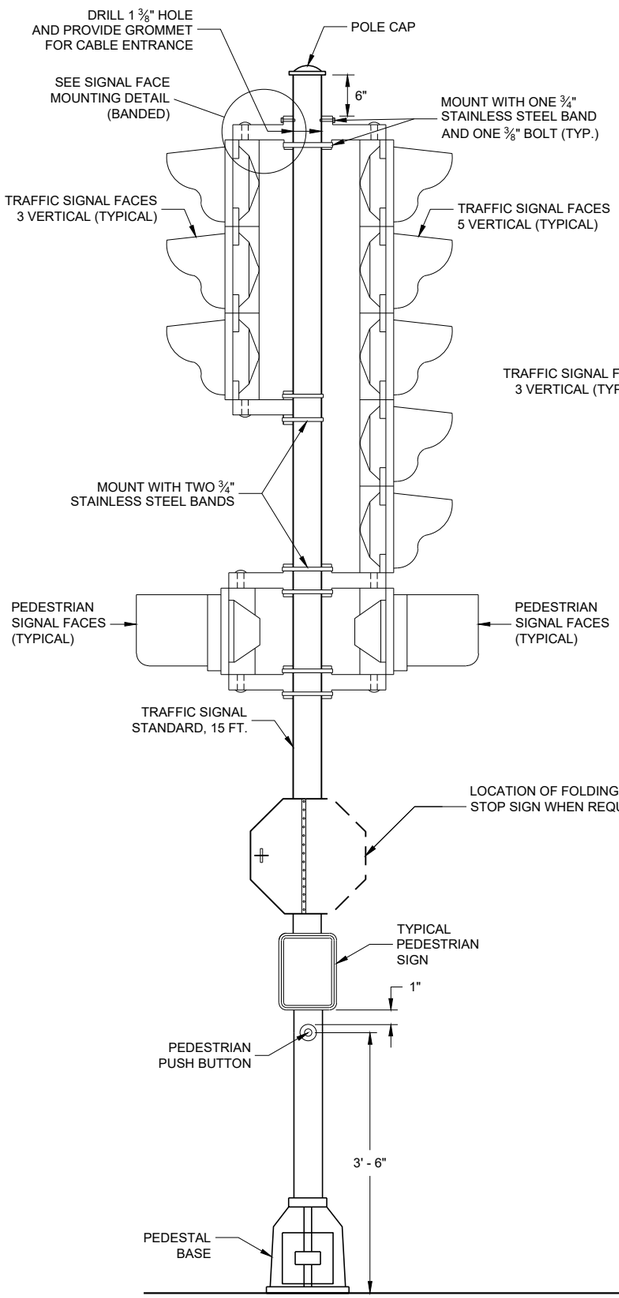
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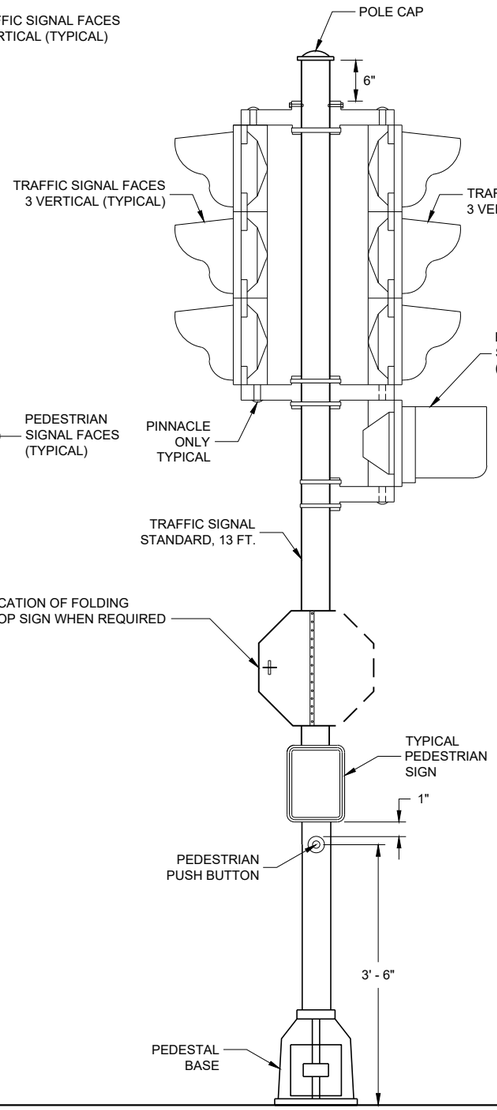
SDD 09E03 - 06

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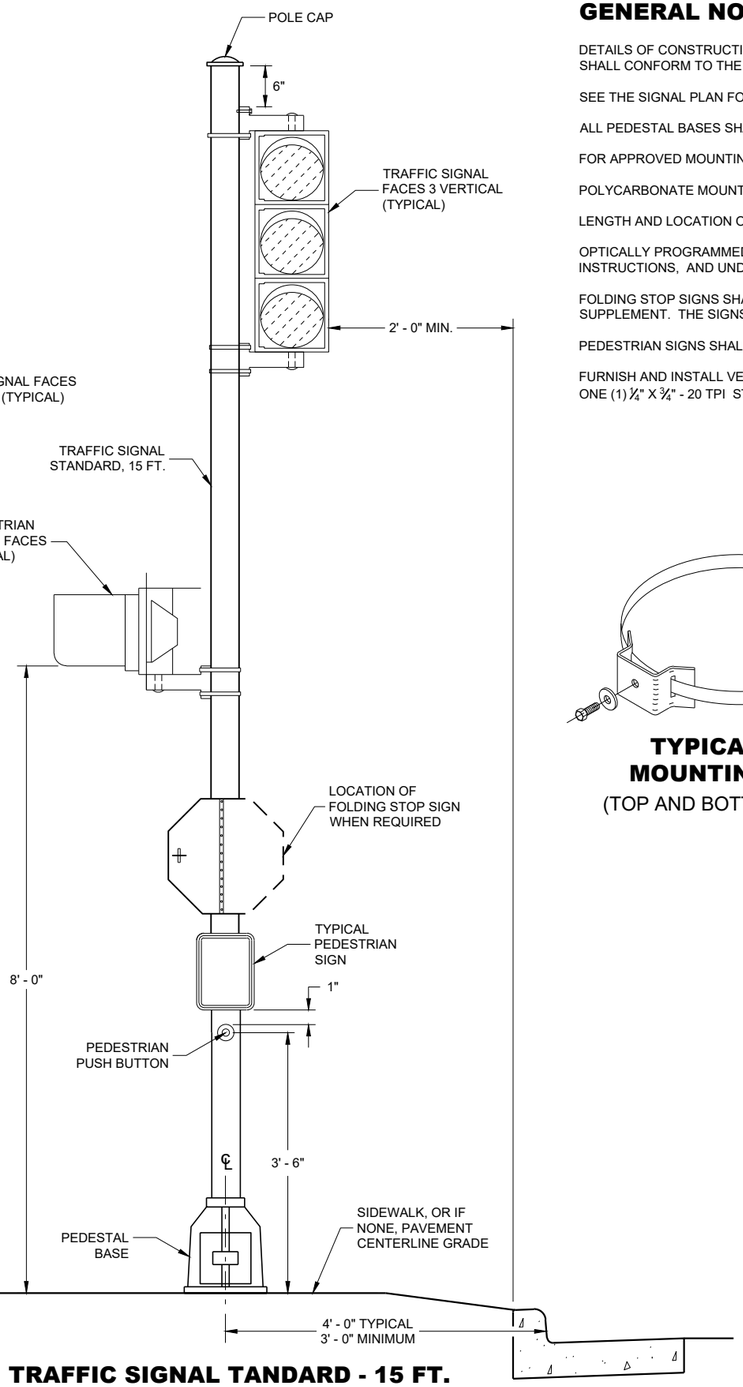
SDD 09E03 - 06



TRAFFIC SIGNAL STANDARD - 15 FT.



TRAFFIC SIGNAL STANDARD - 13 FT.



TRAFFIC SIGNAL TANDARD - 15 FT.
3M MOUNTING (TYPICAL)

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

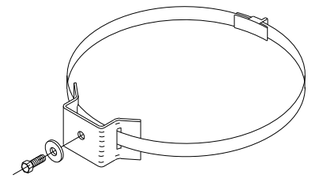
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

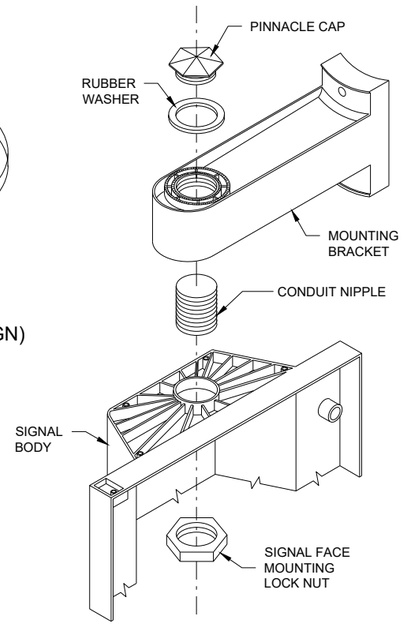
FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



SIGNAL FACE MOUNTING DETAIL (BANDED)

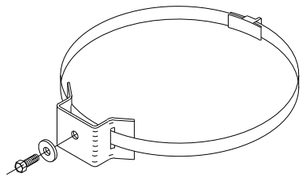
TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

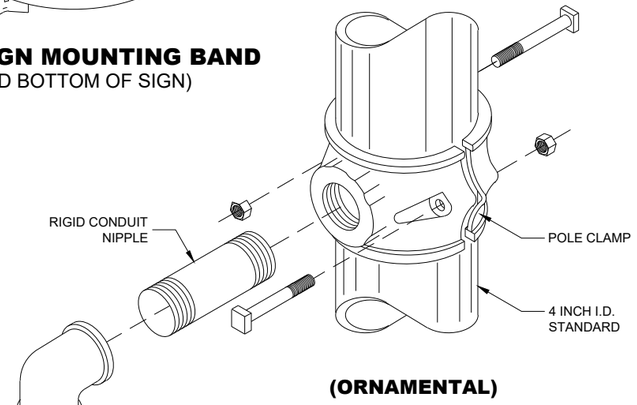
APPROVED
2/28/2013
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 474

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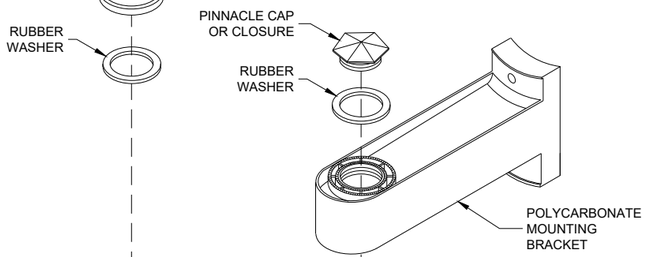
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SDD 09E06 - 05



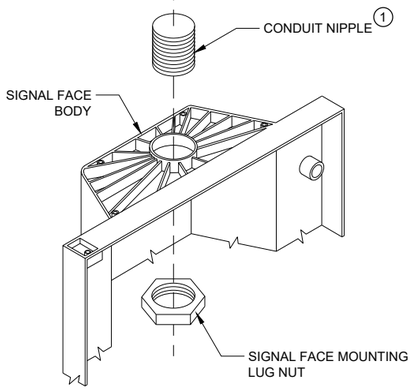
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



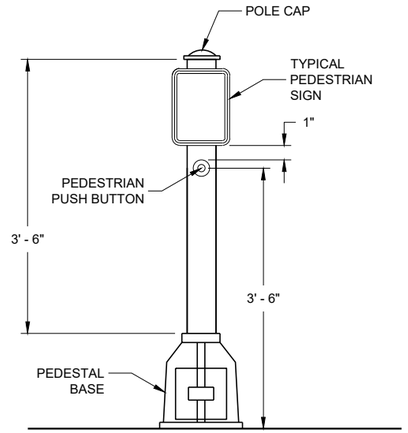
(ORNAMENTAL)



(BANDED)



SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS, UNLESS APPROVED BY THE ENGINEER IN THE FIELD.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

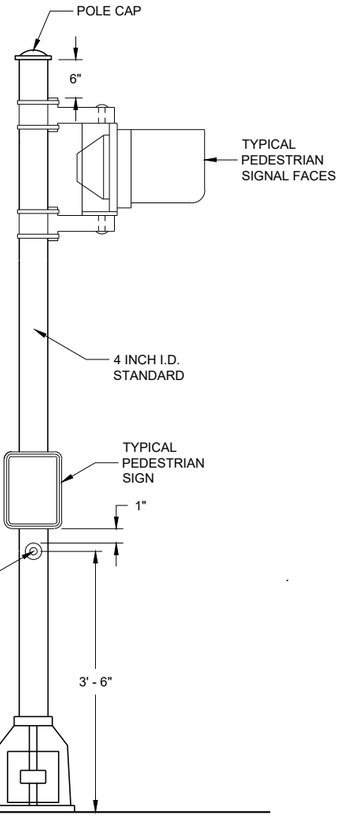
LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE REGION TRAFFIC ENGINEER).

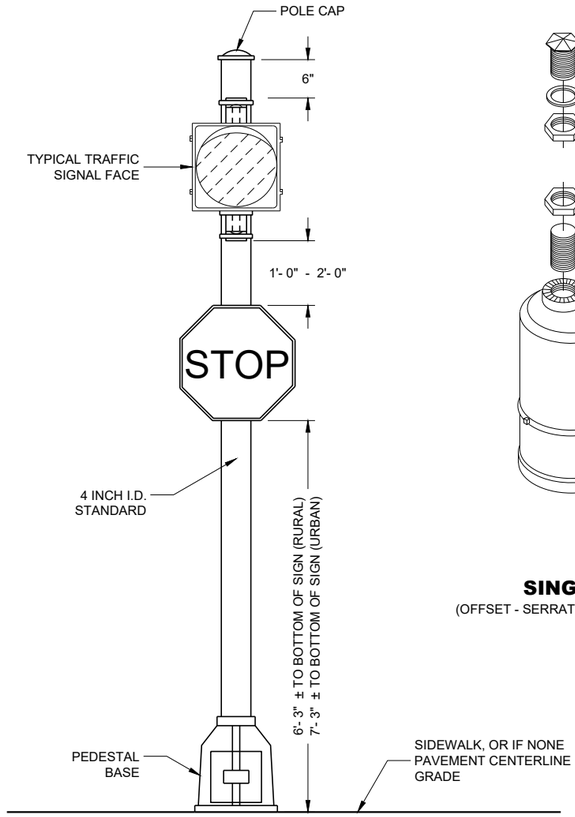
PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

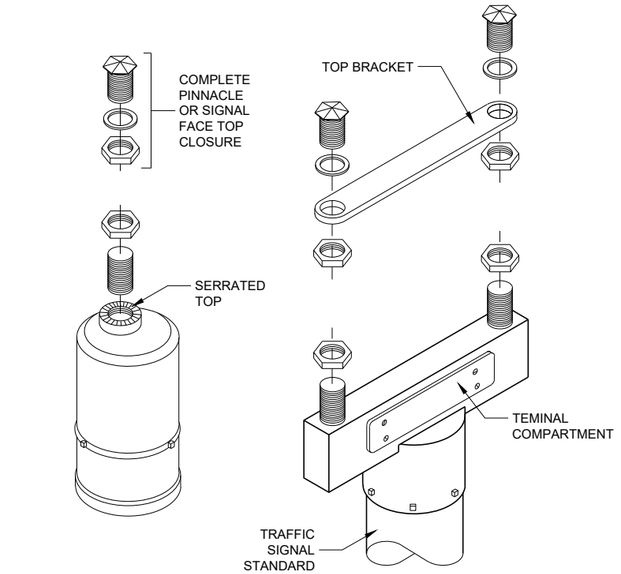
(1) USE 1 ½" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 ½" OPENING IN SIGNAL FACESAND BRACKET ENDS.



PEDESTRIAN FACE STANDARD - 10 FT.
(WALK - DON'T WALK)



STANDARD FLASHER
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED



SINGLE
(OFFSET - SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD
PEDESTRIAN AND FLASHER
TYPICAL MOUNTING DETAILS

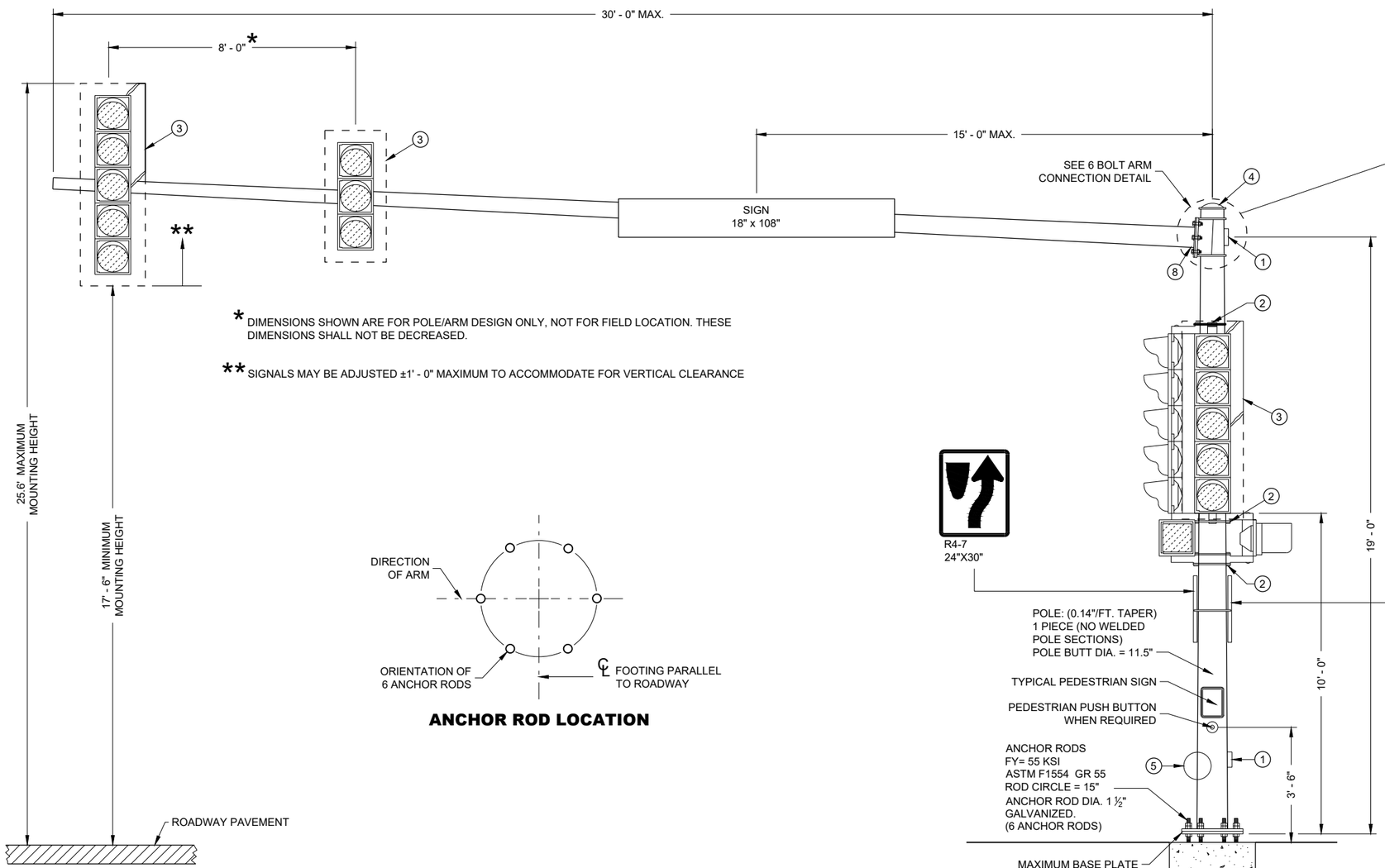
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
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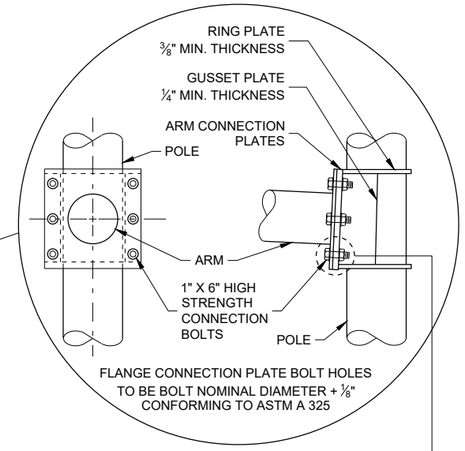
SDD 09E07 - 06



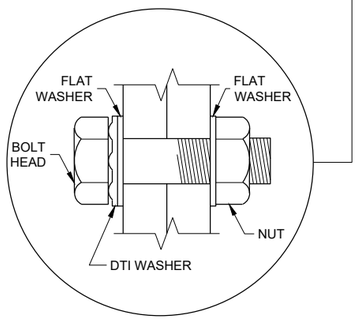
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

ANCHOR ROD LOCATION



6 BOLT ARM CONNECTION DETAIL



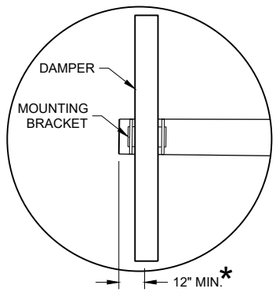
RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 9 POLE
15' - 30' MONOTUBE ARM
(MAXIMUM LOAD)

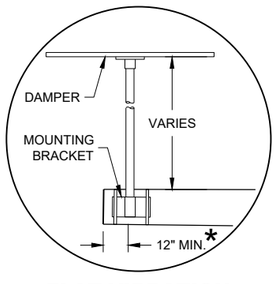
TYPE 9 POLE **15' - 30' MONOTUBE ARM**	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGI 476
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SDD 09E08 - 09a

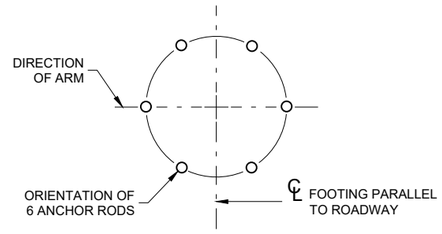


DUMBBELL VIBRATION DAMPER

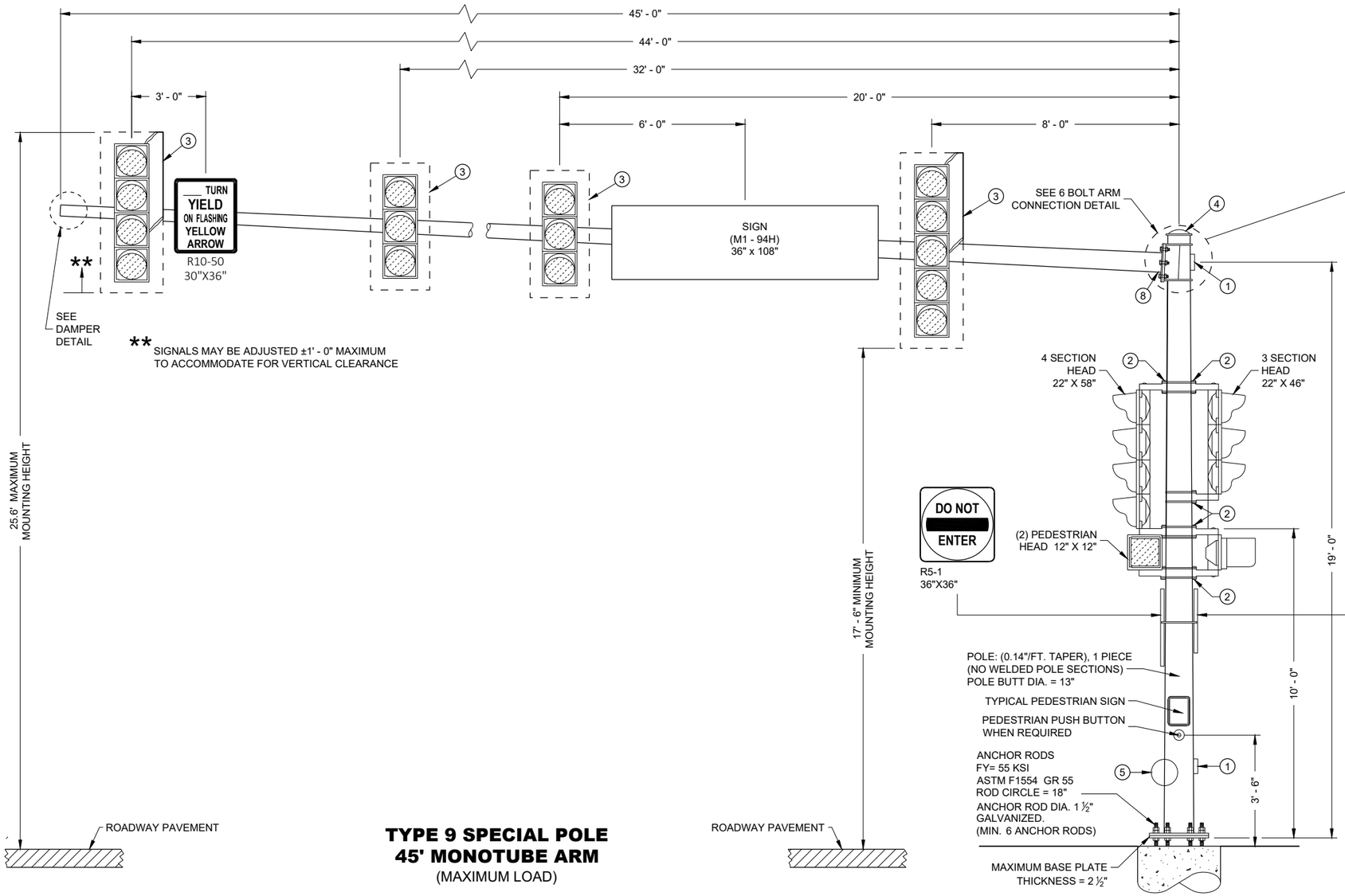


FLAT VIBRATION DAMPER

* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.

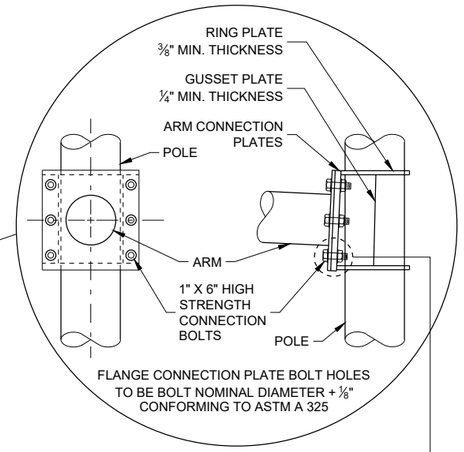


ANCHOR ROD LOCATION

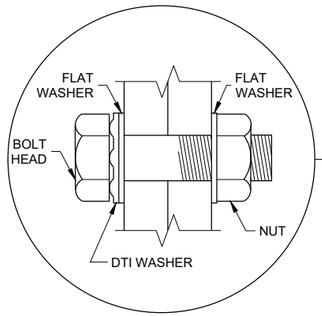


** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

TYPE 9 SPECIAL POLE
45' MONOTUBE ARM
(MAXIMUM LOAD)



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 9 SPECIAL POLE
45' MONOTUBE ARM

STATE OF WISCONSIN
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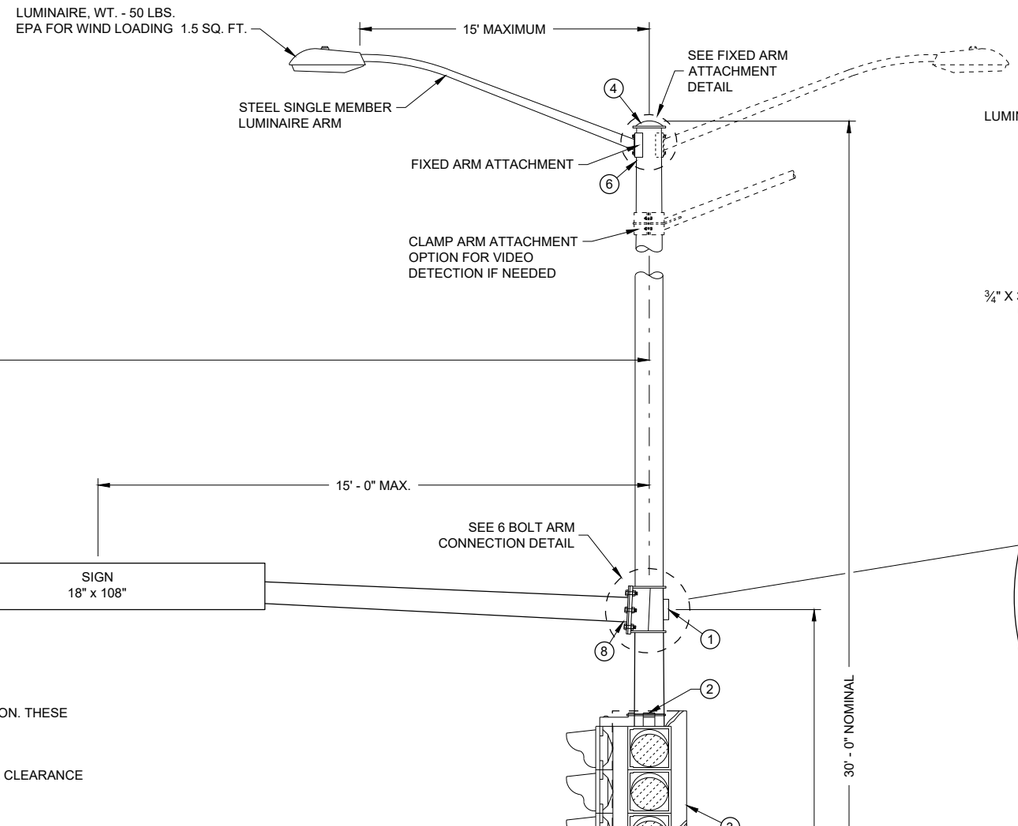
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SDD 09E08 - 09d

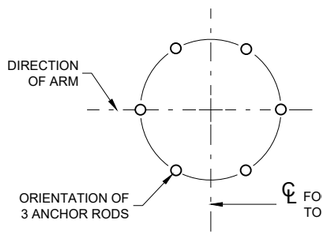
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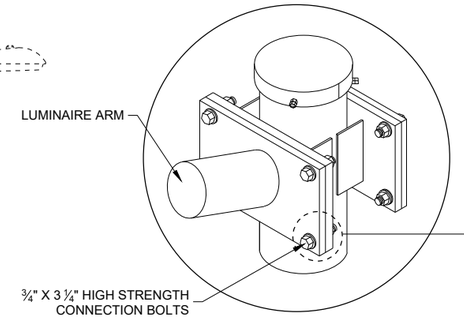


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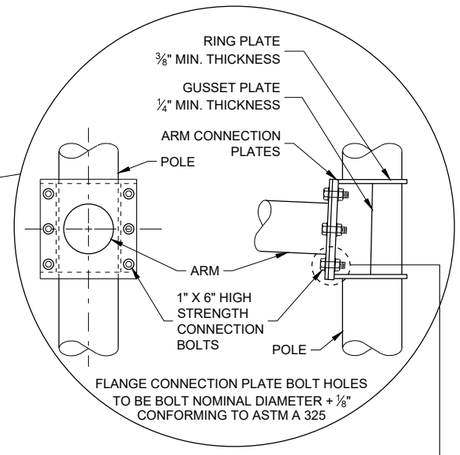
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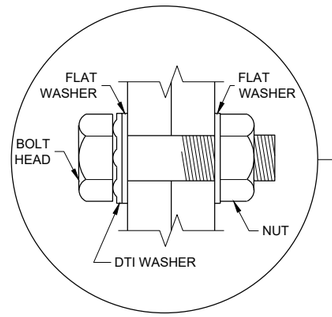
ANCHOR ROD LOCATION



FIXED ARM ATTACHMENT DETAIL



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 10 POLE
15' - 30' MONOTUBE ARM
(MAXIMUM LOAD)

TYPE 10 POLE
15' - 30' MONOTUBE ARM

STATE OF WISCONSIN
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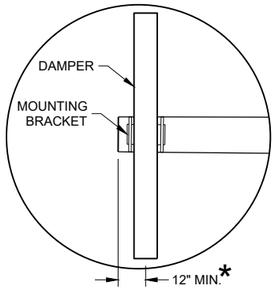
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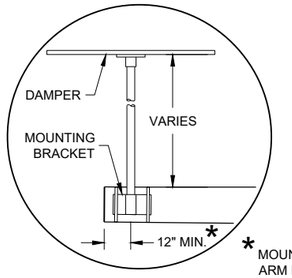
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SDD 09E08 - 09e

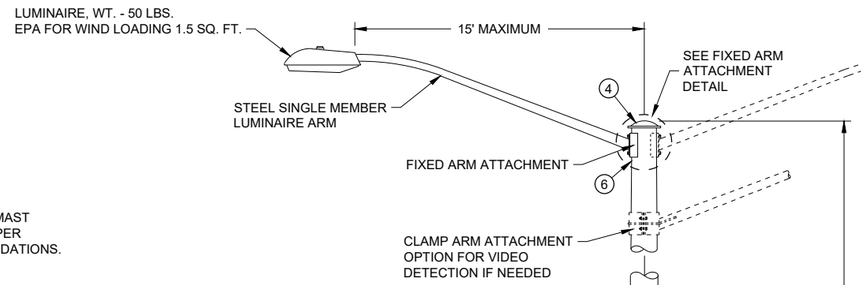


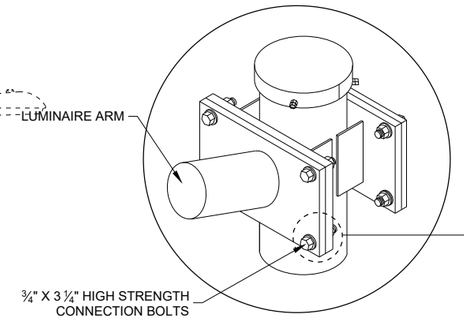
DUMBBELL VIBRATION DAMPER



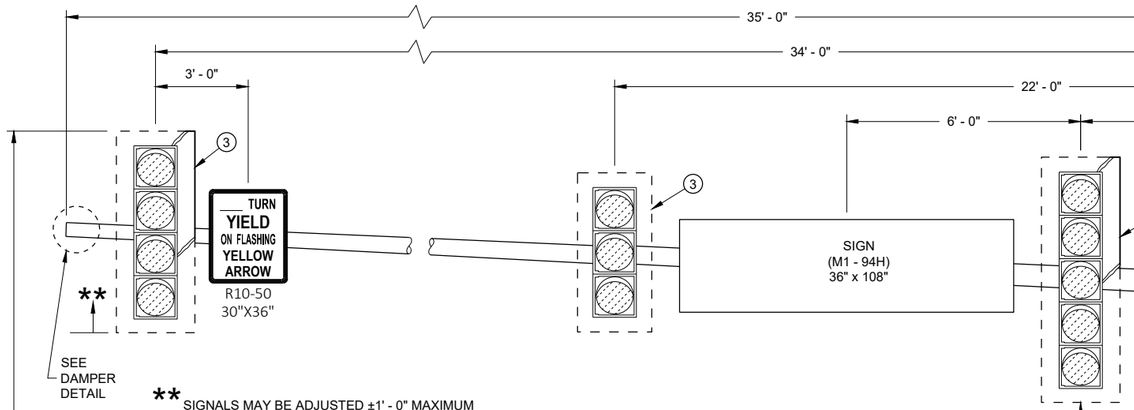
FLAT VIBRATION DAMPER

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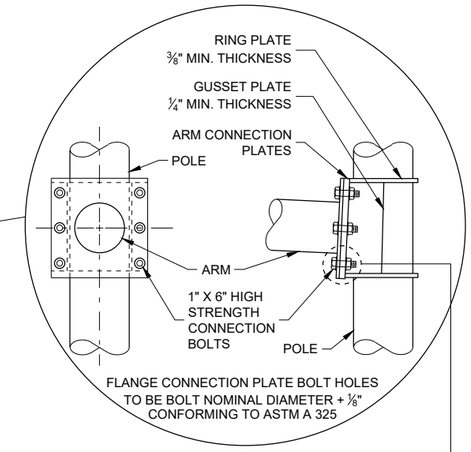




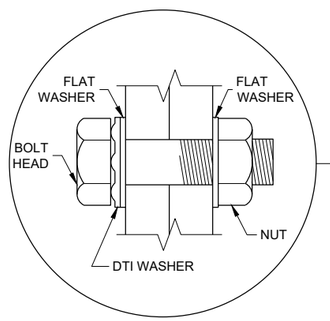
FIXED ARM ATTACHMENT DETAIL



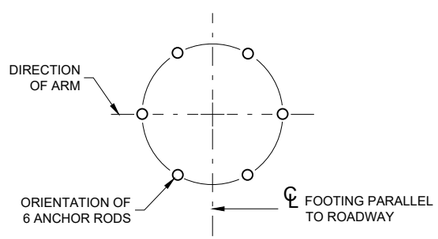
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6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL



ANCHOR ROD LOCATION

TYPE 10 SPECIAL POLE
35' MONOTUBE ARM
(MAXIMUM LOAD)

TYPE 10 SPECIAL POLE
35' MONOTUBE ARM

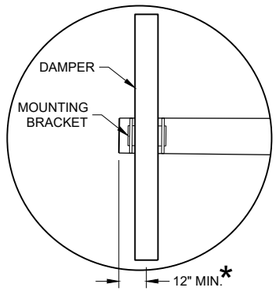
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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August 2020
DATE

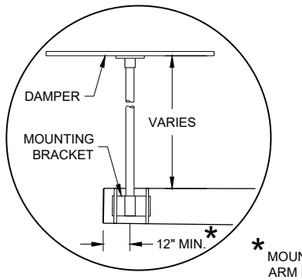
/S/ Ahmet Demirbilek
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SDD 09E08 - 09f

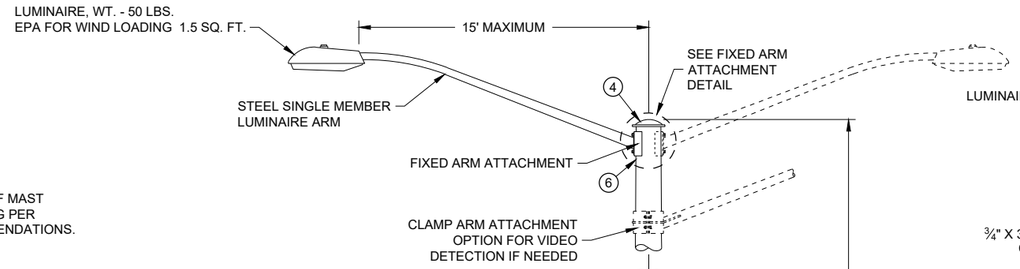


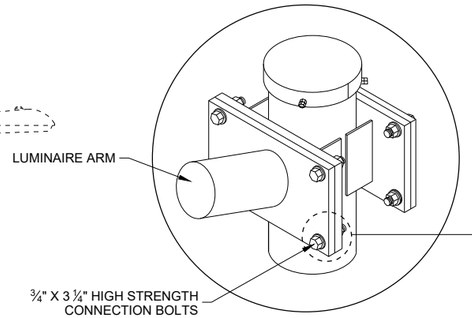
DUMBBELL VIBRATION DAMPER



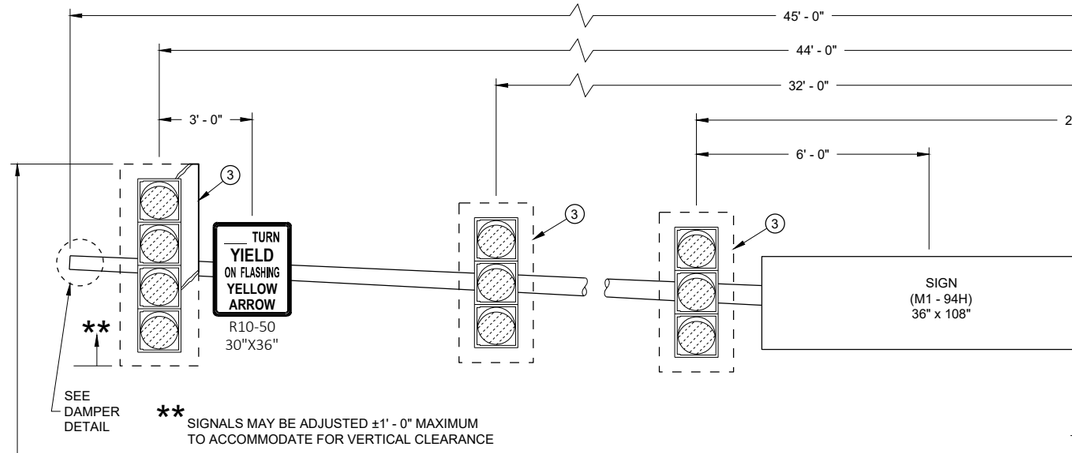
FLAT VIBRATION DAMPER

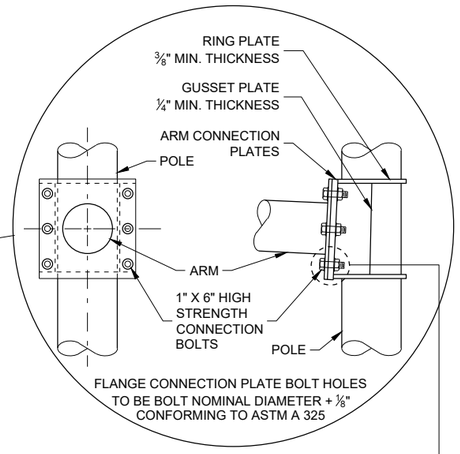
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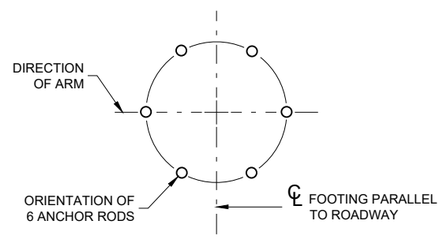


FIXED ARM ATTACHMENT DETAIL

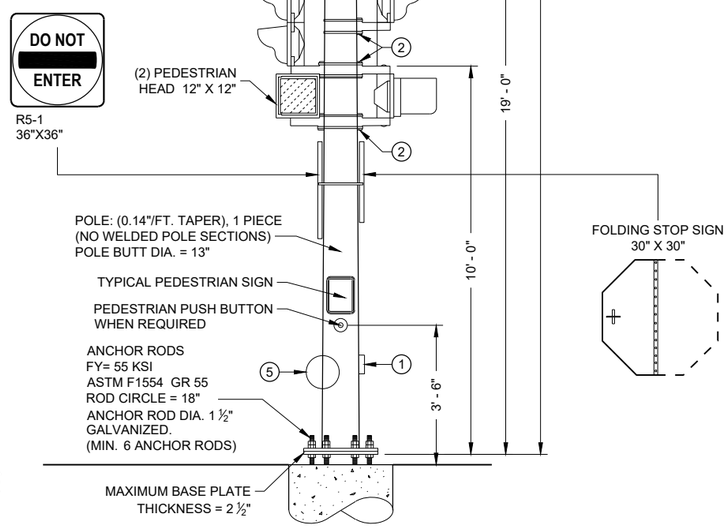


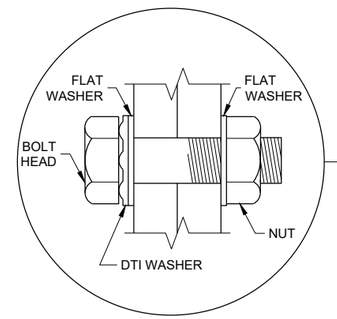


6 BOLT ARM CONNECTION DETAIL



ANCHOR ROD LOCATION





RECOMMENDED BOLT ASSEMBLY DETAIL

25.6' MAXIMUM MOUNTING HEIGHT

17' - 6" MINIMUM MOUNTING HEIGHT

ROADWAY PAVEMENT

ROADWAY PAVEMENT

TYPE 10 SPECIAL POLE
45' MONOTUBE ARM
(MAXIMUM LOAD)

TYPE 10 SPECIAL POLE
45' MONTUBE ARM

STATE OF WISCONSIN
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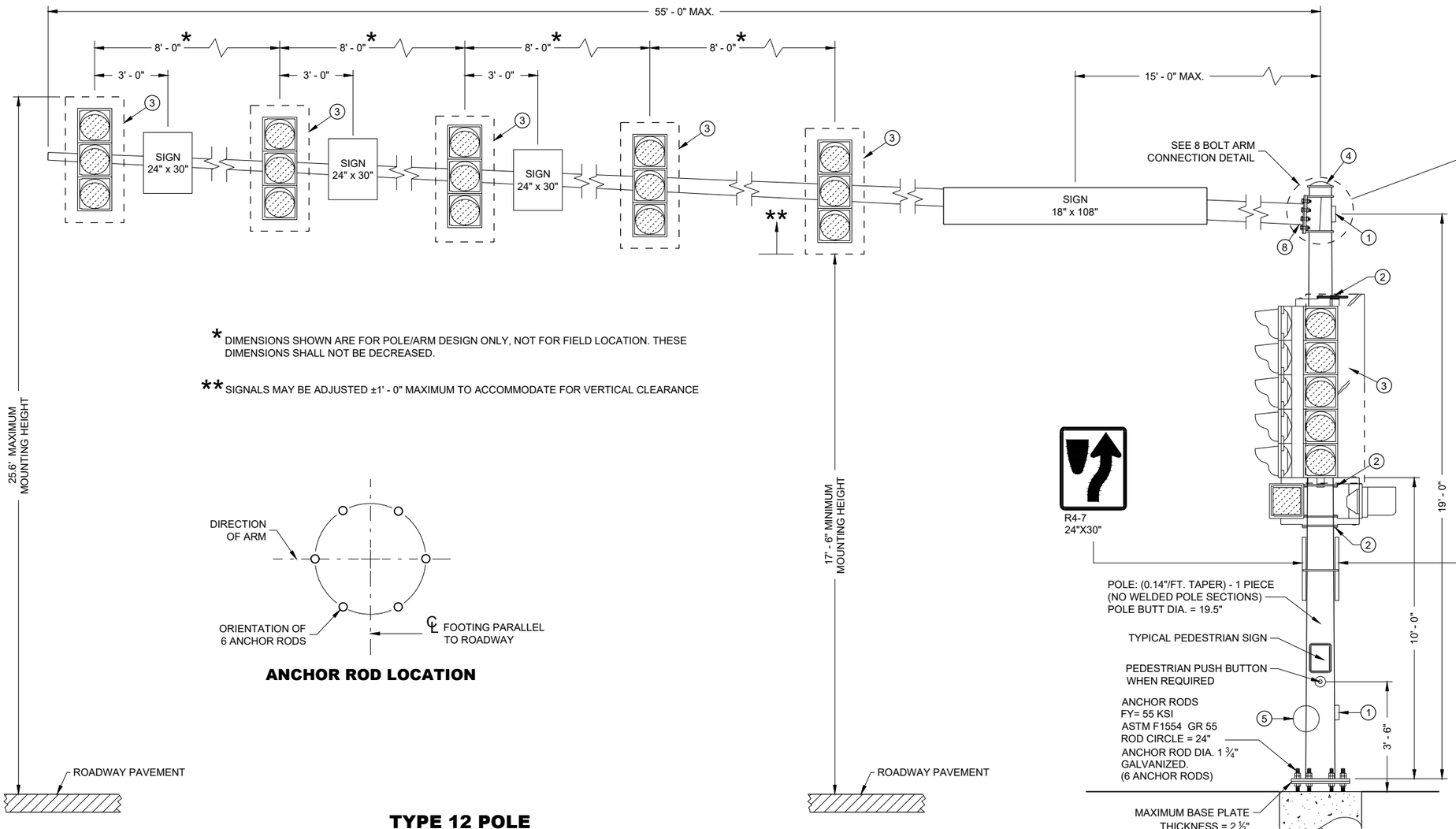
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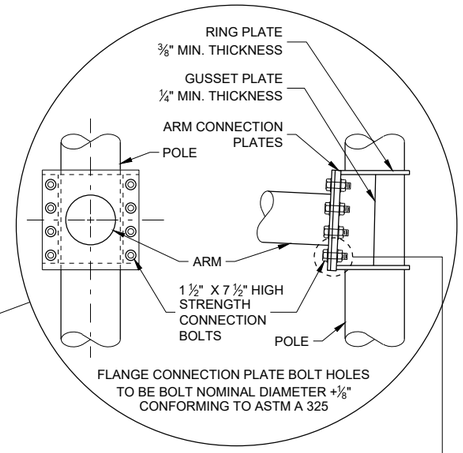
SDD 09E08 - 08h



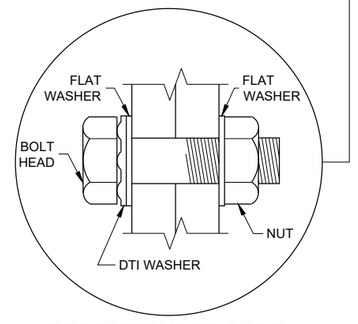
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ANCHOR ROD LOCATION



8 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 12 POLE
35' - 55' MONOTUBE ARM
(MAXIMUM LOAD)

TYPE 12 POLE
35' - 55' MONOTUBE ARM

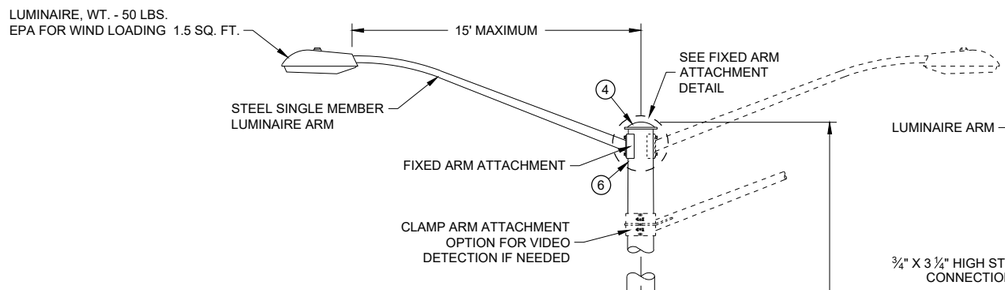
STATE OF WISCONSIN
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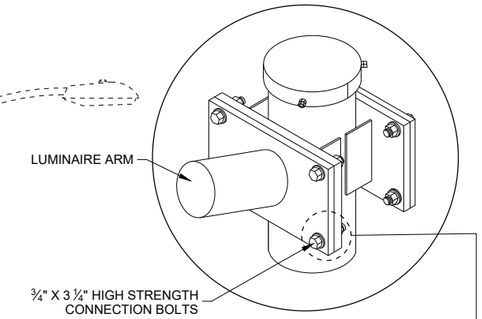
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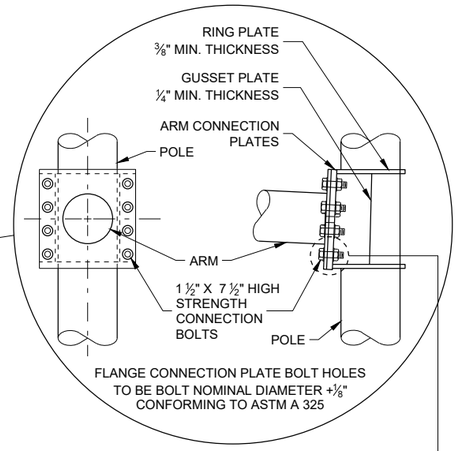
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SDD 09E08 - 09i

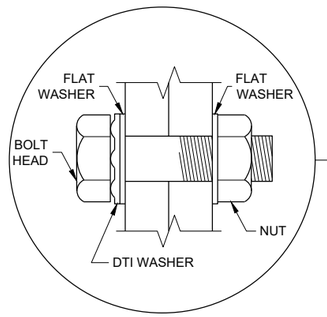




FIXED ARM ATTACHMENT DETAIL



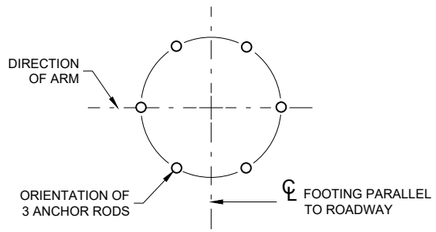
8 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

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** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE



ANCHOR ROD LOCATION

TYPE 13 POLE
35' - 55' MONOTUBE ARM
(MAXIMUM LOAD)

TYPE 13 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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GENERAL NOTES

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

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15 FOOT TO 30 FOOT.

POLE TYPES 9 SPECIAL AND 10 SPECIAL ARE FOR ARM LENGTHS 35 FOOT, 40 FOOT, AND 45 FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35 FOOT TO 55 FOOT.

MONOTUBE POLES AND ARMS SHALL BE GALVANIZED STEEL.

RING STIFFENED BUILT UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3% ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATION SHALL APPLY TO THIS DRAWING.

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNAL 2015 1ST EDITION (INCLUDING INTERIM REVISIONS)" AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR THE LIGHTING STRUCTURES AS FOLLOWS:

CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.

CATEGORY II FATIGUE LOADS OF TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 SPECIAL AND TYPE 10 SPECIAL STRUCTURES. IN LIEU OF DESIGNING FOR GALLOPING, A VIBRATION DAMPER MITIGATION DEVICE IS REQUIRED TO BE SUPPLIED AND INSTALLED AT THE END OF THE MAST ARM.

CATEGORY II FATIGUE FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE12 AND TYPE 13 STRUCTURES.

115 MPH (700 YEAR MRI BASIC WIND SPEED).

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" STAINLESS STEEL BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR A S DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEAD AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

(1) DESIGN FOR MAXIMUM ALLOWABLE HAND HOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

(2) SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING (SEE SPECIFICATION SECTION 658).

(3) SECURELY MOUNT BACK PLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.

(5) FACTORY WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HAND HOLD, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

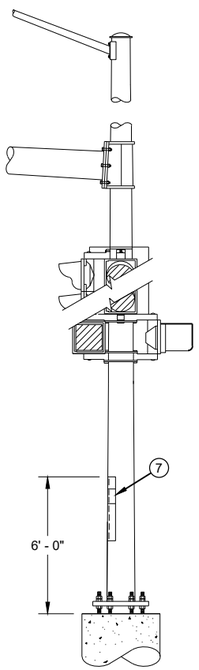
(6) FACTORY WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

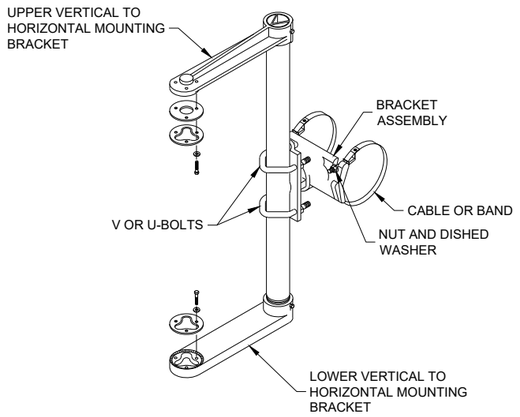
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

MOUNTING HEIGHT SHALL BE 6' - 0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

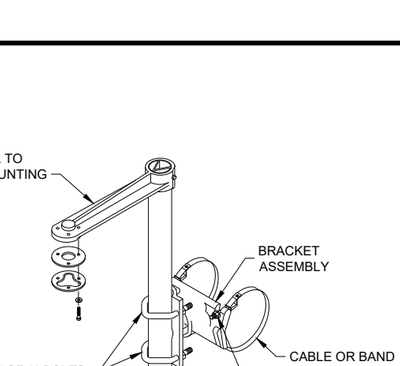


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



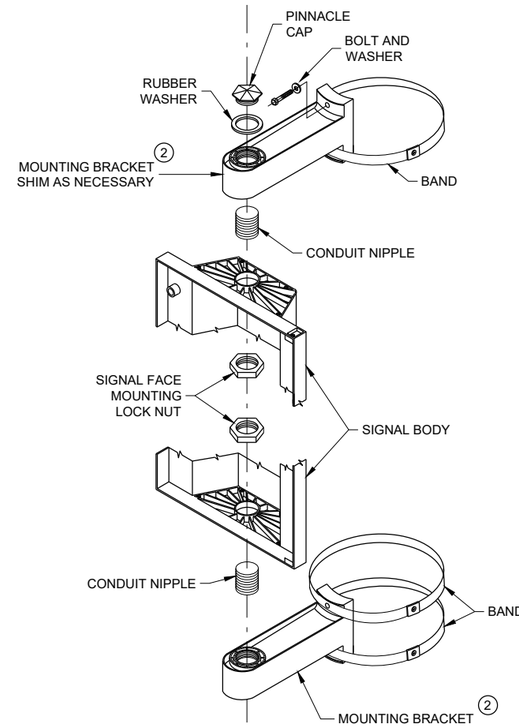
SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANFACTURER'S RECOMMENDATION)

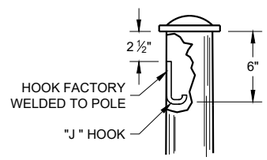


TYPICAL GROUNDING (5) CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



SIGNAL FACE VERTICAL MOUNTING DETAIL



TYPICAL "J" HOOK (6) WIRE SUPPORT

GENERAL NOTES AND HARDWARE FOR TYPES 9,10, 9/10 SPECIAL, 12 AND 13 POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

483

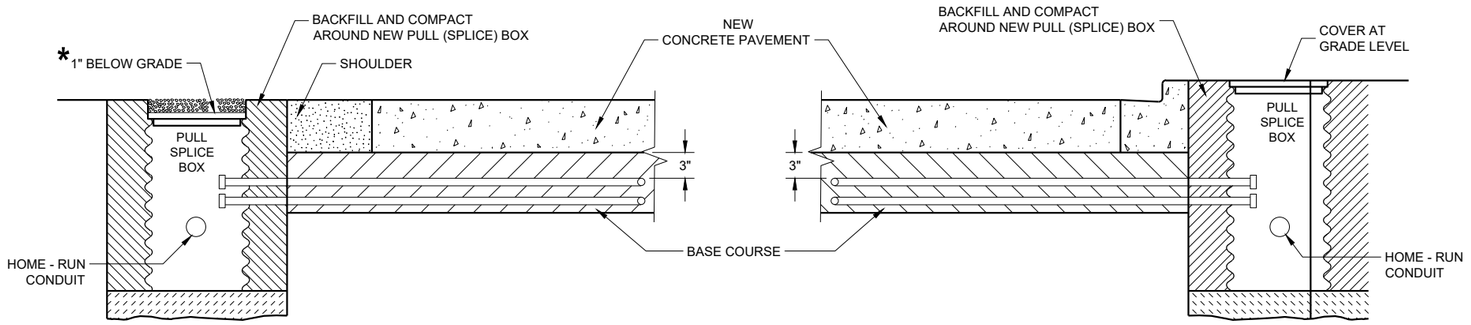
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SDD 09E08 - 09k

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SDD 09E08 - 09k



SECTION A - A
NO CURB AND GUTTER

SECTION B - B
CURB AND GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READING TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

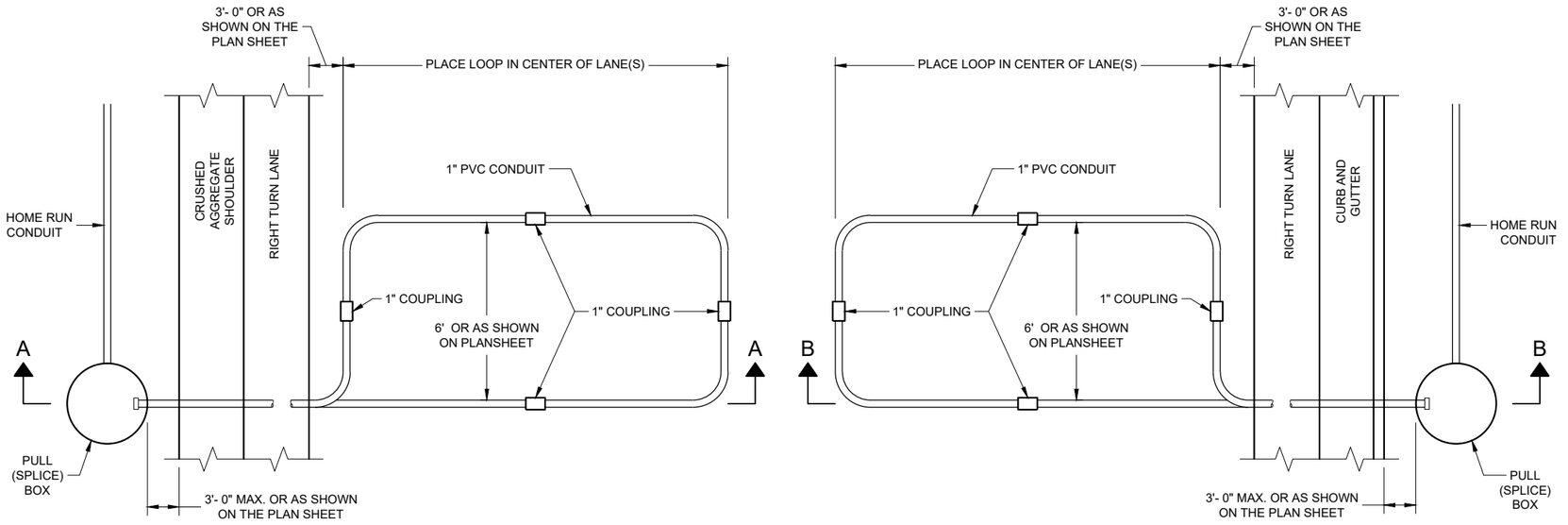
THE #12 AWG LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

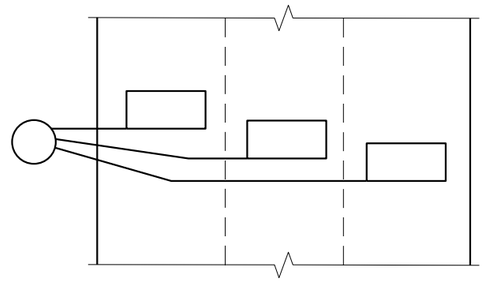
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE NON-SPLICED, CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN LOOP DETECTOR
WITH 24" PULL (SPLICE) BOX



MULTI-LANE
INSTALLATION

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI
FHWA

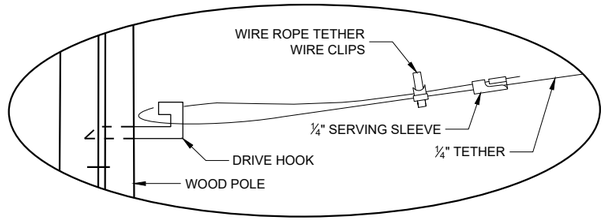
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SDD 09F15 - 04b

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SDD 09F15 - 04b

MINIMUM POLE LENGTHS	POLE BURIAL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

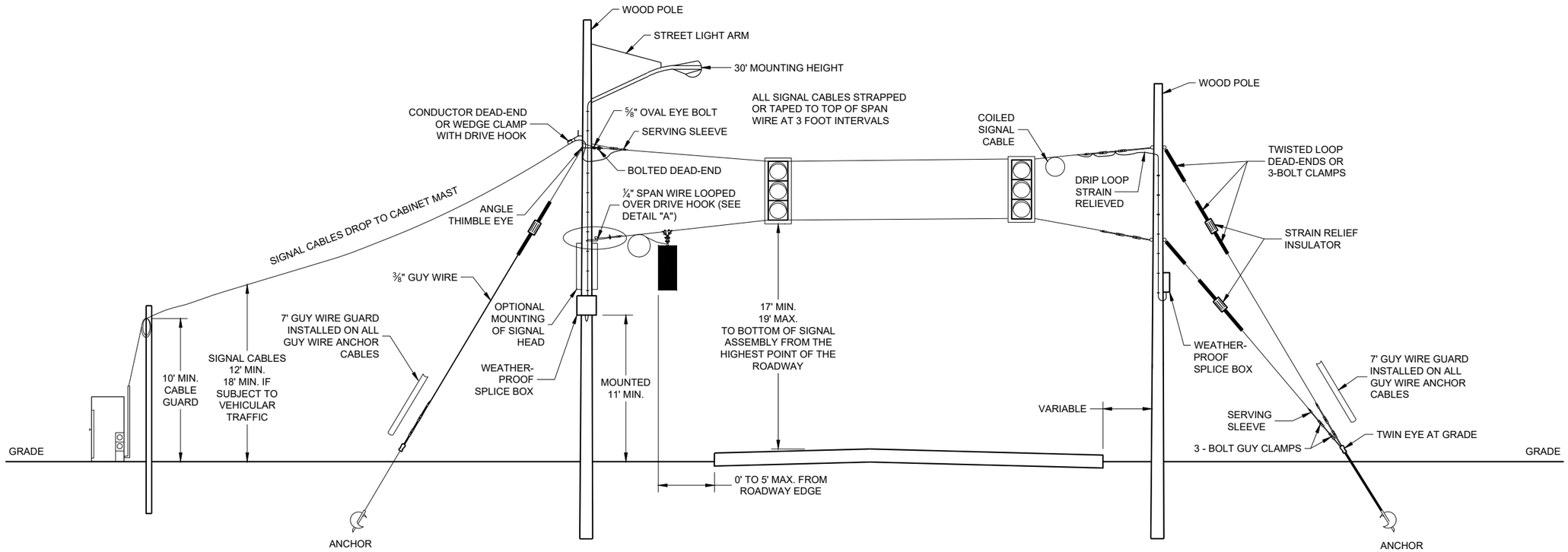


DETAIL "A"

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 485
FHWA

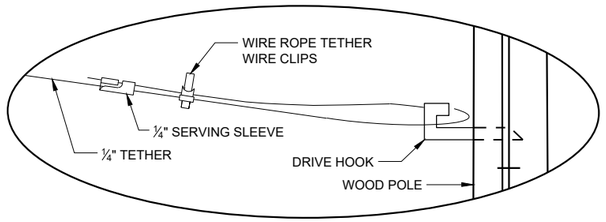
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MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

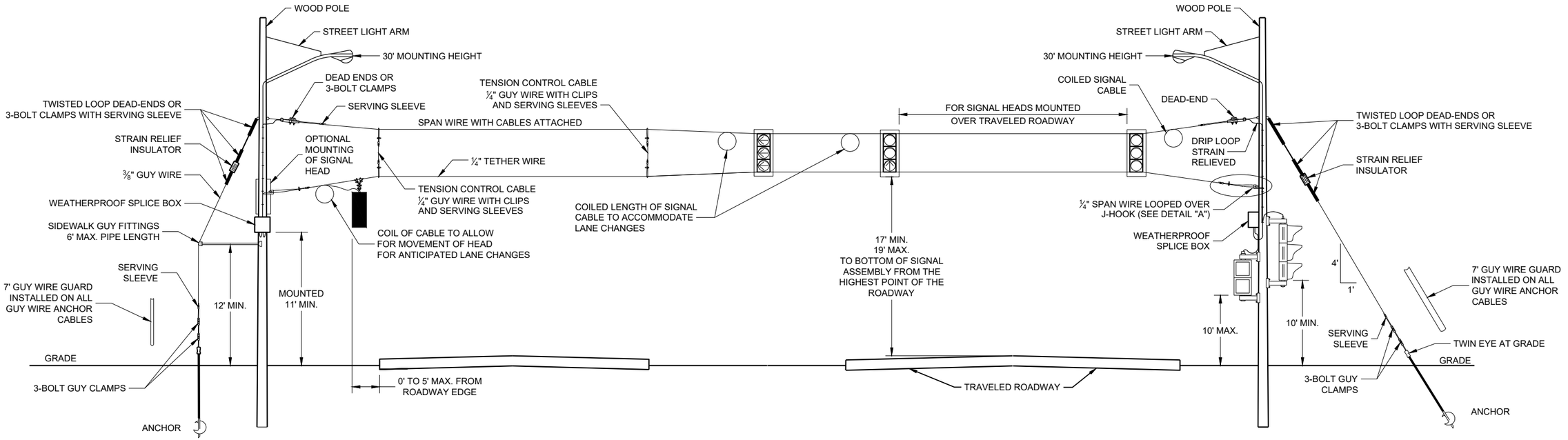


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   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
3. SPAN WIRE:
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   C. THE SIGNAL ASSEMBLY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

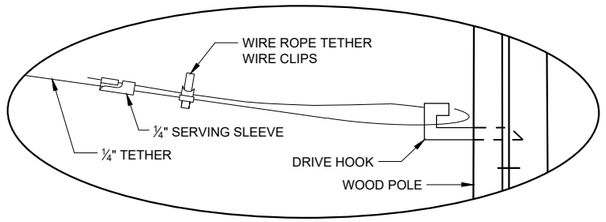
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015
DATE
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI 486
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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'

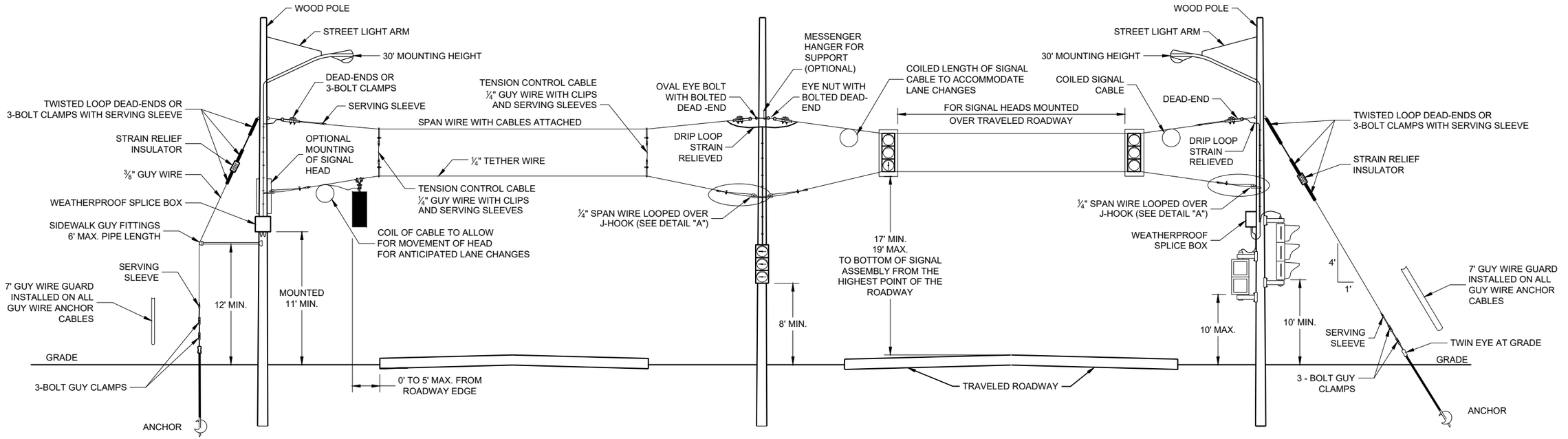


DETAIL "A"

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   - 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

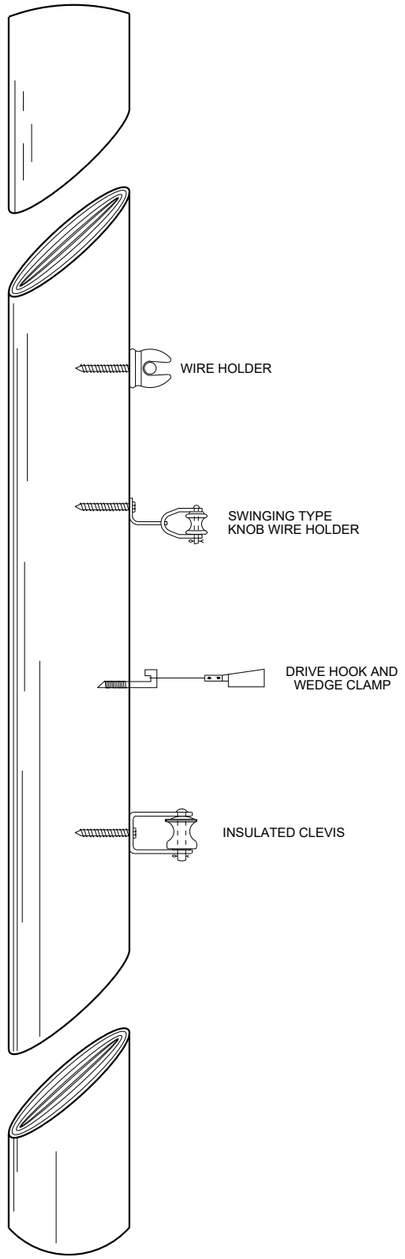
STATE OF WISCONSIN
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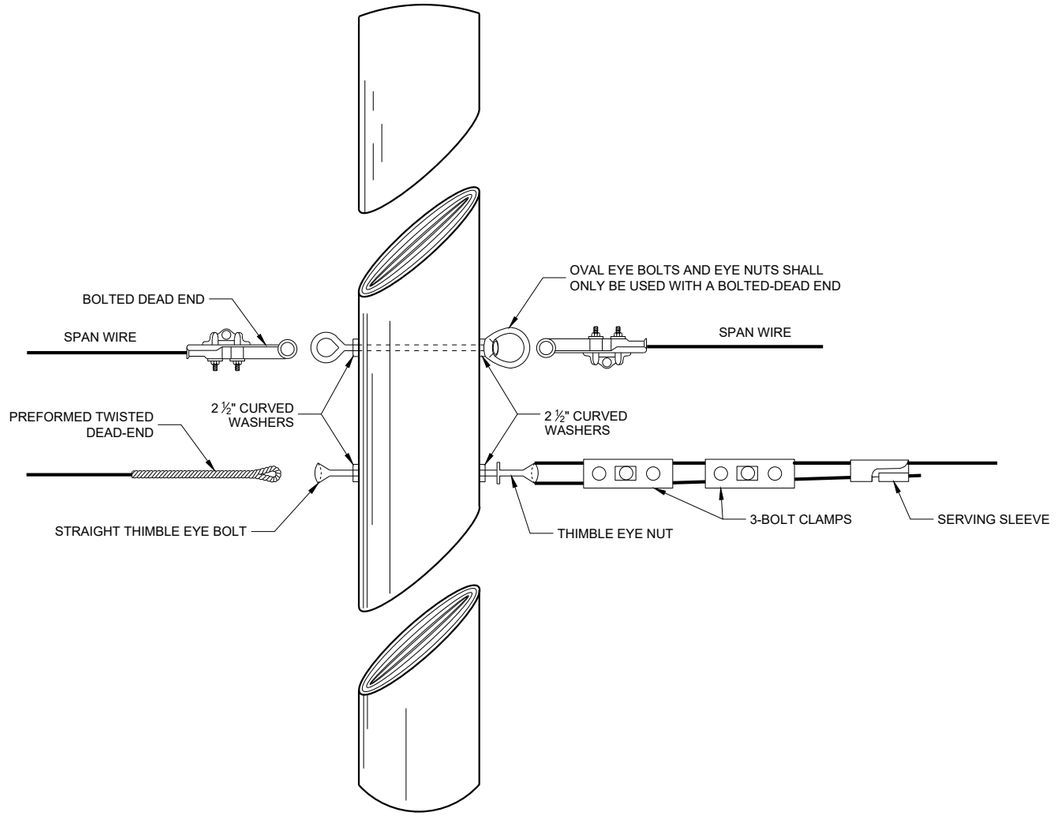
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June 2015
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/S/ Ahmet Demerbilek
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SPAN WIRE TEMPORARY TRAFFIC SIGNAL

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DEPARTMENT OF TRANSPORTATION

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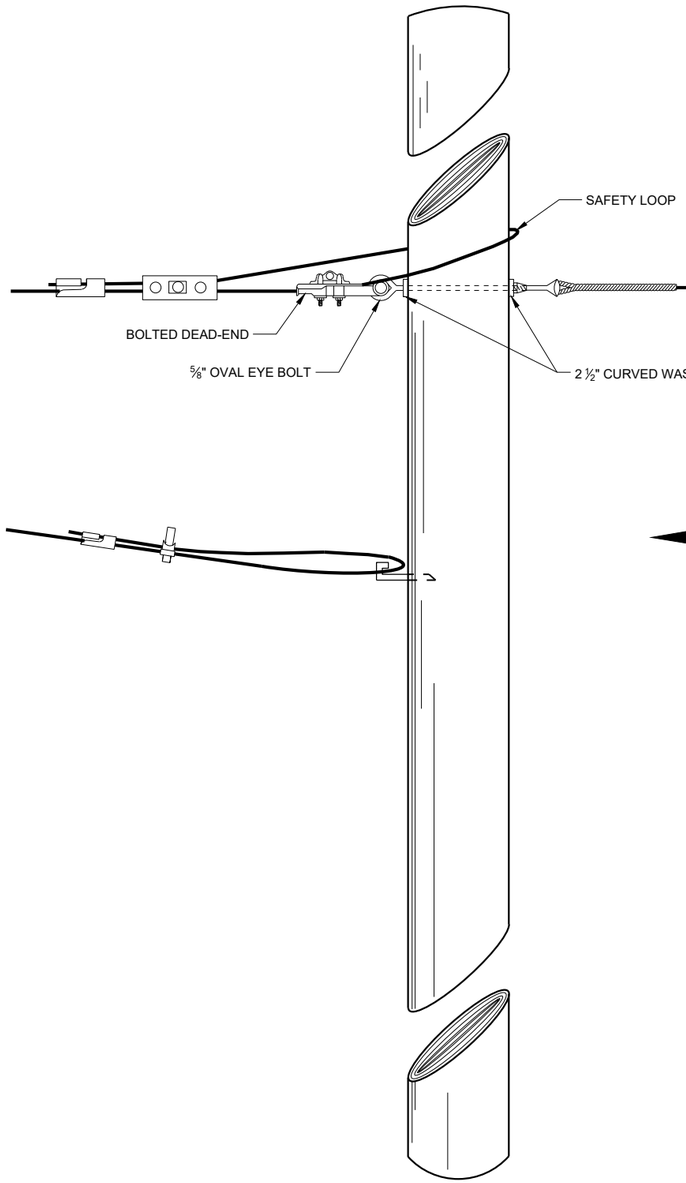
June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

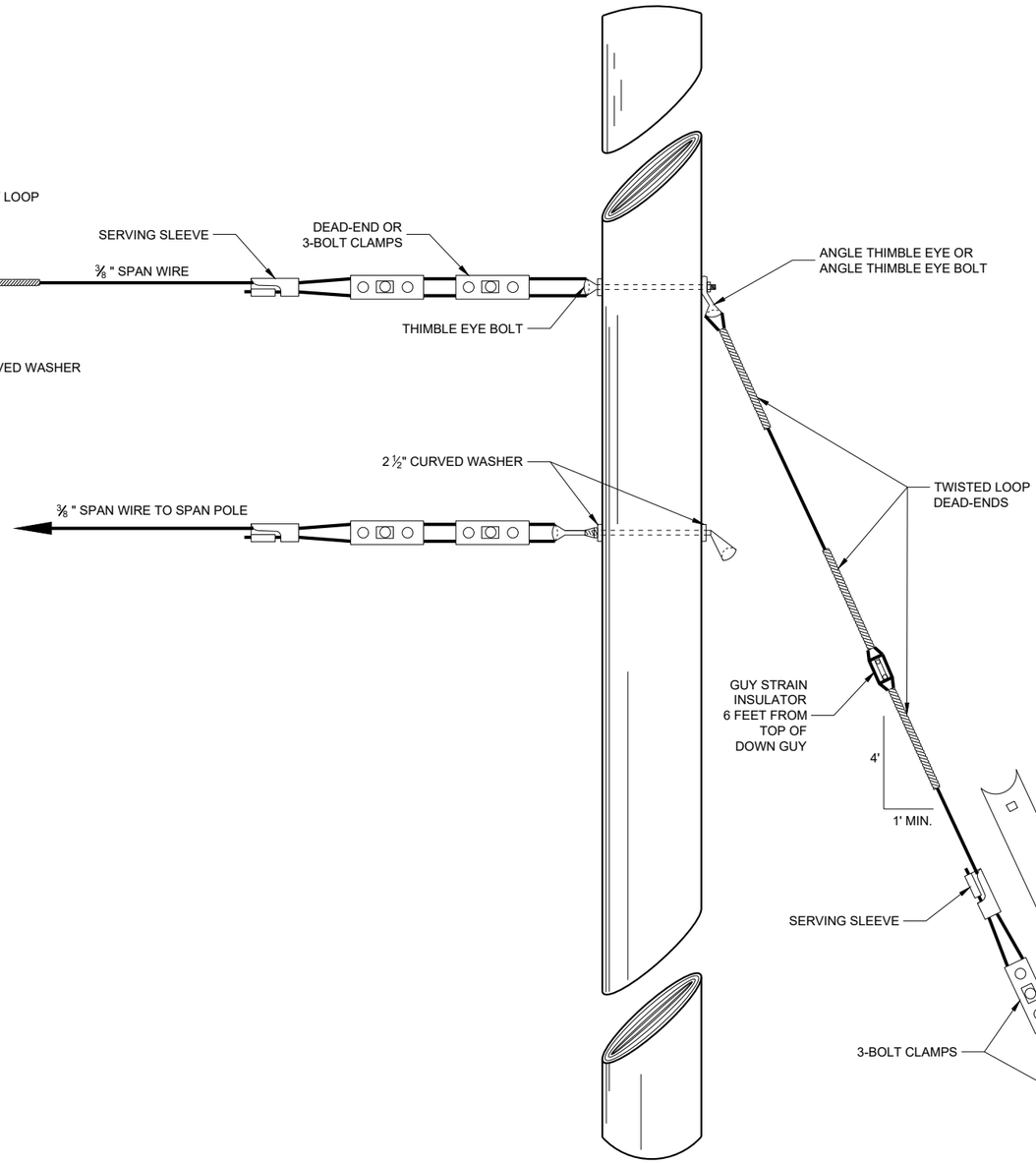
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GENERAL NOTES

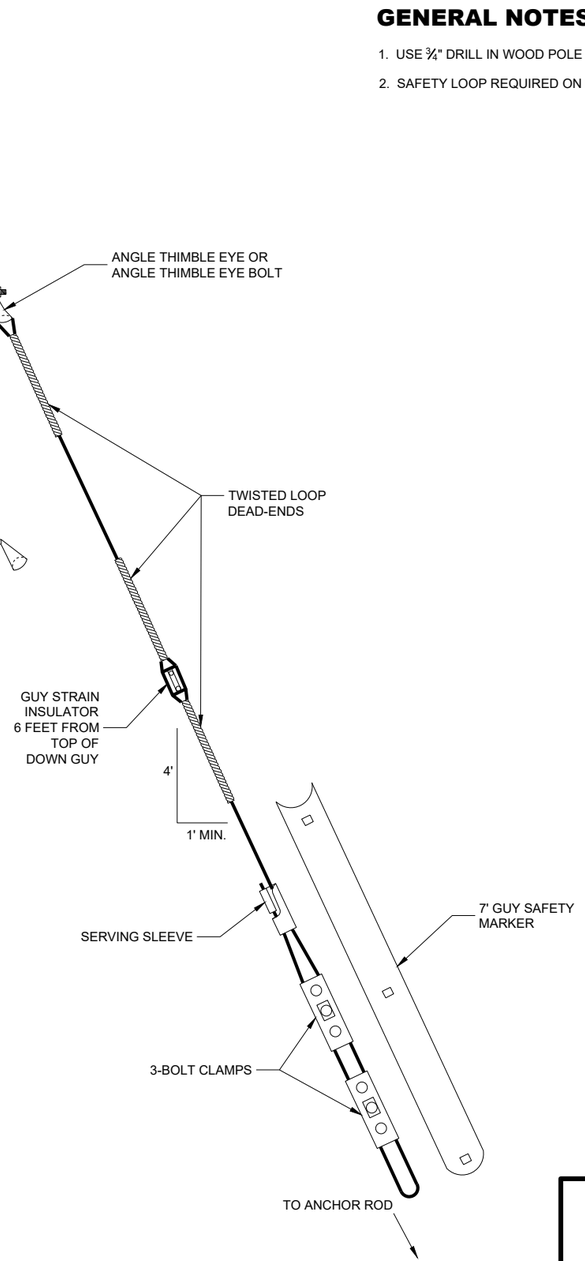
1. USE ¾" DRILL IN WOOD POLE TO PROVIDE FOR ⅝" BOLTS.
2. SAFETY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



SPAN WIRE POLE



GUY POLE



TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

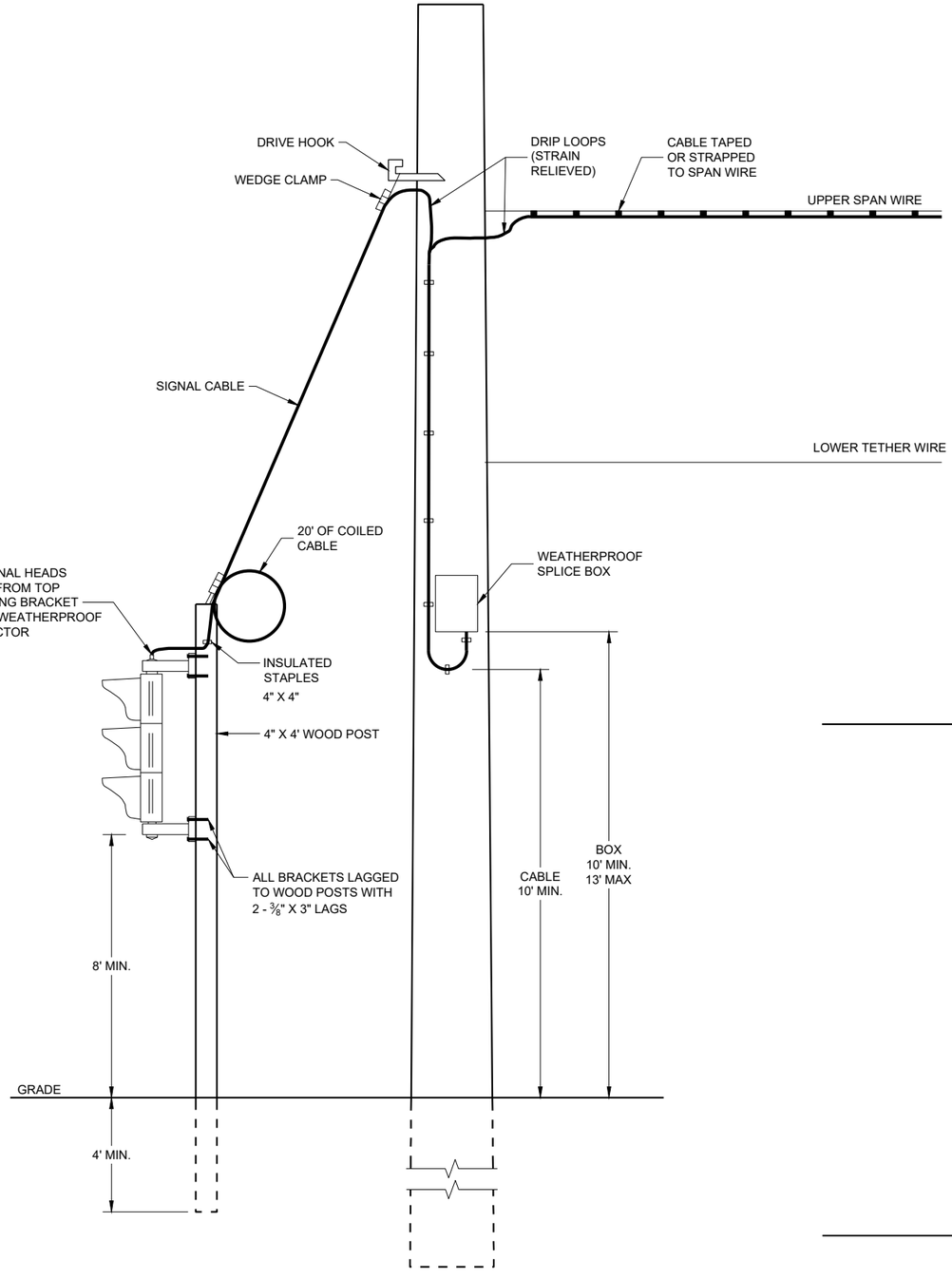
APPROVED
June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

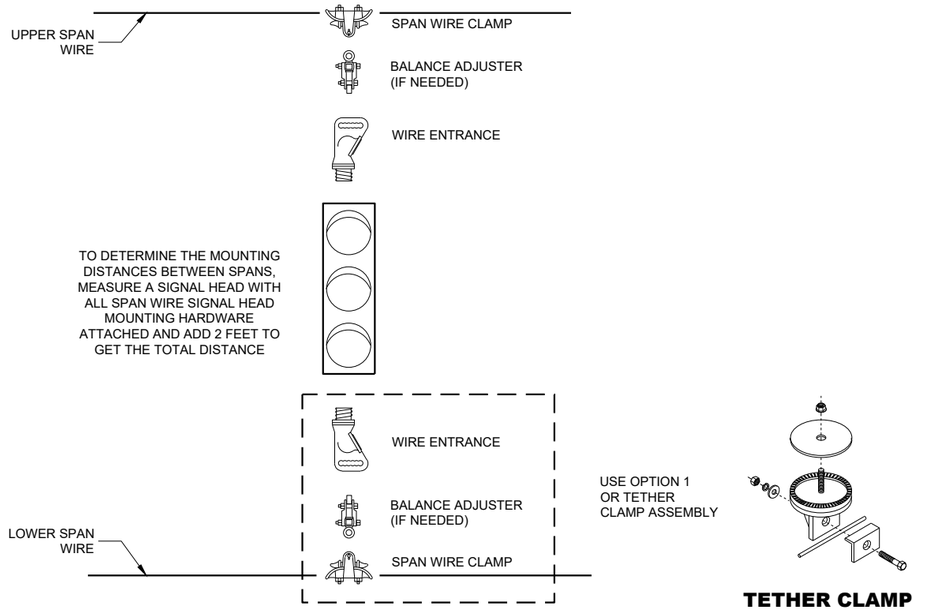
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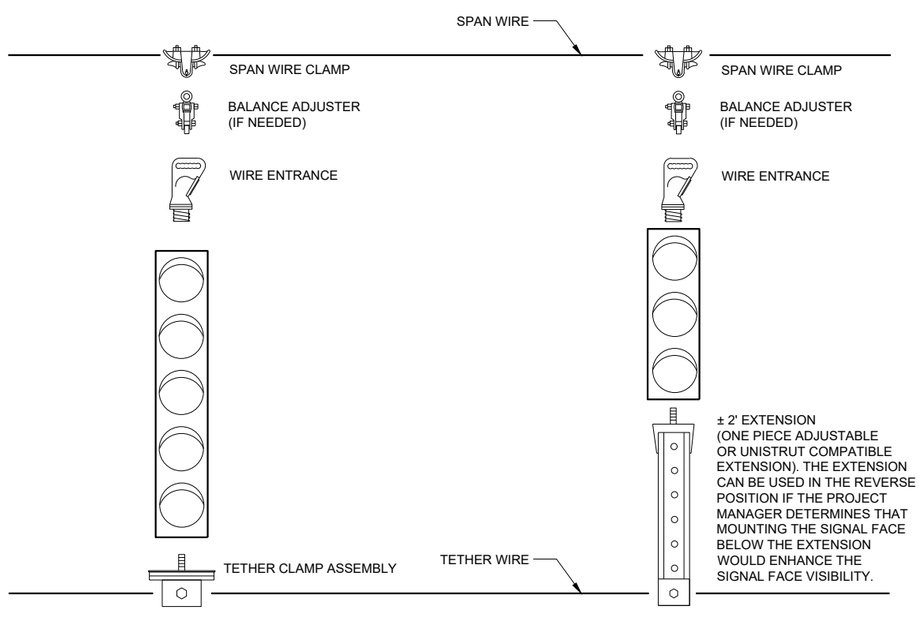
SDD 09G01 - 4e



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

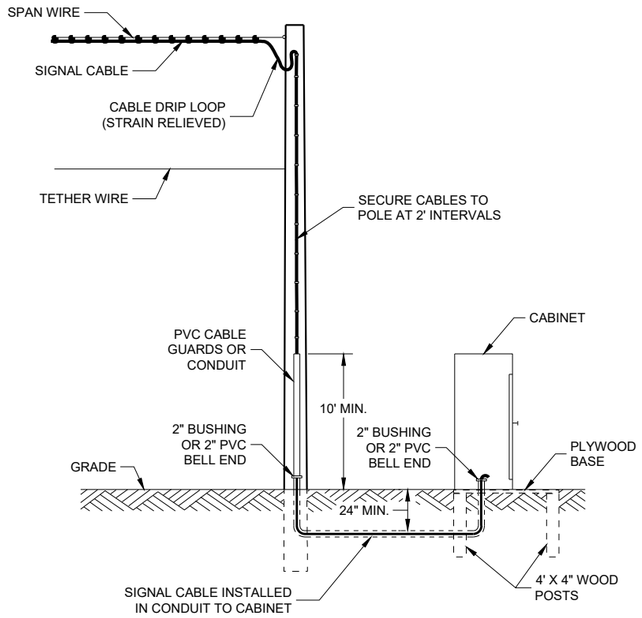
APPROVED
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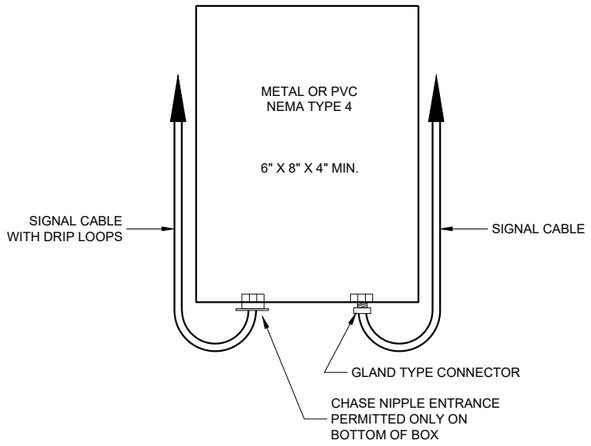
/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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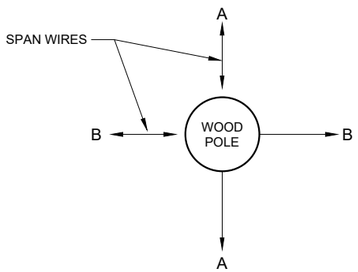
SDD 09G01 - 4f





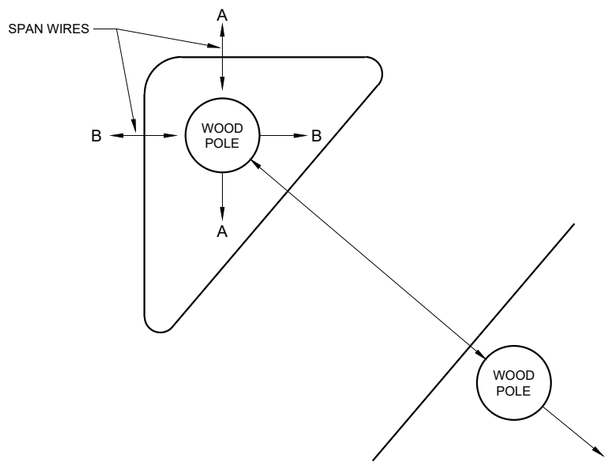
SPLICE BOX

TYPICAL SKID TYPE TEMPORARY

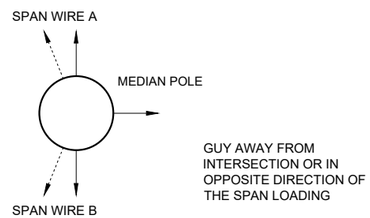


ALL DOWN OR SIDEWALK GUYS
SHALL BE INSTALLED IN THE
OPOSITE DIRECTION OF THE
STRAIN OF THE SPAN WIRE

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

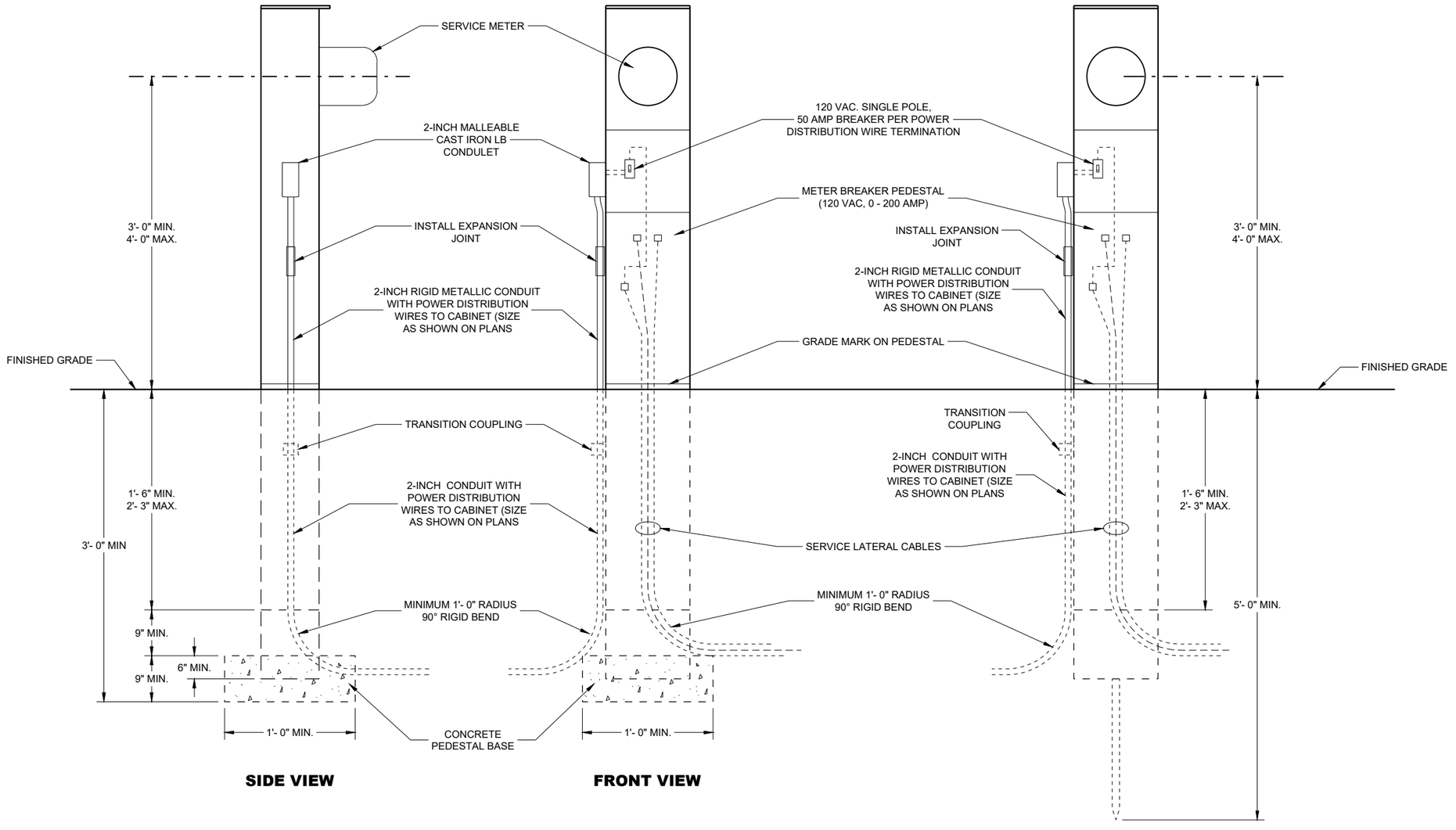
APPROVED
June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

FHWA

SDD 09G01 - 4g

6



2 CIRCUIT METER BREAKER PEDESTAL

ALTERNATE SUPPORTING STAKE
(IF APPROVED BY UTILITY)

2 CIRCUIT METER BREAKER PEDESTAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

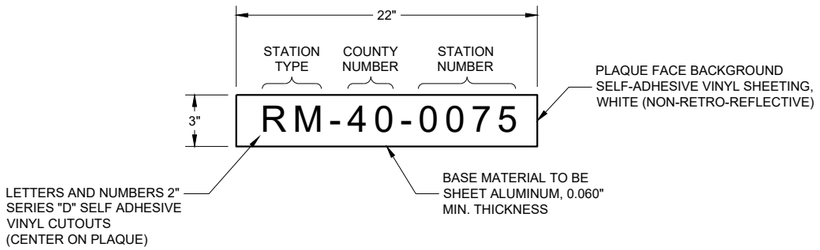
APPROVED
September 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 492

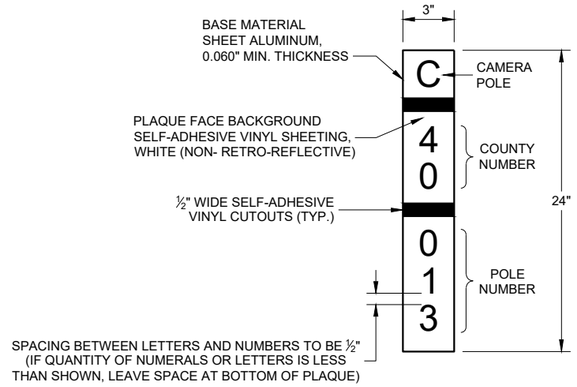
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SDD 09H03 - 01



CONTROL CABINET IDENTIFICATION PLAQUE DETAIL



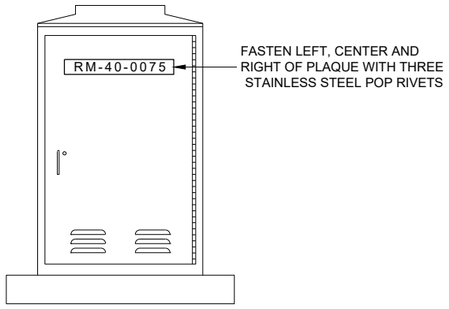
POLE IDENTIFICATION PLAQUE DETAIL

GENERAL NOTES

1. TWO PLAQUES PER CABINET REQUIRED ON CONTROL CABINET.
2. FASTEN ONE PLAQUE ON FRONT DOOR, UPPER HALF.
3. FASTEN ONE PLAQUE ON SIDE FACING LOCAL STREET. IF NO LOCAL STREET NEARBY, OR IF SUCH LOCATION COINCIDES WITH LOCATION OF PLAQUE IN NOTE 2 , FASTEN PLAQUE ON REAR OF CABINET, UPPER HALF.
4. COUNTY NUMBER NOT REQUIRED ON RAMP METER CABINETS.

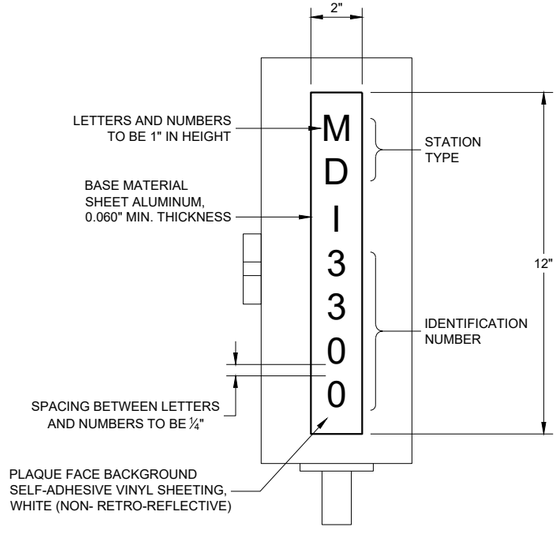
LEGEND STATION TYPE

RM - RAMP METER
CCTV - CLOSED CIRCUIT TELEVISION
ATR - AUTOMATIC TRAFFIC RECORDER
SDS - SYSTEM DETECTOR STATION
MD - MICROWAVE DETECTOR



CONTROL CABINET IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

(TYPICAL ALL CONTROL CABINETS)



MICROWAVE DETECTOR FIELD CABINET IDENTIFICATION PLAQUE DETAIL

IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

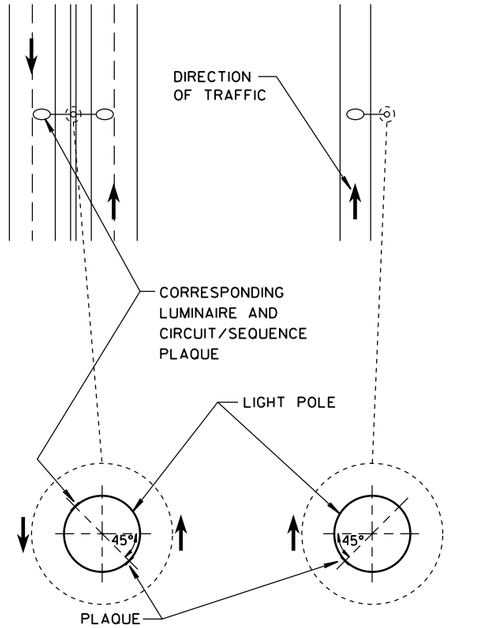
APPROVED
September 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 493
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SDD 09H11 - 01

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SDD 09H11 - 01



MEDIAN POLE SINGLE ARM POLE

LOCATION OF LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

WHERE SHOWN IN THE PLANS, REPLACEMENT PLAQUES WILL BE MEASURED AND PAID SEPARATELY.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETRORFLECTIVE

LINES - BLACK, 1/2" WIDE, SELF-ADHESIVE

CHARACTERS - BLACK, SELF-ADHESIVE, SERIES "D", SIZE AS SHOWN

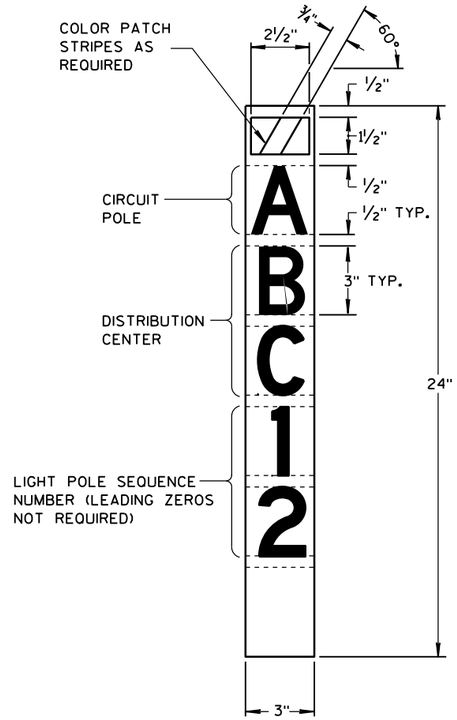
COLOR PATCHES - VARIOUS COLORS, SELF-ADHESIVE VINYL SHEETING

WITH THE APPROVAL OF THE ENGINEER, THE BASE MATERIAL MAY BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE SURFACE, IN CASES SUCH AS SMOOTH, CLEAN ALUMINUM POLES.

ALTERNATIVE COMPUTER-GENERATED SIGN LETTERING MAY BE ACCEPTED IF THE ENGINEER FINDS IT TO BE EQUIVALENT.

COLOR PATCH CODE FOR HPS AND LED LUMINAIRES

HPS	LED	COLOR PATCH CODE
1000 WATT		NO PATCH
400 WATT	CATEGORY D	ORANGE
310 WATT		BLUE
250 WATT	CATEGORY C	ORANGE WITH WHITE STRIPE
200 WATT		RED
150 WATT	CATEGORY B	GREEN
100 WATT	CATEGORY A	BROWN
70 WATT	CATEGORY UDL	BROWN WITH WHITE STRIPE



LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

6

S.D.D. 10 A 2-3

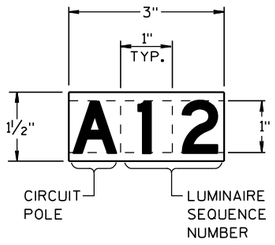
IDENTIFICATION PLAQUES
LIGHT POLES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

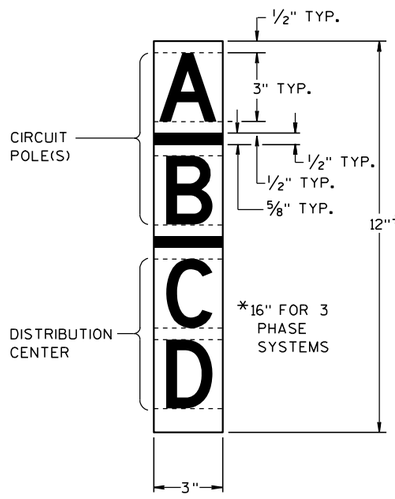
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S.D.D. 10 A 2-3



SEQUENCE DECAL

(MOUNT ON LUMINAIRE)



SIGN BRIDGE CIRCUIT PLAQUE

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

WHERE SHOWN IN THE PLANS, REPLACEMENT PLAQUES WILL BE MEASURED AND PAID SEPARATELY.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS - BLACK, SELF-ADHESIVE, SERIES "D", SIZE AS SHOWN

WITH THE APPROVAL OF THE ENGINEER, THE BASE MATERIAL MAY BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE SURFACE, IN CASES SUCH AS SMOOTH, CLEAN ALUMINUM STRUCTURES.

ALTERNATIVE COMPUTER-GENERATED SIGN LETTERING MAY BE ACCEPTED IF THE ENGINEER FINDS IT TO BE EQUIVALENT.

ALL SIGN BRIDGE STRUCTURES MUST ALSO HAVE STRUCTURE ID PLAQUES AS SHOWN IN THE STRUCTURE DETAILS.

CIRCUIT PLAQUES SHALL BE MOUNTED IN THE STEM WHICH HAS THE ELECTRICAL CIRCUIT, FACING TRAFFIC.

CIRCUIT IDENTIFICATION PLAQUES SIGN BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/25/2010
DATE
/S/ John Corbin
STATE ELECTRICAL ENGI 495
HWYS
FHWA

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S.D.D. 10 A 3-3

GENERAL NOTES

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

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING, SDD10A01.

USE TIME DELAY FUSE PER LUMINAIRE MANUFACTURER RECOMMENDATION.

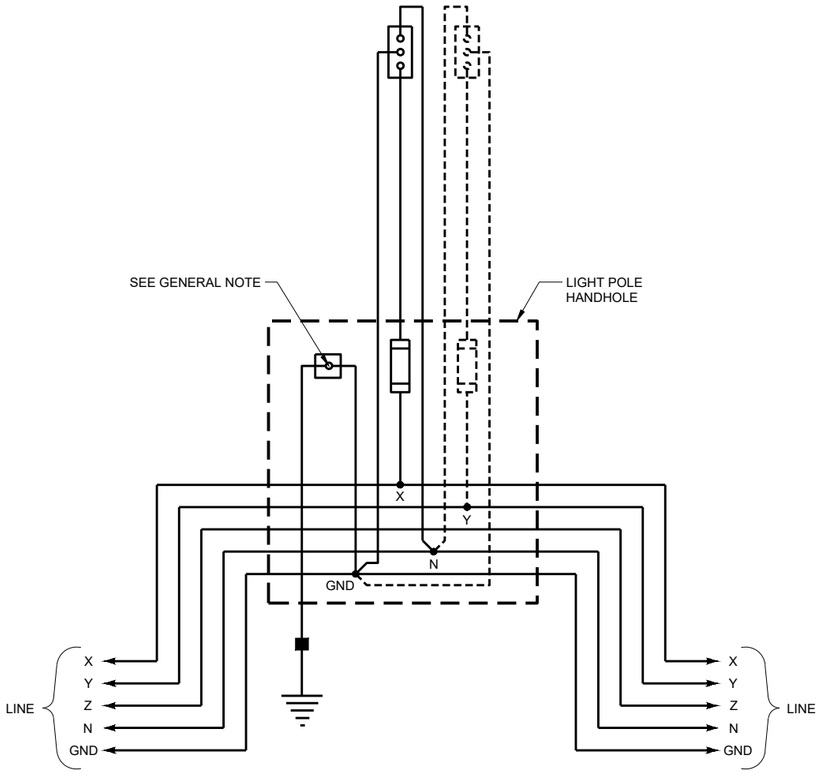
THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLD GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

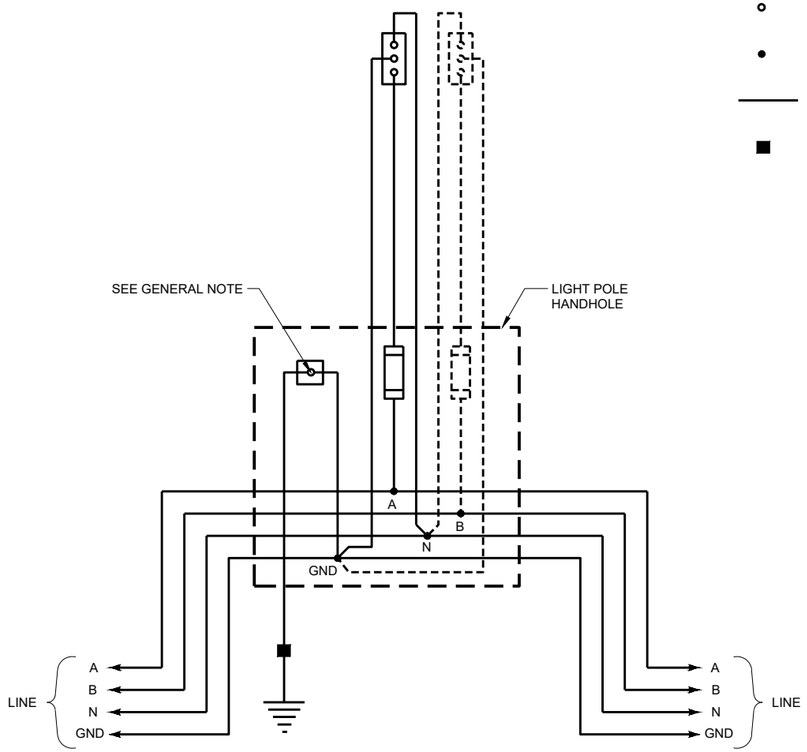
LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM

ISOLATED NEUTRAL SYSTEM
3 - ϕ 208Y / 120VAC OR 480Y / 277VAC 4 WIRE



TYPICAL WIRING DIAGRAM

ISOLATED NEUTRAL SYSTEM
1 - ϕ 120 / 240VAC OR 240 / 480VAC 3 WIRE

ELECTRICAL DETAILS
GROUND MOUNT LIGHT POLES
ISOLATED NEUTRAL SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 496

FHWA

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SDD 10A05 - 03

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SDD 10A05 - 03

GENERAL NOTES

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

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING, SDD10A01.

USE TIME DELAY FUSE PER LUMINAIRE MANUFACTURER RECOMMENDATION.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

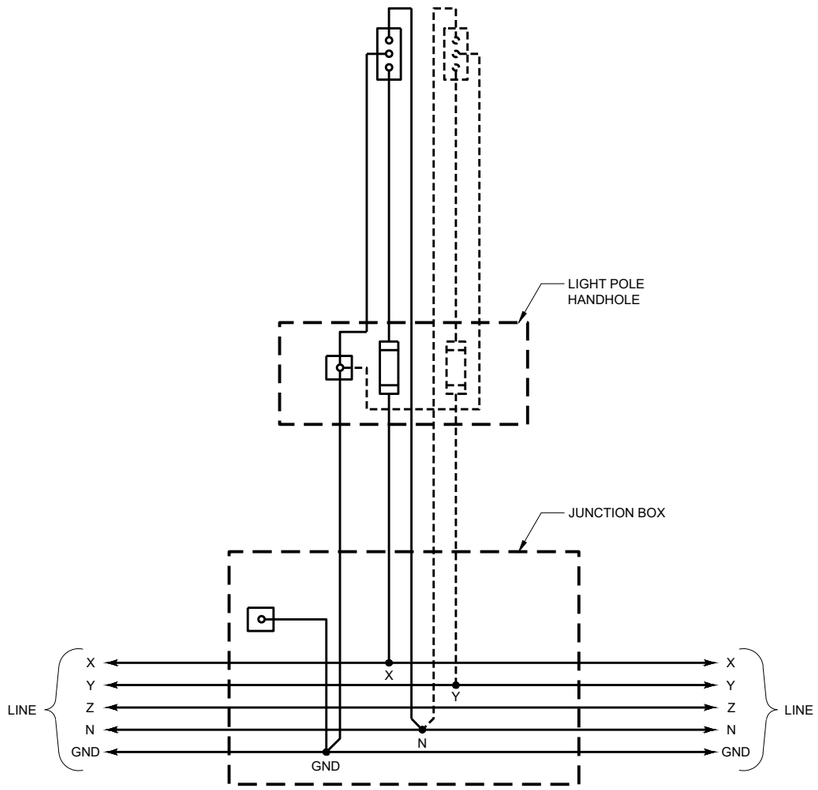
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

WIRE SIZE FROM THE JUNCTION BOX TO THE POLE HANDHOLE SHALL EQUAL THE SIZE OF THE POLE WIRE.

THE INTENT OF JUNCTION BOX SPLICES AS SHOWN IN THIS DETAIL IS FOR LIGHTING SYSTEMS WITH HEAVY LINE WIRE TOO LARGE TO PULL THROUGH THE CONDUIT INTO THE POLE HANDHOLE, DUE TO CONDUIT FILL REQUIREMENTS OF N.E.C. AND / OR THE STIFFNESS OF THE WIRE COMPARED TO THE NUMBER OF BENDS IN THE CONDUIT. IN CASES WHERE LINE WIRE IS LIGHTER, SUCH AS SMALL ER SYSTEMS OR TOWARD THE FURTHEST END OF A LARGER SYSTEM PULL THE LINE WIRE INTO THE POLE HANDHOLE FOR SPLICING.

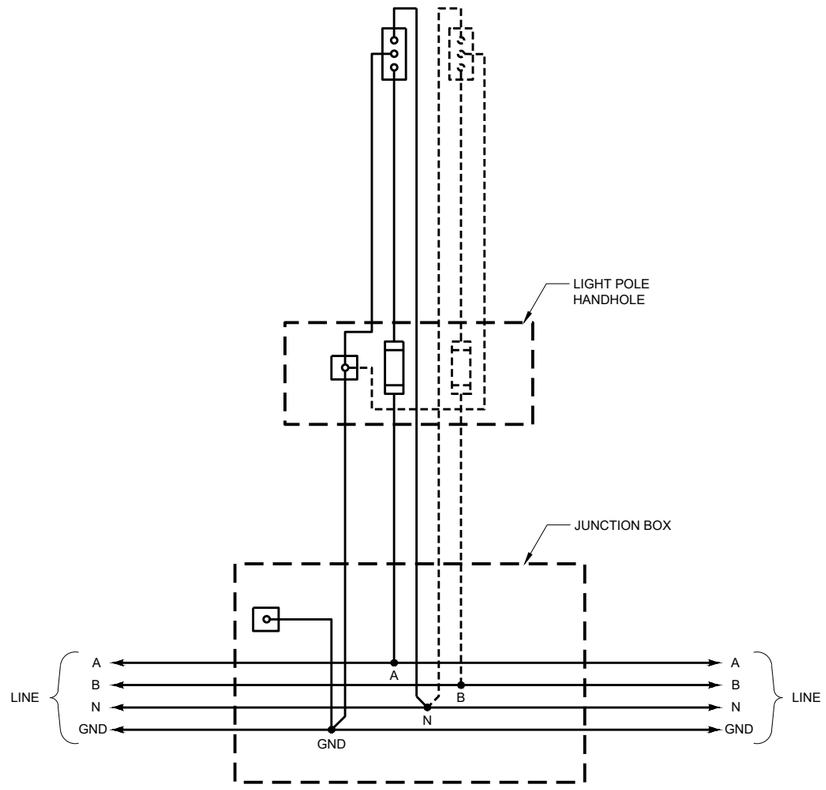
LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM

ISOLATED NEUTRAL SYSTEM
3 - ϕ 208Y / 120VAC OR 480Y / 277VAC 4 WIRE



TYPICAL WIRING DIAGRAM

ISOLATED NEUTRAL SYSTEM
1 - ϕ 120 / 240VAC OR 240 / 480VAC 3 WIRE

ELECTRICAL DETAILS
STRUCTURE MOUNT LIGHT POLES
ISOLATED NEUTRAL SYSTEMS

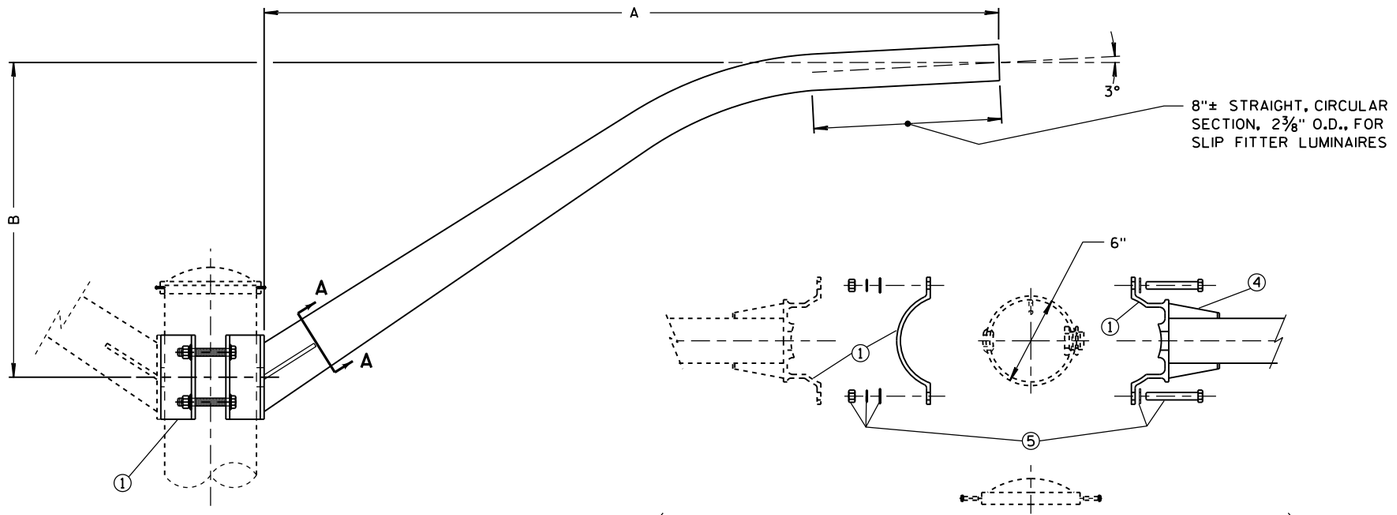
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 497

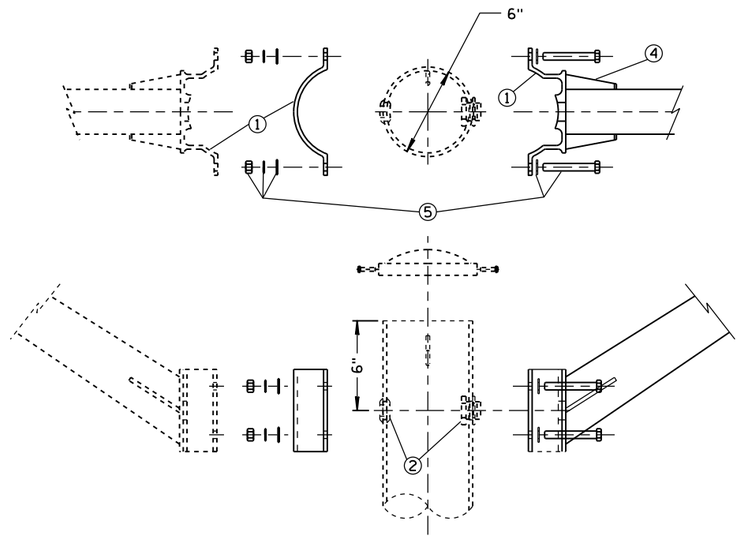
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SDD 10A08 - 03



LUMINAIRE ARMS, SINGLE MEMBER, 6-INCH CLAMP - FOR POLES, TYPE 7, A OR E

VARIOUS LENGTHS (SEE TABLE)



CLAMP ASSEMBLY

SINGLE MEMBER CLAMP SHOWN

TYPE	DIM. A NOMINAL ARM LENGTH (FT)	DIM. B APPROX. RISE (FT)
SINGLE MEMBER	4.0	2.0
SINGLE MEMBER	8.0	3.0
SINGLE MEMBER	10.0	3.0
SINGLE MEMBER	15.0	3.0

GENERAL NOTES

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

ARMS AND CLAMP EXTRUSIONS SHALL BE CONSTRUCTED OF NATURAL FINISH 6063-T6 ALUMINUM.

HEAT TREATMENT OF WELDS IN STRUCTURAL AREAS IS REQUIRED.

ALL THREADED FASTENER COMPONENTS SHALL BE STAINLESS STEEL. NUTS SHALL BE HEX NUTS. BOLTS SHALL BE HEX HEAD. ALL THREADED SURFACES SHALL BE COATED WITH ANTI-SEIZE COMPOUND PRIOR TO INSTALLATION.

LUMINAIRE LOADING FOR DESIGN CALCULATION SHALL BE 50 LBS. IN WEIGHT AND 1.5 SQ. FT. FOR E.P.A..

① CLAMPS SHALL BE EXTRUDED ALUMINUM.

② RACE WAY: 1 3/8" FIELD DRILLED HOLE WITH 1" CHASE NIPPLE AND NUT (OR NEOPRENE GROMMET) PER EACH REQUIRED LUMINAIRE ARM. PROVIDE 1 1/2" HOLE IN CLAMP EXTRUSION TO CONTINUE RACEWAY.

③ STIFFENER

④ GUSSETS REQUIRED.

⑤ CLAMP BOLT ASSEMBLY (BOLT - 1/2"-13 UNC, 2 EACH - FLAT WASHER, LOCK WASHER, NUT) - 4 EACH PER CLAMP.

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S.D.D. 10 A 18-5a

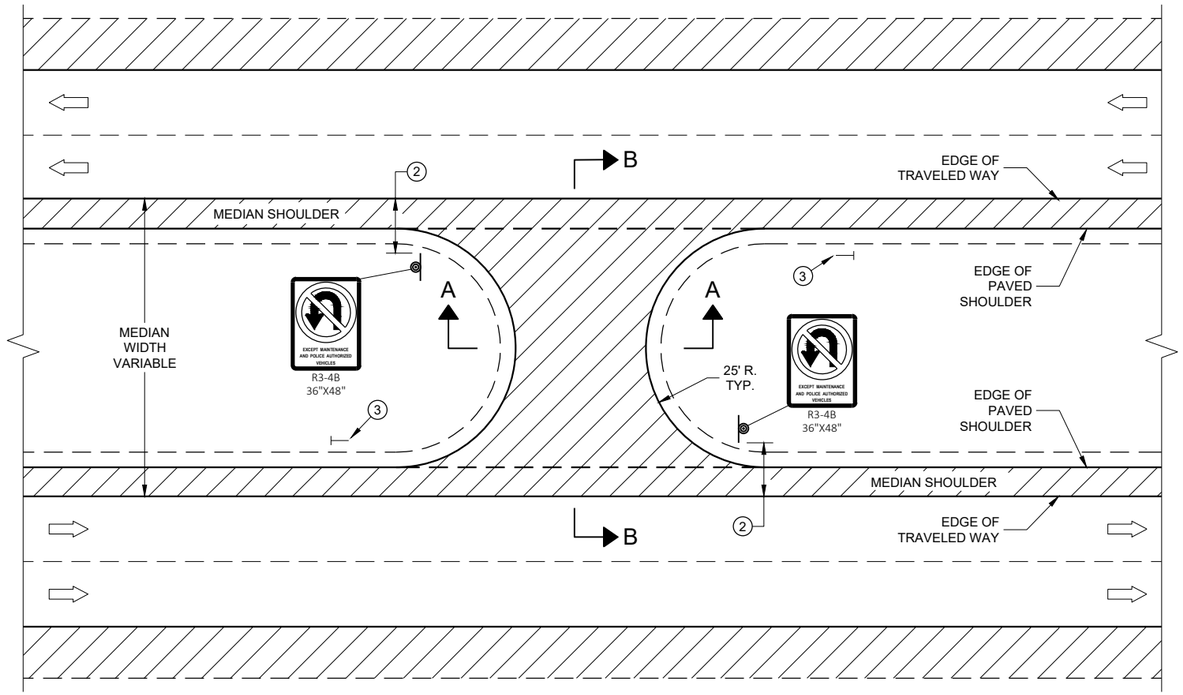
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S.D.D. 10 A 18-5a

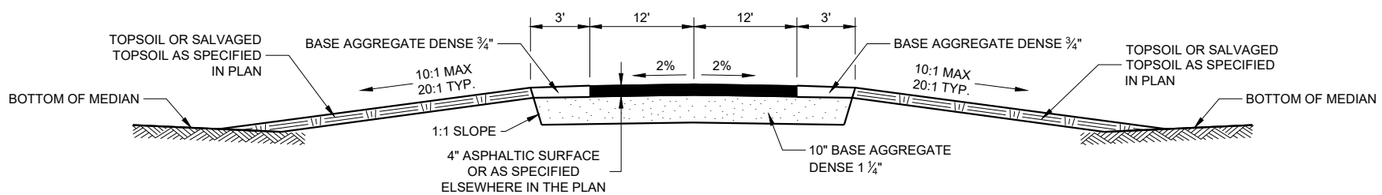
LUMINAIRE ARMS, SINGLE MEMBER 6-INCH CLAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

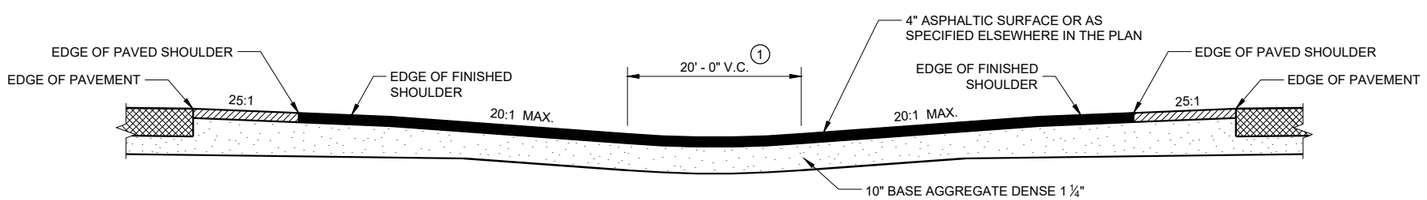
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA



PLAN VIEW



SECTION A-A



SECTION B-B

GENERAL NOTES

1. ADJUST VERTICAL CURVE LOCATION LATERALLY TO MAINTAIN 20:1 MAX.
2. SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.
3. INSTALL DELINEATOR. SEE STANDARD DETAIL DRAWING 15A4.

LEGEND

- SIGN ON PERMANENT SUPPORT
- DELINEATOR
- DIRECTION OF TRAFFIC

MAINTENANCE CROSSOVER FOR FREEWAYS

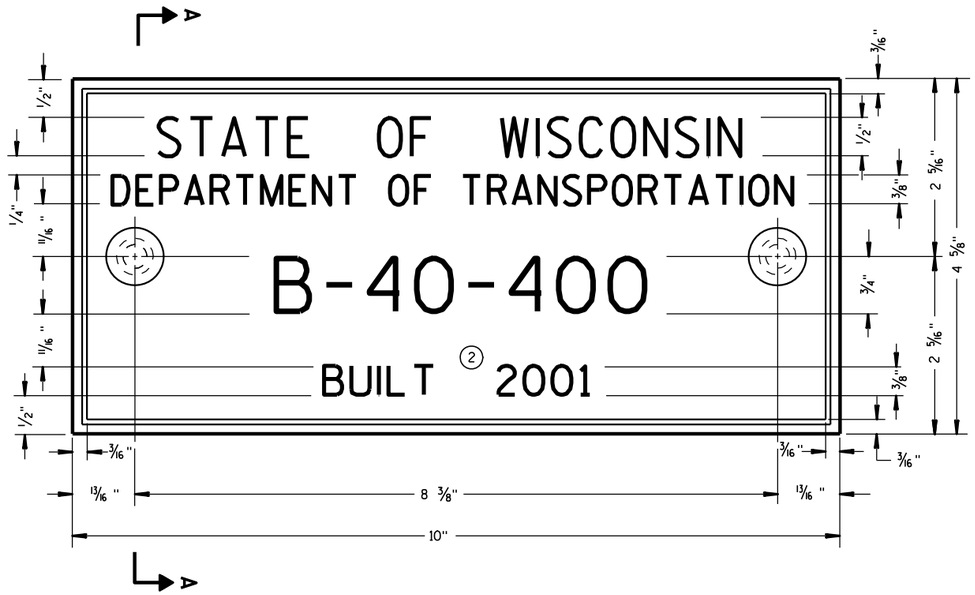
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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SDD 11A01 - 06



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

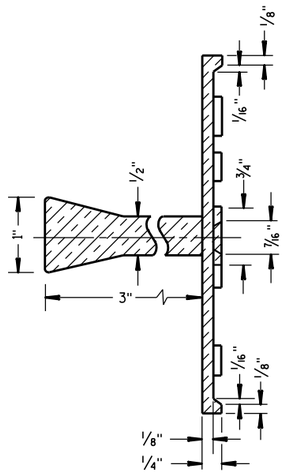
GENERAL NOTES

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.

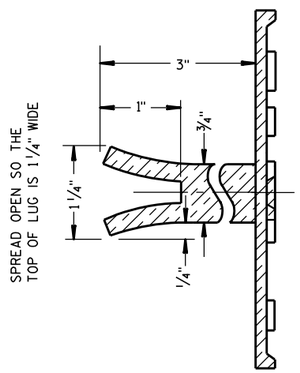
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

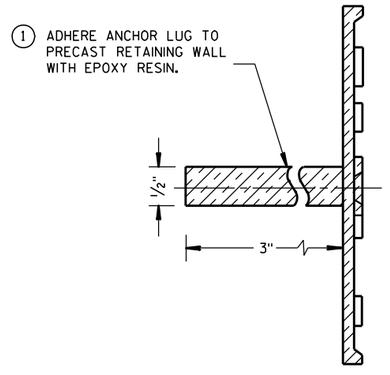
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



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

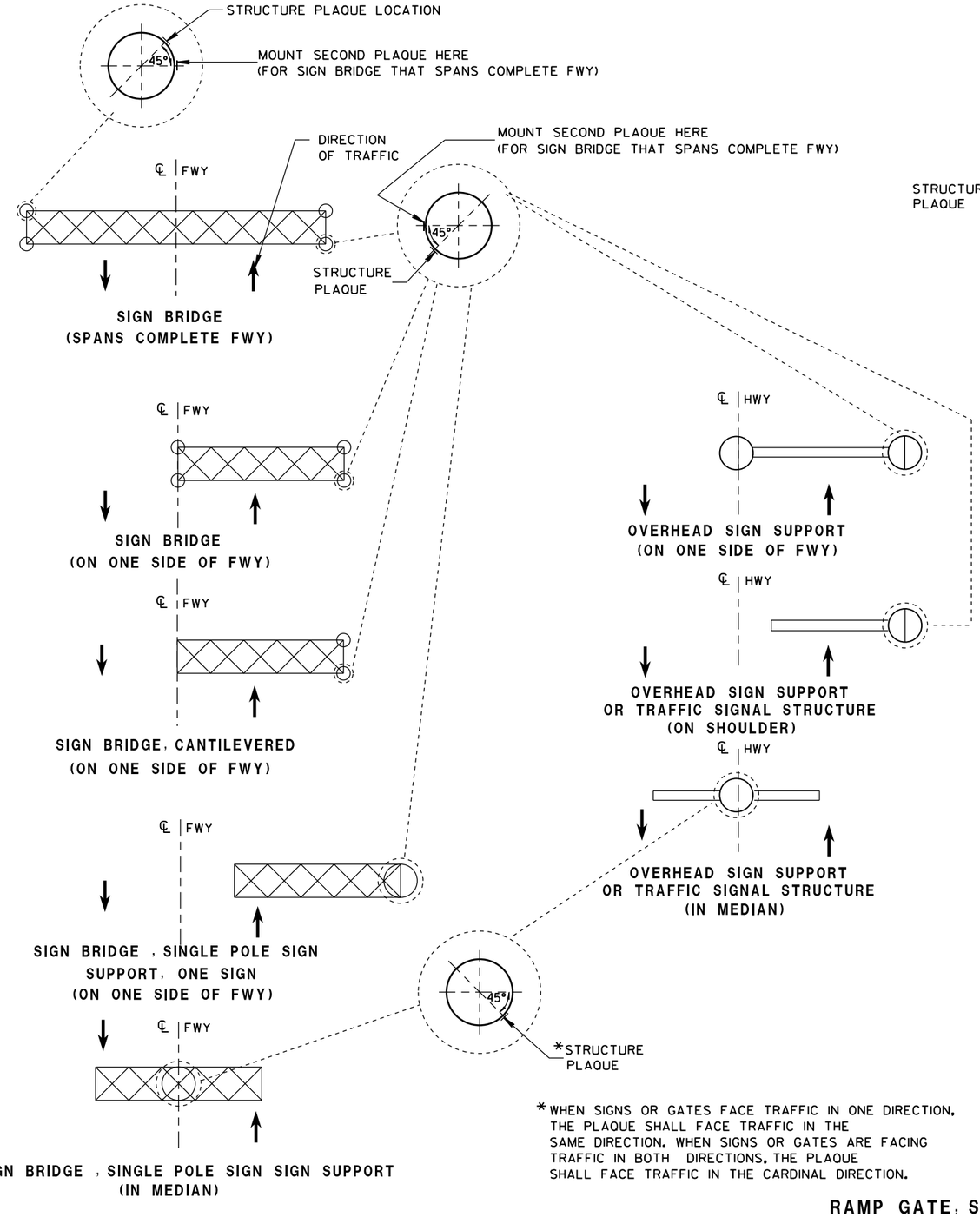
FHWA

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S.D.D. 12 A 3-10

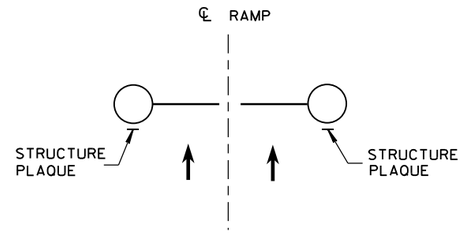
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S.D.D. 12 A 3-10

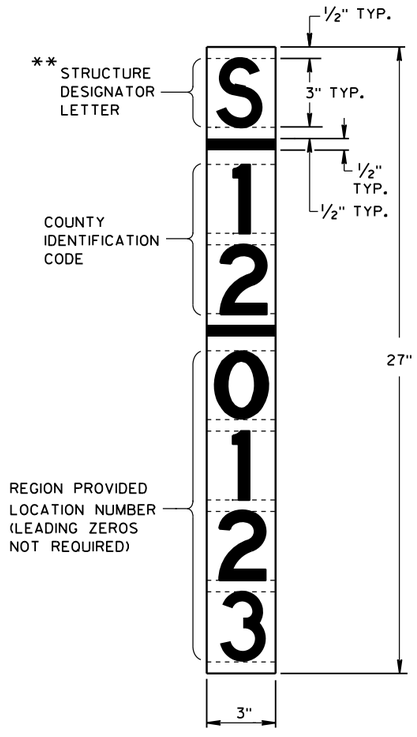


LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES

*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.



RAMP GATE
(ACROSS FWY ON-RAMP)



** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

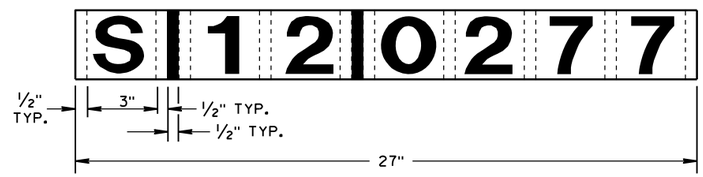
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

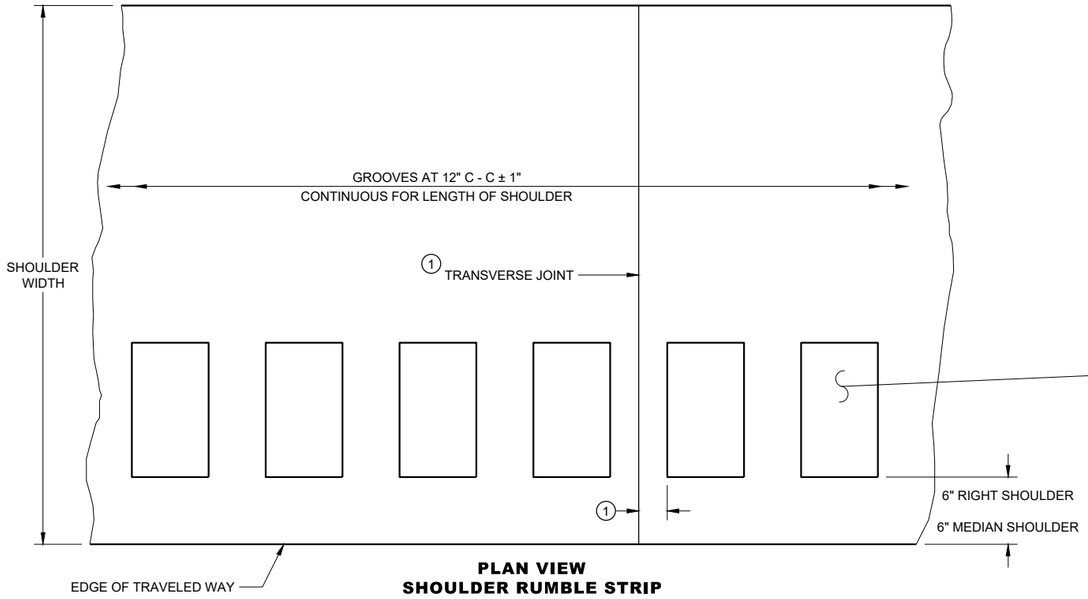
APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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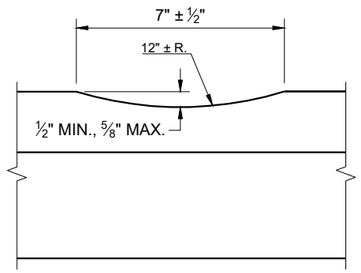
S.D.D. 12 A 4-3

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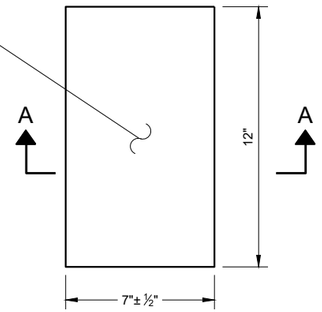
S.D.D. 12 A 4-3



PLAN VIEW
SHOULDER RUMBLE STRIP



SECTION A - A



PLAN VIEW
(SINGLE GROOVE)

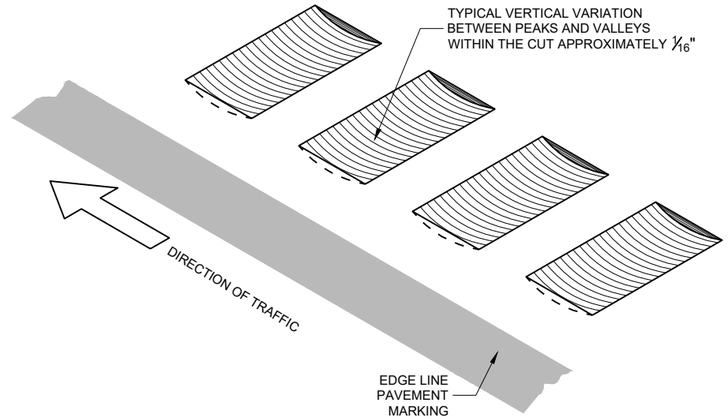
PLACEMENT DETAIL FOR RUMBLE STRIP

GENERAL NOTES

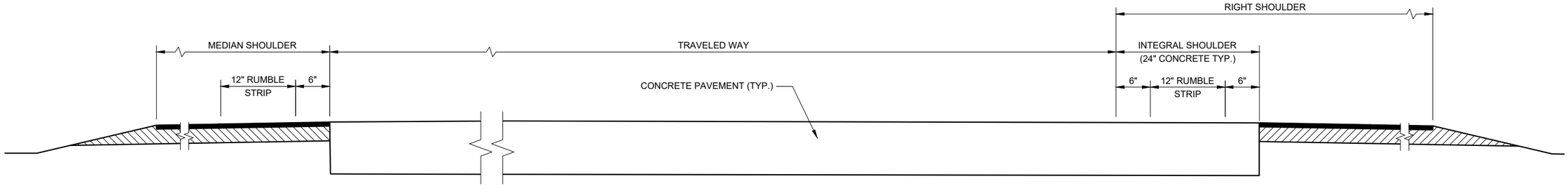
SDD 13A5, SHEET "b" SHOWS THE LOCATION OF THE RUMBLE STRIPS AT RAMP AND GORE LOCATIONS.

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

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



ISOMETRIC



SECTION VIEW

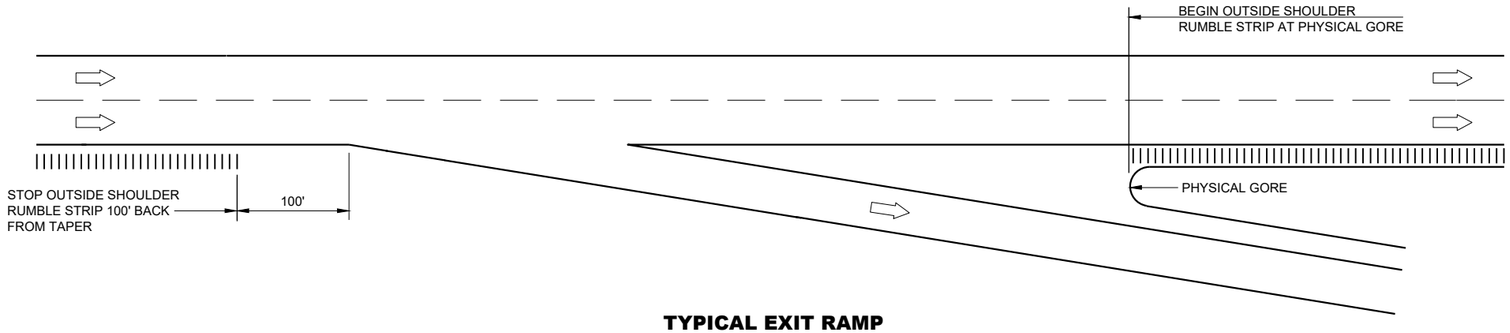
TYPICAL SHOULDER RUMBLE STRIPS
(ONE ROADWAY IS SHOWN)

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

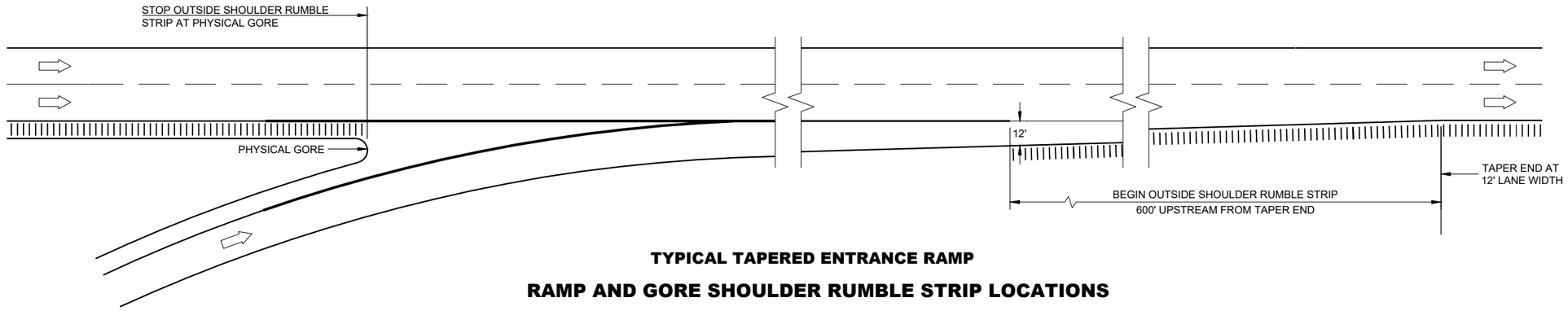
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 13A05-06a

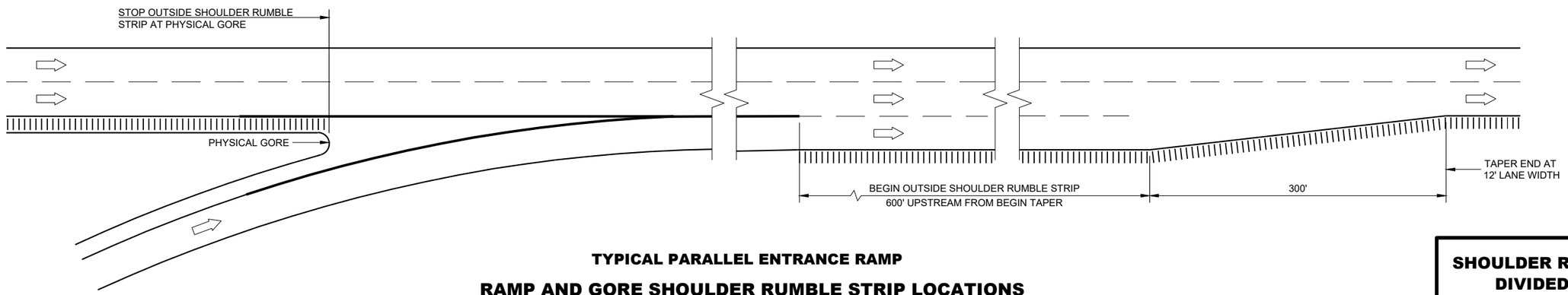


TYPICAL EXIT RAMP



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS

GENERAL NOTES

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

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

LEGEND

DIRECTION OF TRAFFIC

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

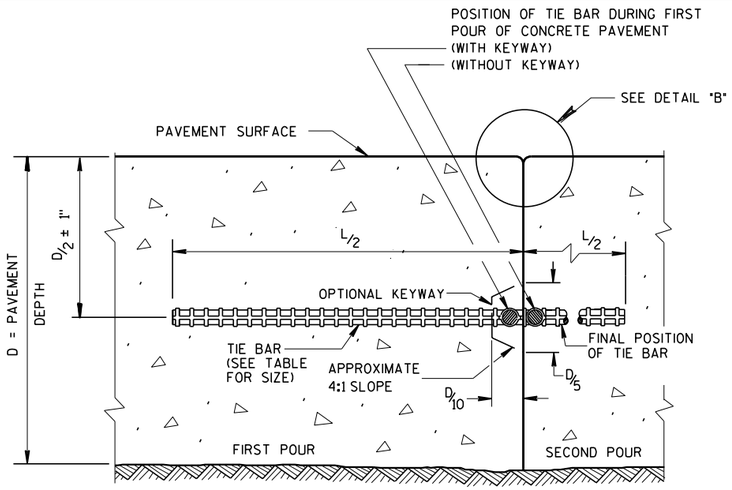
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodney Taylor — ROADWAY DESIGN STANDARDS UNIT SUPERVISOR

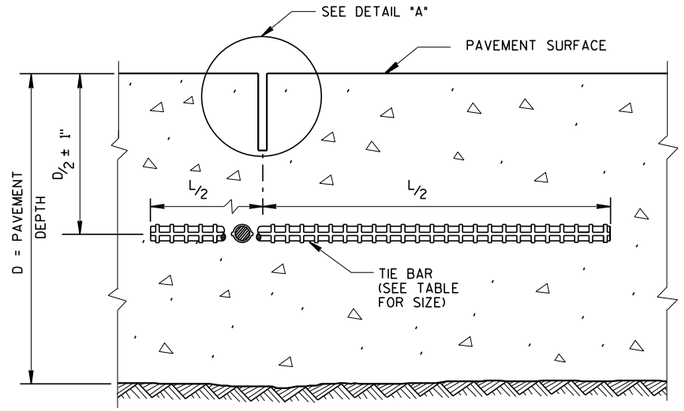
FHWA

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SDD 13A05-06b



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

PLAN VIEW

SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

DETAIL "A"

DETAIL "B"

DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

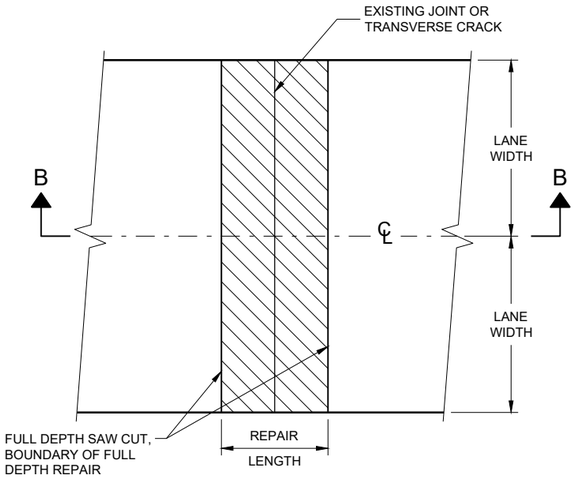
APPROVED
March 2018
DATE
/S/ Peter Kemp PE
PAVEMENT SUPE
FHWA

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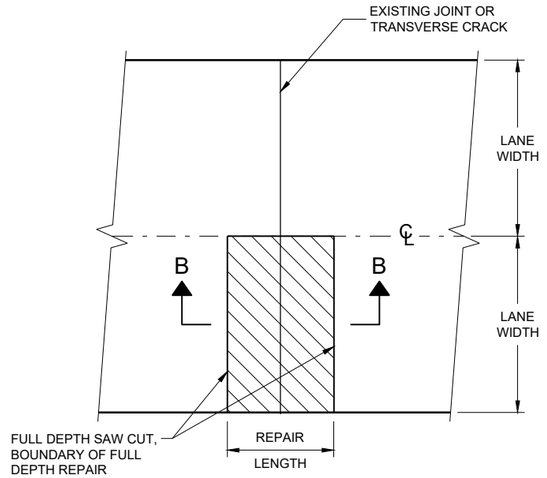
S.D.D. 13 C 1-19

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S.D.D. 13 C 1-19



PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

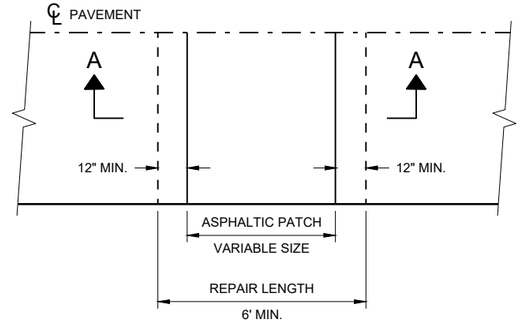
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

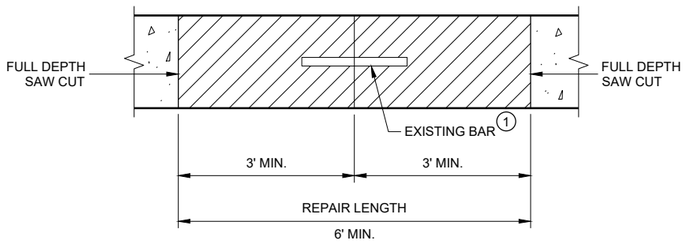
THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

(1) DOWEL BARS MAY NOT BE PRESENT.



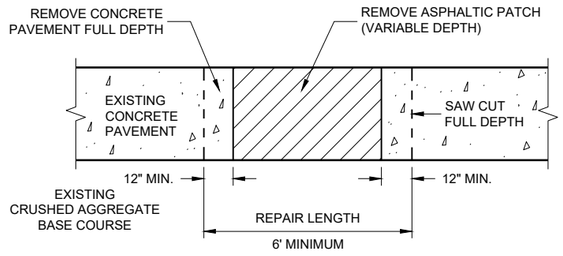
PLAN VIEW

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION B - B

CONCRETE REMOVAL



SECTION A - A

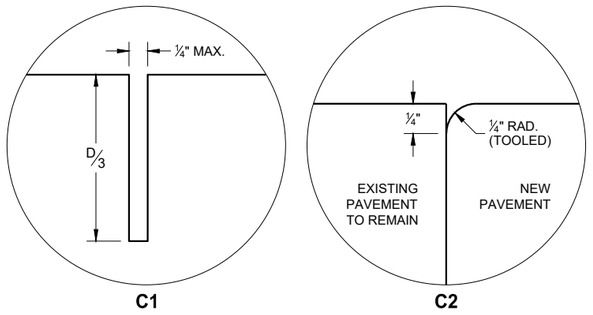
HMA PATCH REMOVAL

CONCRETE PAVEMENT
REPAIR AND REPLACEMENT

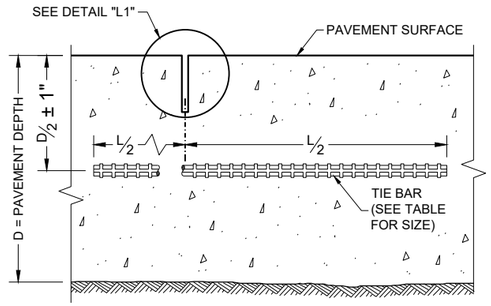
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD13C09 - 17a

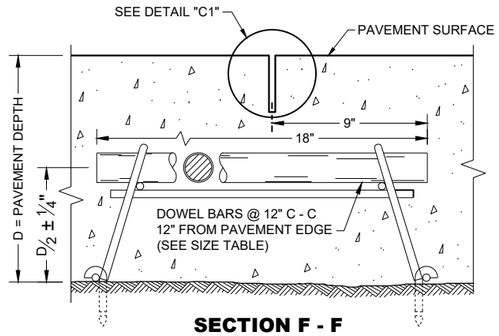


TRANSVERSE JOINTS



SECTION C - C

SAWED LONGITUDINAL JOINT



SECTION F - F

DOWELED CONTRACTION JOINT

GENERAL NOTES

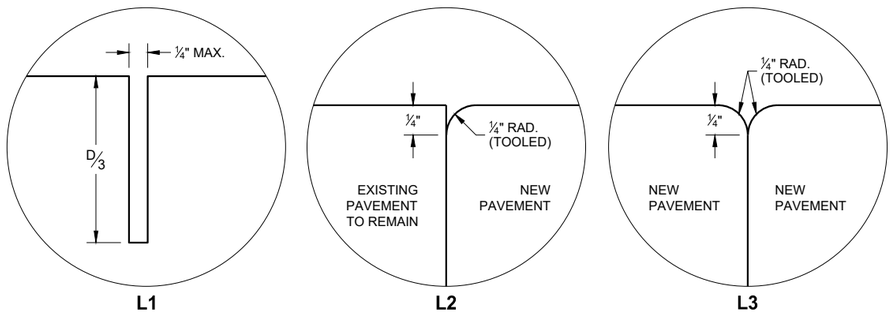
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE PAVEMENT REPAIRS OF EXISTING NON-DOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

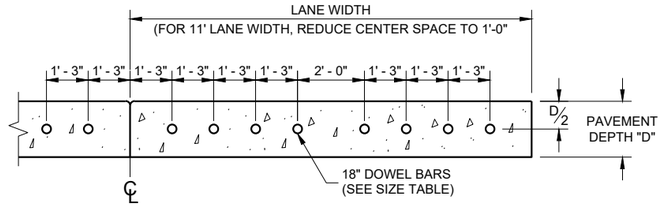
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

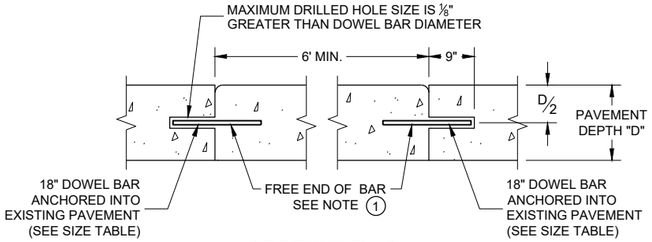


LONGITUDINAL JOINTS



SECTION E - E

DRILLED DOWEL BAR CONSTRUCTION JOINT



SECTION D - D

TIE BAR TABLE

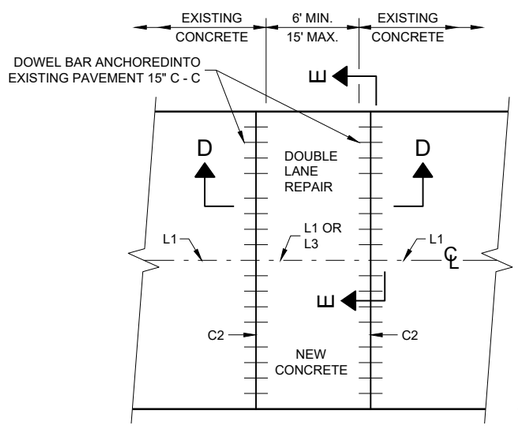
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* 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.

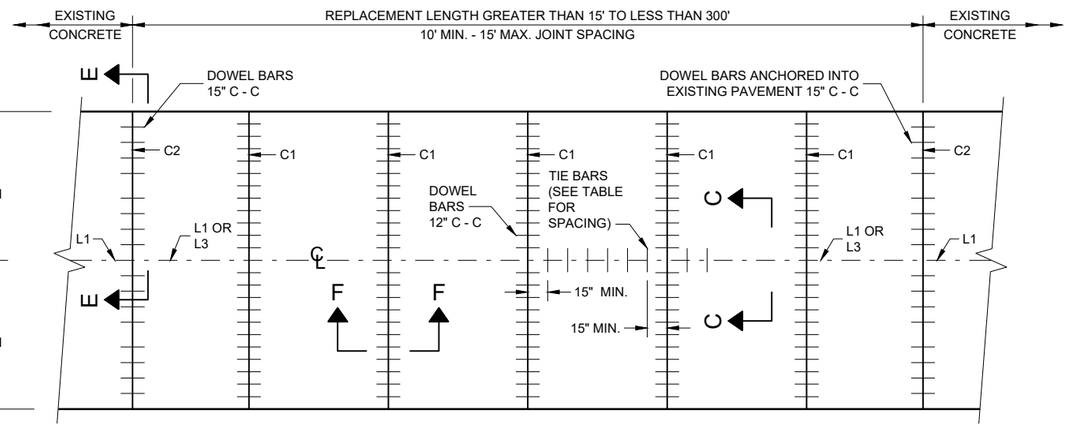
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	NONE	12'
7", 7 ½"	1"	1"	14'
8" & ABOVE	1 ¼"	1 ¼"	15'



PLAN VIEW

MULTILANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

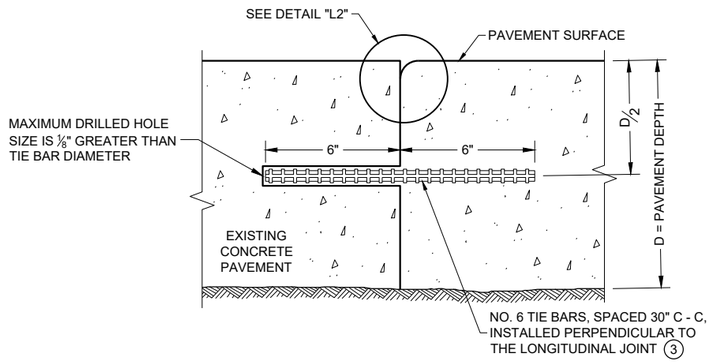
MULTILANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13C09 - 17b
SDD 13C09 - 17b

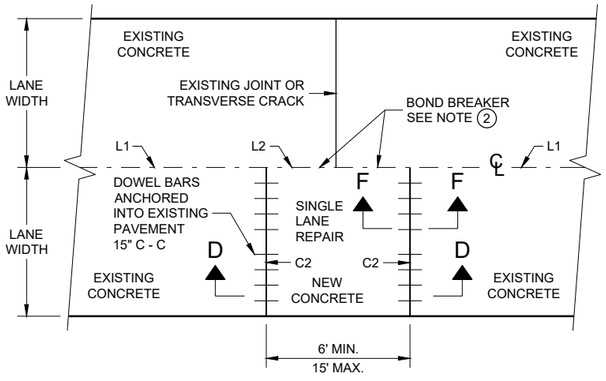


SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

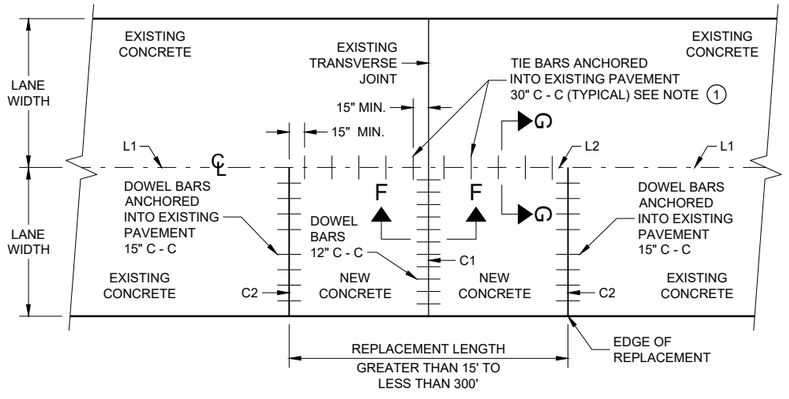
GENERAL NOTES

1. WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
2. USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
3. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

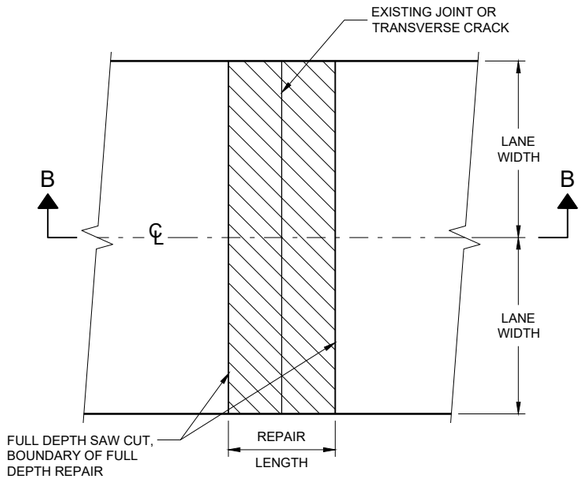
CONCRETE REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

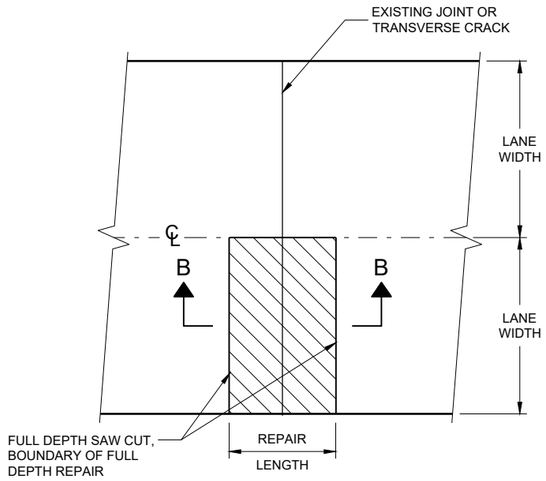
APPROVED
November 2022
DATE
/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS
FHWA

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SDD 13C09 - 17c



PLAN VIEW
DOUBLE LANE REPAIR



PLAN VIEW
SINGLE LANE REPAIR

GENERAL NOTES

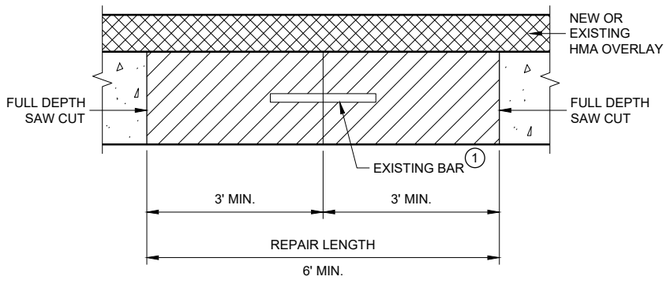
SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

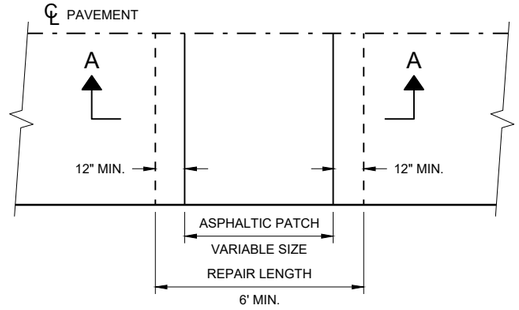
THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

(1) DOWEL BARS MAY NOT BE PRESENT.

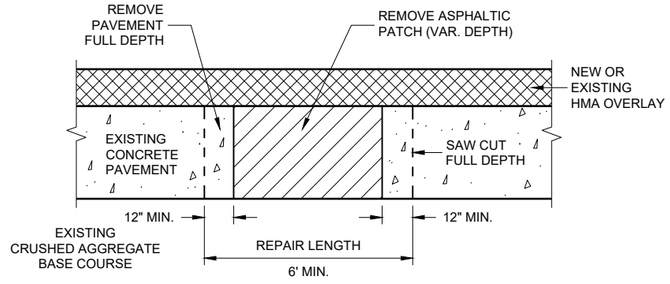
FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION B - B
CONCRETE REMOVAL



PLAN VIEW



SECTION A - A

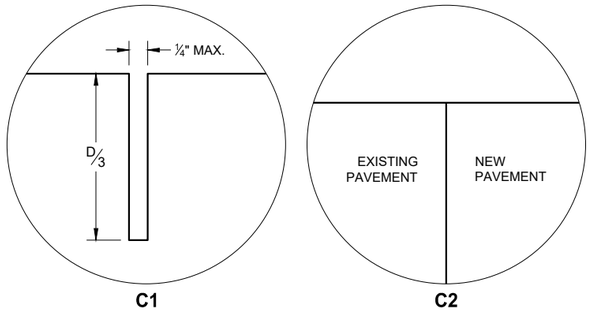
HMA PATCH REMOVAL

BASE PATCHING CONCRETE

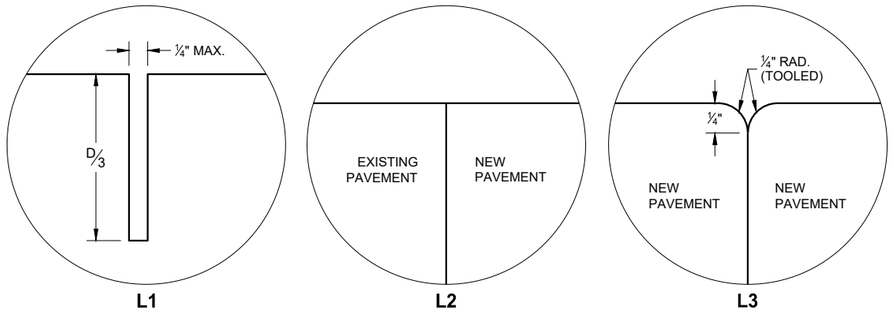
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA 508

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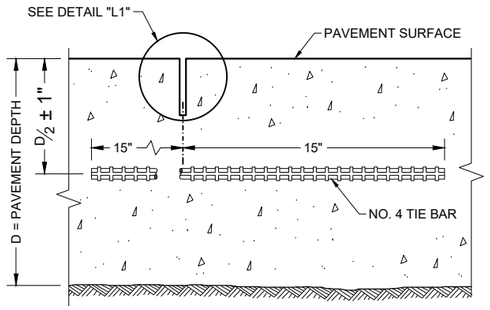
SDD 13C14 - 07a



TRANSVERSE JOINTS

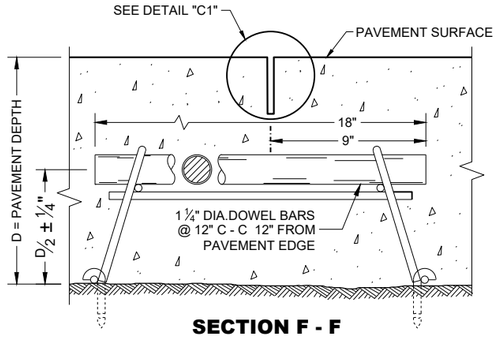


LONGITUDINAL JOINTS



SECTION C - C

SAWED LONGITUDINAL JOINT



SECTION F - F

CONTRACTION JOINT

GENERAL NOTES

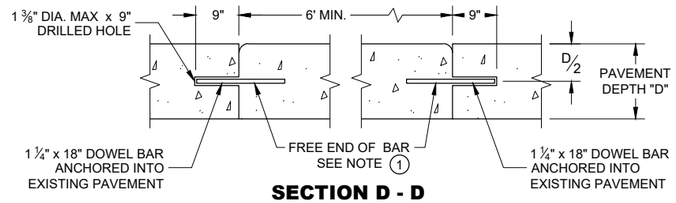
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE BASE PATCHES OF EXISTING NON-DOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

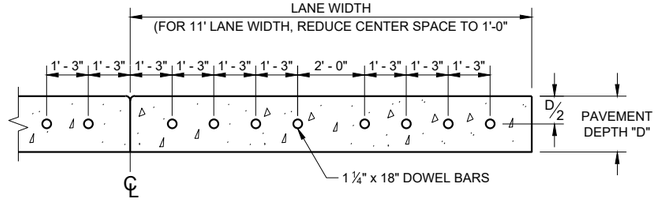
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT O EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

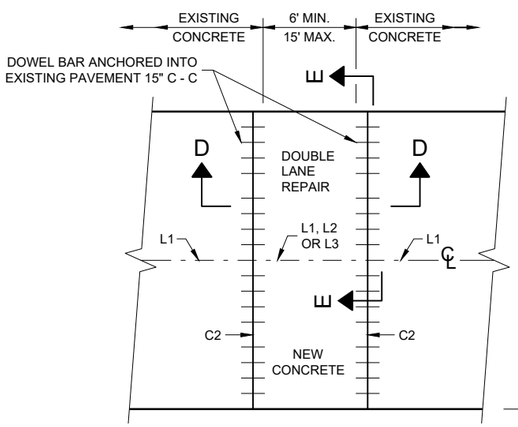


SECTION D - D



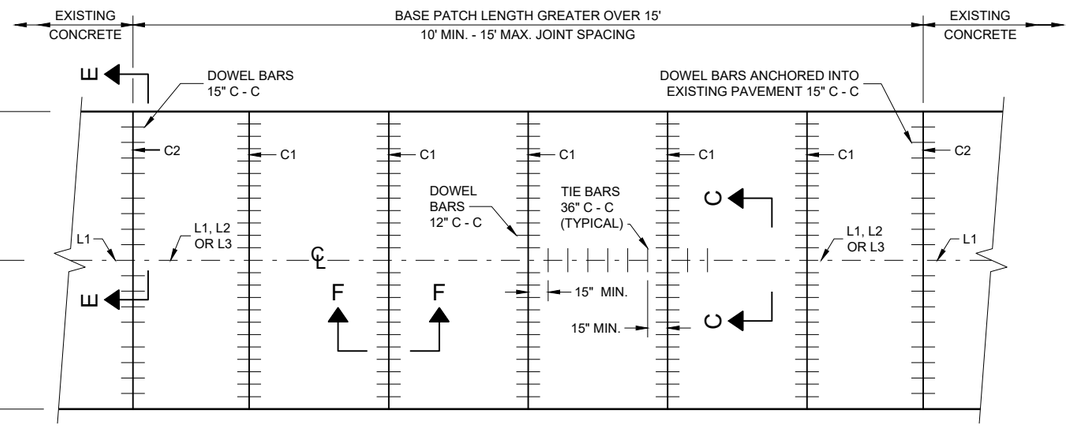
SECTION E - E

SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW

MULTILANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

MULTILANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH

BASE PATCHING CONCRETE

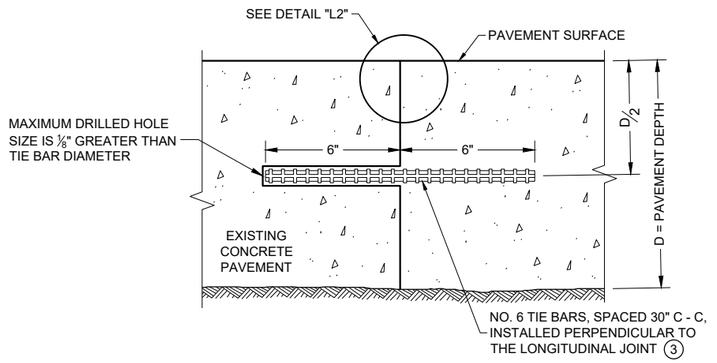
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTAT 509

SDD 13C14 - 07b

SDD 13C14 - 07b

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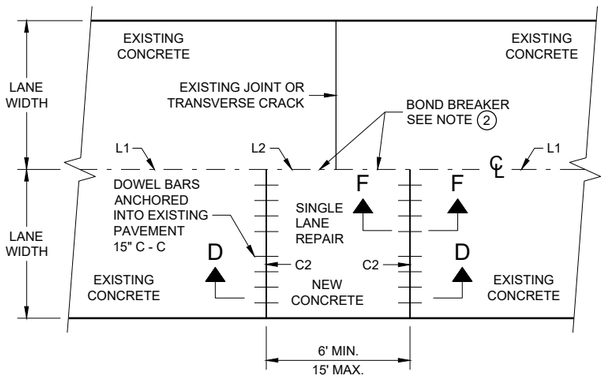


SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

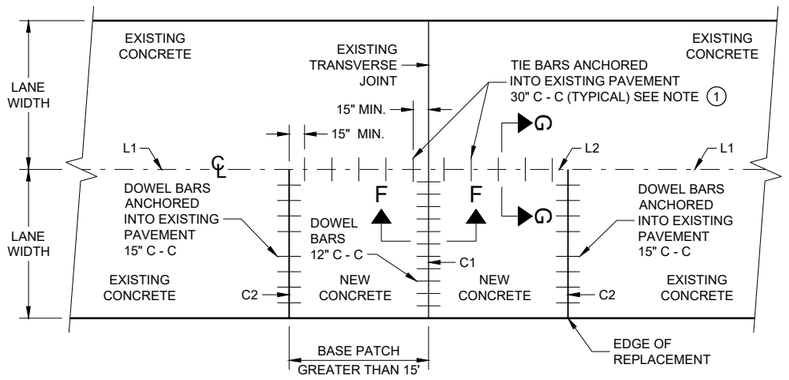
GENERAL NOTES

1. WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
2. USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
3. ANCHOR TIE BARS INTO DRILLED HOES WITH AN EPOXY.



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH GREATER THAN 15' LENGTH

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

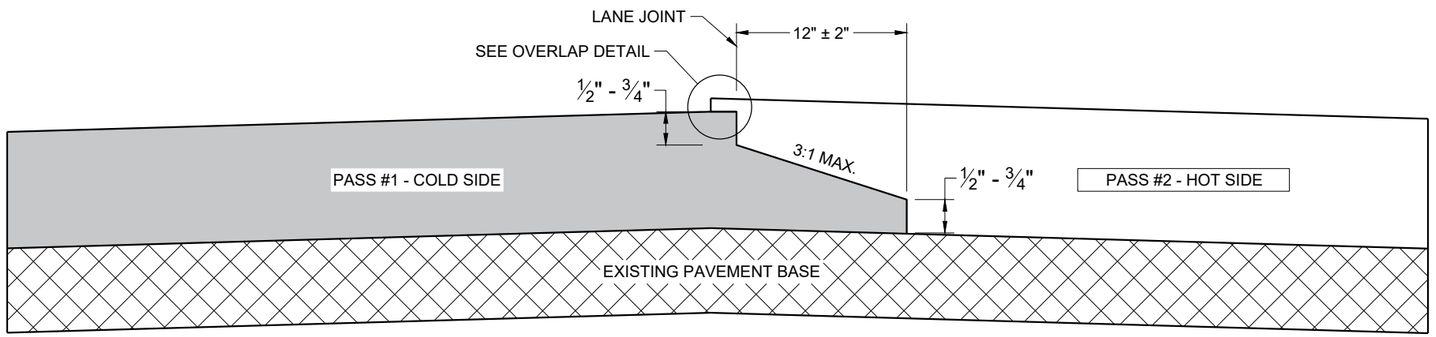
APPROVED
March 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVIS

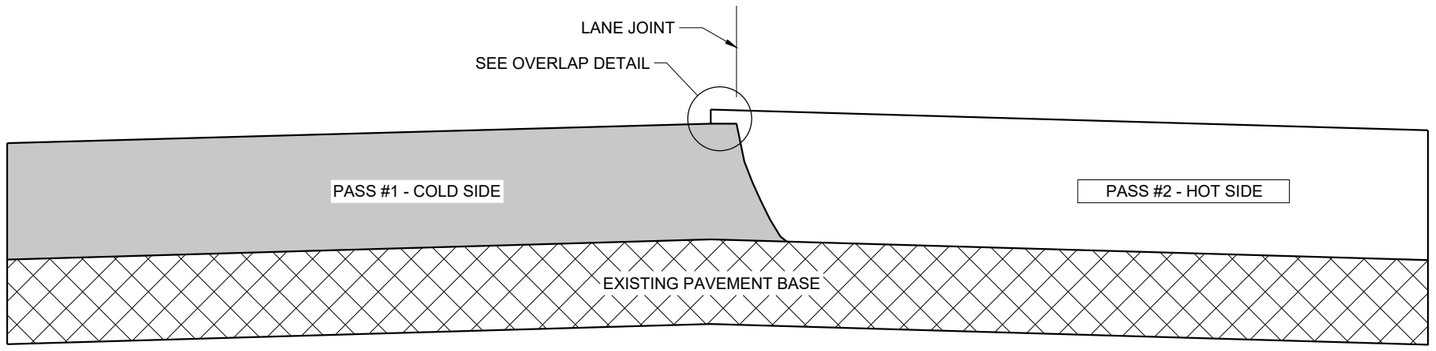
FHWA

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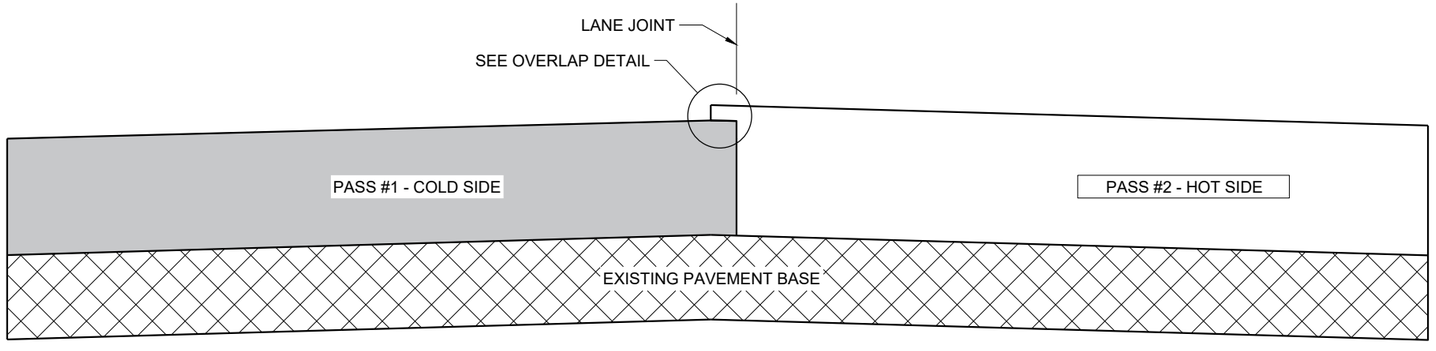
SDD 13C14 - 07c



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

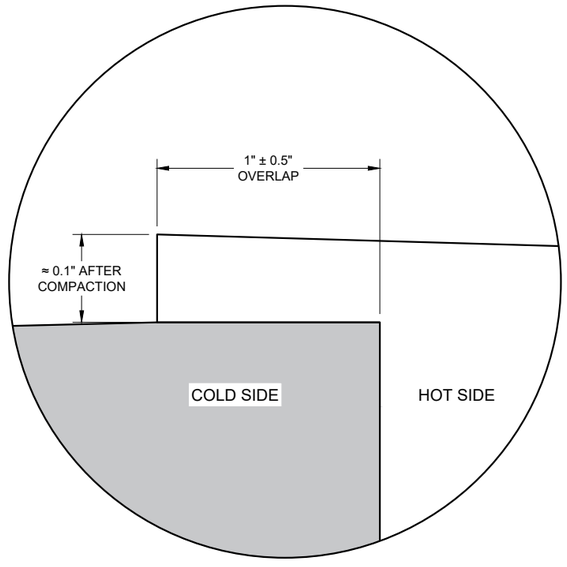
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

6

6

SDD 13C19 - 03

SDD 13C19 - 03

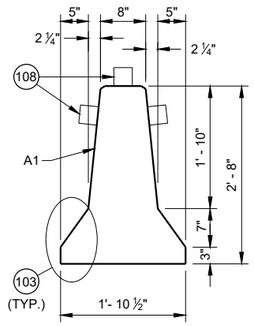
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

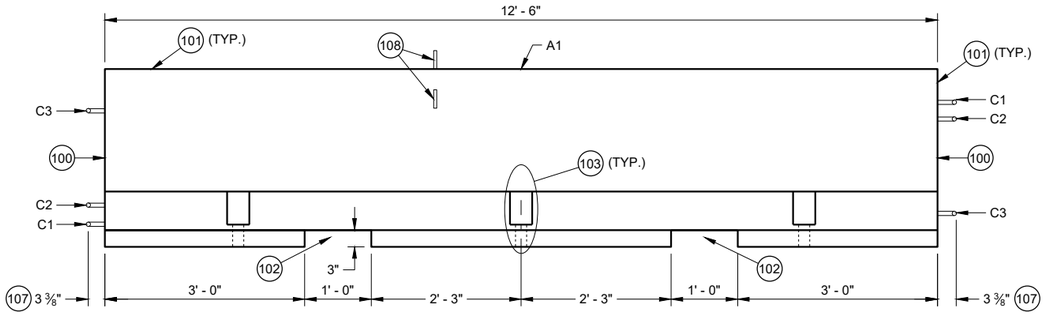
APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



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

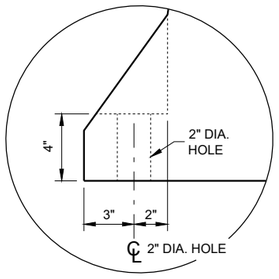
(104) 1 ¾" MIN. CLEAR COVER

(105) 2" MIN. CLEAR COVER

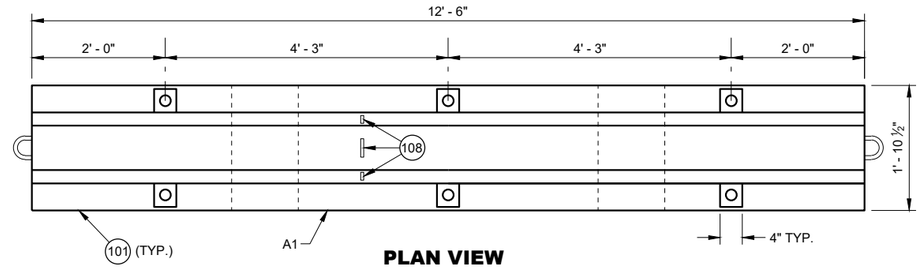
(106) 1" MIN. CLEAR COVER

(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.

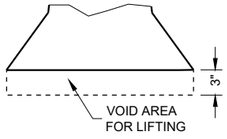


ANCHOR BLOCK DETAIL

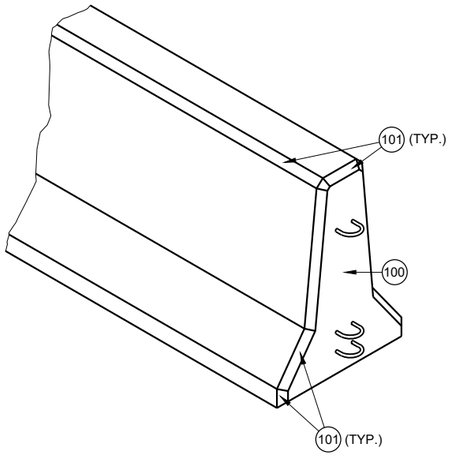


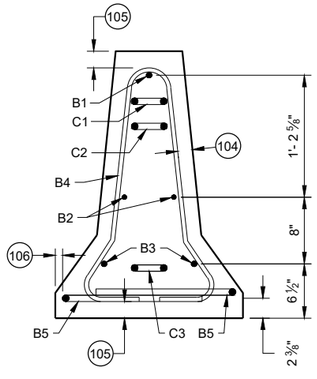
PLAN VIEW

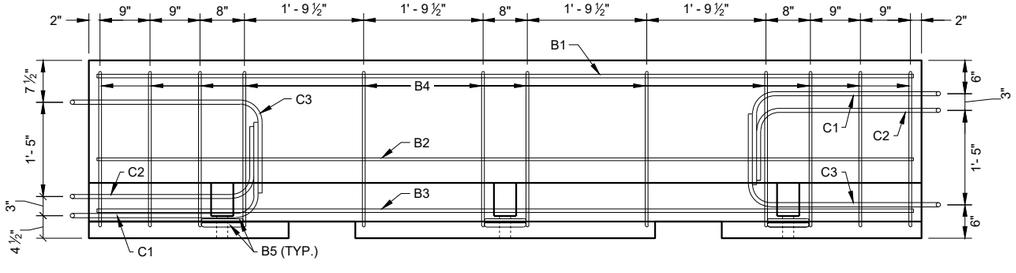
TEMPORARY BARRIER



LIFTING SLOT DETAIL (TYP.)







PROFILE VIEW

TEMPORARY BARRIER REINFORCEMENT

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

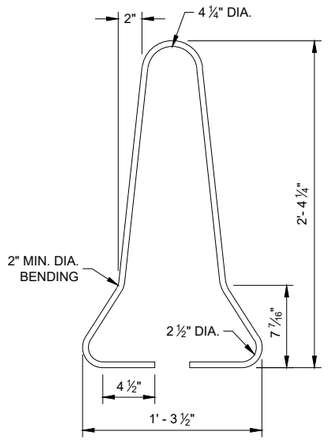
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

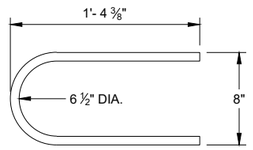
SDD 14B07-16a

6

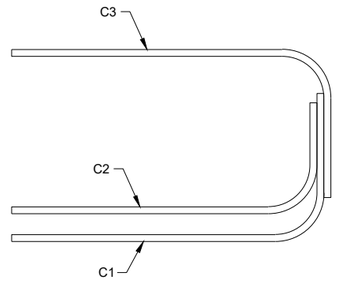
SDD 14B07-16a



B4 BAR DETAIL

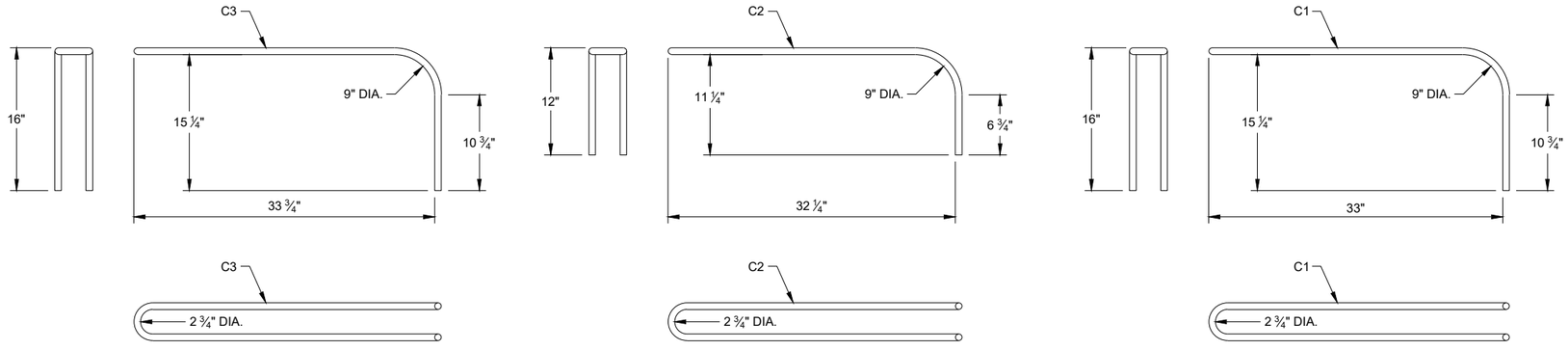


B5 BAR DETAIL



PROFILE VIEW

LOOP BAR ASSEMBLY



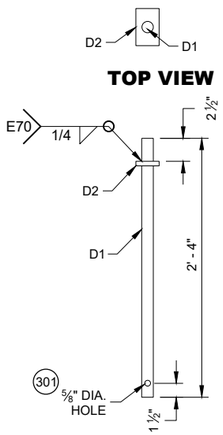
C BAR DETAILS

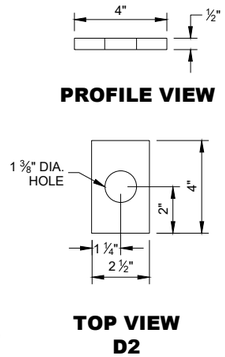
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

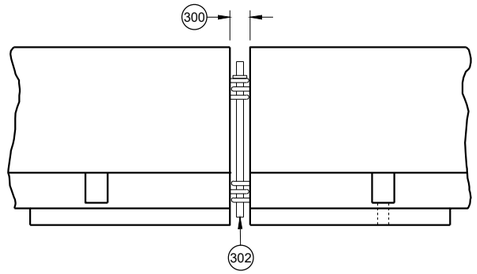
6

SDD 14B07-16b





CONNECTOR PIN ASSEMBLY



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.

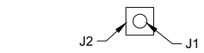
305 DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.

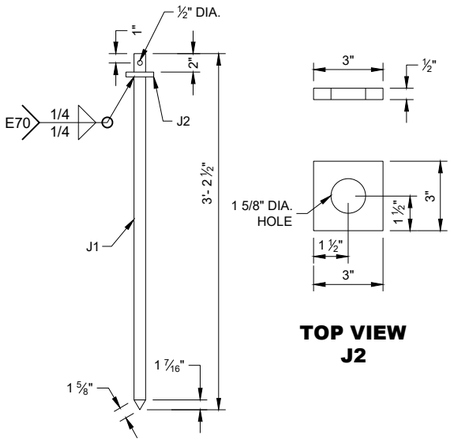
306 MINIMUM OF 2" OF ASPHALT.

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.

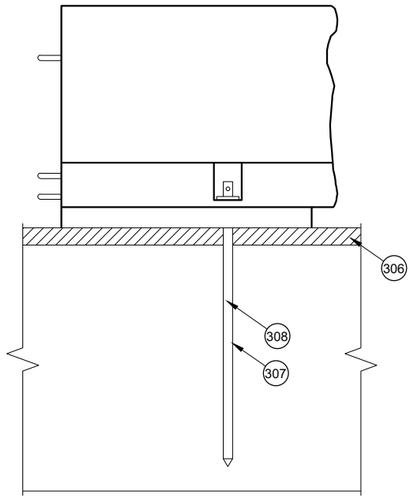




PROFILE VIEW

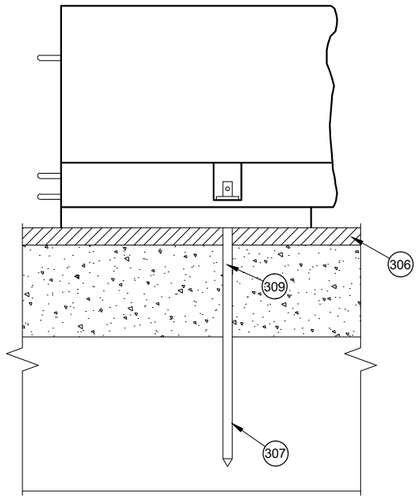
TOP VIEW J2

ASPHALT ANCHOR PIN ASSEMBLY



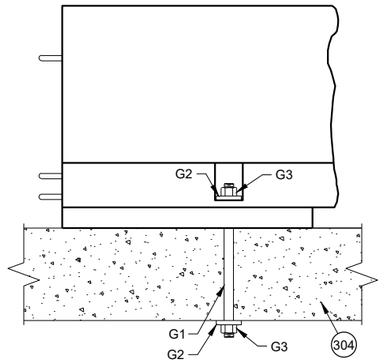
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT PAVEMENT



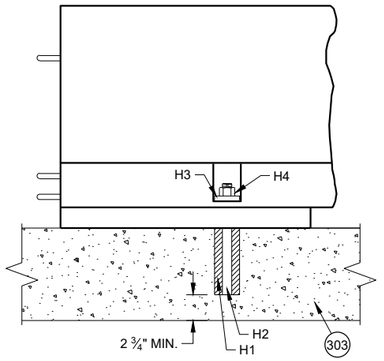
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT OVERLAY ON TOP OF CONCRETE PAVEMENT



SIDE VIEW

THROUGH BOLT ANCHOR INSTALLATION (305)



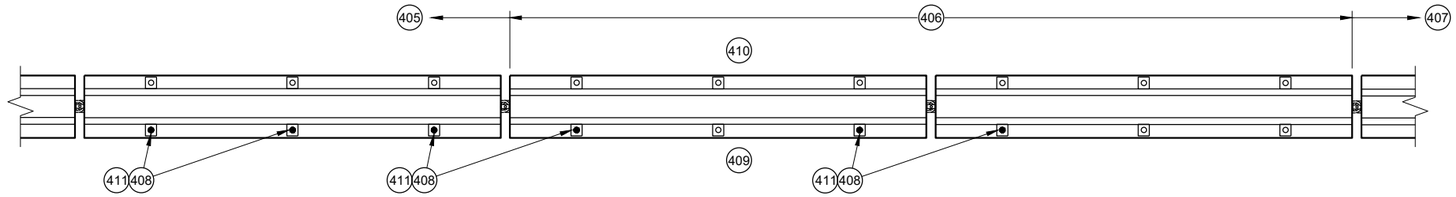
SIDE VIEW

ADHESIVE ANCHOR INSTALLATION (305)

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

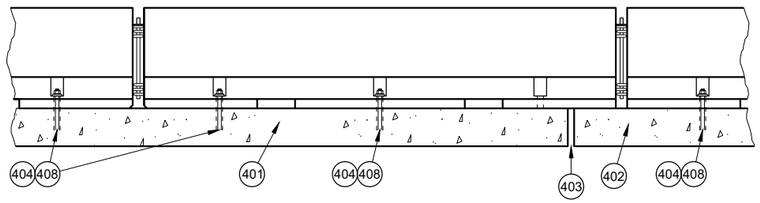
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16c



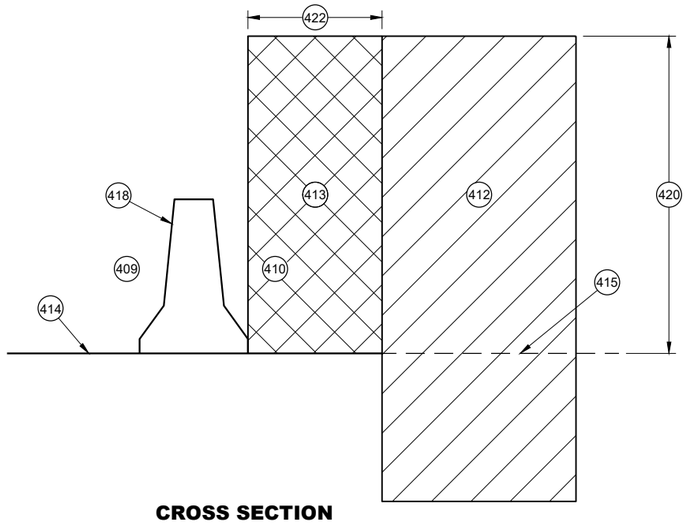
PLAN VIEW

TRANSITION FROM FREE STANDING TO ANCHORED BARRIER



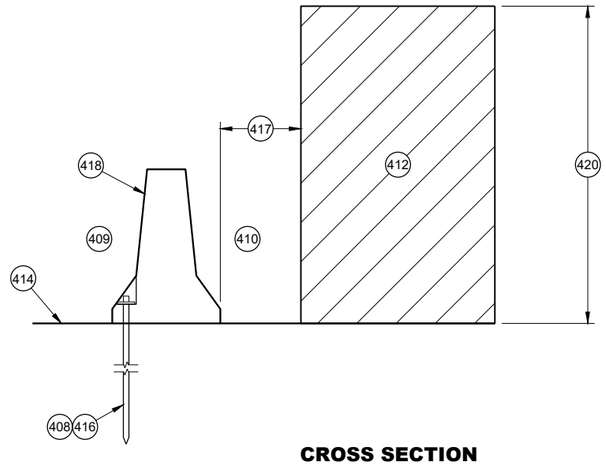
PROFILE VIEW

ANCHORED BARRIER NEAR EXPANSION JOINT (400)



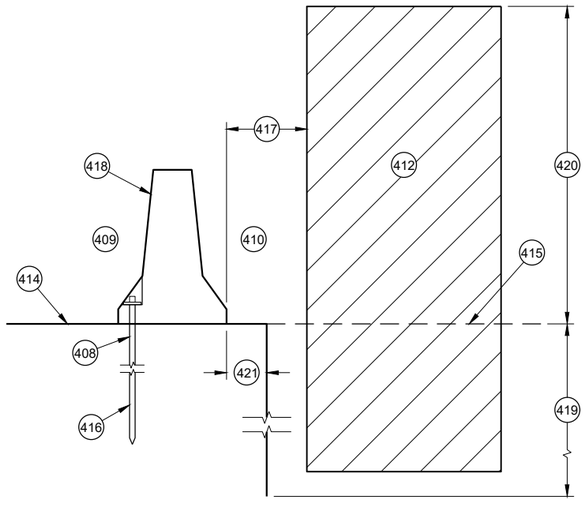
CROSS SECTION

FREE STANDING BARRIER



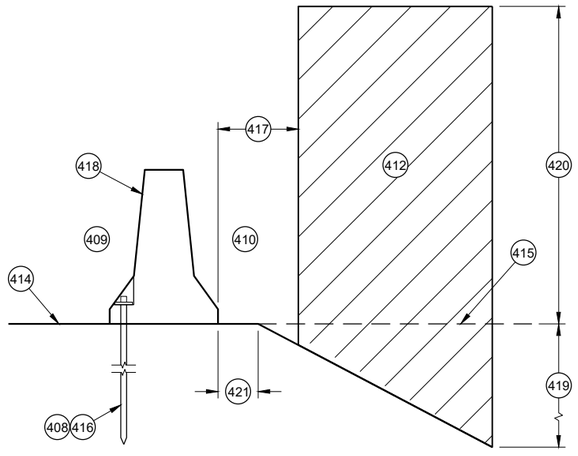
CROSS SECTION

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'

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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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

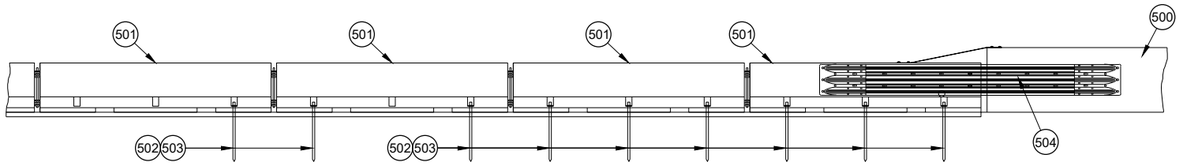
(516) CUT WOOD BLOCK TO FIT.

(517) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL ASSEMBLY.

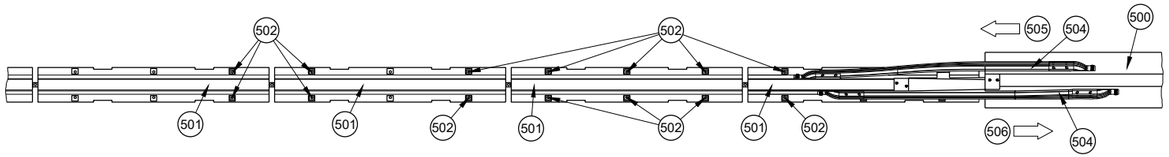
(518) CAP ASSEMBLY

(519) 4" MAX. GAP BETWEEN TEMPORARY BARRIER AND RIGID BARRIER.

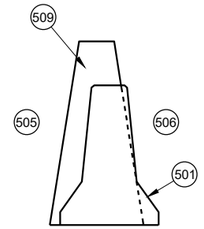
(520) ALL TWELVE SPLICE HOLES REQUIRE M1 AND M2



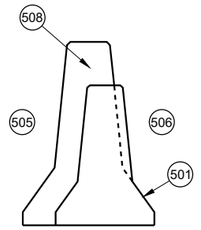
PROFILE VIEW



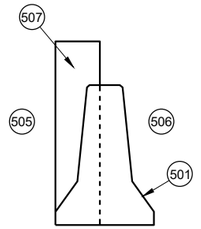
PLAN VIEW



CROSS SECTION TEMPORARY BARRIER PLACEMENT SINGLE SLOPE

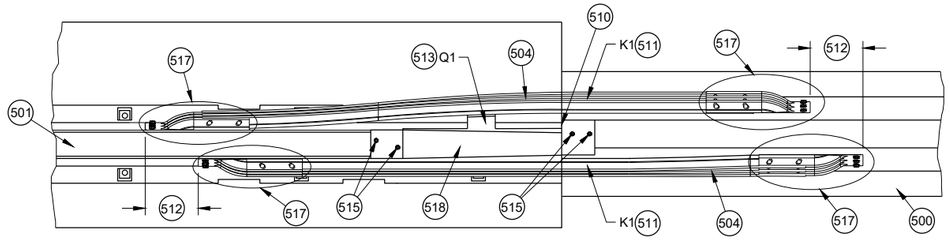


CROSS SECTION TEMPORARY BARRIER PLACEMENT SAFETY SHAPE

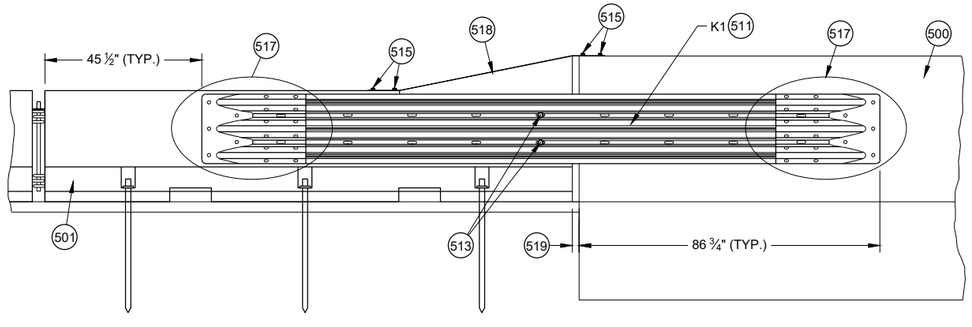


CROSS SECTION TEMPORARY BARRIER PLACEMENT VERTICAL

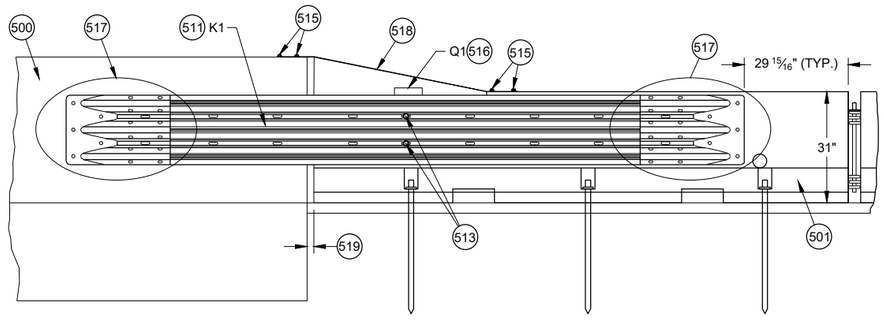
PLAN VIEW
TRANSITION TO RIGID BARRIER



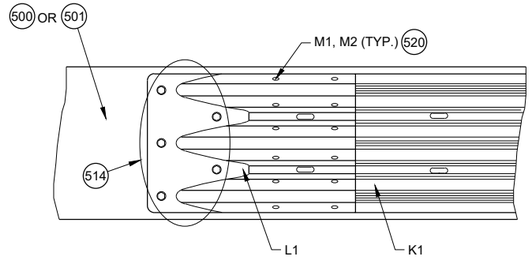
PLAN DETAIL VIEW
TRANSITION TO RIGID BARRIER



FRONT DETAIL VIEW
TRANSITION TO RIGID BARRIER



BACK DETAIL VIEW
TRANSITION TO RIGID BARRIER



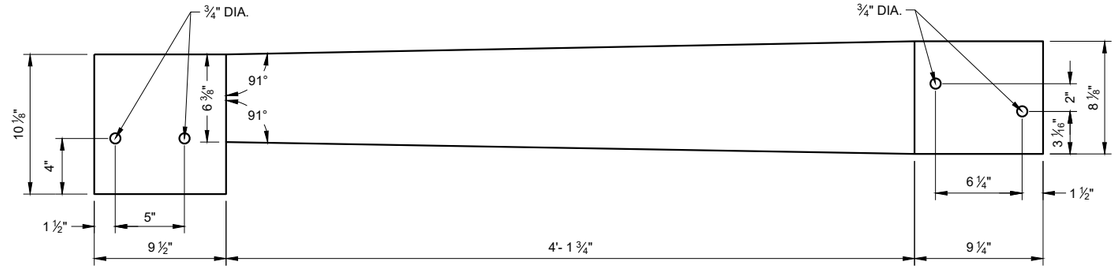
(517) DETAIL PLAN VIEW
THRIE BEAM RAIL TERMINAL CONNECTOR ASSEMBLY

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

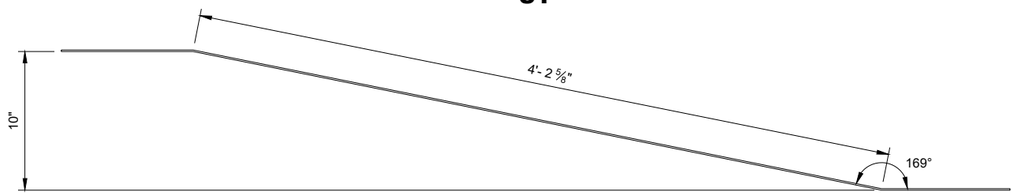
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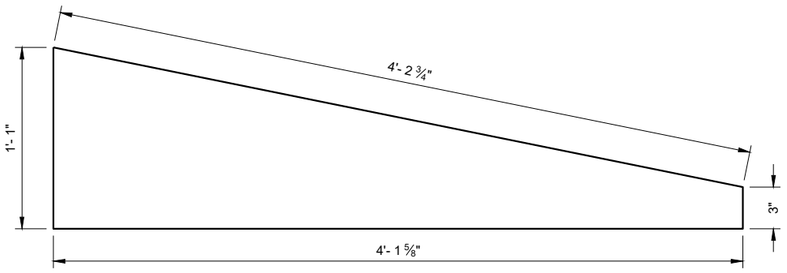
TOP VIEW

S1



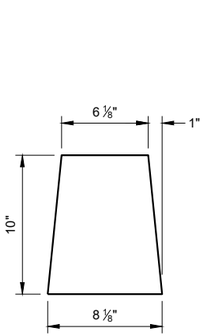
ELEVATION VIEW

S1

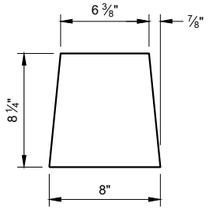


SIDE VIEW

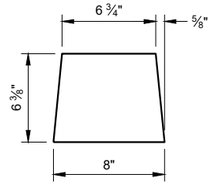
S3



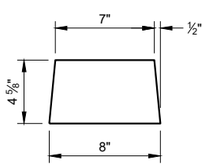
S2



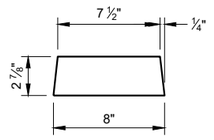
S4



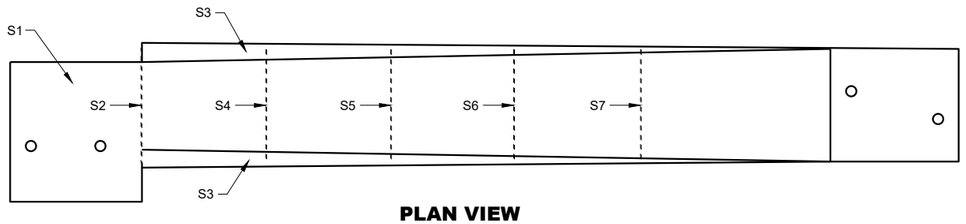
S5



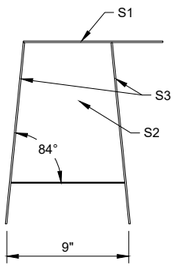
S6



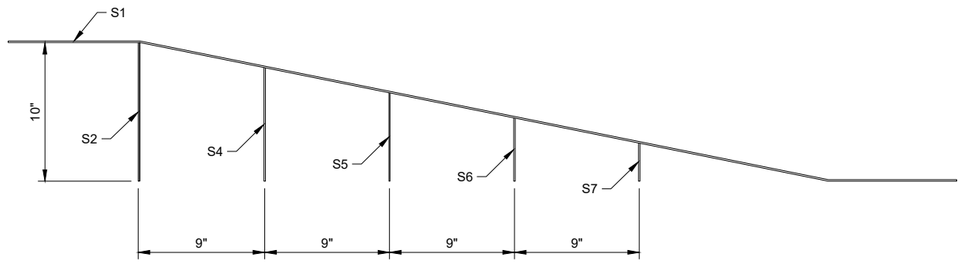
S7



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.

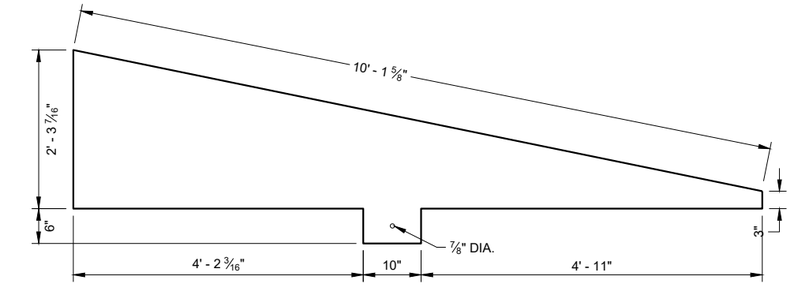
(600) SIDE PLATES (S3) NOT SHOWN FOR CLARITY.

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

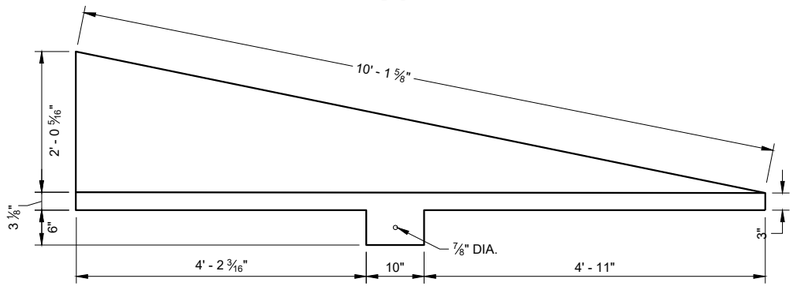
SDD 14B07-16f



SIDE VIEW
T4



END VIEW



SIDE VIEW
T3

END VIEW

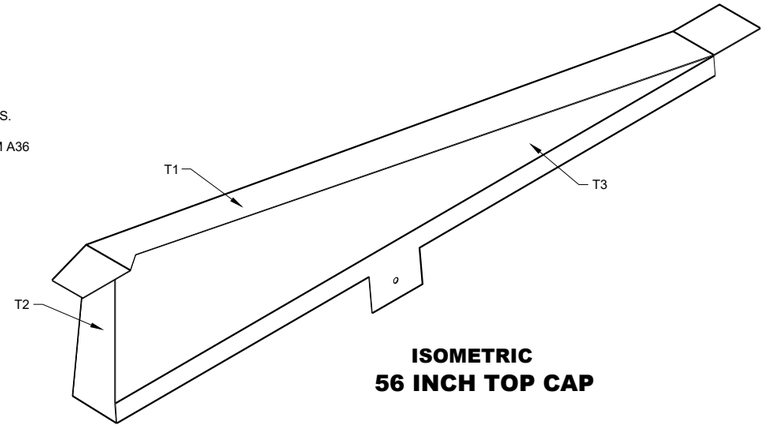
GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THRIE SIDES

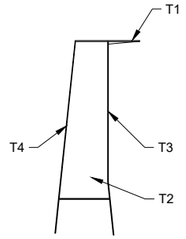
STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

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

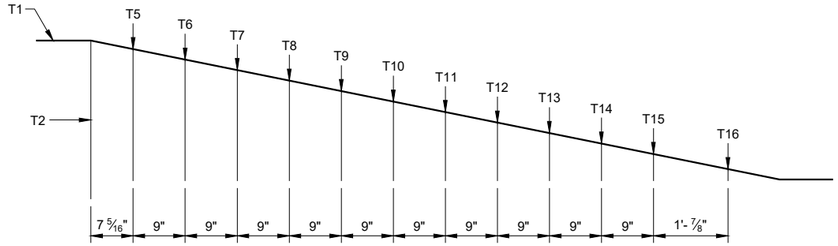
(700) SIDE PLATES (T3 AND T4) NOT SHOWN FOR CLARITY.



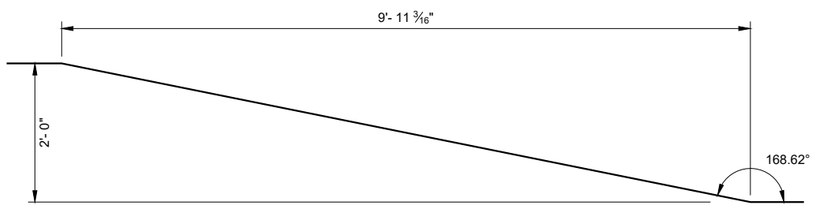
ISOMETRIC
56 INCH TOP CAP



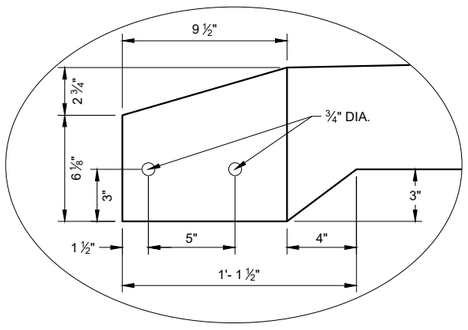
END VIEW
56 INCH TOP CAP



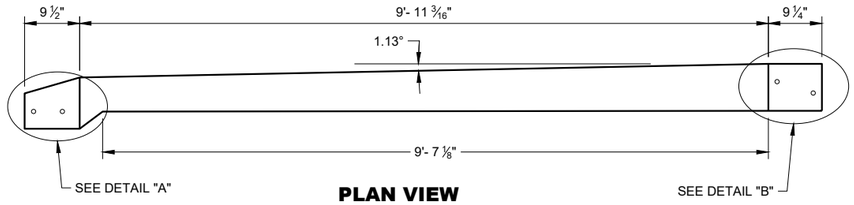
SIDE VIEW (700)
56 INCH TOP CAP



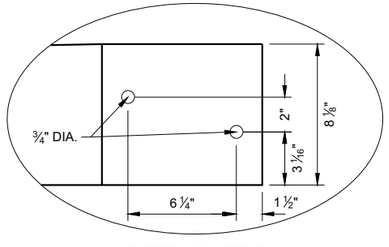
SIDE VIEW
TOP PLATE T1



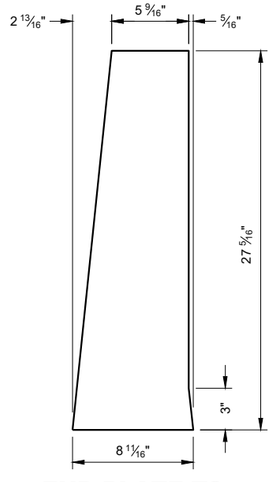
DETAIL "A"



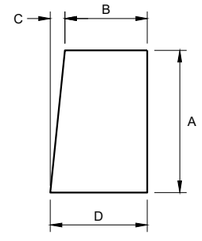
PLAN VIEW
TOP PLATE T1



DETAIL "B"



END PLATE T2



GUSSET PLATES
T5 - T16

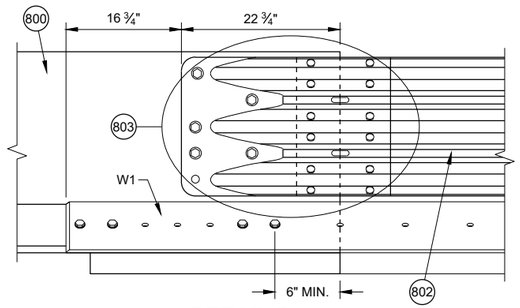
GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
T5	22 13/16"	5 1/16"	2 5/16"	8 1/16"
T6	21"	5 7/8"	2 3/16"	8 1/16"
T7	19 3/16"	6 1/16"	1 15/16"	8 1/16"
T8	17 3/8"	6 1/4"	1 13/16"	8 1/16"
T9	15 5/16"	6 7/16"	1 9/16"	8 1/16"
T10	13 3/4"	6 5/8"	1 7/16"	8 1/16"
T11	11 15/16"	6 13/16"	1 1/4"	8 1/16"
T12	10 1/8"	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"

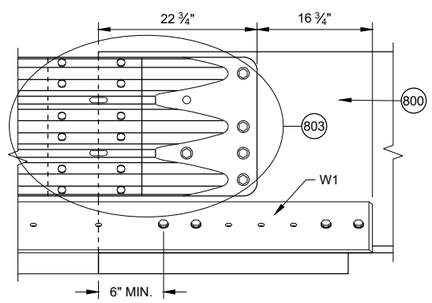
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

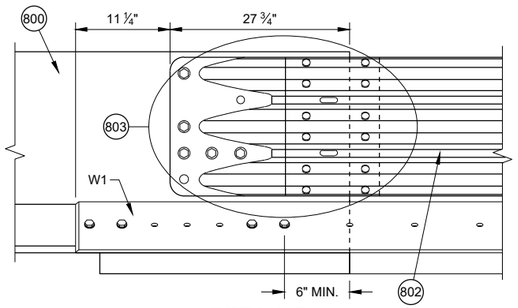
SDD 14B07-16g



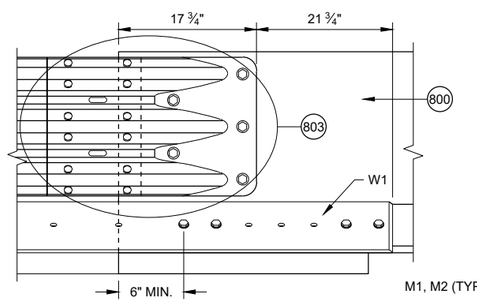
DETAIL D



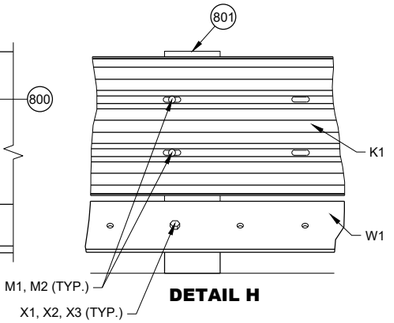
DETAIL E



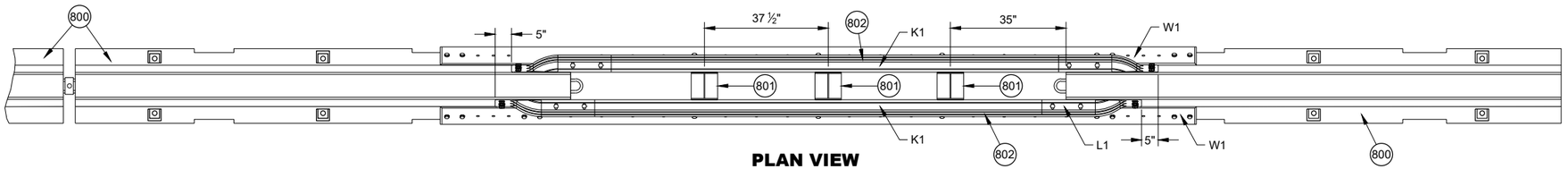
DETAIL F



DETAIL G



DETAIL H



PLAN VIEW

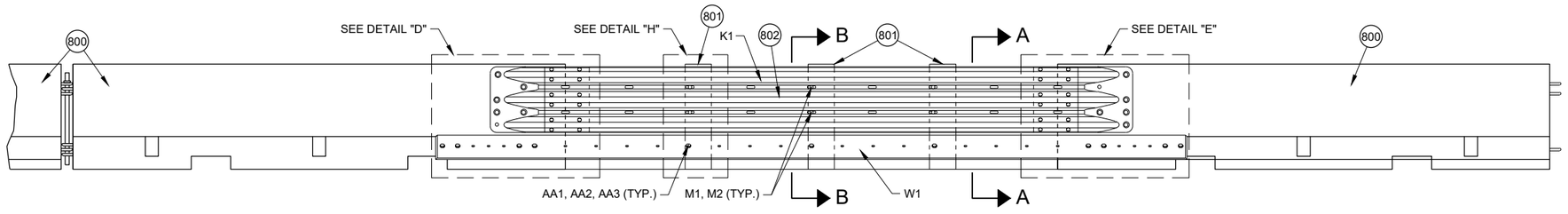
GENERAL NOTES

(800) FREE STANDING TEMPORARY BARRIER

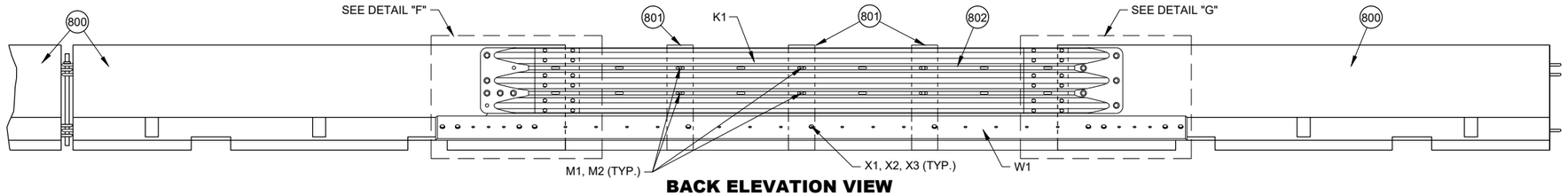
(801) GAP STIFFENER ASSEMBLY

(802) THRIE BEAMS ARE NESTED ON BOTH SIDES OF THE TEMPORARY BARRIER.

(803) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL



FRONT ELEVATION VIEW



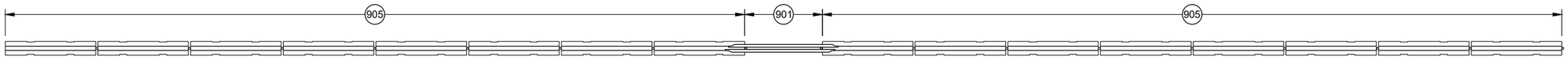
BACK ELEVATION VIEW

PORTABLE CONCRETE BARRIER GAP THRIE BEAM COVER

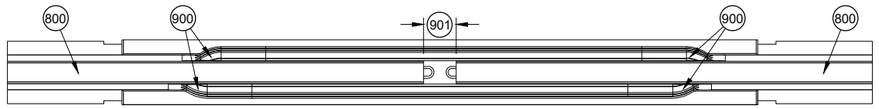
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
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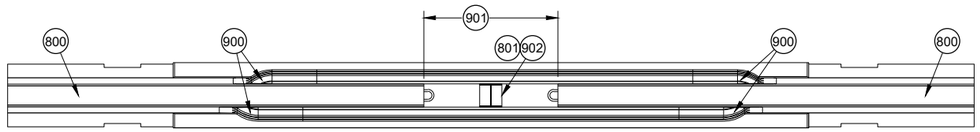
PLAN VIEW
GAP WITHIN SPACING



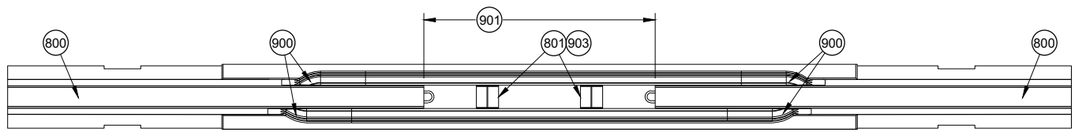
PLAN VIEW
TEMPORARY BARRIER GAP OVER 4" TO 1' MAX. (904)

GENERAL NOTES

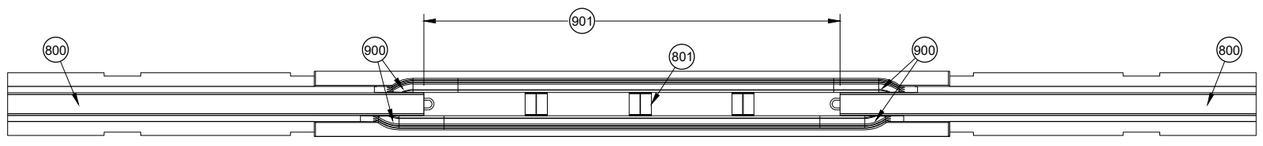
(900) SEE OTHER DETAILS FOR TEMPORARY GAP HARDWARE (TYP.)
(901) TEMPORARY BARRIER GAP
(902) GAP STIFFENER ASSEMBLY CENTERED IN THE GAP.
(903) GAP STIFFENER ASSEMBLY IS OFFSET 18 ¾" FROM CENTER
(904) MINIMUM NUMBER OF GAP STIFFENERS SHOWN FOR THE GAP RANGE SHOWN.
(905) MINIMUM OF 8 CONTINUOUS FREE STANDING TEMPORARY BARRIERS



PLAN VIEW
TEMPORARY BARRIER GAP OVER 1' TO 4' MAX. (904)



PLAN VIEW
TEMPORARY BARRIER GAP OVER 4' TO 7' MAX. (904)

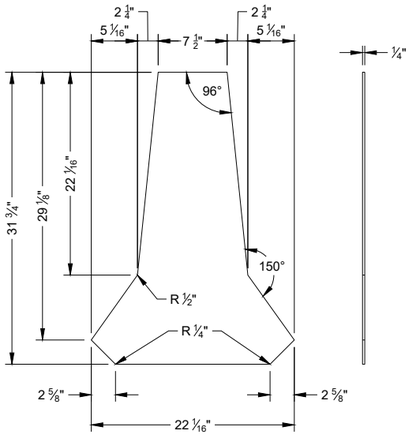


PLAN VIEW
TEMPORARY BARRIER GAP OVER 7' TO 12.5' MAX. (904)

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

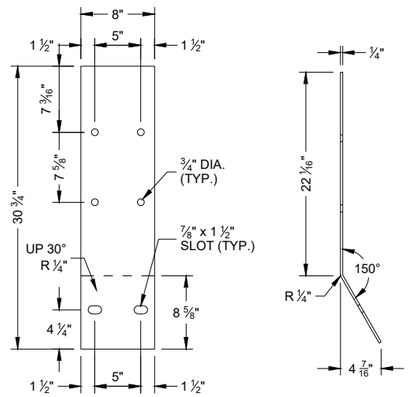
STATE OF WISCONSIN
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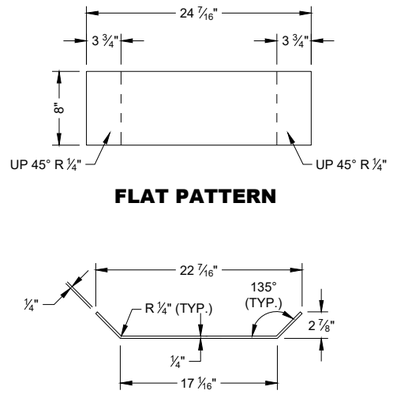
PROFILE VIEW **SIDE VIEW**

STIFFENER ASSEMBLY
CENTER PANEL U1



FLAT PATTERN **SIDE VIEW**

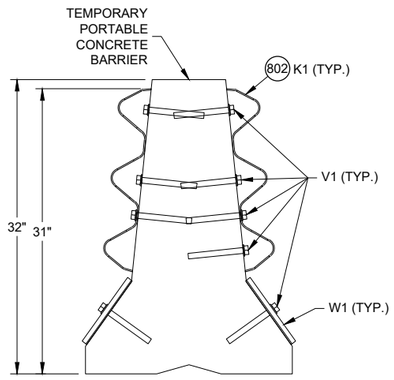
STIFFENER ASSEMBLY
SIDE PANEL U2



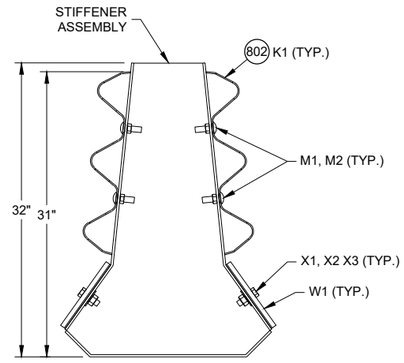
FLAT PATTERN

PROFILE VIEW

STIFFENER ASSEMBLY
BOTTOM PANEL U3

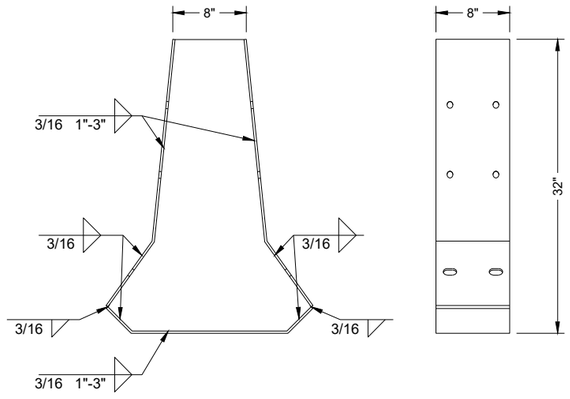


SECTION A - A



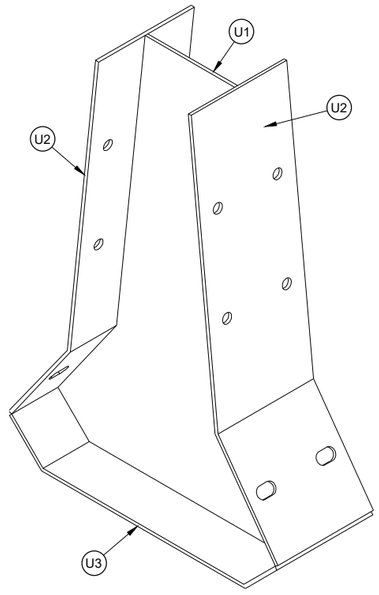
SECTION B - B

PLAN VIEW



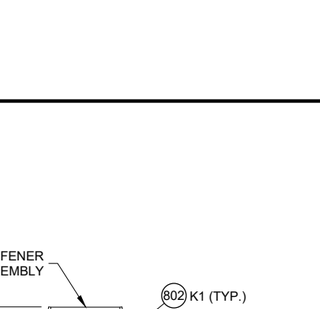
PROFILE VIEW

SIDE VIEW

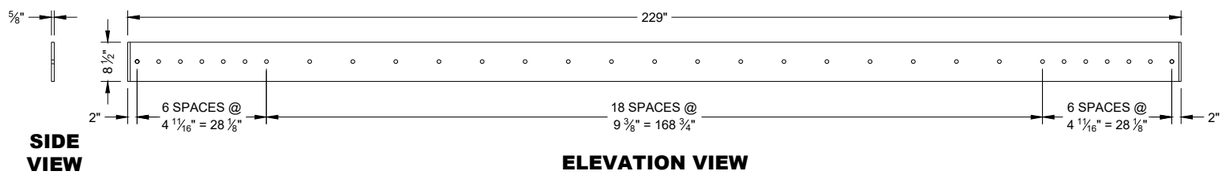


ISOMETRIC

GAP STIFFENER ASSEMBLY



PLAN VIEW



SIDE VIEW

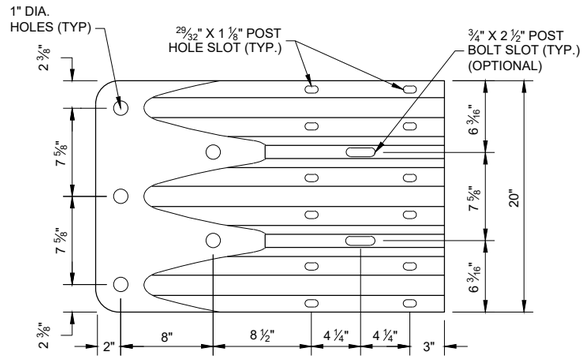
ELEVATION VIEW

W1 TOE PLATE

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

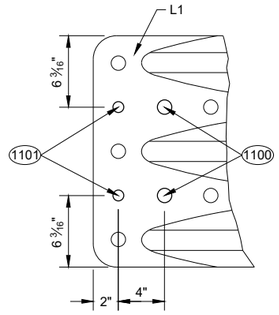
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ELEVATION VIEW

THRIE BEAM TERMINAL CONNECTOR



ELEVATION VIEW

ADDITIONAL THRIE BEAM (1102) TERMINAL CONNECTOR HOLE DETAIL

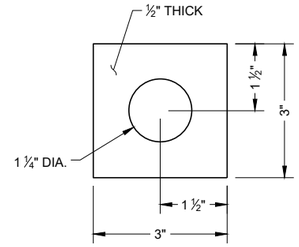


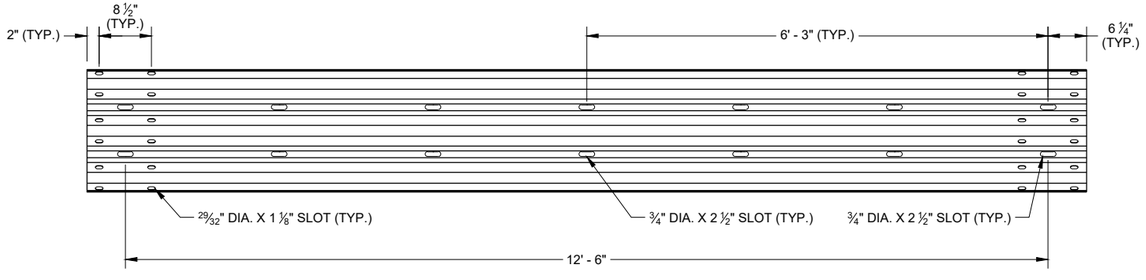
PLATE WASHER DETAIL G2, H3

GENERAL NOTES

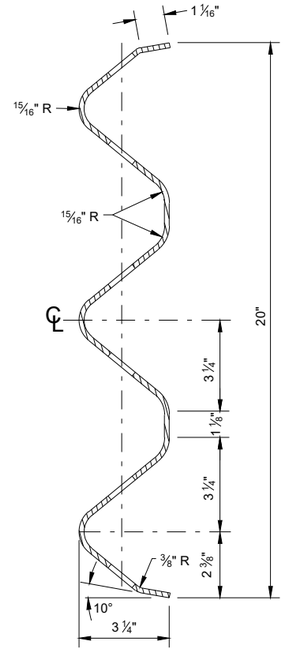
(1100) 1" DIA. HOLE

(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



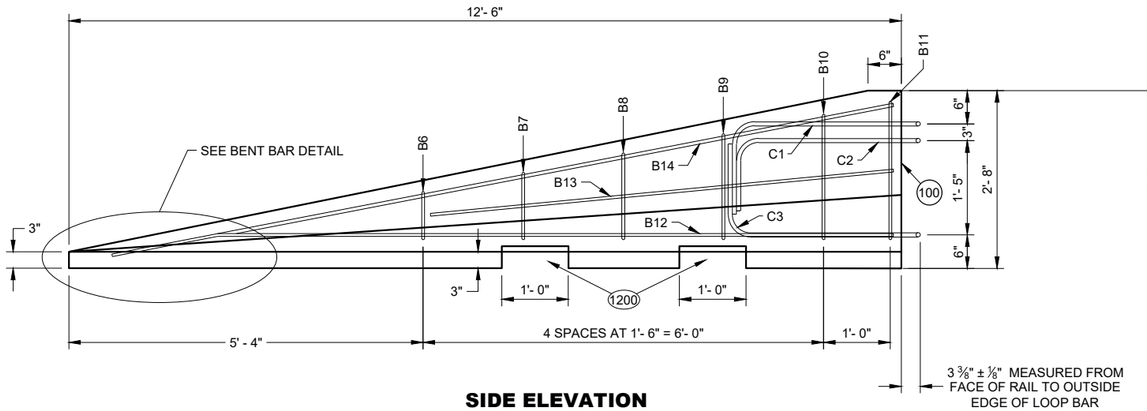
SECTION THROUGH BEAM K1

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

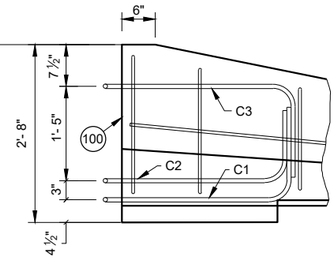
STATE OF WISCONSIN
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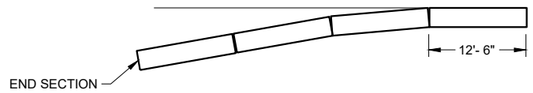
SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END
(FOR CONNECTION TO RIGHT END OF BARRIER)

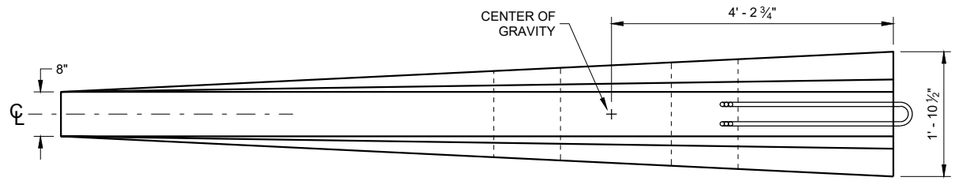
GENERAL NOTES

(1200) SEE LIFTING SLOT DETAIL. LOCATION OF LIFTING SLOTS DETERMINED BY CONTRACTOR.

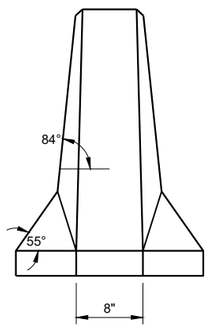


FLARE AT BARRIER END

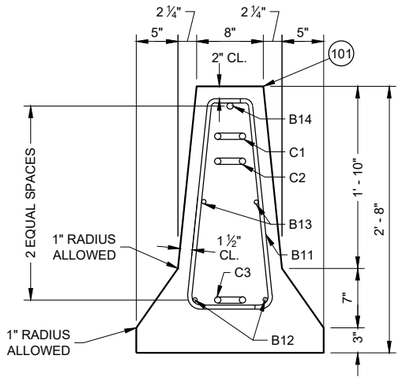
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1



PLAN VIEW

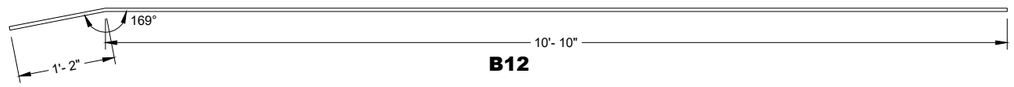


FRONT ELEVATION

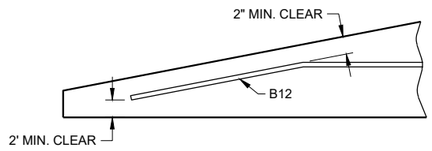


END SECTION

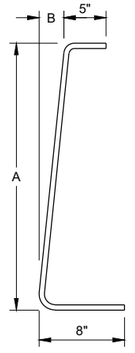
DETAILS OF BARRIER TAPER SECTION



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

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

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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

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	

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

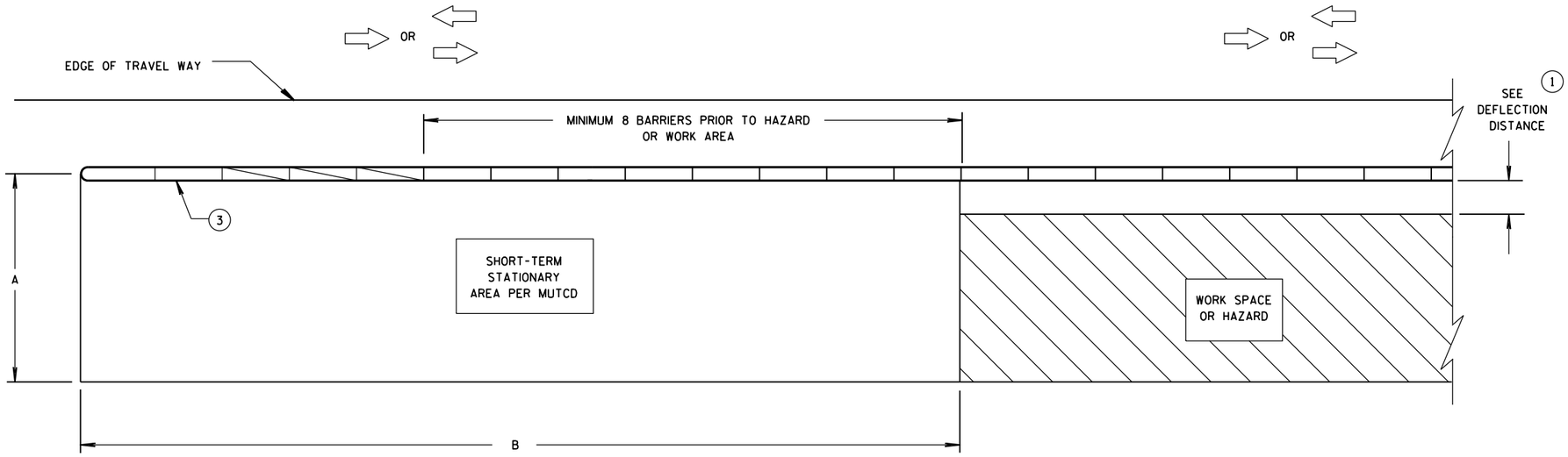
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 14B07-16n



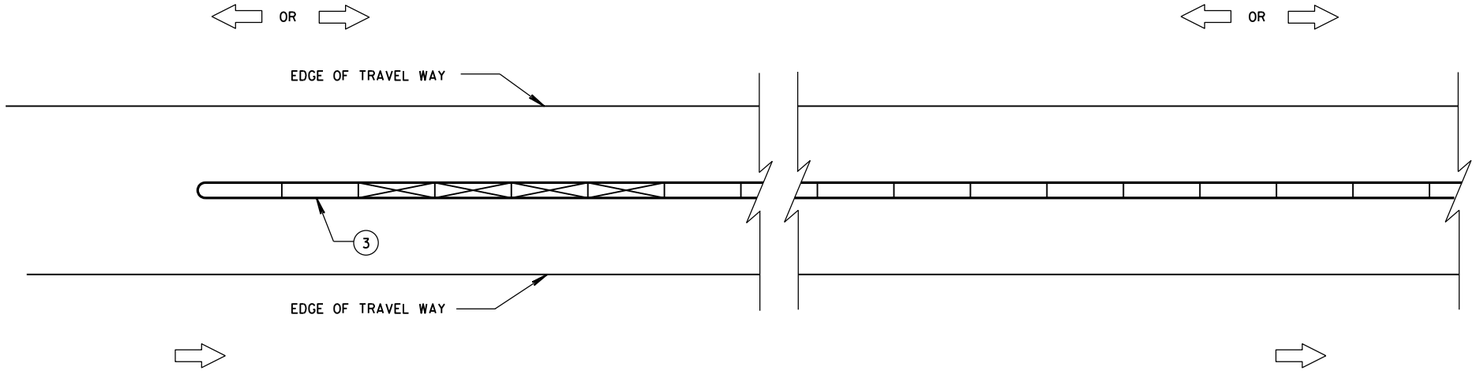
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

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.

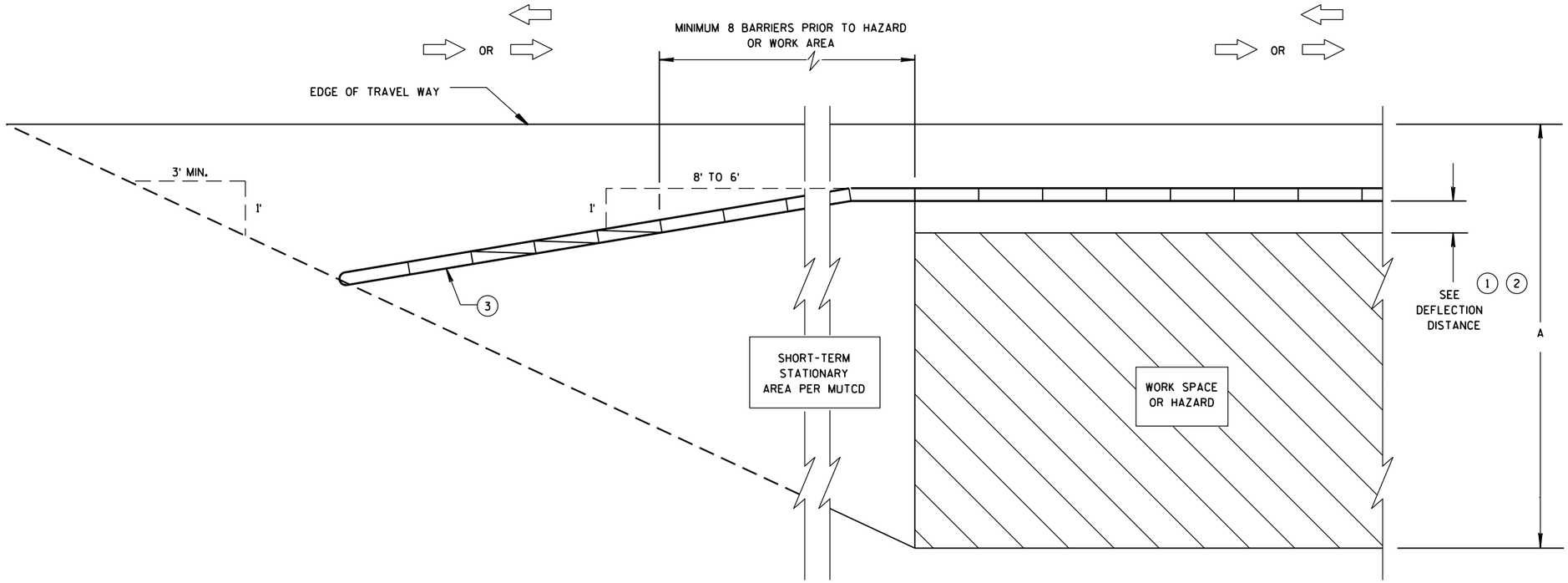
(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

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

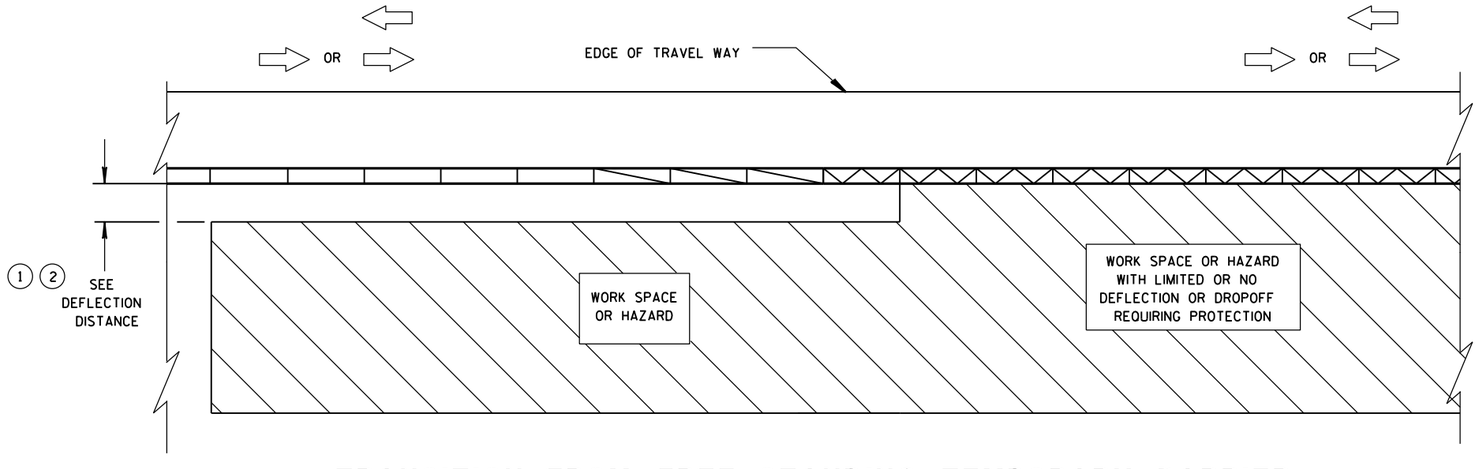
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



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



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

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

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

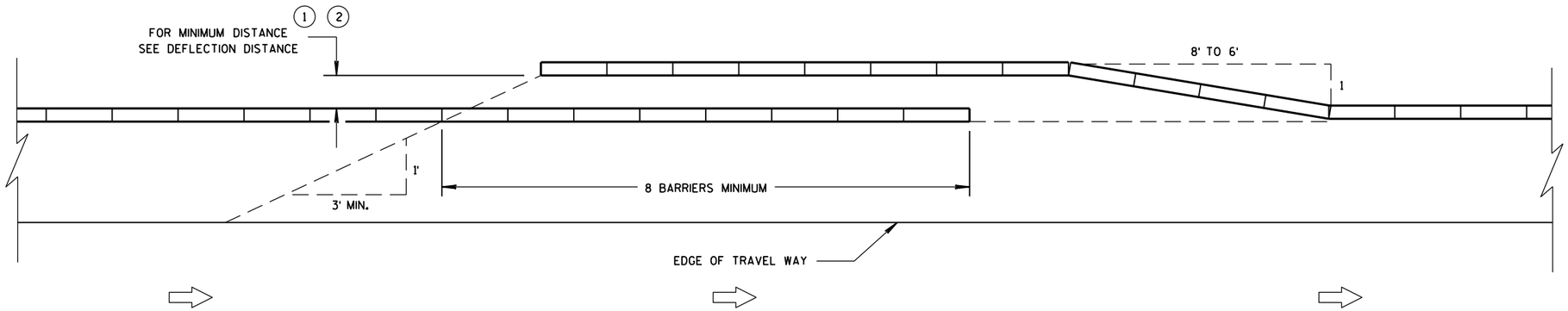
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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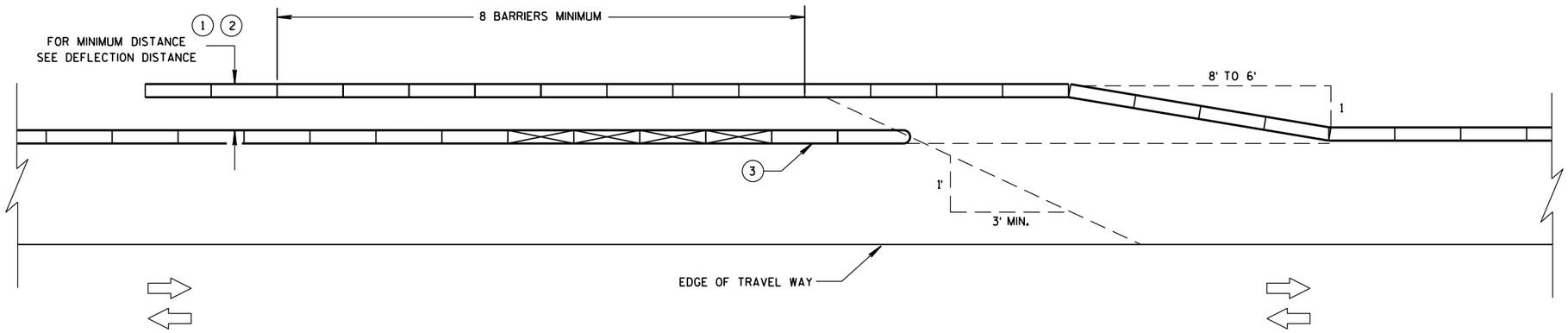
S.D.D. 14 B 8-2b

6

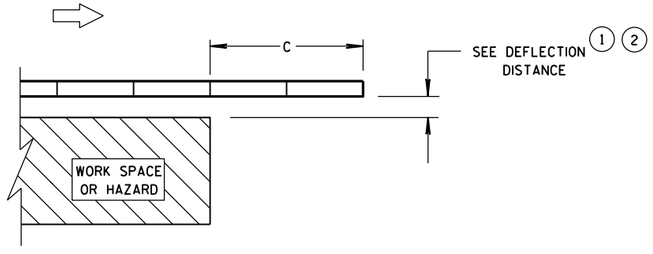
S.D.D. 14 B 8-2b



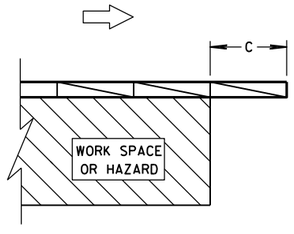
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

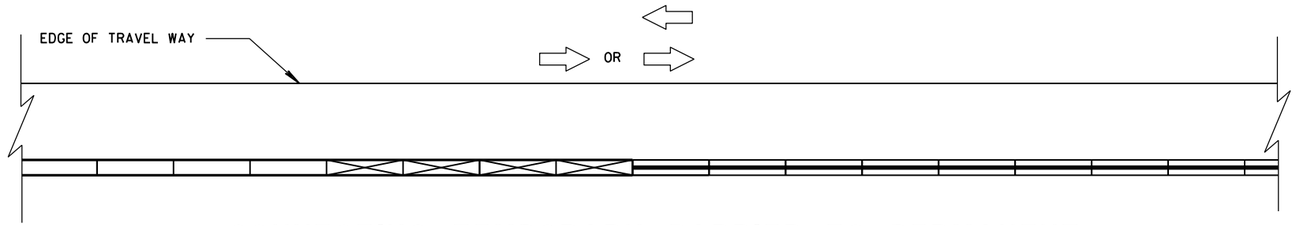
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

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

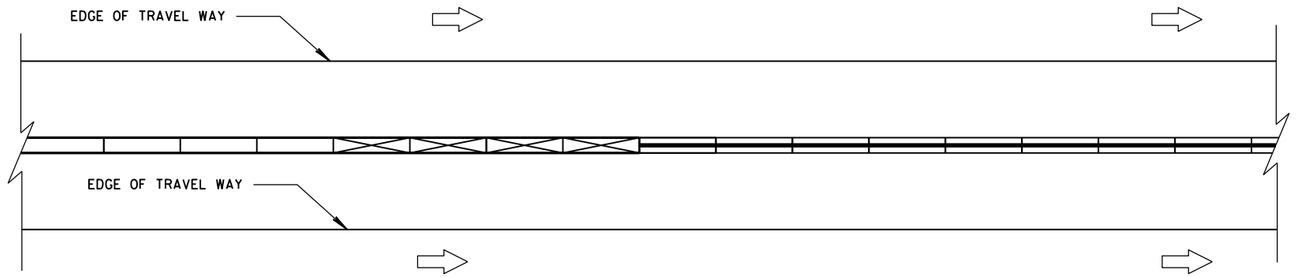
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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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

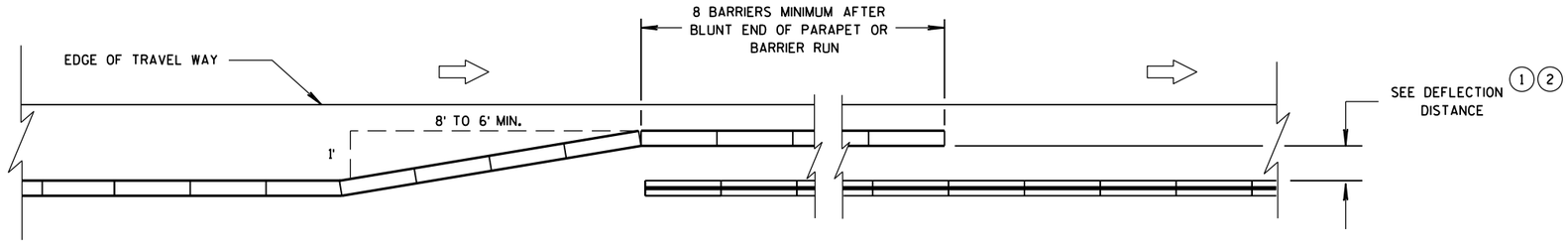
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

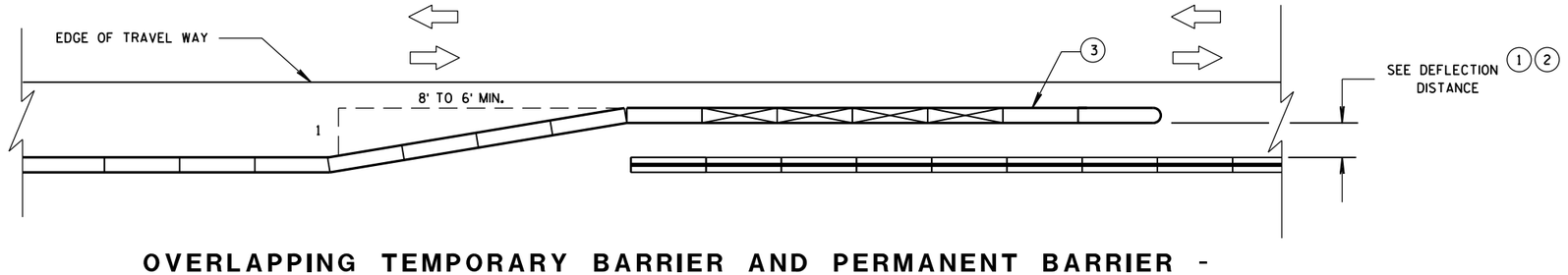
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

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

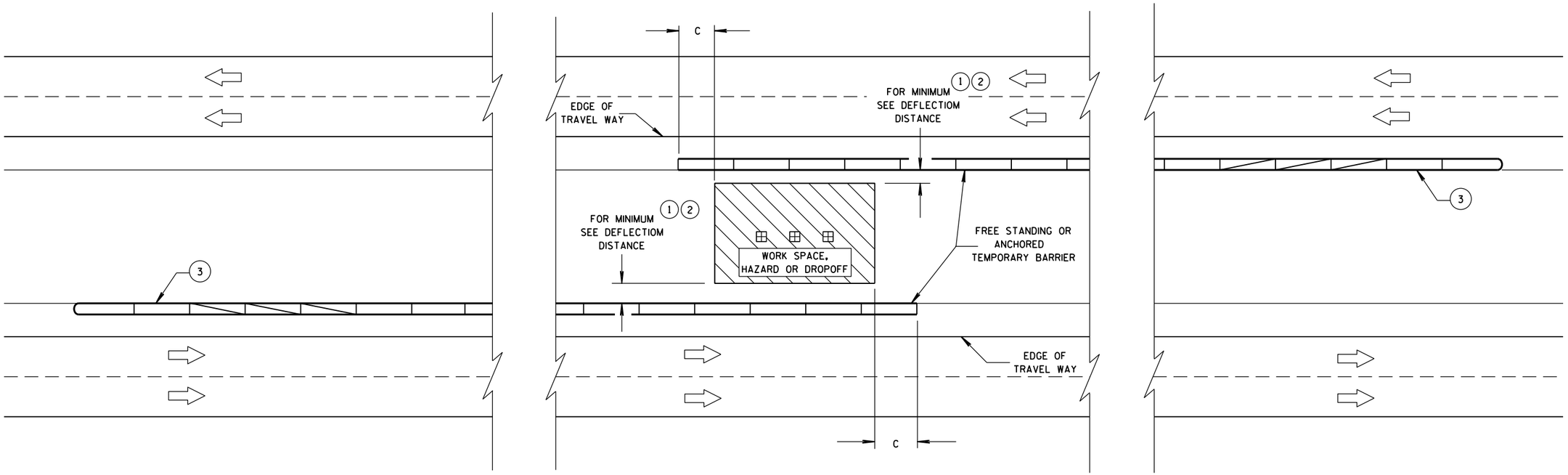
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

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



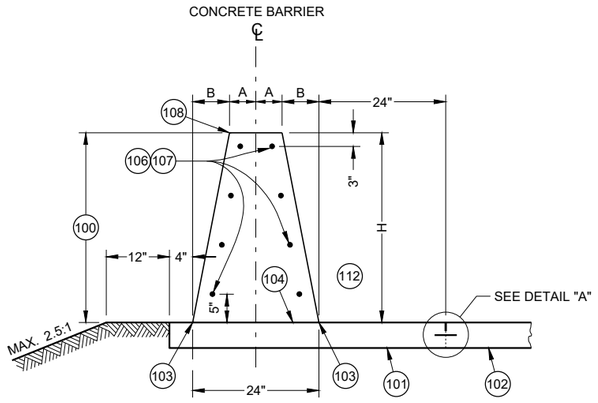
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

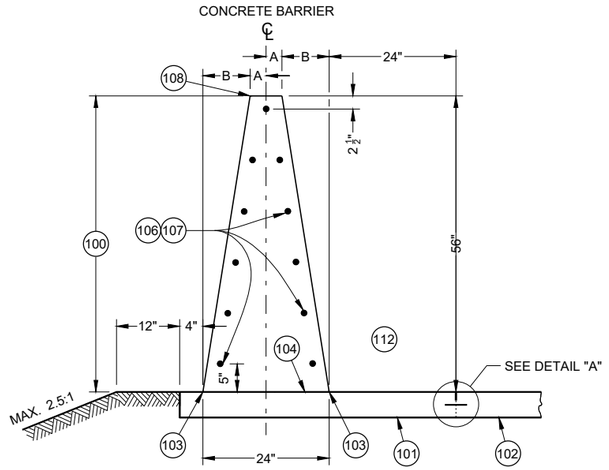
APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINNER
FHWA

6

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



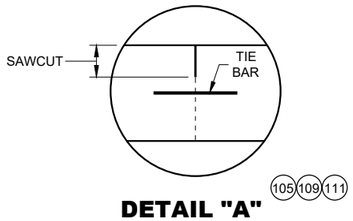
32 - INCH, 36 - INCH OR 42 - INCH SINGLE SLOPE CONCRETE BARRIER
(TYPE S32, TYPE S36, TYPE S42)



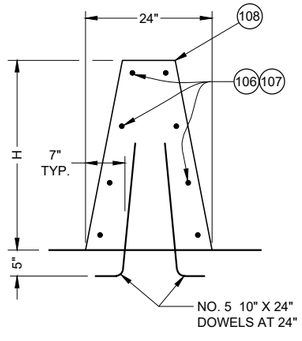
56 - INCH SINGLE SLOPE CONCRETE BARRIER
(TYPE S56)

TABLE "A"

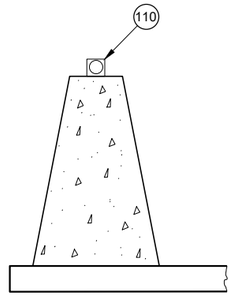
BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
32	7	5	8
36	6 ¼	5 ¾	8
42	5 ¼	6 ¾	10
56	3	9	11



DETAIL "A"



SINGLE SLOPE CONCRETE BARRIER ON BRIDGE
(NON OUTER PARAPET APPLICATION)



DELINEATION

GENERAL NOTES

WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.

LOCATE EXPANSION JOINTS IN CONCRETE BARRIER SHALL AT ALL DECK AND PRINCIPAL WALL JOINTS. FILL EXPANSION JOINT WITH EXPANSION JOINT MATERIAL. SEAL THE EXPANSION JOINT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATION 501.

2" CLEAR COVER TYPICAL

ANCHORS ARE REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN CONCRETE BARRIER. ANCHOR MAY BE AS SHOWN IN THIS SDD OR DETAIL SHOWN ON SDD 14B33. ANCHORS INCIDENTAL TO CBSS.

PROVIDE A 1" DEEP CONTRACTION JOINT IN BARRIER PAD AND BARRIER. JOINT IS TO MATCH ADJACENT CONCRETE JOINTS. NO DOWEL BARS ARE REQUIRED FOR BARRIER PAD. IF ADJACENT TO ASPHALT, CONTRACTION JOINT IS REQUIRED EVERY 15'.

ALL REBAR SHALL BE EPOXY COATED M31 TYPE S. SEE STANDARD SPECIFICATION 505.

CONCRETE BARRIER, UPPER CONCRETE BARRIER, LOWER CONCRETE BARRIER, CONCRETE BARRIER PAD, AND FOOTINGS ARE TERMS USED TO DESCRIBE PARTS OF SINGLE SLOPE CONCRETE BARRIER BID ITEMS. THESE PARTS ARE INCIDENTAL TO THE SINGLE SLOPE CONCRETE BARRIER BID ITEMS.

(100) CONCRETE BARRIER

(101) CONCRETE BARRIER PAD

(102) PAVEMENT

(103) WHERE VERTICAL ROADWAY OFFSET IS GREATER THAN 1 ½", USE TYPE A SINGLE SLOPE BARRIER.

(104) OPTIONAL CONSTRUCTION JOINT.

(105) CONSTRUCTION JOINTS MAY BE ELIMINATED WHEN CONCRETE SHOULDER IS LESS THAT 10'.

(106) STAGGER LAPPING OF LONGITUDINAL STEEL. MINIMUM OVERLAP OF STEEL IS 2' BARS AT LAPS TO BE FIRMLY TIED OR CONNECTED.

(107) NO. 5 CONTINUOUS BARS EVENLY SPACED (SEE TABLE "A").

(108) USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.

(109) CONCRETE BARRIER PAD UNDER CBSS MAY BE PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED ⅓ DEPTH. CONCRETE BARRIER PAD AND SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER BID ITEM. CONCRETE BARRIER PAD MINIMUM DEPTH IS 6", OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.

(110) SEE SDD 15A04 FOR DELINEATOR DETAILS AND SPACING.

(111) SEE SDD 13C01 FOR DETAILS TYPING CONCRETE BARRIER TO ADJACENT CONCRETE

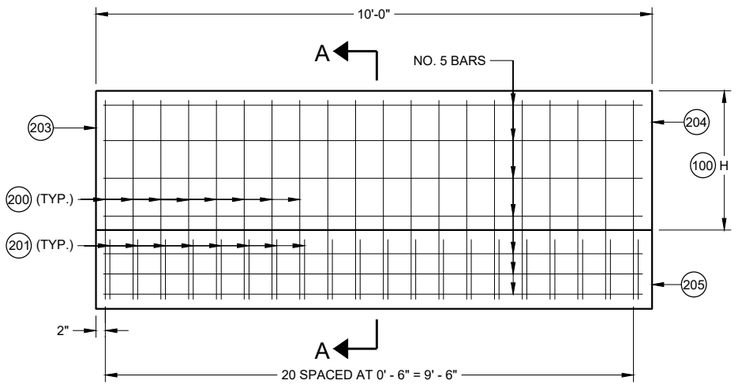
(112) TRAFFIC SIDE

CONCRETE BARRIER SINGLE SLOPE (CBSS)

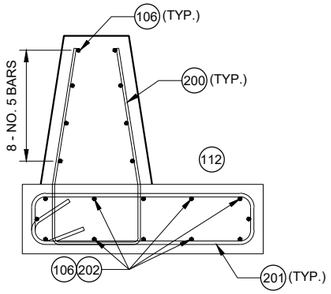
STATE OF WISCONSIN
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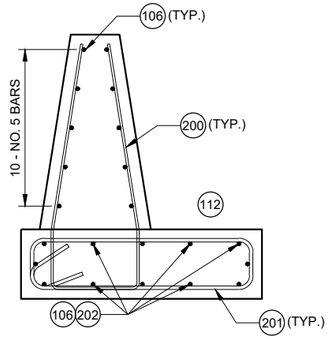
SDD 14B32 - 10a



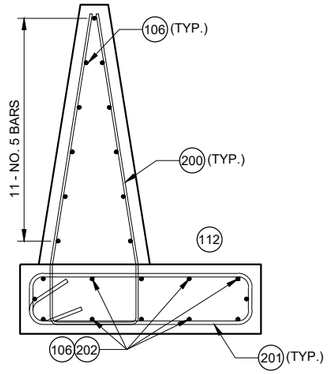
END ANCHOR SINGLE SLOPE CONCRETE BARRIER



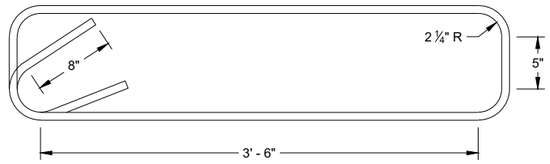
32" AND 36" CBSS



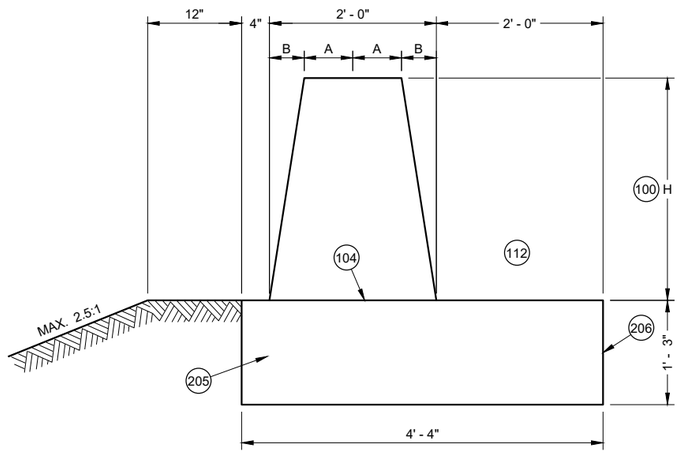
42" CBSS



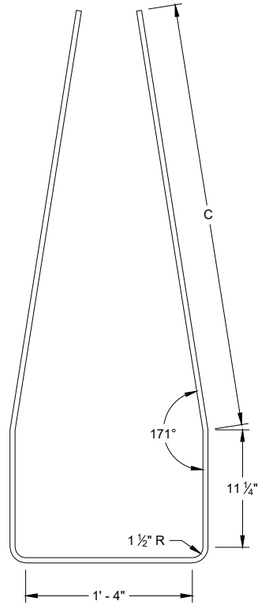
56" CBSS



STIRRUP BAR BENDING DETAIL



SECTION A - A



V1 BAR BENDING DETAIL

TABLE "B"

BARRIER HEIGHT H INCHES	C INCHES
32	2' - 6"
36	2' - 11"
42	3' - 4"
56	4' - 6 ½"

GENERAL NOTES

200 V1 BARS ARE NO. 5 BARS. (SEE BAR BENDING DETAIL)

201 STIRRUPS ARE NO. 6 BARS. (SEE BAR BENDING DETAIL)

202 TWELVE (12) NO. 5 BARS EVENLY SPACED

203 END OF INSTALLATION OR EXPANSION JOINT.

204 SEE COLD JOINT DETAIL TO CONNECT END ANCHOR SINGLE SLOPE CONCRETE BARRIER TO SINGLE SLOPE CONCRETE BARRIER.

205 FOOTING

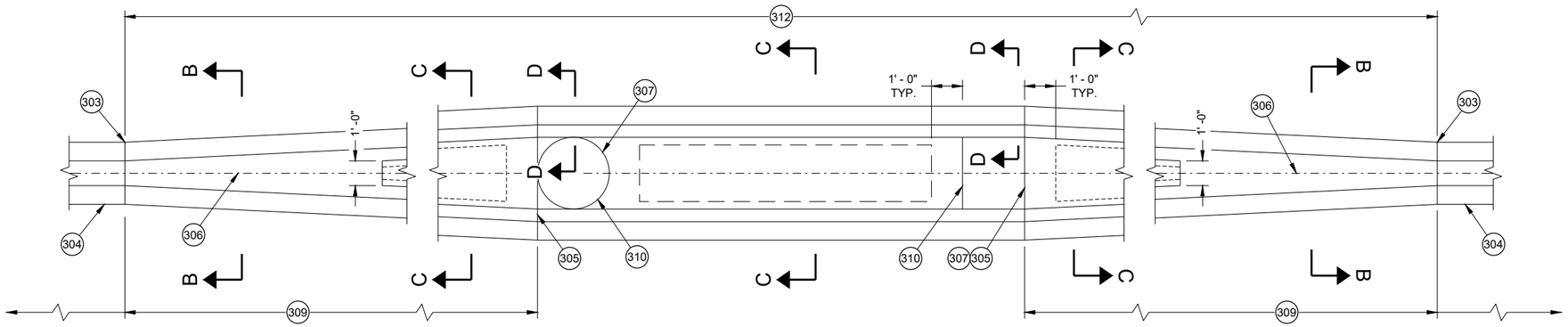
206 DO NOT TIE TO FOOTING TO ADJACENT PAVEMENT.

CONCRETE BARRIER SINGLE SLOPE (CBSS)

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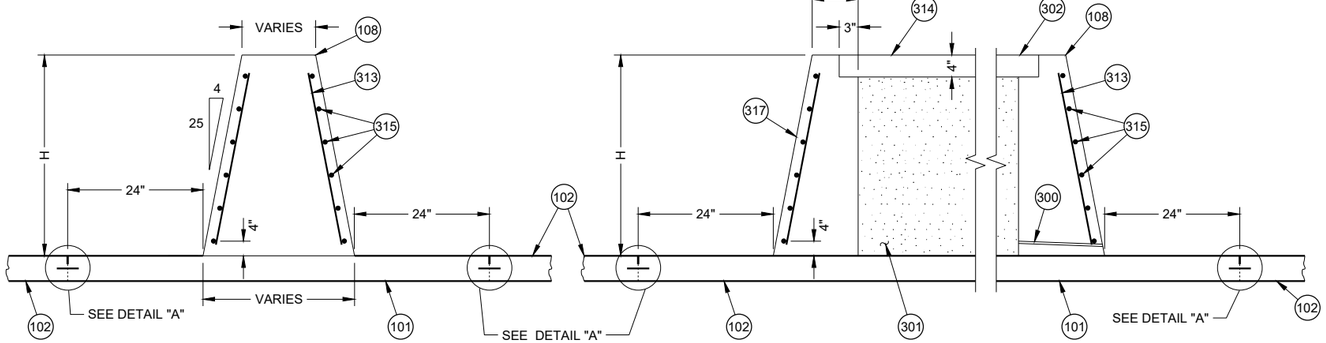
SDD 14B32 - 10b



LARGE FIXED OBJECTS PROTECTION
(TYPE S32, TYPE S36, TYPE S42, TYPE S56)

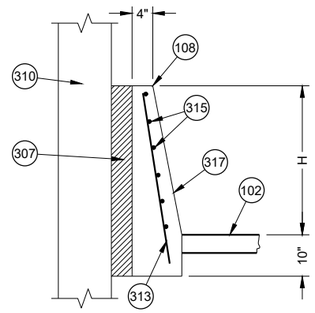
TABLE "C"

BARRIER HEIGHT H INCHES	BAR SIZE	NUMBER OF BARS EACH
32	4	6
36	4	6
42	5	6
56	5	6

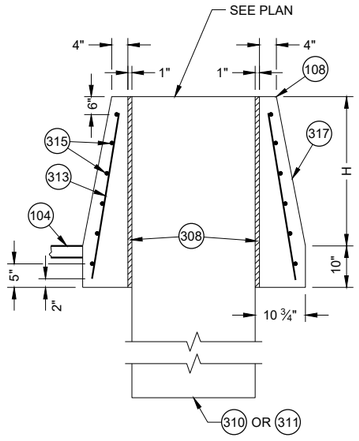


SECTION B - B

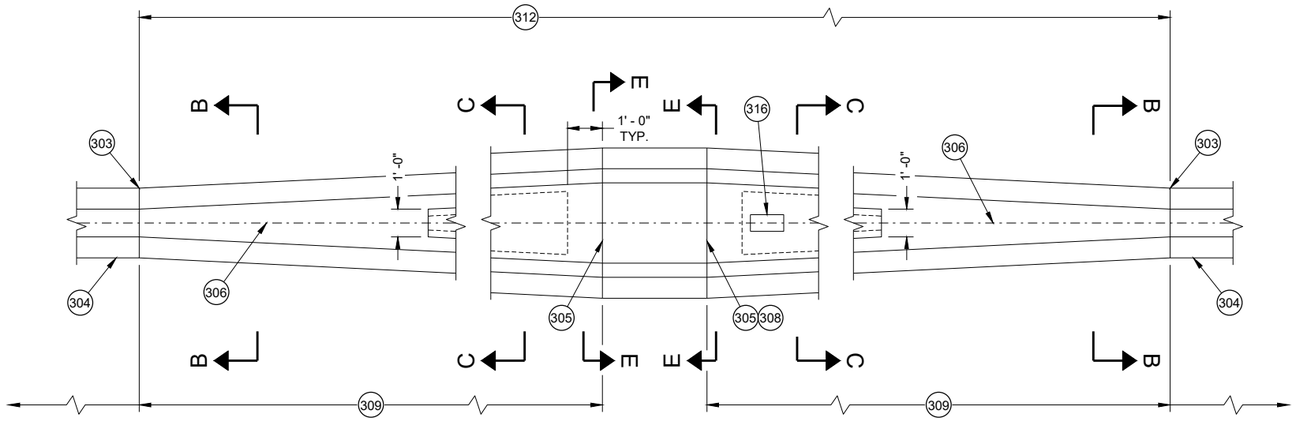
SECTION C - C



SECTION D - D



SECTION E - E



SMALL FIXED OBJECTS PROTECTION
(TYPE S32, TYPE S36, TYPE S42, TYPE S56)

GENERAL NOTES

(300) INSTALL 1 INCH DIAMETER DRAIN PIPE EVERY 20 FEET OF CROSS SECTION B -B. MINIMUM ONE DRAIN CAVITY.

(301) BETWEEN CONCRETE BARRIER WALLS FILL WITH FOUNDATION BACKFILL.

(302) LEVEL THE TOP OF CONCRETE BARRIER CAP ACROSS TOP OF BARRIER. ADJUST HEIGHT OF CONCRETE BARRIER WALL ON LOW SIDE OF OFFSET OR SUPERELEVATED ROADWAYS TO PROVIDE LEVEL GRADE ACROSS TOP OF CONCRETE CAP.

(303) USE COLD JOINTS BETWEEN FIXED OBJECT PROTECTION AND CONCRETE BARRIER ANCHOR.

(304) INSTALL END ANCHOR SINGLE SLOPE CONCRETE BARRIER.

(305) SEE COLD JOINT DETAIL

(306) CENTERLINE OF CONCRETE BARRIER.

(307) INSTALL 4" EXPANDED POLYSTYRENE BETWEEN COLUMN AND CONCRETE BARRIER.

(308) INSTALL 1" EXPANDED POLYSTYRENE BETWEEN PEDESTAL AND CONCRETE BARRIER.

(309) 20:1 MIN. TRANSITION.

(310) COLUMN

(311) PEDESTAL

(312) LIMITS OF PAYMENT FOR LARGE FIXED OBJECT PROTECTION (SEE PLAN)

(313) NO. 4 BARS SPACED 12" CENTER TO CENTER (TYP.)

(314) USE NO. 3 BAR SPACED 12 INCHES CENTER TO CENTER (PLACED IN EACH DIRECTION) OR EQUIVALENT WIRE MESH.

(315) SEE TABLE "C" FOR BAR INFORMATION

(316) ELECTRICAL PULL BOX FOR SIGN FLUSH WITH TOP OF CONCRETE BARRIER.

(317) VARIABLE SLOPE

CONCRETE BARRIER SINGLE SLOPE (CBSS)

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SDD 14B32 - 10c

GENERAL NOTES

(400) END ANCHOR SINGLE SLOPE CONCRETE BARRIER.

(401) PARAPET, SIGN BRIDGE BASE, LIGHT POLE BASE OR OTHER OBJECT SINGLE SLOPE CONCRETE BARRIER CANNOT TIE INTO.

(402) JOINT SEAL CONFORMING TO STANDARD SPECIFICATION 415.2.6

(403) EXPANSION JOINT MATERIAL.

(404) INLET (SEE PLAN)

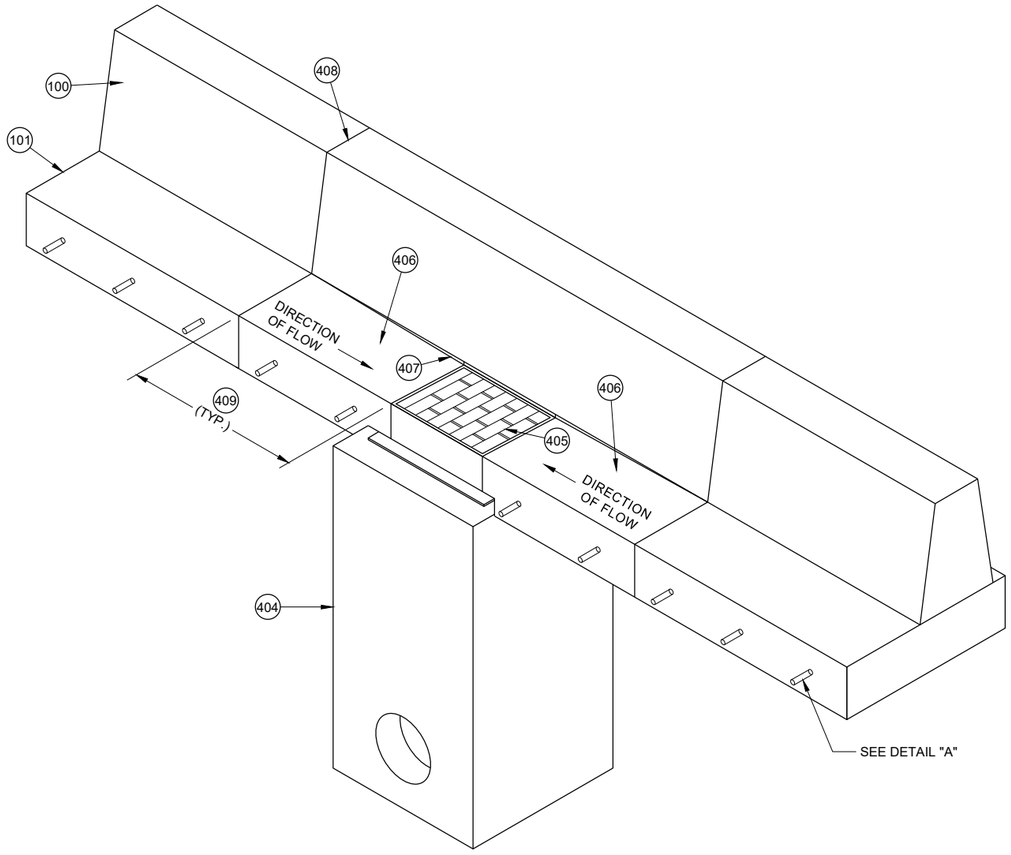
(405) INLET COVER BW (SEE PLAN)

(406) WARP PAN TO MATCH INLET COVER.

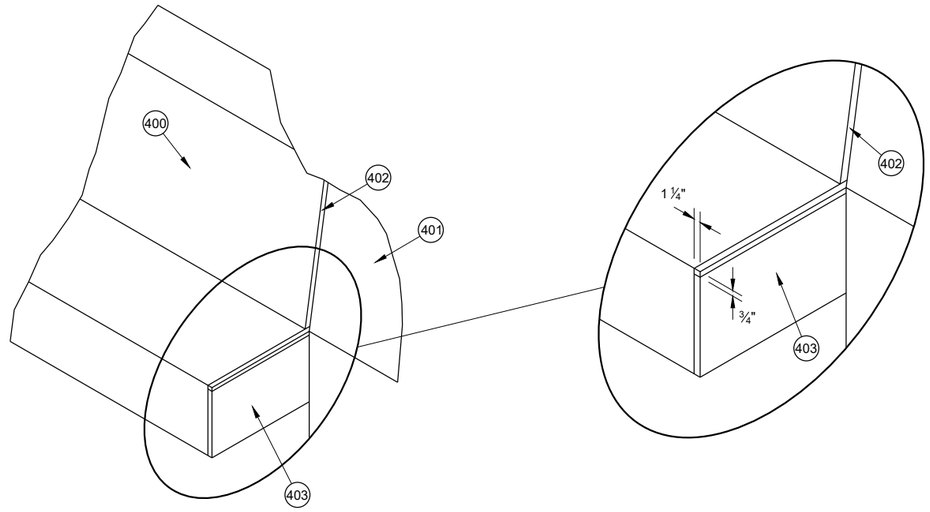
(407) EXTEND BARRIER SLOPE TO INLET. SEE PLAN FOR THE LENGTH OF EXTENSION.

(408) CONTRACTION JOINT.

(409) 3' (TYP.)



DRAINAGE DETAIL



EXPANSION JOINT DETAIL

CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
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SDD 14B32 - 10d

SDD 14B32 - 10d

GENERAL NOTES

USE COLD JOINT TO CONNECT MULTIPLE HEIGHT TRANSITIONS.

(500) SEE TABLE "A" FOR DIMENSIONS

(501) SEE TABLE "D"

(502) MULTIPLE HEIGHT TRANSITION MAY BE USED IN SEQUENCE TO GET APPROPRIATE HEIGHT.

(503) COLD JOINT

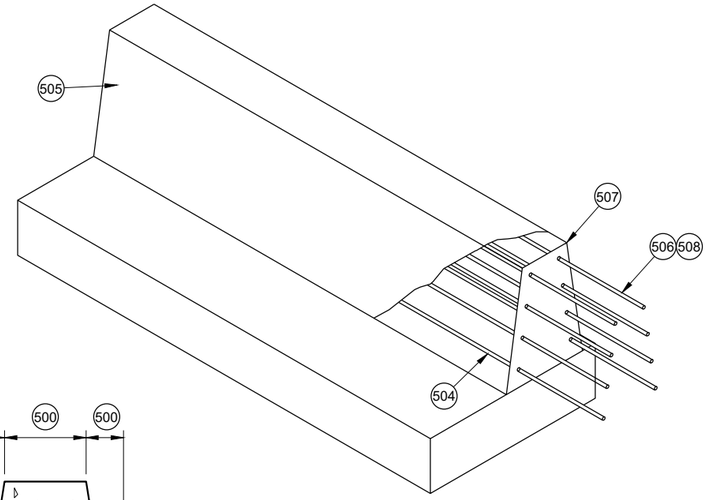
(504) BARRIER REBAR (SEE OTHER DETAILS FOR BAR SIZE, QUANTITY AND LOCATION).

(505) SINGLE SLOPE BARRIER SHOWN. SIMILAR DETAIL CAN BE USED FOR COLD JOINT IN END ANCHORS AND TRANSITIONS.

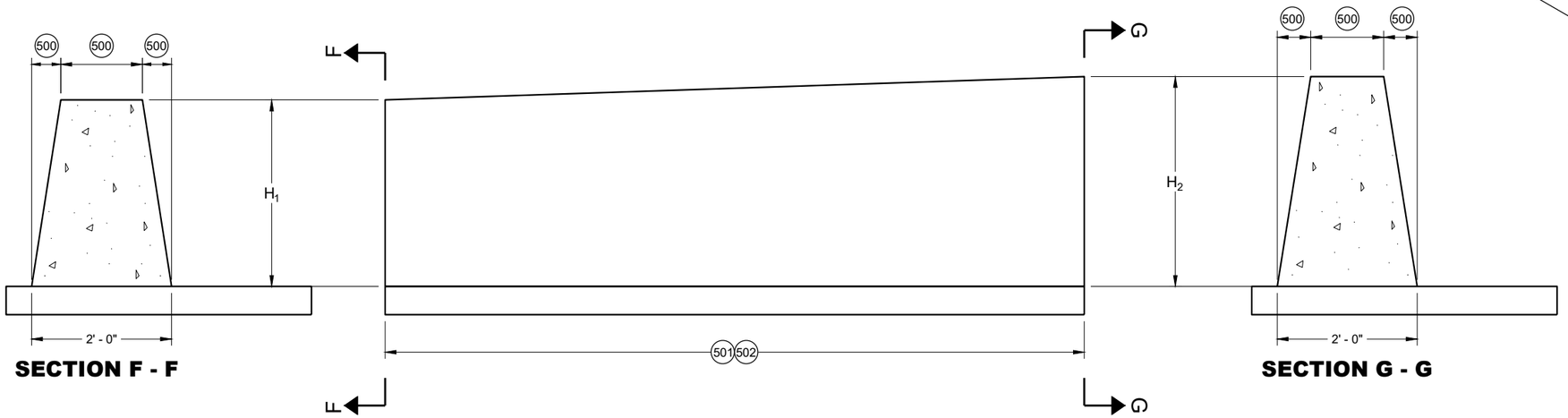
(506) NO. 5 REBAR FOR SPLICE. 3' OF SPLICE REBAR IS LAPPED AND TIED TO BARRIER REBAR. EXTEND 3' OF SPLICE REBAR BEYOND END OF POUR. ALL BARS ARE FIRMLY TIED OR CONNECTED. EVERY REBAR IN THE BARRIER SECTION REQUIRES A SPLICE BAR.

(507) END OF POUR.

(508) LAP AND TIE 3' OF NEXT POUR'S REBAR TO SPLICE REBAR.



COLD JOINT DETAIL



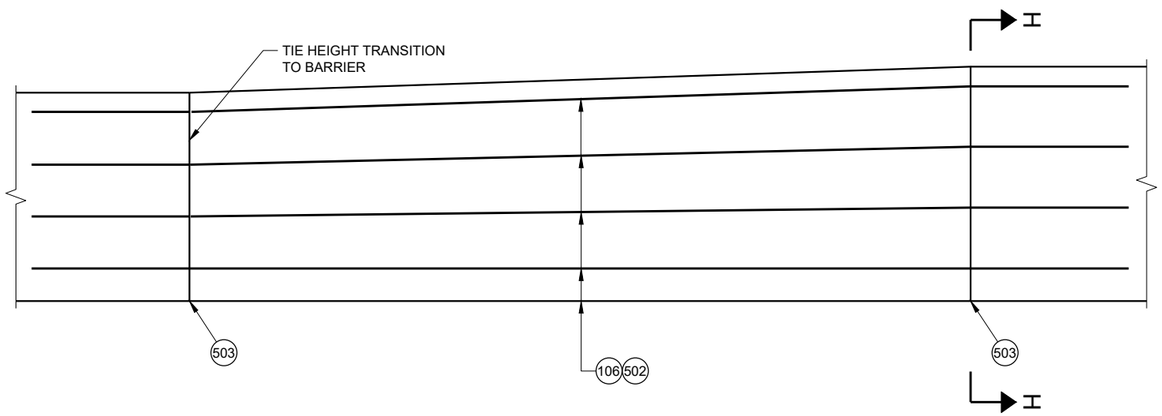
SECTION F - F

SECTION G - G

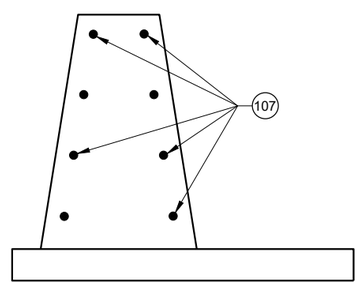
DOUBLE COLD JOINT HEIGHT TRANSITION

TABLE "D"

H_1	H_2	L	NUMBER OF NO. 5 BARS
32"	36"	10' - 0"	8
36"	42"	10' - 6"	10
42"	56"	24' - 6"	11



STEEL REINFORCEMENT DETAIL



SECTION H - H

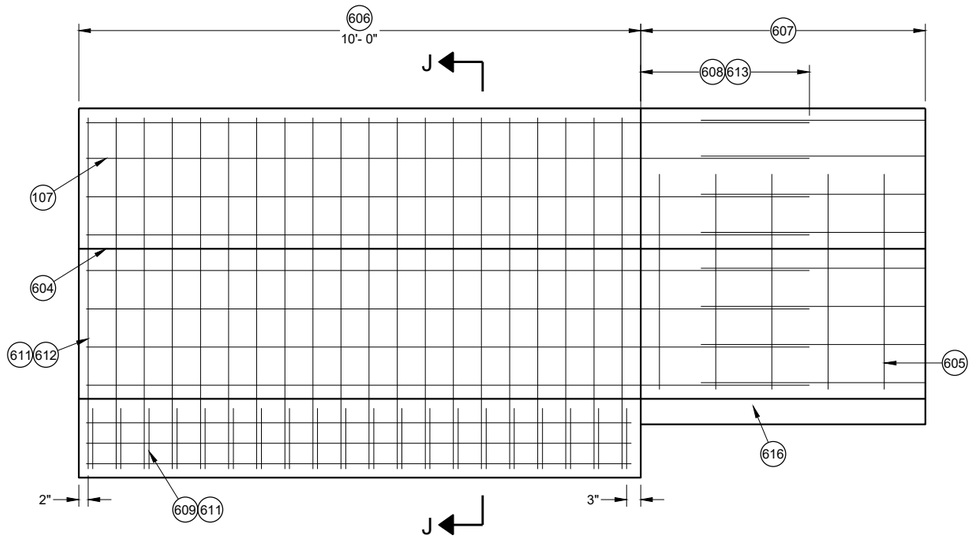
CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
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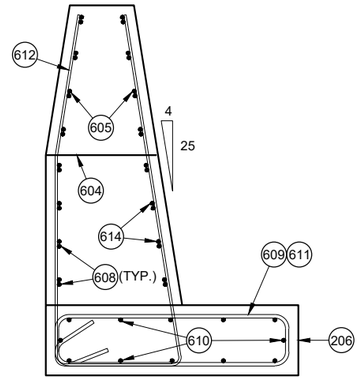
535

SDD 14B32 - 10e

SDD 14B32 - 10e



END ANCHOR MEDIAN BARRIER AND RETAINING WALL



SECTION J - J
END ANCHOR AND MEDIAN WALL END ANCHOR REINFORCEMENT DETAIL

GENERAL NOTES

600 UPPER CONCRETE BARRIER

601 LOWER CONCRETE BARRIER

602 MAX HEIGHT 36".

603 VERTICAL OFFSET FROM TOP ROADWAY SURFACES

604 OPTIONAL CONSTRUCTION JOINT WHEN HEIGHT IS GREATER THAN 1 ½".

605 NO. 4 BARRIER LOOP BARS ARE NOT REQUIRED FOR ROADWAY OFFSETS ARE LESS THAN 1'- 0", EXCEPT WHEN USED IN ANCHORS. BARRIER LOOP BARS ARE SPACED 12" CENTER TO CENTER OUTSIDE OF MEDIAN BARRIER AND RETAINING WALL END ANCHOR.

606 SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL ANCHOR

607 SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL (SEE OTHER DETAILS)

608 NO. 5 REBAR 3' OF LAP OF LONGITUDINAL STEEL.

609 NO. 6 REBAR END ANCHOR FOOTING LOOP

610 TWELVE (12) NO. 5 BARS EVENLY SPACED.

611 SS ANCHOR END LOOP AND END ANCHOR FOOTING LOOP ARE SPACED 6" CENTER TO CENTER.

612 END ANCHOR LOOP BAR IS NO. 5 REBAR.

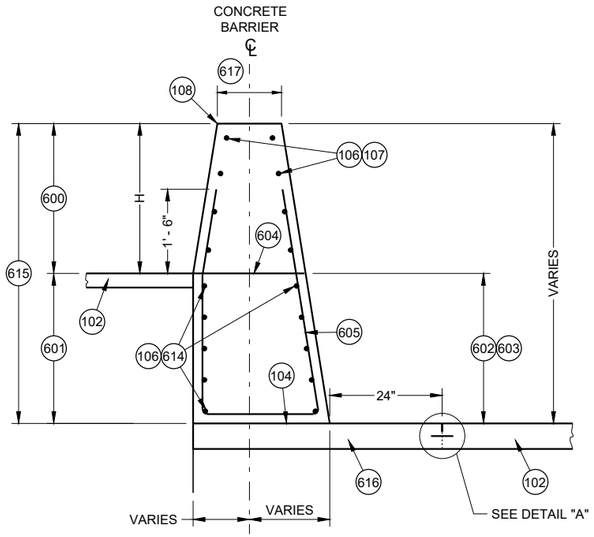
613 SEE COLD JOINT DETAIL.

614 SEE TABLE "E" FOR REQUIRED REBAR

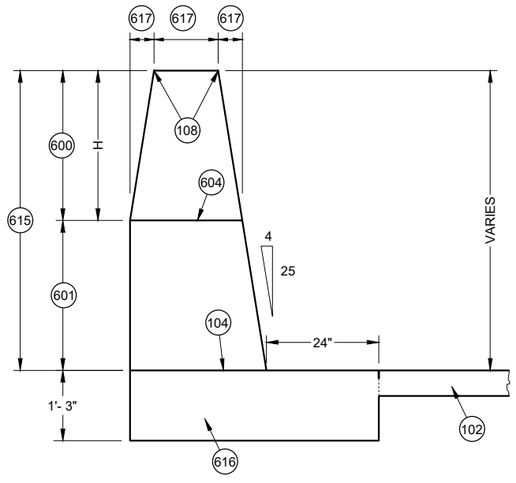
615 TOTAL BARRIER HEIGHT (SEE PLAN FOR HEIGHT)

616 FOR SOME LOCATIONS, NO PAN IS NEEDED. SEE OTHER DETAILS.

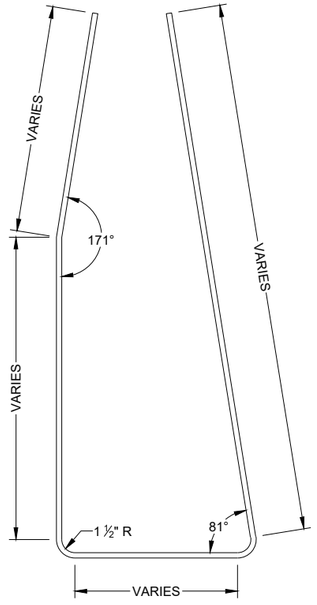
617 SEE TABLE "A" FOR DIMENSIONS



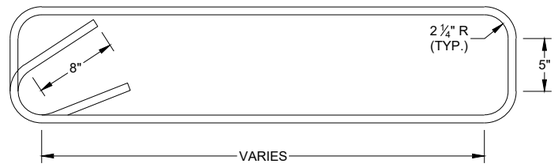
SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)
(BETWEEN ADJACENT ROADWAYS)



SECTION J - J
MEDIAN BARRIER AND RETAINING WALL END ANCHOR DIMENSIONS



LOOP BAR BENDING DETAIL



END ANCHOR STIRRUP BAR BENDING DETAIL

TABLE "E"

HEIGHT BETWEEN ROADWAY	QUANTITY OF NO. 6 BARS
0 TO 3"	0
GREATER THAN 3" TO 8"	2
GREATER THAN 8" TO 12"	4
GREATER THAN 12" TO 36"	8

CONCRETE BARRIER SINGLE SLOPE (CBSS)

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SDD 14B32 - 10f

6

SDD 14B32 - 10f

GENERAL NOTES

700 END ANCHOR SINGLE SLOPE CONCRETE BARRIER

701 SEE EXPANSION JOINT DETAIL

702 END ANCHOR SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL

703 PAY LIMIT FOR SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL

704 SEE COLD JOINT DETAIL

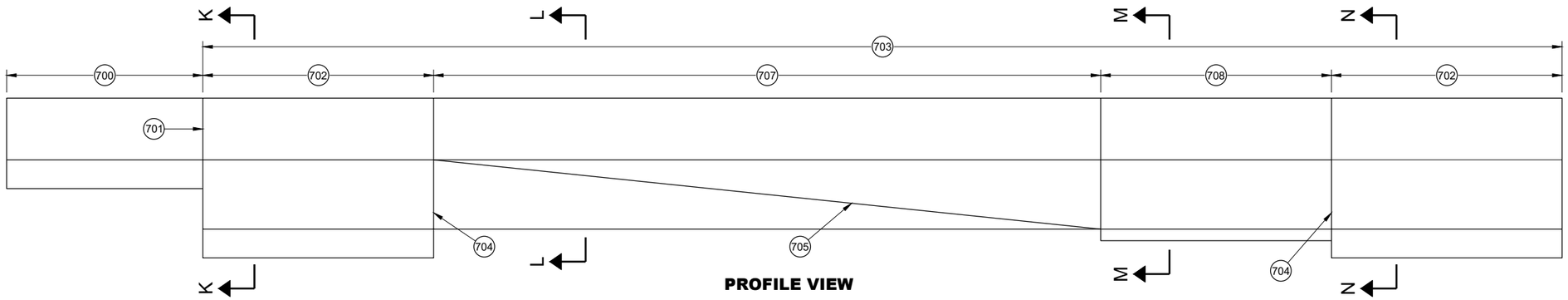
705 LOW SIDE SHOULDER

706 HIGH SIDE SHOULDER

707 SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL INSTALLED WITHOUT A PAN.

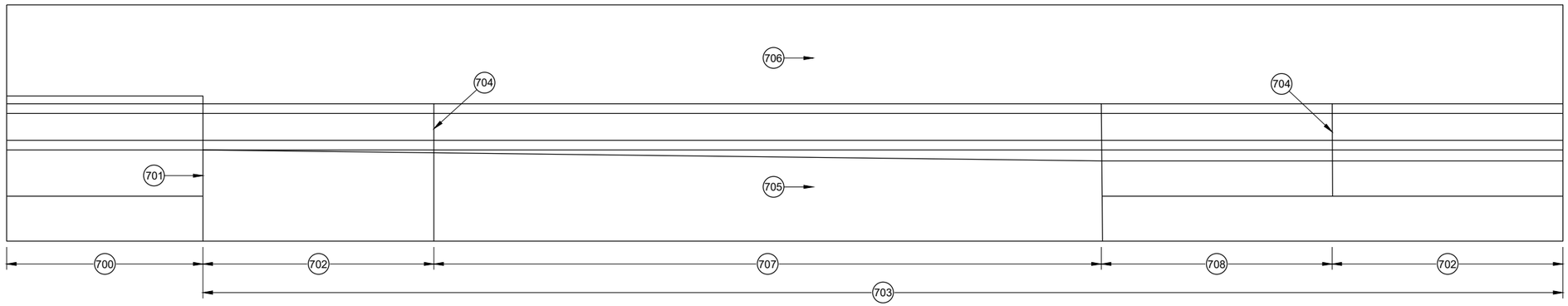
708 SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL INSTALLED WITH A PAN.

709 EXCAVATION AND COMPACTION



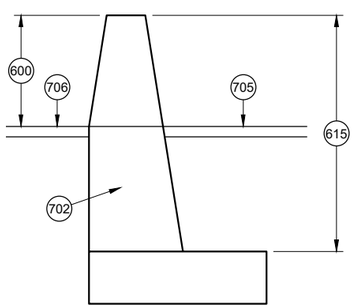
PROFILE VIEW

SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL

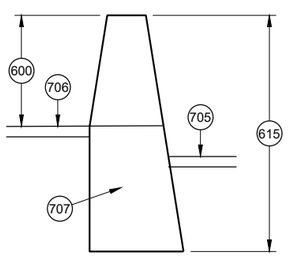


PLAN VIEW

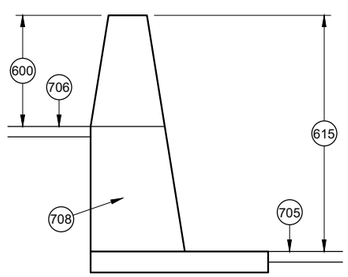
SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL



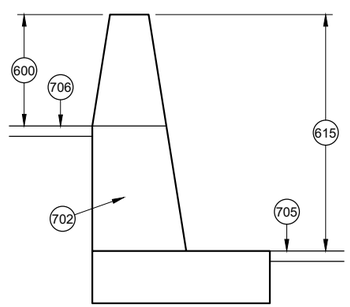
SECTION K - K



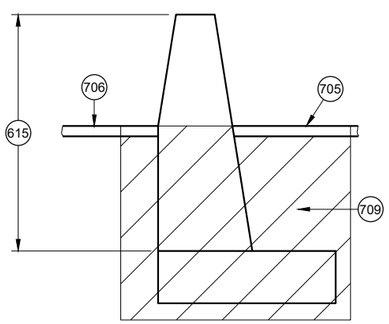
SECTION L - L



SECTION M - M



SECTION N - N

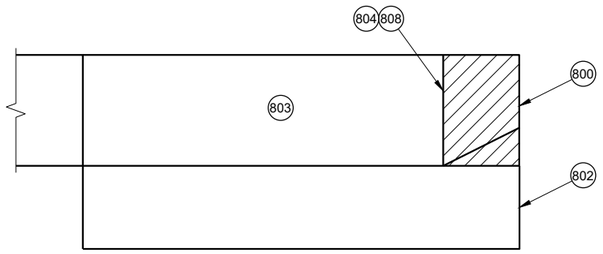


CONCRETE BARRIER
SINGLE SLOPE (CBSS)

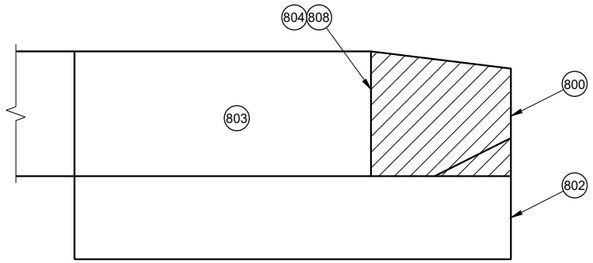
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

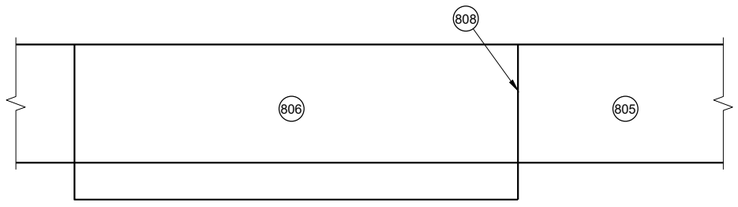
SDD 14B32 - 10g



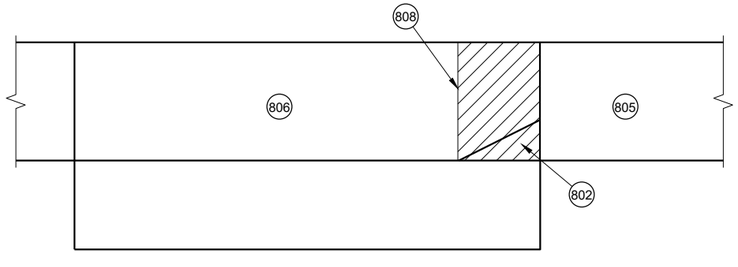
REMOVAL AREA OF
32" CONCRETE THRIE BEAM ANCHORAGE



REMOVAL AREA OF CONCRETE THRIE BEAM ANCHORAGE WITH HEIGHT GREATER THAN 32"



CONCRETE BARRIER EXTENSION NEAR END ANCHORAGE



CONCRETE BARRIER EXTENSION NEAR THRIE BEAM TERMINAL

GENERAL NOTES

END ANCHORAGE MAY OR MAY NOT BE PRESENT ON EXISTING BARRIER.

REMOVE THRIE BEAM ANCHORAGE AS SHOWN.

(800) AREA OF BARRIER REMOVAL AN NEW CONCRETE AND STEEL IS INSTALLED.

(801) MINIMUM LENGTH OF REMOVAL IS 15'

(802) FOOTING BELOW GROUND MAY REMAIN IN PLACE.

(803) CONCRETE BARRIER SINGLE SLOPE THRIE BEAM ANCHOR TO REMAIN.

(804) SAW CUT

(805) NEW SINGLE SLOPE CONCRETE BARRIER.

(806) CONCRETE BARRIE SINGLE SLOPE TO REMAIN.

(807) SINGLE SLOPE CONCRETE BARRIER OR CONCRETE BARRIER SINGLE SLOPE THRIE BEAM ANCHOR TO REMAIN.

(808) SEE CONNECTION DETAIL.

(809) NO. 5 CONTINUOUS BAR.

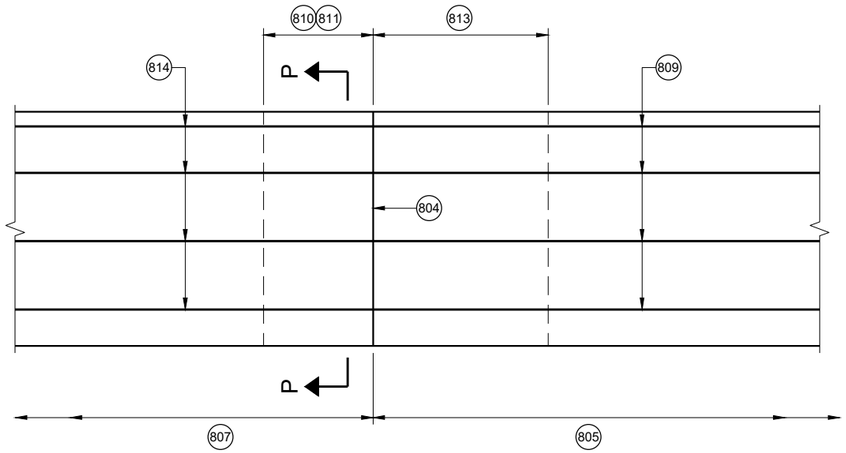
(810) 3' MIN. DRILL HOLES. USES NO. 5 ADHESIVE ANCHORS.

(811) THE NUMBER OF DRILL HOLES IS EQUAL TO THE NUMBER OF HORIZONTAL REBAR IN BARRIER. DRILL HOLES ARE TO BE A MINIMUM OF 4" FROM EDGE OF CONCRETE.

(812) EXISTING REBAR IN EXISTING BARRIER OR END ANCHOR.

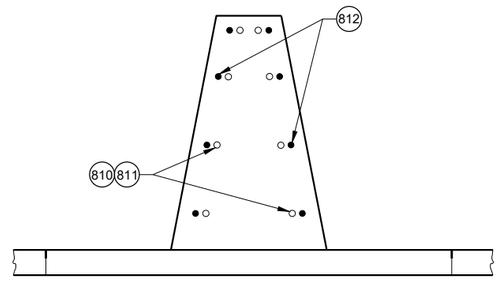
(813) 3' BAR OVERLAP

(814) EXISTING REINFORCEMENT

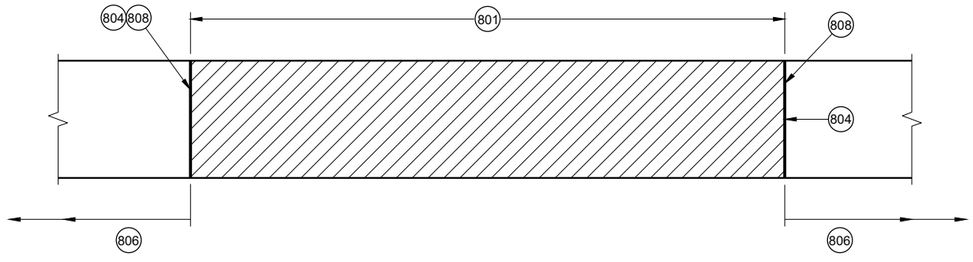


CONNECTION DETAIL

SINGLE SLOPE CONCRETE BARRIER TO NEW SINGLE SLOPE CONCRETE BARRIER



SECTION P - P



BARRIER REMOVAL AND REPLACEMENT

RETROFIT OR REPAIR SINGLE SLOPE CONCRETE BARRIER

CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

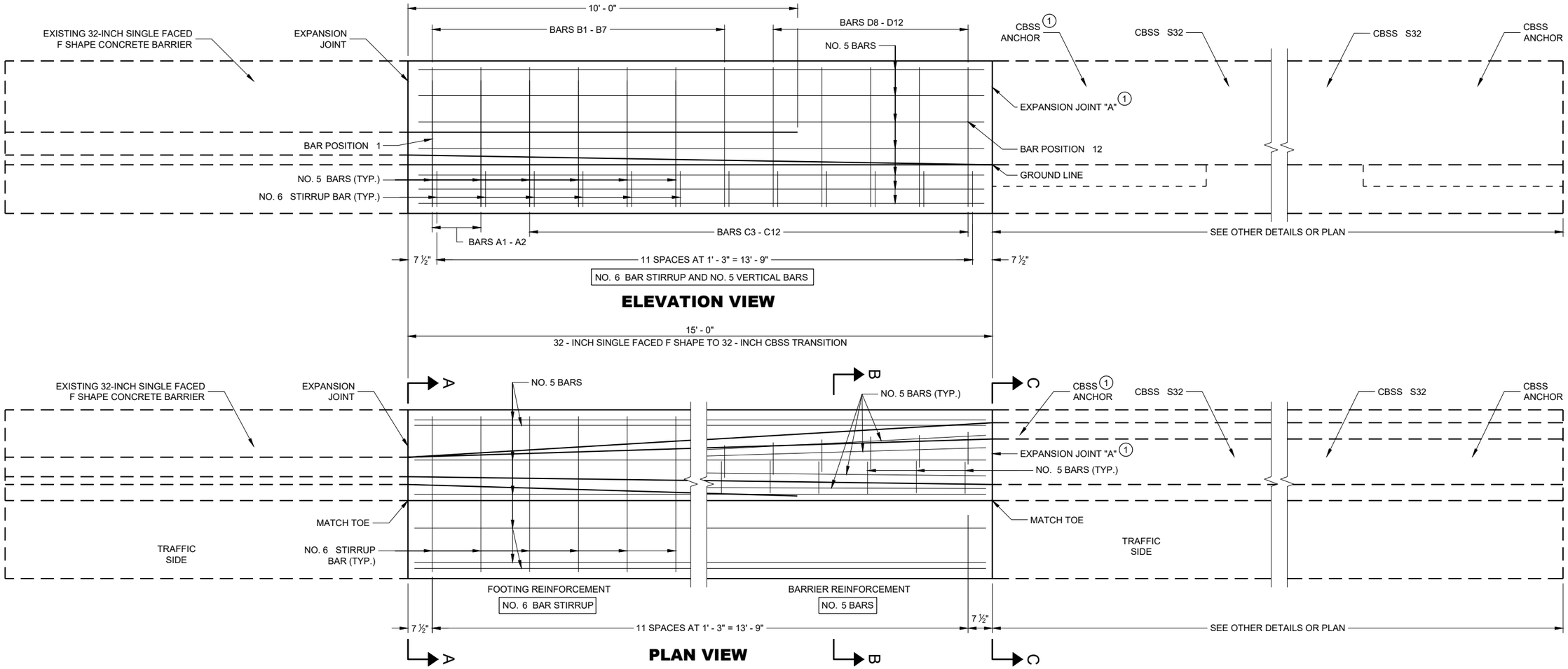
May 2022
DATE

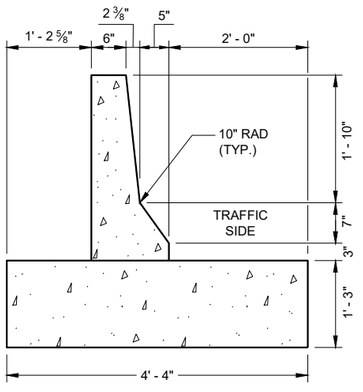
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

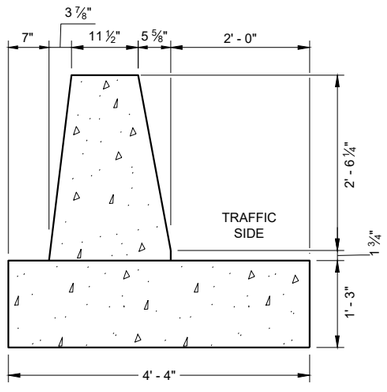
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SDD 14B32 - 10h

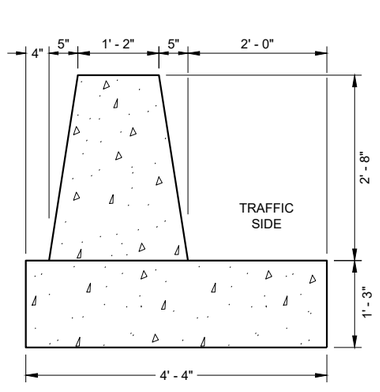




SECTION A - A



SECTION B - B



SECTION C - C

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS OTHERWISE NOTED.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS SECTION 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD JOINT IS USED, ANCHOR IS NOT REQUIRED.

32 - INCH SINGLE FACED F SHAPE CONCRETE BARRER TO 32 - INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

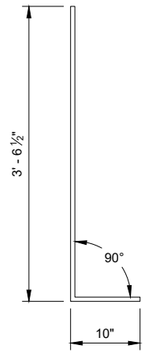
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SDD 14B36 - 02a

6

SDD 14B36 - 02a

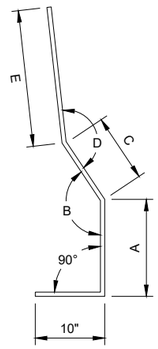
"A" BAR POSITIONS 1 - 2



"A" BAR BENDING DETAIL

"B" BAR CHART BAR POSITIONS 1 - 7

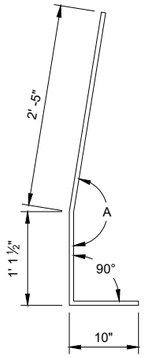
BAR	A	B	C	D	E
B1	1' - 2"	148°	10"	154°	1' - 7 ¾"
B2	1' - 2"	154°	9 ¾"	162°	1' - 7 ¾"
B3	1' - 2"	154°	9 ¾"	163°	1' - 7 ½"
B4	1' - 2"	157°	9 ¾"	165°	1' - 7 ½"
B5	1' -1 ½"	161°	10"	169°	1' - 7 ½"
B6	1' -1 ½"	163°	10"	172°	1' - 7 ½"
B7	1' -1 ½"	166°	10"	175°	1' - 7 ½"



"B" BAR BENDING DETAIL

"C" BAR CHART BAR POSITIONS 3 - 12

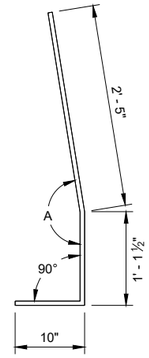
BAR	A
C3	177°
C4	177°
C5	176°
C6	176°
C7	174°
C8	174°
C9	173°
C10	173°
C11	173°
C12	172°



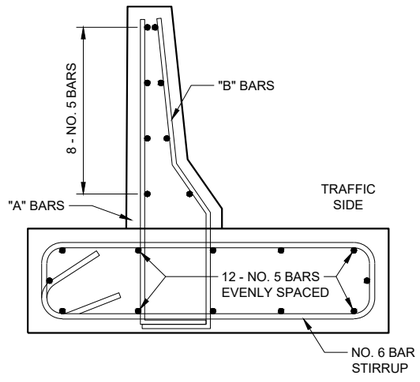
"C" BAR BENDING DETAIL

"D" BAR CHART BAR POSITIONS 8 - 12

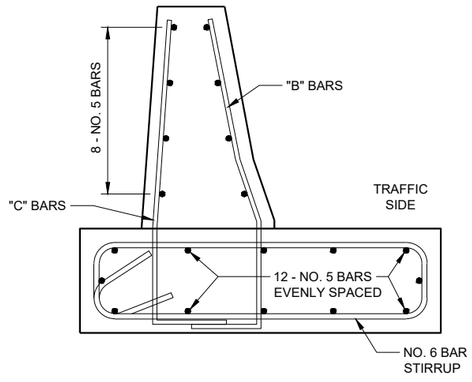
BAR	A
D8	170°
D9	170°
D10	170°
D11	171°
D12	171°



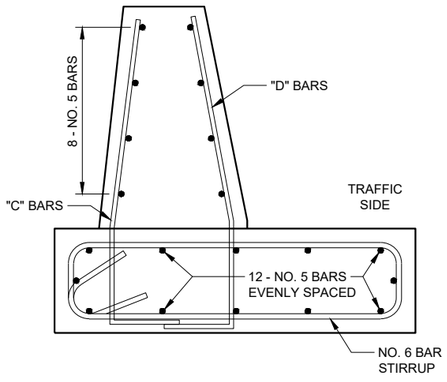
"D" BAR BENDING DETAIL



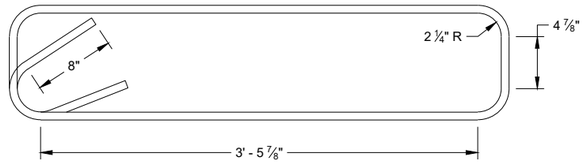
BAR DETAIL BAR POSITIONS 1 - 2



BAR DETAIL BAR POSITIONS 3 - 7



BAR DETAIL BAR POSITIONS 8 - 12



STIRRUP BAR BENDING DETAIL

32 - INCH SINGLE FACED F SHAPE CONCRETE BARRIER TO 32 - INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

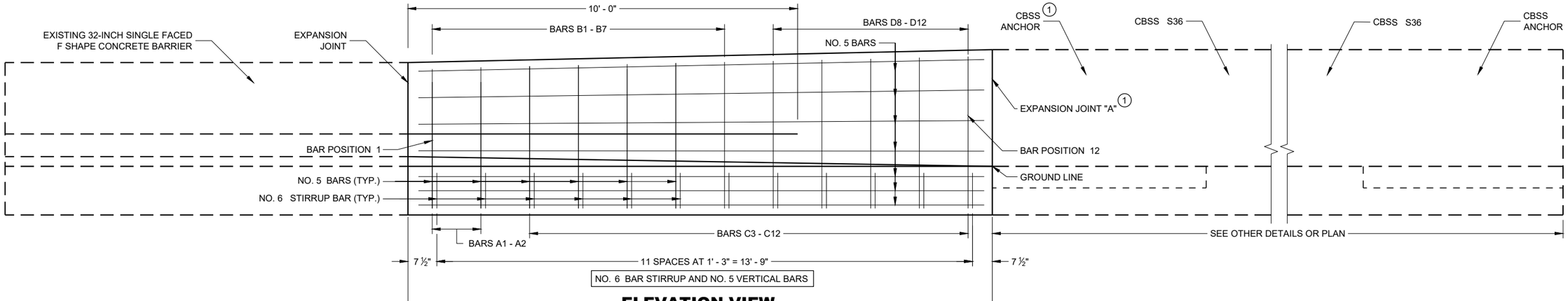
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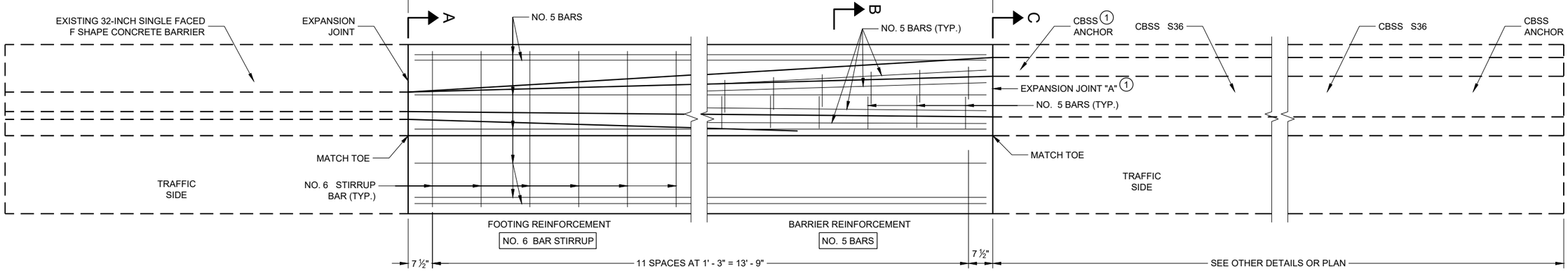
SDD 14B36 - 02b

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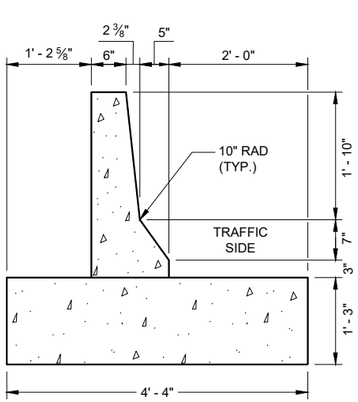
SDD 14B36 - 02b



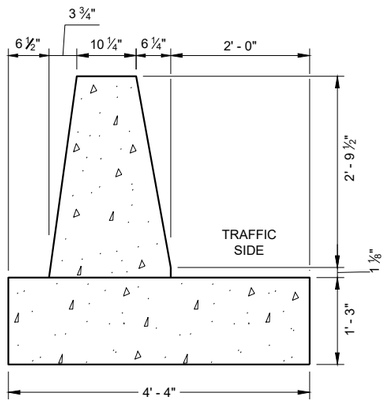
ELEVATION VIEW



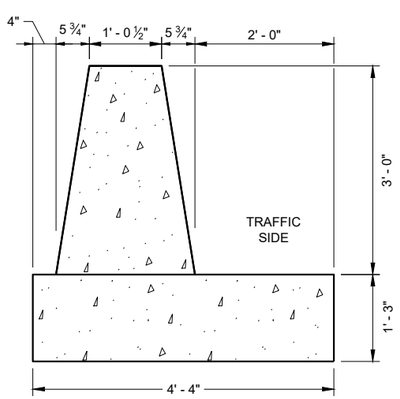
PLAN VIEW



SECTION A - A



SECTION B - B



SECTION C - C

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

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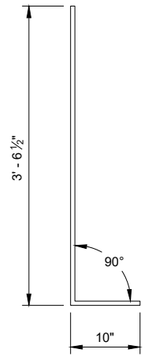
32 - INCH SINGLE FACED F SHAPE CONCRETE BARRER TO 36 - INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B36 - 02c

SDD 14B36 - 02c

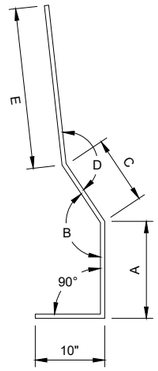
"A" BAR POSITIONS 1 - 2



"A" BAR
BENDING DETAIL

"B" BAR CHART
BAR POSITIONS
1 - 7

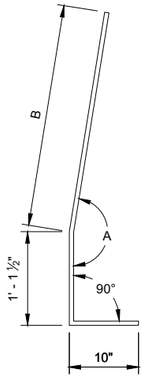
BAR	A	B	C	D	E
B1	1' - 2"	148°	10"	154°	1' - 8 ¼"
B2	1' - 2"	154°	9 ¾"	162°	1' - 8 ½"
B3	1' - 2"	154°	9 ¾"	163°	1' - 8 ¾"
B4	1' - 2"	157°	9 ¾"	165°	1' - 9"
B5	1' -1 ½"	161°	10"	169°	1' - 9 ¼"
B6	1' -1 ½"	163°	10"	172°	1' - 9 ½"
B7	1' -1 ½"	166°	10"	175°	1' - 10"



"B" BAR
BENDING DETAIL

"C" BAR CHART
BAR POSITIONS
3 - 12

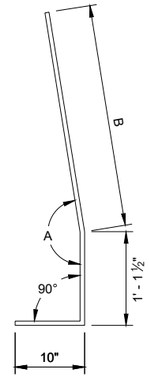
BAR	A	B
C3	177°	2' - 6"
C4	177°	2' - 6 ½"
C5	176°	2' - 6 ¾"
C6	176°	2' - 7"
C7	174°	2' - 7 ½"
C8	174°	2' - 7 ¾"
C9	173°	2' - 8 ½"
C10	173°	2' - 8 ½"
C11	173°	2' - 9"
C12	172°	2' - 9 ½"



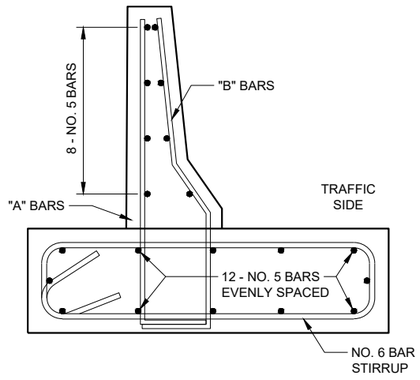
"C" BAR
BENDING DETAIL

"D" BAR CHART
BAR POSITIONS
8 - 12

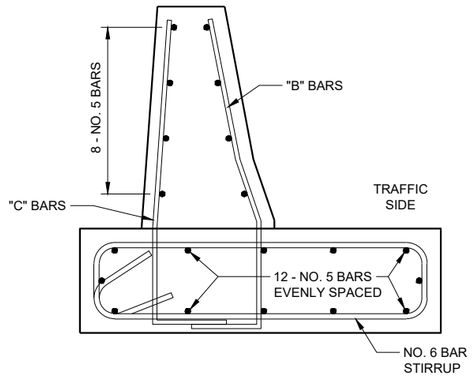
BAR	A	B
D8	170°	2' - 7 ¾"
D9	170°	2' - 8 ½"
D10	170°	2' - 8 ½"
D11	171°	2' - 9"
D12	171°	2' - 9 ½"



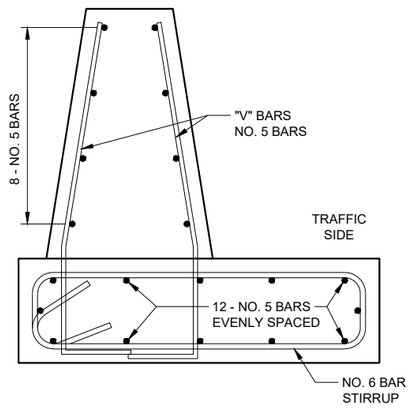
"D" BAR
BENDING DETAIL



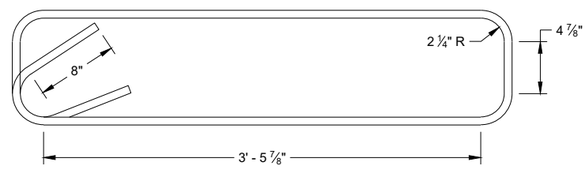
BAR DETAIL
BAR POSITIONS 1 - 2



BAR DETAIL
BAR POSITIONS 3 - 7



BAR DETAIL
BAR POSITIONS 8 - 12



STIRRUP BAR
BENDING DETAIL

32 - INCH SINGLE FACED F SHAPE CONCRETE BARRIER TO 36 - INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

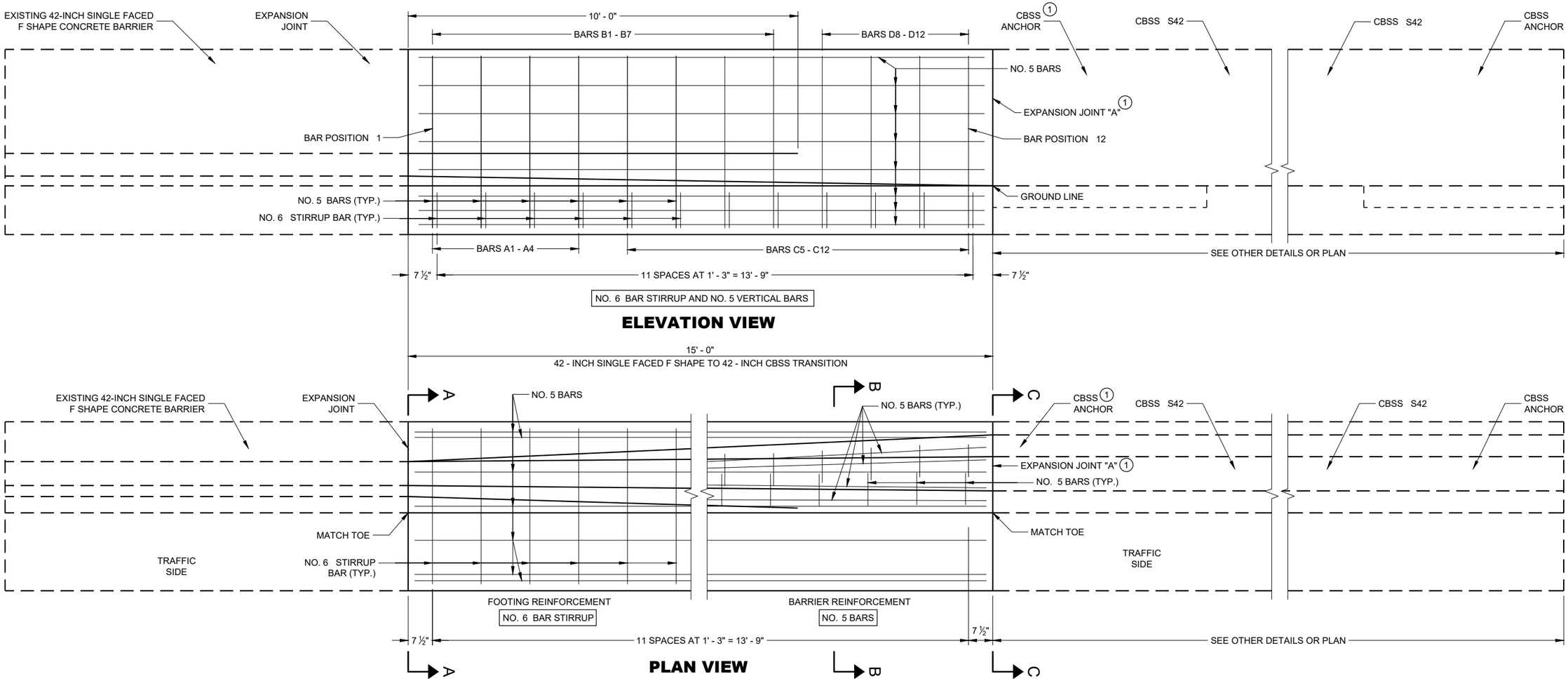
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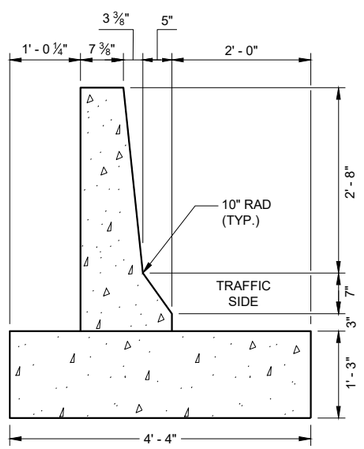
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SDD 14B36 - 02d

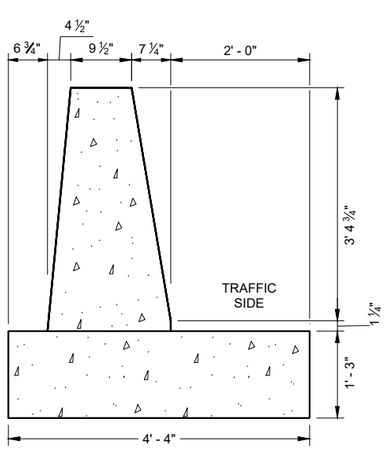
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SDD 14B36 - 02d

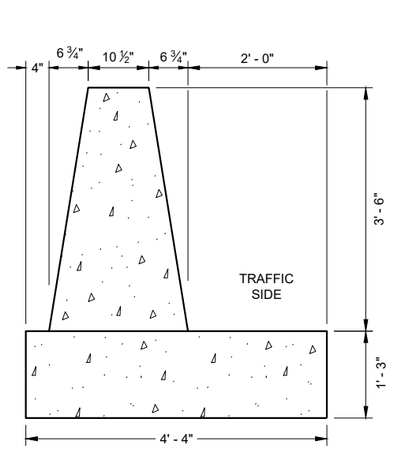




SECTION A - A



SECTION B - B



SECTION C - C

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS OTHERWISE NOTED.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS SECTION 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD JOINT IS USED, ANCHOR IS NOT REQUIRED.

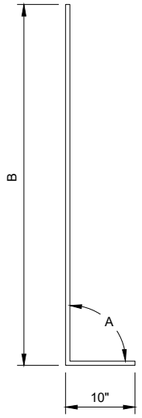
42 - INCH SINGLE FACED F SHAPE CONCRETE BARRER TO 42 - INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

6

SDD 14B36 - 02e

"A" BAR CHART
BAR POSITIONS
1 - 4

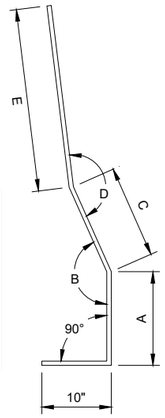
BAR	A	B
A1	90°	4' - 4 ¾"
A2	89°	4' - 5"
A3	88°	4' - 5"
A4	88°	4' - 5"



"A" BAR
BENDING DETAIL

"B" BAR CHART
BAR POSITIONS
1 - 7

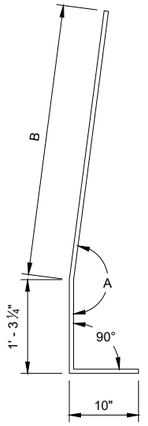
BAR	A	B	C	D	E
B1	1' - 3"	148°	8 ½"	154°	2' - 6 ¾"
B2	1' - 3"	149°	8 ½"	156°	2' - 6 ½"
B3	1' - 3"	152°	8 ½"	159°	2' - 6 ½"
B4	1' - 2 ½"	157°	8 ½"	165°	2' - 6 ½"
B5	1' - 2 ½"	160°	8 ½"	168°	2' - 6 ½"
B6	1' - 2 ½"	163°	8 ½"	172°	2' - 6 ½"
B7	1' - 2"	166°	8 ½"	176°	2' - 7"



"B" BAR
BENDING DETAIL

"C" BAR CHART
BAR POSITIONS
5 - 12

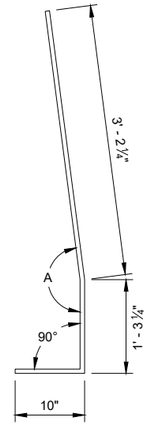
BAR	A	B
C5	177°	3' - 1 ¾"
C6	176°	3' - 1 ¾"
C7	175°	3' - 1 ¾"
C8	174°	3' - 2"
C9	174°	3' - 2"
C10	173°	3' - 2"
C11	172°	3' - 2"
C12	171°	3' - 2"



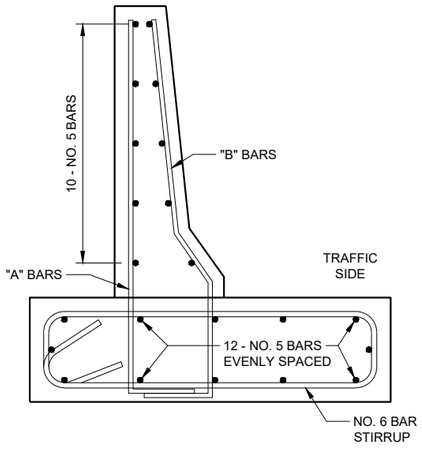
"C" BAR
BENDING DETAIL

"D" BAR CHART
BAR POSITIONS
8 - 12

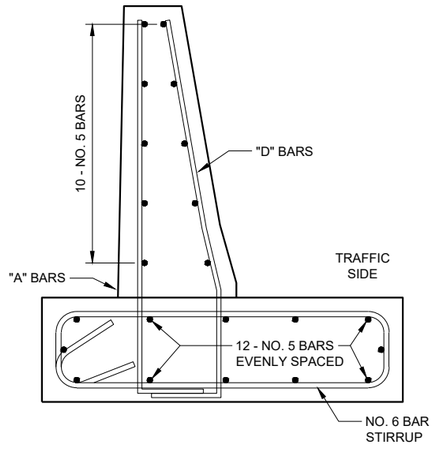
BAR	A
D8	170°
D9	170°
D10	170°
D11	171°
D12	171°



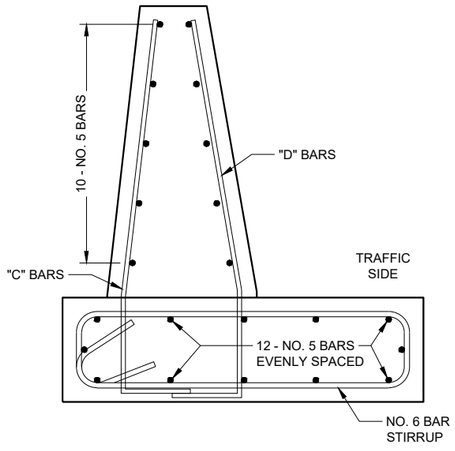
"D" BAR
BENDING DETAIL



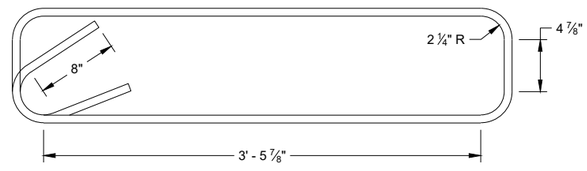
BAR DETAIL
BAR POSITIONS 1 - 4



BAR DETAIL
BAR POSITION 5 - 7



BAR DETAIL
BAR POSITIONS 8 - 12



STIRRUP BAR
BENDING DETAIL

42 - INCH SINGLE FACED F SHAPE CONCRETE BARRIER TO 42 - INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

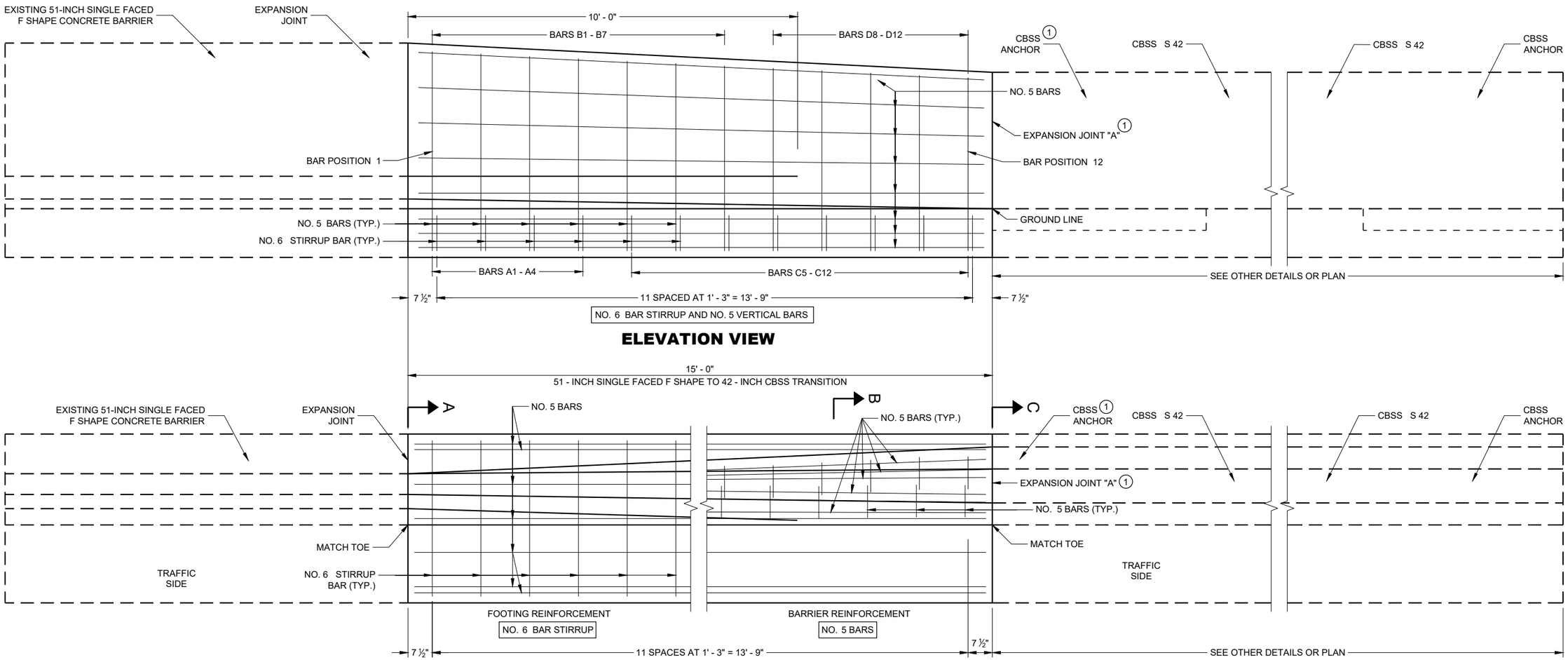
FHWA

6

SDD 14B36 - 02f

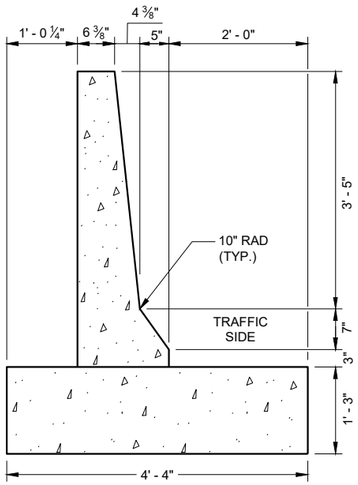
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SDD 14B36 - 02f

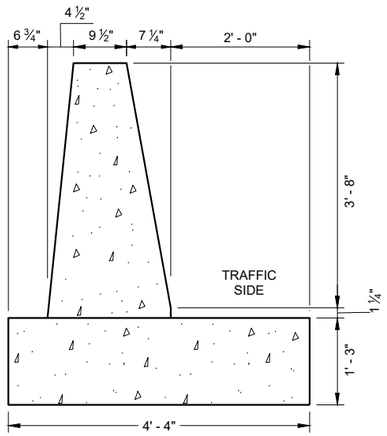


ELEVATION VIEW

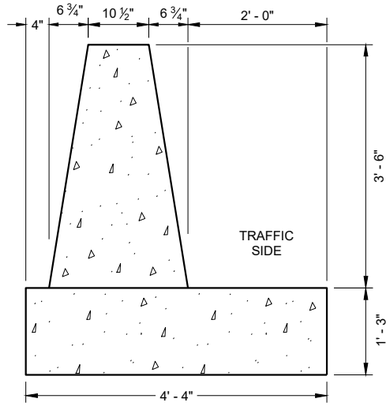
PLAN VIEW



SECTION A - A



SECTION B - B



SECTION C - C

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS OTHERWISE NOTED.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS SECTION 501.

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51 - INCH SINGLE FACED F SHAPE CONCRETE BARRER TO 42 - INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

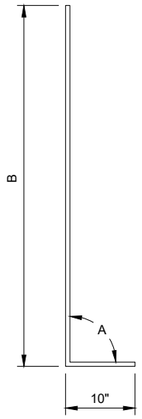
SDD 14B36 - 02g

6

SDD 14B36 - 02g

"A" BAR CHART
BAR POSITIONS
1 - 4

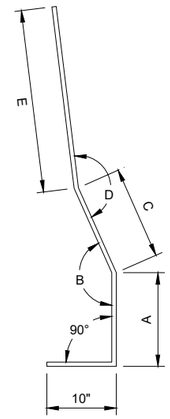
BAR	A	B
A1	90°	5' - 1 ¼"
A2	89°	5' - 0 ½"
A3	88°	4' - 11 ½"
A4	88°	4' - 11"



"A" BAR
BENDING DETAIL

"B" BAR CHART
BAR POSITIONS
1 - 7

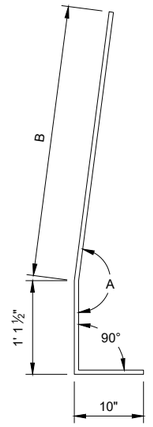
BAR	A	B	C	D	E
B1	1' - 3"	148°	8 ½"	154°	3' - 3 ¼"
B2	1' - 3"	149°	8 ½"	156°	3' - 2 ½"
B3	1' - 3"	152°	8 ½"	159°	3' - 1 ½"
B4	1' - 2 ½"	157°	8 ½"	165°	3' - 1"
B5	1' - 2 ½"	160°	8 ½"	168°	3' - 0 ¼"
B6	1' - 2 ½"	163°	8 ½"	172°	2' - 11 ½"
B7	1' - 2"	166°	8 ½"	175°	2' - 11"



"B" BAR
BENDING DETAIL

"C" BAR CHART
BAR POSITIONS
5 - 12

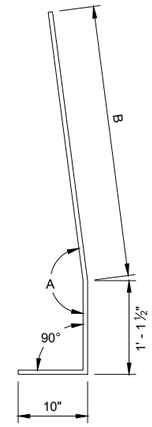
BAR	A	B
C5	177°	3' - 7 ¼"
C6	176°	3' - 6 ½"
C7	175°	3' - 5 ¾"
C8	175°	3' - 5"
C9	174°	3' - 4 ½"
C10	173°	3' - 3 ¾"
C11	172°	3' - 3"
C12	171°	3' - 2 ½"



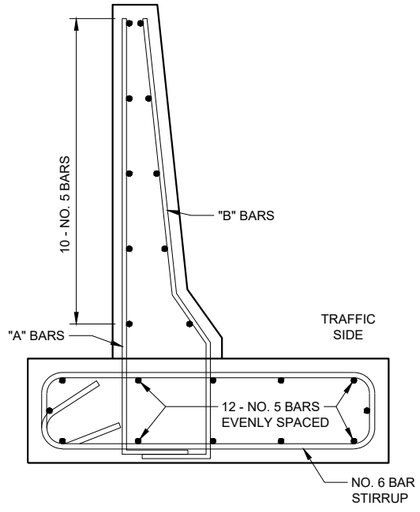
"C" BAR
BENDING DETAIL

"D" BAR CHART
BAR POSITIONS
8 - 12

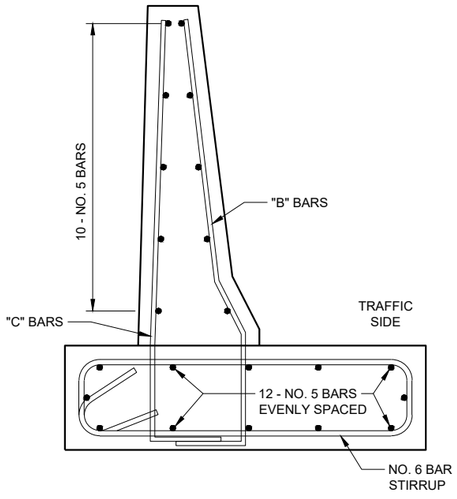
BAR	A	B
D8	170°	3' - 5 ½"
D9	170°	3' - 4 ¾"
D10	170°	3' - 4"
D11	171°	3' - 3 ¼"
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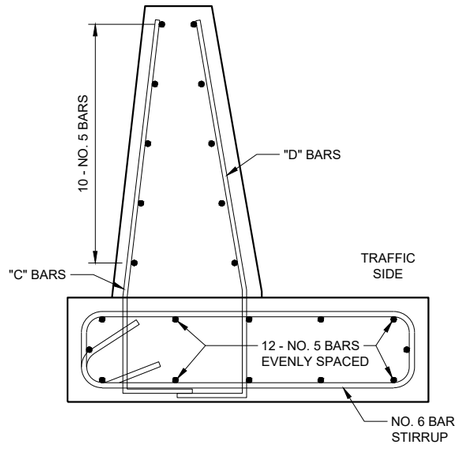
"D" BAR
BENDING DETAIL



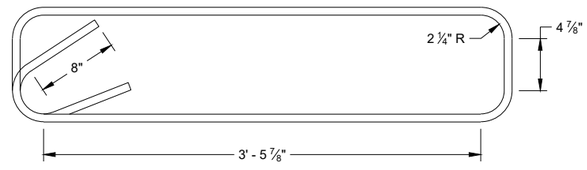
BAR DETAIL
BAR POSITIONS 1 - 2



BAR DETAIL
BAR POSITIONS 3 - 7



BAR DETAIL
BAR POSITIONS 8 - 12



STIRRUP BAR
BENDING DETAIL

51 - INCH SINGLE FACED F SHAPE CONCRETE BARRIER TO 42 - INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

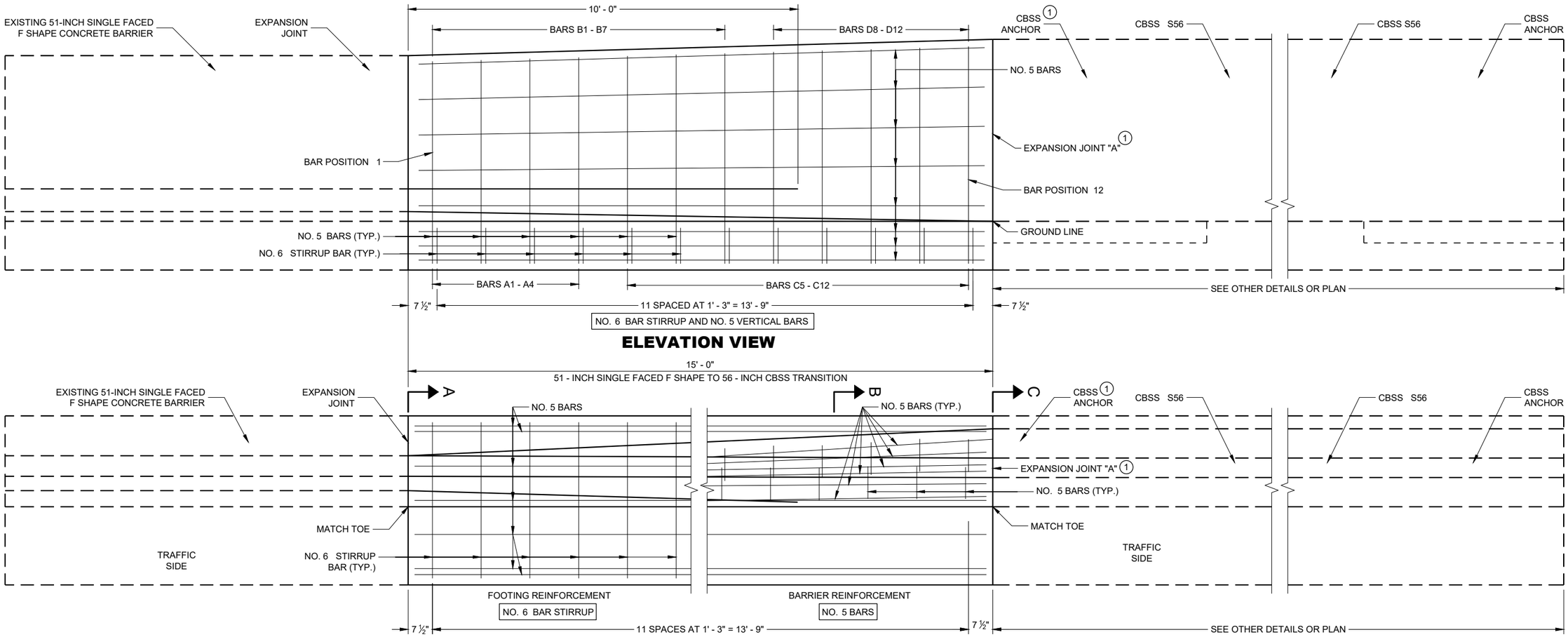
APPROVED
February 2020
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

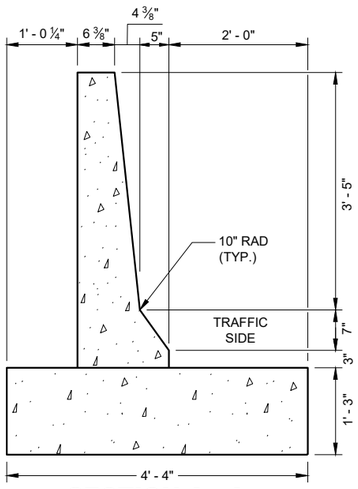
6

SDD 14B36 - 02h

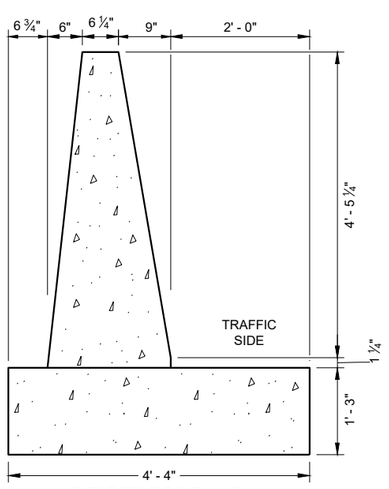


ELEVATION VIEW

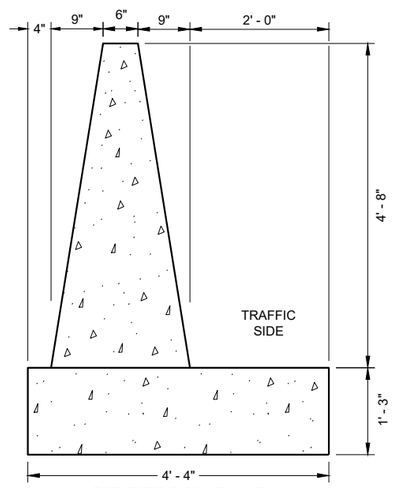
PLAN VIEW



SECTION A - A



SECTION B - B



SECTION C - C

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

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51 - INCH SINGLE FACED F SHAPE CONCRETE BARRER TO 56 - INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

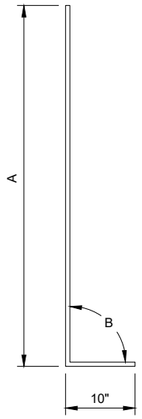
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B36 - 02i

"A" BAR CHART
BAR POSITIONS
1 - 4

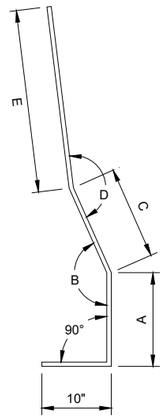
BAR	A	B
A1	90°	5' - 2"
A2	89°	5' - 2 ½"
A3	88°	4' - 11 ½"
A4	87°	4' - 11"



"A" BAR
BENDING DETAIL

"B" BAR CHART
BAR POSITIONS
1 - 7

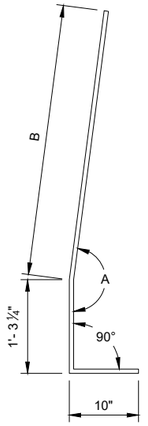
BAR	A	B	C	D	E
B1	1' - 3"	148°	8 ½"	154°	3' - 4"
B2	1' - 3"	149°	8 ½"	156°	3' - 4 ½"
B3	1' - 3"	152°	8 ½"	159°	3' - 4 ¾"
B4	1' - 2 ½"	157°	8 ½"	165°	3' - 5 ½"
B5	1' - 2 ½"	160°	8 ½"	168°	3' - 5 ¾"
B6	1' - 2 ½"	163°	8 ½"	172°	3' - 6"
B7	1' - 2"	166°	8 ½"	175°	3' - 7"



"B" BAR
BENDING DETAIL

"C" BAR CHART
BAR POSITIONS
5 - 12

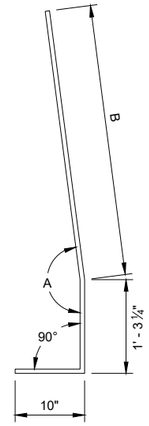
BAR	A	B
C5	177°	4' - 0 ¾"
C6	176°	3' - 6 ½"
C7	175°	3' - 5 ¾"
C8	175°	3' - 5"
C9	174°	3' - 4 ½"
C10	173°	3' - 3 ¾"
C11	172°	3' - 3"
C12	171°	3' - 2 ½"



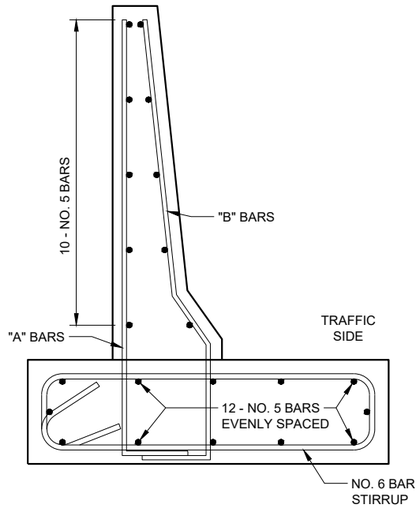
"C" BAR
BENDING DETAIL

"D" BAR CHART
BAR POSITIONS
8 - 12

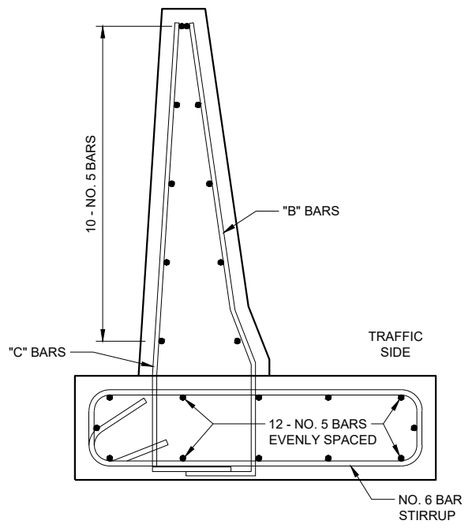
BAR	A	B
D8	170°	3' - 5 ½"
D9	170°	4' - 3"
D10	170°	4' - 3 ½"
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D12	171°	4' - 4"



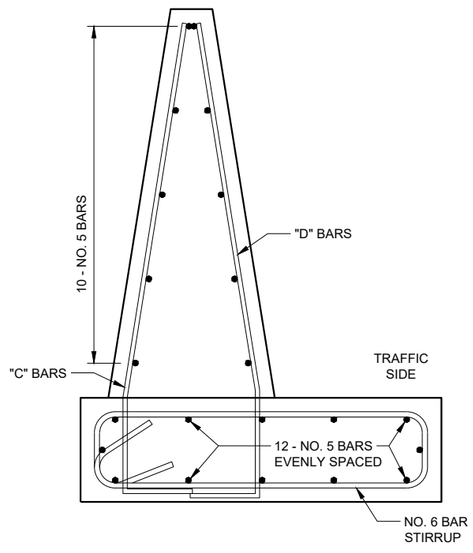
"D" BAR
BENDING DETAIL



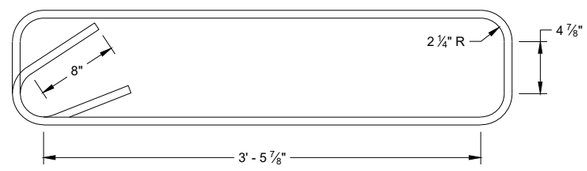
BAR DETAIL
BAR POSITIONS 1 - 2



BAR DETAIL
BAR POSITIONS 3 - 7



BAR DETAIL
BAR POSITIONS 8 - 12



STIRRUP BAR
BENDING DETAIL

51 - INCH SINGLE FACED F SHAPE CONCRETE BARRIER TO 56 - INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

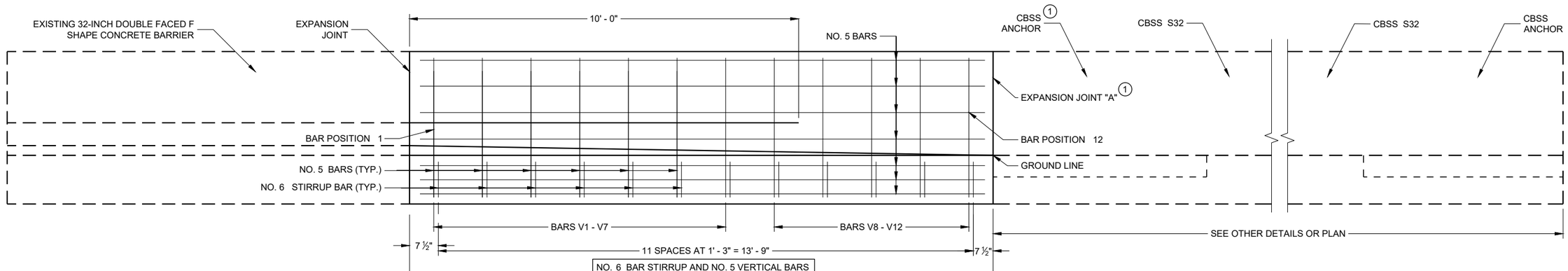
APPROVED
February 2020 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

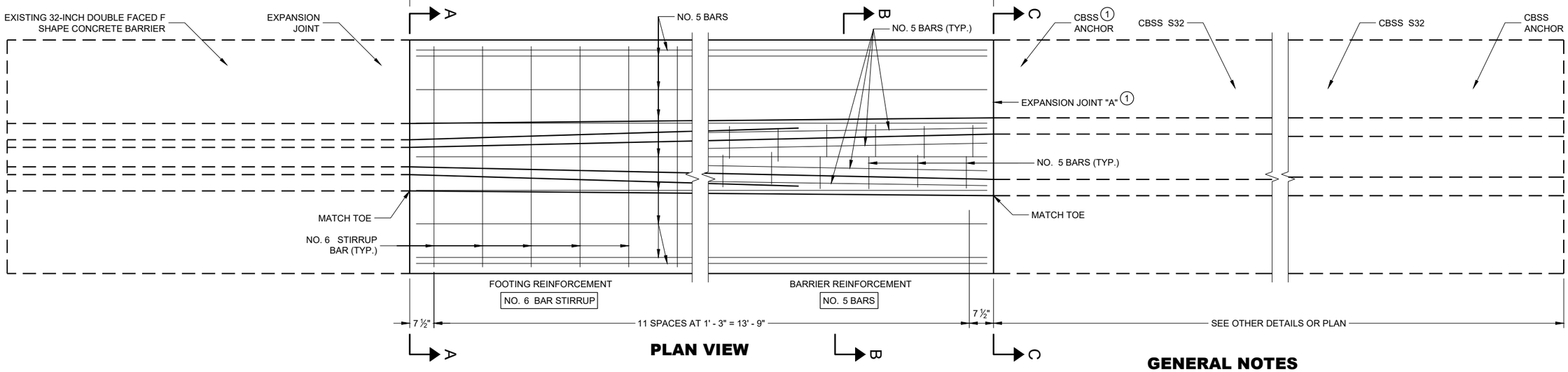
SDD 14B36 - 02j

SDD 14B36 - 02j

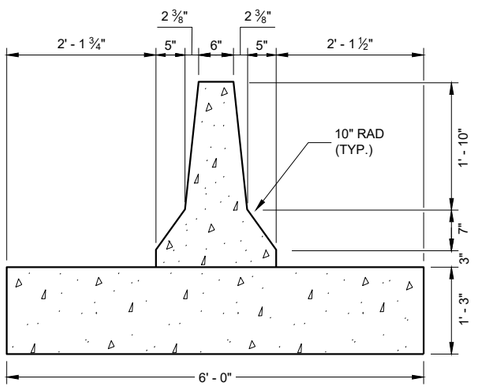


ELEVATION VIEW

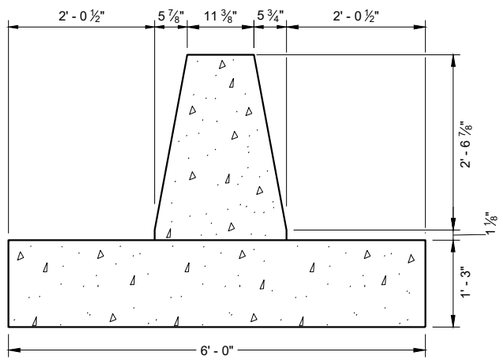
15' - 0"
32 INCH DOUBLE FACED F SHAPE TO 32 INCH CBSS TRANSITION



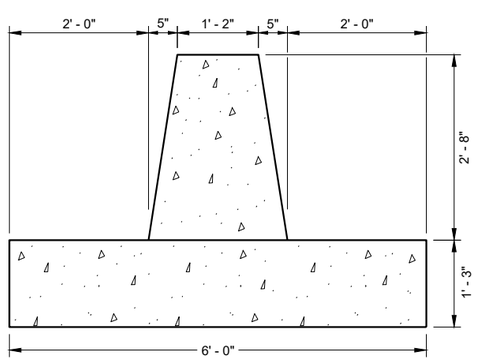
PLAN VIEW



SECTION A - A



SECTION B - B



SECTION C - C

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS OTHERWISE NOTED.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS SECTION 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD JOINT IS USED, ANCHOR IS NOT REQUIRED.

32 - INCH DOUBLE FACED F SHAPE CONCRETE BARRER TO 32 - INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

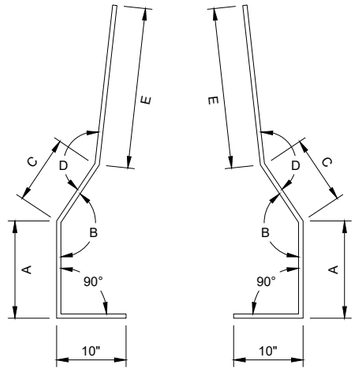
STATE OF WISCONSIN
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SDD 14B38 - 02a
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BAR CHART
BAR POSITIONS
1 - 7

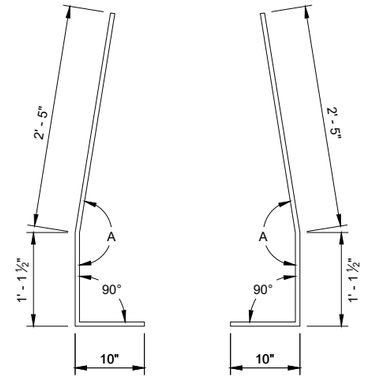
BAR	A	B	C	D	E
B1	1' - 2"	148°	10"	154°	1' - 7 ¾"
B2	1' - 2"	154°	9 ¾"	162°	1' - 7 ¾"
B3	1' - 2"	154°	9 ¾"	163°	1' - 7 ½"
B4	1' - 2"	157°	9 ¾"	165°	1' - 7 ½"
B5	1' -1 ½"	161°	10"	169°	1' - 7 ½"
B6	1' -1 ½"	163°	10"	172°	1' - 7 ½"
B7	1' -1 ½"	166°	10"	175°	1' - 7 ½"



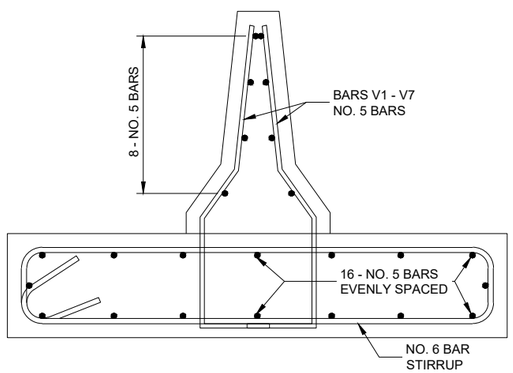
BAR BENDING DETAIL
BARS V1 - V7

BAR CHART
BAR POSITIONS
8 - 12

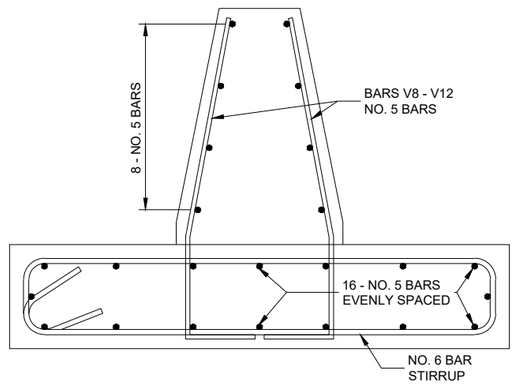
BAR	A
D8	170°
D9	170°
D10	170°
D11	171°
D12	171°



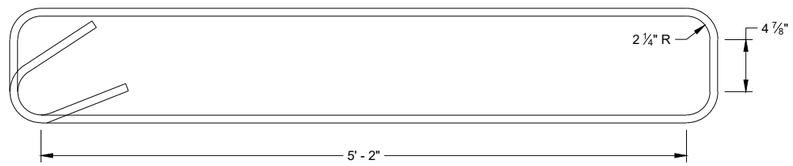
BAR BENDING DETAIL
BARS V8 - V12



BAR DETAIL
BAR POSITIONS V1 - V7



BAR DETAIL
BAR POSITIONS V8 - V12



STIRRUP BAR
BENDING DETAIL

6

SDD 14B38 - 02b

6

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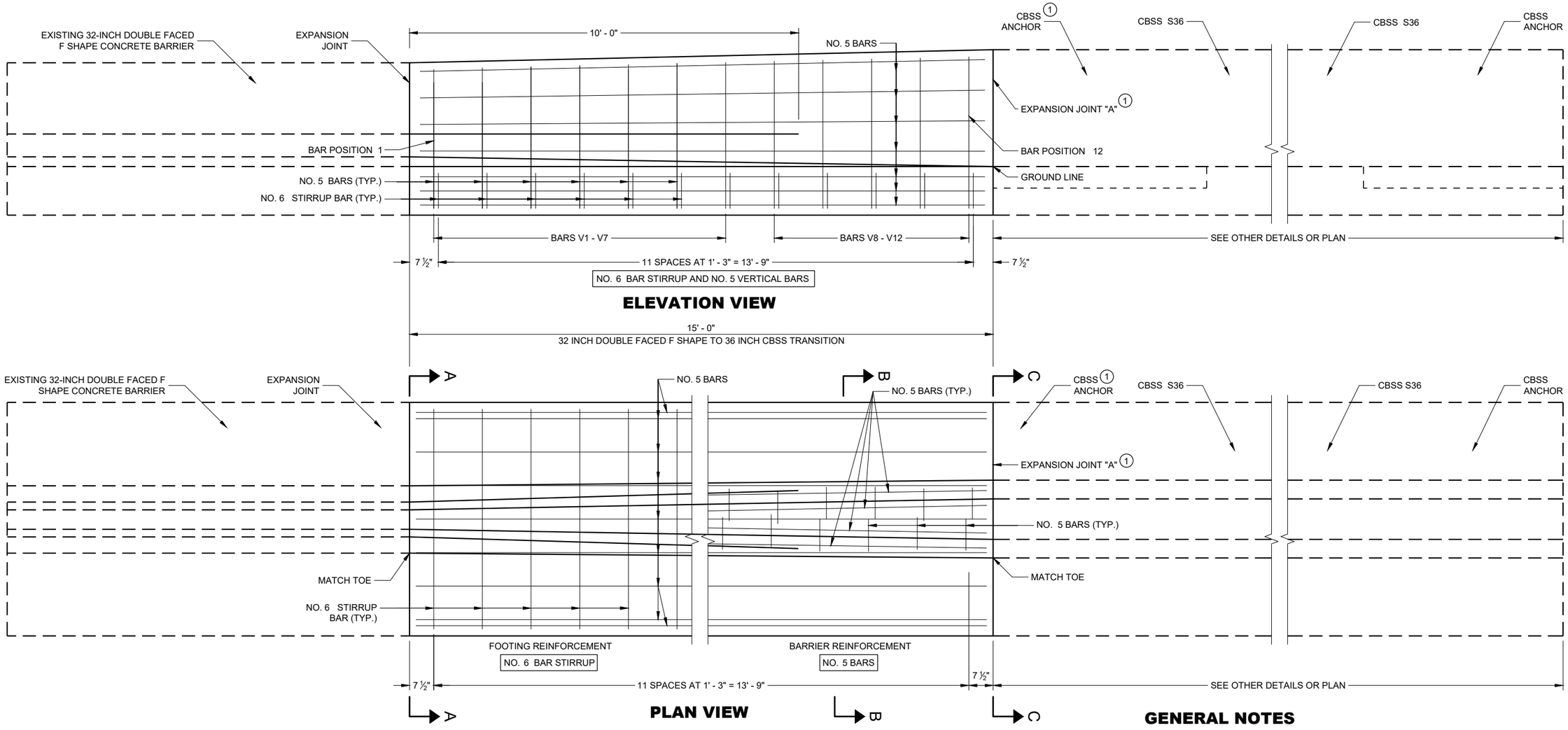
32-INCH DOUBLE FACED F SHAPE CONCRETE BARRIER TO 32-INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

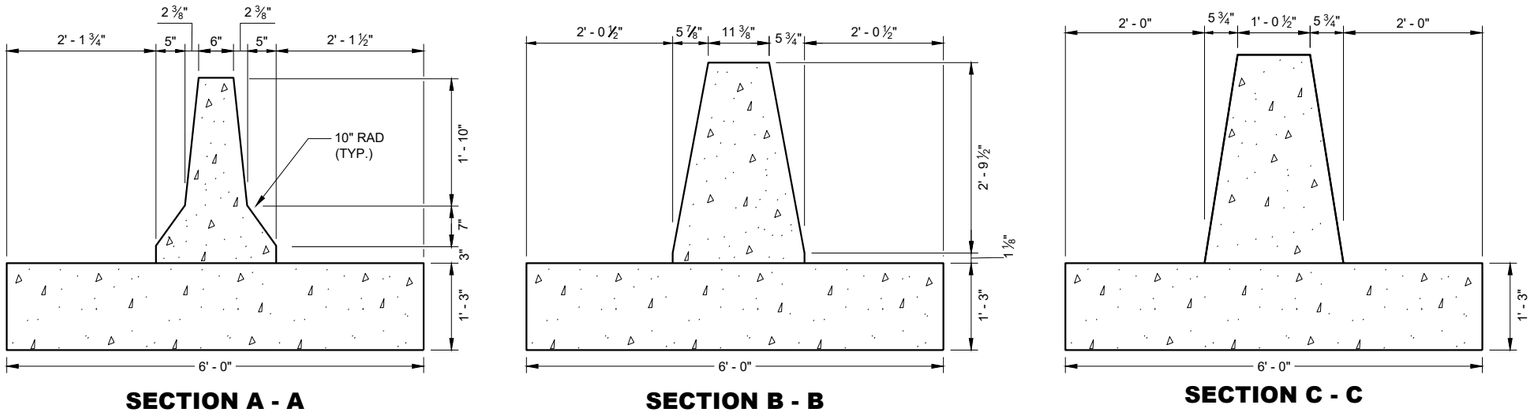
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA





GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS OTHERWISE NOTED.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS SECTION 501.

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THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD JOINT IS USED, ANCHOR IS NOT REQUIRED.

32 - INCH DOUBLE FACED F SHAPE CONCRETE BARRER TO 36 - INCH SINGLE SLOPE CONCRETE BARRIER TRANSITION

STATE OF WISCONSIN
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(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.

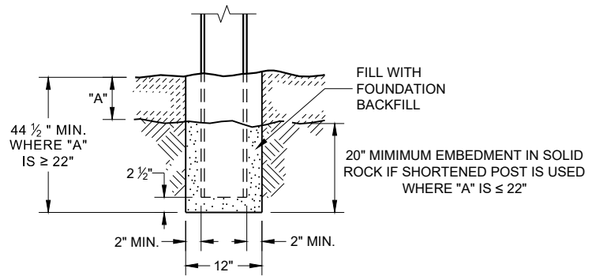
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

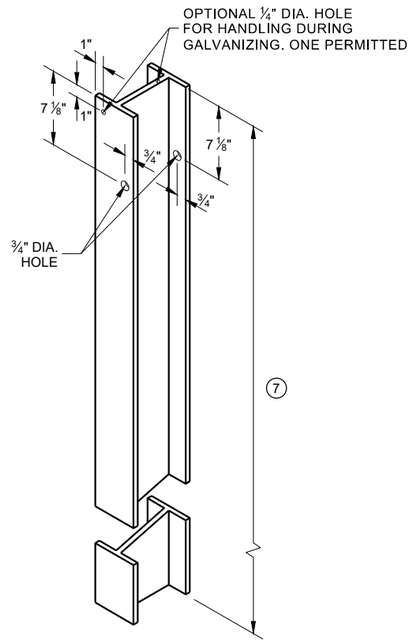
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

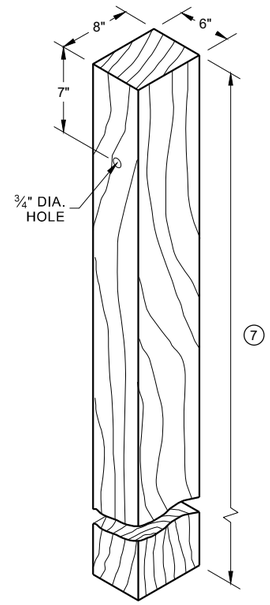
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



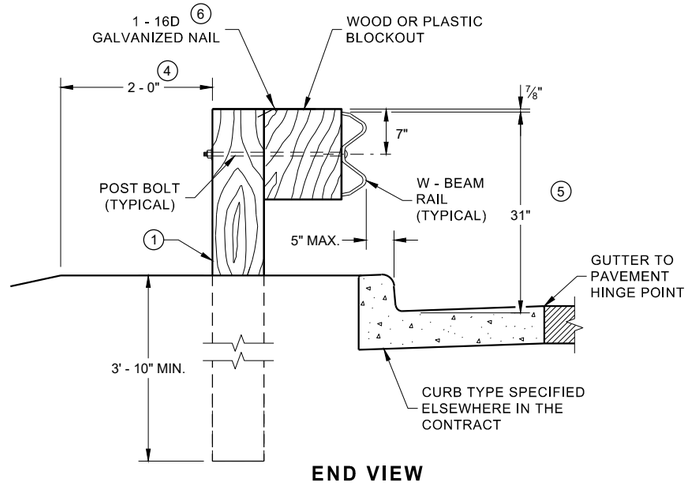
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



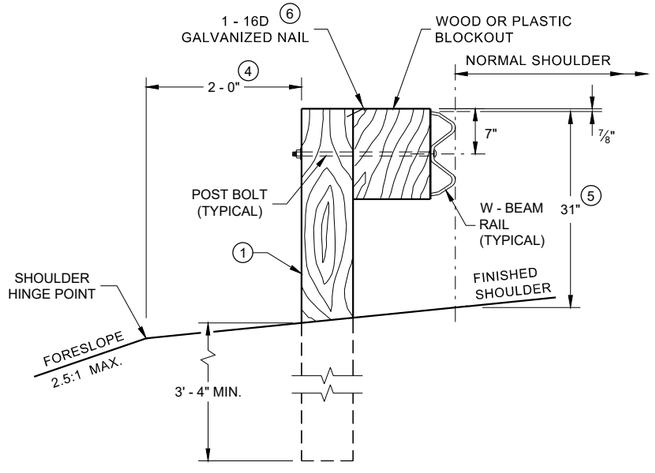
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



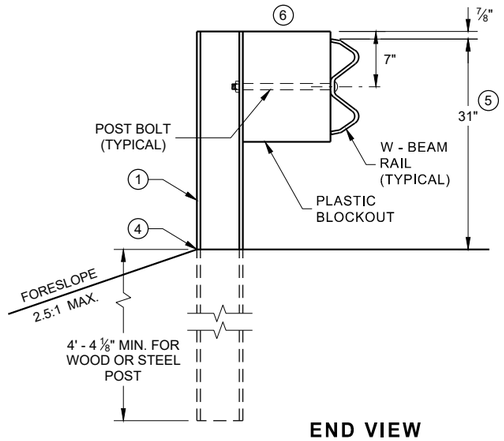
WOOD POST (6" X 8") NOMINAL (1)



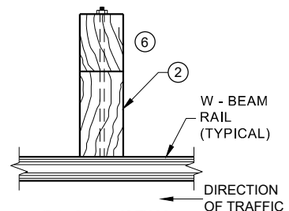
END VIEW
LOCATED ALONG A CURBED ROADWAY



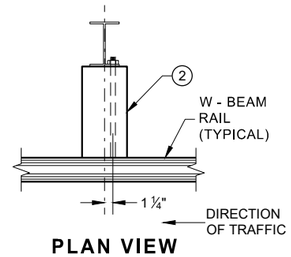
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



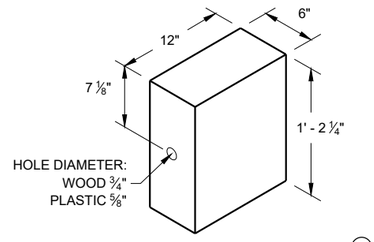
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



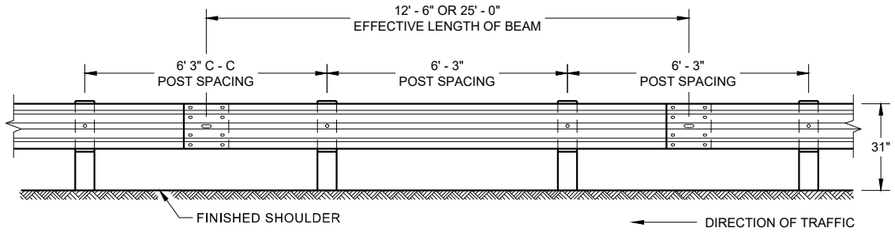
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

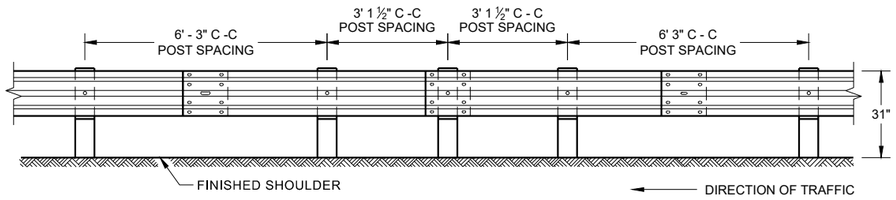
STATE OF WISCONSIN
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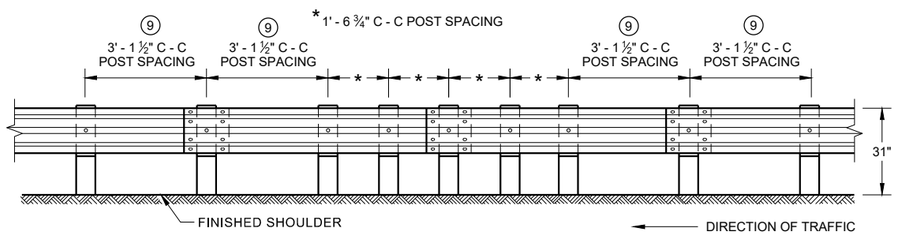
SDD 14B42 - 07a



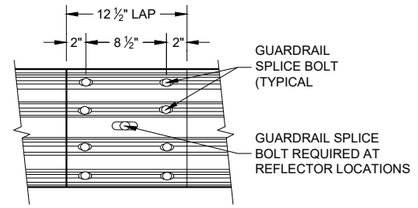
FRONT VIEW
POST SPACING STANDARD INSTALLATION



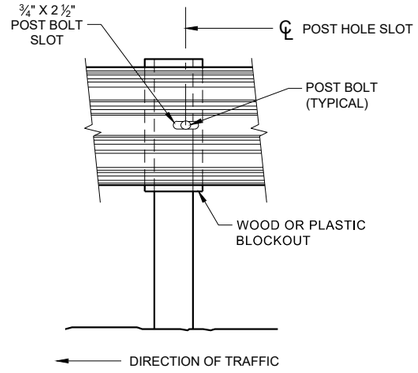
FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



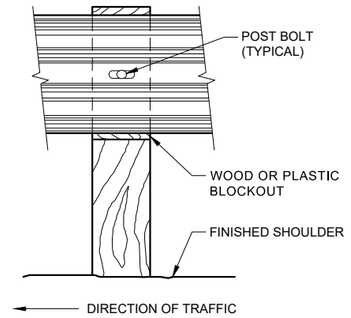
FRONT VIEW
QUARTER POST SPACING (QS)



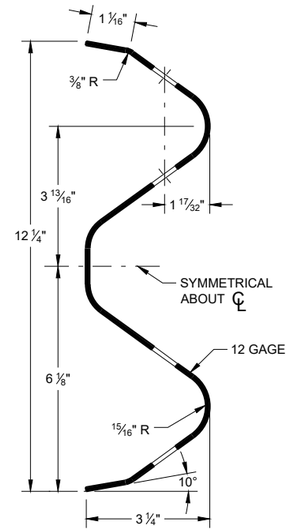
FRONT VIEW
MID-SPAN BEAM SPLICE



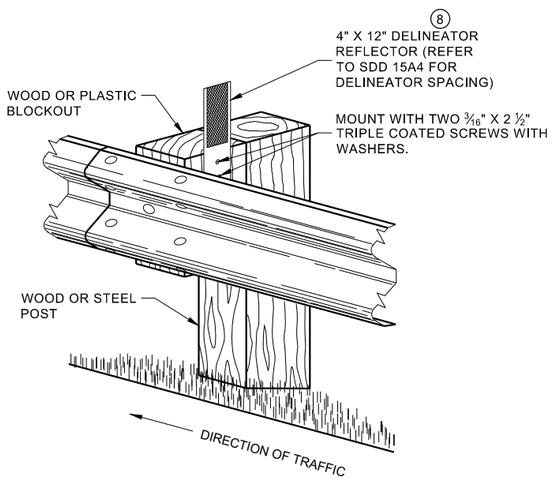
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

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.

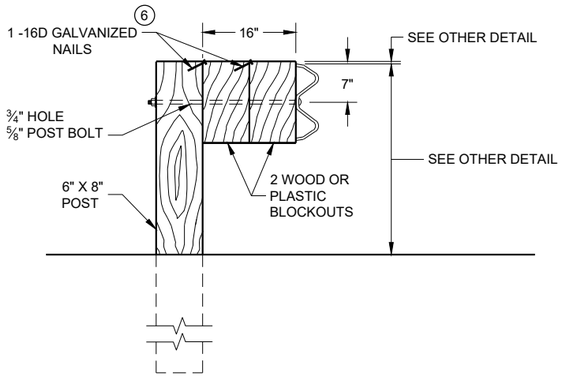
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

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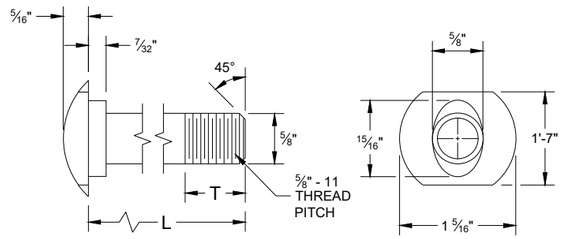


DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

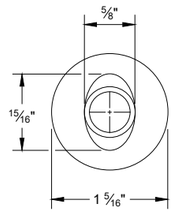
NOTE:

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

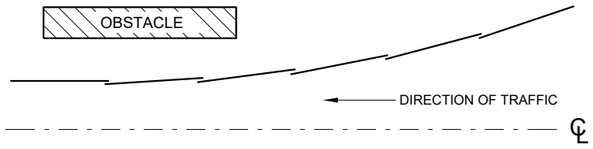


POST BOLT TABLE

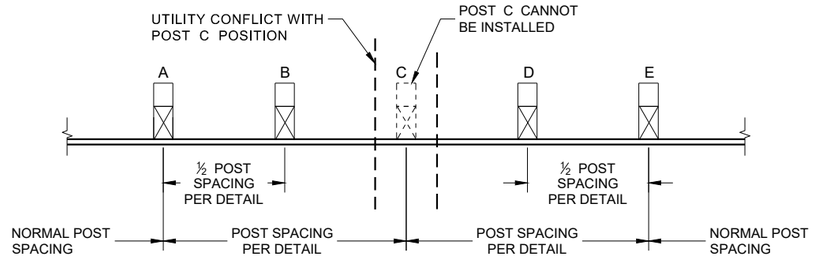
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



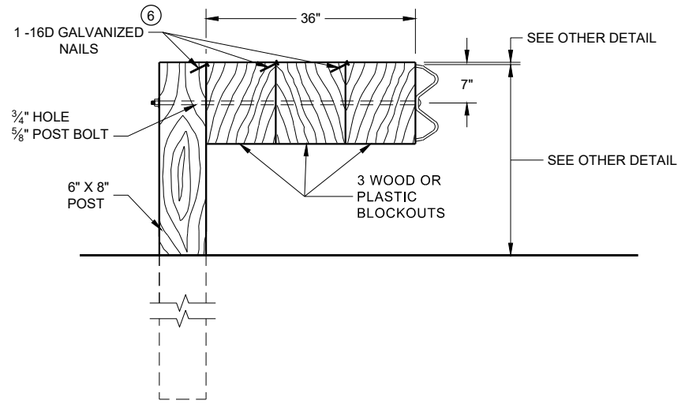
ALTERNATE BOLT HEAD



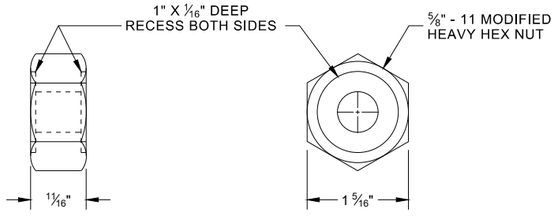
PLAN VIEW
BEAM LAPPING DETAIL



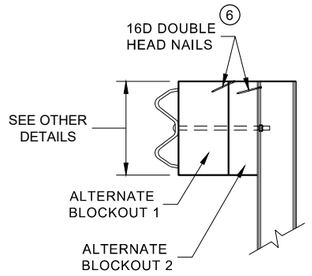
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



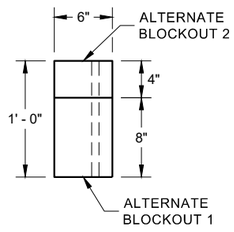
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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

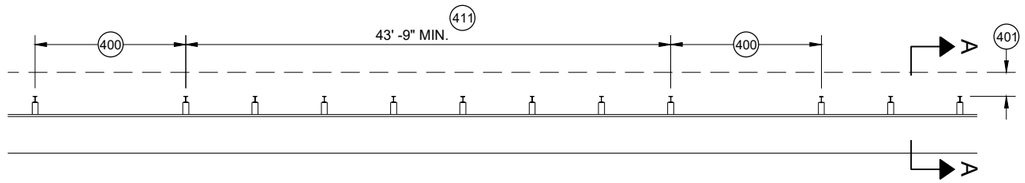
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

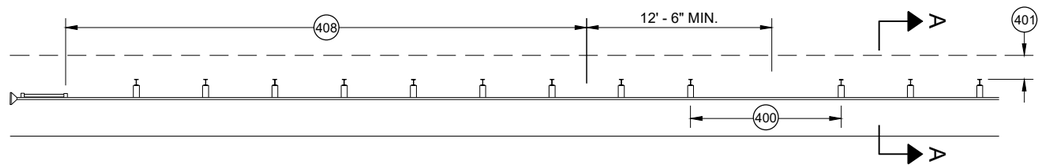
6

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

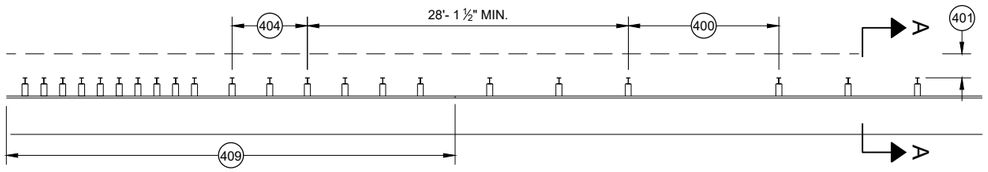
SDD 14B42 - 07c



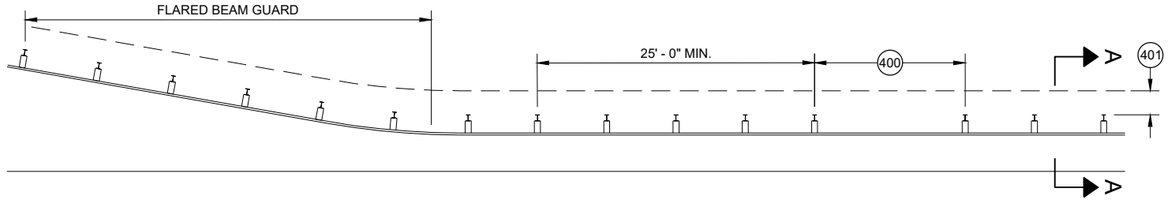
MISSING POST IN MGS GUARDRAIL



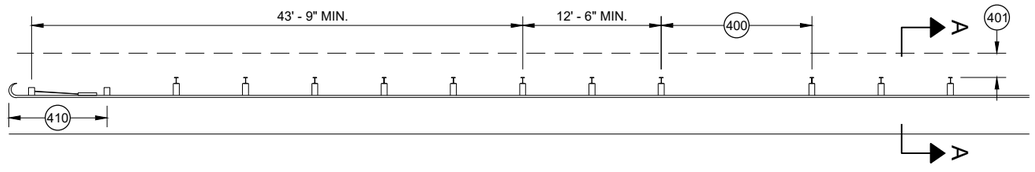
MISSING POST IN MGS GUARDRAIL NEAR EAT



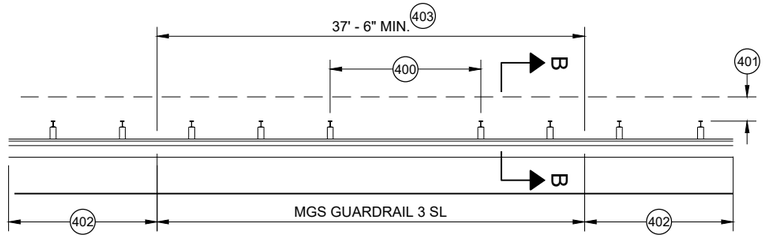
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

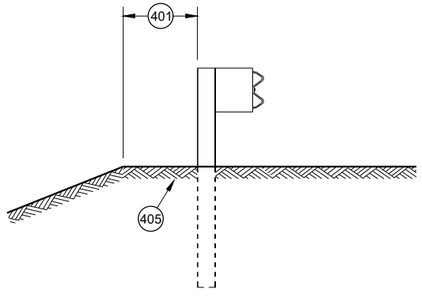


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

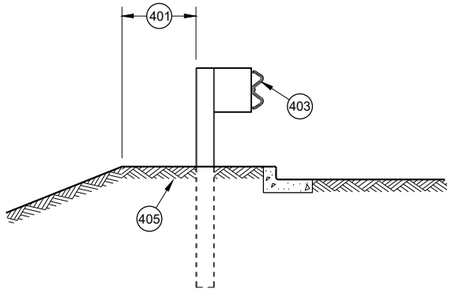


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(400) MAX SPAN 12' - 6"
(401) 2' MIN.
(402) MGS GUARDRAIL 3
(403) NESTING BEAM GUARD
(404) ASYMMETRIC TRANSITION
(405) SOIL WELL DRAINED AND COMPACTED
(406) SEE OTHER DRAWINGS IN THIS SDD
(407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
(408) SEE SDD 14B44
(409) SEE SDD 14B45
(410) SEE SDD 14B47
(411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

6

SDD 14B42 - 07d

GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

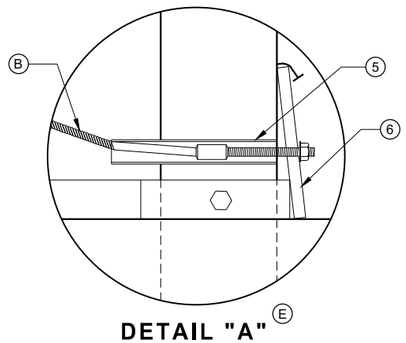
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

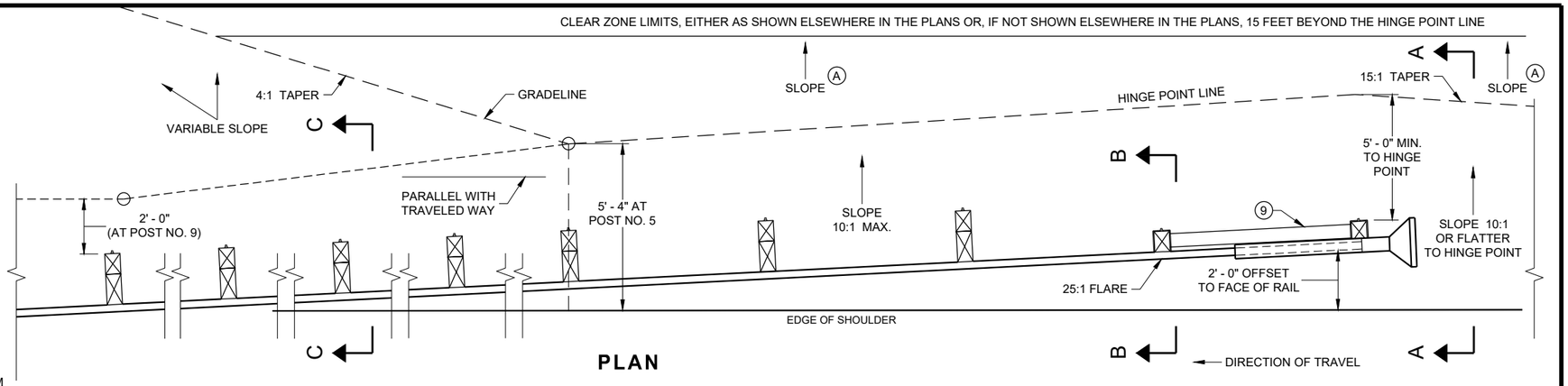
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

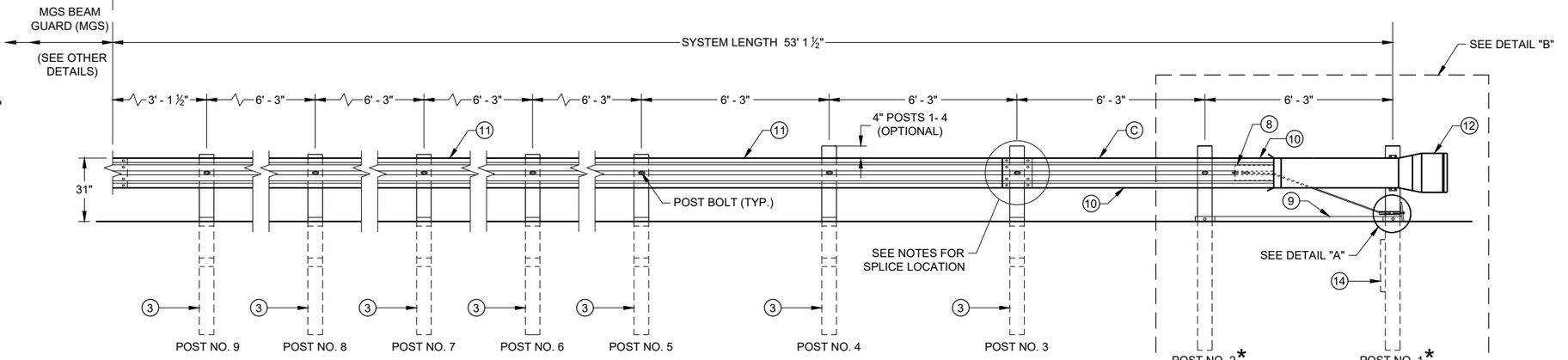
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



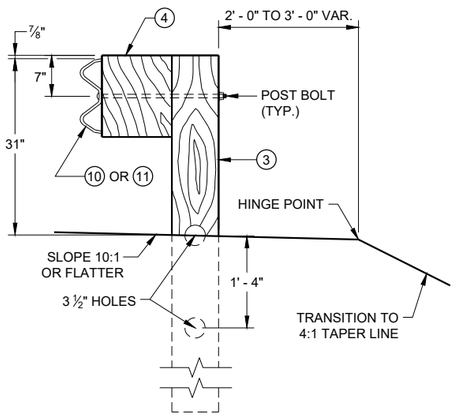
DETAIL "A" (E)



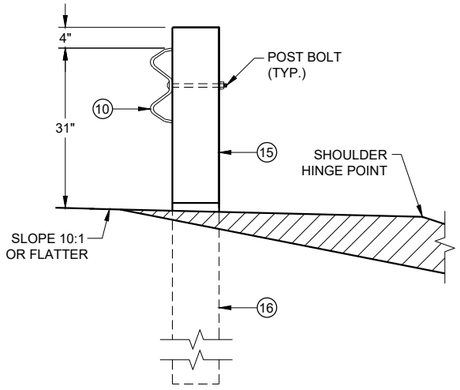
PLAN



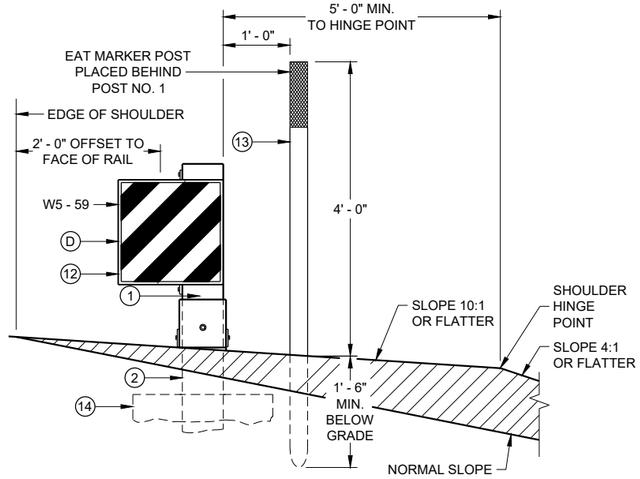
ELEVATION



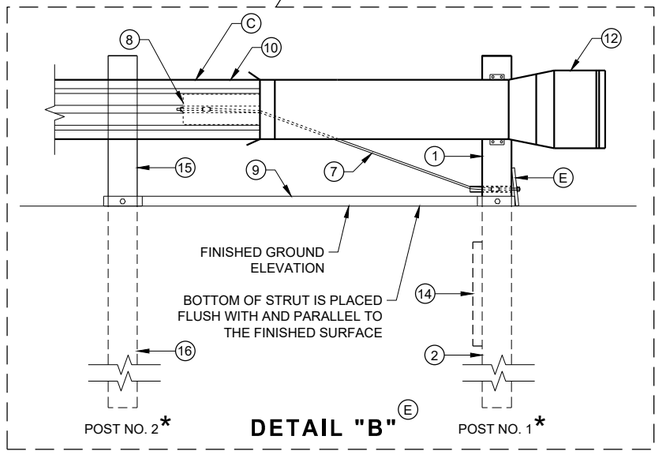
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



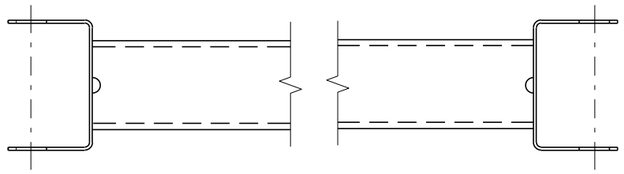
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

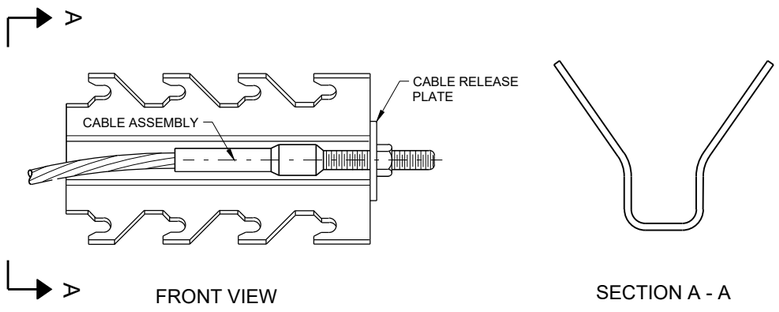
SDD 14B44 - 04a



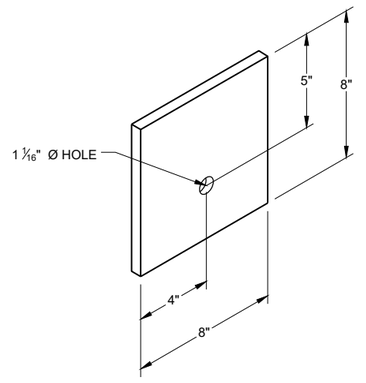
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

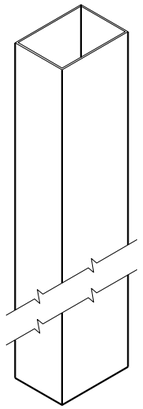
6

SDD 14B44 - 04b

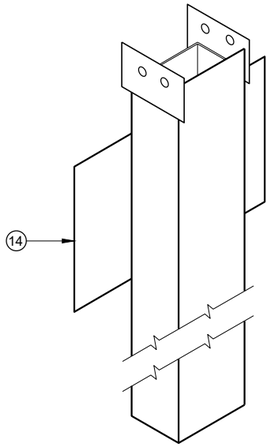
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

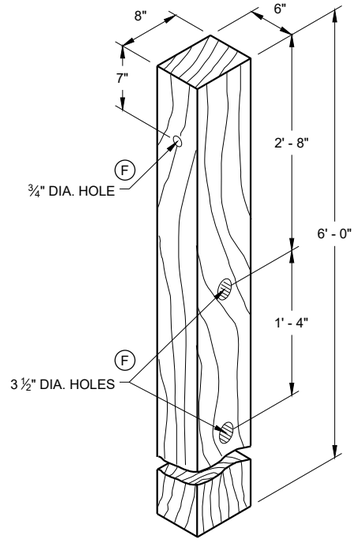
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA1 557



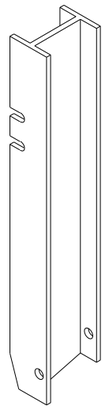
UPPER POST NO. 1 (1) (E)



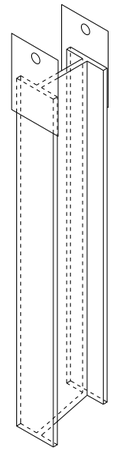
LOWER POST NO. 1 (2) (E)



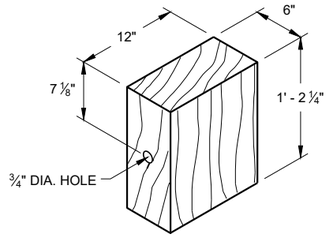
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



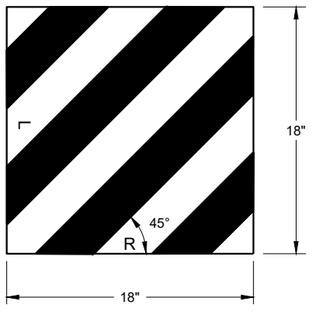
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

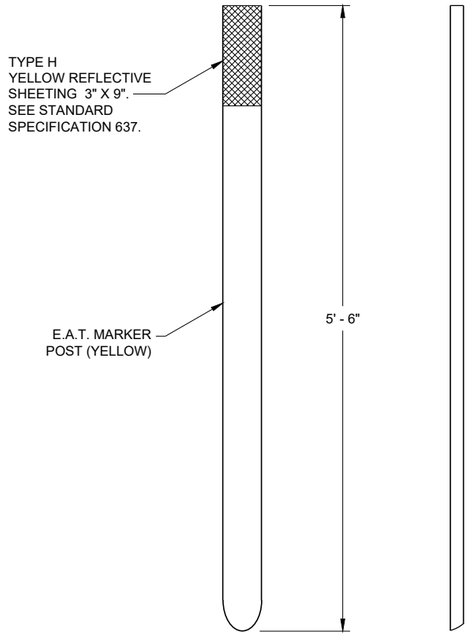


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



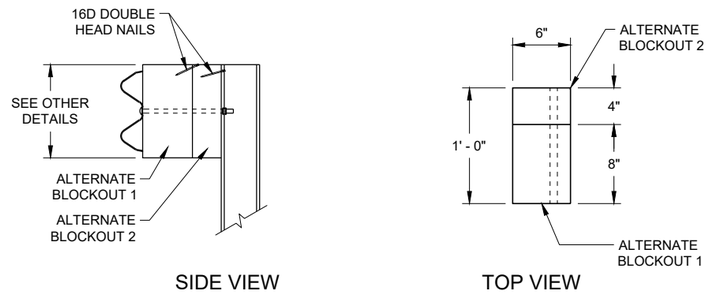
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

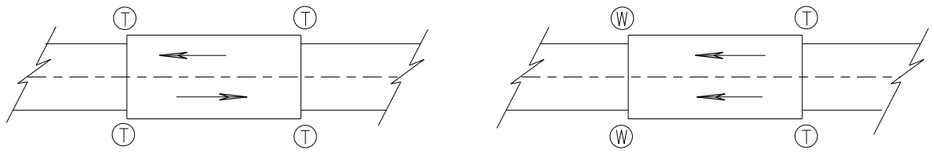
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

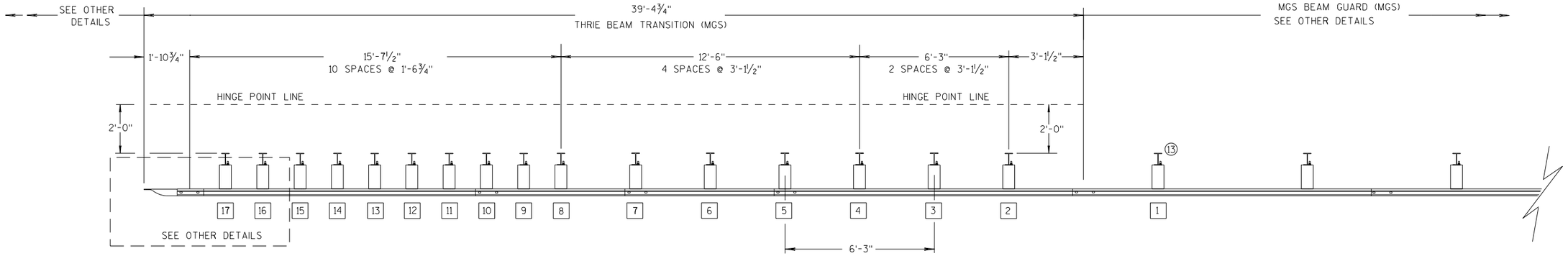
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

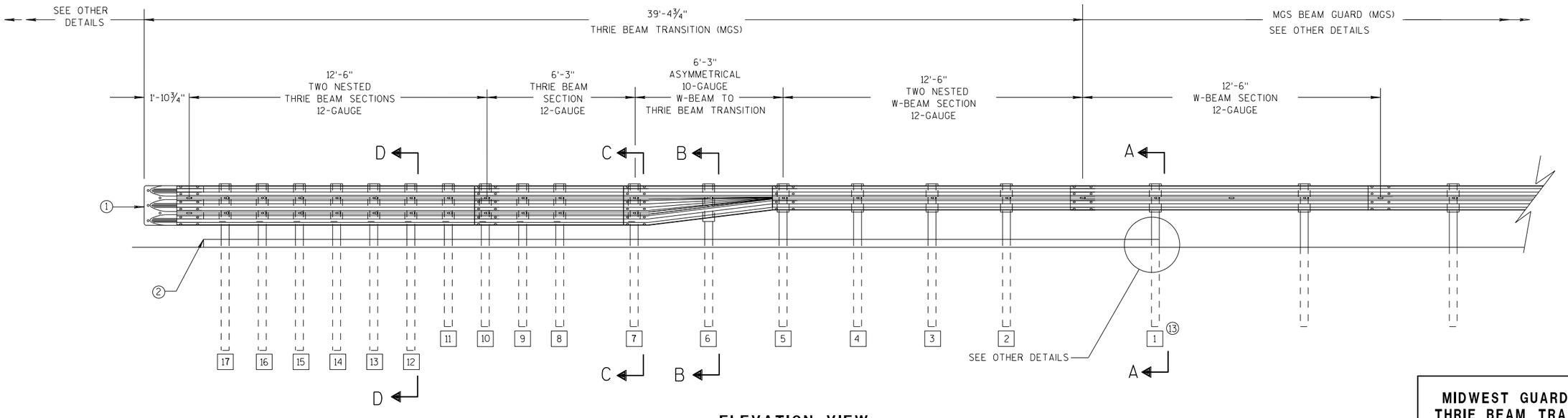
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 559

6

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

6

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

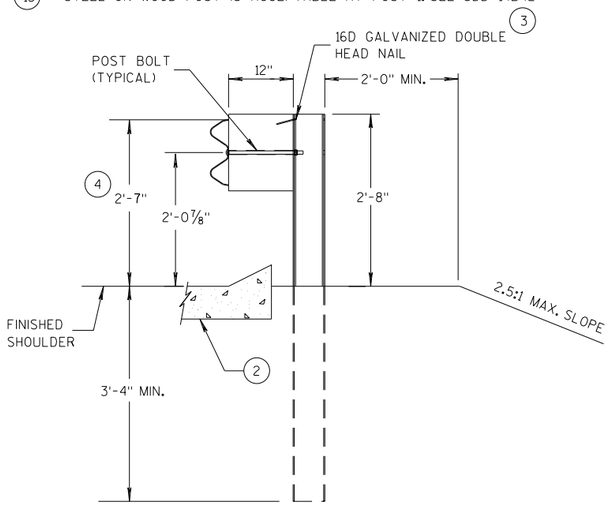
GENERAL NOTES

(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.

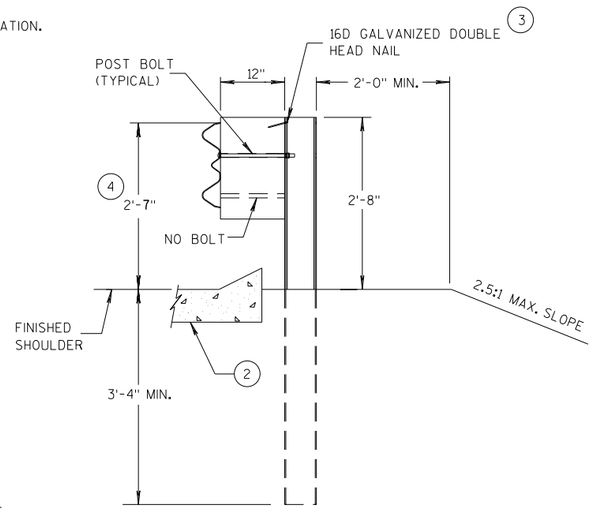
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



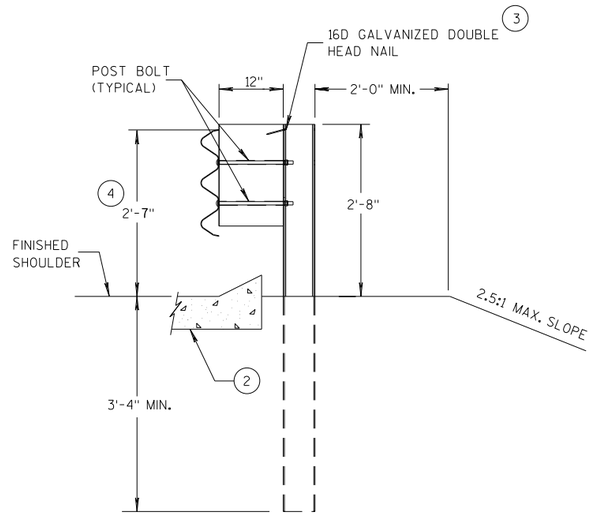
SECTION A-A (13)

POSTS 1-5



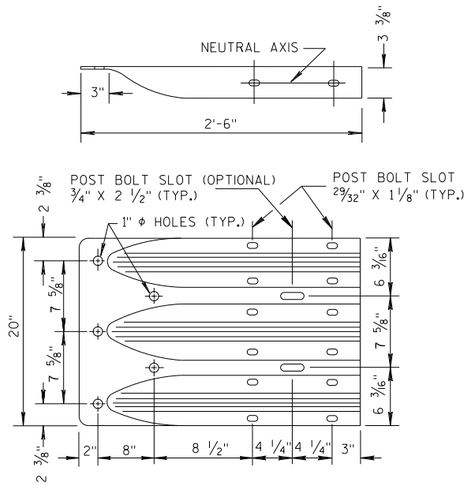
SECTION B-B

POST 6

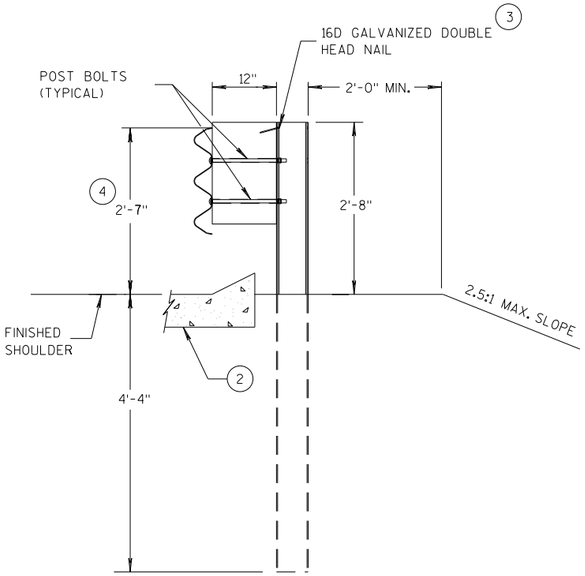


SECTION C-C

POSTS 7-11

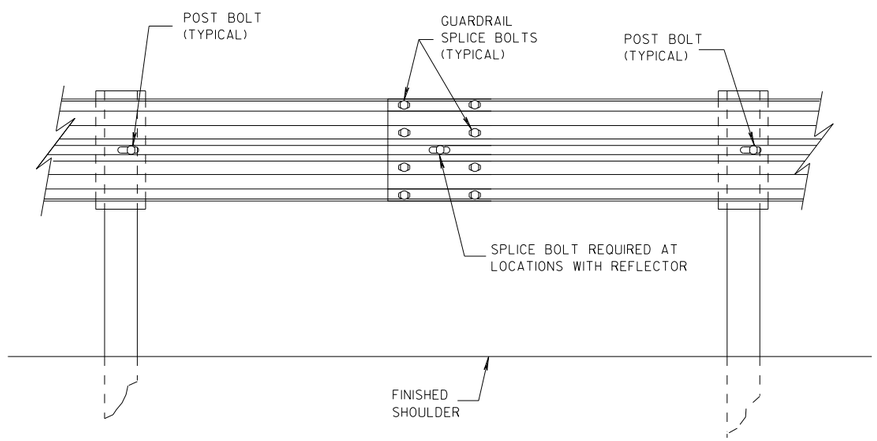


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

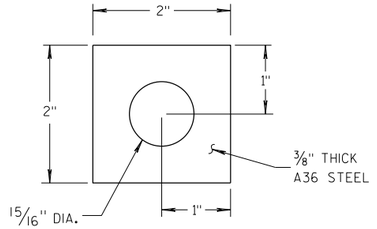
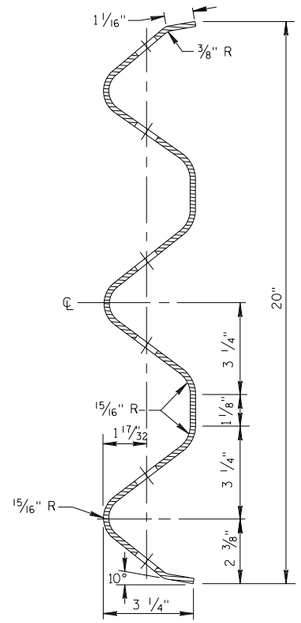


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

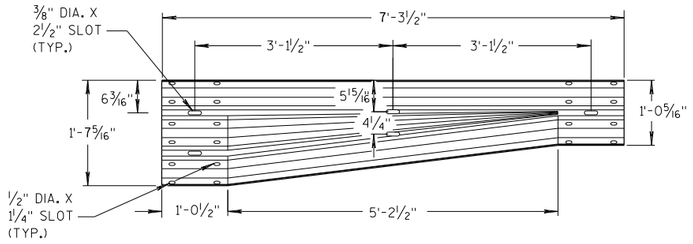
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF 560

6

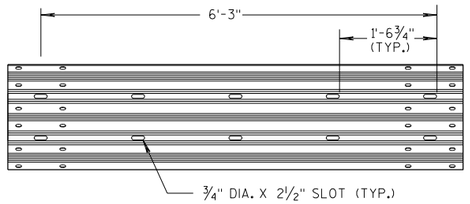
S.D.D. 14 B 45-5b

6

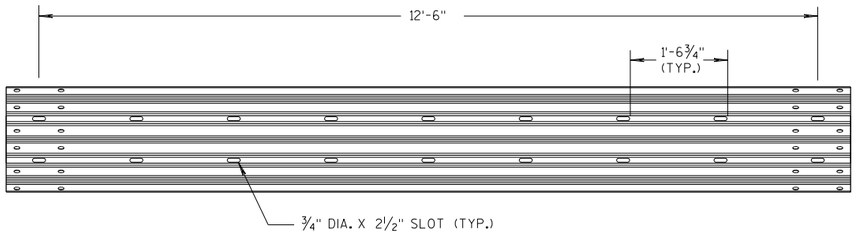
S.D.D. 14 B 45-5b



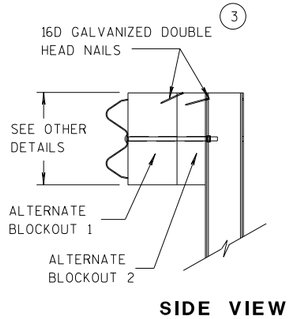
W-BEAM TO THRIE BEAM TRANSITION SECTION



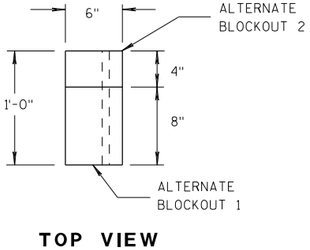
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

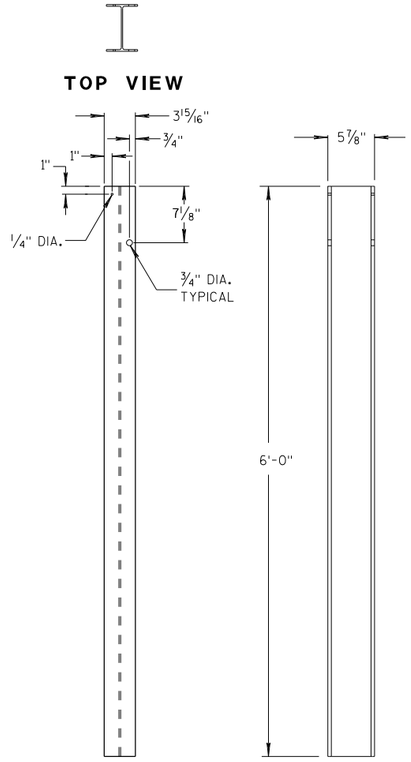


SIDE VIEW



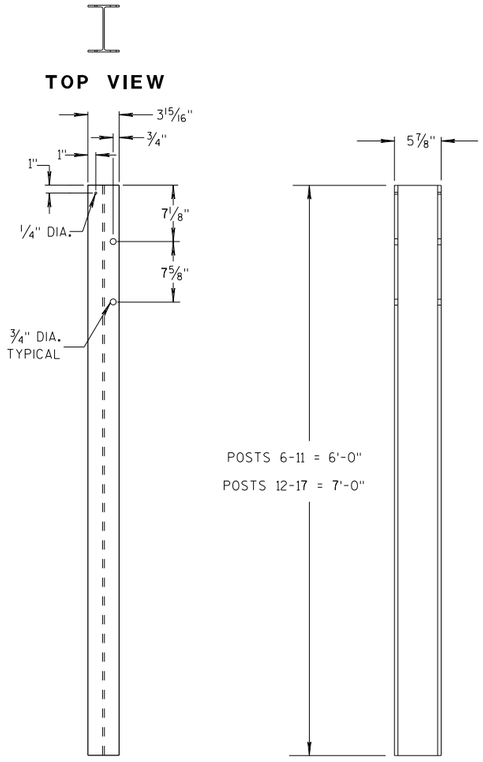
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



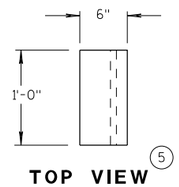
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

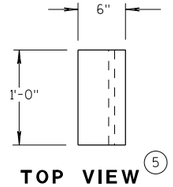


FRONT VIEW SIDE VIEW

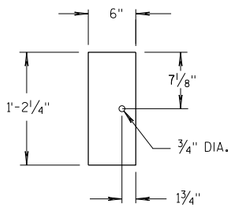
STEEL POSTS 6-17



TOP VIEW (5)

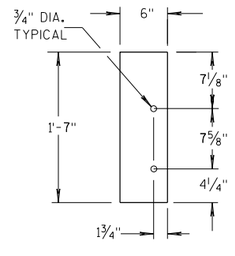


TOP VIEW (5)



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.

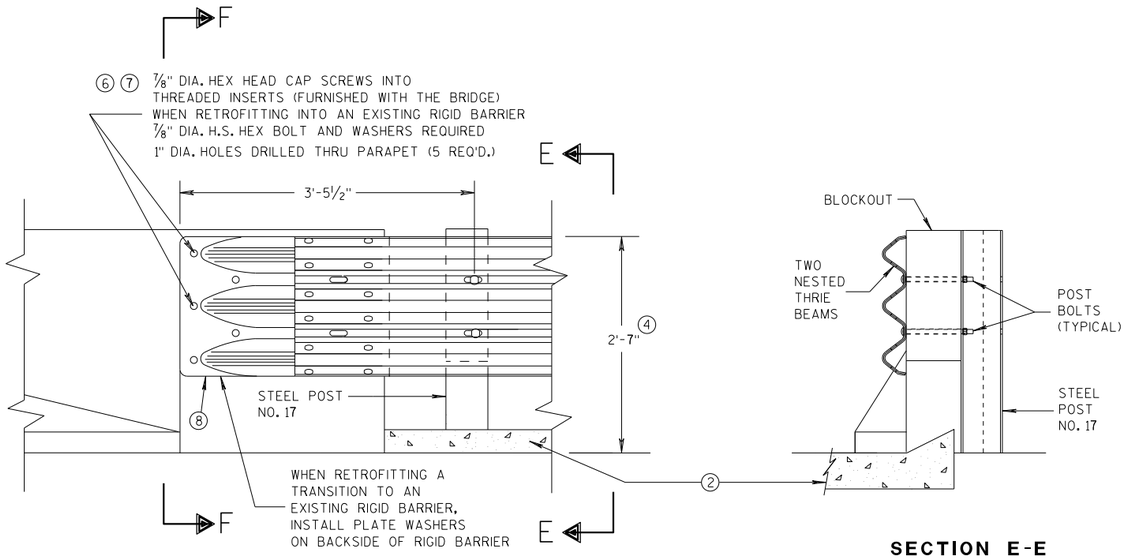
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

(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 561

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.

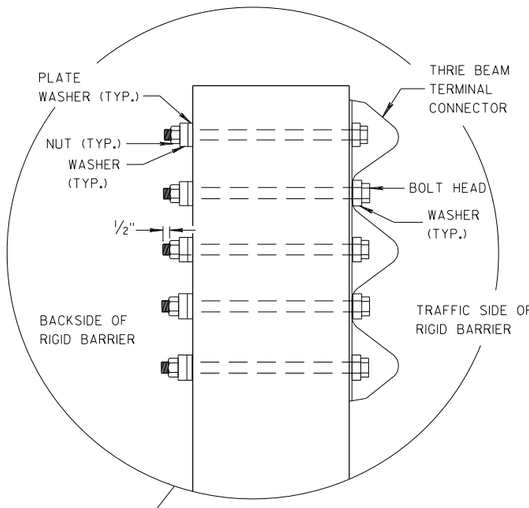
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

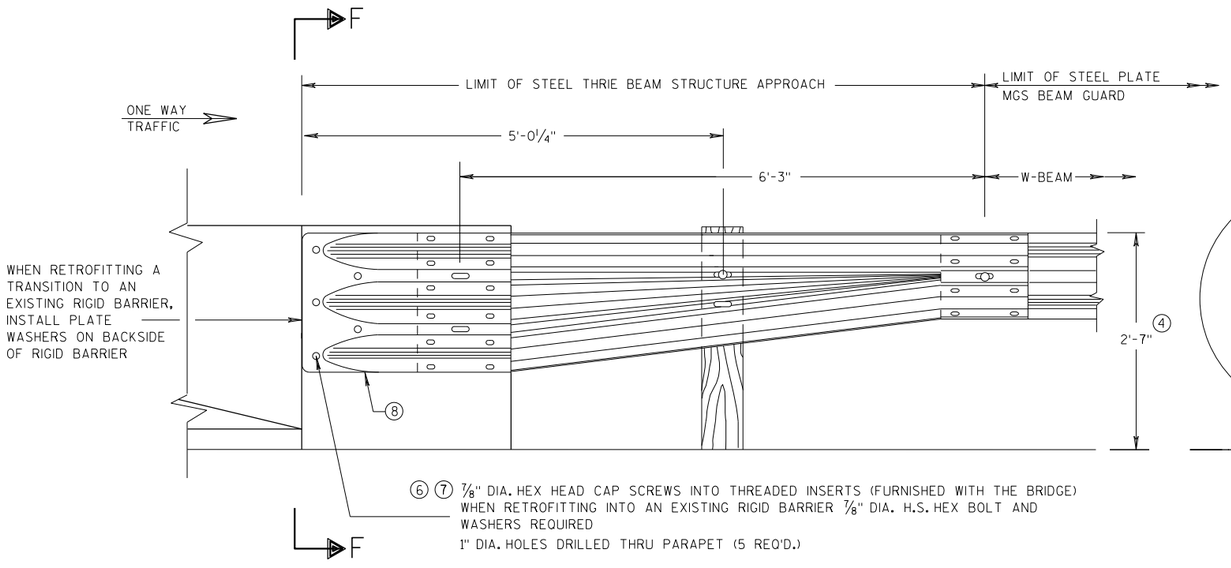
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

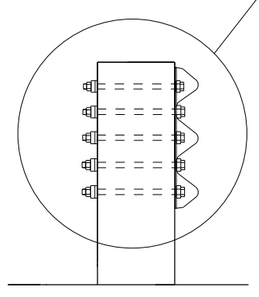
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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".

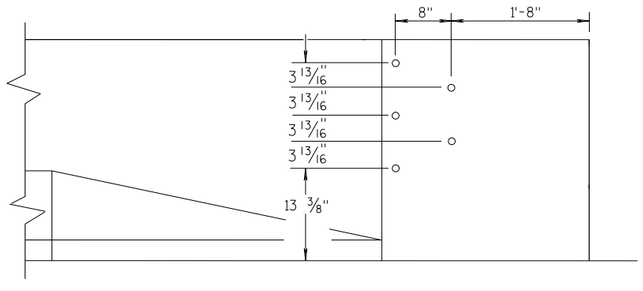




FRONT VIEW



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

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

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.

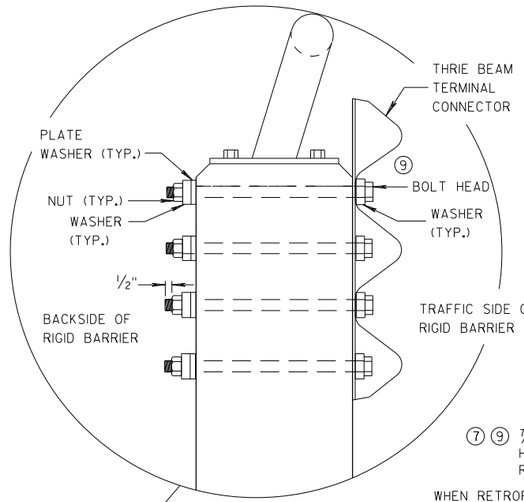
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

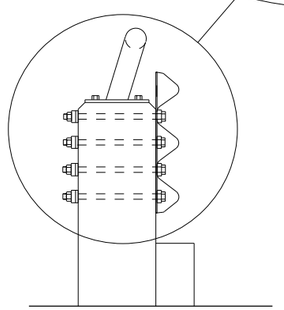
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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.

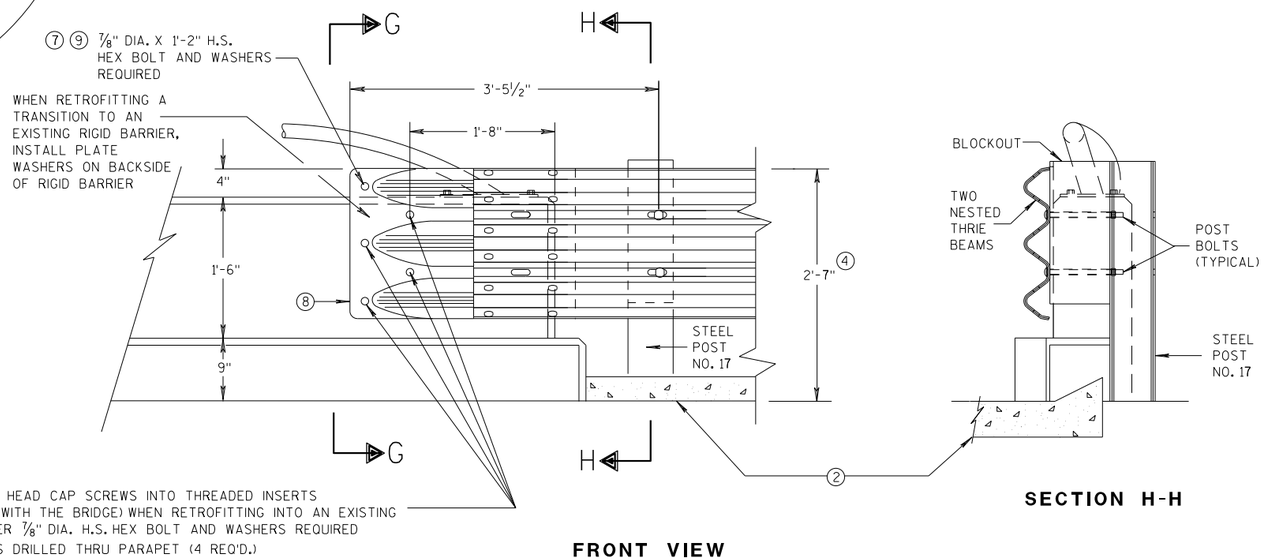
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





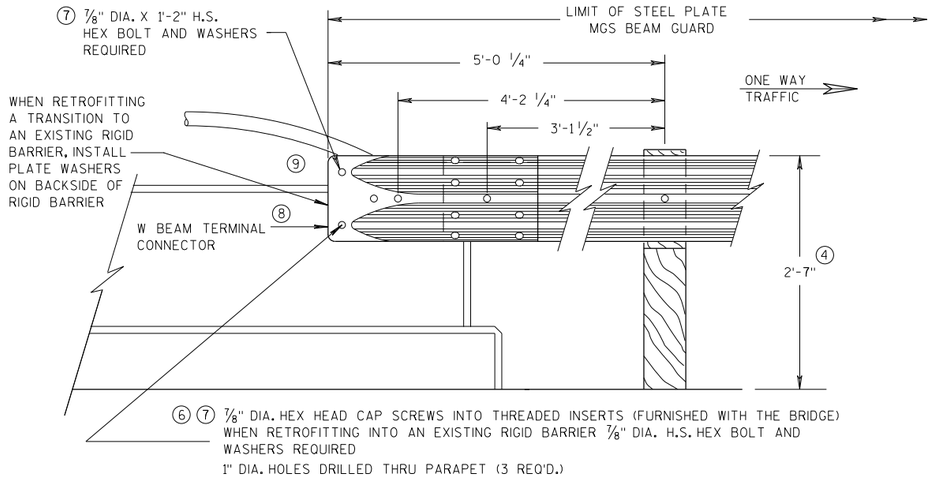
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

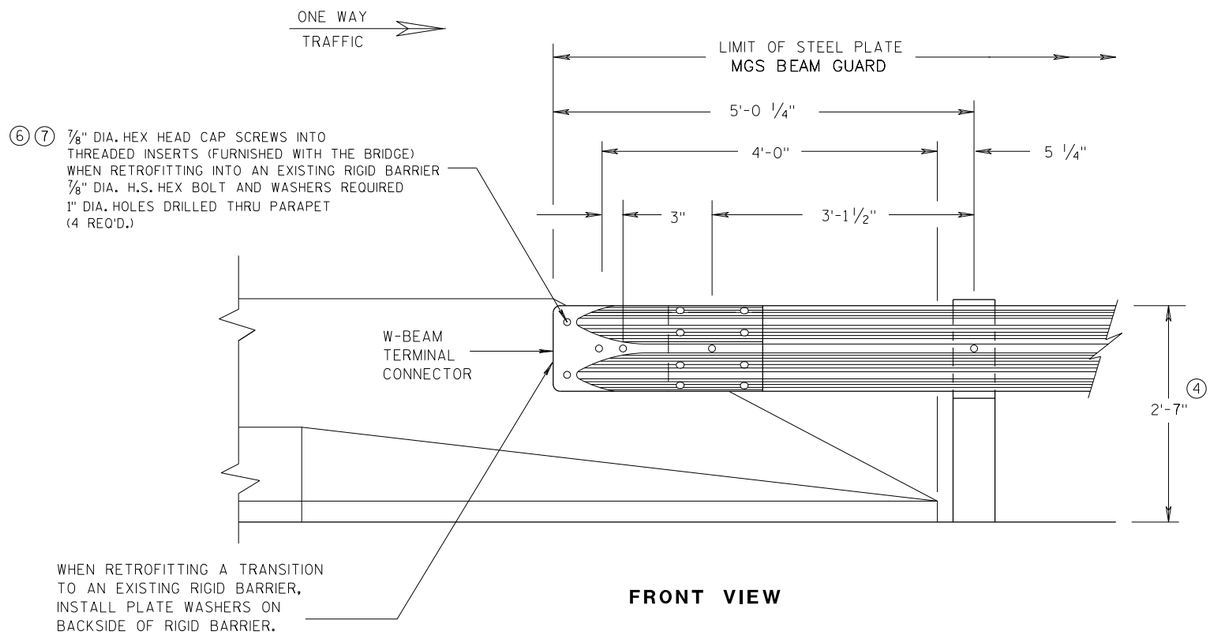
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S.D.D. 14 B 45-5e

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



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

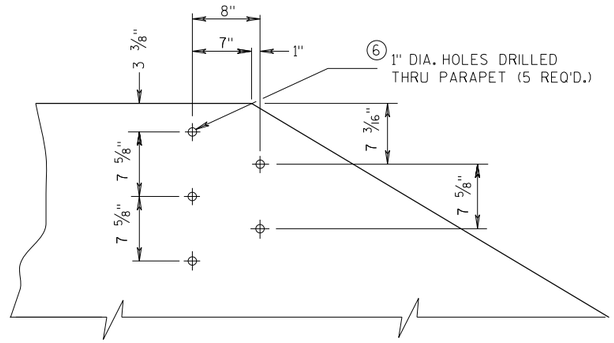
GENERAL NOTES

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

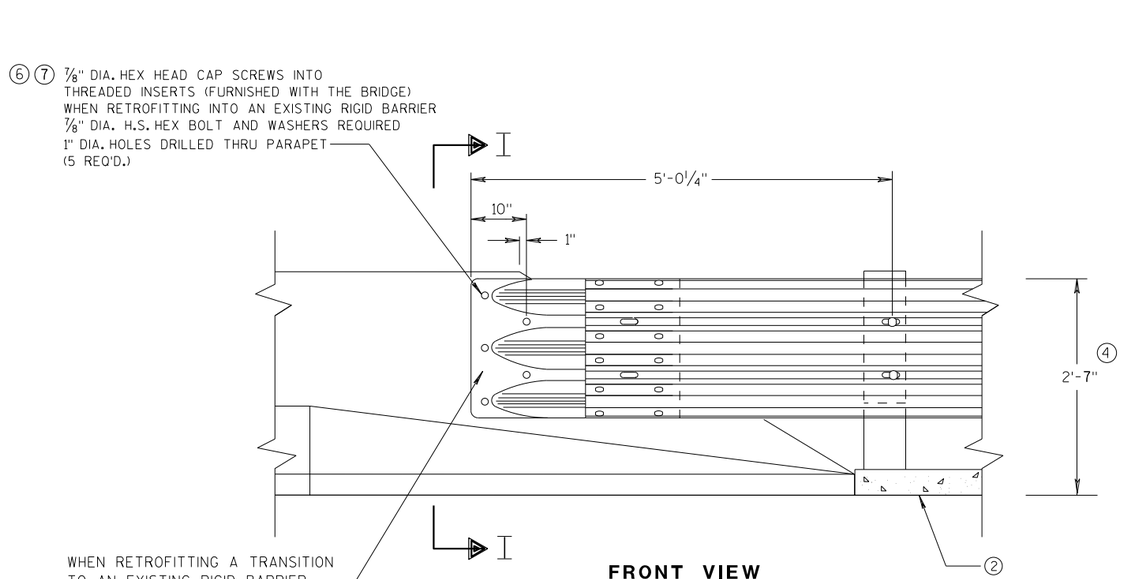
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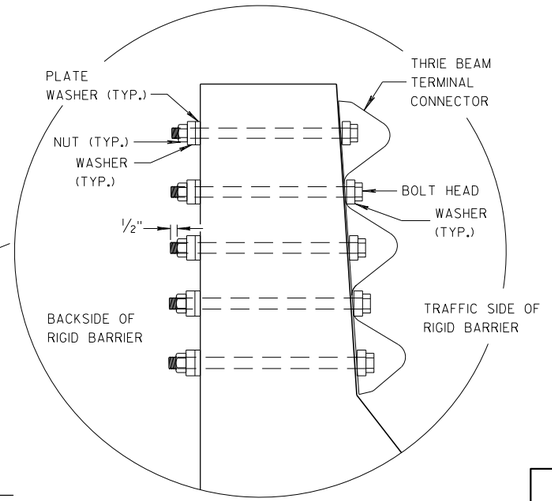


DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW

SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

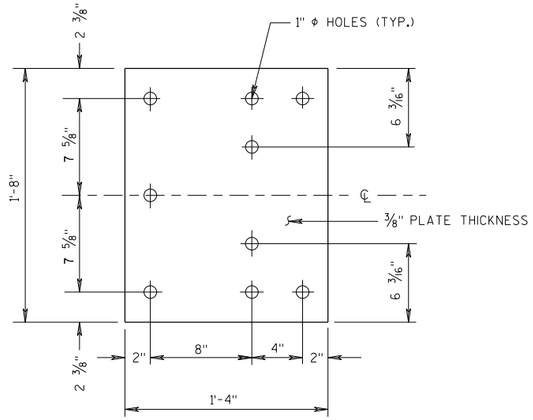
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07/2018 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS [illegible] UNIT SUPERVI[illegible]ENT
FHWA

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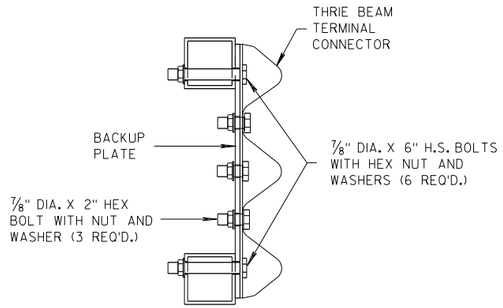
S.D.D. 14 B 45-5f

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



BACK-UP PLATE DETAIL

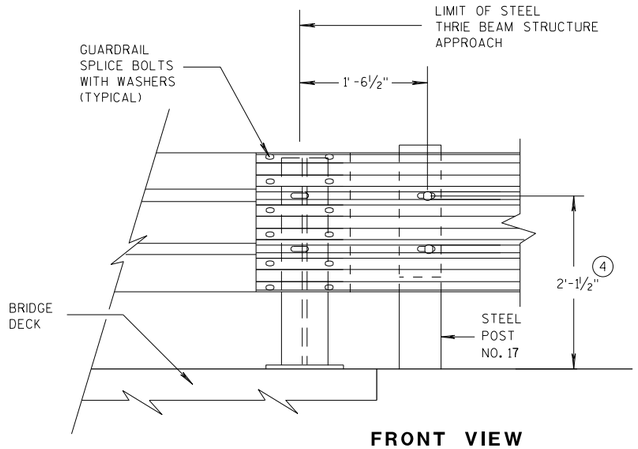


SECTION J-J

GENERAL NOTES

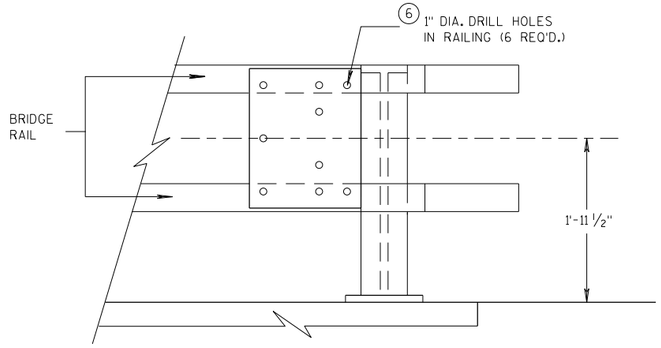
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(6) DRILLING HOLES THROUGH THE PAPRPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

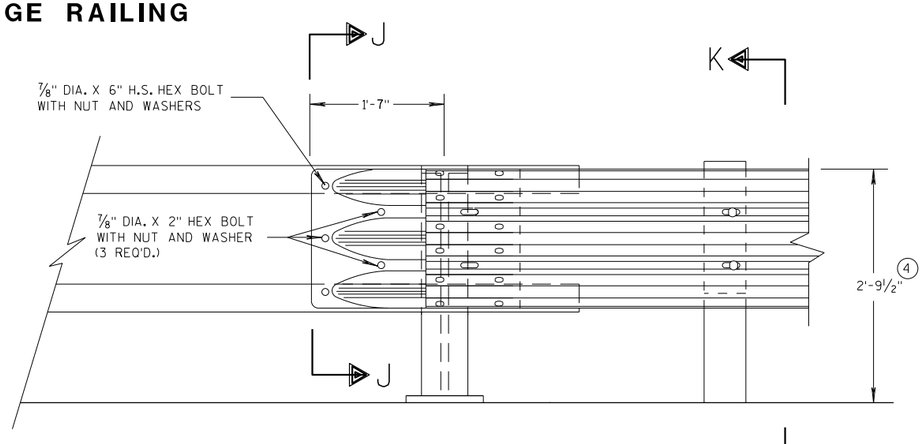


FRONT VIEW

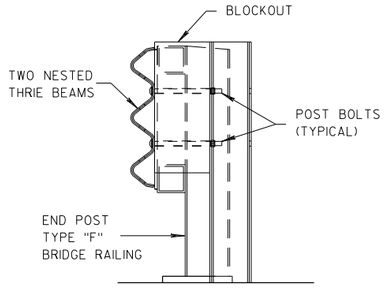
THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
565
FHWA

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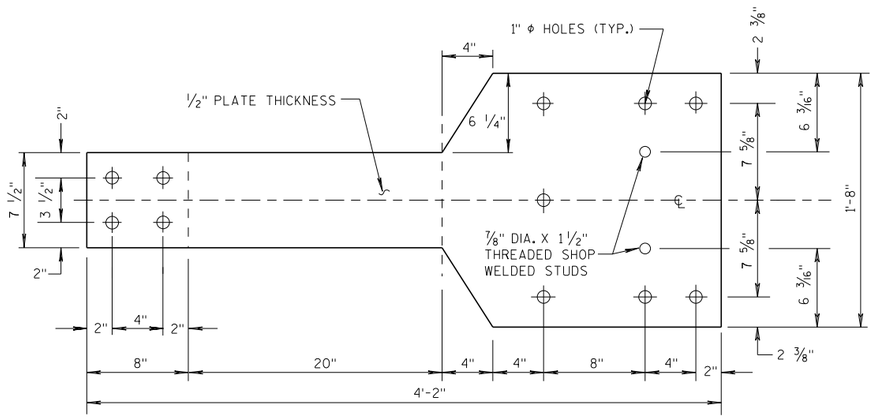
S.D.D. 14 B 45-5g

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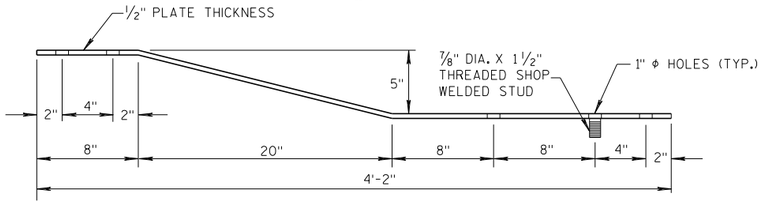
S.D.D. 14 B 45-5g

GENERAL NOTES

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

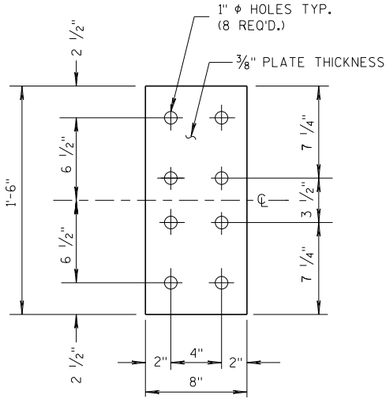


FRONT VIEW



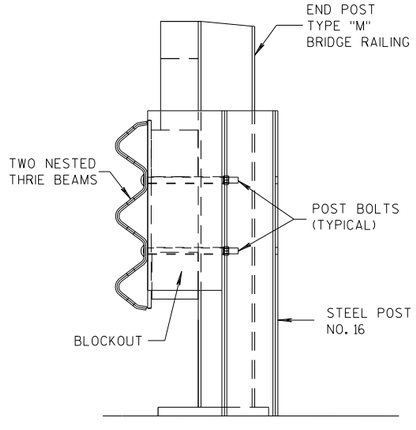
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

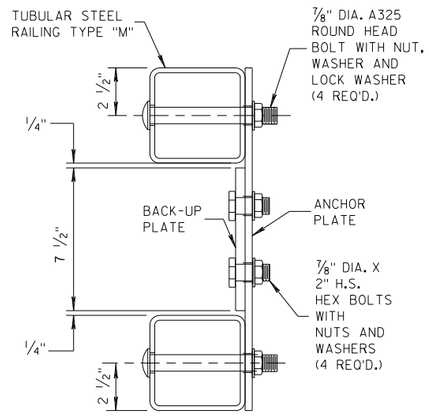


FRONT VIEW

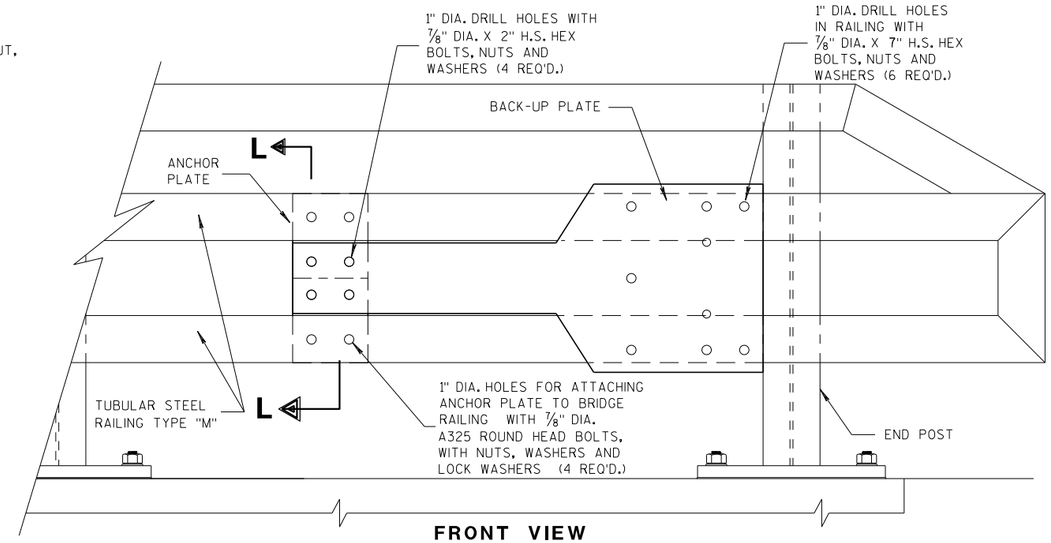
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

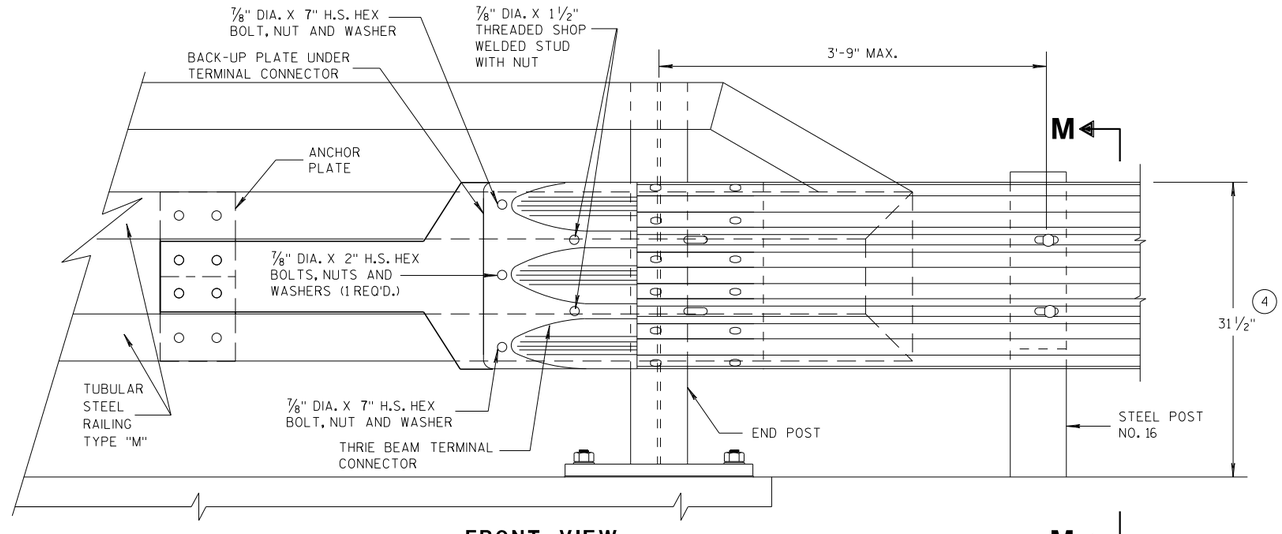


SECTION L-L

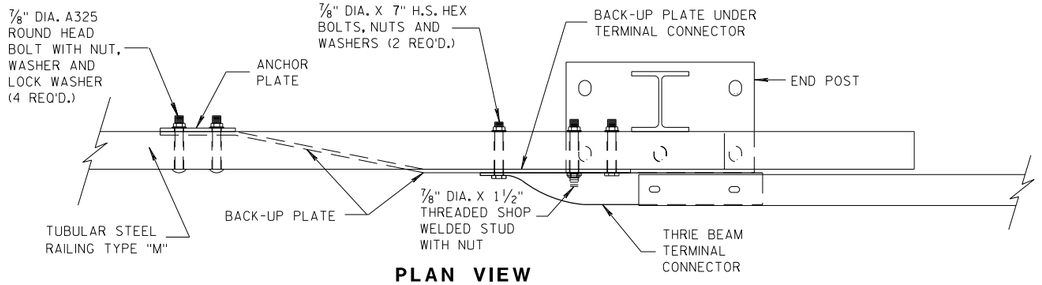


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

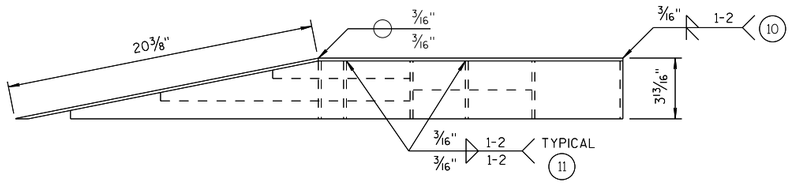
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FHWA

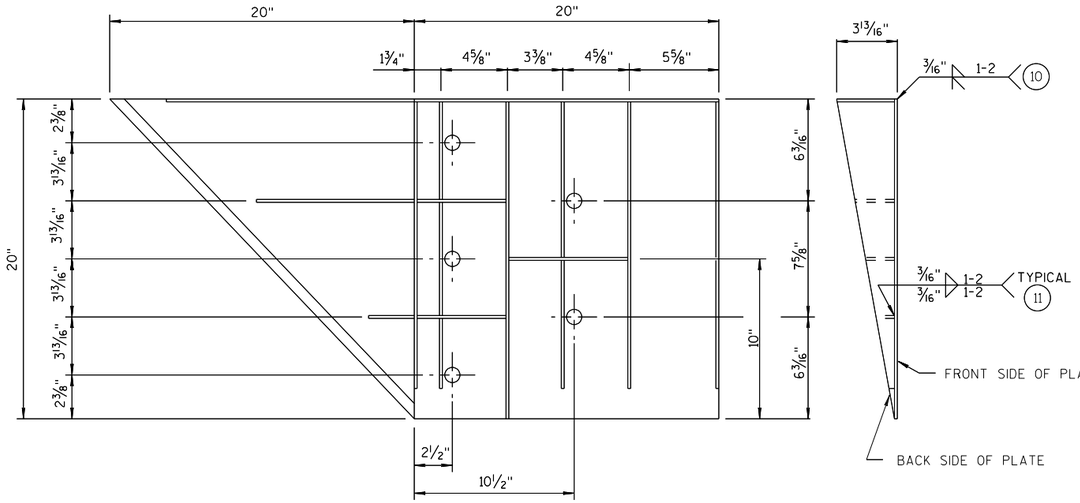
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S.D.D. 14 B 45-5h

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





WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

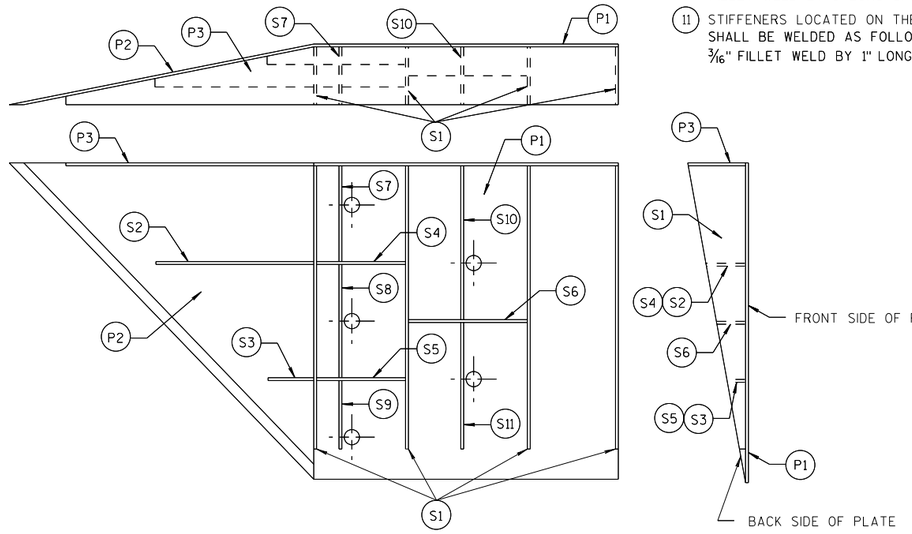


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

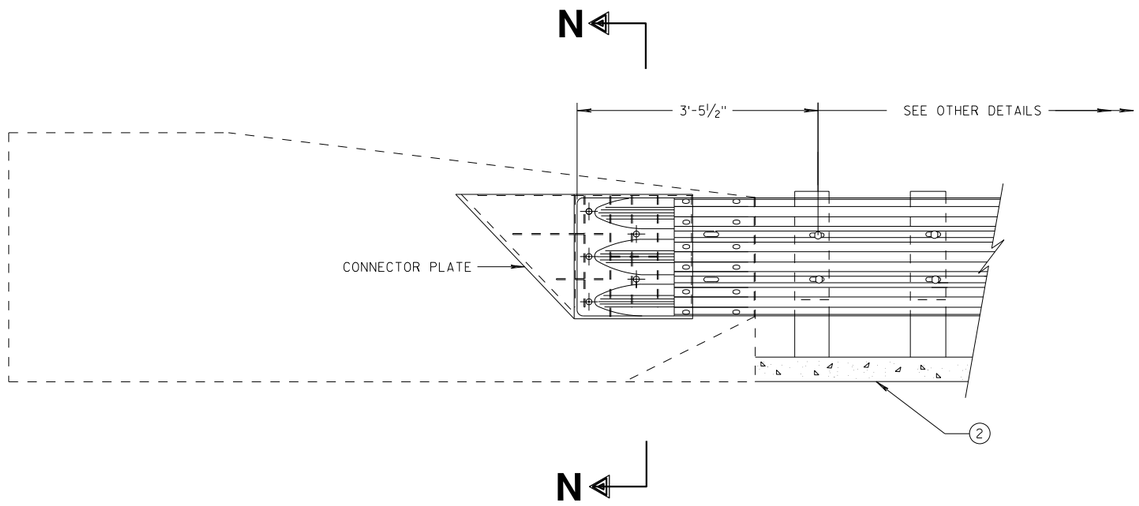
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

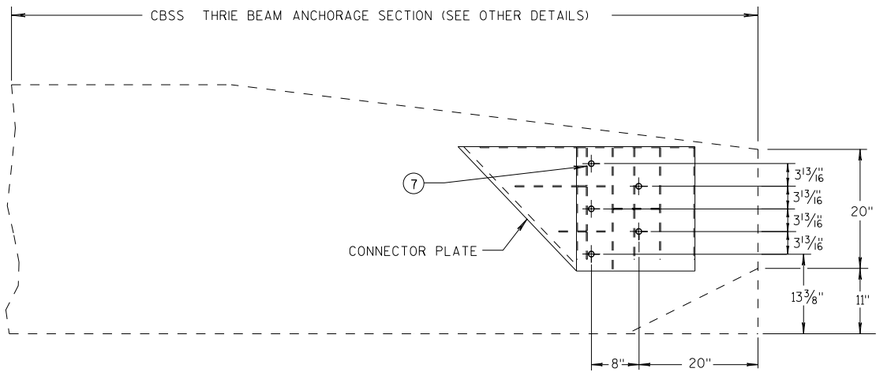
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DATE
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ROADWAY STANDARDS I
UNIT SUPERVI

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



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



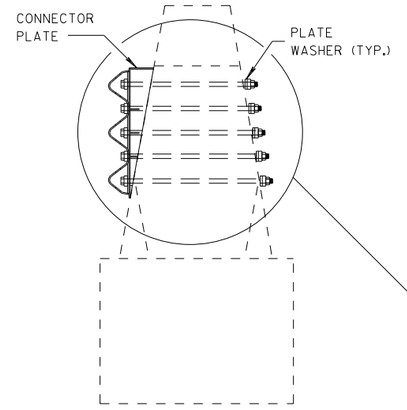
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

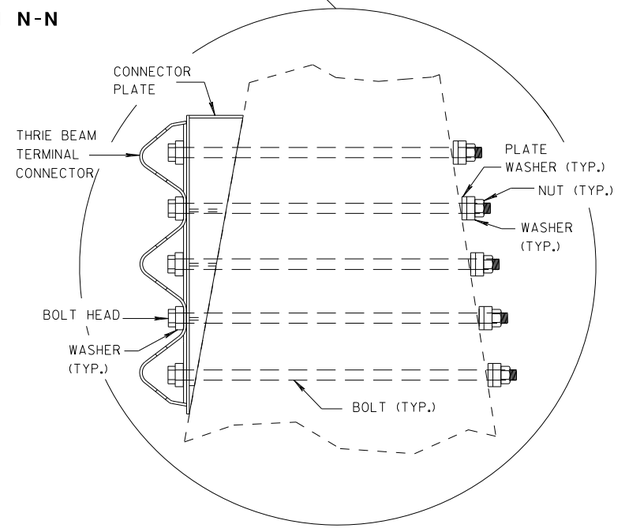
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

(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.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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FHWA

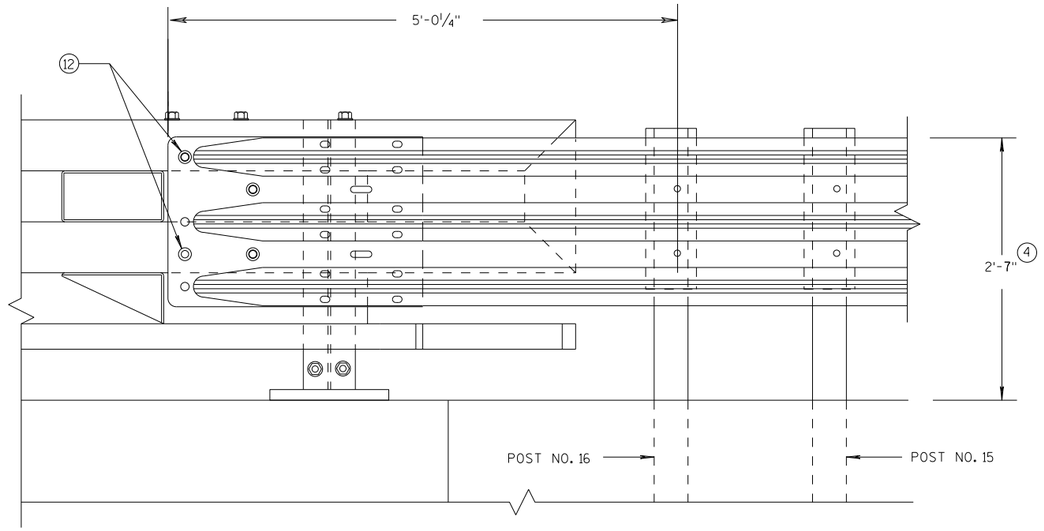
/S/ Rodney Taylor
ROADWAY STANDARDS DI
UNIT SUPERVIS

6

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

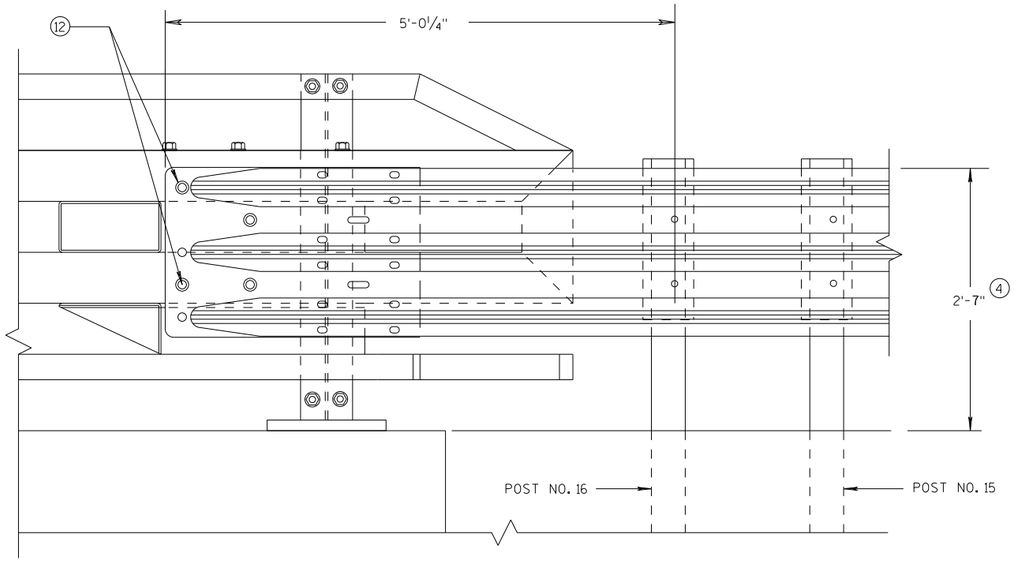
6

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



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

(12) 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. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

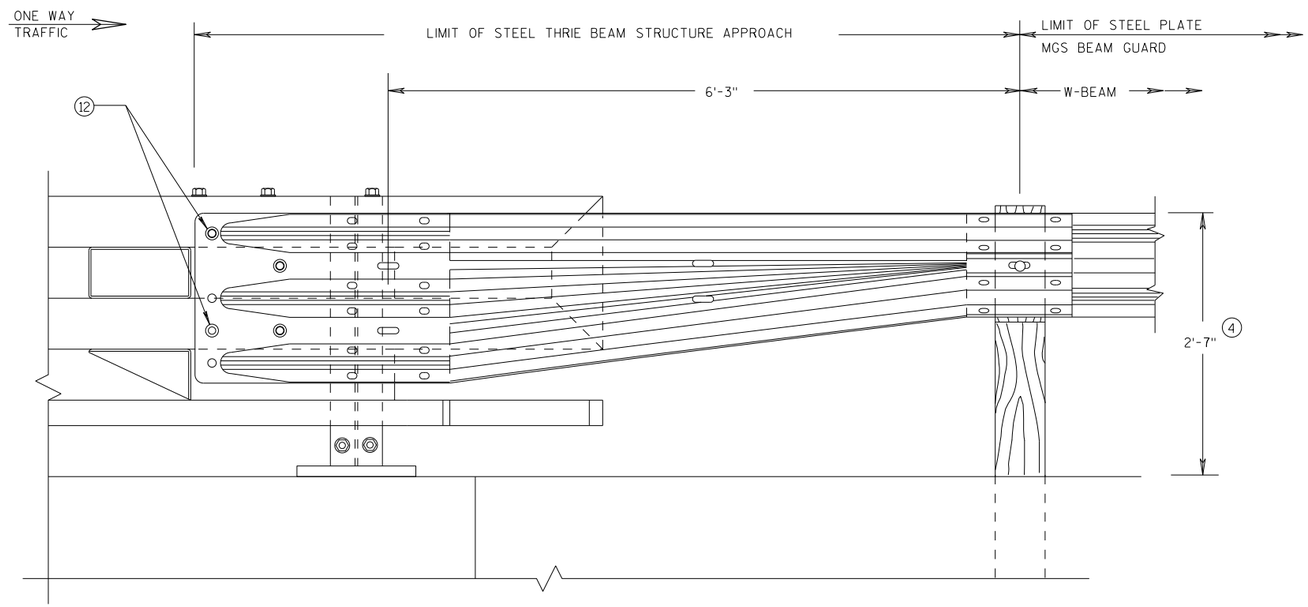
/S/ Rodney Taylor
ROADWAY STANDARDS D 569 NT
UNIT SUPERVIS

6

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

6

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



FRONT VIEW

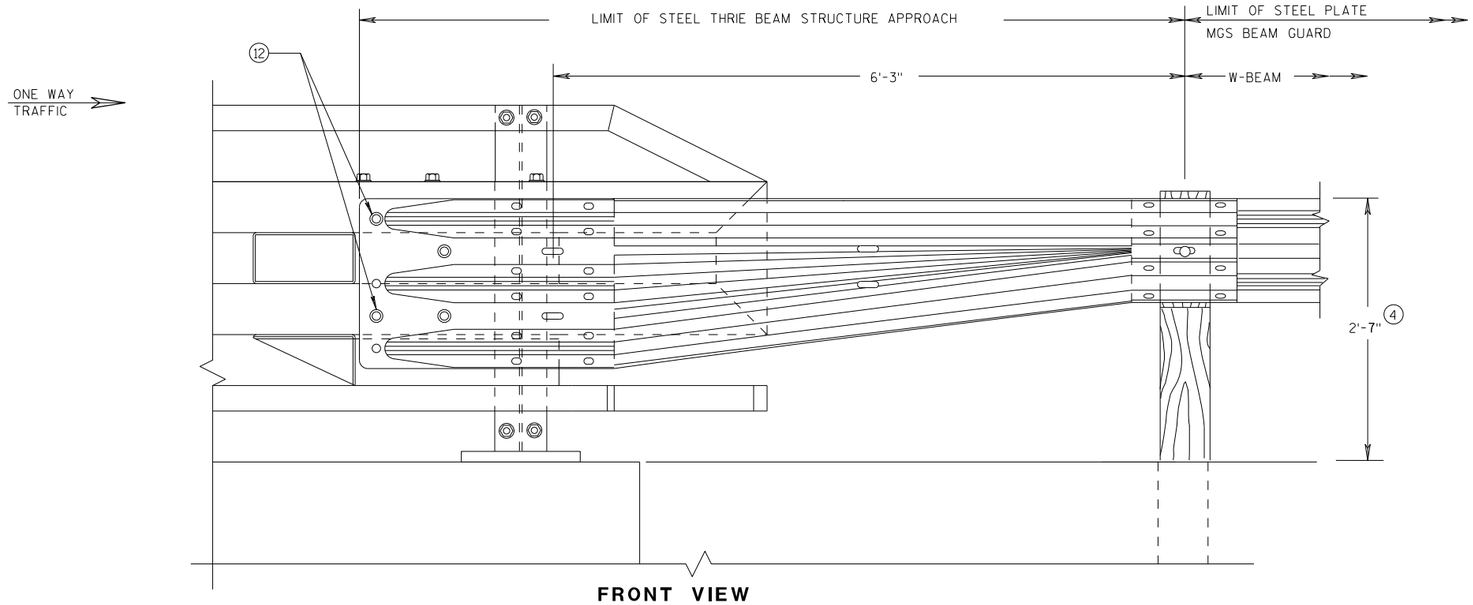
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

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

(12) 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. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

(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
7/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS

570

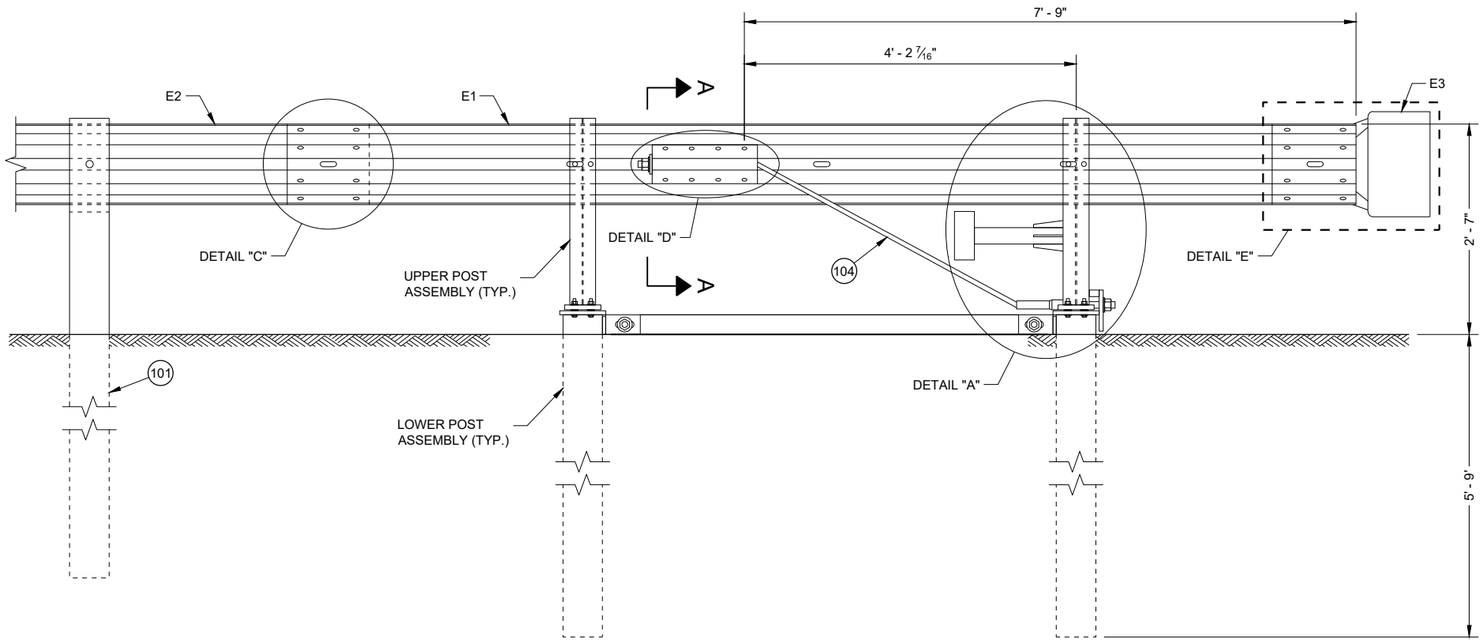
NT

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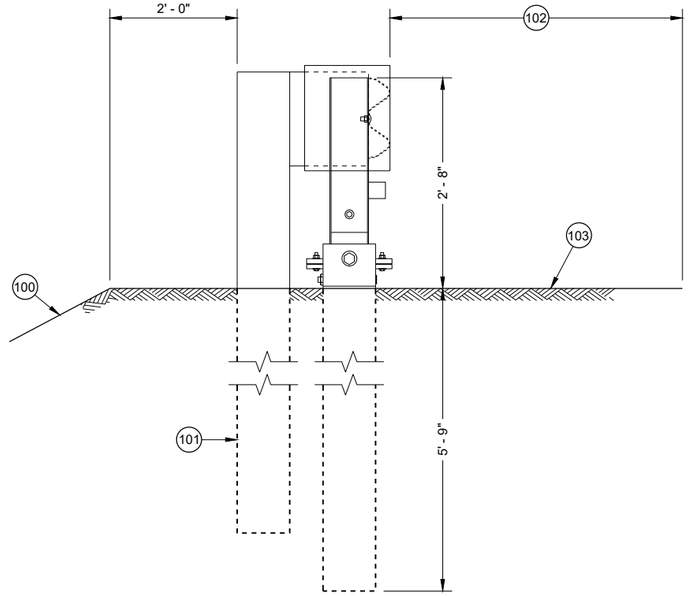
S.D.D. 14 B 45-5L

6

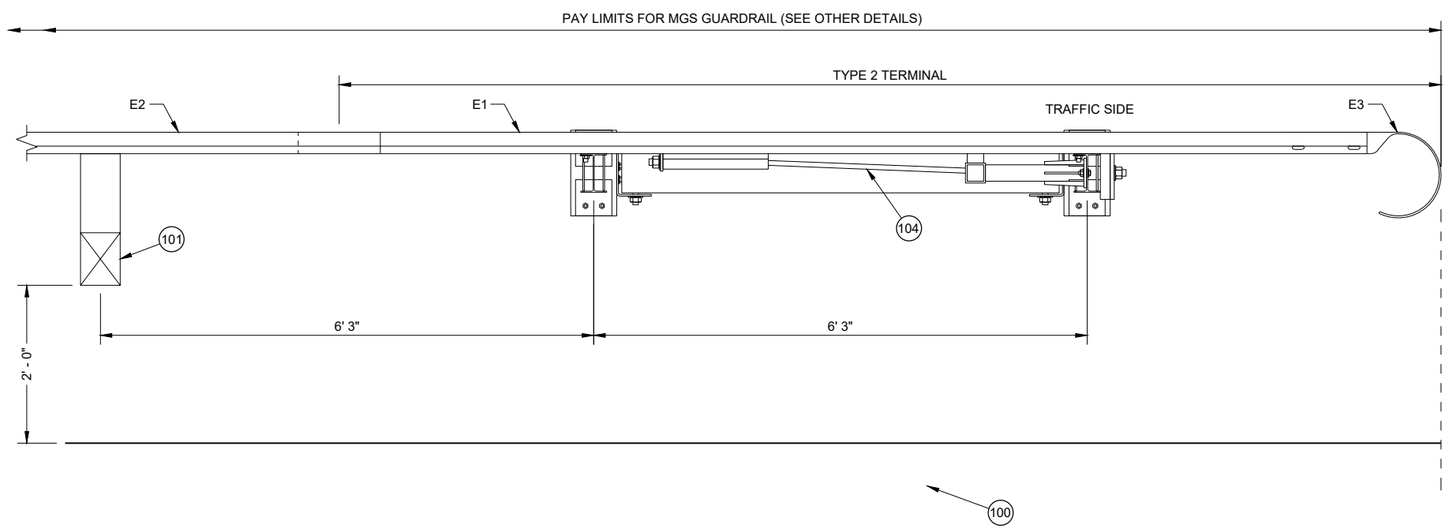
S.D.D. 14 B 45-5L



BACK VIEW
TYPE 2 TERMINAL



SIDE VIEW
TYPE 2 TERMINAL



TOP VIEW
TYPE 2 TERMINAL

GENERAL NOTES

(100) MAXIMUM SLOPE IS 2.5:1.

(101) SEE SDD 14B42 FOR MORE INFORMATION.

(102) SHOULDER

(103) MAXIMUM SLOPE IS 10:1.

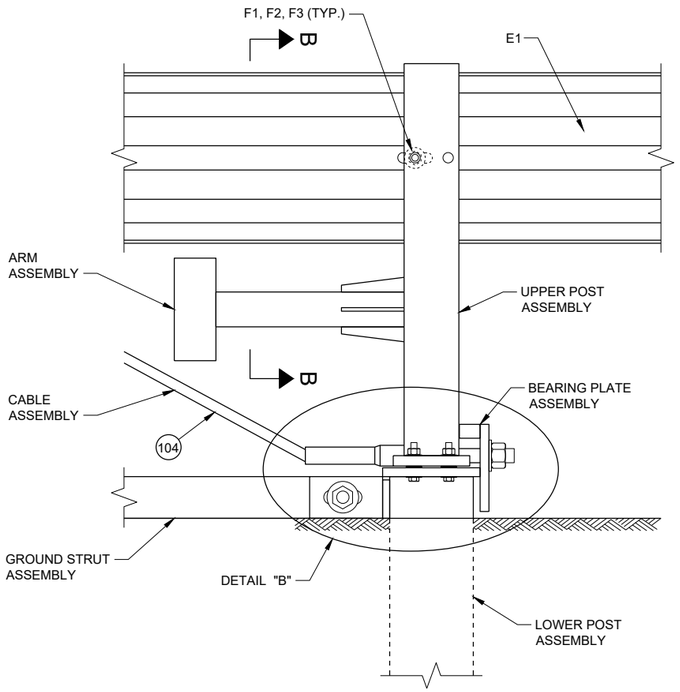
(104) AFTER ASSEMBLY, CABLE IS TO BE TIGHTENED WITHOUT TWISTING THE CABLE.

MIDWEST GUARDRAIL SYSTEM (MGS)
TYPE 2 TERMINAL

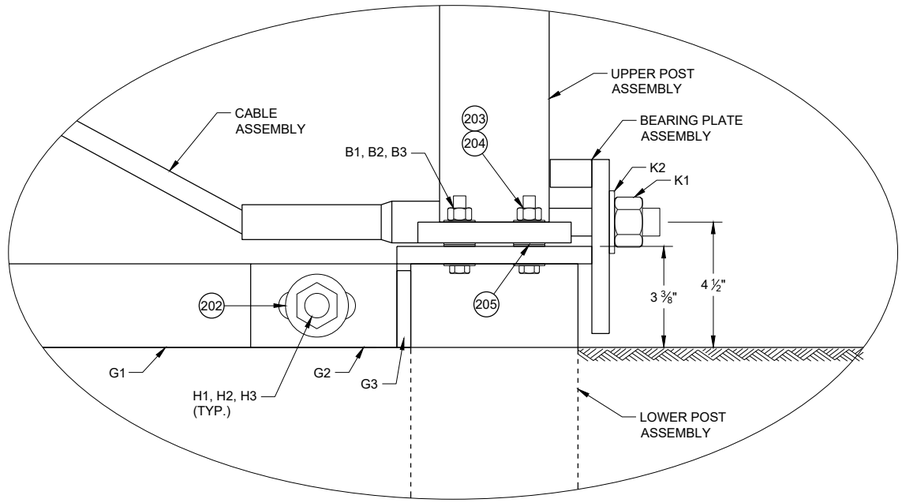
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

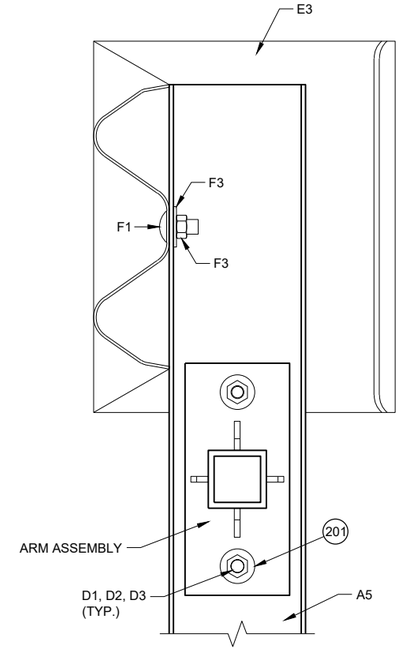
SDD 14B47 - 05a



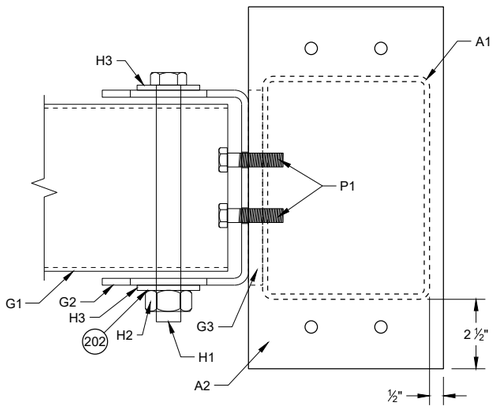
DETAIL "A"



DETAIL "B"

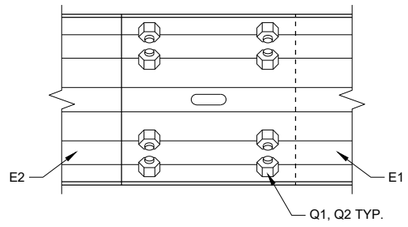


SECTION B - B



TOP VIEW

GROUND STRUT CONNECTION DETAIL



DETAIL "C"

GENERAL NOTES

200 INSTALL ONE WASHER UNDER BOLT HEAD AND RAIL AND ON WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

201 INSTALL ONE WASHER UNDER BOLT HEAD AND UPPER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND ARM PLATE.

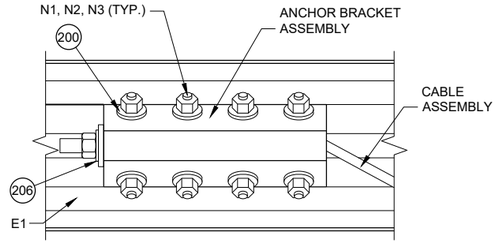
202 INSTALL ONE WASHER UNDER BOLT HEAD AND GROUND STRUT CONNECTOR AND ONE WASHER BETWEEN NUT AND GROUND STRUT CONNECTOR.

203 INSTALL ONE WASHER UNDER BOLT HEAD AND LOWER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND UPPER POST ASSEMBLY.

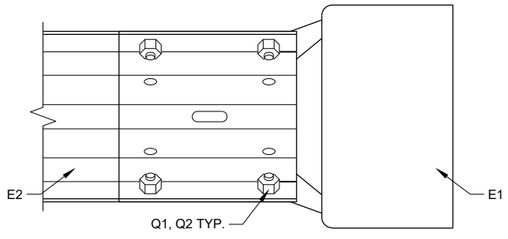
204 TORQUE VALUE IS BETWEEN 60 - 75 FT-LB.

205 TWO WASHERS BETWEEN UPPER AND LOWER POST ASSEMBLY.

206 INSTALL ONE WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.



DETAIL "D"



DETAIL "E"

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

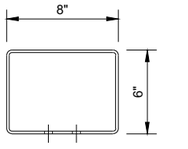
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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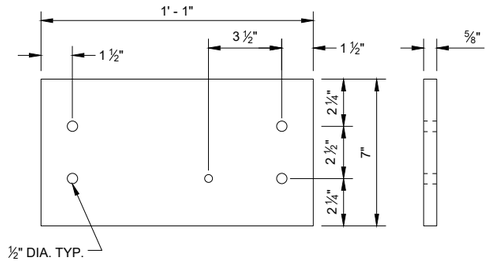
SDD 14B47 - 05b

GENERAL NOTES

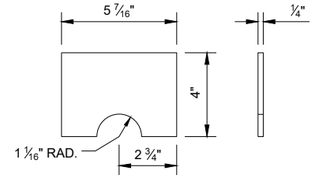
(300) TAP FOR 1/2" AFTER GALVANIZATION



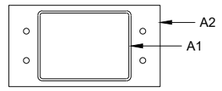
TOP VIEW



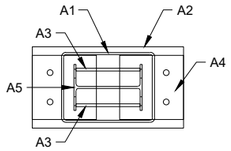
LOWER PLATE (A2)

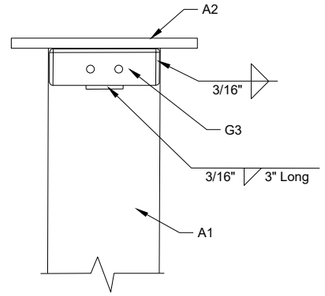


POST GUSSET (A3)

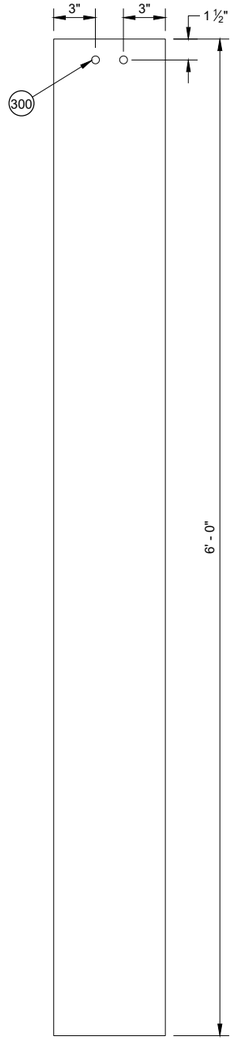


PLAN VIEW



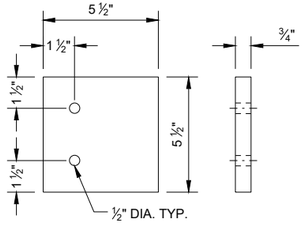


WELDING DETAIL
G3 AND A1

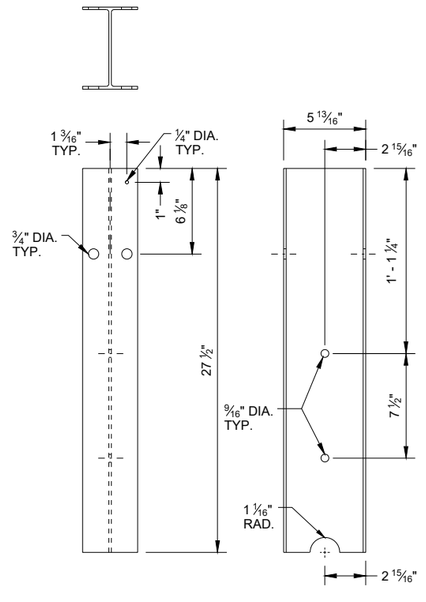


SIDE VIEW

FOUNDATION TUBE (A1)

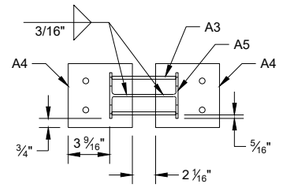


UPPER PLATE (A4)

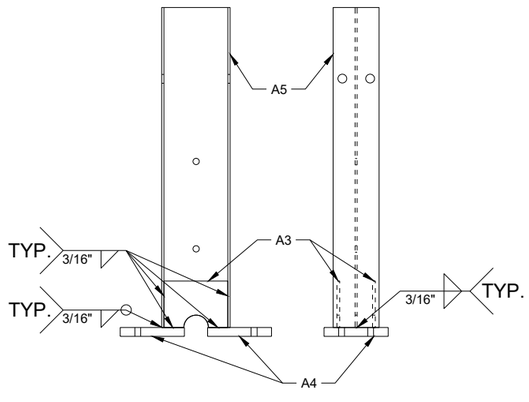


FRONT VIEW SIDE VIEW

TYPE 2 POST (A5)

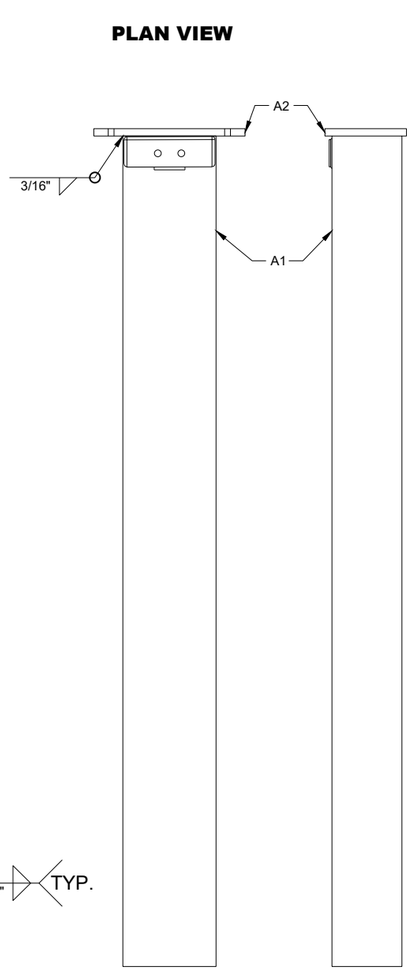


PLAN VIEW



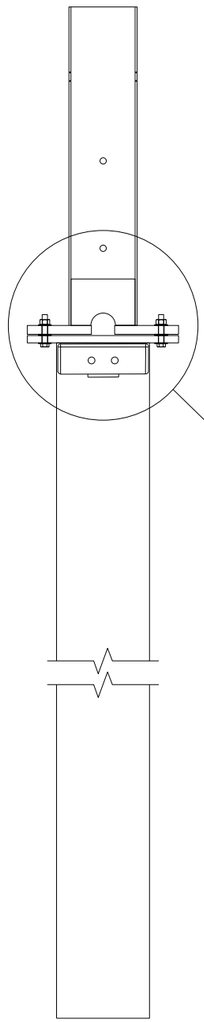
SIDE VIEW FRONT VIEW

UPPER POST ASSEMBLY

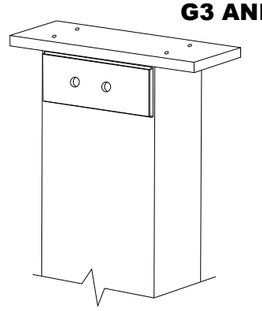


FRONT VIEW SIDE VIEW

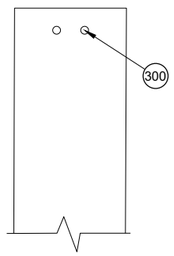
LOWER POST ASSEMBLY



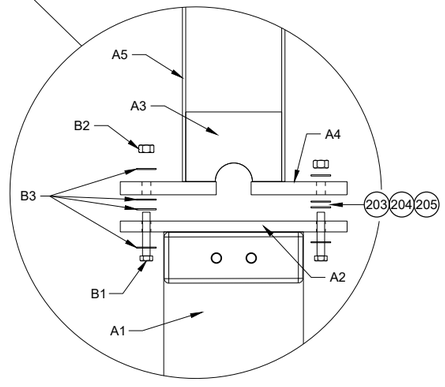
ASSEMBLED POST



ASSEMBLY DETAIL
ISOMETRIC



A1



POST CONNECTION DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

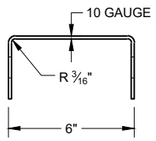
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

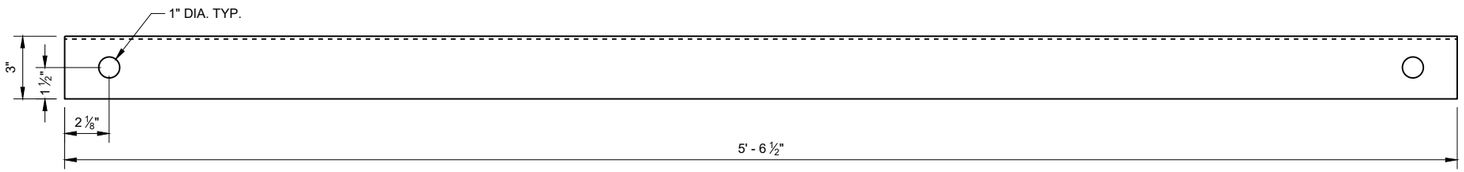
SDD14B47 - 05c

6

SDD14B47 - 05c

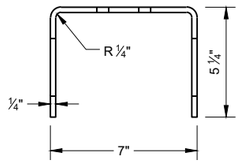


SIDE VIEW

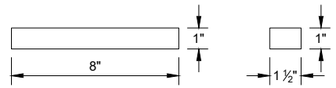


FRONT VIEW

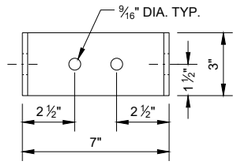
GROUND STRUT CHANNEL (G1)



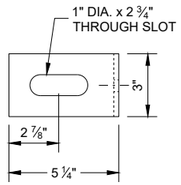
TOP VIEW



BEARING PLATE FLANGE (L2)

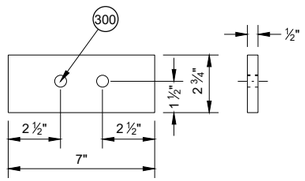


FRONT VIEW

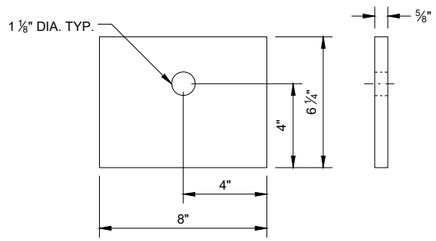


SIDE VIEW

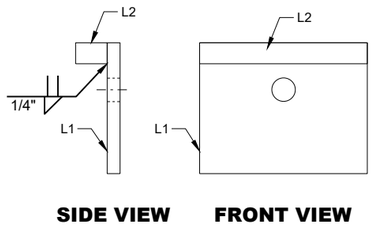
GROUND STRUT CONNECTOR (G2)



GROUND STRUT PLATE (G3)

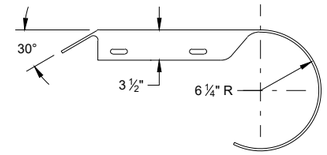


BEARING PLATE (L1)

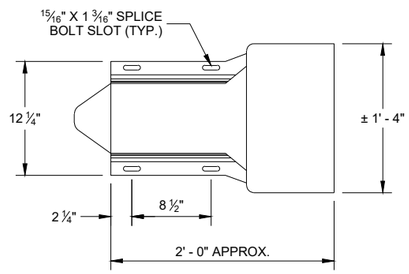


SIDE VIEW FRONT VIEW

BEARING PLATE ASSEMBLY

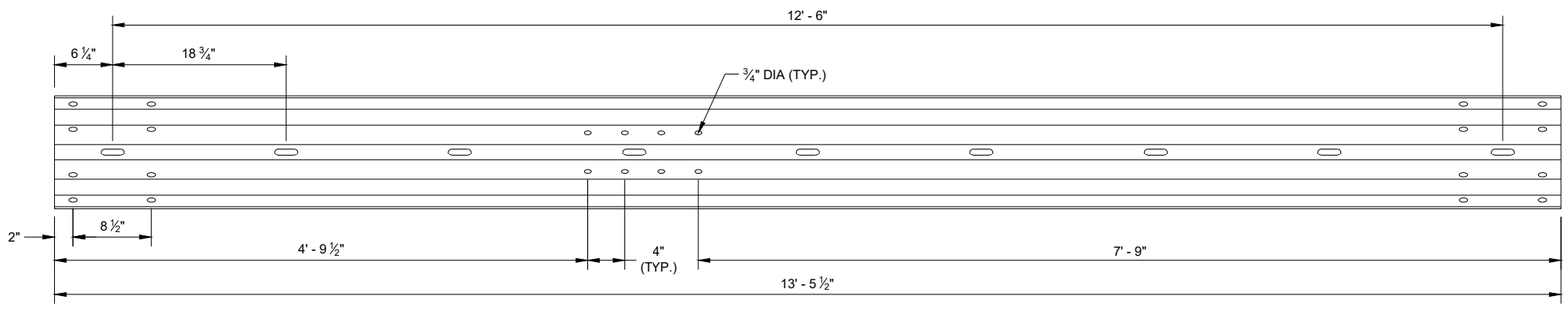


PLAN VIEW

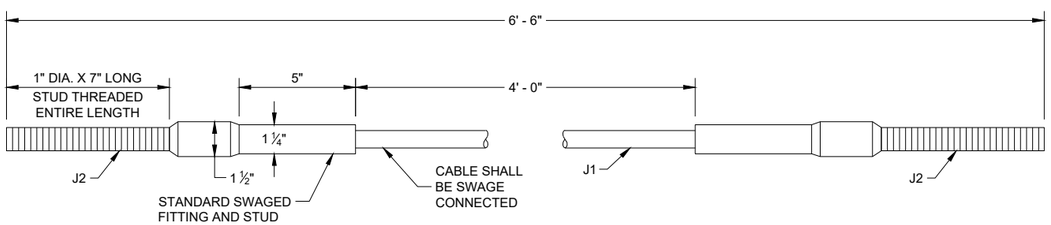


ELEVATION VIEW

ROUNDED BUFFER END (E3)



TYPE 2 GUARDRAIL (E1)



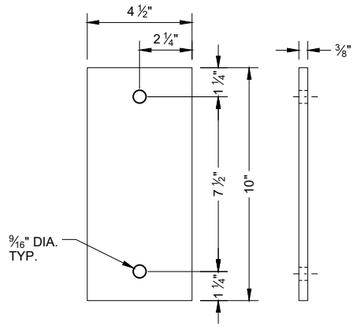
CABLE ASSEMBLY

MIDWEST GUARDRAIL SYSTEM (MGS)
TYPE 2 TERMINAL

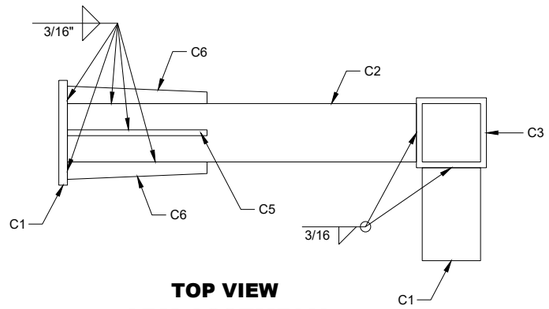
STATE OF WISCONSIN
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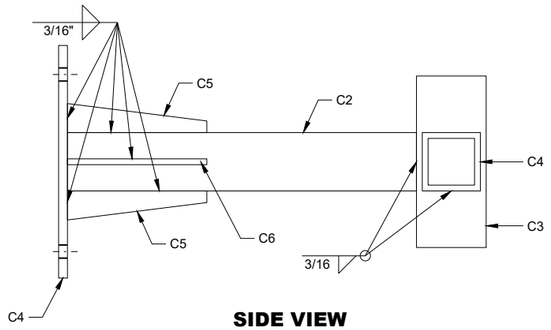
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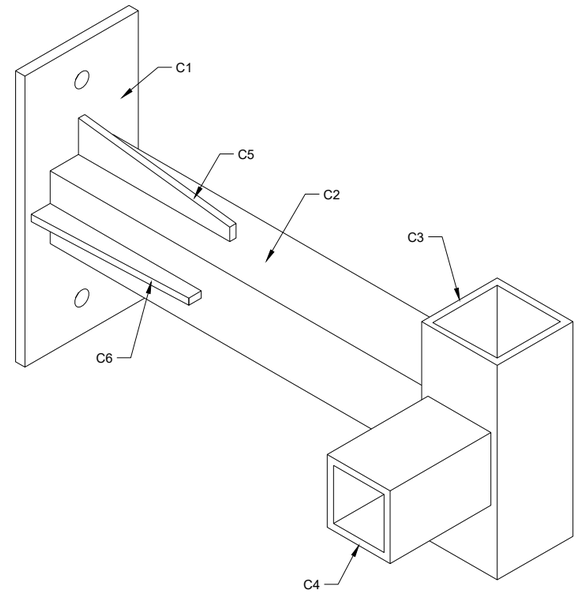
ARM PLATE (C1)



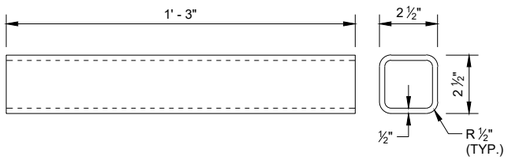
TOP VIEW
ARM ASSEMBLY



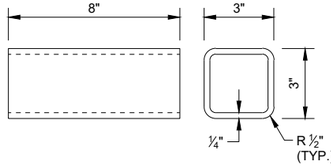
SIDE VIEW
ARM ASSEMBLY



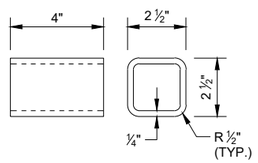
ISOMETRIC VIEW
ARM ASSEMBLY



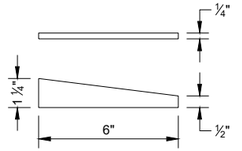
ARM TUBE 1 (C2)



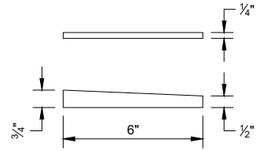
ARM TUBE 2 (C3)



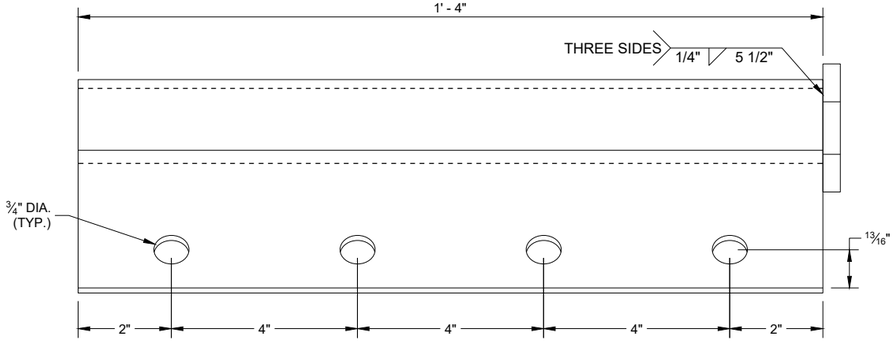
ARM TUBE 3 (C4)

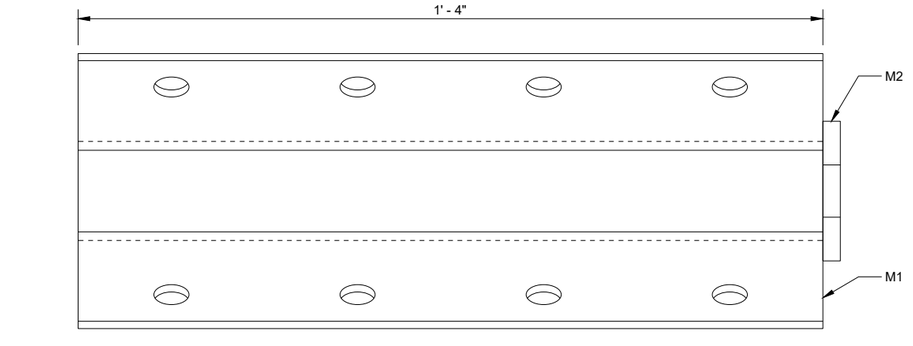


ARM GUSSET PLATE 1 (C5)

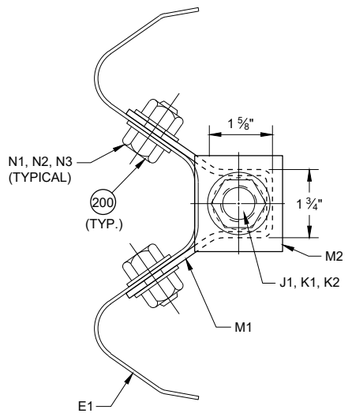


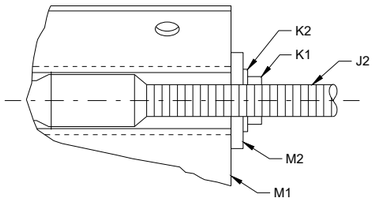
ARM GUSSET PLATE 2 (C6)



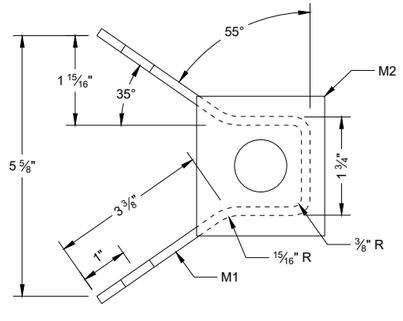


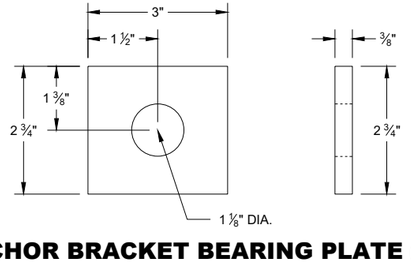
ANCHOR BRACKET (M1, M2)





SECTION A - A





ANCHOR BRACKET BEARING PLATE (M2)

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA 575

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BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	TYPE 2 FOUNDATION TUBE	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
A2	LOWER PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	5/8" THICKNESS
A3	POST GUSSET	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
A4	UPPER PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/4" THICKNESS
A5	TYPE 2 POST	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI, w6x9 or w6x8.5	
B1	BREAKAWAY BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED . PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	7/16" DIA.
B2	BREAKAWAY BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	7/16" DIA.
B3	BREAKAWAY BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
C1	ARM ASSEMBLY PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/8" THICKNESS
C2	ARM ASSEMBLY TUBE 1	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
C3	ARM ASSEMBLY TUBE 2	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 3" x 3" x 1/4"
C4	ARM ASSEMBLY TUBE 3	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 2 1/2" x 2 1/2" X 1/4"
C5	ARM ASSEMBLY GUSSET PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
C6	ARM ASSEMBLY GUSSET PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
D1	ARM ASSEMBLY BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	1/2" DIA.
D2	ARM ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	1/2" DIA.
D3	ARM ASSEMBLY NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1/2" DIA.
E1	TYPE 2 GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E2	BEAM GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E3	BEAM GUARD ROUNDED BUFFER END	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
F1	POST BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
F2	POST BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
F3	POST BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
G1	GROUND STRUT CHANNEL	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/2" x 11 3/4" x 10 GAUGE
G2	GROUND STRUT CONNECTOR	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
G3	GROUND STRUT PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/2" THICKNESS

BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
H1	GROUND STRUT BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	7/8" DIA.
H2	GROUND STRUT BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	7/8" DIA.
H3	GROUND STRUT BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
J1	BCT CABLE	AASHTO M30 / ASTM A741 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS), 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS) TYPE II OR IIC, CLASS C ZINC COATED MIN. BREAKING STRENGTH OF 42.7 KIPS	**3/4" DIA.**
J2	BCT CABLE	UNC 1" ASTM A576 GRADE 1035 SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. MIN BREAKING STRENGTH OF 42.7 KIPS ASME B30.26 "FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING IN TO CONNECTION: NAME OF MANUFACTURE OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE FOR ALLOY EYEBOLTS."	
K1	CABLE ASSEMBLY NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1" DIA.
K2	CABLE ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1	1" DIA.
L1	BEARING PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	5/8" THICKNESS
L2	BEARING PLATE FLANGE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1" THICKNESS
M1	BEAM GUARD ANCHOR BRACKET	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	
M2	BEAM GUARD ANCHOR END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/8" THICKNESS
N1	ANCHOR BRACKET BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
N2	ANCHOR BRACKET BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
N3	ANCHOR BRACKET BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 /ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
P1	FOUNDATION TUBE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1/2" DIA.
Q1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
Q2	SPLICE NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	5/8" DIA.

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MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
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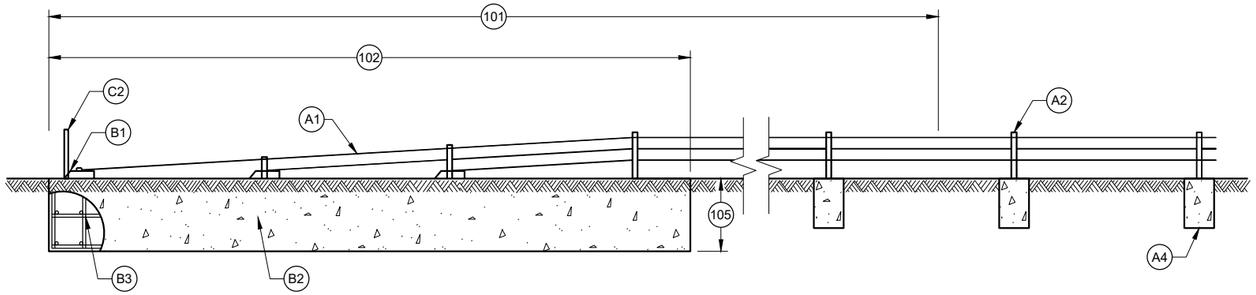
APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

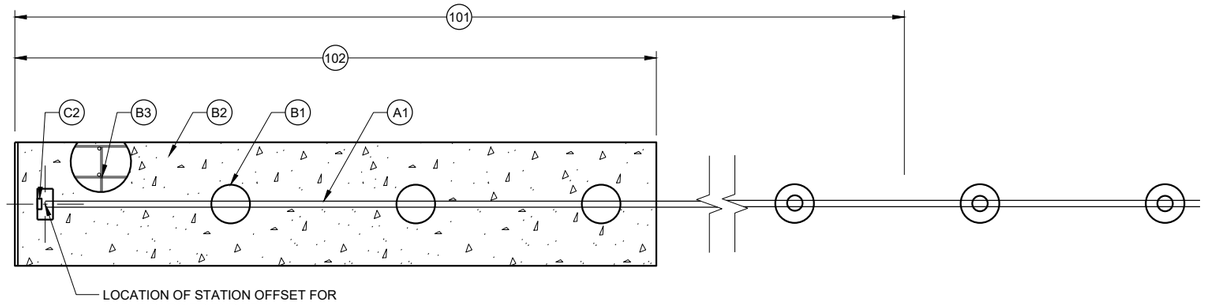
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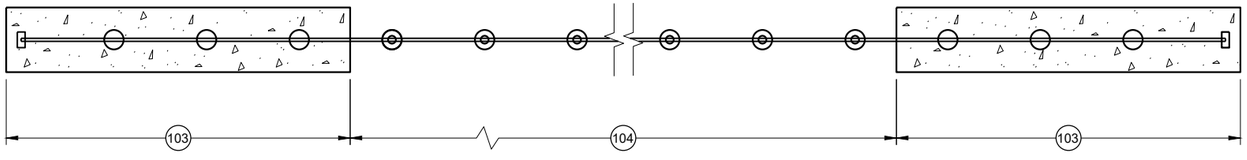


PROFILE VIEW

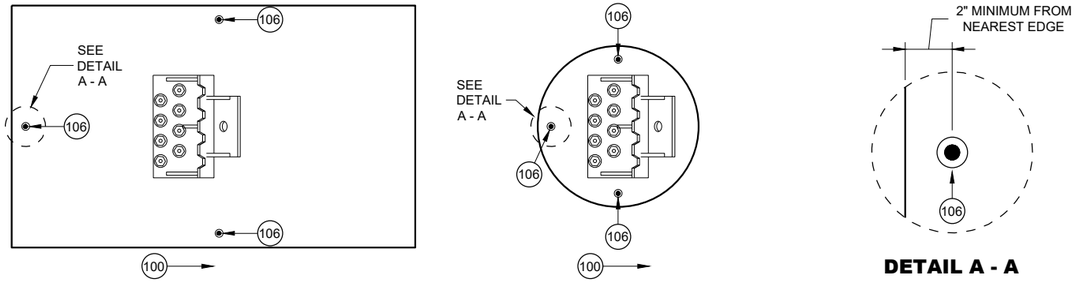


PLAN VIEW

TRANSITION FROM CABLE BARRIER TERMINAL TO CABLE BARRIER LINE POSTS



TYPICAL PLAN VIEW



DETAIL A - A

ANCHOR MONITOR POINTS FOR CABLE BARRIER END TERMINAL ANCHORS

GENERAL NOTES

DRAWINGS ARE GENERAL IN NATURE. SEE MANUFACTURER'S INFORMATION FOR MORE DETAIL.

PROVIDE 2 INCH CLEAR COVER FROM OUTER EDGE OF CONCRETE FOOTINGS TO REINFORCEMENT.

INSTALL LINE POSTS PLUMB. LINE POSTS ARE TO BE EASILY REMOVED BY HAND AND HOLD CABLES AT THE PROPER ELEVATION.

PROVIDE CABLE BARRIER SYSTEM FROM APPROVED PRODUCT LIST.

PROVIDE A SYSTEM TO HAVE THE WORKING WIDTH INDICATED IN PLAN.

PROVIDE DOCUMENTATION HOW POST SPACING, RADIUS OF CURVE AND ANCHOR SPACING INFLUENCES WORKING WIDTH TO CONSTRUCTION STAFF.

CONSTRUCT SHAFTS VERTICALLY. VERTICAL TOLERANCE OF SHAFT IS $\frac{1}{8}$" PER FOOT OF DEPTH. SHAFTS ARE TO MINIMIZE DISTURBANCE TO ADJACENT SOILS.

SECURE STEEL REINFORCEMENT AND STEEL SLEEVE PRIOR TO PLACEMENT OF CONCRETE. MAINTAIN CLEAR DISTANCE BETWEEN SOIL AND REINFORCEMENT CAGE.

PLACE CONCRETE IN ONE CONTINUOUS POUR FOR EACH FOOTING. USE VIBRATION TO CONSOLIDATE CONCRETE.

PROVIDE CASING AS NECESSARY TO PREVENT INTRUSION OF UNCONSOLIDATED MATERIALS OR WATER. USE CASINGS WHEN THERE IS 3 OR MORE INCHES OF WATER IN EXCAVATION.

PROVIDE WISCONSIN PROFESSIONAL ENGINEER SIGNED AND APPROVED FOOTING DESIGN USING A CASING AND CONSTRUCTION SEQUENCE. PROJECT ENGINEER WILL REVIEW AND APPROVED CASING DESIGN AND CONSTRUCTION SEQUENCE. CASING IS TO HAVE INTIMATE CONTACT WITH SHAFT SIDEWALL. CASING IT TO WITHSTAND INSERTION STRESS, REMOVAL STRESS, CONCRETE PRESSURE AND SOIL PRESSURE. REMOVE CASING DURING CONCRETE PLACEMENT OR IMMEDIATELY AFTER CONCRETE PLACEMENT. NO TEMPORARY CASING MAY REMAIN IN-PLACE.

PROVIDE WISCONSIN PROFESSIONAL ENGINEER SIGNED AND APPROVED FOOTING DESIGN AND CONSTRUCTION SEQUENCE WHEN OVER EXCAVATION IS REQUIRED NEAR A FOOTING. PROJECT ENGINEER WILL REVIEW AND APPROVED DESIGN AND CONSTRUCTION SEQUENCE.

FINISH TOP OF FOOTINGS TO THE DIMENSIONS INDICATED IN PLAN. REMOVE EXCESS CONCRETE.

DESIGN POST FOOTINGS SO THAT LINE POST FOOTING MOVE LESS THAN 1 INCH WHEN LINE POST IS IMPACTED BY A NCHRP 350 TL-3 SMALL CAR.

USE MARINE GRADE ANTI-SEIZE LUBRICANT FOR THREADING FITTINGS THAT IS ACCEPTABLE FOR USE ON GALVANIZED STEEL.

(100) DIRECTION THAT THE CABLE PULLS THE END ANCHOR FOOTING

(101) LOCATION OF LENGTH OF NEED POINT FOR CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)

(102) PAY LIMIT FOR CABLE BARRIER END TERMINAL. LENGTH OF CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)

(103) CABLE BARRIER END TERMINAL

(104) CABLE BARRIER AND LINE POSTS

(105) IN SOIL MINIMUM DEPTH OF CABLE BARRIER END TERMINAL FOOTING IS 60 INCHES. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.

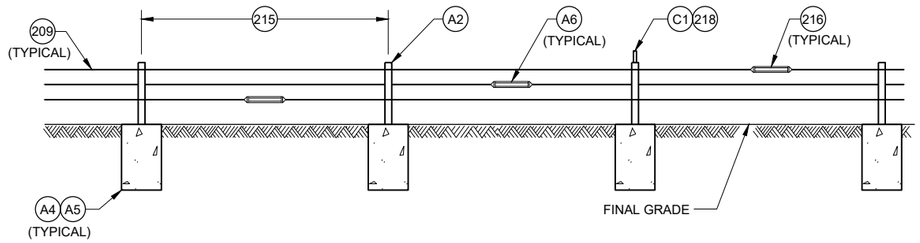
(106) ANCHOR MONITOR POINTS ARE GALVANIZED SURVEY NAIL, OR MASONRY NAIL, PLACED INTO CONCRETE FOOTING BEFORE HARDENING. IF THERE ARE MULTIPLE ANCHOR POINTS WITHIN A PAY LIMIT FOR A CABLE BARRIER END TERMINAL, EACH ANCHOR POINT NEEDS THREE ANCHOR MONITOR POINTS.

CABLE BARRIER TYPE 1 LAYOUT

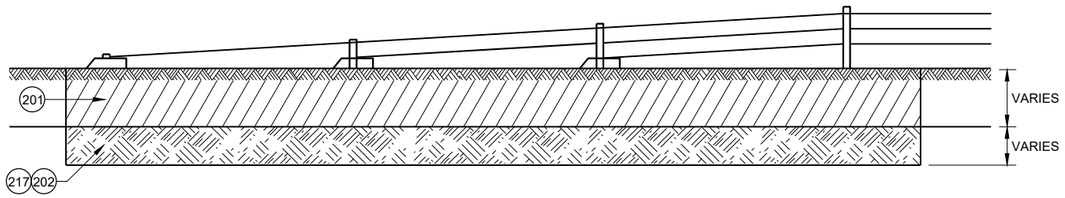
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PROFILE VIEW
LINE POST INSTALLATION



CABLE BARRIER END TERMINAL
ROCK EXCAVATION DETAIL

GENERAL NOTES

201 SOIL TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES)

202 ROCK TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES)

203 SOIL TO BE EXCAVATED FOR LINE POST (VARIES)

204 ROCK TO BE EXCAVATED FOR LINE POST (VARIES)

205 EXCAVATE AND GRADE LINE FOR LINE POST FOOTINGS. INSTALL LINE POST FOOTING TO MINIMIZE 4 INCH TALL OBJECT ON 5 FOOT CHORD.

206 2 INCHES OF CLEAR COVER FROM EDGE OF CONCRETE TO REINFORCEMENT.

207 DIAMETER OF LINE POST FOOTING VARIES. SEE MANUFACTURERS' INFORMATION.

208 MINIMUM DEPTH OF LINE POST FOOTING IS 4' - 0" IN SOIL. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.

209 NUMBER AND LOCATION OF CABLES VARY. SEE MANUFACTURERS' INFORMATION.

210 LINE POST DIMENSIONS AND CONNECTION HARDWARE VARY. SEE MANUFACTURERS' INFORMATION.

211 LANE OF ROADWAY (VARIES). SEE PLAN FOR MORE INFORMATION.

212 PAVED SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.

213 GRAVEL SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.

214 CABLE BARRIER OFFSET FROM CENTERLINE OF MEDIAN DITCH (8 FOOT MINIMUM). SEE PLAN FOR MORE INFORMATION.

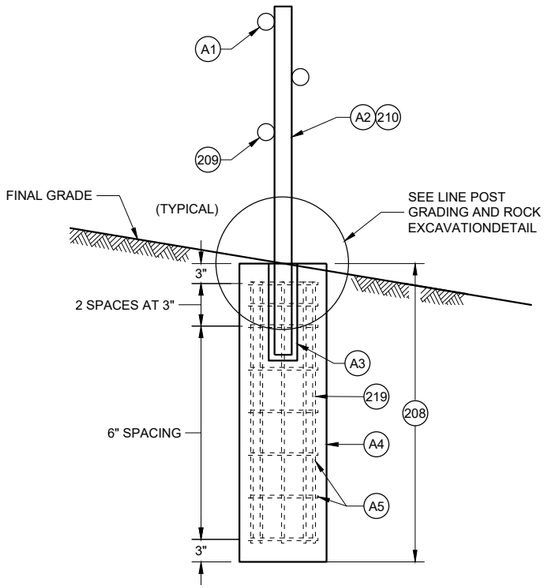
215 MAXIMUM POST SPACING IS 15 FEET.

216 STAGGER TURNBUCKLES (TYPICAL).

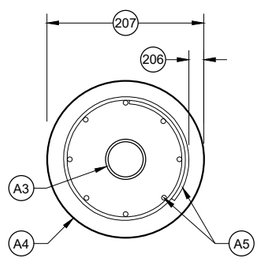
217 SEE MANUFACTURER'S DESIGN WHEN ROCK IS ENCOUNTERED.

218 LINE POST DELINEATOR SPACING IS 100 FEET.

219 MINIMUM LINE POST FOOTING REINFORCEMENT SHOWN. MANUFACTURER IS TO INDICATE REINFORCEMENT IS ADEQUATE FOR THEIR SYSTEM. IF REINFORCEMENT IS NOT ADEQUATE, PROVIDE FOOTING DESIGN WITH A ADEQUATE REINFORCEMENT.

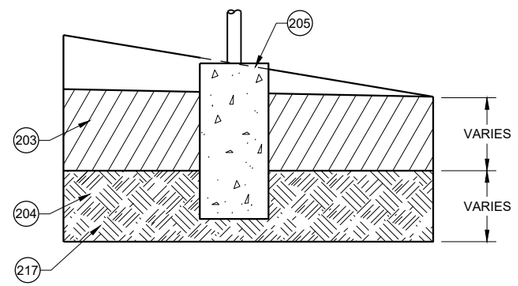


CROSS SECTION

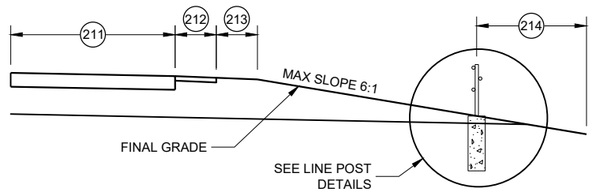


PROFILE VIEW
(LINE POSTS AND CABLES NOT SHOWN)

LINE POST DETAILS



LINE POST GRADING
AND ROCK EXCAVATION DETAIL



CABLE BARRIER OFFSET FROM DITCH LINE

CABLE BARRIER
TYPE 1 LAYOUT

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BILL OF MATERIALS

PART NUMBER	QTY.	DESCRIPTION	MATERIALS SPECIFICATIONS
A1	3 OR 4	¾" 3x7 PRESTRECHED GALVANIZED STEEL WIRE ROPE	AASHTO M30 TYPE 1 CLASS A OR ASTM A741 TYPE 1 CLASS A WITH MINIMUM BREAKING STRENGTH = 39 KIPS (173.5 KN)
A2	1 PER LINE POST	GALVANIZED REMOVABLE STEEL LINE POST	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
			ASTM A123 (GALVANIZATION).
A3	1 PER LINE POST	GALVANIZED STEEL SLEEVE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
			ASTM A123 (GALVANIZATION).
A4	VARIES	CONCRETE FOR LINE POST FOOTING	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2 OR AS MANUFACTURER SPECIFIES.
			STANDARD SPECIFICATION 716 QMP FOR CLASS II ANCILLARY CONCRETE
			SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
A5	MINIMUM REINFORCEMENT: 8 HORIZONTAL LOOP BARS 8 VERTICAL BARS	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
			ALL BARS ARE NO. 4 BARS
A6	VARIES	TURNBUCKLES AND OTHER CABLE CONNECTING HARDWARE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
			MINIMUM BREAKING STRENGTH OF TURNBUCKLES AND CONNECTION HARDWARE IS EQUAL TO CABLE.
			TURNBUCKLES AND OTHER CABLE CONNECTION HARDWARE IS FIELD SWAGED PER MANUFACTURER'S RECOMMENDATION AND DETAILS.
			PROVIDE DOCUMENTATION THAT THE FITTINGS ARE STRONGER THAN THE CABLE BARRIER. DOCUMENTATION IS TO INCLUDE: MANUFACTURER NAME, TESTING RESULTS, AND DATE OF TESTING.
B1	VARIES	CABLE CONNECTION TO CABLE BARRIER END TERMINAL	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
B2	VARIES	CONCRETE FOR CABLE BARRIER END TERMINAL	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2.
			STANDARD SPECIFICATION 716 QMP FOR CLASS II ANCILLARY CONCRETE
B3	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
C1	VARIES	LINE POST DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVED PRODUCT LIST YELLOW.
C2	VARIES	CABLE BARRIER END TERMINAL DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVED PRODUCT LIST OBJECT MARKER TYPE 3 PATTERN

6

CABLE BARRIER TYPE 1 LAYOUT

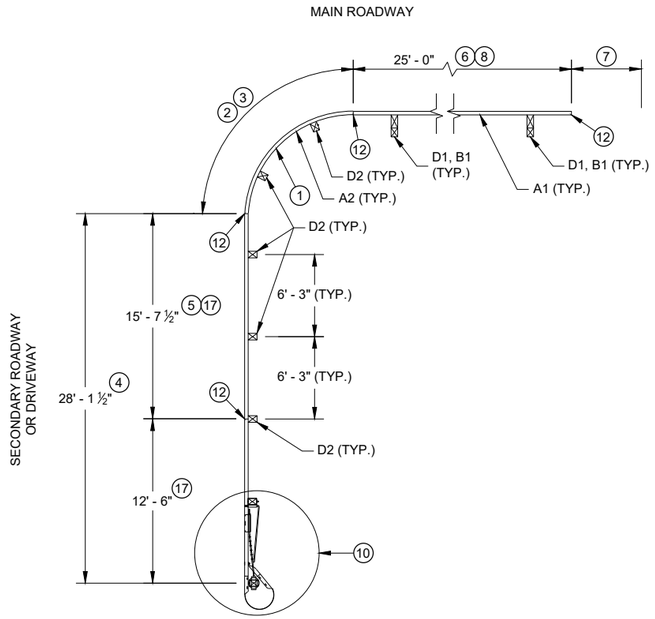
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APPROVED
May 2022
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

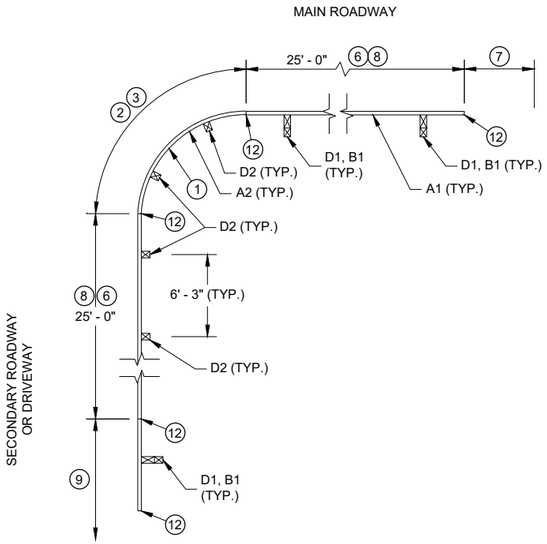
FHWA

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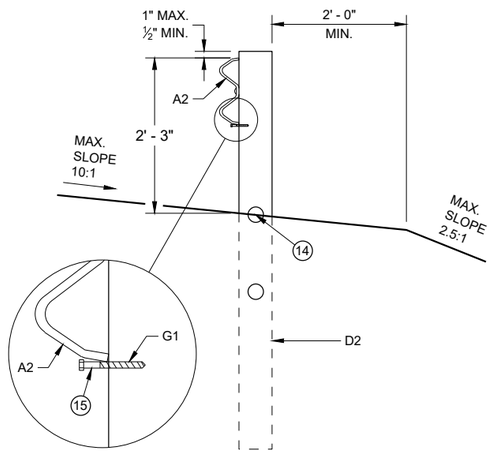
PLAN VIEW

SHORT RADIUS BEAM GUARD WITH SHORT RADIUS TERMINAL ON SECONDARY ROAD OR DRIVEWAY

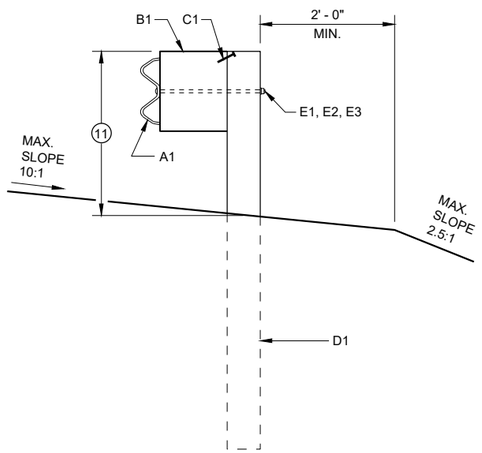


PLAN VIEW

SHORT RADIUS BEAM GUARD WITH EAT, ADDITIONAL BEAM GUARD OR TRANSITION TO RIGID BARRIER ON SECONDARY ROAD OR DRIVEWAY



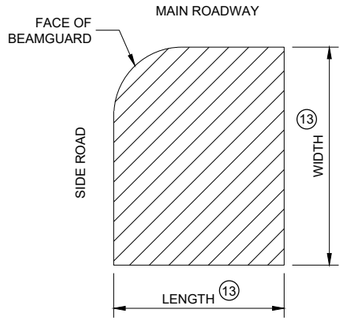
CONTROLLED RELEASE TERMINAL POST (CRT) IN RADIUS



BEAM GUARD POSTS IN HEIGHT TRANSITION

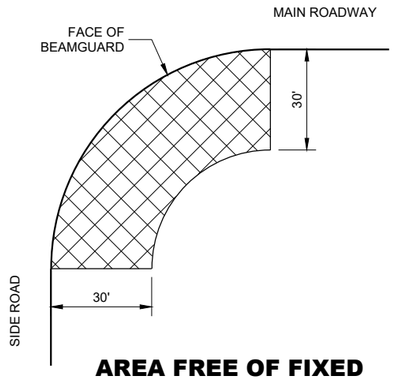
TABLE FOR RADIUS OF 32' AND LESS

RADIUS (FT)	LENGTH (FT)	WIDTH (FT)
8	25	15
16	30	15
24	40	20
32	50	30

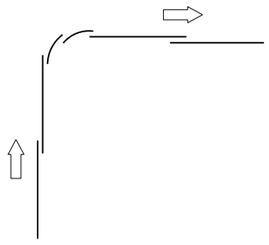


AREA FREE OF FIXED OBJECTS FOR RADIUS 32' AND LESS

16



AREA FREE OF FIXED OBJECTS FOR RADIUS GREATER THAN 32'



LAP SPLICE DETAIL

GENERAL NOTES

SEE PLANS FOR OTHER BARRIER SYSTEM AND LOCATION SPECIFICS.

SEE SDD 14B42 FOR MORE INFORMATION ON BEAM GUARD INSTALLATION, PARTS, MATERIALS, AND INSTALLATION INFORMATION.

GALVANIZE PARTS AFTER FABRICATION.

WELDING TO FOLLOW CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI / AWS D1.1.

UNLESS NOTED OTHERWISE, ALL PLATES ARE FLAT AND FREE OF WARP.

UNLESS NOTED OTHERWISE, ALL EDGES ARE SMOOTH, STRAIGHT AND VERTICAL.

ALL CUTS AND HOLES, EXCEPT IN BEAM GUARD RAIL ARE TO BE MACHINED OR MACHINE FLAME CUT.

UNLESS NOTED OTHERWISE, CUT OR PROVIDE BOLTS THAT ARE ¼" TO ½" BEYOND THE NUT.

DRAWINGS ARE NOT TO SCALE.

1. RADIUS MEASURE FROM INSIDE OF RAIL. LENGTH OF BEAM GUARD SHORT RADIUS GUARD MEASURED ALONG TRAFFIC SIDE OF RAIL. RADIUS BETWEEN 8 FEET TO 150 FEET. SEE PLAN FOR REQUIRED RADIUS. BEAM GUARD RAIL IN RADIUS IS SHOP BENT. ODD RAIL LENGTH OR FIELD CUTS MAY BE REQUIRED.
2. CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE USED IN THE RADIUS. CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE SPACED 6' - 3". SEE PLAN FOR NUMBER OF CONTROLLED RELEASE (CRT) POSTS.
3. WITHIN RADIUS BEAM GUARD RAILS ARE NOT BOLTED TO POSTS. BEAM GUARD RAIL IS RESTED ON TOP OF LAG SCREW.
4. MINIMUM LENGTH OF BEAM GUARD ALONG SIDE ROAD OR DRIVEWAY TO INSTALL SHORT RADIUS TERMINAL. BEAM GUARD IS PAID WITH BEAM GUARD ITEM.
5. ODD LENGTH OF BEAM GUARD REQUIRED TO INSTALL SHORT RADIUS TERMINAL.
6. MINIMUM AMOUNT OF BEAM GUARD TO BE INSTALLED PRIOR TO TRANSITION TO RIGID BARRIER. ADDITIONAL BEAM GUARD, OR EAT. BEAM GUARD PAID FOR WITH BEAM GUARD ITEM. SEE PLANS FOR MORE DETAIL.
7. BEAM GUARD, EAT, OR TRANSITION TO RIGID BARRIER. SEE PLAN.
8. TOP OF BEAM GUARD BY THE RADIUS IS 27". HEIGHT OF BEAM GUARD IS 31" BY TRANSITION TO RIGID BARRIER, ADDITIONAL BEAM GUARD OR EAT.
9. ADDITIONAL BEAM GUARD, EAT OR TRANSITION TO RIGID BARRIER. BEAM GUARD SHOWN. SEE PLAN FOR DETAILS.
10. SHORT RADIUS TERMINAL (SEE OTHER DETAILS).
11. HEIGHT VARIES. SEE NOTE 8 AND 8 .
12. BEAM GUARD RAIL SPLICE LOCATION. SPLICE LOCATION REQUIRES PART F1 AND F2. SEE SDD 14B42 FOR DETAILS.
13. SEE TABLE FOR VALUES.
14. MAXIMUM HEIGHT FOR CENTER OF HOLE IS ¾" ABOVE FINISHED GROUND ±1".
15. DRILL POST $^{15}/_{64}$" DIA. PILOT HOLE. DO NOT HAMMER LAG SCREW INTO POST.
16. SMALL SIGNS ON BREAKAWAY HARDWARE ARE ACCEPTABLE.
17. TOP OF RAIL HEIGHT IS 27" WHEN USING A SHORT RADIUS TERMINAL (CRT).

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

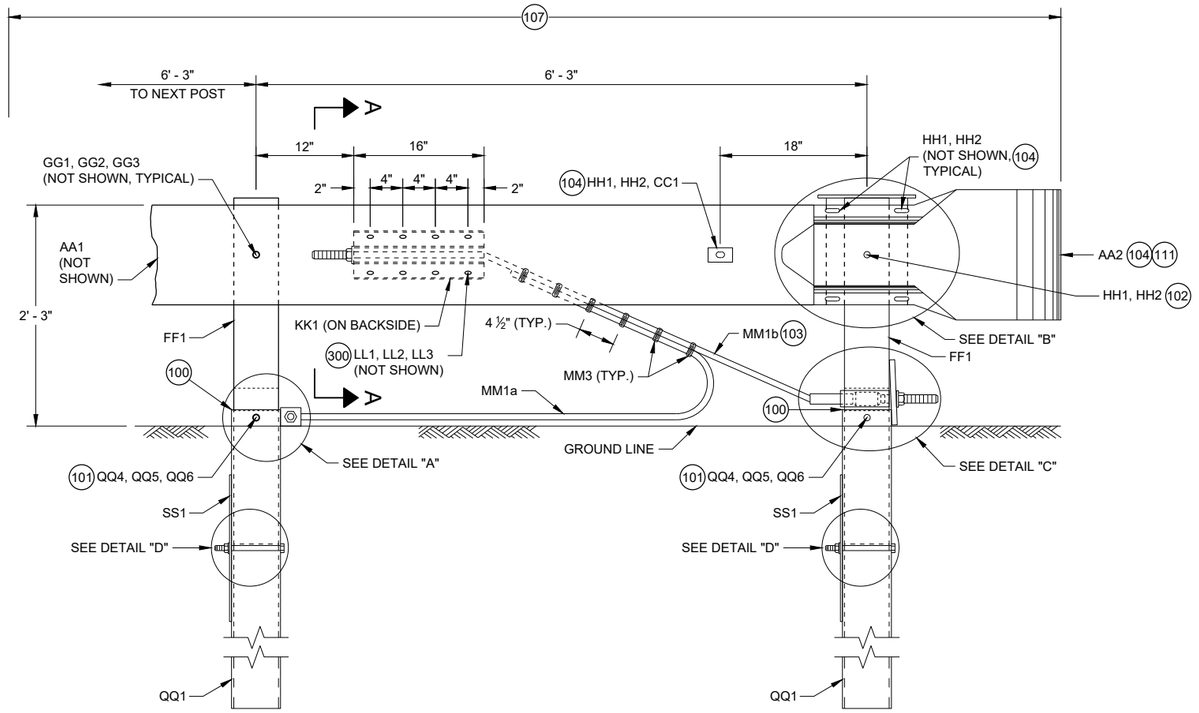
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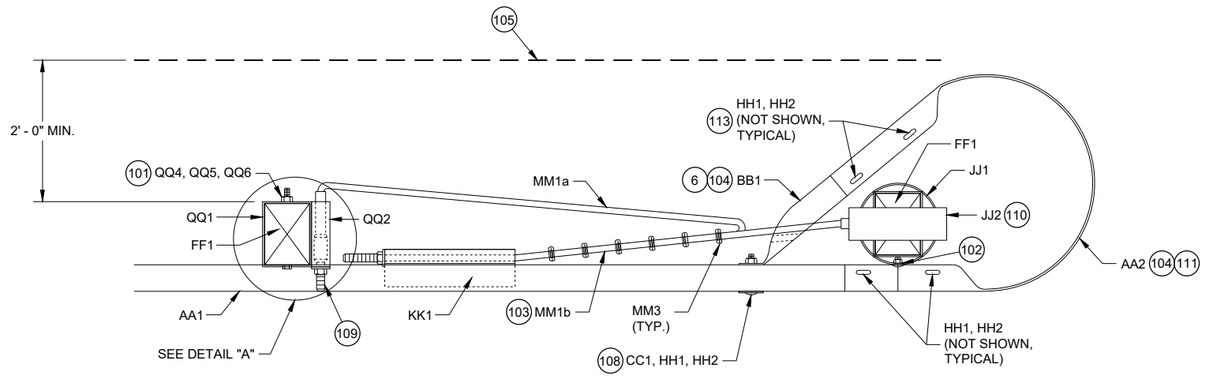
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PROFILE VIEW

SHORT RADIUS TERMINAL



TOP VIEW

SHORT RADIUS TERMINAL

GENERAL NOTES

100 TOP OF FOUNDATION TUBE 2 INCHES MAXIMUM ABOVE FINISHED GROUND.

101 WASHERS REQUIRED BETWEEN BOLT HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.

102 SPLICE BOLT AND NUT CONNECTS BEAM GUARD RAIL, W-BEAM SECTION BUFFER, AND STEEL PIPE ASSEMBLY. NO WASHER REQUIRED. SEE DETAIL "B".

103 CABLE IS TAUT.

104 ADJUST AA2 AND BB1 TO FIT.

105 BREAK POINT OF SHOULDER.

106 TACK WELD CABLE CONNECTOR TUBE PLATE TO CABLE CONNECTION TUBE. SEE DETAIL "A" PROFILE VIEW.

107 PAY LIMIT FOR BEAM GUARD.

108 SQUARE WASHER BETWEEN HEAD OF BOLT AND TRAFFIC FACE OF BEAM GUARD. ROUND WASHER REQUIRED BETWEEN NUT AND BB1.

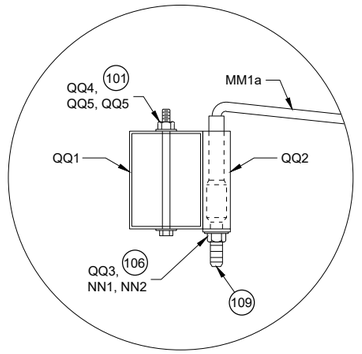
109 CUT OR PROVIDE THREADED STUD THAT IS FLUSH WITH FACE OF BEAM GUARD RAIL KK1 (PLUS OR MINUS ½" TOLERANCE). DEBURR AFTER CUTTING.

110 SEE STEEL PIPE ASSEMBLY DETAILS.

111 ATTACH UU2 WITH UU3. SHOP APPLY UU1 TO UU2.

112 FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA1 TO AA2.

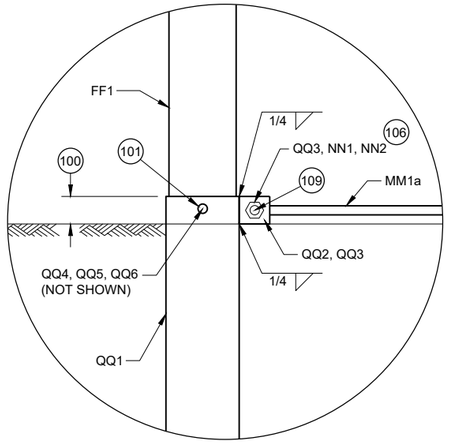
113 FOUR (4) HH1 AND HH2 REQUIRED TO ATTACH AA2 TO BB1.



TOP VIEW

DETAIL "A"

(WOOD BREAKAWAY AND BEAM GUARD RAIL POSTS NOT SHOWN)



PROFILE VIEW

DETAIL "A"

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SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

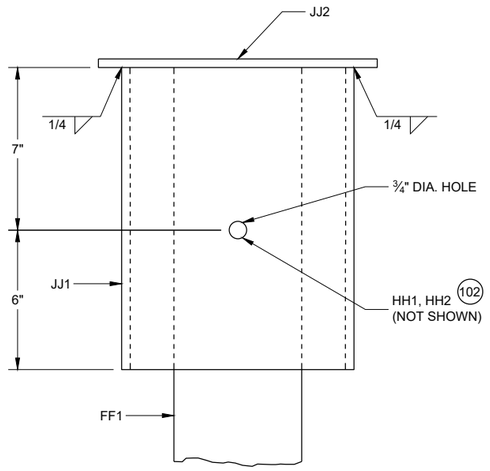
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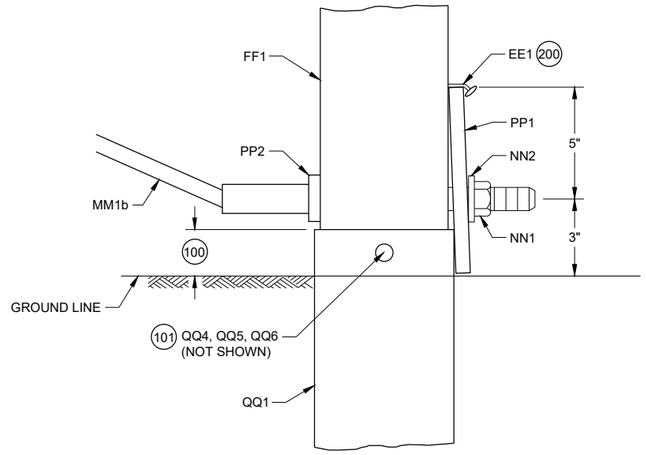
GENERAL NOTES

(200) TWO (2) NAILS SPACED 4 INCHES CENTER TO CENTER.



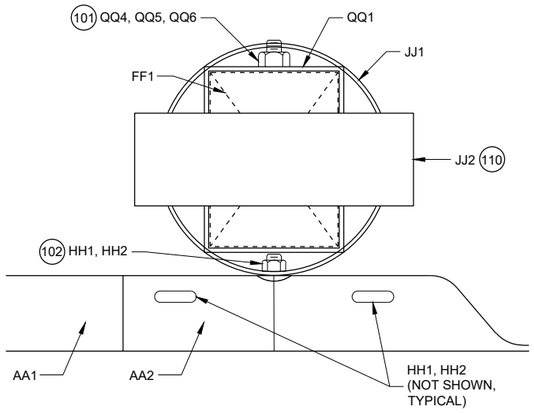
PROFILE VIEW

DETAIL "B"
STEEL PIPE ASSEMBLY
(BEAM GUARD AND W BEAM END SECTION NOT SHOWN)



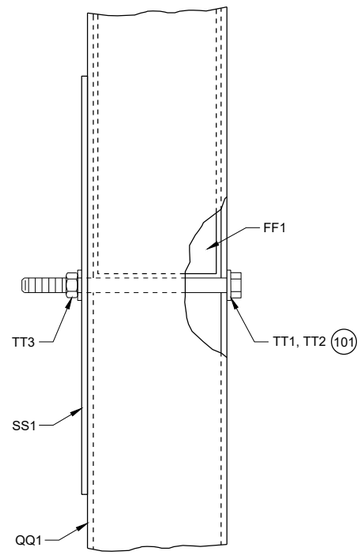
PROFILE VIEW

DETAIL "C"



PLAN VIEW

DETAIL "B"
STEEL PIPE ASSEMBLY



PROFILE VIEW

DETAIL "D"

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

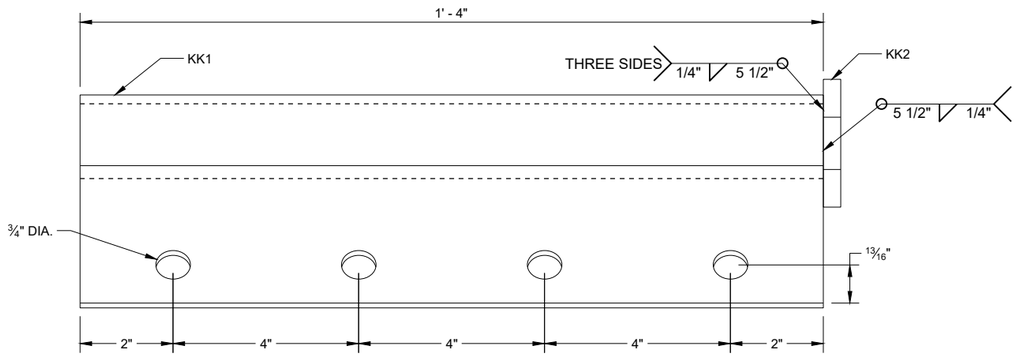
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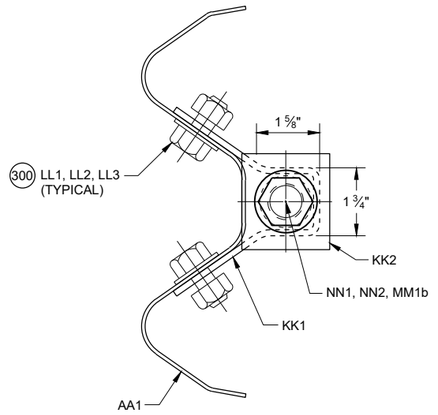
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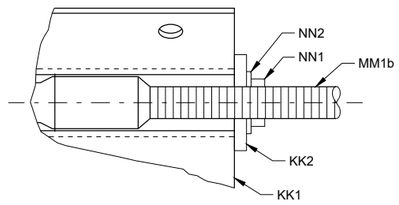
SDD 14B53 - 02c

GENERAL NOTES

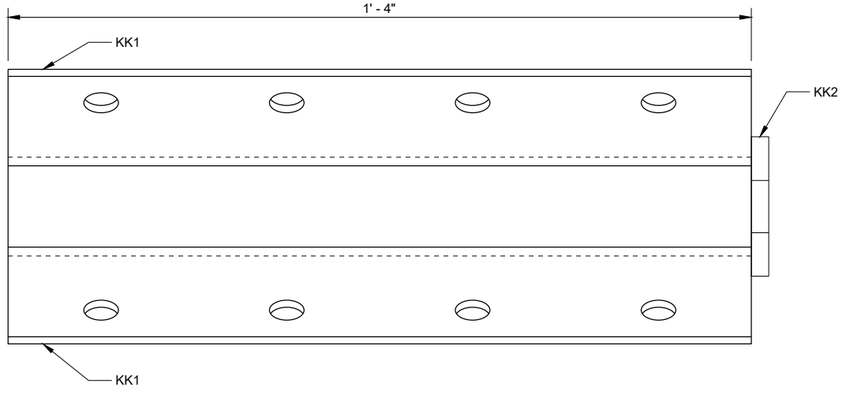
(300) WASHERS REQUIRED BETWEEN BOLT HEAD AND BEAM GUARD RAIL AND BETWEEN NUT AND ANCHOR BRACKET. EIGHT (8) LL1 AND LL3 REQUIRED. SIXTEEN (16) LL2 REQUIRED.

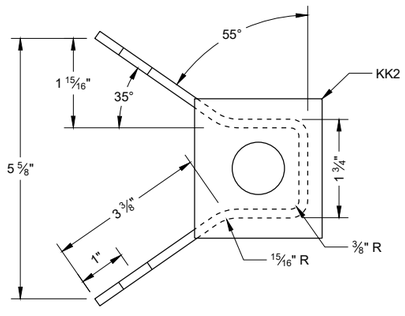




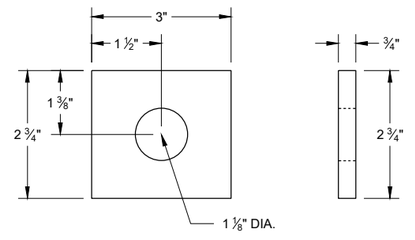


SECTION A - A





ANCHOR BRACKET (KK1, KK2)



ANCHOR BRACKET BEARING PLATE (KK2)

6

SDD 14B53 - 02d

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

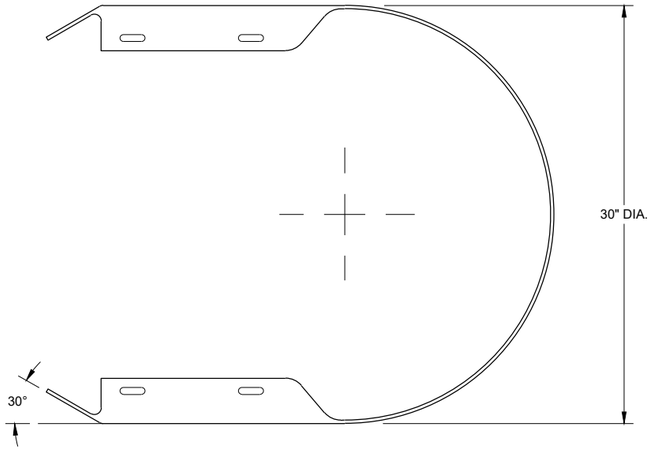
6

SDD 14B53 - 02d

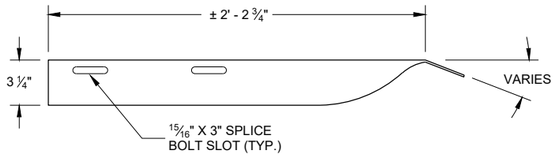
GENERAL NOTES

(400) CROSS SECTION OF PART IS TO FIT OVER AA1 .

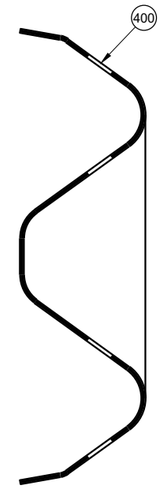
(401) CROSS SECTION OF PART IS TO FIT OVER OR UNDER AA1 .



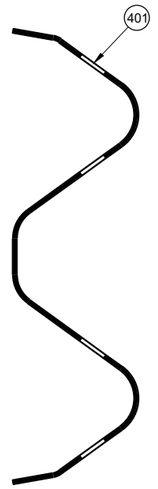
TOP VIEW



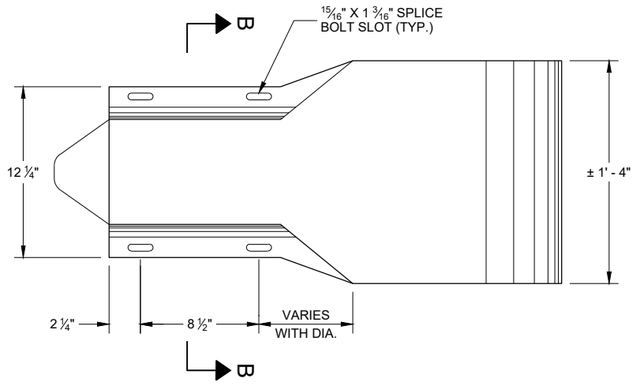
TOP VIEW



SECTION B -B

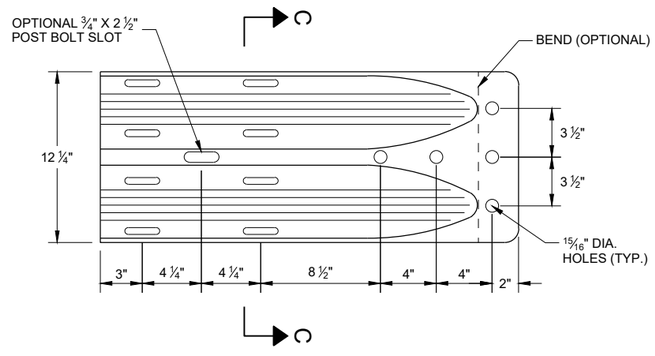


SECTION C -C



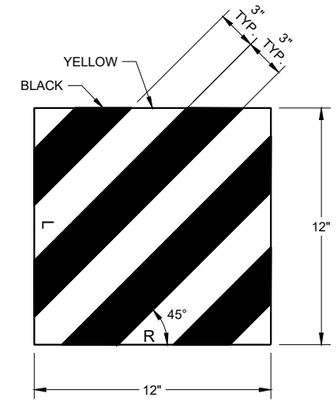
PROFILE VIEW

W BEAM
END SECTION BUFFER (AA2)



PROFILE VIEW

W BEAM
TERMINAL CONNECTOR (BB1)



REFLECTIVE SHEETING (UU1, UU2)

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

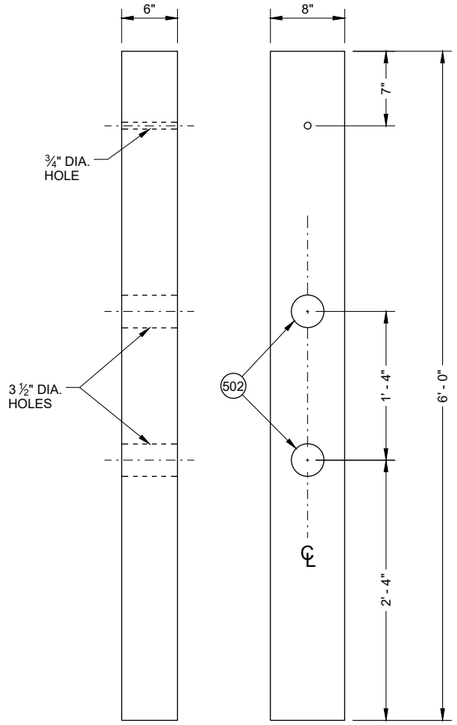
585

6

SDD 14B53 - 02e

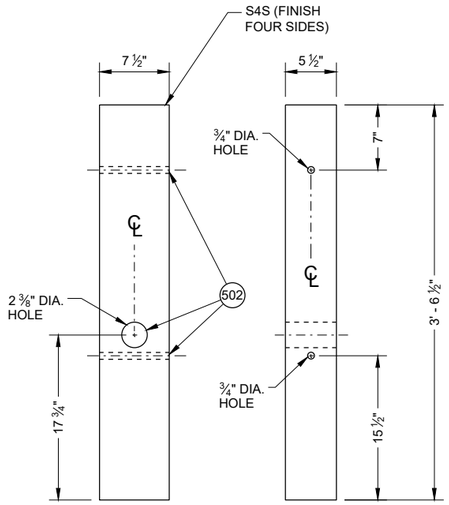
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SDD 14B53 - 02e



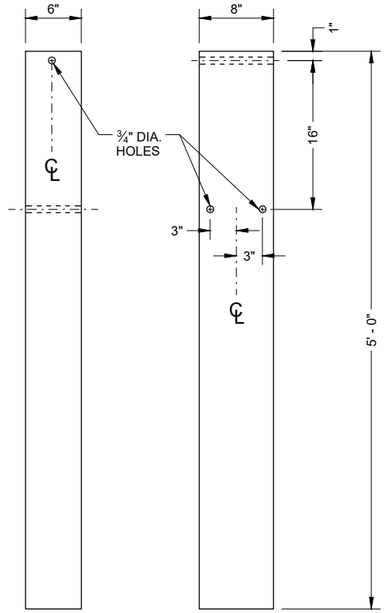
FRONT VIEW SIDE VIEW

CONTROLLED RELEASE POST (CRT) (DD2)



FRONT VIEW SIDE VIEW

WOOD BREAKAWAY POST (FF1)



FRONT VIEW SIDE VIEW

FOUNDATION TUBE (QQ1) (500)

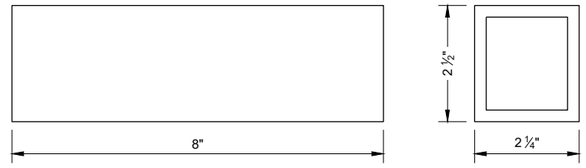
GENERAL NOTES

(500) SEE DETAIL "D" FOR LOCATION AND ATTACHMENT OF SS1.

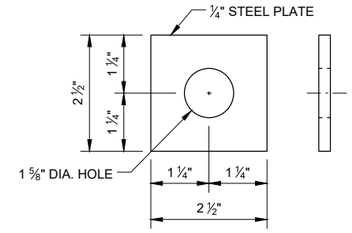
(501) FOR MM1a THREADED STUD ONLY REQUIRED ON ONE END. SWAGED FITTING REQUIRED.

(502) LOCATE HOLES ON THE CENTERLINE OF THE SIDE OF THE POST.

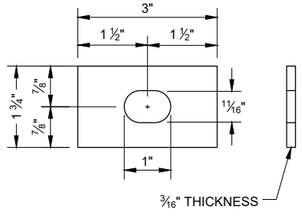
(503) MM1a MAY HAVE ONE THREADED STUD 4 INCHES LONG. SEE NOTE (109).



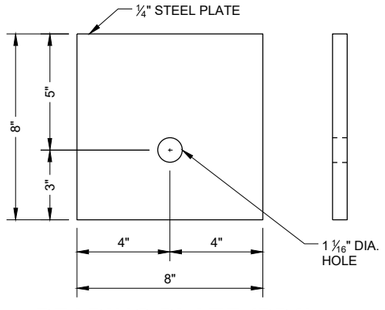
FOUNDATION TUBE - ANCHOR CABLE TUBE (QQ2)



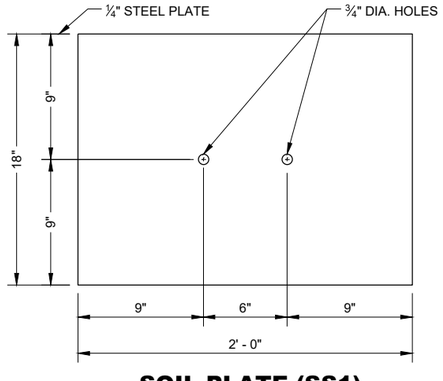
ANCHOR CABLE TUBE END PLATE (QQ3)



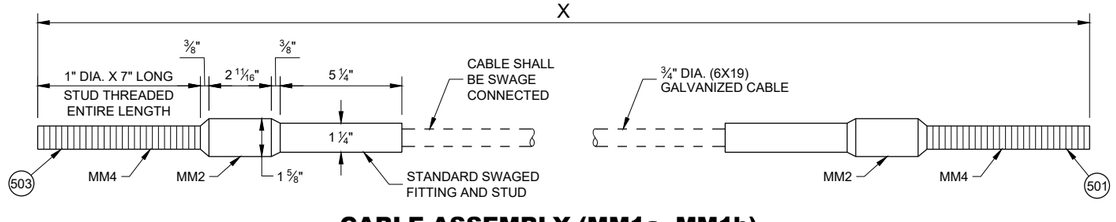
RECTANGULAR PLATE WASHER (CC1)



BEARING PLATE (PP1)



SOIL PLATE (SS1)



CABLE ASSEMBLY (MM1a, MM1b)

"X" LENGTH

MM1b	9' - 0"
MM1b	6' - 8"

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B53 - 02f

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	BEAM GUARD RAIL	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
A2	BEAM GUARD RAIL - SHOP BENT	INDICATE ON BACK OF RAIL THE RADIUS THAT RAIL WAS BENT TO. SHOP BEND RADIUS IS TO THE NEAREST FOOT. FOLLOW AASHTO M180 ON HOW TO MARK RADIUS INFORMATION.	
		AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
B1	BLOCK - WOOD	WISDOT SPEC. 614	SEE SDD 14B42
C1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEAD)	
D1	POST-STRONG POST-WOOD	WISDOT SPEC. 614	SEE SDD 14B42
D2	POST-CRT-WOOD	WISDOT SPEC. 614	
E1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
E2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	5/8" DIA.
		GALV. AASHTO M111 / ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
E3	POST BOLT - NUT	AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
F1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
F2	SPLICE BOLT - NUT	ASTM A563 GRADE A	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
G1	LAG SCREW	ASTM A308 GRADE A ASTM A153 CLASS D	1/2" DIA. 6" LONG
H1	DELINEATOR - BEAM GUARD		SEE SDD 14B42 FOR MORE INFORMATION
H2	DELINEATION - SHEETING	YELLOW OR WHITE	
		WISDOT SPEC 637 TYPE SH	
		APPROVED PRODUCT LIST	
J1	FOUNDATION BACKFILL	STANDARD SPEC. 614	
AA1	BEAM GUARD RAIL - PUNCHED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
AA2	BEAM GUARD RAIL - END SECTION BUFFER	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
BB1	BEAM GUARD RAIL - TERMINAL CONNECTOR MODIFIED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
CC1	SHORT RADIUS - SQUARE WASHER	AASHTO M180	
		GALV. AASHTO M111 / ASTM A123	
EE1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEADED)	
FF1	POST - BCT - WOOD	S4S FINISH ON 4 SIDES	
		WISDOT SPEC. 614	
GG1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	3/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
GG2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	3/8" DIA.
		GALV. AASHTO M111 / ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329	

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

6

SDD 14B53 - 02g

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
GG3	POST BOLT - NUT	ASTM A563 GRADE A	⅜" DIA. SEE 14B42 FOR GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
HH1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	⅜" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180 HEAD GEOMETRY	
HH2	SPLICE BOLT - NUT	ASTM A563 GRADE A	⅜" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
JJ1	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	10" O.D.
JJ2	TOP PLATE	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	DIMENSIONS ⅜" X 4" X 1' - 0"
		GALV. AASHTO M111 / ASTM A123	
KK1	ANCHOR BRACKET	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	
		GALV. AASHTO M111 / ASTM A123	
KK2	ANCHOR BRACKET - BEARING PLATE	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	
		GALV. AASHTO M111 / ASTM A123	
LL1	ANCHOR BRACKET - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	⅝" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
LL2	ANCHOR BRACKET - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	⅝" DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
LL3	ANCHOR BRACKET - NUT	ASTM A563 GRADE A	⅝" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
MM1a	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM1b	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM2	ANCHOR CABLE - SWAGE FITTING	ASTM A576 GRADE 1035	
		SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. WITH A BREAKING STRENGTH 40,000 LBS.	
		GALV. AASHTO M111 / ASTM A123	
		ASME B30.26 FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING INTO CONNECTION: NAME OF MANUFACTURER OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE.	
MM3	WIRE ROPE CABLE CLAMPS	FF-C-450D TYPE 1 CLASS 1	¾"
		ASTM A153 HOT DIP CLASS D	
MM4	ANCHOR CABLE - SWAGE FITTING - STUD	ASTM F3125 GRADE A325 TYPE 1 OR SAE GRADE 5 OR ASTM A449 TYPE 1 HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
NN1	ANCHOR CABLE - NUT	ASTM A563 GRADE A	1" DIA.
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
NN2	ANCHOR CABLE - NUT - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	1" DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
PP1	BEARING PLATE AT POST	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	
		GALV. AASHTO M111 / ASTM A123	
PP2	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	2" DIA. x 6" LONG
QQ1	FOUNDATION TUBE	ASTM A500 GRADE B	8" X 6" X 3/16"
		GALV. AASHTO M111 / ASTM A123	
QQ2	SHORT RADIUS - FOUNDATION TUBE - ANCHOR CABLE - TUBE	ASTM A500 GRADE B	DIMENSIONS 2 1/2" X 2 1/4" X 1/4" X 8"
		GALV. AASHTO M111 / ASTM A123	
QQ3	SHORT RADIUS - SOIL TUBE - ANCHOR CABLE - TUBE - END PLATE	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	DIMENSIONS 2 1/2" X 2 1/2" X 1/4"
		GALV. AASHTO M111 / ASTM A123	
QQ4	GROUND STRUT AND YOKE - BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8 DIA.
		ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	
		UNC	
QQ5	GROUND PLATE AND YOKE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8 DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
QQ6	GROUND STRUT AND YOKE - NUT	HEAVY HEX	5/8 DIA.
		UNC	
		ASTM A563 GRADE A	
		OVER TAPPED NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
SS1	SOIL PLATE	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	
		GALV. AASHTO M111 / A123	
TT1	SOIL PLATE - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	5/8 DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
		UNC	
TT2	SOIL PLATE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8 DIA.
		GALV. AASHTO M111 / ASTM A123 OR GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
TT3	SOIL PLATE - NUT	GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	5/8 DIA.
UU1	OBJECT MARKER - SHEETING	MUTCD / WISDOT OBJECT MARKER TYPE 3	PATTERN AND COLOR FOR SHEETING. SHEETING TYPE FOR MARKER.
		WISDOT SPEC 637 TYPE F	
		APPROVED PRODUCT LIST	
UU2	OBJECT MARKER - ALUMINUM PLATE	WISDOT SPEC 637 ALUMINUM PLATE	MATERIAL AND THICKNESS OF MATERIALS
UU3	OBJECT MARKER - SCREWS	STAINLESS SELF-TAPPING SCREWS	
VV1	FOUNDATION BACKFILL	WISDOT SPEC 614	

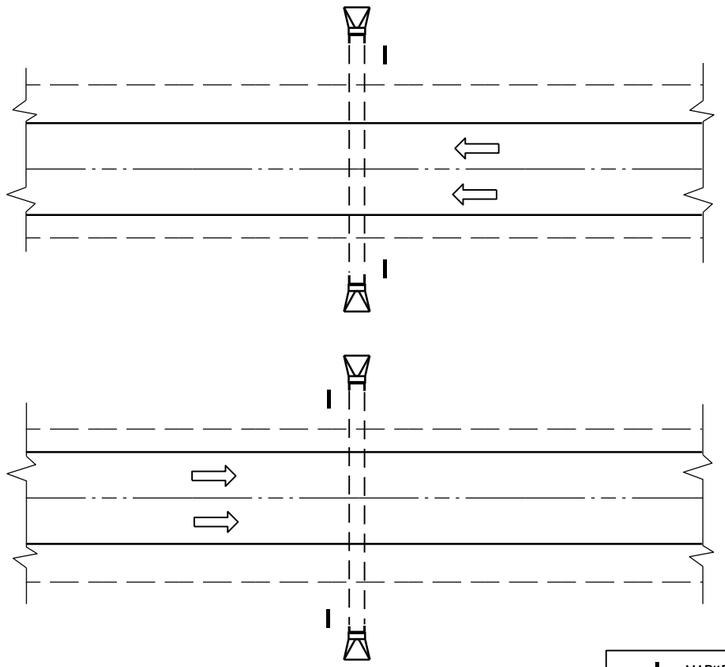
SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

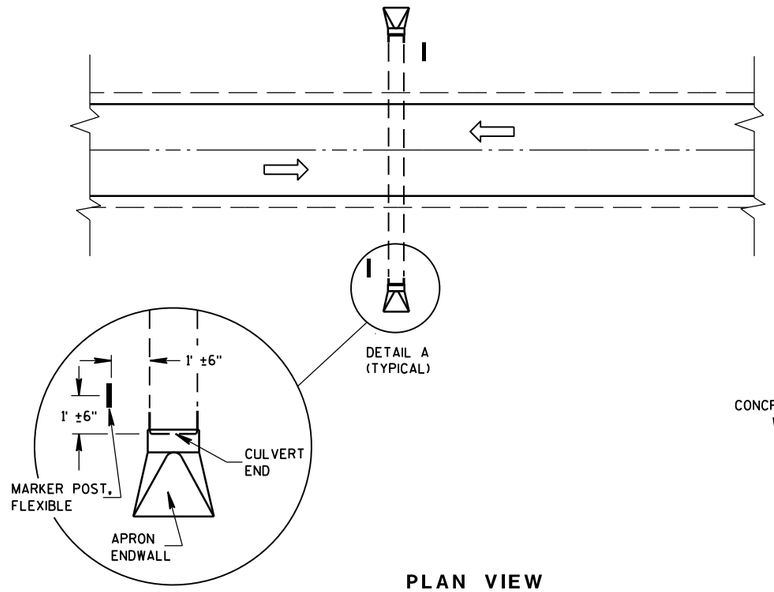
6

SDD 14B53 - 02i



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

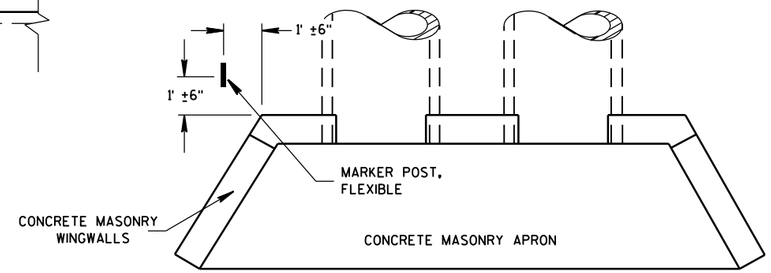
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

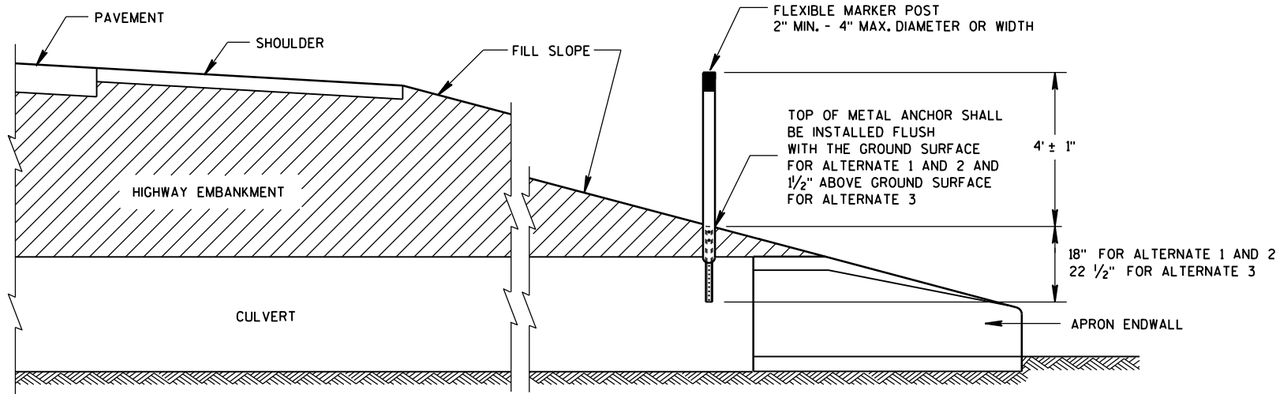
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

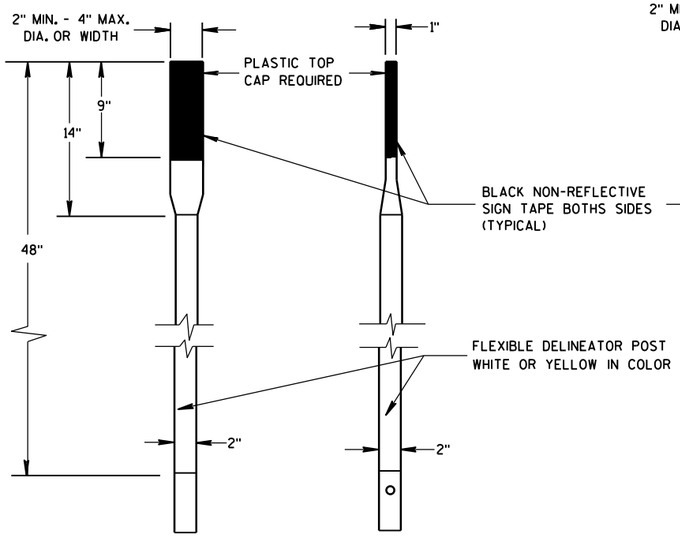
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

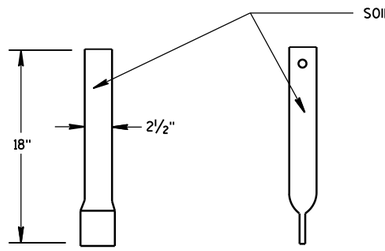
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S.D.D. 15 A 3-2a

6

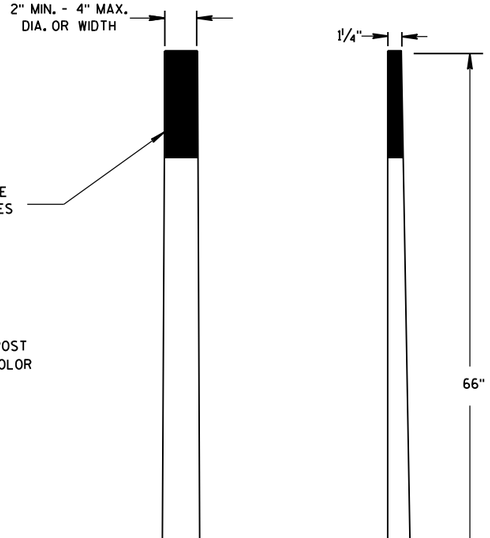
S.D.D. 15 A 3-2a





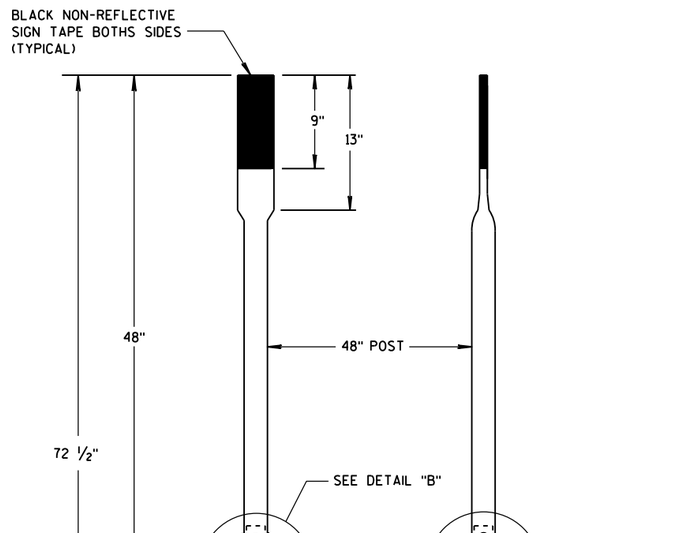
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

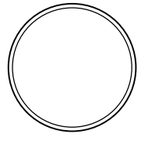
ALTERNATE 2



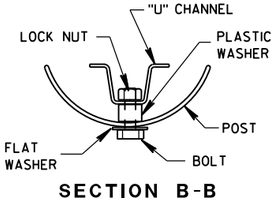
FRONT VIEW SIDE VIEW

ALTERNATE 3

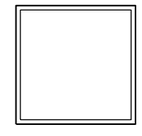
FLEXIBLE MARKER POSTS



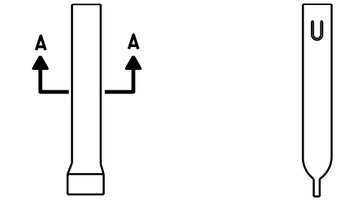
SECTION A-A



SECTION B-B

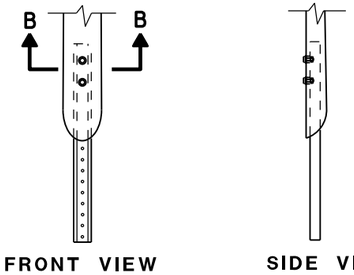


SECTION C-C



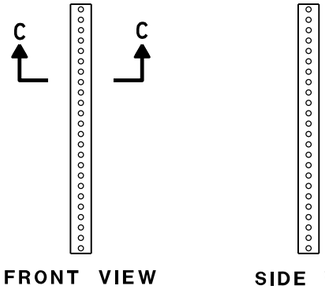
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

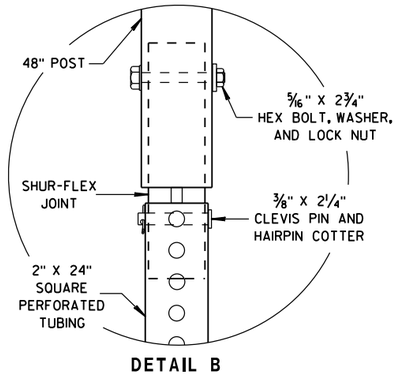
ALTERNATE 2



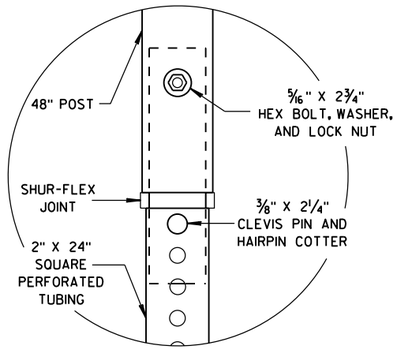
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

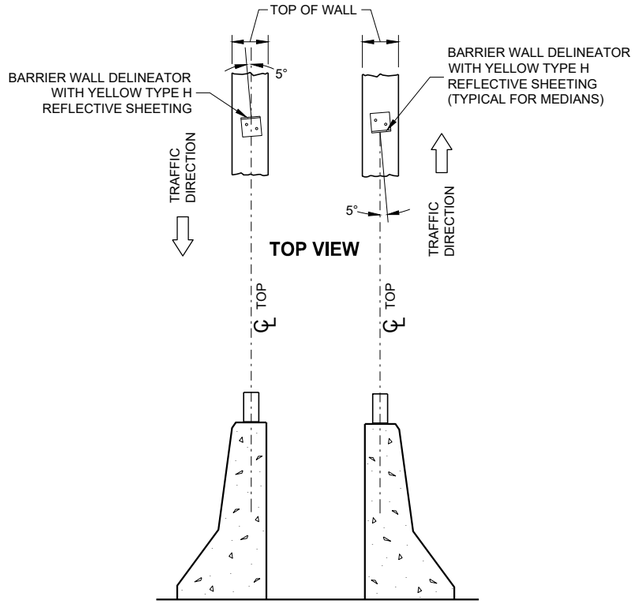
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

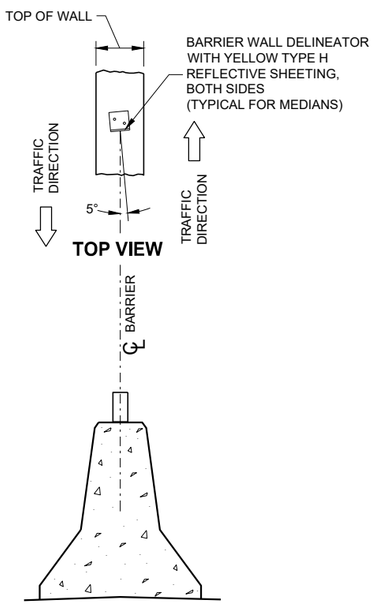
S.D.D. 15 A 3-2b

6

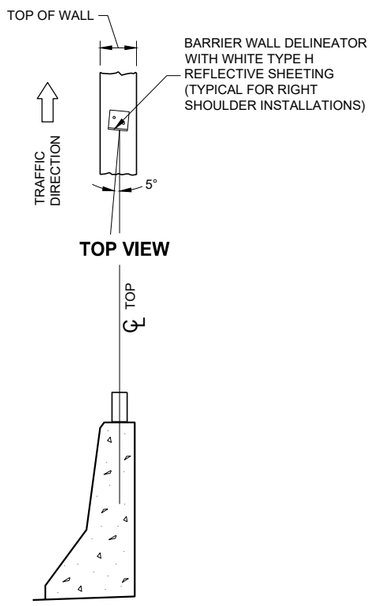
S.D.D. 15 A 3-2b



SIDE VIEW
DOUBLE BARRIERS IN MEDIAN

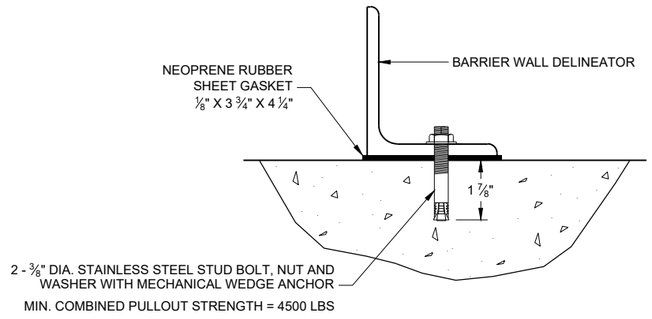


SIDE VIEW
MEDIAN BARRIER

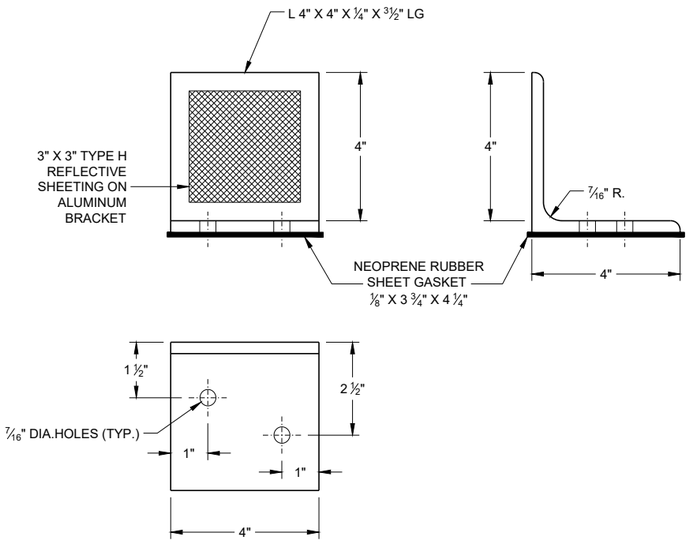


SIDE VIEW
TO RIGHT OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR BARRIER WALL DELINEATOR MOUNTED ON CONCRETE BARRIERS



BARRIER WALL DELINEATOR MOUNTING DETAIL



BARRIER WALL DELINEATOR

REFLECTOR SPACING TABLE

REFLECTOR SPACING	MINIMUM NUMBER OF REFLECTORS
100' C-C	3

BARRIER WALL DELINEATOR WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MAF ENGINEER

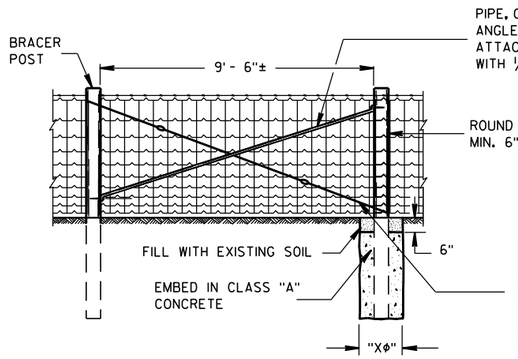
FHWA

6

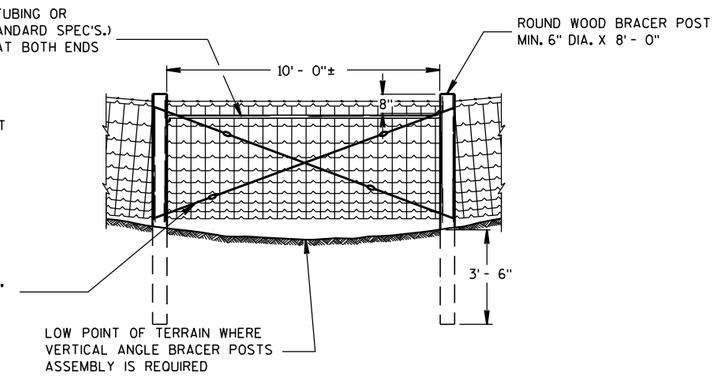
SDD 15A04 - 07b

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

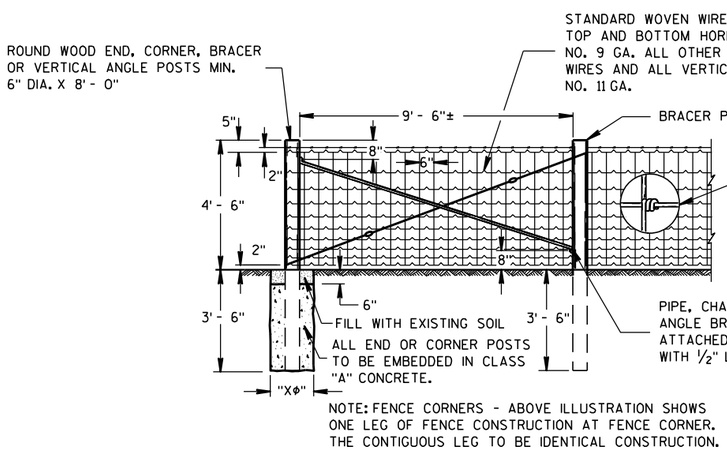
GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

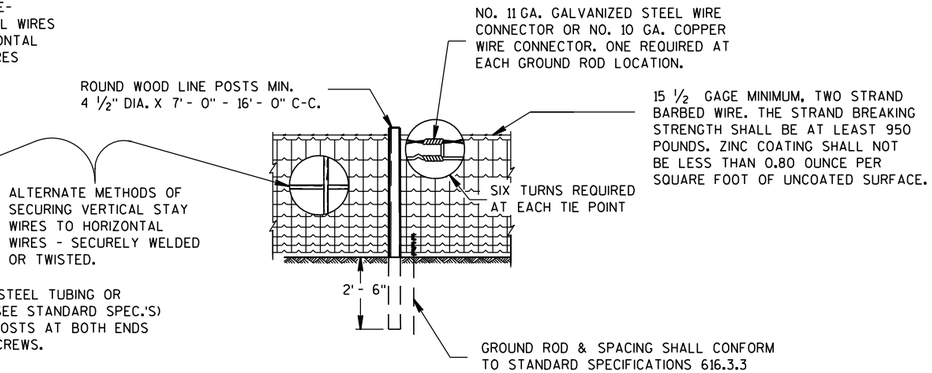
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.



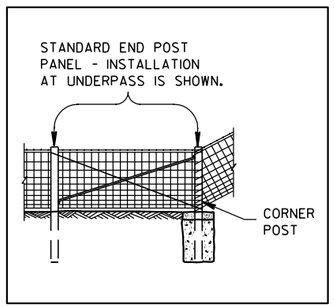
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

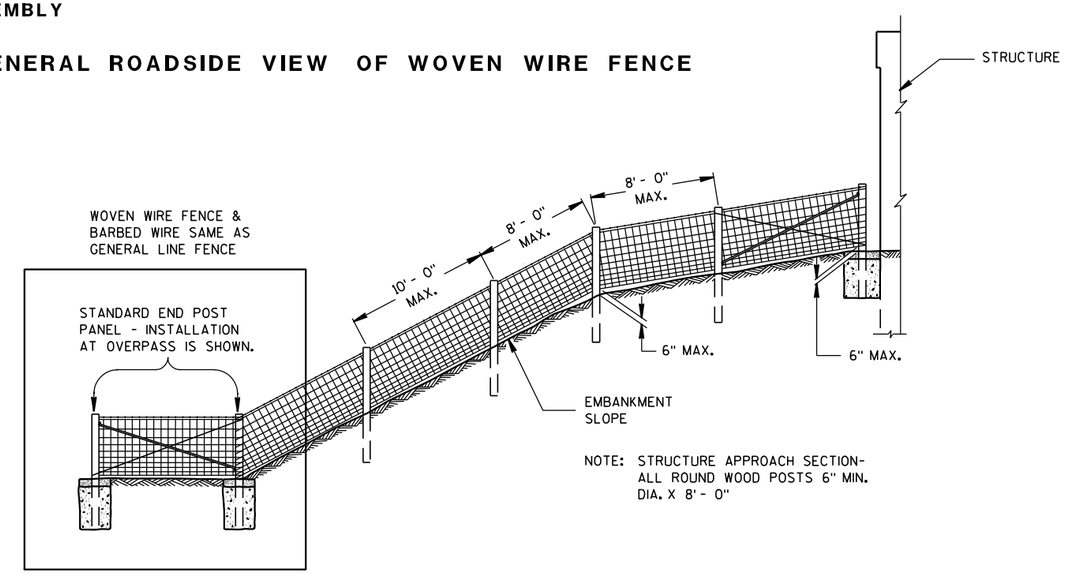


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



NOTE: STRUCTURE APPROACH SECTION- ALL ROUND WOOD POSTS 6" MIN. DIA. X 8' - 0"

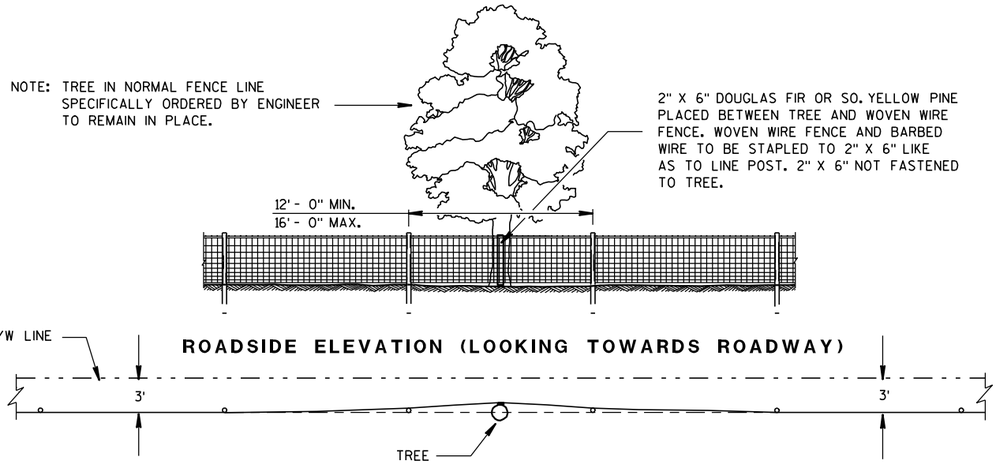
FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

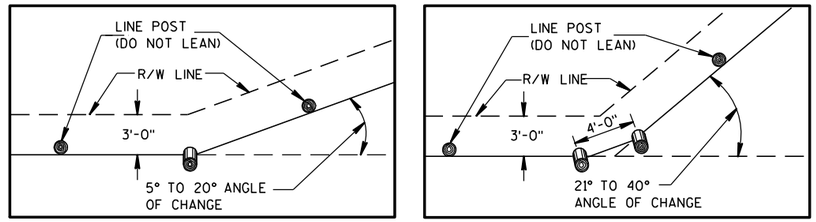
6

S.D.D. 15 B 1-8a



PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



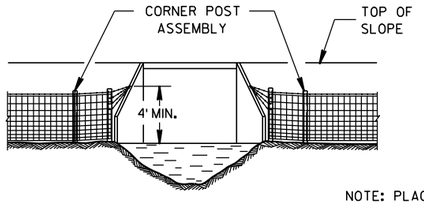
PLAN VIEW
SINGLE POST CORNER

PLAN VIEW
DOUBLE POST CORNER

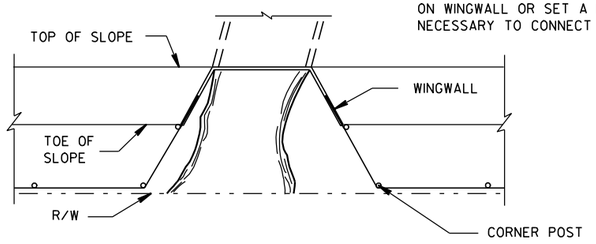
RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

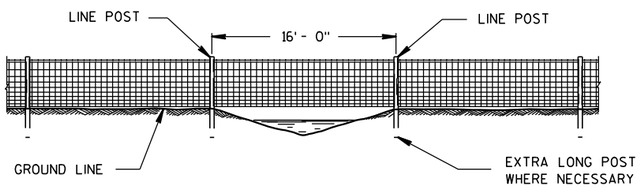
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



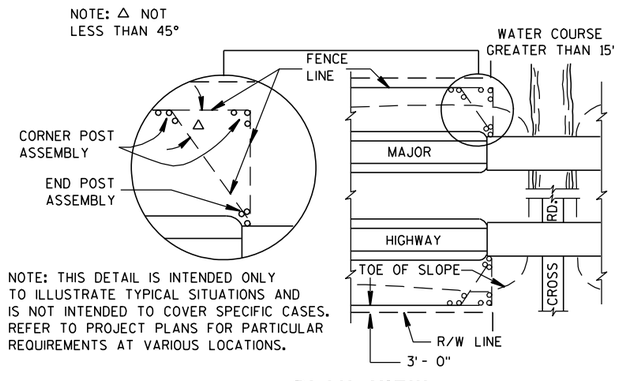
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



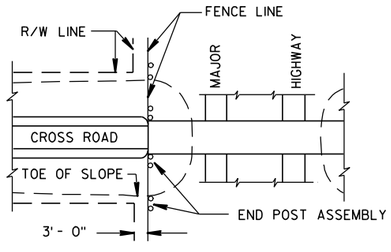
FENCE INSTALLATION TO WINGWALLS



FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH



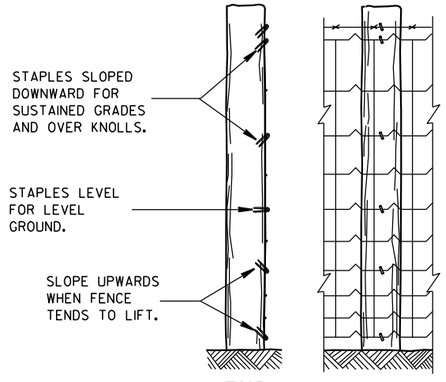
PLAN VIEW
MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW
MAJOR HIGHWAY UNDERPASS

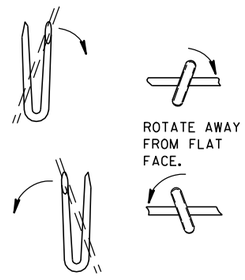
FENCE LOCATION AT STRUCTURES

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.



END ELEVATION **FARM SIDE ELEVATION**

FENCE MOUNTING DETAIL



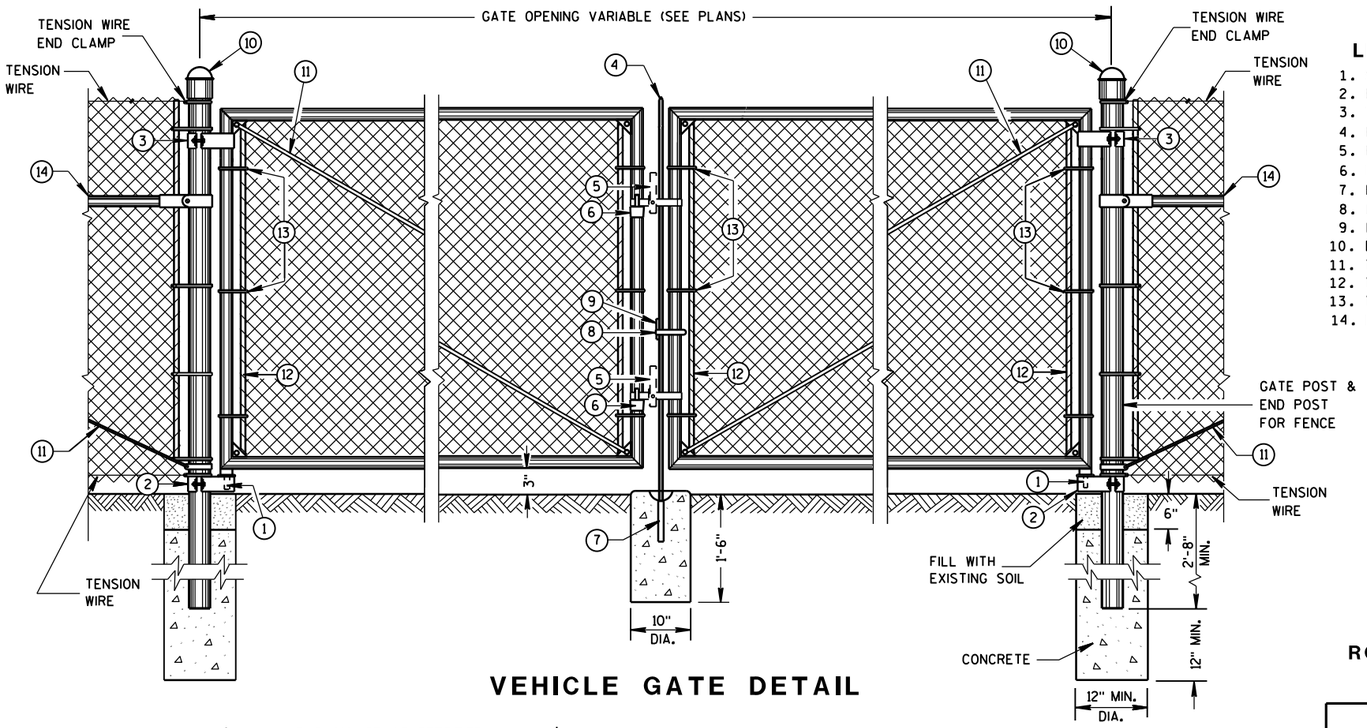
LINE POST

FENCE WOVEN WIRE

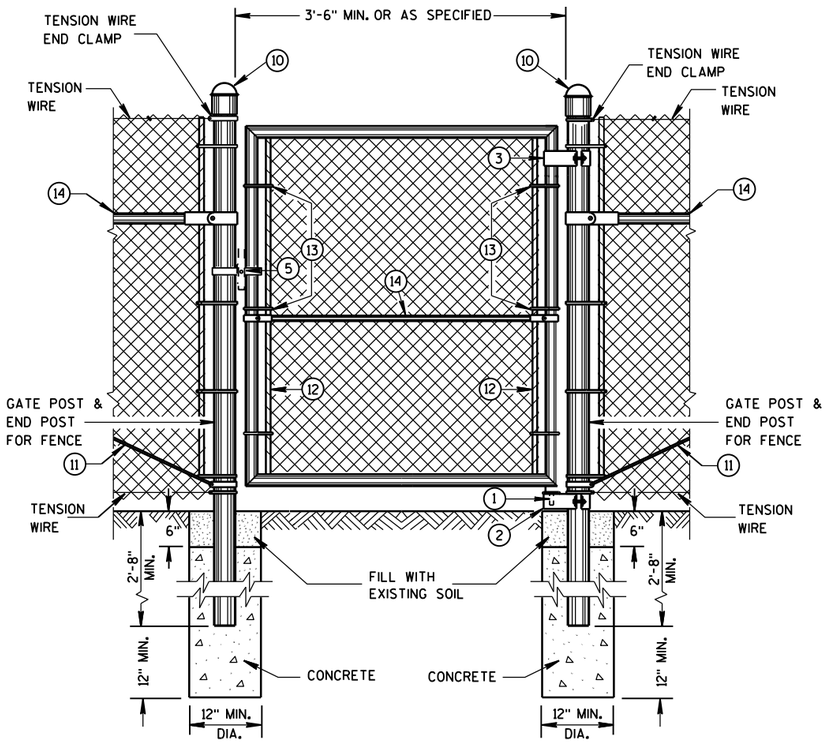
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/4/2008
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6
S.D.D. 15 B 1-8b



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.

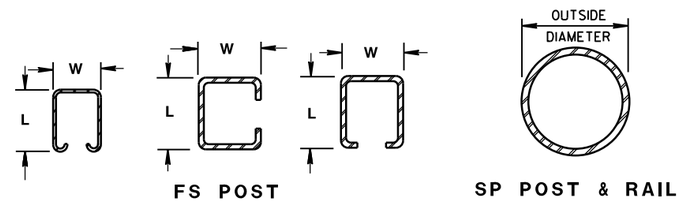
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

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

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

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

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

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

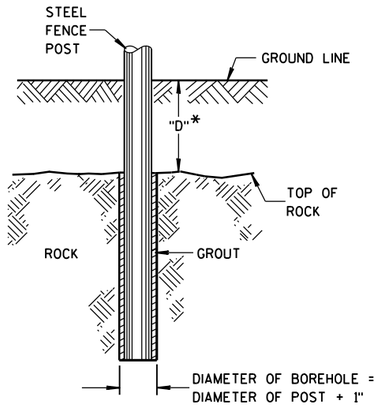
ROUND STEEL FENCE POST (1.8 OZ./SQ. FT. COATING)

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

FENCE CHAIN LINK

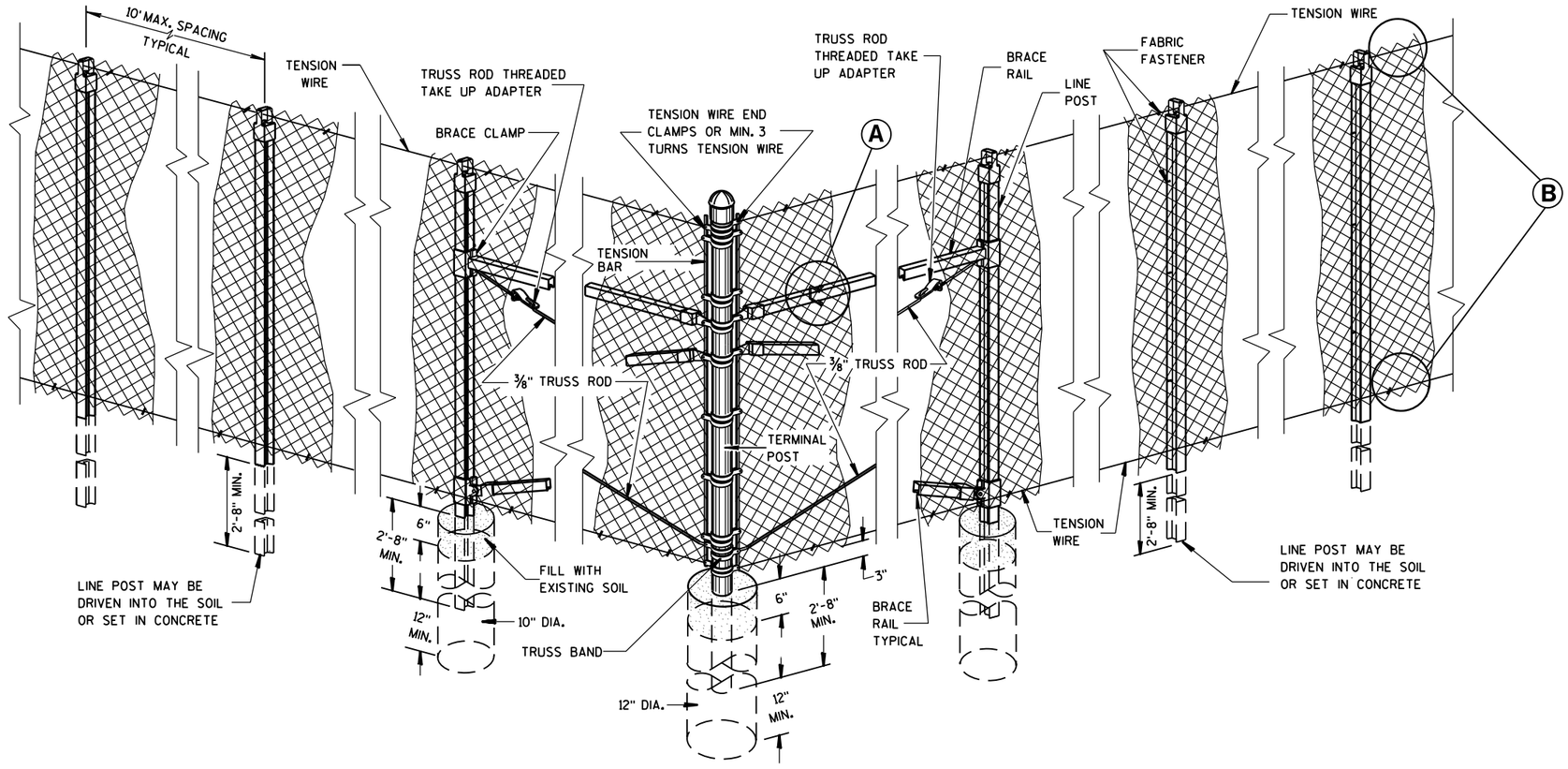
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 595

6
S.D.D. 15 B 3-15a

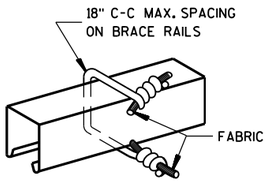


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



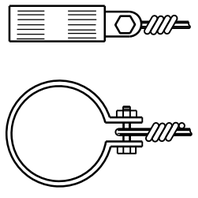
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



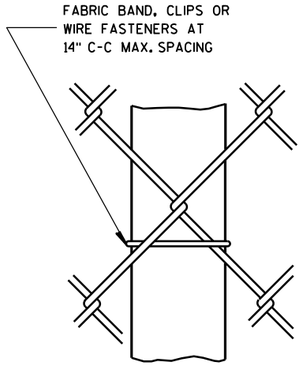
BRACE RAIL

FABRIC FASTENER

Ⓐ



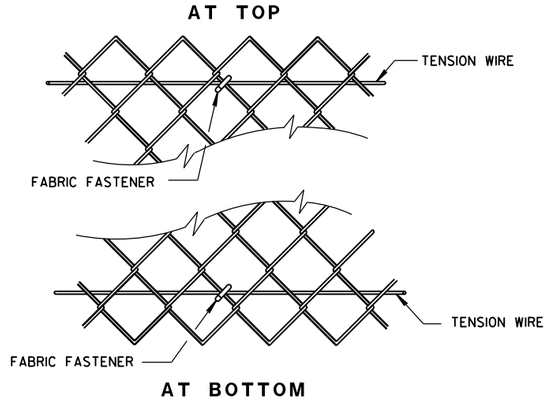
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

FENCE CHAIN LINK

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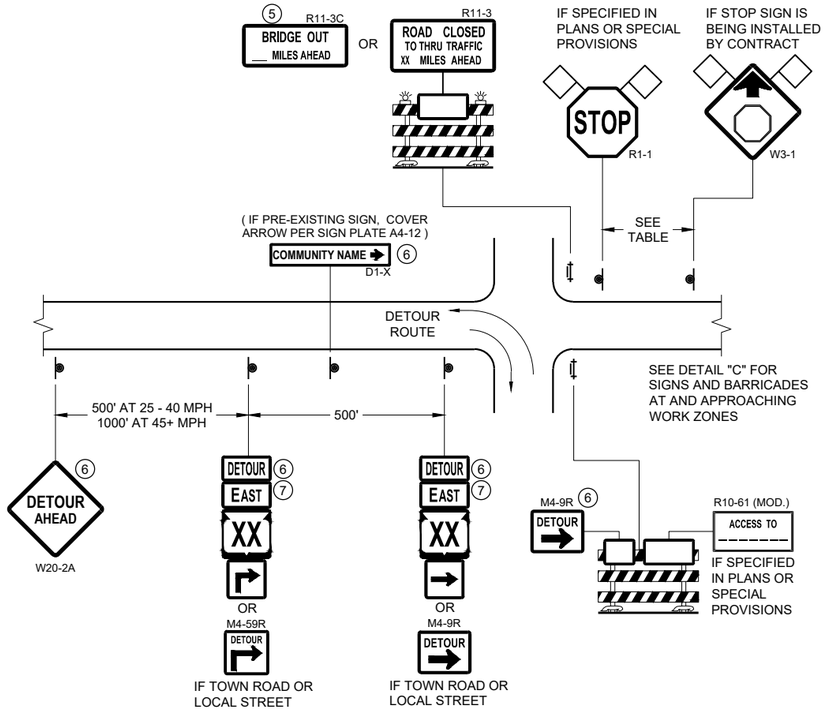
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FEB. 2015 DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

596

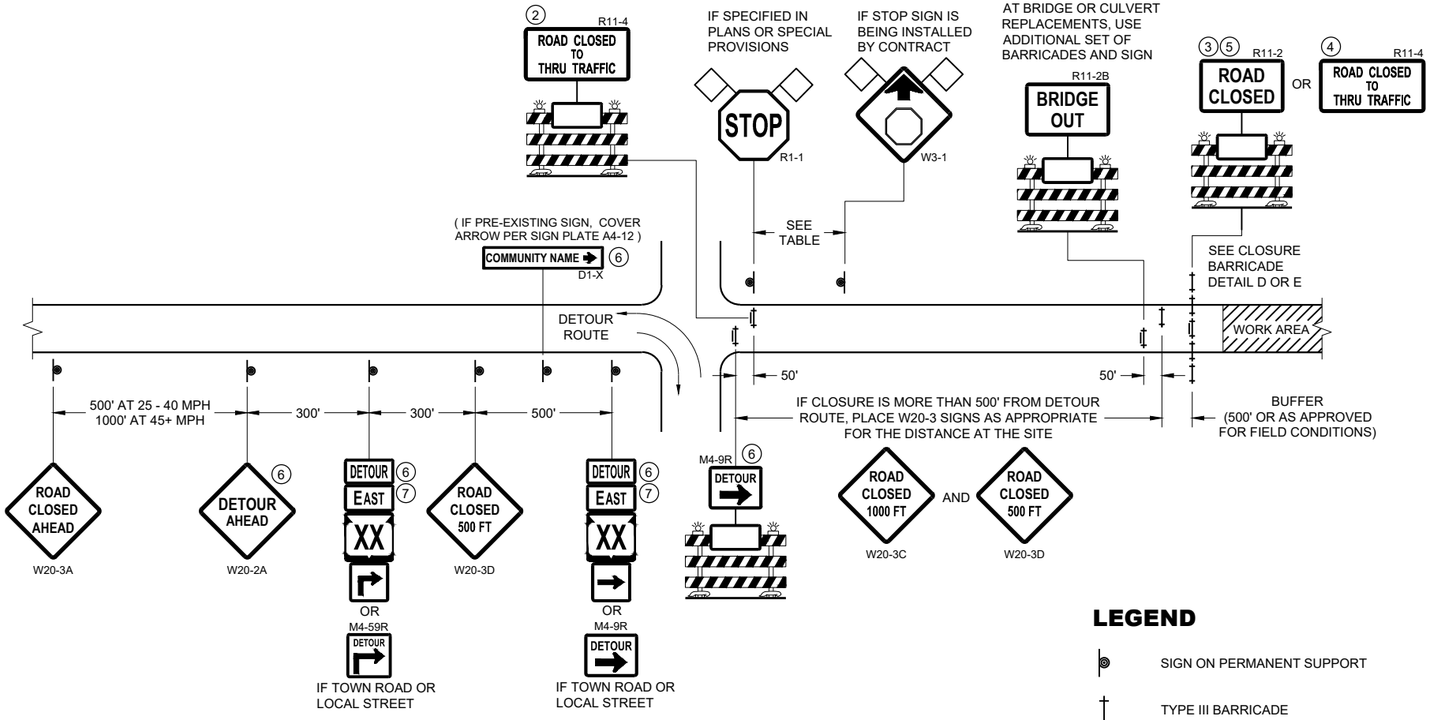
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S.D.D. 15 B 3-15b



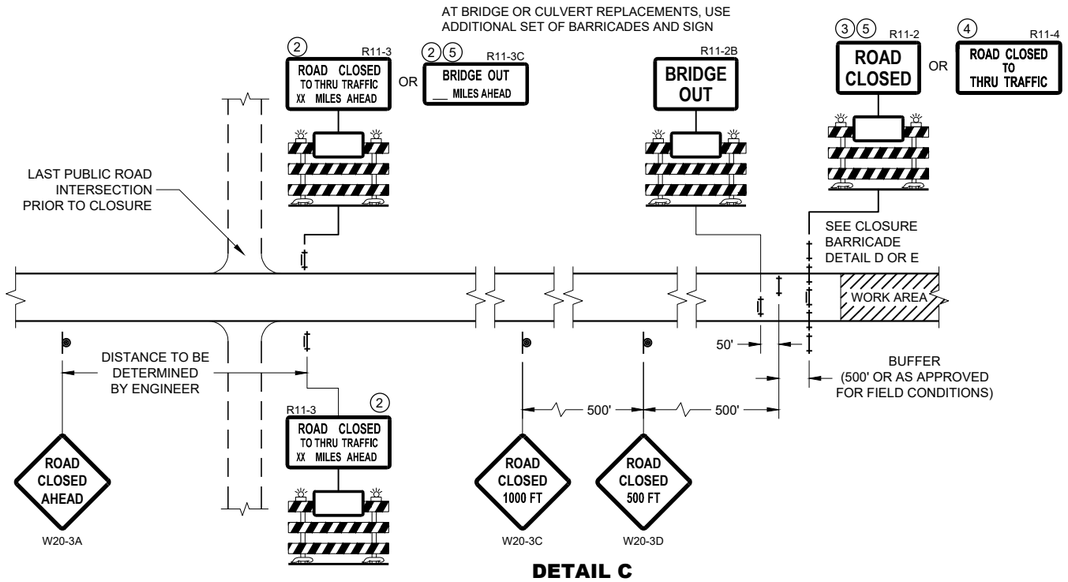
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

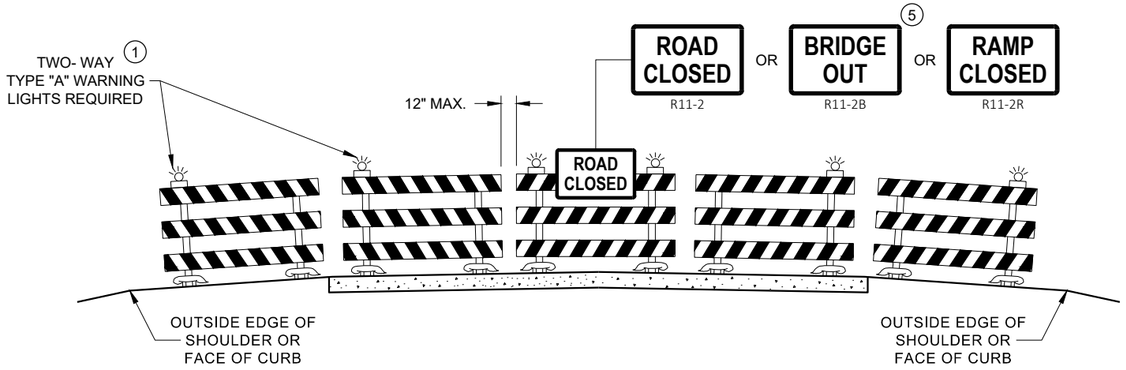
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APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

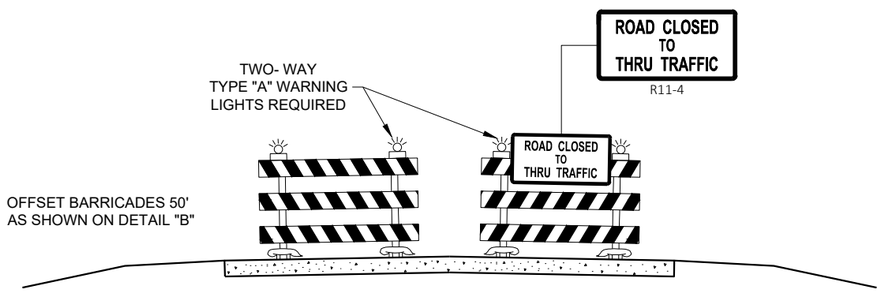
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SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

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SDD 15C02 - 09b

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SDD 15C02 - 09b

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

LEGEND

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

GENERAL NOTES

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

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

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

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

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

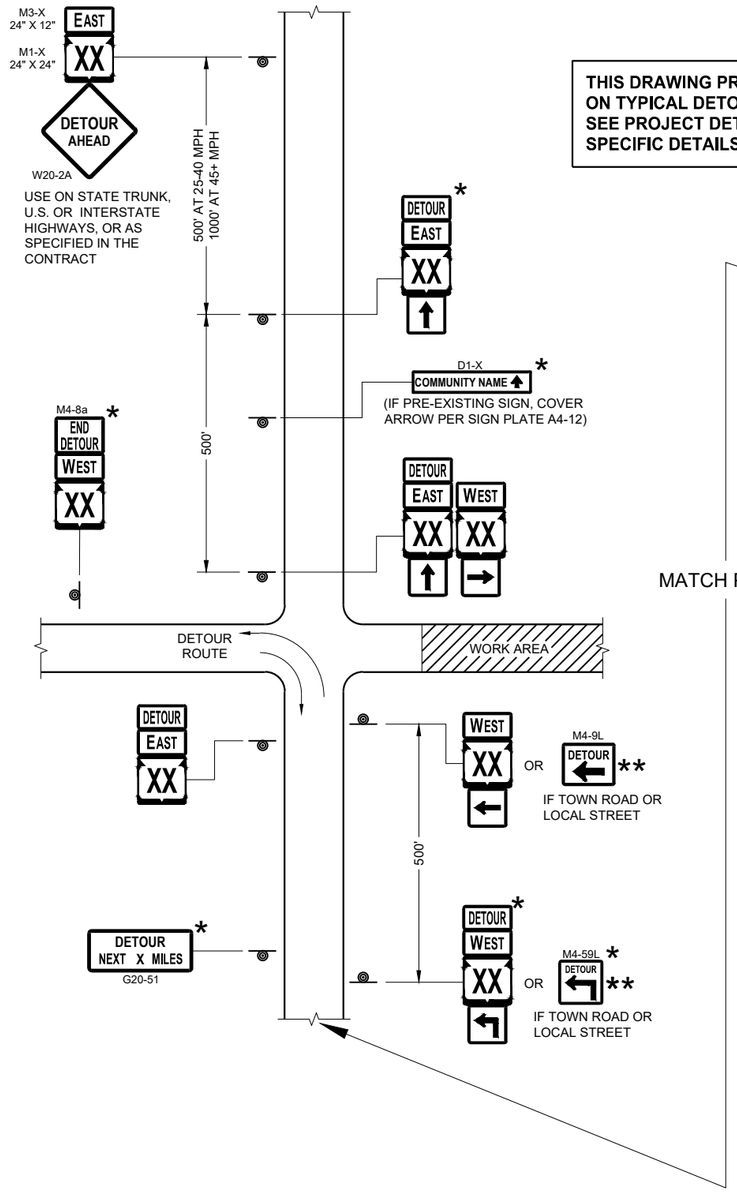
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

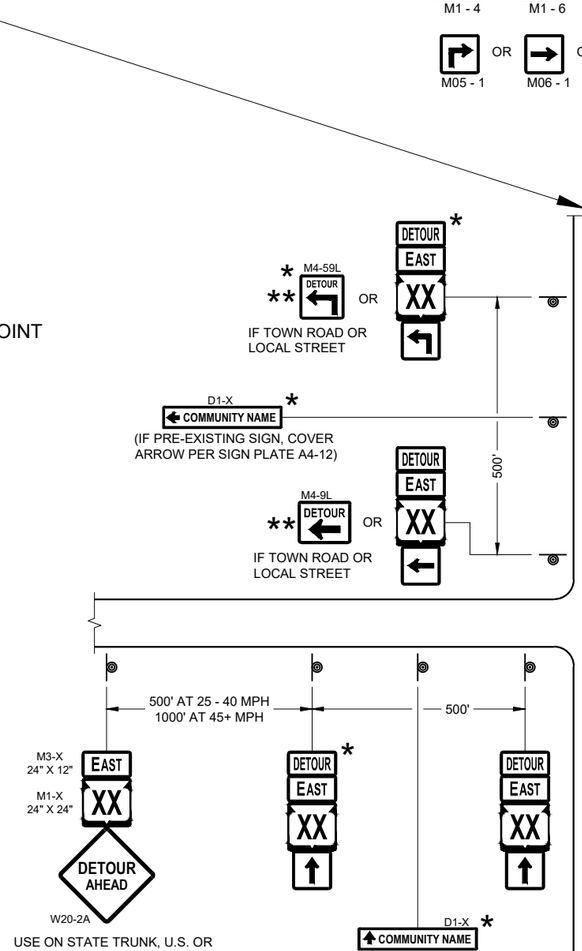
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING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

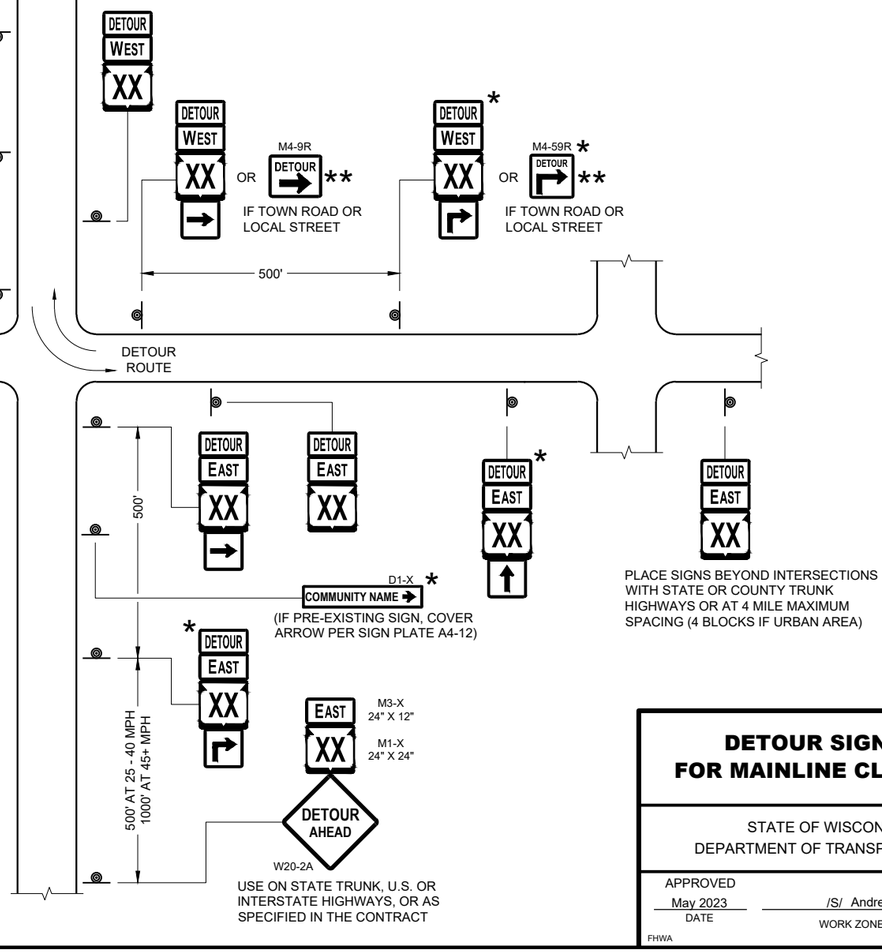
* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

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



MATCH POINT





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

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
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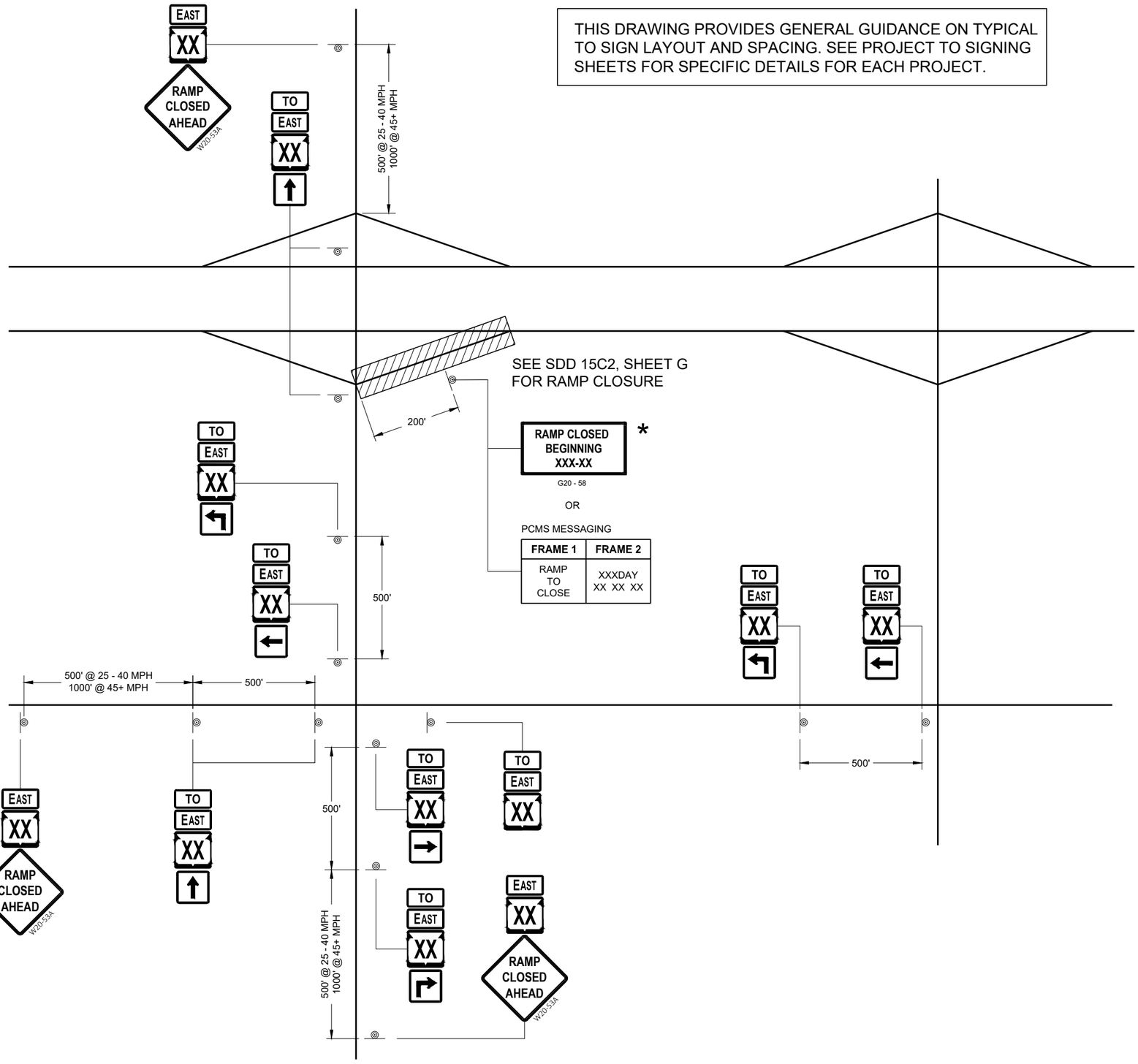
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May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

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SDD 15C02 - 09c



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

LEGEND

SIGN ON PERMANENT SUPPORT

TO EAST — MO4 - 5, M3 - X

XX M1 - 6 OR XX M1 - 4 OR INTERSTATE XX M1 - 1

M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

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

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

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOW:
- M3 - X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- M1 - 1, M1 - 4, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).
- MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).
- W20 - 53A SHALL BE 48" X 48"

* PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR LAYOUT.

ON RAMP LANE CLOSURE

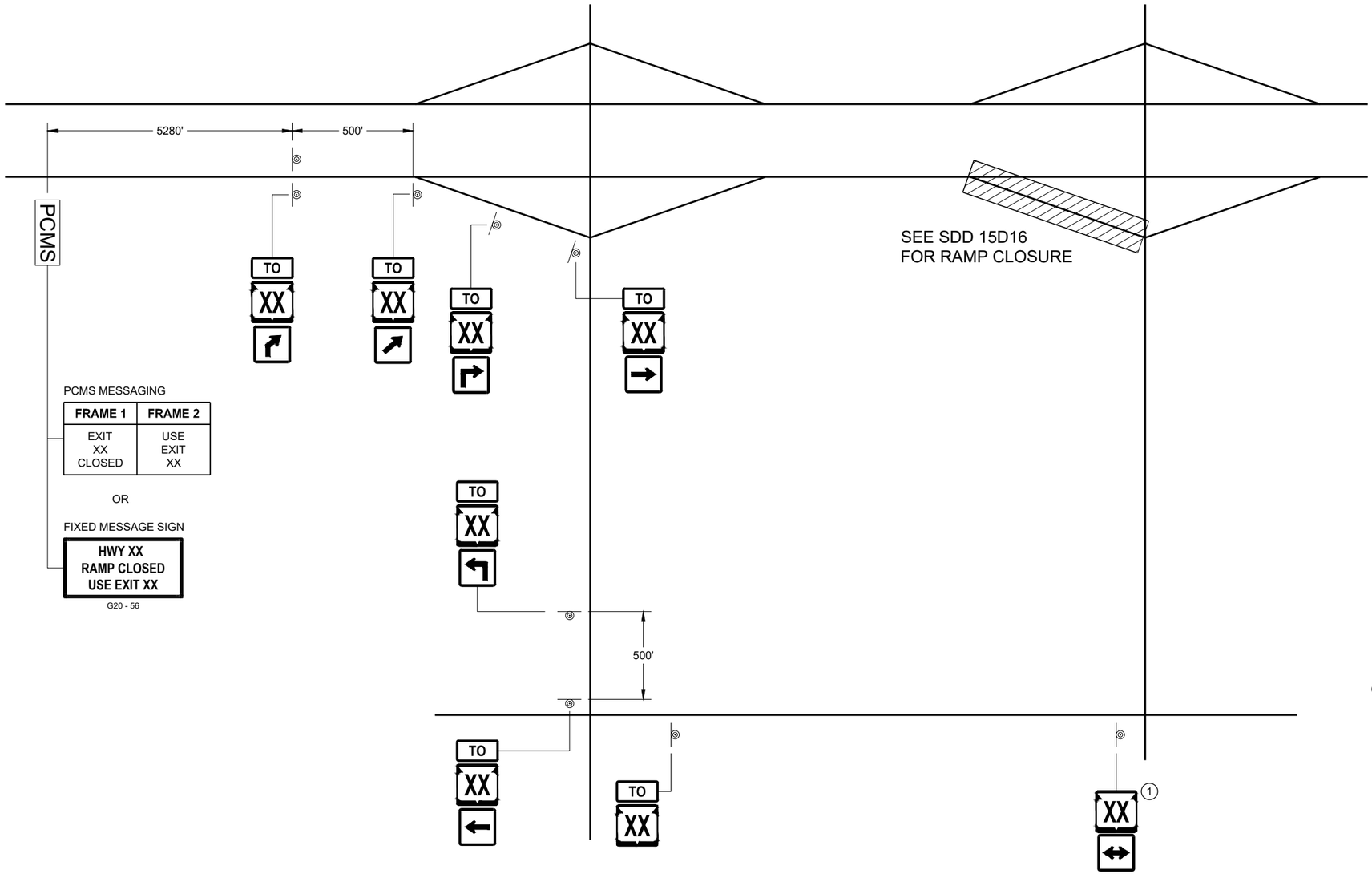
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THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL "TO" MO-4 SIGN LAYOUT AND SPACING. SEE PROJECT TO SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.



PCMS MESSAGING

FRAME 1	FRAME 2
EXIT XX CLOSED	USE EXIT XX

OR

FIXED MESSAGE SIGN

HWY XX
RAMP CLOSED
USE EXIT XX

G20 - 56

LEGEND

SIGN ON PERMANENT SUPPORT

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

TO MO4 - 5

XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A

M05 - 1 OR M05 - 2 OR M06 - 1 OR M06 - 2 OR M06 - 4

GENERAL NOTES

SEE SDD 15D16 "TRAFFIC CONTROL, EXIT RAMP CLOSURE" DETAIL FOR TRAFFIC CONTROL AT EXIT RAMP CLOSURE.

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

IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE "TO" MO-4 ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND "TO" MO-4 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

SIGN SIZES SHALL BE AS FOLLOW:
- MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- M1 - 4, M1 - 5A, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).
- MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).

(1) ONLY ADD IF THERE ARE NO EXISTING ROUTE MARKERS FOR THE INTERSECTING ROADWAY.

OFF RAMP
LANE CLOSURE

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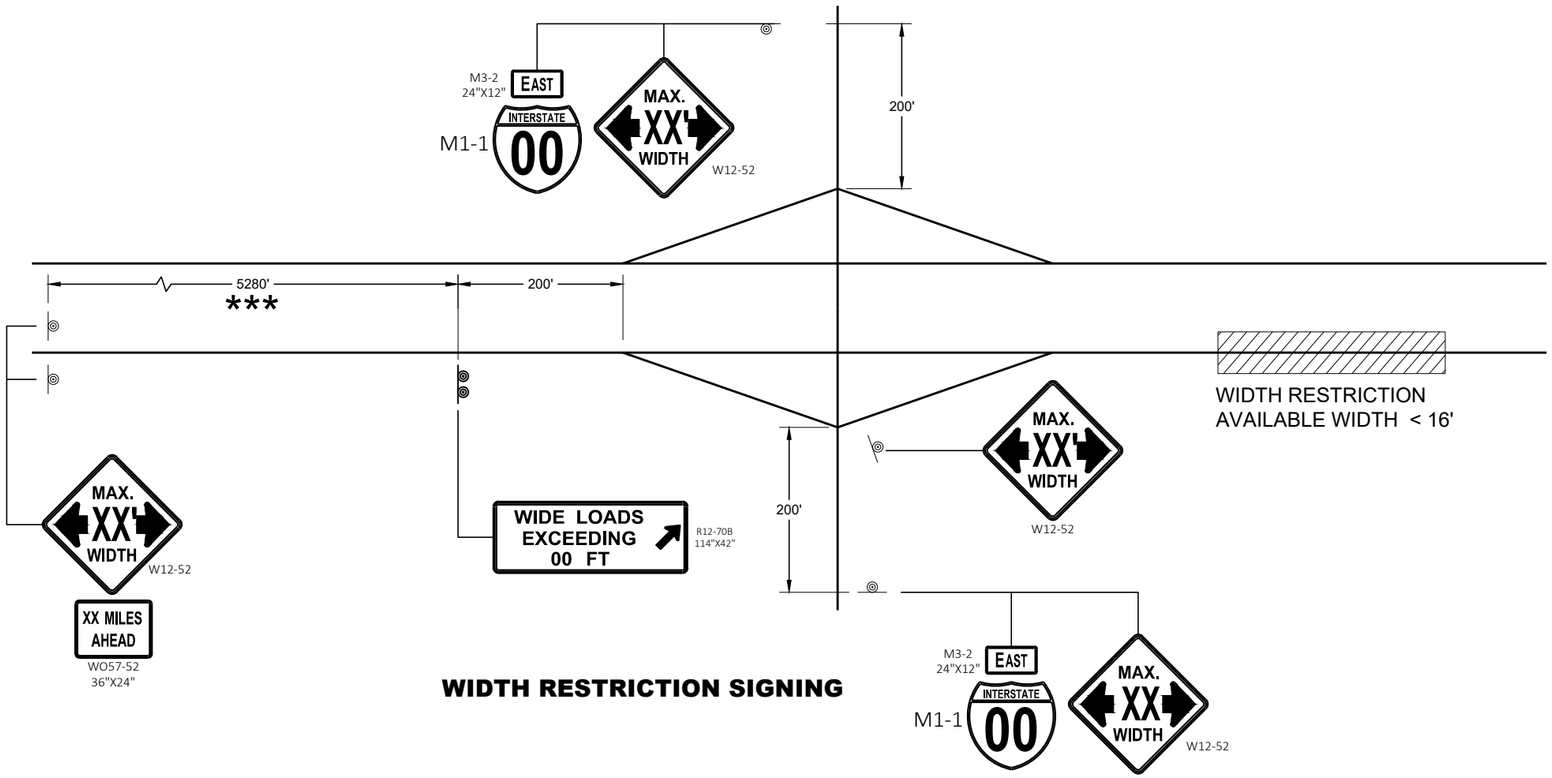
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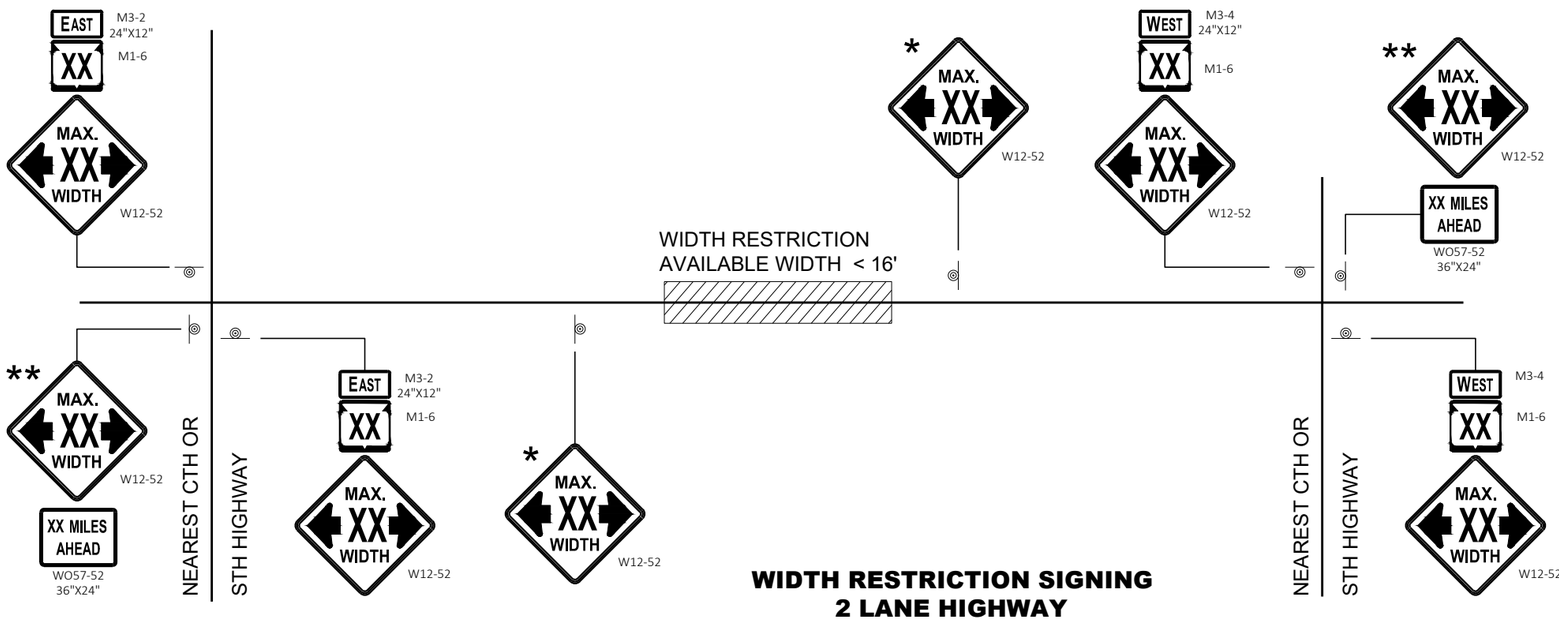
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SDD 15C02 - 09e
SDD 15C02 - 09e



WIDTH RESTRICTION SIGNING



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

LEGEND

SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

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

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

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

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

WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

* PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

** SIGN SHALL BE VISIBLE FROM ROADWAY.

*** ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.



WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

ADVANCED WIDTH RESTRICTION SIGNING

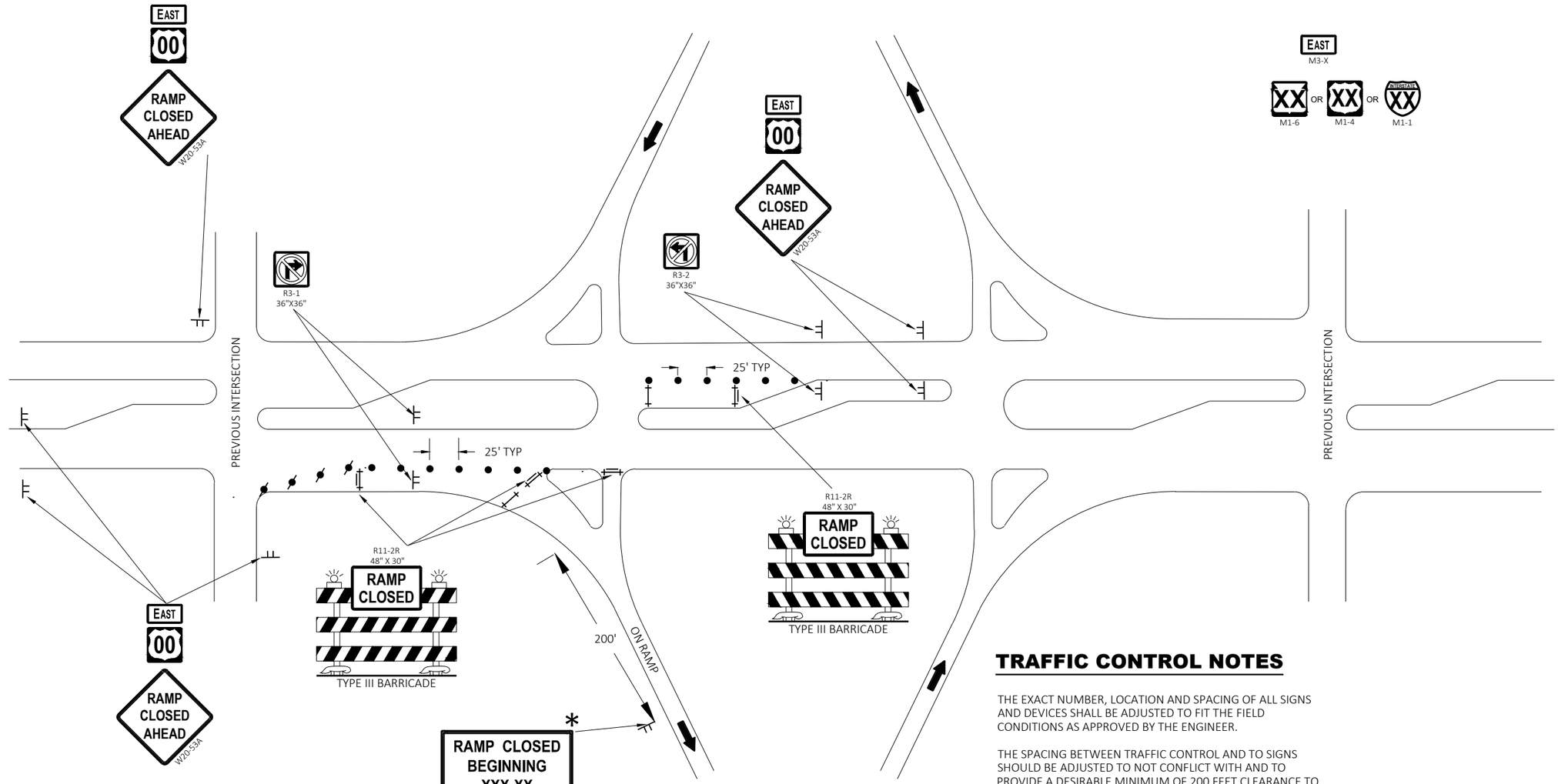
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APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
602

FHWA

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SDD 15C02 - 09f



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL NOTES

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24"x24" (36" x18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-1, M1-4, AND M1-6 SHALL BE 24"x24" (36"x36" IF NEEDED TO MATCH EXISTING SIGNS)
- W20-53A SHALL BE 48"X48"

* PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR LAYOUT.

TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

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DEPARTMENT OF TRANSPORTATION

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/S/ Andrew Heidtke — WORK ZONE ENGINEE
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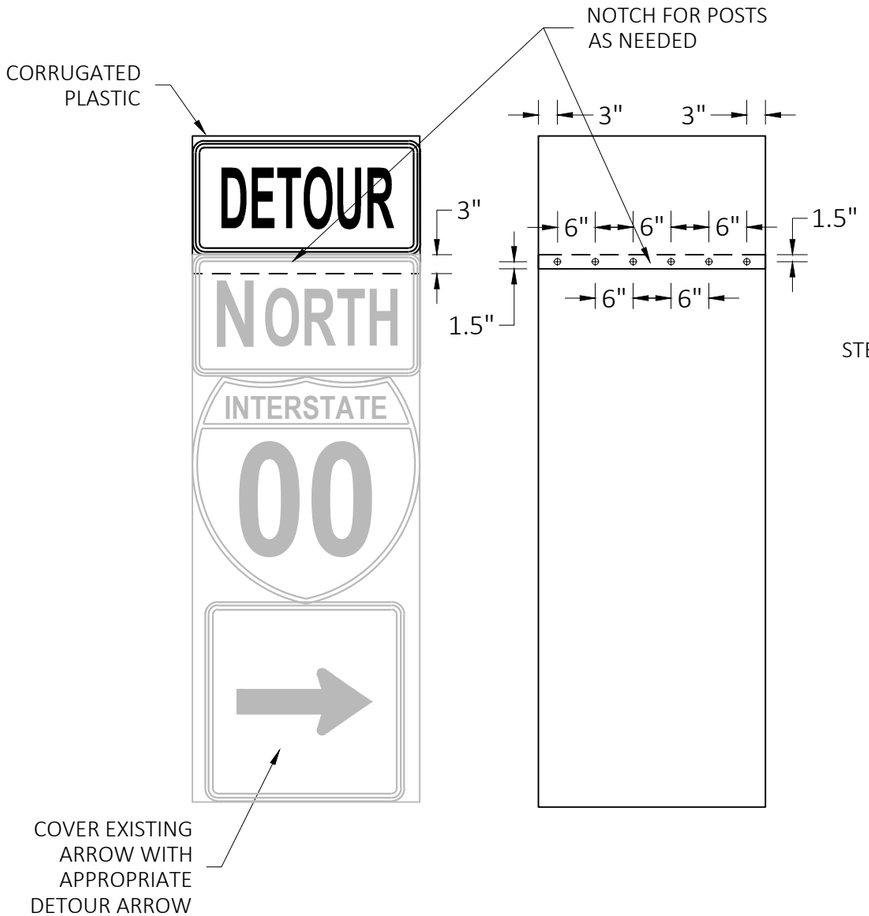
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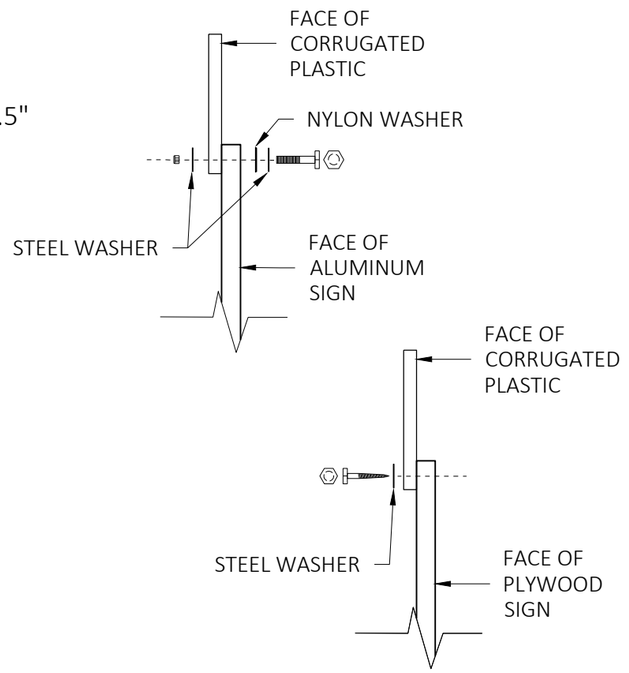
SDD 15C02-09g

FRONT SIDE

BACK SIDE

SIDE VIEW





GENERAL NOTES

CELLS OF CORRUGATED PLASTIC SHALL BE VERTICALLY ORIENTED.

PROVIDE A 0.4-INCH THICK BASE CORRUGATED PLASTIC WITH A 0.035-INCH WALL THICKNESS AND 0.4-INCH CELL SIZE.

FOR 36" WIDE SIGNS: USE 6 FASTENERS AS SHOWN.

FOR 24" WIDE SIGNS: USE 4 FASTENERS WITH EDGE SPACING AS SHOWN AND 6" SPACING BETWEEN FASTENERS.

METAL WASHERS, NUTS, BOLTS AND LAGS 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, SC3

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.

PLYWOOD SIGNS:
LAG SCREWS - 5/16" x 1"
ALUMINUM SIGNS:
MACHINE BOLTS - 5/16" x 1-1/4" LENGTH W/NUTS
WASHERS:
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

MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

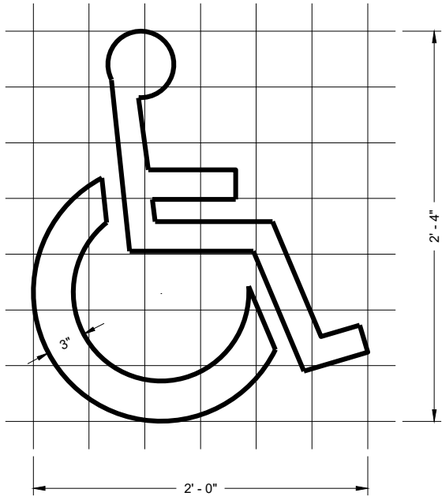
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FHWA

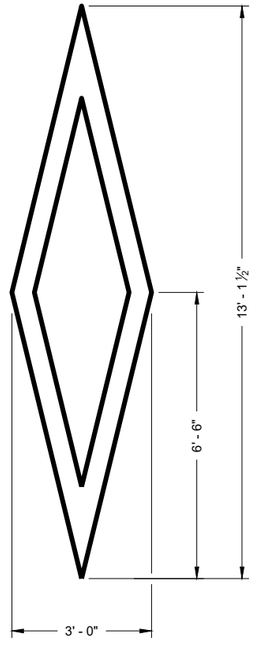
6
SDD 15C02-09h

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.



HANDICAP SYMBOL



PREFERENTIAL LANE SYMBOL

6

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SDD 15C07 - 15a

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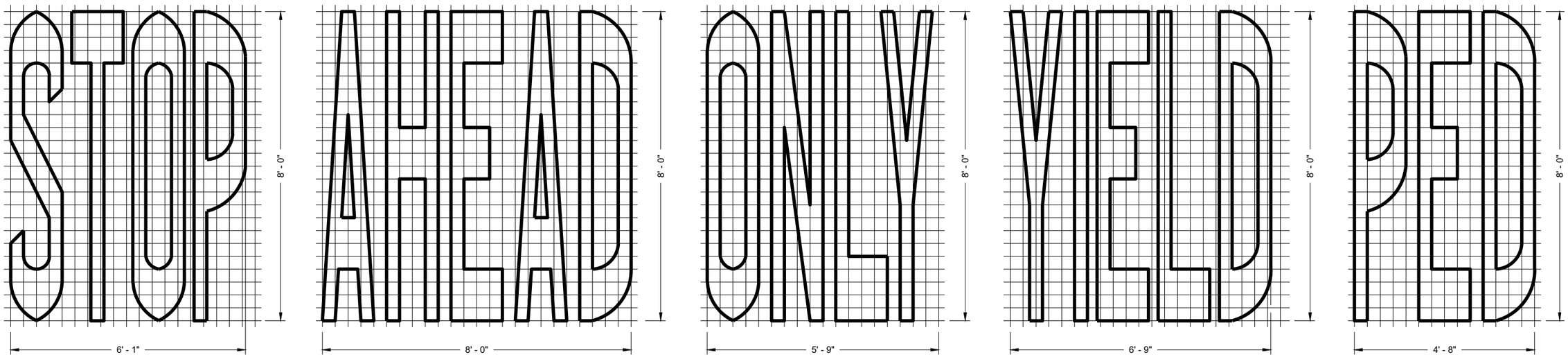
PAVEMENT MARKING SYMBOLS

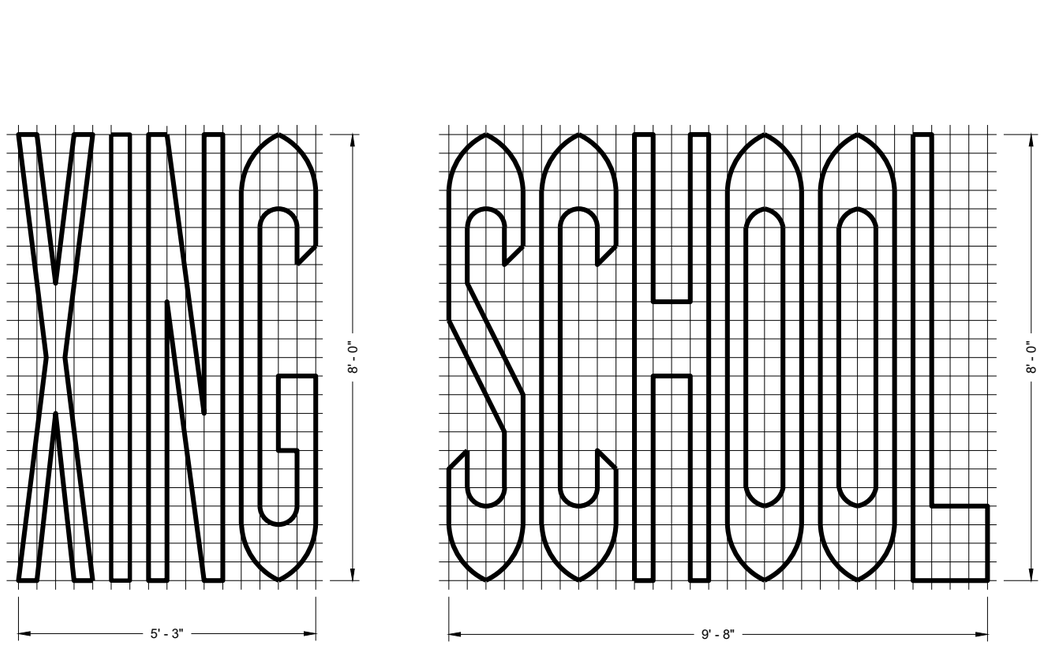
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November 2019
DATE

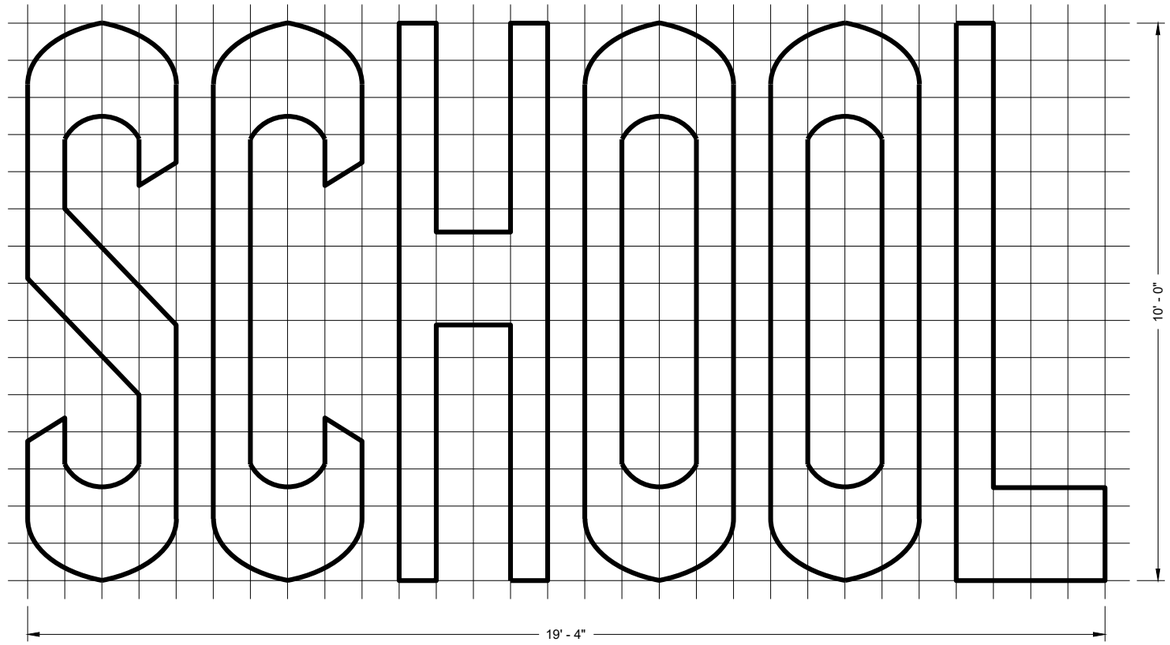
/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

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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

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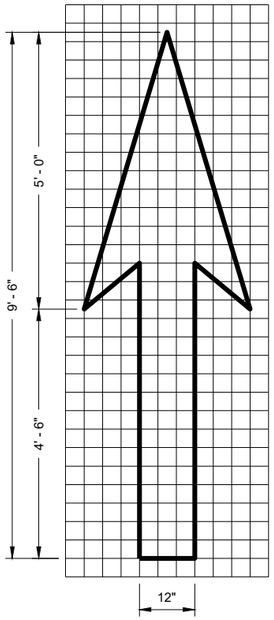
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SDD 15C07 - 15b

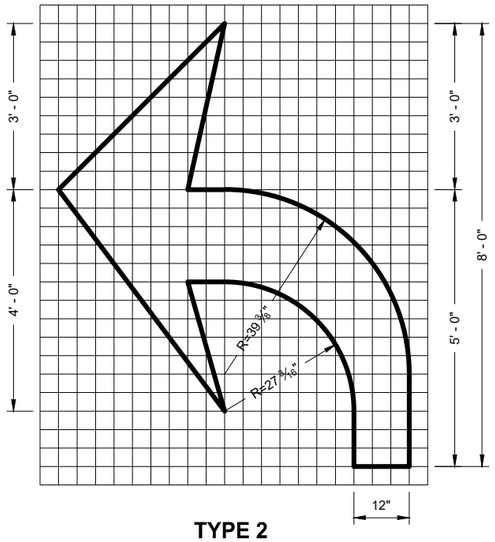
SDD 15C07 - 15b

GENERAL NOTES

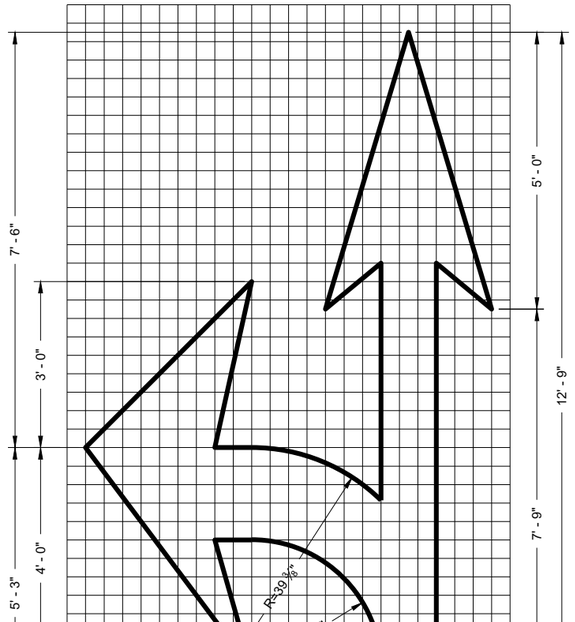
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



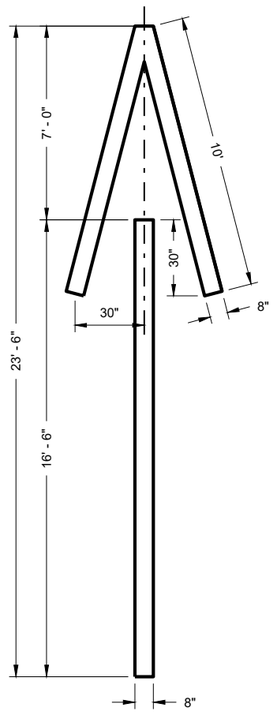
TYPE 1



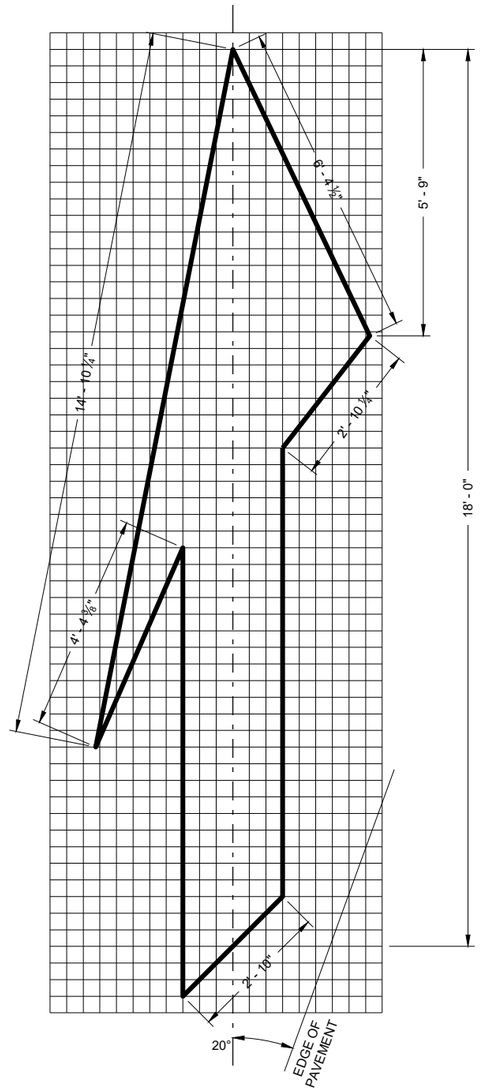
TYPE 2



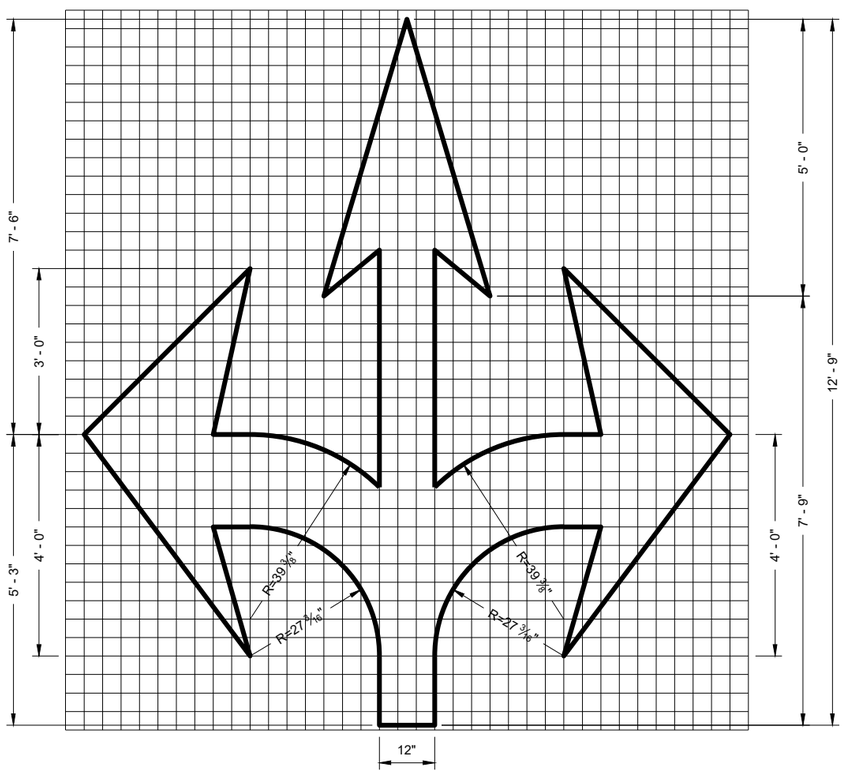
TYPE 3



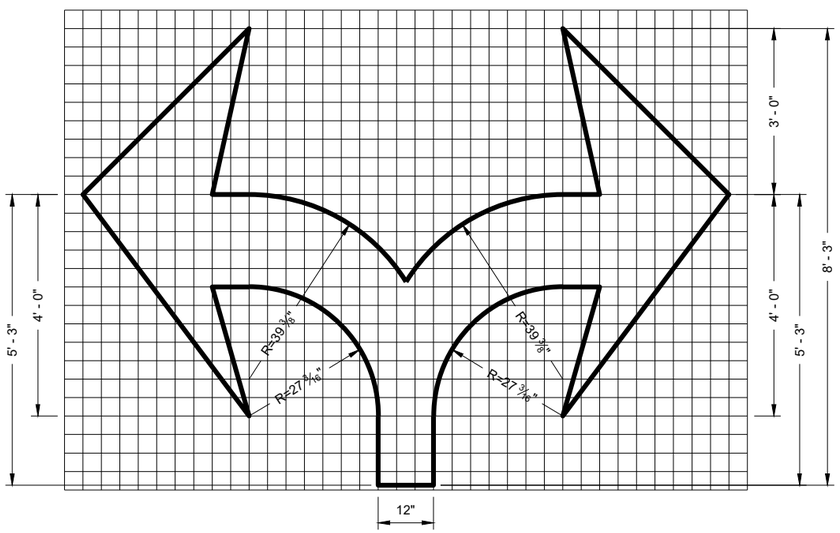
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

PAVEMENT MARKING ARROWS

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DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

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SDD 15C07 - 15c

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SDD 15C07 - 15c

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

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

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

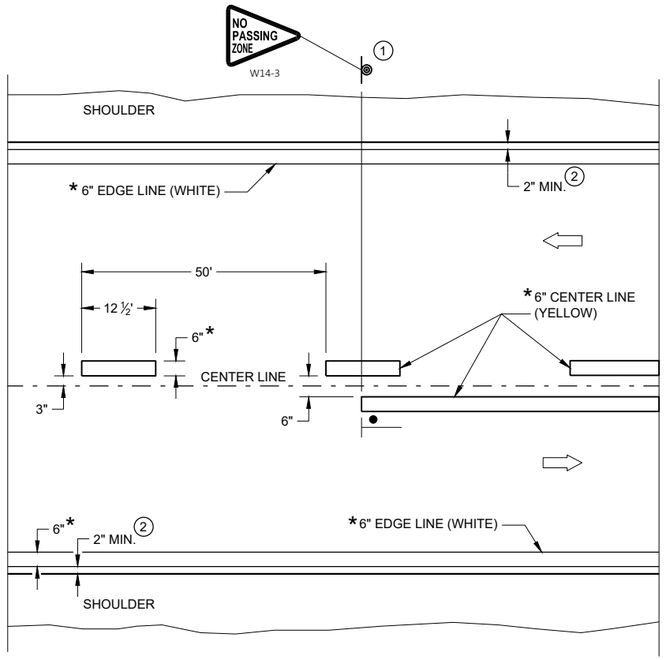
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

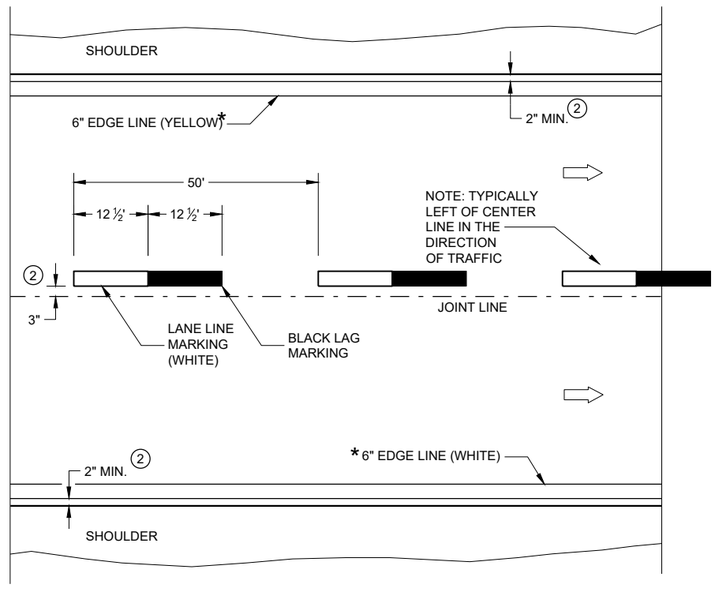
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

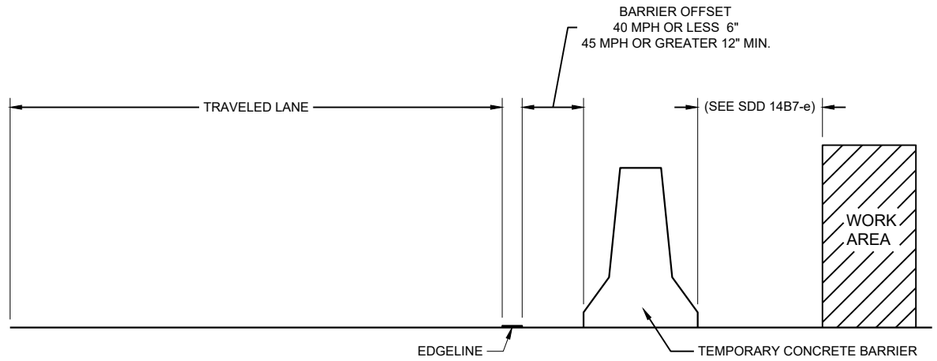
PERMANENT LONGITUDINAL PAVEMENT MARKINGS

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SDD 15C08-23a



TEMPORARY BARRIER OFFSET FROM EDGELINE

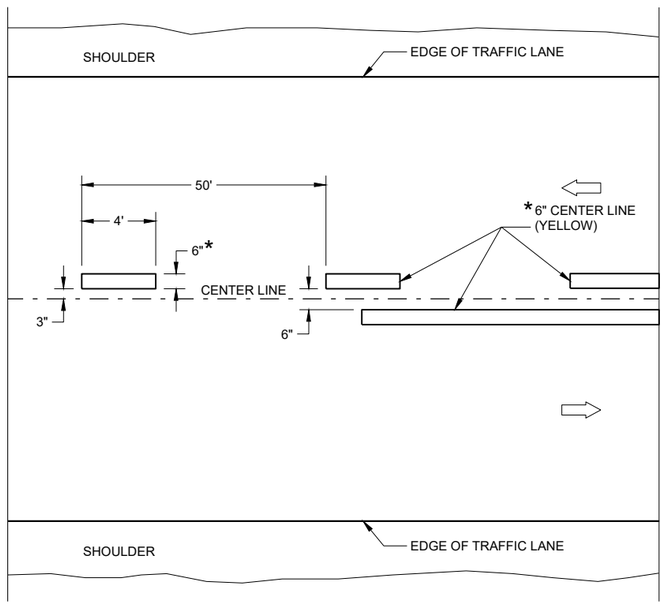
GENERAL NOTES

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

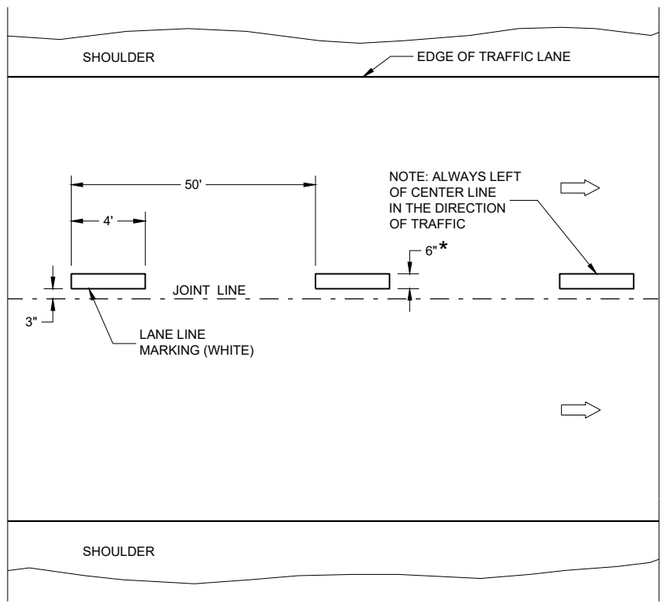
LEGEND

⇨ DIRECTION OF TRAFFIC

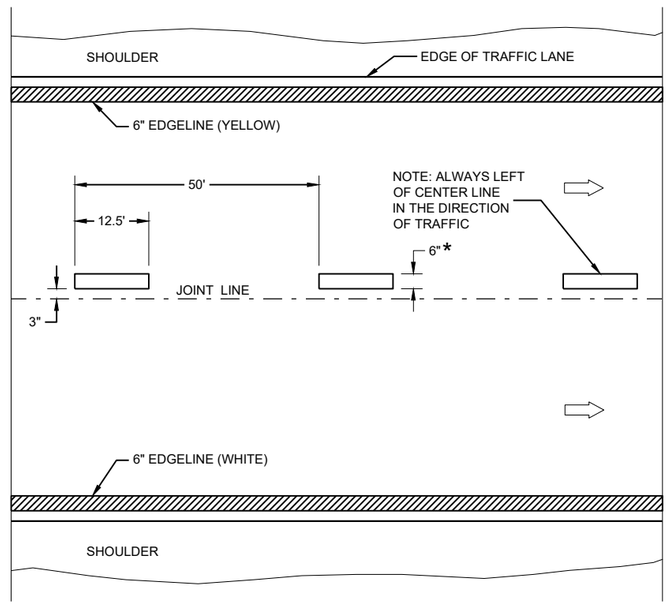
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
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May 2023 — DATE
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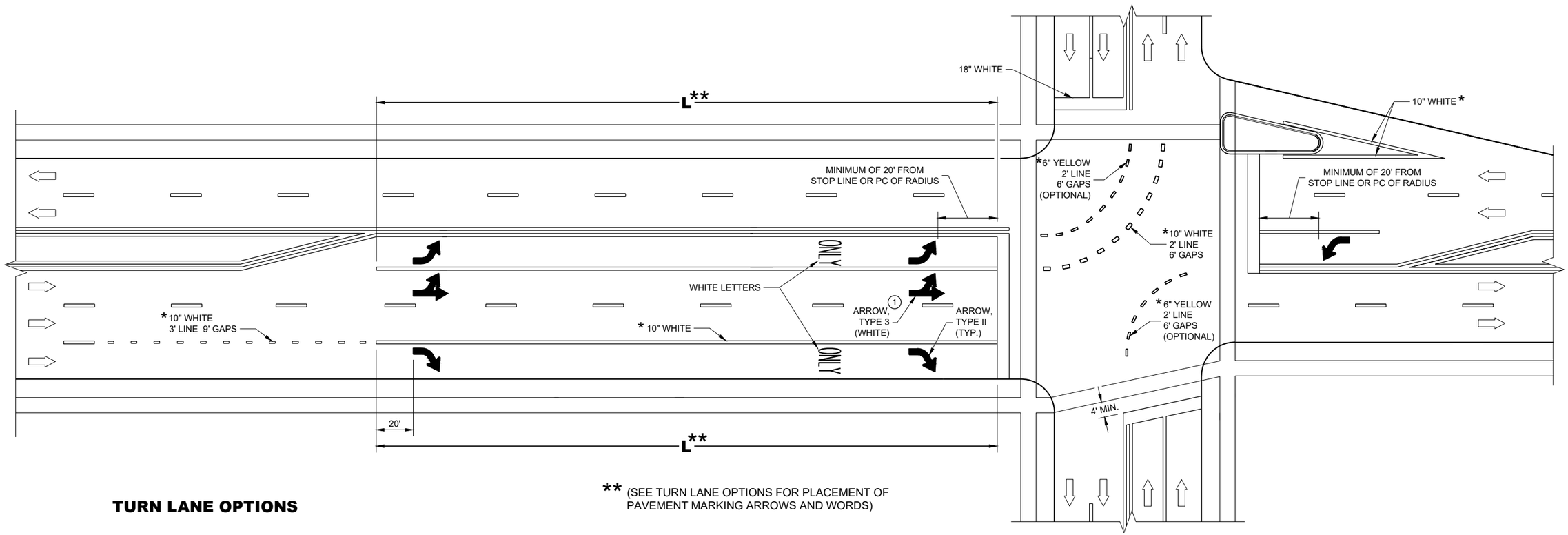
FHWA

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SDD 15C08-23b

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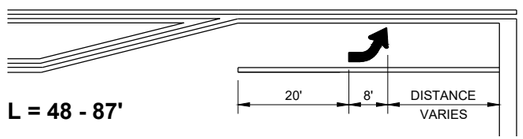
SDD 15C08-23b



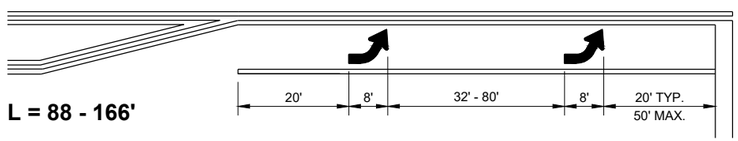
** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

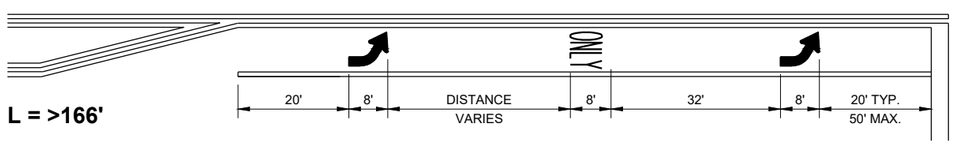
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48 - 87'



L = 88 - 166'



L = >166'

GENERAL NOTES

1. QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

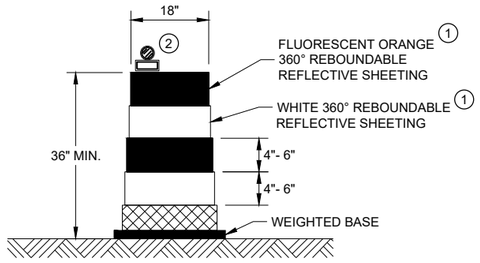
PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 15C08-23d

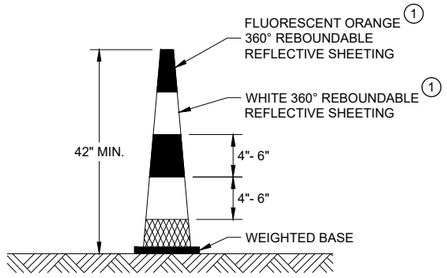
GENERAL NOTES

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

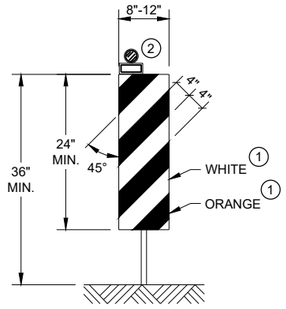
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

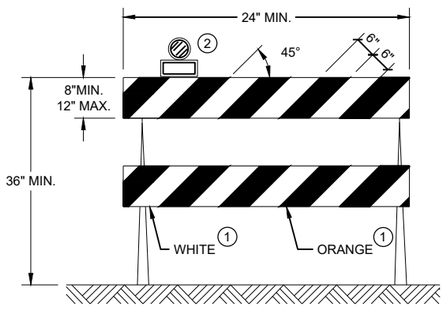
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



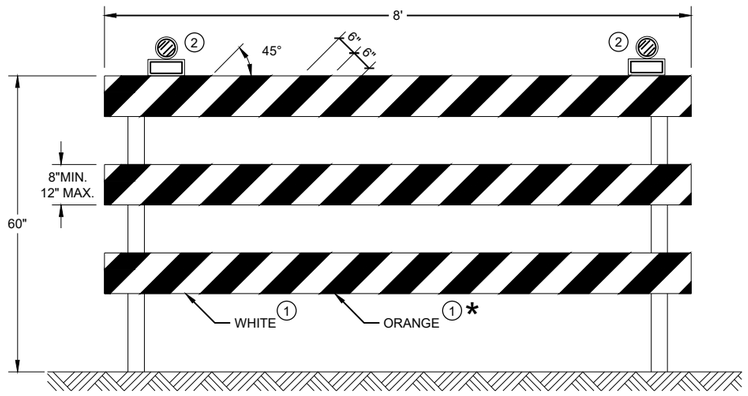
VERTICAL PANEL

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

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SDD 15C11 - 10b
SDD 15C11 - 10b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

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

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

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

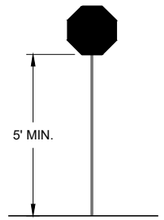
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



STOP/SLOW PADDLE ON SUPPORT STAFF

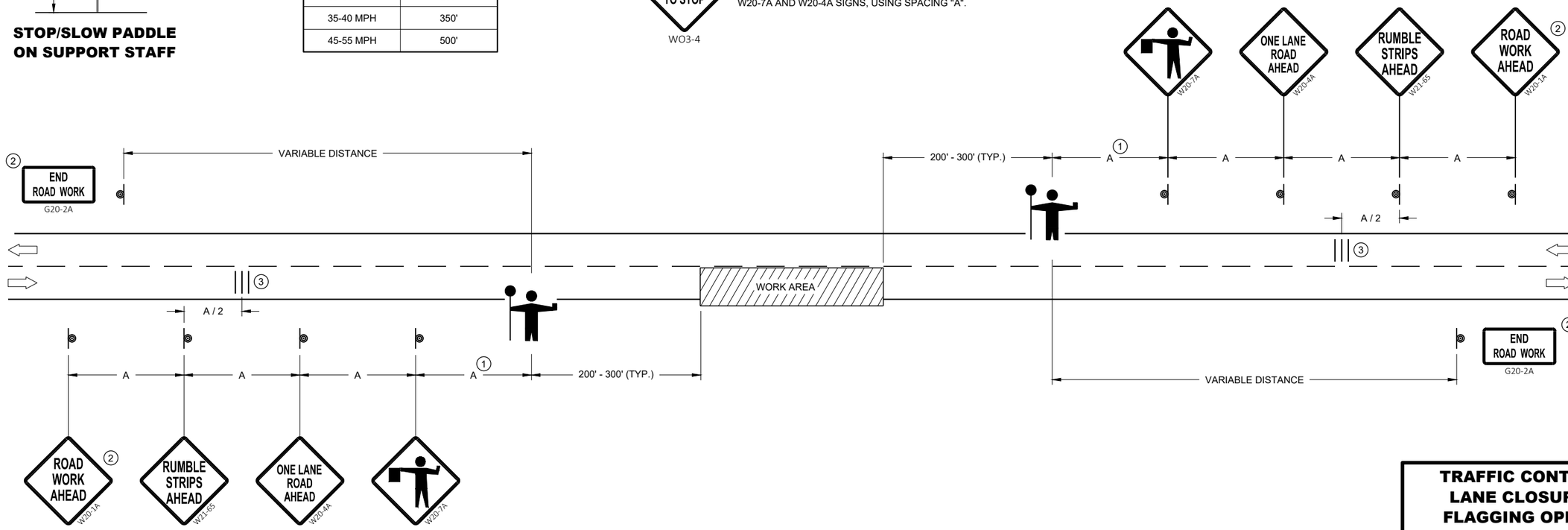
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



WO3-4

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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

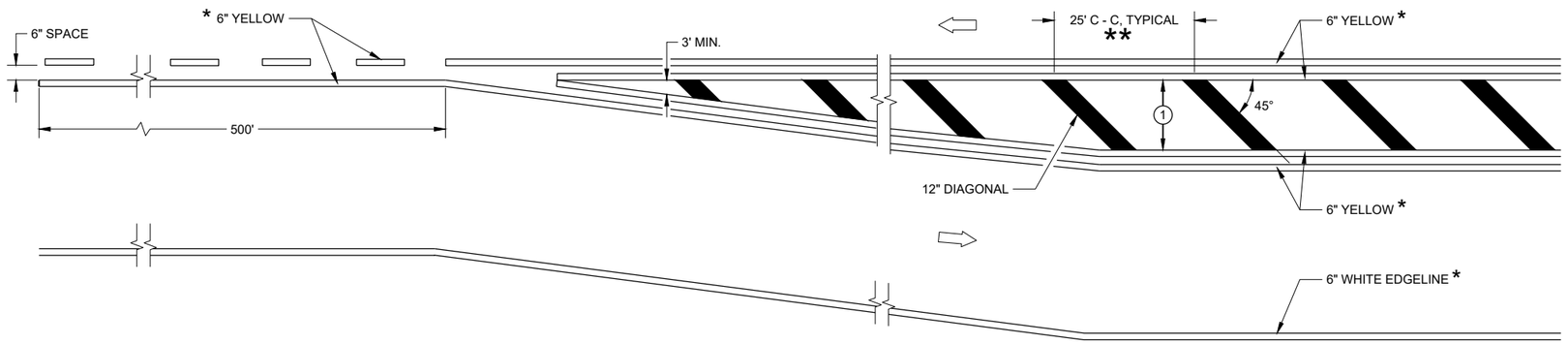
612

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SDD 15C12 - 09a

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SDD 15C12 - 09a



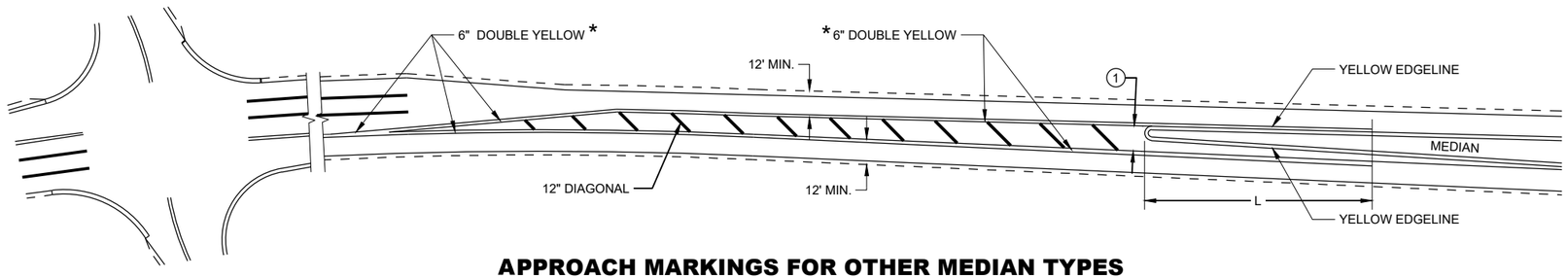
MEDIAN ISLAND DETAIL

GENERAL NOTES

1. DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

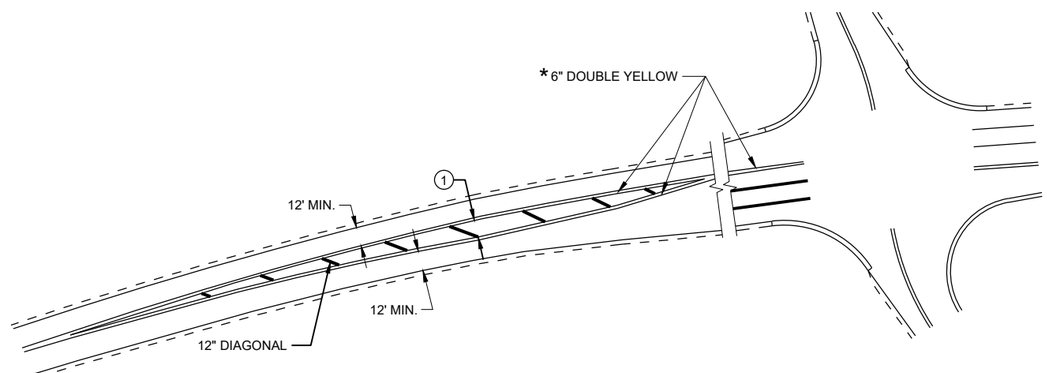
⇨ DIRECTION OF TRAVEL

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



APPROACH MARKINGS FOR OTHER MEDIAN TYPES

SPEED LIMIT	L
<35 MPH	5'
35> MPH	50'



NON-APPROACH MARKINGS

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SDD 15C18-08a

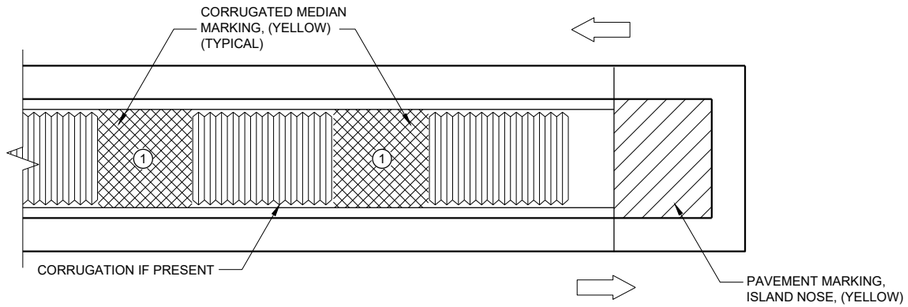
MEDIAN ISLAND PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

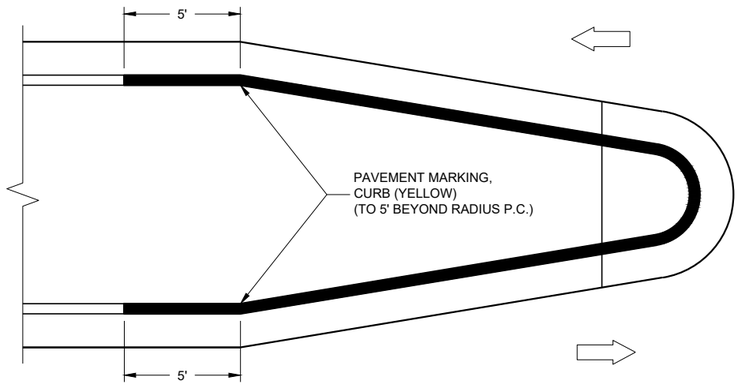
APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MAF ENGINEER
FHWA

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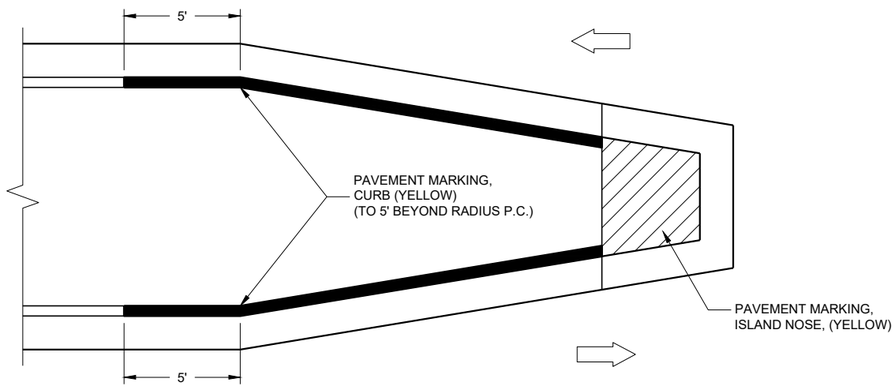
SDD 15C18-08a



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

(1) APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.

ISLAND NOSE MARKING

CURB MARKING

CORRUGATED MEDIAN MARKING

DIRECTION OF TRAVEL

PAVEMENT MARKINGS, MEDIAN ISLAND NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023
DATE

/S/ Jeannie Silver
STATE SIGNING AND MAR ENGINEER

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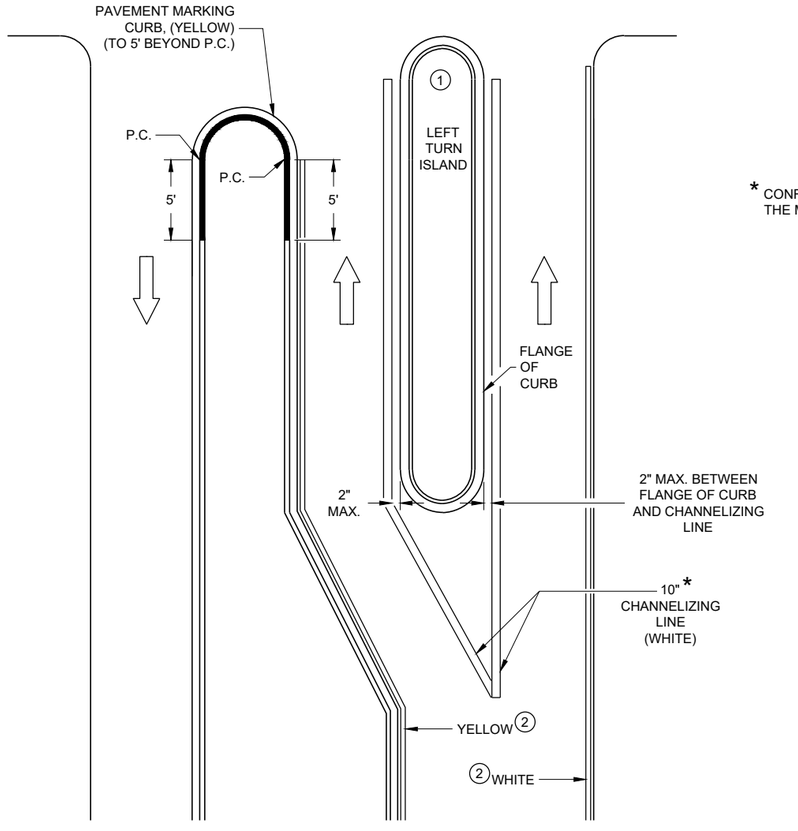
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SDD 15C18-08b

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SDD 15C18-08b

REQUIREMENTS FOR EDGE LINES		
POSTED SPEED	IS THERE CONTINUOUS LIGHTING?	
	YES	NO
≤ 30 MPH	NO	OPTIONAL
35 OR 40 MPH	OPTIONAL	RECOMMENDED
≥ 45 MPH	RECOMMENDED	REQUIRED



* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEFT TURN & MEDIAN ISLAND

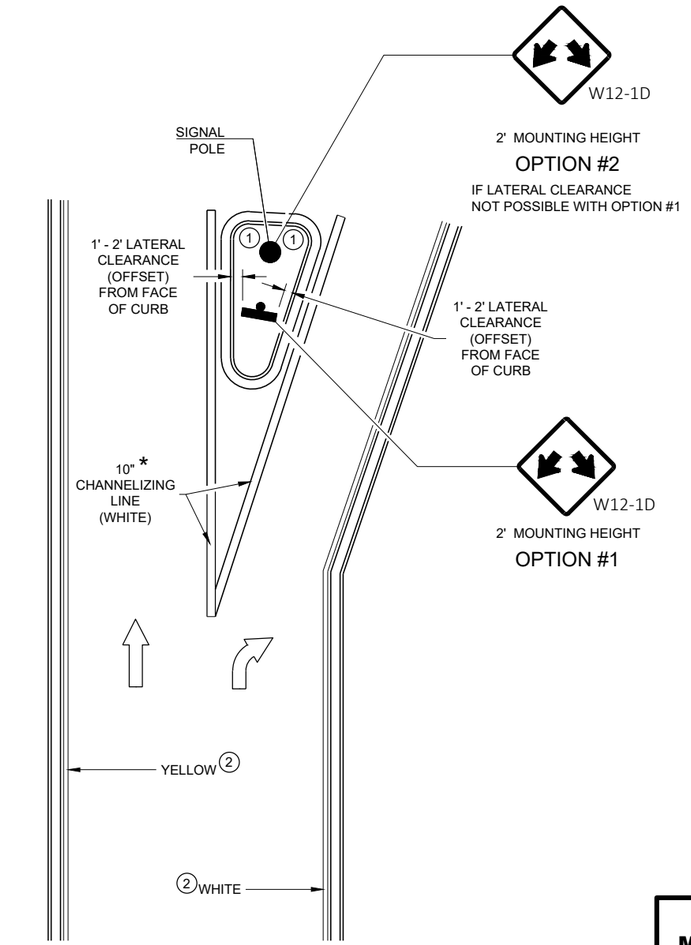
GENERAL NOTES

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

1. MARK CURB NOSES YELLOW.
2. MARK ACCORDING TO TABLE.

DIRECTION OF TRAVEL



RIGHT TURN ISLAND

MEDIAN PAVEMENT MARKINGS, DOUBLE ARROW WARNING SIGN PLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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May 2023 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MAF ENGINEER

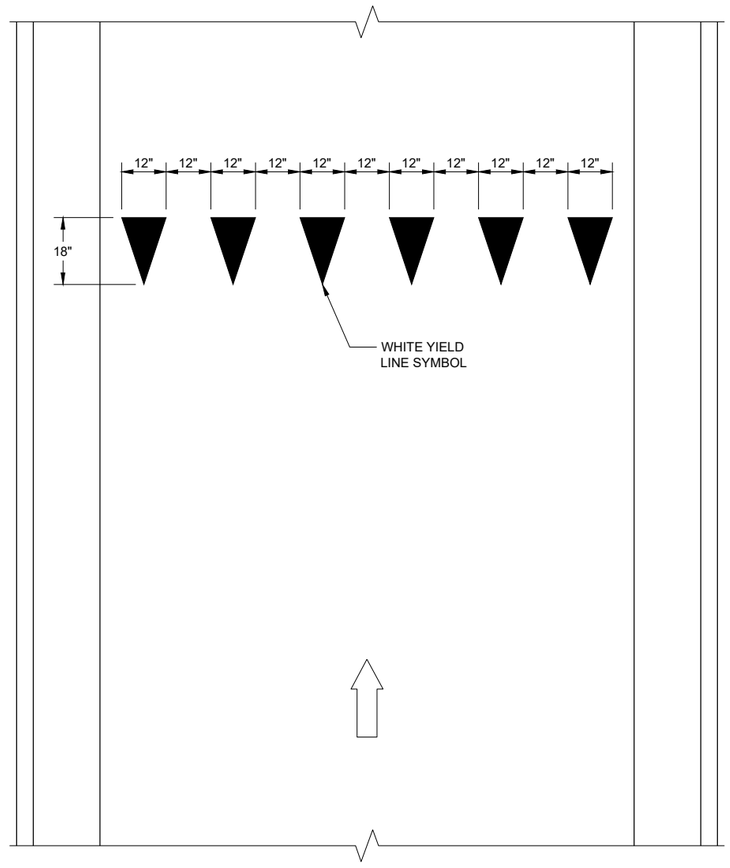
FHWA

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SDD 15C18-08c

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SDD 15C18-08c

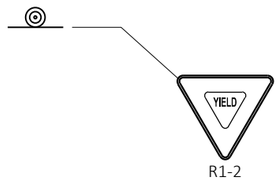


YIELD LINE

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAVEL



R1-2

YIELD MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-81-2016
DATE

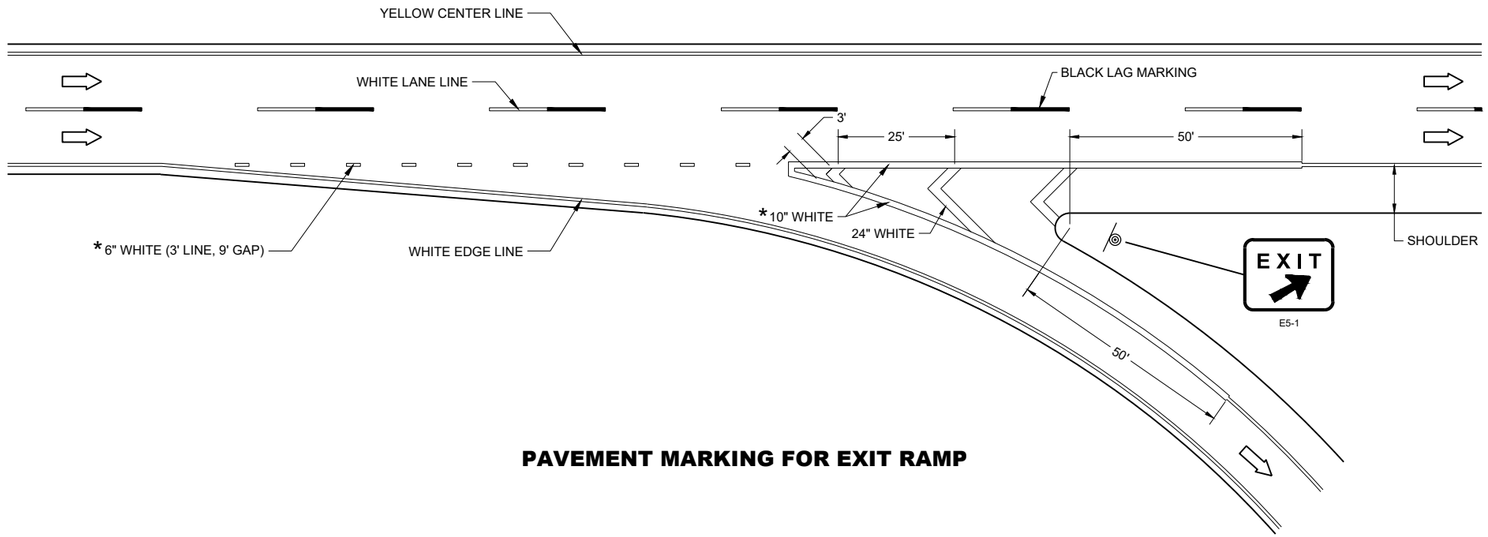
/S/ Matthew R. Rauch
STATE SIGNING AND MAR ENGINEER

FHWA

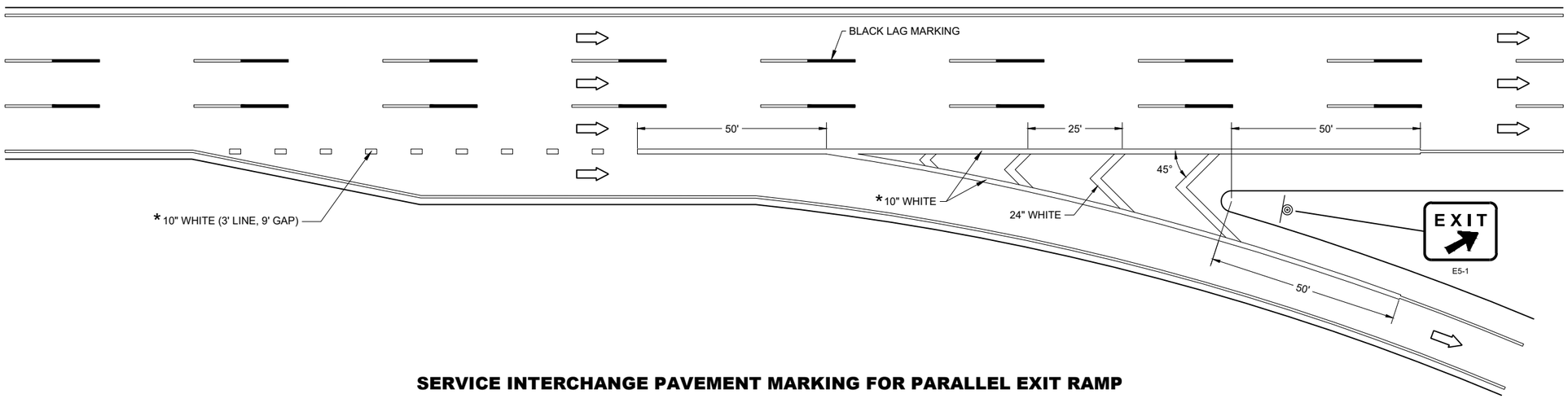
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SDD 15C20 - 02

SDD 15C20 - 02



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

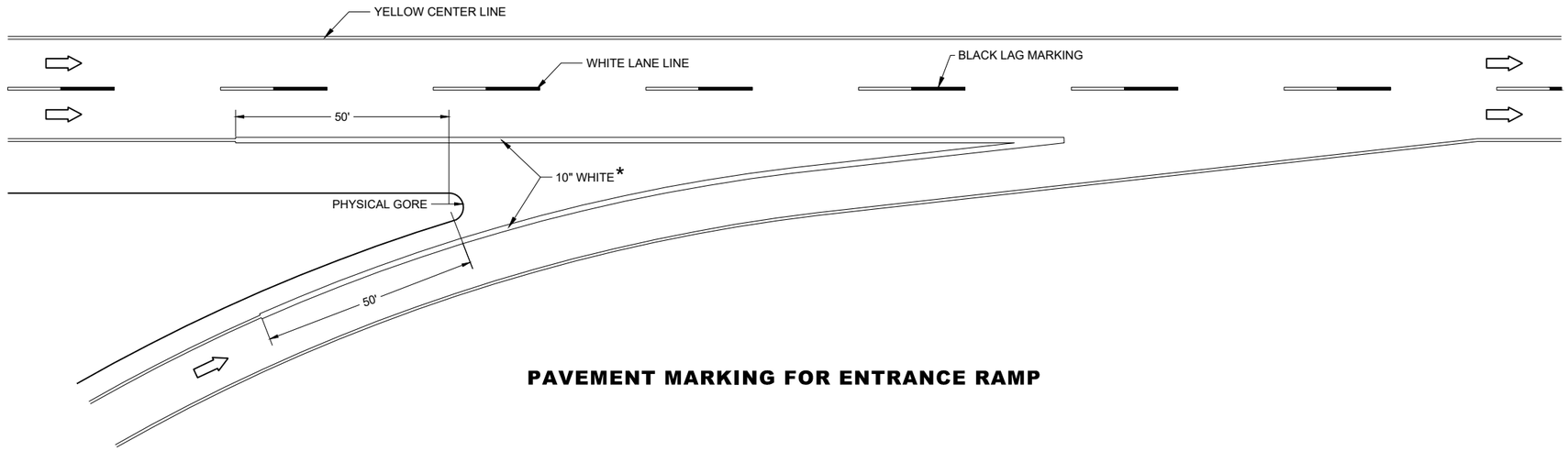
DIRECTION OF TRAVEL

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING, EXIT RAMP AND PARALLEL EXIT RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 15C31-06a



PAVEMENT MARKING FOR ENTRANCE RAMP

GENERAL NOTES

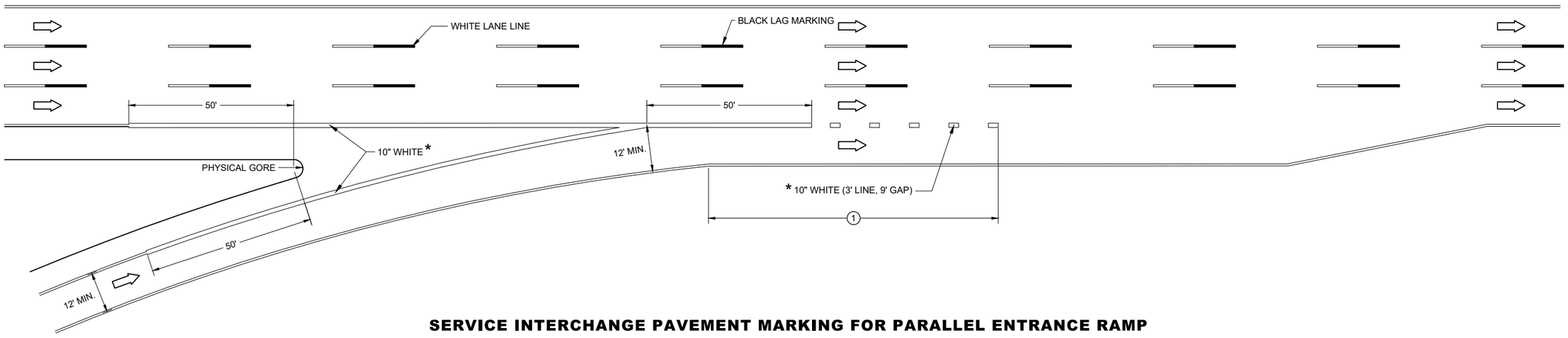
PLACE GROOVE 3 INCHES LEFT OF JOINT.

(1) ½ LENGTH OF FULL WIDTH ACCELERATION LANE.

LEGEND

DIRECTION OF TRAVEL

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE RAMP

PAVEMENT MARKING, ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 15C31-06c

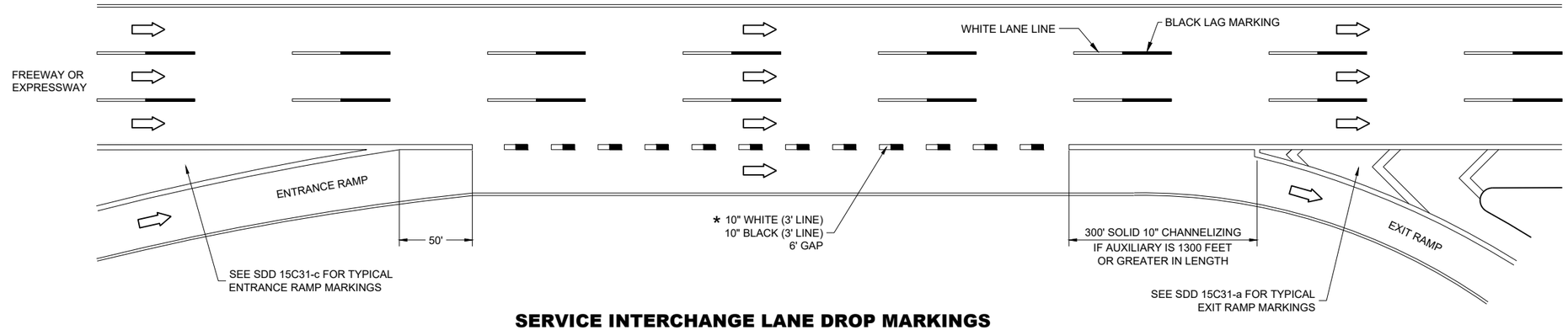
LEGEND

DIRECTION OF TRAVEL

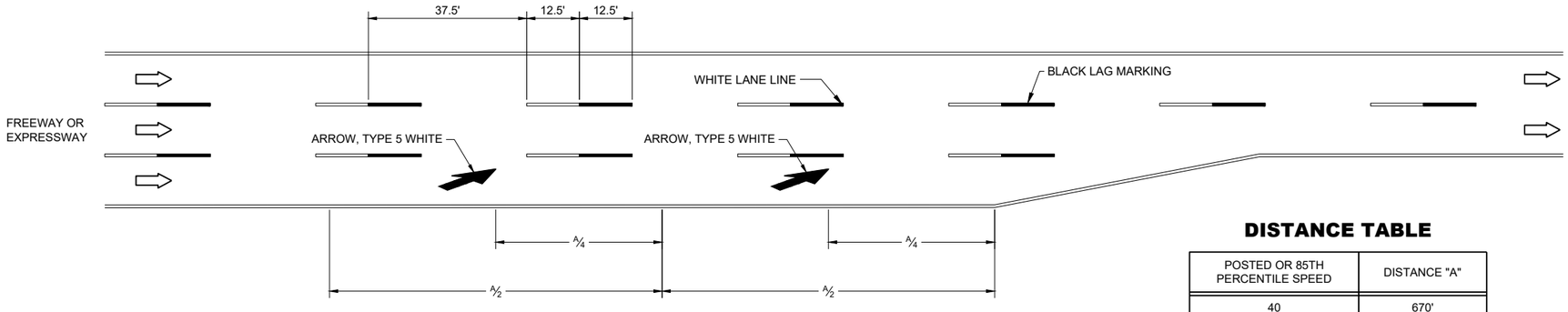
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.



SERVICE INTERCHANGE LANE DROP MARKINGS



LANE REDUCTION MARKINGS

DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
40	670'
45	775'
50	885'
55	990'
60	1100'
65	1200'
70	1250'

PAVEMENT MARKING, LANE DROP AND LANE REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

September 2023
DATE

/S/ Matthew Rauch
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

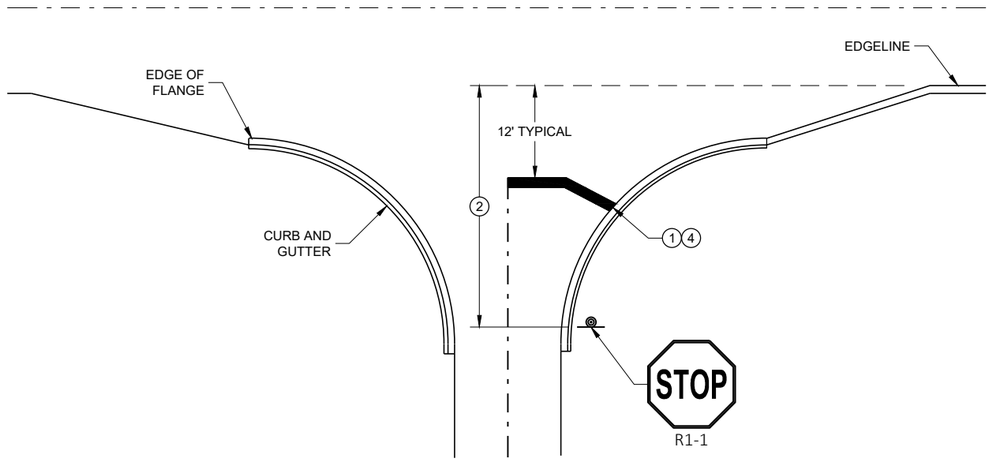
FHWA

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SDD 15C31-06d

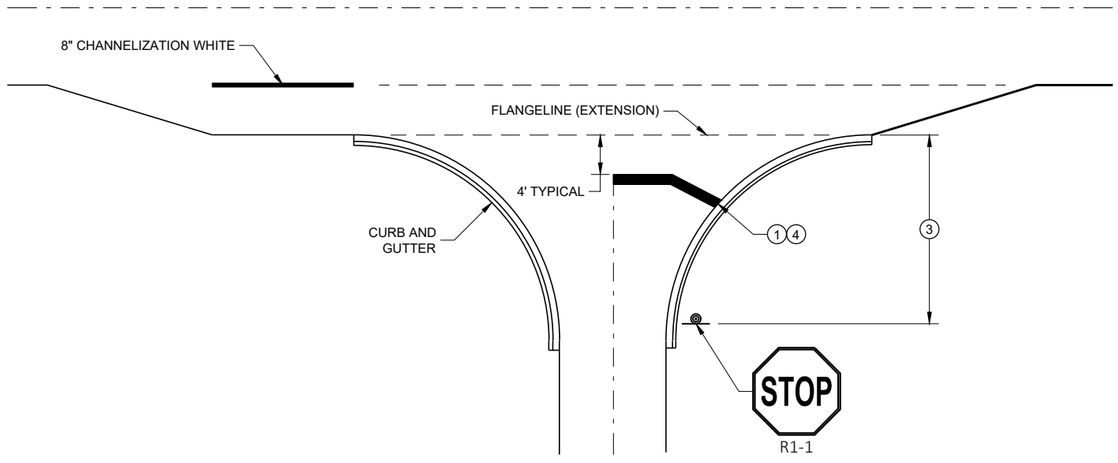
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

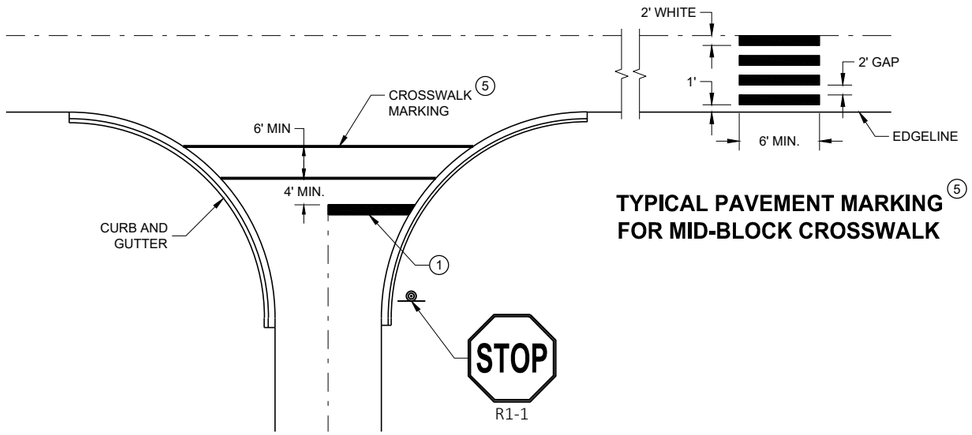
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE 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

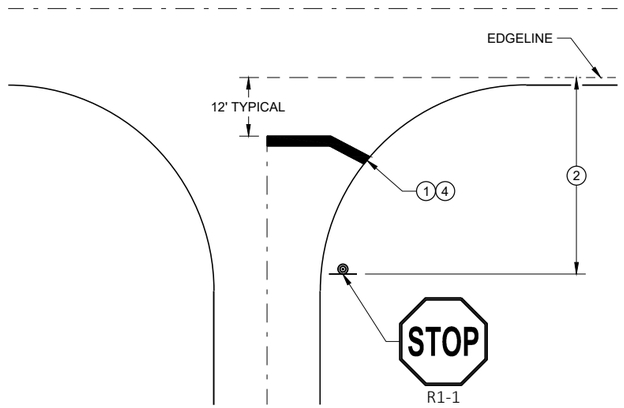


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



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

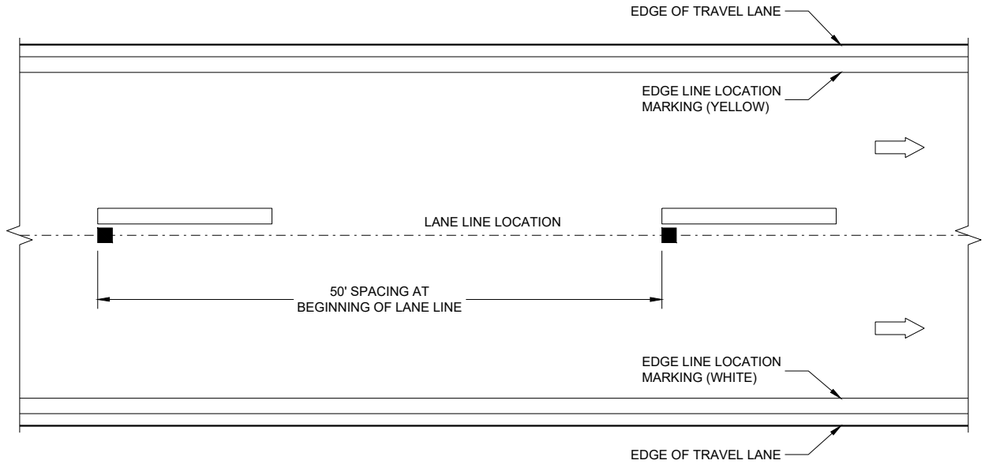
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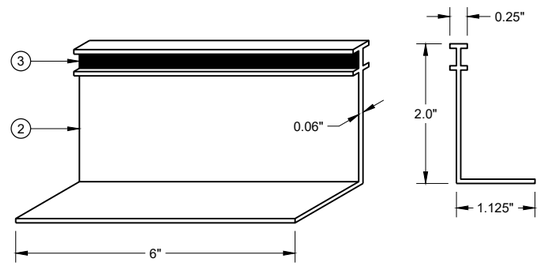
SDD 15C33 - 04

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SDD 15C33 - 04



LONGITUDINAL PLACEMENT 6 - INCH LANE LINE



ISOMETRIC VIEW **SIDE VIEW**

TEMPORARY RAISED PAVEMENT MARKER, TYPE II

GENERAL NOTES

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

COLOR OF TEMPORARY RAISED PAVEMENT MARKERS, TYPE II, SHALL MATCH THE COLOR OF THE MARKING THEY SUPPLEMENT.

PLACEMENT OF TEMPORARY RAISED PAVEMENT MARKERS ON EDGE LINES IS OPTIONAL. IF PLACED ON EDGE LINES, MAXIMUM SPACING SHALL BE 50 FEET.

PROVIDE SINGLE OR MULTI-COVER TEMPORARY RAISED PAVEMENT MARKERS AS SHOWN ON PLAN.

MARK "T"s ON PAVEMENT FOR REESTABLISHING NO PASSING ZONES.

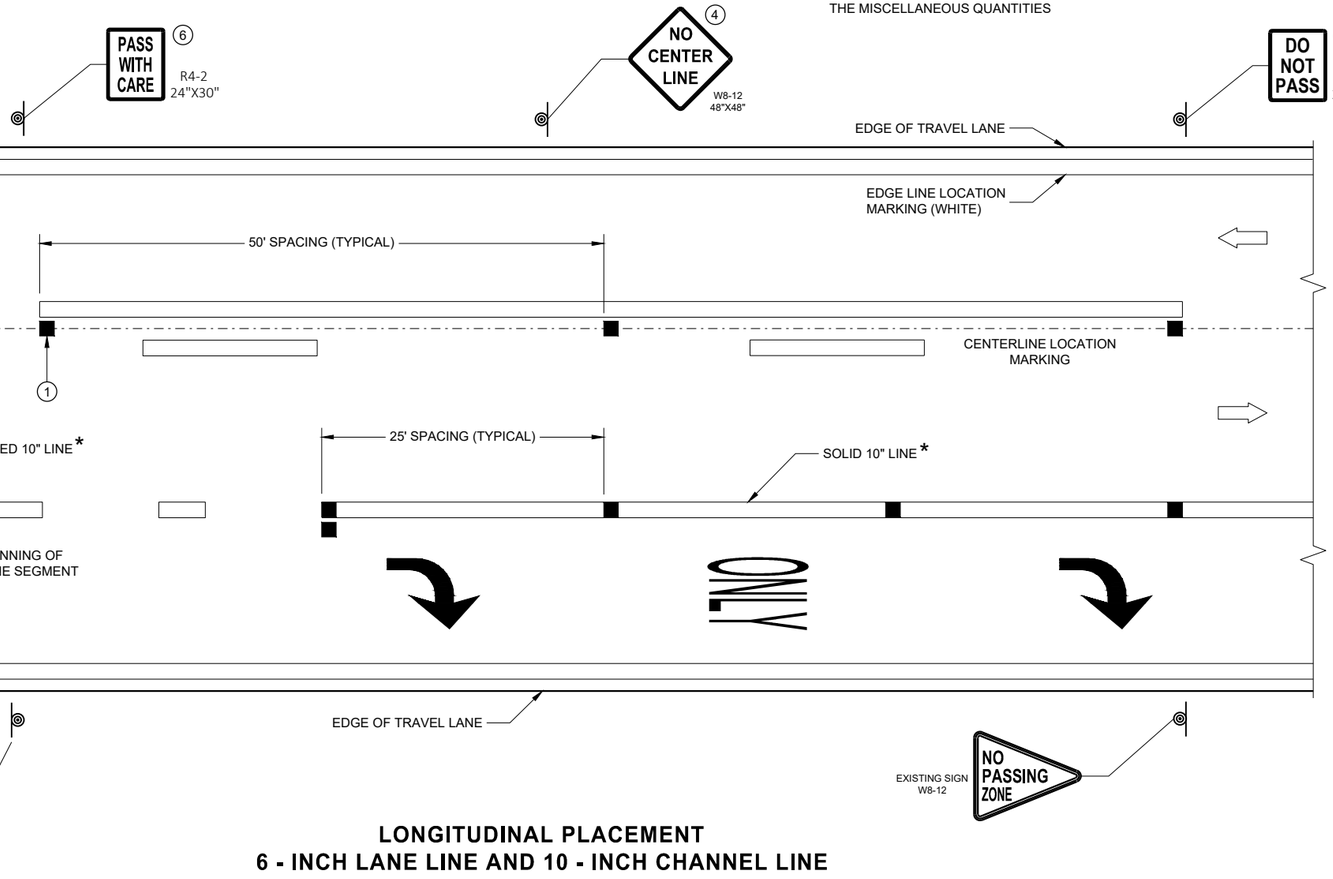
SAME DAY TEMPORARY PAVEMENT MARKING MAY BE USED IN LIEU OF TEMPORARY RAISED PAVEMENT MARKERS, TYPE II.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF TEMPORARY SAME DAY PAVEMENT MARKING IS USED, ENSURE PROPOSED PAVEMENT MARKING ARE PLACED IN THE EXACT LOCATIONS AS THE EXISTING MARKINGS, USING A MINIMAL AMOUNT OF TEMPORARY RAISED MARKERS, TYPE II OR OTHER METHODS AS APPROVED BY THE ENGINEER.

IF ROADWAY IS DETOURED DURING CONSTRUCTION, THE "DO NOT PASS, "PASS WITH CARE" AND "NO CENTERLINE" SIGNS MAY BE OMITTED, PROVIDING A LIQUID MARKING IS INSTALLED BEFORE THE ROADWAY IS REOPENED TO TRAFFIC.

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



LONGITUDINAL PLACEMENT
6 - INCH LANE LINE AND 10 - INCH CHANNEL LINE

1. FOR DOUBLE SOLID YELLOW, PLACE THE MARKERS BETWEEN THE LINES.
2. MARKERS SHALL BE OF POLYURETHANE MATERIAL.
3. MARKERS SHALL HAVE A MINIMUM SIZE REFLECTIVE SURFACE OF 6-INCH WIDTH X 0.25 INCH HEIGHT.
4. "NO CENTER LINE" SIGNS SHALL BE PLACED AT THE BEGINNING OF PROJECT, AT TWO MILE INTERVALS AND AFTER STATE AND COUNTY HIGHWAY INTERSECTIONS.
5. "DO NOT PASS" SIGNS SHALL BE INSTALLED AT THE BEGINNING OF NO PASSING ZONES. ADDITIONAL "DO NOT PASS" SIGNS SHALL BE INSTALLED AT ONE MILE INTERVALS AND AFTER STATE AND COUNTY HIGHWAY INTERSECTIONS WITHIN THE NO PASSING ZONE.
6. "PASS WITH CARE" SIGNS SHALL BE PLACED AT THE DOWNSTREAM END OF NO PASSING ZONES.

LEGEND

- TEMPORARY RAISED PAVEMENT MARKER, TYPE II
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC.

STANDARD APPLICATION FOR TEMPORARY RAISED PAVEMENT MARKERS, TYPE II

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MAF ENGINEER

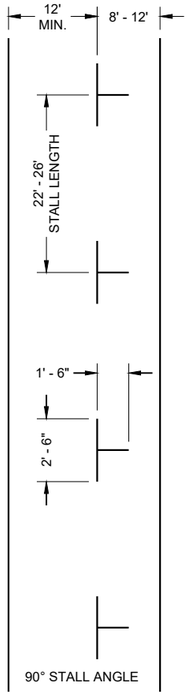
FHWA

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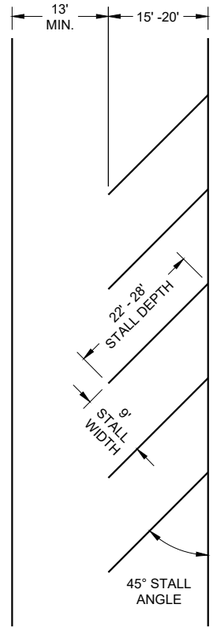
SDD 15C34-04

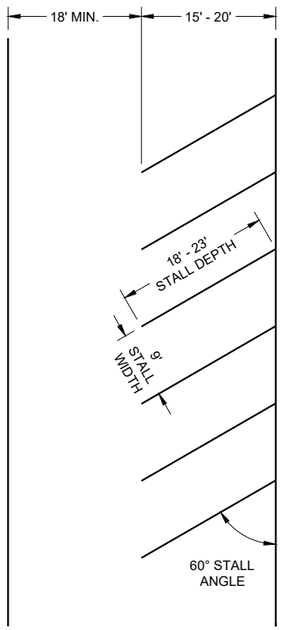
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SDD 15C34-04



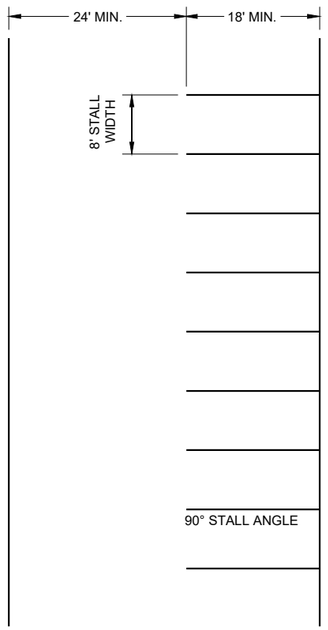
PARALLEL PARKING





ANGLED PARKING

(ANGLED PARKING IS NOT ALLOWED ON STATE HIGHWAYS UNLESS A DESIGN JUSTIFICATION HAS BEEN COMPLETED.)



PARKING LOTS

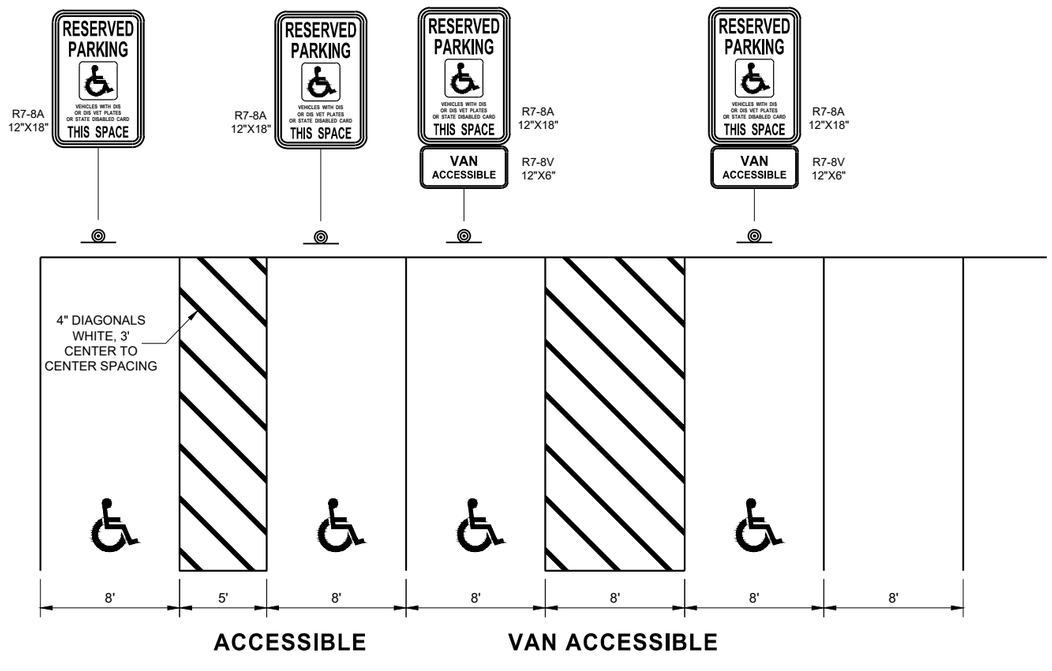
GENERAL NOTES

ALL LINES 4" WHITE (UNLESS OTHERWISE NOTED)

LAST PARKING STALL IS A MINIMUM OF 15' FROM THE CROSSWALK.

LEGEND

SIGN ON PERMANENT SUPPORT



ACCESSIBLE VAN ACCESSIBLE

PARKING STALL MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2019 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MAF ENGINEER

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SDD 15C36 - 01

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SDD 15C36 - 01

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.

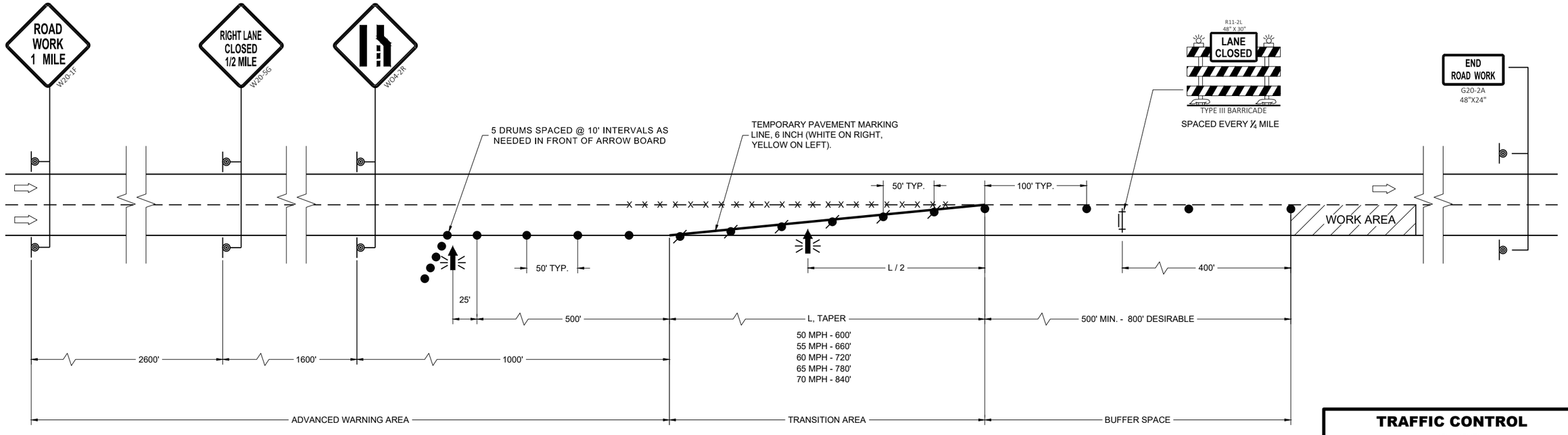
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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
September 2023
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

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SDD 15D12-12a

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SDD 15D12-12a

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" SIGNS ARE THE SAME AS "W" SIGNS 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.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE 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 LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

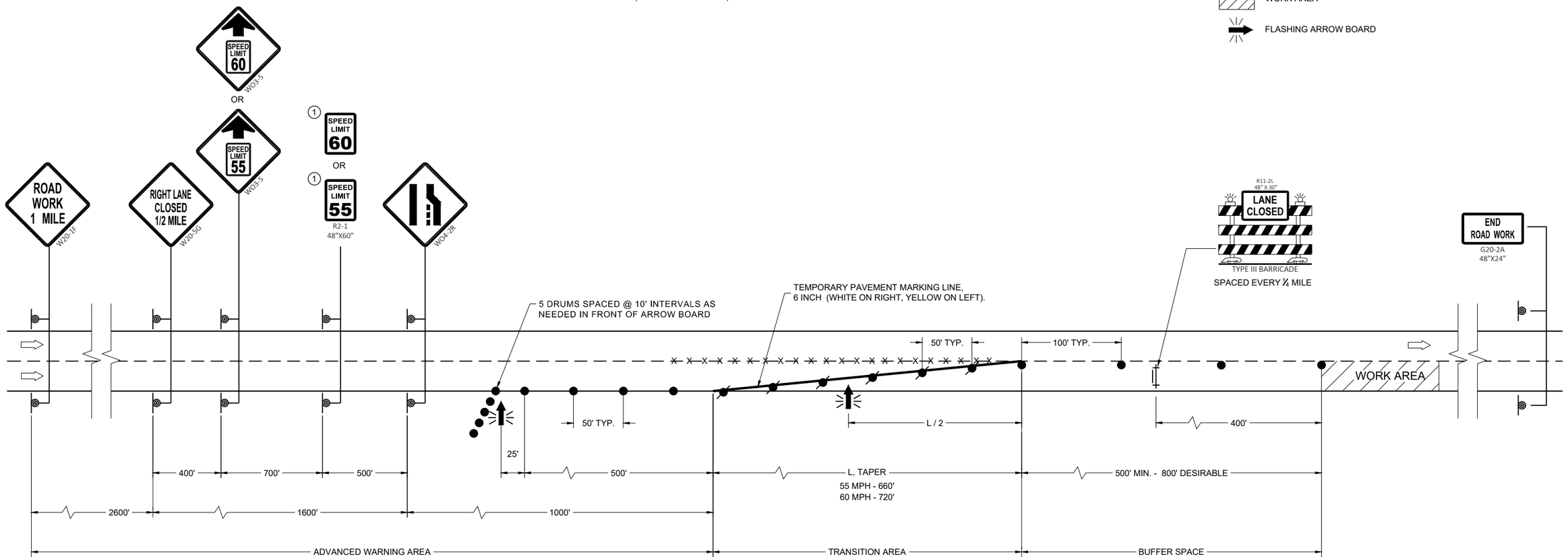
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE 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.

(1) A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END OF ROADWORK" SIGN.

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, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

September 2023
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6

SDD 15D12-12b

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
- S — PORTABLE TRAFFIC SENSOR (PTS)
- FBS — FLASHING BEACON SIGN

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS, INCLUDING FBS 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" SIGNS ARE THE SAME AS "W" SIGNS 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. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED SIGNS.

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. 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 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.

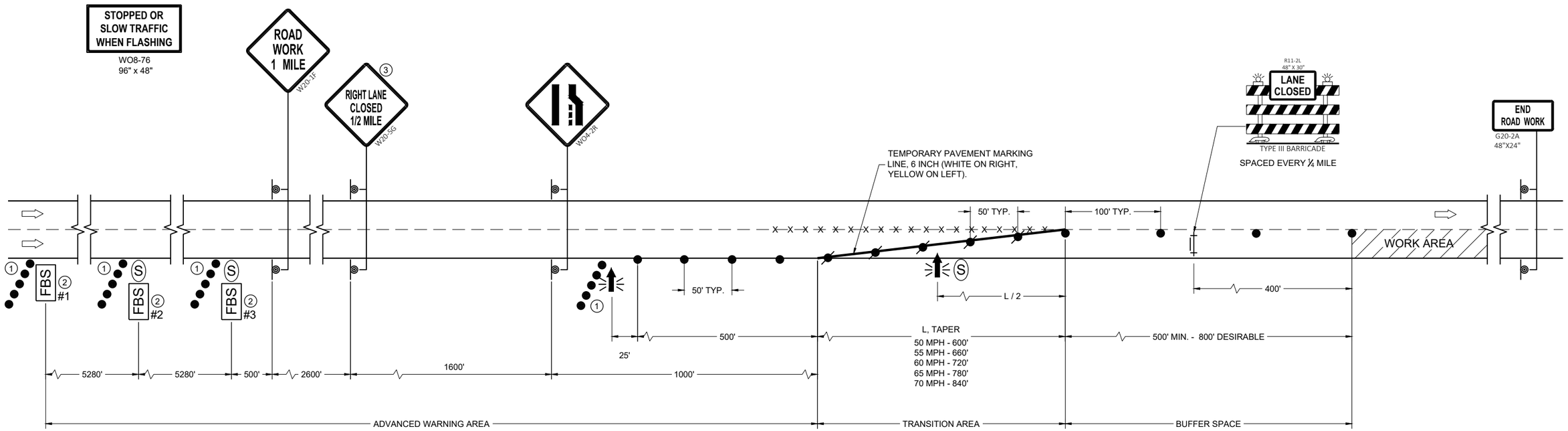
CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

PORTABLE TRAFFIC SENSOR (PTS) MAY BE MOUNTED ON THE FBS, ARROW BOARD OR OTHER TRAILER DEVICES.

(1) 5 DRUMS SPACED AT 10 FOOT INTERVALS AS NEEDED.

(2) IF THERE ARE MORE THAN TWO LANES OR IF SPECIFIED IN THE PLANS, PLACE FBS ON BOTH SIDES OF THE ROADWAY.

(3) IF THERE IS AN APPROVED TEMPORARY SPEED DECLARATION, ADD WO-3-5 SIGNS 400 FEET AFTER THE W20-5G SIGNS AND ADD R2-1 SIGNS (48"x60") 700 FEET AFTER THE WO3-5 SIGNS. A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A "RESUME SPEED LIMIT" SIGN 200 FEET MINIMUM (800 FEET DESIRABLE) BEYOND THE G30-3A "END ROAD WORK" SIGN.



TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2023 — DATE
/S/ Erin Schwark — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6 SDD 15D12-12d

6 SDD 15D12-12d

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

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.

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

W20-1E AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS.

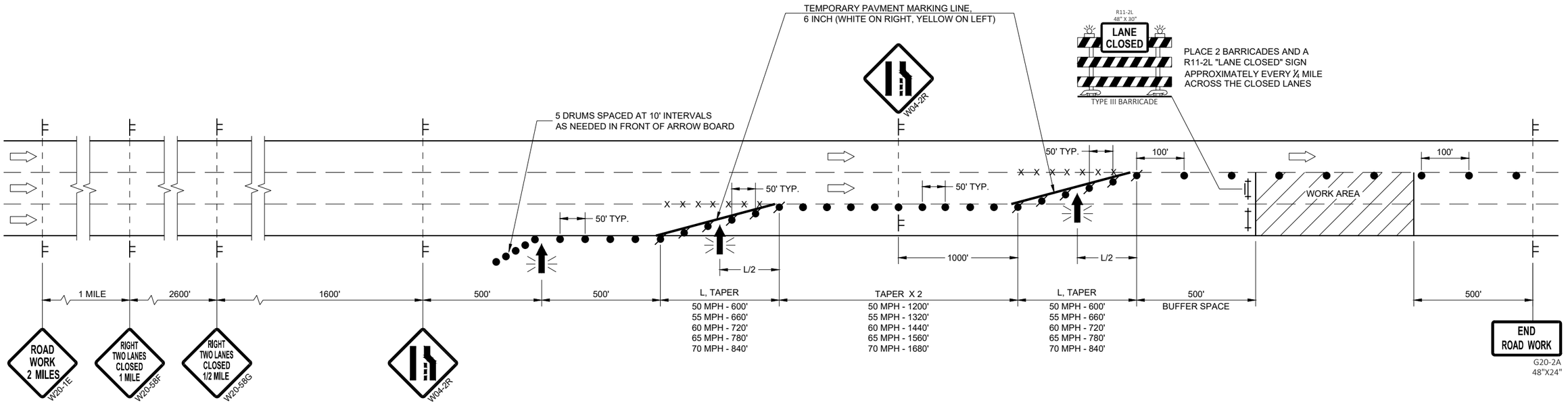
WHEN A RAMP OR SIDE ROAD INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

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.

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



TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

6

SDD 15D14-06

6

SDD 15D14-06

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

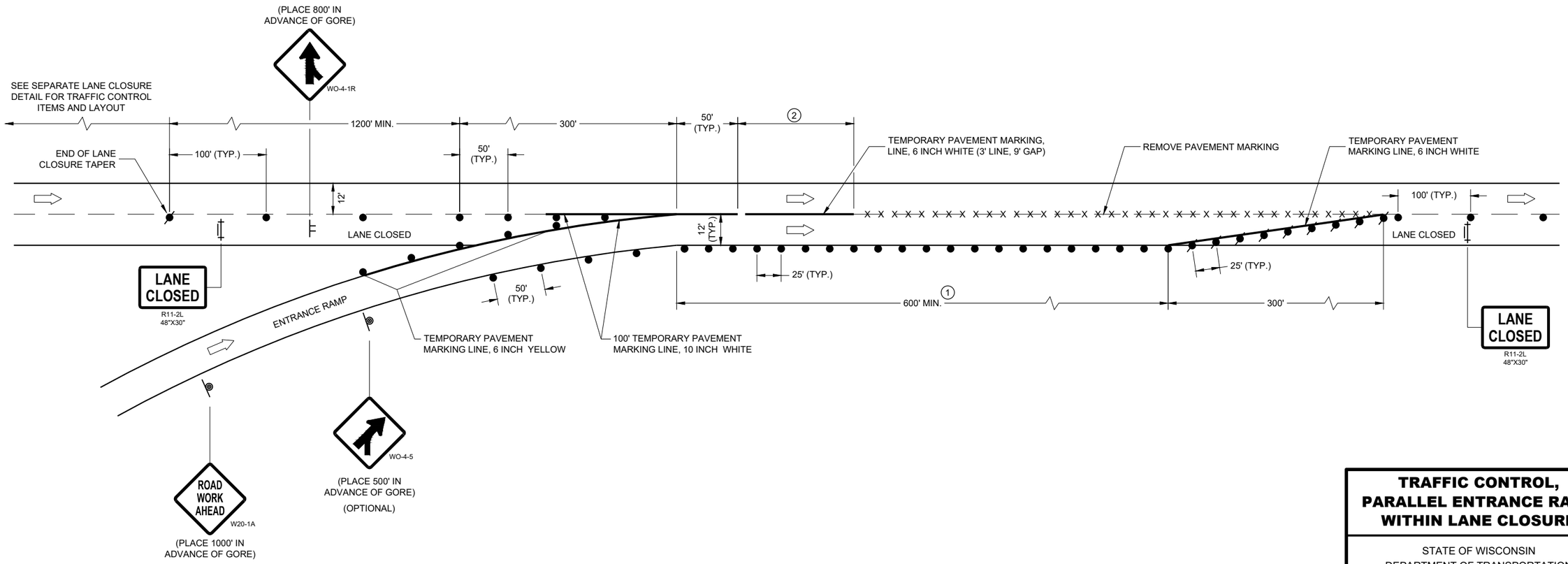
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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.

(1) EXTEND THE LENGTH OF THE MERGE ARE IF THE ENTERING (DESIGN) SPEED IS LESS THAN 50MPH OR IF THE MAINLINE GRADE EXCEEDS ±2.2%.

(2) END TEMPORARY PAVEMENT MARKING LINE AT ½ THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.



TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

627

FHWA

6

SDD 15D15-07a

6

SDD 15D15-07a

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS /OR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

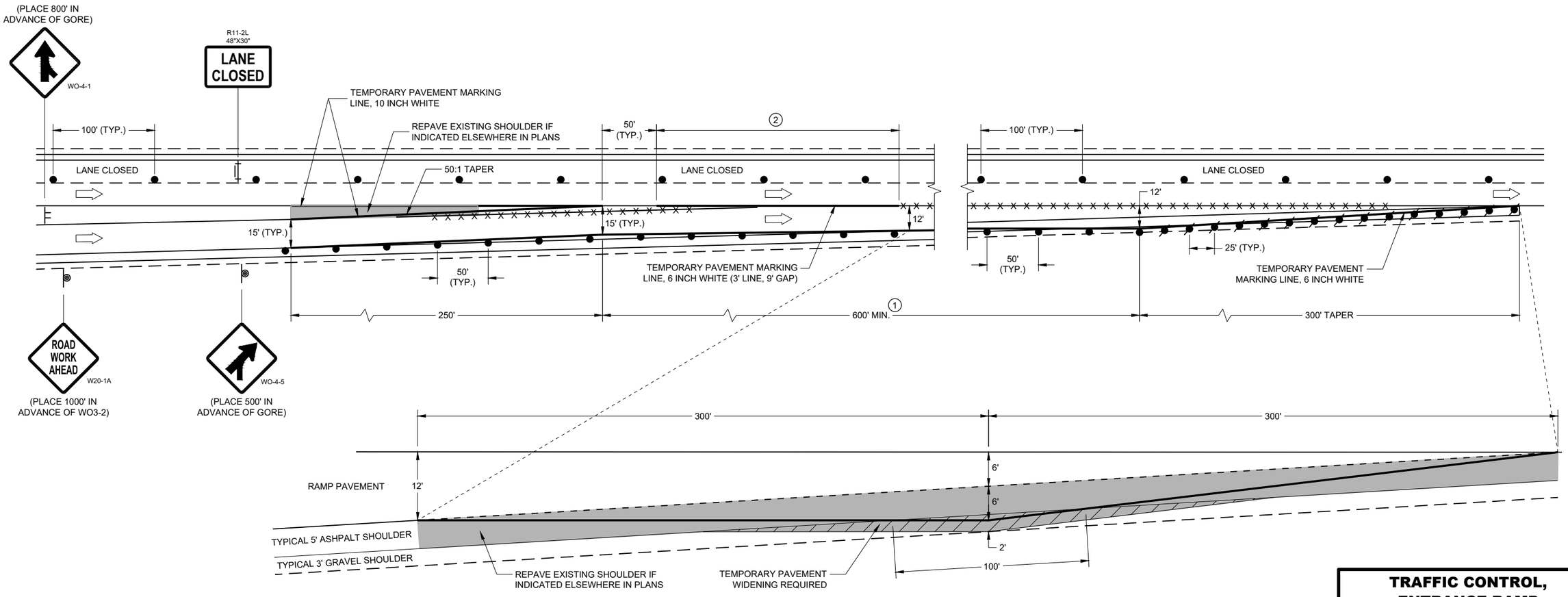
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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.

(1) EXTEND THE LENGTH OF THE MERGE AREA IF THE ENTERING (DESIGN) SPEED OF THE RAMP IS LESS THAN 50 MPH OR IF THE MAINLINE GRADE EXCEEDS ±2.2%.

(2) END TEMPORARY PAVEMENT MARKING LINE AT ½ THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.



TEMPORARY PAVEMENT DETAIL

(EXISTING RAMP DIMENSIONS MAY VARY, ADJUST TEMPORARY PAVEMENT ACCORDINGLY)

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

628

6

SDD 15D15-07b

6

SDD 15D15-07b

LEGEND

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

TYPE III BARRICADE WITH ATTACHED SIGN

FLAGS, 16" X 16" MIN., ORANGE

DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

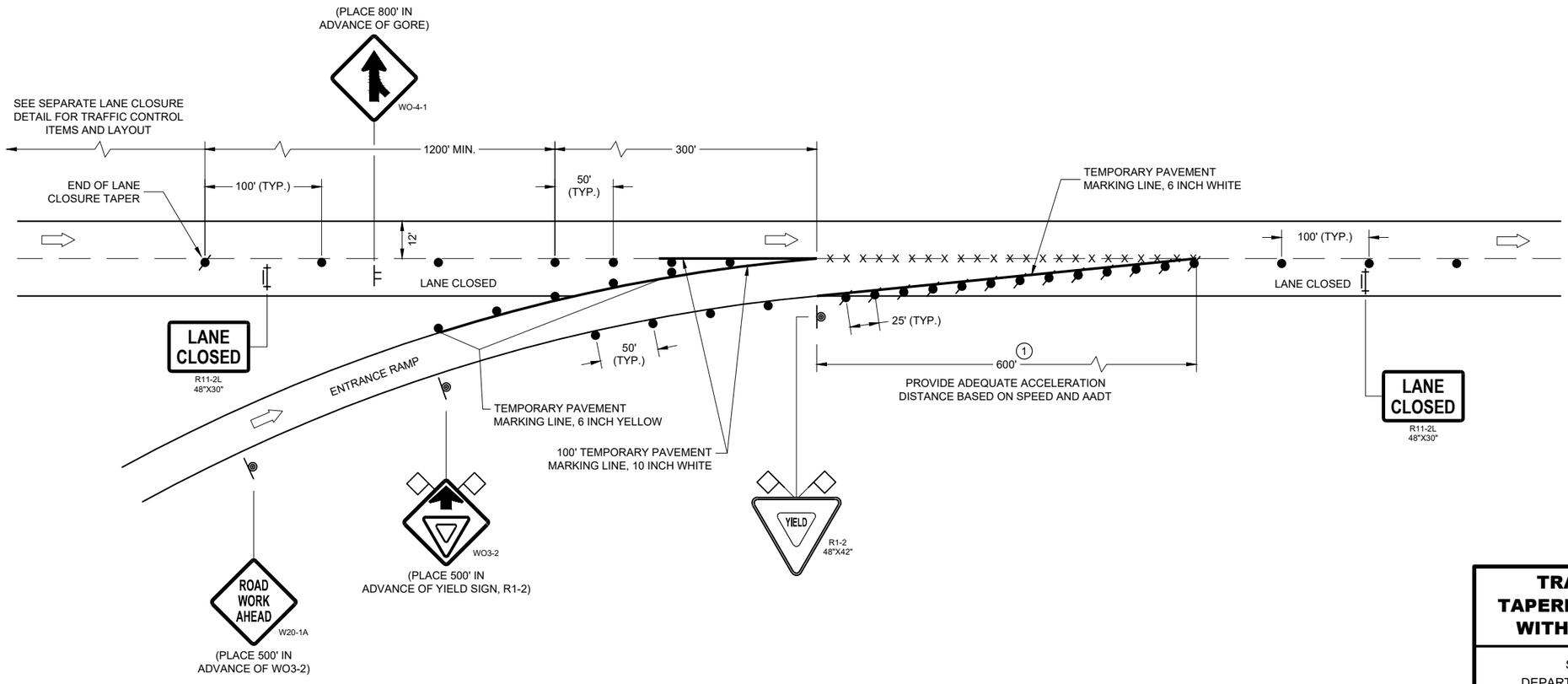
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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.

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.

(1) CONSULT WITH REGIONAL WORK ZONE ENGINEER IF NEED TO REDUCE LENGTH EXISTS.



TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE 629
FHWA

6

SDD 15D15-07c

6

SDD 15D15-07c

LEGEND

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

TYPE III BARRICADE WITH ATTACHED SIGN

FLAGS, 16" X 16" MIN., ORANGE

DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

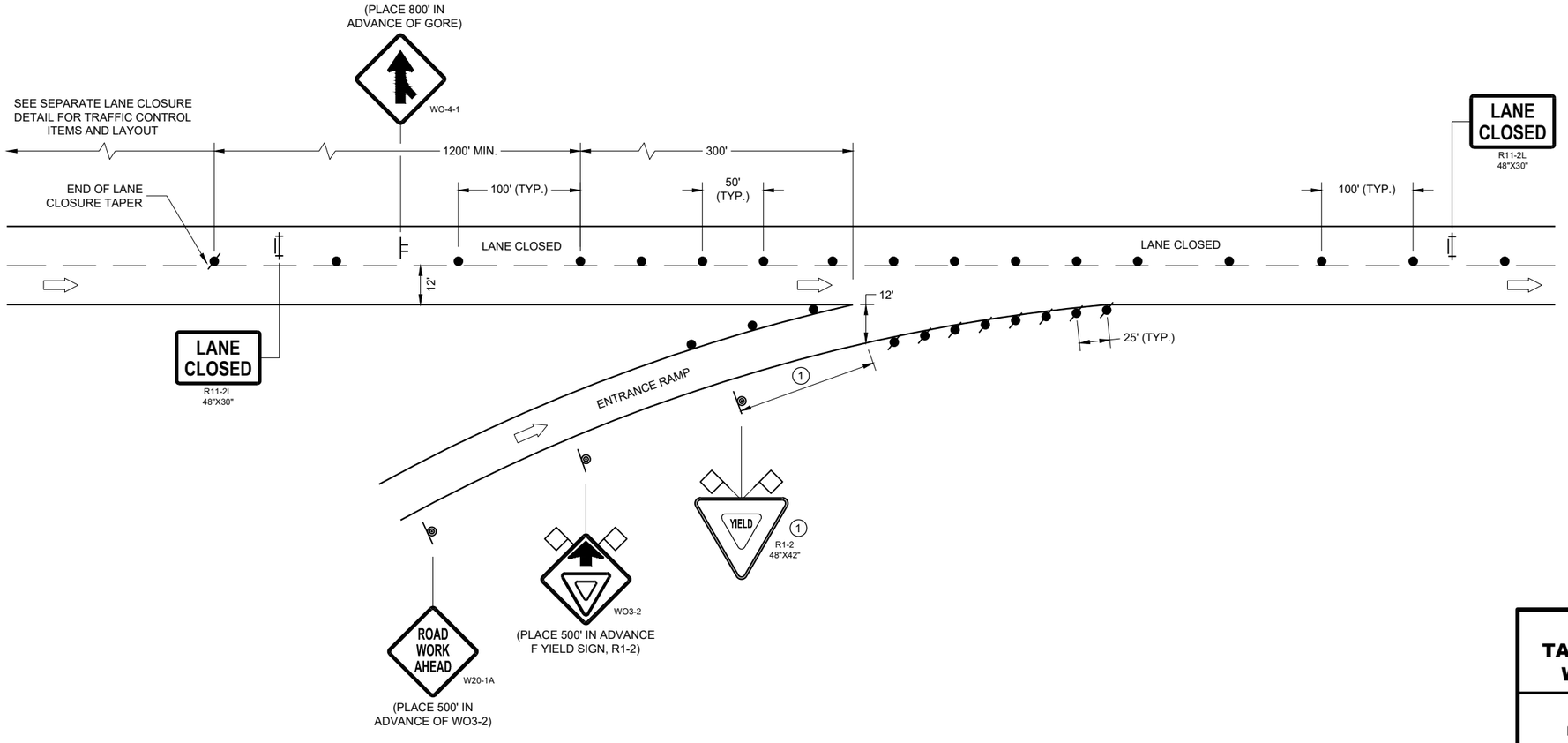
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

(1) PLACE YIELD SIGN TO PROVIDE ADEQUATE SIGHT DISTANCE AND ACCELERATION DISTANCE.



TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE 630
FHWA

6

SDD 15D15-07d

6

SDD 15D15-07d

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

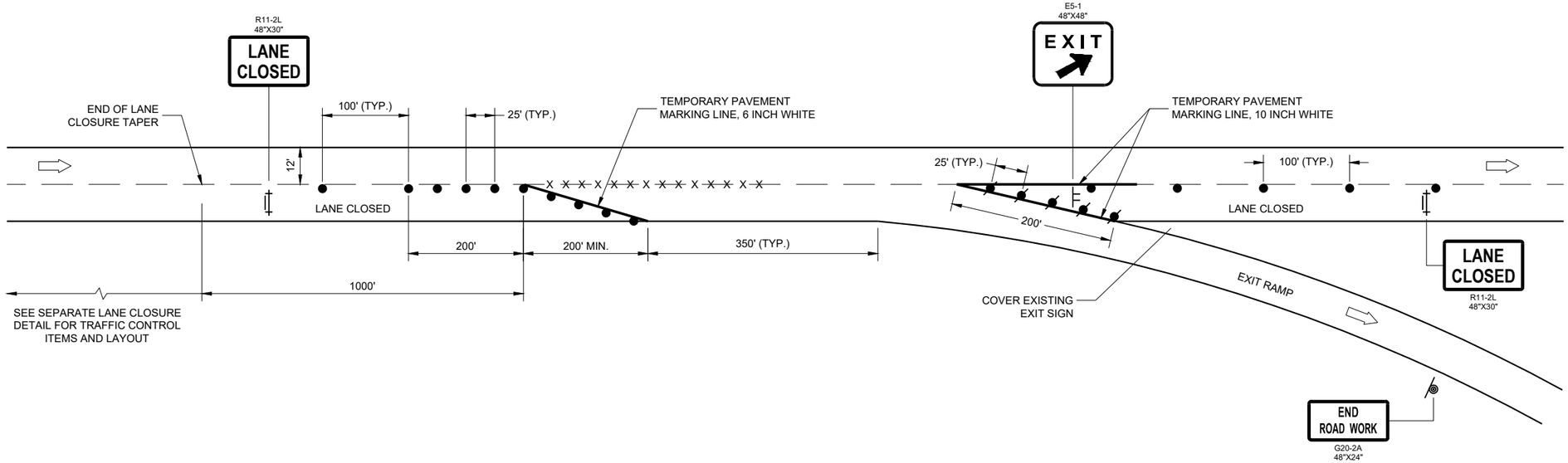
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

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.

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.



TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6
SDD 15D15-07e

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.

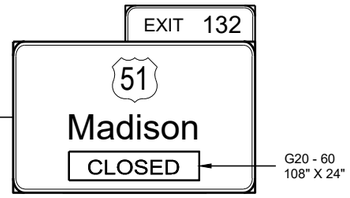
WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12 - HOUR DURATION.

(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

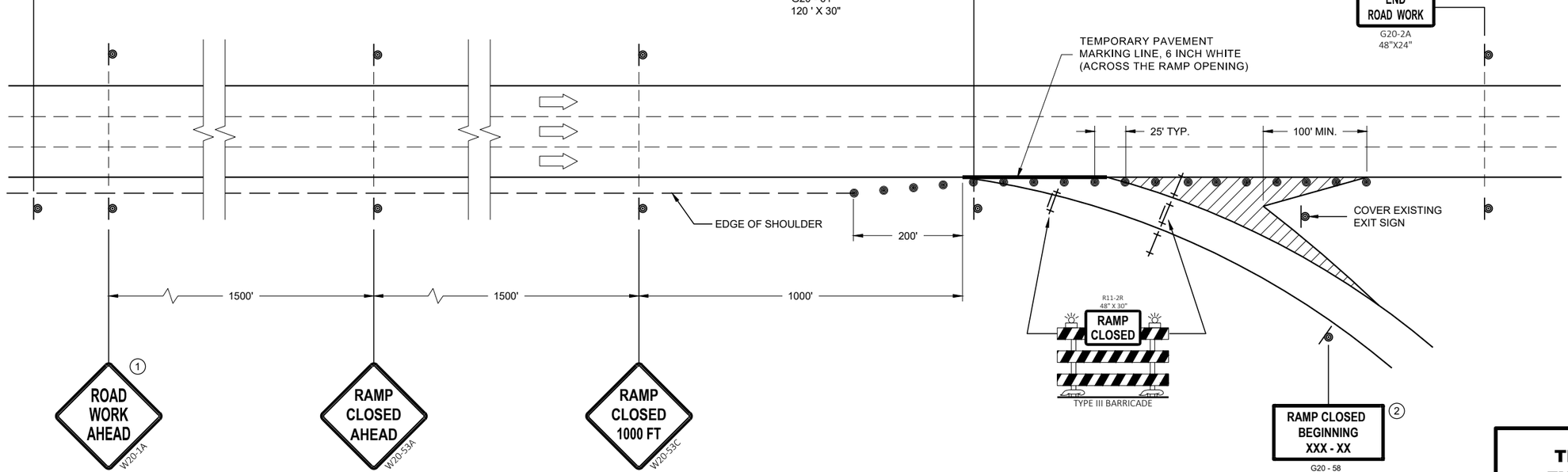


PLACE SIGN G20 - 60 OVER MILEAGE ON EXISTING E1 - 1A SIGN



G20 - 61
120 ' X 30"

COVER ARROW ON EXISTING E4 - 1 SIGN (COVERING SIGNS TYPE I)



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
May 2023
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 15D16-06

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

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

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

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

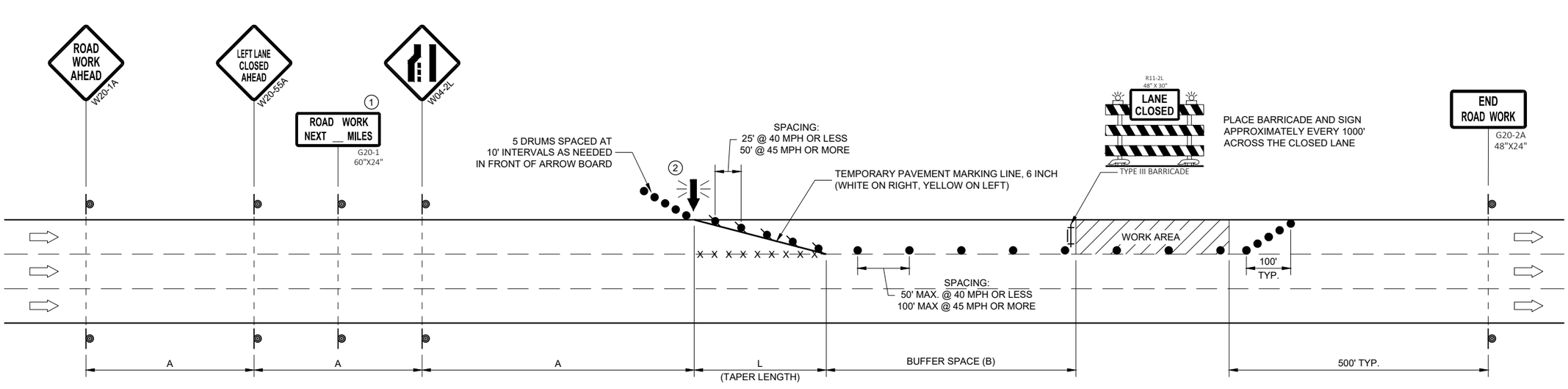
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

(1) OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

(2) WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'

TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D20-07a
SDD 15D20-07a

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA



GENERAL NOTES

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

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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.

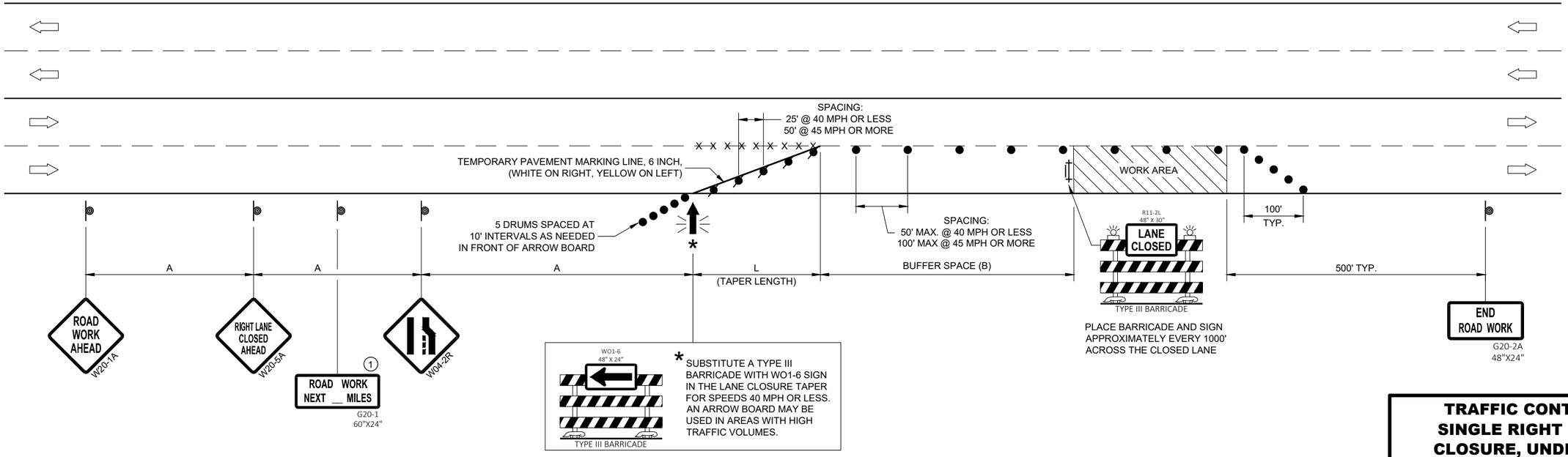
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(1) OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'





TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D20-07b
SDD 15D20-07b

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

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DUE TO LACK OF SHOULDER/MEDIAN, ARROW BOARD IS PLACED AT THE THE END OF THE TAPER.

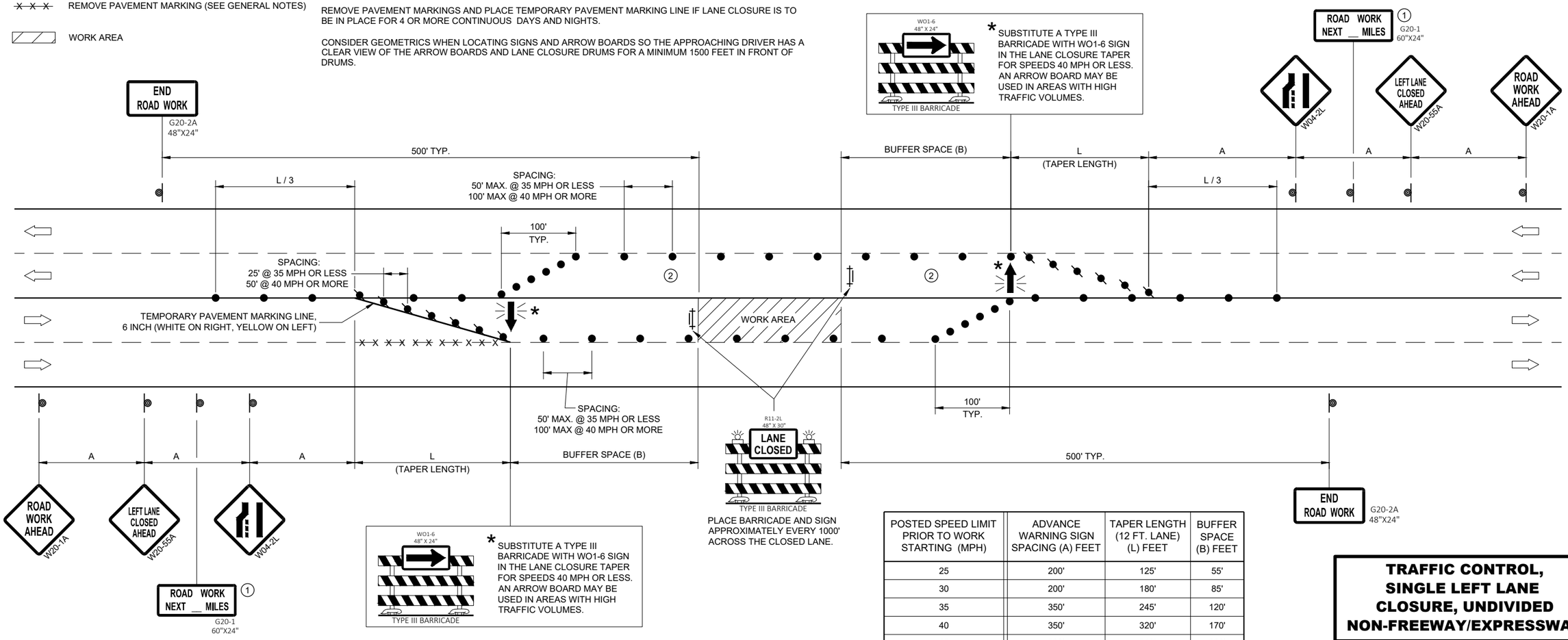
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CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

(1) OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

(2) LANE MAY BE OPENED WHEN WORKERS ARE NOT PRESENT IN THE WORK AREA.



WO1-6 48" X 24"

TYPE III BARRICADE

* SUBSTITUTE A TYPE III BARRICADE WITH WO1-6 SIGN IN THE LANE CLOSURE TAPER FOR SPEEDS 40 MPH OR LESS. AN ARROW BOARD MAY BE USED IN AREAS WITH HIGH TRAFFIC VOLUMES.

WO1-6 48" X 24"

TYPE III BARRICADE

* SUBSTITUTE A TYPE III BARRICADE WITH WO1-6 SIGN IN THE LANE CLOSURE TAPER FOR SPEEDS 40 MPH OR LESS. AN ARROW BOARD MAY BE USED IN AREAS WITH HIGH TRAFFIC VOLUMES.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'

TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE 635

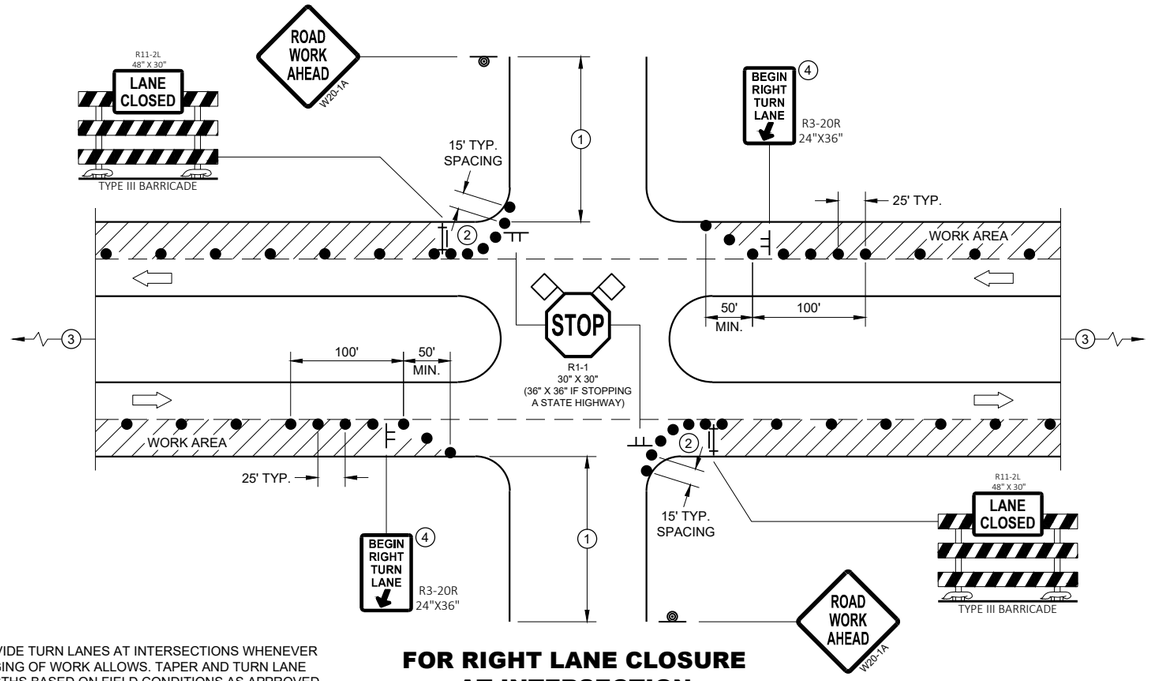
FHWA

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SDD 15D20-07c

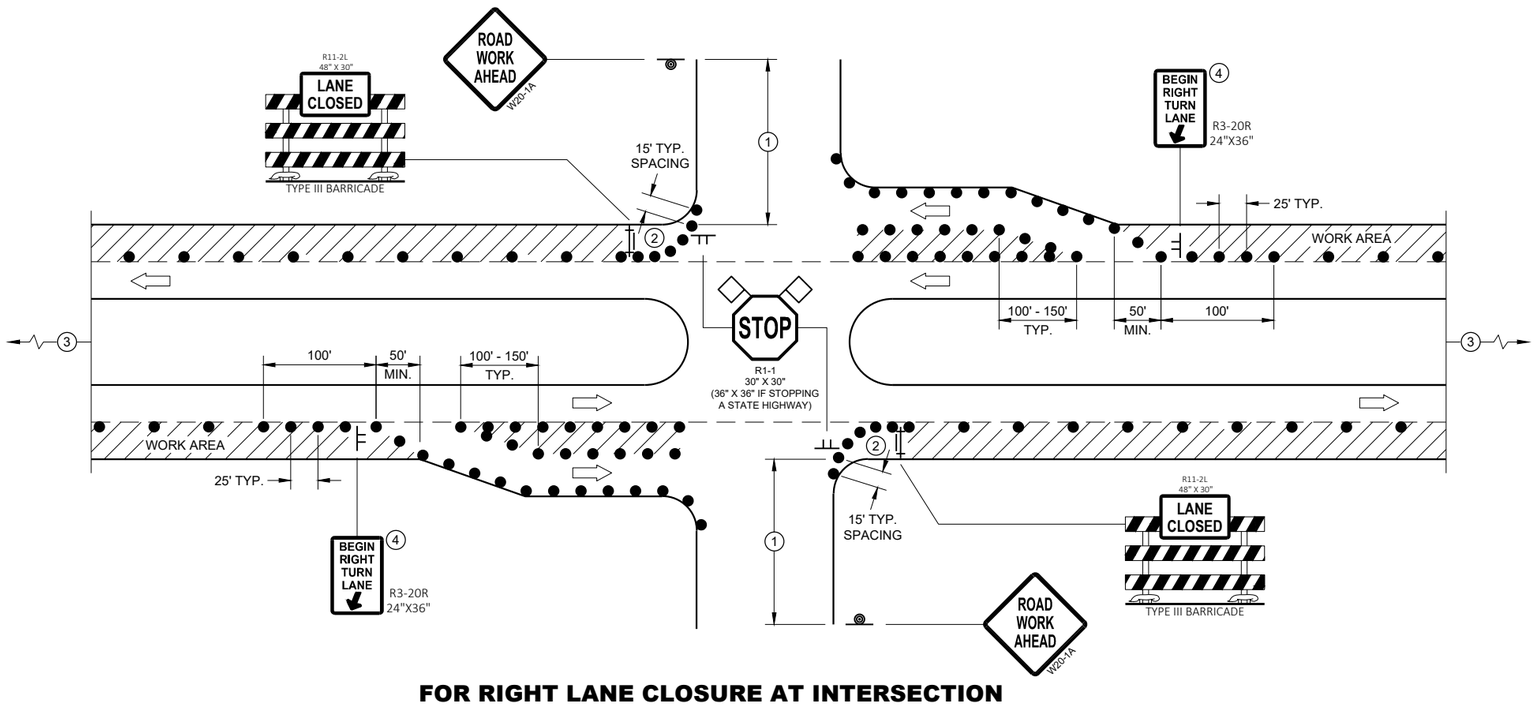
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SDD 15D20-07c



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



FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.

(2) ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

LEGEND

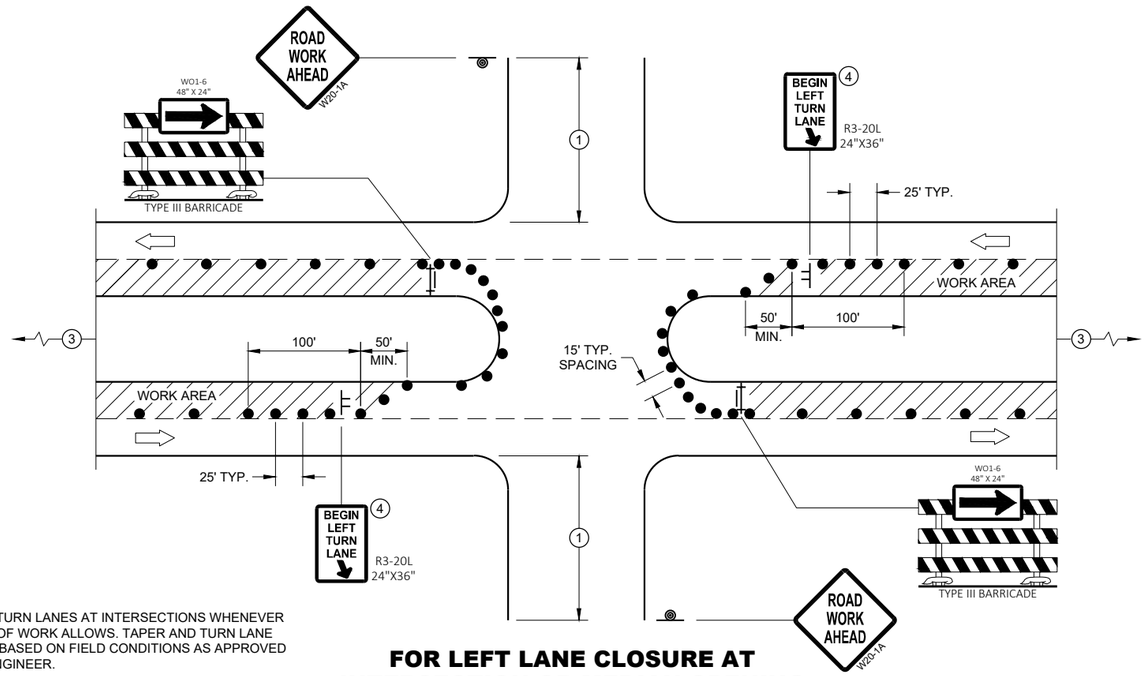
- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D21 - 07a
SDD15D21 - 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.

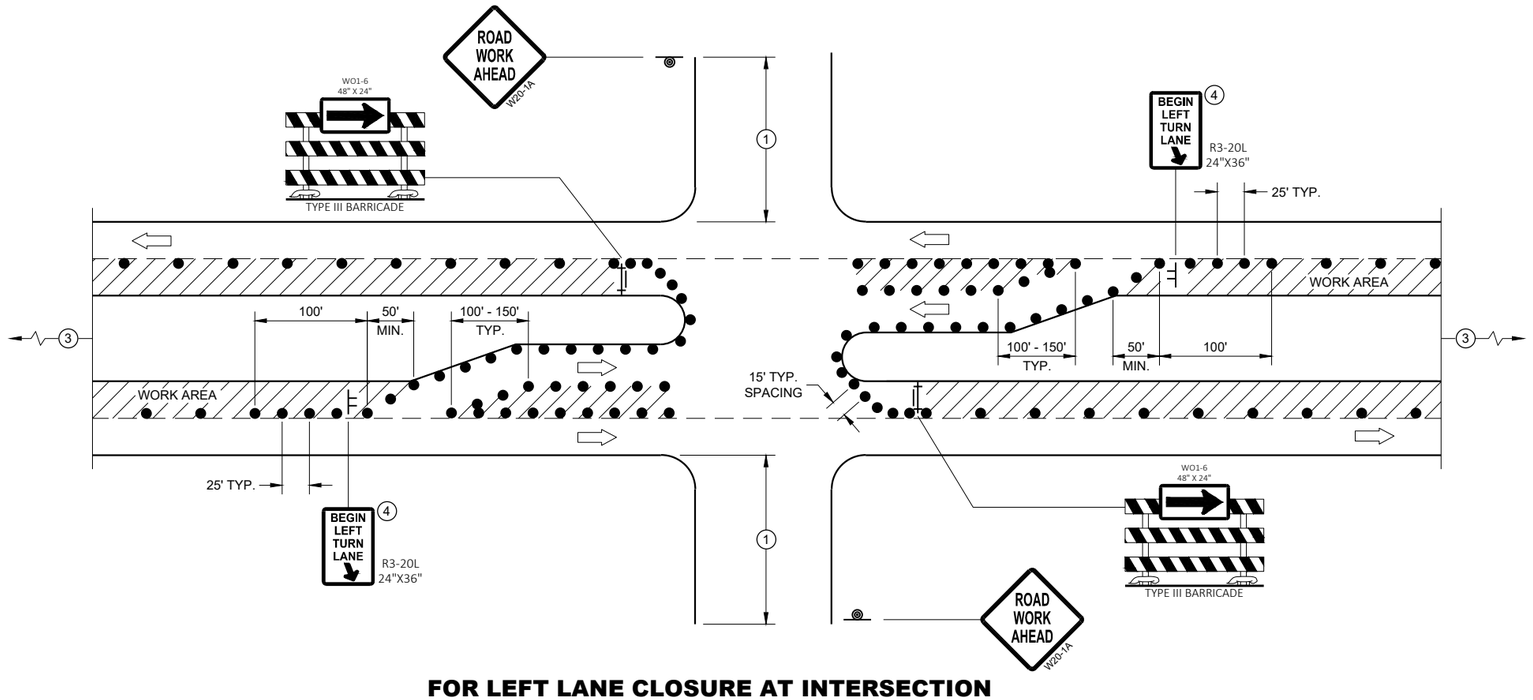
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(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

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

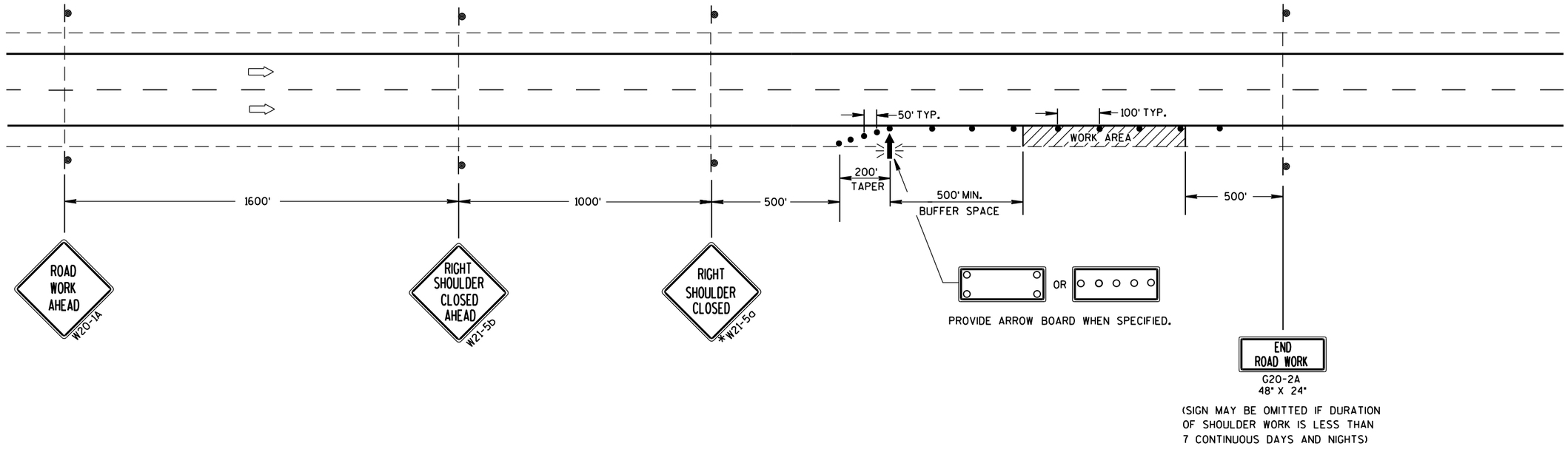
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CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] TIC SAFETY ENGI[illegible]

FHWA

6

S.D.D. 15 D 27-3

LEGEND

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

WORK ZONE

GENERAL NOTES

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 THE REGIONAL TRAFFIC UNIT.

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

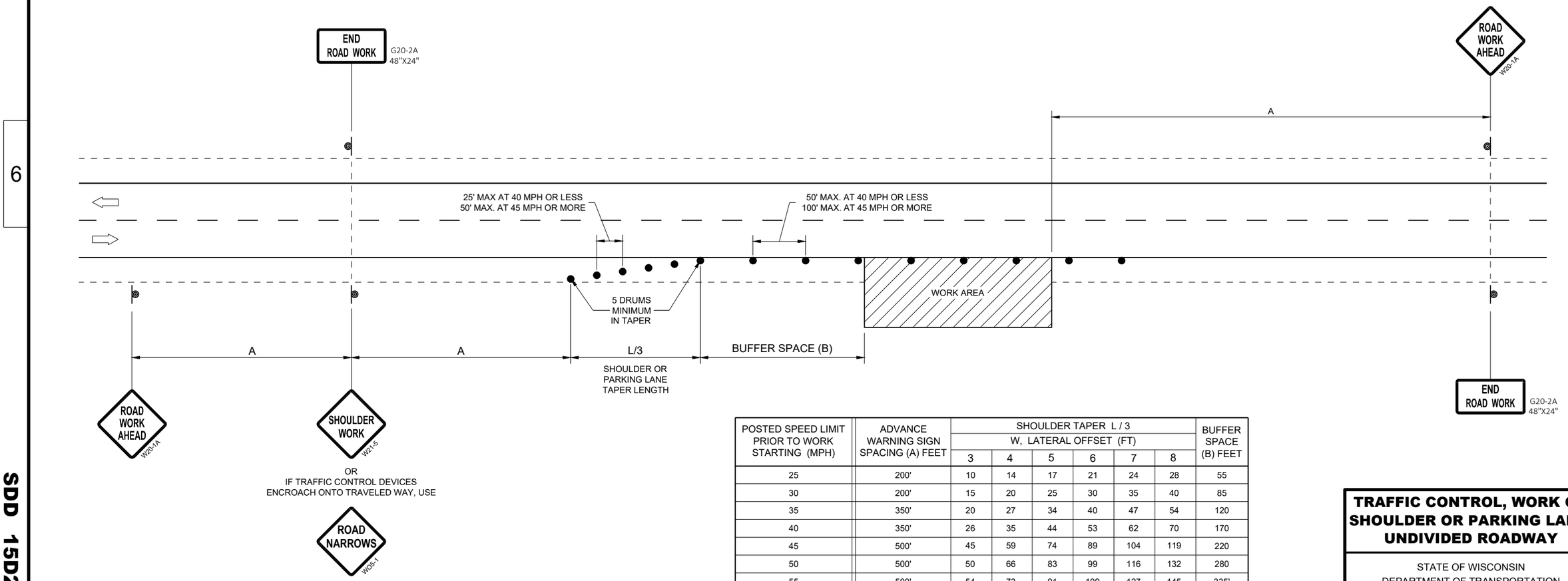
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

639

SDD 15D28 - 04

SDD 15D28 - 04

GENERAL NOTES

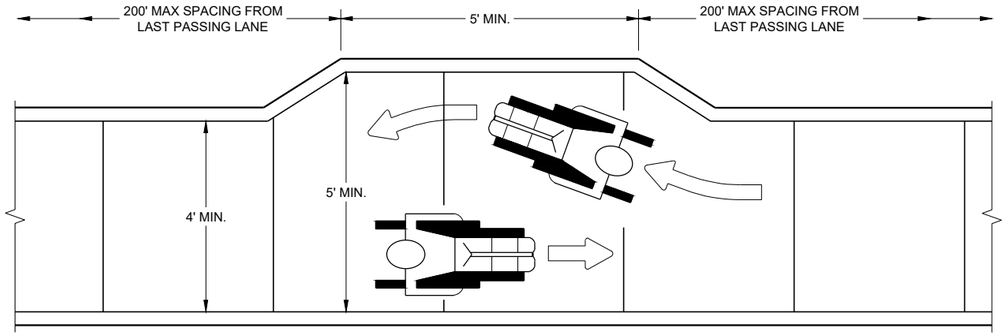
BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

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

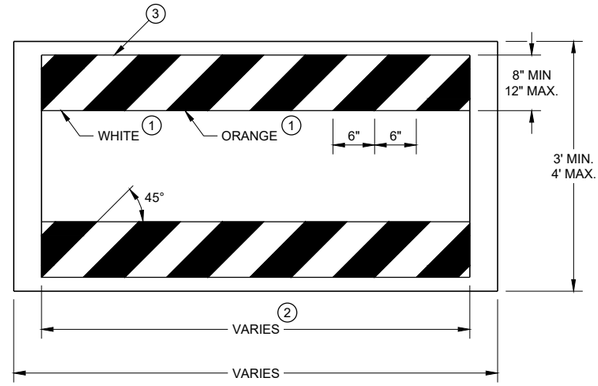
(2) SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

(3) PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

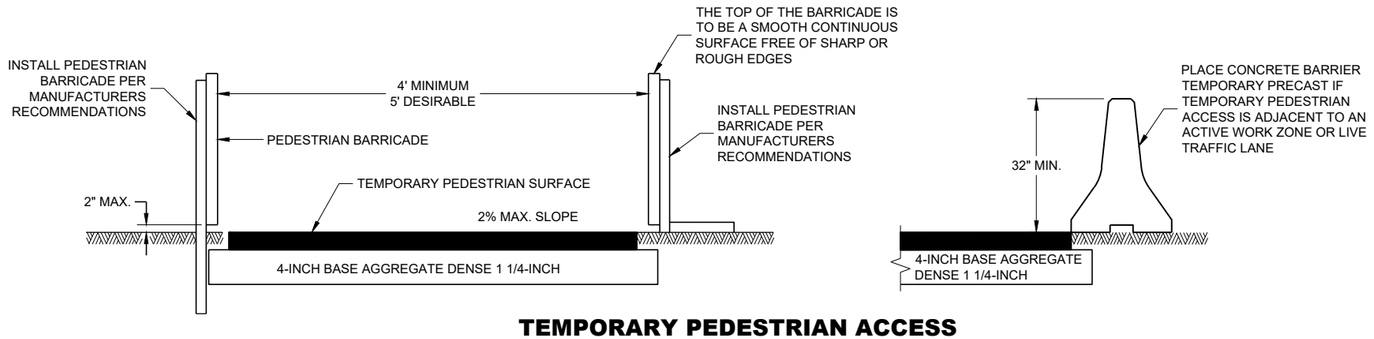
* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.



NARROW SIDEWALK PASSING DETAIL



TEMPORARY PEDESTRIAN BARRICADE*



TEMPORARY PEDESTRIAN ACCESS

6

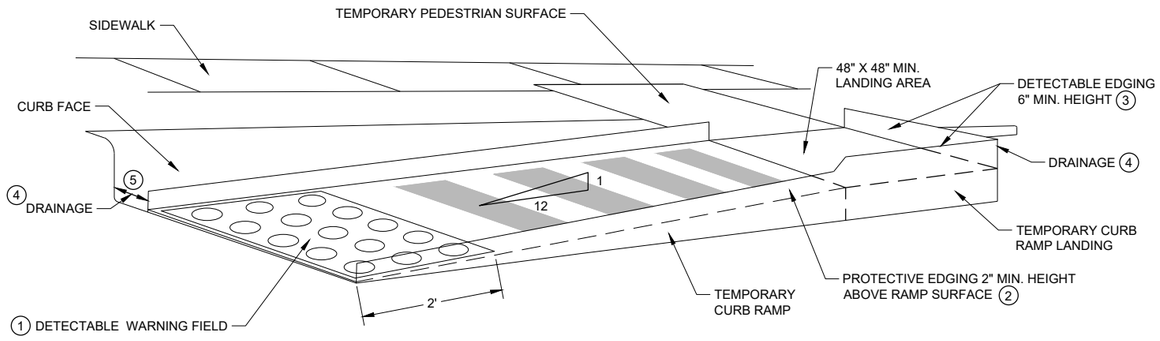
6

SDD 15D30 - 09a

SDD 15D30 - 09a

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA 640



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.

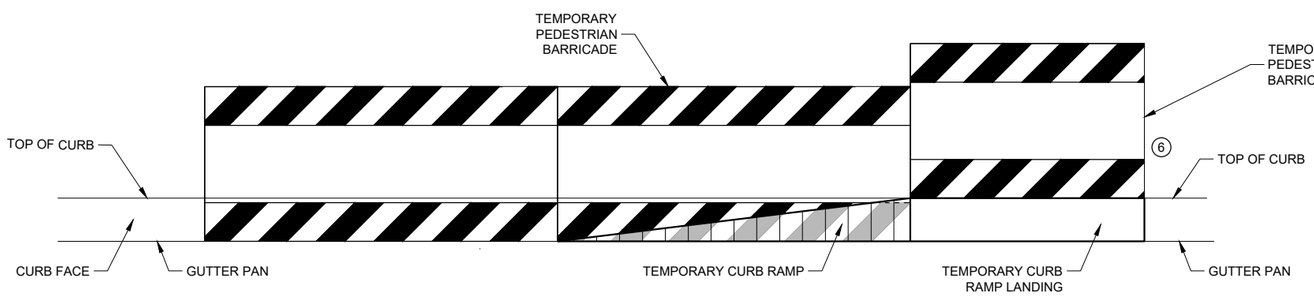
(2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

(3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

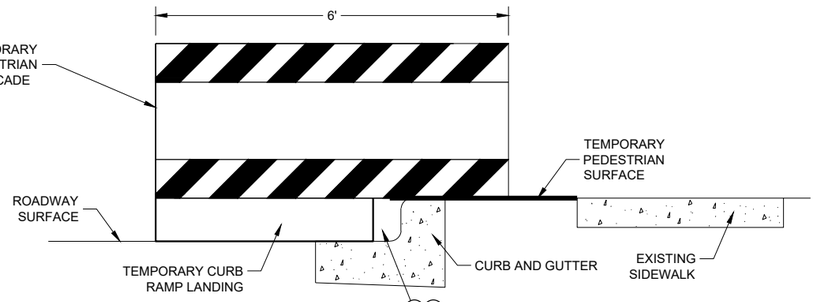
(4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(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

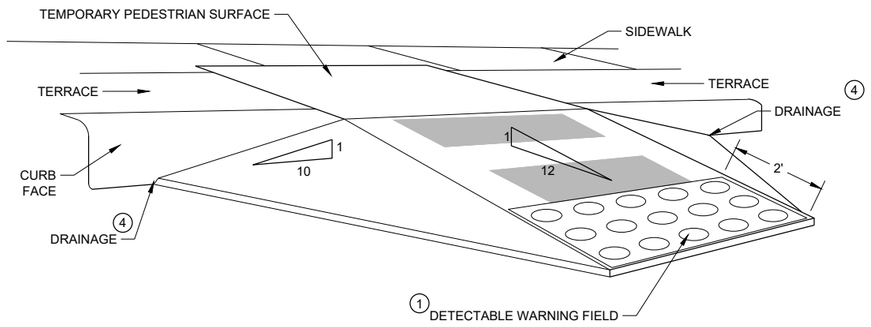
TEMPORARY CURB RAMP PARALLEL TO CURB

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

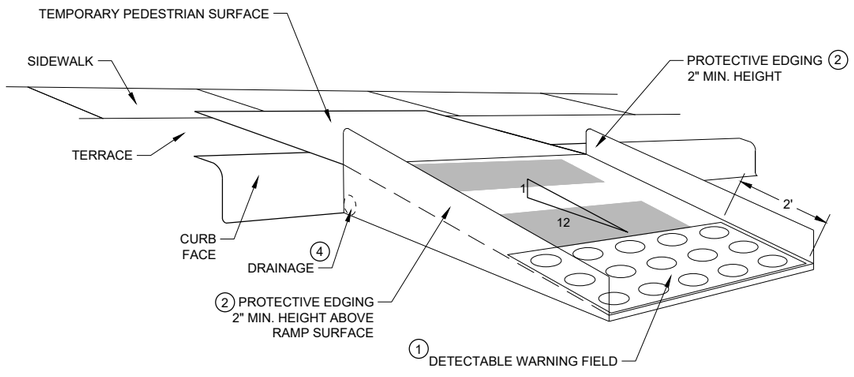
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 15D30 - 09b



WITH SIDE APRON (5)



WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

CURB RAMPS SHALL BE 48" MINIMUM WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

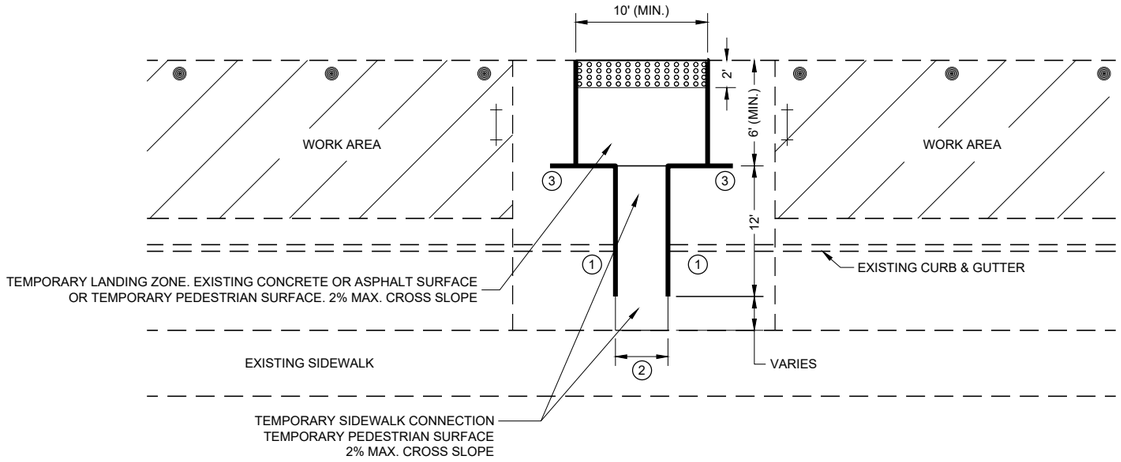
(1) INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS

(2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

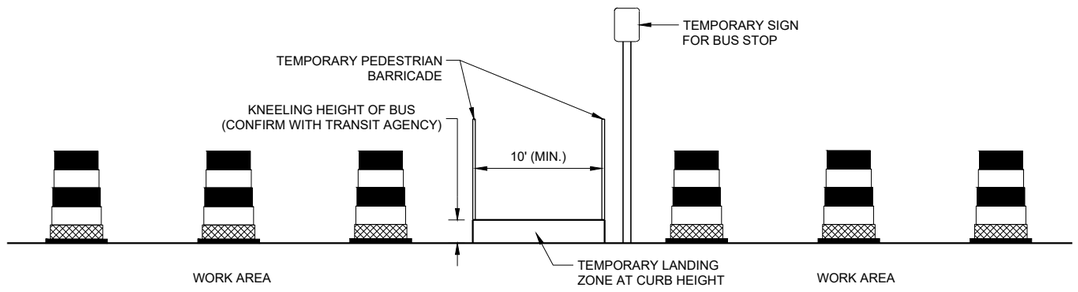
(3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

(4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(5) CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.



PLAN VIEW



PROFILE VIEW

TEMPORARY BUS STOP PAD

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

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.

DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

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".

CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

(1) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(2) 5' WIDE MIN. WITH TEMPORARY PEDESTRIAN BARRICADE, 10' WIDE MIN. WITHOUT TEMPORARY PEDESTRIAN BARRICADE.

(3) PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE INTO THIS SPACE.

LEGEND

- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TEMPORARY PEDESTRIAN BARRICADE
- TEMPORARY DETECTABLE WARNING FIELD
- WORK AREA

6

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TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- UNDER PEDESTRIAN TRAFFIC
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

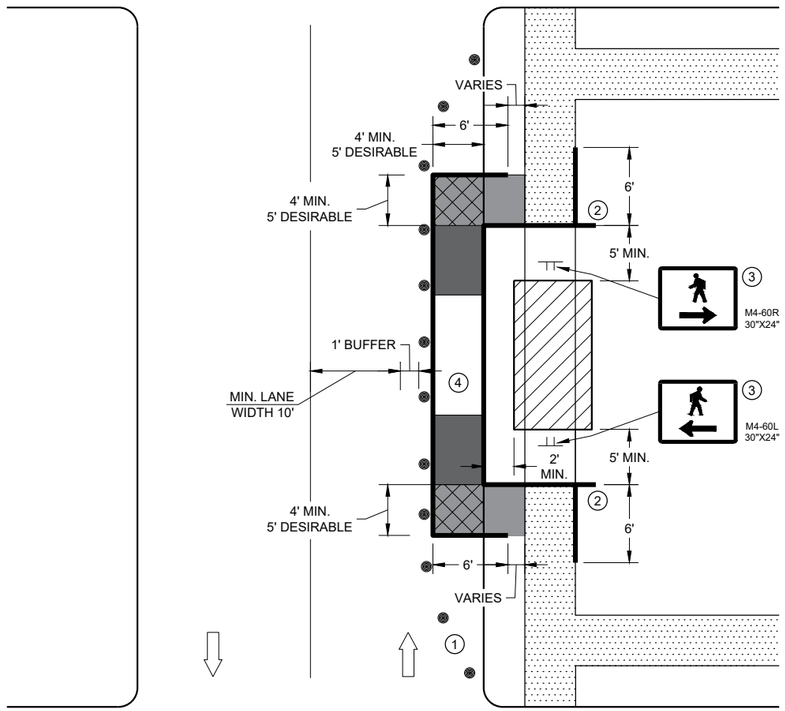
GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

1. SHOULDER OR LANE CLOSURE ADVANCE WARNING AND BUFFER SPACE REQUIRED.
2. PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL PAST THE SIDEWALK ON THE SIDE AWAY FROM THE ROAD.
3. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.
4. USE EXISTING PAVEMENT SURFACE. IF EXISTING PAVEMENT SURACE HAS BEEN REMOVED, USE A TEMPORARY PEDESTRIAN SURFACE.



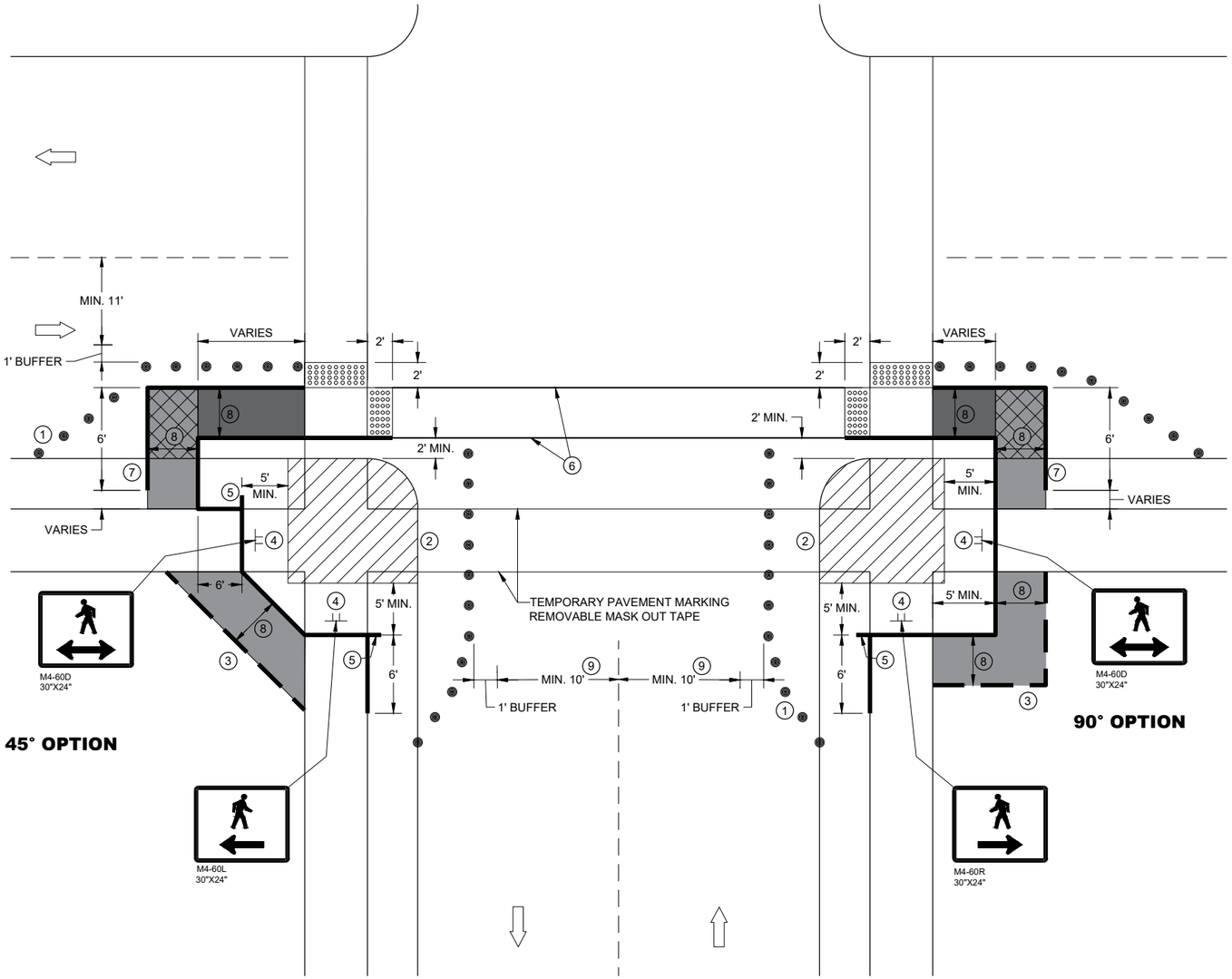
SIDEWALK DIVERSION, SINGLE SIDE

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D30 - 09h



CURB RAMP PEDESTRIAN TRAFFIC CONTROL

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

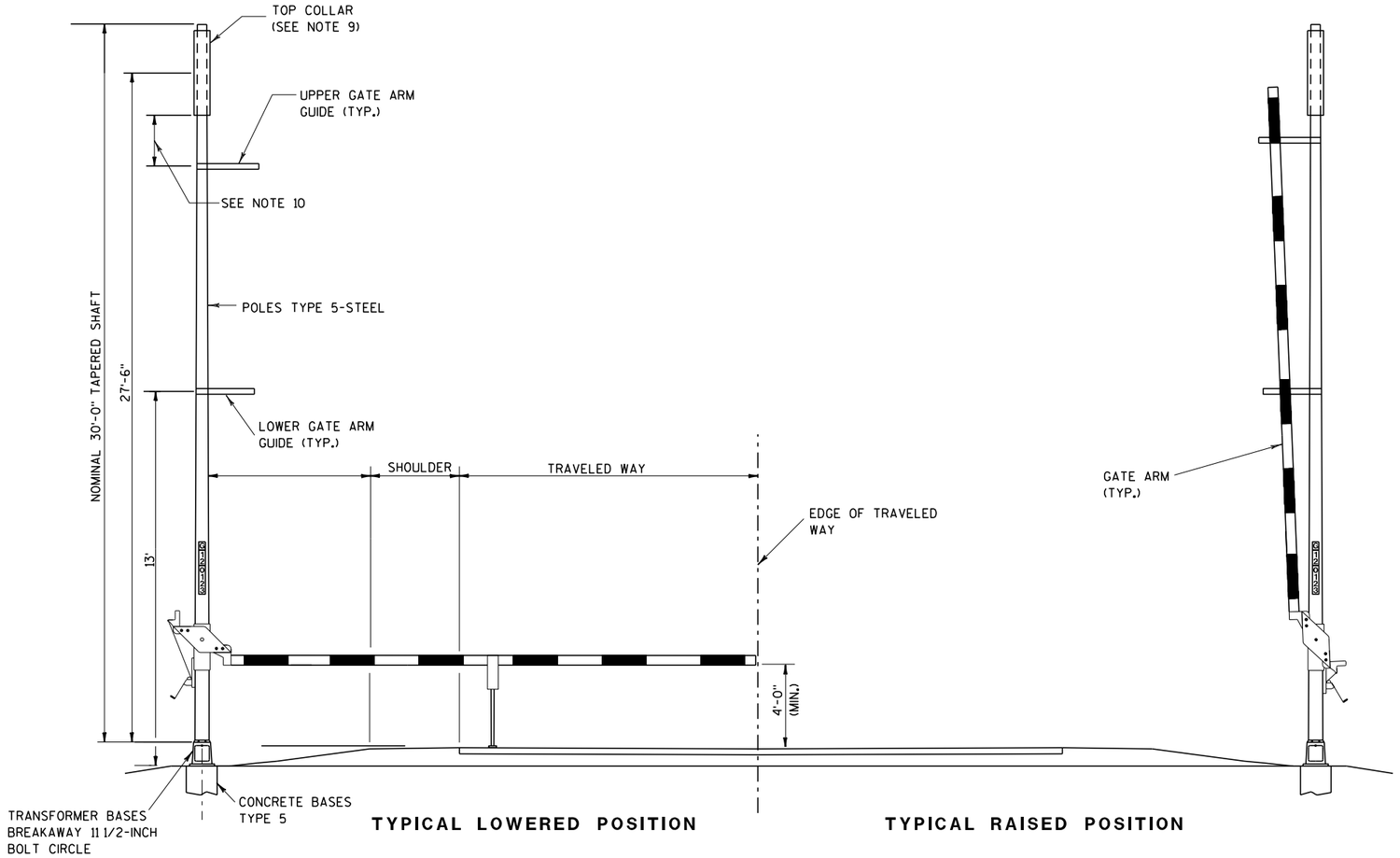
WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

1. SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
2. PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
3. USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
4. MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
5. PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
6. WHITE 6" TEMPORARY PAVEMENT MARKING
7. IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
8. 4 FEET MINIMUM, 5 FEET DESIRABLE
9. IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

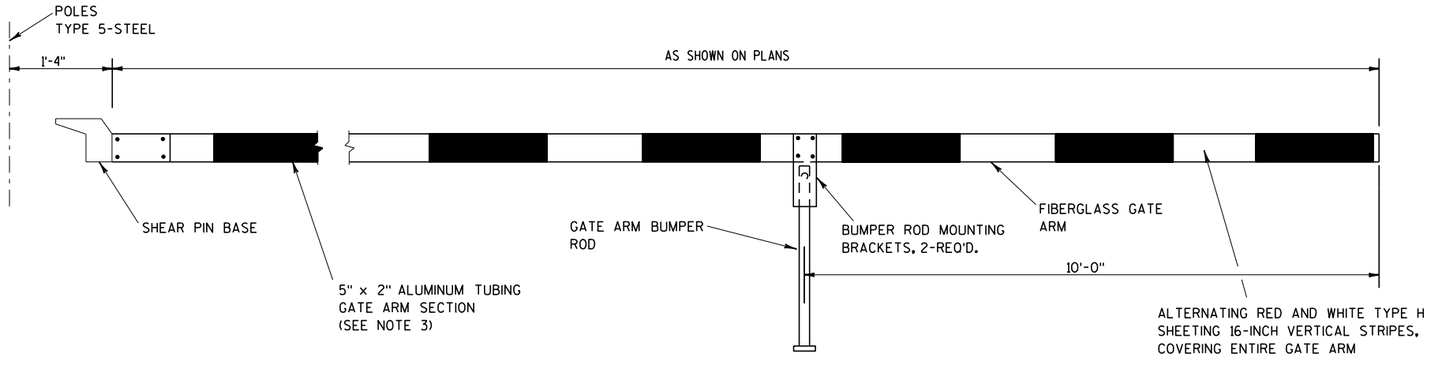
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION



TYPICAL LOWERED POSITION

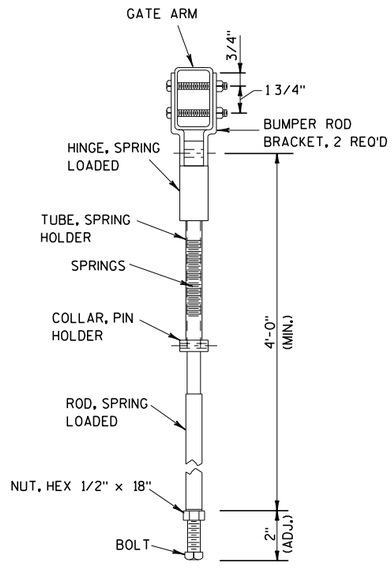
TYPICAL RAISED POSITION



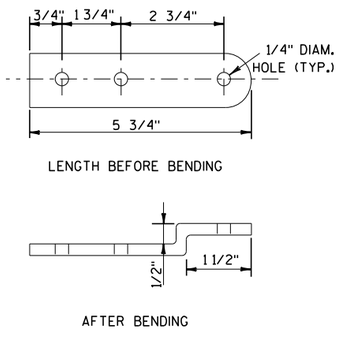
GATE DETAIL

GENERAL NOTES

1. THE LOCATION OF RAMP CLOSURE GATES AND MOUNTING HEIGHT OF GATE ARM PIVOT SHALL BE VERIFIED BY THE ENGINEER.
2. HEIGHT OF GATE ARM GUIDES MAY BE VARIED AS REQUIRED FOR WARNING LIGHT CLEARANCE.
3. FIBERGLASS/ALUMINUM GATE ARM AND SHEAR PIN BASE SHALL BE SUPPLIED BY THE SAME VENDOR.
4. GATE ARM TO BE MOUNTED ON PROPOSED POLE AS INDICATED ON THE PLANS. PROPOSED POLE SHALL BE TYPE 5 POLE.
5. LOCATION OF THE CONCRETE BASE AND LENGTH OF THE GATE ARM WILL BE VERIFIED BY THE ENGINEER TO ENSURE ADEQUATE COVERAGE OF THE TRAVELED LANE.
6. GATE PIVOTS, SUPPORTS AND GUIDES, AND ALL ASSOCIATED HARDWARE SHALL BE GALVANIZED. ALL ROUGH EDGES AND BURRS SHALL BE GROUND SMOOTH PRIOR TO GALVANIZING.
7. ALL EXPOSED BOLT THREADS SHALL BE PAINTED WITH TWO COATS OF ZINC RICH PAINT CONFORMING WITH THE REQUIREMENTS OF ASTM A 780.
8. ANY FIELD DAMAGE TO THE GALVANIZING SHALL BE REPAIRED WITH TWO COATS OF ZINC RICH PAINT CONFORMING WITH THE REQUIREMENTS OF ASTM A 780.
9. A STANDARD LIGHTING LUMINAIRE ARM MAY BE MOUNTED TO THE TYPE 5 POLE IN LIEU OF THE TOP COLLAR.
10. UPPER GATE ARM GUIDE IS TO BE INSTALLED 6 TO 12-INCHES BELOW THE BOTTOM OF THE TOP COLLAR.



GATE ARM BUMPER ROD DETAIL

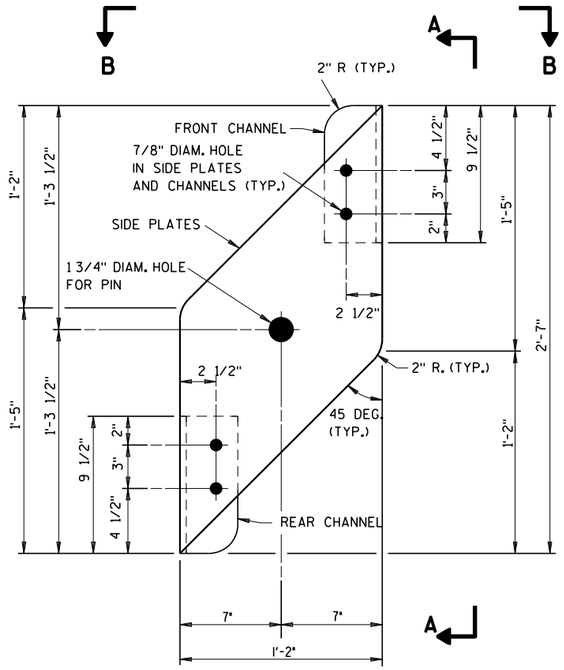


BUMPER ROD MOUNTING BRACKET DETAIL

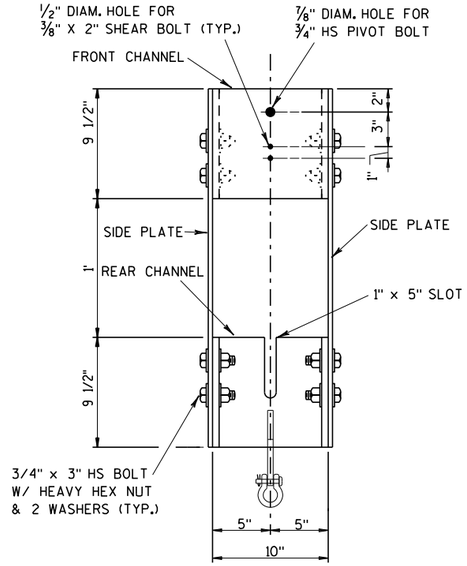
RAMP GATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

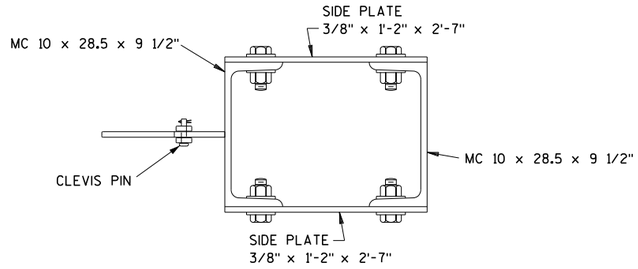
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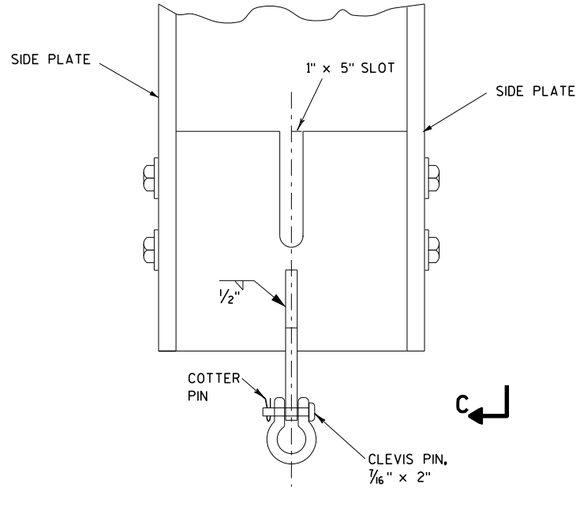
SIDE PLATE DETAIL



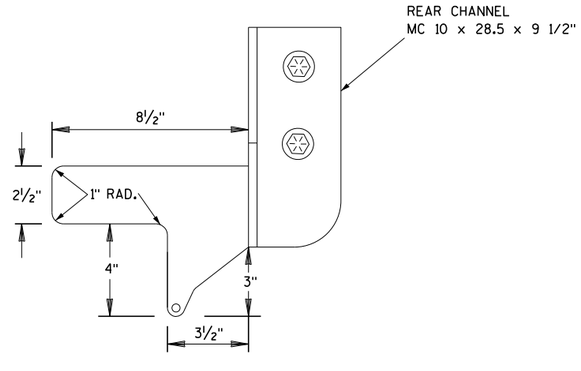
SECTION A-A



SECTION B-B



YOKE ASSEMBLY DETAIL



SECTION C-C

RAMP GATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 15 D 35-3b

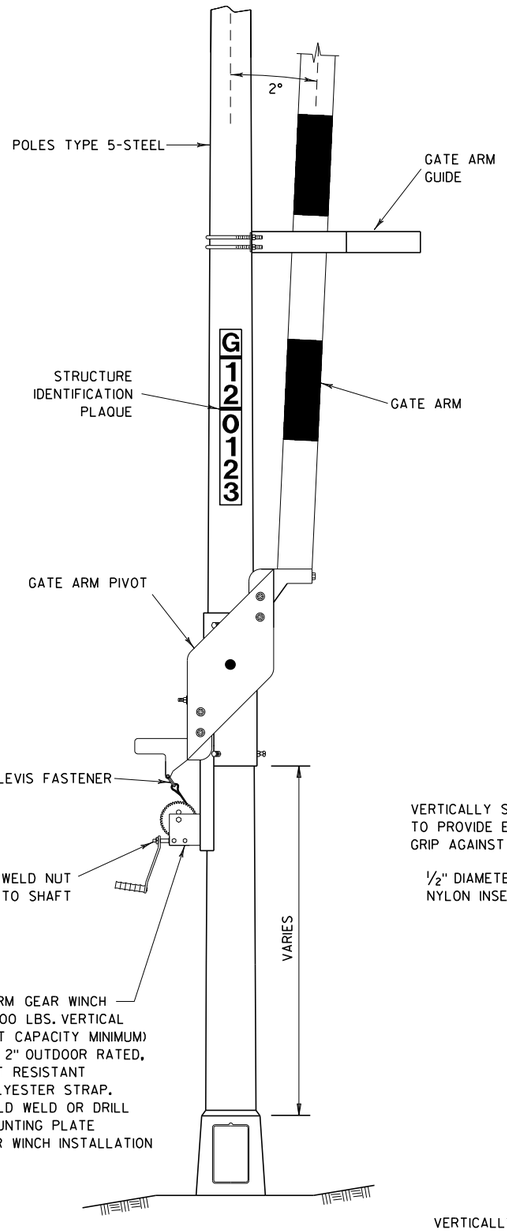
GENERAL NOTES

1. WHEN THE GATE IS FULLY RAISED, THE NUT AND WASHER SHALL BE PLACED SNUGLY AGAINST THE OUTSIDE OF THE REAR CHANNEL.

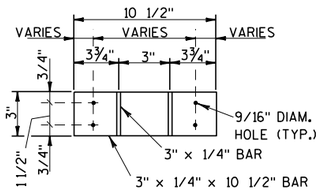
2. WHEN THE GATE IS FULLY LOWERED, THE NUT AND WASHER SHALL BE PLACED SNUGLY AGAINST THE INSIDE OF THE REAR CHANNEL.

3. ANTI-SEIZE LUBRICATING MATERIAL SHALL BE USED ON ALL BOLT THREADS BEFORE INSTALLATION.

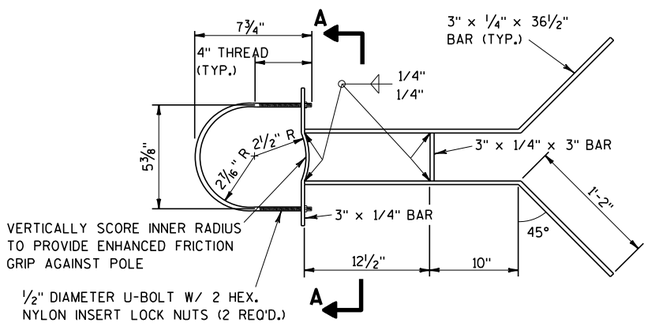
4. ALL BOLTS SHALL BE GALVANIZED AND CONFORM TO ASTM A307, GRADE A, UNLESS DESIGNATED AS HS (HIGH STRENGTH), WHICH SHALL CONFORM TO ASTM A325. BOLTS OF ½" NOMINAL DIAMTER OR LESS MAY BE STAINLESS STEEL.



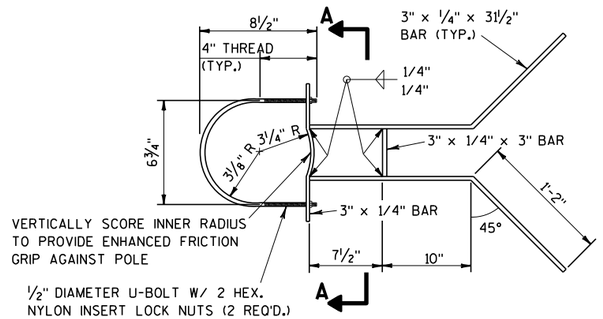
GATE PIVOT ASSEMBLY



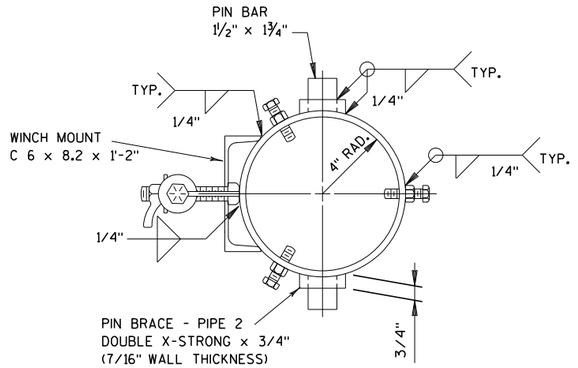
SECTION A-A
U-BOLTS NOT SHOWN



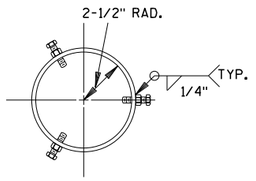
UPPER GATE ARM GUIDE DETAIL



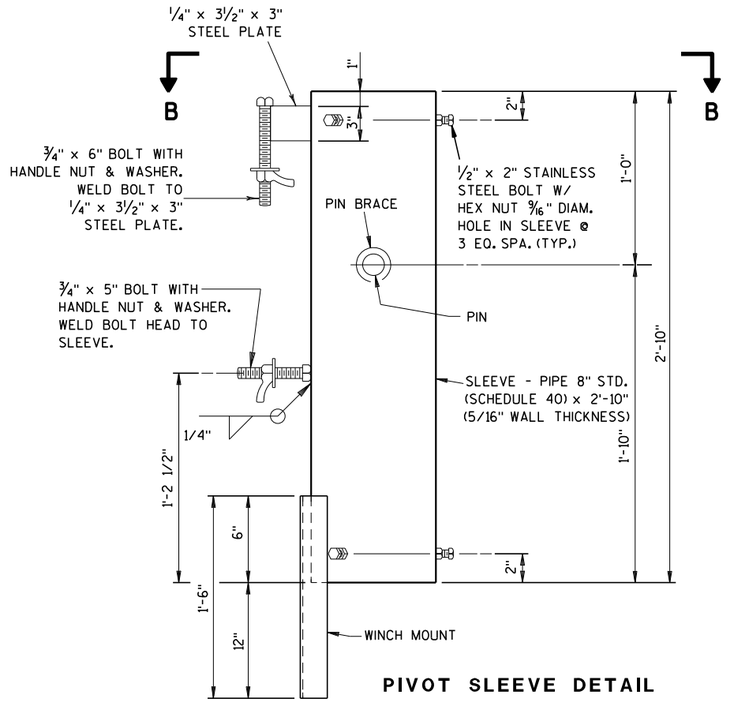
LOWER GATE ARM GUIDE DETAIL



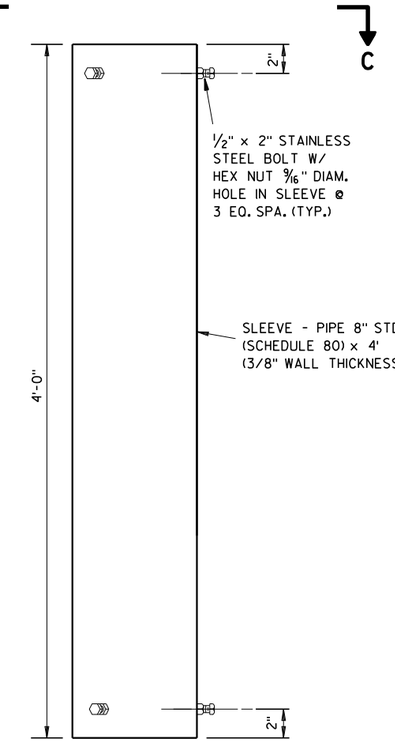
SECTION B-B



SECTION C-C



PIVOT SLEEVE DETAIL



TOP COLLAR

RAMP GATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

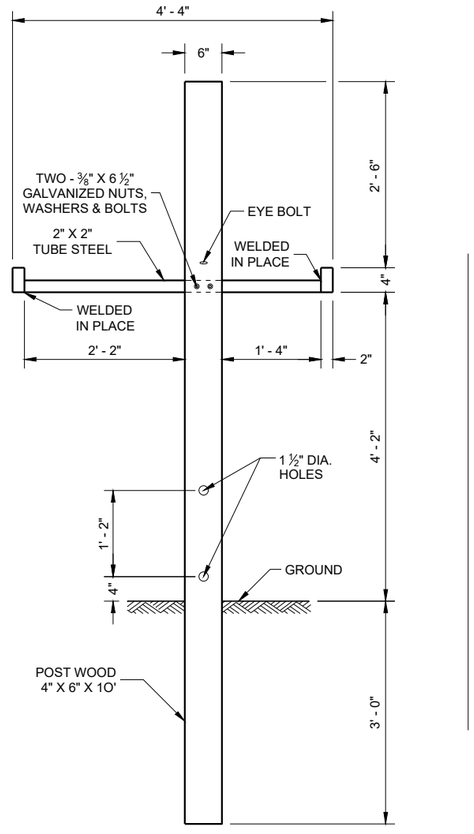
APPROVED
March 2018 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 648 ENGINEER
FHWA

6

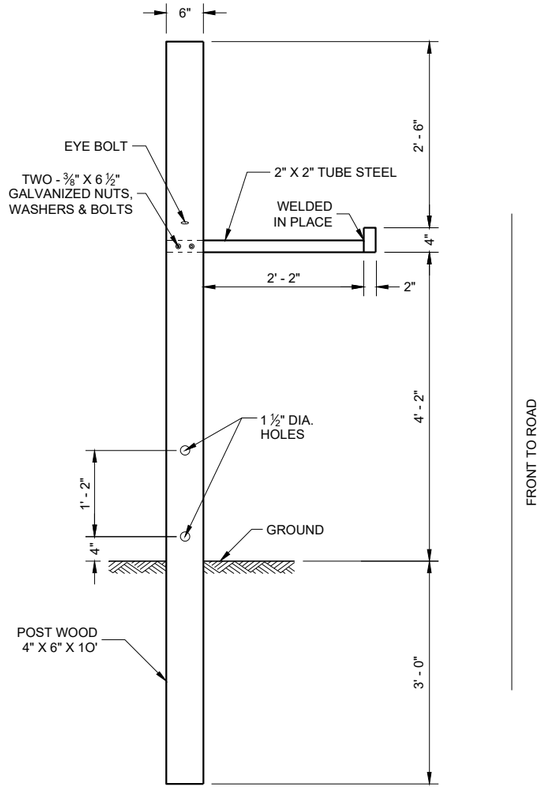
S.D.D. 15 D 35-3c

6

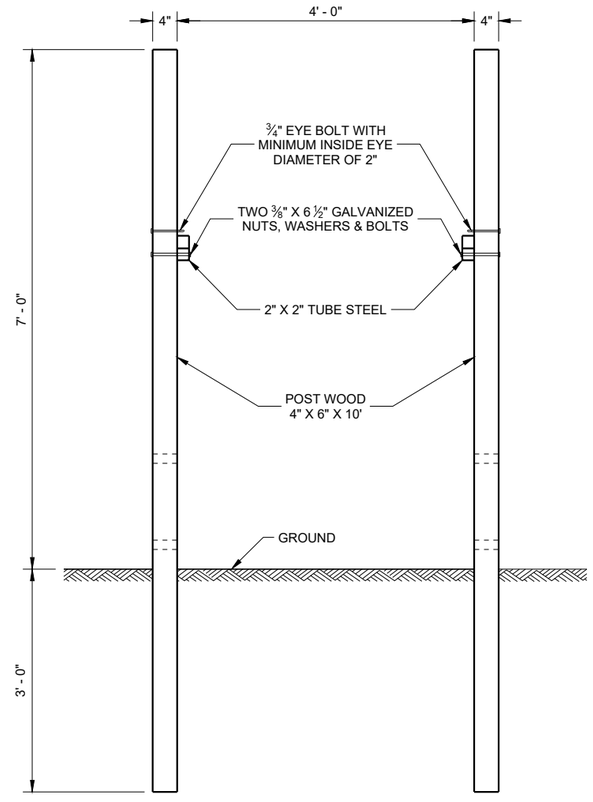
S.D.D. 15 D 35-3c



SIDE VIEW
(3 BARRICADE SYSTEM)



SIDE VIEW
(2 BARRICADE SYSTEM)



FRONT VIEW

BARRICADE RACK

LOCATE OUTSIDE CLEAR ZONE AS DIRECTED BY ENGINEER

BARRICADE RACK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/30/2013
DATE
/S/ Bill Wondrachek
STATE TRAFFIC INCIDE MANAGEMENT ENGINE

FHWA

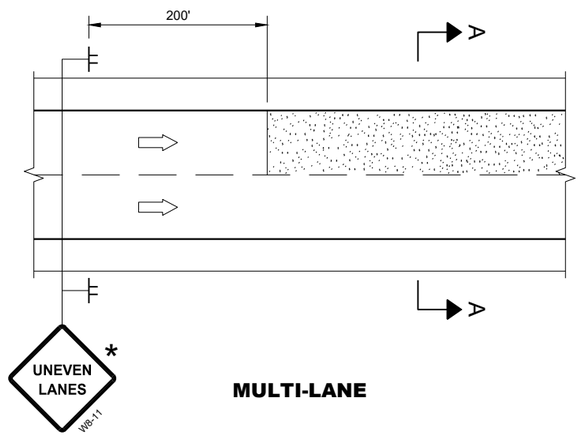
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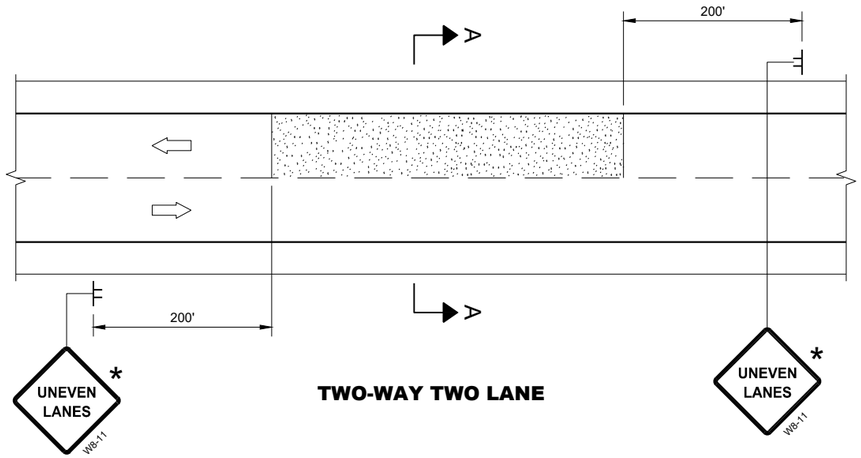
SDD 15D36 - 01

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SDD 15D36 - 01



MULTI-LANE



TWO-WAY TWO LANE

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

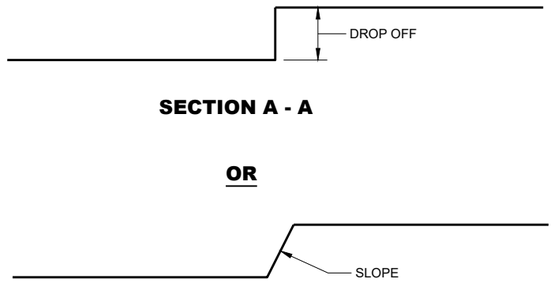
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

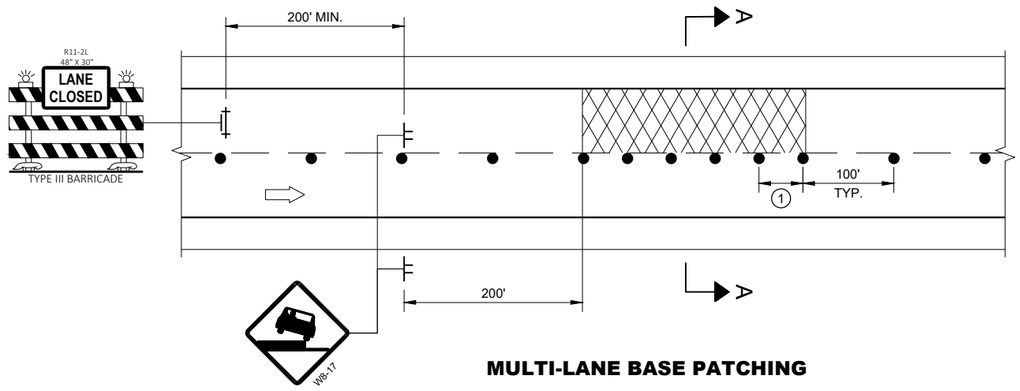
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE



SECTION A - A

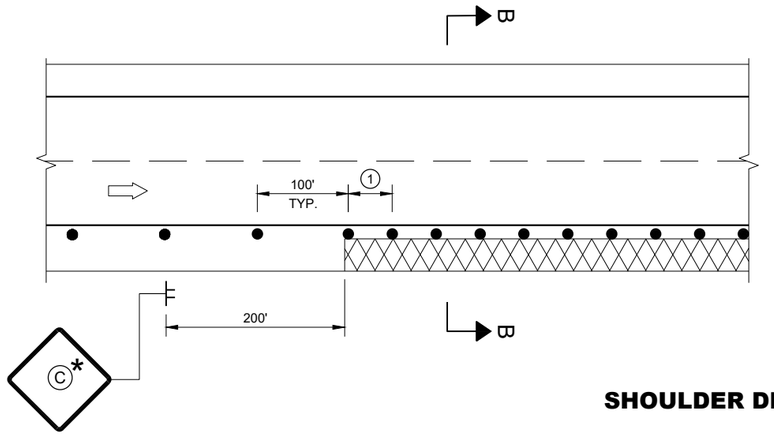
OR

SECTION A - A

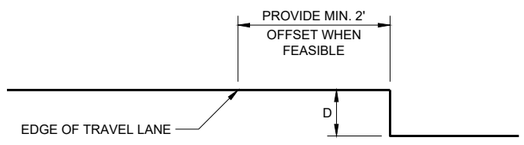


MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D39 - 02

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 RIGHT - REVERSE FOR SHIFTING LEFT.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

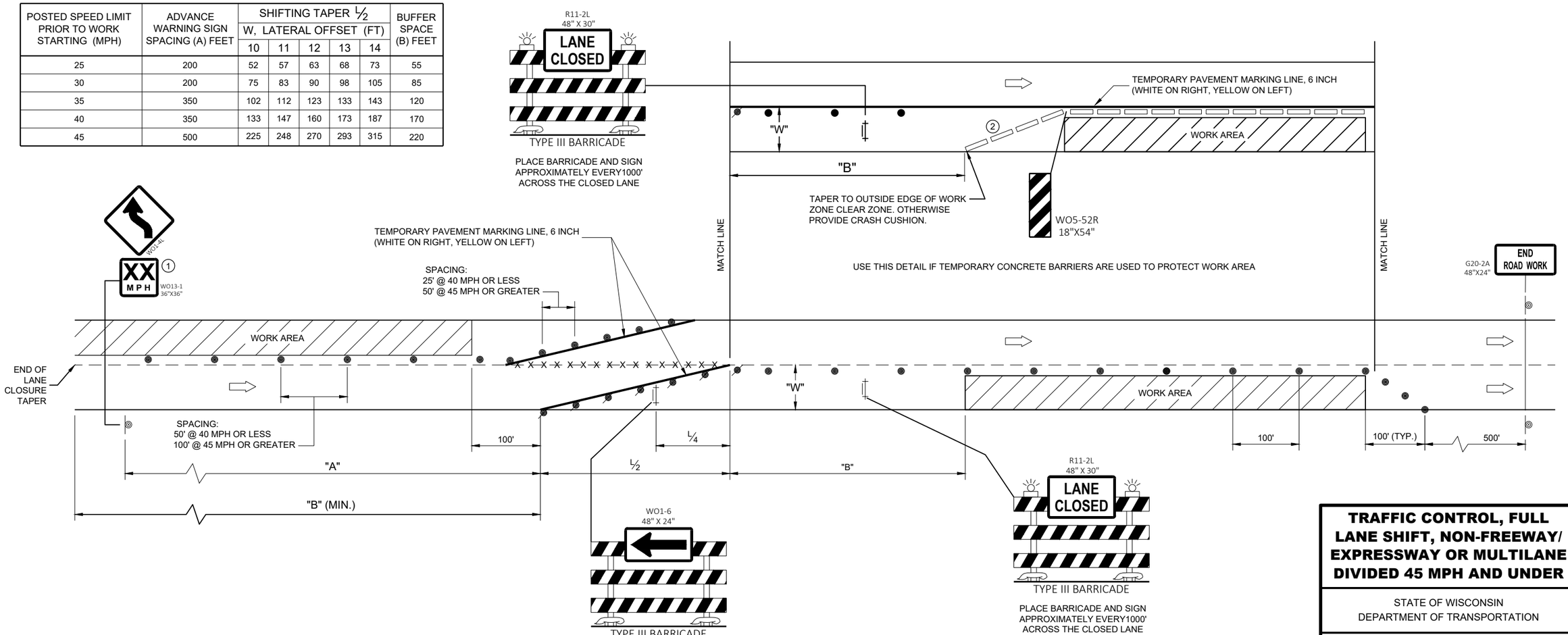
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

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 IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.

(2) 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
		10	11	12	13	14	
25	200	52	57	63	68	73	55
30	200	75	83	90	98	105	85
35	350	102	112	123	133	143	120
40	350	133	147	160	173	187	170
45	500	225	248	270	293	315	220



TRAFFIC CONTROL, FULL LANE SHIFT, NON-FREEWAY/ EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

651

FHWA

6

SDD 15D40-05a

6

SDD 15D40-05a

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.

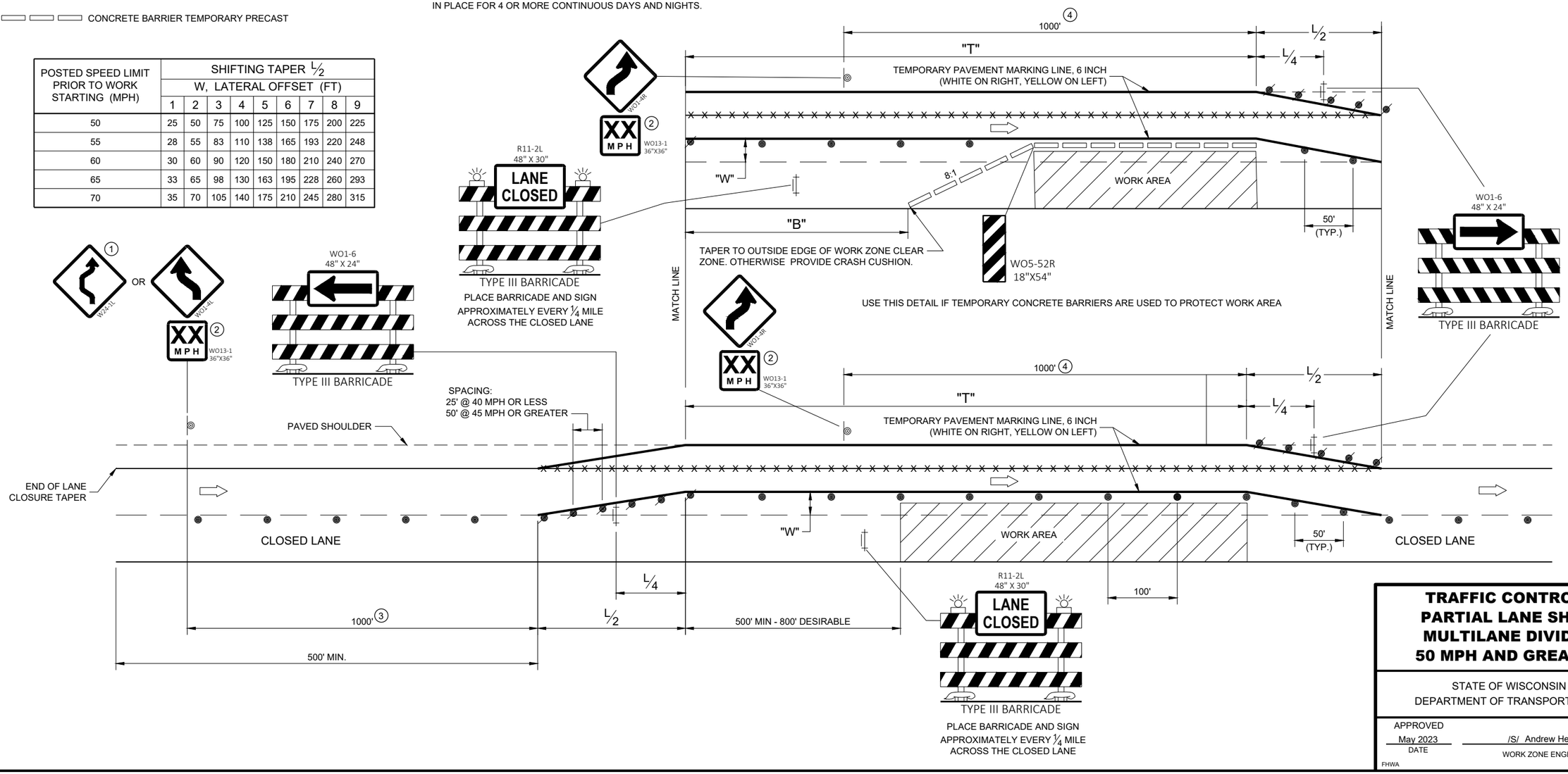
REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

652

FHWA

6

SDD 15D40-05d

6

SDD 15D40-05d

LEGEND

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

CONCRETE BARRIER TEMPORARY PRECAST

TYPE "A" WARNING LIGHT (FLASHING)

WORK AREA

FULL SHIFT							
L, TAPER LENGTH (FT)							
POSTED SPEED (MPH)	W, LATERAL OFFSET (FT)						
	10	11	12	13	14	15	16
45	450	495	540	585	630	675	720
50	500	550	600	650	700	750	800
55	550	605	660	715	770	825	880
60	600	660	720	780	840	900	960
65	650	715	780	845	910	975	1040
70	700	770	840	910	980	1050	1120



OR



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



OR



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

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

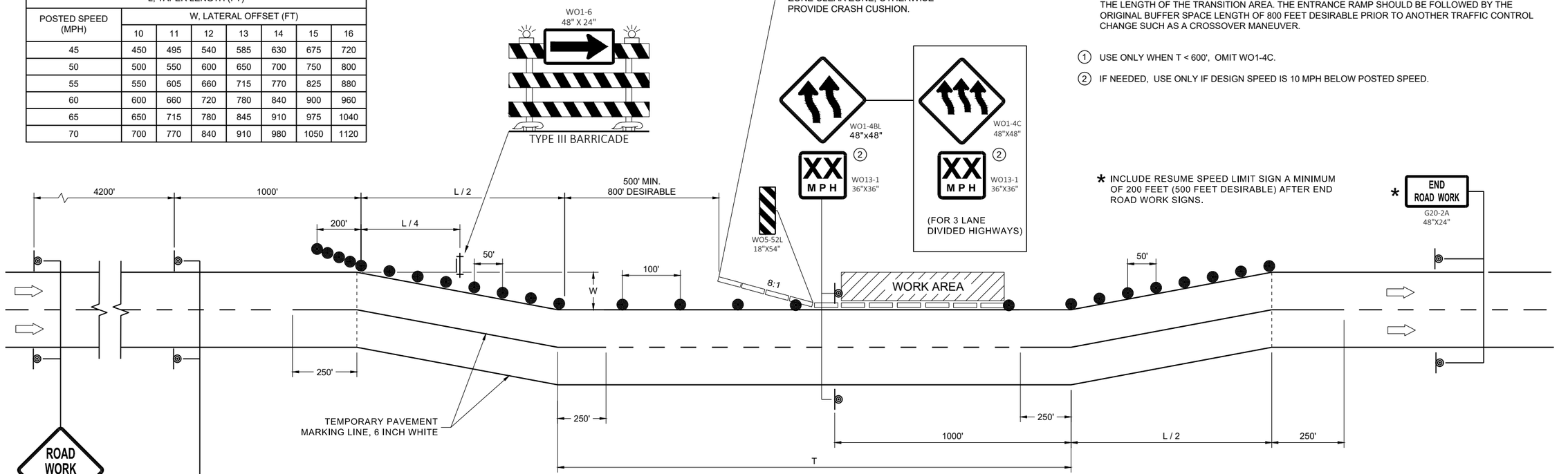
REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

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

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

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



PARTIAL SHIFT									
POSTED SPEED PRIOR TO WORK STARTING (MPH)	SHIFTING TAPER L/2								
	W, LATERAL OFFSET (FT)								
	1	2	3	4	5	6	7	8	9
45	23	45	68	90	113	135	158	180	203
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

TRAFFIC CONTROL MULTIPLE LANE SHIFT MULTILANE DIVIDED ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2023
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6

SDD 15D41-04a

6

SDD 15D41-04a

LEGEND

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

CONCRETE BARRIER TEMPORARY PRECAST

TYPE "A" WARNING LIGHT (FLASHING)

WORK AREA

FULL SHIFT							
L, TAPER LENGTH (FT)							
POSTED SPEED (MPH)	W, LATERAL OFFSET (FT)						
	10	11	12	13	14	15	16
45	450	495	540	585	630	675	720
50	500	550	600	650	700	750	800
55	550	605	660	715	770	825	880
60	600	660	720	780	840	900	960
65	650	715	780	845	910	975	1040
70	700	770	840	910	980	1050	1120

SPEED LIMIT 60 W03-5

OR

SPEED LIMIT 60 R2-1 48"X60"

SPEED LIMIT 55 W03-5

OR

SPEED LIMIT 55 R2-1 48"X60"

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

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

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

WO1-6 48" X 24"

TYPE III BARRICADE

TAPER TO OUTSIDE EDGE OF WORK ZONE CLEAR ZONE, OTHERWISE PROVIDE CRASH CUSHION.

WO1-4BL 48"x48"

② XX MPH WO13-1 36"X36"

WO1-4C 48"X48"

② XX MPH WO13-1 36"X36"

(FOR 3 LANE DIVIDED HIGHWAYS)

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT RIGHT - REVERSE FOR SHIFTING LEFT. ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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

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

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

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

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

③ NINE RUMBLE STRIPS WITH 10 FOOT SPACING BETWEEN EACH INDIVIDUAL STRIP

④ NINE RUMBLE STRIPS WITH 5 FOOT SPACING BETWEEN EACH INDIVIDUAL STRIP

⑤ NINE RUMBLE STRIPS WITH 1.5 FOOT SPACING BETWEEN EACH INDIVIDUAL STRIP

2500' 1000' L / 2 500' MIN. 800' DESIRABLE

1400' 200' 200' L / 4

1900'

50' W 100' 8:1 WORK AREA 50'

WO5-52L 18"X54"

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

* END ROAD WORK G20-2A 48"X24"

200' 250' 250' 250' 1000' L / 2 250'

T

TEMPORARY PAVEMENT MARKING LINE, 6 INCH WHITE

ROAD WORK 1 MILE W20-1F

RUMBLE STRIPS AHEAD W21-6S

WO1-4BR 48"x48" OR W24-1AR ①

② XX MPH WO13-1 36"X36"

WO1-4C 48"X48" OR W24-1BR ①

② XX MPH WO13-1 36"X36"

(FOR 3 LANE DIVIDED HIGHWAYS)

PARTIAL SHIFT									
POSTED SPEED PRIOR TO WORK STARTING (MPH)	SHIFTING TAPER L/2								
	W, LATERAL OFFSET (FT)								
	1	2	3	4	5	6	7	8	9
45	23	45	68	90	113	135	158	180	203
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

TRAFFIC CONTROL MULTIPLE LANE SHIFT DIVIDED ROAD TEMPORARY RUMBLE STRIPS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2023 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6

SDD 15D41-04b

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

GENERAL NOTES

RIGHT CLOSURE SHOWN (LEFT LANE CLOSURE SIMILAR)

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

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS PART OF A DAYTIME ONLY OPERATION.

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

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

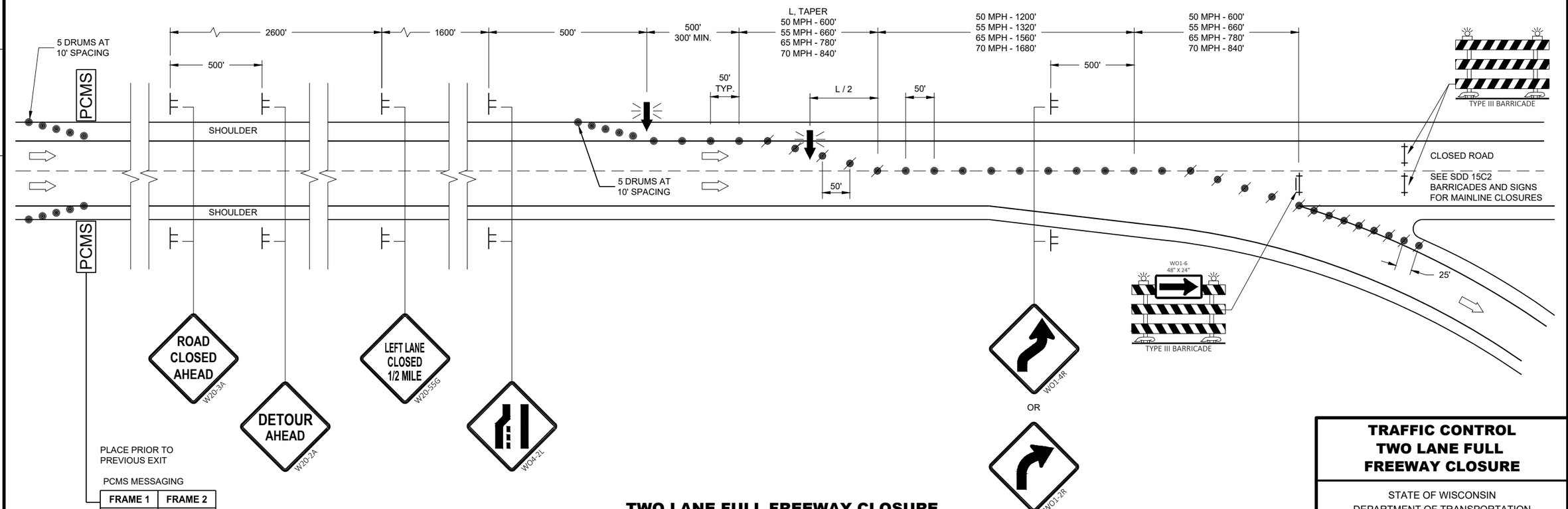
WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROL SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND / OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1000' ACROSS EACH CLOSED LANE TO HELP REINFORCE THE DRUM LINE.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

REFER TO DETOUR ROUTES FOR TRAFFIC GUIDANCE SIGNING.

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. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.



PLACE PRIOR TO PREVIOUS EXIT

PCMS MESSAGING

FRAME 1	FRAME 2
FREEWAY CLOSED	EXIT AHEAD

TWO LANE FULL FREEWAY CLOSURE

TRAFFIC CONTROL TWO LANE FULL FREEWAY CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

6

SDD 15D42 - 01

SDD 15D42 - 01

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

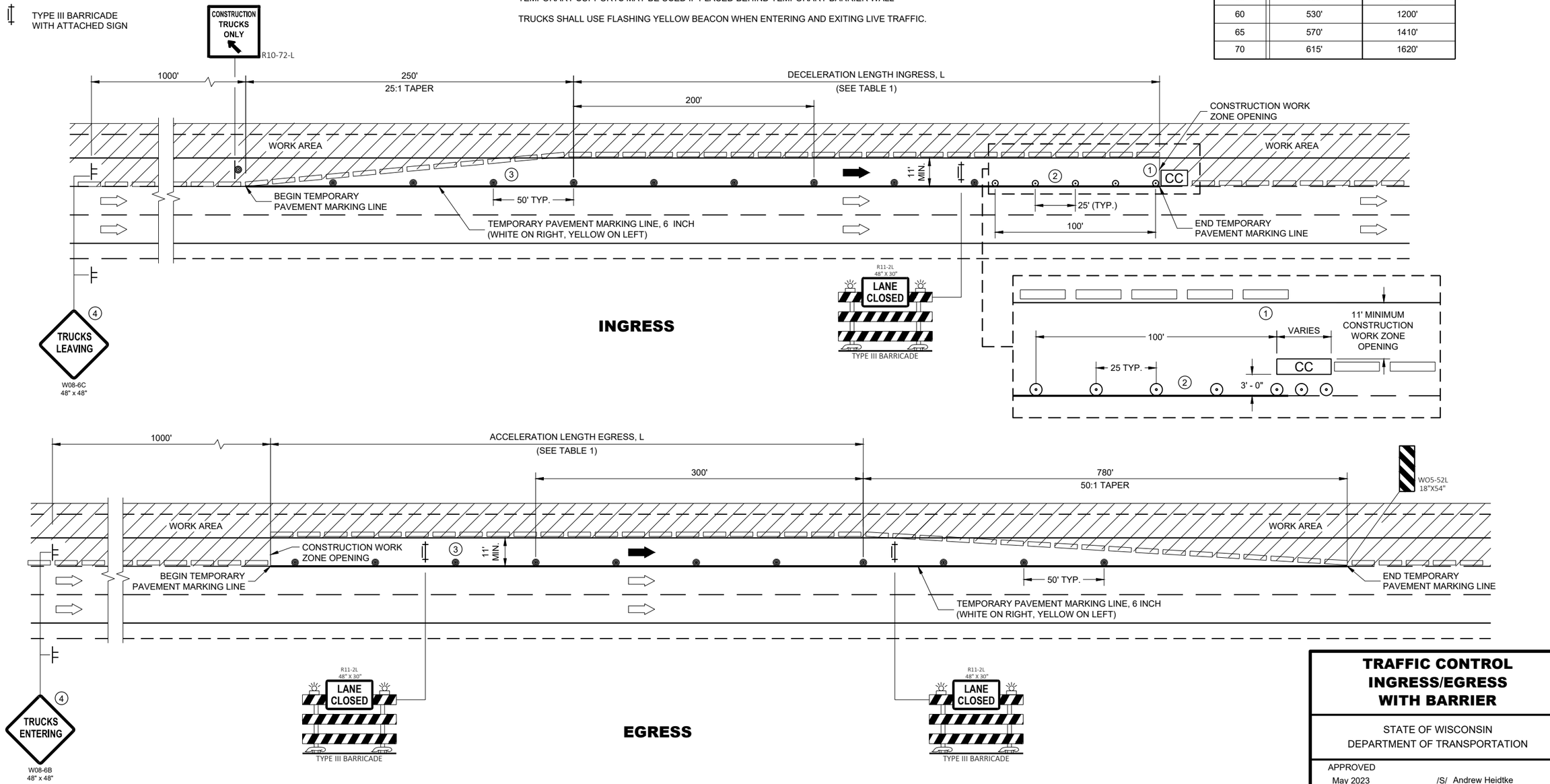
TEMPORARY SUPPORTS MAY BE USED IF PLACED BEHIND TEMPORARY BARRIER WALL

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
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
656

FHWA

6

SDD 15D47-03a

6

SDD 15D47-03a

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- CONSTRUCTION TRAFFIC
- WORK AREA

TABLE 1

S (MPH)	INGRESS, L	EGRESS, L
50	435'	720'
55	480'	960'
60	530'	1200'
65	570'	1410'
70	615'	1620'

LEGEND

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.

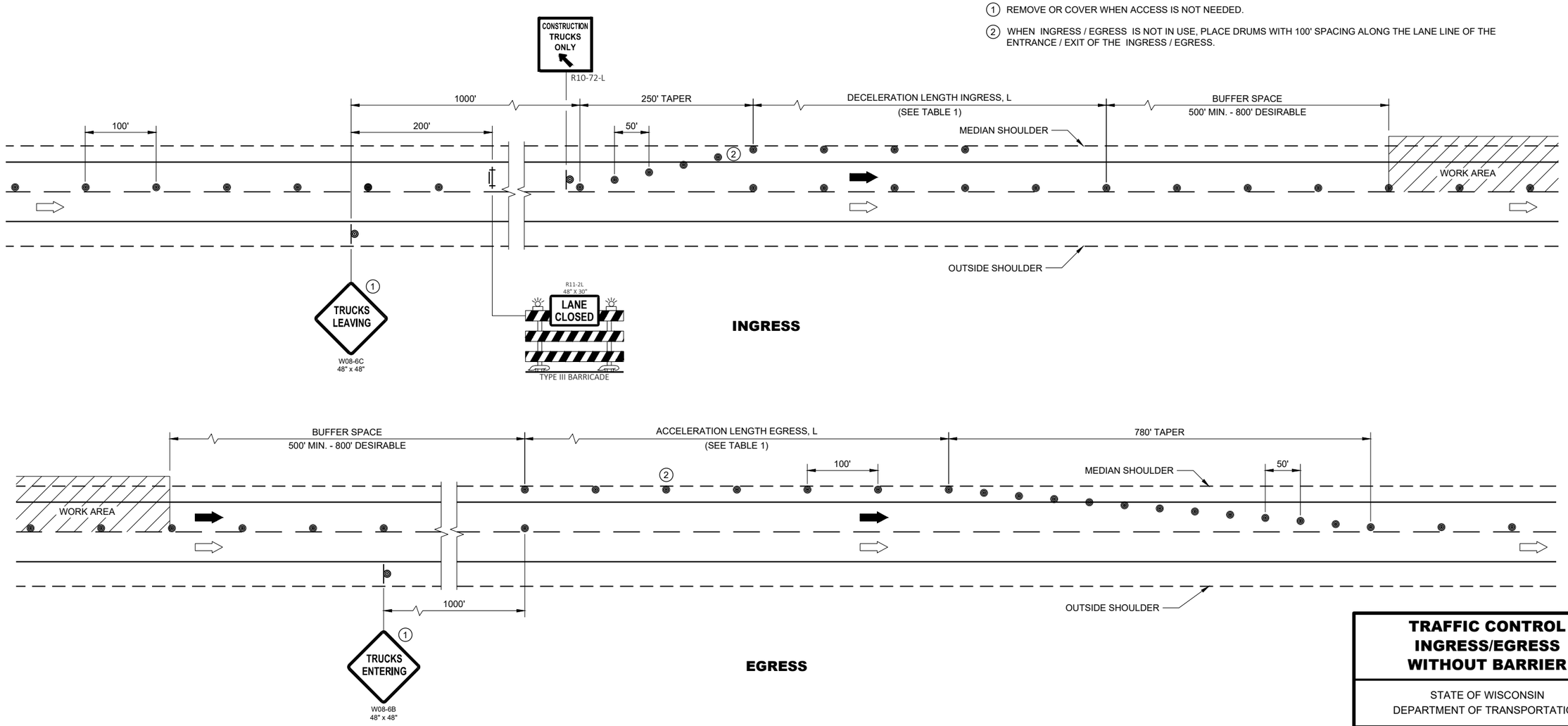
THIS ACCESS DETAIL IS TYPICAL FOR LEFT LANE ACCESS, FOR RIGHT LANE ACCESS, REVERSE THE TRAFFIC CONTROL

TEMPORARY SUPPORTS MAY BE USED IF PLACED BEHIND TEMPORARY BARRIER WALL

TRUCKS SHALL USE FLASHING YELLOW BEACON WHEN ENTERING AND EXITING LIVE TRAFFIC.

(1) REMOVE OR COVER WHEN ACCESS IS NOT NEEDED.

(2) WHEN INGRESS / EGRESS IS NOT IN USE, PLACE DRUMS WITH 100' SPACING ALONG THE LANE LINE OF THE ENTRANCE / EXIT OF THE INGRESS / EGRESS.



TRAFFIC CONTROL INGRESS/EGRESS WITHOUT BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

657

FHWA

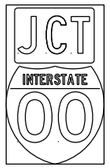
6

SDD 15D47-03b

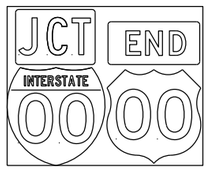
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SDD 15D47-03b

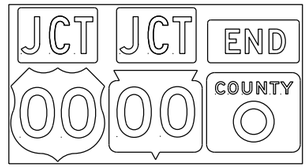
TYPICAL ASSEMBLIES



J1-1



J1-2



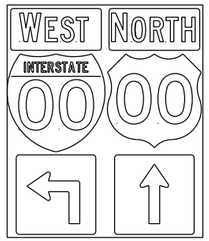
J1-3



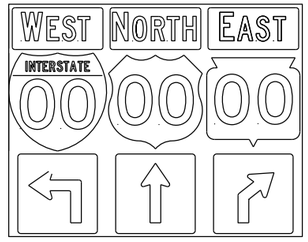
JR1-1



J2-1



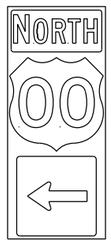
J2-2



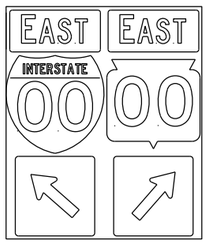
J2-3



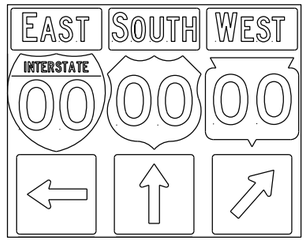
JV
(Typical Vertical J-Assembly
See Note 10 and 11)



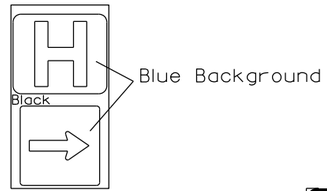
J3-1



J3-2



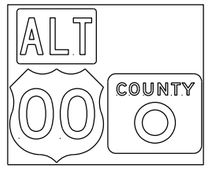
J3-3



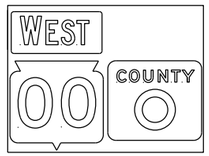
JH-1



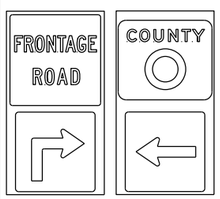
J4-1



J4-2



J4-2



J12-1

J13-1



J32-1



J33-1



J22-1



J23-1



JR13-1

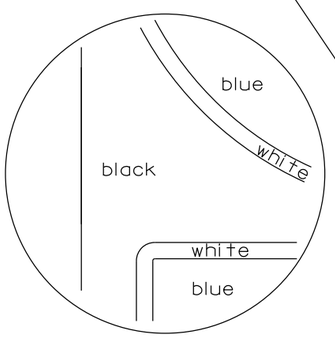


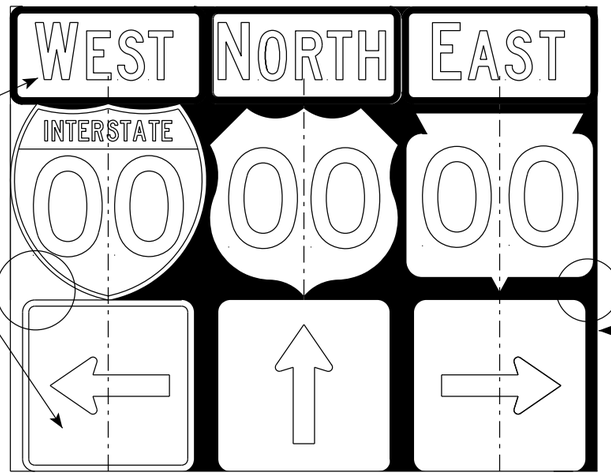
JR23-1

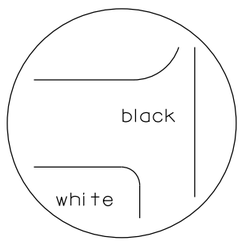


JR99-1

[blue background with interstate]







[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

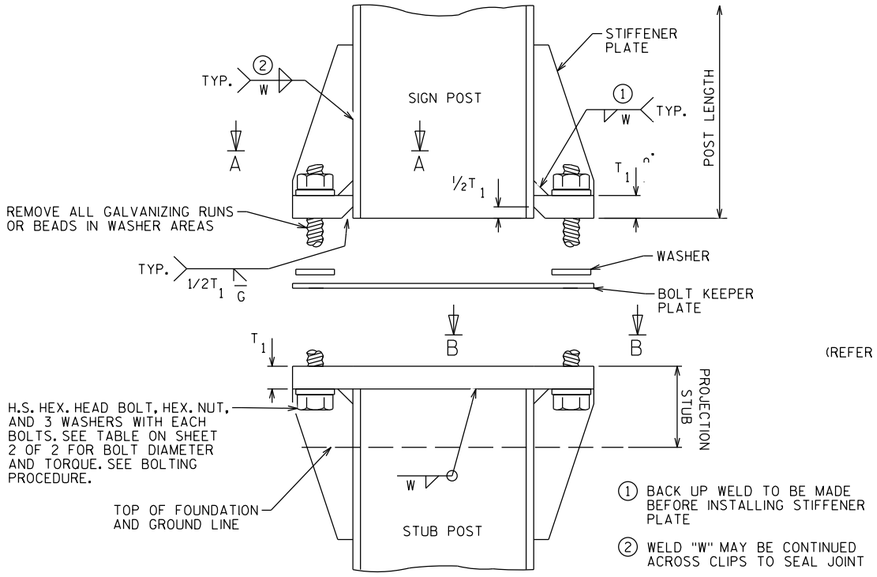
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/21 PLATE NO. A2-1S.9

PROJECT NO:

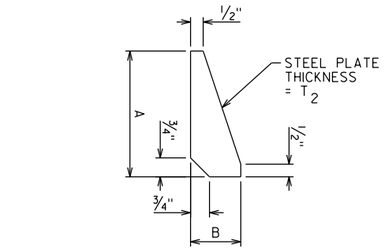
SHEET NO: 658 E



① BACK UP WELD TO BE MADE BEFORE INSTALLING STIFFENER PLATE

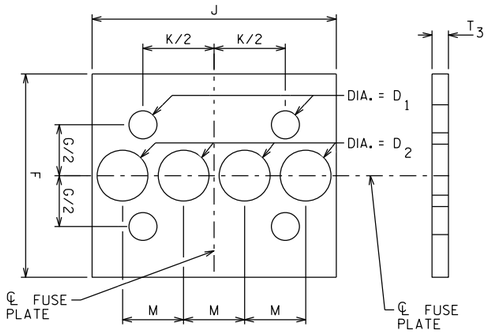
② WELD "W" MAY BE CONTINUED ACROSS CLIPS TO SEAL JOINT

SIGN POST & STUB POST ELEVATION



STIFFENER PLATE DETAIL

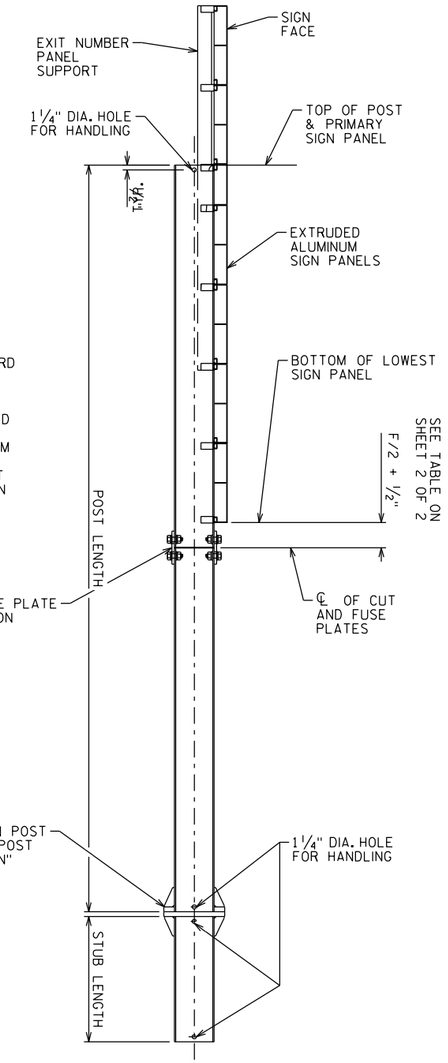
(REFER TO TABLE ON SHEET 2 OF 2 FOR DIMENSIONS)



PERFORMED FUSE PLATE DETAIL

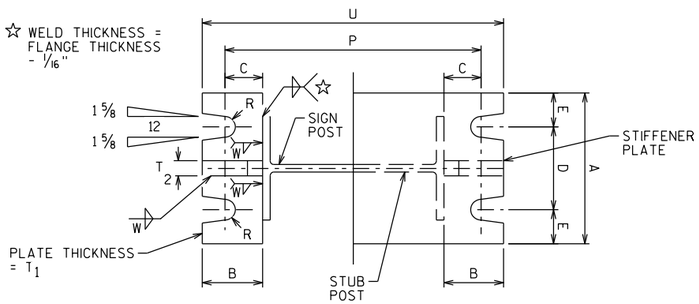
USE H.S. HEX HEAD BOLTS, HEX HEAD NUT AND FLAT WASHER UNDER NUT. INSTALL BOLTS PER THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION SECTION 506.3.12.3.

ALL HOLES SHALL BE DRILLED, SUB-PUNCHED AND REAMED. ALL PLATE CUTS SHALL PREFERABLY BE SAW CUTS. HOWEVER, FLAME CUTTING WILL BE PERMITTED PROVIDED ALL EDGES ARE GROUND. METAL PROJECTING BEYOND THE PLANE OF THE PLATE FACE WILL NOT BE PERMITTED. STEEL FUSE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36. ASTM A572 GRADE 50 OR ASTM A588 MAY BE SUBSTITUTED FOR A36 AT THE OPTION OF THE FABRICATOR. MILL TEST REPORTS SHALL BE SUBMITTED FOR FUSE PLATES. STEEL USED SHALL HAVE AN ULTIMATE TENSILE STRENGTH NOT TO EXCEED 80 KSI.



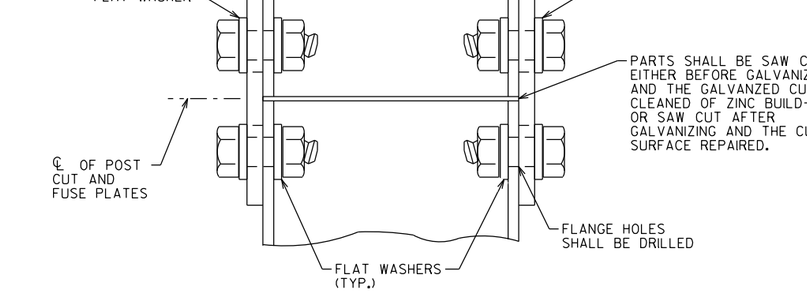
POST DETAIL

☆ WELD THICKNESS = FLANGE THICKNESS - 1/16"

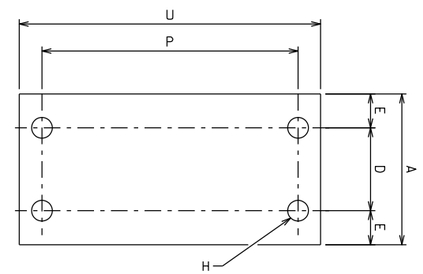


SECTION A-A

SECTION B-B



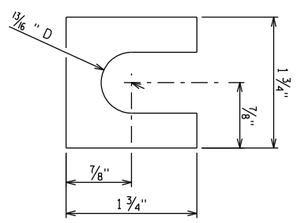
FUSE PLATE CONNECTION DETAIL



H = BOLT DIA. + 1/8"

BOLT KEEPER PLATE DETAIL

30 GA GALVANIZED SHEET STEEL



SHIM DETAIL

FURNISH TWO .012"± THICK AND TWO .032"± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO ASTM B36.

BOLTING PROCEDURE FOR BASE CONNECTION

1. ASSEMBLE SIGN POST, BOLT KEEPER PLATE, AND STUB POST WITH BOLTS AND THREE FLAT WASHERS PER BOLT AS SHOWN.
2. SHIM AS REQUIRED TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING, LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH A 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS.
5. LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PERSCRIBED TORQUE. (SEE TABLE FOR PERSCRIBED TORQUE). DO NOT OVER-TIGHTEN.
6. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

DRAWN BY | PLANS CK'D.

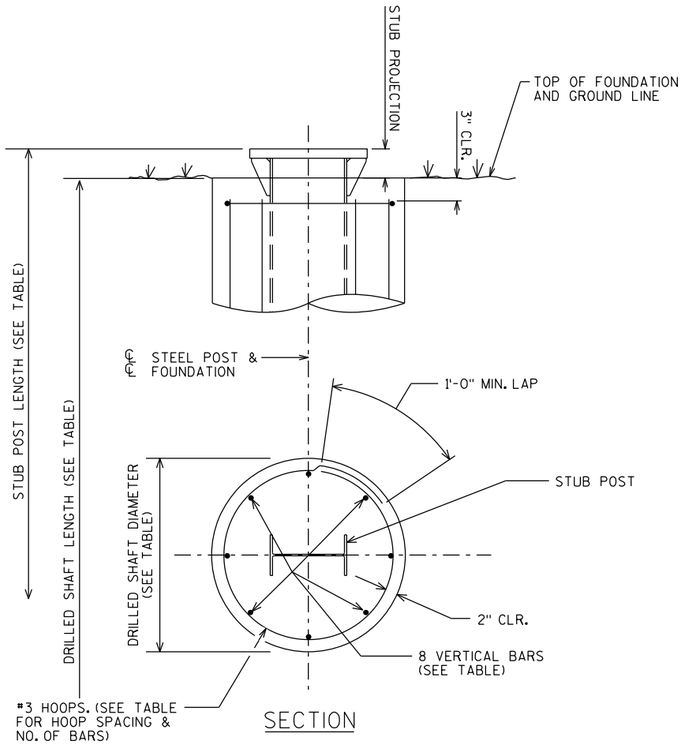
CONNECTION & FOUNDATION DETAILS 1 OF 2

SHEET A3-1.20

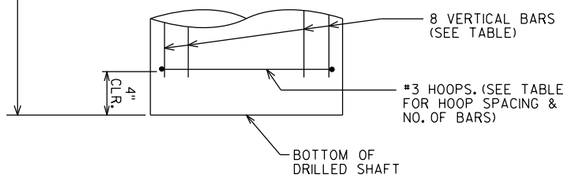
659

7

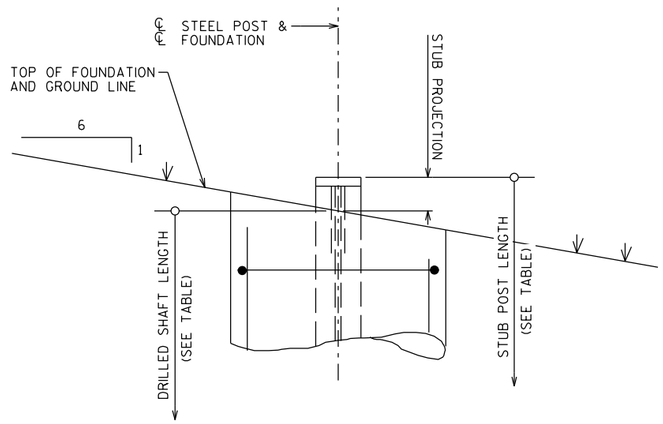
7



SECTION



FOUNDATION DETAIL



SHAFT PLACEMENT

FOUNDATION DATA TABLE

POST SHAPE	STUB LENGTH	STUB PROJECTION	DRILLED SHAFT DIAMETER	DRILLED SHAFT LENGTH	VERTICAL BARS		HOOPS		CONCRETE VOLUME ◆	TOTAL REINF. WEIGHT ◆
					SIZE	LENGTH	MAX SPA.	NO.		
W6X15	2'-6"	3"	24"	6'-6"	#5	5'-11"	10"	9	0.8 CY	71 LB
W8X18	2'-6"	3"	24"	7'-6"	#6	6'-11"	12"	8	0.9 CY	102 LB
W8X21	3'-0"	2½"	24"	8'-0"	#6	7'-5"	12"	9	1.0 CY	110 LB
W10X22	3'-0"	2½"	24"	8'-6"	#7	7'-11"	12"	9	1.0 CY	151 LB
W12X26	3'-0"	2½"	24"	10'-0"	#7	9'-5"	12"	11	1.2 CY	180 LB

◆ QUANTITIES SHOWN ARE FOR ONE DRILLED SHAFT

BASE CONNECTION & FUSE PLATE DATA TABLE

POST SHAPE	WEIGHT PER FOOT	BASE CONNECTION DATA: BOLT SIZE & TORQUE	A	B	C	D	E	T1	T2	W	R	BOLT KEEPER PLATE DATA: P	U	PERFORATED FUSE PLATE DATA: F	G	J	K	M	D1	D2	T3	BOLT DIA.	WGT. EA. LBS	BOLT LENGTH	V ◪
W6X15	15 LB	⅝" DIA. X 4" 36 TO 38 FT-LB	5"	2"	1¼"	2¾"	1⅛"	1¼"	½"	¼"	11/32"	8½"	10"	5"	2½"	6"	3½"	1½"	11/16"	1¼"	⅜"	⅝"	2.4	2	73.0 LB
W8X18	18 LB											10⅝"	12⅛"	5"	2½"	5¼"	2¾"	1¼"	11/16"	1 1/16"	⅜"	⅝"	2.0	2	83.0 LB
W8X21	21 LB	¾" DIA. X 4¾" 62 TO 63 FT-LB	6"	2¼"	1⅜"	3½"	1¼"	1½"	¾"	5/16"	13/32"	11"	12¾"	5½"	2½"	5¼"	2¾"	1¼"	13/16"	1"	½"	¾"	3.1	2¼"	124.0 LB
W10X22	22 LB											12⅞"	14⅝"	6"	3"	5¾"	2¾"	1⅜"	13/16"	1⅛"	½"	¾"	3.9	2¼"	134.0 LB
W12X26	26 LB											15"	16¾"	6"	3"	6½"	3½"	1⅝"	13/16"	1 5/16"	½"	¾"	4.5	2¼"	152.0 LB

◪ TOTAL STRUCTURAL CARBON STEEL WEIGHT FOR ONE POST = V + (POST LENGTH X POST WEIGHT PER FOOT)

"V" INCLUDES STUB POST, BASE PLATES, STIFFENER PLATES, PERFORATED FUSE PLATES, BOLTS, NUTS, AND WASHERS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED

MATERIALS SHALL CONFORM TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 506, UNLESS NOTED OTHERWISE.

FABRICATION SHALL CONFORM TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 506.

ALL POST, POST STUBS & ATTACHMENTS SHALL BE ASTM A709 GRADE 50, GALVANIZED IN ACCORDANCE WITH ASTM A123.

THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST, FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.

H.S. BOLTS, WASHERS, & NUTS SHALL BE A325 GALVANIZED.

FOUNDATION MATERIAL PROPERTIES

CONCRETE MASONRY	F'C = 3,500 P.S.I.
BAR STEEL REINFORCEMENT (UNCOATED), GRADE 60	FY = 60,000 P.S.I.

DESIGN DATA

DESIGN CONFORMS TO AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS 1ST EDITION 2015 (WITH 2017 & 2018 INTERIM REVISIONS).

DEAD LOADS (DL):

- STEEL POST SELF WEIGHT
- SIGN PANEL WEIGHT = 3 PSF

WIND LOADS (WL):

WIND LOADS WERE APPLIED TO THE PROJECTED AREAS OF THE SIGN PANELS AND THE STEEL SIGN POSTS.

- BASIC WIND SPEED = 76 MPH
- MEAN RECURRANCE INTERVAL (MRI) = 10 YEARS
- HEIGHT & EXPOSURE FACTOR = 1.00
- DIRECTIONALITY FACTOR = 0.85
- GUST EFFECT FACTOR = 1.14

WIND LOAD CASES:

- WL CASE 1: 1.0 X NORMAL WIND
- WL CASE 2: 1.0 X TRANSVERSE WIND
- WL CASE 3: 0.75 X NORMAL WIND + 0.75 X TRANSVERSE WIND

LOAD COMBINATIONS:

LOAD COMBINATION	TYPE	DL FACTOR	WL FACTOR
STRENGTH I	GRAVITY	1.25	-
EXTREME I	WIND	1.10	1.0
		0.9	1.0
SERVICE I	DEFLECTION	1.0	1.0

FOUNDATION DESIGN DATA

THE FOUNDATION DESIGN ASSUMED COHESIONLESS SOILS (LOOSE SAND) ABOVE THE WATER TABLE WITH THE FOLLOWING PROPERTIES:

- SOIL UNIT WEIGHT = 115 PCF
- ANGLE OF INTERNAL FRICTION = 24 DEGREES
- SOIL MODULUS PARAMETER = 25 LB/IN3

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

DRAWN BY | PLANS CK'D.

CONNECTION & FOUNDATION DETAILS 2 OF 2

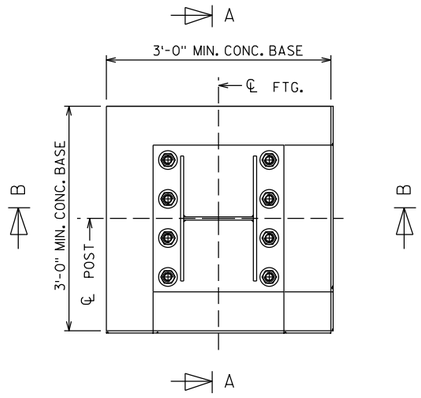
SHEET A3-1.20

660

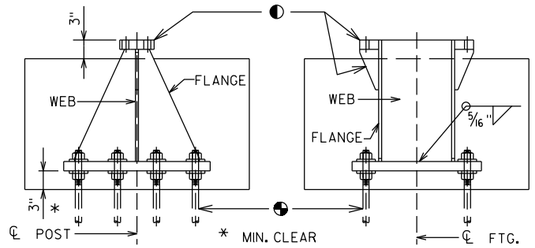
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PLOT DATE : 3-MAR-2020
PLOT BY : dotc4c

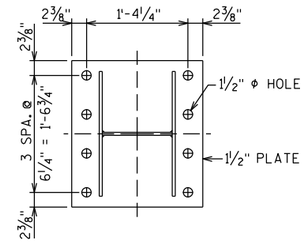
STUB AND ADHESIVE ANCHOR DETAILS



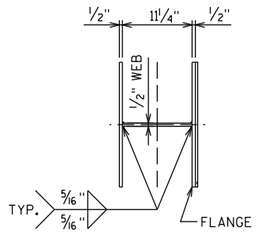
STUB SECTION



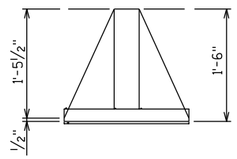
SECTION A-A SECTION B-B



BASE PLATE



STUB



FLANGE

◐ SEE BASE CONNECTION DETAILS ON "CONNECTIONS & FOUNDATION DETAILS" SHEETS.

◔ ADHESIVE ANCHORS 1¼-INCHES. ALLOWABLE PULL OUT CAPACITY = 15 KIPS. EMBED 1'-3" INTO ROCK.

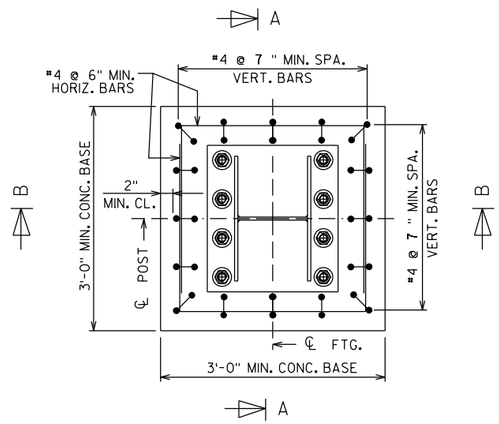
GENERAL NOTES:

QUANTITIES PER BASE:
REINFORCING STEEL = 62 LB
CONCRETE = 0.6 CY
STRUCTURAL STEEL = 335 LB

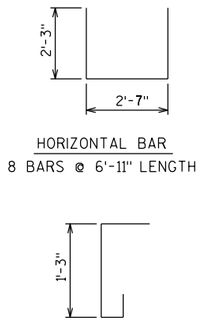
ALL MATERIALS, EXCEPT FOR ANCHOR ROD, NUTS, AND WASHERS, SHALL BE ASTM A709 GRADE 50. ALL MATERIALS TO BE GALVANIZED AFTER FABRICATION.

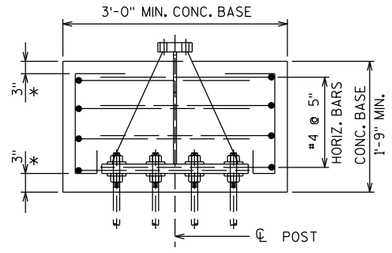
IF ROCK IS ENCOUNTERED PRIOR TO REACHING THE MINIMUM DRILLED SHAFT EMBEDMENT DEPTH DEFINED ON THE FOUNDATION DATA TABLE OF THE "CONNECTIONS & FOUNDATION DETAILS 2 OF 2" SHEET, THE CONTRACTOR SHALL INSTALL A TEST ADHESIVE ANCHOR AND DETERMINE THE PULL-OUT CAPACITY. IF THE FIELD TEST RESULTS IN A PULL-OUT CAPACITY GREATER THAN OR EQUAL TO 15 KIPS, THE CONTRACTOR MAY INSTALL THE ALTERNATE CONCRETE BASE AND BREAK-WAY STUB PER THE DETAILS ON THIS SHEET.

CONCRETE BASE DETAILS

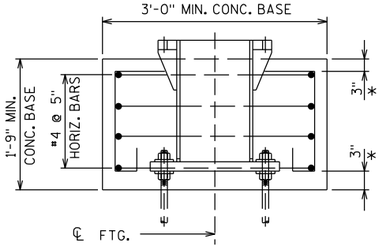


CONCRETE BASE PLAN





SECTION A-A



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

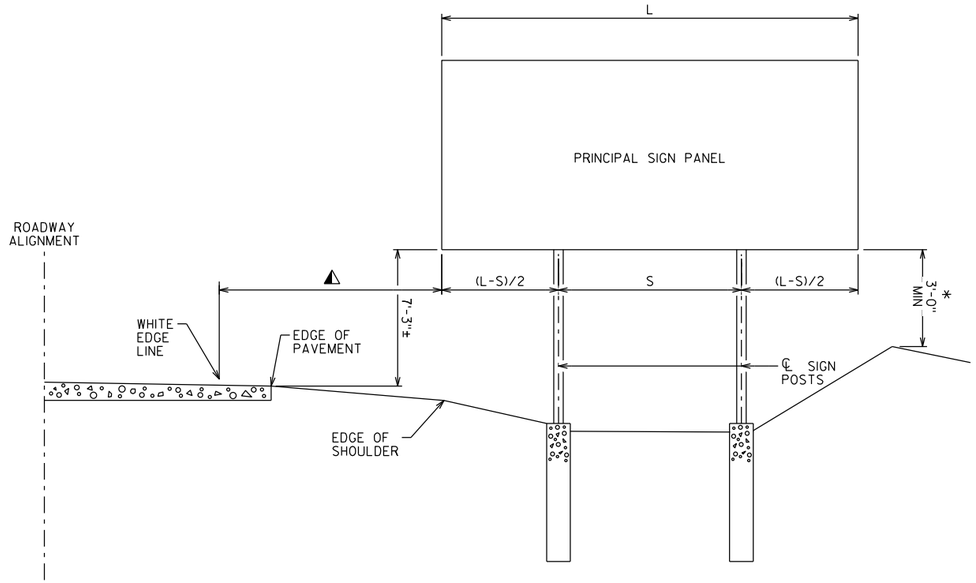
STRUCTURE BTO TYPE I SIGNS

DRAWN BY | PLANS CK'D.

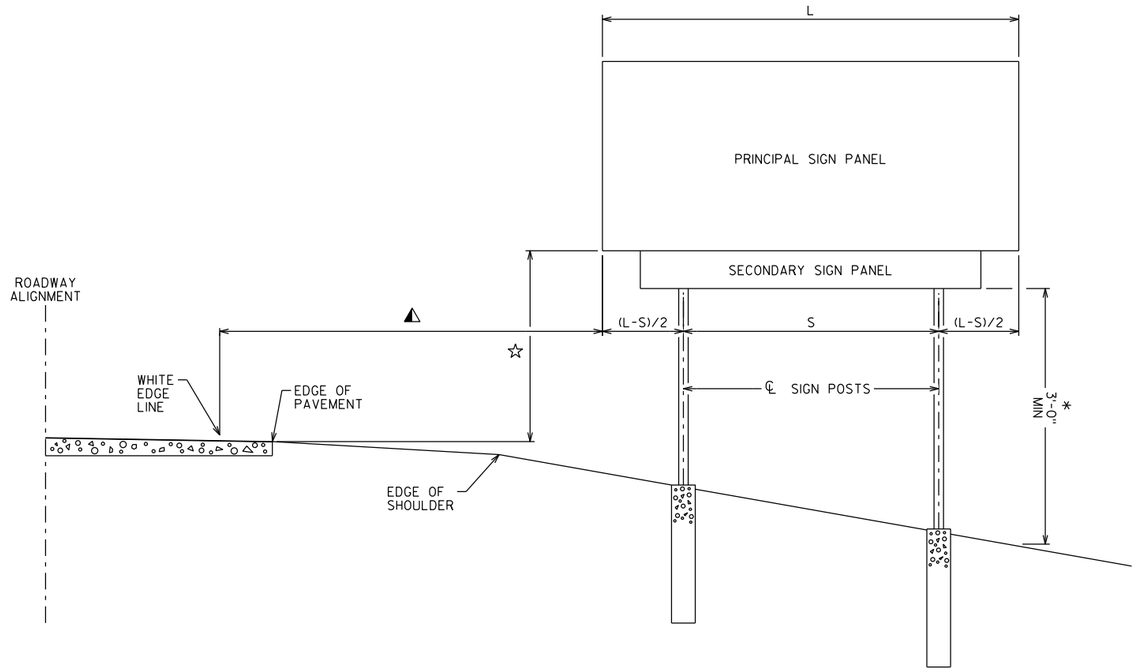
ALTERNATE BREAK-AWAY BASE ON ROCK

SHEET A3-1M.2

661



INSTALLATION WITHOUT SECONDARY SIGN



INSTALLATION WITH SECONDARY SIGN

TYPE 1 SIGN INSTALLATION NOTES:

FOR A 2-POST INSTALLATION, "S" EQUALS 3L/5, BUT SHALL NOT BE LESS THAN 6'-0".

FOR A 3-POST INSTALLATION, "S" EQUALS 5L/7, BUT SHALL NOT BE LESS THAN 12'-0". THE SPACING BETWEEN ANY TWO POSTS SHALL NOT BE LESS THAN 6'-0".

⚠ UNLESS NOTED IN THE PLANS, THE SIGN OFFSET DISTANCE SHALL BE A MINIMUM OF 17'-6" FROM THE WHITE EDGE LINE, DESIRABLE 30'-0".

THE ± TOLERANCE SHOWN ON THIS SHEETS IS 3".

THE VERTICAL SIGN HEIGHT CLEARANCES SHOWN ON THIS SHEET ARE MEASURED FROM THE BOTTOM OF THE SIGN PANEL TO THE NEAR EDGE OF PAVEMENT.

☆ THE VERTICAL CLEARANCE SHALL BE 8'-3"± WHEN THE SECONDARY SIGN HEIGHT IS 3'-0" OR LESS. FOR SECONDARY SIGN HEIGHTS LARGER THAN 3'-0", THE VERTICAL CLEARANCE TO THE BOTTOM OF THE SECONDARY SIGN PANEL SHALL BE 5'-3"±.

* THE VERTICAL SIGN GROUND CLEARANCE ON RIGHT END OF SIGN SHALL BE A MINIMUM OF 3'-0"±.

POST LENGTHS SHOWN IN THE MISCELLANEOUS QUANTITIES ARE ESTIMATED LENGTHS. THE CONTRACTOR SHALL VERIFY POST LENGTHS AT THE TIME OF FINAL GRADING.

REFER TO THE TRAFFIC ENGINEERING OPERATIONS AND SAFETY MANUAL FOR FURTHER GUIDANCE ON MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

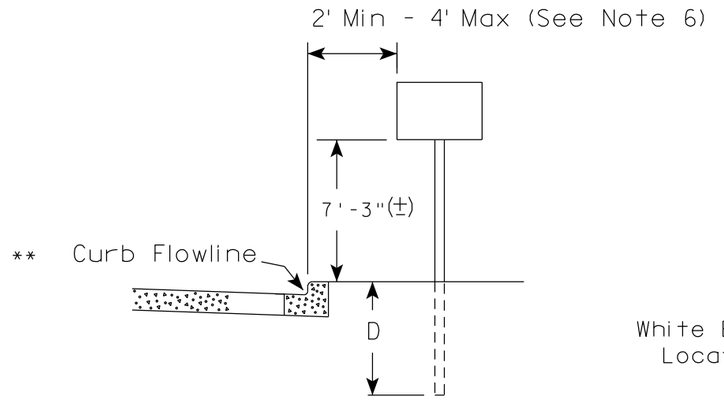
DRAWN BY | PLANS CK'D.

TYPICAL TYPE I SIGN INSTALLATION

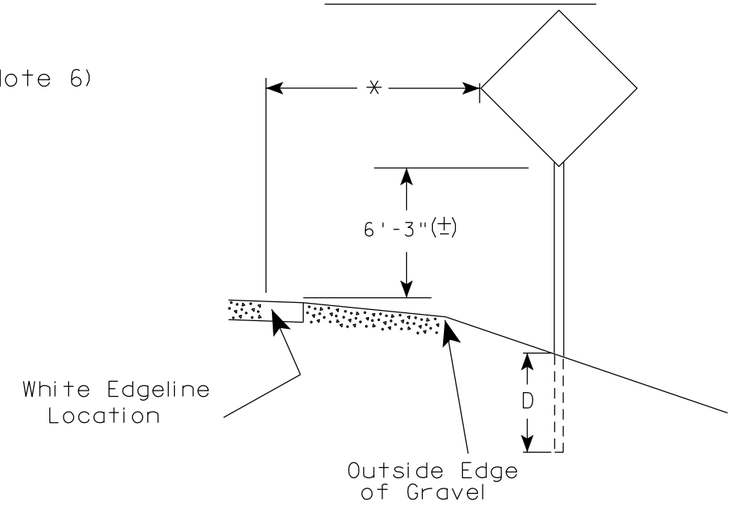
SHEET A4-1.10

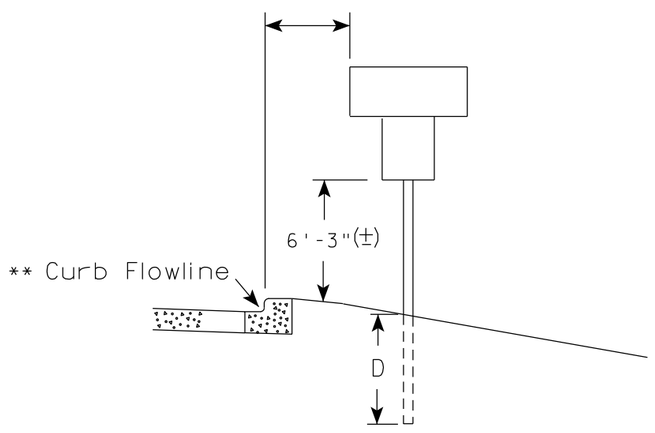
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 662 | E

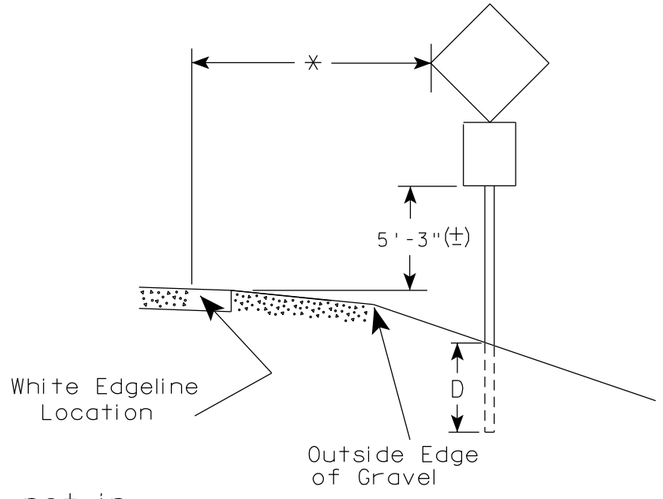
URBAN AREA



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.

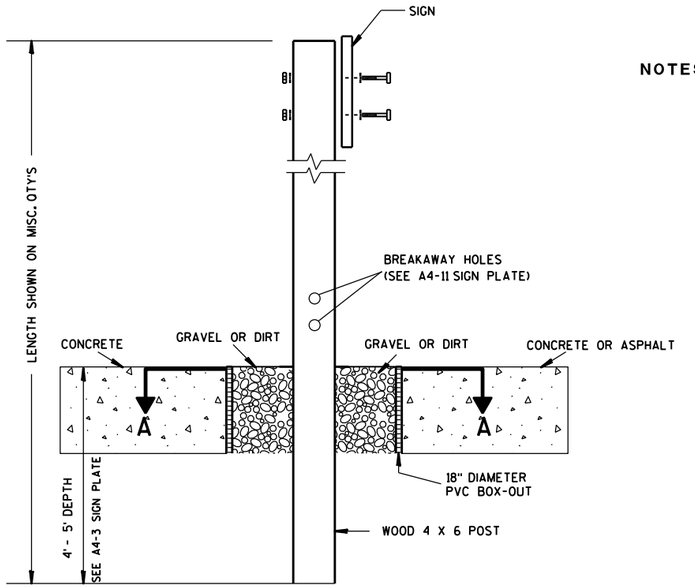
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

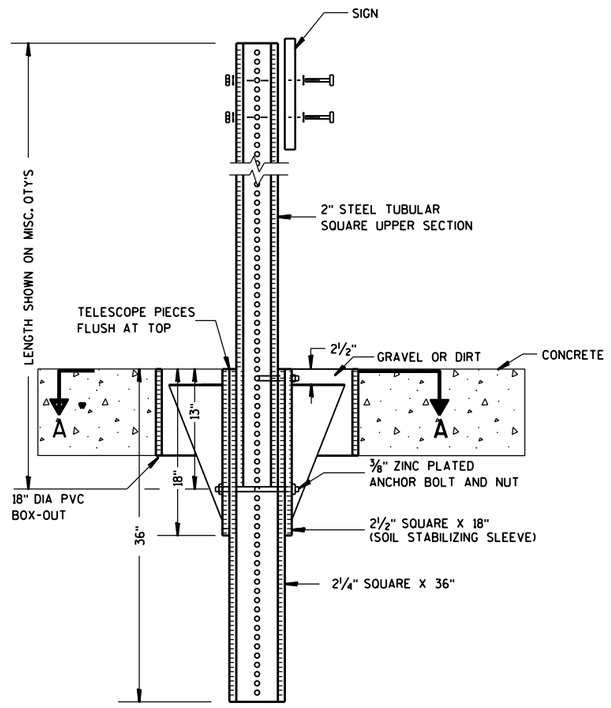
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 663	E



ELEVATION VIEW

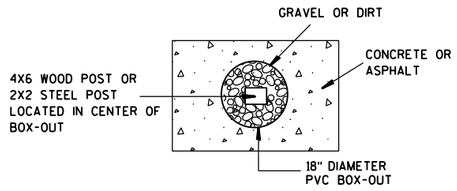
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

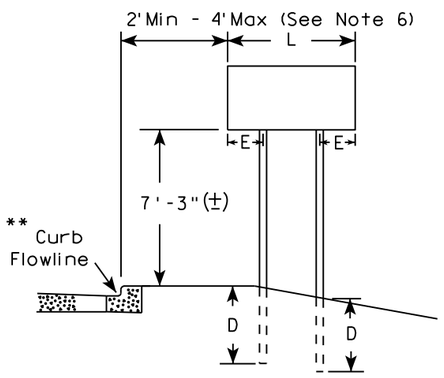
APPROVED Matthew R Rauch
for State Traffic Engineer

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

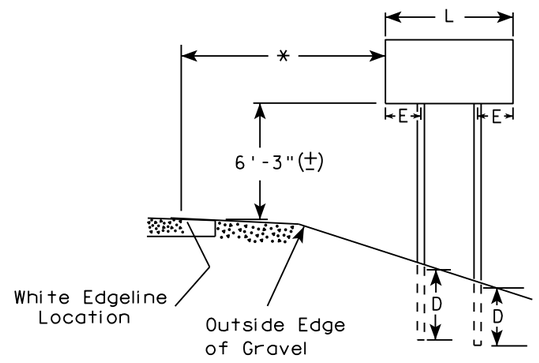
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

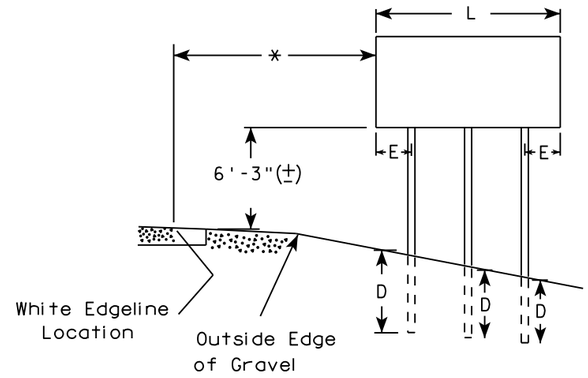
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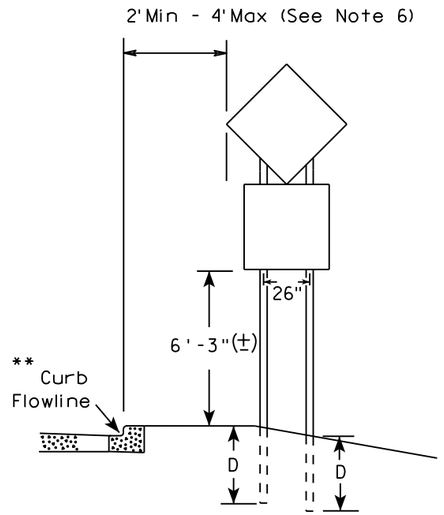
URBAN AREA



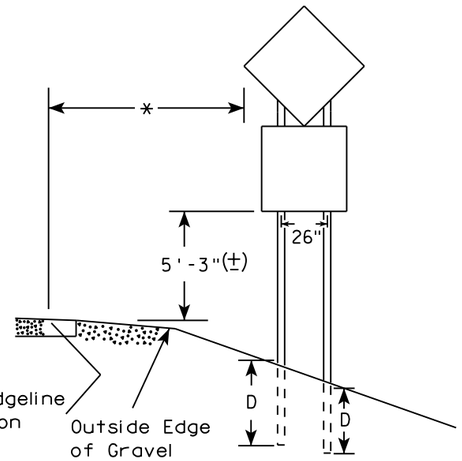
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) 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

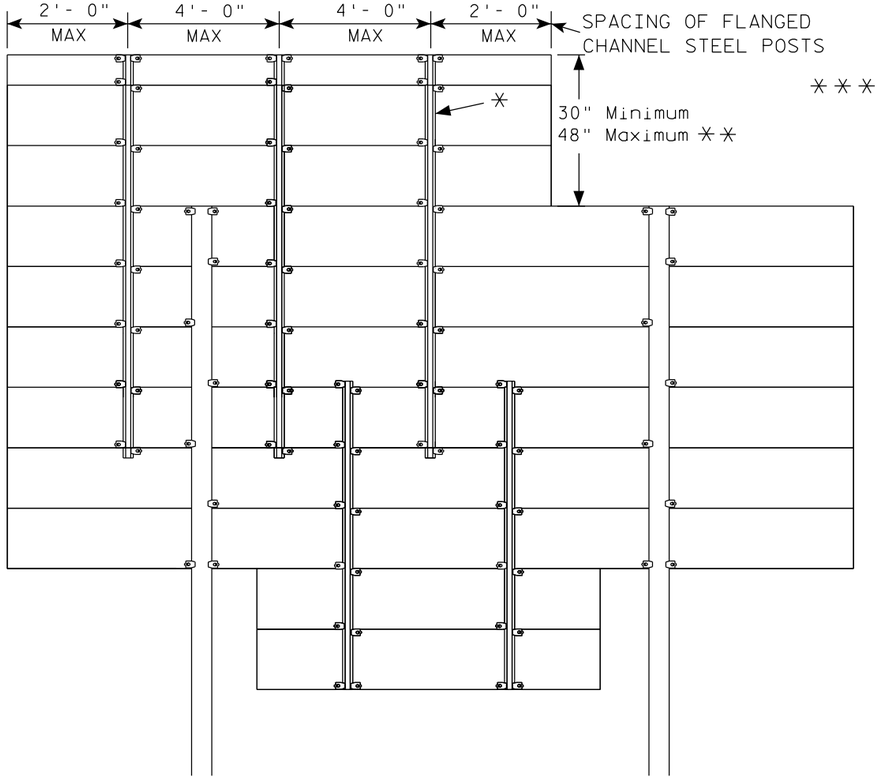
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 665	E

GROUND MOUNTED SIGN



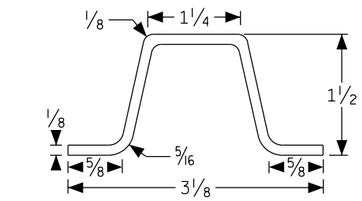
✳=2.00 lb/ft AND 4.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

✳✳=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

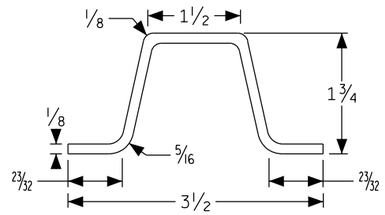
✳✳✳ THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 15 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 15 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAILS

NOT TO SCALE

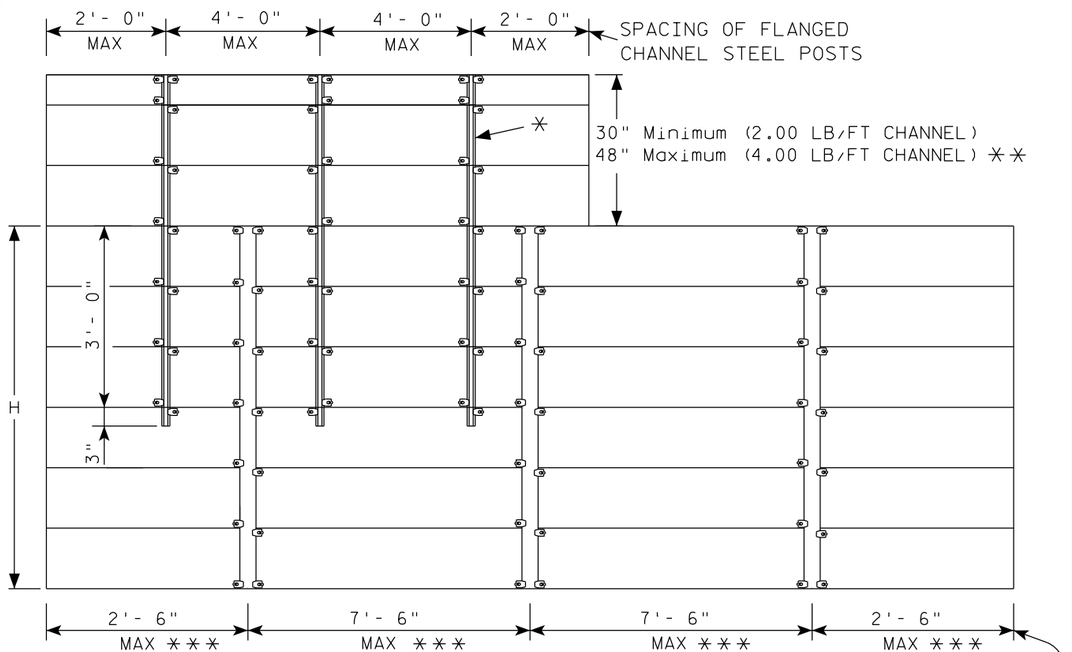


2.00 LB/FT CHANNEL



4.00 LB/FT CHANNEL

SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.

2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.

3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.

4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.

5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)

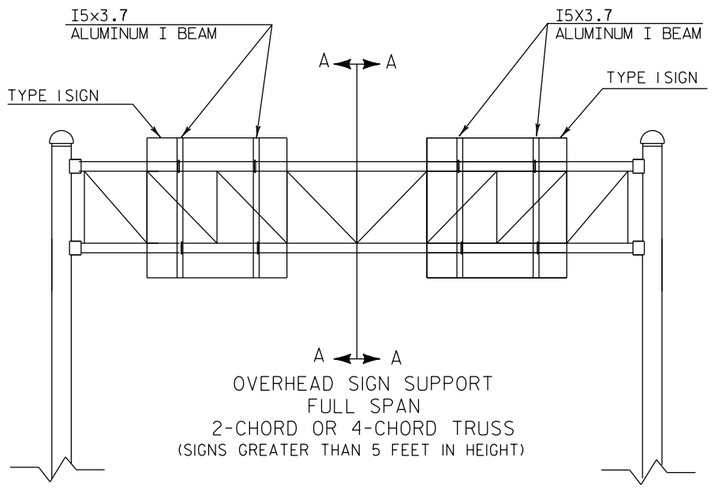
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

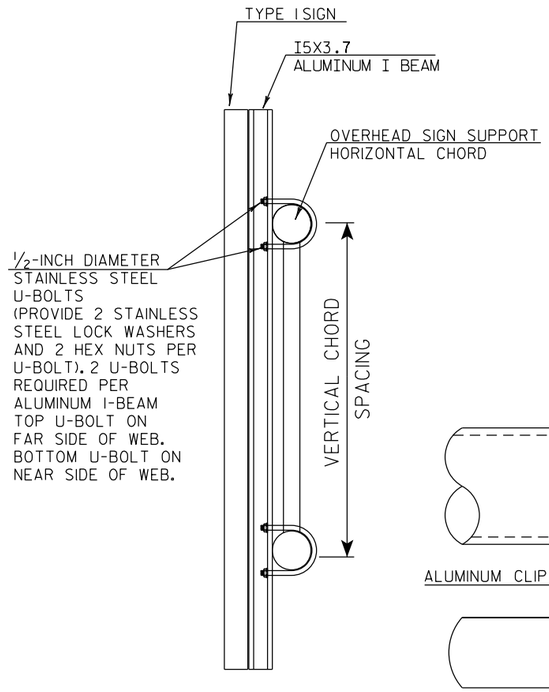
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

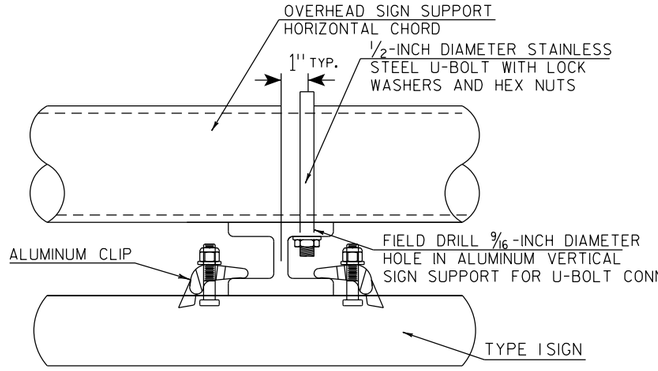
DATE 1/07/20 PLATE NO. A4-6.12



OVERHEAD SIGN SUPPORT
FULL SPAN
2-CHORD OR 4-CHORD TRUSS
(SIGNS GREATER THAN 5 FEET IN HEIGHT)



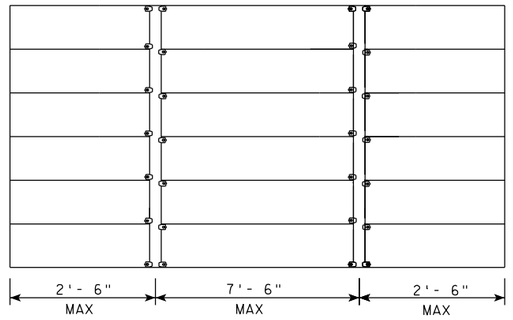
CUT SECTION A-A



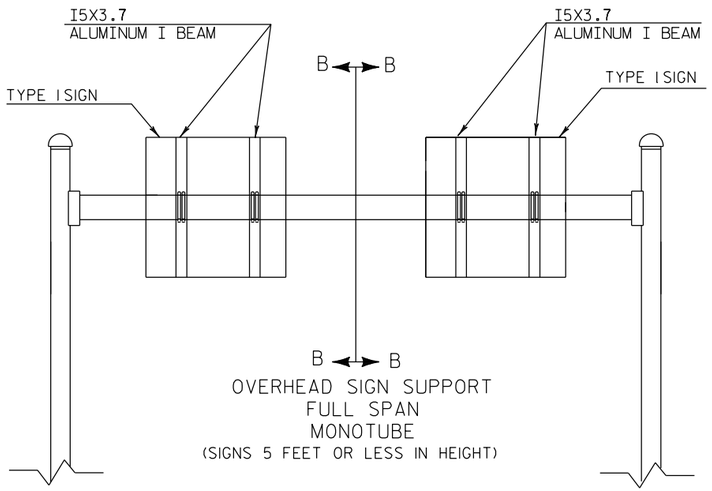
TYPICAL SIGN CONNECTION FOR
2-CHORD OR 4-CHORD TRUSS
PLAN VIEW

GENERAL NOTES

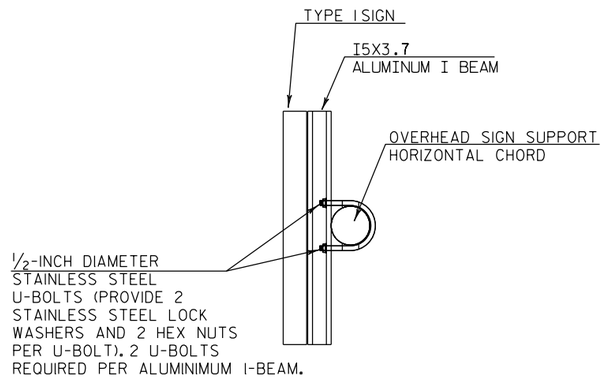
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
   STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.
   STAINLESS STEEL HEX NUTS ASTM A276.
   ALUMINUM I-BEAMS ARE 6061-T6.
9. SLOTTED HOLES IN I-BEAMS ARE NOT ALLOWED



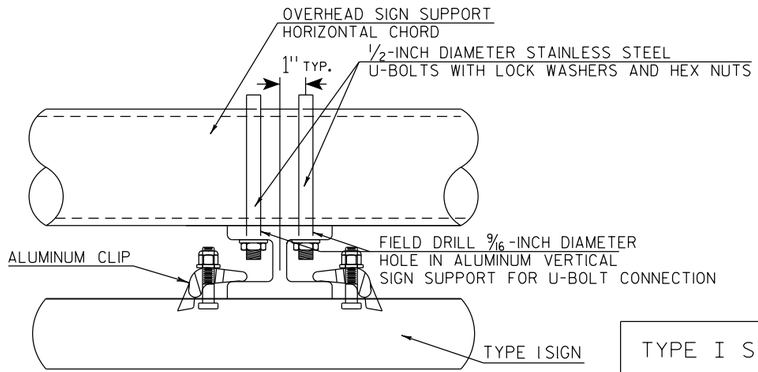
SPACING OF I5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



OVERHEAD SIGN SUPPORT
FULL SPAN
MONOTUBE
(SIGNS 5 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
MONOTUBE
PLAN VIEW

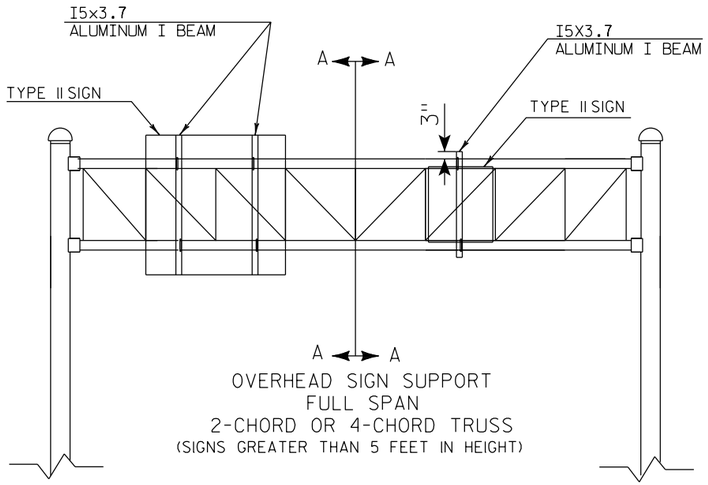
TYPE I SIGN CONNECTION
TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION

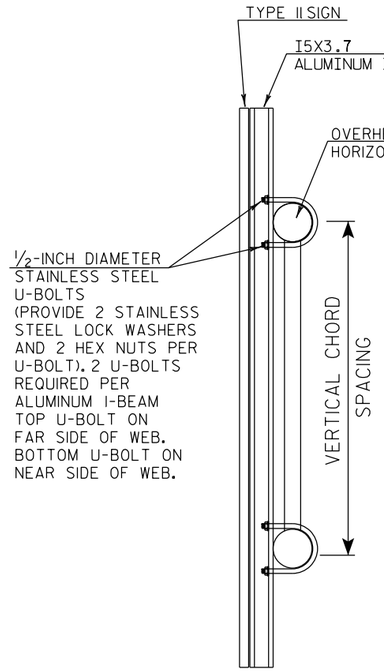
APPROVED Matthew R Rauch
State Traffic Engineer

DATE 1/07/20 PLATE NO. A4-7A.1

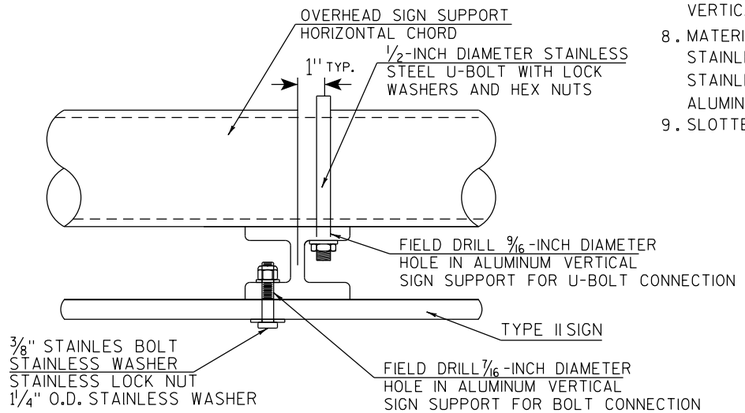
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 667	E



OVERHEAD SIGN SUPPORT
FULL SPAN
2-CHORD OR 4-CHORD TRUSS
(SIGNS GREATER THAN 5 FEET IN HEIGHT)



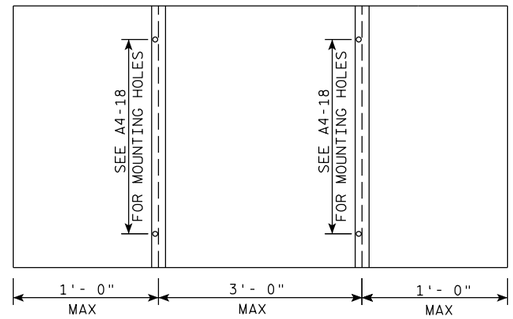
CUT SECTION A-A



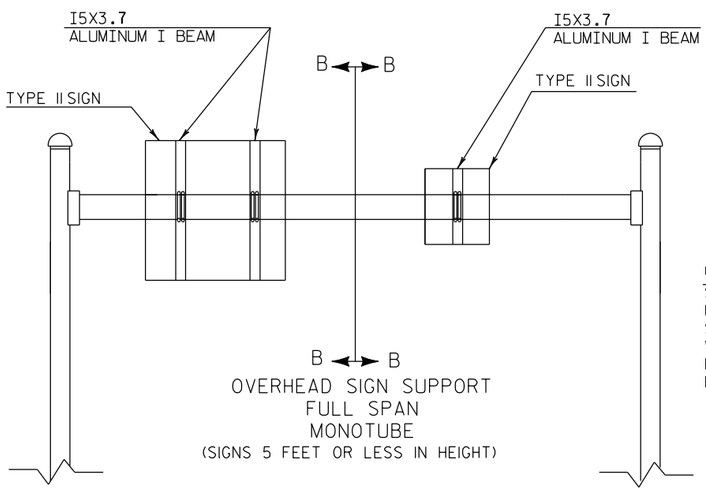
TYPICAL SIGN CONNECTION FOR
2-CHORD OR 4-CHORD TRUSS
PLAN VIEW

GENERAL NOTES

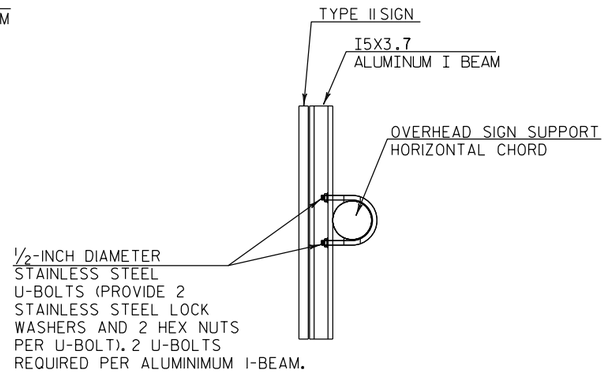
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE STAINLESS BOLTS AT BOLT HOLES IN SIGN PANEL PER SIGN PLATE A4-18.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
   STAINLESS STEEL U-BOLTS, BOLTS, AND LOCKWASHERS ASTM 304.
   STAINLESS STEEL HEX NUTS ASTM A276.
   ALUMINUM I-BEAMS ARE 6061-T6.
9. SLOTTED HOLES IN I-BEAMS ARE NOT ALLOWED



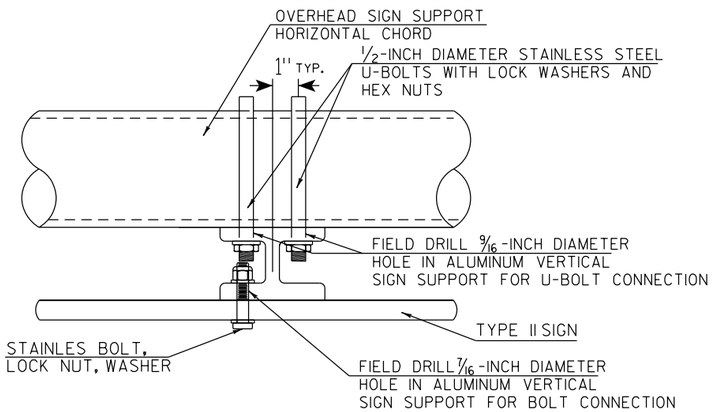
SPACING OF I5X3.7 ALUMINUM
MULTIPLE VERTICAL SIGN SUPPORTS



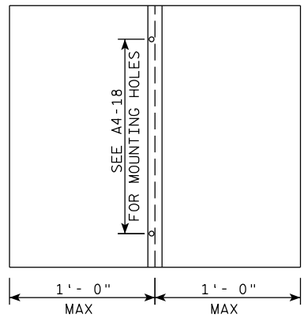
OVERHEAD SIGN SUPPORT
FULL SPAN
MONOTUBE
(SIGNS 5 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
MONOTUBE
PLAN VIEW



SPACING OF I5X3.7 ALUMINUM
SINGLE VERTICAL SIGN SUPPORT

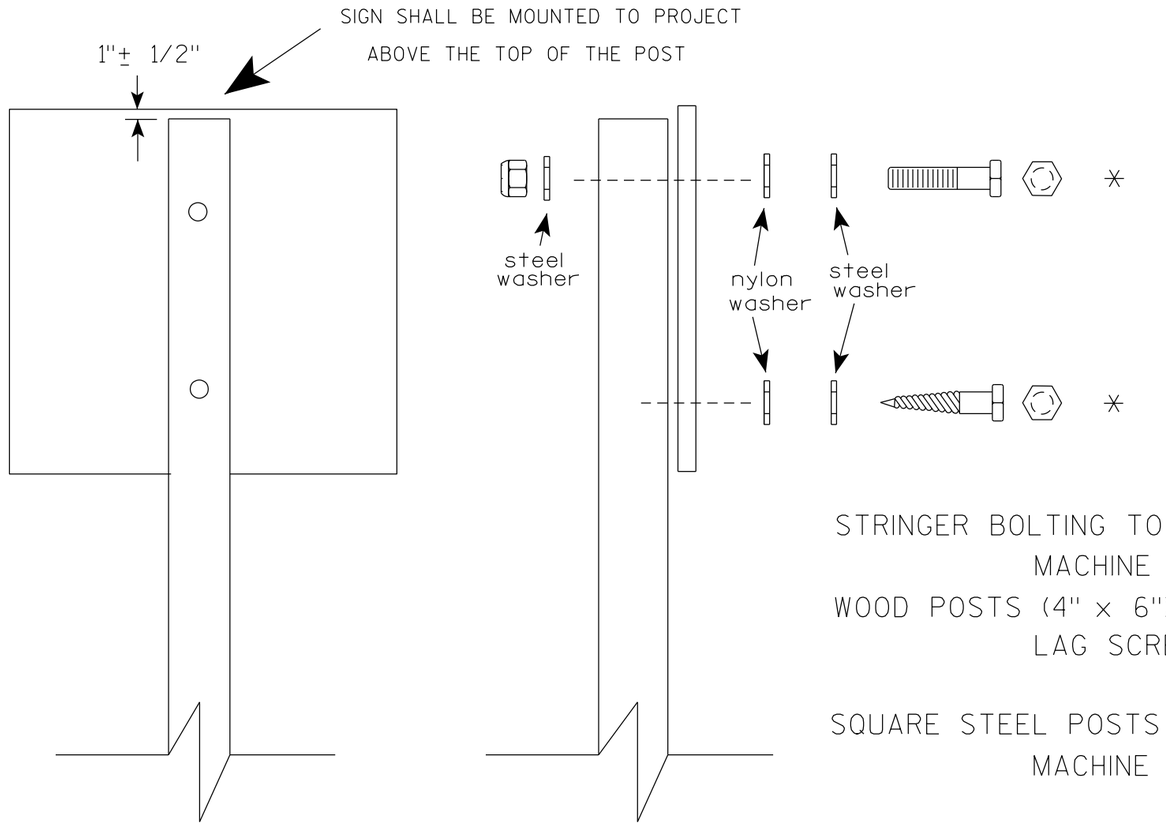
TYPE II SIGN CONNECTION
TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/07/20 PLATE NO. A4-7B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 668	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

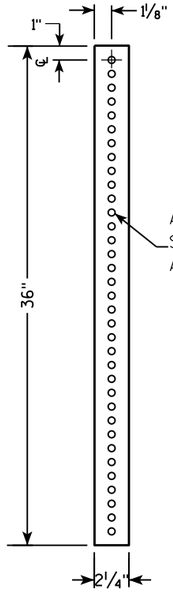
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

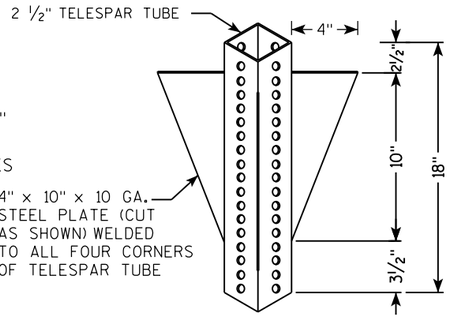
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

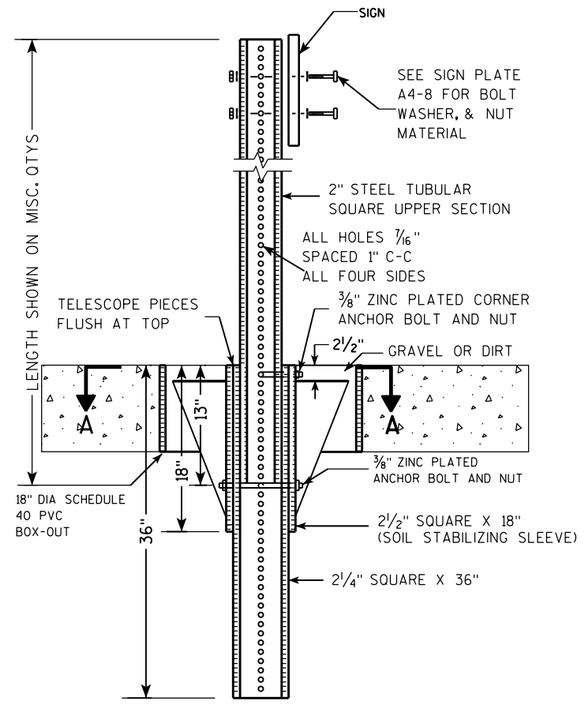
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



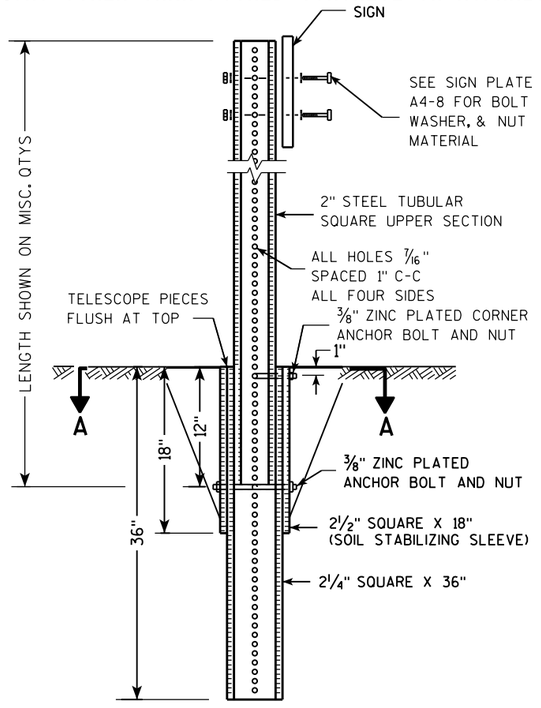
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

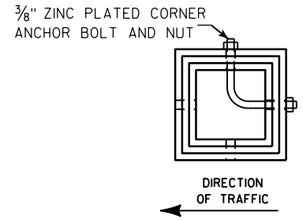


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

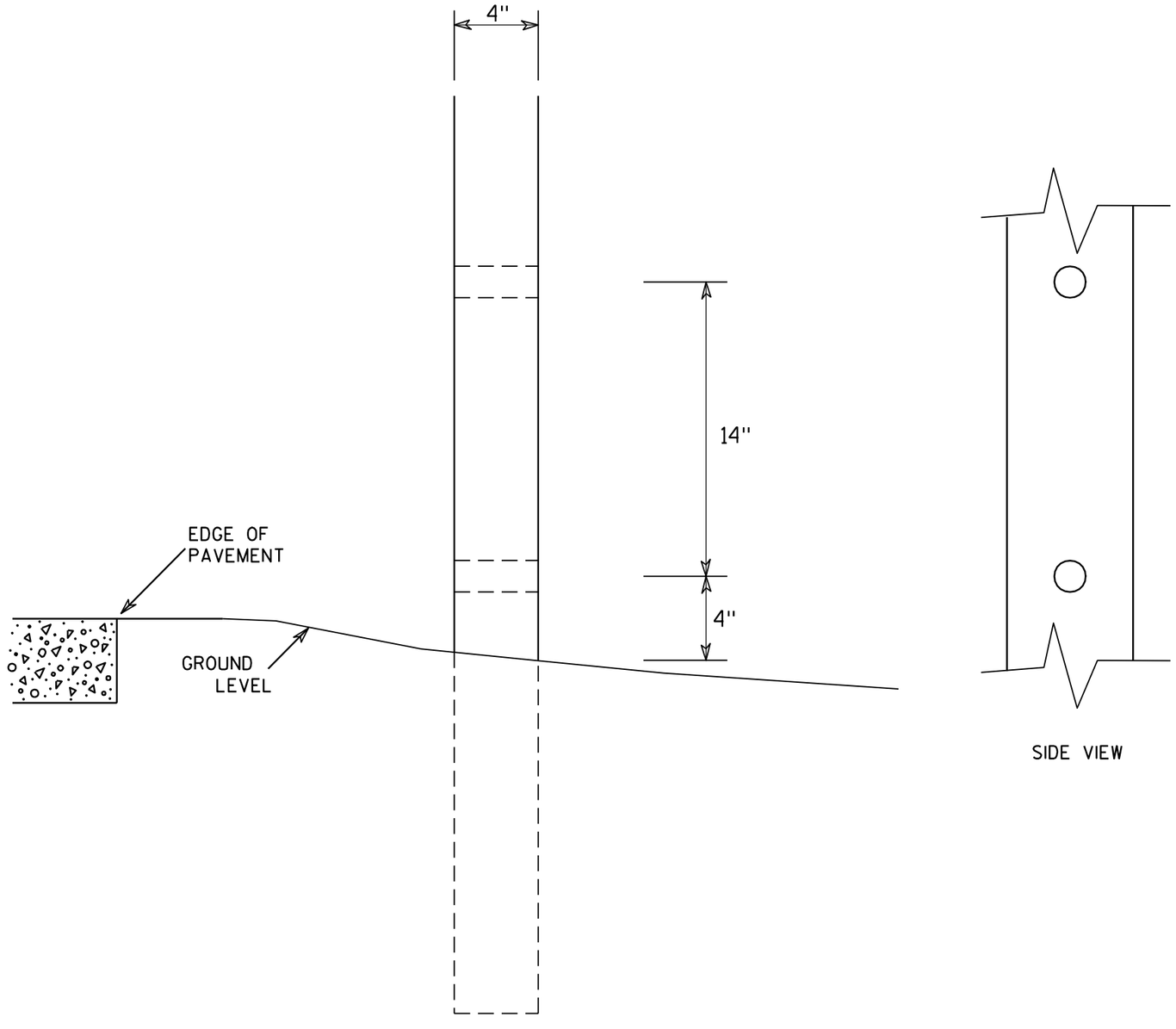
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 670 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000

WISDOT/CADDS SHEET 42



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.

7

7

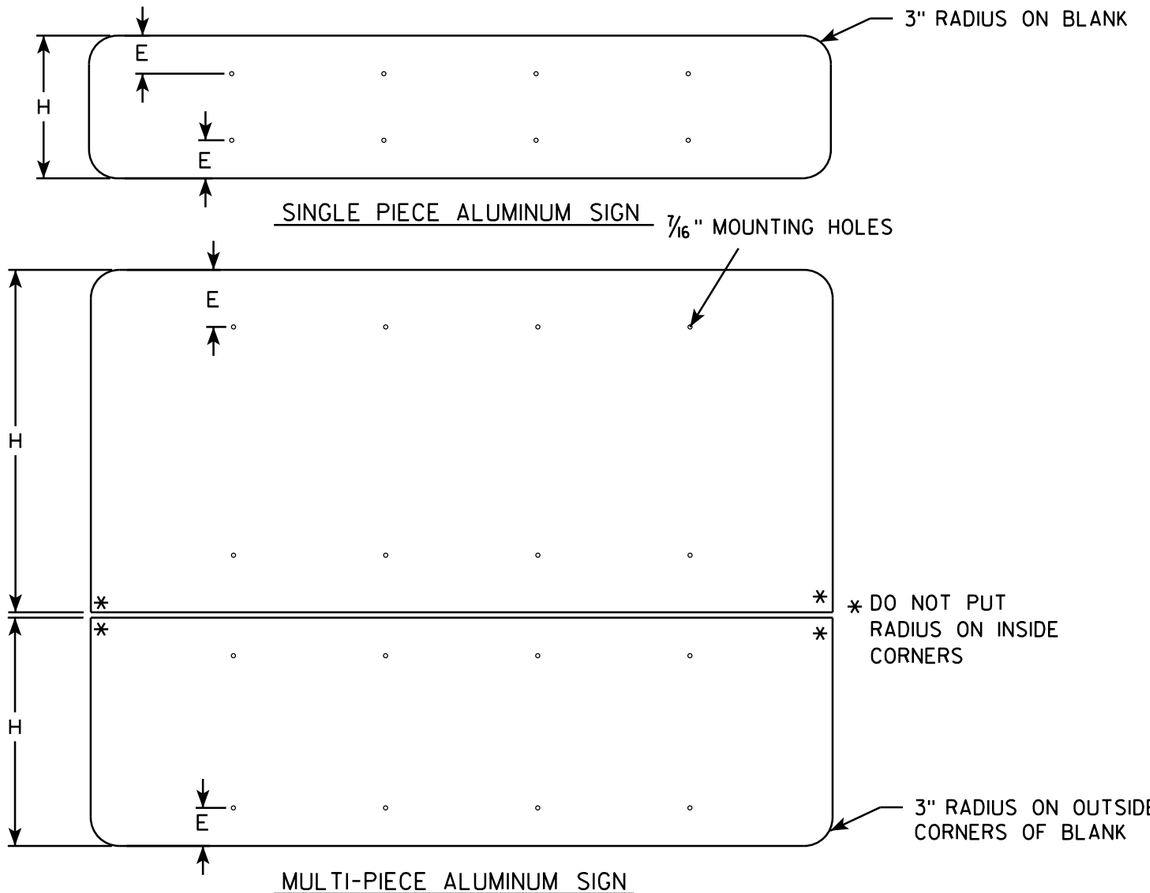
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

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

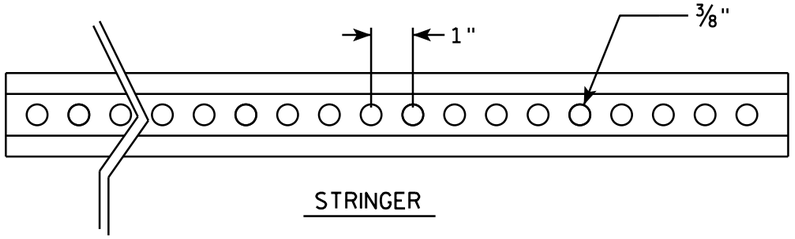
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 671	E



GENERAL NOTES

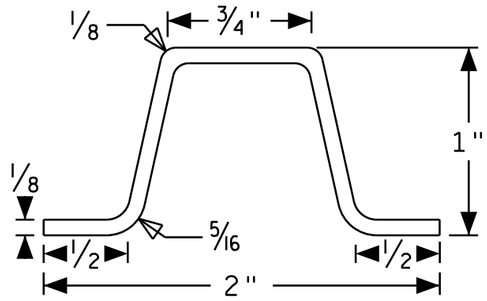
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 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"

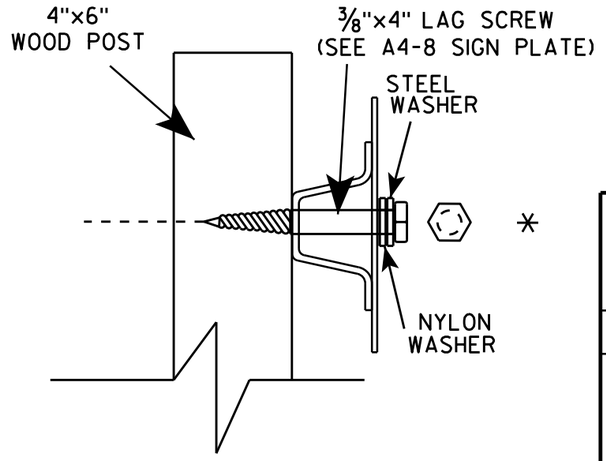


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

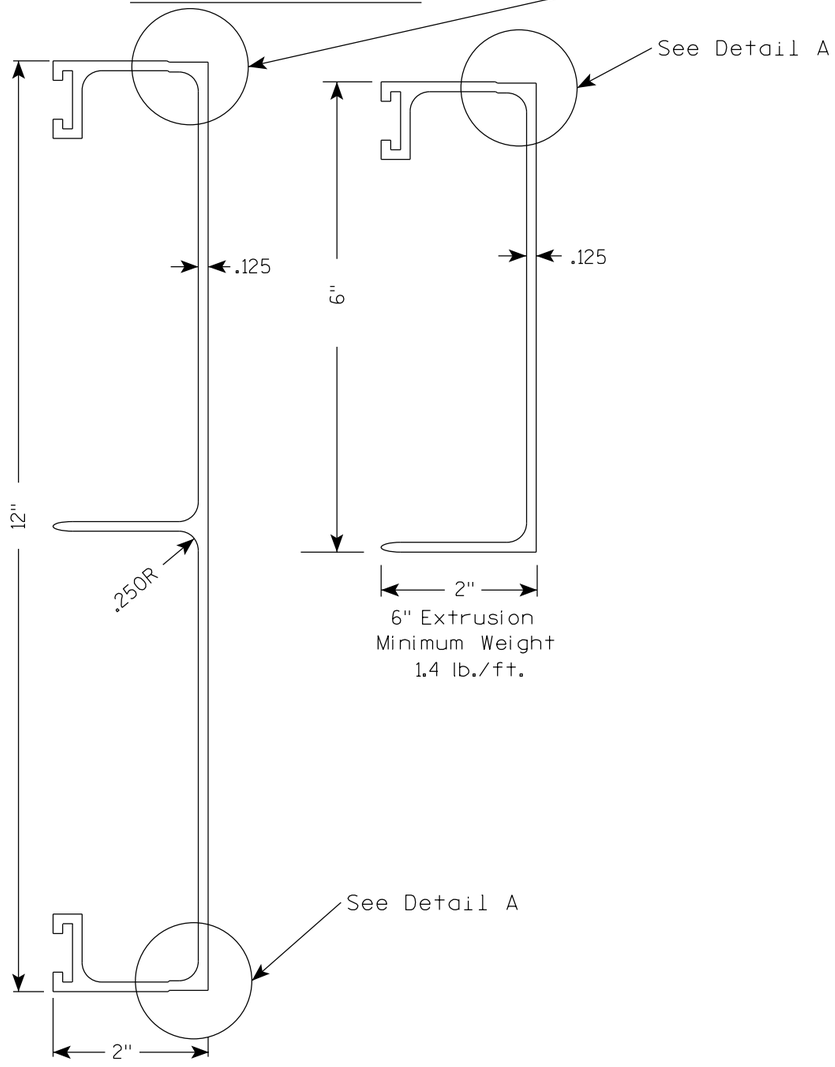
for State Traffic Engineer

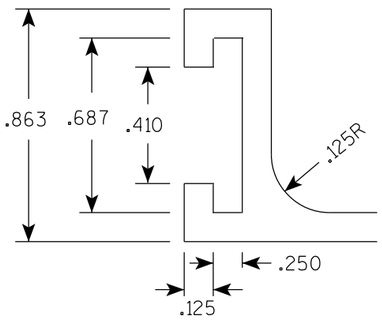
DATE 4/26/16 PLATE NO A4-18.1

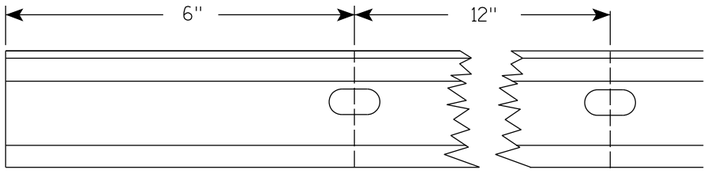
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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

Extruded Shape







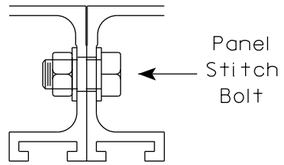
Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

Hardware

STITCH BOLT, WASHER & NUT

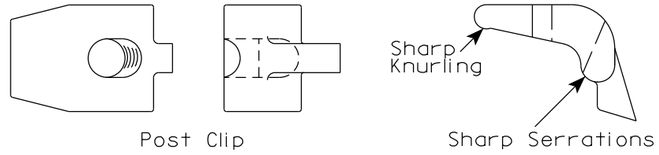
The hardware includes:

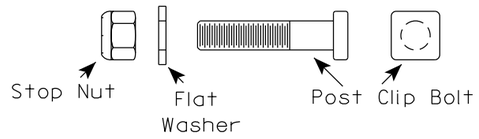
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

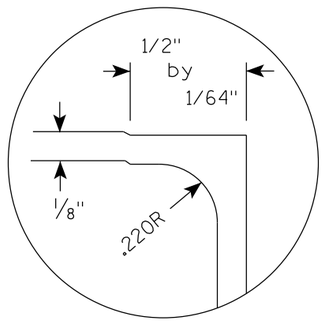
Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.
4. Edge wrapping of sign sheeting required on all extrusions joints shown in Detail A.



DETAIL A (EDGE WRAP JOINT)

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

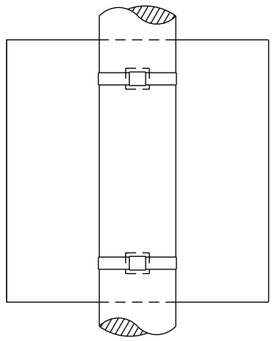
DATE 1/07/20 PLATE NO. A5-2.10

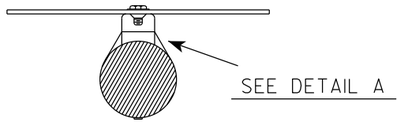
PROJECT NO:

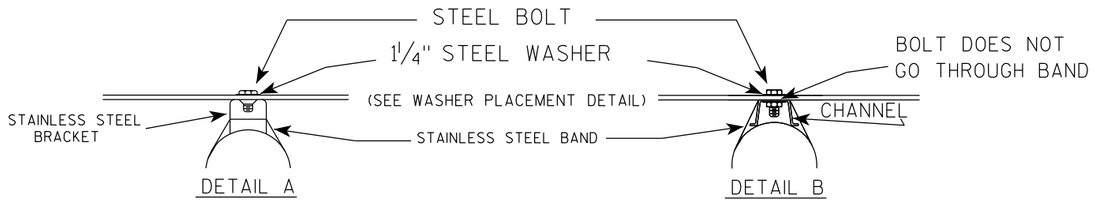
SHEET NO: 673 E

BANDING

SINGLE SIGN



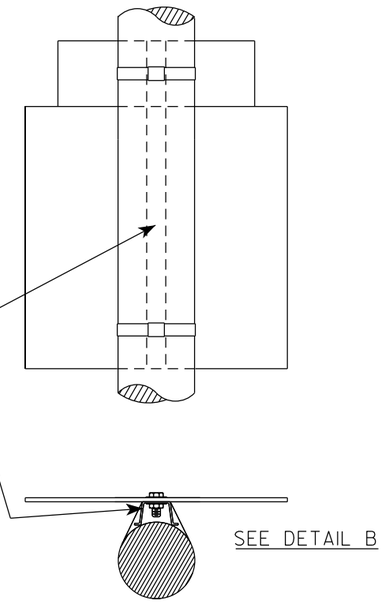




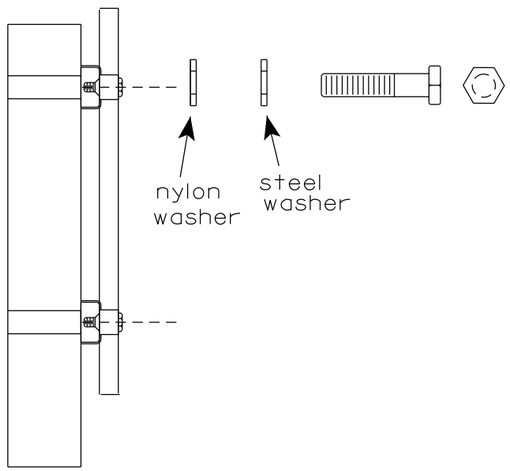
GENERAL NOTES

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



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

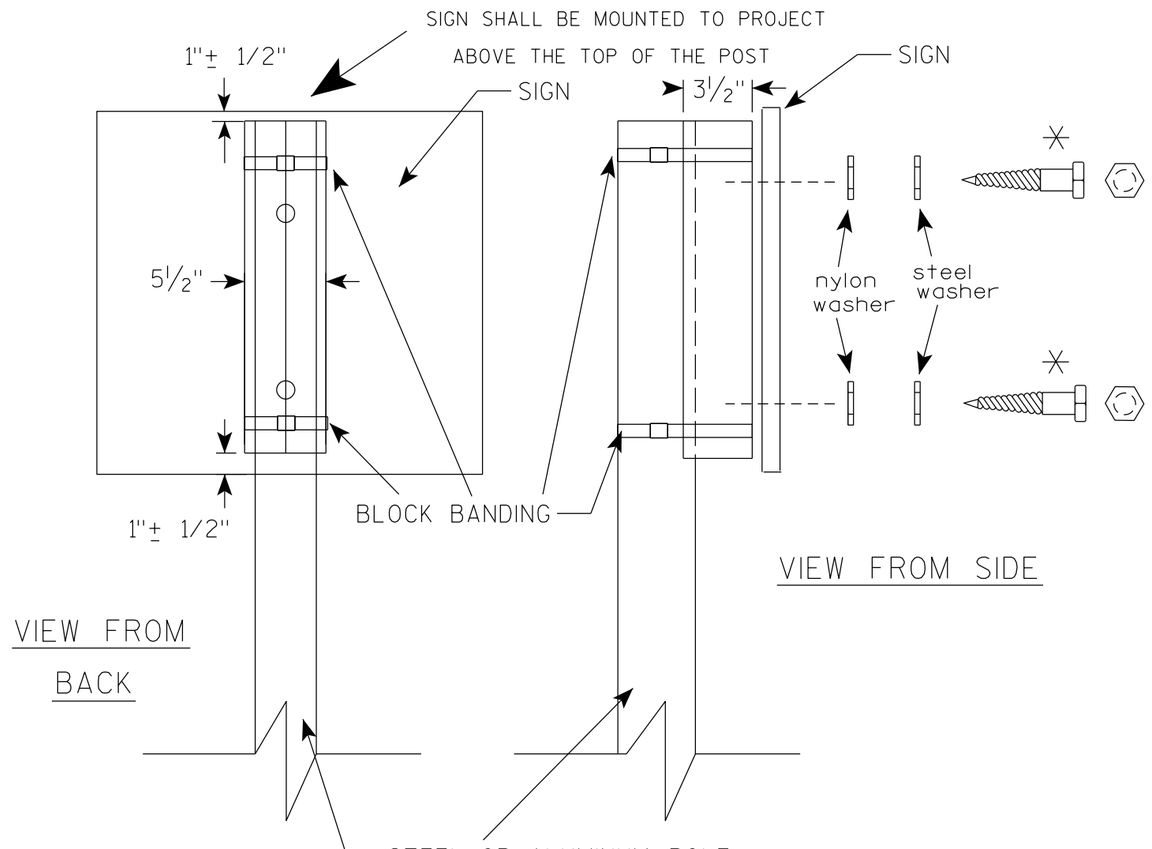
DATE 6/10/19 PLATE NO. A5-9.4

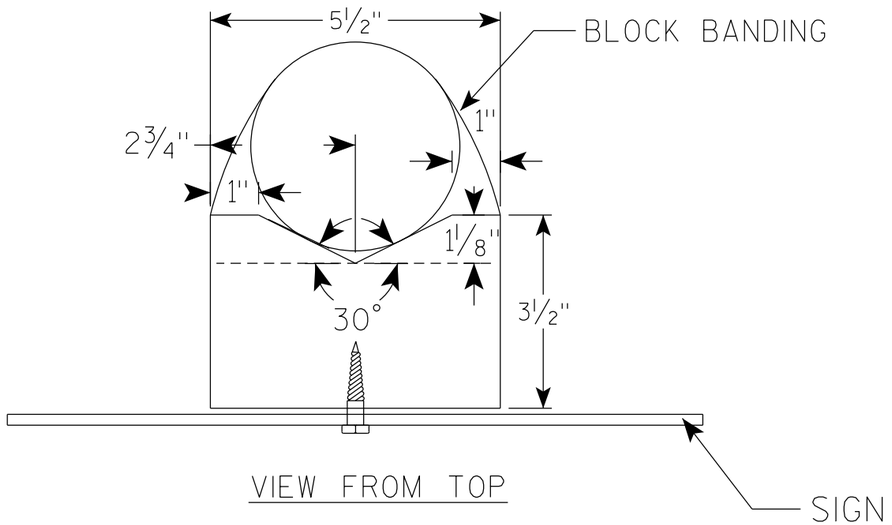
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 674	E

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)

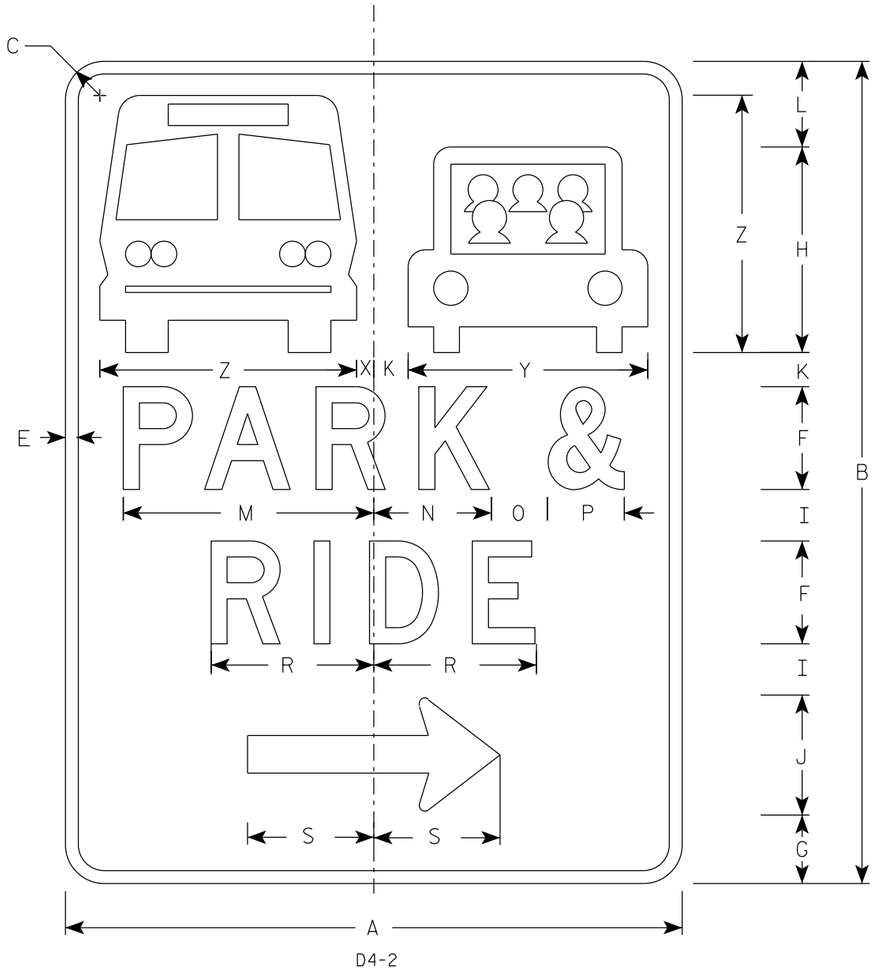
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

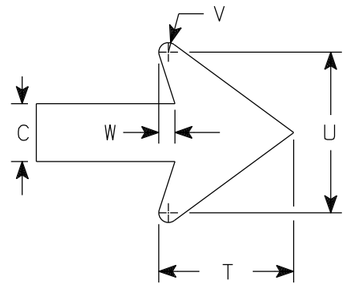
SHEET NO: 675 E



D4-2

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - D
4. The D4-2L is the same as a D4-2R 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	24	30	1 1/8		1/2	4	1 5/8	7 1/2	1 1/2	4 5/8	1 3/8	3 7/8	9 3/4	4	2 3/4	3		6 3/8	4 7/8	3 1/2	4 1/8	1/4	3/8	5/8	9 3/8	10	5.0
2S	30	36	1 3/8		5/8	5	2	9	1 5/8	5 1/2	1 5/8	4 5/8	12 1/4	5 1/8	3 3/8	3 3/4		8	6 1/8	4 3/8	5 1/4	3/8	1/2	7/8	11 3/4	12 1/2	7.50
2M	30	36	1 3/8		5/8	5	2	9	1 5/8	5 1/2	1 5/8	4 5/8	12 1/4	5 1/8	3 3/8	3 3/4		8	6 1/8	4 3/8	5 1/4	3/8	1/2	7/8	11 3/4	12 1/2	7.50
3	36	48	2 1/4		3/4	6	4	12	3	7	2	5	14 5/8	6 7/8	3 1/4	4 1/2		9 1/2	7 1/2	5 1/4	6 1/4	3/8	5/8	1	14	15	12.0
4																											
5																											

STANDARD SIGN
D4-2

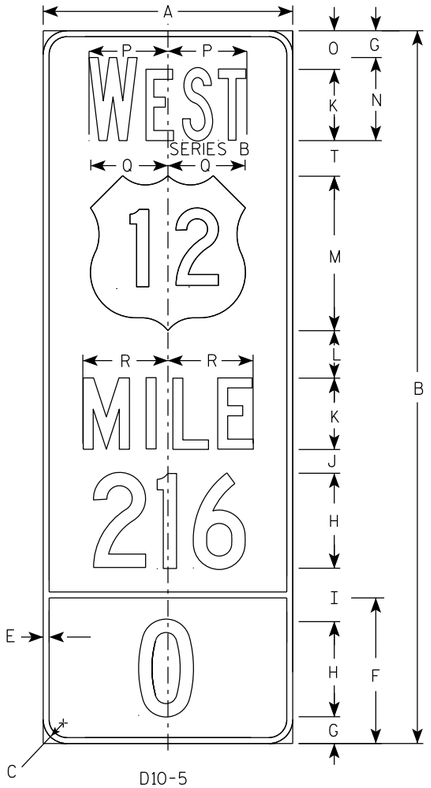
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/19/2021 PLATE NO. D4-2.6

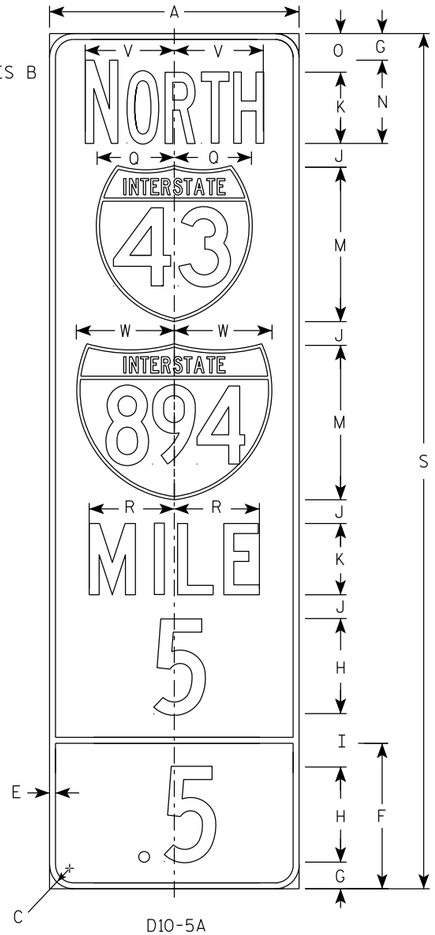
PROJECT NO:

SHEET NO: E

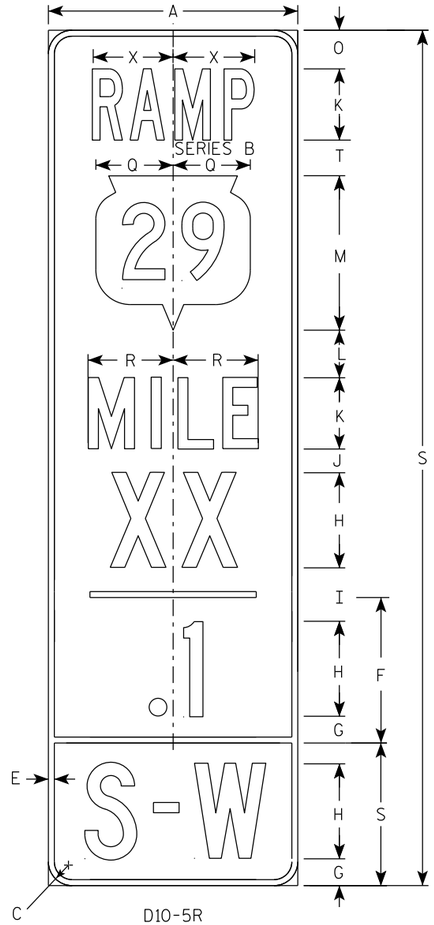


D10-5

SERIES B



D10-5A



D10-5R



SERIES B



SERIES B

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - BLUE
   Message - WHITE
3. Interstate Shield Color
   Background - Top Red
   - Bottom Blue
   Message - White
4. Message Series - C or as noted on the Sign.
5. The decimal point is required for all digits except "0".
6. Optically adjust mileage numbers about the centerline of the sign to achieve proper balance.
7. Optically adjust Ramp direction letters about the centerline of the sign 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	D10-5 Area sq. ft.	D10-5A Area sq. ft.	D10-5R Area sq. ft.
1																													
2																													
3																													
4	21	60	1 ½		½	12 ¼	2 ¼	8	4 ½	2	6	4	13	6 ⅝	3 ¼	7	6 ½	7 ⅛	72	3		7 ½	8 ¼	6 ¾			8.75	10.5	10.5
5	21	60	1 ½		½	12 ¼	2 ¼	8	4 ½	2	6	4	13	6 ⅝	3 ¼	7	6 ½	7 ⅛	72	3		7 ½	8 ¼	6 ¾			8.75	10.5	10.5

STANDARD SIGN
D10-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/11/18 PLATE NO. D10-5.3

PROJECT NO:

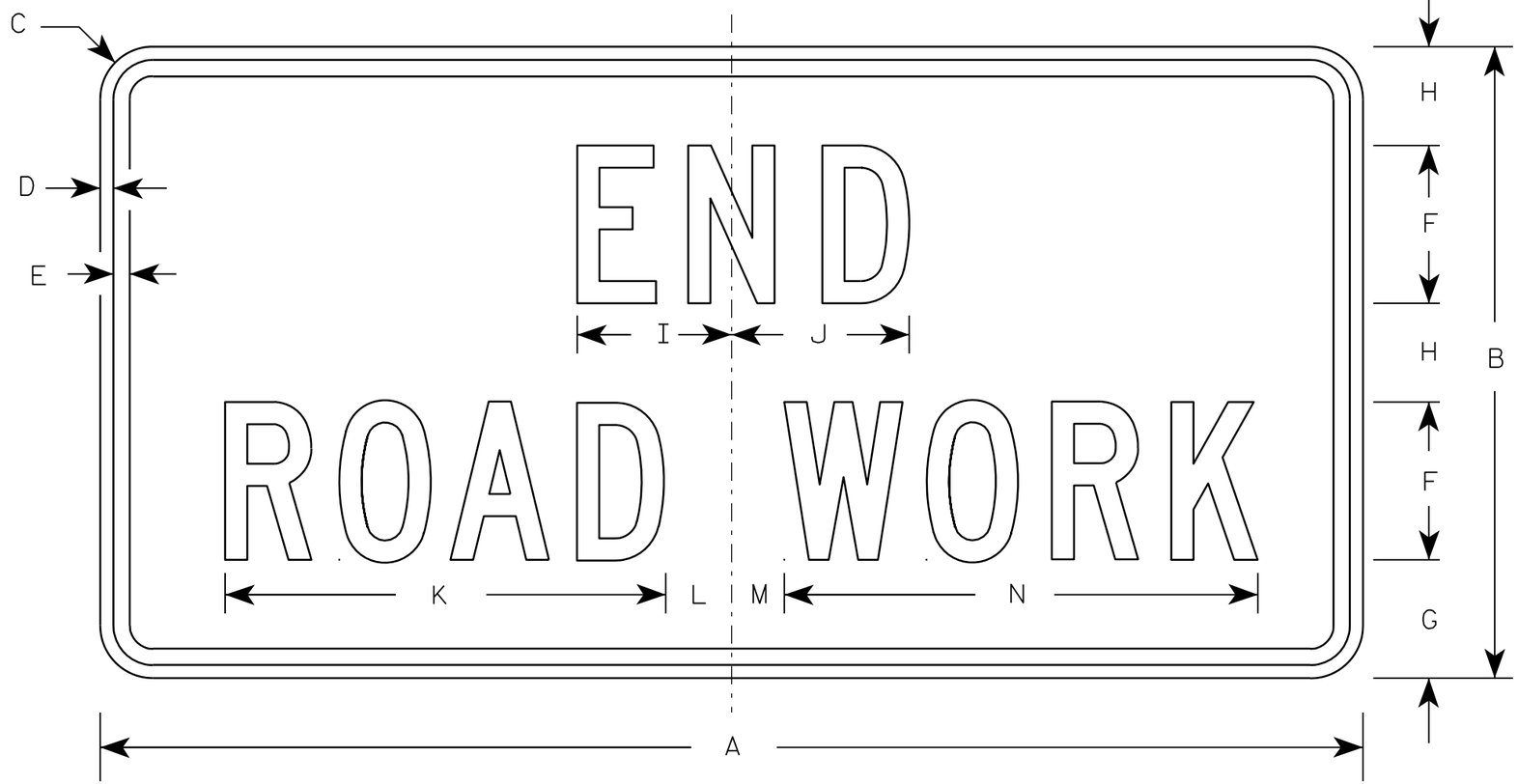
SHEET NO: 677 E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\D105.dgn PLOT DATE : 11-JUL-2018 1:41 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42

7

7



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: 678	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\G202A.DGN PLOT DATE : 30-SEP-2009 09:31 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 5.561773:1.000000

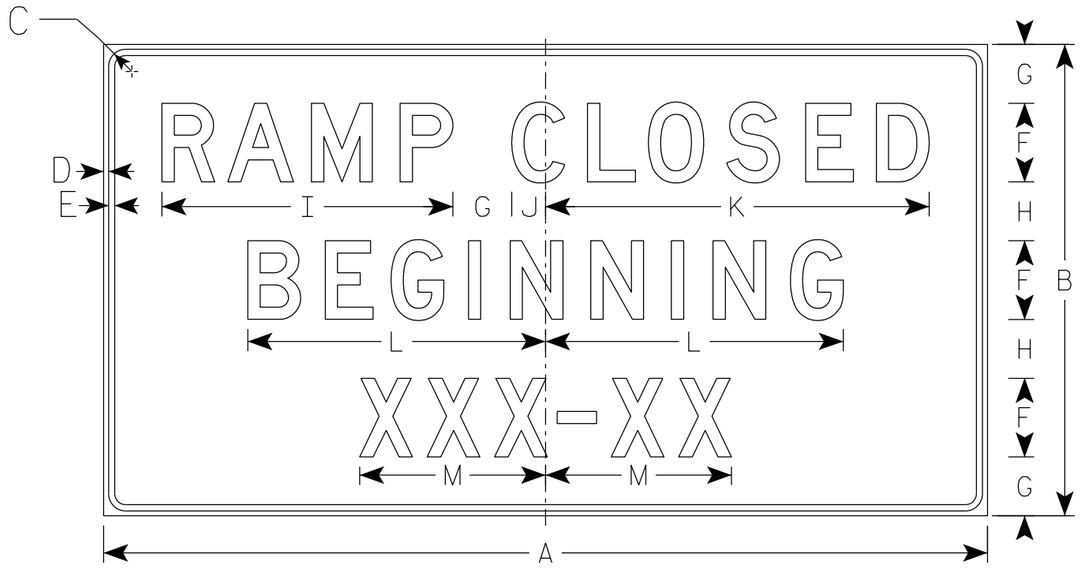
WISDOT/CADDS SHEET 42

7

7

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																											

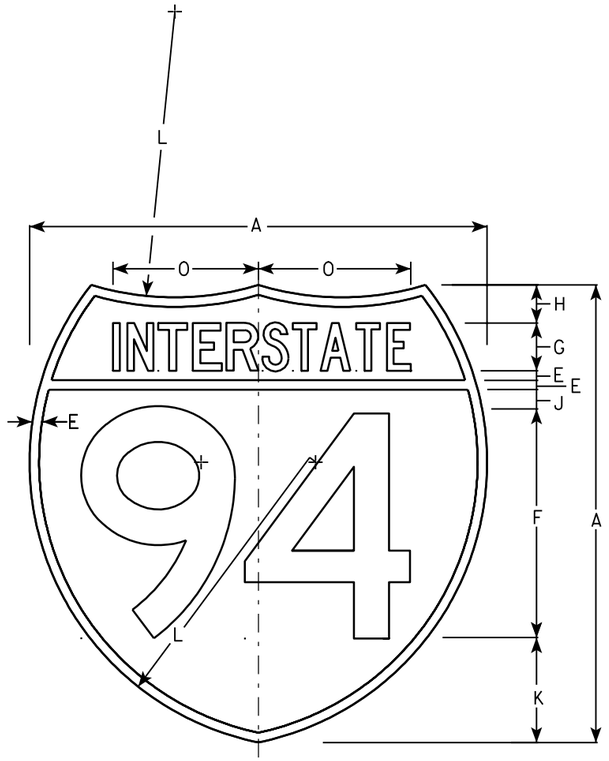
STANDARD SIGN
G20-58

WISCONSIN DEPT OF TRANSPORTATION

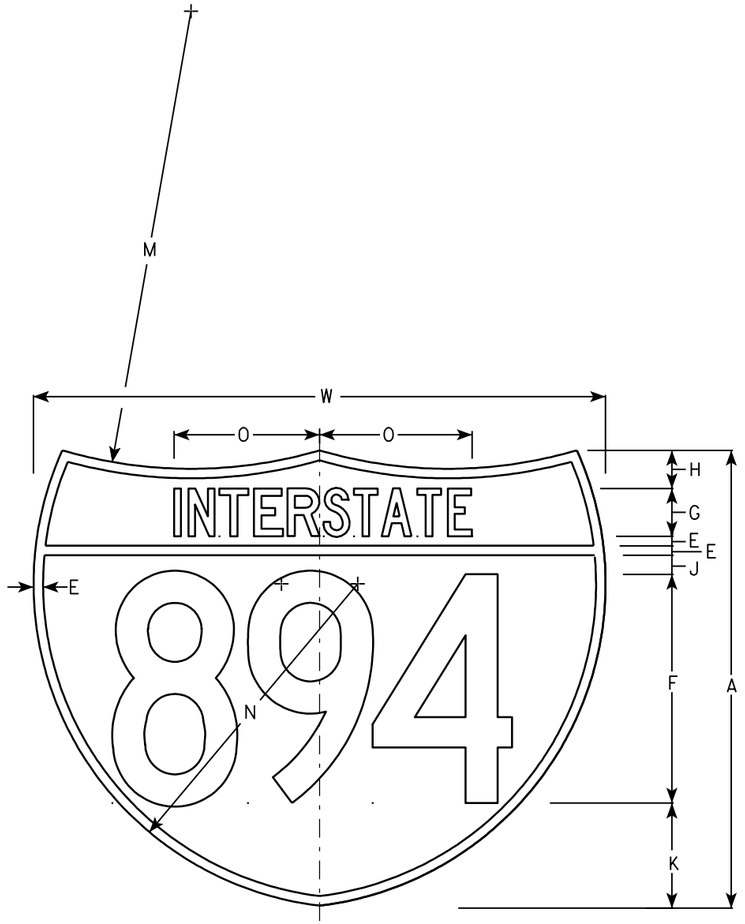
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/19/2020 PLATE NO. G20-58.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 679 | E



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 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	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

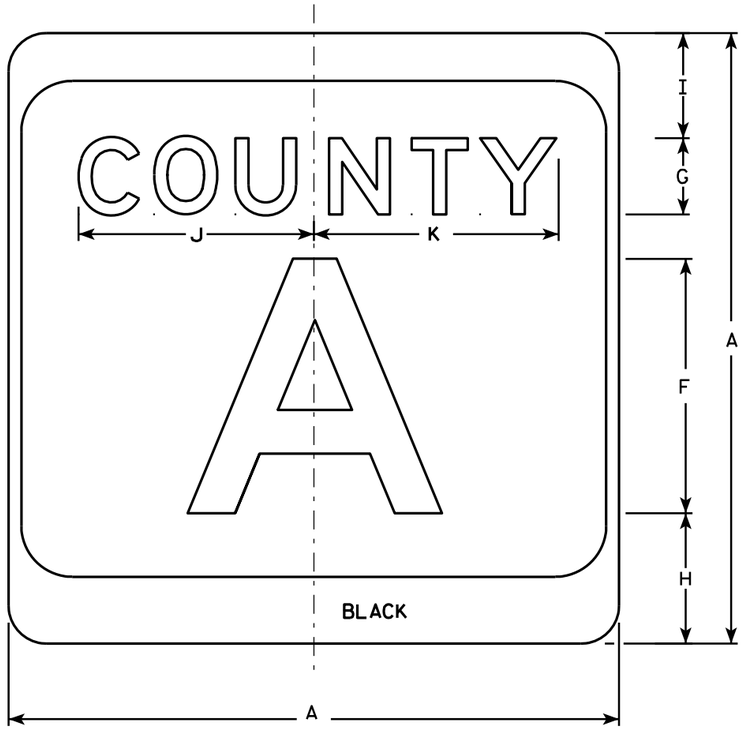
INTERSTATE ROUTE MARKER M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

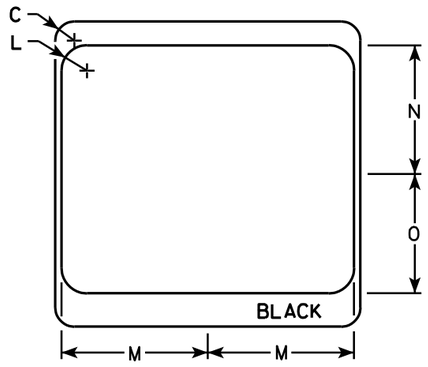
APPROVED Matthew R Rauch
for State Traffic Engineer

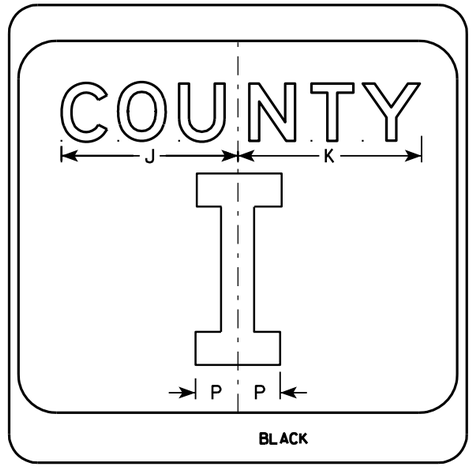
DATE 08/23/05 PLATE NO. M1-1.8

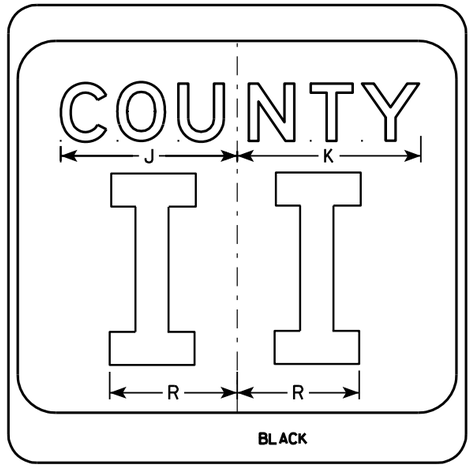
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 680	E



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

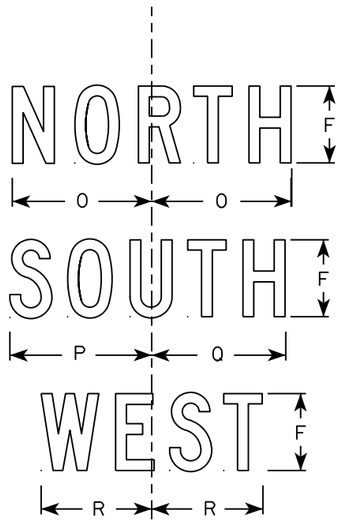
CTH MARKER
M1-5A FOR ASSEMBLIES

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: 681	E



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Substitute appropriate message as required.

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	24	1 1/8	3/8	1/2	4	3	3	5	5 1/4	9 7/8	10 1/4	5 3/8	6	7 1/4	7 3/8	7	5 3/4									4.0
3																											
4	36	36	1 3/8	5/8	5/8	6	4 1/2	4 1/2	7 1/2	7 7/8	14 3/4	15 3/8	8	9	10 7/8	11	10 1/2	8 5/8									9.0
5																											

STANDARD SIGN
M1-95A

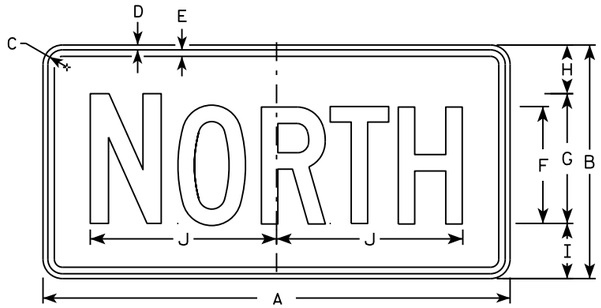
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

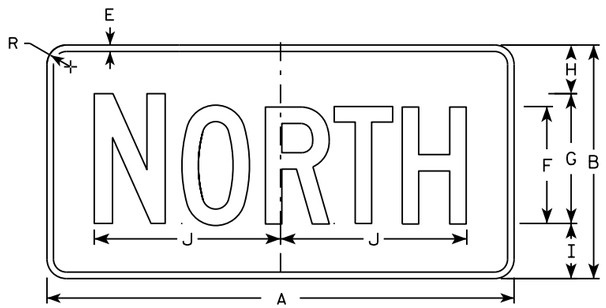
DATE 3/15/18 PLATE NO. M1-95A.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 682 | E

7



M3-1
MM3-1
MP3-1



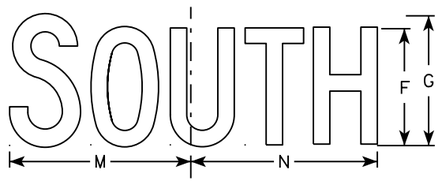
MB3-1
MK3-1
MN3-1



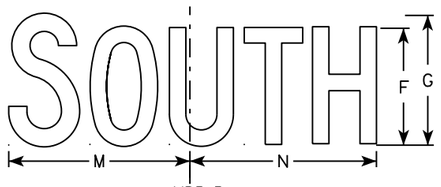
M3-2
MM3-2
MP3-2



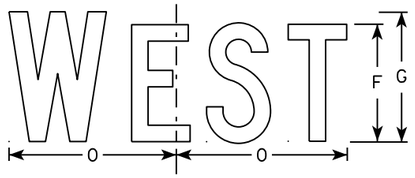
MB3-2
MK3-2
MN3-2



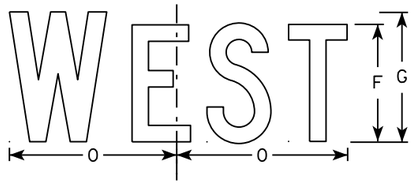
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

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

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

STANDARD SIGNS
M3-1 thur M3-4
SERIES

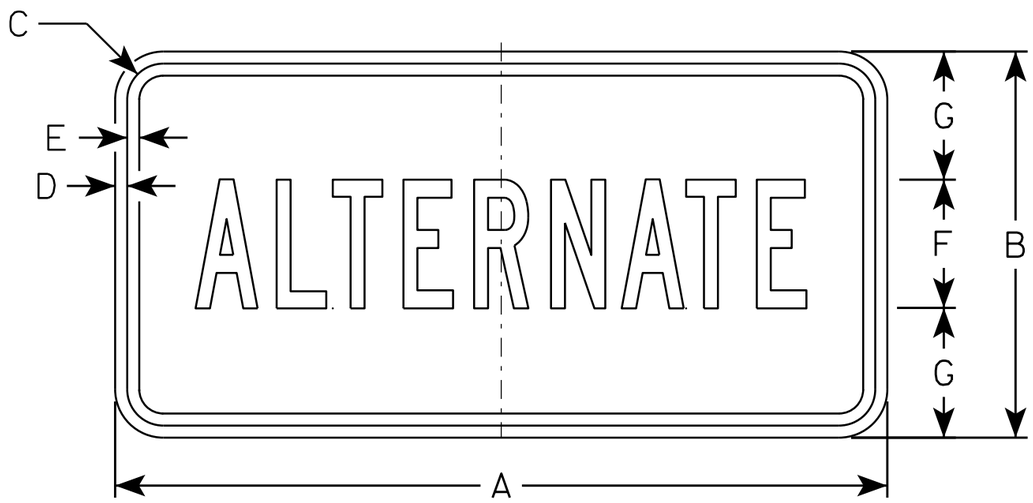
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

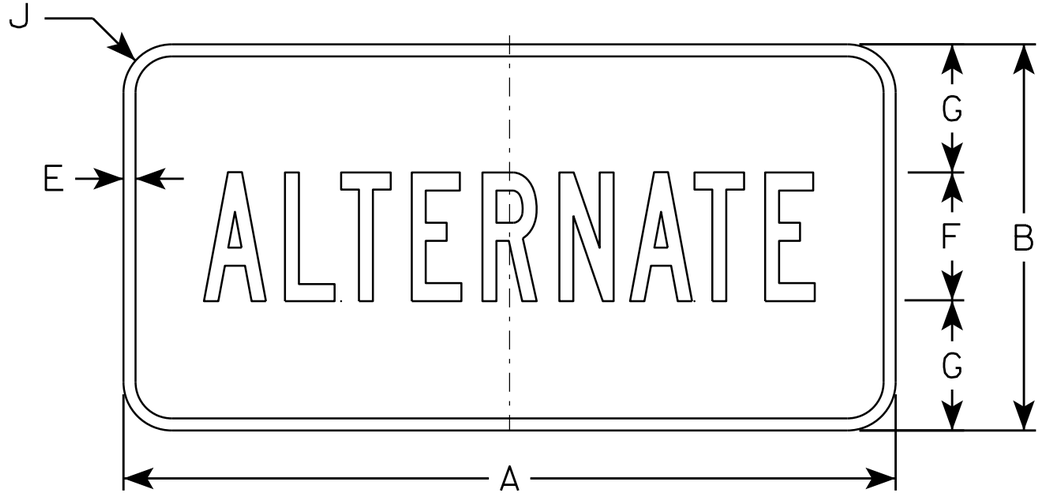
DATE 10/15/15 PLATE NO M3-1.14

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-1
M04-1



MB4-1

NOTES

1. Sign is Type II - Type H except as Shown
2. Color:
   Background - See Note 5
   Message - See note 5
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-1 Background - White
   Message - Black

   MB4-1 Background - Blue
   Message - White

   M04-1 Background - Orange - Type F
   Message - Black

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	4	4	9 3/4	9 1/2	1 1/2																	2.00
3	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
4	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
5	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5

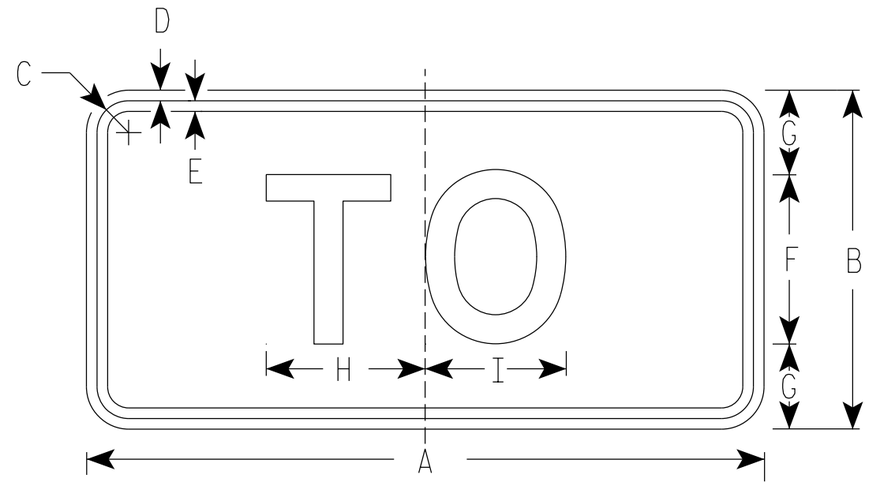
STANDARD SIGN
M4-1

WISCONSIN DEPT OF TRANSPORTATION

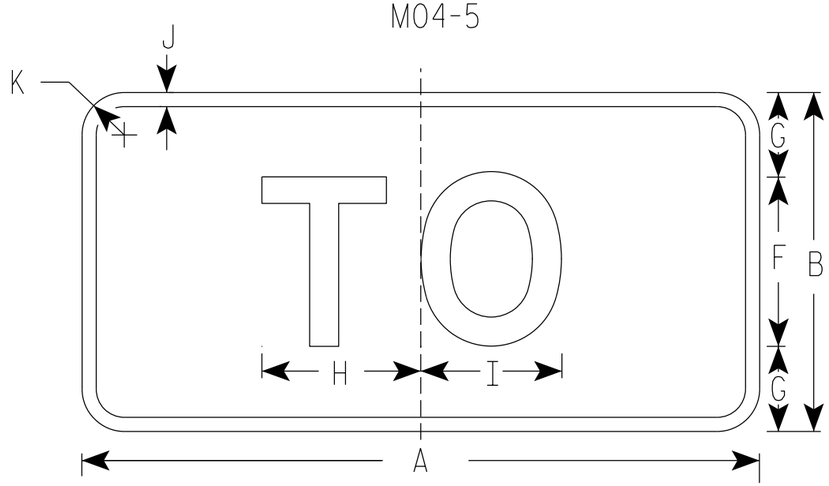
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/30/14 PLATE 684 14-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



M4-5
MM4-5
MP4-5
M04-5



MB4-5
MK4-5
MN4-5

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See note 5
   Message - See note 5
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. M4-5 Background - White
   Message - Black

   MB4-5 Background - Blue
   Message - White

   MK4-5 Background - Green
   Message - White

   MM4-5 Background - White
   Message - Green

   MN4-5 Background - Brown
   Message - White

   MP4-5 Background - White
   Message - Blue

   M04-5 Background - Orange Type F Reflective
   Message - Black

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

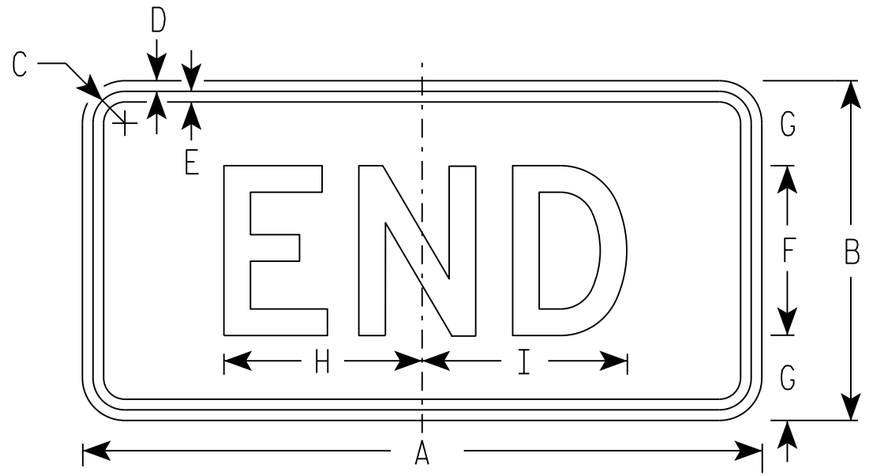
STANDARD SIGN
M4-5

WISCONSIN DEPT OF TRANSPORTATION

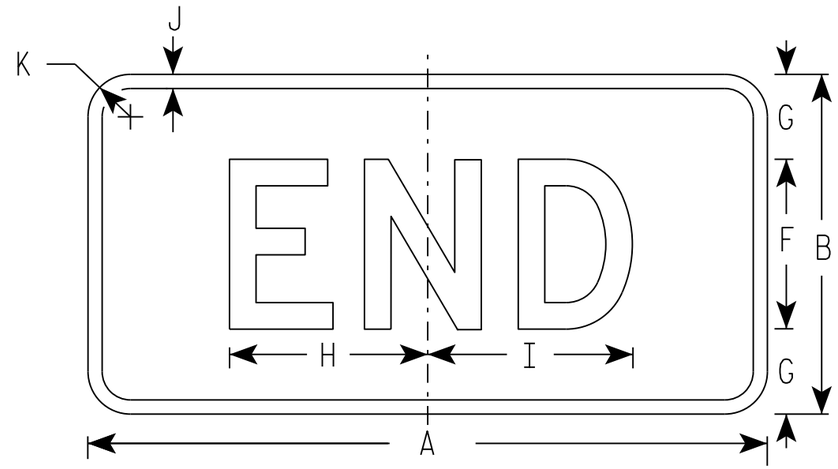
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/7/19 PLATE NO. M4-5.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 685 | E



M4-6
MM4-6
MP4-6



MB4-6
MK4-6
MN4-6
MR4-6

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
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. M4-6 Background - White
   Message - Black

   MB4-6 Background - Blue
   Message - White

   MK4-6 Background - Green
   Message - White

   MM4-6 Background - White
   Message - Green

   MN4-6 Background - Brown
   Message - White

   MP4-6 Background - White
   Message - Blue

   MR4-6 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	7	7 1/4	1/2	1 1/2																2.00
3	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
4	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
5	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5

STANDARD SIGN
M4-6

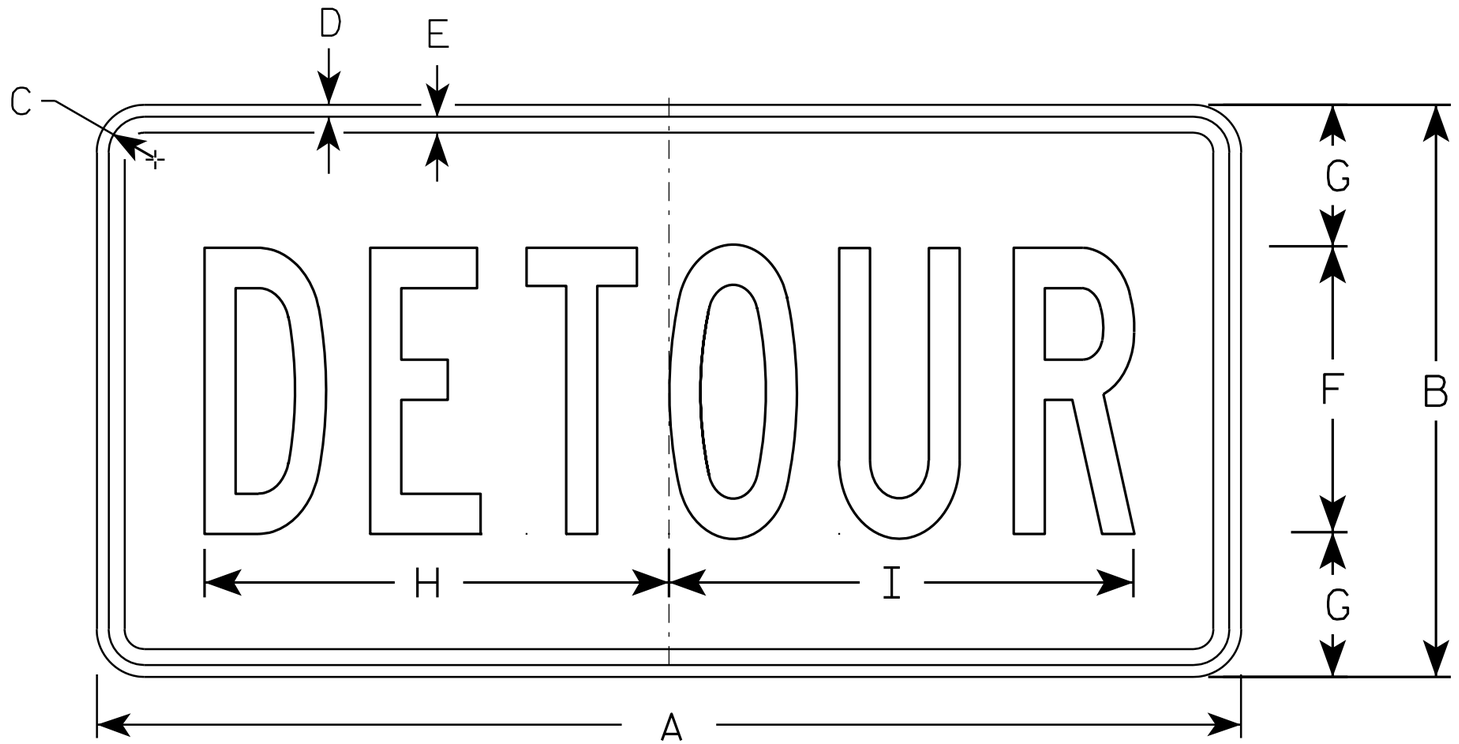
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 686 '14-7.9

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M46.DGN PLOT DATE : 01-DEC-2015 17:55 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.351066:1.000000



M4-8

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 - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

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

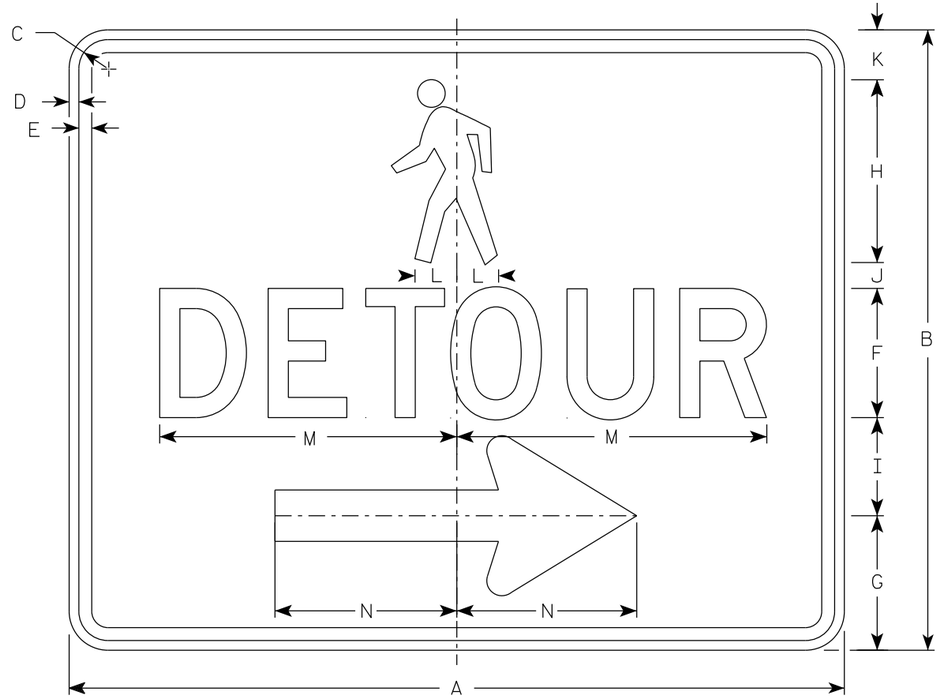
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

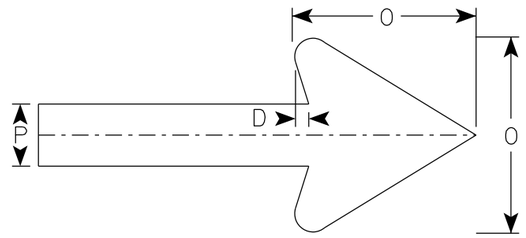
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 687	E



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																											

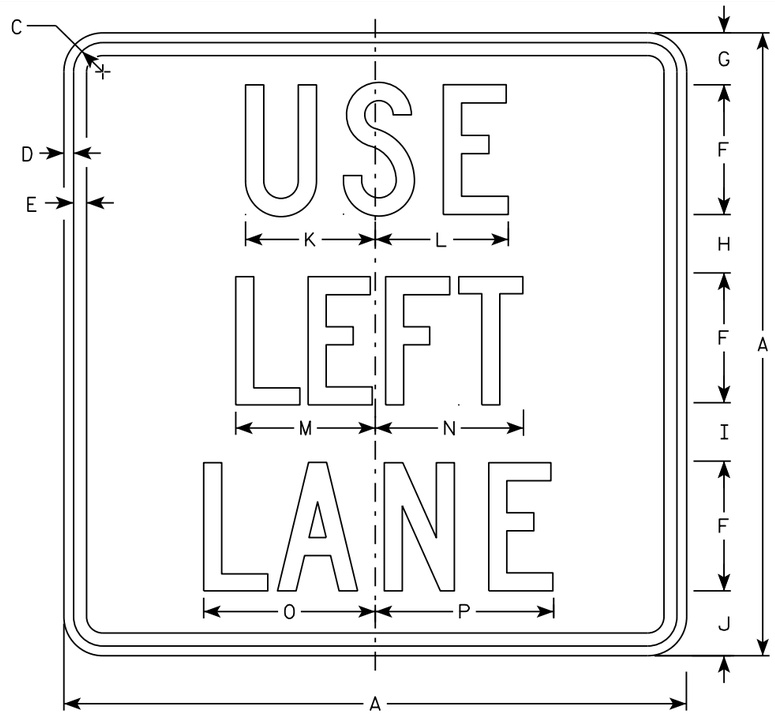
STANDARD SIGN
M4-9B L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 7/1/19 PLATE NO. M4-9B.2

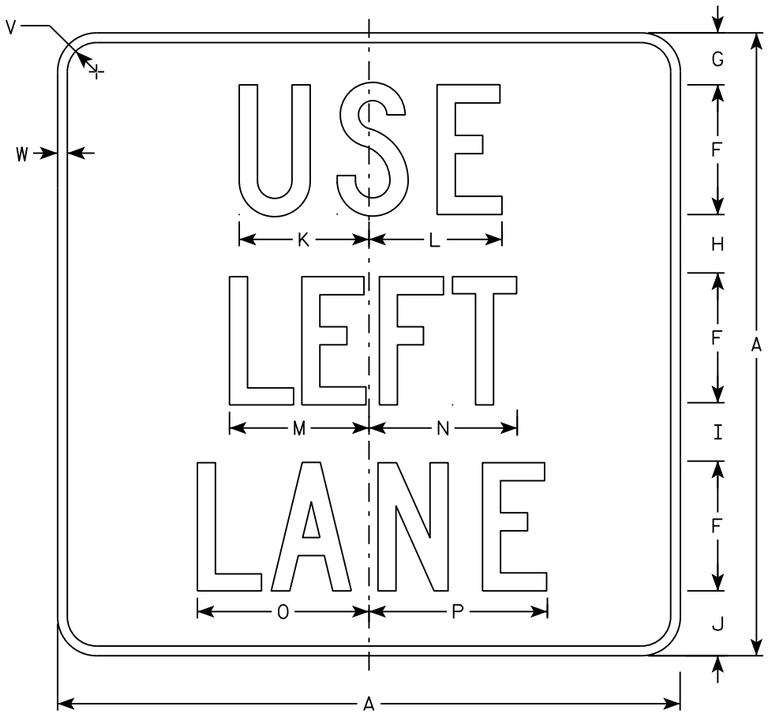
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 688 | E



M4-20L

A

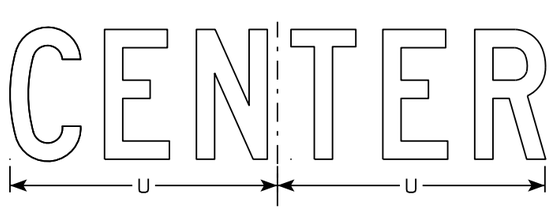
M4-20L
MM4-20L
M04-20L
MP4-20L



MB4-20L

A

MB4-20L
MK4-20L
MN4-20L
MR4-20L



M4-20C
MB4-20C
MK4-20C
MM4-20C
MN4-20C
M04-20C
MP4-20C
MR4-20C



M4-20R
MB4-20R
MK4-20R
MM4-20R
MN4-20R
M04-20R
MP4-20R
MR4-20R

NOTES

1. Sign is Type II - Type H except as Shown
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-20 Background - White
   Message - Black
   MB4-20 Background - Blue
   Message - White
   MK4-20 Background - Green
   Message - White
   MM4-20 Background - White
   Message - Green
   MN4-20 Background - Brown
   Message - White
   M04-20 Background - Orange - Type F Reflective
   Message - Black
   MP4-20 Background - White
   Message - Blue
   MR4-20 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/8	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8	5 3/8	5 3/4	6 5/8	6 7/8			7	7 5/8	10 1/4	1 1/2	1/2				4.0
3	36		1 5/8	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4	8	8 5/8	9 7/8	10 1/4			10 3/8	11 3/8	14 3/8	1 7/8	1/2				9.0
4																											
5																											

STANDARD SIGN
M4-20

WISCONSIN DEPT OF TRANSPORTATION

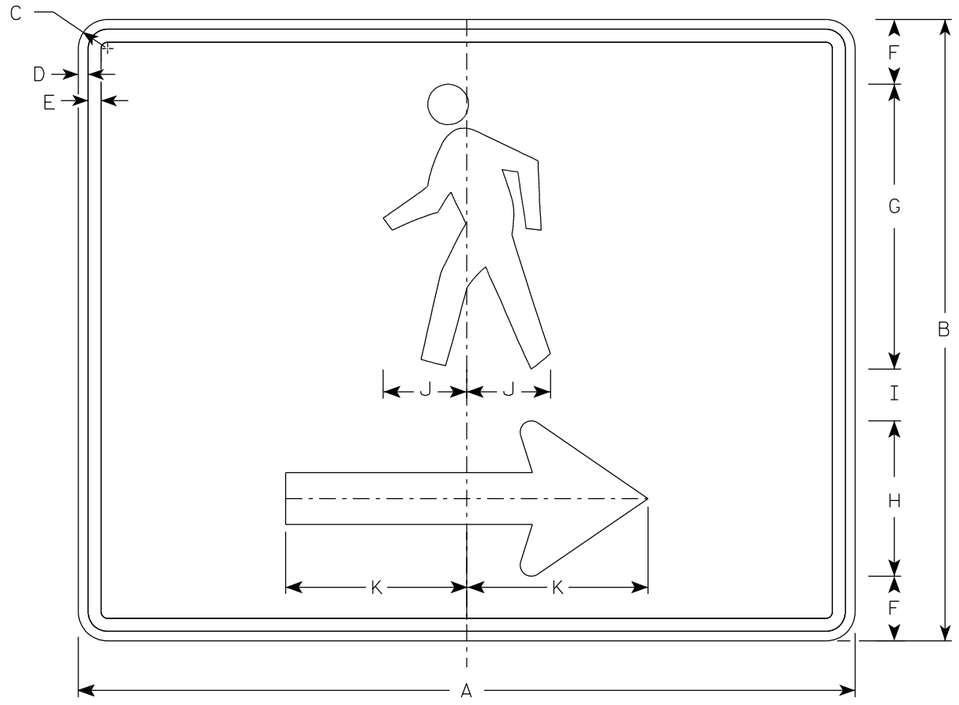
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 10/15/15 PLATE NO M4-20.5

689

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

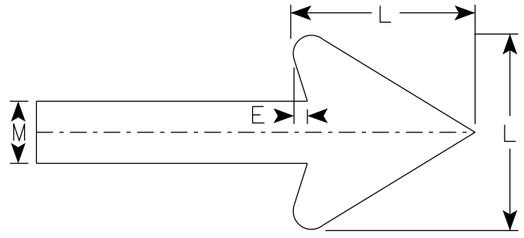
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M420.DGN PLOT DATE : 01-DEC-2015 18:03 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.837526:1.000000



M4-60R

NOTES

1. Sign is Type II- Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M4-60L is the same as M4-60R except the arrow is reversed.



Arrow Detail

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

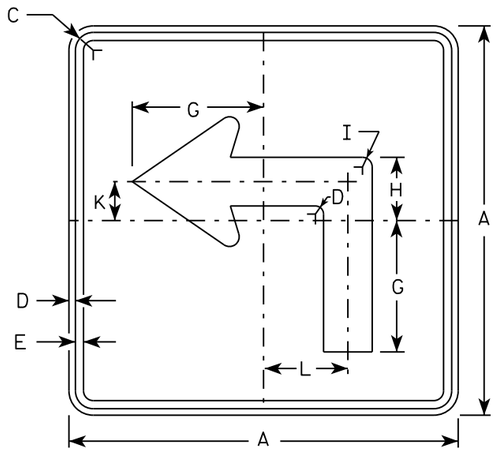
STANDARD SIGN
M4-60 L&R

WISCONSIN DEPT OF TRANSPORTATION

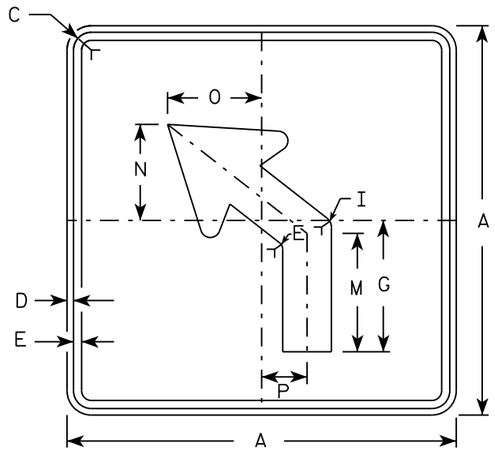
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/16/2021 PLATE NO. M4-60.1

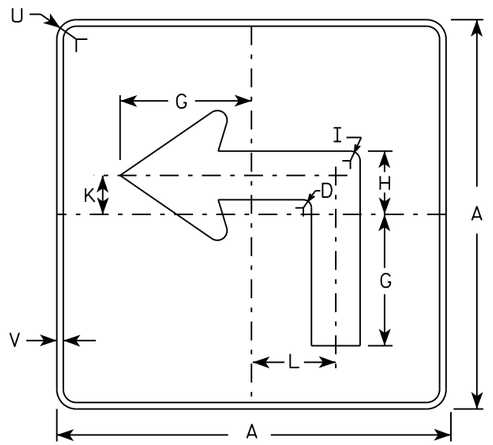
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 690 | E



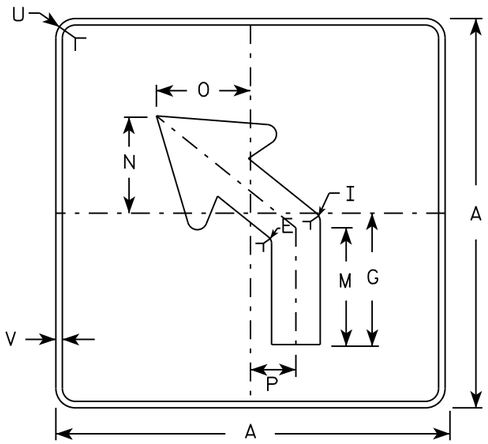
M5-1L
MM5-1L
MO5-1L
MP5-1L



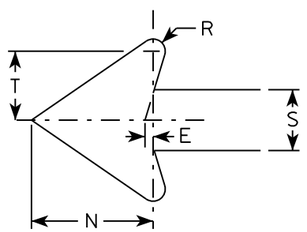
M5-2L
MM5-2L
MO5-2L
MP5-2L



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

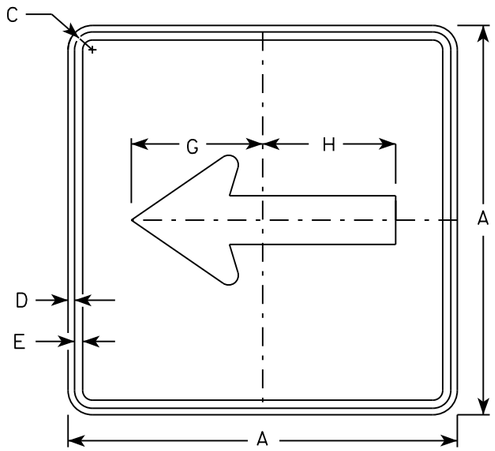
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

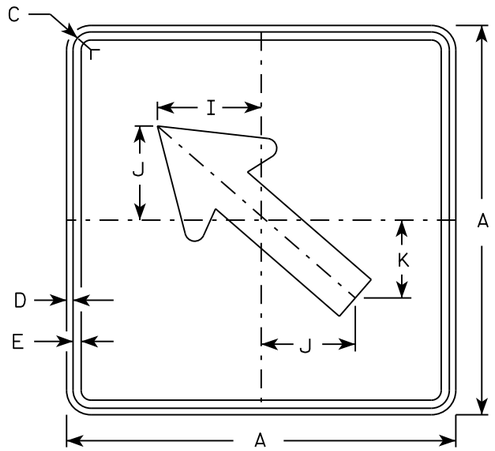
DATE 10/15/15 PLATE NO. M5-1.13

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



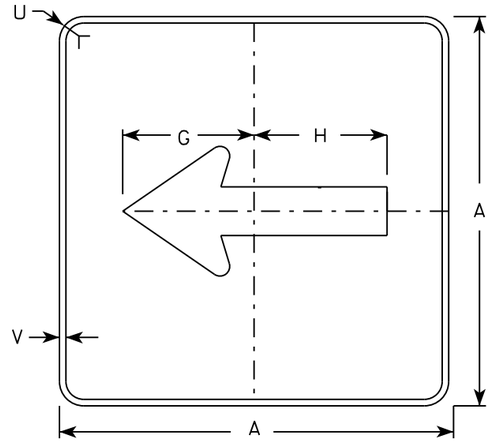
M6-1
MM6-1
MO6-1
MP6-1



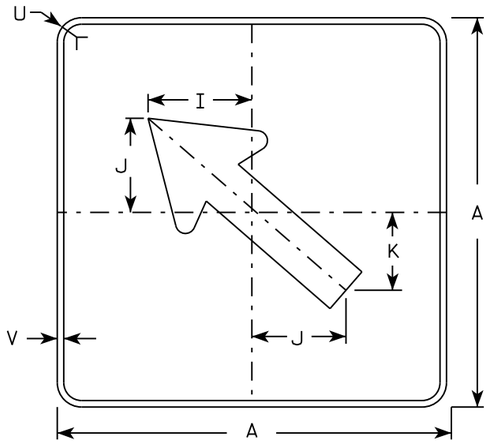
M6-2
MM6-2
MO6-2
MP6-2

NOTES

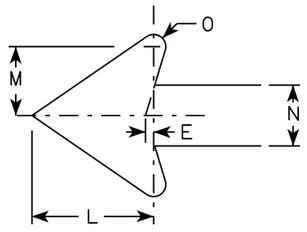
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - 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

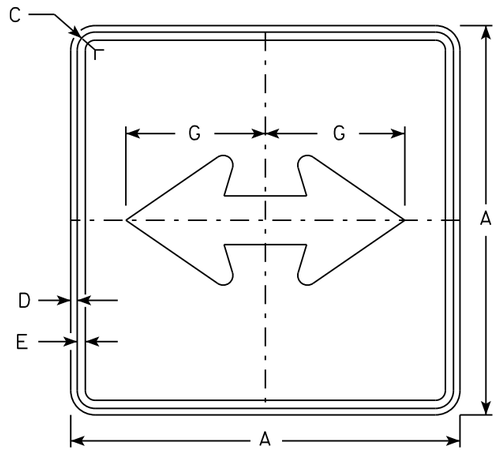
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

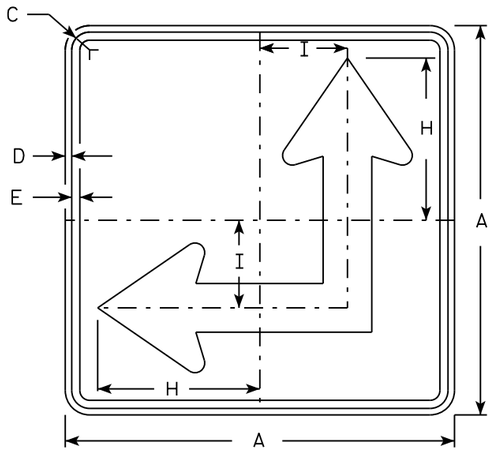
DATE 10/15/15 PLATE 692 M6-1.15

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



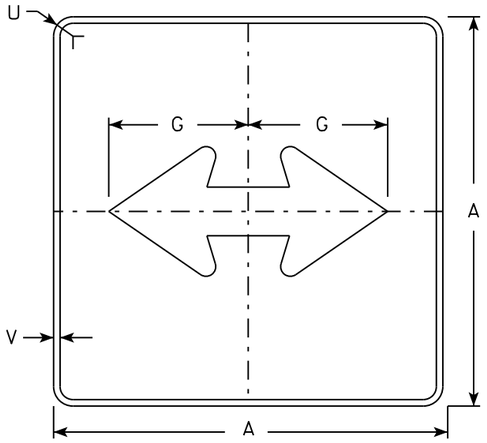
M6-4
MM6-4
MO6-4
MP6-4



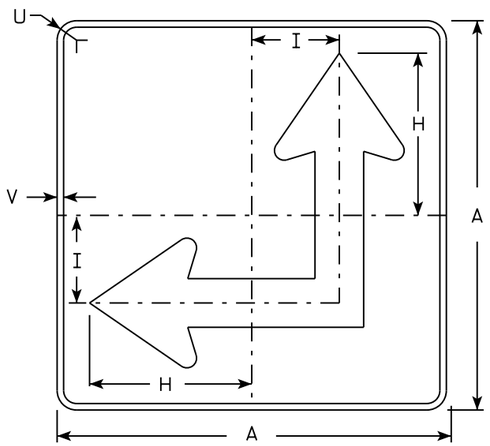
M6-6
MM6-6
MO6-6
MP6-6

NOTES

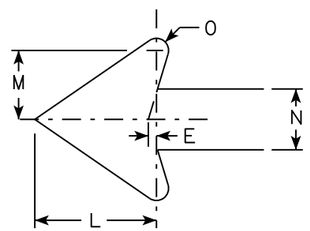
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White
   MK6-4 and MK6-6 Background - Green
   Message - White
   MM6-4 and MM6-6 Background - White
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White
   MO6-4 and MO6-6 Background - Orange - Type F Reflective
   Message - Black
   MP6-4 and MP6-6 Background - White
   Message - Blue
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and right.



MB6-4
MK6-4
MN6-4
MR6-4



MB6-6
MK6-6
MN6-6
MR6-6



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	8 3/4	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	12 1/2	6 3/4			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	12 1/2	6 3/4			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	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN
M6-4 & M6-6
SERIES

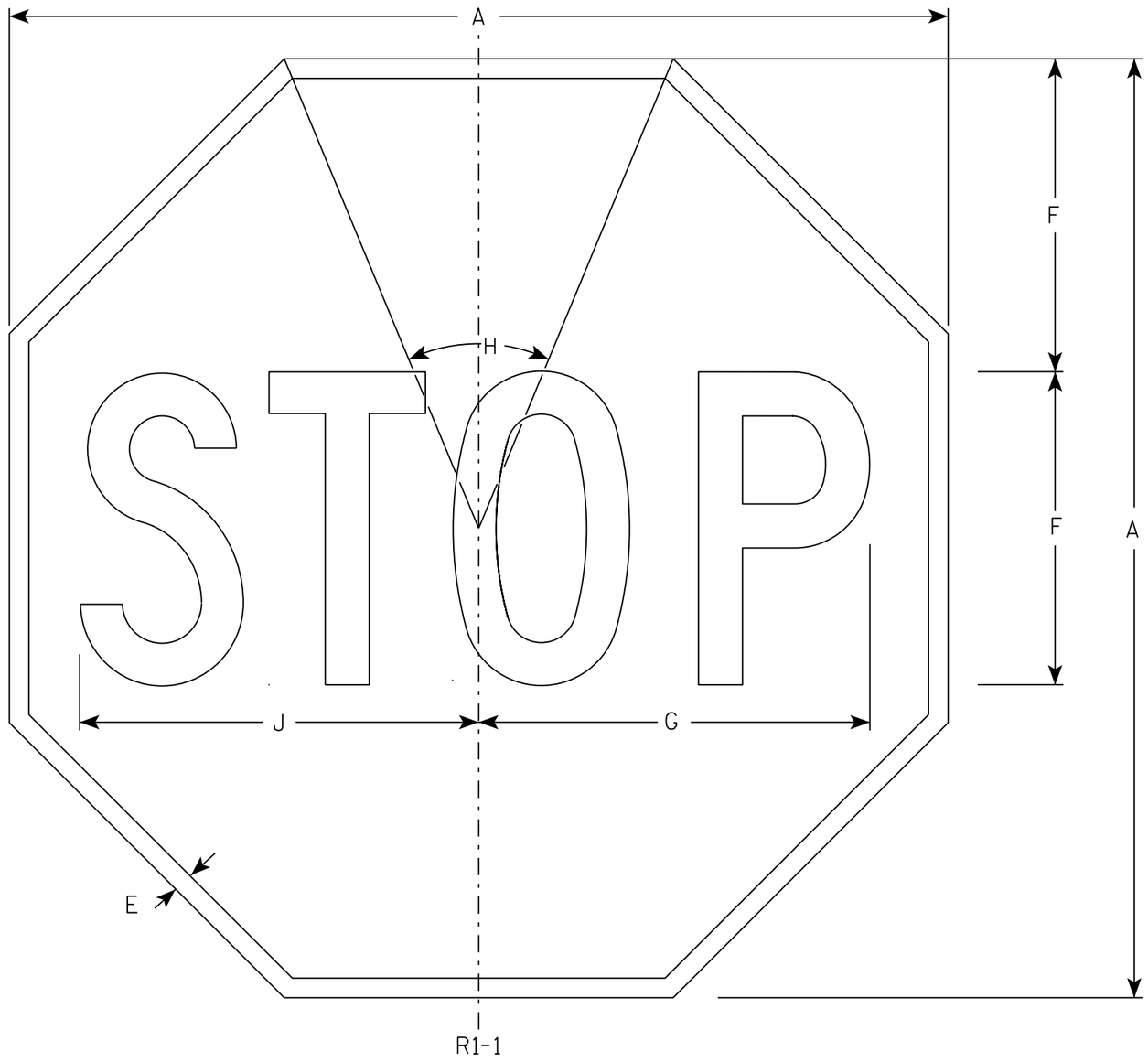
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 693 M6-4.10

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M64.DGN PLOT DATE : 01-DEC-2015 17:58 PLOT BY : $$ platuser $$ 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

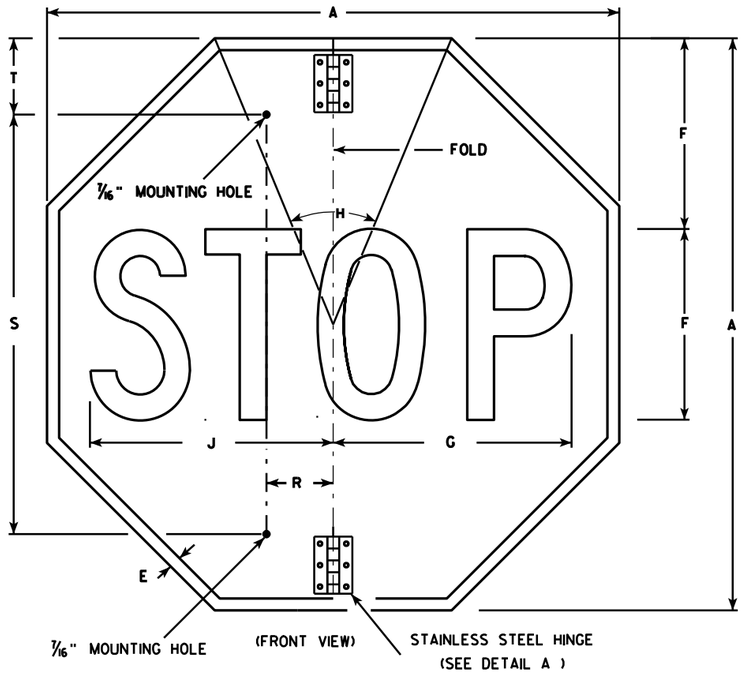
WISCONSIN DEPT OF TRANSPORTATION

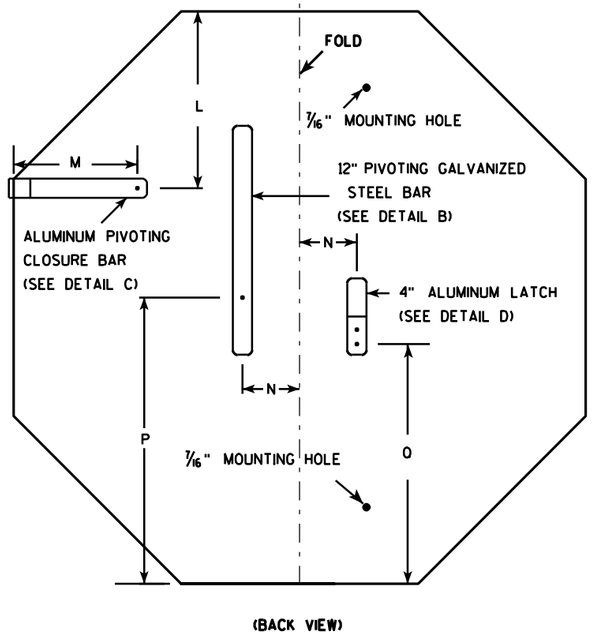
APPROVED Matthew R Rauch

for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

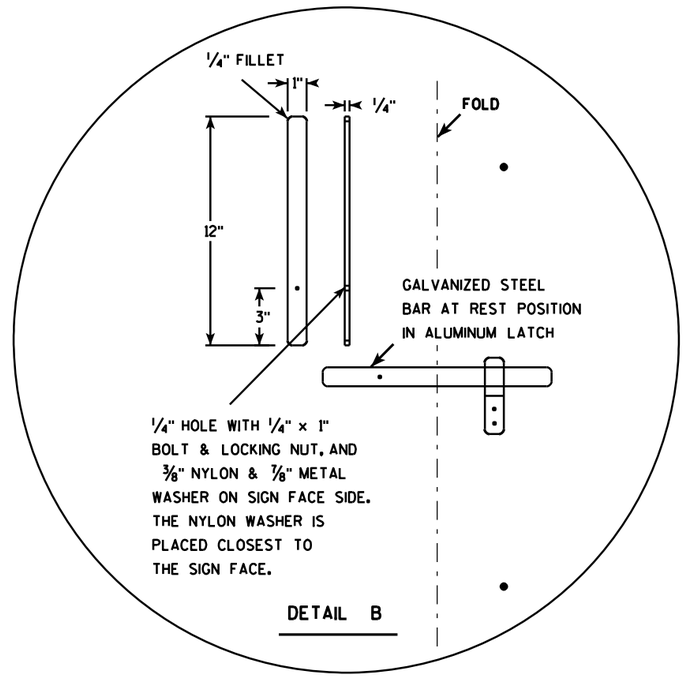
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 694	E

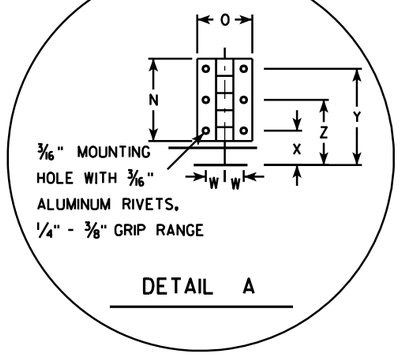


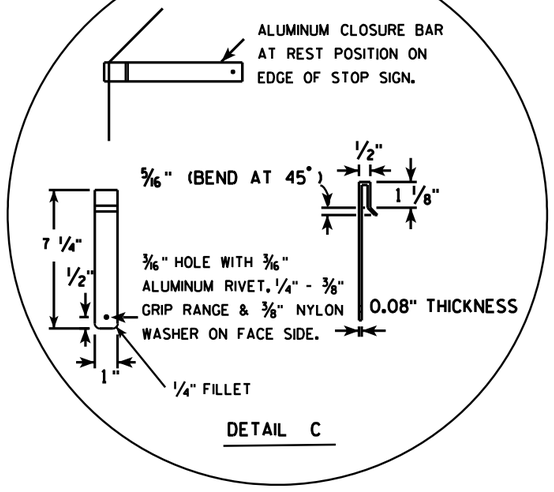


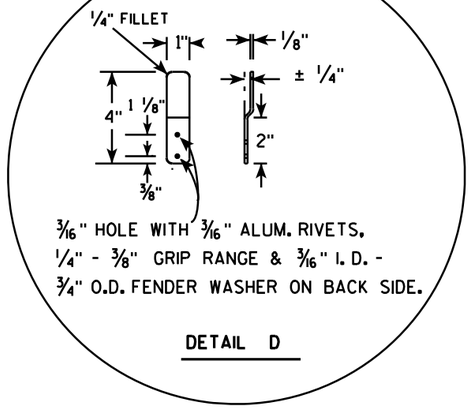
NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.









SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

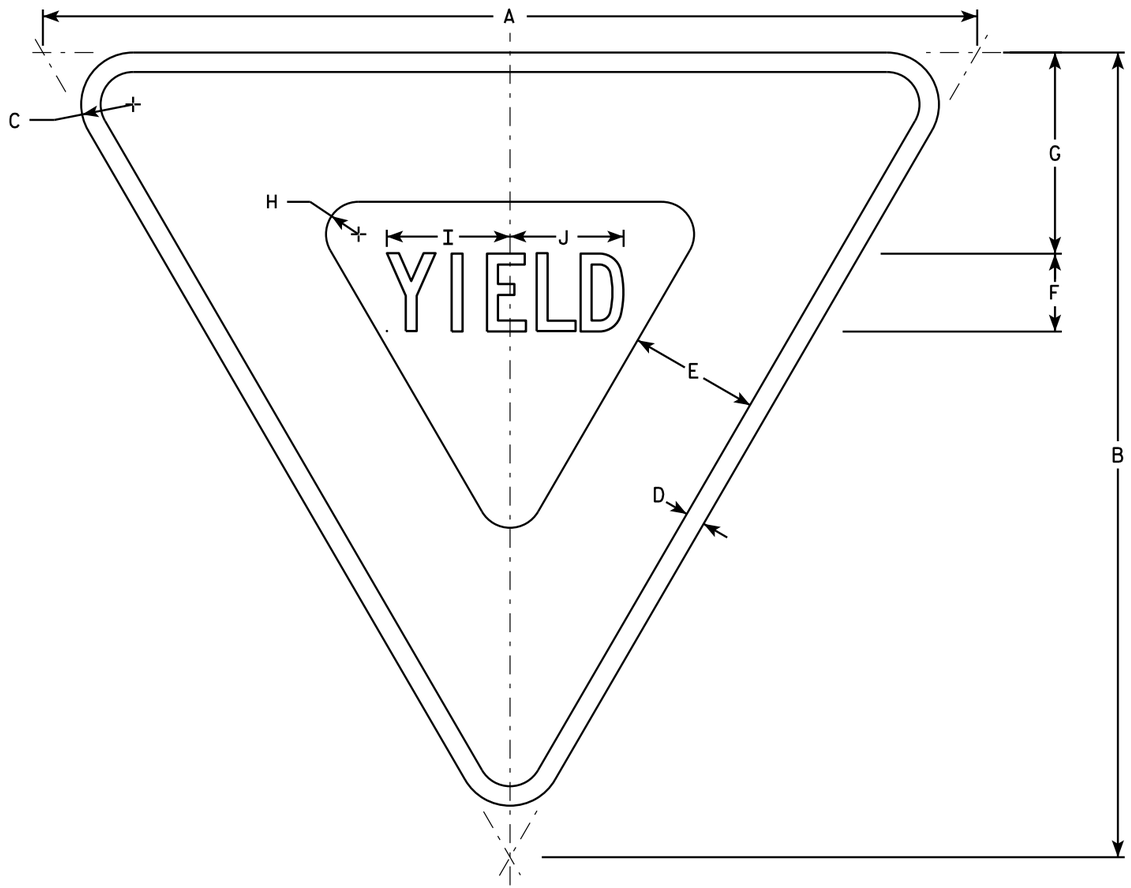
STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 695	E



R1-2

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 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. The border strip and word message are reflectorized red.

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	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

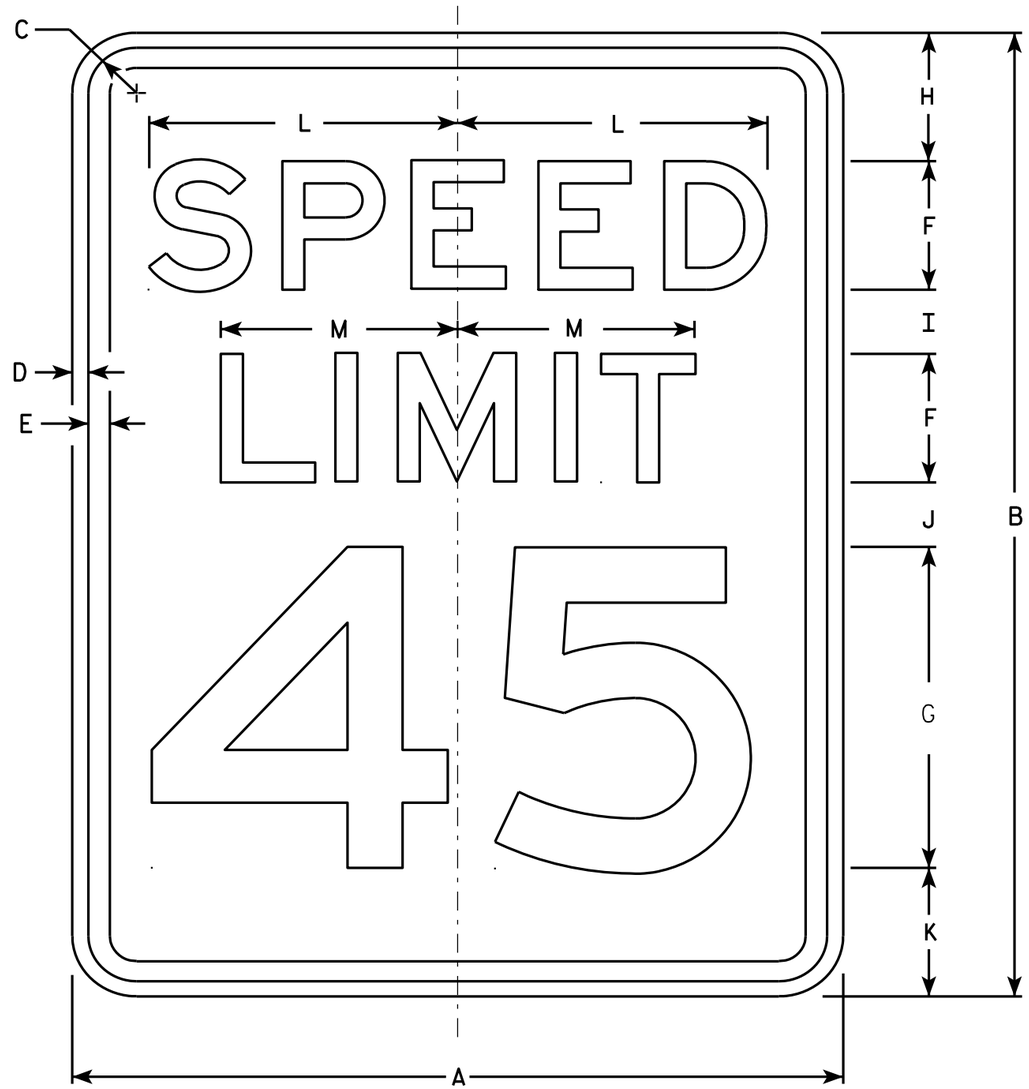
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE P1-2.12

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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



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

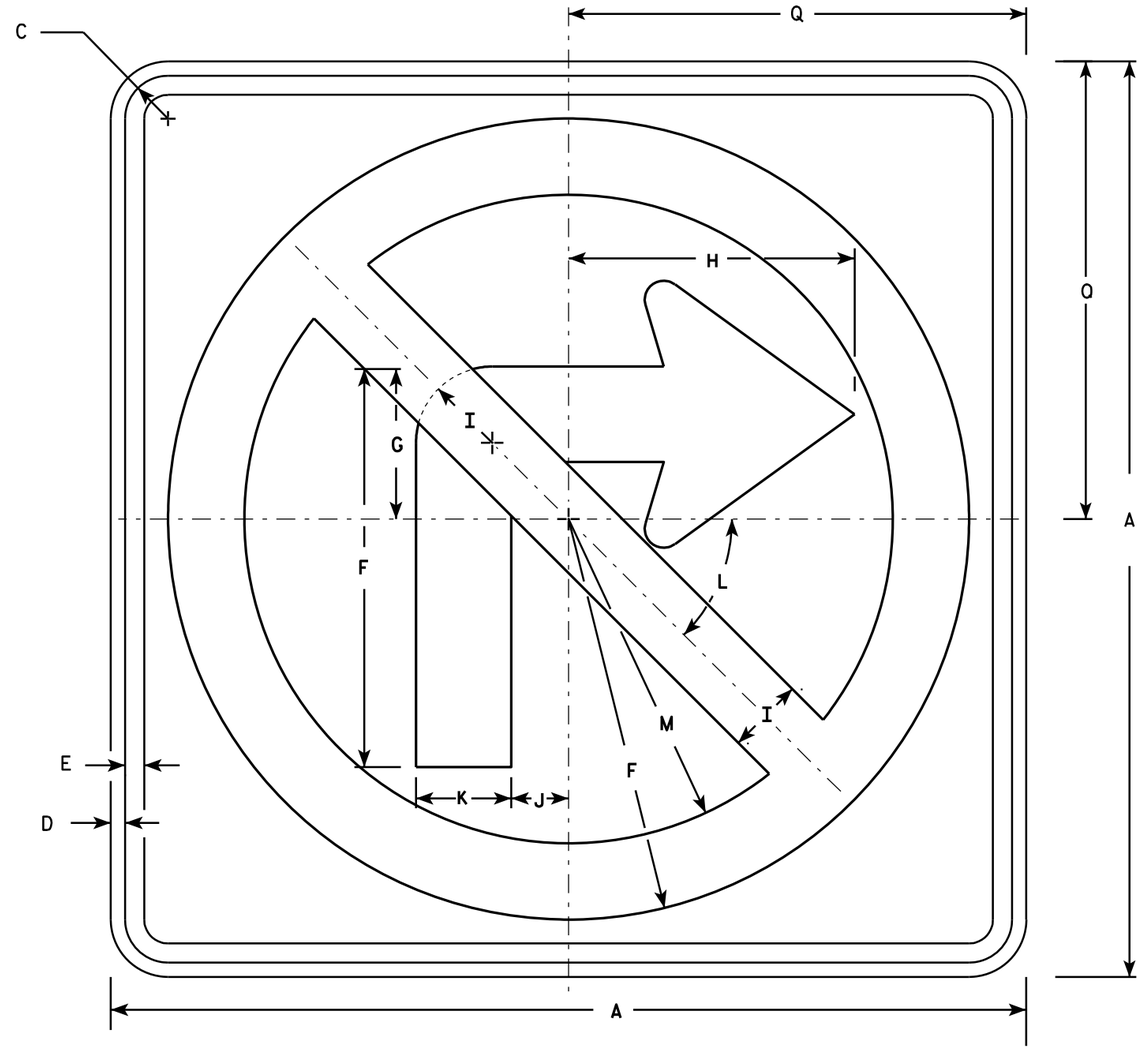
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

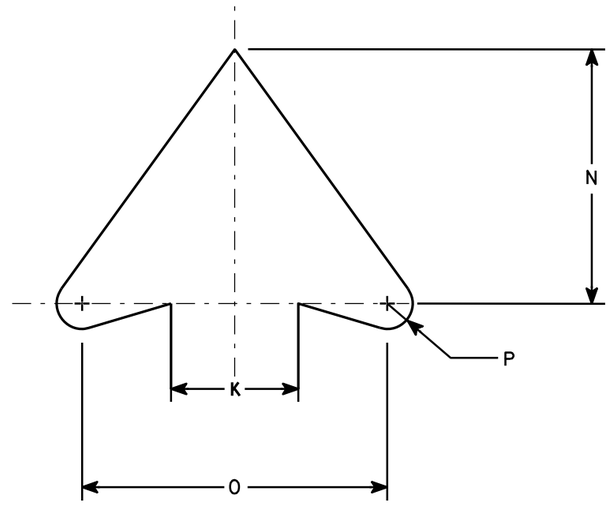
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 697	E



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

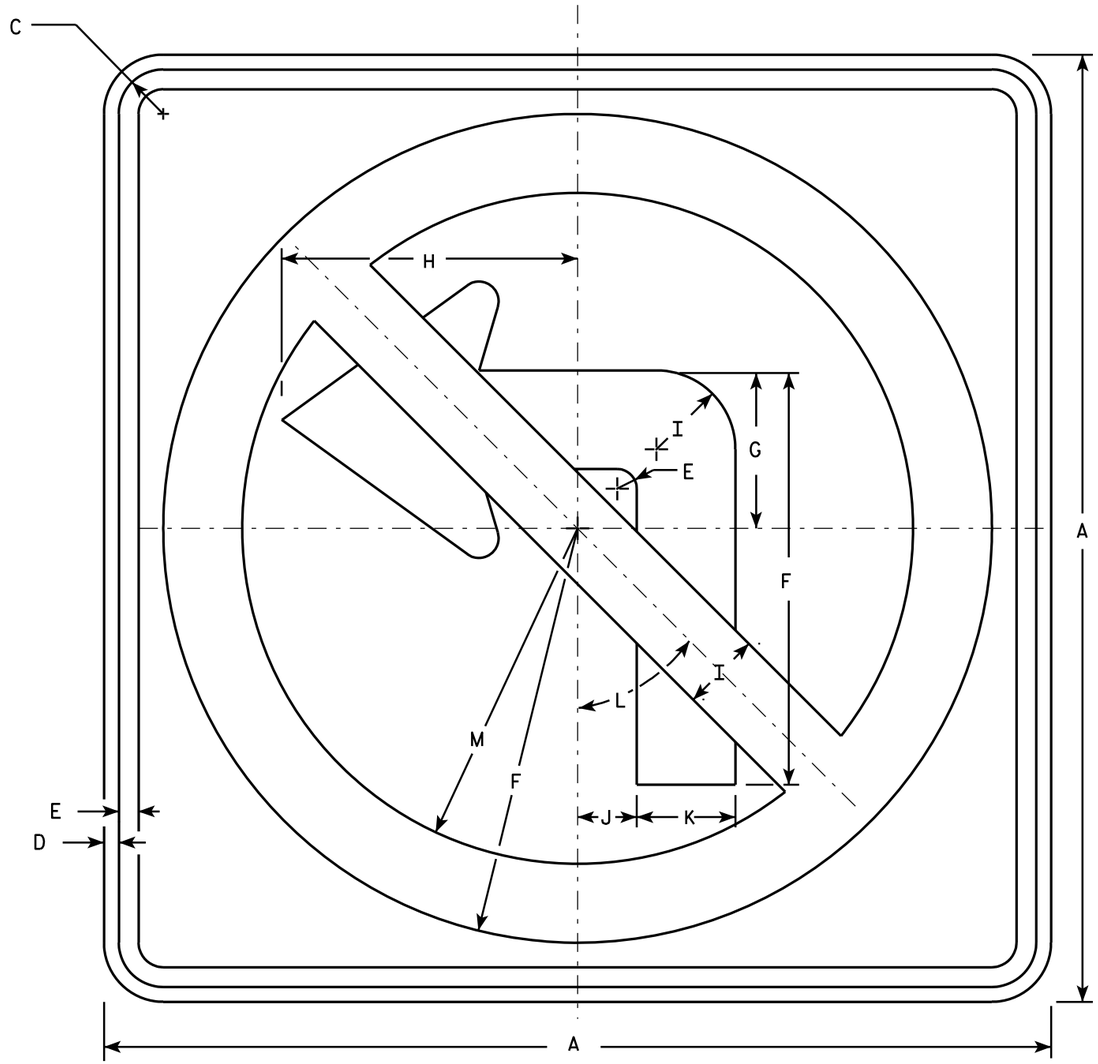
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

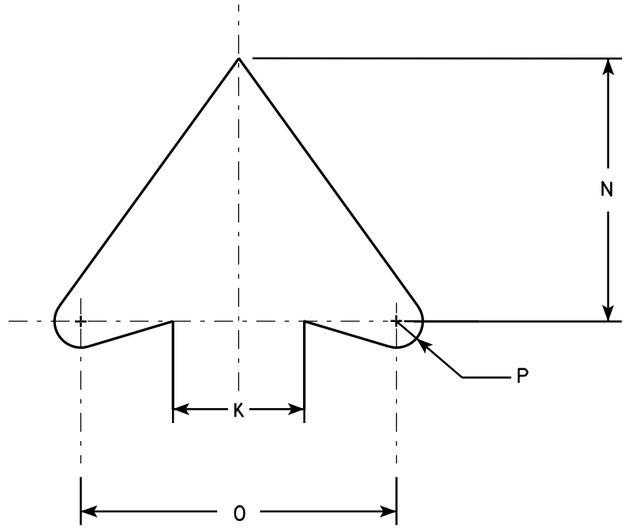
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 698	E



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

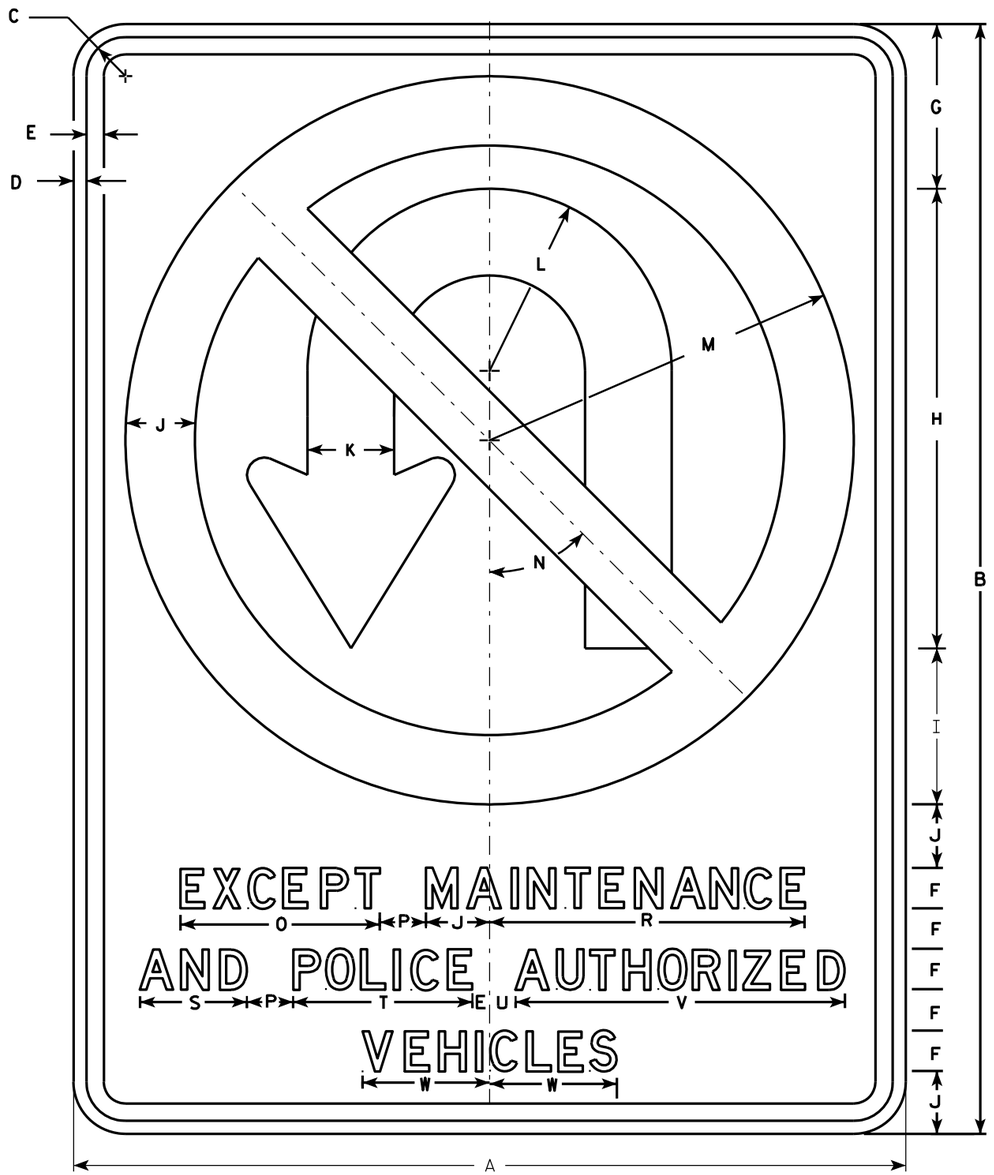
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

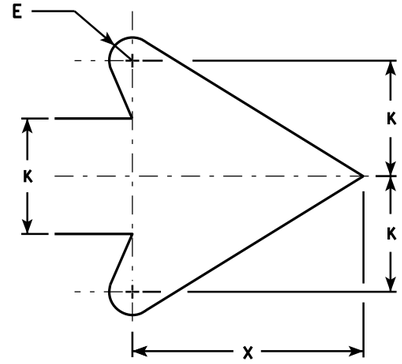
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 699	E



R3-4B

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																											
2S																											
2M																											
3																											
4	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0
5	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0

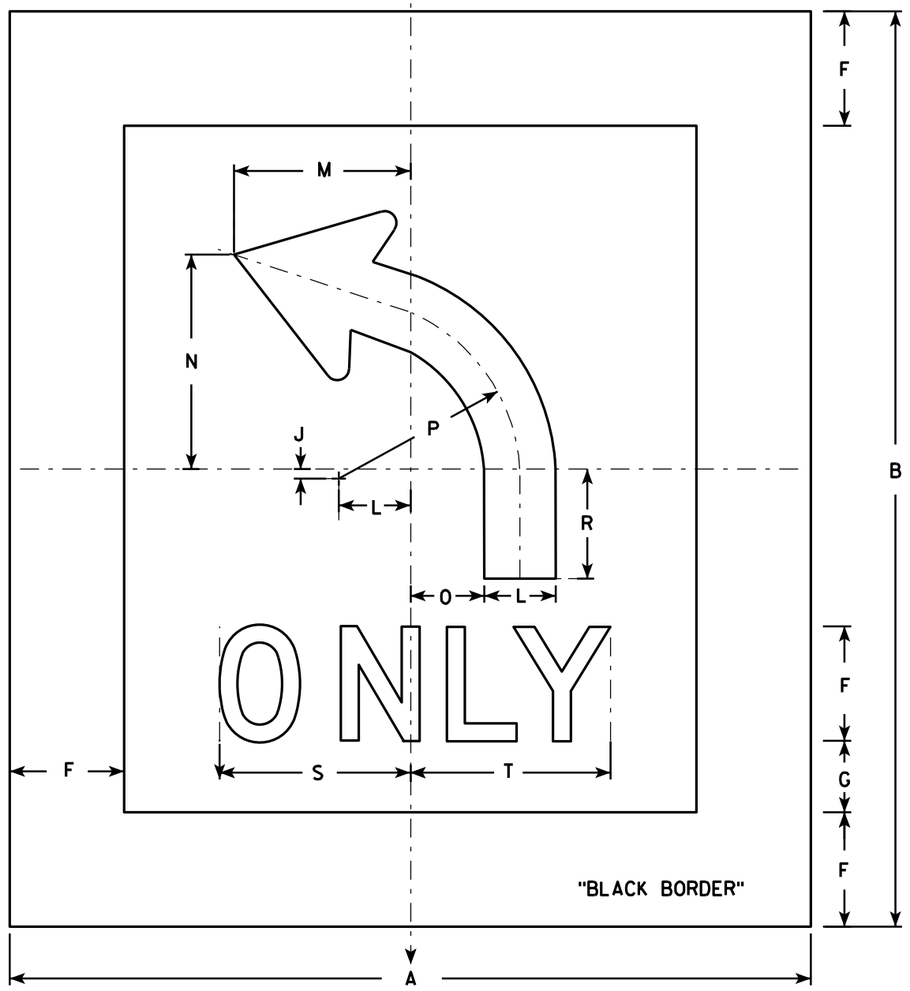
STANDARD SIGN
R3-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-4B.2

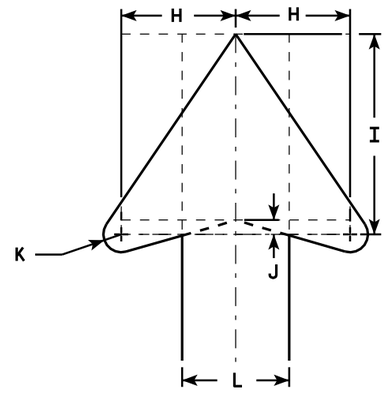
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 700	E



R3-5L

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. When base material is metal, the corners shall be rounded.
5. R3-5R is the same as R3-5L except curved portion of arrow points right.
6. The 6" border is non-reflective 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	42	48				6	3 3/4	4	7	1/2	5/8	3 3/4	9 1/4	11 1/4	3 7/8	9 1/2		5 3/4	10	10 1/2							1.26
2M	42	48				6	3 3/4	4	7	1/2	5/8	3 3/4	9 1/4	11 1/4	3 7/8	9 1/2		5 3/4	10	10 1/2							1.26
3																											
4																											
5																											

STANDARD SIGN
R3-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/24/11 PLATE NO. R3-5.6

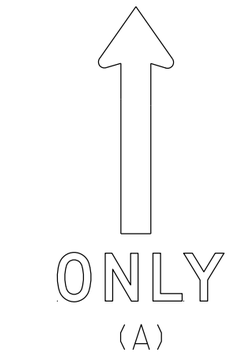
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 701 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R35.DGN PLOT DATE : 24-FEB-2011 14:53 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 7.945391:1.000000

WISDOT/CADDS SHEET 42

7

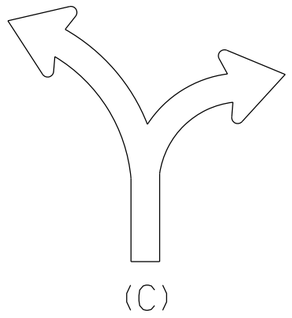
7

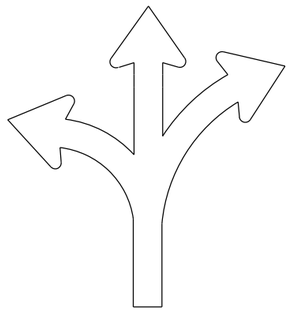


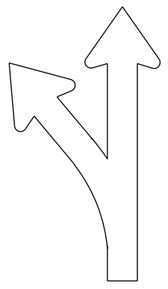
(A)

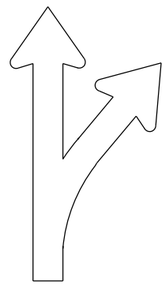


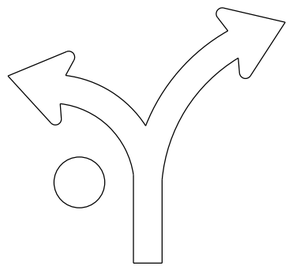
(B)

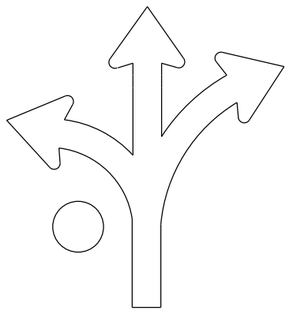

(C)

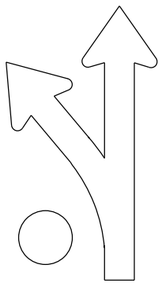

(D)

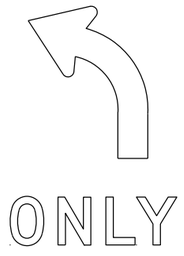

(E)


(F)

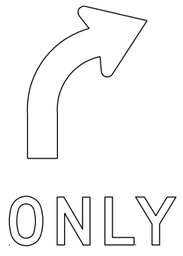

(G)


(H)

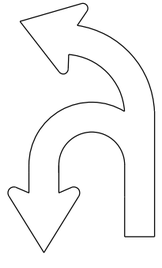

(I)



(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

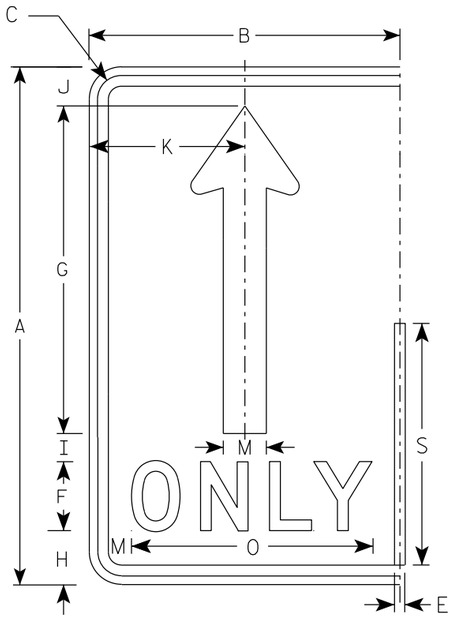
PROJECT NO:

SHEET NO: 702 E

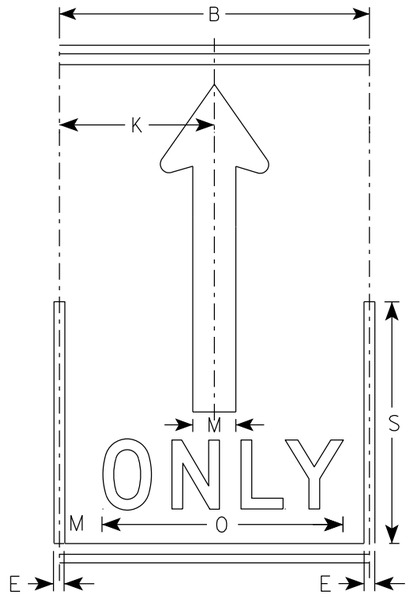
7

NOTES

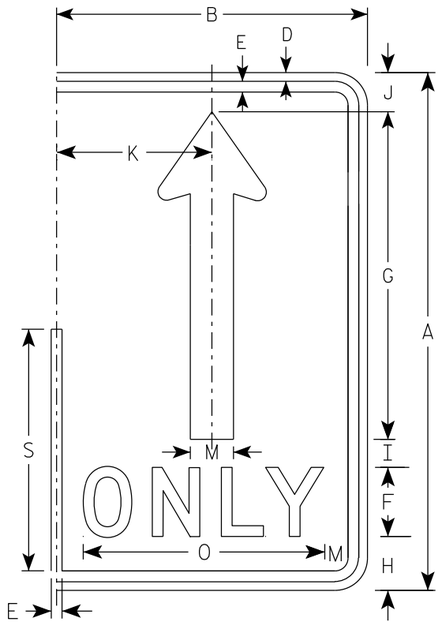
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



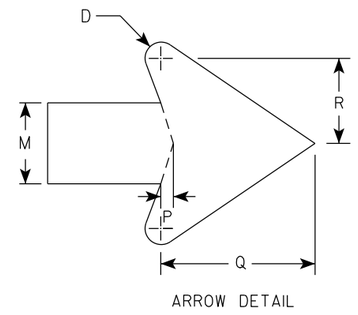
(A)



(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

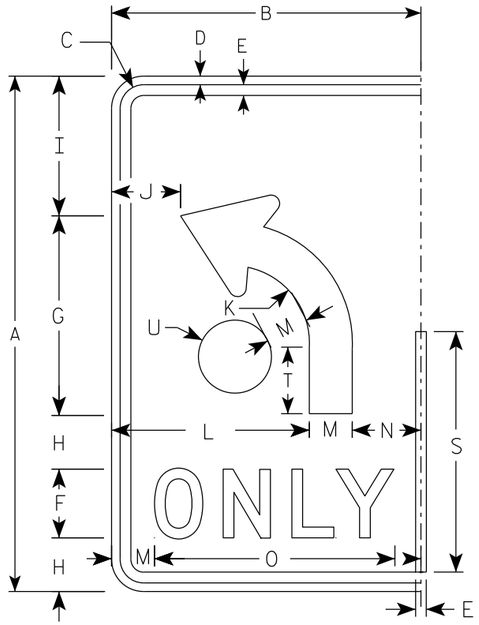
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

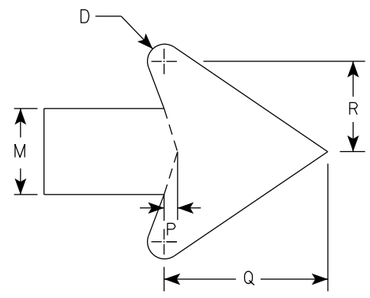
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 703 | E

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

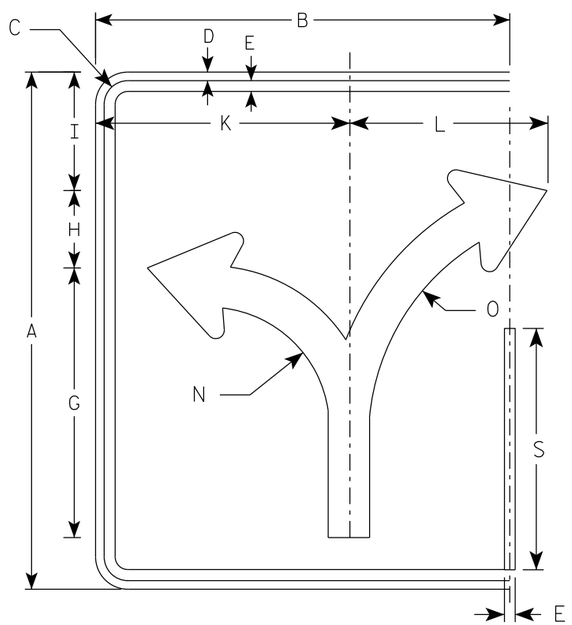
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

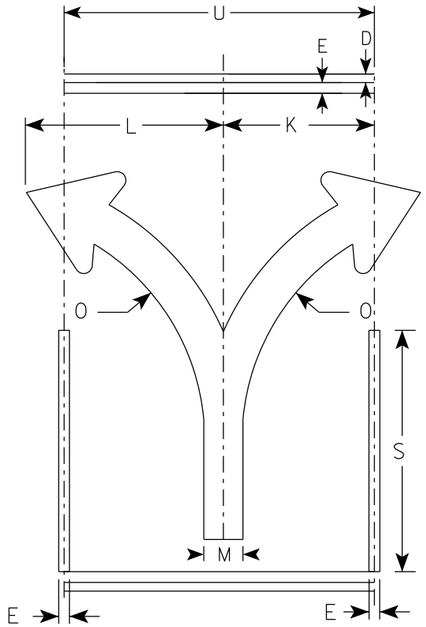
SHEET NO: 704 E

NOTES

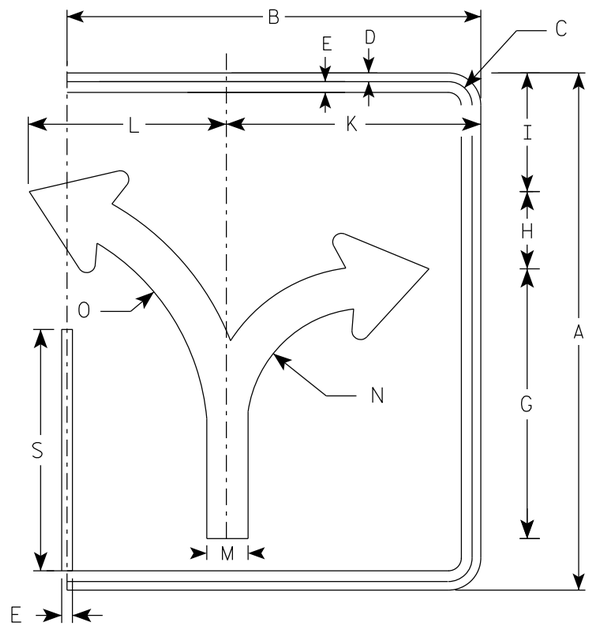
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



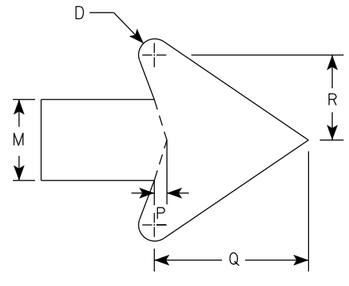
(C)



(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

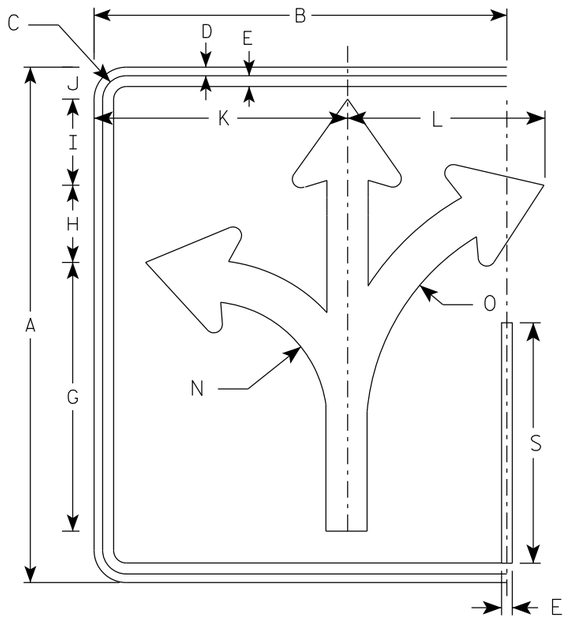
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

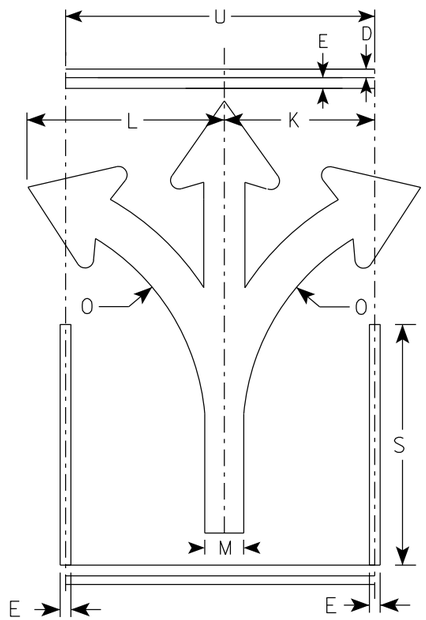
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 705 | E

NOTES

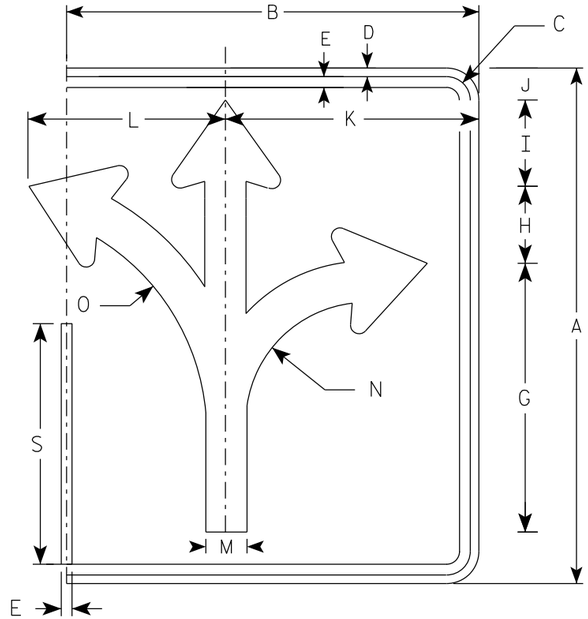
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



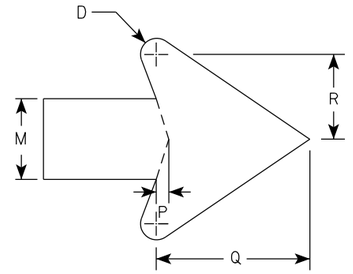
(D)



(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

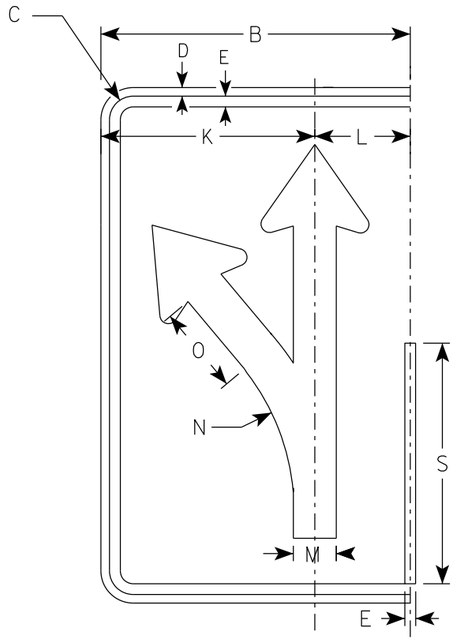
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 706 | E

7

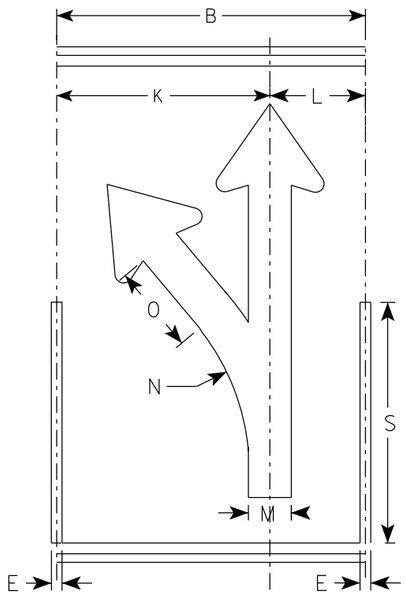
7

NOTES

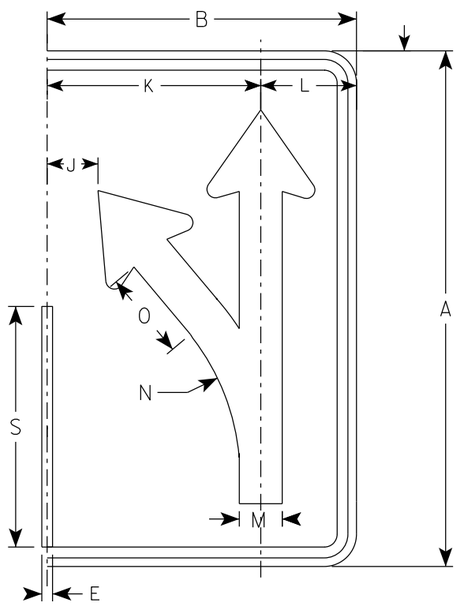
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



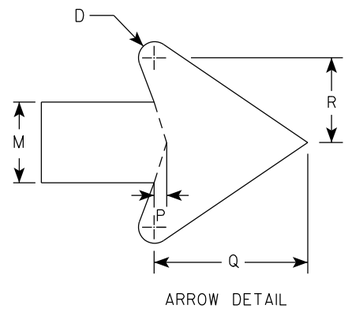
(E)



(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

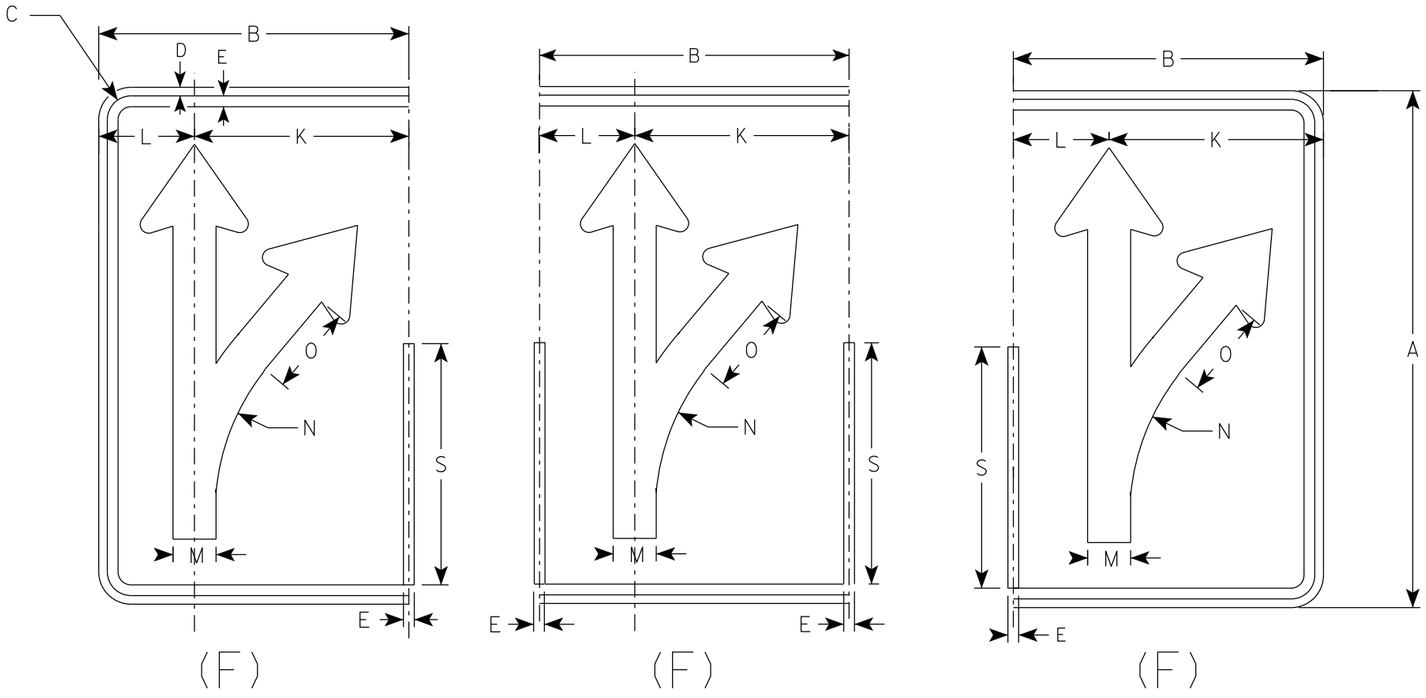
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

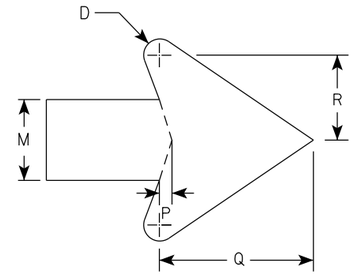
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 707 | E

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

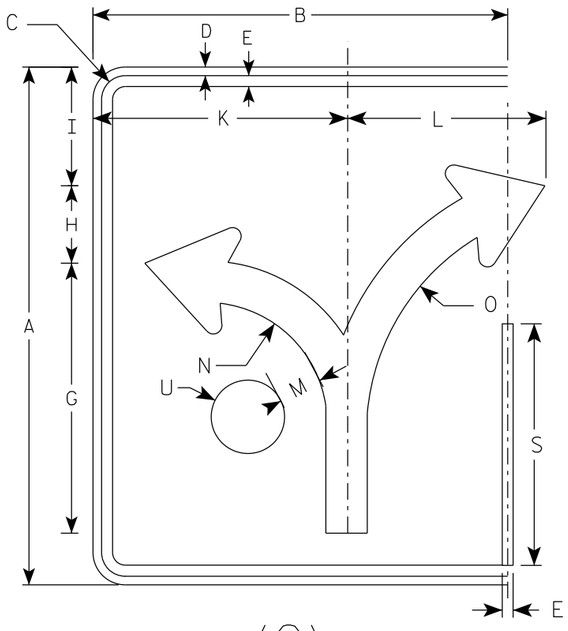
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

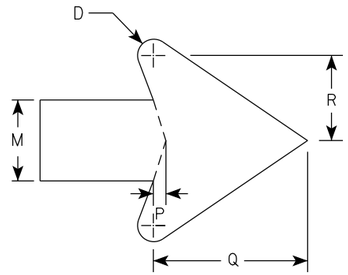
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 708 | E

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

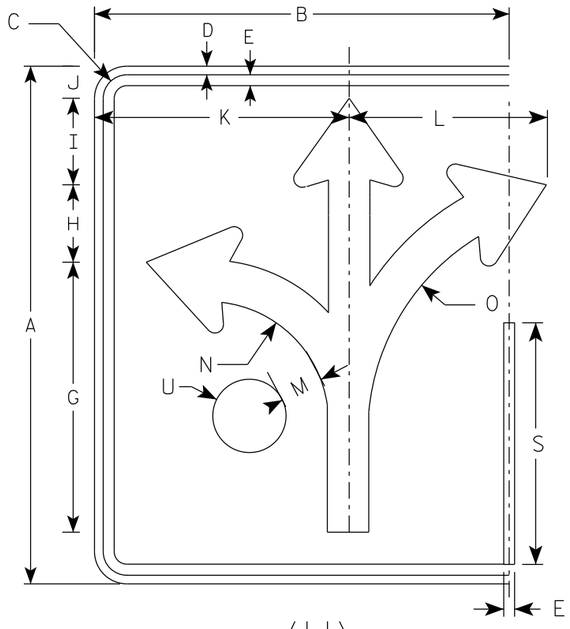
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

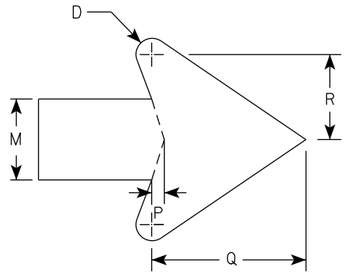
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 709 | E

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

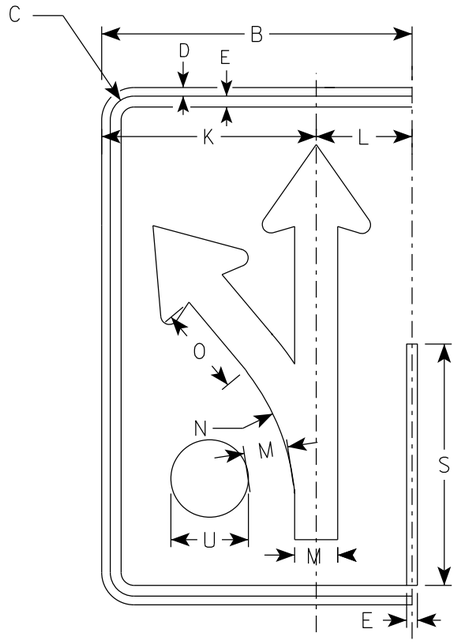
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

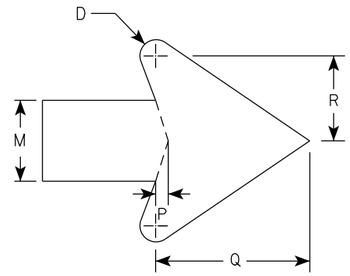
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 710	E

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

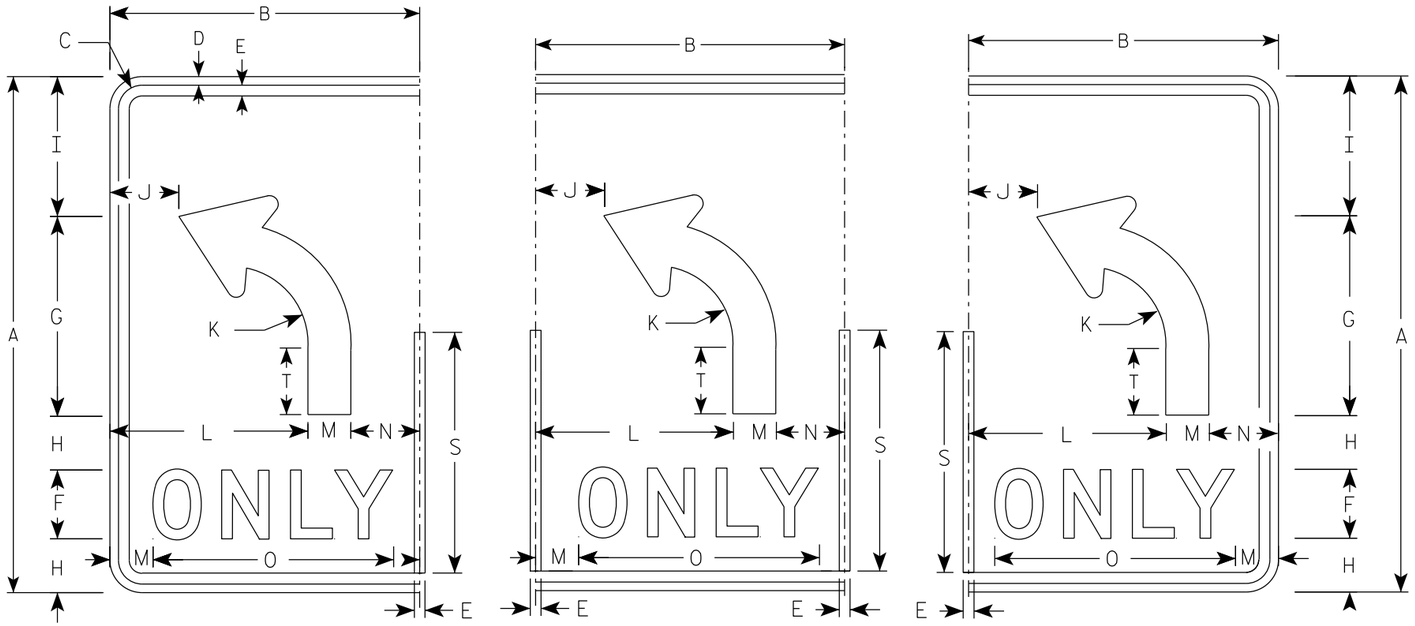
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

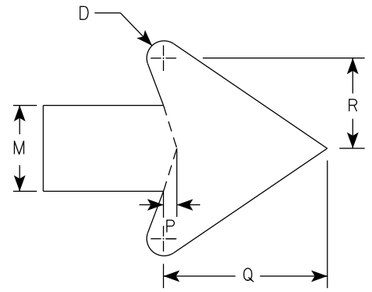
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 711 | E

NOTES

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



(L) (L) (L)



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

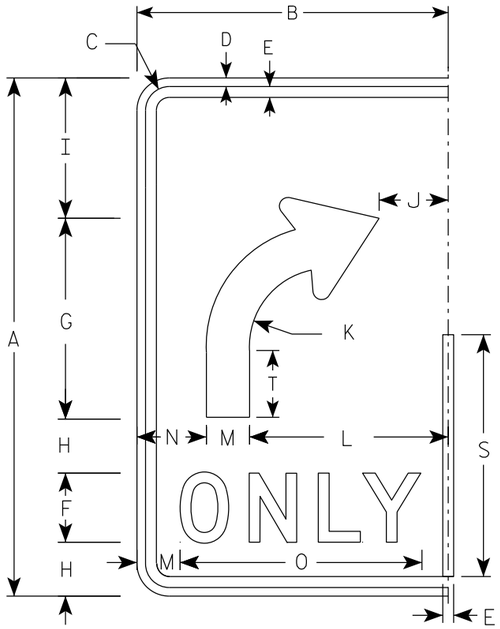
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

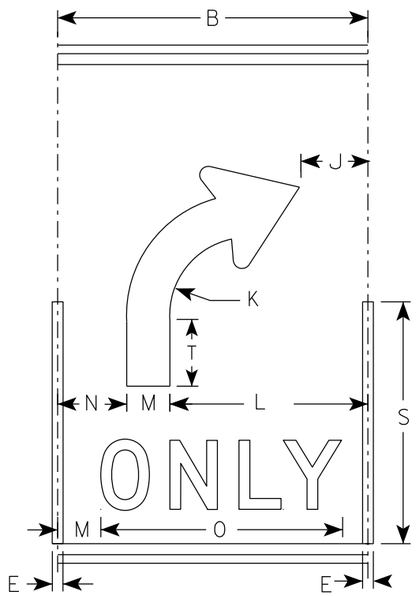
SHEET NO: 712 E

NOTES

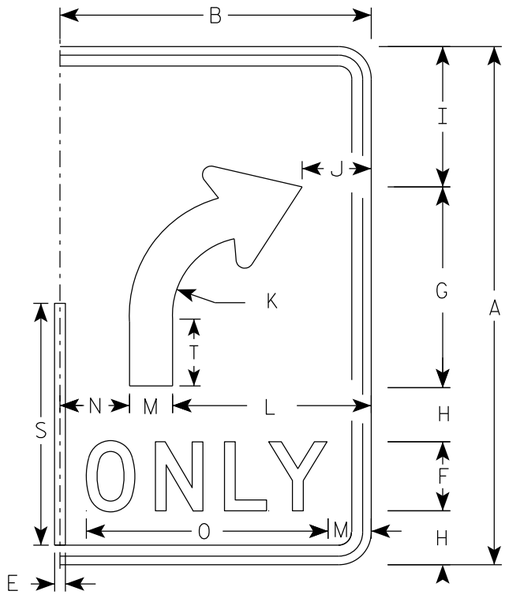
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



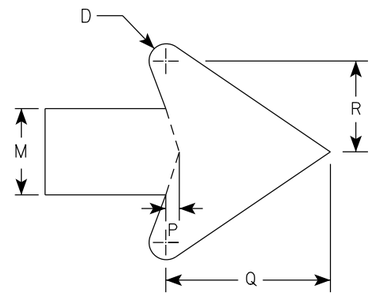
(R)



(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

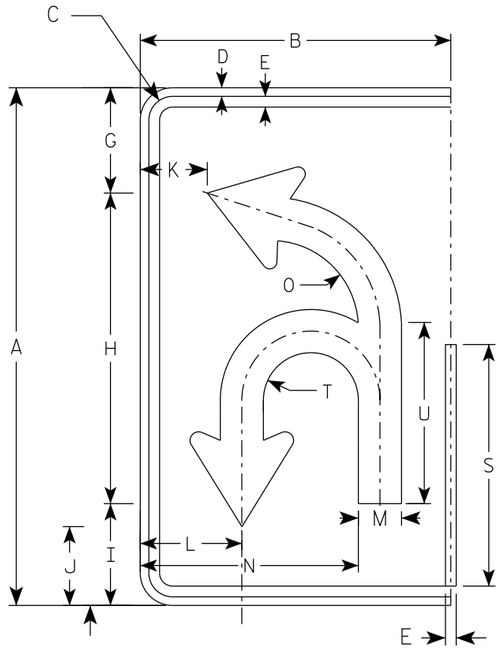
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

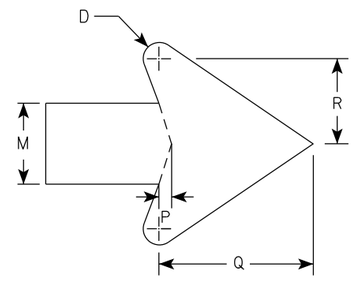
SHEET NO: 713 **E**

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

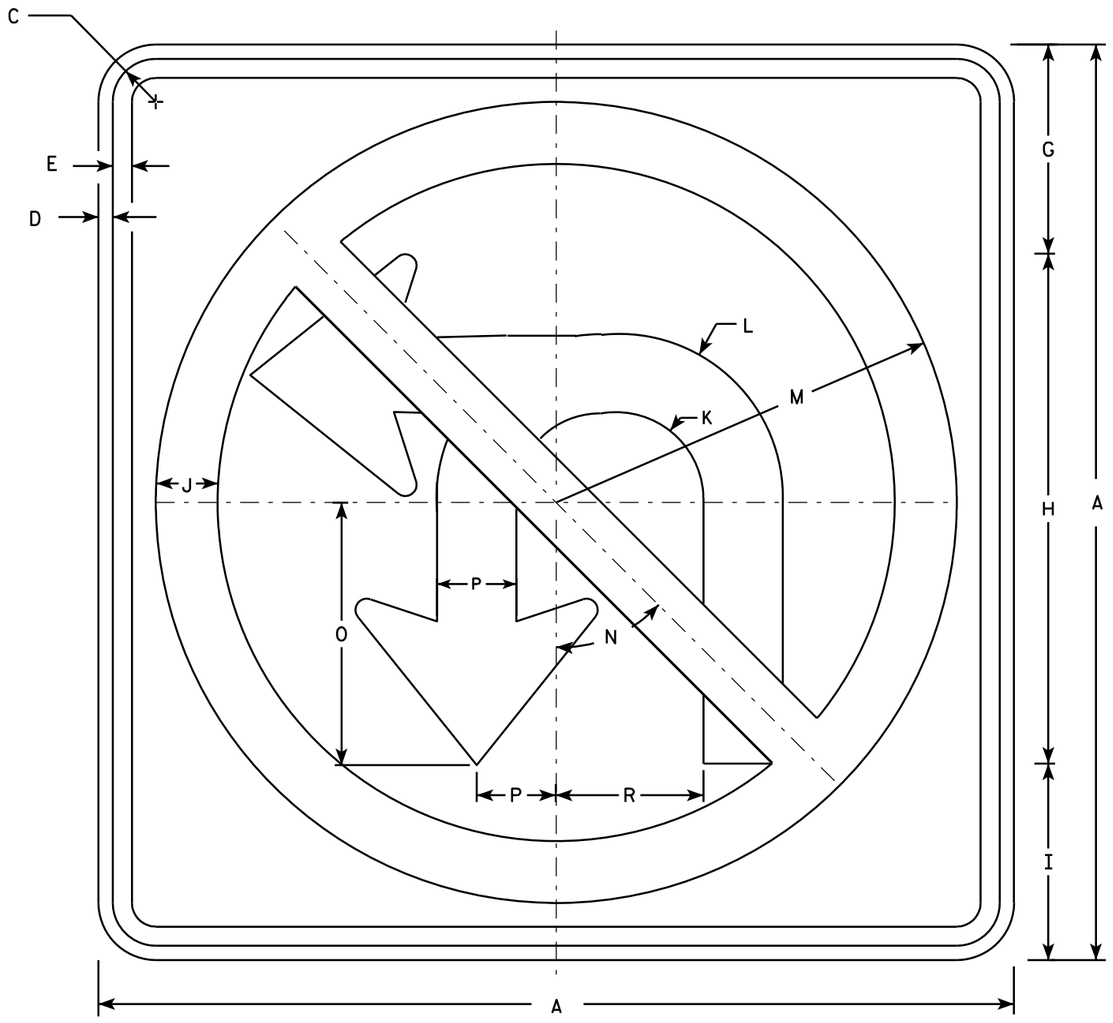
STANDARD SIGN
R3-8 (U) Arrow

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: 714 | E



R3-18

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.

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	3/8	1/2		5 1/2	13 3/8	5 1/8	1 5/8	2 1/4	4 1/4	10 1/2	45°	6 7/8	2 1/8		3 7/8									4.0
2M	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45°	10 3/8	3 1/8		5 3/4									9.0
3	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
4	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
5	48		2 1/4	3/4	1		11	26 3/4	10 1/4	3 1/4	4 5/8	8 5/8	21	45°	13 3/4	4 1/8		7 3/4									16.0

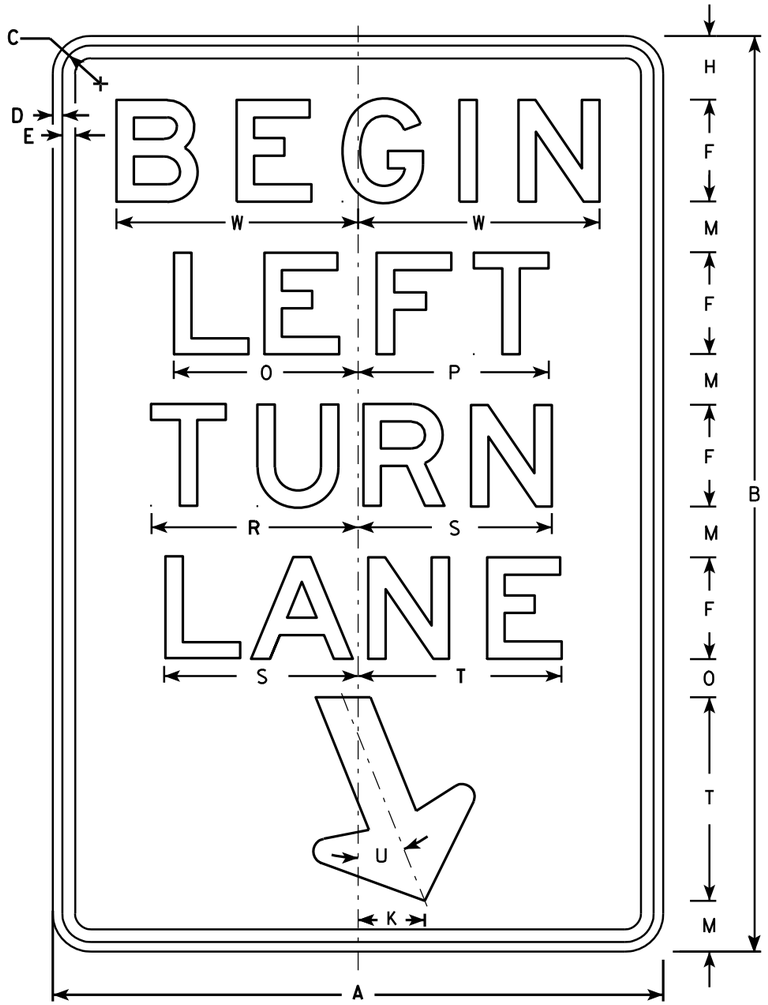
STANDARD SIGN
R3-18

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/10 PLATE NO. R3-18.2

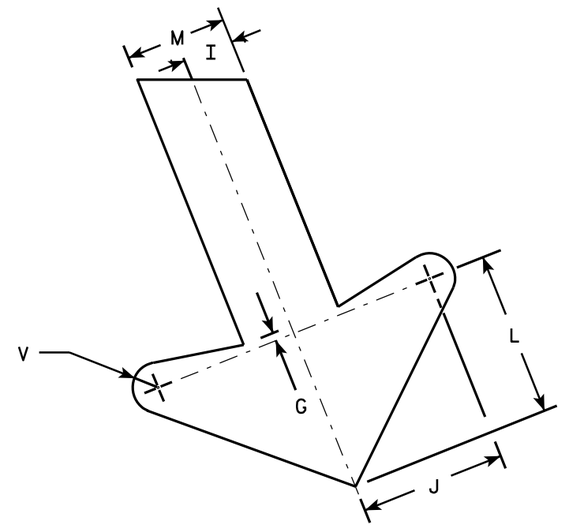
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 715	E



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																											

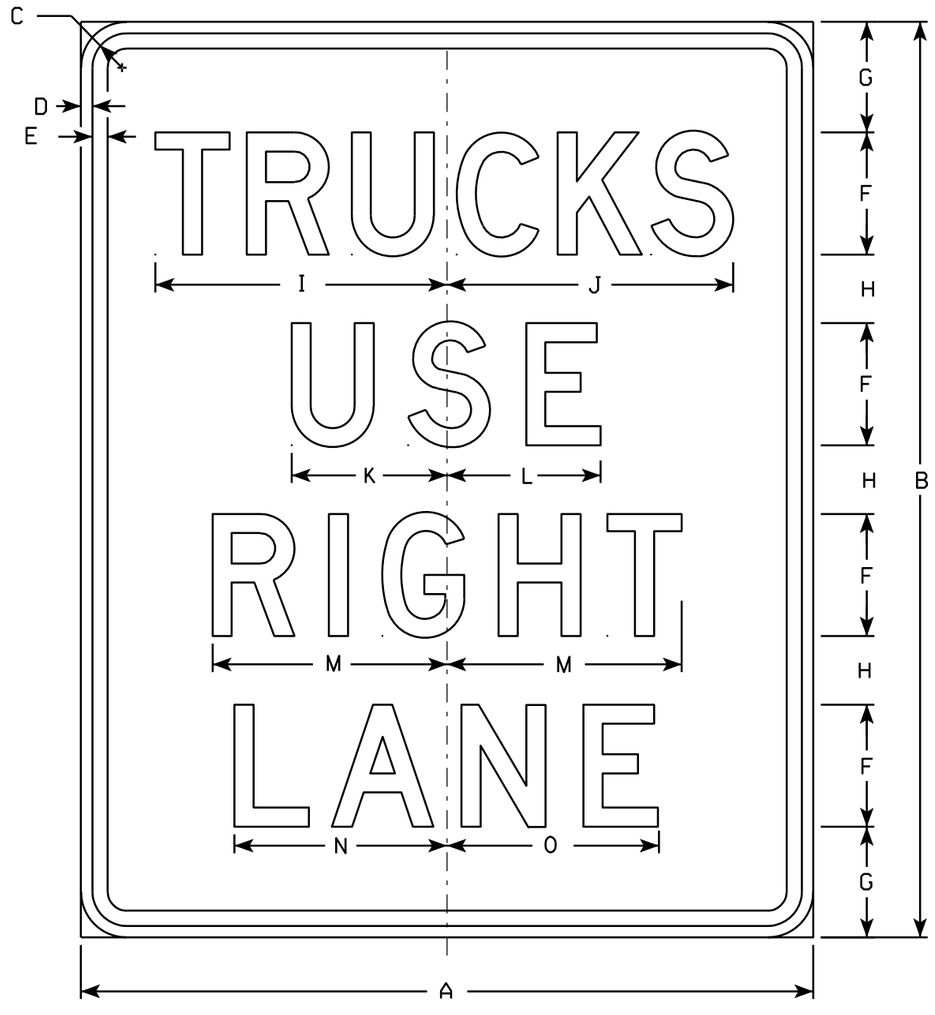
STANDARD SIGN
R3-20L

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: 716 | E

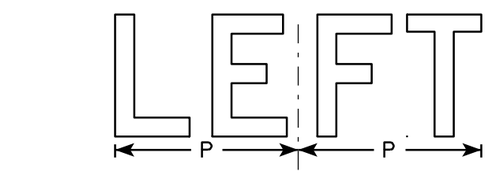


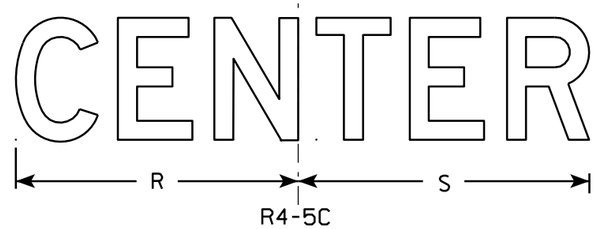
R4-5

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. R4-5L & R4-5C are the same as R4-5 except LEFT or CENTER replaces RIGHT as order by code.

R4-5L





R4-5C

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	4	3 5/8	2 1/4	9 5/8	9 3/8	5 1/8	5 1/8	7 3/4	7 1/4	7	6		9 1/4	9 1/2								5.0
2M	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 5/8	9 3/8	5 1/8	5 1/8	7 3/4	7 1/4	7	6		9 1/4	9 1/2								5.0
3																											
4	36	48	2 1/4	5/8	3/4	6	6	4	14 3/8	14 1/8	7 7/8	7 7/8	12 1/4	10 3/4	10 1/2	9 5/8		13 7/8	14 1/4								12.0
5	48	60	2 1/4	3/4	1	8	7 1/4	4 1/2	19 1/8	18 3/4	10 1/4	10 1/8	15 3/8	14	13 7/8	12		18 1/2	19 1/8								20.0

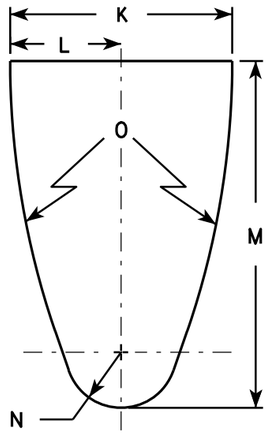
STANDARD SIGN
R4-5

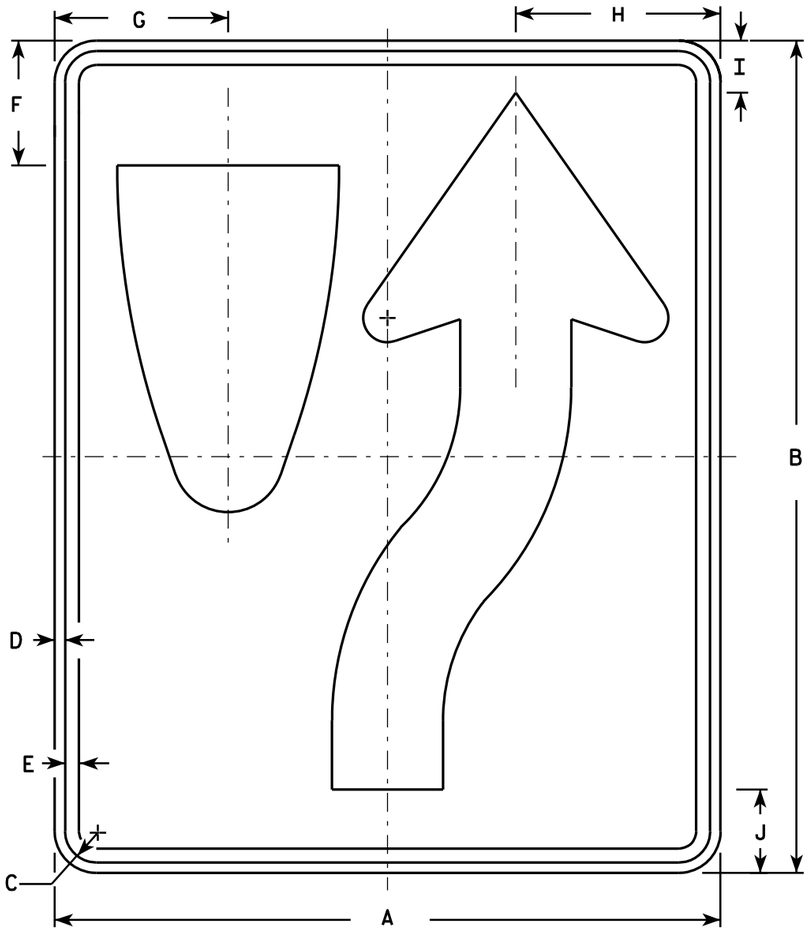
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-5.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 717 | E

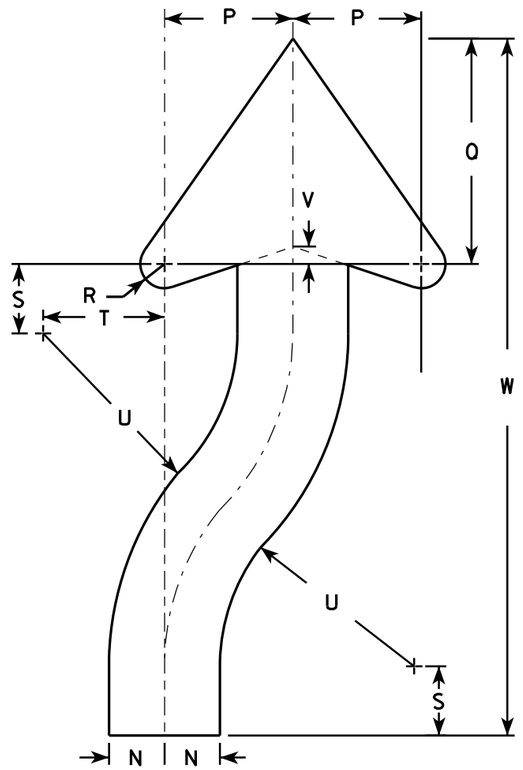




R4-7

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

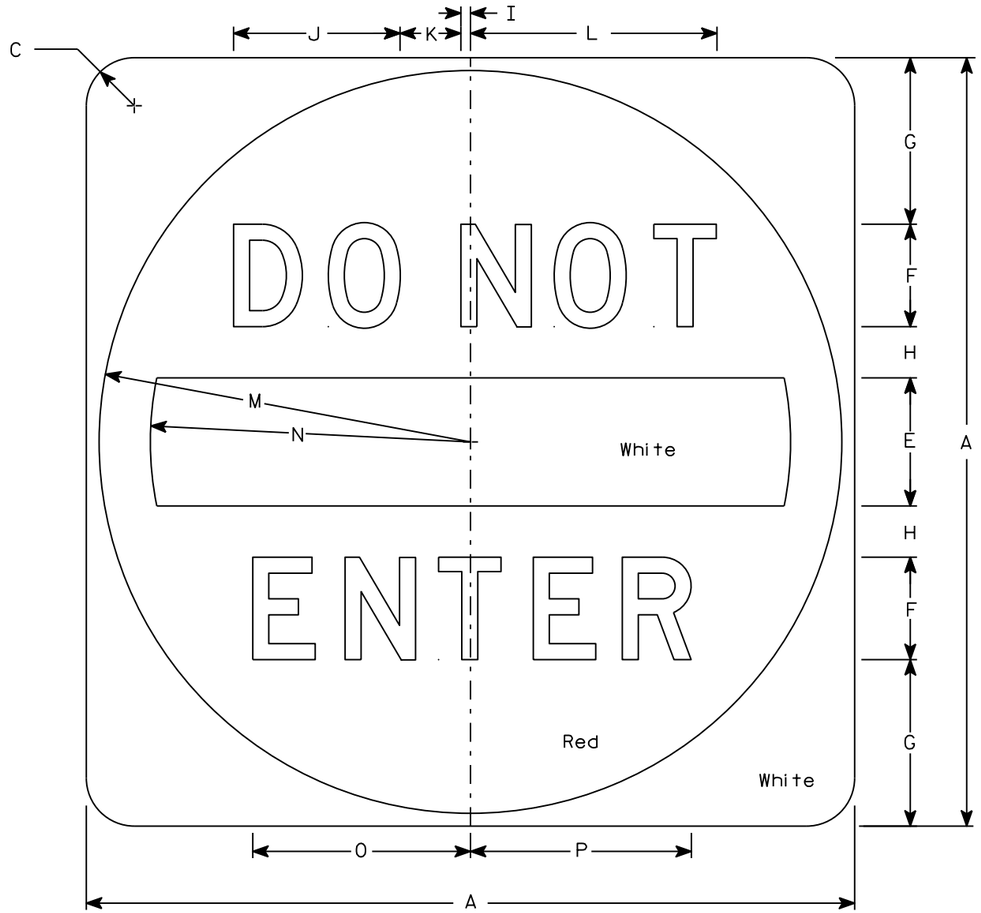
STANDARD SIGN
R4-7 & R4-8

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: 718	E



R5-1

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.25
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

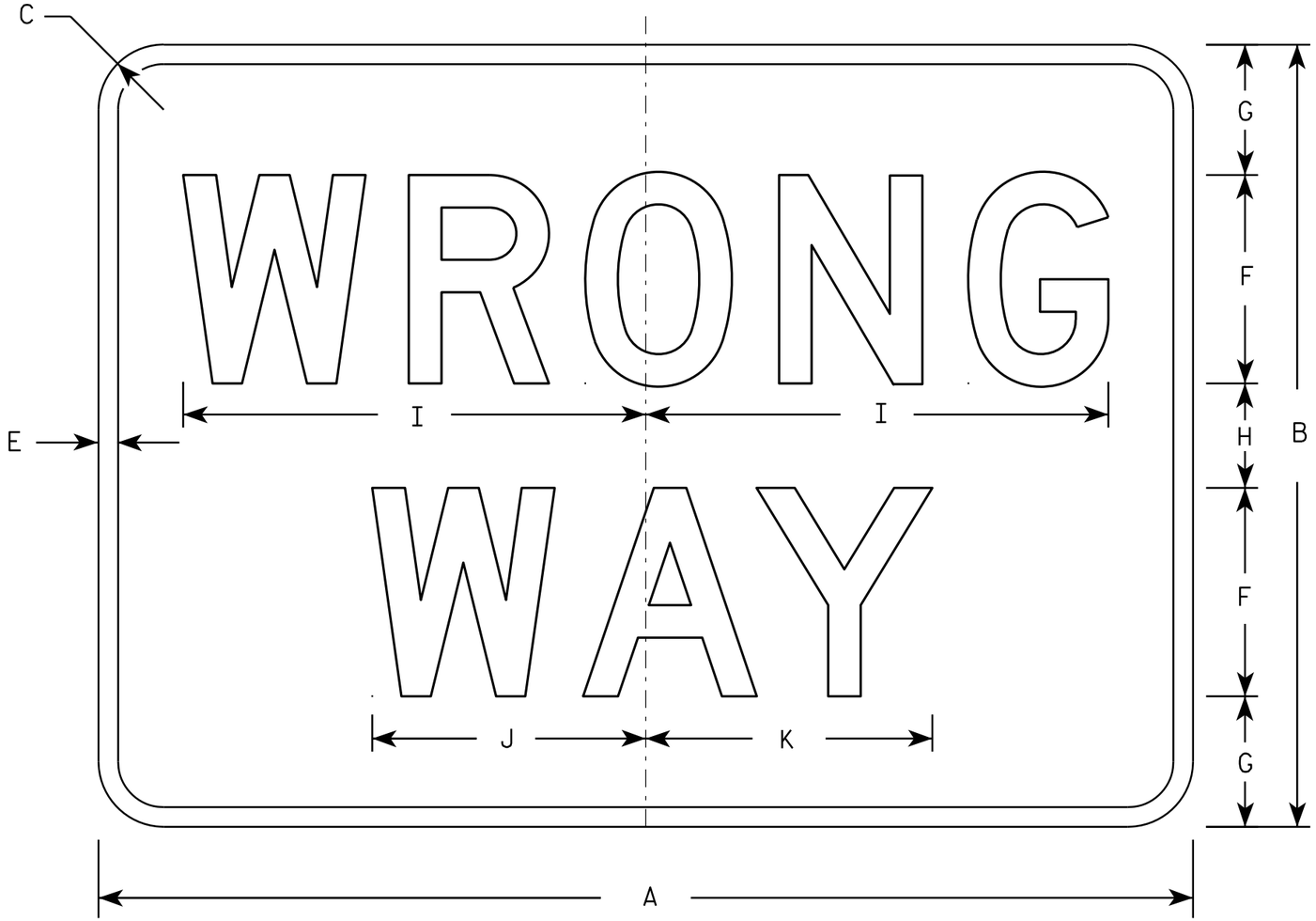
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 719 | E



R5-1A

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 - 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	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

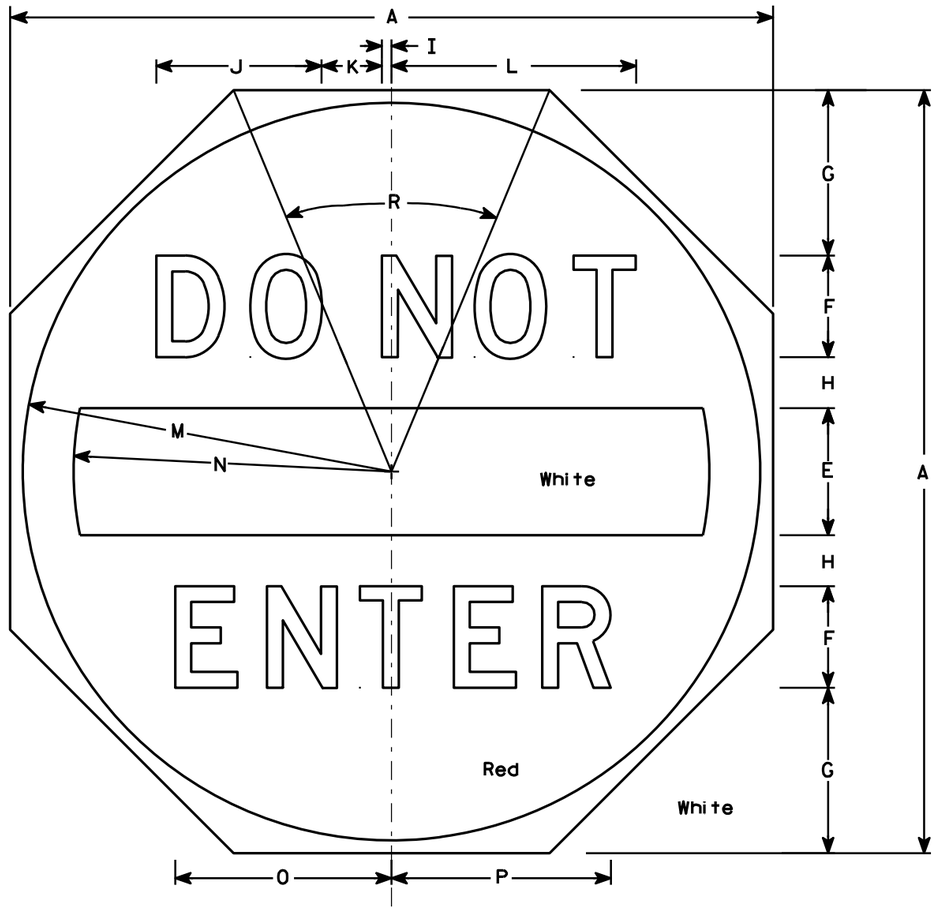
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 720 | E



R5-1C

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors 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		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8		45°									5.18
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4		45°									7.46
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4		45°									7.46
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4		45°									13.25
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8		45°									13.25

STANDARD SIGN
R5-1C

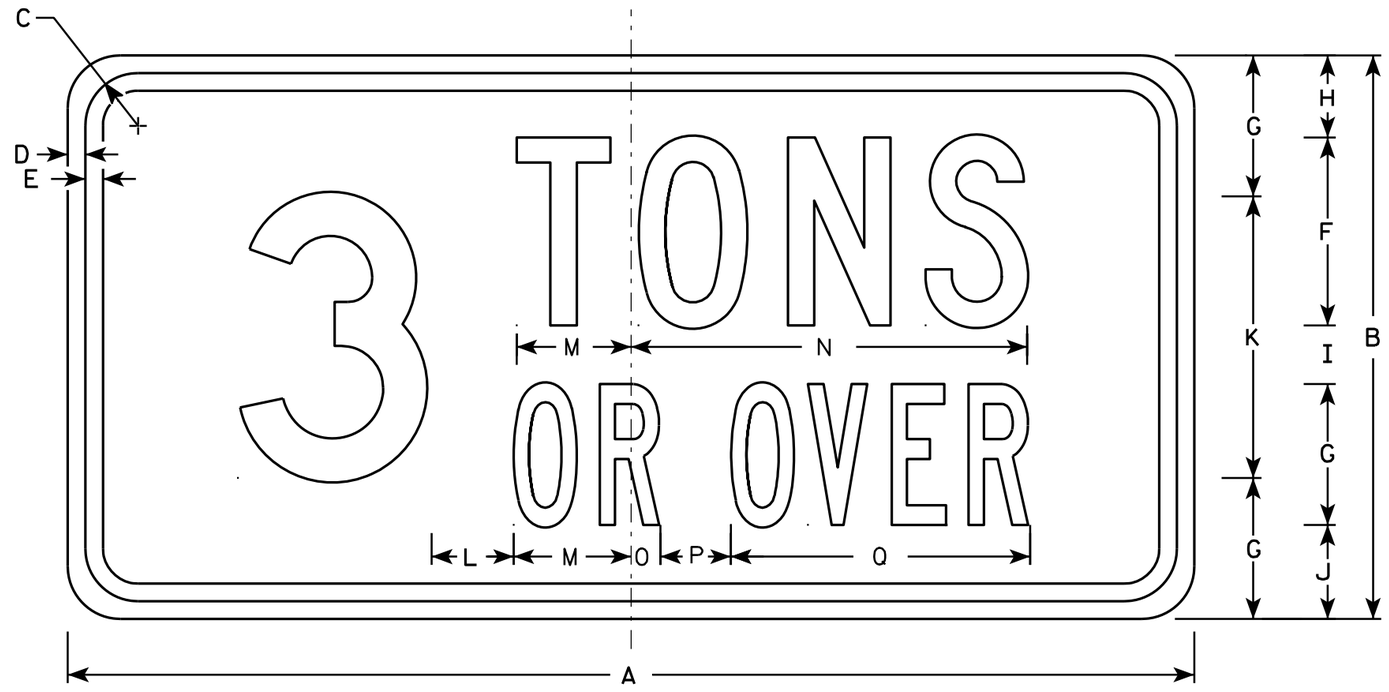
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

State Traffic Engineer

DATE 3/23/11 PLATE NO. R5-1C.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 721 | E



R5-2A

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"
   Line 2 is Series "B"
   Numeral is Series "D"
6. Substitute appropriate numerals.

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	4	3	1 3/4	1 1/4	2	6	1 3/4	2 1/2	8 1/2	5/8	1 1/2	6 3/8										2.0
2M	24	12	1 1/8	3/8	3/8	4	3	1 3/4	1 1/4	2	6	1 3/4	2 1/2	8 1/2	5/8	1 1/2	6 3/8										2.0
3	30	15	1 1/8	3/8	1/2	5	4	2 1/8	1 3/8	2 1/2	7	2 1/4	3 1/8	10 1/2	1	2 3/8	8 1/2										2.25
4	36	18	1 1/8	3/8	1/2	6	5	2 5/8	1 3/8	3	9	2 1/2	3 3/4	12 5/8	1 3/8	3 1/8	10 1/2										4.5
5	48	24	1 3/8	3/8	5/8	8	6	3 1/2	2 1/2	4	12	3 1/2	4 7/8	16 7/8	1 1/4	3	12 3/4										8.0

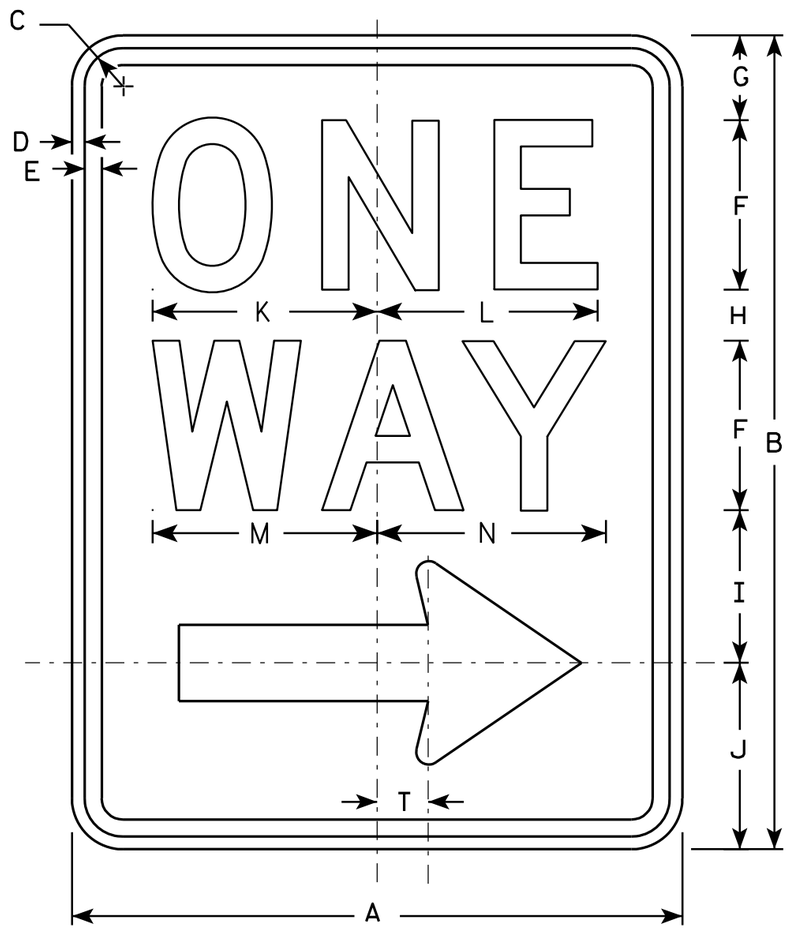
STANDARD SIGN
R5-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-2A.7

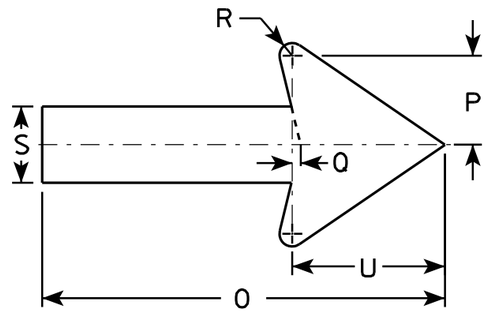
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 722	E



R6-2R

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. R6-2L same as R6-2R except arrow points to the left.



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
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

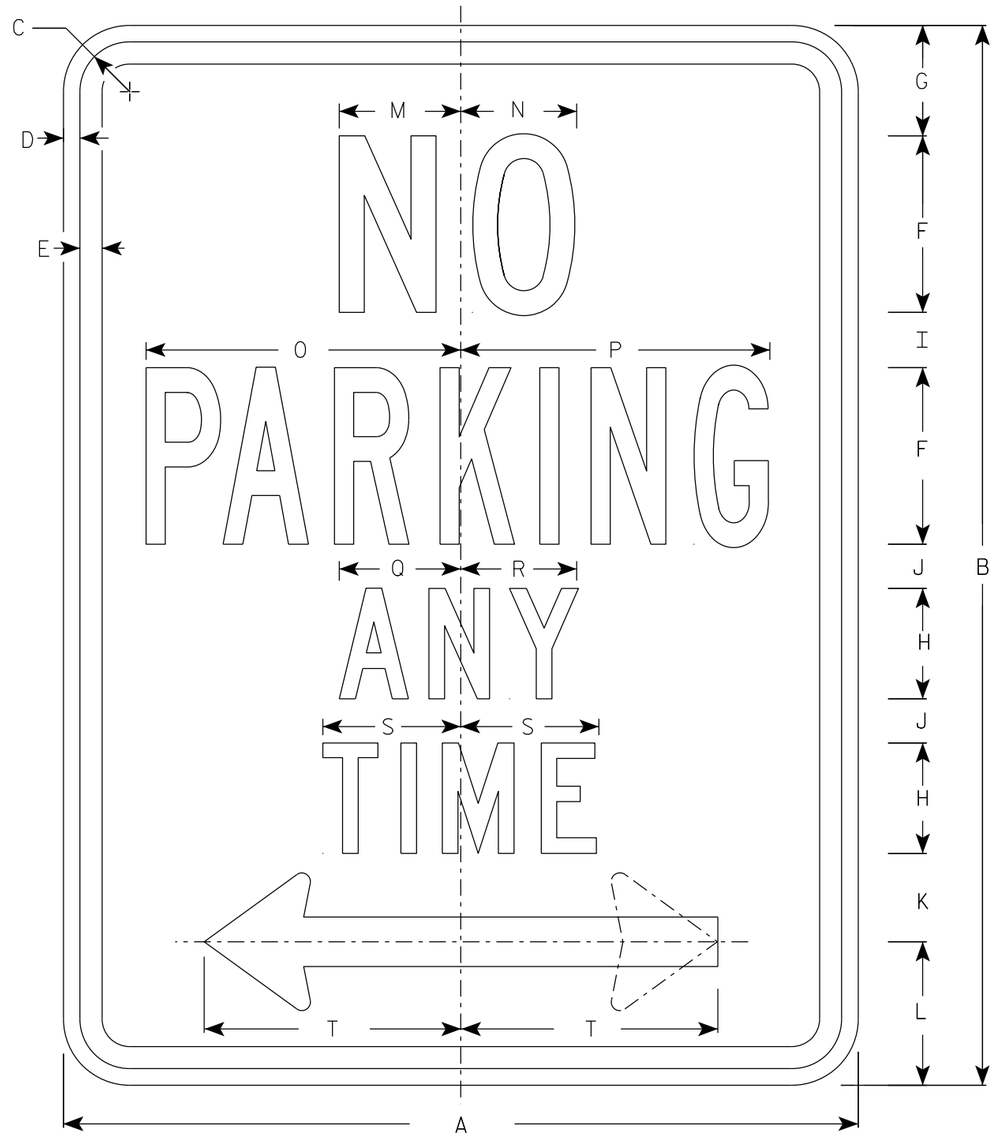
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

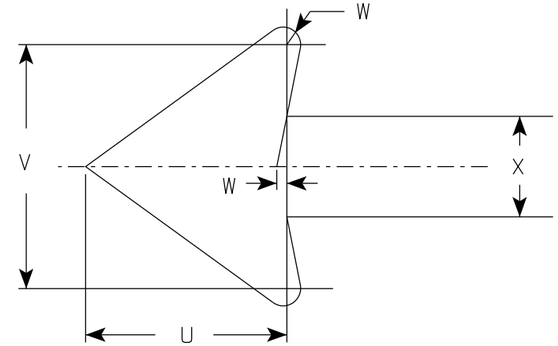
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 723	E



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																											

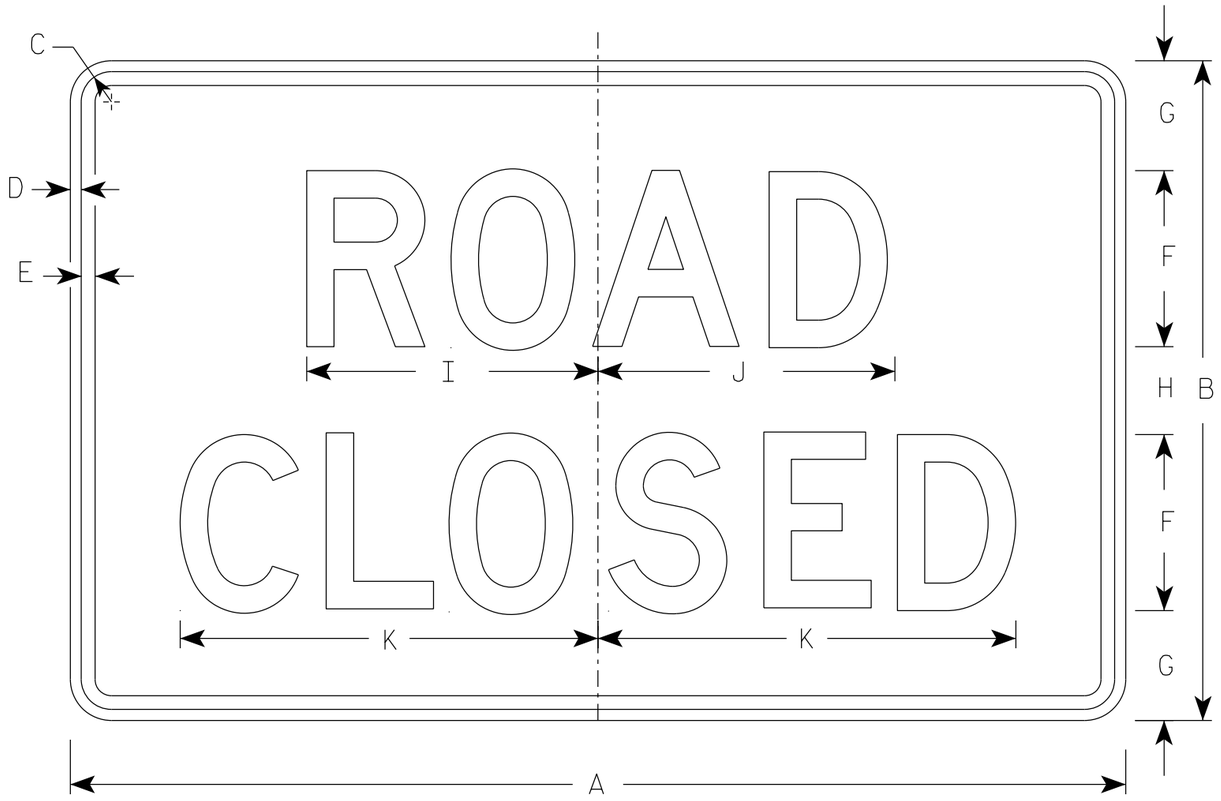
STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2021 PLATE NO. R7-1.10

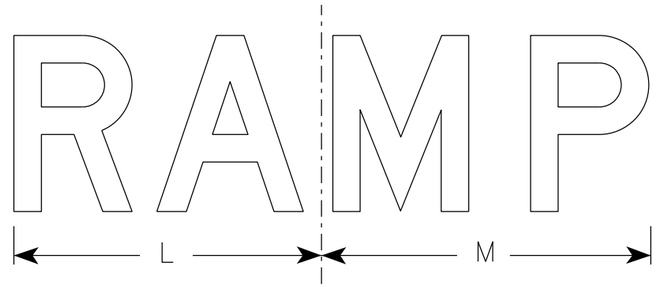
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 724 E



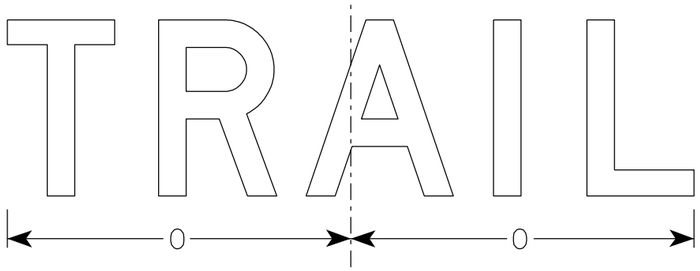
R11-2

NOTES

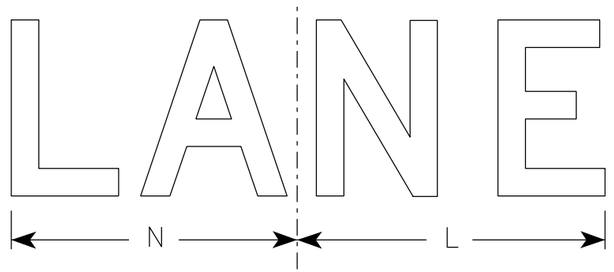
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the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

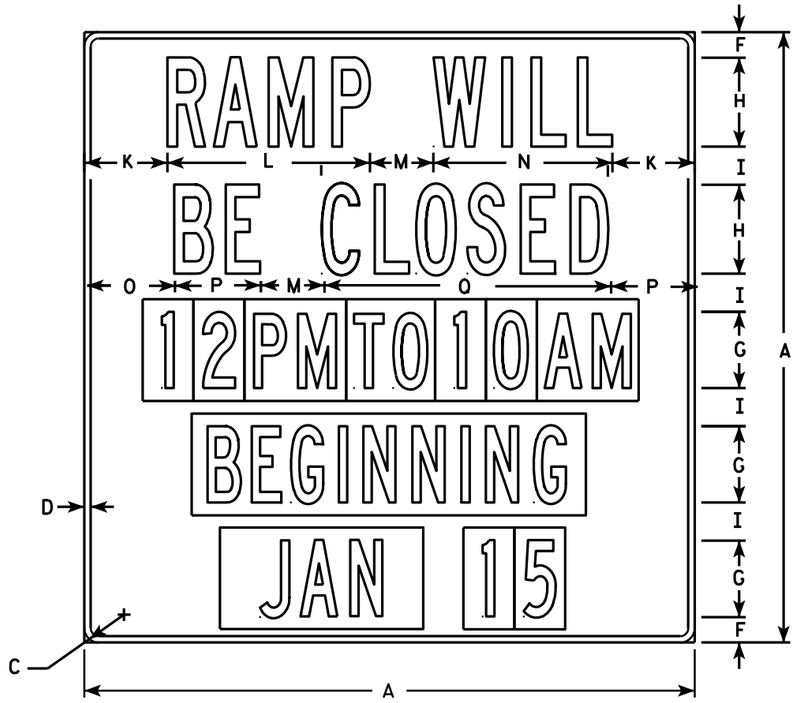
STANDARD SIGN
R11-2

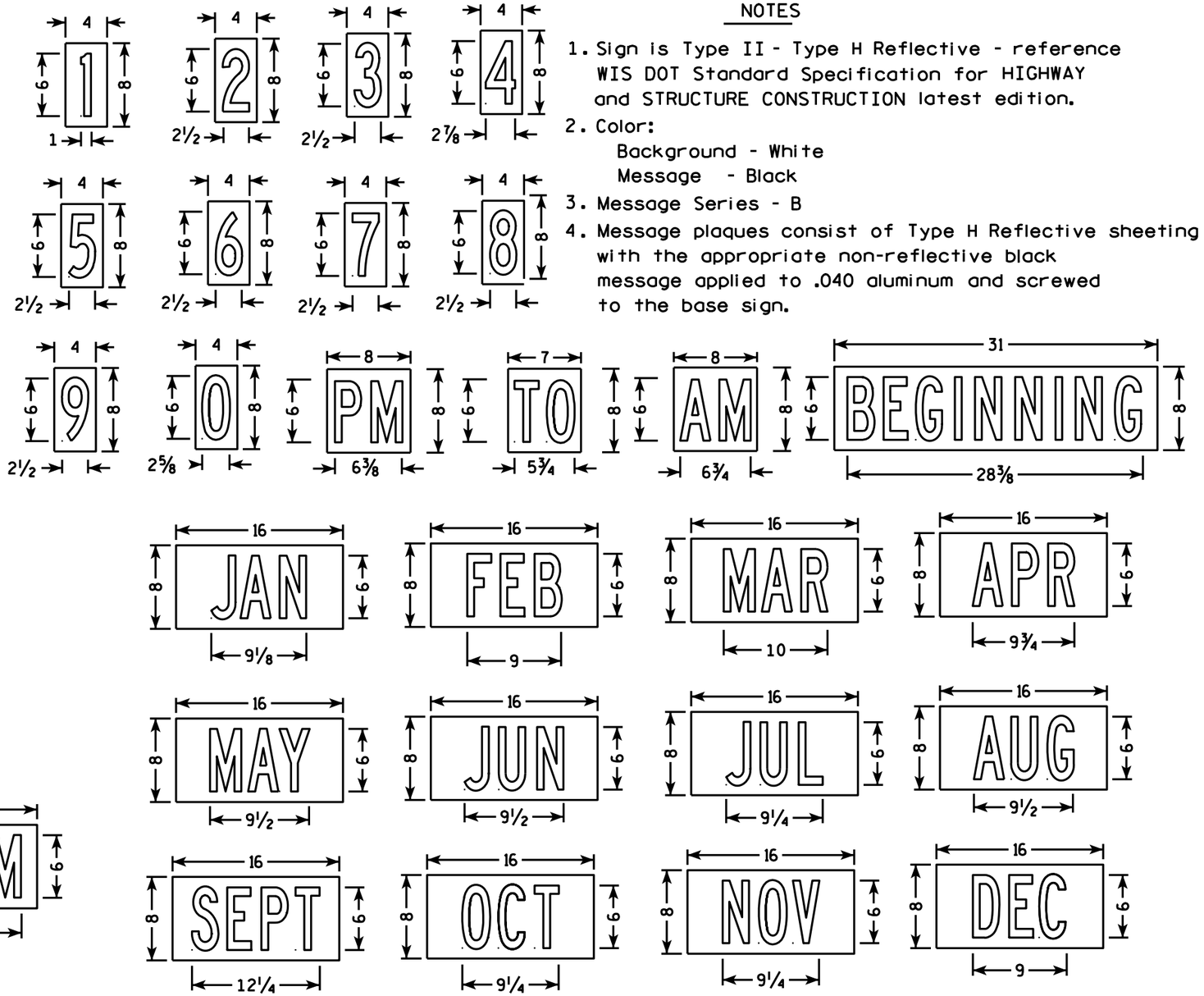
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2021 PLATE NO. R11-2.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 725	E





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 - B
4. Message plaques consist of Type H Reflective sheeting with the appropriate non-reflective black message applied to .040 aluminum and screwed to the base sign.

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		2 1/4	1/2		2	6	7	3		6 1/2	15 7/8	5	14 1/8	6 7/8	6 3/4	22 1/2										16.0
2M	48		2 1/4	1/2		2	6	7	3		6 1/2	15 7/8	5	14 1/8	6 7/8	6 3/4	22 1/2										16.0
3																											
4																											
5																											

STANDARD SIGN
R11-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-51.4

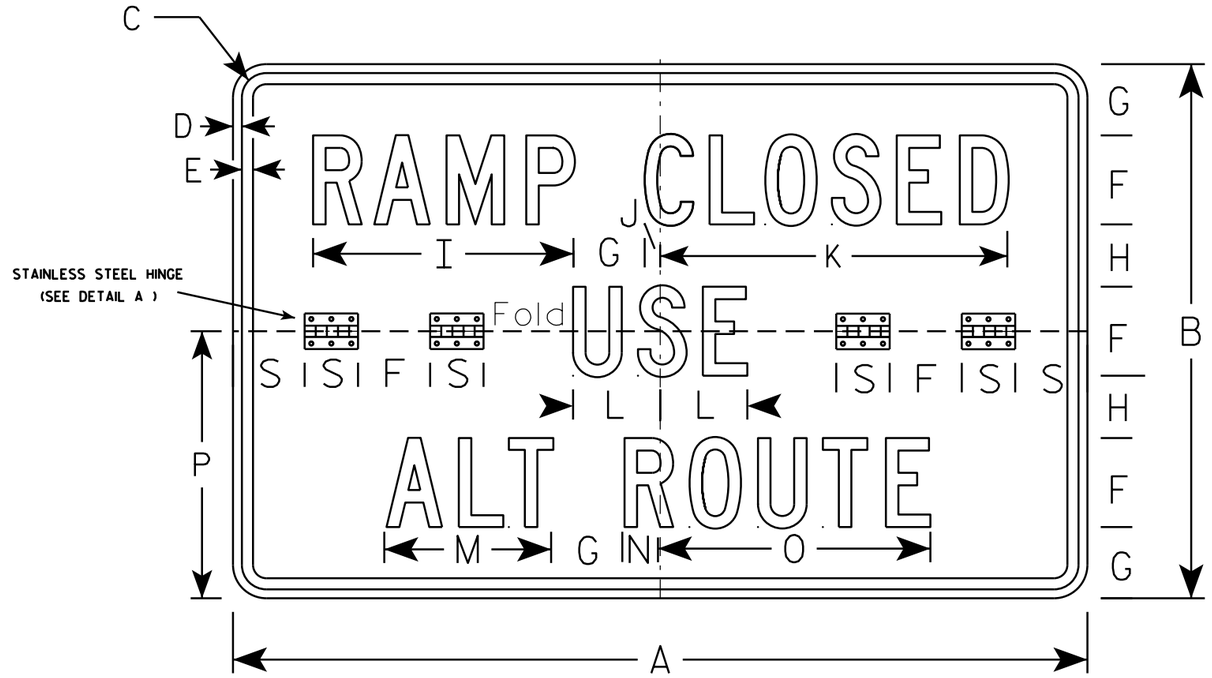
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 726	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R1151.DGN PLOT DATE : 01-APR-2011 14:07 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000

WISDOT/CADDS SHEET 42

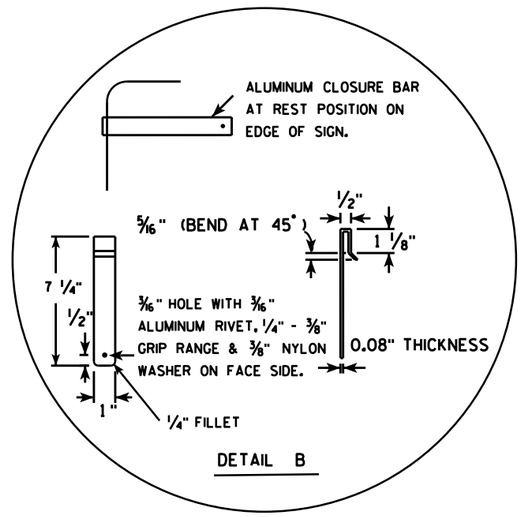
7

7



R11-54F

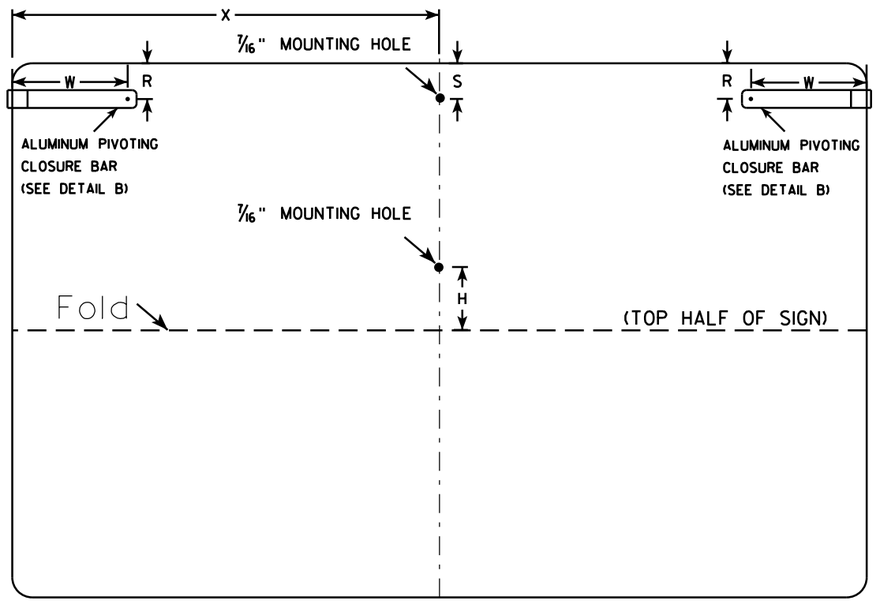
DETAIL A



DETAIL B

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - C
4. Sign Base Material shall be aluminum, corners and borders shall be rounded.
5. All hardware used on the folding sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.
6. Refer to plate A5-3A for sign blank layout.



(BACK VIEW)

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	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
2M	48	30	1 3/8	1/2	5/8	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
3																											
4																											
5																											

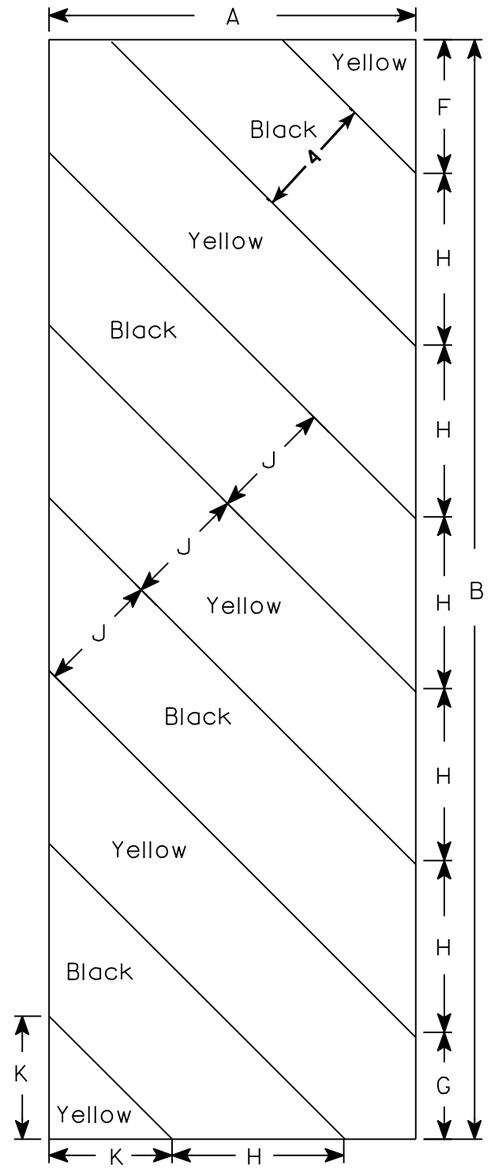
STANDARD SIGN
R11-54F

WISCONSIN DEPT OF TRANSPORTATION

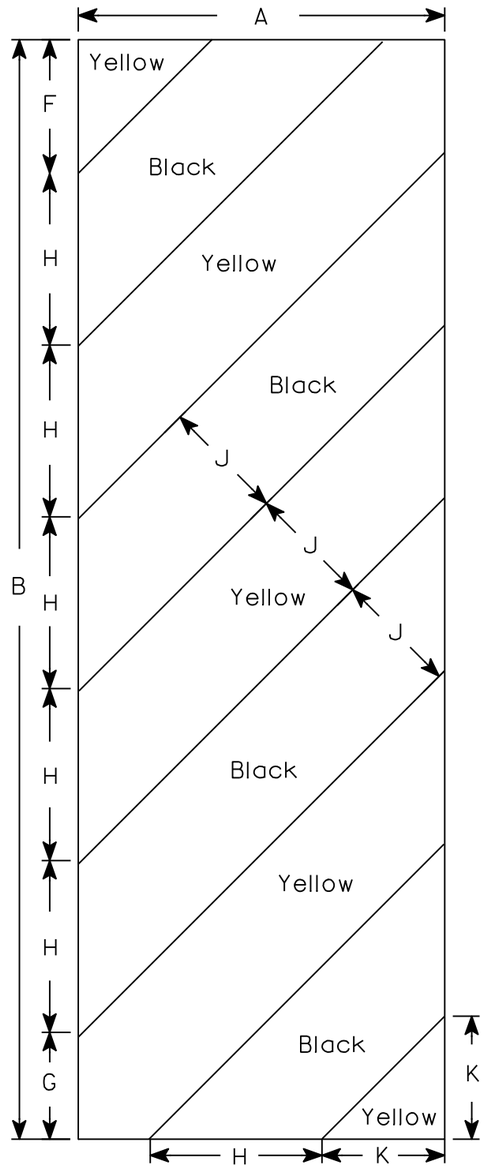
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/28/14 PLATE NO. 727 R11-54F.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: E



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

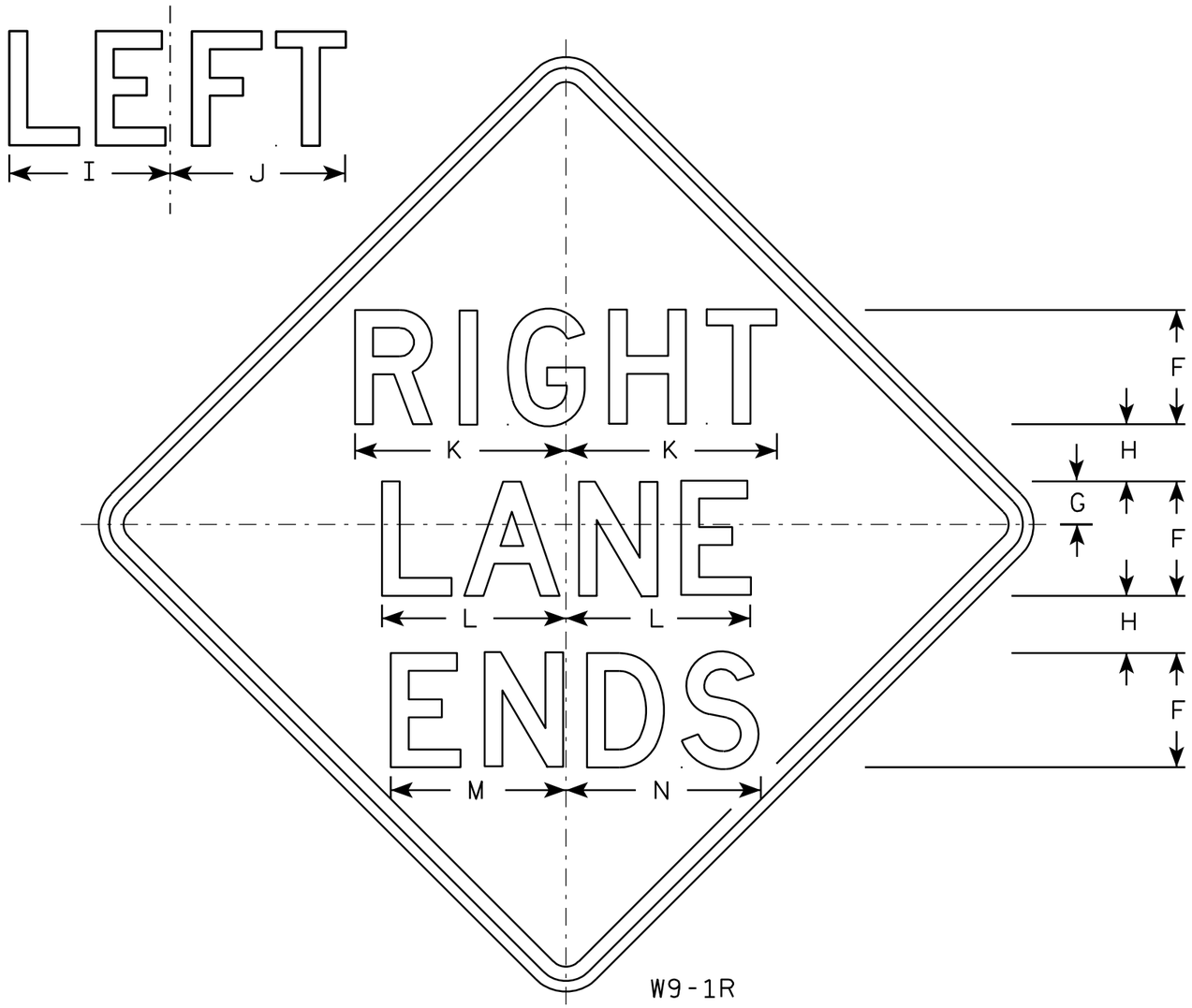
W5-52L & W5-52R

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: 728	E



W9-1R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. W9-1L same as W9-1R except the word Left replaces 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	30		1 3/8	1/2	5/8	5	1 1/2	2 1/2	7 1/8	7 5/8	9 1/4	8 1/8	7 5/8	8 5/8													6.25
2S	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
2M	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
3	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
4	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
5	48		2 1/4	3/4	1	8	3	4	11 1/4	12 1/4	14 3/4	12 7/8	12 1/4	13 5/8													16.0

STANDARD SIGN
W9-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

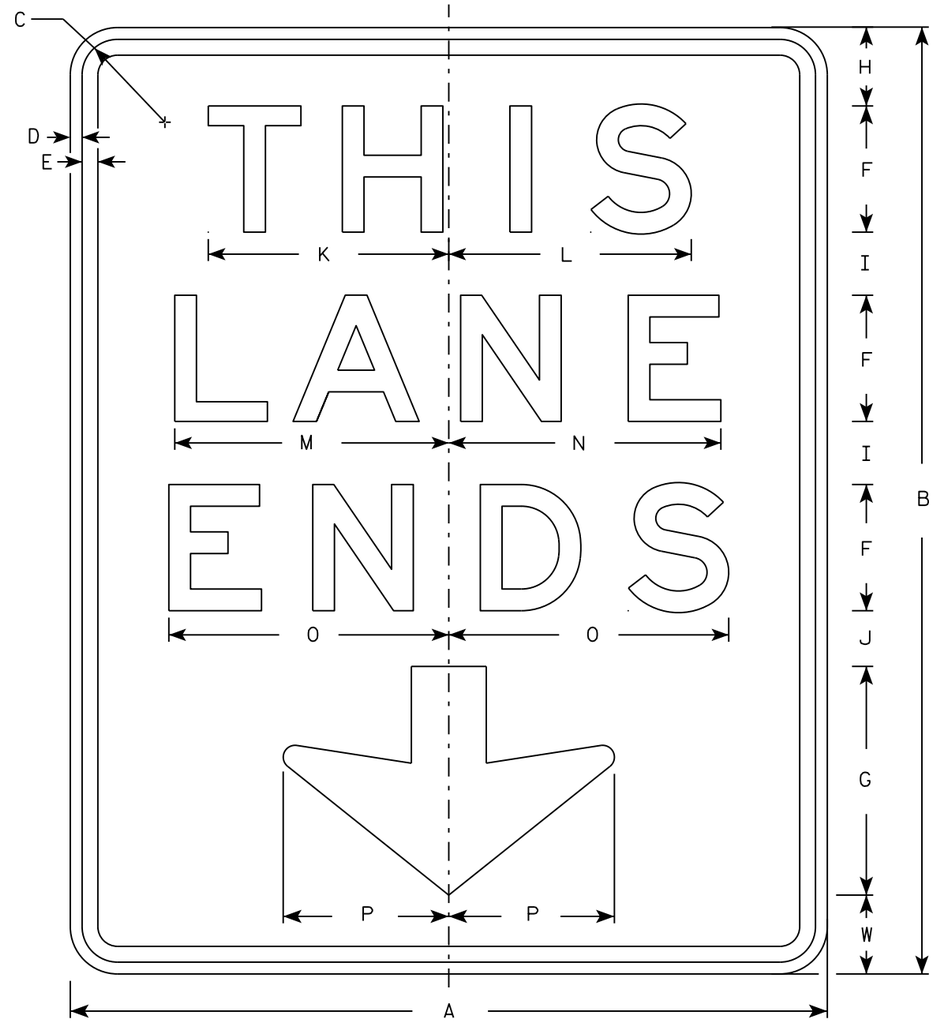
DATE 03/18/13 PLATE NO. W9-1.8

PROJECT NO:

SHEET NO: 729 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W91.DGN PLOT DATE : 18-MAR-2013 11:42 PLOT BY : mscsja

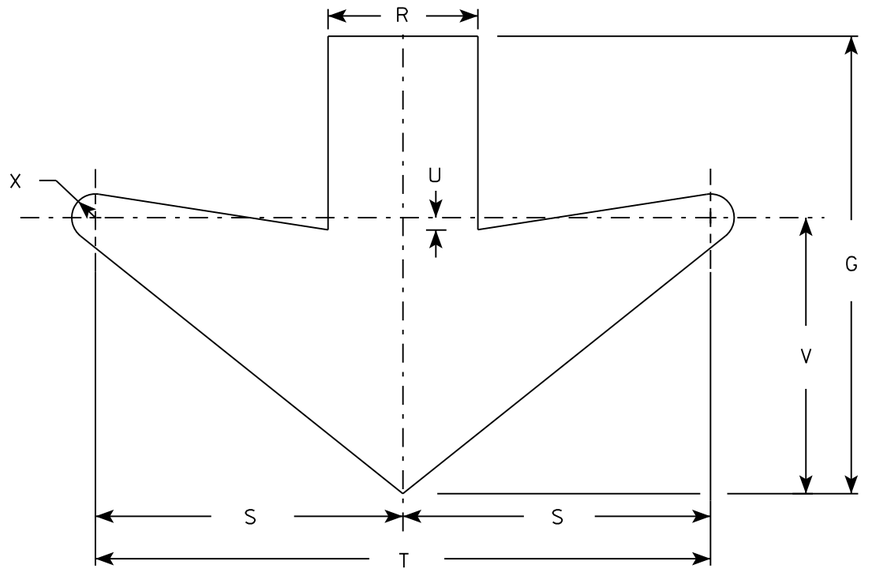
WISDOT/CADDS SHEET 42



W9-62

NOTES

1. Sign is Type II - Type F Reflective except see Note 5
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - E
4. Size 4 and 5 shall be Type I - Type F Reflective



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	48	60	2 1/4	3/4	1	8	14 1/2	5	4	3 1/2	15 1/4	15 3/8	17 3/8	17 1/4	17 3/4	10 1/2		4 3/4	9 3/4	19 1/2	3/4	8 3/4	5	3/4			20.0
2S	48	60	2 1/4	3/4	1	8	14 1/2	5	4	3 1/2	15 1/4	15 3/8	17 3/8	17 1/4	17 3/4	10 1/2		4 3/4	9 3/4	19 1/2	3/4	8 3/4	5	3/4			20.0
2M	48	60	2 1/4	3/4	1	8	14 1/2	5	4	3 1/2	15 1/4	15 3/8	17 3/8	17 1/4	17 3/4	10 1/2		4 3/4	9 3/4	19 1/2	3/4	8 3/4	5	3/4			20.0
3																											
4	72	90	6	1	1 1/2	12	22	8	6	5	23	23	26 1/8	26 1/8	26 5/8	16		6 1/2	15	30	2	15	7	1			45.0
5	72	90	6	1	1 1/2	12	22	8	6	5	23	23	26 1/8	26 1/8	26 5/8	16		6 1/2	15	30	2	15	7	1			45.0

STANDARD SIGN
W9-62

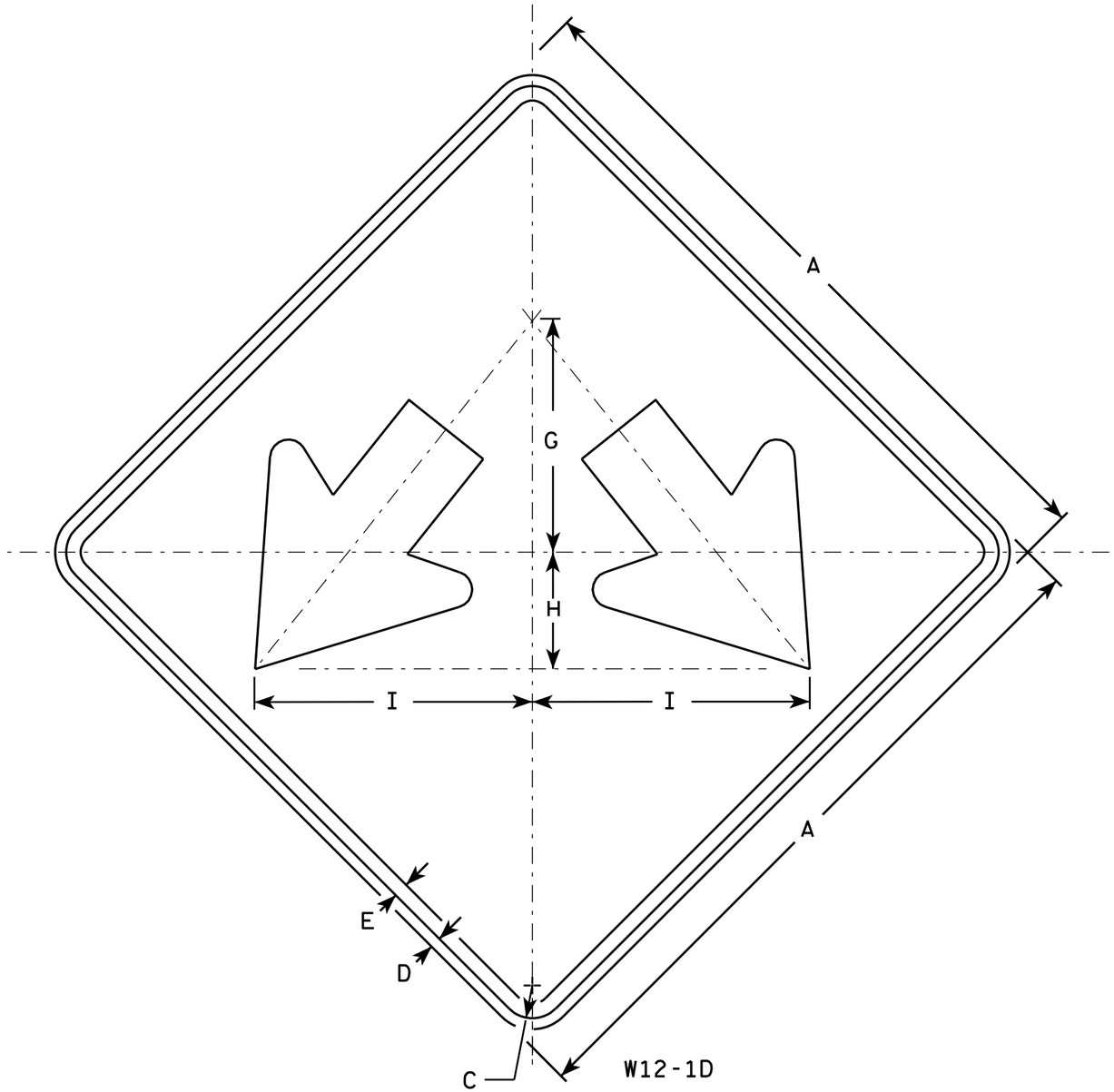
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. W9-62.11

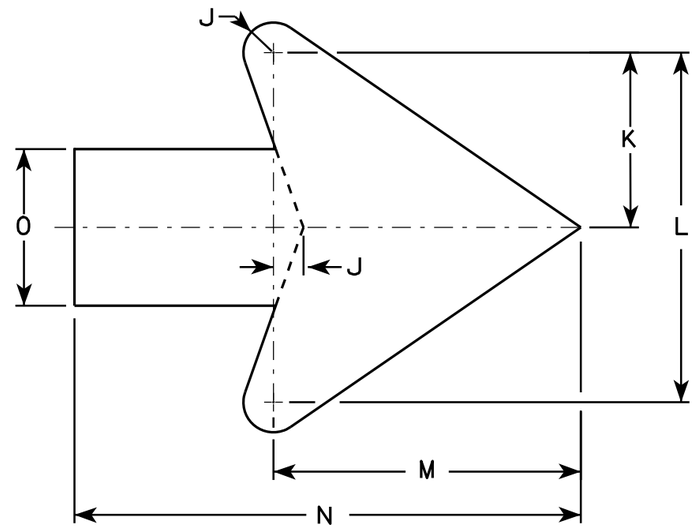
PROJECT NO:

SHEET NO: 730 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

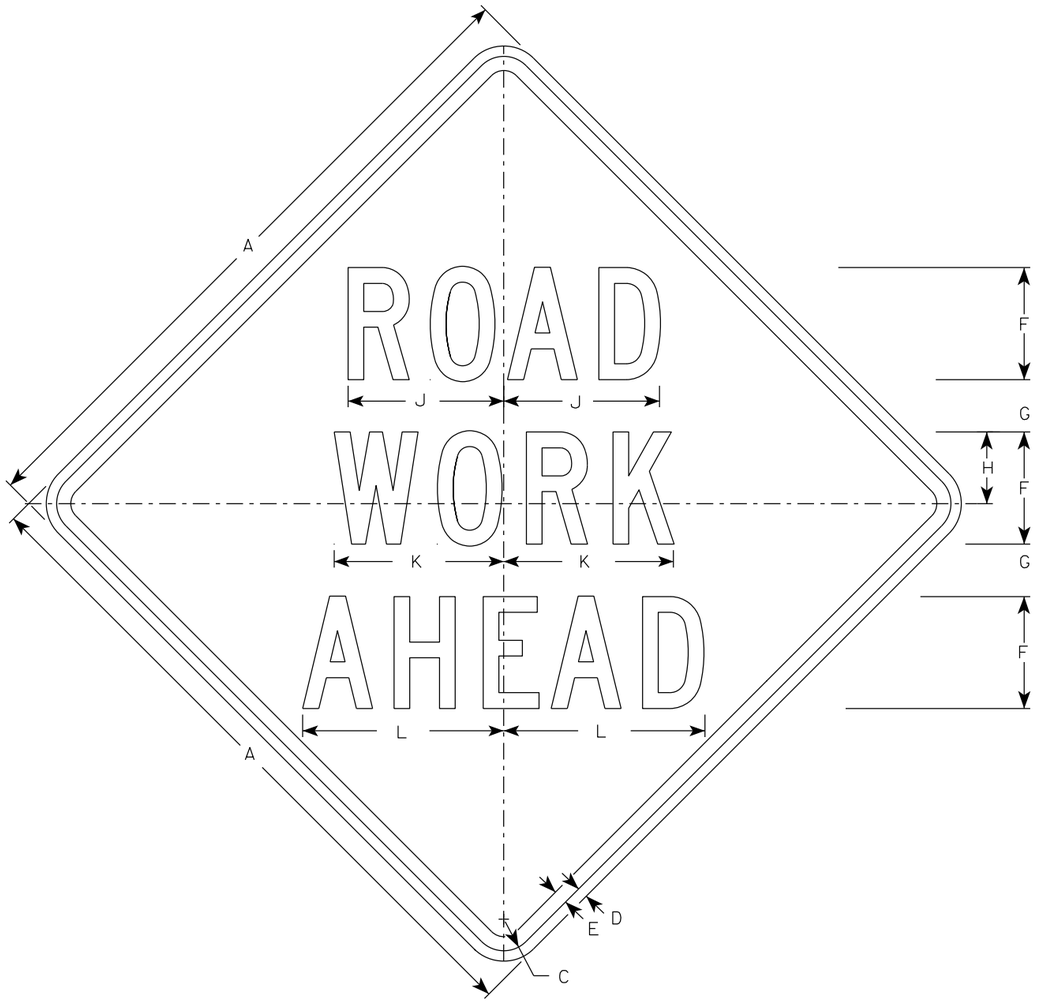
STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

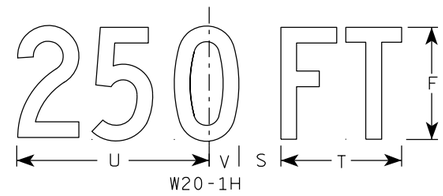
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

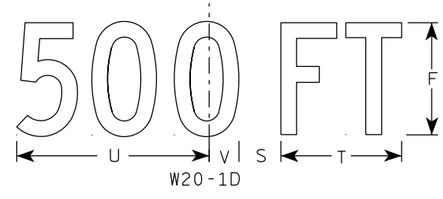
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 731	E



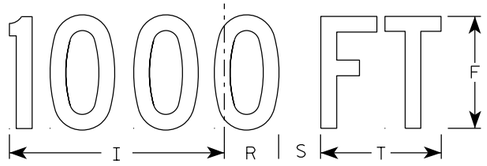
W20-1A



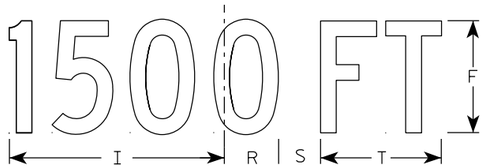
W20-1H



W20-1D



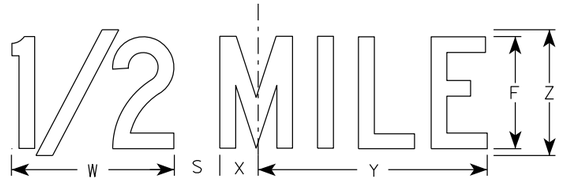
W20-1C



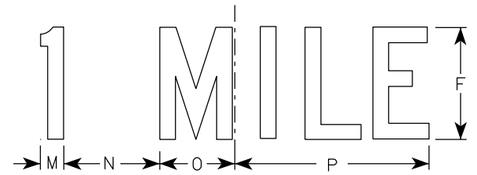
W20-1B

NOTES

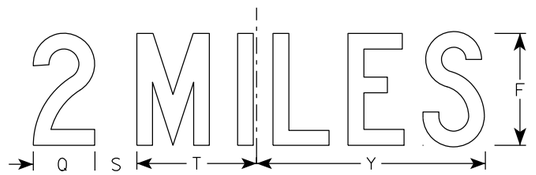
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



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:

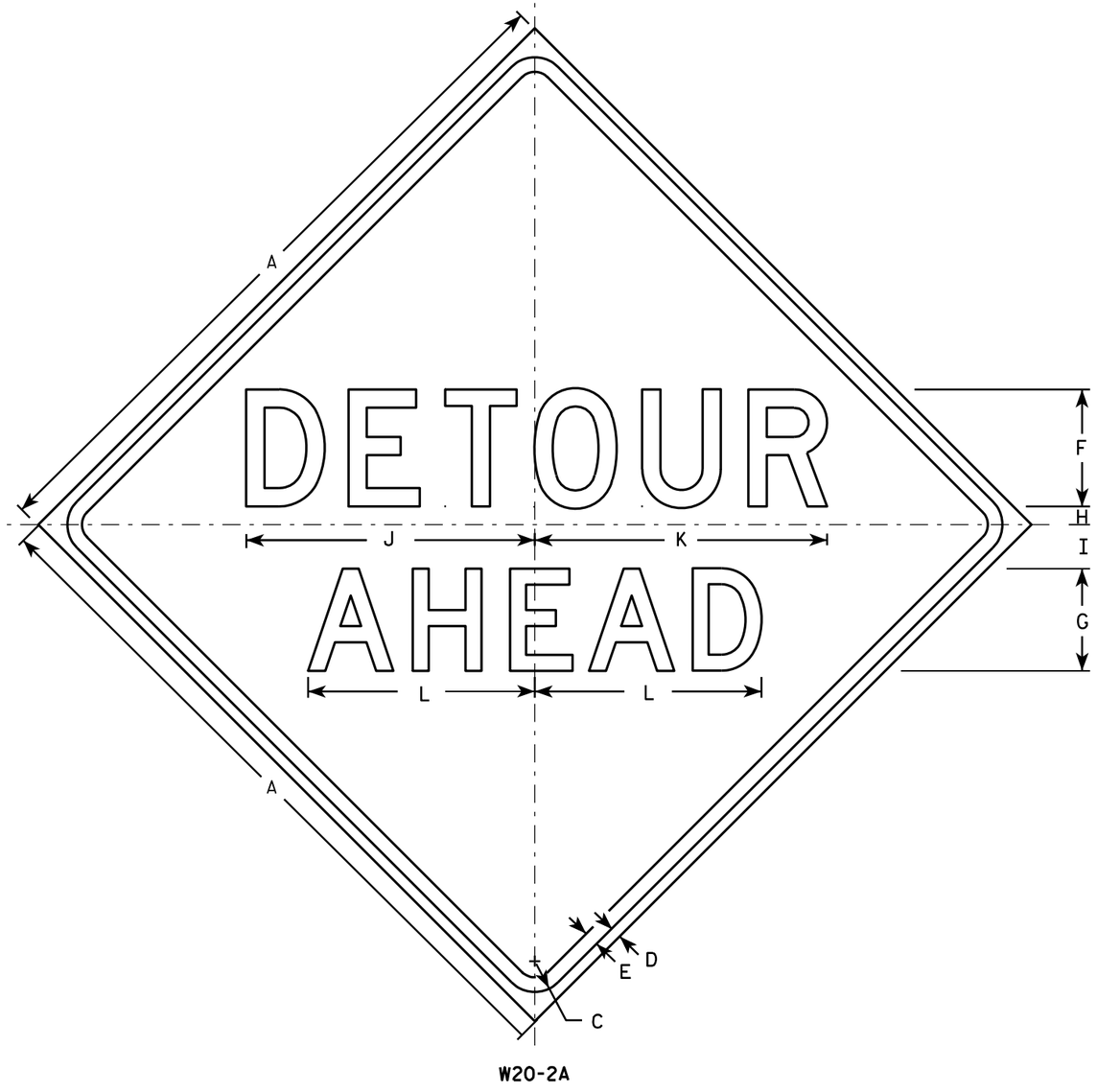
SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 25-MARCH-2020 PLOT BY : dotc4c

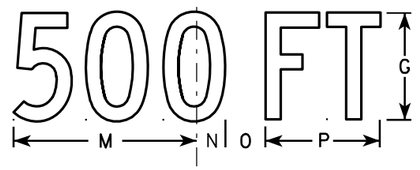
WISDOT/CADDS SHEET 42

7

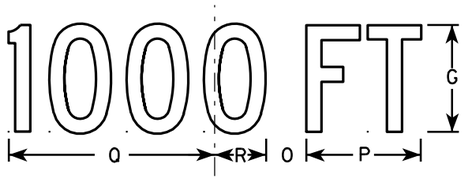
7



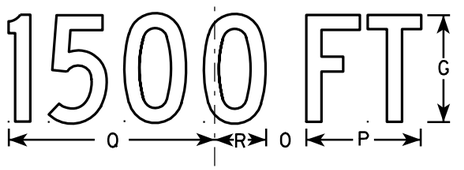
W20-2A



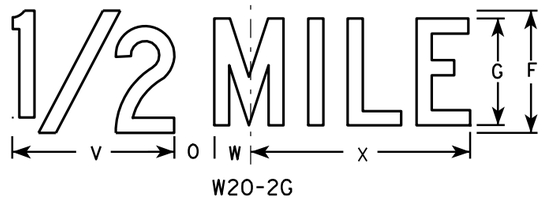
W20-2D



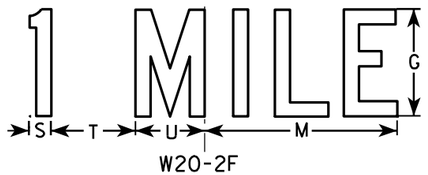
W20-2C



W20-2B



W20-2G



W20-2F

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. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

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

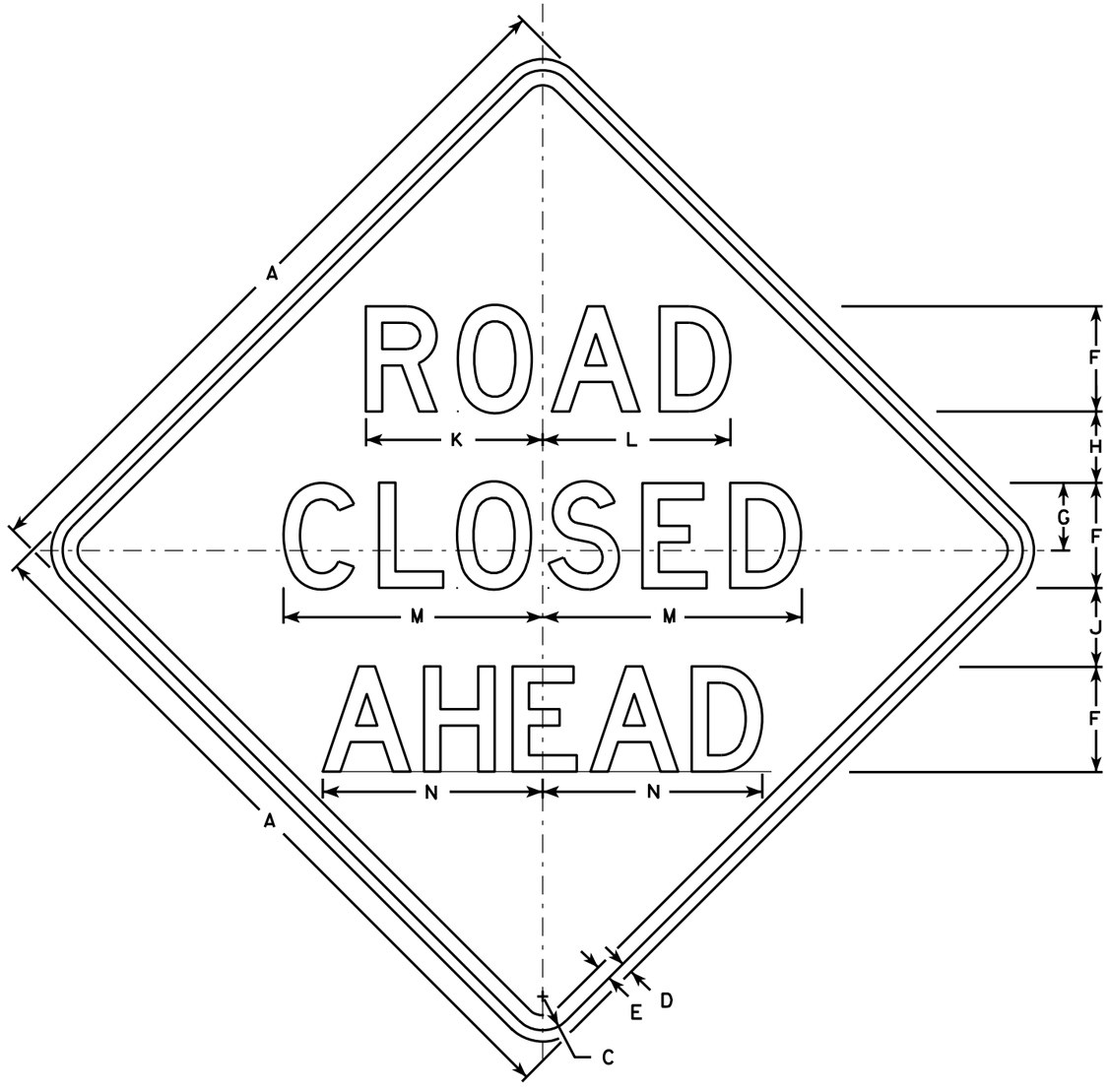
STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

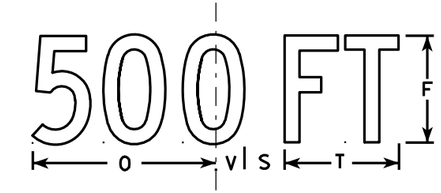
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

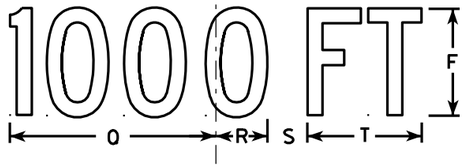
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 733	E



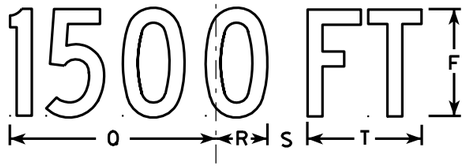
W20-3A



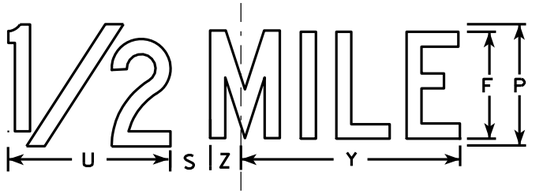
W20-3D



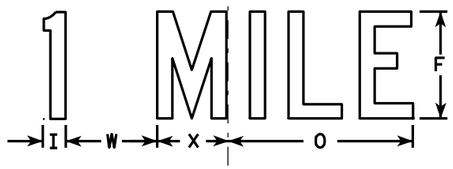
W20-3C



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

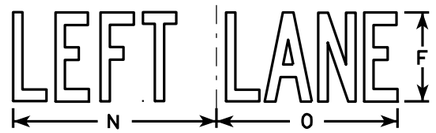
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

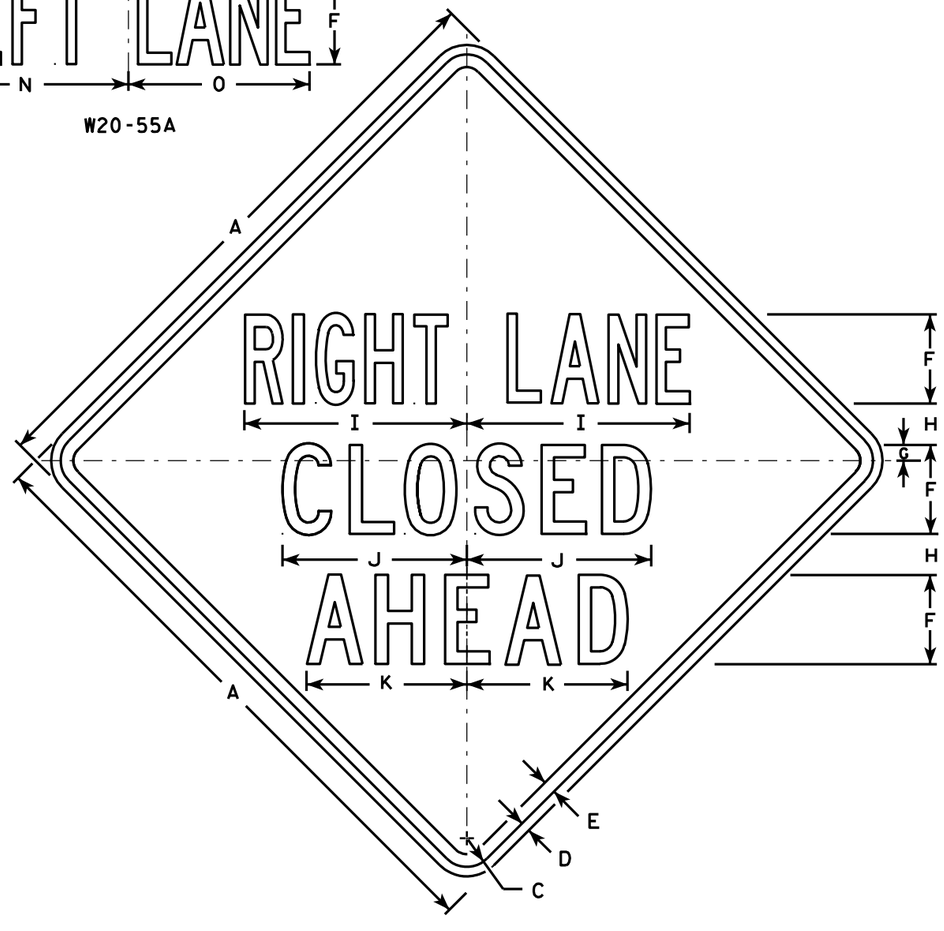
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 734 | E



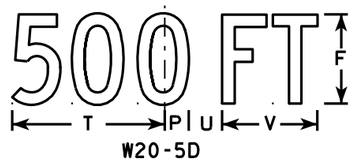
W20-56A



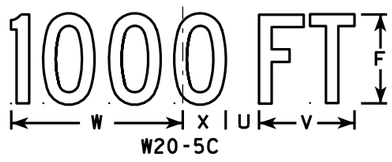
W20-55A



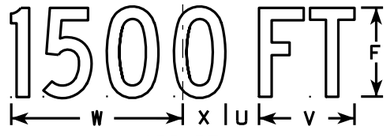
W20-5A



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

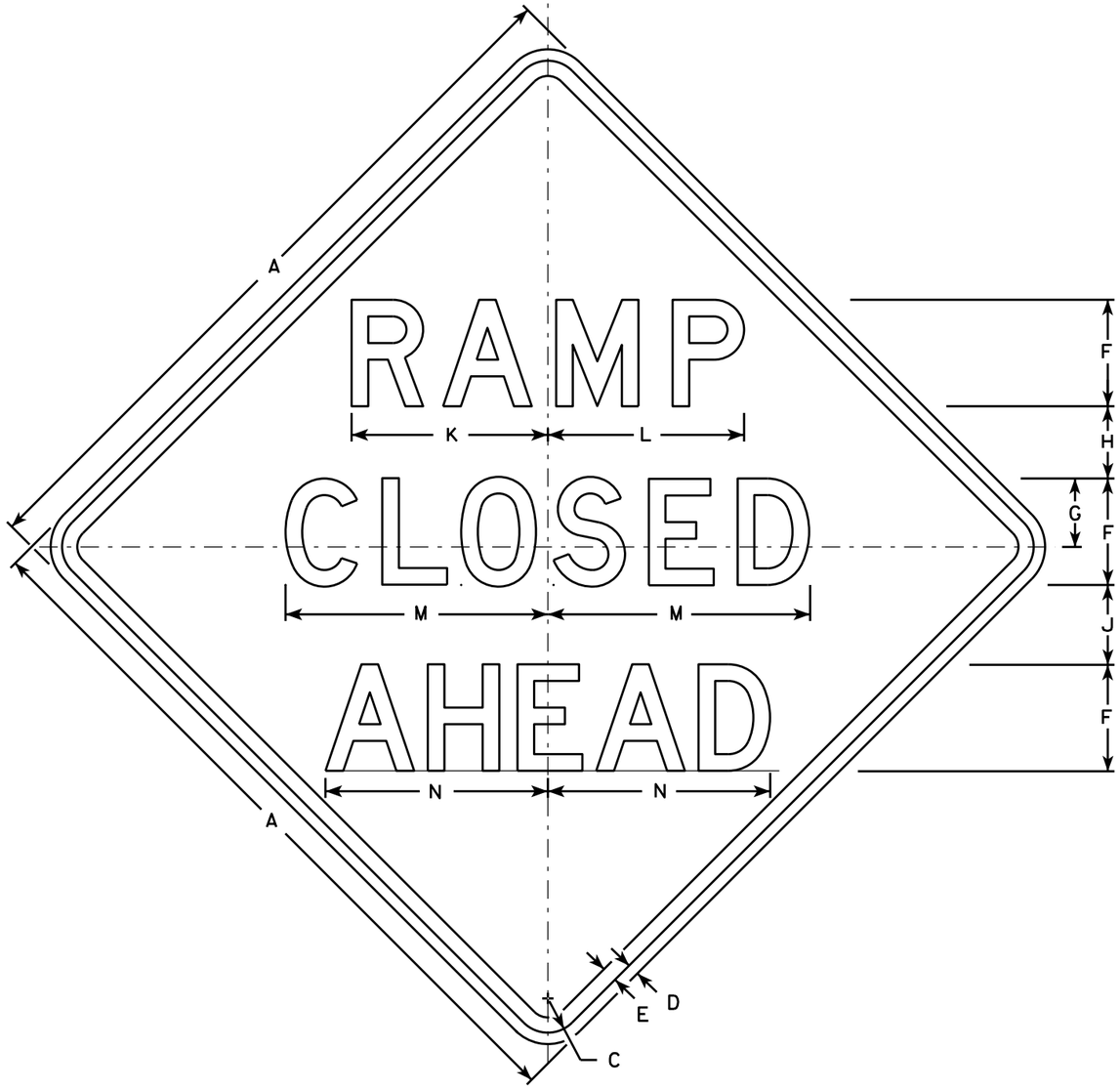
STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

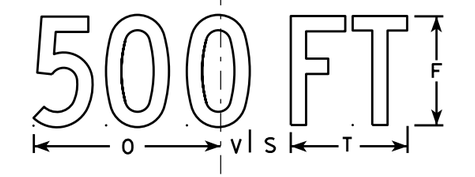
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

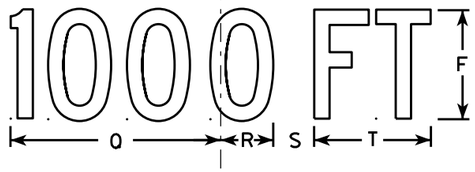
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 735	E



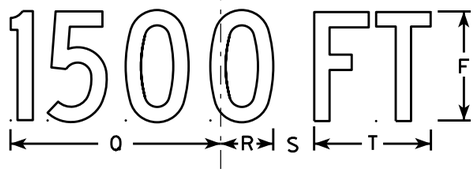
W20-53A



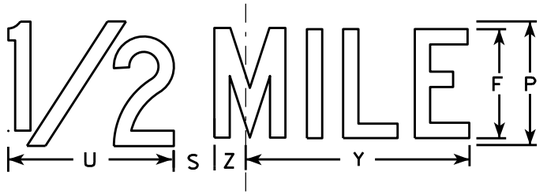
W20-53D



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

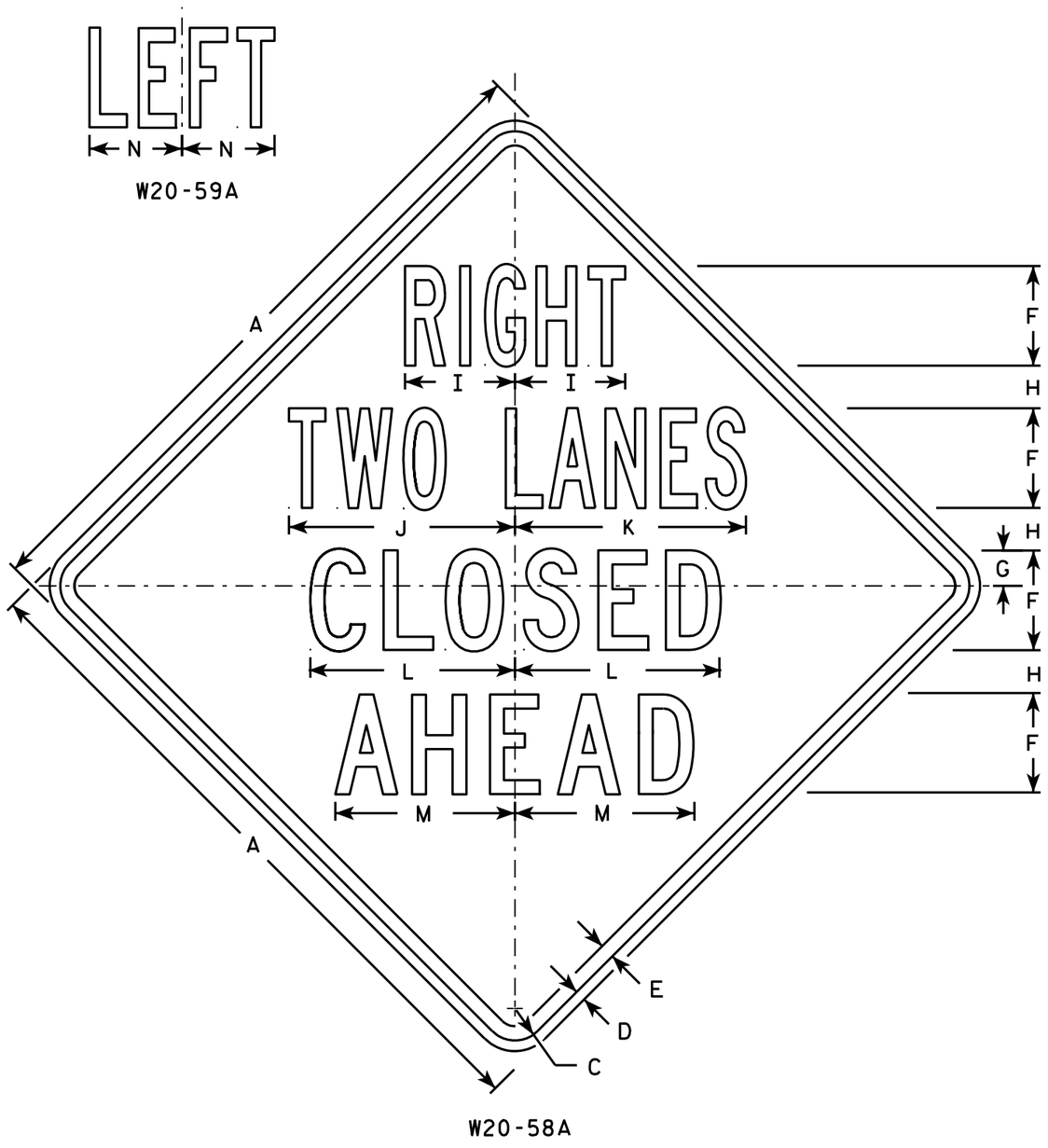
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

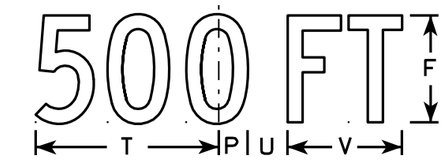
DATE 5/27/15 PLATE NO. W20-53.1

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

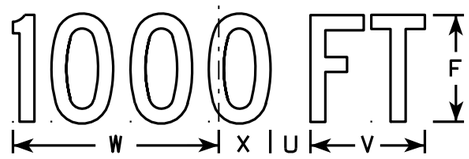
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W2053.DGN PLOT DATE : 27-MAY-2015 19:40 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.729210:1.000000
WISDOT/CADDS SHEET 42



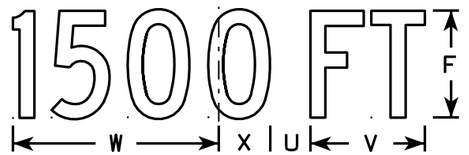
W20-58A



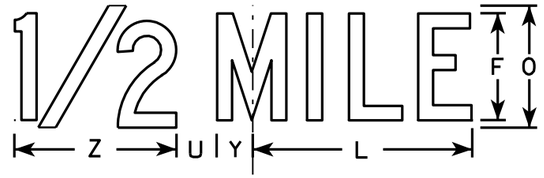
W20-58D



W20-58C



W20-58B



W20-58G



W20-58F

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 & 2 Series B.
   Lines 3 & 4 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		1 5/8	5/8	3/4	5	1 7/8	2 1/4	5 7/8	11 7/8	12 1/8	10 3/4	9 1/2	4 7/8	6	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48		2 1/4	3/4	1	7	2 1/2	3	7 3/4	15 7/8	16 1/4	14 3/8	12 5/8	6 1/2	8	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		2 1/4	3/4	1	7	2 1/2	3	7 3/4	15 7/8	16 1/4	14 3/8	12 5/8	6 1/2	8	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		2 1/4	3/4	1	7	2 1/2	3	7 3/4	15 7/8	16 1/4	14 3/8	12 5/8	6 1/2	8	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		2 1/4	3/4	1	7	2 1/2	3	7 3/4	15 7/8	16 1/4	14 3/8	12 5/8	6 1/2	8	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		2 1/4	3/4	1	7	2 1/2	3	7 3/4	15 7/8	16 1/4	14 3/8	12 5/8	6 1/2	8	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

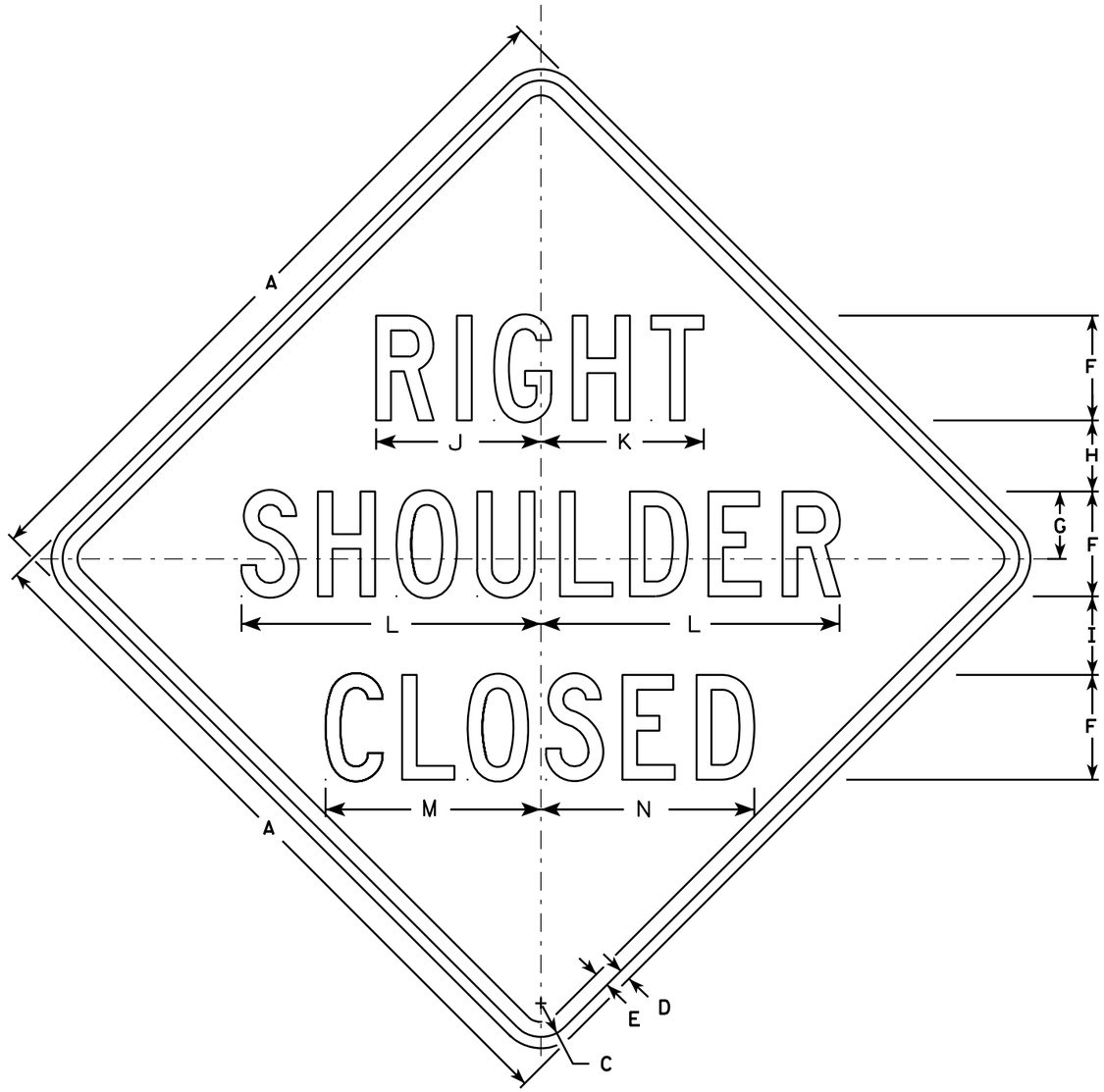
STANDARD SIGN
W20-58A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

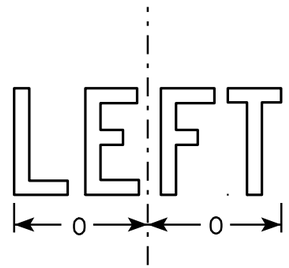
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-58.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 737	E



W21-5A



W21-5AL

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 - 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	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	4	7 7/8	7 3/4	14 1/4	10 1/4	10 1/8	6 1/4												9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0

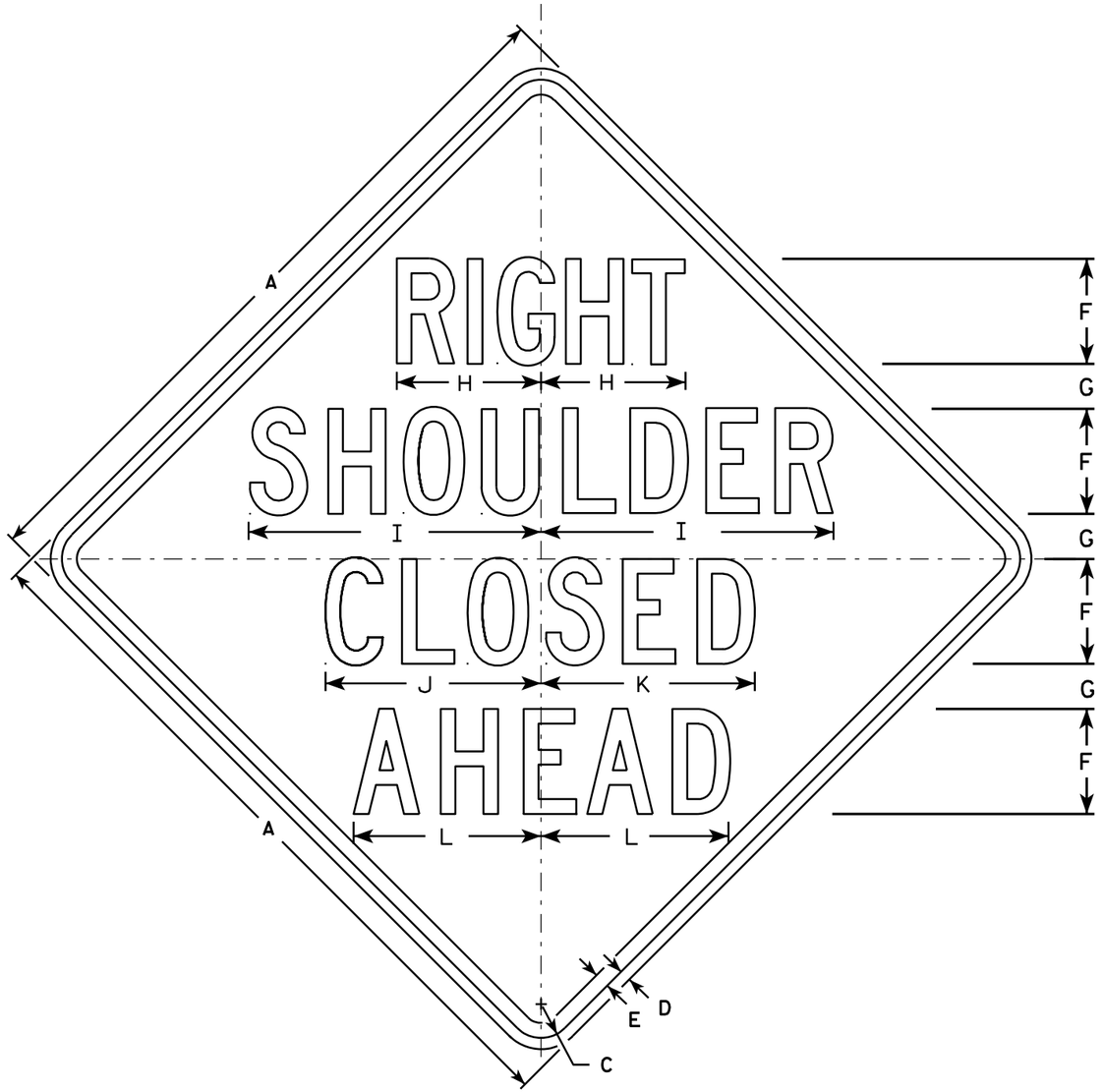
STANDARD SIGN
W21-5A

WISCONSIN DEPT OF TRANSPORTATION

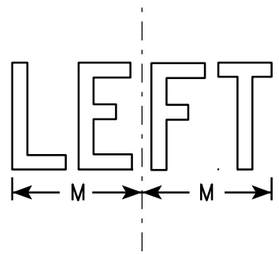
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5A.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 738 | E



W21-5B



W21-5BL

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.

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 1/4	7 3/8	14 1/4	10 1/4	10 1/8	8 7/8	6 1/4														9.0
2S	48		2 1/4	3/4	1	7	3	9 5/8	19 1/2	14 3/8	14 1/4	12 1/2	8 1/2														16.0
2M	48		2 1/4	3/4	1	7	3	9 5/8	19 1/2	14 3/8	14 1/4	12 1/2	8 1/2														16.0
3	48		2 1/4	3/4	1	7	3	9 5/8	19 1/2	14 3/8	14 1/4	12 1/2	8 1/2														16.0
4	48		2 1/4	3/4	1	7	3	9 5/8	19 1/2	14 3/8	14 1/4	12 1/2	8 1/2														16.0
5	48		2 1/4	3/4	1	7	3	9 5/8	19 1/2	14 3/8	14 1/4	12 1/2	8 1/2														16.0

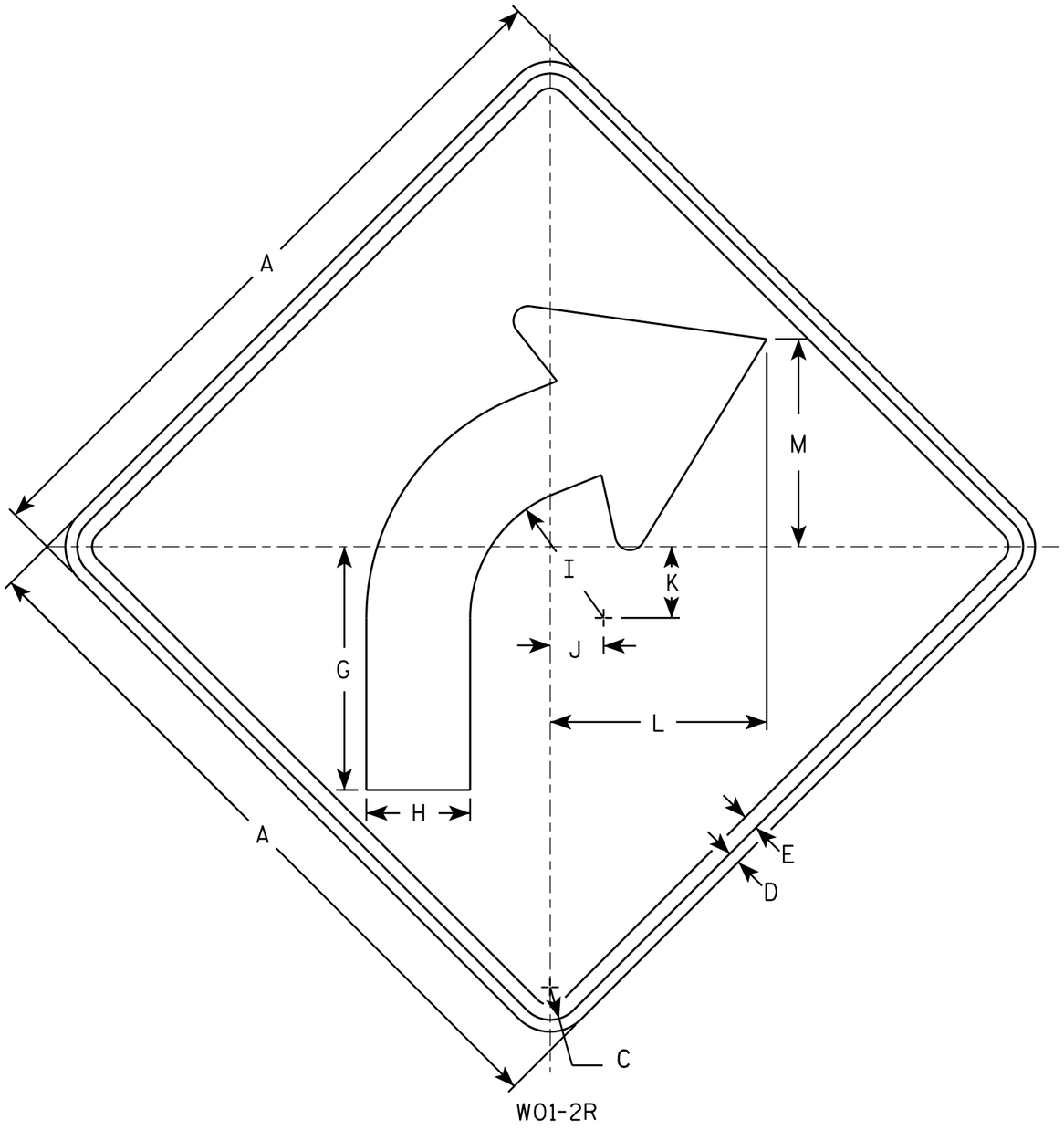
STANDARD SIGN
W21-5B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5B.3

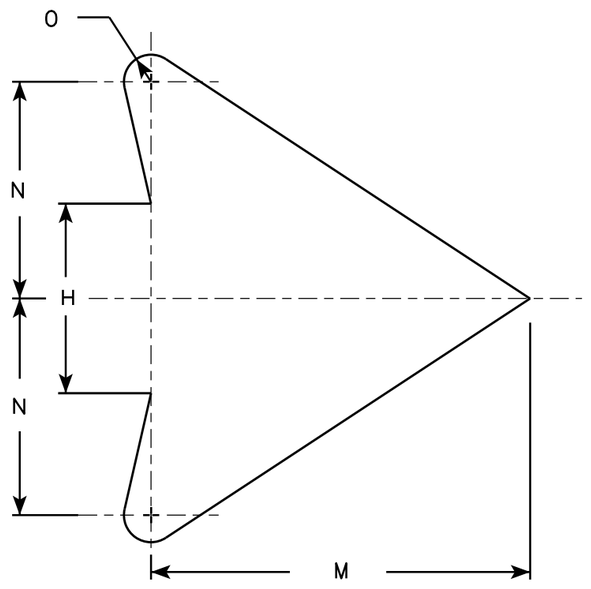
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 739	E



W01-2R

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. W01-2L is the same as W01-2R except the arrow is reversed along the vertical centerline.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												4.0
2S	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0
2M	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0
3	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0
4	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

STANDARD SIGN
W01-2

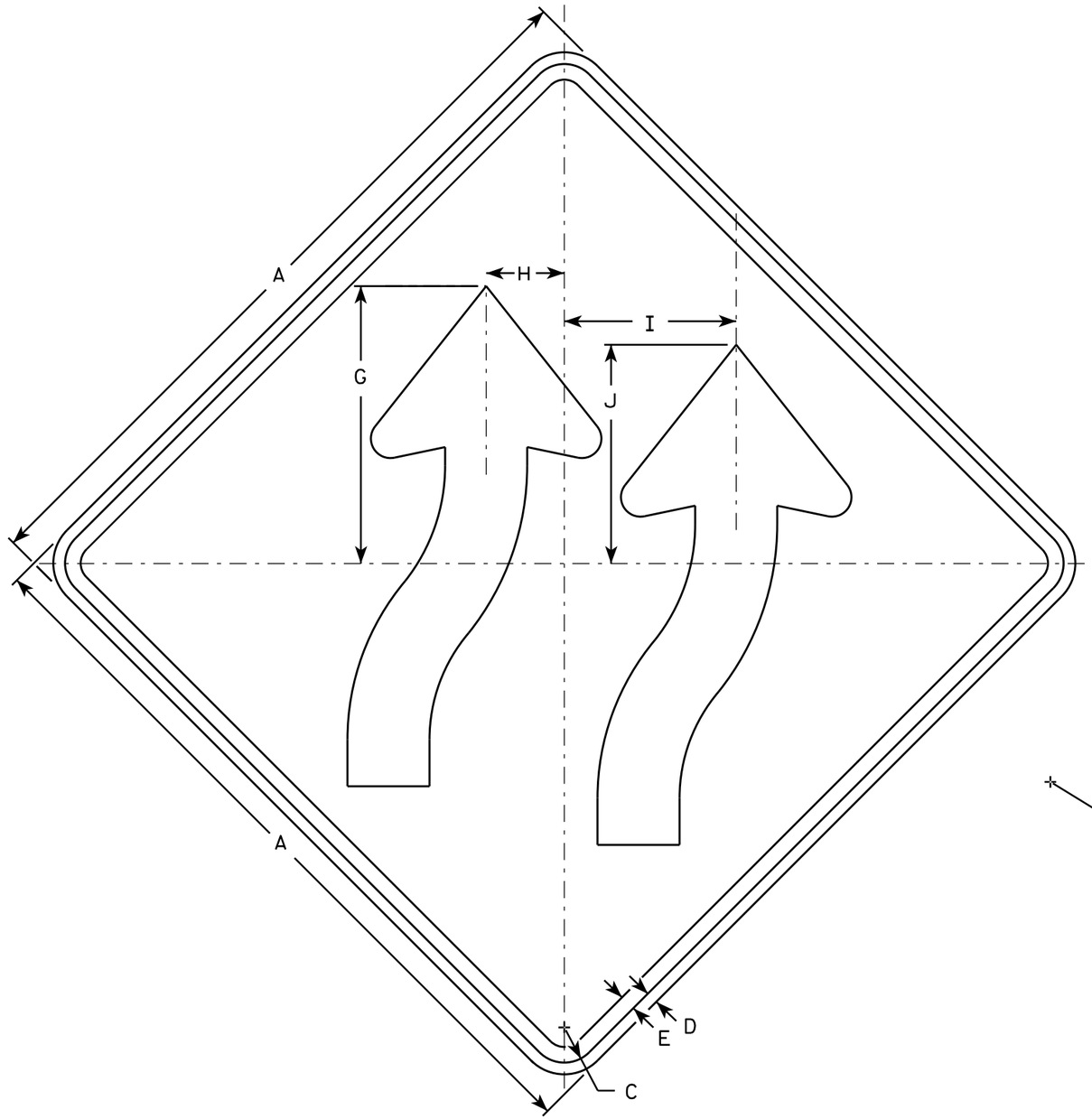
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

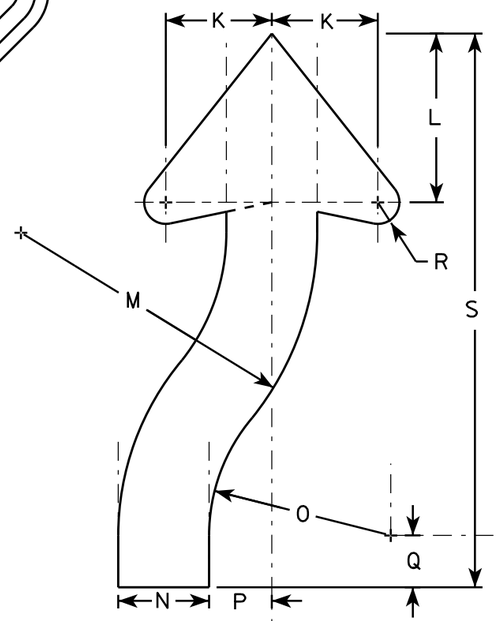
DATE 11/18/13 PLATE NO W01-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W012.DGN PLOT DATE : 28-FEB-2014 11:34 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.992871:1.000000 WISDOT/CADDS SHEET 42



W01-4bR



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. W01-4bL is the same as W014-bR exept arrows are 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		13 3/8	3 3/4	8 1/4	10 1/2	4 5/8	7 3/8	12 7/8	3 7/8	7 7/8	2 3/4	2 1/4	7/8	24								9.0
2S	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
2M	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
3	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
4	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
5	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0

STANDARD SIGN
W01-4b

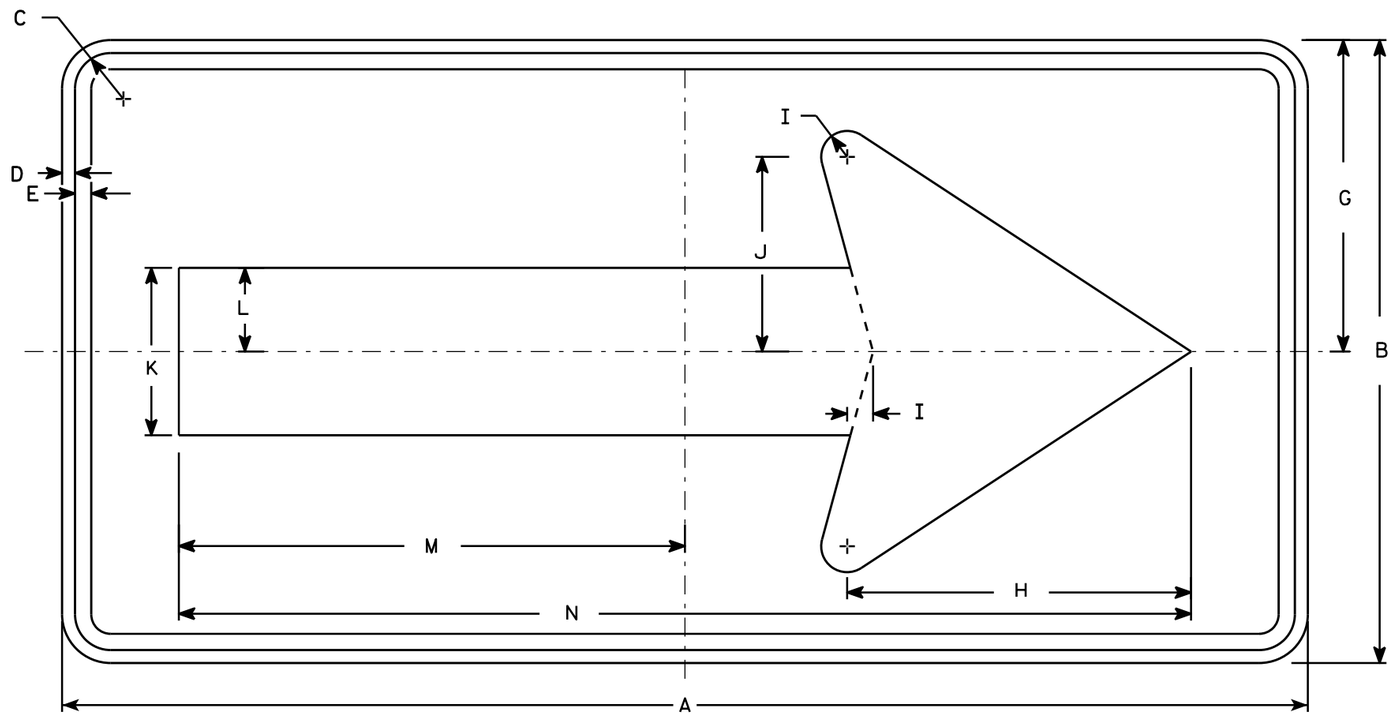
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4b.1

741

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



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

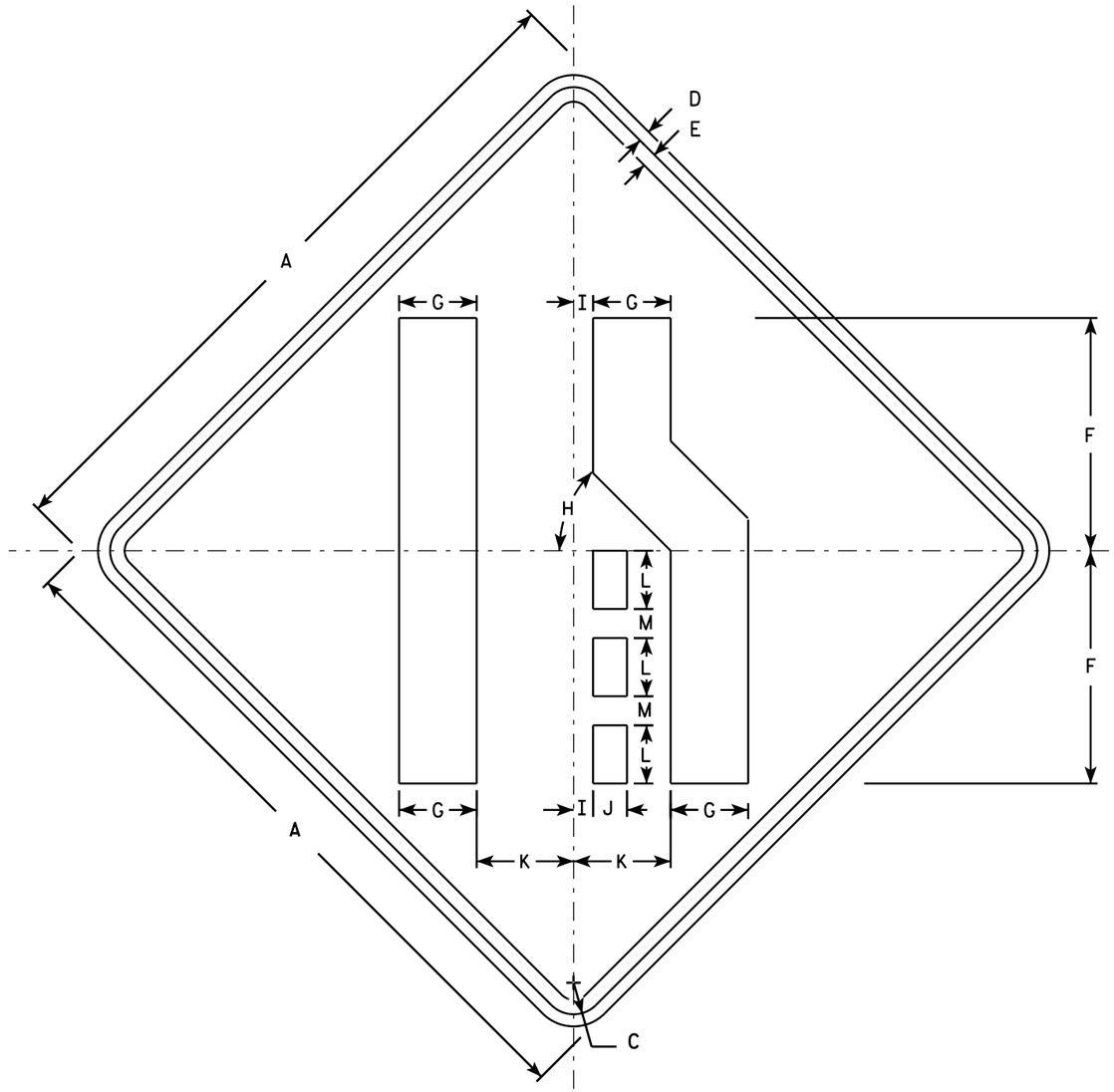
WISCONSIN DEPT OF TRANSPORTATION

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

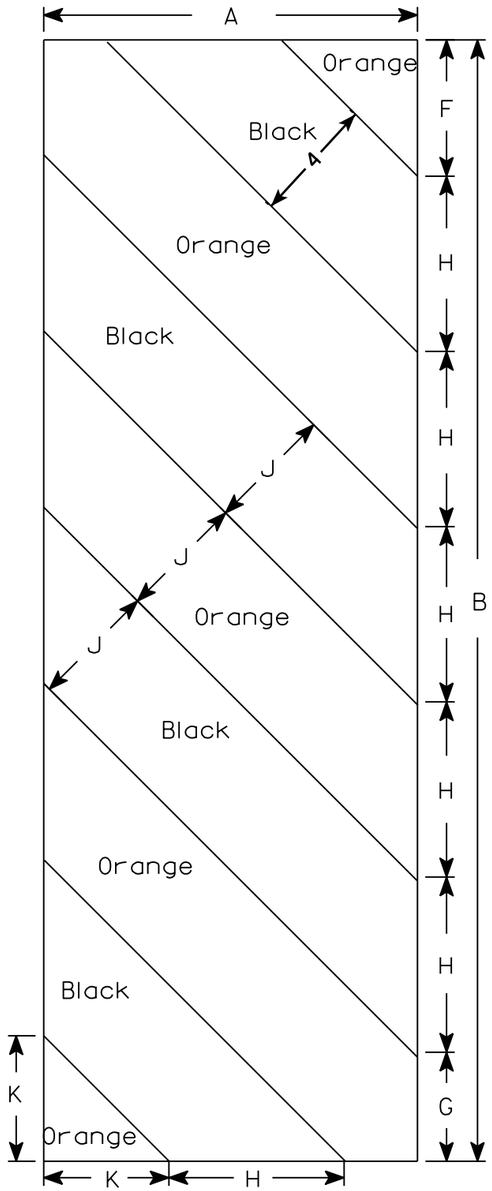
STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

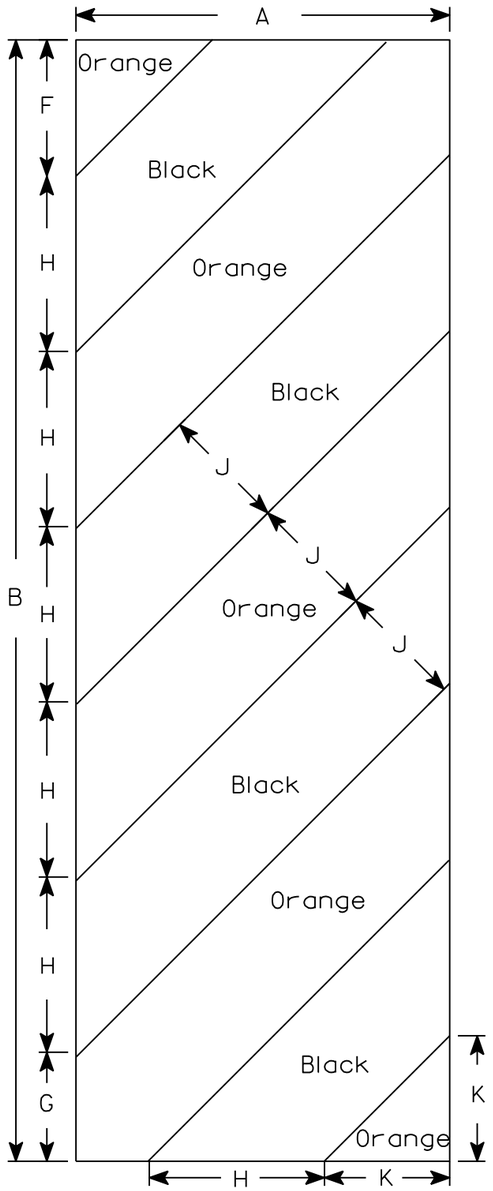
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 743 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



W08-76

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - Lines 1 and 2 are series D
   Line 3 is 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																											
3																											
4	96	48	2 1/4	3/4	1	8	6	34 3/4	14 1/8	7	13 5/8	28 7/8	4 5/8	40 1/2	23 1/8	5 3/4		35 7/8									32.0
5																											

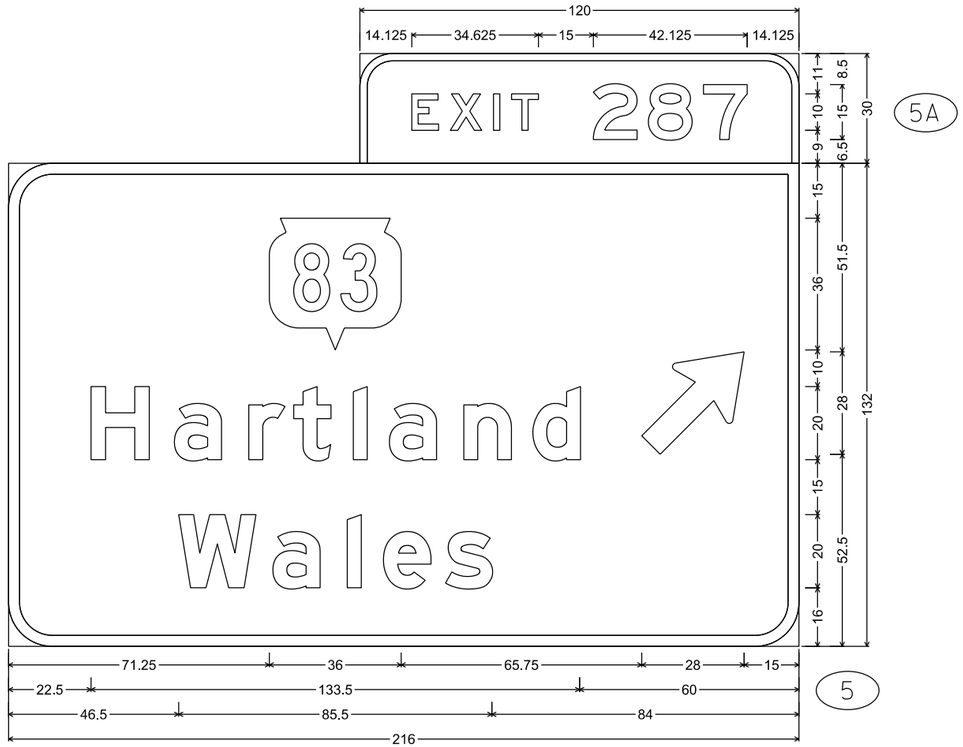
STANDARD SIGN
W08-76

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 4/8/2021 PLATE NO. W08-76.2

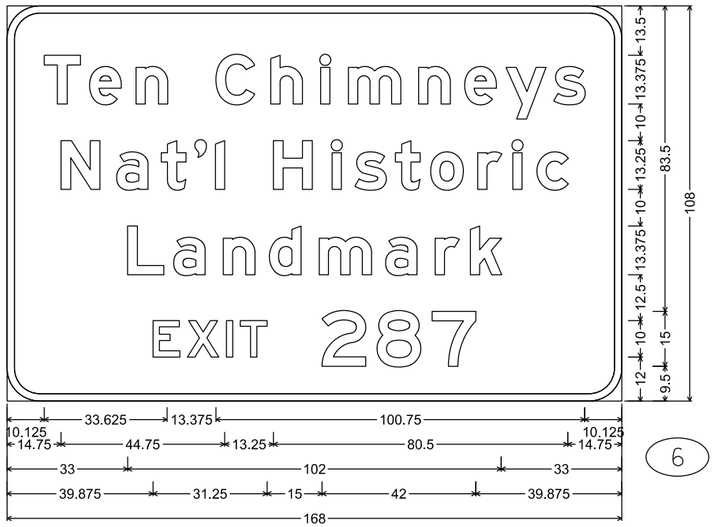
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 745 | E



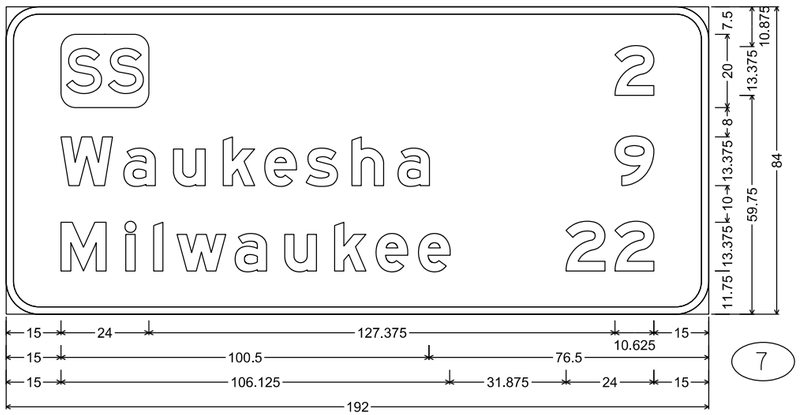
E1-5P; 9.000" Radius, 2.000" Border
E4-1A; 12.000" Radius, 3.000" Border

NOTES

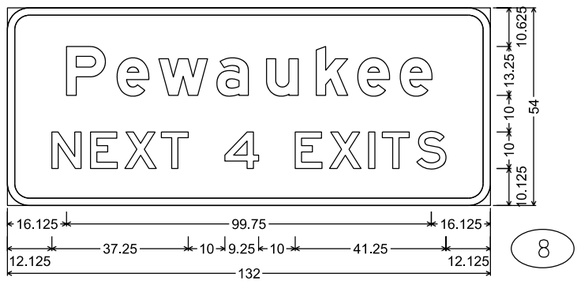
1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green or as noted
   Message - White
3. Message Series - E Modified except all CAP words Series E



E3-1; 9.000" Radius, 2.000" Border, White on, Brown



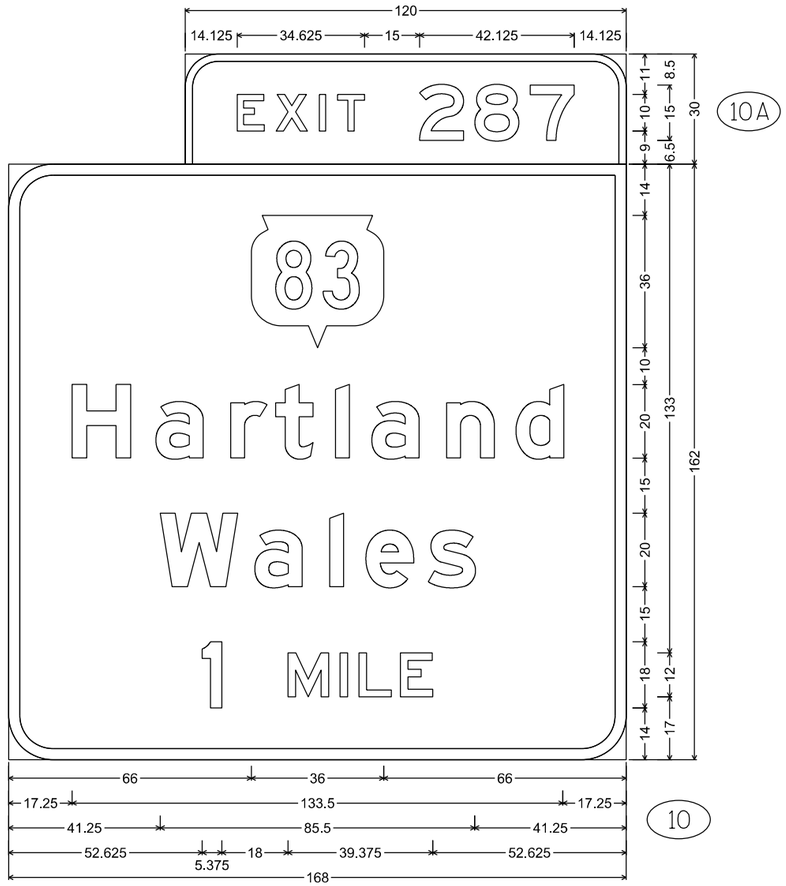
D2-3; 9.000" Radius, 2.000" Border



E9-1; 6.000" Radius, 2.000" Border

NOTES

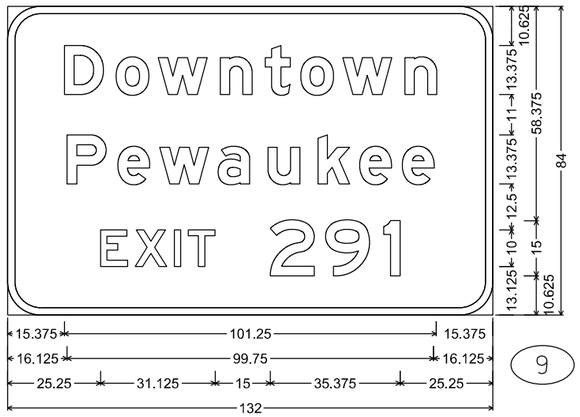
1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all CAP words Series E



10A

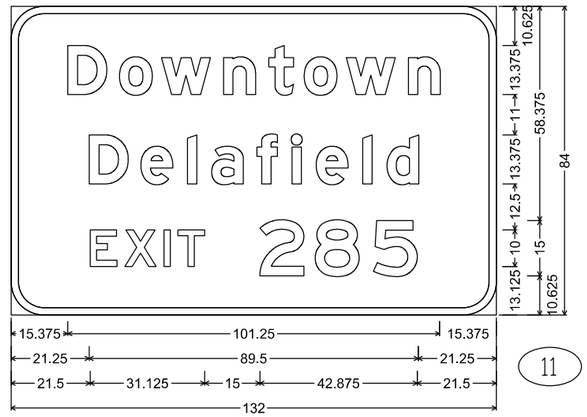
10

E1-5P; 9.000" Radius, 2.000" Border
E1-1A; 12.000" Radius, 3.000" Border



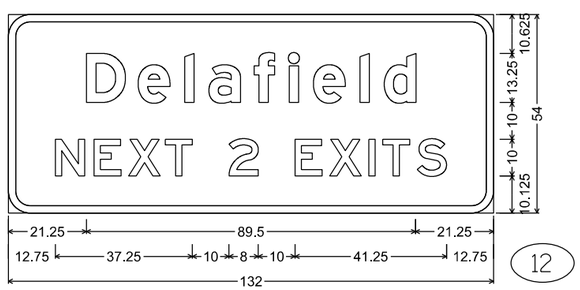
9

E3-1; 9.000" Radius, 2.000" Border



11

E3-1; 9.000" Radius, 2.000" Border



12

E9-1; 6.000" Radius, 2.000" Border

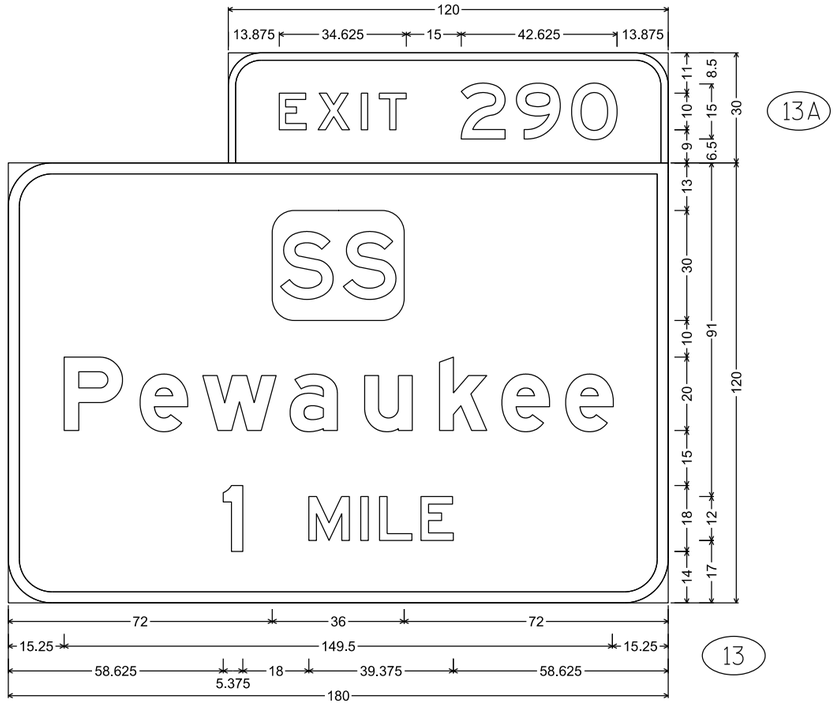
7

7

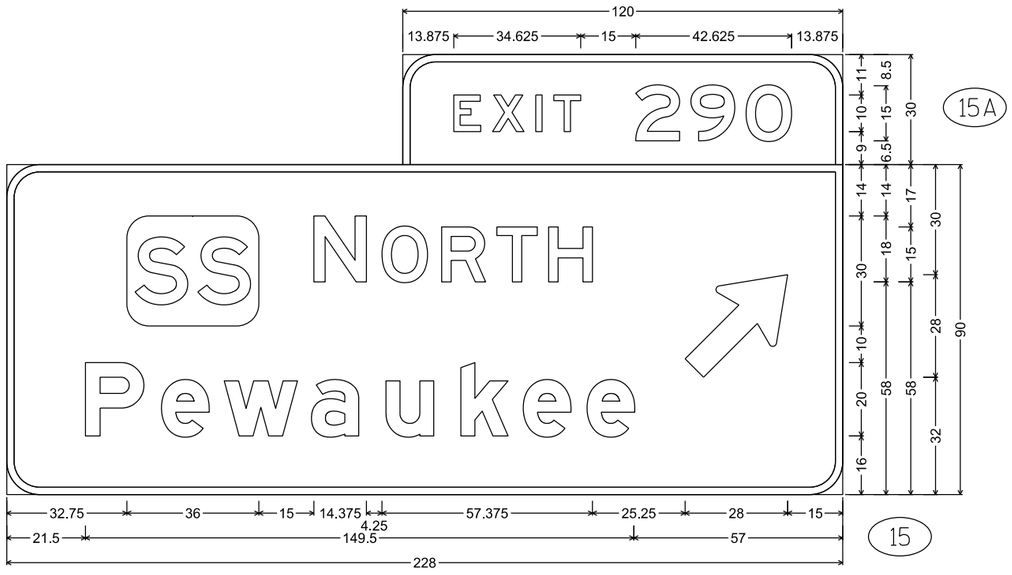
PROJECT NO:1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET NO: 747	E

NOTES

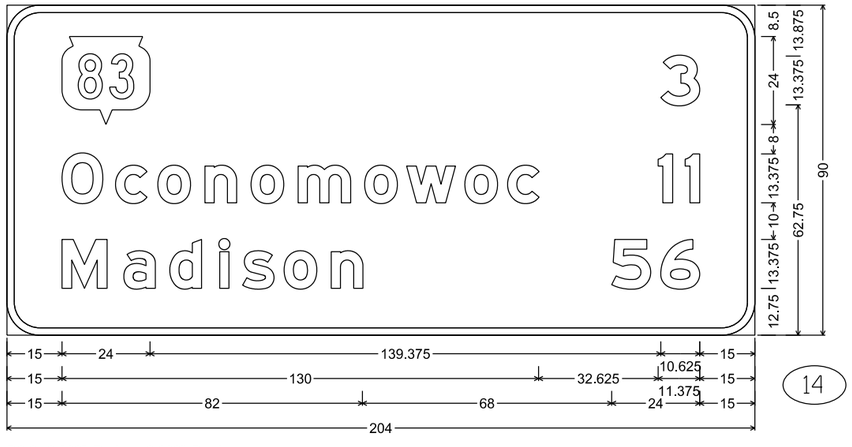
1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all CAP words Series E



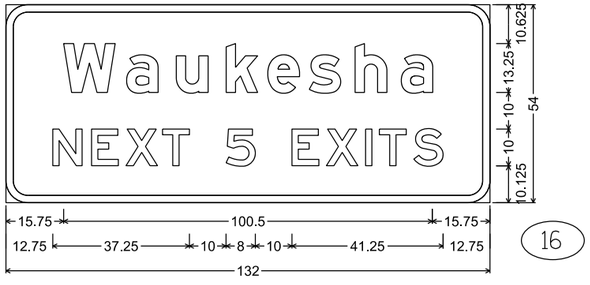
E1-5P; 9.000" Radius, 2.000" Border
E1-1A; 12.000" Radius, 3.000" Border



E1-5P; 9.000" Radius, 2.000" Border
E4-1A; 9.000" Radius, 2.000" Border



D2-3; 9.000" Radius, 2.000" Border



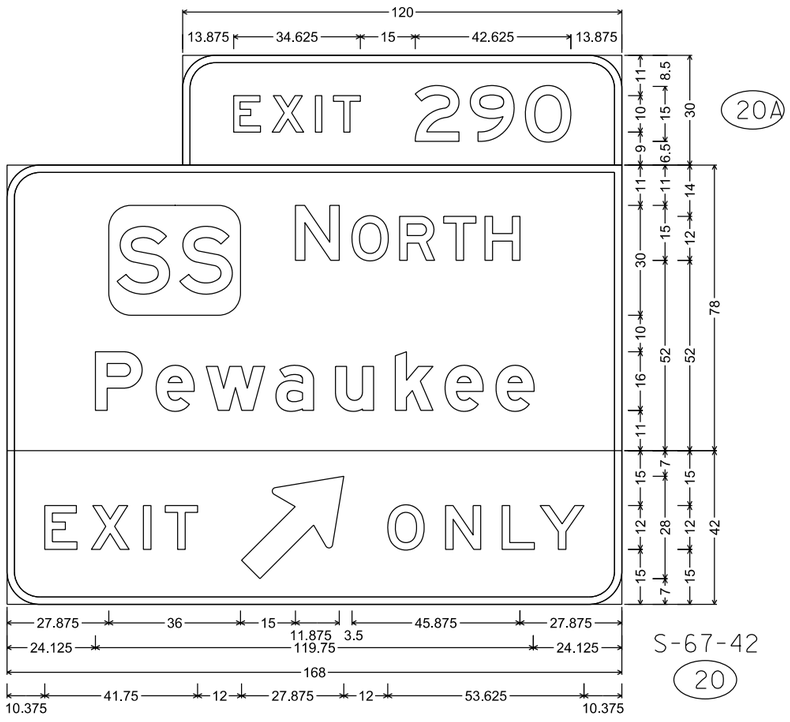
E9-1; 6.000" Radius, 2.000" Border

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET NO: 748	E

FILE NAME : C:\CAEfiles\Projects\tr_d2\2679a522.dgn PLOT DATE : 2-JUNE 2022 2:24 PLOT BY : mscj9h PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

NOTES

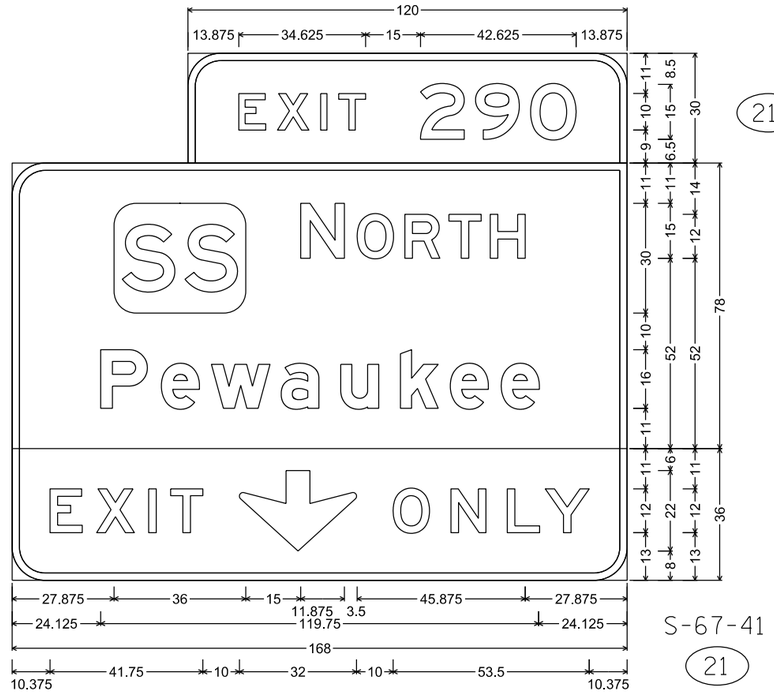
1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all CAP words Series E
4. EXIT ONLY Panel on Yellow Type F Reflective Sheeting with Black Non-Reflective Message



S-67-42

(20)

E1-5P; 9.000" Radius, 2.000" Border
E6-1; 9.000" Radius, 2.000" Border
E11-1D; 9.000" Radius, 2.000" Border, Black on, Yellow



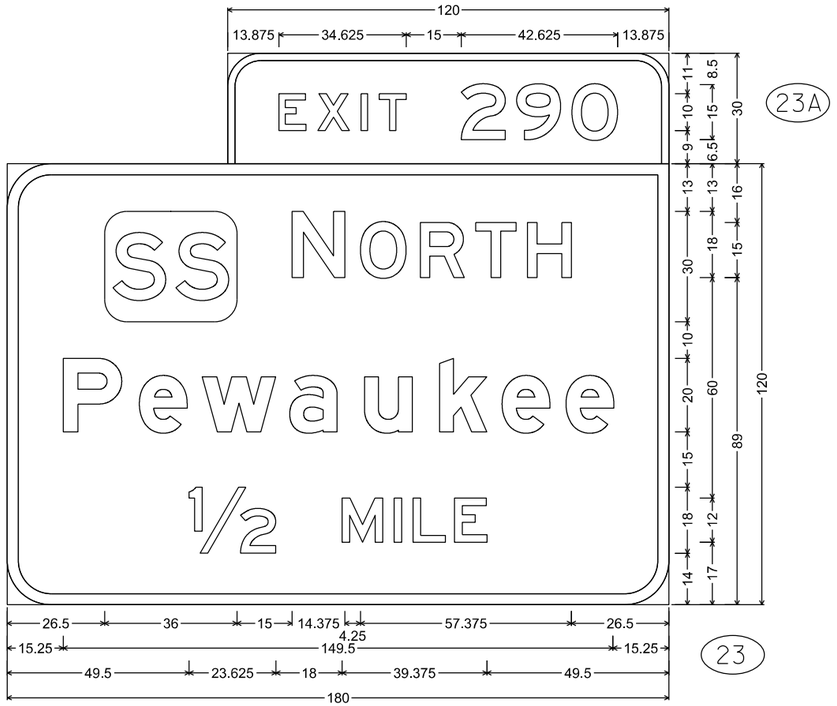
S-67-41

(21)

E1-5P; 9.000" Radius, 2.000" Border
E6-1; 9.000" Radius, 2.000" Border
E11-1; 9.000" Radius, 2.000" Border, Black on, Yellow

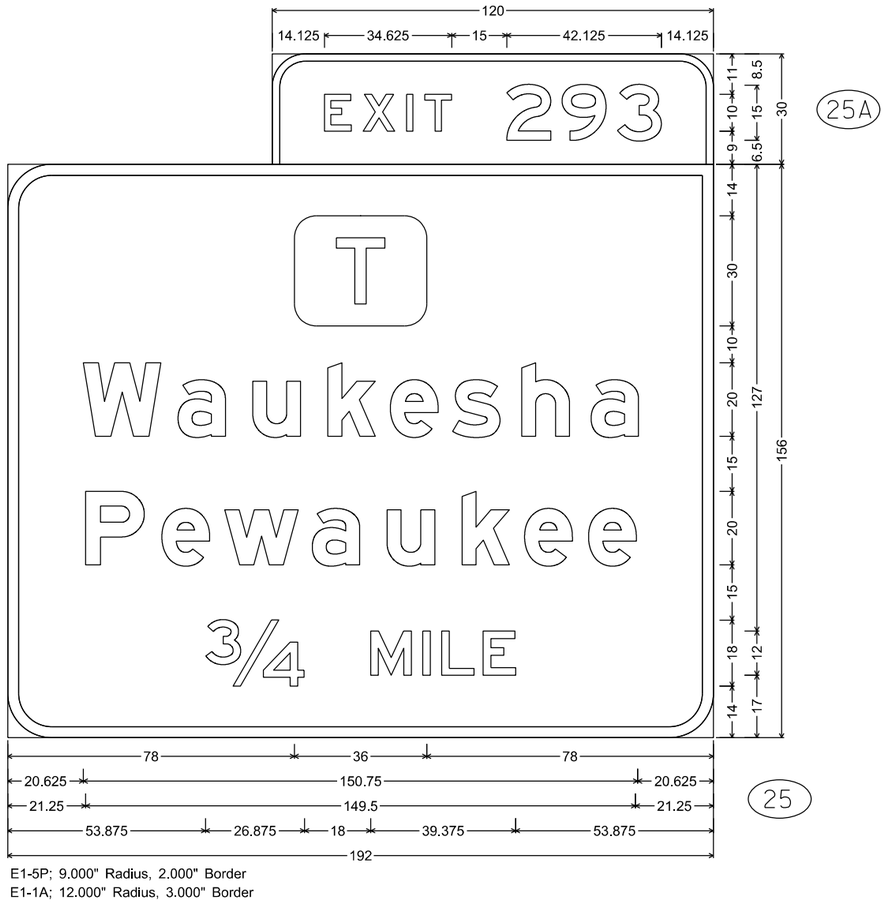
7

7



NOTES

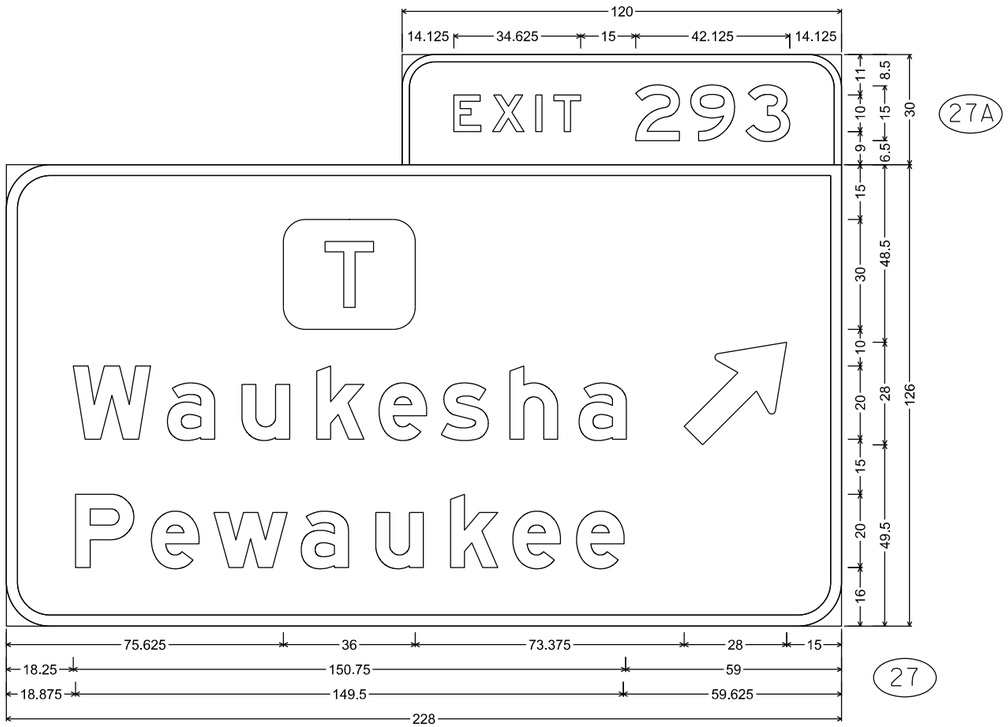
1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all CAP words Series E



7

7

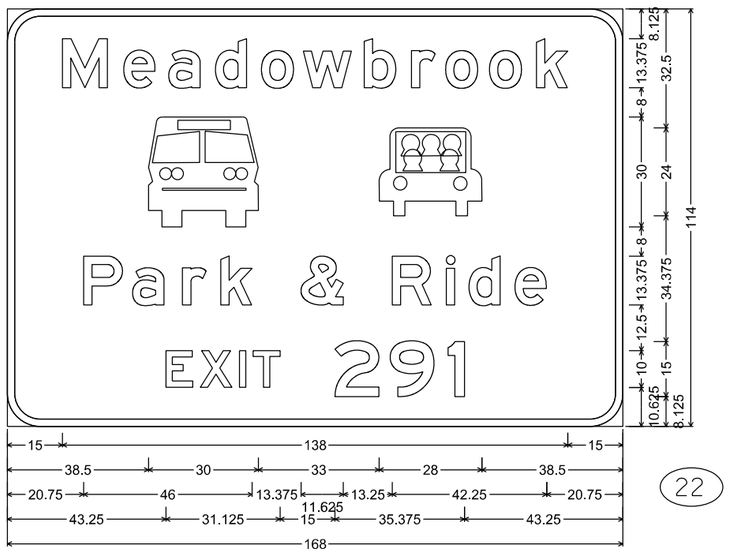
PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET NO: 750	E



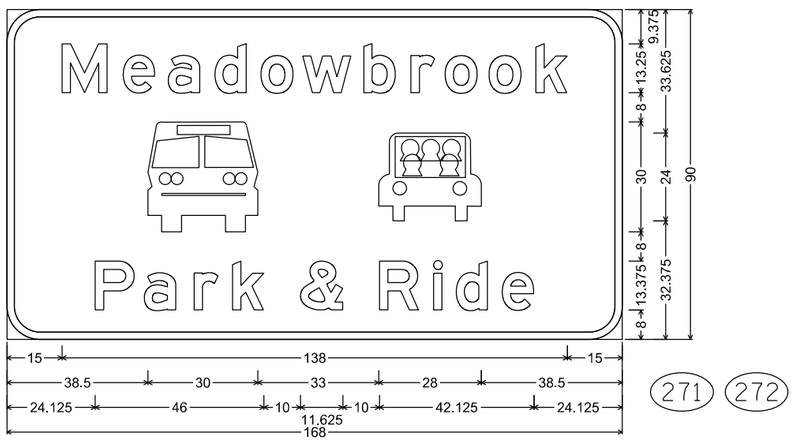
E1-5P; 9.000" Radius, 2.000" Border
E4-1A; 12.000" Radius, 3.000" Border

NOTES

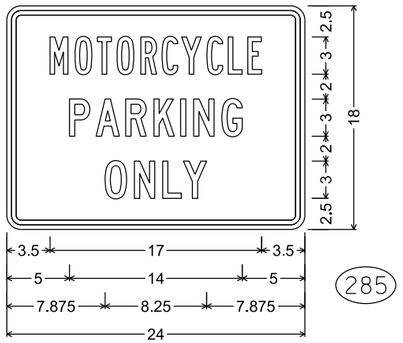
1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all CAP words Series E



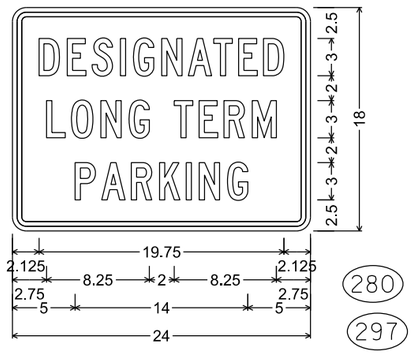
E3-1; 9.000" Radius, 2.000" Border



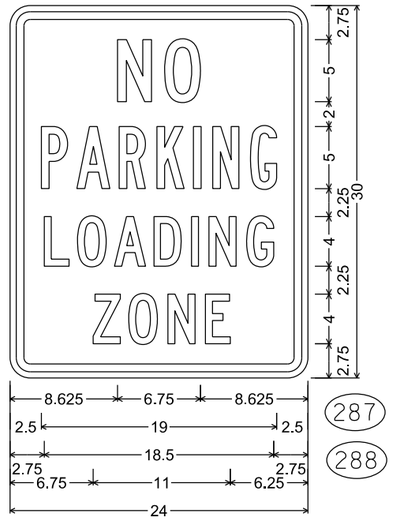
E3-1; 9.000" Radius, 2.000" Border



1.125" Radius, 0.375" Border, 0.375" Indent
"MOTORCYCLE", B; "PARKING", C; "ONLY", C



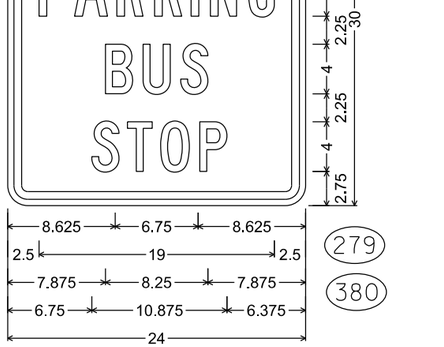
1.125" Radius, 0.375" Border, 0.375" Indent



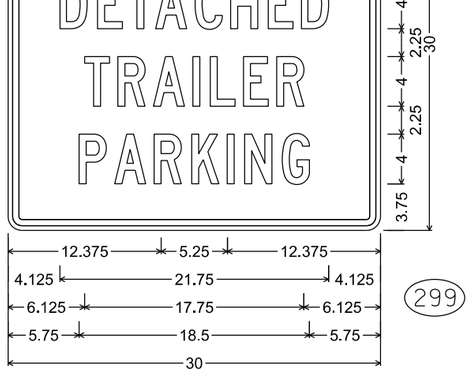
1.625" Radius, 0.625" Border, 0.500" Indent, Red on, White
"NO", C; "PARKING", B; "LOADING", C; "ZONE", C

NOTES

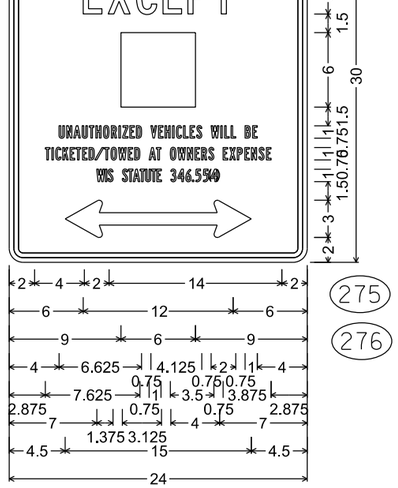
1. All Signs Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black or as noted
3. Message Series - C except as noted



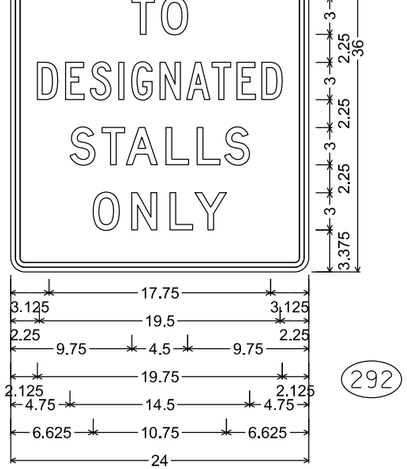
1.625" Radius, 0.625" Border, 0.500" Indent, Red on, White
"NO", C; "PARKING", B; "BUS", C; "STOP", C



1.125" Radius, 0.500" Border, 0.375" Indent



1.125" Radius, 0.375" Border, 0.375" Indent, Red on White;
"NO", C; "PARKING", C; "EXCEPT", C;
"UNAUTHORIZED", B; "VEHICLES", B; "WILL", B;
"BE", B; "TICKETED/TOWED", B;
"AT", B; "OWNERS", B; "EXPENSE", B;
"WIS", B; "STATUTE", B; "346.55(4)", B



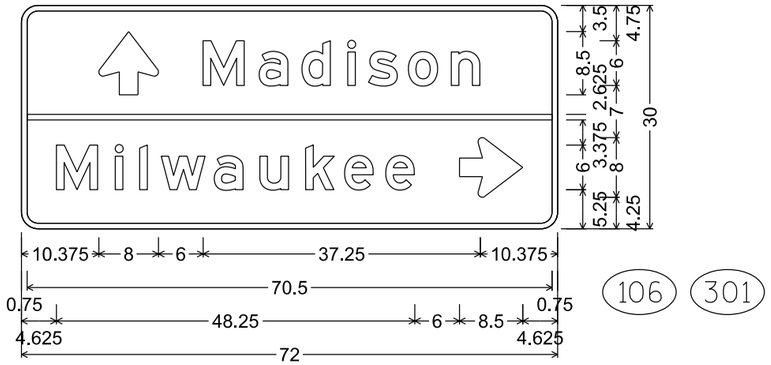
1.125" Radius, 0.375" Border, 0.375" Indent
"PARKING", D; "RESTRICTED", C; "TO", D; "DESIGNATED", C;
"STALLS", D; "ONLY", D

7

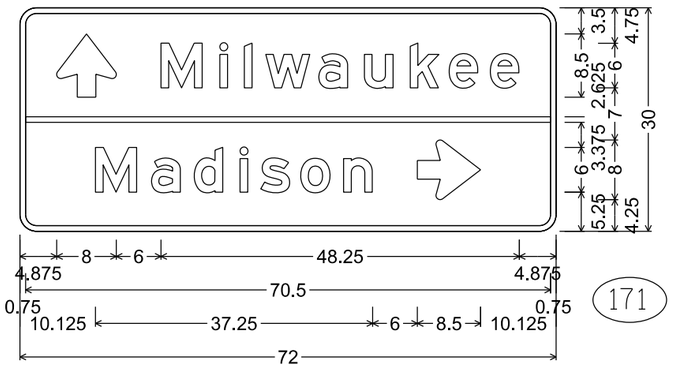
7

NOTES

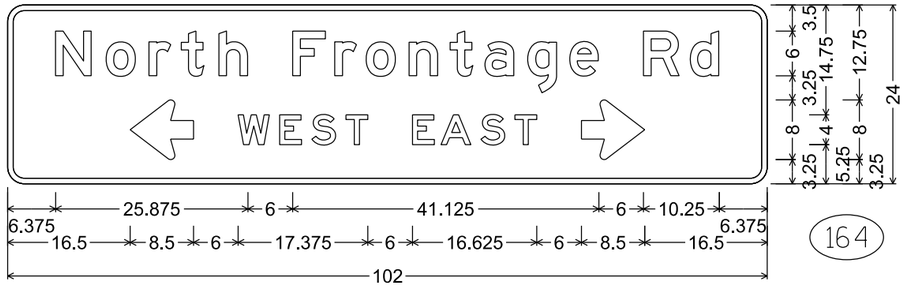
1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E except as noted



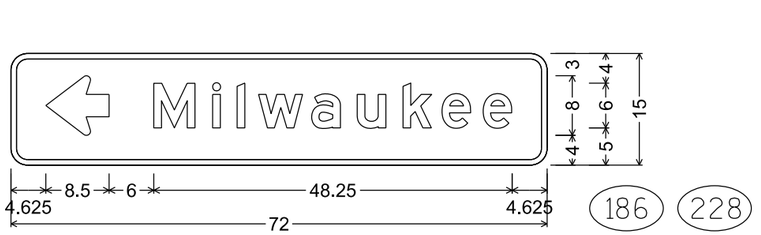
D1-2; 2.250" Radius, 0.750" Border



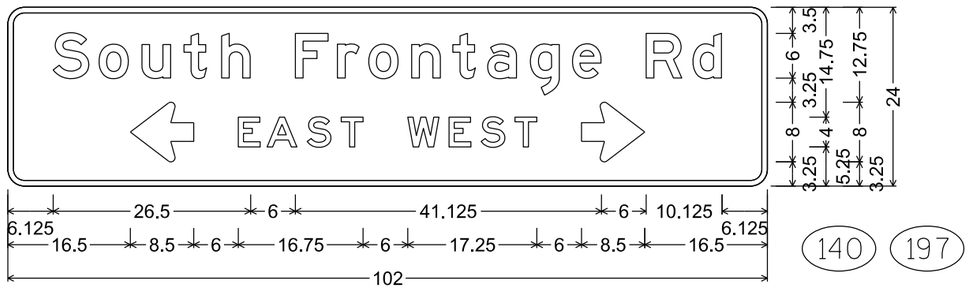
D1-2; 2.250" Radius, 0.750" Border



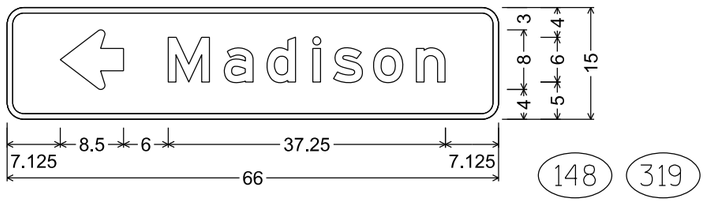
D1-60; 2.250" Radius, 0.750" Border



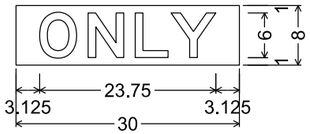
D1-1; 2.250" Radius, 0.750" Border



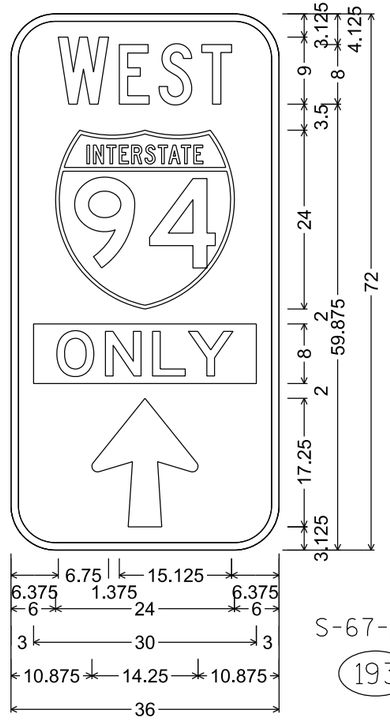
D1-60; 2.250" Radius, 0.750" Border



D1-1; 2.250" Radius, 0.750" Border



No border, Black on, Fluorescent yellow;
"ONLY" Black, E;

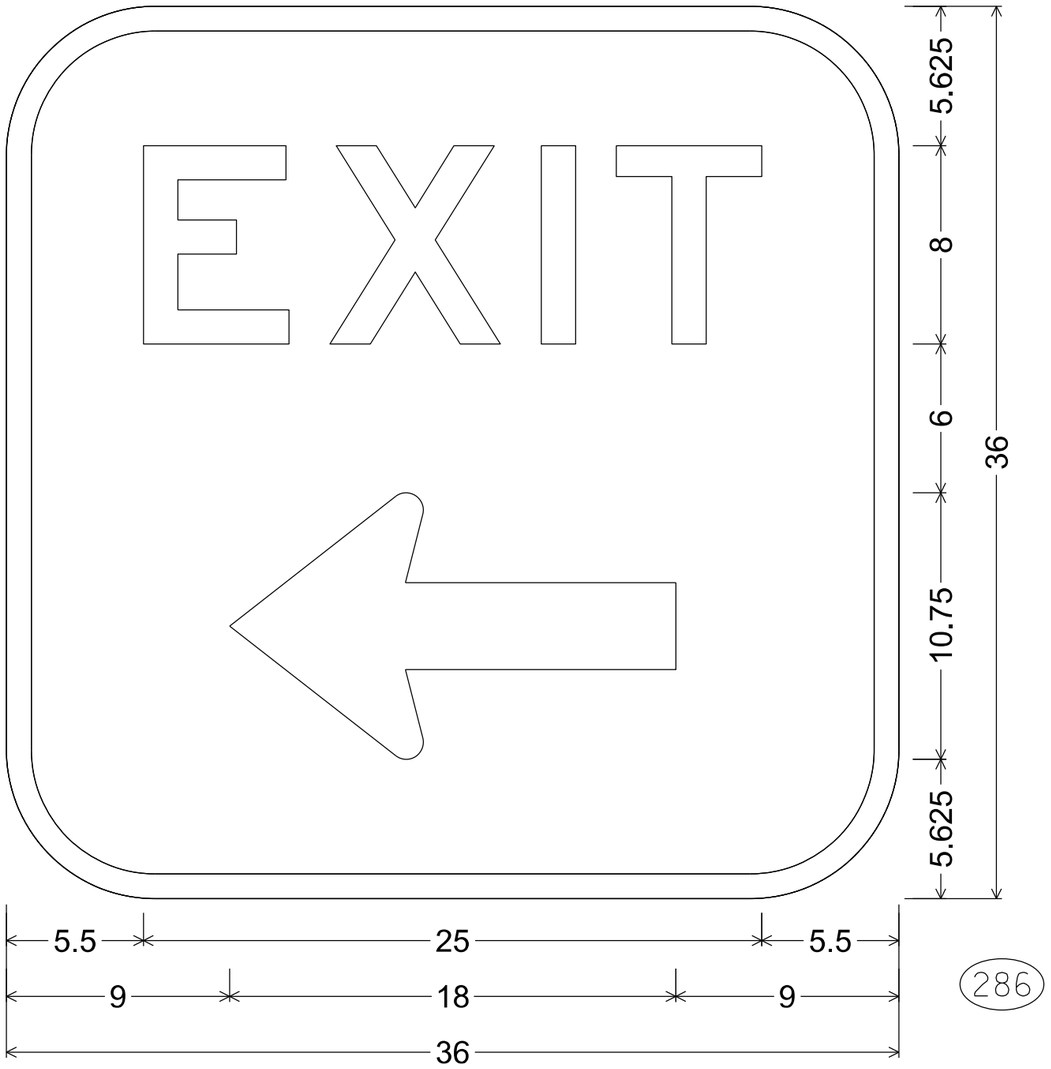


D16-1; 6.000" Radius, 1.000" Border
6.000" Radius, 1.000" Border
"WEST", C

PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET NO: 753	E

NOTES

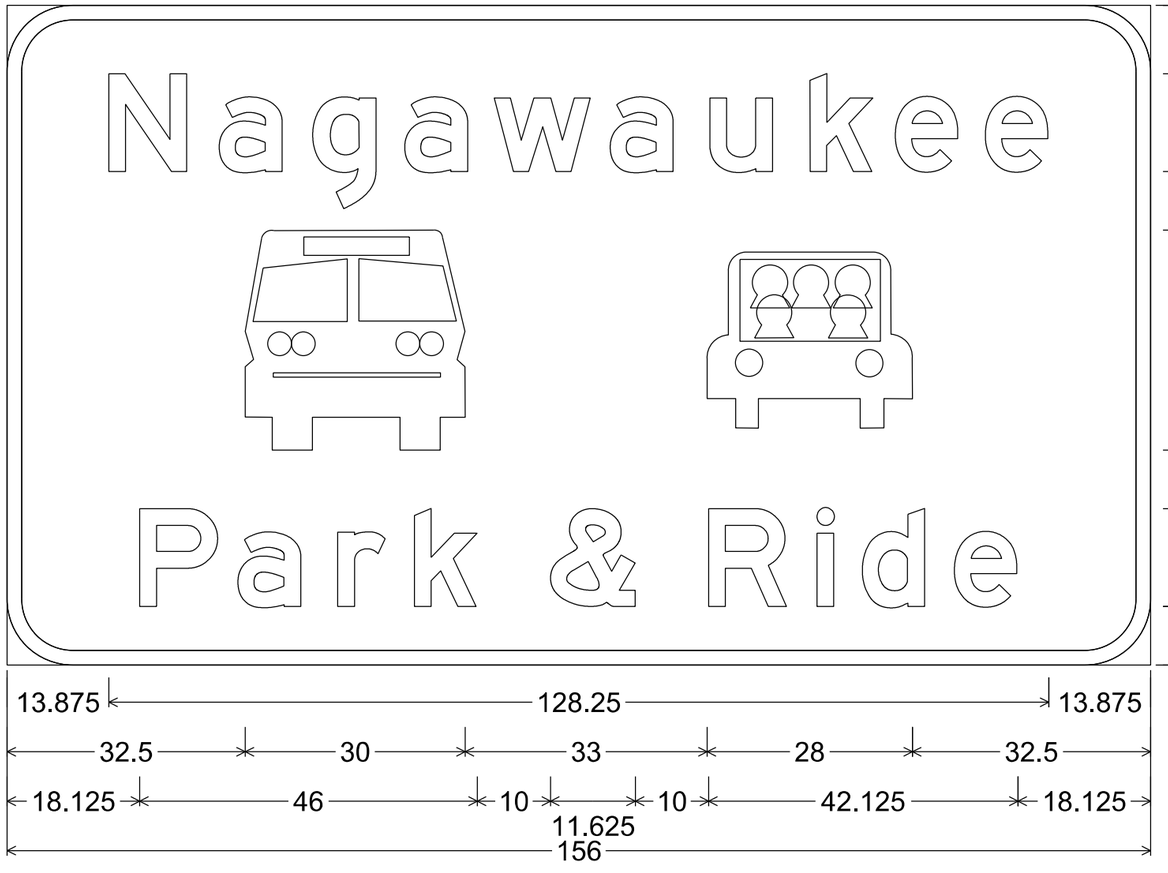
1. Sign is Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



E5-1 Mod; 6.000" Radius, 1.000" Border

NOTES

1. Sign is Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



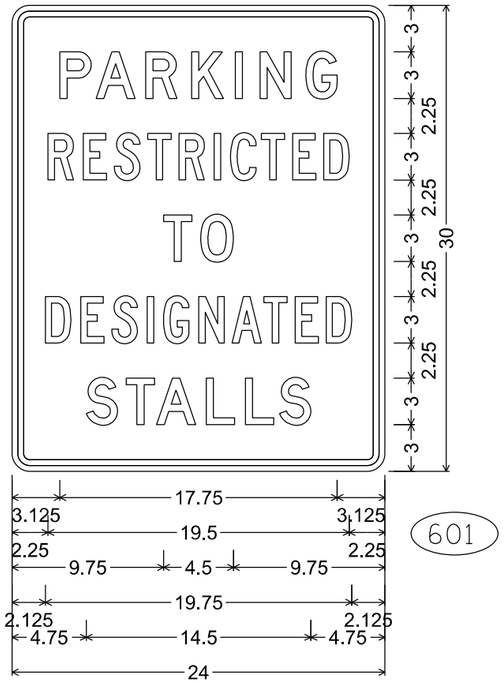
608 608A

E3-1; 9.000" Radius, 2.000" Border

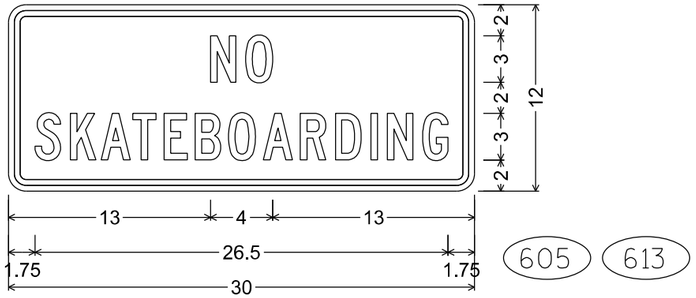
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7

PROJECT NO: 1330-47-71	HWY: STH 83	COUNTY: WAUKESHA	PERMANENT SIGNING	SHEET NO: 755	E



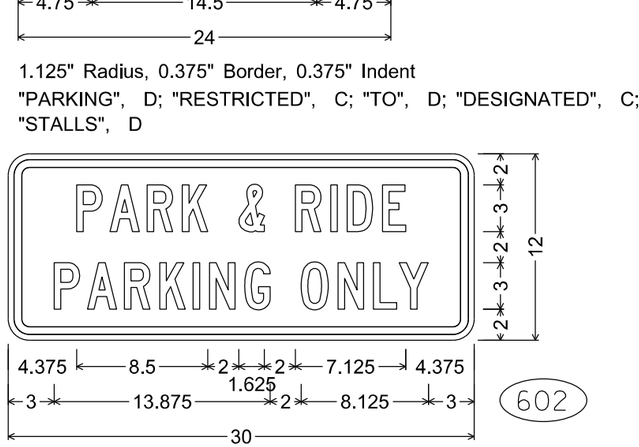
1.125" Radius, 0.375" Border, 0.375" Indent
"PARKING", D; "RESTRICTED", C; "TO", D; "DESIGNATED", C;
"STALLS", D



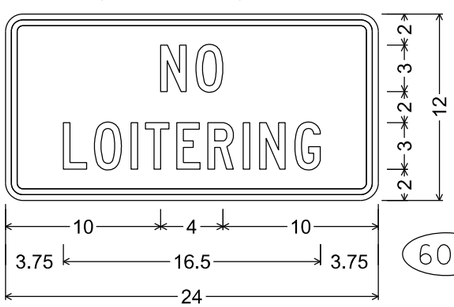
1.125" Radius, 0.375" Border, 0.375" Indent

NOTES

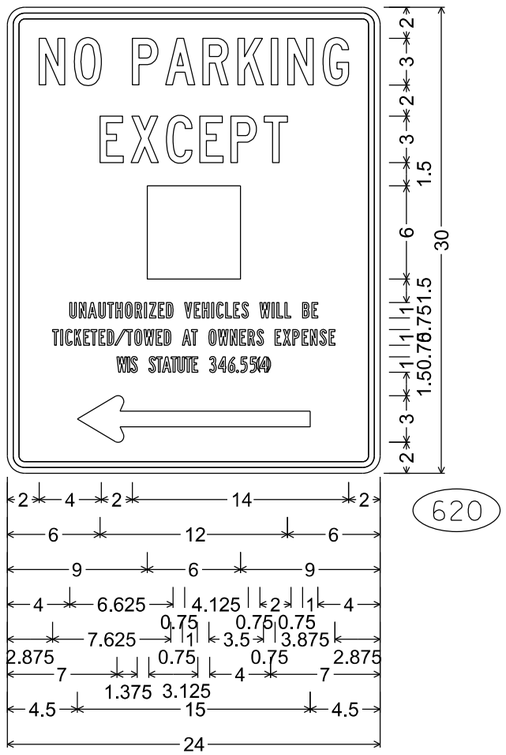
1. All Signs Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C except as noted



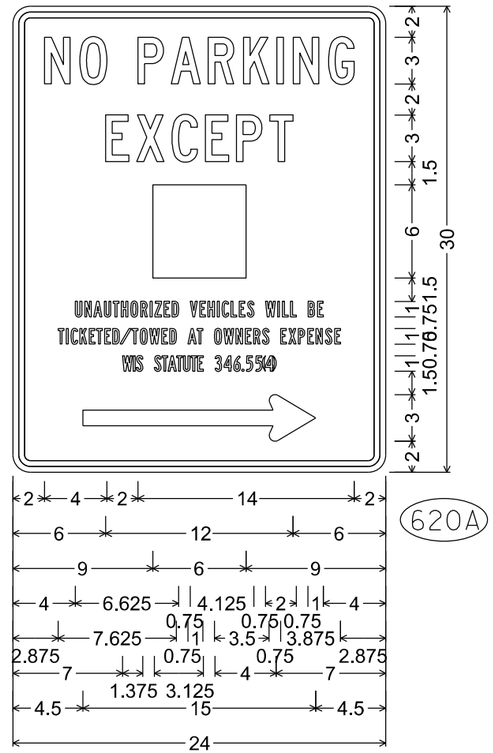
1.375" Radius, 0.500" Border, 0.375" Indent



1.125" Radius, 0.375" Border, 0.375" Indent



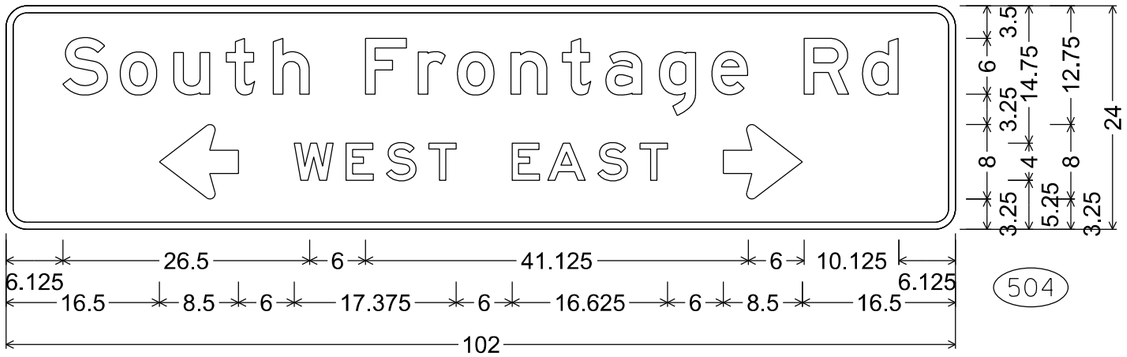
1.125" Radius, 0.375" Border, 0.375" Indent, Red on White;
"NO", C; "PARKING", C; "EXCEPT", C;
"UNAUTHORIZED", B; "VEHICLES", B; "WILL", B;
"BE", B; "TICKETED/TOWED", B;
"AT", B; "OWNERS", B; "EXPENSE", B;
"WIS", B; "STATUTE", B; "346.55(4)", B



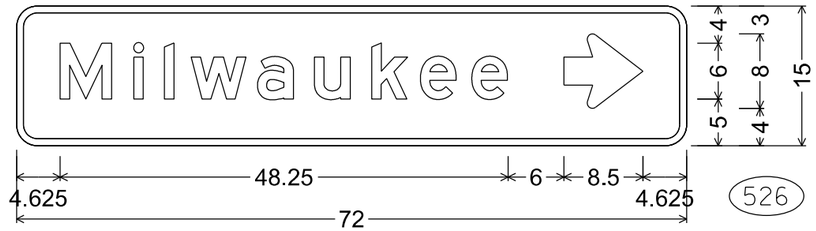
1.125" Radius, 0.375" Border, 0.375" Indent, Red on White;
"NO", C; "PARKING", C; "EXCEPT", C;
"UNAUTHORIZED", B; "VEHICLES", B; "WILL", B;
"BE", B; "TICKETED/TOWED", B;
"AT", B; "OWNERS", B; "EXPENSE", B;
"WIS", B; "STATUTE", B; "346.55(4)", B

NOTES

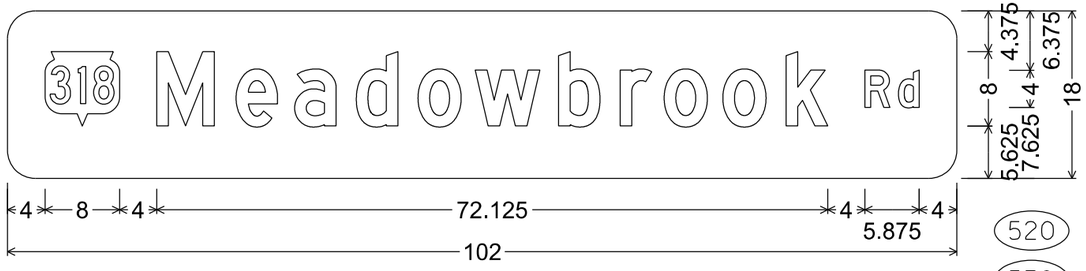
1. All Signs Type II - Type H Reflective
2. Color:
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   Message - White
3. Message Series - E except as noted



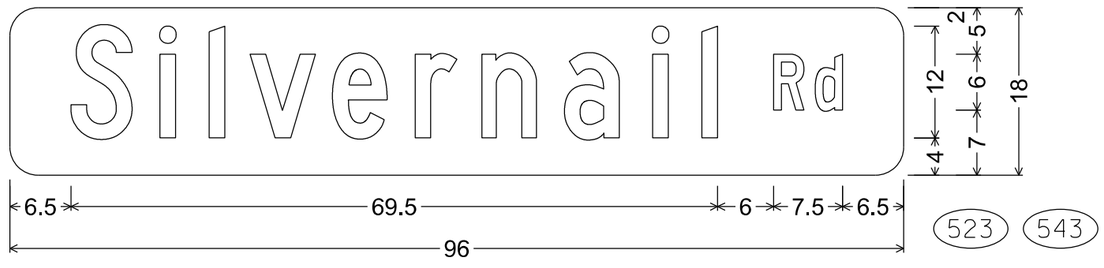
D1-60; 2.250" Radius, 0.750" Border



D1-1; 2.250" Radius, 0.750" Border



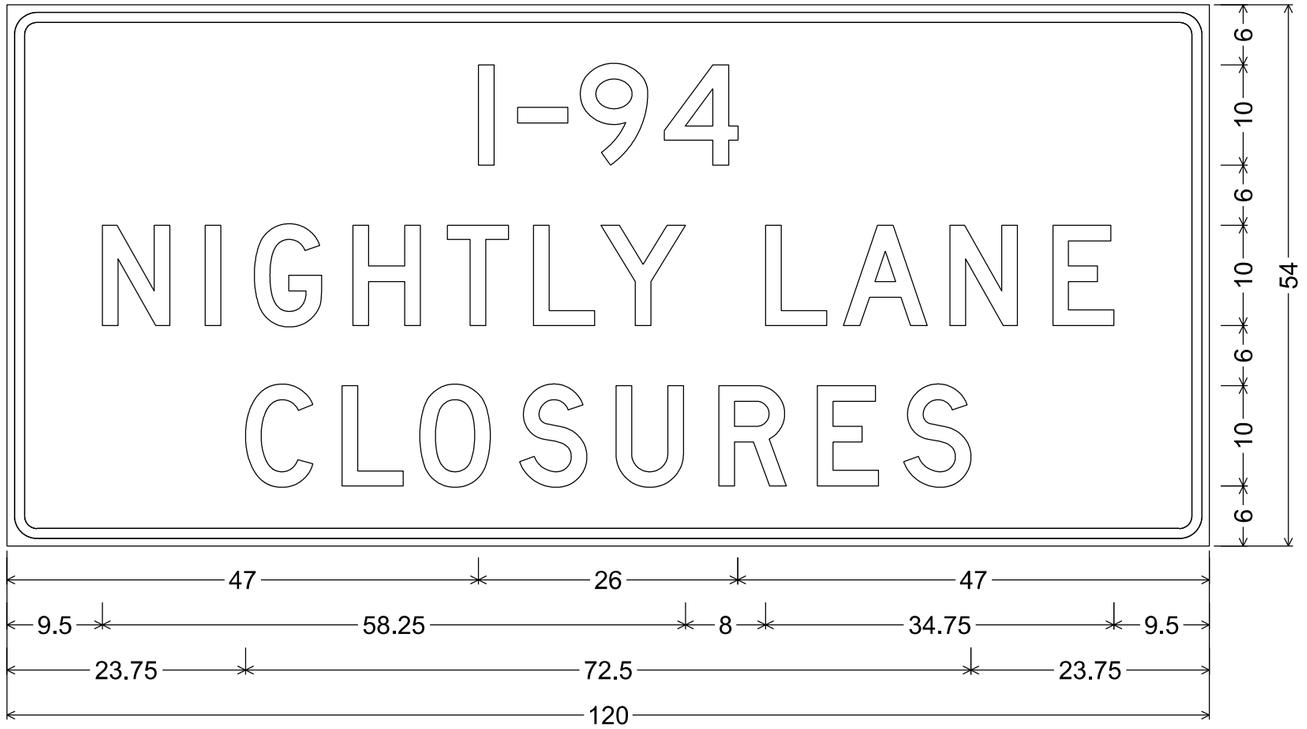
M1-94S; 3.000" Radius, No border
"Meadowbrook", D; "Rd", D



M1-94H; 3.000" Radius, No border
"Silvernail", C; "Rd", C;

7

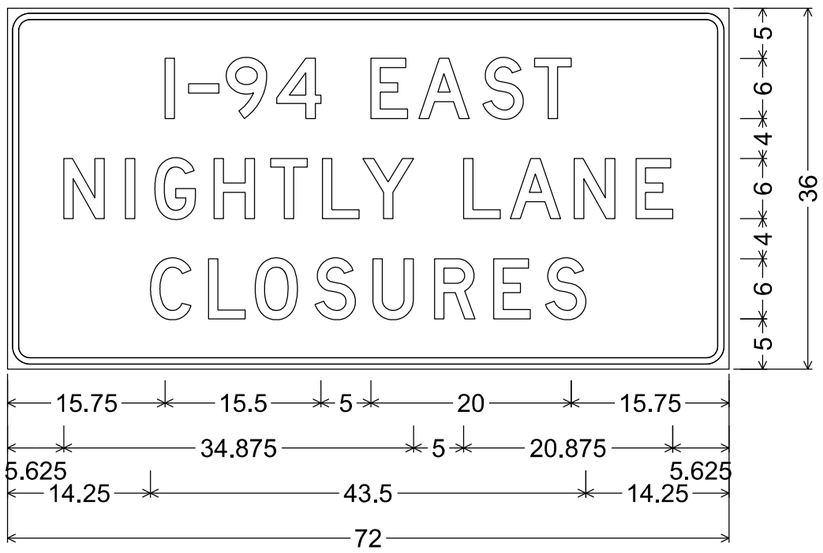
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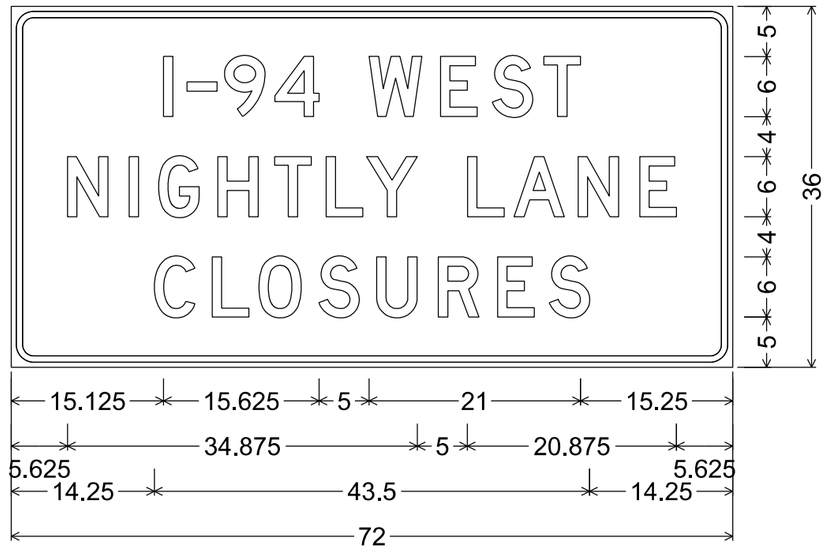
3.000" Radius, 1.000" Border, 0.750" Indent

NOTES

1. Fixed Message Signs Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D



2.250" Radius, 0.625" Border, 0.500" Indent



2.250" Radius, 0.625" Border, 0.500" Indent

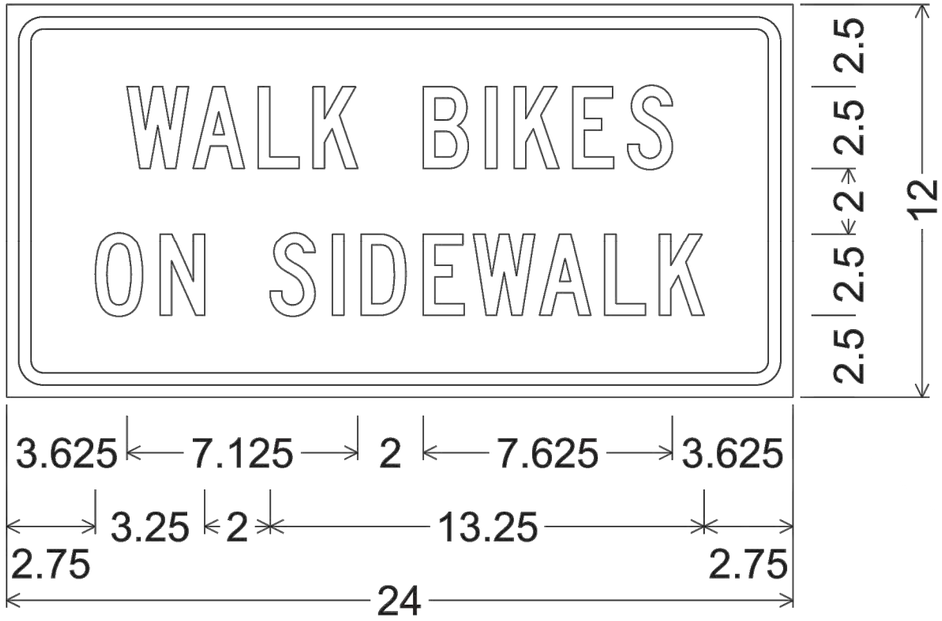
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PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	TEMPORARY SIGNING	SHEET NO: 758	E

NOTES

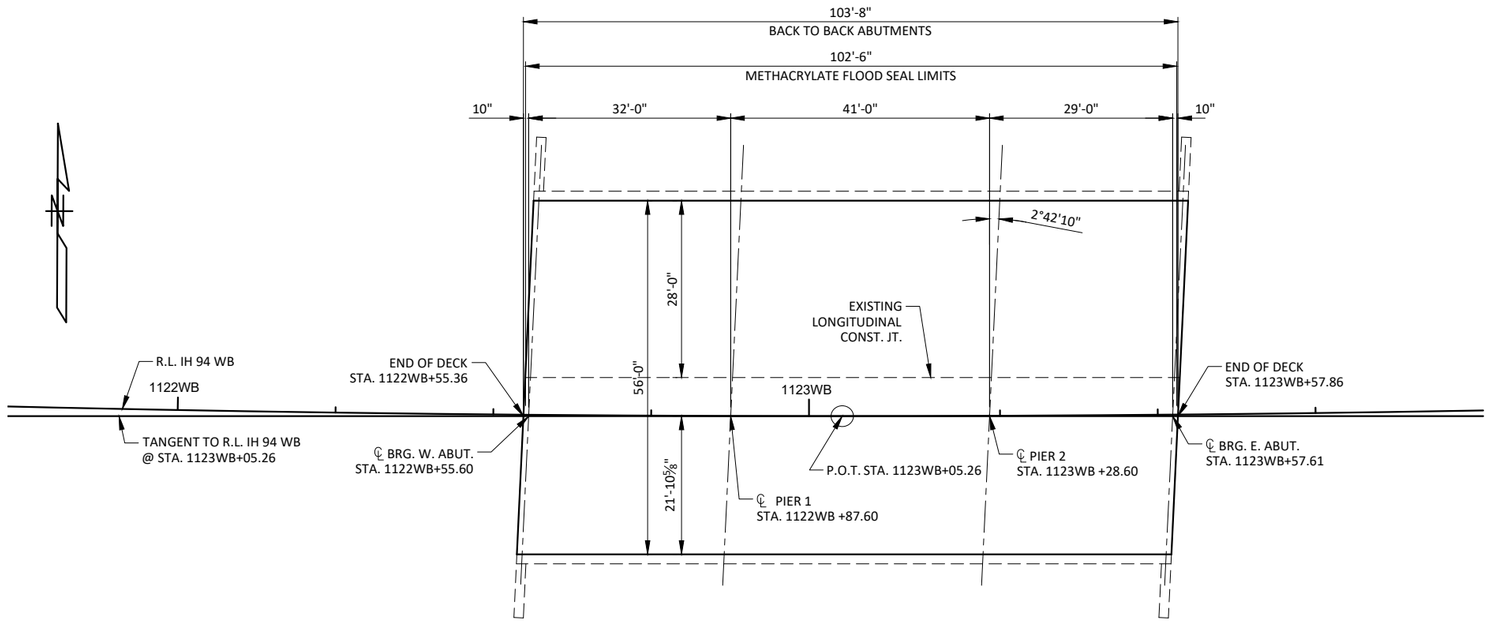
1. Fixed Message Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C



1.125" Radius, 0.375" Border, 0.375" Indent

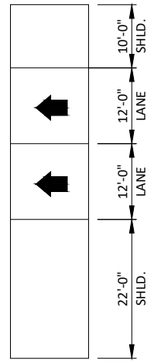
STATE PROJECT NUMBER

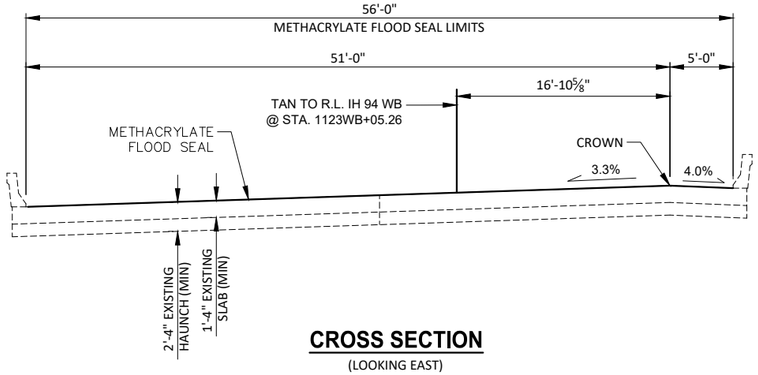
1060-47-70



PLAN

(3 SPAN - CAST-IN-PLACE HAUNCHED CONCRETE SLAB)
(ALL DIMENSIONS ARE MEASURED ALONG WB TANGENT)





CROSS SECTION

(LOOKING EAST)

	TOTAL ESTIMATED QUANTITIES		
ITEM NUMBER	BID ITEM	UNIT	TOTAL
509.1500	CONCRETE SURFACE REPAIR	SF	10
SPV.0180.001	METHACRYLATE FLOOD SEAL	SY	638

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "METHACRYLATE FLOOD SEAL".

THE CONTRACTOR SHALL DETERMINE REQUIRED CONSTRUCTION STAGING ON THE STRUCTURE TO ACCOMPLISH APPLICATION OF THE MMA FLOOD SEAL INCLUDING LOCATION OF MMA FLOOD SEAL CONSTRUCTION JOINTS BETWEEN STAGES AS PERMITTED BY THE CONTRACT AND AS APPROVED BY THE ENGINEER. SEE ROADWAY PLANS AND SPECIAL PROVISIONS FOR MAINTENANCE OF TRAFFIC, PERMISSIBLE LANE CLOSURES, AND CONSTRUCTION STAGING REQUIREMENTS.

LIVELOAD:

DESIGN RATING: HS20
INVENTORY RATING: HS19
OPERATING RATING: HS33
WISCONSIN STANDARD PERMIT VEHICLE: 250 KIPS

TRAFFIC DATA

E. MAPLE AVE
AADT (2043) _____ 2,196
DESIGN SPEED _____ 50MPH

IH 94
AADT (2043) _____ 96,465
DESIGN SPEED_____ 70MPH

LIST OF DRAWINGS:

1. GENERAL PLAN

HORIZONTAL CURVE DATA

R.L. IH 94 WB

P.I. = 1120+17.54
Δ = 15°19'16" LEFT
D = 1°00'
T = 770.66'
L = 1532.11'
R = 5729.65'
P.C. = 1112.46.88
P.T. = 1127+78.99



DESIGN CONSULTANT
TOM ROMENESKO, PE
(608) 566-1370

BRIDGE OFFICE CONTACT
AARON BONK, PE
(608) 261-0261

NO.	DATE	REVISION	BY

DAAR
ENGINEERING, INC.
www.daarcorp.com
Milwaukee, WI 53202
414-225-9817

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 02/13/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-67-60

IH 94 WB OVER E. MAPLE AVE.

COUNTY	TOWN/~~CITY/VILLAGE~~
WAUKESHA	VERNON

DESIGN SPEC.
REHABILITATION N/A

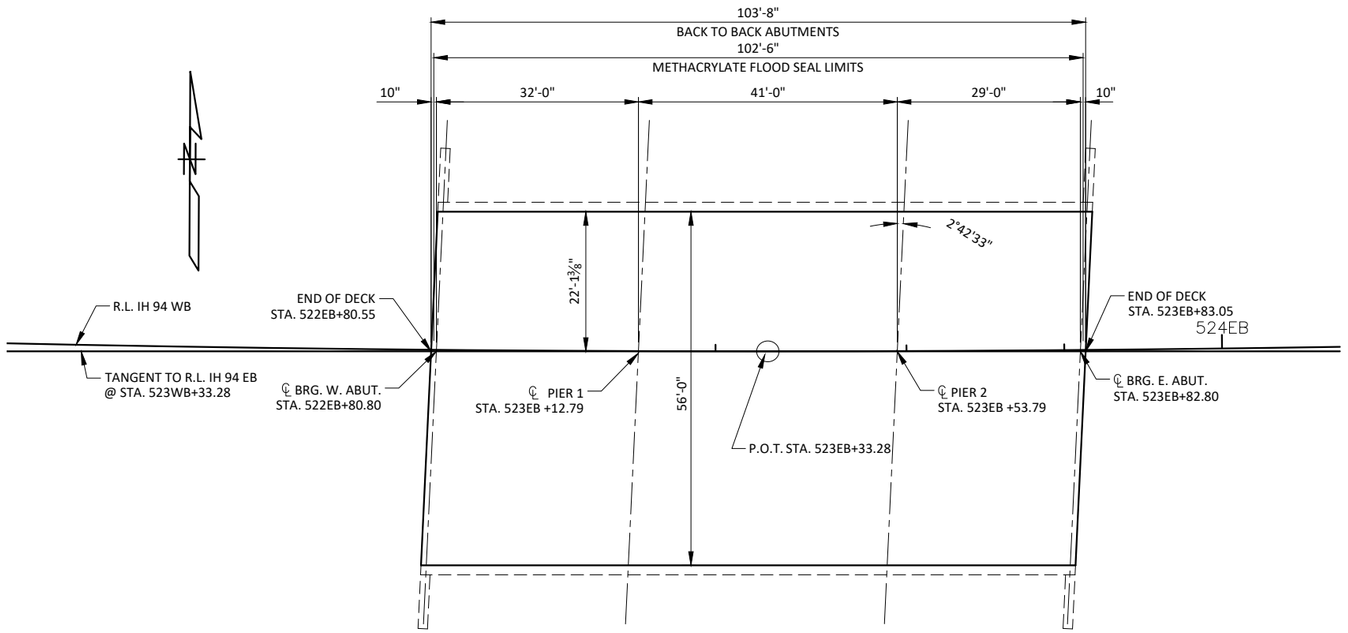
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MC	TR	MC	TR

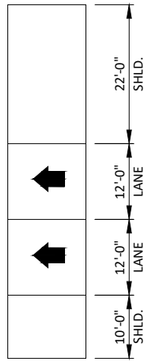
GENERAL PLAN

SHEET 1 OF 1
760

STATE PROJECT NUMBER

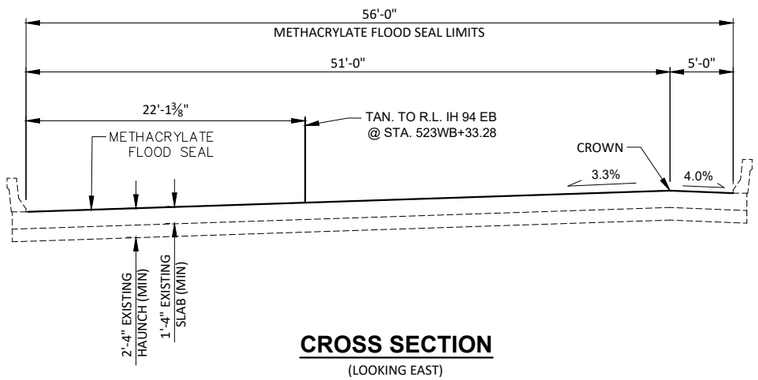
1060-47-70





PLAN

(3 SPAN - CAST-IN-PLACE HAUNCHED CONCRETE SLAB)
(ALL DIMENSIONS ARE MEASURED ALONG WB TANGENT)



CROSS SECTION

(LOOKING EAST)

	TOTAL ESTIMATED QUANTITIES		
ITEM NUMBER	BID ITEM	UNIT	TOTAL
509.1500	CONCRETE SURFACE REPAIR	SF	10
SPV.0180.001	METHACRYLATE FLOOD SEAL	SY	638

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "METHACRYLATE FLOOD SEAL".

THE CONTRACTOR SHALL DETERMINE REQUIRED CONSTRUCTION STAGING ON THE STRUCTURE TO ACCOMPLISH APPLICATION OF THE MMA FLOOD SEAL INCLUDING LOCATION OF MMA FLOOD SEAL CONSTRUCTION JOINTS BETWEEN STAGES AS PERMITTED BY THE CONTRACT AND AS APPROVED BY THE ENGINEER. SEE ROADWAY PLANS AND SPECIAL PROVISIONS FOR MAINTENANCE OF TRAFFIC, PERMISSIBLE LANE CLOSURES, AND CONSTRUCTION STAGING REQUIREMENTS.

LIVELOAD:

DESIGN RATING: HS20
INVENTORY RATING: HS19
OPERATING RATING: HS33
WISCONSIN STANDARD PERMIT VEHICLE: 250 KIPS

TRAFFIC DATA

E. MAPLE AVE
AADT (2043) — 2,196
DESIGN SPEED — 50MPH

IH 94
AADT (2043) — 96,465
DESIGN SPEED — 70MPH

LIST OF DRAWINGS:

1. GENERAL PLAN

HORIZONTAL CURVE DATA

R.L. IH 94 WB

P.I. = 1120+17.54
Δ = 15°19'16" LEFT
D = 1°00'
T = 770.66'
L = 1532.11'
R = 5729.65'
P.C. = 1112.46.88
P.T. = 1127+78.99



NO.	DATE	REVISION	BY

DAAR ENGINEERING, INC.
www.daarcorp.com
Milwaukee, WI 53202
414-225-9817

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 02/13/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-67-61

IH 94 EB OVER E. MAPLE AVE.

COUNTY: WAUKESHA
TOWN/~~CITY/VILLAGE~~: DELAFIELD

DESIGN SPEC.
REHABILITATION N/A

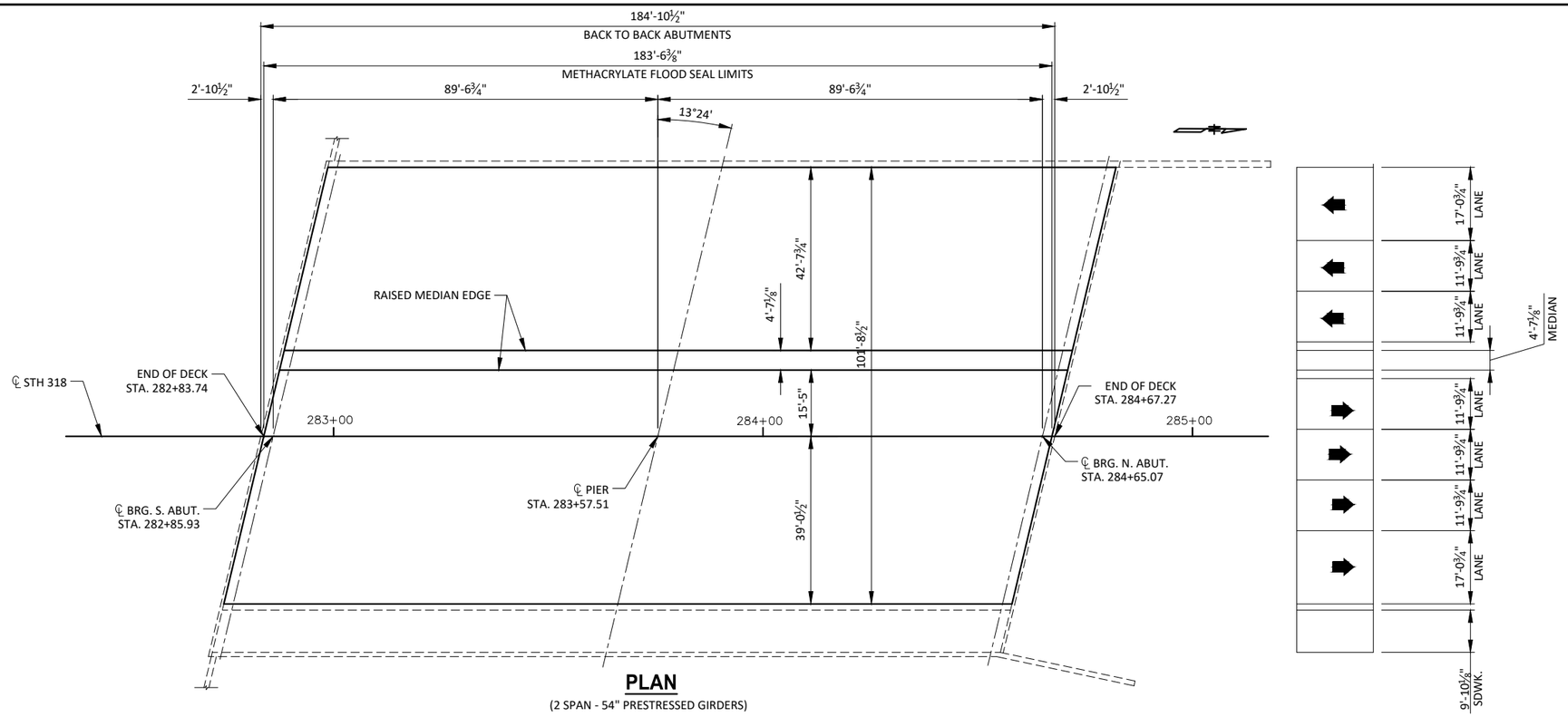
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MC	TR	MC	TR

GENERAL PLAN

SHEET 1 OF 1
761

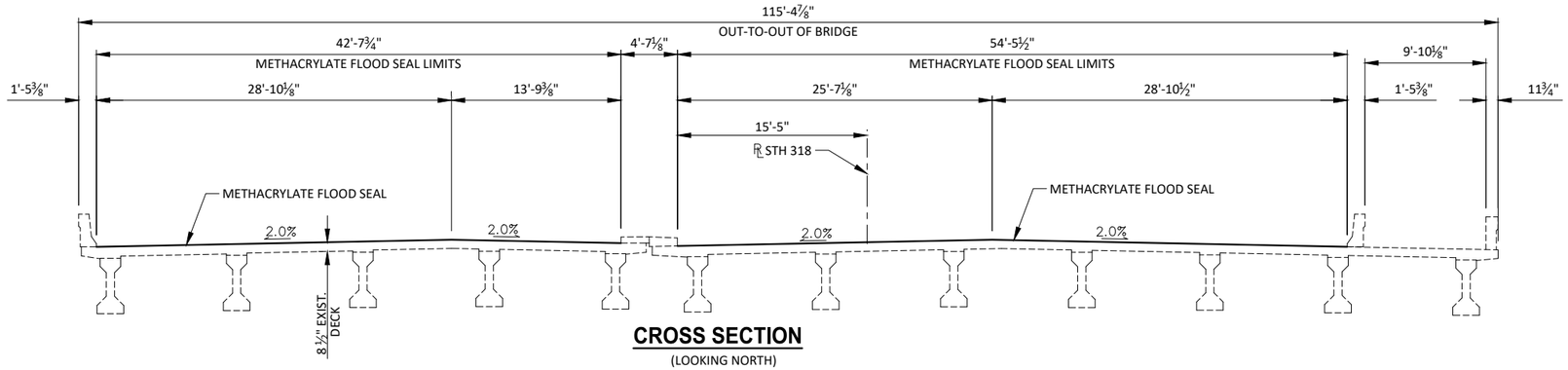
DESIGN CONSULTANT
TOM ROMENESKO, PE
(608) 566-1370

BRIDGE OFFICE CONTACT
AARON BONK, PE
(608) 261-0261



PLAN

(2 SPAN - 54" PRESTRESSED GIRDERS)



CROSS SECTION

(LOOKING NORTH)

	TOTAL ESTIMATED QUANTITIES		
ITEM NUMBER	BID ITEM	UNIT	TOTAL
SPV.0180.001	METHACRYLATE FLOOD SEAL	SY	1970

STATE PROJECT NUMBER

1060-47-70

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS, AND WERE CONVERTED FROM METRIC.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "METHACRYLATE FLOOD SEAL".

THE CONTRACTOR SHALL DETERMINE REQUIRED CONSTRUCTION STAGING ON THE STRUCTURE TO ACCOMPLISH APPLICATION OF THE MMA FLOOD SEAL INCLUDING LOCATION OF MMA FLOOD SEAL CONSTRUCTION JOINTS BETWEEN STAGES AS PERMITTED BY THE CONTRACT AND AS APPROVED BY THE ENGINEER. SEE ROADWAY PLANS AND SPECIAL PROVISIONS FOR MAINTENANCE OF TRAFFIC, PERMISSIBLE LANE CLOSURES, AND CONSTRUCTION STAGING REQUIREMENTS.

LIVELOAD:

DESIGN RATING: HS20
INVENTORY RATING: HS22
OPERATING RATING: HS41
WISCONSIN STANDARD PERMIT VEHICLE: 250 KIPS

TRAFFIC DATA

STH 318
AADT (2043) — 25,018
DESIGN SPEED — 40 MPH

IH 94
AADT (2043) — 96,465
DESIGN SPEED — 70 MPH

LIST OF DRAWINGS:

1. GENERAL PLAN

WISCONSIN
THOMAS J. ROMENESKO
E-26318
MADISON
WI
PROFESSIONAL ENGINEER

NO.	DATE	REVISION	BY

DAAR ENGINEERING, INC.
www.daarcorp.com
Milwaukee, WI 53202
414-225-9817

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 02/13/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-67-266

IH 94 EB OVER E. MAPLE AVE.

COUNTY: WAUKESHA
TOWN/~~CITY/VILLAGE~~: PEWAUKEE
DESIGN SPEC.: REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MC	TR	MC	TR

GENERAL PLAN

SHEET 1 OF 1
762

DESIGN CONSULTANT
TOM ROMENESKO, PE
(608) 566-1370

BRIDGE OFFICE CONTACT
AARON BONK, PE
(608) 261-0261

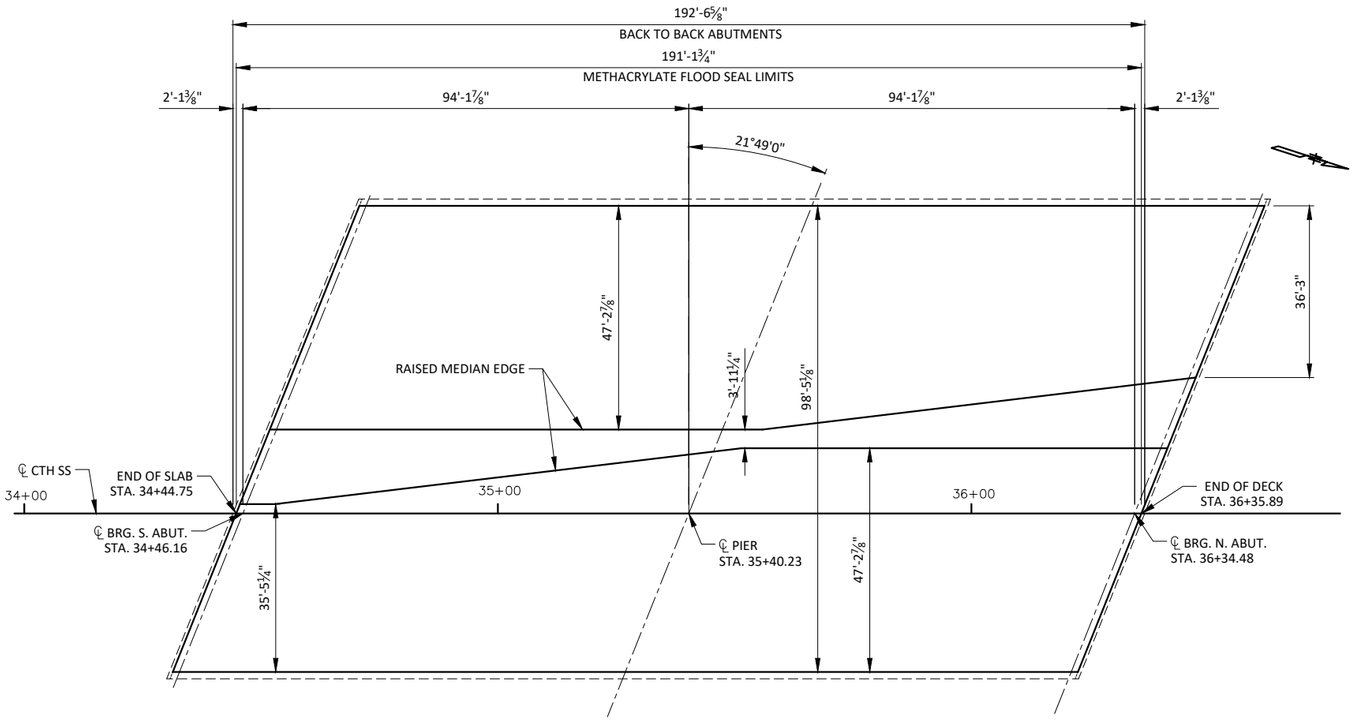
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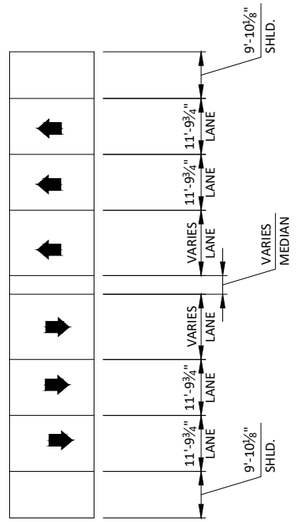
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FILE NAME : C:\USERS\MITCHELLCOMER\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\07 STRUCTURES\PLANS_CAD\B-67-266\1 GENERAL PLAN.DWG
PLOT DATE : 2/9/2024 11:20:00 AM
PLOT BY : MITCHELL COMER
PLOT SCALE : 1:1
LAYOUT : 1 GENERAL PLAN

STATE PROJECT NUMBER

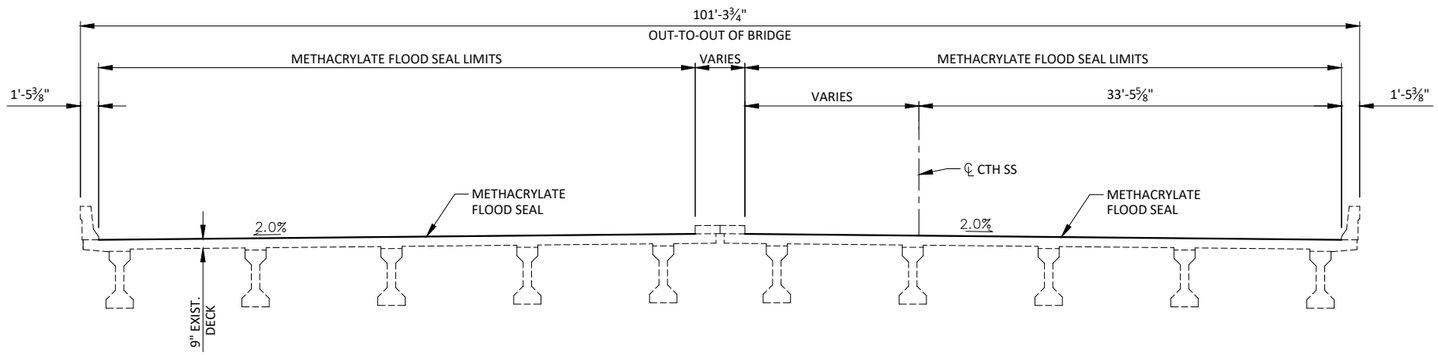
1060-47-70





PLAN

(2 SPAN - 54" PRESTRESSED GIRDERS)



CROSS SECTION

(LOOKING NORTH)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "METHACRYLATE FLOOD SEAL".

THE CONTRACTOR SHALL DETERMINE REQUIRED CONSTRUCTION STAGING ON THE STRUCTURE TO ACCOMPLISH APPLICATION OF THE MMA FLOOD SEAL INCLUDING LOCATION OF MMA FLOOD SEAL CONSTRUCTION JOINTS BETWEEN STAGES AS PERMITTED BY THE CONTRACT AND AS APPROVED BY THE ENGINEER. SEE ROADWAY PLANS AND SPECIAL PROVISIONS FOR MAINTENANCE OF TRAFFIC, PERMISSIBLE LANE CLOSURES, AND CONSTRUCTION STAGING REQUIREMENTS.

LIVELOAD:

DESIGN RATING: HS20
INVENTORY RATING: HS21
OPERATING RATING: HS48
WISCONSIN STANDARD PERMIT VEHICLE: 250 KIPS

TRAFFIC DATA

CTH SS
AADT (2043) ——— 5,260
DESIGN SPEED ——— 40MPH

IH 94
AADT (2043) ——— 107,319
DESIGN SPEED——— 70MPH

LIST OF DRAWINGS:

1. GENERAL PLAN

	TOTAL ESTIMATED QUANTITIES		
ITEM NUMBER	BID ITEM	UNIT	TOTAL
SPV.0180.001	METHACRYLATE FLOOD SEAL	SY	1890

WISCONSIN
THOMAS J. ROMENESKO
E-26318
MADISON
WI
PROFESSIONAL ENGINEER
5/23/2022

DESIGN CONSULTANT
TOM ROMENESKO, PE
(608) 566-1370

BRIDGE OFFICE CONTACT
AARON BONK, PE
(608) 261-0261

NO.	DATE	REVISION	BY

DAAR ENGINEERING, INC.
www.daarcorp.com
Milwaukee, WI 53202
414-225-9817

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 02/19/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-67-267

CTH SS OVER IH 94

COUNTY: WAUKESHA
TOWN/~~CITY/ VILLAGE~~: VERNON

DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MC	TR	MC	TR

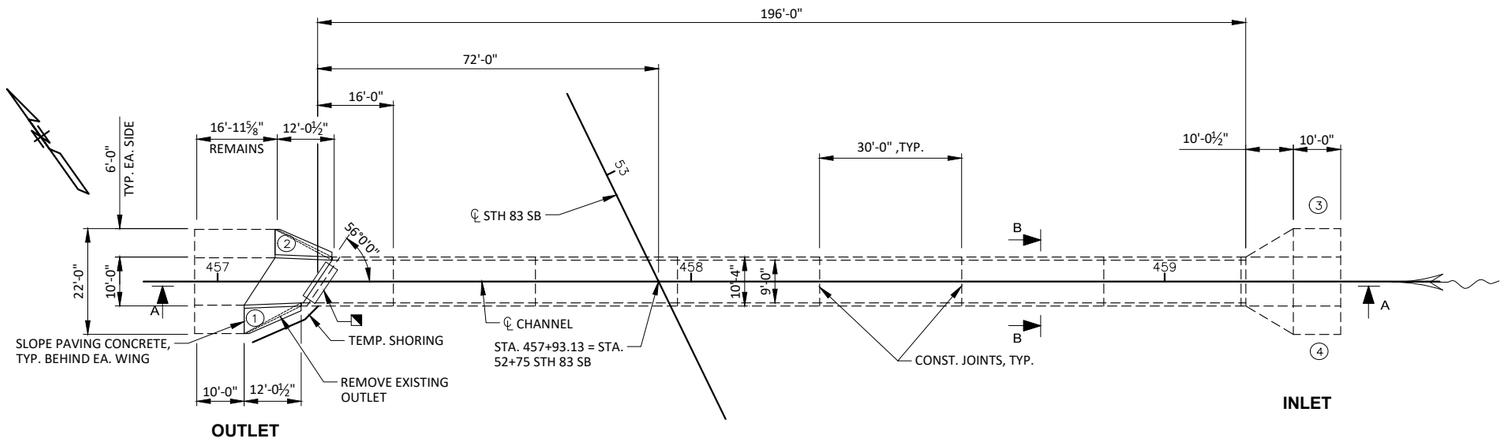
GENERAL PLAN

SHEET 1 OF 1

763

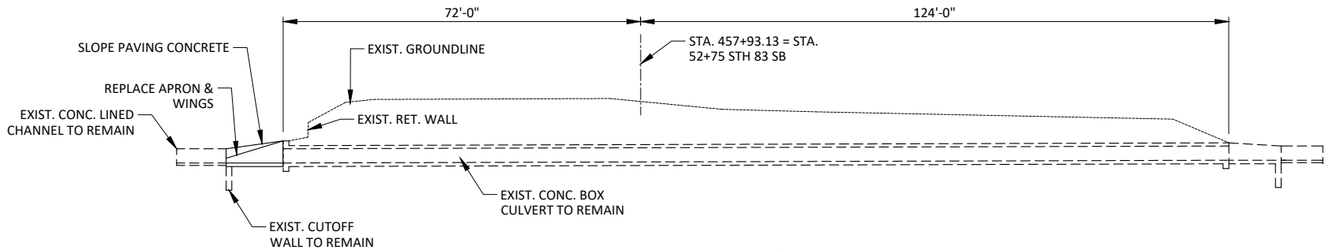
STATE PROJECT NUMBER

1060-47-70



PLAN

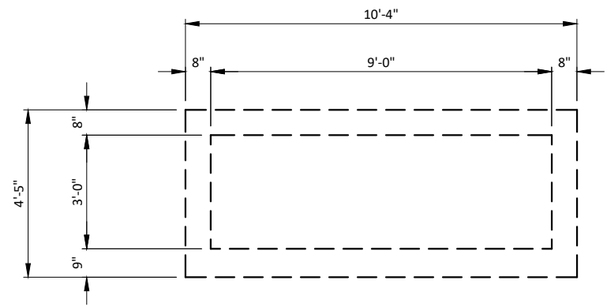
(SINGLE CELL BOX CULVERT)



ELEVATION VIEW

SECTION A-A

(SINGLE CELL BOX CULVERT)



SECTION B-B

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
203.0220.001	REMOVING STRUCTURE C-67-25	EA	1
206.2001.001	EXCAVATION FOR STRUCTURES CULVERTS C-67-25	EA	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	38
502.4204	ADHESIVE ANCHORS NO. 4 BAR	EA	10
504.0100	CONCRETE MASONRY CULVERTS	CY	6
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	520
509.1500	CONCRETE SURFACE REPAIR	SF	10
511.1200.001	TEMPORARY SHORING C-67-25	SF	50
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6
604.0400	SLOPE PAVING CONCRETE	SY	11

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
169	249+93	CHISELED CROSS IN CURB SET, 215' LT.	975.37
170	251+16	CHISELED CROSS IN CURB SET, 400' LT.	977.40

LIST OF DRAWINGS:

1. GENERAL PLAN
2 OUTLET APRON DETAIL

LIVELOAD:

INVENTORY RATING FACTOR: 1.0
OPERATING RATING FACTOR: 1.67
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV): 190 kips
LOAD RATINGS PER WBM 45.8.2.1

MATERIAL PROPERTIES:

CONCRETE MASONRY	f'c = 3,500 PSI
HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 PSI

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

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

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

CONCRETE REMOVAL LIMITS DEFINED BY EXISTING JOINTS.

ANY CONCRETE OF DOWNSTREAM CHANNEL REMOVED TO CONSTRUCT NEW WING WALLS SHALL BE REPLACED IN KIND. COST FOR ALL REMOVAL AND REPLACEMENT SHALL BE INCLUDED IN COST FOR "REMOVING STRUCTURE C-67-25".

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C-67-25" SHALL BE THE EXISTING GROUND LINE.

ALL WING WALL BACKFILL SHALL BE BACKFILL STRUCTURE TYPE B

BACKFILL QUANTITIES ARE BASED ON PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITY. BACKFILL STRUCTURE TYPE B REQUIRED BEHIND WINGS. BACKFILL PLACED BEYOND PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

½" FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M153 TYPES I, II OR III OR M213

THE PROPOSED REHABILITATION INCLUDES CONCRETE SURFACE REPAIR AND REPLACEMENT OF THE OUTLET APRON AND WINGS 1 & 2.

◥ "CONCRETE SURFACE REPAIR" QUANTITIES ARE AN ESTIMATE ONLY. QUANTITIES TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

TRAFFIC DATA

STH 83
AADT (2022)_____26,900
DESIGN SPEED_____40 MPH

NO.	DATE	REVISION	BY

DAAR ENGINEERING, INC.
www.daarcorp.com
Milwaukee, WI 53202
414-225-9817

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 02/13/24
CHIEF STRUCTURES DESIGN ENGINEER DATE

WISCONSIN THOMAS J. ROMENESKO E-26318 MADISON WI PROFESSIONAL ENGINEER

STRUCTURE C-67-25

STH 83 OVER UNKNOWN WATERWAY

COUNTY WAUKESHA
~~TOWN~~/CITY/~~VILLAGE~~ DELAFIELD
DESIGN SPEC. REHABILITATION N/A

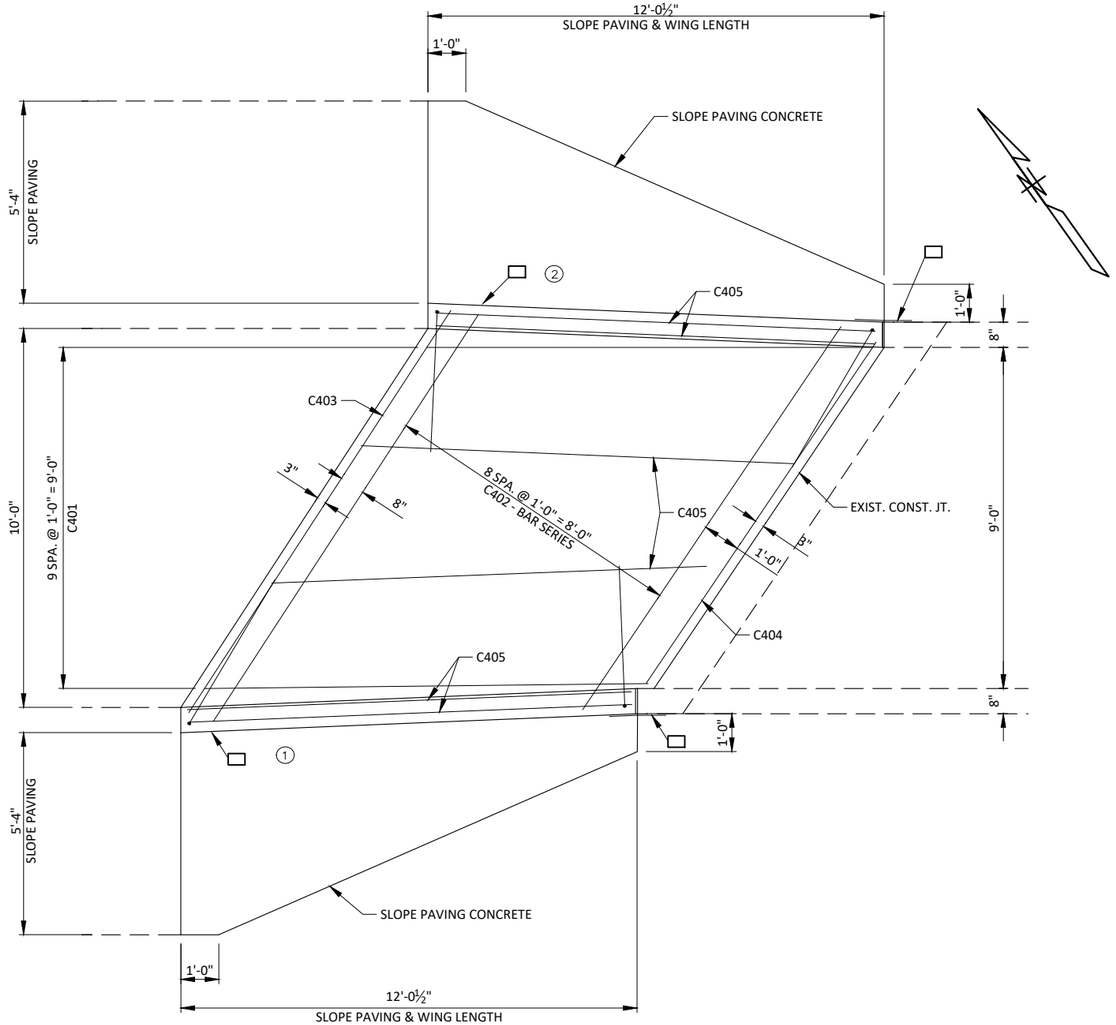
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MC	TR	MC	TR

DESIGN CONSULTANT
TOM ROMENESKO, PE
(608) 566-1370

BRIDGE OFFICE CONTACT
AARON BONK, PE
(608) 261-0261

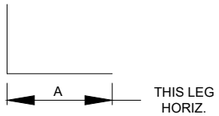
GENERAL PLAN

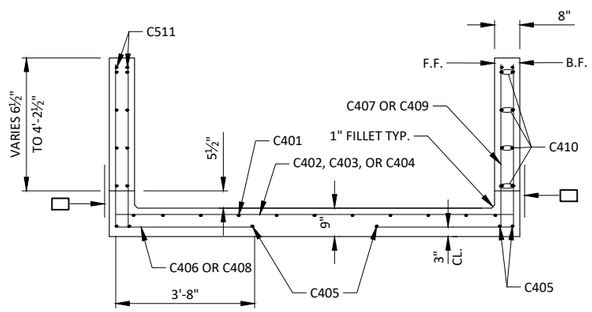
SHEET 1 OF 2
764



APRON PLAN

MARK	A
C406	3'-8"
C408	3'-8"





SECTION THRU APRON AND WINGWALLS

(WING DIMENSIONS AND BAR STEEL ARE SIMILAR)

BILL OF BARS

MARK	NUMBER	LENGTH	BENT	BAR SERIES	LOCATION
C401	10	11-8			APRON - TOP LONGIT.
C402	9	12-8		*	APRON - TOP TRANS.
C403	1	12-8			APRON - TOP TRANS.
C404	1	10-10			APRON - TOP TRANS.
C405	6	11-8			APRON - BOTTOM LONGIT.
C406	22	6-11	X	*	WING DOWEL - B.F. VERT.
C407	22	3-4		*	WING DOWEL - F.F. VERT.
C408	2	5-0	X		WING DOWEL - B.F. VERT.
C409	2	1-5			WING DOWEL - F.F. VERT.
C410	16	6-11		*	WING FOOTING - LONGIT.
C511	4	12-1			WING - F.F. & BF. VERT.
C412	10	2-0			APRON ADHESIVE ANCHOR - LONGIT.

ALL REINFORCEMENT BAR STEEL SHALL BE EPOXY COATED.

* LENGTH SHOWN FOR BAR IS AN AVERAGE AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATION. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

MARK	NO. REQUIRED	LENGTH
C402	1 SERIES OF 9	12-2 TO 13-2
C406	2 SERIES OF 11	5-5 TO 8-5
C407	2 SERIES OF 11	1-10 TO 4-10
C410	4 SERIES OF 4	2-2 TO 11-8

LEGEND

◯ - INDICATES WING NUMBER

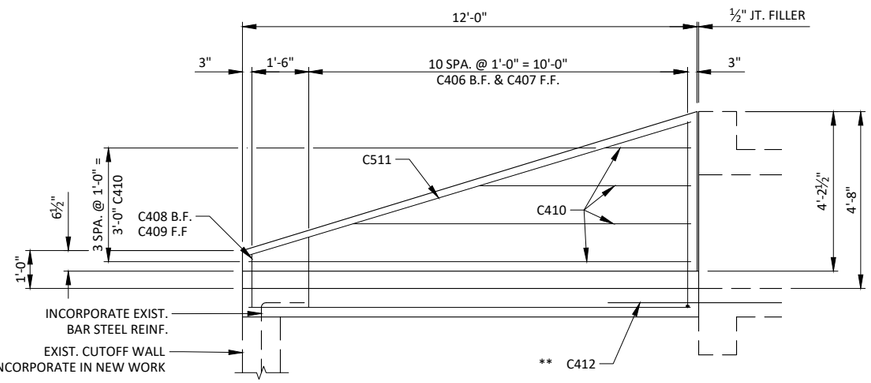
F.F. - FRONT FACE

B.F. - BACK FACE

E.F. - EACH FACE

CL. - CLEAR

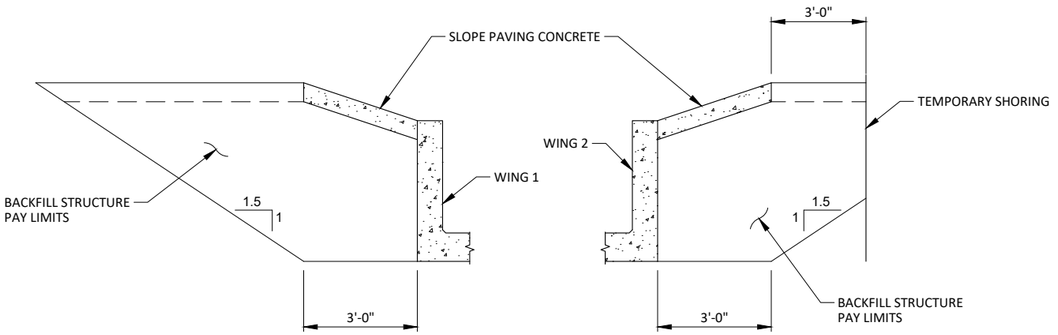
▭ 18" MIN. WIDTH RUBBERIZED MEMBRANE WATERPROOFING ALONG HORIZ. & VERT. CONSTR. JOINTS IN WING



WING 2 ELEVATION

(WING 1 SIMILAR)

** ADHESIVE ANCHOR NO. 4 BAR. EMBED 1'-0" IN CONCRETE. SPACE AT 1'-0" .



BACKFILL DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-67-25

DRAWN BY MC | PLANS CK'D. TR

OUTLET APRON DETAIL

SHEET 2 OF 2

765

STATE PROJECT NUMBER

1060-47-70

8

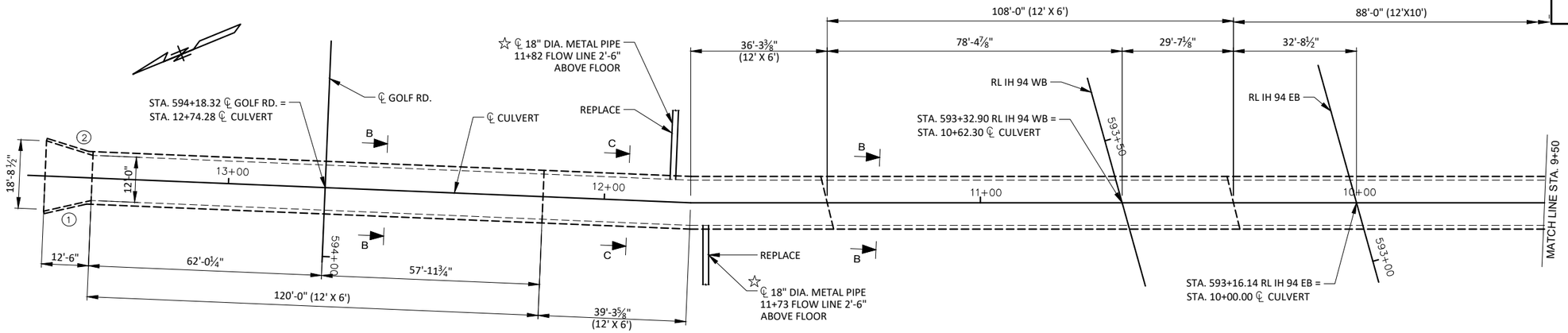
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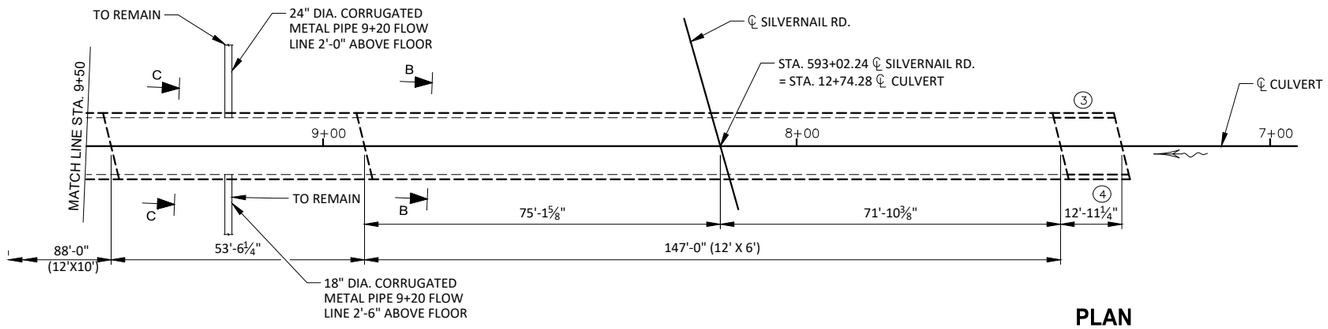
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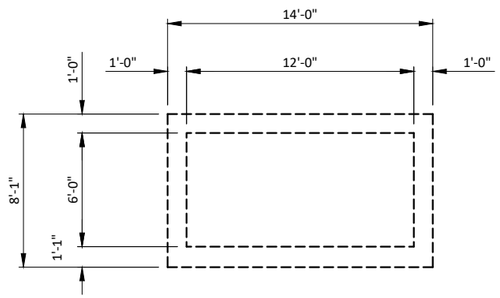
STATE PROJECT NUMBER

1060-47-70

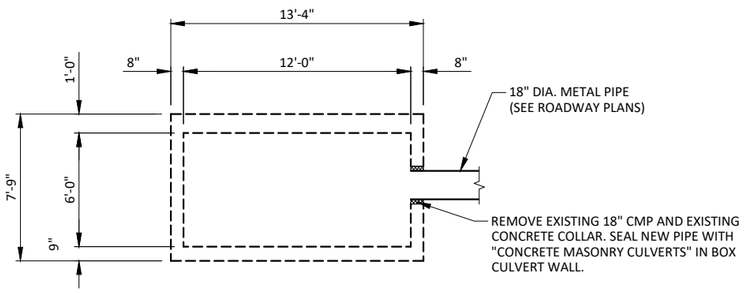




PLAN
(SINGLE CELL BOX CULVERT)



SECTION B-B



SECTION C-C

	TOTAL ESTIMATED QUANTITIES		
ITEM NUMBER	BID ITEM	UNIT	TOTAL
203.0220.002	REMOVING STRUCTURE C-67-865	EA	1
504.0100	CONCRETE MASONRY CULVERTS	CY	0.1

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
161	591EB+03	2 ½" MAG NAIL SET, 179' RT.	913.97
162	592EB+79	2 ½" MAG NAIL SET, 285' LT.	893.53

LOAD RATINGS

INVENTORY RATING FACTOR: 1.0
OPERATING RATING FACTOR: 1.67
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV): 190 kips

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS

☆ THE PROPOSED REHABILITATION INCLUDES REPLACING TWO CORRUGATED METAL PIPES (CMP) ENTERING THE BOX CULVERT. THE PIPES AND RECONNECTING THEM TO THE EXISTING INLETS IS INCLUDED IN THE ROADWAY PLANS. REMOVING THEM FROM THE BOX CULVERT AND RECONNECTING THE NEW PIPES TO THE BOX CULVERT IS INCLUDED IN THIS STRUCTURE PLAN.

TRAFFIC DATA

IH 94

AADT (2019)	73,200
AADT (2043)	96,465
DESIGN SPEED	70 MPH

LIST OF DRAWINGS:

1. GENERAL PLAN



NO.	DATE	REVISION	BY

DAAR ENGINEERING, INC.
www.daarcorp.com
Milwaukee, WI 53202
414-225-9817

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 02/13/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE C-67-865

IH-94/ CTH DR/ SILVERNAIL ROAD OVER ZION CREEK

COUNTY: WAUKESHA
TOWN/~~CITY/ VILLAGE~~: DELAFIELD

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MC	TR	MC	TR

GENERAL PLAN

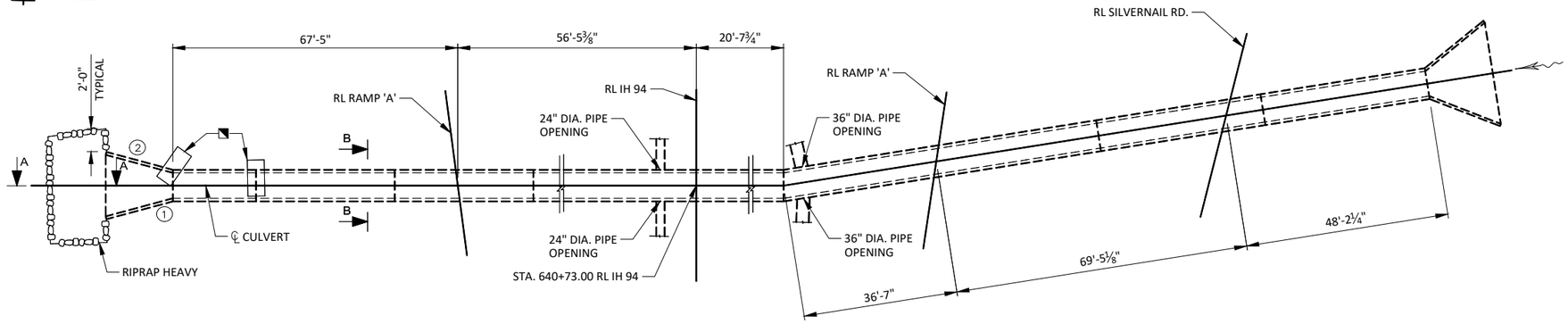
SHEET 1 OF 1
766

DESIGN CONSULTANT
TOM ROMENESKO, PE
(608) 566-1370

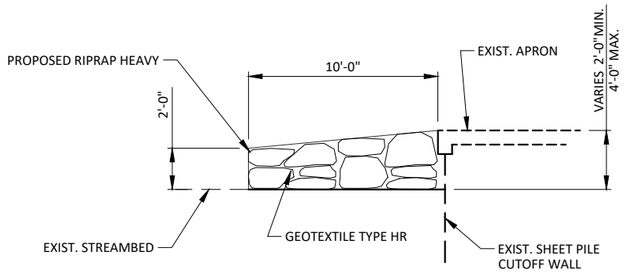
BRIDGE OFFICE CONTACT
AARON BONK, PE
(608) 261-0261

STATE PROJECT NUMBER

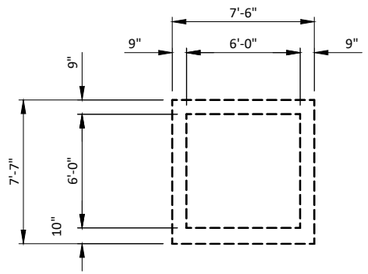
1060-47-70



PLAN
(SINGLE CELL BOX CULVERT)



SECTION A-A



SECTION B-B

LOAD RATINGS
INVENTORY RATING FACTOR: 1.0
OPERATING RATING FACTOR: 1.67
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV): 190 kips

GENERAL NOTES
DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS, AND WERE CONVERTED FROM METRIC.

THE PROPOSED REHABILITATION INCLUDES CONCRETE SURFACE REPAIR AND INSTALLATION OF RIPRAP ON THE NORTH END OF THE STRUCTURE.

◥ "CONCRETE SURFACE REPAIR QUANTITIES ARE AN ESTIMATE ONLY. QUANTITIES TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

TRAFFIC DATA
IH 94
AADT (2016) ——— 74,700
AADT (2043) ——— 107,319
DESIGN SPEED ——— 70 MPH

LIST OF DRAWINGS:
1. GENERAL PLAN

	TOTAL ESTIMATED QUANTITIES		
ITEM NUMBER	BID ITEM	UNIT	TOTAL
◥ 509.1500	CONCRETE SURFACE REPAIR	SF	25
606.0030	RIPRAP HEAVY	CY	28
645.0120	GEOTEXTILE TYPE HR	SY	30

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
158	642EB+15	CHISELED CROSS SET, 175' RT.	921.57
159	639EB+36	CHISELED CROSS SET, 117' LT.	911.27



NO.	DATE	REVISION	BY

DAAR ENGINEERING, INC.
www.daarcorp.com
Milwaukee, WI 53202
414-225-9817

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 08/02/23
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE C-67-866

IH-94/ CTH DR/ SILVERNAIL ROAD OVER ZION CREEK

COUNTY: WAUKESHA
~~TOWN~~/CITY/~~VILLAGE~~: DELAFIELD

DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MC	TR	MC	TR

DESIGN CONSULTANT
TOM ROMENESKO, PE
(608) 566-1370

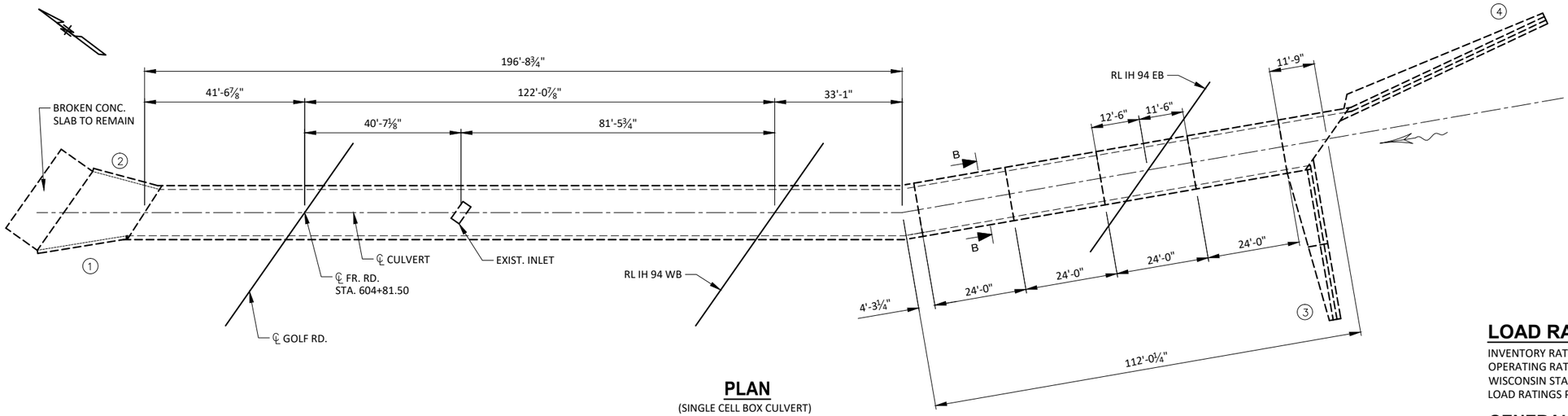
BRIDGE OFFICE CONTACT
AARON BONK, PE
(608) 261-0261

GENERAL PLAN

SHEET 1 OF 1
767

STATE PROJECT NUMBER

1060-47-70



PLAN
(SINGLE CELL BOX CULVERT)

LOAD RATINGS

INVENTORY RATING FACTOR: 1.0
OPERATING RATING FACTOR: 1.67
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV): 190 kips
LOAD RATINGS PER WBM 48.8.2.1

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

THE PROPOSED REHABILITATION INCLUDES INSTALLING WINGWALL STRAPS AT WINGS 3 & 4.

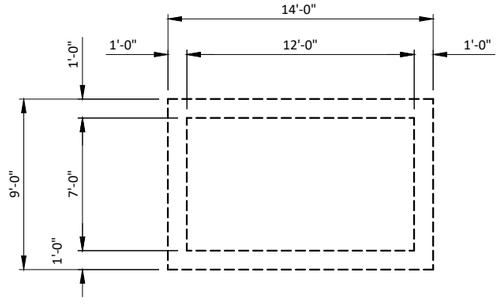
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TRAFFIC DATA

IH 94
AADT (2043) _____ 107,319
DESIGN SPEED _____ 70 MPH

LIST OF DRAWINGS:

1. GENERAL PLAN
2. STRAPPING DETAILS
3. STRAPPING DETAILS



SECTION B-B

	TOTAL ESTIMATED QUANTITIES		
ITEM NUMBER	BID ITEM	UNIT	TOTAL
SPV.0060.010	STRAPPING C-67-1570	EA	2

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
160	593EB+02	2 ½" MAG NAIL SET, 161' RT.	940.22
163	595EB+24	2 ½" MAG NAIL SET, 209' LT.	885.76

WISCONSIN
THOMAS J. ROMENESKO
E-26318
MADISON
WI
PROFESSIONAL ENGINEER

DESIGN CONSULTANT
TOM ROMENESKO, PE
(608) 566-1370

BRIDGE OFFICE CONTACT
AARON BONK, PE
(608) 261-0261

NO.	DATE	REVISION	BY

DAAR ENGINEERING, INC.
www.daarcorp.com
Milwaukee, WI 53202
414-225-9817

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 02/13/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE C-67-1570

IH 94 & GOLF ROAD OVER ZION CREEK TRIBUTARY

COUNTY	TOWN/~~CITY/VILLAGE~~
WAUKESHA	DELAFIELD

DESIGN SPEC. REHABILITATION N/A

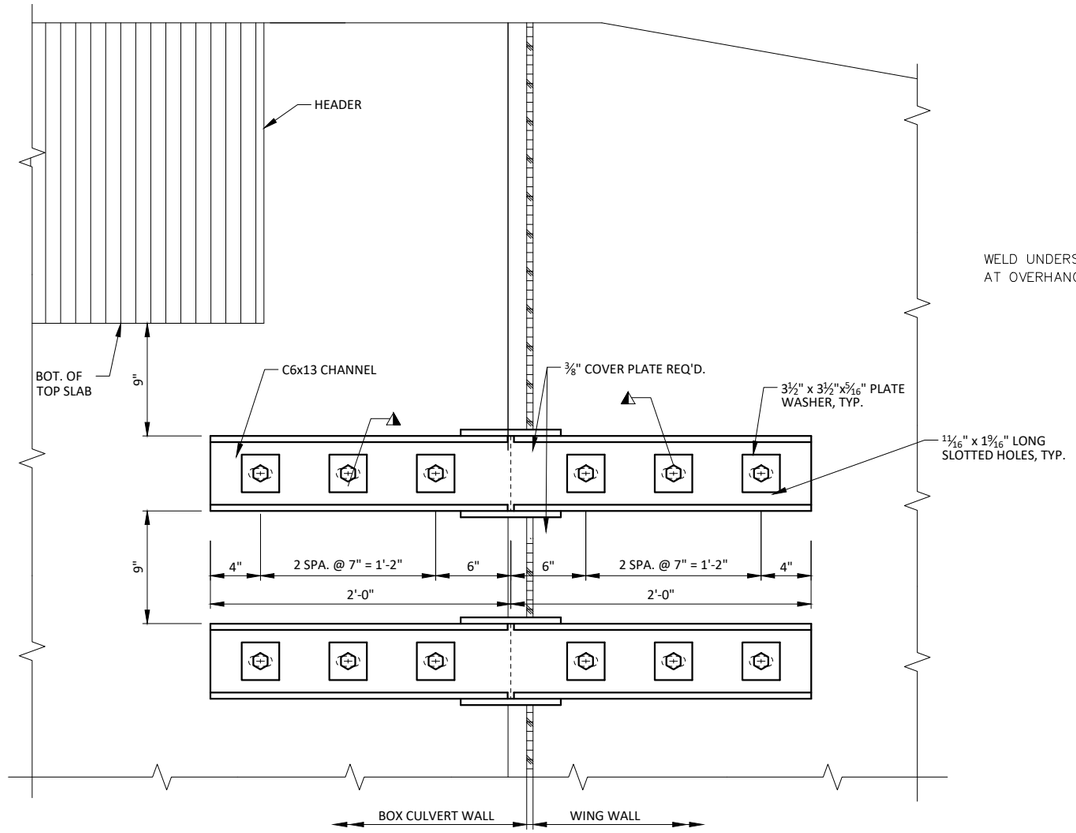
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MC	TR	MC	TR

GENERAL PLAN

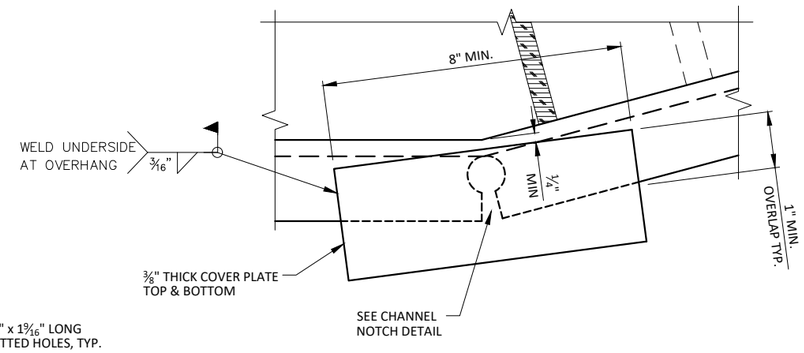
SHEET 1 OF 3
768

STATE PROJECT NUMBER

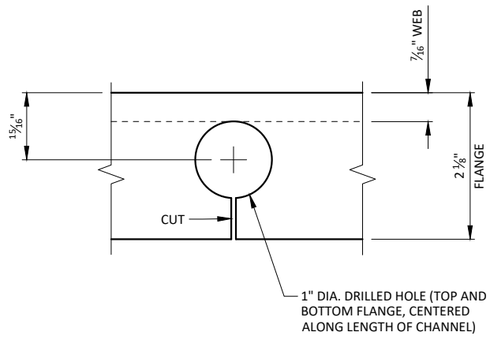
1060-47-70



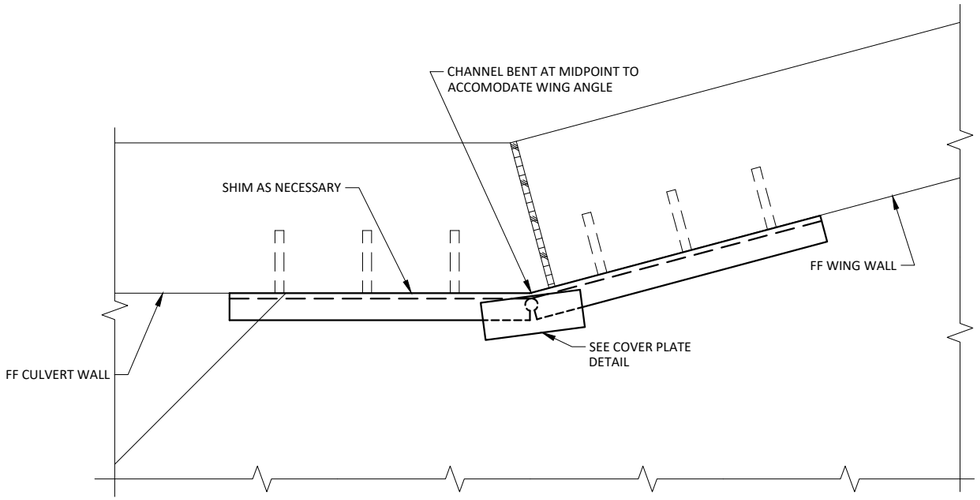
WING 4 - ELEVATION



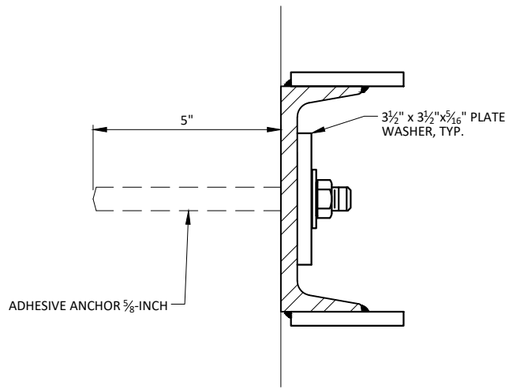
COVER PLATE DETAIL



CHANNEL NOTCH DETAIL



WING 4 - PLAN



ADHESIVE ANCHOR DETAIL

NOTES

BID ITEM SHALL BE "STRAPPING C-67-1570" WHICH INCLUDES ALL ITEMS SHOWN ON SHEETS 2 & 3.

WISDOT REGIONAL BRIDGE MAINTENANCE ENGINEER TO APPROVE USE OF DETAIL PRIOR TO INSTALLATION.

ALL PROVIDED STEEL MATERIAL SHALL CONFORM TO ASTM A36.

ALL STRUCTURAL STEEL SHOWN SHALL BE GALVANIZED. THREADED RODS, MASONRY ANCHORS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C.

CUTTING AND DRILLING OF CHANNEL SHALL BE DONE IN FABRICATION SHOP, PRIOR TO GALVANIZING.

IF WELDING COVER PLATE IN FIELD, PRIOR TO WELDING, REMOVE GALVANIZING FROM AREA TO BE WELDED. TOUCH UP WITH PAINT
ALL AREAS LACKING GALVANIZING WHEN COMPLETE.

CAULK AROUND PERIMETER OF CHANNEL AND FILL PORTION OF HOLE AROUND ANCHOR BOLT AND SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

⚠ ADHESIVE ANCHORS 5/8-INCH EMBED 5 INCHES. SEE DETAIL THIS SHEET. ADHESIVE ANCHORS SHALL CONFORM TO SECTION 502.2.12 OF THE STANDARD SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-67-1570

DRAWN BY MC | PLANS CK'D. TR

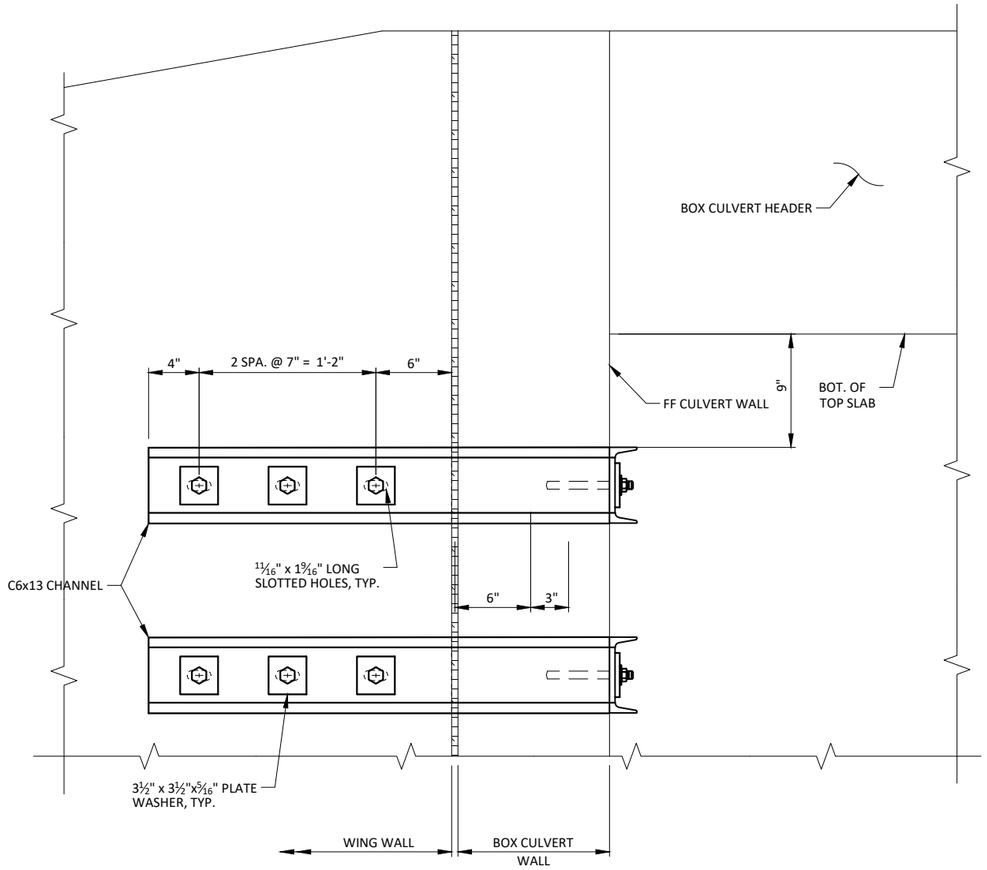
STRAPPING DETAIL

SHEET 2 OF 3

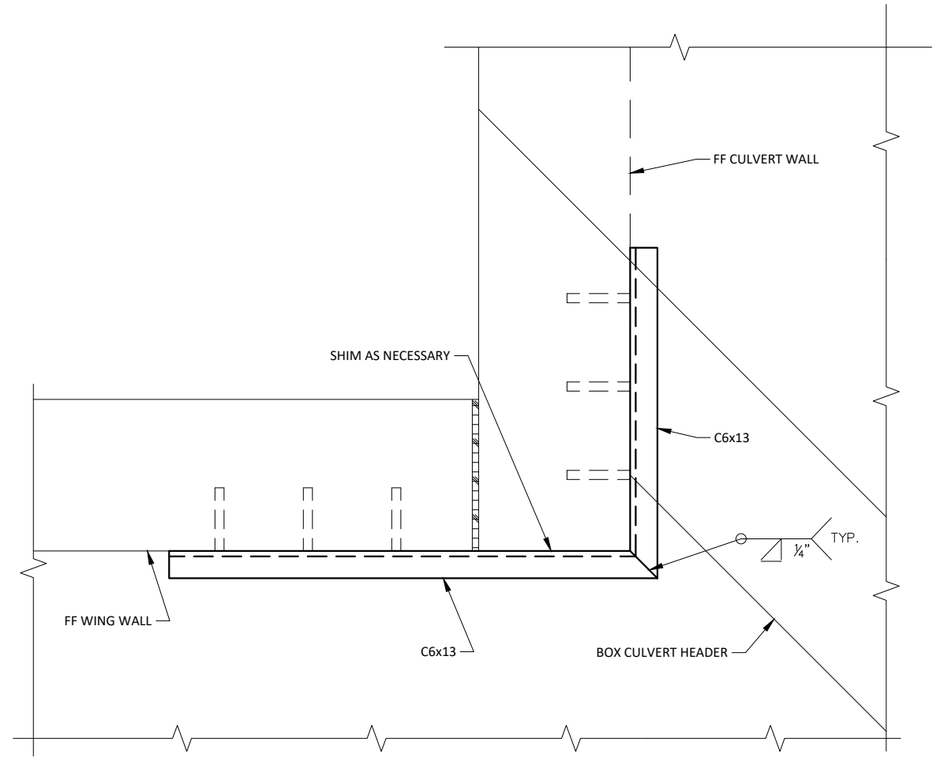
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STATE PROJECT NUMBER

1060-47-70

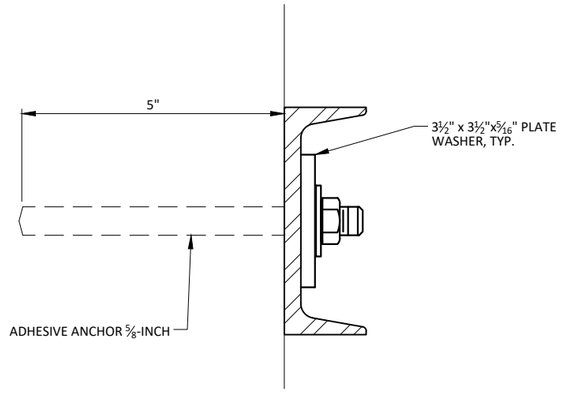


WING 3 - ELEVATION



WING 3 - PLAN

⚠ ADHESIVE ANCHORS 5/8-INCH EMBED 5 INCHES, SEE DETAIL THIS SHEET.



ADHESIVE ANCHOR DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-67-1570

DRAWN BY MC | PLANS CK'D. TR

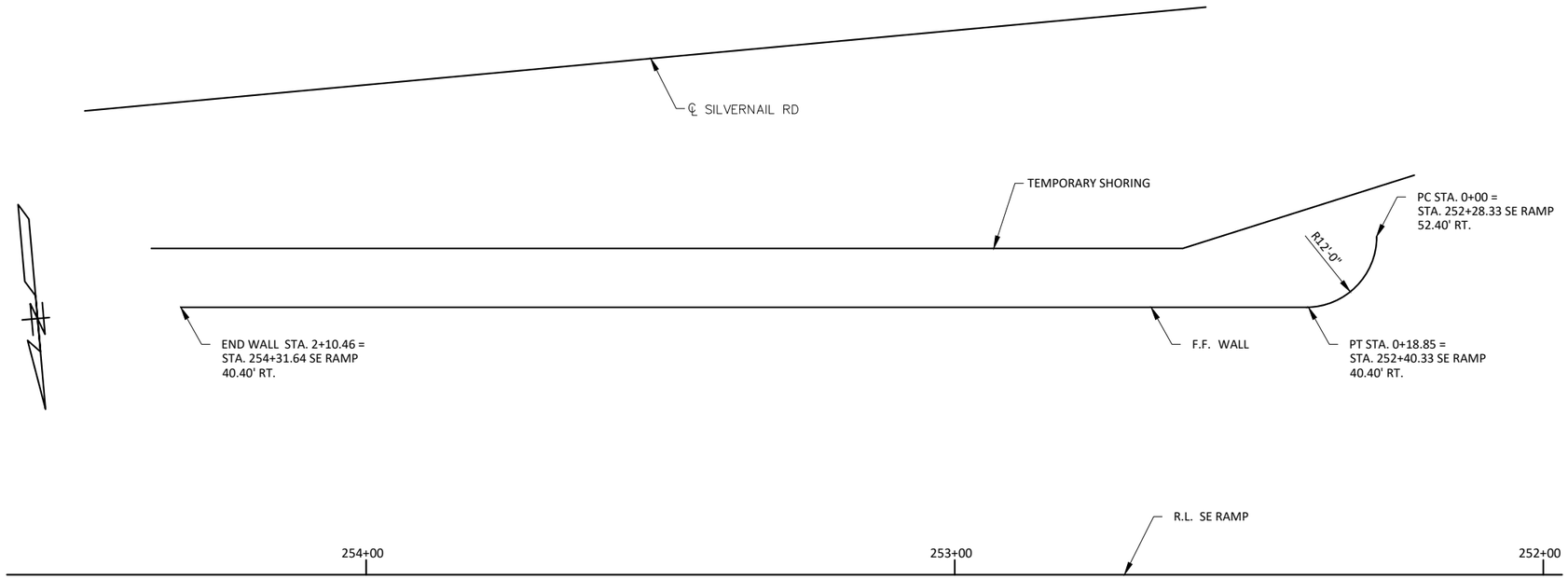
STRAPPING DETAIL

SHEET 3 OF 3

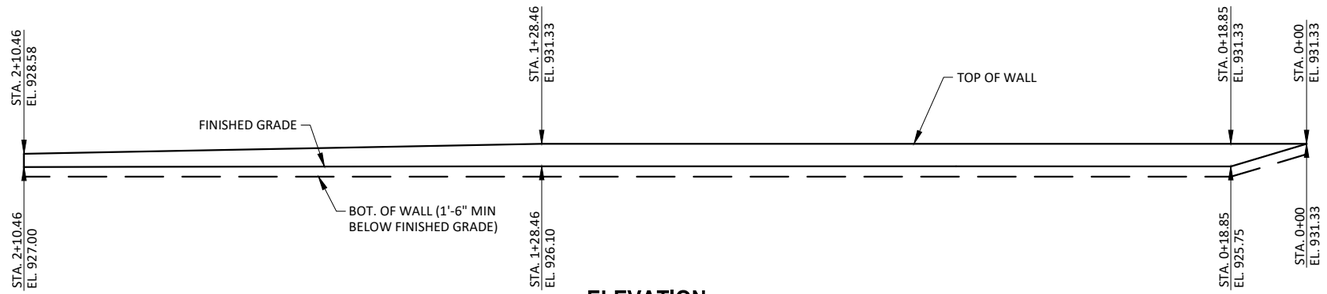
770

STATE PROJECT NUMBER

1060-47-70

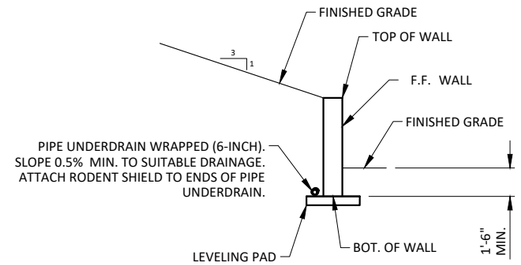


PLAN R-67-159



ELEVATION

(LOOKING SOUTH AT F.F. WALL)



TYPICAL CROSS SECTION OF RETAINING WALL

	TOTAL ESTIMATED QUANTITIES		
ITEM NUMBER	BID ITEM	UNIT	TOTAL
203.0220.003	REMOVING STRUCTURE R-67-49	EA	1
511.1200	TEMPORARY SHORING R-67-159	SF	1,000
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	235
SPV.0165.002	WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH R-67-159	SF	1,240

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE PLAN QUANTITY FOR THE BID ITEM "WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH R-67-159" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO A CONSTANT DEPTH OF 1'-6" BELOW FINISHED GRADE.

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL MODULAR BLOCK GRAVITY R-67-159".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS AND THE GEOMETRY SHOWN ON THIS SHEET.

DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN.

DESIGN RETAINING WALL FOR A LIVE LOAD SURCHARGE OF 2 FEET.

LIST OF DRAWINGS

1. GENERAL PLAN
2. WALL DETAILS
3. SOILS EXPLORATION



NO.	DATE	REVISION	BY

DAAR ENGINEERING, INC.
www.daarcorp.com
Milwaukee, WI 53202
414-225-9817

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED _____ SDR
CHIEF STRUCTURES DESIGN ENGINEER

02/13/24
DATE

STRUCTURE R-67-159

ALONG SILVERNAIL RD.

COUNTY WAUKESHA

~~TOWN~~/CITY/~~VILLAGE~~ PEWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	TR	DESIGN CK'D.	MC	DRAWN BY	TR	PLANS CK'D.	MC

GENERAL PLAN

SHEET 1 OF 3
771

DESIGN CONSULTANT
TOM ROMENESKO, PE
(608) 566-1370

BRIDGE OFFICE CONTACT
AARON BONK, PE
(608) 261-0261

STATE PROJECT NUMBER
1060-47-70

WALL EXTERNAL & OVERALL STABILITY EVALUATION

DIMENSIONS		
WALL HEIGHT (FEET)	7.0	5.0
EXPOSED WALL HEIGHT (FEET)	5.5	3.5
MINIMU LENGTH OF REINFORCEMENT (FEET)	6.0	6.0
LENGTH OF REINFORCEMENT TO HEIGHT RATIO[2]	0.9	1.2
APPROXIMATE WALL STATION	0+19	1+69
CAPACITY TO DEMAND RATION (CDR)[3]		
SLIDING (CDR >1.0)	1.5	2.2
ECCENTRICITY (CDR >1.0)	2.5	2.8
OVERALL STABILITY (CDR>1.0)	1.3	NA
BEARING RESISTANCE (CDR>1.0)	1.1	1.4
FACTORED BEARING RESISTANCE (PSF)	0+19	1+69

NOTES:

1. THE WALL HEIGHT INCLUDES AN EMBEDDMENT OF 1.5 FEET.
2. THE MINIMUM REQUIRED REINFORCEMENT LENGTH IS THE GREATER OF 0.7 OF WALL HEIGHT OR 6 FEET.
3. THE WALL STABILITY EVALUATION INCLUDED A SURCHARGE OF 240 PSF.
4. GLOBAL STABILITY WAS EVALUATED AT ON CRITICAL WALL LOCATION, AT A POINT OF HIGHEST WALL HEIGHT.
5. CDR REQUIREMENTS AND LOAD AND RESISTANCE FACTORS ARE PRESENTED IN CHAPTER 14 OF THE BRIDGE MANUAL.

SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
GRANULAR BACKFILL (WITHIN THE REINFORCING ZONE	120	34	0
RETAINED SOIL (BEYOND THE REINFORCEMENT ZONE)	120	26	0
BORING 1			
924.9 TO 910.1	110	28	0
910.1 TO 900.3	120	34	0
BORING 2			
923.2 TO 914.4	110	28	0
914.4 TO 910.4	120	34	0

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-67-159

DRAWN BY TR | PLANS CK'D. MC

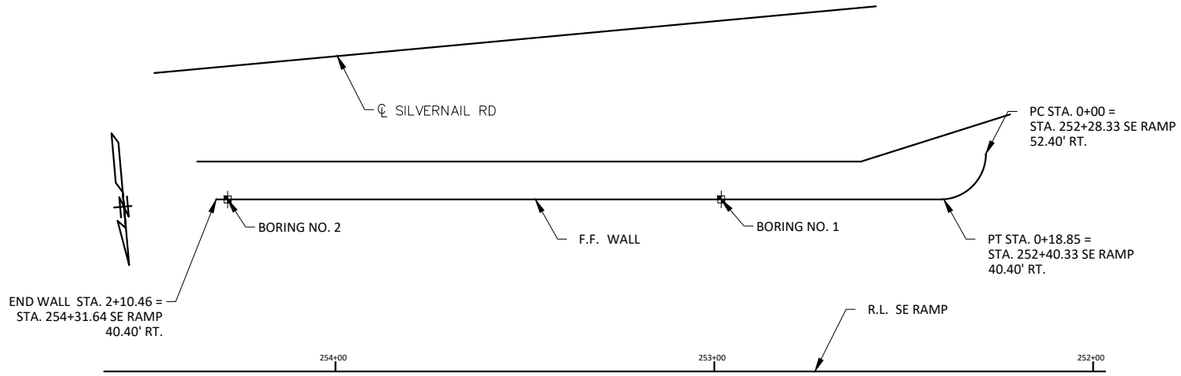
WALL DETAILS

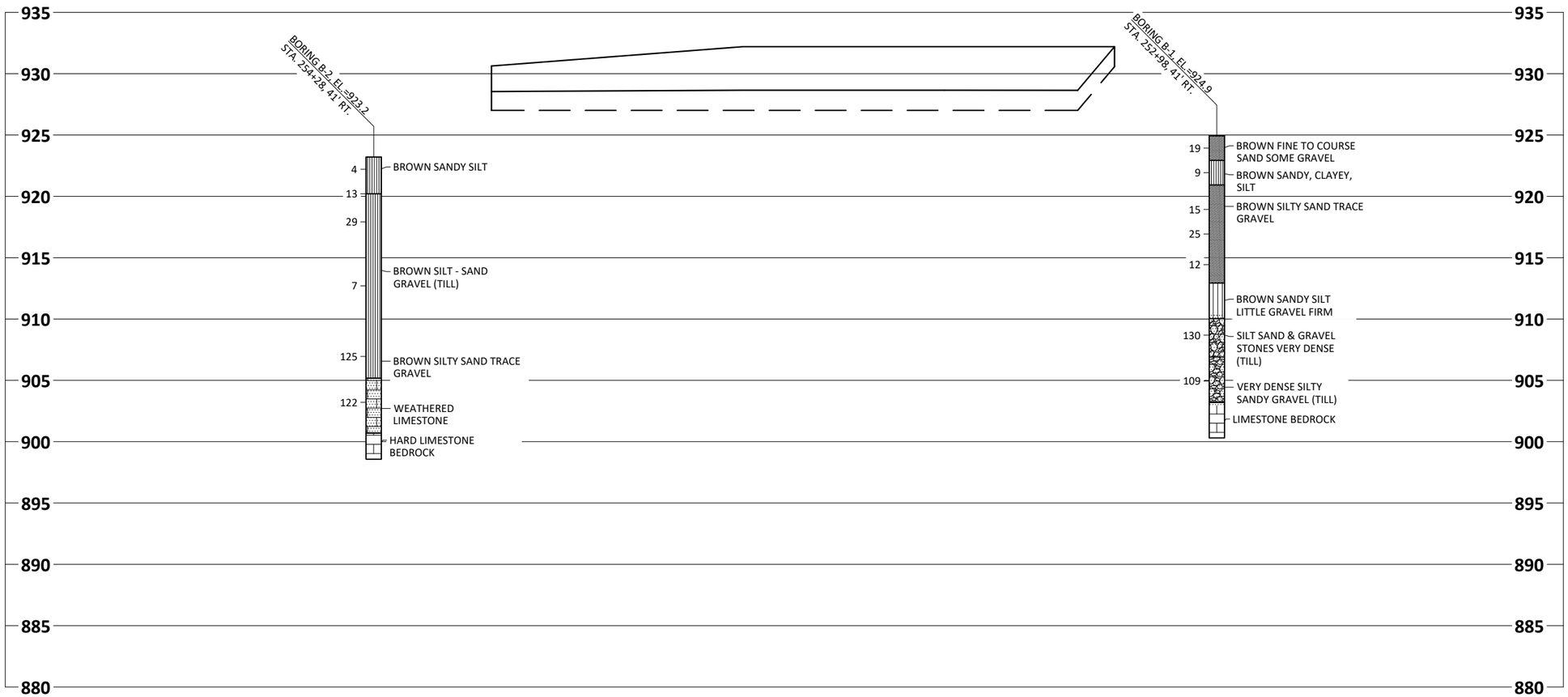
SHEET 772 OF 3

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BORINGS ARE TAKEN FROM THE EXISTING STRUCTURE PLANS (R-67-49).
BORINGS WERE TAKEN OCTOBER 20 & 21, 1999.





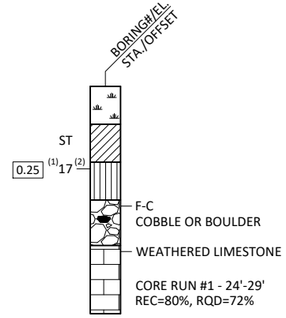
STATE PROJECT NUMBER

1060-47-70

MATERIAL SYMBOLS

Asphalt · Topsoil · Peat
Concrete · Fill · Gravel
Sand · Clay · Silt
Boulders or Cobbles · Limestone · Bedrock (unknown)
Shale · Sandstone · Igneous/ meta

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE SPECIFIED, THE SPT 'N' VALUE IS BASED ON AASHTO T-206 STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATIONS

AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE **R-67-159**

DRAWN BY TR | PLANS CK'D. MC

SOILS EXPLORATION

SHEET 3 OF 3
773

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Division 1 - IH-94 MEDIAN, CABLE RAIL

STATION	REAL STATION	DISTANCE	AREA (SF)						INCREMENTAL VOL (CY) (UNADJUSTED)						CUMULATIVE VOL (CY)							
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED MARSH IN FILL	REDUCED EBS IN FILL	MASS ORDINATE
									NOTE 1	NOTE 2	NOTE 3				1.00 NOTE 1	1.25	1.50 NOTE 4	1.10	1.30 NOTE 5	0.60 NOTE 6	0.80 NOTE 7	NOTE 8
459+63.61	45963.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
460+00	46000.00	36.39	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
460+50	46050.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
461+00	46100.00	50.00	1.91	0.00	2.24	0.00	0.00	0.00	2	0	2	0	0	0	2	3	0	0	0	0	0	-1
461+50	46150.00	50.00	1.23	0.00	2.92	0.00	0.00	0.00	3	0	5	0	0	0	5	9	0	0	0	0	0	-4
462+00	46200.00	50.00	0.41	0.00	3.48	0.00	0.00	0.00	2	0	6	0	0	0	7	16	0	0	0	0	0	-9
462+50	46250.00	50.00	0.31	0.00	3.89	0.00	0.00	0.00	1	0	7	0	0	0	8	25	0	0	0	0	0	-17
463+00	46300.00	50.00	0.62	0.00	3.45	0.00	0.00	0.00	1	0	7	0	0	0	9	34	0	0	0	0	0	-25
463+50	46350.00	50.00	4.07	0.00	0.97	0.00	0.00	0.00	4	0	4	0	0	0	13	39	0	0	0	0	0	-26
464+00	46400.00	50.00	9.89	0.00	0.57	0.00	0.00	0.00	13	0	1	0	0	0	26	40	0	0	0	0	0	-14
464+50	46450.00	50.00	12.79	0.00	0.59	0.00	0.00	0.00	21	0	1	0	0	0	47	41	0	0	0	0	0	6
465+00	46500.00	50.00	22.24	0.00	0.52	0.00	0.00	0.00	32	0	1	0	0	0	79	43	0	0	0	0	0	37
465+50	46550.00	50.00	16.02	0.00	0.58	0.00	0.00	0.00	35	0	1	0	0	0	114	44	0	0	0	0	0	70
466+00	46600.00	50.00	11.29	0.00	0.64	0.00	0.00	0.00	25	0	1	0	0	0	139	45	0	0	0	0	0	94
466+50	46650.00	50.00	5.87	0.00	0.78	0.00	0.00	0.00	16	0	1	0	0	0	155	46	0	0	0	0	0	109
467+00	46700.00	50.00	5.65	0.00	0.66	0.00	0.00	0.00	11	0	1	0	0	0	166	48	0	0	0	0	0	119
467+50	46750.00	50.00	5.69	0.00	0.62	0.00	0.00	0.00	11	0	1	0	0	0	177	49	0	0	0	0	0	128
468+00	46800.00	50.00	7.00	0.00	0.57	0.00	0.00	0.00	12	0	1	0	0	0	189	50	0	0	0	0	0	139
468+50	46850.00	50.00	4.89	0.00	0.62	0.00	0.00	0.00	11	0	1	0	0	0	200	51	0	0	0	0	0	149
469+00	46900.00	50.00	2.98	0.00	0.56	0.00	0.00	0.00	7	0	1	0	0	0	207	53	0	0	0	0	0	155
469+50	46950.00	50.00	3.15	0.00	0.58	0.00	0.00	0.00	6	0	1	0	0	0	213	54	0	0	0	0	0	159
470+00	47000.00	50.00	4.27	0.00	0.51	0.00	0.00	0.00	7	0	1	0	0	0	220	55	0	0	0	0	0	165
470+50	47050.00	50.00	2.64	0.00	0.59	0.00	0.00	0.00	6	0	1	0	0	0	226	56	0	0	0	0	0	170
470+67.872	47067.87	17.87	2.19	0.00	0.49	0.00	0.00	0.00	2	0	0	0	0	0	228	56	0	0	0	0	0	172
470+67.872	47067.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	228	56	0	0	0	0	0	172
470+92.86	47092.86	24.99	2.09	0.00	0.68	0.00	0.00	0.00	1	0	0	0	0	0	229	56	0	0	0	0	0	173
471+00	47100.00	7.14	1.69	0.00	0.78	0.00	0.00	0.00	0	0	0	0	0	0	229	56	0	0	0	0	0	173
471+17.85	47117.85	17.85	1.95	0.00	0.51	0.00	0.00	0.00	1	0	0	0	0	0	230	56	0	0	0	0	0	174
471+50	47150.00	32.15	3.80	0.00	0.61	0.00	0.00	0.00	3	0	1	0	0	0	233	58	0	0	0	0	0	176
472+00	47200.00	50.00	6.75	0.00	0.56	0.00	0.00	0.00	10	0	1	0	0	0	243	59	0	0	0	0	0	184
472+22.328	47222.33	22.33	7.23	0.00	0.49	0.00	0.00	0.00	6	0	0	0	0	0	249	59	0	0	0	0	0	190
472+50	47250.00	27.67	9.43	0.00	0.49	0.00	0.00	0.00	9	0	1	0	0	0	258	60	0	0	0	0	0	198
473+00	47300.00	50.00	6.81	0.00	0.51	0.00	0.00	0.00	15	0	1	0	0	0	273	61	0	0	0	0	0	212
473+50	47350.00	50.00	8.62	0.00	0.63	0.00	0.00	0.00	14	0	1	0	0	0	287	63	0	0	0	0	0	225
474+00	47400.00	50.00	12.42	0.00	0.56	0.00	0.00	0.00	19	0	1	0	0	0	306	64	0	0	0	0	0	242
474+50	47450.00	50.00	10.23	0.00	0.70	0.00	0.00	0.00	21	0	1	0	0	0	327	65	0	0	0	0	0	262
475+00	47500.00	50.00	16.96	0.00	0.71	0.00	0.00	0.00	25	0	1	0	0	0	352	66	0	0	0	0	0	286
475+50	47550.00	50.00	19.47	0.00	0.26	0.00	0.00	0.00	34	0	1	0	0	0	386	68	0	0	0	0	0	319
476+00	47600.00	50.00	14.25	0.00	0.70	0.00	0.00	0.00	31	0	1	0	0	0	417	69	0	0	0	0	0	348
476+50	47650.00	50.00	14.77	0.00	0.73	0.00	0.00	0.00	27	0	1	0	0	0	444	70	0	0	0	0	0	374
477+00	47700.00	50.00	13.24	0.00	0.69	0.00	0.00	0.00	26	0	1	0	0	0	470	71	0	0	0	0	0	399
477+50	47750.00	50.00	9.42	0.00	0.80	0.00	0.00	0.00	21	0	1	0	0	0	491	73	0	0	0	0	0	419
478+00	47800.00	50.00	13.40	0.00	0.73	0.00	0.00	0.00	21	0	1	0	0	0	512	74	0	0	0	0	0	438
478+50	47850.00	50.00	14.23	0.00	0.60	0.00	0.00	0.00	26	0	1	0	0	0	538	75	0	0	0	0	0	463
479+00	47900.00	50.00	10.46	0.00	0.78	0.00	0.00	0.00	23	0	1	0	0	0	561	76	0	0	0	0	0	485
479+50	47950.00	50.00	10.34	0.00	0.59	0.00	0.00	0.00	19	0	1	0	0	0	580	78	0	0	0	0	0	503
480+00	48000.00	50.00	10.83	0.00	0.50	0.00	0.00	0.00	20	0	1	0	0	0	600	79	0	0	0	0	0	521
480+50	48050.00	50.00	9.32	0.00	0.64	0.00	0.00	0.00	19	0	1	0	0	0	619	80	0	0	0	0	0	539
481+00	48100.00	50.00	7.49	0.00	0.54	0.00	0.00	0.00	16	0	1	0	0	0	635	81	0	0	0	0	0	554
481+50	48150.00	50.00	5.78	0.00	0.69	0.00	0.00	0.00	12	0	1	0	0	0	647	83	0	0	0	0	0	565
482+00	48200.00	50.00	5.99	0.00	0.49	0.00	0.00	0.00	11	0	1	0	0	0	658	84	0	0	0	0	0	574
482+50	48250.00	50.00	4.03	0.00	0.52	0.00	0.00	0.00	9	0	1	0	0	0	667	85	0	0	0	0	0	582
482+83.843	48283.84	33.84	1.42	0.00	0.43	0.00	0.00	0.00	3	0	1	0	0	0	670	86	0	0	0	0	0	584

Division 1 - IH-94 MAINLINE, RT

STATION	REAL STATION	DISTANCE	AREA (SF)						INCREMENTAL VOL (CY) (UNADJUSTED)						CUMULATIVE VOL (CY)							
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED MARSH IN FILL	REDUCED EBS IN FILL	MASS ORDINATE
									NOTE 1	NOTE 2	NOTE 3				1.00 NOTE 1	1.25	1.50 NOTE 4	1.10	1.30 NOTE 5	0.60 NOTE 6	0.80 NOTE 7	NOTE 8
490+59.108	49059.11	0.00	4.00	0.00	0.14	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
491+00	49100.00	40.89	5.70	0.00	0.19	0.00	0.00	0.00	7	0	0	0	0	0	7	0	0	0	0	0	0	7
491+50	49150.00	50.00	2.55	0.00	1.03	0.00	0.00	0.00	8	0	1	0	0	0	15	1	0	0	0	0	0	14
491+79.279	49179.28	29.28	1.81	0.00	0.54	0.00	0.00	0.00	2	0	1	0	0	0	17	3	0	0	0	0	0	15
492+00	49200.00	20.72	1.70	0.00	1.02	0.00	0.00	0.00	1	0	1	0	0	0	18	4	0	0	0	0	0	14
492+04.262	49204.26	4.26	1.74	0.00	0.78	0.00	0.00	0.00	0	0	0	0	0	0	18	4	0	0	0	0	0	14
492+29.246	49229.25	24.98	1.94	0.00	0.14	0.00	0.00	0.00	2	0	0	0	0	0	20	4	0	0	0	0	0	16
492+50	49250.00	20.75	2.05	0.00	0.12	0.00	0.00	0.00	2	0	0	0	0	0	22	4	0	0	0	0	0	18
493+00	49300.00	50.00	1.95	0.00	0.29	0.00	0.00	0.00	4	0	0	0	0	0	26	4	0	0	0	0	0	22
493+50	49350.00	50.00	1.80	0.00	1.12	0.00	0.00	0.00	3	0	1	0	0	0	29	5	0	0	0	0	0	24
494+00	49400.00	50.00	1.71	0.00	0.87	0.00	0.00	0.00	3	0	2	0	0	0	32	8	0	0	0	0	0	25
494+50	49450.00	50.00	1.27	0.00	1.17	0.00	0.00	0.00	3	0	2	0	0	0	35	10	0	0	0	0	0	25
495+00	49500.00	50.00	1.45	0.00	0.36	0.00	0.00	0.00	3	0	1	0	0	0	38	11	0	0	0	0	0	27
495+50	49550.00	50.00	0.98	0.00	1.11	0.00	0.00	0.00	2	0	1	0	0	0	40	13	0	0	0	0	0	28
496+00	49600.00	50.00	0.80	0.00	2.91	0.00	0.00	0.00	2	0	4	0	0	0	42	18	0	0	0	0	0	25
496+50	49650.00	50.00	1.81	0.00	0.35	0.00	0.00	0.00	2	0	3	0	0	0	44	21	0	0	0	0	0	23
497+00	49700.00	50.00	1.28	0.00	1.87	0.00	0.00	0.00	3	0	2	0	0	0	47	24	0	0	0	0	0	23
497+50	49750.00	50.00	1.53	0.00	3.86	0.00	0.00	0.00	3	0	5	0	0	0	50	30	0	0	0	0	0	20
498+00	49800.00	50.00	1.22	0.00	4.77	0.00	0.00	0.00	3	0	8	0	0	0	53	40	0	0	0	0	0	13
498+50	49850.00	50.00	0.79	0.00	13.91	0.00	0.00	0.00	2	0	17	0	0	0	55	61	0	0	0	0	0	-6
499+00	49900.00	50.00	0.84	0.00	19.67	0.00	0.00	0.00	2	0	31	0	0	0	57	100	0	0	0	0	0	-43
499+50	49950.00	50.00	0.98	0.00	1.71	0.00	0.00	0.00	2	0	20	0	0	0	59	125	0	0	0	0	0	-66
500+00	50000.00	50.00	0.89	0.00	1.17	0.00	0.00	0.00	2	0	3	0	0	0	61	129	0	0	0	0	0	-68
500+50	50050.00	50.00	1.48	0.00	0.73	0.00	0.00	0.00	2	0	2	0	0	0	63	131	0	0	0	0	0	-68
501+00	50100.00	50.00	1.59	0.00	1.00	0.00	0.00	0.00	3	0	2	0	0	0	66	134	0	0	0	0	0	-68
501+50	50150.00	50.00	2.42	0.00	0.58	0.00	0.00	0.00	4	0	1	0	0	0	70	135	0	0	0	0	0	-65
502+00	50200.00	50.00	1.71	0.00	0.85	0.00	0.00	0.00	4	0	1	0	0	0	74	136	0	0	0	0	0	-62
502+50	50250.00	50.00	2.12	0.00	0.40	0.00	0.00	0.00	4	0	1	0	0	0	78	138	0	0	0	0	0	-60

DIVISION 1 - IH-94 MAINLINE, RT

STATION	REAL STATION	DISTANCE	AREA (SF)						INCREMENTAL VOL (CY) (UNADJUSTED)						CUMULATIVE VOL (CY)							
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED MARSH IN FILL	REDUCED EBS IN FILL	MASS ORDINATE
									NOTE 1	NOTE 2	NOTE 3				1.00 NOTE 1	1.25	1.50 NOTE 4	1.10	1.30 NOTE 5	0.60 NOTE 6	0.80 NOTE 7	NOTE 8
519+00	51900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
519+17.072	51917.07	17.07	0.04	0.00	0.41	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
519+50	51950.00	32.93	0.01	0.00	2.86	0.00	0.00	0.00	0	0	2	0	0	0	0	3	0	0	0	0	0	-3
520+00	52000.00	50.00	0.37	0.00	7.19	0.00	0.00	0.00	0	0	9	0	0	0	0	14	0	0	0	0	0	-14
520+35.489	52035.49	35.49	0.83	0.00	3.53	0.00	0.00	0.00	1	0	7	0	0	0	1	23	0	0	0	0	0	-22
520+50	52050.00	14.51	0.47	0.00	7.87	0.00	0.00	0.00	0	0	3	0	0	0	1	26	0	0	0	0	0	-25
520+60.472	52060.47	10.47	0.41	0.00	6.51	0.00	0.00	0.00	0	0	3	0	0	0	1	30	0	0	0	0	0	-29
520+85.455	52085.46	24.98	0.31	0.00	5.37	0.00	0.00	0.00	0	0	5	0	0	0	1	36	0	0	0	0	0	-35
521+00	52100.00	14.54	0.25	0.00	3.61	0.00	0.00	0.00	0	0	2	0	0	0	1	39	0	0	0	0	0	-38
521+50	52150.00	50.00	0.10	0.00	1.41	0.00	0.00	0.00	0	0	5	0	0	0	1	45	0	0	0	0	0	-44
522+00	52200.00	50.00	0.04	0.00	2.12	0.00	0.00	0.00	0	0	3	0	0	0	1	49	0	0	0	0	0	-48
522+50	52250.00	50.00	0.04	0.00	3.66	0.00	0.00	0.00	0	0	5	0	0	0	1	55	0	0	0	0	0	-54
522+79.784	52279.78	29.78	0.02	0.00	14.48	0.00	0.00	0.00	0	0	10	0	0	0	1	68	0	0	0	0	0	-67

DIVISION 1 - IH-94 MAINLINE, RT

STATION	REAL STATION	DISTANCE	AREA (SF)						INCREMENTAL VOL (CY) (UNADJUSTED)						CUMULATIVE VOL (CY)							
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED MARSH IN FILL	REDUCED EBS IN FILL	MASS ORDINATE
									NOTE 1	NOTE 2	NOTE 3				1.00 NOTE 1	1.25	1.50 NOTE 4	1.10	1.30 NOTE 5	0.60 NOTE 6	0.80 NOTE 7	NOTE 8
601+79.233	60179.23	0.00	1.87	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
602+00	60200.00	20.77	1.66	0.00	1.10	0.00	0.00	0.00	1	0	0	0	0	0	1	0	0	0	0	0	0	1
602+50	60250.00	50.00	1.73	0.00	9.86	0.00	0.00	0.00	3	0	10	0	0	0	4	13	0	0	0	0	0	-9
602+96.762	60296.76	46.76	1.88	0.00	9.57	0.00	0.00	0.00	3	0	17	0	0	0	7	34	0	0	0	0	0	-27
603+00	60300.00	3.24	2.02	0.00	6.29	0.00	0.00	0.00	0	0	1	0	0	0	7	35	0	0	0	0	0	-28
603+21.731	60321.73	21.73	2.39	0.00	2.26	0.00	0.00	0.00	2	0	3	0	0	0	9	39	0	0	0	0	0	-30
603+46.442	60346.44	24.71	2.25	0.00	0.77	0.00	0.00	0.00	2	0	1	0	0	0	11	40	0	0	0	0	0	-29
603+50	60350.00	3.56	2.25	0.00	0.69	0.00	0.00	0.00	0	0	0	0	0	0	11	40	0	0	0	0	0	-29
604+00	60400.00	50.00	1.83	0.00	0.00	0.00	0.00	0.00	4	0	1	0	0	0	15	41	0	0	0	0	0	-26
604+50	60450.00	50.00	1.87	0.00	0.02	0.00	0.00	0.00	3	0	0	0	0	0	18	41	0	0	0	0	0	-23
605+00	60500.00	50.00	1.38	0.00	0.61	0.00	0.00	0.00	3	0	1	0	0	0	21	43	0	0	0	0	0	-22
605+50	60550.00	50.00	1.37	0.00	0.39	0.00	0.00	0.00	3	0	1	0	0	0	24	44	0	0	0	0	0	-20
606+00	60600.00	50.00	1.21	0.00	1.22	0.00	0.00	0.00	2	0	1	0	0	0	26	45	0	0	0	0	0	-19
606+50	60650.00	50.00	1.23	0.00	3.04	0.00	0.00	0.00	2	0	4	0	0	0	28	50	0	0	0	0	0	-22
606+74.216	60674.22	24.22	0.00	0.00	0.00	0.00	0.00	0.00	1	0	1	0	0	0	29	51	0	0	0	0	0	-22

DIVISION 1 - IH-94 MAINLINE, LT

STATION	REAL STATION	DISTANCE	AREA (SF)						INCREMENTAL VOL (CY) (UNADJUSTED)						CUMULATIVE VOL (CY)							
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED MARSH IN FILL	REDUCED EBS IN FILL	MASS ORDINATE
									NOTE 1	NOTE 2	NOTE 3				1.00 NOTE 1	1.25	1.50 NOTE 4	1.10	1.30 NOTE 5	0.60 NOTE 6	0.80 NOTE 7	NOTE 8
694+93.098	69493.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
695+00	69500.00	6.90	4.01	0.00	0.05	0.00	0.00	0.00	1	0	0	0	0	0	1	0	0	0	0	0	0	1
695+50	69550.00	50.00	0.38	0.00	0.24	0.00	0.00	0.00	4	0	0	0	0	0	5	0	0	0	0	0	0	5
695+99.301	69599.30	49.30	1.01	0.00	1.21	0.00	0.00	0.00	1	0	1	0	0	0	6	1	0	0	0	0	0	5
696+00	69600.00	0.70	0.99	0.00	1.35	0.00	0.00	0.00	0	0	0	0	0	0	6	1	0	0	0	0	0	5
696+24.288	69624.29	24.29	0.68	0.00	4.70	0.00	0.00	0.00	1	0	3	0	0	0	7	5	0	0	0	0	0	2
696+49.274	69649.27	24.99	0.47	0.00	7.02	0.00	0.00	0.00	1	0	5	0	0	0	8	11	0	0	0	0	0	-3
696+50	69650.00	0.73	0.48	0.00	7.01	0.00	0.00	0.00	0	0	0	0	0	0	8	11	0	0	0	0	0	-3
697+00	69700.00	50.00	0.76	0.00	3.71	0.00	0.00	0.00	1	0	10	0	0	0	9	24	0	0	0	0	0	-15
697+50	69750.00	50.00	0.51	0.00	2.57	0.00	0.00	0.00	1	0	6	0	0	0	10	31	0	0	0	0	0	-21

PROJECT NO: 1060-47-70 | HWY: I-94 | COUNTY: WAUKESHA | EARTHWORK DATA | SHEET: 776 | E

FILE NAME : Documents-SE-Design\1060-47-00 I-94 Waukesha County\C3D\10604700\SheetsPlan\090101-ew.pptx PLOT DATE : January 26, 2024 PLOT BY : DAAR ENGINEERING PLOT NAME : PLOT SCALE : 1:1

Division 1 - IH-94 MAINLINE, LT

STATION	REAL STATION	DISTANCE	AREA (SF)						INCREMENTAL VOL (CY) (UNADJUSTED)						CUMULATIVE VOL (CY)							
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED MARSH IN FILL	REDUCED EBS IN FILL	MASS ORDINATE
									NOTE 1	NOTE 2	NOTE 3				1.00 NOTE 1	1.25	1.50 NOTE 4	1.10	1.30 NOTE 5	0.60 NOTE 6	0.80 NOTE 7	NOTE 8
459+63.61	45963.61	0.00	3.95	0.00	40.11	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
460+00	46000.00	36.39	4.46	0.00	58.07	0.00	0.00	0.00	6	0	66	0	0	0	6	83	0	0	0	0	0	-77
460+50	46050.00	50.00	4.09	0.00	66.56	0.00	0.00	0.00	8	0	115	0	0	0	14	226	0	0	0	0	0	-212
461+00	46100.00	50.00	4.58	0.00	72.95	0.00	0.00	0.00	8	0	129	0	0	0	22	388	0	0	0	0	0	-366
461+50	46150.00	50.00	3.92	0.00	68.90	0.00	0.00	0.00	8	0	131	0	0	0	30	551	0	0	0	0	0	-521
462+00	46200.00	50.00	3.80	0.00	51.51	0.00	0.00	0.00	7	0	111	0	0	0	37	690	0	0	0	0	0	-653
462+50	46250.00	50.00	3.53	0.00	63.26	0.00	0.00	0.00	7	0	106	0	0	0	44	823	0	0	0	0	0	-779
463+00	46300.00	50.00	3.16	0.00	76.75	0.00	0.00	0.00	6	0	130	0	0	0	50	985	0	0	0	0	0	-935
463+50	46350.00	50.00	3.34	0.00	48.18	0.00	0.00	0.00	6	0	116	0	0	0	56	1,130	0	0	0	0	0	-1,074
464+00	46400.00	50.00	2.75	0.00	41.11	0.00	0.00	0.00	6	0	83	0	0	0	62	1,234	0	0	0	0	0	-1,172
464+50	46450.00	50.00	2.30	0.00	41.42	0.00	0.00	0.00	5	0	76	0	0	0	67	1,329	0	0	0	0	0	-1,262
465+00	46500.00	50.00	1.99	0.00	67.16	0.00	0.00	0.00	4	0	101	0	0	0	71	1,455	0	0	0	0	0	-1,384
465+50	46550.00	50.00	1.85	0.00	71.04	0.00	0.00	0.00	4	0	128	0	0	0	75	1,615	0	0	0	0	0	-1,540
466+00	46600.00	50.00	1.76	0.00	80.23	0.00	0.00	0.00	3	0	140	0	0	0	78	1,790	0	0	0	0	0	-1,712
466+50	46650.00	50.00	1.75	0.00	50.97	0.00	0.00	0.00	3	0	121	0	0	0	81	1,941	0	0	0	0	0	-1,860
467+00	46700.00	50.00	1.75	0.00	72.48	0.00	0.00	0.00	3	0	114	0	0	0	84	2,084	0	0	0	0	0	-2,000
467+50	46750.00	50.00	1.77	0.00	36.95	0.00	0.00	0.00	3	0	101	0	0	0	87	2,210	0	0	0	0	0	-2,123
468+00	46800.00	50.00	2.08	0.00	19.91	0.00	0.00	0.00	4	0	53	0	0	0	91	2,276	0	0	0	0	0	-2,185
468+50	46850.00	50.00	2.44	0.00	17.72	0.00	0.00	0.00	4	0	35	0	0	0	95	2,320	0	0	0	0	0	-2,225
469+00	46900.00	50.00	1.71	0.00	12.68	0.00	0.00	0.00	4	0	28	0	0	0	99	2,355	0	0	0	0	0	-2,256
469+50	46950.00	50.00	2.56	0.00	11.54	0.00	0.00	0.00	4	0	22	0	0	0	103	2,383	0	0	0	0	0	-2,280
470+00	47000.00	50.00	2.90	0.00	16.94	0.00	0.00	0.00	5	0	26	0	0	0	108	2,415	0	0	0	0	0	-2,307
470+50	47050.00	50.00	2.52	0.00	11.22	0.00	0.00	0.00	5	0	26	0	0	0	113	2,448	0	0	0	0	0	-2,335
470+67.872	47067.87	17.87	2.19	0.00	20.78	0.00	0.00	0.00	2	0	11	0	0	0	115	2,461	0	0	0	0	0	-2,346
470+67.872	47067.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	115	2,461	0	0	0	0	0	-2,346
470+92.86	47092.86	24.99	2.66	0.00	23.72	0.00	0.00	0.00	1	0	11	0	0	0	116	2,475	0	0	0	0	0	-2,359
471+00	47100.00	7.14	2.14	0.00	26.40	0.00	0.00	0.00	1	0	7	0	0	0	117	2,484	0	0	0	0	0	-2,367
471+17.85	47117.85	17.85	2.79	0.00	37.81	0.00	0.00	0.00	2	0	21	0	0	0	119	2,510	0	0	0	0	0	-2,391
471+50	47150.00	32.15	2.94	0.00	24.38	0.00	0.00	0.00	3	0	37	0	0	0	122	2,556	0	0	0	0	0	-2,434
472+00	47200.00	50.00	3.58	0.00	0.44	0.00	0.00	0.00	6	0	23	0	0	0	128	2,585	0	0	0	0	0	-2,457
472+22.328	47222.33	22.33	3.55	0.00	0.00	0.00	0.00	0.00	3	0	0	0	0	0	131	2,585	0	0	0	0	0	-2,454

DIVISION 1 - CTH G EB OFF RAMP,LT

STATION	REAL STATION	DISTANCE	AREA (SF)						INCREMENTAL VOL (CY) (UNADJUSTED)						CUMULATIVE VOL (CY)							
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED MARSH IN FILL	REDUCED EBS IN FILL	MASS ORDINATE
									NOTE 1	NOTE 2	NOTE 3				1.00 NOTE 1	1.25	1.50 NOTE 4	1.10	1.30 NOTE 5	0.60 NOTE 6	0.80 NOTE 7	NOTE 8
238+00	23800.00	0.00	0.37	0.00	0.78	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
238+50	23850.00	50.00	0.42	0.00	1.11	0.00	0.00	0.00	1	0	2	0	0	0	1	3	0	0	0	0	0	-2
239+00	23900.00	50.00	0.44	0.00	1.39	0.00	0.00	0.00	1	0	2	0	0	0	2	5	0	0	0	0	0	-3
239+50	23950.00	50.00	0.48	0.00	1.47	0.00	0.00	0.00	1	0	3	0	0	0	3	9	0	0	0	0	0	-6
239+88.834	23988.83	38.83	0.80	0.00	3.41	0.00	0.00	0.00	1	0	4	0	0	0	4	14	0	0	0	0	0	-10
240+00	24000.00	11.17	0.00	0.00	3.34	0.00	0.00	0.00	0	0	1	0	0	0	4	15	0	0	0	0	0	-11
240+14.461	24014.46	14.46	0.00	0.00	2.25	0.00	0.00	0.00	0	0	1	0	0	0	4	16	0	0	0	0	0	-12
240+40.128	24040.13	25.67	0.11	0.00	2.09	0.00	0.00	0.00	0	0	2	0	0	0	4	19	0	0	0	0	0	-15
240+50	24050.00	9.87	0.59	0.00	2.23	0.00	0.00	0.00	0	0	1	0	0	0	4	20	0	0	0	0	0	-16
241+00	24100.00	50.00	0.25	0.00	5.38	0.00	0.00	0.00	1	0	7	0	0	0	5	29	0	0	0	0	0	-24
241+50	24150.00	50.00	0.29	0.00	6.21	0.00	0.00	0.00	1	0	11	0	0	0	6	43	0	0	0	0	0	-37
242+00	24200.00	50.00	0.00	0.00	5.94	0.00	0.00	0.00	0	0	11	0	0	0	6	56	0	0	0	0	0	-50
242+50	24250.00	50.00	0.40	0.00	1.03	0.00	0.00	0.00	0	0	6	0	0	0	6	64	0	0	0	0	0	-58
242+79.395	24279.40	29.40	0.52	0.00	0.61	0.00	0.00	0.00	1	0	1	0	0	0	7	65	0	0	0	0	0	-58

DIVISION 1 - STH 83 RAMP D

STATION	REAL STATION	DISTANCE	AREA (SF)						INCREMENTAL VOL (CY) (UNADJUSTED)						CUMULATIVE VOL (CY)							
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED MARSH IN FILL	REDUCED EBS IN FILL	MASS ORDINATE
									NOTE 1	NOTE 2	NOTE 3				1.00 NOTE 1	1.25	1.50 NOTE 4	1.10	1.30 NOTE 5	0.60 NOTE 6	0.80 NOTE 7	NOTE 8
467+75.418	46775.42	0.00	0.66	0.00	9.90	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
468+00	46800.00	24.58	0.53	0.00	9.35	0.00	0.00	0.00	1	0	9	0	0	0	1	11	0	0	0	0	0	-10
468+50	46850.00	50.00	0.67	0.00	7.09	0.00	0.00	0.00	1	0	15	0	0	0	2	30	0	0	0	0	0	-28
468+52.812	46852.81	2.81	0.68	0.00	7.05	0.00	0.00	0.00	0	0	1	0	0	0	2	31	0	0	0	0	0	-29
468+77.795	46877.80	24.98	0.65	0.00	11.87	0.00	0.00	0.00	1	0	9	0	0	0	3	43	0	0	0	0	0	-40
469+00	46900.00	22.20	0.69	0.00	20.57	0.00	0.00	0.00	1	0	13	0	0	0	4	59	0	0	0	0	0	-55
469+02.778	46902.78	2.78	0.69	0.00	22.43	0.00	0.00	0.00	0	0	2	0	0	0	4	61	0	0	0	0	0	-57
469+50	46950.00	47.22	0.13	0.00	25.70	0.00	0.00	0.00	1	0	42	0	0	0	5	114	0	0	0	0	0	-109
470+00	47000.00	50.00	0.04	0.00	11.22	0.00	0.00	0.00	0	0	34	0	0	0	5	156	0	0	0	0	0	-151
470+19.452	47019.45	19.45	0.00	0.00	0.00	0.00	0.00	0.00	0	0	4	0	0	0	5	161	0	0	0	0	0	-156

DIVISION 1 - CTH SS WB ON RAMP,LT

STATION	REAL STATION	DISTANCE	AREA (SF)						INCREMENTAL VOL (CY) (UNADJUSTED)						CUMULATIVE VOL (CY)							
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED MARSH IN FILL	REDUCED EBS IN FILL	MASS ORDINATE
									NOTE 1	NOTE 2	NOTE 3				1.00 NOTE 1	1.25	1.50 NOTE 4	1.10	1.30 NOTE 5	0.60 NOTE 6	0.80 NOTE 7	NOTE 8
1172+55.67	117255.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1173+00	117300.00	44.33	1.27	0.00	0.00	0.00	0.00	0.00	1	0	0	0	0	0	1	0	0	0	0	0	0	1
1173+50	117350.00	50.00	0.63	0.00	0.44	0.00	0.00	0.00	2	0	0	0	0	0	3	0	0	0	0	0	0	3
1174+00	117400.00	50.00	1.80	0.00	0.00	0.00	0.00	0.00	2	0	0	0	0	0	5	0	0	0	0	0	0	5
1174+50	117450.00	50.00	0.98	0.00	1.31	0.00	0.00	0.00	3	0	1	0	0	0	8	1	0	0	0	0	0	7
1175+00	117500.00	50.00	0.66	0.00	1.45	0.00	0.00	0.00	2	0	3	0	0	0	10	5	0	0	0	0	0	5
1175+50	117550.00	50.00	0.67	0.00	0.83	0.00	0.00	0.00	1	0	2	0	0	0	11	8	0	0	0	0	0	4
1176+00	117600.00	50.00	0.89	0.00	2.20	0.00	0.00	0.00	1	0	3	0	0	0	12	11	0	0	0	0	0	1
1176+50	117650.00	50.00	0.71	0.00	0.62	0.00	0.00	0.00	1	0	3	0	0	0	13	15	0	0	0	0	0	-2
1177+00	117700.00	50.00	0.50	0.00	0.58	0.00	0.00	0.00	1	0	1	0	0	0	14	16	0	0	0	0	0	-2
1177+50	117750.00	50.00	0.58	0.00	1.08	0.00	0.00	0.00	1	0	2	0	0	0	15	19	0	0	0	0	0	-4
1177+61.138	117761.14	11.14	0.55	0.00	0.69	0.00	0.00	0.00	0	0	0	0	0	0	15	19	0	0	0	0	0	-4
1177+86.139	117786.14	25.00	1.30	0.00	0.27	0.00	0.00	0.00	1	0	0	0	0	0	16	19	0	0	0	0	0	-3
1178+00	117800.00	13.86	0.41	0.00	1.98	0.00	0.00	0.00	0	0	1	0	0	0	16	20	0	0	0	0	0	-4
1178+11.14	117811.14	11.14	0.43	0.00	0.35	0.00	0.00	0.00	0	0	0	0	0	0	16	20	0	0	0	0	0	-4
1178+28.057	117828.06	16.92	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	16	20	0	0	0	0	0	-4

DIVISION 1 - CTH G WB OFF RAMP,LT

STATION	REAL STATION	DISTANCE	AREA (SF)						INCREMENTAL VOL (CY) (UNADJUSTED)						CUMULATIVE VOL (CY)							
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED MARSH IN FILL	REDUCED EBS IN FILL	MASS ORDINATE
									NOTE 1	NOTE 2	NOTE 3				1.00 NOTE 1	1.25	1.50 NOTE 4	1.10	1.30 NOTE 5	0.60 NOTE 6	0.80 NOTE 7	NOTE 8
244+57.136	24457.14	0.00	0.00	0.00	5.18	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
245+00	24500.00	42.86	0.05	0.00	14.21	0.00	0.00	0.00	0	0	15	0	0	0	0	19	0	0	0	0	0	-19
245+50	24550.00	50.00	0.00	0.00	8.11	0.00	0.00	0.00	0	0	21	0	0	0	0	45	0	0	0	0	0	-45
246+00	24600.00	50.00	0.00	0.00	6.29	0.00	0.00	0.00	0	0	13	0	0	0	0	61	0	0	0	0	0	-61
246+50	24650.00	50.00	0.18	0.00	9.67	0.00	0.00	0.00	0	0	15	0	0	0	0	80	0	0	0	0	0	-80
247+00	24700.00	50.00	0.22	0.00	9.20	0.00	0.00	0.00	0	0	17	0	0	0	0	101	0	0	0	0	0	-101
247+50	24750.00	50.00	0.00	0.00	10.01	0.00	0.00	0.00	0	0	18	0	0	0	0	124	0	0	0	0	0	-124
248+00	24800.00	50.00	0.05	0.00	4.48	0.00	0.00	0.00	0	0	13	0	0	0	0	140	0	0	0	0	0	-140
248+36.025	24836.02	36.02	0.00	0.00	0.00	0.00	0.00	0.00	0	0	3	0	0	0	0	144	0	0	0	0	0	-144

DIVISION 1 - STH 83 - BOX CULVERT FILL

STATION	REAL STATION	DISTANCE	AREA (SF)						INCREMENTAL VOL (CY) (UNADJUSTED)						CUMULATIVE VOL (CY)							
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED MARSH IN FILL	REDUCED EBS IN FILL	MASS ORDINATE
															1.00	1.25	1.50	1.10	1.30	0.60	0.80	
									NOTE 1	NOTE 2	NOTE 3				NOTE 1		NOTE 4		NOTE 5	NOTE 6	NOTE 7	NOTE 8
241+21.155	24121.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
241+25	24125.00	3.84	0.00	0.00	2.79	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
241+30	24130.00	5.00	1.50	0.00	13.48	0.00	0.00	0.00	0	0	2	0	0	0	0	3	0	0	0	0	0	-3
241+35	24135.00	5.00	0.93	0.00	4.88	0.00	0.00	0.00	0	0	2	0	0	0	0	5	0	0	0	0	0	-5
241+40	24140.00	5.00	1.28	0.00	2.47	0.00	0.00	0.00	0	0	1	0	0	0	0	6	0	0	0	0	0	-6
241+45	24145.00	5.00	1.18	0.00	2.06	0.00	0.00	0.00	0	0	0	0	0	0	0	6	0	0	0	0	0	-6
241+50	24150.00	5.00	0.00	0.00	0.91	0.00	0.00	0.00	0	0	0	0	0	0	0	6	0	0	0	0	0	-6
241+55	24155.00	5.00	0.00	0.00	0.59	0.00	0.00	0.00	0	0	0	0	0	0	0	6	0	0	0	0	0	-6
241+60	24160.00	5.00	0.00	0.00	0.48	0.00	0.00	0.00	0	0	0	0	0	0	0	6	0	0	0	0	0	-6
241+65	24165.00	5.00	0.00	0.00	0.71	0.00	0.00	0.00	0	0	0	0	0	0	0	6	0	0	0	0	0	-6
241+70	24170.00	5.00	0.00	0.00	0.67	0.00	0.00	0.00	0	0	0	0	0	0	0	6	0	0	0	0	0	-6
241+75	24175.00	5.00	0.00	0.00	0.72	0.00	0.00	0.00	0	0	0	0	0	0	0	6	0	0	0	0	0	-6
241+80	24180.00	5.00	0.00	0.00	0.57	0.00	0.00	0.00	0	0	0	0	0	0	0	6	0	0	0	0	0	-6
241+82.254	24182.25	2.25	0.00	0.00	0.57	0.00	0.00	0.00	0	0	0	0	0	0	0	6	0	0	0	0	0	-6

DIVISION 1 - IH 94 - STH 83, BRIDGE FILL NE Wingwall

STATION	REAL STATION	DISTANCE	AREA (SF)						INCREMENTAL VOL (CY) (UNADJUSTED)						CUMULATIVE VOL (CY)							
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED MARSH IN FILL	REDUCED EBS IN FILL	MASS ORDINATE
															1.00	1.25	1.50	1.10	1.30	0.60	0.80	
									NOTE 1	NOTE 2	NOTE 3				NOTE 1		NOTE 4		NOTE 5	NOTE 6	NOTE 7	NOTE 8
459+37.209	45937.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
459+40	45940.00	2.79	0.04	0.00	48.17	0.00	0.00	0.00	0	0	2	0	0	0	0	3	0	0	0	0	0	-3
459+45	45945.00	5.00	0.00	0.00	43.19	0.00	0.00	0.00	0	0	8	0	0	0	0	13	0	0	0	0	0	-13
459+50	45950.00	5.00	0.03	0.00	33.99	0.00	0.00	0.00	0	0	7	0	0	0	0	21	0	0	0	0	0	-21
459+55	45955.00	5.00	0.01	0.00	31.65	0.00	0.00	0.00	0	0	6	0	0	0	0	29	0	0	0	0	0	-29
459+60	45960.00	5.00	0.00	0.00	33.23	0.00	0.00	0.00	0	0	6	0	0	0	0	36	0	0	0	0	0	-36
459+64.273	45964.27	4.27	0.00	0.00	34.57	0.00	0.00	0.00	0	0	5	0	0	0	0	43	0	0	0	0	0	-43

DIVISION 1 - IH 94 - MAINLINE, LT NW QUAD BG PLUS AREA BEHIND HMA CURB

STATION	REAL STATION	DISTANCE	AREA (SF)						INCREMENTAL VOL (CY) (UNADJUSTED)						CUMULATIVE VOL (CY)							
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED MARSH IN FILL	REDUCED EBS IN FILL	MASS ORDINATE
															1.00	1.25	1.50	1.10	1.30	0.60	0.80	
									NOTE 1	NOTE 2	NOTE 3				NOTE 1		NOTE 4		NOTE 5	NOTE 6	NOTE 7	NOTE 8
521+06.729	52106.73	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
521+50	52150.00	43.27	0.07	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
522+00	52200.00	50.00	0.09	0.00	1.36	0.00	0.00	0.00	0	0	1	0	0	0	0	1	0	0	0	0	0	-1
522+08.509	52208.51	8.51	0.12	0.00	2.37	0.00	0.00	0.00	0	0	1	0	0	0	0	3	0	0	0	0	0	-3
522+50	52250.00	41.49	0.00	0.00	0.67	0.00	0.00	0.00	0	0	2	0	0	0	0	5	0	0	0	0	0	-5
522+59.252	52259.25	9.25	0.05	0.00	0.38	0.00	0.00	0.00	0	0	0	0	0	0	0	5	0	0	0	0	0	-5
522+84.622	52284.62	25.37	0.15	0.00	0.22	0.00	0.00	0.00	0	0	0	0	0	0	0	5	0	0	0	0	0	-5

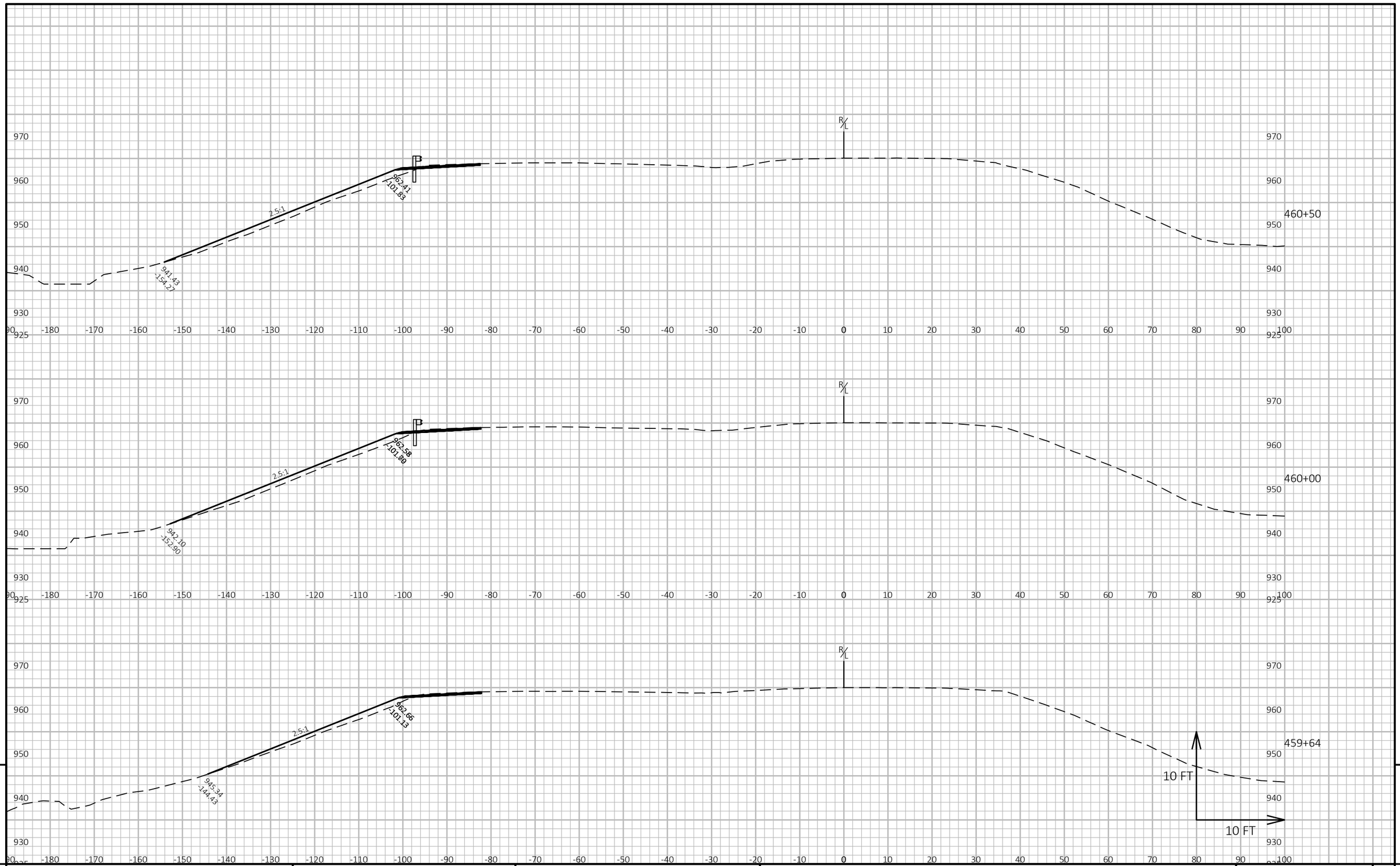
DIVISION 1 - IH 94 - NE QUADRANT BEHIND HMA CURB

STATION	REAL STATION	DISTANCE	AREA (SF)						INCREMENTAL VOL (CY) (UNADJUSTED)						CUMULATIVE VOL (CY)							
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED MARSH IN FILL	REDUCED EBS IN FILL	MASS ORDINATE
									NOTE 1	NOTE 2	NOTE 3				1.00 NOTE 1	1.25	1.50 NOTE 4	1.10	1.30 NOTE 5	0.60 NOTE 6	0.80 NOTE 7	NOTE 8
523+97.209	52397.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
524+00	52400.00	2.79	0.12	0.00	18.70	0.00	0.00	0.00	0	0	1	0	0	0	0	1	0	0	0	0	0	-1
524+05	52405.00	5.00	0.00	0.00	10.95	0.00	0.00	0.00	0	0	3	0	0	0	0	5	0	0	0	0	0	-5
524+10	52410.00	5.00	0.05	0.00	6.89	0.00	0.00	0.00	0	0	2	0	0	0	0	8	0	0	0	0	0	-8
524+14.365	52414.36	4.36	0.00	0.00	7.99	0.00	0.00	0.00	0	0	1	0	0	0	0	9	0	0	0	0	0	-9

DIVISION 1 - Maintenance Crossover

STATION	REAL STATION	DISTANCE	AREA (SF)						INCREMENTAL VOL (CY) (UNADJUSTED)						CUMULATIVE VOL (CY)							
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED MARSH IN FILL	REDUCED EBS IN FILL	MASS ORDINATE
									NOTE 1	NOTE 2	NOTE 3				1.00 NOTE 1	1.25	1.50 NOTE 4	1.10	1.30 NOTE 5	0.60 NOTE 6	0.80 NOTE 7	NOTE 8
538+36.44	53836.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
538+50.00	53850.00	13.56	1.52	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
538+95.02	53895.02	45.02	10.66	0.00	0.00	0.00	0.00	0.00	10	0	0	0	0	0	10	0	0	0	0	0	0	10
539+00.00	53900.00	4.98	13.27	0.00	0.00	0.00	0.00	0.00	2	0	0	0	0	0	12	0	0	0	0	0	0	12
539+50.00	53950.00	50.00	16.40	0.00	52.80	0.00	0.00	0.00	27	0	49	0	0	0	39	61	0	0	0	0	0	-22
539+91.41	53991.41	41.41	18.71	0.00	0.00	0.00	0.00	0.00	27	0	41	0	0	0	66	112	0	0	0	0	0	-46
540+00.00	54000.00	8.59	19.05	0.00	0.00	0.00	0.00	0.00	6	0	0	0	0	0	72	112	0	0	0	0	0	-40
540+50.00	54050.00	50.00	9.22	0.00	0.00	0.00	0.00	0.00	26	0	0	0	0	0	98	112	0	0	0	0	0	-14
541+00.00	54100.00	50.00	4.22	0.00	0.00	0.00	0.00	0.00	12	0	0	0	0	0	110	112	0	0	0	0	0	-2
541+22.08	54122.08	22.08	0.00	0.00	0.00	0.00	0.00	0.00	2	0	0	0	0	0	112	112	0	0	0	0	0	0

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - EXPANDED MARSH BACKFILL	WILL BE BACKFILLED WITH BORROW
5 - EXPANDED EBS	WILL BE BACKFILLED WITH BORROW
6 - REDUCED MARSH IN FILL	REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL
7 - REDUCED EBS IN FILL	REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL
8 - MASS ORDINATE	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

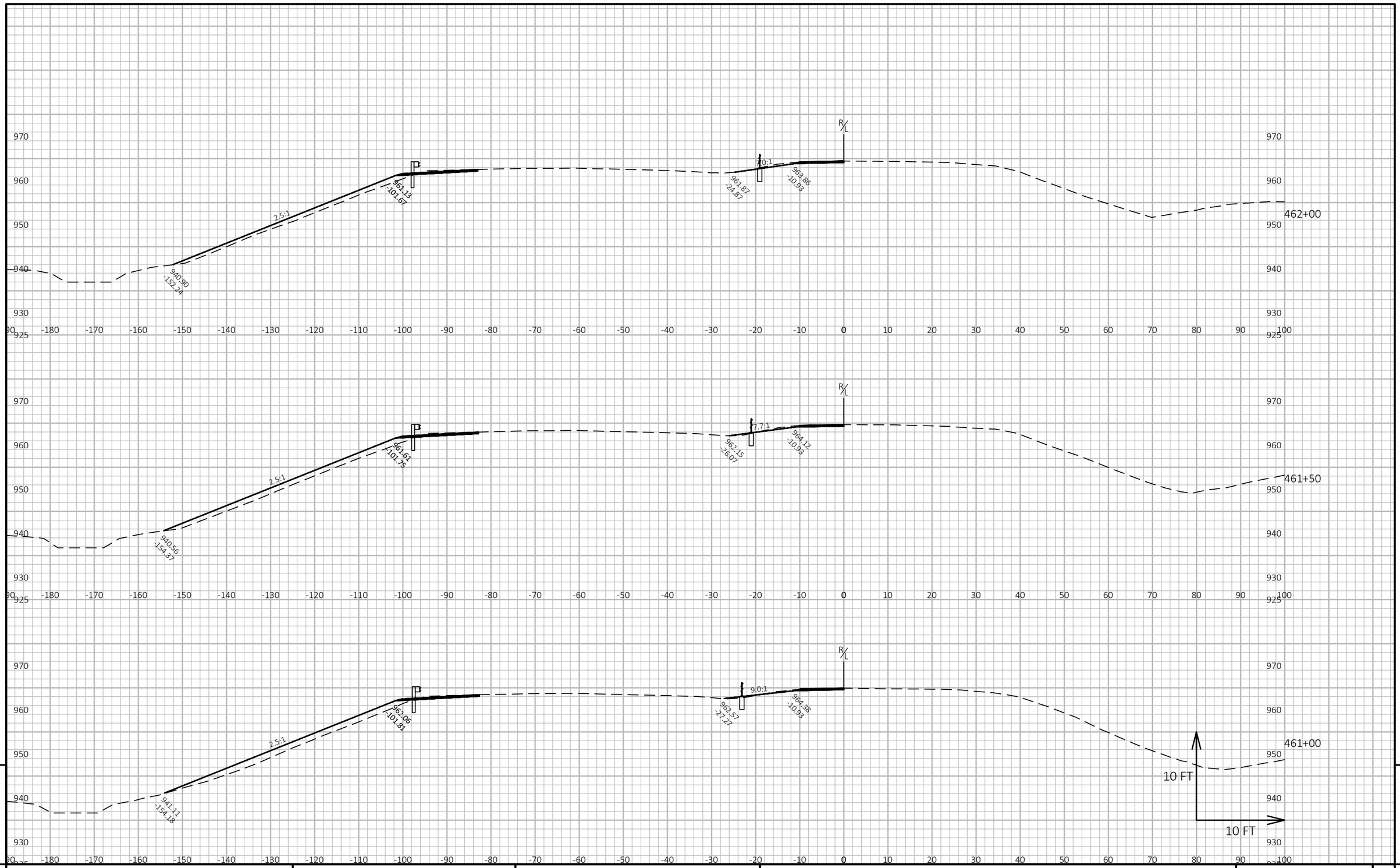


PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 459+00 - STA 487+00	SHEET 781	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 01

PLOT DATE : 7/6/2023 2:40 PM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 459+00 - STA 487+00	SHEET 782	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 02

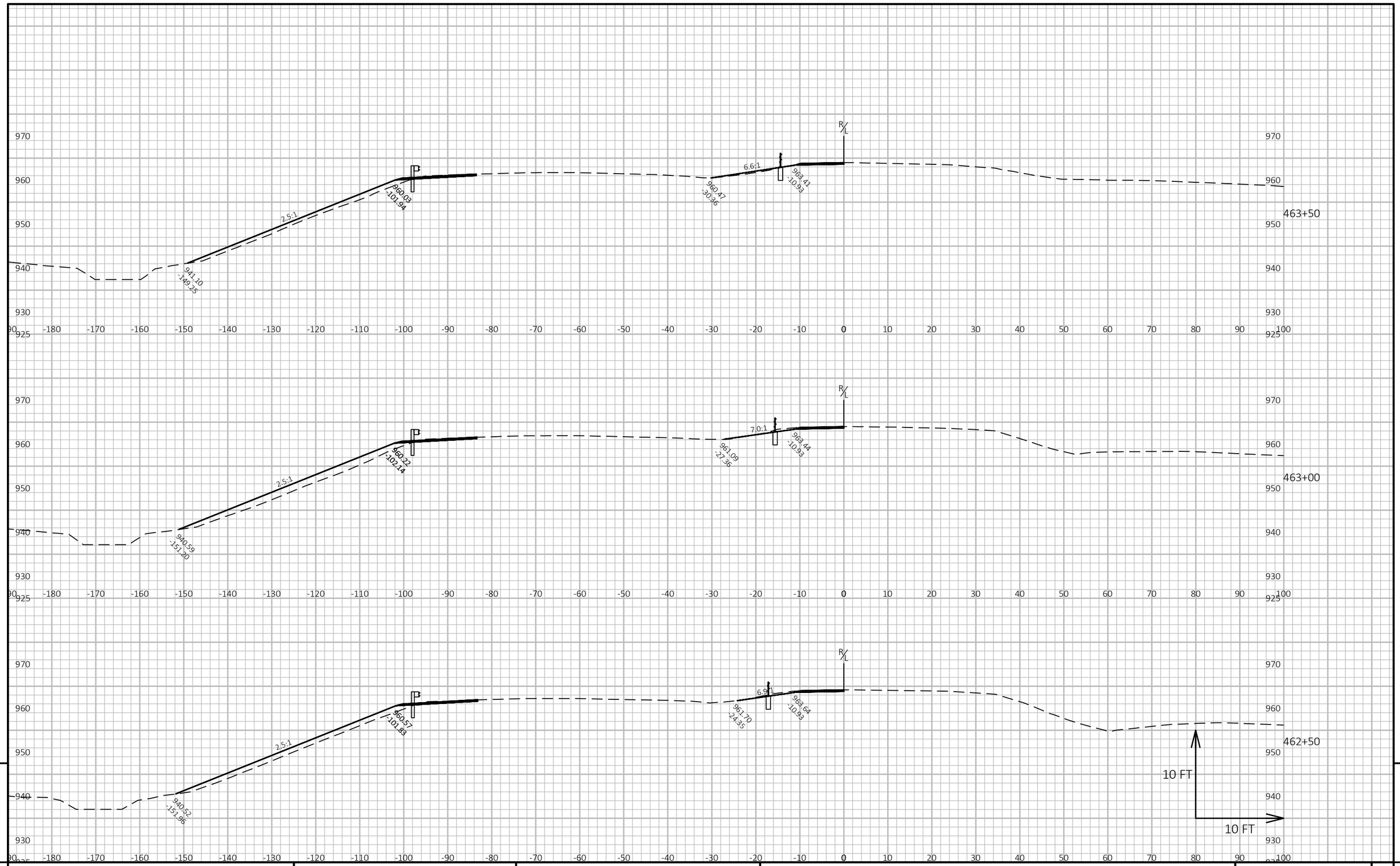
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PLOT BY : TONY BACIAK

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 459+00 - STA 487+00	SHEET 783	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 03

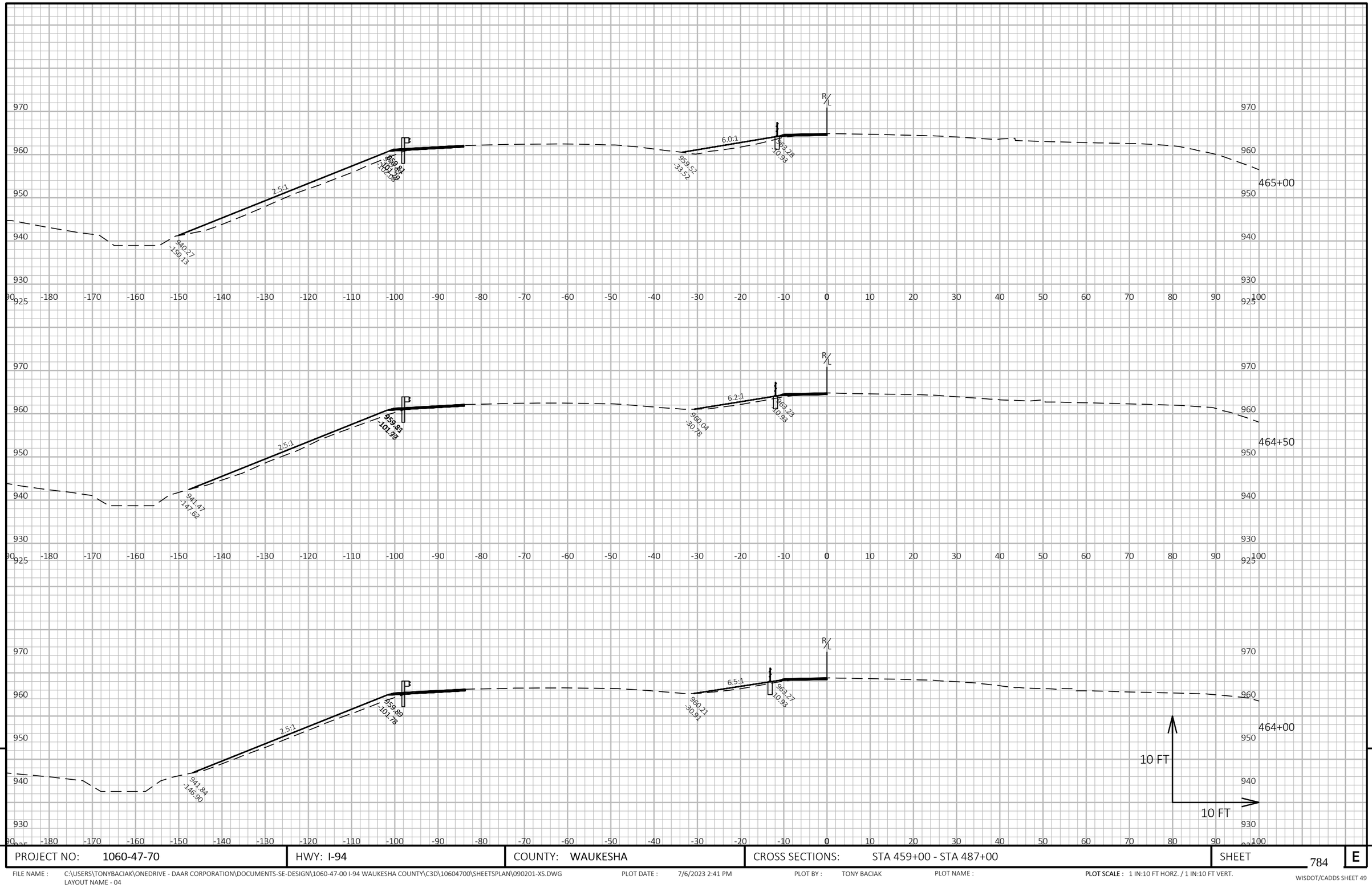
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PLOT BY : TONY BACIAK

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

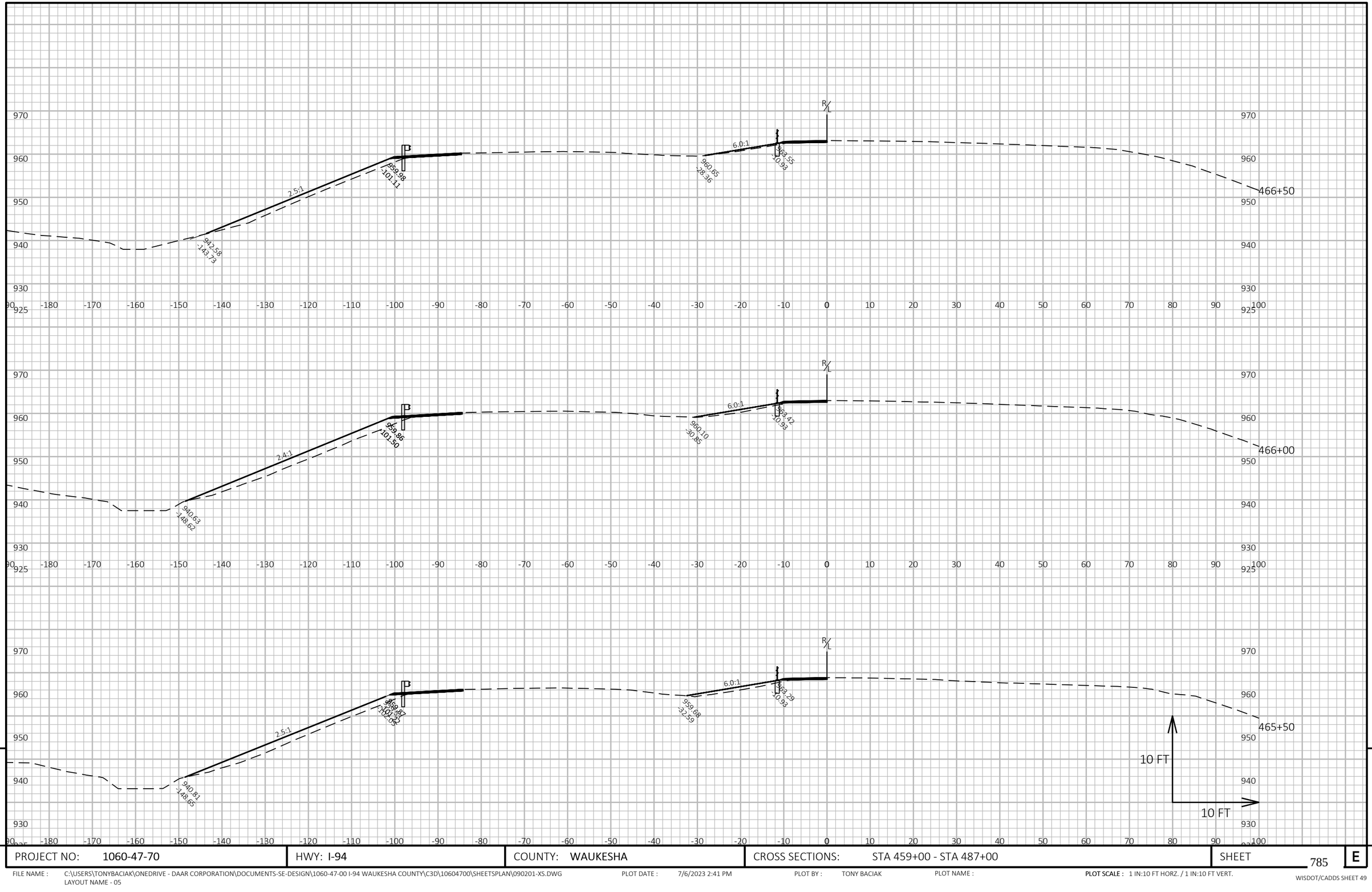


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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 459+00 - STA 487+00	SHEET 784	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 04

PLOT DATE : 7/6/2023 2:41 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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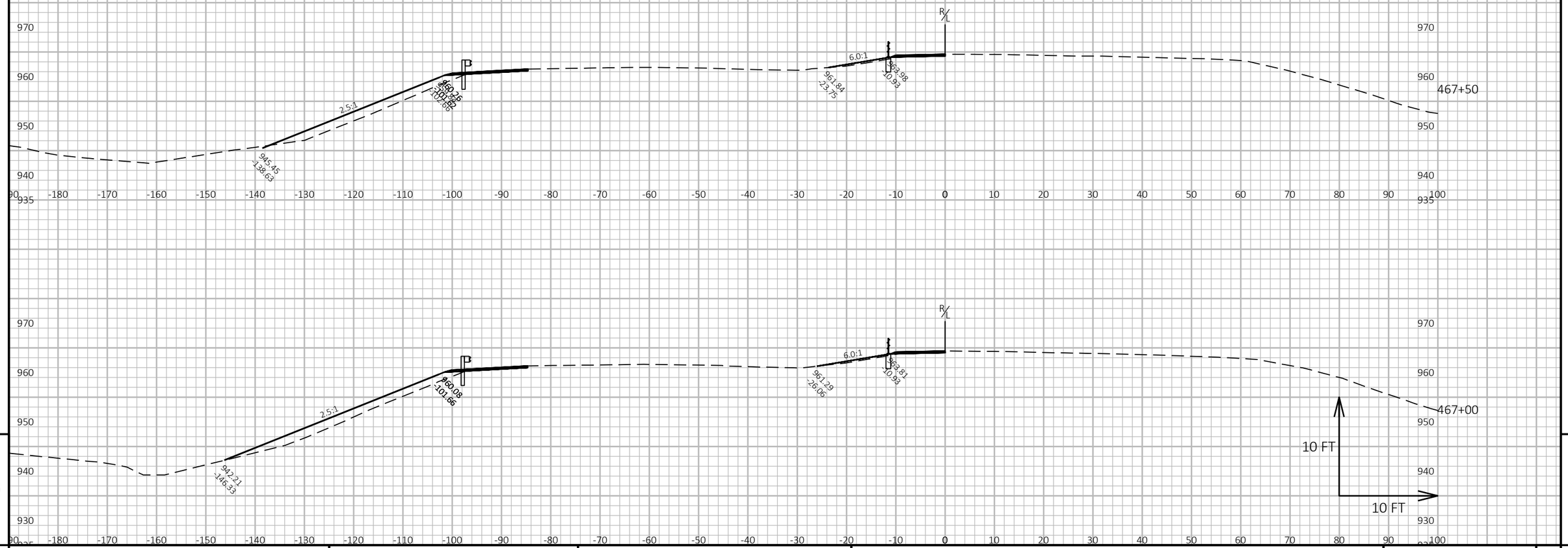
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 459+00 - STA 487+00	SHEET 785	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 05

PLOT DATE : 7/6/2023 2:41 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 459+00 - STA 487+00	SHEET 786	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 06

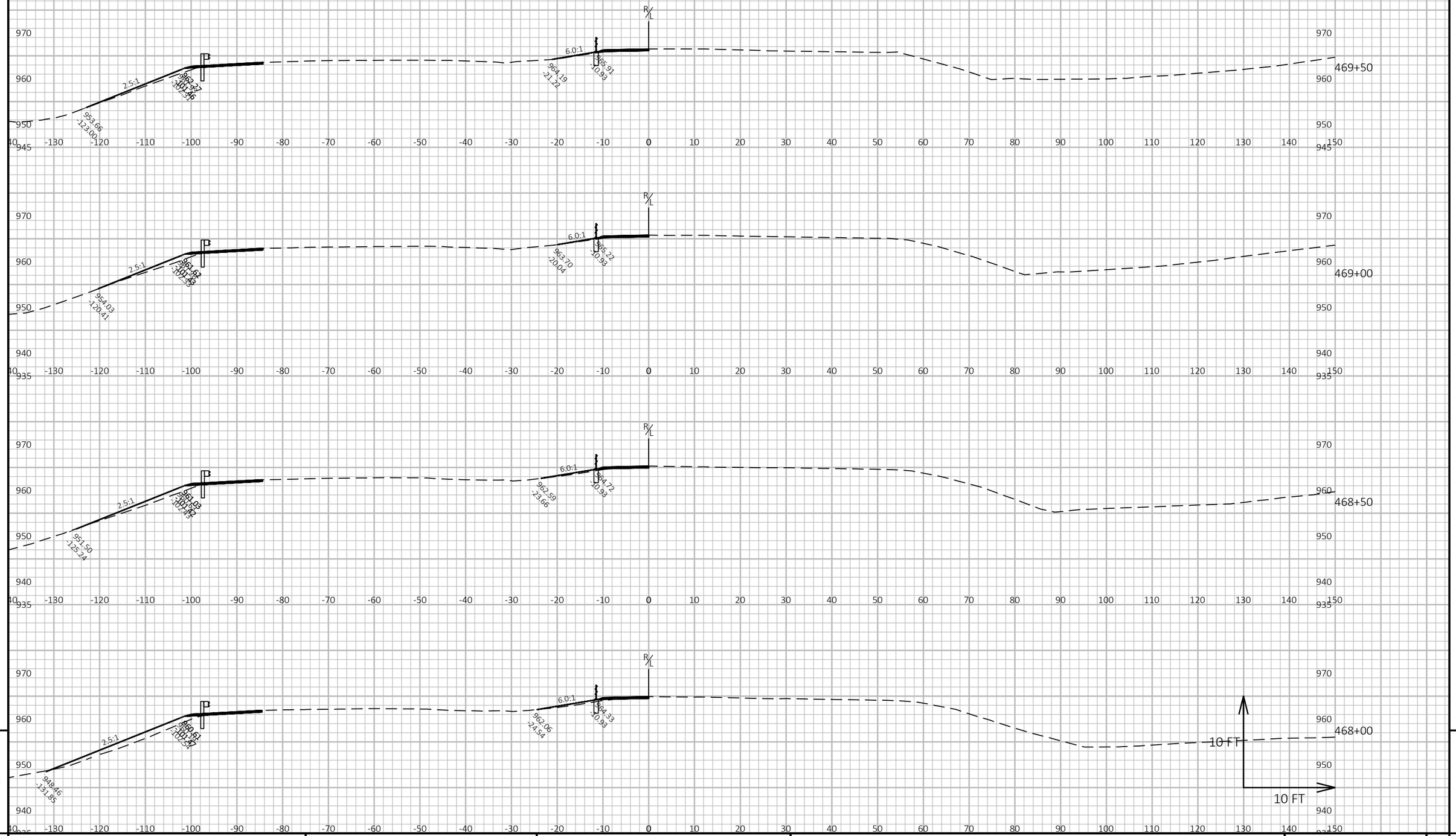
PLOT DATE : 7/6/2023 2:41 PM

PLOT BY : TONY BACIAK

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

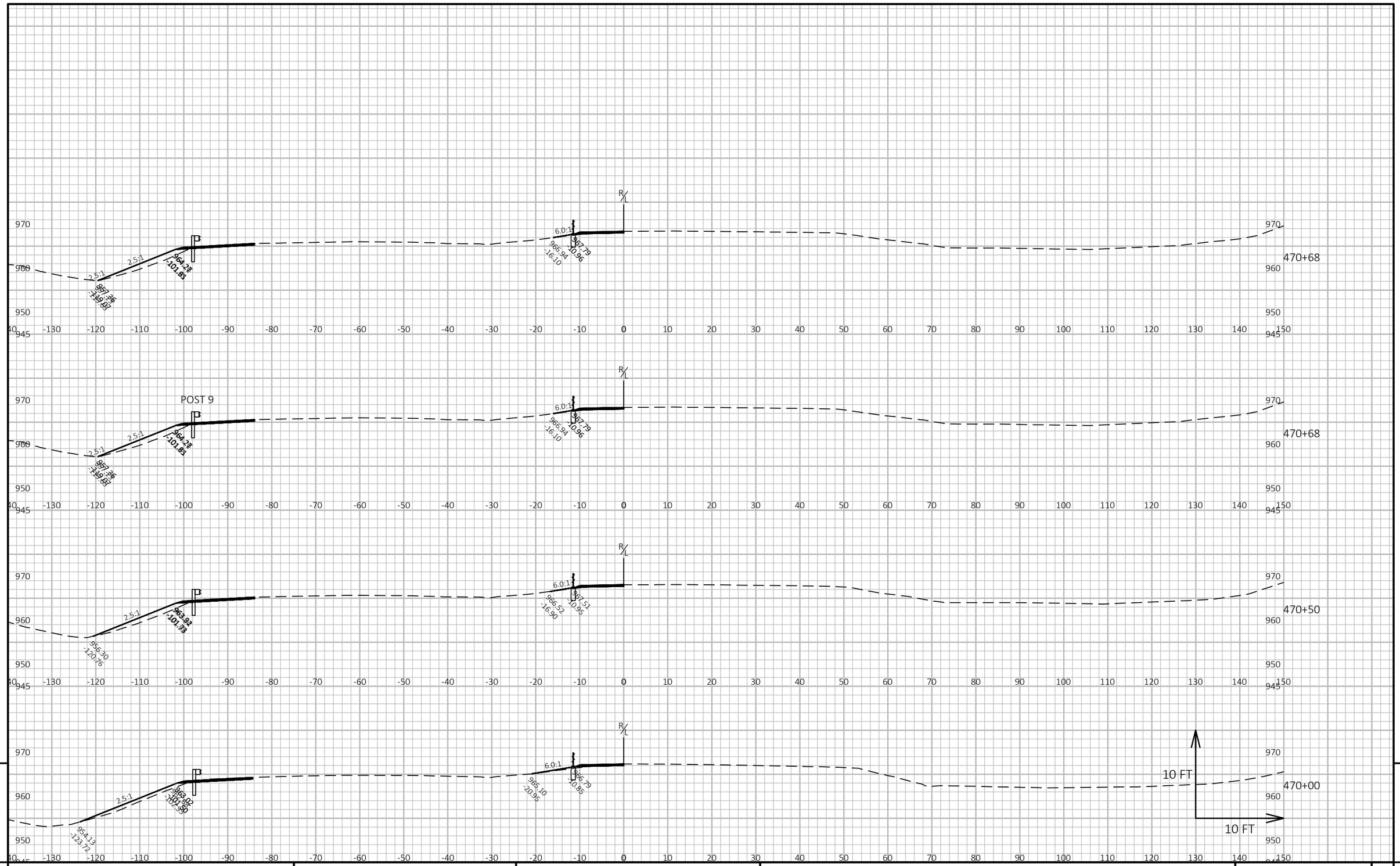


PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 459+00 - STA 487+00	SHEET 787 E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 07

PLOT DATE : 7/6/2023 2:41 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

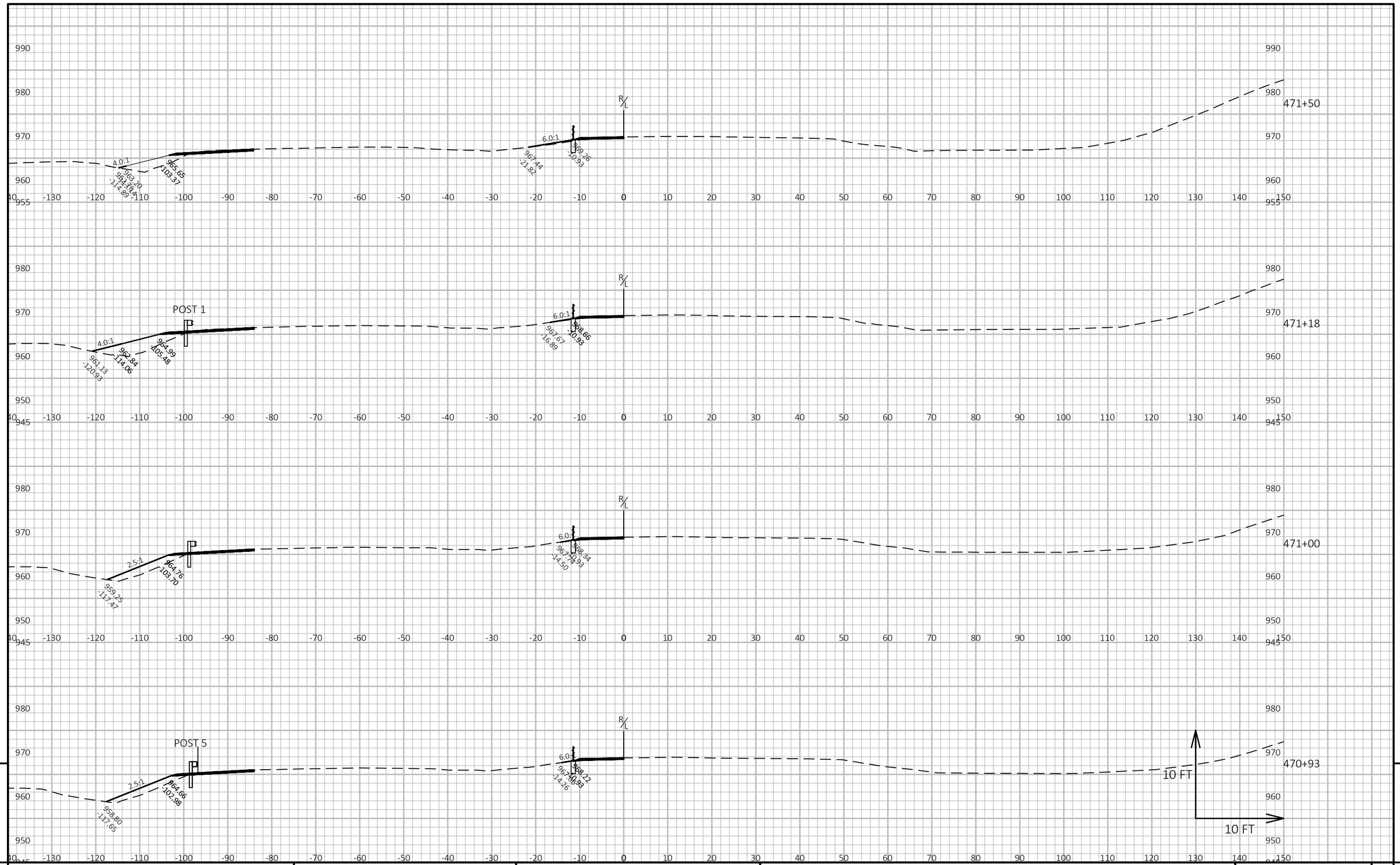


PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 459+00 - STA 487+00	SHEET 788 E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 08

PLOT DATE : 7/6/2023 2:41 PM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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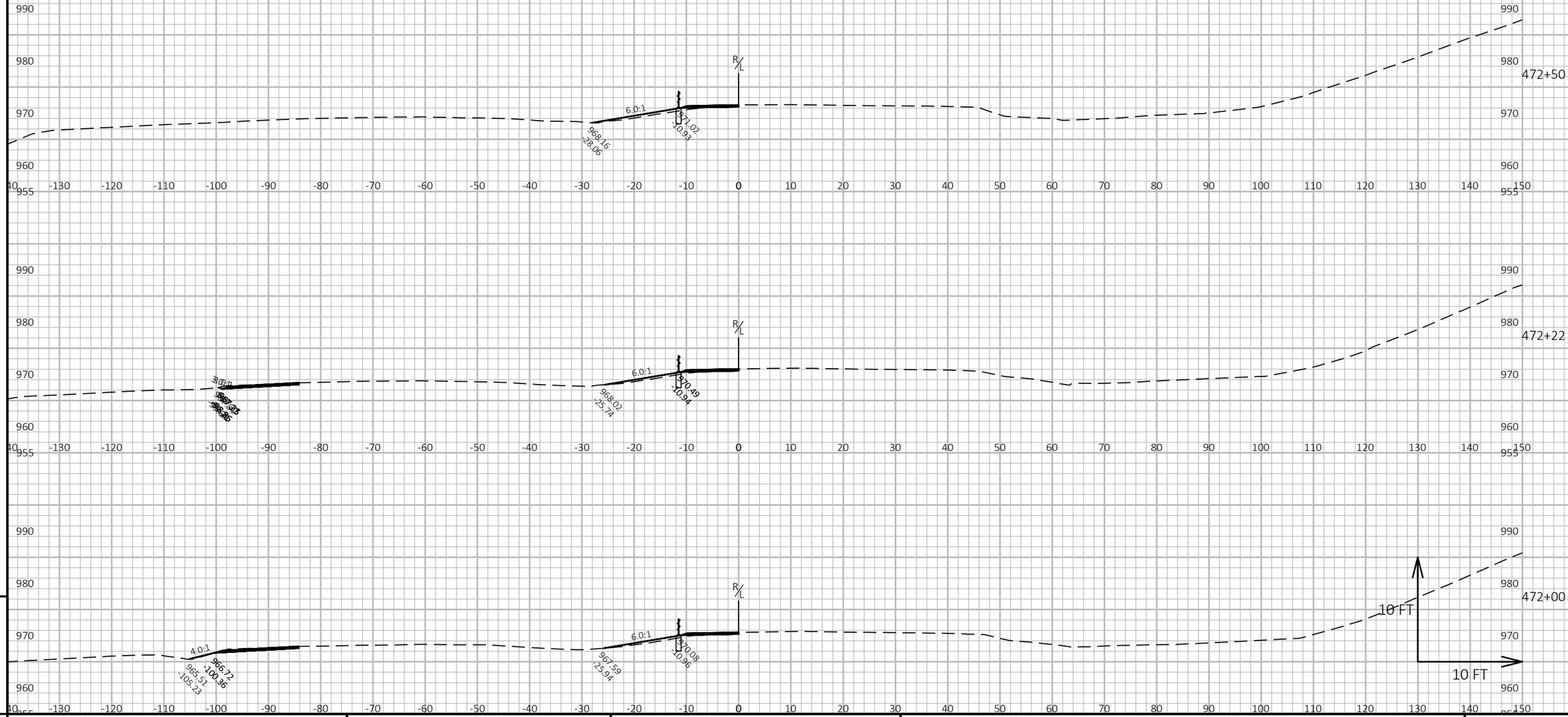
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 459+00 - STA 487+00	SHEET 789	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 09

PLOT DATE : 7/6/2023 2:41 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

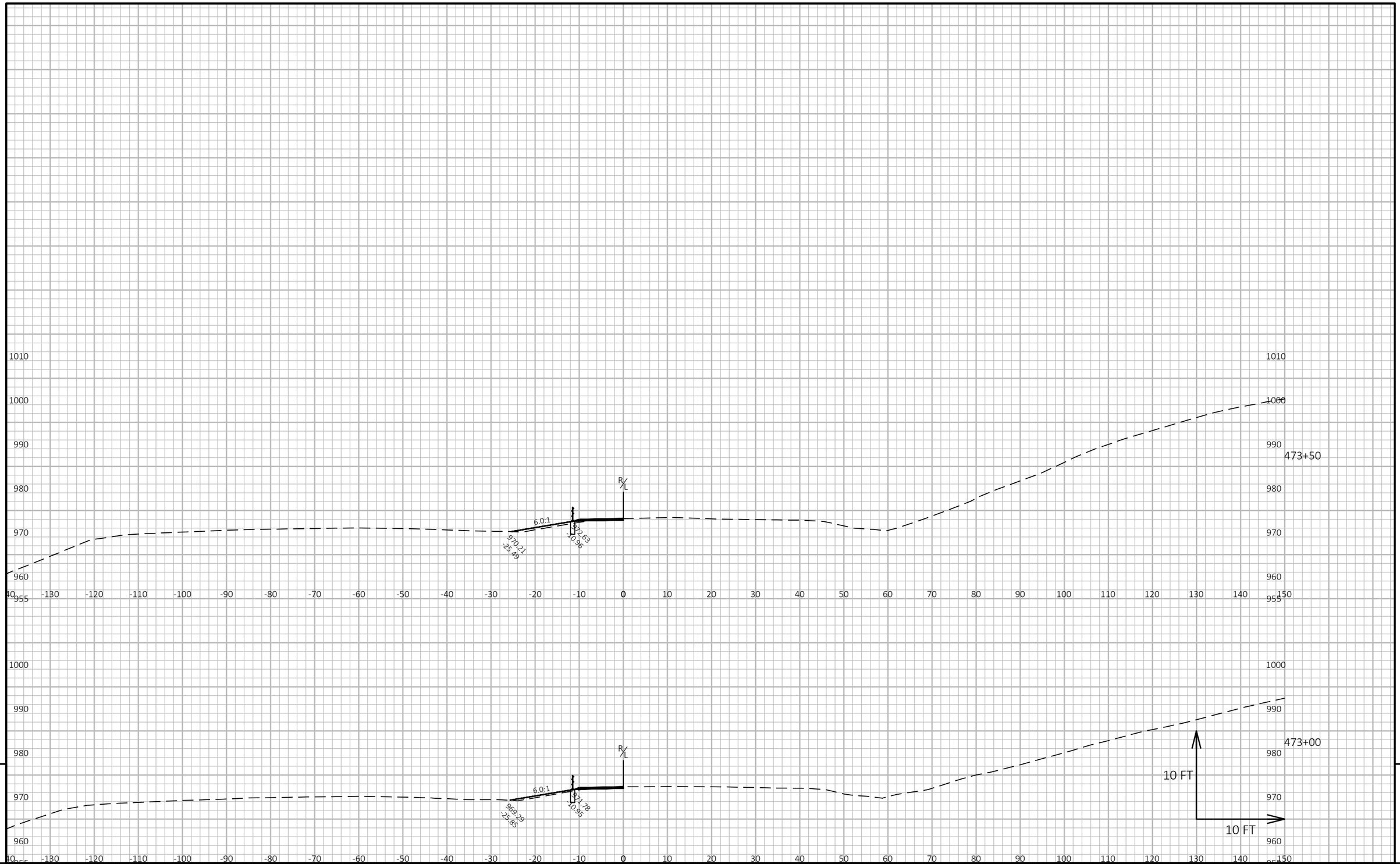


PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 459+00 - STA 487+00	SHEET 790 E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 10

PLOT DATE : 7/6/2023 2:41 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

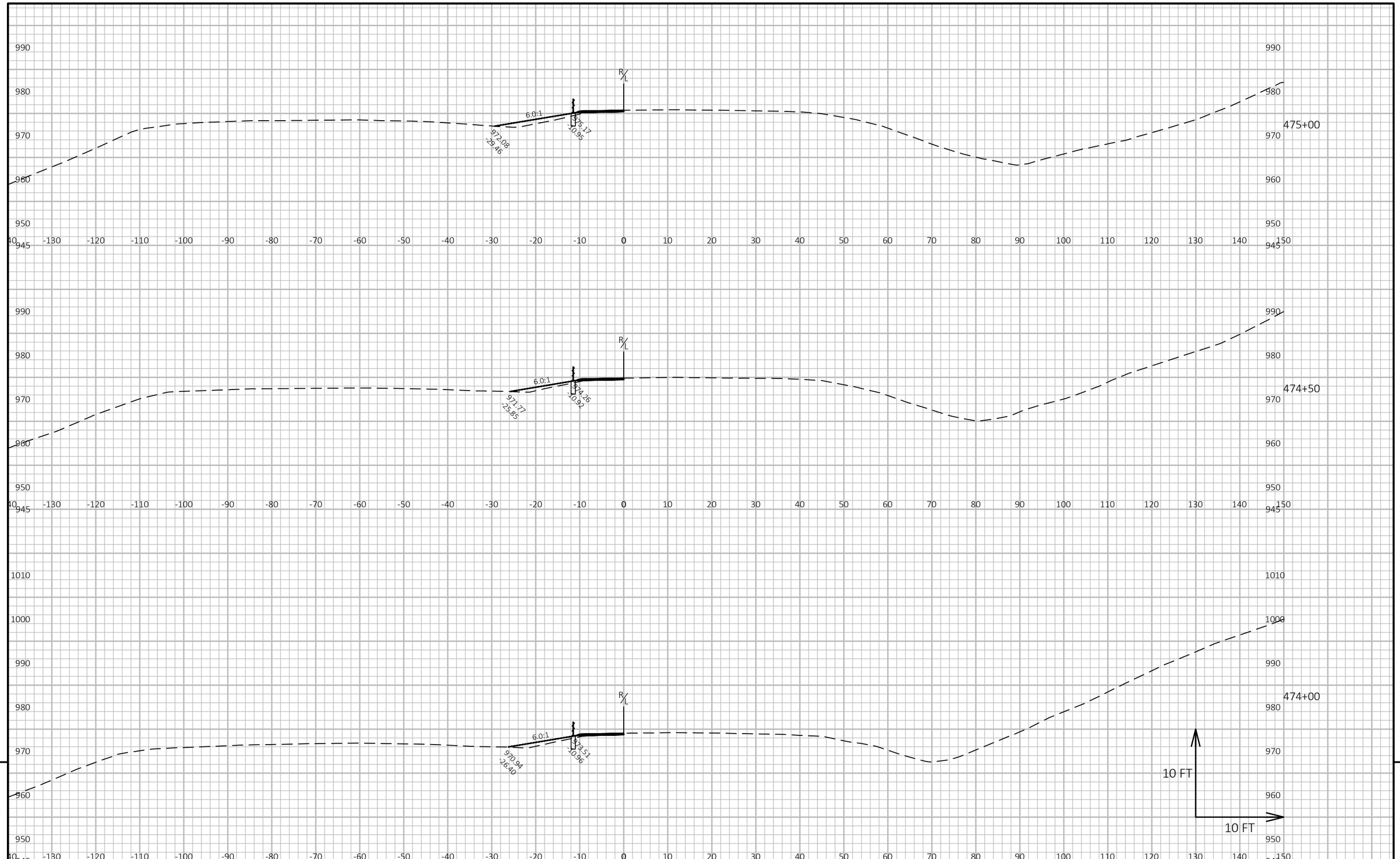
PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 459+00 - STA 487+00	SHEET 791	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 11

PLOT DATE : 7/6/2023 2:41 PM PLOT BY : TONY BACIAK PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

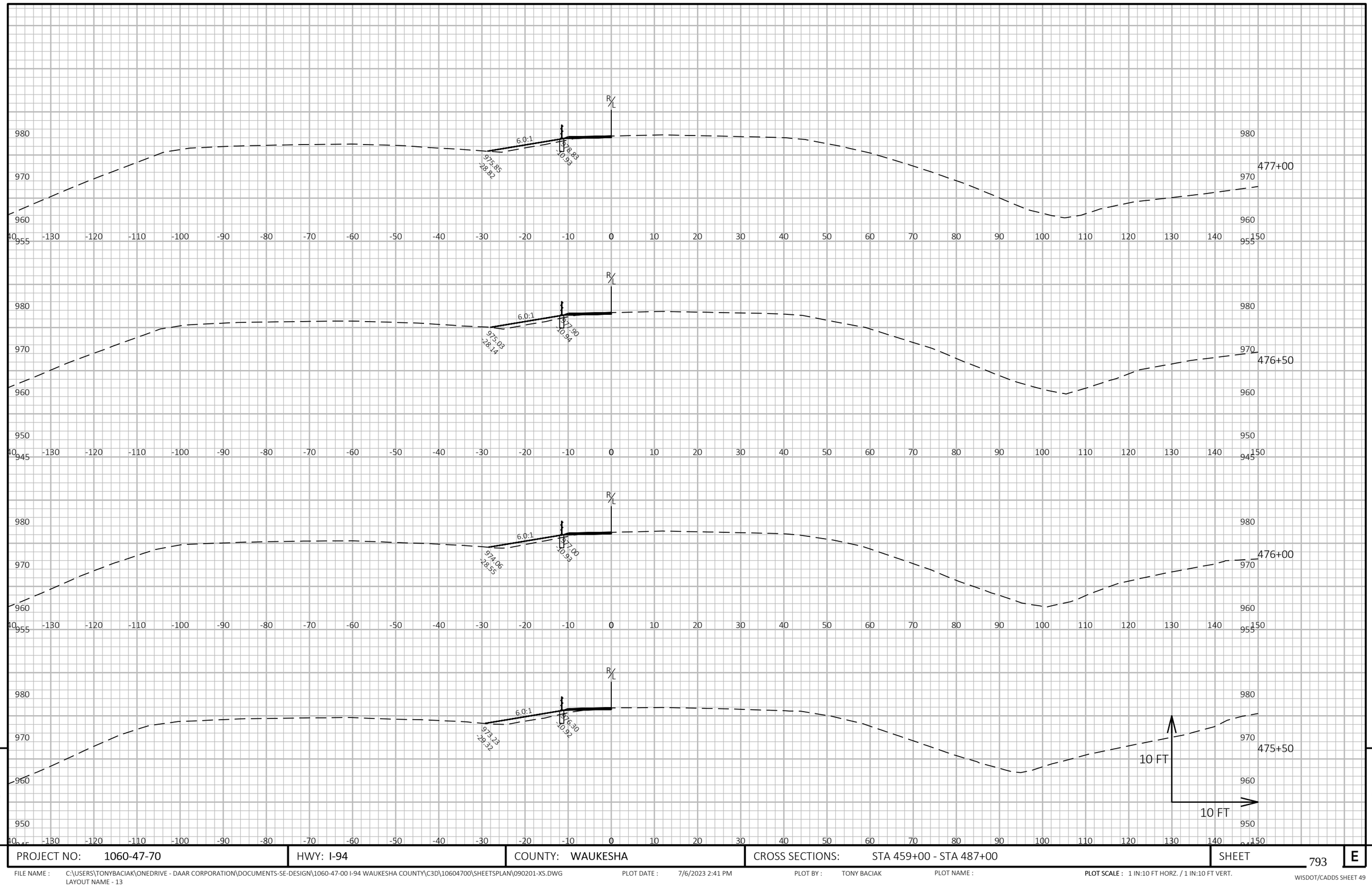
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 459+00 - STA 487+00	SHEET 792	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 12

PLOT DATE : 7/6/2023 2:41 PM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

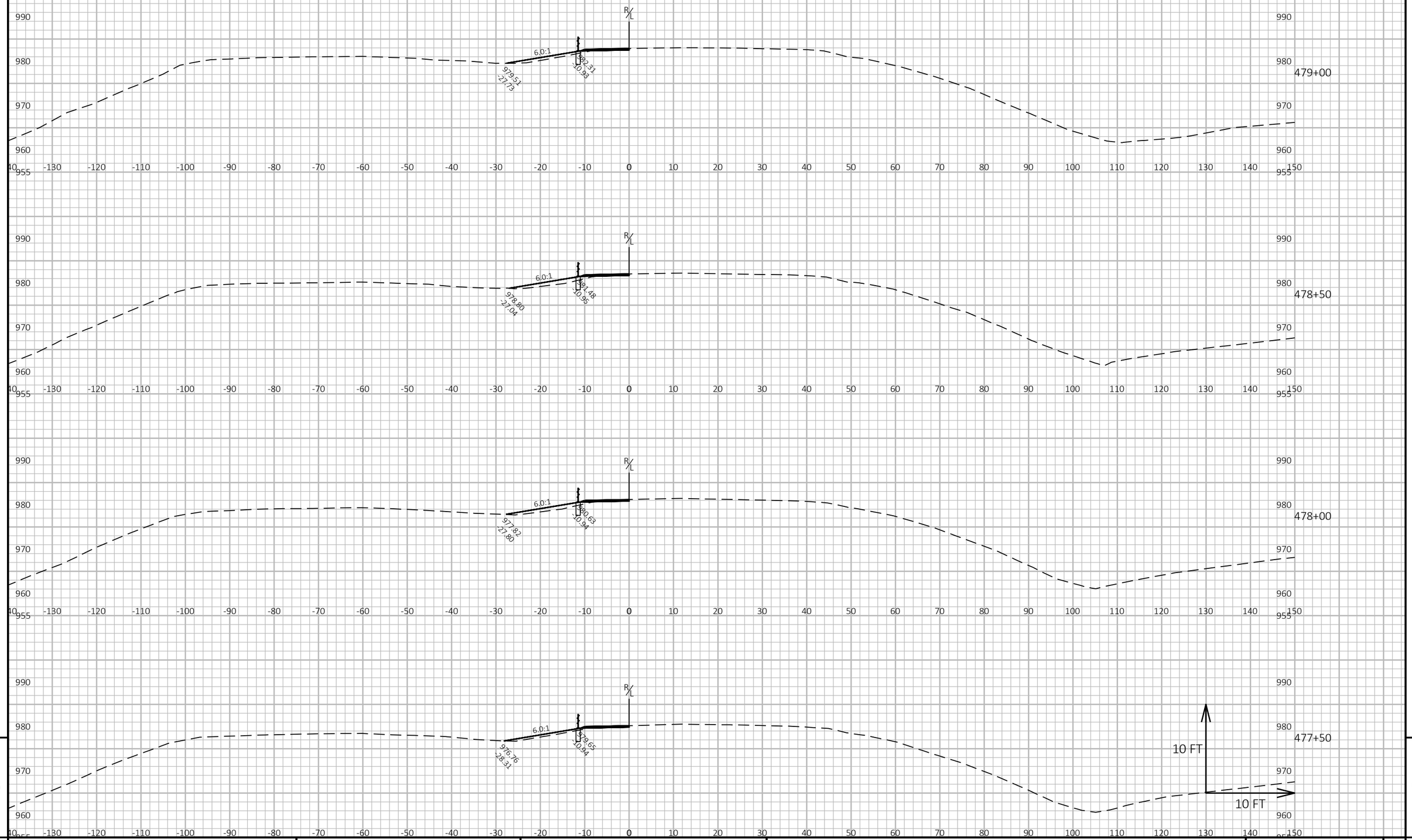
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 459+00 - STA 487+00	SHEET 793	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 13

PLOT DATE : 7/6/2023 2:41 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

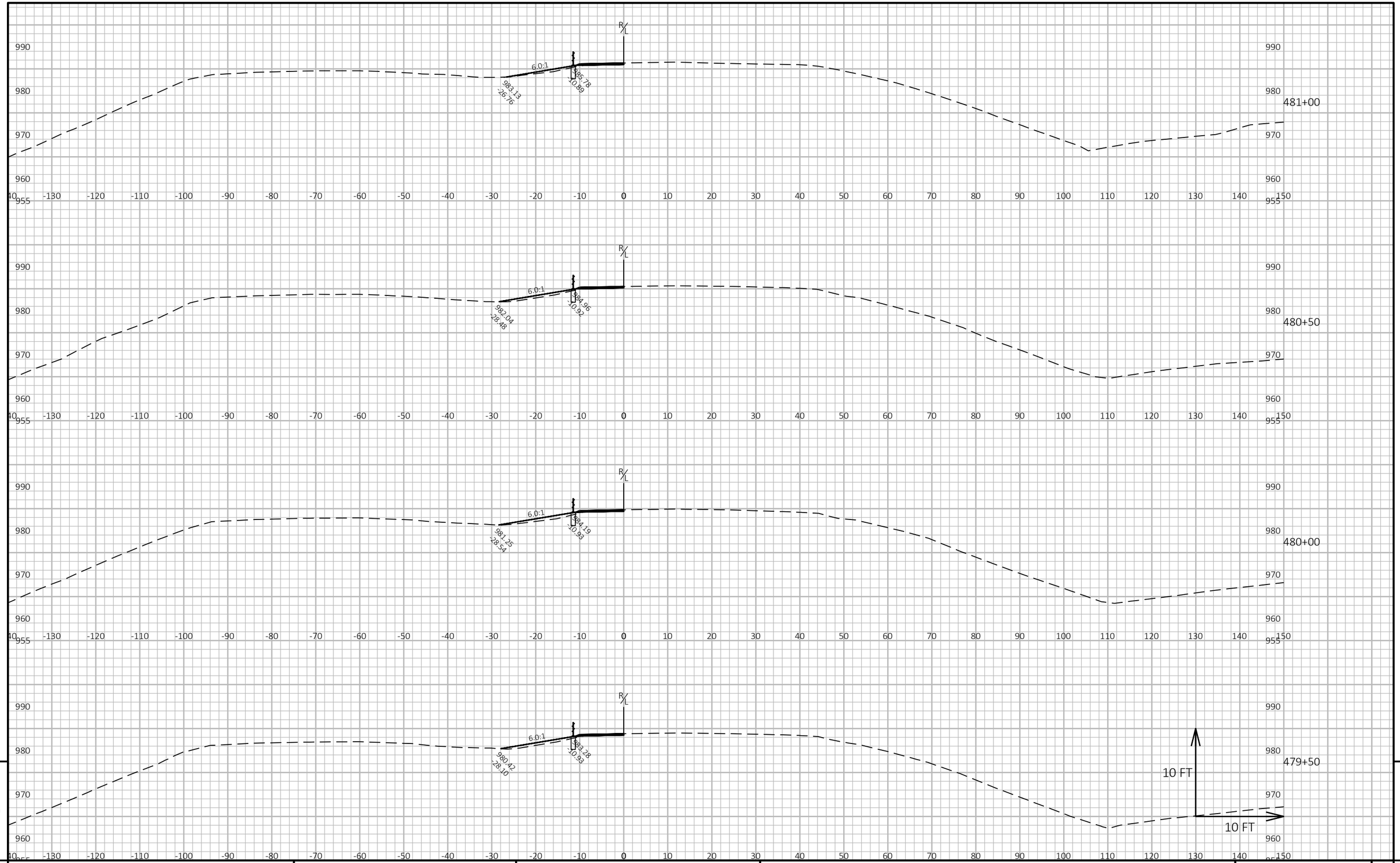
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 459+00 - STA 487+00	SHEET 794	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 14

PLOT DATE : 7/6/2023 2:41 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

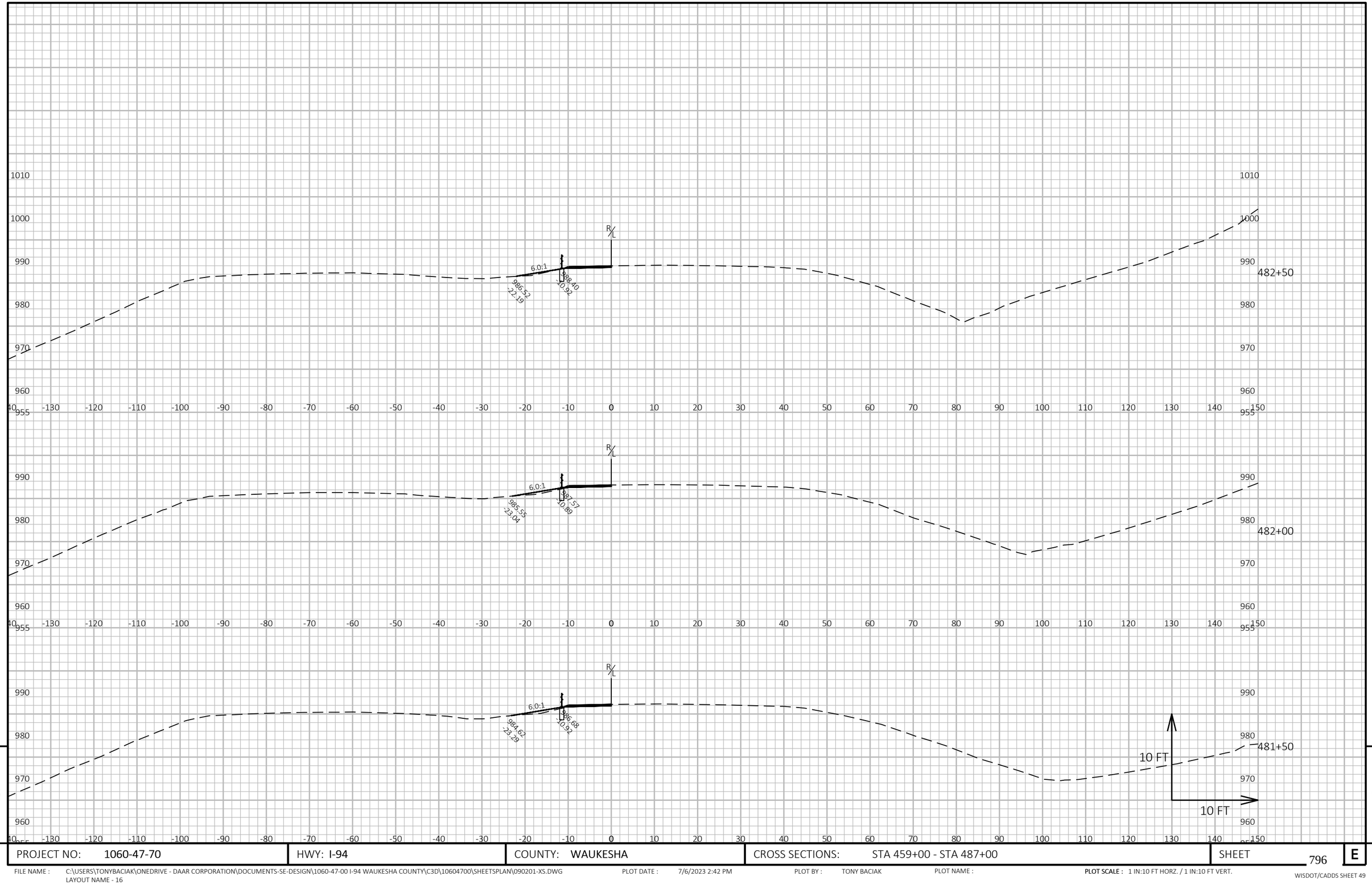
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 459+00 - STA 487+00	SHEET 795	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 15

PLOT DATE : 7/6/2023 2:41 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

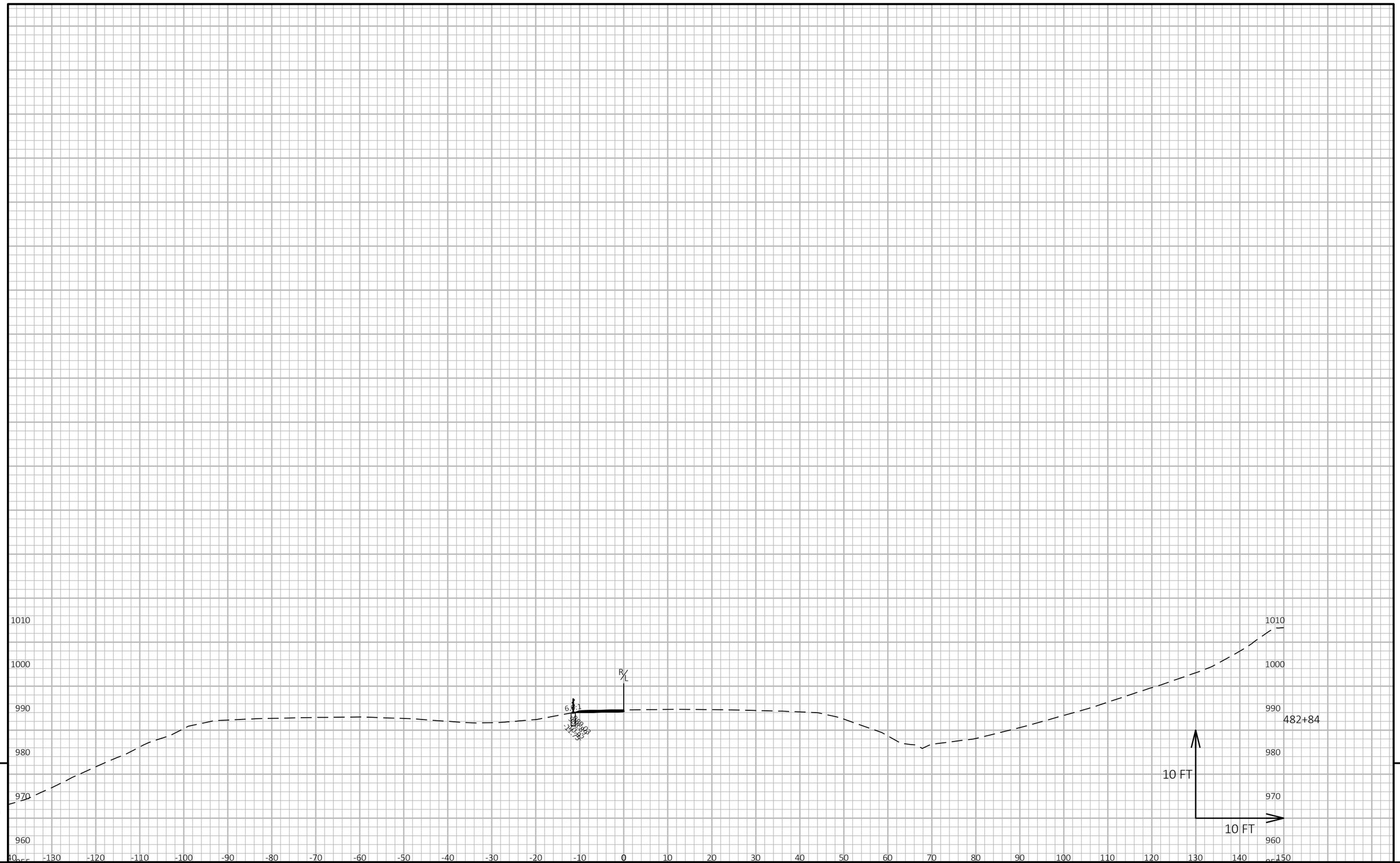


PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 459+00 - STA 487+00	SHEET 796	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 16

PLOT DATE : 7/6/2023 2:42 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



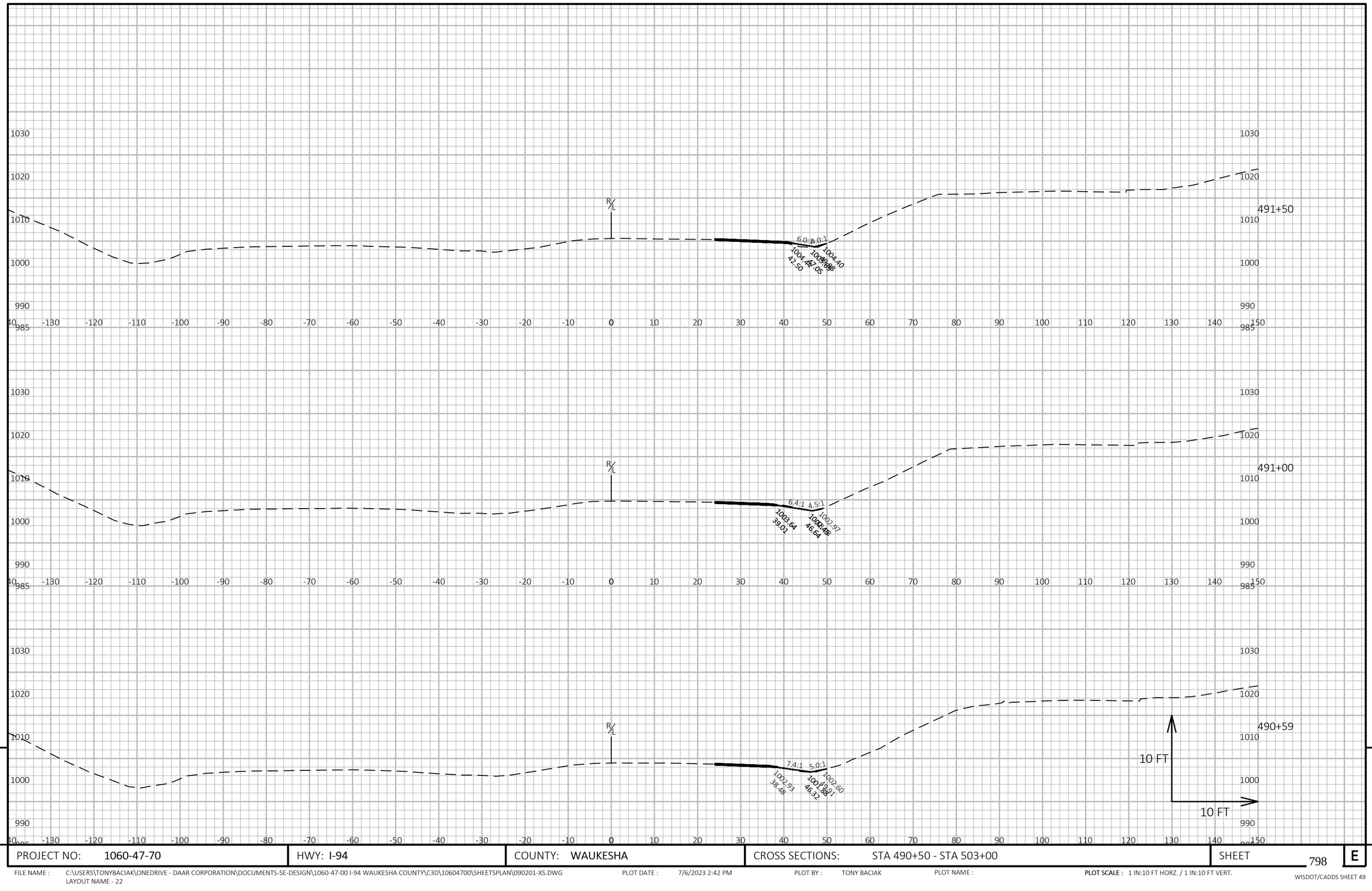
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 459+00 - STA 487+00	SHEET 797	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 17

PLOT DATE : 7/6/2023 2:42 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

9

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 490+50 - STA 503+00	SHEET 798	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 22

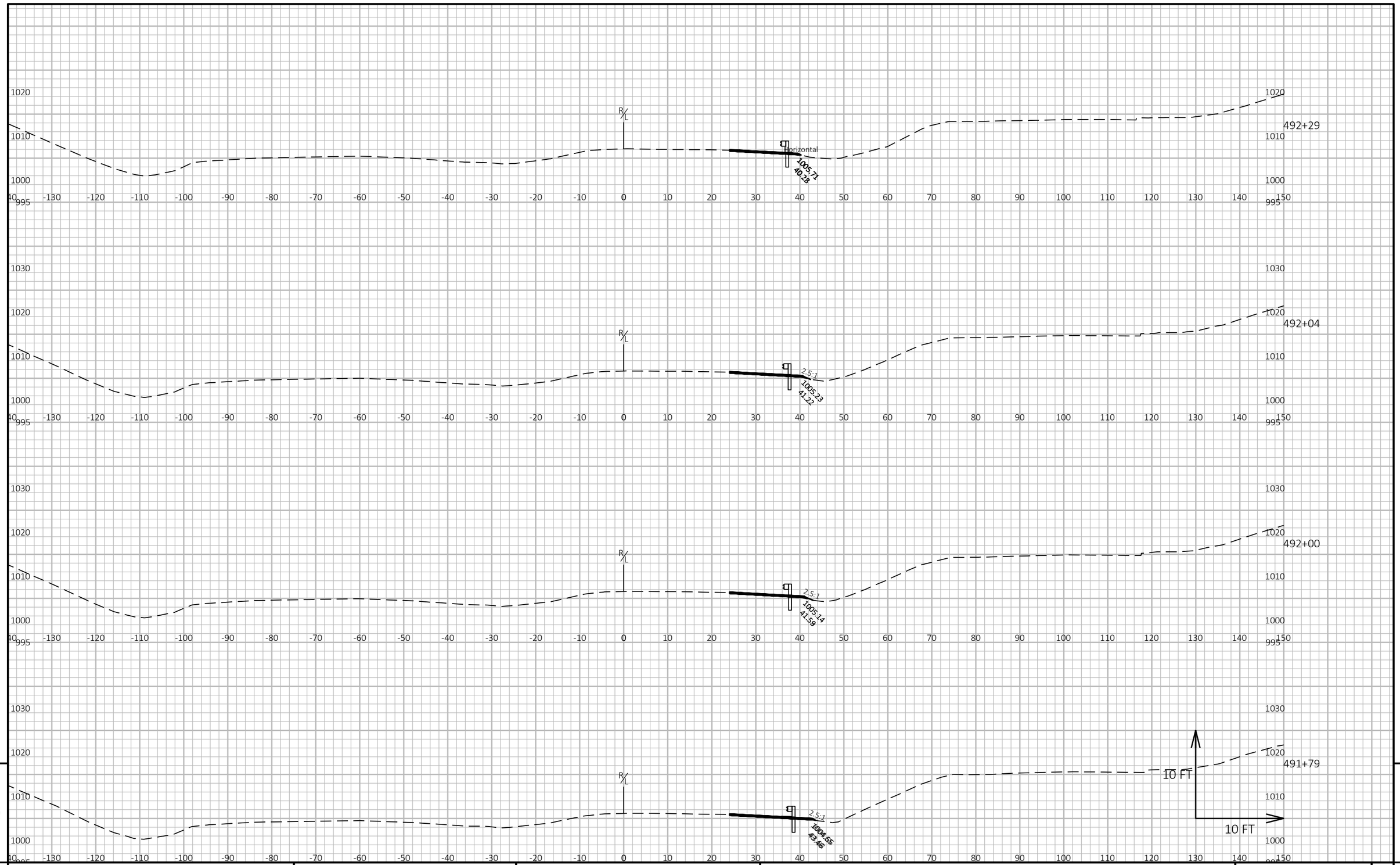
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PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



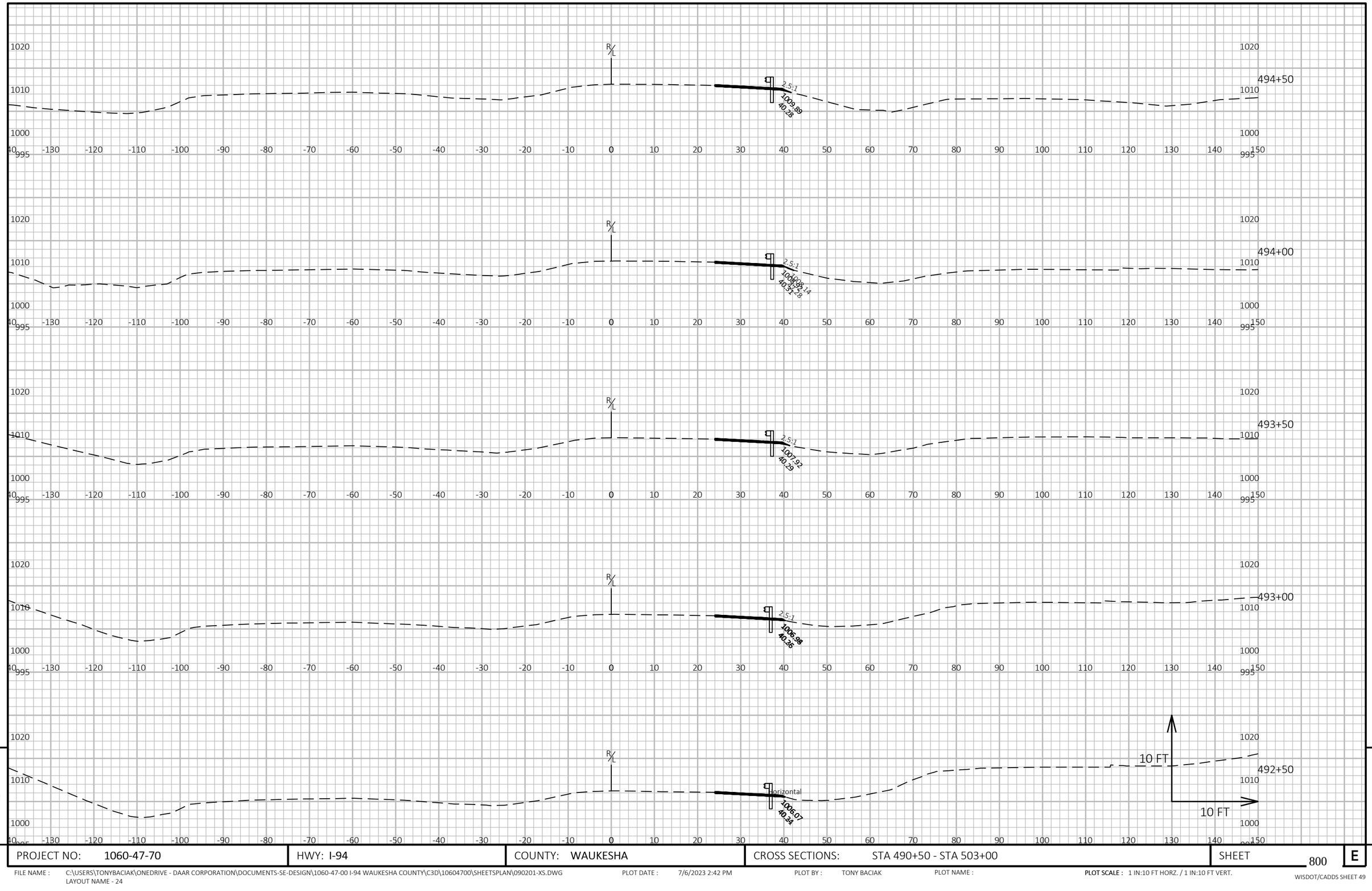
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 490+50 - STA 503+00	SHEET 799	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 23

PLOT DATE : 7/6/2023 2:42 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

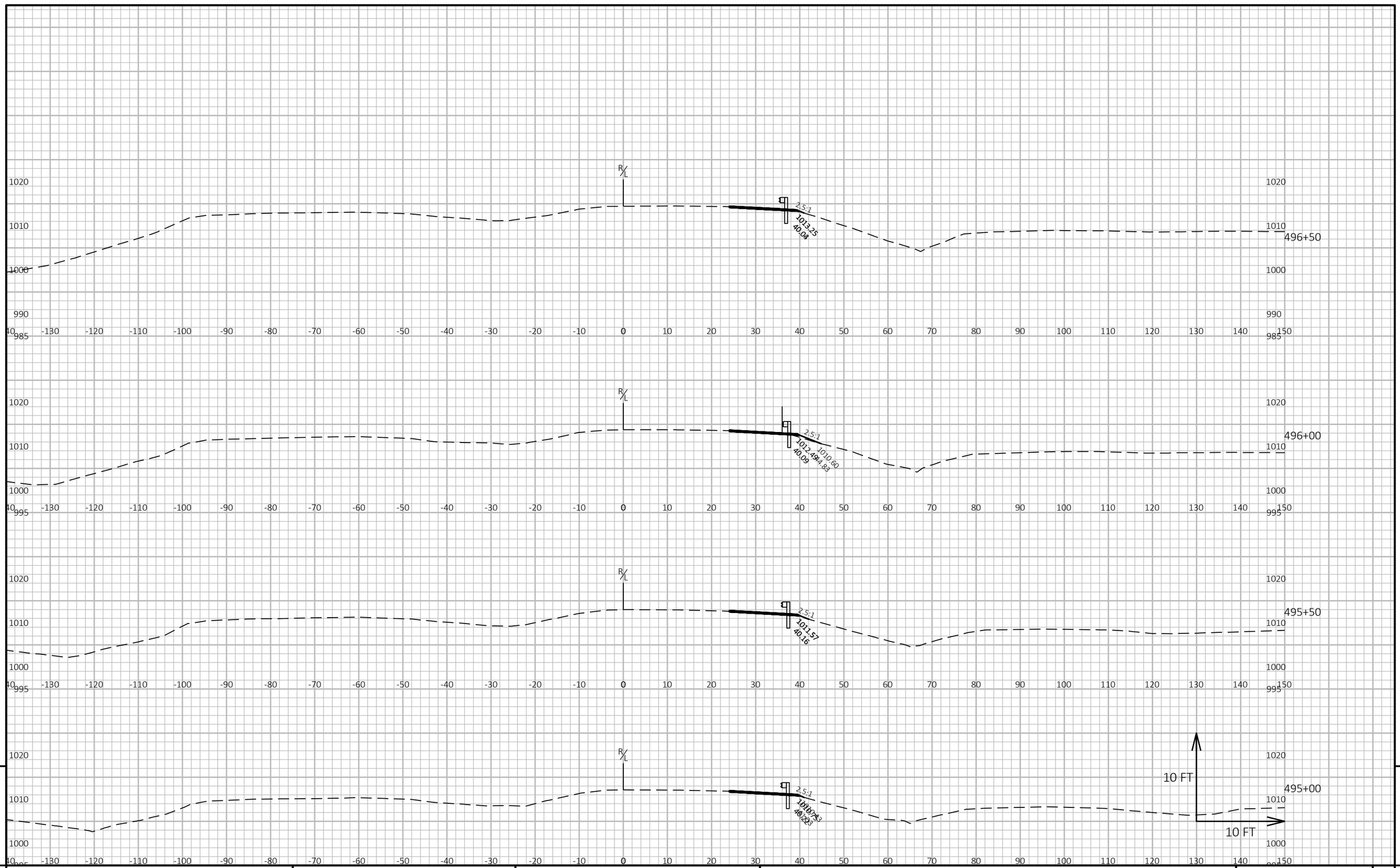


PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 490+50 - STA 503+00	SHEET 800	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 24

PLOT DATE : 7/6/2023 2:42 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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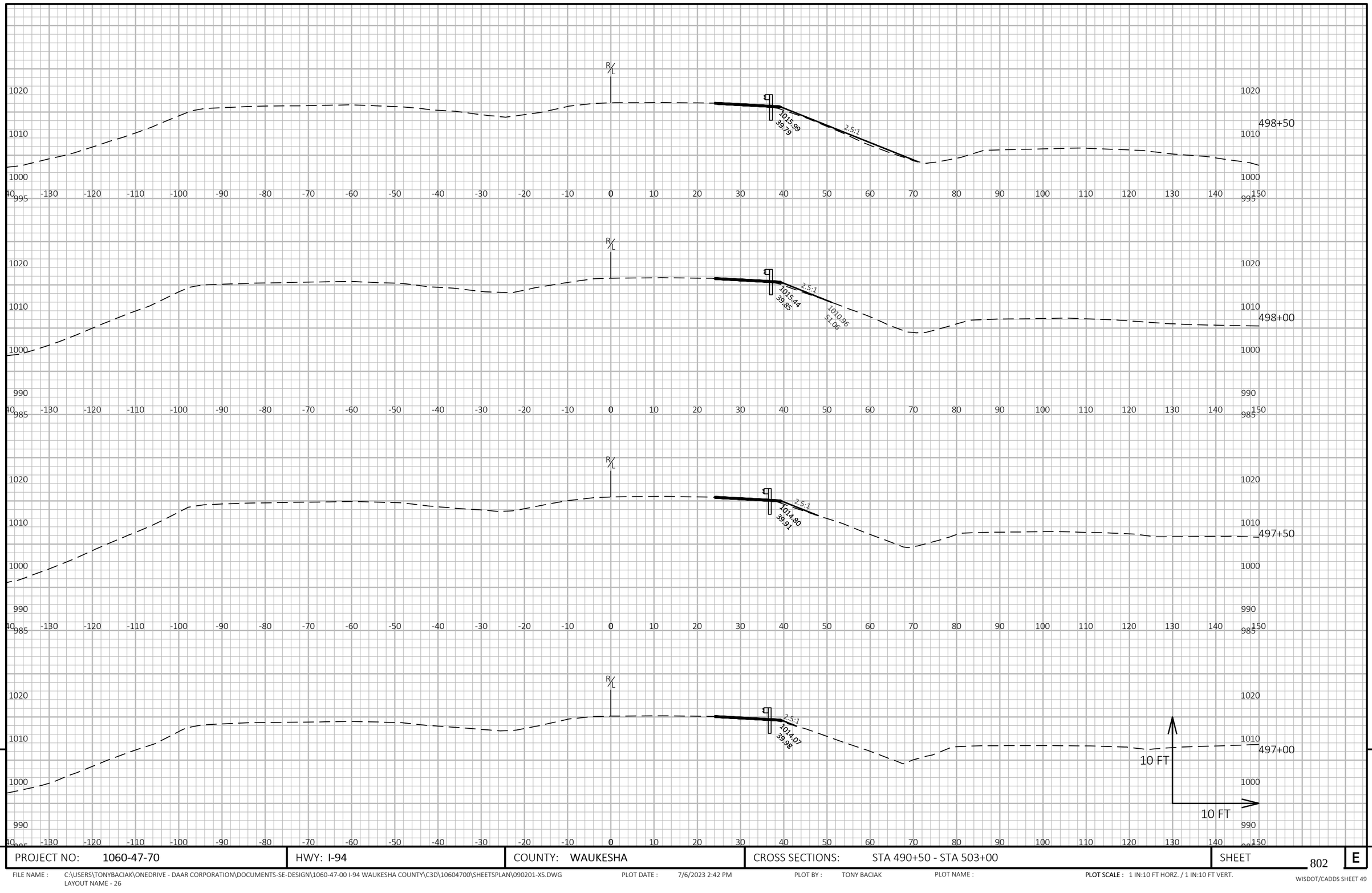
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 490+50 - STA 503+00	SHEET 801	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 25

PLOT DATE : 7/6/2023 2:42 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

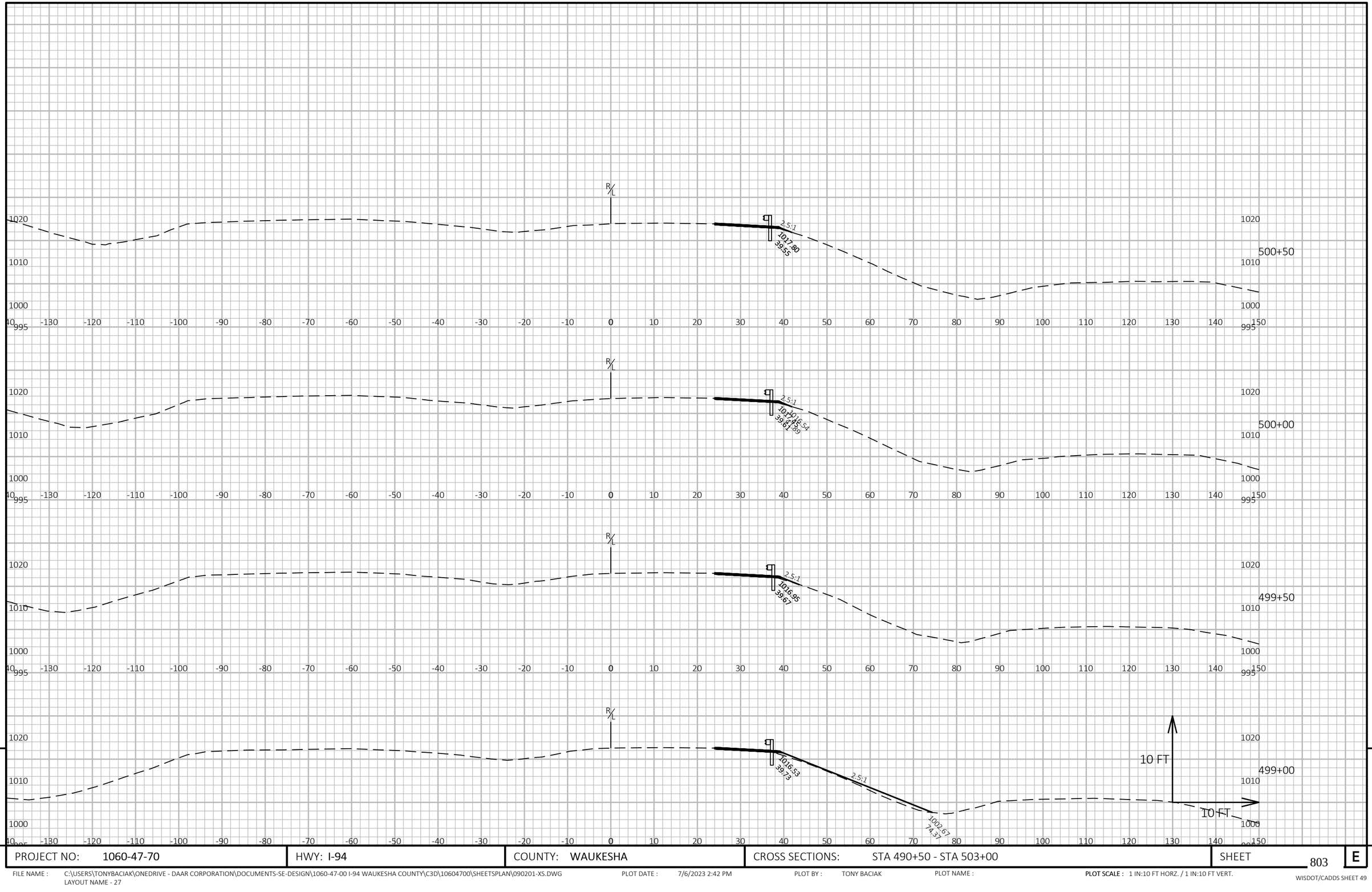
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 490+50 - STA 503+00	SHEET 802	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 26

PLOT DATE : 7/6/2023 2:42 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

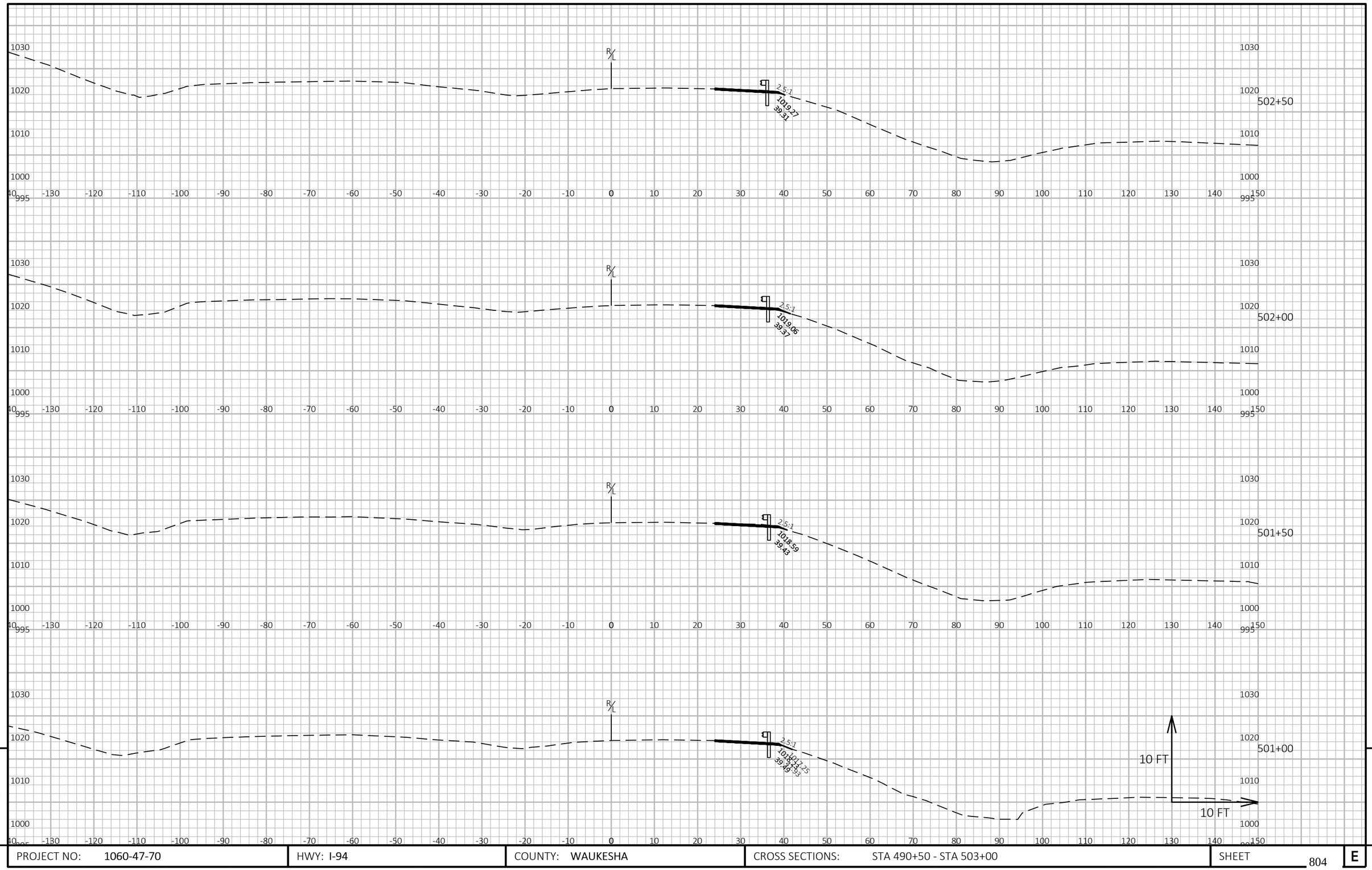
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 490+50 - STA 503+00	SHEET 803	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 27

PLOT DATE : 7/6/2023 2:42 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

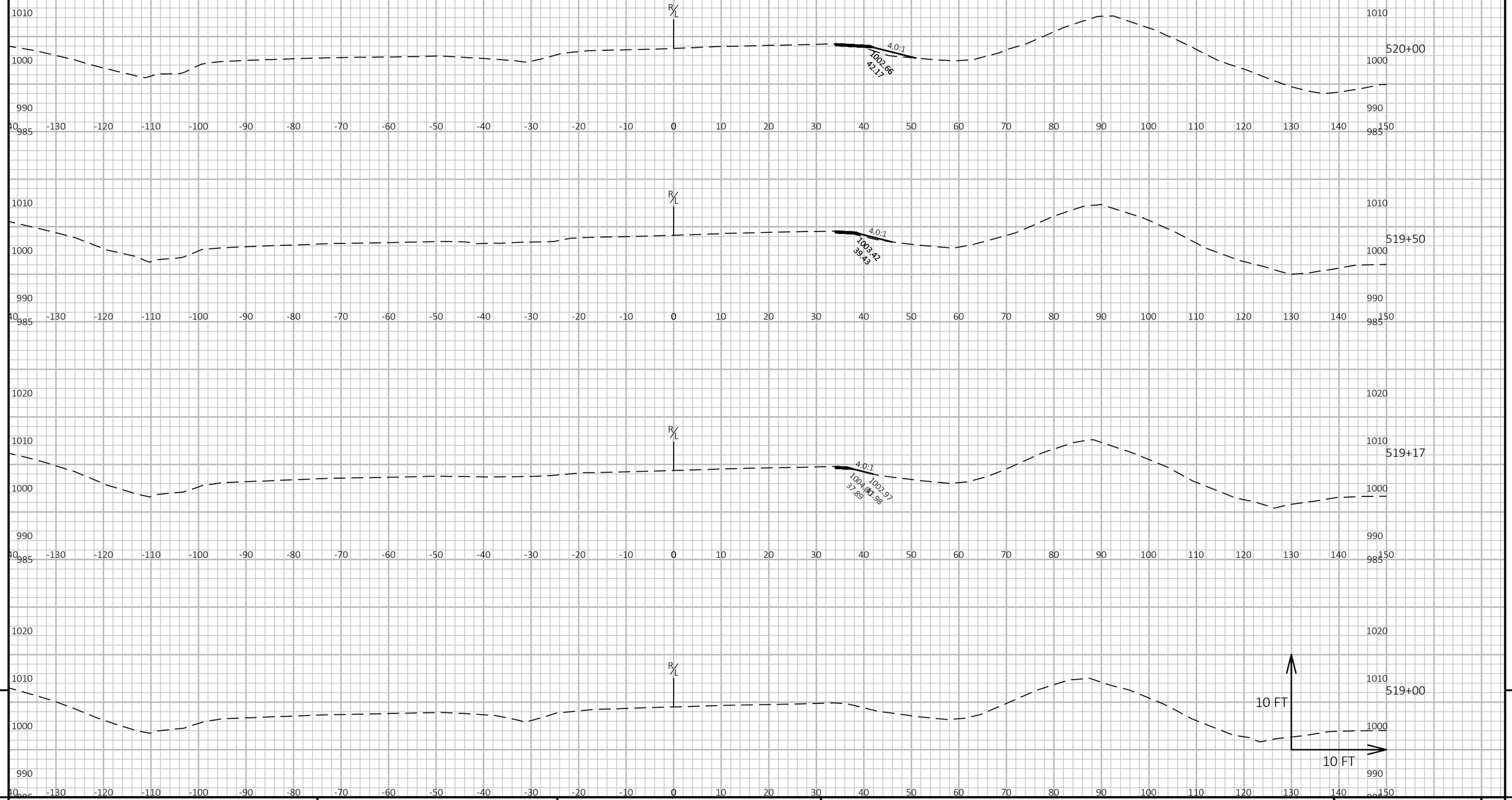
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 490+50 - STA 503+00	SHEET 804	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 28

PLOT DATE : 7/6/2023 2:42 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

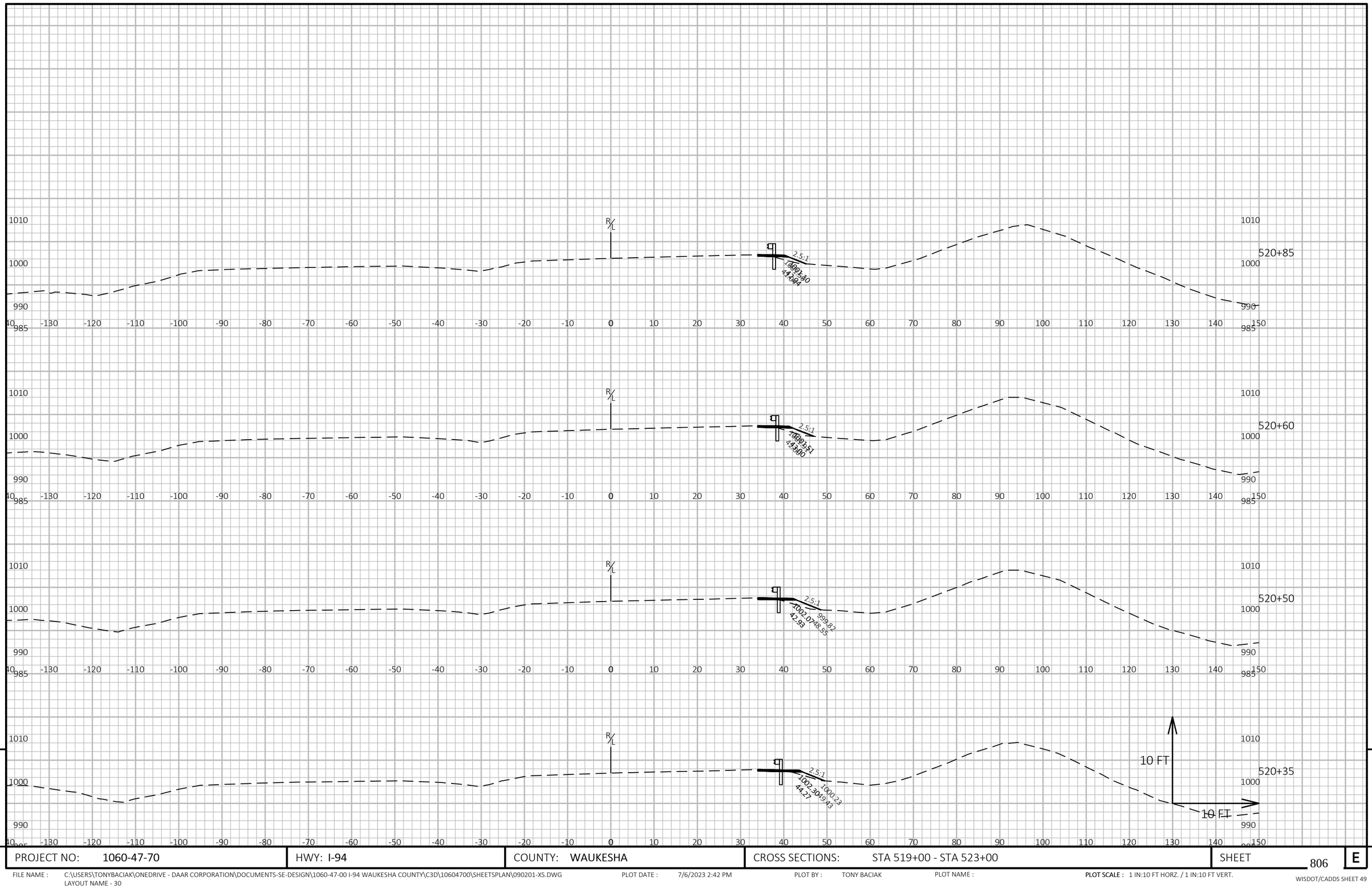
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 519+00 - STA 523+00	SHEET 805	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 29

PLOT DATE : 7/6/2023 2:42 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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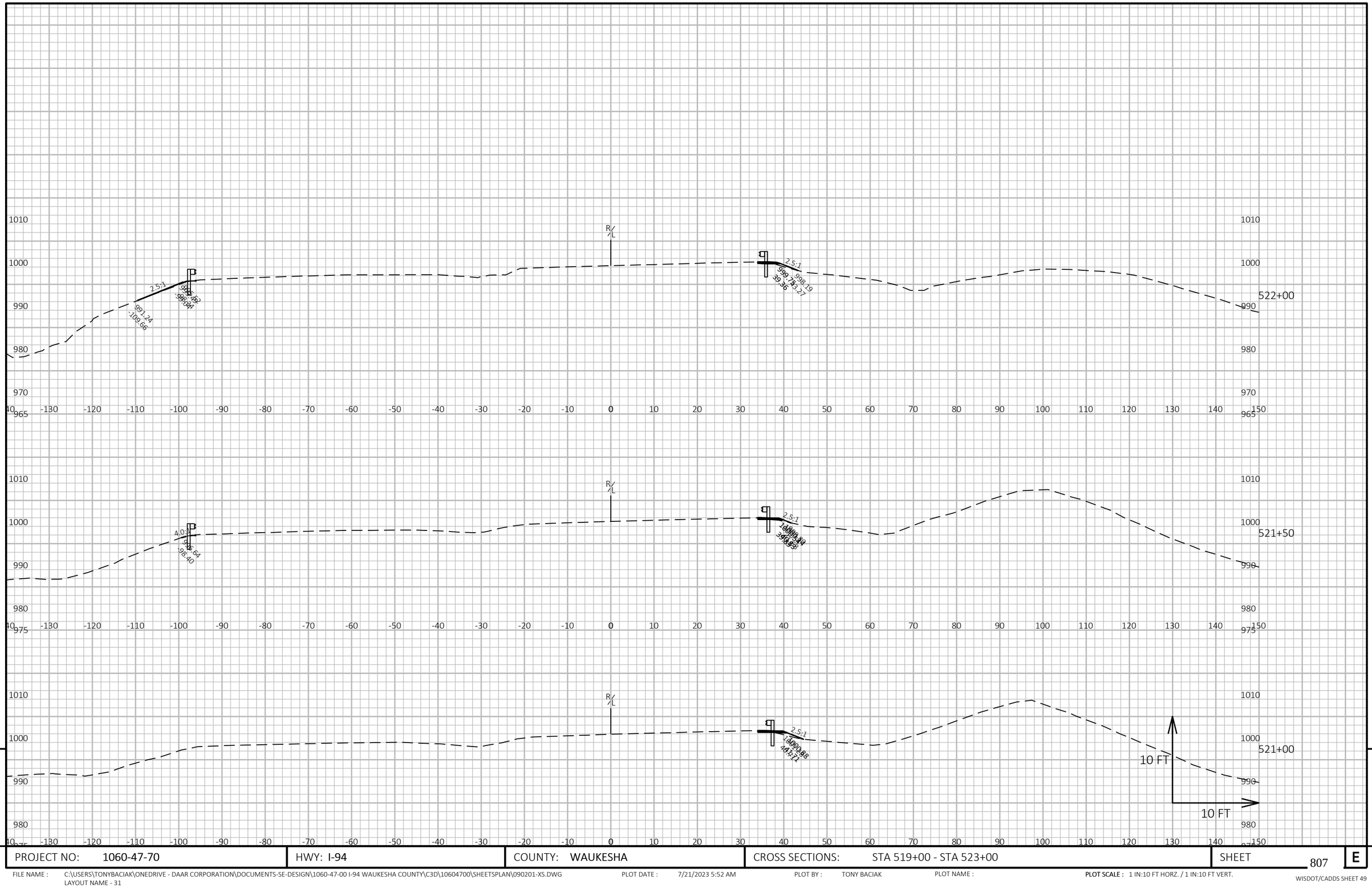
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 519+00 - STA 523+00	SHEET 806	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 30

PLOT DATE : 7/6/2023 2:42 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

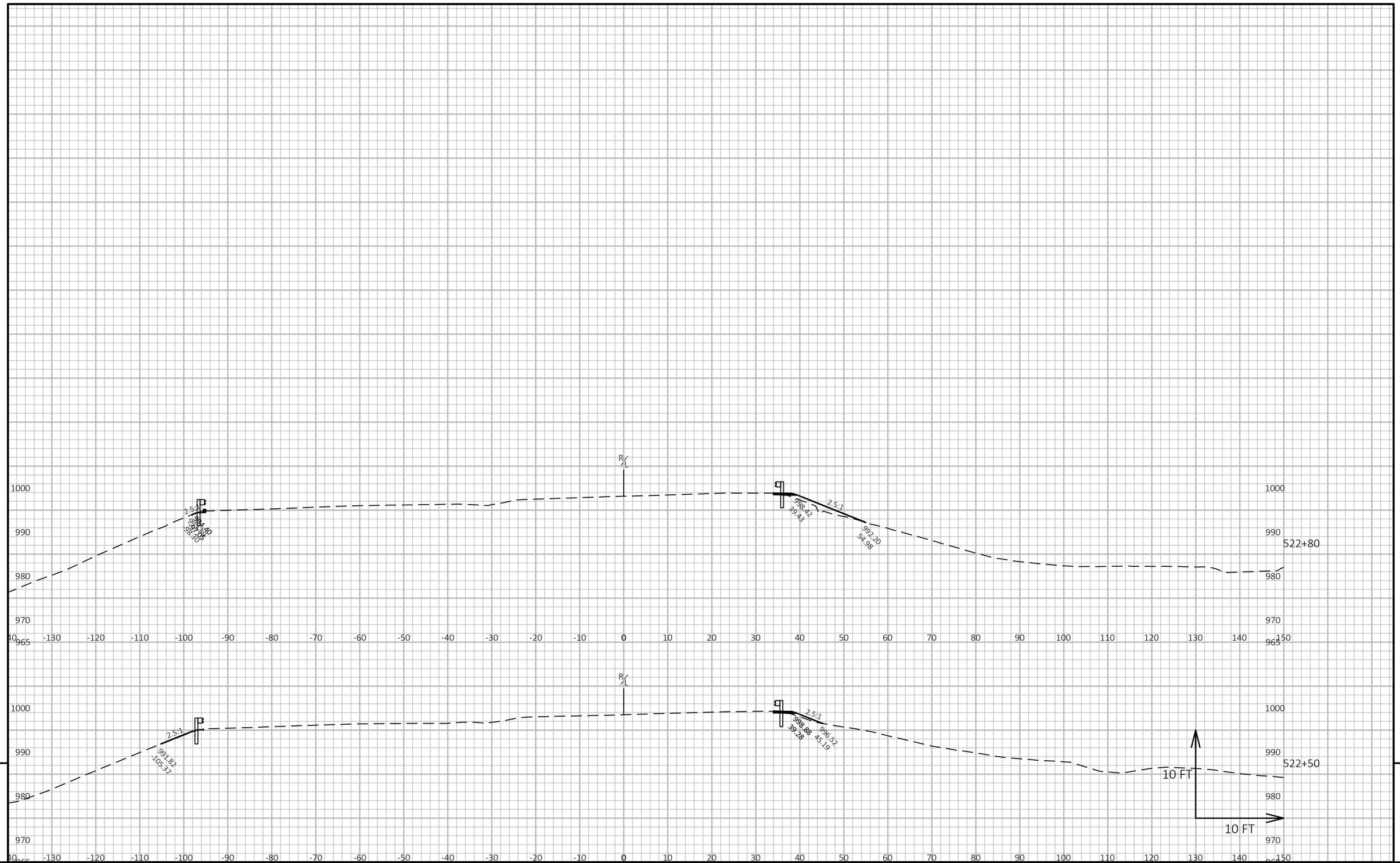


PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 519+00 - STA 523+00	SHEET 807	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 31

PLOT DATE : 7/21/2023 5:52 AM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

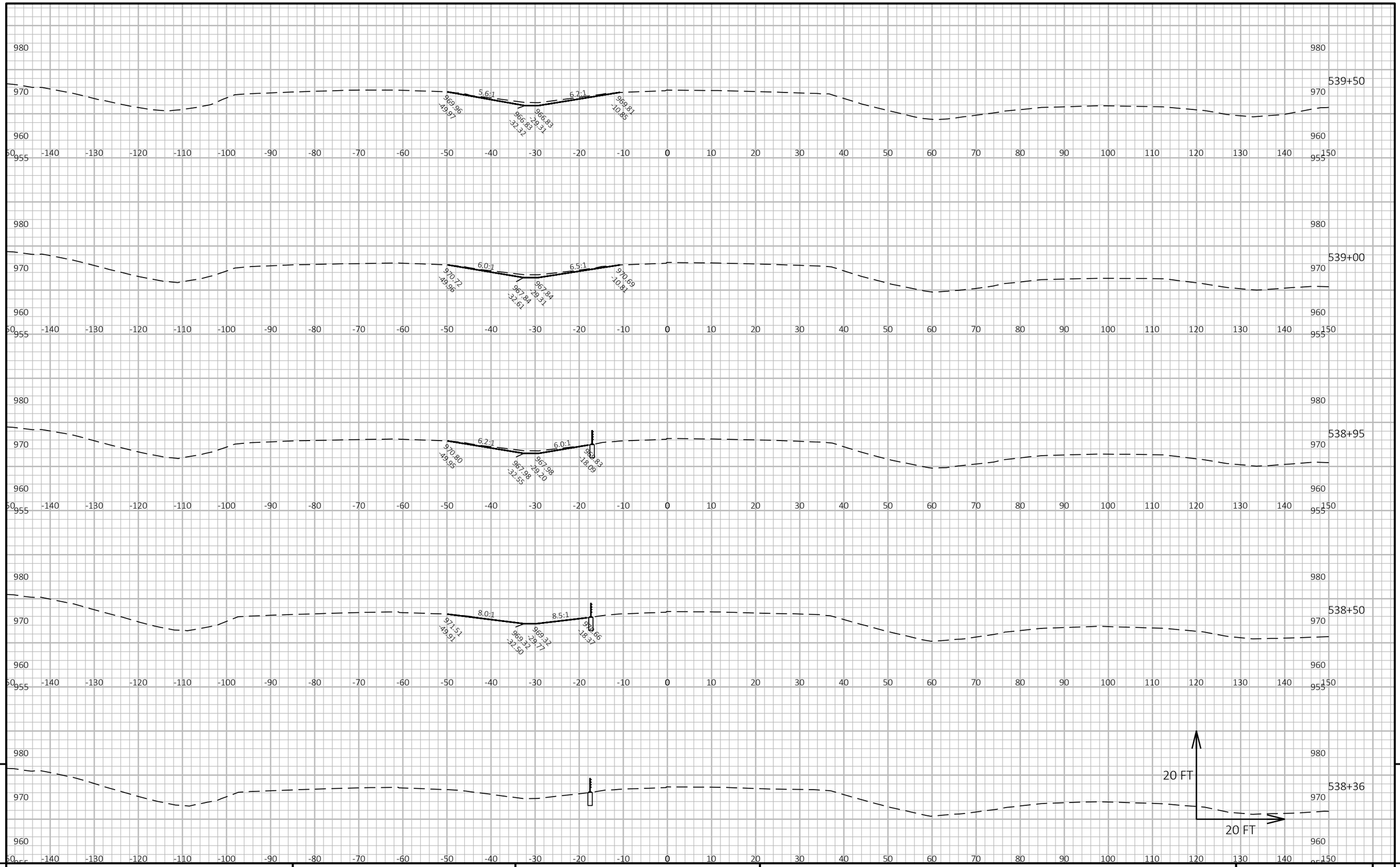
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 519+00 - STA 523+00	SHEET 808	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 32

PLOT DATE : 7/21/2023 5:52 AM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

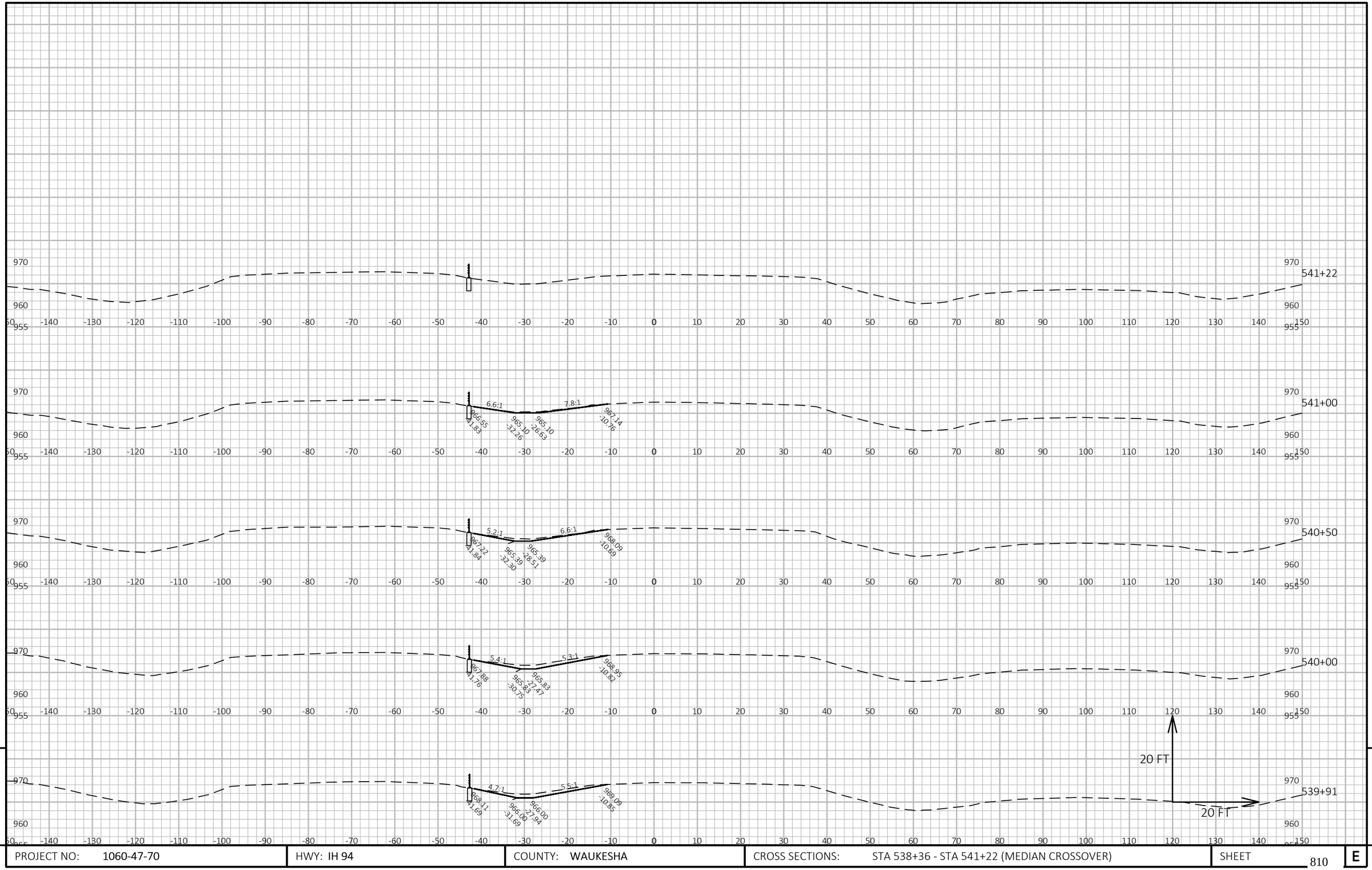


PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 538+36 - STA 541+22 (MEDIAN CROSSOVER)	SHEET 809	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs-01

PLOT DATE : 1/8/2024 4:37 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

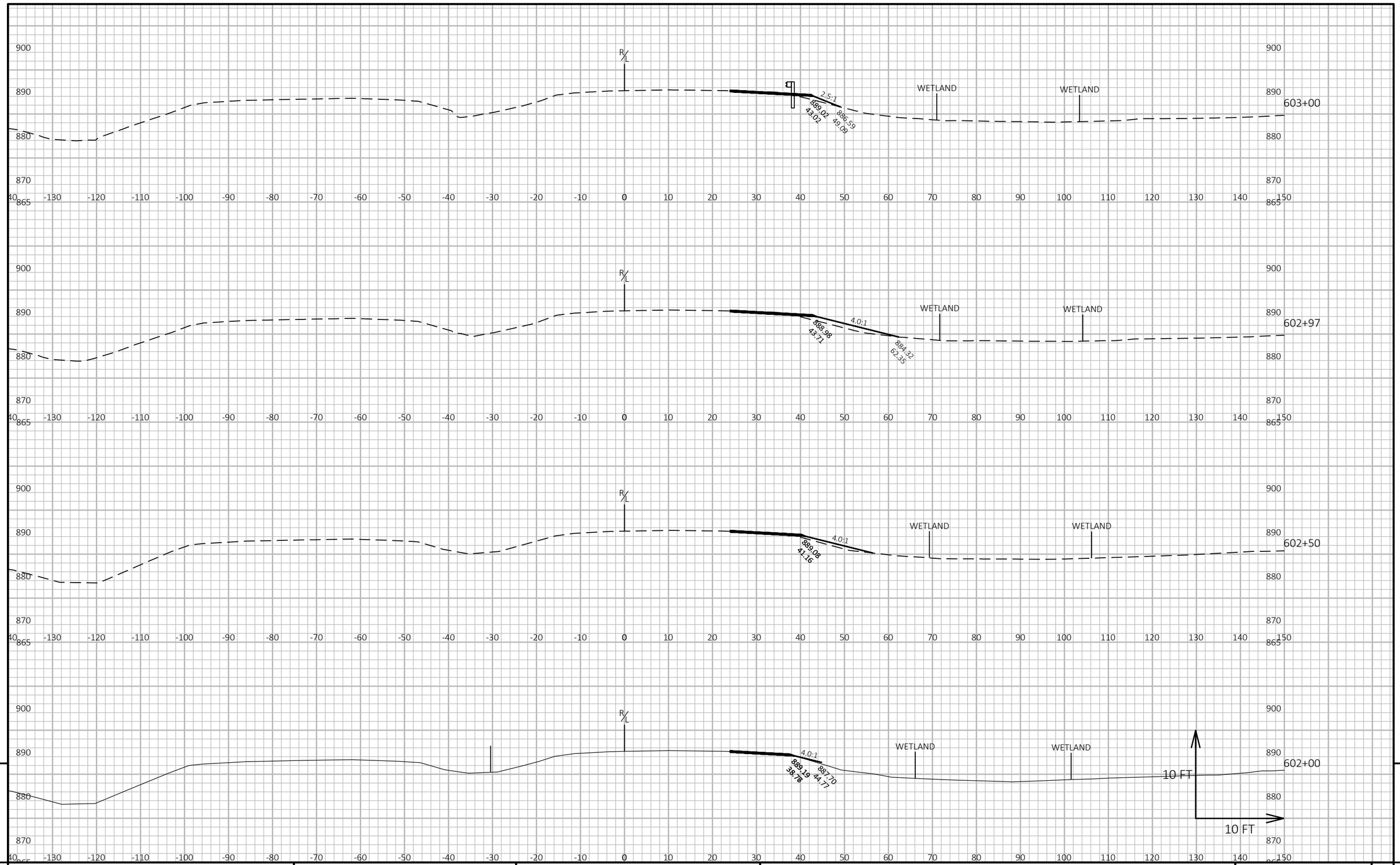


PROJECT NO: 1060-47-70	HWY: IH 94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 538+36 - STA 541+22 (MEDIAN CROSSOVER)	SHEET 810	E

FILE NAME : L:\DESIGN PROJECTS\1060-47-00 IH 94 WAUKESHA COUNTY\10. ROADWAY\CADD\SHEETSPLAN\090202_XS.DWG
LAYOUT NAME - 090202_xs-02

PLOT DATE : 1/8/2024 4:37 PM PLOT BY : JOE MAAS PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 602+00 - STA 607+00	SHEET 811	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 33

PLOT DATE : 7/6/2023 2:43 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

9

9

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 602+00 - STA 607+00	SHEET 812	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 34

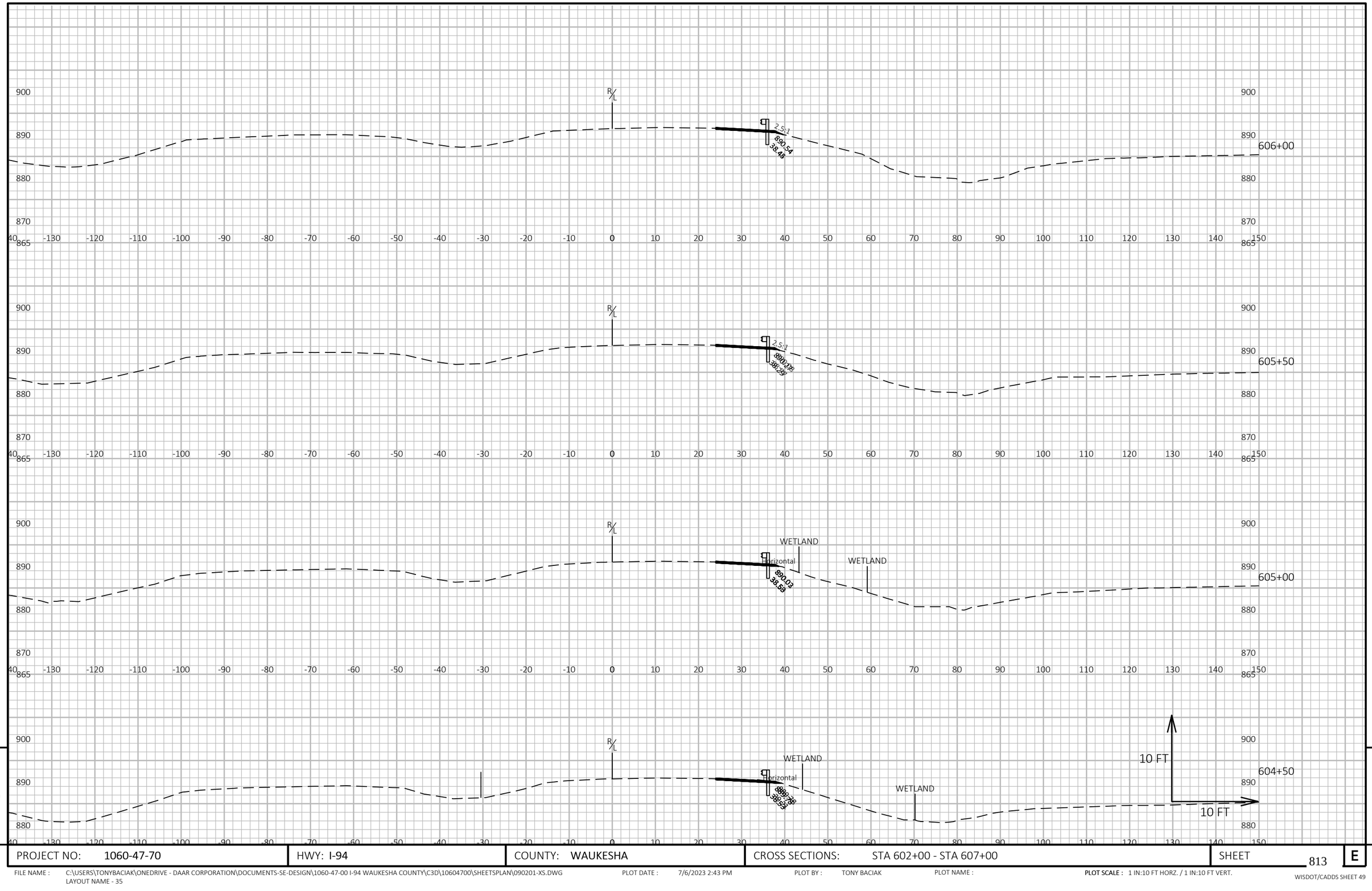
PLOT DATE : 7/6/2023 2:43 PM

PLOT BY : TONY BACIAK

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

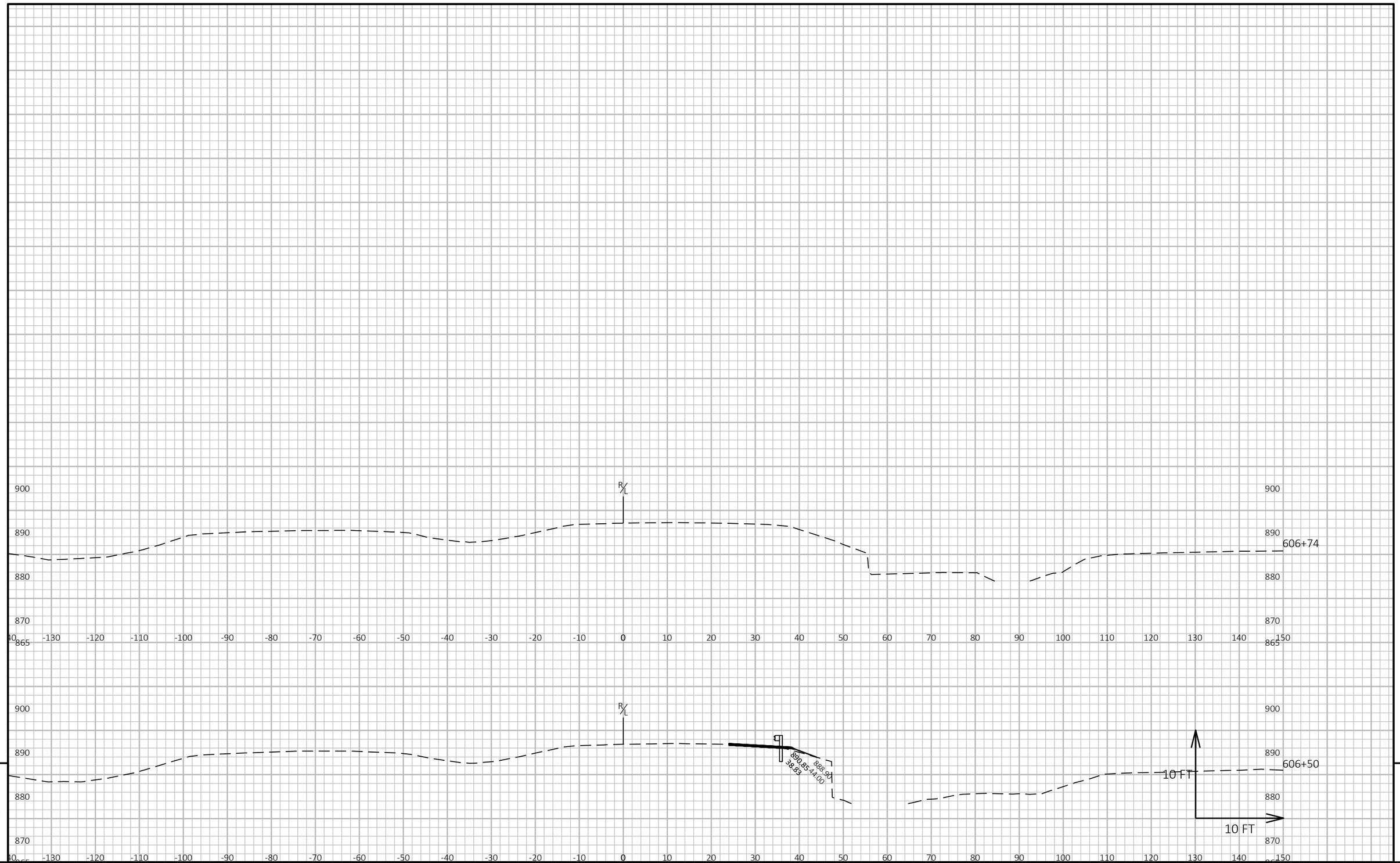


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9

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 602+00 - STA 607+00	SHEET 813	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 35
PLOT DATE : 7/6/2023 2:43 PM
PLOT BY : TONY BACIAK
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49



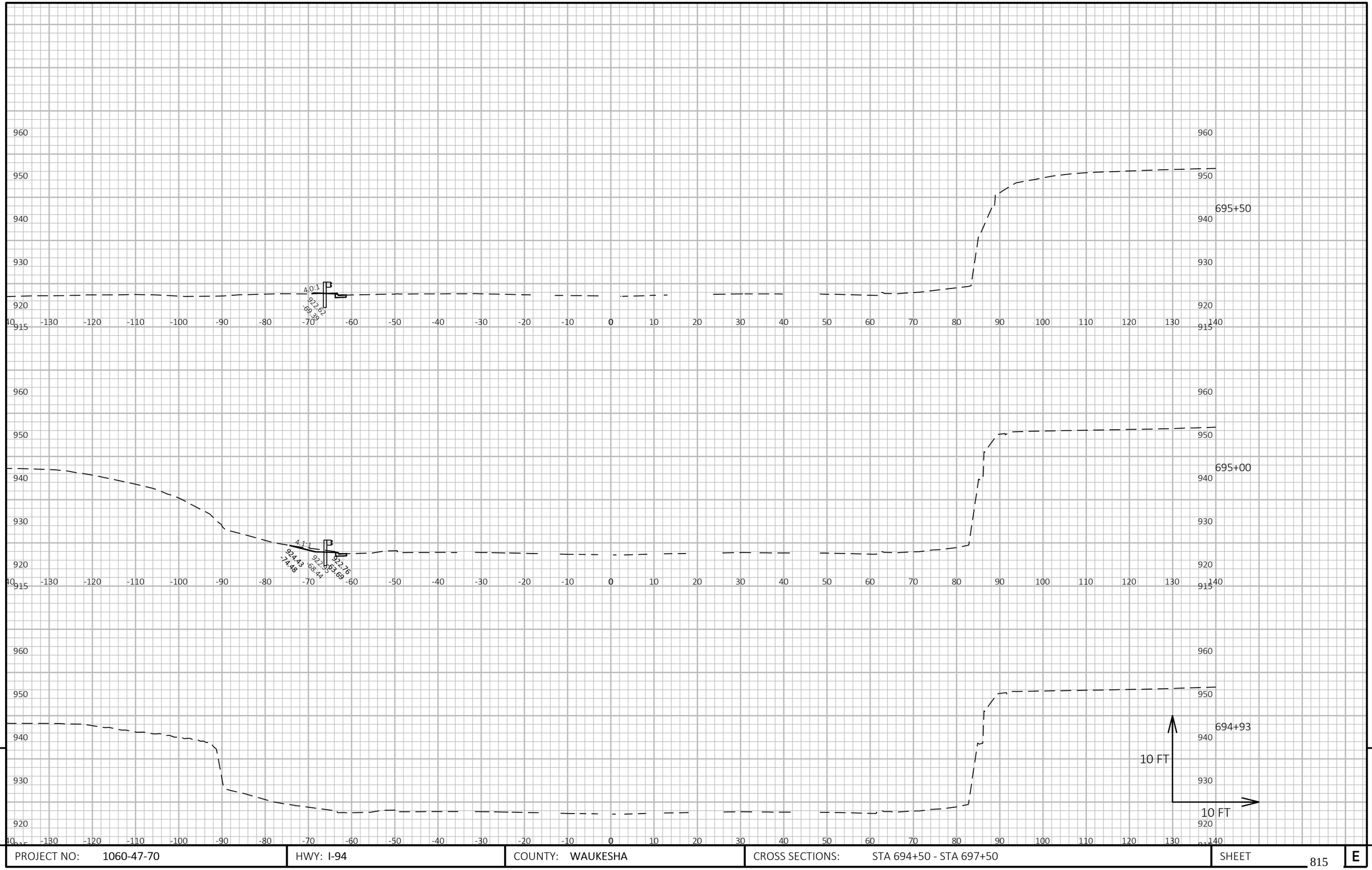
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 602+00 - STA 607+00	SHEET 814	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 36

PLOT DATE : 7/6/2023 2:43 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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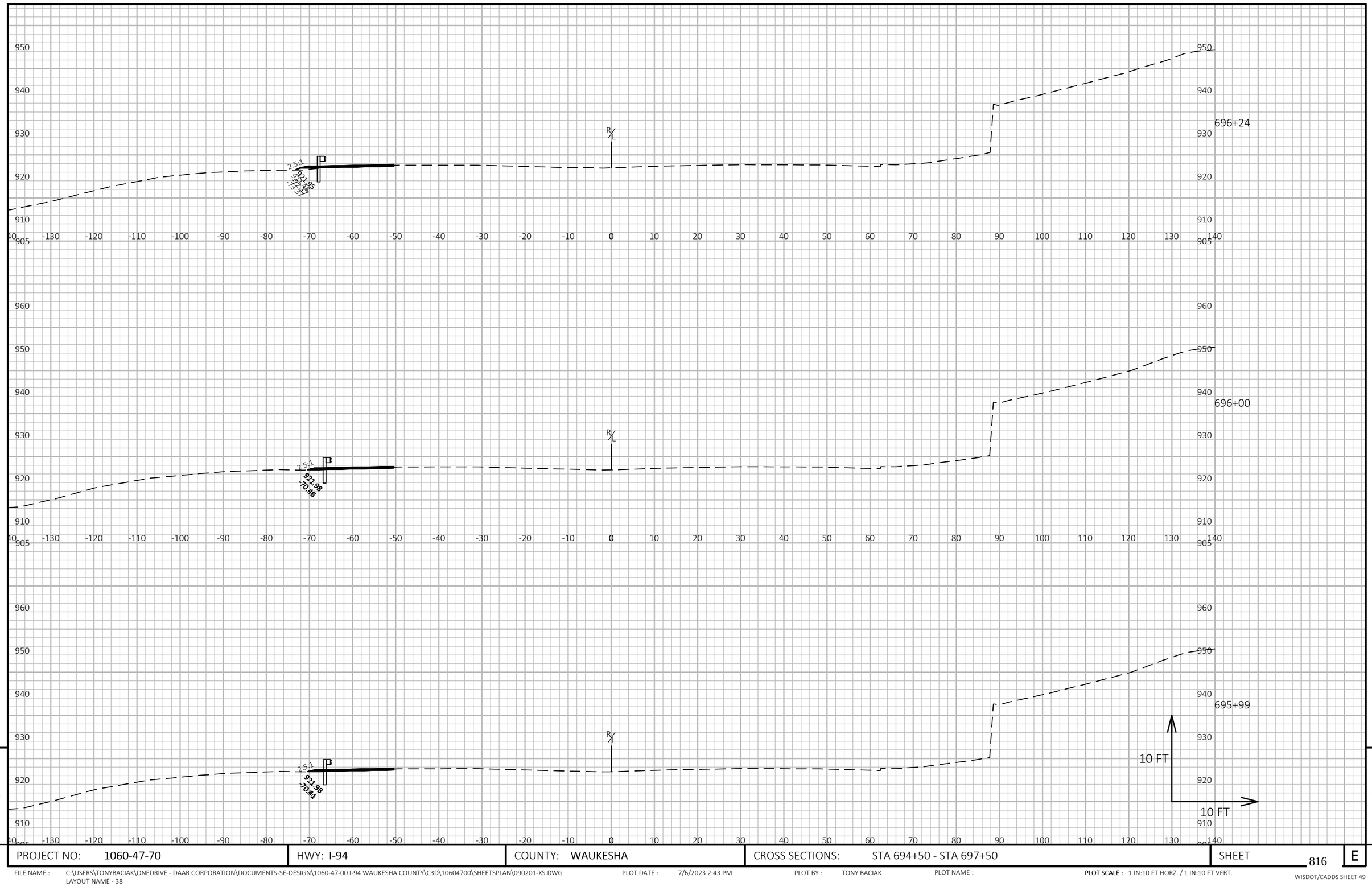
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 694+50 - STA 697+50	SHEET 815	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 37

PLOT DATE : 7/6/2023 2:43 PM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

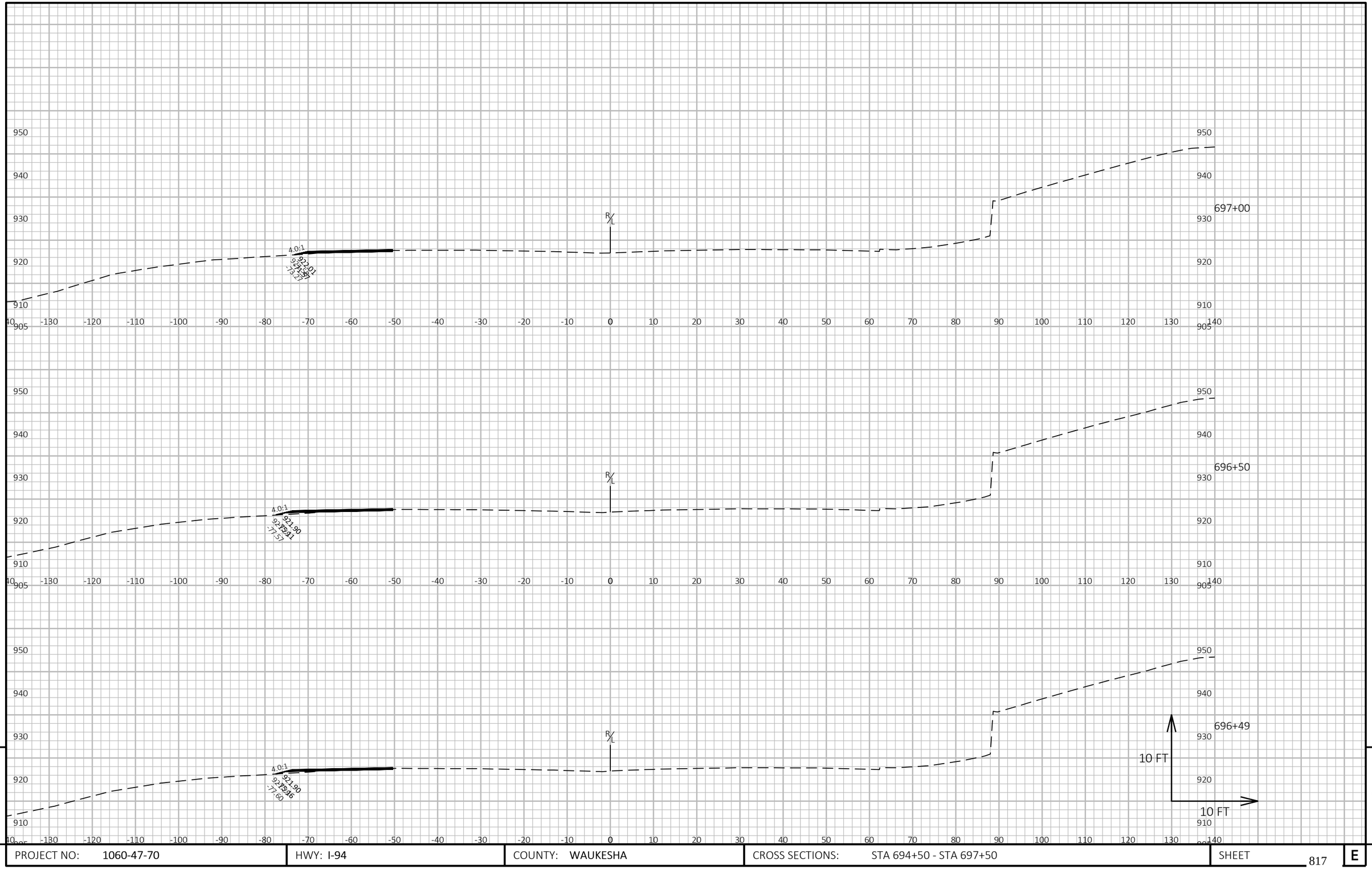


PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 694+50 - STA 697+50	SHEET 816	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 38

PLOT DATE : 7/6/2023 2:43 PM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

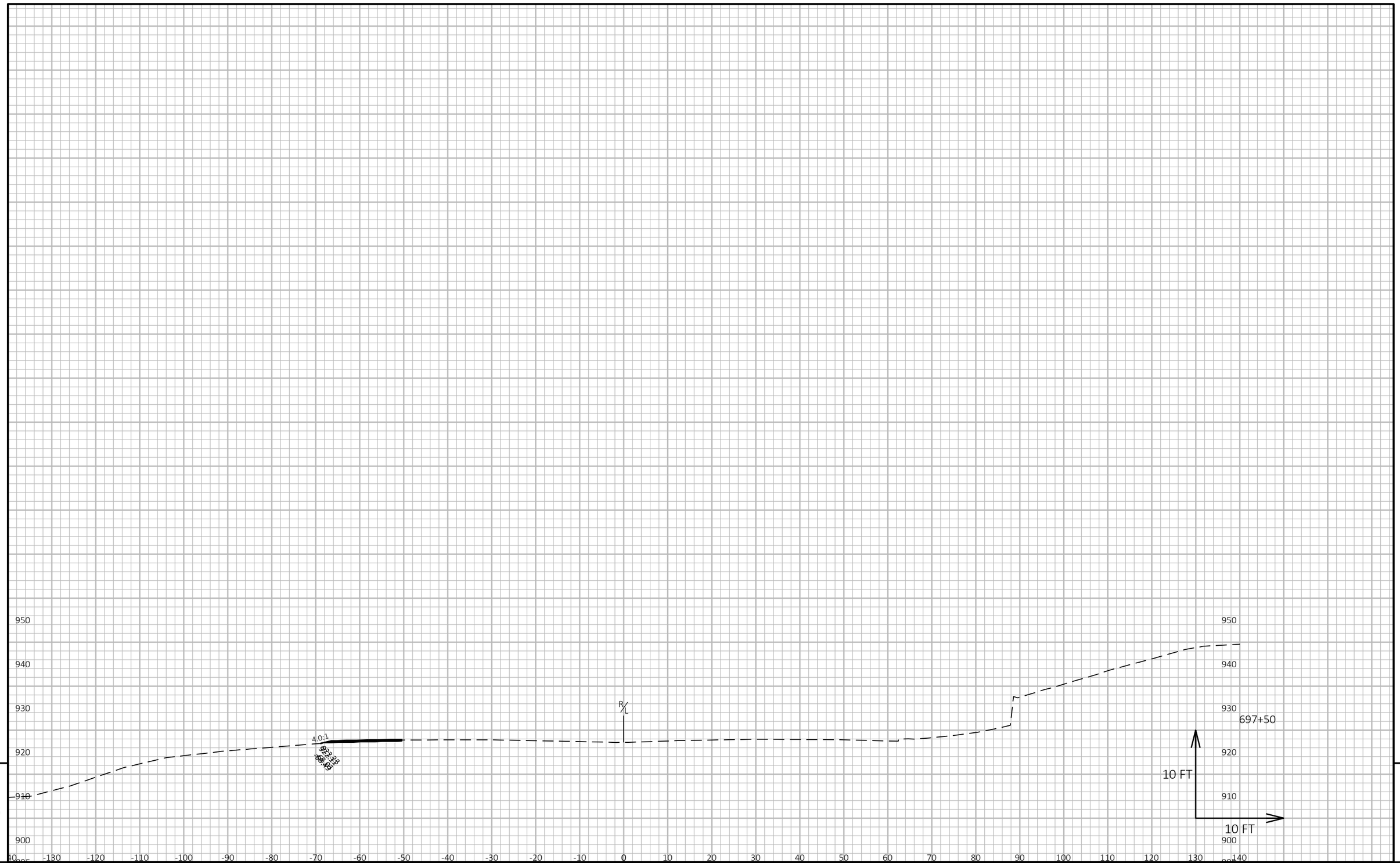
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 694+50 - STA 697+50	SHEET 817	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 39

PLOT DATE : 7/6/2023 2:43 PM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

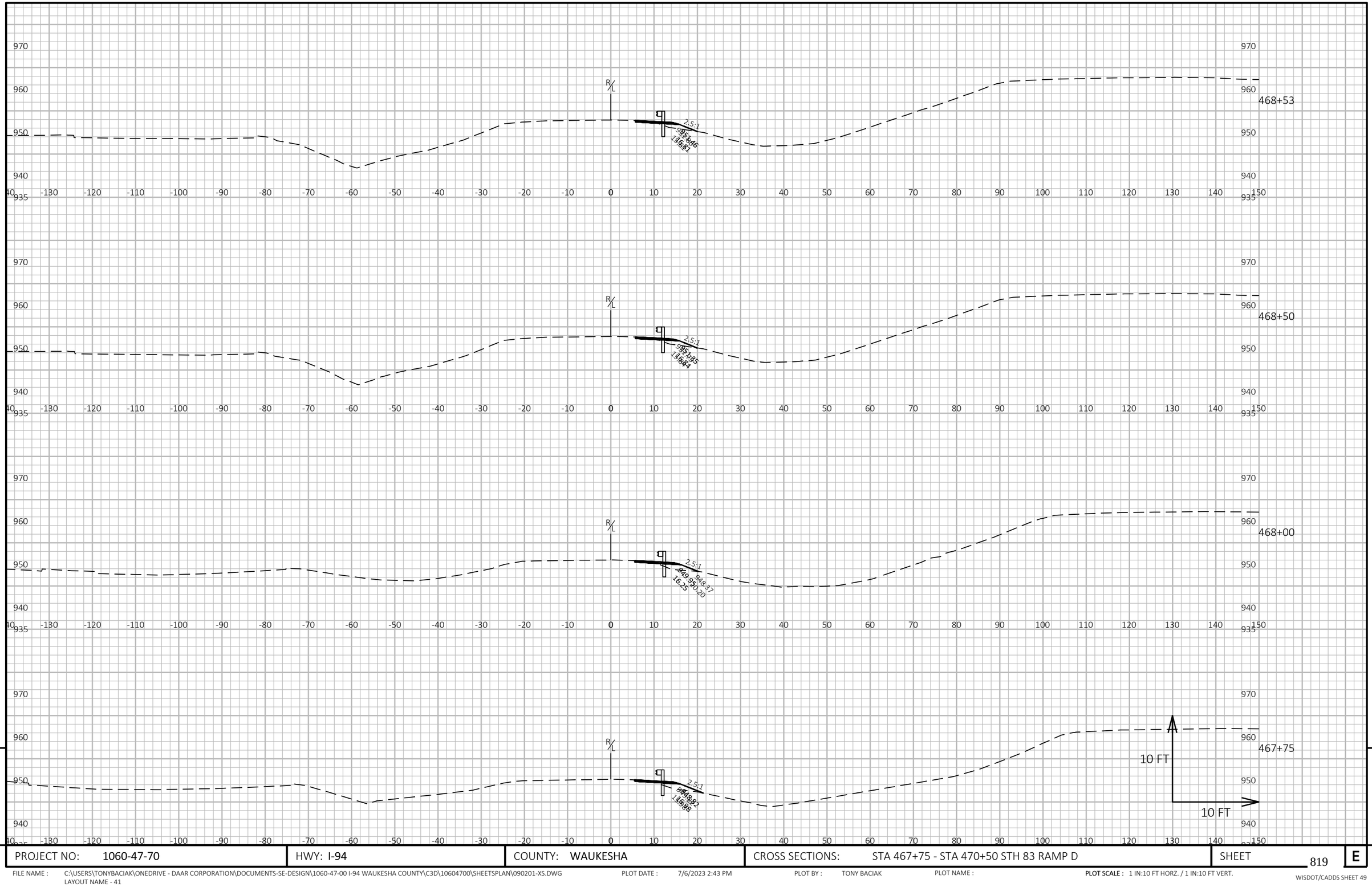
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 694+50 - STA 697+50	SHEET 818	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 40

PLOT DATE : 7/6/2023 2:43 PM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

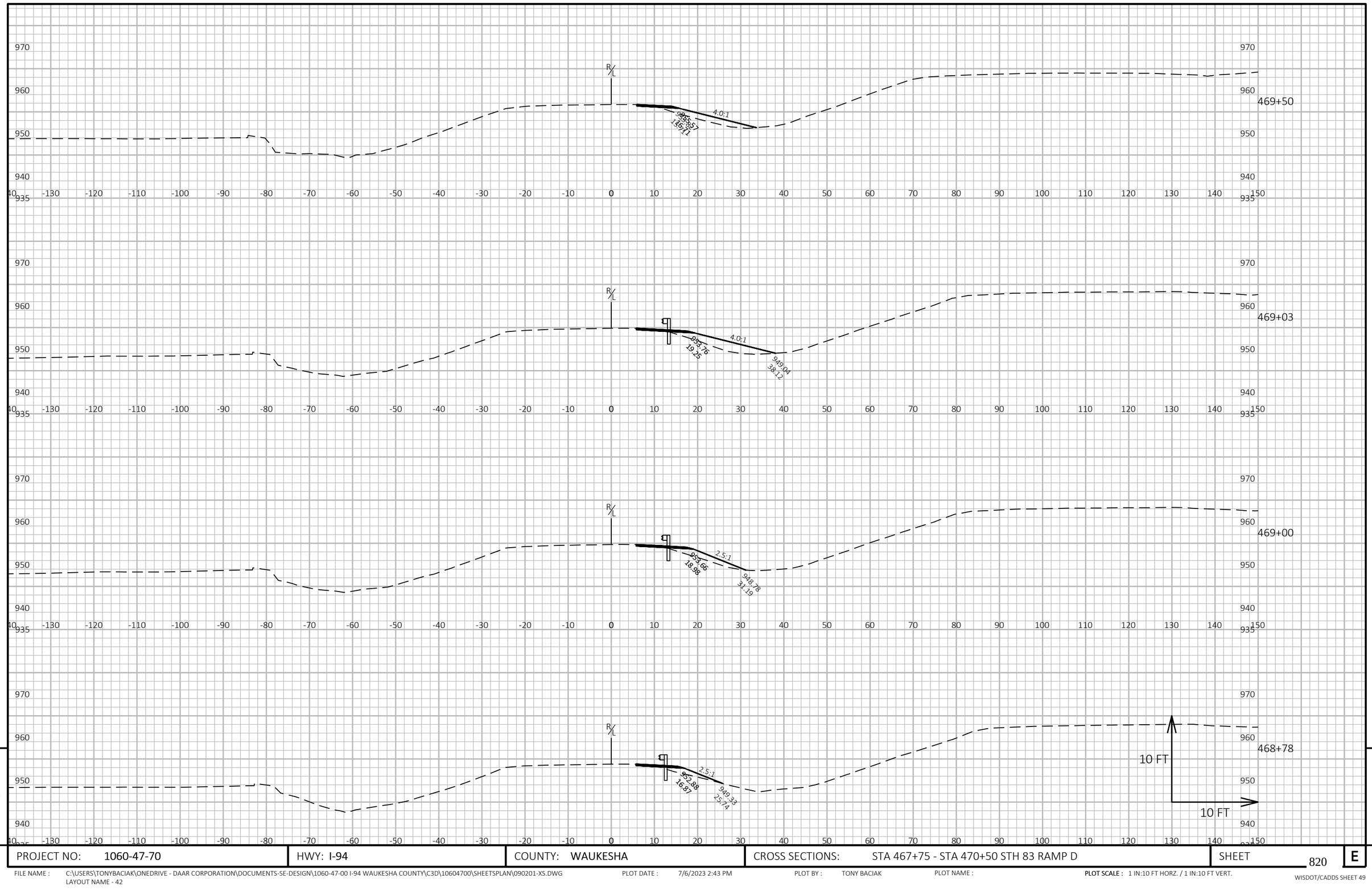
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 467+75 - STA 470+50 STH 83 RAMP D	SHEET 819	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 41

PLOT DATE : 7/6/2023 2:43 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

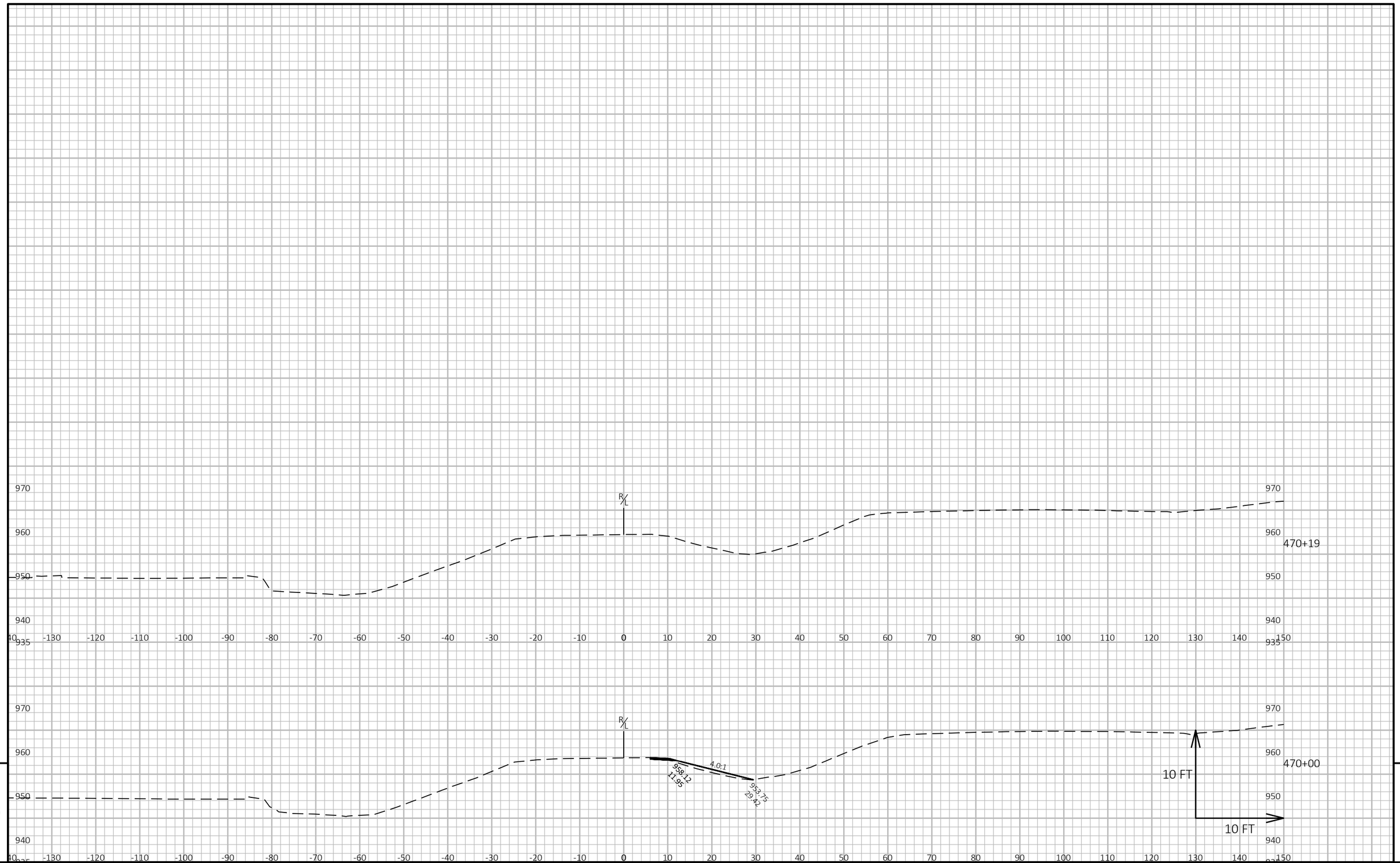
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 467+75 - STA 470+50 STH 83 RAMP D	SHEET 820	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 42

PLOT DATE : 7/6/2023 2:43 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

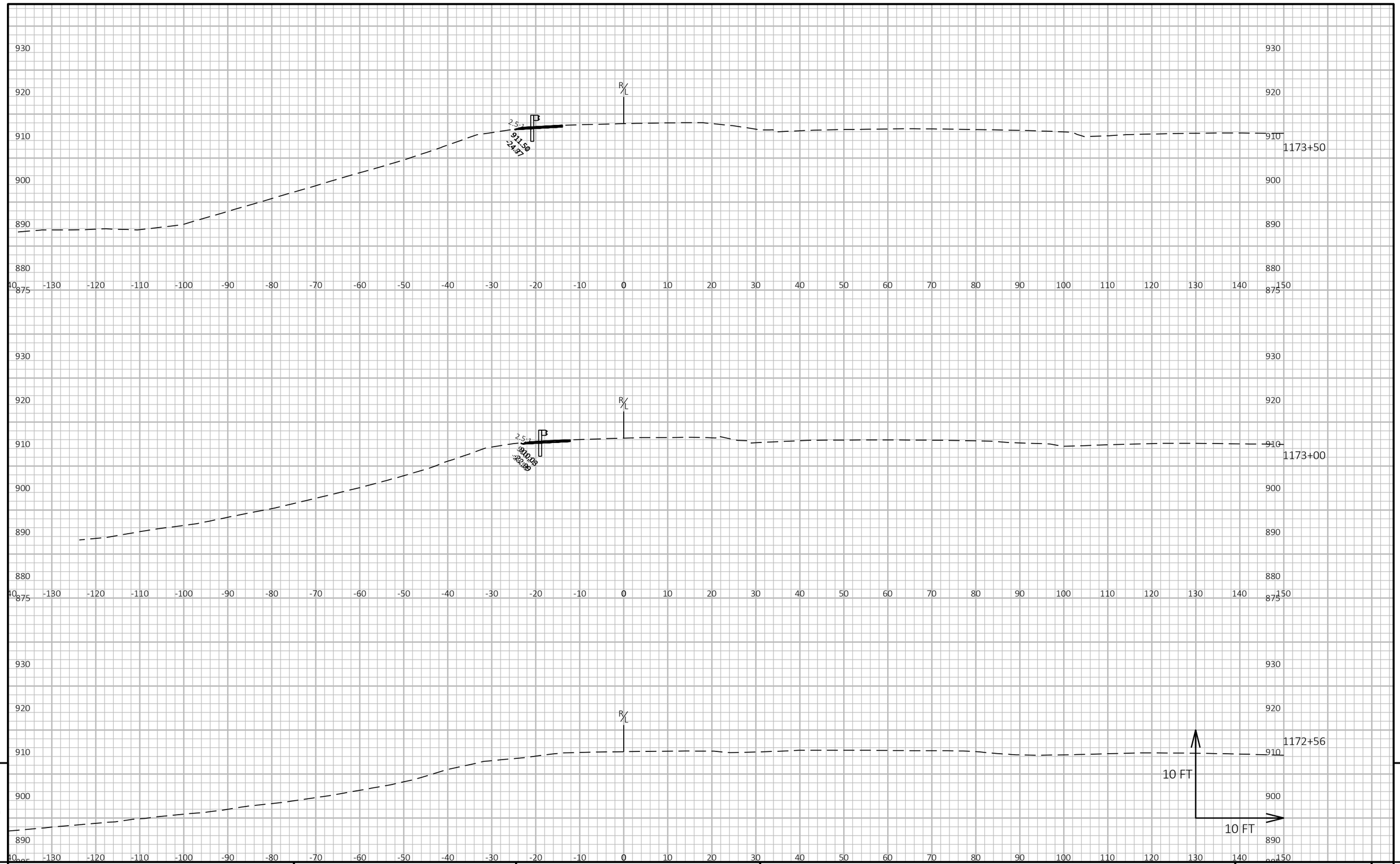
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 467+75 - STA 470+50 STH 83 RAMP D	SHEET 821	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 43

PLOT DATE : 7/6/2023 2:44 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

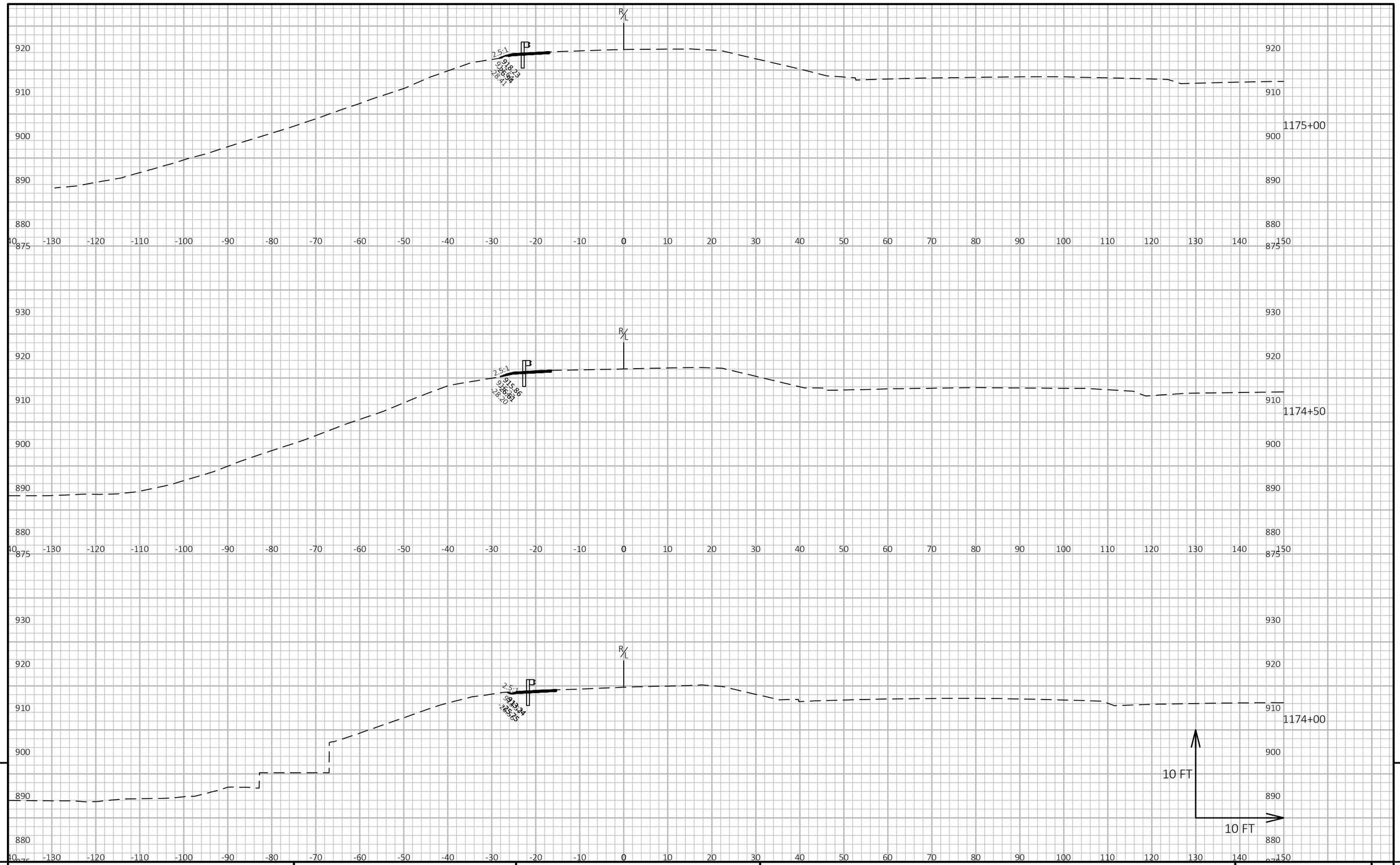
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 1172+50 - STA 1178+50 ON RAMP CTH SS	SHEET 822	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 44

PLOT DATE : 7/6/2023 2:44 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

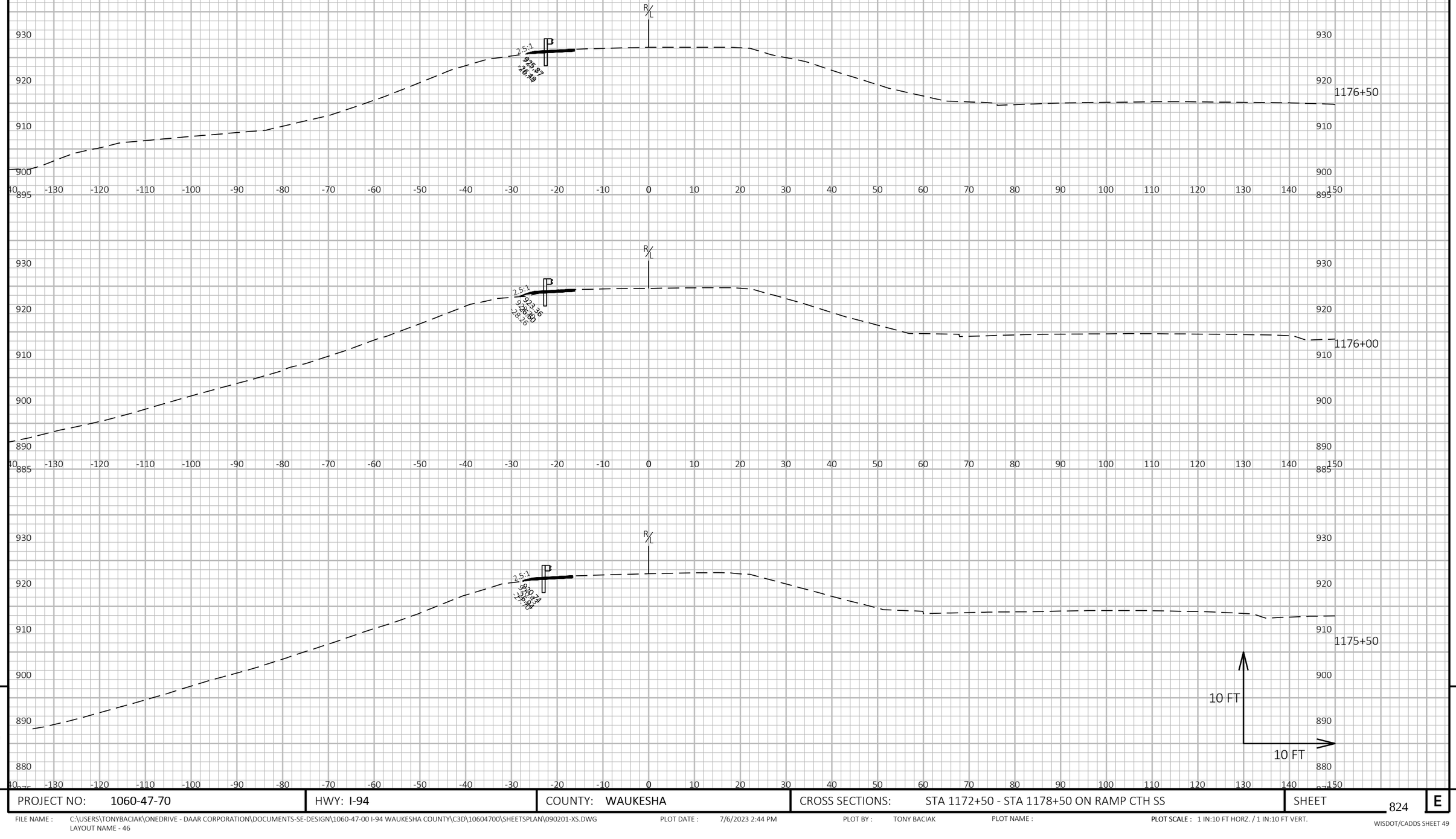
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 1172+50 - STA 1178+50 ON RAMP CTH SS	SHEET 823	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 45

PLOT DATE : 7/6/2023 2:44 PM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

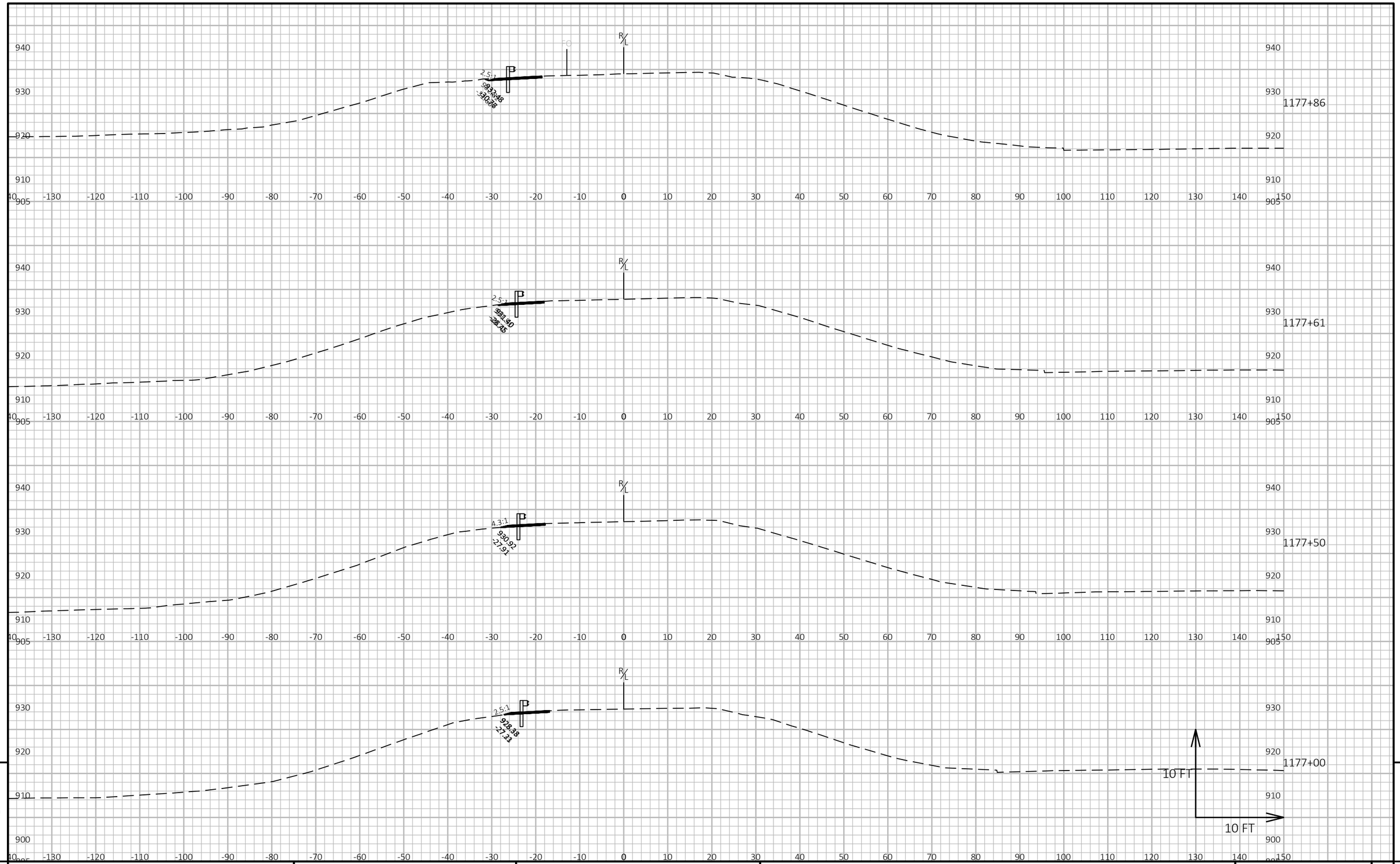


PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 1172+50 - STA 1178+50 ON RAMP CTH SS	SHEET 824 E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 46

PLOT DATE : 7/6/2023 2:44 PM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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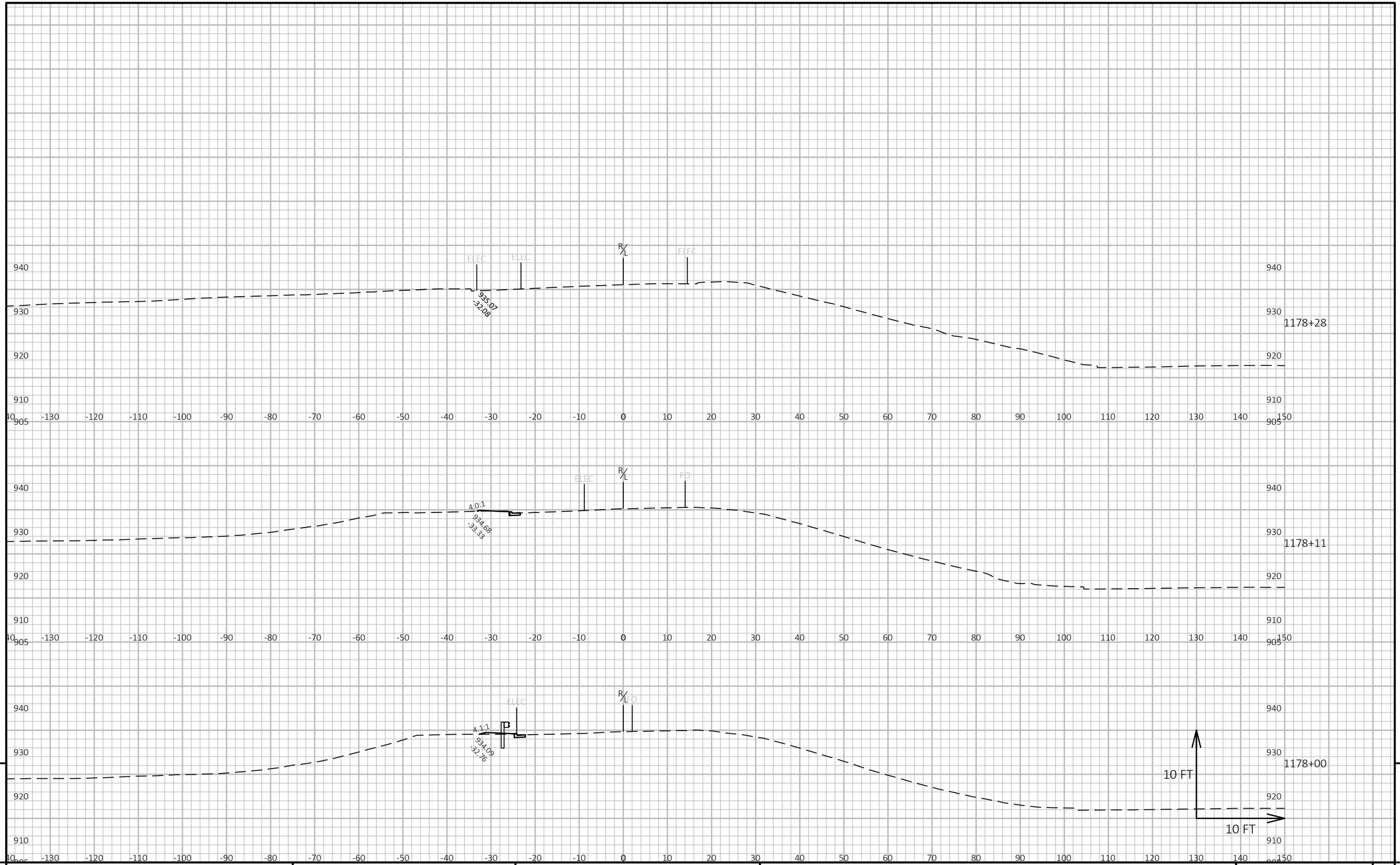
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 1172+50 - STA 1178+50 ON RAMP CTH SS	SHEET 825	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 47

PLOT DATE : 7/6/2023 2:44 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 1172+50 - STA 1178+50 ON RAMP CTH SS	SHEET 826	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 48

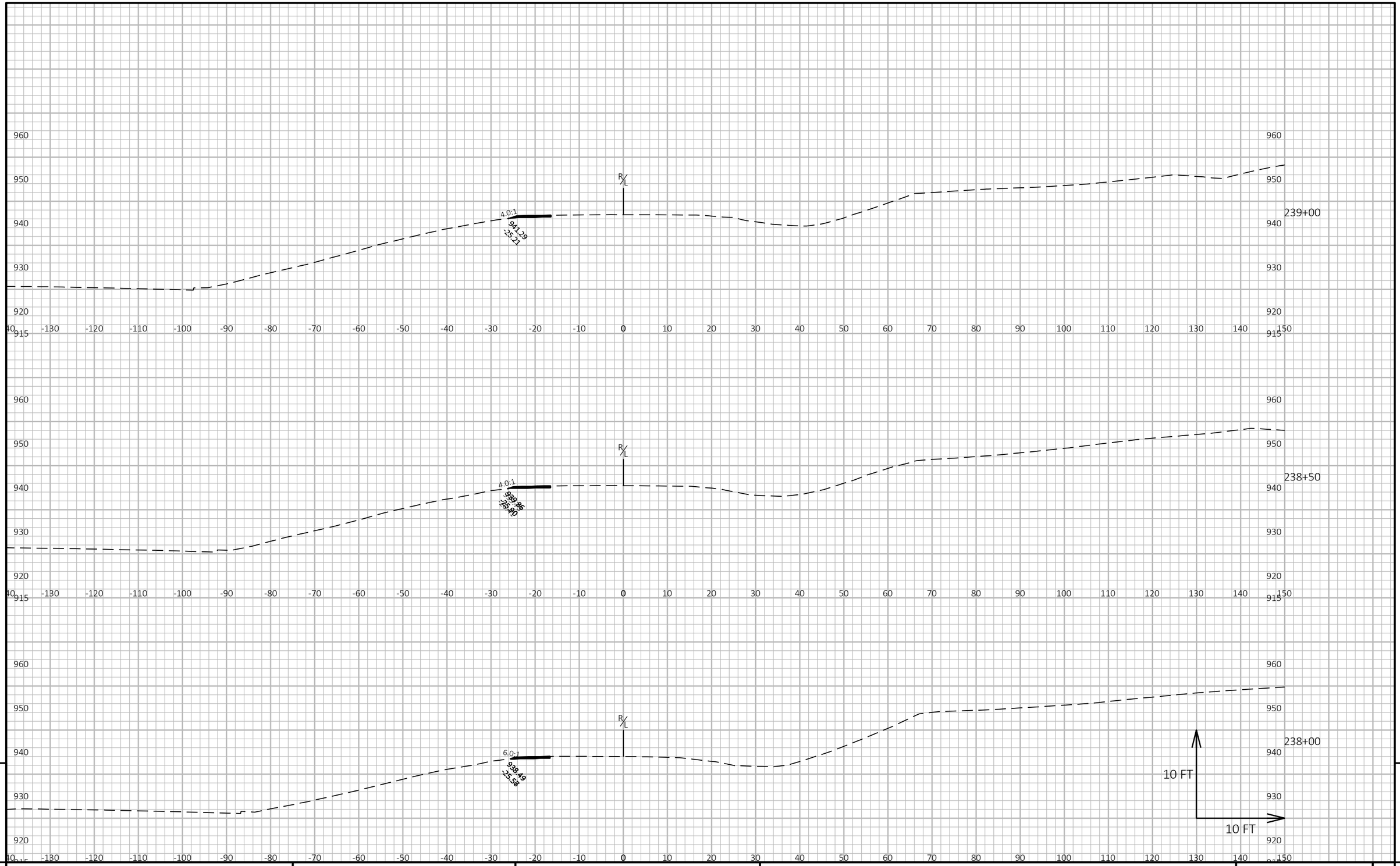
PLOT DATE : 7/6/2023 2:44 PM

PLOT BY : TONY BACIAK

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

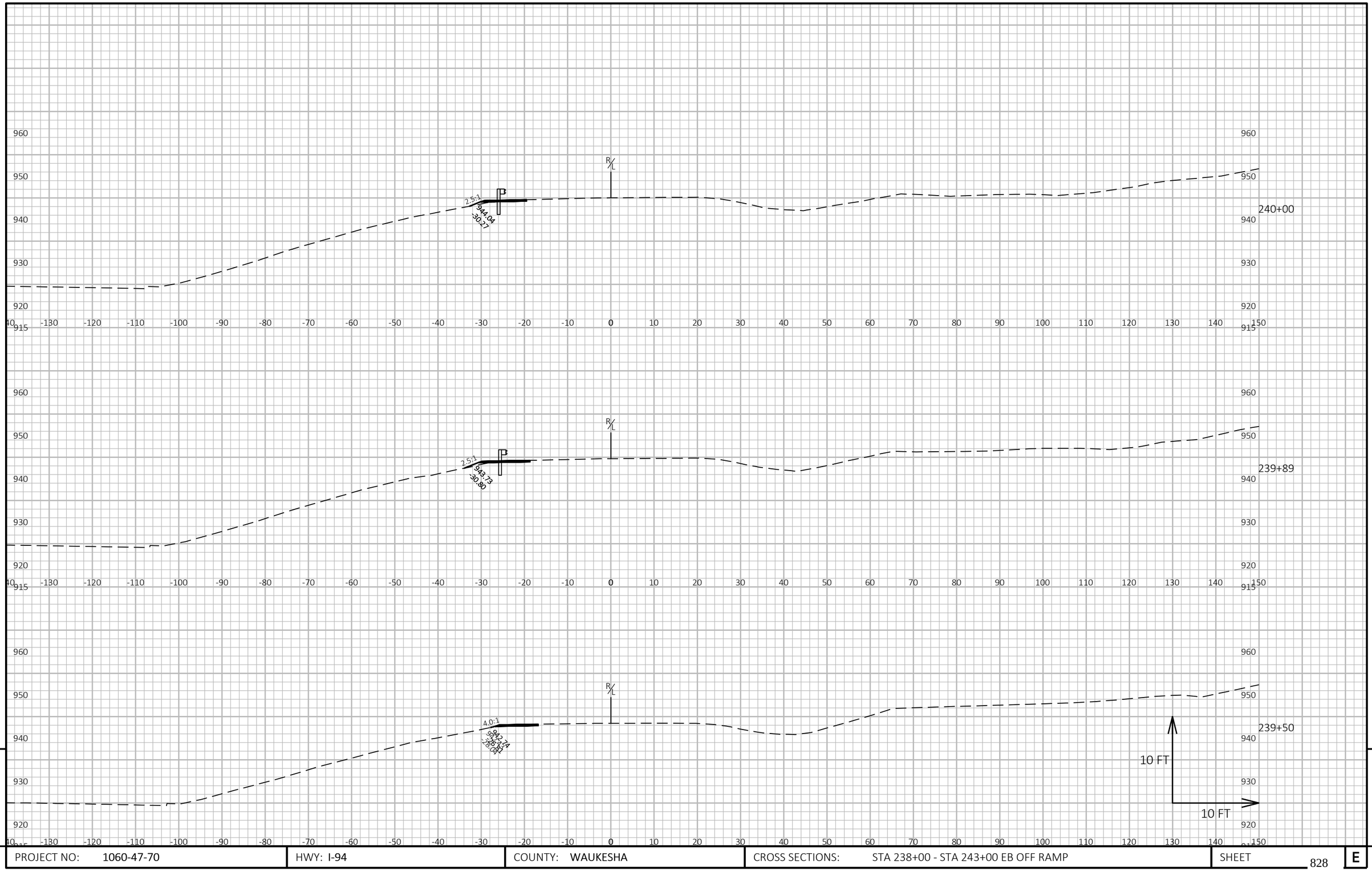
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 238+00 - STA 243+00 EB OFF RAMP	SHEET 827	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 49

PLOT DATE : 7/6/2023 2:44 PM PLOT BY : TONY BACIAK PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 238+00 - STA 243+00 EB OFF RAMP	SHEET 828 E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 50

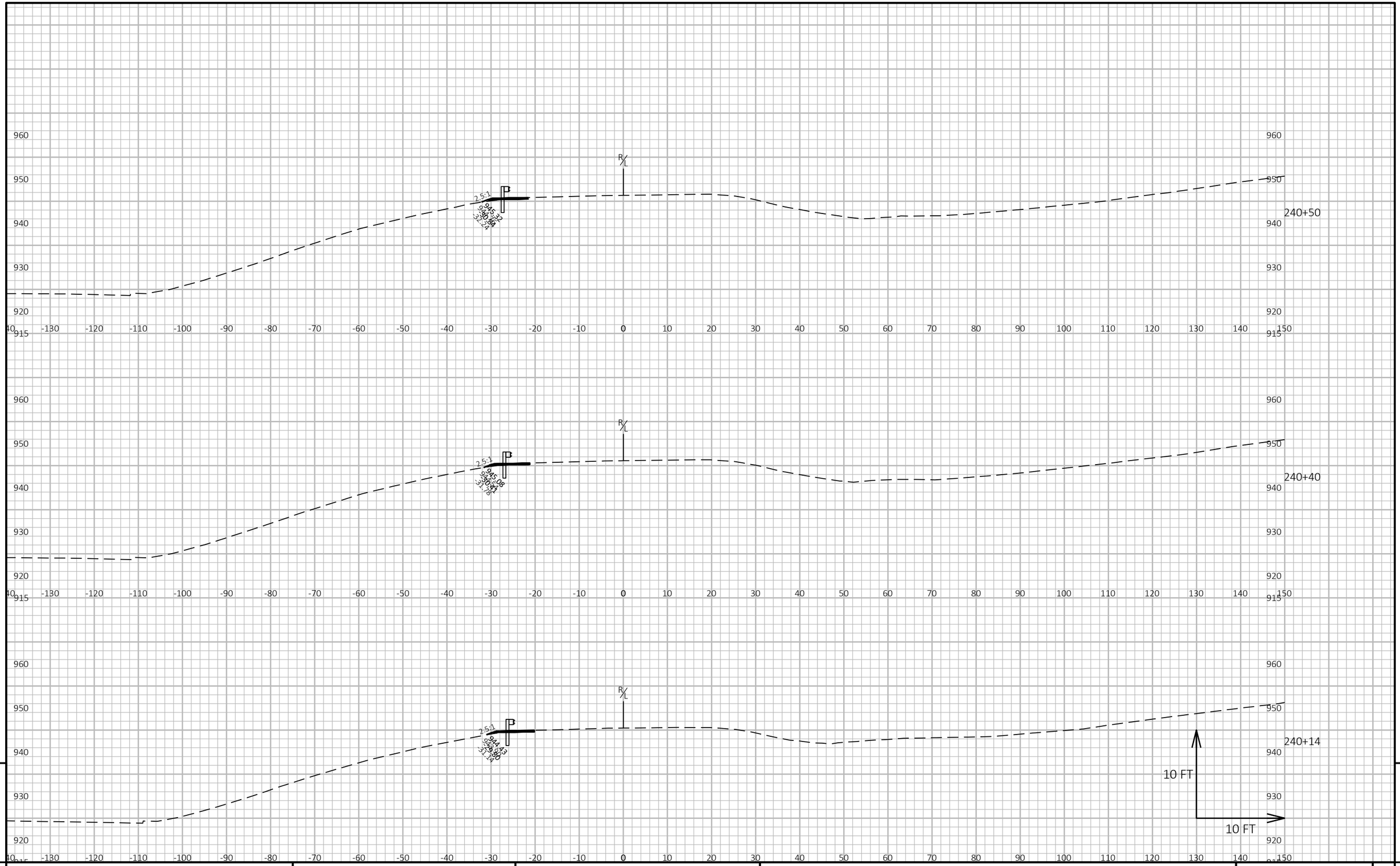
PLOT DATE : 7/6/2023 2:44 PM

PLOT BY : TONY BACIAK

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 238+00 - STA 243+00 EB OFF RAMP	SHEET 829	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 51

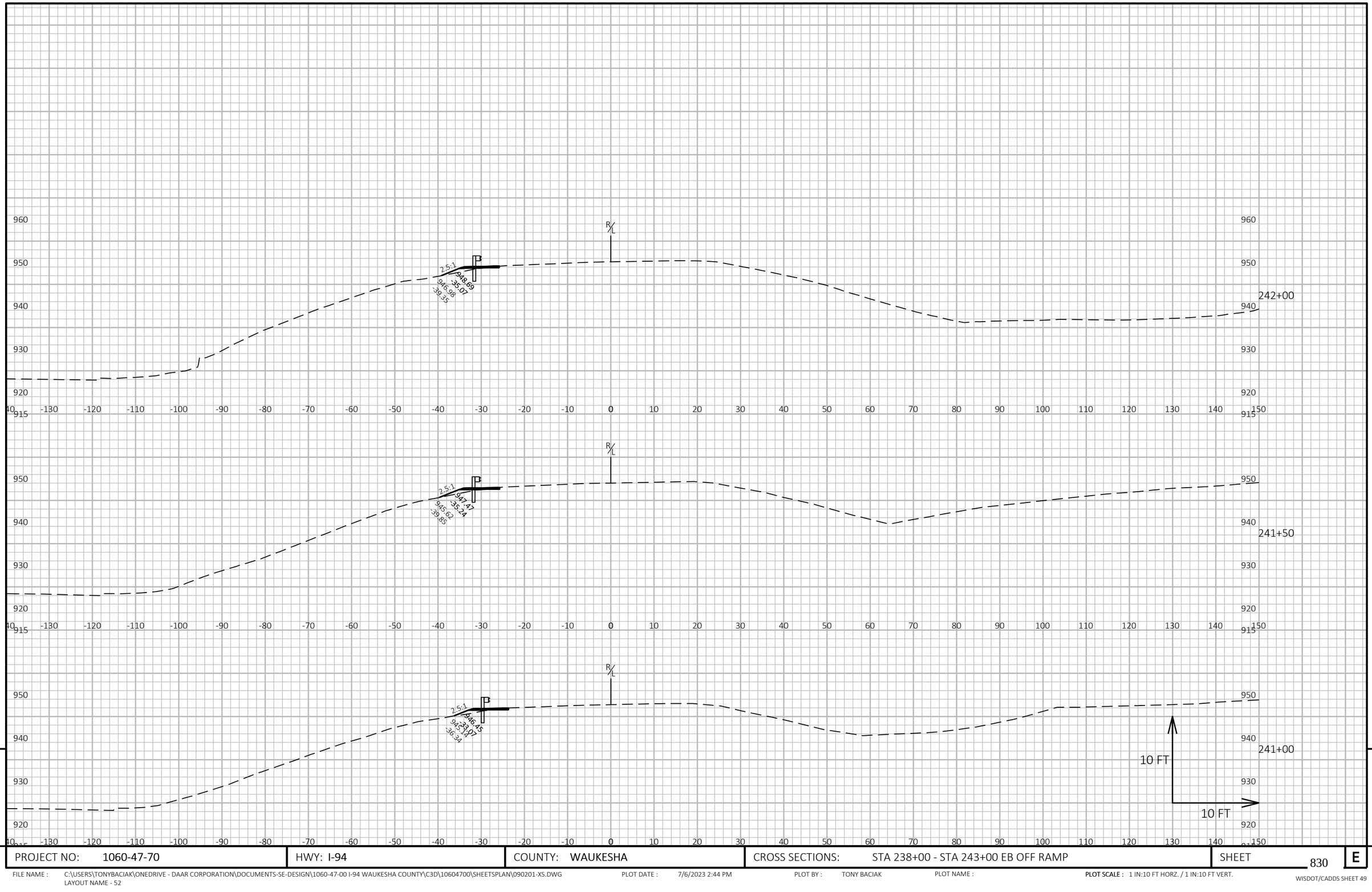
PLOT DATE : 7/6/2023 2:44 PM

PLOT BY : TONY BACIAK

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 238+00 - STA 243+00 EB OFF RAMP	SHEET 830	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 52

PLOT DATE : 7/6/2023 2:44 PM

PLOT BY : TONY BACIAK

PLOT NAME :

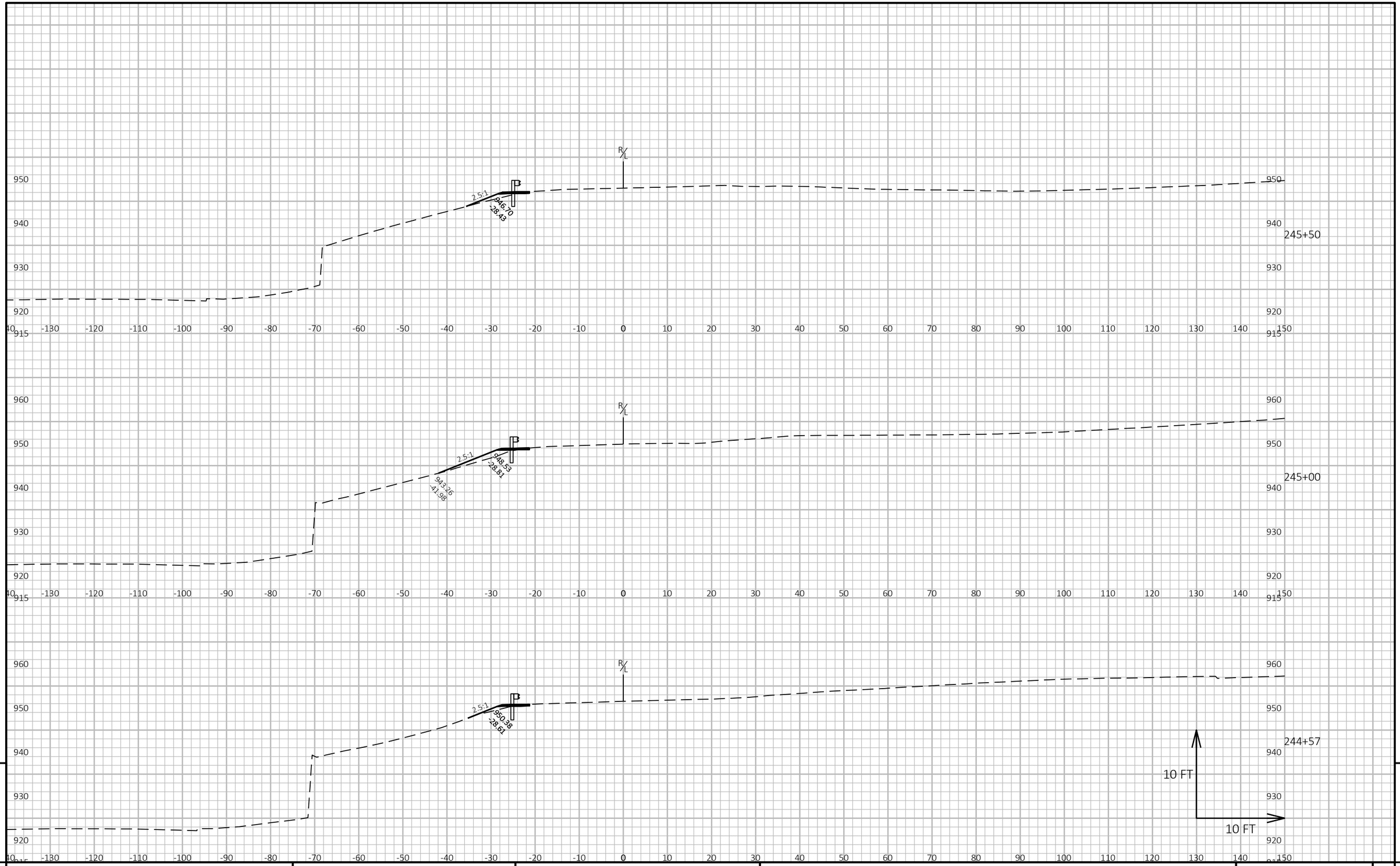
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

960
950
940
930
920
915
-130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
242+79
242+50
10 FT
10 FT

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 238+00 - STA 243+00 EB OFF RAMP	SHEET 831 E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 53
PLOT DATE : 7/6/2023 2:44 PM
PLOT BY : TONY BACIAK
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49



9

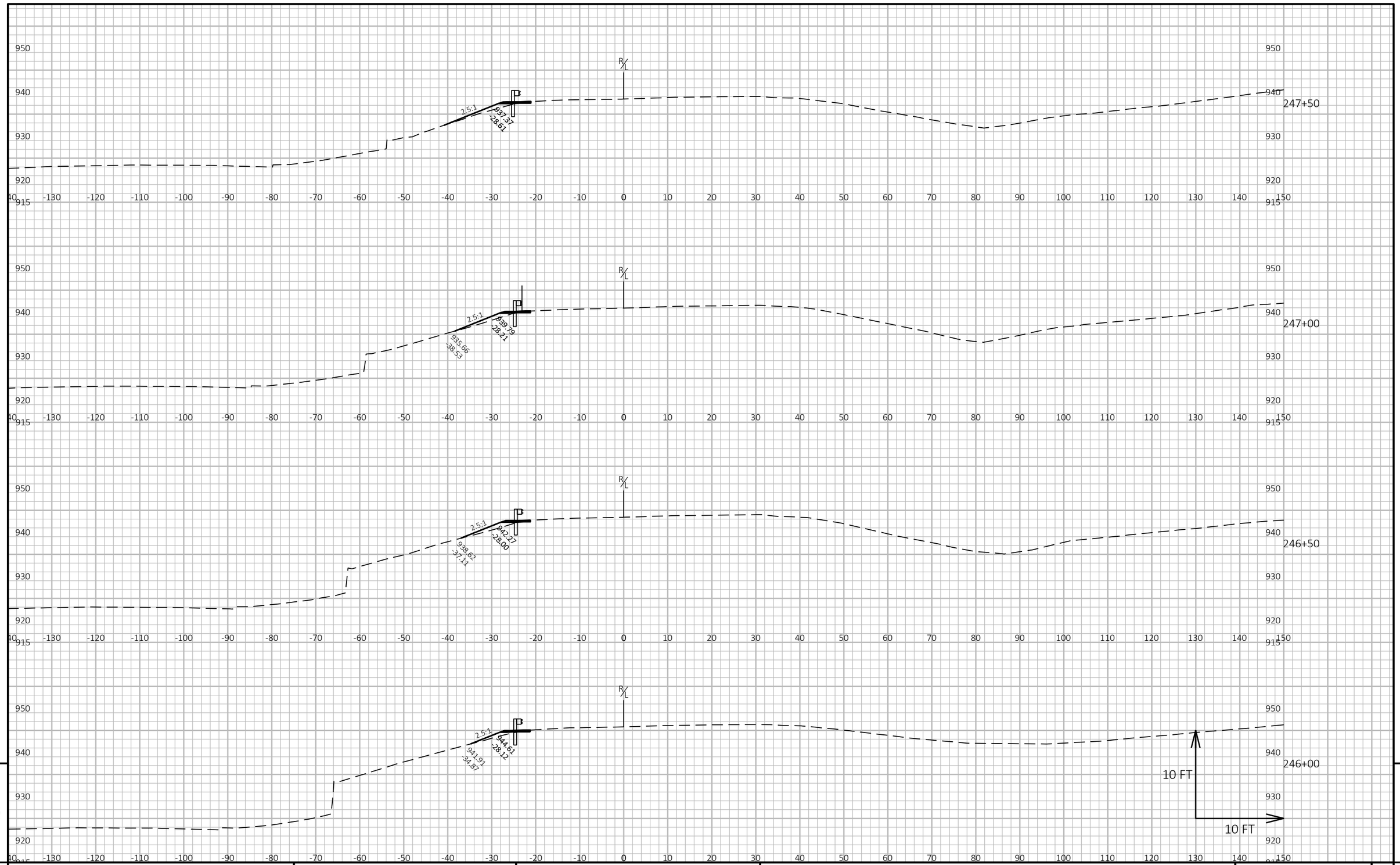
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PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 244+50 -STA 248+50 EB ON RAMP	SHEET 832	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 54

PLOT DATE : 7/6/2023 2:45 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 244+50 -STA 248+50 EB ON RAMP	SHEET 833	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 55

PLOT DATE : 7/6/2023 2:45 PM PLOT BY : TONY BACIAK PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

950
940
930
920
910
905
-130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

248+36

248+00

2.5:1
P
934.94
28.70

10 FT
10 FT

9

9

PROJECT NO: 1060-47-70	HWY: I-94	COUNTY: WAUKESHA	CROSS SECTIONS: STA 244+50 -STA 248+50 EB ON RAMP	SHEET 834	E

FILE NAME : C:\USERS\TONYBACIAK\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\1060-47-00 I-94 WAUKESHA COUNTY\C3D\10604700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 56
PLOT DATE : 7/6/2023 2:45 PM
PLOT BY : TONY BACIAK
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
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