WKE

MAY 2019

PROJECT ID: **2120-16-70**

COUNTY: **MILWAUKEE**

ORDER OF SHEETS

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

TOTAL SHEETS = 238



18

N

DESIGN DESIGNATION

			STH 24	CTH N
A.A.D.T.	2014	=	19800	= 4100 (2011)
A.A.D.T.	2039	=	22400	= 5400
D.H.V.		=	2700	= 700
D.D.		=	59/41	= 59/ 41
T.		=	4.9%	= 3.7%
DESIGN SPEED		=	45 MPH	= 35 MPH
ESALS		=		

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STH 24

INTERSECTION WITH 92ND ST

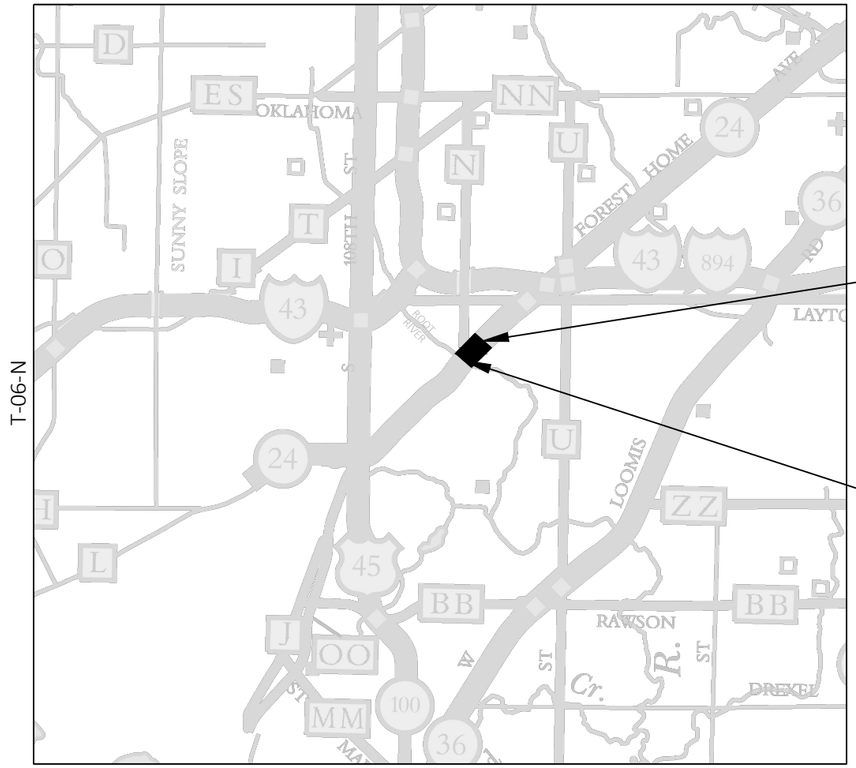
STH 24

MILWAUKEE COUNTY

STATE PROJECT NUMBER
2120-16-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2120-16-70	WISC 2019289	1

R-21-E



T-06-N

END PROJECT
STA 167+19.40
X= 574666.91
Y= 268030.25

BEGIN PROJECT
STA 161+74.02
X= 574282.24
Y= 267643.65

LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.123 MI (URBAN)

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, MILWAUKEE 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 ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF NAVD 88 (2012)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	JSD
Designer	DAWN MARSHALL
Project Manager	MARK WILFERT
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	REEM SHAHIN

APPROVED FOR THE DEPARTMENT

DATE: February 1, 2019

E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\010101_TI.DWG

PLOT DATE : 1/8/2019 1:49 PM

PLOT BY : SCHMIDT, JUDENE M

PLOT NAME :

GENERAL NOTES

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

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE.

A SAWED JOINT WILL BE REQUIRED WHERE NEW PAVEMENT IS TO MEET AN EXISTING PAVED SURFACE.

TRAFFIC CONTROL LOCATIONS AS SHOWN IN THE PLAN ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

SHOULDER PAVEMENT SHALL MATCH ADJACENT MAINLINE OVERLAY.

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

FIELD VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN PRIOR TO ORDERING DRAINAGE STRUCTURES.

NO TREES OR SHRUBS SHALL BE REMOVED UNLESS DESIGNATED FOR REMOVAL BY THE ENGINEER.

PROTECT FROM DAMAGE AND COMPLETE SHOULDER WORK AROUND ANY EXISTING SIGNS OR MAILBOXES THAT ARE TO REMAIN IN PLACE.

CONTACT THE PROJECT ENGINEER AND THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION, AT LEAST TWO WEEKS PRIOR TO WORK NEAR ANY PUBLIC SURVEY MONUMENT.

ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE TOPSOILED, FERTILIZED, AND SEEDED, AS DIRECTED BY THE ENGINEER. RESTORATION SHALL TAKE PLACE WITHIN 7 CALENDAR DAYS AFTER THE FINISHED GRADE IS COMPLETE.

IF AN EXISTING SIGN IS TO BE REMOVED AND REPLACED WITH A NEW SIGN, DO NOT REMOVE THE EXISTING SIGN PRIOR TO INSTALLATION OF THE NEW SIGN.

THE LOCATIONS OF EROSION CONTROL ITEMS SHALL BE DETERMINED BY THE ENGINEER. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

TEMPORARY STORAGE OF ANY MATERIAL SHALL NOT BE PERMITTED IN WETLANDS.

ALL CURB AND GUTTER ELEVATIONS PROVIDED ARE AT FLANGE LINE. RADIUS DIMENSIONS ARE PROVIDED TO THE FLANGE LINE.

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

EROSION CONTROL ITEMS ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTORS ECIP AND BY THE ENGINEER. EROSION CONTROL ITEMS SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE ITEM IS NO LONGER REQUIRED.

HMA PAVING

		LAYER	THICKNESS	PAVEMENT
RECONSTRUCT	5 1/4 - INCH	LOWER	3 1/2 - INCH	3 MT 58-28 S
		UPPER	1 3/4 - INCH	4 MT 58-28 S
ADJACENT TO FLANGE	4 - INCH	LOWER	2 1/4 - INCH)	3 MT 58-28 S
		UPPER	1 3/4 - INCH	4 MT 58-28 S
OVERLAY	2 - INCH	UPPER	2 - INCH	4 MT 58-28 S

STANDARD ABBREVIATIONS

ABUT	Abutment	POT	Point on Tangent
AH	Ahead	R	Radius
AADT	Annual Average Daily Traffic	RL or R/L	Reference Line
BK	Back	RHF	Right-Hand Forward
CL or C/L	Center Line	R/W	Right-of-Way
Δ	Central Angle or Delta	SALV	Salvaged
CH	Chord	SAN S	Sanitary Sewer
D	Degree of Curve	SF	Square Feet
DHV	Design Hour Volume	SY	Square Yard
DIA	Diameter	STD	Standard
X	East Grid Coordinate	SDD	Standard Detail Drawings
EBS	Excavation Below Subgrade	SSD	Stopping Sight Distance
FL or F/L	Flow Line	SE	Superelevation
CWT	Hundredweight	SL or S/L	Survey Line
IN DIA	Inch Diameter	T	Tangent
ID	Inside Diameter	TEL	Telephone
I	Intersection Angle	TLE	Temporary Limited Easement
INV	Invert	T	Trucks (percent of)
LHF	Left-Hand Forward	UG	Underground
LC	Long Chord of Curve	VAR	Variable
LS	Lump Sum	V	Velocity or Design Speed
ML or M/L	Match Line	VC	Vertical Curve
NC	Normal Crown	VPCC	Vertical Point of Compound Curve
Y	North Grid Coordinate	VPC	Vertical Point of Curve
PAVT	Pavement	VPI	Vertical Point of Intersection
PCC	Point of Compound Curve	VPRC	Vertical Point of Reverse Curve
PC	Point of Curvature	VPT	Vertical Point of Tangency
PI	Point of Intersection	W	Water
PRC	Point of Reverse Curvature	WM	Water Main
PT	Point of Tangency	WV	Water Valve
POC	Point On Curve		

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

2

CONTACTS

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(262) 896-7690
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1025 ELDORADO BLVD
BROOMFIELD, CO 80021
relo@centurylink.com

MICKI KLAPPA-SULLIVAN
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841 N. BROADWAY, ROOM 409
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CRAIG SKALA
ENGINEERING DEPARTMENT
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VILLAGE MANAGER
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tmichaels@greendale.org

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MELANIE FLYNN
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Fax: (414)257-6501
kevin.kent@milwaukeecountywi.gov

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PO BOX 798
WAUKESHA, WI 53187
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WISDOT UTILITIES
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141 NW BARSTOW ST
PO BOX 798
WAUKESHA, WI 53187
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rabi.bista@dot.wi.gov

WISDOT ELECTRICAL FIELD UNIT
935 S. 60TH STREET
WEST ALLIS, WI 53214
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WISDOT PROJECT MANAGER
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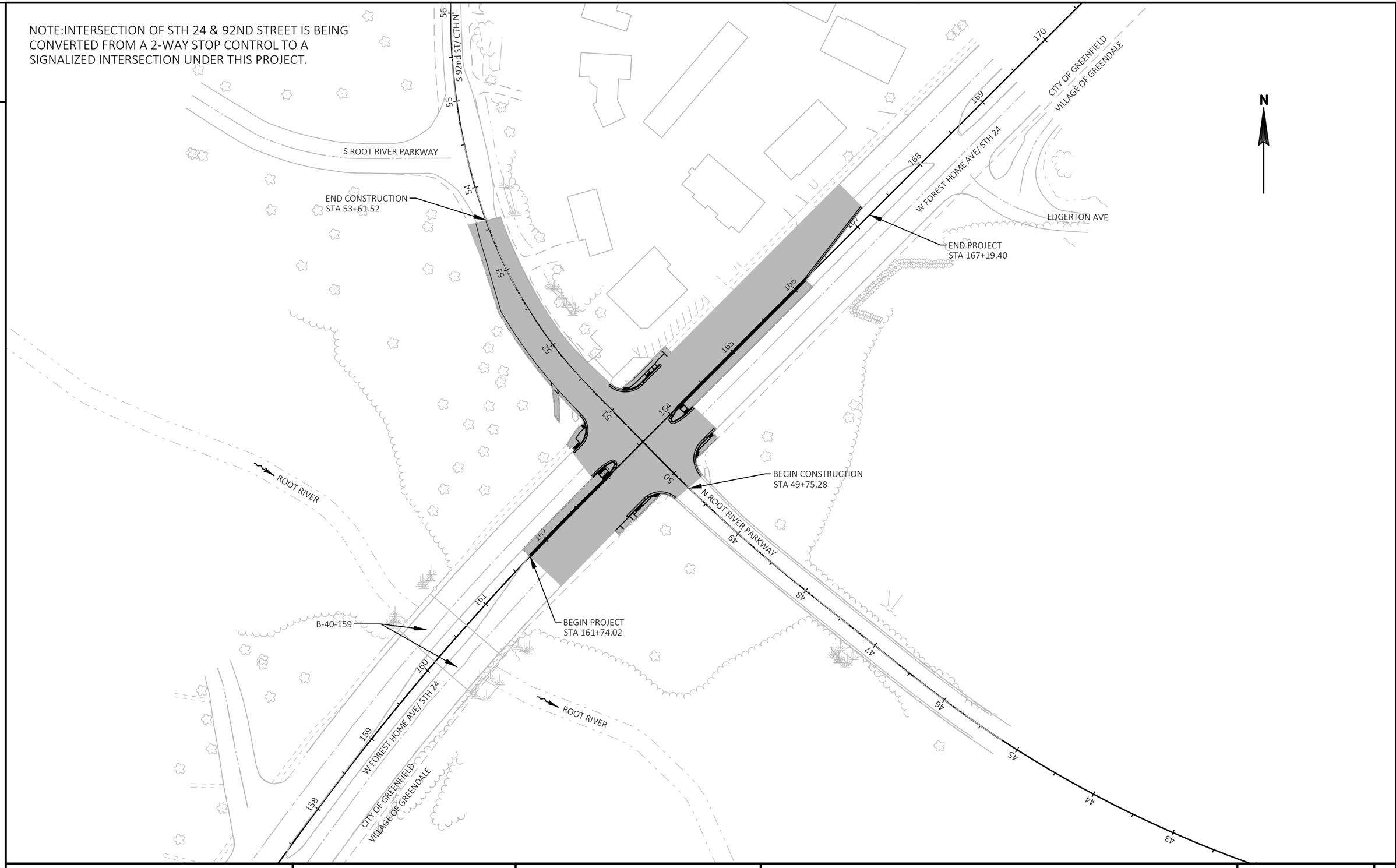
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SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
JOHN WASHBURN
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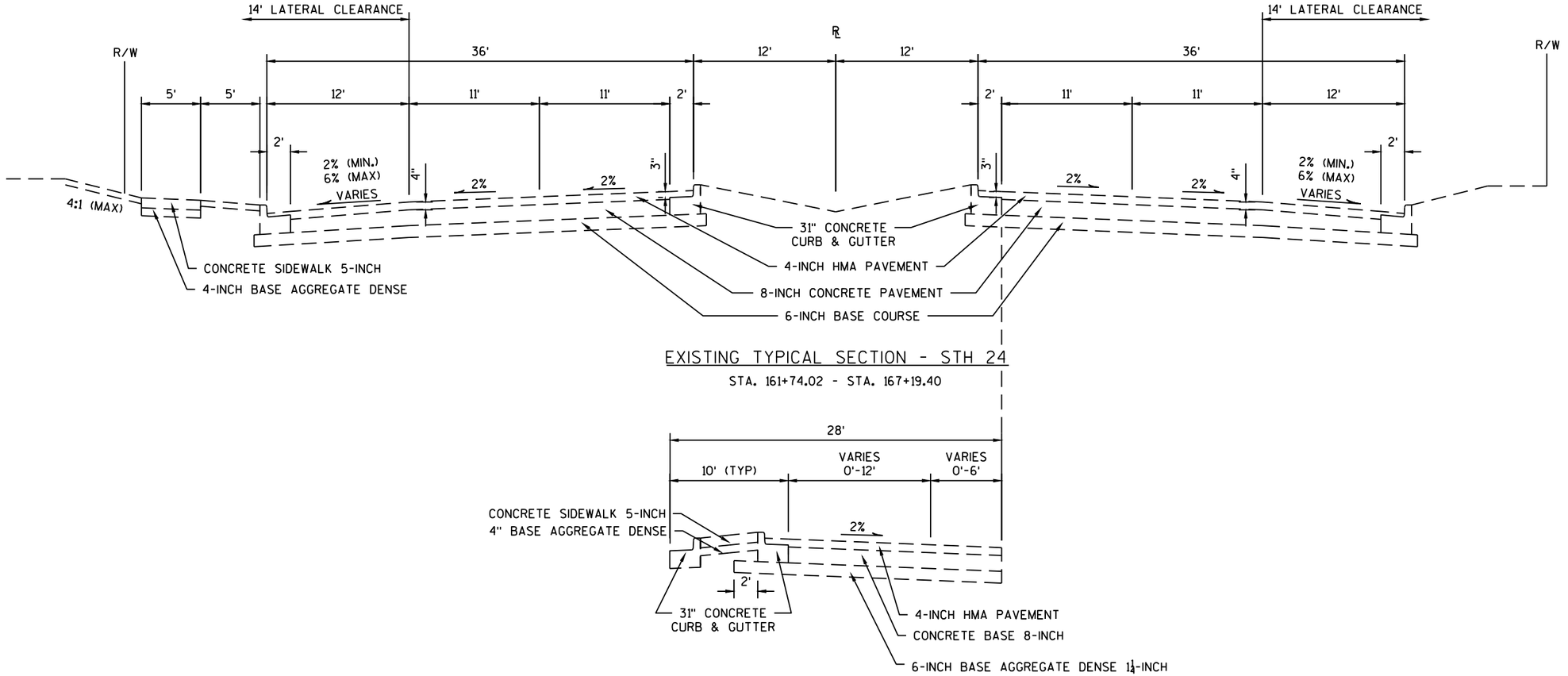
NOTE:INTERSECTION OF STH 24 & 92ND STREET IS BEING CONVERTED FROM A 2-WAY STOP CONTROL TO A SIGNALIZED INTERSECTION UNDER THIS PROJECT.



PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET 4	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\020101_PO.DWG
LAYOUT NAME - Plan 1 IN 100 FT

PLOT DATE : 10/22/2018 10:35 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1 IN: 100 FT

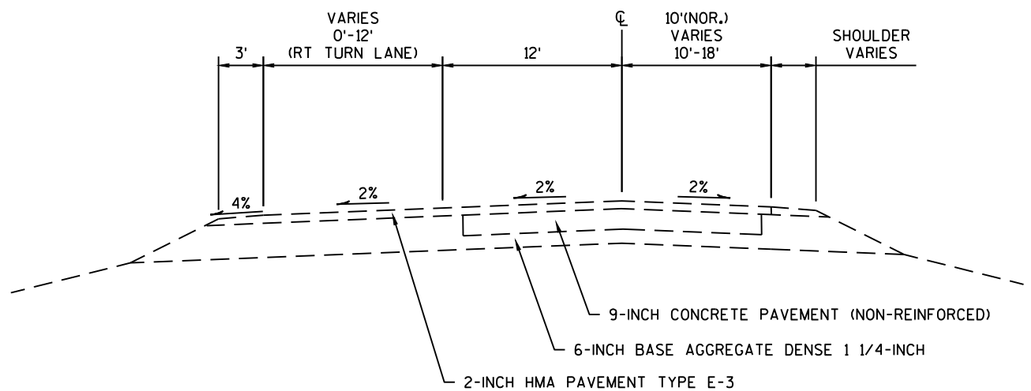


EXISTING TYPICAL SECTION - STH 24

STA. 161+74.02 - STA. 167+19.40

EXISTING EB LT LANE

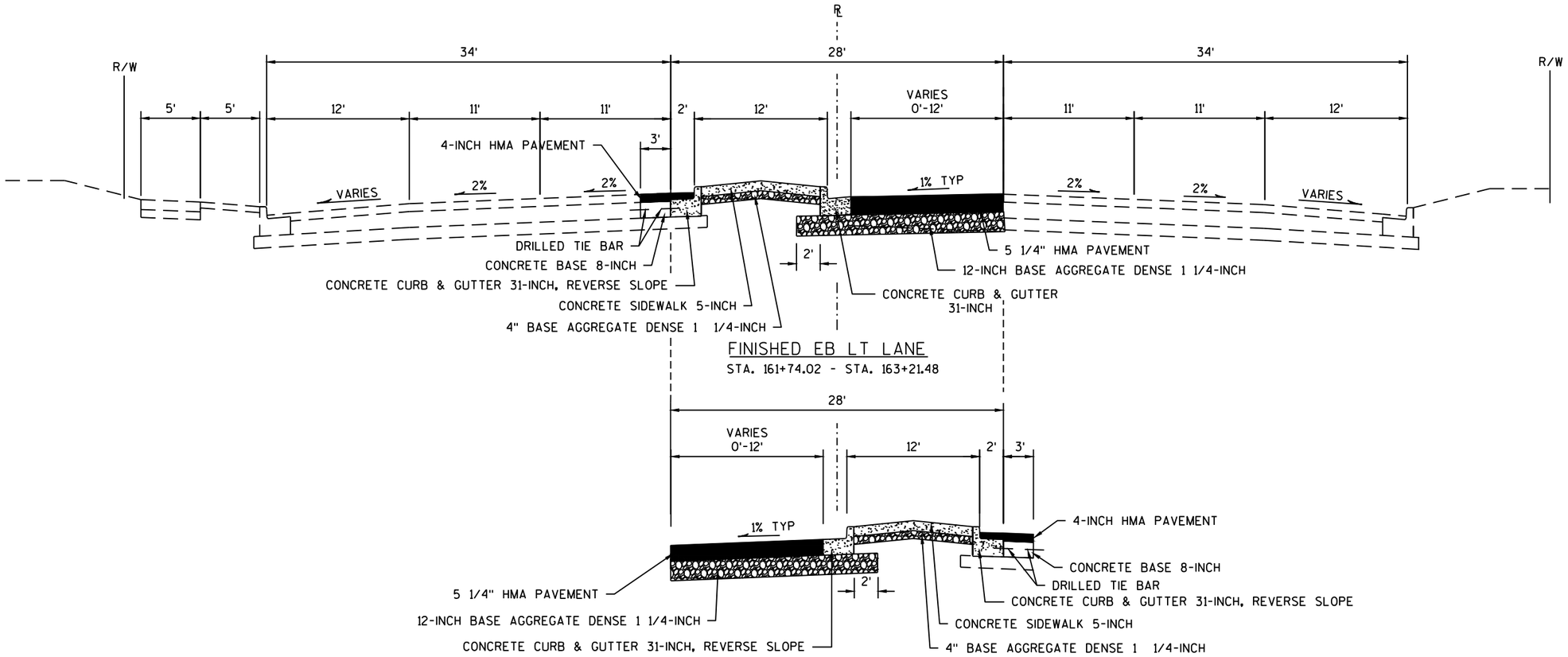
STA. 161+74.02 - STA. 163+05.93



EXISTING TYPICAL SECTION - 92ND STREET (NORTH)

STA. 51+15.73 - STA 53+61.52

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 5	E



FINISHED WB LT LANE

STA. 163+79.78 - STA. 167+19.40

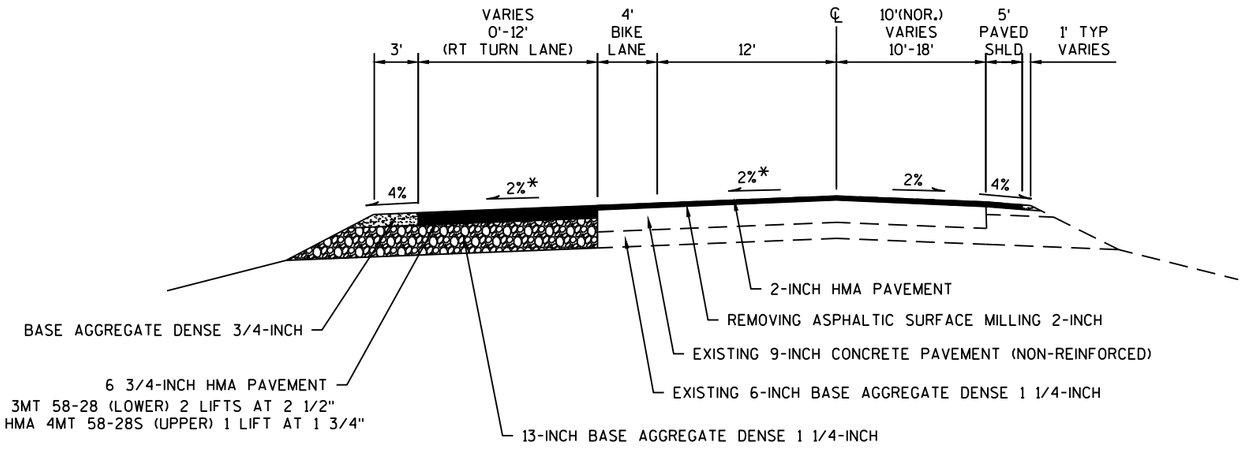
FINISHED TYPICAL SECTION - STH 24

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 6	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\020301_TS.DWG
LAYOUT NAME - 02b_TS

PLOT DATE : 1/8/2019 11:57 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : Custom

2

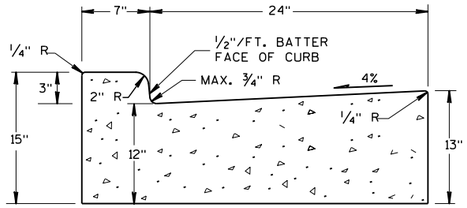


FINISHED TYPICAL SECTION - 92ND STREET (NORTH)

STA. 51+15.73 - STA 53+61.52

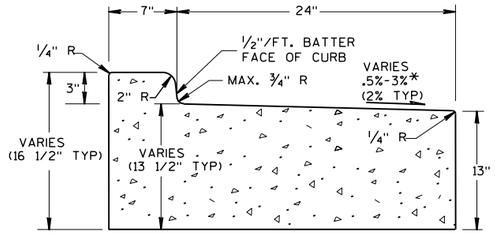
*SUPERELEVATED HORIZONTAL CURVE FROM STA. 51+35.96 TO STA. 53+28.84

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET 7	E



MODIFIED CONCRETE CURB & GUTTER 31-INCH

STA 162+94.5 TO STA 163+04.5, MEDIAN RT AND BOTH RADII
STA 164+12 TO STA 164+18, RADII
STA 51+07.5 TO STA 51+12.5 LT, N 92nd ST/ CTH N
STA 51+04 TO STA 51+10 RT, N 92nd ST/ CTH N
STA 49+94 TO STA 49+99, N ROOT RIVER PARKWAY

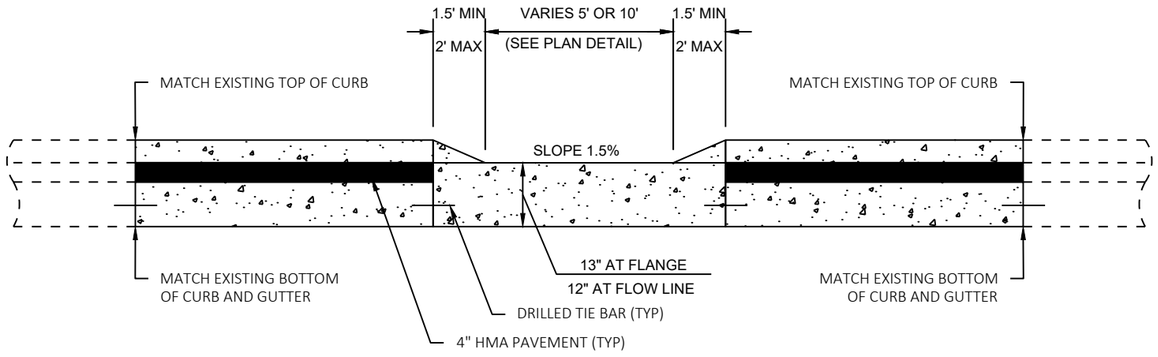


MODIFIED CONCRETE CURB & GUTTER 31-INCH

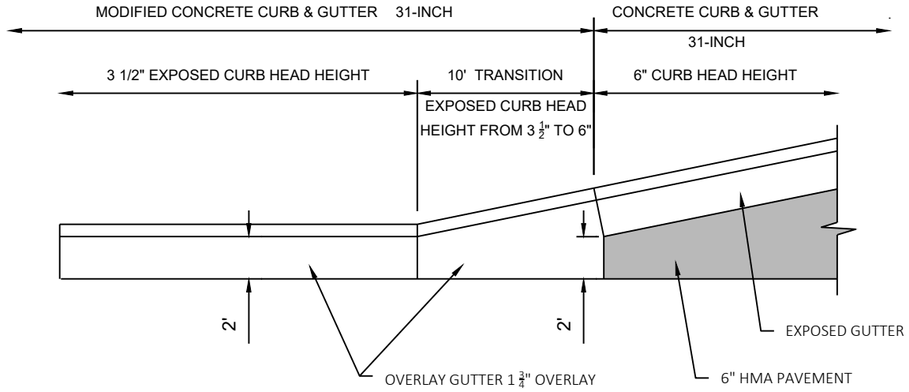
REVERSE SLOPE

STA 162+94.5 TO STA 163+04.5, MEDIAN LT
STA 164+12 TO STA 164+18, MEDIAN RT AND LT

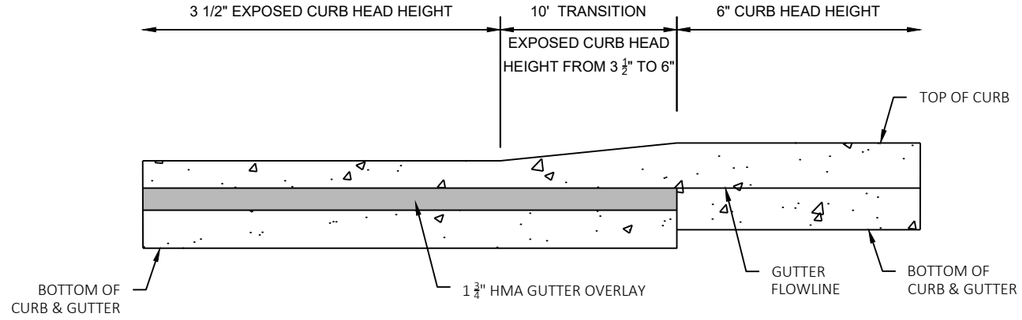
* MATCH SLOPE OF ADJACENT PAVEMENT



CURB RAMP IN RADIUS



PLAN VIEW



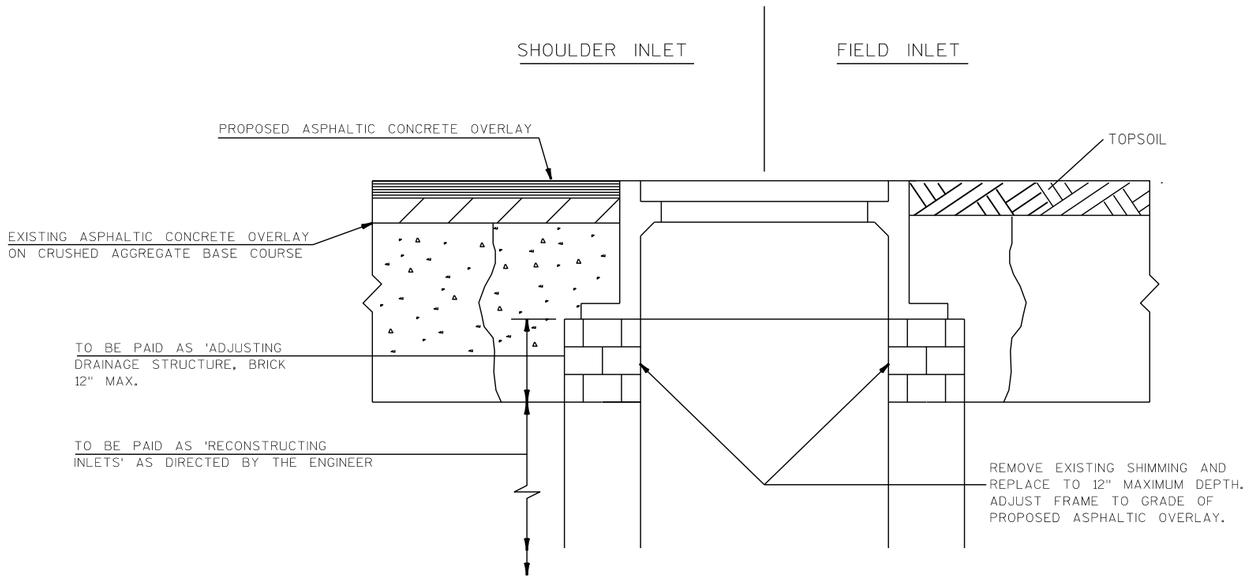
PROFILE VIEW ALONG GUTTER FLOWLINE

CURB & GUTTER TRANSITION DETAIL

SOUTHWEST BOUND LEFT TURN LANE TO ROOT RIVER PARKWAY

NOTE: LENGTH MEASURE ALONG FACE OF CURB

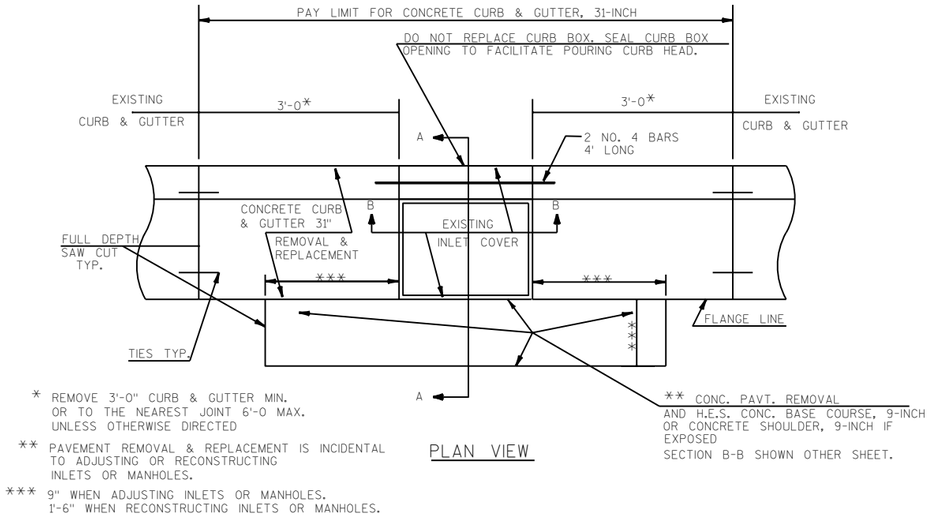
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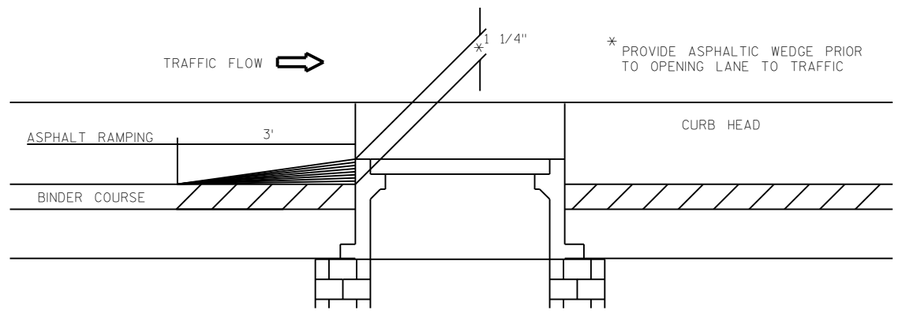
ADJUSTING DRAINAGE STRUCTURES

NOTES:

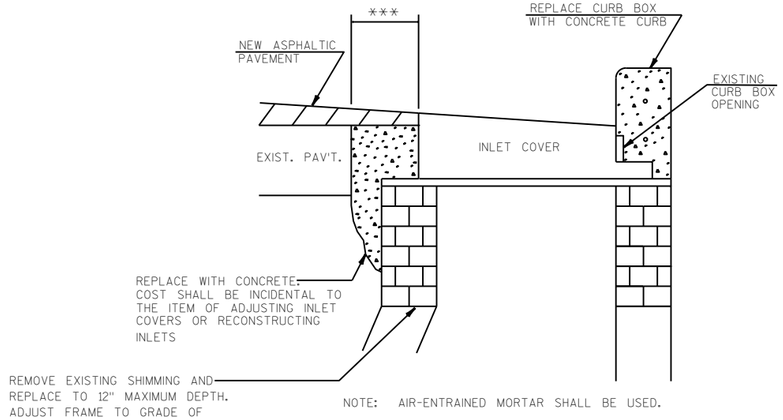
MANHOLE ADJUSTMENTS IN ASPHALTIC CONCRETE PAVEMENT WILL BE MADE AFTER THE BINDER COURSE IS PLACED.



PLAN VIEW



SECTION B-B



SECTION A-A

INLETS

GENERAL DRAINAGE STRUCTURE NOTES

1. LOCATIONS OF STRUCTURES IN THE DRAINAGE TABLE REFER TO CENTERLINE OF STRUCTURE.
2. GRATE AND RIM ELEVATIONS ARE GIVEN AT FLOW LINE OF INLET COVER OR CENTERLINE OF MANHOLE COVER.
3. WHEN NEW COVERS ARE PLACED, THE FIRST 6" OF ADJUSTMENT OR REPAIRING SHALL BE INCIDENTAL TO THE COST OF THE NEW COVER. ANY ADJUSTMENT OR REPAIR OF BRICKWORK BETWEEN 6" AND 12" WILL BE PAID AS ADJUSTING COVERS. REPAIRS GREATER THAN 12" WILL BE PAID AS RECONSTRUCTING INLETS.
4. MANHOLE ADJUSTMENTS IN ASPHALTIC PAVEMENT SHALL BE MADE AFTER THE BINDER COURSE IS PLACED.
5. WHEN A NEW INLET COVER IS SPECIFIED, BOTH THE FRAME AND GRATE ARE INCLUDED.
6. ALL FRAMES, GRATES, AND CURB BOXES NOT REUSED SHALL BECOME THE PROPERTY OF THE D.O.T. AND BE DELIVERED TO: WALLY HOFFMAN AT THE HIGHWAY MAINTENANCE BUILDING 10190 WATERTOWN PLANK ROAD, WAUWATOSA, WI. 53226
7. THE CURB BOX OPENING SHALL BE SEALED BEFORE POURING CONCRETE CURB TO PREVENT CONCRETE FROM ENTERING STRUCTURE.
8. WHEN CURB PLUG IS NOT REQUIRED, REPLACEMENT OF CONCRETE CURB AND GUTTER IS TO BE PAID FOR UNDER "CONCRETE CURB AND GUTTER, 31-INCH".
9. SAWING OF EXISTING CURB AND GUTTER AND PAVEMENT SHALL BE PAID FOR AS "SAWING CONCRETE PAVEMENT, FULL DEPTH".

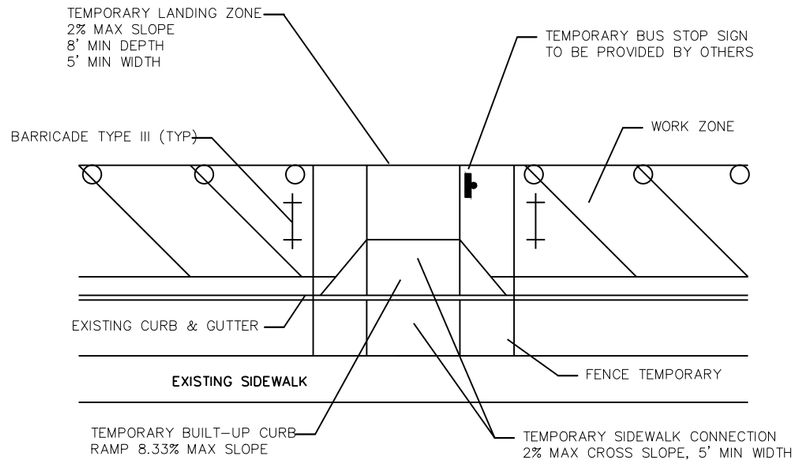
ADJUSTING OR RECONSTRUCTING INLETS OR MANHOLES
(AT CURB & GUTTER LOCATIONS)

STA. 242+15, 17' LT

SEE EROSION CONTROL PLAN

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL	SHEET 10	E

2



TEMPORARY BUS STOP TYPICAL

NOTES

1) MAINTAIN ACCESS TO BUS STOPS.
2) GAP SIDEWALK WORK TO MAINTAIN PEDESTRIAN ACCESS WHERE APPLICABLE.
3) ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

DESIGNER NOTE: MODIFY DRAWING TO FIT PROJECT

2

BEGIN REMOVING CURB & GUTTER
+20.48, -28.15' LT
S 92nd ST

+03.40, -71.08' LT
STH 24

SI

25.0' R

EXISTING R/W

+91.48, -46.01' LT
STH 24
END REMOVING CURB & GUTTER

REMOVE STREET LIGHT

3'

+03.46, -46.01' LT
STH 24

S 92nd STREET/ CTH N

51+00

MATCHLINE B
STA 51+45.00

+22.48, 17.18' RT
S 92nd ST

END REMOVING CURB & GUTTER
+01.29, -73.65' LT
STH 24

+96.32, -58.43' LT
BEGIN PEDESTRIAN CURB

+31.55, -58.44' LT
END PEDESTRIAN CURB

27.6' R

SI

BUS STOP

+31.75, -46.00' LT
STH 24
BEGIN REMOVING CURB & GUTTER

EXISTING R/W

+01.36, -46.00' LT
STH 24

BEGIN CONSTRUCTION
STA 161+74.02

PT: 162+56.27

+95.46, -14.00' LT

3'

60' R

+18.53, -6.49' LT
4.5' R

+87.06, -13.94' LT

162+00

STH 24 (W FOREST HOME AVE)

EP: 50+50.00

60' R

+96.49, 1.17' RT

+74.02, 1.17' RT
BEGIN REMOVING CURB & GUTTER
BEGIN REMOVING PAVEMENT

+21.52
END REMOVING CURB & GUTTER
END REMOVING PAVEMENT

+80.08
BEGIN REMOVING CURB & GUTTER
BEGIN REMOVING PAVEMENT

+15.54, -1.00' LT

164+00

60' R

STH 24 (W FOREST HOME AVE)

+24.30, 14.13' RT

3'

+93.40, 6.16' RT
4.5' R

+15.89, 14.16' RT

LEGEND

XXX SAWCUT

TRUNCATED DOME

(A) MODIFIED CONCRETE CURB & GUTTER 31-INCH TO BE USED AT CURB RAMPS

(B) MODIFIED CONCRETE CURB & GUTTER 31-INCH REVERSE SLOPE

(C) CONCRETE SIDEWALK 5-INCH

(D) PEDESTRIAN CURB

(E) DETECTABLE WARNING FIELD

(F) CONCRETE CURB & GUTTER 31-INCH

(G) HMA PAVEMENT OVERLAY

(H) HMA PAVEMENT RECONSTRUCT

+10.73, 46.17' RT
STH 24

CP918

EXISTING R/W

3'

SI

BUS STOP

+83.63, 46.17' RT
STH 24
BEGIN REMOVING CURB & GUTTER

26.8' R

+11.01, 73.01' RT
STH 24

+79.53, -18.29' LT
ROOT RIVER PKY
END REMOVING CURB & GUTTER

50+00

N ROOT RIVER PARKWAY

+02.17, 46.17' RT
STH 24

3'

27.3' R

SI

+25.23, 46.04' RT
STH 24
END REMOVING CURB & GUTTER

+02.47, 73.40' RT
STH 24

36.7' R

+90.50, 23.55' RT
ROOT RIVER PKY

+75.28, 18.52' RT
ROOT RIVER PKY
BEGIN REMOVING CURB & GUTTER

+10.74, 77.71' RT
STH 24

MATCHLINE A
STA 164+75.00

EXISTING R/W

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET 12	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\021201__PD.DWG
LAYOUT NAME - 01_PD

PLOT DATE : 1/7/2019 12:04 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

2

.00' LT

EXISTING R/W

167+19.39, -14.00' LT
END REMOVING CURB & GUTTER

167+07.04

+15.29, -1.00' LT

STH 24 (W FOREST HOME AVE)

165+00

166+00

167+00

RT

SI

END CONSTRUCTION
STA 167+19.39

MATCHLINE A
STA 164+75.00

EXISTING R/W

LEGEND

XXX	SAWCUT
	TRUNCATED DOME
(A)	MODIFIED CONCRETE CURB & GUTTER 31-INCH TO BE USED AT CURB RAMPS
(B)	MODIFIED CONCRETE CURB & GUTTER 31-INCH REVERSE SLOPE
(C)	CONCRETE SIDEWALK 5-INCH
(D)	PEDESTRIAN CURB
(E)	DETECTABLE WARNING FIELD
(F)	CONCRETE CURB & GUTTER 31-INCH
(G)	HMA PAVEMENT OVERLAY
(H)	HMA PAVEMENT RECONSTRUCT

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET 13	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\021201__PD.DWG
LAYOUT NAME - 02_PD

PLOT DATE : 1/7/2019 12:04 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

+91.48, -46.01' LT

3'

+03.40, -71.08' LT

+20.48, -28.15' LT

+03.46, -46.01' LT

+62.20, -28.00' LT

+91.55, -13.06' LT

+46.31, -13.67' LT

+46.12, -12.00' LT

+61.33, -12.02' LT

+61.36, -10.00' LT

2'

+59.14, 11.77' RT

+58.61, 16.76' RT

51+00

52+00

53+00

54+00

SI

WETLAND

WETLAND

S 92nd STREET/ CTH N

+22.48, 17.18' RT

MATCHLINE B
STA 51+45.00

+01.29, -73.65' LT

+96.32, -58.43' LT

+31.55, -58.44' LT

+31.75, -46.00' LT

3'

STH 24 (W FOREST HOME AVE)

LEGEND

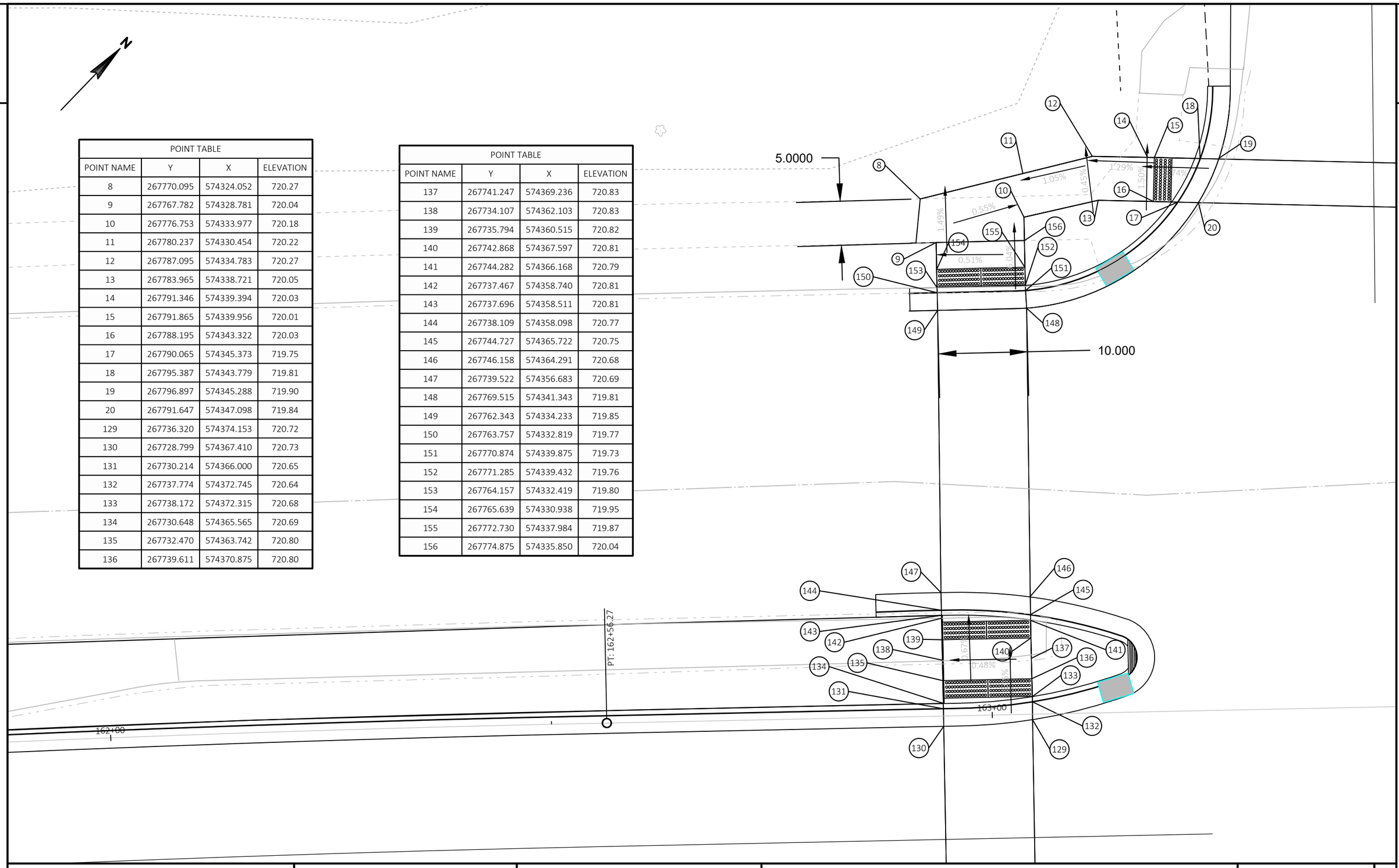
XXX	SAWCUT
	TRUNCATED DOME
(A)	MODIFIED CONCRETE CURB & GUTTER 31-INCH TO BE USED AT CURB RAMPS
(B)	MODIFIED CONCRETE CURB & GUTTER 31-INCH REVERSE SLOPE
(C)	CONCRETE SIDEWALK 5-INCH
(D)	PEDESTRIAN CURB
(E)	DETECTABLE WARNING FIELD
(F)	CONCRETE CURB & GUTTER 31-INCH
(G)	HMA PAVEMENT OVERLAY
(H)	HMA PAVEMENT RECONSTRUCT

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PLAN DETAIL	SHEET 14	E

2

POINT TABLE			
POINT NAME	Y	X	ELEVATION
8	267770.095	574324.052	720.27
9	267767.782	574328.781	720.04
10	267776.753	574333.977	720.18
11	267780.237	574330.454	720.22
12	267787.095	574334.783	720.27
13	267783.965	574338.721	720.05
14	267791.346	574339.394	720.03
15	267791.865	574339.956	720.01
16	267788.195	574343.322	720.03
17	267790.065	574345.373	719.75
18	267795.387	574343.779	719.81
19	267796.897	574345.288	719.90
20	267791.647	574347.098	719.84
129	267736.320	574374.153	720.72
130	267728.799	574367.410	720.73
131	267730.214	574366.000	720.65
132	267737.774	574372.745	720.64
133	267738.172	574372.315	720.68
134	267730.648	574365.565	720.69
135	267732.470	574363.742	720.80
136	267739.611	574370.875	720.80

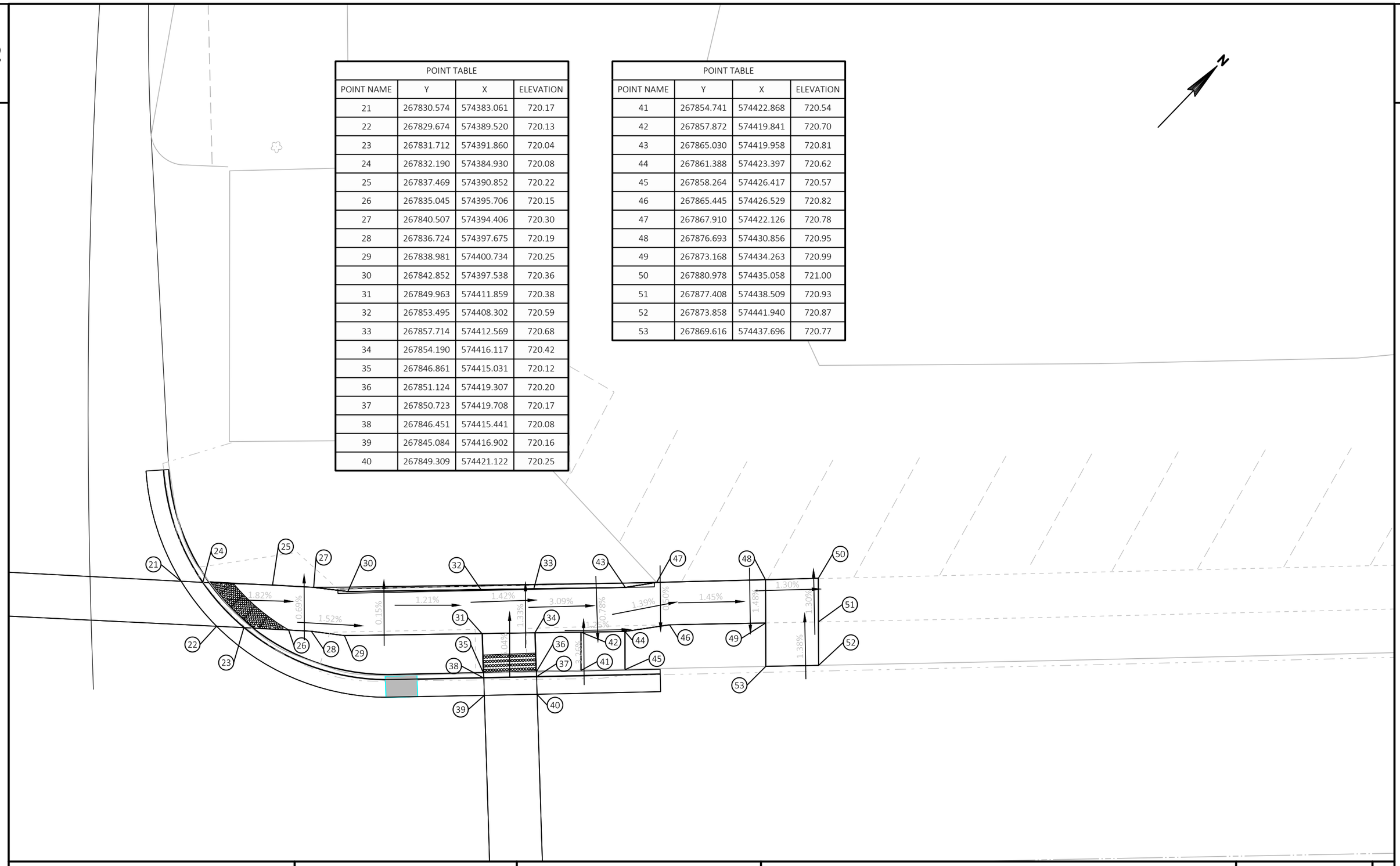
POINT TABLE			
POINT NAME	Y	X	ELEVATION
137	267741.247	574369.236	720.83
138	267734.107	574362.103	720.83
139	267735.794	574360.515	720.82
140	267742.868	574367.597	720.81
141	267744.282	574366.168	720.79
142	267737.467	574358.740	720.81
143	267737.696	574358.511	720.81
144	267738.109	574358.098	720.77
145	267744.727	574365.722	720.75
146	267746.158	574364.291	720.68
147	267739.522	574356.683	720.69
148	267769.515	574341.343	719.81
149	267762.343	574334.233	719.85
150	267763.757	574332.819	719.77
151	267770.874	574339.875	719.73
152	267771.285	574339.432	719.76
153	267764.157	574332.419	719.80
154	267765.639	574330.938	719.95
155	267772.730	574337.984	719.87
156	267774.875	574335.850	720.04



PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	SIDEWALK DETAILS	SHEET 15	E

POINT TABLE			
POINT NAME	Y	X	ELEVATION
21	267830.574	574383.061	720.17
22	267829.674	574389.520	720.13
23	267831.712	574391.860	720.04
24	267832.190	574384.930	720.08
25	267837.469	574390.852	720.22
26	267835.045	574395.706	720.15
27	267840.507	574394.406	720.30
28	267836.724	574397.675	720.19
29	267838.981	574400.734	720.25
30	267842.852	574397.538	720.36
31	267849.963	574411.859	720.38
32	267853.495	574408.302	720.59
33	267857.714	574412.569	720.68
34	267854.190	574416.117	720.42
35	267846.861	574415.031	720.12
36	267851.124	574419.307	720.20
37	267850.723	574419.708	720.17
38	267846.451	574415.441	720.08
39	267845.084	574416.902	720.16
40	267849.309	574421.122	720.25

POINT TABLE			
POINT NAME	Y	X	ELEVATION
41	267854.741	574422.868	720.54
42	267857.872	574419.841	720.70
43	267865.030	574419.958	720.81
44	267861.388	574423.397	720.62
45	267858.264	574426.417	720.57
46	267865.445	574426.529	720.82
47	267867.910	574422.126	720.78
48	267876.693	574430.856	720.95
49	267873.168	574434.263	720.99
50	267880.978	574435.058	721.00
51	267877.408	574438.509	720.93
52	267873.858	574441.940	720.87
53	267869.616	574437.696	720.77

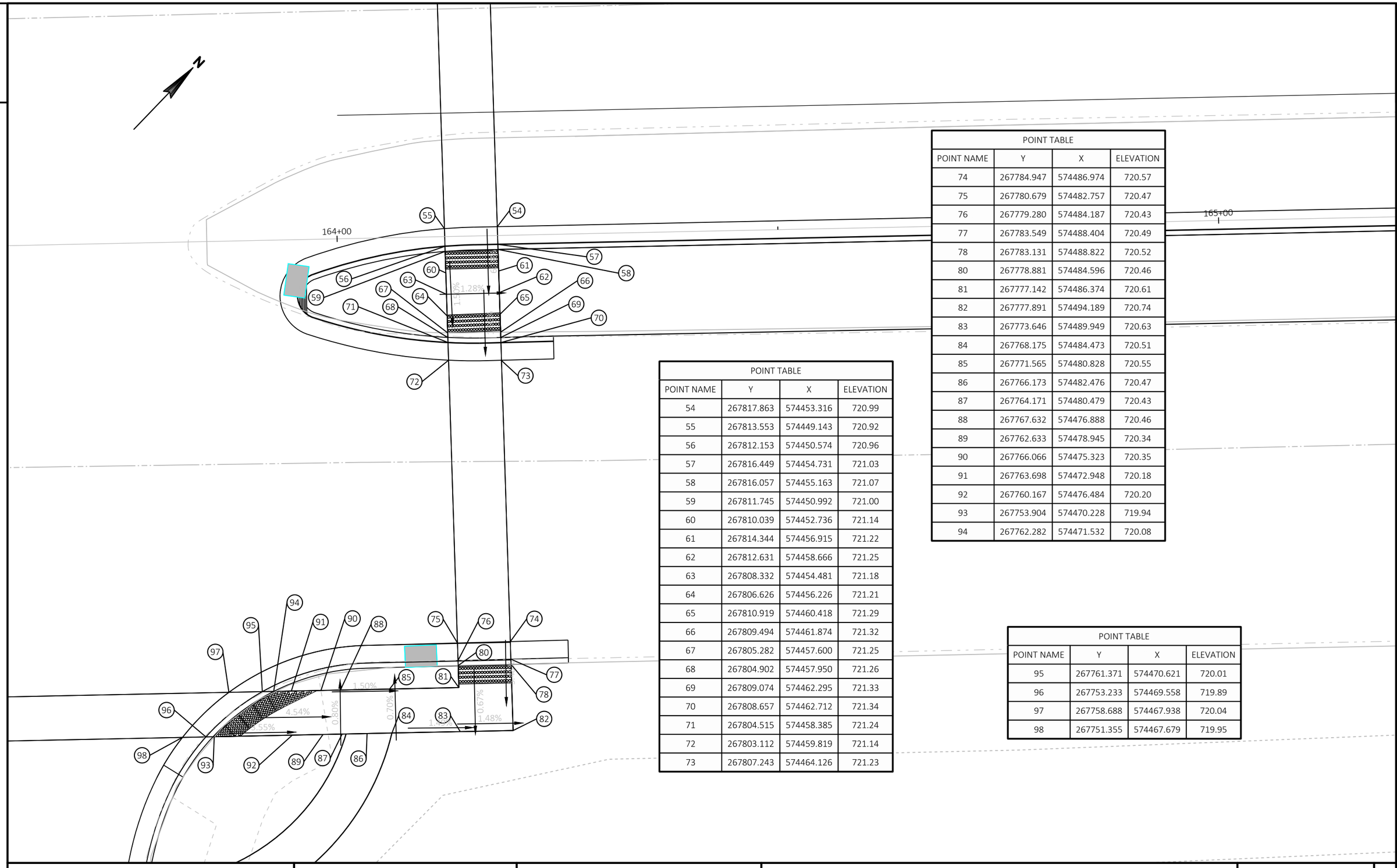


PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	SIDEWALK DETAILS	SHEET 16	E

FILE NAME : N:\PDS\C3D\21201600\DESIGN\SURFACES\SIDEWALK WITH REV CURB STUBS.DWG
LAYOUT NAME - sw_02

PLOT DATE : 1/7/2019 12:38 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:10 FT

2



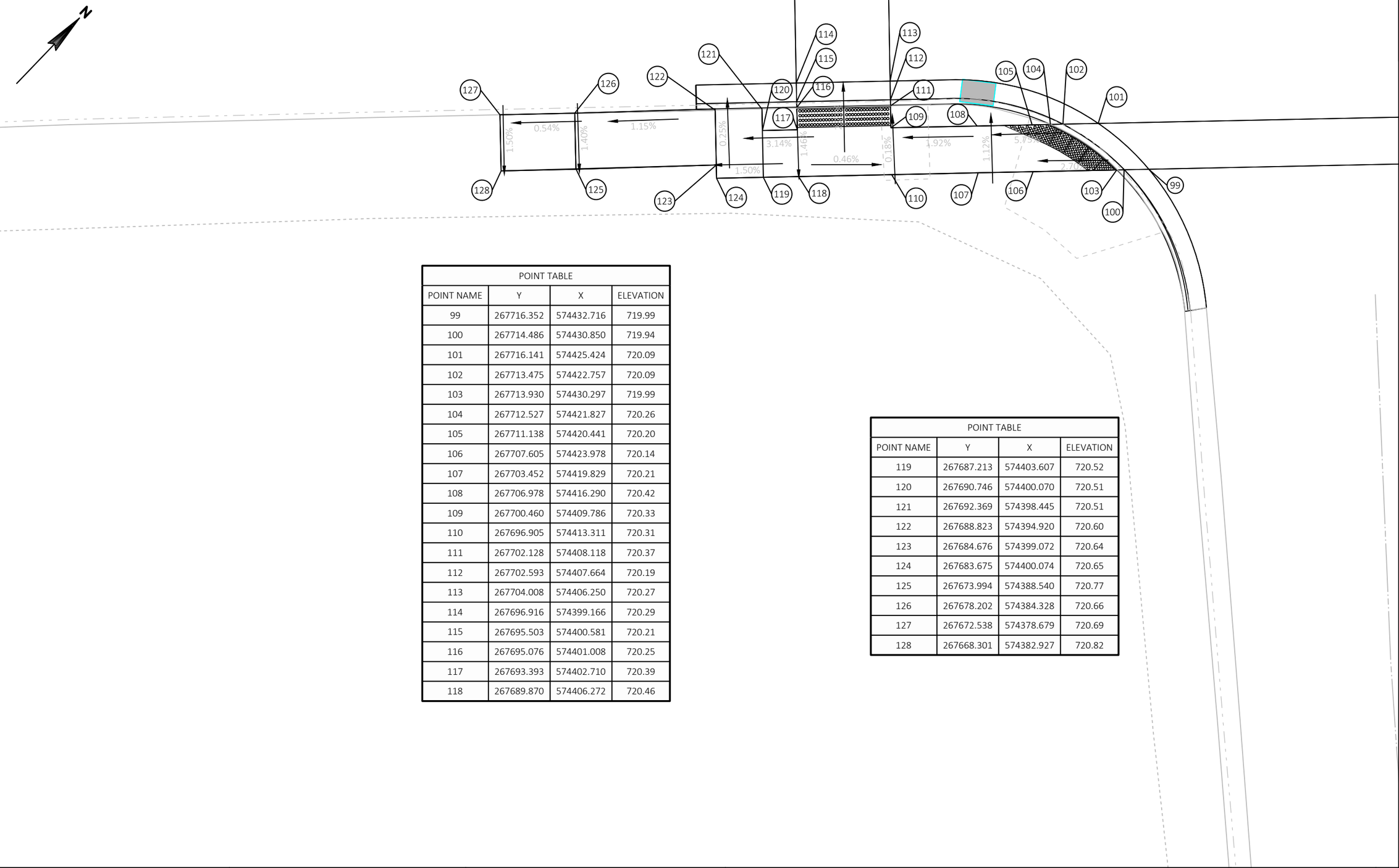
POINT TABLE			
POINT NAME	Y	X	ELEVATION
54	267817.863	574453.316	720.99
55	267813.553	574449.143	720.92
56	267812.153	574450.574	720.96
57	267816.449	574454.731	721.03
58	267816.057	574455.163	721.07
59	267811.745	574450.992	721.00
60	267810.039	574452.736	721.14
61	267814.344	574456.915	721.22
62	267812.631	574458.666	721.25
63	267808.332	574454.481	721.18
64	267806.626	574456.226	721.21
65	267810.919	574460.418	721.29
66	267809.494	574461.874	721.32
67	267805.282	574457.600	721.25
68	267804.902	574457.950	721.26
69	267809.074	574462.295	721.33
70	267808.657	574462.712	721.34
71	267804.515	574458.385	721.24
72	267803.112	574459.819	721.14
73	267807.243	574464.126	721.23

POINT TABLE			
POINT NAME	Y	X	ELEVATION
74	267784.947	574486.974	720.57
75	267780.679	574482.757	720.47
76	267779.280	574484.187	720.43
77	267783.549	574488.404	720.49
78	267783.131	574488.822	720.52
80	267778.881	574484.596	720.46
81	267777.142	574486.374	720.61
82	267777.891	574494.189	720.74
83	267773.646	574489.949	720.63
84	267768.175	574484.473	720.51
85	267771.565	574480.828	720.55
86	267766.173	574482.476	720.47
87	267764.171	574480.479	720.43
88	267767.632	574476.888	720.46
89	267762.633	574478.945	720.34
90	267766.066	574475.323	720.35
91	267763.698	574472.948	720.18
92	267760.167	574476.484	720.20
93	267753.904	574470.228	719.94
94	267762.282	574471.532	720.08

POINT TABLE			
POINT NAME	Y	X	ELEVATION
95	267761.371	574470.621	720.01
96	267753.233	574469.558	719.89
97	267758.688	574467.938	720.04
98	267751.355	574467.679	719.95

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	SIDEWALK DETAILS	SHEET 17	E

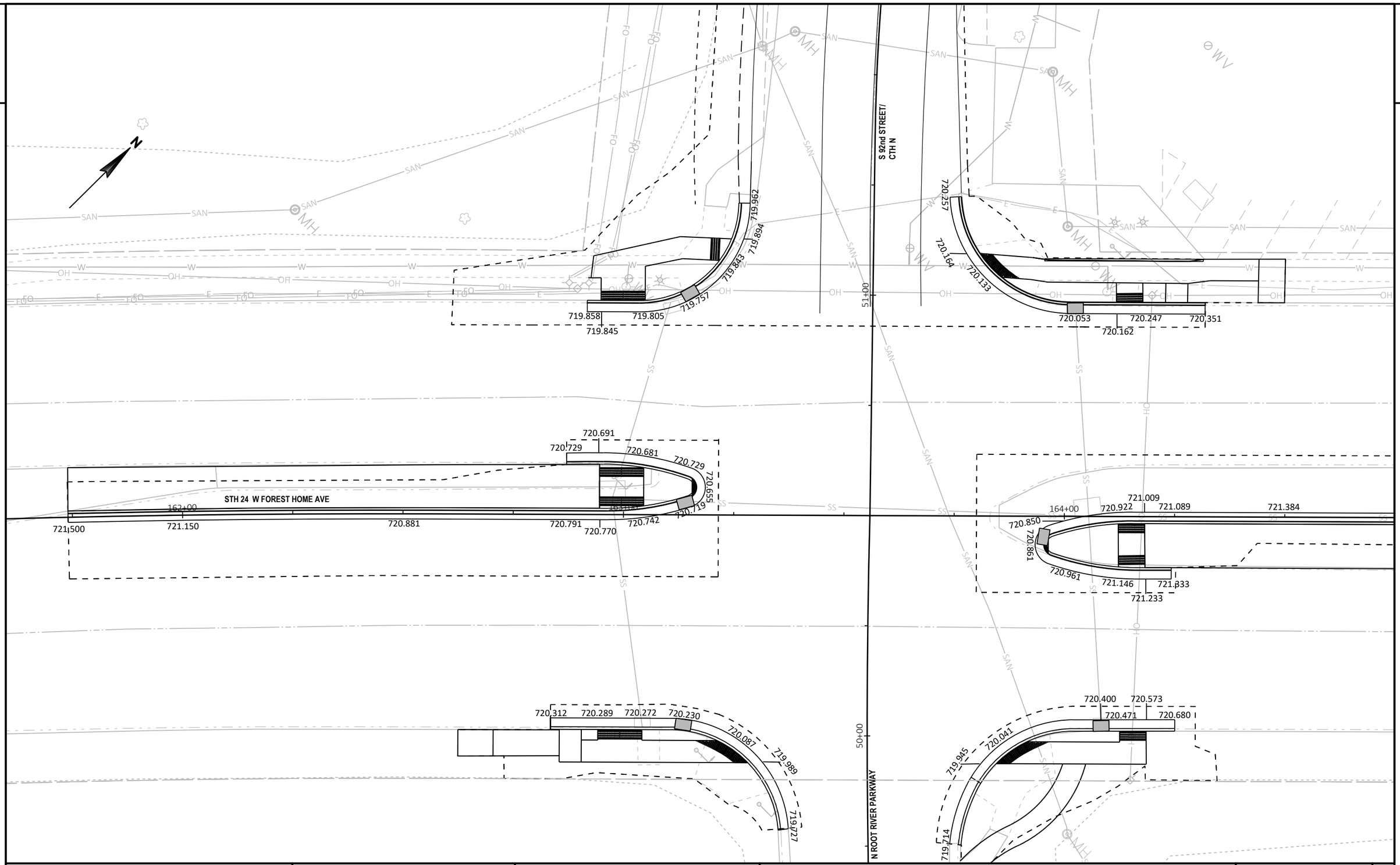
FILE NAME : N:\PDS\C3D\21201600\DESIGN\SURFACES\SIDEWALK WITH REV CURB STUBS.DWG
LAYOUT NAME - sw_03
PLOT DATE : 1/7/2019 12:38 PM
PLOT BY : MARSHALL, DAWN L
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



POINT TABLE			
POINT NAME	Y	X	ELEVATION
99	267716.352	574432.716	719.99
100	267714.486	574430.850	719.94
101	267716.141	574425.424	720.09
102	267713.475	574422.757	720.09
103	267713.930	574430.297	719.99
104	267712.527	574421.827	720.26
105	267711.138	574420.441	720.20
106	267707.605	574423.978	720.14
107	267703.452	574419.829	720.21
108	267706.978	574416.290	720.42
109	267700.460	574409.786	720.33
110	267696.905	574413.311	720.31
111	267702.128	574408.118	720.37
112	267702.593	574407.664	720.19
113	267704.008	574406.250	720.27
114	267696.916	574399.166	720.29
115	267695.503	574400.581	720.21
116	267695.076	574401.008	720.25
117	267693.393	574402.710	720.39
118	267689.870	574406.272	720.46

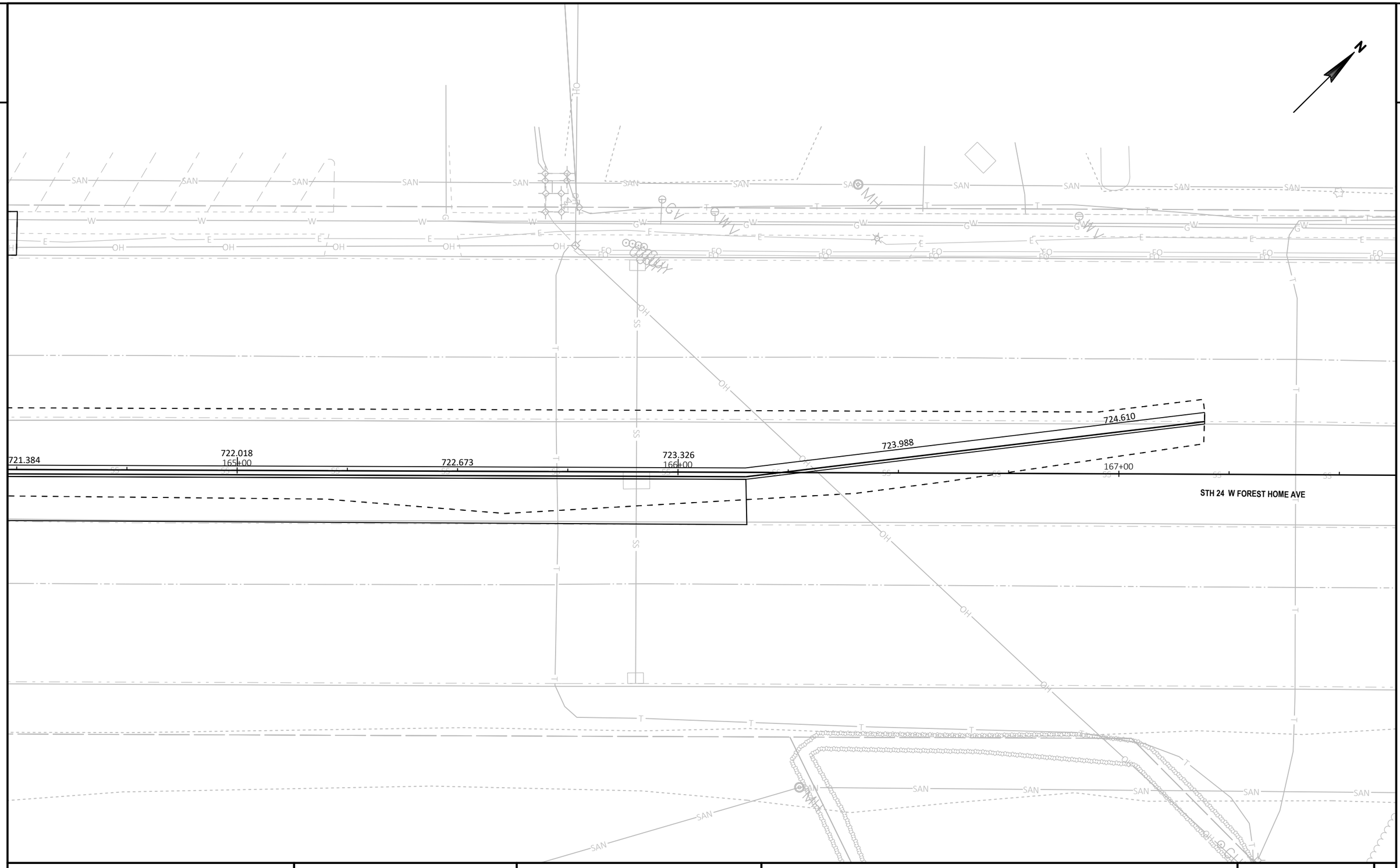
POINT TABLE			
POINT NAME	Y	X	ELEVATION
119	267687.213	574403.607	720.52
120	267690.746	574400.070	720.51
121	267692.369	574398.445	720.51
122	267688.823	574394.920	720.60
123	267684.676	574399.072	720.64
124	267683.675	574400.074	720.65
125	267673.994	574388.540	720.77
126	267678.202	574384.328	720.66
127	267672.538	574378.679	720.69
128	267668.301	574382.927	720.82

2



PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PAVEMENT GRADES	SHEET 19	E

2



PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PAVEMENT GRADES	SHEET 20	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\021301_GD.DWG
LAYOUT NAME - 02_GD

PLOT DATE : 1/8/2019 12:01 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2

WETLAND

WETLAND

ROOT RIVER

WETLAND

WETLAND

WETLAND

ROOT RIVER

53+00

52+00

51+00

50+00

49+00

N ROOT RIVER PARKWAY

S 92nd STREET/ CTH V

160+00

161+00

162+00

164+00

165+00

166+00

BEGIN PROJECT
STA 161+74.02

END PROJECT
STA 167+19.40

STH 24 W FOREST HOME AVE

N

LEGEND

- INLET PROTECTION, TYPE B
- EROSION MAT, CLASS I URBAN, TYPE A
- SILT FENCE
- SURFACE WATER FLOW

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET 21	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 01_EC

PLOT DATE : 1/8/2019 12:14 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

S 92nd ST
CTH N

N ROOT RIVER PKWY

STH 24 W FOREST HOME AVE

P-A
3 STA 163+14.9, 51.0' LT
INLETS 2x2.5-S

1 STA 163+95.3, 4.7' RT
INLETS 2x2.5-S

2 STA 163+14.0, 3.4' LT
INLETS 2x2.5-S

P-B
4 STA 163+13.9, 48.3' RT
INLETS 2x2.5-S

151+00

50+00

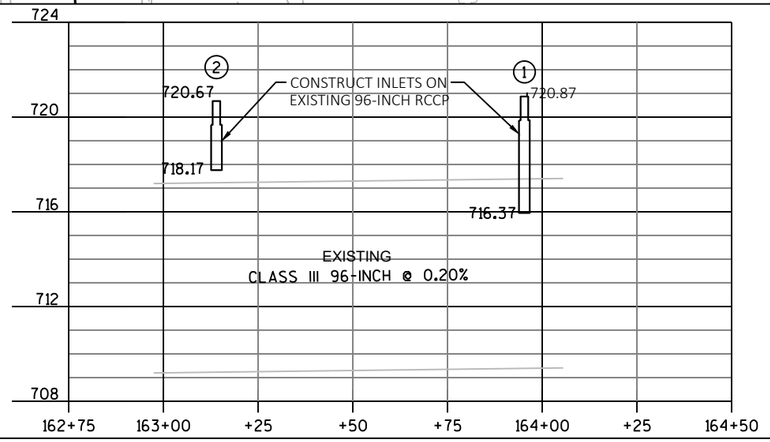
162+00

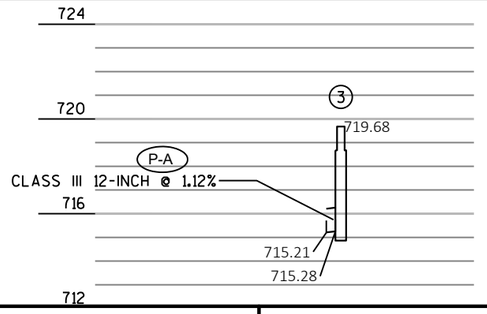
164+00

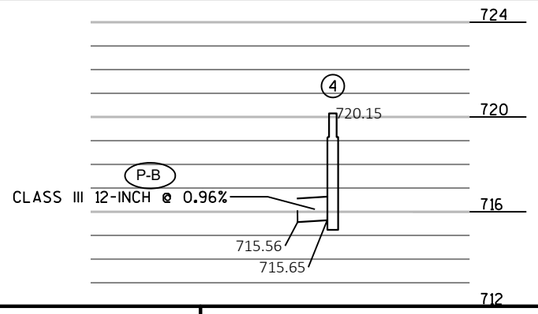
165+00

166+00

167+00







PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	STORM SEWER	SHEET 22	E

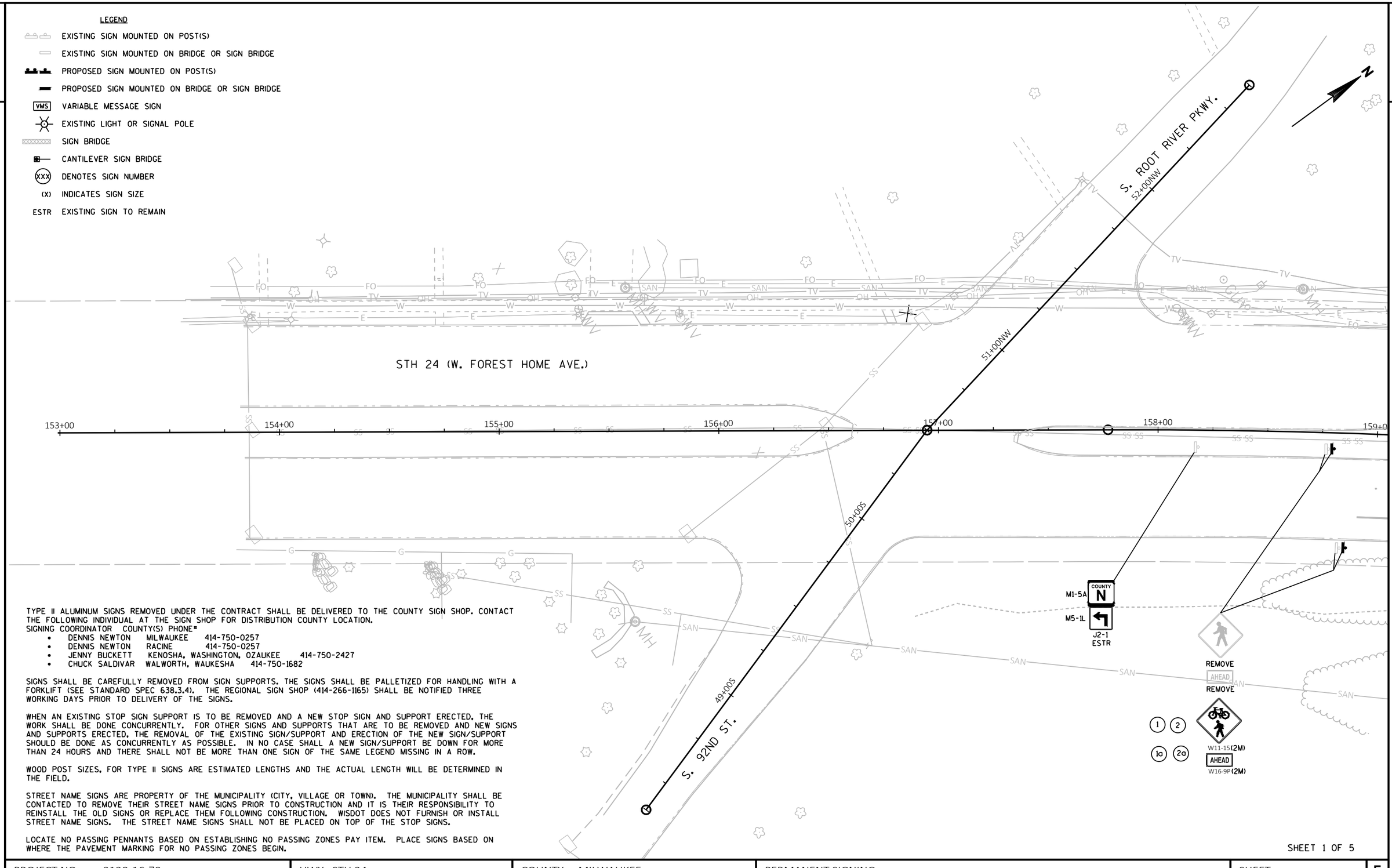
FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\022501_SS.DWG
LAYOUT NAME - 01_ss

PLOT DATE : 1/8/2019 12:19 PM PLOT BY : SCHMIDT, JUDENE M 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
- ESTR — EXISTING SIGN TO REMAIN



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

SIGNING COORDINATOR COUNTY(S) PHONE#

- DENNIS NEWTON MILWAUKEE 414-750-0257
- DENNIS NEWTON RACINE 414-750-0257
- JENNY BUCKETT KENOSHA, WASHINGTON, OZAUKEE 414-750-2427
- CHUCK SALDIVAR WALWORTH, WAUKESHA 414-750-1682

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

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

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

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

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

SHEET 1 OF 5

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 23	E

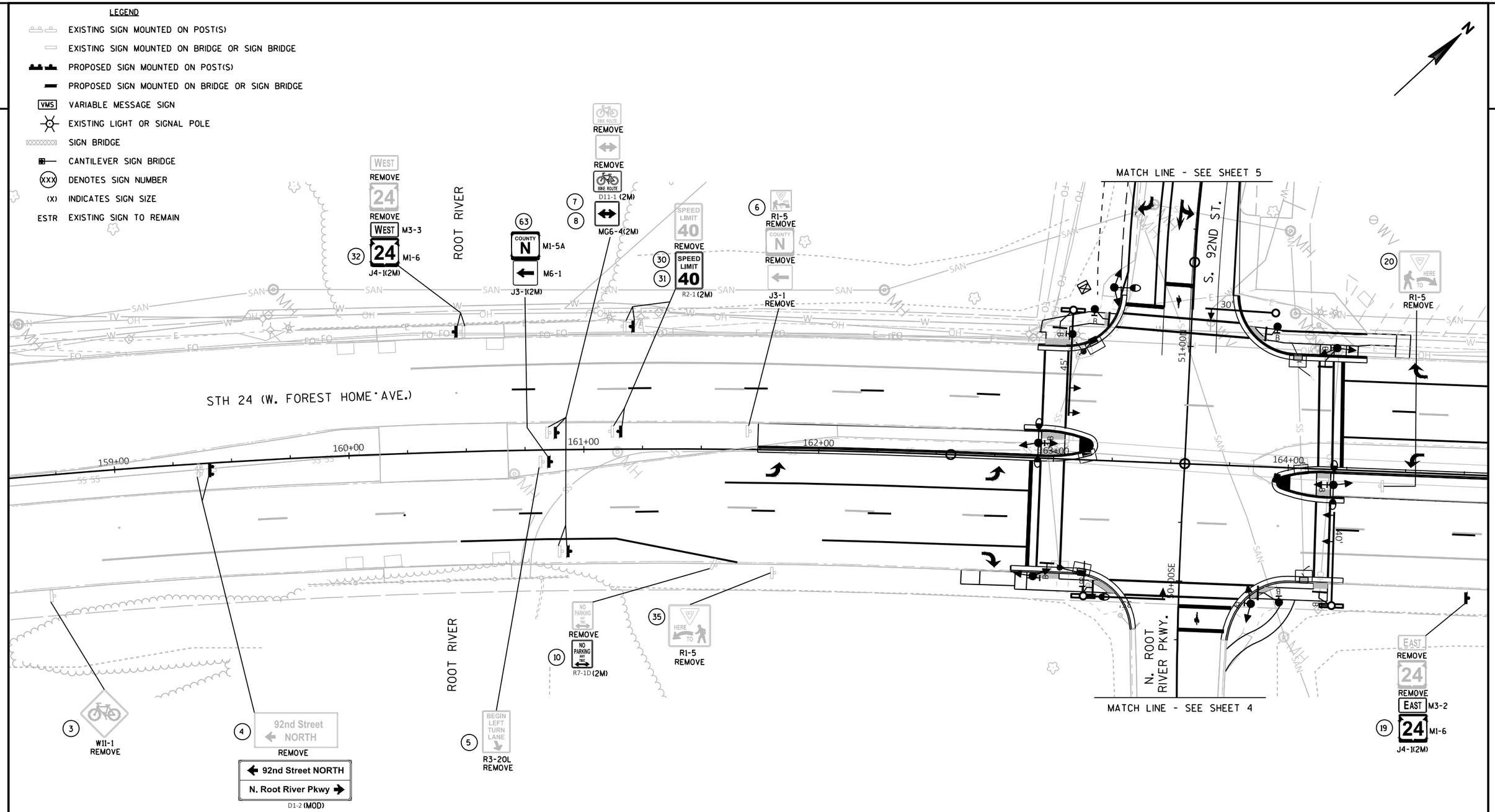
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LAYOUT NAME - 023201_ps

PLOT DATE : 1/9/2019 7:47 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
- ESTR — EXISTING SIGN TO REMAIN



SHEET 2 OF 5

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 24	E

FILE NAME : N:\PDS\C3D\CAD\21201600\SIGN\023201_PS_16.DWG
LAYOUT NAME - 023202_ps

PLOT DATE : 1/9/2019 7:47 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

LEGEND

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

STH 24 (W. FOREST HOME AVE.)

S. 92ND ST.

N. ROOT RIVER PKWY.

162+00

164+00

51+00N

50+00SE

45'

30'

40'

(43) STOP R1-1F (2M) ON SIGNAL POLE

(44) DIVIDED HIGHWAY R6-3 (2M) ON SIGNAL POLE

(29) REMOVE TURNING VEHICLES TO R10-15R (2M)

(46) STOP REMOVE; DIVIDED HIGHWAY REMOVE

(27) W11-2 REMOVE; W16-7L REMOVE; RECTANGULAR RAPID FLASH BEACON; REMOVE ON TYPE 1 POLE

(48) PUSH BUTTON TO TURN ON WARNING LIGHTS R9-5 REMOVE ON TYPE 1 POLE TURN OVER TO CITY OF GREENFIELD

(28) REMOVE W11-2; RECTANGULAR RAPID FLASH BEACON; REMOVE; W16-7R REMOVE; PUSH BUTTON TO TURN ON WARNING LIGHTS R9-5 REMOVE ON TYPE 1 POLE TURN OVER TO CITY OF GREENFIELD

(47) N. Root River Pkwy / S. 92nd St M1-94H (MOD) ON SIGNAL ARM

(45) 24 M1-6; M6-4 J3-1(2S)

(66) (67) ONE WAY R6-2-L (2M) ON SIGNAL POLE

(23) (24) REMOVE; R4-7 (2M) ON SIGNAL POLE

(25) MOVE* R9-5 (FWHA PLATE) By County (County Sign) CONTACT BRAD DREFCINSKI 414-257-4772

(26) USE CROSSWALK REMOVE

STREET NAME SIGN MOVE BY OTHERS (CITY)

REMOVE BY OTHERS (BUS COMPANY)

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

(21) R9-5 REMOVE

(41) (42) STOP R1-1F (2M) ON SIGNAL POLE

(33) (34) STOP R1-1F (2M) ON SIGNAL POLE

(39) (40) LEFT TURN YIELD ON FLASHING YELLOW ARROW R10-5OL (2M) ON SIGNAL POLE

(11) PUSH BUTTON TO TURN ON WARNING LIGHTS R9-5 REMOVE ON TYPE 1 POLE

(12) W11-2 REMOVE; RECTANGULAR RAPID FLASH BEACON TURN OVER TO CITY OF GREENFIELD; W16-7L REMOVE; PUSH BUTTON TO TURN ON WARNING LIGHTS R9-5 REMOVE ON TYPE 1 POLE

(14) (14a) W11-15 (2M); W16-7L (2M)

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

BUS STOP REMOVE BY OTHERS (BUS COMPANY)

ESTR Root River Pkwy (County Park Wood Sign)

(13) PUSH BUTTON TO TURN ON WARNING LIGHTS REMOVE ON TYPE 1 POLE

(36) (64) (24) W. Forest Home Ave M1-94S ON SIGNAL ARM

(38) S. 92nd St / N. Root River Pkwy M1-94H (MOD) ON SIGNAL ARM

(37) 24 M1-6; M6-4 J3-1(2S)

(68) STOP HERE ON RED R10-6 (2S); (68A) EXCEPT Bicycles (SEE DETAIL)

(18) STOP REMOVE; DIVIDED HIGHWAY REMOVE

(16) (17) STOP R1-1F (2M); DIVIDED HIGHWAY R6-3 (2M) ON SIGNAL POLE

MOVE* By County (County Sign) CONTACT BRAD DREFCINSKI 414-257-4772

SHEET 2A OF 5

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 25	E

FILE NAME : N:\PDS\C3D\CAD\21201600\SIGN\023201_PS_16.DWG
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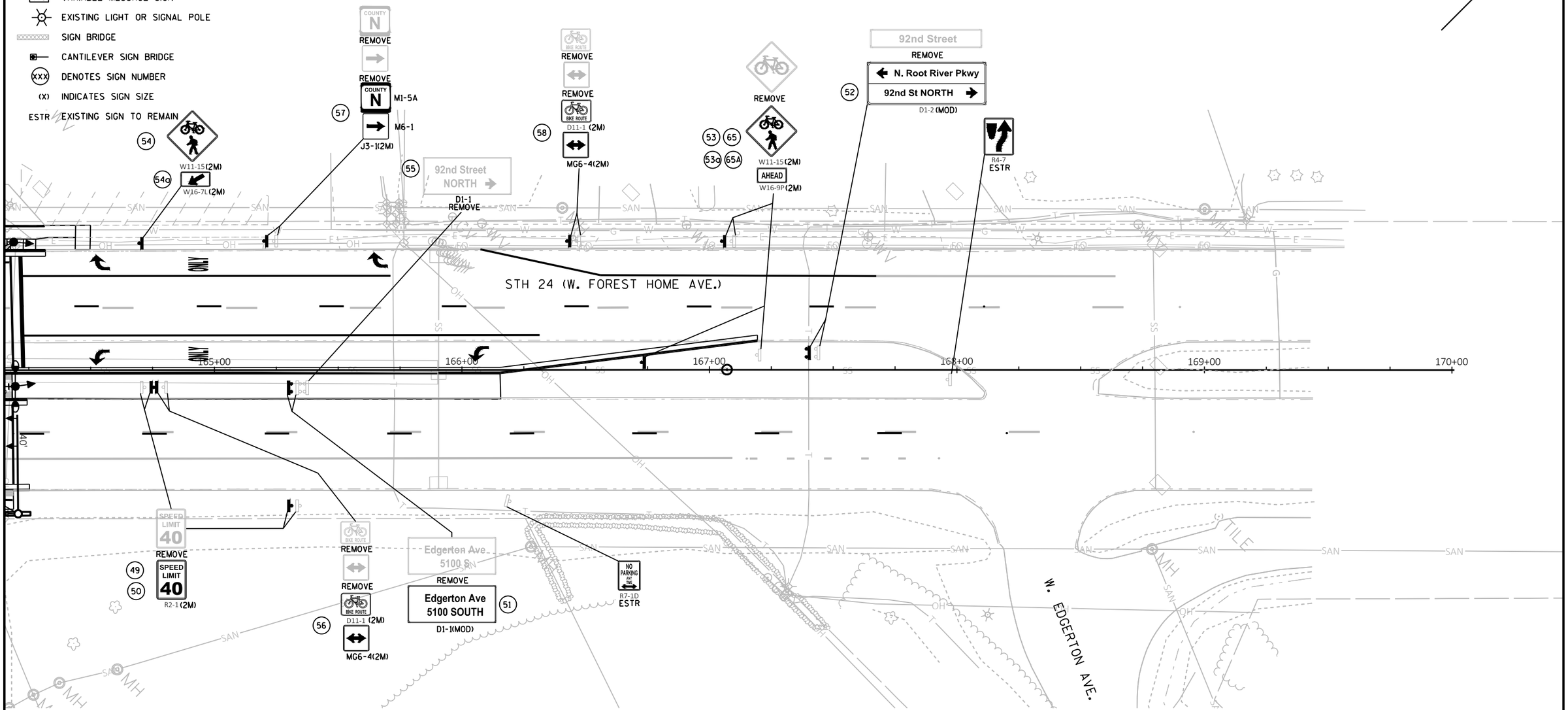
PLOT DATE : 1/9/2019 7:47 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:20 FT

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
- ESTR — EXISTING SIGN TO REMAIN



SHEET 3 OF 5

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 26	E

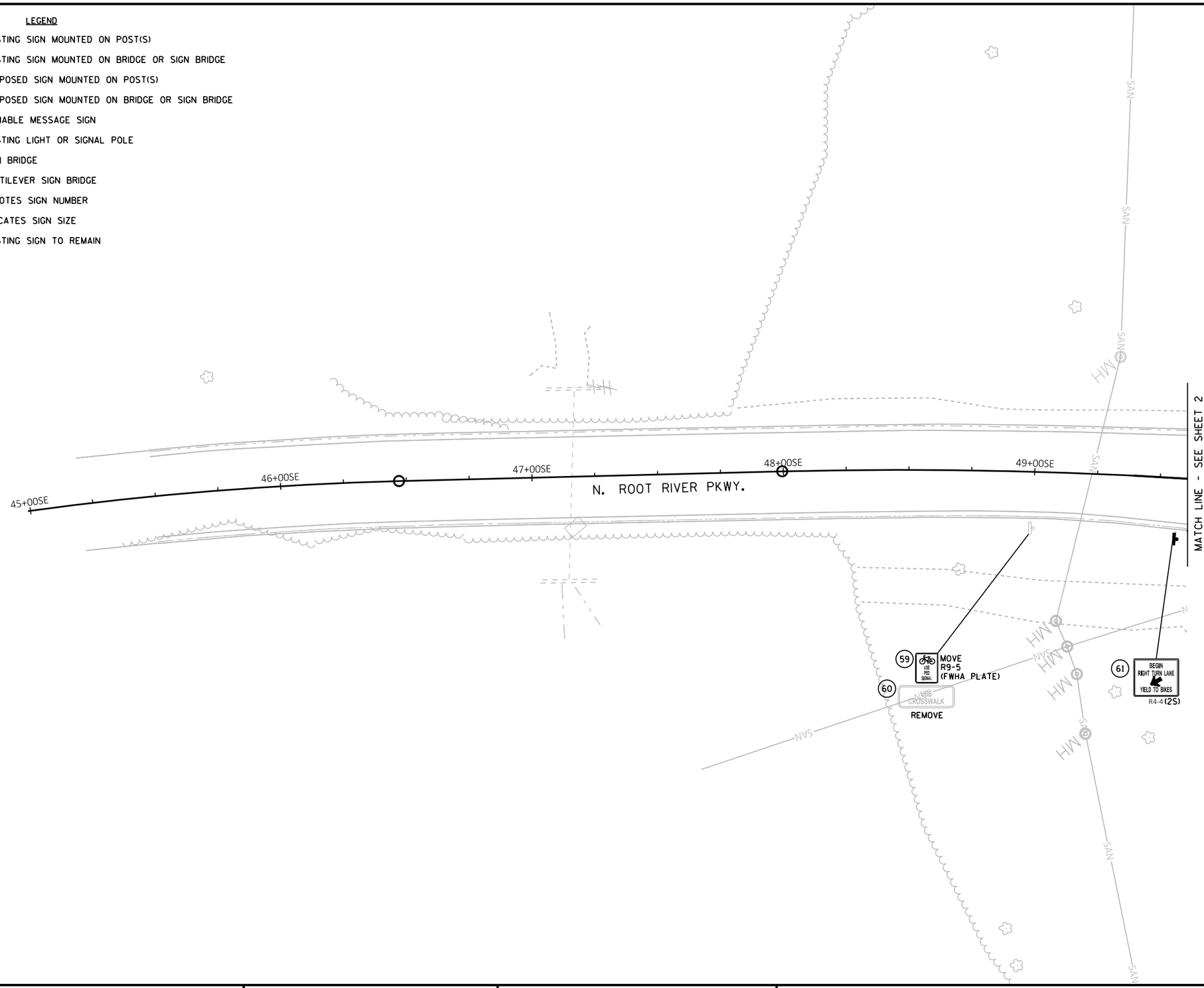
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LAYOUT NAME - 023203_ps

PLOT DATE : 1/9/2019 7:47 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
- ESTR — EXISTING SIGN TO REMAIN



SHEET 4 OF 5

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 27	E

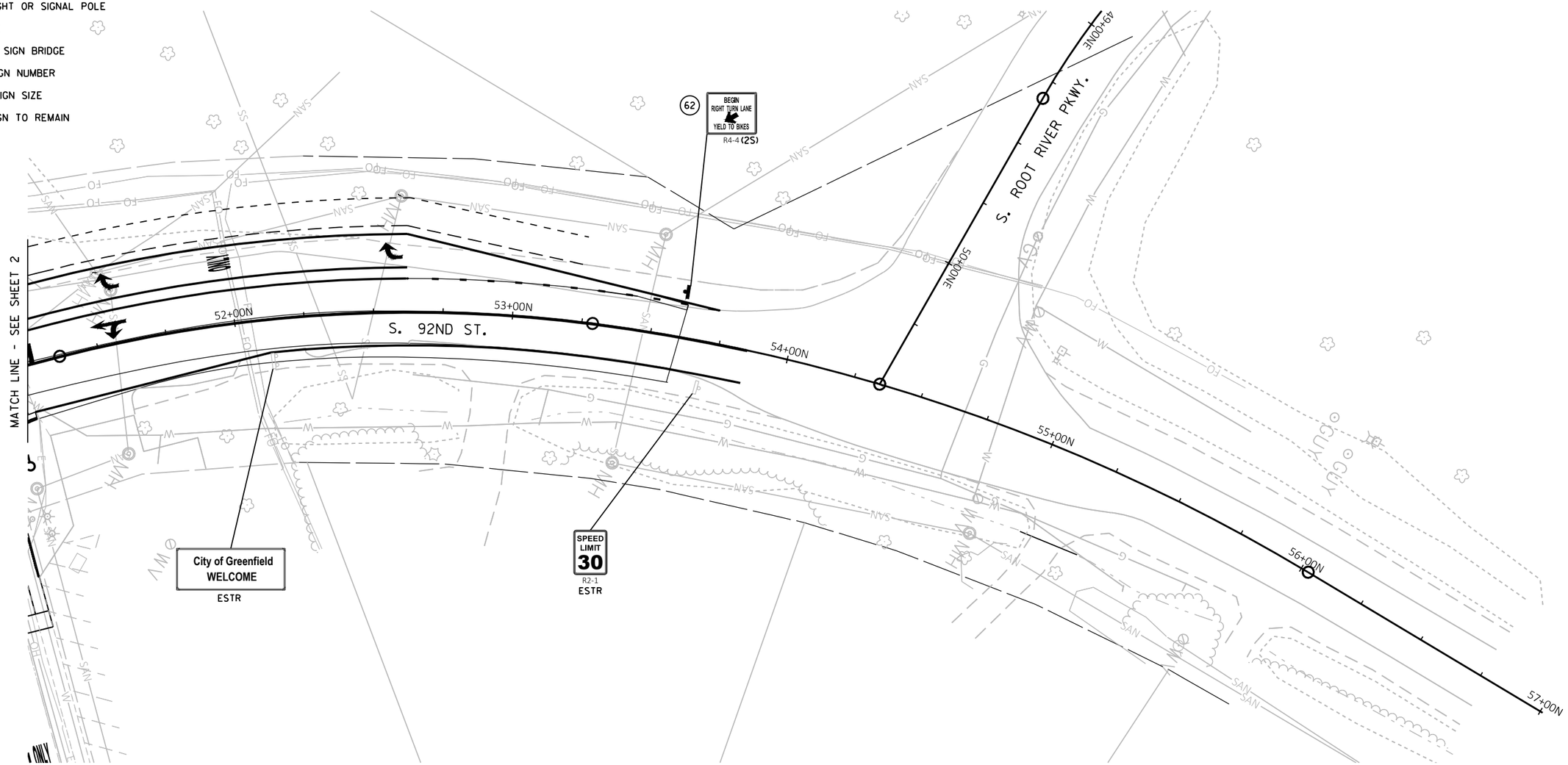
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LAYOUT NAME - 023204_ps
PLOT DATE : 1/9/2019 7:47 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

LEGEND

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



SHEET 5 OF 5

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 28	E

FILE NAME : N:\PDS\C3D\CAD\21201600\SIGN\023201_PS_16.DWG
LAYOUT NAME - 023205_ps

PLOT DATE : 1/9/2019 7:47 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

NOTES:

- LIGHTING CONTROL CABINET LOCATED IN THE SW QUADRANT OF STH 24 & WOODLAWN PLACE.
- COORDINATE ALL LIGHTING WORK AND LIGHT UNIT REMOVAL BY OTHERS WITH THE CITY OF GREENFIELD A MINIMUM OF 5 DAYS PRIOR TO BEGINNING WORK.

LIGHTING UNIT TO BE REMOVED BY OTHERS
REMOVE CONCRETE BASE

EXISTING 3" STEEL CONDUIT TO REMAIN

DIRECT BURY CID

SPEED LIMIT= 25 MPH

S. 92ND STREET

52+00N

51+00N

50+00SE

49+00SE

LP1

LP2

LP3

R/W

SPEED LIMIT= 40 MPH

STH 24 (W. FOREST HOME AVE.)

161+00

162+00

163+00

164+00

165+00

166+00

N. ROOT RIVER PKWY

SPEED LIMIT= 25 MPH

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN	SHEET 29	E

FILE NAME : N:\PDS\C3D\CAD\21201600\LTG\023501_LP.DWG
LAYOUT NAME - 023501_LP

PLOT DATE : 12/4/2018 7:35 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

NOTES:

- LIGHTING CONTROL CABINET LOCATED IN THE SW QUADRANT OF STH 24 & WOODLAWN PLACE.
- COORDINATE ALL LIGHTING WORK WITH THE CITY OF GREENFIELD A MINIMUM OF 5 DAYS PRIOR TO BEGINNING WORK.

S. 92ND STREET

SPEED LIMIT= 25 MPH

52+00N

51+00N

50+00SE

49+00SE

N. ROOT RIVER PKWY

SPEED LIMIT= 25 MPH

REUSE EXISTING 3" STEEL CONDUIT

2-#4 CID DIRECT BURY

LP3

LP1

R/W

SPEED LIMIT= 40 MPH

STH 24 (W. FOREST HOME AVE.)

161+00

162+00

163+00

164+00

165+00

166+00

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	LIGHTING PROPOSED PLAN	SHEET 30	E

FILE NAME : N:\PDS\C3D\CAD\21201600\LTG\023601_LP.DWG
LAYOUT NAME - 023601_LP

PLOT DATE : 12/4/2018 10:49 AM PLOT BY : WAGNER, SCOTT H PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

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. SB13 IS A TYPE 2 CONCRETE BASE WITH SPREAD FOOTING.

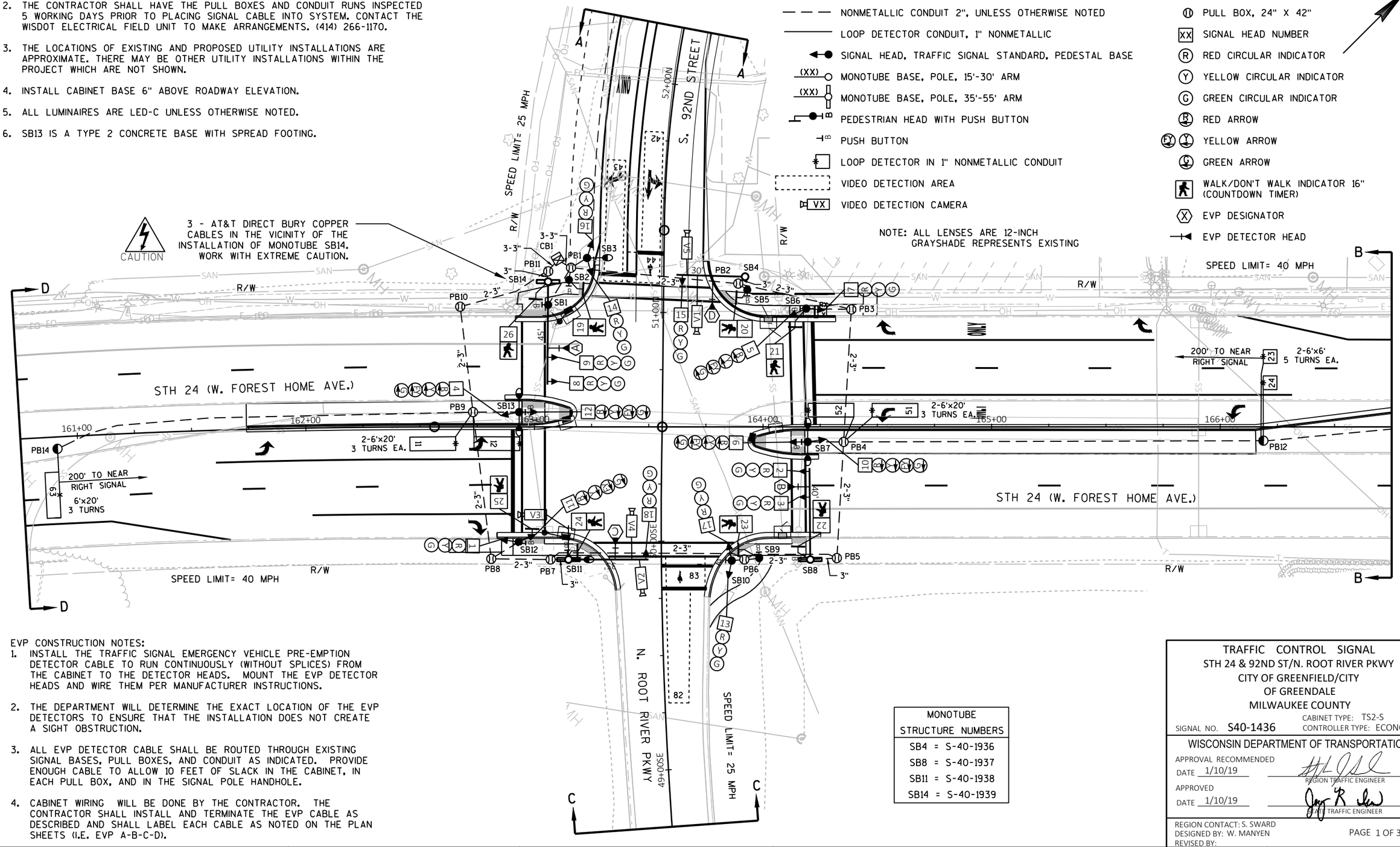
LEGEND

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

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

CAUTION

3 - AT&T DIRECT BURY COPPER CABLES IN THE VICINITY OF THE INSTALLATION OF MONOTUBE SB14. WORK WITH EXTREME CAUTION.



EVP CONSTRUCTION NOTES:

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

MONOTUBE STRUCTURE NUMBERS
SB4 = S-40-1936
SB8 = S-40-1937
SB11 = S-40-1938
SB14 = S-40-1939

TRAFFIC CONTROL SIGNAL
STH 24 & 92ND ST/N. ROOT RIVER PKWY
CITY OF GREENFIELD/CITY
OF GREENDALE
MILWAUKEE COUNTY

CABINET TYPE: TS2-S
SIGNAL NO. S40-1436 CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
DATE 1/10/19 REGION TRAFFIC ENGINEER

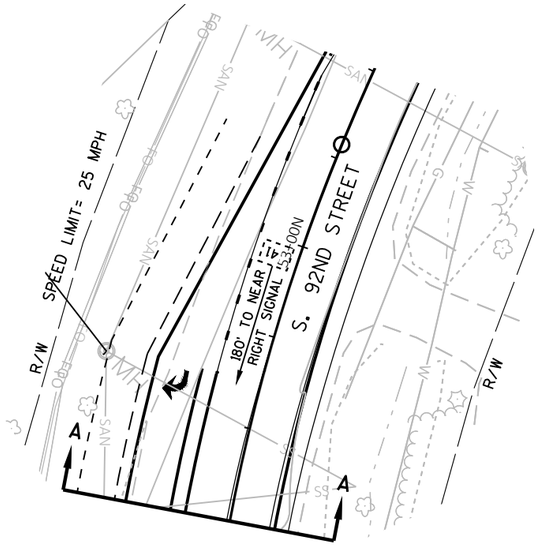
APPROVED
DATE 1/10/19 STATE TRAFFIC ENGINEER

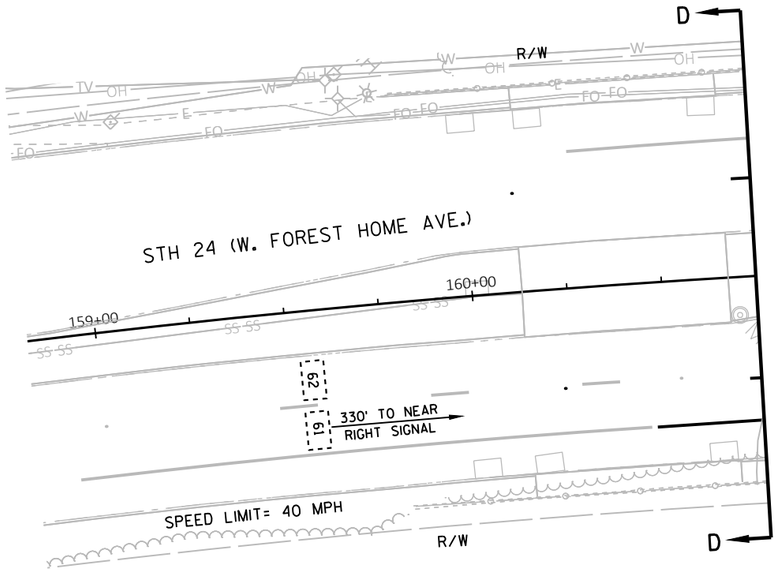
REGION CONTACT: S. SWARD
DESIGNED BY: W. MANYEN
REVISED BY:

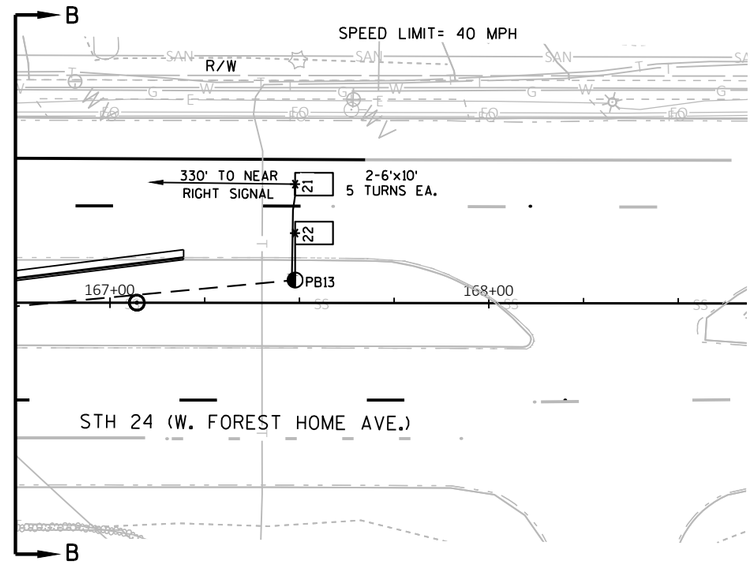
PAGE 1 OF 3

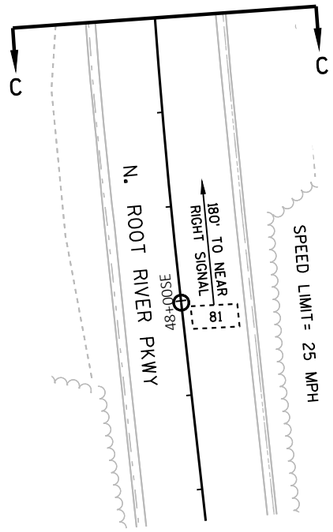
PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 31	E

FILE NAME : N:\PDS\C3D\CAD\21201600\SIG\S40-1436\S40-1436_16.DWG
LAYOUT NAME - S40-1436_PG1
PLOT DATE : 1/14/2019 6:39 AM PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME : PLOT SCALE : 1 IN:40 FT









TRAFFIC CONTROL SIGNAL
STH 24 & 92ND ST/N ROOT RIVER PKWY
CITY OF GREENFIELD/
CITY OF GREENDALE
MILWAUKEE COUNTY

SIGNAL NO. S40-1436

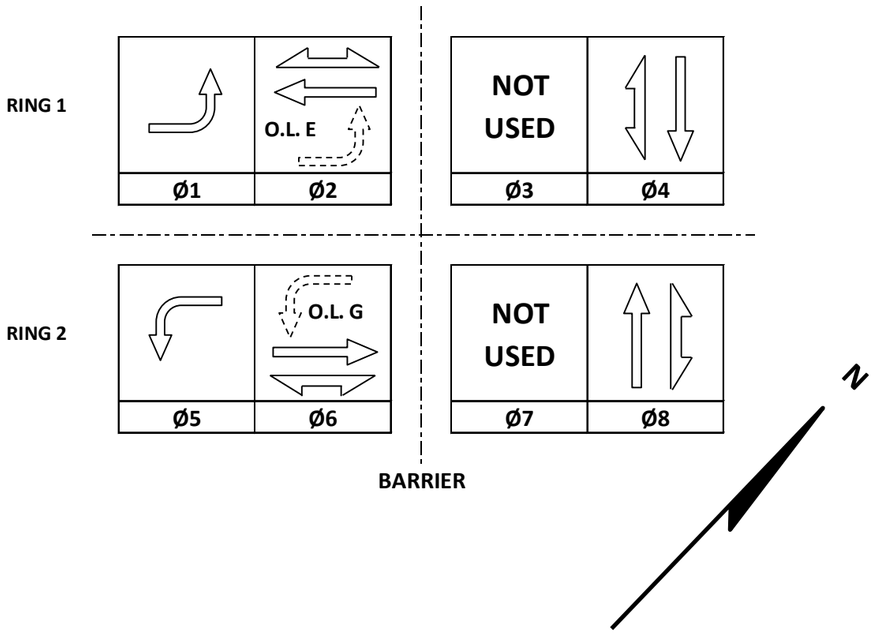
REGION CONTACT: S. SWARD
DESIGNED BY: W. MANYEN
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 32	E

FILE NAME : N:\PDS\C3D\CAD\21201600\SIG\S40-1436\S40-1436_16.DWG
LAYOUT NAME - S40-1436_PG2
PLOT DATE : 1/14/2019 6:39 AM
PLOT BY : VANDE LEEST, CYNTHIA
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

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



CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

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

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

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

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	X
IN SEPARATE DOT LIGHTING CABINET	

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	21	23	51	63			
CALLED PHASE	1	2	2	5	6			
CALL OPTION	X	X	X	X	X			
DELAY TIME								
EXTENTION OPTION	X	X	X	X	X			
EXTEND TIME								
USE ADDED INITIAL		X	X		X			
CROSS SWITCH PHASE	2			6				

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR*(S)	41	43	61	81	83			
CALLED PHASE	4	4	6	8	8			
CALL OPTION		X	X		X			
DELAY TIME		X			X			
EXTENTION OPTION	X	X	X	X	X			
EXTEND TIME	X			X				
USE ADDED INITIAL			X					
CROSS SWITCH PHASE								

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	12	22	24	52				
CALLED PHASE	1	2	2	5				
CALL OPTION	X	X	X	X				
DELAY TIME								
EXTENTION OPTION	X	X	X	X				
EXTEND TIME								
USE ADDED INITIAL		X	X					
CROSS SWITCH PHASE	2			6				

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR*(S)	42	44	62	82				
CALLED PHASE	4	4	6	8				
CALL OPTION	X	X	X	X				
DELAY TIME	X	X		X				
EXTENTION OPTION	X	X	X	X				
EXTEND TIME								
USE ADDED INITIAL			X					
CROSS SWITCH PHASE								

GENERAL NOTES:

1. VIDEO ZONES 44 AND 83 ARE FOR BIKE DETECTION.
2. PUSH BUTTON ON SB10 FOR BIKE DETECTION.

STH 24 & 92ND / N. ROOT RIVER PKWY
CITY OF GREENFIELD/CITY OF GREENDALE
MILWAUKEE COUNTY

SIGNAL NO: S40-1436	CABINET TYPE: TS2-S
	CONTROLLER TYPE: ECONOLITE
DATE: JAN 2019	PAGE NUMBER: 3 OF 3

PROJECT ID:	2120-16-70
INTERSECTION:	STH 24 & 92ND ST/N. ROOT RIVER PKWY

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

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

*Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications
*Ensure the grounded conductor in the feeder cable and the pole cables are both 18" longer than the ungrounded conductors.
*Reconnect the grounding conductors wherever the circuit has been interrupted to ensure the grounding circuit is complete.

2

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

Pull Box Bonding Jumper 10 AWG Green XLP	
From	To
PB1	CB1
PB2	SB4
PB3	SB6
PB4	SB7
PB5	SB8
PB6	SB10
PB7	SB11
PB8	SB11
PB9	SB13
PB10	SB14
PB11	SB14

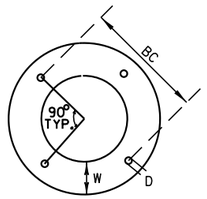
Lighting UF 2-10 AWG Grounded	
From	To
CB1	SB3
SB3	SB7
CB1	SB13
SB13	SB11

Emergency Vehicle Preemption	
From	To
CB1	SB1 (HEAD A)
CB1	SB8 (HEAD B)
CB1	SB11 (HEAD C)
CB1	SB4 (HEAD D)

Video Detection Cable	
From	To
CB1	SB4 (V1)
CB1	SB11 (V2)
CB1	SB11 (V3)
CB1	SB11 (V4)
CB1	SB4 (V5)

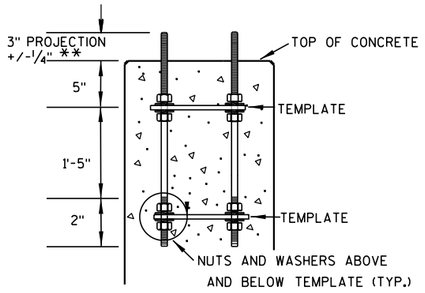
SPREAD FOOTING DIMENSIONS
STEEL AND CONCRETE QUANTITIES ARE APPROXIMATE

TYPE OF BASE	IF D =	THEN L=	401 HOOPS LBS.	402 VERTICAL BARS LBS.	602 VERTICAL BARS LBS.	403 HORIZ BARS LBS.	TOTAL LBS. STEEL	CONCR YDS.
TYPE 1	2'	5' 0"	8	7	-	36	51	1.9
TYPE 1	3'	4' 6"	12	13	-	36	61	1.6
TYPE 1	4'	4' 6'	8	18	-	36	62	1.6
TYPE 2 OR 5	2'	6' 6"	8	-	14	72	94	3.1
TYPE 2 OR 5	3'	6' 6"	12	-	26	72	110	3.2
TYPE 2 OR 5	4'	6' 0"	12	-	35	55	102	2.8
TYPE 2 OR 5	5'	6' 0"	15	-	44	55	114	2.9
TYPE 2 OR 5	6'	6' 0"	20	-	53	55	128	3.0



	TYPE 1	TYPE 2 OR 5
THICKNESS OF PLATE	½"	½"
BOLT CIRCLE "BC"	12.75"	11.50"
WIDTH "W"	3" +/-	3" +/-
HOLE DIAMETER "D"	1.125"	1.125"
ANCHOR ROD	1" X 2'-3"	1" X 2'-3"

ANCHOR ROD TEMPLATE



ANCHOR ROD ASSEMBLY

ANCHOR ROD SHALL BE ASTM A449/AASHTO M314-90 GR55
THREADED 12-INCH AT TOP; 4-INCH AT BOTTOM,
HOT-DIP GALVANIZED TO ASTM A153, GR C

REQUIRED:

2 TEMPLATES
4 ANCHOR RODS
16 FLAT WASHERS HOT-DIP GALVANIZED
16 HEAVY DUTY HEX NUTS* HOT-DIP GALVANIZED

*CHASE THREADS FOR HOT-DIP GALVANIZED ANCHOR RODS
** FAILURE TO MEET TOLERANCE CONDEMNS THE BASE

GENERAL NOTES

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

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

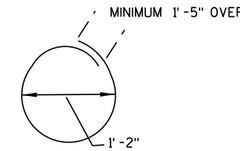
CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

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 AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X 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 NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.



(401) HOOP
QUANTITY VARIES

(402) OR (602) VERTICAL "D" - 4"
QUANTITY 6, LENGTH VARIES

(403) HORIZONTAL "L" - 6"
QUANTITY AND LENGTH VARY

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC 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 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2 AND TYPE 5 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES 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.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

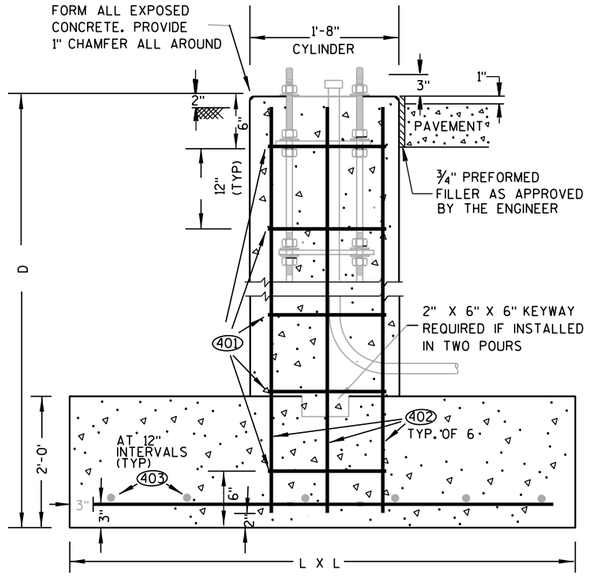
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL PER SECTION 5.17.6.3, AASHTO 2001 4TH EDITION STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS.

WELDING OF THE ANCHOR RODS TO THE CAGE OR TEMPLATE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

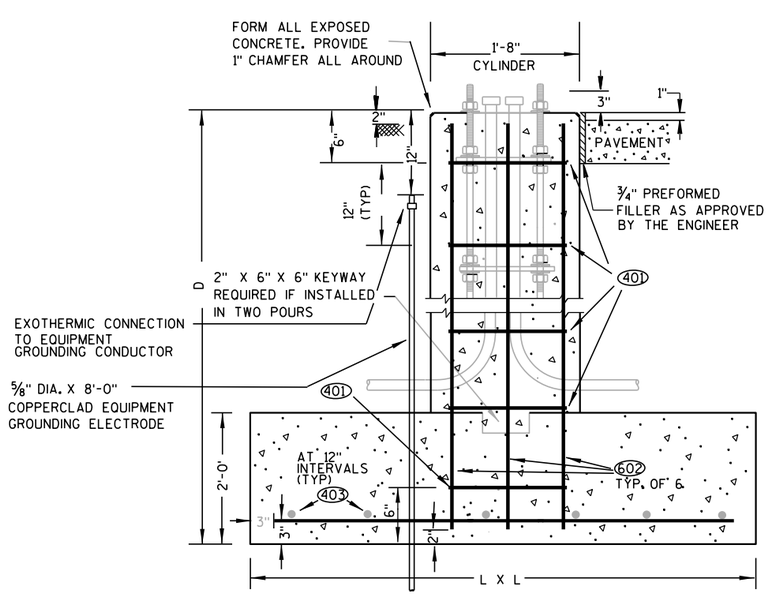
BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

CONDUIT SHOWN FOR ILLUSTRATION ONLY AND VARIES BY "D"

ANCHOR ROD PATTERN SHALL BE PARALLEL TO THE ROADWAY



SPREAD FOOTING
TYPE 1



SPREAD FOOTING
TYPE 2 OR 5

2

LEGEND

1. MARKING LINE EPOXY 4-INCH, YELLOW
2. MARKING LINE EPOXY 4-INCH, WHITE
3. MARKING LINE EPOXY 8-INCH, WHITE
4. MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH 12.5' LINE / 37.5' GAP, WHITE
5. MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 8-INCH, WHITE
6. MARKING ARROW EPOXY TYPE 2
7. MARKING ARROW EPOXY TYPE 3
8. MARKING SYMBOL EPOXY (BICYCLE DETECTION SYMBOL)
9. MARKING STOP LINE EPOXY 18-INCH
10. MARKING CROSS WALK EPOXY TRANSVERSE LINE 6-INCH
11. MARKING WORD EPOXY
12. MARKING ISLAND NOSE EPOXY
13. MARKING CURB EPOXY

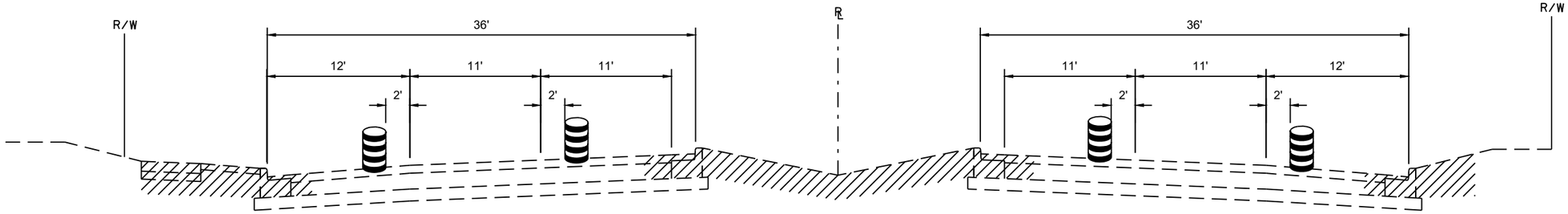
N

+85.28, 0.25' RT
+85.28, 12.00' RT
+72.48, -12.00' LT
S 92nd STREET/ CTH N
3' LINE 9' GAP
DOUBLE YELLOW
53+00
52+00
51+00
50+00
49+00
+62.19, -28.00' LT
+62.15, -16.00' LT
+61.82, -12.00' LT
+11.85, 12.00' RT
12'
11'
13'
+07.52, -48.67' LT
+55.88, -38.19' LT
+67.34, -37.78' LT
+71.14, -38.00' LT
+31.42, -14.00' LT
161+00
162+00
163+00
164+00
165+00
166+00
167+00
168+00
STH 24 W FOREST HOME AVE
+60.22, 14.17' RT
+02.26, 38.17' RT
+46.51, 38.17' RT
+13.35, 38.11' RT
+65.83, 48.11' RT
DOUBLE YELLOW
+39.31, 0.00'
N ROOT RIVER PARKWAY

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET 37	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\024501_PM.DWG
LAYOUT NAME - 01_PM
PLOT DATE : 1/11/2019 1:45 PM
PLOT BY : SCHMIDT, JUDENE M
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

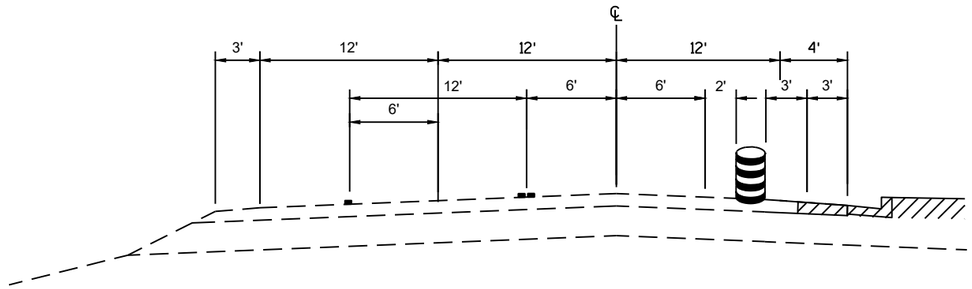
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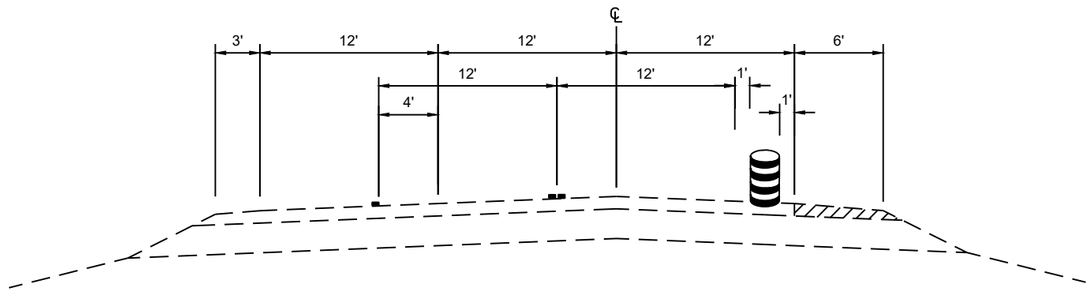
TRAFFIC CONTROL STH 24
STAGE 1 & 2

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SHEET 38	E

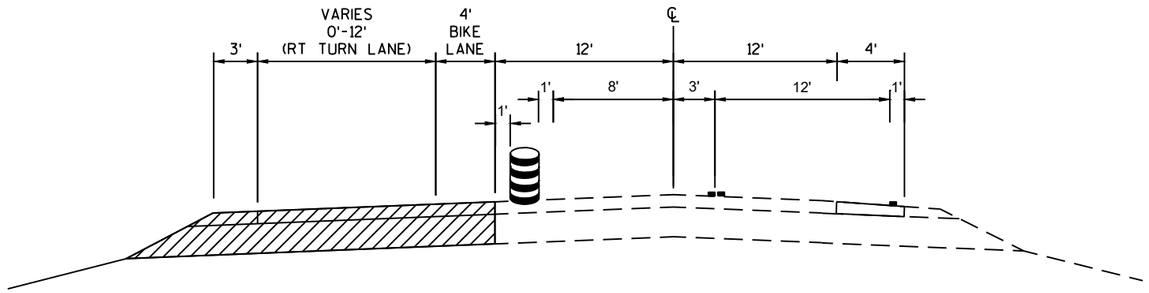
2



TRAFFIC CONTROL - CTH N (92nd STREET)
STAGE 1
STA 50+90 TO STA 51+25



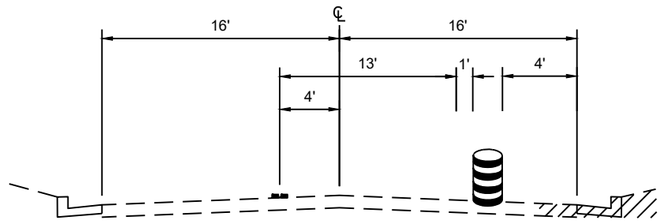
TRAFFIC CONTROL - CTH N (92nd STREET)
STAGE 1
STA 51+25 TO STA 53+60



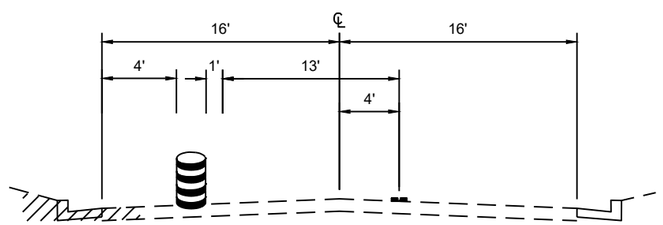
TRAFFIC CONTROL - CTH N (92nd STREET)
STAGE 2

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SHEET 39	E

2



TRAFFIC CONTROL - NORTH ROOT RIVER PARKWAY
STAGE 1



TRAFFIC CONTROL - NORTH ROOT RIVER PARKWAY
STAGE 2

2

LEGEND

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

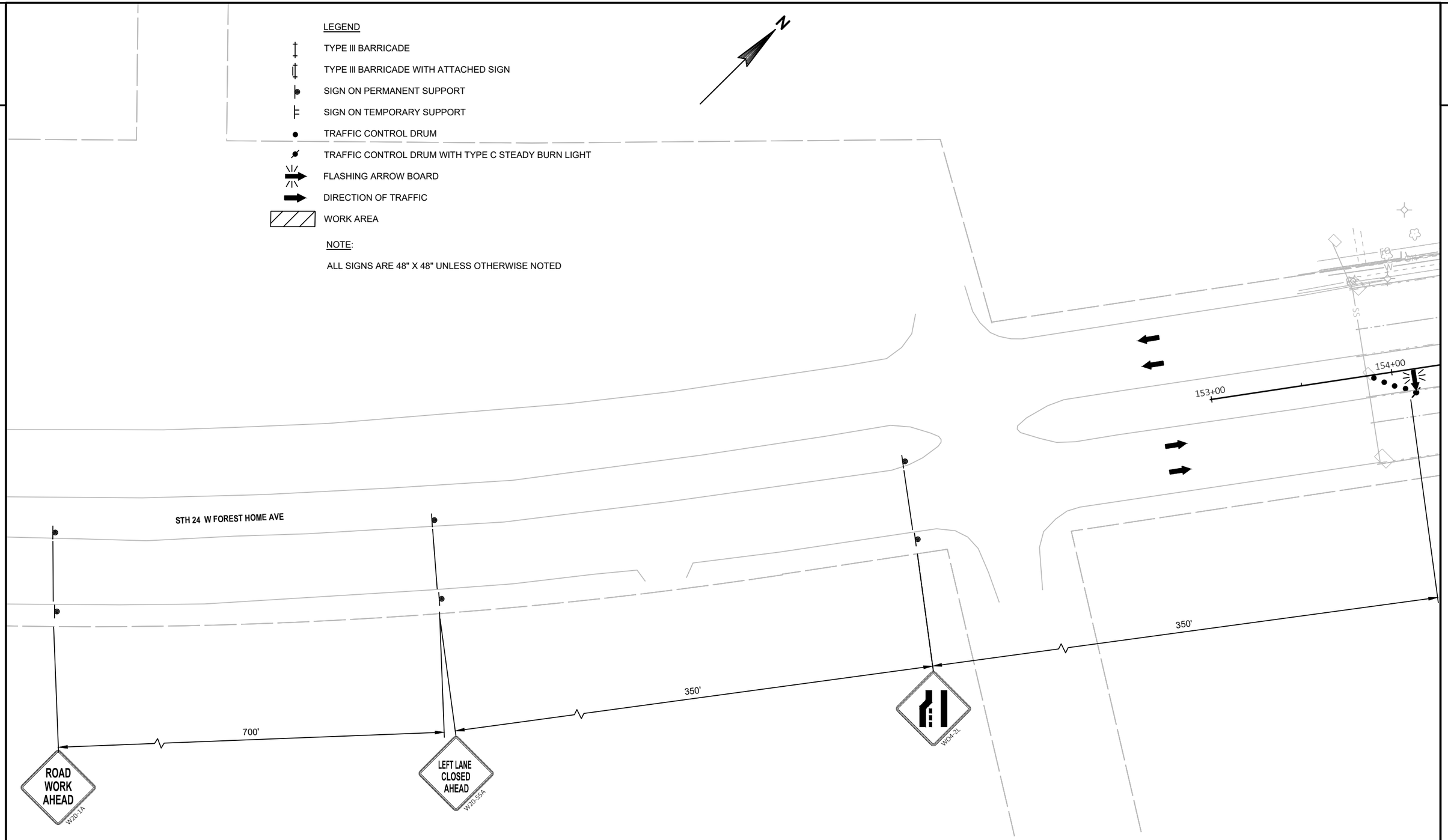
FLASHING ARROW BOARD

DIRECTION OF TRAFFIC

WORK AREA

NOTE:

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED



PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1	SHEET 41	E

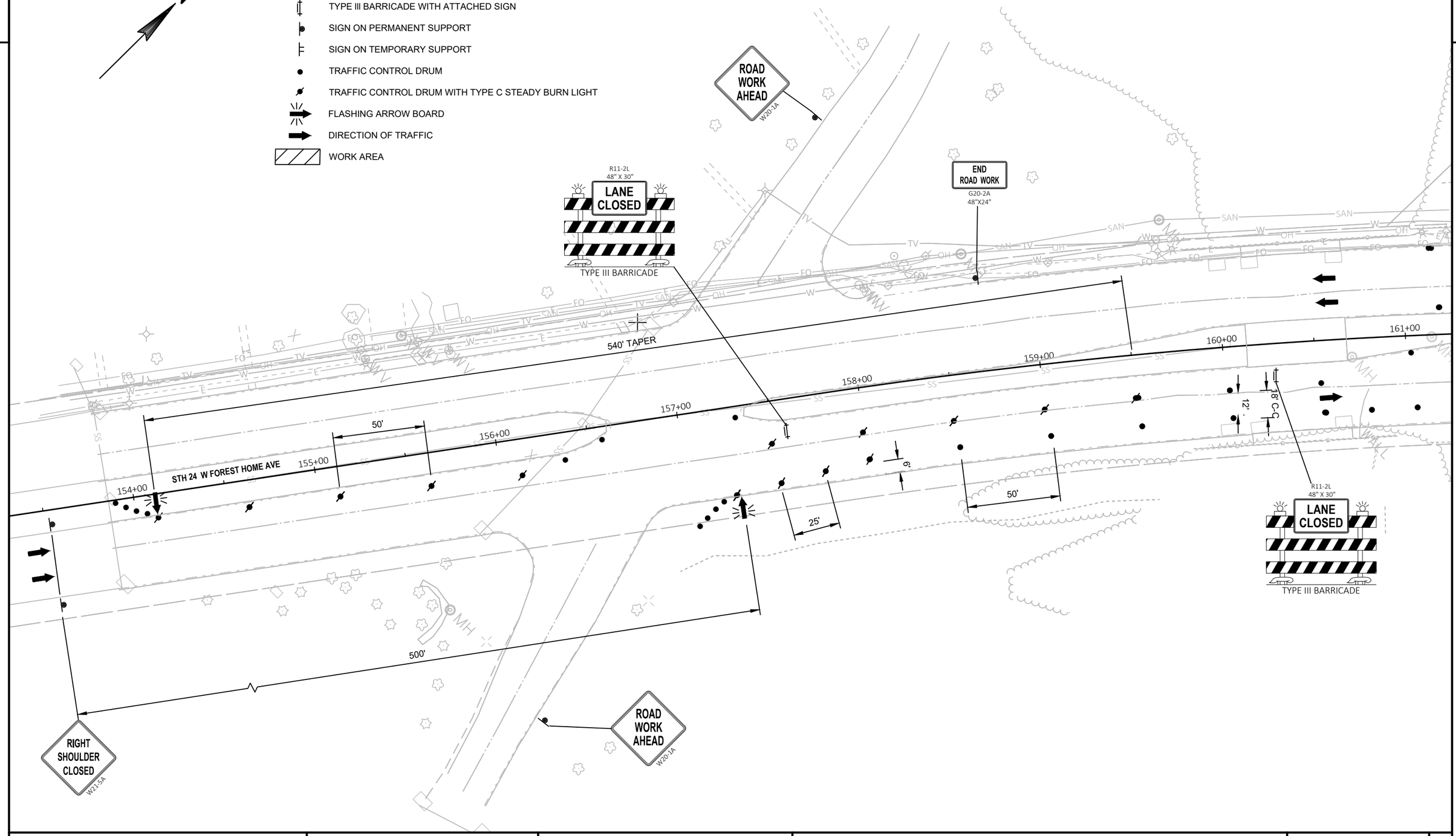
2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

NOTE:

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED



PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1	SHEET 42	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\027000_S1.DWG
LAYOUT NAME - 00_s1

PLOT DATE : 1/10/2019 11:10 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

S 92nd STREET

STH 24 W FOREST HOME AVE

N ROOT RIVER PARKWAY

R11-2 MOD
48"X30"
SHOULDER CLOSED
TYPE III BARRICADE

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

R11-2 MOD
48"X30"
SHOULDER CLOSED
TYPE III BARRICADE

BEGIN BUS LANE
36"X30"
TYPE III BARRICADE

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

R9-9
30" X 18"
SIDEWALK CLOSED
TYPE II BARRICADE

R3-2
24"X24"

SEE PEDESTRIAN TRAFFIC CONTROL STAGE 1A AND 1

TEMPORARY BUS STOP

R3-2
24"X24"

R7-7D
18"X24"

R7-7D
18"X24"

R7-7D
18"X24"

100' TAPER

25'

12'

15'

6'

9'

10'

52+00

51+00

50+00

49+00

400'

300'

161+00

162+00

163+00

164+00

165+00

166+00

167+00

168+00

8' C-C

LEFT TURN LANE
R3-55L
24"X36"

R11-2 MOD
48"X30"
SHOULDER CLOSED
TYPE III BARRICADE

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

SIDEWALK CLOSED CROSS HERE
R9-11A
48"X24"

R11-2 MOD
48"X30"
SHOULDER CLOSED
TYPE III BARRICADE

END ROAD WORK
G20-2A
48"X24"

ROAD WORK AHEAD
W20-1A

NOTE:

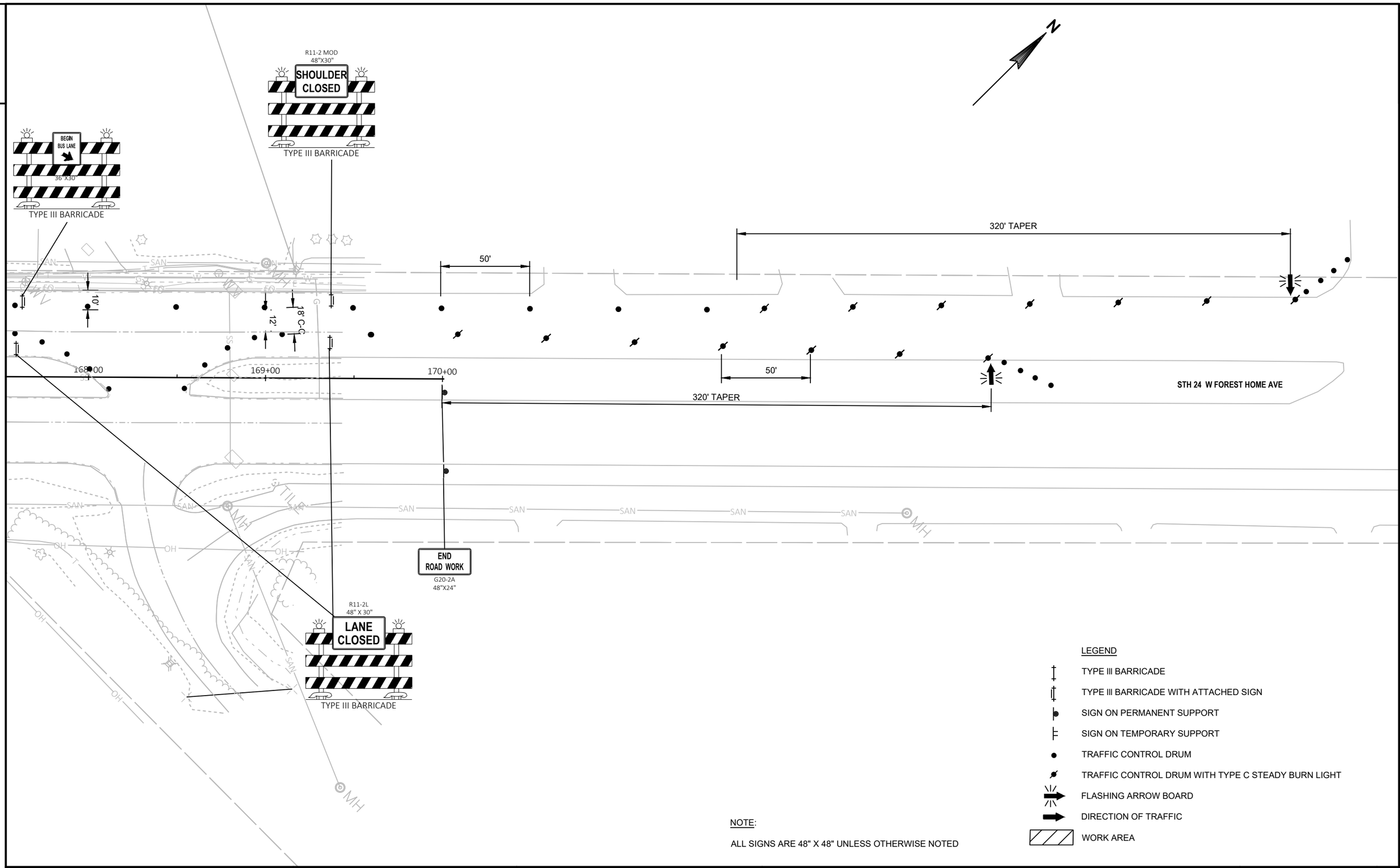
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1	SHEET 43	E

2

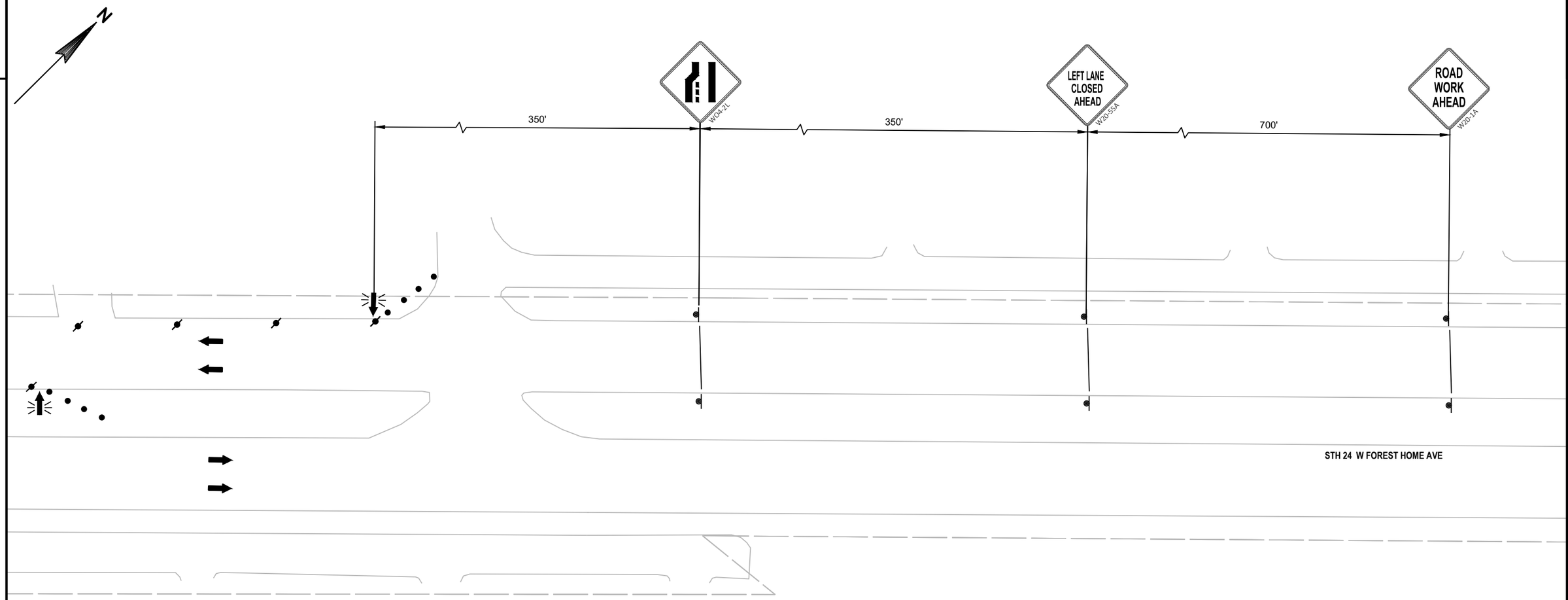


NOTE:

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1	SHEET 44	E

2



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

NOTE:

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1	SHEET 45	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\027000_S1.DWG
LAYOUT NAME - 03_s1
PLOT DATE : 1/10/2019 11:11 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1 IN:50 FT

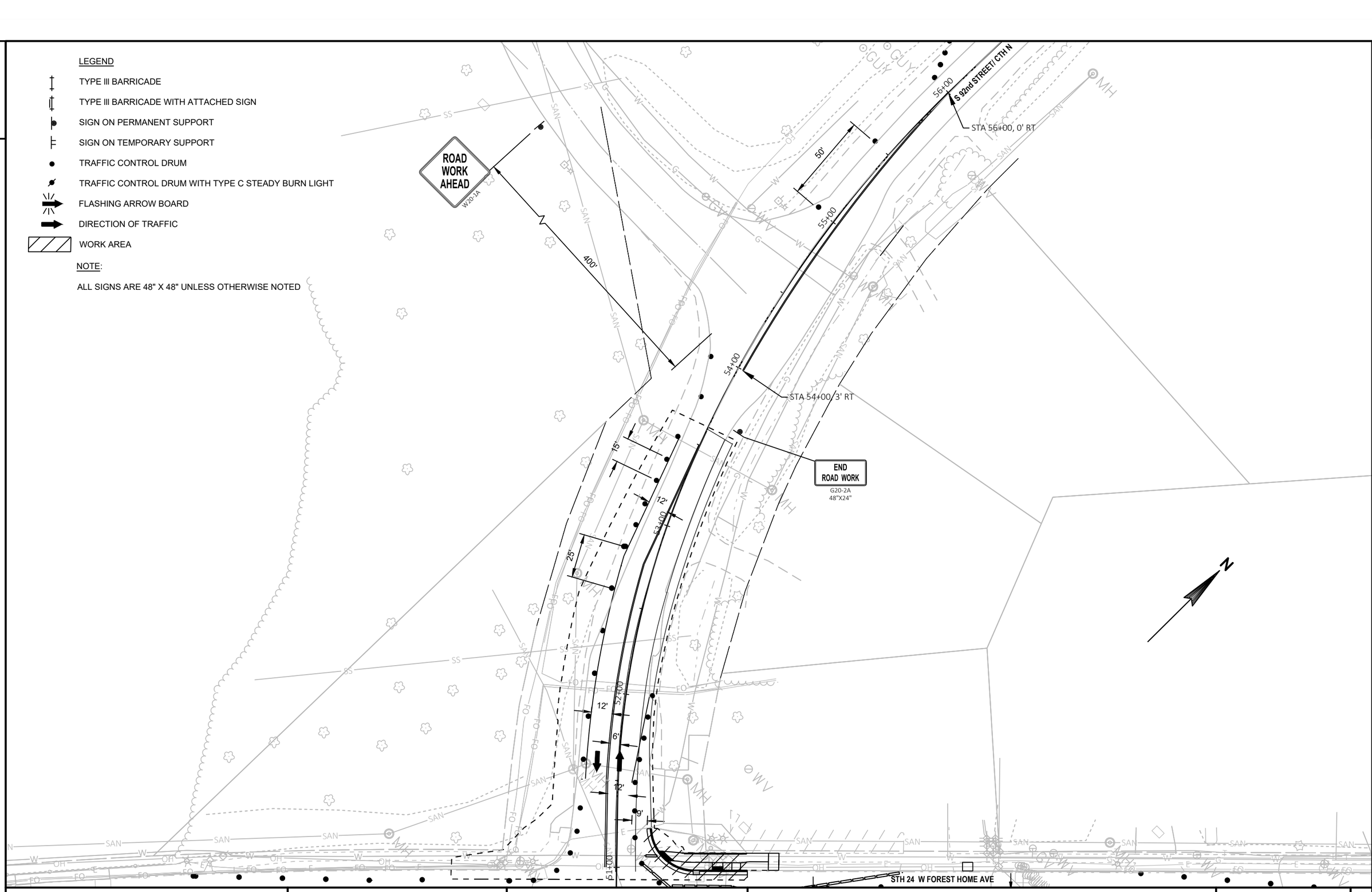
2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

NOTE:

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED

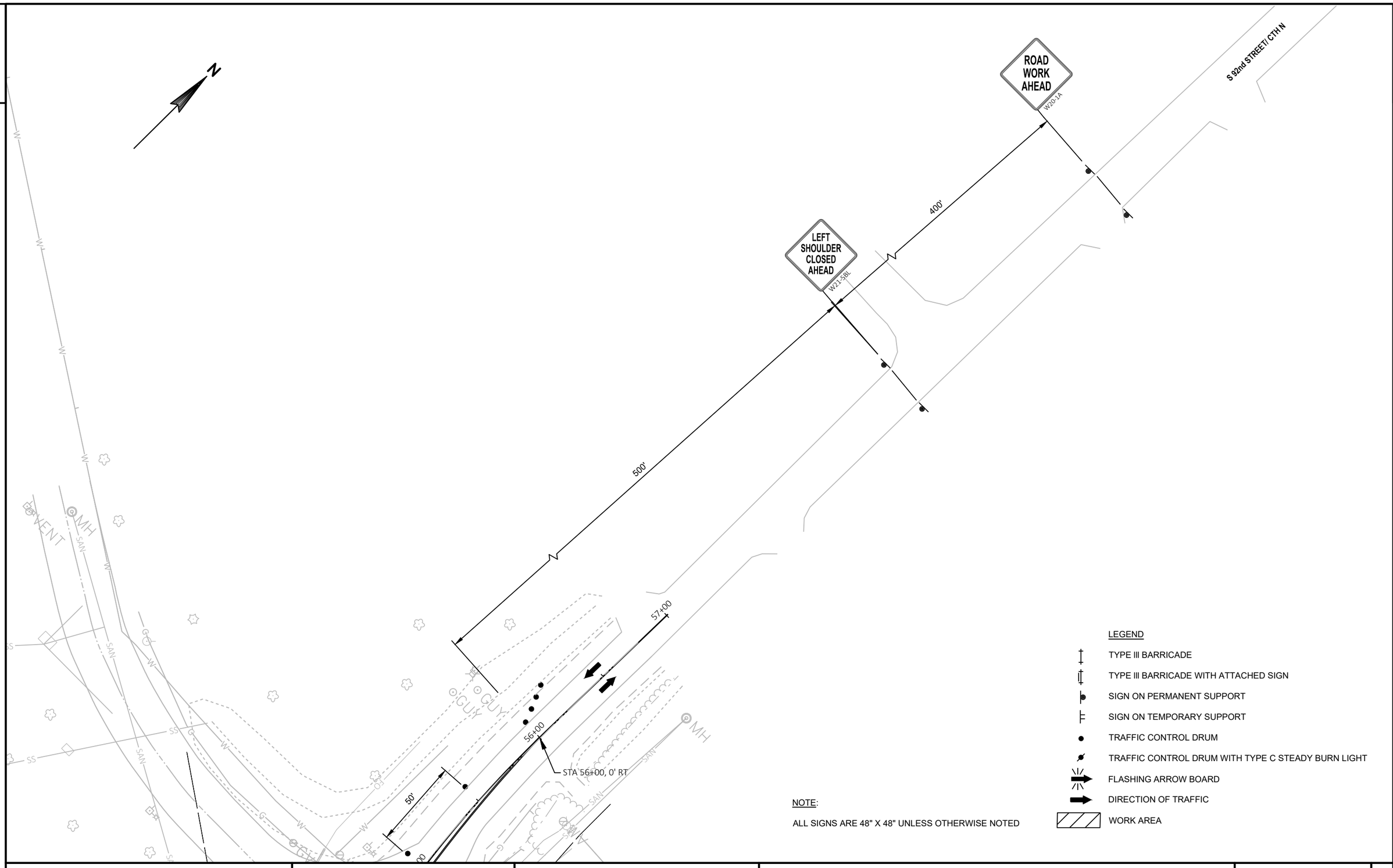


PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1	SHEET 46 E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\027000_S1.DWG
LAYOUT NAME - 04_s1

PLOT DATE : 1/10/2019 11:11 AM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1 IN:50 FT

2



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

NOTE:

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1	SHEET 47	E

2

2

LEGEND

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

FLASHING ARROW BOARD

DIRECTION OF TRAFFIC

WORK AREA

NOTE:

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED

N

STH 24 W FOREST HOME AVE

153+00

154+00

700'

350'

350'

ROAD WORK AHEAD W20-1A

LEFT LANE CLOSED AHEAD W20-5SA

W04-2L

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 48	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\027000_S2.DWG
LAYOUT NAME - 0_s2

PLOT DATE : 1/15/2019 5:09 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

NOTE:

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED

N

ROAD WORK AHEAD
W20-1A

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

END ROAD WORK
G20-2A
48"X24"

540' TAPER

STH 24 W FOREST HOME AVE

154+00
155+00
156+00
157+00
158+00
159+00
160+00
161+00

50'
50'
25'
25'
12'
18" C-C
2'

BEGIN BUS LANE
36" X30"
TYPE III BARRICADE

500'

RIGHT SHOULDER CLOSED
W21-5A

ROAD WORK AHEAD
W20-1A

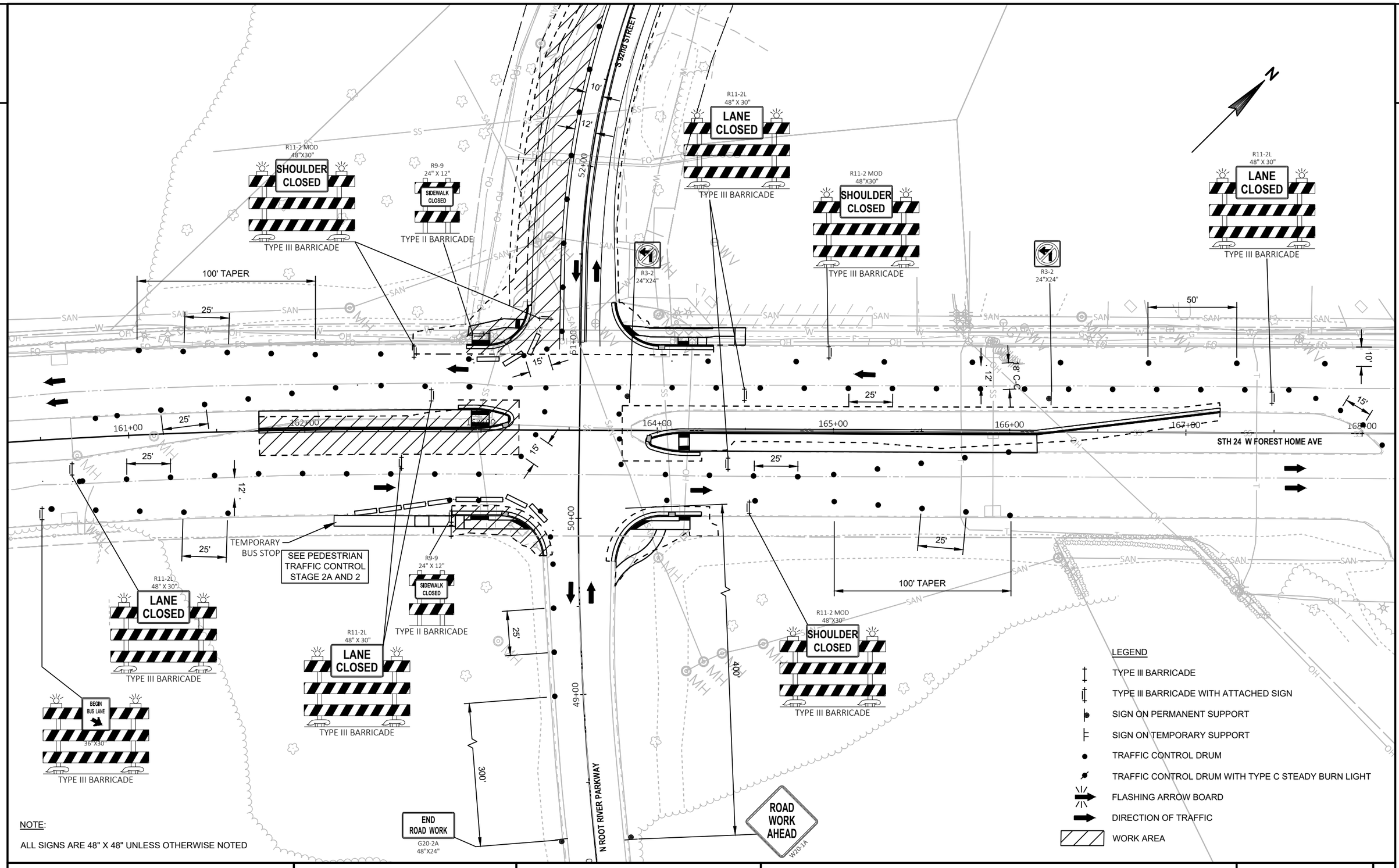
PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 49	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\027000_S2.DWG
LAYOUT NAME - 00_s2

PLOT DATE : 1/15/2019 5:09 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2



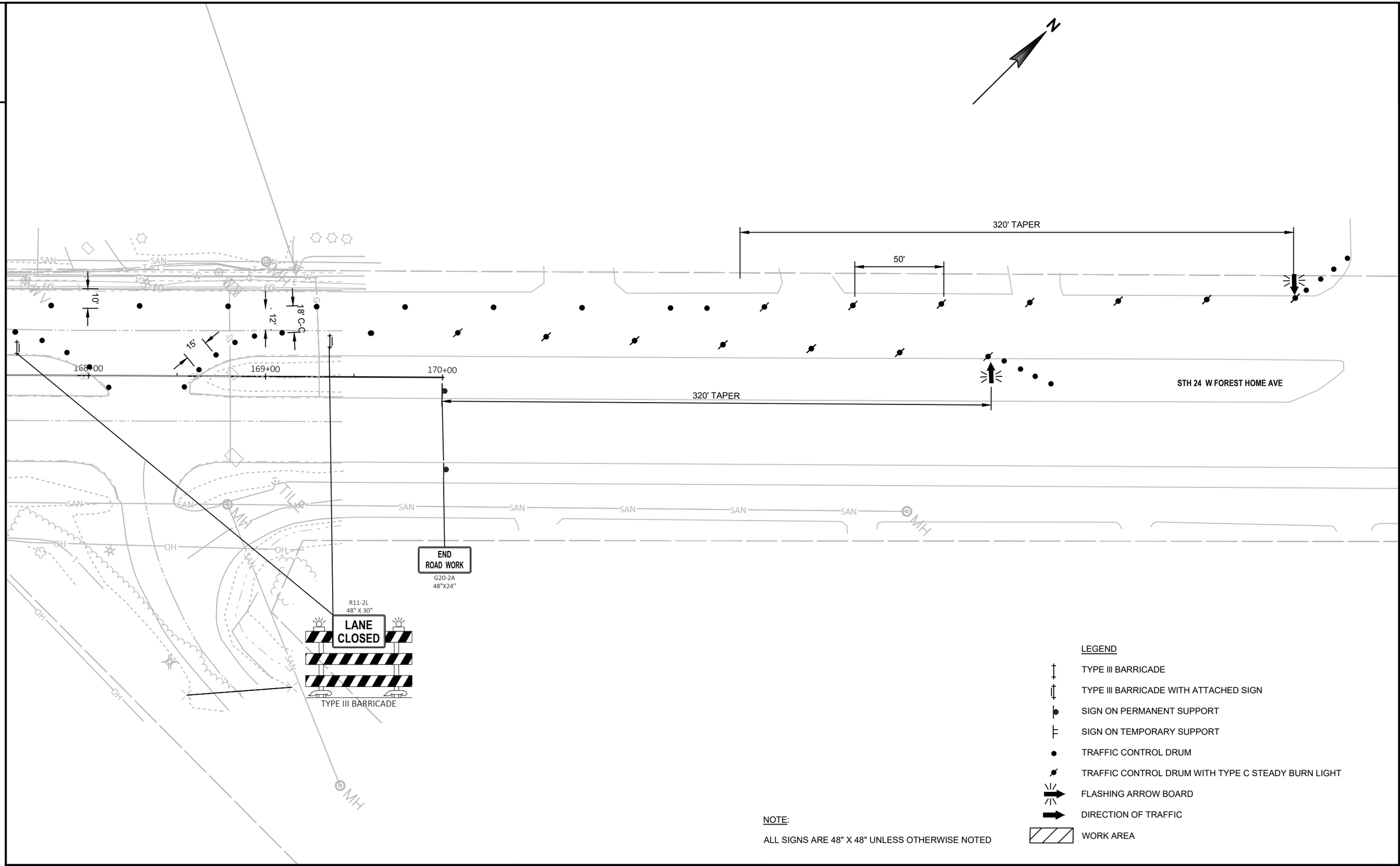
NOTE:

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 50	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\027000_S2.DWG
LAYOUT NAME - 01_s2
PLOT DATE : 1/15/2019 5:10 PM
PLOT BY : SCHMIDT, JUDENE M
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2



LEGEND

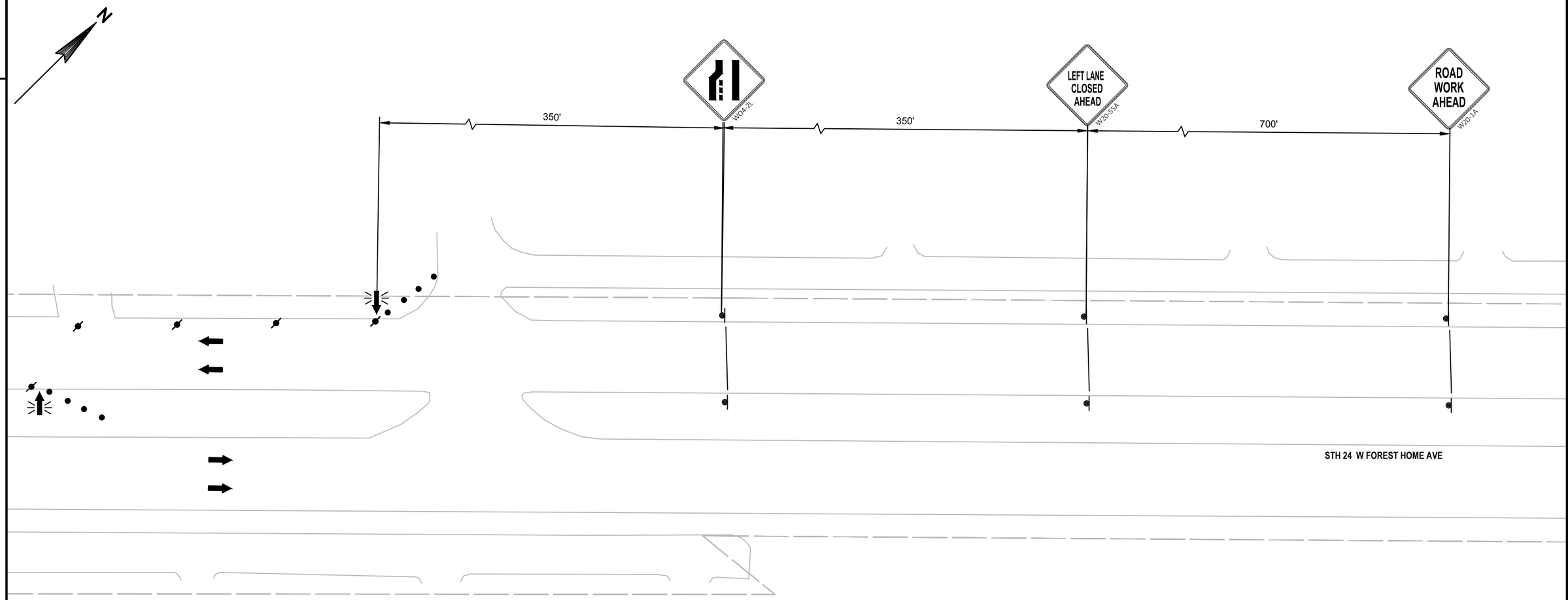
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

NOTE:

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 51	E

2



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

NOTE:

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 52	E

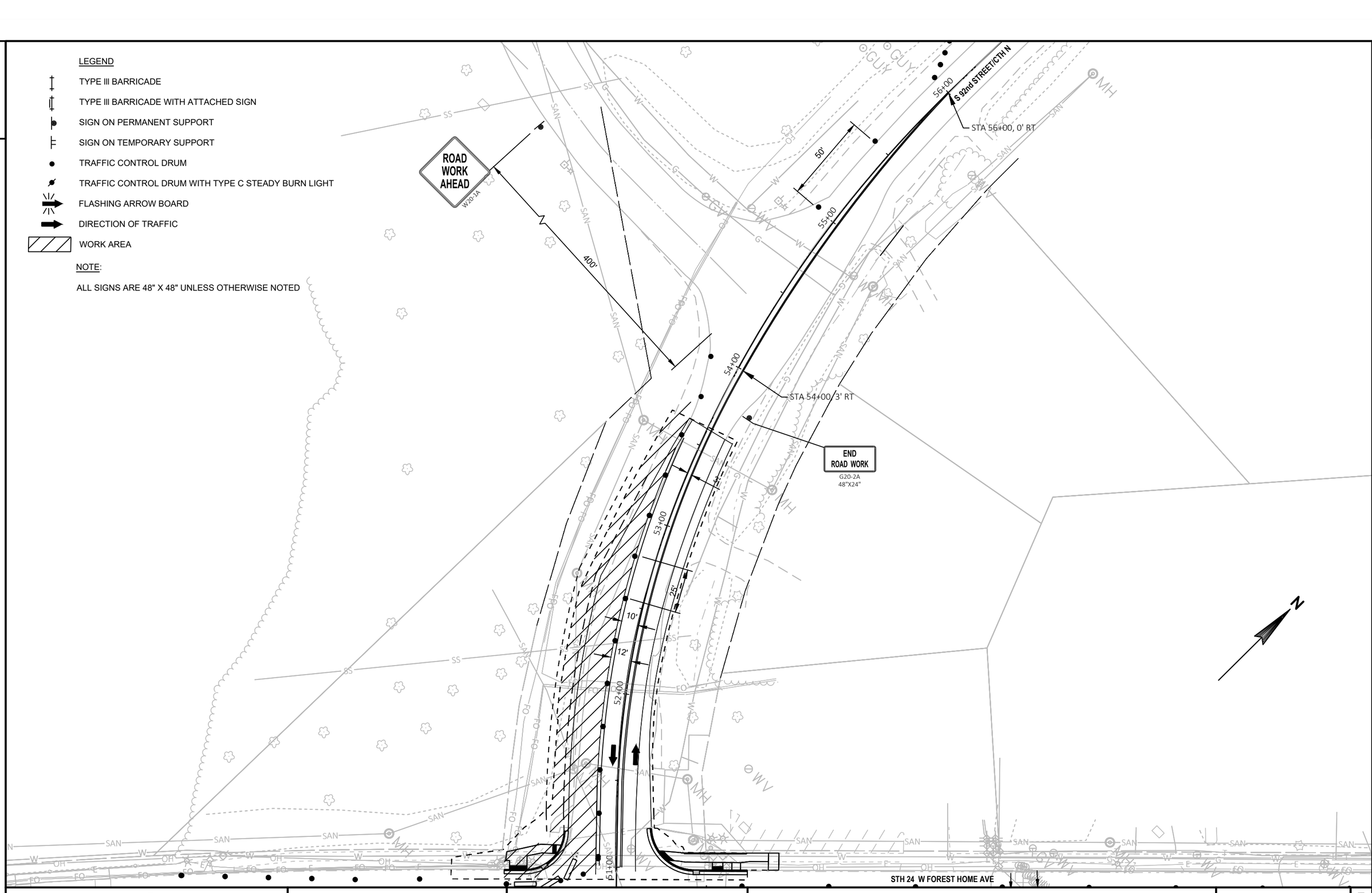
2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

NOTE:

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED



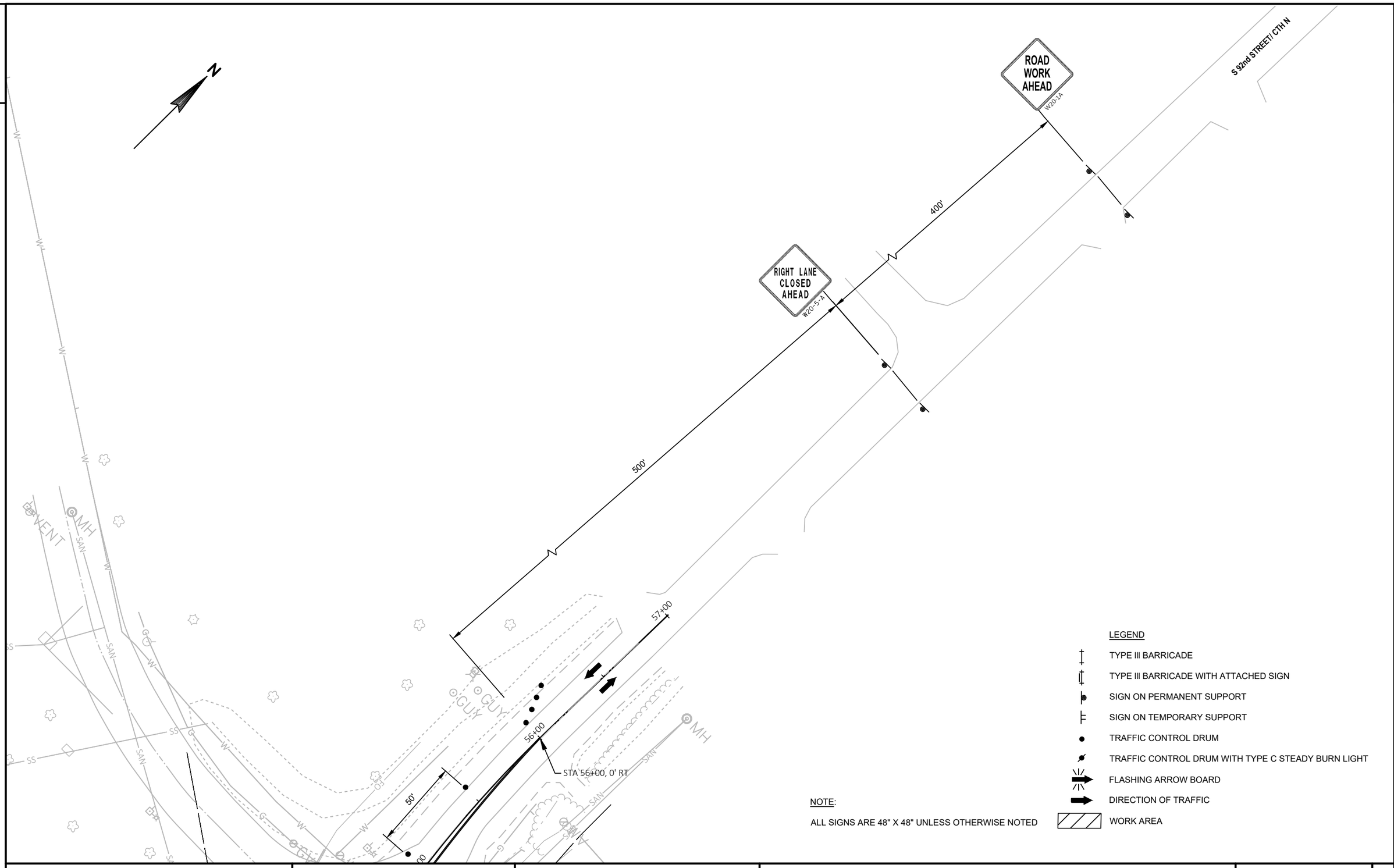
PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 53	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\027000_S2.DWG
LAYOUT NAME - 04_s2

PLOT DATE : 1/15/2019 5:10 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

NOTE:

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2	SHEET 54	E

2

S 92nd STREET/ CTH U

51+00

TEMPORARY SIDEWALK CONNECTION
2% MAX CROSS SLOPE, 5' MIN WIDTH

TEMPORARY BUS STOP

5'

6'

6'

6'

5'

163+00

164+00

165+00

STH 24 (W FOREST HOME AVE)

50+00

N ROOT RIVER PARKWAY

LEGEND

TEMPORARY PEDESTRIAN SURFACE ASPHALT

TEMPORARY BARRIER

WORK AREA

TYPE II BARRICADE WITH / WITHOUT SIGN
(ALL WITH ONE WARNING LIGHT, TYPE A)

SIGN ON SUPPORT

PEDESTRIAN SAFETY FENCE

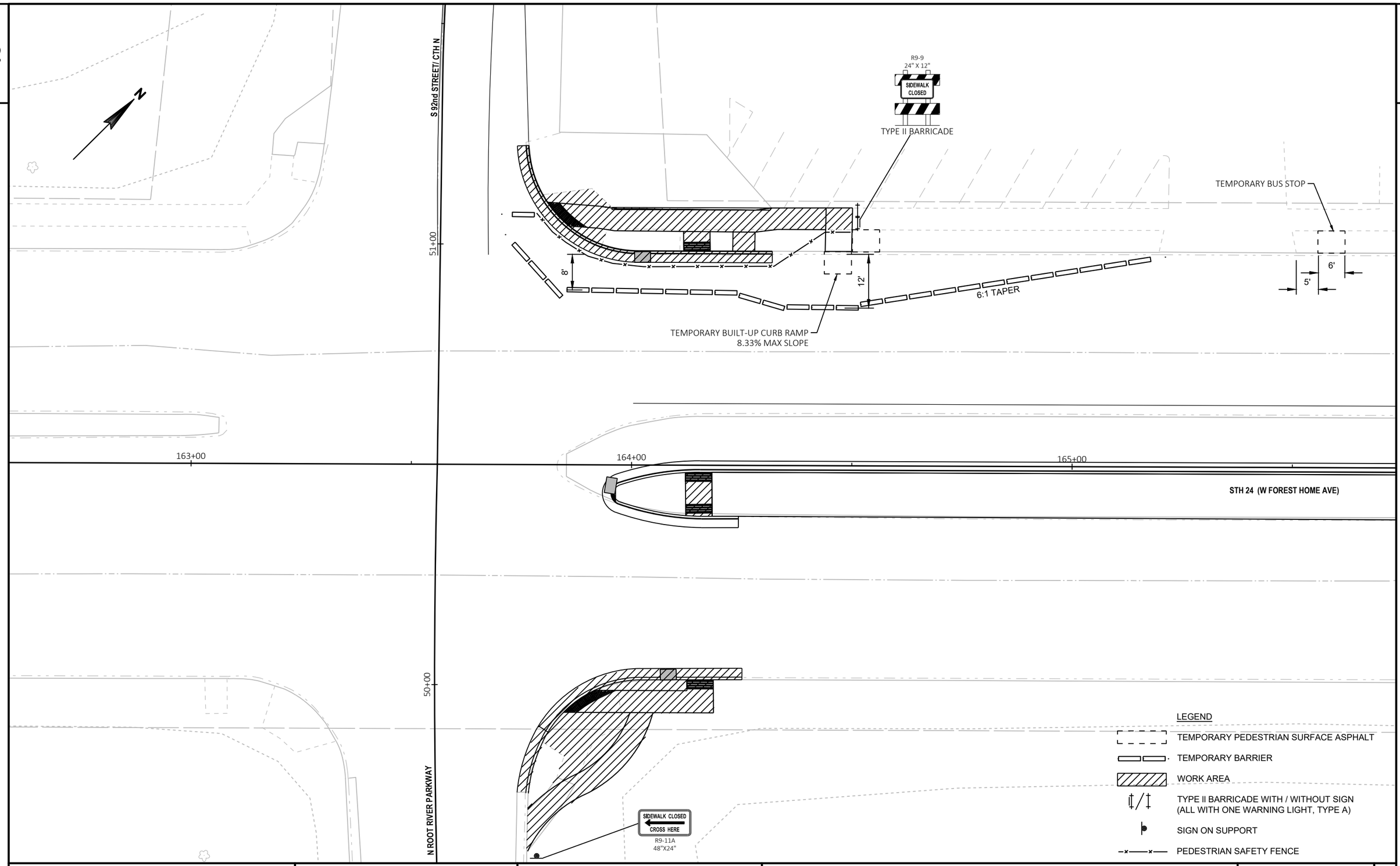
PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PEDESTRIAN TRAFFIC CONTROL - STAGE 1A	SHEET 55	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\027001_PED_S1.DWG
LAYOUT NAME - 01_s1a

PLOT DATE : 3/15/2019 4:42 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PEDESTRIAN TRAFFIC CONTROL - STAGE 1	SHEET 56	E

2

2

S 92nd STREET/ CTH N

51+00

17'

REMOVE TEMPORARY SURFACE PLACED IN STAGE 1

164+00

STH 24 (W FOREST HOME AVE)

165+00

46'

TEMPORARY BUS STOP

50+00

N ROOT RIVER PARKWAY

LEGEND

- TEMPORARY PEDESTRIAN SURFACE ASPHALT
- TEMPORARY BARRIER
- WORK AREA
- TYPE II BARRICADE WITH / WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A)
- SIGN ON SUPPORT
- PEDESTRIAN SAFETY FENCE

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PEDESTRIAN TRAFFIC CONTROL - STAGE 2A	SHEET 57	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\027002_PED_S2.DWG
LAYOUT NAME - 01_S2aa

PLOT DATE : 3/15/2019 4:44 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2

N

REMOVE TEMPORARY SURFACE PLACED IN STAGE 1

164+00

165+00

166+00

STH 24 (W FOREST HOME AVE)

LEGEND

TEMPORARY PEDESTRIAN SURFACE ASPHALT

TEMPORARY BARRIER

WORK AREA

TYPE II BARRICADE WITH / WITHOUT SIGN
(ALL WITH ONE WARNING LIGHT, TYPE A)

SIGN ON SUPPORT

PEDESTRIAN SAFETY FENCE

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PEDESTRIAN TRAFFIC CONTROL - STAGE 2A	SHEET 58	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\027002_PED_S2.DWG
LAYOUT NAME - 01_S2a

PLOT DATE : 3/15/2019 4:44 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

S 92nd STREET/ CTH N

51+00

8:1 TAPER

8'

R9-9
24" X 12"

SIDEWALK CLOSED

TYPE II BARRICADE

164+00

STH 24 (W FOREST HOME AVE)

165+00

8:1 TAPER

8'

TEMPORARY BUS STOP

R9-9
24" X 12"

SIDEWALK CLOSED

TYPE II BARRICADE

50+00

N ROOT RIVER PARKWAY

LEGEND

- TEMPORARY PEDESTRIAN SURFACE ASPHALT
- TEMPORARY BARRIER
- WORK AREA
- TYPE II BARRICADE WITH / WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A)
- SIGN ON SUPPORT
- PEDESTRIAN SAFETY FENCE

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PEDESTRIAN TRAFFIC CONTROL - STAGE 2	SHEET 59	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSPLAN\027002_PED_S2.DWG
LAYOUT NAME - 01_s2

PLOT DATE : 3/15/2019 4:44 PM PLOT BY : SCHMIDT, JUDENE M PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

2

PT: 56+02.83

56

S 92nd ST/ CTH N

CURVE 3
PI STA = 54+67.80
Y = 268122.532
X = 574190.480
DELTA = 23°32'25"
D = 8°35'31"
T = 138.95'
L = 273.98'
R = 666.86'
PC STA = 53+28.84
Y = 267994.257
X = 574243.895
PT STA = 56+02.83
Y = 268261.466
X = 574192.742
BK = N22°36'26.6"W
AH = N00°55'58.5"E

621122
Y= 268021.26
X= 574188.83
SEC E 29 6 21 CONC MON
WITH BRASS SEWRPC CAP

T 6 N
29 28
R 21 E

54

CURVE 3

PCC: 53+28.84

CURVE 2

CURVE 2
PI STA = 52+33.59
Y = 267904.131
X = 574281.425
DELTA = 21°50'59"
D = 11°19'40"
T = 97.63'
L = 192.88'
R = 505.79'
PC STA = 51+35.96
Y = 267834.446
X = 574349.801
PT STA = 53+28.84
Y = 267994.257
X = 574243.895
BK = N44°27'25.4"W
AH = N22°36'26.6"W

52

N44° 58' 10"E
450.76'

166

PI: 167+07.04

168

CP 917

170

W FOREST HOME AVE/ STH 24

N

CURVE 4
PI STA = 49+24.94
Y = 267682.506
X = 574496.766
DELTA = 7°41'26"
D = 3°04'13"
T = 125.43'
L = 250.49'
R = 1866.19'
PC STA = 47+99.51
Y = 267604.346
X = 574594.869
PT STA = 50+50.00
Y = 267773.091
X = 574410.005
BK = N51°27'19.2"W
AH = N43°45'53.5"W

N44° 27' 25"W
85.96'

164

PC: 51+35.96

50

PI: 50+50.00

CURVE 4

162

CP 918

PT: 162+56.27

CURVE 1

9532
HMOD 1X22
BRONZE DISK IN SIDEWALK

CURVE 1
PI STA = 160+17.22
Y = 267532.808
X = 574169.978
DELTA = 8°49'26"
D = 1°50'31"
T = 240.00'
L = 479.05'
R = 3110.58'
PC STA = 157+77.22
Y = 267339.003
X = 574028.417
PT STA = 162+56.27
Y = 267702.604
X = 574339.593
BK = N36°08'44.0"E
AH = N44°58'10.2"E

48

PC: 47+99.51

N51° 27' 19"W
152.45'

160

CP 919

PC: 157+77.22

158

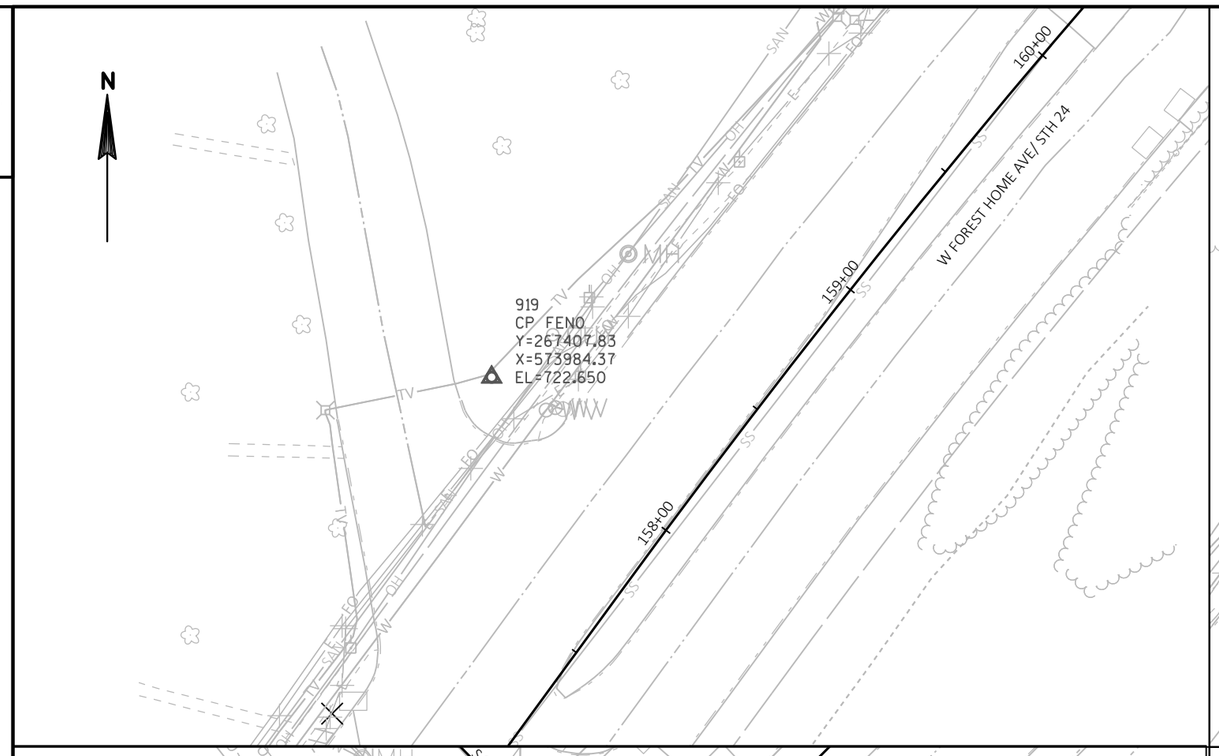
W FOREST HOME AVE/ STH 24

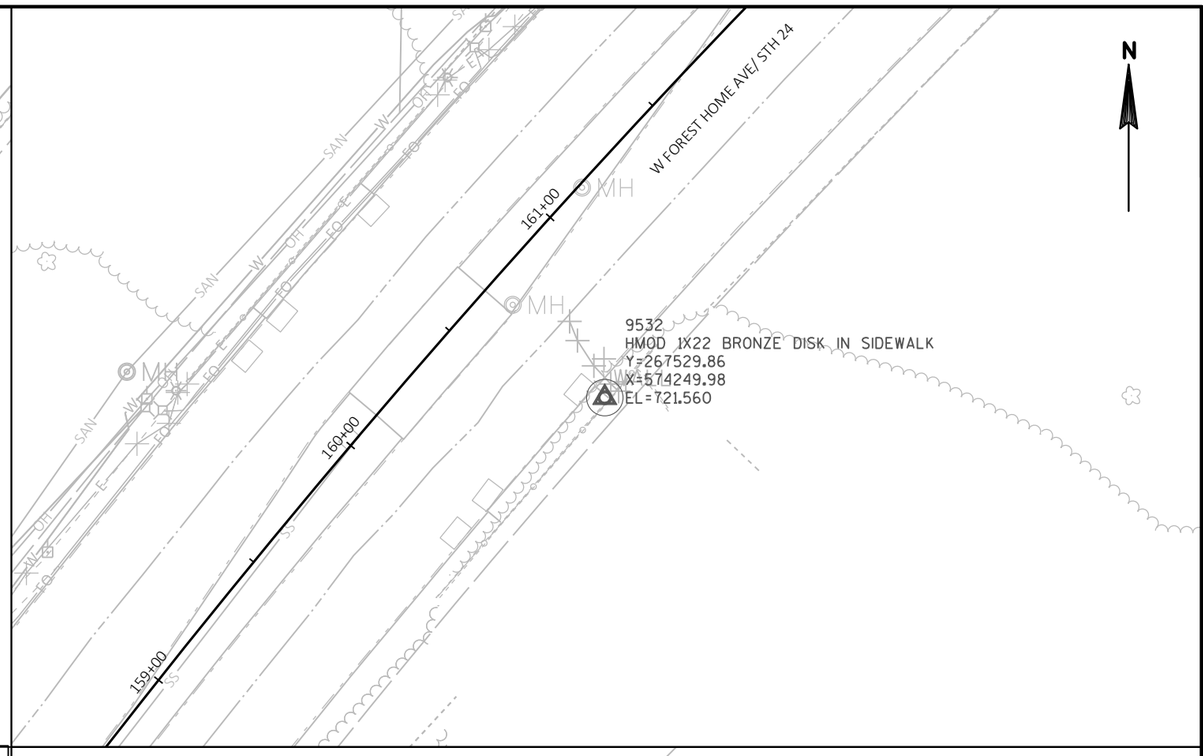
PT: 46+47.06

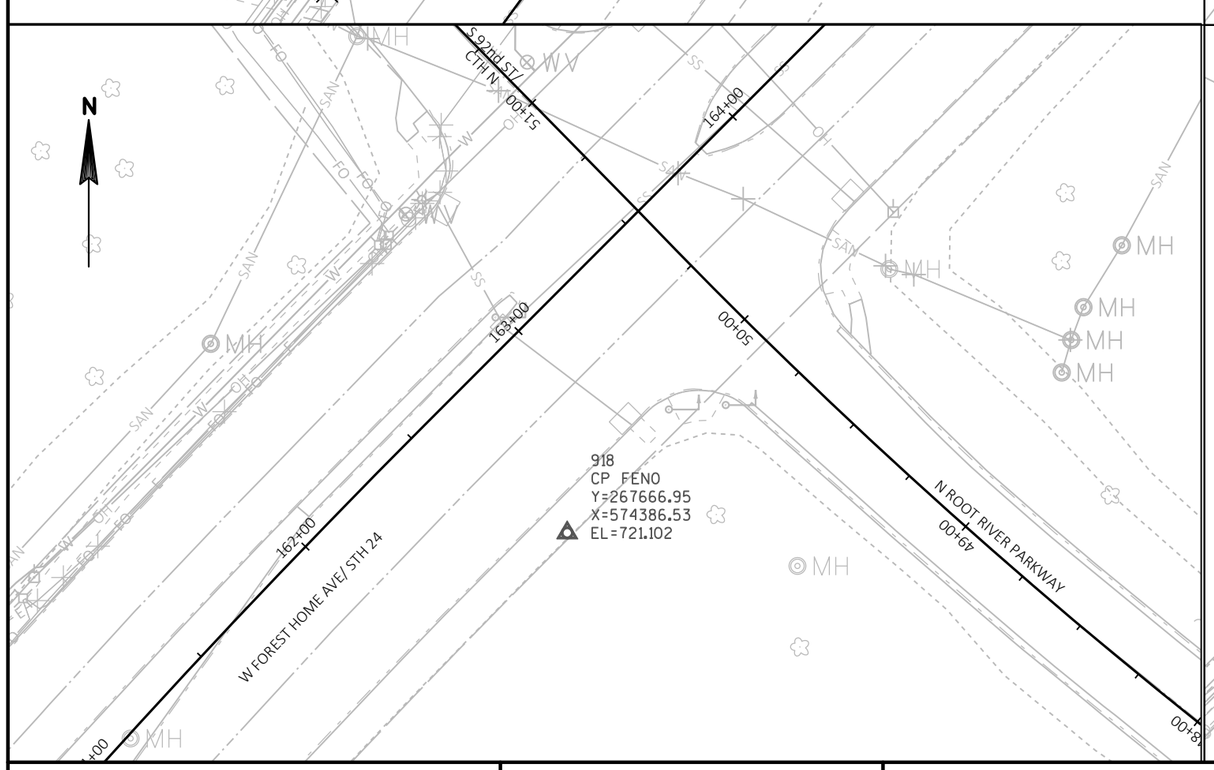
46

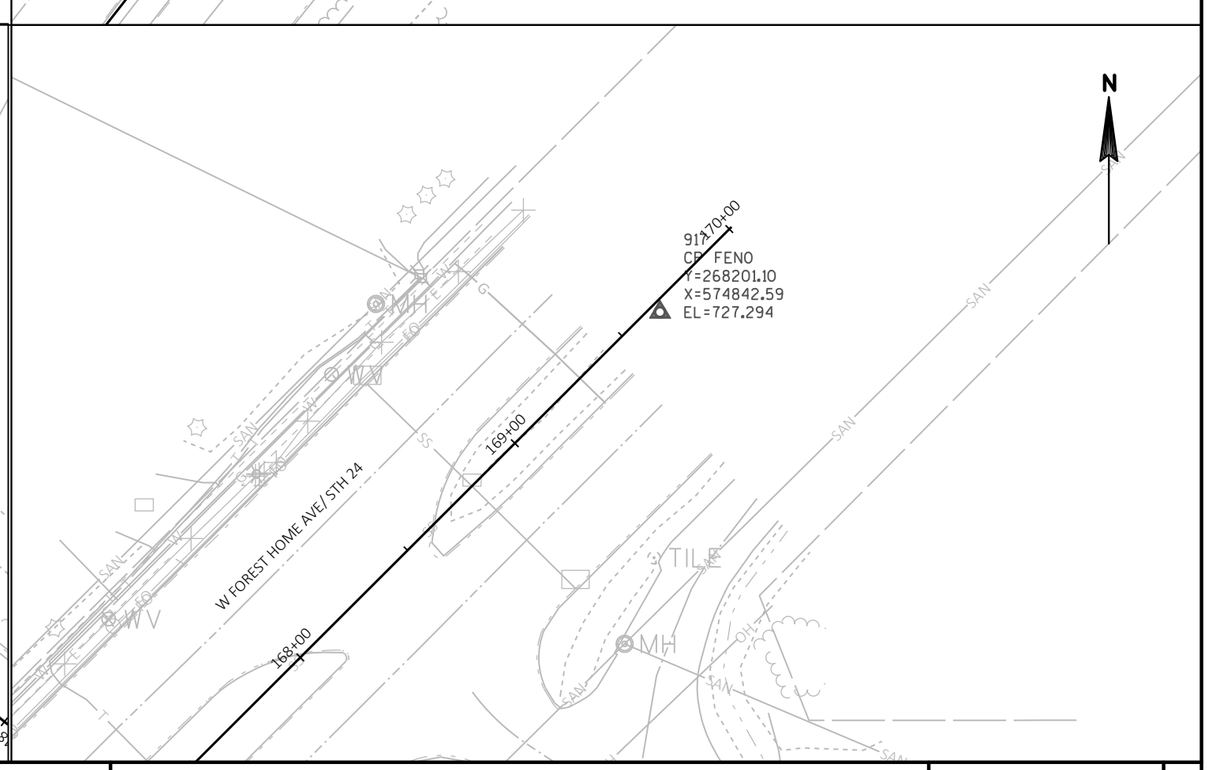
N ROOT RIVER PARKWAY

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	ALIGNMENT SHEET	SHEET 60	E









PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	SURVEY CONTROL	SHEET 61	E

2120-16-70

Line	Item	Item Description	Unit	Total	Qty
0002	204.0100	Removing Pavement	SY	638.000	638.000
0004	204.0110	Removing Asphaltic Surface	SY	88.000	88.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	720.000	720.000
0008	204.0150	Removing Curb & Gutter	LF	304.000	304.000
0010	204.0155	Removing Concrete Sidewalk	SY	172.000	172.000
0012	204.0195	Removing Concrete Bases	EACH	5.000	5.000
0014	204.0220	Removing Inlets	EACH	1.000	1.000
0016	204.0260	Abandoning Inlets	EACH	1.000	1.000
0018	204.9060.S	Removing (item description) 01. Removing RRFB Type I Pole Assembly	EACH	4.000	4.000
0020	204.9060.S	Removing (item description) 02. Removing Pedestrian Push Button Pole Assembly	EACH	2.000	2.000
0022	204.9090.S	Removing (item description) 01. Removing Cable in Duct from Conduit	LF	50.000	50.000
0024	204.9090.S	Removing (item description) 02. Removing Cable in Duct	LF	350.000	350.000
0026	205.0100	Excavation Common	CY	691.000	691.000
0028	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	3.000	3.000
0030	213.0100	Finishing Roadway (project) 01. 2120-16-70	EACH	1.000	1.000
0032	305.0110	Base Aggregate Dense 3/4-Inch	TON	39.000	39.000
0034	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,252.000	1,252.000
0036	390.0403	Base Patching Concrete Shes	SY	76.000	76.000
0038	416.0610	Drilled Tie Bars	EACH	42.000	42.000
0040	416.0620	Drilled Dowel Bars	EACH	118.000	118.000
0042	455.0605	Tack Coat	GAL	226.000	226.000
0044	460.2000	Incentive Density HMA Pavement	DOL	587.000	587.000
0046	460.6223	HMA Pavement 3 MT 58-28 S	TON	361.000	361.000
0048	460.6224	HMA Pavement 4 MT 58-28 S	TON	230.000	230.000
0050	465.0105	Asphaltic Surface	TON	2.000	2.000
0052	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	7.000	7.000
0054	601.0331	Concrete Curb & Gutter 31-Inch	LF	660.000	660.000
0056	601.0600	Concrete Curb Pedestrian	LF	36.000	36.000
0058	602.0410	Concrete Sidewalk 5-Inch	SF	5,028.000	5,028.000
0060	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	130.000	130.000
0062	602.0605	Curb Ramp Detectable Warning Field Radial Yellow	SF	54.000	54.000
0064	603.8000	Concrete Barrier Temporary Precast Delivered	LF	320.000	320.000
0066	603.8125	Concrete Barrier Temporary Precast Installed	LF	320.000	320.000
0068	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	30.000	30.000
0070	611.0430	Reconstructing Inlets	EACH	2.000	2.000
0072	611.0530	Manhole Covers Type J	EACH	3.000	3.000

2120-16-70

Line	Item	Item Description	Unit	Total	Qty
0074	611.0651	Inlet Covers Type S	EACH	5.000	5.000
0076	611.3225	Inlets 2x2.5-FT	EACH	4.000	4.000
0078	611.8115	Adjusting Inlet Covers	EACH	2.000	2.000
0080	619.1000	Mobilization	EACH	1.000	1.000
0082	620.0300	Concrete Median Sloped Nose	SF	32.000	32.000
0084	624.0100	Water	MGAL	20.000	20.000
0086	625.0100	Topsoil	SY	604.000	604.000
0088	628.1104	Erosion Bales	EACH	30.000	30.000
0090	628.1504	Silt Fence	LF	492.000	492.000
0092	628.1520	Silt Fence Maintenance	LF	247.000	247.000
0094	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0096	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0098	628.2006	Erosion Mat Urban Class I Type A	SY	410.000	410.000
0100	628.7010	Inlet Protection Type B	EACH	12.000	12.000
0102	629.0210	Fertilizer Type B	CWT	0.260	0.260
0104	630.0130	Seeding Mixture No. 30	LB	7.380	7.380
0106	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	31.000	31.000
0108	634.0816	Posts Tubular Steel 2x2-Inch X 16-FT	EACH	3.000	3.000
0110	637.2210	Signs Type II Reflective H	SF	315.365	315.365
0112	637.2215	Signs Type II Reflective H Folding	SF	44.760	44.760
0114	637.2230	Signs Type II Reflective F	SF	76.500	76.500
0116	638.2102	Moving Signs Type II	EACH	2.000	2.000
0118	638.2602	Removing Signs Type II	EACH	49.000	49.000
0120	638.3000	Removing Small Sign Supports	EACH	39.000	39.000
0122	643.0300	Traffic Control Drums	DAY	15,918.000	15,918.000
0124	643.0410	Traffic Control Barricades Type II	DAY	252.000	252.000
0126	643.0420	Traffic Control Barricades Type III	DAY	1,176.000	1,176.000
0128	643.0705	Traffic Control Warning Lights Type A	DAY	2,352.000	2,352.000
0130	643.0715	Traffic Control Warning Lights Type C	DAY	2,352.000	2,352.000
0132	643.0800	Traffic Control Arrow Boards	DAY	336.000	336.000
0134	643.0900	Traffic Control Signs	DAY	3,906.000	3,906.000
0136	643.1050	Traffic Control Signs PCMS	DAY	21.000	21.000
0138	643.5000	Traffic Control	EACH	1.000	1.000
0140	644.1410.S	Temporary Pedestrian Surface Asphalt	SF	391.000	391.000
0142	644.1601.S	Temporary Curb Ramp	EACH	1.000	1.000
0144	644.1616.S	Temporary Pedestrian Safety Fence	LF	160.000	160.000
0146	646.1020	Marking Line Epoxy 4-Inch	LF	1,579.000	1,579.000
0148	646.1545	Marking Line Grooved Wet Ref Contrast Epoxy 4-Inch	LF	250.000	250.000
0150	646.3020	Marking Line Epoxy 8-Inch	LF	177.000	177.000
0152	646.3545	Marking Line Grooved Wet Ref Contrast Epoxy 8-Inch	LF	576.000	576.000

2120-16-70

Line	Item	Item Description	Unit	Total	Qty
0154	646.4520	Marking Line Same Day Epoxy 4-Inch	LF	530.000	530.000
0156	646.5020	Marking Arrow Epoxy	EACH	10.000	10.000
0158	646.5120	Marking Word Epoxy	EACH	3.000	3.000
0160	646.5220	Marking Symbol Epoxy	EACH	2.000	2.000
0162	646.6120	Marking Stop Line Epoxy 18-Inch	LF	138.000	138.000
0164	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	527.000	527.000
0166	646.8120	Marking Curb Epoxy	LF	84.000	84.000
0168	646.8220	Marking Island Nose Epoxy	EACH	2.000	2.000
0170	646.9000	Marking Removal Line 4-Inch	LF	1,000.000	1,000.000
0172	646.9100	Marking Removal Line 8-Inch	LF	100.000	100.000
0174	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	2,400.000	2,400.000
0176	649.0960	Temporary Marking Removable Mask Out Tape 6-Inch	LF	200.000	200.000
0178	650.4000	Construction Staking Storm Sewer	EACH	4.000	4.000
0180	650.4500	Construction Staking Subgrade	LF	755.000	755.000
0182	650.5000	Construction Staking Base	LF	755.000	755.000
0184	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	817.000	817.000
0186	650.8500	Construction Staking Electrical Installations (project) 01. 2120-16-70	LS	1.000	1.000
0188	650.9000	Construction Staking Curb Ramps	EACH	12.000	12.000
0190	650.9910	Construction Staking Supplemental Control (project) 01. 2120-16-70	LS	1.000	1.000
0192	650.9920	Construction Staking Slope Stakes	LF	805.000	805.000
0194	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	619.000	619.000
0196	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	386.000	386.000
0198	652.0615	Conduit Special 3-Inch	LF	762.000	762.000
0200	652.0800	Conduit Loop Detector	LF	672.000	672.000
0202	653.0135	Pull Boxes Steel 24x36-Inch	EACH	3.000	3.000
0204	653.0140	Pull Boxes Steel 24x42-Inch	EACH	11.000	11.000
0206	654.0101	Concrete Bases Type 1	EACH	7.000	7.000
0208	654.0102	Concrete Bases Type 2	EACH	2.000	2.000
0210	654.0110	Concrete Bases Type 10	EACH	1.000	1.000
0212	654.0113	Concrete Bases Type 13	EACH	3.000	3.000
0214	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	1.000	1.000
0216	655.0104	Cable In Duct 2-4 AWG	LF	400.000	400.000
0218	655.0230	Cable Traffic Signal 5-14 AWG	LF	594.000	594.000
0220	655.0240	Cable Traffic Signal 7-14 AWG	LF	902.000	902.000
0222	655.0260	Cable Traffic Signal 12-14 AWG	LF	1,964.000	1,964.000
0224	655.0320	Cable Type UF 2-10 AWG Grounded	LF	668.000	668.000
0226	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	1,810.000	1,810.000
0228	655.0610	Electrical Wire Lighting 12 AWG	LF	729.000	729.000

2120-16-70

Line	Item	Item Description	Unit	Total	Qty
0230	655.0700	Loop Detector Lead In Cable	LF	2,724.000	2,724.000
0232	655.0800	Loop Detector Wire	LF	2,588.000	2,588.000
0234	655.0900	Traffic Signal EVP Detector Cable	LF	1,063.000	1,063.000
0236	656.0200	Electrical Service Meter Breaker Pedestal (location) 01. STH 24 & 92ND ST	LS	1.000	1.000
0238	657.0100	Pedestal Bases	EACH	7.000	7.000
0240	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	3.000	3.000
0242	657.0310	Poles Type 3	EACH	3.000	3.000
0244	657.0345	Poles Type 9	EACH	1.000	1.000
0246	657.0355	Poles Type 12	EACH	2.000	2.000
0248	657.0360	Poles Type 13	EACH	1.000	1.000
0250	657.0405	Traffic Signal Standards Aluminum 3.5-FT	EACH	1.000	1.000
0252	657.0420	Traffic Signal Standards Aluminum 13-FT	EACH	1.000	1.000
0254	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	2.000	2.000
0256	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	3.000	3.000
0258	657.0530	Monotube Arms 30-FT	EACH	1.000	1.000
0260	657.0535	Monotube Arms 35-FT	EACH	1.000	1.000
0262	657.0540	Monotube Arms 40-FT	EACH	1.000	1.000
0264	657.0545	Monotube Arms 45-FT	EACH	1.000	1.000
0266	657.0609	Luminaire Arms Single Member 4-Inch Clamp 6-FT	EACH	5.000	5.000
0268	657.0815	Luminaire Arms Steel 15-FT	EACH	2.000	2.000
0270	658.0173	Traffic Signal Face 3S 12-Inch	EACH	12.000	12.000
0272	658.0174	Traffic Signal Face 4S 12-Inch	EACH	6.000	6.000
0274	658.0416	Pedestrian Signal Face 16-Inch	EACH	8.000	8.000
0276	658.0500	Pedestrian Push Buttons	EACH	11.000	11.000
0278	658.5069	Signal Mounting Hardware (location) 01. STH 24 & 92ND ST	LS	1.000	1.000
0280	659.1125	Luminaires Utility LED C	EACH	6.000	6.000
0282	690.0150	Sawing Asphalt	LF	385.000	385.000
0284	690.0250	Sawing Concrete	LF	1,216.000	1,216.000
0286	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	400.000	400.000
0288	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	450.000	450.000
0290	SPV.0060	Special 01. Concrete Bases Type 2 Spread Footing	EACH	1.000	1.000
0292	SPV.0060	Special 02. Internal/External Sanitary Manhole Seals	EACH	1.000	1.000
0294	SPV.0060	Special 03. Adjusting Water Boxes	EACH	3.000	3.000
0296	SPV.0060	Special 04. Luminaire Arm, Steel, 15' Clamp-on	EACH	1.000	1.000
0298	SPV.0090	Special 01. Concrete Curb & Gutter 31-Inch Modified	LF	149.000	149.000
0300	SPV.0105	Special 01. Transport and Install State Furnished Traffic Signal Cabinet STH24 & 92nd St	LS	1.000	1.000
0302	SPV.0105	Special 02. Transport and Install State Furnished Video Detection System STH24 & 92ND St	LS	1.000	1.000

				2120-16-70	
0304	SPV.0105	Special 03. Transport and Install State Furnished EVP Detector Heads STH 24 & 92nd St	LS	1.000	1.000

3

STATION			Location	REMOVING PAVEMENT 204.0100 SY	REMOVING ASPHALTIC SURFACE 204.0110 SY	REMOVING ASPHALTIC SURFACE MILLING 204.0120 SY	REMOVING CURB & GUTTER 204.0150 LF	REMOVING CONCRETE SIDEWALK 204.0155 SY	REMOVING CONCRETE BASES 204.0195 EA	REMOVING INLETS 204.0220 EA
161+74	TO	163+22	MEDIAN	352	--	--	--	53	1	--
162+84	TO	163+41	RT	42	--	--	--	20	2	--
162+91	TO	163+44	LT	85	16	--	--	31	2	--
163+70	TO	164+25	RT	42	6	--	--	22	--	--
163+70	TO	164+32	LT	45	--	--	--	46	--	--
163+80	TO	164+00	MEDIAN	72	--	--	--	--	--	--
50+90	TO	53+60	LT/RT	--	66	720	--	--	--	--
164+00	TO	167+19	MEDIAN	--	--	--	304	--	--	1
		TOTAL		638	88	720	304	172	5	1

STRUCTURE NUMBER	STATION	LOCATION	ABANDONING INLETS 204.0260 EACH	SSPRC CLASS III 12-INCH 608.0312 LF	RECONSTRUCTING INLETS 611.0430 EACH	MANHOLE COVERS TYPE J 611.0530 EACH	INLET COVERS TYPE S 611.0651 EACH	INLETS 2x2.5 611.3225 EACH	ADJUSTING INLET COVERS 611.8115 EACH
1	164+05.6	1.3' RT	1	--	--	--	1	1	--
2	163+14.0	3.4' LT	--	16	--	--	1	1	--
2E	162+97	0'	--	--	1	1	--	--	--
3	163+14.9	51' LT	--	5	--	--	1	1	--
3E	163+11	49' LT	--	--	--	1	--	--	--
4	163+13.9	48.3' RT	--	9	--	--	1	1	--
4E	163+05	48' RT	--	--	--	1	--	--	--
E	164+00	LT	--	--	--	--	--	--	1
E	164+00	RT	--	--	--	--	--	--	1
9	165+90.3	1.0' RT	--	--	1	--	1	--	--
	TOTAL		1	30	2	3	5	4	2

				SAWING	
					*
				ASPHALT	CONCRETE
				690.0150	690.0250
STATION			LOCATION	LF	LF
161+74	TO	163+15	MEDIAN	--	234
163+80	TO	167+19	MEDIAN	--	422
162+63	TO	163+41	RT	--	83
162+91	TO	163+44	LT	--	86.5
163+70	TO	164+25	RT	--	82
163+70	TO	164+32	LT	--	85.5
50+90	TO	53+60	92ND ST	385	--
TOTAL				385	993

* Quantities shown elsewhere

	MOBILIZATION
	619.1000
LOCATION	EACH
PROJECT	1
TOTAL	1

	FINISHING ROADWAY (2120-16-70)
	213.0100
LOCATION	EACH
PROJECT	1
TOTAL	1

	CONCRETE BARRIER TEMPORARY PRECAST	
	DELIVERED	INSTALLED
	603.8000	603.8125
STATION	LF	LF
STAGE 1	150	150
STAGE 2	170	170
TOTAL	320	320

	INTERNAL/EXTERNAL SANITARY MANHOLE SEALS
	SPV.0060.02
LOCATION	EACH
PROJECT	1
TOTAL	1

	ADJUSTING WATER BOXES
	SPV.0060.03**
LOCATION	EACH
PROJECT	3
TOTAL	3

** - CATEGORY 020

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

3

LOCATION	MARKING REMOVAL LINE 4-INCH 646.9000 LF	MARKING REMOVAL LINE 8-INCH 646.9100 LF	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH 649.0150 LF	TEMPORARY MARKING REMOVABLE MASK OUT TAPE 6-INCH 649.0960 LF
S STH 24	--	--	--	100
N STH 24	--	--	--	100
STAGE 1				
W 92nd	1000	100	1000	--
E 92nd	--	--	200	--
STAGE 2				
W 92nd	--	--	1000	--
E 92nd	--	--	200	--
TOTAL	1000	100	2400	200

STATION			Location	TACK COAT 455.0605 GAL	* HMA PAVEMENT 3 MT 58-28 S 460.6223 TON	* HMA PAVEMENT 4 MT 58-28 S 460.6224 TON	ASPHALTIC SURFACE 465.0105 TON	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES 465.0120 TON	TEMPORARY PEDESTRIAN SURFACE ASPHALT 644.1410.S SF
161+74	TO	163+22	MEDIAN	33	67	24	--	--	--
162+84	TO	163+41	RT	3	7	2	--	--	276
162+91	TO	163+44	LT	--	--	--	2	--	85
163+70	TO	164+25	RT	3	7	2	--	--	--
163+70	TO	164+50	LT	3	7	3	--	--	30
163+80	TO	167+19	MEDIAN	65	133	46	--	--	--
50+90	TO	53+60	LT/RT	119	140	139	--	7	--
		TOTAL		226	361	216	2	7	391

* Quantities shown elsewhere

3

Location	MARKING LINE EPOXY 4-INCH WHITE 646.1020 LF	MARKING LINE EPOXY 4-INCH YELLOW 646.1020 LF	MARKING LINE EPOXY 8-INCH WHITE 646.3020 LF	MARKING LINE EPOXY 8-INCH 3', 9' 646.3020 LF	MARKING LINE GROOVED WET REFLECTIVE 4-INCH WHITE 646.1545 LF	MARKING LINE GROOVED WET REFLECTIVE 8-INCH WHITE 646.3545 LF	MARKING LINE SAME DAY EPOXY 4-INCH 646.4520 LF	MARKING ARROW EPOXY 646.5020 EA	MARKING WORD EPOXY 646.5120 EA	MARKING SYMBOL EPOXY 646.5220 EA	MARKING STOP LINE EPOXY 18-Inch 646.6120 LF	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH 646.7420 LF	MARKING CURB EPOXY 846.8120 LF	MARKING ISLAND NOSE EPOXY 646.8220 EA
W STH 24	119	--	--	--	100	218	--	3	--	--	45	155	42	1
E STH 24	162	--	--	--	150	358	--	4	2	--	45	154	42	1
N 92nd	660	538	150	27	--	--	530	3	1	1	28	107	--	--
S ROOT RIVER PKWY	--	100	--	--	--	--	--	--	--	1	20	111	--	--
SUBTOTAL	941	638	150	27										
TOTAL	1579		177		250	576	530	10	3	2	138	527	84	2

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

3

STATION	BASE PATCHING CONCRETE SHES 390.0403 SY	* DRILLED TIE BARS 416.0610 EA	DRILLED DOWEL BARS 416.0620 EA	* HMA PAVEMENT 4 MT 58-28 S 460.6224 TON	* CONCRETE CURB & GUTTER 31-INCH 601.0331 LF	* SAWING CONCRETE 690.0250 LF
161+00 RT	23	6	42	4	8	77
166+25 LT	21	6	38	4	8	64
167+50 LT	32	10	38	6	12	82
TOTAL	76	22	118	14	28	223

* Quantities shown elsewhere

STATION			LOCATION	PREPARING FOUNDATION FOR ASPHALTIC SHOULDERS 211.0400 STA	BASE AGGREGATE DENSE 3/4-INCH 305.0110 TON	BASE AGGREGATE DENSE 1 1/4-INCH 305.0120 TON	WATER 624.0100 MGAL
161+74	TO	163+22	MEDIAN	--	--	232	3.5
162+84	TO	163+41	RT	--	--	38	0.5
162+91	TO	163+44	LT	--	--	16	0.25
163+70	TO	164+25	RT	--	--	32	0.5
163+70	TO	164+32	LT	--	--	45	1.75
163+80	TO	167+19	MEDIAN	--	--	445	6.75
50+90	TO	53+60	LT/RT	3	39	444	6.75
			TOTAL	3	39	1252	20

3

STATION			LOCATION	* DRILLED TIE BARS 416.0610 EA	* CONCRETE CURB & GUTTER 31-INCH 601.0331 LF	CONCRETE CURB PEDESTRIAN 601.0600 LF	CONCRETE SIDEWALK 5-INCH 602.0410 SF	CURB RAMP DETECTABLE WARNING FIELD YELLOW 602.0505 SF	CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW 602.0605 SF	CONCRETE MEDIAN SLOPED NOSE TYPE 2 620.0300 SF	CONCRETE CURB & GUTTER 31-INCH MODIFIED SPV.0090 LF
161+74	TO	163+15	MEDIAN	4	147	--	1362	40	--	16	28
162+63	TO	163+41	RT	4	33	--	413	20	19	--	32
162+91	TO	163+44	LT	2	24	--	319	30	--	--	24
163+70	TO	164+25	RT	4	39	--	213	10	19	--	25
163+70	TO	164+32	LT	2	50	36	604	10	16	--	22
163+80	TO	167+19	MEDIAN	4	339	--	2117	20	--	16	18
			TOTAL	20	632	36	5028	130	54	32	149

* Quantities shown elsewhere

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET:	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

CONSTRUCTION STAKING

STATION			LOCATION	CURB GUTTER AND CURB & GUTTER 650.5500 LF	CURB RAMPS 650.9000 EACH	SLOPE STAKES 650.9920 LF
161+74	TO	163+15	MEDIAN	175	2	175
162+63	TO	163+41	RT RADIUS	65	2	--
162+91	TO	163+44	LT RADIUS	48	2	--
163+70	TO	164+25	RT RADIUS	64	2	--
163+70	TO	164+32	LT RADIUS	108	2	--
163+80	TO	167+19	MEDIAN	357	2	339
50+90	TO	53+60	92ND ST	--	--	270
49+86	TO	50+05	ROOT RIVER PKWY	--	--	21
		TOTAL		817	12	805

CONSTRUCTION STAKING
ELECTRICAL INSTALLATIONS (2120-16-70)

LOCATION	650.8500 LS
PROJECT LIMITS	1
TOTAL	1

CONSTRUCTION STAKING
SUPPLEMENTAL CONTROL (2120-16-70)

LOCATION	650.9910 LS
PROJECT LIMITS	1
TOTAL	1

CONSTRUCTION STAKING
STORM SEWER

STRUCTURE NUMBER	STATION	LOCATION	ELEVATION	650.4000 EACH
1	164+05.6	1.3' RT		1
2	163+14.0	3.4' LT		1
3	163+14.9	51' LT		1
4	163+13.9	48.3' RT		1
TOTAL				4

CONSTRUCTION STAKING

LOCATION		SUBGRADE 650.4500 LF	BASE 650.5000 LF
STATION 161+74 TO 163+22	MEDIAN	148	148
STATION 163+80 TO 167+19	MEDIAN	339	339
STATION 50+93 TO 53+61	N 92ND	268	268
TOTAL		755	755

LOCATION	TRAFFIC CONTROL 643.5000 EACH
PROJECT	1
TOTAL	1

3

		TRAFFIC CONTROL																	
				BARRICADES				WARNING LIGHTS										TEMPORARY	TEMPORARY PEDESTRIAN
		DRUMS		TYPE II		TYPE III		TYPE A		TYPE C		ARROW BOARDS		SIGNS		SIGNS PCMS		CURB RAMP	SAFETY FENCE
			643.0300		643.0410		643.0420		643.0705		643.0715		643.0800		643.0900		643.1050	644.1601.S	644.1616.S
STAGE	DAYS	EAC H	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	LF
STAGE 1	42	201	8442	2	84	15	630	30	1260	28	1176	4	168	49	2058	3	21	1	78
STAGE 2	42	178	7476	4	168	13	546	26	1092	28	1176	4	168	44	1848	--	--	--	82
TOTAL			15918		252		1176		2352		2352		336		3906		21	1	160

3

						MOBILIZATIONS						
			EROSION	SILT FENCE		EROSION	EMERGENCY	EROSION MAT	INLET		SEEDING
		TOPSOIL	BALES		MAINTENANCE	CONTROL	EROSION CONTROL	URBAN CLASS I TYPE A	PROTECTION TYPE B	FERTILIZER TYPE B	MIXTURE NO. 30
		625.0100	628.1104	628.1504	628.1520	628.1905	628.1910	628.2006	628.7010	629.0210	630.0130
LOCATION		SY	EACH	LF	LF	EACH	EACH	SY	EACH	CWT	LB
STATION 161+70 TO 163+21	MEDIAN	2	--	--	--	--	--	2	2	0.0014	0.04
STATION 162+75 TO 163+40 RT	RADIUS	36	--	59	30	--	--	36	3	0.02268	0.648
STATION 162+75 TO 163+40 LT	RADIUS	211	--	307	154	--	--	211	3	0.13279	3.794
STATION 163+80 TO 167+20	MEDIAN	63	--	--	--	--	--	63	1	0.03948	1.128
STATION 163+70 TO 164+30 RT	RADIUS	76	--	58	29	--	--	76	1	0.04781	1.366
STATION 163+70 TO 164+50 LT	RADIUS	22	30	68	34	--	--	22	2	0.014	0.4
STATION 51	92ND ST	194	--	--	--	2	2	--	--	--	--
UNDISTRIBUTED		--	--	--	--	2	2	--	--	--	--
TOTAL		604	30	492	247	4	4	410	12	0.25816	7.376

STH 24 & 92ND ST/N ROOT RIVER PKWY
MILWAUKEE COUNTY
CATEGORY 0010
S40-1436

STATE FURNISHED MATERIALS SUMMARY

EACH	DESCRIPTION
1	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 8 PHASE
1	TRAFFIC SIGNAL CABINET
5	VIDEO CAMERA
4	EVP DETECTOR HEADS
1	ETHERNET SWITCH
1	CELLULAR MODEM

STATE FURNISHED FOR INFORMATION ONLY

SIGNAL BASE NO.	VIDEO CAMERA EACH	EVP DETECTOR HEADS EACH
SB4	2	1
SB8		1
SB11	3	1
SB14		1
TOTAL	5	4

STATE FURNISHED COMMUNICATIONS EQUIPMENT FOR INFORMATION ONLY

LOCATION	ETHERNET SWITCHES EACH	CELLULAR MODEMS EACH	CAT-5E-CABLE 5-FEET EACH
CB1(S40-1436)	1	1	1
TOTAL	1	1	1

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0615 CONDUIT SPECIAL 3-INCH L.F.
CB1	PB1		18	
PB1	SB1	19		
PB1	SB2	5		
PB1	SB3	8		
PB1	PB2			148
PB2	SB4		4	
PB2	SB5	5		
PB2	PB3		102	
PB3	SB6	20		
PB3	PB4			116
PB4	SB7	16		
PB4	PB12	184		
PB12	PB13	131		
PB4	PB5			102
PB5	SB8		12	
PB5	PB6		82	
PB6	SB9	7		
PB6	SB10	6		
PB6	PB7			174
PB7	SB11		8	
PB7	PB8		52	
PB8	SB12	14		
PB8	PB9			130
PB9	SB13	20		
PB9	PB14	184		
PB9	PB10			92
PB10	PB11		82	
PB11	SB14		5	
PB11	CB1		21	
TOTAL		619	386	762

FILE NAME : N:\PDS\C3D\CAD\21201600\SIG\S40-1436\S40-1436_mq.pptx PLOT DATE : 1/22/2019 PLOT BY : DOTCMV PLOT NAME : S40-1436_mq.pdf PLOT SCALE : 1:1

STH 24 & 92ND ST/N ROOT RIVER PKWY
MILWAUKEE COUNTY
CATEGORY 0010
S40-1436

3

TRAFFIC DETECTOR LOOPS

LOOP NO.	HOME RUN PB	LOCATION*	SIZE (FT)x(FT)	NO. OF TURNS	SDD INSTALLATION REFERENCE	652.0800 CONDUIT LOOP DETECTOR L.F.	655.0700 LOOP DETECTOR LEAD IN CABLE L.F.	655.0800 LOOP DETECTOR WIRE L.F.
11	PB9	162+65.5, 7.2' RT	6'x20'	3	9F15-4A - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	78	108	234
12	PB9	162+93.5, 7.2' RT	6'x20'	3	9F15-4A - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	74	108	222
21	PB13	167+48.7, 31.3' LT	6'x10'	5	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	76	518	380
22	PB13	167+48.9, 18.3' LT	6'x10'	5	9F15-4A - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	50	518	250
23	PB12	166+18.8, 30.7' LT	6'x6'	5	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	92	387	460
24	PB12	166+18.8, 19.2' LT	6'x6'	5	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	68	387	340
51	PB4	164+47.7, 7.2' LT	6'x20'	3	9F15-4A - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	86	203	258
52	PB4	164+19.7, 7.2' LT	6'x20'	3	9F15-4A - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	76	203	228
63	PB14	160+91.0, 25.4' RT	6'x20'	3	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	72	292	216
					TOTAL	672	2724	2588

*LOCATION IS TO FRONT CENTER OF DETECTOR LOOP
**FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

PULL BOXES

PULL BOX NO.	LOCATION*		653.0135 PULL BOXES STEEL 24x36-INCH EACH	653.0140 PULL BOXES STEEL 24x42-INCH EACH
PB1	163+16.0, 69.5' LT			1
PB2	163+89.1, 62.6' LT			1
PB3	164+38.6, 51.3' LT			1
PB4	164+35.2, 6.6' RT			1
PB5	164+32.3, 57.4' RT			1
PB6	163+91.8, 58.0' RT			1
PB7	163+07.1, 58.0' RT			1
PB8	162+81.1, 57.7' RT			1
PB9	162+73.1, 6.4' LT			1
PB10	162+67.5, 52.5' LT			1
PB11	163+06.0, 68.0' LT			1
PB12	166+18.9, 6.1' RT		1	
PB13	167+48.9, 6.0' LT		1	
PB14	160+91.0, 5.2' RT		1	
		TOTAL	3	11

*FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

CONCRETE BASES

SIGNAL BASE NO.	LOCATION*		654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH	SPV.0060.01 CONCRETE BASES TYPE 2 SPREAD FOOTING EACH
CB1	163+10.5, 72.8' LT						1	
SB1	163+06.0, 53.3' LT		1					
SB2	163+15.1, 64.3' LT		1					
SB3	163+23.0, 73.8' LT			1				
SB4	163+92.1, 65.7' LT				1			
SB5	163+93.1, 59.9' LT		1					
SB6	164+18.9, 51.7' LT		1					
SB7	164+19.5, 6.6' RT			1				
SB8	164+20.6, 58.0' RT					1		
SB9	163+98.3, 57.4' RT		1					
SB10	163+86.3, 58.5' RT		1					
SB11	163+14.9, 58.0' RT					1		
SB12	162+93.1, 50.3' RT		1					
SB13	162+93.3, 6.4' LT							1
SB14	163+06.0, 63.5' LT					1		
		TOTAL	7	2	1	3	1	1

*FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

3

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED L.F.
CB 1	SB 1	52		
CB 1	SB 2	38		
CB 1	SB 3		41	
CB 1	SB 4	127		
CB 1	SB 5	128		
CB 1	SB 6		210	
CB 1	SB 7		280	
CB 1	SB 8		343	
CB 1	SB 9	386		
CB 1	SB 10		385	
CB 1	SB 11		284	
CB 1	SB 12		248	
CB 1	SB 13		173	
CB 1	SB 14	39		
CB 1	SB 3			41
SB 3	SB 7			279
CB 1	SB 13			173
SB 13	SB 11			175
	TOTAL	770 *	1964	668

* QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB 1	SB 1	52
SB 1	SB 2	48
SB 2	SB 3	37
SB 3	SB 4	126
SB 4	SB 5	33
SB 5	SB 6	116
SB 6	SB 7	134
SB 7	SB 8	119
SB 8	SB 9	100
SB 9	SB 10	37
SB 10	SB 11	141
SB 11	SB 12	88
SB 12	SB 13	139
SB 13	SB 14	168
SB 14	CB 1	39
PB 1	CB 1	29
PB 2	SB 4	25
PB 3	SB 6	40
PB 4	SB 7	36
PB 5	SB 8	32
PB 6	SB 10	26
PB 7	SB 11	28
PB 8	SB 11	70
PB 9	SB 13	40
PB 10	SB 14	82
PB 11	SB 14	25
	TOTAL	1810

STH 24 & 92ND ST/N ROOT RIVER PKWY
MILWAUKEE COUNTY
CATEGORY 0010
S40-1436

3

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG L.F.
SB 2	HEAD 19	15	
SB 3	HEAD 14	19	
SB 3	HEAD 16	19	
SB 4	HEAD 15	55	
SB 5	HEAD 20	15	
SB 6	HEAD 5		22
SB 6	HEAD 7	19	
SB 6	HEAD 21	15	
SB 7	HEAD 6		22
SB 7	HEAD 10		22
SB 8	HEAD 2	65	
SB 8	HEAD 3	52	
SB 8	HEAD 22	15	
SB 9	HEAD 23	15	
SB 10	HEAD 13	19	
SB 10	HEAD 17	19	
SB 11	HEAD 18	60	
SB 11	HEAD 24	15	
SB 12	HEAD 1	19	
SB 12	HEAD 11		22
SB 12	HEAD 25	15	
SB 13	HEAD 4		22
SB 13	HEAD 12		22
SB 14	HEAD 8	70	
SB 14	HEAD 9	58	
SB 14	HEAD 26	15	
	TOTAL	594	132 *

* QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.
SB 3	LUMIN.	117
SB 7	LUMIN. (2)	234
SB 11	LUMIN.	144
SB 13	LUMIN. (2)	234
	TOTAL	729

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE L.F.
CB 1	SB 14 (HEAD A)	114
CB 1	SB 8 (HEAD B)	413
CB 1	SB 11 (HEAD C)	349
CB 1	SB 4 (HEAD D)	187
	TOTAL	1063

ELECTRICAL SERVICE METER BREAKER PEDESTAL

LOCATION*	656.0200.01 ELECTRICAL SERVICE METER BREAKER PEDESTAL L.S.
STH 24 & 92ND ST	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

STH 24 & 92ND ST/N ROOT RIVER PKWY
MILWAUKEE COUNTY
CATEGORY 0010
S40-1436

	POLES																		
	657.0100	657.0255	657.0310	657.0345	657.0355	657.0360	657.0405	657.0420	657.0425	657.0430	657.0530	657.0535	657.0540	657.0545	657.0609	657.0815	SPV.0060.04	658.0500	659.1125
		TRANSFORMER BASES BREAKAWAY	POLES	POLES	POLES	POLES	TRAFFIC SIGNAL STANDARDS	TRAFFIC SIGNAL STANDARDS	TRAFFIC SIGNAL STANDARDS	TRAFFIC SIGNAL STANDARDS									
	PEDESTAL	11 1/2-INCH	TYPE 3	TYPE 9	TYPE 12	TYPE 13	ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM	MONOTUBE ARMS	MONOTUBE ARMS	MONOTUBE ARMS	MONOTUBE ARMS	LUMINAIRE ARMS SINGLE MEMBER	LUMINAIRE ARMS	LUMINAIRE ARM STEEL 15-FT	PEDESTRIAN PUSH	LUMINAIRES UTILITY
SIGNAL	BASES	BOLT CIRCLE					3.5-FT	13-FT	15-FT	10-FT	30-FT	35-FT	40-FT	45-FT	4-INCH CLAMP 6-FT	STEEL 15-FT	CLAMP-ON	BUTTONS	LED C
BASE NO.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
SB 1	1						1											1	
SB 2	1									1								1	
SB 3		1	1												1				1
SB 4				1							1								
SB 5	1									1								1	
SB 6	1								1									1	
SB 7		1	1												2			1	2
SB 8					1								1					1	
SB 9	1									1								1	
SB 10	1							1										1	
SB 11						1						1				1	1	1	1
SB 12	1								1									1	
SB 13		1	1												2			1	2
SB 14					1									1					
TOTAL	7	3	3	1	2	1	1	1	2	3	1	1	1	1	5	1	1	11	6

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 77	E

FILE NAME : N:\PDS\C3D\CAD\21201600\SIG\S40-1436\S40-1436_mq.pptx PLOT DATE : 1/22/2019 PLOT BY : DOTCMV PLOT NAME : S40-1436_mq.pdf PLOT SCALE : 1:1

STH 24 & 92ND ST/N ROOT RIVER PKWY
MILWAUKEE COUNTY
CATEGORY 0010
S40-1436

3

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
1	SB 12	1		
2	SB 8	1		
3	SB 8	1		
4	SB 13		1	
5	SB 6		1	
6	SB 7		1	
7	SB 6	1		
8	SB 1	1		
9	SB 1	1		
10	SB 7		1	
11	SB 12		1	
12	SB 13		1	
13	SB 10	1		
14	SB 3	1		
15	SB 4	1		
16	SB 3	1		
17	SB 10	1		
18	SB 11	1		
19	SB 2			1
20	SB 5			1
21	SB 6			1
22	SB 8			1
23	SB 9			1
24	SB 11			1
25	SB 12			1
26	SB 14			1
	TOTAL	12	6	8

SIGNAL MOUNTING HARDWARE

LOCATION	658.5069.01 SIGNAL MOUNTING HARDWARE L.S.
STH 24 & 92ND ST	1
TOTAL	1

TRANSPORT AND INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET

LOCATION	SPV.0105.01 TRANSPORT AND INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET L.S.
STH 24 & 92ND ST	1
TOTAL	1

TRANSPORT AND INSTALL STATE FURNISHED VIDEO DETECTION SYSTEM

LOCATION	SPV.0105.02 TRANSPORT AND INSTALL STATE FURNISHED VIDEO DETECTION SYSTEM L.S.
STH 24 & 92ND ST	1
TOTAL	1

EVP DETECTOR HEAD INSTALLATION

LOCATION	SPV.0105.03 TRANSPORT AND INSTALL STATE FURNISHED EVP DETECTOR HEADS L.S.
STH 24 & 92ND ST	1
TOTAL	1

TYPE II PERMANENT SIGNING

2120-16-70 sth 24

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x 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]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	638.2102 MOVING SIGNS TYPE II [EA]	638.2602 REMOVING SIGNS TYPE II (EA)	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	204.9060.S.01 REMOVING RRFB TYPE I POLE ASSEMBLY (EA)	204.9060.S.02 REMOVING PEDESTRIAN PUSH BUTTON POLE ASSEMBLY (EA)	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
1	W11-15(2M)		36 X 36		9.000		1.000		1	1					
1A	W16-9P(2M)		30 X 18		3.750									1	PART OF SIGN # 1 REMOVAL
2	W11-15(2M)		36 X 36		9.000		1.000		1	1					
2A	W16-9P(2M)		30 X 18		3.750									2	PART OF SIGN # 2 REMOVAL
3	W11-1						1.000		1						
4	D1-2 MODIFIED	92ND STREET NORTH (ARROW) N. ROOT RIVER PKWY (ARROW)	84 X 30	17.500			2.000		1	2					
5	R3-20L						1.000		1						
6	R1-5						1.000		1						J3-1 REMOVAL IS PART OF SIGN # 6 PER STANDARD SPEC
7	D11-1(2M)		24 X 18	3.000			1.000		1	1					
	MG6-4		21 X 21	3.060											PART OF SIGN # 7
8	D11-1(2M)		24 X 18	3.000			1.000		1	1					
	MG6-4		21 X 21	3.060											PART OF SIGN # 8
9	NOT USED														
10	R7-1D(2M)		24 X 30	5.000			1.000		1	1					
11	W11-2								3		1				REMOVING SIGNS IS REMOVING 3 SIGNS FROM THE TYPE I POLE AND TURNING OVER ENTIRE ASSEMBLY TO CITY OF GREENFIELD WHO OWNS THE RRFB AND POLE
12	W11-2								3		1				REMOVING SIGNS IS REMOVING 3 SIGNS FROM THE TYPE I POLE AND TURNING OVER ENTIRE ASSEMBLY TO CITY OF GREENFIELD WHO OWNS THE RRFB AND POLE
13	R10-25						1.000					1			REMOVING 1 SIGN FROM THE TYPE I POLE AND TURNING OVER TO CITY OF GREENFIELD
14	W11-15(2M)		36 X 36		9.000					1					
14A	W16-7L(2M)		30 X 18		3.750									14	
15	R5-1(2M)		36 X 36	9.000											MOUNT ON SIGNAL POLE
16	R1-1F(2M)		36 X 36			7.460									MOUNT ON SIGNAL POLE
17	R6-3(2M)		30 X 24	5.000										16	
18	R1-1						1.000		1						INCLUDES REMOVAL OF R6-3 SIGN
19	J4-1(2M)		24 X 36	6.000			1.000		1						
	M3-2		24 X 12												
	M1-6	STH 24	24 X 24												

TYPE II PERMANENT SIGNING

2120-16-70 sth 24

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]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	638.2102 MOVING SIGNS TYPE II [EA]	638.2602 REMOVING SIGNS TYPE II (EA)	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	204.9060.S.01 REMOVING RRFB TYPE I POLE ASSEMBLY (EA)	204.9060.S.02 REMOVING PEDESTRIAN PUSH BUTTON POLE ASSEMBLY (EA)	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
20	R1-5						1.000		1						
21	R1-5						1.000		1						
22	R5-1(2M)		36 X 36	9.000			1.000		1						ON SIGNAL POLE
23	R4-7(2M)		24 X 30	5.000			1.000		1						ON SIGNAL POLE
24	R4-7(2M)		24 X 30	5.000			1.000		1						ON SIGNAL POLE
25	R9-5						1.000	1		1					
26	NONE	USE CROSSWALK							1						
27	W11-2								3		1				REMOVING SIGNS IS REMOVING 3 SIGNS FROM THE TYPE I POLE AND TURNING OVER ENTIRE ASSEMBLY TO CITY OF GREENFIELD WHO OWNS THE RRFB AND POLE
28	W11-2								3		1				REMOVING SIGNS IS REMOVING 3 SIGNS FROM THE TYPE I POLE AND TURNING OVER ENTIRE ASSEMBLY TO CITY OF GREENFIELD WHO OWNS THE RRFB AND POLE
29	R10-15R(2M)		30 X 30	6.250			1.000		1	1					
30	R2-1(2M)	40 MPH	30 X 36	7.500			1.000		1	1					
31	R2-1(2M)	40 MPH	30 X 36	7.500			1.000		1	1					
32	J4-1(2M)		24 X 36	6.000			1.000		1	1					
	M3-3		24 X 12												
	M1-6	STH 24	24 X 24												
33	R1-1F(2M)		36 X 36			7.460									ON SIGNAL POLE
34	R1-1F(2M)		36 X 36			7.460									ON SIGNAL POLE
35	R1-5						1.000		1						
36	M1-94S	24 - W. FOREST HOME AVE	108 X 18	13.500											MOUNT ON SIGNAL ARM PER SIGNAL DETAIL
37	J3-1(2S)		24 X 45	7.500						1					
	M1-6	STH 24	24 X 24												
	M6-4		21 X 21												
38	M1-94H MOD	S. 92ND ST (ARROW)	102 X 30	21.250											MOUNT ON SIGNAL ARM PER SIGNAL DETAIL
		N. ROOT RIVER PKWY (ARROW)													
39	R10-50L(2M)		30 X 36	7.500											MOUNT ON SIGNAL POLE

TYPE II PERMANENT SIGNING

2120-16-70 sth 24

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	SIGN SIZE 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]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	638.2102 MOVING SIGNS TYPE II [EA]	638.2602 REMOVING SIGNS TYPE II (EA)	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	204.9060.S.01 REMOVING RRFB TYPE I POLE ASSEMBLY (EA)	204.9060.S.02 REMOVING PEDESTRIAN PUSH BUTTON POLE ASSEMBLY (EA)	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
40	R10-50L(2M)		30	X	36	7.500											MOUNT ON SIGNAL POLE
41	R1-1F(2M)		36	X	36			7.460									MOUNT ON SIGNAL POLE
42	R1-1F(2M)		36	X	36			7.460									MOUNT ON SIGNAL POLE
43	R1-1F(2M)		36	X	36			7.460									MOUNT ON SIGNAL POLE
44	R6-3(2M)		30	X	24	5.000										43	MOUNT ON SIGNAL POLE
45	J3-1(2M)		24	X	45	7.500						1					
	M1-6	STH 24	24	X	24												
	M6-4		21	X	21												
46	R1-1								1.000		1						INCLUDES REMOVAL OF R6-3 SIGN PER STANDARD SPECS
47	M1-94H MOD	N. ROOT RIVER PKWY (ARROW)	102	X	30	21.250											MOUNT ON SIGNAL ARM PER SIGNAL DETAIL
48	R9-5	S. 92ND ST (ARROW									1			1			REMOVING 1 SIGN FROM THE TYPE I POLE AND TURNING OVER TO CITY OF GREENFIELD
49	R2-1(2M)	40 MPH	30	X	36	7.500			1.000		1	1					
50	R2-1(2M)	40 MPH	30	X	36	7.500			1.000		1	1					
51	D1-1(MOD)	EDGERTON AVE 5100 SOUTH	78	X	21	11.375			2.000		1	2					
52	D1-2(MOD)	N. ROOT RIVER PKWY (ARROW) 92ND ST NORTH (ARROW)	96	X	30	20.000			2.000		1	2					
53	W11-15(2M)		36	X	36		9.000		1.000		1	1					
53A	W16-9P(2M)		30	X	18		3.750									53	REMOVAL OF SIGN IS PART OF 53 PER STD SPEC
54	W11-15(2M)		36	X	36		9.000					1					
54A	W16-7L(2M)		30	X	18		3.750									54	
55	D1-1								2.000		1						
56	D11-1(2M)		24	X	18	3.000			1.000		1	1					
	MG6-4		21	X	21	3.060											
57	J3-1(2M)		24	X	45	7.500			1.000		1	1					
	M1-5A	CTH N	24	X	24												
	M6-1		21	X	21												
58	D11-1(2M)		24	X	18	3.000			1.000		1	1					
	MG6-4		21	X	21	3.060											
59	R9-5									1	1	1					

TYPE II PERMANENT SIGNING

2120-16-70 sth 24

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]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	638.2102 MOVING SIGNS TYPE II [EA]	638.2602 REMOVING SIGNS TYPE II (EA)	634.0618 POSTS WOOD 4" X 6" X 18' [EA]	204.9060.S.01 REMOVING RRFB TYPE I POLE ASSEMBLY (EA)	204.9060.S.02 REMOVING PEDESTRIAN PUSH BUTTON POLE ASSEMBLY (EA)	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
60	NONE	USE CROSSWALK									1						
61	R4-4(2S)		36	X	30	7.500						1					
62	R4-4(2S)		36	X	30	7.500						1					
63	J3-1(2M)		24	X	36	6.000			1.000		1	1					SHEET 2
	M3-3		24	X	12												
	M1-6	STH 24	24	X	24												
64	M1-94S	24 W. FOREST HOME AVE	108	X	18	13.500											MOUNT ON SIGNAL ARM PER SIGNAL DETAIL. SHEET 2A
65	W11-15(2M)		36	X	36		9.000		1.000		1	1					SHEET 3 OF 5
65A	W16-9P(2M)		30	X	18		3.750									65	
66	R6-2L(2M)		30	X	36	7.500											MOUNT ON SIGNAL POLE
67	R6-2L(2M)		30	X	36	7.500											MOUNT ON SIGNAL POLE
68	R10-6(2S)		24	x	36	6.000									1		sheet 2A
68a	NONE	EXCEPT BICYCLES	24	X	12	2.000										68	
UNDISTRIBUTED						--	--	--							2	--	--
TOTALS						315.365	76.500	44.760	39.000	2	49	31	4	2	3	--	--

CATEGORY 0010
LIGHTING QUANTITIES
480V 2-WIRE GROUNDED NEUTRAL LIGHTING SYSTEM

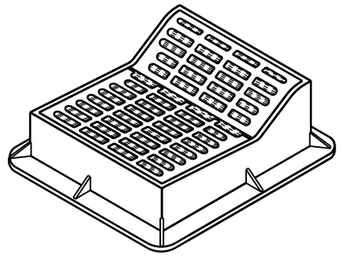
204.9090.S.01 REMOVING CABLE IN DUCT FROM CONDUIT
204.9090.S.02 REMOVING CABLE IN DUCT
204.0195 REMOVING CONCRETE BASES
655.0104 CABLE IN DUCT 2-4 AWG

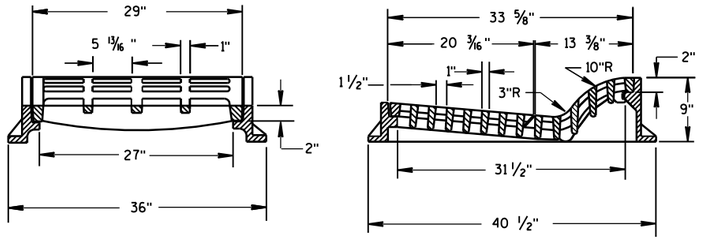
SYSTEM	NETWORK	LOCATION TO LOCATION	204.9090.S.01 REMOVING CABLE IN DUCT FROM CONDUIT LF	204.9090.S.02 REMOVING CABLE IN DUCT LF	204.0195 REMOVING CONCRETE BASES EA	655.0104 CABLE IN DUCT 2-4 AWG LF
GREENFIELD	CIRCUIT 1A	LP1 TO E SIDE S 92ND ST		120		120
GREENFIELD	CIRCUIT 1A	E SIDE S 92ND ST TO W SIDE S 92ND ST	50			50
GREENFIELD	CIRCUIT 1A	W SIDE S 92ND ST TO LP2		30		30
GREENFIELD	CIRCUIT 1A	LP2 TO LP3		200		200
GREENFIELD	CIRCUIT 1A	LP2			1	
		TOTAL (0010)	**50**	**350**	**1**	**400**

Standard Detail Drawing List

08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-19B	CURB RAMPS TYPES 2 AND 3
08D05-19F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-19G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D16-10	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-10	CONDUIT
09B04-11	PULL BOX
09C02-08	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
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)
09E01-15G	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
09E08-08A	TYPE 9 POLE 15'-30' MONOTUBE ARM
09E08-08B	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-08C	TYPE 12 POLE 35'-55' MONOTUBE ARM
09E08-08D	TYPE 13 POLE 35'-55' MONOTBE ARM
09E08-08E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09F15-04A	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
11B02-02	CONCRETE MEDIAN NOSE
14B07-15A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
15C07-14A	PAVEMENT MARKING SYMBOLS
15C07-14B	PAVEMENT MARKING WORDS
15C07-14C	PAVEMENT MARKING ARROWS
15C07-14E	PAVEMENT MARKING FOR BIKE LANES
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C08-19B	PAVEMENT MARKING (TURN LANES)
15C08-19C	PAVEMENT MARKING (TURN LANES)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C27-03B	PAVEMENT MARKING (ISLANDS)
15C29-06A	BICYCLE LANE MARKING
15C29-06B	PAVEMENT MARKING FOR SHARED LANE 35 MPH OR LESS
15C33-03	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-03A	PAVEMENT MARKING (INTERSECTIONS)
15D03-04	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER
15D03-05	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER
15D20-04	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-06	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D30-04A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-04B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-04C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

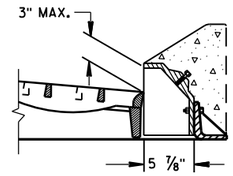
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TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

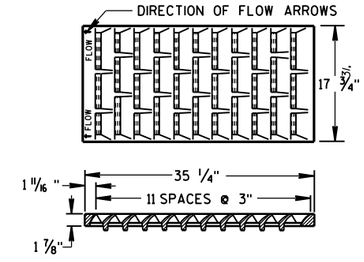
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

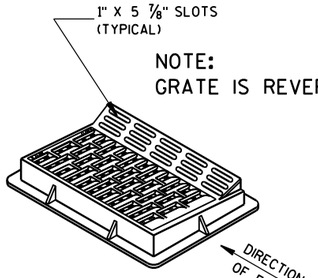
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

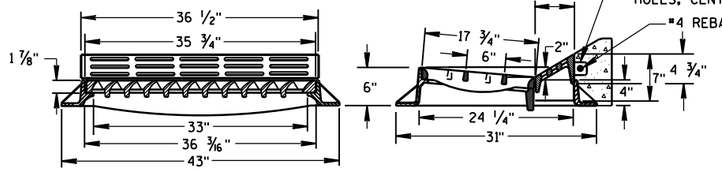
GENERAL NOTES

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.



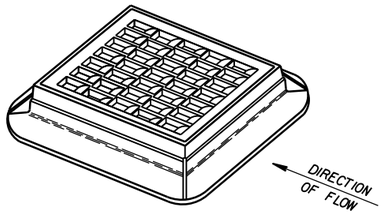


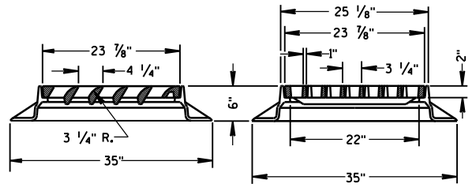


TYPE "HM"

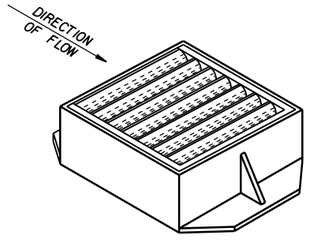
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

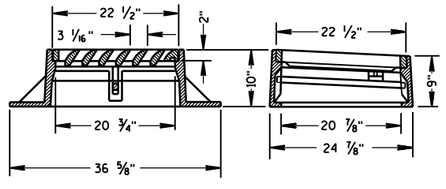
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



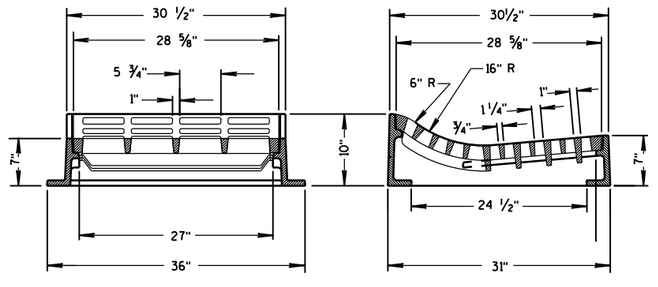


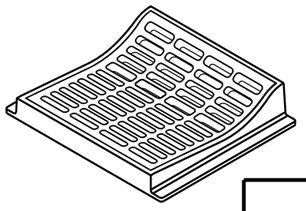
TYPE "S"





TYPE "V"





TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.

INLET COVERS
TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

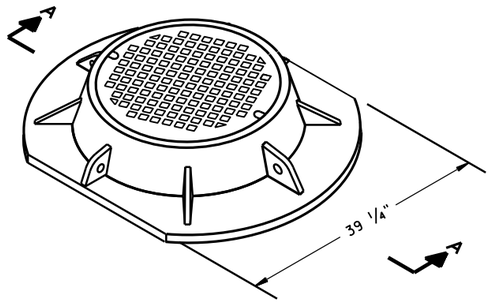
FHWA

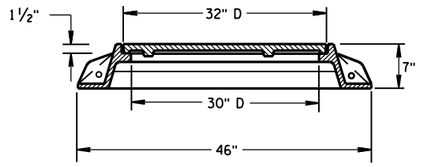
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S.D.D. 8 A 5-19c

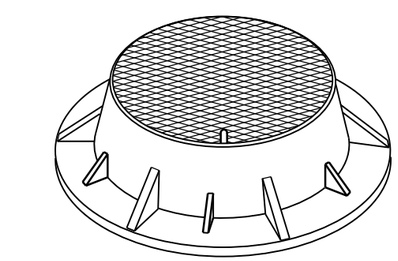
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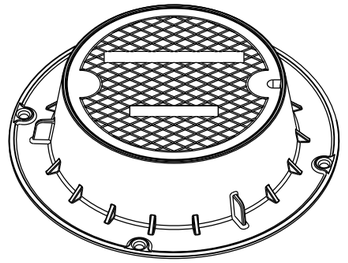
S.D.D. 8 A 5-19c

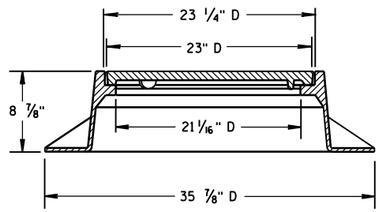


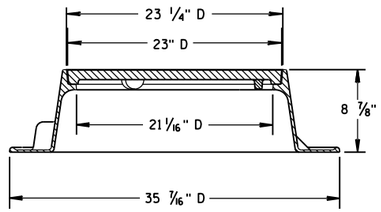


SECTION A-A
TYPE "K"









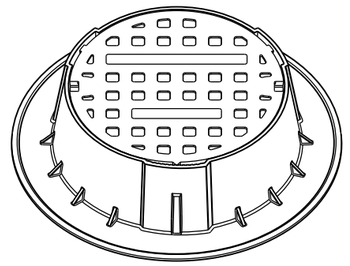
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

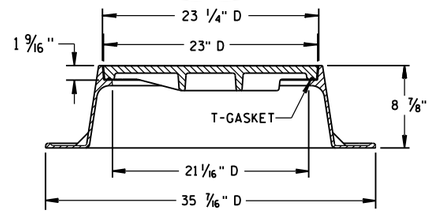
GENERAL NOTES

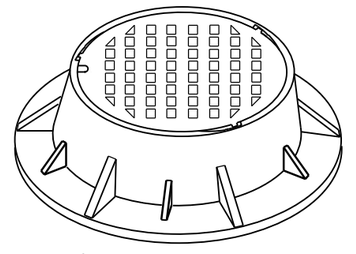
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

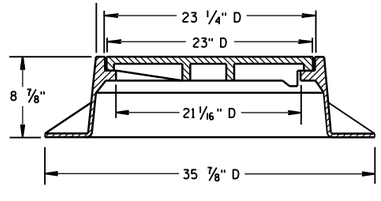
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

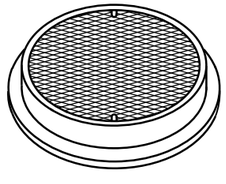


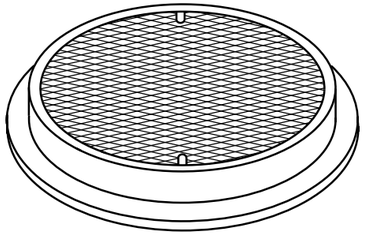


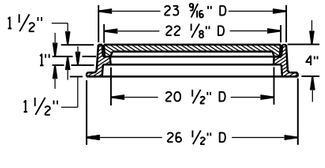




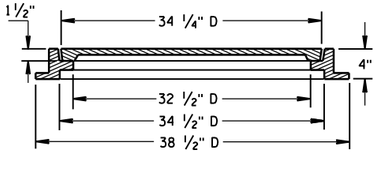
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



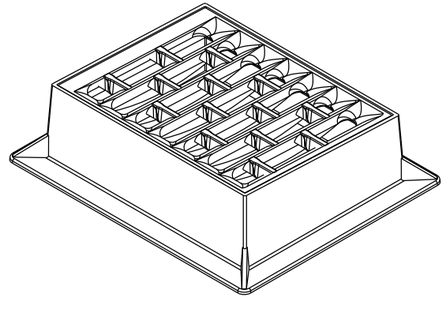


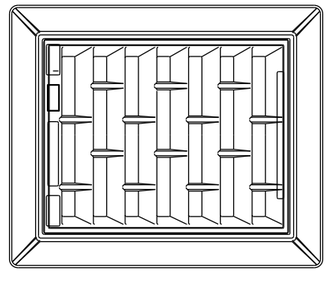


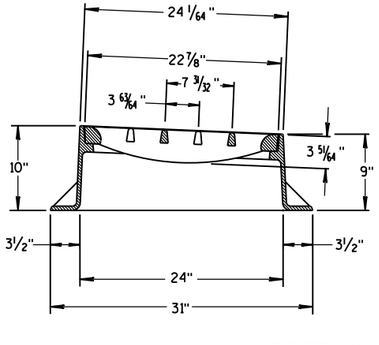
TYPE "L"

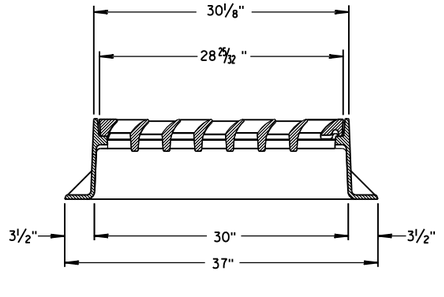


TYPE "M"









INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

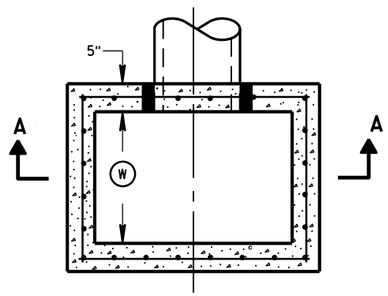
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

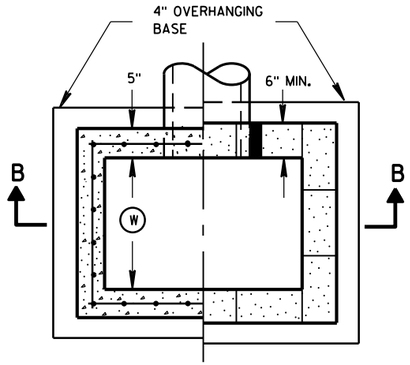
S.D.D. 8 A 5-19d

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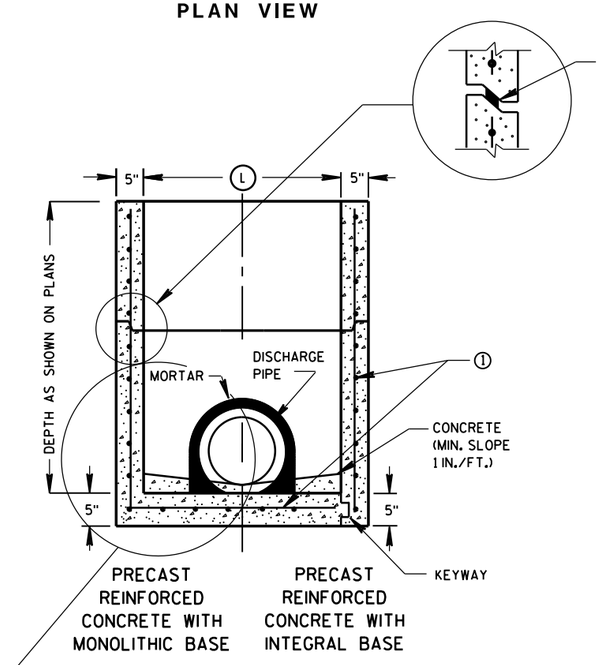
S.D.D. 8 A 5-19d



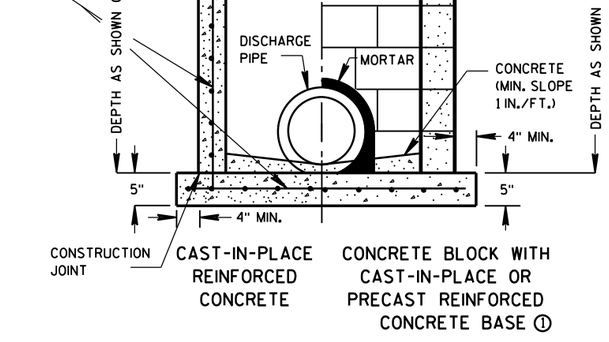
PLAN VIEW



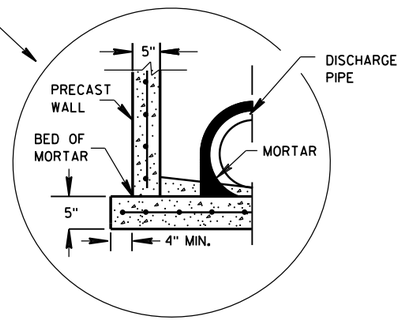
PLAN VIEW



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.

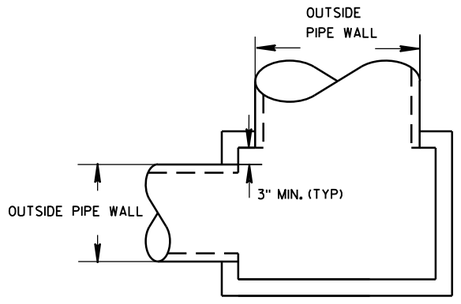
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

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



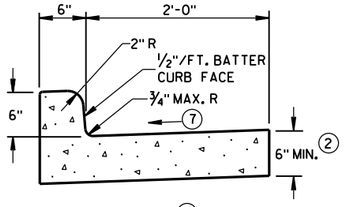
DETAIL "A"

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

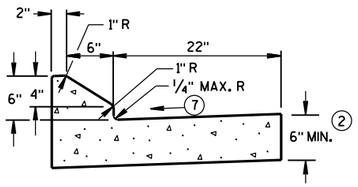
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

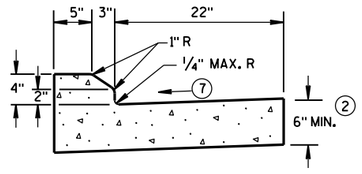
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT



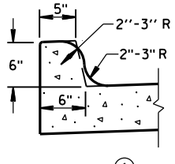
TYPES A (1) & D



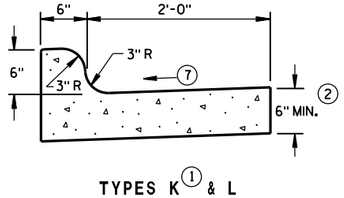
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

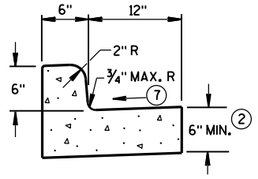


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



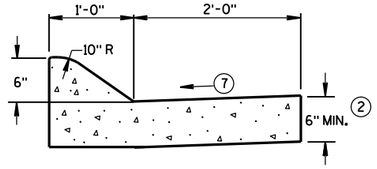
TYPES K (1) & L

CONCRETE CURB & GUTTER 30"

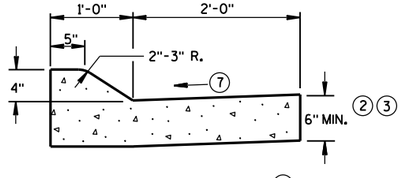


TYPES A (1) & D

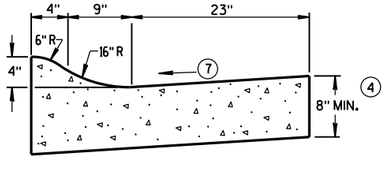
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

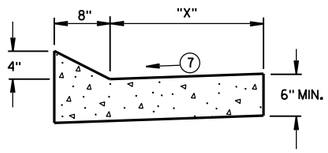


4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

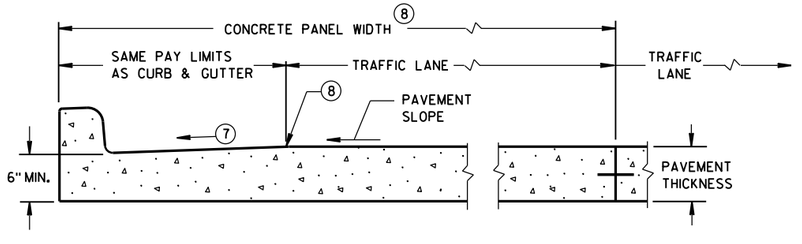
CONCRETE CURB & GUTTER 36"



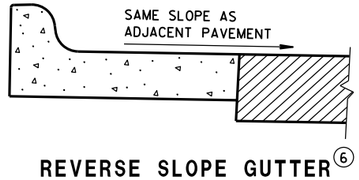
TYPES TBT & TBTT (1)

CONCRETE CURB & GUTTER

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



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB & GUTTER



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

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS 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 & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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 GUTTER 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) 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.

PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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

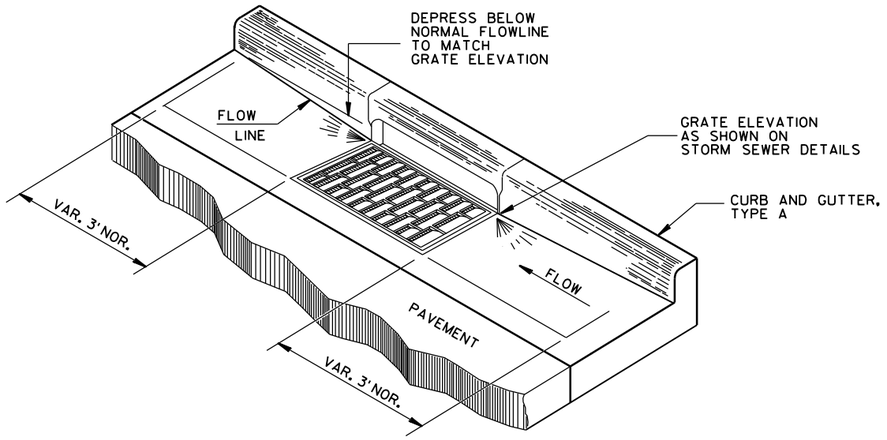
* BIKE LANE IS NOT SHOWN.

CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 8 D 1-20a



DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

GENERAL NOTES

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

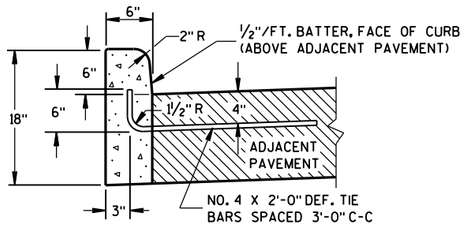
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

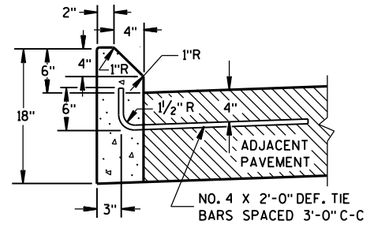
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

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

(9) REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

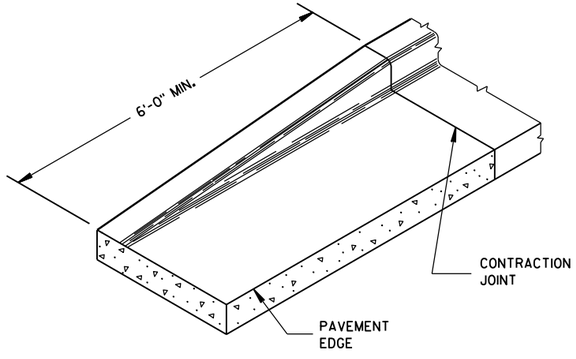


TYPES A(1) & D

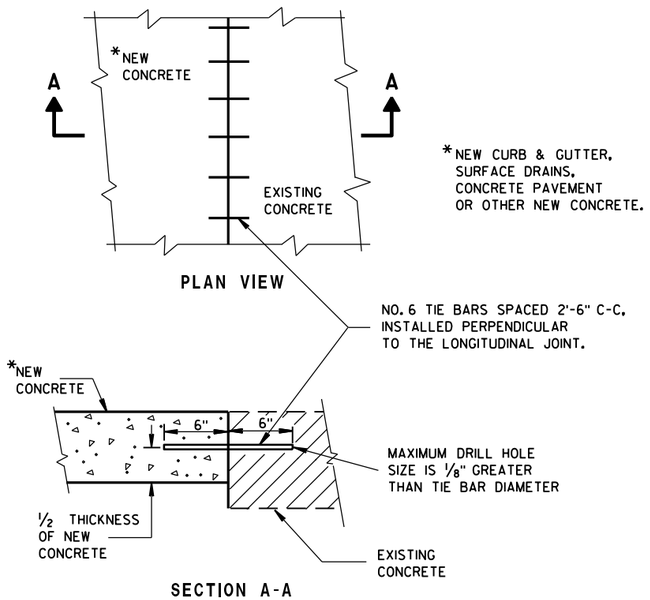


TYPES G(1) & J

CONCRETE CURB



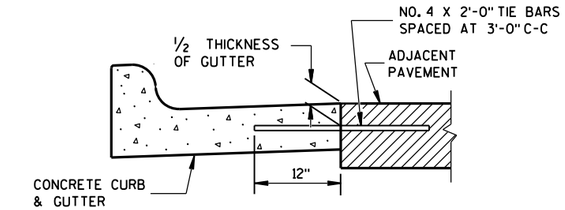
END SECTION CURB & GUTTER



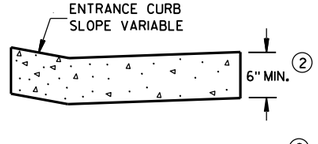
PLAN VIEW

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

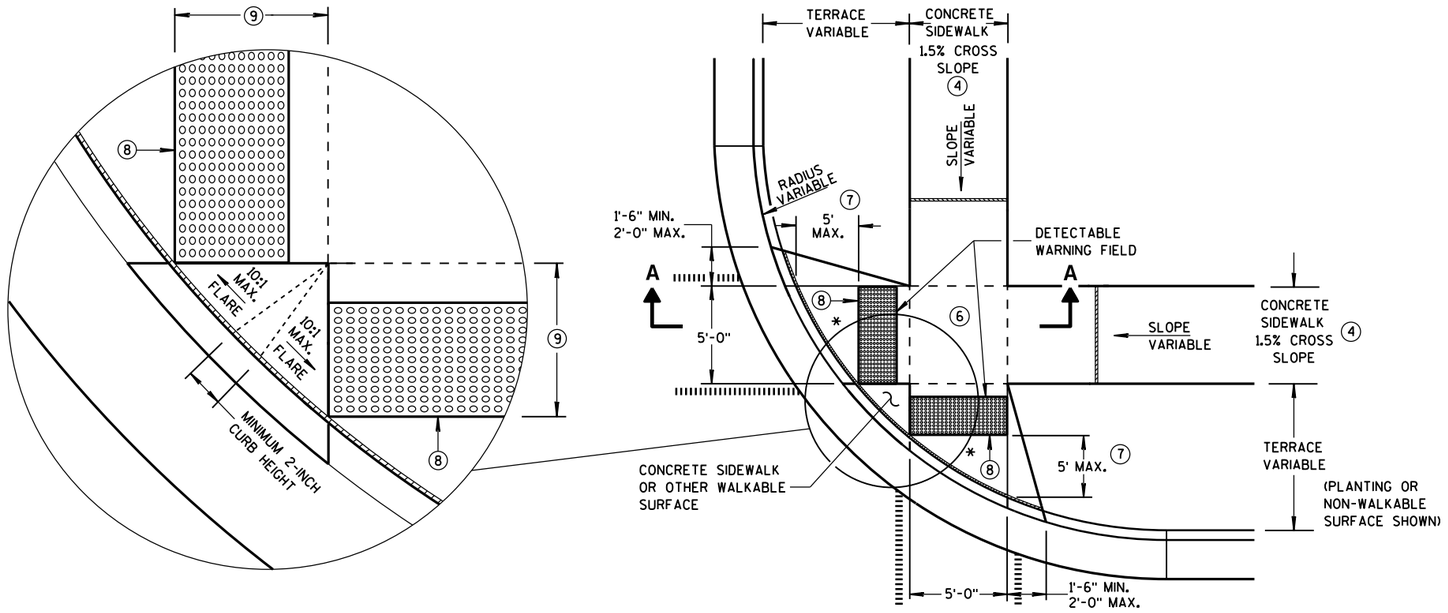
APPROVED
June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
89 — ENT
FHWA

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S.D.D. 8 D 1-20b

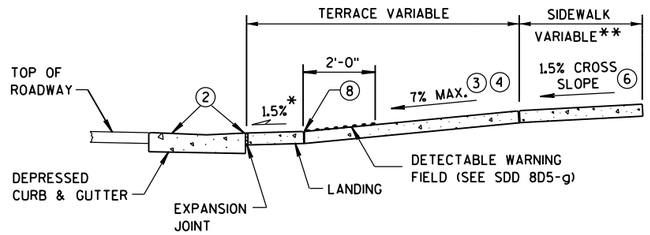
6

S.D.D. 8 D 1-20b



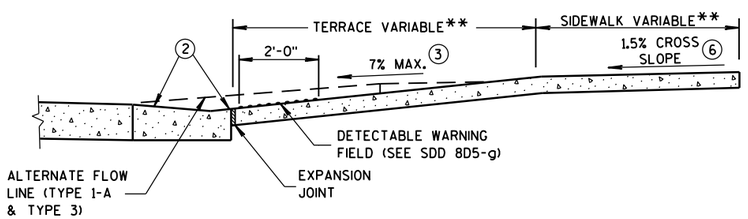
PLAN VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

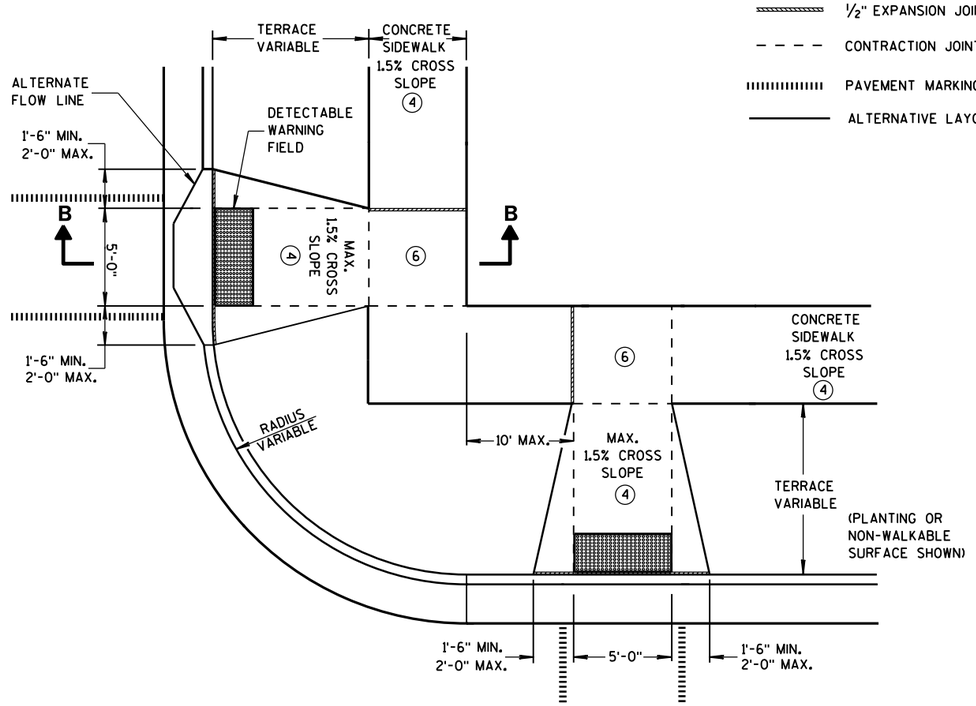


SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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 1/4-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) ABSOLUTE MAXIMUM 12H:1V (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 X 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.

(9) WHEN THIS 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.

LEGEND

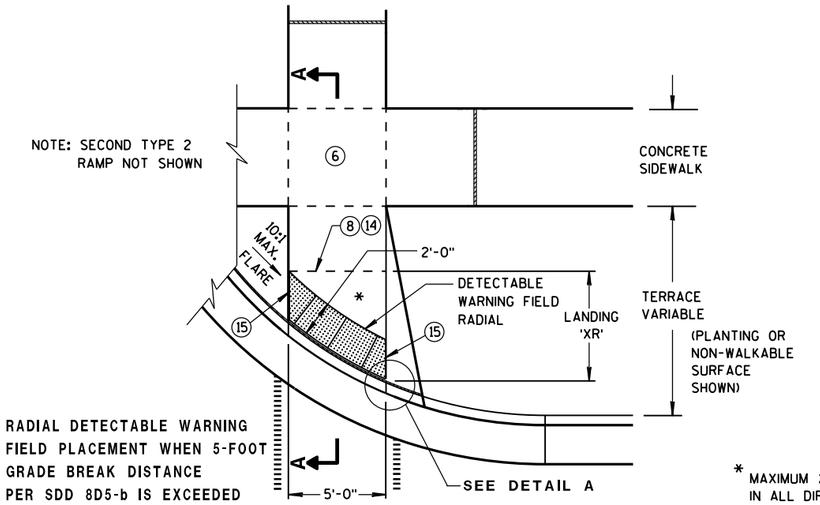
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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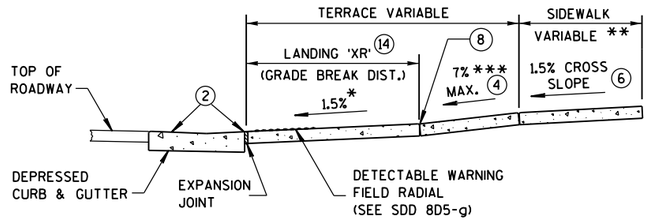
S.D.D. 8 D 5-19b



TYPE 2 RAMP
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION A-A

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS (DWFs) 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 FIELD 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.

(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) ABSOLUTE MAXIMUM 12H:1V (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 X 5 FEET.

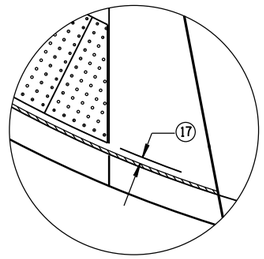
(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION 'XR') REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

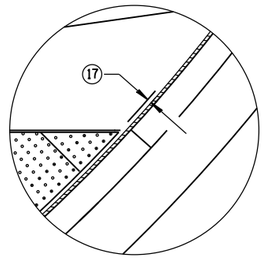
(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(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.

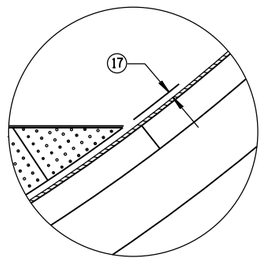
(17) A MAXIMUM 3-INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.



DETAIL A

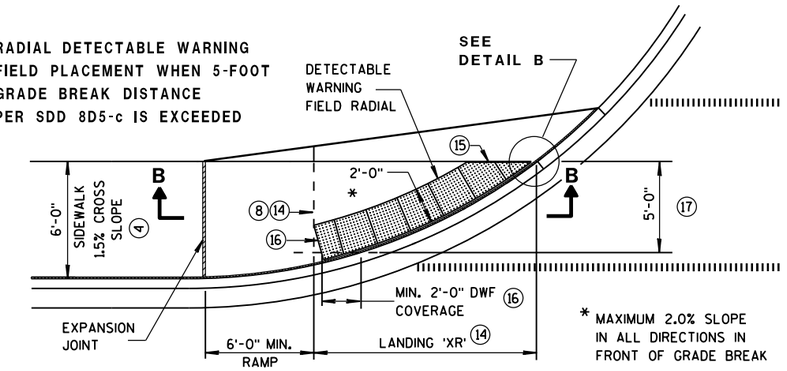


DETAIL C



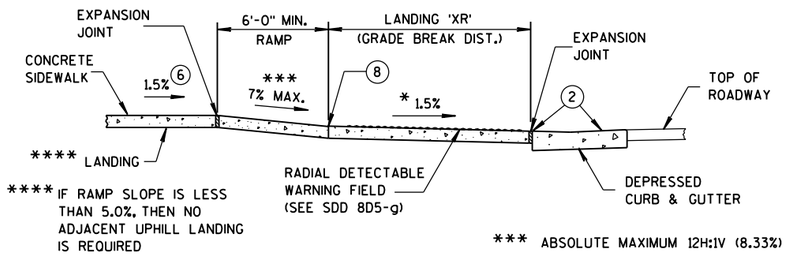
DETAIL B

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5-FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

CURB RAMP TYPE 4A1
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

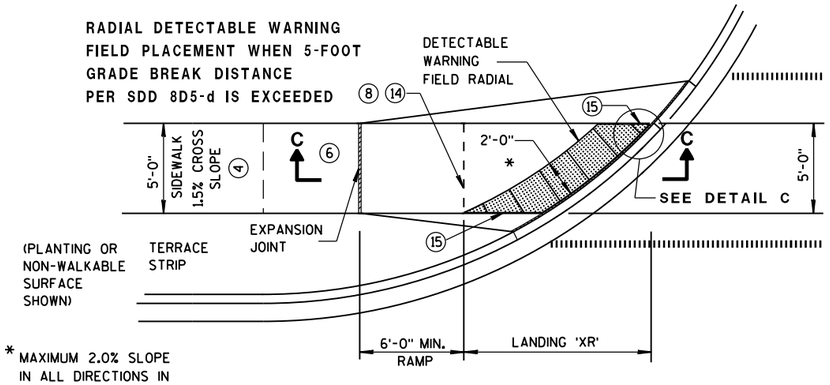


**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

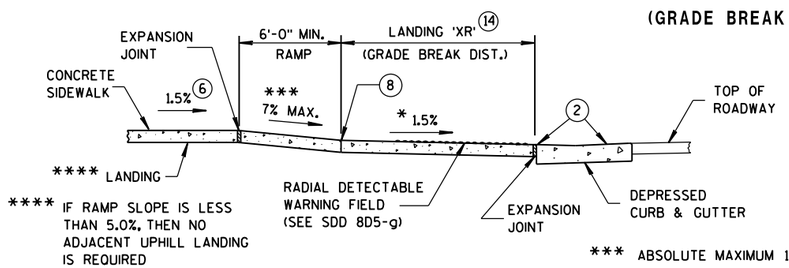
SECTION B-B FOR TYPE 4A1

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5-FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

CURB RAMP TYPE 4B1
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION C-C FOR TYPE 4B1

CURB RAMPS
RADIAL DETECTABLE WARNING FIELD APPLICATIONS

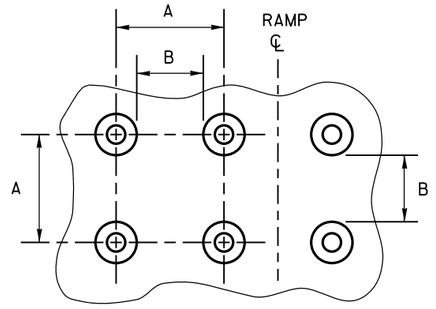
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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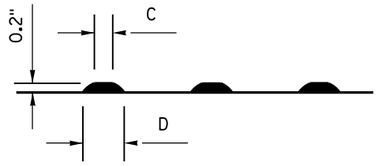
S.D.D. 8 D 5-19f

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



PLAN VIEW



ELEVATION VIEW

TRUNCATED DOMES

DETECTABLE WARNING PATTERN DETAIL

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, 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 FIELD ARE PROHIBITED.

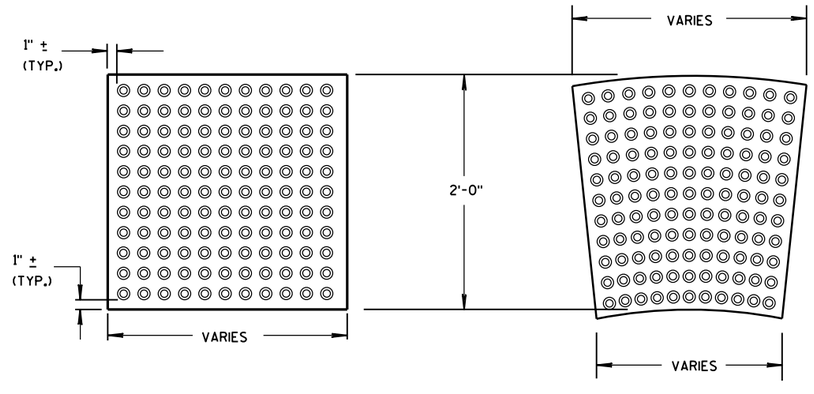
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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 WEDGES IN COMBINATION WITH SQUARE PANELS 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 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

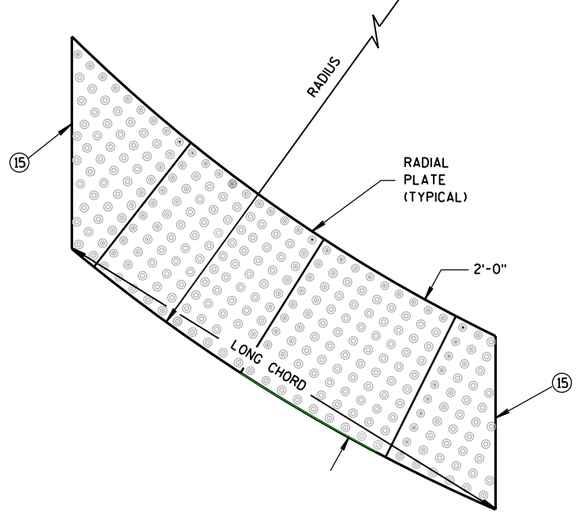


RECTANGULAR PLATES

RADIAL PLATES

DETECTABLE WARNING FIELDS (TYPICAL)

PLAN VIEW



RADIAL DETECTABLE WARNING FIELD ATTRIBUTES

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

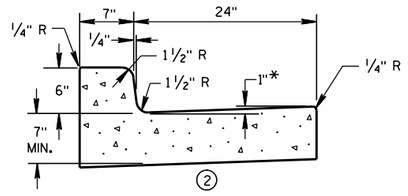
APPROVED
June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERV
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FHWA

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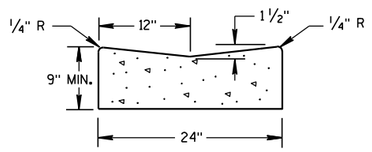
S.D.D. 8 D 5-19g

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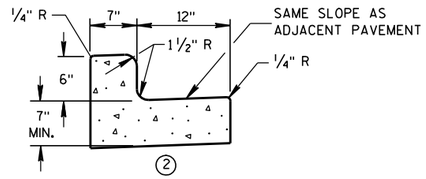
S.D.D. 8 D 5-19g



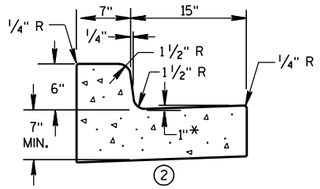
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

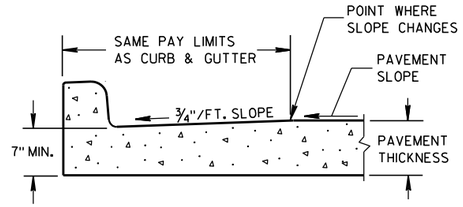


① CONCRETE CURB & GUTTER 19"



① CONCRETE CURB & GUTTER 22"

* TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS 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 & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

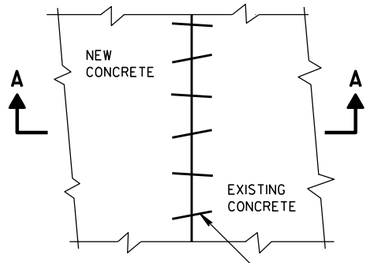
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURB.

① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUIRED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".

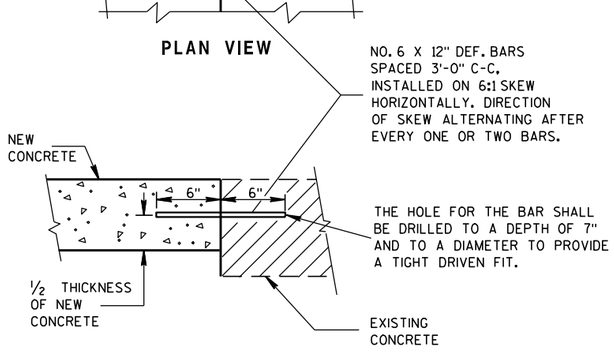
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MIMIMUM GUTTER THICKNESS IS MAINTAINED.

③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.



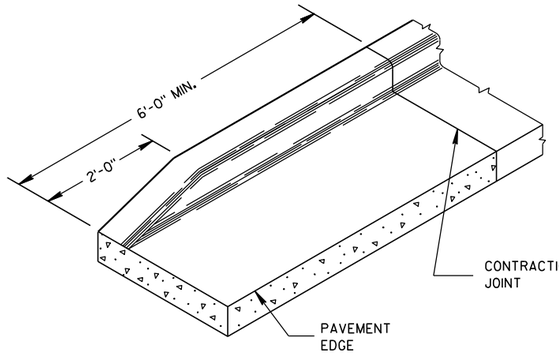
PLAN VIEW

EXISTING AND NEW CONCRETE MAY BE CURB & GUTTER, SURFACE DRAIN, PAVEMENT OR OTHER CONCRETE STRUCTURE.

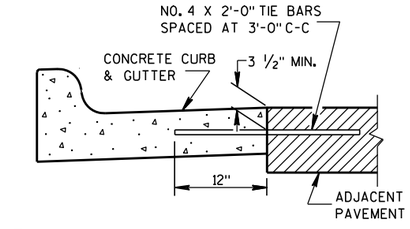


SECTION A-A

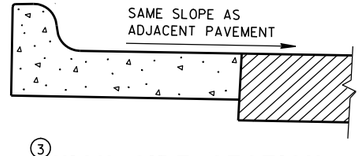
PAVEMENT TIES



END SECTION CURB & GUTTER



① TYPICAL TIE BAR LOCATION



③ HIGH SIDE SECTION

(TYPICAL FOR ALL CURB & GUTTER)

CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES

(For Optional Use in Milwaukee Co. Only)

STATE OF WISCONSIN
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APPROVED

11/2/2010 — DATE

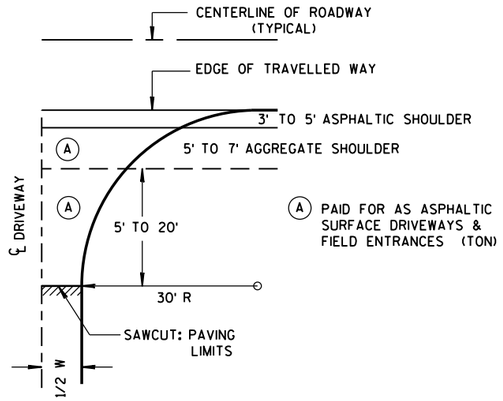
/S/ Jerry Zogg — ROADWAY STANDARDS ENGINEER

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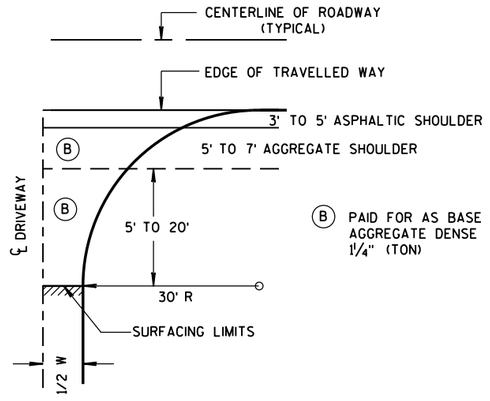
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S.D.D. 8 D 16-10



W MIN. = 16'
W MAX. = 24'

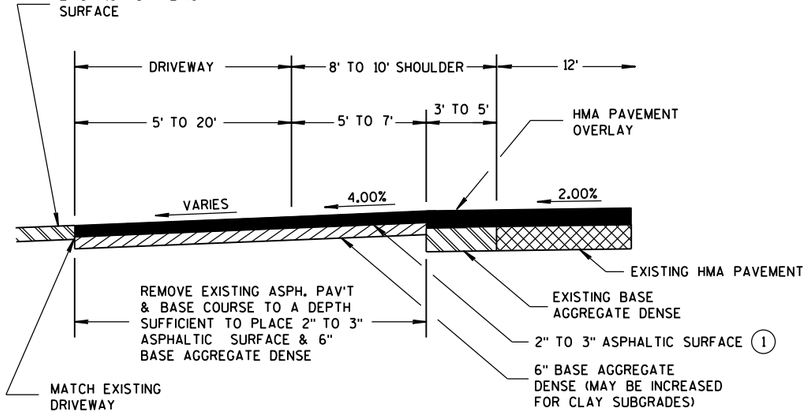
PLAN VIEW
HALF SECTION



PLAN VIEW
HALF SECTION

GENERAL NOTES

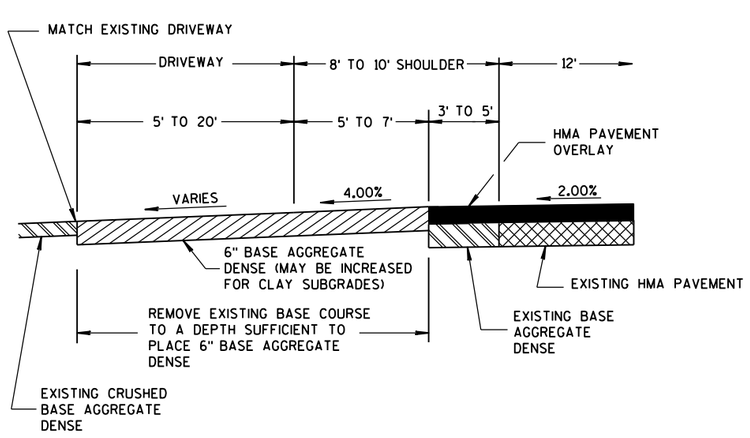
(1) DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.



PROFILE VIEW

RURAL ENTRANCE WITH ASPHALTIC SURFACE

RESURFACING PROJECTS



PROFILE VIEW

RURAL ENTRANCE WITH AGGREGATE SURFACE

6" BASE AGGREGATE DENSE
RESURFACING PROJECTS

DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL

STATE OF WISCONSIN
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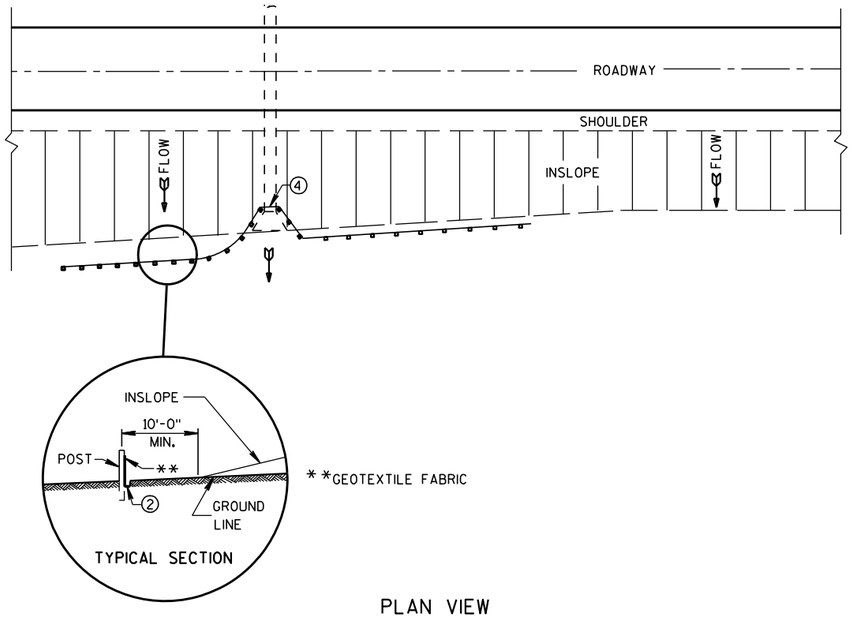
APPROVED
December, 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERV
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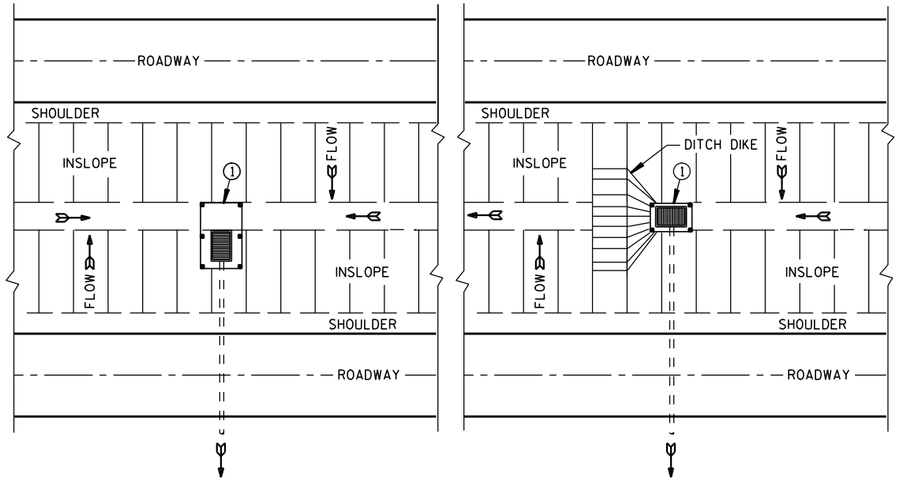
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S.D.D. 8 D 22-1



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.

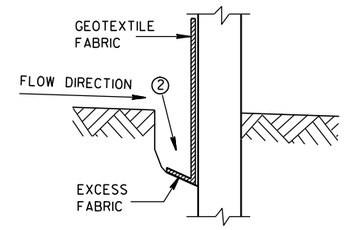
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

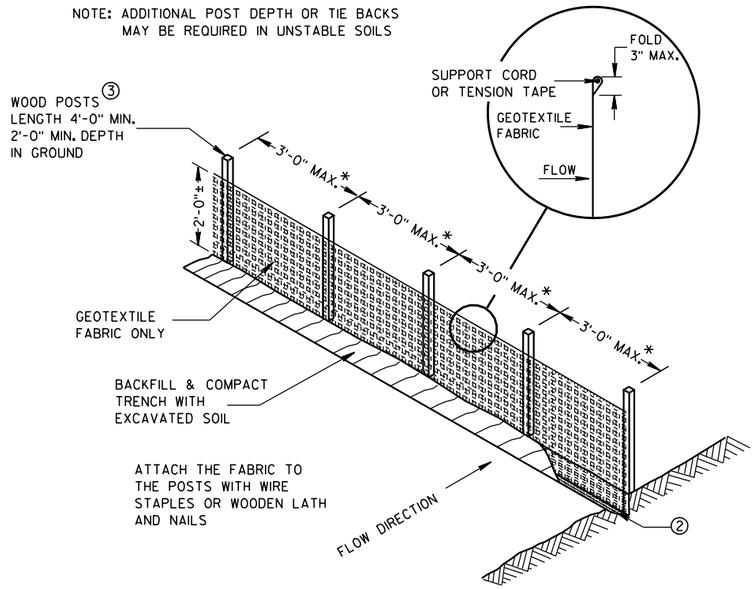
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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.

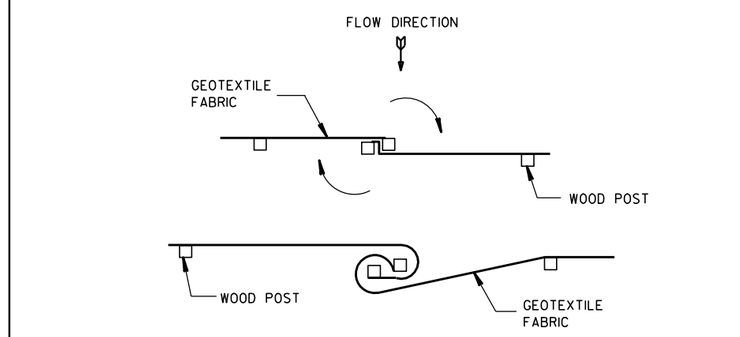


TRENCH DETAIL

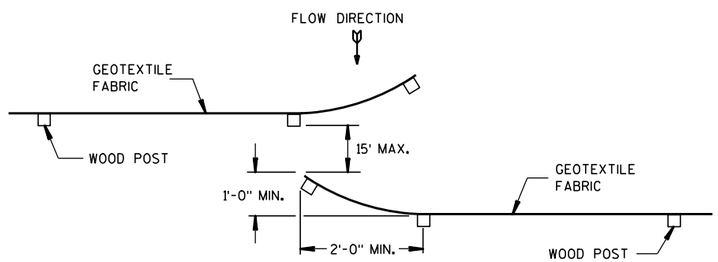


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

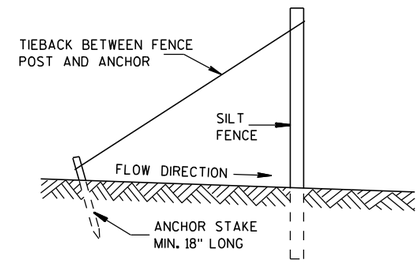


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

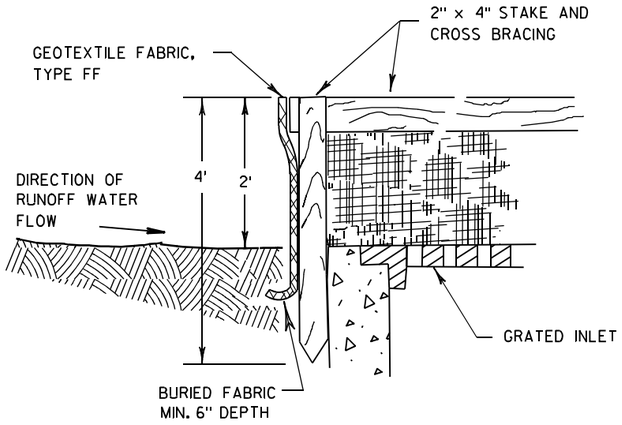
(WHEN REQUIRED BY THE ENGINEER)

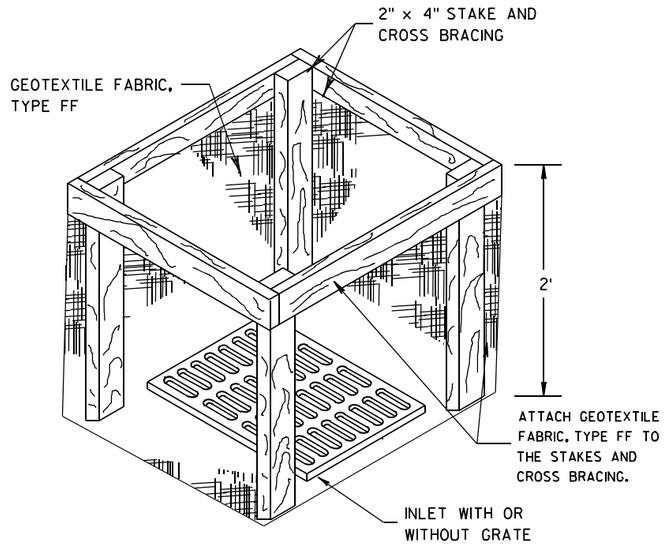
SILT FENCE

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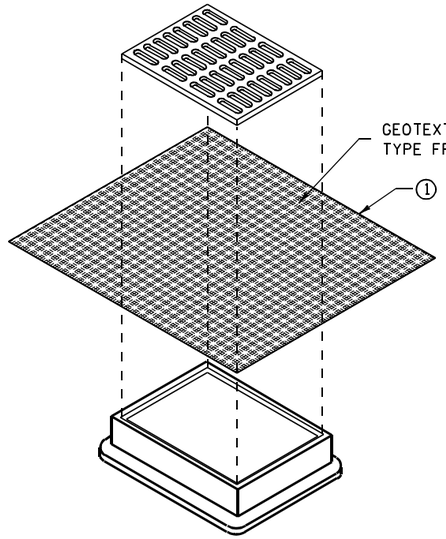
APPROVED
4-29-05
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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S.D.D. 8 E 9-6



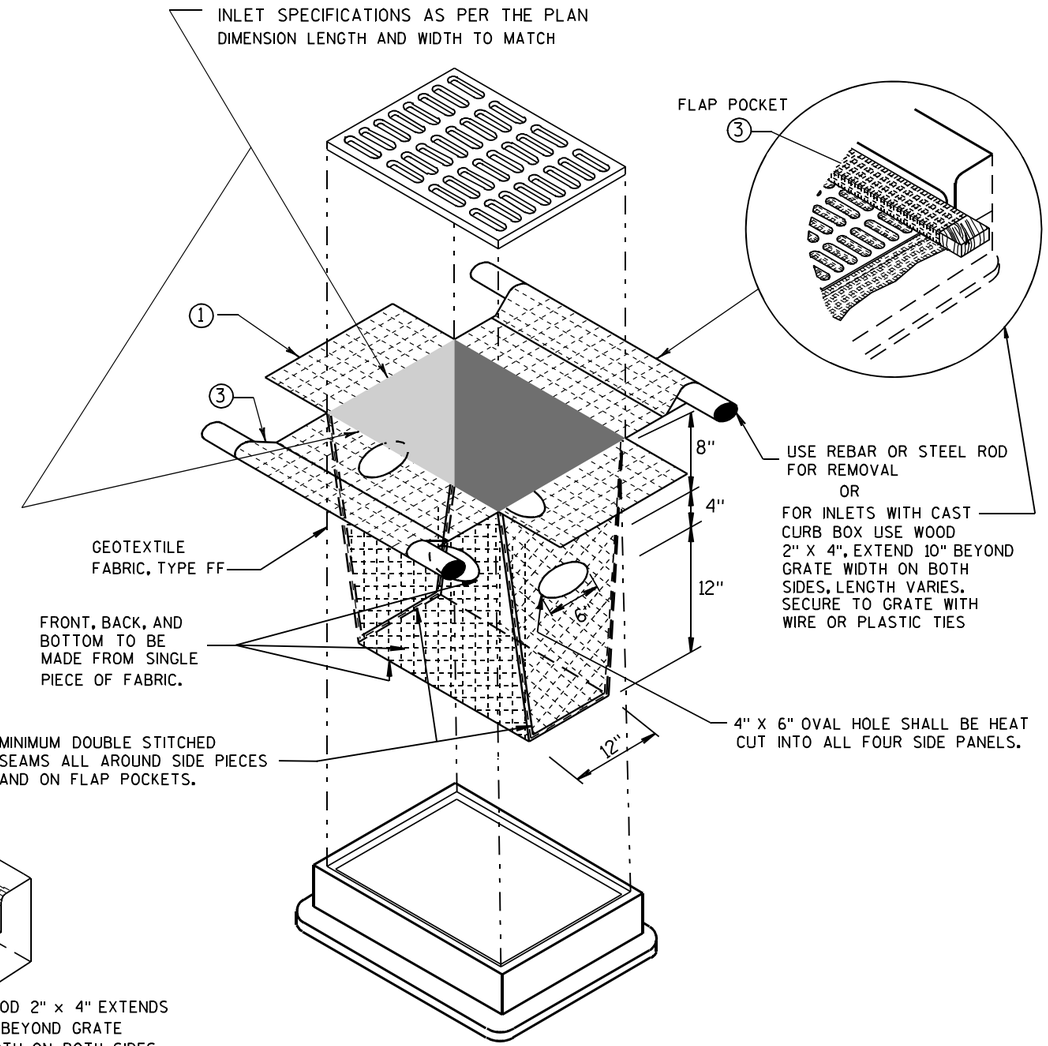


INLET PROTECTION, TYPE A



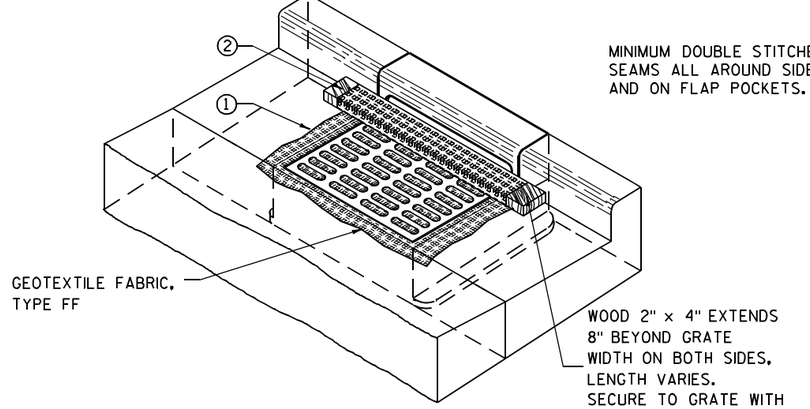
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

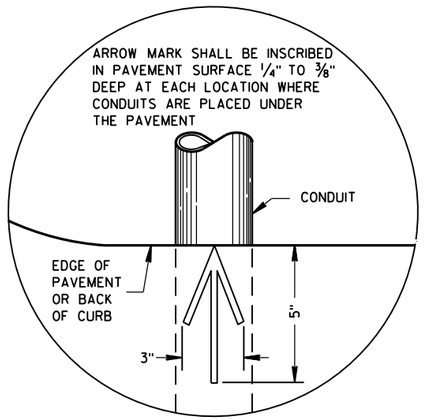
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

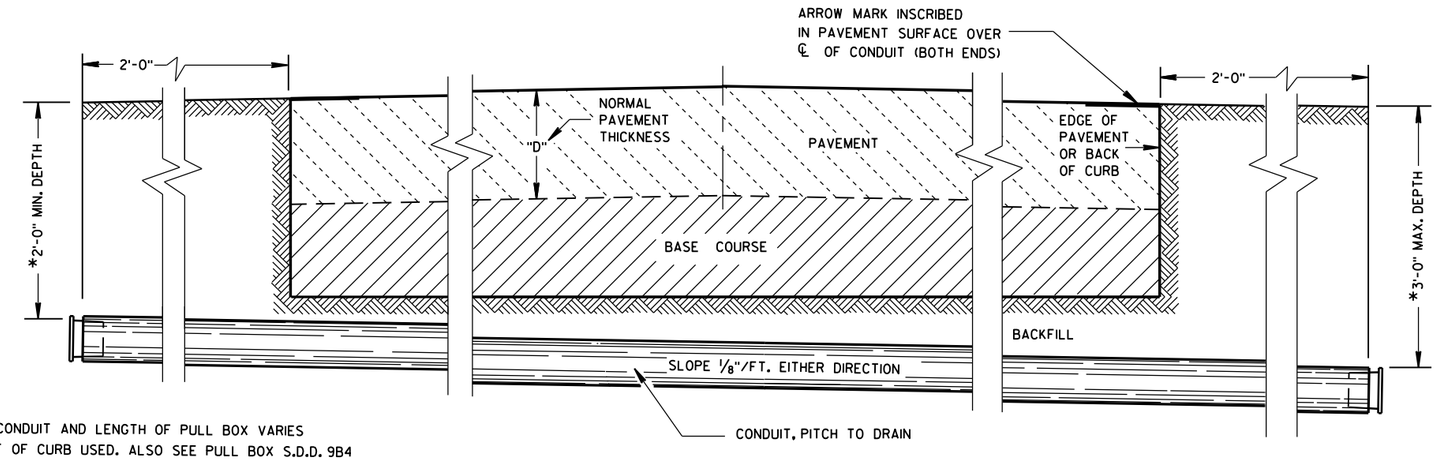
APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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



PLAN VIEW

ARROW MARK



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

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

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

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

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

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

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

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 97
FHWA

6

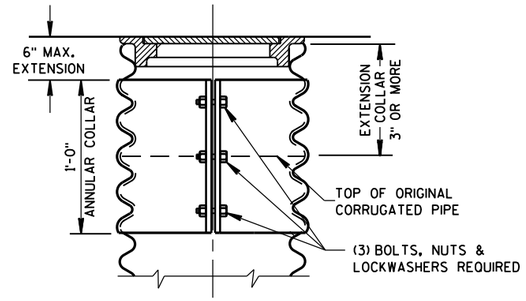
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

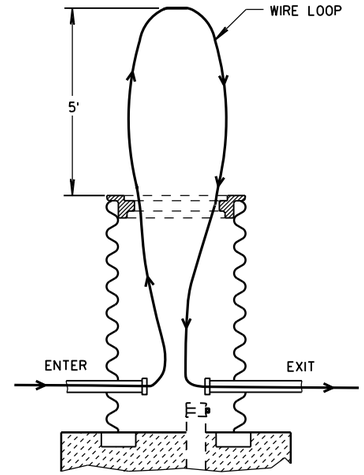
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2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

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

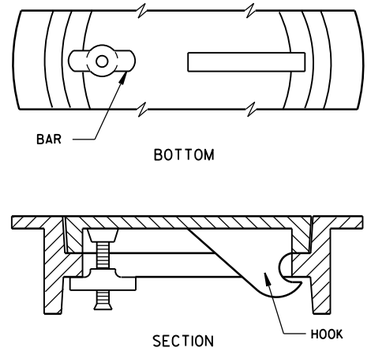
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

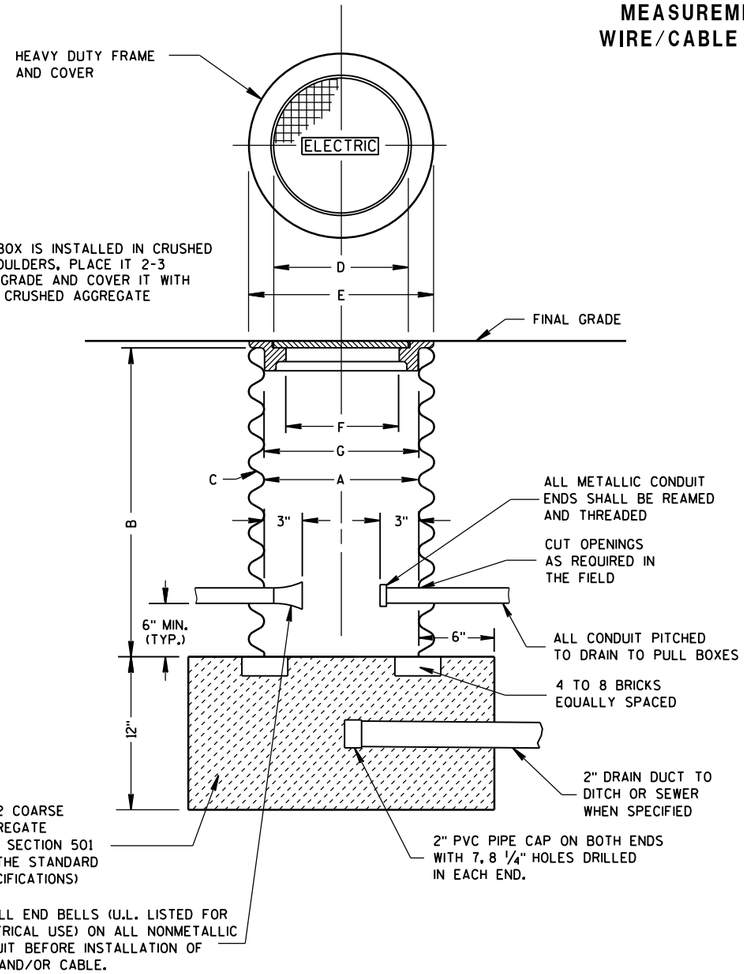


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



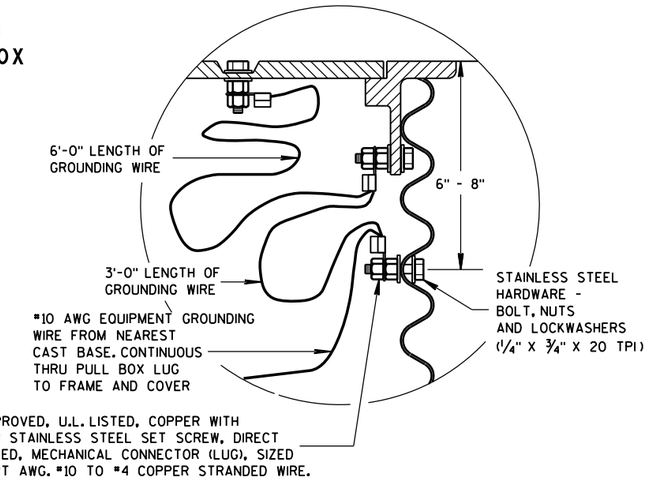
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

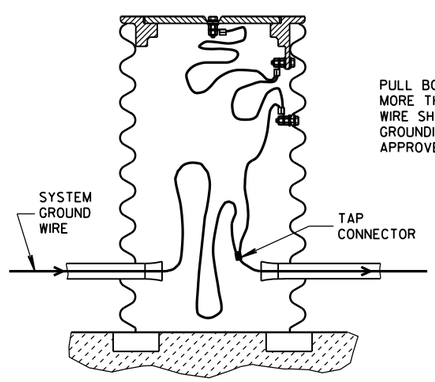


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



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

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

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

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

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

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

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

PULL BOX

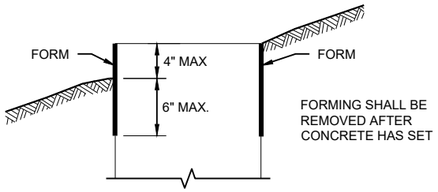
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 B 4-11

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 BENDS 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 1, 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.

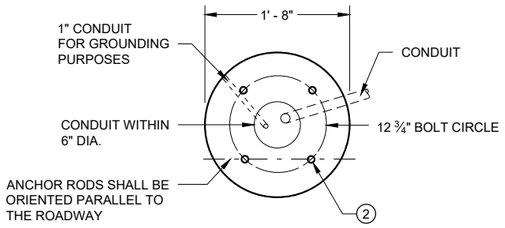
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

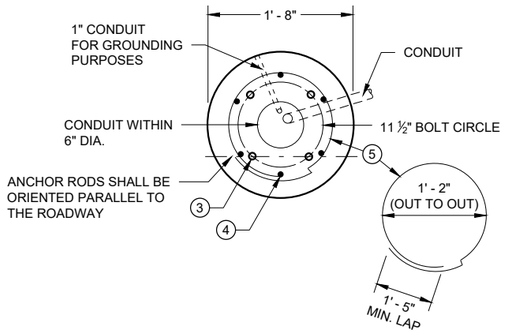
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

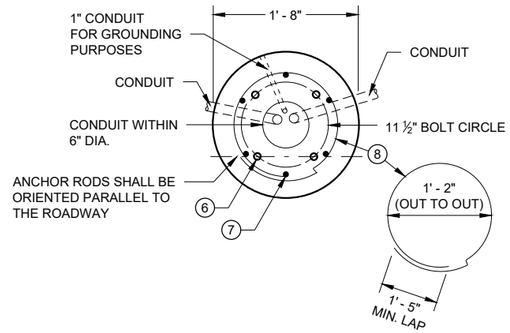
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

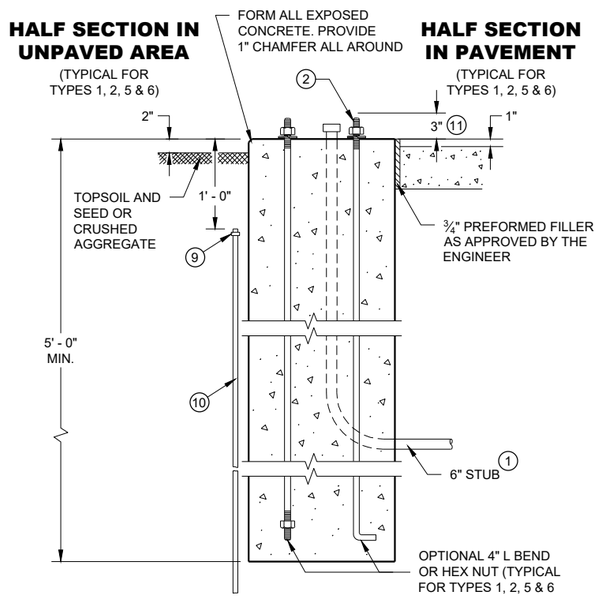
WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

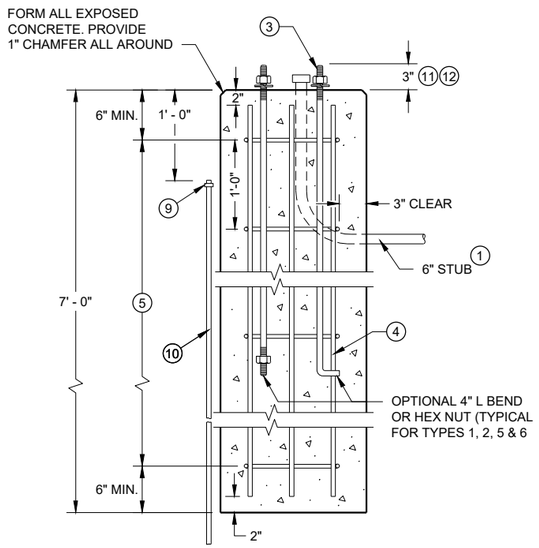




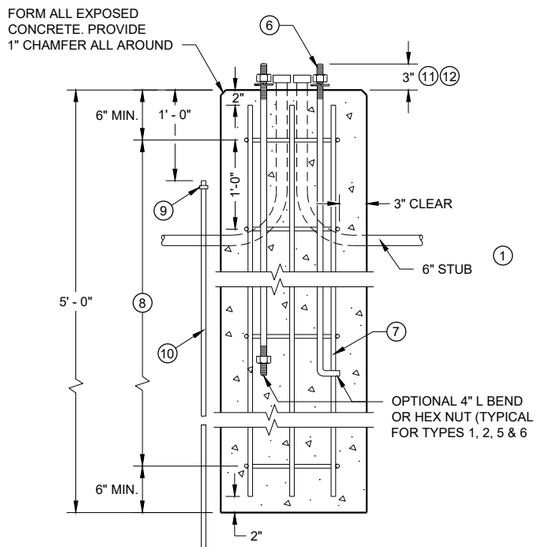




TYPE 1



TYPE 2



TYPE 5 & 6

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.

CONCRETE BASES

CONCRETE BASES TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI
FHWA

6
SDD 09C02 - 08

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 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

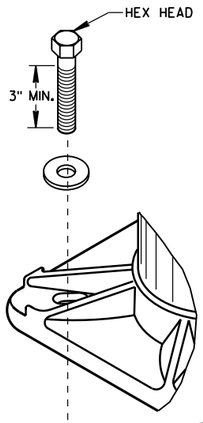
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

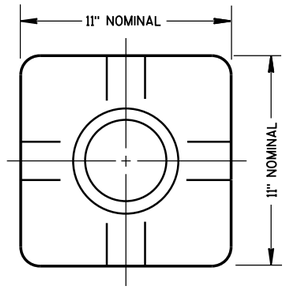
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

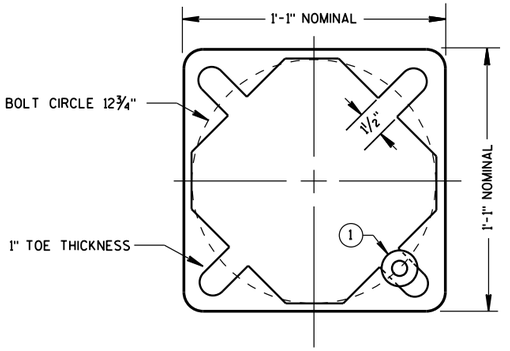
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

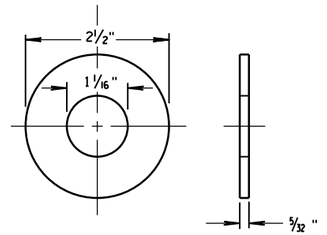




TOP VIEW
(PEDESTAL BASE)

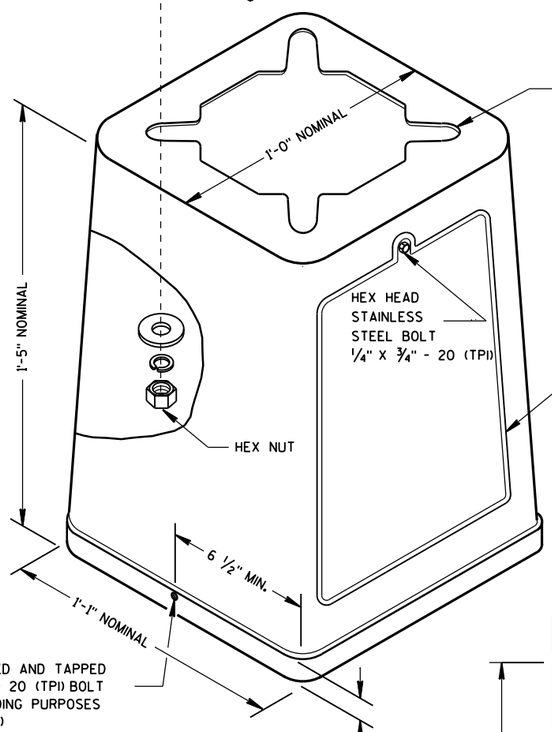


BOTTOM VIEW
(PEDESTAL BASE)

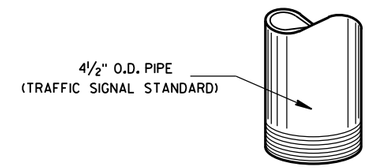


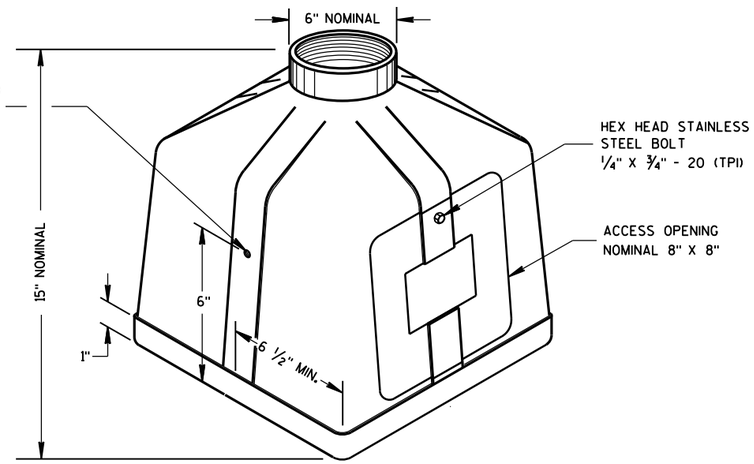
ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)



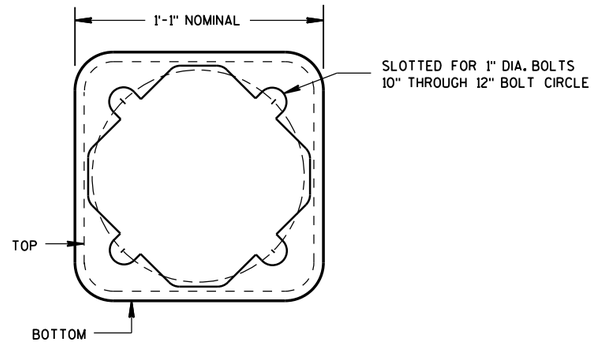
ISOMETRIC VIEW



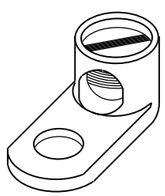


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

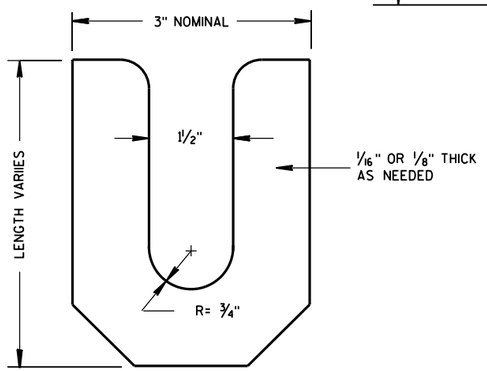


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

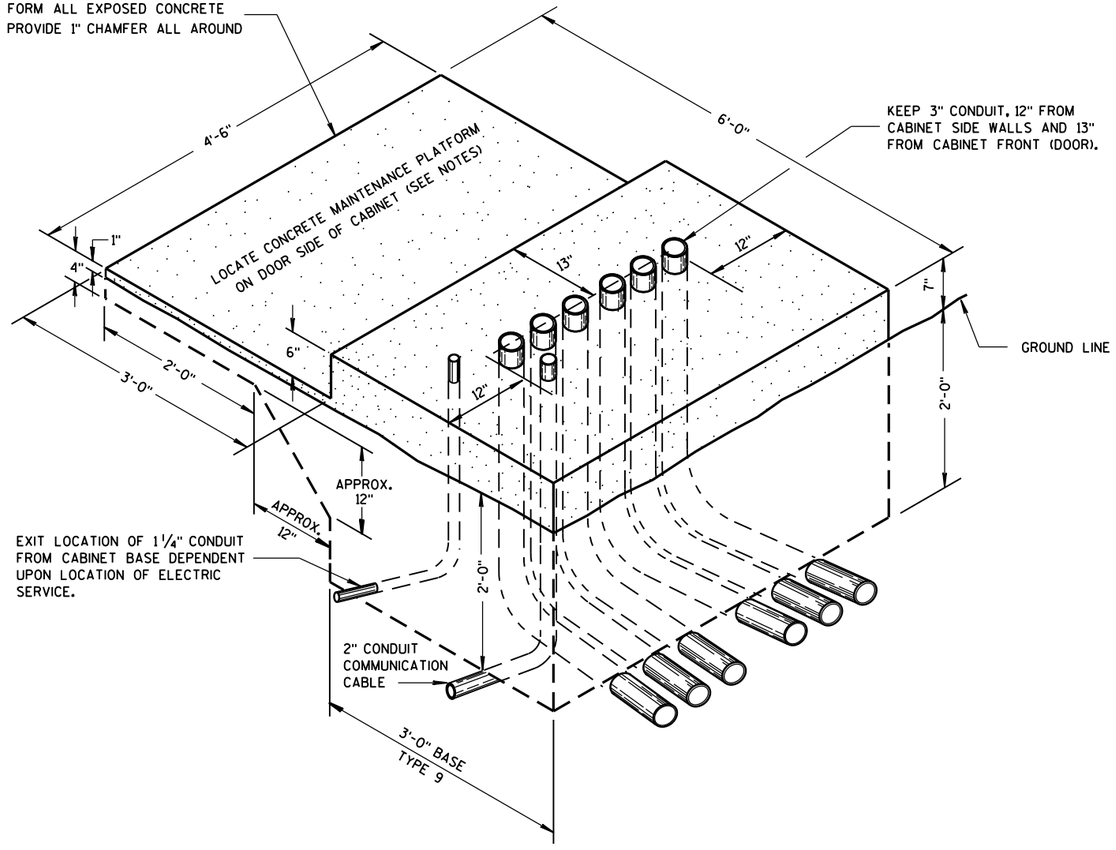
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 C 3-4

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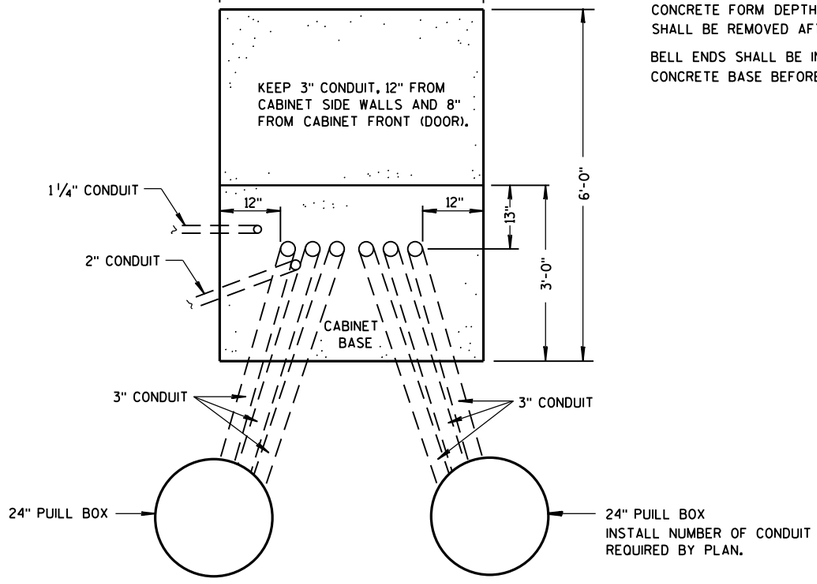
S.D.D. 9 C 3-4



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 ½ 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 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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL 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 AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS 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 AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED 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. CONDUIT 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.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC 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).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL 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.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

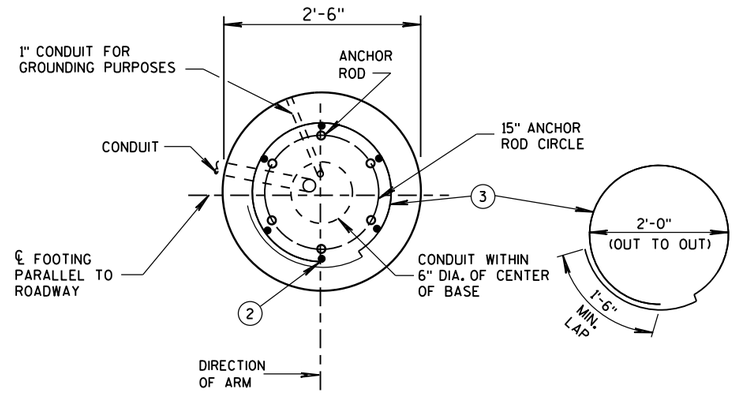
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

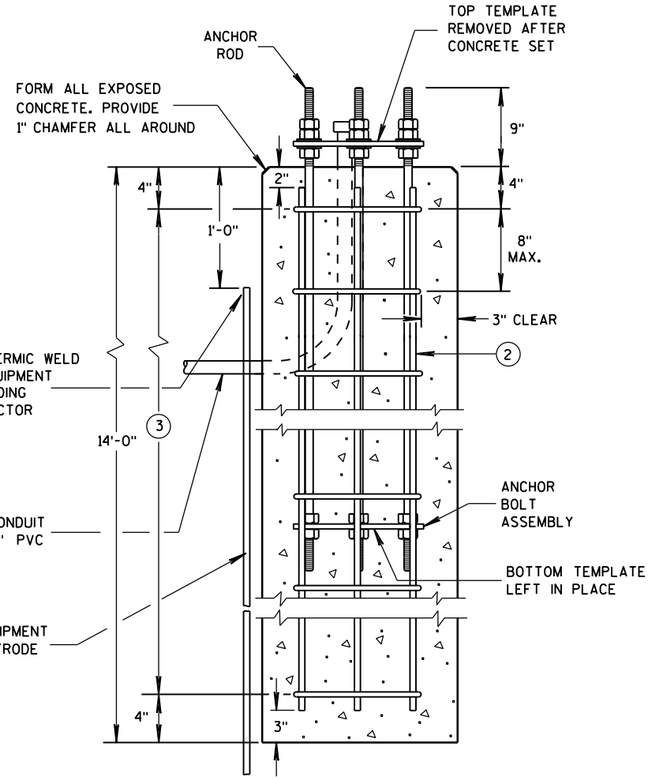
(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES. (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (6) NO. 6 X 13'-7" BAR STEEL REINFORCEMENT.

(3) (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 WITH SECTION 641.2.2.3 OF THE STANDARD SPECIFICATION)	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.

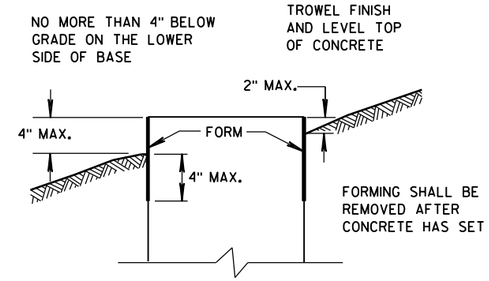




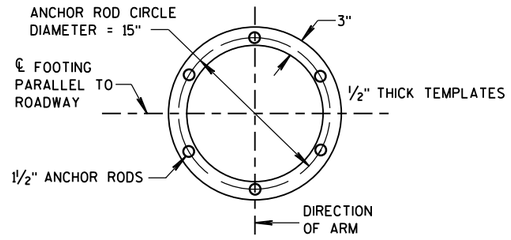
CONCRETE BASE TYPE 10

(FOR TYPE 9 & 10 & OVER HEIGHT (OH) POLES)

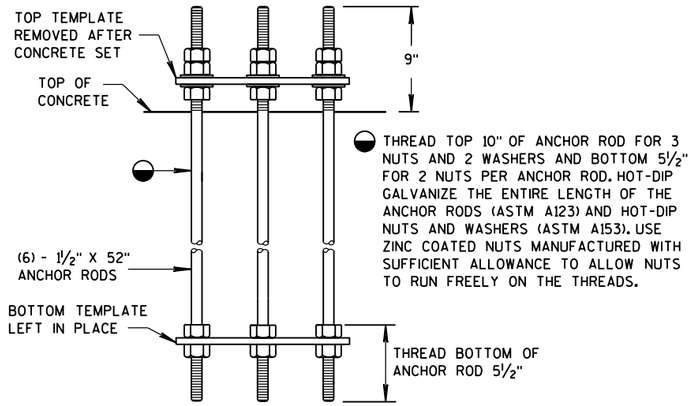
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



FORMING DETAIL



TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 10 ANCHOR ASSEMBLY

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2017 — DATE

/S/ Ahmet Demirbilek — STATE ELECTRICAL

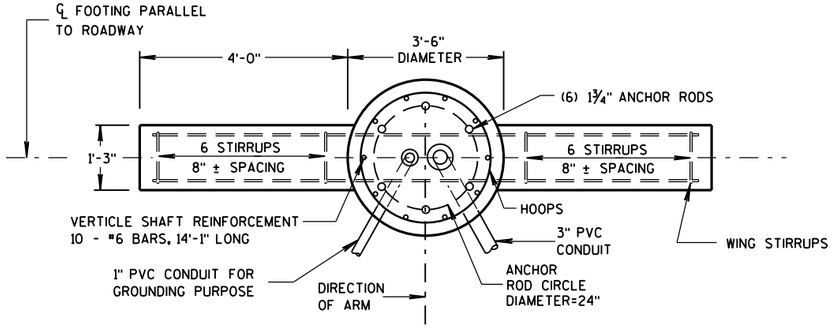
FHWA

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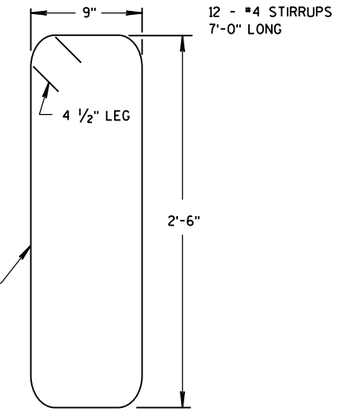
S.D.D. 9 C 11-10

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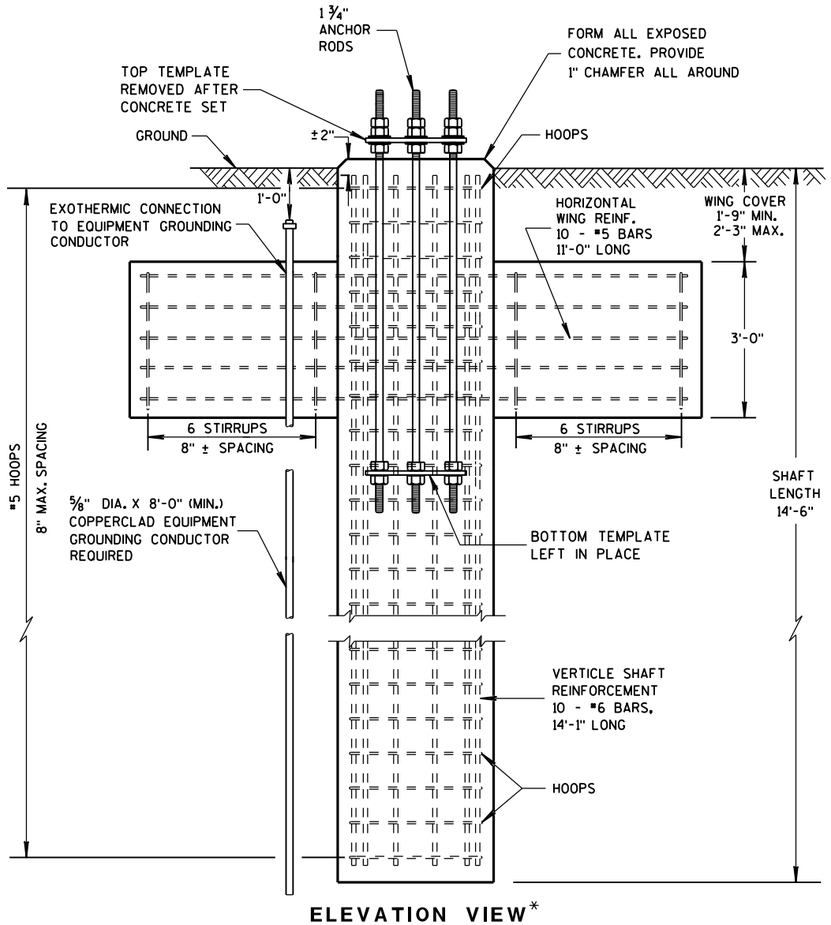
S.D.D. 9 C 11-10



PLAN VIEW

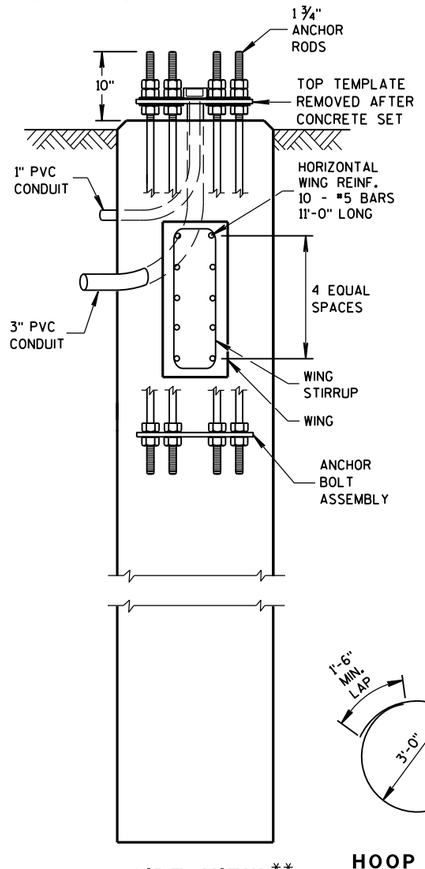


WING STIRRUP



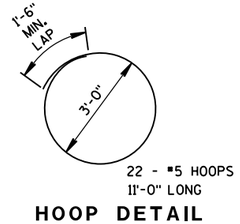
ELEVATION VIEW*

* CONDUITS ARE NOT SHOWN ON THIS VIEW FOR CLARITY



SIDE VIEW**

** HOOPS AND VERTICAL SHAFT REINFORCEMENT NOT SHOWN ON THIS VIEW FOR CLARITY



HOOP DETAIL

GENERAL NOTES

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

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

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.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

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 AROUNG 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.

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 4½" 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 THE 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, UL 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.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS.

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.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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 641.2.2.3 OF THE STANDARD SPECIFICATIONS	fy=55,000 p.s.i.
TEMPLATES, ASTM A709 GRADE 36	fy=36,000 p.s.i.

(FOR TYPE 12 & 13 & OVER HEIGHT (OH) POLES)

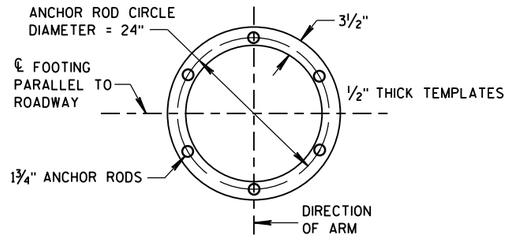
CONCRETE = 6.3 C.Y.
H.S. REINFORCEMENT = 635 LBS.

TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.
SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

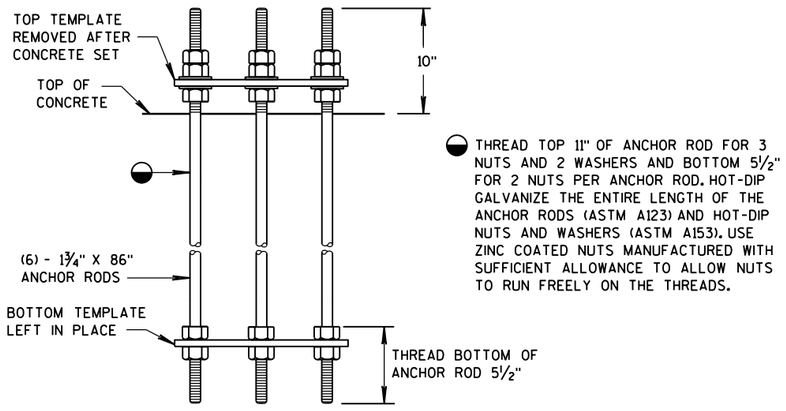
CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 9 C 12-9a

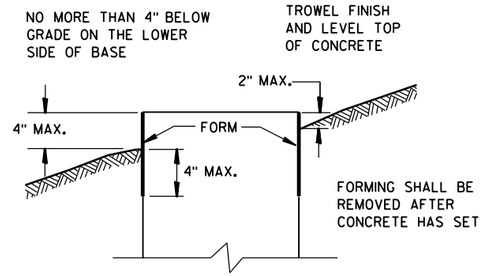


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



FORMING DETAIL

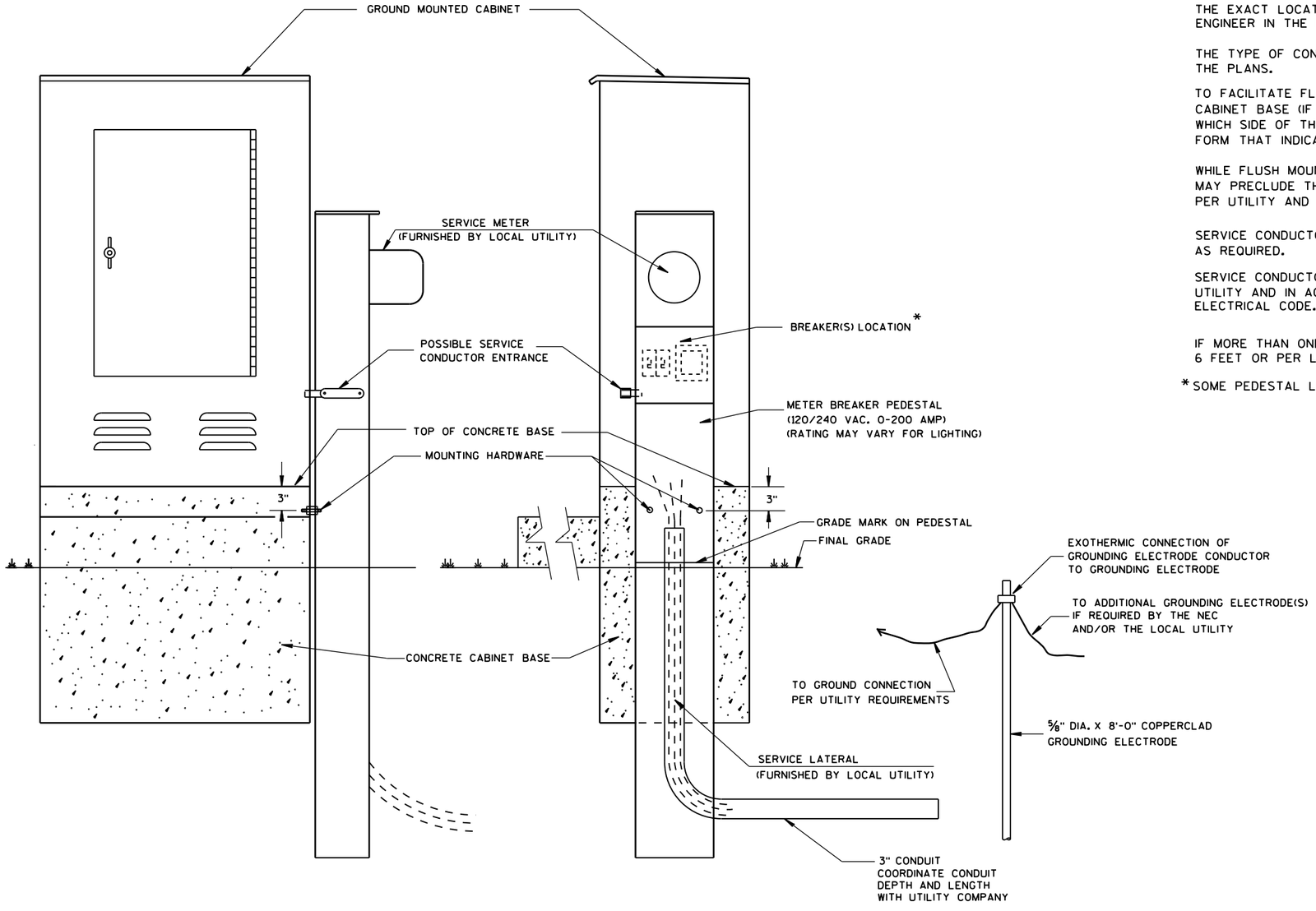
CONCRETE BASE TYPE 13	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2017 DATE FHWA	/S/ Ahmet Demirbilek STATE ELECTRICAL

6

S.D.D. 9 C 12-9b

6

S.D.D. 9 C 12-9b



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.

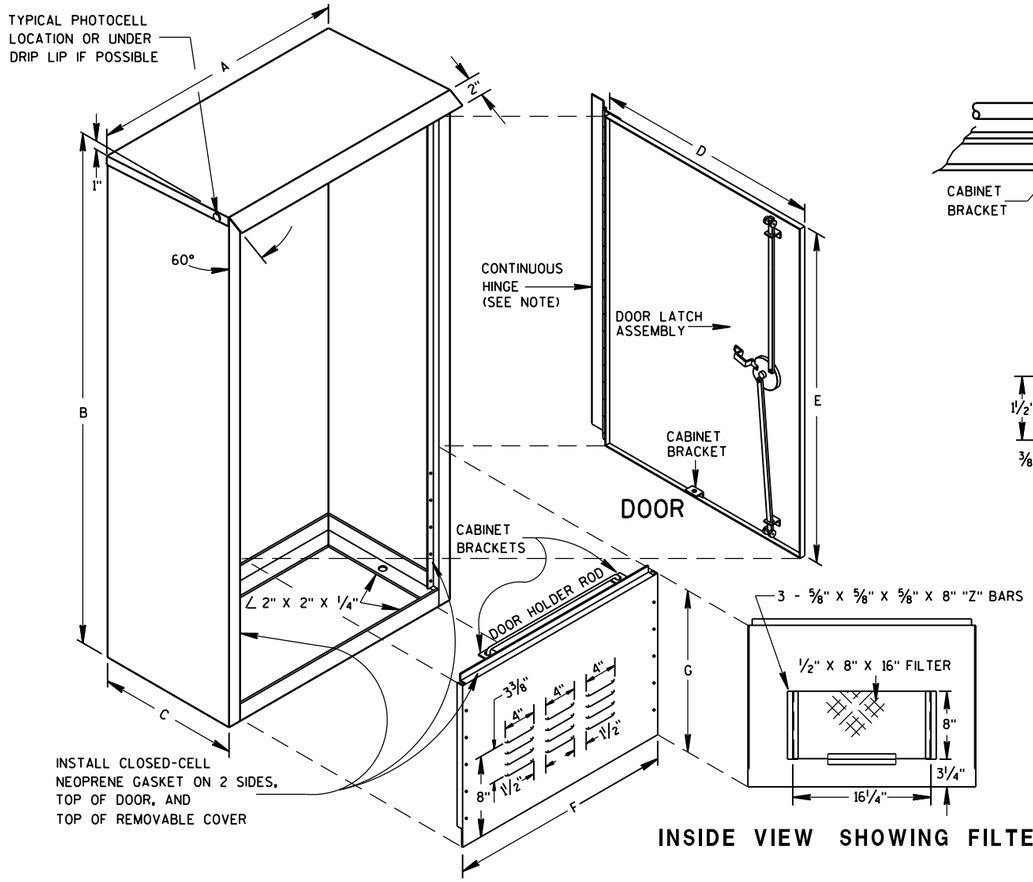
* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

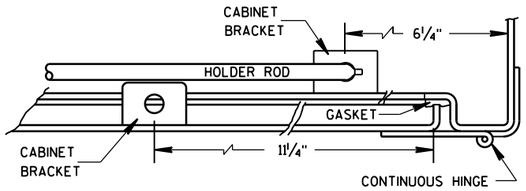
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 D 1-5

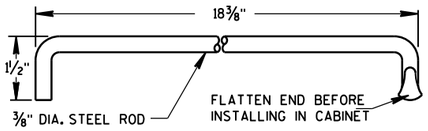


REMOVABLE COVER

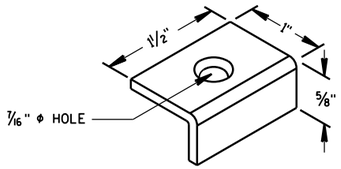
INSIDE VIEW SHOWING FILTER



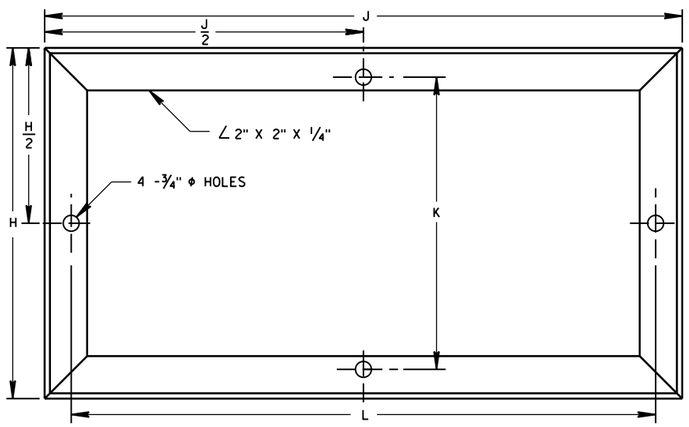
HINGE & DOOR HOLDER



HOLDER ROD



CABINET BRACKET



MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2

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.

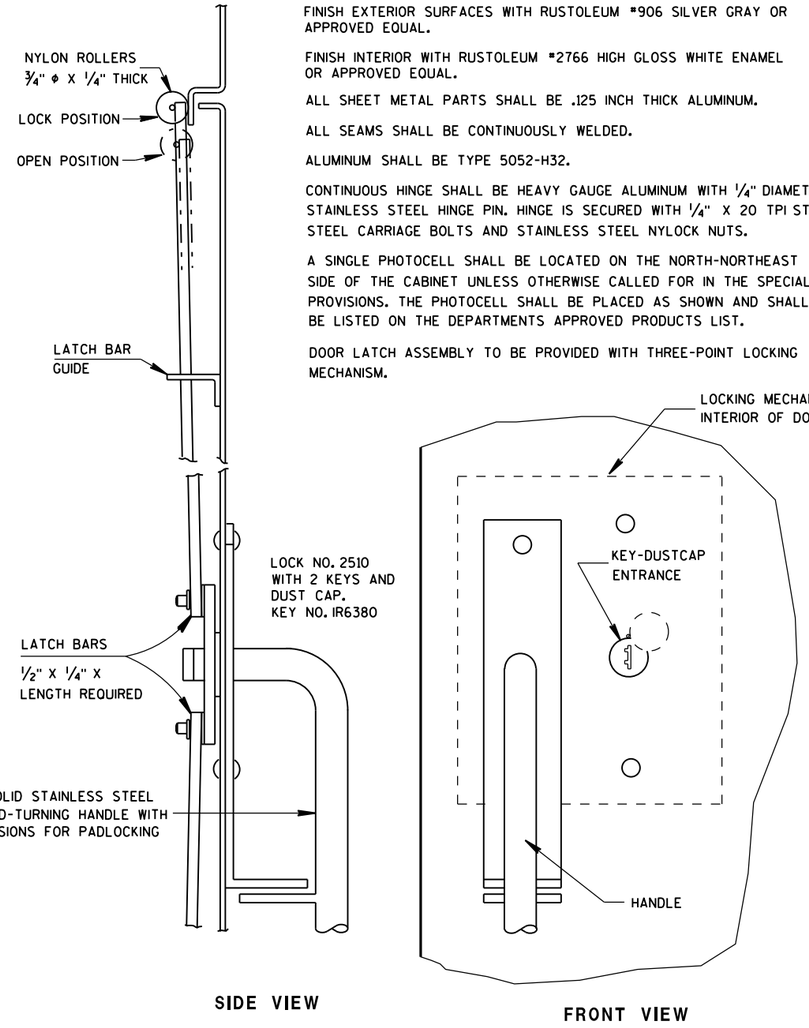
ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH 1/4" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH 1/4" 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.

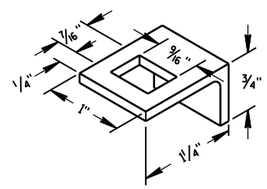
DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.



SIDE VIEW

FRONT VIEW

LATCH ASSEMBLY



LATCH BAR GUIDE

SIGNAL CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

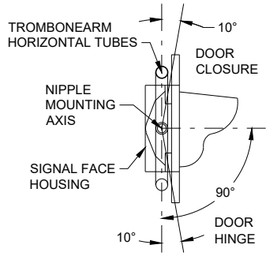
FHWA

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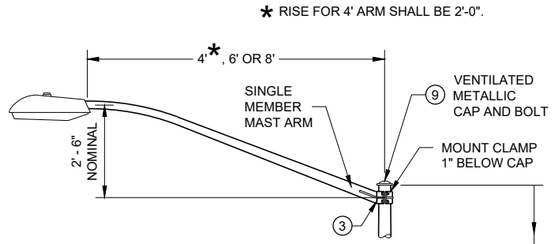
S.D.D. 9 D 2-3

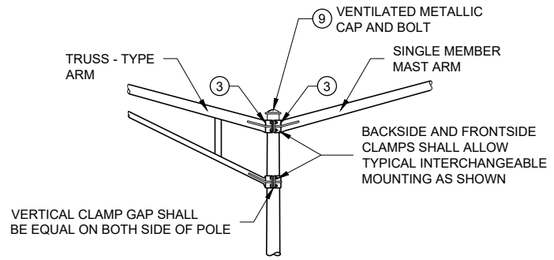
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S.D.D. 9 D 2-3

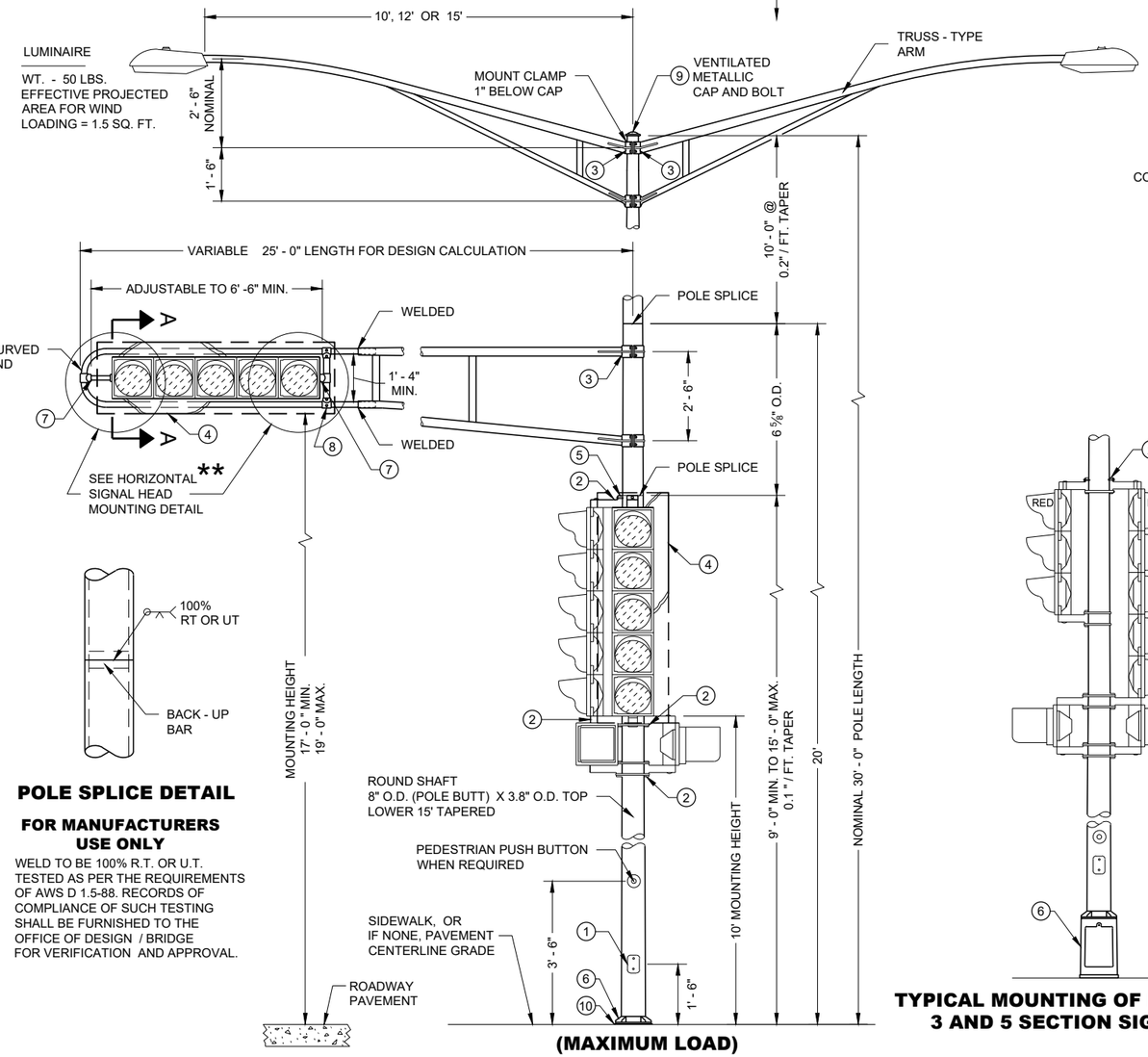


SECTION A-A





INTERCHANGEABLE MOUNTING DETAIL

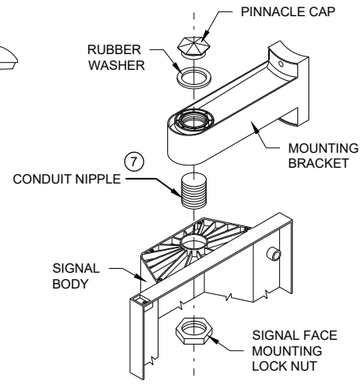


POLE SPLICE DETAIL

FOR MANUFACTURERS USE ONLY

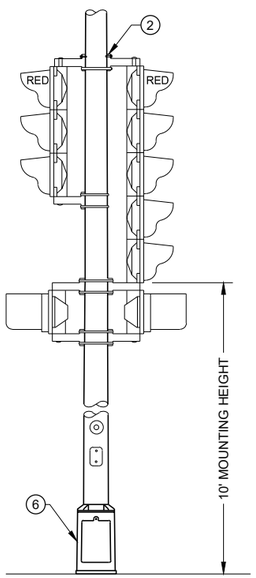
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN / BRIDGE FOR VERIFICATION AND APPROVAL.

(MAXIMUM LOAD)

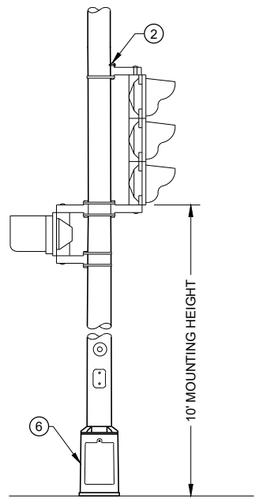


SIGNAL FACE MOUNTING DETAIL

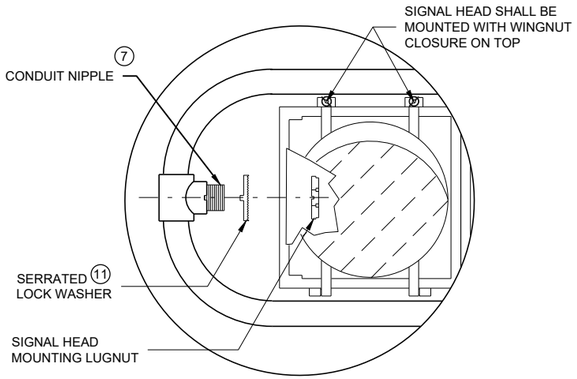
(BANDED)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE



HORIZONTAL SIGNAL HEAD ** MOUNTING DETAIL

** SIGNAL HEAD ATTACHMENT ALSO APPLIES TO MOUNTING AT CROSS BAR

GENERAL NOTES

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

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE / ROPE SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 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) 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 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED. UNDER MAX LOADING, TYPE 3 POLE SHALL BE MOUNTED DIRECTLY TO ITS CONCRETE BASE.

(7) USE 1 ½" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 ½" OPENING IN SIGNAL FACES AND BRACKET ENDS.

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

(9) FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

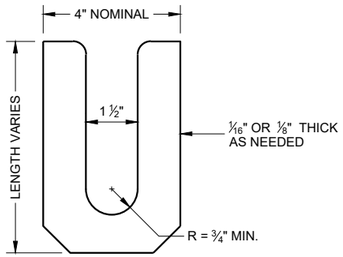
TYPE 3 POLE MOUNTING CONFIGURATION

POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS TYPE 3 (HEAVY DUTY)

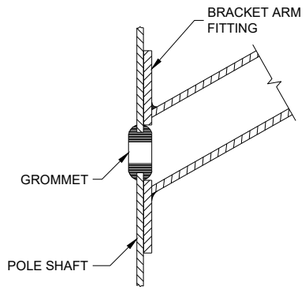
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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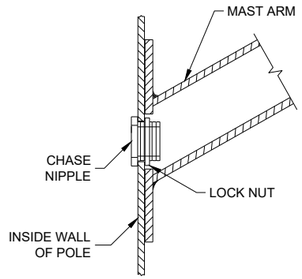
SDD 09E01 - 15b
SDD 09E01 - 15b



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.

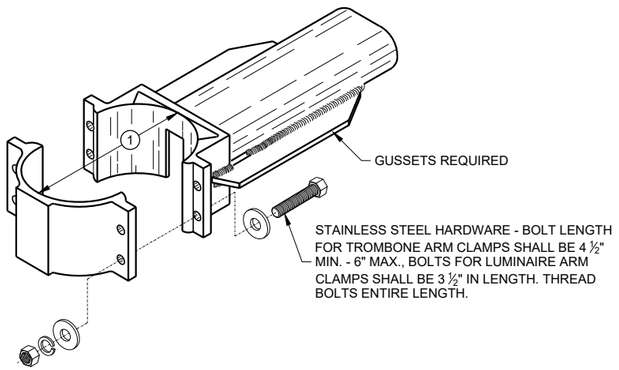
(1) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(2) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

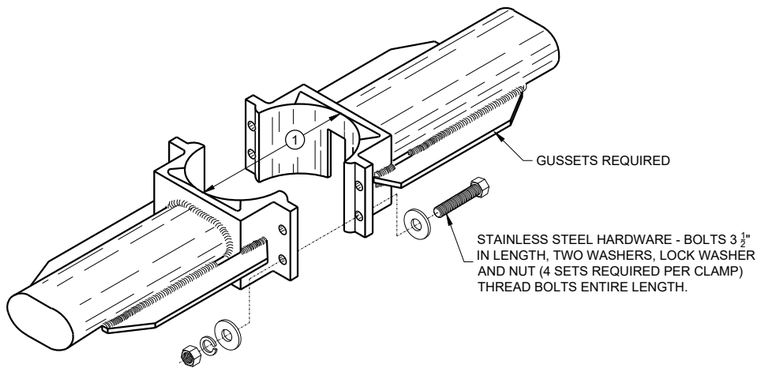
(3) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(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.

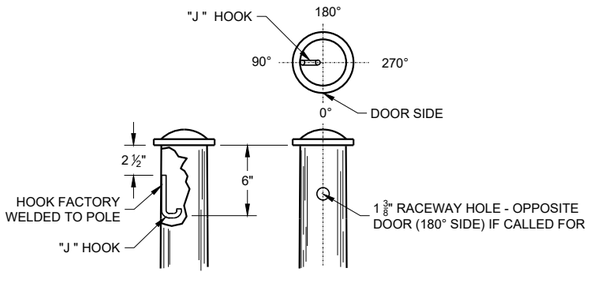
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



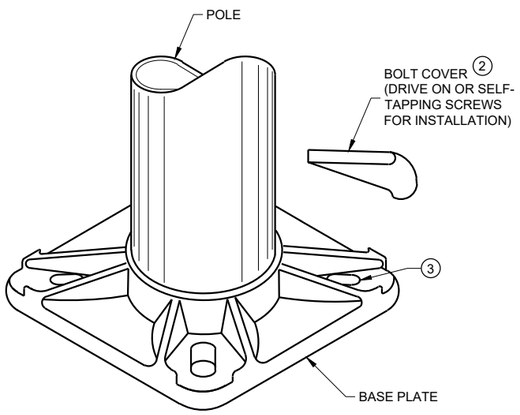
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



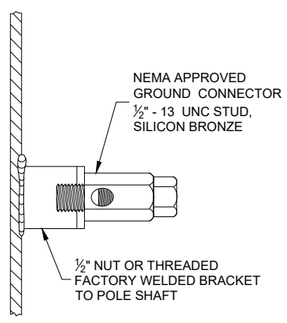
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

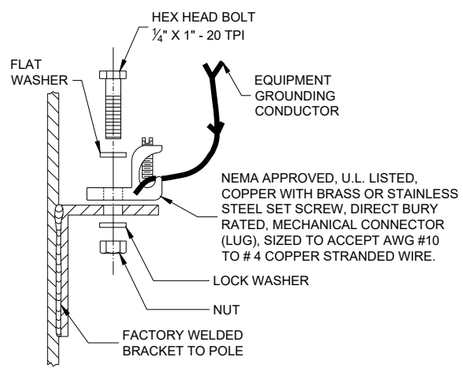


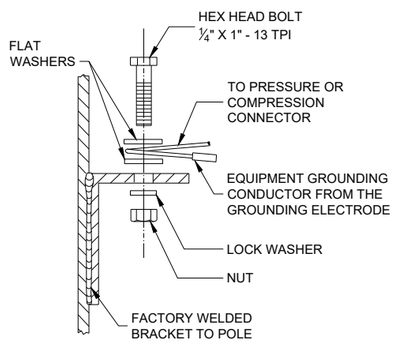
TYPICAL "J" HOOK LOCATION



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 108

FHWA

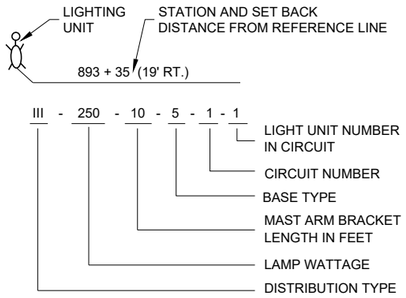
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SDD 09A01 - 15g

GENERAL NOTES

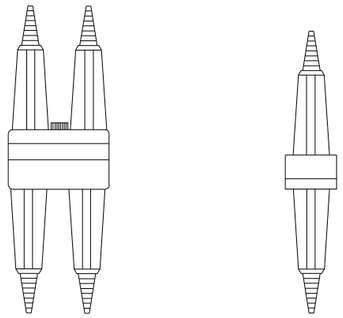
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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.

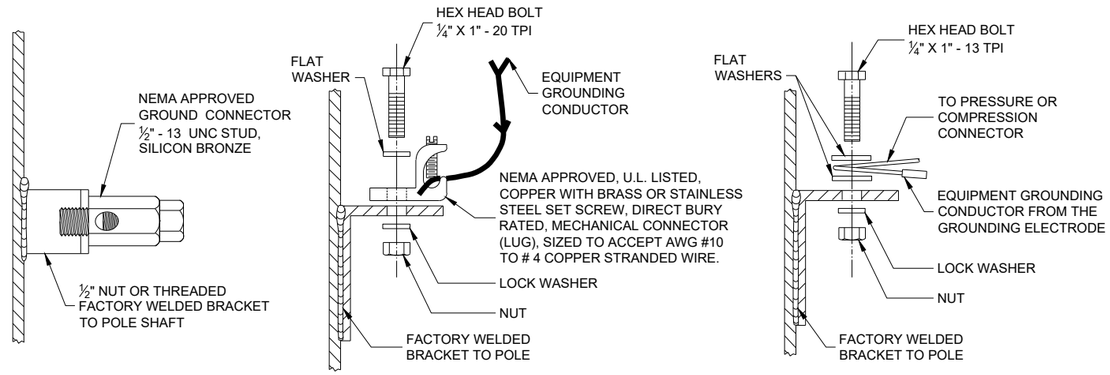


LIGHTING UNIT CODE
(TYPICAL)

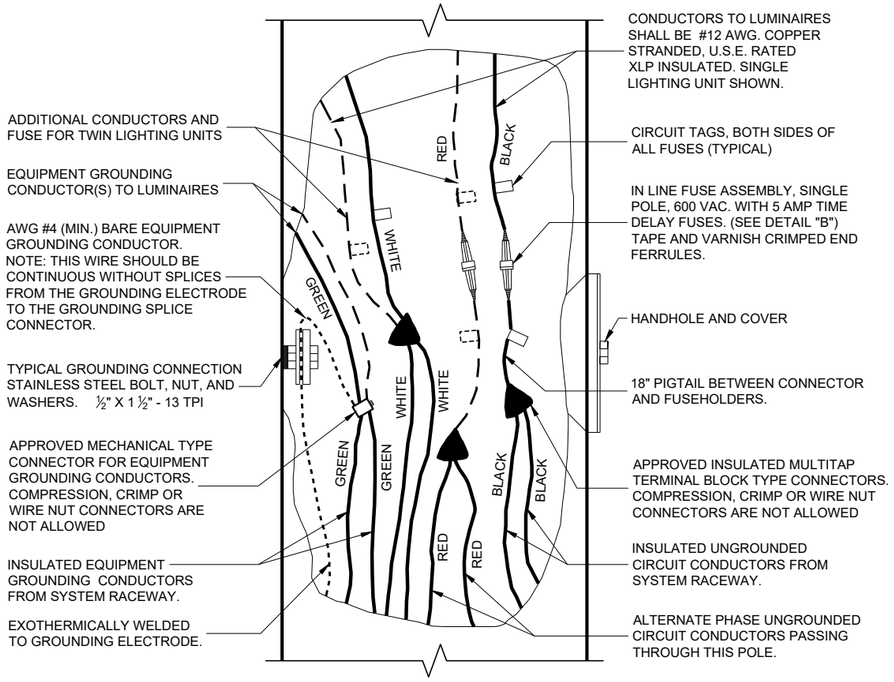


DETAIL "A"
BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT

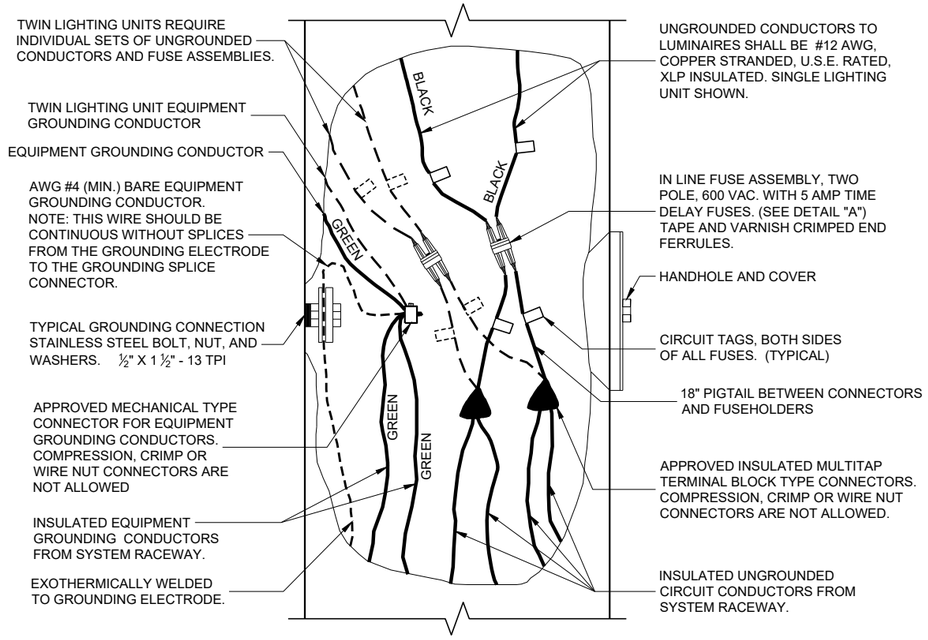
DETAIL "B"
BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT



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

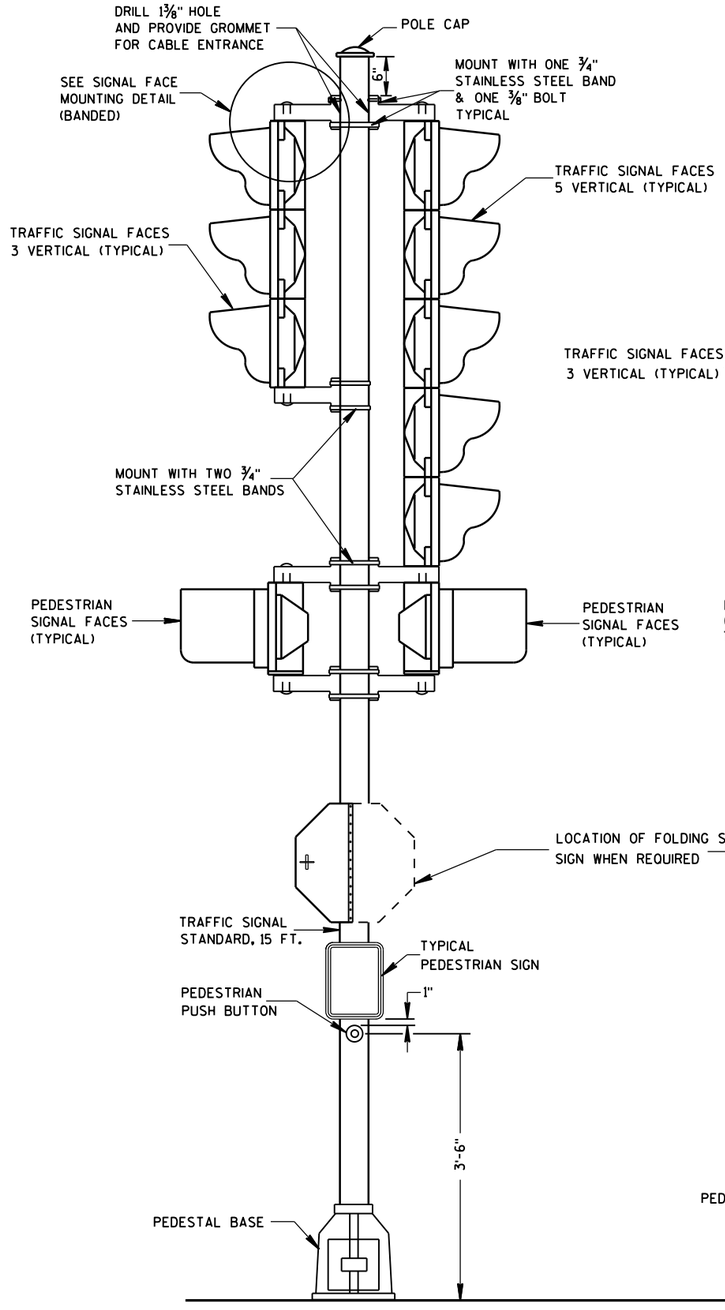
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

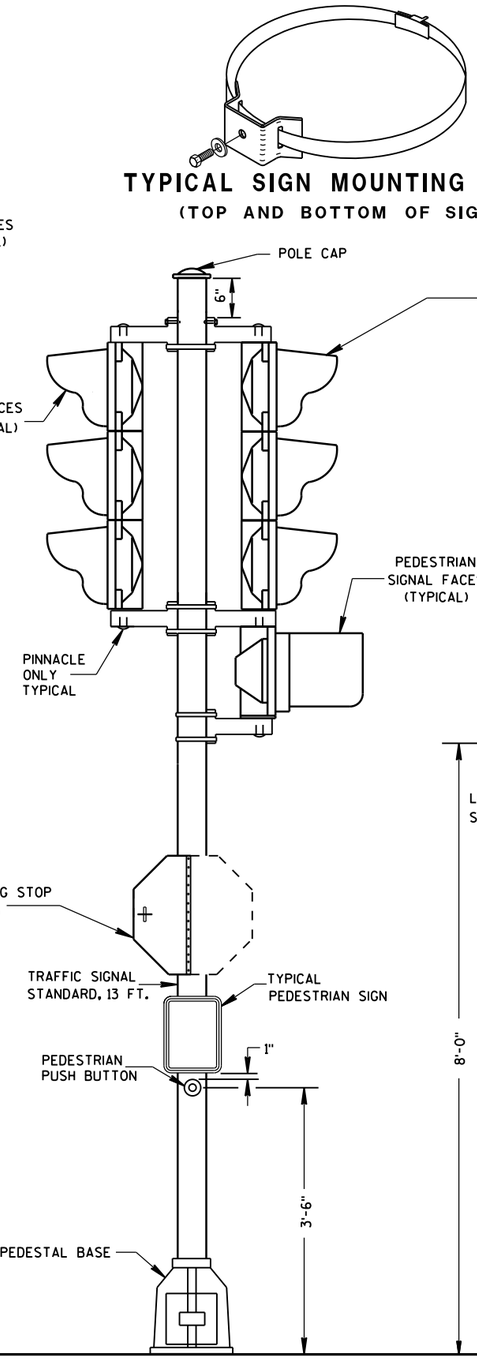
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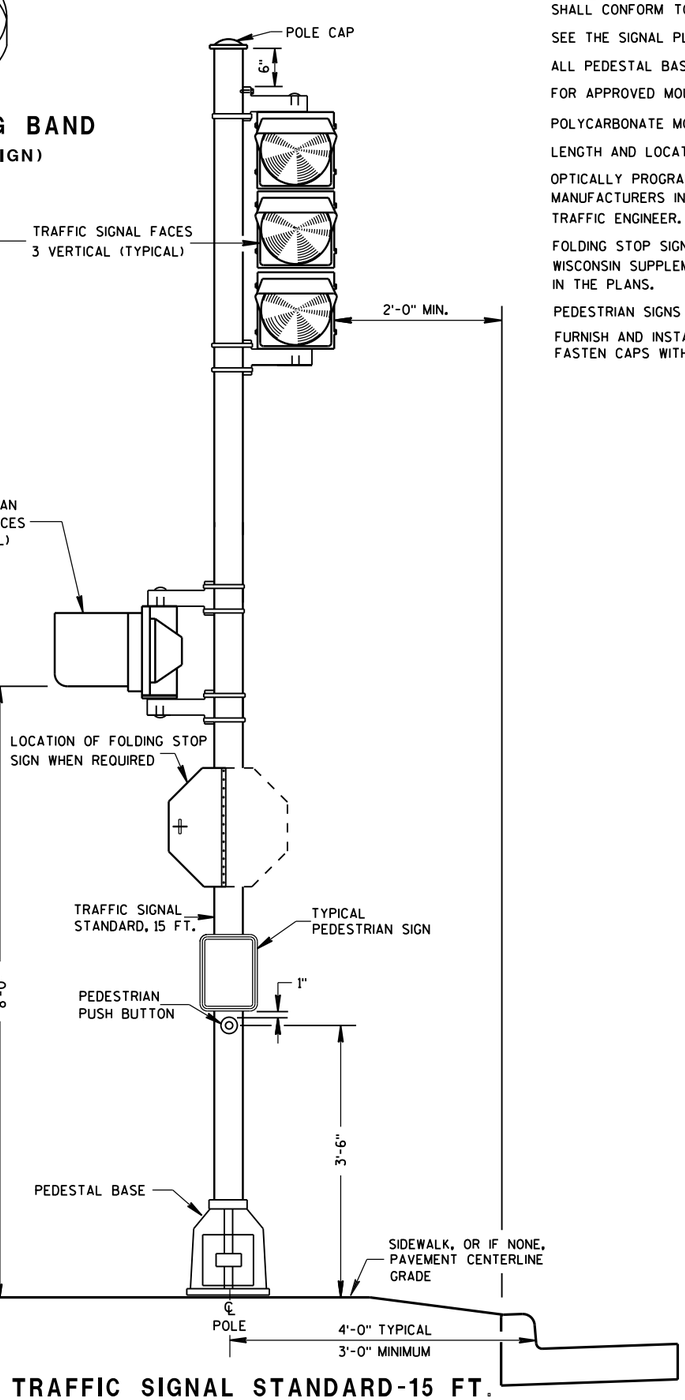


TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.

TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



TRAFFIC SIGNAL STANDARD-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.

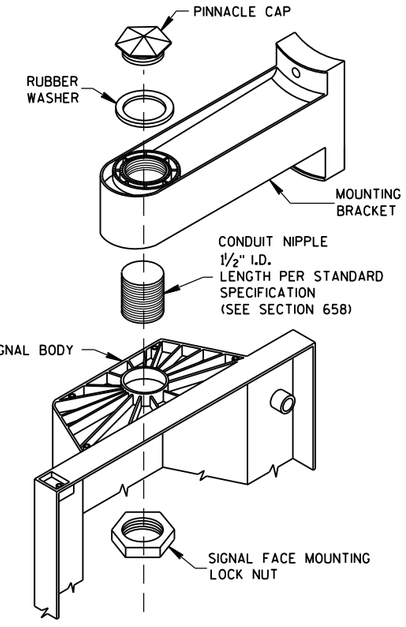
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



SIGNAL FACE MOUNTING DETAIL
(BANDED)

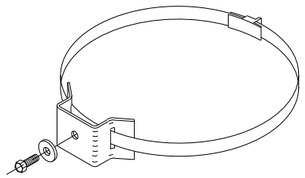
TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

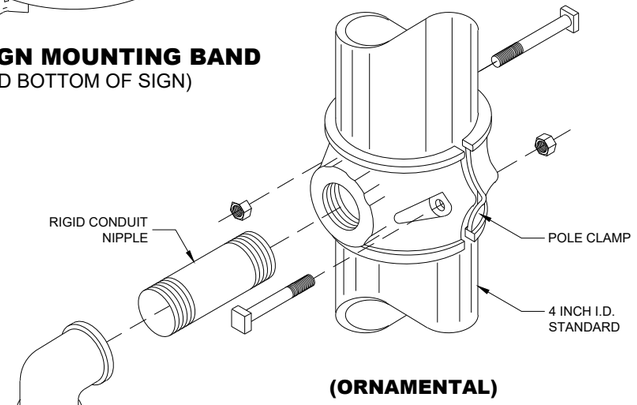
APPROVED
2/28/2013 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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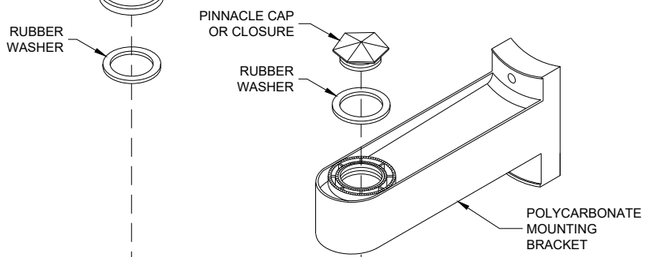
S.D.D. 9 E 6-5



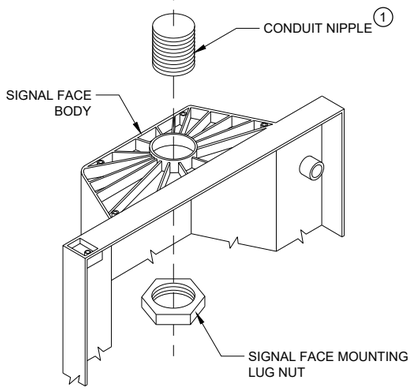
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



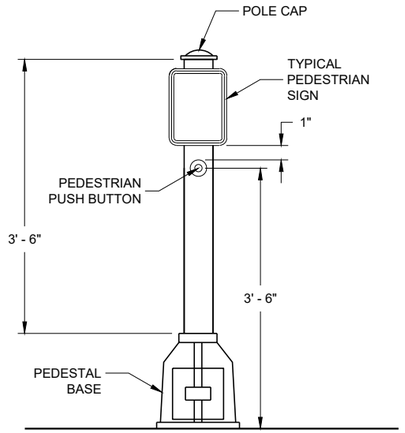
(ORNAMENTAL)



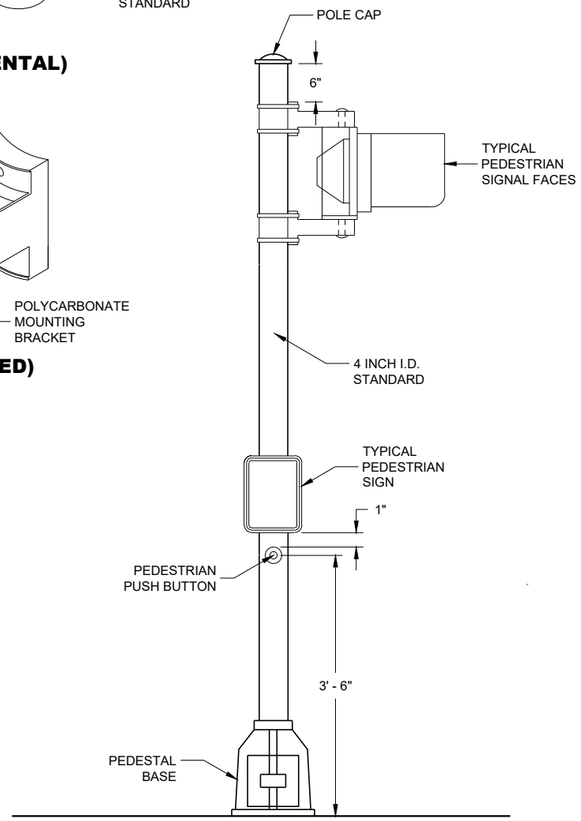
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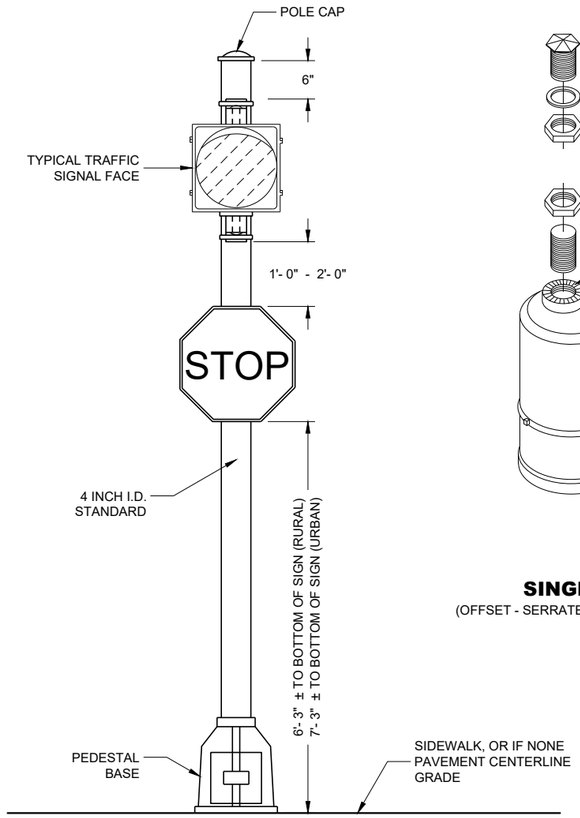
SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING



PEDESTRIAN FACE STANDARD - 10 FT.
(WALK - DON'T WALK)



STANDARD FLASHER
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED

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.

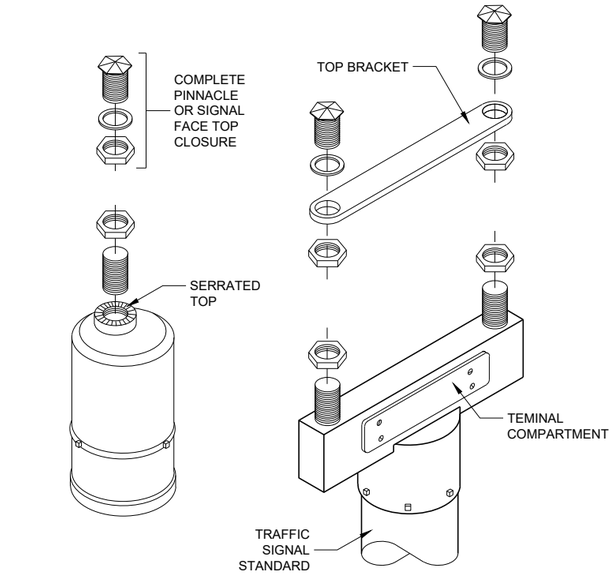
LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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.



SINGLE
(OFFSET - SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

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SDD 09E07 - 06

SDD 09E07 - 06

30'-0" MAX.

8'-0" *

15'-0" MAX.

SEE ARM CONNECTION DETAIL

SIGN 18" X 108"

**

* 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 ACCOMODATE FOR VERTICAL CLEARANCE.

25'-6" MAXIMUM MOUNTING HEIGHT

17'-6" MINIMUM MOUNTING HEIGHT

ROADWAY PAVEMENT

R4-7
24" x 30"

19'-0"

10'-0"

FOLDING STOP SIGN
30" x 30"

POLE: (.14"/FT. TAPER)
1 PIECE (NO WELDED POLE SECTIONS)
POLE BUTT DIA. = 11.50"

PEDESTRIAN PUSH BUTTON

TYPICAL PEDESTRIAN SIGN

ANCHOR RODS:
FY=55 KSI
ASTM F1554 GR 55
ROD CIRCLE = 15"
ANCHOR ROD DIAM. 1½"
GALVANIZED. (6 ANCHOR RODS)

3'-6"

MAXIMUM BASE PLATE THICKNESS = 2½"

POLE

RING PLATE ⅜" MIN. THICKNESS

GUSSET PLATE ¼" MIN. THICKNESS

ARM

ARM CONNECTION PLATES

1" X 6" HIGH STRENGTH CONNECTION BOLTS

FLANGE CONNECTION
PLATE BOLT HOLES TO BE BOLT NOMINAL DIAMETER + ⅛" CONFORMING TO ASTM A 325

6 BOLT ARM CONNECTION DETAIL

FLAT WASHER

BOLT HEAD

NUT

DTI WASHER

RECOMMENDED BOLT ASSEMBLY DETAIL

DIRECTION OF ARM

ORIENTATION OF 6 ANCHOR RODS

℄ FOOTING PARALLEL TO ROADWAY

ANCHOR ROD LOCATION

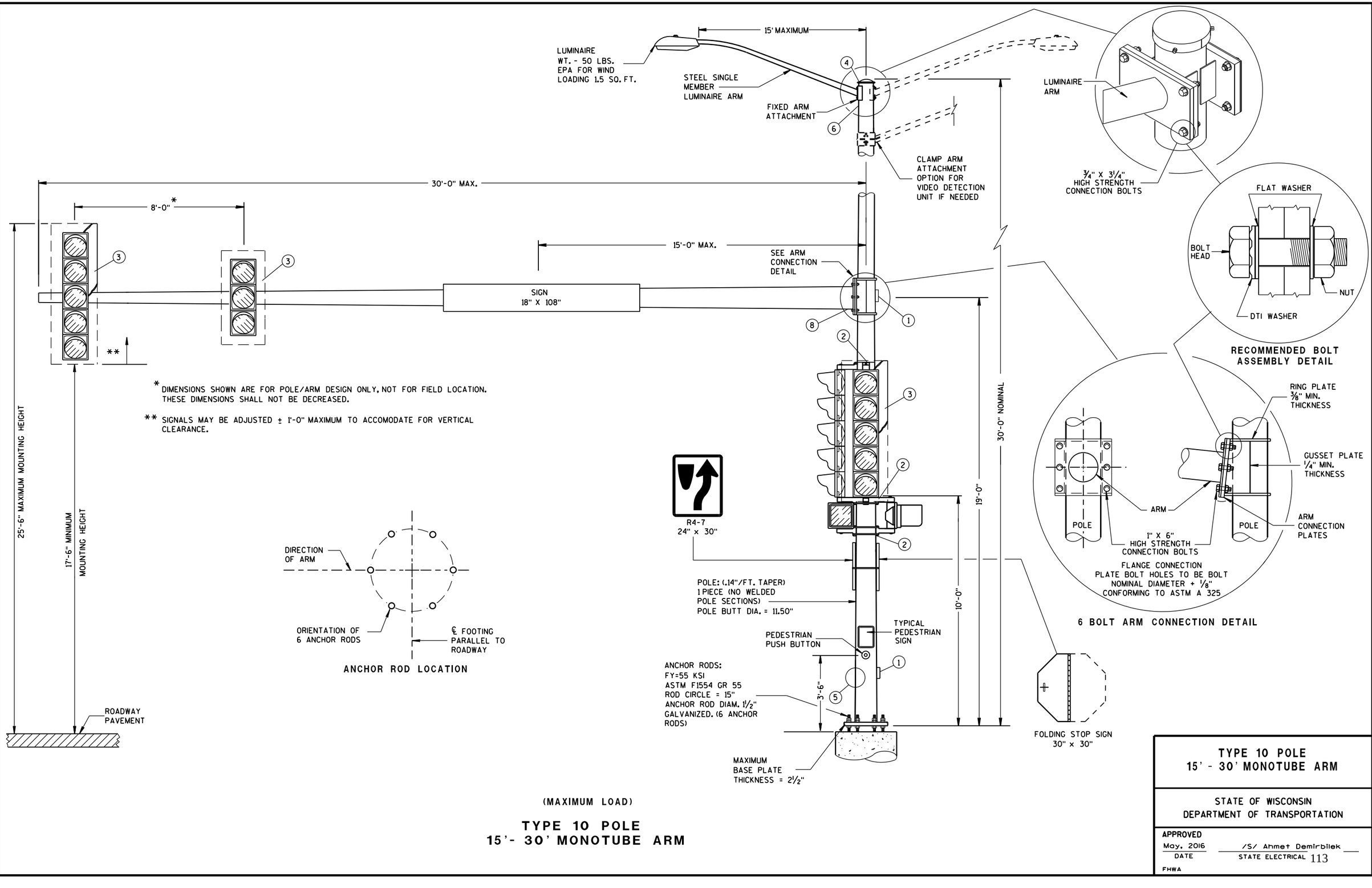
(MAXIMUM LOAD)

TYPE 9 POLE 15'- 30' MONOTUBE ARM

TYPE 9 POLE 15' - 30' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May, 2016 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL
FHWA	

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S.D.D. 9 E 8-8a



* 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 ACCOMODATE FOR VERTICAL CLEARANCE.

(MAXIMUM LOAD)

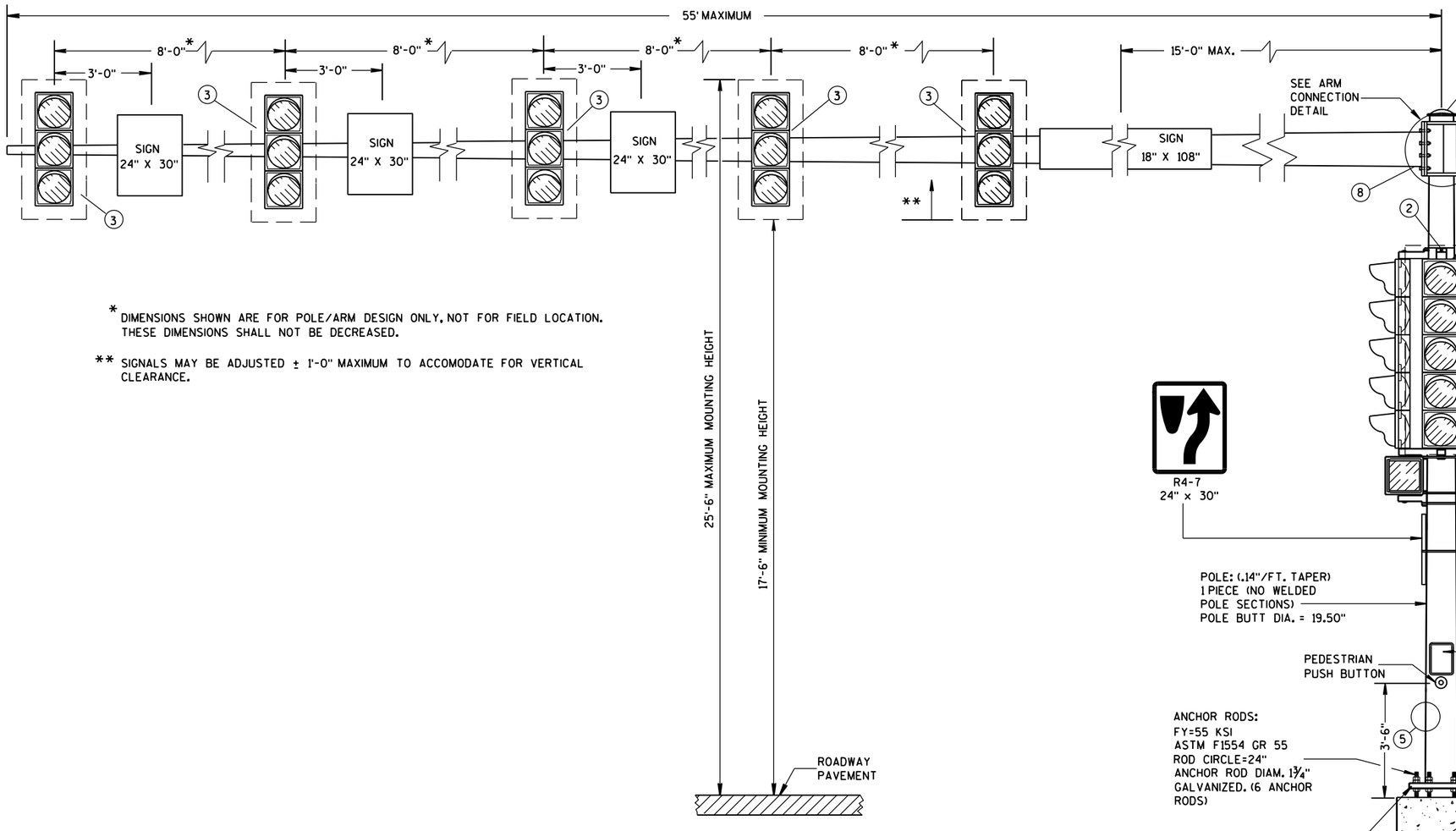
TYPE 10 POLE
15'- 30' MONOTUBE ARM

TYPE 10 POLE
15' - 30' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

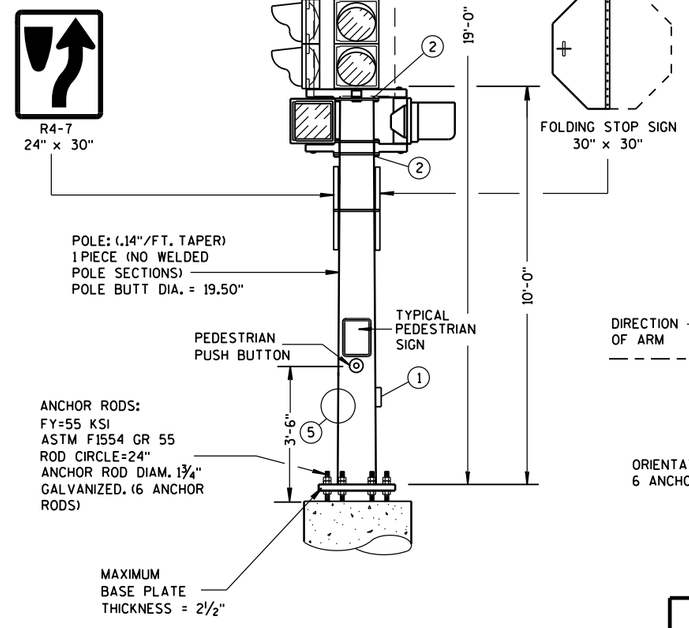
APPROVED
May, 2016 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

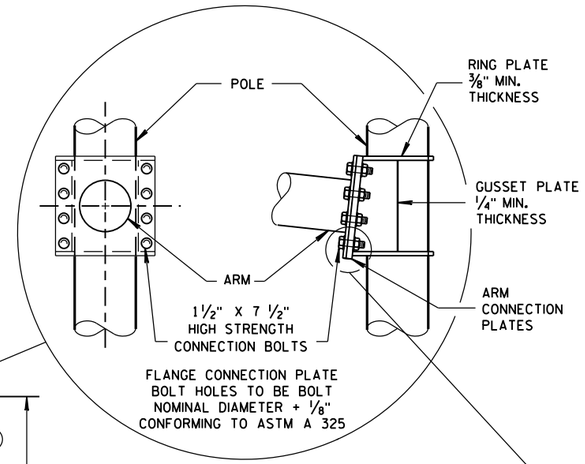
S.D.D. 9 E 8-8b



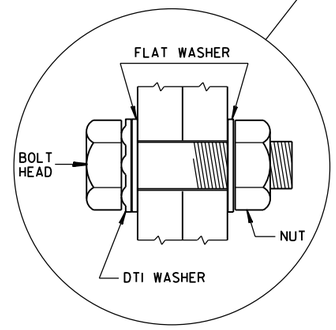
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** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

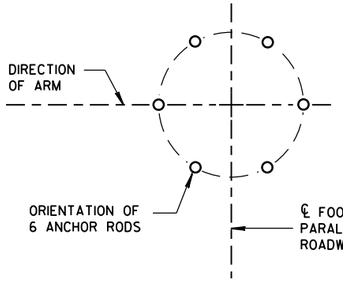




8 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL



ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 12 POLE 35'- 55' MONOTUBE ARM

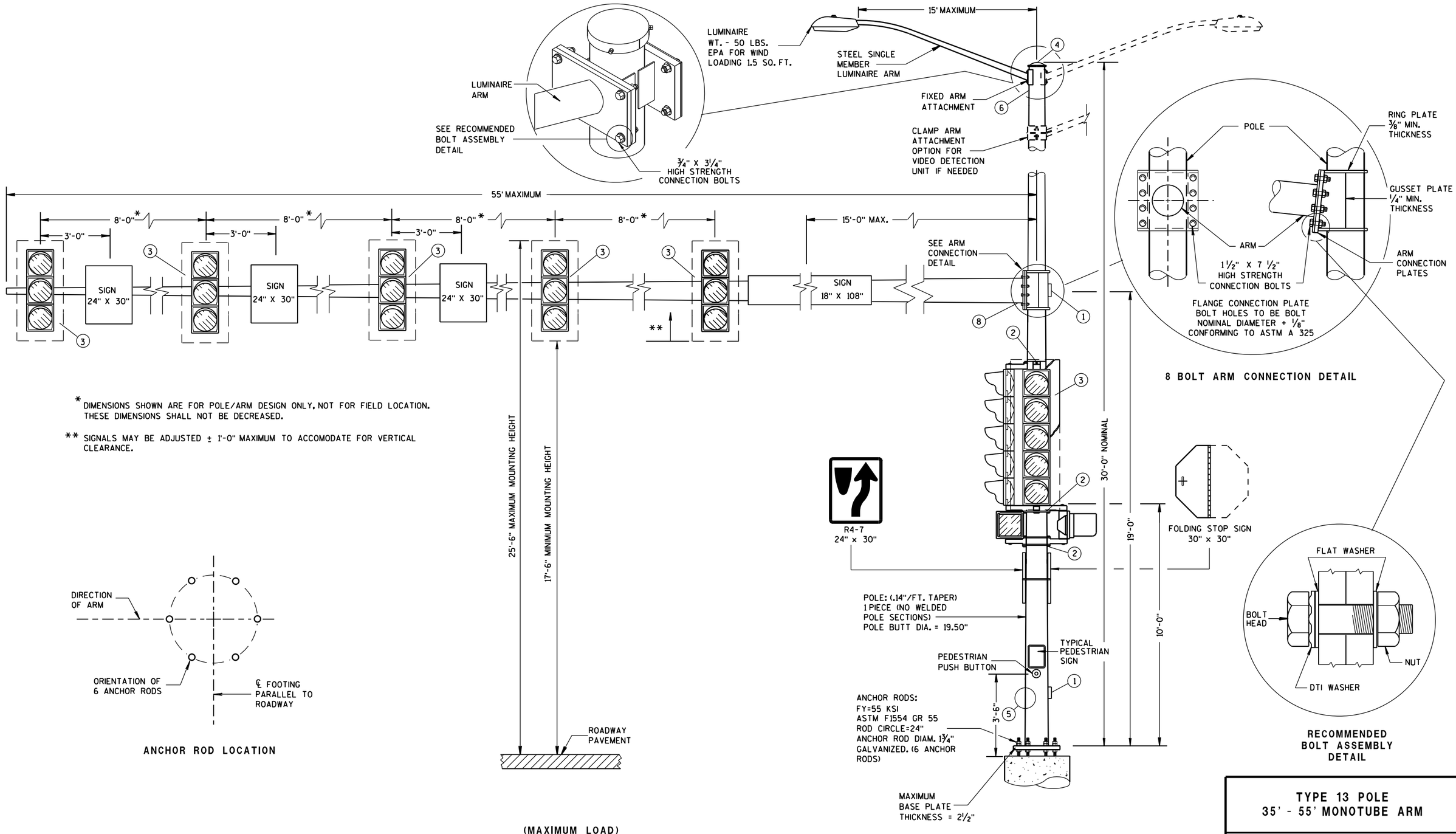
TYPE 12 POLE 35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May, 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 E 8-8c



* 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 ACCOMODATE FOR VERTICAL CLEARANCE.

8 BOLT ARM CONNECTION DETAIL

RECOMMENDED BOLT ASSEMBLY DETAIL

ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 13 POLE 35'- 55' MONOTUBE ARM

TYPE 13 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2016 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 E 8-8d

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP 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 12 AND 13 ARE FOR ARM LENGTHS 35-FOOT TO 55-FOOT.

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

RING-STIFFENED BUILT-UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE (1) PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3 % ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATIONS 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 2013 6TH EDITION AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR TRAFFIC AND LIGHTING STRUCTURES AND 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 GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" S.S. 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 AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS 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 HANDHOLE 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 SPECIFICATIONS SEC. 658).

(3) SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND THE END OF 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 HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

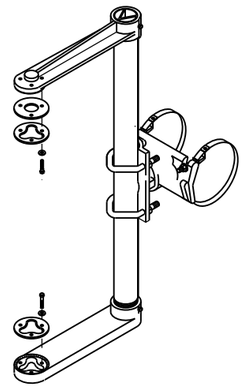
(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

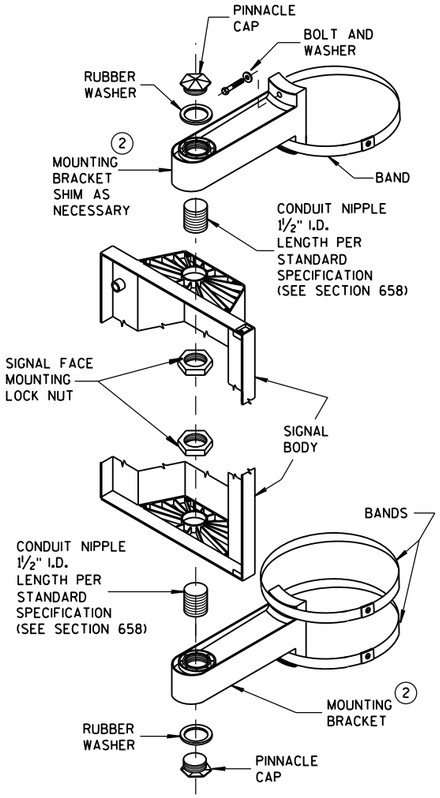
MOUNTING HEIGHT SHALL BE 6'-0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

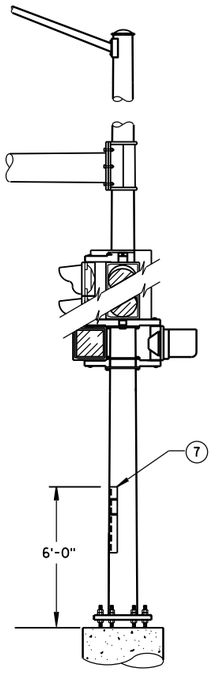


SIGNAL FACE MOUNTING BRACKET
DETAIL FOR MONOTUBE ARM

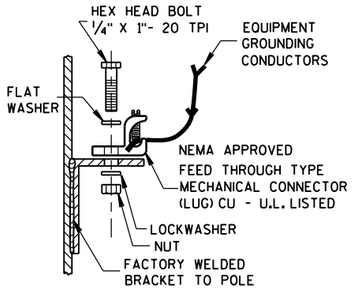
(MOUNT PER MANUFACTURER'S RECOMMENDATION)



SIGNAL FACE
VERTICAL MOUNTING DETAIL

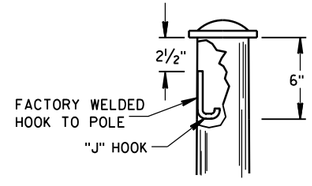


STRUCTURAL IDENTIFICATION
PLAQUE PLACEMENT



TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL
BE STAINLESS STEEL



"J" HOOK WIRE SUPPORT (6)

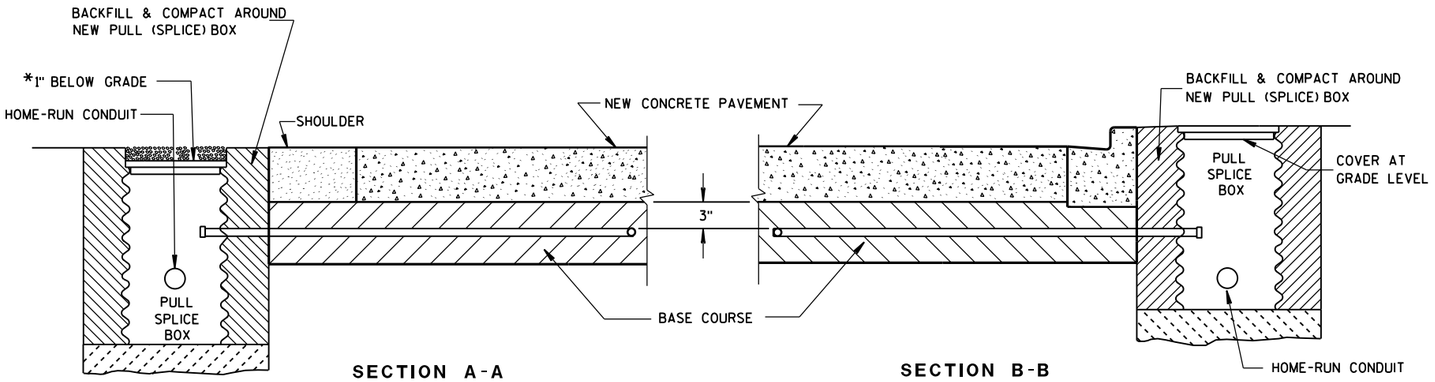
GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2016 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL

FHWA

S.D.D. 9 E 8-8e



SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & 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.

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

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 READINGS 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.

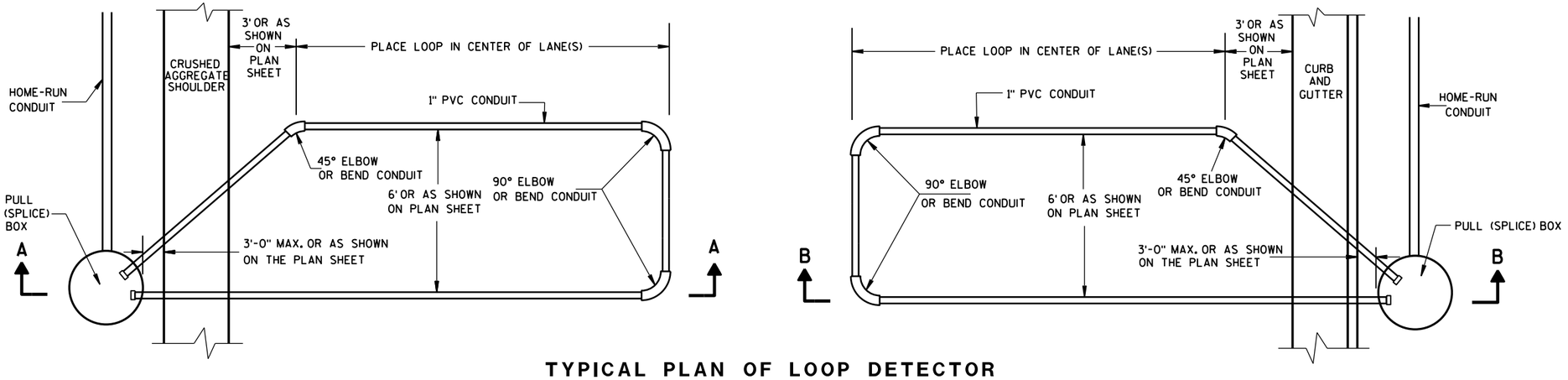
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

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-SPLICE 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 OF LOOP DETECTOR WITH 18" OR 24" PULL (SPLICE) BOX

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE
FHWA

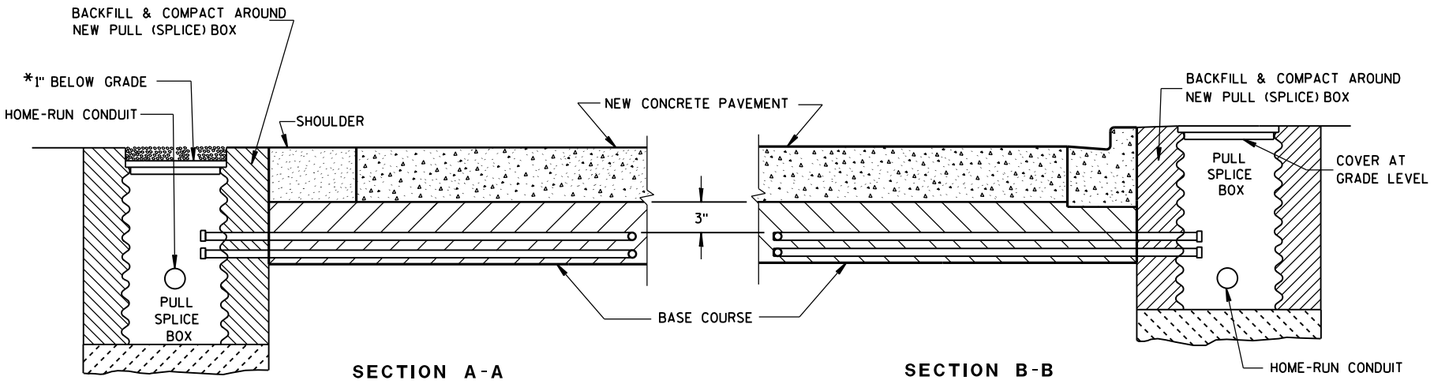
/S/ Ahmet Demirbilek
STATE ELECTRICAL

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S.D.D. 9 F 15-4a

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S.D.D. 9 F 15-4a



SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & 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.

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

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 READINGS 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.

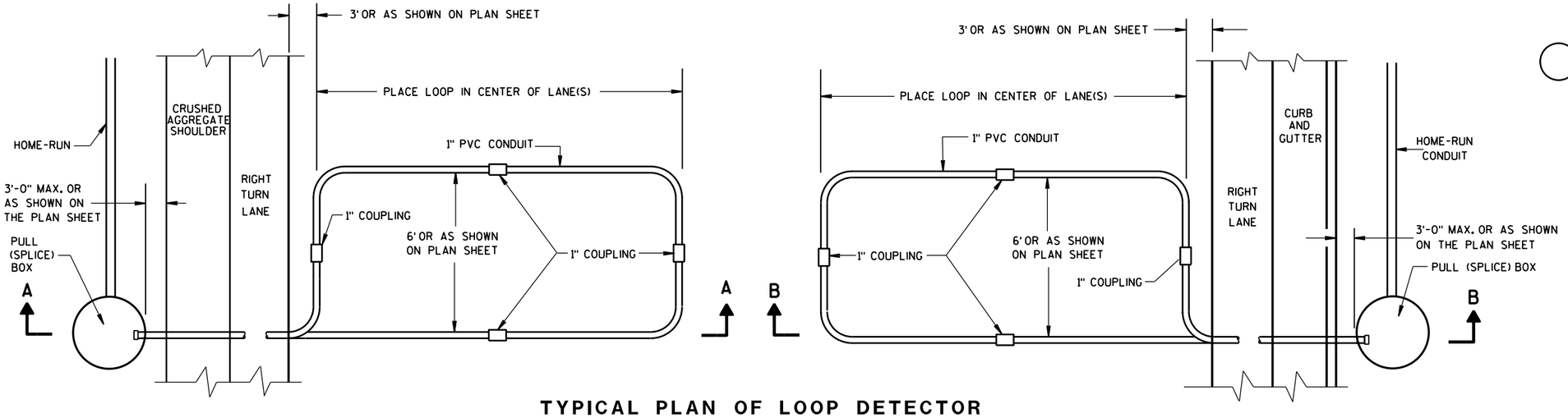
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

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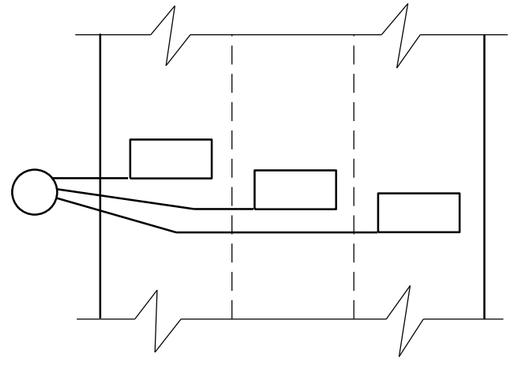
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICED CONTINUOUS LENGTH.

PROTECTION OF THE CONDUITS 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 OF 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

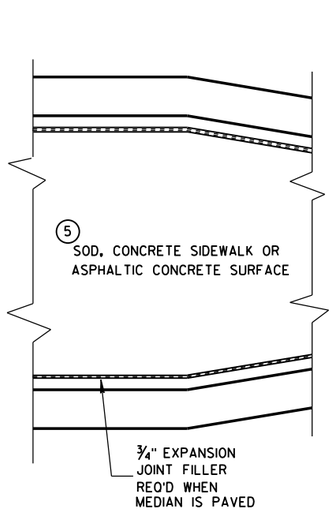
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

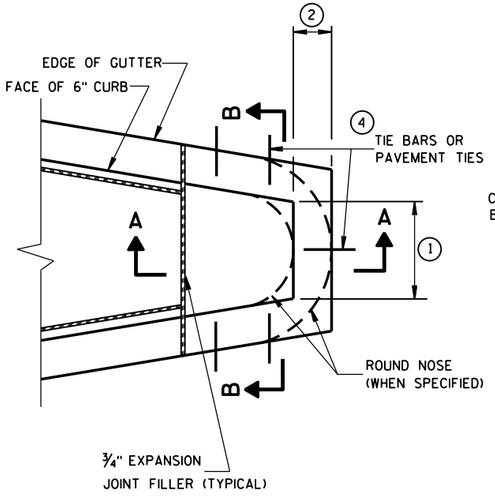
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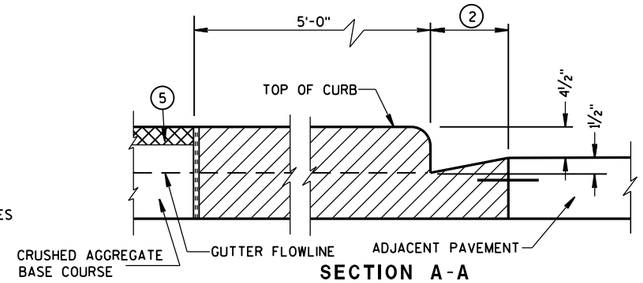
S.D.D. 9 F 15-4b

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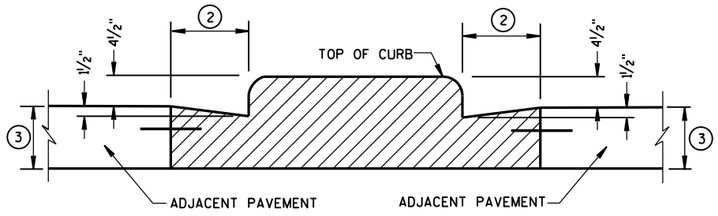
S.D.D. 9 F 15-4b







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.

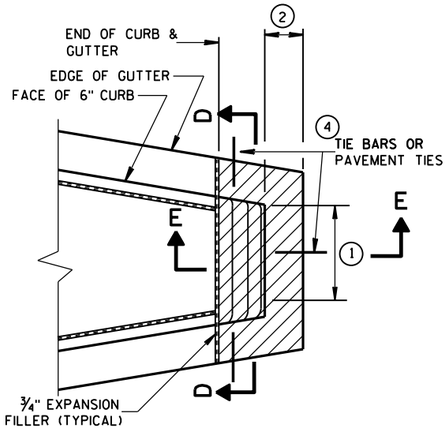
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

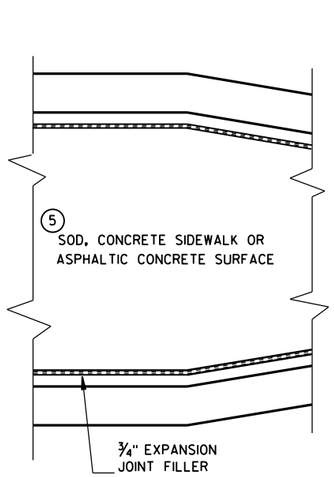
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

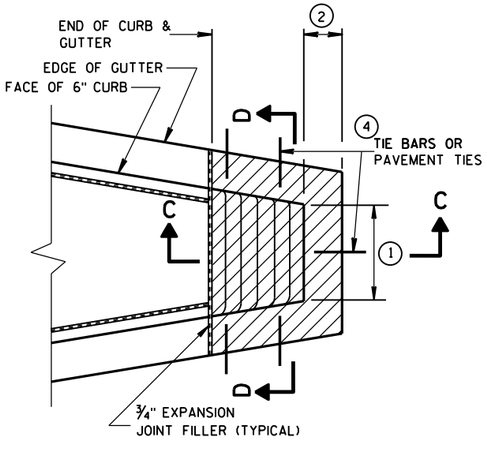
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

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.

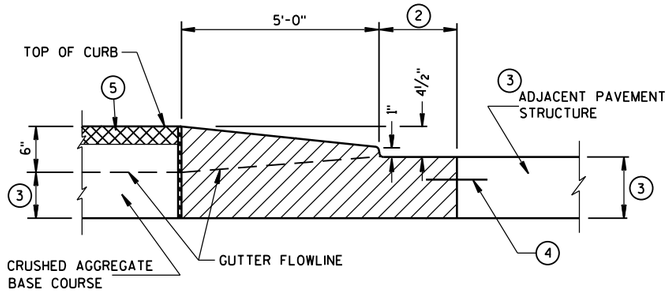
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



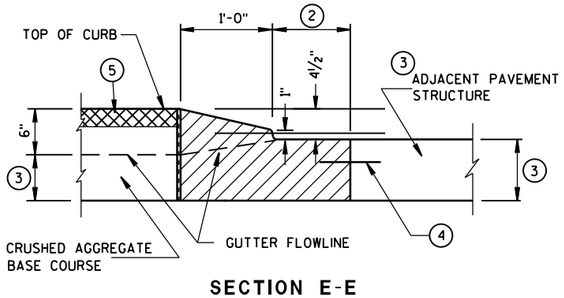




CONCRETE MEDIAN SLOPED NOSE TYPE 1

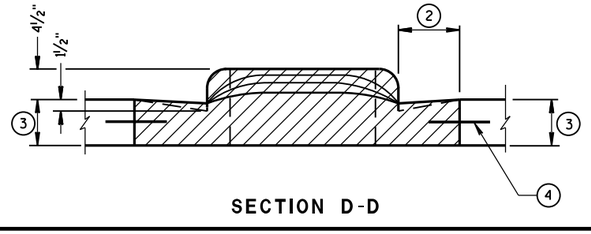


SECTION C-C



SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 2



SECTION D-D

CONCRETE MEDIAN NOSE

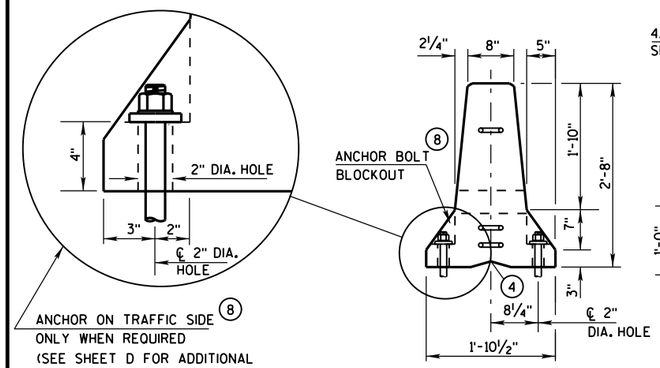
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

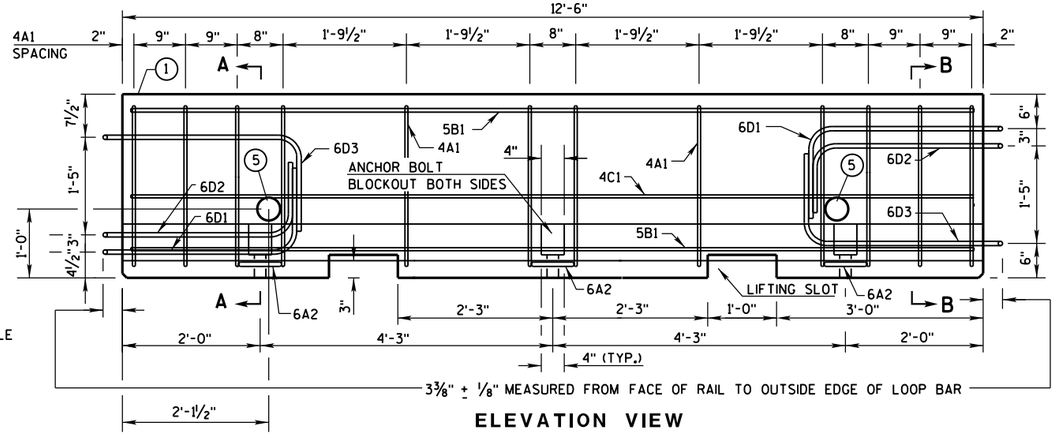
6/8/2006
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER

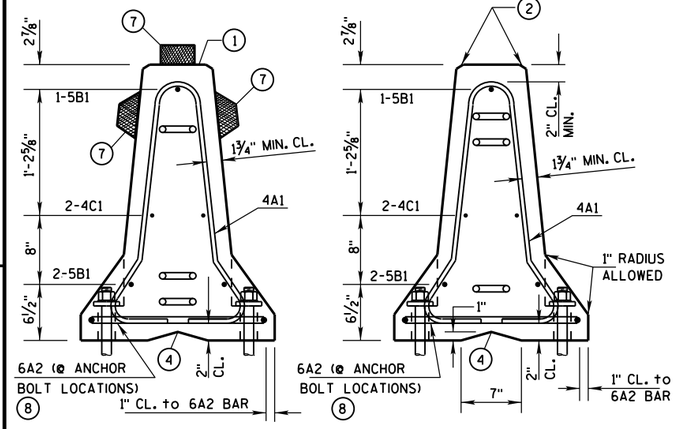
FHWA



END VIEW

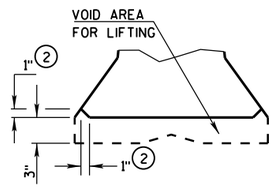


ELEVATION VIEW

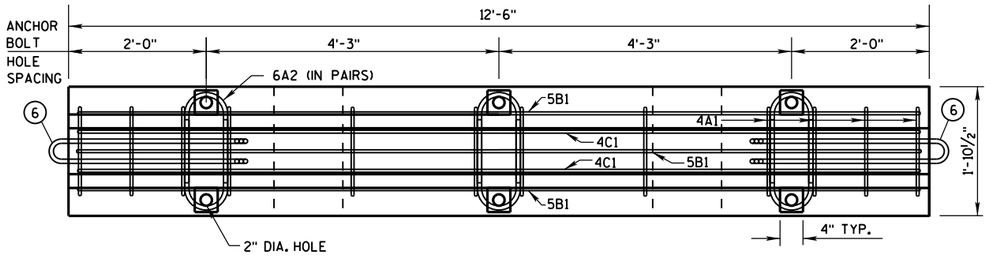


SECTION A-A
(STIRRUP PLACEMENT)

SECTION B-B
(STIRRUP PLACEMENT)

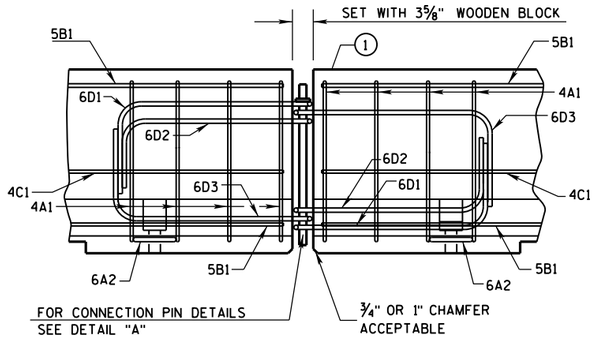


DETAIL "B"
LIFTING SLOT DETAIL

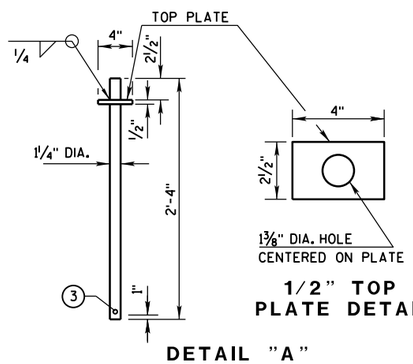


PLAN VIEW

DETAILS OF BARRIER SECTION

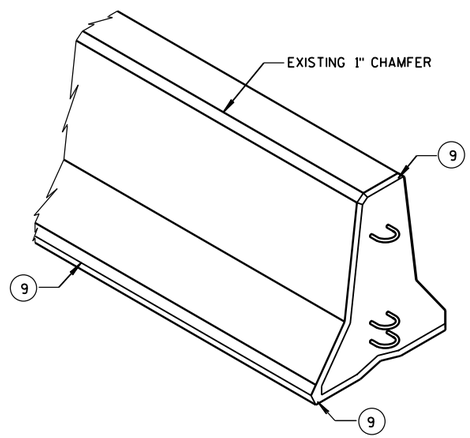


DETAILS OF BARRIER CONNECTION



1/2" TOP
PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-15(a) THRU 14B7-15(i).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

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

(8) SEE SHEET D FOR HOW TO ANCHOR BARRIER. SEE SHEET E FOR WHEN TO ANCHOR BARRIER.

(9) 1" CHAMFER OPTIONAL.

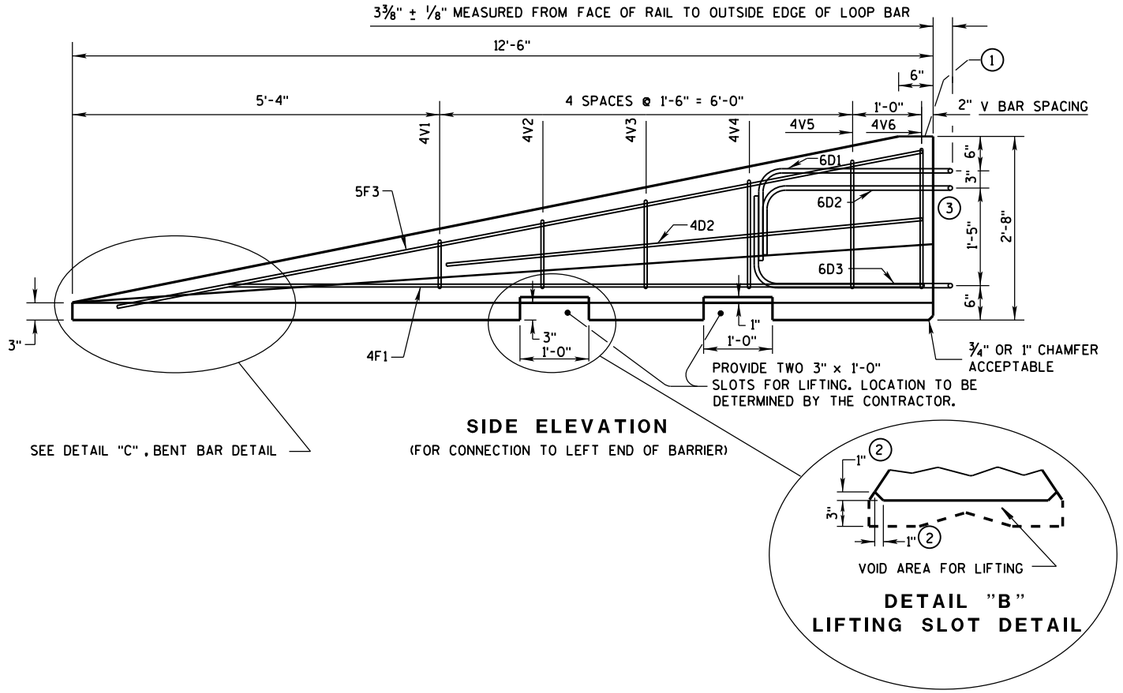
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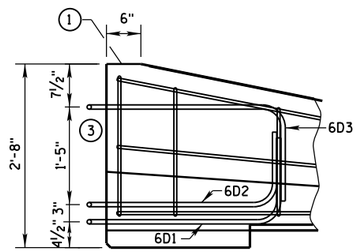
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

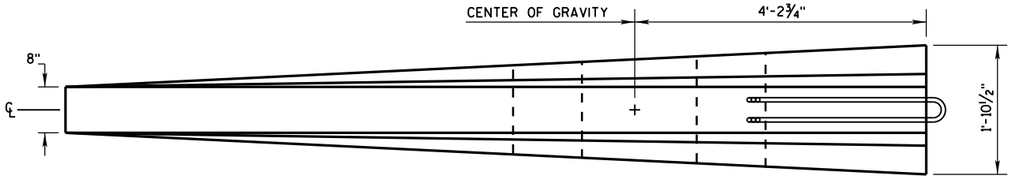
S.D.D. 14 B 7-15a

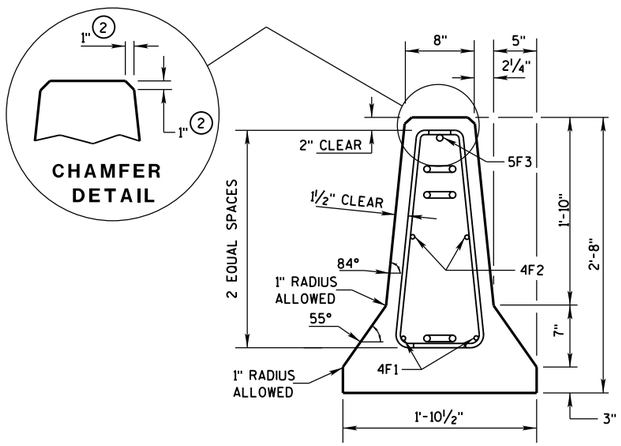


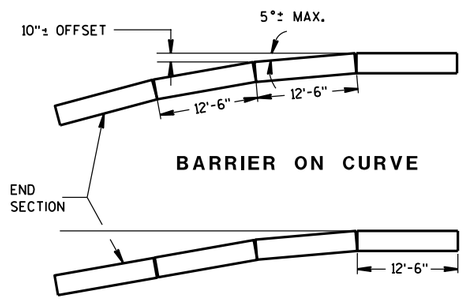


GENERAL NOTES

1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.







POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

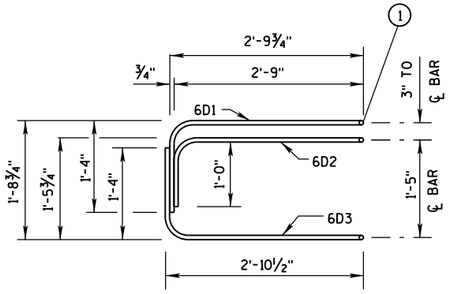
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S.D.D. 14 B 7-15b

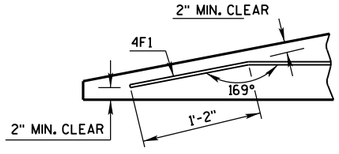
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

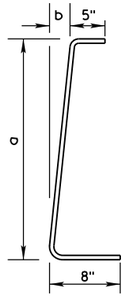
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

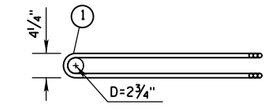
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

BARRIER SECTION BILL OF MATERIALS

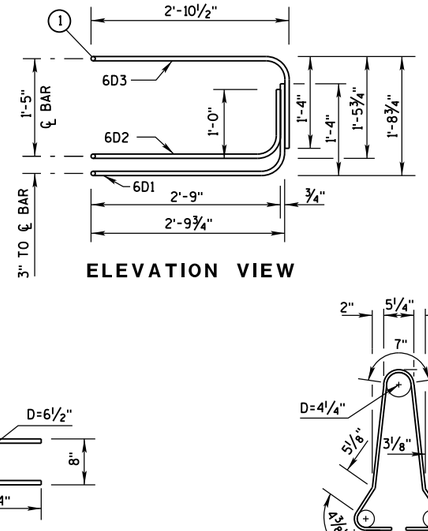
(PER 12'-6" BARRIER SECTION)

BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"

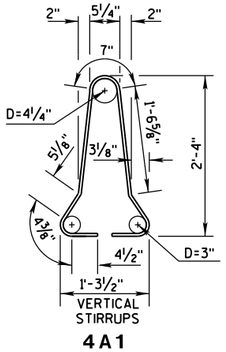


PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)

6A2



ELEVATION VIEW



4A1

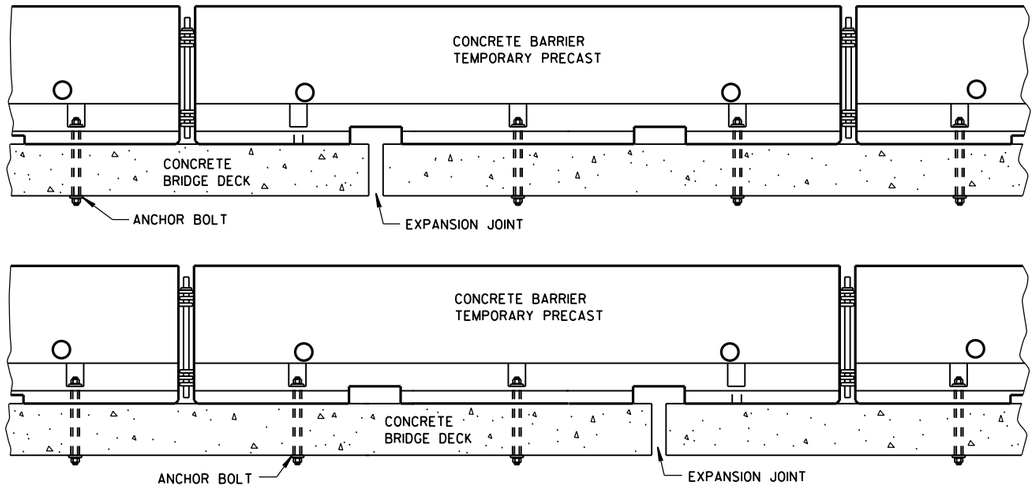
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 7-15c



TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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.)

GENERAL NOTES

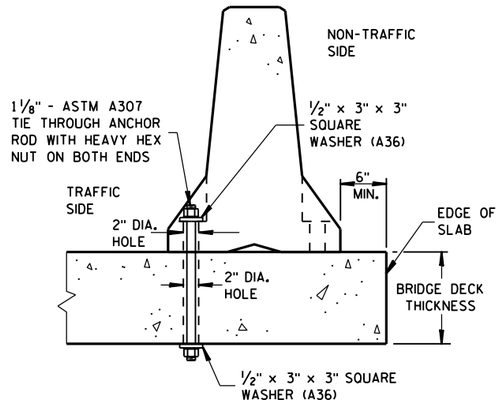
SEE SHEET E FOR WHEN TO ANCHOR. OTHER PARTS OF THE PLAN MAY SHOW ADDITIONAL LOCATIONS REQUIRING ANCHORING.

REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERICAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

(1) 1⅛" DIAMENTER A307 THREADED ROD. ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL. ASTM A563A HEAVY HEX NUT.

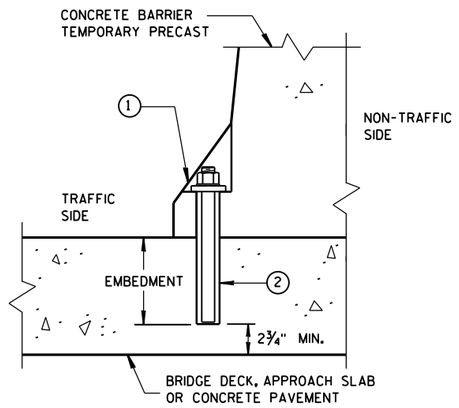
(2) ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

(3) ASPHALT SURFACE SHOWN. CONTRACTOR MAY DRILL THROUGH CONCRETE PAVEMENT AND THAN DRIVE ASPHALT ANCHOR PIN.



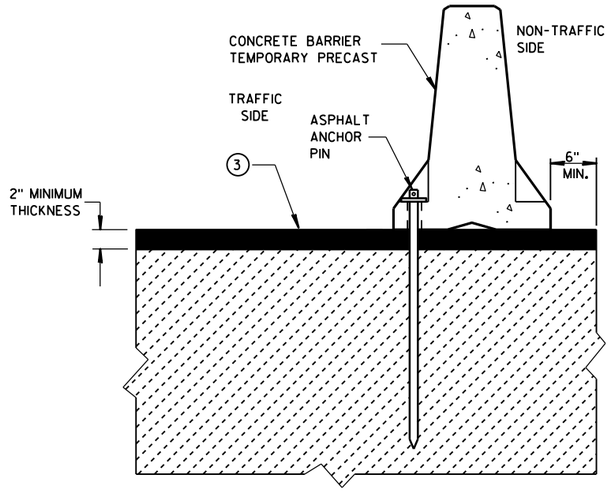
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)

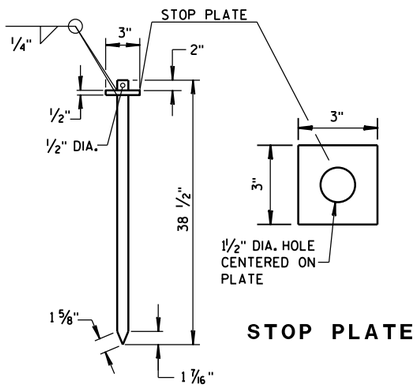


REMOVABLE ADHESIVE ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



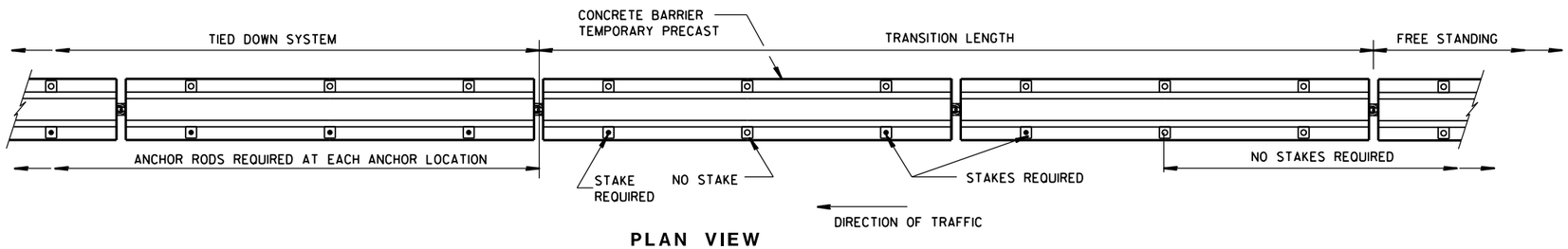
STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE



STOP PLATE

ASPHALT ANCHOR PIN

(ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

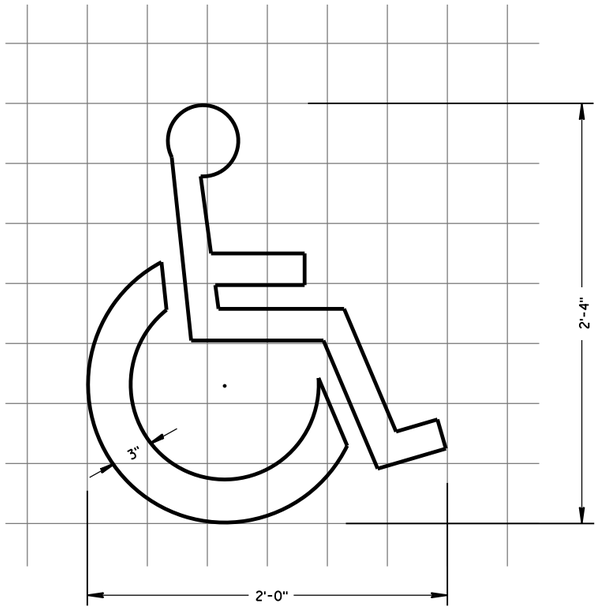
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

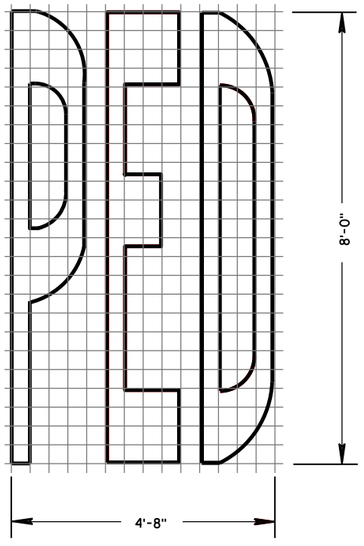
6
S.D.D. 14 B 7-15d

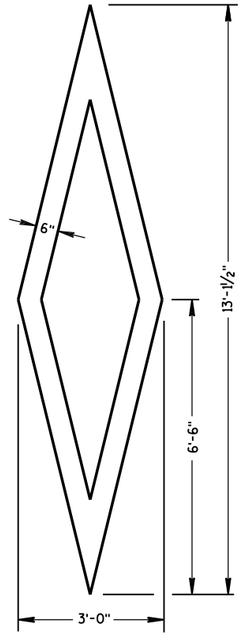
GENERAL NOTES

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

6

S.D.D. 15 C 7-14a

S.D.D. 15 C 7-14a

PAVEMENT MARKING SYMBOLS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

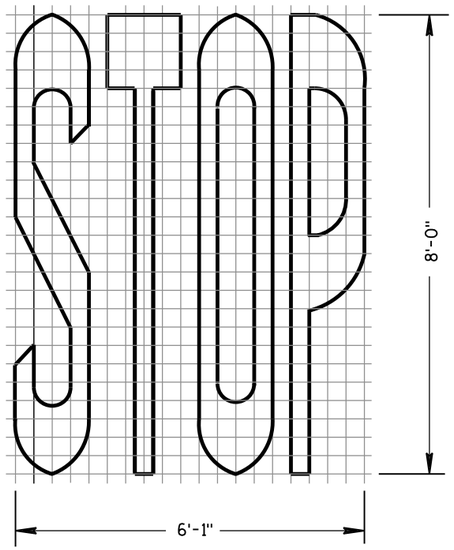
June 2017 — DATE

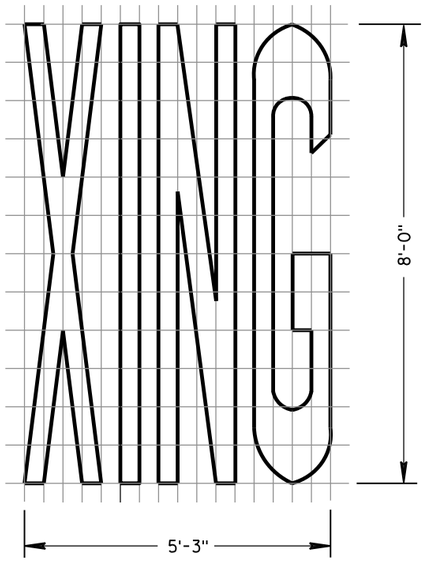
/S/ Matthew R. Rauch — STATE SIGNING AND MARK EER

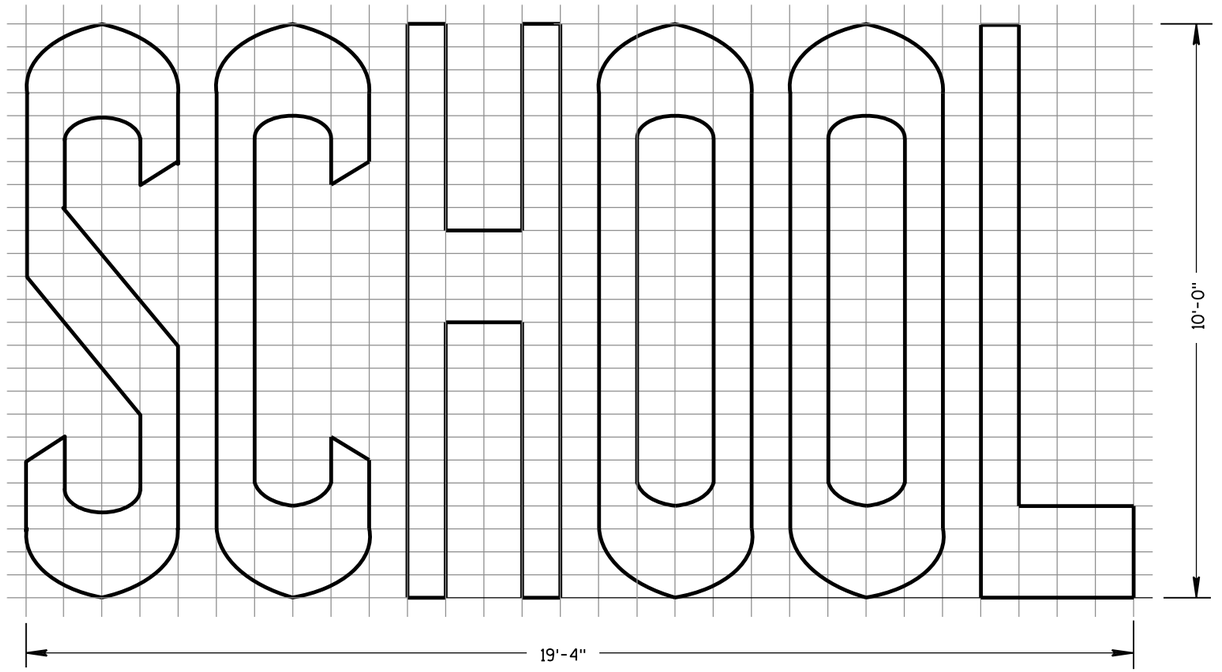
FHWA

GENERAL NOTES

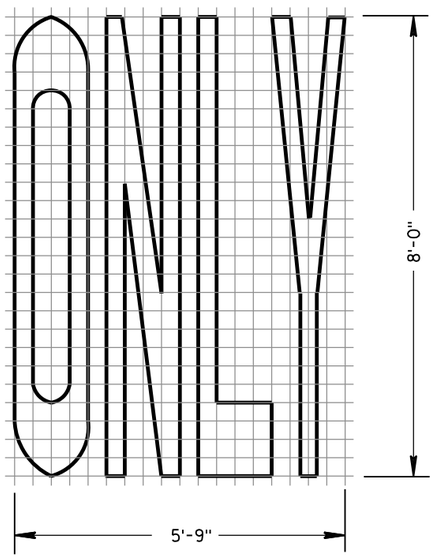
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

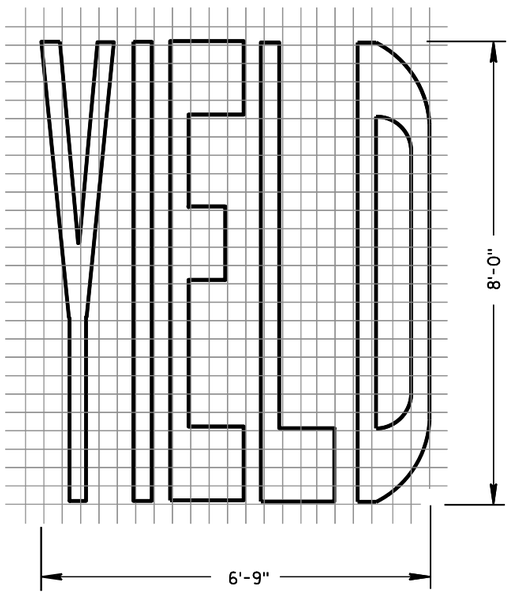


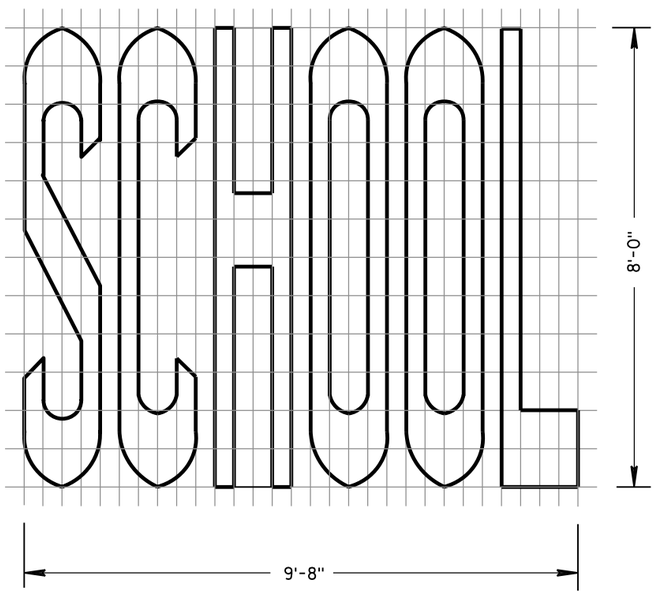




TWO-LANE







SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

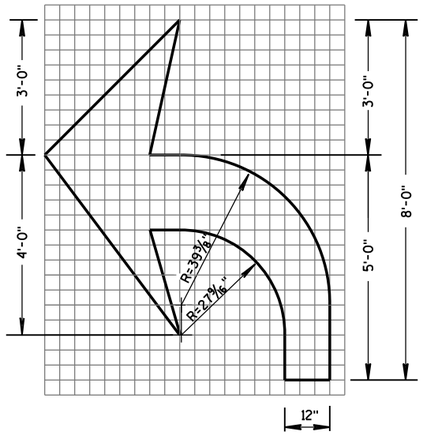
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARK
EER
FHWA

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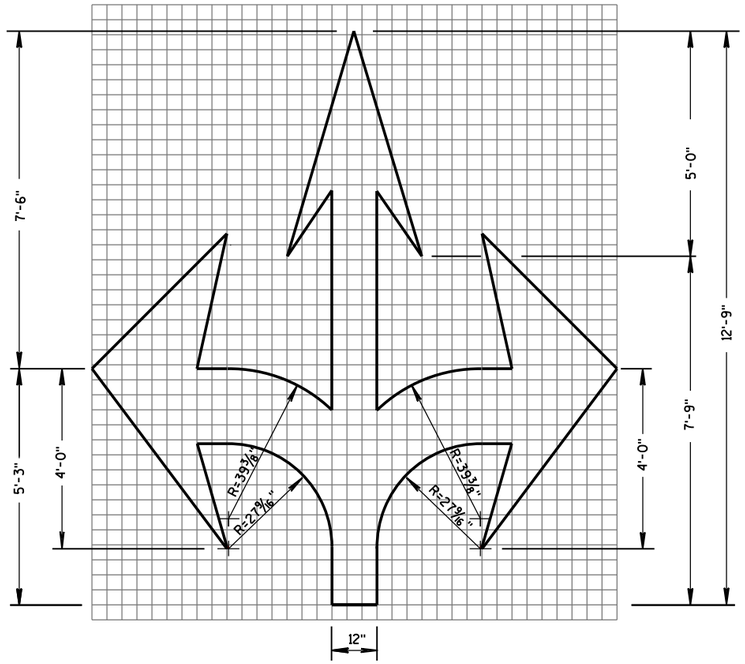
S.D.D. 15 C 7-14b

6

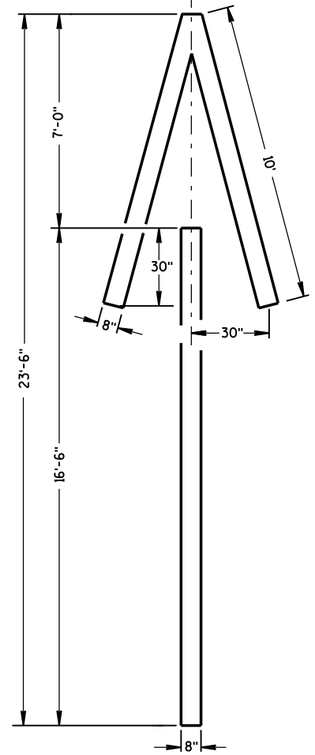
S.D.D. 15 C 7-14b



TYPE 2



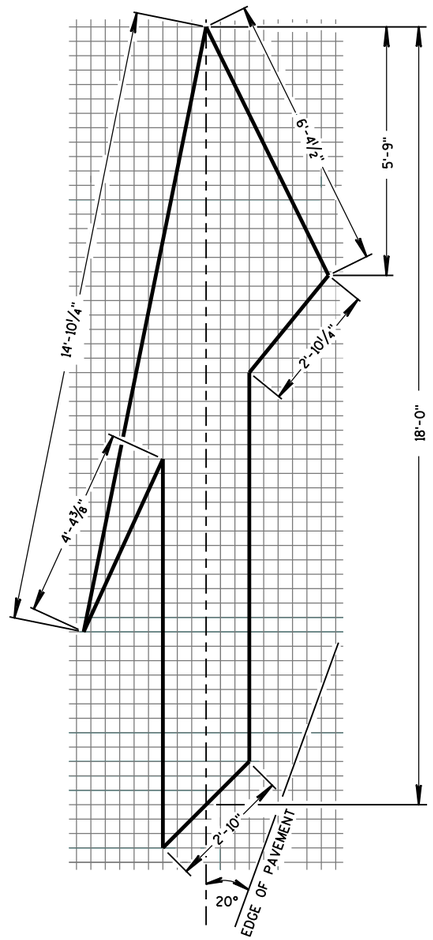
TYPE 6



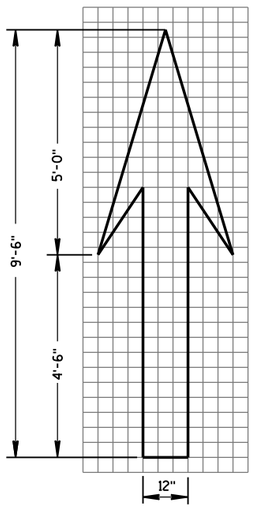
TYPE 4

GENERAL NOTES

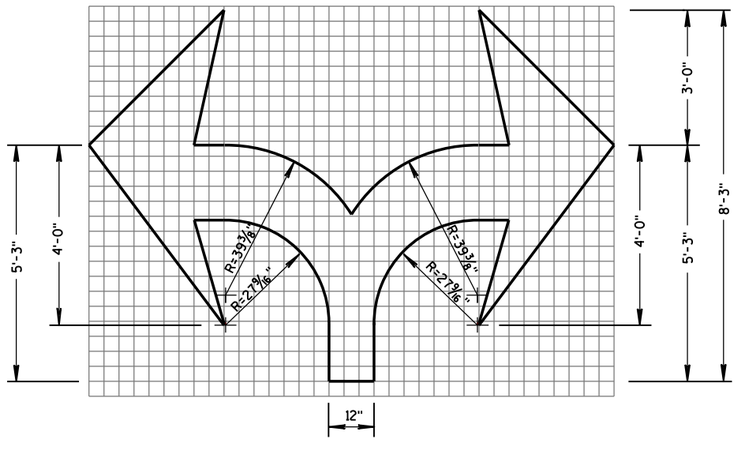
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



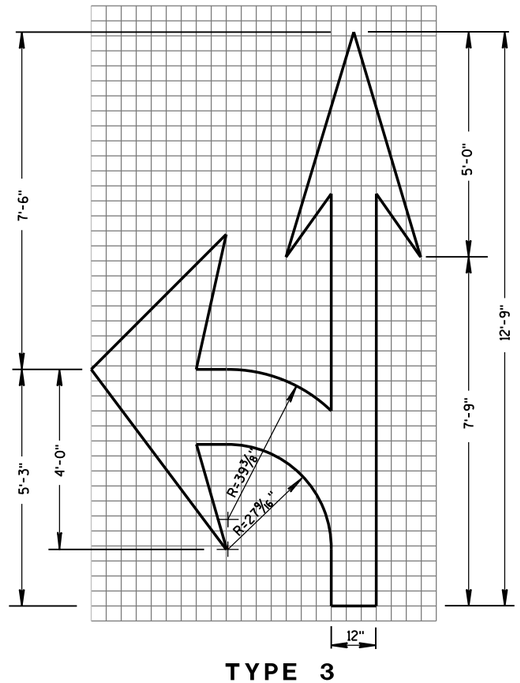
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

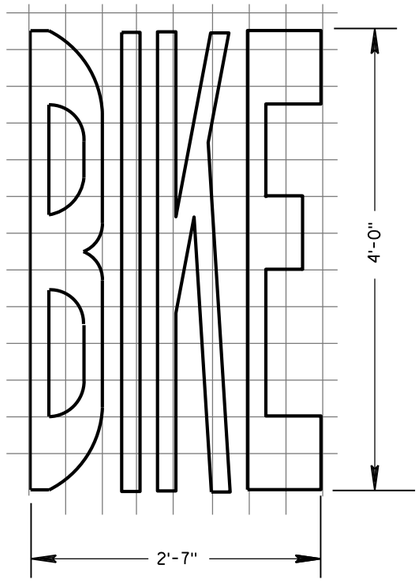
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]NEER
FHWA

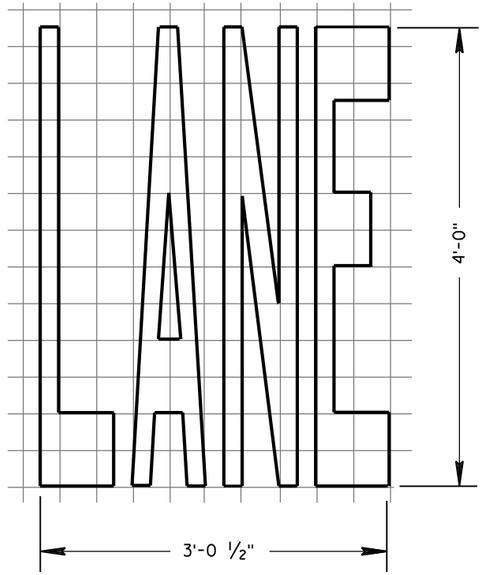
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S.D.D. 15 C 7-14c

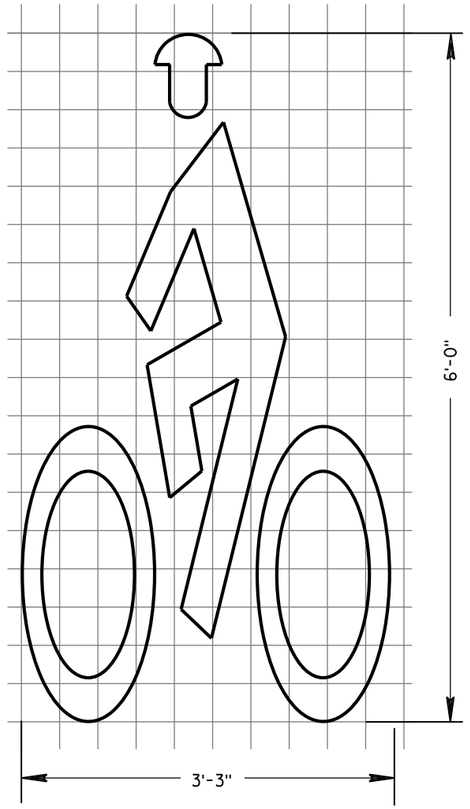
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S.D.D. 15 C 7-14c

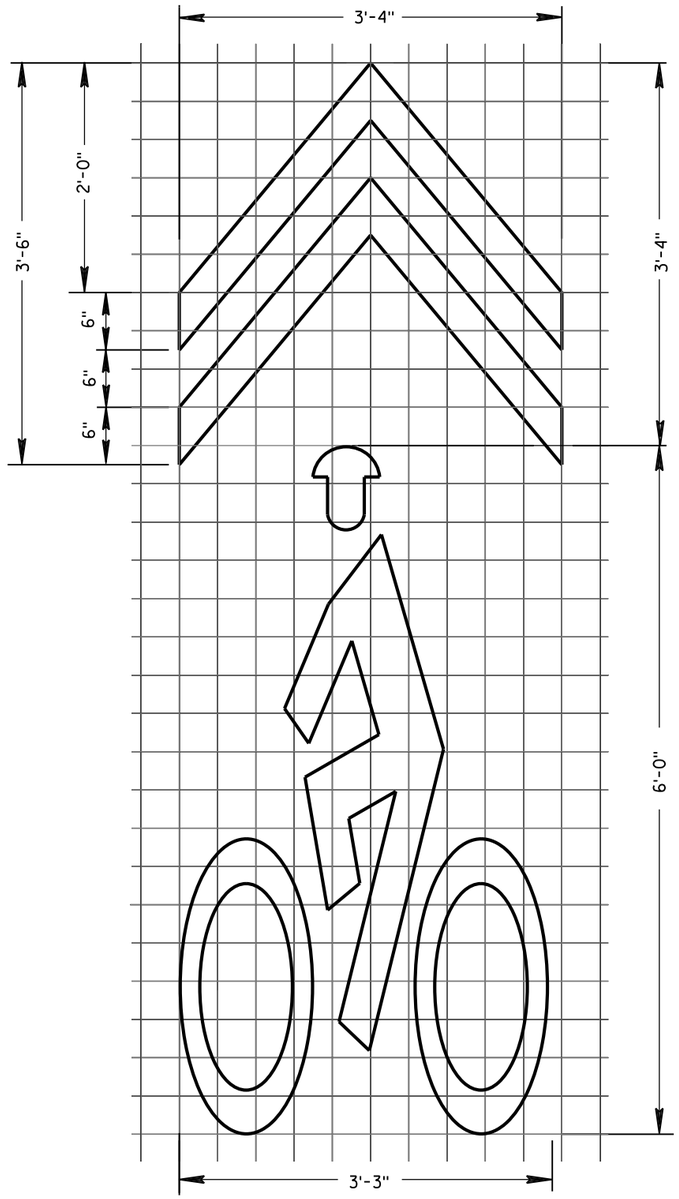




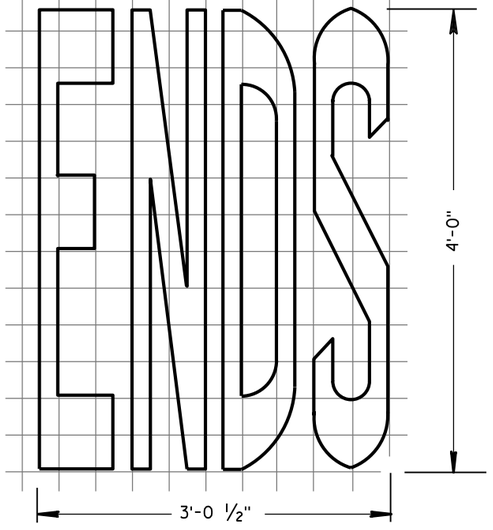
BIKE LANE WORDS



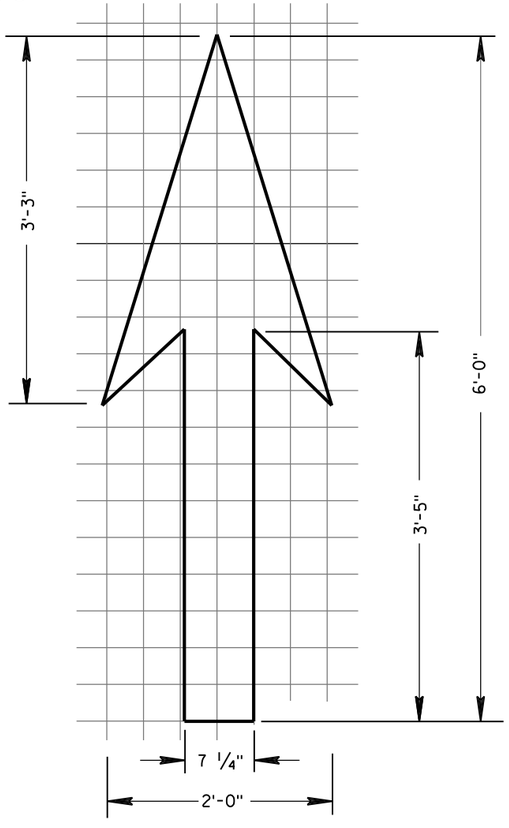
BIKE LANE SYMBOL



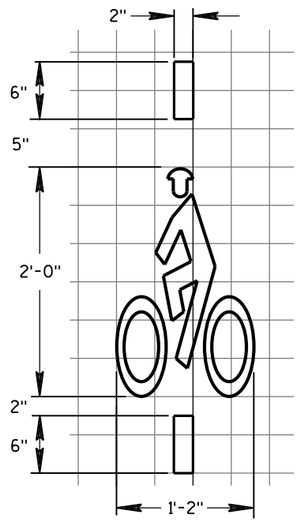
BIKE SYMBOL FOR SHARED LANE



BIKE LANE WORDS



BIKE LANE ARROW



BICYCLE DETECTOR PAVEMENT MARKING

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 FOR BIKE LANES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

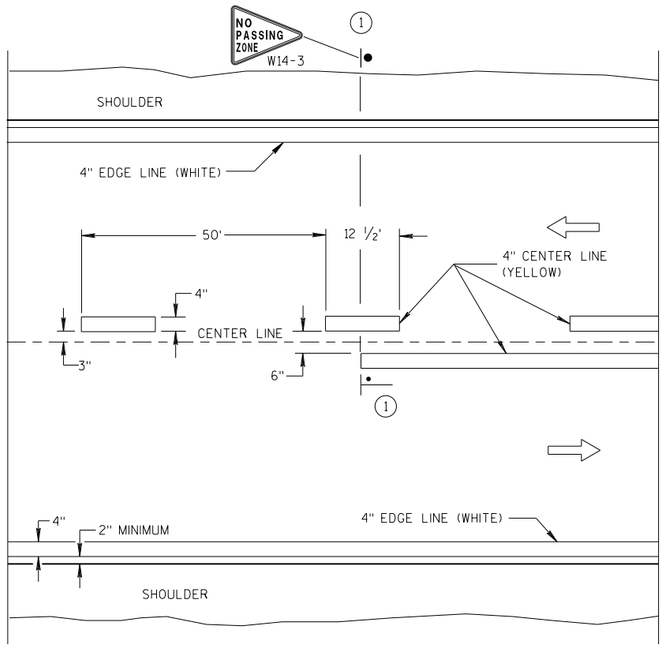
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

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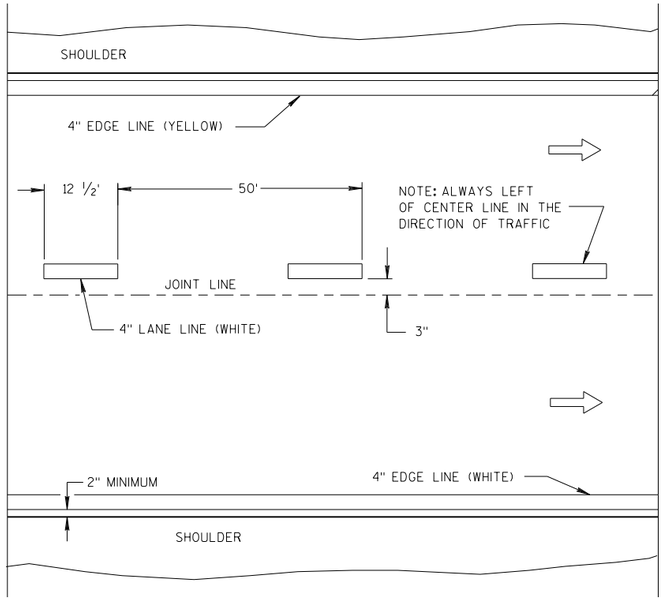
S.D.D. 15 C 7-14e

6

S.D.D. 15 C 7-14e



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

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.

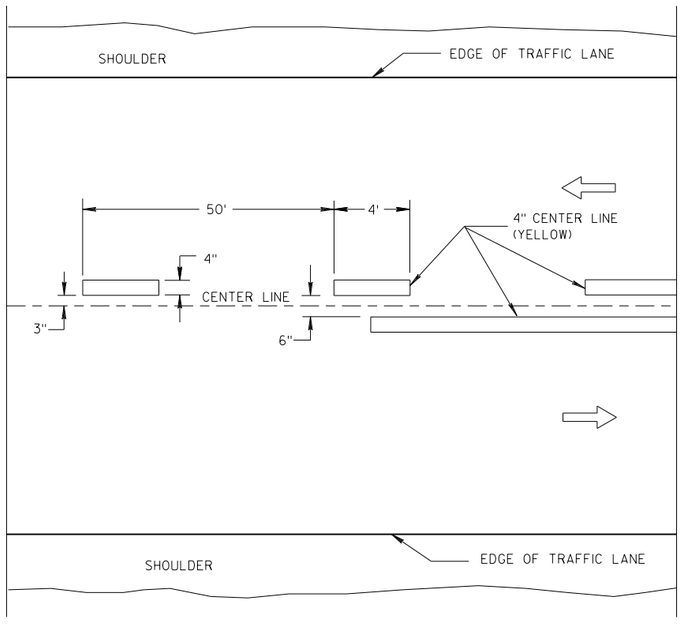
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

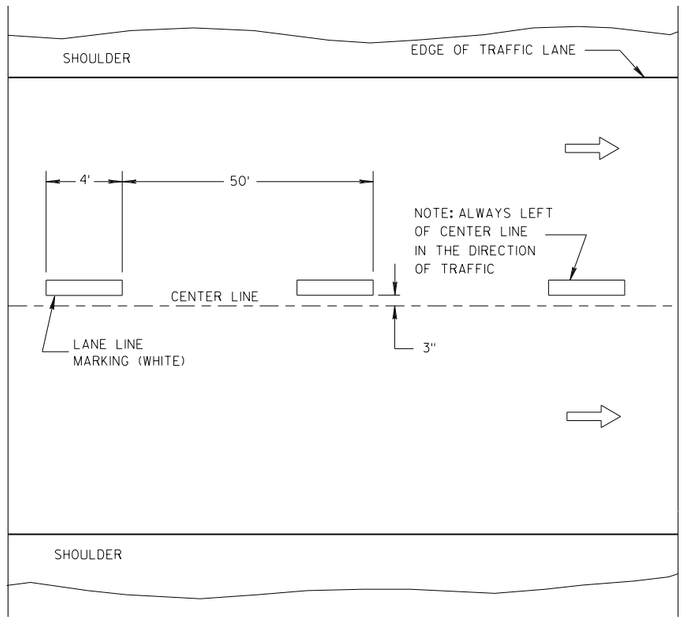
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 — DATE

/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER

FHWA

6

S.D.D. 15 C 8-19a

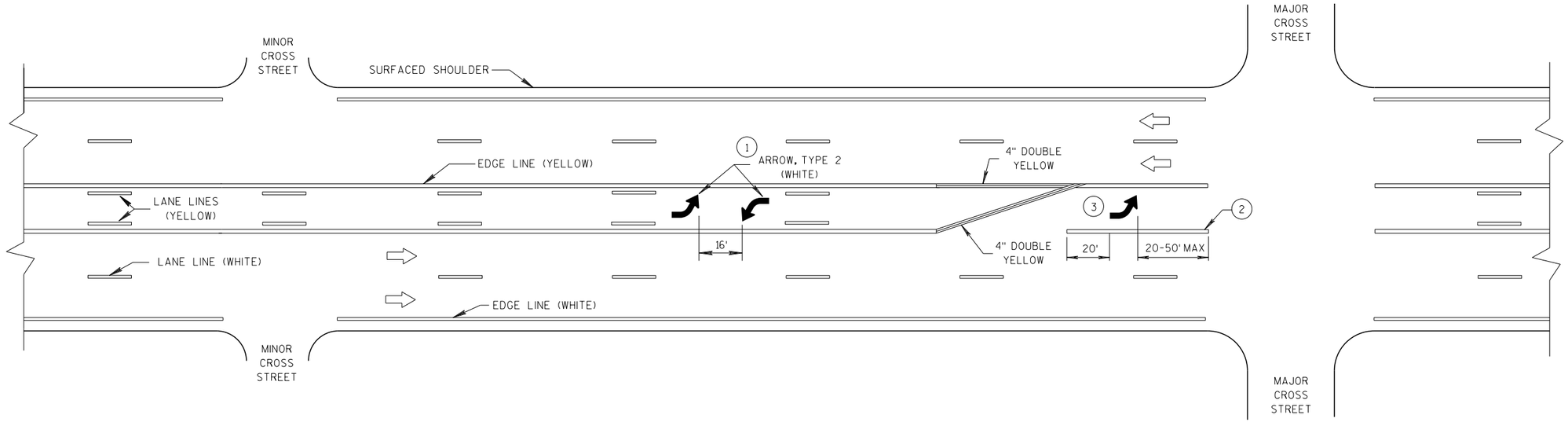
GENERAL NOTES

(1) A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.

(2) 8" WHITE

(3) TURN BAY LENGTH OF LESS THAN 48'DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT

DIRECTION OF TRAFFIC



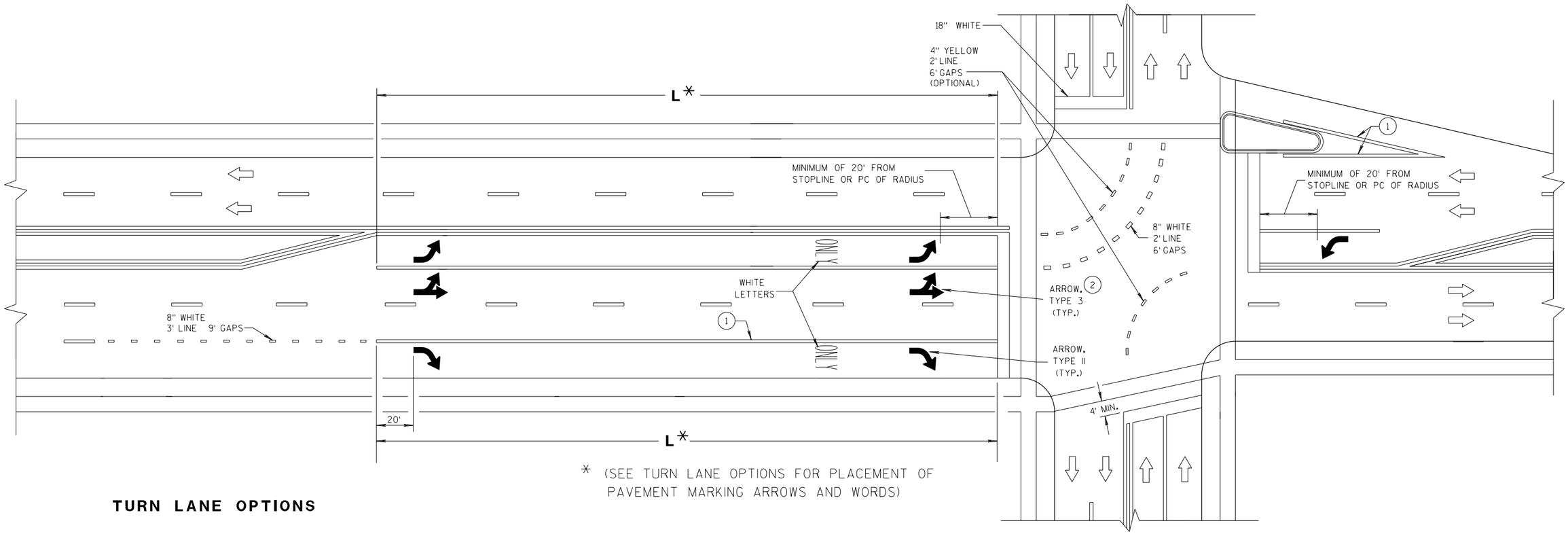
TWO WAY LEFT TURN LANE

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

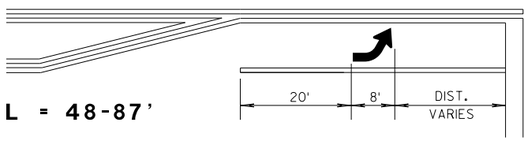
S.D.D. 15 C 8-19b



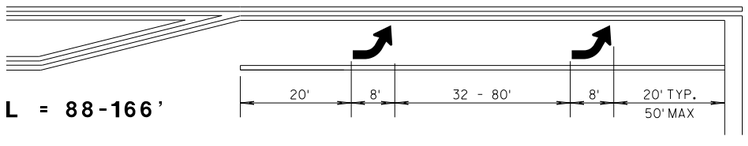
* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

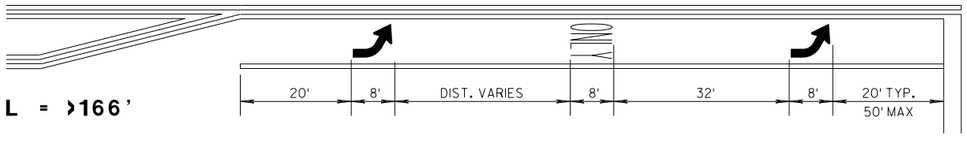
LENGTH OF TURN BAY (**L**) OF 0-47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48-87'



L = 88-166'



L = >166'

GENERAL NOTES

(1) 8" WHITE

(2) QUANTITY AND LOCATION OF TYPE 3 ARROW ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION, THE ARROWS AND ONLY MARKING ARE ELIMINATED.

⇨ DIRECTION OF TRAFFIC

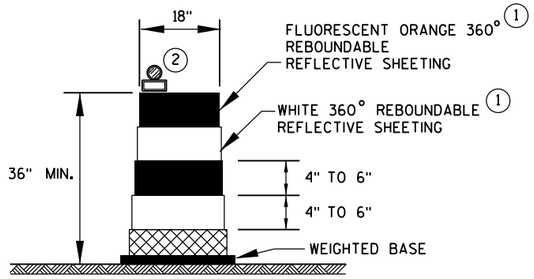
L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

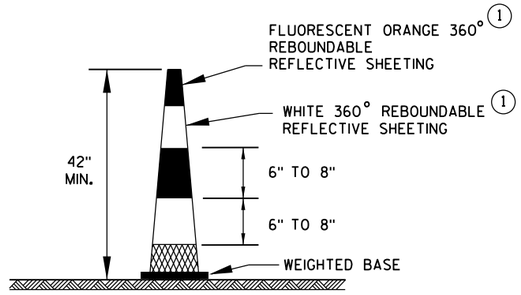
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORT

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S.D.D. 15 C 8-19c



DRUM

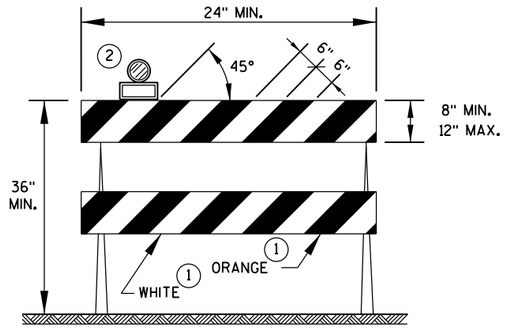


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

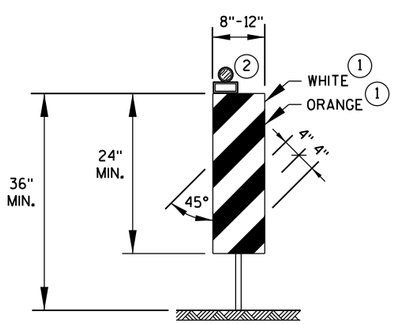
GENERAL NOTES

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.



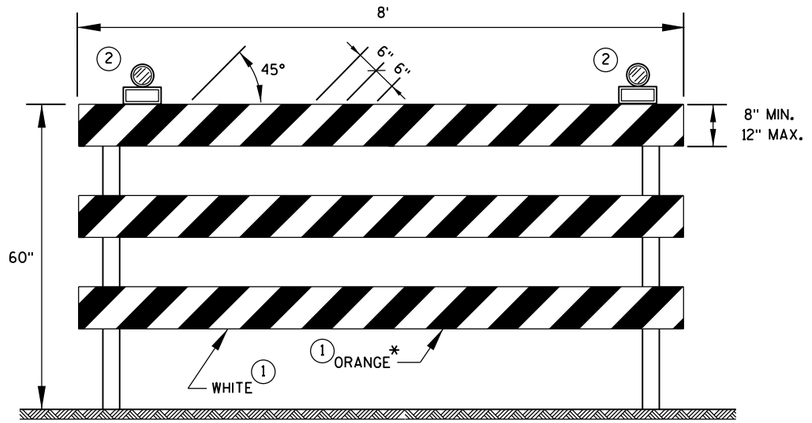
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 BARRICADE

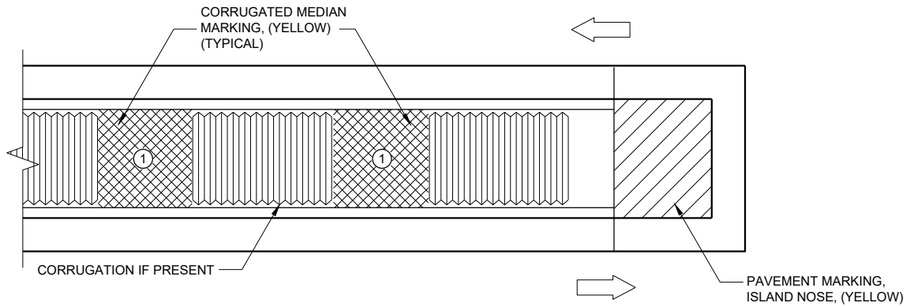
IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

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

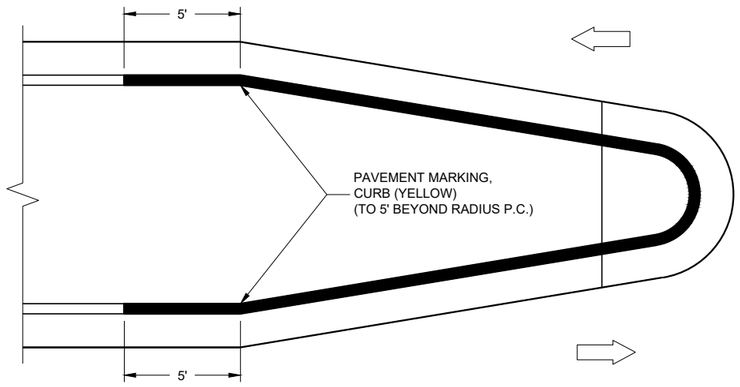
CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENG
FHWA	

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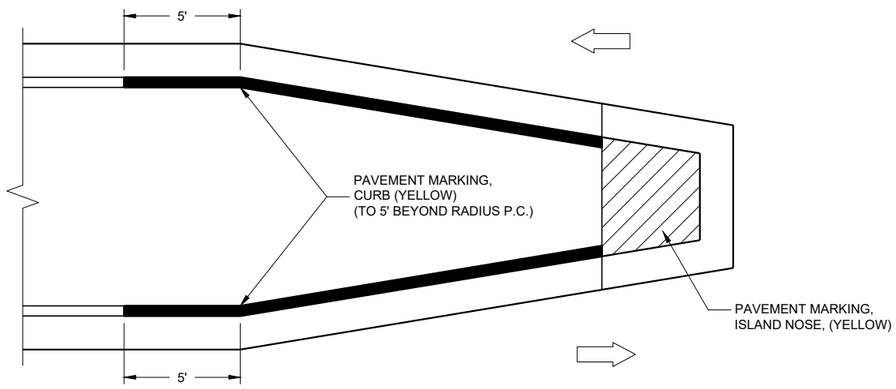
S.D.D. 15 C 11-7b



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.

ISLAND NOSE MARKING

CURB MARKING

CORRUGATED MEDIAN MARKING

DIRECTION OF TRAVEL

**PAVEMENT MARKINGS
(ISLANDS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAF
ENGINEER

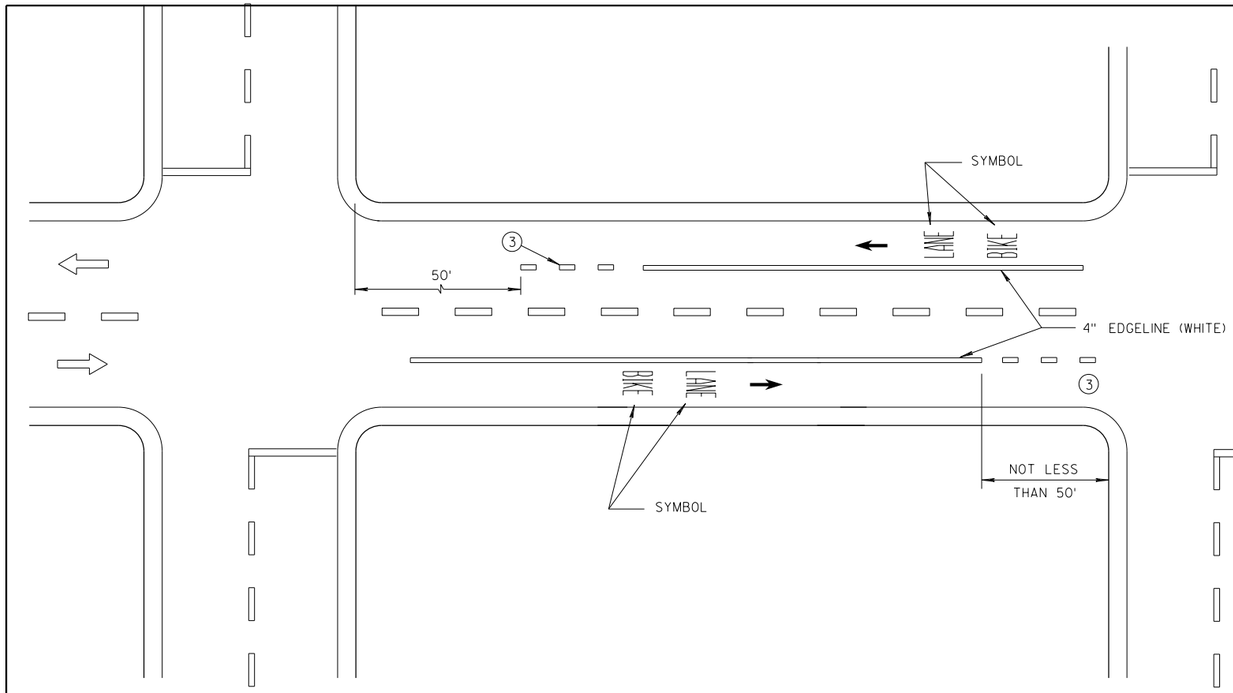
FHWA

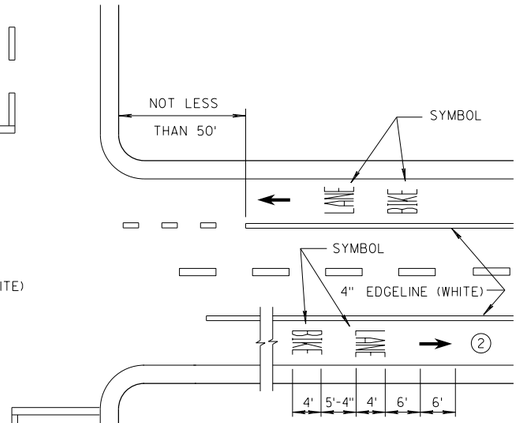
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6

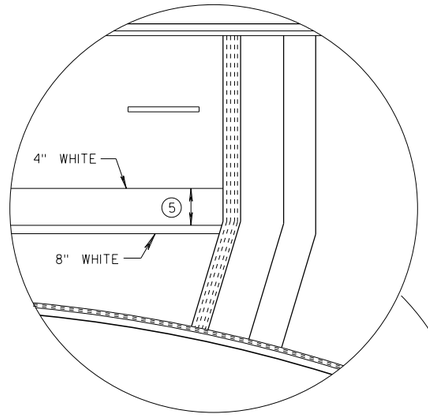
SDD 15C27 - 03b

SDD15C27 - 03b

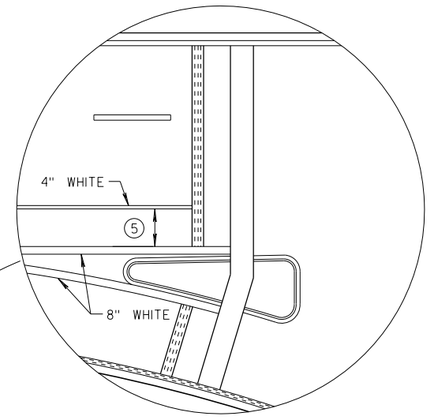




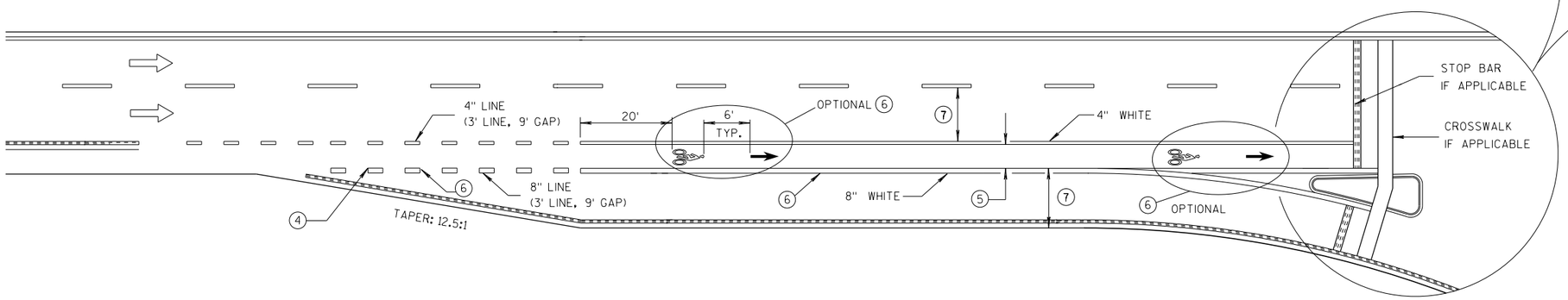
DESIGNATED BICYCLE LANE
NO PARKING



4 LANE DIVIDED WITHOUT ISLAND



4 LANE DIVIDED WITH ISLAND



BIKE LANE - FOR 2-LANE ROADWAYS AND 4-LANE DIVIDED ROADWAYS
(4-LANE DIVIDED WITH RIGHT TURN LANE SHOWN)

GENERAL NOTES

1. DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
2. MINIMUM OF ONE PER BLOCK. MAXIMUM OF 250 FEET.
3. DOTTED LINES (3' LINE, 9' GAP) SHOULD BE USED 50 FEET TO 200 FEET IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
4. IF SIGNED AND/OR MARKED AS A BICYCLE FACILITY INCLUDE SECOND LINE OF LINE-SPACE MARKING, OTHERWISE DO NOT.
5. BIKE ACCOMODATION IS TYPICALLY 5 FEET WIDE AND A MINIMUM OF 4 FEET FROM A LONGITUDINAL JOINT. USE 5 FEET AT 45 MPH.
6. OMIT THESE MARKINGS FOR WIDER TURN LANE APPLICATIONS (MINIMUM OF 15 FEET WIDE TURN LANE).
7. REFER TO CONTRACT PLANS FOR LANE WIDTH.

DIRECTION OF TRAVEL

BICYCLE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAR

FHWA

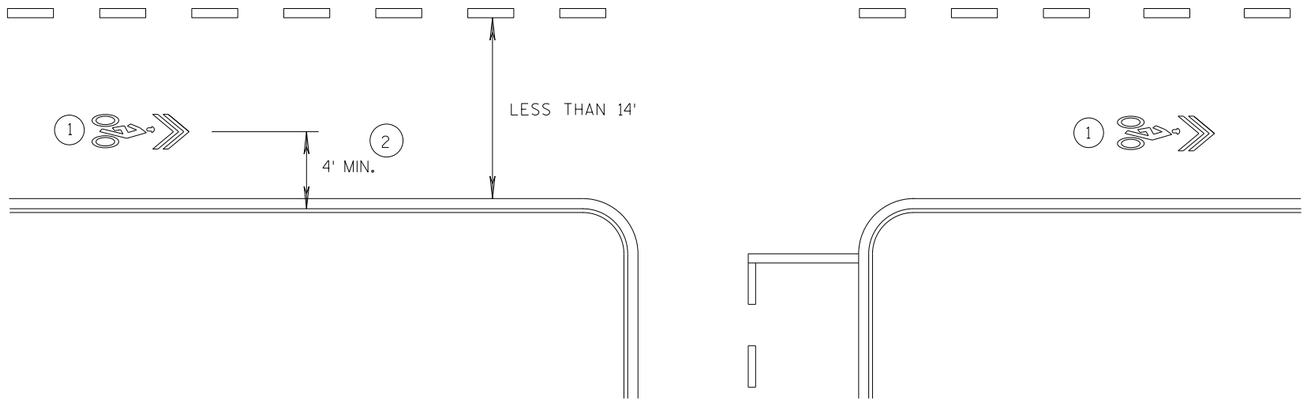
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S.D.D. 15 C 29-6a

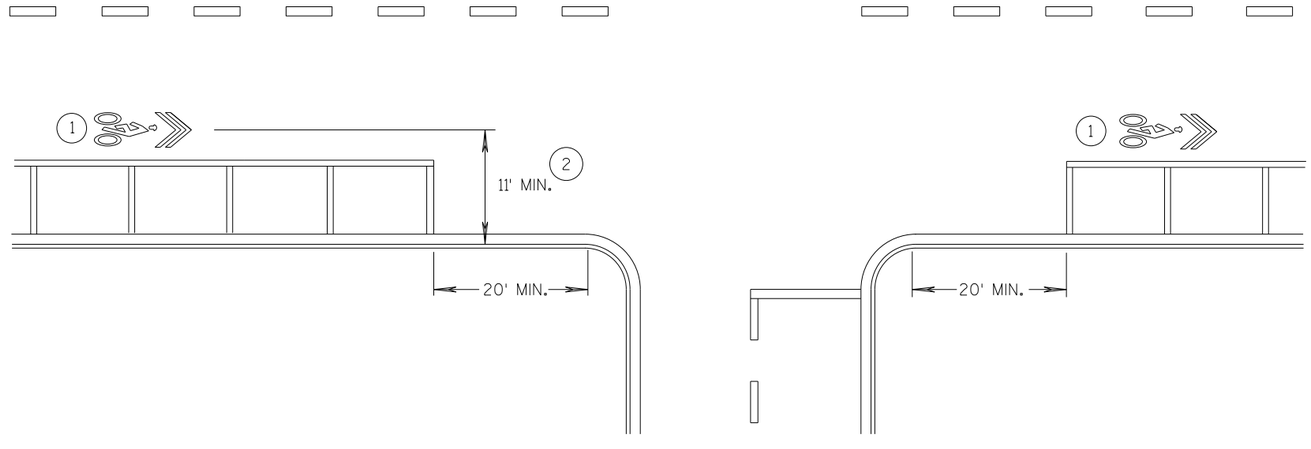
GENERAL NOTES

(1) MINIMUM OF ONE PER BLOCK, MAXIMUM OF 250 FEET.

(2) OR TO EDGE OF PAVEMENT WITHOUT CURB.



WITHOUT PARKING



WITH PARKING

PAVEMENT MARKING FOR SHARED LANE 35 MPH OR LESS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARKI[illegible]ER

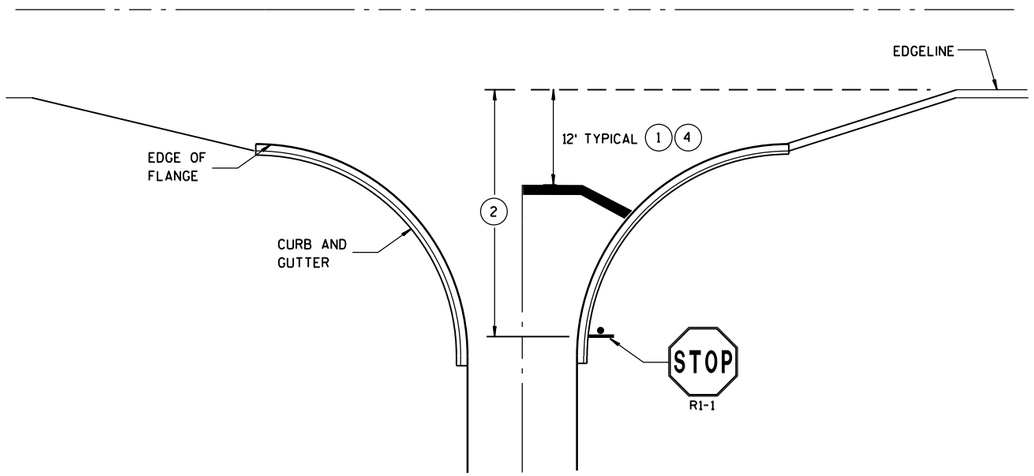
FHWA

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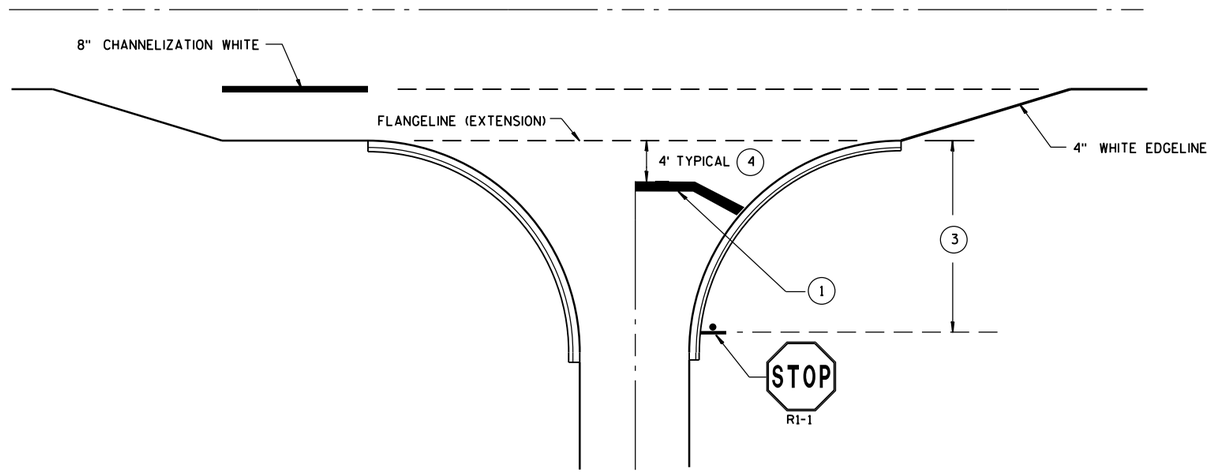
S.D.D. 15 C 29-6b

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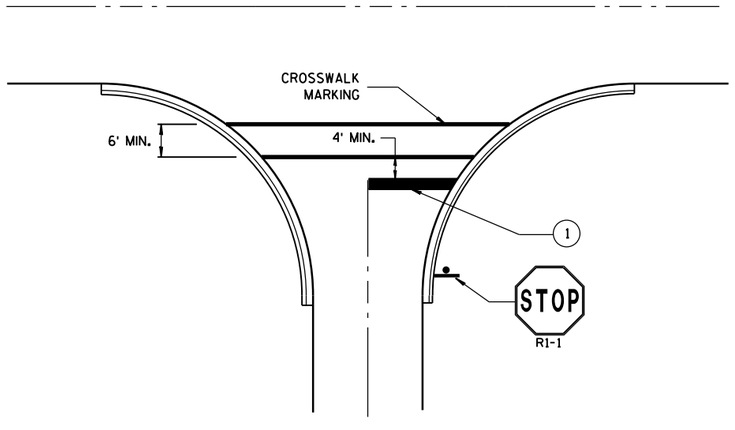
S.D.D. 15 C 29-6b



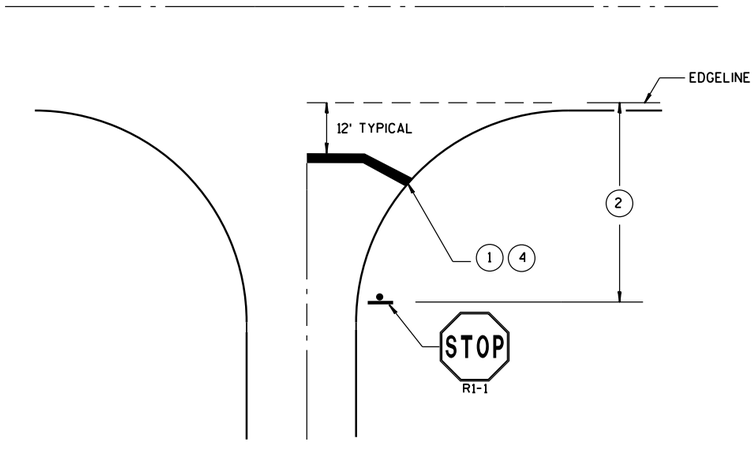
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

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 PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.

(2) IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.

(3) IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.

(4) MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

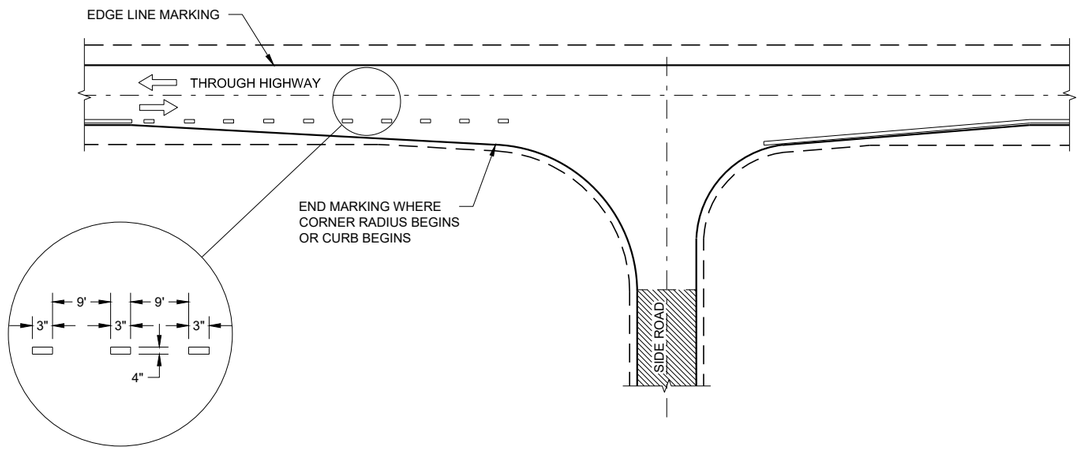
Sept., 2017 — DATE

/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]NEER

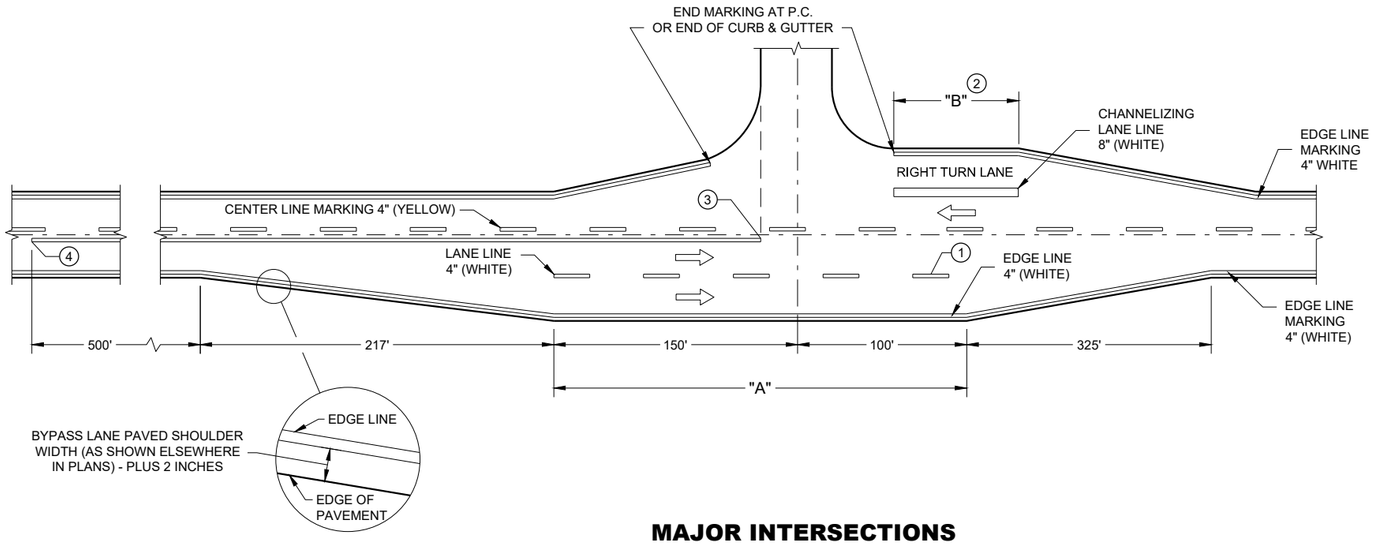
FHWA

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S.D.D. 15 C 33-3



MINOR INTERSECTION



MAJOR INTERSECTIONS

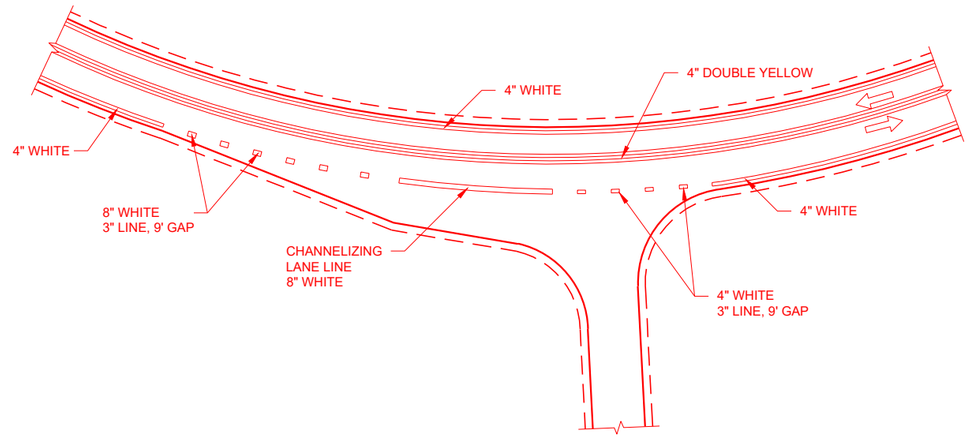
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

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

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

SDD 15C35 - 03a

SDD 15C35 - 03a

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- REMOVING PAVEMENT MARKING
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA

L, TAPER LENGTH (MPH)							
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



INSTALL ON EACH APPROACH AT THE CLOSEST INTERSECTION WITH A STATE OR COUNTY TRUNK HIGHWAY, OR AS DIRECTED BY THE ENGINEER. WIDTH ON SIGN TO BE APPROX. 1 FOOT LESS THAN AVAILABLE WIDTH (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET).



OR



LOCATED 2600 FEET IN ADVANCE OF R2-1 SIGN AND 500 FEET BEYOND THE "ROAD WORK 1 MILE" SIGN.



OR



R2-1
48"x60"
(BLACK AND WHITE)
LOCATED 500 FEET BEYOND W20-5G 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. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES.

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

GENERAL NOTES

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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.

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 OR AS APPROVED BY THE ENGINEER.

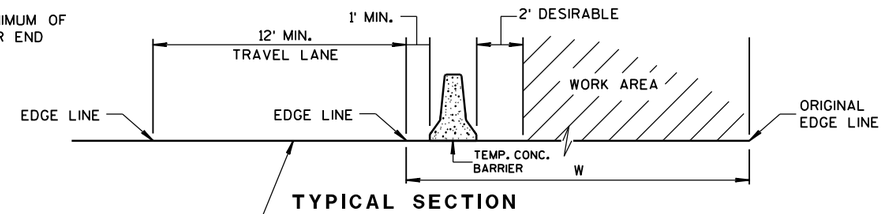
(1) CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUM TAPER.

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.

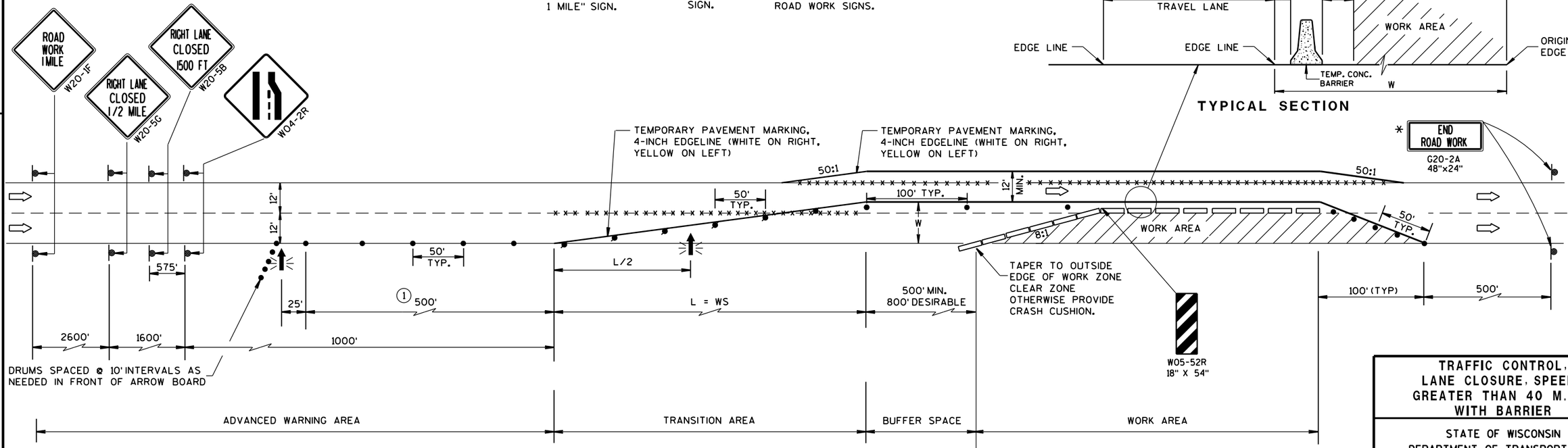
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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 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 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.



TYPICAL SECTION



TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZOI SAFETY ENGIN
FHWA

6

S.D.D. 15 D 3-4

6

S.D.D. 15 D 3-4

GENERAL NOTES

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE

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.

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 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.

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) CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

(2) IF NEEDED. USE ONLY IF DESIGN SPEED IS 10 MPH LESS THAN POSTED SPEED.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- REMOVING PAVEMENT MARKING
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA



OR





R2-1
48"X60"

OR



R2-1
48"X60"

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 A MINIMUM OF EVERY 3 MILES.

LOCATED 400 FEET BEYOND THE W20- 5G SIGN.

SEE SDD 15D12b FOR SIGN PLACEMENT.

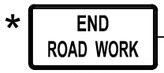
(BLACK AND WHITE)

LOCATED 700 FEET BEYOND W03-5 SIGN

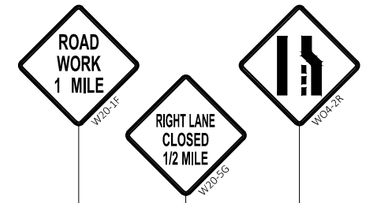


WO13-1
36"X36"

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

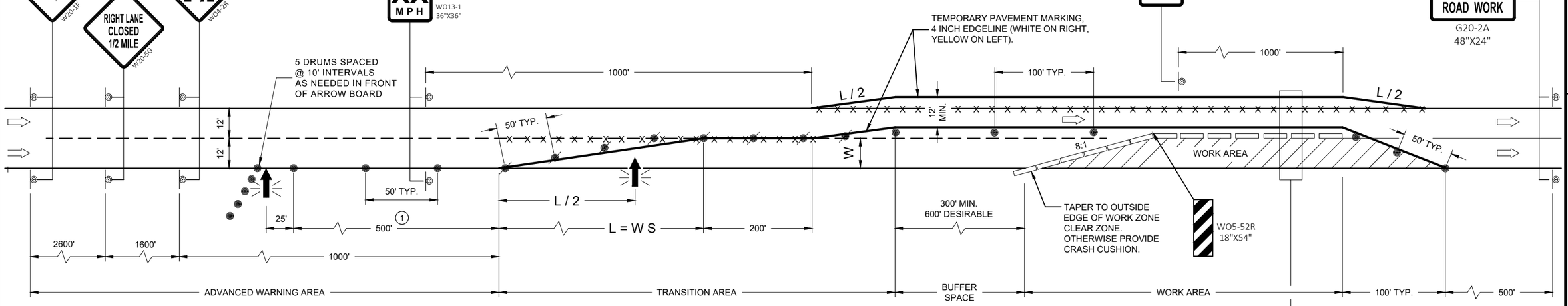


G20-2A
48"X24"

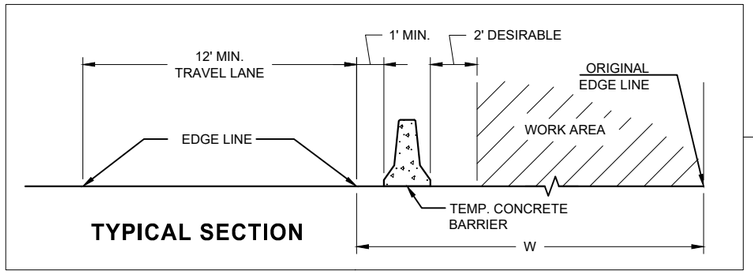




WO13-1
36"X36"



L, TAPER LENGTH (MPH)												
SPEED (MPH)	W, LATERAL OFFSET (FT)											
	1	2	3	4	5	6	7	8	9	10	11	12
45	45	90	135	180	225	270	315	360	405	450	495	540
50	50	100	150	200	250	300	350	400	450	500	550	600
55	55	110	165	220	275	330	385	440	495	550	605	660
60	60	120	180	240	300	360	420	480	540	600	660	720
65	65	130	195	260	325	390	455	520	585	650	715	780
70	70	140	210	280	350	420	490	560	630	700	770	840



TYPICAL SECTION

TRAFFIC CONTROL LANE CLOSURE, SPEEDS GREATER THAN 40 MPH WITH BARRIER

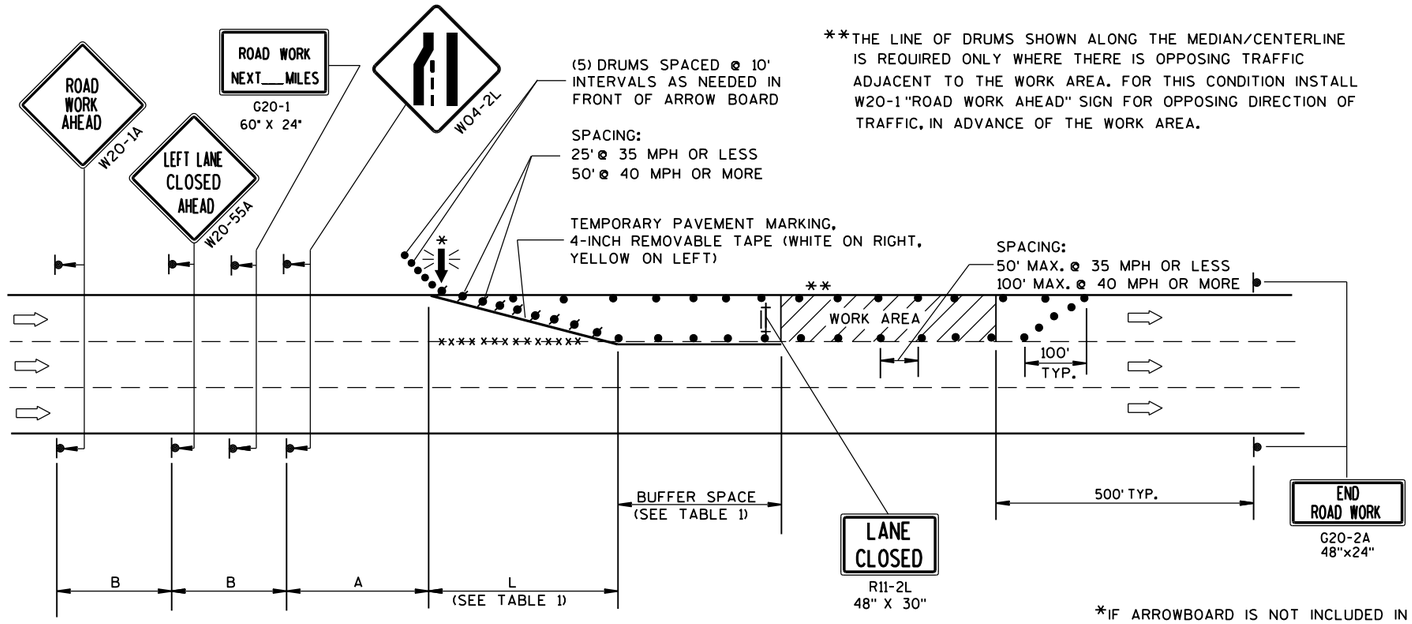
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINE

FHWA

SDD 15D03-05

SDD 15D03-05



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

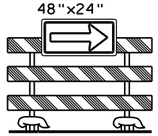


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

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.

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 DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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 DISTRICT TRAFFIC UNIT.

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

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 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.

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

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

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.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE 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.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
FHWA

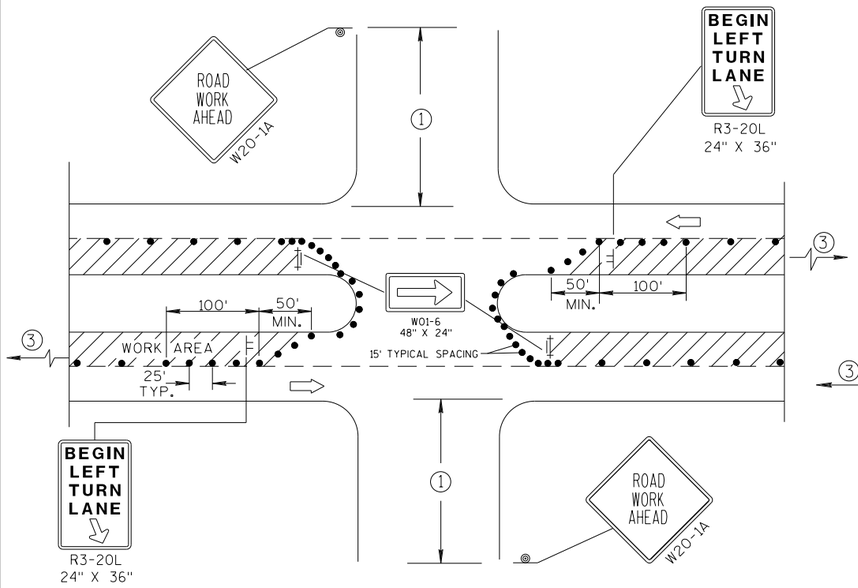
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER

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S.D.D. 15 D 20-4

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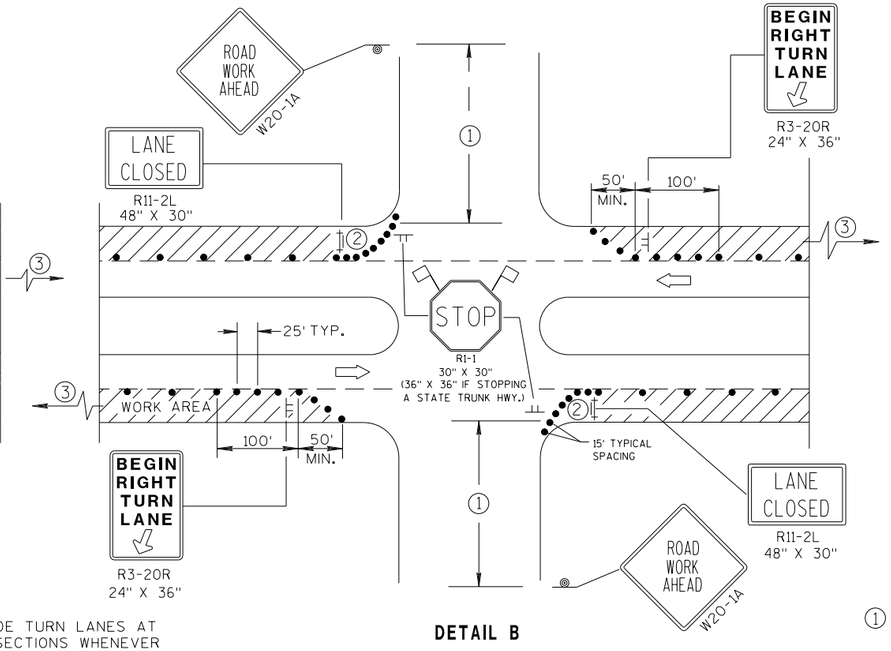
S.D.D. 15 D 20-4



DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

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 SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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 DISTRICT TRAFFIC UNIT.

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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 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.

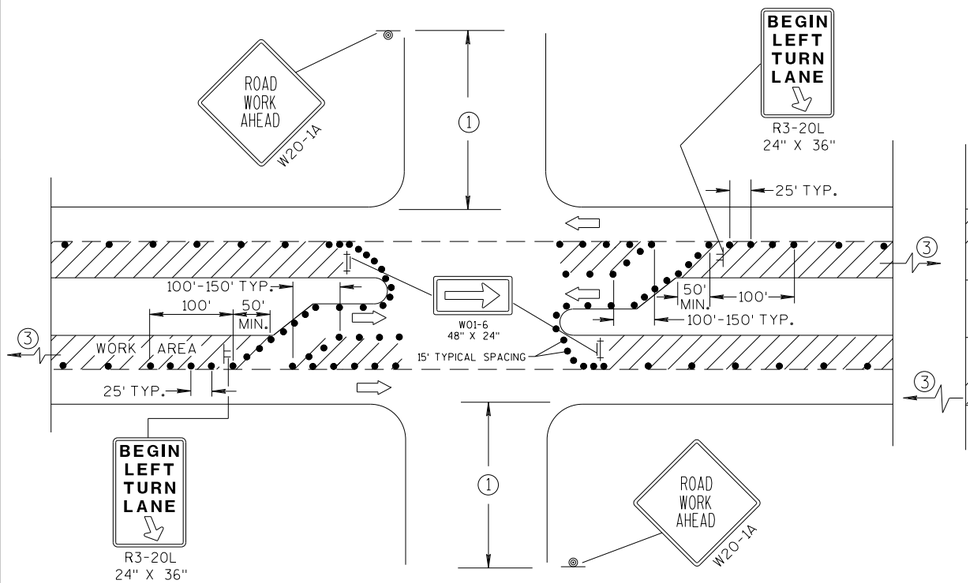
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE 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.

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

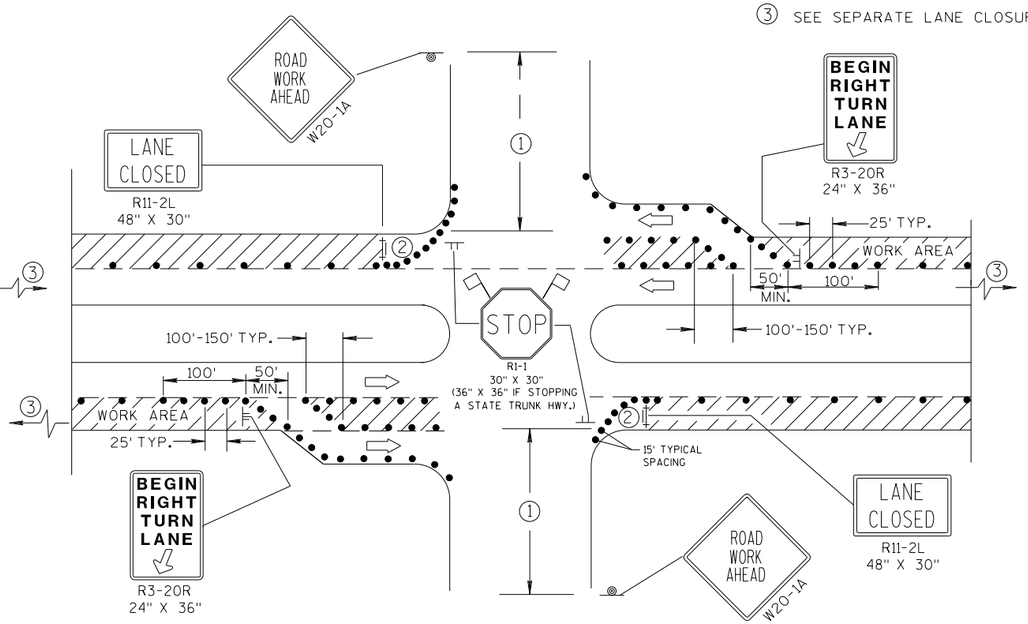
(2) ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D

FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

FHWA

6

S.D.D. 15 D 21-6

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.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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.

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.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TABLE A

SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S \ W	4	6	8	10	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

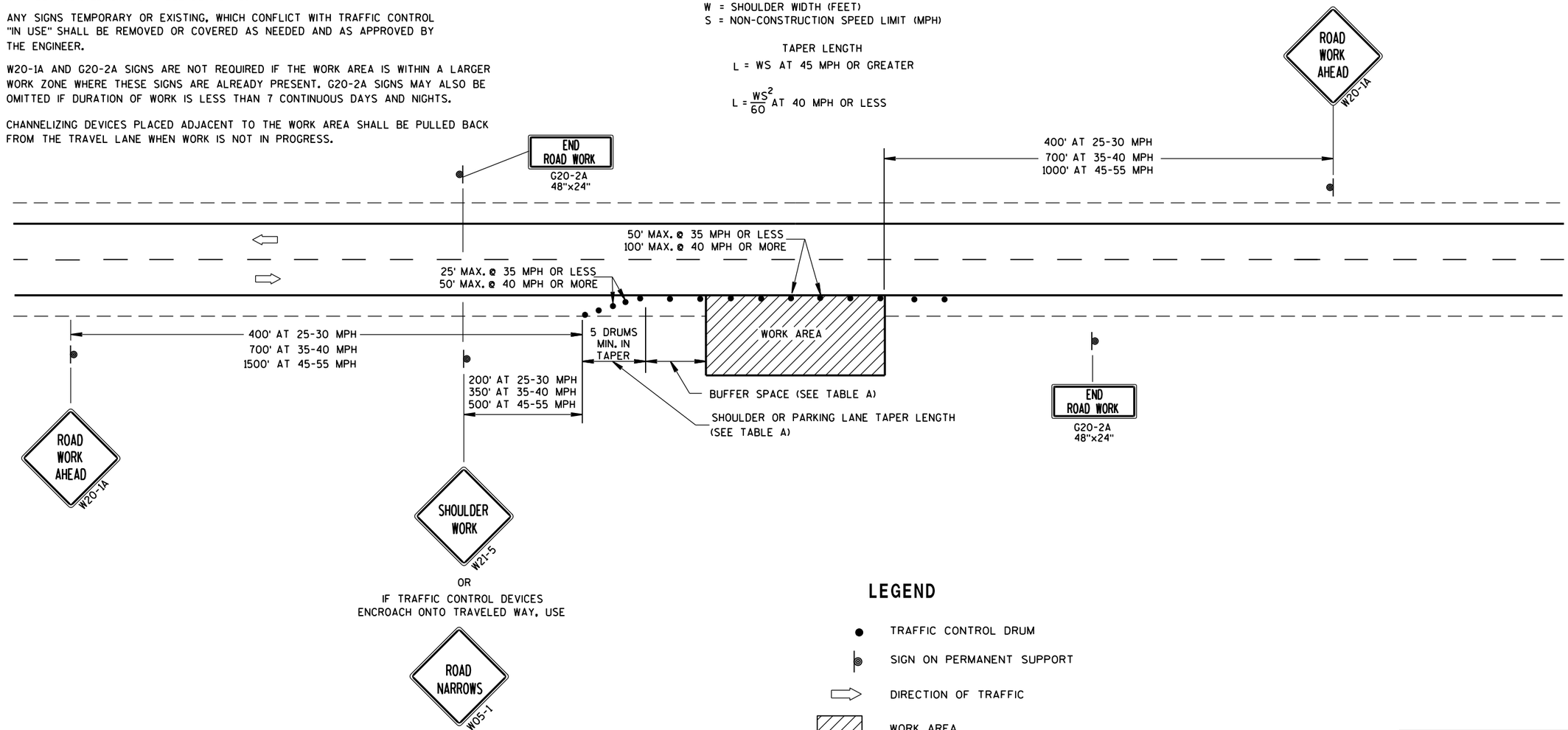
W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = $\frac{1}{3}L$



LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

July 14, 2015 — DATE

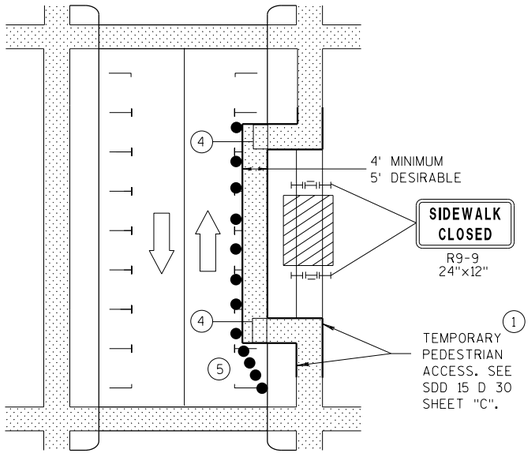
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

FHWA

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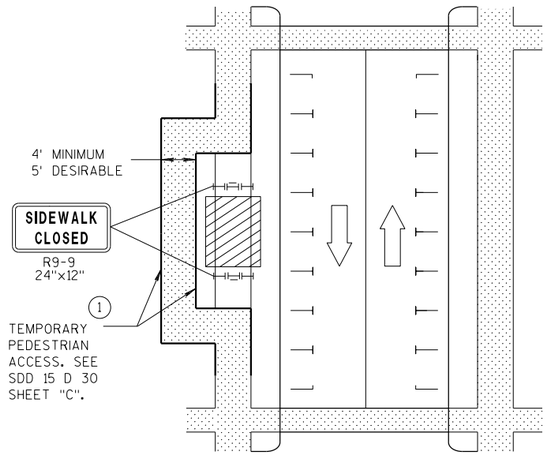
S.D.D. 15 D 28-3

NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.

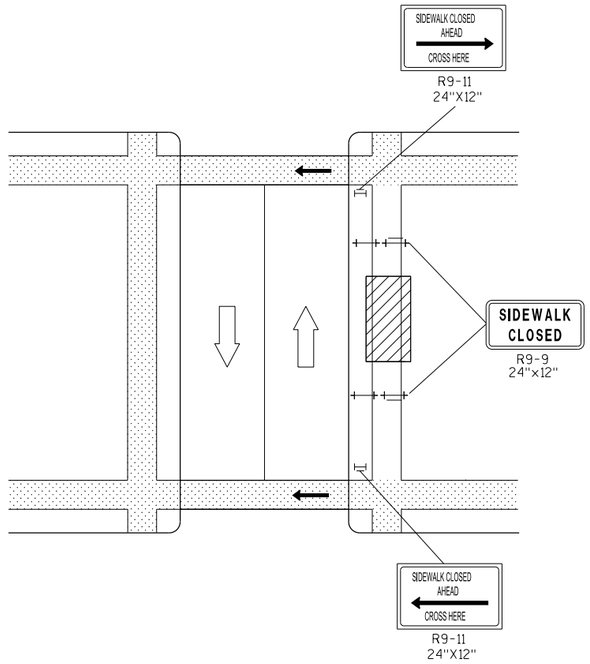


MID-BLOCK SIDEWALK CLOSURE IN PARKING LANE

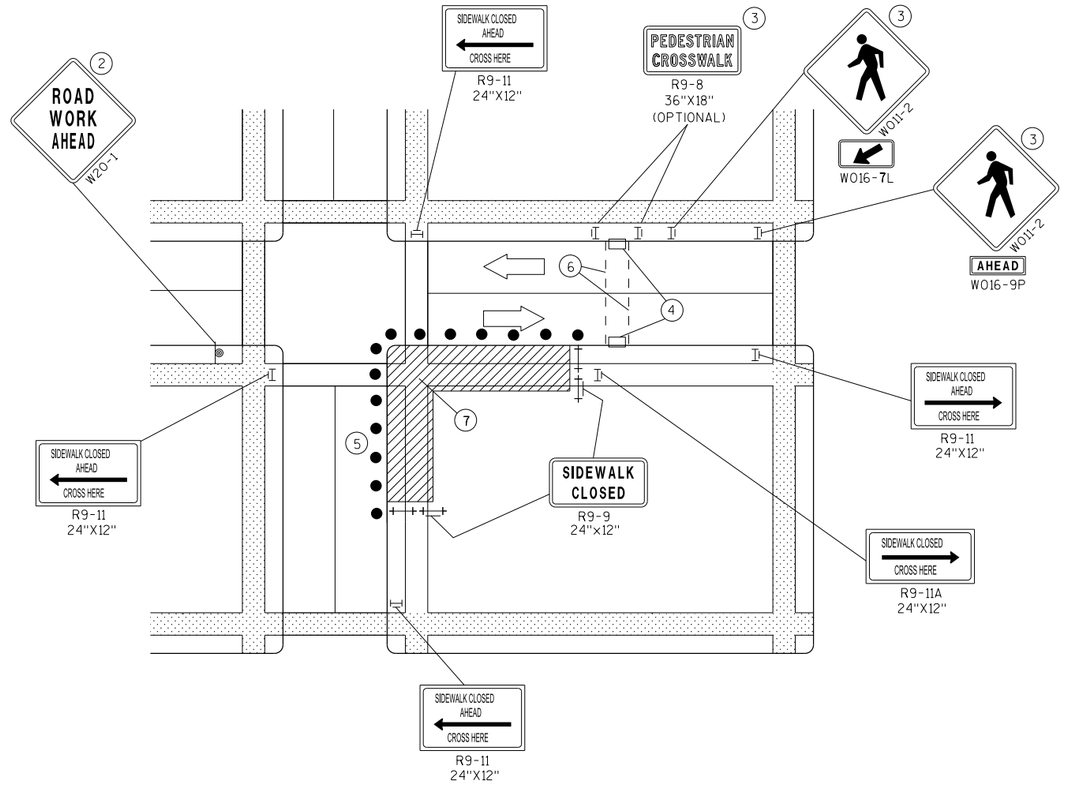
NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION



MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

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

FOR NIGHTTIME CLOSURE USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

(1) IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE.

(2) "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.

(3) IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND W011-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.

(4) TEMPORARY CURB RAMPS. SEE SDD 15 D 30 SHEET "B".

(5) DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.

(6) TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.

(7) LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

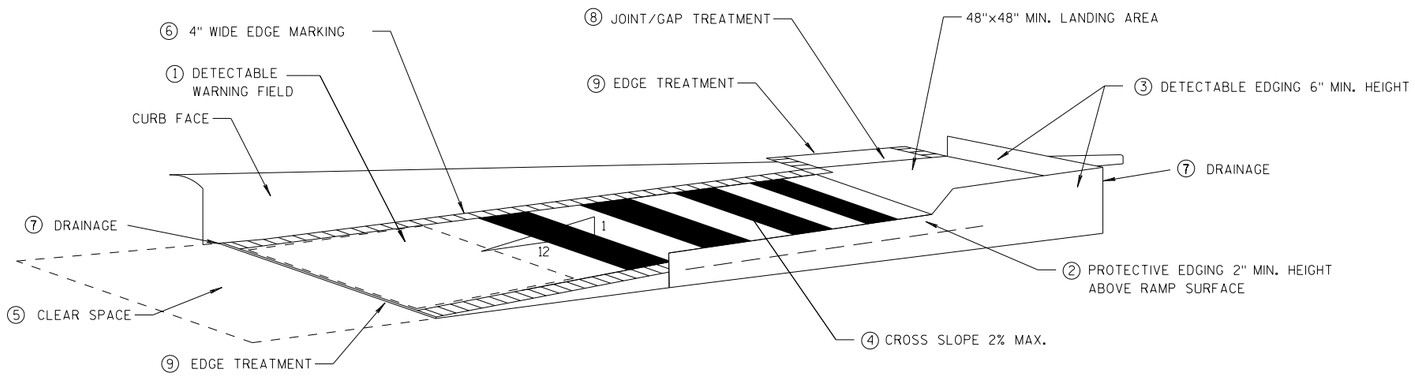
LEGEND

- SIGN ON PERMANENT SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- DIRECTION OF TRAFFIC
- TRAFFIC CONTOL DRUM

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

6

S.D.D. 15 D 30-4a



TEMPORARY CURB RAMP PARALLEL TO CURB

GENERAL NOTES

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

① CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE. INSTALL CONTRASTING DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS. REFER TO SDD 8D5 SHEET "E".

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 CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

⑤ CLEAR SPACE OF 48"X48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

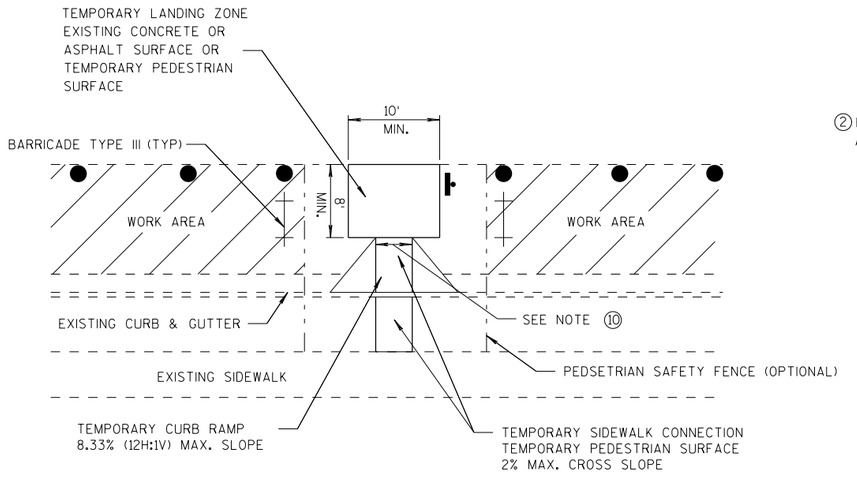
⑥ THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A YELLOW COLOR, 4" WIDE MARKING, UNLESS A CONTRASTING DETECTABLE WARNING FIELD IS PROVIDED.

⑦ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

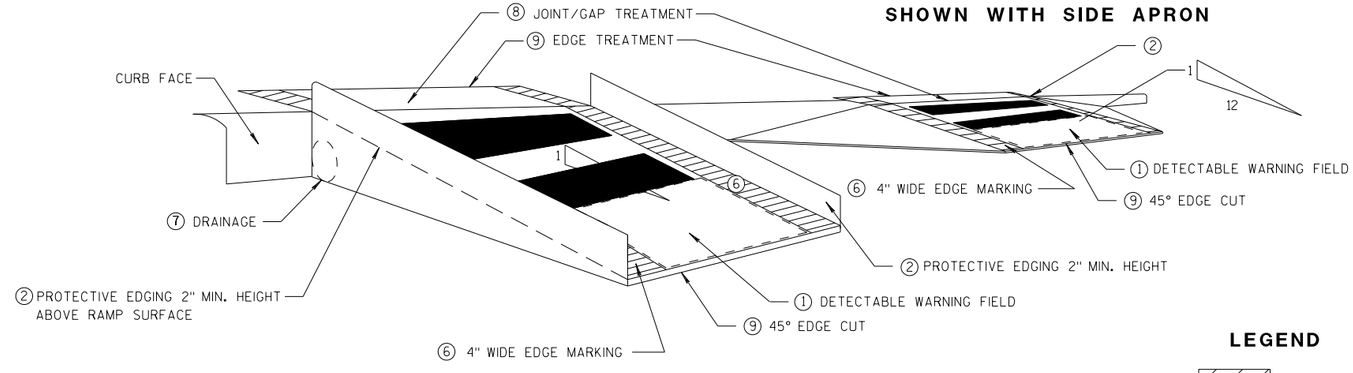
⑧ LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.

⑨ CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHALL BE VERTICAL UP TO 1/4" HIGH, AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

⑩ 5' WIDE MIN. WITH PEDSETRIAN SAFETY FENCE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY FENCE.



TEMPORARY BUS STOP PAD



SHOWN WITH SIDE APRON

SHOWN WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

LEGEND

WORK AREA

TYPE III BARRICADE

TRAFFIC CONTOL DRUM

TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

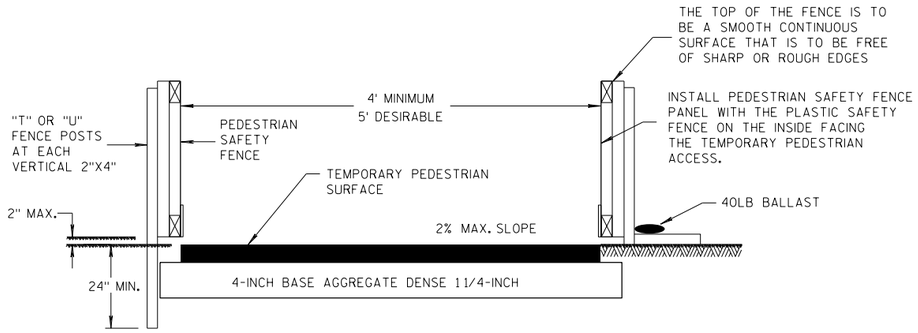
7/2018 DATE

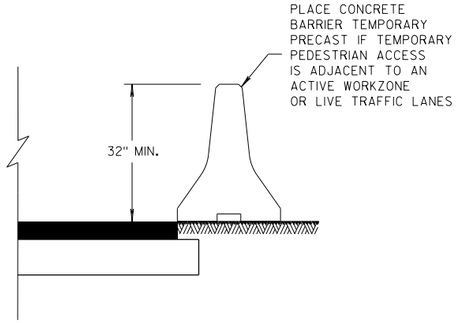
/S/ Andrew Heidtke
WORK ZONE ENG

FHWA

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S.D.D. 15 D 30-4b

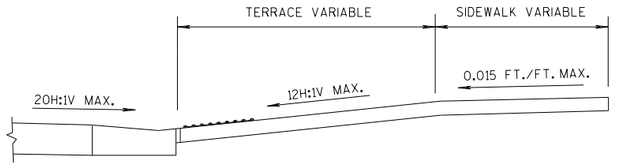




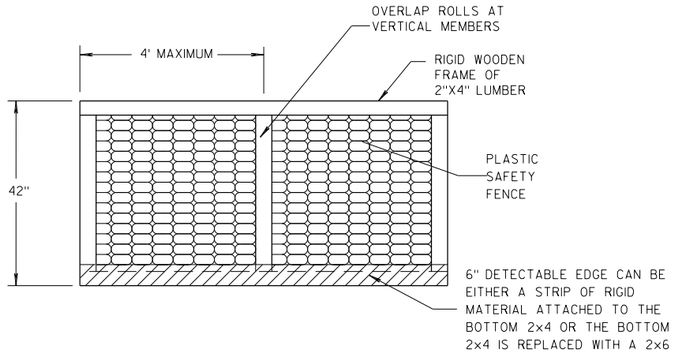
TEMPORARY PEDESTRIAN ACCESS

GENERAL NOTES

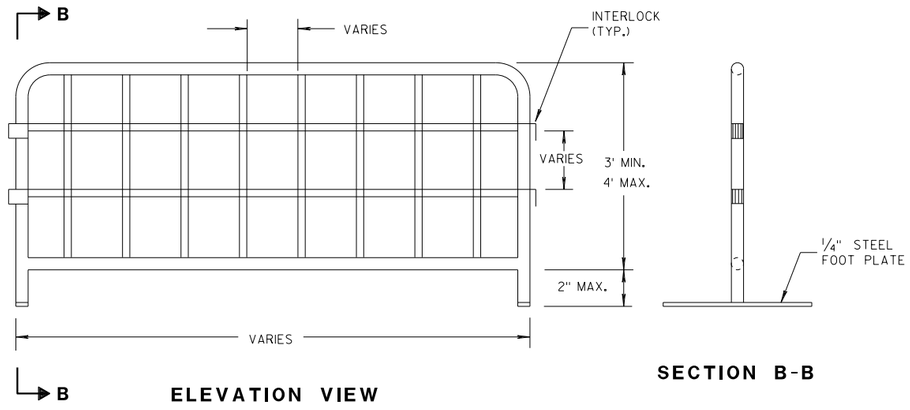
(1) INTERCHANGEABLE WITH THE PEDESTRIAN SAFETY FENCE.



SECTION A-A



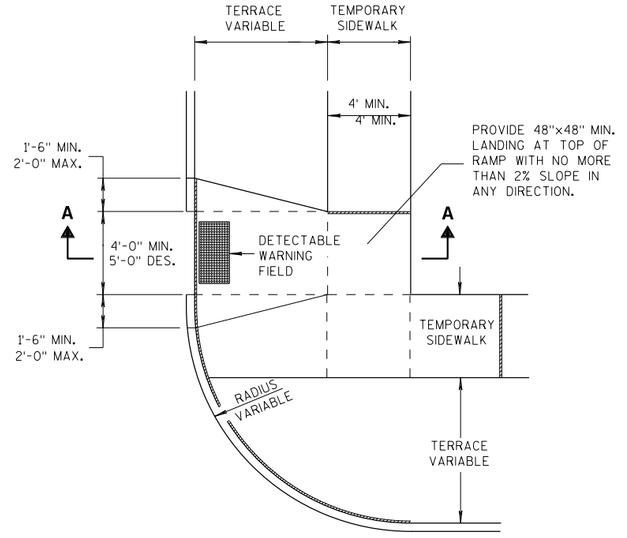
PEDESTRIAN SAFETY FENCE



ELEVATION VIEW

SECTION B-B

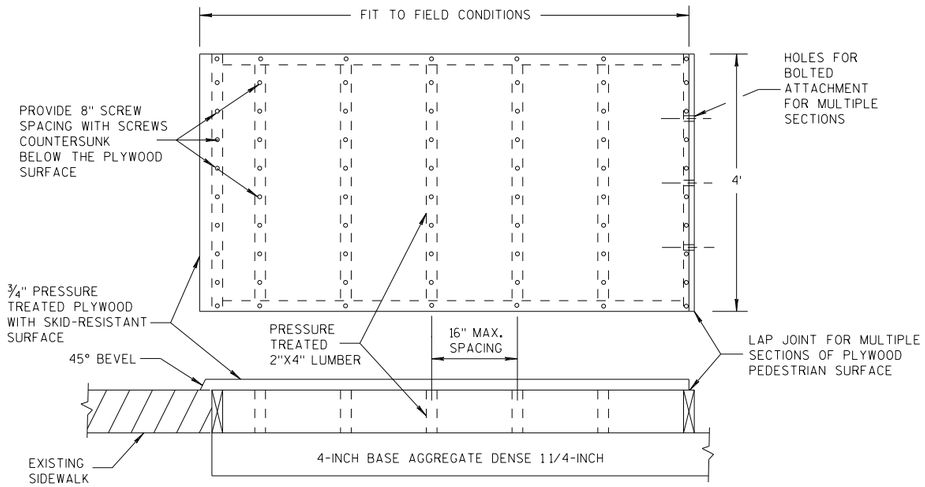
TEMPORARY PEDESTRIAN STEEL BARRICADE (1)



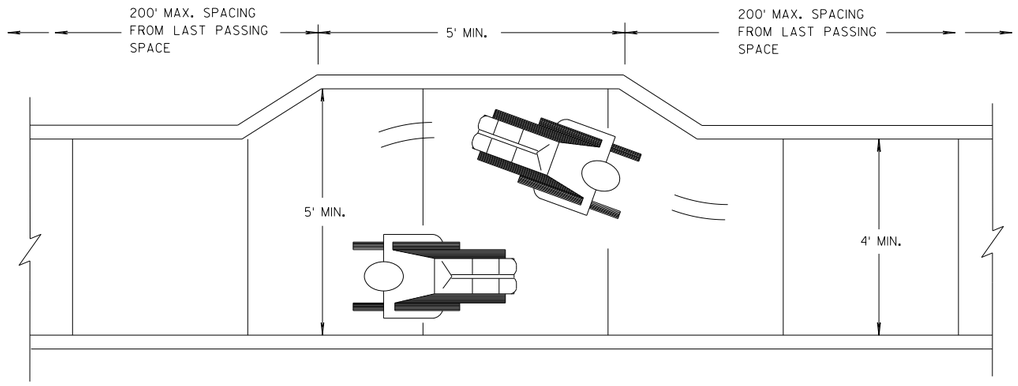
PLAN VIEW

TEMPORARY TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)



TEMPORARY PEDESTRIAN SURFACE PLYWOOD



NARROW SIDEWALK PASSING DETAIL

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

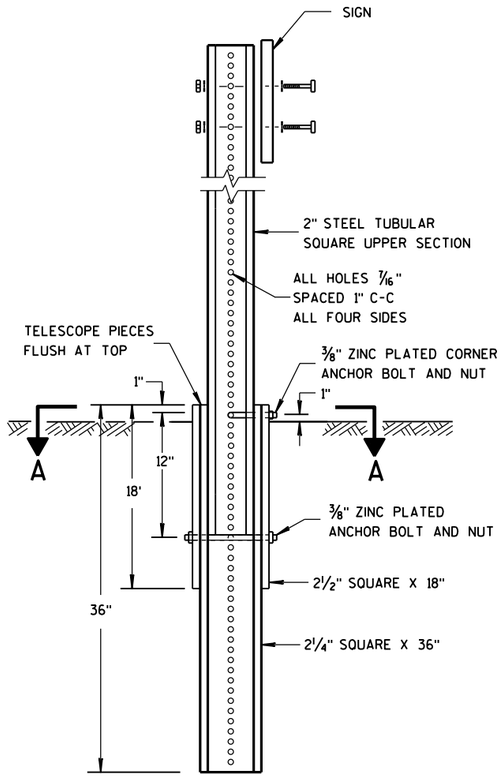
APPROVED

7/2018
DATE

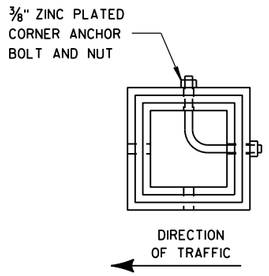
/S/ Andrew Heidtke
WORK ZONE ENG

FHWA

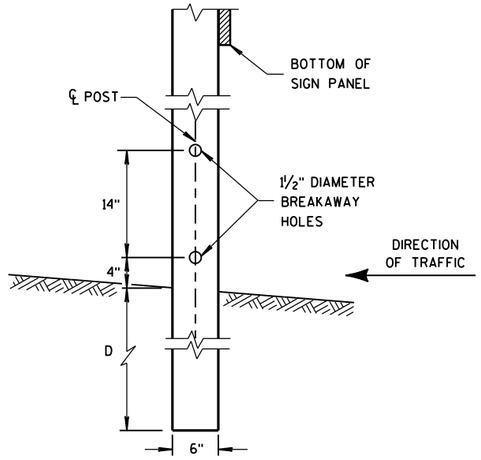
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S.D.D. 15 D 30-4c



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



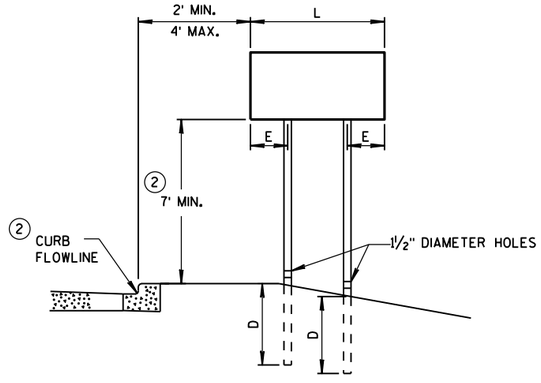
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

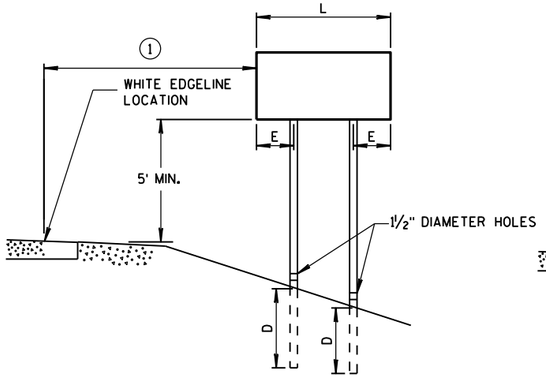
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

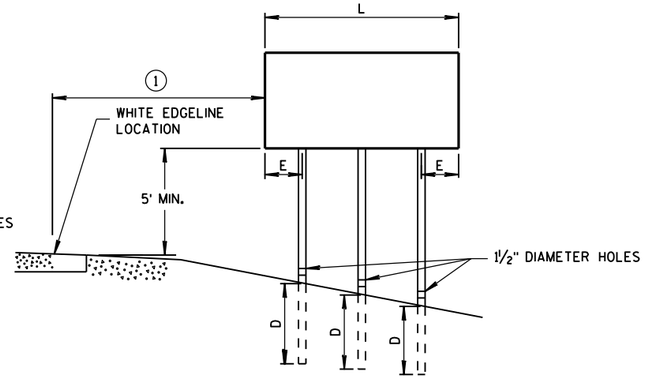
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL 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).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

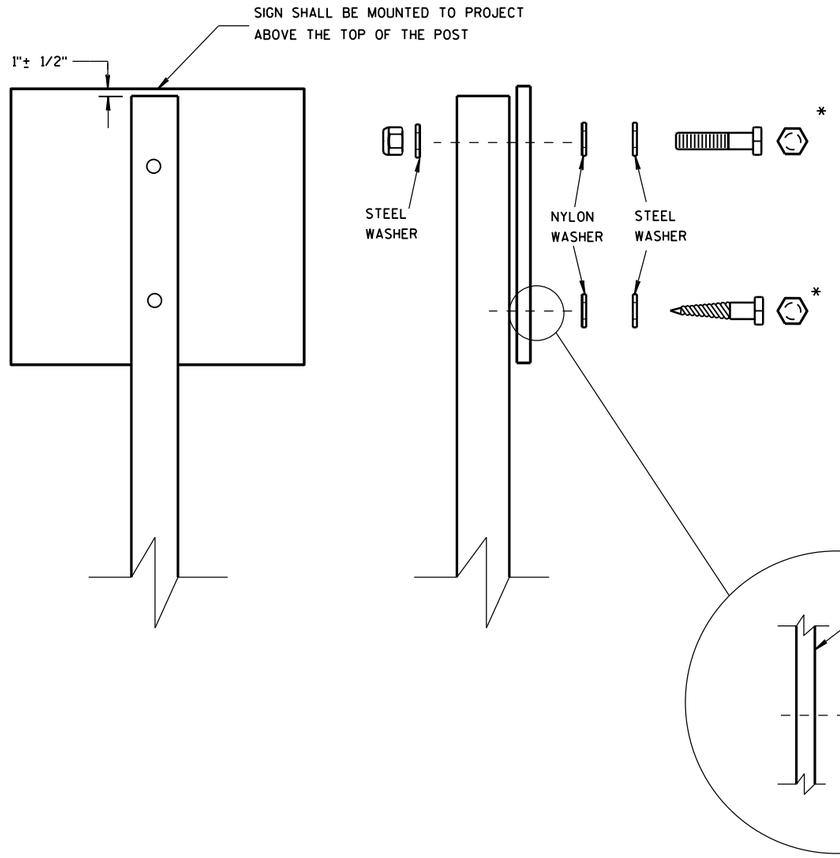
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 D 38-2a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

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 FOR ALL TYPE H SIGNS

* 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

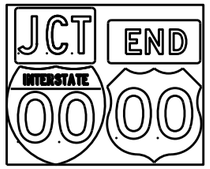
/S/ Andrew Heldtke
WORK ZONE ENG

FHWA

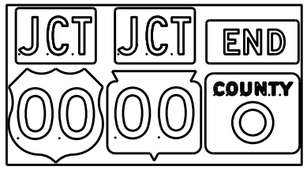
TYPICAL ASSEMBLIES



J1-1



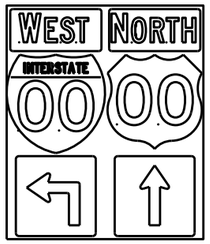
J1-2



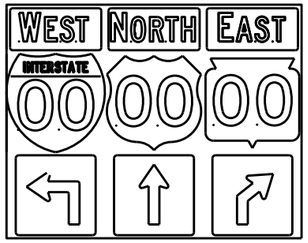
J1-3



J2-1



J2-2

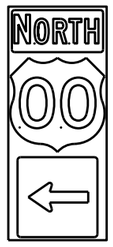


J2-3

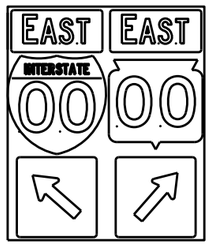


JV

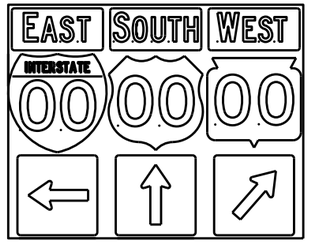
(Typical Vertical J-Assembly
See Note 10 and 11)



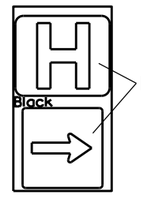
J3-1



J3-2



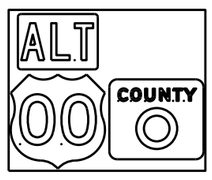
J3-3



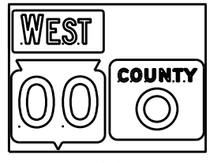
JH-1



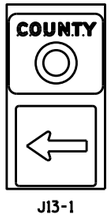
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

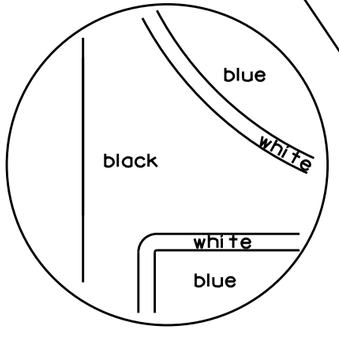


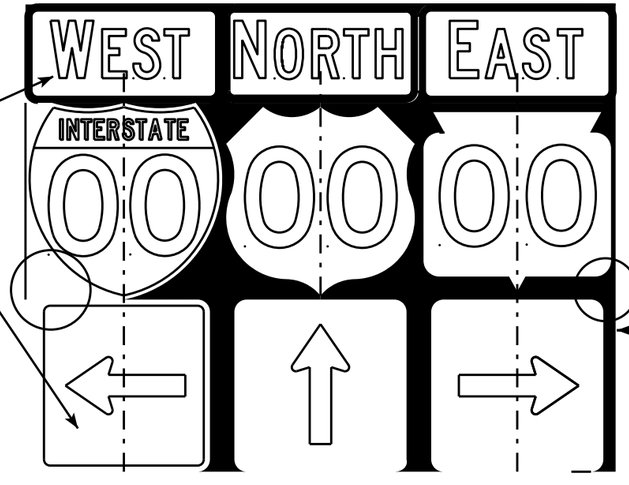
J23-1

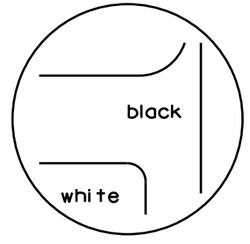


J22-1

blue background
with interstate







black background

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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

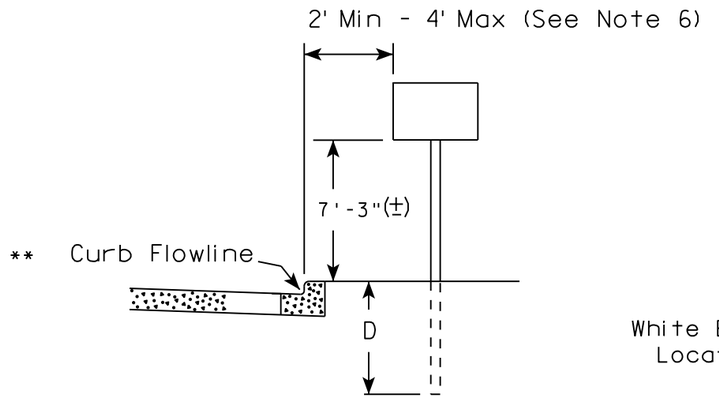
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

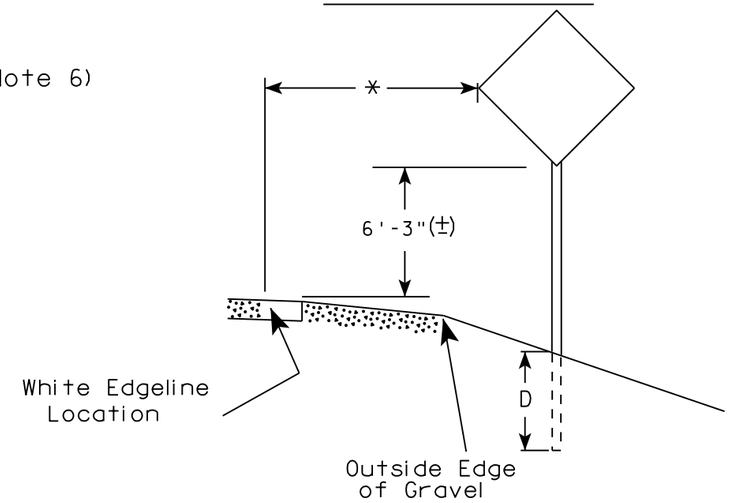
PROJECT NO: | SHEET NO: E

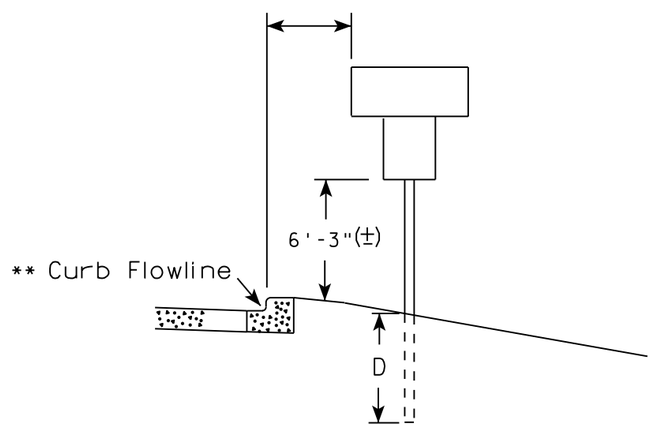
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :
WISDOT/CADDS SHEET 42

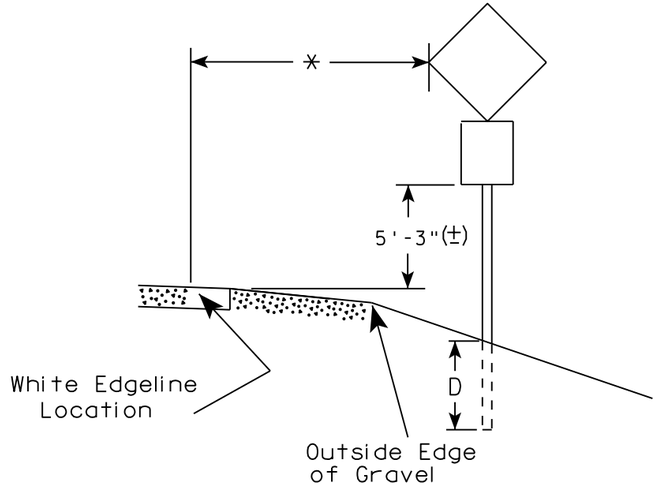
URBAN AREA



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

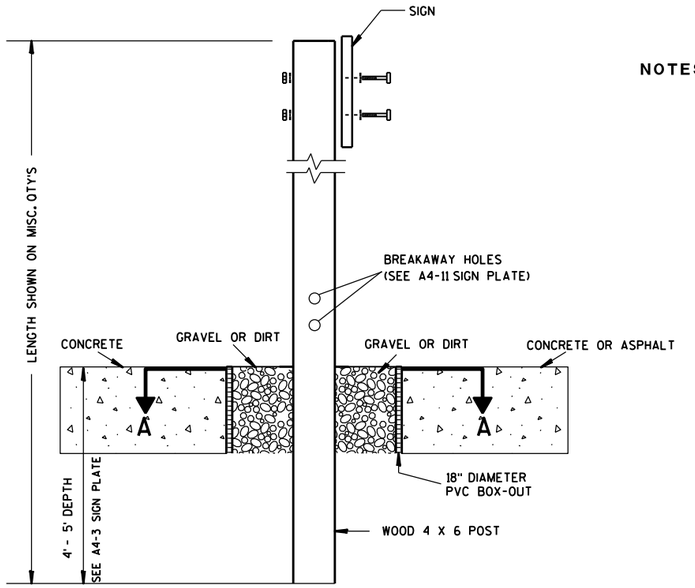
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. 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), 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" (±).

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

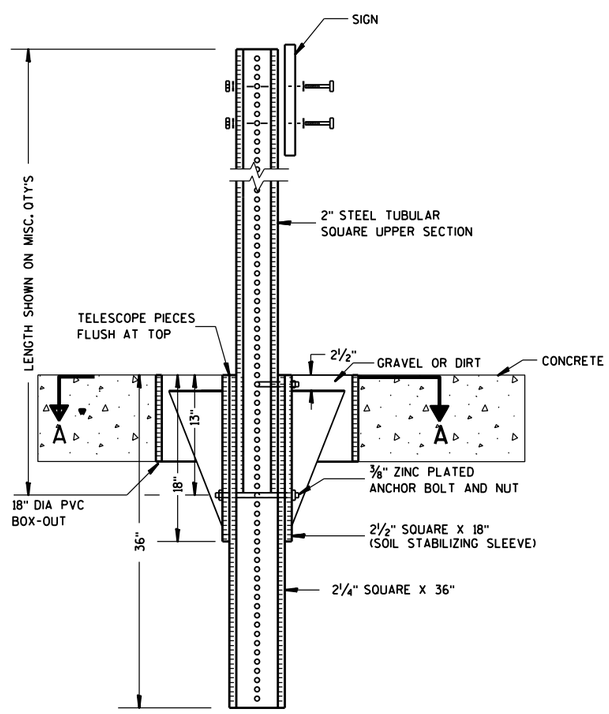
DATE 8/21/17 PLATE NO. A4-3.21



ELEVATION VIEW

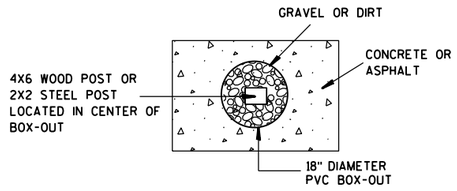
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

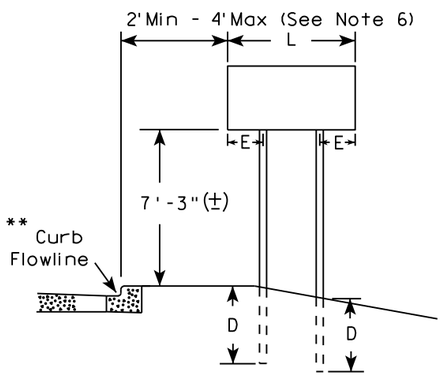
APPROVED Matthew R Rauch
for State Traffic Engineer

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

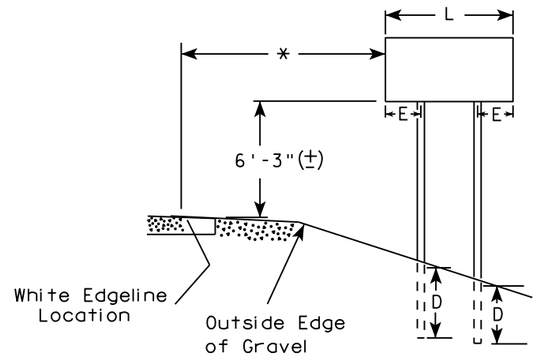
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

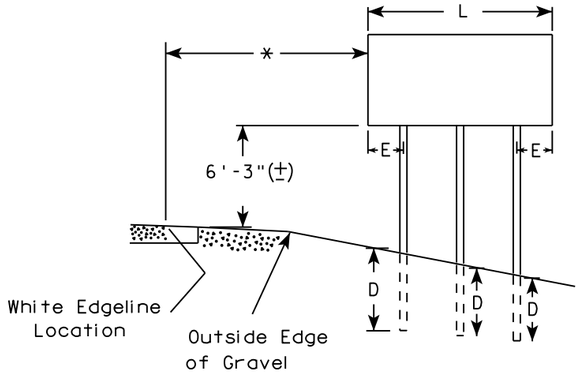
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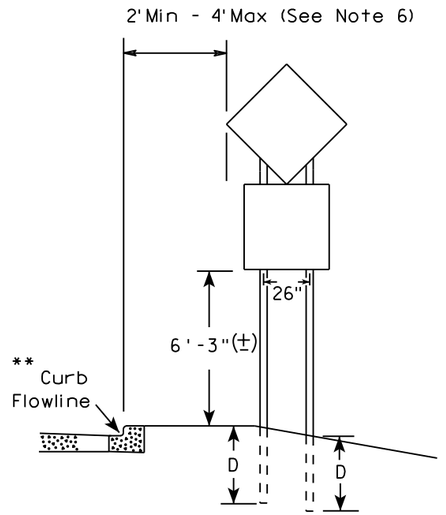
URBAN AREA



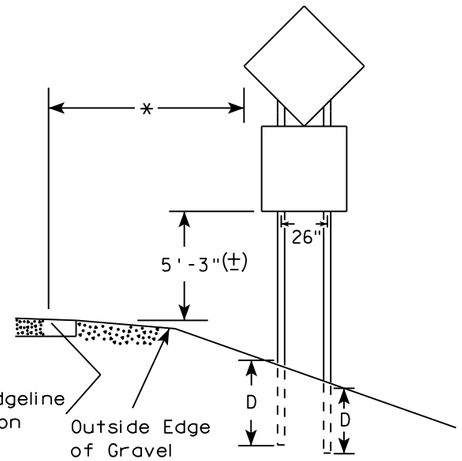
RURAL AREA (See Note 3)







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'

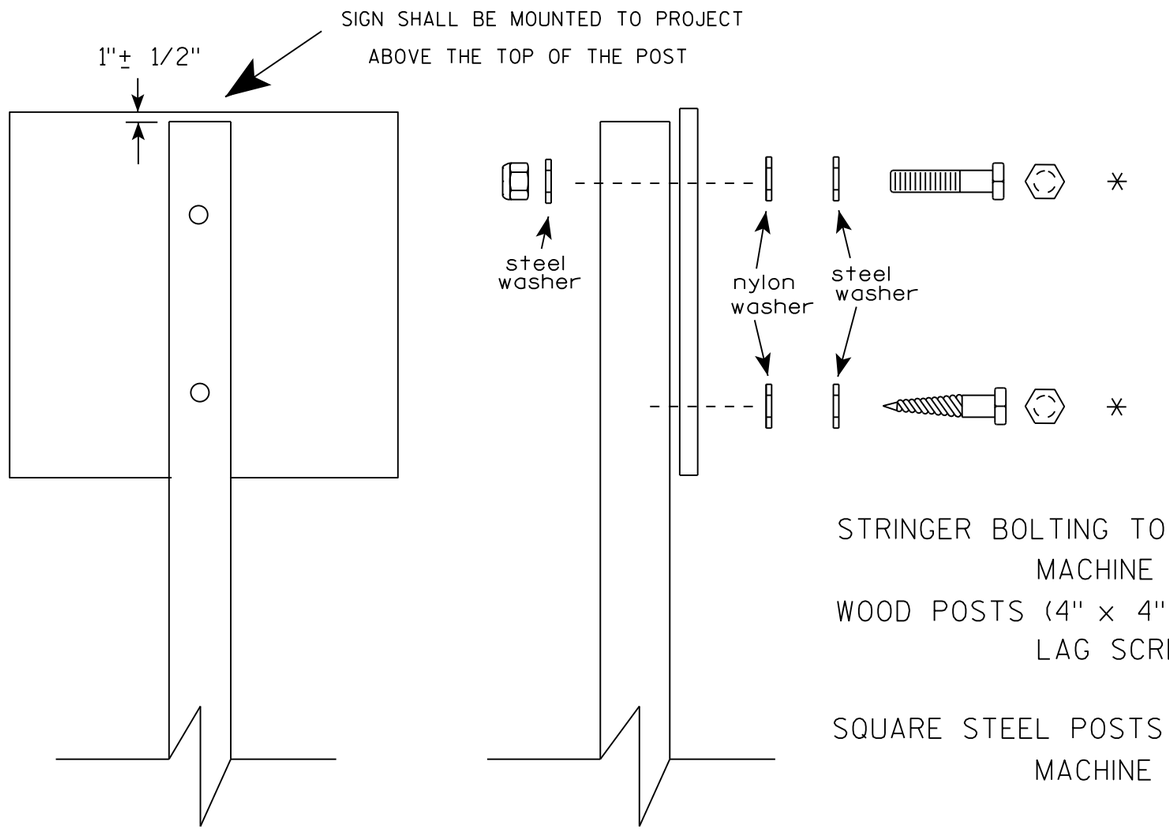
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 150	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 4" or 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

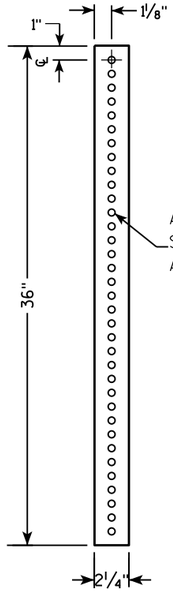
DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E

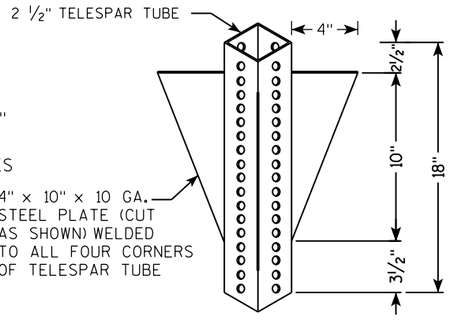
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TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

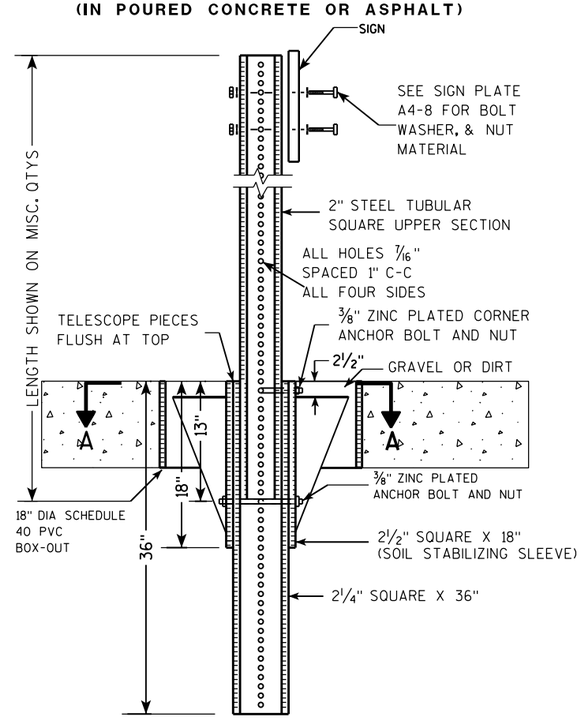
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



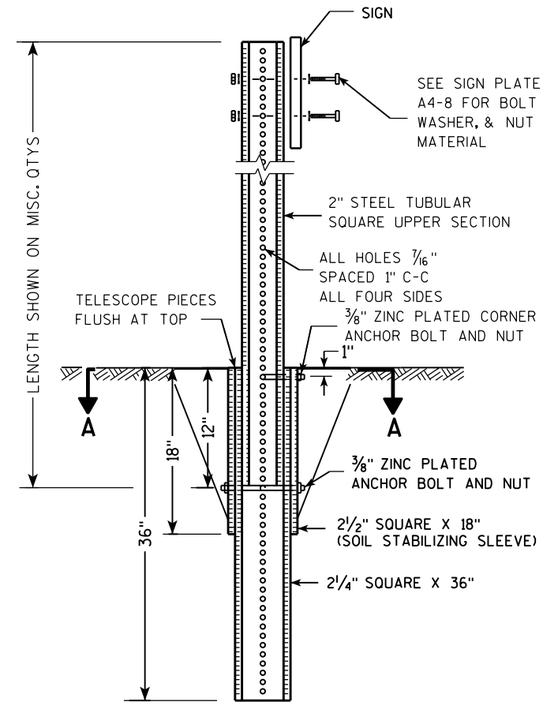
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

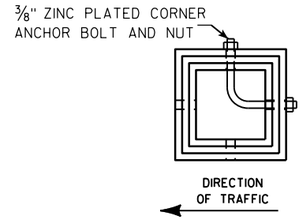


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

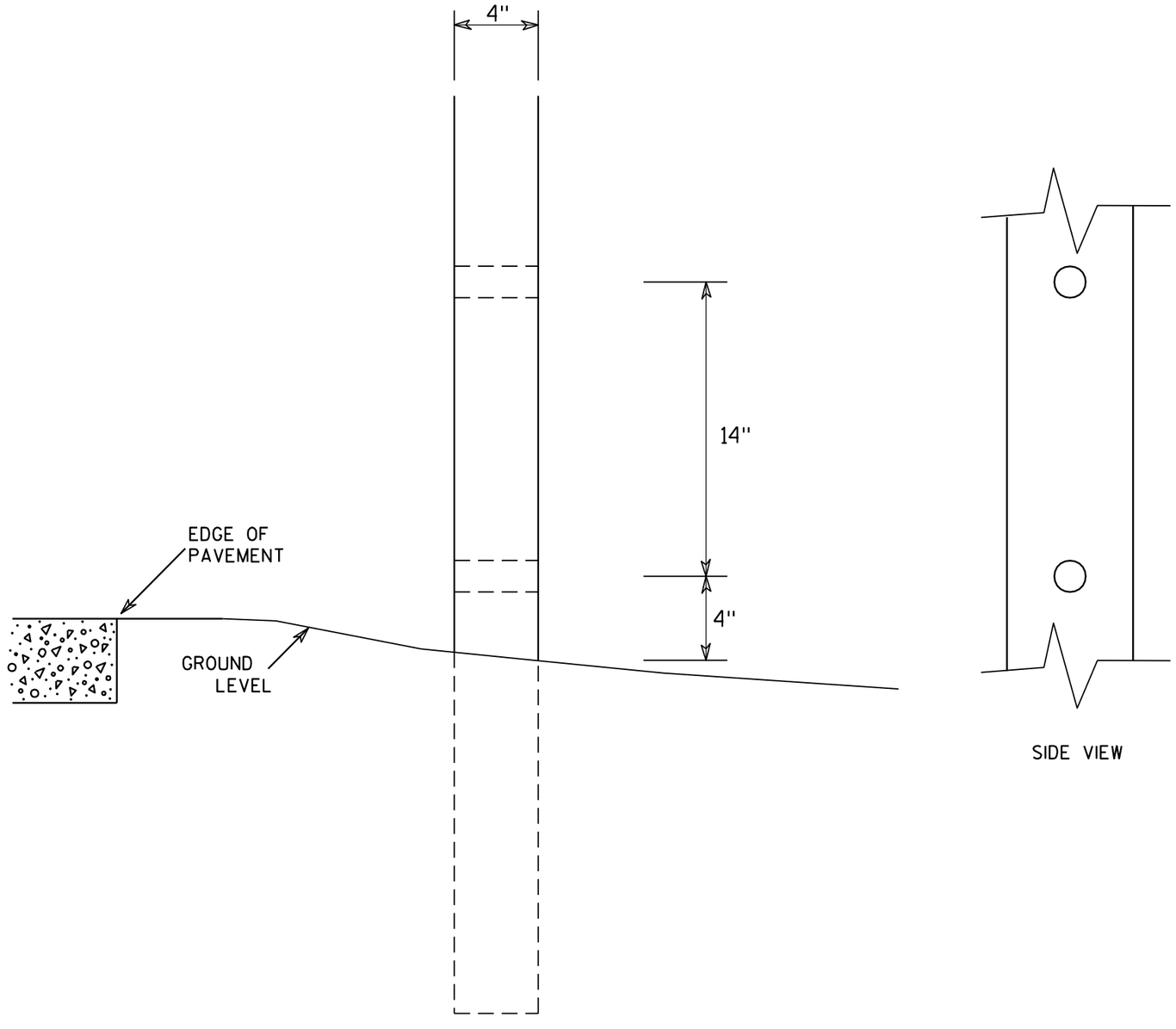
WISCONSIN DEPT OF TRANSPORTATION

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

7

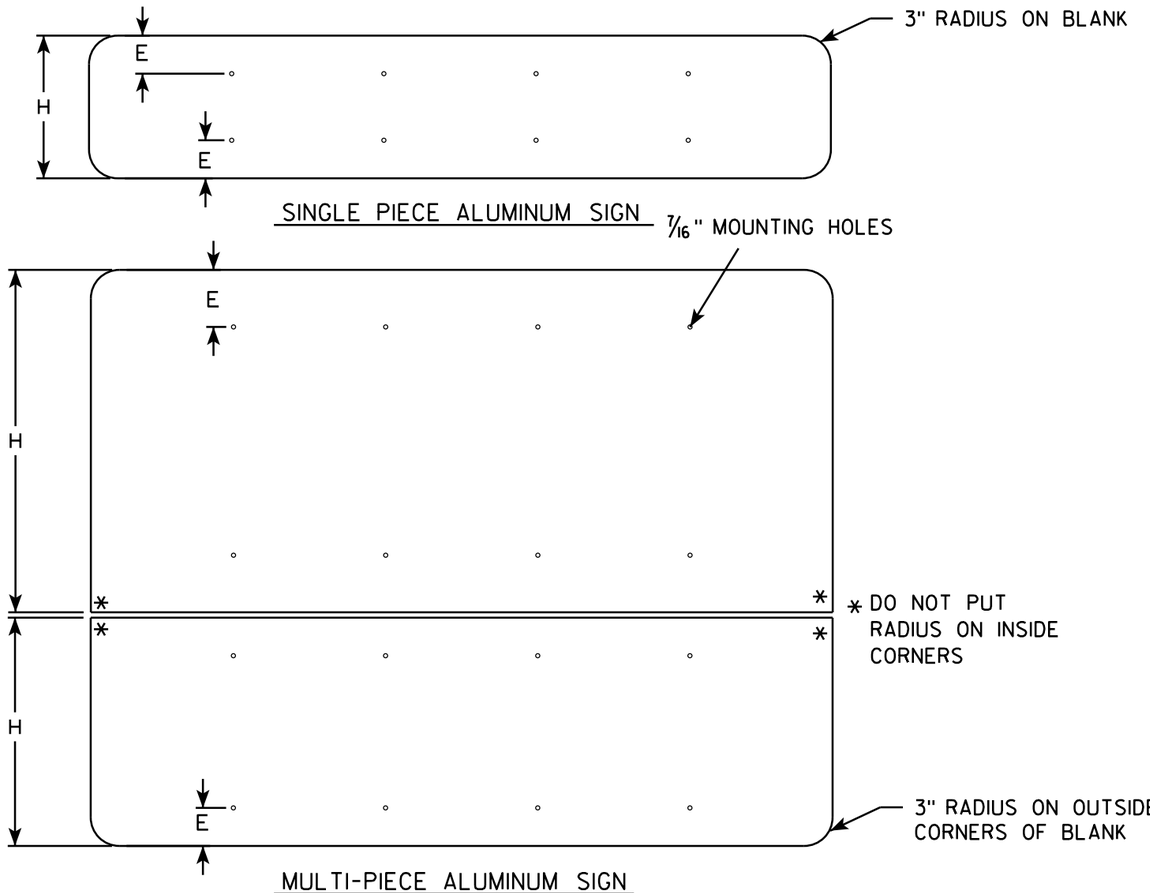
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

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

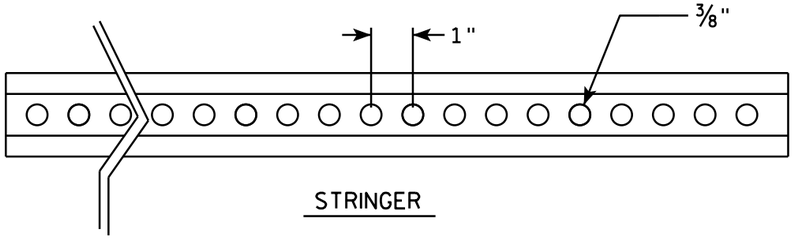
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 153	E



GENERAL NOTES

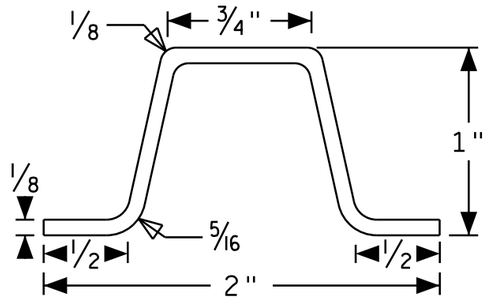
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16½" 33½" 50½" 67½"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19½" 38½" 57½" 76½"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22½" 43½" 64½" 85½"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

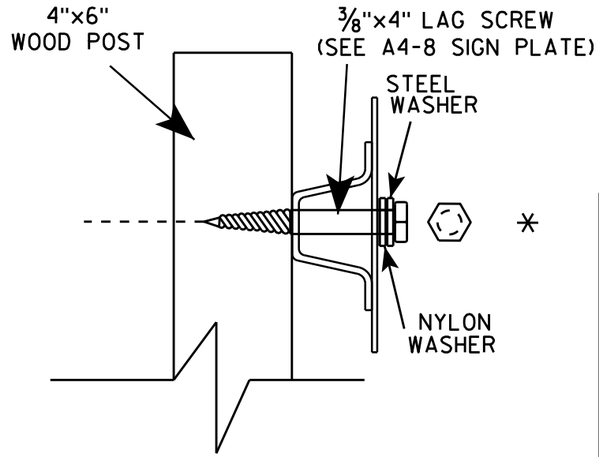


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

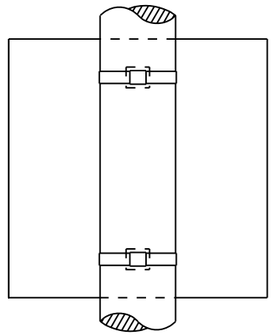
DATE 4/26/16 PLATE NO A4-18.1

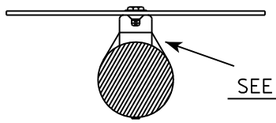
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000 WISDOT/CADDS SHEET 42

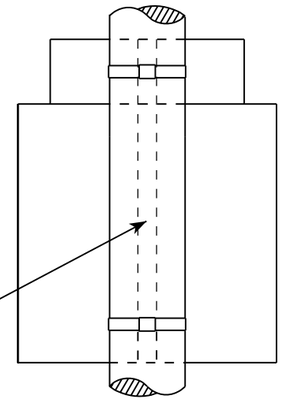
BANDING

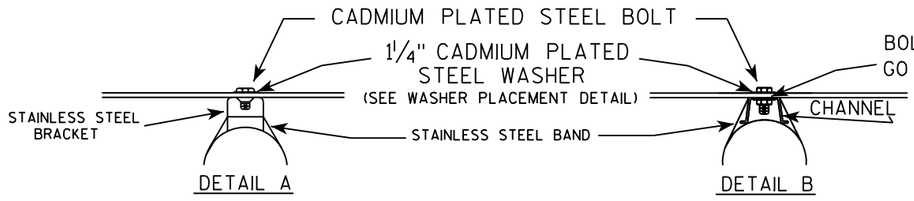
SINGLE SIGN



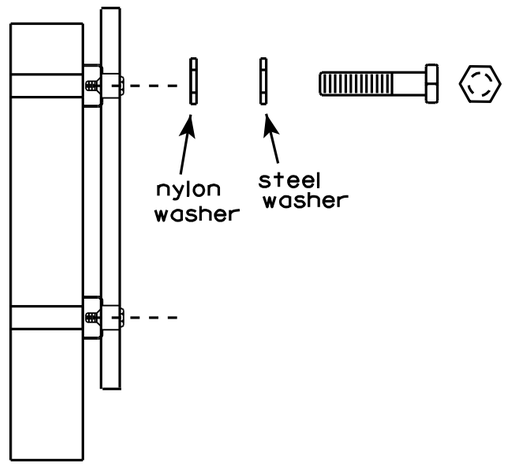


"J" ASSEMBLY





WASHER PLACEMENT



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

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.

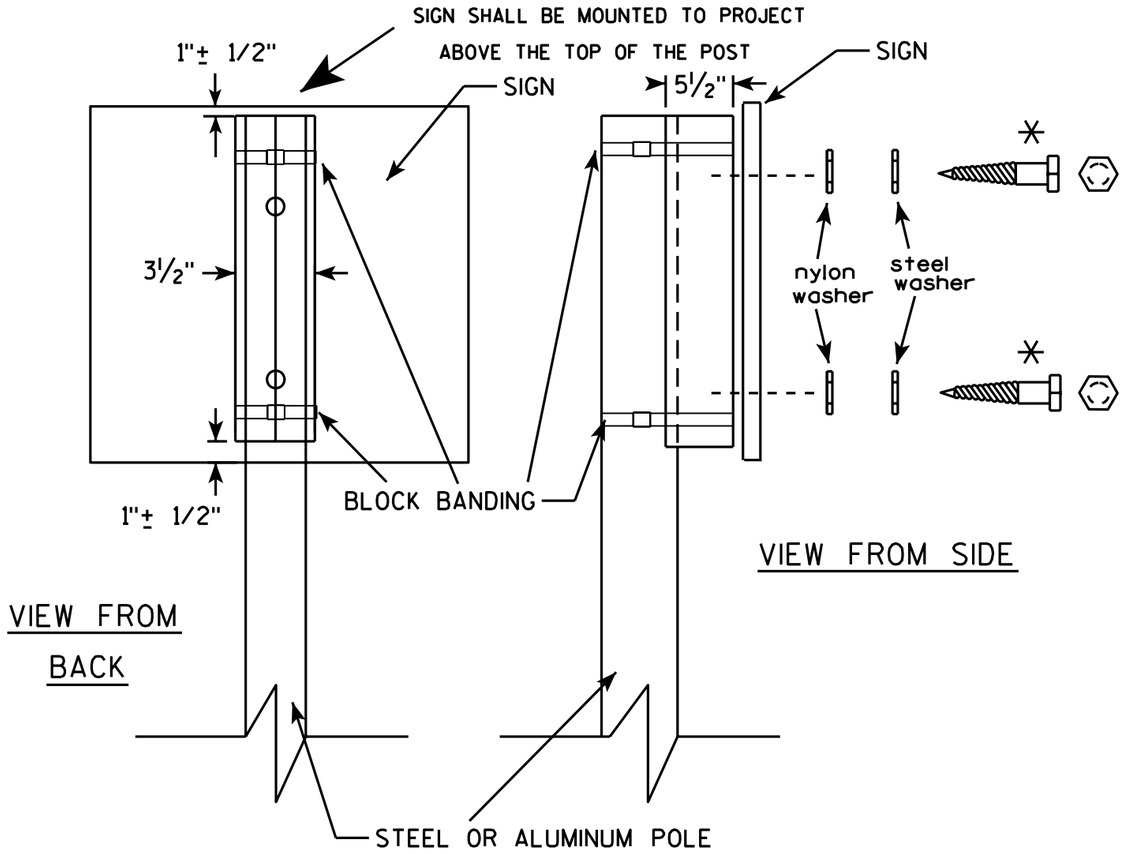
STANDARD SIGN
SIGN BANDING DETAILS

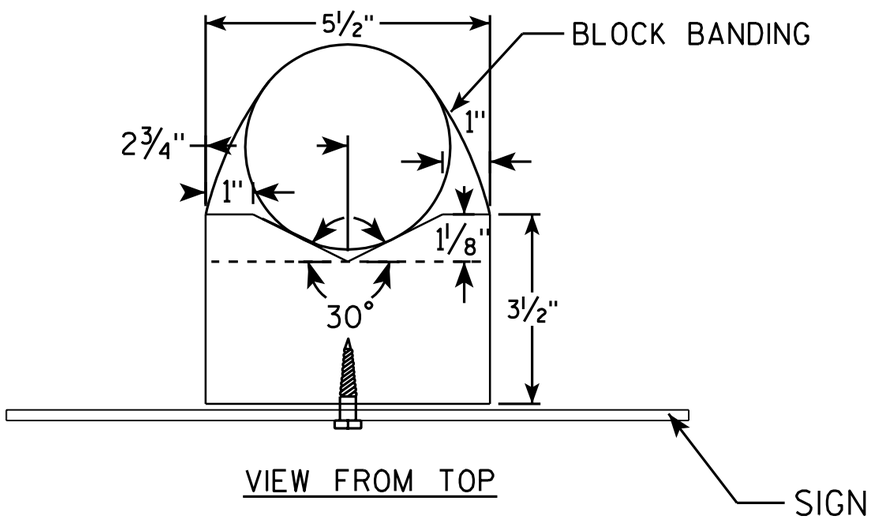
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 155	E





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, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. 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)

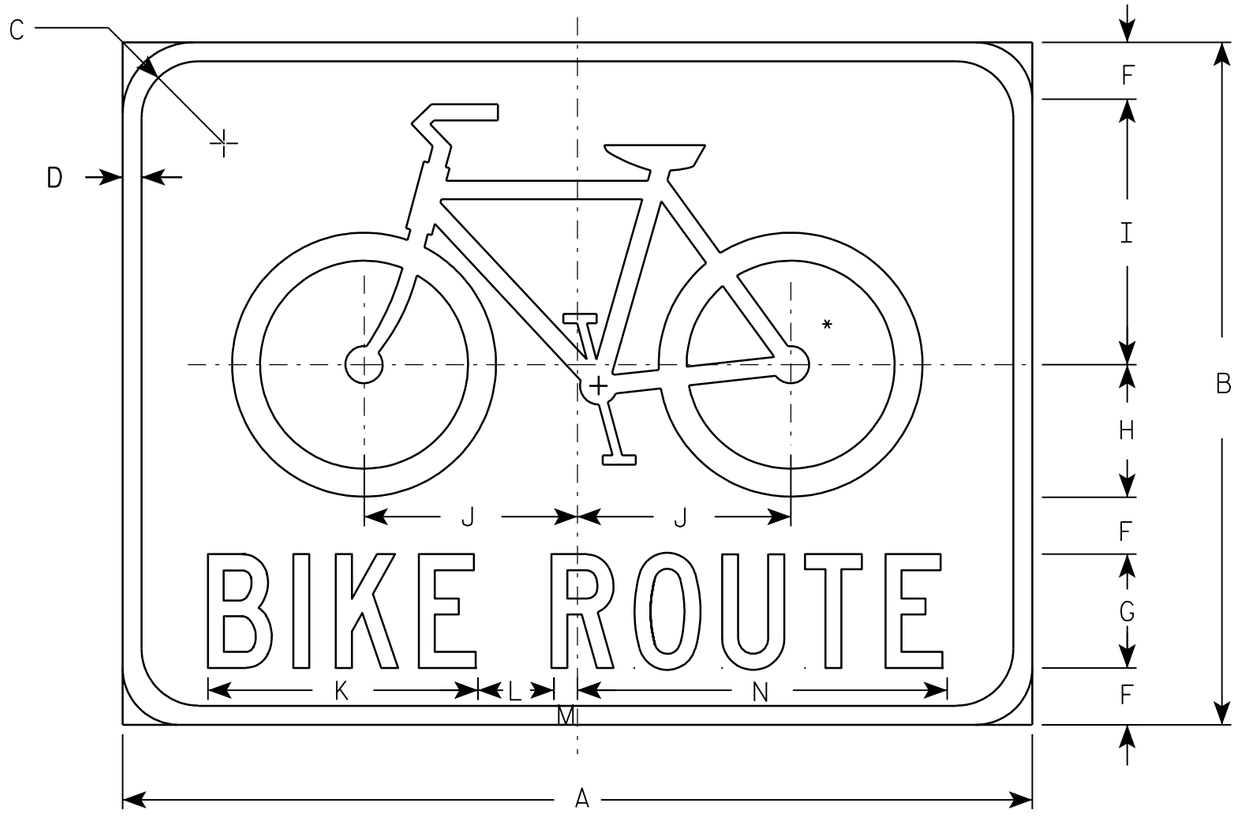
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO: 156 E



D11-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - GREEN
   Message - WHITE
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.

* See W11-1 for symbol design

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 450 mm
3	750 mm X 600 mm
4	
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.	Area m2
1																												
2	24	18	1 1/2	1/2		1 1/2	3	3 1/2	7	5 5/8	7 1/8	2	5/8	9 3/4													3.0	0.27
3	30	24	1 1/4	5/8		2	4	4 3/4	9 1/4	7 1/2	9 1/2	2 5/8	7/8	13													5.0	0.45
4																												
5																												

STANDARD SIGN
D11-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/04 PLATE NO. D11-1.1

PROJECT NO:

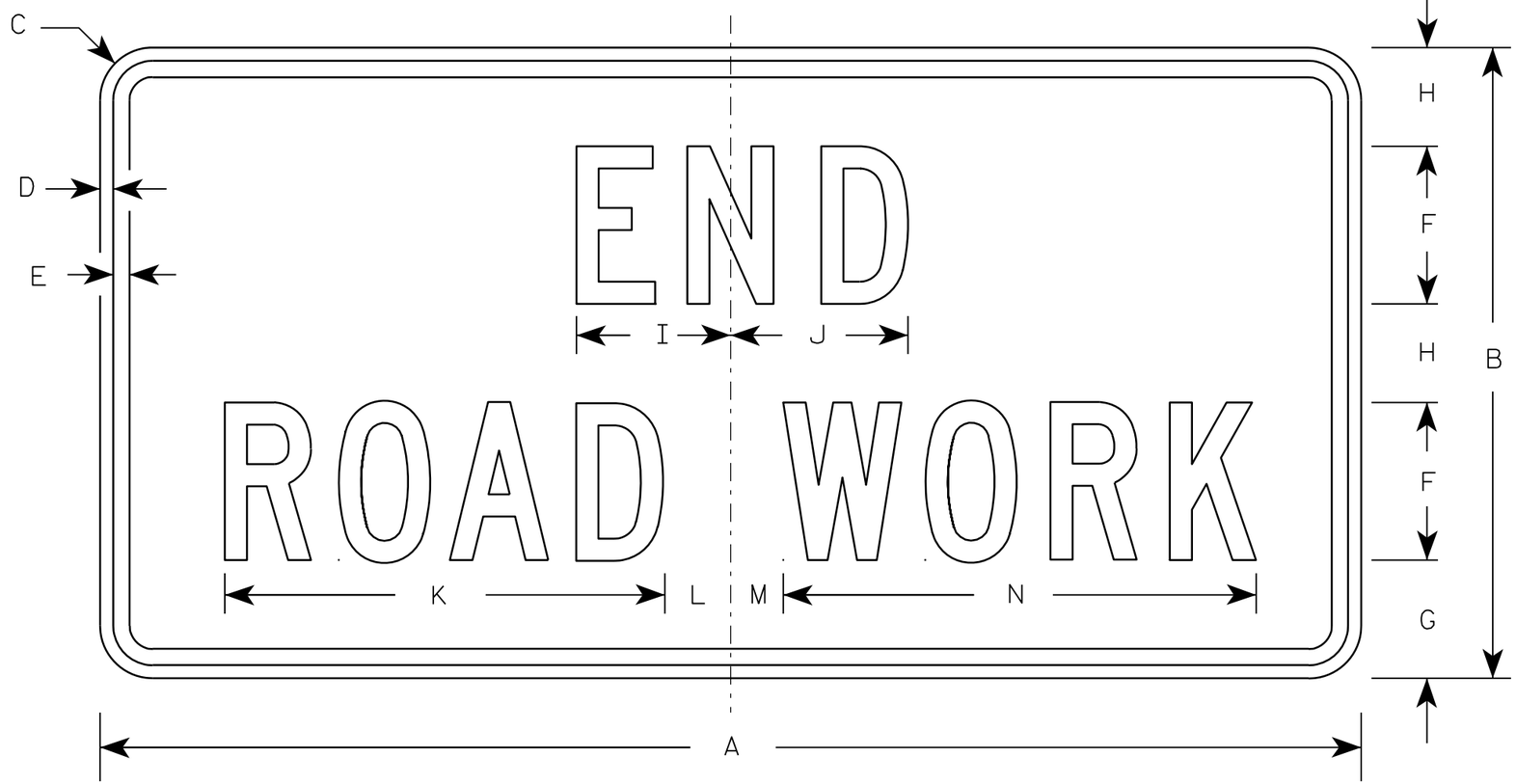
SHEET NO: 157 E

FILE NAME : C:\Users\Projects\tr_stdplate\D111.DGN PLOT DATE : 17-MAR-2005 10:38 PLOT BY : DOTDZK

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

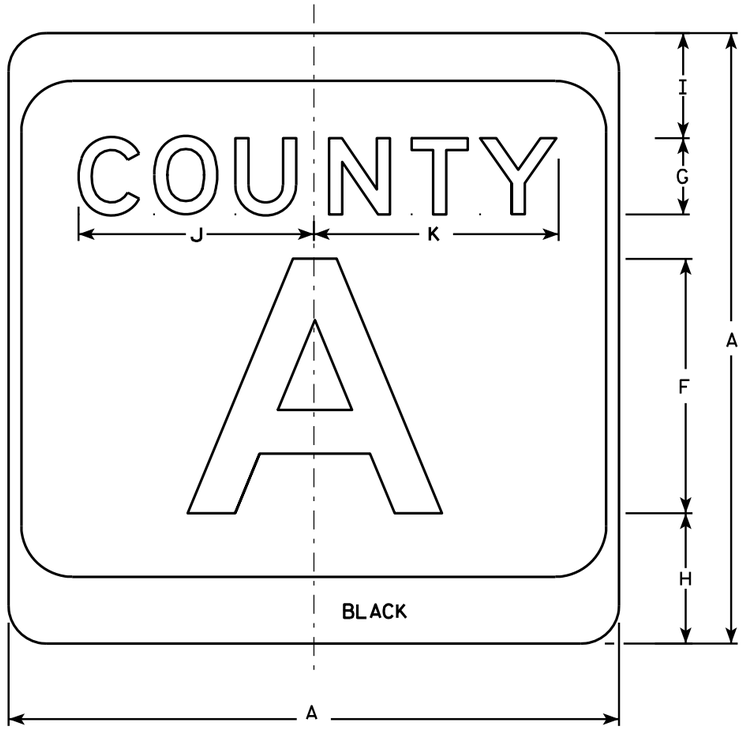
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

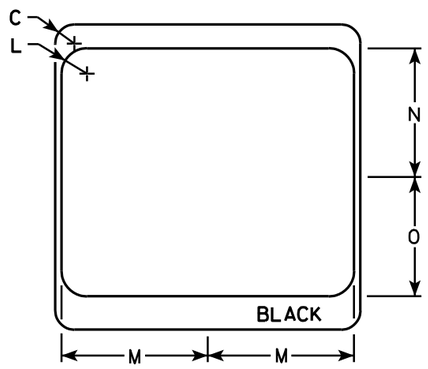
APPROVED Matthew R Rauch
for State Traffic Engineer

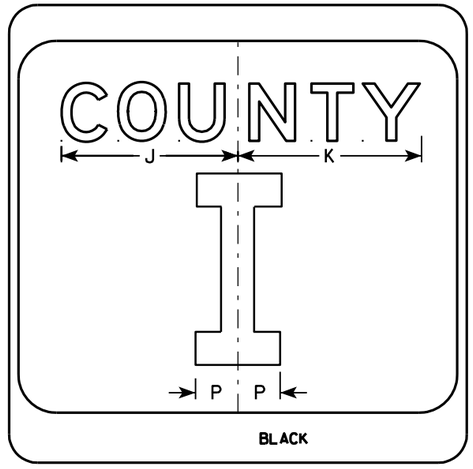
DATE 9/30/09 PLATE NO. G20-2A.8

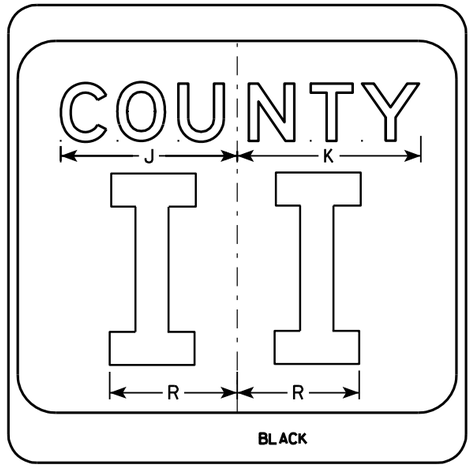
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 158	E



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

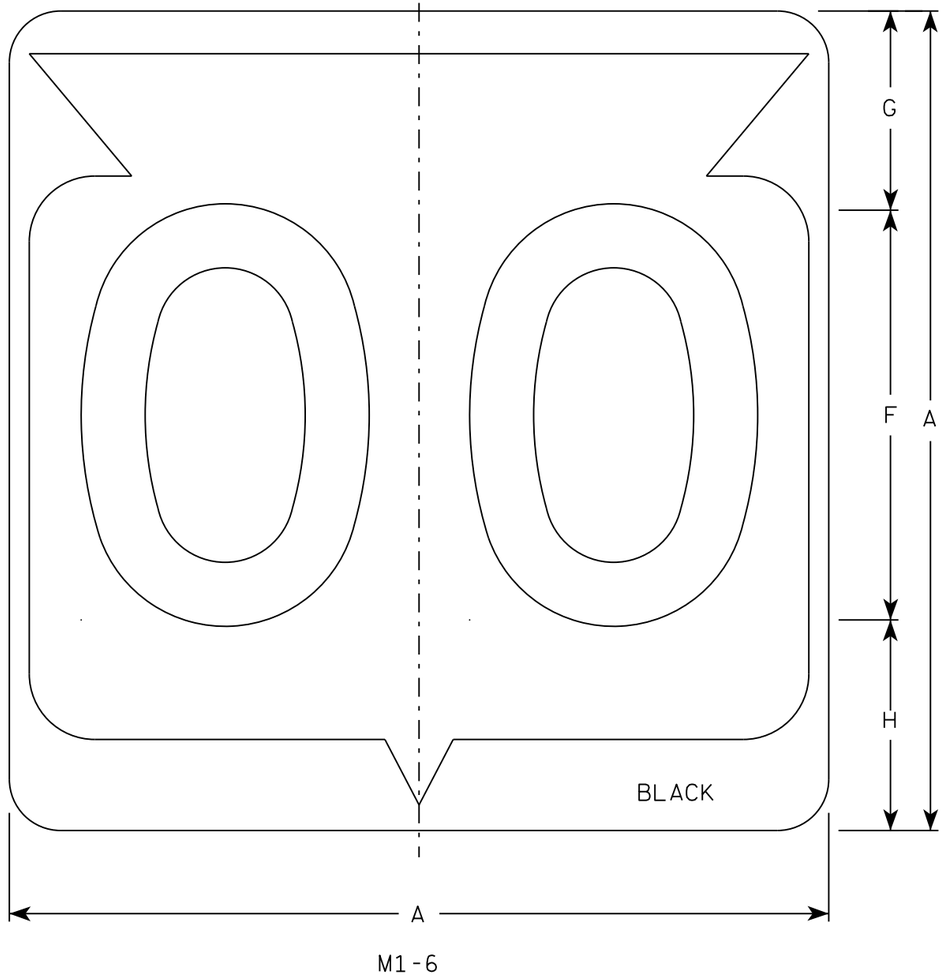
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

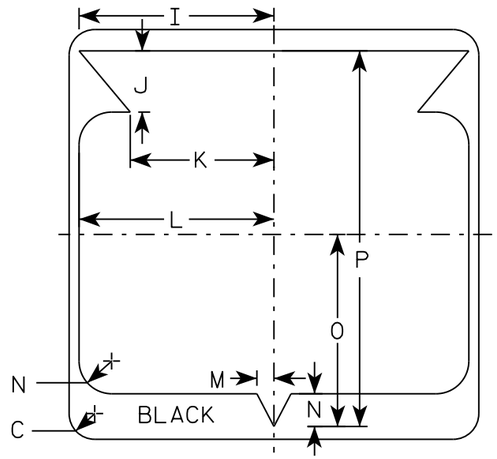
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 159 | E



M1-6

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

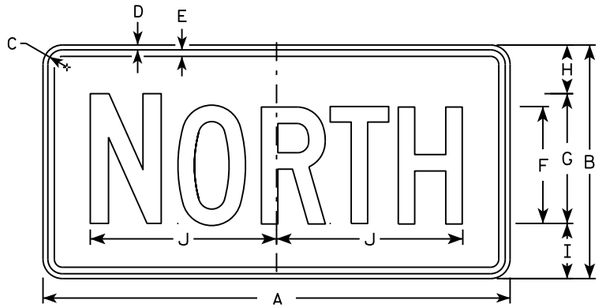
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

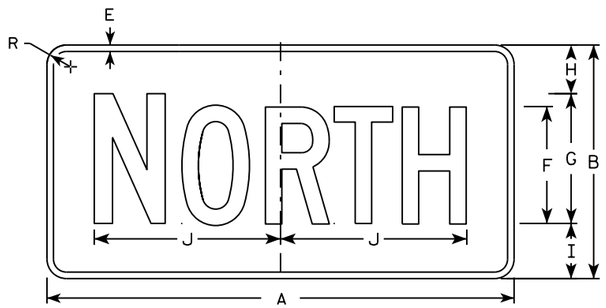
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 160	E



M3-1
MM3-1
MP3-1



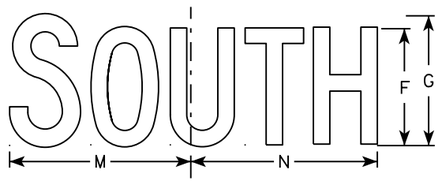
MB3-1
MK3-1
MN3-1



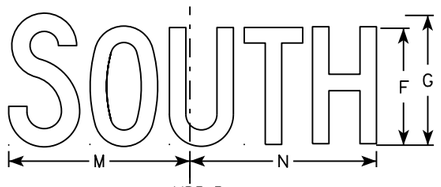
M3-2
MM3-2
MP3-2



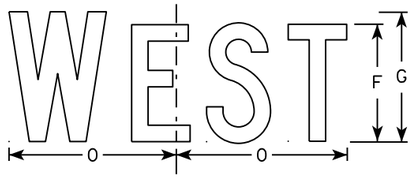
MB3-2
MK3-2
MN3-2



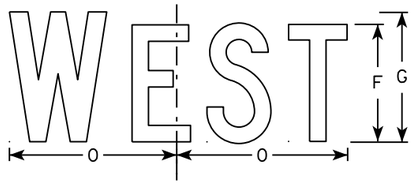
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

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

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

STANDARD SIGNS
M3-1 thur M3-4
SERIES

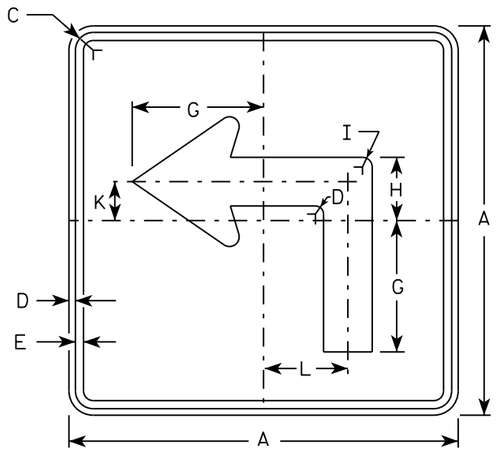
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

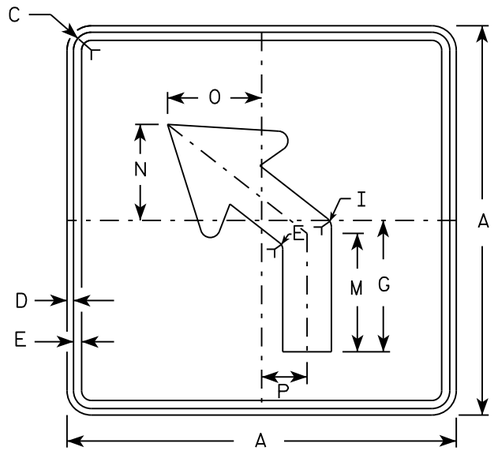
DATE 10/15/15 PLATE NO M3-1.14

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

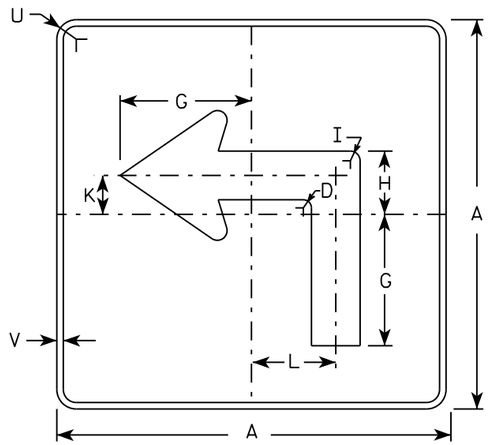
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



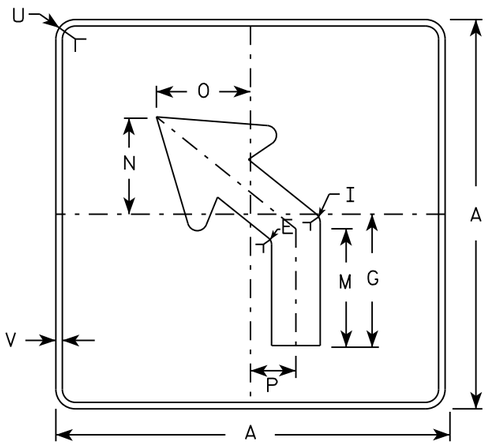
M5-1L
MM5-1L
MO5-1L
MP5-1L



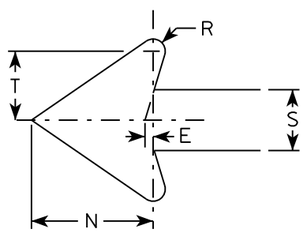
M5-2L
MM5-2L
MO5-2L
MP5-2L



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

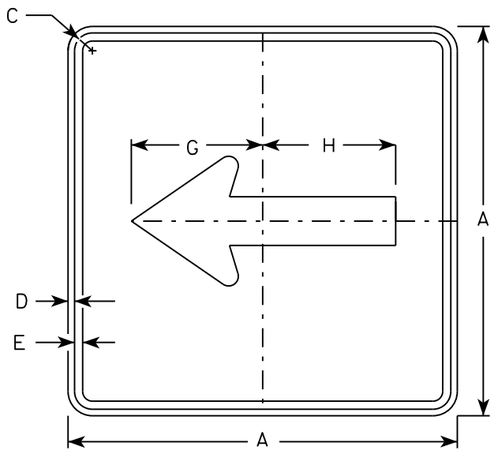
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

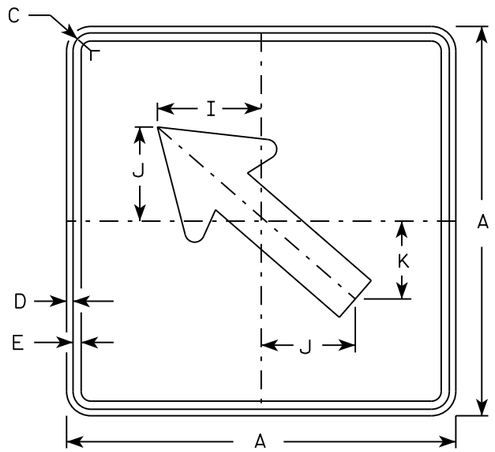
DATE 10/15/15 PLATE NO. M5-1.13

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



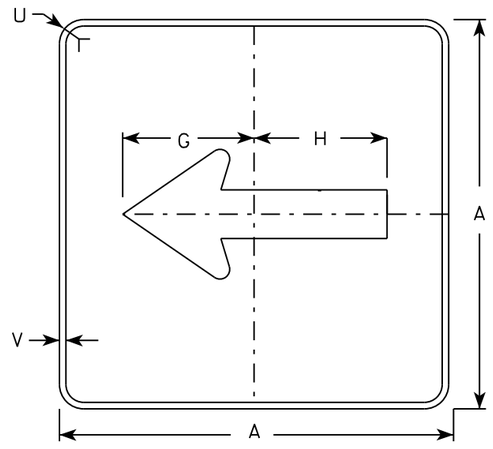
M6-1
MM6-1
MO6-1
MP6-1



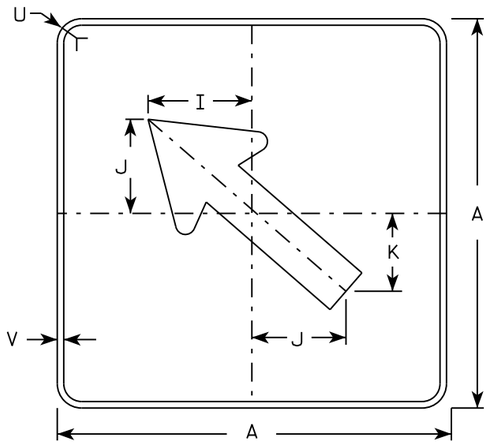
M6-2
MM6-2
MO6-2
MP6-2

NOTES

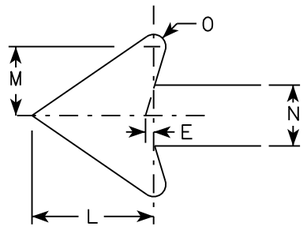
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - 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

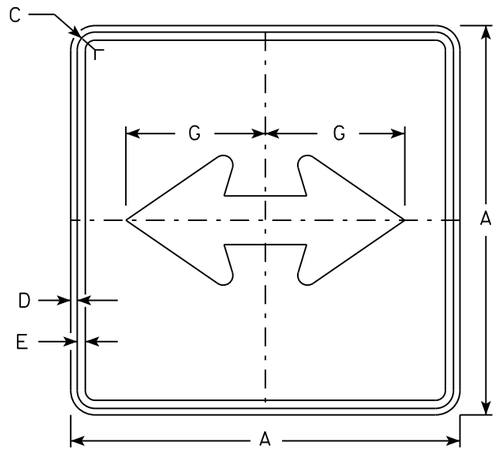
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

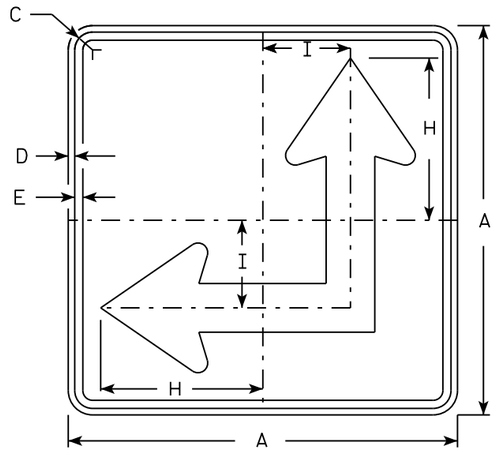
DATE 10/15/15 PLATE 163 M6-1.15

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



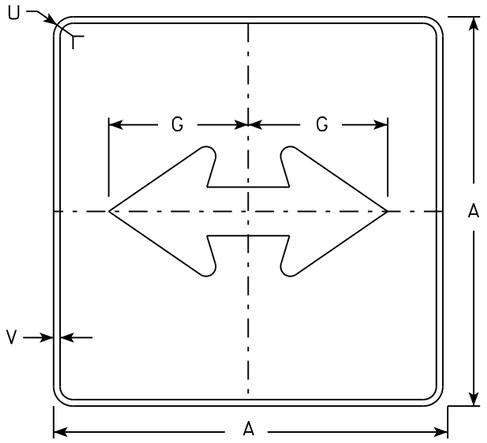
M6-4
MM6-4
MO6-4
MP6-4



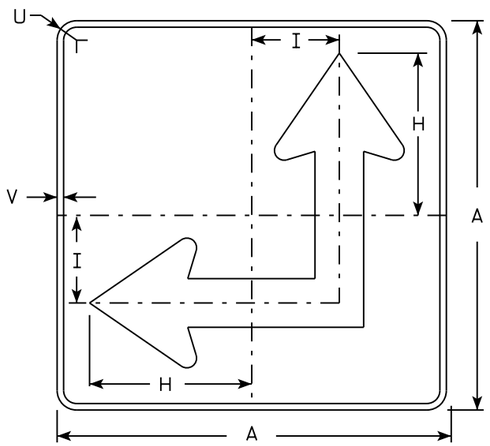
M6-6
MM6-6
MO6-6
MP6-6

NOTES

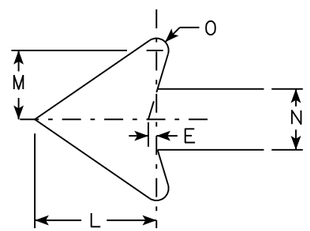
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - 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

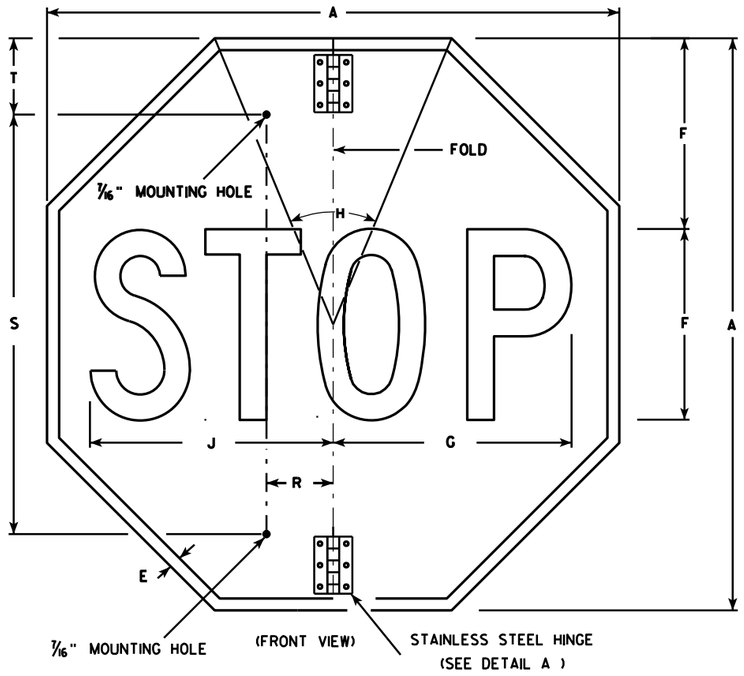
WISCONSIN DEPT OF TRANSPORTATION

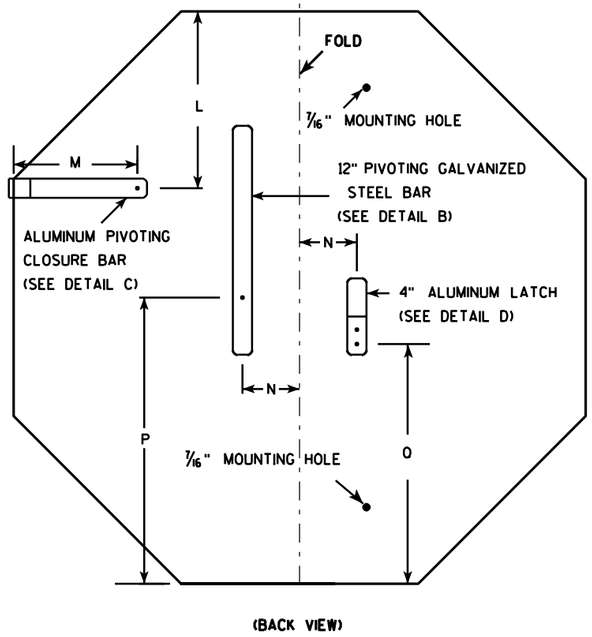
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 164 M6-4.10

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

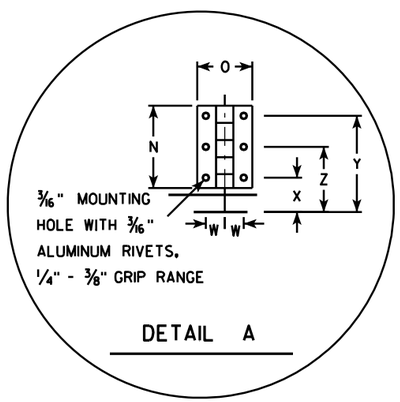
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M64.DGN PLOT DATE : 01-DEC-2015 17:58 PLOT BY : $$ platuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



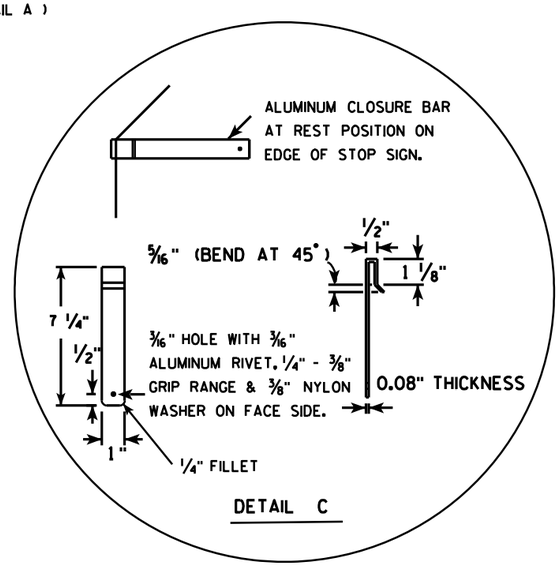


NOTES

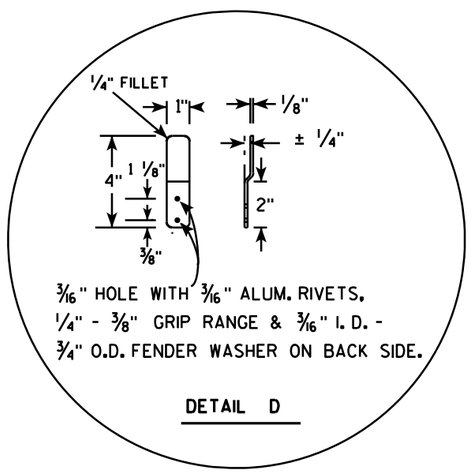
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



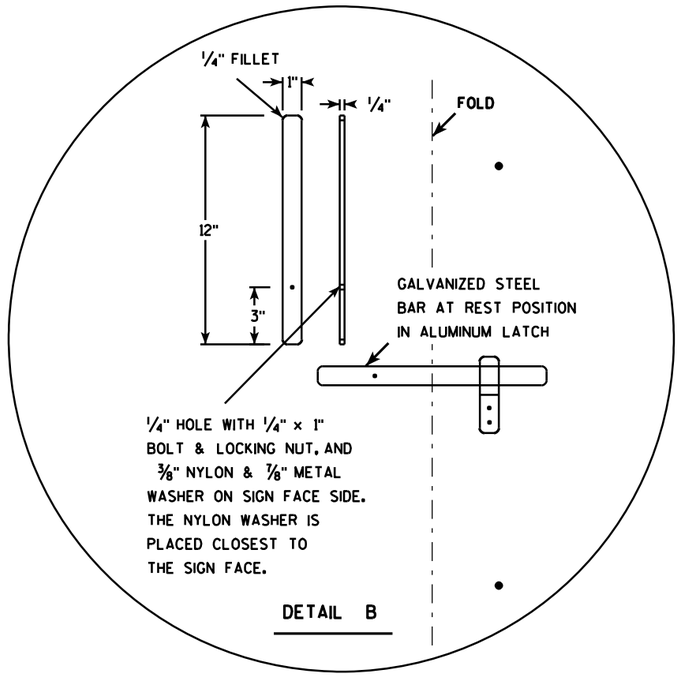
DETAIL A



DETAIL C



DETAIL D



DETAIL B

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																											

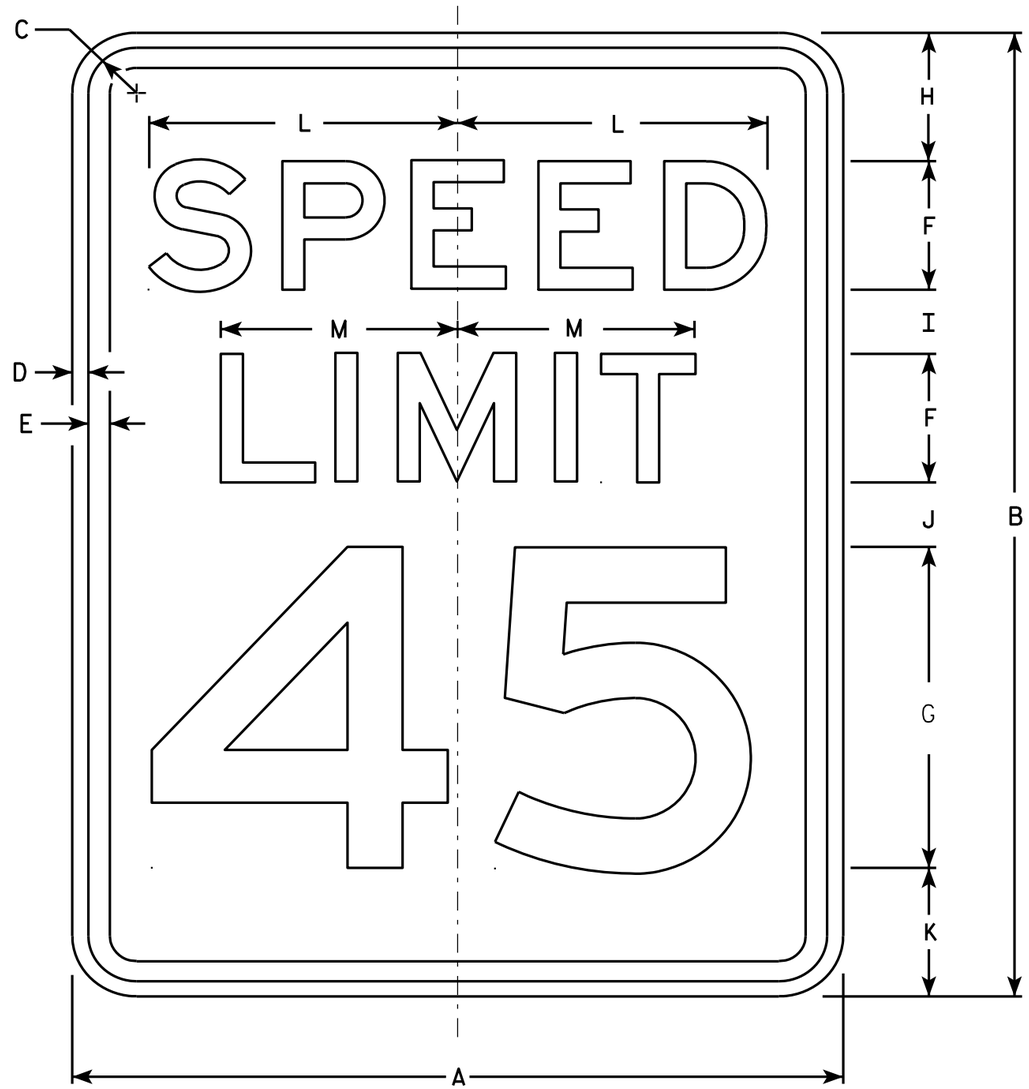
STANDARD SIGN
R1-1F

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: 165	E



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

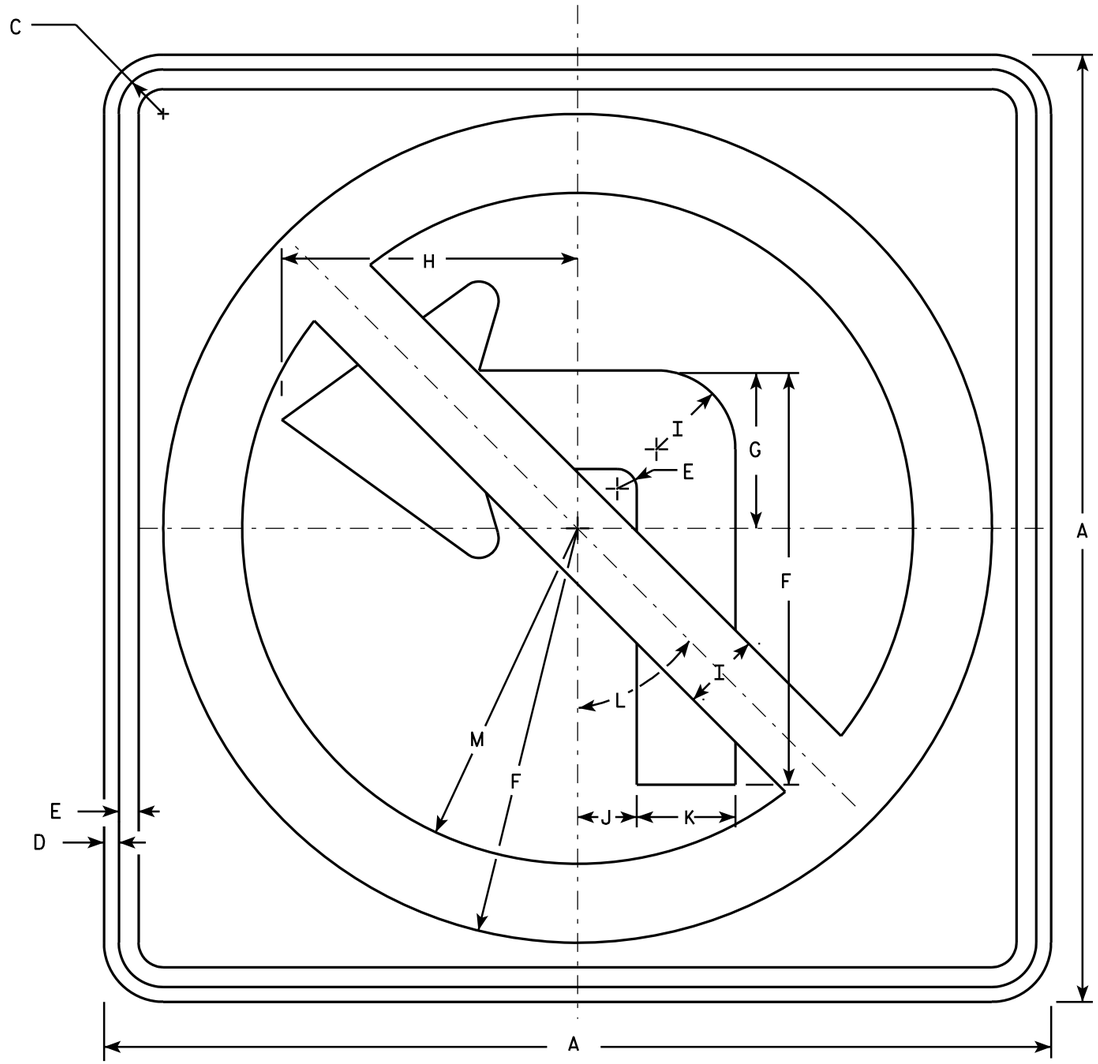
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

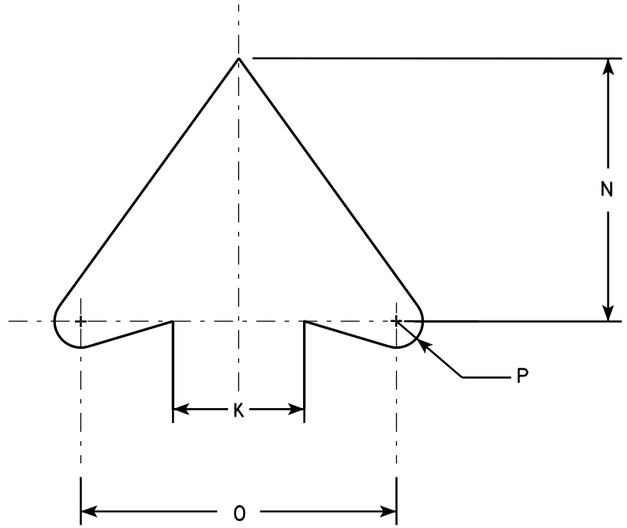
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 166 | E



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

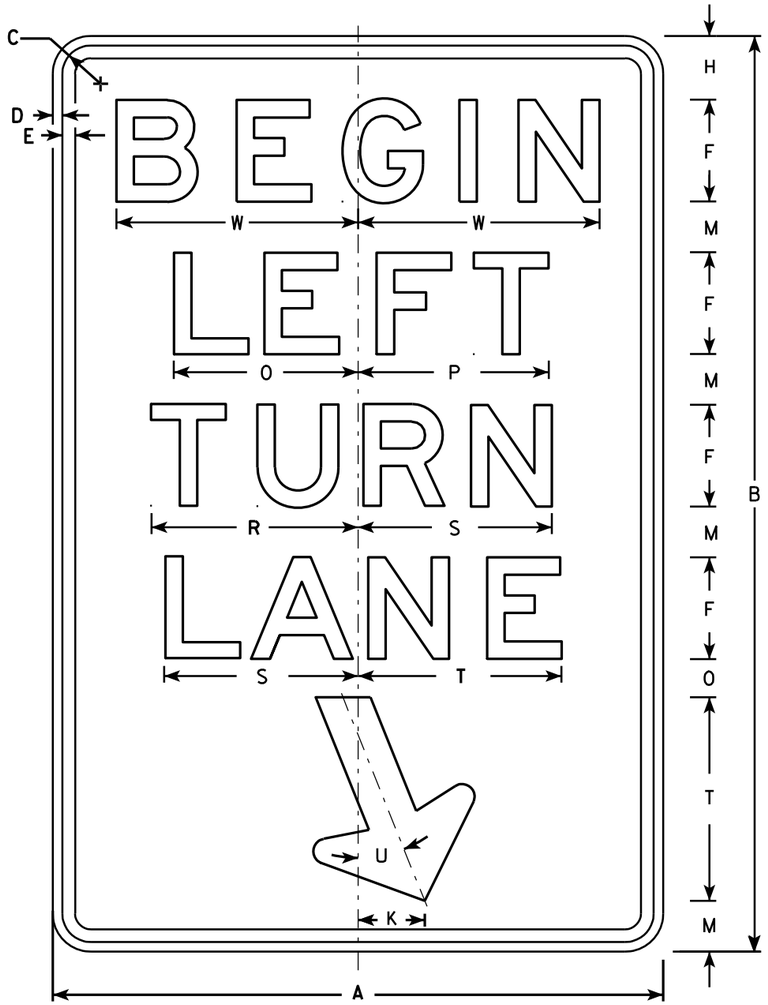
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

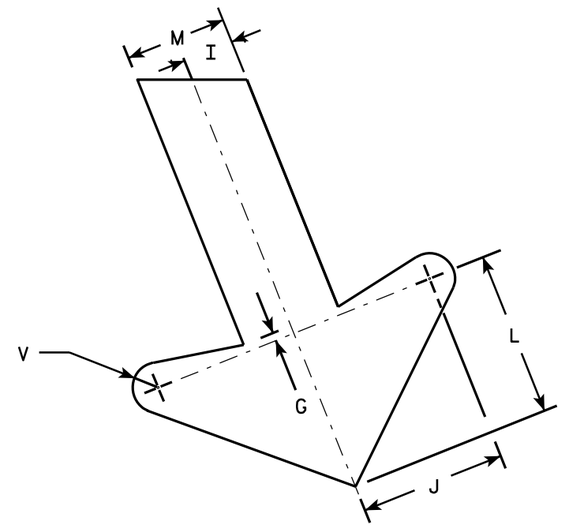
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 167 | E



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																											

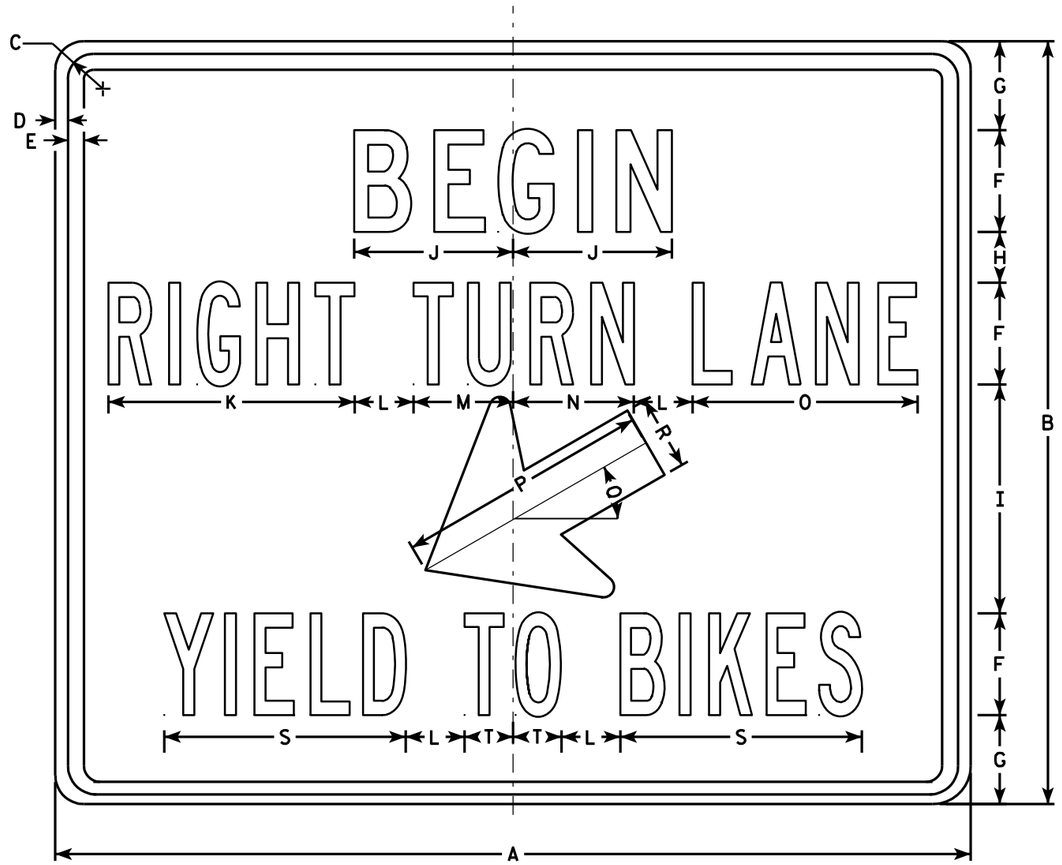
STANDARD SIGN
R3-20L

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: 168 | E



R4-4

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series C
   Lines 2 & 3 are Series B

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36	30	1 3/8	1/2	5/8	4	3 1/2	2	9	6 1/4	9 3/4	2 3/8	3 7/8	4 3/4	8 7/8	10	30°	2 7/8	9 1/2	1 7/8							7.5
2M	36	30	1 3/8	1/2	5/8	4	3 1/2	2	9	6 1/4	9 3/4	2 3/8	3 7/8	4 3/4	8 7/8	10	30°	2 7/8	9 1/2	1 7/8							7.5
3																											
4																											
5																											

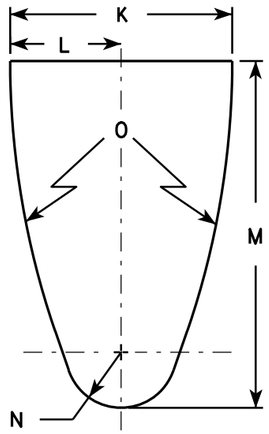
STANDARD SIGN
R4-4

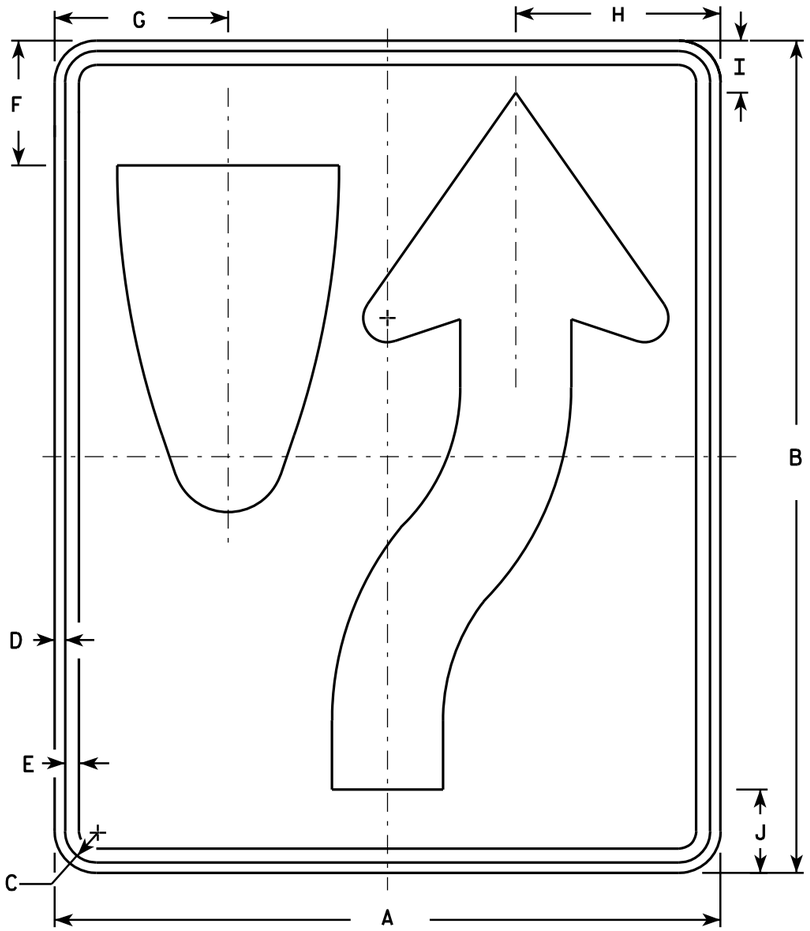
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-4.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 169 | E

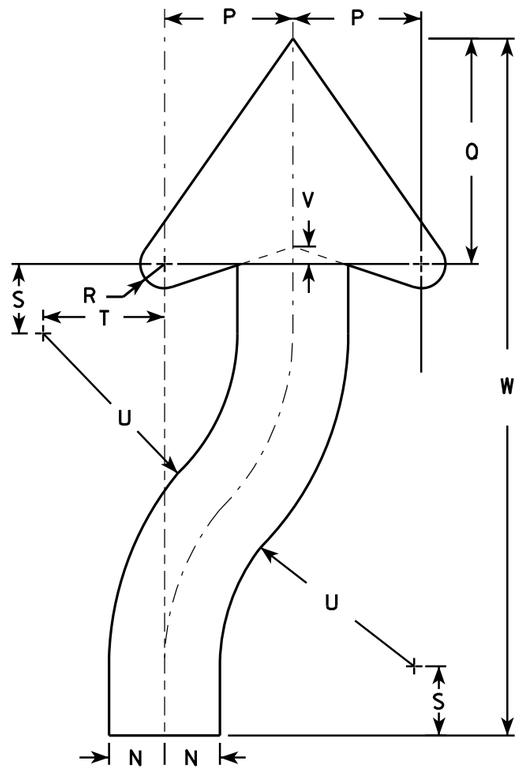




R4-7

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

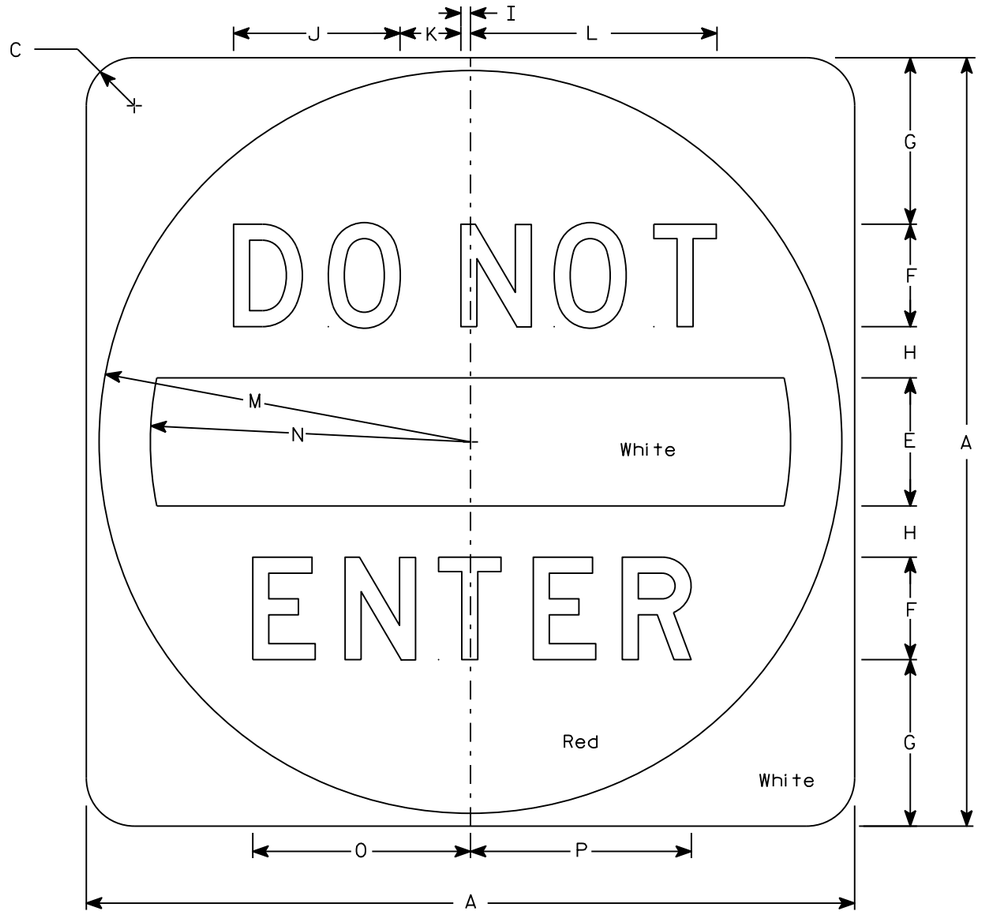
STANDARD SIGN
R4-7 & R4-8

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: 170	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

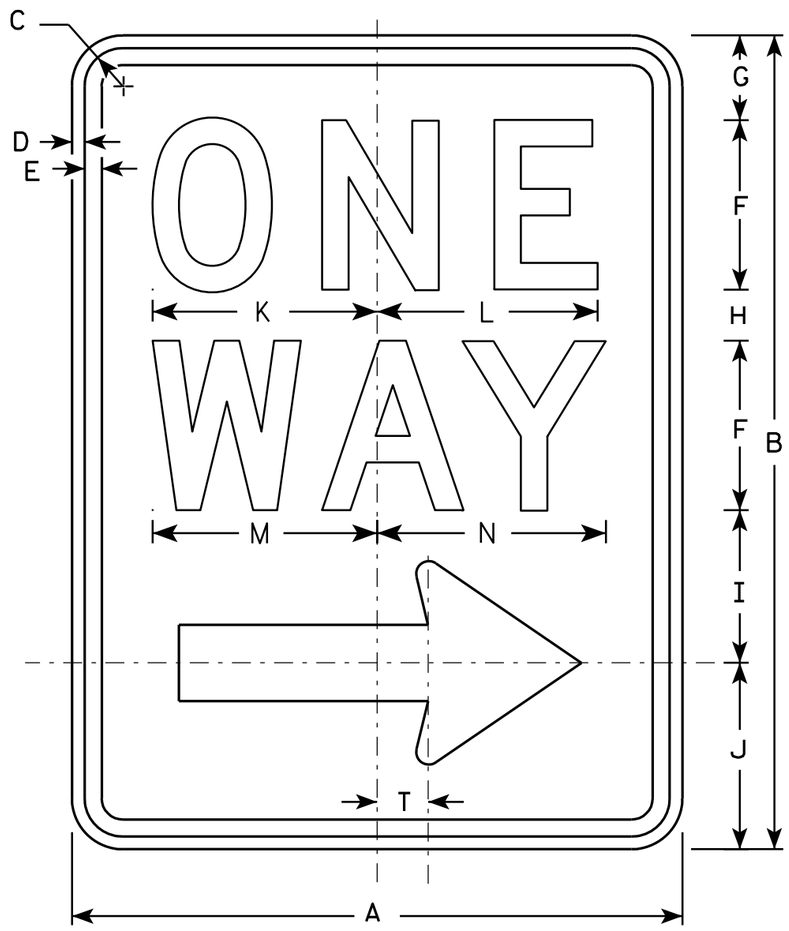
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

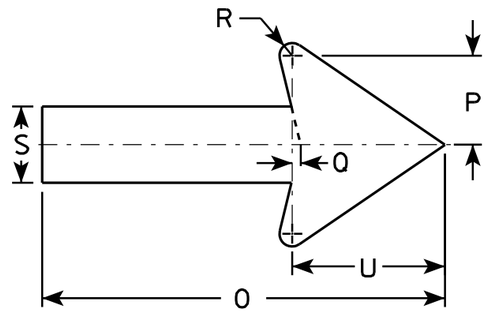
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 171 | E



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																										

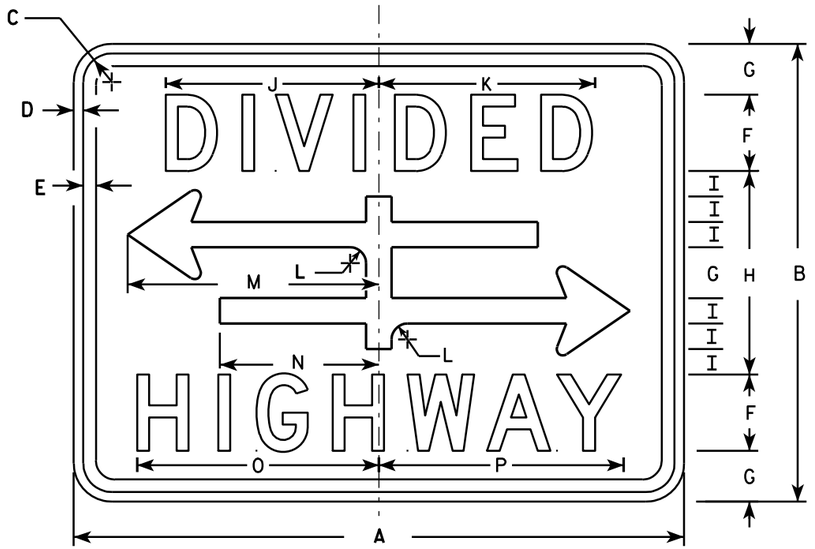
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

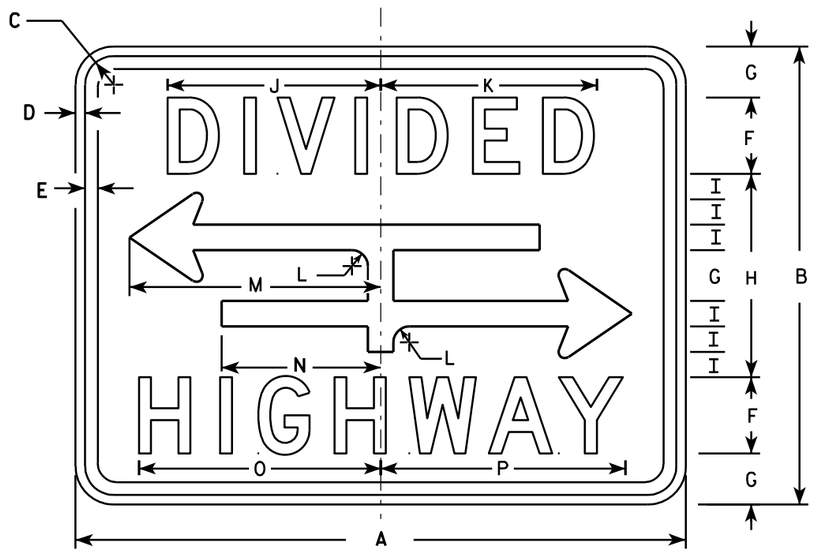
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 172	E



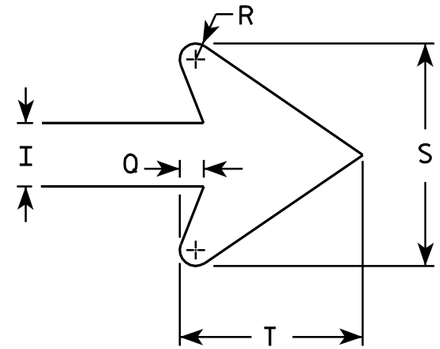
R6-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R6-3A



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN
R6-3 & R6-3A

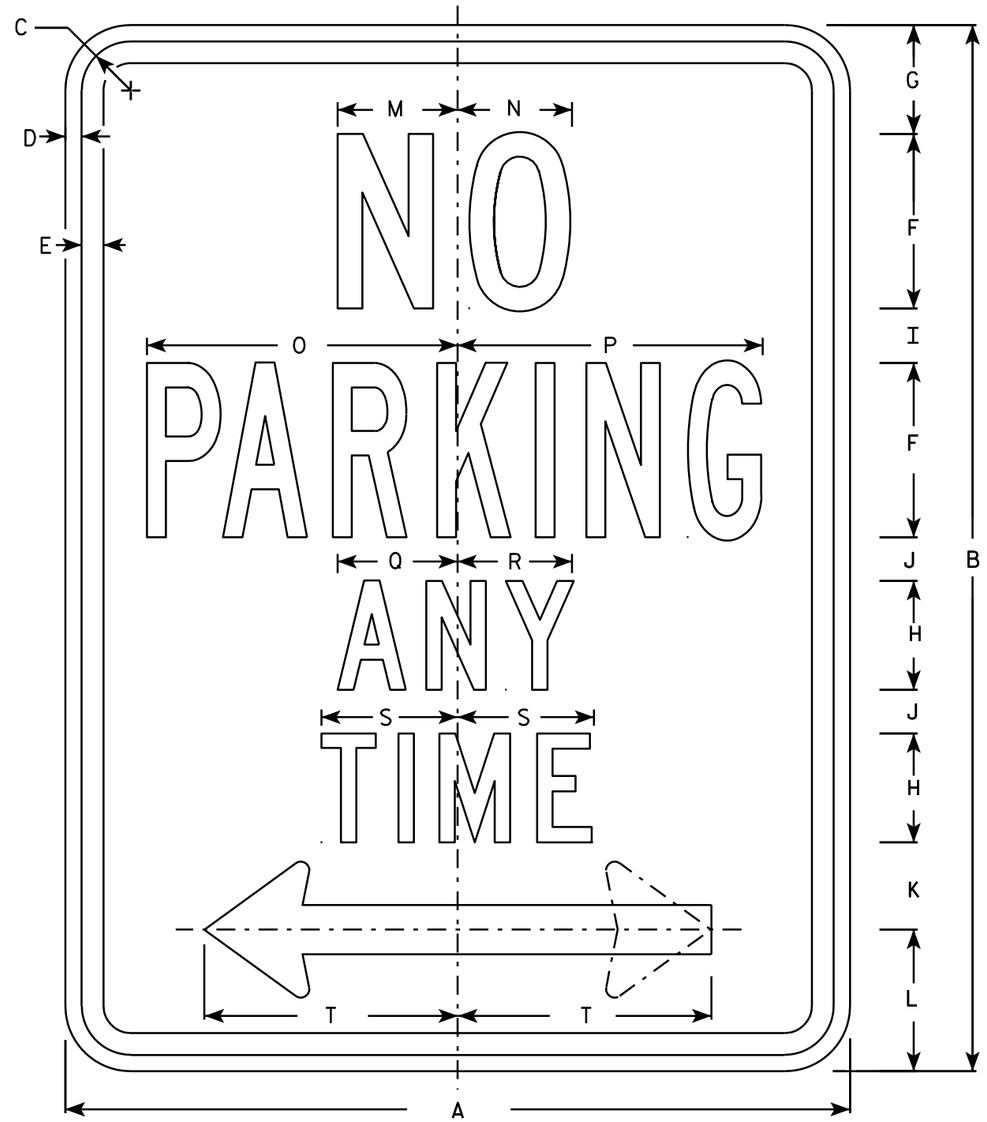
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

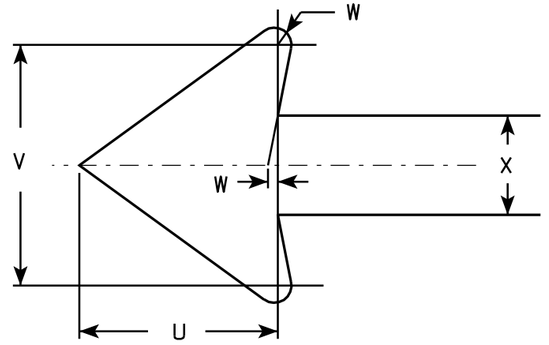
SHEET NO: 173 E



R7-1

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 - Red
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, 3 and 4 are series C, line 2 is series B.
6. 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 3/31/2011 PLATE NO. R7-1.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 174	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R71.DGN PLOT DATE : 31-MAR-2011 09:20 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.476110:1.000000

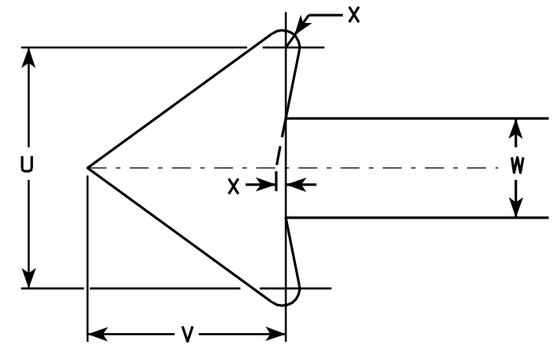
WISDOT/CADDS SHEET 42



R7-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R7-7D (double arrow)
   R7-7R (right arrow)
   R7-7L (left arrow)
6. Lines 1, 3 and 4 are Series C.
   Line 2 is Series B.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	2	1 7/8	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2	2 3/4	2 5/8	3 7/8	1 3/4	1 1/2	3/4	1/8			1.50
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 1/2	3 3/8	3 3/8	5 7/8	2 5/8	2 1/4	1 1/8	1/4			3.00
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	4 1/8	4	7 3/4	3 1/2	3	1 1/2	1/4			5.00
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	4 1/8	4	7 3/4	3 1/2	3	1 1/2	1/4			5.00
4																											
5																											

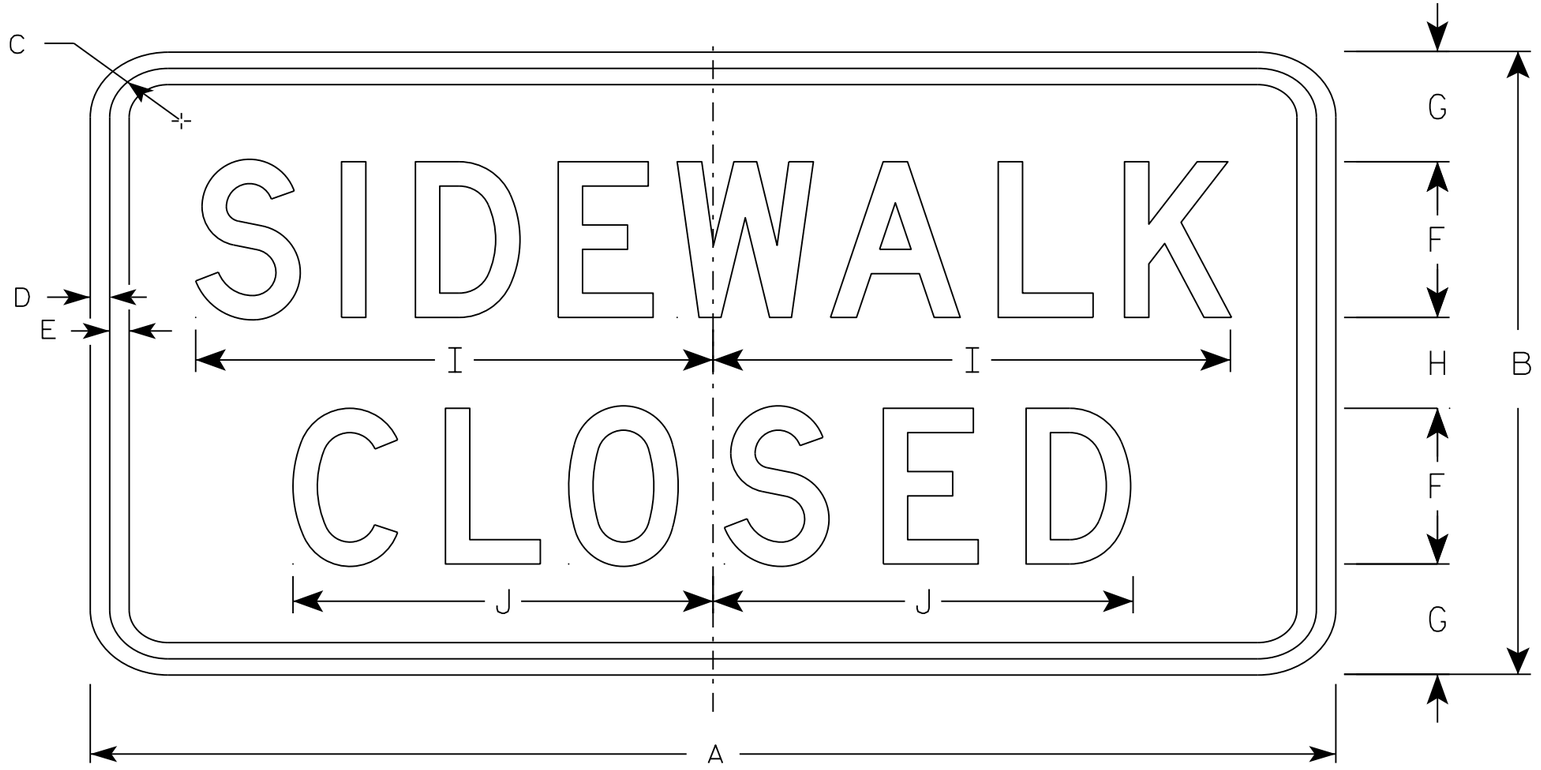
STANDARD SIGN
R7-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-7.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 175 | E



R9-9

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 3/4	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

STANDARD SIGN
R9-9

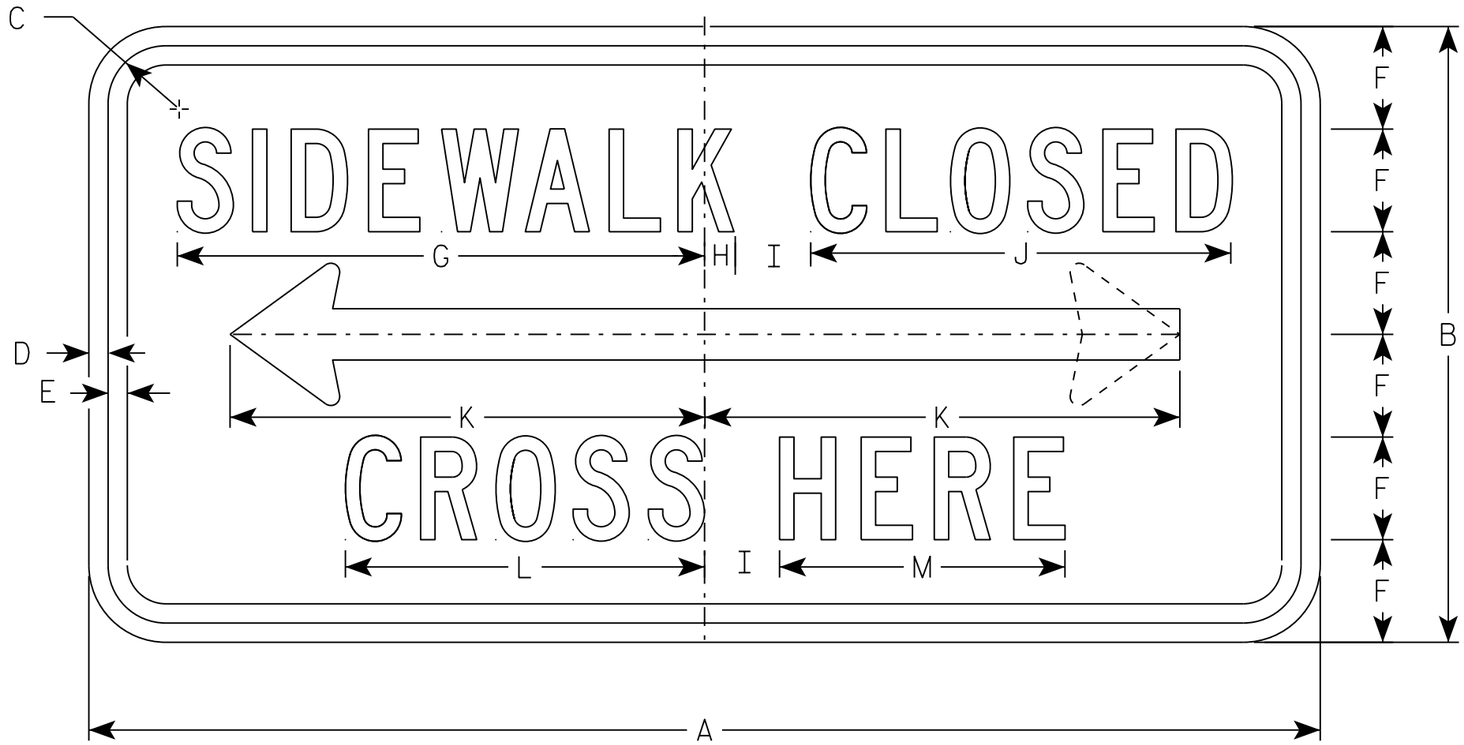
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

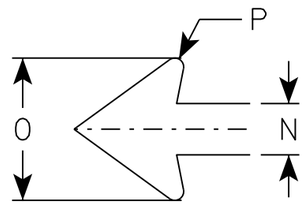
DATE 8/11/16 PLATE 176 R9-9.6

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R99.DGN PLOT DATE : 11-AUG-2016 11:33 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 2.918761:1.000000



R9-11A



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. Use Size 2 for Sidewalks. Use Size 3 for paths and Trails.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	2	10 1/4	5/8	1 1/2	8 1/4	9 1/4	7	5 5/8	1	2 3/4	1/8											2.0
2M	24	12	1 1/8	3/8	3/8	2	10 1/4	5/8	1 1/2	8 1/4	9 1/4	7	5 5/8	1	2 3/4	1/8											2.0
3	30	15	1 1/8	3/8	1/2	2	13	3/4	2	10 1/4	12 3/8	8 7/8	6 7/8	1 1/4	3 5/8	1/4											3.125
4																											
5																											

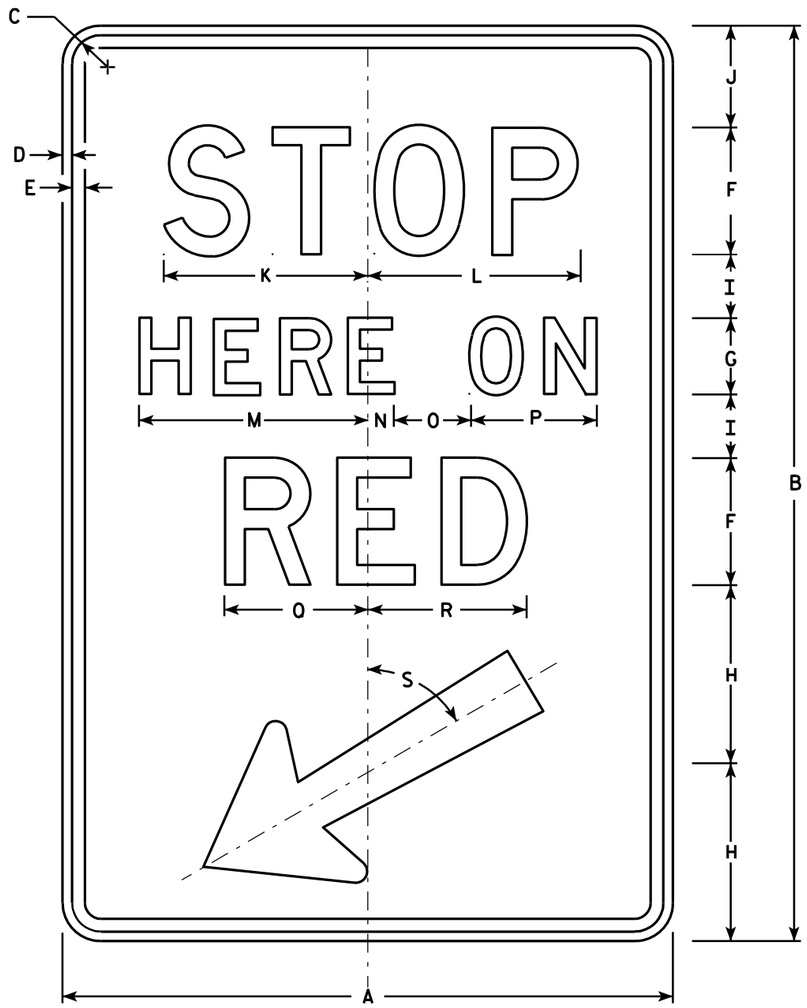
STANDARD SIGN
R9-11A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/29/16 PLATE NO. R9-11A.3

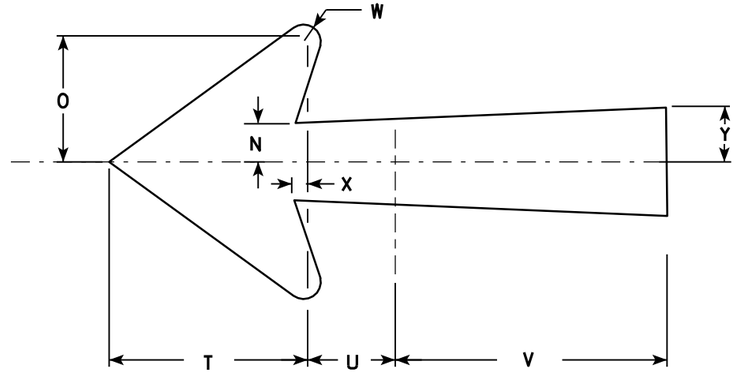
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 177 E



R10-6

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.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
2M	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
3																											
4																											
5																											

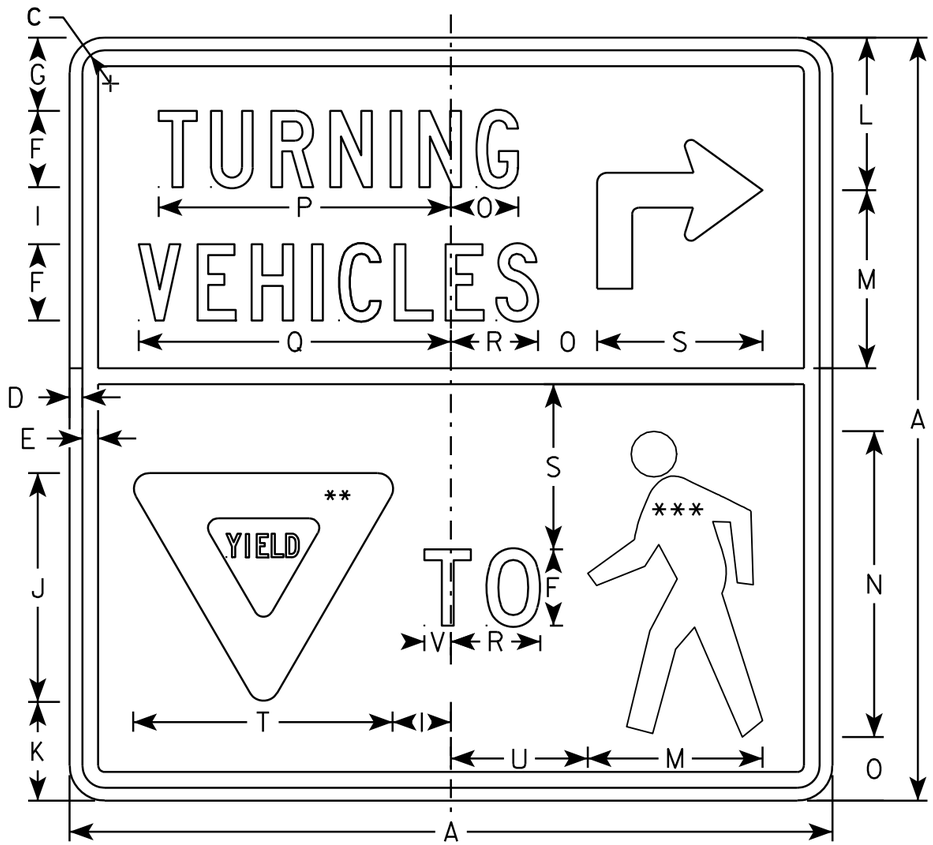
STANDARD SIGN
R10-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-6.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 178	E



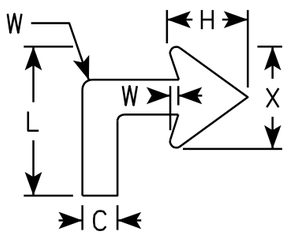
R10-15R

NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Half- Yellow
   Bottom Half - WHITE
   Message - BLACK
   YIELD SYMBOL - RED ON WHITE
   PED SYMBOL - BLACK ON WHITE
3. Message Series - C except "TO" 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.

** INSERT R1-2 AND SIZE TO FIT

*** INSERT W11-2 AND SIZE TO FIT



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 3/8	1/2	5/8	3	2 7/8	3	2 1/4	9	3 7/8	6	7	12	2 1/2	11 1/2	12 1/4	3 1/2	6 1/2	10 1/4	5 3/8	1	3/8	4			6.25
2M	30		1 3/8	1/2	5/8	3	2 7/8	3	2 1/4	9	3 7/8	6	7	12	2 1/2	11 1/2	12 1/4	3 1/2	6 1/2	10 1/4	5 3/8	1	3/8	4			6.25
3																											
4																											
5																											

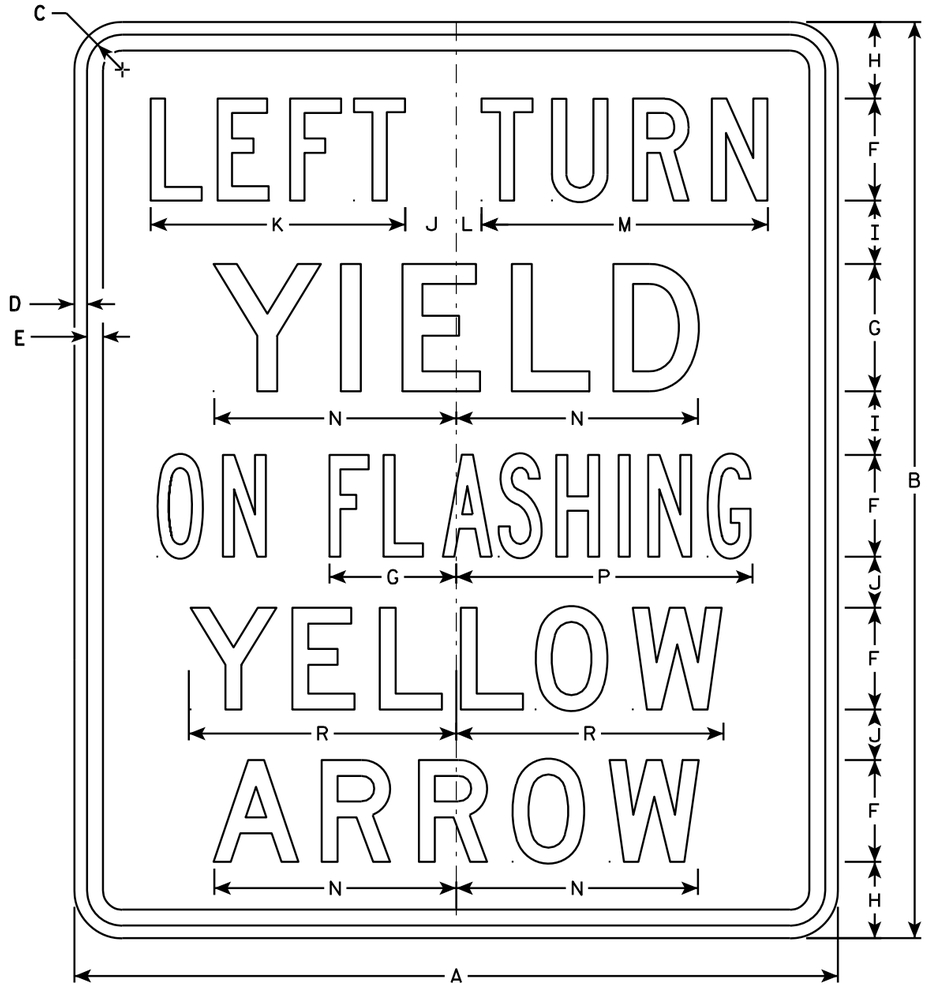
STANDARD SIGN
R10-15R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/2/10 PLATE NO. R10-15R.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 179 | E

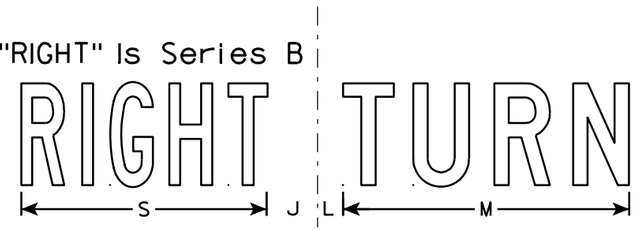


R10-50L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series C.
   Lines 2, 4 and 5 are Series D.
   Line 3 is Series B.

"RIGHT" Is Series B



R10-50R

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	4	5	3	2 1/2	2	10	1	11 1/4	9 1/2	4 1/4	11 5/8		10 1/2	9 5/8								7.5
2M	30	36	1 3/8	1/2	5/8	4	5	3	2 1/2	2	10	1	11 1/4	9 1/2	4 1/4	11 5/8		10 1/2	9 5/8								7.5
3																											
4																											
5																											

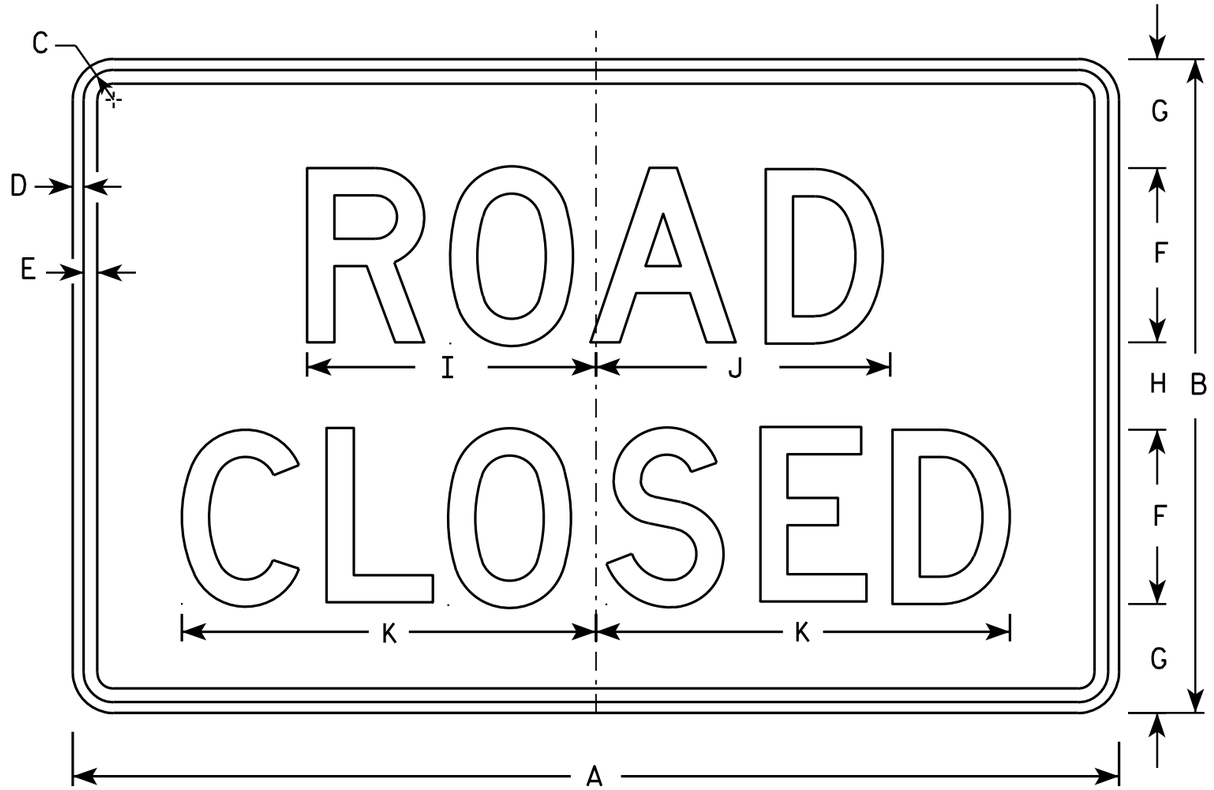
STANDARD SIGN
R10-50

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/11/13 PLATE NO. R10-50.2

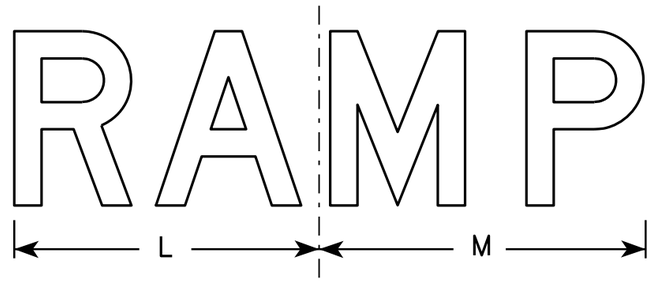
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 180	E



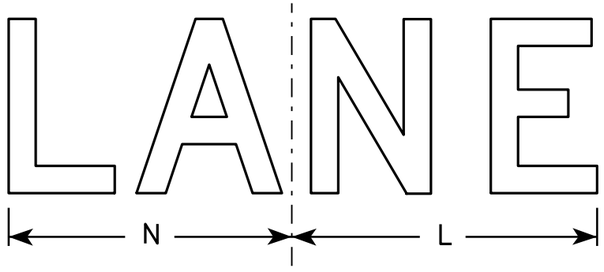
R11-2

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 - 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



R11-2L

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													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													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													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													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													10.0

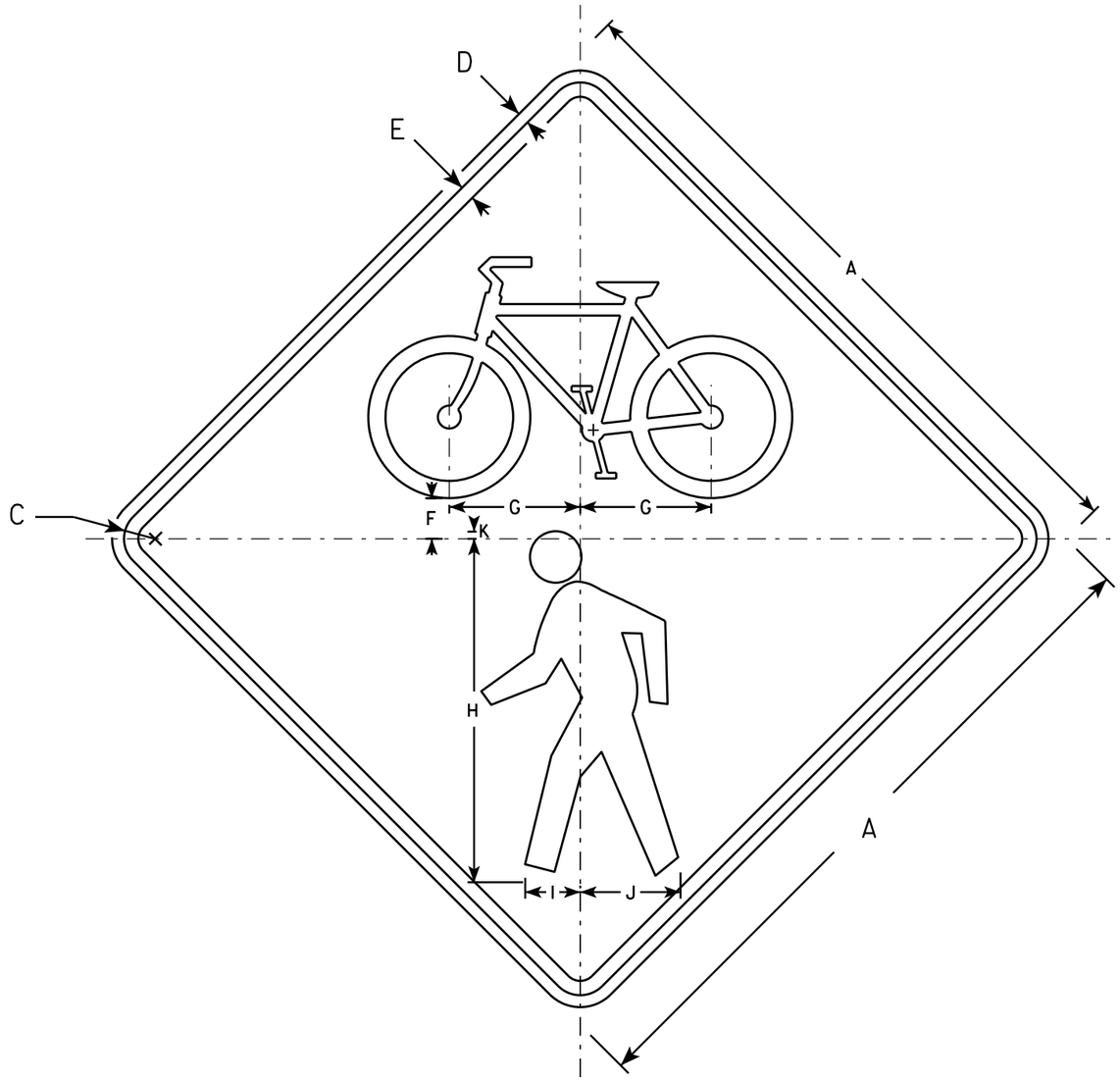
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 181 | E



W11-15

NOTES

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

SIZE	A	B	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	1 3/8	4 5/8	12	1 7/8	3 1/2	1/4																4.0
2S	30		1 3/8	1/2	5/8	1 3/4	5 3/4	15	2 3/8	4 3/8	3/8																6.25
2M	36		1 5/8	5/8	3/4	2 1/8	6 7/8	18	2 7/8	5 1/4	3/8																9.0
3	36		1 5/8	5/8	3/4	2 1/8	6 7/8	18	2 7/8	5 1/4	3/8																16.0
4	48		2 1/4	3/4	1	2 7/8	9 1/8	24	3 7/8	7	1/2																16.0
5																											

STANDARD SIGN
W11-15

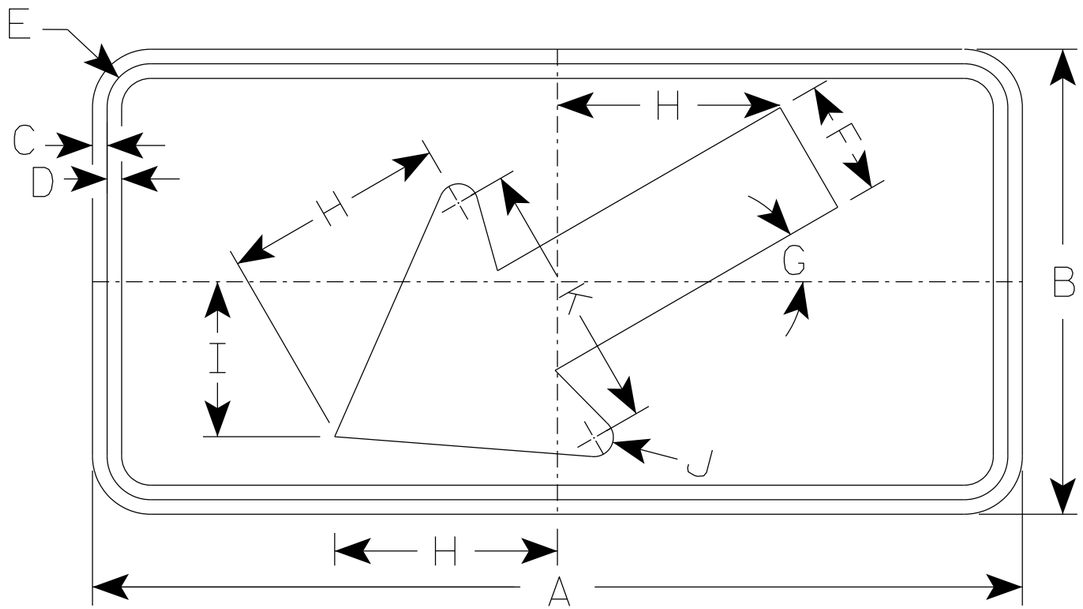
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 2/13/14 PLATE NO. W11-15.4

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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W1115.DGN PLOT DATE : 13-FEB-2014 10:54 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 7.783368:1.000000
WISDOT/CADDS SHEET 42



W16-7L

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. W16-7R is the same as W16-L
   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																											
2S	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4	48	24	1/2	5/8	1 3/8	6	30°	11 1/2	8	1	14																8.0
5																											

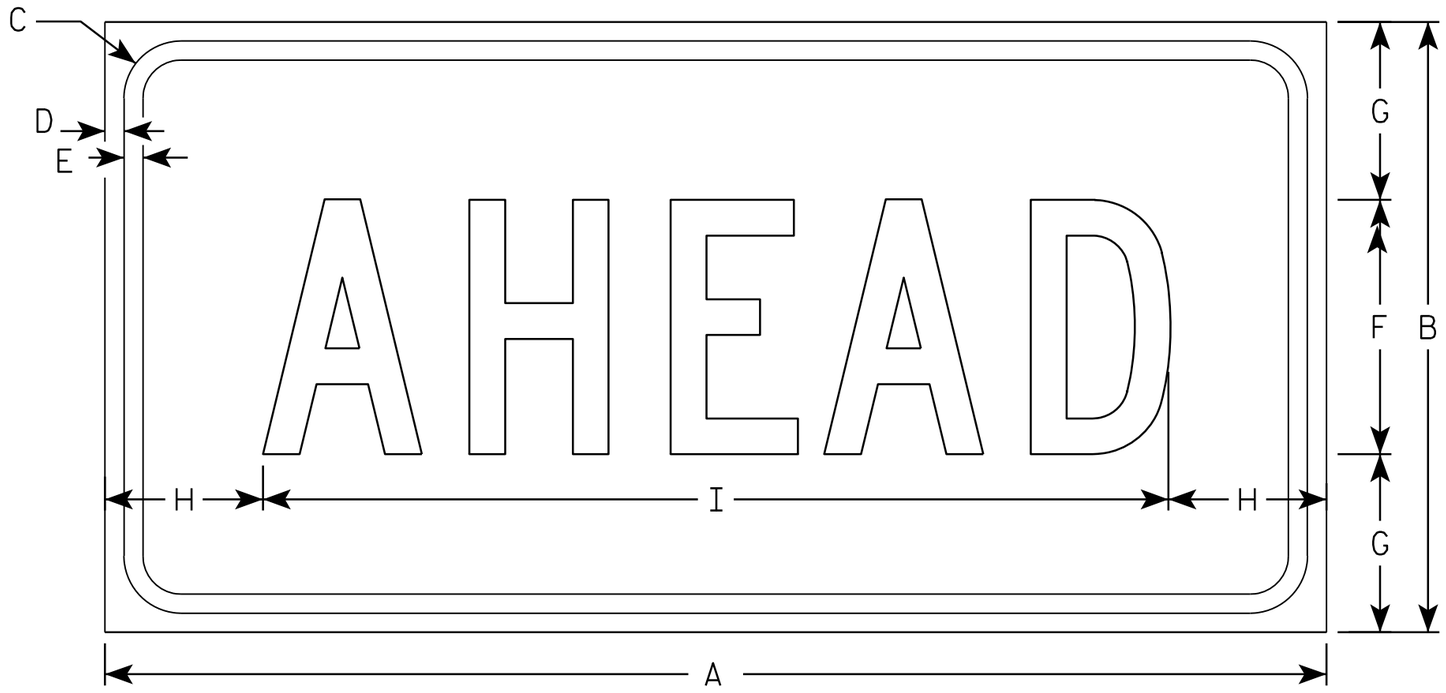
STANDARD SIGN
W16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 7/11/18 PLATE NO. W16-7.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 183 | E



W16-9P

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 - 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	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

STANDARD SIGN
W16-9P

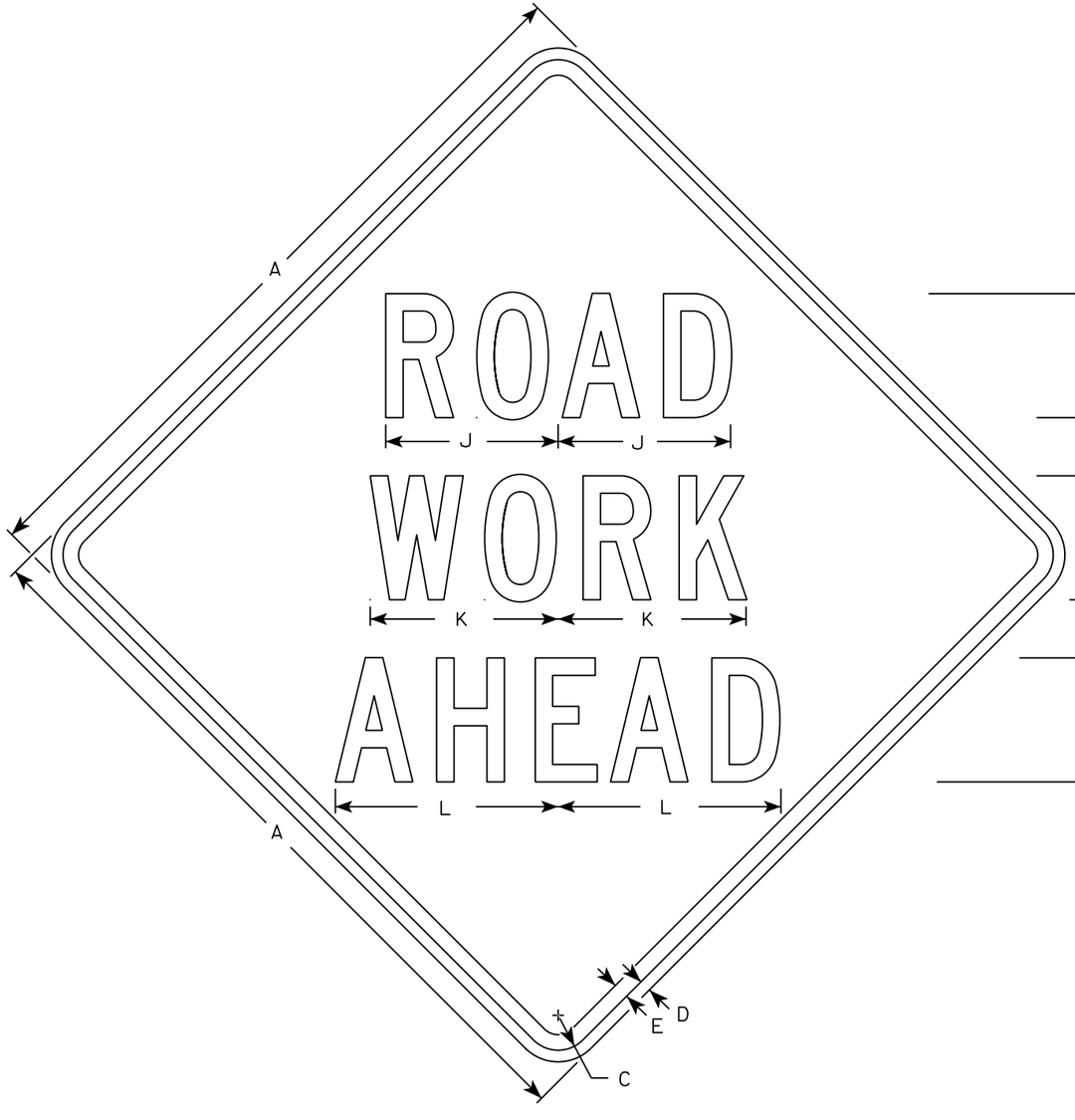
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

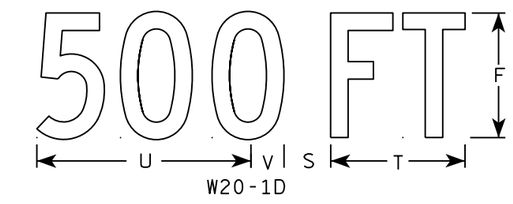
DATE 12/28/10 PLATE NO. W16-9P.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 184 | E

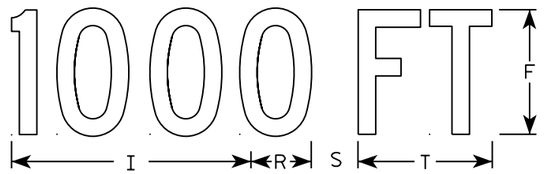
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W169P.DGN PLOT DATE : 28-DEC-2010 13:39 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 2.979524:1.000000
WISDOT/CADDS SHEET 42



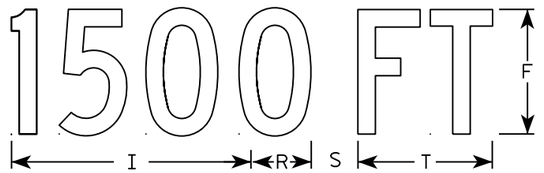
W20-1A



W20-1D



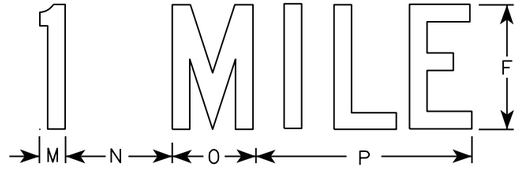
W20-1C



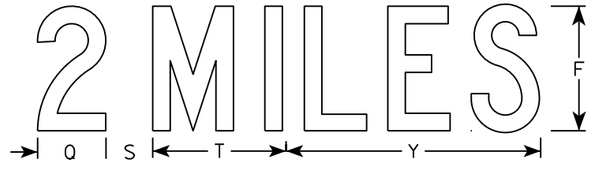
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	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		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, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

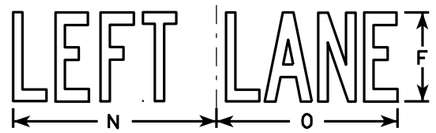
PROJECT NO:

SHEET NO: E

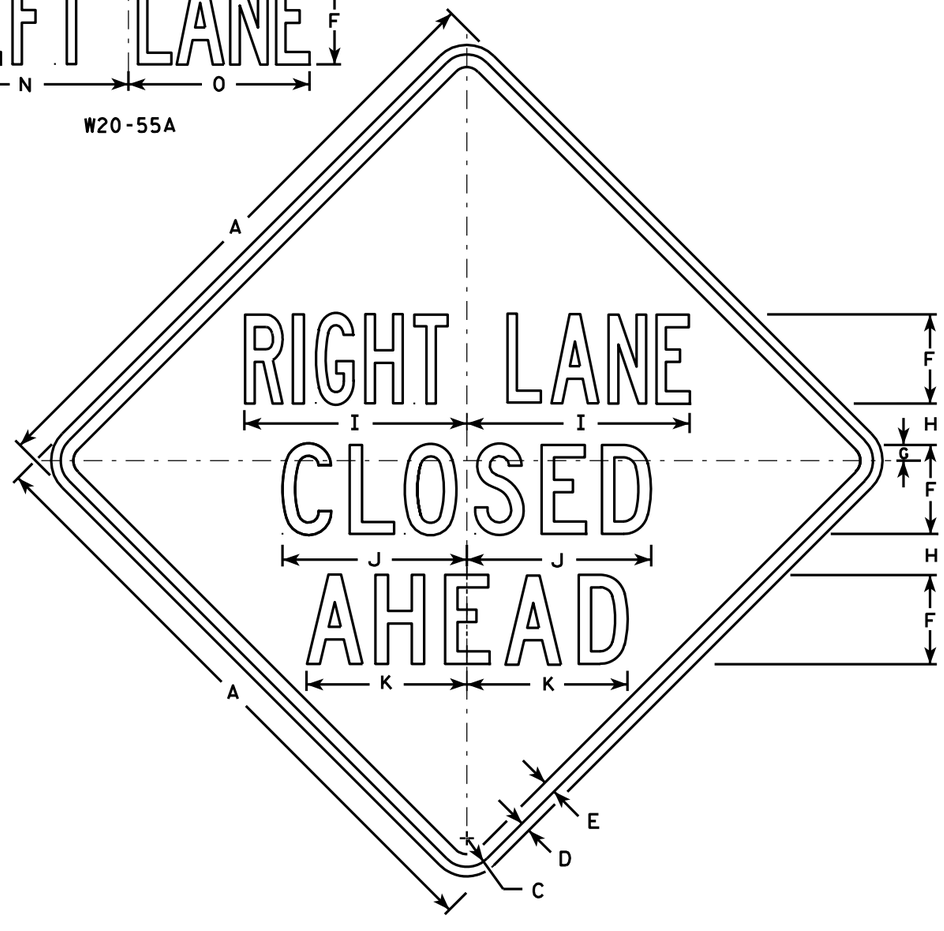
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$



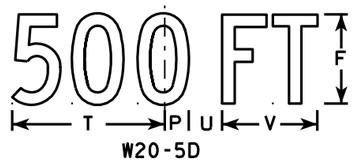
W20-56A



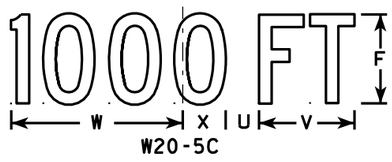
W20-55A



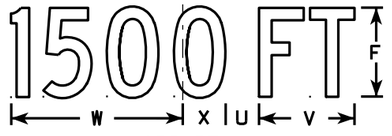
W20-5A



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

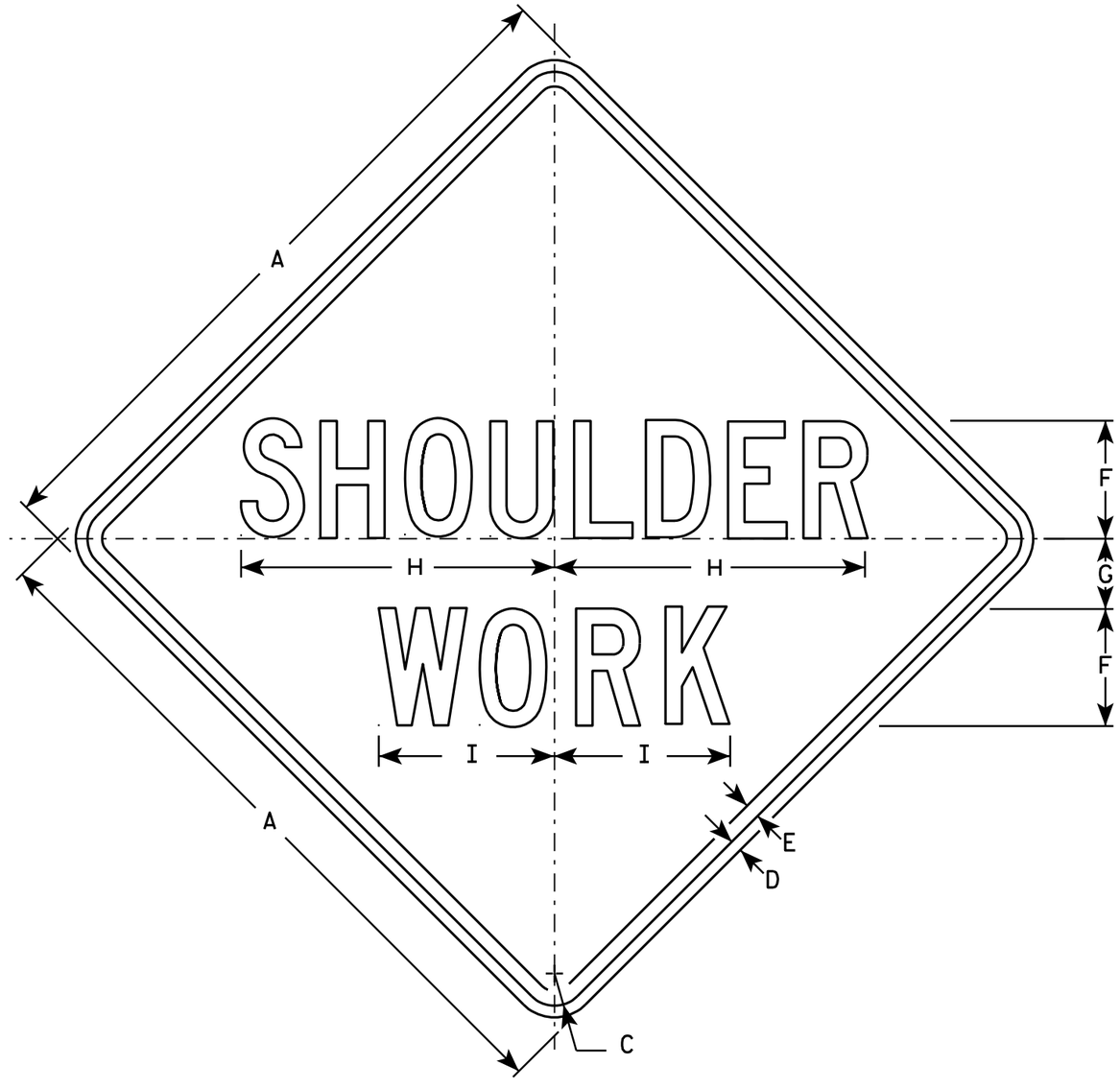
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 186 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000
WISDOT/CADDS SHEET 42



W21-5

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	24		1 1/8	3/8	1/2	4	2 1/2	10 3/4	6																		4.0
2S	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	3	13 3/8	7 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3 1/2	16	9																		9.0
4	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0
5	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0

STANDARD SIGN
W21-5

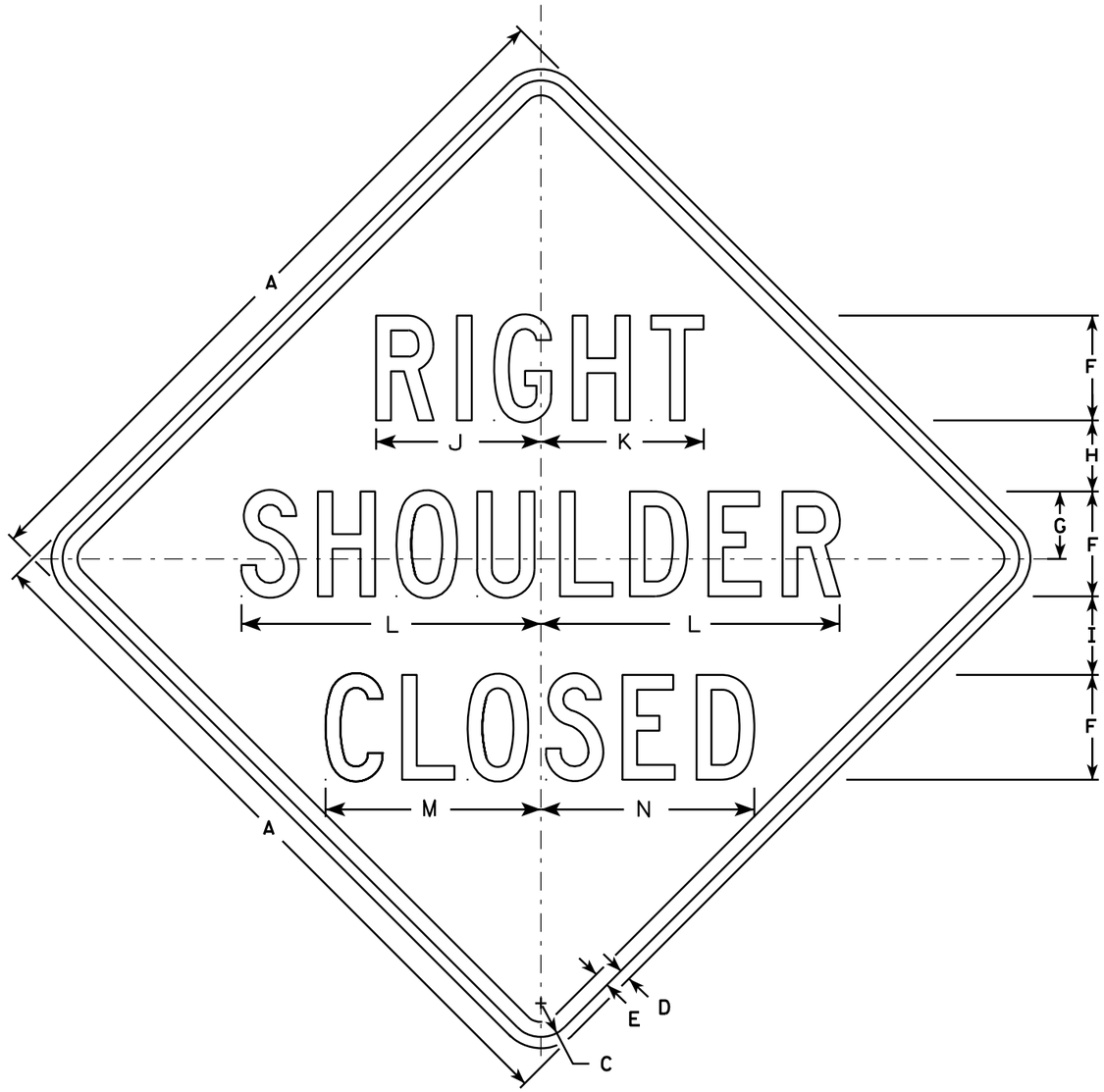
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

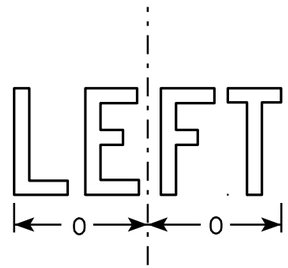
DATE 3/21/11 PLATE NO. W21-5.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 187 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W215.DGN PLOT DATE : 21-MAR-2011 08:01 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.207338:1.000000
WISDOT/CADDS SHEET 42



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

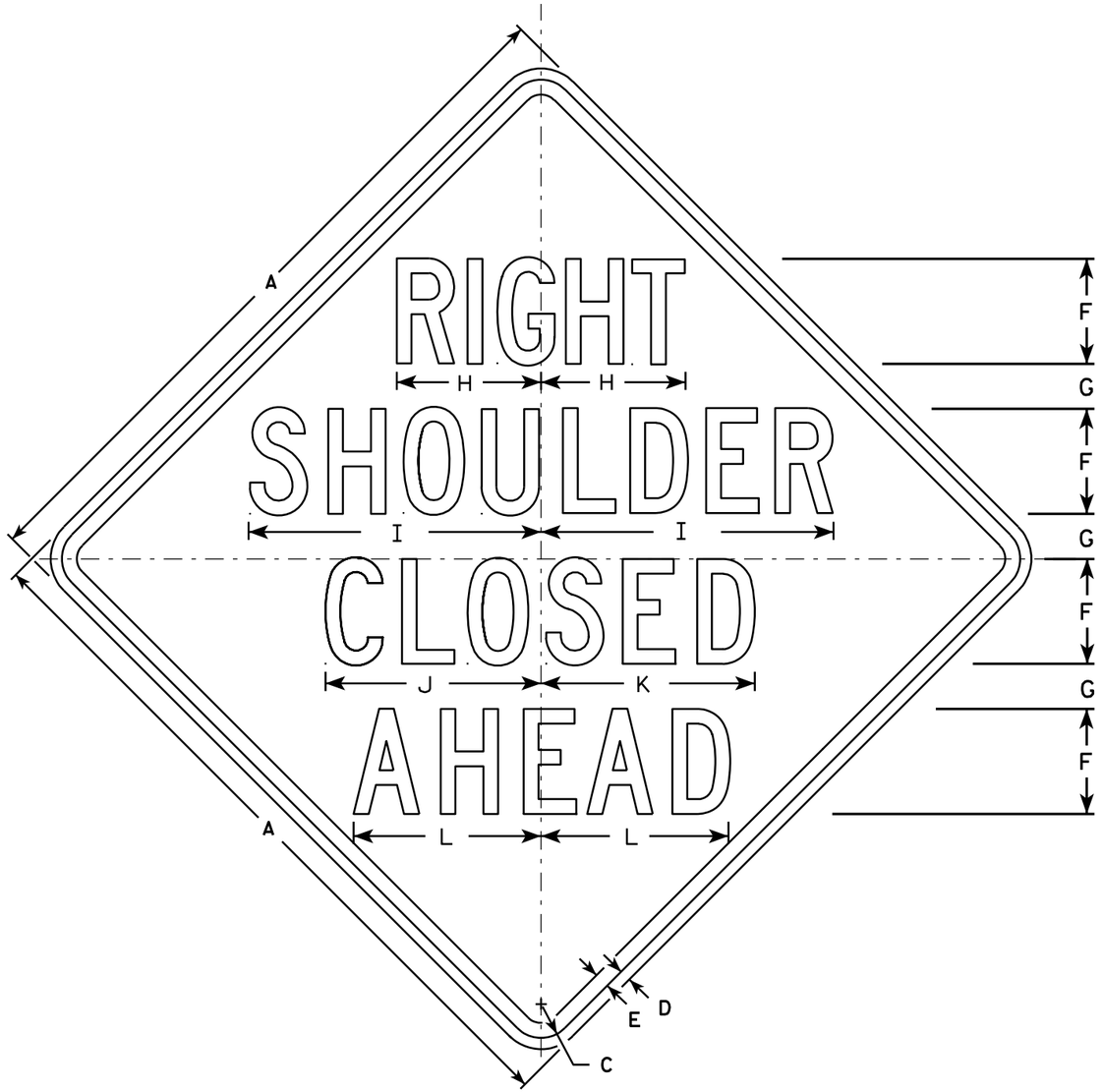
STANDARD SIGN
W21-5A

WISCONSIN DEPT OF TRANSPORTATION

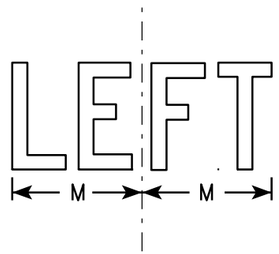
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5A.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 188 | 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

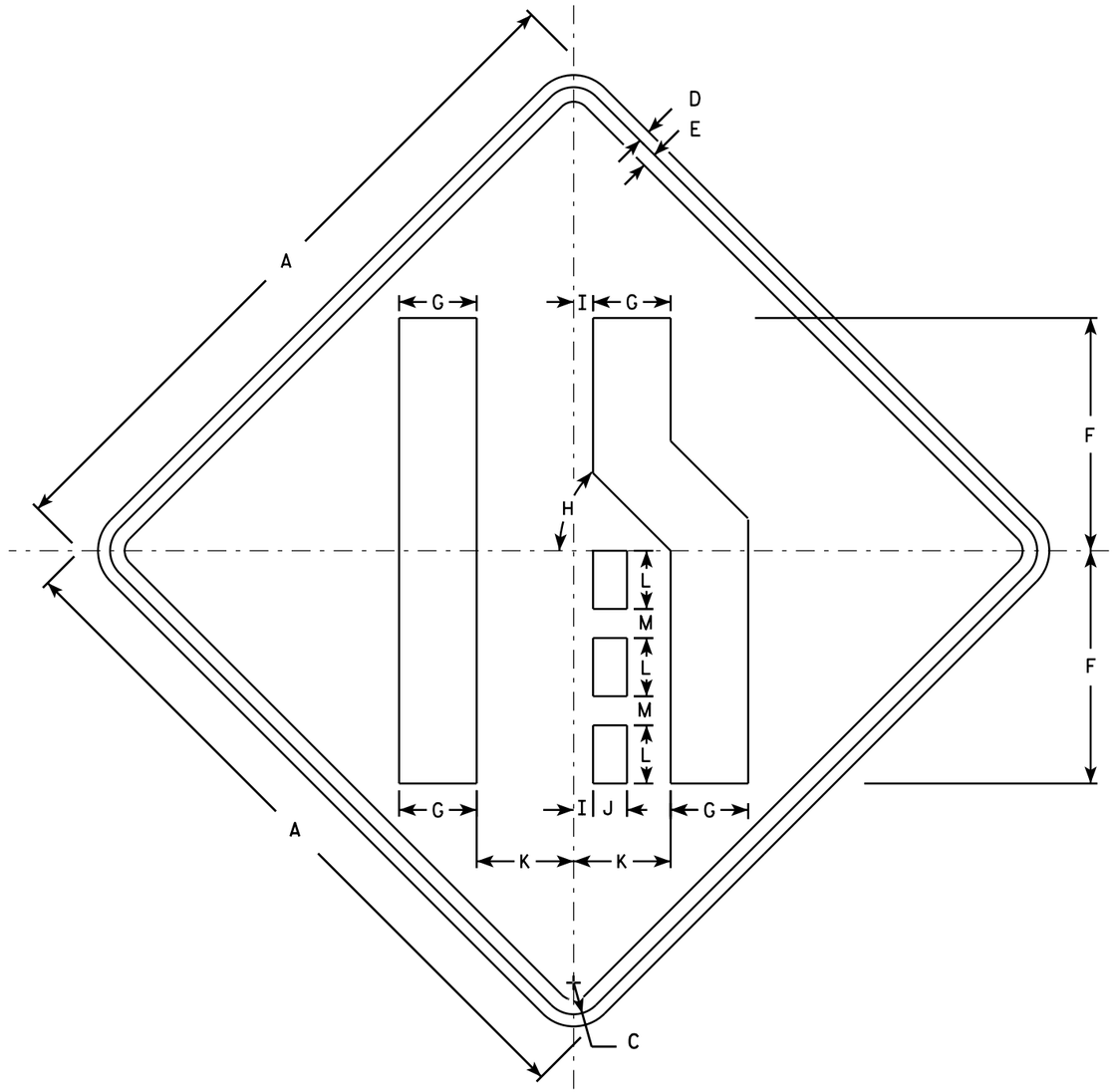
STANDARD SIGN
W21-5B

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: 189	E



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

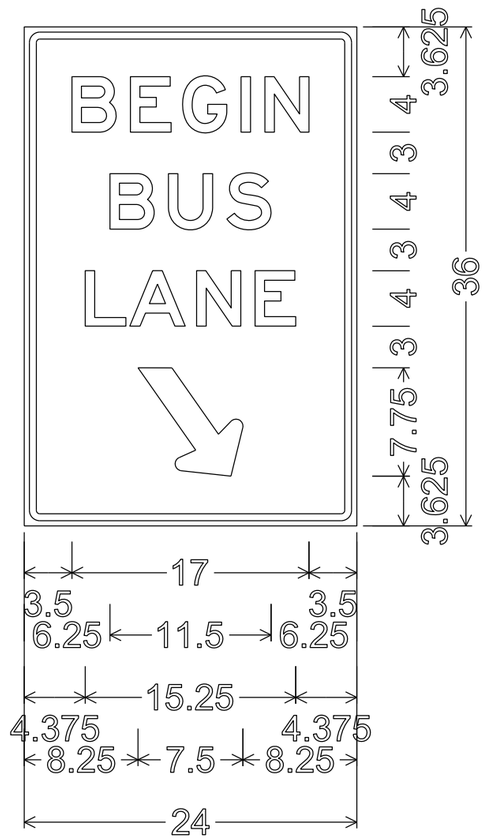
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 190 W04-2.1

PROJECT NO: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W042.DGN PLOT DATE : 20-NOV-2013 11:43 PLOT BY : mscsja

WISDOT/CADDS SHEET 42



1.125" Radius, 0.500" Border, 0.375" Indent

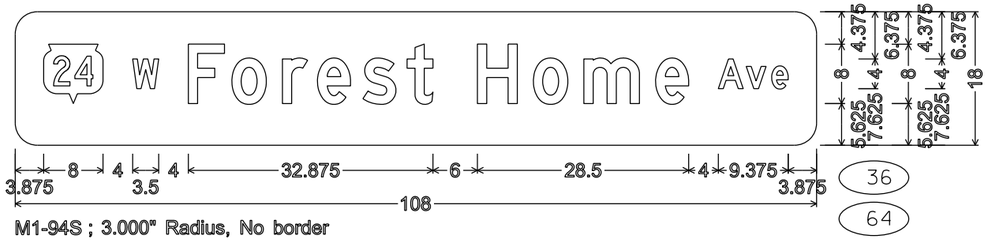
NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - E

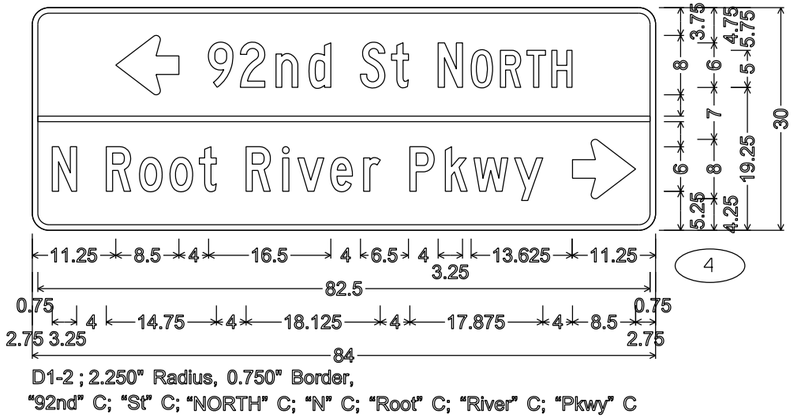
7

7

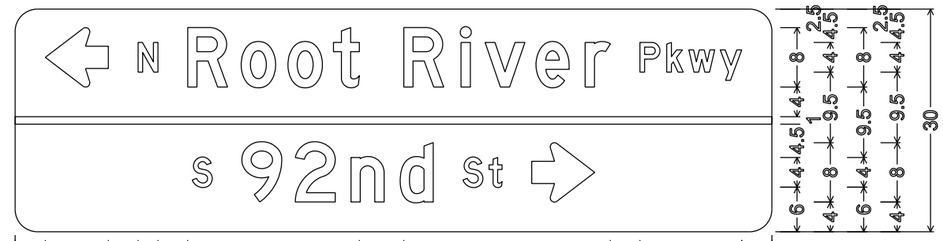
PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TEMPORARY SIGNING	SHEET NO: 191	E



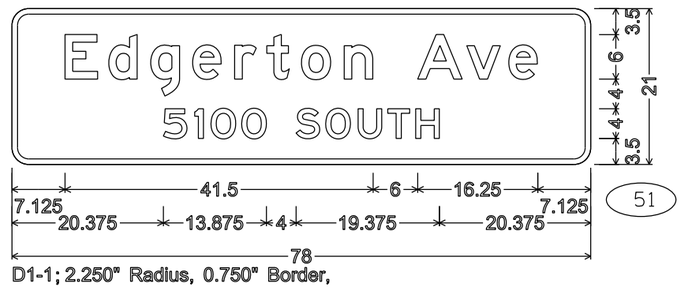
M1-94S ; 3.000" Radius, No border



D1-2 ; 2.250" Radius, 0.750" Border,
"92nd" C; "St" C; "NORTH" C; "N" C; "Root" C; "River" C; "Pkwy" C



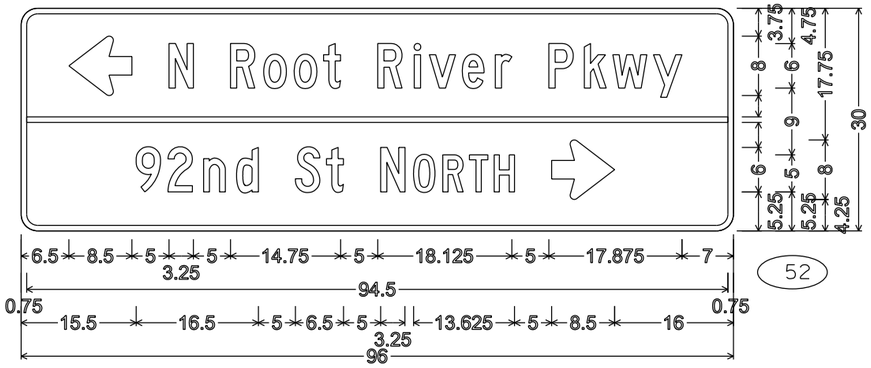
M1-94H; 3.000" Radius, No border



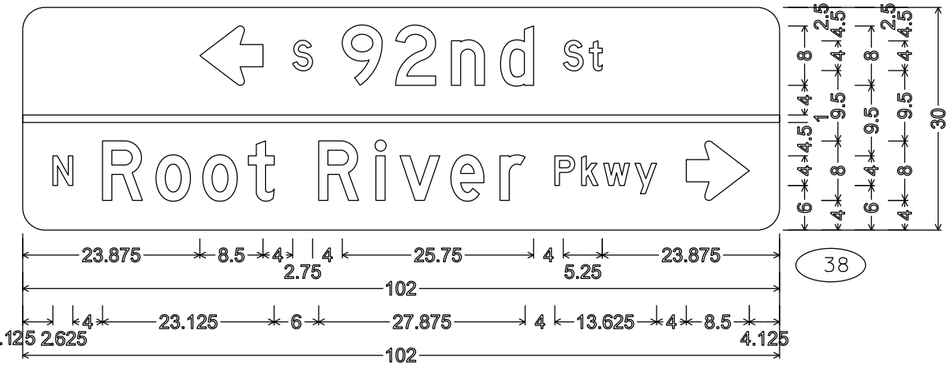
D1-1; 2.250" Radius, 0.750" Border,
"Edgerton" E; "Ave" E; "5100" E; "SOUTH" E

NOTES

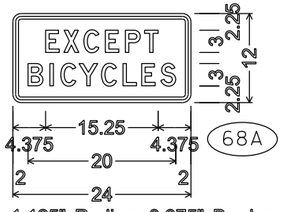
1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green except as noted
   Message - White except as noted
3. Message Series - D except as noted
4. M1-94H base material is .125" alumninum



D1-2; 2.250" Radius, 0.750" Border,
"N" C; "Root" C; "River" C; "Pkwy" C; "92nd" C; "St" C; "NORTH" C



M1-94H; 3.000" Radius, No border



1.125" Radius, 0.375" Border, 0.375" Indent, Black on White;

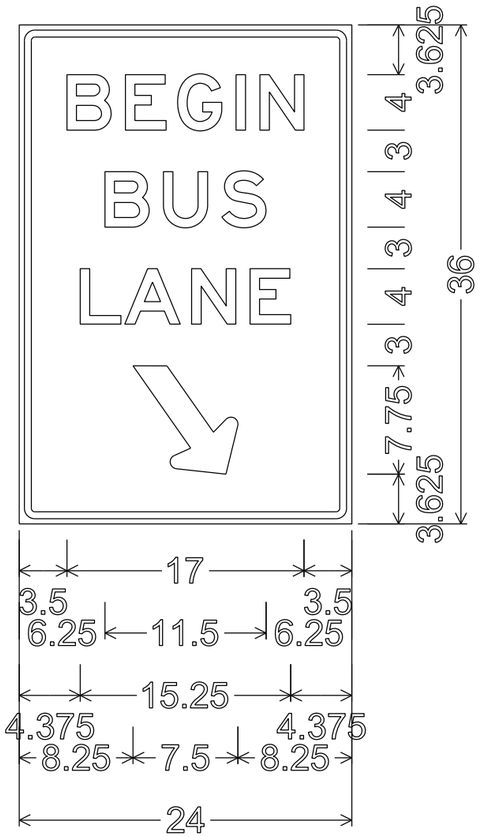
7

7

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET NO: 192	E

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - E



1.125" Radius, 0.500" Border, 0.375" Indent

7

7

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	TEMPORARY SIGNING	SHEET NO: 193	E

Division	From/To Station	Location	205.0100 Common Excavation (1)		Salvaged/Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	208.0100 Borrow	Comment:
STH 24			Cut (2)	EBS Excavation (3)				Factor 1.30				
			359		127	232	27	35		197		
STH 24 Subtotal			359	0	127	232	27	35	0	197	0	
92nd Street/Root River Parkway												
92nd Street			326		124	201	0.2	0		201		
Root River Parkway			6		3	4	0.4	1		3		
92nd Street/Root River Parkway Subtotal			332	0	127	205	1	1	0	204	0	
Grand Total			691	0	254	436	28	36	0	400	0	
Total Common Exc			691									

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/Unusuable Pavement Material

(13) Expanded Fill Factor = 1.3

(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.

Division -- STH 24

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	Expanded EBS Backfill 1.30 Note 5	Reduced EBS in Fill 0.80 Note 7	Mass Ordinate Note 8
							Note 1	Note 2	Note 3		Note 1				
161+74.68	16174.68	0.00	19.69	11.82	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
161+75	16175.00	0.32	19.74	11.85	0.46	0.00	0.23	0.14	0.01	0.00	0.23	0.01	0.00	0.00	0.09
161+80	16180.00	5.00	20.13	12.08	0.19	0.00	3.69	2.22	0.06	0.00	3.92	0.08	0.00	0.00	1.49
161+85	16185.00	5.00	20.45	12.27	0.19	0.00	3.76	2.25	0.04	0.00	7.68	0.13	0.00	0.00	2.95
161+90	16190.00	5.00	21.17	12.70	0.25	0.00	3.85	2.31	0.04	0.00	11.53	0.18	0.00	0.00	4.44
161+95	16195.00	5.00	21.48	12.89	0.38	0.00	3.95	2.37	0.06	0.00	15.48	0.25	0.00	0.00	5.94
162+00	16200.00	5.00	21.55	12.93	0.61	0.00	3.98	2.39	0.09	0.00	19.47	0.37	0.00	0.00	7.42
162+05	16205.00	5.00	21.76	13.06	0.73	0.00	4.01	2.41	0.12	0.00	23.48	0.52	0.00	0.00	8.87
162+10	16210.00	5.00	22.27	13.36	0.67	0.00	4.08	2.45	0.13	0.00	27.55	0.68	0.00	0.00	10.34
162+15	16215.00	5.00	22.60	13.56	0.70	0.00	4.15	2.49	0.13	0.00	31.71	0.84	0.00	0.00	11.84
162+20	16220.00	5.00	22.82	13.69	0.64	0.00	4.21	2.52	0.12	0.00	35.91	1.00	0.00	0.00	13.37
162+25	16225.00	5.00	22.64	13.59	0.70	0.00	4.21	2.53	0.12	0.00	40.12	1.15	0.00	0.00	14.90
162+30	16230.00	5.00	22.45	13.47	0.74	0.00	4.18	2.51	0.13	0.00	44.30	1.32	0.00	0.00	16.40
162+35	16235.00	5.00	22.21	13.33	0.79	0.00	4.14	2.48	0.14	0.00	48.44	1.50	0.00	0.00	17.88
162+40	16240.00	5.00	22.07	13.24	0.82	0.00	4.10	2.46	0.15	0.00	52.54	1.68	0.00	0.00	19.33
162+45	16245.00	5.00	21.82	13.09	0.88	0.00	4.06	2.44	0.16	0.00	56.60	1.88	0.00	0.00	20.76
162+50	16250.00	5.00	21.71	13.02	0.92	0.00	4.03	2.42	0.17	0.00	60.63	2.09	0.00	0.00	22.17
162+55	16255.00	5.00	21.70	13.02	0.84	0.00	4.02	2.41	0.16	0.00	64.65	2.29	0.00	0.00	23.57
162+56.27	16256.27	1.27	21.73	13.04	0.83	0.00	1.02	0.61	0.04	0.00	65.68	2.34	0.00	0.00	23.93
162+60	16260.00	3.73	21.75	13.05	0.82	0.00	3.00	1.80	0.11	0.00	68.68	2.48	0.00	0.00	24.99
162+65	16265.00	5.00	23.82	14.29	0.78	0.00	4.22	2.53	0.15	0.00	72.89	2.67	0.00	0.00	26.49
162+70	16270.00	5.00	23.92	14.35	0.69	0.00	4.42	2.65	0.14	0.00	77.32	2.84	0.00	0.00	28.09
162+75	16275.00	5.00	23.97	14.38	0.63	0.00	4.43	2.66	0.12	0.00	81.75	2.99	0.00	0.00	29.71
162+80	16280.00	5.00	23.27	13.96	0.56	0.00	4.37	2.62	0.11	0.00	86.12	3.13	0.00	0.00	31.32
162+85	16285.00	5.00	23.32	13.99	0.68	0.00	4.31	2.59	0.11	0.00	90.44	3.27	0.00	0.00	32.90
162+90	16290.00	5.00	28.66	20.19	0.18	0.00	4.81	3.17	0.08	0.00	95.25	3.37	0.00	0.00	34.45
162+95	16295.00	5.00	38.20	25.92	0.15	0.00	6.19	4.27	0.03	0.00	101.44	3.41	0.00	0.00	36.33
163+00	16300.00	5.00	46.92	31.15	0.06	0.00	7.88	5.28	0.02	0.00	109.32	3.43	0.00	0.00	38.91
163+05	16305.00	5.00	29.65	20.79	0.01	0.00	7.09	4.81	0.01	0.00	116.41	3.44	0.00	0.00	41.18
163+10	16310.00	5.00	34.66	23.79	0.19	0.00	5.95	4.13	0.02	0.00	122.36	3.46	0.00	0.00	42.98
163+15	16315.00	5.00	44.57	29.74	0.90	0.00	7.34	4.96	0.10	0.00	129.70	3.59	0.00	0.00	45.23
163+20	16320.00	5.00	50.41	33.25	0.03	0.00	8.79	5.83	0.09	0.00	138.49	3.70	0.00	0.00	48.09
163+21.48	16321.48	1.48	48.88	32.33	0.00	0.00	2.72	1.80	0.00	0.00	141.22	3.70	0.00	0.00	49.01
163+80	16380.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	141.22	3.70	0.00	0.00	49.01
163+85	16385.00	5.00	43.08	28.85	0.00	0.00	3.99	2.67	0.00	0.00	145.21	3.70	0.00	0.00	50.33
163+90	16390.00	5.00	44.52	29.71	0.02	0.00	8.11	5.42	0.00	0.00	153.32	3.70	0.00	0.00	53.02
163+95	16395.00	5.00	40.61	27.36	0.16	0.00	7.88	5.28	0.02	0.00	161.20	3.72	0.00	0.00	55.59
164+00	16400.00	5.00	36.81	6.00	0.37	0.00	7.17	3.09	0.05	0.00	168.37	3.78	0.00	0.00	59.61
164+05	16405.00	5.00	34.76	6.00	0.29	0.00	6.63	1.11	0.06	0.00	174.99	3.86	0.00	0.00	65.05
164+10	16410.00	5.00	36.62	6.00	0.21	0.00	6.61	1.11	0.05	0.00	181.60	3.92	0.00	0.00	70.49
164+15	16415.00	5.00	37.97	6.00	0.00	0.00	6.91	1.11	0.02	0.00	188.51	3.94	0.00	0.00	76.26
164+20	16420.00	5.00	30.33	6.00	0.05	0.00	6.32	1.11	0.00	0.00	194.83	3.95	0.00	0.00	81.47
164+25	16425.00	5.00	24.83	6.00	0.96	0.00	5.11	1.11	0.09	0.00	199.94	4.06	0.00	0.00	85.35
164+30	16430.00	5.00	19.15	1.50	1.21	0.00	4.07	0.69	0.20	0.00	204.01	4.31	0.00	0.00	88.48

Division -- STH 24

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) Expanded EBS Backfill 1.30	Cumulative Vol (CY) Reduced EBS in Fill 0.80	Cumulative Vol (CY) Mass Ordinate
							Note 1	Note 2	Note 3		Note 1		Note 5	Note 7	Note 8
164+35	16435.00	5.00	18.52	1.50	1.01	0.00	3.49	0.28	0.21	0.00	207.50	4.57	0.00	0.00	91.43
164+40	16440.00	5.00	18.56	1.50	1.03	0.00	3.43	0.28	0.19	0.00	210.94	4.81	0.00	0.00	94.35
164+45	16445.00	5.00	18.68	1.50	1.15	0.00	3.45	0.28	0.20	0.00	214.38	5.06	0.00	0.00	97.27
164+50	16450.00	5.00	18.78	1.50	1.06	0.00	3.47	0.28	0.20	0.00	217.85	5.32	0.00	0.00	100.20
164+55	16455.00	5.00	18.89	1.50	1.07	0.00	3.49	0.28	0.20	0.00	221.34	5.56	0.00	0.00	103.17
164+60	16460.00	5.00	19.00	1.50	1.09	0.00	3.51	0.28	0.20	0.00	224.85	5.81	0.00	0.00	106.15
164+65	16465.00	5.00	19.09	1.50	1.10	0.00	3.53	0.28	0.20	0.00	228.38	6.07	0.00	0.00	109.14
164+70	16470.00	5.00	19.19	1.50	1.11	0.00	3.54	0.28	0.20	0.00	231.92	6.32	0.00	0.00	112.15
164+75	16475.00	5.00	19.30	1.50	1.12	0.00	3.56	0.28	0.21	0.00	235.49	6.58	0.00	0.00	115.18
164+80	16480.00	5.00	19.19	1.50	1.14	0.00	3.56	0.28	0.21	0.00	239.05	6.84	0.00	0.00	118.21
164+85	16485.00	5.00	19.01	1.50	1.17	0.00	3.54	0.28	0.21	0.00	242.59	7.11	0.00	0.00	121.20
164+90	16490.00	5.00	18.82	1.50	1.21	0.00	3.50	0.28	0.22	0.00	246.09	7.39	0.00	0.00	124.15
164+95	16495.00	5.00	18.62	1.50	1.22	0.00	3.47	0.28	0.23	0.00	249.56	7.67	0.00	0.00	127.05
165+00	16500.00	5.00	18.41	1.50	1.27	0.00	3.43	0.28	0.23	0.00	252.98	7.96	0.00	0.00	129.92
165+05	16505.00	5.00	18.21	1.50	1.28	0.00	3.39	0.28	0.24	0.00	256.37	8.25	0.00	0.00	132.73
165+10	16510.00	5.00	17.99	1.50	1.33	0.00	3.35	0.28	0.24	0.00	259.73	8.55	0.00	0.00	135.51
165+15	16515.00	5.00	17.77	1.50	1.45	0.00	3.31	0.28	0.26	0.00	263.04	8.87	0.00	0.00	138.22
165+20	16520.00	5.00	17.54	1.50	1.60	0.00	3.27	0.28	0.28	0.00	266.31	9.23	0.00	0.00	140.86
165+25	16525.00	5.00	17.31	1.50	1.80	0.00	3.23	0.28	0.32	0.00	269.53	9.62	0.00	0.00	143.41
165+30	16530.00	5.00	17.26	1.50	1.97	0.00	3.20	0.28	0.35	0.00	272.73	10.06	0.00	0.00	145.90
165+35	16535.00	5.00	17.20	1.50	2.07	0.00	3.19	0.28	0.37	0.00	275.92	10.52	0.00	0.00	148.34
165+40	16540.00	5.00	17.12	1.50	2.26	0.00	3.18	0.28	0.40	0.00	279.10	11.02	0.00	0.00	150.74
165+45	16545.00	5.00	17.03	1.50	2.39	0.00	3.16	0.28	0.43	0.00	282.26	11.56	0.00	0.00	153.09
165+50	16550.00	5.00	16.94	1.50	2.61	0.00	3.15	0.28	0.46	0.00	285.41	12.14	0.00	0.00	155.38
165+55	16555.00	5.00	16.88	1.50	2.77	0.00	3.13	0.28	0.50	0.00	288.54	12.76	0.00	0.00	157.61
165+60	16560.00	5.00	16.83	1.50	3.02	0.00	3.12	0.28	0.54	0.00	291.66	13.43	0.00	0.00	159.78
165+65	16565.00	5.00	16.81	1.50	2.93	0.00	3.12	0.28	0.55	0.00	294.78	14.12	0.00	0.00	161.93
165+70	16570.00	5.00	16.81	1.50	2.97	0.00	3.11	0.28	0.55	0.00	297.89	14.81	0.00	0.00	164.08
165+75	16575.00	5.00	16.70	1.50	3.00	0.00	3.10	0.28	0.55	0.00	300.99	15.50	0.00	0.00	166.22
165+80	16580.00	5.00	16.35	1.50	3.11	0.00	3.06	0.28	0.57	0.00	304.05	16.20	0.00	0.00	168.29
165+85	16585.00	5.00	15.78	1.50	3.18	0.00	2.97	0.28	0.58	0.00	307.03	16.93	0.00	0.00	170.26
165+90	16590.00	5.00	15.44	1.50	3.37	0.00	2.89	0.28	0.61	0.00	309.92	17.69	0.00	0.00	172.11
165+95	16595.00	5.00	15.36	1.50	3.26	0.00	2.85	0.28	0.61	0.00	312.77	18.46	0.00	0.00	173.92
166+00	16600.00	5.00	15.31	1.50	3.25	0.00	2.84	0.28	0.60	0.00	315.61	19.21	0.00	0.00	175.73
166+05	16605.00	5.00	15.22	1.50	3.07	0.00	2.83	0.28	0.59	0.00	318.43	19.94	0.00	0.00	177.55
166+10	16610.00	5.00	15.11	1.50	3.05	0.00	2.81	0.28	0.57	0.00	321.24	20.65	0.00	0.00	179.37
166+15	16615.00	5.00	14.77	1.50	3.12	0.00	2.77	0.28	0.57	0.00	324.01	21.37	0.00	0.00	181.14
166+20	16620.00	5.00	14.40	1.50	3.23	0.00	2.70	0.28	0.59	0.00	326.71	22.10	0.00	0.00	182.83
166+25	16625.00	5.00	13.86	1.50	3.48	0.00	2.62	0.28	0.62	0.00	329.33	22.88	0.00	0.00	184.39
166+30	16630.00	5.00	13.33	1.50	3.72	0.00	2.52	0.28	0.67	0.00	331.84	23.71	0.00	0.00	185.80
166+35	16635.00	5.00	12.81	1.50	3.97	0.00	2.42	0.28	0.71	0.00	334.26	24.60	0.00	0.00	187.05
166+40	16640.00	5.00	12.31	1.50	4.10	0.00	2.33	0.28	0.75	0.00	336.59	25.54	0.00	0.00	188.16
166+45	16645.00	5.00	11.84	1.50	3.97	0.00	2.24	0.28	0.75	0.00	338.83	26.47	0.00	0.00	189.19
166+50	16650.00	5.00	11.36	1.50	3.81	0.00	2.15	0.28	0.72	0.00	340.97	27.37	0.00	0.00	190.16
166+55	16655.00	5.00	10.86	1.50	3.50	0.00	2.06	0.28	0.68	0.00	343.03	28.21	0.00	0.00	191.09
166+60	16660.00	5.00	10.32	1.50	3.24	0.00	1.96	0.28	0.62	0.00	344.99	28.99	0.00	0.00	192.00
166+65	16665.00	5.00	9.75	1.50	2.87	0.00	1.86	0.28	0.57	0.00	346.85	29.70	0.00	0.00	192.87

Division -- STH 24

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 5	Cumulative Vol (CY) Reduced EBS in Fill 0.80 Note 7	Mass Ordinate Note 8
							Note 1	Note 2	Note 3		Note 1				
166+70	16670.00	5.00	9.14	1.50	2.55	0.00	1.75	0.28	0.50	0.00	348.60	30.33	0.00	0.00	193.71
166+75	16675.00	5.00	8.52	1.50	2.26	0.00	1.63	0.28	0.45	0.00	350.24	30.89	0.00	0.00	194.52
166+80	16680.00	5.00	7.85	1.50	2.04	0.00	1.52	0.28	0.40	0.00	351.75	31.38	0.00	0.00	195.26
166+85	16685.00	5.00	7.17	1.50	1.85	0.00	1.39	0.28	0.36	0.00	353.14	31.83	0.00	0.00	195.92
166+90	16690.00	5.00	6.45	1.50	1.60	0.00	1.26	0.28	0.32	0.00	354.40	32.23	0.00	0.00	196.50
166+95	16695.00	5.00	5.68	1.50	1.44	0.00	1.12	0.28	0.28	0.00	355.53	32.59	0.00	0.00	196.99
167+00	16700.00	5.00	4.90	1.50	1.23	0.00	0.98	0.28	0.25	0.00	356.51	32.89	0.00	0.00	197.39
167+05	16705.00	5.00	4.07	1.50	1.08	0.00	0.83	0.28	0.21	0.00	357.34	33.16	0.00	0.00	197.67
167+07.04	16707.04	2.04	3.73	1.50	1.02	0.00	0.29	0.11	0.08	0.00	357.63	33.26	0.00	0.00	197.76
167+10	16710.00	2.96	3.22	1.50	0.91	0.00	0.38	0.16	0.11	0.00	358.01	33.39	0.00	0.00	197.84
167+15	16715.00	5.00	2.34	1.50	0.80	0.00	0.51	0.28	0.16	0.00	358.53	33.59	0.00	0.00	197.88
167+19.39	16719.39	4.39	1.54	0.92	0.66	0.00	0.32	0.20	0.12	0.00	358.84	33.74	0.00	0.00	197.85
							359	127	27	0					

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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	EARTHWORK – STH 24	SHEET: 197	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

Division -- 92nd St - North

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.25	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 5	Reduced EBS in Fill 0.80 Note 7	Mass Ordinate Note 8
51+00	5100.00	0.00	37.31	13.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51+05	5105.00	5.00	40.37	14.63	0.77	0.00	7.19	2.63	0.07	0.00	7.19	0.09	0.00	0.00	4.47
51+10	5110.00	5.00	32.06	12.44	0.28	0.00	6.71	2.51	0.10	0.00	13.90	0.21	0.00	0.00	8.55
51+15	5115.00	5.00	33.30	12.77	0.09	0.00	6.05	2.33	0.03	0.00	19.95	0.25	0.00	0.00	12.22
51+20	5120.00	5.00	16.95	8.47	0.12	0.00	4.65	1.97	0.02	0.00	24.60	0.28	0.00	0.00	14.88
51+25	5125.00	5.00	43.13	15.36	0.00	0.00	5.56	2.21	0.01	0.00	30.16	0.29	0.00	0.00	18.22
51+30	5130.00	5.00	47.03	16.38	0.00	0.00	8.35	2.94	0.00	0.00	38.51	0.29	0.00	0.00	23.63
51+35	5135.00	5.00	45.67	16.03	0.00	0.00	8.58	3.00	0.00	0.00	47.10	0.29	0.00	0.00	29.22
51+35.96	5135.96	0.96	45.42	15.96	0.00	0.00	1.62	0.57	0.00	0.00	48.71	0.29	0.00	0.00	30.27
51+40	5140.00	4.04	44.69	15.77	0.00	0.00	6.74	2.37	0.00	0.00	55.46	0.29	0.00	0.00	34.63
51+45	5145.00	5.00	42.58	15.21	0.00	0.00	8.08	2.87	0.00	0.00	63.54	0.29	0.00	0.00	39.85
51+50	5150.00	5.00	42.58	15.21	0.00	0.00	7.88	2.82	0.00	0.00	71.42	0.29	0.00	0.00	44.91
51+55	5155.00	5.00	42.95	15.31	0.00	0.00	7.92	2.83	0.00	0.00	79.34	0.29	0.00	0.00	50.01
51+60	5160.00	5.00	43.53	15.46	0.00	0.00	8.01	2.85	0.00	0.00	87.35	0.29	0.00	0.00	55.16
51+65	5165.00	5.00	43.81	15.54	0.00	0.00	8.09	2.87	0.00	0.00	95.44	0.29	0.00	0.00	60.38
51+70	5170.00	5.00	44.05	15.60	0.00	0.00	8.13	2.88	0.00	0.00	103.57	0.29	0.00	0.00	65.63
51+75	5175.00	5.00	44.50	15.72	0.00	0.00	8.20	2.90	0.00	0.00	111.77	0.29	0.00	0.00	70.93
51+80	5180.00	5.00	44.77	15.79	0.00	0.00	8.27	2.92	0.00	0.00	120.04	0.29	0.00	0.00	76.28
51+85	5185.00	5.00	45.71	16.04	0.00	0.00	8.38	2.95	0.00	0.00	128.41	0.29	0.00	0.00	81.71
51+90	5190.00	5.00	46.01	16.12	0.00	0.00	8.49	2.98	0.00	0.00	136.91	0.29	0.00	0.00	87.23
51+95	5195.00	5.00	46.36	16.21	0.00	0.00	8.55	2.99	0.00	0.00	145.46	0.29	0.00	0.00	92.79
52+00	5200.00	5.00	46.07	16.13	0.00	0.00	8.56	2.99	0.00	0.00	154.02	0.29	0.00	0.00	98.35
52+05	5205.00	5.00	45.52	15.99	0.00	0.00	8.48	2.97	0.00	0.00	162.50	0.29	0.00	0.00	103.86
52+10	5210.00	5.00	45.65	16.02	0.00	0.00	8.44	2.96	0.00	0.00	170.94	0.29	0.00	0.00	109.34
52+15	5215.00	5.00	33.37	12.79	0.00	0.00	7.32	2.67	0.00	0.00	178.25	0.29	0.00	0.00	113.98
52+20	5220.00	5.00	33.83	12.91	0.00	0.00	6.22	2.38	0.00	0.00	184.48	0.29	0.00	0.00	117.83
52+25	5225.00	5.00	33.70	12.88	0.00	0.00	6.25	2.39	0.00	0.00	190.73	0.29	0.00	0.00	121.69
52+30	5230.00	5.00	34.08	12.98	0.00	0.00	6.28	2.39	0.00	0.00	197.01	0.29	0.00	0.00	125.57
52+32.4	5232.40	2.40	33.96	12.94	0.00	0.00	3.03	1.15	0.00	0.00	200.03	0.29	0.00	0.00	127.45
52+35	5235.00	2.60	34.13	12.99	0.00	0.00	3.28	1.25	0.00	0.00	203.31	0.29	0.00	0.00	129.48
52+40	5240.00	5.00	34.47	13.08	0.00	0.00	6.35	2.41	0.00	0.00	209.66	0.29	0.00	0.00	133.41
52+45	5245.00	5.00	34.04	12.97	0.00	0.00	6.34	2.41	0.00	0.00	216.01	0.29	0.00	0.00	137.35
52+50	5250.00	5.00	31.92	12.41	0.00	0.00	6.11	2.35	0.00	0.00	222.11	0.29	0.00	0.00	141.11
52+55	5255.00	5.00	34.24	13.02	0.00	0.00	6.13	2.35	0.00	0.00	228.24	0.29	0.00	0.00	144.88
52+60	5260.00	5.00	37.97	14.00	0.00	0.00	6.69	2.50	0.00	0.00	234.93	0.29	0.00	0.00	149.06
52+65	5265.00	5.00	36.20	13.54	0.00	0.00	6.87	2.55	0.00	0.00	241.79	0.29	0.00	0.00	153.38
52+70	5270.00	5.00	35.20	13.27	0.00	0.00	6.61	2.48	0.00	0.00	248.41	0.29	0.00	0.00	157.51
52+75	5275.00	5.00	33.22	12.75	0.00	0.00	6.34	2.41	0.00	0.00	254.74	0.29	0.00	0.00	161.43
52+80	5280.00	5.00	31.73	12.36	0.00	0.00	6.01	2.32	0.00	0.00	260.75	0.29	0.00	0.00	165.12
52+85	5285.00	5.00	29.57	11.79	0.00	0.00	5.68	2.24	0.00	0.00	266.43	0.29	0.00	0.00	168.56
52+90	5290.00	5.00	28.09	11.40	0.00	0.00	5.34	2.15	0.00	0.00	271.77	0.29	0.00	0.00	171.76
52+95	5295.00	5.00	27.40	11.22	0.00	0.00	5.14	2.09	0.00	0.00	276.91	0.29	0.00	0.00	174.80
53+00	5300.00	5.00	25.45	10.71	0.00	0.00	4.89	2.03	0.00	0.00	281.80	0.29	0.00	0.00	177.66
53+05	5305.00	5.00	23.91	10.30	0.00	0.00	4.57	1.94	0.00	0.00	286.37	0.29	0.00	0.00	180.29
53+10	5310.00	5.00	20.10	9.30	0.00	0.00	4.07	1.81	0.00	0.00	290.45	0.29	0.00	0.00	182.55
53+15	5315.00	5.00	21.21	9.59	0.00	0.00	3.83	1.75	0.00	0.00	294.27	0.29	0.00	0.00	184.62
53+20	5320.00	5.00	21.28	9.61	0.00	0.00	3.93	1.78	0.00	0.00	298.21	0.29	0.00	0.00	186.78
53+25	5325.00	5.00	20.46	9.39	0.00	0.00	3.86	1.76	0.00	0.00	302.07	0.29	0.00	0.00	188.89
53+28.84	5328.84	3.84	19.75	9.21	0.00	0.00	2.86	1.32	0.00	0.00	304.93	0.29	0.00	0.00	190.42
53+30	5330.00	1.16	19.60	9.17	0.00	0.00	0.84	0.39	0.00	0.00	305.77	0.29	0.00	0.00	190.87
53+35	5335.00	5.00	18.65	8.92	0.00	0.00	3.54	1.67	0.00	0.00	309.32	0.29	0.00	0.00	192.74
53+40	5340.00	5.00	17.89	8.72	0.00	0.00	3.38	1.63	0.00	0.00	312.70	0.29	0.00	0.00	194.49
53+45	5345.00	5.00	17.24	8.55	0.00	0.00	3.25	1.60	0.00	0.00	315.95	0.29	0.00	0.00	196.15
53+50	5350.00	5.00	16.77	8.42	0.00	0.00	3.15	1.57	0.00	0.00	319.10	0.29	0.00	0.00	197.73
53+55	5355.00	5.00	15.58	8.11	0.00	0.00	2.99	1.53	0.00	0.00	322.10	0.29	0.00	0.00	199.19
53+60	5360.00	5.00	13.72	7.62	0.09	0.00	2.71	1.46	0.01	0.00	324.81	0.30	0.00	0.00	200.44
53+61.52	5361.52	1.52	13.54	7.57	0.08	0.00	0.77	0.43	0.00	0.00	325.57	0.31	0.00	0.00	200.77
							326	124	0.2	0					

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	EARTHWORK – 92nd STREET / CTH N	SHEET: 198	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

Division -- Root River Parkway SE

			AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)				
STATION	Real Station	Distance	Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Cut	Expanded Fill	Expanded EBS Backfill	Reduced EBS in Fill	Mass Ordinate
											1.00	1.25	1.30	0.80	
							Note 1	Note 2	Note 3		Note 1		Note 5	Note 7	Note 8
49+75.44	4975.44	0.00	0.48	0.25	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49+80	4980.00	4.56	1.63	1.50	0.15	0.00	0.18	0.15	0.02	0.00	0.18	0.03	0.00	0.00	0.00
49+85	4985.00	5.00	1.45	1.50	0.21	0.00	0.29	0.28	0.03	0.00	0.46	0.07	0.00	0.00	-0.03
49+90	4990.00	5.00	1.17	1.50	1.20	0.00	0.24	0.28	0.13	0.00	0.71	0.23	0.00	0.00	-0.23
49+95	4995.00	5.00	27.42	8.00	0.00	0.00	2.65	0.88	0.11	0.00	3.35	0.37	0.00	0.00	1.40
50+00	5000.00	5.00	2.10	1.50	0.90	0.00	2.73	0.88	0.08	0.00	6.09	0.48	0.00	0.00	3.15
50+03.44	5003.44	3.44	0.30	0.00	0.00	0.00	0.15	0.10	0.06	0.00	6.24	0.55	0.00	0.00	3.13
							6.24	2.56	0.44	0.00					

730
720
710
-150 -140 -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

RL
SAN
WAT
EE
13.4%
1.2%
721.56
-6.00
720.37
-2.42
720.33
-1.77
720.83
-1.77
720.17
-14.00
161+75

730
720
710
-150 -140 -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

RL
SAN
WAT
EE
13.6%
1.2%
721.56
-6.00
720.38
-2.42
720.33
-1.77
720.17
-14.00
161+75
10 FT
20 FT

9

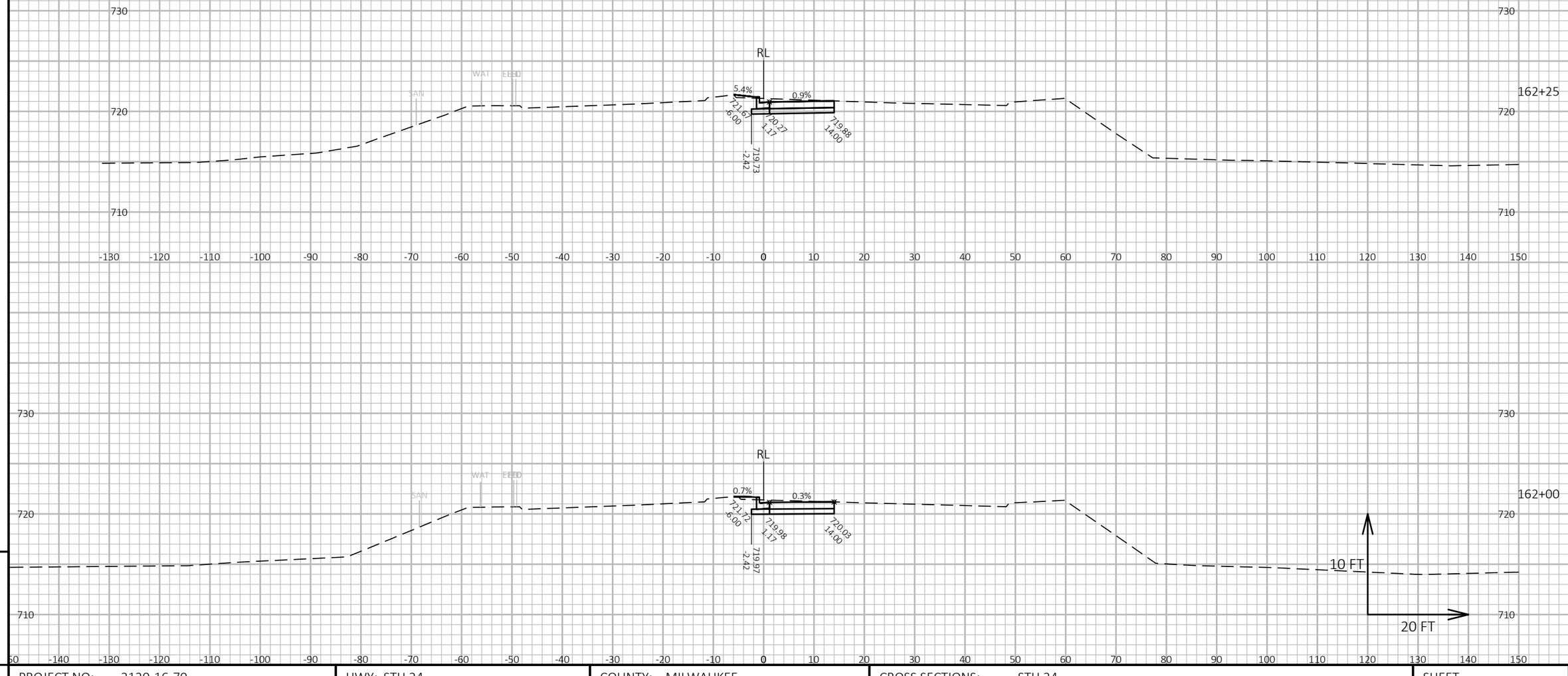
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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 200	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (1)

PLOT DATE : 3/28/2019 1:46 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

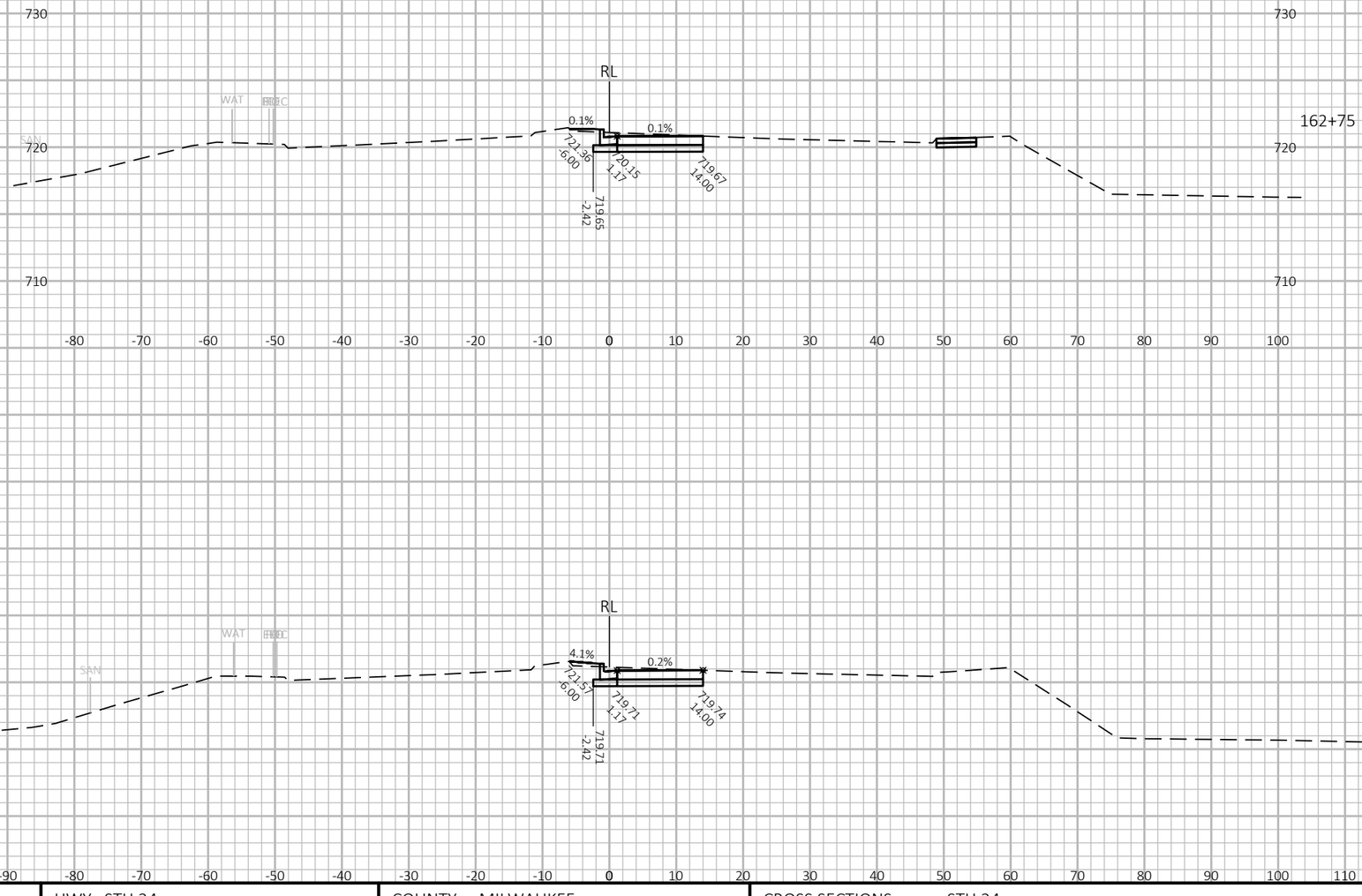
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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 201	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (2)

PLOT DATE : 3/28/2019 1:46 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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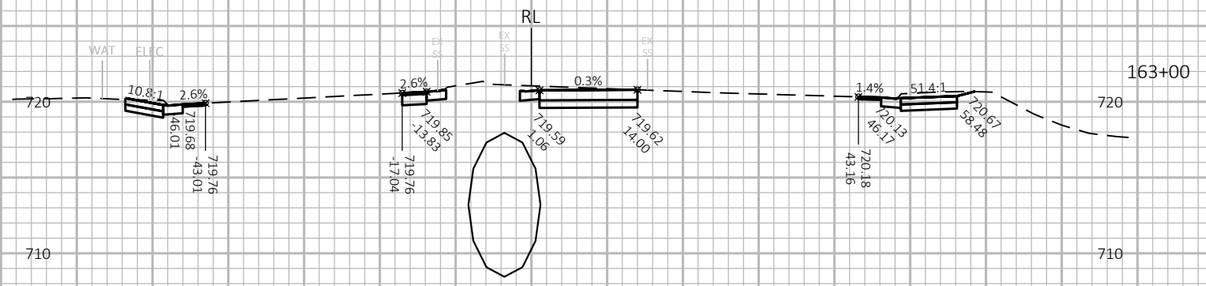
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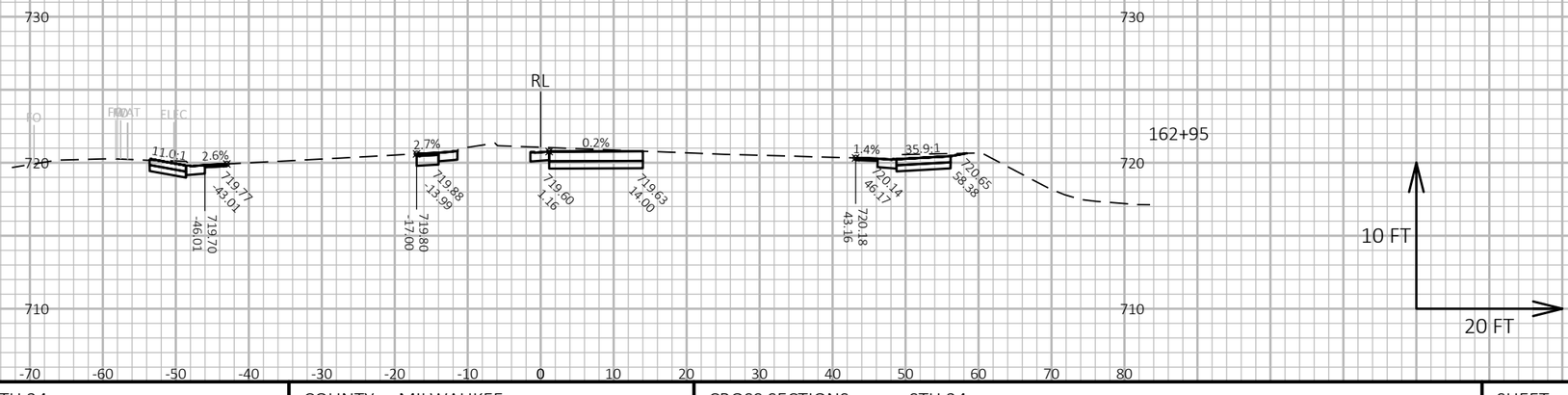
PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 202	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (3)

PLOT DATE : 3/28/2019 1:46 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





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9

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 203	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (4)

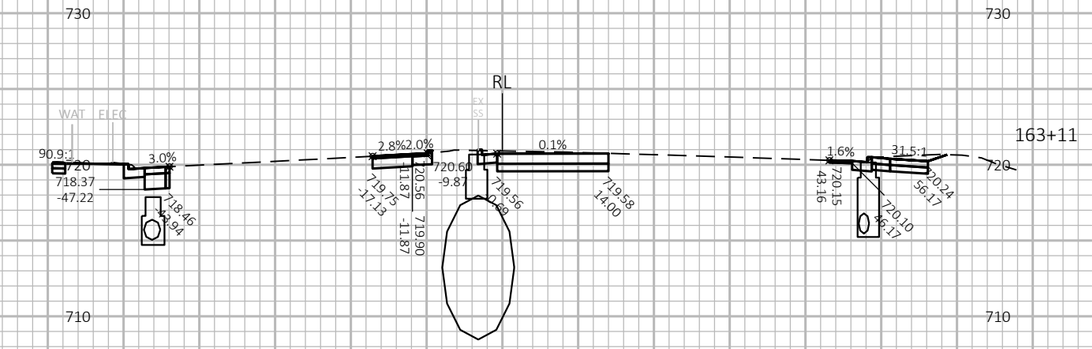
PLOT DATE : 3/28/2019 1:46 PM

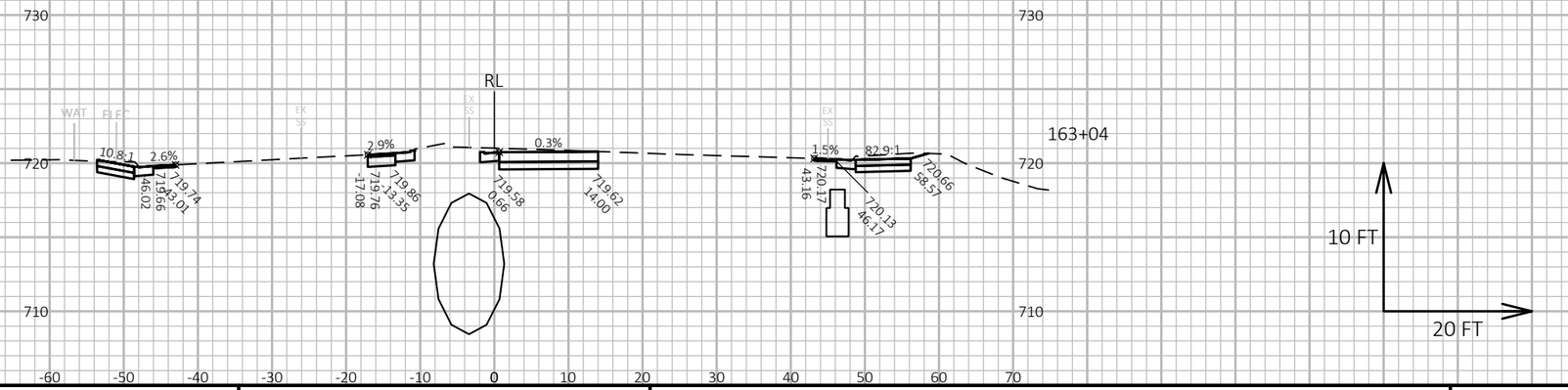
PLOT BY : MARSHALL, DAWN L

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



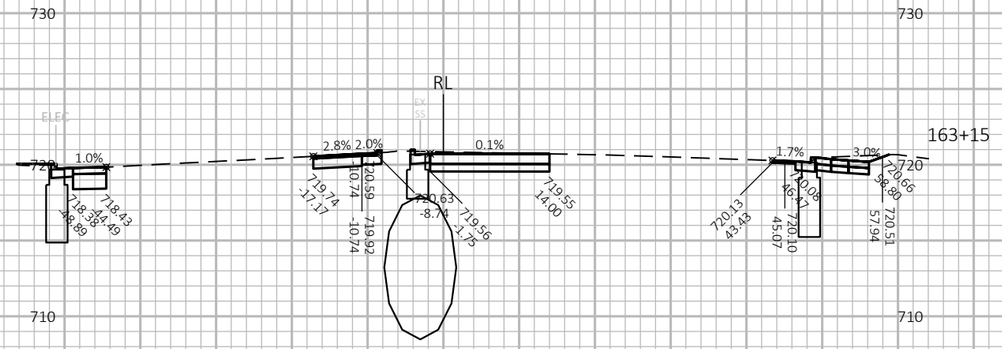


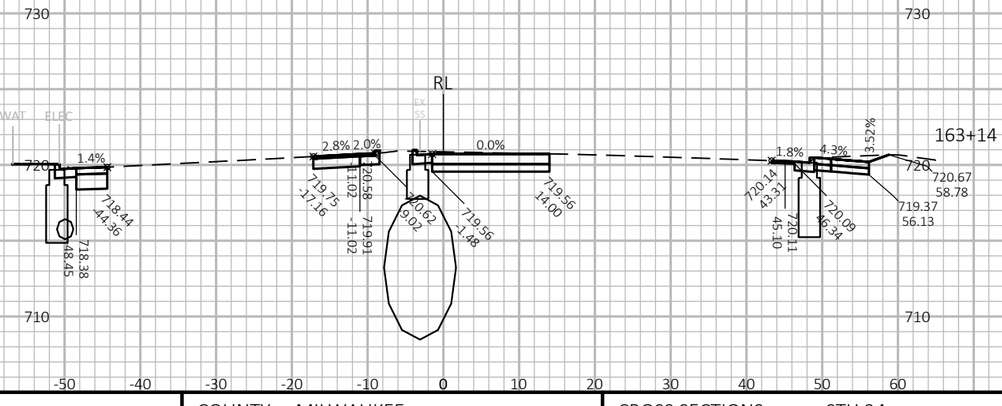
PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 204	E

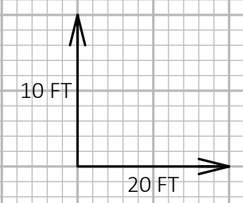
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LAYOUT NAME - Section Sheet - (5)

PLOT DATE : 3/28/2019 1:46 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49







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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 205	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (6)

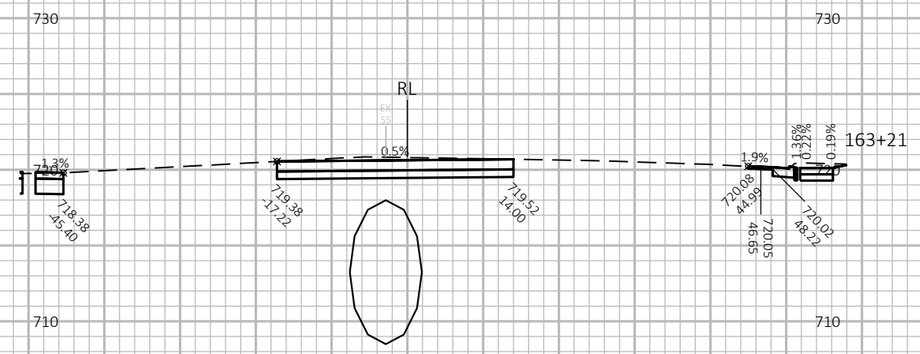
PLOT DATE : 3/28/2019 1:46 PM

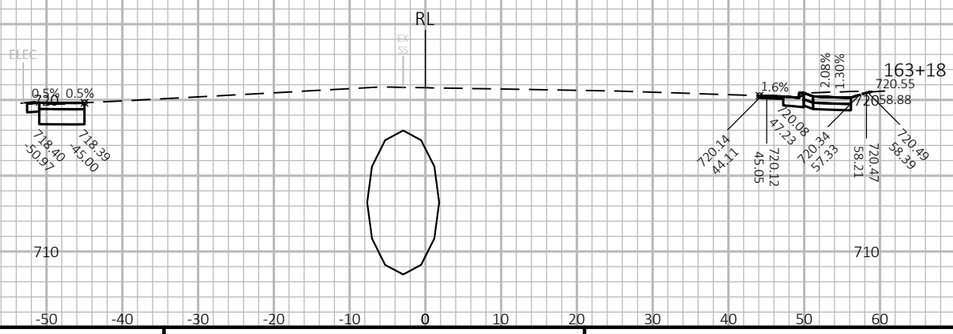
PLOT BY : MARSHALL, DAWN L

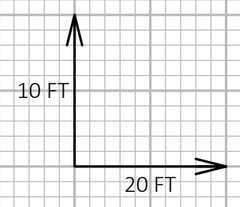
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49







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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 206	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (7)

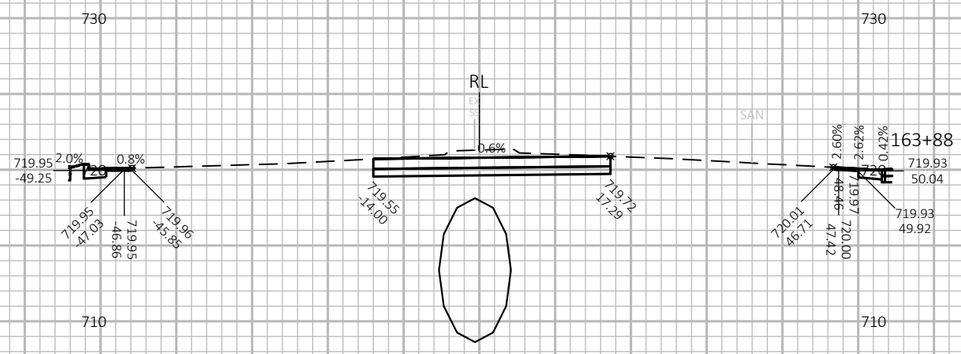
PLOT DATE : 3/28/2019 1:46 PM

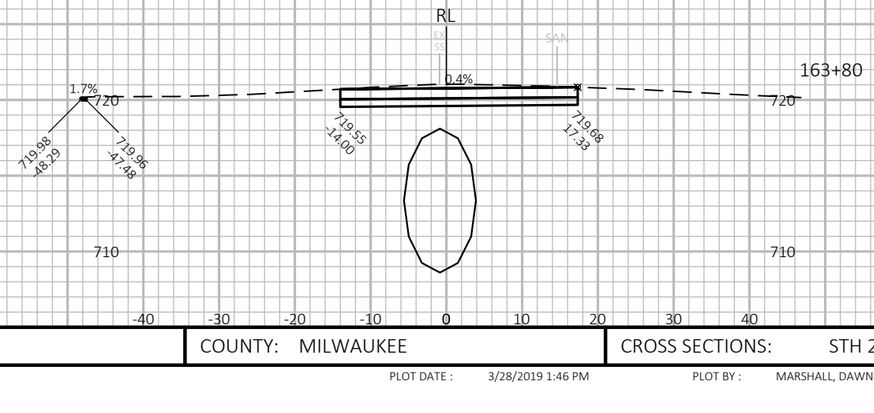
PLOT BY : MARSHALL, DAWN L

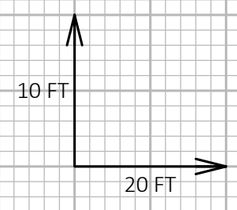
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49







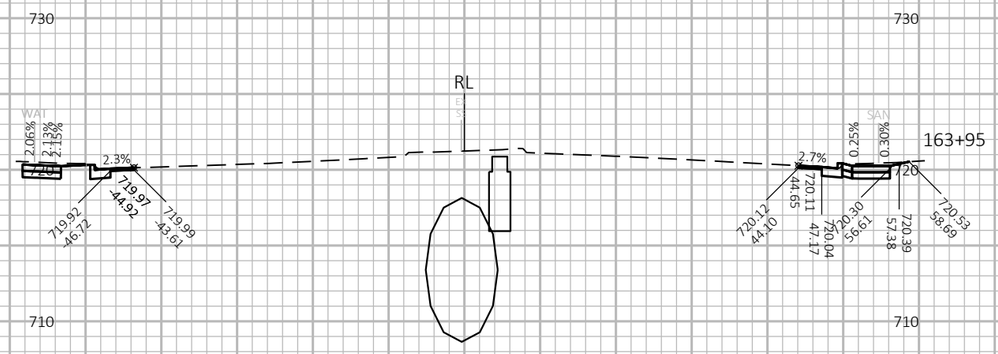
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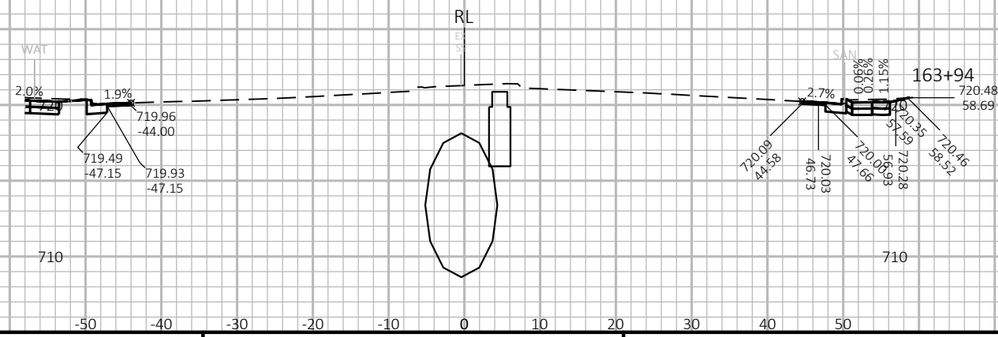
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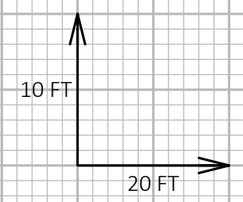
PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 207	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (8)

PLOT DATE : 3/28/2019 1:46 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.







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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 208	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (9)

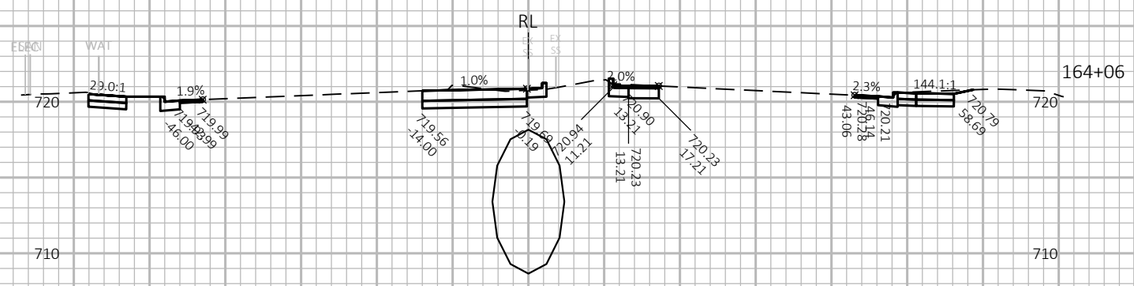
PLOT DATE : 3/28/2019 1:46 PM

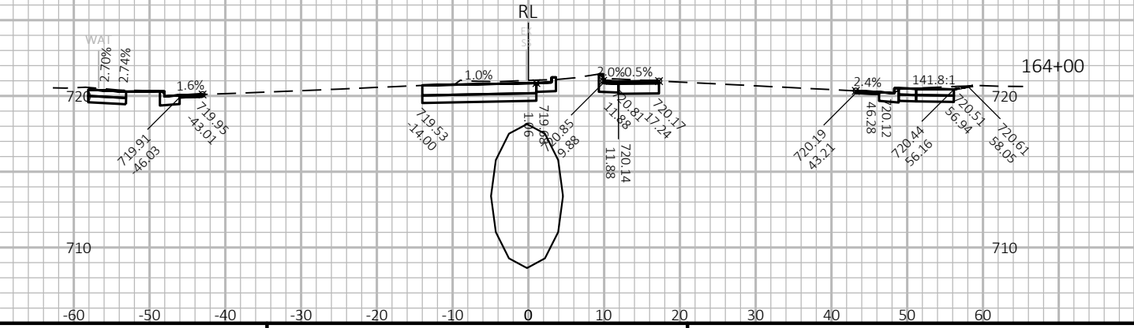
PLOT BY : MARSHALL, DAWN L

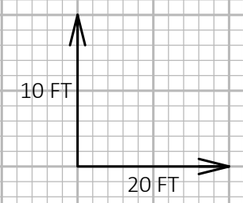
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49







9

9

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 209	E

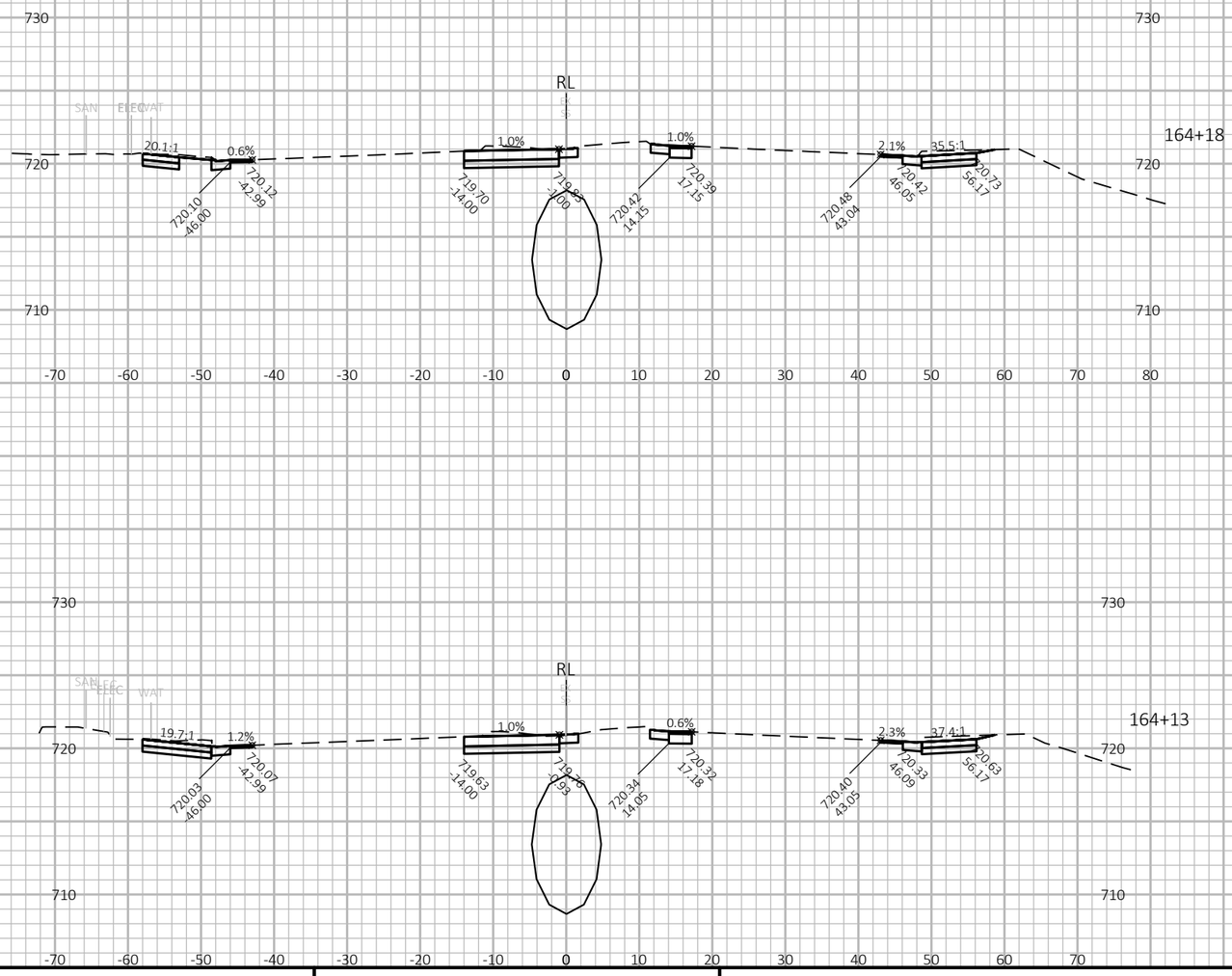
FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (10)

PLOT DATE : 3/28/2019 1:46 PM

PLOT BY : MARSHALL, DAWN L

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



9

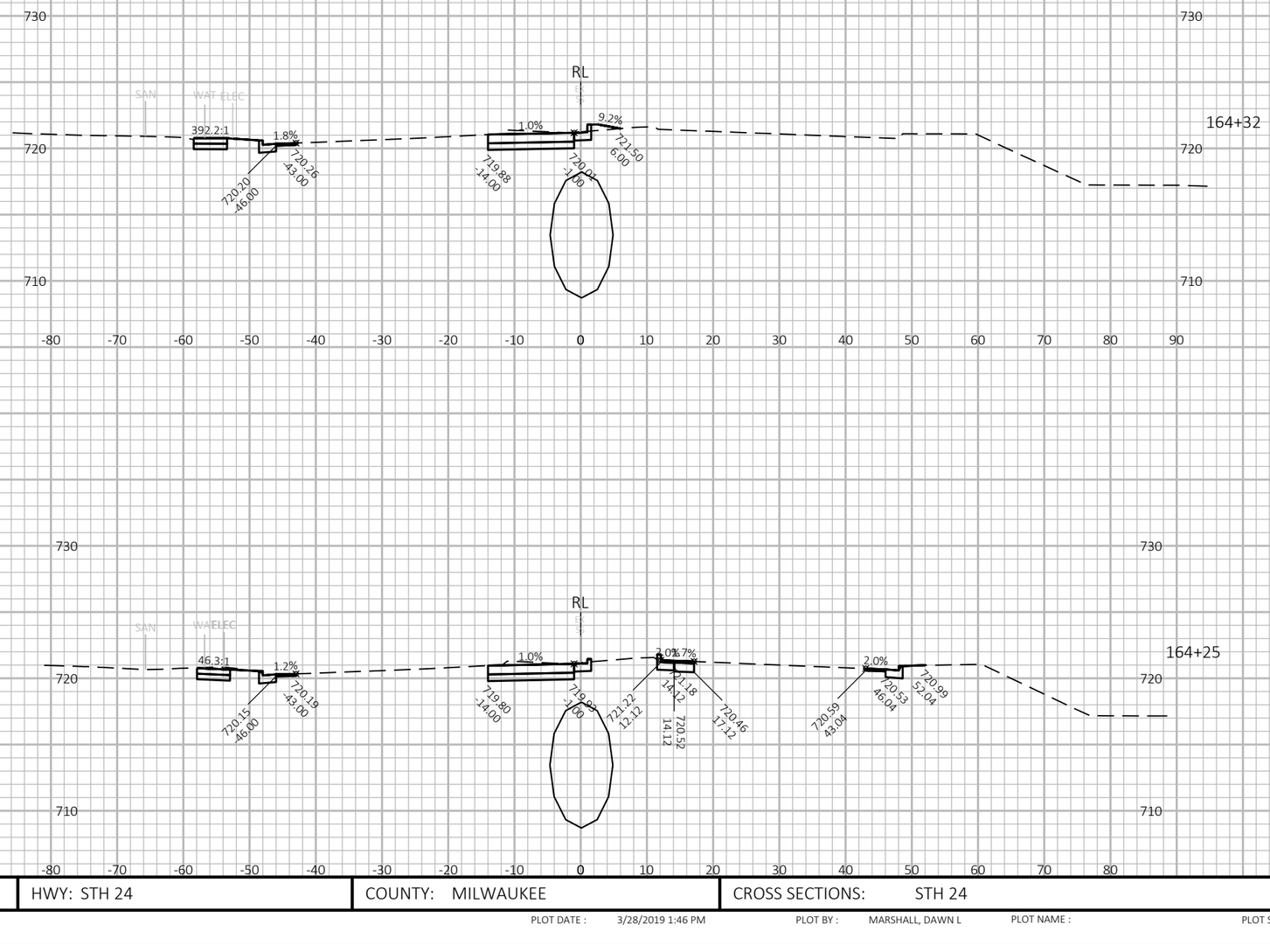
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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 210	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (11)

PLOT DATE : 3/28/2019 1:46 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

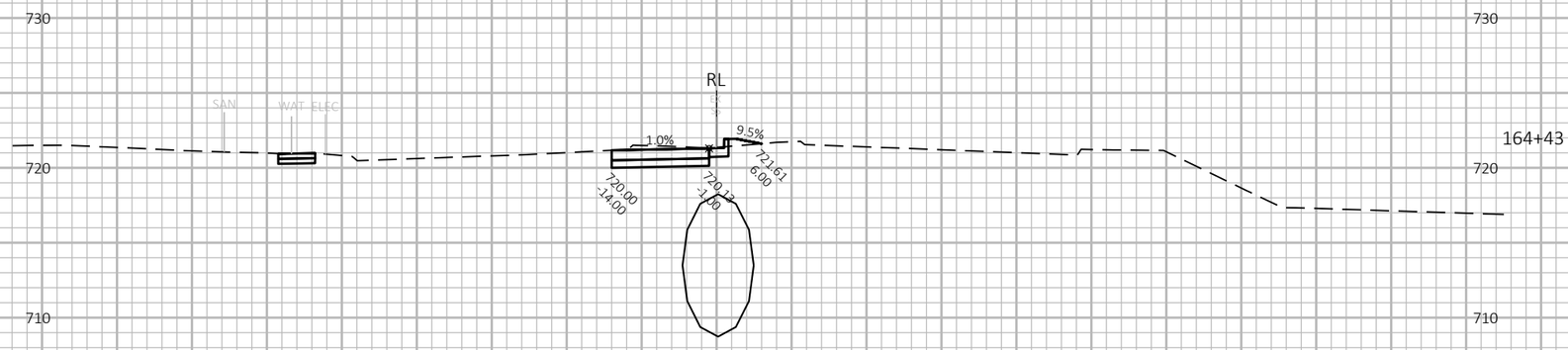
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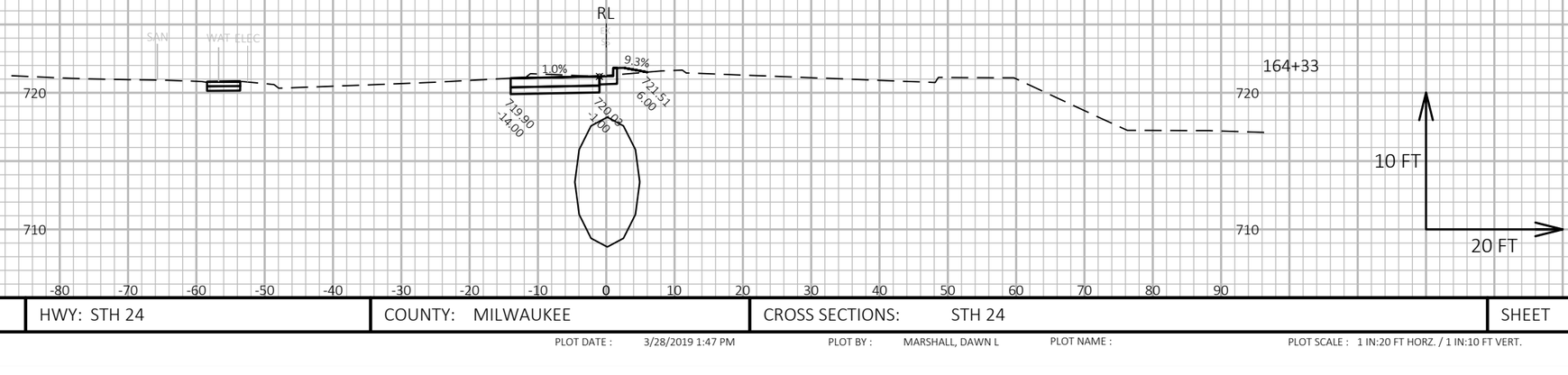
PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 211	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (12)

PLOT DATE : 3/28/2019 1:46 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





9

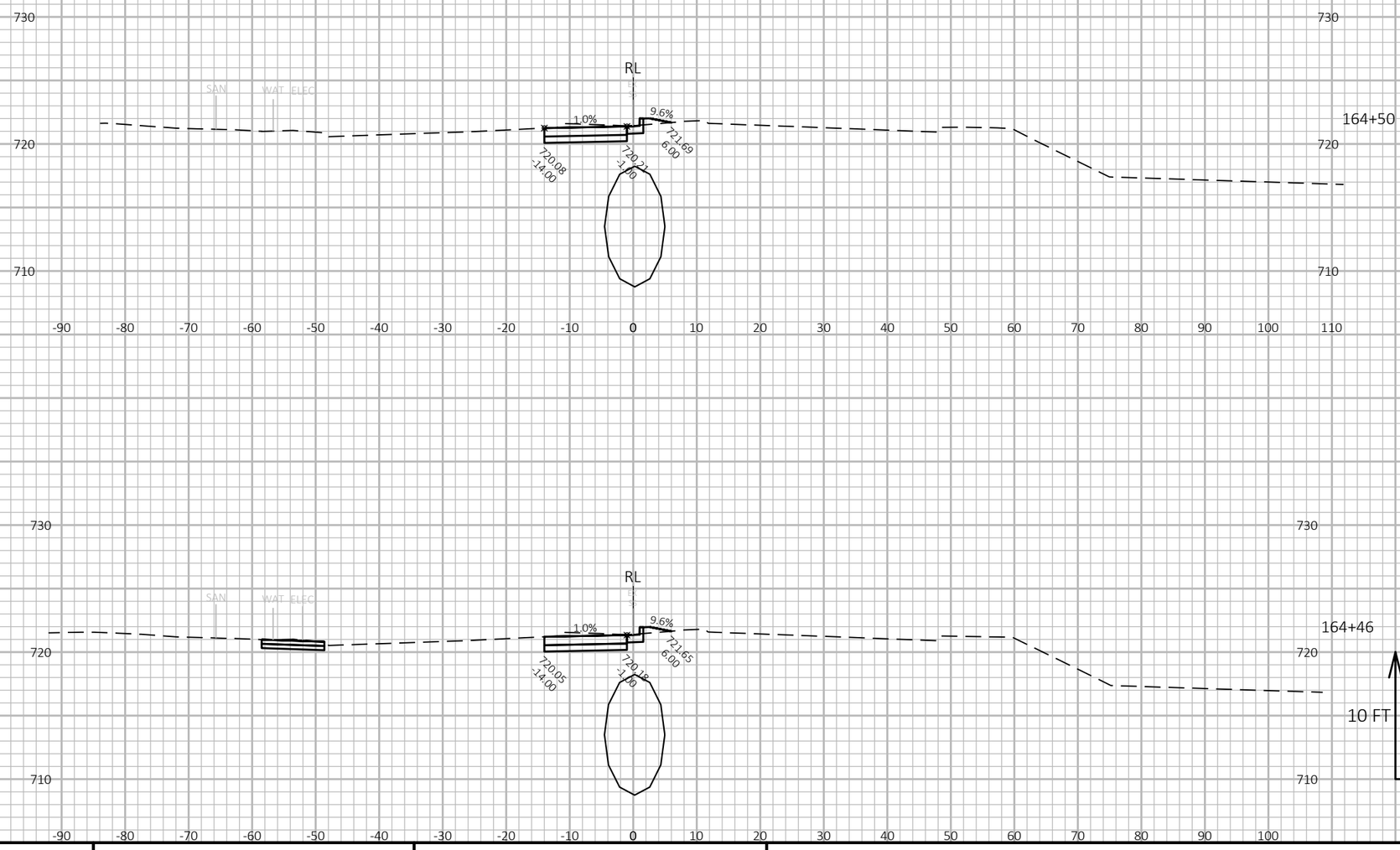
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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 212	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (13)

PLOT DATE : 3/28/2019 1:47 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

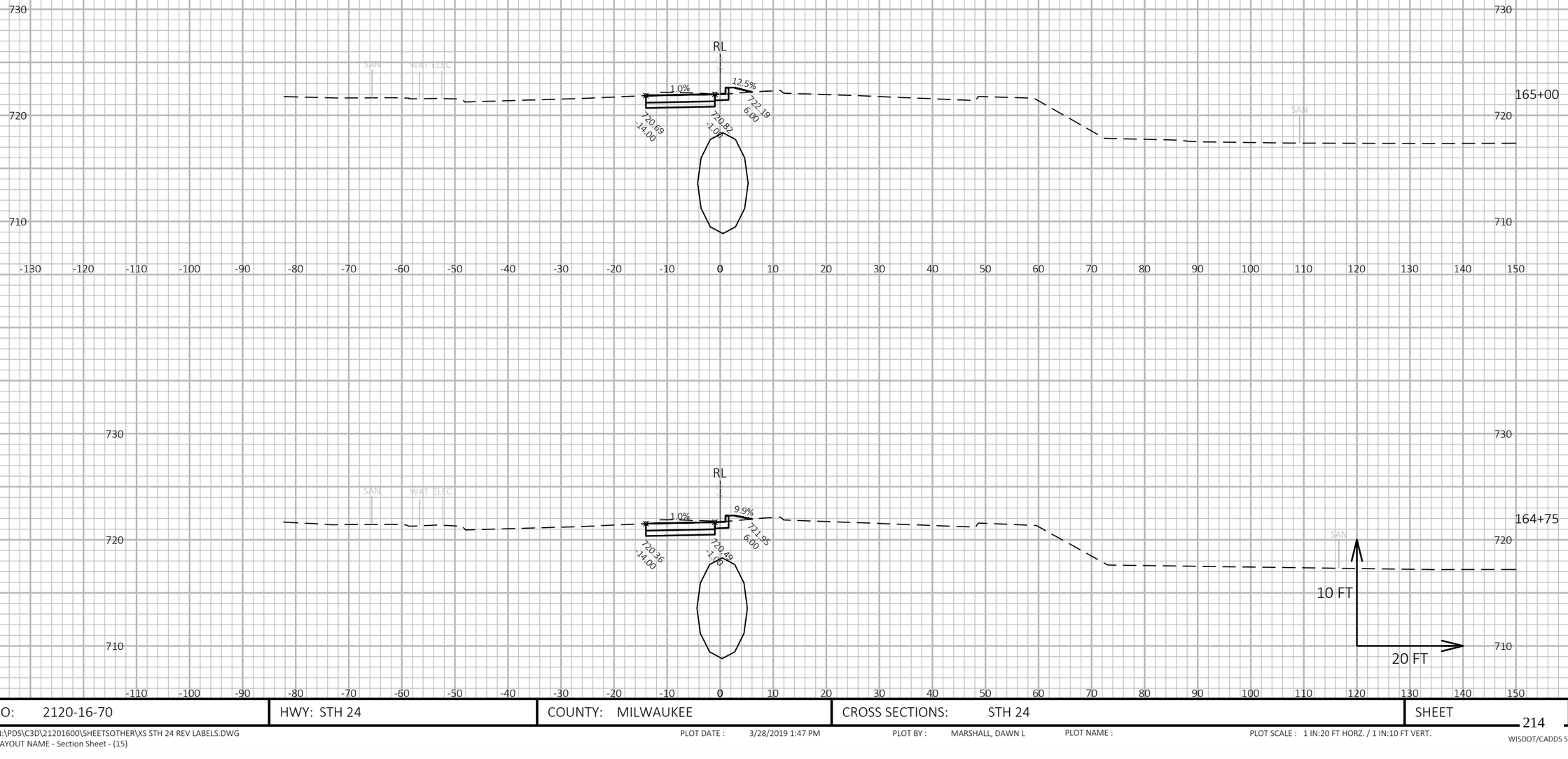


PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 213 E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (14)

PLOT DATE : 3/28/2019 1:47 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

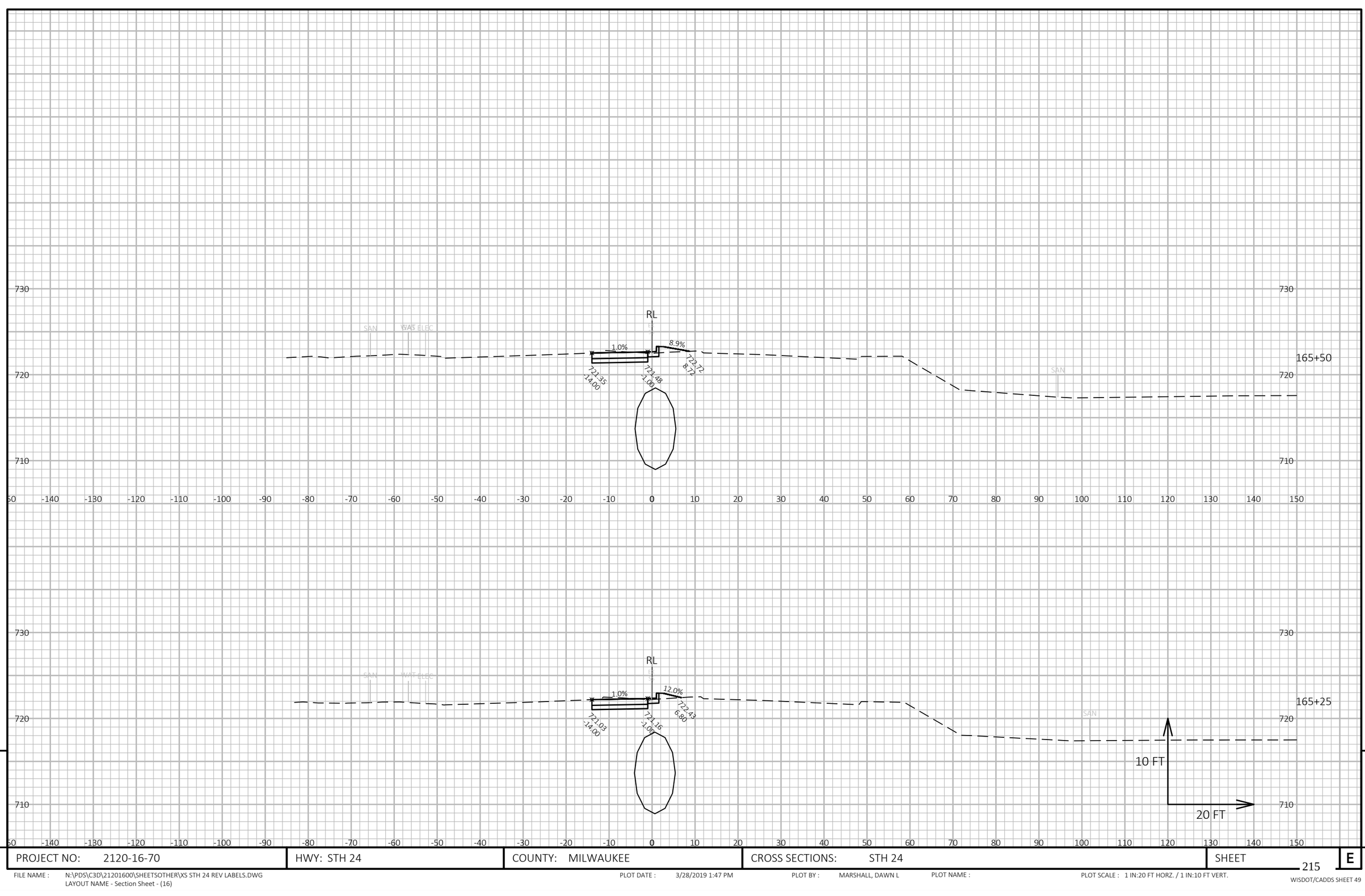
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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 214	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (15)

PLOT DATE : 3/28/2019 1:47 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 215	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (16)

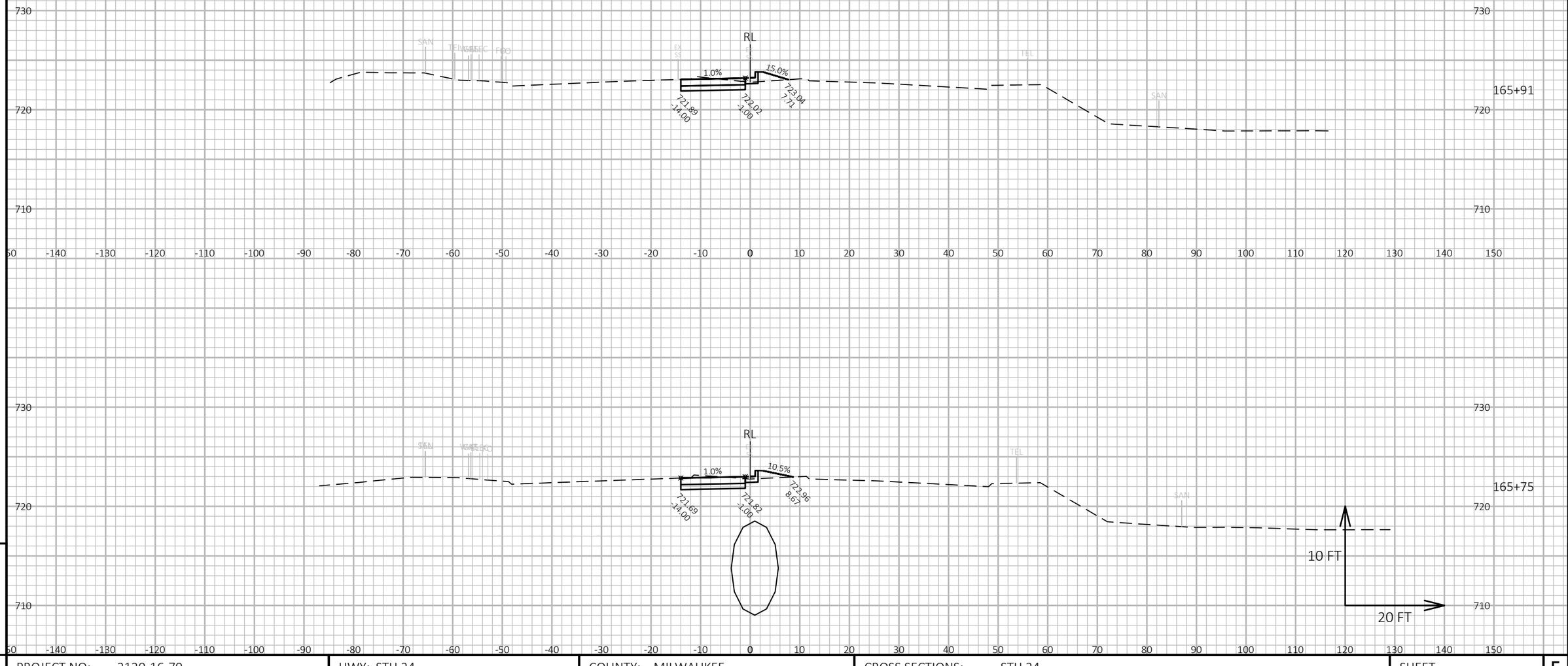
PLOT DATE : 3/28/2019 1:47 PM

PLOT BY : MARSHALL, DAWN L

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

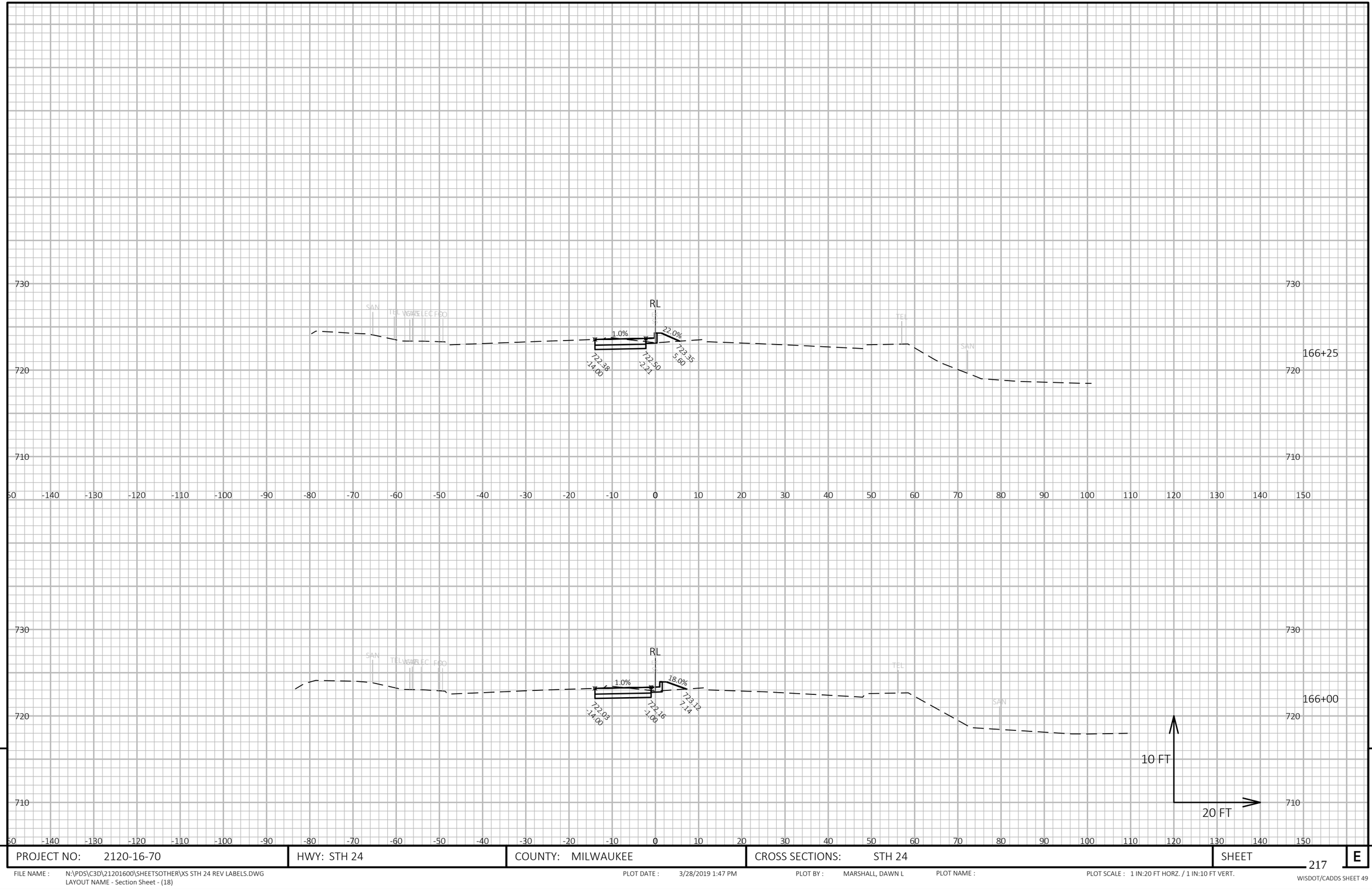
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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 216	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (17)

PLOT DATE : 3/28/2019 1:47 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 217	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (18)

PLOT DATE : 3/28/2019 1:47 PM

PLOT BY : MARSHALL, DAWN L

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

730
720
710
730
720
710

RL

SAN TEL VGAS ELEC OO

1.0%
-2.0%
723.07
-14.00
723.13
-8.45
723.86
-0.27

TEL
SAN

166+75

RL

SAN TEL VGAS ELEC OO

1.0%
-20.3%
722.73
-14.00
722.82
-5.33
723.54
3.46

TEL
SAN

166+50

10 FT
20 FT

-150 -140 -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

9

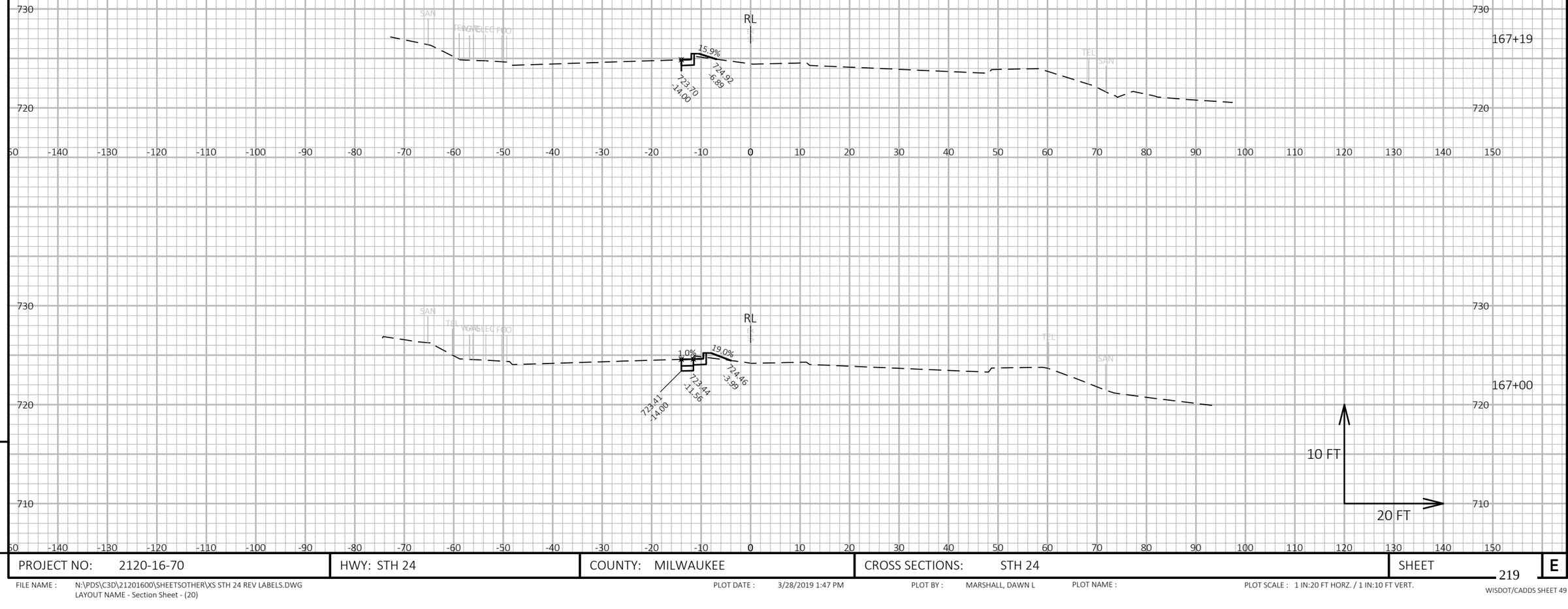
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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 218	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (19)

PLOT DATE : 3/28/2019 1:47 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



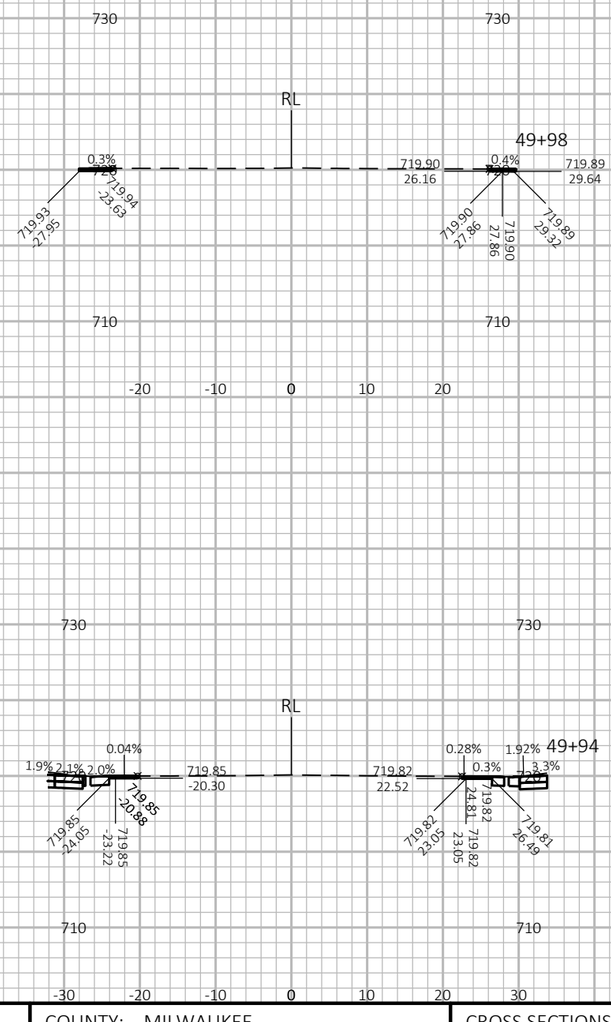
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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: STH 24	SHEET 219	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (20)

PLOT DATE : 3/28/2019 1:47 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



9

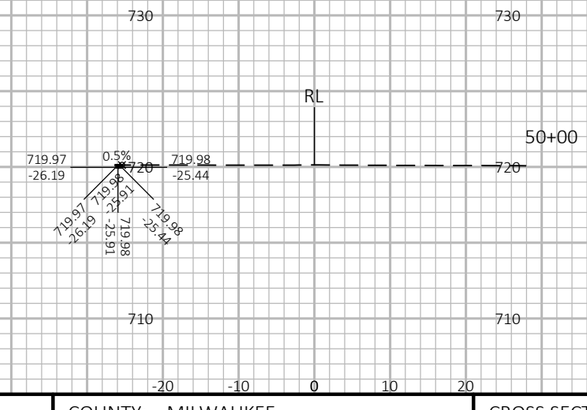
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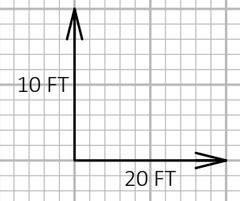
PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: ROOT RIVER PARKWAY SE	SHEET 220	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (45)

PLOT DATE : 3/28/2019 1:50 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





9

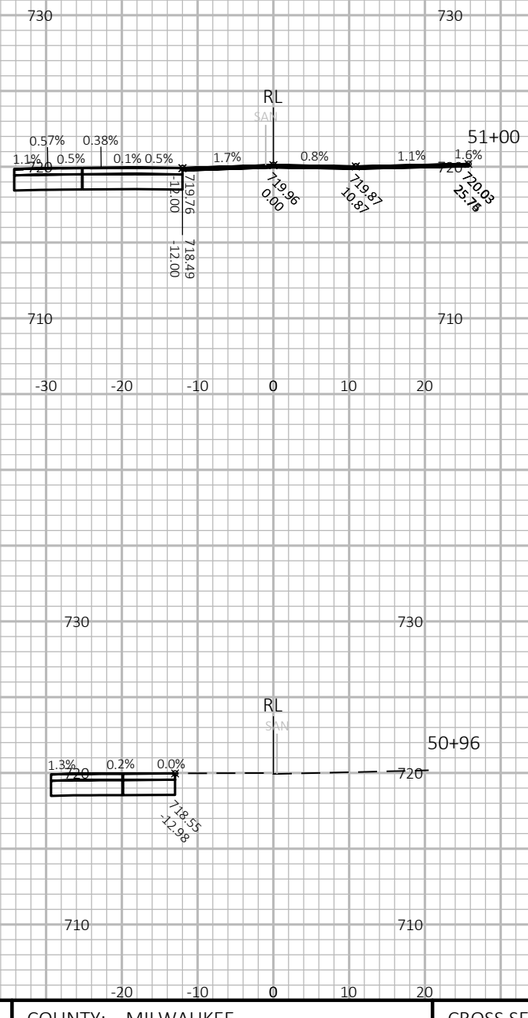
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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: ROOT RIVER PARKWAY SE	SHEET 221	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (46)

PLOT DATE : 3/28/2019 1:50 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



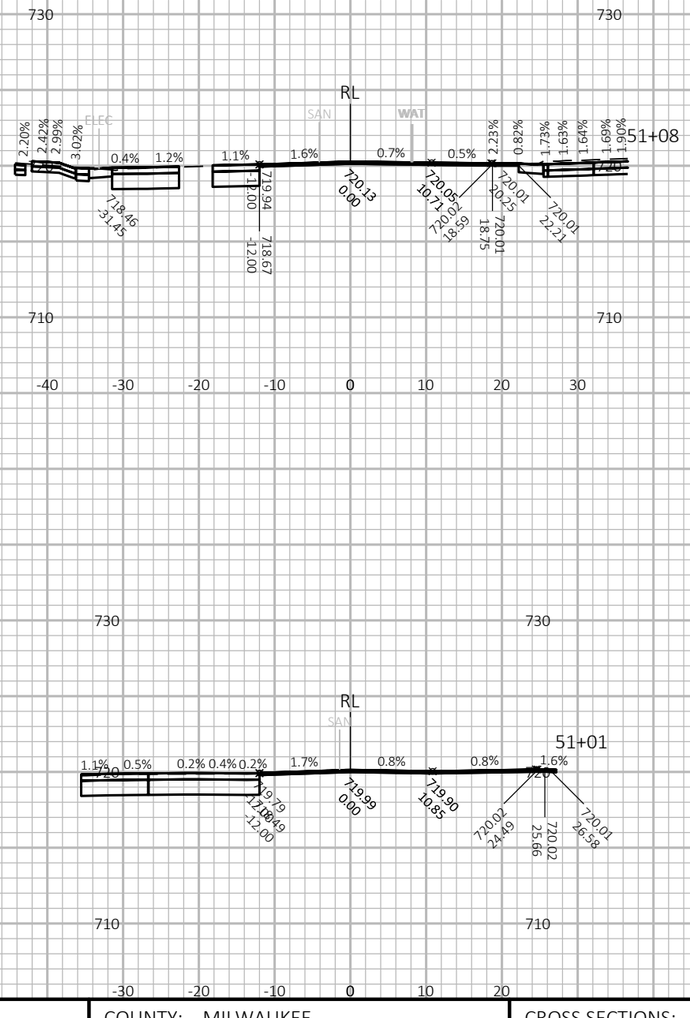
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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: CTH N - NORTH 92ND STREET	SHEET 222	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (32)

PLOT DATE : 3/28/2019 1:48 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



9

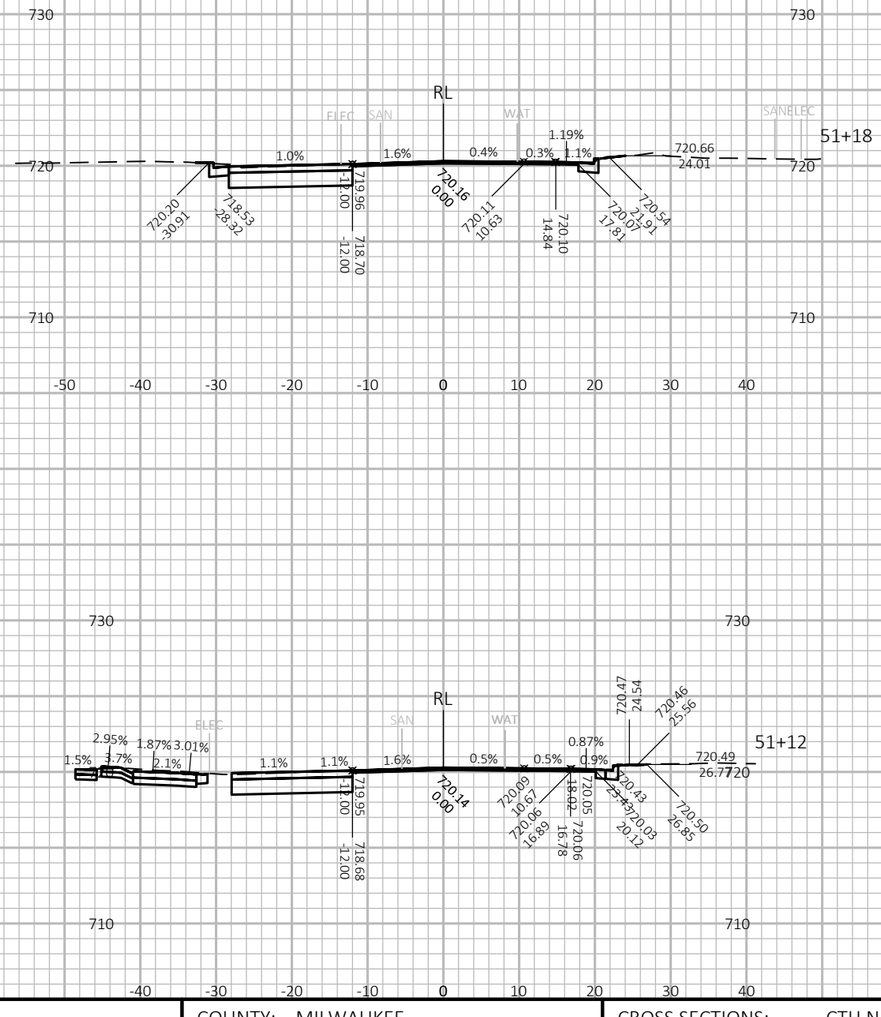
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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: CTH N - NORTH 92ND STREET	SHEET 223	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (33)

PLOT DATE : 3/28/2019 1:48 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

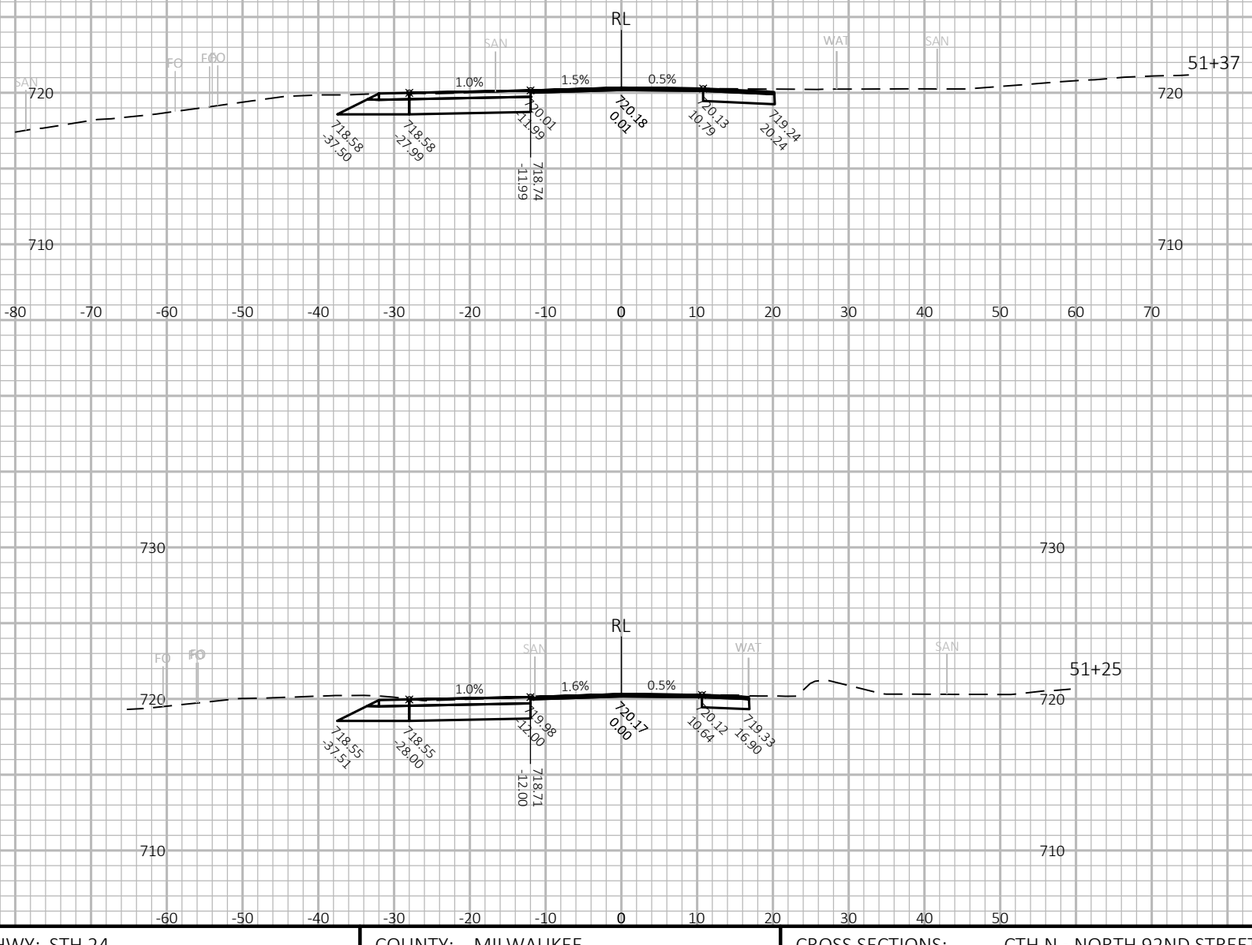
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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: CTH N - NORTH 92ND STREET	SHEET 224	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (34)

PLOT DATE : 3/28/2019 1:48 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

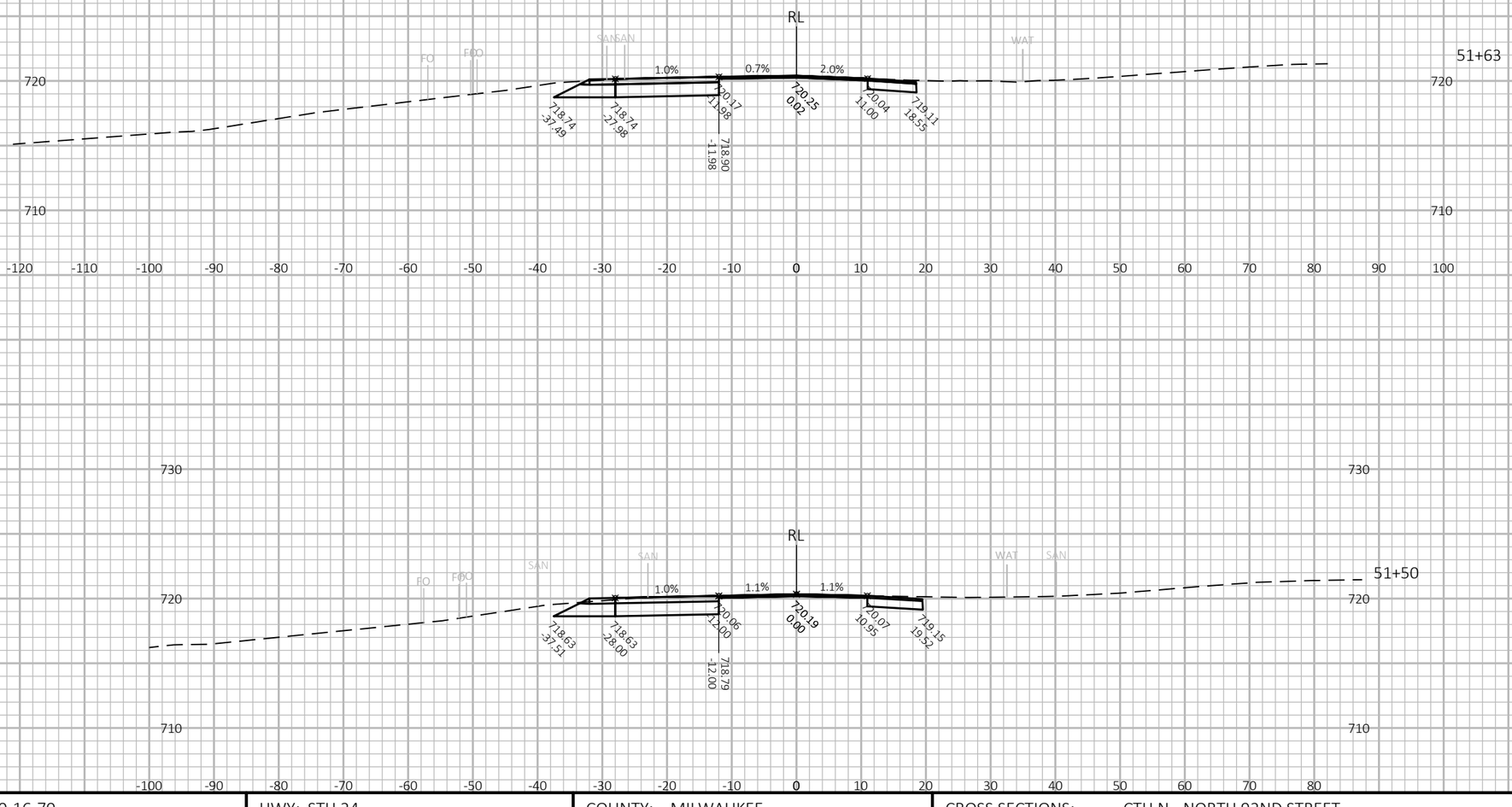
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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: CTH N - NORTH 92ND STREET	SHEET 225	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (35)

PLOT DATE : 3/28/2019 1:48 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

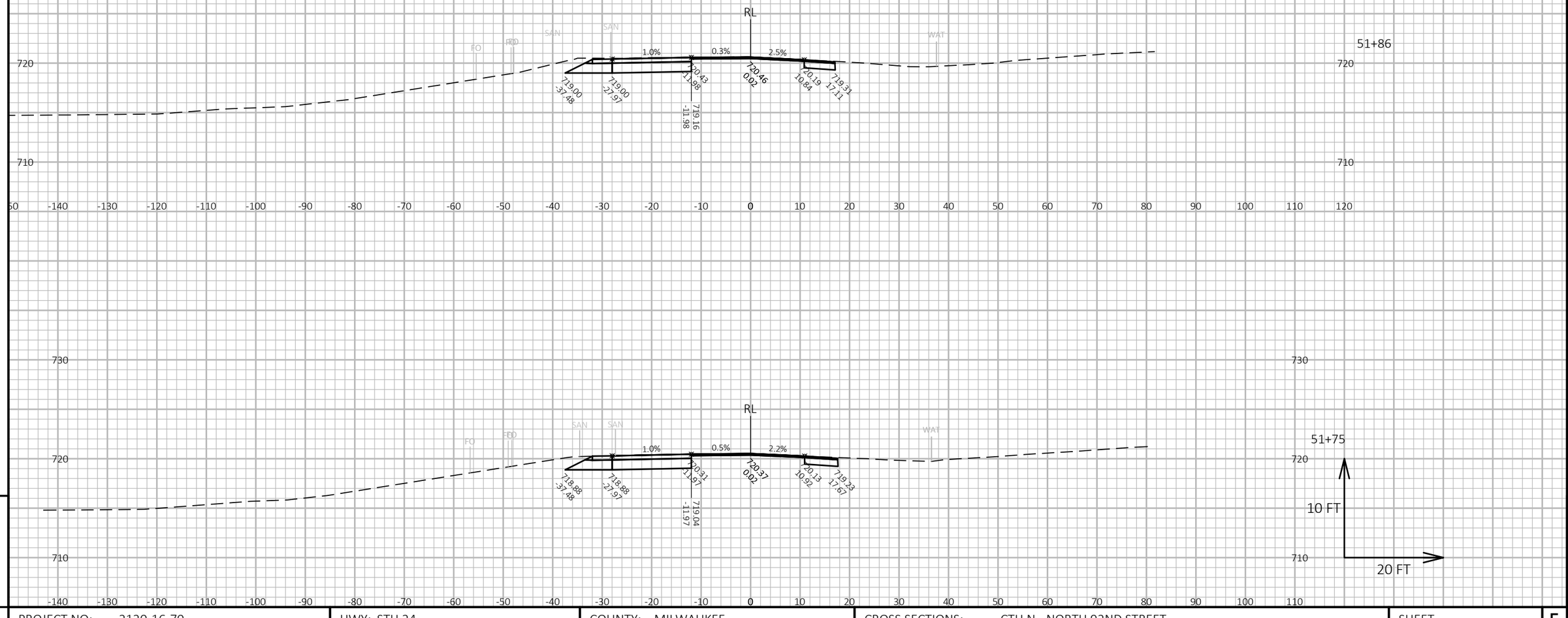
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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: CTH N - NORTH 92ND STREET	SHEET 226	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (36)

PLOT DATE : 3/28/2019 1:48 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

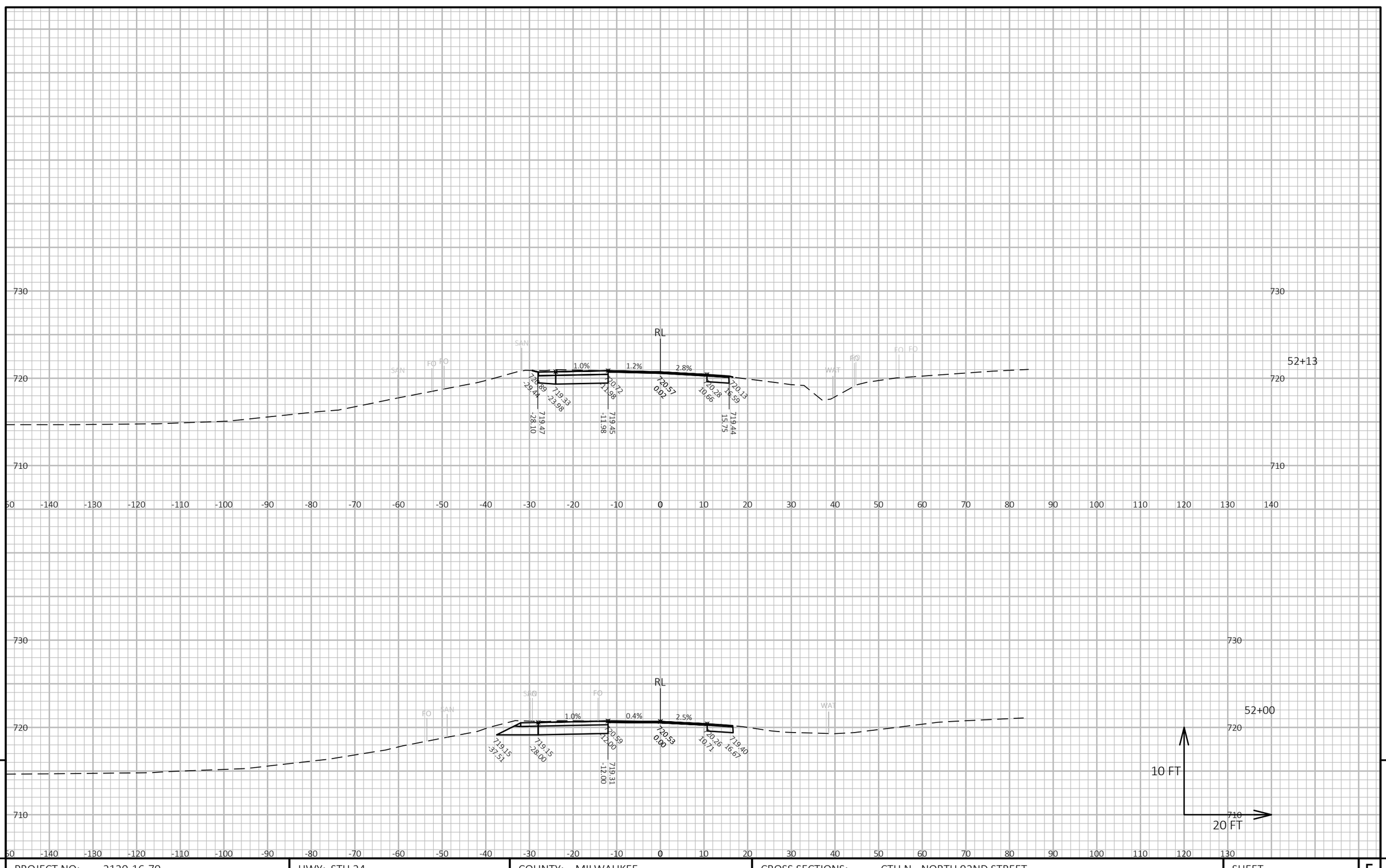
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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: CTH N - NORTH 92ND STREET	SHEET 227	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (37)

PLOT DATE : 3/28/2019 1:48 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

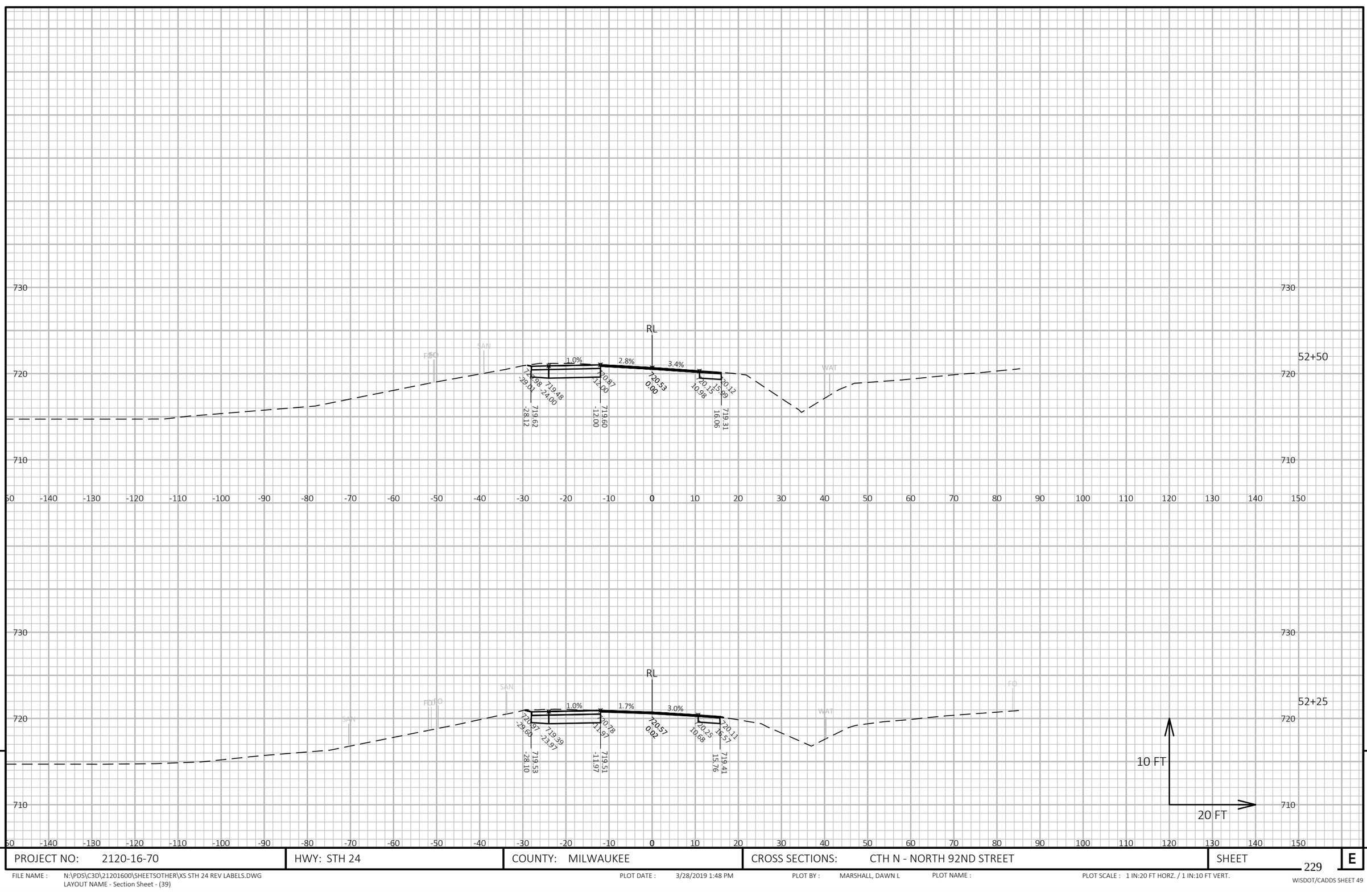


PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: CTH N - NORTH 92ND STREET	SHEET 228 E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (38)

PLOT DATE : 3/28/2019 1:48 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

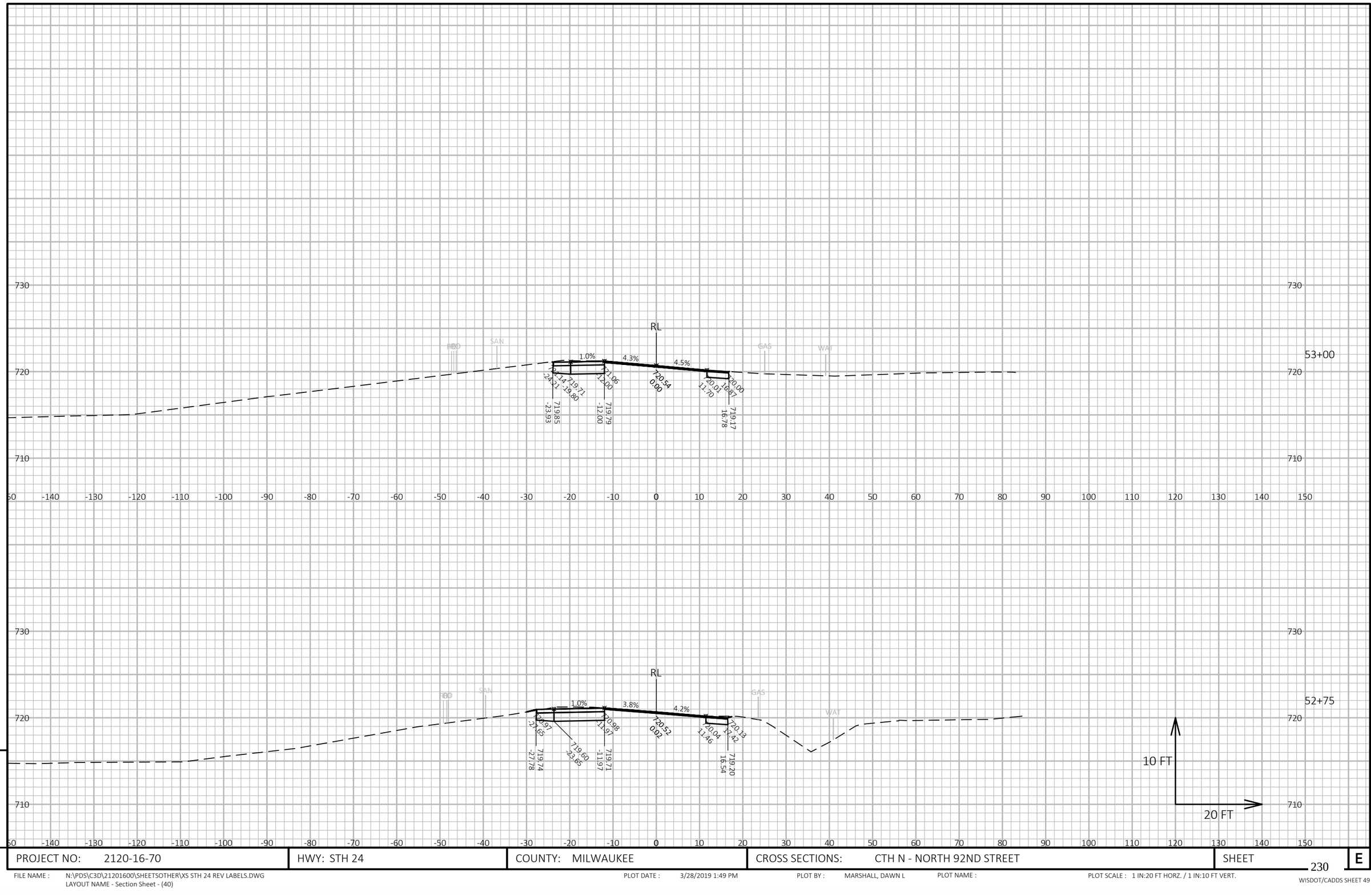


PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: CTH N - NORTH 92ND STREET	SHEET 229 E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (39)

PLOT DATE : 3/28/2019 1:48 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

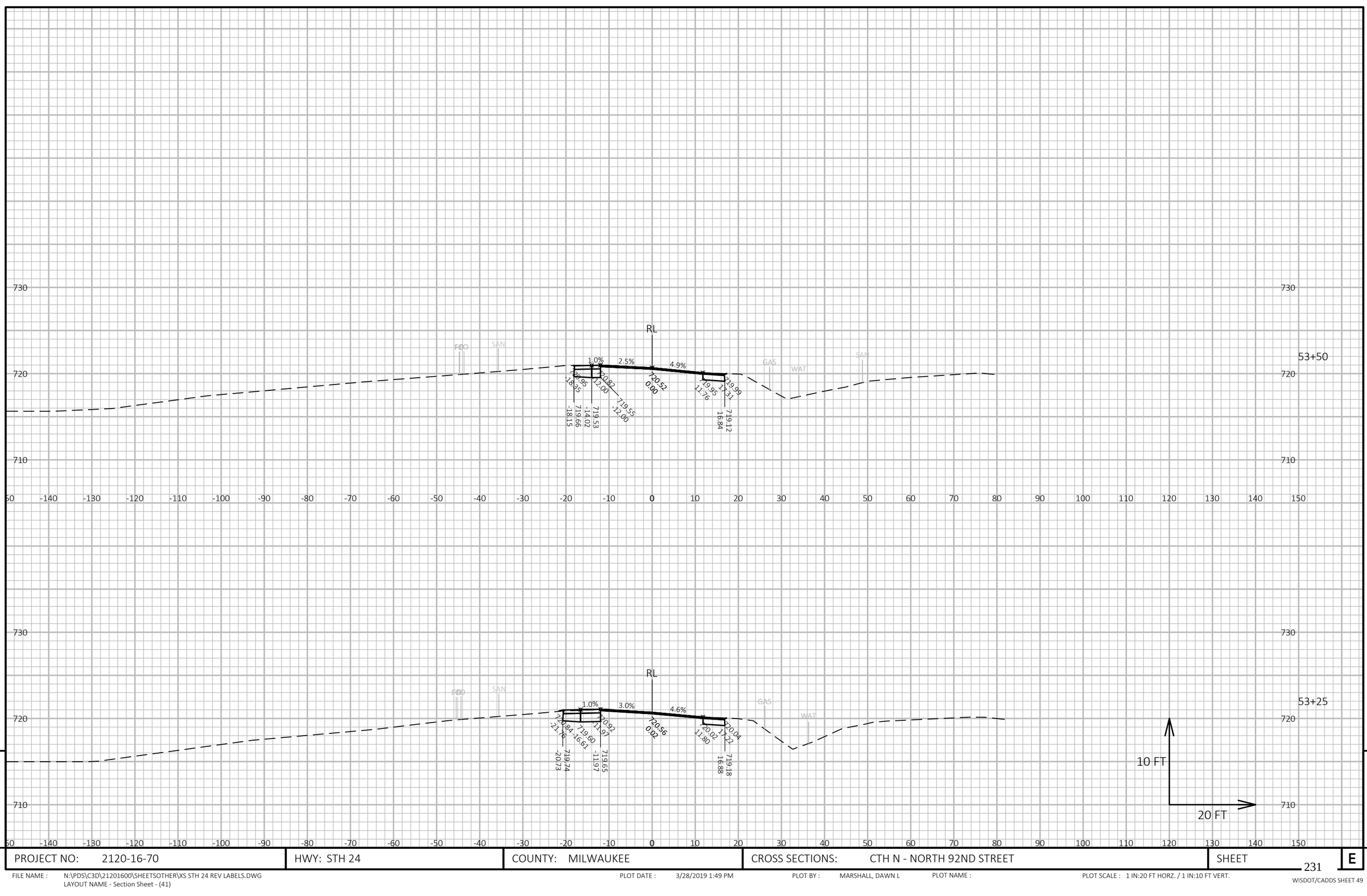


PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: CTH N - NORTH 92ND STREET	SHEET 230 E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (40)

PLOT DATE : 3/28/2019 1:49 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

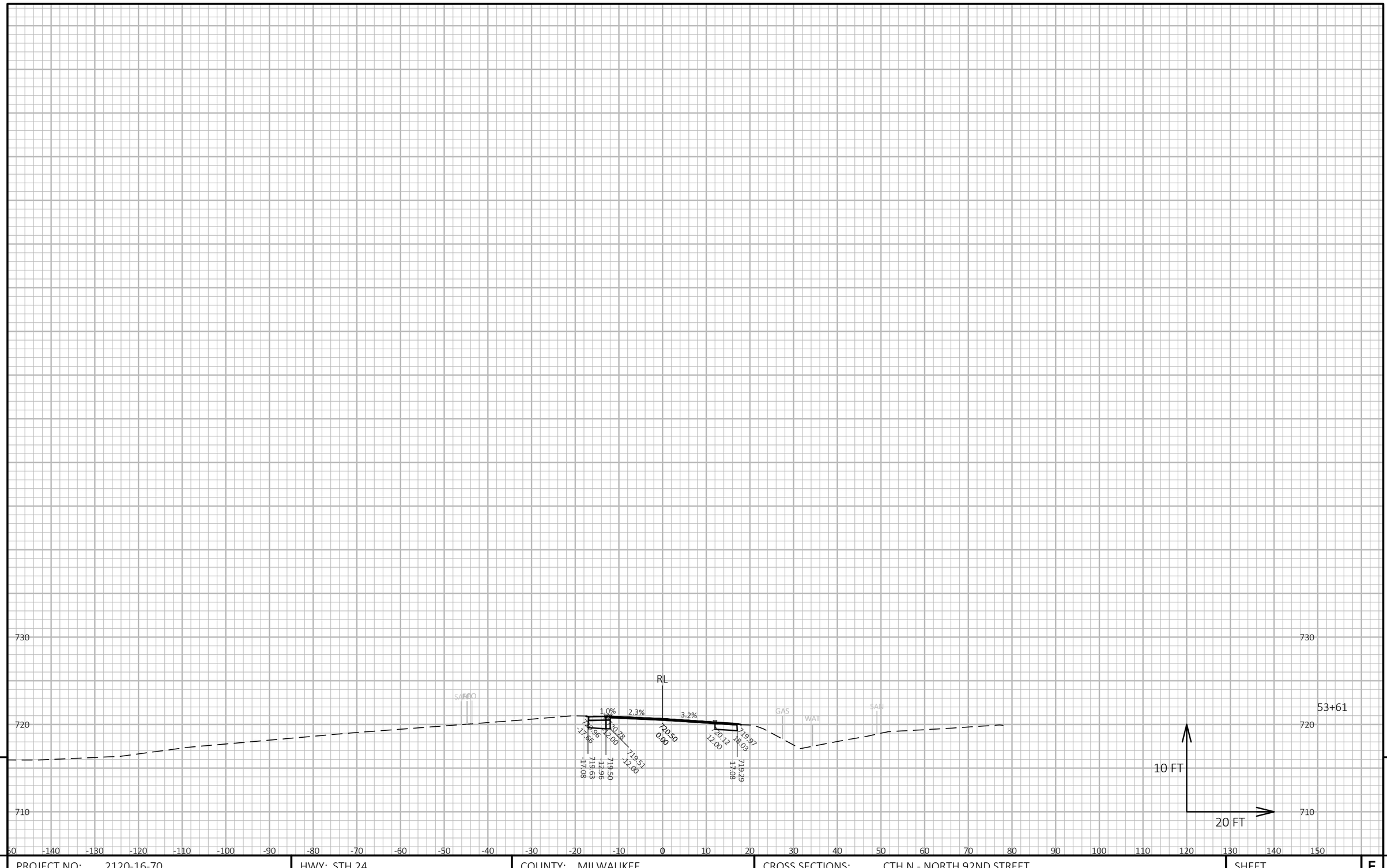
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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: CTH N - NORTH 92ND STREET	SHEET 231 E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (41)

PLOT DATE : 3/28/2019 1:49 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: CTH N - NORTH 92ND STREET	SHEET 232	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (42)

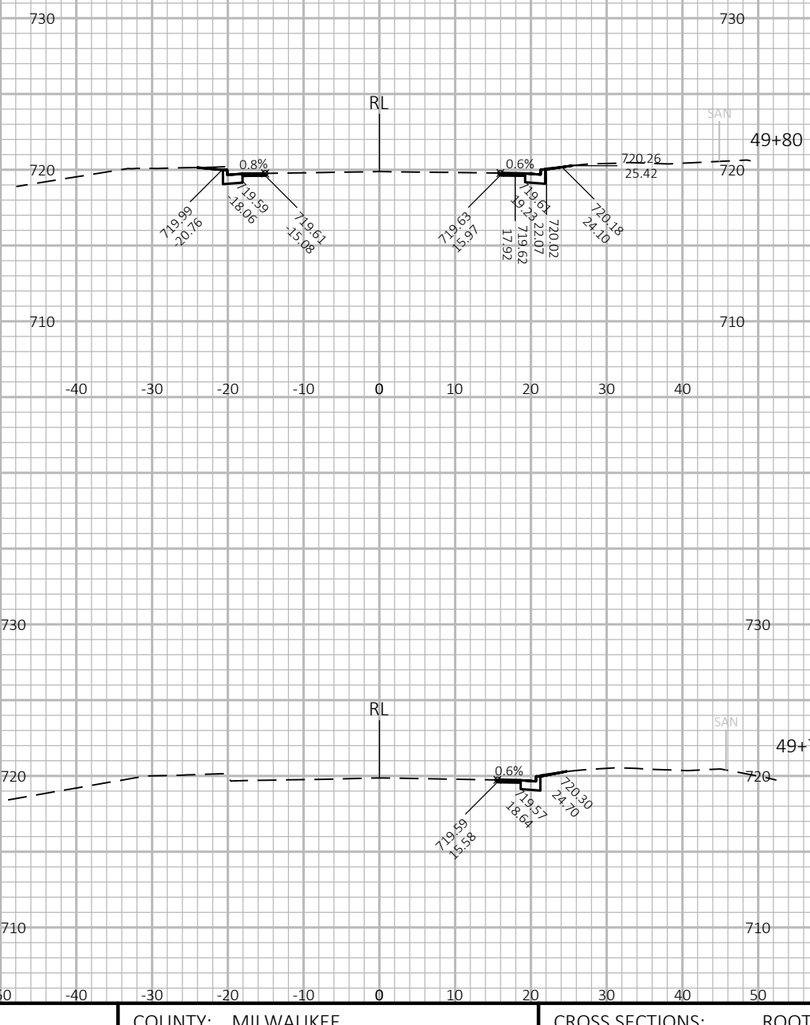
PLOT DATE : 3/28/2019 1:49 PM

PLOT BY : MARSHALL, DAWN L

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

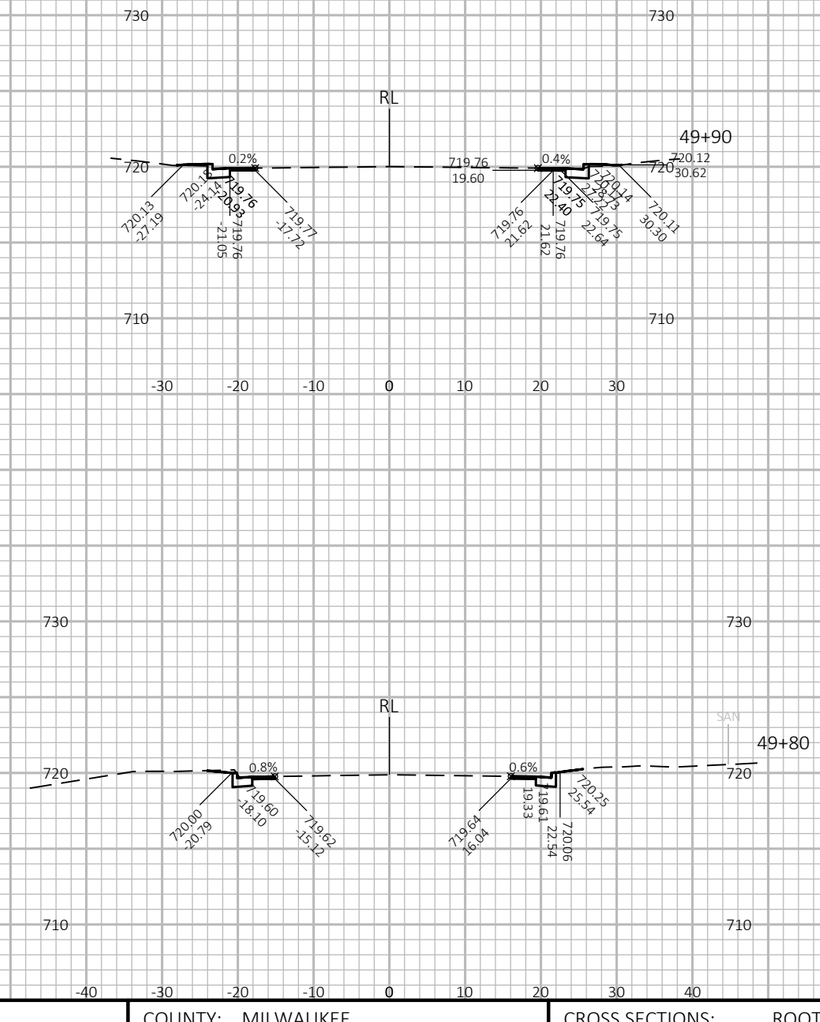


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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: ROOT RIVER PARKWAY SE	SHEET 233	E

9

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (43)
PLOT DATE : 3/28/2019 1:50 PM
PLOT BY : MARSHALL, DAWN L
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49



9

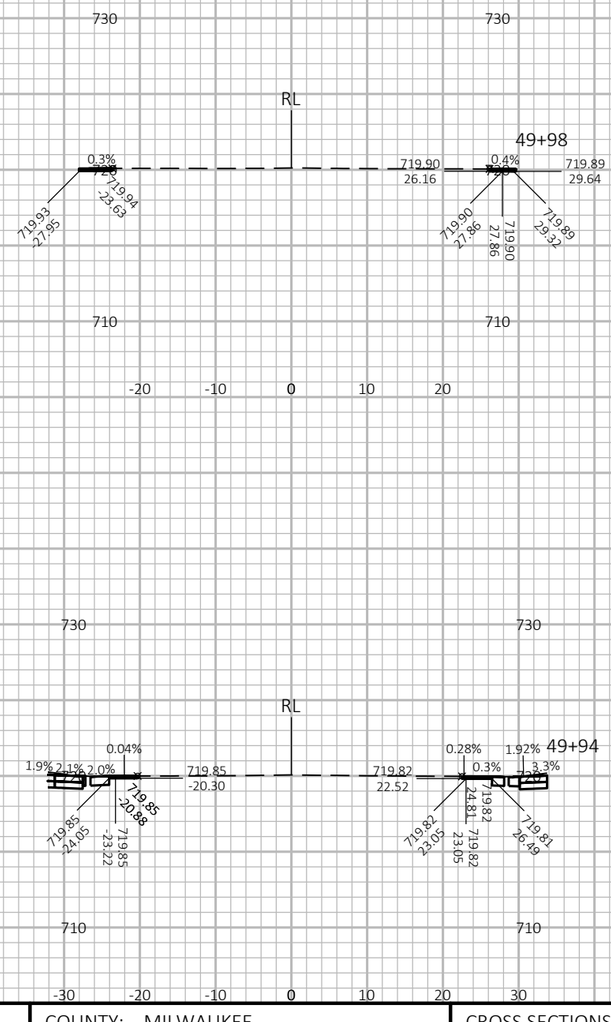
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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: ROOT RIVER PARKWAY SE	SHEET 234	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (44)

PLOT DATE : 3/28/2019 1:50 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

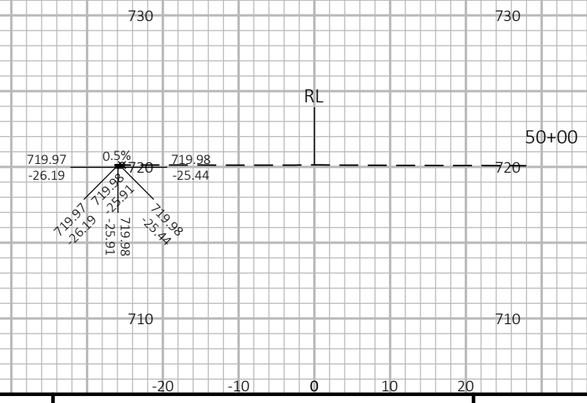
9

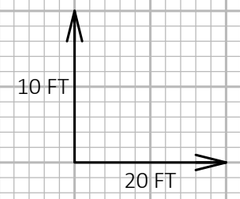
PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: ROOT RIVER PARKWAY SE	SHEET 235	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (45)

PLOT DATE : 3/28/2019 1:50 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





9

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PROJECT NO: 2120-16-70	HWY: STH 24	COUNTY: MILWAUKEE	CROSS SECTIONS: ROOT RIVER PARKWAY SE	SHEET 236	E

FILE NAME : N:\PDS\C3D\21201600\SHEETSOTHER\XS STH 24 REV LABELS.DWG
LAYOUT NAME - Section Sheet - (46)

PLOT DATE : 3/28/2019 1:50 PM PLOT BY : MARSHALL, DAWN L PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

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