

WKE

Apr 12, 2022

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 = 182

PROJECT ID: 2967-00-77

COUNTY: MILWAUKEE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

6 LOCAL INTERSECTIONS

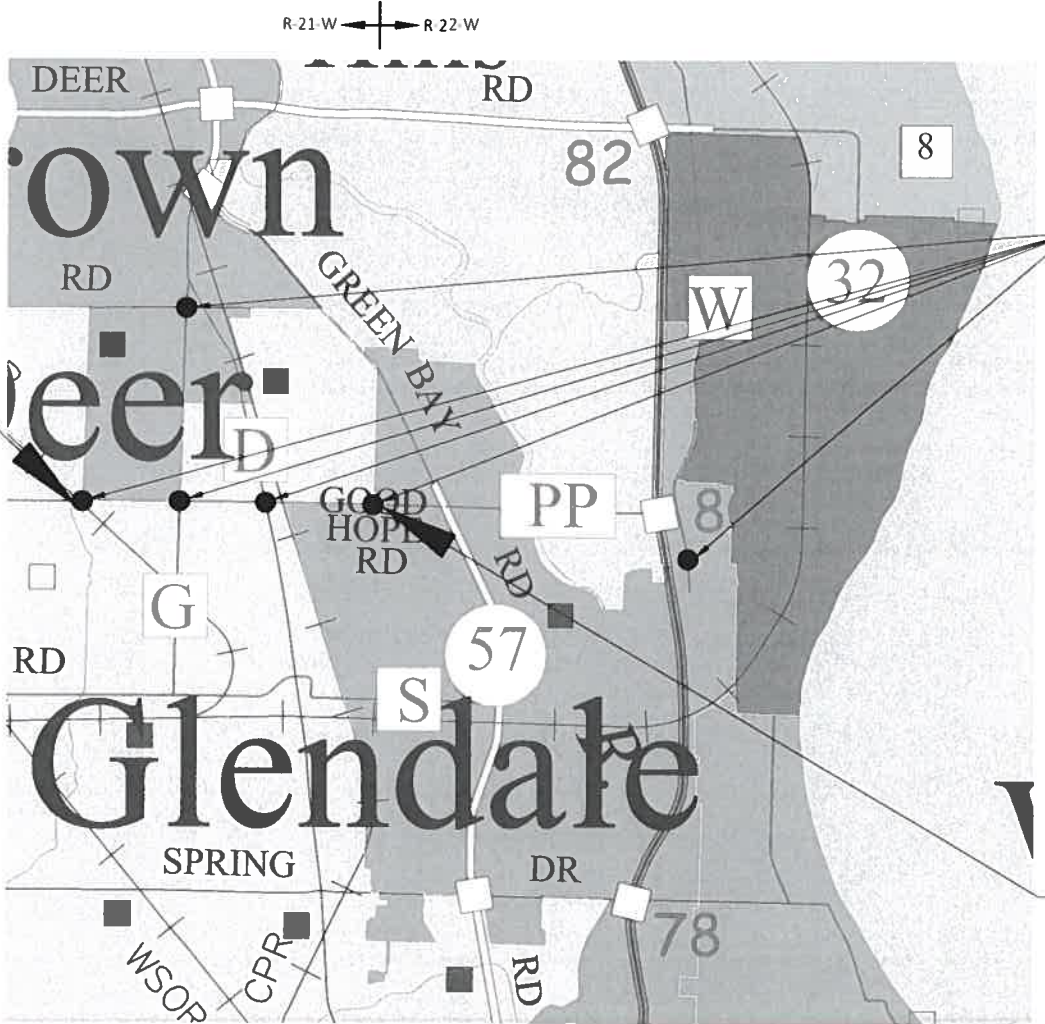
GOOD HOPE PORT WASH & SHERMAN

VARIOUS HIGHWAYS

MILWAUKEE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2967-00-77	WISC 2022302	1

STATE PROJECT NUMBER
2967-00-77



BEGIN PROJECT
STA 166+66
X=2508717.2388
Y=425178.3606

PROJECT LOCATIONS

END PROJECT
STA 247+32

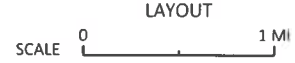
DESIGN DESIGNATION

A.A.D.T.	2019	=	8,800 28,600
A.A.D.T.		=	TBD
D.H.V.		=	N/A
D.D.		=	N/A
T.		=	N/A
DESIGN SPEED		=	40-45 M.P.H.
ESALS		=	N/A

CONVENTIONAL SYMBOLS

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

PROFILE	
GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

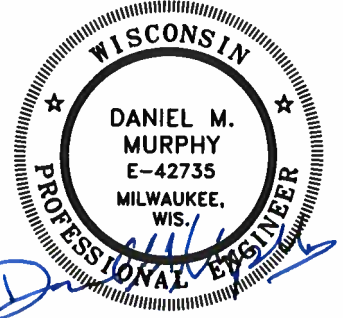


TOTAL NET LENGTH OF CENTERLINE = N/A

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), MILWAUKEE COUNTY NAD83 (2007), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2007).

ORIGINAL PLANS PREPARED BY:
MILWAUKEE COUNTY
DEPARTMENT OF TRANSPORTATION



PROJECT DESIGNER:
DATE: 10/18/2021

RECOMMENDED FOR APPROVAL:
DATE: 10/20/21
Director Transportation Services

APPROVED:
DATE: 10-20-21
Director of Milwaukee County Department of Transportation

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	MILWAUKEE COUNTY
Designer	MILWAUKEE COUNTY
Project Manager	MICHAEL BAIRD
Regional Examiner	
Regional Supervisor	JEFF BOHEN

APPROVED FOR THE DEPARTMENT
DATE: 10/22/2021
Michael J. Baird (Signature)

E

GENERAL NOTESREMOVALS

- DO NOT REMOVE TREES OR SHRUBS WITHOUT THE CONSENT OF THE ENGINEER.
- FILL ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES WITH GRANULAR BACKFILL. GRANULAR BACKFILL IS INCIDENTAL TO THE PERTINENT REMOVAL ITEM.

UTILITIES

- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF EXISTING UTILITIES AND TO NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES.

EROSION CONTROL

- EROSION CONTROL ITEMS SHOWN ARE AT SUGGESTED LOCATIONS AND THE EXACT LOCATIONS/DIMENSIONS WILL BE DETERMINED BY THE ENGINEER. MAINTAIN ALL EROSION CONTROL MEASURES UNTIL SUCH TIME THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.
- TOPSOIL, SEED, FERTILIZE AND WATER OR SOD AND WATER DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS AS DIRECTED BY THE ENGINEER.

SIGNING/MARKING

- DO NOT REMOVE SIGNS WITHOUT THE CONSENT OF THE ENGINEER.
- ALL NEW PERMANENT SIGNS SHALL BE MADE OF ALUMINUM MATERIAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

MISCELLANEOUS

- ADJUST TRAFFIC CONTROL DEVICES TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
- CONSTRUCT TRANSVERSE JOINTS IN THE CONCRETE SIDEWALK AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES WITHIN THE PROJECT LIMITS AT ALL TIMES.
- DETAILS OF CONSTRUCTION NOT SHOWN IN THE PLANS SHALL CONFORM TO THE PERTINENT STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.
- CONTRACTOR MUST CONTACT THE PROJECT ENGINEER AND SEWRPC AT LEAST TWO WEEK PRIOR TO ANY WORK NEAR ANY PUBLIC SURVEY MONUMENT.

LIST OF STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AEW	APRON ENDWALL
AGG	AGGREGATE
AH	AHEAD
ASPH	ASPHALT OR ASPHALTIC
BAD	BASE AGGREGATE DENSE
BK	BACK
BM	BENCHMARK
CABC	CRUSHED AGGREGATE BASE COURSE
CB	CATCH BASIN
CL or C/L	CENTER LINE
CONC	CONCRETE
CTH	COUNTY TRUNK HIGHWAY
C&G	CURB AND GUTTER
DWY	DRIVEWAY
EL or ELEV	ELEVATION
EBS	EXCAVATION BELOW SUBGRADE
HMA	HOT MIX ASPHALT
INL	INLET
INV	INVERT
LT	LEFT
MH	MANHOLE
MIS	METROPOLITAN INTERCEPTOR SEWER
PAVT	PAVEMENT
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
PCC	POINT OF COMPOUND CURVATURE
RL or R/L	REFERENCE LINE
R	RADIUS
RAB	ROUNDAABOUT
REQD	REQUIRED
RT	RIGHT
R/W	RIGHT-OF-WAY
SE	SUPERELEVATION
SEC	SECTION
SDD	STANDARD DETAIL DRAWING
STH	STATE TRUNK HIGHWAY
STA	STATION
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
S/W	SIDEWALK
TLE	TEMPORARY LIMITED EASEMENT
VERT	VERTICAL
VC	VERTICAL CURVE
VCL	VERTICAL CURVE LENGTH
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY

UTILITIES

AT&T

2005 Pewaukee Rd
Waukesha, WI 53188
Attn: Mr. Jay Bulanek
Phone: (414) 491-2855
jb5175@att.com

Charter Communications

1320 N. Martin Luther King Dr.
Milwaukee, WI 53212
Attn: Mr. Beau Abuya
Phone: (414) 908-1343
Mobile: (414) 758-9241
Beau.abuya@charter.com

City of Glendale – Water, Sanitary, & Storm

Mr. Charlie Imig
Director of Public Works
5909 N. Milwaukee River Pkwy
Glendale, WI 53209
Phone: (414) 228-1746
c.imig@glendale-wi.gov

City of Milwaukee – Sanitary & Storm

Robert Seleen
841 North Broadway, Room 409
Milwaukee, WI 53202
Phone: (414) 286-2465
Rselee@milwaukee.gov

Lumen Communication Line

Thomas Dineen
19 W Fond du Lac St
Ripon, WI 54971
Phone: (920) 748-2752
Mobile: (920) 246-7752
relocations@lumen.com

Midwest Fiber Networks

Mr. Cory Schmuki
6070 N. Flint Rd
Glendale, WI 53209
Phone: (414) 225-2178
relocationrequests@midwestfibernetworks.com

UTILITIES

Milwaukee County Communications

Electrical Shop
10320 W. Watertown Plank Rd, 2nd Floor
Wauwatosa, WI 53226
Phone: (414) 257-6555

Milwaukee Metropolitan Sewerage District (MMSD)

Ms. Micki Klappa-Sullivan
260 W. Seeboth Street
Milwaukee, WI 53204
Phone: 414-225-2178

Milwaukee Water Works – Engineering

Mr. Dave Goldapp
841 North Broadway, Room 409
Milwaukee, WI 53202
Phone: (414) 286-6301
Mobile: (414) 708-2695
Dave.Goldapp@milwaukee.gov

Southeastern Wisconsin Regional Planning Commission (SEWRPC)

Mr. Rob Merry
W239 N1812 Rockwood Drive
P.O. Box 1607
Waukesha, WI 53187-1607
Phone: (262) 547-6722 Ext. 289
rmerry@sewrpc.org

We Energies – Gas & Electric

Mr. Alex Dantine
333 W. Everett St. A-299
Milwaukee, WI 53203
Phone: (920) 621-6903
Alex.dantine@we-energies.com

WisDOT– Communications

Mr. Jeff Madson
Southeast Region
141 NW Barstow St
Waukesha , WI 53187
Phone: (414) 225-3723
Jeffrey.Madson@dot.wi.gov

AGENCIES

City of Glendale

Mr. Charlie Imig
Director of Public Works
5909 N. Milwaukee River Pkwy
Glendale, WI 53209
Phone: (414) 228-1746
c.imig@glendale-wi.gov

City of Milwaukee

Mr. Chad Chrisbaum
841 N. Broadway, Room 701
Milwaukee, WI 53202
Phone: (414) 286-0470

Village of Brown Deer

Mr. Matthew Maederer
Department of Public Works
8717 N. 43rd Street
Brown Deer, WI 53223
Phone: (414) 357-0120

Milwaukee County Transit System

Ms. Melanie Flynn
Coordinator of Street Supervision
1942 N. 17th Street
Milwaukee, WI 53205
Phone: (414) 343-1764

WISDOT

Mr. Michael Baird
Southeast Region
141 NW Barstow St
Waukesha , WI 53187
Phone: 262-548-5918
michael.baird@dot.wi.gov

MILWAUKEE COUNTY

Ms. Andrea Weddle-Henning
Director of Transportation Engineering
10320 W. Watertown Plank Rd, 2nd Floor
Wauwatosa, WI 53226
Phone: (414) 257-5934
Andrea.Weddle-Henning@milwaukeecountywi.gov

Mr. Daniel Murphy
Traffic Engineer Manager
10320 W. Watertown Plank Rd, 2nd Floor
Wauwatosa, WI 53226
Phone: (414) 257-5942
Daniel.Murphy@milwaukeecountywi.gov

STATE AGENCIES

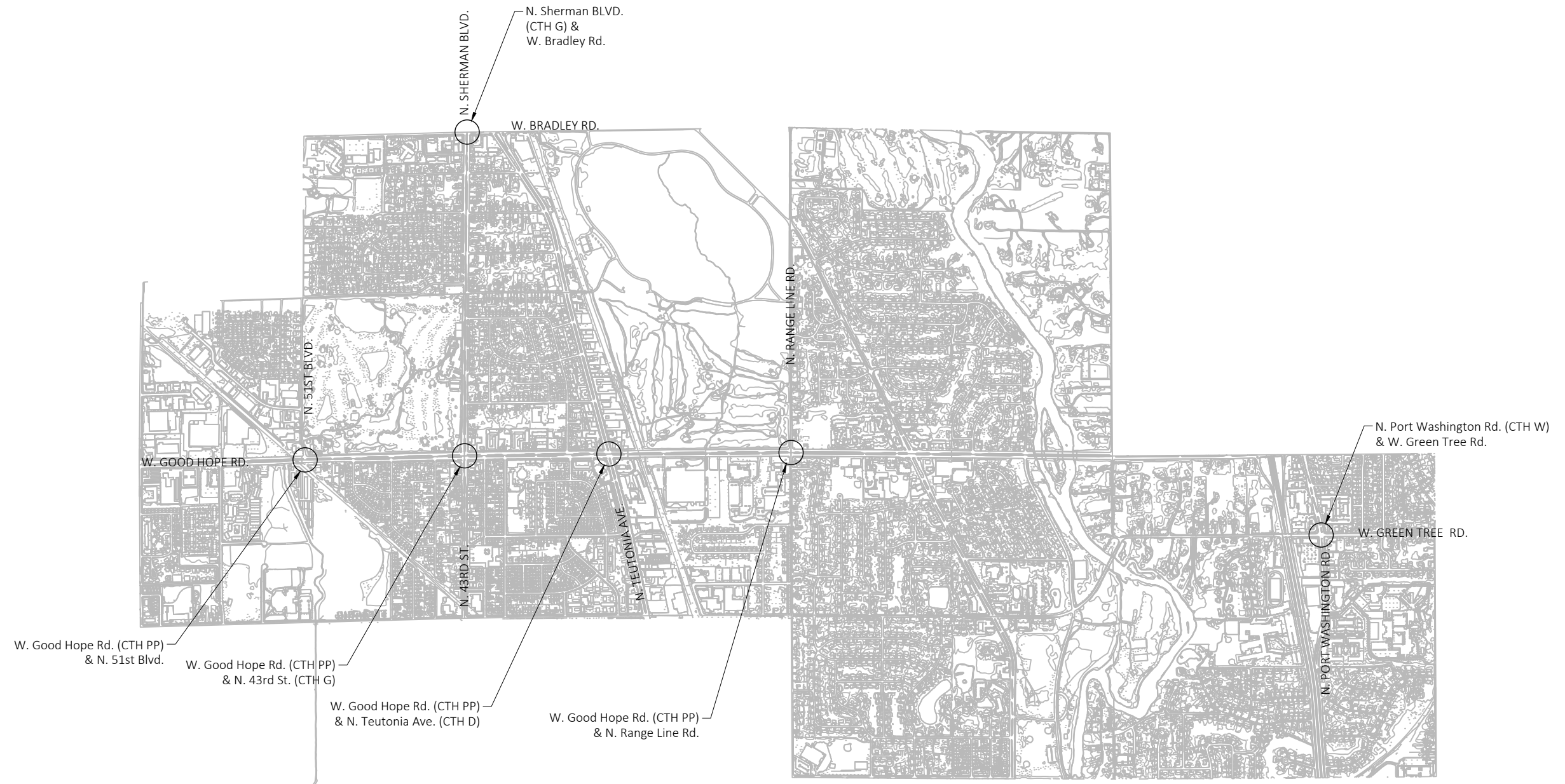
Wisconsin Department of Natural Resources

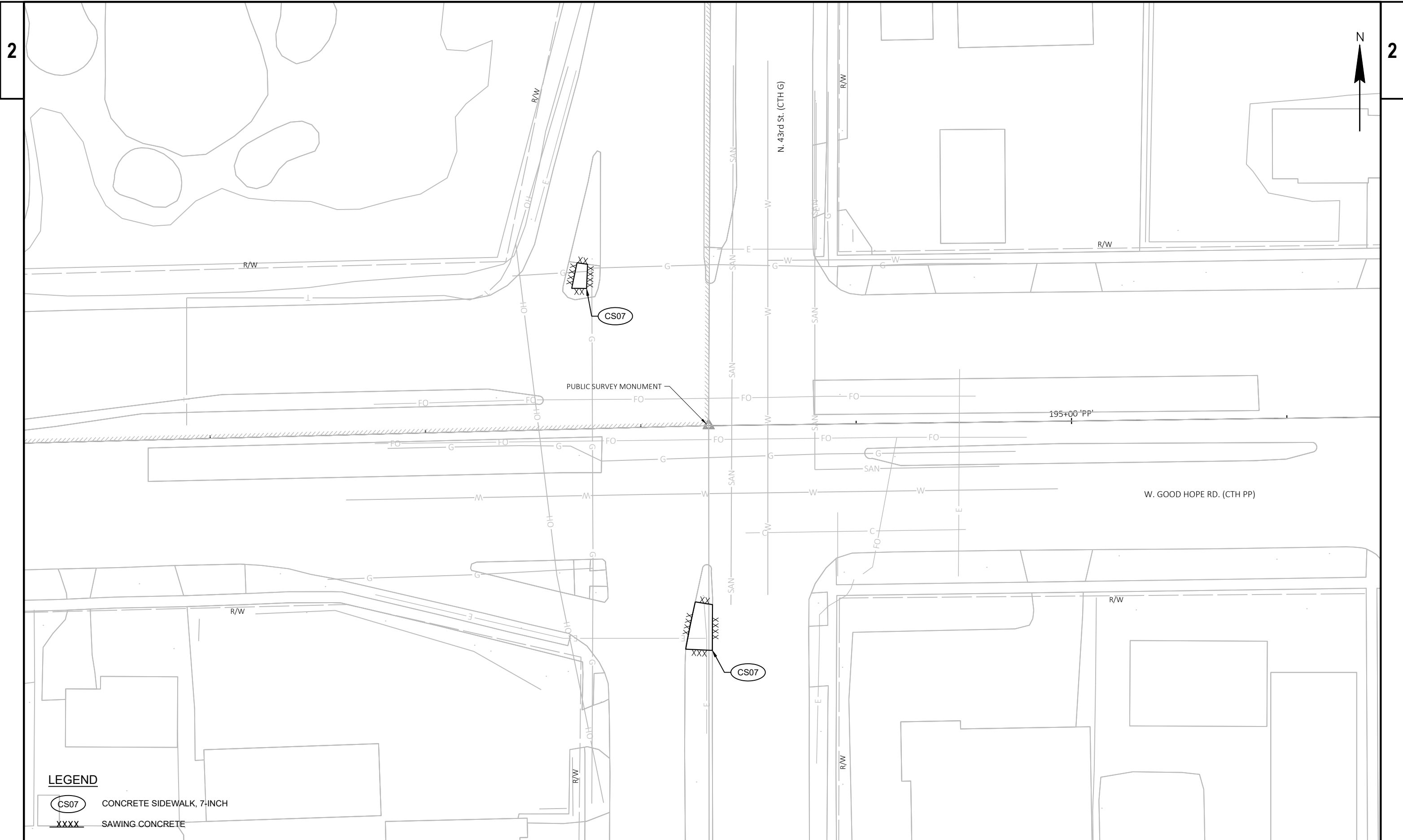
Ms. Kristina Betzold
Environmental Analysis and Review Specialist
1027 W. St. Paul Ave.
Milwaukee, WI 53233
Phone: (414) 343-9346
Kristina.Betzold@wi.gov

ORDER OF SECTION 2 SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- PLAN DETAILS
- EROSION CONTROL
- SIGNING
- TRAFFIC SIGNALS
- TRAFFIC CONTROL
- ALIGNMENT DIAGRAM







2

2



CS07

PUBLIC SURVEY MONUMENT

195+00' PP

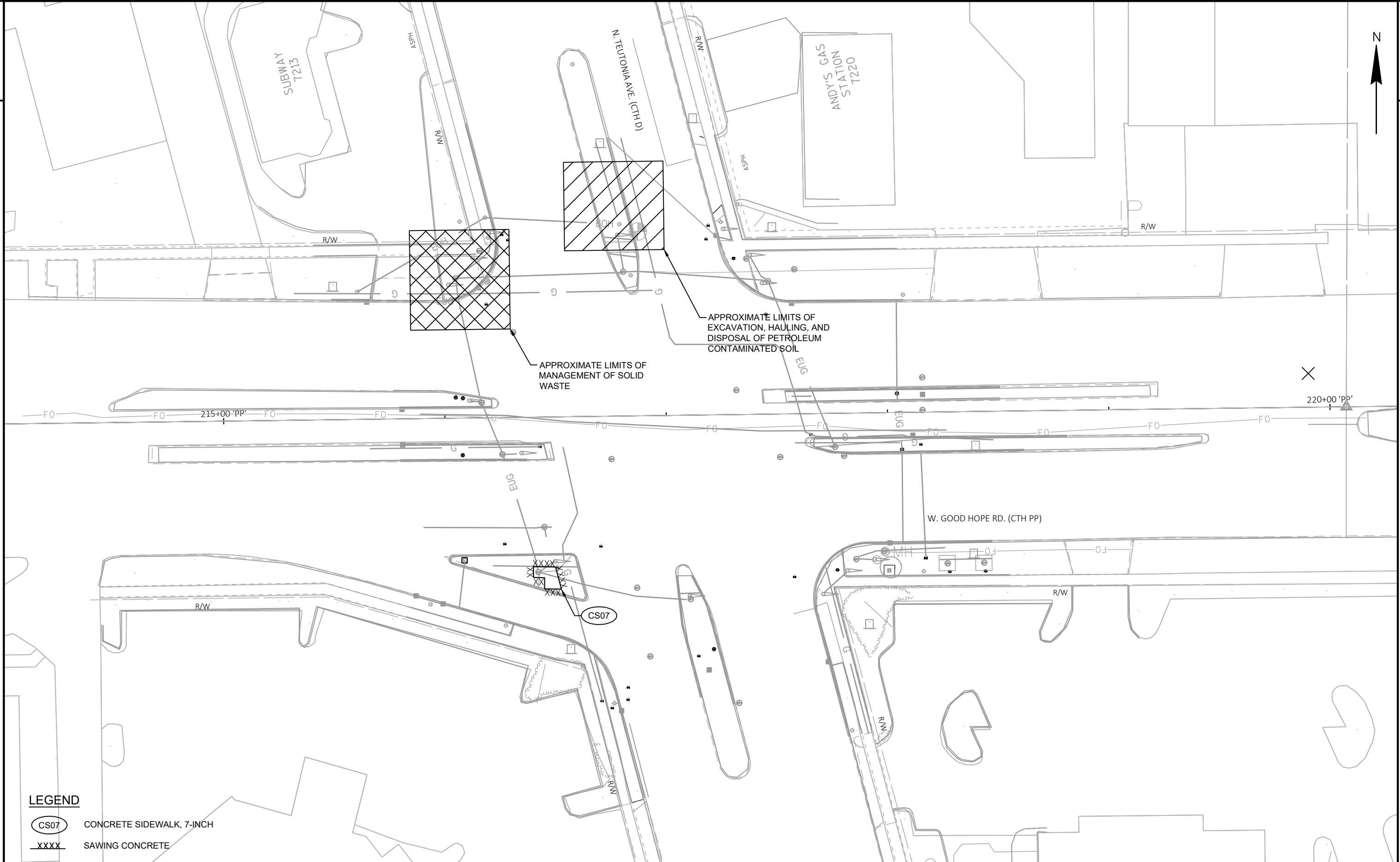
W. GOOD HOPE RD. (CTH PP)

CS07

LEGEND

- CS07 CONCRETE SIDEWALK, 7-INCH
- XXXX SAWING CONCRETE

PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E
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

APPROXIMATE LIMITS OF EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL

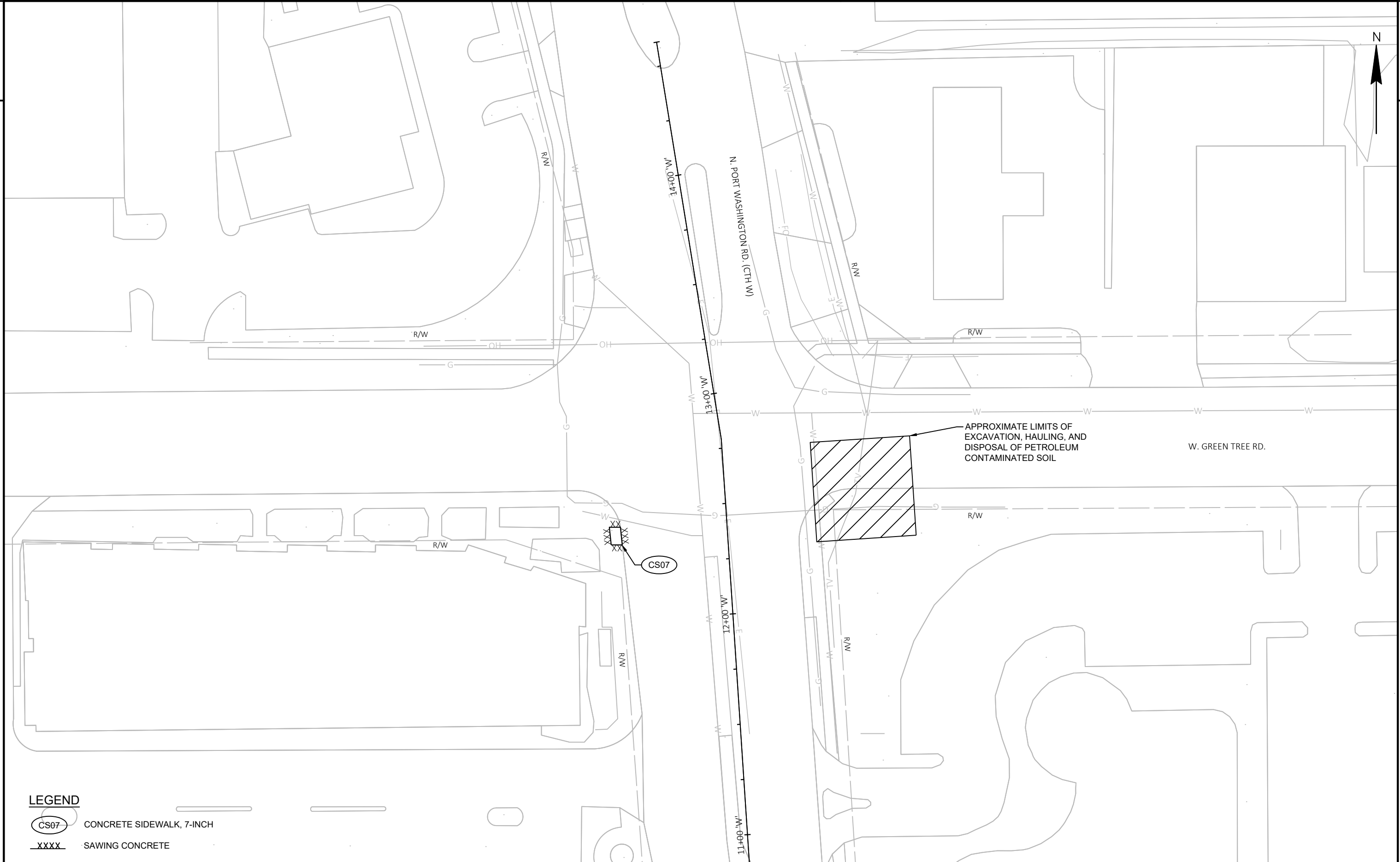
APPROXIMATE LIMITS OF MANAGEMENT OF SOLID WASTE

W. GOOD HOPE RD. (CTH PP)



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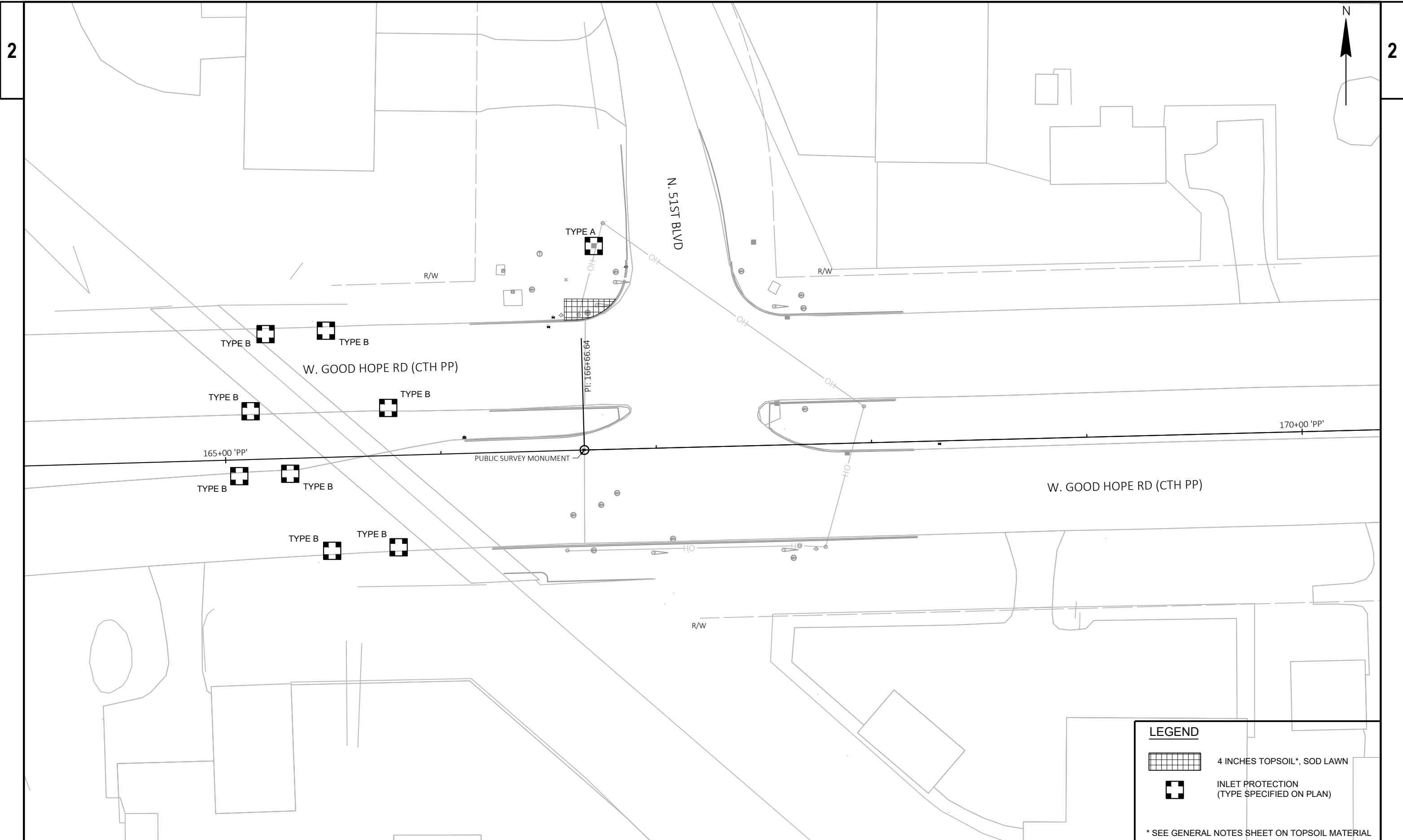
-  CONCRETE SIDEWALK, 7-INCH
-  SAWING CONCRETE



LEGEND

-  CONCRETE SIDEWALK, 7-INCH
-  SAWING CONCRETE


PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E
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2

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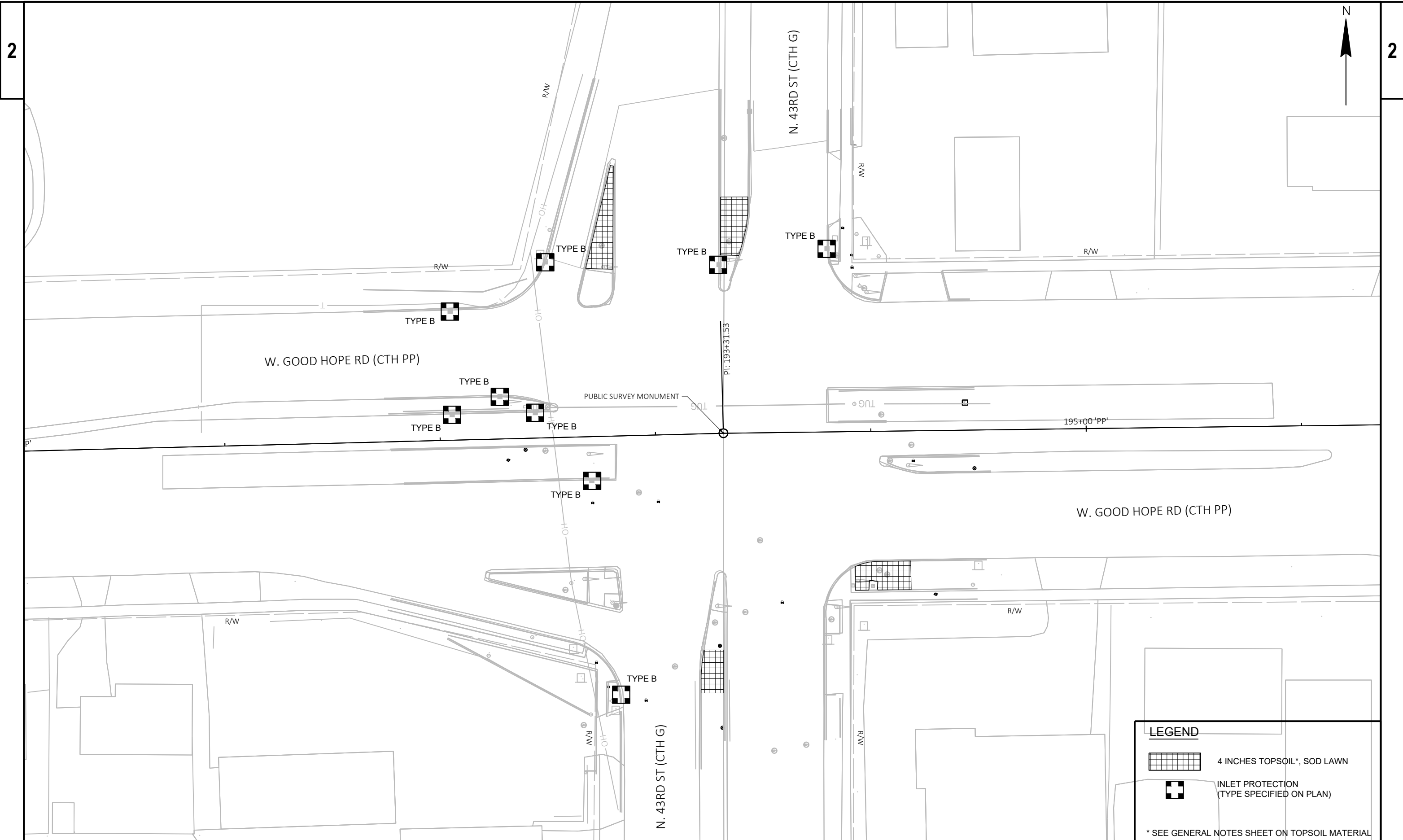
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 4 INCHES TOPSOIL*, SOD LAWN



 INLET PROTECTION (TYPE SPECIFIED ON PLAN)

* SEE GENERAL NOTES SHEET ON TOPSOIL MATERIAL

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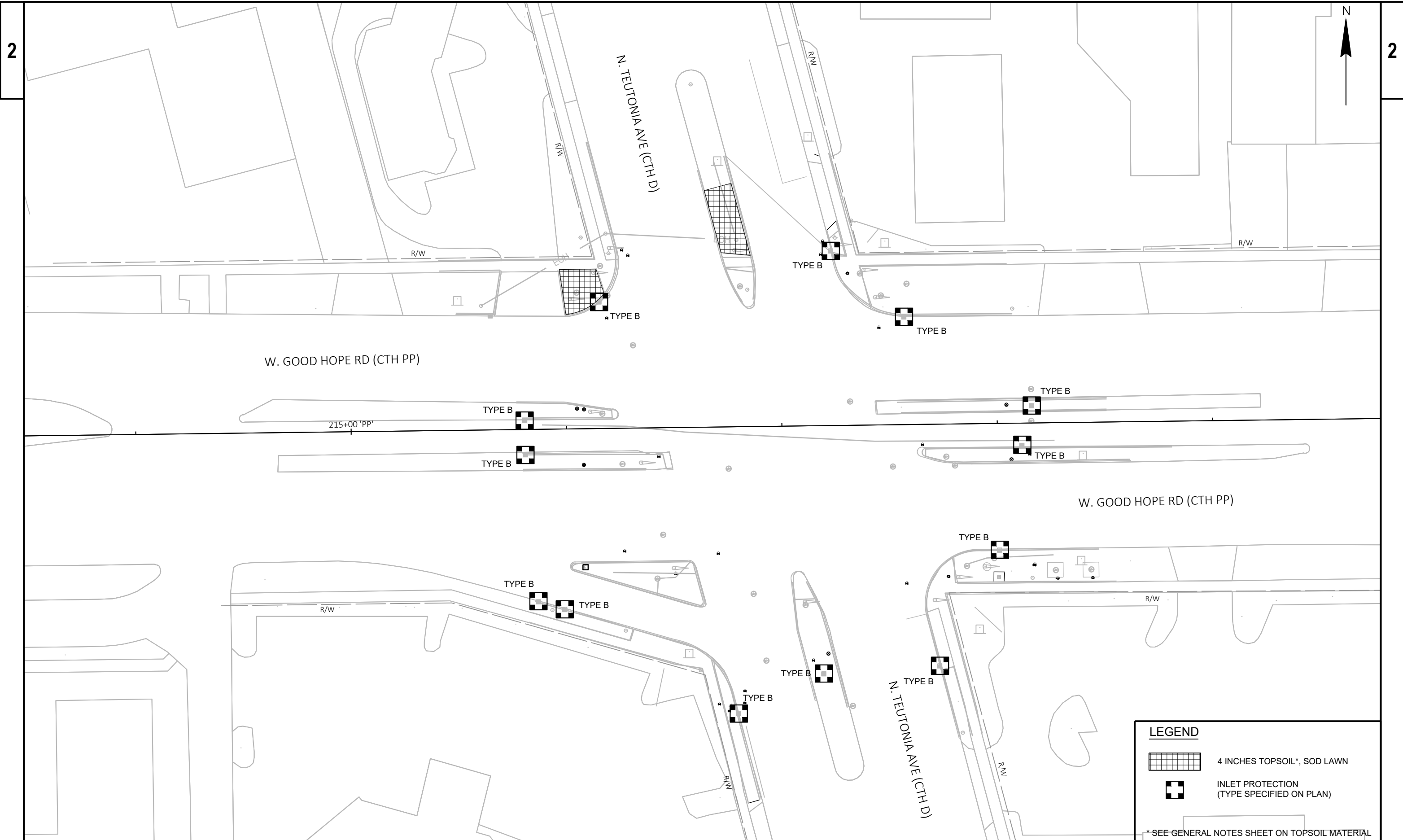


LEGEND

-  4 INCHES TOPSOIL*, SOD LAWN
-  INLET PROTECTION (TYPE SPECIFIED ON PLAN)

* SEE GENERAL NOTES SHEET ON TOPSOIL MATERIAL

PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	EROSION CONTROL- 43RD & CTH PP	SHEET E
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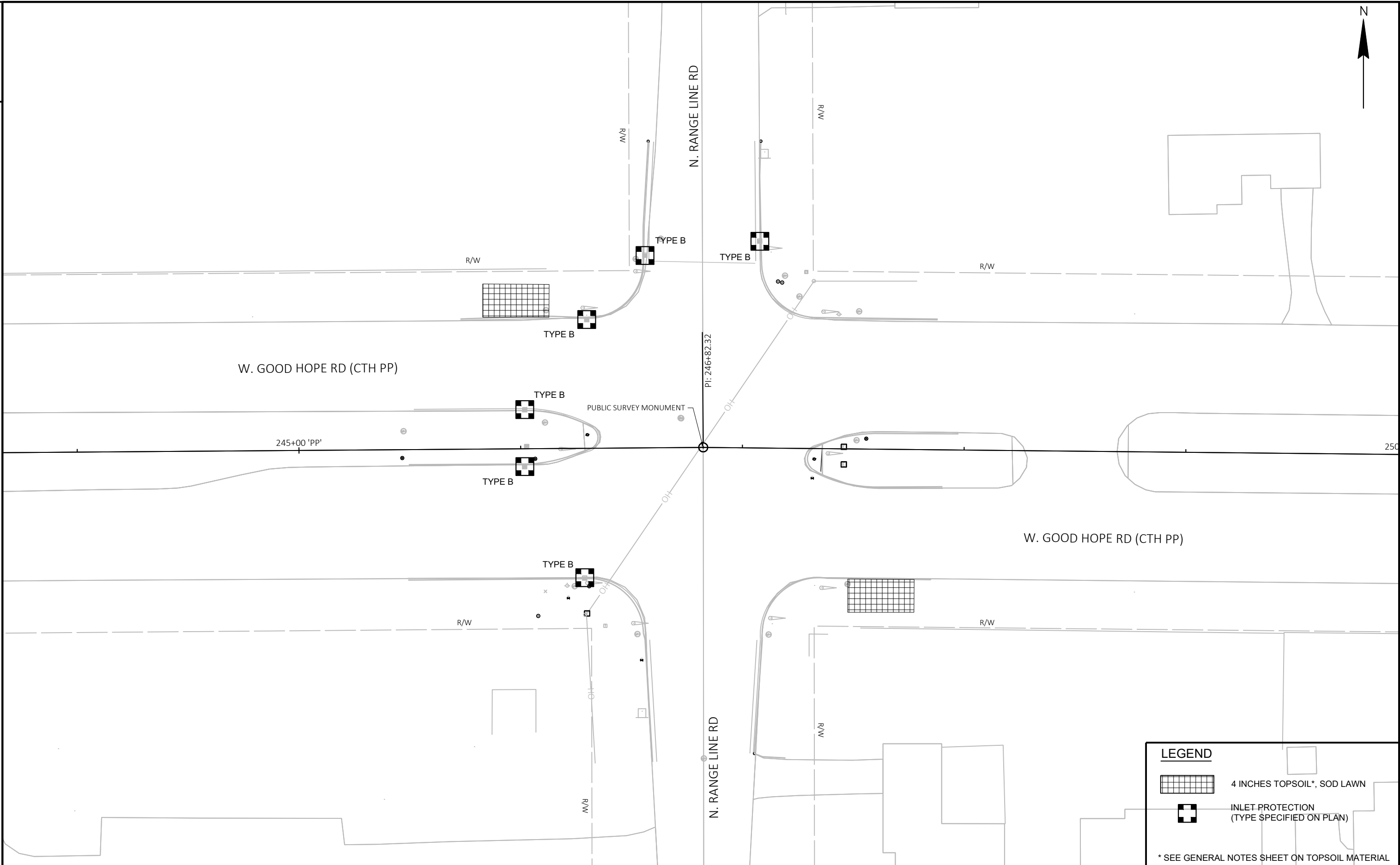
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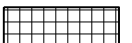

 4 INCHES TOPSOIL*, SOD LAWN

 INLET PROTECTION (TYPE SPECIFIED ON PLAN)

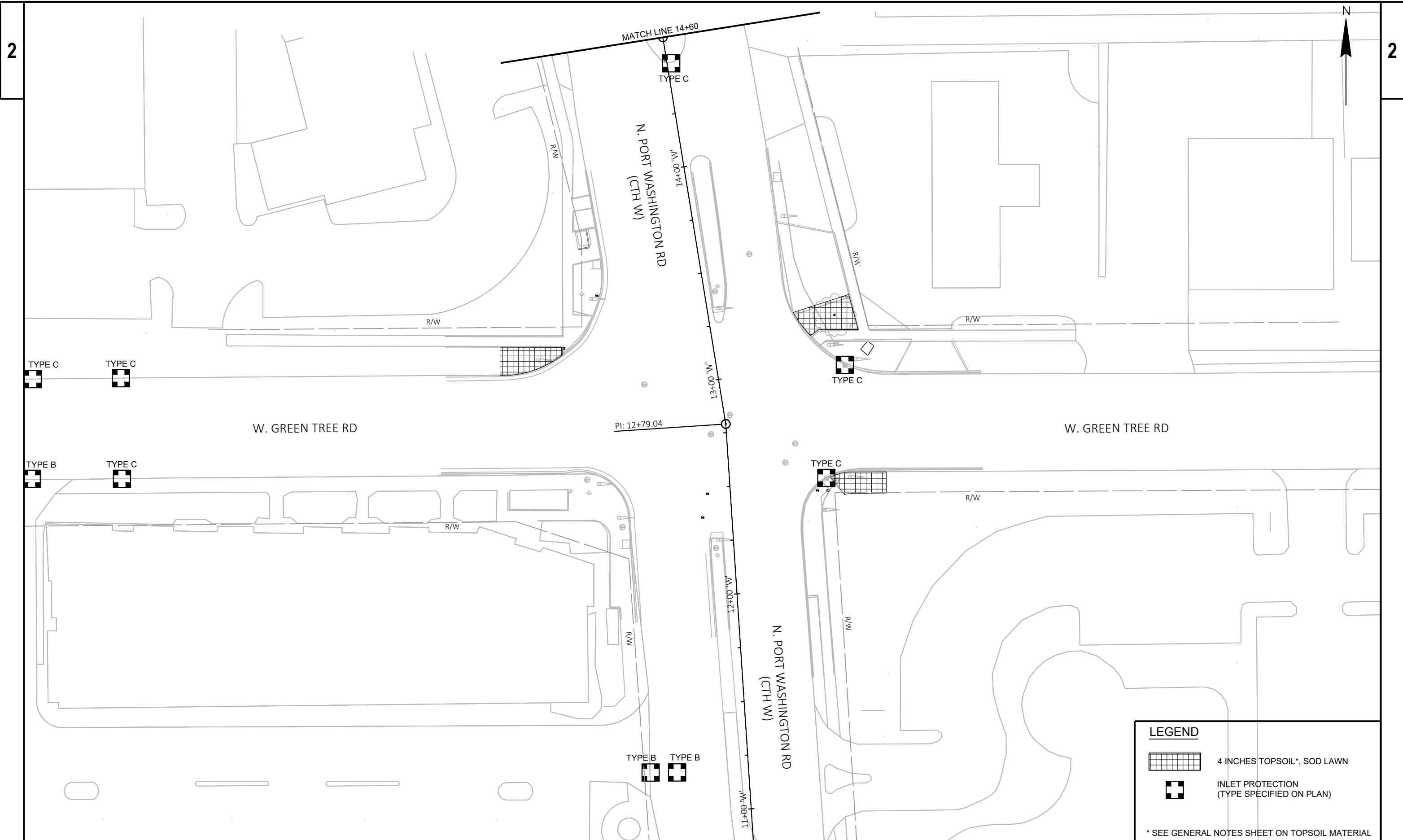
* SEE GENERAL NOTES SHEET ON TOPSOIL MATERIAL



LEGEND

-  4 INCHES TOPSOIL*, SOD LAWN
-  INLET PROTECTION (TYPE SPECIFIED ON PLAN)

* SEE GENERAL NOTES SHEET ON TOPSOIL MATERIAL



2



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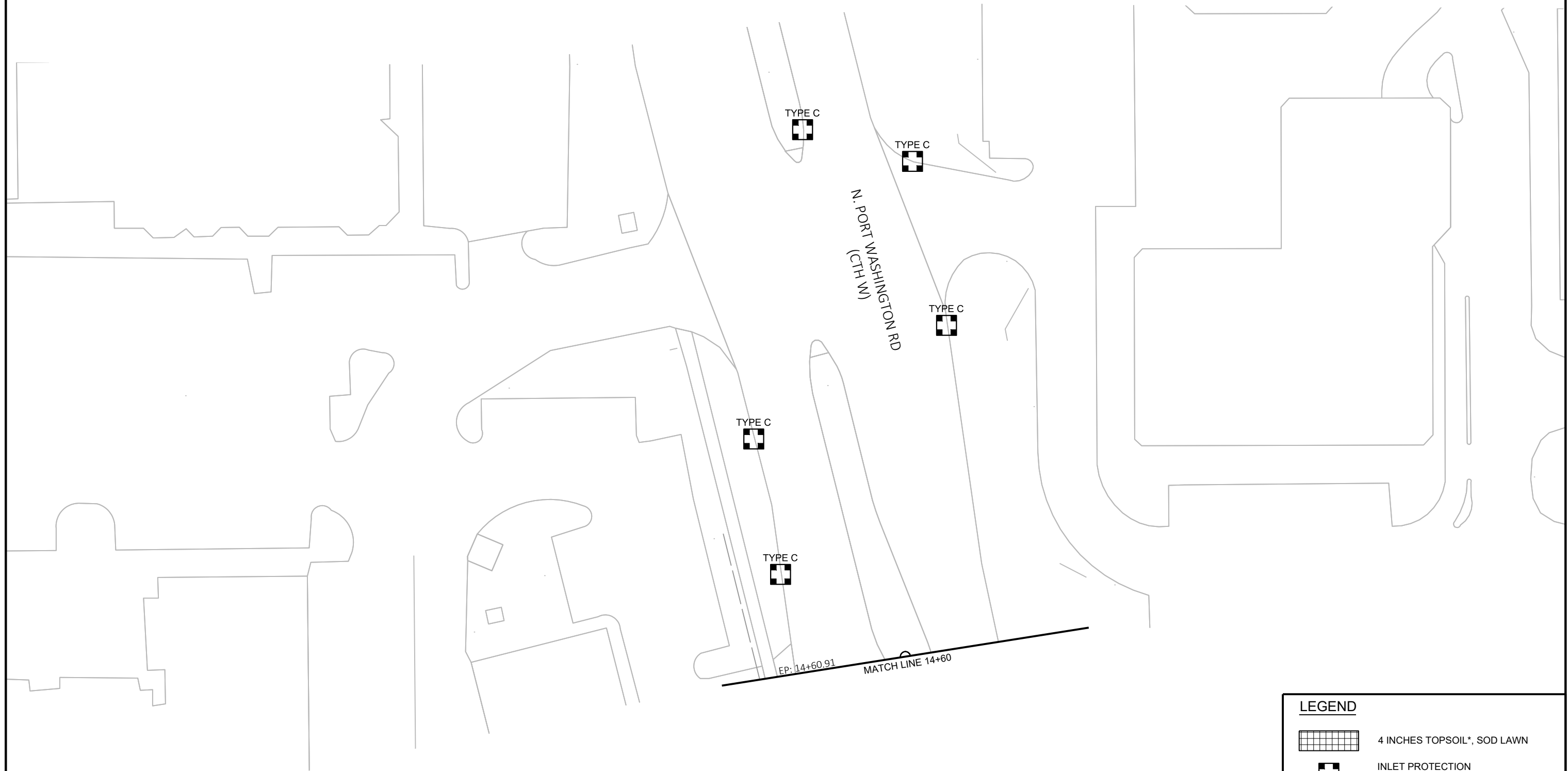
PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	EROSION CONTROL- GREEN TREE & PORT WASHINGTON (CTH W)	SHEET	E
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FILE NAME : O:\HIGHWAY OPERATIONS CONTROL FILE\CENTRAL FILES\2010-2014\HSIP PROJECTS - MULTI-HWY\2967-00-07 6 INTERSECTIONS GOOD HOPE PORT SHERMAN\DESIGN\PLANS\29670077_EROSION CONTROL\DWG\10/26/2021 9:13 AM PLOT BY : MURPHY, DANIEL PLOT NAME : PLOT SCALE : 1 IN:40 FT LAYOUT NAME - GREEN TREE & PORT_1 WISDOT/CADD SHEET 42


LEGEND


-  4 INCHES TOPSOIL*, SOD LAWN
-  INLET PROTECTION (TYPE SPECIFIED ON PLAN)

* SEE GENERAL NOTES SHEET ON TOPSOIL MATERIAL



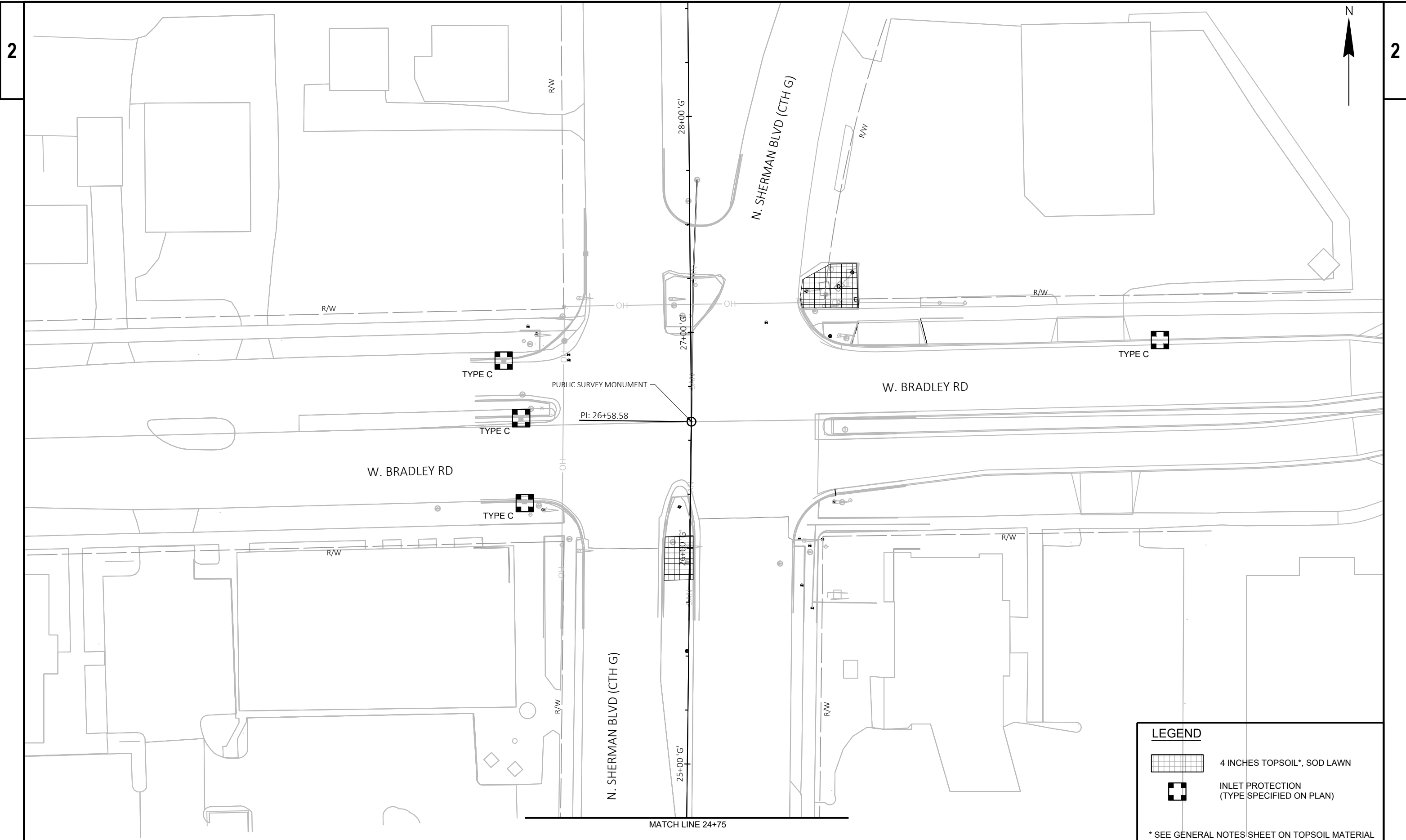
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 4 INCHES TOPSOIL*, SOD LAWN

 INLET PROTECTION (TYPE SPECIFIED ON PLAN)

* SEE GENERAL NOTES SHEET ON TOPSOIL MATERIAL

PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	EROSION CONTROL- GREEN TREE & PORT WASHINGTON (CTH W)	SHEET	E
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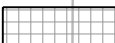



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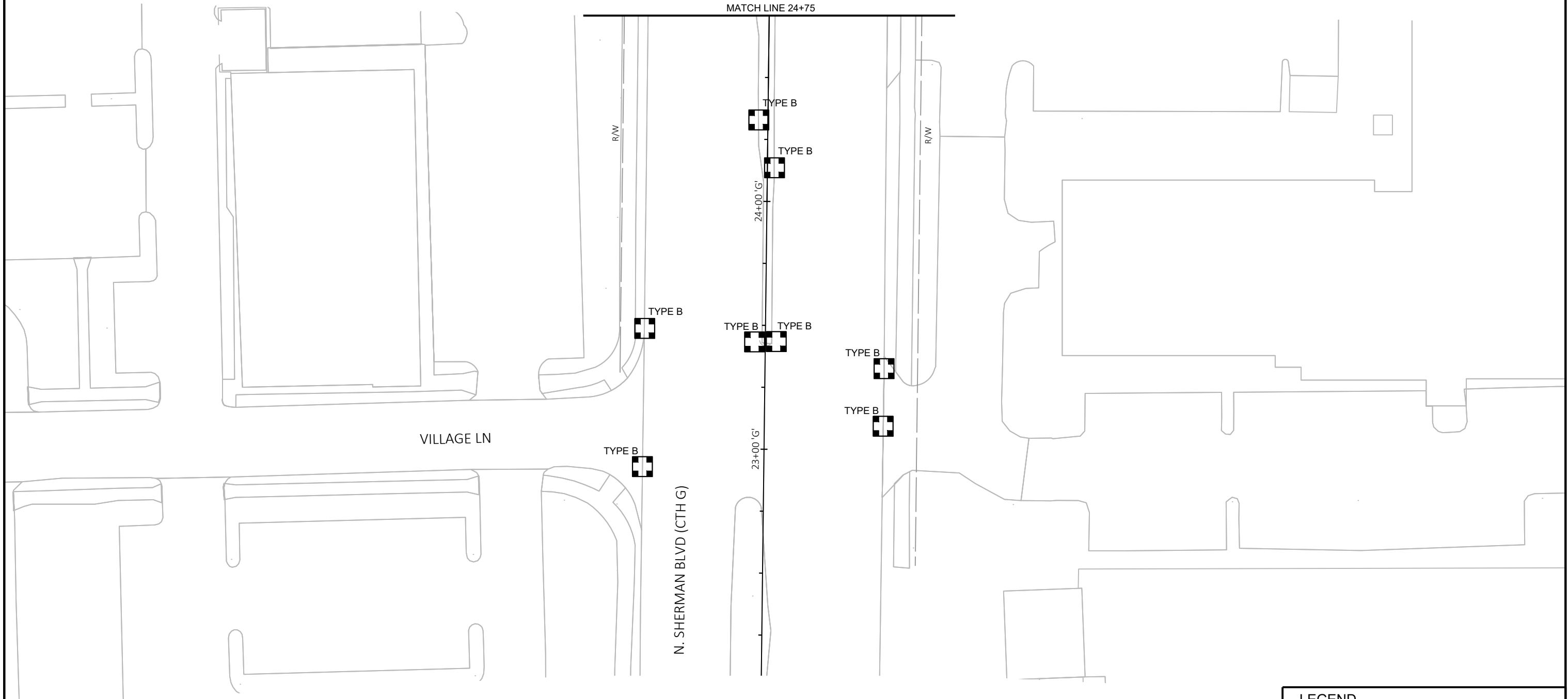


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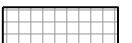

-  4 INCHES TOPSOIL*, SOD LAWN
-  INLET PROTECTION (TYPE SPECIFIED ON PLAN)

* SEE GENERAL NOTES SHEET ON TOPSOIL MATERIAL

PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	EROSION CONTROL- SHERMAN (CTH G) & BRADLEY	SHEET	E
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LEGEND

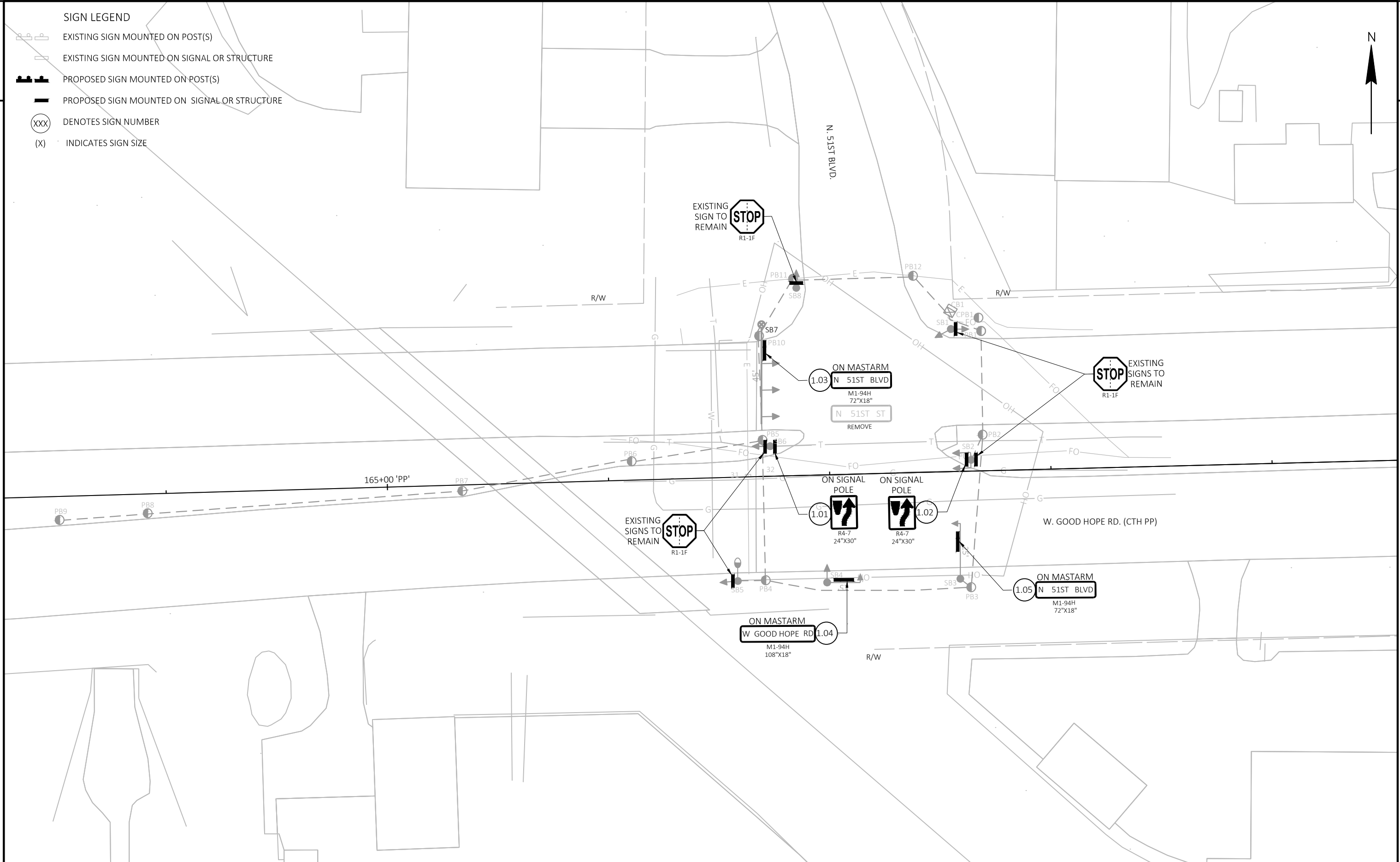
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-  INLET PROTECTION (TYPE SPECIFIED ON PLAN)

* SEE GENERAL NOTES SHEET ON TOPSOIL MATERIAL







PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	EROSION CONTROL- SHERMAN (CTH G) & BRADLEY	SHEET	E
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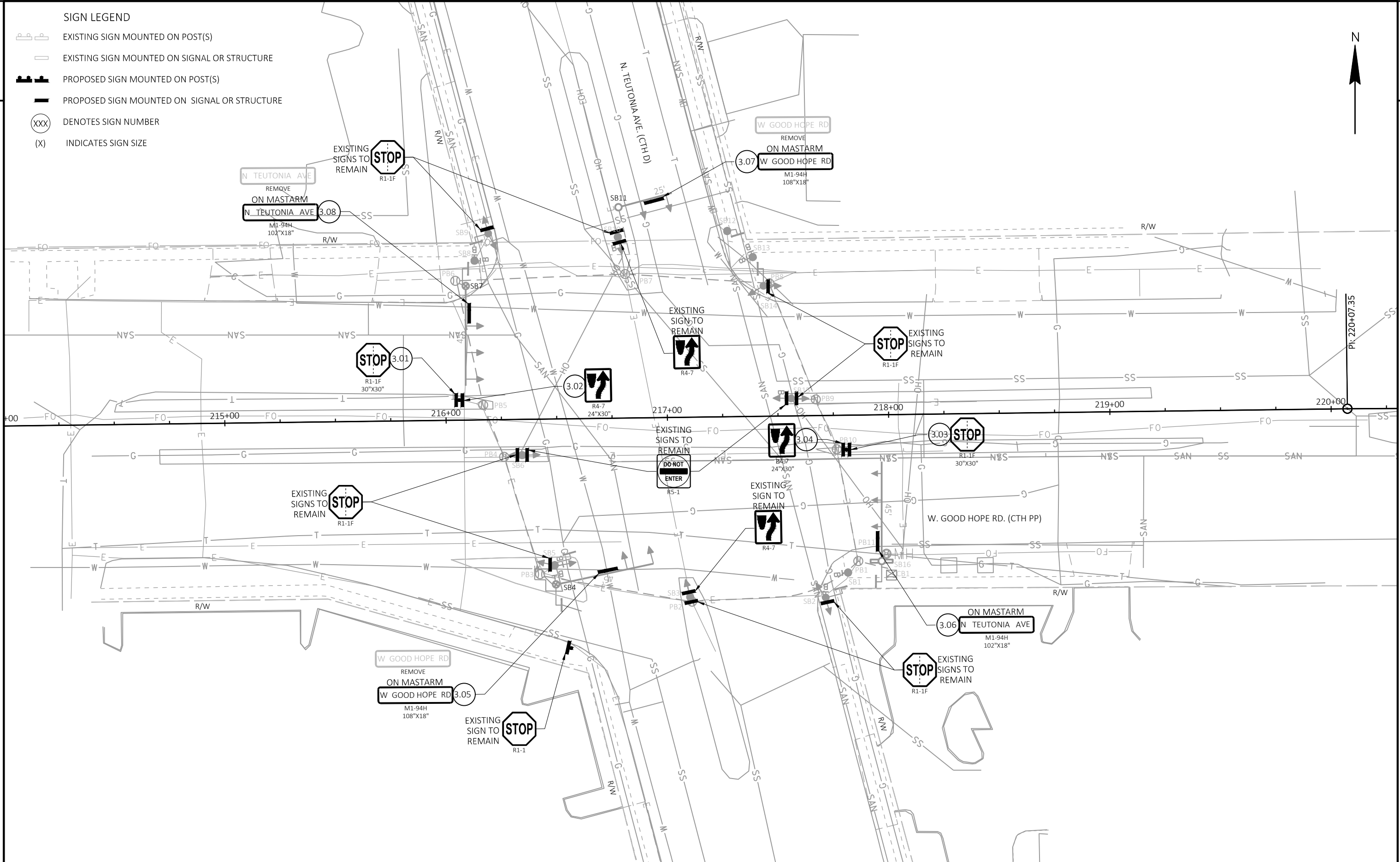
SIGN LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON SIGNAL OR STRUCTURE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGNAL OR STRUCTURE
- DENOTES SIGN NUMBER
- INDICATES SIGN SIZE



SIGN LEGEND







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-  DENOTES SIGN NUMBER
-  INDICATES SIGN SIZE

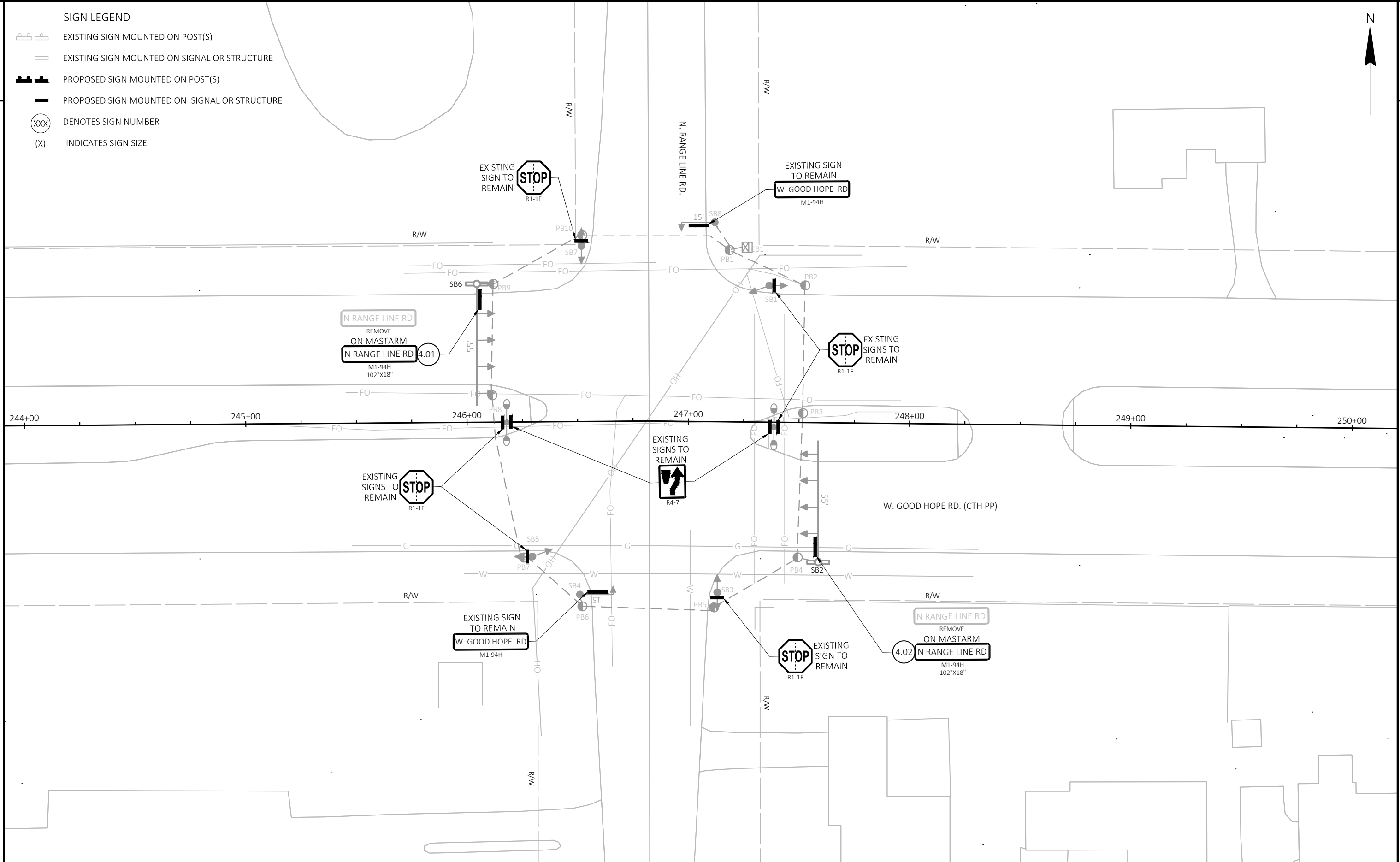


PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	SIGNING	SHEET E
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

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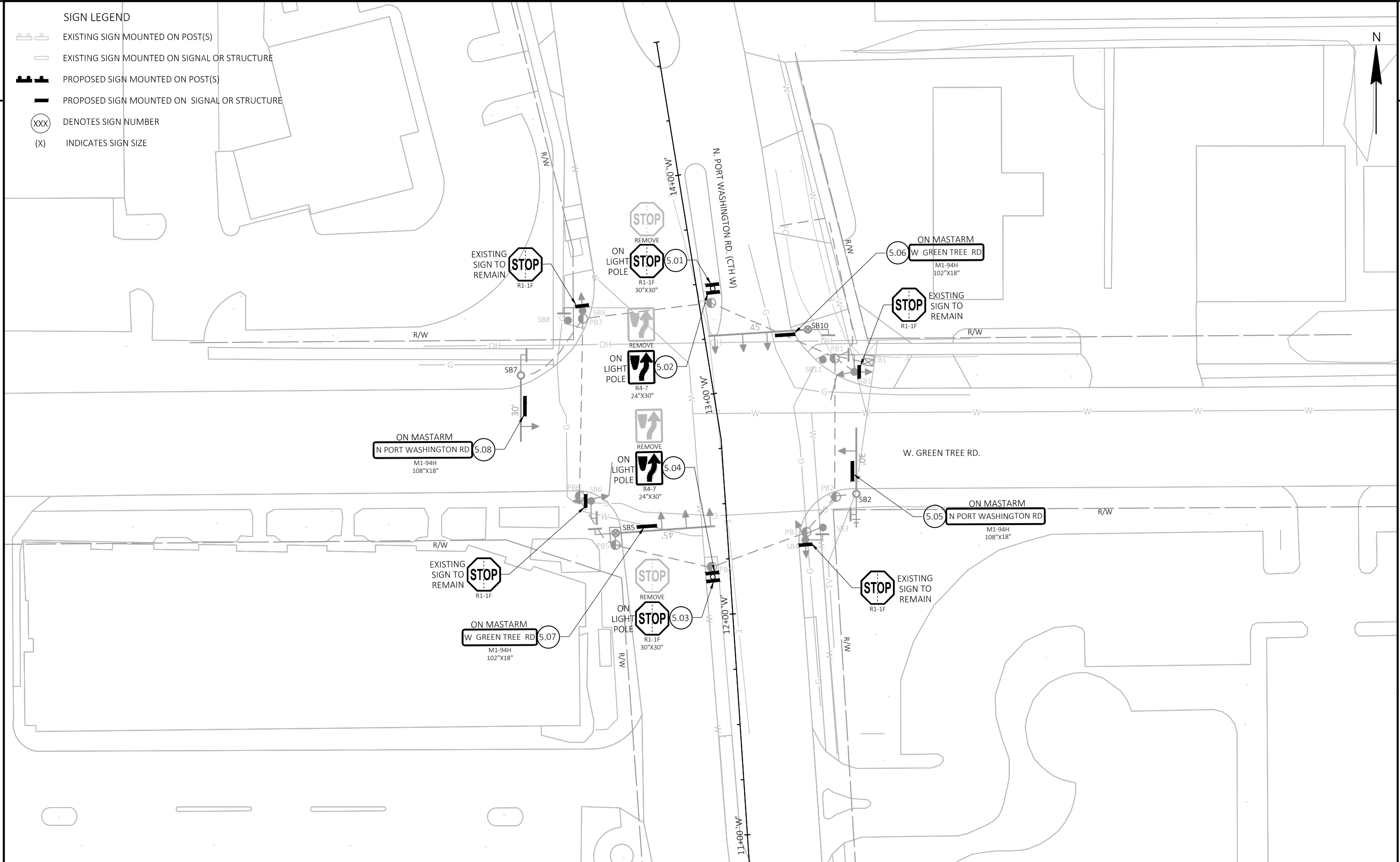
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-  PROPOSED SIGN MOUNTED ON POST(S)
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-  DENOTES SIGN NUMBER
-  INDICATES SIGN SIZE



PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	SIGNING	SHEET	E
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




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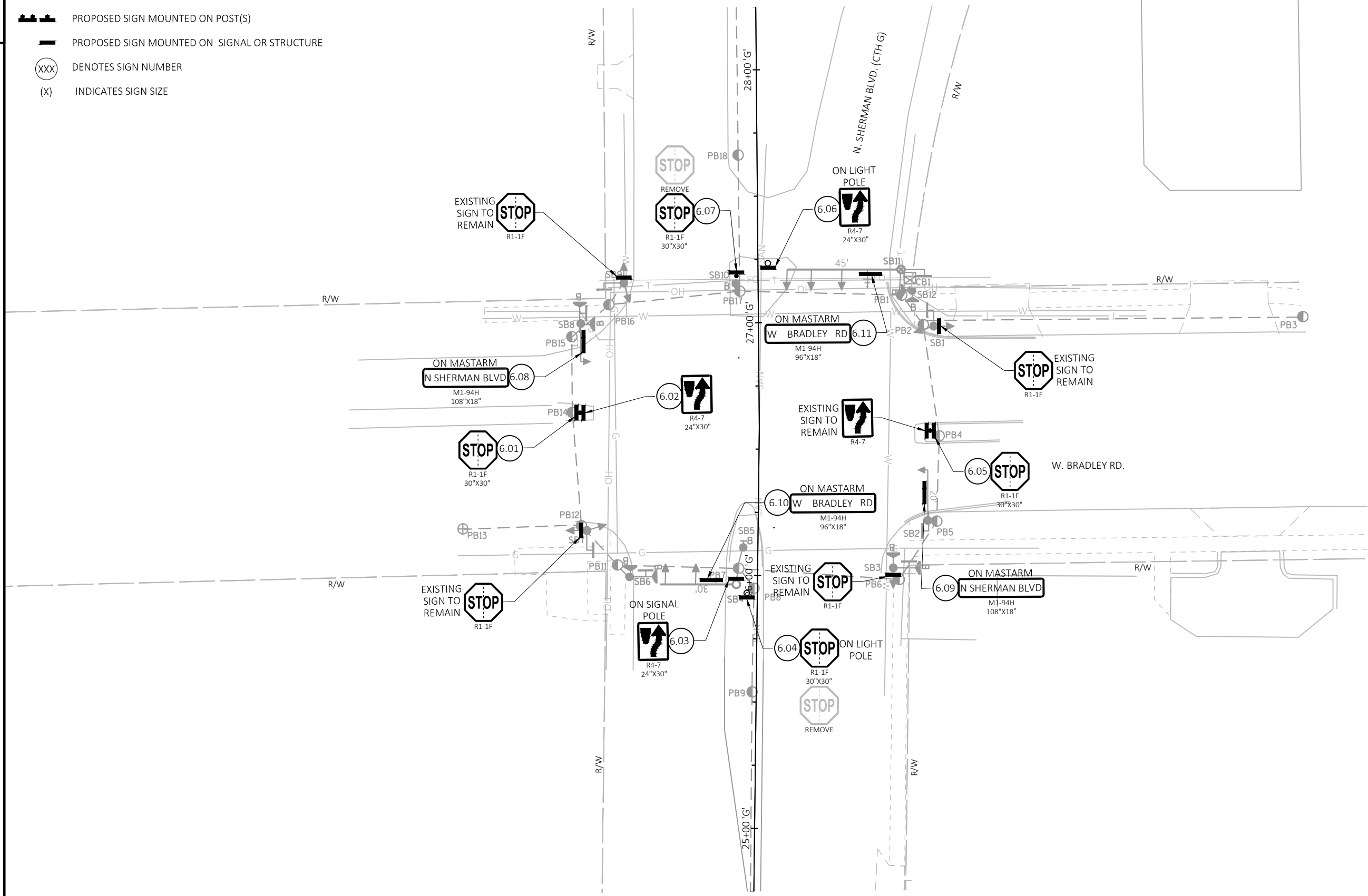
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-  PROPOSED SIGN MOUNTED ON POST(S)
-  PROPOSED SIGN MOUNTED ON SIGNAL OR STRUCTURE
-  DENOTES SIGN NUMBER
-  INDICATES SIGN SIZE



PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	SIGNING	SHEET E
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















SIGN LEGEND

-  EXISTING SIGN MOUNTED ON POST(S)
-  EXISTING SIGN MOUNTED ON SIGNAL OR STRUCTURE
-  PROPOSED SIGN MOUNTED ON POST(S)
-  PROPOSED SIGN MOUNTED ON SIGNAL OR STRUCTURE
-  DENOTES SIGN NUMBER
-  INDICATES SIGN SIZE













PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	SIGNING	SHEET	E
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LEGEND

-  CONTROL CABINET
-  NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
-  SB# ● PROPOSED CONCRETE SIGNAL BASE
-  SB# ● EXISTING CONCRETE SIGNAL BASE TO BE REUSED
-  SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
-  SIGNAL HEAD, LUMINAIRE, POLE TYPE 4, TRANSFORMER BASE
-  (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
-  (XX) MONOTUBE BASE, POLE, 15'-30' ARM
-  (XX) MONOTUBE BASE, POLE, 35'-45' ARM
-  (XX) MONOTUBE BASE, POLE, 35'-55' ARM
-  PULL BOX, 24" X 42"
-  PULL BOX, 24" X 36"
-  PEDESTRIAN HEAD
-  PUSH BUTTON
-  LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
-  VIDEO DETECTION AREA
-  LUMINAIRE

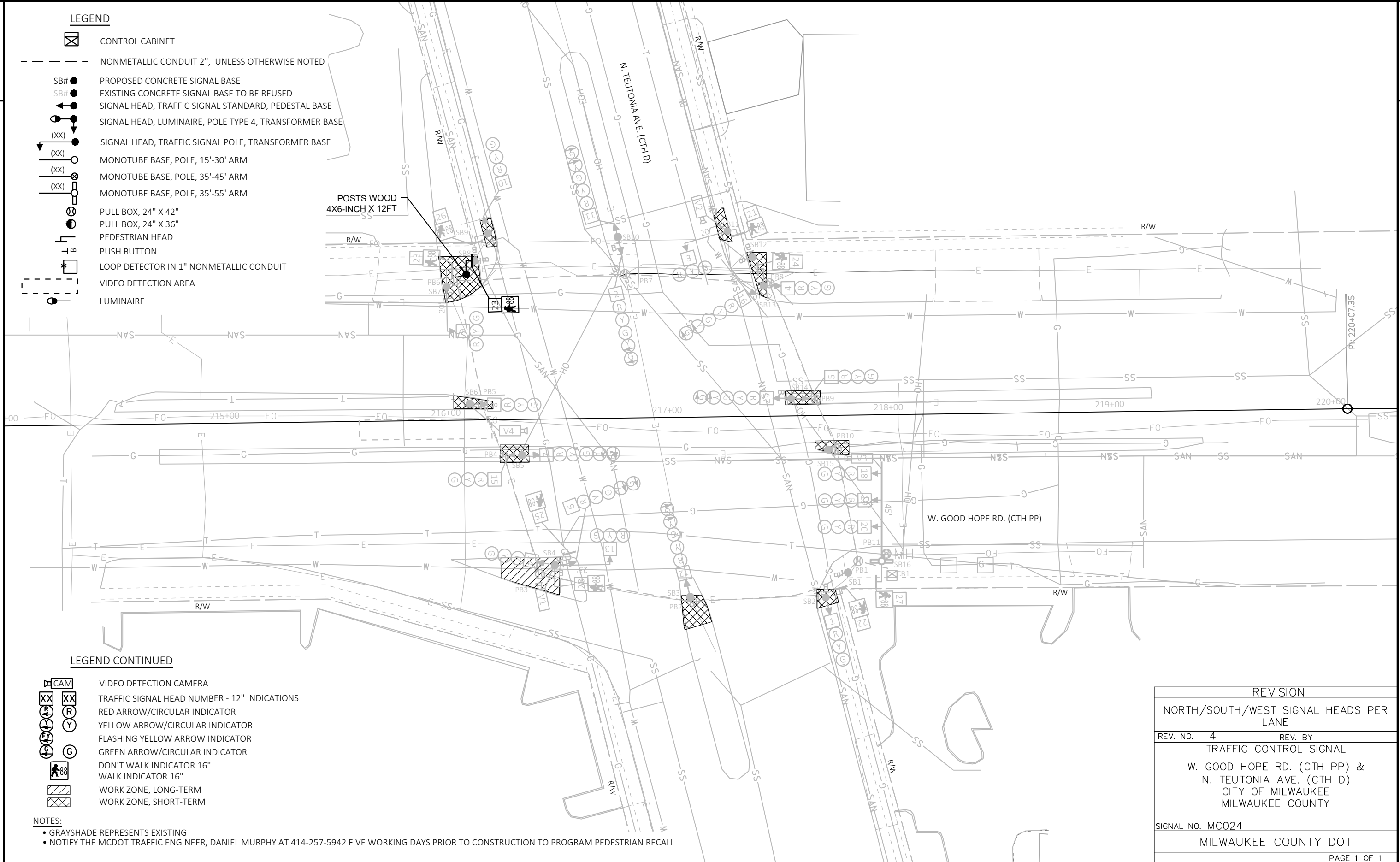
POSTS WOOD
4X6-INCH X 12FT

LEGEND CONTINUED

-  CAM VIDEO DETECTION CAMERA
-  (XX) TRAFFIC SIGNAL HEAD NUMBER - 12" INDICATIONS
-  (R) RED ARROW/CIRCULAR INDICATOR
-  (Y) YELLOW ARROW/CIRCULAR INDICATOR
-  (F) FLASHING YELLOW ARROW INDICATOR
-  (G) GREEN ARROW/CIRCULAR INDICATOR
-  (88) DON'T WALK INDICATOR 16"
-  (88) WALK INDICATOR 16"
-  (Hatched) WORK ZONE, LONG-TERM
-  (Cross-hatched) WORK ZONE, SHORT-TERM


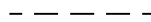
















NOTES:

- GRAYSHADE REPRESENTS EXISTING
- NOTIFY THE MCDOT TRAFFIC ENGINEER, DANIEL MURPHY AT 414-257-5942 FIVE WORKING DAYS PRIOR TO CONSTRUCTION TO PROGRAM PEDESTRIAN RECALL















REVISION	
NORTH/SOUTH/WEST SIGNAL HEADS PER LANE	
REV. NO. 4	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. TEUTONIA AVE. (CTH D) CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC024	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 1	

LEGEND

-  CONTROL CABINET
-  NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
-  SB# ● PROPOSED CONCRETE SIGNAL BASE
-  SB# ● EXISTING CONCRETE SIGNAL BASE TO BE REUSED
-  SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
-  SIGNAL HEAD, LUMINAIRE, POLE TYPE 4, TRANSFORMER BASE
-  (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
-  (XX) MONOTUBE BASE, POLE, 15'-30' ARM
-  (XX) MONOTUBE BASE, POLE, 35'-45' ARM
-  (XX) MONOTUBE BASE, POLE, 35'-55' ARM
-  PULL BOX, 24" X 42"
-  PULL BOX, 24" X 36"
-  PEDESTRIAN HEAD
-  PUSH BUTTON
-  LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
-  VIDEO DETECTION AREA
-  LUMINAIRE
-  ANTENNA

LEGEND CONTINUED

-  EVP DETECTOR HEAD
-  FE# FISHEYE DETECTION CAMERA
-  CAM VIDEO DETECTION CAMERA
-  TRAFFIC SIGNAL HEAD NUMBER - 12" INDICATIONS
-  RED ARROW/CIRCULAR INDICATOR
-  YELLOW ARROW/CIRCULAR INDICATOR
-  FLASHING YELLOW ARROW INDICATOR
-  GREEN ARROW/CIRCULAR INDICATOR
-  DON'T WALK INDICATOR 16"
-  WALK INDICATOR 16"
-  WORK ZONE, LONG-TERM
-  WORK ZONE, SHORT-TERM

NOTES:

- GRAYSHADE REPRESENTS EXISTING
- NOTIFY THE MCDOT TRAFFIC ENGINEER, DANIEL MURPHY AT 414-257-5942 FIVE WORKING DAYS PRIOR TO CONSTRUCTION TO PROGRAM PEDESTRIAN RECALL

PROJECT NO: 2967-00-77

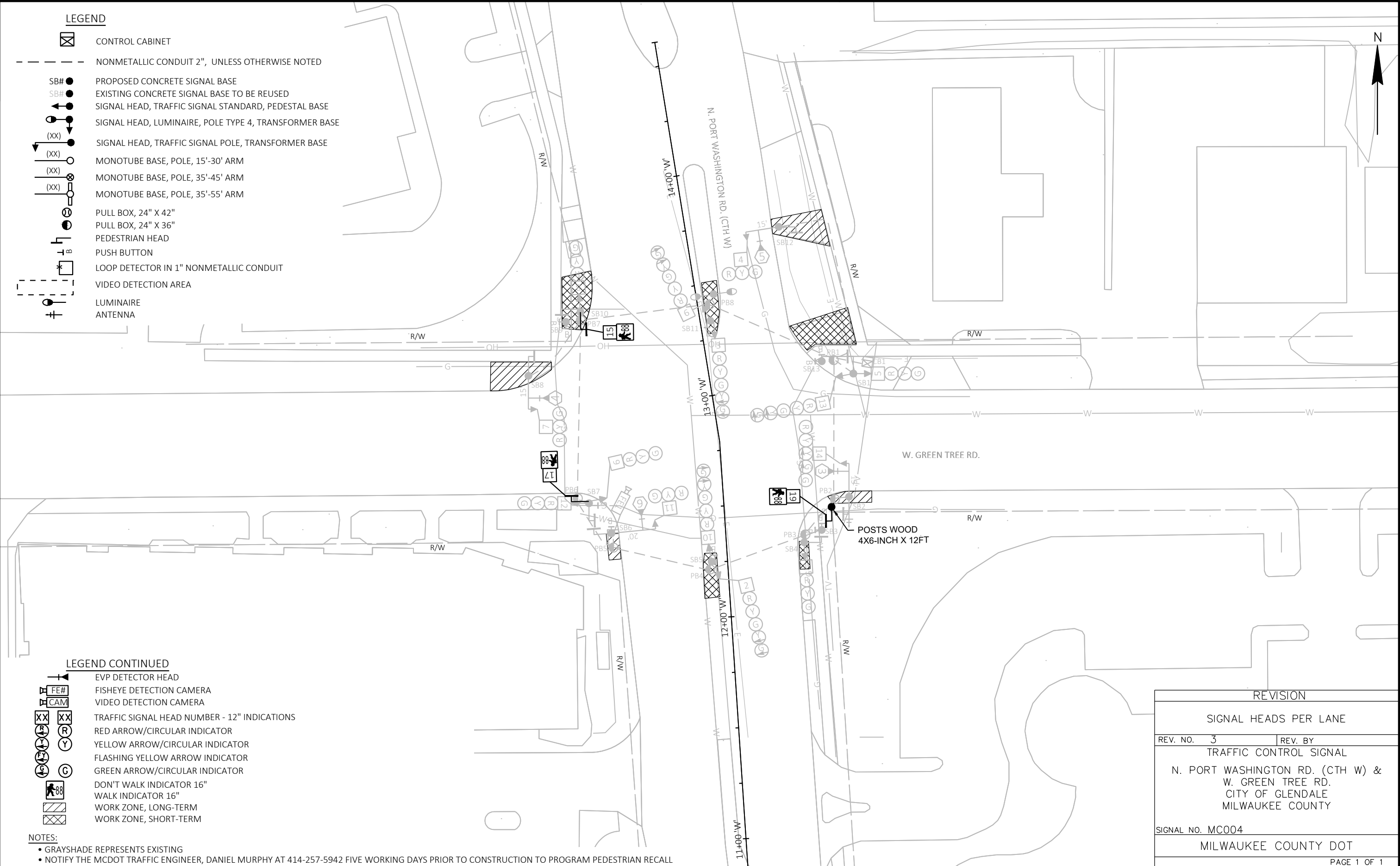
HWY: 6 LOCAL INTERSECTIONS

COUNTY: MILWAUKEE

TEMPORARY TRAFFIC SIGNAL PLAN


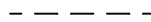















SHEET

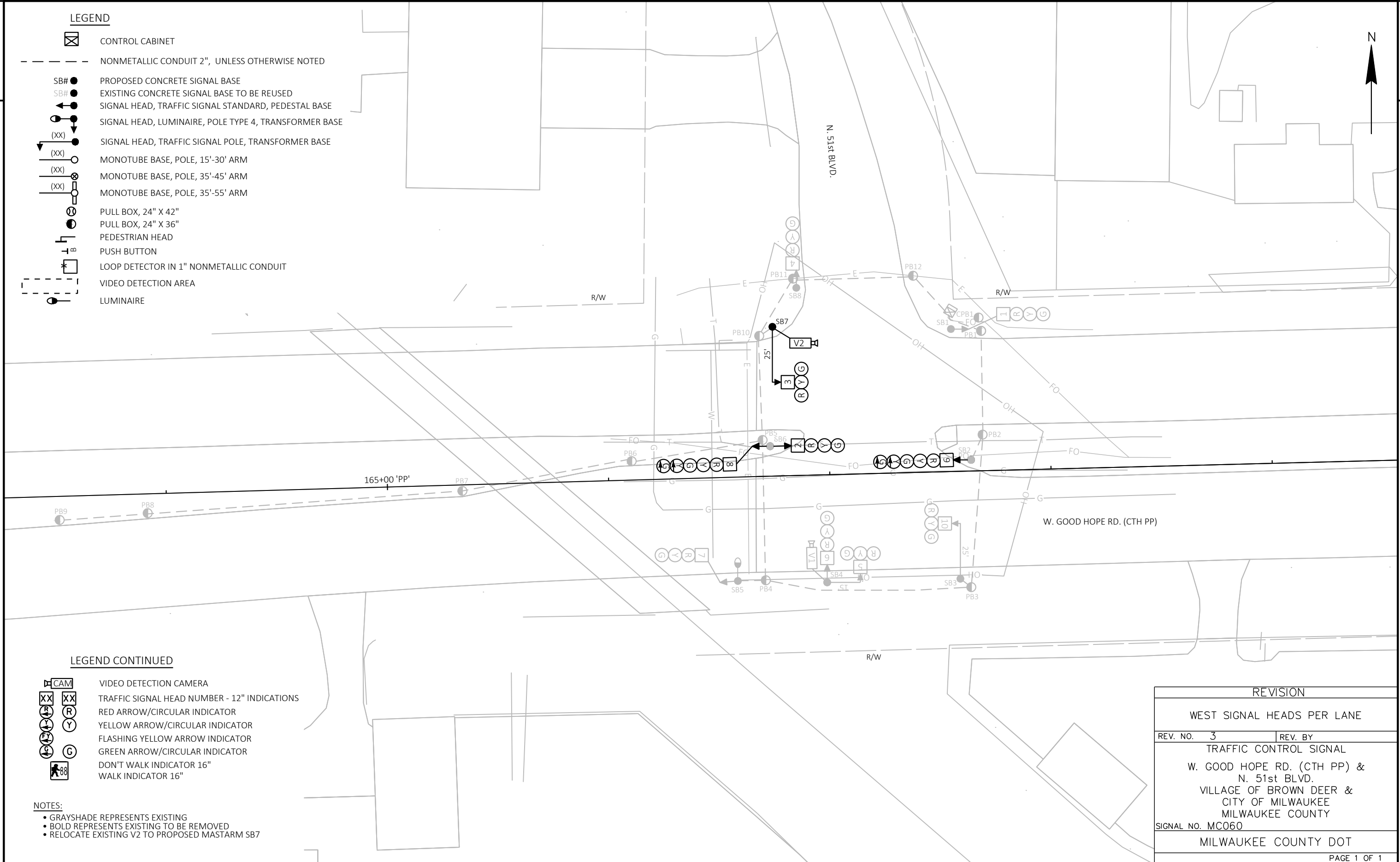
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REVISION	
SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
N. PORT WASHINGTON RD. (CTH W) & W. GREEN TREE RD. CITY OF GLENDALE MILWAUKEE COUNTY	
SIGNAL NO. MC004	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 1	

LEGEND

-  CONTROL CABINET
-  NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
-  PROPOSED CONCRETE SIGNAL BASE
-  EXISTING CONCRETE SIGNAL BASE TO BE REUSED
-  SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
-  SIGNAL HEAD, LUMINAIRE, POLE TYPE 4, TRANSFORMER BASE
-  SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
-  MONOTUBE BASE, POLE, 15'-30' ARM
-  MONOTUBE BASE, POLE, 35'-45' ARM
-  MONOTUBE BASE, POLE, 35'-55' ARM
-  PULL BOX, 24" X 42"
-  PULL BOX, 24" X 36"
-  PEDESTRIAN HEAD
-  PUSH BUTTON
-  LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
-  VIDEO DETECTION AREA
-  LUMINAIRE



LEGEND CONTINUED

-  VIDEO DETECTION CAMERA
-  TRAFFIC SIGNAL HEAD NUMBER - 12" INDICATIONS
-  RED ARROW/CIRCULAR INDICATOR
-  YELLOW ARROW/CIRCULAR INDICATOR
-  FLASHING YELLOW ARROW INDICATOR
-  GREEN ARROW/CIRCULAR INDICATOR
-  DON'T WALK INDICATOR 16"
-  WALK INDICATOR 16"

- NOTES:
- GRAYSHADE REPRESENTS EXISTING
 - BOLD REPRESENTS EXISTING TO BE REMOVED
 - RELOCATE EXISTING V2 TO PROPOSED MASTARM SB7

REVISION	
WEST SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. 51st BLVD.	
VILLAGE OF BROWN DEER & CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC060	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 1	

Base	Structure No.
SB7	S40-2071-01



LEGEND

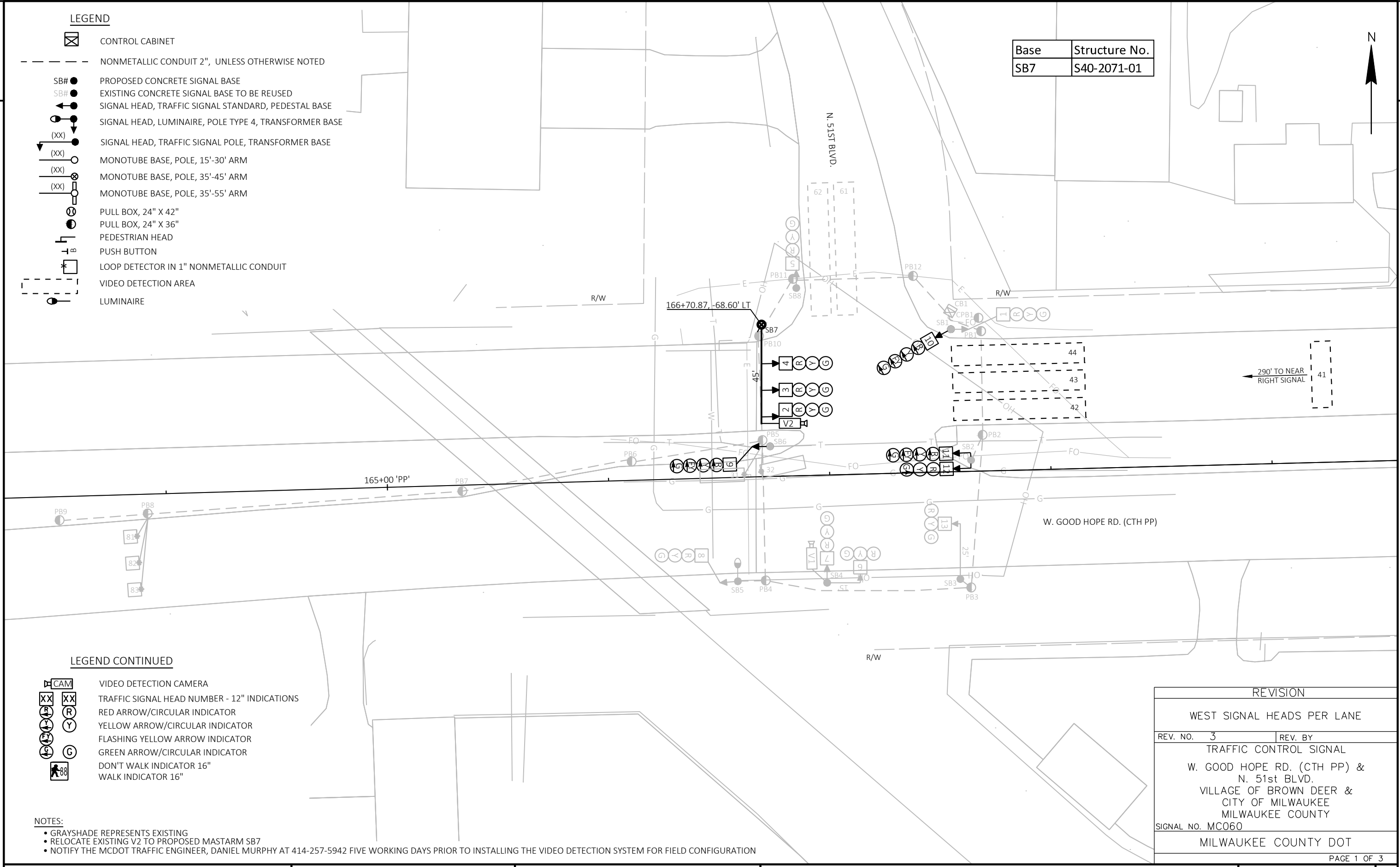
- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- PROPOSED CONCRETE SIGNAL BASE
- EXISTING CONCRETE SIGNAL BASE TO BE REUSED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, LUMINAIRE, POLE TYPE 4, TRANSFORMER BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- MONOTUBE BASE, POLE, 15'-30' ARM
- MONOTUBE BASE, POLE, 35'-45' ARM
- MONOTUBE BASE, POLE, 35'-55' ARM
- PULL BOX, 24" X 42"
- PULL BOX, 24" X 36"
- PEDESTRIAN HEAD
- PUSH BUTTON
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO DETECTION AREA
- LUMINAIRE

LEGEND CONTINUED

- VIDEO DETECTION CAMERA
- TRAFFIC SIGNAL HEAD NUMBER - 12" INDICATIONS
- RED ARROW/CIRCULAR INDICATOR
- YELLOW ARROW/CIRCULAR INDICATOR
- FLASHING YELLOW ARROW INDICATOR
- GREEN ARROW/CIRCULAR INDICATOR
- DON'T WALK INDICATOR 16"
- WALK INDICATOR 16"

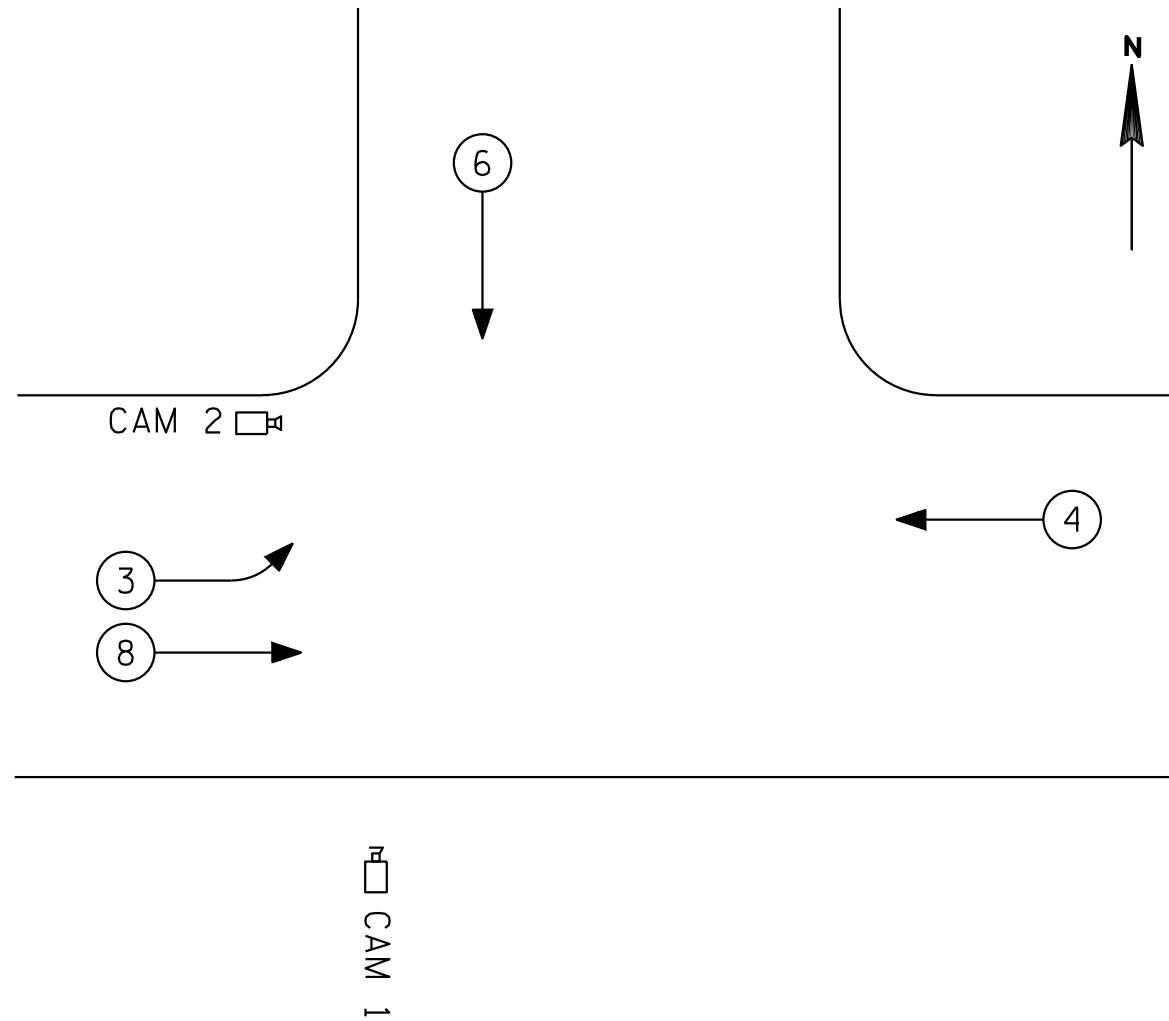
NOTES:

- GRAYSHADE REPRESENTS EXISTING
- RELOCATE EXISTING V2 TO PROPOSED MASTARM SB7
- NOTIFY THE MCDOT TRAFFIC ENGINEER, DANIEL MURPHY AT 414-257-5942 FIVE WORKING DAYS PRIOR TO INSTALLING THE VIDEO DETECTION SYSTEM FOR FIELD CONFIGURATION



REVISION	
WEST SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. 51st BLVD.	
VILLAGE OF BROWN DEER & CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC060	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 3	

PHASE	PHASES			OVERLAPS		
	VEHICLE	LEFT TURN TYPE	PED	OVLP	INCLUDES	OUTPUT
1				A		
2				B		
3	X	FYA		C		
4	X			D		
5				E		
6	X			F	3 FY	10Y
7				G		
8	X			H		



COMMUNICATION	
ETHERNET SWITCH	X
SM FIBER	X
MM FIBER	
5.8 GHZ RADIO	
900 MHZ ETHERNET RADIO	
900 MHZ SERIAL RADIO	
ETHERNET OVER COPPER	

AUXILARY EQUIPMENT	
LIGHTING FROM CABINET	
BATTERY BACKUP	
PTZ CAMERA	
AUDIBLE PEDESTRIAN HEADS	
AUDIBLE PEDESTRIAN BUTTONS	

REVISION	
WEST SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. 51st BLVD.	
VILLAGE OF BROWN DEER & CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC060	
MILWAUKEE COUNTY DOT	

PROJECT ID:	2967-00-77
INTERSECTION:	W. GOOD HOPE RD. (CTH PP) & N. 51st ST.

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	# OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR								PED BUTTONS	
				RED	YELLOW	GREEN	<RED>	<YELLOW>	<FL YLW>	<GREEN>	D/WALK	WALK	
SB1	12	1	8	RED	ORG	GRN							
		10	3				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK			
SB2	12	11	3				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK			
		12	4	RED	ORG	GRN							
SB3	* 7	13	4	RED	ORG	GRN							
SB4	* 7	6 / 7	6	RED	ORG	GRN							
SB5	* 7	8	4	RED	ORG	GRN							
SB6	* 7	9	3				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK			
SB7	12	2 / 3 / 4	8	RED	ORG	GRN							
SB8	* 7	5	6	RED	ORG	GRN							

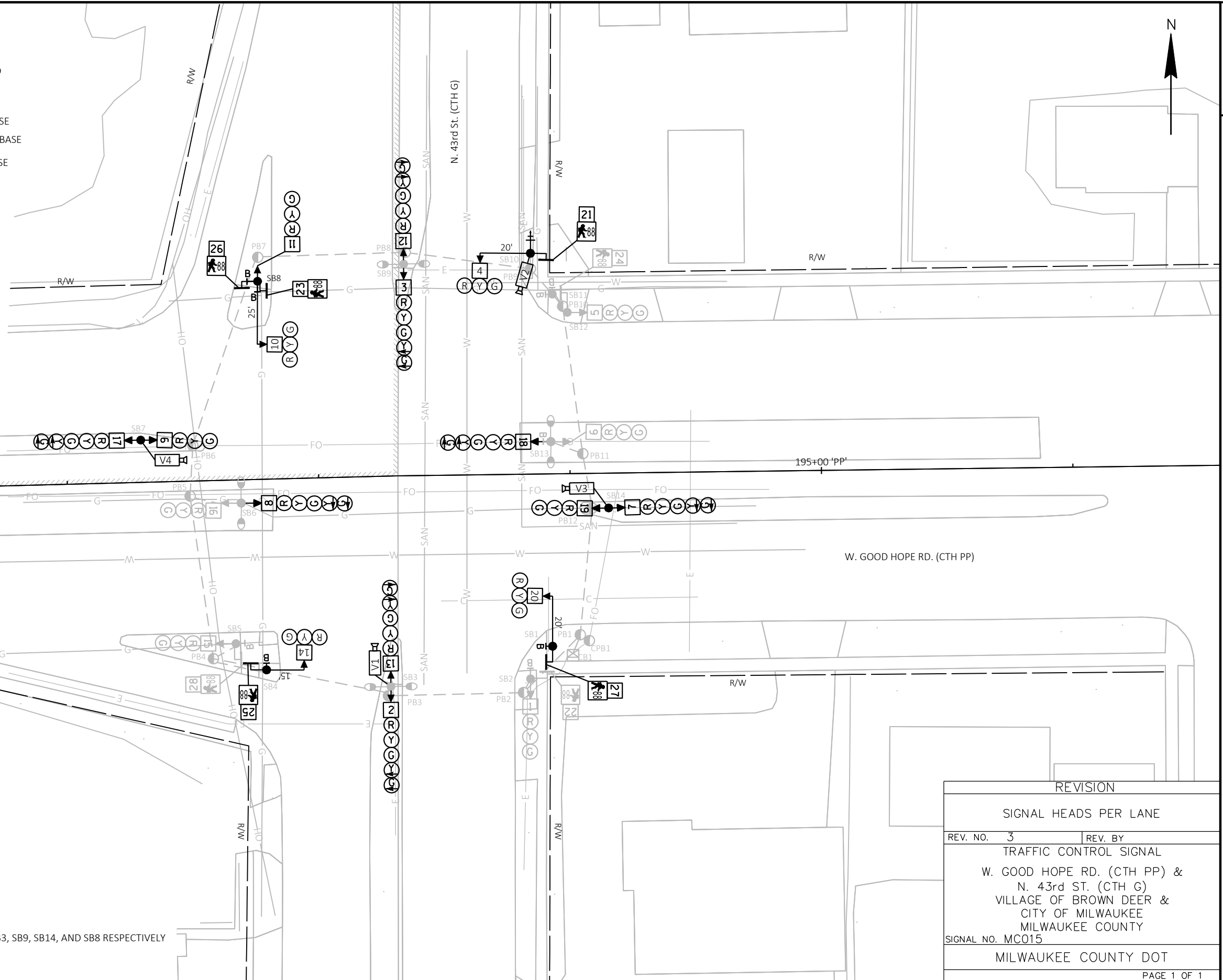
NOTES:

- DO NOT USE THE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR SIGNAL INDICATIONS.
 - ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
- * EXISTING SIGNAL WIRING TO REMAIN.

REVISION	
WEST SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL W. GOOD HOPE RD. (CTH PP) & N. 51st BLVD. VILLAGE OF BROWN DEER & CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC060	
MILWAUKEE COUNTY DOT	
PAGE 3 OF 3	

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- PROPOSED CONCRETE SIGNAL BASE
- EXISTING CONCRETE SIGNAL BASE TO BE REUSED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, LUMINAIRE, POLE TYPE 4, TRANSFORMER BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- MONOTUBE BASE, POLE, 15'-30' ARM
- MONOTUBE BASE, POLE, 35'-45' ARM
- MONOTUBE BASE, POLE, 35'-55' ARM
- PULL BOX, 24" X 42"
- PULL BOX, 24" X 36"
- PEDESTRIAN HEAD
- PUSH BUTTON
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO DETECTION AREA
- LUMINAIRE ANTENNA



LEGEND CONTINUED

- VIDEO DETECTION CAMERA
- TRAFFIC SIGNAL HEAD NUMBER - 12" INDICATIONS
- RED ARROW/CIRCULAR INDICATOR
- YELLOW ARROW/CIRCULAR INDICATOR
- FLASHING YELLOW ARROW INDICATOR
- GREEN ARROW/CIRCULAR INDICATOR
- DON'T WALK INDICATOR 16"
- WALK INDICATOR 16"

NOTES:

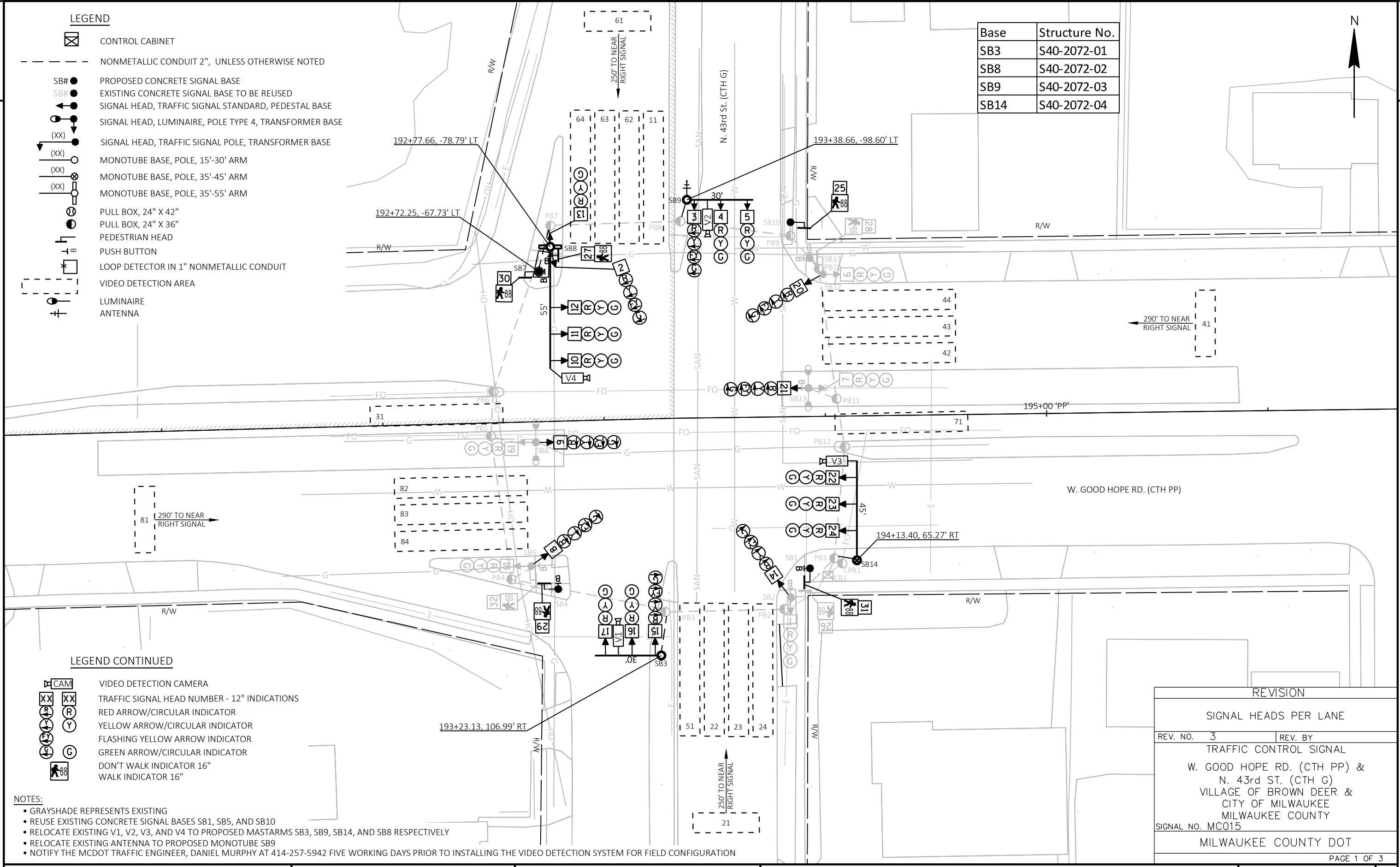
- GRAYSHADE REPRESENTS EXISTING
- BOLD REPRESENTS EXISTING TO BE REMOVED
- RELOCATE EXISTING V1, V2, V3, AND V4 TO PROPOSED MASTARMS SB3, SB9, SB14, AND SB8 RESPECTIVELY
- RELOCATE EXISTING ANTENNA TO PROPOSED MONOTUBE SB9
- REUSE EXISTING CONCRETE SIGNAL BASES SB1, SB4, AND SB10

REVISION	
SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. 43rd ST. (CTH G) VILLAGE OF BROWN DEER & CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC015	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 1	

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SB# PROPOSED CONCRETE SIGNAL BASE
- SB# EXISTING CONCRETE SIGNAL BASE TO BE REUSED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, LUMINAIRE, POLE TYPE 4, TRANSFORMER BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- (XX) MONOTUBE BASE, POLE, 15'-30' ARM
- (XX) MONOTUBE BASE, POLE, 35'-45' ARM
- (XX) MONOTUBE BASE, POLE, 35'-55' ARM
- PULL BOX, 24" X 42"
- PULL BOX, 24" X 36"
- PEDESTRIAN HEAD
- PUSH BUTTON
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO DETECTION AREA
- LUMINAIRE ANTENNA

Base	Structure No.
SB3	S40-2072-01
SB8	S40-2072-02
SB9	S40-2072-03
SB14	S40-2072-04



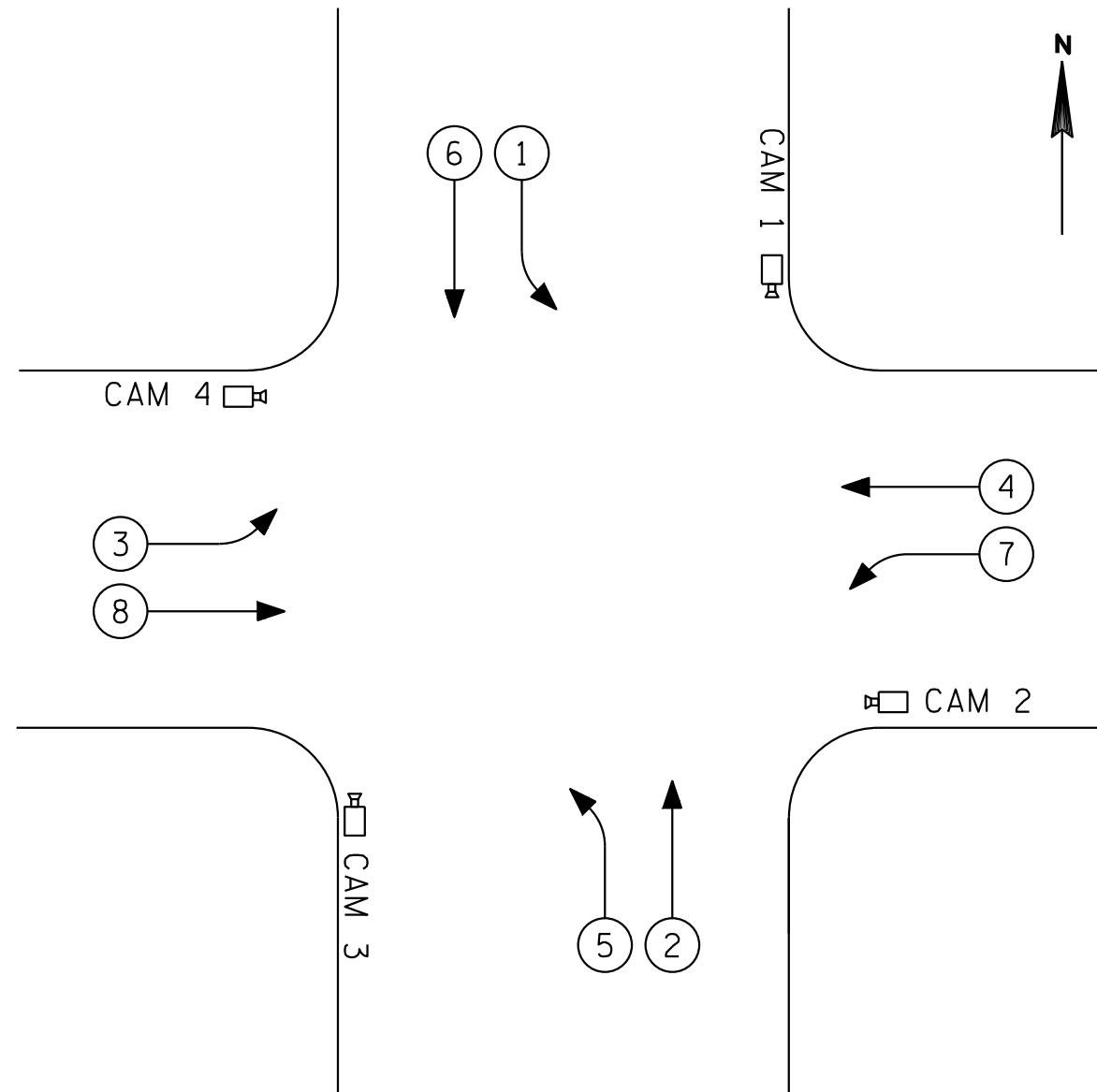
LEGEND CONTINUED

- VIDEO DETECTION CAMERA
- TRAFFIC SIGNAL HEAD NUMBER - 12" INDICATIONS
- RED ARROW/CIRCULAR INDICATOR
- YELLOW ARROW/CIRCULAR INDICATOR
- FLASHING YELLOW ARROW INDICATOR
- GREEN ARROW/CIRCULAR INDICATOR
- DON'T WALK INDICATOR 16"
- WALK INDICATOR 16"

NOTES:

- GRAYSHADE REPRESENTS EXISTING
- REUSE EXISTING CONCRETE SIGNAL BASES SB1, SB5, AND SB10
- RELOCATE EXISTING V1, V2, V3, AND V4 TO PROPOSED MASTARMS SB3, SB9, SB14, AND SB8 RESPECTIVELY
- RELOCATE EXISTING ANTENNA TO PROPOSED MONOTUBE SB9
- NOTIFY THE MCDOT TRAFFIC ENGINEER, DANIEL MURPHY AT 414-257-5942 FIVE WORKING DAYS PRIOR TO INSTALLING THE VIDEO DETECTION SYSTEM FOR FIELD CONFIGURATION

REVISION	
SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. 43rd ST. (CTH G) VILLAGE OF BROWN DEER & CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC015	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 3	



PHASE	VEHICLE	PHASES		OVERLAPS		
		LEFT TURN TYPE	PED	OVLAP	INCLUDES	OUTPUT
1	X	FYA		A		
2	X		X	B		
3	X	FYA		C		
4	X		X	D		
5	X	FYA		E	1 FY	9 Y
6	X		X	F	3 FY	10 Y
7	X	FYA		G	5 FY	11 Y
8	X		X	H	7 FY	12 Y

COMMUNICATION	
ETHERNET SWITCH	X
SM FIBER	X
MM FIBER	
5.8 GHZ RADIO	
900 MHZ ETHERNET RADIO	X
900 MHZ SERIAL RADIO	
ETHERNET OVER COPPER	

AUXILARY EQUIPMENT	
LIGHTING FROM CABINET	
BATTERY BACKUP	
PTZ CAMERA	
AUDIBLE PEDESTRIAN HEADS	
AUDIBLE PEDESTRIAN BUTTONS	

REVISION	
SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. 43rd ST. (CTH G) VILLAGE OF BROWN DEER & CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC015	
MILWAUKEE COUNTY DOT	

PROJECT ID:	2967-00-77
INTERSECTION:	W. GOOD HOPE RD. (CTH PP) & N. 43rd ST. (CTH G)

SIGNAL WIRE COLOR	BLK-BLACK	RED-RED	GRN-GREEN
CODING	WHT-WHITE	BLU-BLUE	ORG-ORANGE


















CB1 TO	# OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR								PED BUTTONS			
				RED	YELLOW	GREEN	<RED>	<YELLOW>	<FL YLW>	<GREEN>	D/WALK	WALK			
SB1	7	31	8P									BLU	BLK		
		B	2P											GRN	WHT/BLK
SB2	15	1	2	RED	ORG	GRN									
		14	1				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		26	2P								BLU	BLK			
		B	8P											WHT/BLK	BLK/WHT
SB3	12	15	1				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		16 / 17	6	RED	ORG	GRN									
SB4	7	29	6P								BLU	BLK			
		B	8P											GRN	WHT/BLK
SB5	15	8	7				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		18	4	RED	ORG	GRN									
		32	8P								BLU	BLK			
		B	6P											WHT/BLK	BLK/WHT
SB6	12	9	7				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		19	4	RED	ORG	GRN									
SB7	7	30	6P								BLU	BLK			
		B	6P											GRN	WHT/BLK
SB8	15	2	5				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		10 / 11 / 12	4	RED	ORG	GRN									
		13	6	RED/WHT	BLU/WHT	GRN/WHT									
		27	4P								BLU	BLK			
		B	4P											WHT/BLK	BLK/WHT
SB9	12	3	5				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		4 / 5	2	RED	ORG	GRN									
SB10	7	25	2P								BLU	BLK			
SB11	* 7	B	4P											GRN	WHT/BLK
		B	2P											RED	WHT/BLK
SB12	12	6	4	RED	ORG	GRN									
		20	3				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		28	4P								BLU	BLK			
SB13	12	7	4	RED	ORG	GRN									
		21	3				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		B	2P											WHT/BLK	BLK/WHT
SB14	12	22 / 23 / 24	4	RED	ORG	GRN									

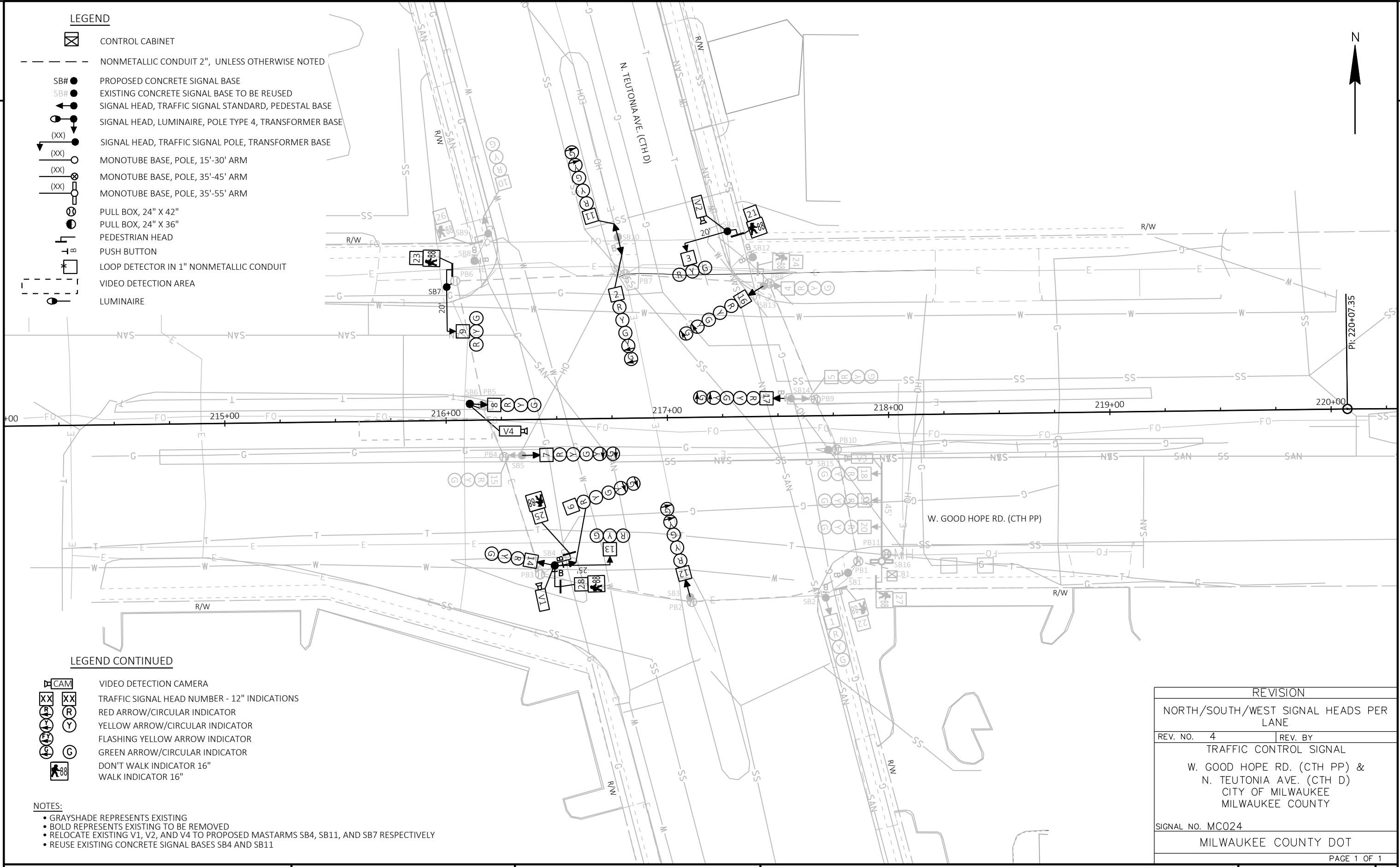
NOTES:

- DO NOT USE THE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR SIGNAL INDICATIONS.
 - ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
- * EXISTING SIGNAL WIRING TO REMAIN.









REVISION	
SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. 43rd ST. (CTH G) VILLAGE OF BROWN DEER & CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC015	
MILWAUKEE COUNTY DOT	
PAGE 3 OF 3	

LEGEND

-  CONTROL CABINET
-  NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
-  SB# ● PROPOSED CONCRETE SIGNAL BASE
-  SB# ● EXISTING CONCRETE SIGNAL BASE TO BE REUSED
-  SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
-  SIGNAL HEAD, LUMINAIRE, POLE TYPE 4, TRANSFORMER BASE
-  (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
-  (XX) MONOTUBE BASE, POLE, 15'-30' ARM
-  (XX) MONOTUBE BASE, POLE, 35'-45' ARM
-  (XX) MONOTUBE BASE, POLE, 35'-55' ARM
-  PULL BOX, 24" X 42"
-  PULL BOX, 24" X 36"
-  PEDESTRIAN HEAD
-  PUSH BUTTON
-  LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
-  VIDEO DETECTION AREA
-  LUMINAIRE



LEGEND CONTINUED

-  VIDEO DETECTION CAMERA
-  (XX) TRAFFIC SIGNAL HEAD NUMBER - 12" INDICATIONS
-  (R) RED ARROW/CIRCULAR INDICATOR
-  (Y) YELLOW ARROW/CIRCULAR INDICATOR
-  (F) FLASHING YELLOW ARROW INDICATOR
-  (G) GREEN ARROW/CIRCULAR INDICATOR
-  (88) DON'T WALK INDICATOR 16"
-  (88) WALK INDICATOR 16"

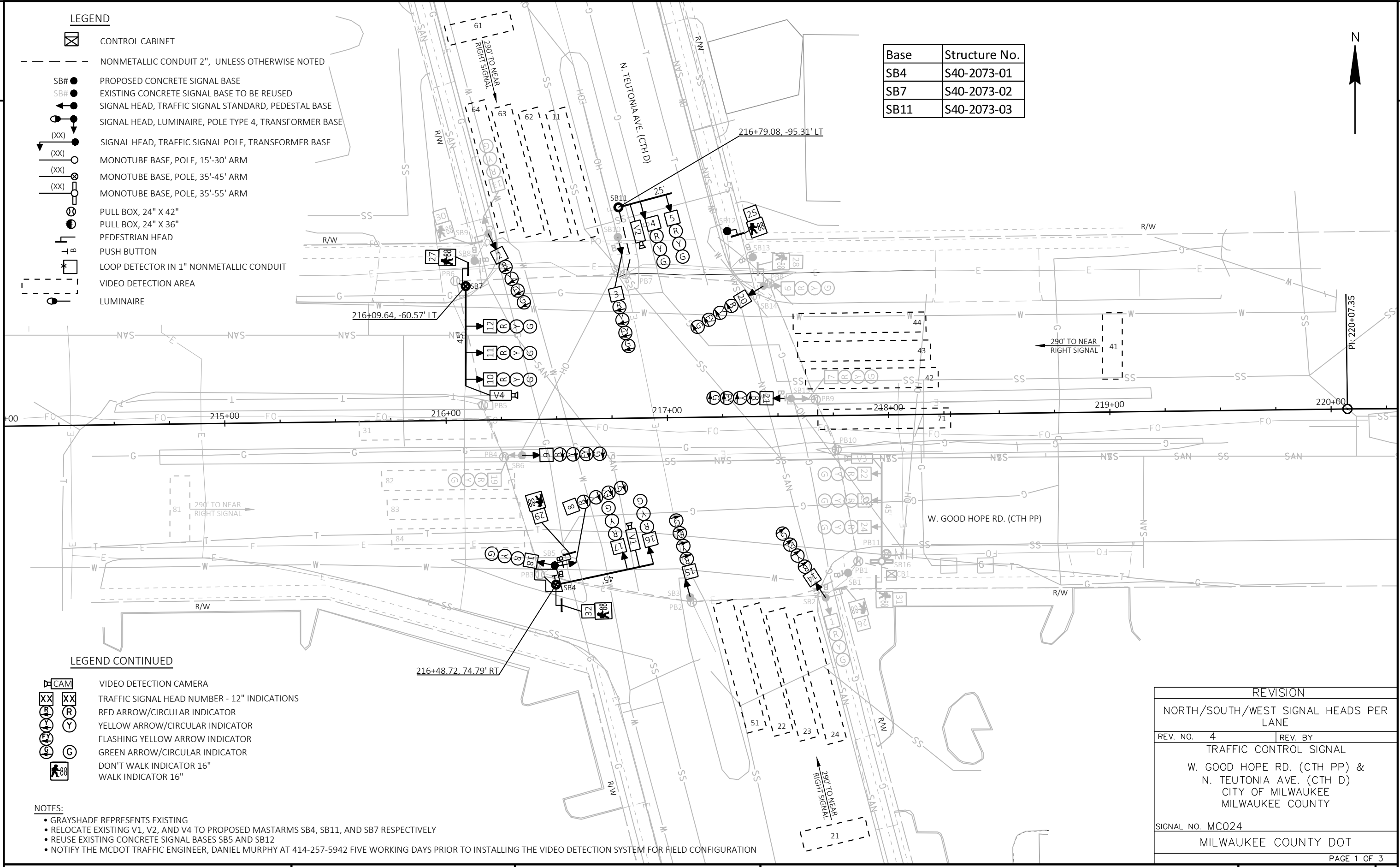
- NOTES:
- GRAYSHADE REPRESENTS EXISTING
 - BOLD REPRESENTS EXISTING TO BE REMOVED
 - RELOCATE EXISTING V1, V2, AND V4 TO PROPOSED MASTARMS SB4, SB11, AND SB7 RESPECTIVELY
 - REUSE EXISTING CONCRETE SIGNAL BASES SB4 AND SB11

REVISION	
NORTH/SOUTH/WEST SIGNAL HEADS PER LANE	
REV. NO. 4	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. TEUTONIA AVE. (CTH D) CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC024	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 1	

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SB# PROPOSED CONCRETE SIGNAL BASE
- SB# EXISTING CONCRETE SIGNAL BASE TO BE REUSED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, LUMINAIRE, POLE TYPE 4, TRANSFORMER BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- MONOTUBE BASE, POLE, 15'-30' ARM
- MONOTUBE BASE, POLE, 35'-45' ARM
- MONOTUBE BASE, POLE, 35'-55' ARM
- PULL BOX, 24" X 42"
- PULL BOX, 24" X 36"
- PEDESTRIAN HEAD
- PUSH BUTTON
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO DETECTION AREA
- LUMINAIRE

Base	Structure No.
SB4	S40-2073-01
SB7	S40-2073-02
SB11	S40-2073-03

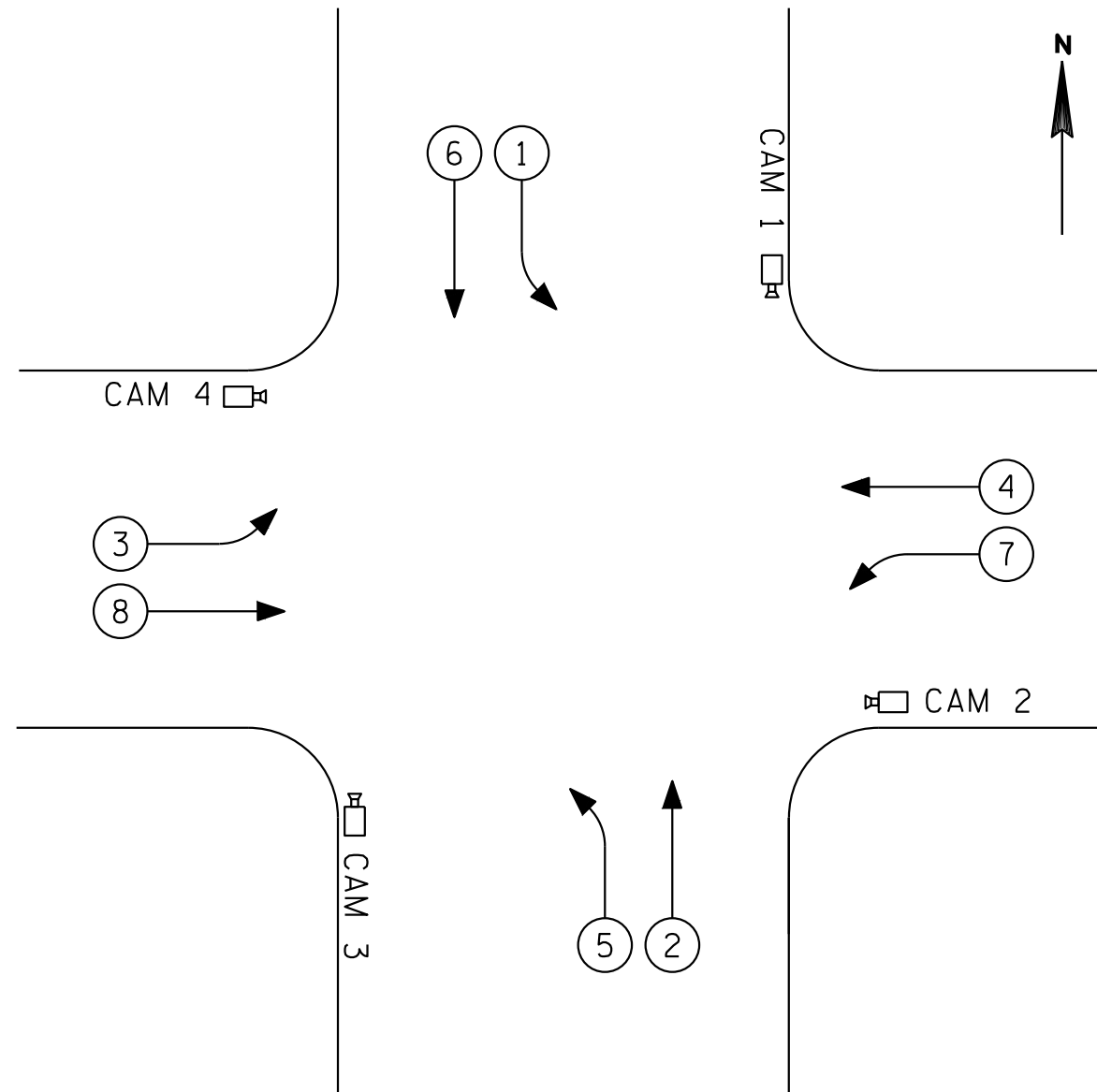


LEGEND CONTINUED

- VIDEO DETECTION CAMERA
- TRAFFIC SIGNAL HEAD NUMBER - 12" INDICATIONS
- RED ARROW/CIRCULAR INDICATOR
- YELLOW ARROW/CIRCULAR INDICATOR
- FLASHING YELLOW ARROW INDICATOR
- GREEN ARROW/CIRCULAR INDICATOR
- DON'T WALK INDICATOR 16"
- WALK INDICATOR 16"

- NOTES:
- GRAYSHADE REPRESENTS EXISTING
 - RELOCATE EXISTING V1, V2, AND V4 TO PROPOSED MASTARMS SB4, SB11, AND SB7 RESPECTIVELY
 - REUSE EXISTING CONCRETE SIGNAL BASES SB5 AND SB12
 - NOTIFY THE MCDOT TRAFFIC ENGINEER, DANIEL MURPHY AT 414-257-5942 FIVE WORKING DAYS PRIOR TO INSTALLING THE VIDEO DETECTION SYSTEM FOR FIELD CONFIGURATION

REVISION	
NORTH/SOUTH/WEST SIGNAL HEADS PER LANE	
REV. NO. 4	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. TEUTONIA AVE. (CTH D)	
CITY OF MILWAUKEE	
MILWAUKEE COUNTY	
SIGNAL NO. MC024	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 3	



PHASE	PHASES			OVERLAPS		
	VEHICLE	LEFT TURN TYPE	PED	OVLP	INCLUDES	OUTPUT
1	X	FYA		A		
2	X		X	B		
3	X	FYA		C		
4	X		X	D		
5	X	FYA		E	1FY	9Y
6	X		X	F	3FY	10Y
7	X	FYA		G	5FY	11Y
8	X		X	H	7FY	12Y

COMMUNICATION	
ETHERNET SWITCH	X
SM FIBER	X
MM FIBER	
5.8 GHZ RADIO	
900 MHZ ETHERNET RADIO	
900 MHZ SERIAL RADIO	
ETHERNET OVER COPPER	

AUXILARY EQUIPMENT	
LIGHTING FROM CABINET	
BATTERY BACKUP	
PTZ CAMERA	
AUDIBLE PEDESTRIAN HEADS	
AUDIBLE PEDESTRIAN BUTTONS	

REVISION	
NORTH/SOUTH/WEST SIGNAL HEADS PER LANE	
REV. NO. 4	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. TEUTONIA AVE. (CTH D) CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC024	
MILWAUKEE COUNTY DOT	

PROJECT ID:	2967-00-77
INTERSECTION:	W. GOOD HOPE RD. (CTH PP) & N. TEUTONIA AVE. (CTH D)

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE


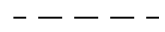















CB1 TO	# OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR								PED BUTTONS			
				RED	YELLOW	GREEN	<RED>	<YELLOW>	<FL YLW>	<GREEN>	D/WALK	WALK	WHT/BLK	BLK	
SB1	* 7	B	2P											WHT/BLK	BLK
SB2	15	1	2	RED	ORG	GRN									
		14	1				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		26	2P								BLU	BLK			
		B	8P										WHT/BLK	BLK/WHT	
SB3	7	15	1				RED	ORG	BLU	GRN					
SB4	12	16 / 17	6	RED	ORG	GRN									
		32	8P								BLU	BLK			
		B	8P										WHT/BLK	BLK/WHT	
SB5	15	8	7				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		18	8	RED	ORG	GRN									
		29	6P								BLU	BLK			
		B	6P										WHT/BLK	BLK/WHT	
SB6	12	9	7				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		19	8	RED	ORG	GRN									
SB7	12	10 / 11 / 12	4	RED	ORG	GRN									
		27	4P								BLU	BLK			
SB8	* 7	B	4P										GRN	WHT/BLK	
		B	6P										RED	WHT/BLK	
SB9	12	2	5				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		13	6	RED	ORG	GRN									
		30	6P								BLU	BLK			
SB10	12	3	5				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		B	4P										WHT/BLK	BLK/WHT	
SB11	7	4 / 5	2	RED	ORG	GRN									
SB12	7	25	2P								BLU	BLK			
SB13	* 7	B	4P										GRN	WHT/BLK	
		B	2P										RED	WHT/BLK	
SB14	12	6	4	RED	ORG	GRN									
		20	3				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		28	4P								BLU	BLK			
SB15	12	7	4	RED	ORG	GRN									
		21	3				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		B	2P										WHT/BLK	BLK/WHT	
SB16	* 12	22 / 23 / 24	8	RED	ORG	GRN									
		31	8P								BLU	BLK			

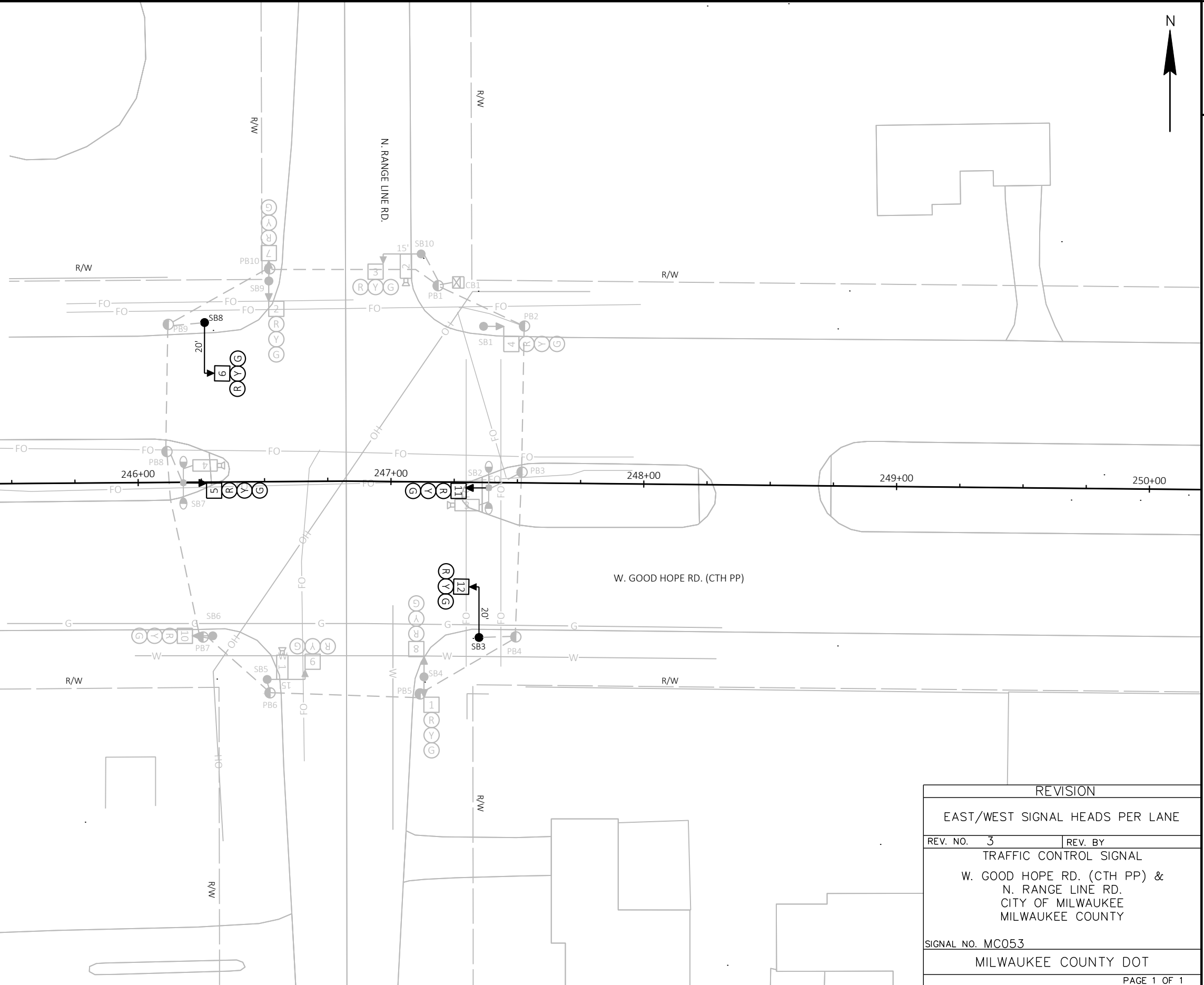
- NOTES:
- DO NOT USE THE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR SIGNAL INDICATIONS.
 - ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
- * EXISTING SIGNAL WIRING TO REMAIN.

REVISION	
NORTH/SOUTH/WEST SIGNAL HEADS PER LANE	
REV. NO. 4	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. TEUTONIA AVE. (CTH D)	
CITY OF MILWAUKEE	
MILWAUKEE COUNTY	
SIGNAL NO. MC024	
MILWAUKEE COUNTY DOT	
PAGE 3 OF 3	











LEGEND

-  CONTROL CABINET
-  NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
-  PROPOSED CONCRETE SIGNAL BASE
-  EXISTING CONCRETE SIGNAL BASE TO BE REUSED
-  SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
-  SIGNAL HEAD, LUMINAIRE, POLE TYPE 4, TRANSFORMER BASE
-  SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
-  MONOTUBE BASE, POLE, 15'-30' ARM
-  MONOTUBE BASE, POLE, 35'-45' ARM
-  MONOTUBE BASE, POLE, 35'-55' ARM
-  PULL BOX, 24" X 42"
-  PULL BOX, 24" X 36"
-  PEDESTRIAN HEAD
-  PUSH BUTTON
-  LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
-  VIDEO DETECTION AREA
-  LUMINAIRE

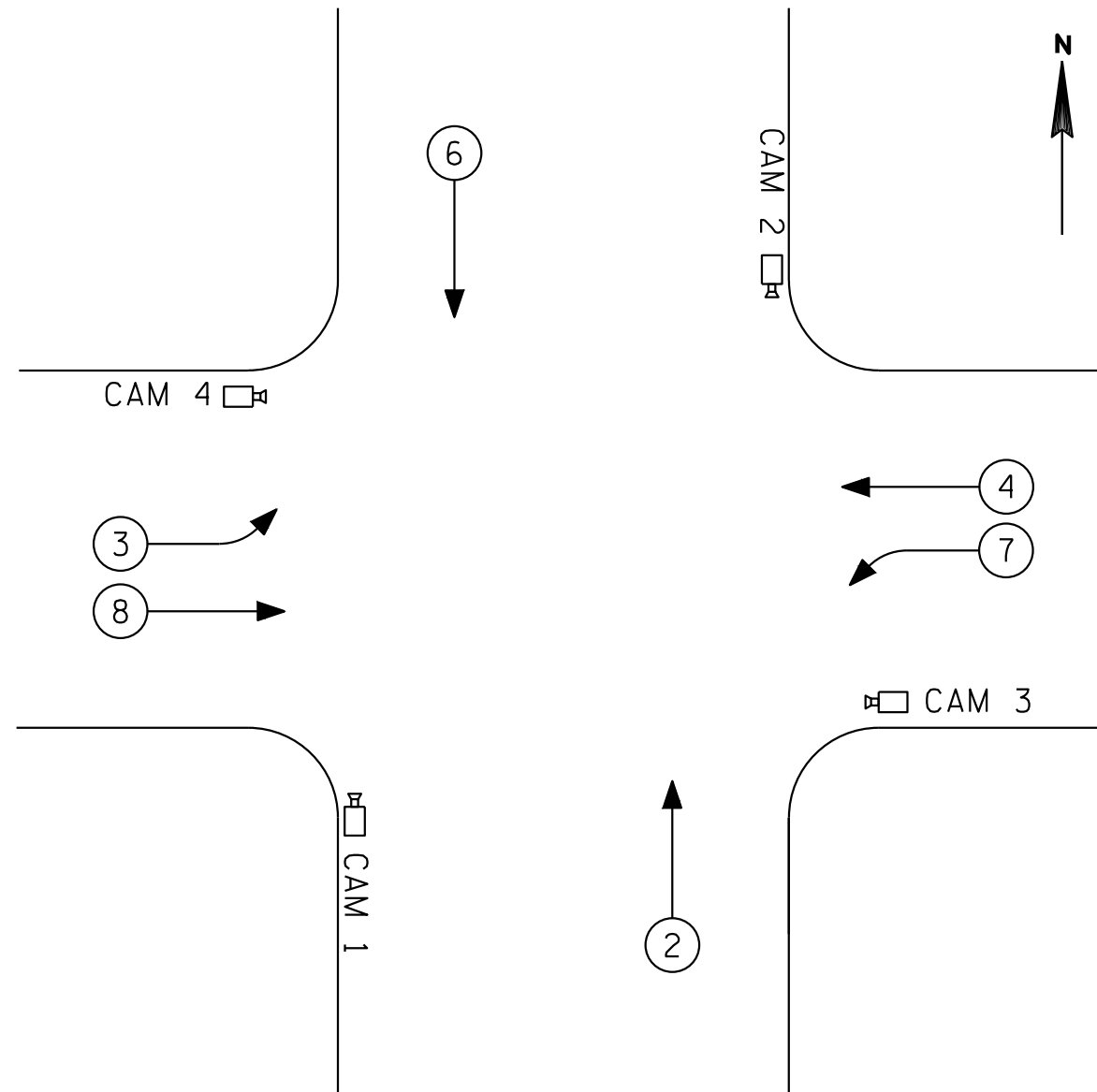


LEGEND CONTINUED

-  VIDEO DETECTION CAMERA
-  TRAFFIC SIGNAL HEAD NUMBER - 12" INDICATIONS
-  RED ARROW/CIRCULAR INDICATOR
-  YELLOW ARROW/CIRCULAR INDICATOR
-  FLASHING YELLOW ARROW INDICATOR
-  GREEN ARROW/CIRCULAR INDICATOR
-  DON'T WALK INDICATOR 16"
-  WALK INDICATOR 16"

- NOTES:
- GRAYSHADE REPRESENTS EXISTING
 - BOLD REPRESENTS EXISTING TO BE REMOVED

REVISION	
EAST/WEST SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. RANGE LINE RD. CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC053	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 1	



PHASE	PHASES			OVERLAPS		
	VEHICLE	LEFT TURN TYPE	PED	OVLP	INCLUDES	OUTPUT
1				A		
2	X			B		
3	X	FYA		C		
4	X			D		
5				E		
6	X			F	3 FY	10 Y
7	X	FYA		G		
8	X			H	7 FY	12 Y

COMMUNICATION	
ETHERNET SWITCH	X
SM FIBER	X
MM FIBER	
5.8 GHZ RADIO	
900 MHZ ETHERNET RADIO	
900 MHZ SERIAL RADIO	
ETHERNET OVER COPPER	

AUXILARY EQUIPMENT	
LIGHTING FROM CABINET	
BATTERY BACKUP	
PTZ CAMERA	
AUDIBLE PEDESTRIAN HEADS	
AUDIBLE PEDESTRIAN BUTTONS	

REVISION	
EAST/WEST SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. RANGE LINE RD. CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC053	
MILWAUKEE COUNTY DOT	
PAGE 2 OF 3	

PROJECT ID:	2967-00-77
INTERSECTION:	W. GOOD HOPE RD. (CTH PP) & N. RANGE LINE RD.

SIGNAL WIRE COLOR	BLK-BLACK	RED-RED	GRN-GREEN
CODING	WHT-WHITE	BLU-BLUE	ORG-ORANGE


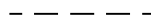















CB1 TO	# OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR								PED BUTTONS		
				RED	YELLOW	GREEN	<RED>	<YELLOW>	<FL YLW>	<GREEN>	D/WALK	WALK		
SB1	12	4	4	RED	ORG	GRN								
		14	3				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK				
SB2	12	15	3				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK				
		16 / 17 / 18	8	RED	ORG	GRN								
SB3	* 12	1	2	RED	ORG	GRN								
		11	6	RED/BLK	ORG/BLK	GRN/BLK								
SB4	* 12	12	6	RED	ORG	GRN								
SB5	12	5	7				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK				
		13	8	RED	ORG	GRN								
SB6	12	6	7				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK				
		7 / 8 / 9	4	RED	ORG	GRN								
SB7	* 12	2	2	RED	ORG	GRN								
		10	6	RED/BLK	ORG/BLK	GRN/BLK								
SB8	* 12	3	2	RED	ORG	GRN								

NOTES:











- DO NOT USE THE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR SIGNAL INDICATIONS.
 - ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
- * EXISTING SIGNAL WIRING TO REMAIN.

REVISION	
EAST/WEST SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL W. GOOD HOPE RD. (CTH PP) & N. RANGE LINE RD. CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC053	
MILWAUKEE COUNTY DOT	
PAGE 3 OF 3	

LEGEND

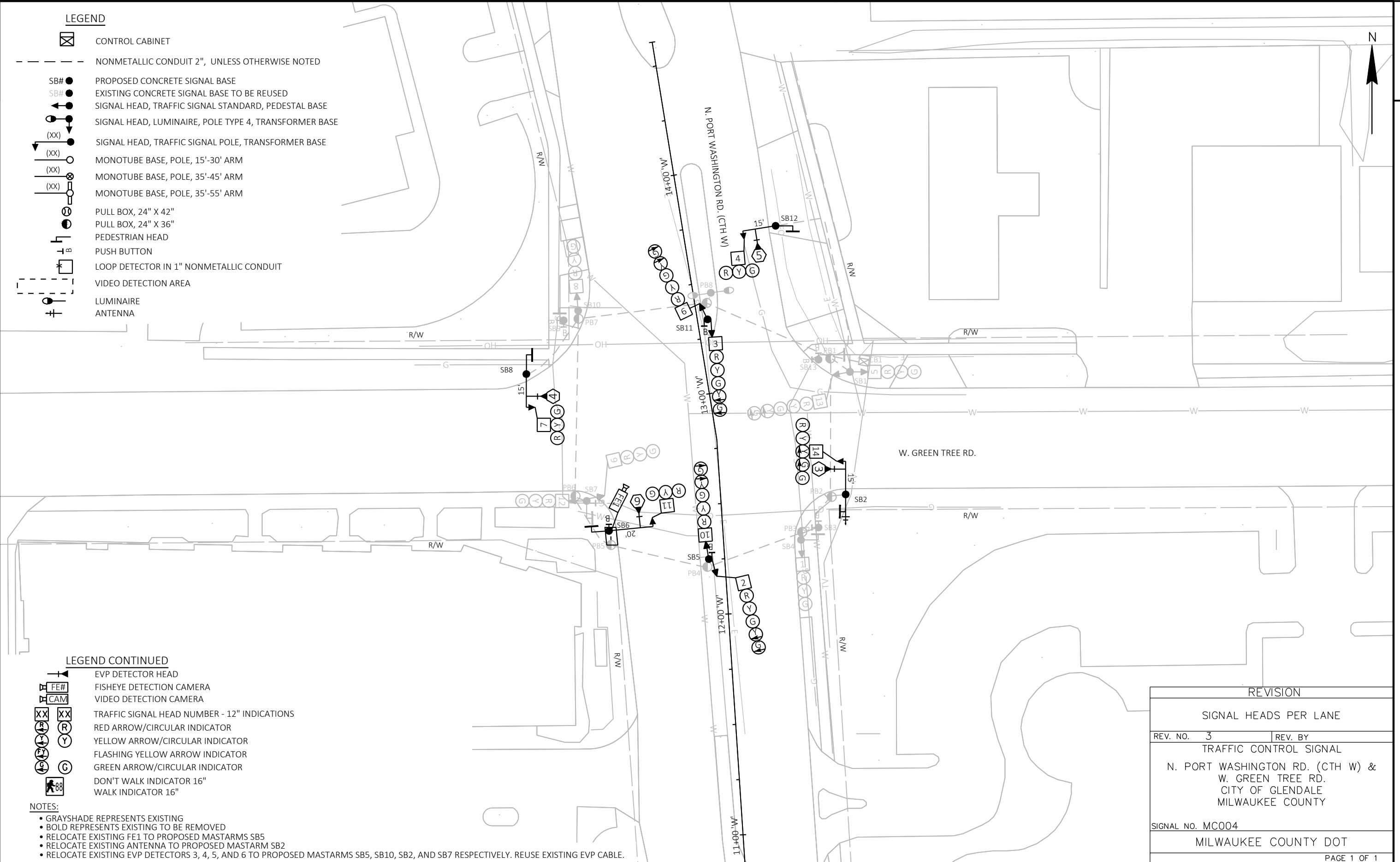
-  CONTROL CABINET
-  NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
-  SB# ● PROPOSED CONCRETE SIGNAL BASE
-  SB# ● EXISTING CONCRETE SIGNAL BASE TO BE REUSED
-  SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
-  SIGNAL HEAD, LUMINAIRE, POLE TYPE 4, TRANSFORMER BASE
-  (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
-  (XX) MONOTUBE BASE, POLE, 15'-30' ARM
-  (XX) MONOTUBE BASE, POLE, 35'-45' ARM
-  (XX) MONOTUBE BASE, POLE, 35'-55' ARM
-  PULL BOX, 24" X 42"
-  PULL BOX, 24" X 36"
-  PEDESTRIAN HEAD
-  PUSH BUTTON
-  LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
-  VIDEO DETECTION AREA
-  LUMINAIRE ANTENNA

LEGEND CONTINUED

-  EVP DETECTOR HEAD
-  FE# FISHEYE DETECTION CAMERA
-  CAM VIDEO DETECTION CAMERA
-  TRAFFIC SIGNAL HEAD NUMBER - 12" INDICATIONS
-  RED ARROW/CIRCULAR INDICATOR
-  YELLOW ARROW/CIRCULAR INDICATOR
-  FLASHING YELLOW ARROW INDICATOR
-  GREEN ARROW/CIRCULAR INDICATOR
-  DON'T WALK INDICATOR 16"
-  WALK INDICATOR 16"

NOTES:

- GRAYSHADE REPRESENTS EXISTING
- BOLD REPRESENTS EXISTING TO BE REMOVED
- RELOCATE EXISTING FE1 TO PROPOSED MASTARMS SB5
- RELOCATE EXISTING ANTENNA TO PROPOSED MASTARM SB2
- RELOCATE EXISTING EVP DETECTORS 3, 4, 5, AND 6 TO PROPOSED MASTARMS SB5, SB10, SB2, AND SB7 RESPECTIVELY. REUSE EXISTING EVP CABLE.



REVISION	
SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
N. PORT WASHINGTON RD. (CTH W) & W. GREEN TREE RD. CITY OF GLENDALE MILWAUKEE COUNTY	
SIGNAL NO. MC004	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 1	

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SB# PROPOSED CONCRETE SIGNAL BASE
- SB# EXISTING CONCRETE SIGNAL BASE TO BE REUSED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, LUMINAIRE, POLE TYPE 4, TRANSFORMER BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- MONOTUBE BASE, POLE, 15'-30' ARM
- MONOTUBE BASE, POLE, 35'-45' ARM
- MONOTUBE BASE, POLE, 35'-55' ARM
- PULL BOX, 24" X 42"
- PULL BOX, 24" X 36"
- PEDESTRIAN HEAD
- PUSH BUTTON
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO DETECTION AREA
- LUMINAIRE
- ANTENNA

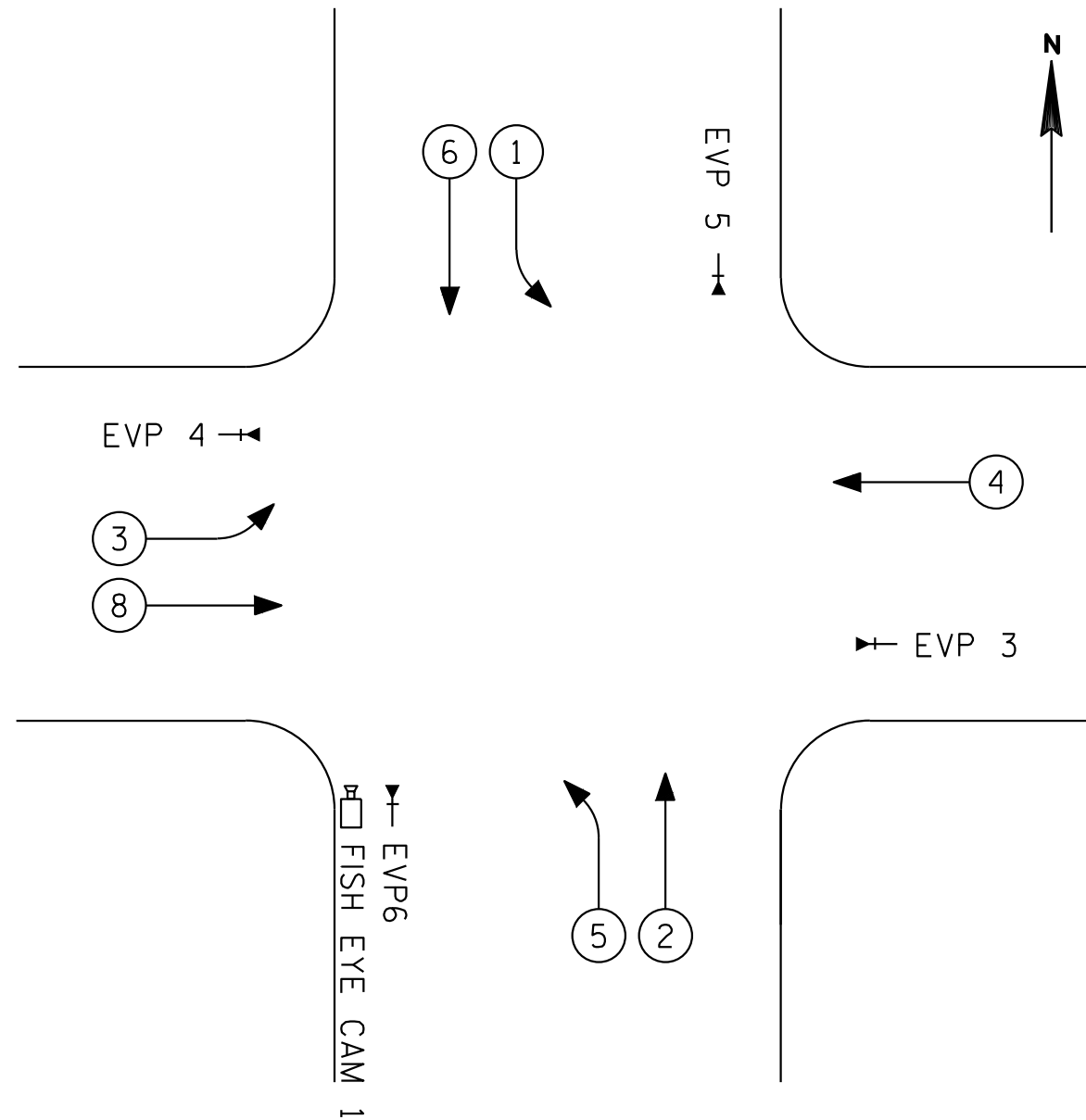
Base	Structure No.
SB2	S40-2075-01
SB5	S40-2075-02
SB7	S40-2075-03
SB10	S40-2075-04

LEGEND CONTINUED

- EVP DETECTOR HEAD
- FISHEYE DETECTION CAMERA
- VIDEO DETECTION CAMERA
- TRAFFIC SIGNAL HEAD NUMBER - 12" INDICATIONS
- RED ARROW/CIRCULAR INDICATOR
- YELLOW ARROW/CIRCULAR INDICATOR
- FLASHING YELLOW ARROW INDICATOR
- GREEN ARROW/CIRCULAR INDICATOR
- DON'T WALK INDICATOR 16"
- WALK INDICATOR 16"

- NOTES:
- GRAYSHADE REPRESENTS EXISTING
 - RELOCATE EXISTING FE1 TO PROPOSED MASTARM SB5
 - INSTALL FE1 ON LUMINAIRE ARM
 - NOTIFY THE MCDOT TRAFFIC ENGINEER, DANIEL MURPHY AT 414-257-5942 FIVE WORKING DAYS PRIOR TO INSTALLING THE VIDEO DETECTION SYSTEM FOR FIELD CONFIGURATION
 - MINIMUM ONE FAR INDICATION SHALL BE ACTIVE AT ALL TIMES DURING INSTALLATION
 - INTERCEPT EXISTING CONDUIT FOR PROPOSED CONCRETE SIGNAL BASES SB7 AND SB10
 - RELOCATE EXISTING ANTENNA TO PROPOSED MASTARM SB2
 - RELOCATE EXISTING EVP DETECTORS 3, 4, 5, AND 6 TO PROPOSED MASTARMS SB5, SB10, SB2, AND SB7 RESPECTIVELY. REUSE EXISTING EVP CABLE.

REVISION	
SIGNAL HEADS PER LANE	
REV. NO. 4	REV. BY
TRAFFIC CONTROL SIGNAL	
N. PORT WASHINGTON RD. (CTH W) & W. GREEN TREE RD. CITY OF GLENDALE MILWAUKEE COUNTY	
SIGNAL NO. MC004	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 3	



PHASE	PHASES			OVERLAPS		
	VEHICLE	LEFT TURN TYPE	PED	OVLP	INCLUDES	OUTPUT
1	X	FYA		A		
2	X		X	B		
3	X			C		
4	X		X	D		
5	X	FYA		E	1 FY	9Y
6	X		X	F		
7				G	5 FY	11Y
8	X		X	H		

COMMUNICATION	
ETHERNET SWITCH	X
SM FIBER	
MM FIBER	
5.8 GHZ RADIO	X
900 MHZ ETHERNET RADIO	
900 MHZ SERIAL RADIO	
ETHERNET OVER COPPER	

AUXILARY EQUIPMENT	
LIGHTING FROM CABINET	
BATTERY BACKUP	
PTZ CAMERA	
AUDIBLE PEDESTRIAN HEADS	
AUDIBLE PEDESTRIAN BUTTONS	

PRE-EMPTION	
EMERGENCY VEHICLE	X
CONFIRMATION BEACONS	
RAILROAD	

REVISION	
SIGNAL HEADS PER LANE	
REV. NO. 4	REV. BY
TRAFFIC CONTROL SIGNAL	
N. PORT WASHINGTON RD. (CTH W) & W. GREEN TREE RD. CITY OF GLENDALE MILWAUKEE COUNTY	
SIGNAL NO. MC004	
MILWAUKEE COUNTY DOT	

PROJECT ID:	2967-00-77
INTERSECTION:	N. PORT WASHINGTON RD. (CTH W) & W. GREEN TREE RD.

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE


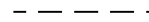

















CB1 TO	# OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR								PED BUTTONS			
				RED	YELLOW	GREEN	<RED>	<YELLOW>	<FL YLW>	<GREEN>	D/WALK	WALK			
SB1	* 12	6	4	RED	ORG	GRN									
		15	3 / 8	RED/BLK	ORG/BLK	GRN/BLK		BLU/WHT			GRN/WHT				
		18	4P									BLU	BLK		
SB2	12	16	3 / 8	RED/BLK	ORG/BLK	GRN/BLK		BLU/WHT			GRN/WHT				
		21	8P									BLU	BLK		
SB3	* 2	B	2P											BLK	WHT
SB3	* 2	B	8P											BLK	WHT
SB4	12	1	2	RED	ORG	GRN									
		10	1				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		24	2P									BLU	BLK		
SB5	15	11	1				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		12 / 13	6	RED	ORG	GRN									
		19	6P									BLU	BLK		
		B	8P											WHT/BLK	BLK/WHT
SB6	* 15	7	4	RED	ORG	GRN									
		14	8				RED/BLK	ORG/BLK		GRN/BLK					
		22	8P									BLU	BLK		
		B	6P											WHT/BLK	BLK/WHT
SB7	15	8	4	RED	ORG	GRN									
		17	4P									BLU	BLK		
SB8	* 2	B	4P											BLK	WHT
SB8	* 2	B	6P											BLK	WHT
SB9	12	2	5				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		9	6	RED	ORG	GRN									
		20	6P									BLU	BLK		
SB10	12	3	5				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK					
		4 / 5	2	RED	ORG	GRN									
		23	2P									BLU	BLK		
SB11	* 2	B	2P											BLK	WHT
SB11	* 2	B	4P											BLK	WHT

NOTES:









- DO NOT USE THE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR SIGNAL INDICATIONS.
 - ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
- * EXISTING SIGNAL WIRING TO REMAIN.

REVISION	
SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
N. PORT WASHINGTON RD. (CTH W) & W. GREEN TREE RD. CITY OF GLENDALE MILWAUKEE COUNTY	
SIGNAL NO. MC004	
MILWAUKEE COUNTY DOT	
PAGE 3 OF 3	

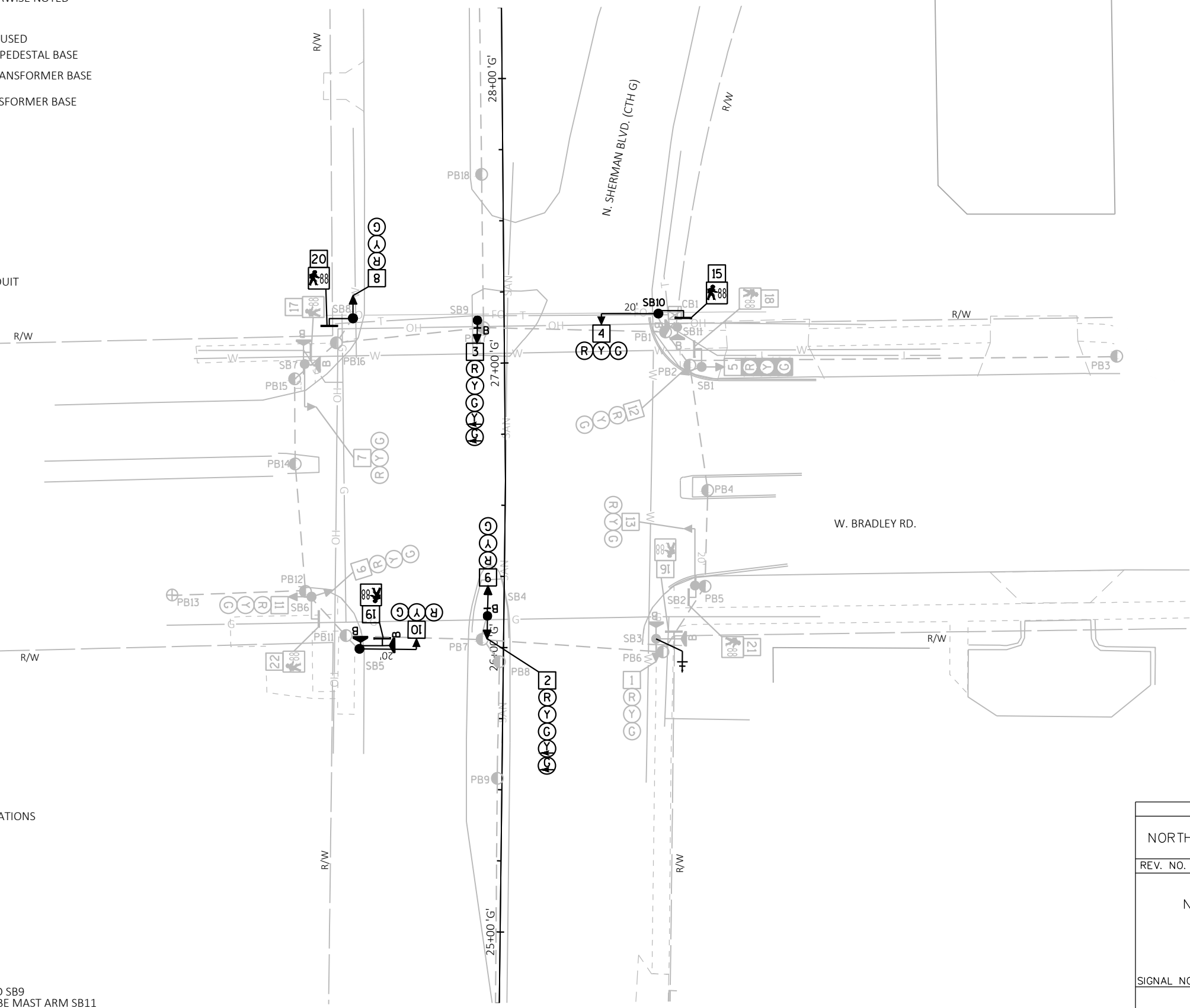
LEGEND

-  CONTROL CABINET
-  NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
-  SB# ● PROPOSED CONCRETE SIGNAL BASE
-  SB# ● EXISTING CONCRETE SIGNAL BASE TO BE REUSED
-  SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
-  SIGNAL HEAD, LUMINAIRE, POLE TYPE 4, TRANSFORMER BASE
-  (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
-  (XX) MONOTUBE BASE, POLE, 15'-30' ARM
-  (XX) MONOTUBE BASE, POLE, 35'-45' ARM
-  (XX) MONOTUBE BASE, POLE, 35'-55' ARM
-  PULL BOX, 24" X 42"
-  PULL BOX, 24" X 36"
-  PEDESTRIAN HEAD
-  PUSH BUTTON
-  ACCESSIBLE PUSH BUTTON
-  LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
-  VIDEO DETECTION AREA
-  LUMINAIRE
-  ANTENNA

LEGEND CONTINUED


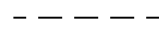
















-  CAM VIDEO DETECTION CAMERA
-  XX TRAFFIC SIGNAL HEAD NUMBER - 12" INDICATIONS
-  R RED ARROW/CIRCULAR INDICATOR
-  Y YELLOW ARROW/CIRCULAR INDICATOR
-  F FLASHING YELLOW ARROW INDICATOR
-  G GREEN ARROW/CIRCULAR INDICATOR
-  16" DON'T WALK INDICATOR 16"
-  16" WALK INDICATOR 16"

- NOTES:
- GRAYSHADE REPRESENTS EXISTING
 - BOLD REPRESENTS EXISTING TO BE REMOVED
 - REUSE EXISTING CONCRETE SIGNAL BASES SB4, SB5, AND SB9
 - RELOCATE EXISTING ANTENNA TO PROPOSED MONOTUBE MAST ARM SB11











REVISION	
NORTH/SOUTH SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
N. SHERMAN BLVD. (CTH G) & W. BRADLEY RD.	
VILLAGE OF BROWN DEER MILWAUKEE COUNTY	
SIGNAL NO. MC002	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 1	

LEGEND

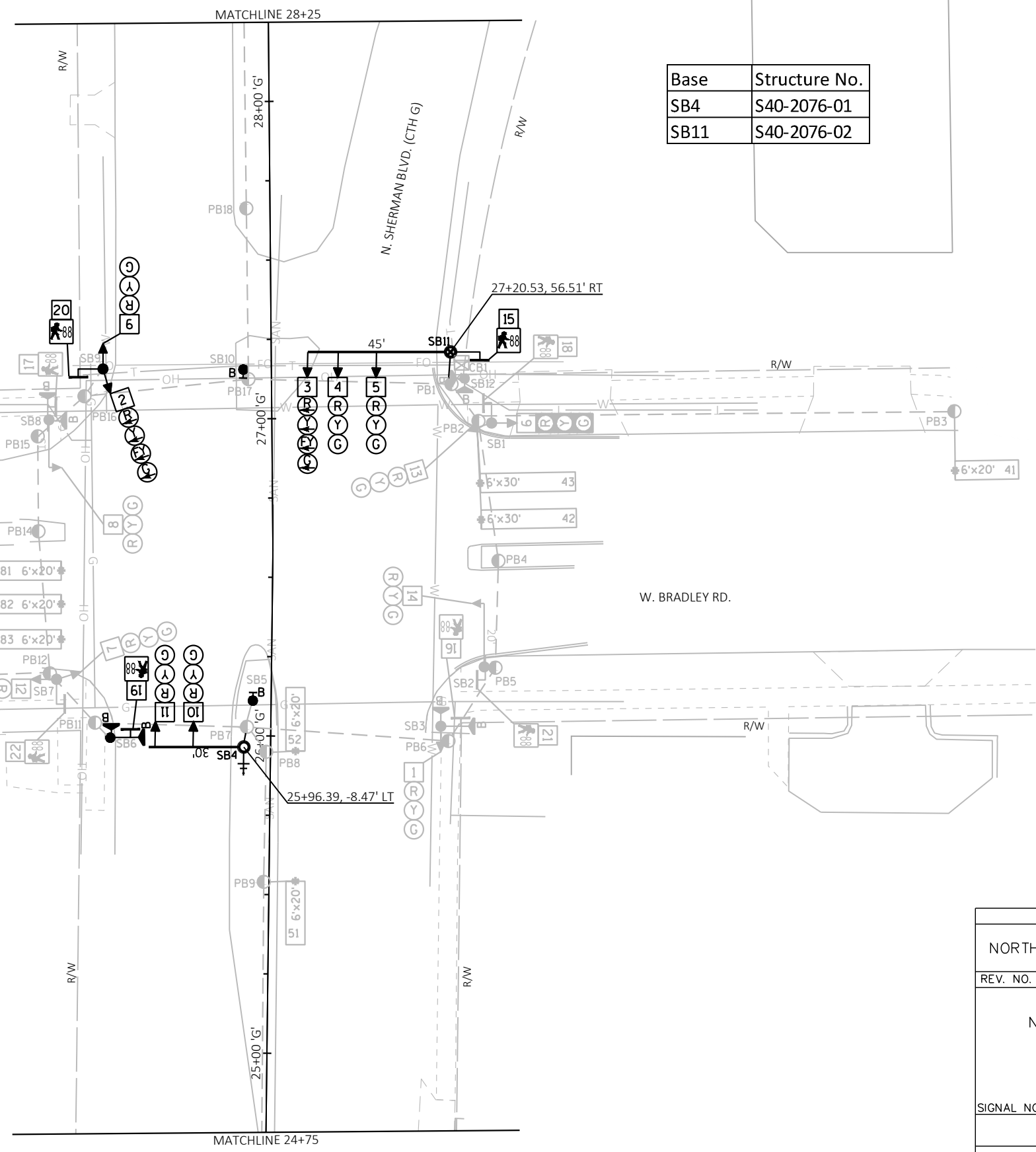
-  CONTROL CABINET
-  NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
-  SB# ● PROPOSED CONCRETE SIGNAL BASE
-  SB# ● EXISTING CONCRETE SIGNAL BASE TO BE REUSED
-  SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
-  SIGNAL HEAD, LUMINAIRE, POLE TYPE 4, TRANSFORMER BASE
-  (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
-  (XX) MONOTUBE BASE, POLE, 15'-30' ARM
-  (XX) MONOTUBE BASE, POLE, 35'-45' ARM
-  (XX) MONOTUBE BASE, POLE, 35'-55' ARM
-  PULL BOX, 24" X 42"
-  PULL BOX, 24" X 36"
-  PEDESTRIAN HEAD
-  PUSH BUTTON
-  ACCESSIBLE PUSH BUTTON
-  LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
-  VIDEO DETECTION AREA
-  LUMINAIRE ANTENNA

LEGEND CONTINUED

-  CAM VIDEO DETECTION CAMERA
-  XX TRAFFIC SIGNAL HEAD NUMBER - 12" INDICATIONS
-  R RED ARROW/CIRCULAR INDICATOR
-  Y YELLOW ARROW/CIRCULAR INDICATOR
-  F FLASHING YELLOW ARROW INDICATOR
-  G GREEN ARROW/CIRCULAR INDICATOR
-  88 DON'T WALK INDICATOR 16"
-  88 WALK INDICATOR 16"

- NOTES:
- GRAYSHADE REPRESENTS EXISTING
 - REUSE EXISTING CONCRETE SIGNAL BASES SB5, SB6, AND SB10
 - RELOCATE EXISTING ANTENNA TO PROPOSED MONOTUBE MAST ARM SB11

Base	Structure No.
SB4	S40-2076-01
SB11	S40-2076-02



REVISION	
NORTH/SOUTH SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
N. SHERMAN BLVD. (CTH G) & W. BRADLEY RD.	
VILLAGE OF BROWN DEER MILWAUKEE COUNTY	
SIGNAL NO. MC002	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 4	

PROJECT ID:	2967-00-77
INTERSECTION:	N. SHERMAN BLVD. (CTH G) & W. BRADLEY RD.

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE





CB1 TO	# OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR							PED BUTTONS			
				RED	YELLOW	GREEN	<RED>	<YELLOW>	<FL YLW>	<GREEN>	D/WALK	WALK		
SB1	* 12	6	4	RED	ORG	GRN								
		13	8	RED/BLK	ORG/BLK	GRN/BLK								
		18	4P							BLU	BLK			
SB2	* 7	14	8	RED	ORG	GRN								
		21	8P							BLU	BLK			
SB3	* 12	1	2	RED	ORG	GRN								
		16	2P							BLU	BLK			
		B	2P									GRN/BLK	WHT/BLK	
		B	8P									RED/BLK	WHT/BLK	
SB4	12	10 / 11	6	RED	ORG	GRN								
SB5	5	B	8P									GRN	WHT	
SB6	12	19	6P								BLU	BLK		
		B	6P									GRN	WHT/BLK	
		B	8P									RED	WHT/BLK	
SB7	* 12	7	4	RED	ORG	GRN								
		12	8	RED/BLK	ORG/BLK	GRN/BLK								
		22	8P								BLU	BLK		
SB8	* 12	8	4	RED	ORG	GRN								
		17	4P								BLU	BLK		
		B	6P									GRN/BLK	WHT/BLK	
		B	4P									RED/BLK	WHT/BLK	
SB9	12	2	5				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK				
		9	6	RED	ORG	GRN								
		20	6P								BLU	BLK		
SB10	5	B	4P									GRN	WHT	
SB11	12	3	5				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK				
		4 / 5	2	RED	ORG	GRN								
SB12	* 5	15	2P								BLU	BLK		
		B	2P									GRN	WHT	
		B	4P									RED	WHT	

NOTES:

- DO NOT USE THE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR SIGNAL INDICATIONS.
 - ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
- * EXISTING SIGNAL WIRING TO REMAIN

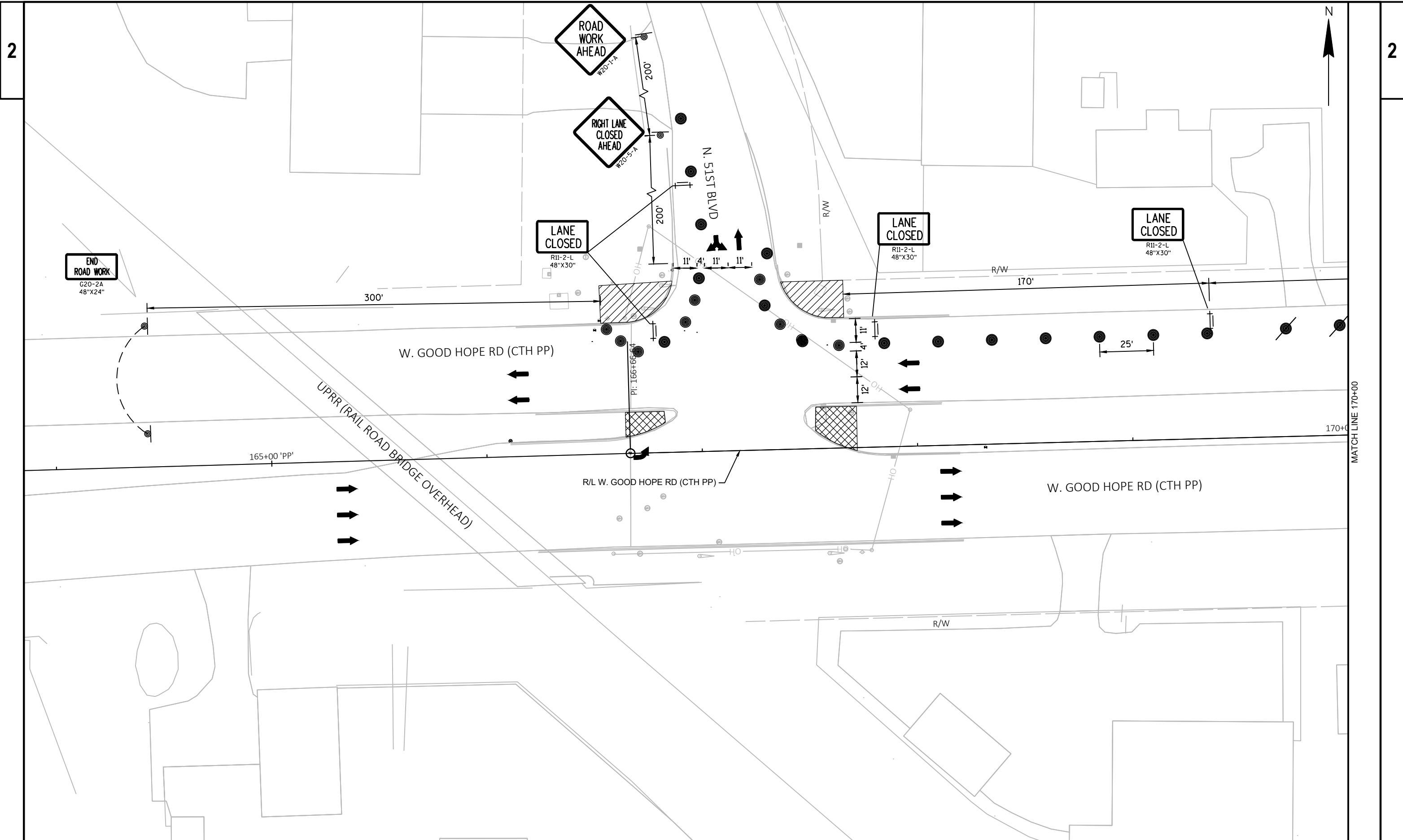
REVISION	
NORTH/SOUTH SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL N. SHERMAN BLVD. (CTH G) & W. BRADLEY RD. VILLAGE OF BROWN DEER MILWAUKEE COUNTY	
SIGNAL NO. MC002	
MILWAUKEE COUNTY DOT	
PAGE 4 OF 4	

LEGEND

†	TYPE III BARRICADE WITH TWO TYPE A LIGHTS (FLASHING)
†	TYPE III BARRICADE WITH ATTACHED SIGN AND TWO TYPE A WARNING LIGHT (FLASHING)
●	TRAFFIC CONTROL DRUM
●	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
↗	FLASHING ARROW BOARD
P	SIGN ON PERMANENT SUPPORT
F	SIGN ON TEMPORARY SUPPORT
	WORK ZONE, LONG-TERM (SEE NOTE 1 BELOW)
	WORK ZONE, SHORT-TERM (SEE NOTE 2 BELOW)
→	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE BOARD
	TEMPORARY CURB RAMP
(YT)	TEMPORARY PAVEMENT MARKING REMOVABLE 4-INCH TAPE (YELLOW)
(WT)	TEMPORARY PAVEMENT MARKING REMOVABLE 4-INCH TAPE (WHITE)

NOTES:

1. FOR LONG-TERM WORK ZONE TRAFFIC CONTROL, REFER TO THE TRAFFIC CONTROL PLANS FOR DEVICE PLACEMENT AND LAYOUTS.
2. FOR SHORT-TERM WORK ZONE TRAFFIC CONTROL, REFER TO SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON FREEWAY/EXPRESSWAY FOR DEVICE PLACEMENT AND LAYOUTS. SHORT-TERM WORK ZONE LANE CLOSURES CAN BE COMPLETE BETWEEN THE HOURS OF 9AM-3PM.
3. A MINIMUM OF 2 HEADS PER PHASE AND PER APPROACH MUST REMAIN OPERATIONAL DURING TRAFFIC SIGNAL INSTALLATIONS AND REMOVALS.
4. A MINIMUM OF 3 QUADRANTS PER INTERSECTION MUST REMAIN OPEN AND ACCESSIBLE TO PEDESTRIANS TO TRAVERSE AN INTERSECTION DURING CONSTRUCTION. REFER TO SDD TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION FOR DEVICE PLACEMENT AND LAYOUT FOR SIDEWALK CLOSURES. NOTIFY THE MCDOT TRAFFIC ENGINEER, DANIEL MURPHY AT 414-257-5942 FIVE WORKING DAYS PRIOR TO CONSTRUCTION TO PROGRAM PEDESTRIAN RECALL.
5. MCTS BUS STOPS ARE TO REMAIN OPEN DURING CONSTRUCTION.
6. FOR ALL WORK NEXT TO SIDEWALKS:
 - ALL WORK OPERATIONS MUST BE PROTECTED NEXT TO SIDEWALKS.
 - ALL DROP-OFFS MUST BE PROTECTED FROM SIDEWALKS AS WELL.
 - ALL EQUIPMENT USED FOR PROTECTION MUST BE MUTCD, MASH, AND/OR NCHRP 350 COMPLIANT AS WELL.
7. REMOVE ANY CONFLICTING EXISTING PAVEMENT MARKING WHEN PLACING PAVEMENT MARKING TEMPORARY TAPE. RESTORE PAVEMENT MARKING TO EXISTING CONDITIONS ONCE TEMPORARY TRAFFIC CONTROL IS REMOVED.



2

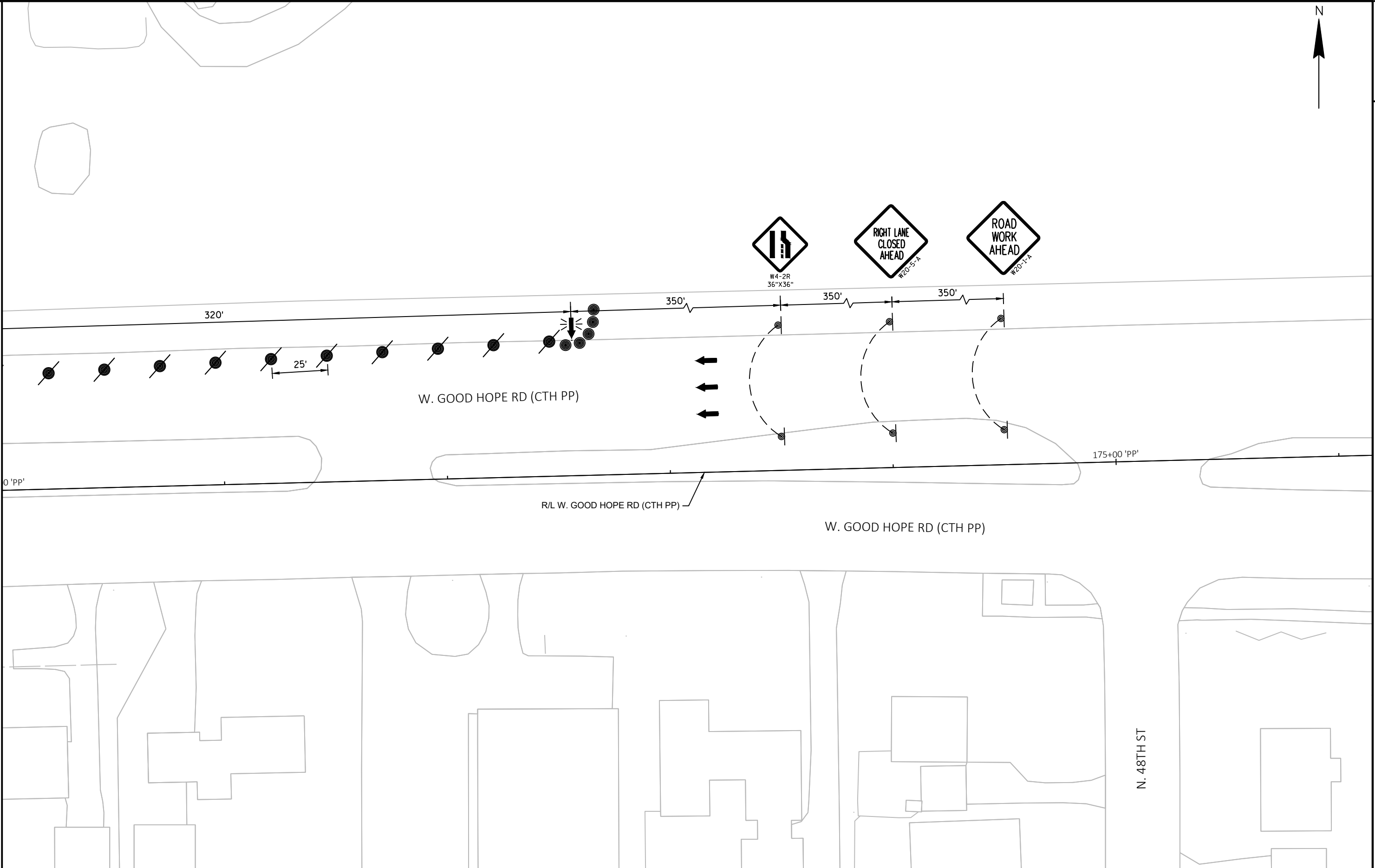
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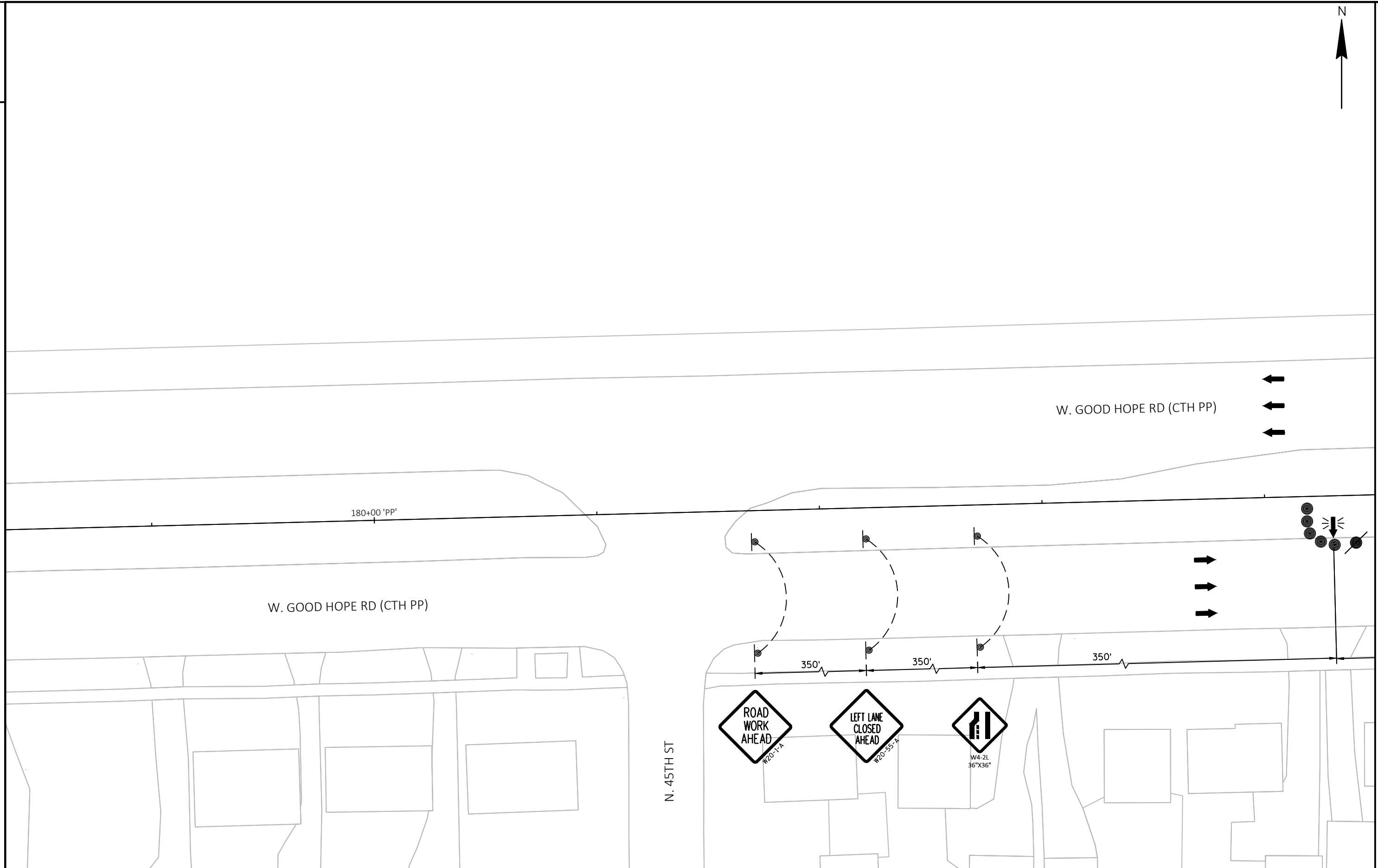
PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- 51ST & CTH PP	SHEET	E
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MATCH LINE 170+00



PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- 51ST & CTH PP	SHEET	E
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PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- 43RD & CTH PP (STAGE 1)	SHEET	E
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MATCH LINE STA 184+50

MATCH LINE STA 190+50

W. GOOD HOPE RD (CTH PP)

W. GOOD HOPE RD (CTH PP)

N. 44TH ST

END ROAD WORK
C20-2A
48"X24"

LANE CLOSED
R11-2-L
48"X30"

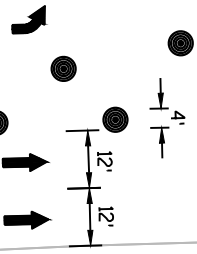
LANE CLOSED
R11-2-L
48"X30"

LANE CLOSED
R11-2-L
48"X30"

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



W012-1D
36"X36"



300'

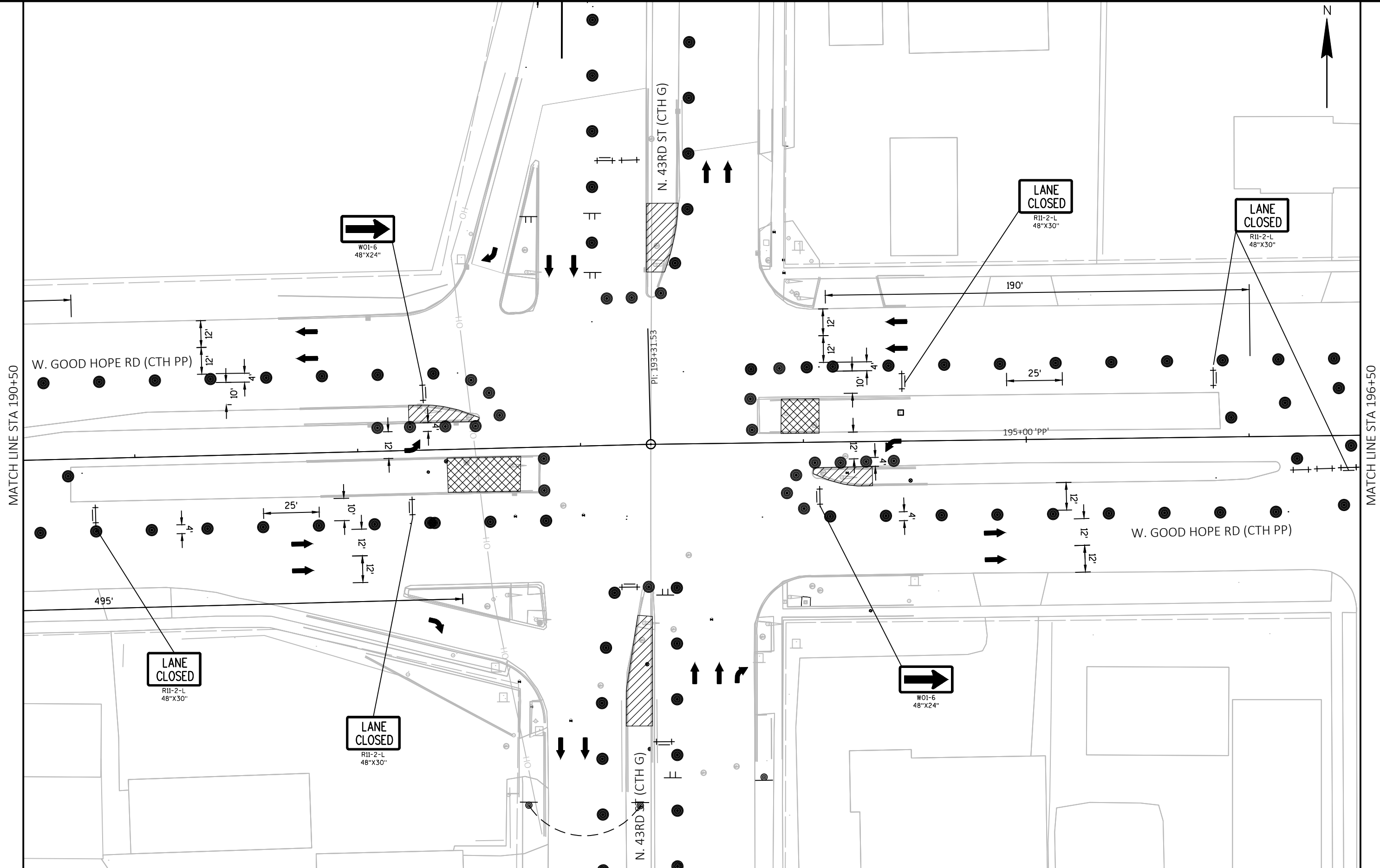
185+00 'PP'

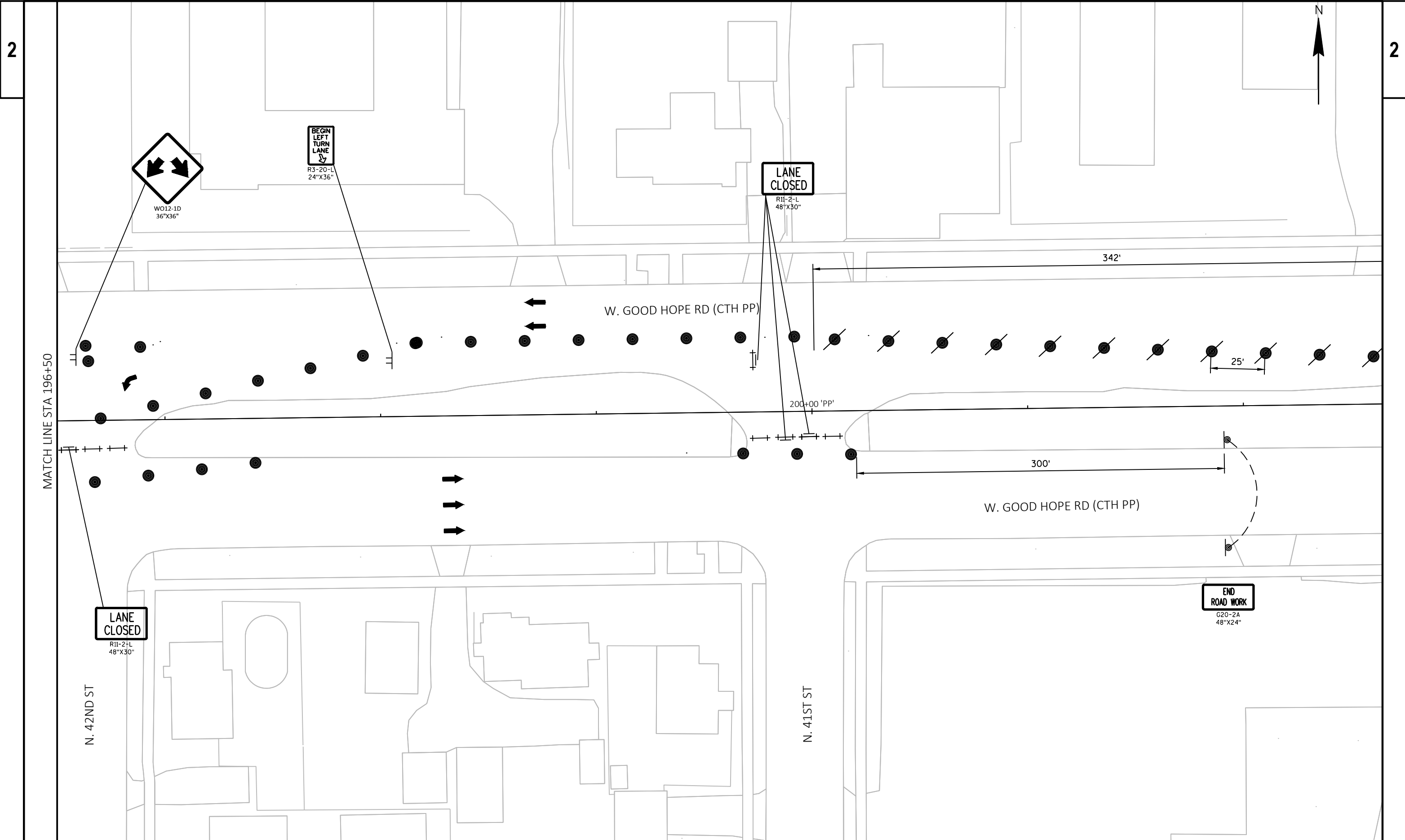
190+00 'PP'

25'

320'

495'



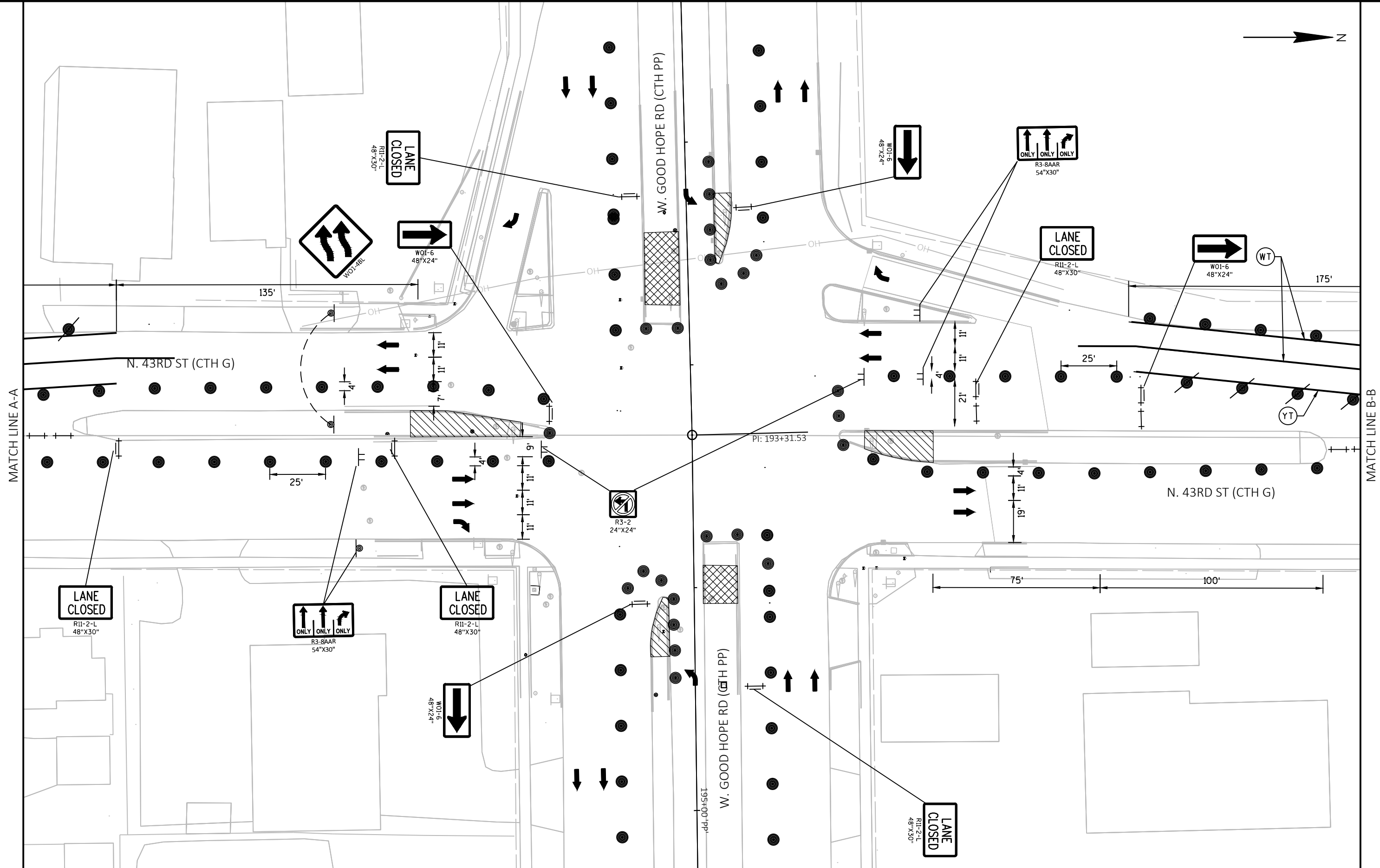


2

2

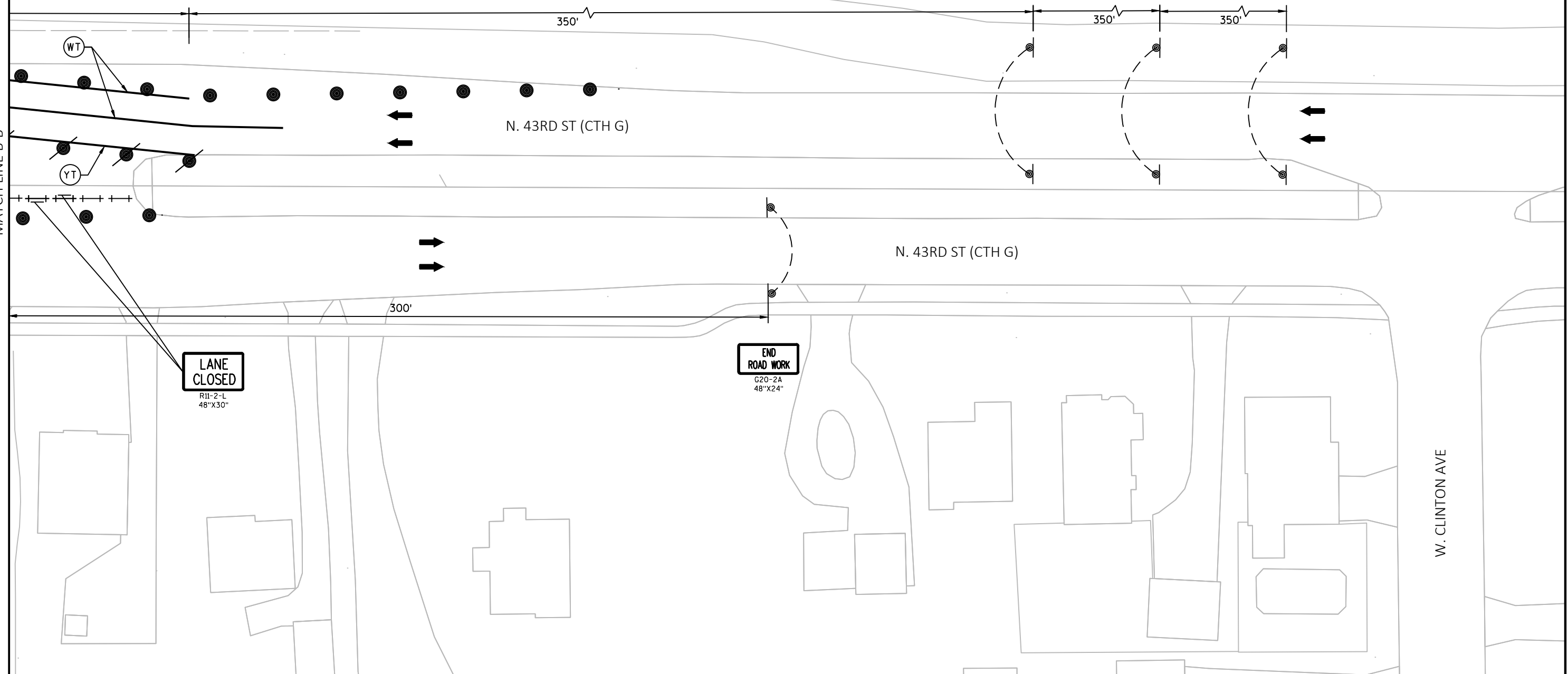
PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- 43RD & CTH PP (STAGE 1)	SHEET	E
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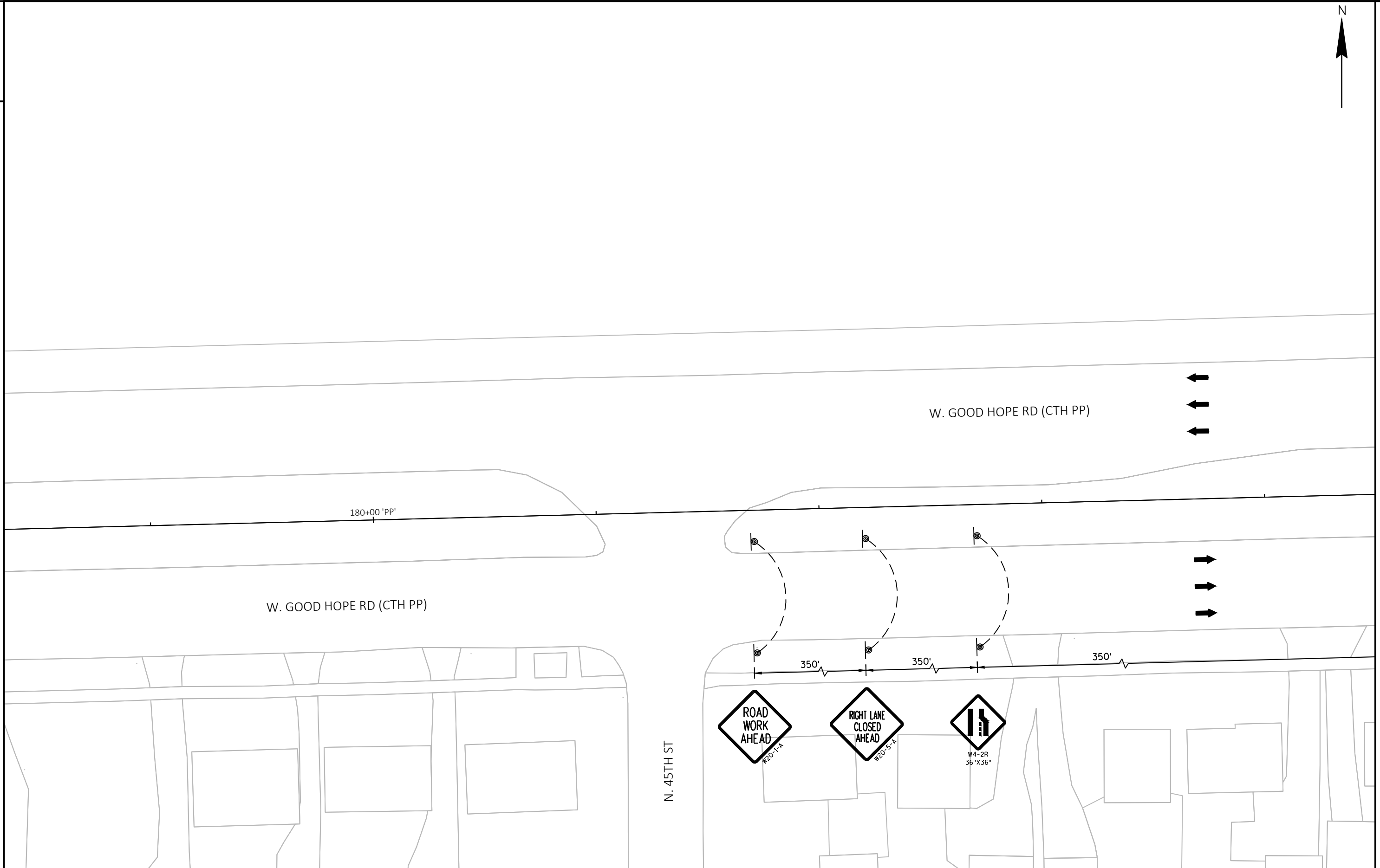




MATCH LINE B-B



PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- 43RD & CTH PP (STAGE 1)	SHEET	E
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MATCH LINE STA 184+50

PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- 43RD & CTH PP (STAGE 2)	SHEET E
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MATCH LINE STA 184+50

MATCH LINE STA 190+50

END ROAD WORK
G20-2A
48"X24"

300'

W. GOOD HOPE RD (CTH PP)



185+00 'PP'

190+00 'PP'

W. GOOD HOPE RD (CTH PP)

320'

25'

12'

12'

4'

10'

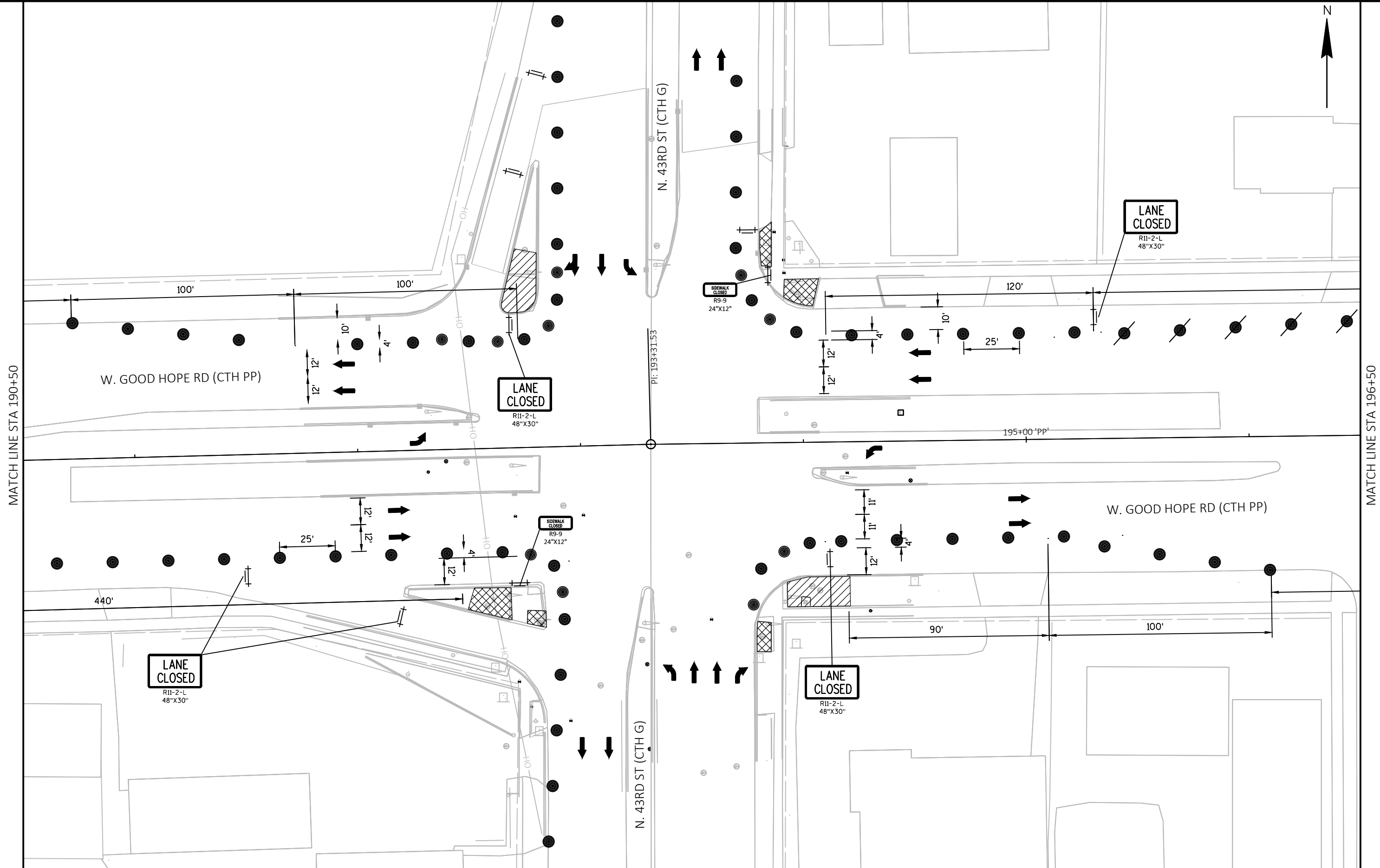
440'

LANE CLOSED
R11-2-L
48"X30"

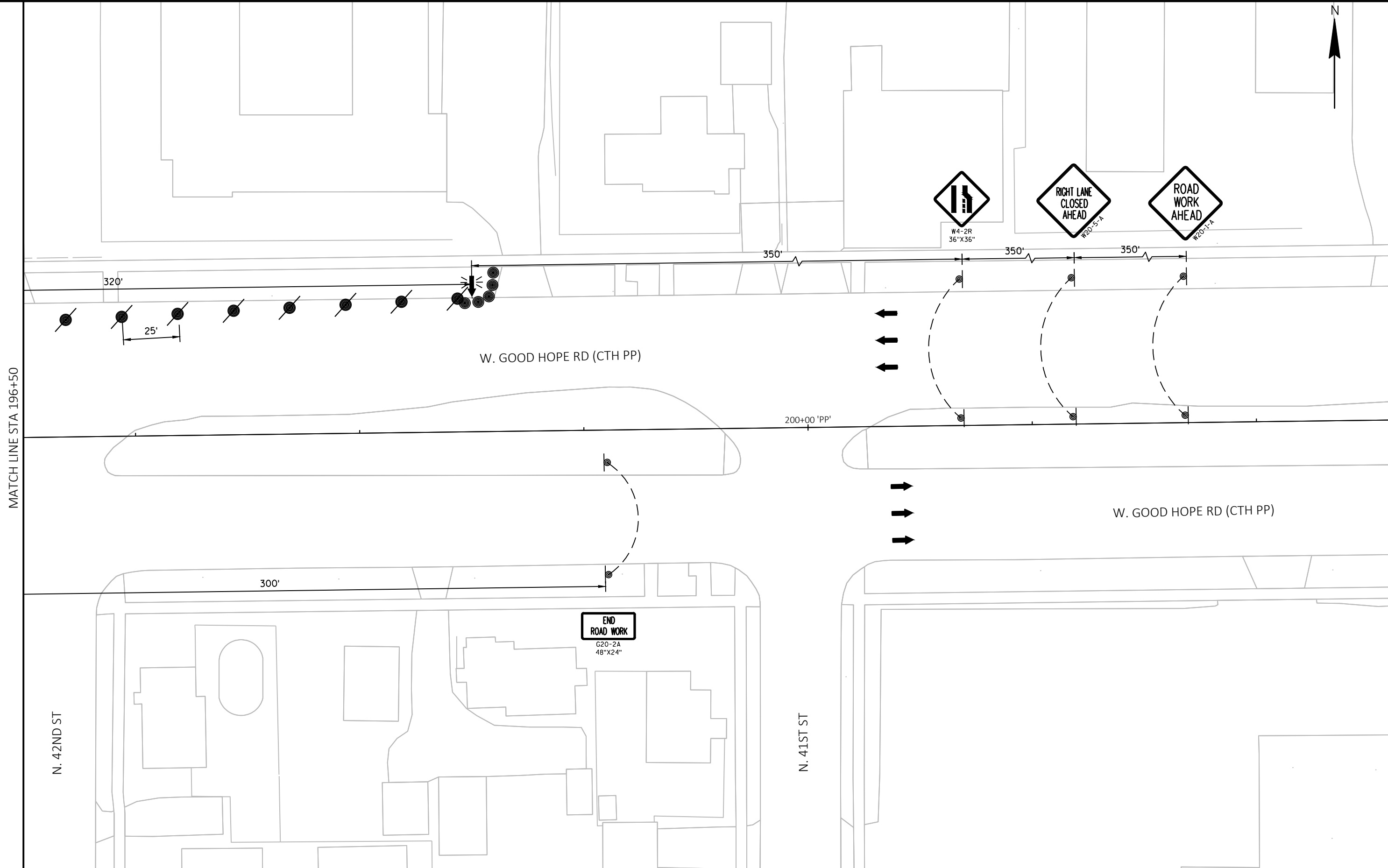
LANE CLOSED
R11-2-L
48"X30"

N. 44TH ST

PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- 43RD & CTH PP (STAGE 2)	SHEET	E
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PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- 43RD & CTH PP (STAGE 2)	SHEET	E
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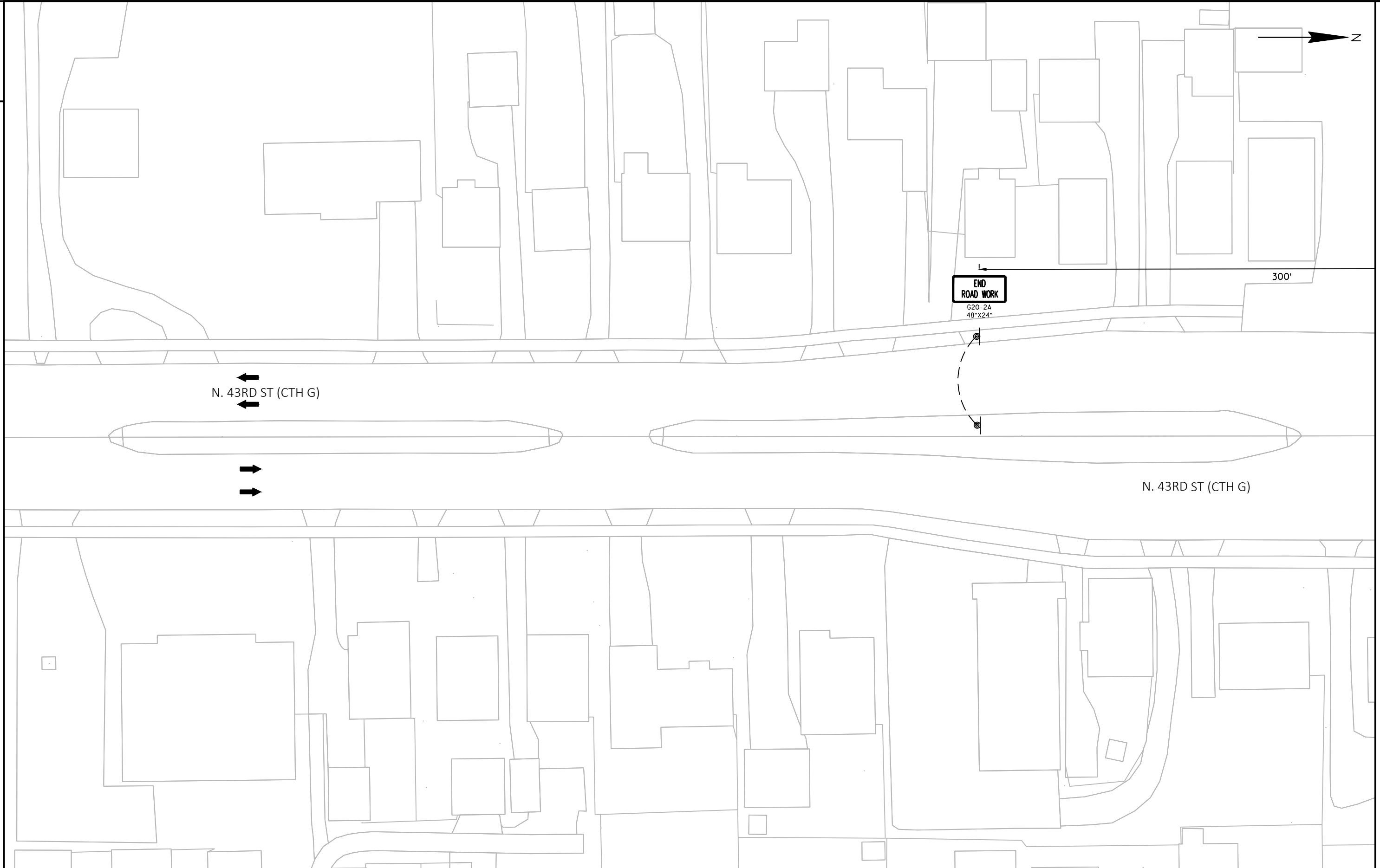


MATCH LINE STA 196+50

N. 42ND ST

N. 41ST ST

PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- 43RD & CTH PP (STAGE 2)	SHEET	E
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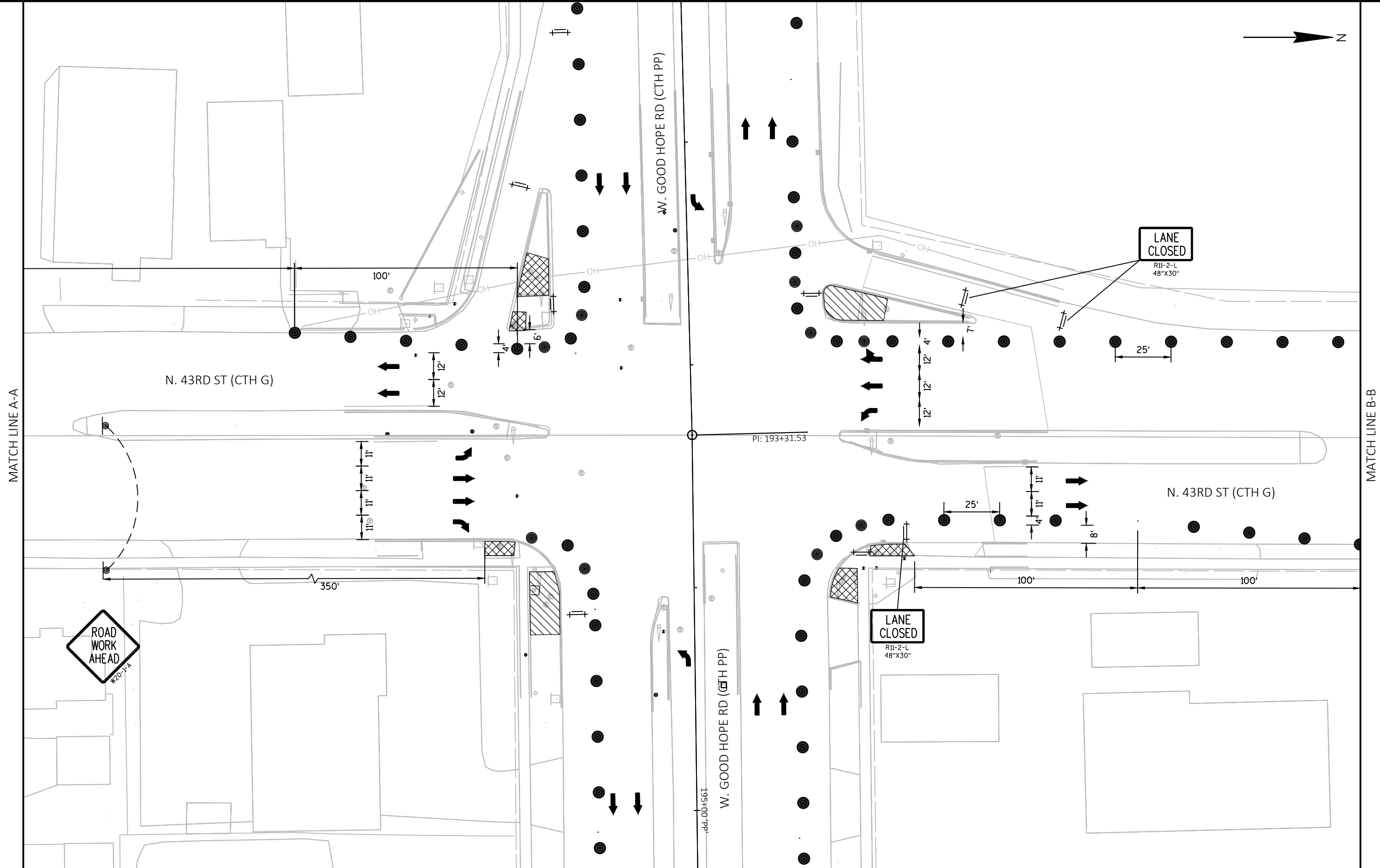
MATCH LINE A-A

PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- 43RD & CTH PP (STAGE 2)	SHEET E
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MATCH LINE A-A

MATCH LINE B-B



PROJECT NO: 2967-00-77

HWY: 6 LOCAL INTERSECTIONS

COUNTY: MILWAUKEE

TRAFFIC CONTROL- 43RD & CTH PP (STAGE 2)

SHEET

E



MATCH LINE B-B

LANE CLOSED

R11-2-L
48"X30"

N. 43RD ST (CTH G)

25'

350'

350'



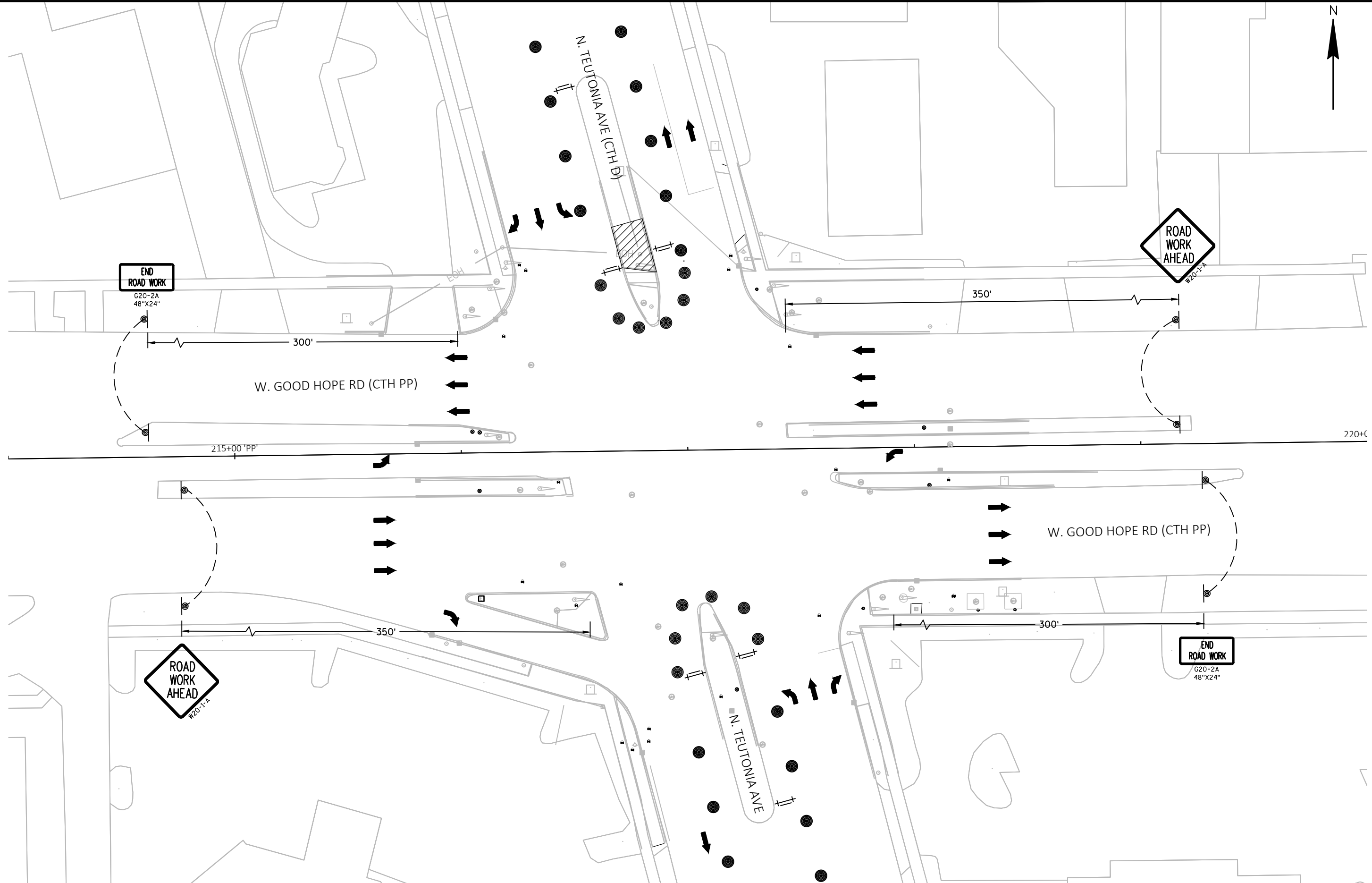
N. 43RD ST (CTH G)

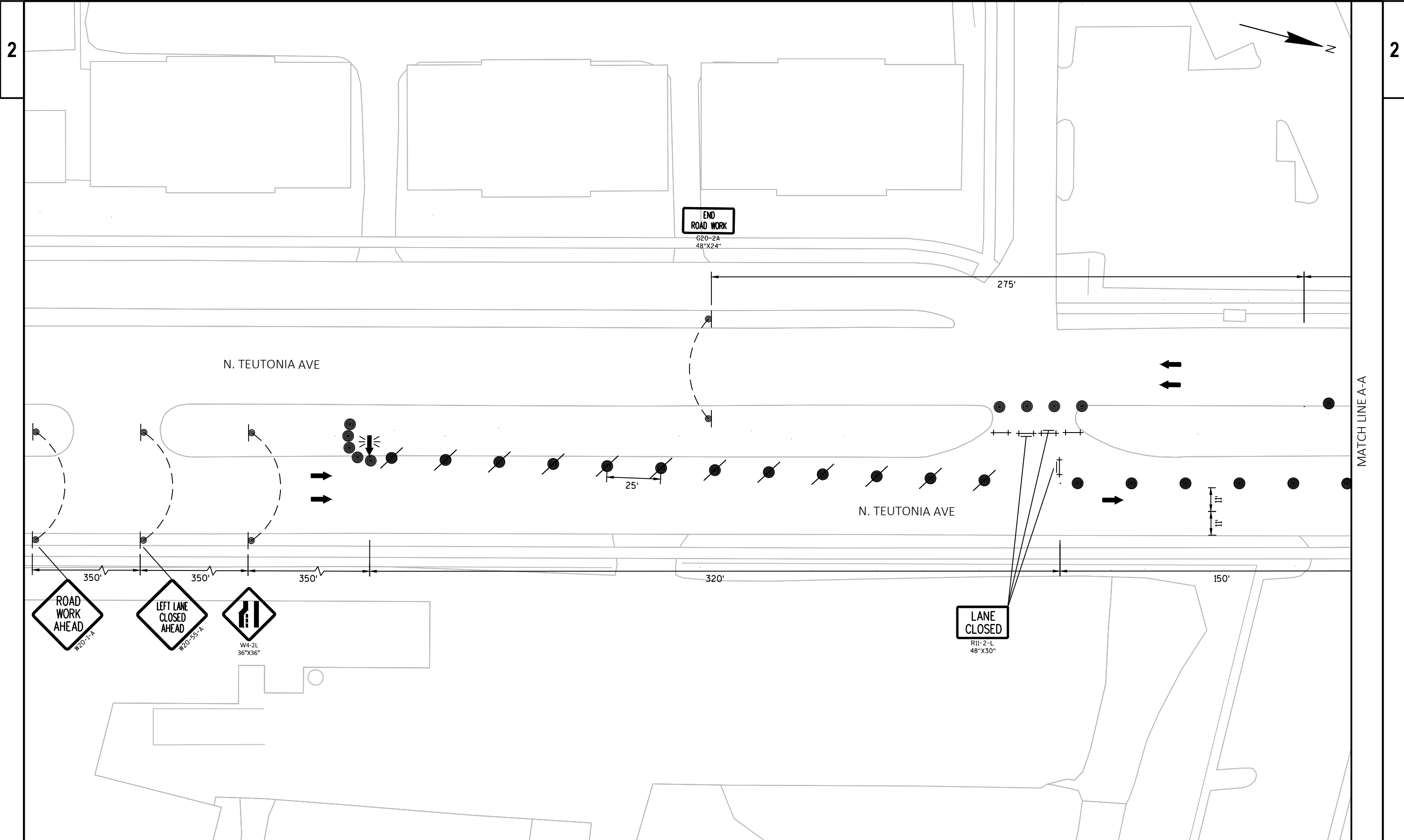
300'

END ROAD WORK

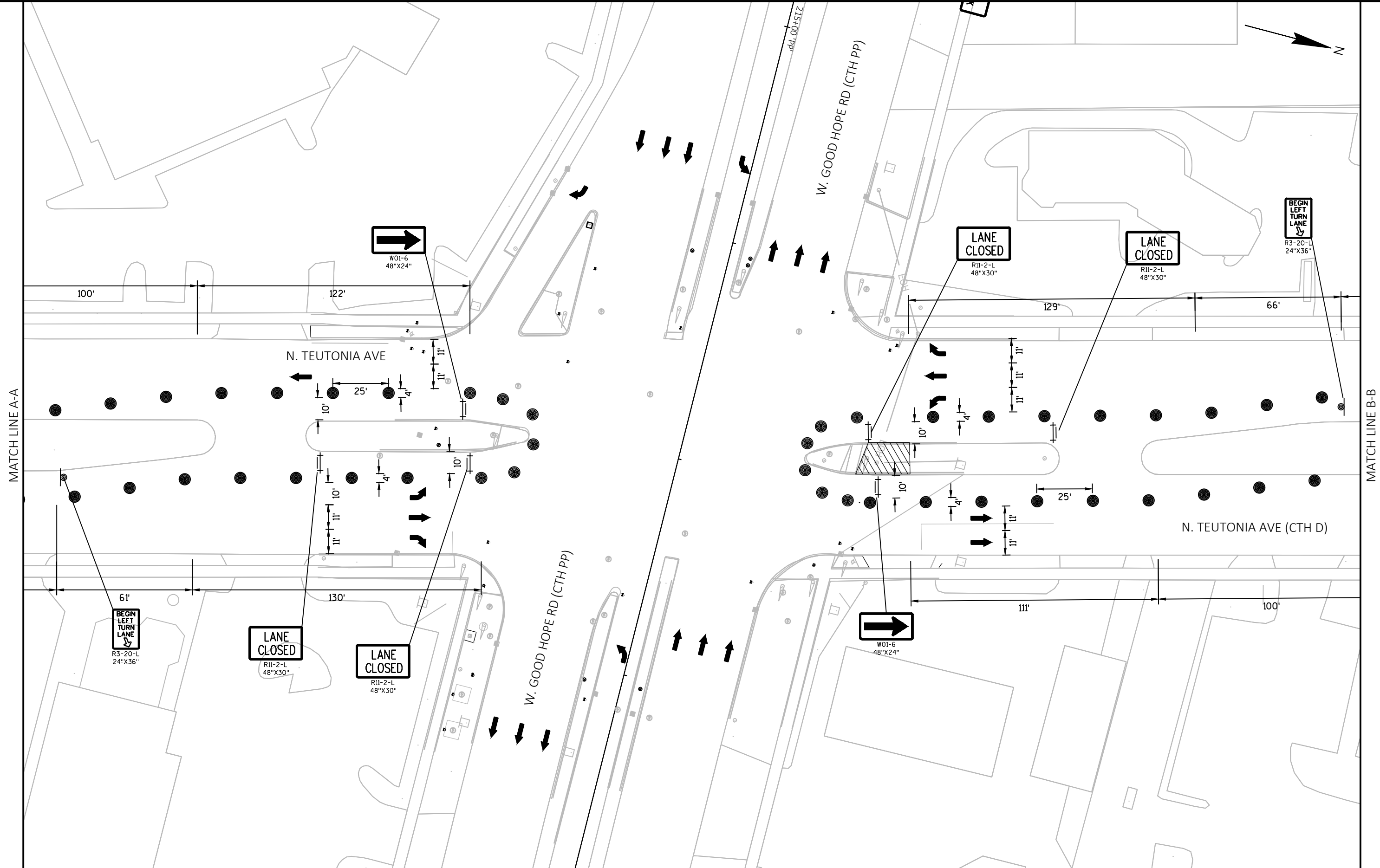
G20-2A
48"X24"

W. CLINTON AVE





PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- TEUTONIA & CTH PP (STAGE 1)	SHEET	E
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N. 38TH ST

END ROAD WORK
G20-2A
48"X24"

350'

W. GOOD HOPE RD (CTH PP)



210+00 'PP'

MATCH LINE STA 208+00

MATCH LINE STA 214+00

W. GOOD HOPE RD (CTH PP)

25'

320'

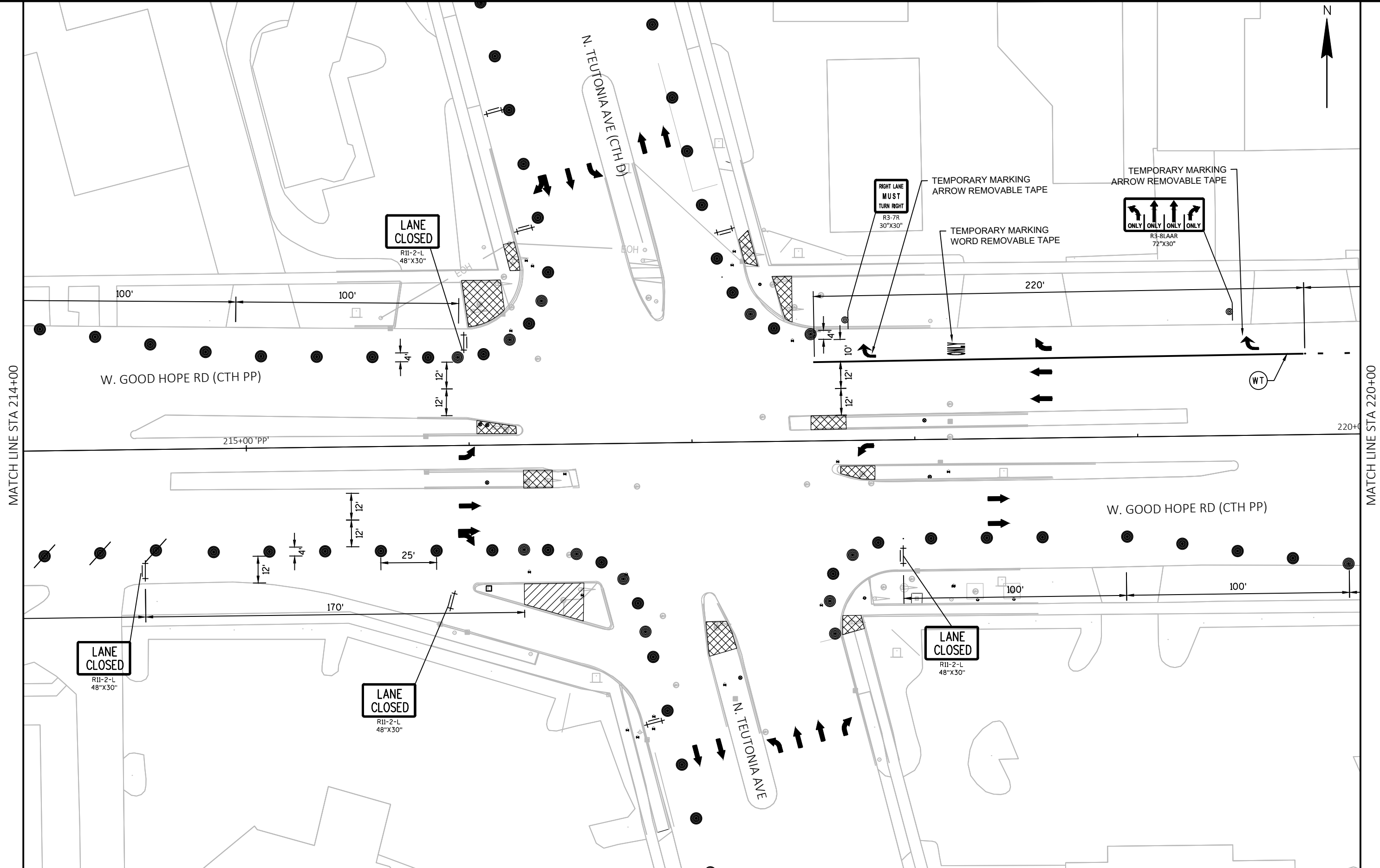
350'

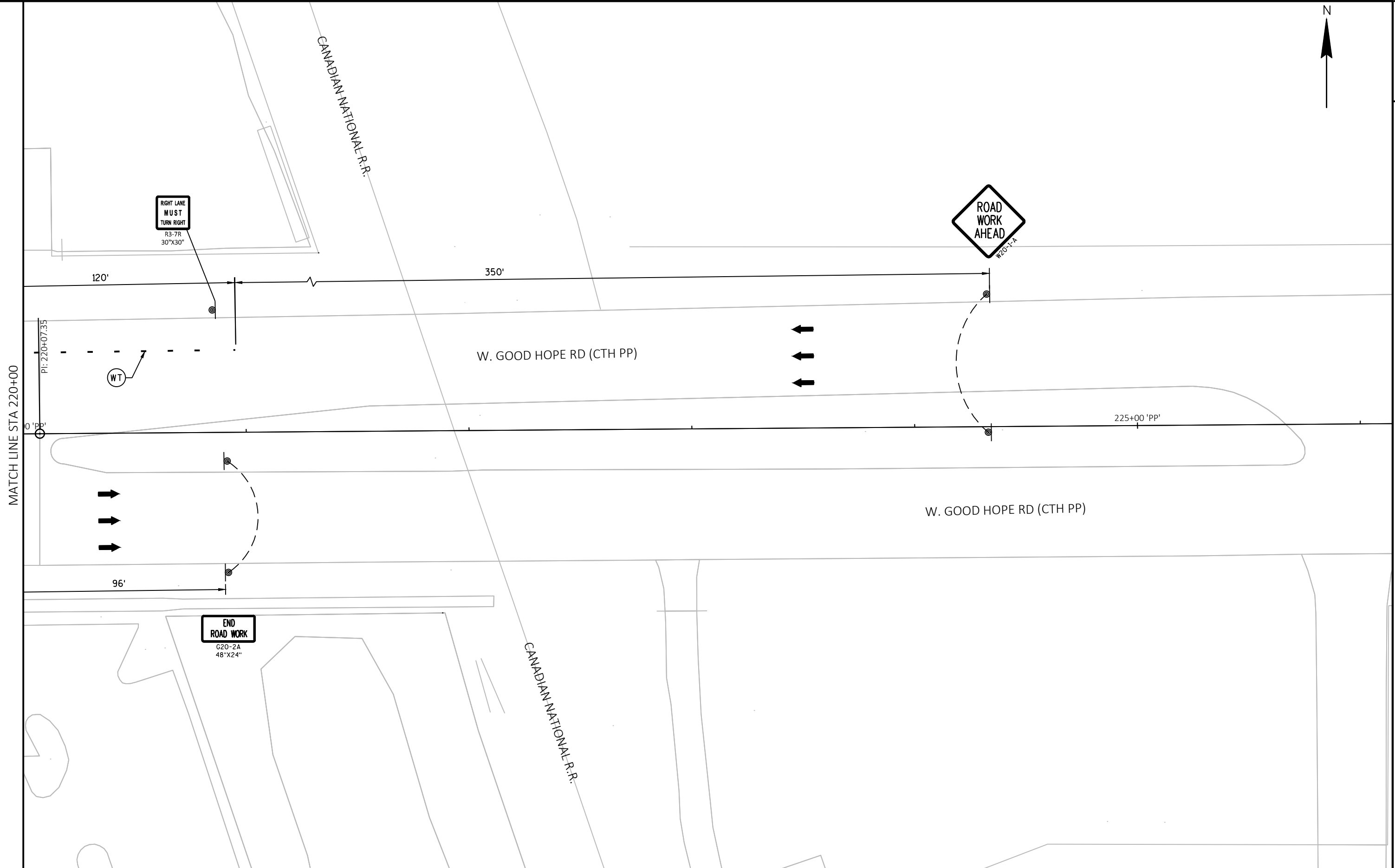
350'

350'



N. 38TH ST

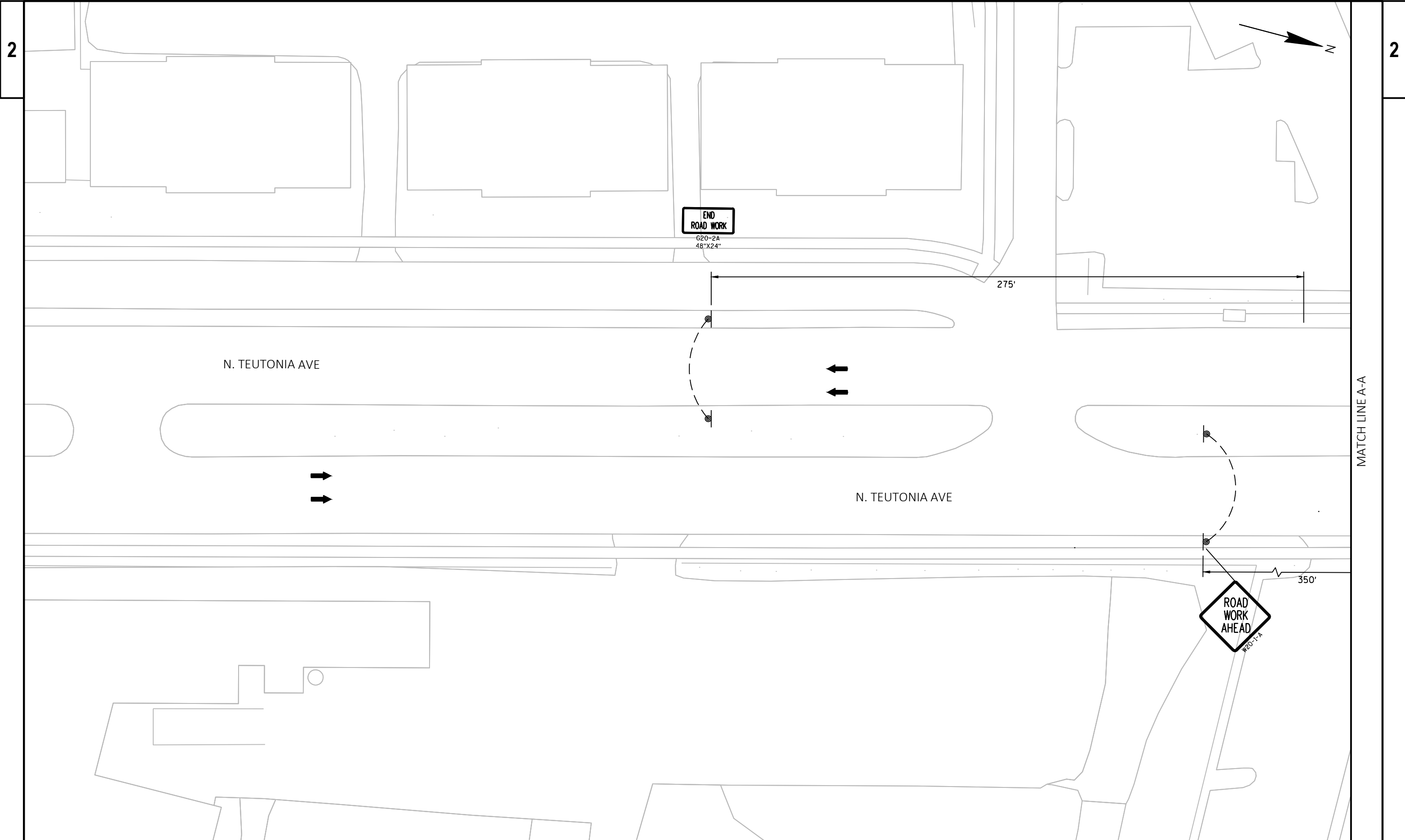




RIGHT LANE
MUST
TURN RIGHT
R3-7R
30"X30"

ROAD
WORK
AHEAD
W20-T-1A

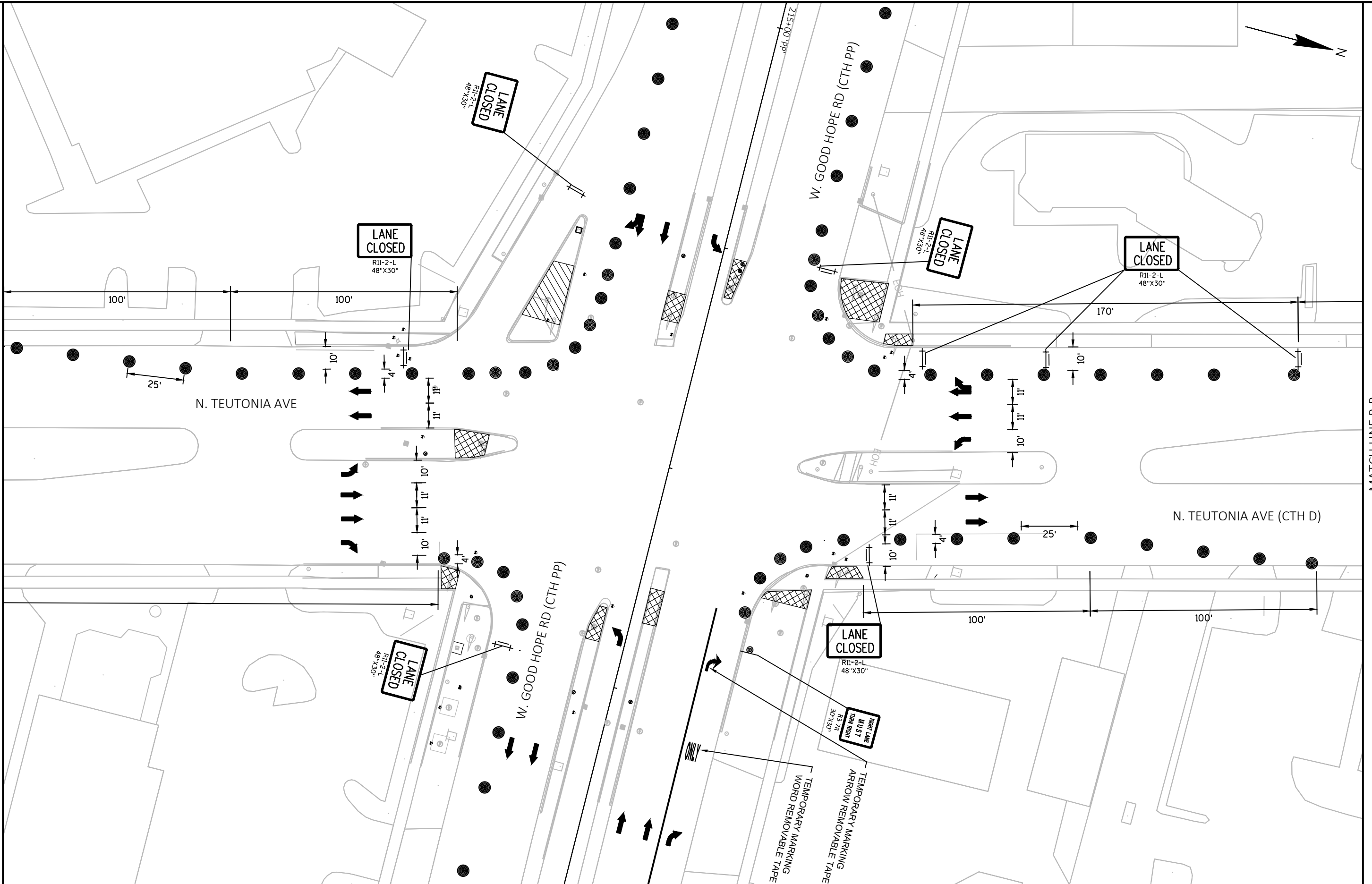
END
ROAD WORK
G20-2A
48"X24"

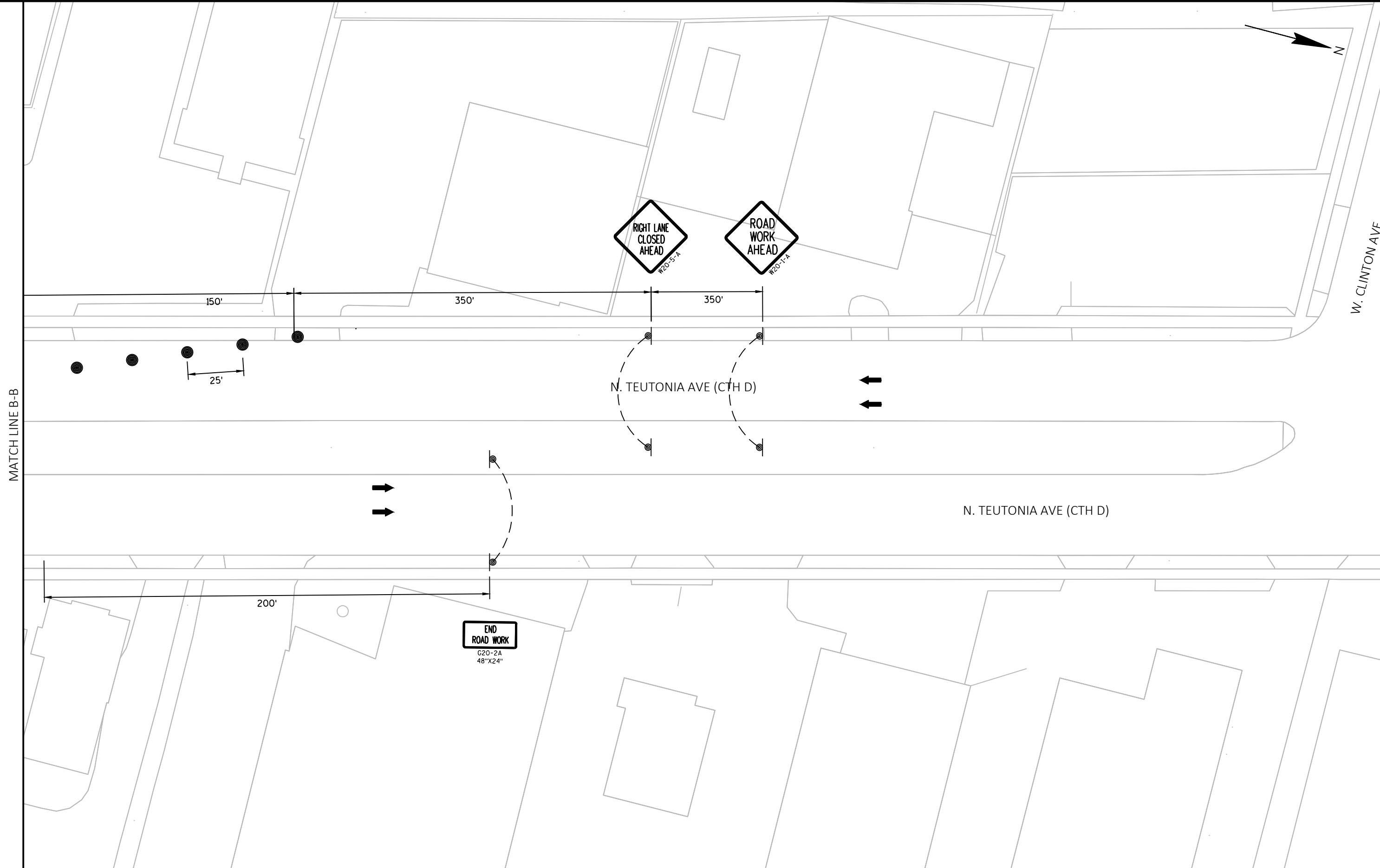


PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- TEUTONIA & CTH PP (STAGE 2)	SHEET	E
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MATCH LINE A-A

MATCH LINE B-B





PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- TEUTONIA & CTH PP (STAGE 2)	SHEET	E
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END ROAD WORK
G20-2A
48"X24"

300'

W. GOOD HOPE RD (CTH PP)



240+00 'PP'

W. GOOD HOPE RD (CTH PP)



25'

320'

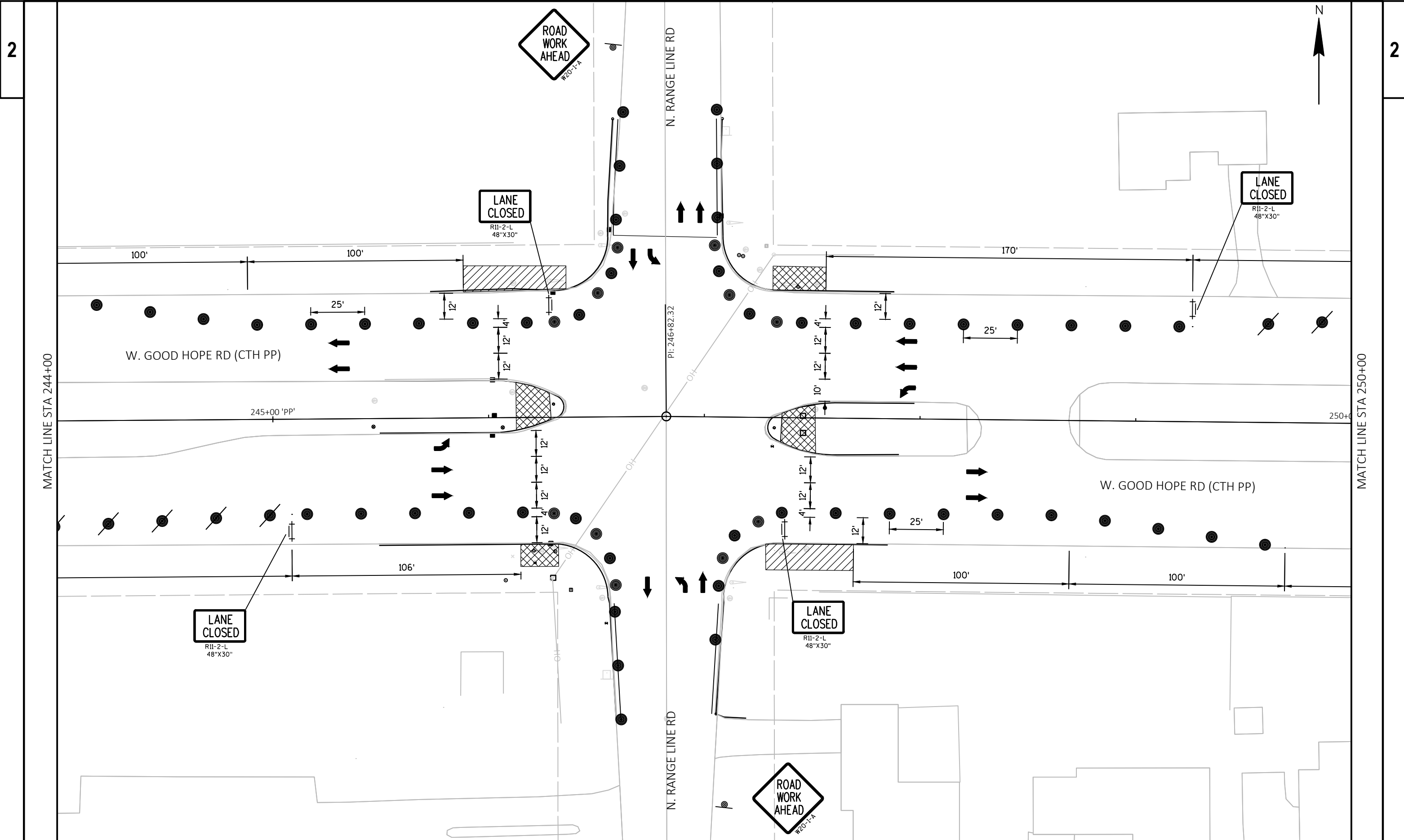


350'

350'

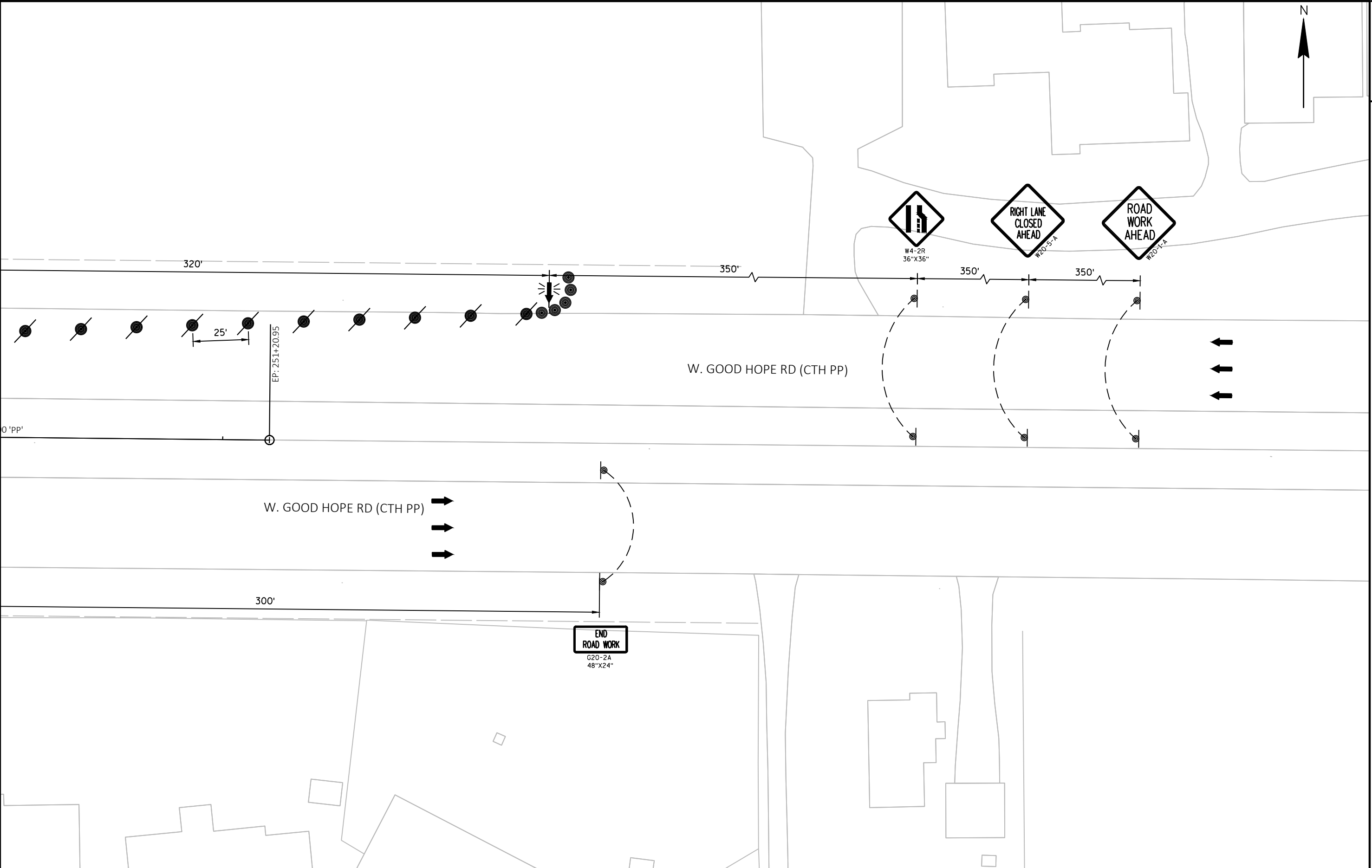
350'

MATCH LINE STA 244+00





MATCH LINE STA 250+00



2

2



IH 43 (SOUTHBOUND)

IH 43 (NORTHBOUND)

W. GREEN TREE RD

W. GREEN TREE RD

END ROAD WORK

G20-2A
48"X24"

135'

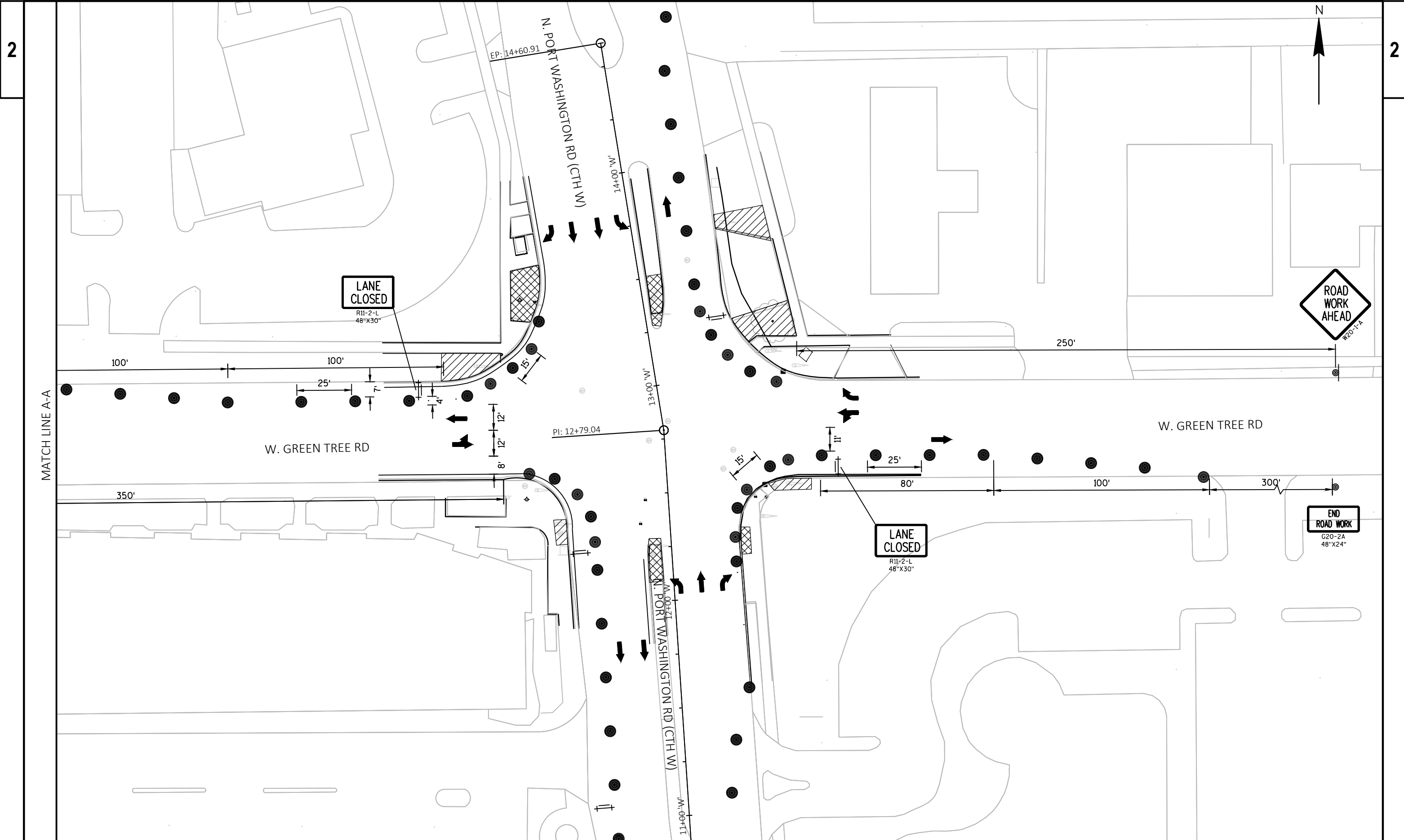
ROAD WORK AHEAD

W20-1-A

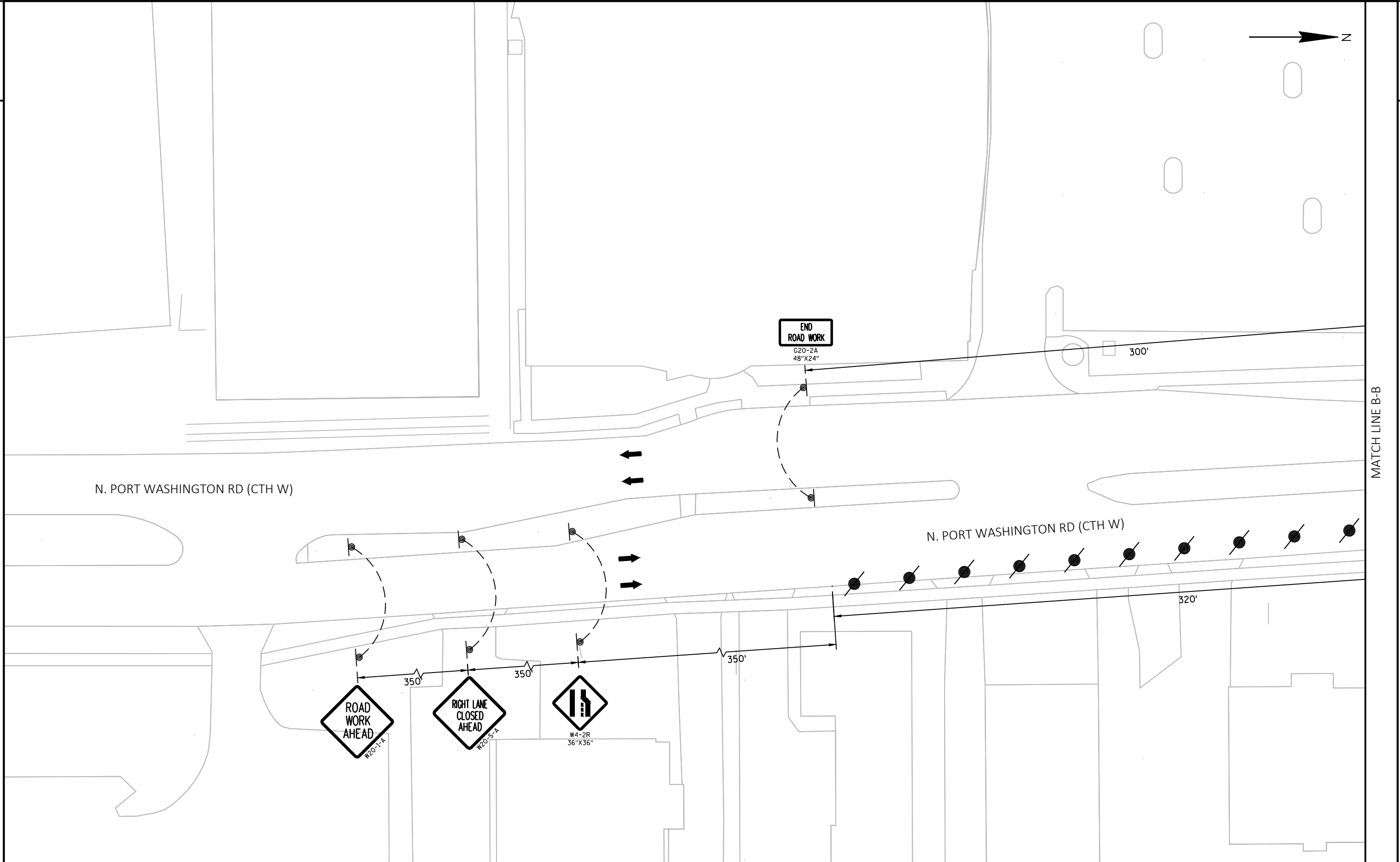
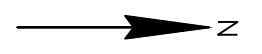
350'

MATCH LINE A-A

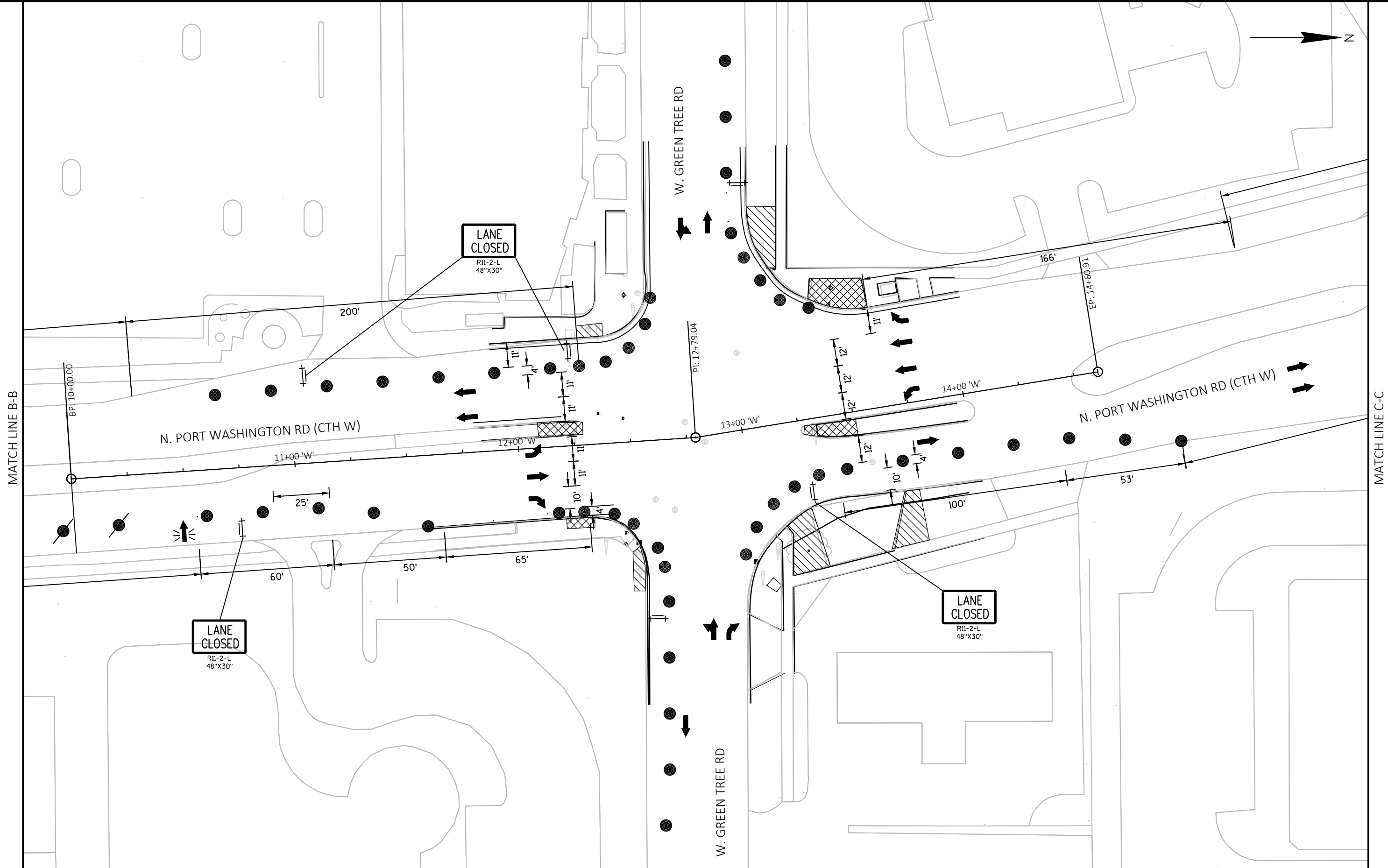
PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- GREEN TREE & CTH W	SHEET	E
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PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- GREEN TREE & CTH W	SHEET	E
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PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- GREEN TREE & CTH W	SHEET E
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MATCH LINE C-C



350'

270'

N. PORT WASHINGTON RD (CTH W)

N. PORT WASHINGTON RD (CTH W)

W. SUGAR LN



2

2



N. 44TH ST

END
ROAD WORK
G20-2A
48"X24"

W. BRADLEY RD



W. BRADLEY RD

350'

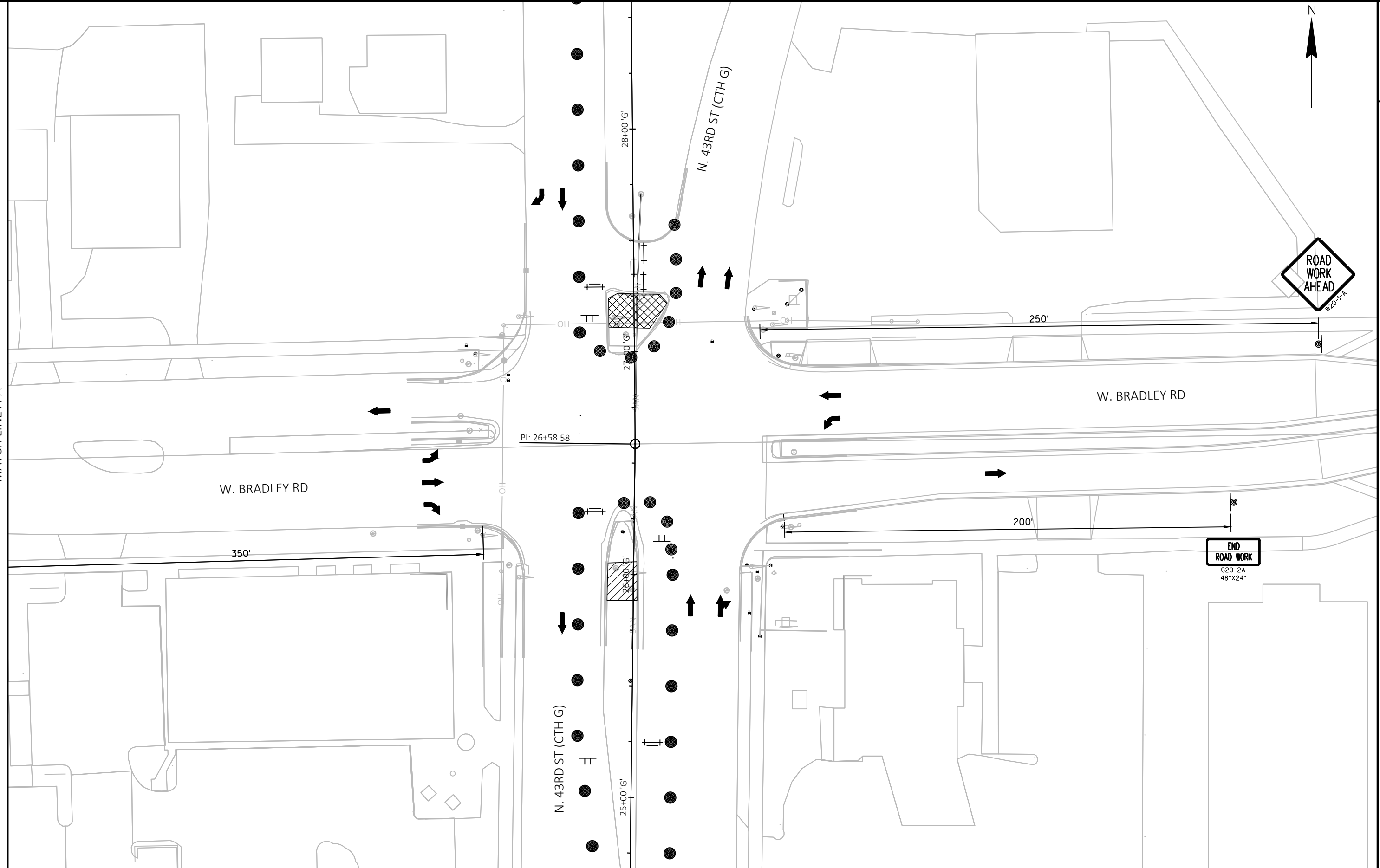
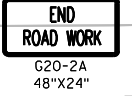
ROAD
WORK
AHEAD
W20-1-A

VILLAGE LN

MATCH LINE A-A

PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- BRADLEY & CTH G (STAGE 1)	SHEET	E
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MATCH LINE A-A



PROJECT NO: 2967-00-77

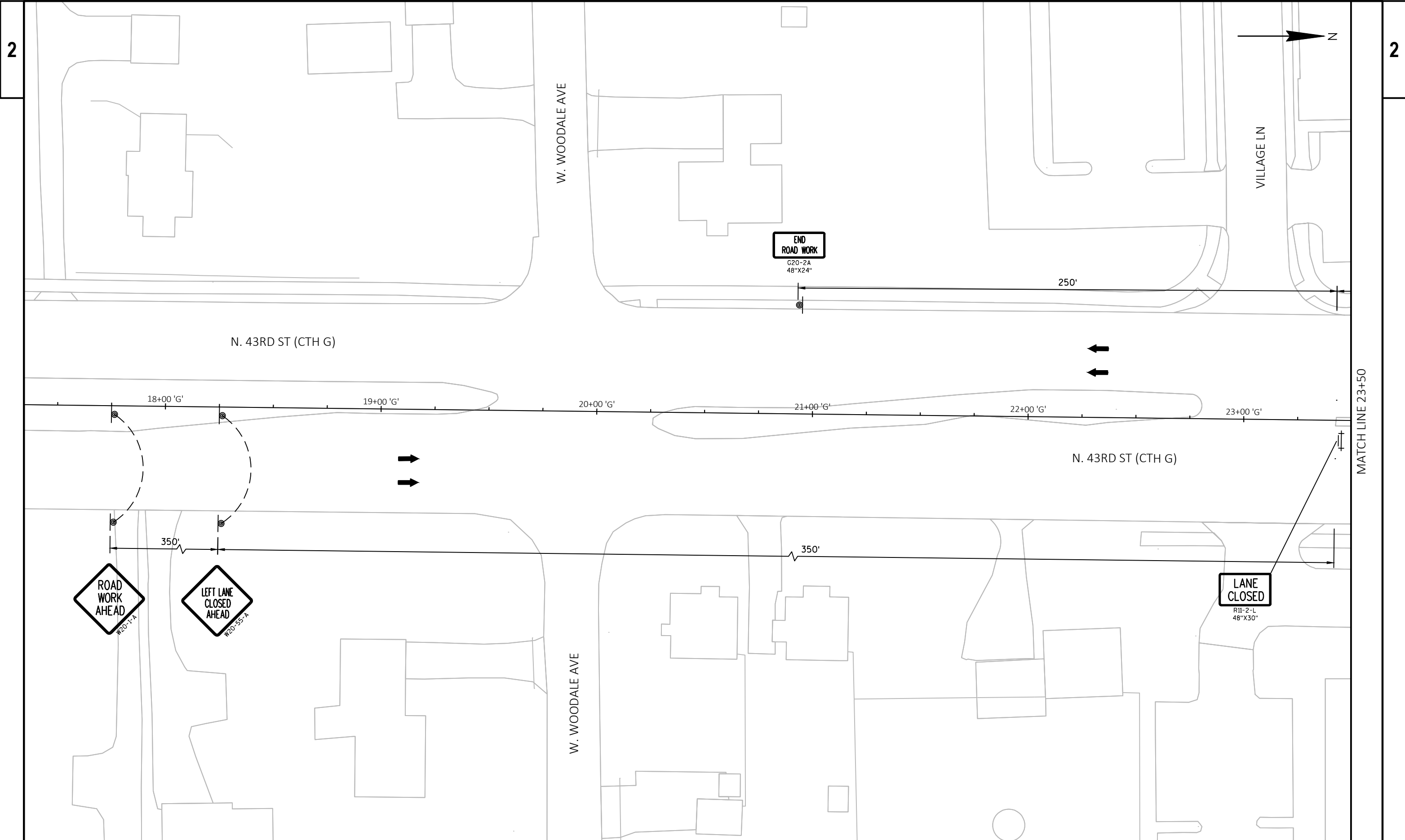
HWY: 6 LOCAL INTERSECTIONS

COUNTY: MILWAUKEE

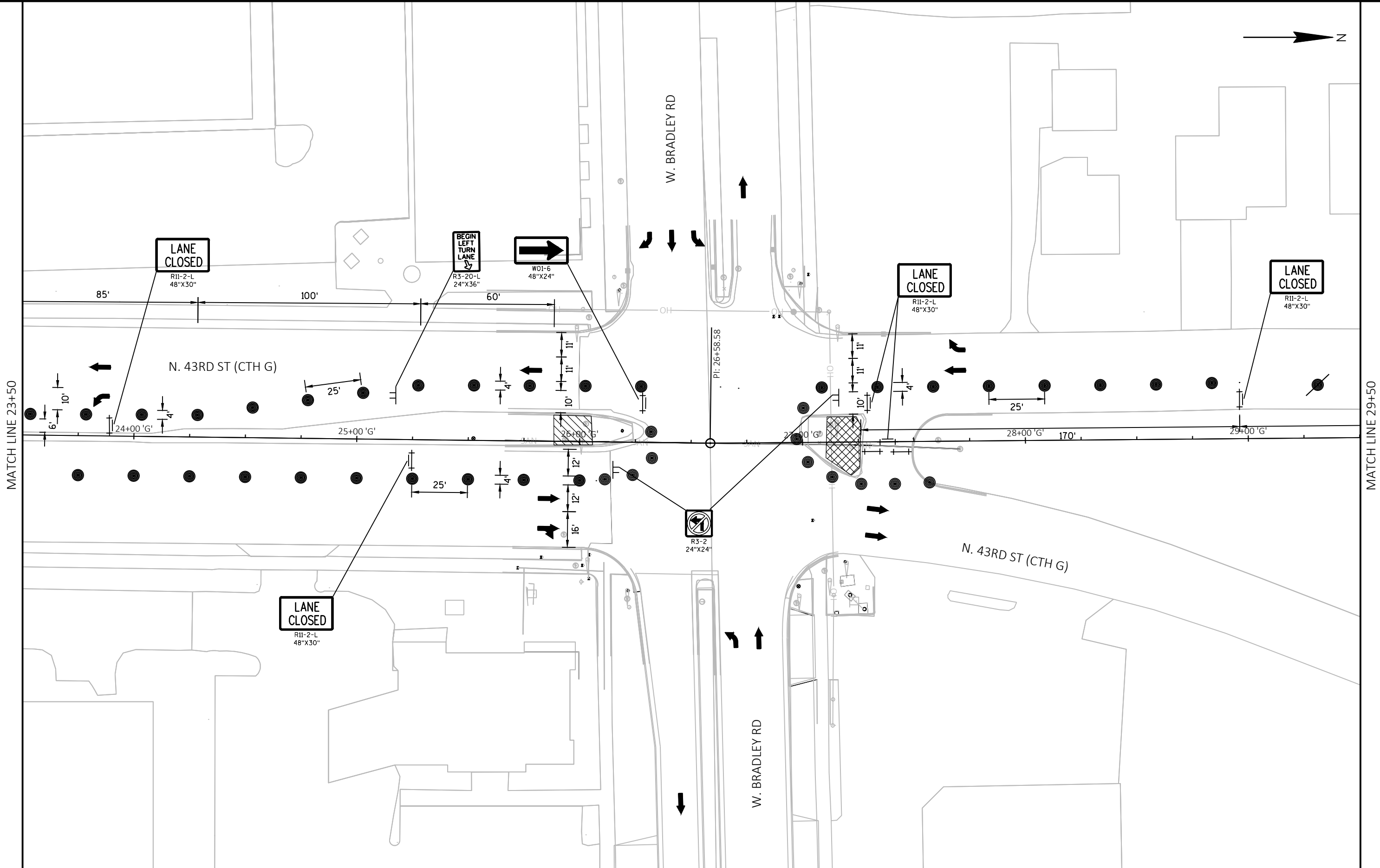
TRAFFIC CONTROL- BRADLEY & CTH G (STAGE 1)

SHEET

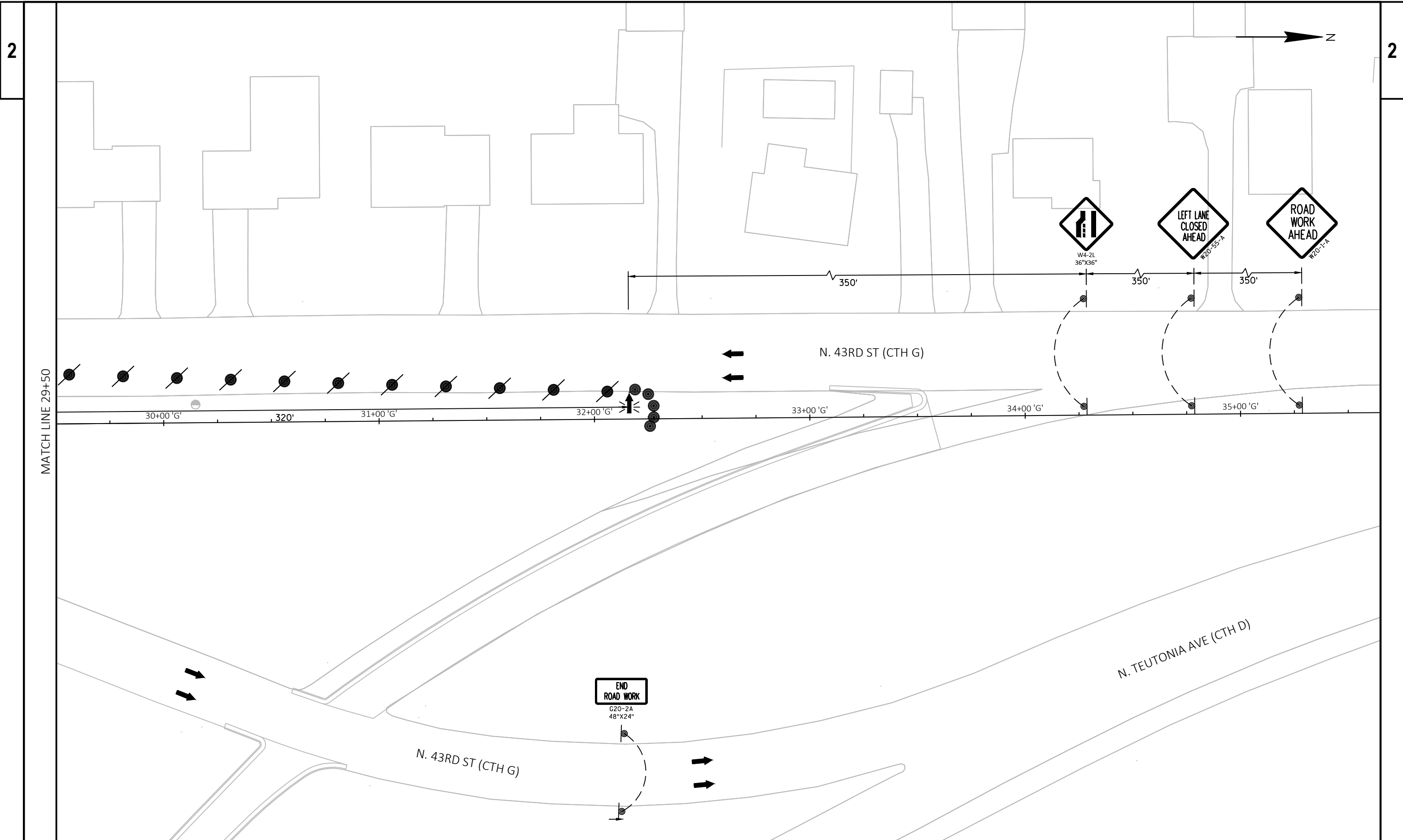
E



PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- BRADLEY & CTH G (STAGE 1)	SHEET	E
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PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- BRADLEY & CTH G (STAGE 1)	SHEET	E
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PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- BRADLEY & CTH G (STAGE 1)	SHEET	E
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N. 44TH ST

END
ROAD WORK
G20-2A
48"X24"

300'

W. BRADLEY RD



W. BRADLEY RD

350'

ROAD
WORK
AHEAD
W20-1-A

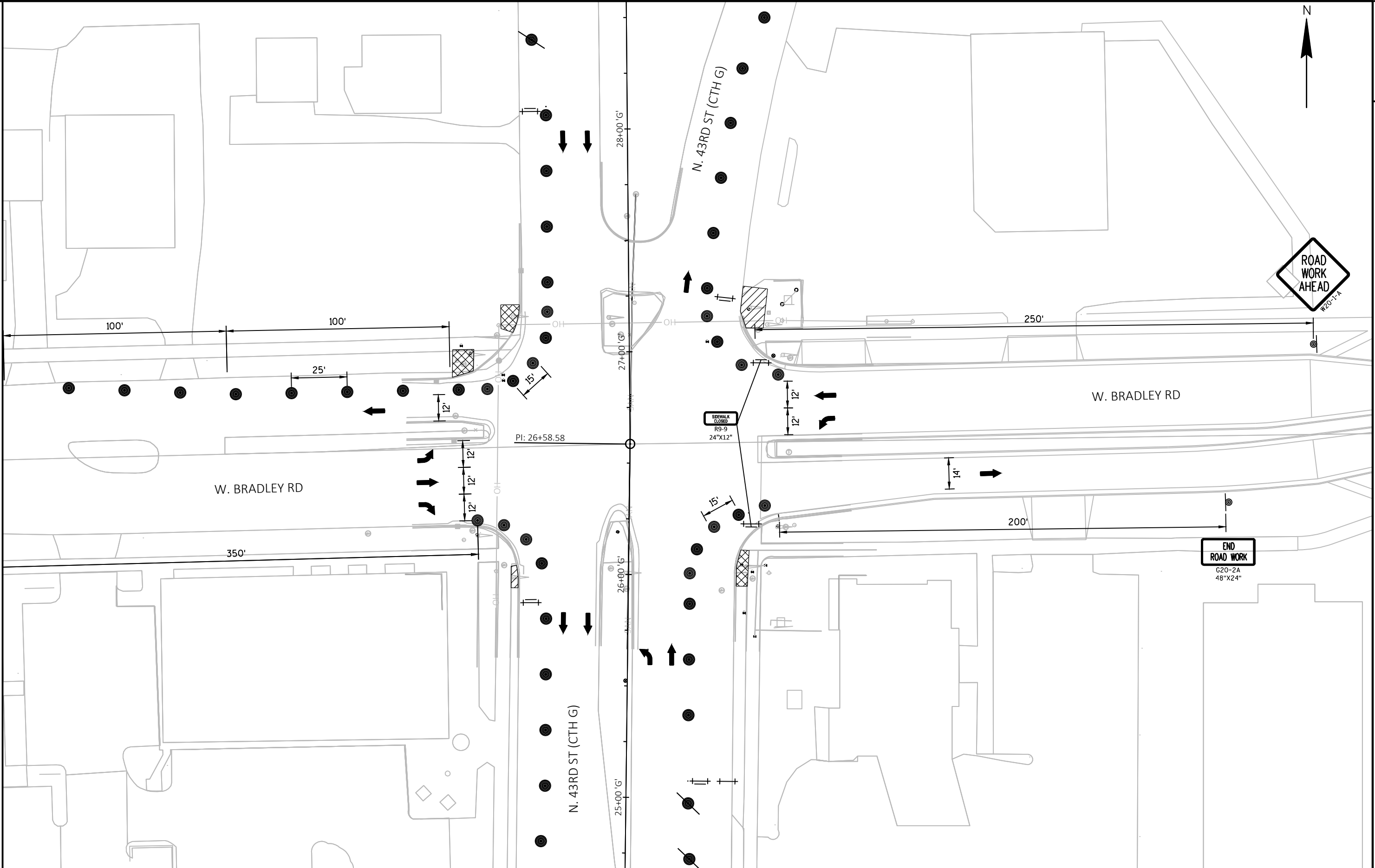
VILLAGE LN

MATCH LINE A-A

PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- BRADLEY & CTH G (STAGE 2)	SHEET	E
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MATCH LINE A-A



PROJECT NO: 2967-00-77

HWY: 6 LOCAL INTERSECTIONS

COUNTY: MILWAUKEE

TRAFFIC CONTROL- BRADLEY & CTH G (STAGE 2)

SHEET

E

W. WOODALE AVE

VILLAGE LN



END ROAD WORK

G20-2A
48"X24"

300'

N. 43RD ST (CTH G)

18+00 'G'

19+00 'G'

20+00 'G'

21+00 'G'

22+00 'G'

23+00 'G'

N. 43RD ST (CTH G)

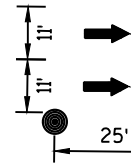
MATCH LINE 23+50



350'

350'

60'



25'

11'

11'

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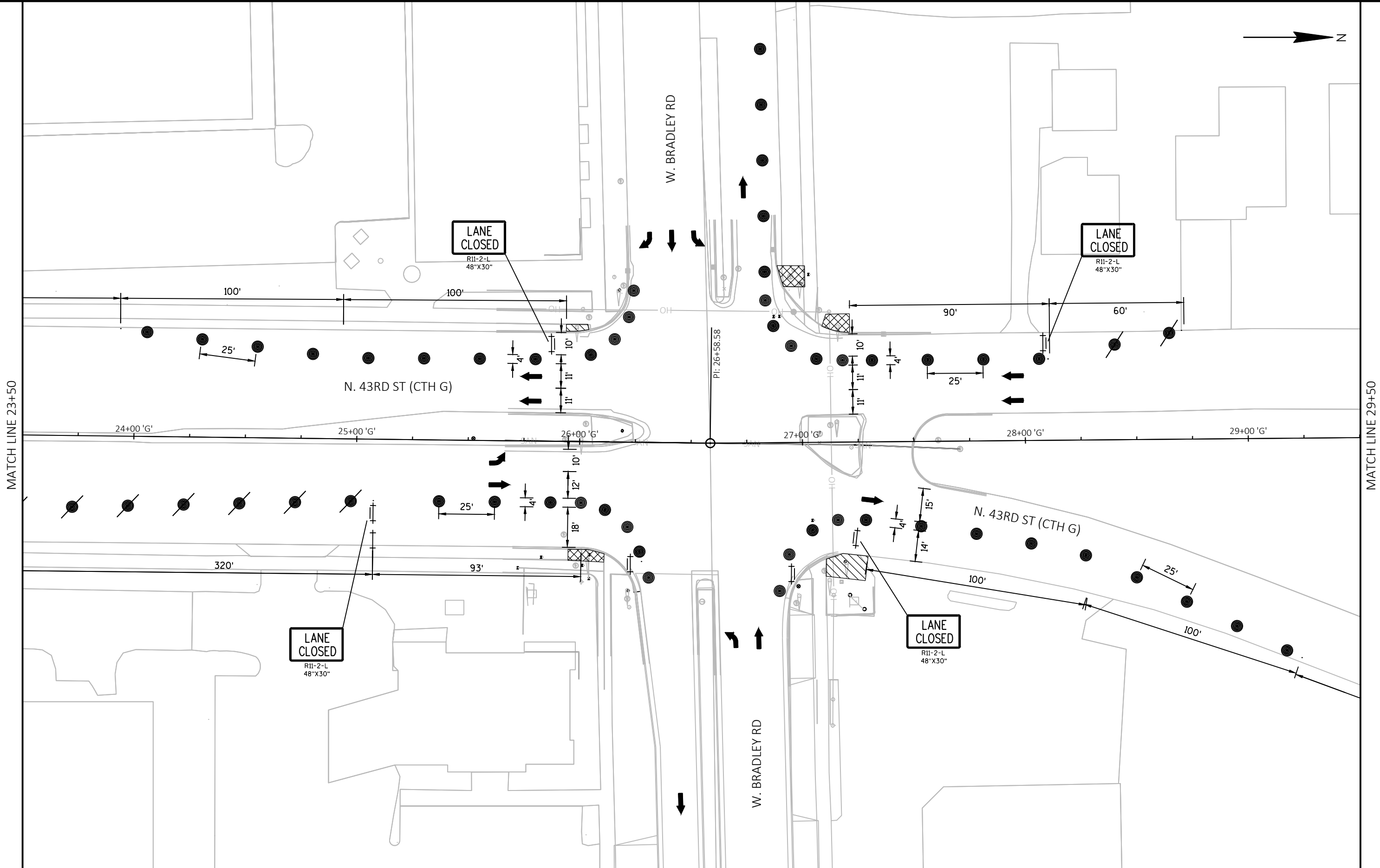
25'

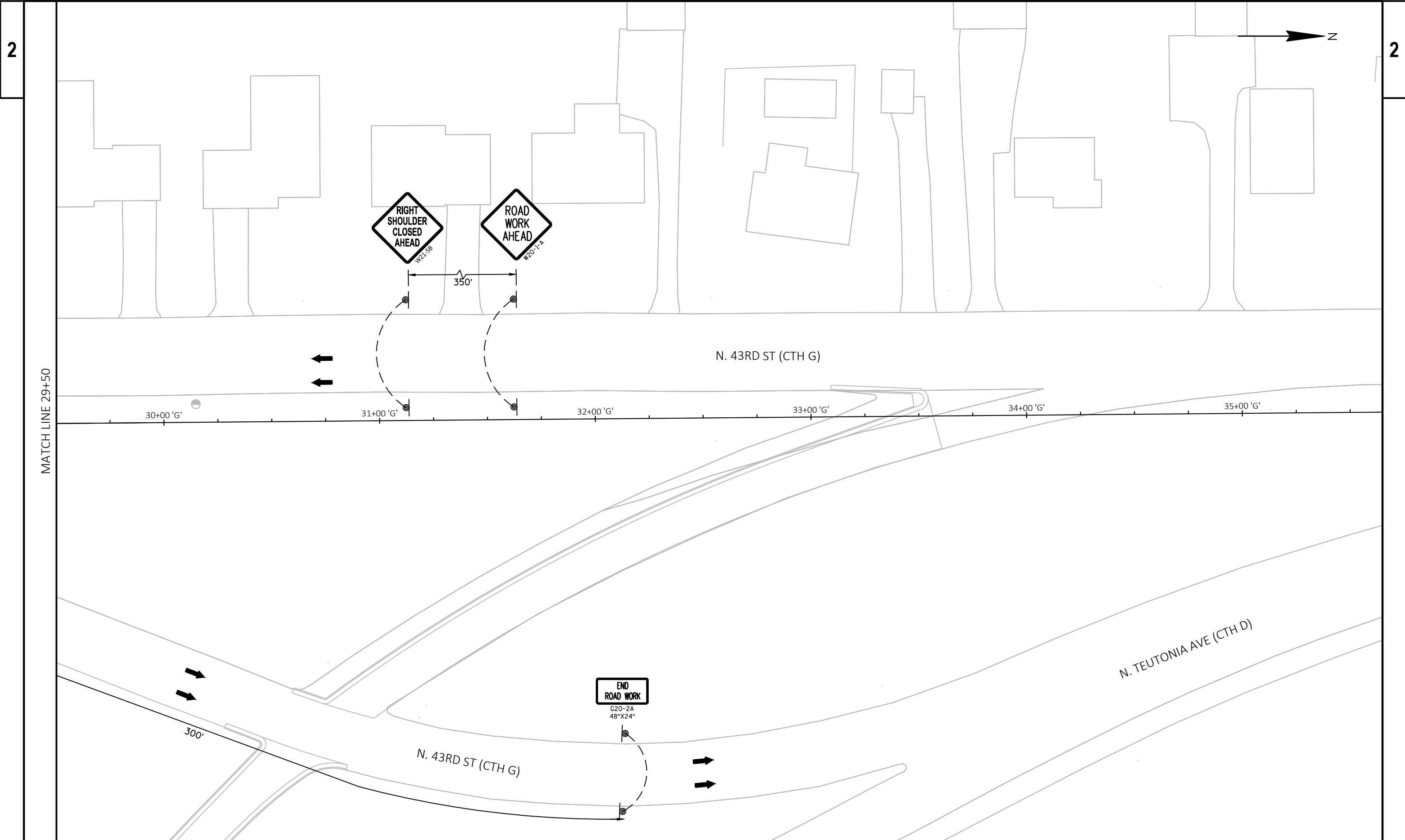
25'



MATCH LINE 23+50

MATCH LINE 29+50



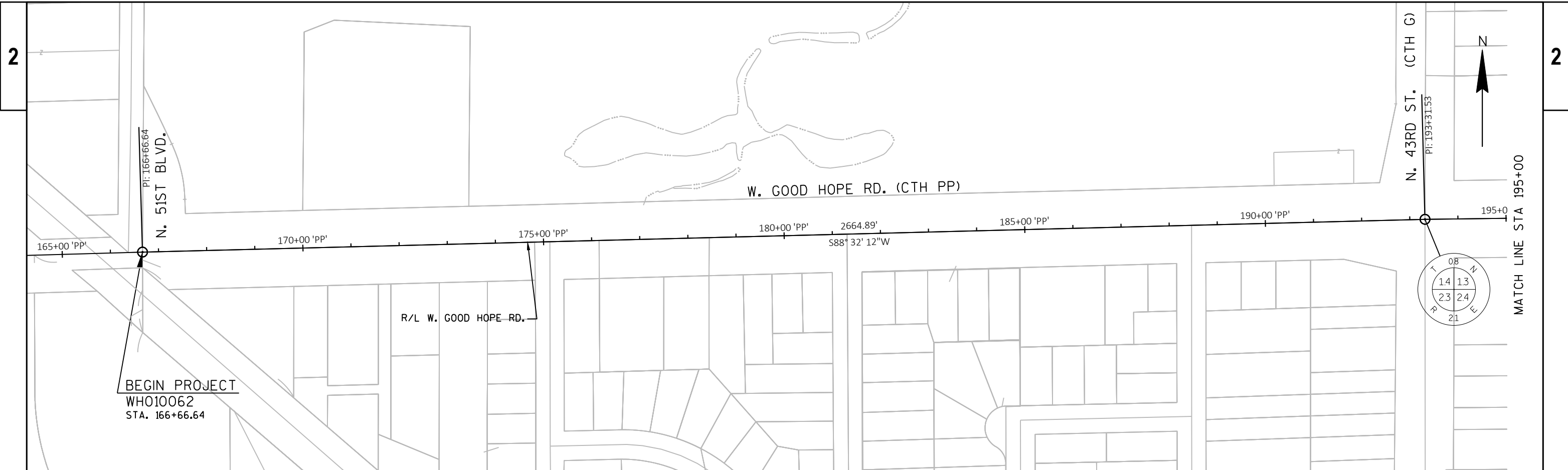


MATCH LINE 29+50

2

2

PROJECT NO: 2967-00-77	HWY: 6 LOCAL INTERSECTIONS	COUNTY: MILWAUKEE	TRAFFIC CONTROL- BRADLEY & CTH G (STAGE 2)	SHEET	E
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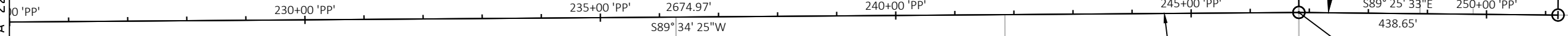
PROJECT NO: 2967-00-77	HWY: CTH PP, G & W	COUNTY: MILWAUKEE	ALIGNMENT DIAGRAM - CTH PP	SHEET	E
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MATCH LINE STA 225+00

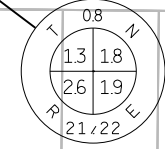
W. GOOD HOPE RD. (CTH PP)

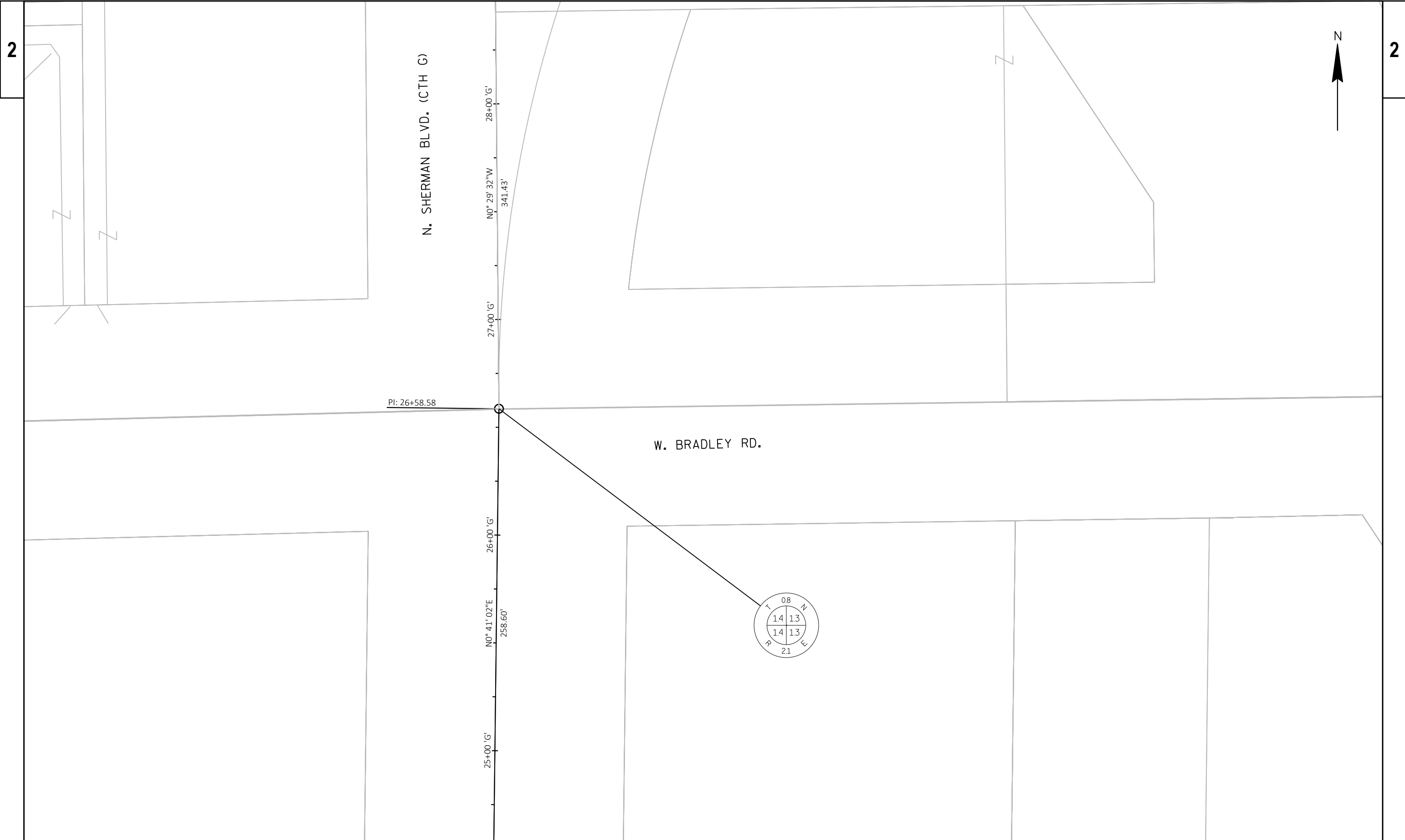
N. RANGE LINE RD.

END PROJECT
WH010062
STA. 247+32.26



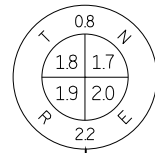
R/L W. GOOD HOPE RD.





2

2



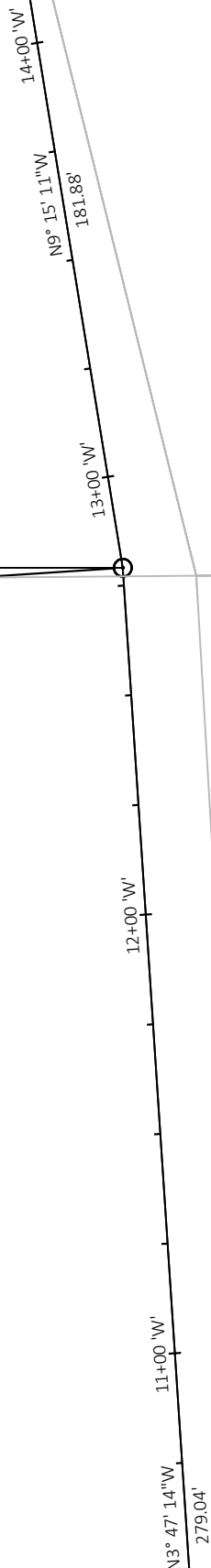
1325.01'

3430.72'

Pt. 12+79.04

N. PORT WASHINGTON RD. (CTH W)

W. GREEN TREE RD.



Estimate Of Quantities

2967-00-77

Line	Item	Item Description	Unit	Total	Qty
0002	204.0155	Removing Concrete Sidewalk	SY	55.000	55.000
0004	204.0195	Removing Concrete Bases	EACH	11.000	11.000
0006	204.9060.S	Removing (item description) 01. TRAFFIC SIGNAL EQUIPMENT AT INTERSECTION	EACH	6.000	6.000
0008	204.9060.S	Removing (item description) 02. Concrete Base Bolts	EACH	4.000	4.000
0010	205.0501.S	Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	TON	12.000	12.000
0012	213.0100	Finishing Roadway (project) 01. 2967-00-77	EACH	1.000	1.000
0014	602.0420	Concrete Sidewalk 7-Inch	SF	450.000	450.000
0016	619.1000	Mobilization	EACH	1.000	1.000
0018	625.0100	Topsoil	SY	570.000	570.000
0020	628.6510	Soil Stabilizer Type B	ACRE	0.200	0.200
0022	628.7005	Inlet Protection Type A	EACH	2.000	2.000
0024	628.7010	Inlet Protection Type B	EACH	45.000	45.000
0026	628.7015	Inlet Protection Type C	EACH	5.000	5.000
0028	631.0300	Sod Water	MGAL	20.000	20.000
0030	631.1000	Sod Lawn	SY	570.000	570.000
0032	634.0812	Posts Tubular Steel 2x2-Inch X 12-FT	EACH	8.000	8.000
0034	637.2210	Signs Type II Reflective H	SF	321.500	321.500
0036	637.2215	Signs Type II Reflective H Folding	SF	67.340	67.340
0038	638.2602	Removing Signs Type II	EACH	18.000	18.000
0040	642.5001	Field Office Type B	EACH	1.000	1.000
0042	643.0300	Traffic Control Drums	DAY	28,830.000	28,830.000
0044	643.0420	Traffic Control Barricades Type III	DAY	2,880.000	2,880.000
0046	643.0705	Traffic Control Warning Lights Type A	DAY	5,780.000	5,780.000
0048	643.0715	Traffic Control Warning Lights Type C	DAY	6,350.000	6,350.000
0050	643.0800	Traffic Control Arrow Boards	DAY	420.000	420.000
0052	643.0900	Traffic Control Signs	DAY	8,560.000	8,560.000
0054	643.1050	Traffic Control Signs PCMS	DAY	600.000	600.000
0056	643.5000	Traffic Control	EACH	1.000	1.000
0058	646.1020	Marking Line Epoxy 4-Inch	LF	210.000	210.000
0060	646.9000	Marking Removal Line 4-Inch	LF	210.000	210.000
0062	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	1,450.000	1,450.000
0064	649.0550	Temporary Marking Arrow Removable Tape	EACH	2.000	2.000
0066	649.0650	Temporary Marking Word Removable Tape	EACH	1.000	1.000
0068	650.8500	Construction Staking Electrical Installations (project) 01. 2967-00-77	LS	1.000	1.000
0070	650.9910	Construction Staking Supplemental Control (project) 01. 2967-00-77	LS	1.000	1.000
0072	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	200.000	200.000
0074	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	300.000	300.000
0076	652.0615	Conduit Special 3-Inch	LF	300.000	300.000
0078	654.0102	Concrete Bases Type 2	EACH	1.000	1.000
0080	654.0110	Concrete Bases Type 10	EACH	5.000	5.000
0082	654.0113	Concrete Bases Type 13	EACH	3.000	3.000
0084	654.0120	Concrete Bases Type 10-Special	EACH	8.000	8.000
0086	655.0210	Cable Traffic Signal 3-14 AWG	LF	70.000	70.000
0088	655.0230	Cable Traffic Signal 5-14 AWG	LF	560.000	560.000
0090	655.0240	Cable Traffic Signal 7-14 AWG	LF	4,125.000	4,125.000
0092	655.0260	Cable Traffic Signal 12-14 AWG	LF	5,280.000	5,280.000
0094	655.0270	Cable Traffic Signal 15-14 AWG	LF	1,350.000	1,350.000
0096	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	245.000	245.000
0098	657.0100	Pedestal Bases	EACH	10.000	10.000

Estimate Of Quantities

2967-00-77

Line	Item	Item Description	Unit	Total	Qty
0100	657.0345	Poles Type 9	EACH	5.000	5.000
0102	657.0347	Poles Type 9-Special	EACH	6.000	6.000
0104	657.0350	Poles Type 10	EACH	2.000	2.000
0106	657.0352	Poles Type 10-Special	EACH	1.000	1.000
0108	657.0355	Poles Type 12	EACH	1.000	1.000
0110	657.0360	Poles Type 13	EACH	2.000	2.000
0112	657.0405	Traffic Signal Standards Aluminum 3.5-FT	EACH	2.000	2.000
0114	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	2.000	2.000
0116	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	6.000	6.000
0118	657.0525	Monotube Arms 25-FT	EACH	1.000	1.000
0120	657.0530	Monotube Arms 30-FT	EACH	4.000	4.000
0122	657.0546	Monotube Arms 45-FT-Special	EACH	6.000	6.000
0124	657.0555	Monotube Arms 55-FT	EACH	3.000	3.000
0126	657.0815	Luminaire Arms Steel 15-FT	EACH	3.000	3.000
0128	658.0173	Traffic Signal Face 3S 12-Inch	EACH	39.000	39.000
0130	658.0174	Traffic Signal Face 4S 12-Inch	EACH	28.000	28.000
0132	658.0175	Traffic Signal Face 5S 12-Inch	EACH	1.000	1.000
0134	658.0416	Pedestrian Signal Face 16-Inch	EACH	16.000	16.000
0136	658.0500	Pedestrian Push Buttons	EACH	9.000	9.000
0138	658.5069	Signal Mounting Hardware (location) 01. W. Good Hope Rd (CTH PP) & 51st Blvd	LS	1.000	1.000
0140	658.5069	Signal Mounting Hardware (location) 02. W. Good Hope Rd (CTH PP) & N. 43rd St	LS	1.000	1.000
0142	658.5069	Signal Mounting Hardware (location) 03. W. Good Hope Rd (CTH PP) & N. Teutonia Ave (CTH D)	LS	1.000	1.000
0144	658.5069	Signal Mounting Hardware (location) 04. W. Good Hope Rd (CTH PP) & N. Range Line Rd	LS	1.000	1.000
0146	658.5069	Signal Mounting Hardware (location) 05. N. Port Washington Rd (CTH W) & W. Green Tree Rd	LS	1.000	1.000
0148	658.5069	Signal Mounting Hardware (location) 06. N. Sherman Blvd (CTH G) & W. Bradley Rd	LS	1.000	1.000
0150	661.0200	Temporary Traffic Signals for Intersections (location) 01. W. Good Hope Rd (CTH PP) & N. Teutonia Ave (CTH D)	LS	1.000	1.000
0152	661.0200	Temporary Traffic Signals for Intersections (location) 02. N. Port Washington Rd (CTH W) & W. Green Tree Rd	LS	1.000	1.000
0154	690.0250	Sawing Concrete	LF	200.000	200.000
0156	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	500.000	500.000
0158	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	400.000	400.000
0160	SPV.0035	Special 01. Backfill Slurry	CY	9.000	9.000
0162	SPV.0060	Special 01. Furnish and Install Accessible Pedestrian Push Button System, 2 Buttons	EACH	1.000	1.000
0164	SPV.0060	Special 02. Remove and Reinstall Video Detection Camera	EACH	4.000	4.000
0166	SPV.0060	Special 03. Remove and Reinstall Antenna	EACH	3.000	3.000
0168	SPV.0060	Special 04. Cabinet Modification	EACH	6.000	6.000
0170	SPV.0060	Special 05. Transport and Install 4-Camera System	EACH	1.000	1.000
0172	SPV.0060	Special 06. Transport and Install 2-Camera System	EACH	1.000	1.000
0174	SPV.0060	Special 07. Cored Sign Post Holes 6-Inch	EACH	6.000	6.000
0176	SPV.0060	Special 08. Utility Line Opening	EACH	12.000	12.000
0178	SPV.0060	Special 09. Hydroexcavation	EACH	8.000	8.000
0180	SPV.0195	Special 01. Managment of Solid Waste	TON	10.000	10.000

REMOVING CONCRETE BASES

CATEGORY	LOCATION	NO.	204.0195 REMOVING CONCRETE BASES EACH	204.9060.S.02 REMOVING (02. CONCRETE BASE BOLTS) EACH
0010	W. GOOD HOPE RD (CTH PP) & N. 43RD ST (CTH G)	SB8	1	
		SB7		1
		SB14		1
0010	W. GOOD HOPE RD (CTH PP) & N. TEUTONIA AVE (CTH D)	SB6		1
		SB7	1	
		SB15		1
0010	W. GOOD HOPE RD (CTH PP) & N. RANGE LINE RD	SB3	1	
0010		SB8	1	
0010	N. PORT WASHINGTON RD (CTH W) & W. GREEN TREE RD	SB2	1	
0010		SB5	1	
0010		SB6	1	
0010		SB8	1	
0010		SB11	1	
0010		SB12	1	
0010		N. SHERMAN BLVD (CTH G) & W. BRADLEY RD	SB10	1
TOTAL 0010			11	4

EROSION CONTROL ITEMS

CATEGORY	LOCATION	625.0100 TOPSOIL SY	628.6510 SOIL STABILIZER TYPE B ACRE	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY
0010	W. GOOD HOPE RD (CTH PP) & N. 51ST BLVD	20	0.004	1	8	-	1	20
0010	W. GOOD HOPE RD (CTH PP) & N. 43RD ST (CTH G)	131	0.027	-	9	-	4	131
0010	W. GOOD HOPE RD (CTH PP) & N. TEUTONIA AVE (CTH D)	83	0.017	-	13	-	2	83
0010	W. GOOD HOPE RD (CTH PP) & N. RANGE LINE RD	100	0.021	-	7	-	3	100
0010	N. PORT WASHINGTON RD (CTH W) & W. GREEN TREE RD	96	0.020	-	2	-	3	96
0010	N. SHERMAN BLVD (CTH G) & W. BRADLEY RD	84	0.017	-	-	2	2	84
SUBTOTAL		514	0.11	1	39	2	15	514
UNDISTRIBUTED		56	0.09	1	6	3	5	56
TOTAL 0010		570	0.20	2	45	5	20	570

CONTAMINATED SOILS

CATEGORY	STATION	TO	STATION	LOCATION	205.0501.S EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL TON	SPV.0195.01 SPECIAL (01. MANAGMENT OF SOLID WASTE) TON
0010	216+55 PP	-	217+00 PP	W. GOOD HOPE RD (CTH PP) & N. TEUTONIA AVE (CTH D)	5	--
0010	215+85 PP	-	216+30 PP	W. GOOD HOPE RD (CTH PP) & N. TEUTONIA AVE (CTH D)	--	8
0010	12+30 W	-	12+75 W	N. PORT WASHINGTON RD (CTH W) & W. GREEN TREE RD	5	--
SUBTOTAL					10	8
UNDISTRIBUTED					2	2
TOTAL 0010					12	10

CONCRETE SIDEWALK ITEMS

CATEGORY	LOCATION	204.0155 REMOVING CONCRETE SIDEWALK SY	602.0420 CONCRETE SIDEWALK 7- INCH SF	690.0250 SAWING CONCRETE LF
0010	W. GOOD HOPE RD (CTH PP) & N. 43RD ST (CTH G)	34	300	110
0010	W. GOOD HOPE RD (CTH PP) & N. TEUTONIA AVE (CTH D)	10	90	50
0010	N. PORT WASHINGTON RD (CTH W) & W. GREEN TREE RD	5	40	30
SUBTOTAL		49	430	190
UNDISTRIBUTED		6	20	10
TOTAL 0010		55	450	200

SIGN SUMMARY

CATEGORY	SIGN NO.	SIGN CODE	DESCRIPTION	INCHES	SIZE		634.0812	637.2210	637.2215	638.2602	SPV.0060.07	REMARKS
					X	INCHES	POSTS TUBULAR STEEL 2X2-INCH X 12-FT EACH	SIGNS TYPE II REFLECTIVE H SF	SIGNS TYPE II REFLECTIVE H FOLDING SF	REMOVING SIGNS TYPE II EACH	SPECIAL (.07 CORED SIGN POST HOLES 6- INCH) EACH	
0010	1.01	R4-7	KEEP RIGHT	24.00	X	30.00	--	5.00	--			ON SIGNAL POLE
0010	1.02	R4-7	KEEP RIGHT	24.00	X	30.00	--	5.00	--			ON SIGNAL POLE
0010	1.03	M1-94H	N 51ST BLVD	72.00	X	18.00	--	9.00	--			ON MASTARM
0010	1.04	M1-94H	W GOOD HOPE RD	108.00	X	18.00	--	13.50	--			ON MASTARM
0010	1.05	M1-94H	N 51ST BLVD	72.00	X	18.00	--	9.00	--			ON MASTARM
0010	2.01	R1-1F	STOP (FOLDING)	30.00	X	30.00	1	--	5.18	1	1	
0010	2.02	R4-7	KEEP RIGHT	24.00	X	30.00	--	5.00	--			SAME POST AS 2.01
0010	2.03	R1-1F	STOP (FOLDING)	30.00	X	30.00	1	--	5.18	1	1	
0010	2.04	R4-7	KEEP RIGHT	24.00	X	30.00	--	5.00	--	1		SAME POST AS 2.03
0010	2.05	R1-1F	STOP (FOLDING)	30.00	X	30.00	--	--	5.18			ON LIGHT POLE
0010	2.06	R4-7	KEEP RIGHT	24.00	X	30.00	--	5.00	--			ON LIGHT POLE
0010	2.07	R1-1F	STOP (FOLDING)	30.00	X	30.00	--	--	5.18			ON LIGHT POLE
0010	2.08	R4-7	KEEP RIGHT	24.00	X	30.00	--	5.00	--			ON LIGHT POLE
0010	2.09	R1-1F	STOP (FOLDING)	30.00	X	30.00	--	--	5.18	1		ON SIGNAL POLE
0010	2.10	M1-94H	W GOOD HOPE RD	108.00	X	18.00	--	13.50	--	1		ON MASTARM
0010	2.11	M1-94H	N 43RD ST	66.00	X	18.00	--	8.25	--	1		ON MASTARM
0010	2.12	M1-94H	W GOOD HOPE RD	108.00	X	18.00	--	13.50	--	1		ON MASTARM
0010	2.13	M1-94H	N 43RD ST	66.00	X	18.00	--	8.25	--	1		ON MASTARM
0010	3.01	R1-1F	STOP (FOLDING)	30.00	X	30.00	1	--	5.18		1	
0010	3.02	R4-7	KEEP RIGHT	24.00	X	30.00	--	5.00	--			SAME POST AS 3.01
0010	3.03	R1-1F	STOP (FOLDING)	30.00	X	30.00	1	--	5.18		1	
0010	3.04	R4-7	KEEP RIGHT	24.00	X	30.00	--	5.00	--			SAME POST AS 3.03
0010	3.05	M1-94H	W GOOD HOPE RD	108.00	X	18.00	--	13.50	--	1		ON MASTARM
0010	3.06	M1-94H	N TEUTONIA AVE	102.00	X	18.00	--	12.75	--			ON MASTARM
0010	3.07	M1-94H	W GOOD HOPE RD	108.00	X	18.00	--	13.50	--	1		ON MASTARM
0010	3.08	M1-94H	N TEUTONIA AVE	102.00	X	18.00	--	12.75	--	1		ON MASTARM
0010	4.01	M1-94H	N RANGE LINE RD	102.00	X	18.00	--	12.75	--	1		ON MASTARM
0010	4.02	M1-94H	N RANGE LINE RD	102.00	X	18.00	--	12.75	--	1		ON MASTARM
0010	5.01	R1-1F	STOP (FOLDING)	30.00	X	30.00	1	--	5.18	1		
0010	5.02	R4-7	KEEP RIGHT	24.00	X	30.00	--	5.00	--	1		SAME POST AS 5.01
0010	5.03	R1-1F	STOP (FOLDING)	30.00	X	30.00	1	--	5.18	1		
0010	5.04	R4-7	KEEP RIGHT	24.00	X	30.00	--	5.00	--	1		SAME POST AS 5.03
0010	5.05	M1-94H	N PORT WASHINGTON RD	108.00	X	18.00	--	13.50	--			ON MASTARM
0010	5.06	M1-94H	W GREEN TREE RD	102.00	X	18.00	--	12.75	--			ON MASTARM
0010	5.07	M1-94H	W GREEN TREE RD	102.00	X	18.00	--	12.75	--			ON MASTARM
0010	5.08	M1-94H	N PORT WASHINGTON RD	108.00	X	18.00	--	13.50	--			ON MASTARM
0010	6.01	R1-1F	STOP (FOLDING)	30.00	X	30.00	1	--	5.18		1	
0010	6.02	R4-7	KEEP RIGHT	24.00	X	30.00	--	5.00	--			SAME POST AS 6.01
0010	6.03	R4-7	KEEP RIGHT	24.00	X	30.00	--	5.00	--			ON SIGNAL POLE
0010	6.04	R1-1F	STOP (FOLDING)	30.00	X	30.00	--	--	5.18			ON LIGHT POLE
0010	6.05	R1-1F	STOP (FOLDING)	30.00	X	30.00	--	--	5.18			ON EXISTING SUPPORT
0010	6.06	R4-7	KEEP RIGHT	24.00	X	30.00	--	5.00	--			ON LIGHT POLE
0010	6.07	R1-1F	STOP (FOLDING)	30.00	X	30.00	1	--	5.18	1	1	
0010	6.08	M1-94H	N SHERMAN BLVD	108.00	X	18.00	--	13.50	--			ON MASTARM
0010	6.09	M1-94H	N SHERMAN BLVD	108.00	X	18.00	--	13.50	--			ON MASTARM
0010	6.10	M1-94H	W BRADLEY RD	96.00	X	18.00	--	12.00	--			ON MASTARM
0010	6.11	M1-94H	W BRADLEY RD	96.00	X	18.00	--	12.00	--			ON MASTARM
TOTAL 0010							8	321.50	67.34	18	6	

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TRAFFIC CONTROL

LOCATION	DURATION DAYS *	643.0300		643.0420		643.0705		643.0715		643.0800		643.0900		643.1050	
		TRAFFIC CONTROL DRUMS		TRAFFIC CONTROL BARRICADES TYPE III		TRAFFIC CONTROL WARNING LIGHTS TYPE A		TRAFFIC CONTROL WARNING LIGHTS TYPE C		TRAFFIC CONTROL ARROW BOARDS		TRAFFIC CONTROL SIGNS		TRAFFIC CONTROL SIGNS PCMS	
		*EACH	DAY	*EACH	DAY	*EACH	DAY	*EACH	DAY	*EACH	DAY	*EACH	DAY	*EACH	DAY
<u>N. 51ST ST & CTH PP</u>															
STAGE 1 (CORNERS)	40	42	1,680	4	160	8	320	14	560	1	40	11	440	2	80
UNDISTRIBUTED	10	6	60	2	20	2	20	4	40	--	--	4	40	--	--
SUBTOTAL	50		1,740		180		340		600		40		480		80
<u>N. 43RD ST & CTH PP</u>															
STAGE 1 (CORNERS)	40	140	5,600	11	440	22	880	28	1,120	2	80	37	1,480	2	80
STAGE 2 (MEDIAN)	20	230	4,600	44	880	88	1,760	40	800	2	40	63	1,260	2	40
UNDISTRIBUTED	10	20	200	2	20	6	60	6	60	--	--	7	70	--	--
SUBTOTAL	70		10,400		1,340		2,700		1,980		120		2,810		120
<u>N. TEUTONIA AVE & CTH PP</u>															
STAGE 1 (CORNERS)	40	94	3,760	7	280	14	560	14	560	1	40	32	1,280	2	80
STAGE 2 (MEDIAN)	20	97	1,940	12	240	24	480	24	480	2	40	35	700	2	40
UNDISTRIBUTED	10	12	120	2	20	4	40	7	70	--	--	6	60	--	--
SUBTOTAL	70		5,820		540		1,080		1,110		80		2,040		120
<u>N. RANGE LINE RD & CTH PP</u>															
CORNERS	40	96	3,840	4	160	8	320	28	1,120	2	80	20	800	2	80
UNDISTRIBUTED	10	10	100	1	10	2	20	6	60	--	--	6	60	--	--
SUBTOTAL	50		3,940		170		340		1,180		80		860		80
<u>W. BRADLEY RD & CTH G</u>															
STAGE 1 (CORNERS)	40	69	2,760	5	200	10	400	16	640	1	40	21	840	2	80
STAGE 2 (MEDIAN)	20	59	1,180	9	180	18	360	13	260	1	20	28	560	2	40
UNDISTRIBUTED	10	12	120	2	20	4	40	6	60	--	--	8	80	--	--
SUBTOTAL	70		4,060		400		800		960		60		1,480		120
<u>W. GREEN TREE RD & CTH W</u>															
CORNERS	40	69	2,760	6	240	12	480	12	480	1	40	21	840	2	80
UNDISTRIBUTED	10	11	110	1	10	4	40	4	40	--	--	5	50	--	--
SUBTOTAL	50		2,870		250		520		520		40		890		80
TOTAL			28,830		2,880		5,780		6,350		420		8,560		600
CATEGORY 0010			DAY		DAY		DAY		DAY		DAY		DAY		DAY
* FOR INFORMATIONAL USE ONLY															

PROJECT NO: 2967-00-77

HWY: 6 LOCAL INTERSECTIONS

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET

E

FILE NAME :

PLOT DATE :

PLOT BY :

PLOT SCALE : 1:1

PAVEMENT MARKING

CATEGORY	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH (WHITE)* (12.5' LINE, 37.5' SKIP)* LF	646.9000 MARKING REMOVAL LINE 4-INCH LF
0010	N. 43RD ST & CTH PP	100	100
0010	N. TEUTONIA AVE & CTH PP	90	90
0010	UNDISTRIBUTED	20	20
0010			
TOTAL 0010		210	210

*FOR INFORMATIONAL USE ONLY

TEMPORARY MARKING

CATEGORY	LOCATION	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH LF	649.0550 TEMPORARY MARKING ARROW REMOVABLE TAPE EACH	649.0650 TEMPORARY MARKING WORD REMOVABLE TAPE EACH
0010	N. 43RD ST & CTH PP	1,170		
0010	N. TEUTONIA AVE & CTH PP	250	2	1
0010	UNDISTRIBUTED	30		
TOTAL 0010		1,450	2	1

CONDUIT

CATEGORY	LOCATION	FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615 CONDUIT SPECIAL 3- INCH LF	REMARKS
0010	W. GOOD HOPE RD (CTH PP) & N. 51ST BLVD	PB10	SB7		10		
0010	W. GOOD HOPE RD (CTH PP) & N. 43RD ST (CTH G)	PB1	SB14		10		
0010		PB3	SB3		20		
0010		PB7	SB7	20			
0010		PB7	SB8		10		
0010		PB8	SB9		10		
0010	W. GOOD HOPE RD (CTH PP) & N. TEUTONIA AVE (CTH D)	PB3	SB4		10		
0010		PB6	SB7		10		
0010		PB7	SB11		30		
0010	W. GOOD HOPE RD (CTH PP) & N. RANGE LINE RD	PB4	SB2		10		
0010		PB9	SB6		10		
0010	N. PORT WASHINGTON RD (CTH W) & W. GREEN TREE RD	PB1	SB10	5			INTERCEPT EXISTING CONDUIT
0010		PB2	SB2		10		
0010		PB5	SB5		10		
0010		PB7	SB7	5			INTERCEPT EXISTING CONDUIT
0010	N. SHERMAN BLVD (CTH G) & W. BRADLEY RD	PB1	SB11		10		
0010		PB7	SB4		10		
0010	UNDISTRIBUTED			170	130	300	
TOTAL 0010				200	300	300	

CONCRETE BASES, POLES, AND MAST ARMS

CATEGORY	LOCATION	NO.	654.0102 CONCRETE BASES TYPE 2 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0120 CONCRETE BASES TYPE 10-SPECIAL EACH	657.0345 POLES TYPE 9 EACH	657.0347 POLES TYPE 9- SPECIAL EACH	657.0350 POLES TYPE 10 EACH	657.0352 POLES TYPE 10- SPECIAL EACH	657.0355 POLES TYPE 12 EACH	657.0360 POLES TYPE 13 EACH	657.0525 MONOTUBE ARMS 25-FT EACH	657.0530 MONOTUBE ARMS 30-FT EACH	657.0546 MONOTUBE ARMS 45-FT- SPECIAL EACH	657.0555 MONOTUBE ARMS 55-FT EACH	657.0815 LUMINAIRE ARMS STEEL 15- FT EACH	
0010	W. GOOD HOPE RD (CTH PP) & N. 51ST BLVD	SB7				1		1										1
0010	W. GOOD HOPE RD (CTH PP) & N. 43RD ST (CTH G)	SB14				1		1										1
0010		SB3		1			1							1				
0010		SB7	1															
0010		SB8			1						1							1
0010		SB9		1					1					1				
0010	W. GOOD HOPE RD (CTH PP) & N. TEUTONIA AVE (CTH D)	SB4				1		1										1
0010		SB7				1		1										1
0010		SB11		1			1						1					
0010	W. GOOD HOPE RD (CTH PP) & N. RANGE LINE RD	SB2										1						1
0010		SB6				1						1						1
0010	N. PORT WASHINGTON RD (CTH W) & W. GREEN TREE RD	SB10				1		1										1
0010		SB2		1			1							1				
0010		SB5				1				1								1
0010		SB7		1			1							1				
0010	N. SHERMAN BLVD (CTH G) & W. BRADLEY RD	SB11				1		1										
0010		SB4				1		1		1								
TOTAL 0010			1	5	3	8	5	6	2	1	1	2	1	4	6	3	3	

PROJECT NO: 2967-00-77

HWY: 6 LOCAL INTERSECTIONS

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET

E

FILE NAME :

PLOT DATE :

PLOT BY :

PLOT SCALE : 1:1

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRING

LOCATION			*	*	*	*
			655.0240	655.0260	655.0270	655.0515
			CABLE TRAFFIC	CABLE TRAFFIC	CABLE TRAFFIC	ELECTRICAL
			SIGNAL 7-14	SIGNAL 12-14	SIGNAL 15-14	WIRE TRAFFIC
			AWG	AWG	AWG	SIGNALS 10
FROM	THROUGH	TO	LF	LF	LF	LF
W. GOOD HOPE RD (CTH PP) & N. 51ST BLVD						
CB1	PB1	SB1	--	40	--	--
CB1	PB1, PB2	SB2	--	95	--	--
CB1	PB12, PB11, PB10	SB7	--	140	--	--
SB7		PB10	--	--	--	10
BASE TO SIGNAL HEAD CABLING			215	--	--	--
UNDISTRIBUTED			60	80	--	5
W. GOOD HOPE RD (CTH PP) & N. 51ST BLVD			SUBTOTAL:	275	355	0
			CATEGORY	0010	0010	0010

*ADDITIONAL QUANTITIES ELSEWHERE

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRING

(PUSH BUTTON**)

LOCATION			*	*	*	*	*	*
			655.0210	655.0230	655.0240	655.0260	655.0270	655.0515
			CABLE TRAFFIC	CABLE TRAFFIC	CABLE TRAFFIC	CABLE TRAFFIC	CABLE TRAFFIC	ELECTRICAL
			SIGNAL 3-14	SIGNAL 5-14	SIGNAL 7-14	SIGNAL 12-14	SIGNAL 15-14	WIRE TRAFFIC
			AWG	AWG	AWG	AWG	AWG	SIGNALS 10
FROM	THROUGH	TO	LF	LF	LF	LF	LF	LF
W. GOOD HOPE RD (CTH PP) & N. 43RD ST (CTH G)								
CB1	PB1	SB1	--	--	30	--	--	--
CB1	PB1, PB2	SB2	--	--	--	--	45	--
CB1	PB1, PB2, PB3	SB3	--	--	--	120	--	20
CB1	PB1, PB2, PB3, PB4	SB4	--	--	205	--	--	--
CB1	PB1, PB2, PB3, PB4	SB5	--	--	--	--	185	--
CB1	PB1, PB2, PB3, PB4, PB5	SB6	--	--	--	270	--	--
CB1	PB1, PB12, PB11, PB10, PB9, PB8, PB7	SB7	--	--	335	--	--	--
CB1	PB1, PB12, PB11, PB10, PB9, PB8, PB7	SB8	--	--	--	--	325	10
CB1	PB1, PB12, PB11, PB10, PB9, PB8	SB9	--	--	--	260	--	10
CB1	PB1, PB12, PB11, PB10, PB9	SB10	--	--	200	--	--	--
CB1	PB1, PB12, PB11, PB10	SB12	--	--	--	175	--	--
CB1	PB1, PB12, PB11	SB13	--	--	--	120	--	--
CB1	PB1	SB14	--	--	--	20	--	10
BASE TO SIGNAL HEAD CABLING			15	45	625	--	--	--
UNDISTRIBUTED			5	5	55	35	45	10
W. GOOD HOPE RD (CTH PP) & N. 43RD ST (CTH G)			SUBTOTAL:	20	50	1,450	1,000	60
			CATEGORY	0010	0010	0010	0010	0010

*ADDITIONAL QUANTITIES ELSEWHERE

**FOR INFORMATION ONLY

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRING

(PUSH BUTTON**)

			*	*	*	*	*	*
			655.0210	655.0230	655.0240	655.0260	655.0270	655.0515
			CABLE TRAFFIC	CABLE TRAFFIC	CABLE TRAFFIC	CABLE TRAFFIC	CABLE TRAFFIC	ELECTRICAL
			SIGNAL 3-14	SIGNAL 5-14	SIGNAL 7-14	SIGNAL 12-14	SIGNAL 15-14	WIRE TRAFFIC
			AWG	AWG	AWG	AWG	AWG	SIGNALS 10
LOCATION	FROM	THROUGH	TO	LF	LF	LF	LF	LF
W. GOOD HOPE RD (CTH PP) & N. TEUTONIA AVE (CTH D)								
CB1		PB1	SB2	--	--	--	50	--
CB1		PB1, PB2	SB3	--	--	125	--	--
CB1		PB1, PB2, PB3	SB4	--	--	--	200	10
CB1		PB1, PB2, PB3	SB5	--	--	--	200	--
CB1		PB1, PB2, PB3, PB4	SB6	--	--	--	255	--
CB1		PB1, PB10, PB9, PB8, PB7, PB6	SB7	--	--	--	340	10
CB1		PB1, PB10, PB9, PB8, PB7, PB6	SB9	--	--	--	360	--
CB1		PB1, PB10, PB9, PB8, PB7	SB10	--	--	--	270	--
CB1		PB1, PB10, PB9, PB8, PB7	SB11	--	--	280	--	30
CB1		PB1, PB10, PB9, PB8	SB12	--	--	205	--	--
CB1		PB1, PB10, PB9, PB8	SB14	--	--	--	185	--
CB1		PB1, PB10, PB9	SB15	--	--	--	130	--
BASE TO SIGNAL HEAD CABLING				15	45	565	--	--
UNDISTRIBUTED				5	5	25	60	10
W. GOOD HOPE RD (CTH PP) & N. TEUTONIA AVE (CTH D) SUBTOTAL:				20	50	1,200	1,800	300
CATEGORY				0010	0010	0010	0010	0010

*ADDITIONAL QUANTITIES ELSEWHERE

**FOR INFORMATION ONLY

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRING

			*	*	*	
			655.0240	655.0260	655.0515	
			CABLE TRAFFIC	CABLE TRAFFIC	ELECTRICAL	
			SIGNAL 7-14	SIGNAL 12-14	WIRE TRAFFIC	
			AWG	AWG	SIGNALS 10	
LOCATION	FROM	THROUGH	TO	LF	LF	LF
W. GOOD HOPE RD (CTH PP) & N. RANGE LINE RD						
CB1		PB1	SB1	--	70	--
CB1		PB1, PB2, PB3, PB4	SB2	--	205	10
CB1		PB1, PB10, PB9, PB8, PB7	SB5	--	290	--
CB1		PB1, PB10, PB9	SB6	--	150	10
BASE TO SIGNAL HEAD CABLING				400	--	--
UNDISTRIBUTED				50	85	10
W. GOOD HOPE RD (CTH PP) & N. RANGE LINE RD SUBTOTAL:				450	800	30
CATEGORY				0010	0010	0010

*ADDITIONAL QUANTITIES ELSEWHERE

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRING

(PUSH BUTTON**)

LOCATION FROM	THROUGH	TO	*	*	*	*	*	*	
			655.0210	655.0230	655.0240	655.0260	655.0270	655.0515	
			CABLE TRAFFIC SIGNAL 3-14	CABLE TRAFFIC SIGNAL 5-14	CABLE TRAFFIC SIGNAL 7-14	CABLE TRAFFIC SIGNAL 12-14	CABLE TRAFFIC SIGNAL 15-14	ELECTRICAL WIRE TRAFFIC SIGNALS 10	
			AWG	AWG	AWG	AWG	AWG	AWG	
			LF	LF	LF	LF	LF	LF	
N. PORT WASHINGTON RD (CTH W) & W. GREEN TREE RD									
CB1	PB1, PB2	SB2	--	--	--	105	--	10	
CB1	PB1, PB2, PB3	SB4	--	--	--	130	--	--	
CB1	PB1, PB2, PB3, PB4, PB5	SB5	--	--	--	--	230	10	
CB1	PB1, PB8, PB7	SB7	--	--	--	--	200	10	
CB1	PB1, PB8, PB7	SB9	--	--	--	160	--	--	
CB1	PB1	SB10	--	--	--	50	--	10	
BASE TO SIGNAL HEAD CABLING			5	45	415	--	--	--	
UNDISTRIBUTED			5	15	35	55	20	10	
N. PORT WASHINGTON RD (CTH W) & W. GREEN TREE RD			SUBTOTAL:	10	60	450	500	450	50
			CATEGORY	0010	0010	0010	0010	0010	0010

*ADDITIONAL QUANTITIES ELSEWHERE

**FOR INFORMATION ONLY

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRING

(PUSH BUTTON**)

LOCATION FROM	THROUGH	TO	*	*	*	*	*	
			655.0210	655.0230	655.0240	655.0260	655.0515	
			CABLE TRAFFIC SIGNAL 3-14	CABLE TRAFFIC SIGNAL 5-14	CABLE TRAFFIC SIGNAL 7-14	CABLE TRAFFIC SIGNAL 12-14	ELECTRICAL WIRE TRAFFIC SIGNALS 10	
			AWG	AWG	AWG	AWG	AWG	
			LF	LF	LF	LF	LF	
N. SHERMAN BLVD (CTH G) & W. BRADLEY RD								
CB1	PB1, PB2, PB3, PB4, PB5, PB6, PB7	SB4	--	--	--	245	10	
CB1	PB1, PB2, PB3, PB4, PB5, PB6, PB7	SB5	--	255	--	--	--	
CB1	PB1, PB2, PB3, PB4, PB5, PB6, PB7, PB11	SB6	--	--	--	305	--	
CB1	PB1, PB17, PB16	SB9	--	--	--	160	--	
CB1	PB1, PB17	SB10	--	95	--	--	--	
CB1	PB1	SB11	--	--	--	30	10	
BASE TO SIGNAL HEAD CABLING			10	35	245	--	--	
UNDISTRIBUTED			10	15	55	85	10	
N. SHERMAN BLVD (CTH G) & W. BRADLEY RD			SUBTOTAL:	20	400	300	825	30
			CATEGORY	0010	0010	0010	0010	0010

*ADDITIONAL QUANTITIES ELSEWHERE

**FOR INFORMATION ONLY

TRAFFIC SIGNAL BASES, STANDARDS, POLES, MAST ARMS, FACES, AND EQUIPMENT

CATEGORY	LOCATION	NO.	657.0100	657.0405	657.0425	657.0430	658.0173	658.0174	658.0175	658.0416	658.0500	
			PEDESTAL BASES EACH	TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5- FT EACH	TRAFFIC SIGNAL STANDARDS ALUMINUM 15- FT EACH	TRAFFIC SIGNAL STANDARDS ALUMINUM 10- FT EACH	TRAFFIC SIGNAL FACE 3S 12-INCH EACH	TRAFFIC SIGNAL FACE 4S 12-INCH EACH	TRAFFIC SIGNAL FACE 5S 12-INCH EACH	PEDESTRIAN SIGNAL FACE 16- INCH EACH	PEDESTRIAN PUSH BUTTONS EACH	
0010	W. GOOD HOPE RD (CTH PP) & N. 51ST BLVD	SB1						1				
0010		SB2				1		1				
0010		SB6						1				
0010		SB7					3					
0010	W. GOOD HOPE RD (CTH PP) & N. 43RD ST (CTH G)	SB1	1			1				1	1	
0010		SB2						1				
0010		SB3					2		1			
0010		SB4	1			1				1	1	
0010		SB5							1			
0010		SB6							1			
0010		SB7	1			1				1	1	
0010		SB8					4		1	1	1	
0010		SB9					2		1			
0010		SB10	1			1				1		
0010		SB12							1			
0010		SB13							1			
0010		SB14					3					
0010		W. GOOD HOPE RD (CTH PP) & N. TEUTONIA AVE (CTH D)	SB2						1			
0010	SB3							1				
0010	SB4						2			1	1	
0010	SB5		1		1		1		1	1	1	
0010	SB6								1			
0010	SB7						3			1		
0010	SB9								1			
0010	SB10								1			
0010	SB11						2					
0010	SB12		1			1				1		
0010	SB14								1			
0010	W. GOOD HOPE RD (CTH PP) & N. RANGE LINE RD		SB1						1			
0010			SB2					3		1		
0010			SB5							1		
0010		SB6					3		1			
0010	N. PORT WASHINGTON RD (CTH W) & W. GREEN TREE RD	SB2							1	1		
0010		SB4							1			
0010		SB5					2		1	1	1	
0010		SB7					1			1		
0010		SB9							1			
0010		SB10					2		1	1		
0010	N. SHERMAN BLVD (CTH G) & W. BRADLEY RD	SB4					2					
0010		SB5	1	1							1	
0010		SB6	1			1				1		
0010		SB9	1		1		1		1	1		
0010		SB10	1	1							1	
0010		SB11					2		1	1		
TOTAL 0010			10	2	2	6	39	28	1	16	9	

PROJECT NO: 2967-00-77

HWY: 6 LOCAL INTERSECTIONS

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET

E

FILE NAME :

PLOT DATE :

PLOT BY :

PLOT SCALE : 1:1

3

3

TRAFFIC SIGNAL ITEMS

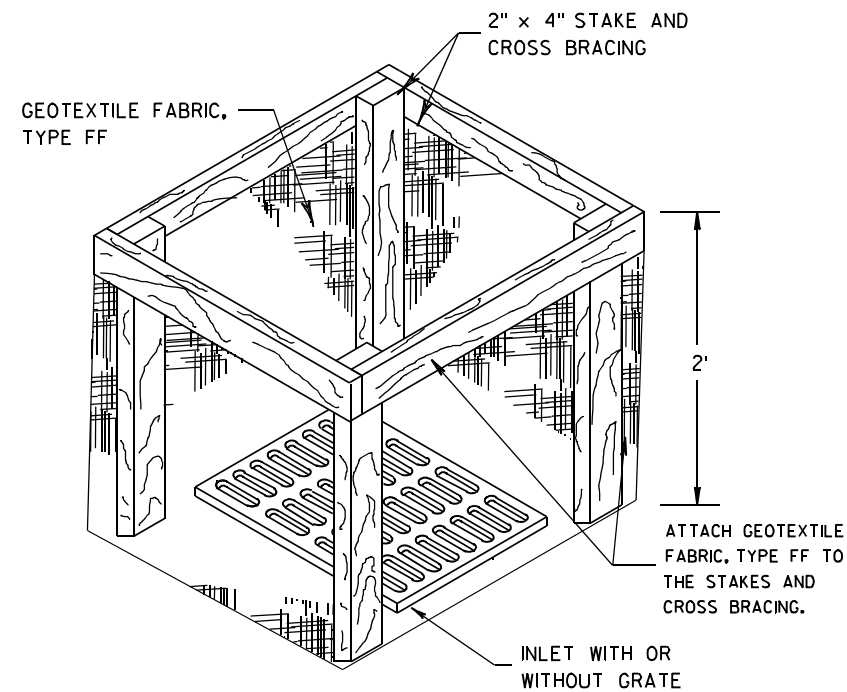
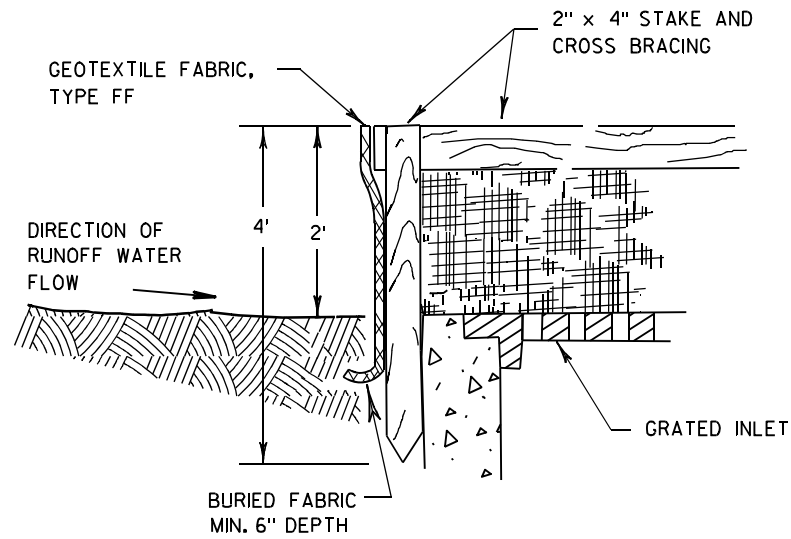
CATEGORY	LOCATION	204.9060.S.01 REMOVING (ITEM DESCRIPTION) (01. TRAFFIC SIGNAL EQUIPMENT AT INTERSECTION) EACH	658.5069.01 SIGNAL MOUNTING HARDWARE (LOCATION) (W. GOOD HOPE RD (CTH PP) & 51ST BLVD) LS	658.5069.02 SIGNAL MOUNTING HARDWARE (LOCATION) (W. GOOD HOPE RD (CTH PP) & N. 43RD ST) LS	658.5069.03 SIGNAL MOUNTING HARDWARE (LOCATION) (W. GOOD HOPE RD (CTH PP) & N. TEUTONIA AVE (CTH D)) LS	658.5069.04 SIGNAL MOUNTING HARDWARE (LOCATION) (W. GOOD HOPE RD (CTH PP) & N. RANGE LINE RD) LS	658.5069.05 SIGNAL MOUNTING HARDWARE (LOCATION) (N. PORT WASHINGTON RD (CTH W) & W. GREEN TREE RD) LS	658.5069.06 SIGNAL MOUNTING HARDWARE (LOCATION) (N. PORT SHERMAN BLVD (CTH G) & W. BRADLEY RD) LS	661.0200.01 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) (W. GOOD HOPE RD (CTH PP) & N. TEUTONIA AVE (CTH D)) LS	661.0200.02 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) (N. PORT WASHINGTON RD (CTH W) & W. GREEN TREE RD) LS	SPV.0060.01 SPECIAL (.01 FURNISH AND INSTALL ACCESSIBLE PEDESTRIAN PUSH BUTTON SYSTEM, 2 BUTTONS) EACH	SPV.0060.02 SPECIAL (.02 REMOVE AND REINSTALL VIDEO DETECTION CAMERA) EACH	SPV.0060.03 SPECIAL (.03 REMOVE AND REINSTALL ANTENNA) EACH	SPV.0060.04 SPECIAL (.04 CABINET MODIFICATION) EACH	SPV.0060.05 SPECIAL (.05 TRANSPORT AND INSTALL 4- CAMERA SYSTEM) EACH	SPV.0060.06 SPECIAL (.06 TRANSPORT AND INSTALL 2- CAMERA SYSTEM) EACH	
0010	W. GOOD HOPE RD (CTH PP) & N. 51ST BLVD	1	1									1					
0010	W. GOOD HOPE RD (CTH PP) & N. 43RD ST (CTH G)	1		1								1	1				
0010	W. GOOD HOPE RD (CTH PP) & N. TEUTONIA AVE (CTH D)	1			1				1			1					
0010	W. GOOD HOPE RD (CTH PP) & N. RANGE LINE RD	1				1						1					1
0010	N. PORT WASHINGTON RD (CTH W) & W. GREEN TREE RD	1						1		1		1	1				
0010	N. SHERMAN BLVD (CTH G) & W. BRADLEY RD	1							1		1	1	1				
	TOTAL 0010	6	1	1	1	1	1	1	1	1	1	4	3	6	1	1	

MISC

CATEGORY	LOCATION	619.1000 MOBILIZATION EACH	642.5001 FIELD OFFICE TYPE B EACH	SPV.0035.01 SPECIAL (01. BACKFILL SLURRY) CY	SPV.0060.08 SPECIAL (.08 UTILITY LINE OPENING) EACH	SPV.0060.09 SPECIAL (.09 HYDROEXCAVATION) EACH	REMARKS
0010	UNDISTRIBUTED	1	1	9	12	8	
	TOTAL 0010	1	1	9	12	8	

Standard Detail Drawing List

08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-10	CONDUIT
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C11-10	CONCRETE BASE TYPE 10
09C12-09A	CONCRETE BASE TYPE 13
09C12-09B	CONCRETE BASE TYPE 13
09C15-01	CONCRETE BASE TYPE 10 SPECIAL
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-06	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-09A	TYPE 9 POLE 15'-30' MONOTUBE ARM
09E08-09D	TYPE 9 SPECIAL POLE 45' MONOTUBE ARM
09E08-09E	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-09H	TYPE 10 SPECIAL POLE 45' MONOTUBE ARM
09E08-09I	TYPE 12 POLE 35'-55' MONOTUBE ARM
09E08-09J	TYPE 13 POLE 35'-55' MONOTUBE ARM
09E08-09K	GENERAL NOTES, HARDWARE DETAILS FOR TYPE 9/10, 9/10 SPECIAL, 12 & 13 POLES W/MONOTUBE ARMS
09G01-04A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09H16-01	INSTALL WIRELESS ANTENNA
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-06C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D40-02A	TRAFFIC CONTROL, FULL LANE SHIFT NON-FREEWAY OR MULTILANE DIVIDED 45 MPH AND UNDER



INLET PROTECTION, TYPE A

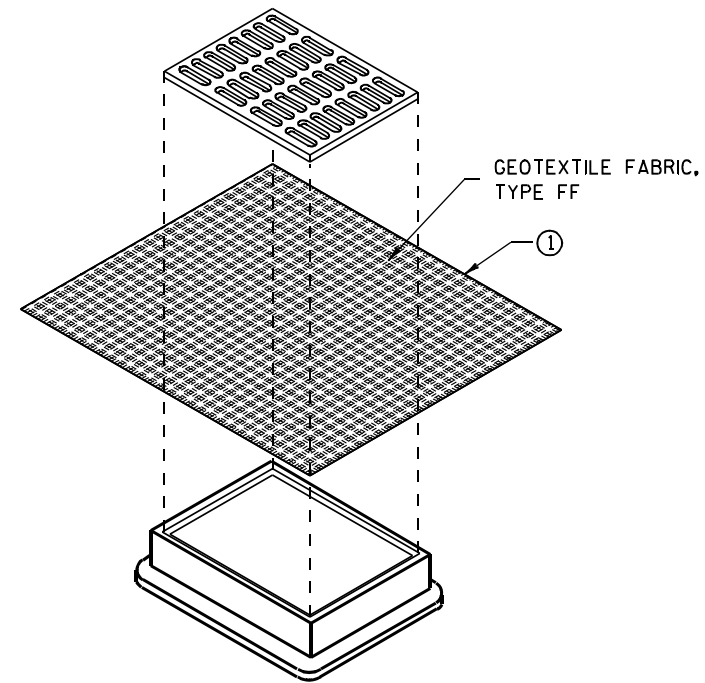
GENERAL NOTES

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.

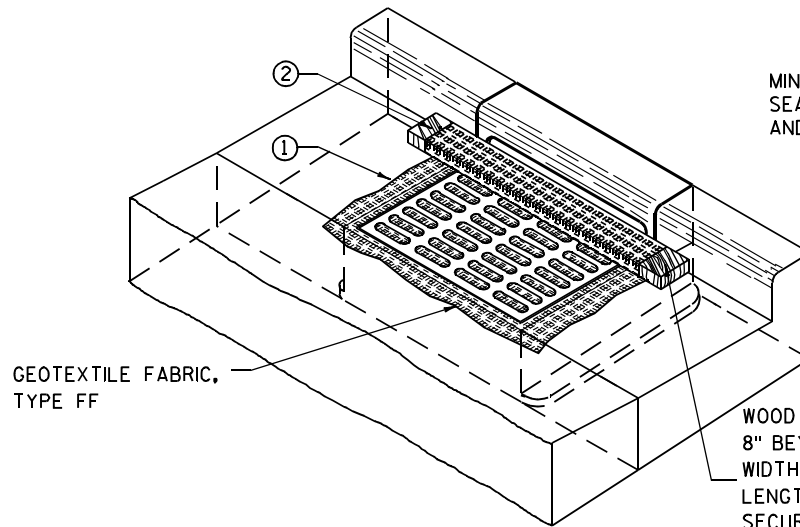
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

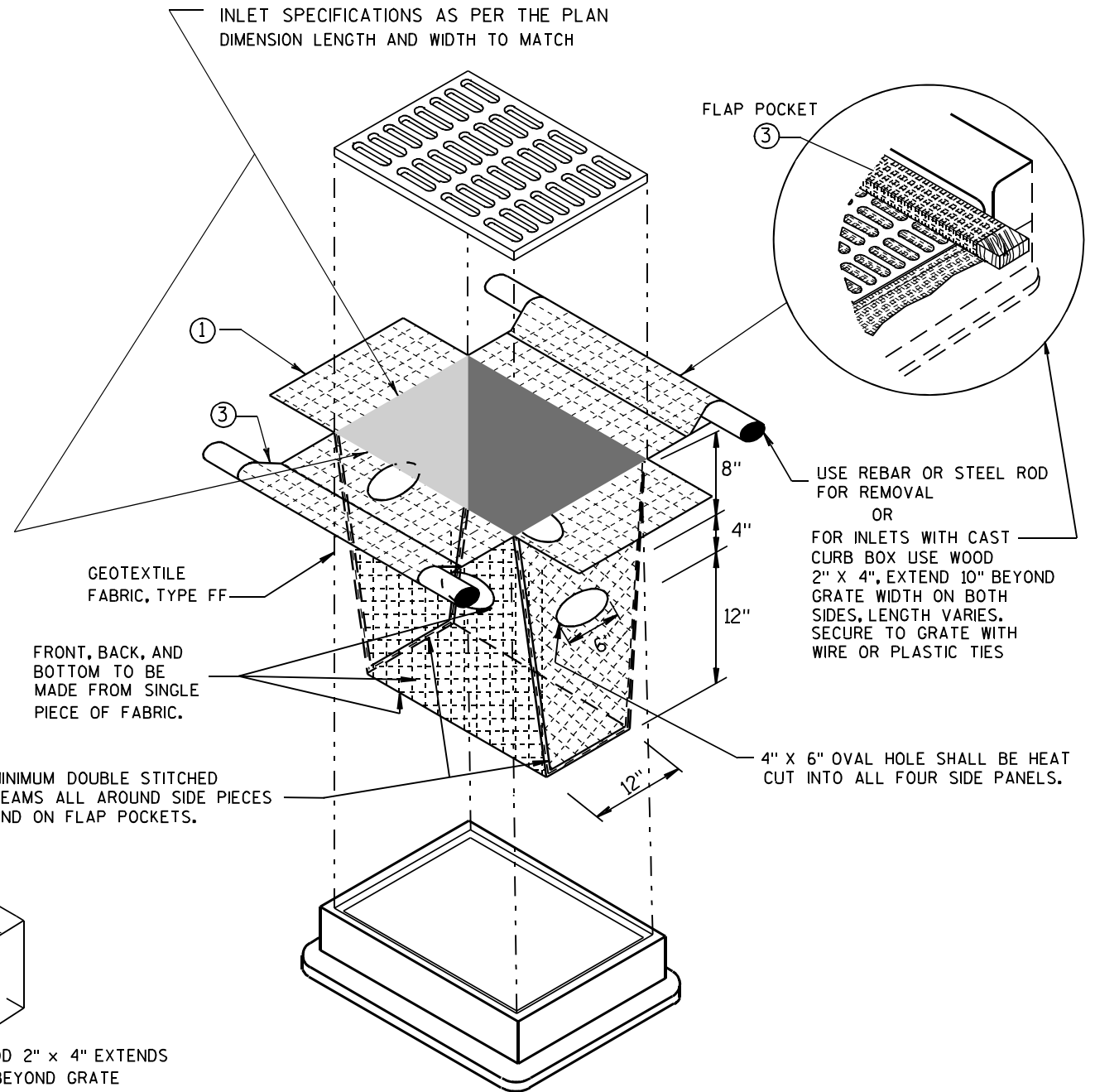
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

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.

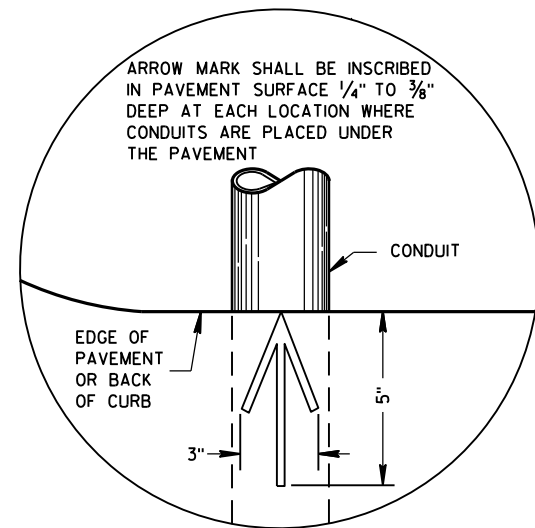
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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



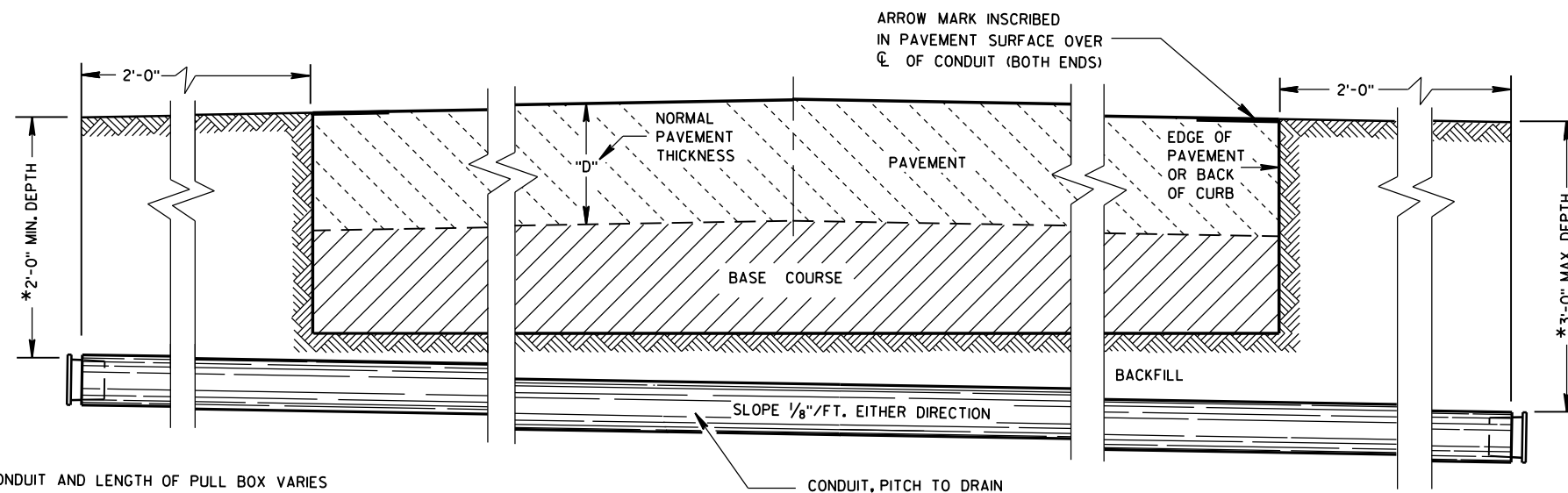
INLET PROTECTION, TYPE D

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

INLET PROTECTION TYPE A, B, C, AND D	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/16/02 DATE	/s/ Beth Conestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



**PLAN VIEW
ARROW MARK**



**SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS**

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

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.

6

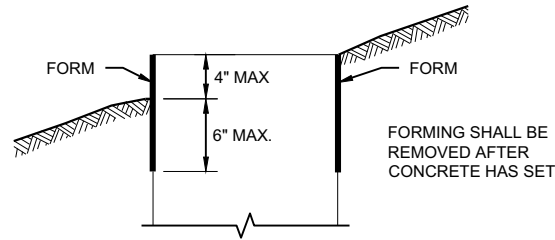
6

S.D.D. 9 B 2-10

S.D.D. 9 B 2-10

CONDUIT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March, 2017 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS 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 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 AT THE ENTRANCE OF THE BASE.

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

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

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

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

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

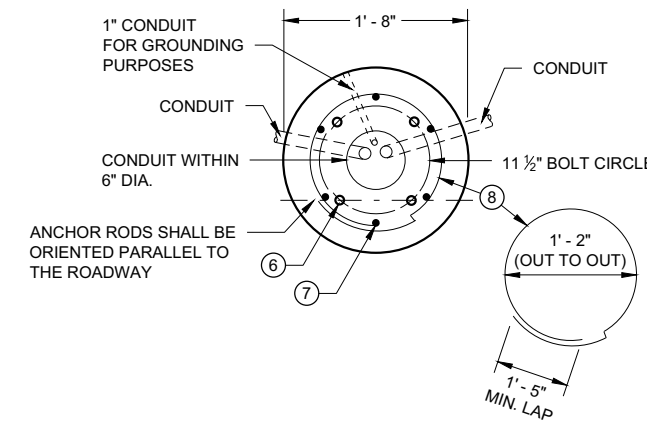
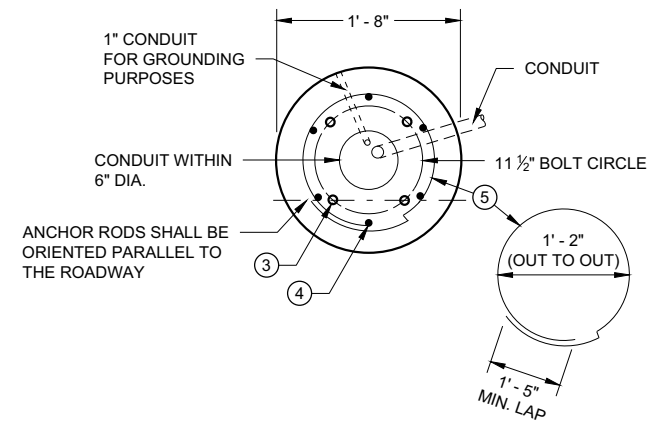
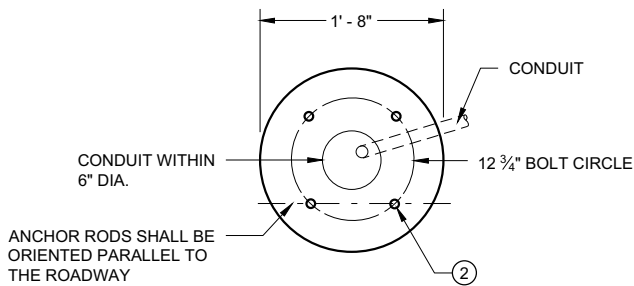
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

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

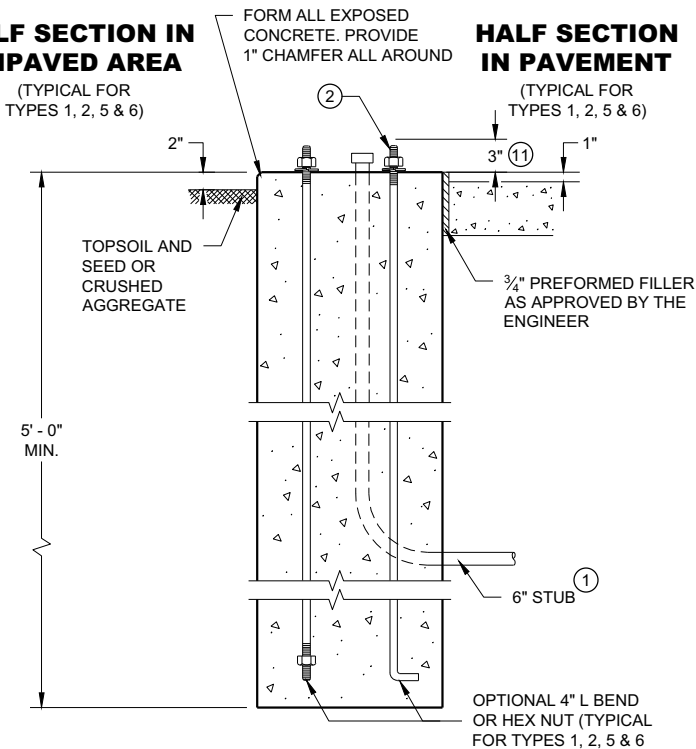
WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

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

- ① THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.
- ② (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- ③ (4) 1" DIA. X 5' - 0" ANCHOR RODS.
- ④ (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.
- ⑤ (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- ⑥ (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- ⑦ (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.
- ⑧ (5) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- ⑨ EXOTHERMIC CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR
- ⑩ 5/8" DIA. X 8' - 0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED
- ⑪ ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/4" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.
- ⑫ FOR NON - BREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

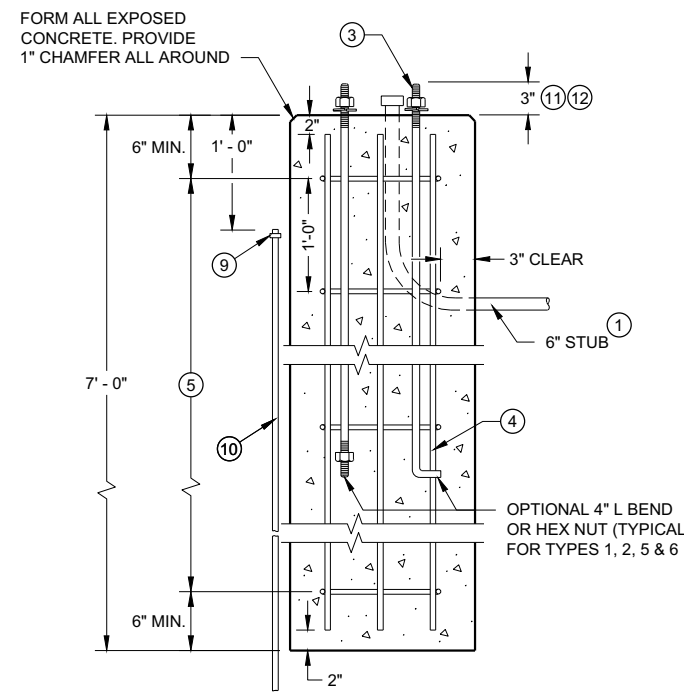


HALF SECTION IN UNPAVED AREA

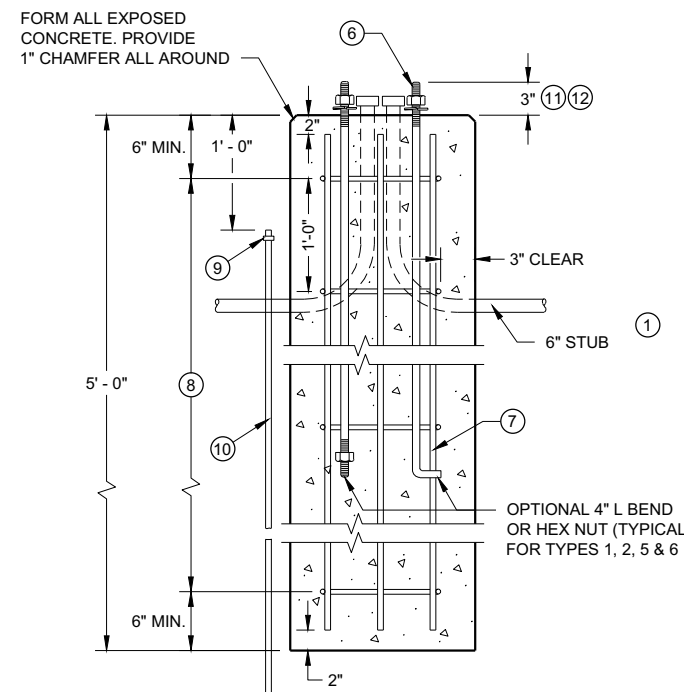


TYPE 1

HALF SECTION IN PAVEMENT



TYPE 2



TYPE 5 & 6

CONCRETE BASES

**CONCRETE BASES
TYPES 1, 2, 5, & 6**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGINEER

FHWA

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

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

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

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

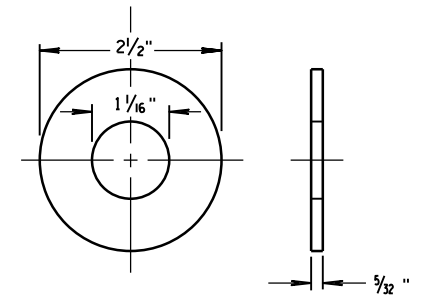
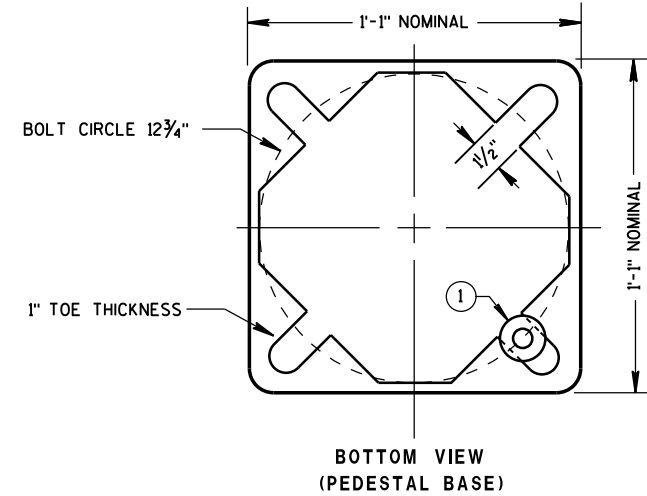
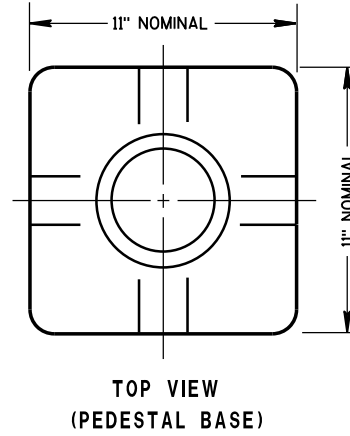
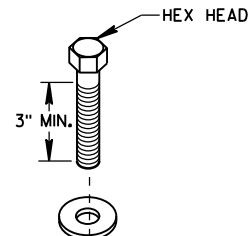
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

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

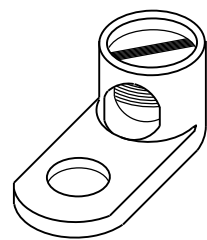
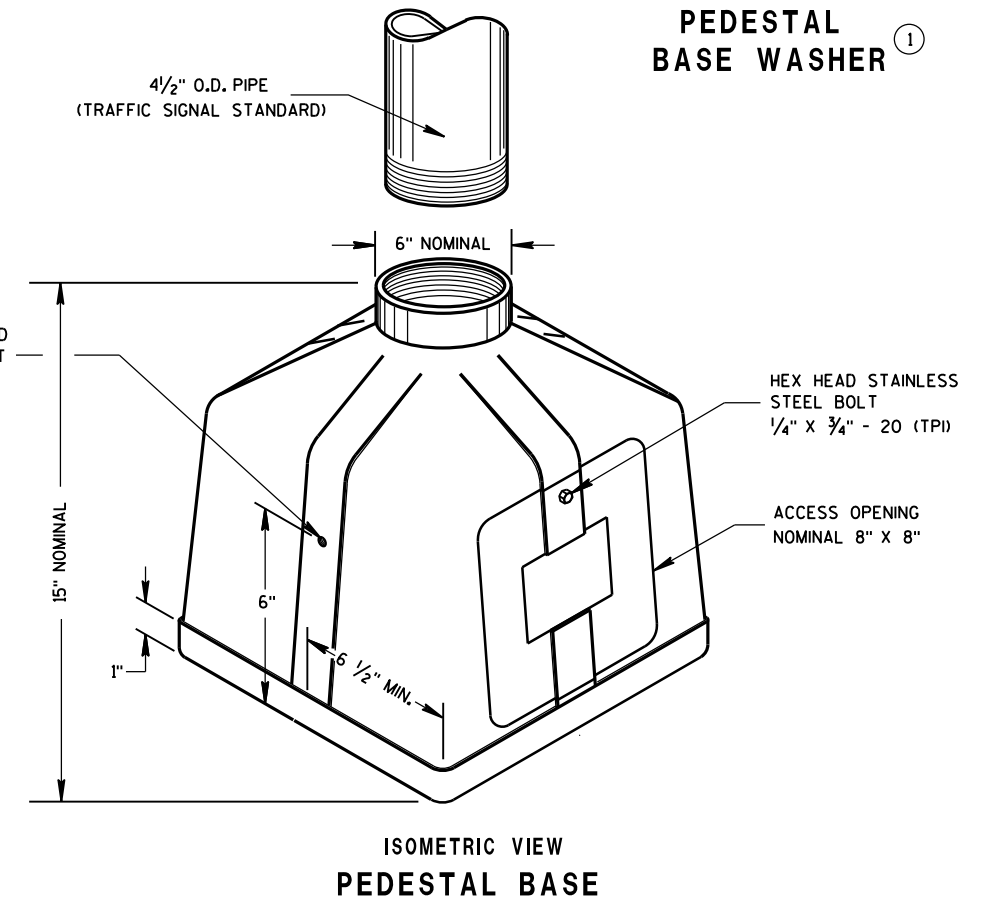
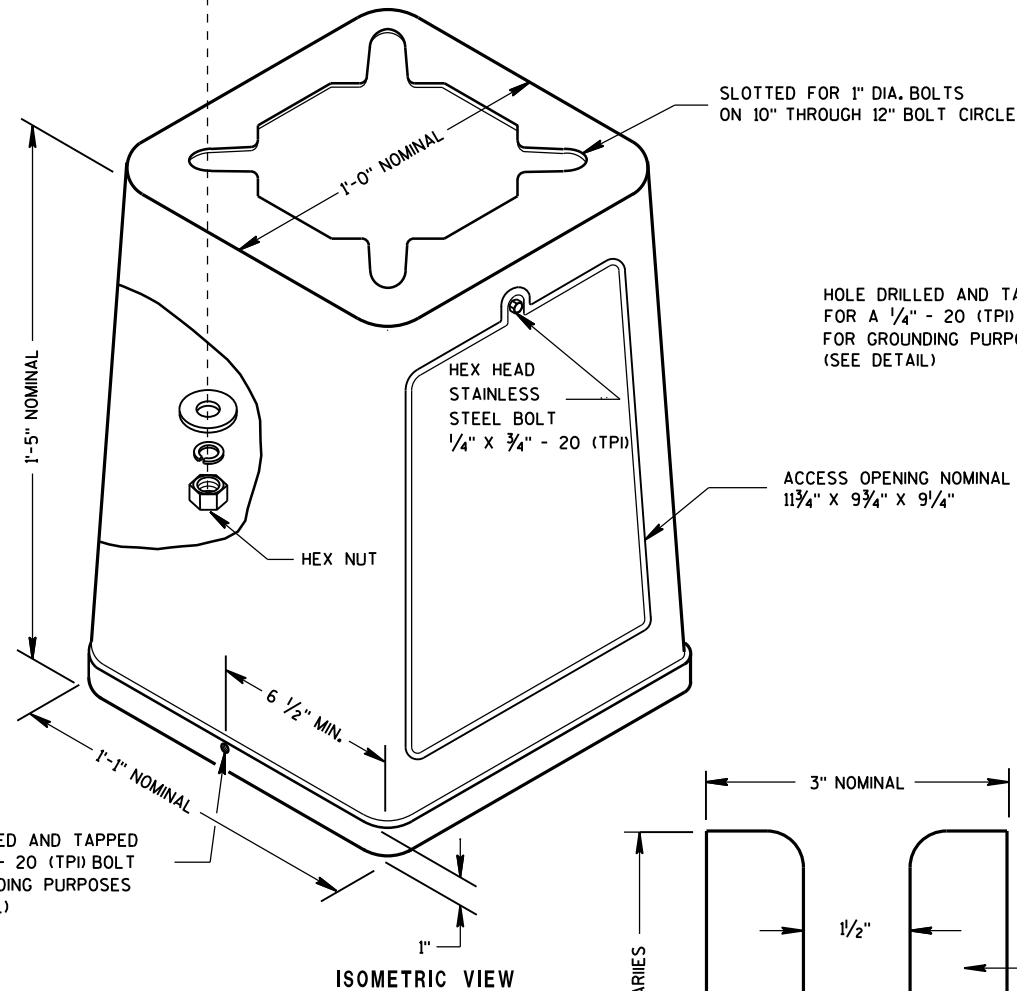
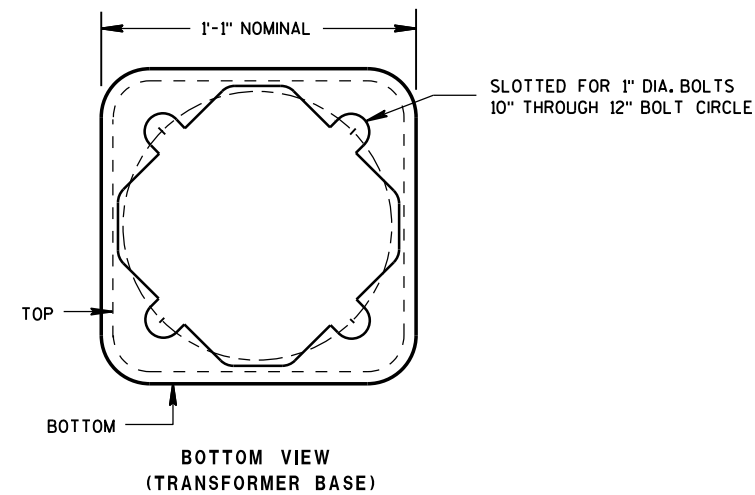
PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

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

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

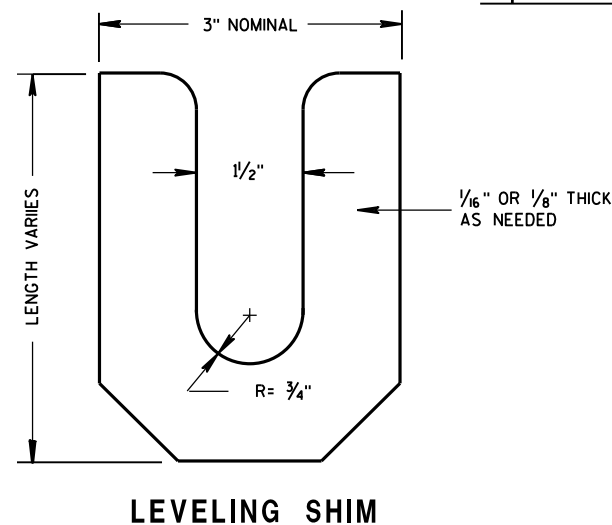


ZINC COATED STEEL WASHER TO BE PROVIDED BY THE CONTRACTOR
PEDESTAL BASE WASHER ①



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 ENGINEER
FHWA	

6

6

S.D.D. 9 C 3-4

S.D.D. 9 C 3-4

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).

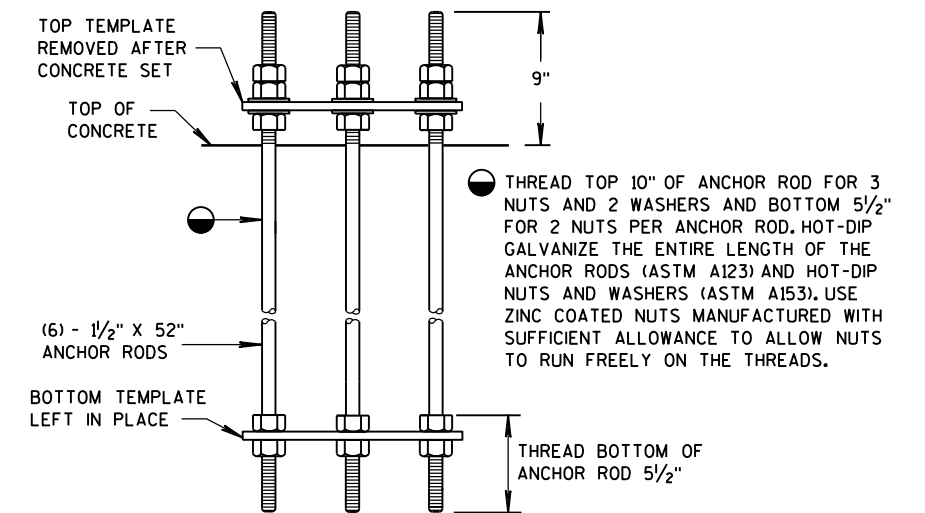
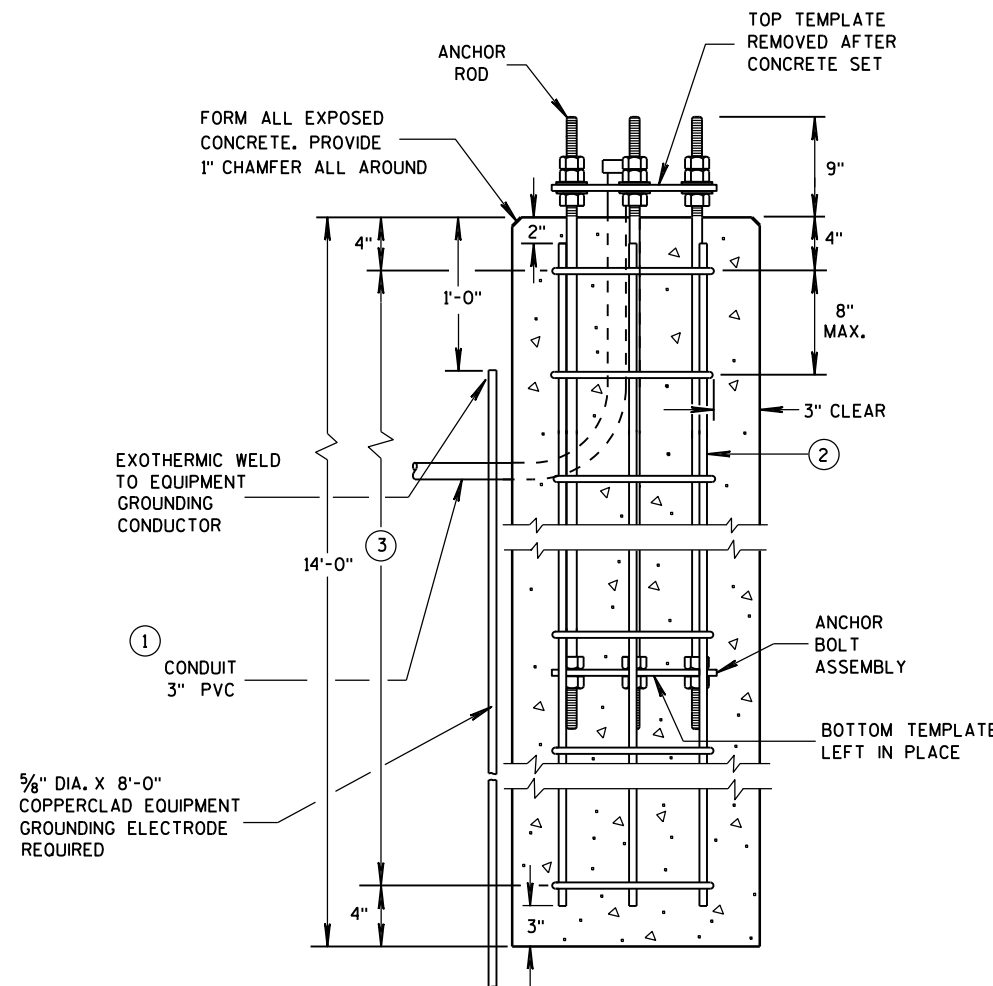
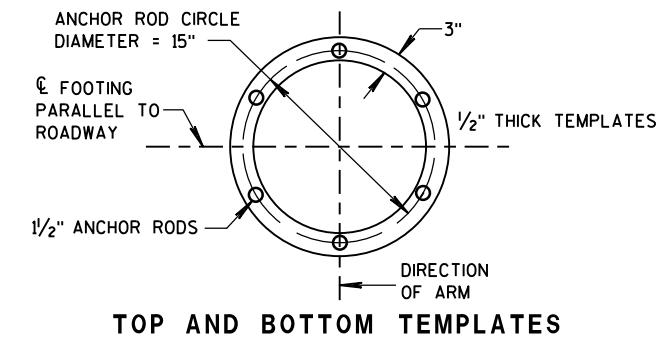
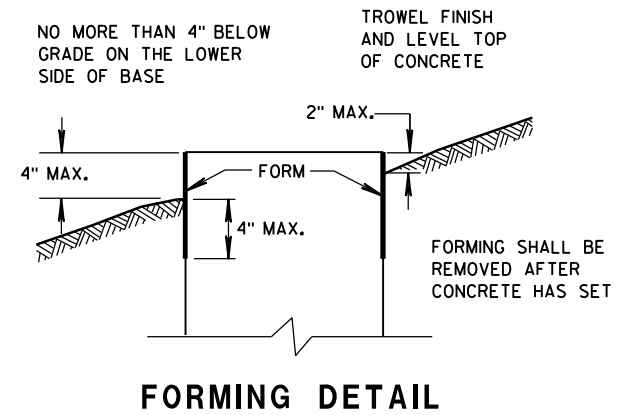
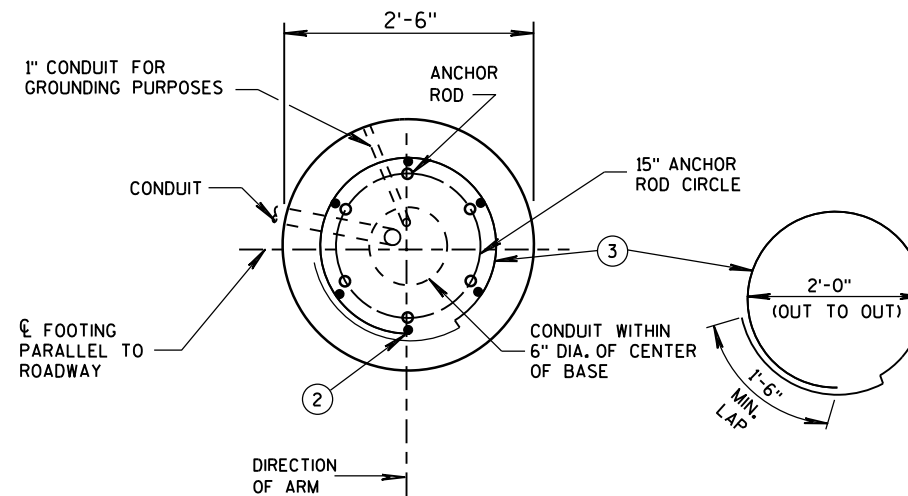
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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 (2) NO. 5 X 7'-10" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.

CONCRETE MASONRY	-----	$f_c=3,500$ p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	-----	$f_y=60,000$ p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION)	-----	$f_y=55,000$ p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	-----	$f_y=36,000$ p.s.i.



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

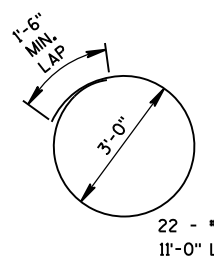
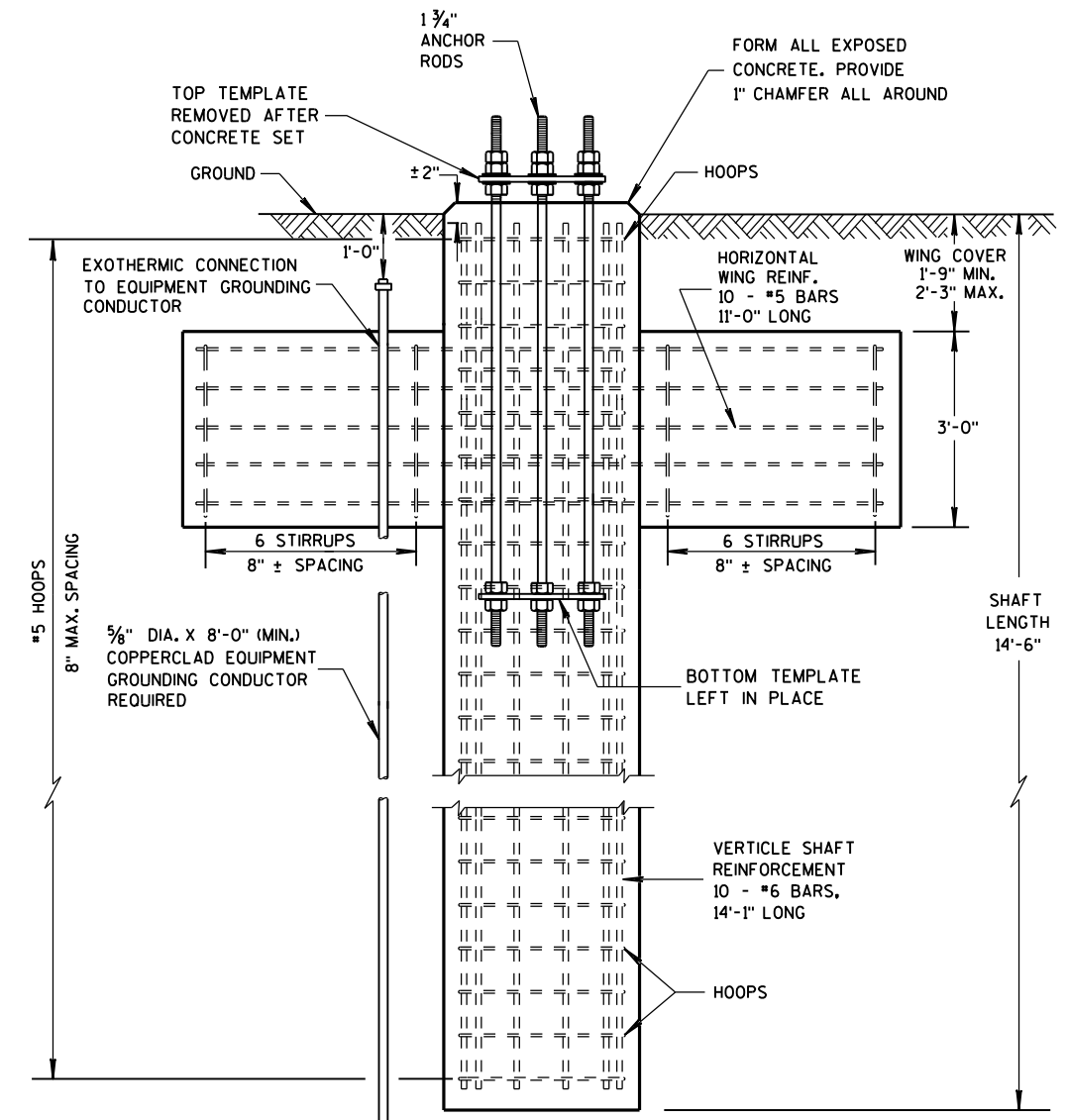
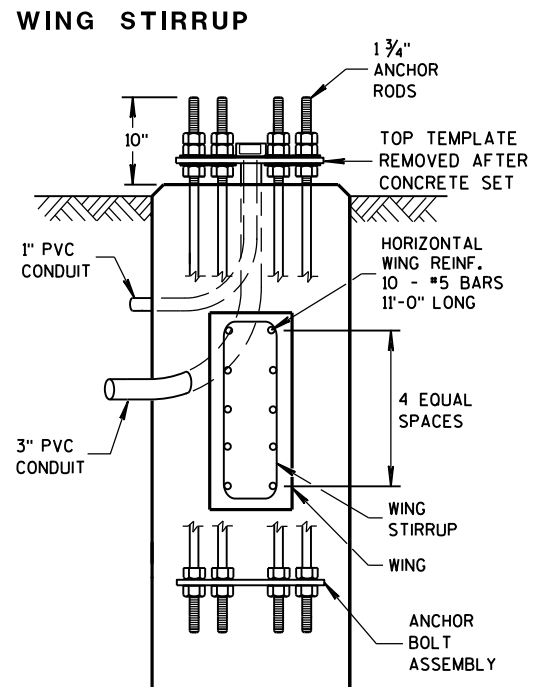
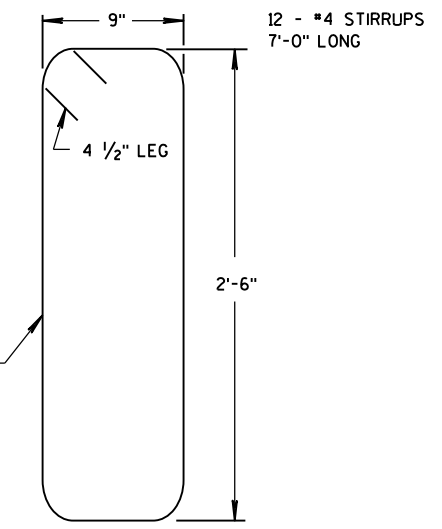
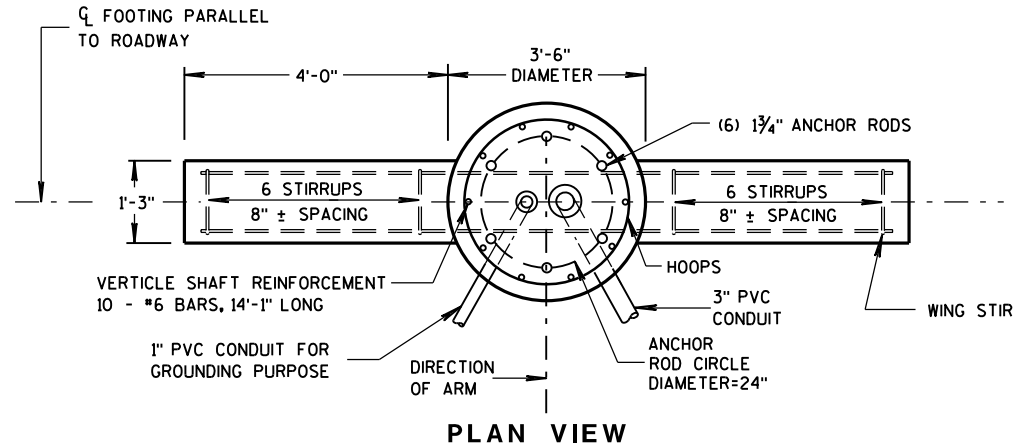
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

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	/s/ Ahmet Demirbilek
May 2017	DATE
	STATE ELECTRICAL ENGINEER
FHWA	

6

6



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 AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

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

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

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4 1/2" 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 $f_c=3,500$ p.s.i.
 HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 $f_y=60,000$ p.s.i.
 ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS $f_y=55,000$ p.s.i.
 TEMPLATES, ASTM A709 GRADE 36 $f_y=36,000$ p.s.i.

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

(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

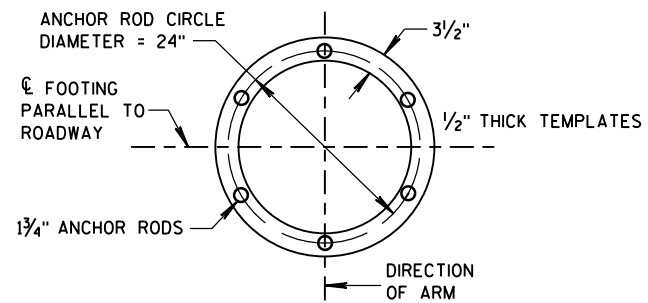
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

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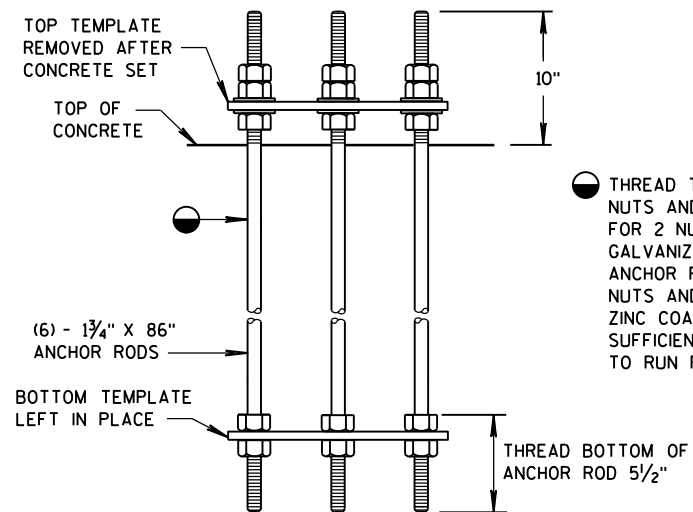
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S.D.D. 9 C 12-9a

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

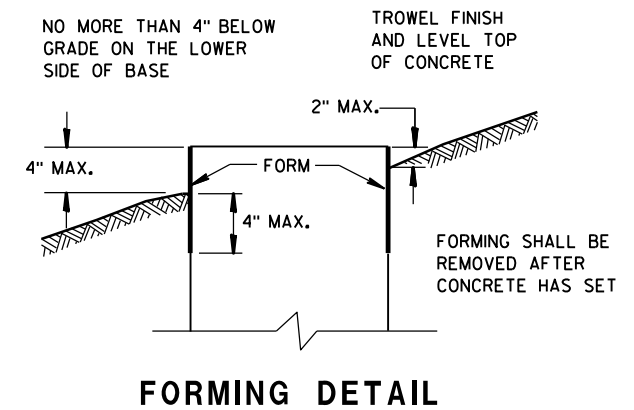


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



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6

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

GENERAL NOTES

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

THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING. A STEEL CASING OR CORRUGATED METAL PIPE IS ALLOWED TO REMAIN. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BASE IN LAYERS OF ONE FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

ANY DAMAGE TO THE CONCRETE BASE AND ANCHOR RODS DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

THE REINFORCEMENT AND ANCHOR RODS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

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

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

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

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

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

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

FORM ALL EXPOSED CONCRETE CORNERS WITH 1" CHAMFER ALL AROUND. TOP OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS.

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

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 1/2" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NON-METALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

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

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

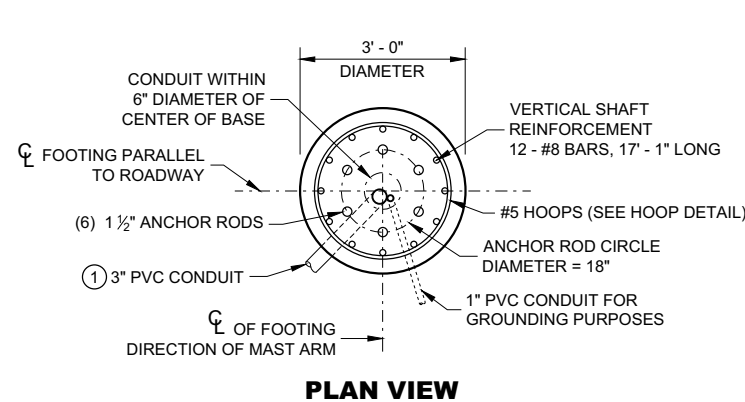
A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

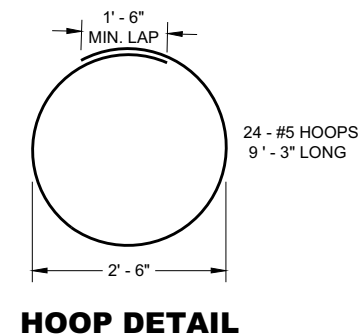
THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

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

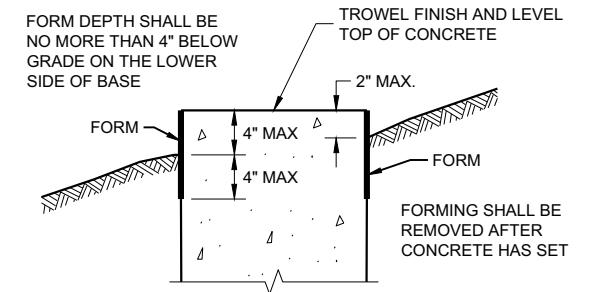
CONCRETE MASONRY.....fc = 3,500 p.s.i.
 HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.
 ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION).....fy = 55,000 p.s.i.
 TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.



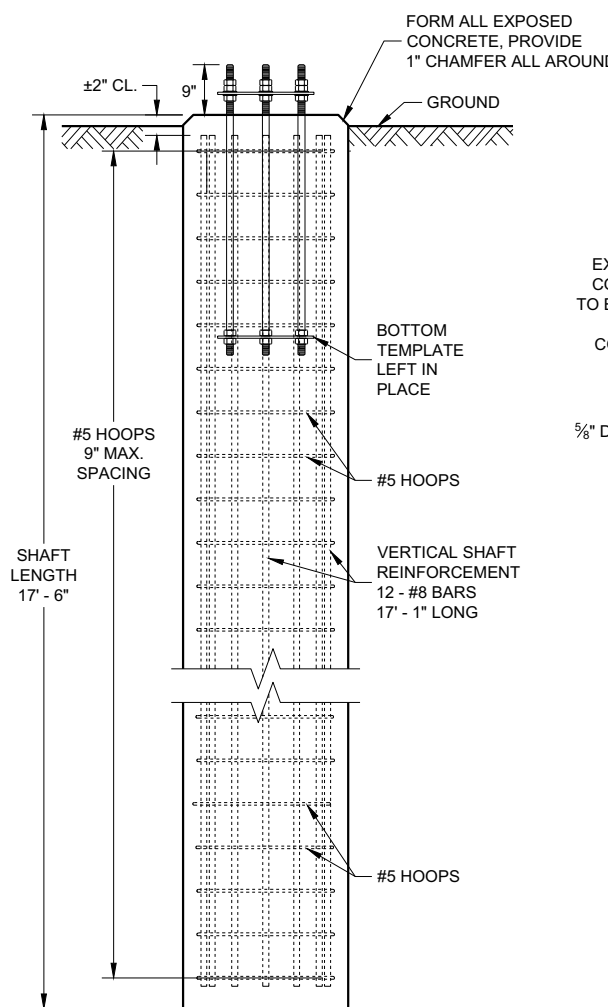
PLAN VIEW



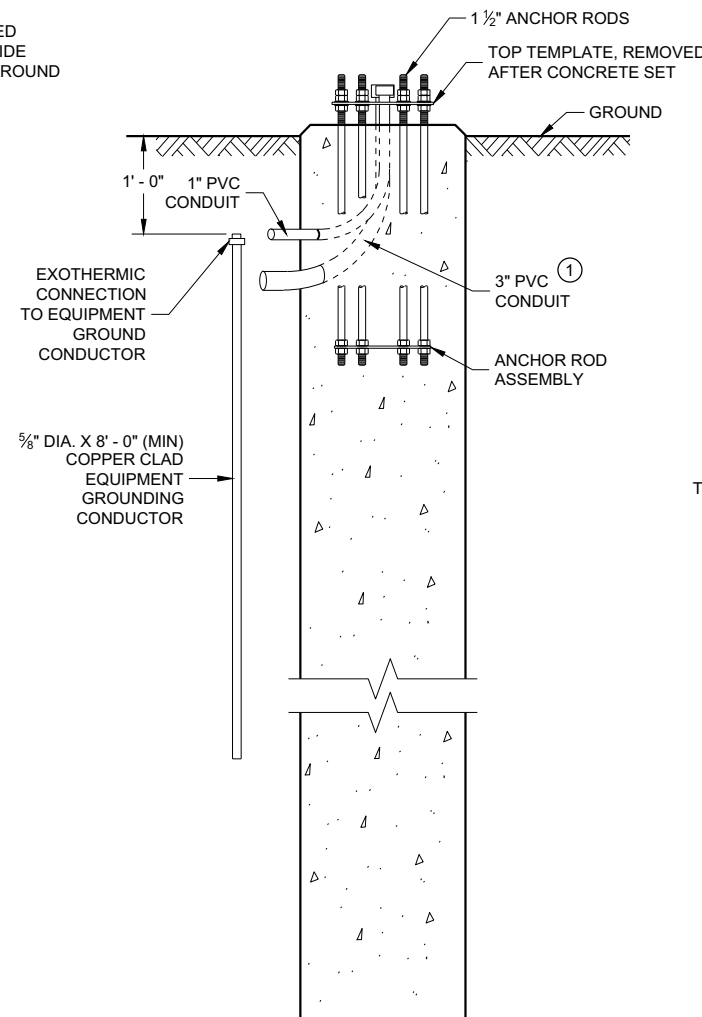
HOOP DETAIL



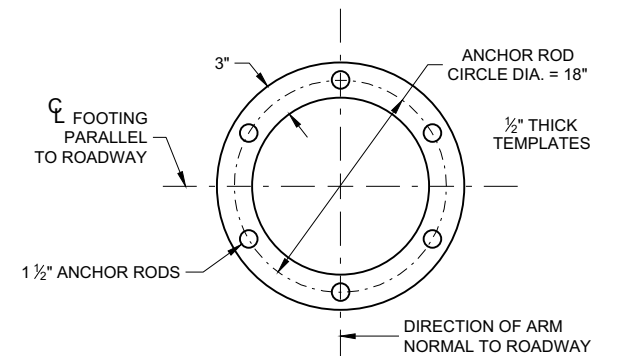
FORMING DETAIL



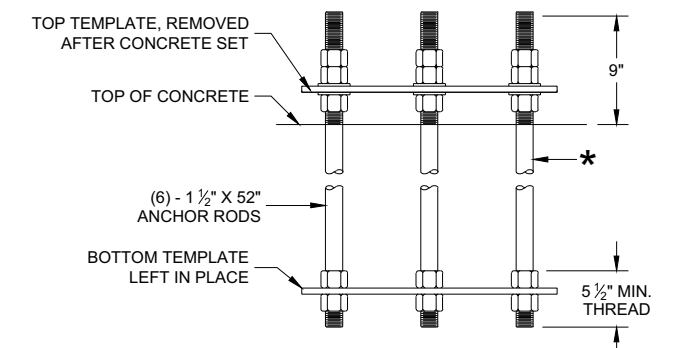
ELEVATION VIEW
(CONDUITS NOT SHOWN ON THIS VIEW FOR CLARITY)



SIDE VIEW
(HOOPS AND VERTICAL SHAFT REINFORCEMENT NOT SHOWN ON THIS VIEW FOR CLARITY)



TOP AND BOTTOM TEMPLATE



ANCHOR ROD ASSEMBLY DETAILS

* THREAD TOP 10" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 1/2" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

**CONCRETE BASE, TYPE 10 SPECIAL
(FOR TYPE 9 SPECIAL AND TYPE 10 SPECIAL POLES)**

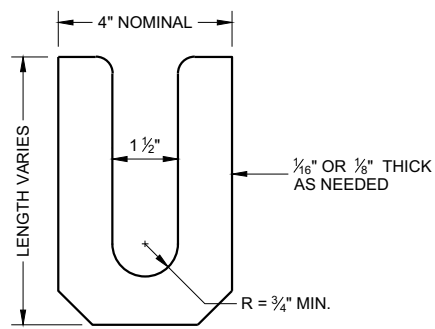
CONCRETE = 4.6 CUBIC YARD
 H.S. REINFORCEMENT = 779 LBS.

FOR USE WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.

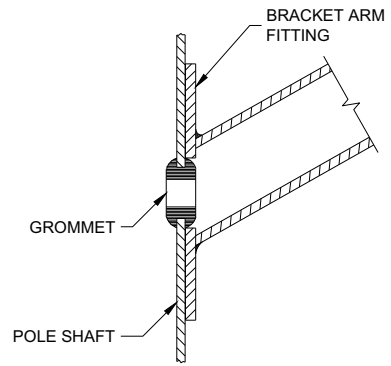
**CONCRETE BASE
TYPE 10 SPECIAL**

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

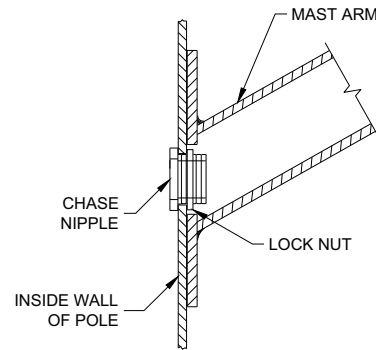
APPROVED
 August 2020 /S/ Alex Crabtree
 DATE WIND LOADED STRUCTURES PROGRAM LEADER
 FHWA



LEVELING SHIM
SHALL BE ALUMINUM



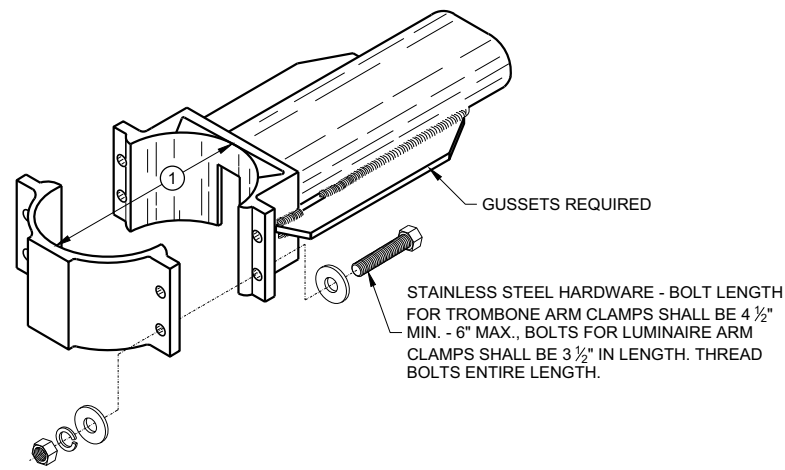
TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



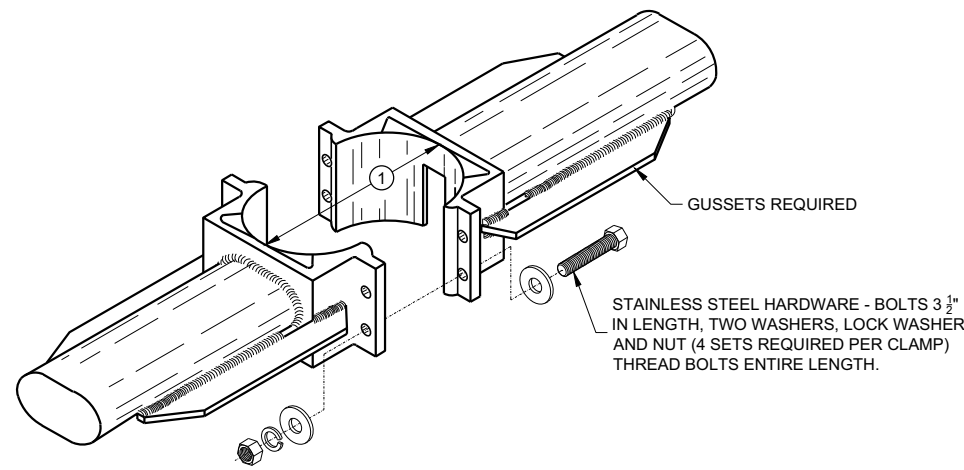
TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

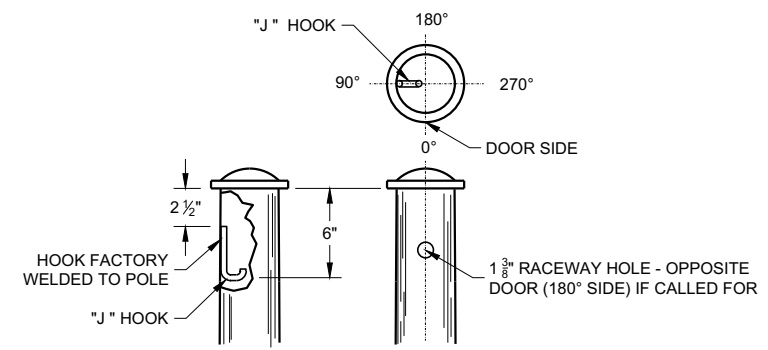
- CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.
- ① 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
 - ② INDIVIDUAL BASE PLATE 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.



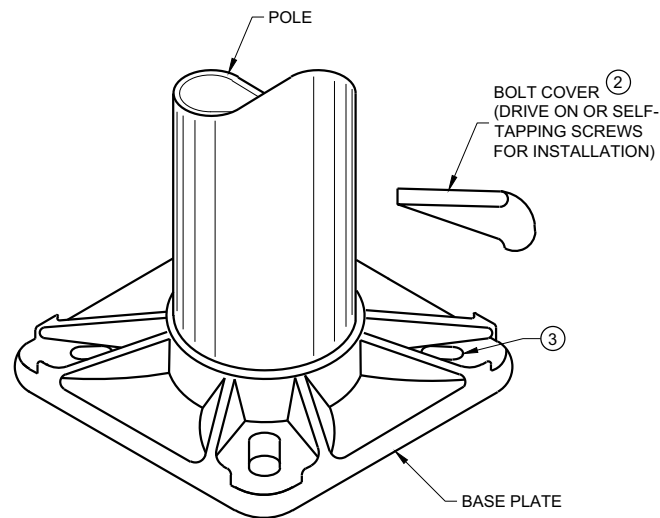
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



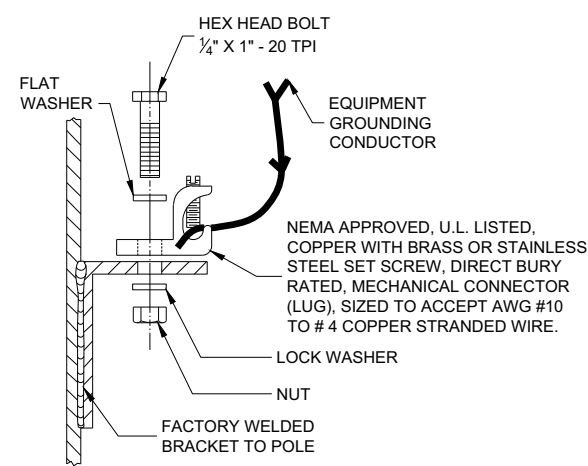
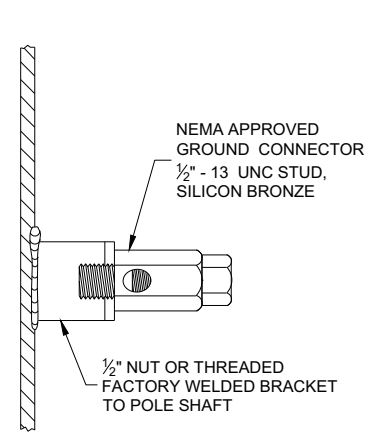
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS



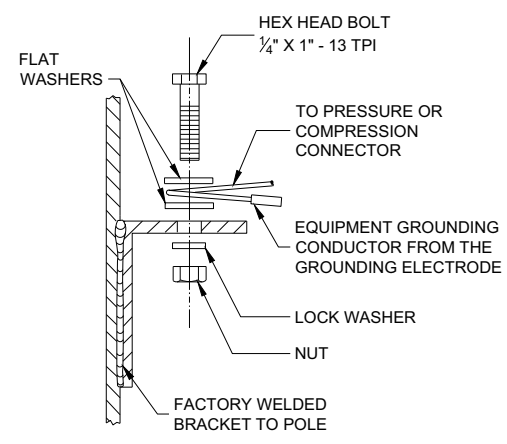
TYPICAL "J" HOOK LOCATION



BASE PLATE



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



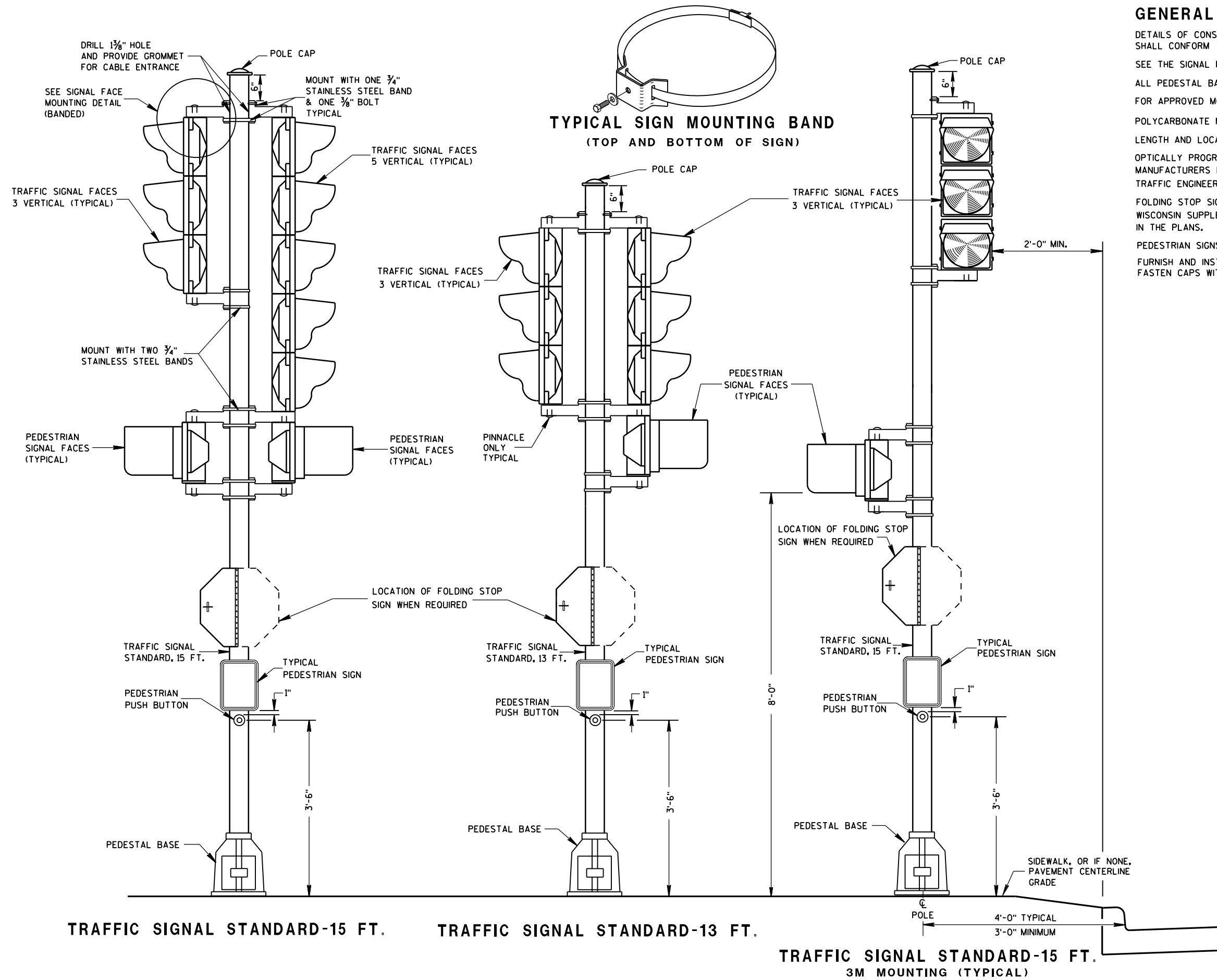
HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

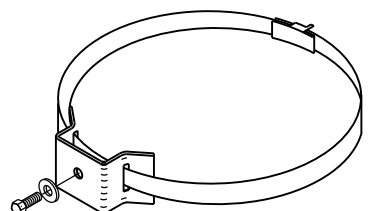
APPROVED
November 2018 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGINEER
FHWA

6

6



**TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)**



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.

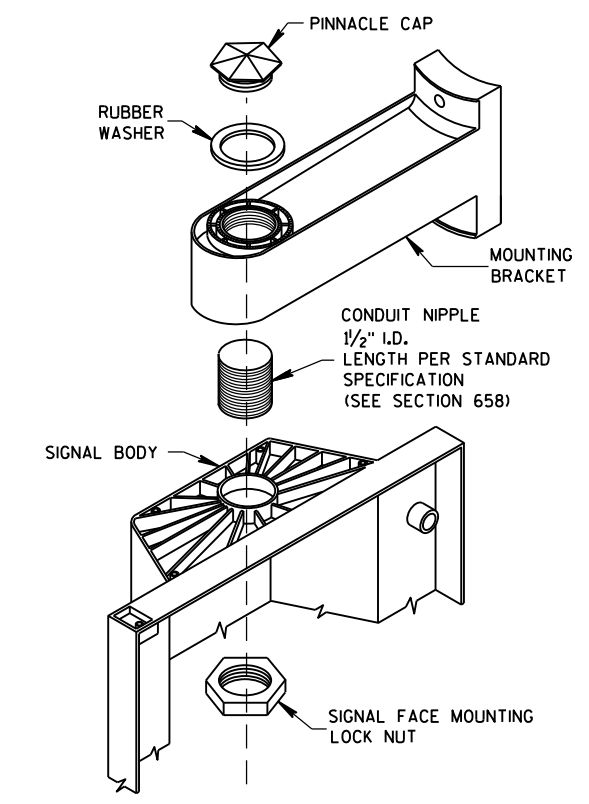
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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 THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



**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 ENGINEER
FHWA	

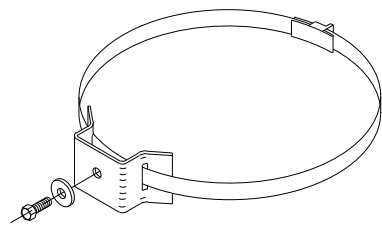
S.D.D. 9 E 6-5

S.D.D. 9 E 6-5

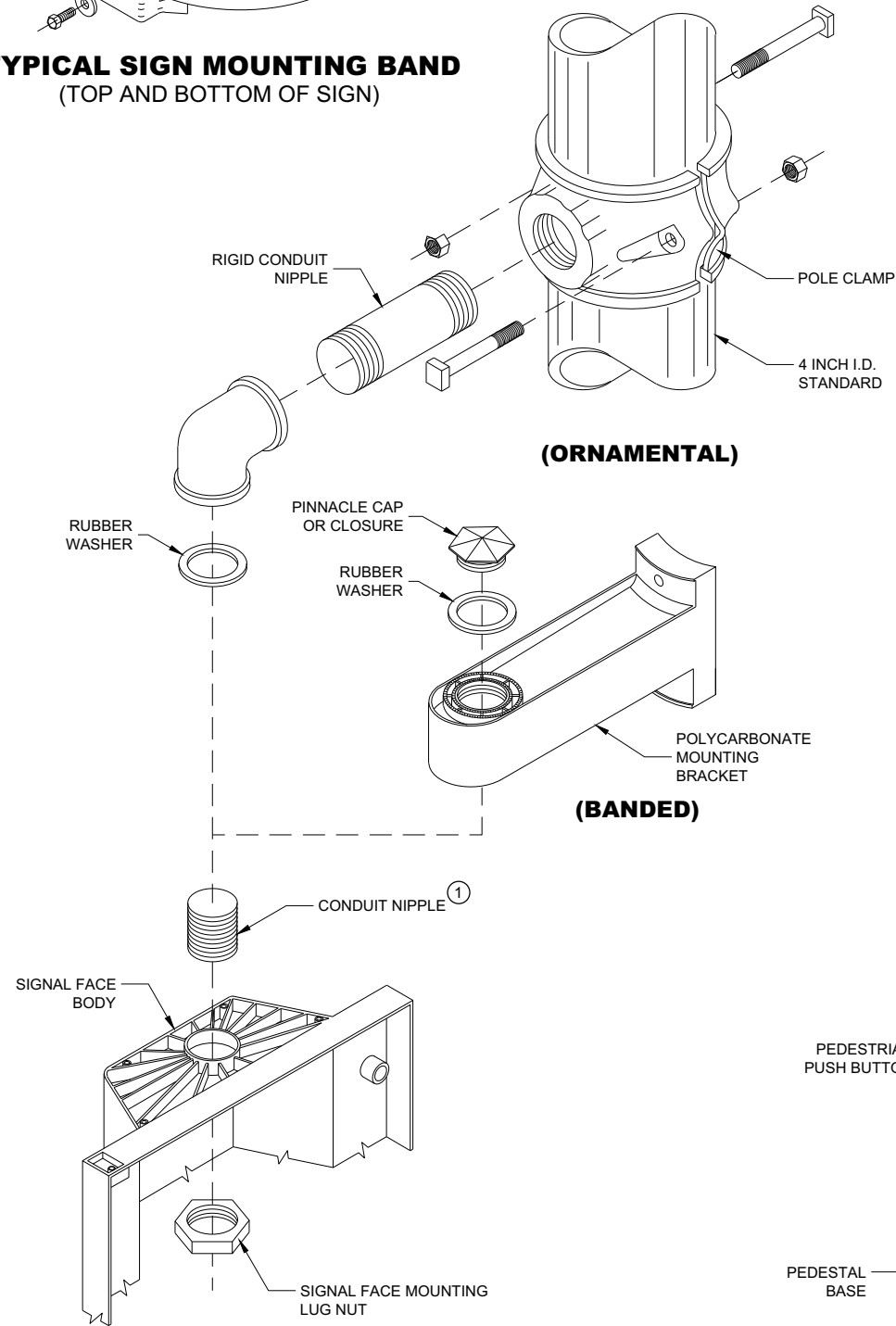
TRAFFIC SIGNAL STANDARD-15 FT.

TRAFFIC SIGNAL STANDARD-13 FT.

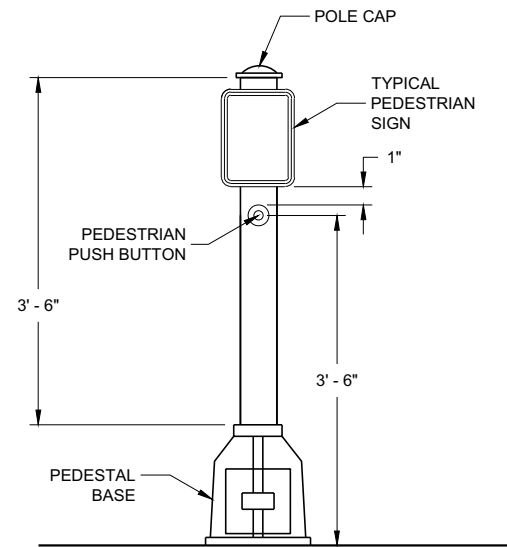
**TRAFFIC SIGNAL STANDARD-15 FT.
3M MOUNTING (TYPICAL)**



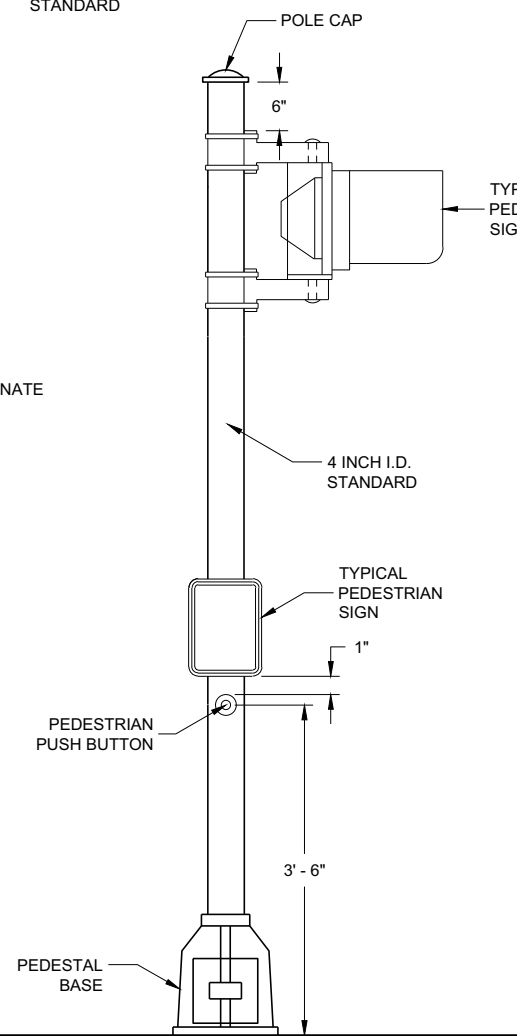
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



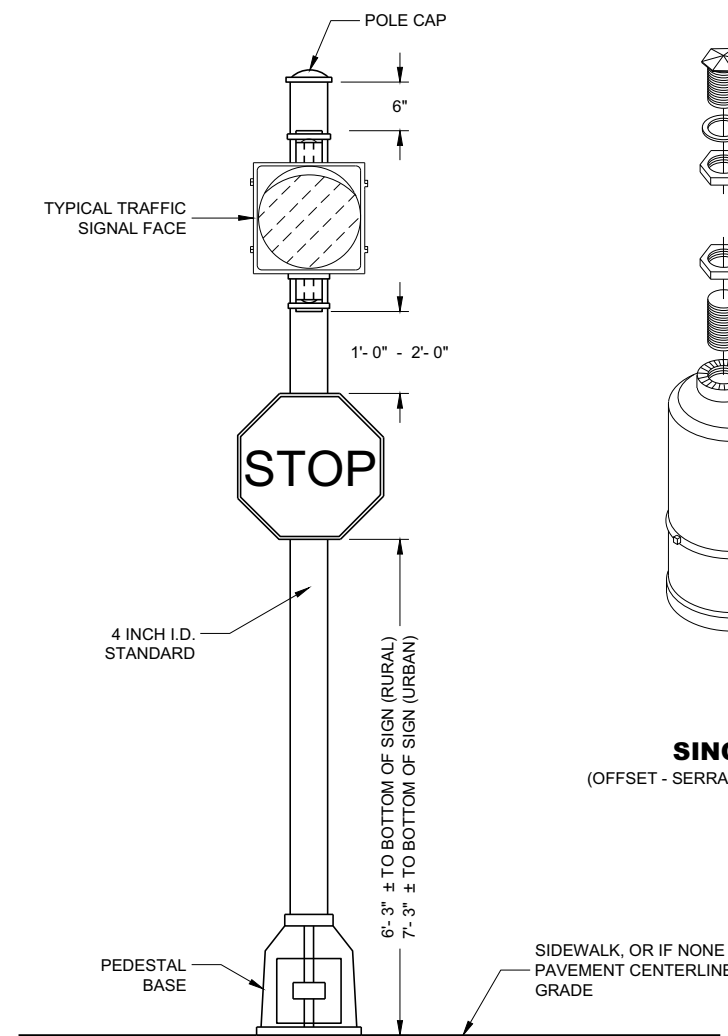
SIGNAL FACE MOUNTING DETAILS



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.

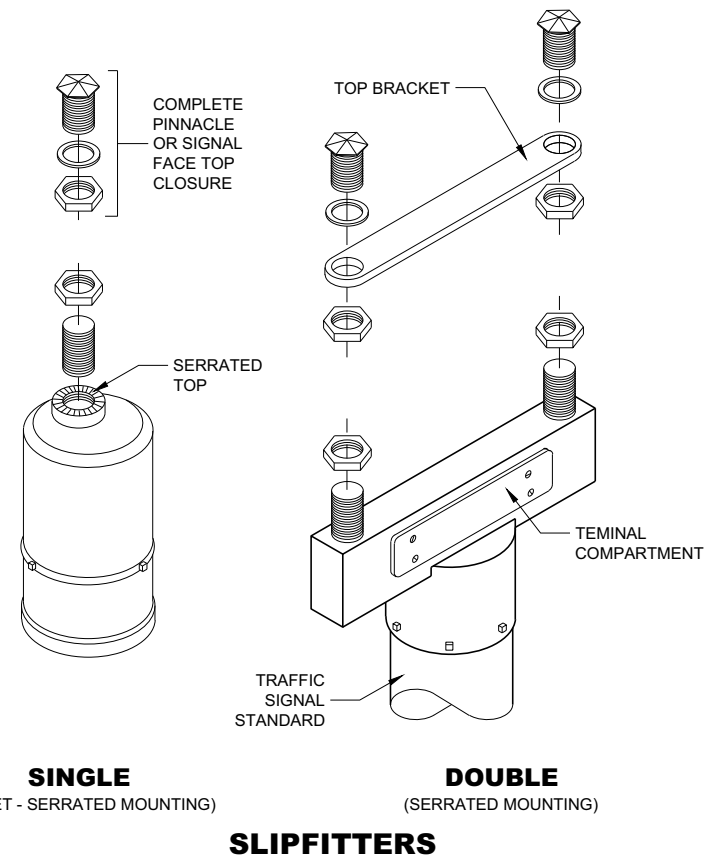
LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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) 1/2" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

- ① USE 1/2" 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 1/2" OPENING IN SIGNAL FACES AND BRACKET ENDS.



SINGLE
(OFFSET - SERRATED MOUNTING)

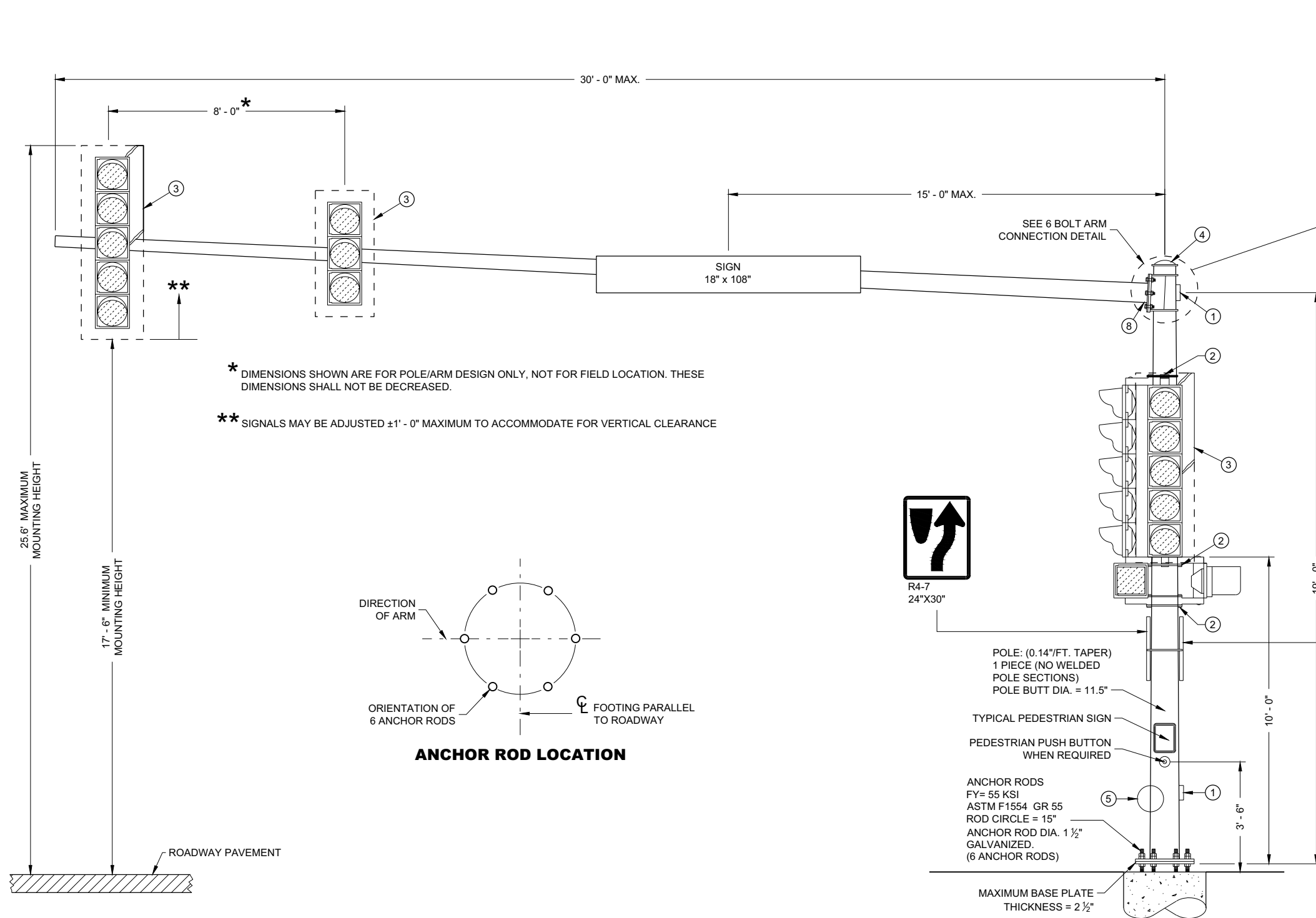
DOUBLE
(SERRATED MOUNTING)

SLIPFITERS

TRAFFIC SIGNAL STANDARD
PEDESTRIAN AND FLASHER
TYPICAL MOUNTING DETAILS

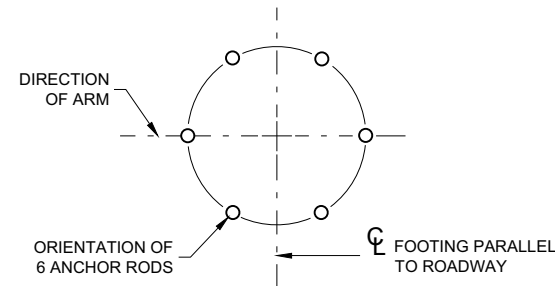
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGINEER
FHWA



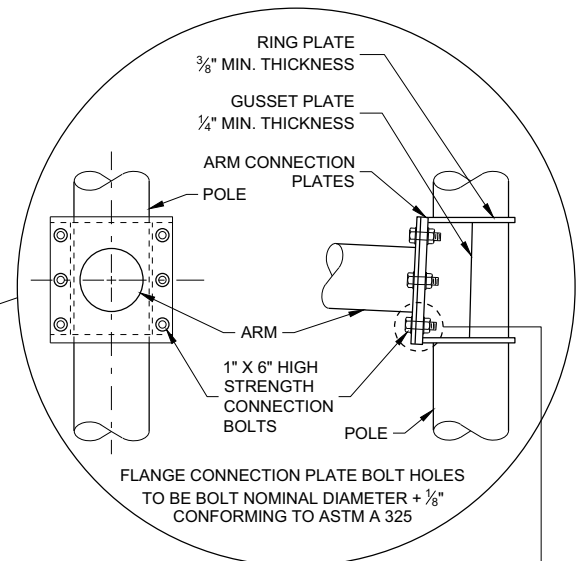
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

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

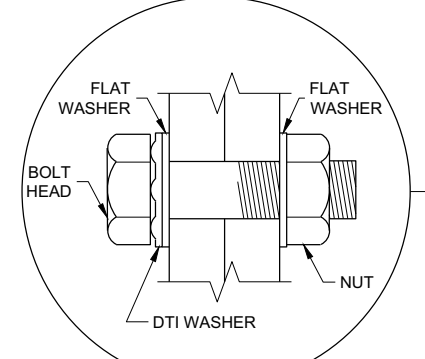


ANCHOR ROD LOCATION

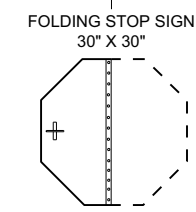
**TYPE 9 POLE
15' - 30' MONOTUBE ARM
(MAXIMUM LOAD)**



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL



FOLDING STOP SIGN
30" X 30"



R4-7
24" X 30"

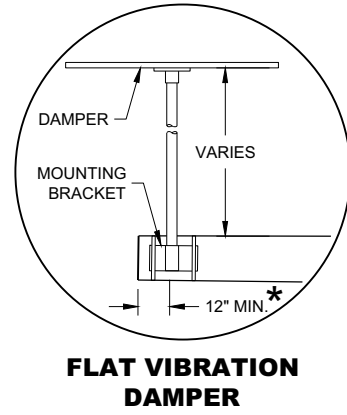
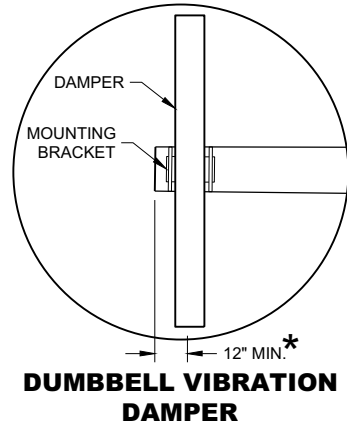
POLE: (0.14"/FT. TAPER)
1 PIECE (NO WELDED
POLE SECTIONS)
POLE BUTT DIA. = 11.5"

TYPICAL PEDESTRIAN SIGN
PEDESTRIAN PUSH BUTTON
WHEN REQUIRED

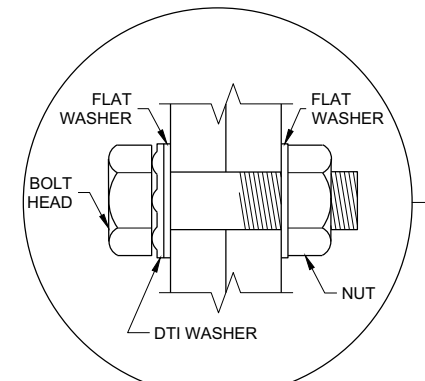
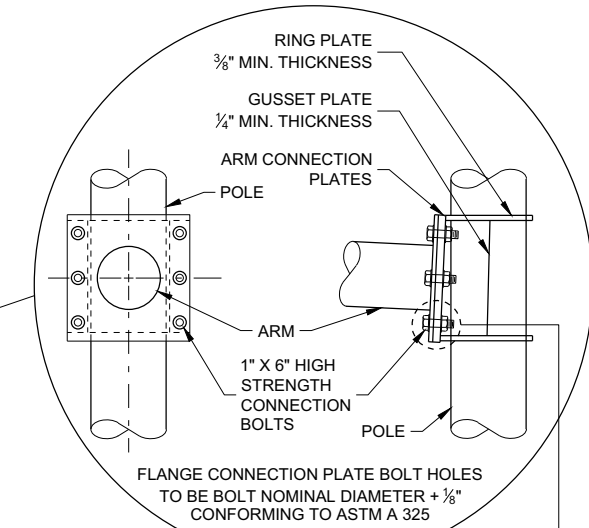
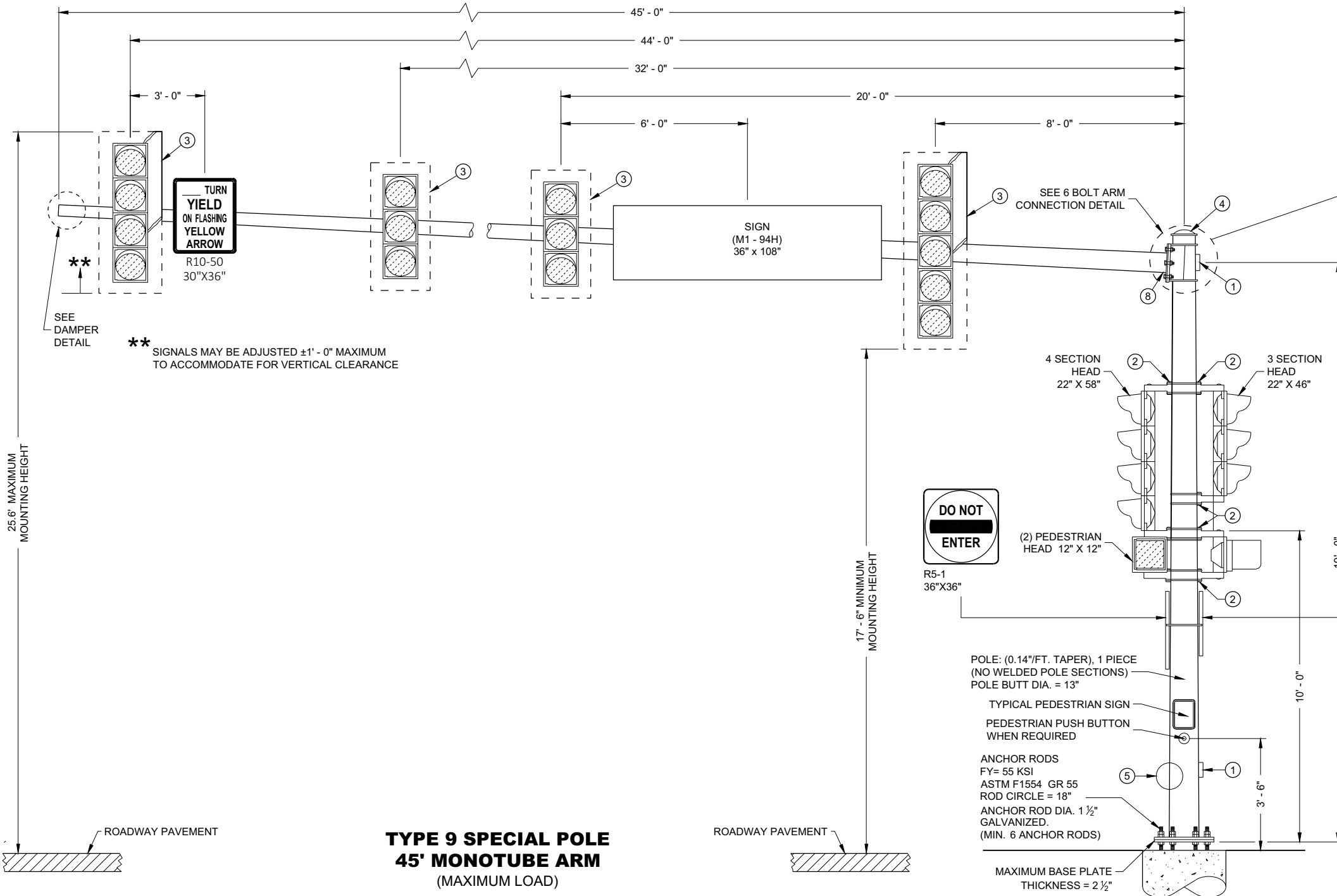
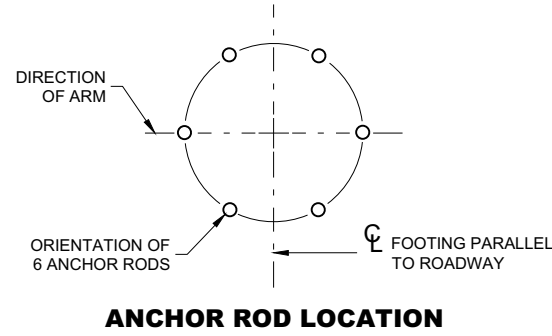
ANCHOR RODS
FY= 55 KSI
ASTM F1554 GR 55
ROD CIRCLE = 15"
ANCHOR ROD DIA. 1 1/2"
GALVANIZED.
(6 ANCHOR RODS)

MAXIMUM BASE PLATE
THICKNESS = 2 1/2"

TYPE 9 POLE 15' - 30' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/s/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	



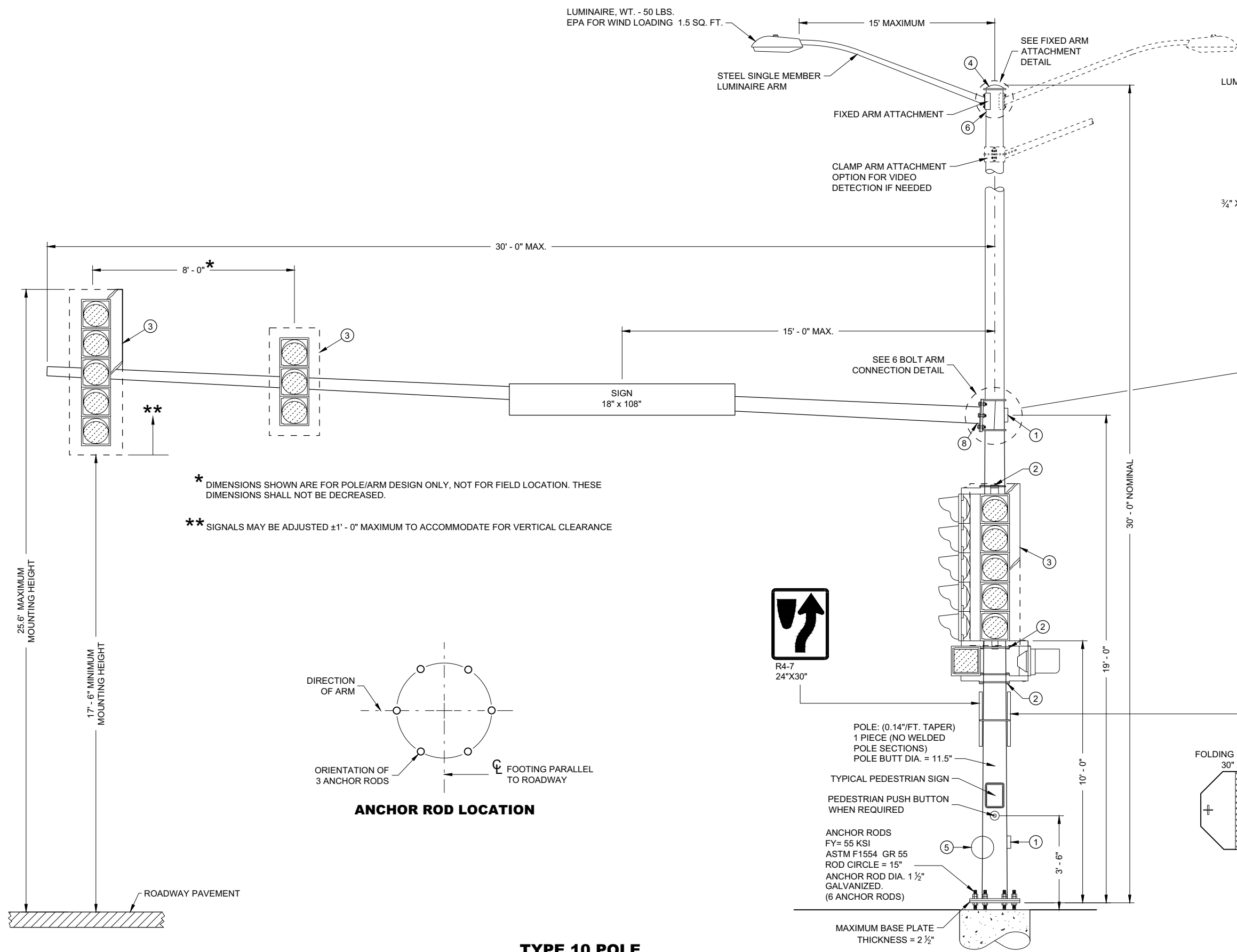
* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.



TYPE 9 SPECIAL POLE 45' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/s/ Ahmet Demirelek STATE ELECTRICAL ENGINEER
FHWA	

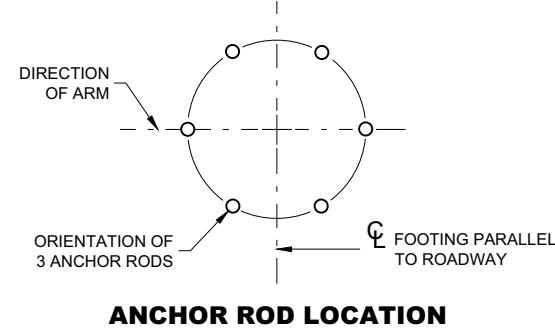
SDD 09E08 - 09d

SDD 09E08 - 09d

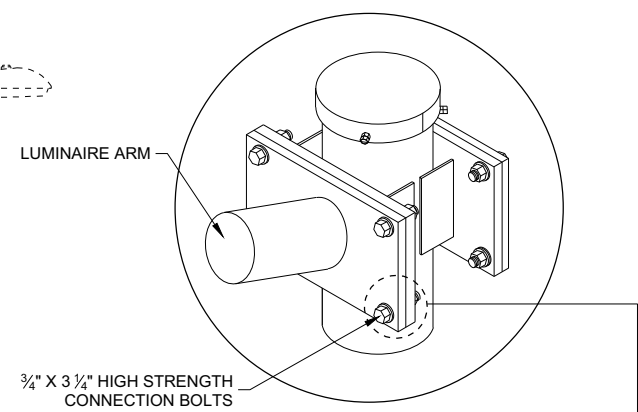


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

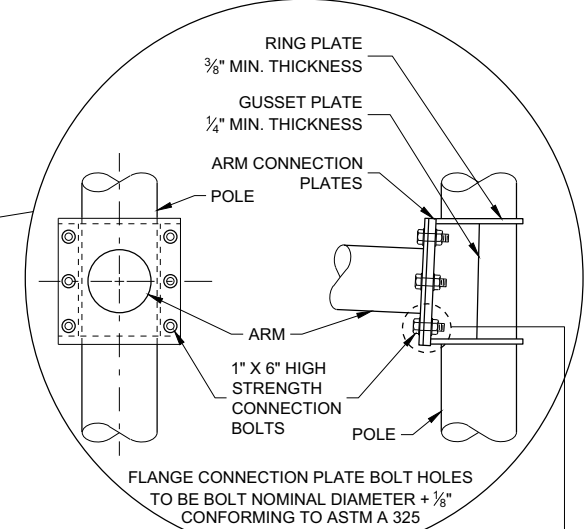
** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE



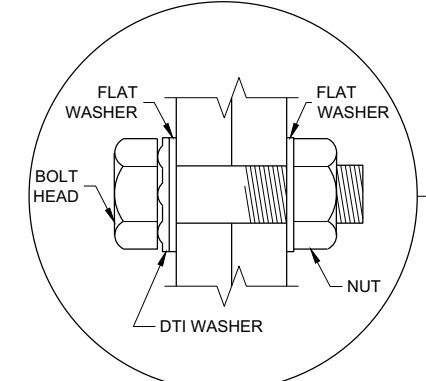
**TYPE 10 POLE
15' - 30' MONOTUBE ARM
(MAXIMUM LOAD)**



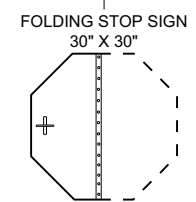
FIXED ARM ATTACHMENT DETAIL



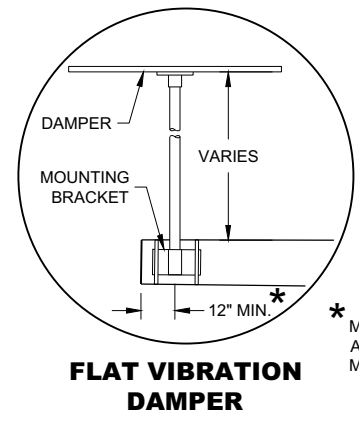
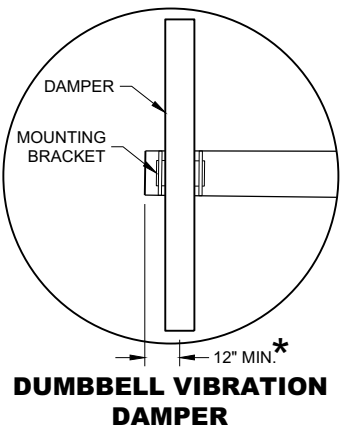
6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

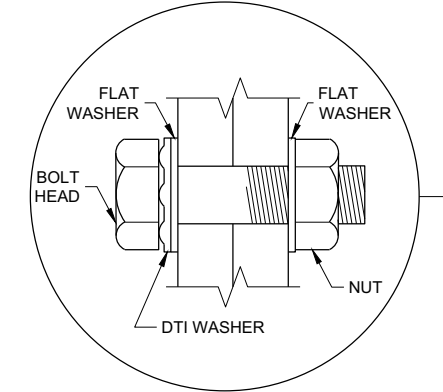
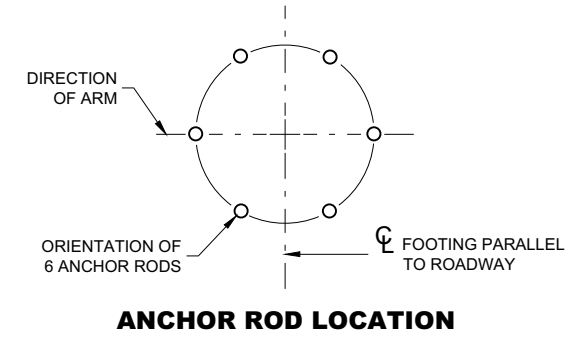
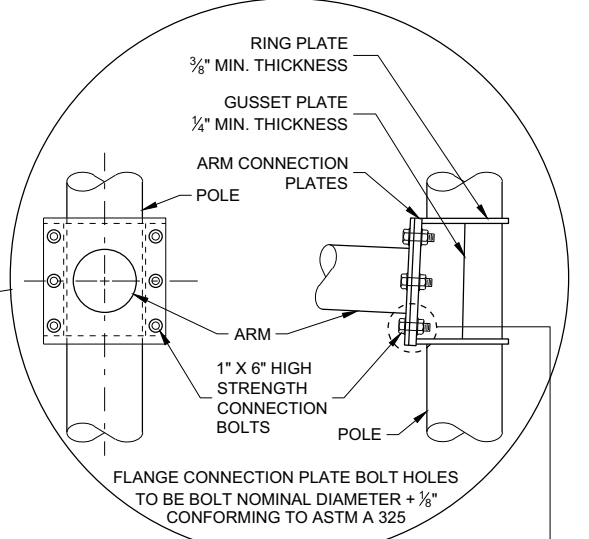
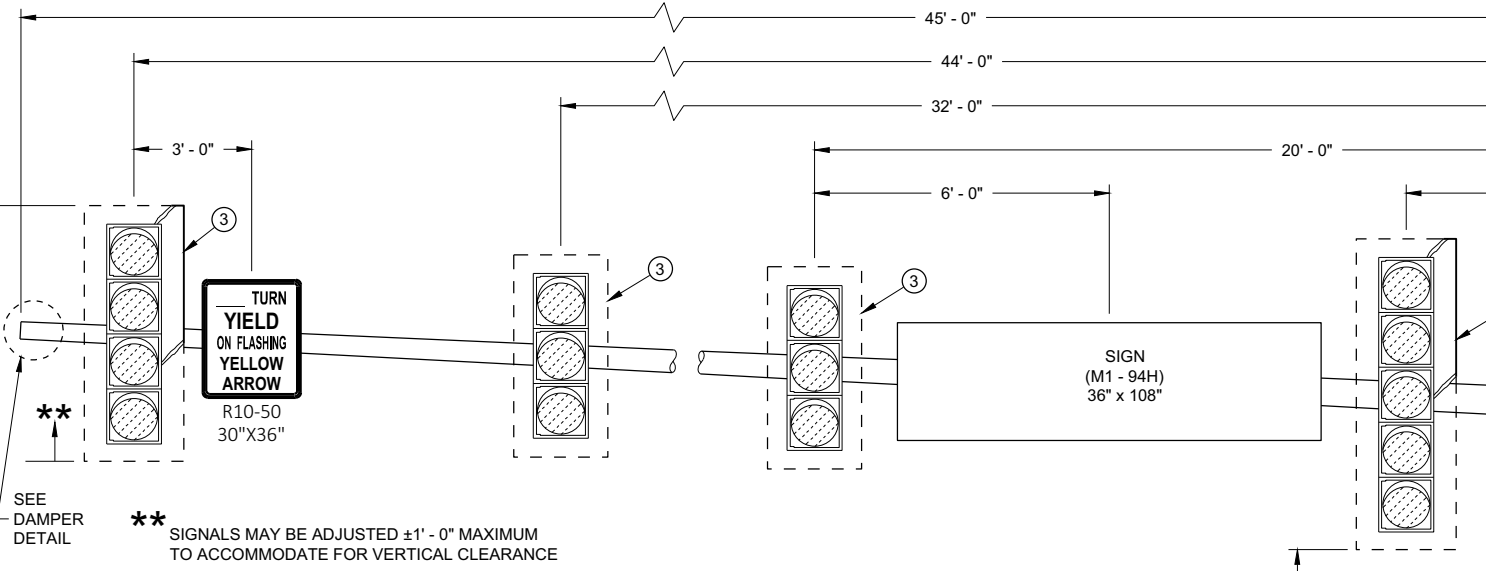
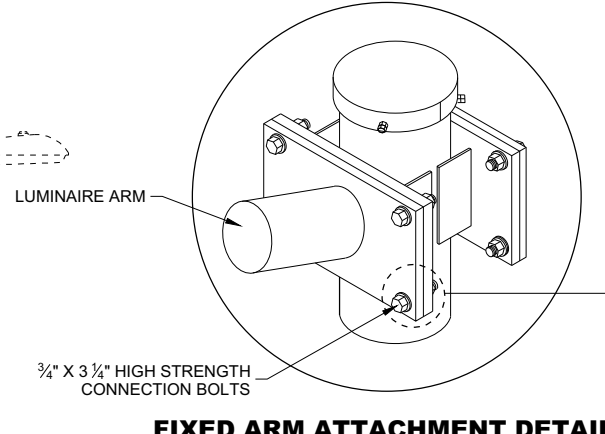
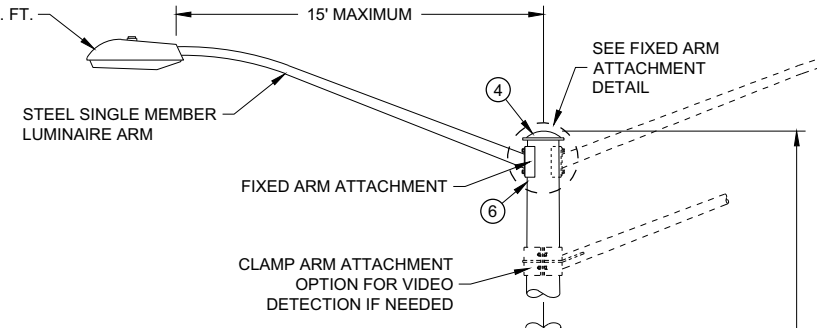


TYPE 10 POLE 15' - 30' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Ahmet Demirelek STATE ELECTRICAL ENGINEER
FHWA	



* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.

LUMINAIRE, WT. - 50 LBS.
EPA FOR WIND LOADING 1.5 SQ. FT.



25.6' MAXIMUM MOUNTING HEIGHT

17.6' MINIMUM MOUNTING HEIGHT

30' - 0" NOMINAL

19' - 0"

10' - 0"

3' - 6"

POLE: (0.14"/FT. TAPER), 1 PIECE (NO WELDED POLE SECTIONS) POLE BUTT DIA. = 13"

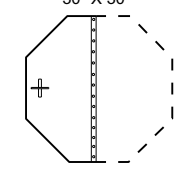
TYPICAL PEDESTRIAN SIGN

PEDESTRIAN PUSH BUTTON WHEN REQUIRED

ANCHOR RODS
FY= 55 KSI
ASTM F1554 GR 55
ROD CIRCLE = 18"
ANCHOR ROD DIA. 1 1/2"
GALVANIZED.
(MIN. 6 ANCHOR RODS)

MAXIMUM BASE PLATE THICKNESS = 2 1/2"

FOLDING STOP SIGN 30" X 30"



**TYPE 10 SPECIAL POLE
45' MONOTUBE ARM
(MAXIMUM LOAD)**

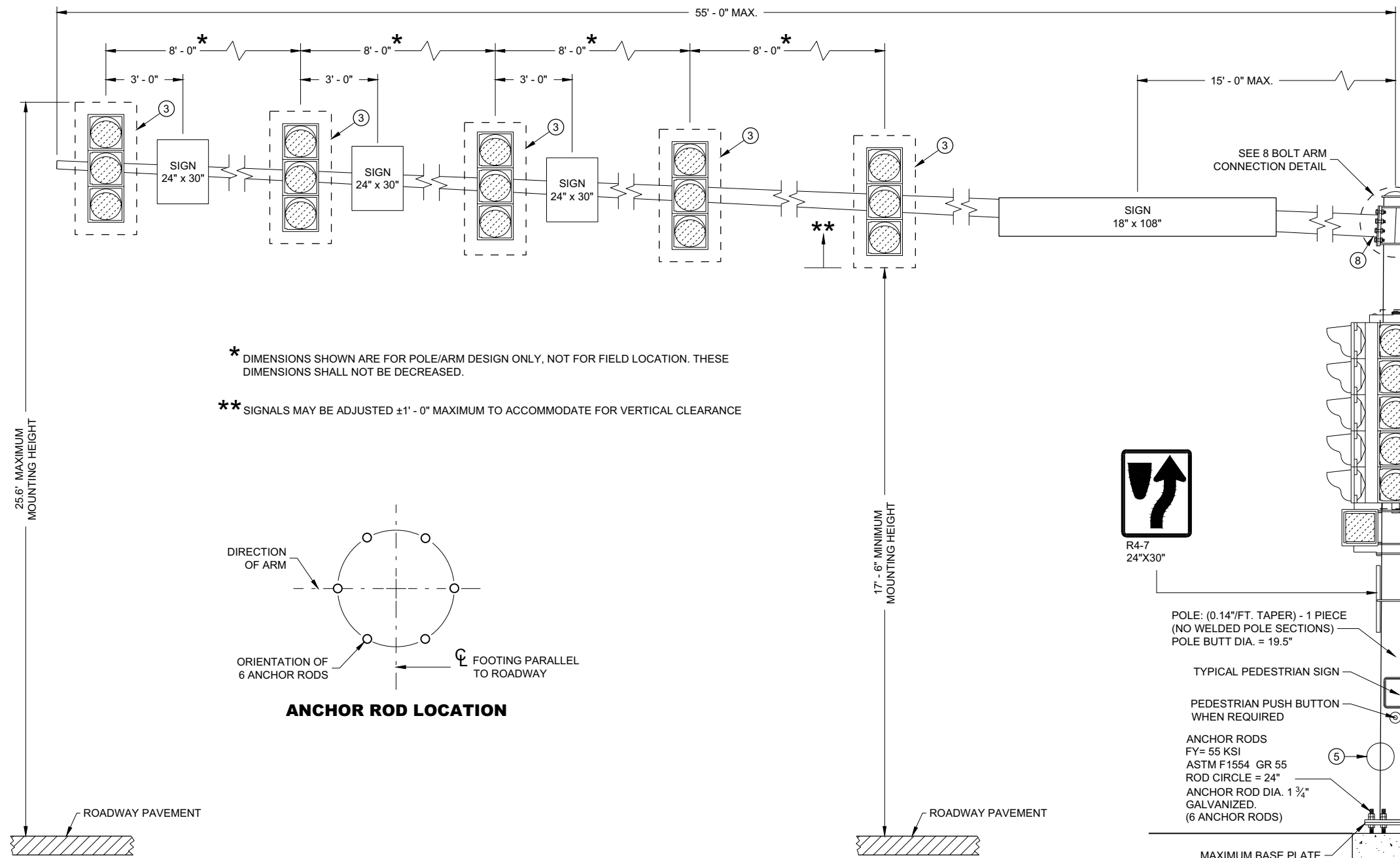
**TYPE 10 SPECIAL POLE
45' MONTUBE ARM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGINEER

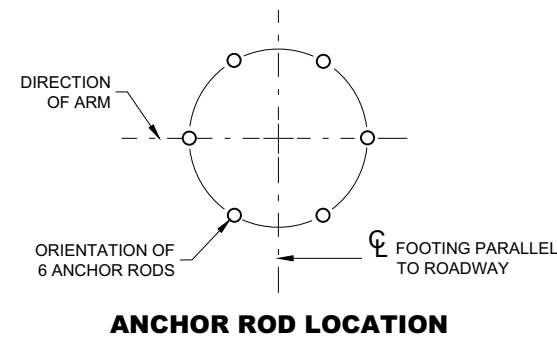
SDD 09E08 - 08h

SDD 09E08 - 08h

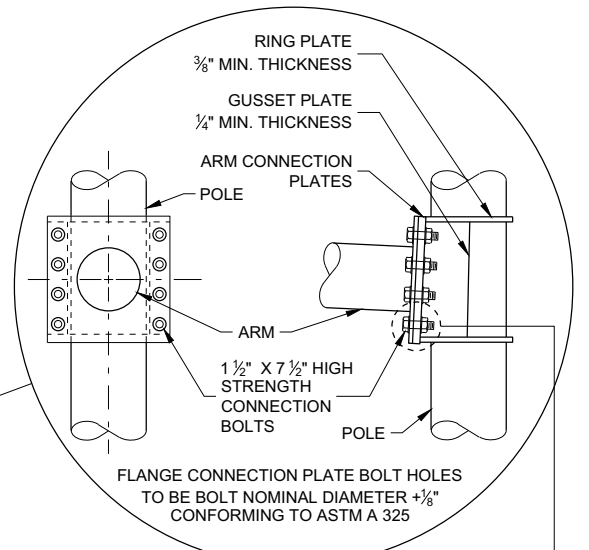


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

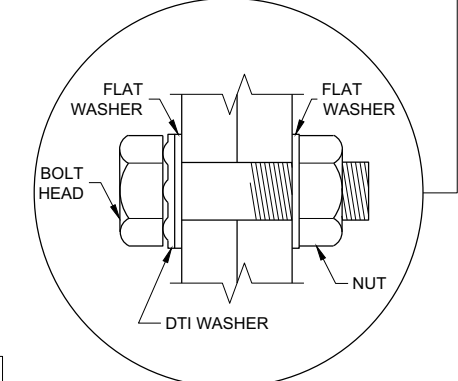
** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE



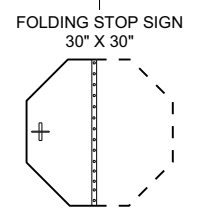
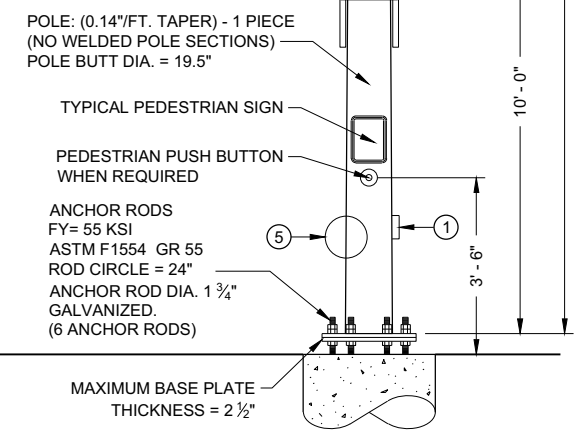
**TYPE 12 POLE
35' - 55' MONOTUBE ARM
(MAXIMUM LOAD)**



**8 BOLT ARM
CONNECTION DETAIL**

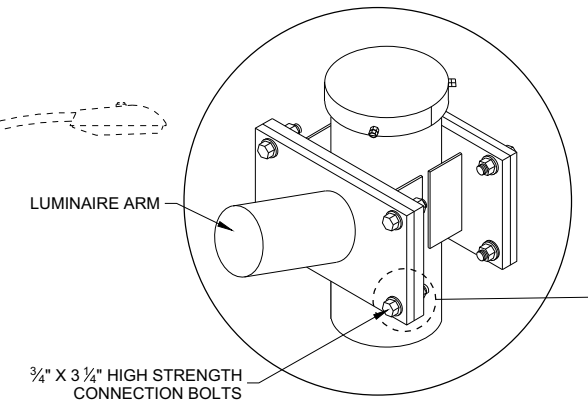
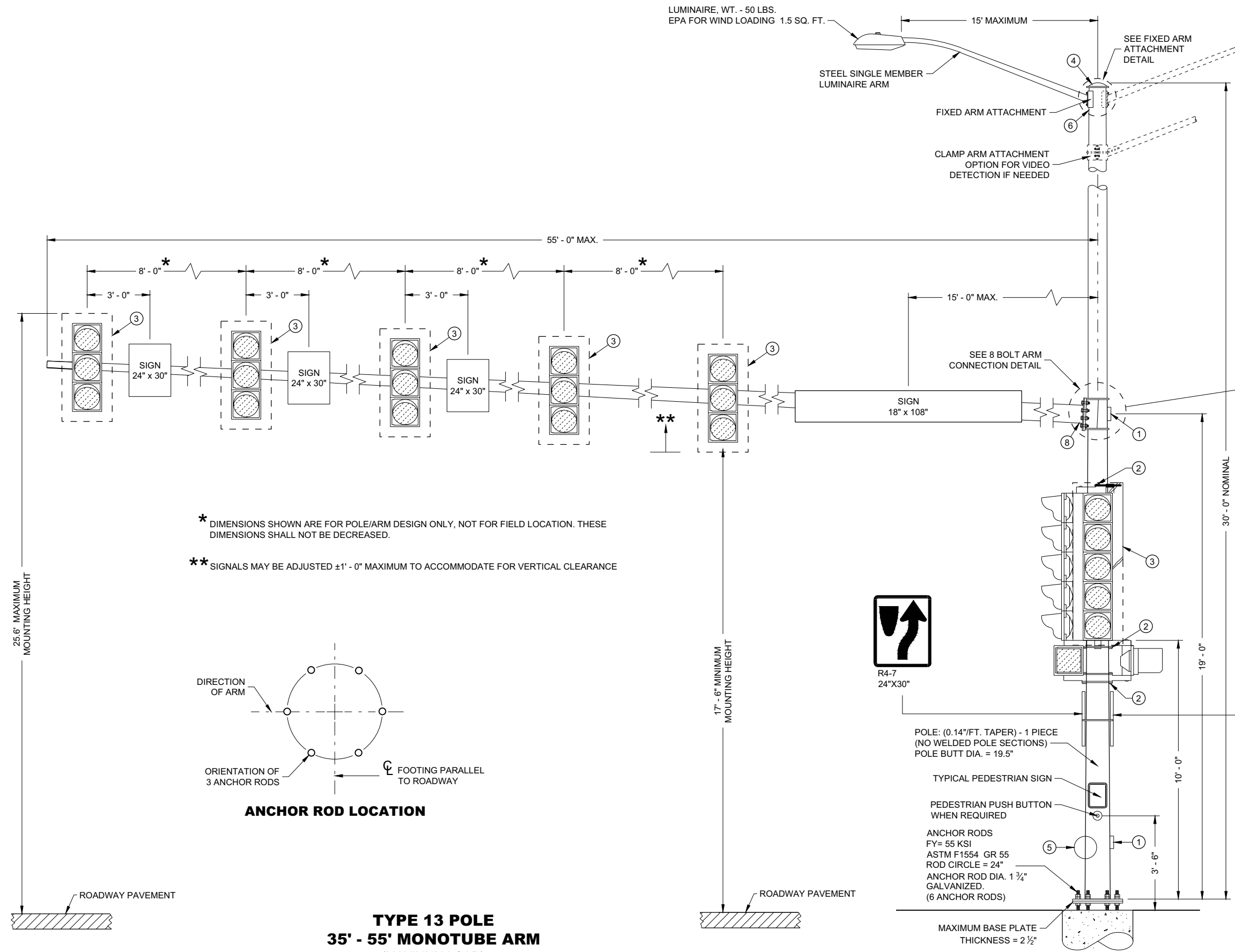


**RECOMMENDED BOLT
ASSEMBLY DETAIL**

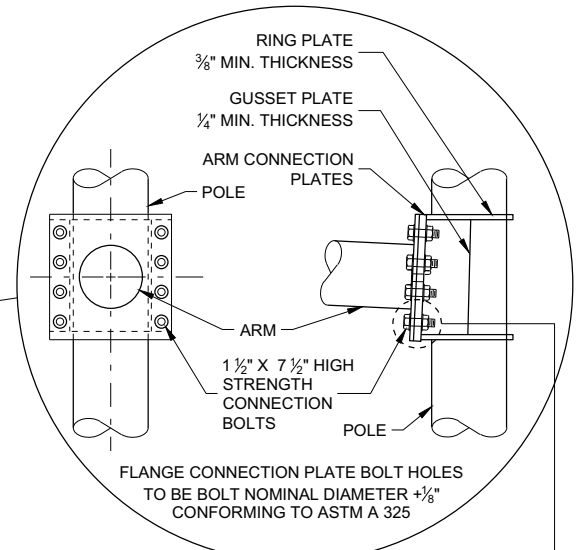


TYPE 12 POLE 35' - 55' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

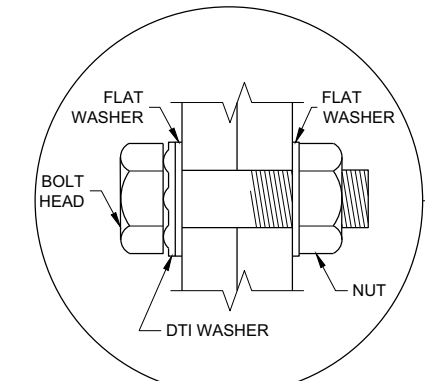
LUMINAIRE, WT. - 50 LBS.
EPA FOR WIND LOADING 1.5 SQ. FT.



FIXED ARM ATTACHMENT DETAIL



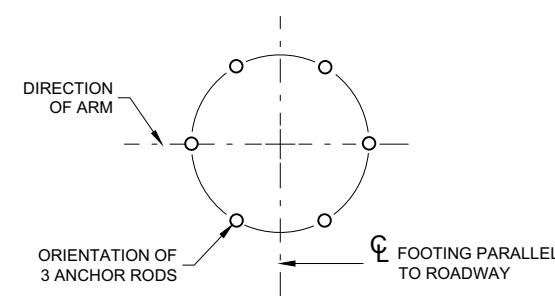
8 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

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



ANCHOR ROD LOCATION

**TYPE 13 POLE
35' - 55' MONOTUBE ARM
(MAXIMUM LOAD)**



R4-7
24"x30"

POLE: (0.14"/FT. TAPER) - 1 PIECE
(NO WELDED POLE SECTIONS)
POLE BUTT DIA. = 19.5"

TYPICAL PEDESTRIAN SIGN

PEDESTRIAN PUSH BUTTON
WHEN REQUIRED

ANCHOR RODS
FY= 55 KSI
ASTM F1554 GR 55
ROD CIRCLE = 24"
ANCHOR ROD DIA. 1 3/4"
GALVANIZED.
(6 ANCHOR RODS)

MAXIMUM BASE PLATE
THICKNESS = 2 1/2"

TYPE 13 POLE 35' - 55' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Ahmet Demirelek STATE ELECTRICAL ENGINEER
FHWA	

GENERAL NOTES

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

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15 FOOT TO 30 FOOT.

POLE TYPES 9 SPECIAL AND 10 SPECIAL ARE FOR ARM LENGTHS 35 FOOT, 40 FOOT, AND 45 FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35 FOOT TO 55 FOOT.

MONOTUBE POLES AND ARMS SHALL BE GALVANIZED STEEL.

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

ONE PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3% ± RISE).

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

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNAL 2015 1ST EDITION (INCLUDING INTERIM REVISIONS)" AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR THE LIGHTING STRUCTURES AS FOLLOWS:

CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.

CATEGORY II FATIGUE LOADS OF TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 SPECIAL AND TYPE 10 SPECIAL STRUCTURES. IN LIEU OF DESIGNING FOR GALLOPING, A VIBRATION DAMPER MITIGATION DEVICE IS REQUIRED TO BE SUPPLIED AND INSTALLED AT THE END OF THE MAST ARM.

CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.

115 MPH (700 YEAR MRI BASIC WIND SPEED).

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH 3/4" STAINLESS STEEL BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL 1/2" 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 HEAD AT SAME ELEVATION.

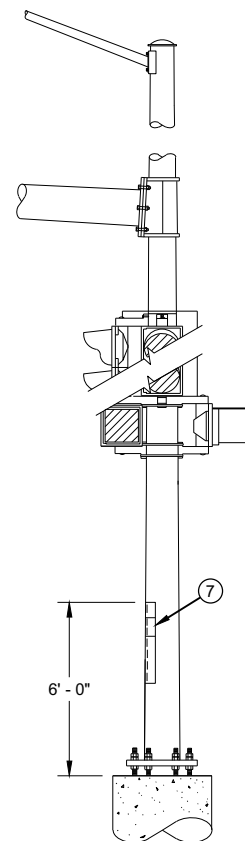
SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

- ① DESIGN FOR MAXIMUM ALLOWABLE HAND HOLE WITH COVER ASSEMBLY WITH TWO 1/4" X 3/4" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.
- ② SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING (SEE SPECIFICATION SECTION 658).
- ③ SECURELY MOUNT BACK PLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.
- ④ THE TOP OF THE POLE SHAFT AND THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.
- ⑤ FACTORY WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HAND HOLD, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR 1/4" X 3/4" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.
- ⑥ FACTORY WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.
- ⑦ INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

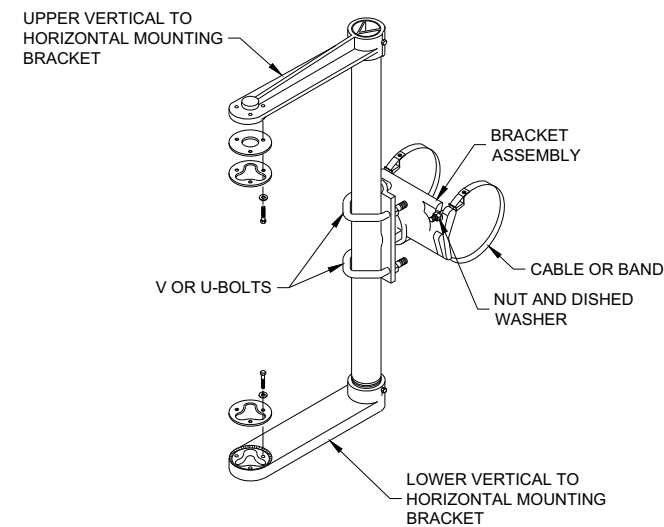
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

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 1/2" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

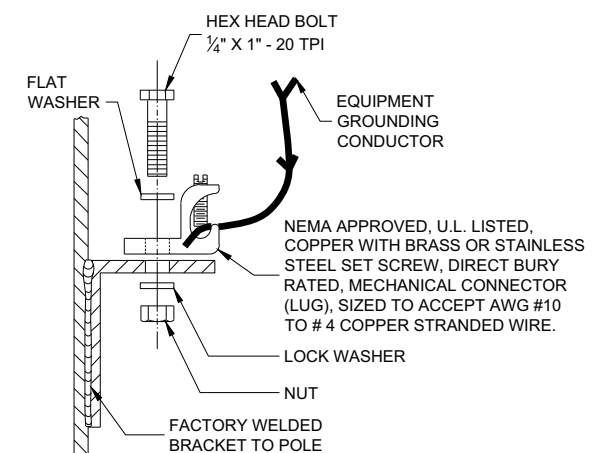


**STRUCTURAL IDENTIFICATION
PLAQUE PLACEMENT**



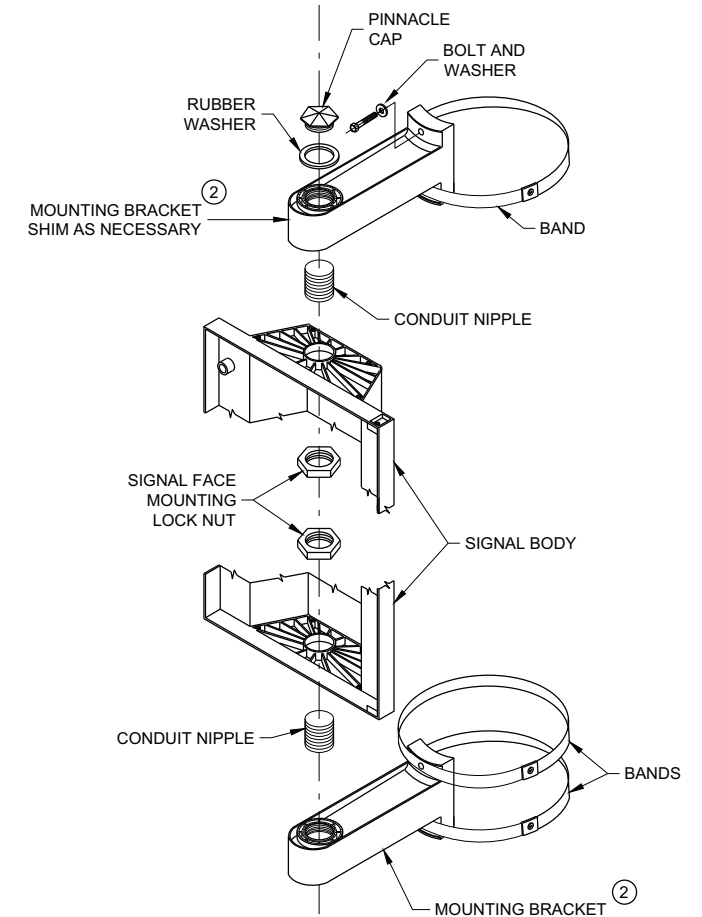
**SIGNAL FACE MOUNTING BRACKET
DETAIL FOR MONOTUBE ARM**

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

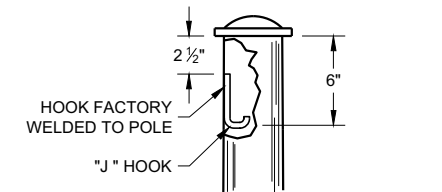


**TYPICAL GROUNDING
CONNECTIONS**

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



**SIGNAL FACE VERTICAL
MOUNTING DETAIL**



**TYPICAL "J" HOOK
WIRE SUPPORT**

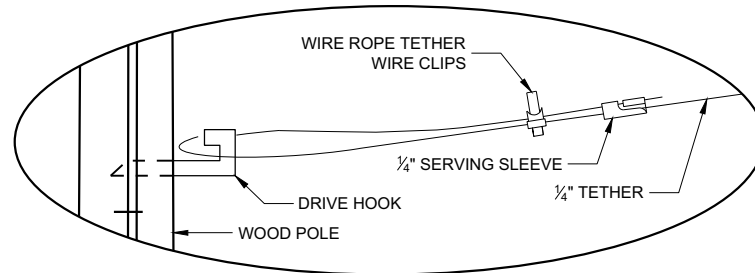
**GENERAL NOTES AND
HARDWARE FOR TYPES 9,10,
9/10 SPECIAL, 12 AND 13
POLES WITH MONOTUBE ARMS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL
ENGINEER

FHWA

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

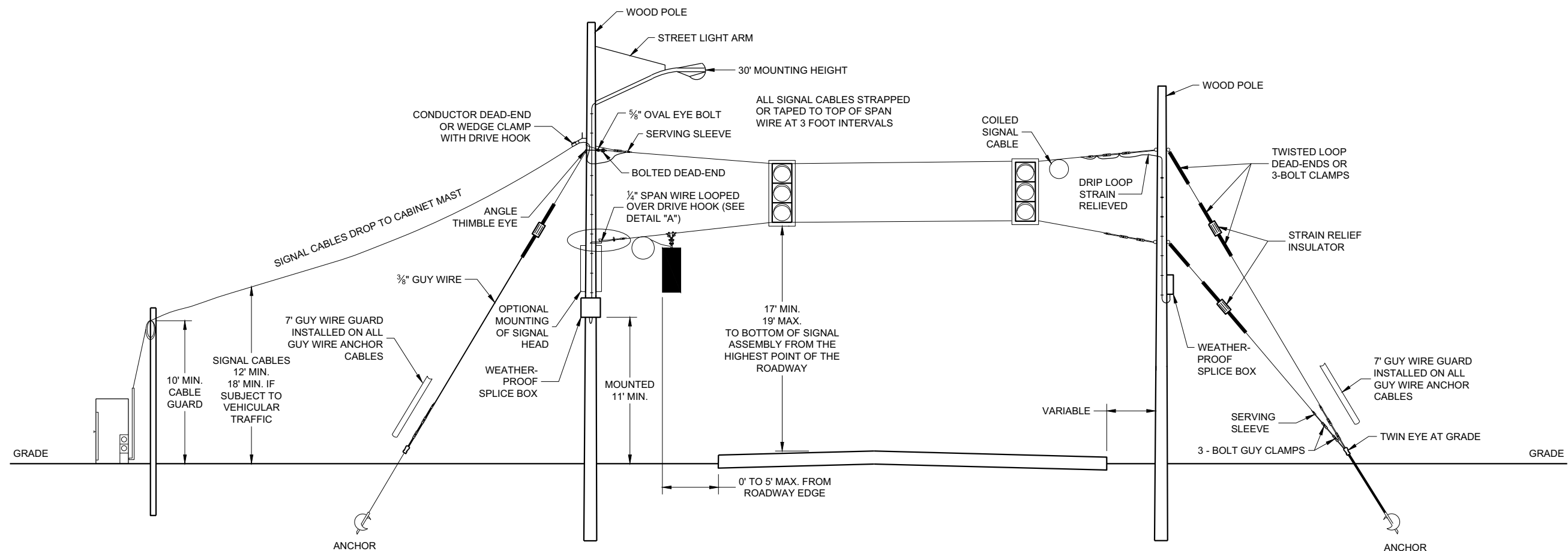


DETAIL "A"

GENERAL NOTES

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

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.
2. SIGNAL FACES:
 - A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
 - B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
 - C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
 - D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
3. SPAN WIRE:
 - A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED
 - B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
 - C. THE SIGNAL ASSEMBLY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



SPAN WIRE TEMPORARY SIGNALS

SPAN WIRE TEMPORARY TRAFFIC SIGNAL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2015 DATE	/s/ Ahmet Demerbilek STATE ELECTRICAL ENGINEER
FHWA	

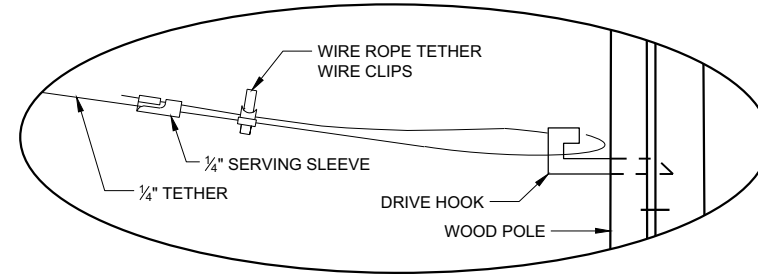
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SDD09G01 - 04a

SDD09G01 - 04a

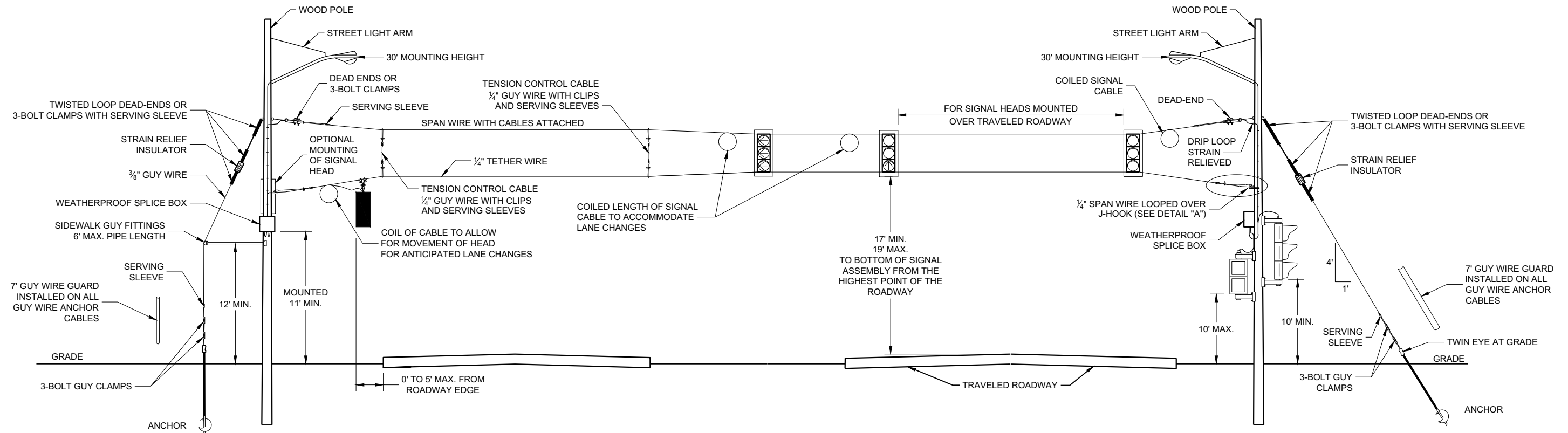
MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'



DETAIL "A"

GENERAL NOTES

- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
- WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.
 - SIGNAL FACES:
 - ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
 - EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
 - EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
 - NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
 - FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
 - SPAN WIRE:
 - EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED
 - SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
 - THE SIGNAL ASSEMBLY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



**SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS**

**SPAN WIRE TEMPORARY
TRAFFIC SIGNAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

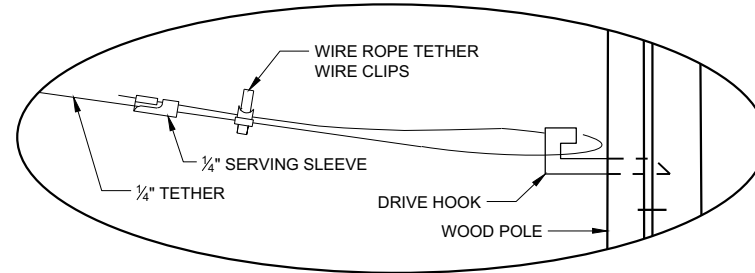
APPROVED
June 2015 /S/ Ahmet Demerbilek
DATE STATE ELECTRICAL ENGINEER

FHWA

SDD09G01 - 04b

SDD09G01 - 04b

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

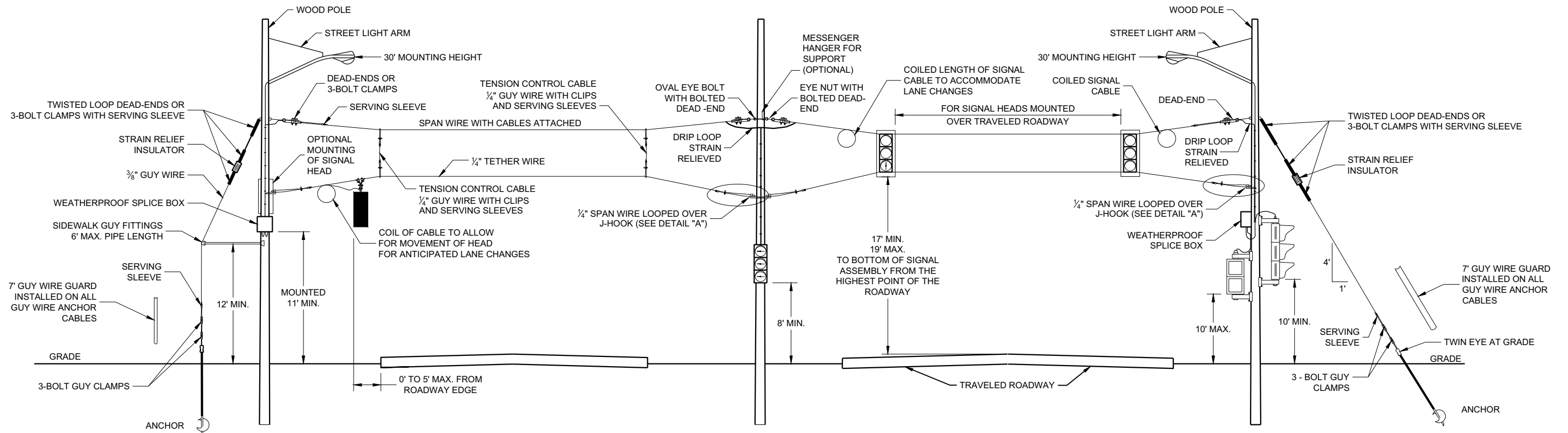


DETAIL "A"

GENERAL NOTES

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2. SIGNAL FACES:
 - A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
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 - C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
 - D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
 - E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
3. SPAN WIRE:
 - A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED
 - B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
 - C. THE SIGNAL ASSEMBLY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



**SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS**

**SPAN WIRE TEMPORARY
TRAFFIC SIGNAL**

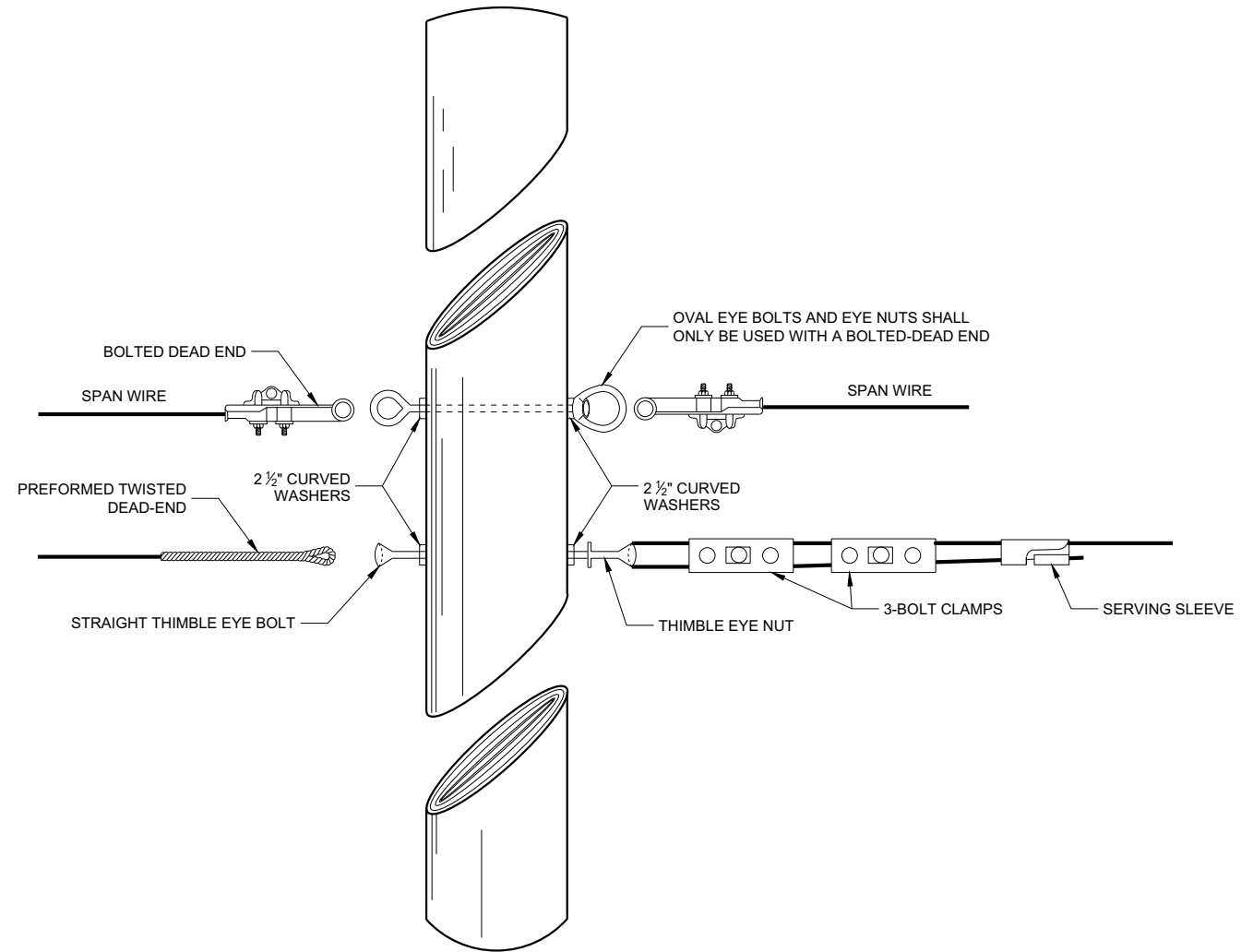
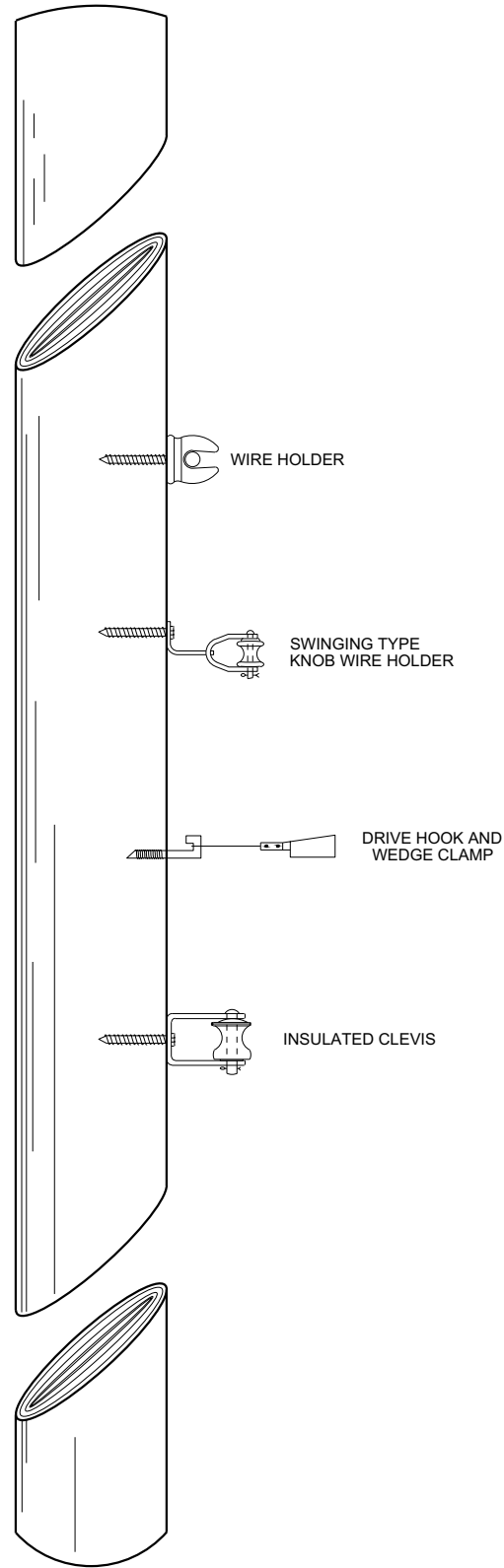
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

SDD09G01 - 04c

SDD09G01 - 04c

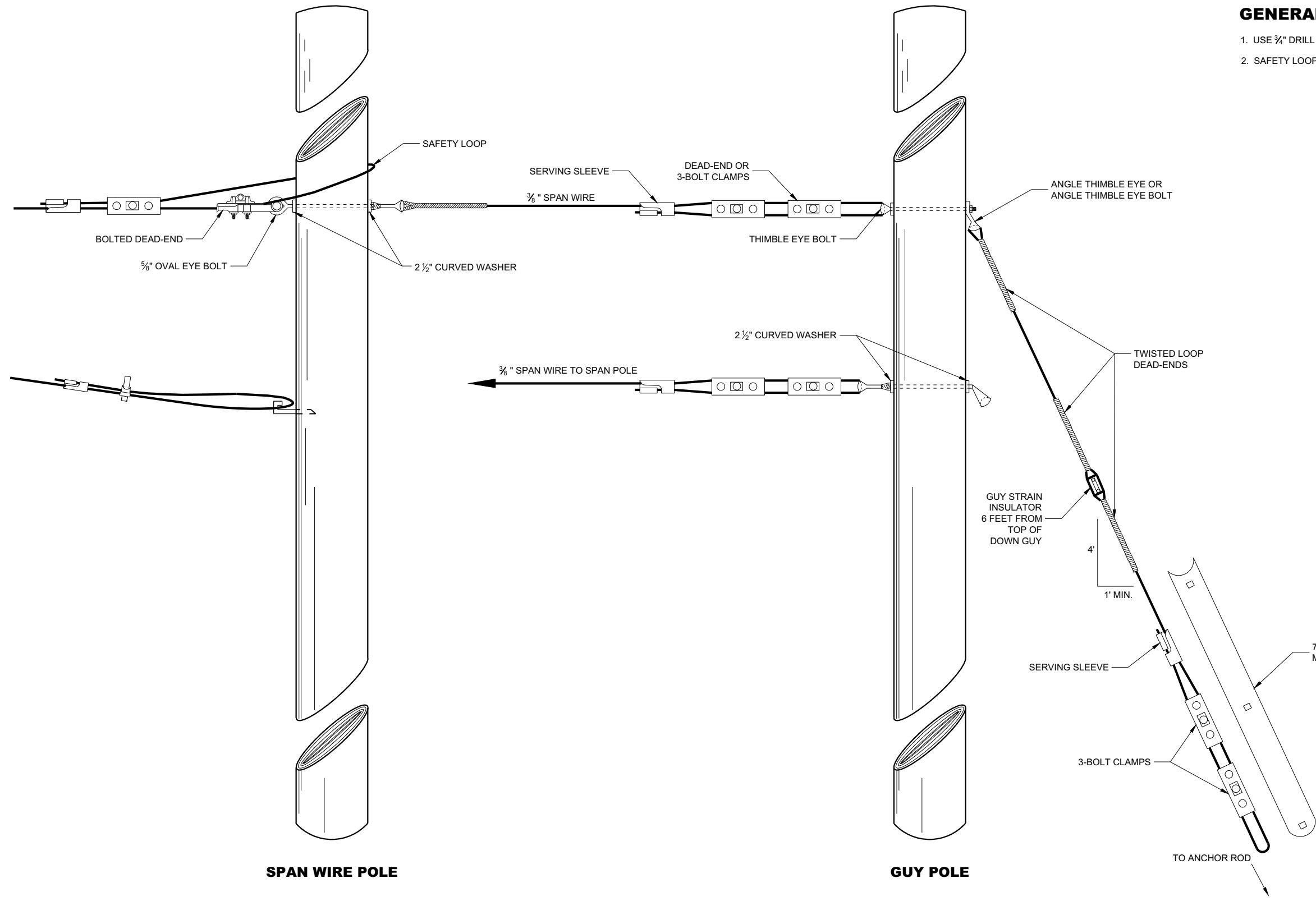


**SPAN WIRE TEMPORARY
TRAFFIC SIGNAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015 /S/ Ahmet Demerbilek
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA



GENERAL NOTES

1. USE 3/4" DRILL IN WOOD POLE TO PROVIDE FOR 5/8" BOLTS.
2. SAFETY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.

SPAN WIRE POLE

GUY POLE

TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015 DATE /S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVELOPMENT ENGINEER

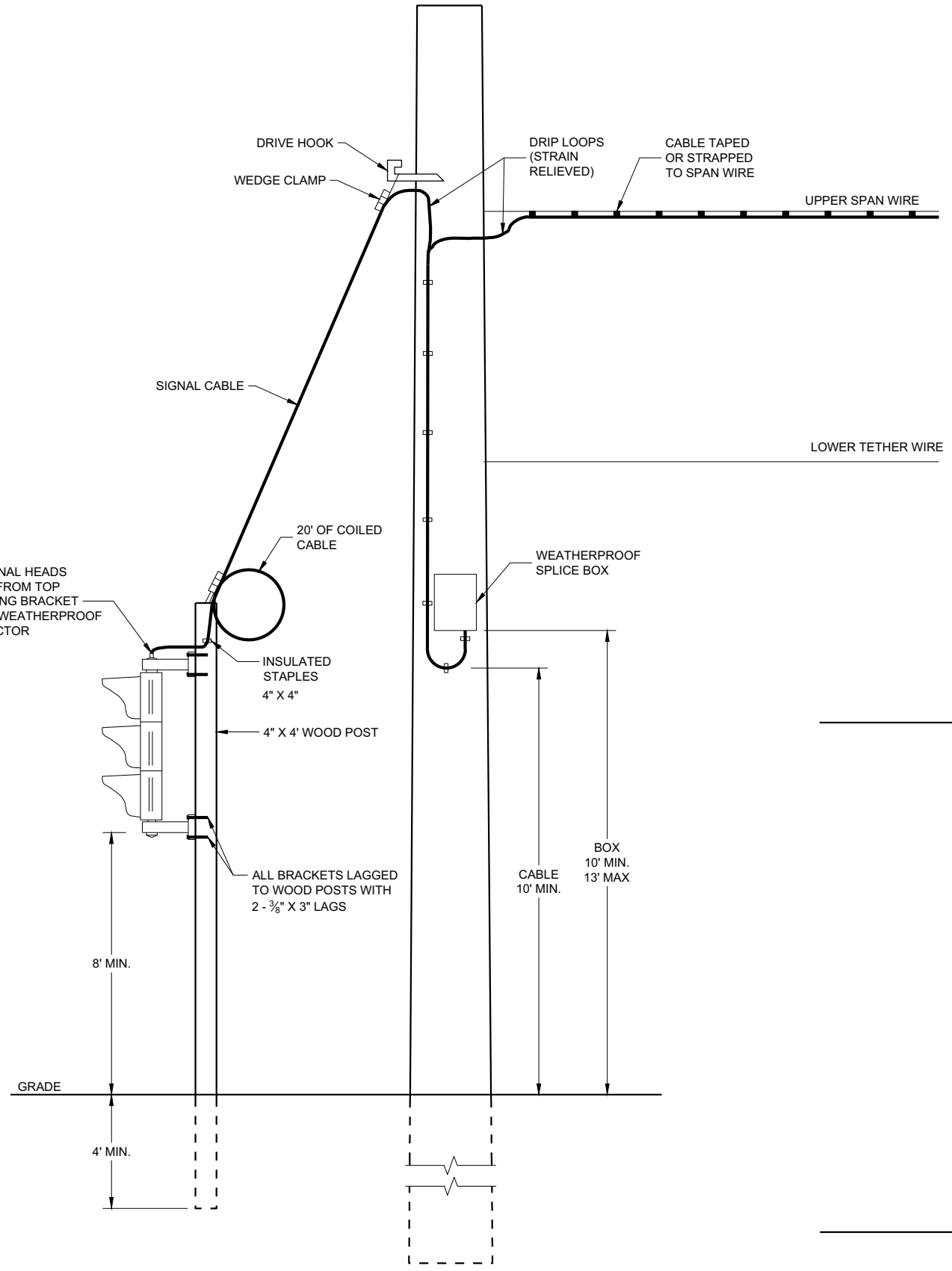
FHWA

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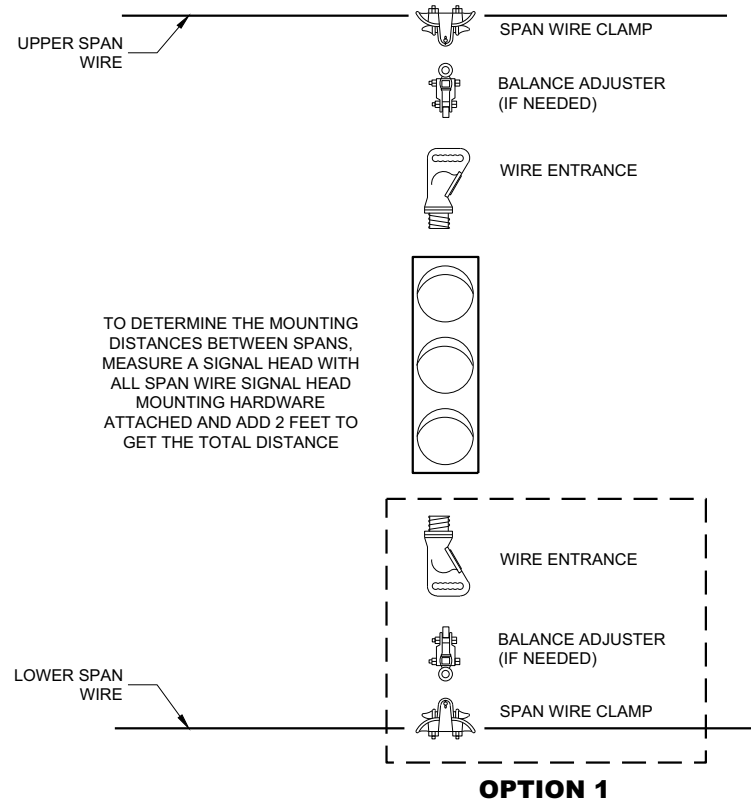
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SDD 09G01 - 4e

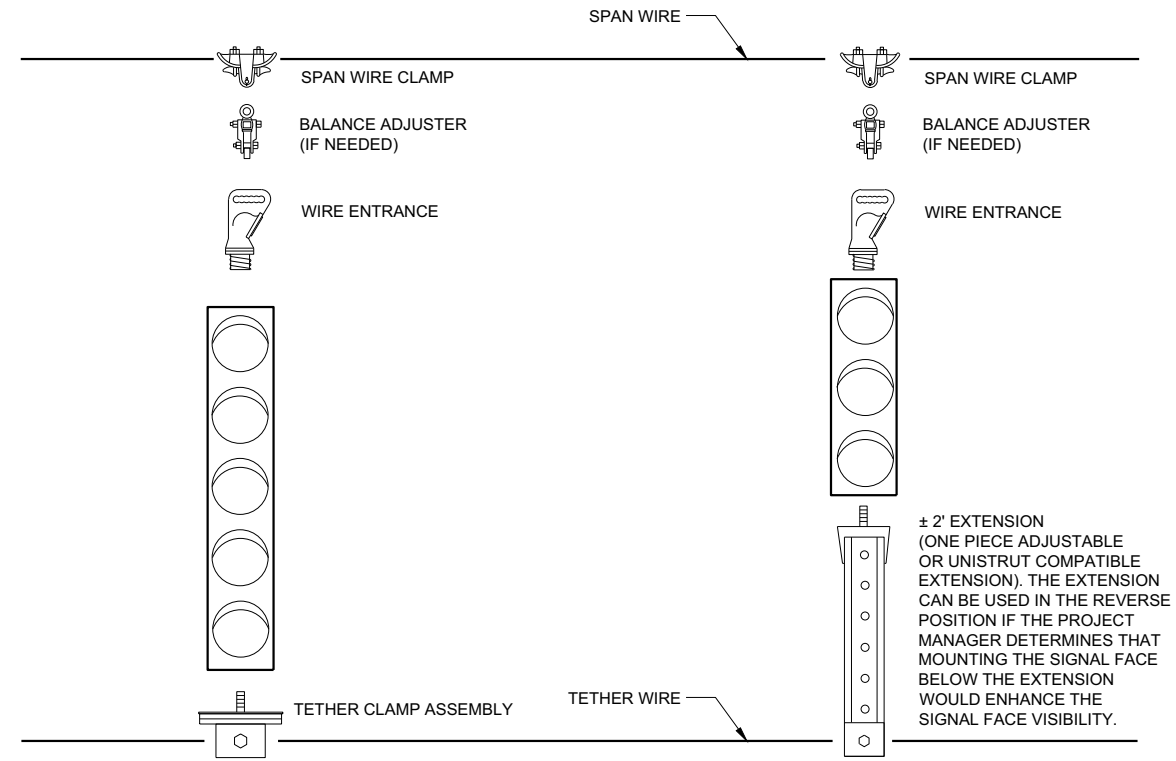
SDD 09G01 - 4e



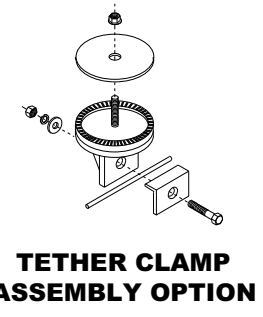
TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL



TYPICAL SPAN WIRE MOUNTING HARDWARE

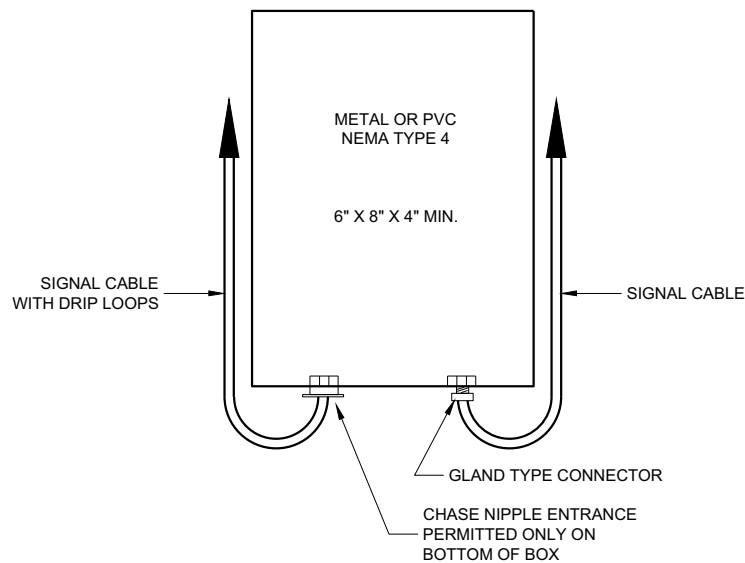
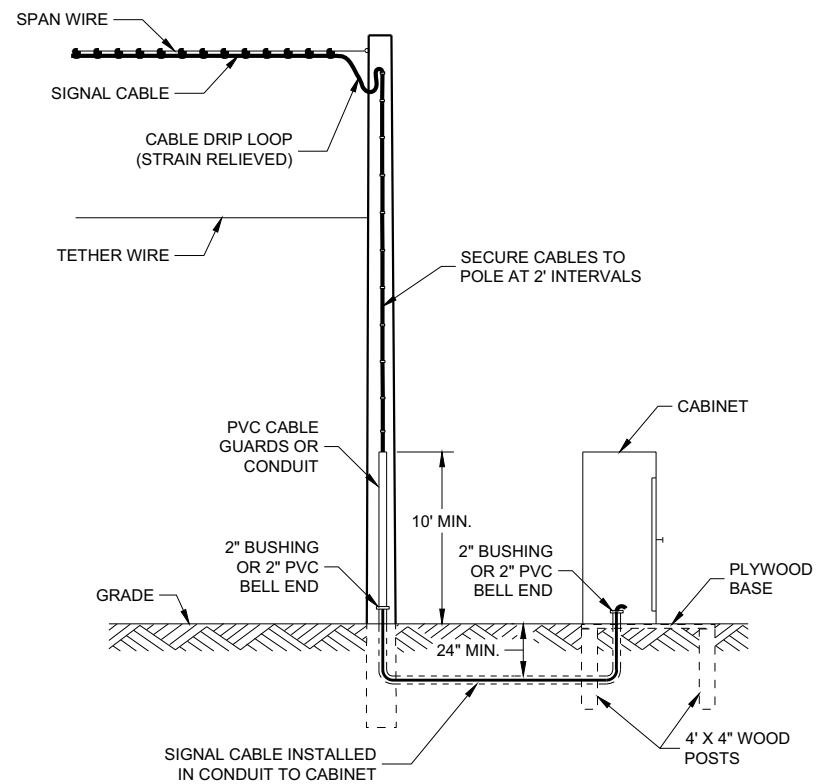


5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE

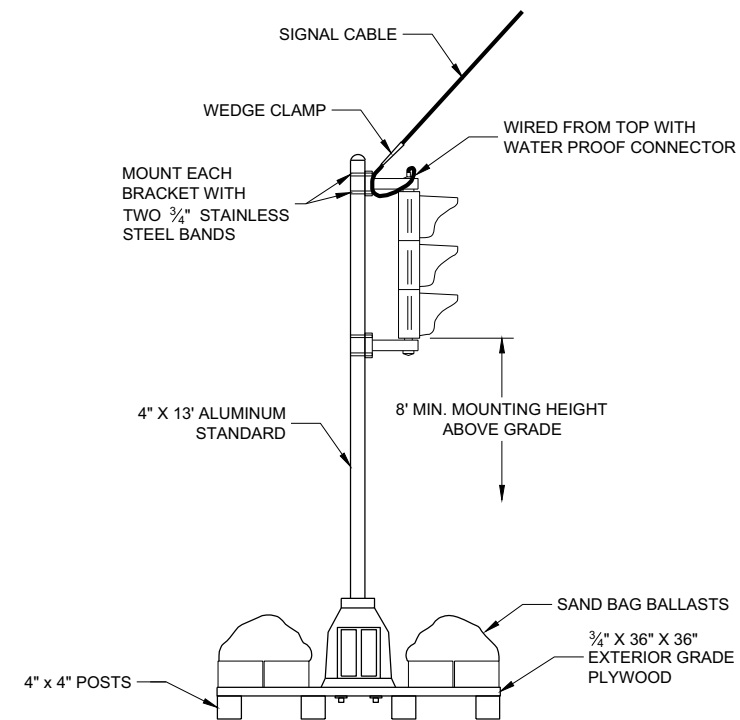


TETHER CLAMP ASSEMBLY OPTION

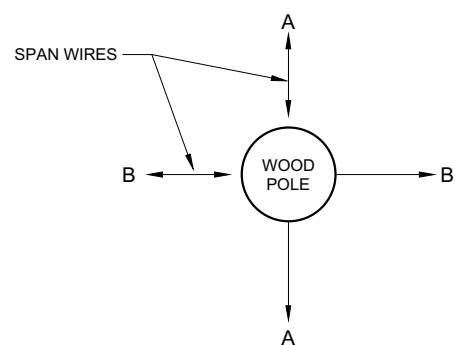
SPAN WIRE TEMPORARY TRAFFIC SIGNAL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2015 DATE	/S/ Ahmet Demerbilek ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



SPLICE BOX

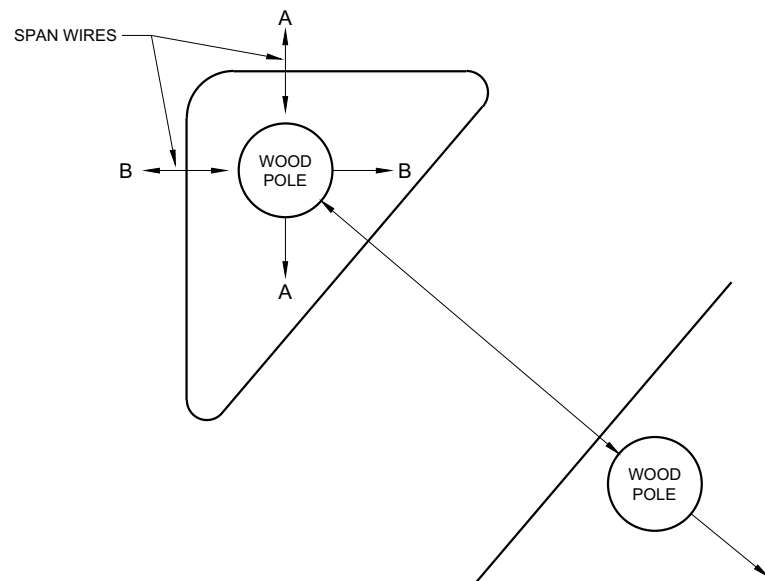


TYPICAL SKID TYPE TEMPORARY

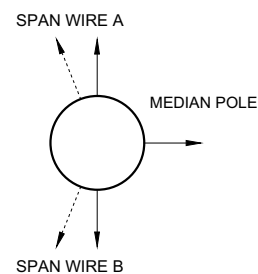


CORNER POLES

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



ISLAND POLES



MEDIAN POLES

GUY AWAY FROM INTERSECTION OR IN OPPOSITE DIRECTION OF THE SPAN LOADING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

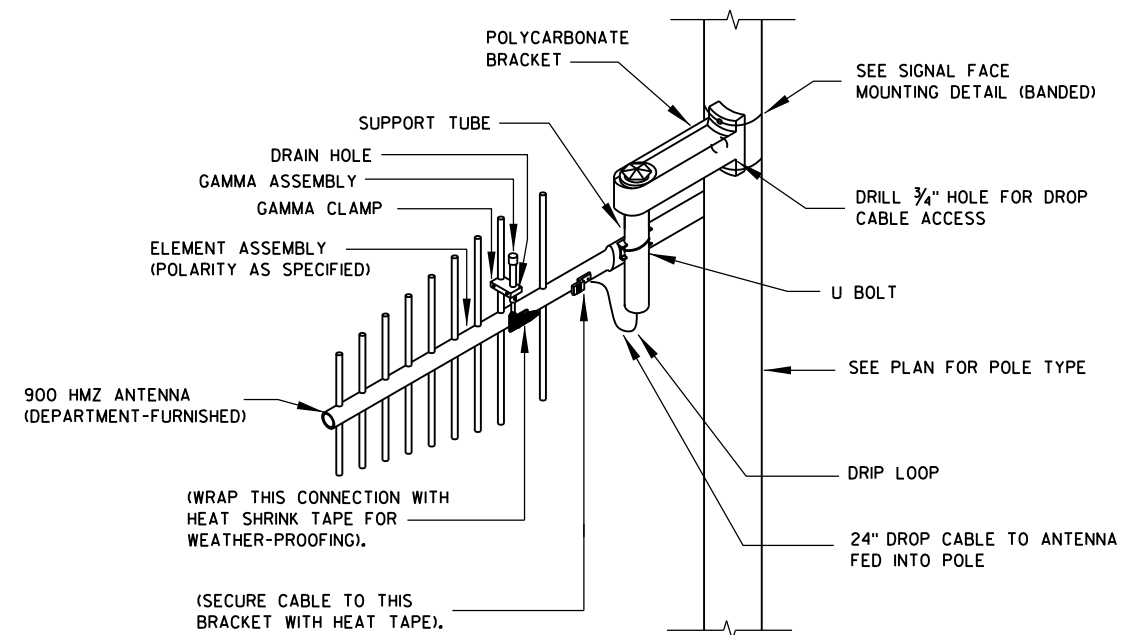
APPROVED
June 2015 /S/ Ahmet Demerbilek
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

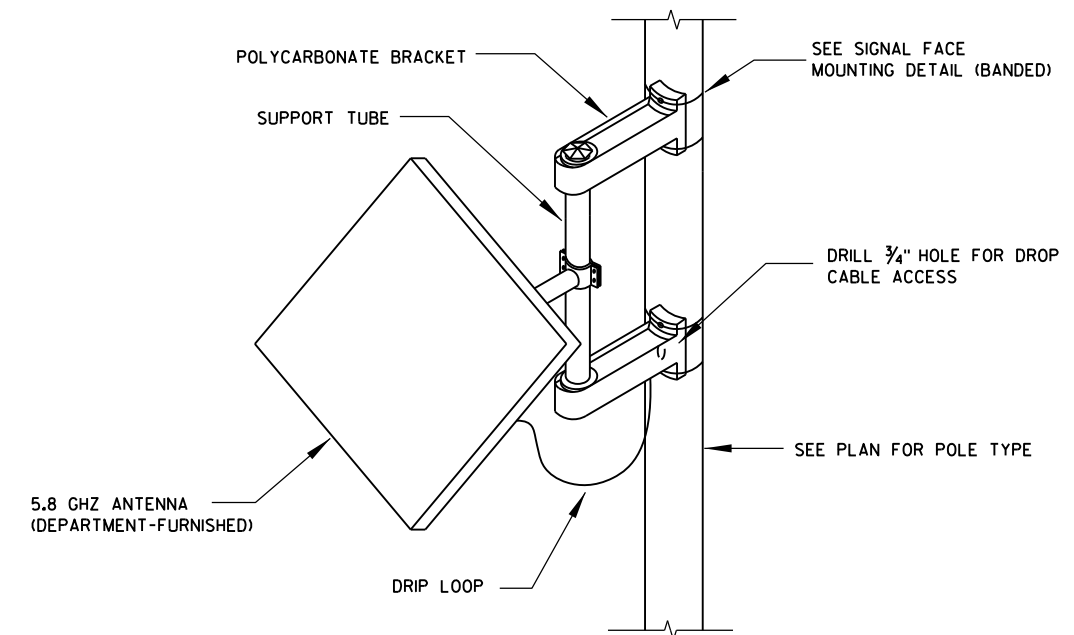
GENERAL NOTES

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

ALL MOUNTING EQUIPMENT REQUIRED IS INCIDENTAL TO BID ITEM "INSTALL WIRELESS ANTENNA".



900 MHZ ANTENNA



5.8 GHZ ANTENNA

INSTALL WIRELESS ANTENNA

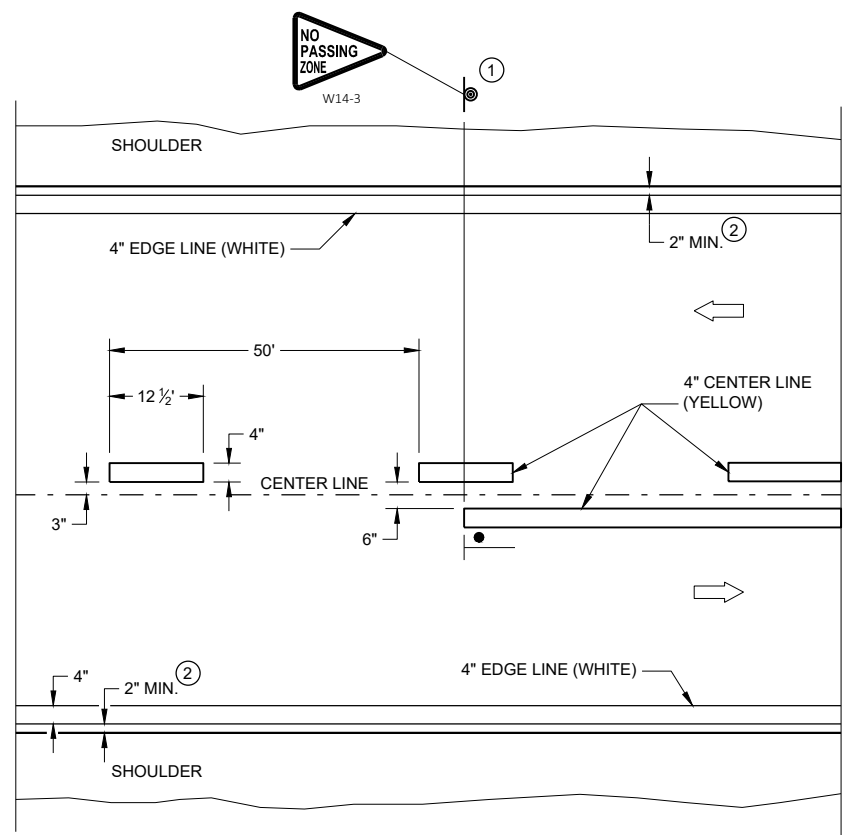
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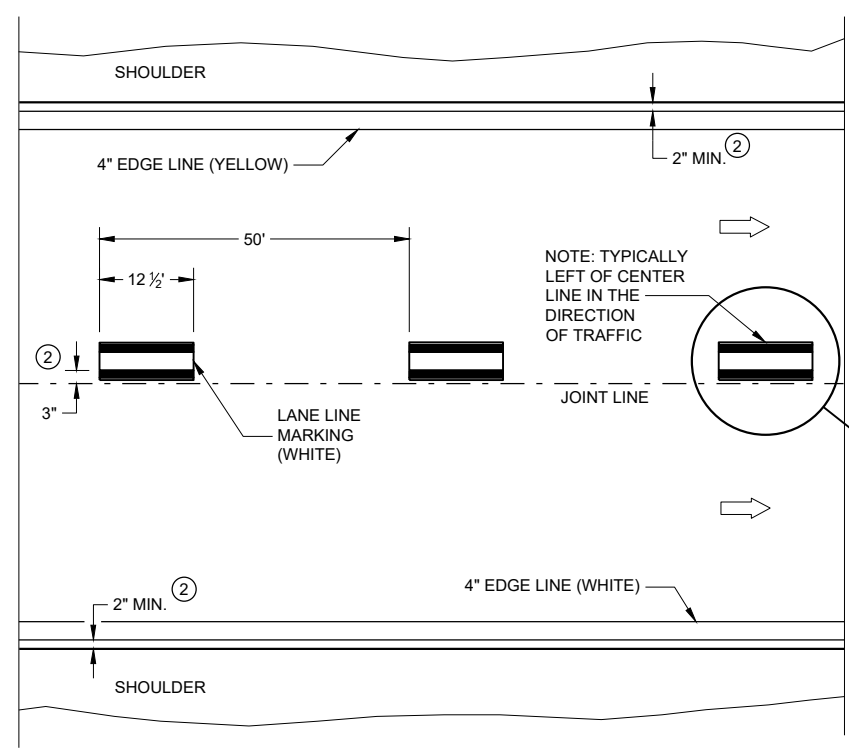
S.D.D. 9 H 16-1

S.D.D. 9 H 16-1

INSTALL WIRELESS ANTENNA	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

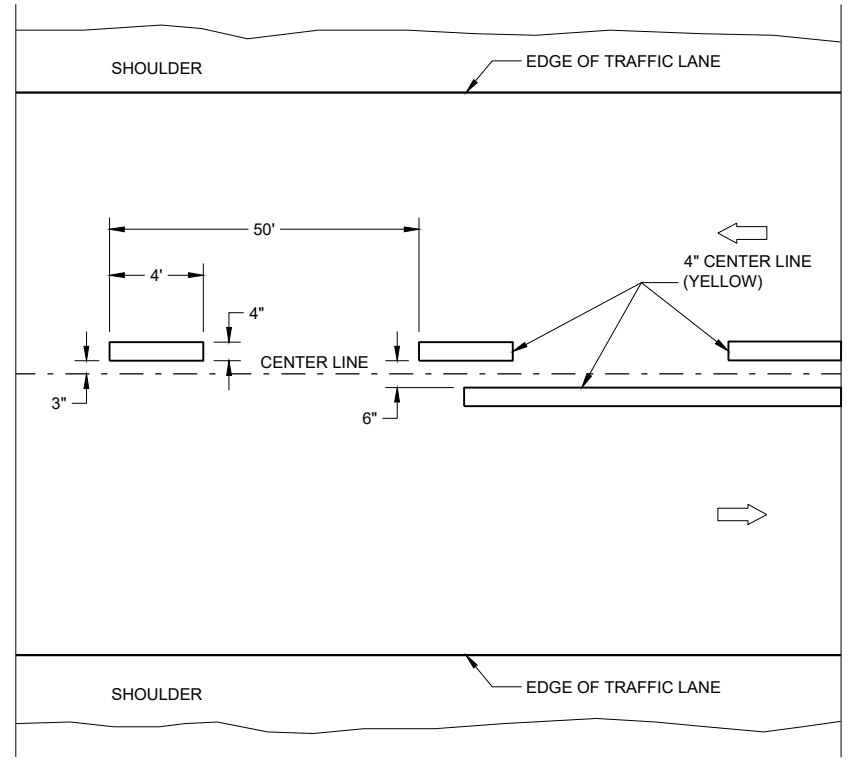


TWO WAY TRAFFIC

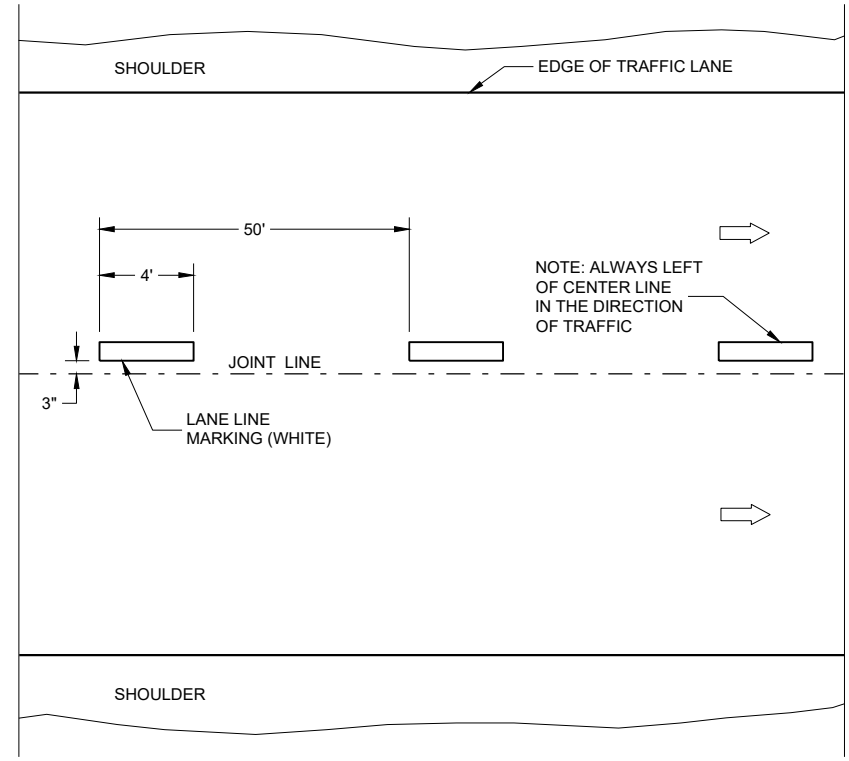


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

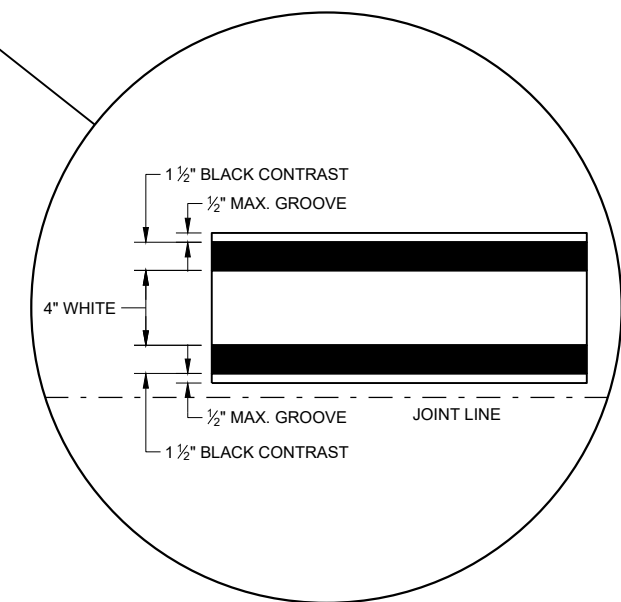
GENERAL NOTES

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

LEGEND

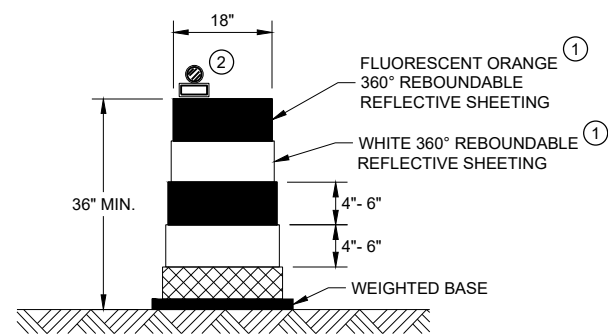
- |• "T" MARKING
- ⊙ SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC



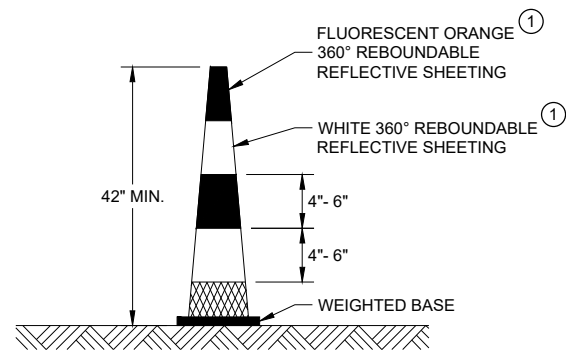
LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED
 February 2020 /S/ Matthew Rauch
 DATE STATEWIDE SIGNING AND MARKING ENGINEER
 FHWA

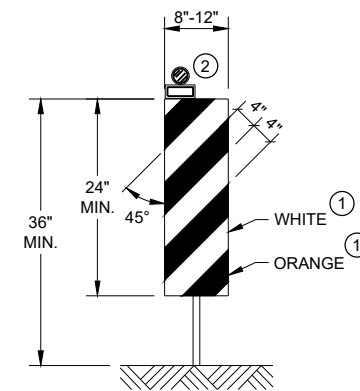


DRUM



42" CONE

DO NOT USE IN TAPERS
 1/2 SPACING OF DRUMS

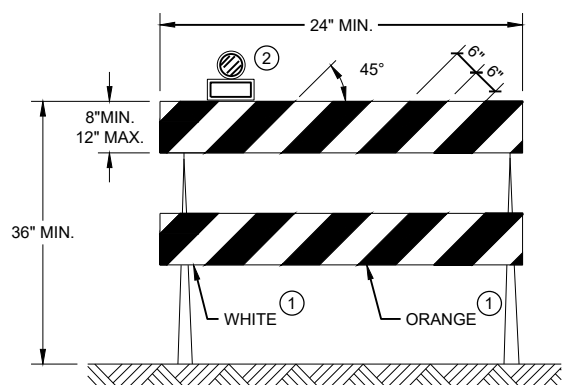


VERTICAL PANEL

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

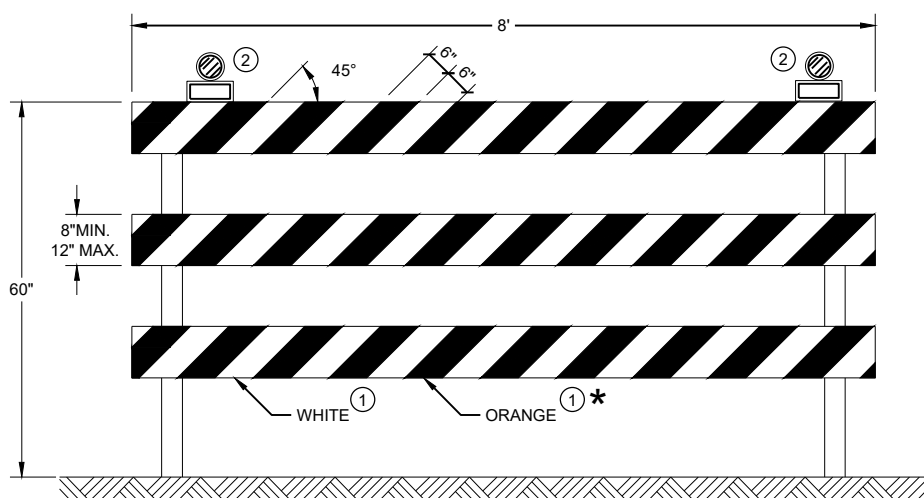
GENERAL NOTES

- 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 II BARRICADE

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

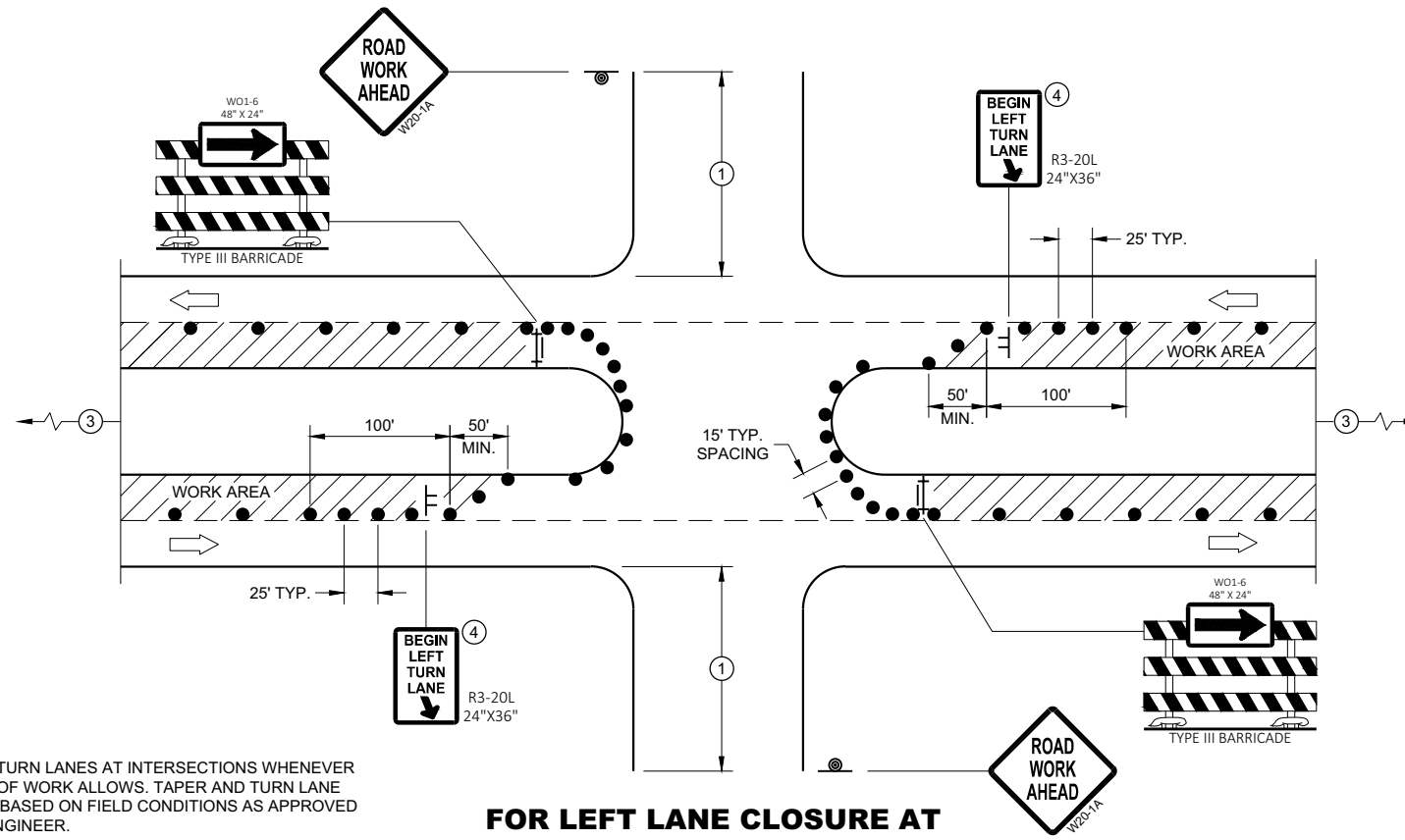


TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



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

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

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

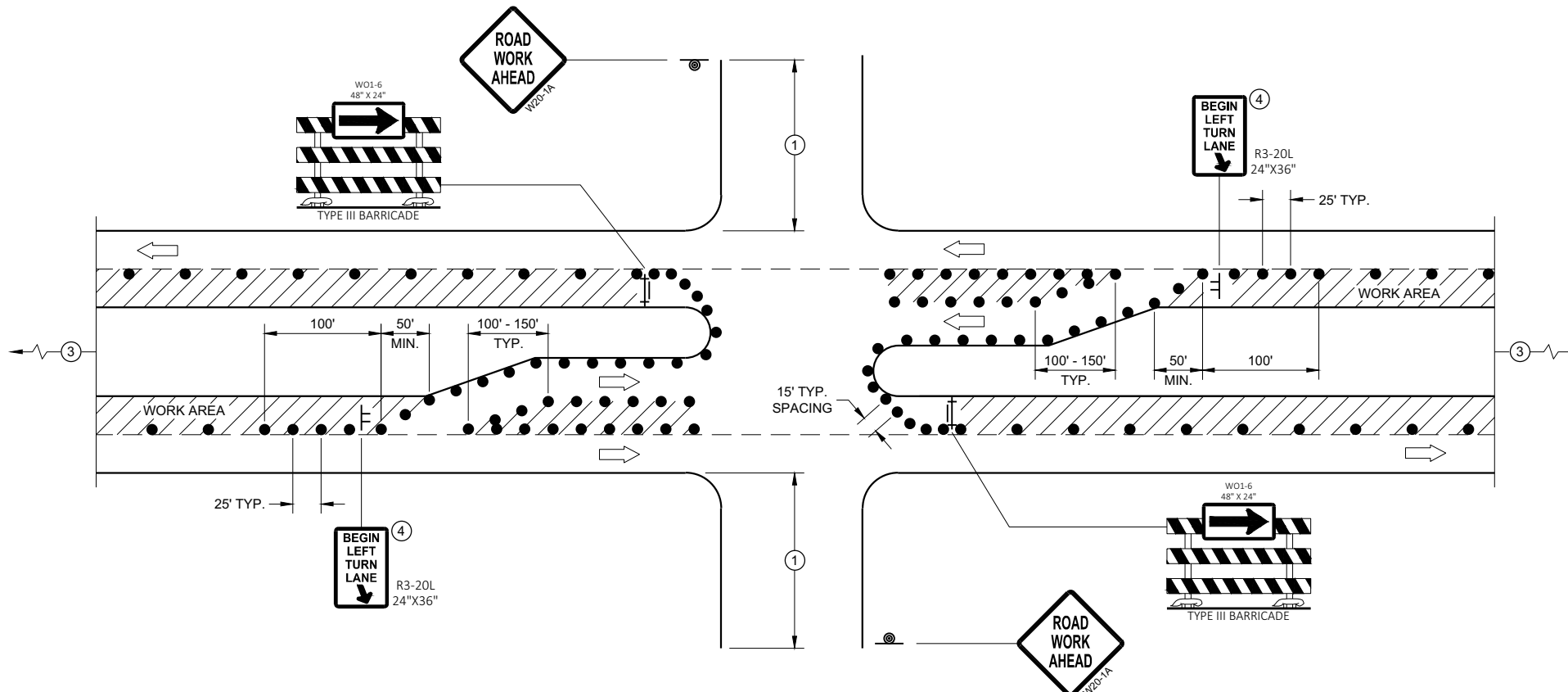
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.
- ② ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- ④ MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

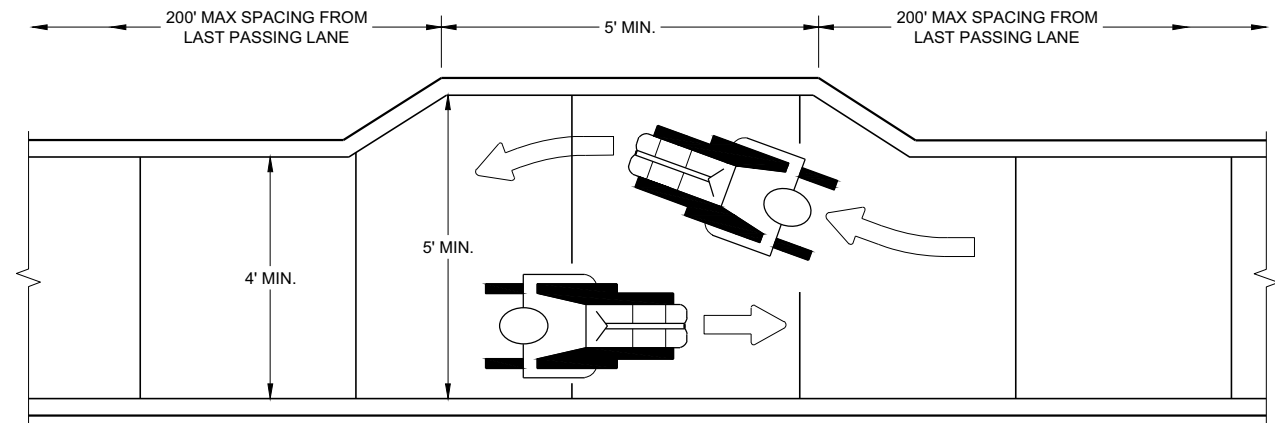


FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)

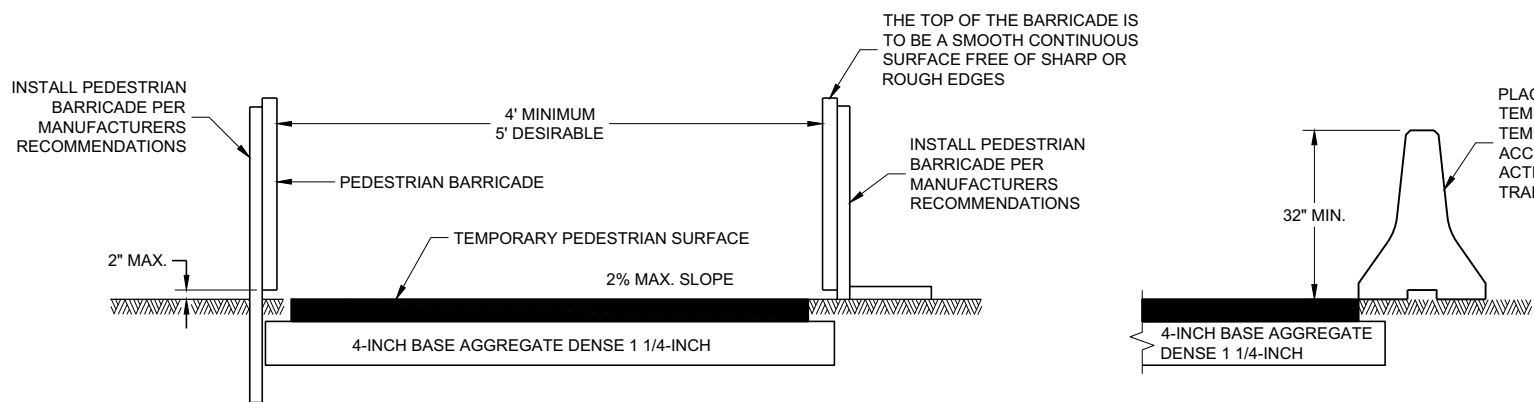
LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

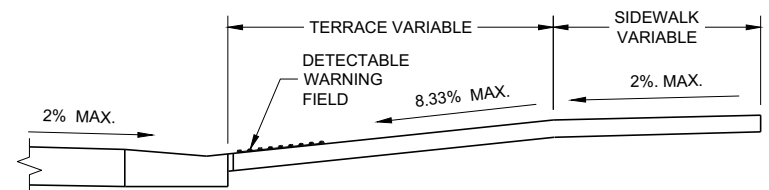
TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



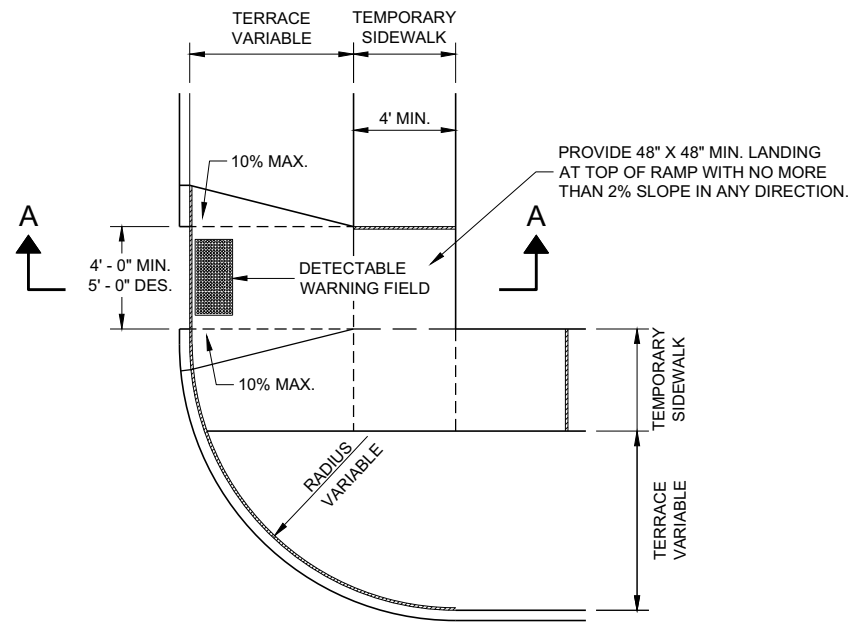
NARROW SIDEWALK PASSING DETAIL



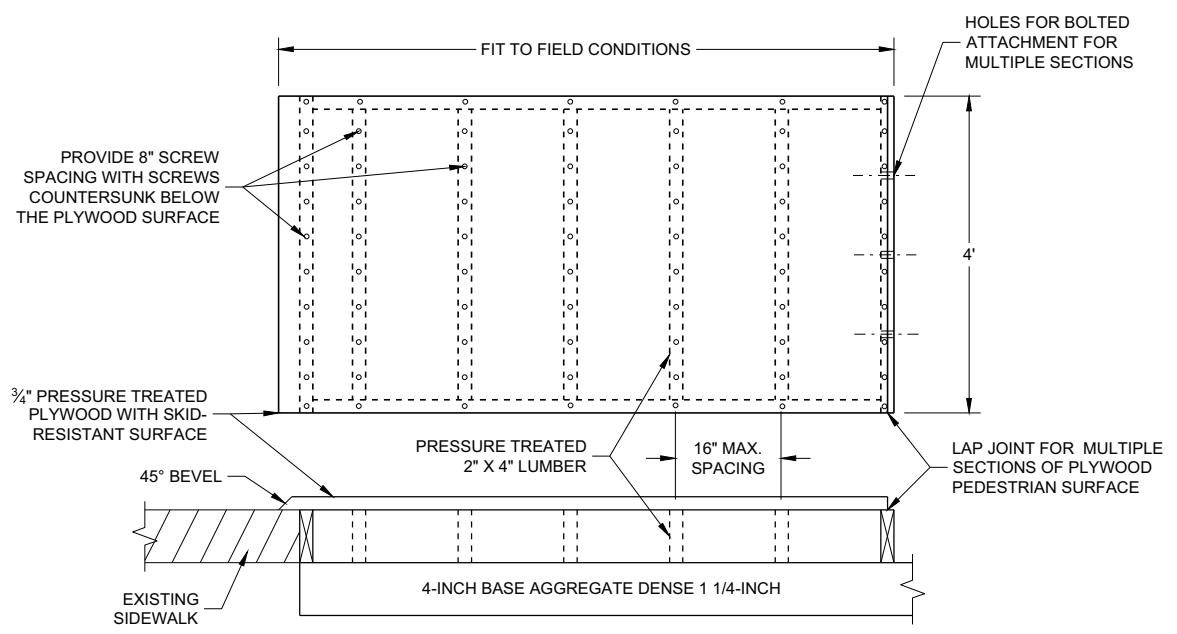
TEMPORARY PEDESTRIAN ACCESS



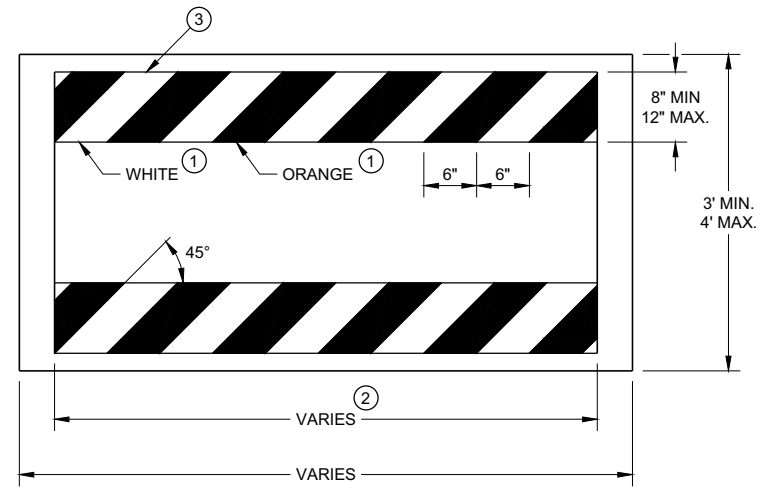
SECTION A - A



**PLAN VIEW
TEMPORARY TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)**



TEMPORARY PEDESTRIAN SURFACE PLYWOOD

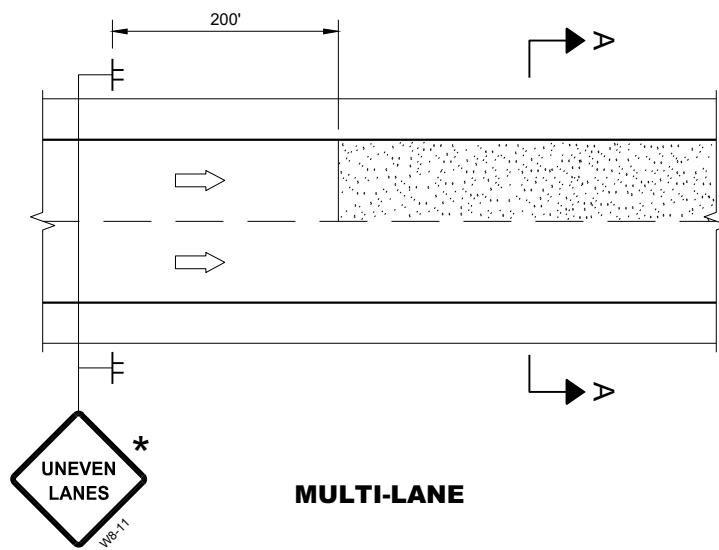


TEMPORARY PEDESTRIAN BARRICADE *

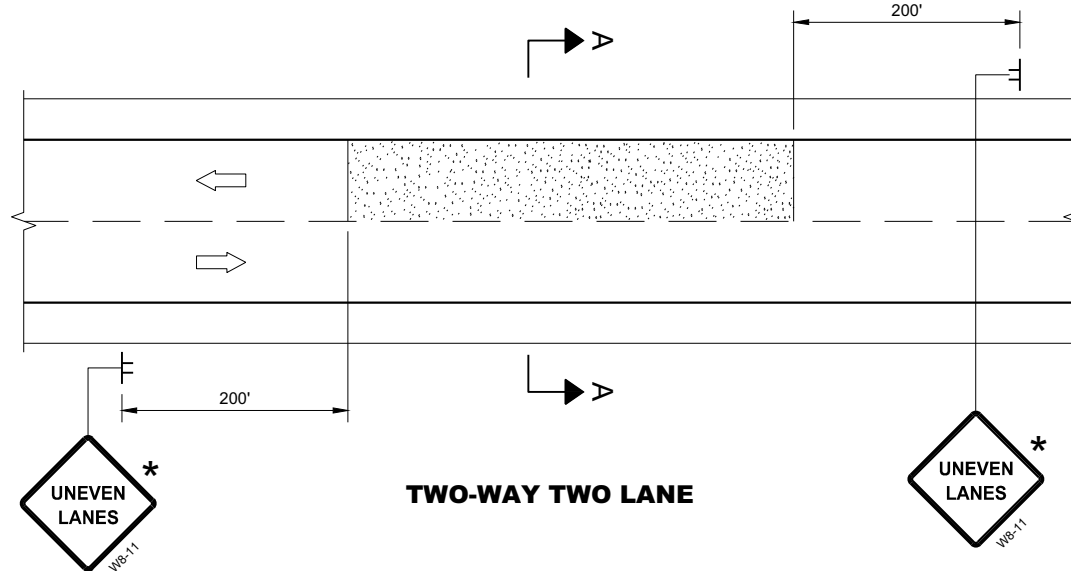
GENERAL NOTES

- BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST
- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.
- ③ PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.
- * USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.

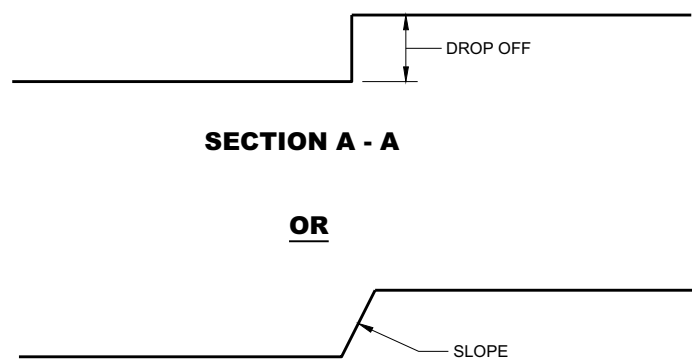
TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2019 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



MULTI-LANE



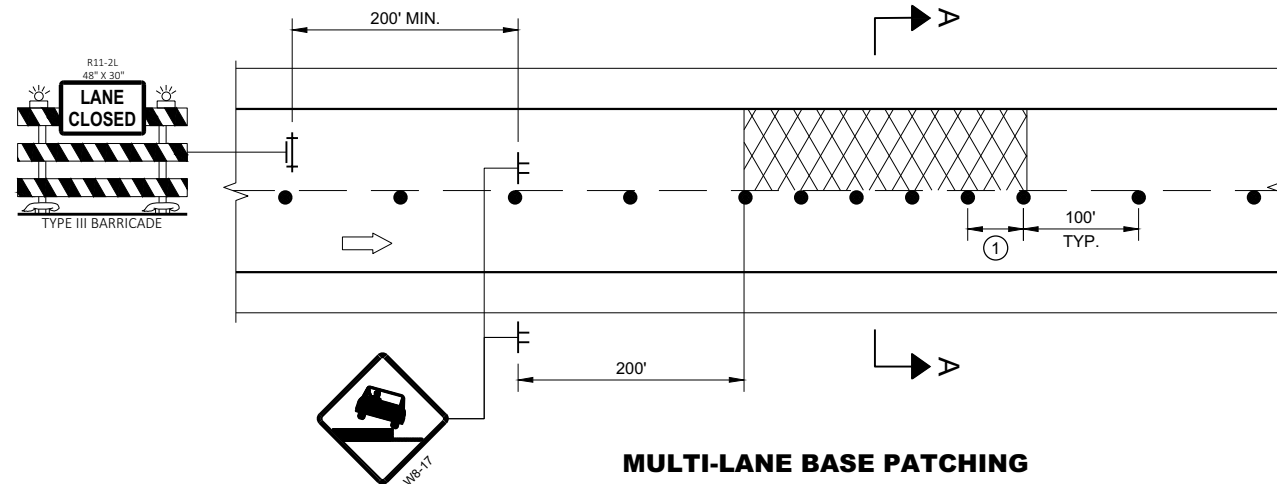
TWO-WAY TWO LANE



SECTION A - A

OR

SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

GENERAL NOTES

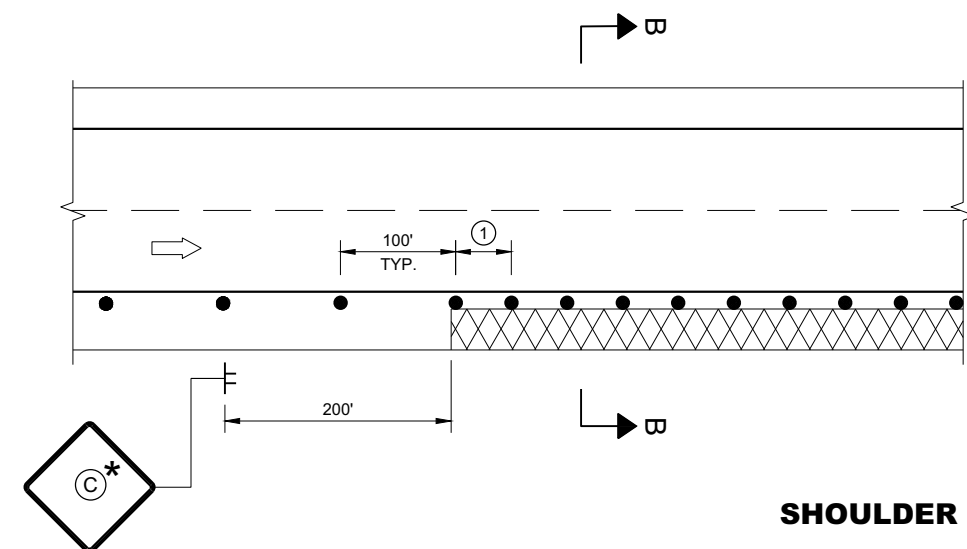
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- * IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.
- ① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

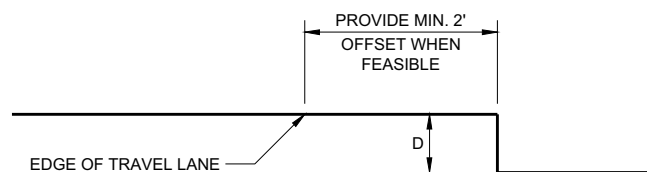
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

6

6



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

SDD 15D39 - 02

SDD 15D39 - 02









**TRAFFIC CONTROL,
DROP-OFF SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Andrew Heidtke
DATE DATE WORK ZONE ENGINEER

FHWA

LEGEND

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON ANY "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

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

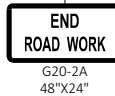
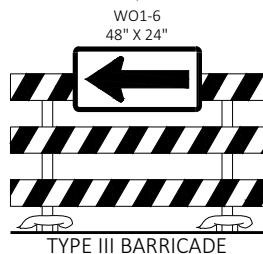
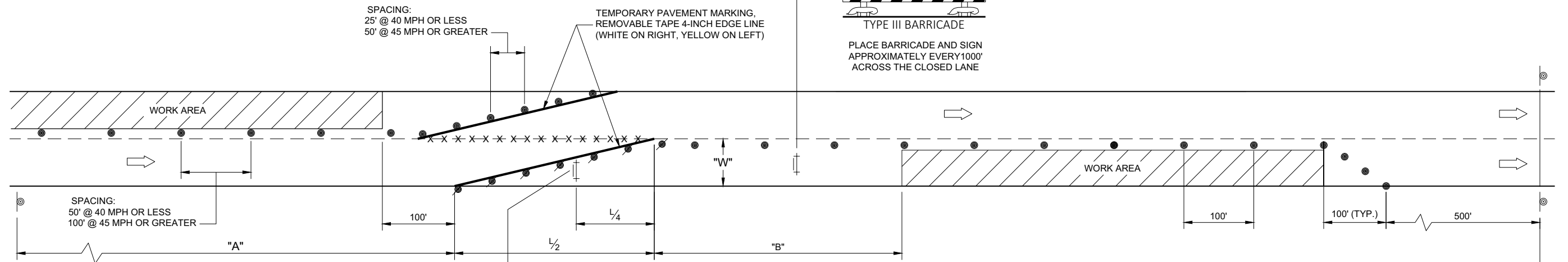
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

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

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

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER ^{L/2} W, LATERAL OFFSET (FT)					BUFFER SPACE (B) FEET
		10	11	12	13	14	
25	200	52	57	63	68	73	55
30	200	75	83	90	98	105	85
35	350	102	112	123	133	143	120
40	350	133	133	133	133	143	170
45	500	225	248	270	293	315	220



* USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED

TRAFFIC CONTROL, FULL LANE SHIFT, NON-FREEWAY/ EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 /S/ Andrew Heidtke
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

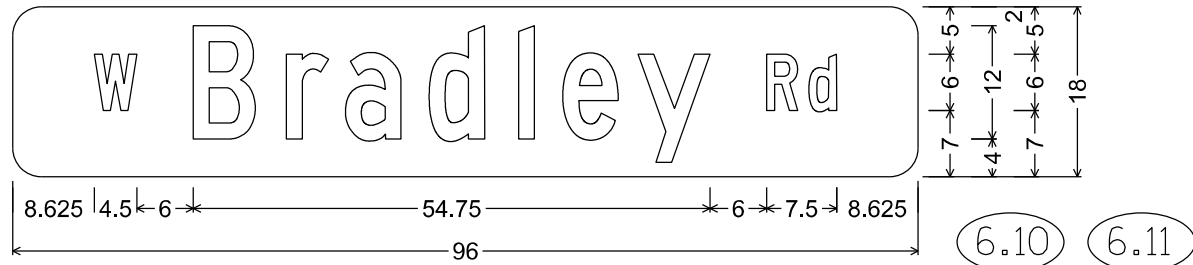
FHWA

SDD 15D40 - 02a

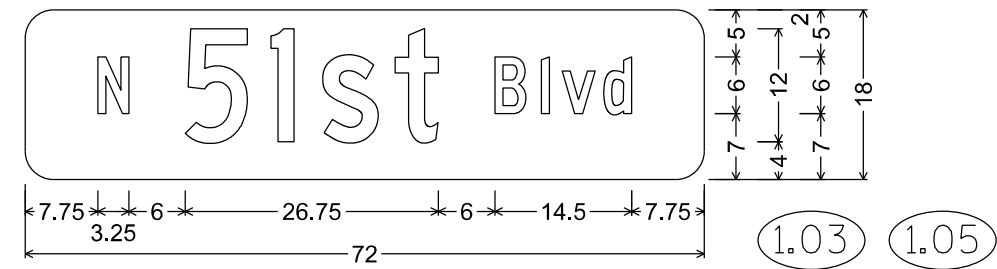
SDD 15D40 - 02a

NOTES

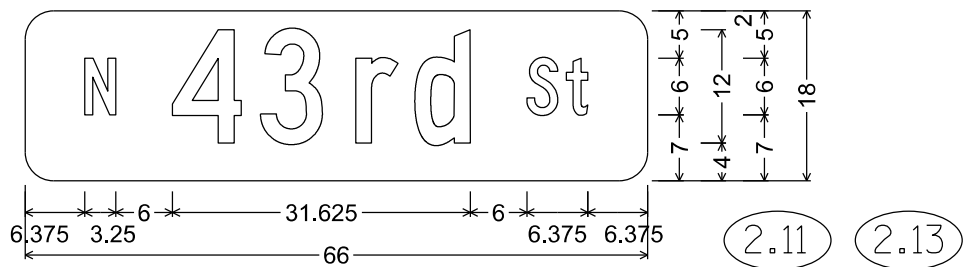
1. All Signs Type II - Type H Reflective
2. Color:
Background - Green
Message - White
3. Message Series - C except as noted



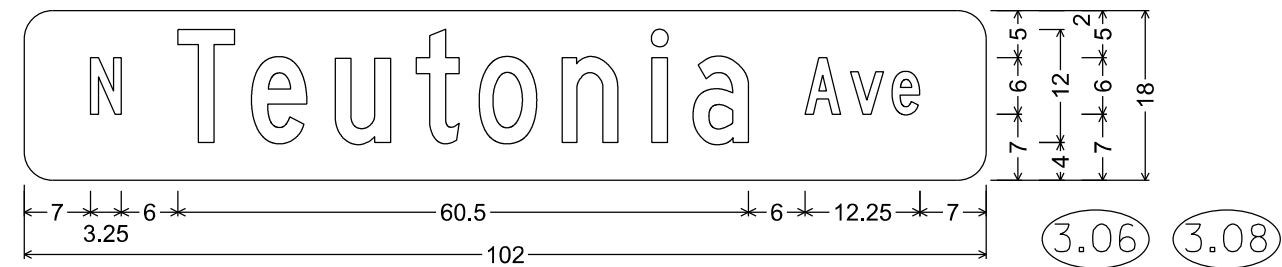
M1-94H; 3.000" Radius, No border



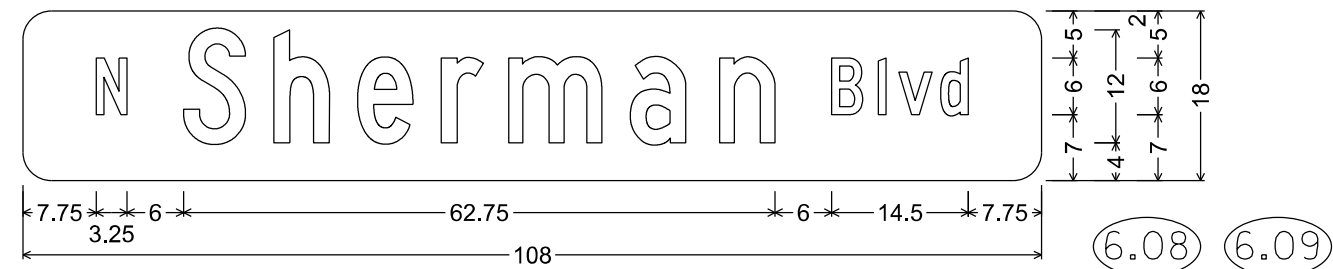
M1-94H; 3.000" Radius, No border



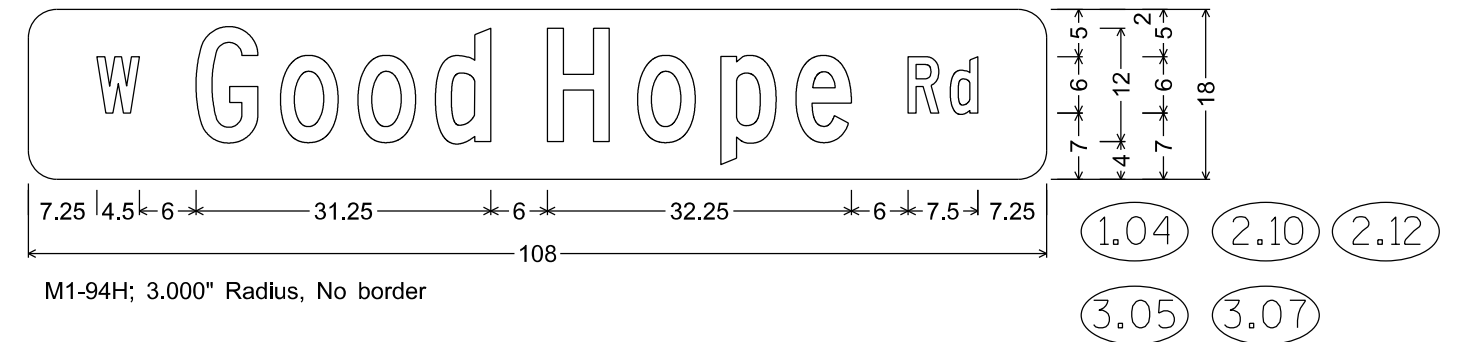
M1-94H; 3.000" Radius, No border



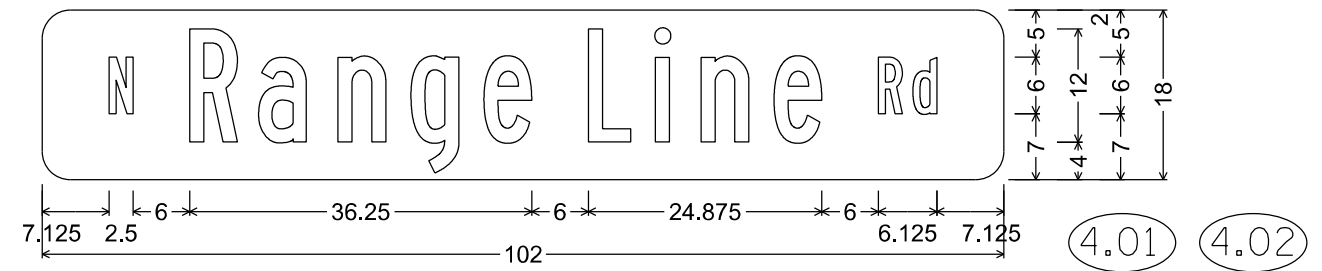
M1-94H; 3.000" Radius, No border



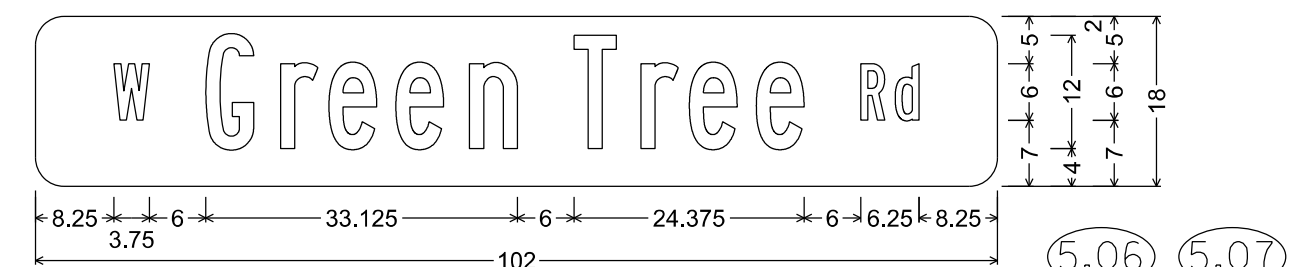
M1-94H; 3.000" Radius, No border



M1-94H; 3.000" Radius, No border



M1-94H; 3.000" Radius, No border
"N", B; "Range", B; "Line", B; "Rd", B

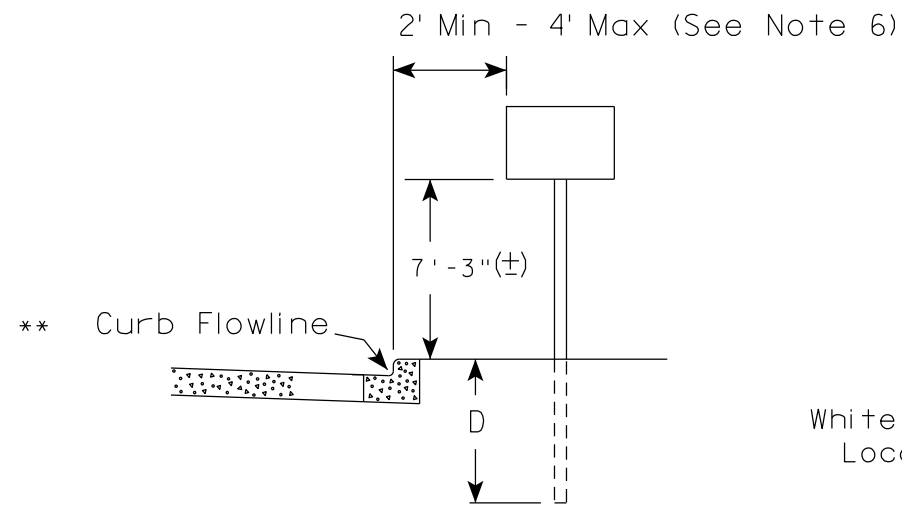


M1-94H; 3.000" Radius, No border
"W", B; "Green", B; "Tree", B; "Rd", B

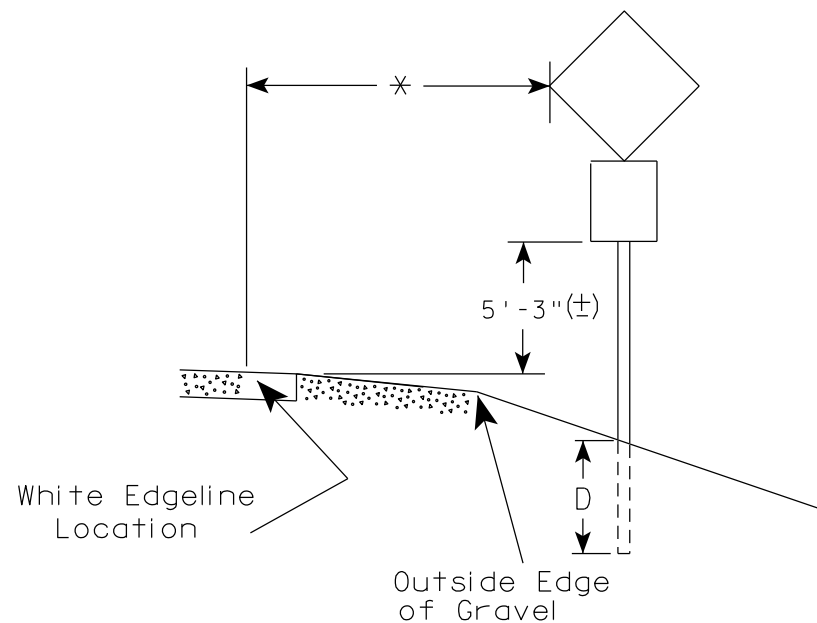
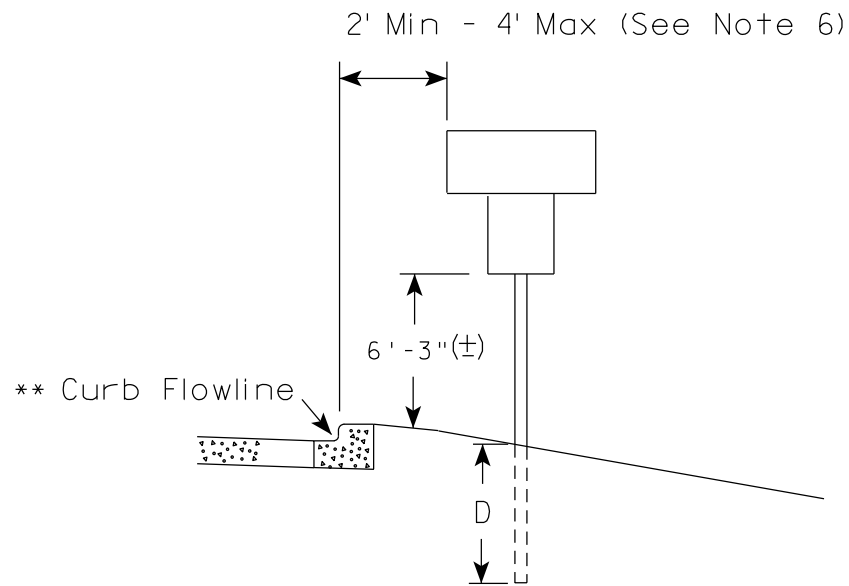
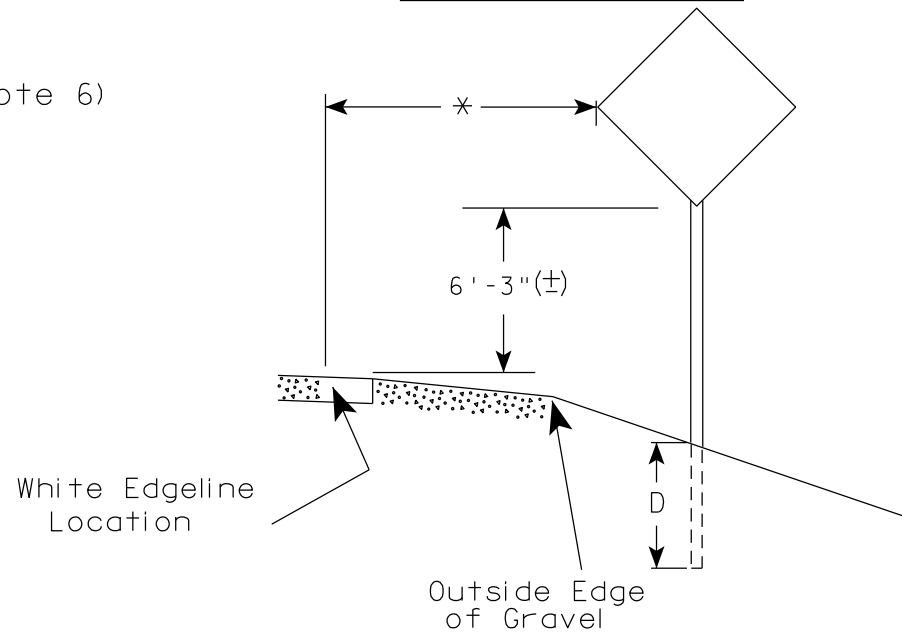


M1-94H; 3.000" Radius, No border

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.

POST EMBEDMENT DEPTH

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

* * 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.

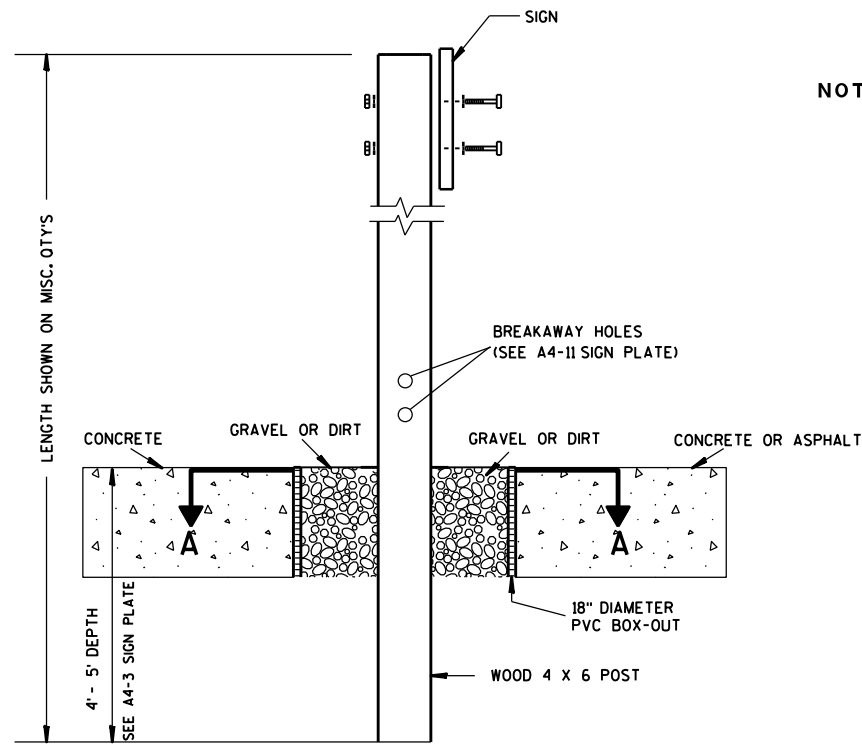
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

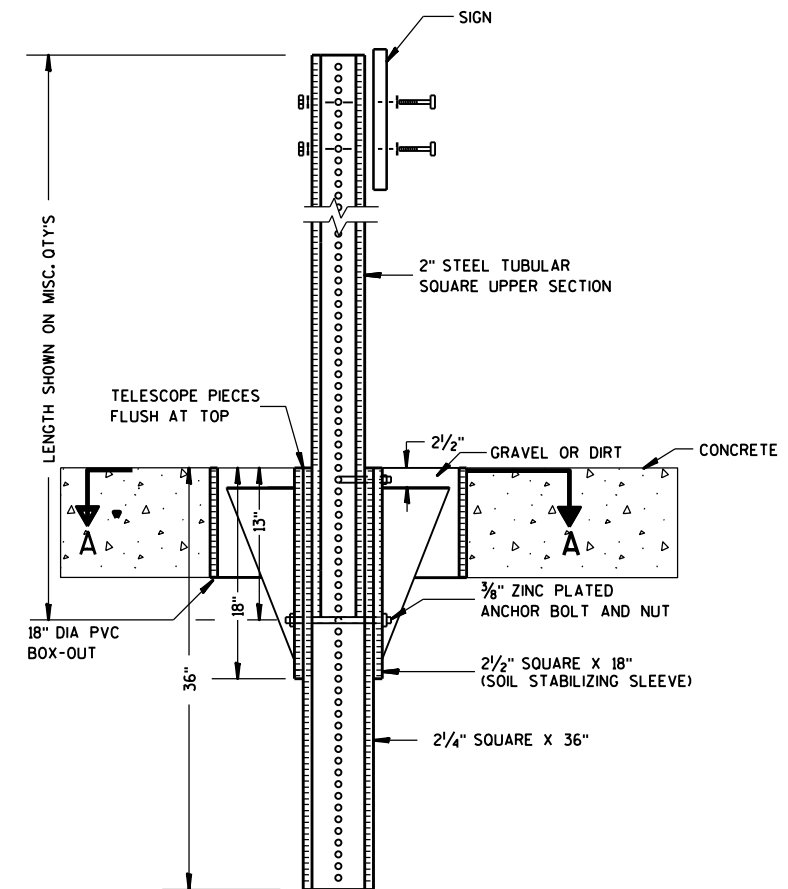
DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

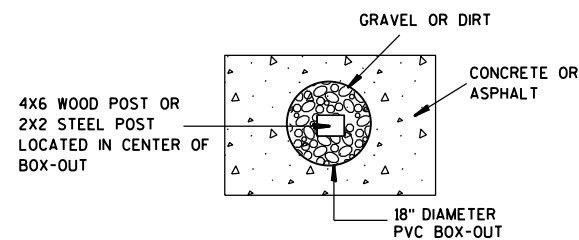
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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

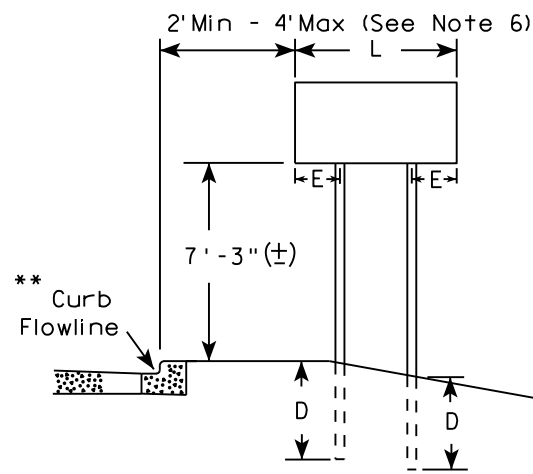
FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

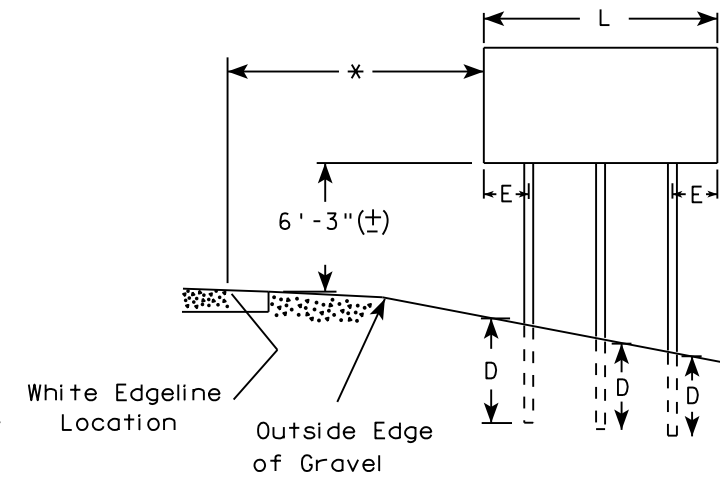
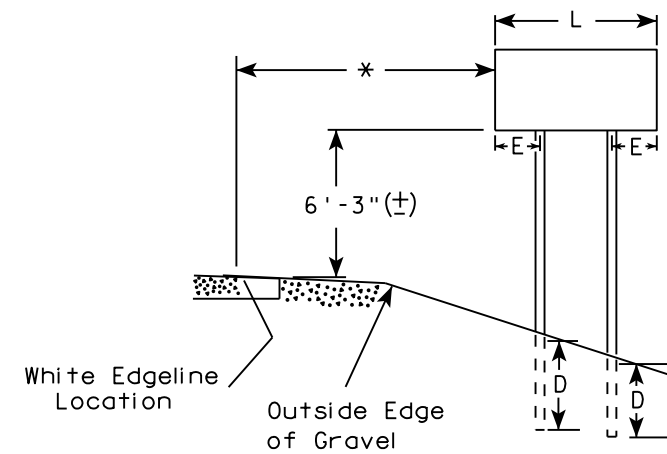
GENERAL NOTES

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" (±).

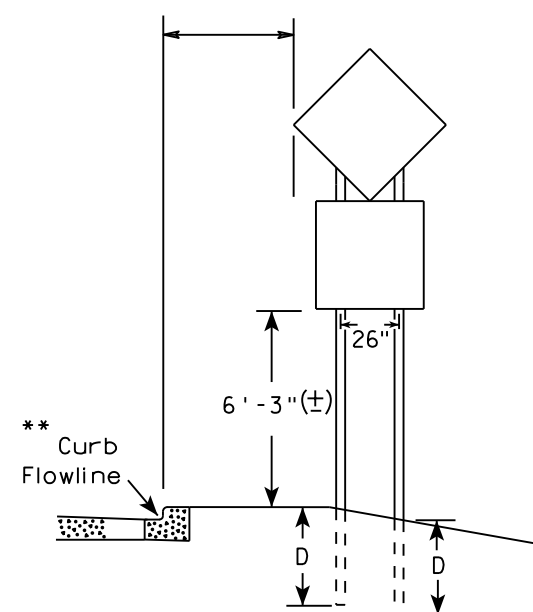
URBAN AREA



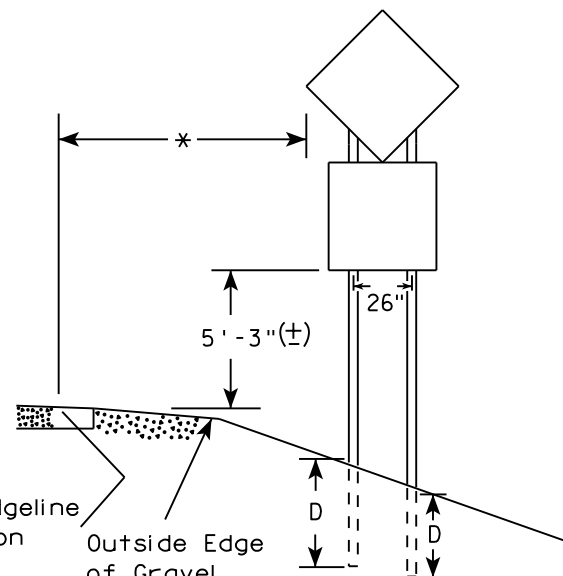
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

* 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.

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"

POST EMBEDMENT DEPTH

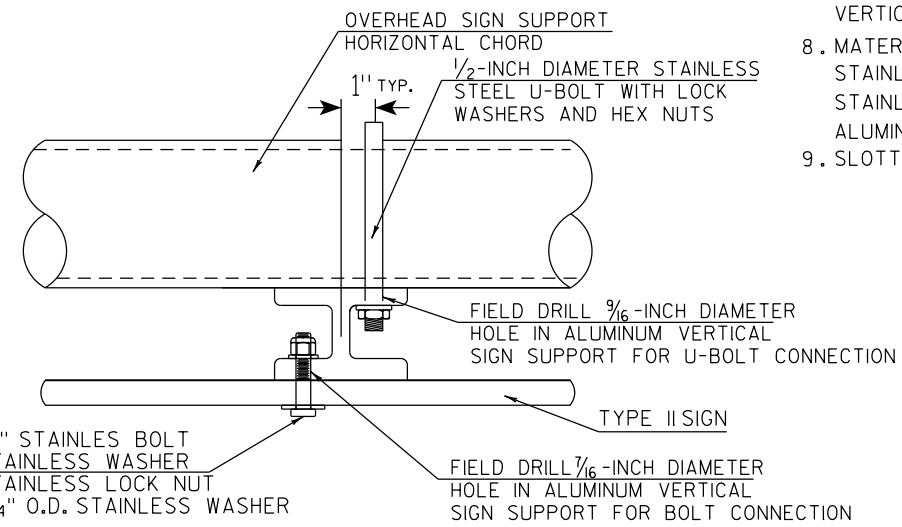
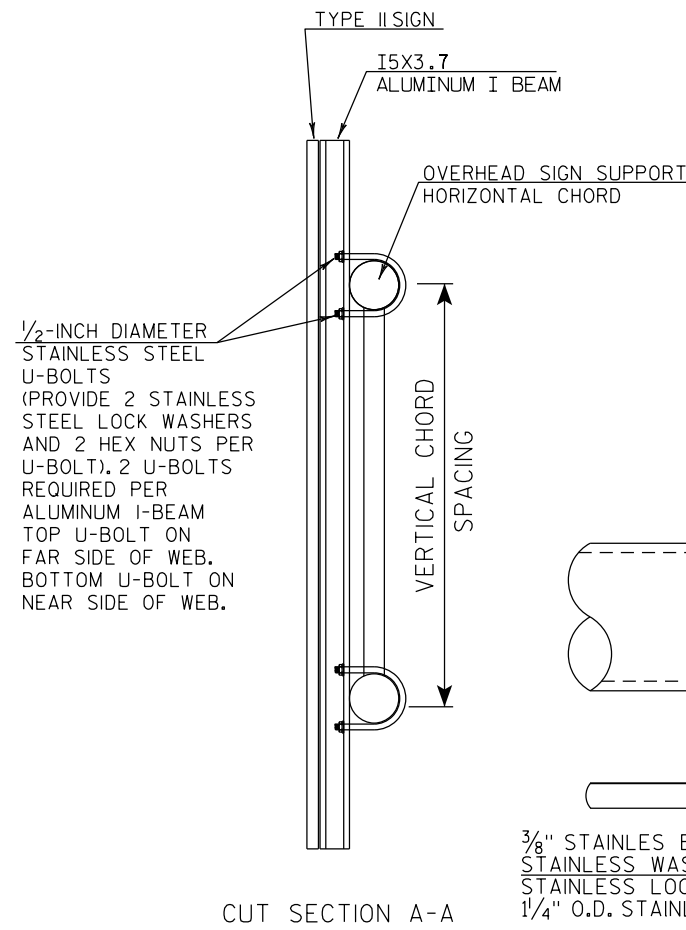
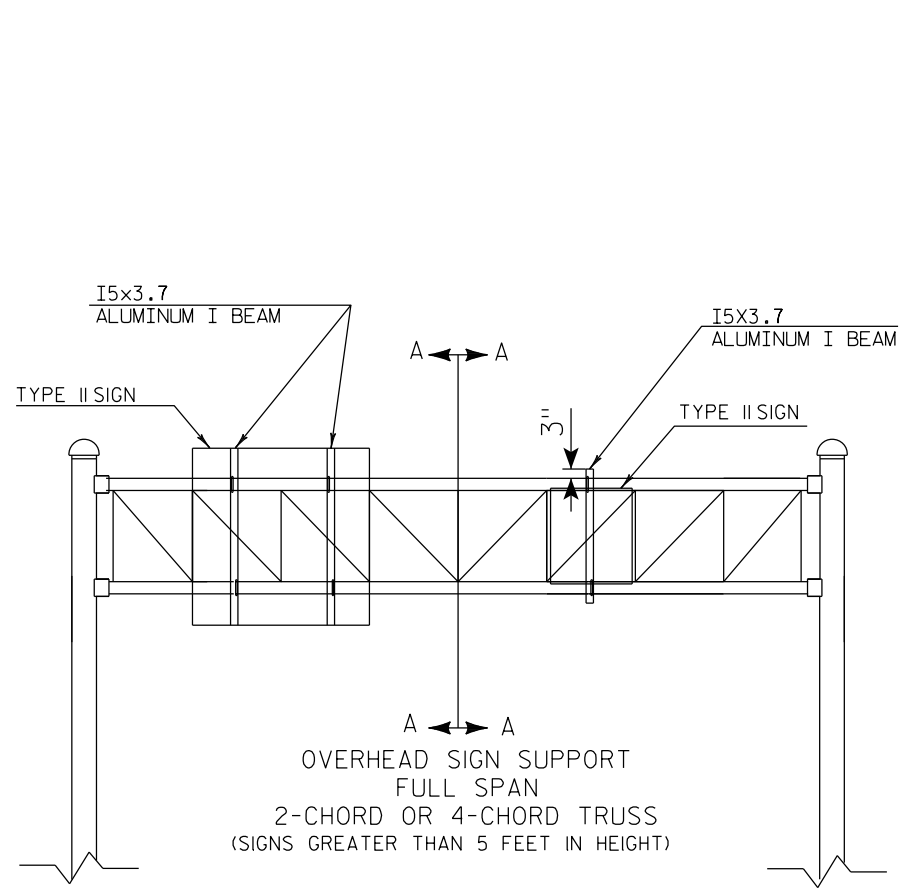
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

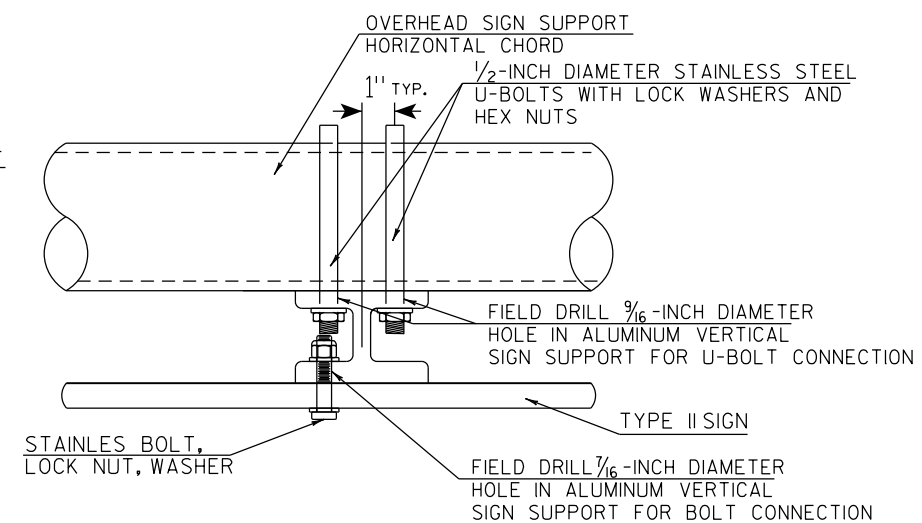
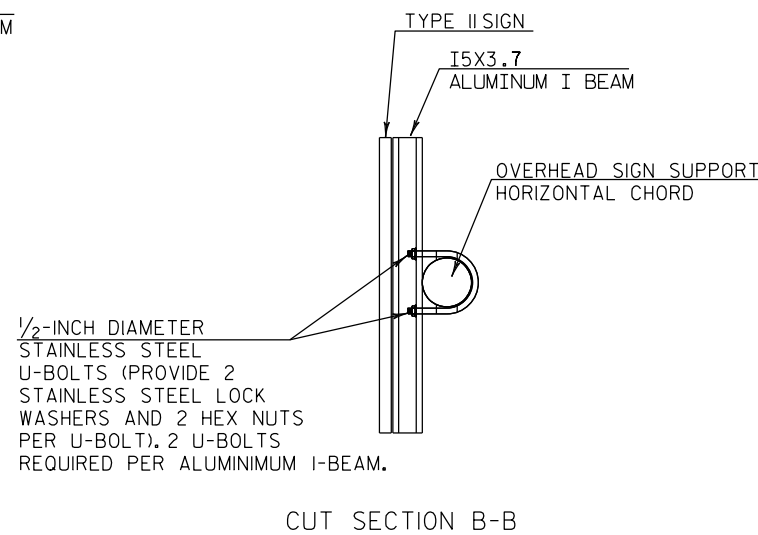
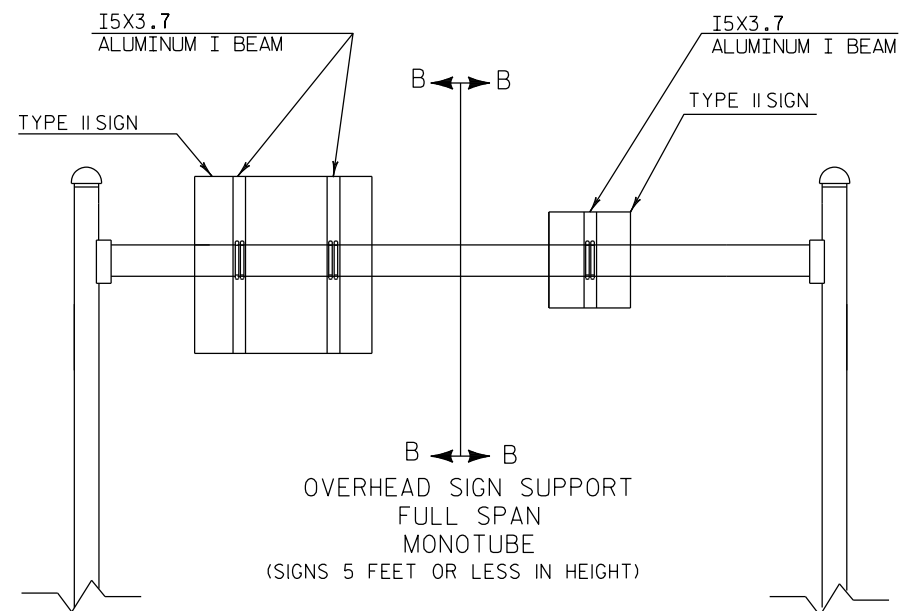
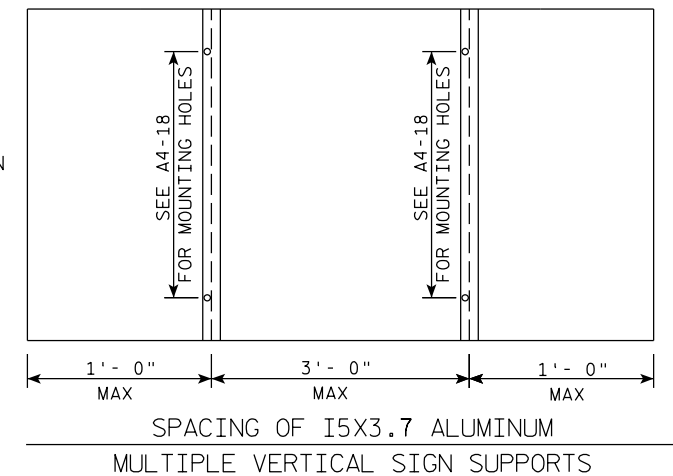
WISCONSIN DEPT OF TRANSPORTATION
 APPROVED *Matthew R. Rauch*
 For State Traffic Engineer
 DATE 8/21/17 PLATE NO. A4-4.15

GENERAL NOTES

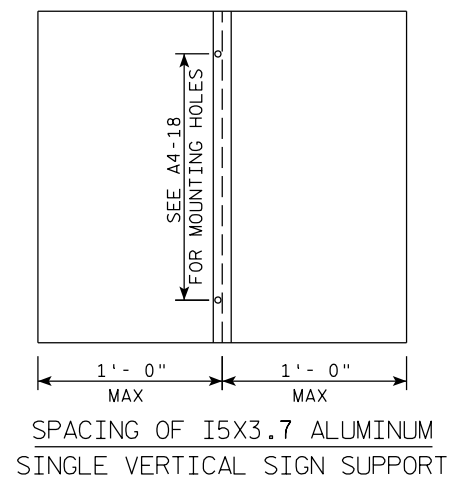
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE STAINLESS BOLTS AT BOLT HOLES IN SIGN PANEL PER SIGN PLATE A4-18.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
STAINLESS STEEL U-BOLTS, BOLTS, AND LOCKWASHERS ASTM 304.
STAINLESS STEEL HEX NUTS ASTM A276.
ALUMINUM I-BEAMS ARE 6061-T6.
9. SLOTTED HOLES IN I-BEAMS ARE NOT ALLOWED



TYPICAL SIGN CONNECTION FOR 2-CHORD OR 4-CHORD TRUSS PLAN VIEW



TYPICAL SIGN CONNECTION FOR MONOTUBE PLAN VIEW

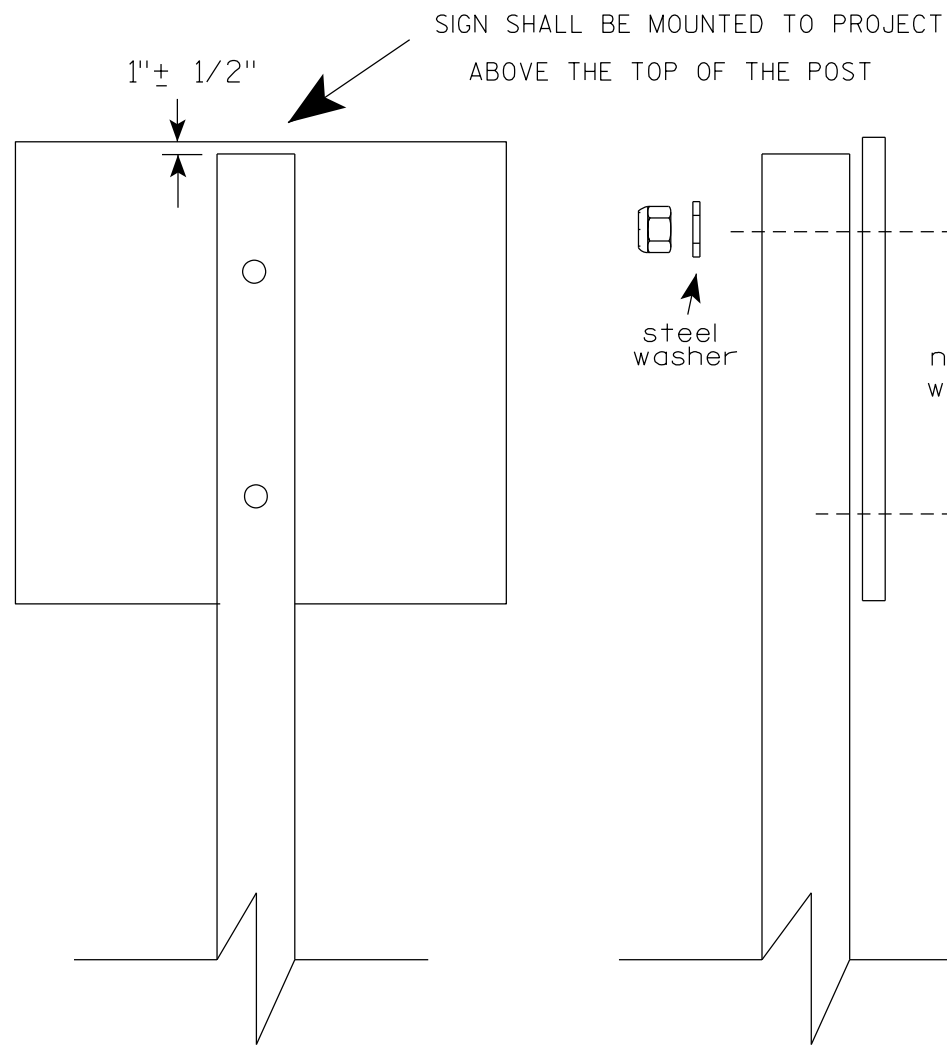


TYPE II SIGN CONNECTION TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 1/07/20 PLATE NO. A4-7B.1



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- 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.

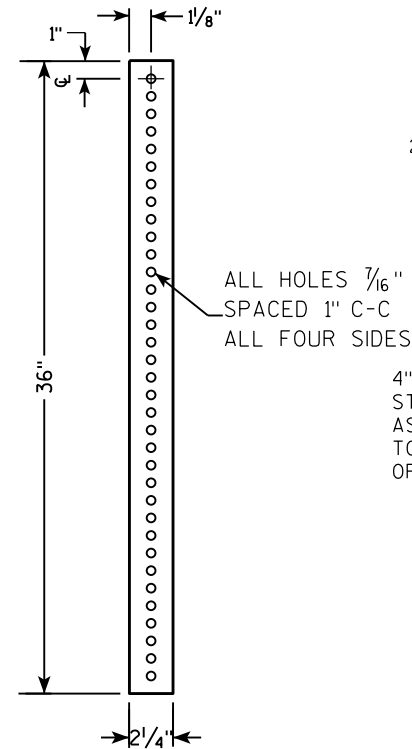
- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 - $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 - $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (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 $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
 - 1-1/4" O.D. X $\frac{3}{8}$ " 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.

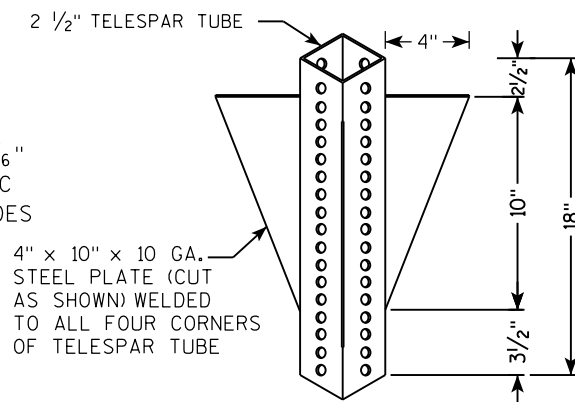
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

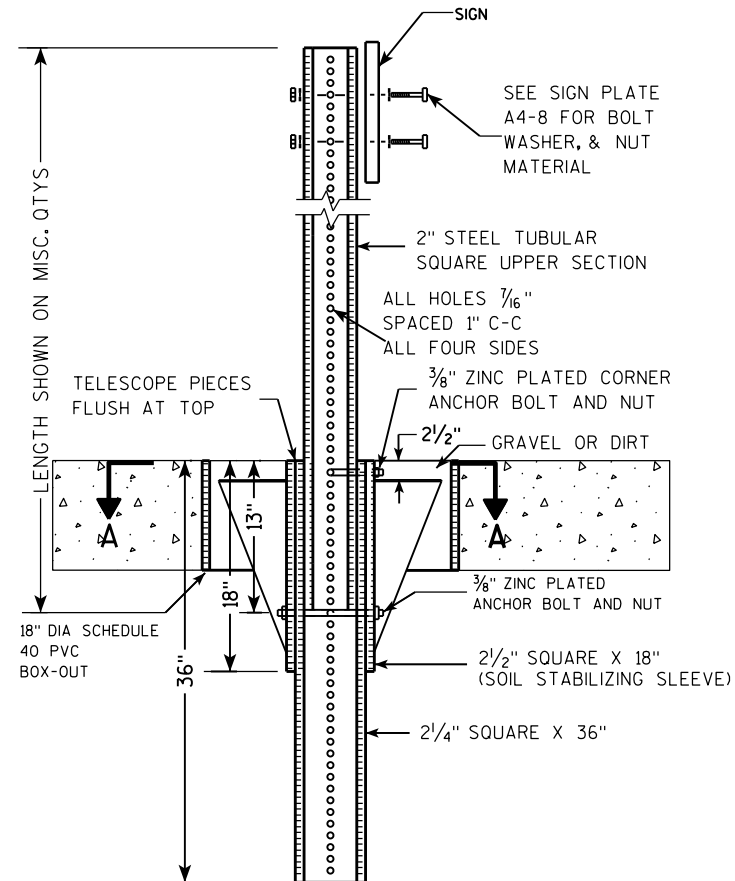
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



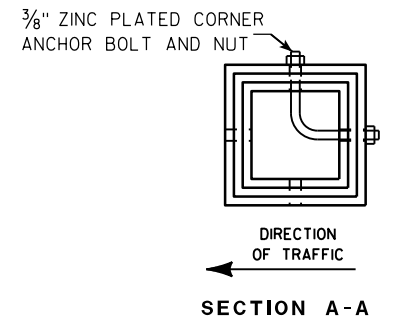
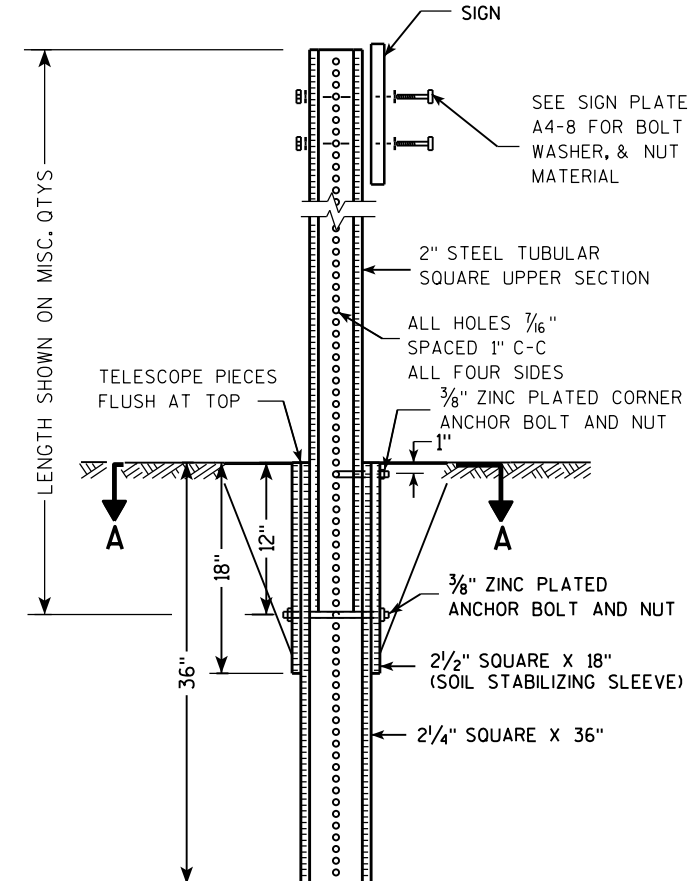
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



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



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



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 NO. A4-9.9

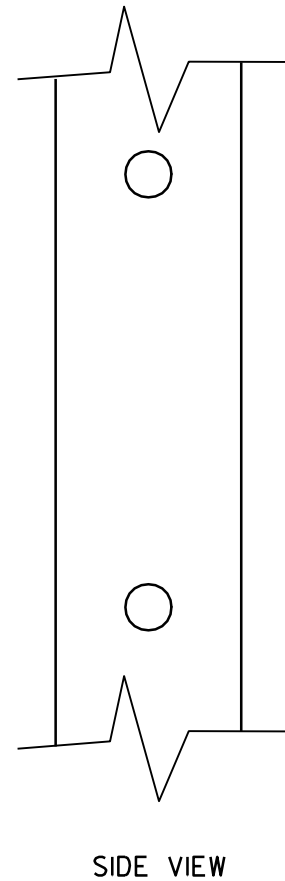
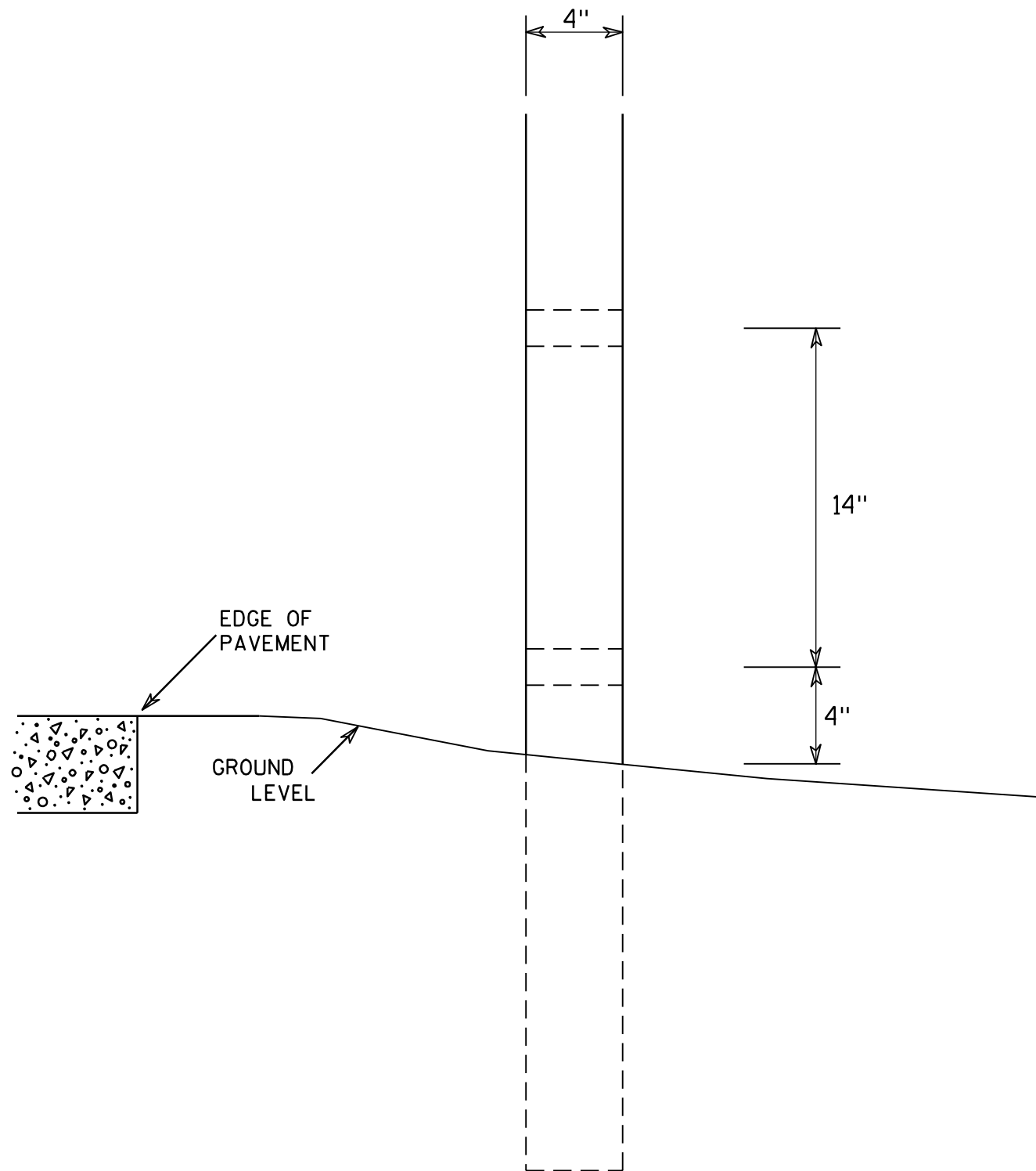
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



GENERAL NOTES

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

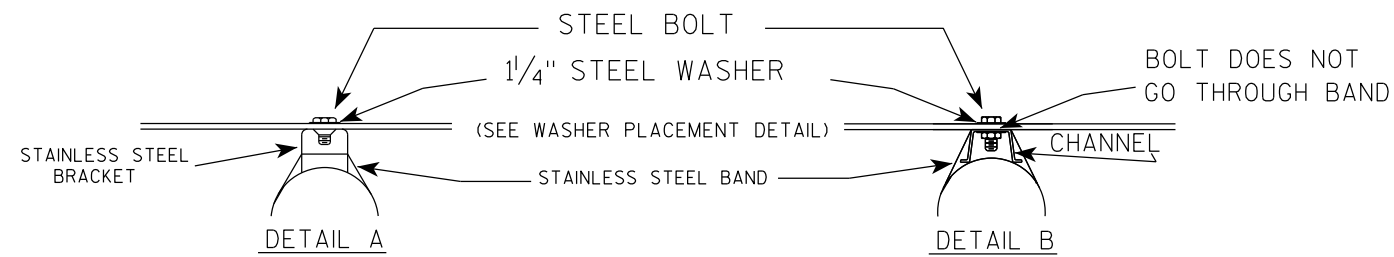
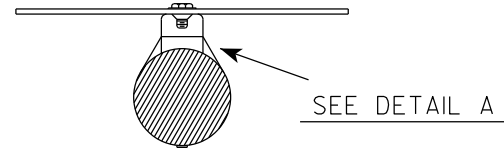
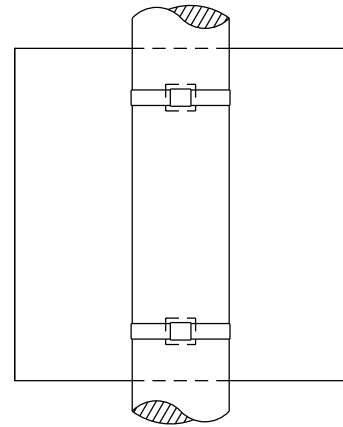
7

7

4 X 6 WOOD POST MODIFICATIONS	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

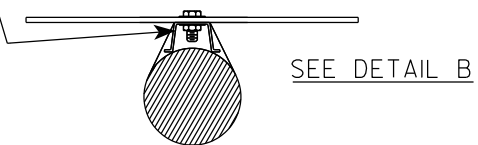
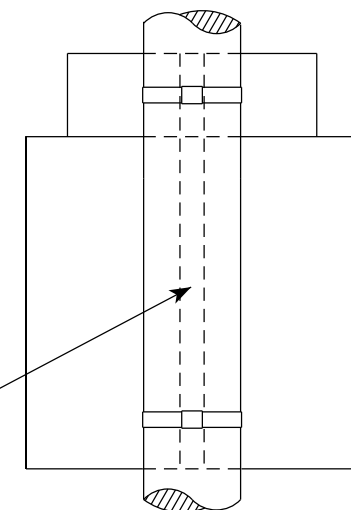
BANDING

SINGLE SIGN

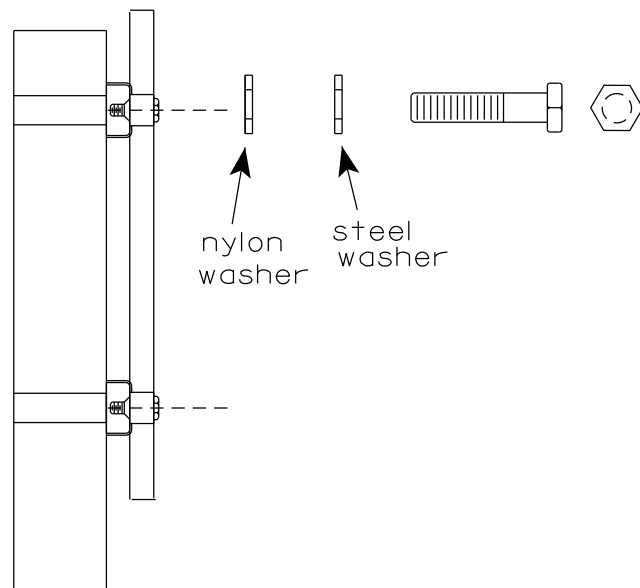


- GENERAL NOTES
1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
 2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
 3. Banding and assembly bracket shall be stainless steel. All bands shall be $\frac{3}{4}$ " in width and 0.025" thickness.
 4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY

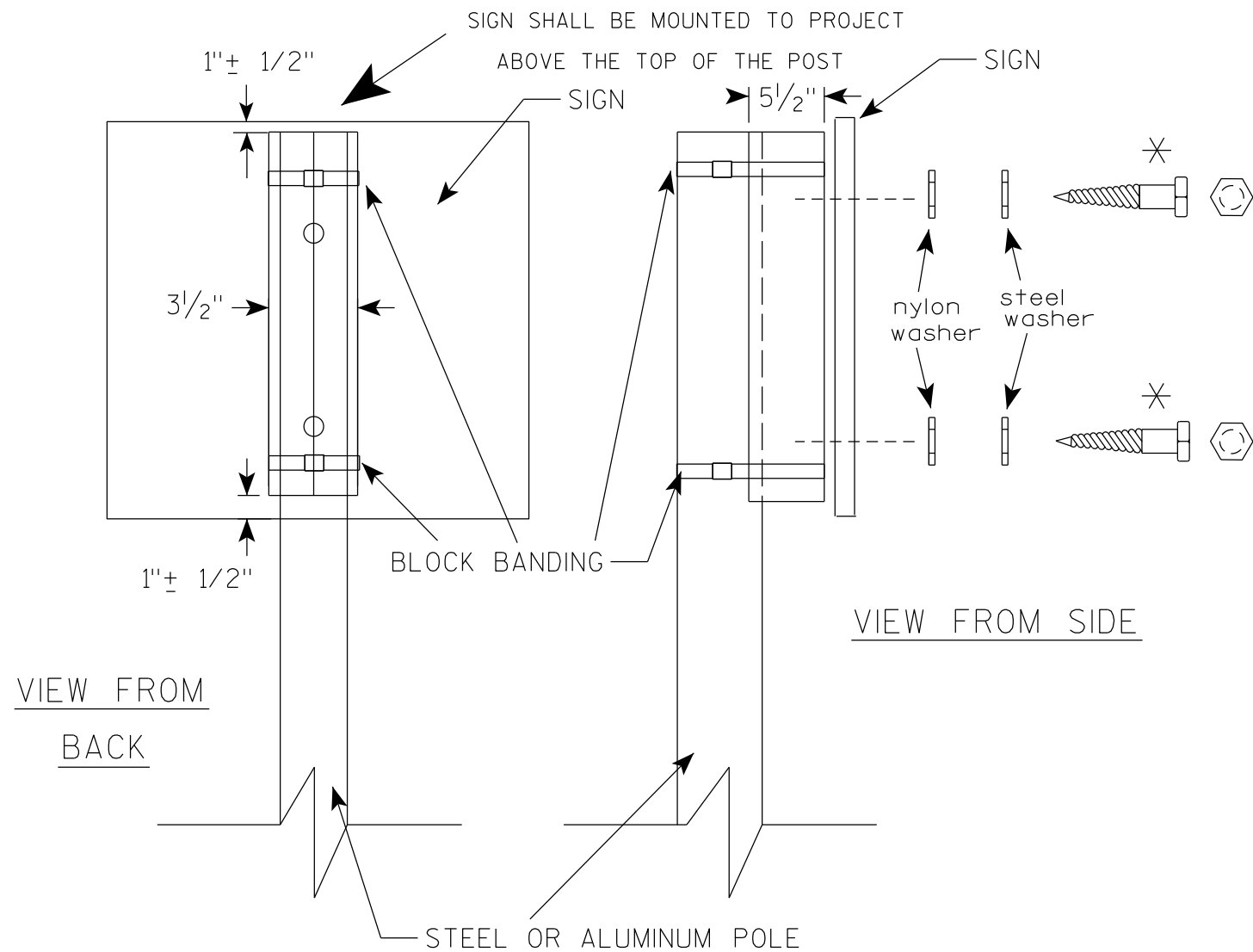


WASHER PLACEMENT



WASHERS (ALL POSTS) -
 1-1/4" O.D. X 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

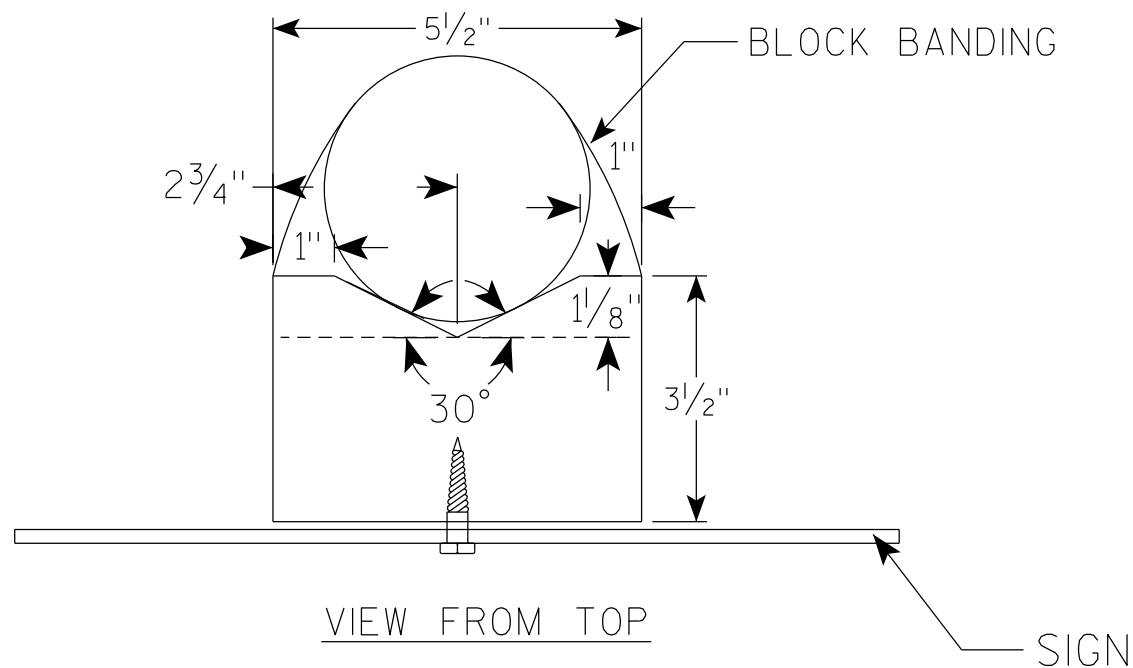
STANDARD SIGN SIGN BANDING DETAILS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 6/10/19	PLATE NO. A5-9.4



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, 3/4" 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 NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

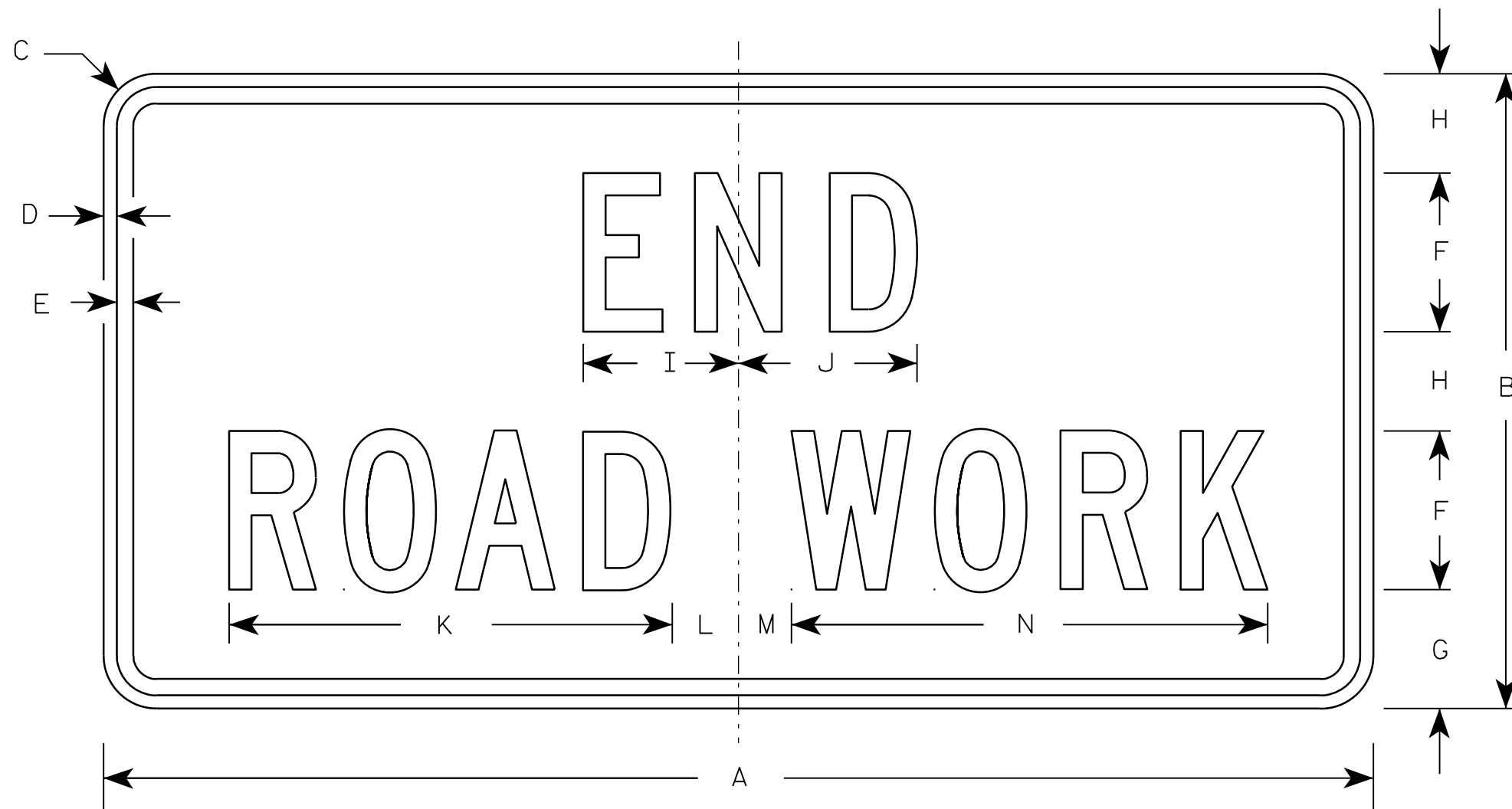
✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"



BLOCK BANDING DETAIL (V-BLOCK OPTION)	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> for State Traffic Engineer
DATE <u>6/10/19</u>	PLATE NO. <u>A5-10.2</u>

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.



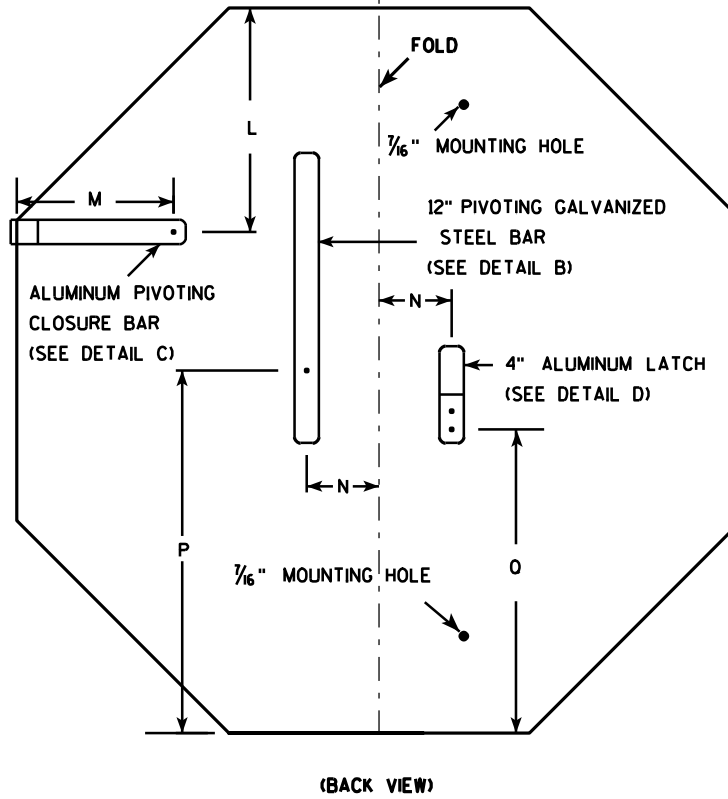
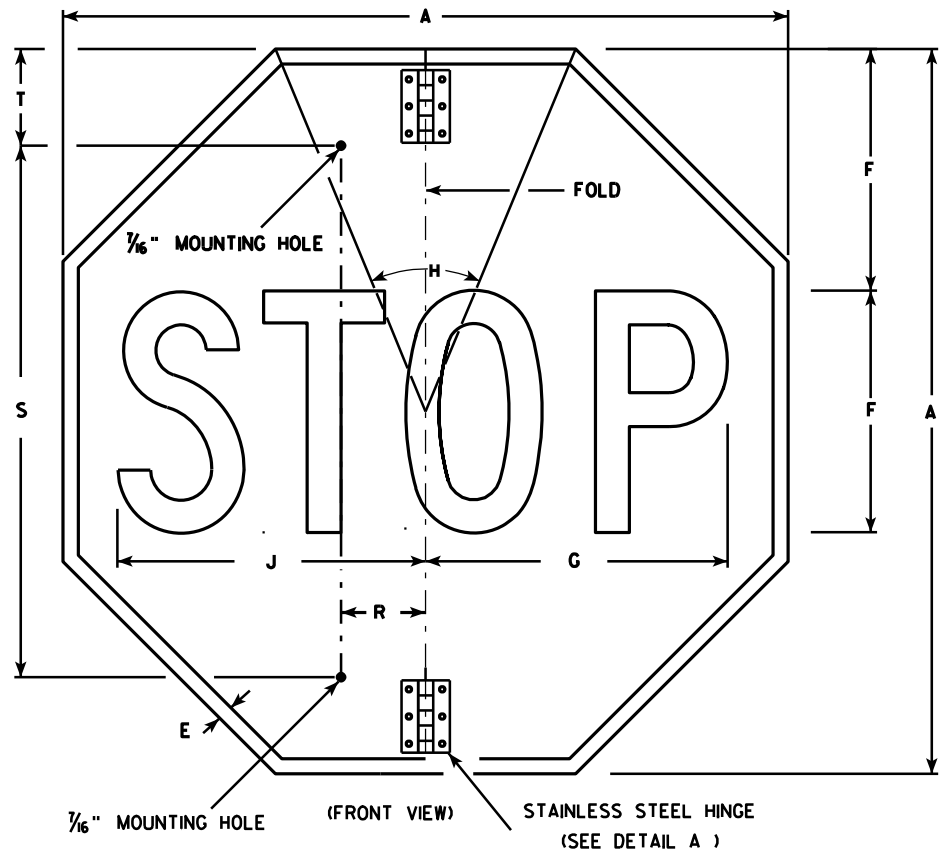
G20-2A

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

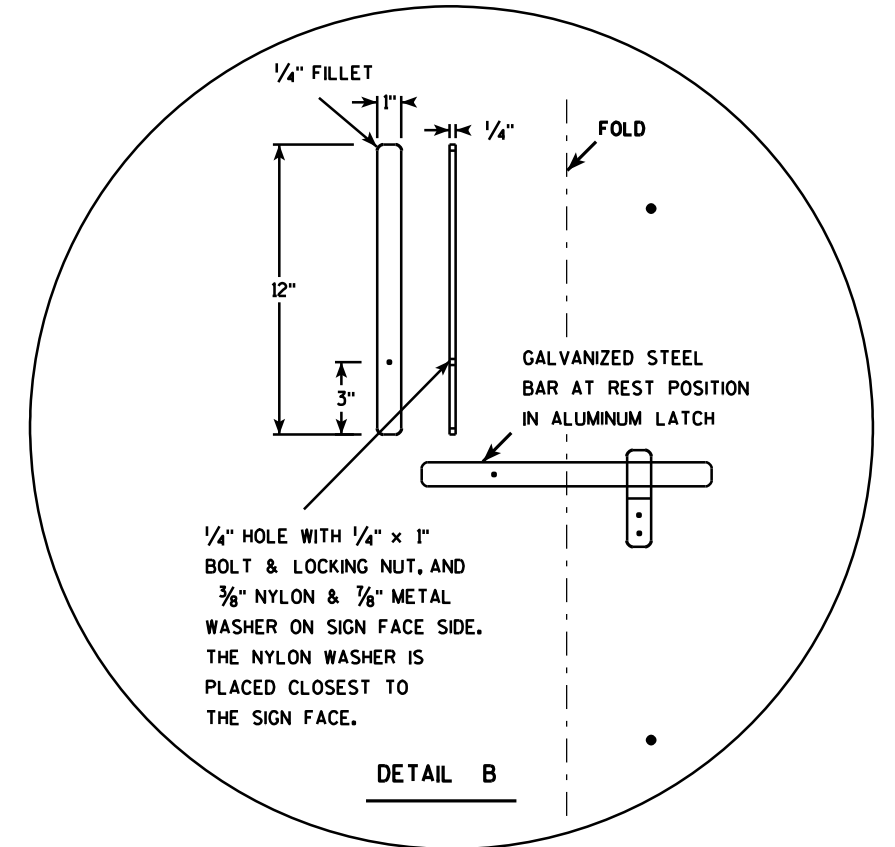
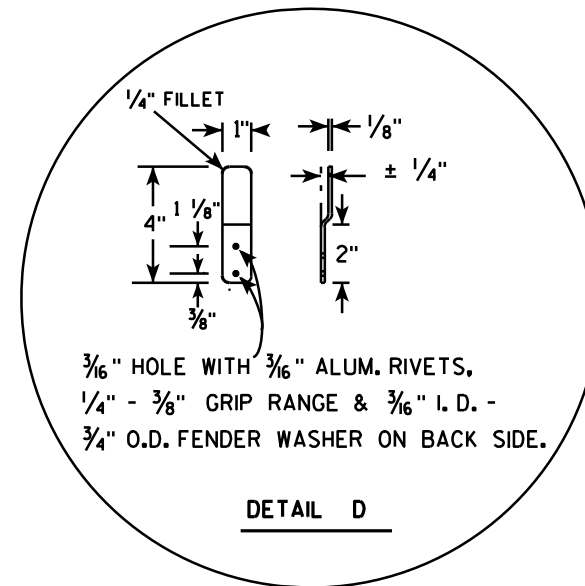
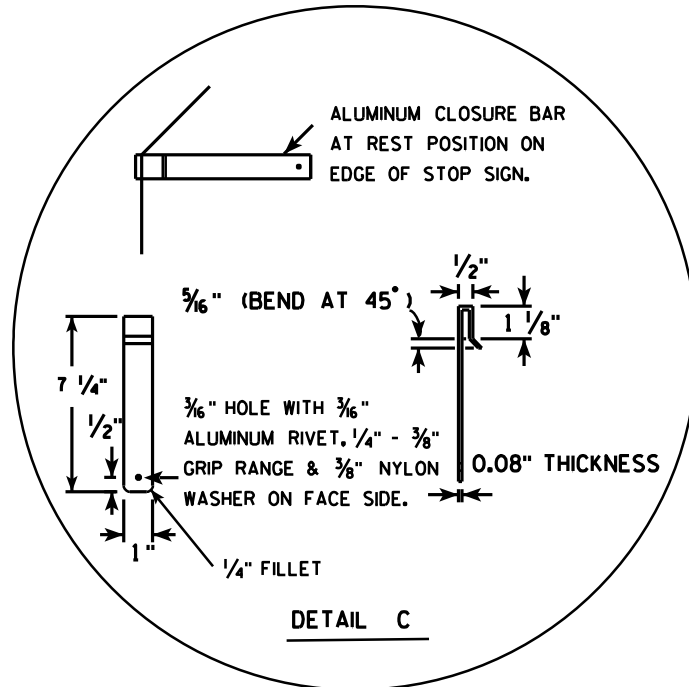
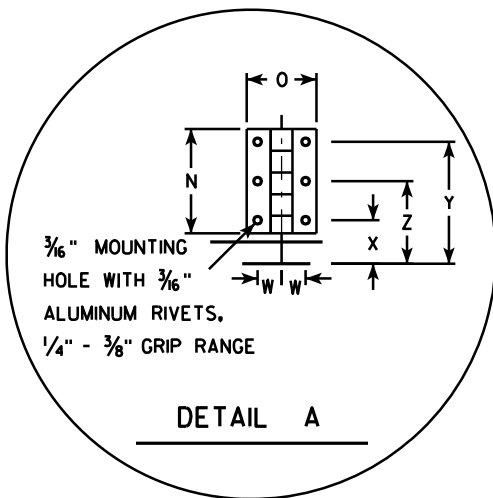
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq.
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	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	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/30/09	PLATE NO. G20-2A.8



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Red
Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



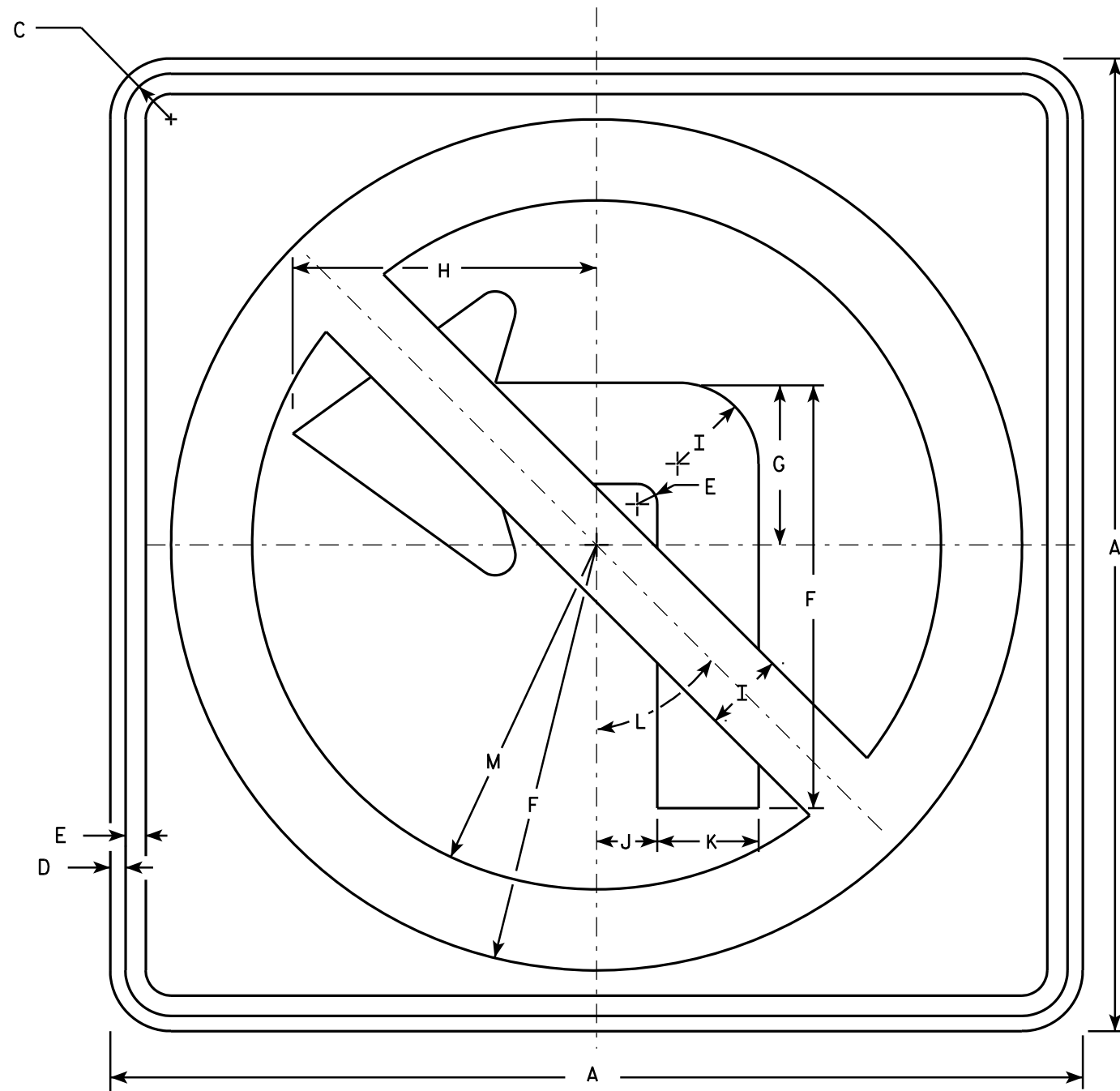
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5		1/16	1 1/4	3 1/2	2 3/8	5.18	
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5		1/16	1 1/4	3 1/2	2 3/8	7.46	
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5		1/16	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

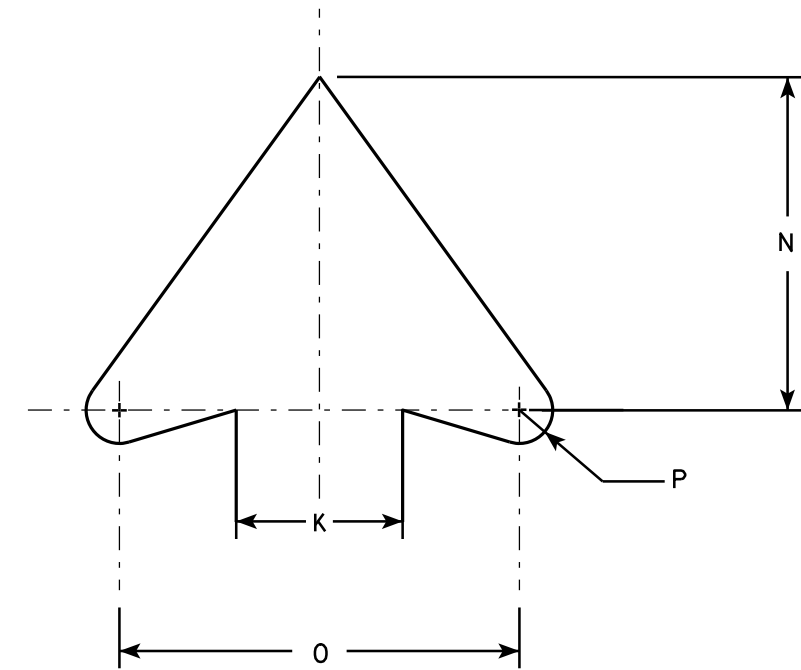
DATE 12/03/10 PLATE NO. R1-1F.3



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

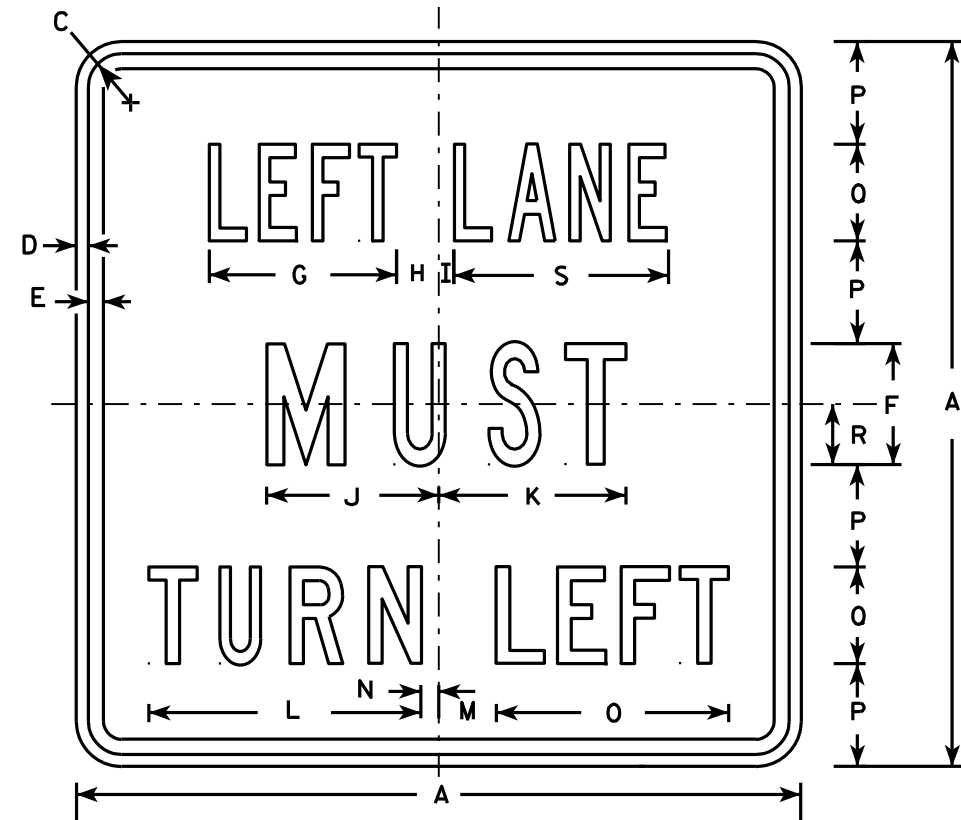
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

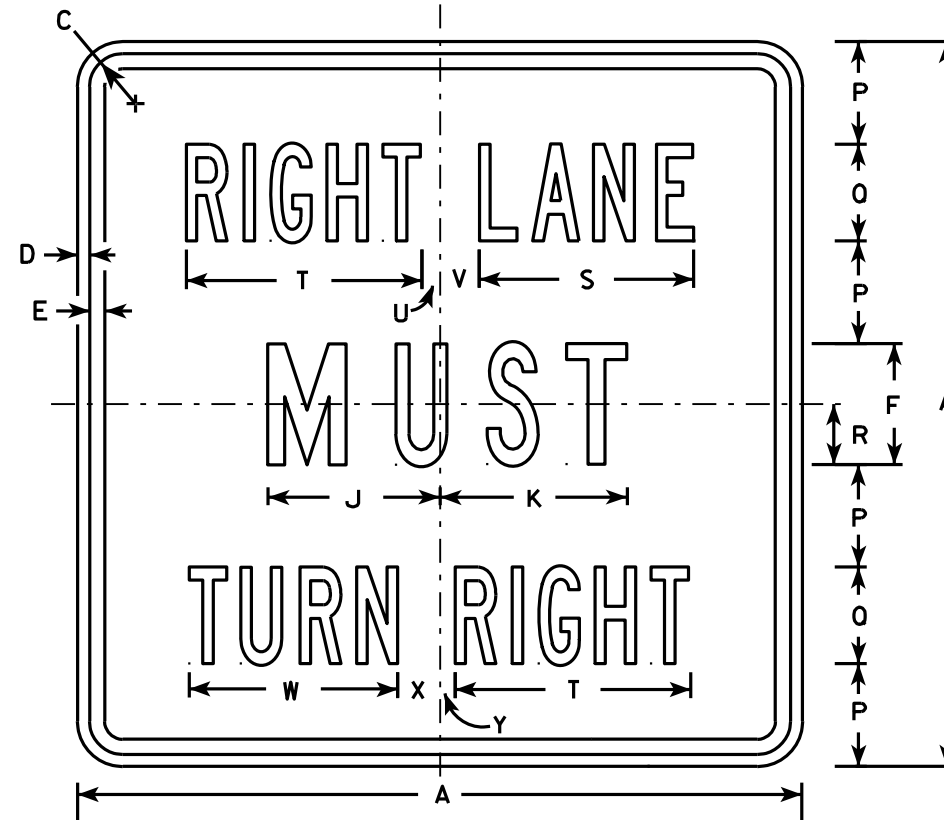
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - Line 1 is Series B.
Line 2 is Series C.
Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R3-7L



R3-7R

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E

NOTES

1. Signs are Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Use appropriate Letter for Sign Code
Each letter added makes sign wider. Example R3-8EAR
5. Square footage of sign varies by letters

1 Letter = 3.75 sq ft for Size 2
6.0 sq ft for Size 3
10.0 sq ft for Size 4 or 5

2 Letters = 7.5 sq ft for Size 2
12.0 sq ft for Size 3
20.0 sq ft for Size 4 or 5

3 Letters = 11.25 sq ft for Size 2
18.0 sq ft for Size 3
30.0 sq ft for Size 4 or 5

4 Letters = 15.0 sq ft for Size 2
24.0 sq ft for Size 3
40.0 sq ft for Size 4 or 5

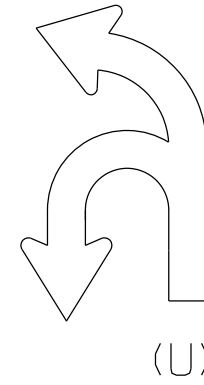
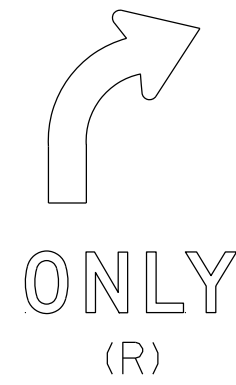
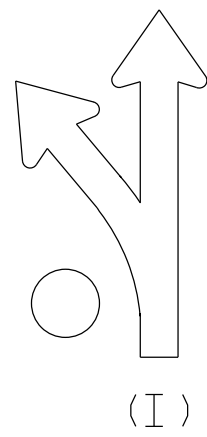
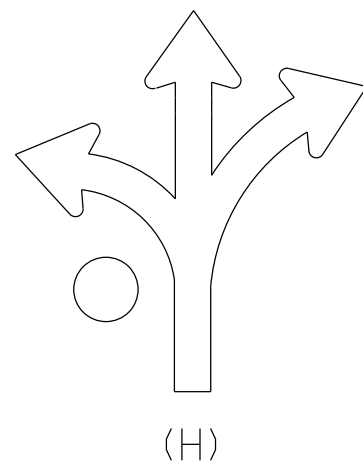
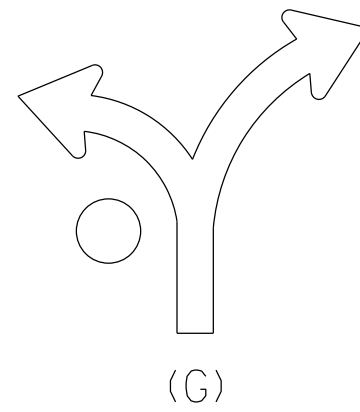
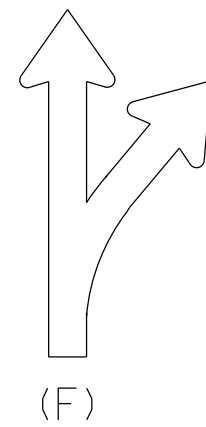
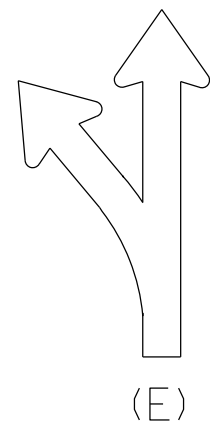
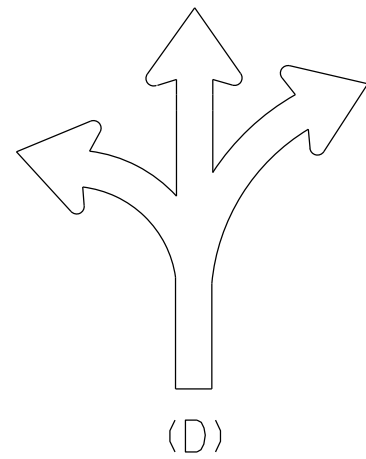
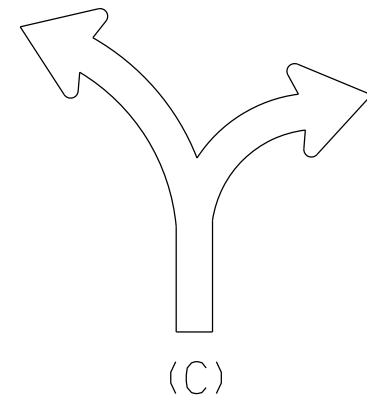
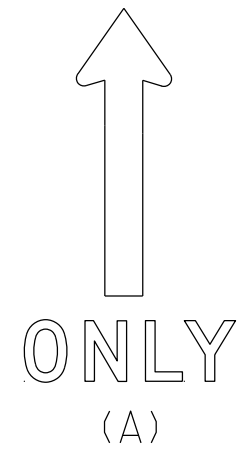
5 Letters = 18.75 sq ft for Size 2
30.0 sq ft for Size 3
50.0 sq ft for Size 4 or 5

6 Letters = 22.5 sq ft for Size 2
36.0 sq ft for Size 3
60.0 sq ft for Size 4 or 5

6. When letters C,D,G,H are used on the Left or Right end of the sign the Sq.Ft. changes.

Add the amounts when these letters are used:

1.25 sq ft for Size 2
1.5 sq ft for Size 3
2.0 sq ft for Size 4 or 5



STANDARD SIGN
R3-8 Series

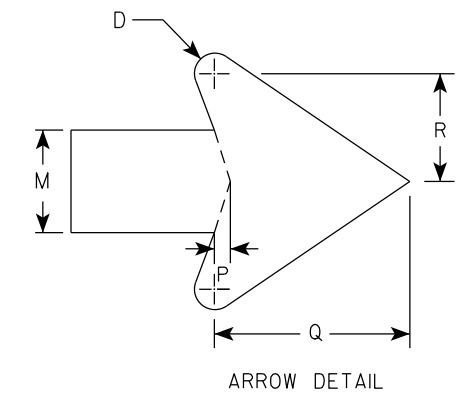
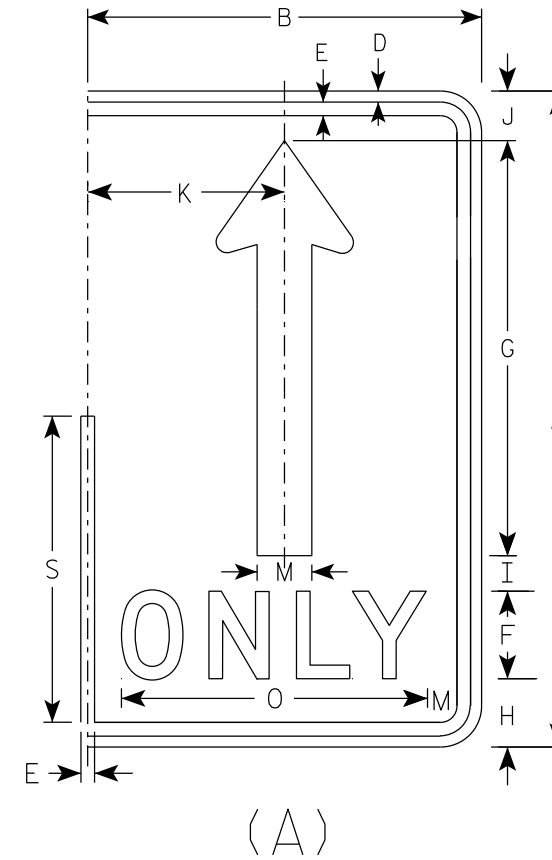
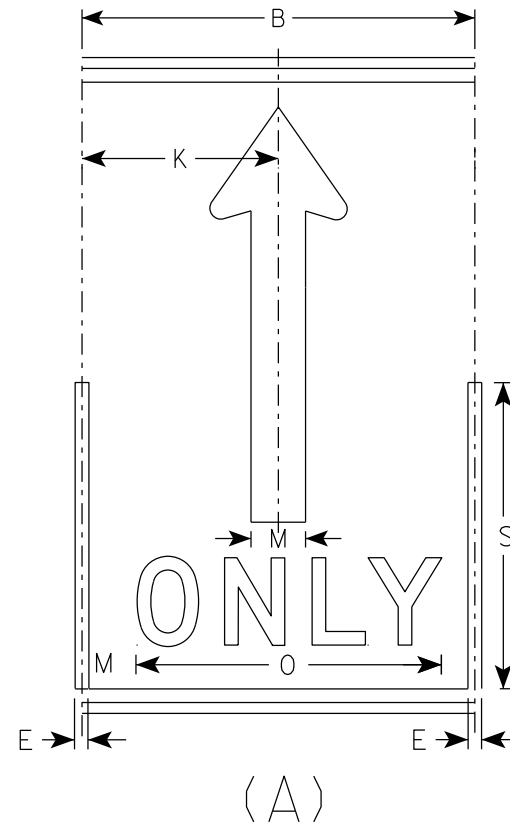
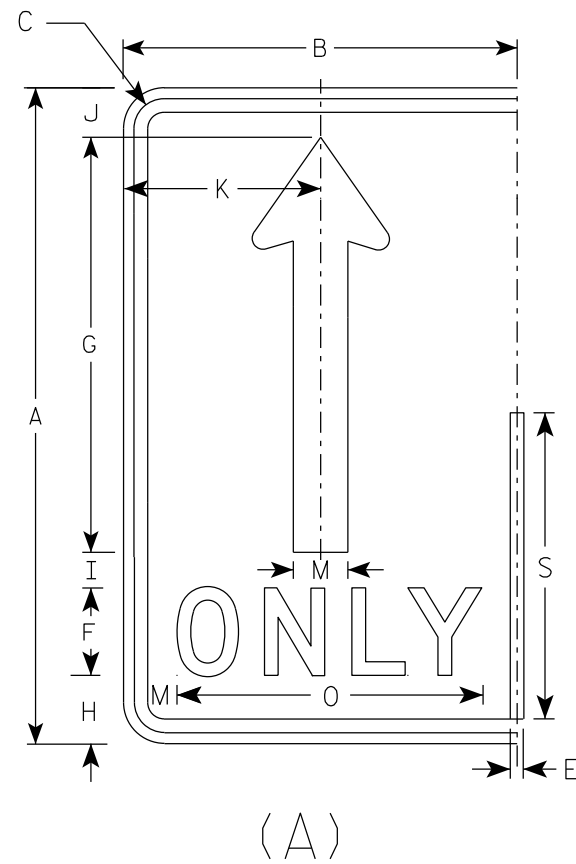
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8	5	22 3/4	3 3/4	1 3/4	2 3/4	12		3		17 5/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

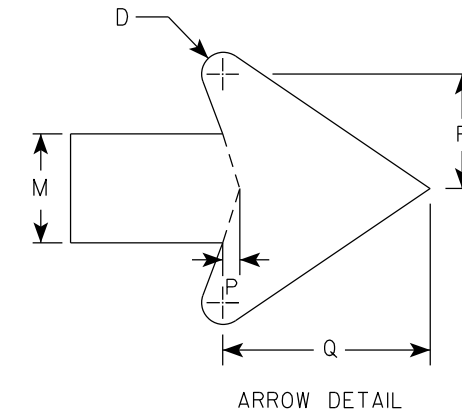
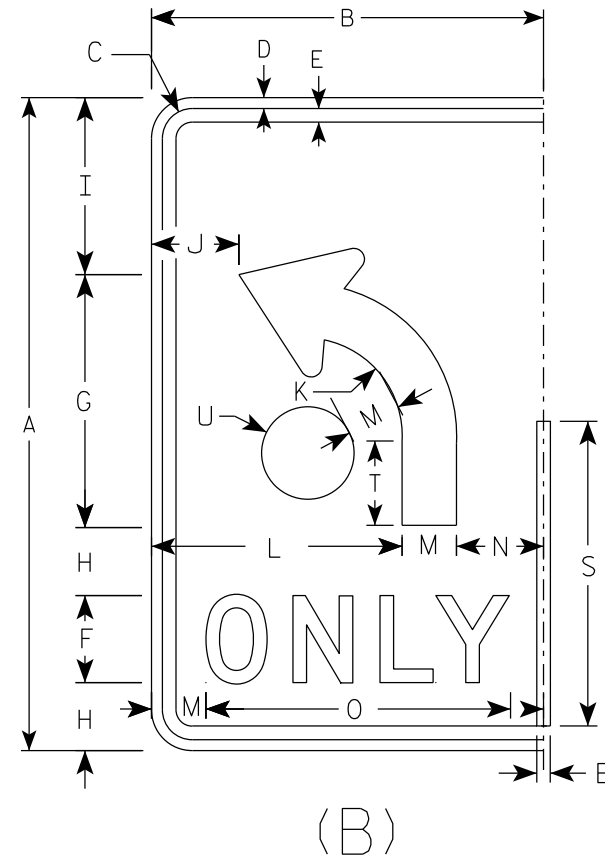
APPROVED *Matthew R Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
 - Background - White
 - Message - Black
 - 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	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8	2 1/2						6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0

STANDARD SIGN
R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

SHEET NO:

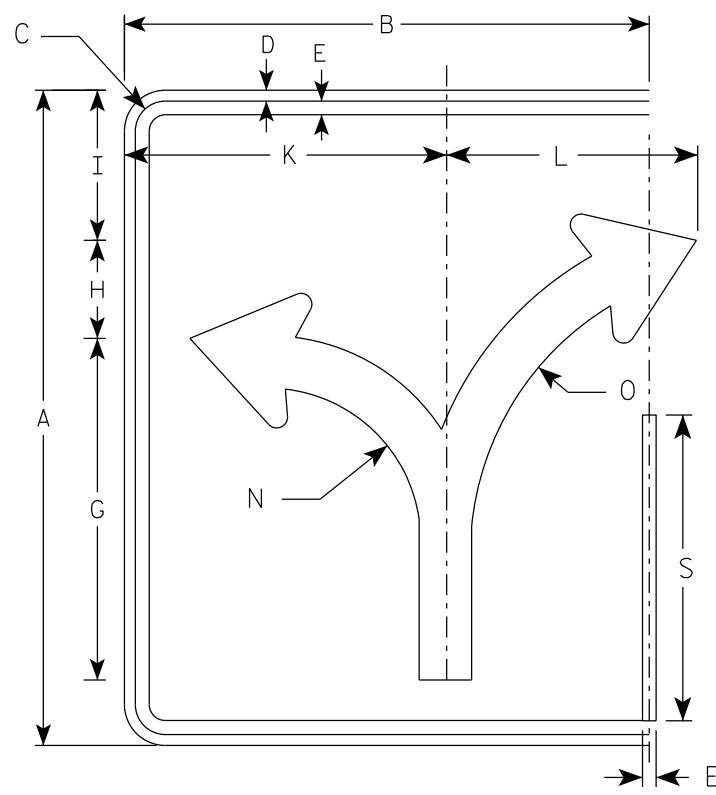
E

7

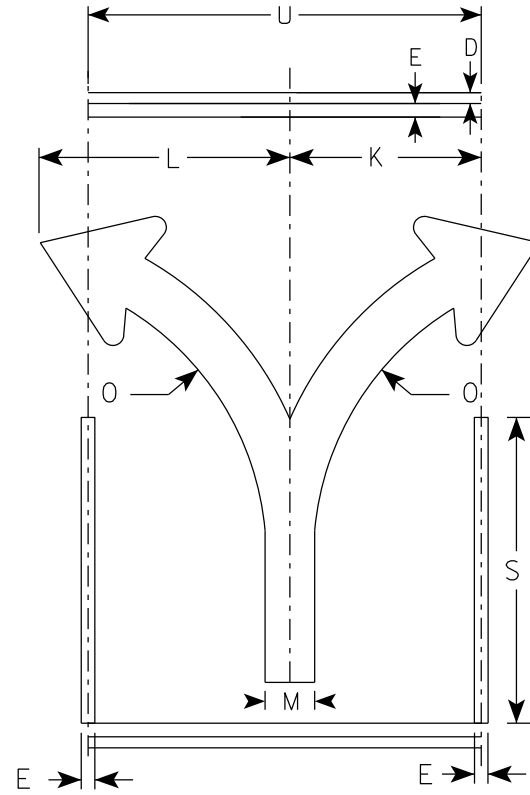
7

NOTES

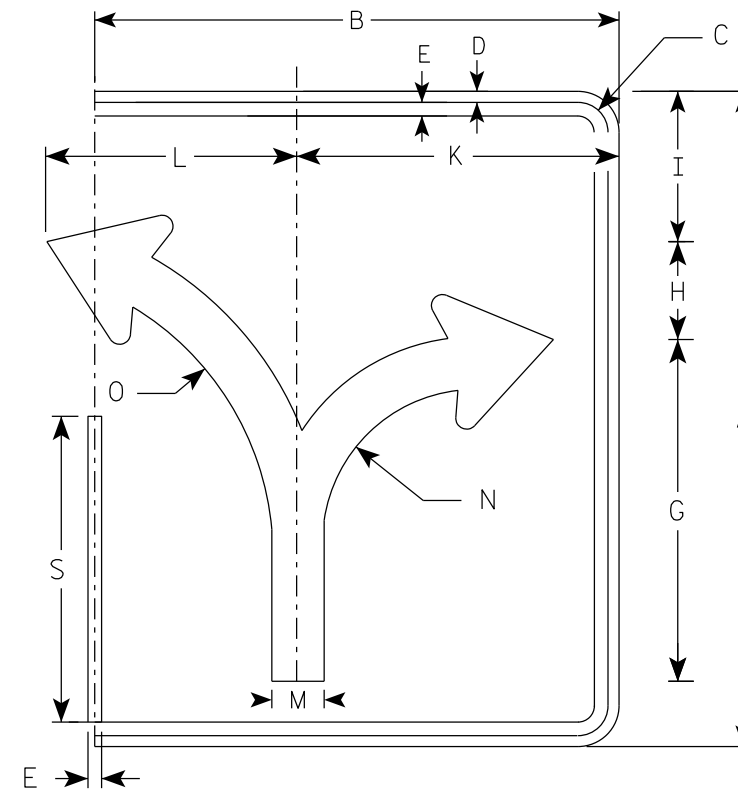
1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - None



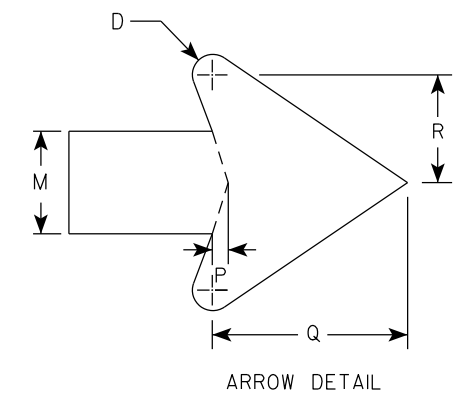
(C)



(C)



(C)



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	ENDS	MIDDLE
																											Area sq. ft.	Area sq. ft.
1																												
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN
R3-8 (C) Arrow

WISCONSIN DEPT OF TRANSPORTATION

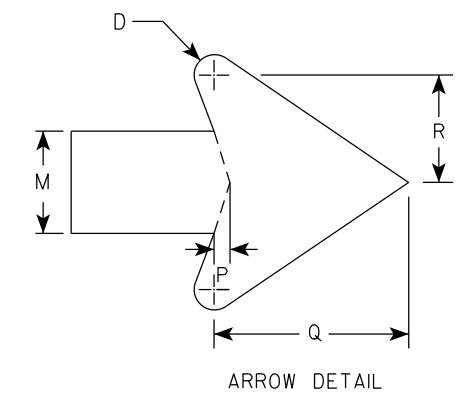
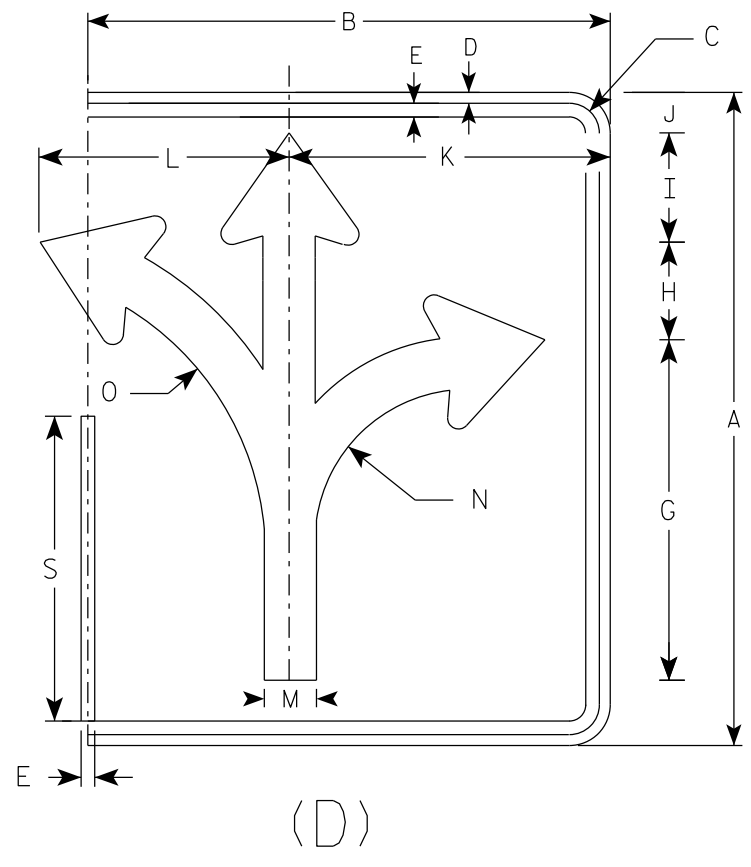
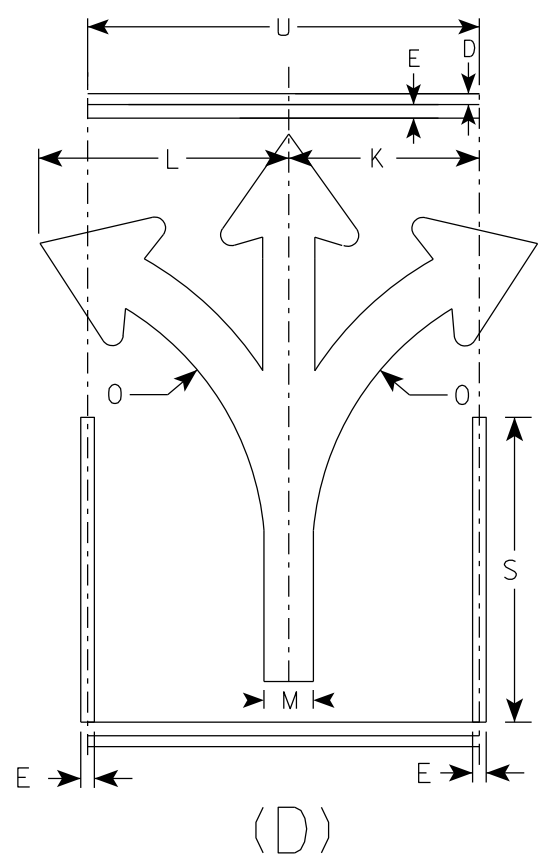
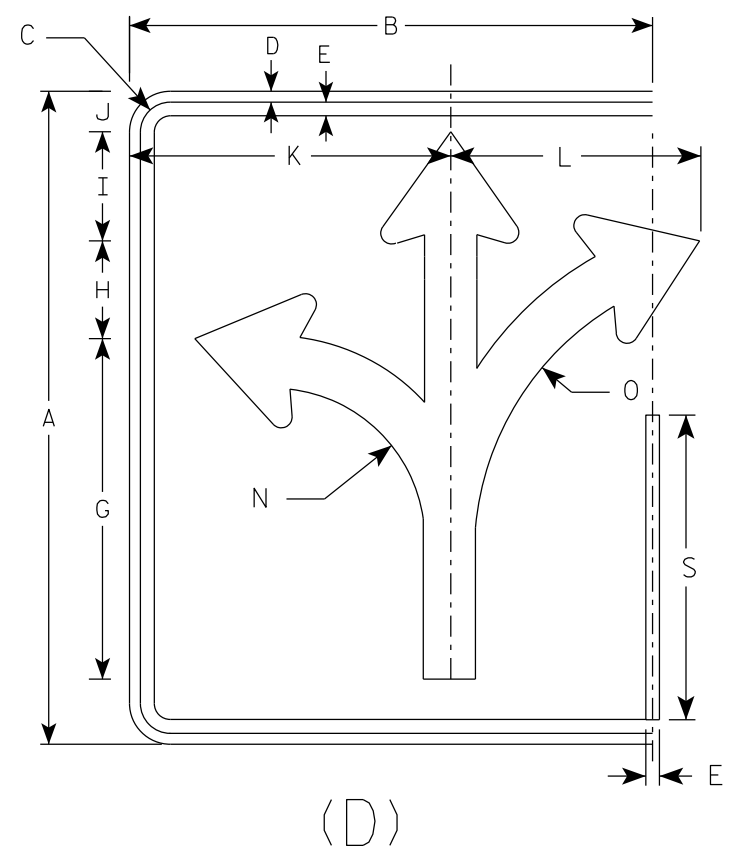
APPROVED *Matthew R Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - None



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	ENDS	MIDDLE
																											Area sq. ft.	Area sq. ft.
1																												
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18					5.0	3.75	
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	6	2 1/4	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24					7.5	6.0	
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30					12.0	10.0	
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30					12.0	10.0	

STANDARD SIGN
R3-8 (D) Arrow

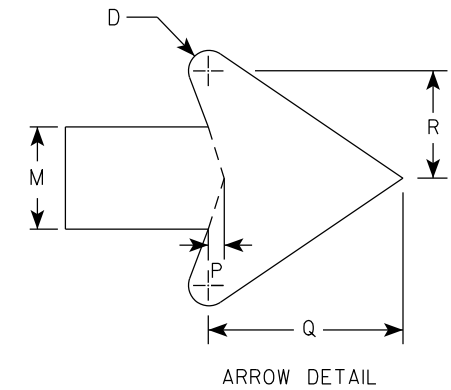
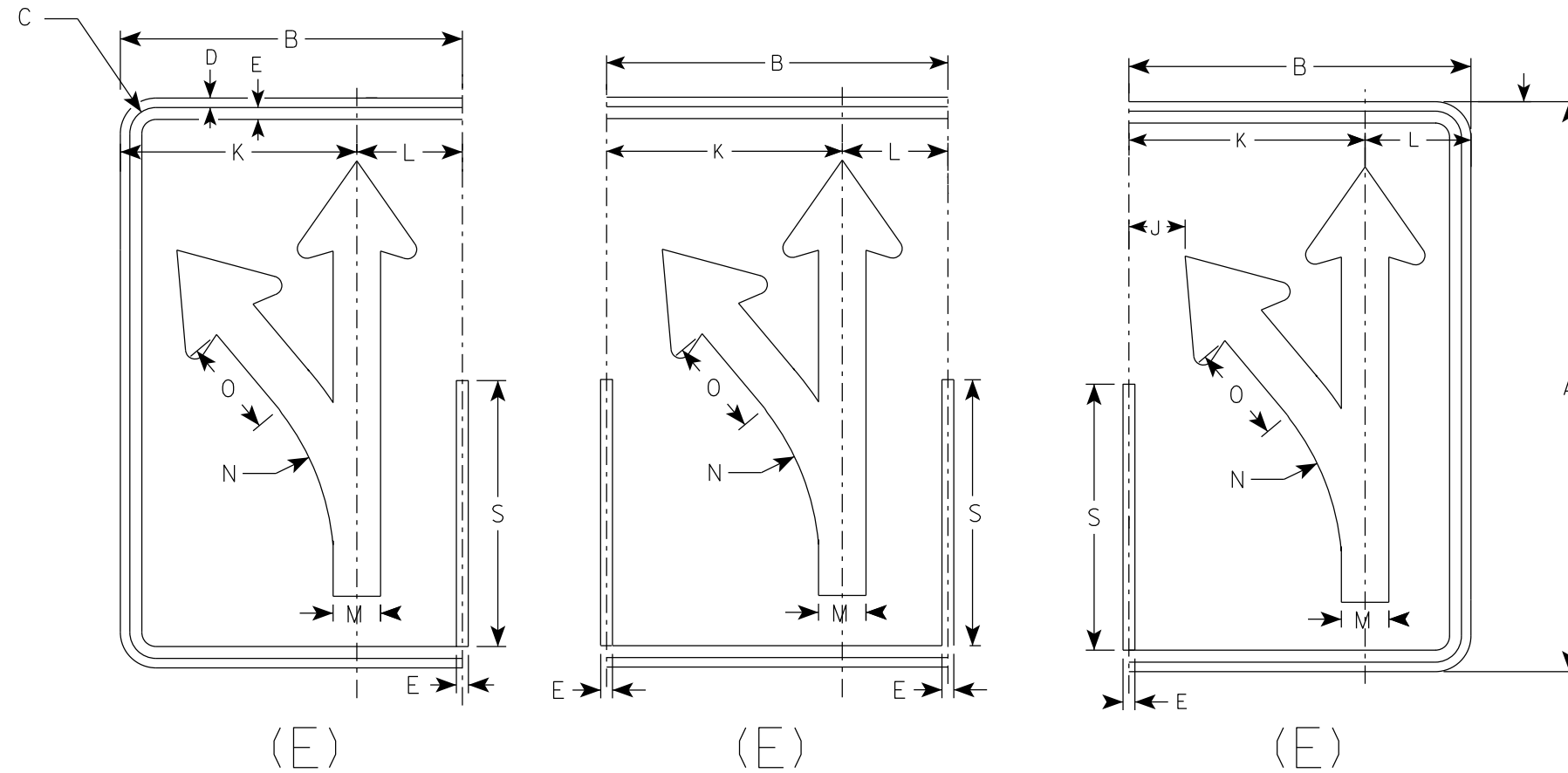
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - None



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (E) Arrow

WISCONSIN DEPT OF TRANSPORTATION

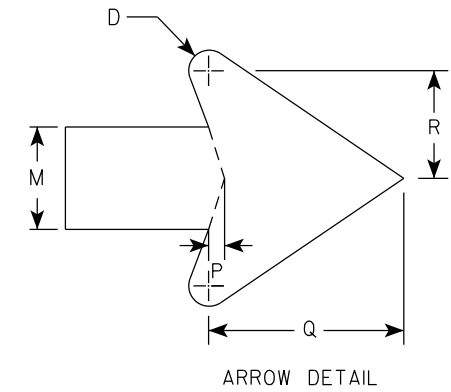
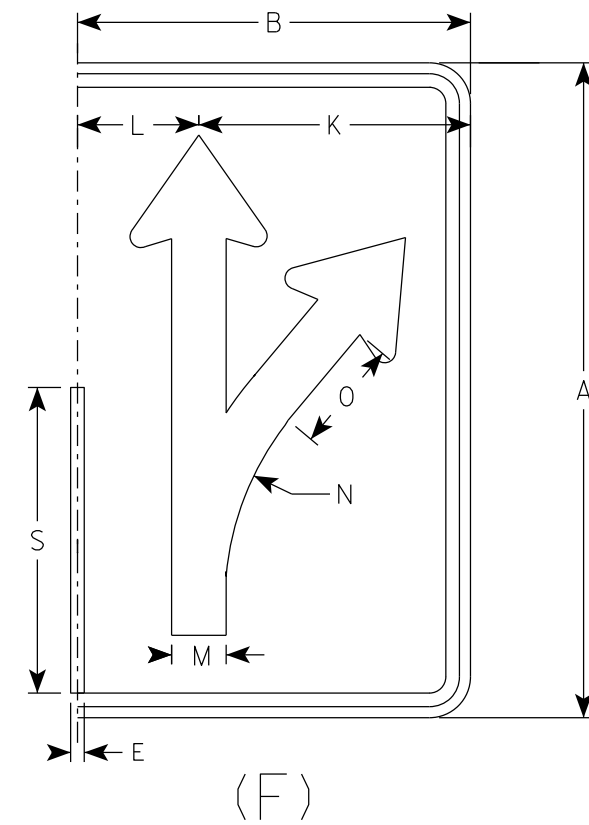
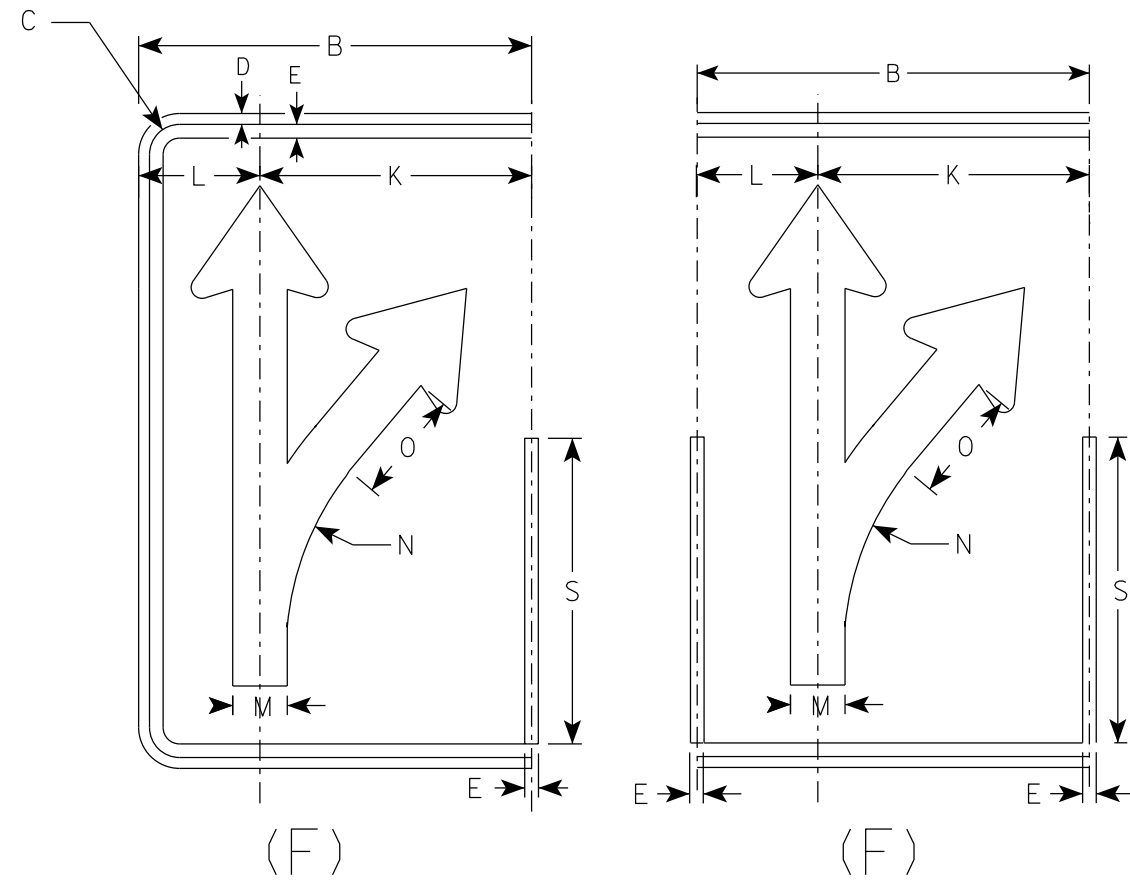
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - None



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (F) Arrow

WISCONSIN DEPT OF TRANSPORTATION

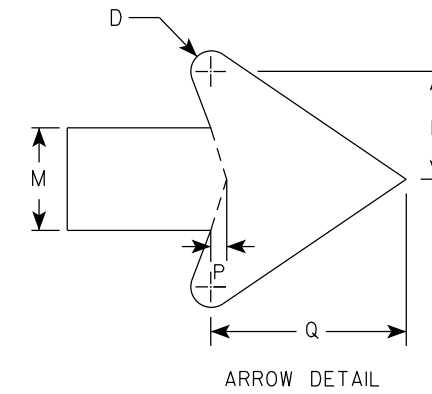
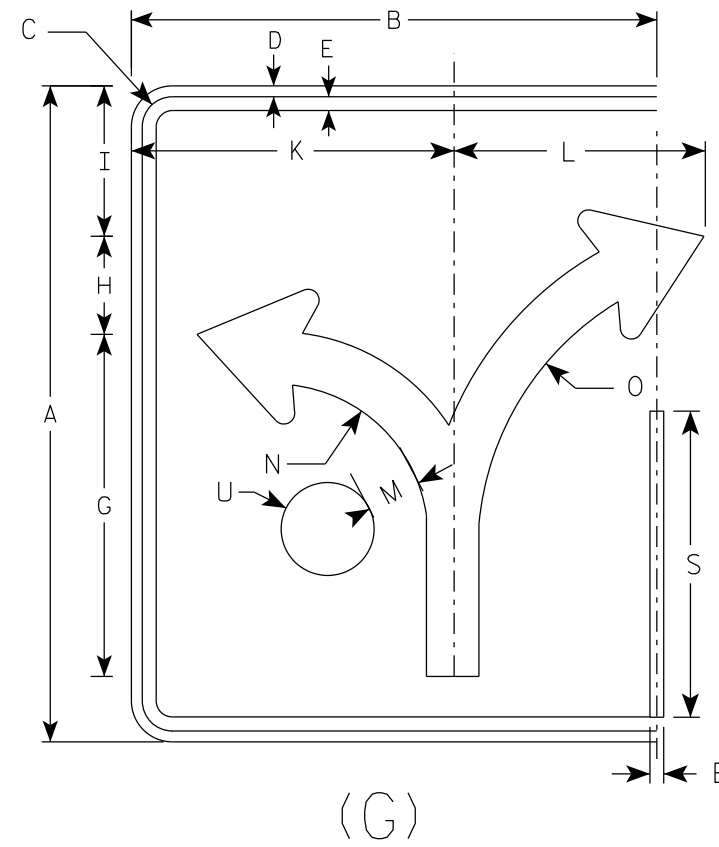
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - None



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN
R3-8 (G) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

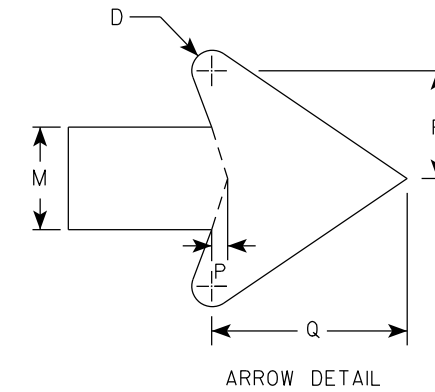
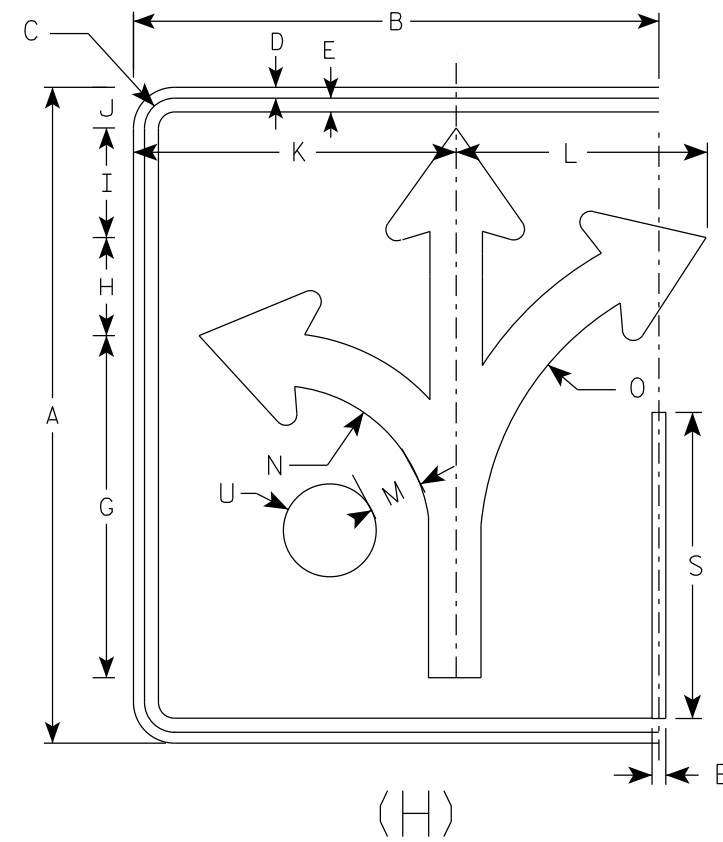
DATE 5/21/19 PLATE NO. R3-8.1

7

7

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - None



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	6	3 1/8	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN
R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

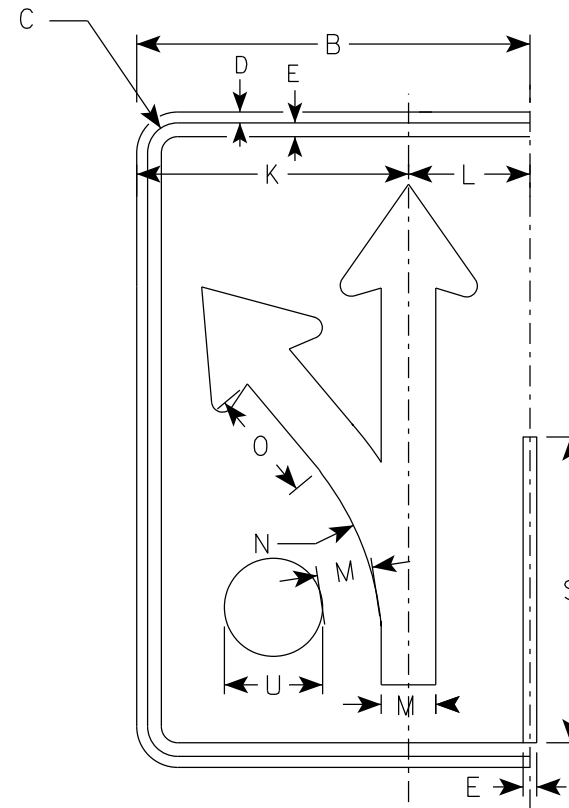
APPROVED *Matthew R Rauch*
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

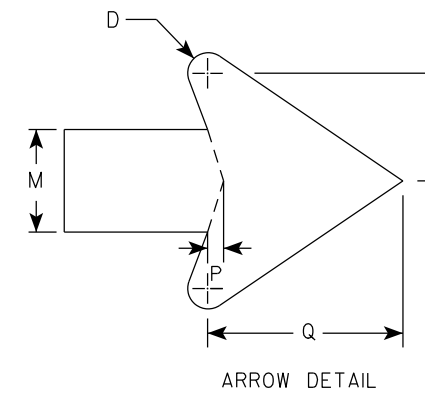
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - None



(I)



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4		2 1/2						6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0

STANDARD SIGN
R3-8 (I) Arrow

WISCONSIN DEPT OF TRANSPORTATION

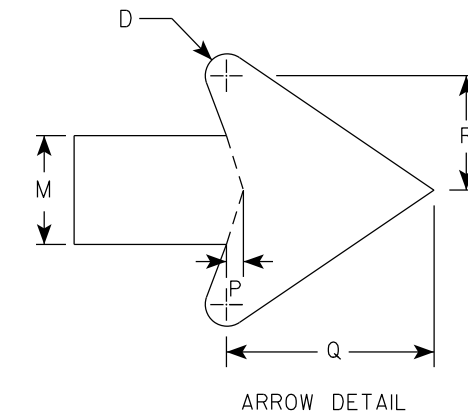
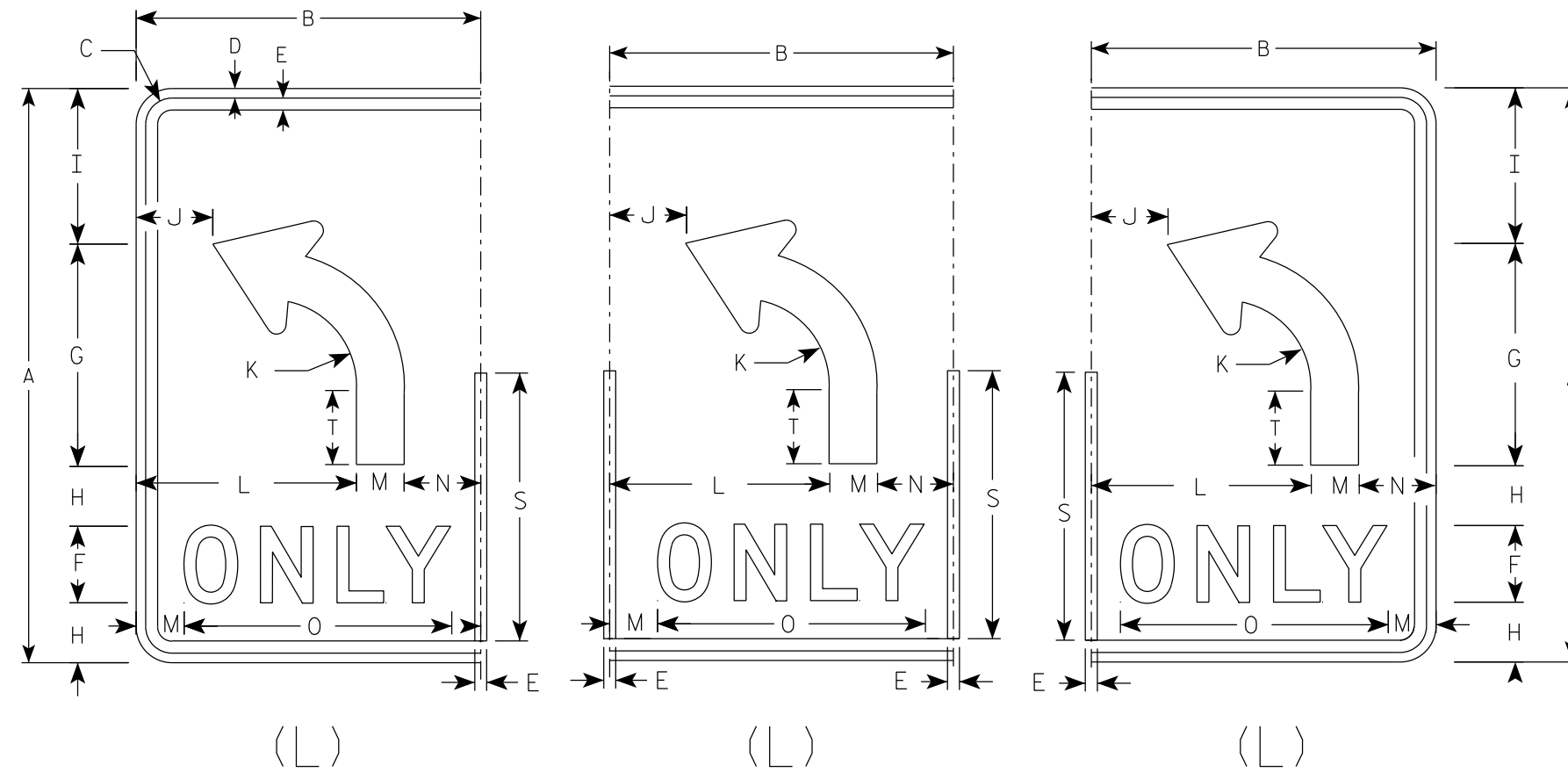
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

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



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4		5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN
R3-8 (L) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

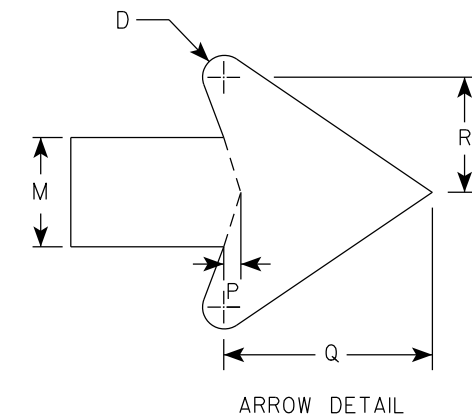
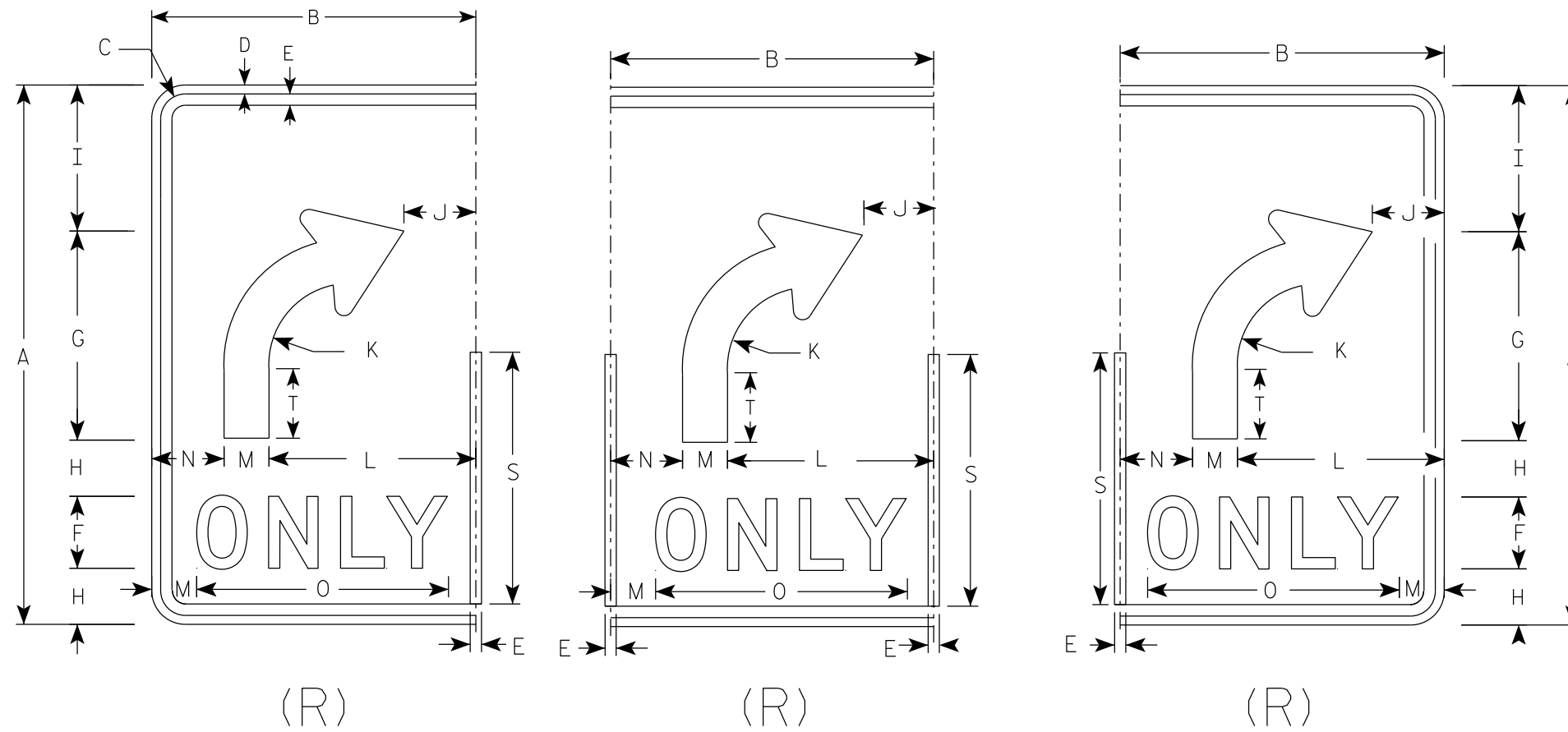
PROJECT NO:

SHEET NO:

E

NOTES

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



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN
R3-8 (R) Arrow

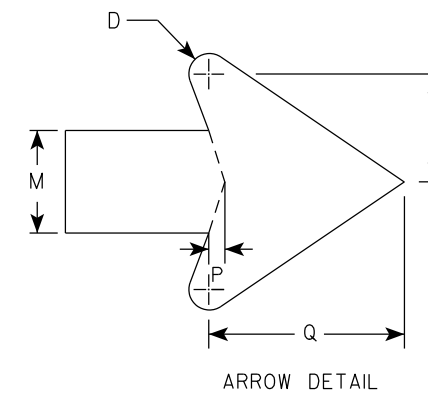
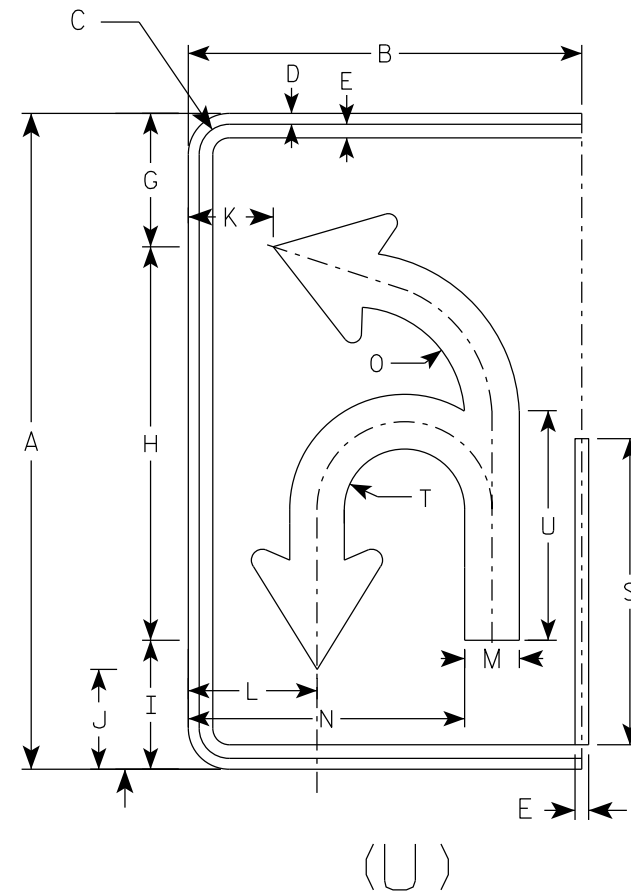
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - None



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
2M	30	18	1 3/8	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	21 5/8	7 1/8	5 1/2	5 7/8	8 1/4	3	16 3/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4	3 1/4	12 5/8						6.0
4	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0
5	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0

STANDARD SIGN
R3-8 (U) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

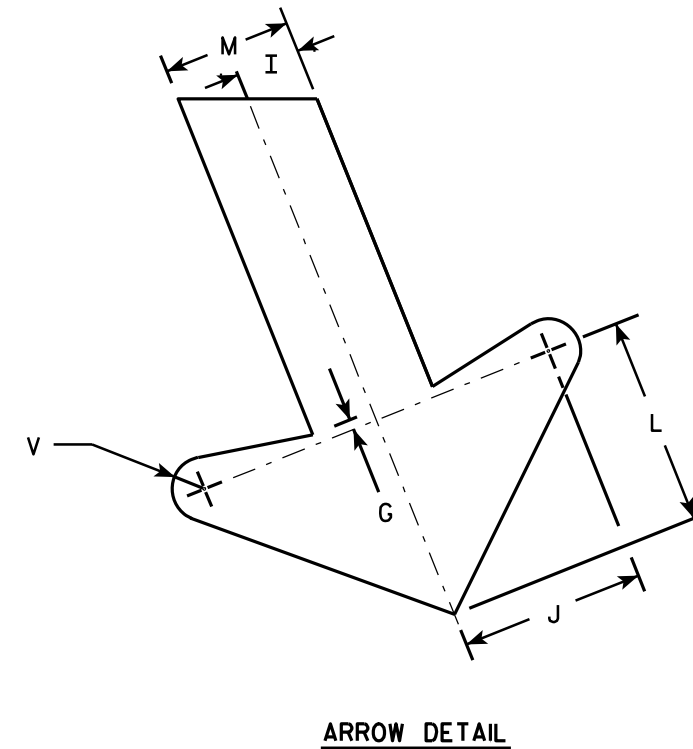
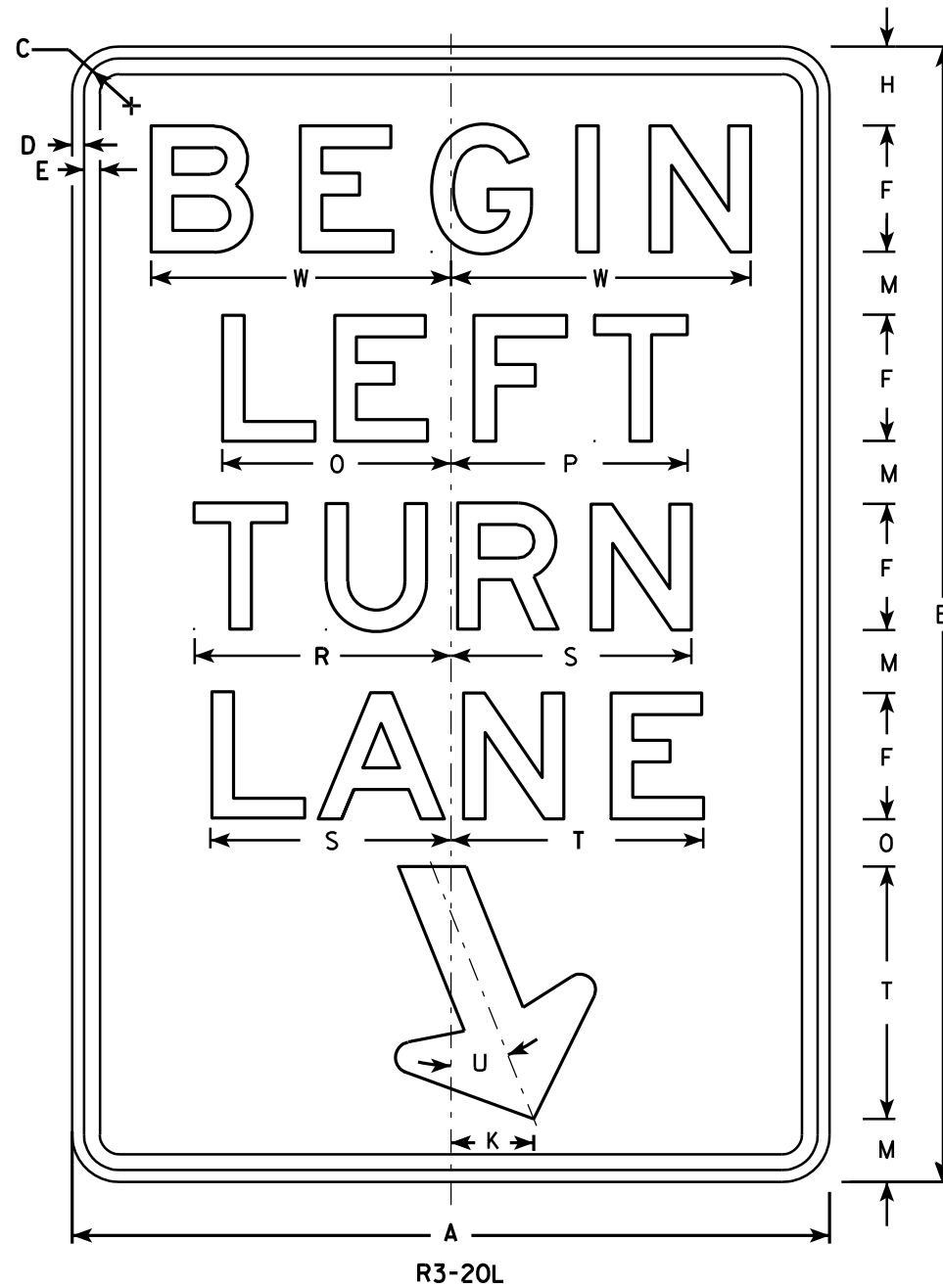
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

7

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 - 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.



7

7

SIZE	A	B	C	D	E	F	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

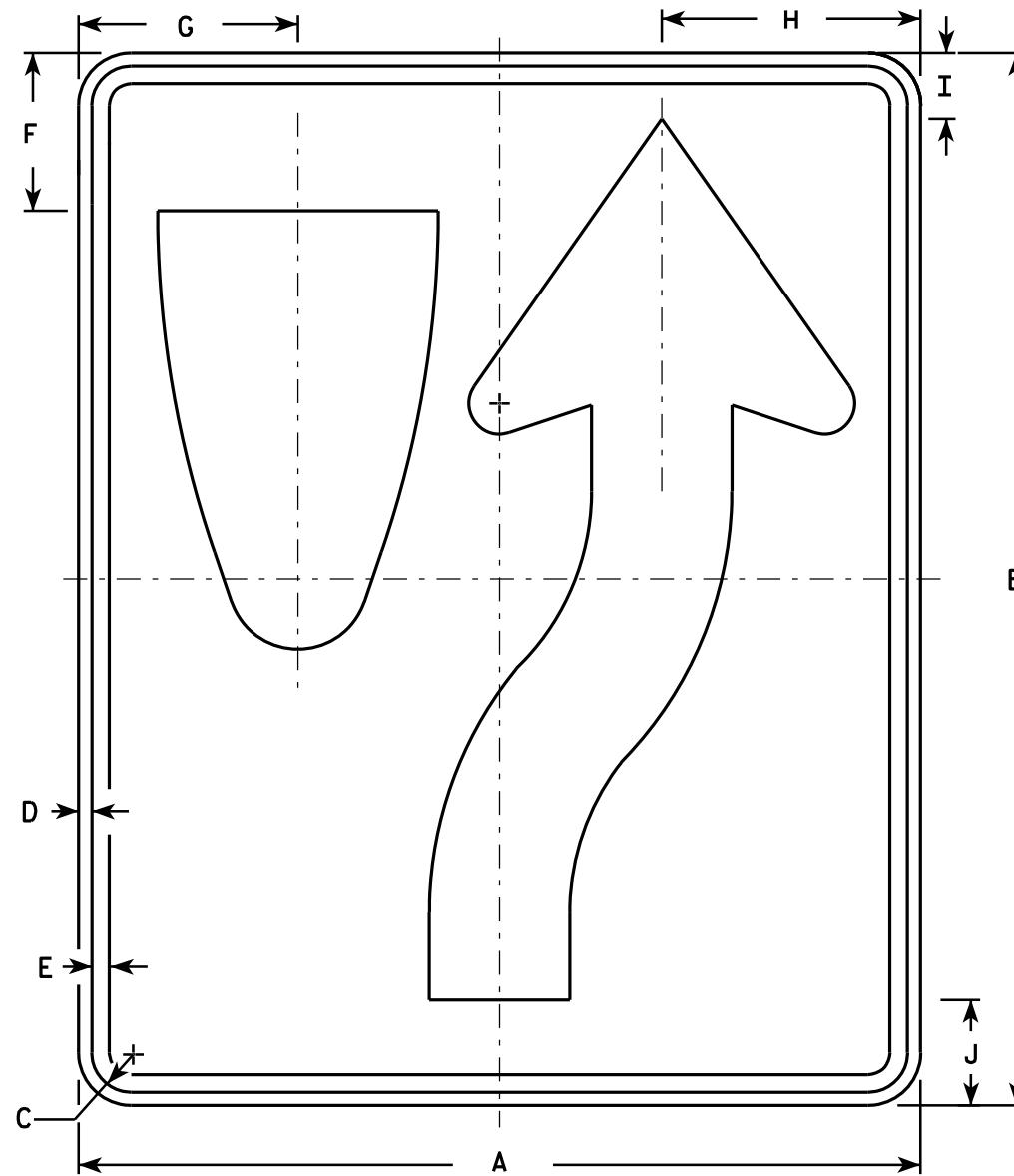
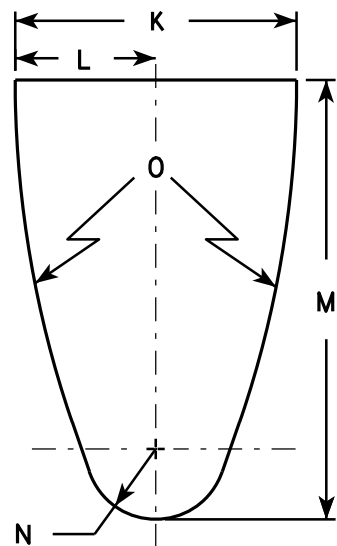
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

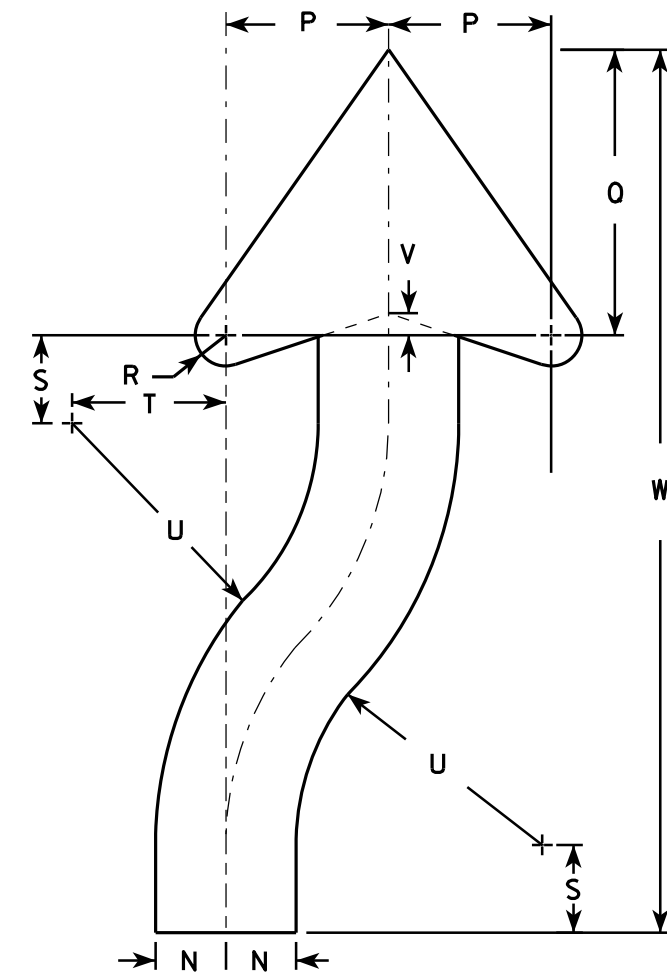
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ **E**

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.



R4-7



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

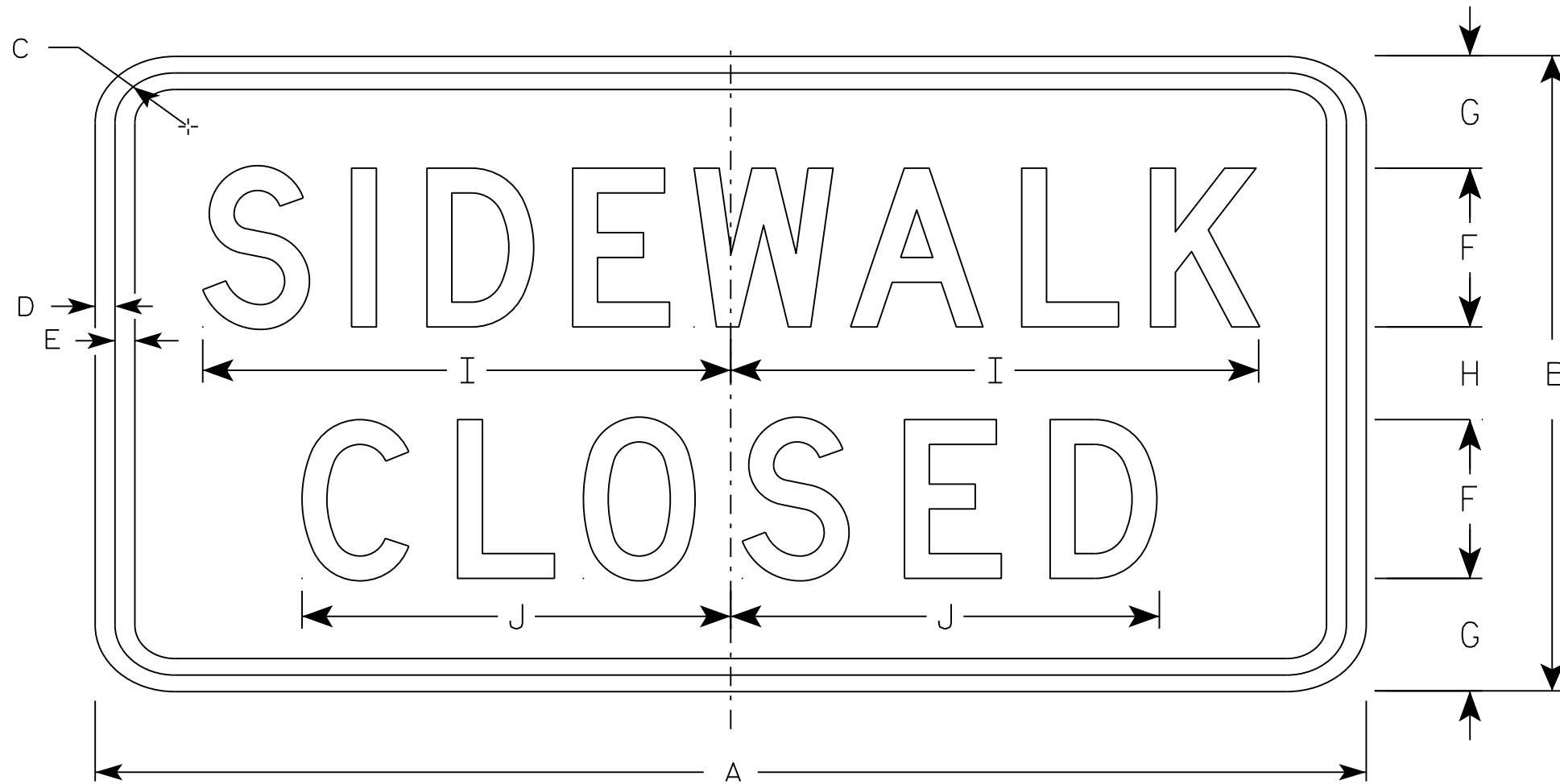
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - 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.



R9-9

7

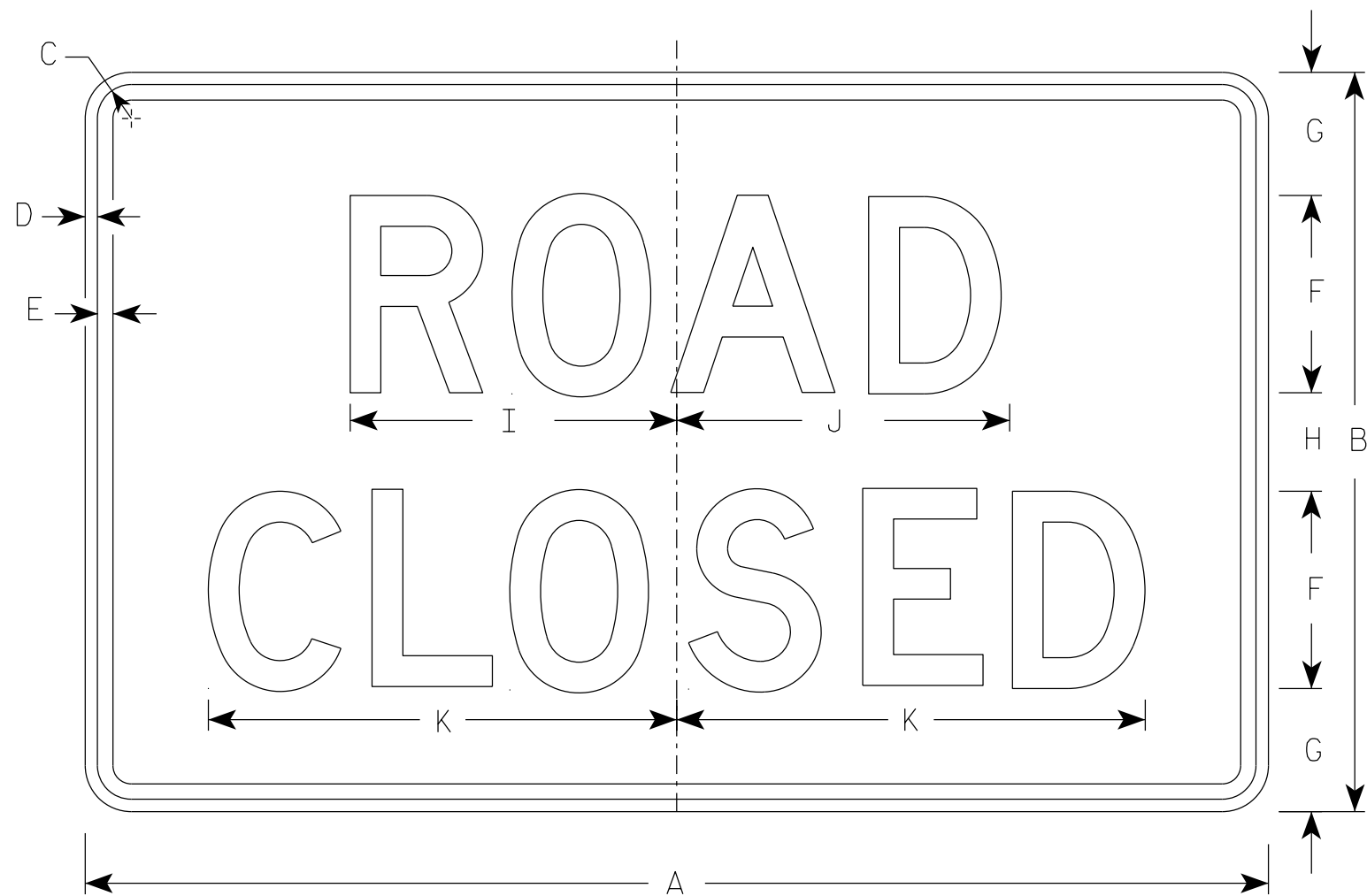
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 3/4	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

STANDARD SIGN
R9-9

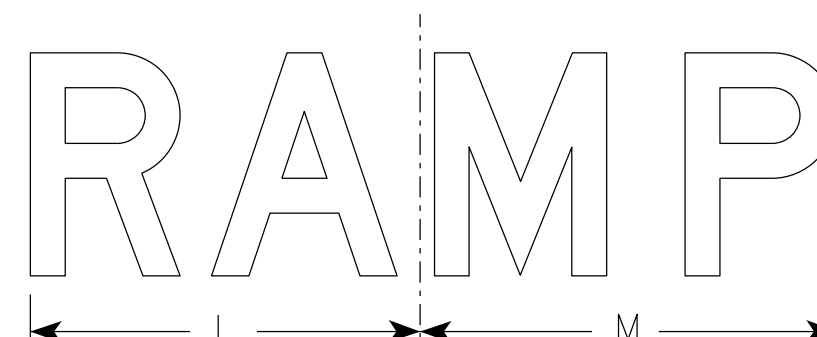
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

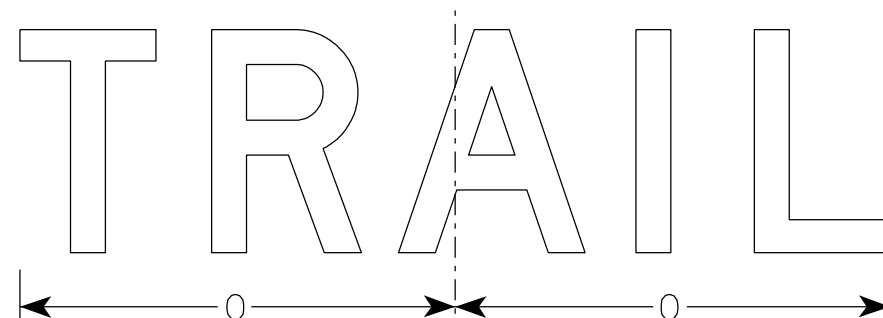
DATE 8/11/16 PLATE NO. R9-9.6



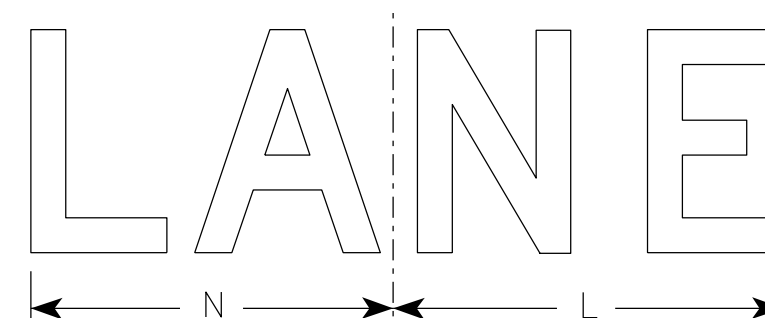
R11-2



R11-2R



R11-2T



R11-2L

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

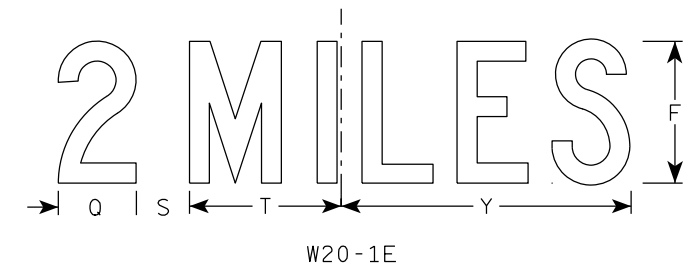
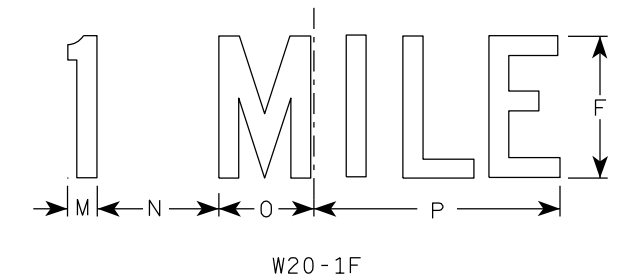
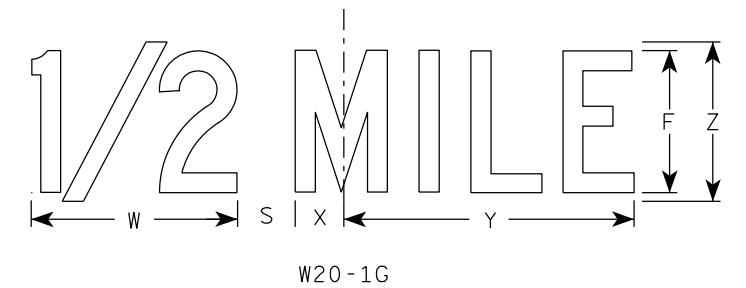
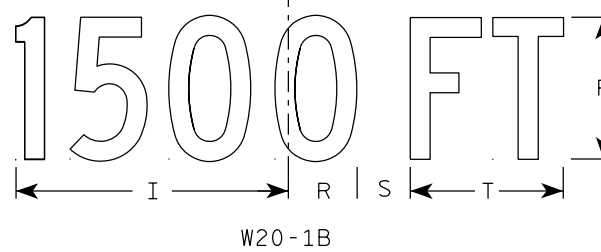
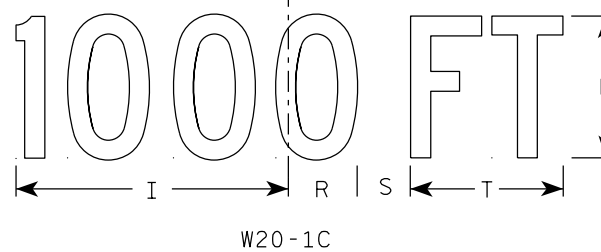
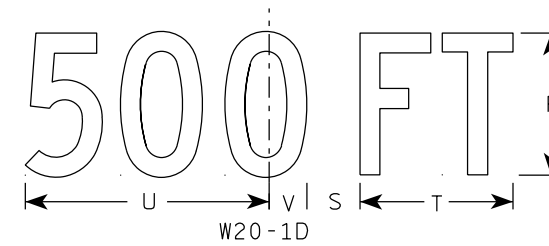
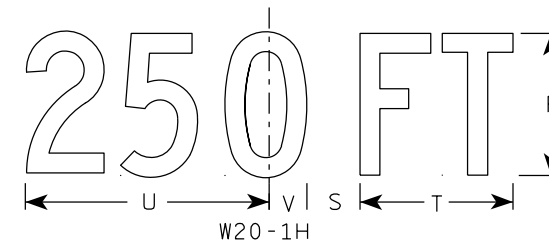
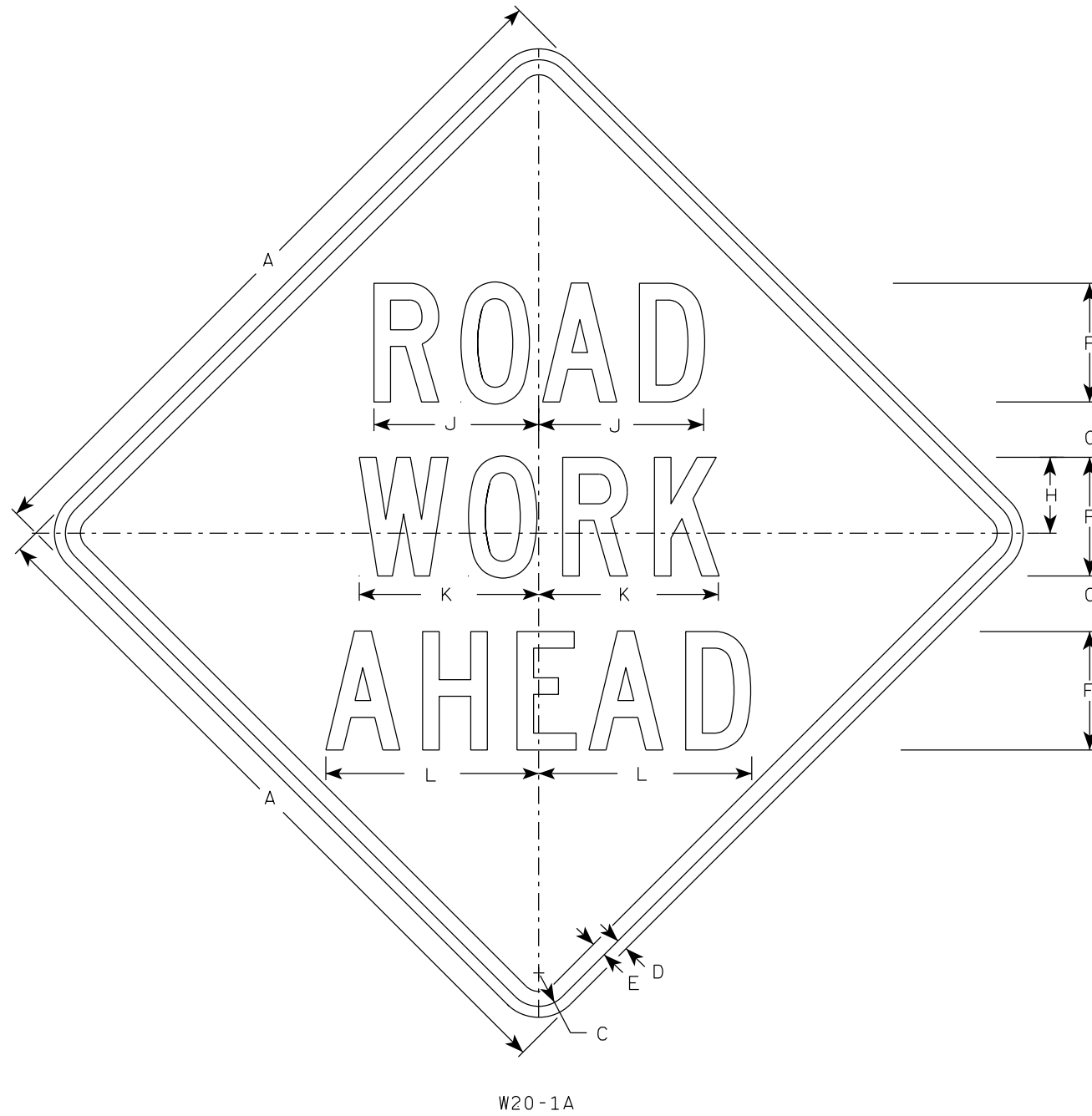
APPROVED *Matthew R Rauch*
For State Traffic Engineer

DATE 3/29/2021 PLATE NO. R11-2.11

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ **E**

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 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

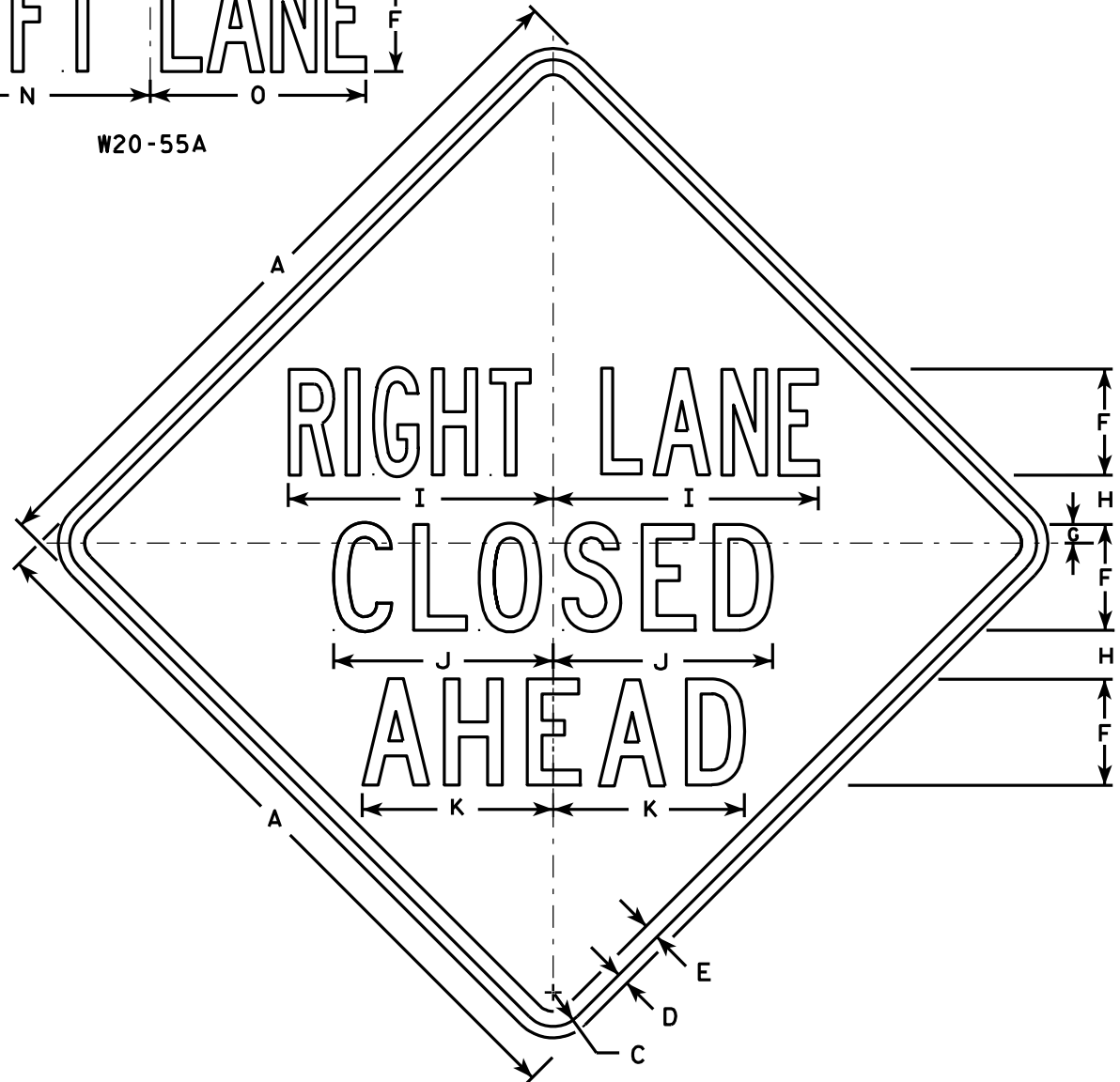
DATE 3/25/2020 PLATE NO. W20-1.11

CENTER LANE

W20-56A

LEFT LANE

W20-55A



W20-5A

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.

500 FT

W20-5D

1000 FT

W20-5C

1500 FT

W20-5B

1/2 MILE

W20-5G

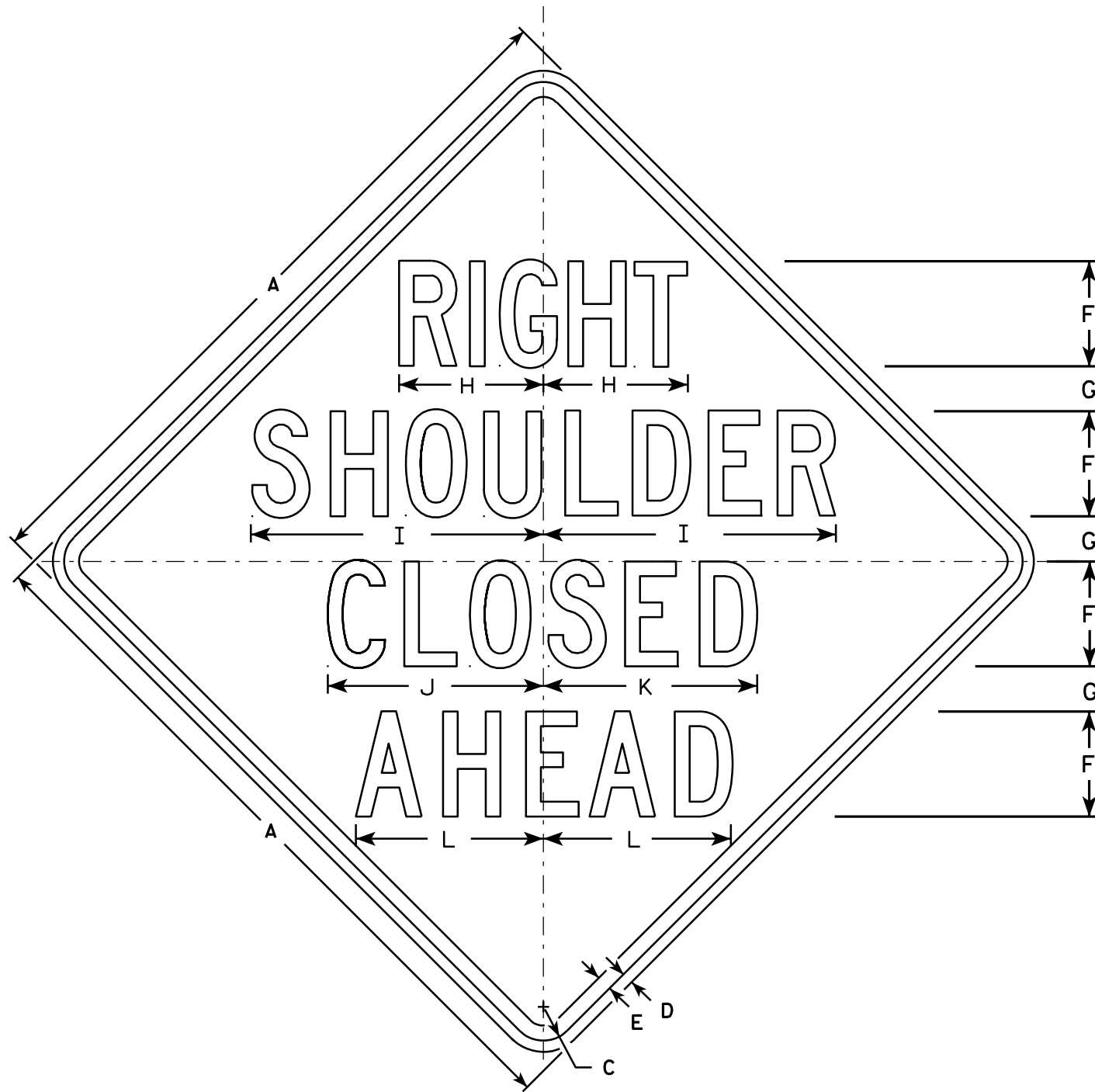
1 MILE

W20-5F

SIZE	A	B	C	D	E	F	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	7/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	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

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E

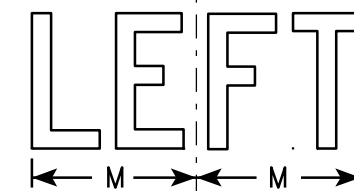
STANDARD SIGN
W20-5A, B, C, D, F & G
WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R Rauch*
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-5.11



W21-5B

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.



W21-5BL

7

7

SIZE	A	B	C	D	E	F	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

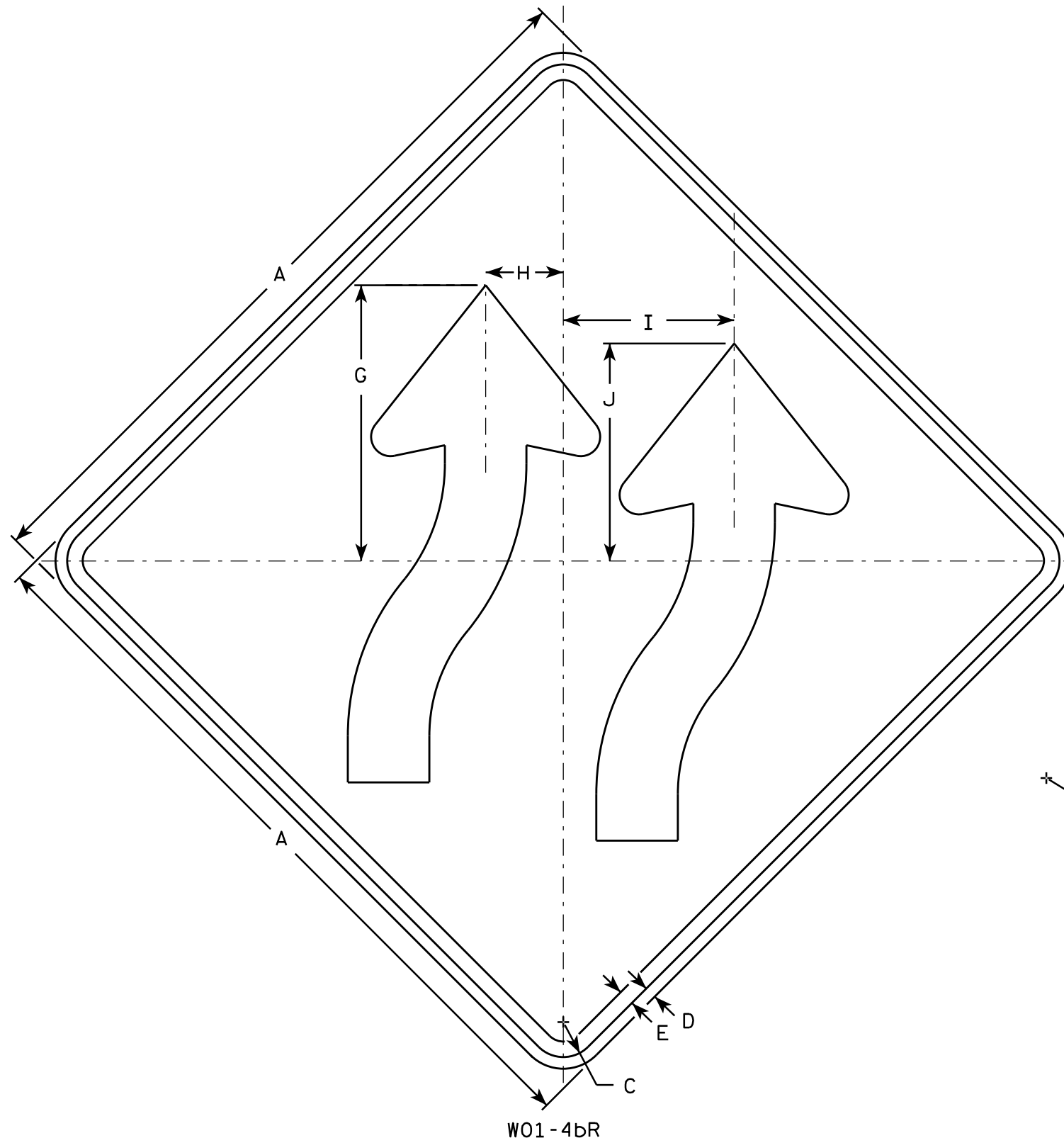
STANDARD SIGN
W21-5B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

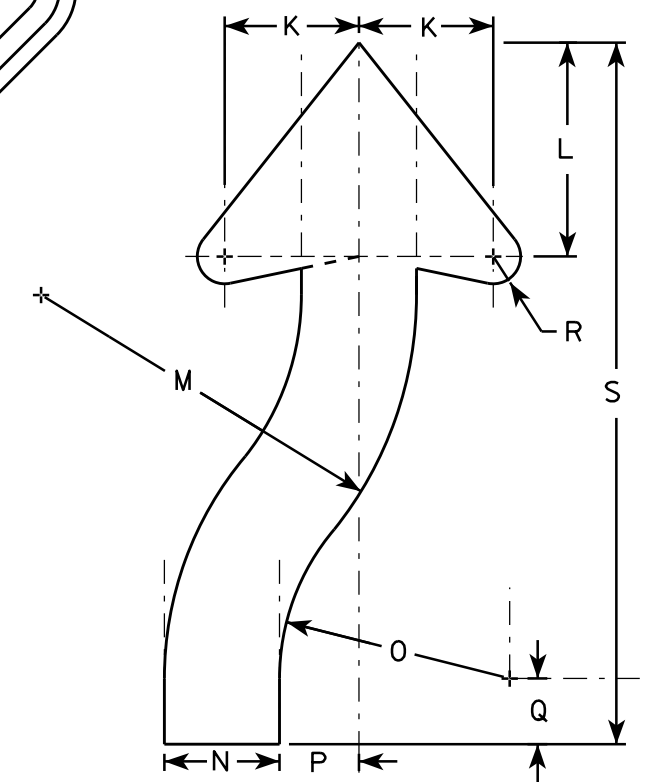
DATE 3/21/11 PLATE NO. W21-5B.3

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4bL is the same as W014-bR except arrows are reversed along the vertical centerline



W01-4bR

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		13 3/8	3 3/4	8 1/4	10 1/2	4 5/8	7 3/8	12 7/8	3 7/8	7 7/8	2 3/4	2 1/4	7/8	24								9.0
2S	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
2M	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
3	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
4	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
5	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0

STANDARD SIGN
W01-4b

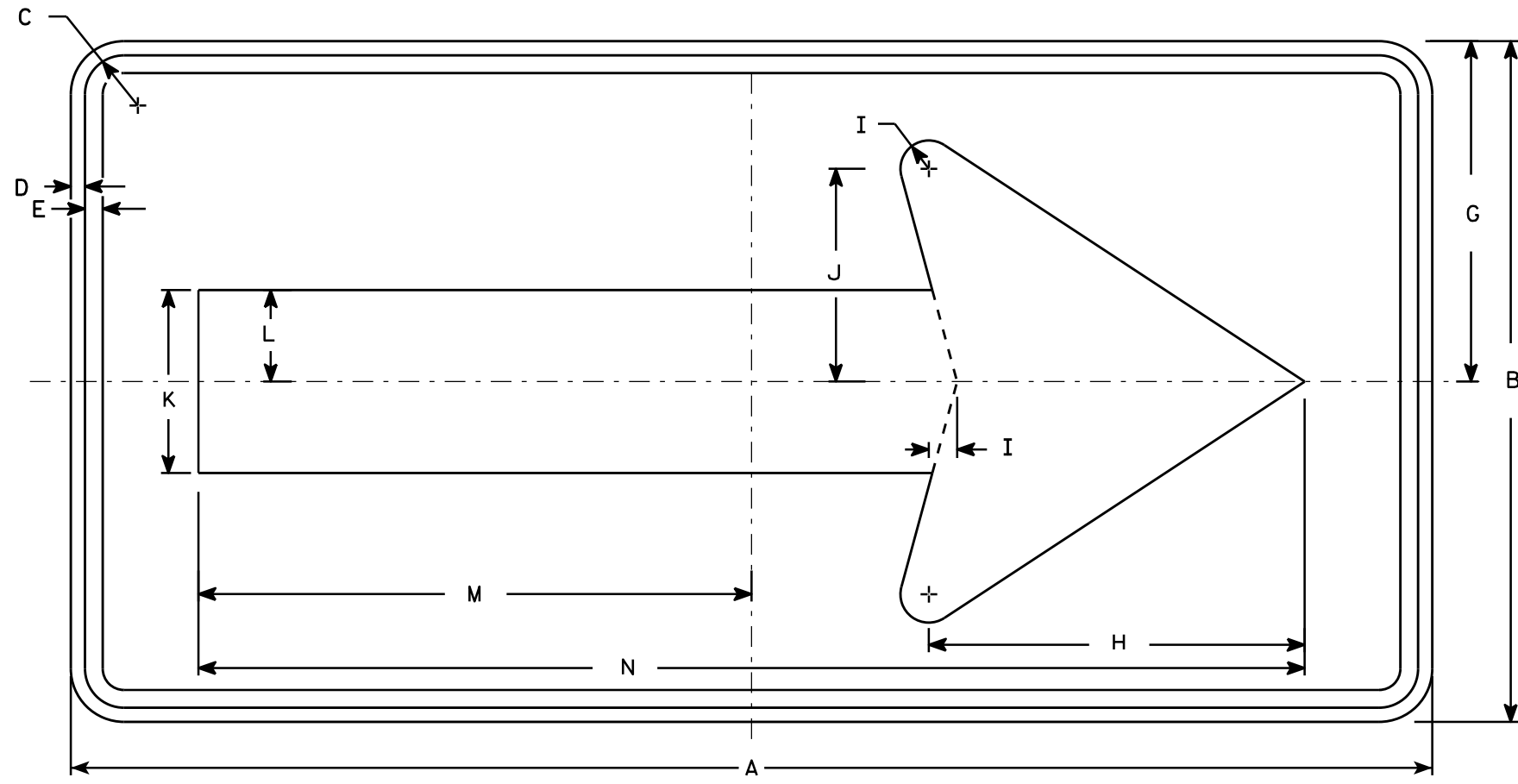
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4b.1

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.



W01-6

7

7

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

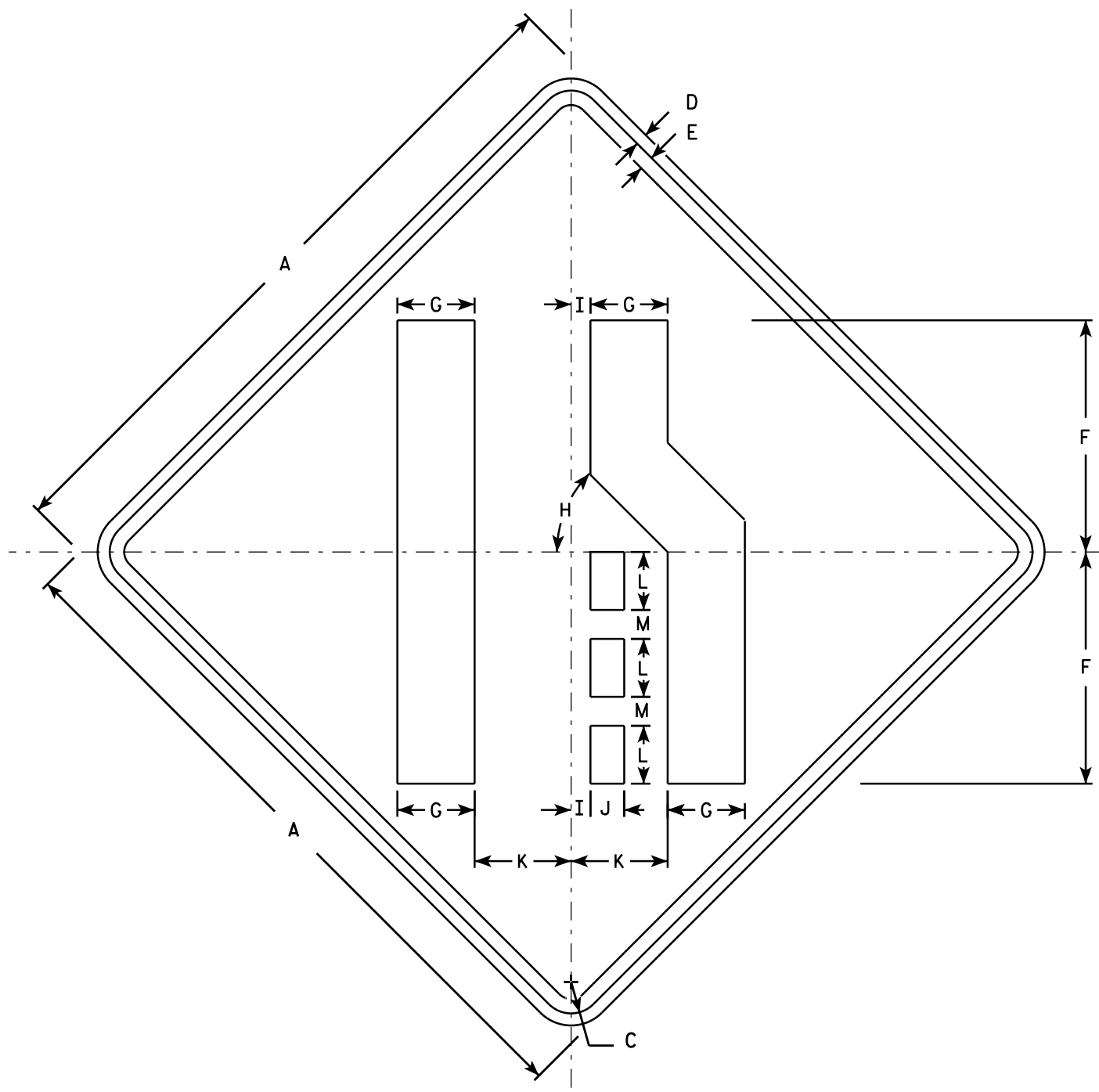
STANDARD SIGN
W01-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



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.

7

7

SIZE	A	B	C	D	E	F	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

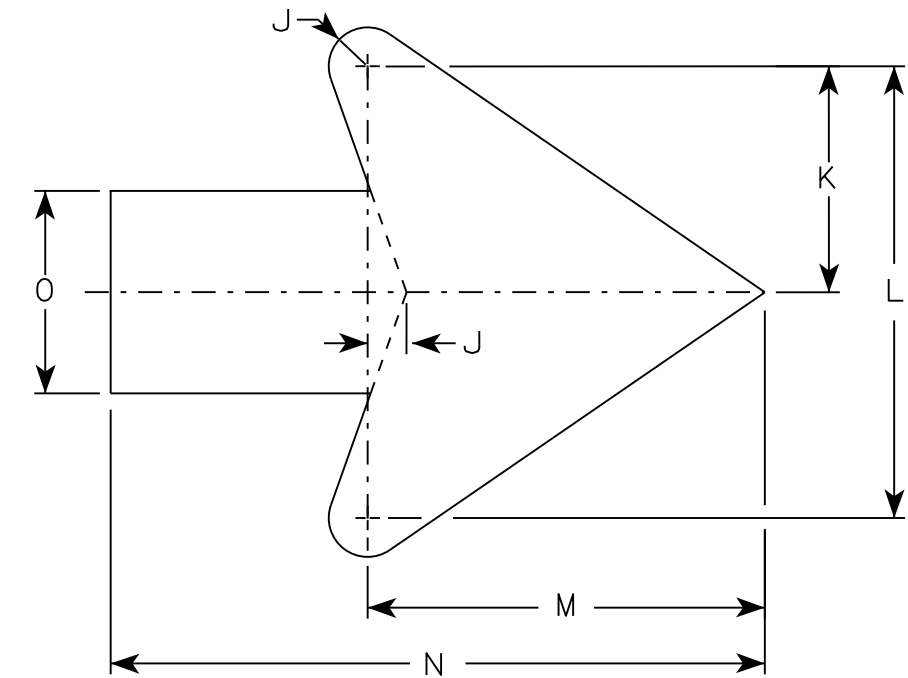
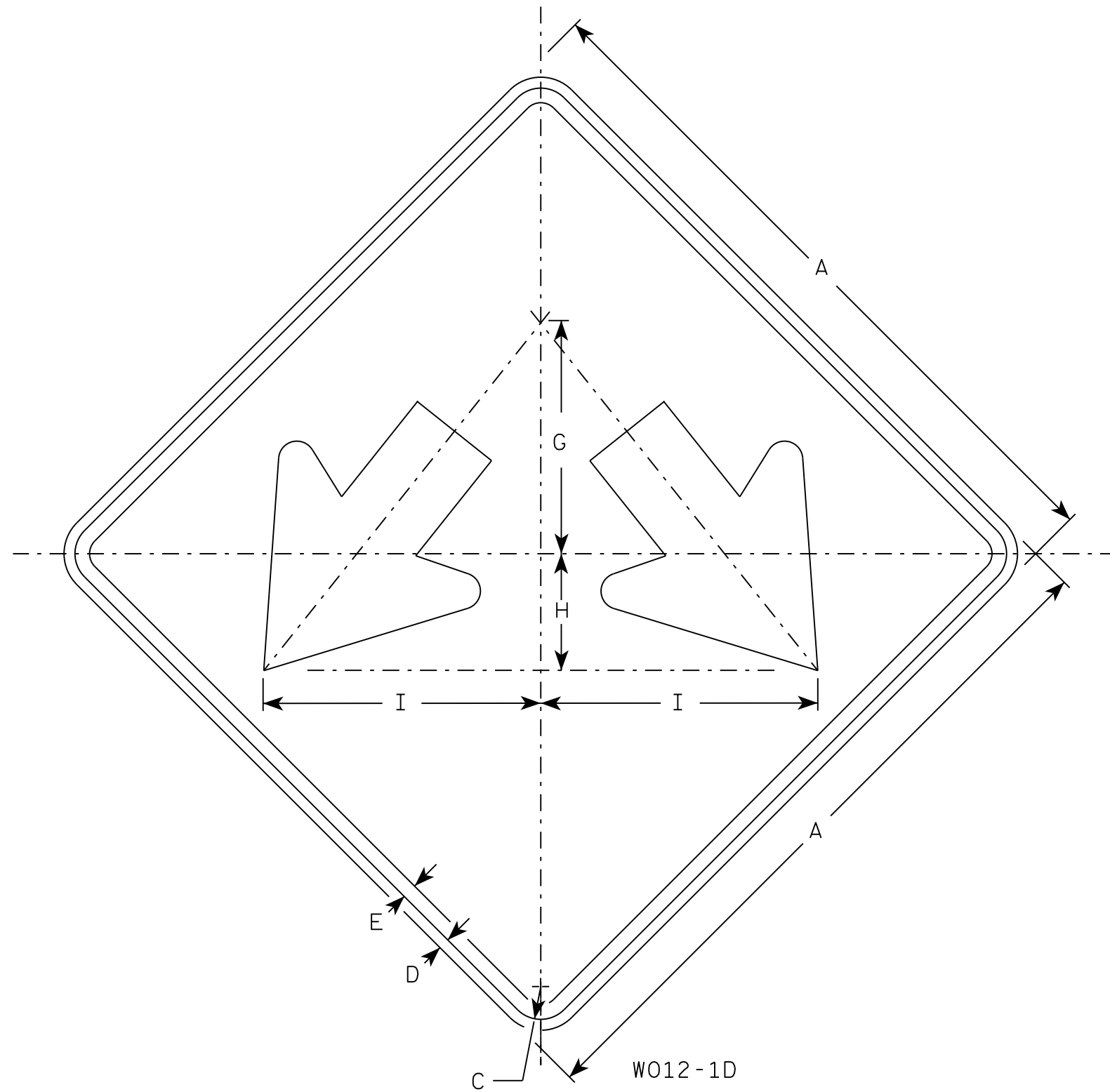
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 11/20/13 PLATE NO. W04-2.1

NOTES

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



Arrow Detail

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0

STANDARD SIGN
W012-1D

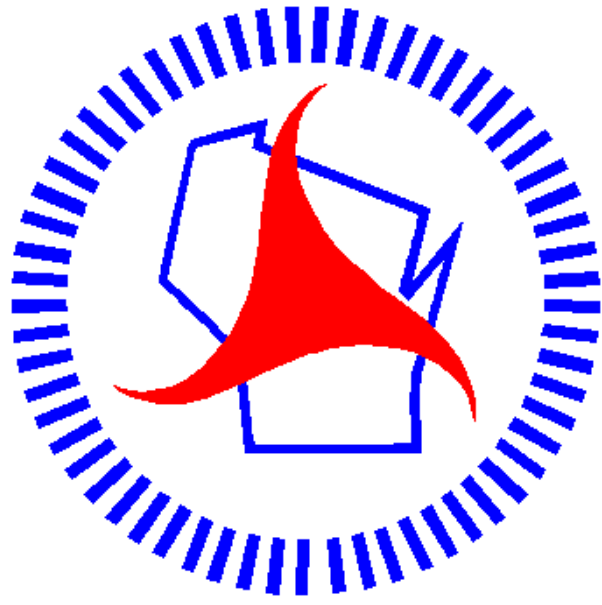
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/28/16 PLATE NO. W012-1D.2

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

Notes



Wisconsin Department of Transportation

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