

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 = 150



DESIGN DESIGNATION

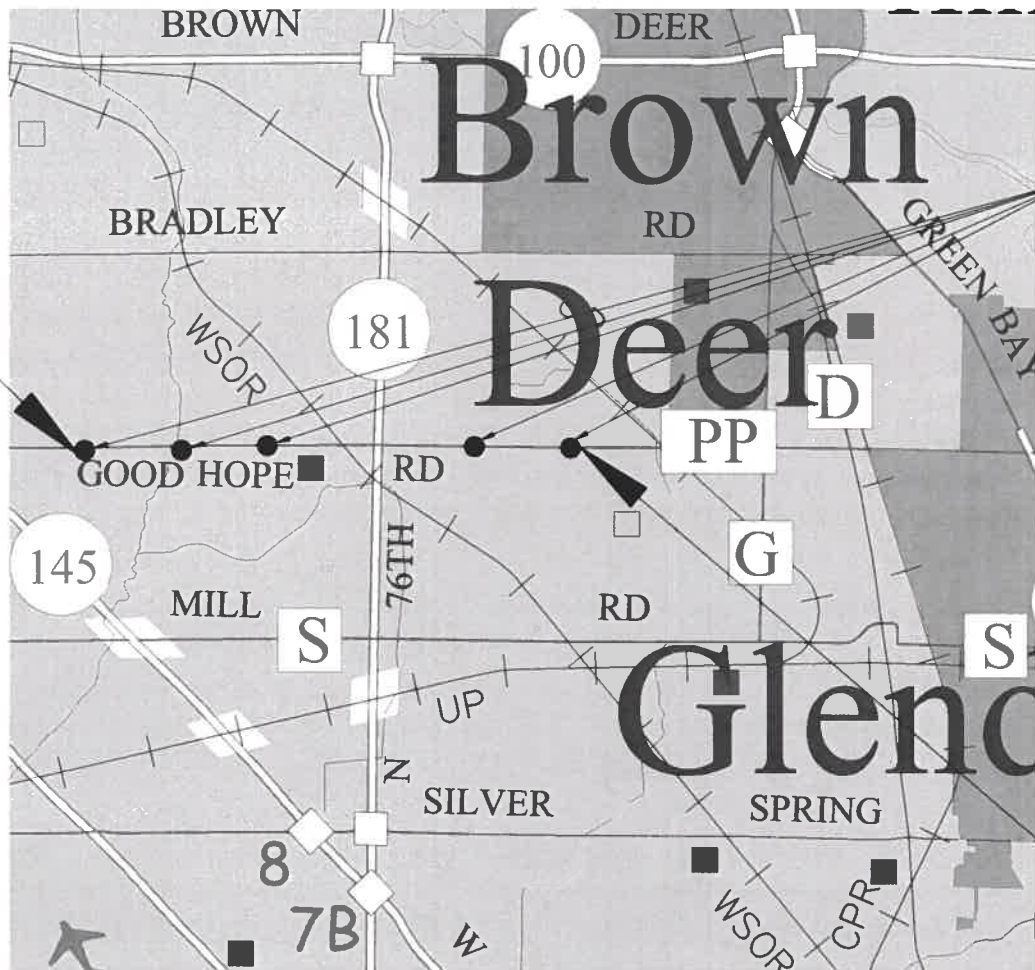
A.A.D.T.	2019	=	26,200 - 35,200
A.A.D.T.		=	N/A
D.H.V.		=	N/A
D.D.		=	N/A
T.		=	N/A
DESIGN SPEED		=	40.45 M.P.H.
ESALS		=	N/A

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	

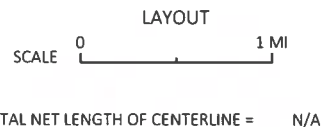
PROFILE	
GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

BEGIN PROJECT STA 9+50
X=2492752.9584
Y=424752.6087



PROJECT LOCATIONS

END PROJECT STA 143+15



HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN STATE PLANE COORDINATES, SOUTH ZONE, NAD27, IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NGVD29.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
C MILWAUKEE GOOD HOPE ROAD
99TH ST TO 60TH ST
CTH PP
MILWAUKEE COUNTY

STATE PROJECT NUMBER
2984-07-76

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2984-07-76	WISC 2023313	1

ORIGINAL PLANS PREPARED BY:

MILWAUKEE COUNTY
DEPARTMENT OF TRANSPORTATION



PROJECT DESIGNER:
DATE: 10/25/2022 *Alex Thornburg*

RECOMMENDED FOR APPROVAL
DATE: 10/25/2022 *Dana Brown-Morden*
Director Transportation Services

APPROVED:
DATE: 10-25-2022 *Dana Brown-Morden*
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	BRIAN BOOTHBY

APPROVED FOR THE DEPARTMENT
DATE: 10/26/2022 *Michael J. Baird*
(Signature)

E

GENERAL NOTES

REMOVALS

- DO NOT REMOVE TREES OR SHRUBS WITHOUT THE CONSENT OF THE ENGINEER.

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.

MISCELLANEOUS

- ADJUST TRAFFIC CONTROL DEVICES TO FIT FIELD CONDITIONS AS 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.
- CONTACT THE PROJECT ENGINEER AND THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION (SEWRPC), AT LEAST TWO WEEKS PRIOR TO 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	ROUNDBOUT
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 Wisconsin

Mr. Jay Bulanek
435 S. 95th St.
Milwaukee, WI 53214
Phone: (414) 491-2855
jb5175@att.com

Charter Communications

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

City of Milwaukee

841 North Broadway, Room 409
Milwaukee, WI 53202

Street Lighting – Mark MacRae,
Office: (414) 286-5928,
Mobile: (414) 708-0434

Communications - Brian Pawlak,
(414) 286-3686

Sewer - Zafar Yousuf,
Office: (414) 286-2467,
zyousu@milwaukee.gov

Water – 24hr Control Center,
(414) 286-3710

Everstream

Mr. Shad Garcia Manager, Outside Plant
324 E Wisconsin Avenue, Suite 730
Milwaukee, WI 53202
Office: (414) 409-1708
Mobile: (414) 522-6685
WI-Relocations@everstream.net

UTILITIES

MCI/Verizon

Mr. RJ Cicatello
15725 W Ryerson Rd
New Berlin, WI 53151
Phone: (262) 232-1323
Randy.Cicatello@verizon.com

Midwest Fiber Networks

Mr. Cory Schmuki
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Glendale, WI 53209
Phone: (414) 459-3561
Mobile: (414) 349-2764
rtrgovec@midwestfibernetworks.com
relocationrequests@midwestfibernetworks.com

Milwaukee County Department of Transportation

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

**Milwaukee Metropolitan
Sewerage District (MMSD)**

Mr. Jim Romanowski
260 W. Seeboth Street
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Mobile: (414) 617-1429
JRomanowski@mmsd.com

We Energies – Electric

Mr. Alex Dantine
500 S 116th St.
West Allis, WI 53214
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Alex.Dantine@we-energies.com

We Energies – Gas

Mr. Jacob Hulbert
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West Allis, WI 53214
Phone: (414) 459-3561
Mobile: (414) 349-2764
Jacob.Hulbert@we-energies.com

UTILITIES

WisDOT– Communications

Mr. John Mittelstadt
Southeast Region
141 NW Barstow St
Waukesha , WI 53187
Phone: (608) 205-7859

AGENCIES

City of Milwaukee

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

Milwaukee County Transit System

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

**Southeastern Wisconsin Regional Planning
Commission (SEWRPC)**

W239 N1812 Rockwood Drive
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Waukesha, WI 53187-1607

Mr. Andy Traeger
Phone: (262) 953-4296
Mobile: (262) 853-8463
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MILWAUKEE COUNTY

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Mr. Alex Thornburg
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Phone: (414) 257-6569
Eddie.santiago@milwaukeecountywi.gov

ORDER OF SECTION 2 SHEETS

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

STATE AGENCIES

**Wisconsin Department of
Natural Resources**
Mr. Craig Webster
Environmental Analysis and
Review Specialist
141 NW Barstow St
Waukesha, WI 53188
Phone: (262) 574-2141
Craig.Webster@wisconsin.gov



Dial **811** or **(800) 242-8511**

www.DiggersHotline.com



PROJECT NO: 2984-07-76

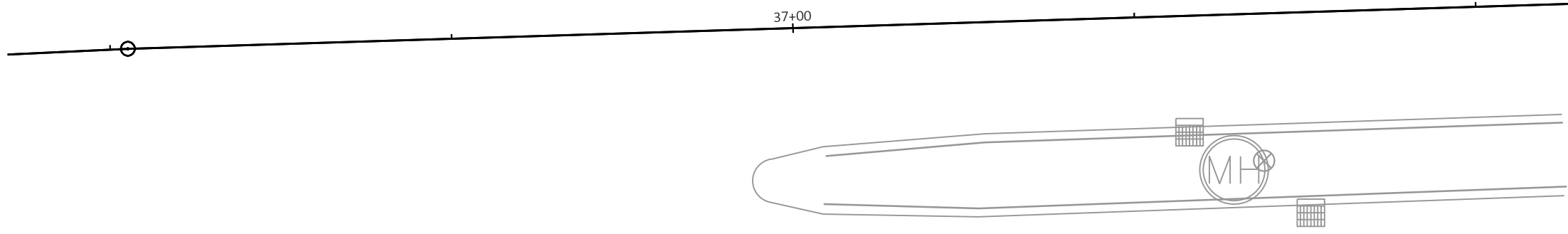
HWY: CTH PP

COUNTY: MILWAUKEE

PROJECT OVERVIEW

SHEET

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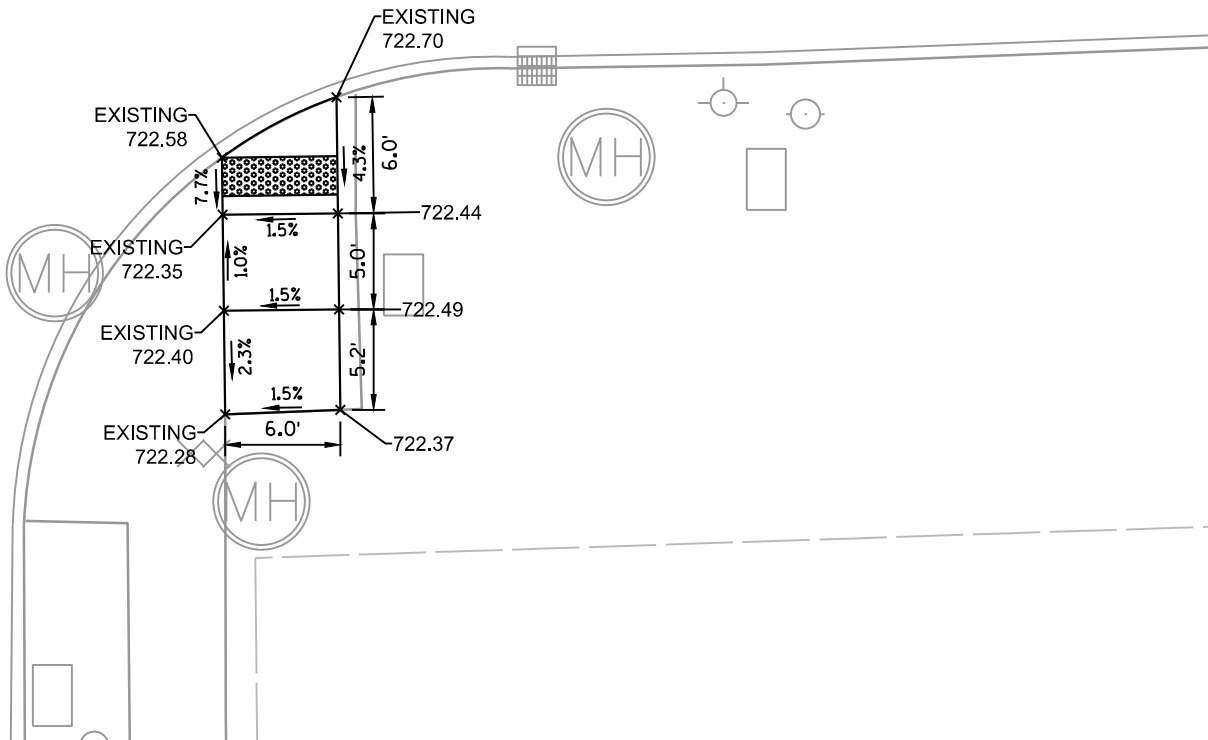


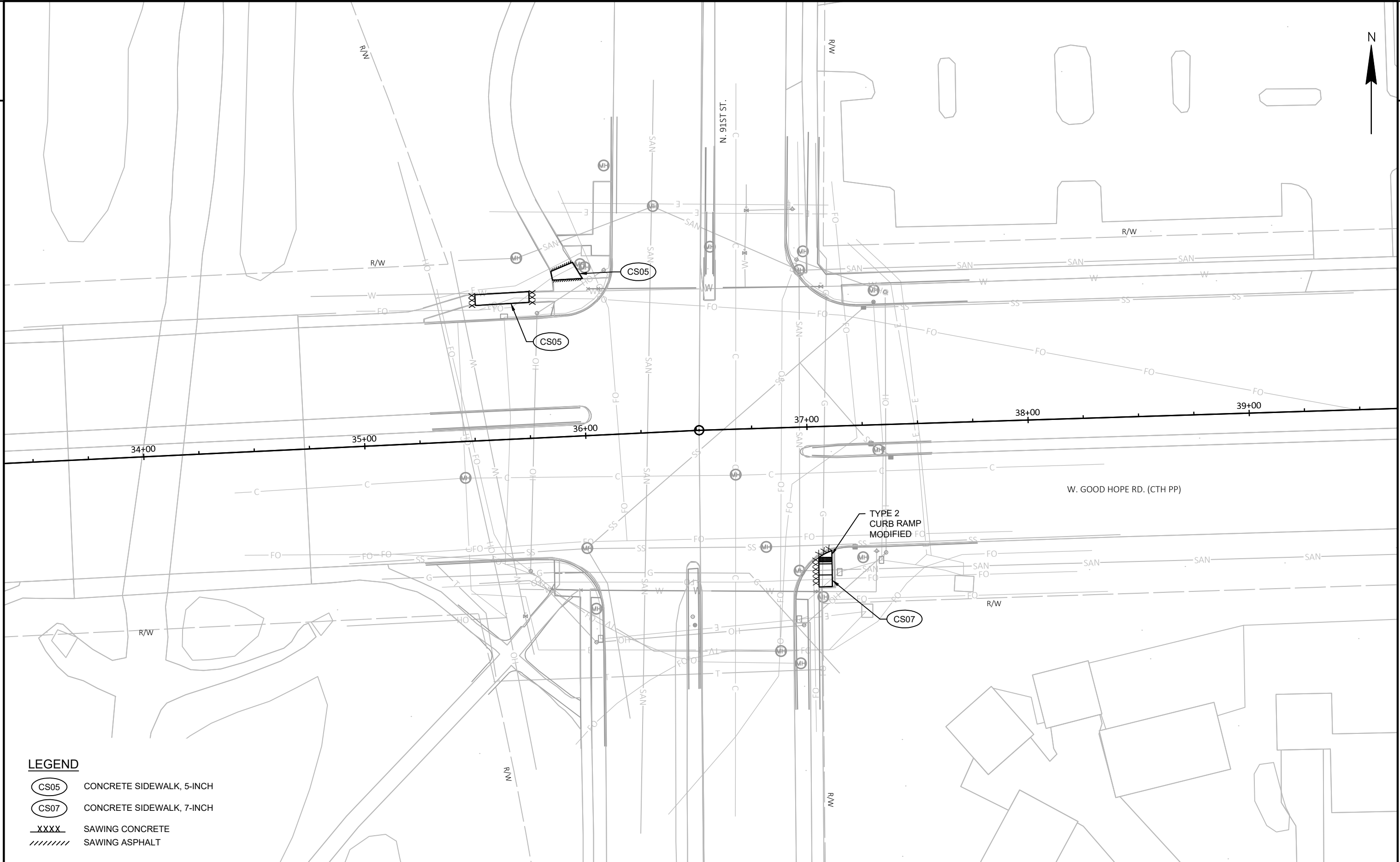
W. GOOD HOPE RD. (CTH PP)

TYPE 2 CURB RAMP
MODIFIED



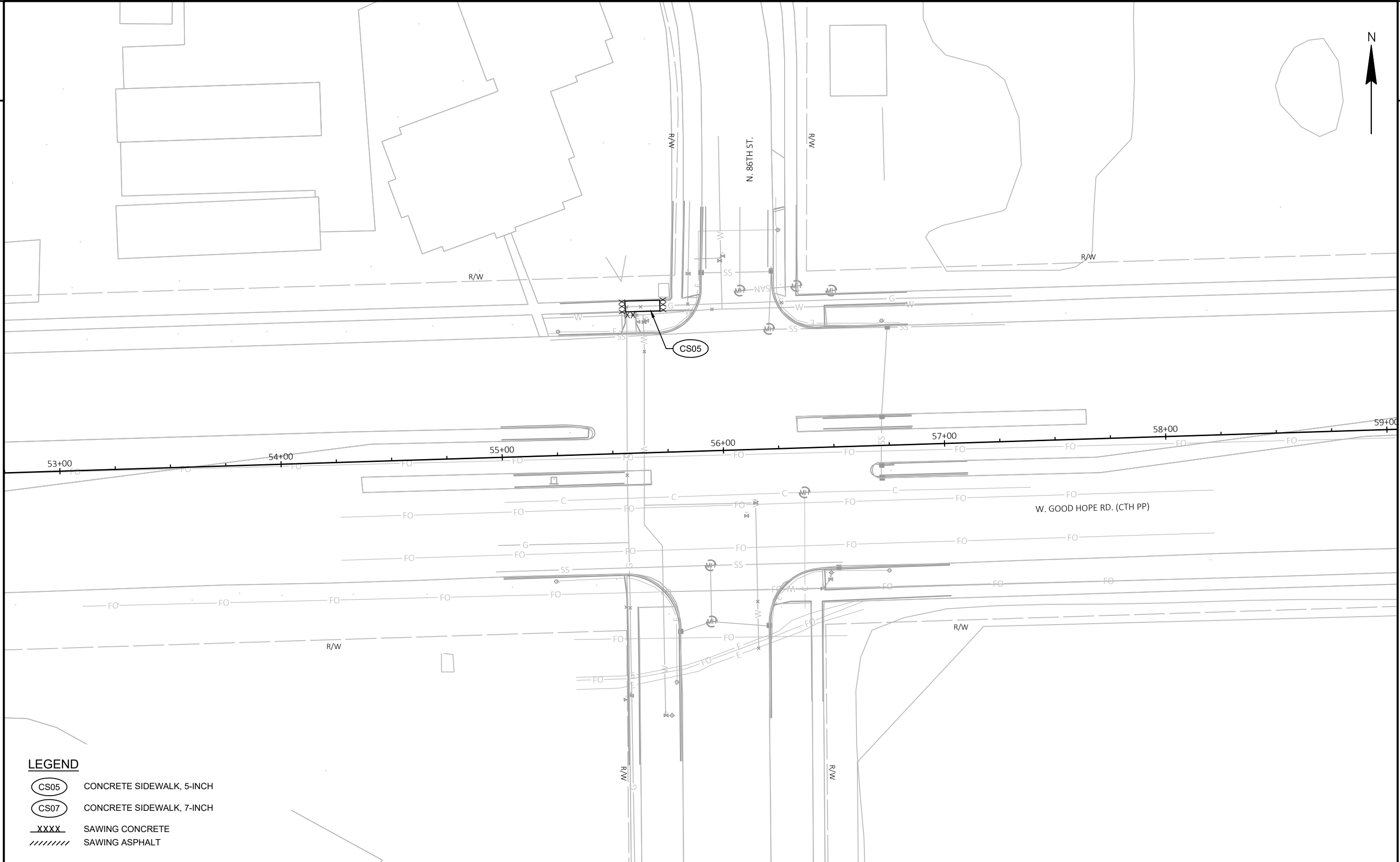
N. 91ST ST.





- LEGEND**
- CS05 CONCRETE SIDEWALK, 5-INCH
 - CS07 CONCRETE SIDEWALK, 7-INCH
 - XXXX SAWING CONCRETE
 - ////// SAWING ASPHALT

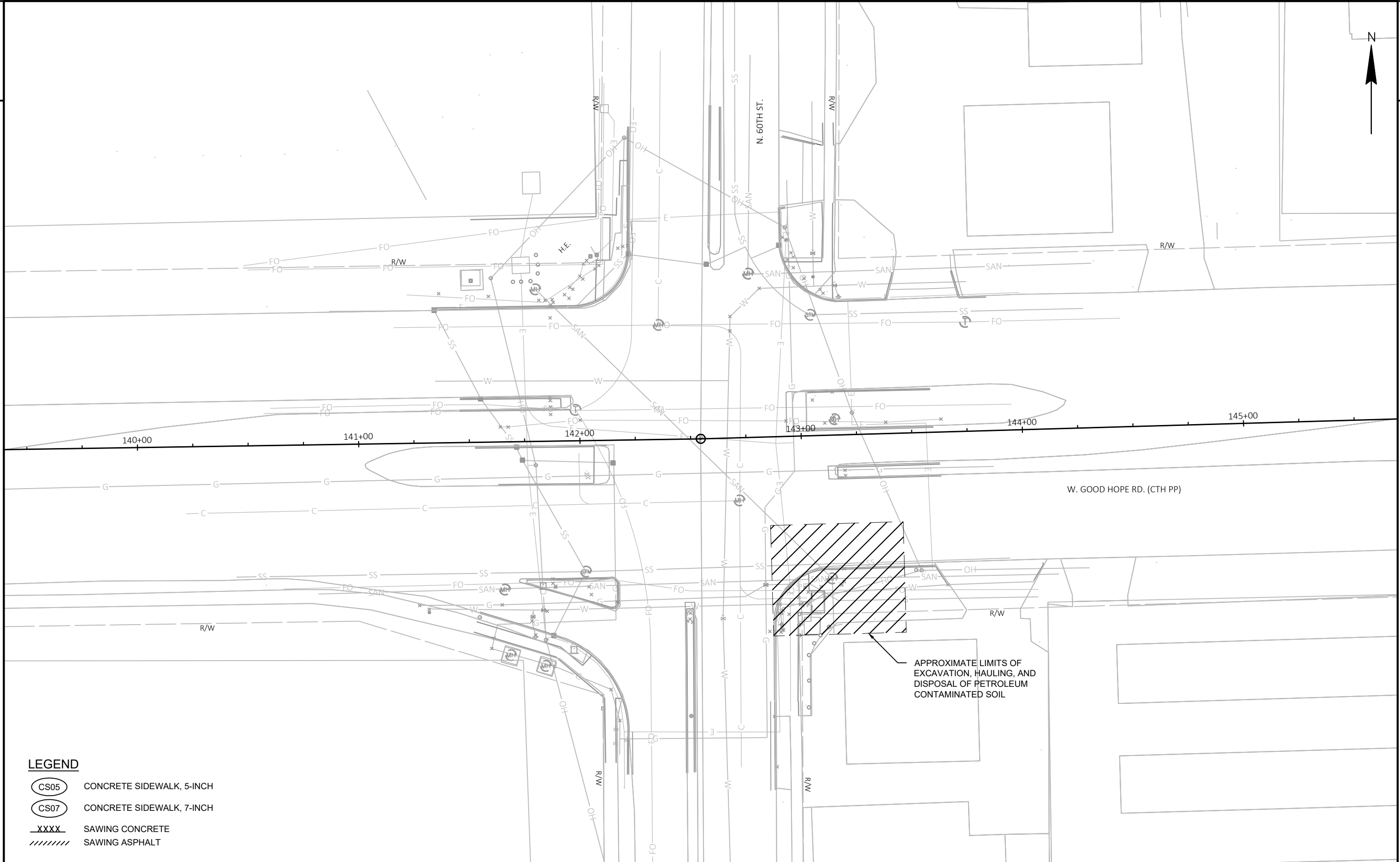
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



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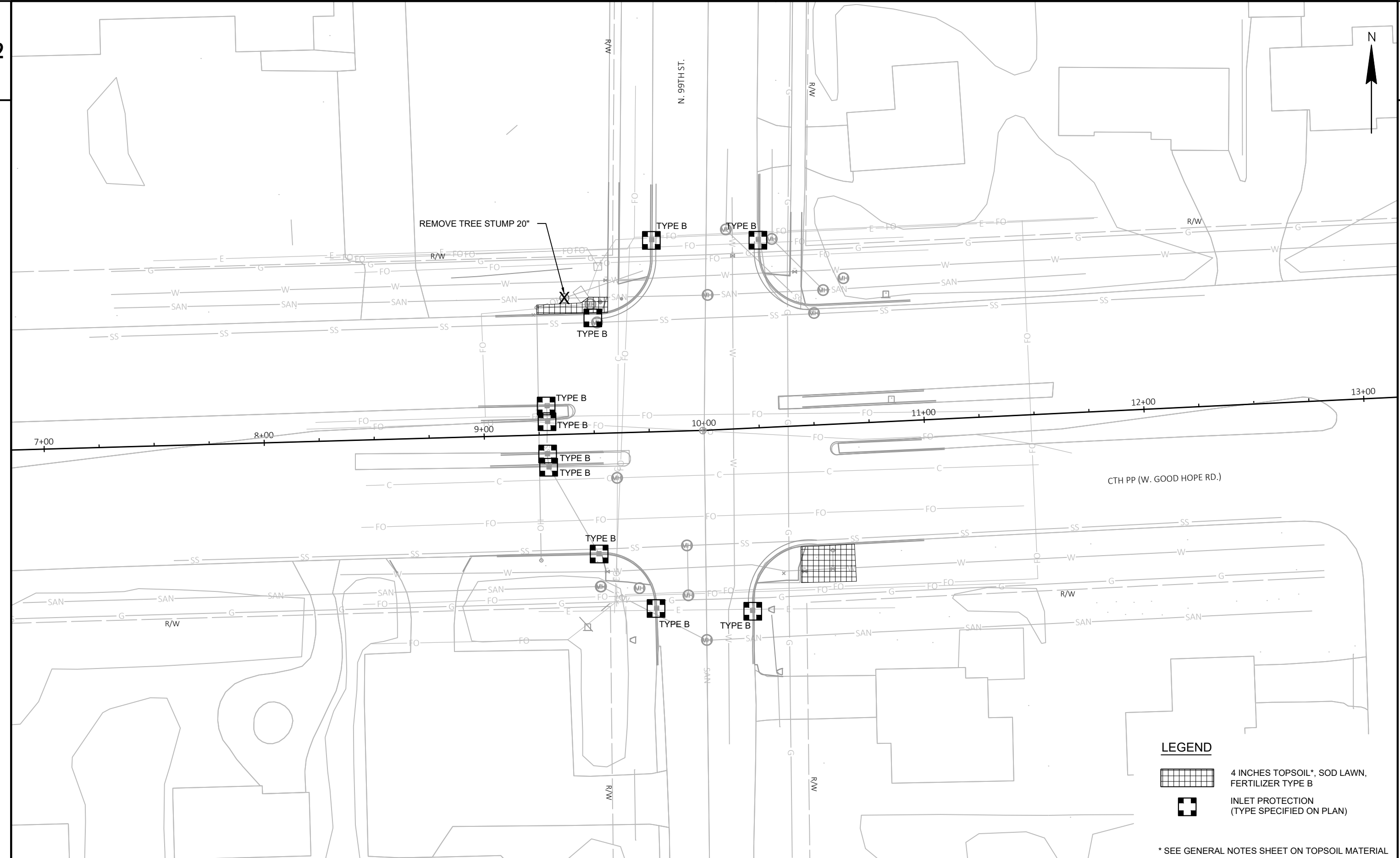
- CS05 CONCRETE SIDEWALK, 5-INCH
- CS07 CONCRETE SIDEWALK, 7-INCH
- XXXX SAWING CONCRETE
- //// SAWING ASPHALT

PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E
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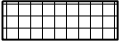



- LEGEND**
-  CONCRETE SIDEWALK, 5-INCH
 -  CONCRETE SIDEWALK, 7-INCH
 -  SAWING CONCRETE
 -  SAWING ASPHALT

PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E
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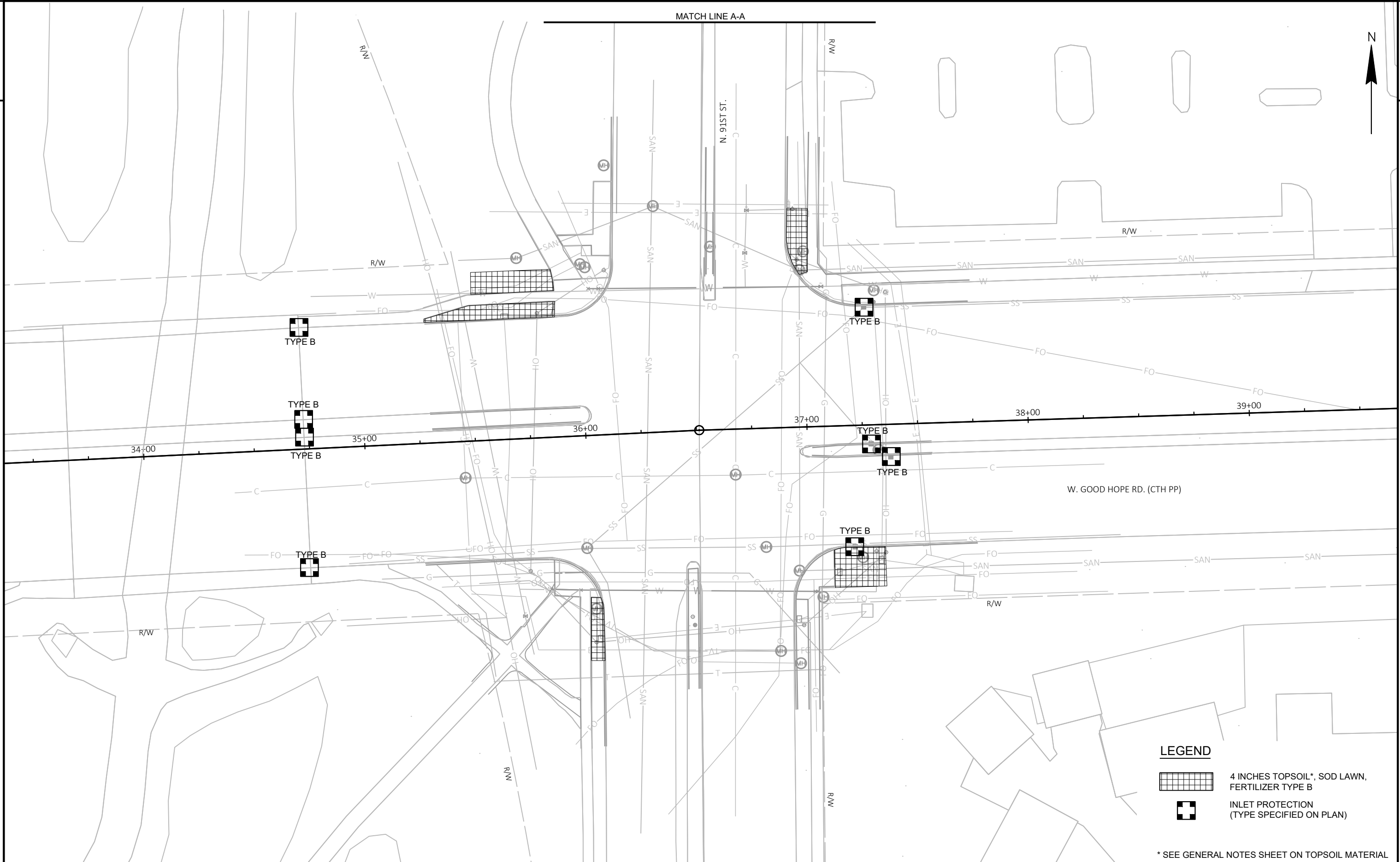
LEGEND

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

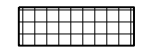
* SEE GENERAL NOTES SHEET ON TOPSOIL MATERIAL

PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	EROSION CONTROL - W. GOOD HOPE RD. (CTH PP) & N. 99TH ST.	SHEET	E
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MATCH LINE A-A



LEGEND



4 INCHES TOPSOIL*, SOD LAWN,
FERTILIZER TYPE B



INLET PROTECTION
(TYPE SPECIFIED ON PLAN)

* SEE GENERAL NOTES SHEET ON TOPSOIL MATERIAL

PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	EROSION CONTROL - W. GOOD HOPE RD. (CTH PP) & N. 91ST ST.	SHEET	E
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TYPE B



TYPE B



TYPE B

N. 91ST ST.

MATCH LINE A-A

LEGEND



4 INCHES TOPSOIL*, SOD LAWN,
FERTILIZER TYPE B



INLET PROTECTION
(TYPE SPECIFIED ON PLAN)

* SEE GENERAL NOTES SHEET ON TOPSOIL MATERIAL

PROJECT NO: 2984-07-76

HWY: CTH PP

COUNTY: MILWAUKEE

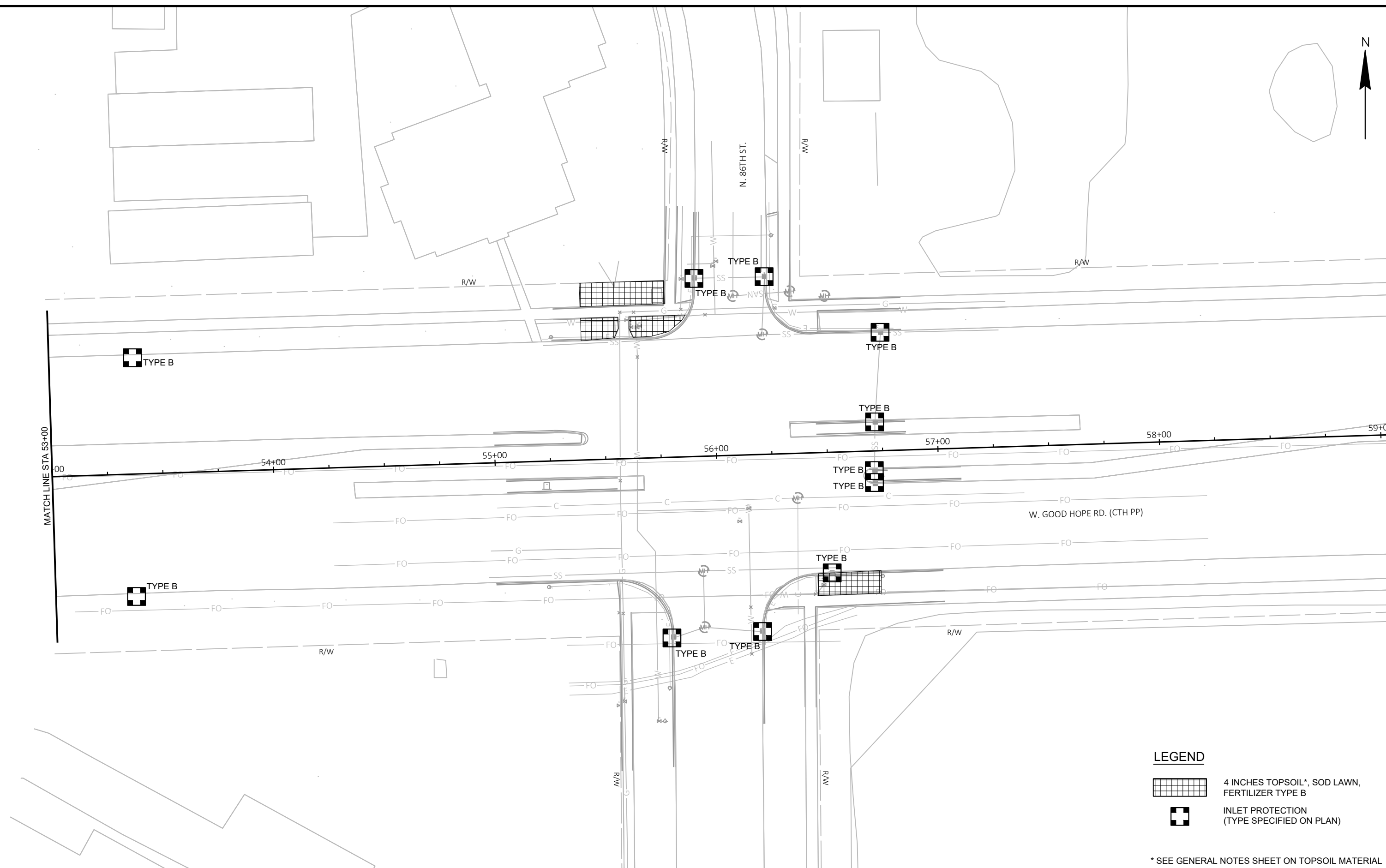
EROSION CONTROL - W. GOOD HOPE RD. (CTH PP) & N. 91ST ST.

SHEET

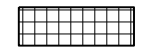
E



MATCH LINE STA 53+00



LEGEND



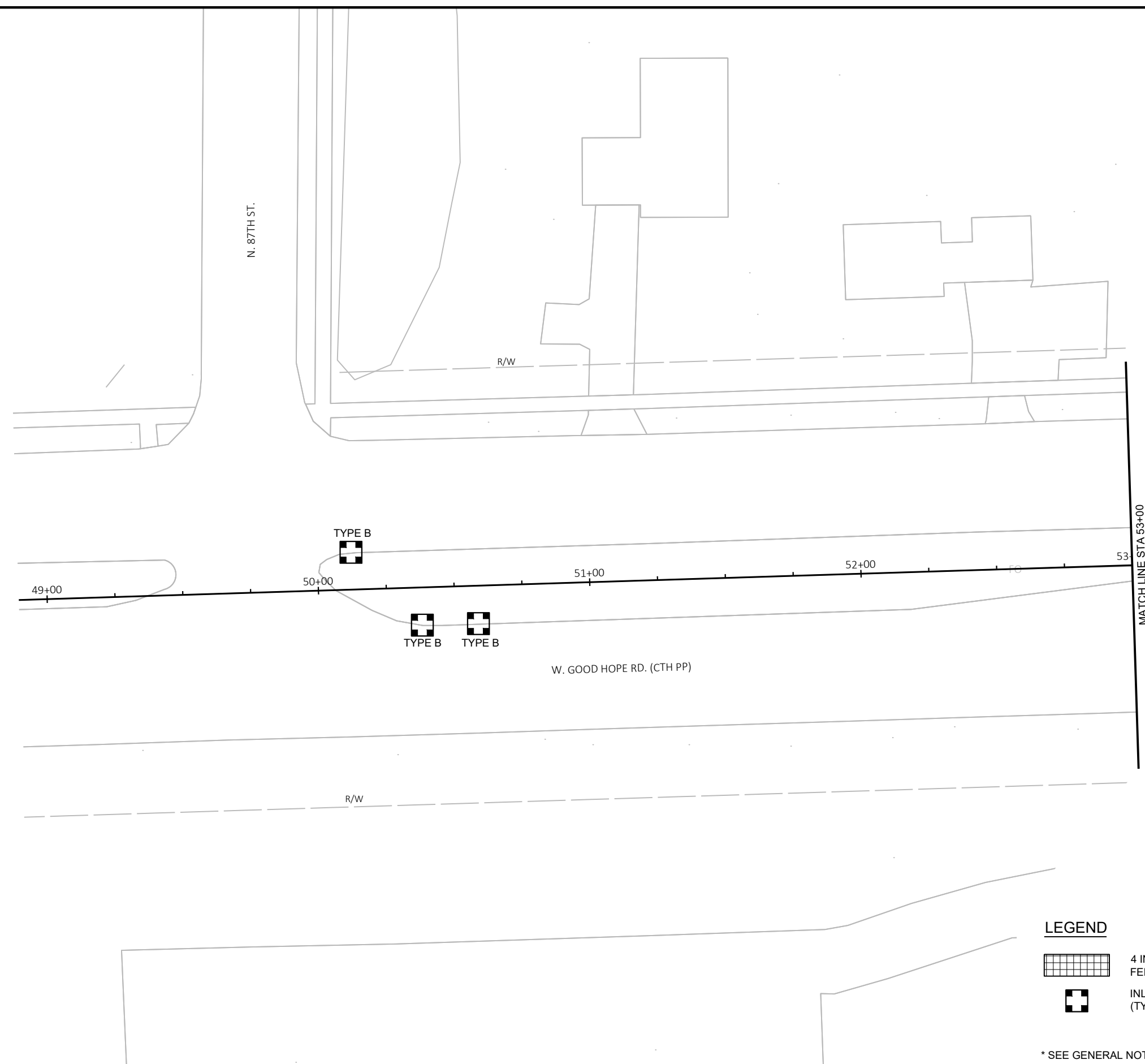
4 INCHES TOPSOIL*, SOD LAWN,
FERTILIZER TYPE B



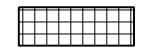
INLET PROTECTION
(TYPE SPECIFIED ON PLAN)

* SEE GENERAL NOTES SHEET ON TOPSOIL MATERIAL

PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	EROSION CONTROL - W. GOOD HOPE RD. (CTH PP) & N. 86TH ST.	SHEET	E
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LEGEND



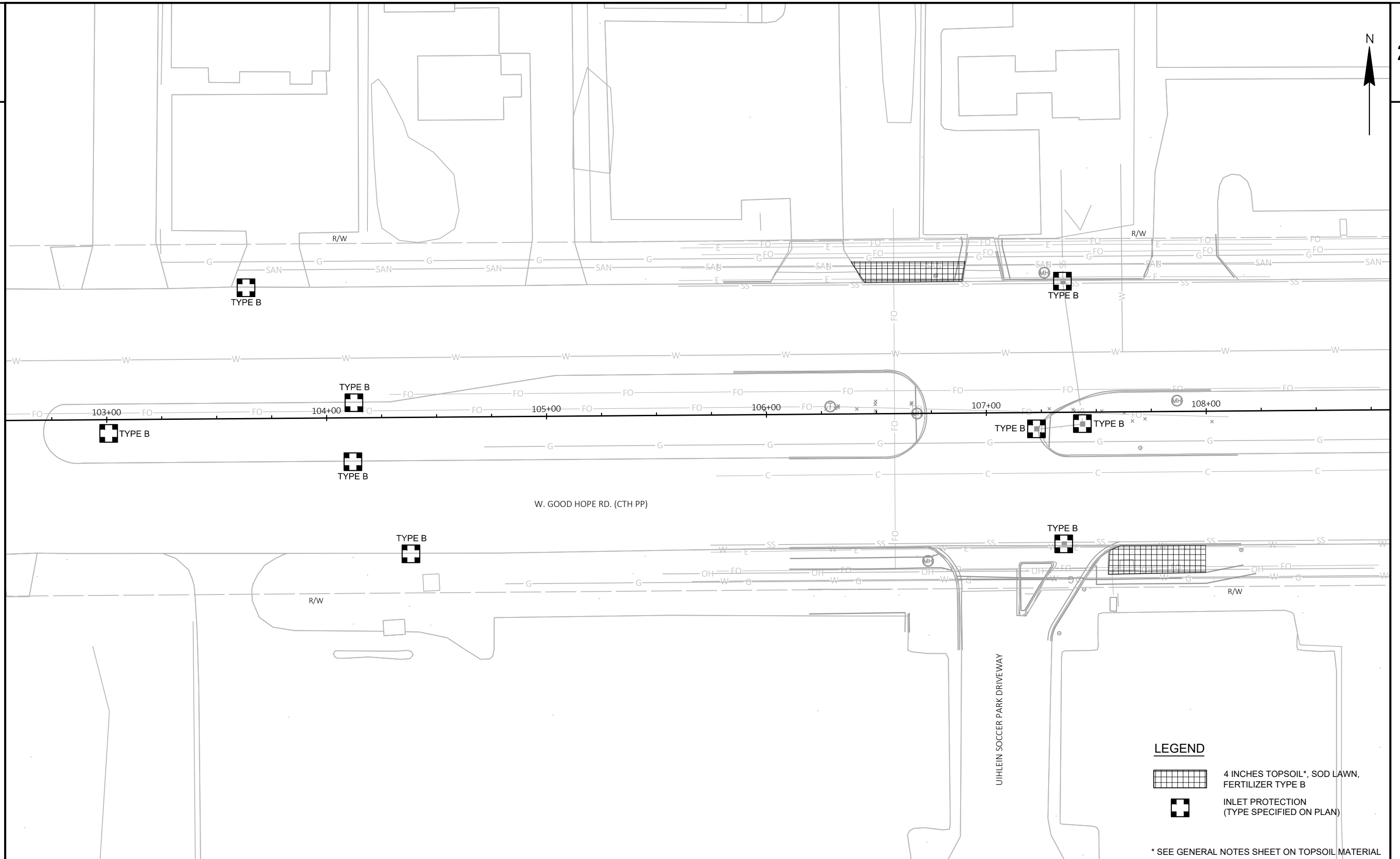
4 INCHES TOPSOIL*, SOD LAWN, FERTILIZER TYPE B



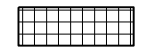
INLET PROTECTION (TYPE SPECIFIED ON PLAN)

* SEE GENERAL NOTES SHEET ON TOPSOIL MATERIAL

PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	EROSION CONTROL - W. GOOD HOPE RD. (CTH PP) & N. 86TH ST.	SHEET	E
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LEGEND



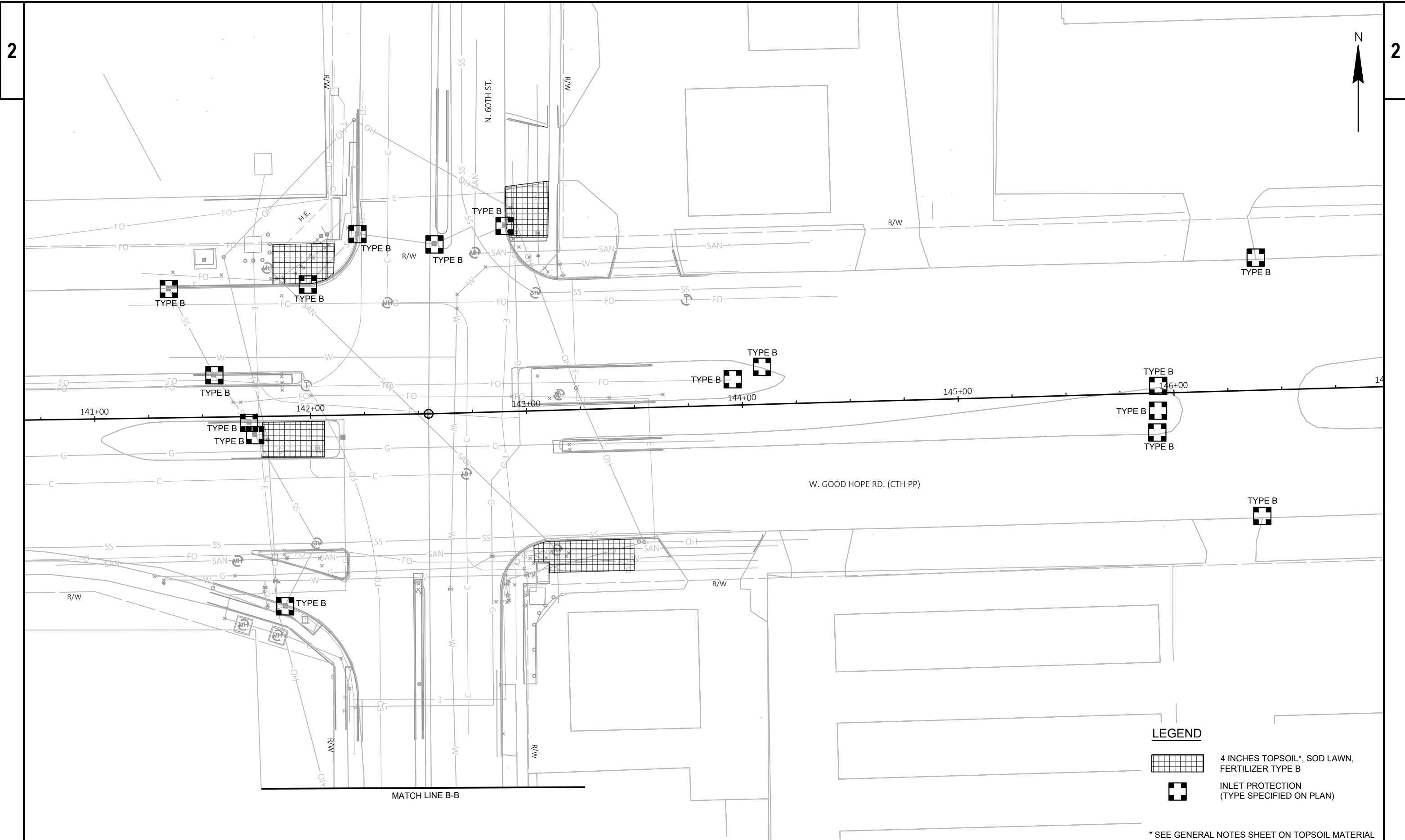
4 INCHES TOPSOIL*, SOD LAWN,
FERTILIZER TYPE B



INLET PROTECTION
(TYPE SPECIFIED ON PLAN)

* SEE GENERAL NOTES SHEET ON TOPSOIL MATERIAL

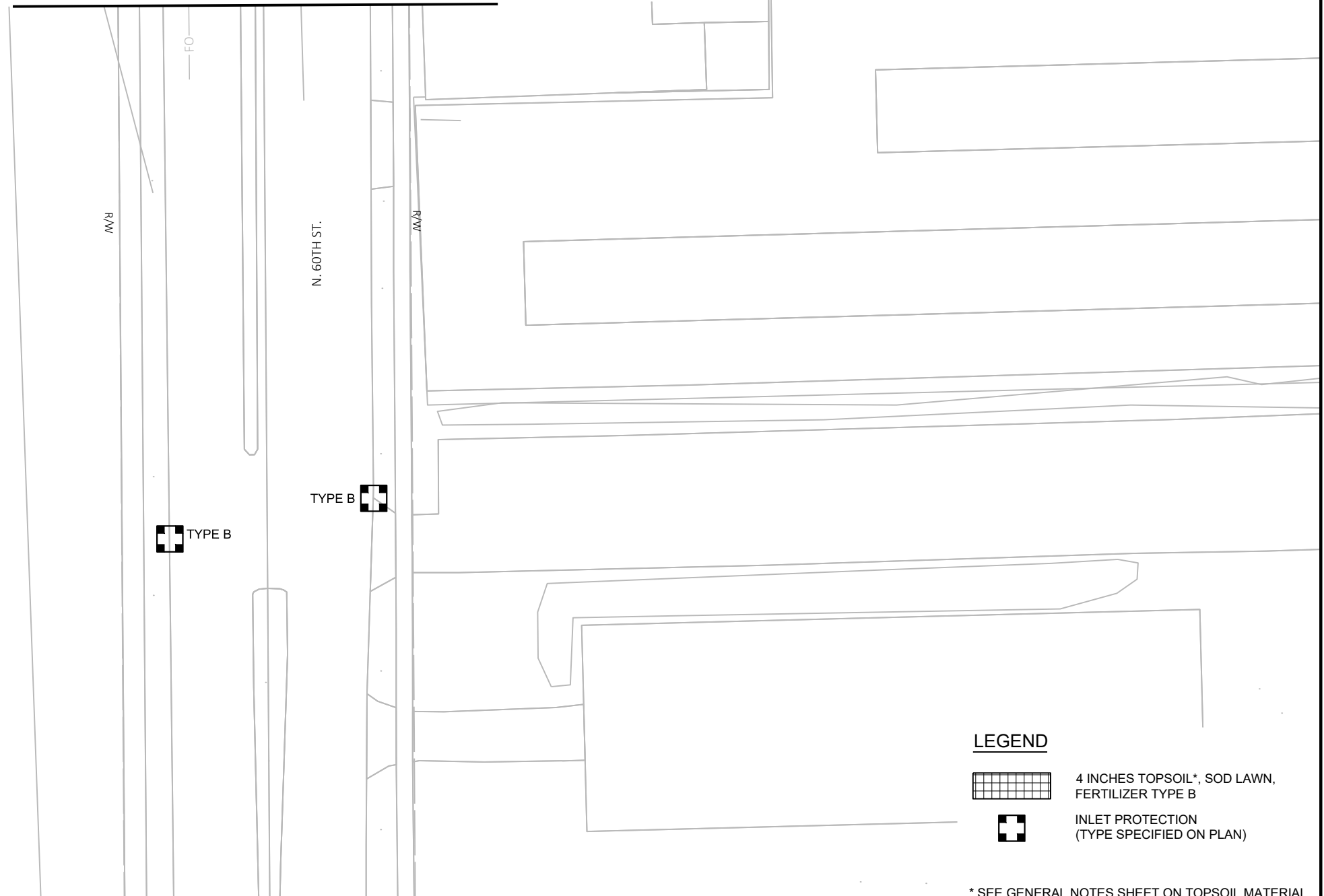
PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	EROSION CONTROL - W. GOOD HOPE RD. (CTH PP) & UIHLEIN SOCCER PARK DRIVEWAY	SHEET	E
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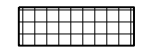
* SEE GENERAL NOTES SHEET ON TOPSOIL MATERIAL



MATCH LINE B-B



LEGEND



4 INCHES TOPSOIL*, SOD LAWN,
FERTILIZER TYPE B









INLET PROTECTION
(TYPE SPECIFIED ON PLAN)

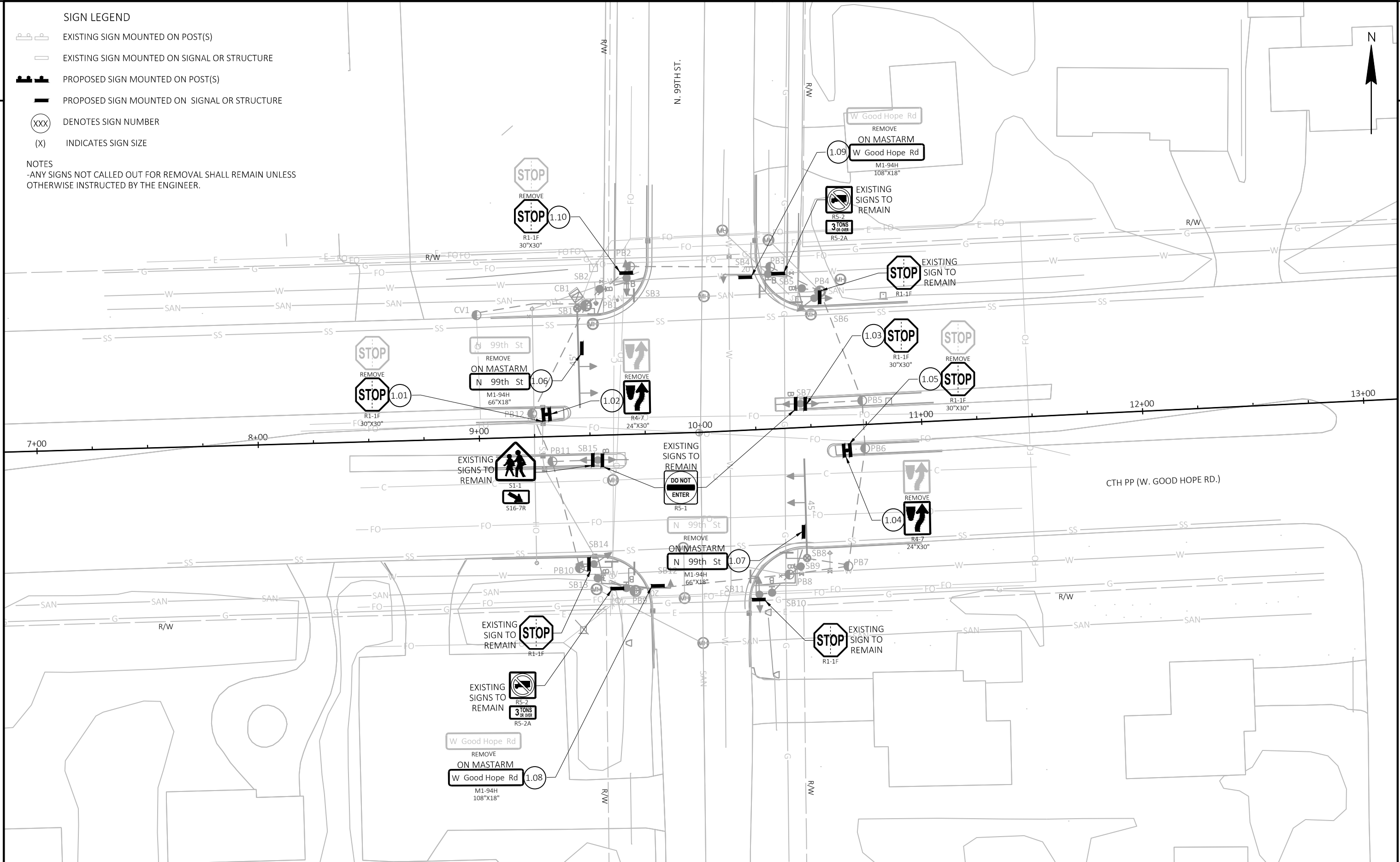
* SEE GENERAL NOTES SHEET ON TOPSOIL MATERIAL

PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	EROSION CONTROL - W. GOOD HOPE RD. (CTH PP) & N. 60TH ST.	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

NOTES
 -ANY SIGNS NOT CALLED OUT FOR REMOVAL SHALL REMAIN UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER.



PROJECT NO: 2984-07-76

HWY: CTH PP

COUNTY: MILWAUKEE

SIGNING

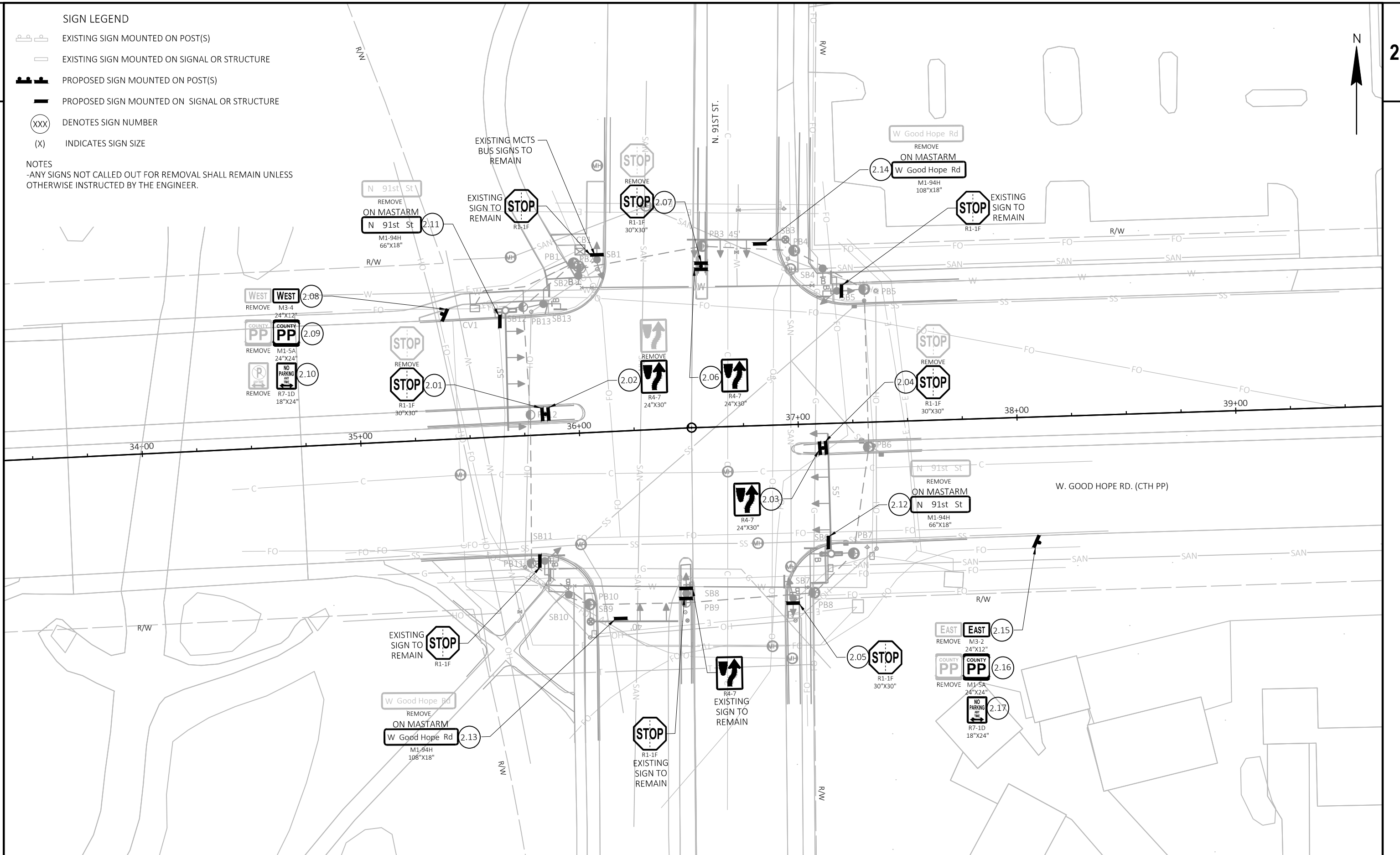
SHEET

E

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

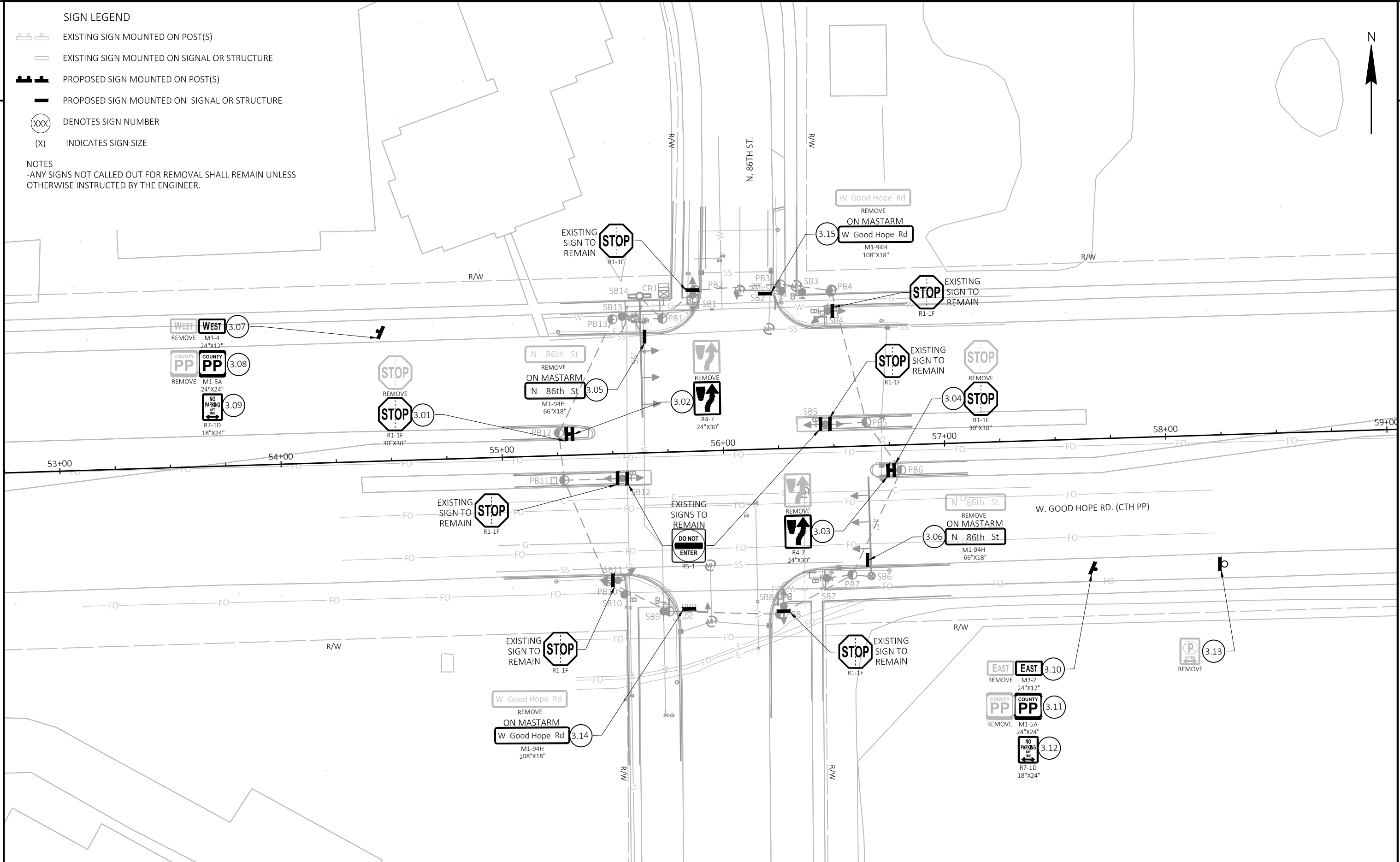
NOTES
 -ANY SIGNS NOT CALLED OUT FOR REMOVAL SHALL REMAIN UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER.









SIGN LEGEND

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

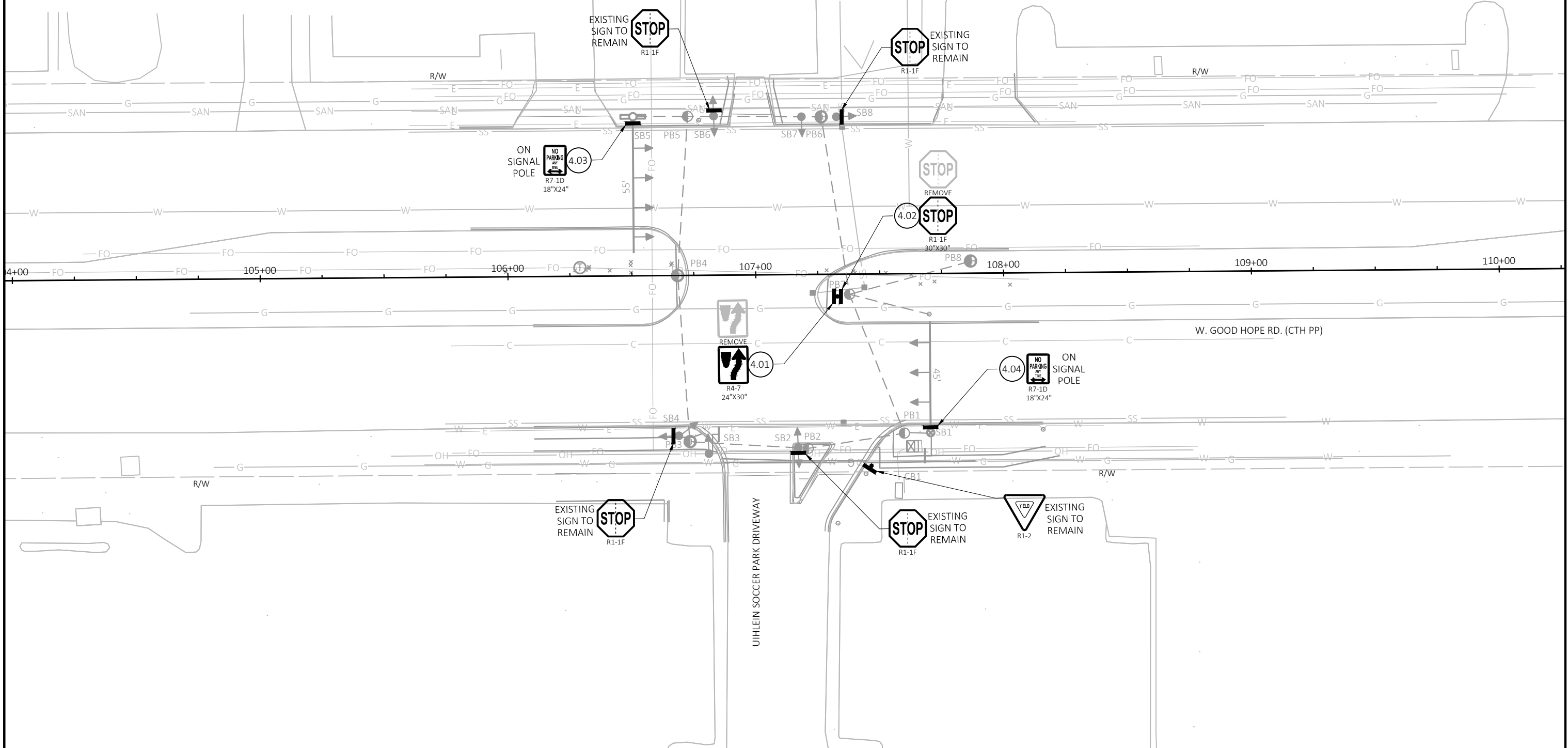
NOTES
 -ANY SIGNS NOT CALLED OUT FOR REMOVAL SHALL REMAIN UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER.



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

NOTES
 -ANY SIGNS NOT CALLED OUT FOR REMOVAL SHALL REMAIN UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER.

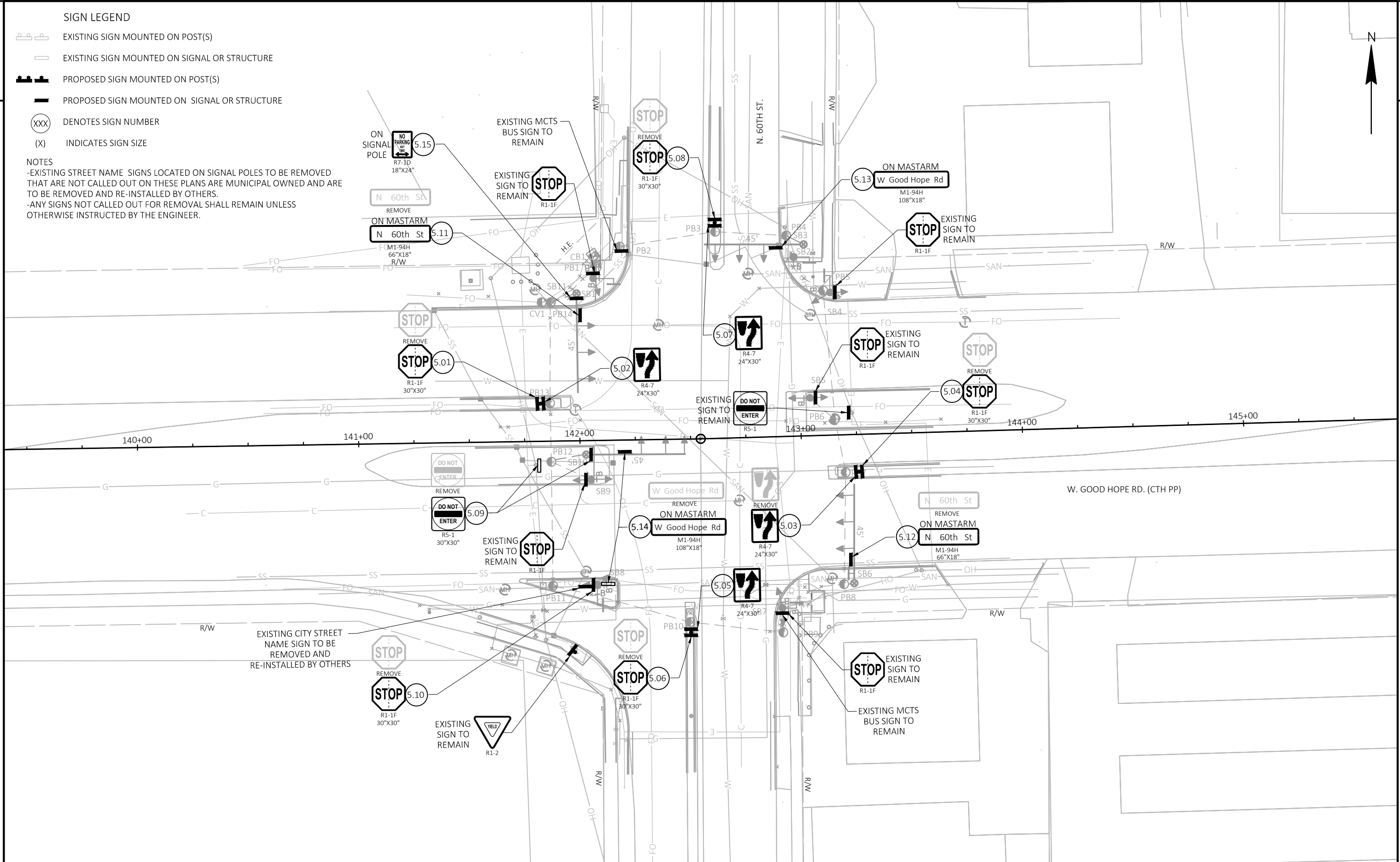


PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	SIGNING
SHEET			E

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

NOTES
 -EXISTING STREET NAME SIGNS LOCATED ON SIGNAL POLES TO BE REMOVED THAT ARE NOT CALLED OUT ON THESE PLANS ARE MUNICIPAL OWNED AND ARE TO BE REMOVED AND RE-INSTALLED BY OTHERS.
 -ANY SIGNS NOT CALLED OUT FOR REMOVAL SHALL REMAIN UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER.

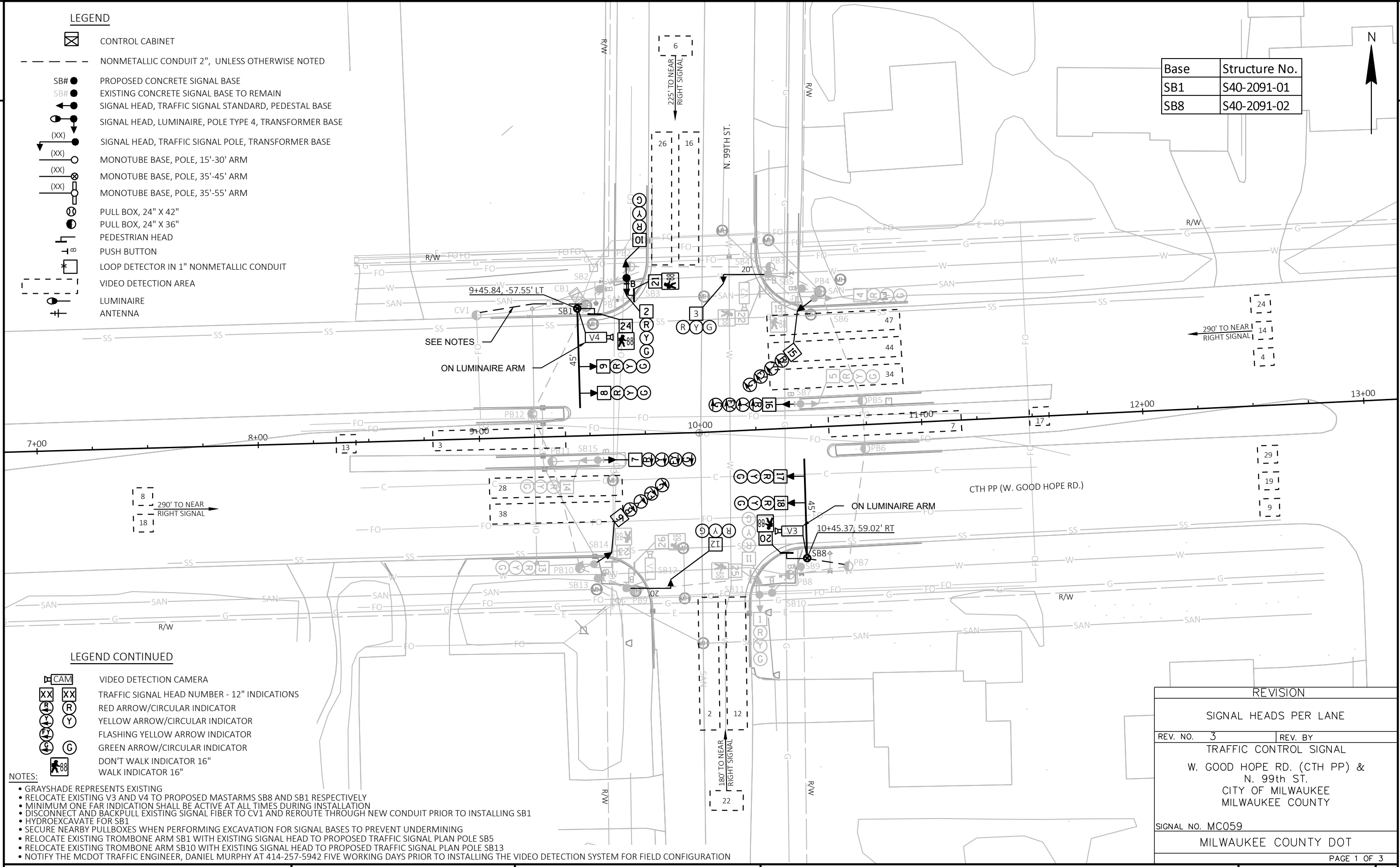


PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	SIGNING	SHEET	E
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LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- PROPOSED CONCRETE SIGNAL BASE
- EXISTING CONCRETE SIGNAL BASE TO REMAIN
- 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.
SB1	S40-2091-01
SB8	S40-2091-02

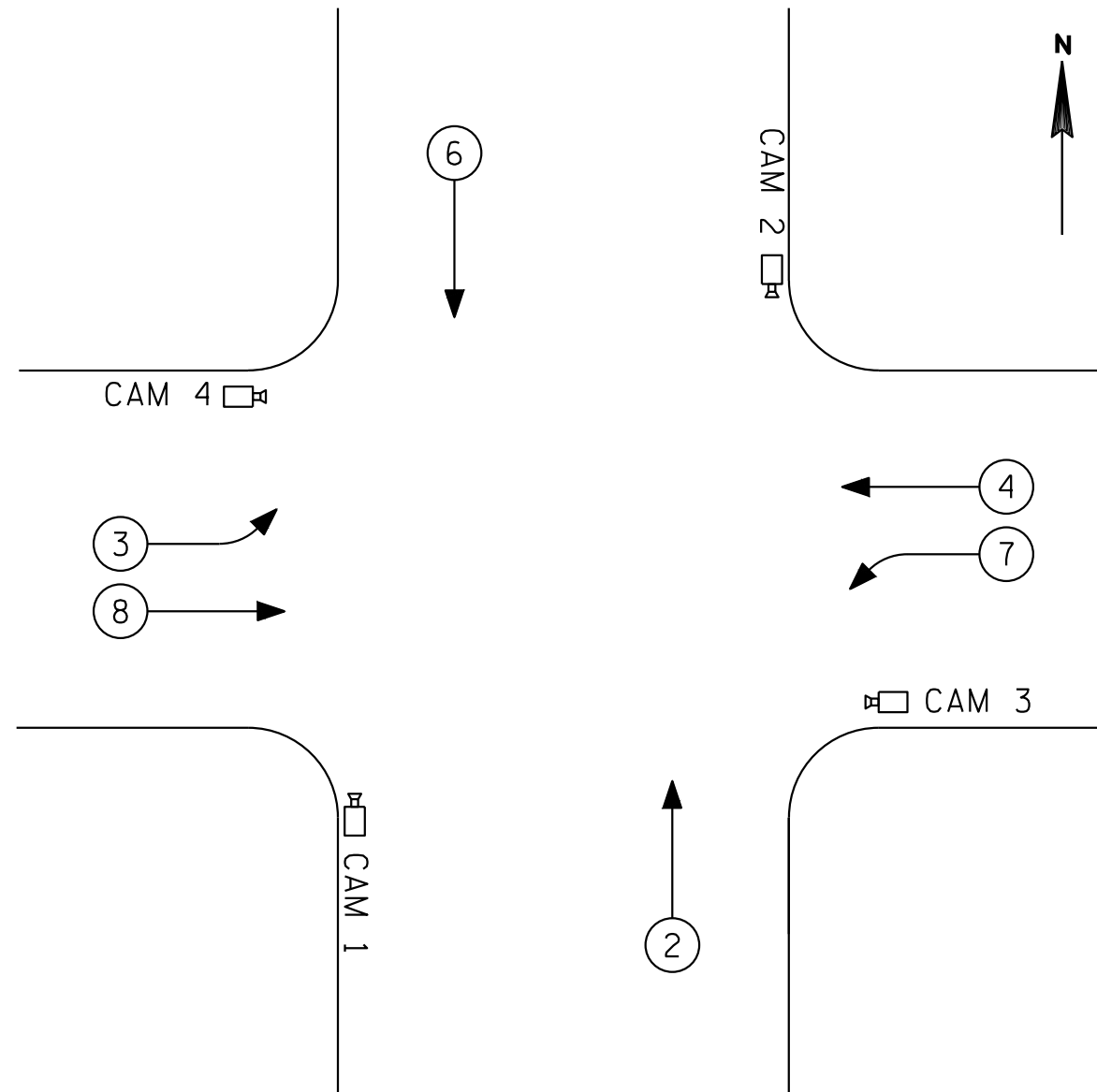


LEGEND CONTINUED

- 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 V3 AND V4 TO PROPOSED MASTARMS SB8 AND SB1 RESPECTIVELY
 - MINIMUM ONE FAR INDICATION SHALL BE ACTIVE AT ALL TIMES DURING INSTALLATION
 - DISCONNECT AND BACKPULL EXISTING SIGNAL FIBER TO CV1 AND REROUTE THROUGH NEW CONDUIT PRIOR TO INSTALLING SB1
 - HYDROEXCAVATE FOR SB1
 - SECURE NEARBY PULLBOXES WHEN PERFORMING EXCAVATION FOR SIGNAL BASES TO PREVENT UNDERMINING
 - RELOCATE EXISTING TROMBONE ARM SB1 WITH EXISTING SIGNAL HEAD TO PROPOSED TRAFFIC SIGNAL PLAN POLE SB5
 - RELOCATE EXISTING TROMBONE ARM SB10 WITH EXISTING SIGNAL HEAD TO PROPOSED TRAFFIC SIGNAL PLAN POLE SB13
 - 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. 99th ST.	
CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC059	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 3	



PHASE	PHASES			OVERLAPS		
	VEHICLE	LEFT TURN TYPE	PED	OVL P	INCLUDES	OUTPUT
1				A		
2	X		X	B		
3	X	FYA		C		
4	X		X	D		
5				E		
6	X		X	F	3 FY	10 Y
7	X	FYA		G		
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	
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. 99th ST. CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC059	
MILWAUKEE COUNTY DOT	

PROJECT ID:	2984-07-76
INTERSECTION:	W. GOOD HOPE RD. (CTH PP) & N. 99TH ST.

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


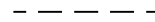















CB1 TO	# OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR								PED BUTTONS				
				RED	YELLOW	GREEN	<RED>	<YELLOW>	<FL YLW>	<GREEN>	D/WALK	WALK				
SB1	12	8 / 9	4	RED	ORG	GRN										
		24	6P									BLU	BLK			
SB2	* 7	B	6P											GRN	WHT/BLK	
SB3	12	2	2	RED	ORG	GRN										
		10	6	RED/BLK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

NOTES:

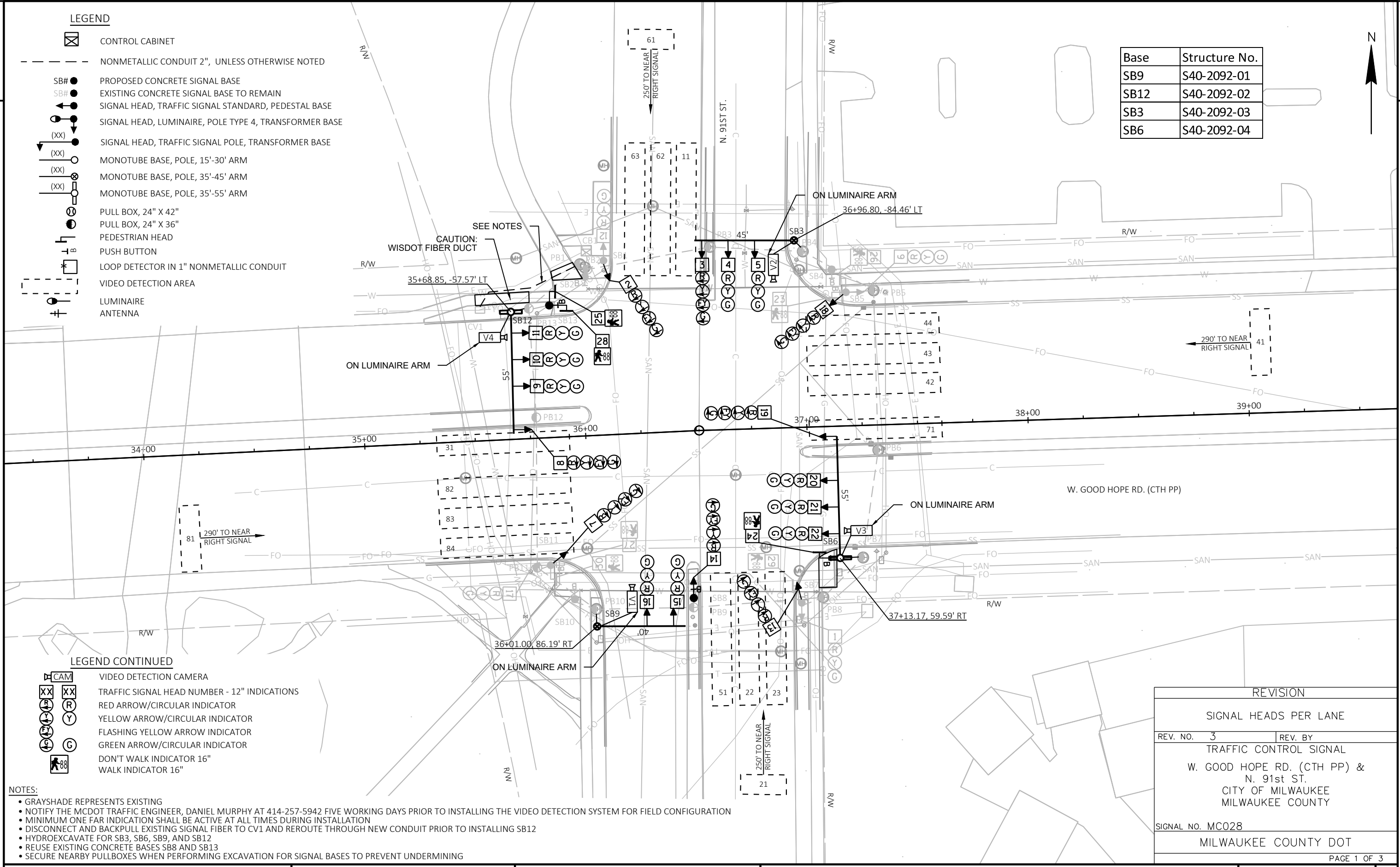
- DO NOT USE THE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR SIGNAL INDICATIONS.
 - ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
- * EXISTING SIGNAL WIRING TO REMAIN.

REVISION	
SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. 99th ST.	
CITY OF MILWAUKEE	
MILWAUKEE COUNTY	
SIGNAL NO. MC059	
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 REMAIN
-  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.
SB9	S40-2092-01
SB12	S40-2092-02
SB3	S40-2092-03
SB6	S40-2092-04

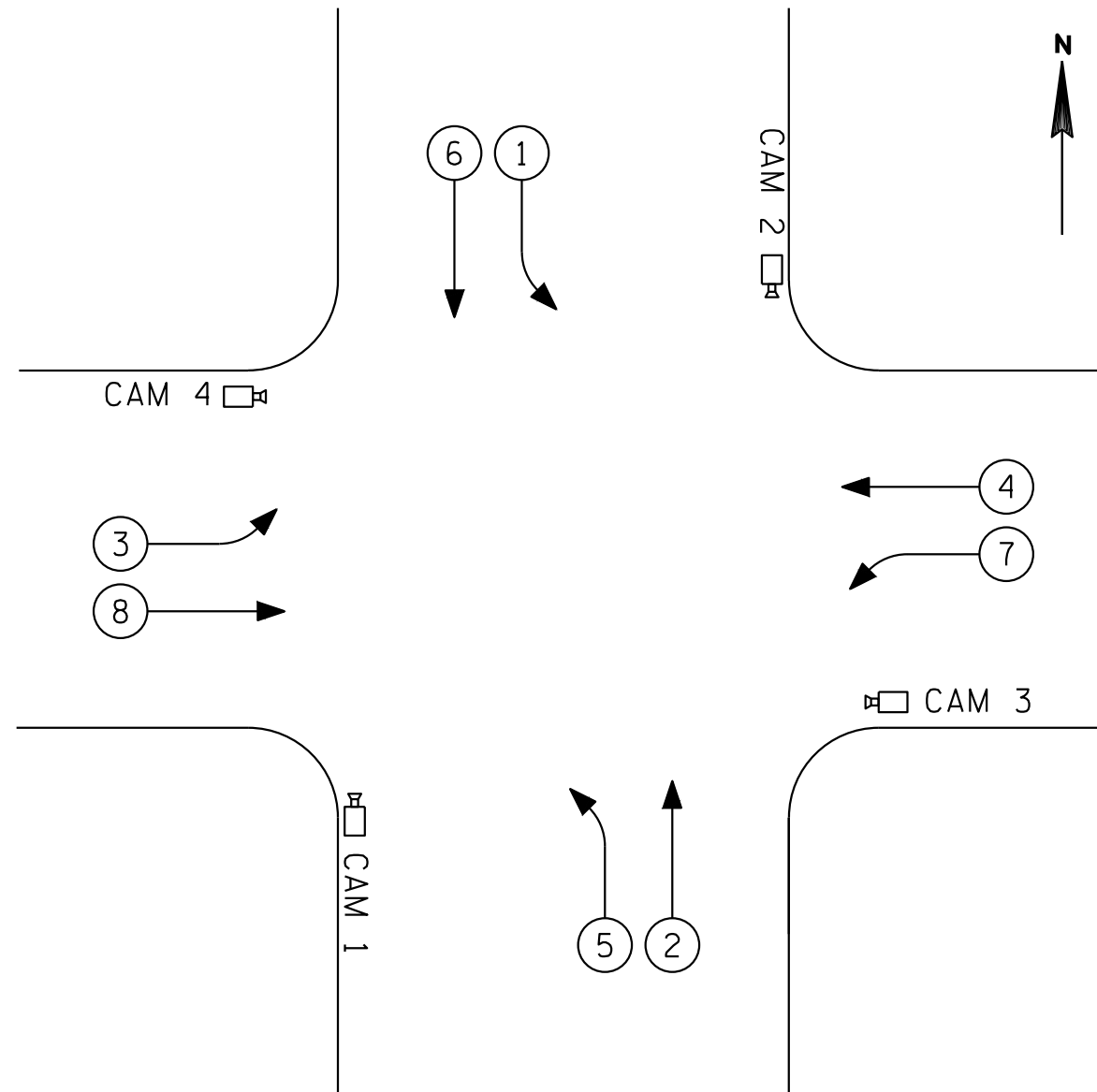


LEGEND CONTINUED

-  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
-  (W) DON'T WALK INDICATOR 16"
-  (B) WALK INDICATOR 16"

- NOTES:
- GRAYSHADE REPRESENTS EXISTING
 - 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
 - DISCONNECT AND BACKPULL EXISTING SIGNAL FIBER TO CV1 AND REROUTE THROUGH NEW CONDUIT PRIOR TO INSTALLING SB12
 - HYDROEXCAVATE FOR SB3, SB6, SB9, AND SB12
 - REUSE EXISTING CONCRETE BASES SB8 AND SB13
 - SECURE NEARBY PULLBOXES WHEN PERFORMING EXCAVATION FOR SIGNAL BASES TO PREVENT UNDERMINING

REVISION	
SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. 91st ST.	
CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC028	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 3	



PHASE	VEHICLE	PHASES		OVERLAPS		
		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	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	
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. 91st ST. CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC028	
MILWAUKEE COUNTY DOT	
PAGE 2 OF 3	

PROJECT ID:	2984-07-76
INTERSECTION:	W. GOOD HOPE RD. (CTH PP) & N. 91ST ST.


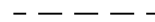
















SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

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	12	6	RED	ORG	GRN										
		2	5				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK						
SB2	* 7	B	4P											GRN	WHT/BLK	
SB3	12	4 / 5	2	RED	ORG	GRN										
		3	5				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK						
SB4	* 7	B	4P											GRN	WHT/BLK	
SB5	15	6	4	RED	ORG	GRN										
		18	3				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK						
		23	2P									BLU	BLK			
		26	4P									BLU/WHT	GRN/WHT			
		B	2P											WHT/BLK	BLK/WHT	
SB6	15	20 / 21 / 22	8	RED	ORG	GRN										
		19	3				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK						
		24	2P									BLU	BLK			
		B	2P											WHT/BLK	BLK/WHT	
SB7	12	1	2	RED	ORG	GRN										
		13	1				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK						
		29	8P									BLU	BLK			
		B	8P											WHT/BLK	BLK/WHT	
SB8	*7	14	1				RED	ORG	BLU	GRN						
		B	8P											BLK	WHT/BLK	
SB9	12	15 / 16	2	RED	ORG	GRN										
SB10	* 7	B	8P											GRN	WHT/BLK	
SB11	15	17	8	RED	ORG	GRN										
		7	7				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK						
		27	6P									BLU	BLK			
		30	8P									BLU/WHT	GRN/WHT			
		B	6P											WHT/BLK	BLK/WHT	
SB12	12	9 / 10 / 11	4	RED	ORG	GRN										
		8	7				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK						
SB13	*12	25	4P									BLU	BLK			
		28	6P									BLU/BLK	GRN/BLK			
		B	6P											WHT/BLK	BLK/WHT	

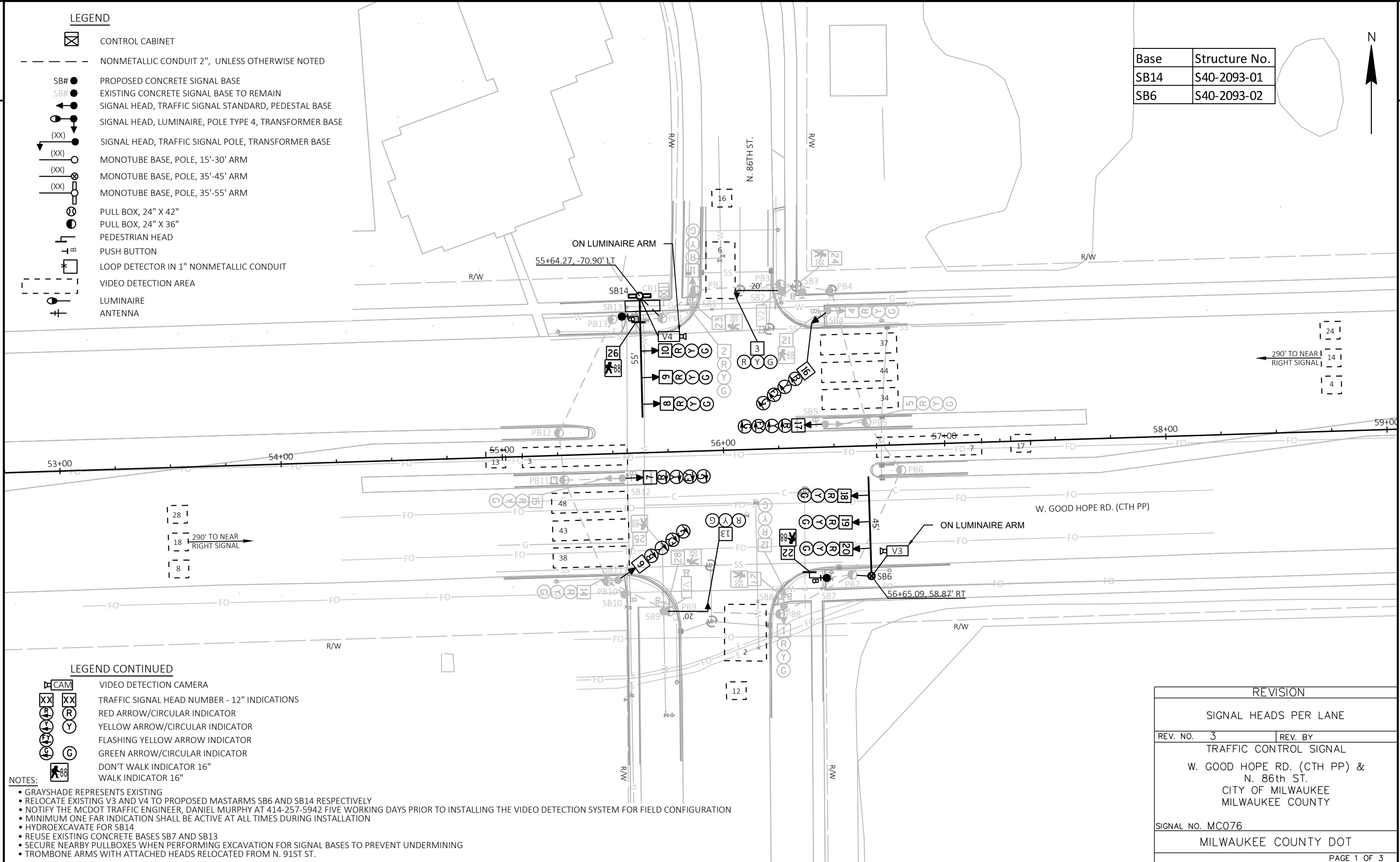
- NOTES:
- DO NOT USE THE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR SIGNAL INDICATIONS.
 - ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
- * EXISTING SIGNAL WIRING TO REMAIN.

REVISION	
SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. 91st ST.	
CITY OF MILWAUKEE	
MILWAUKEE COUNTY	
SIGNAL NO. MC028	
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 REMAIN
-  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.
SB14	S40-2093-01
SB6	S40-2093-02

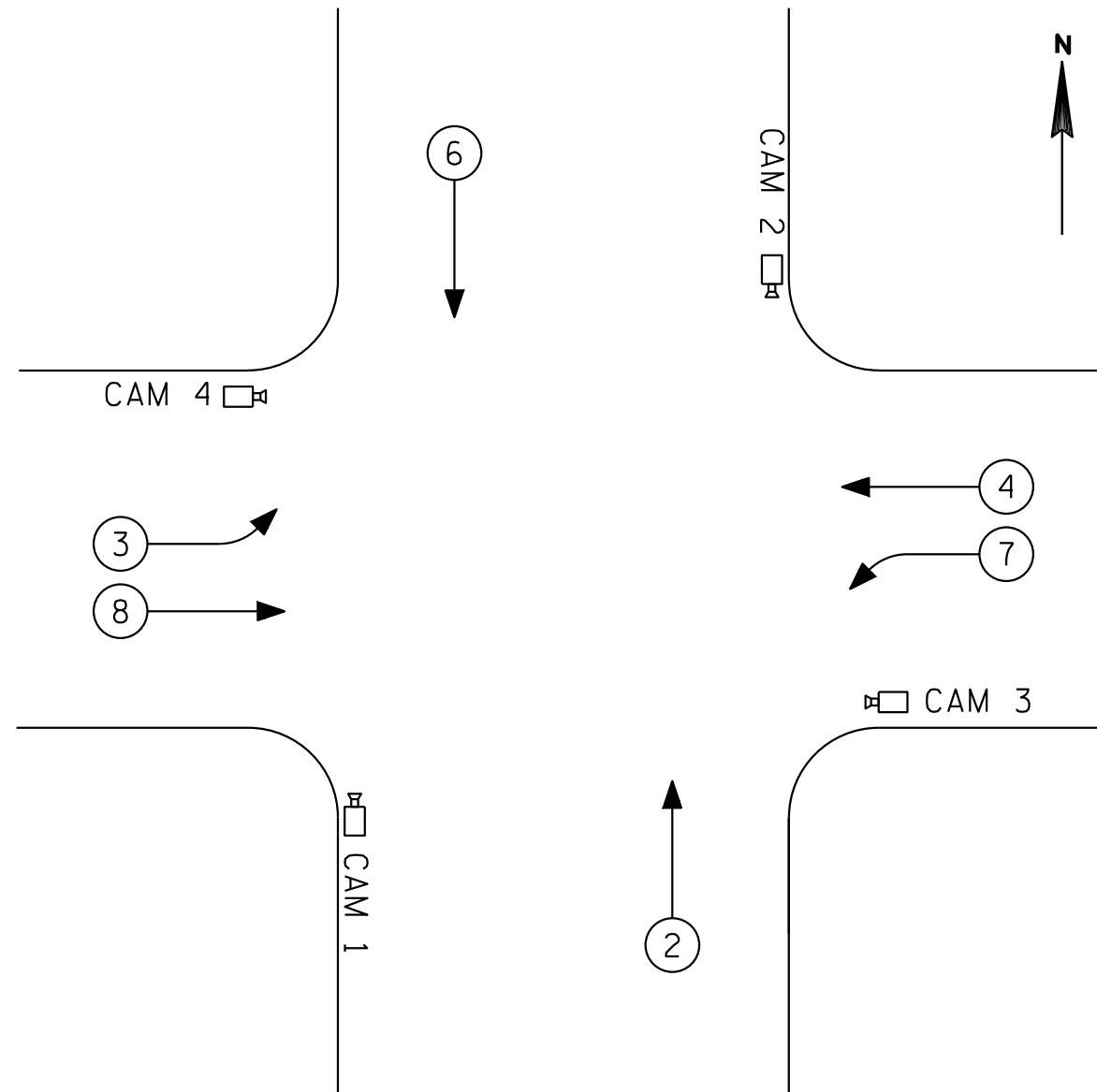


LEGEND CONTINUED

-  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 V3 AND V4 TO PROPOSED MASTARMS SB6 AND SB14 RESPECTIVELY
 - 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
 - HYDROEXCAVATE FOR SB14
 - REUSE EXISTING CONCRETE BASES SB7 AND SB13
 - SECURE NEARBY PULLBOXES WHEN PERFORMING EXCAVATION FOR SIGNAL BASES TO PREVENT UNDERMINING
 - TROMBONE ARMS WITH ATTACHED HEADS RELOCATED FROM N. 91ST ST.

REVISION	
SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL W. GOOD HOPE RD. (CTH PP) & N. 86th ST. CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC076	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 3	



PHASE	PHASES			OVERLAPS		
	VEHICLE	LEFT TURN TYPE	PED	OVL P	INCLUDES	OUTPUT
1				A		
2	X		X	B		
3	X	FYA		C		
4	X		X	D		
5				E		
6	X		X	F	3 FY	10 Y
7	X	FYA		G		
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	
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. 86th ST. CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC076	
MILWAUKEE COUNTY DOT	

PROJECT ID:	2984-07-76
INTERSECTION:	W. GOOD HOPE RD. (CTH PP) & N. 86TH ST.


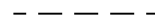
















SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

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	2	2	RED	ORG	GRN								
		11	6	RED/BLK	ORG/BLK	GRN/BLK								
		23	4P							BLU	BLK			
SB2	* 12	3	2	RED	ORG	GRN								
		24	4P								BLU	BLK		
SB3	* 7	B	4P									GRN	WHT/BLK	
SB4	12	4	4	RED	ORG	GRN								
		16	3				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK				
		21	2P								BLU	BLK		
SB5	*12	B	2P									WHT/BLK	BLK/WHT	
		5	4	RED	ORG	GRN								
		17	3				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK				
SB6	12	18 / 19 / 20	8	RED	ORG	GRN								
		B	2P									WHT/BLK	BLK/WHT	
		22	2P								BLU	BLK		
SB7	7	B	2P									GRN	WHT/BLK	
		1	2	RED	ORG	GRN								
		12	6	RED/BLK	ORG/BLK	GRN/BLK								
SB8	* 12	27	8P									BLU	BLK	
		B	8P									GRN	WHT/BLK	
		13	6	RED	ORG	GRN								
SB9	* 12	28	8P									BLU	BLK	
		B	8P									WHT/BLK	BLK/WHT	
		B	8P									GRN	WHT/BLK	
SB10	* 7	B	6P											
SB11	12	14	8	RED	ORG	GRN								
		6	7				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK				
		25	6P								BLU	BLK		
SB12	*12	15	8	RED	ORG	GRN								
		7	7				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK				
		B	6P									WHT/BLK	BLK/WHT	
SB13	12	26	6P									BLU	BLK	
		B	6P									WHT/BLK	BLK/WHT	
SB14	12	8 / 9 / 10	4	RED	ORG	GRN								

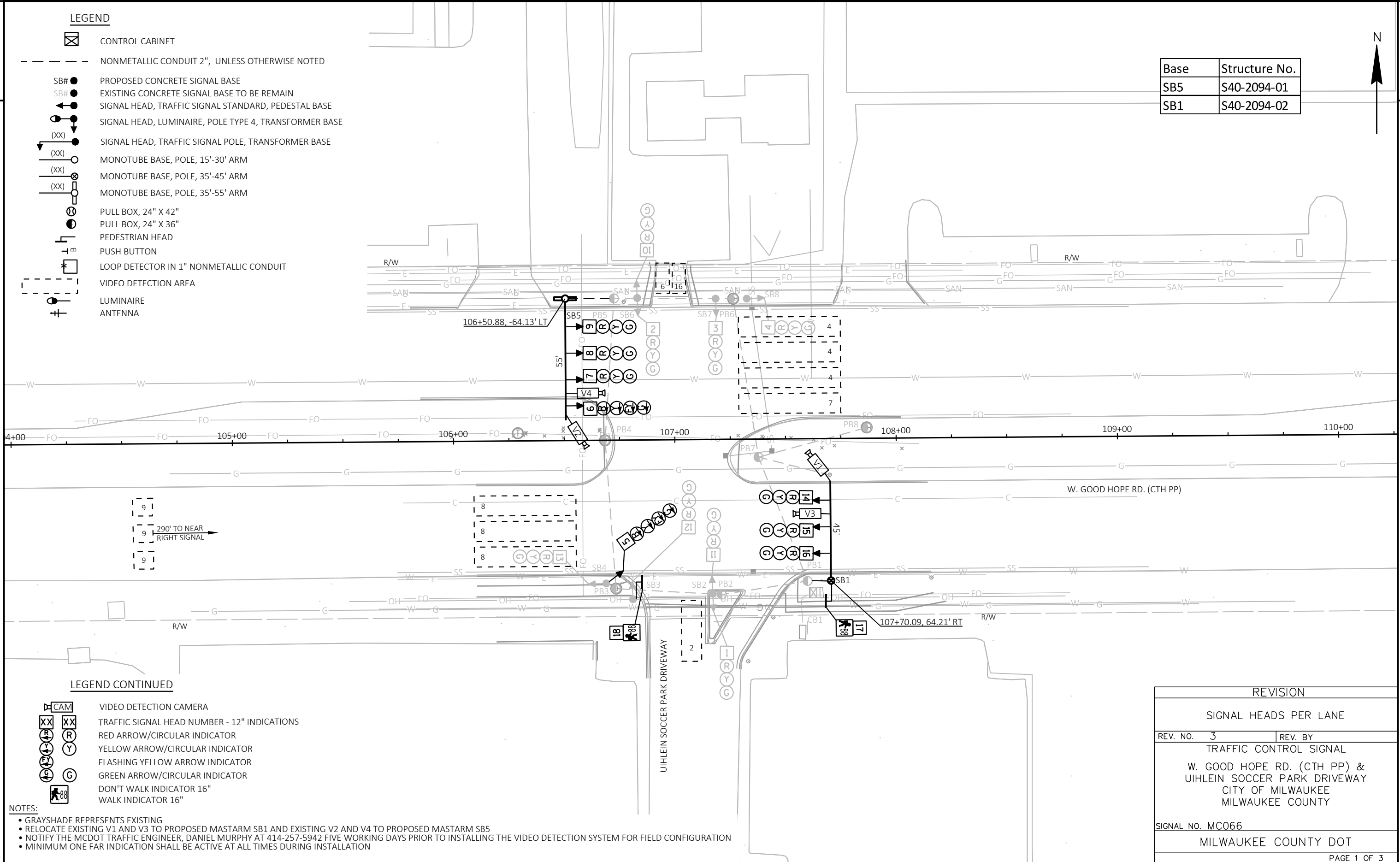
- NOTES:
- DO NOT USE THE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR SIGNAL INDICATIONS.
 - ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
- * EXISTING SIGNAL WIRING TO REMAIN.

REVISION	
SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. 86th ST.	
CITY OF MILWAUKEE	
MILWAUKEE COUNTY	
SIGNAL NO. MC076	
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 REMAIN
-  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.
SB5	S40-2094-01
SB1	S40-2094-02

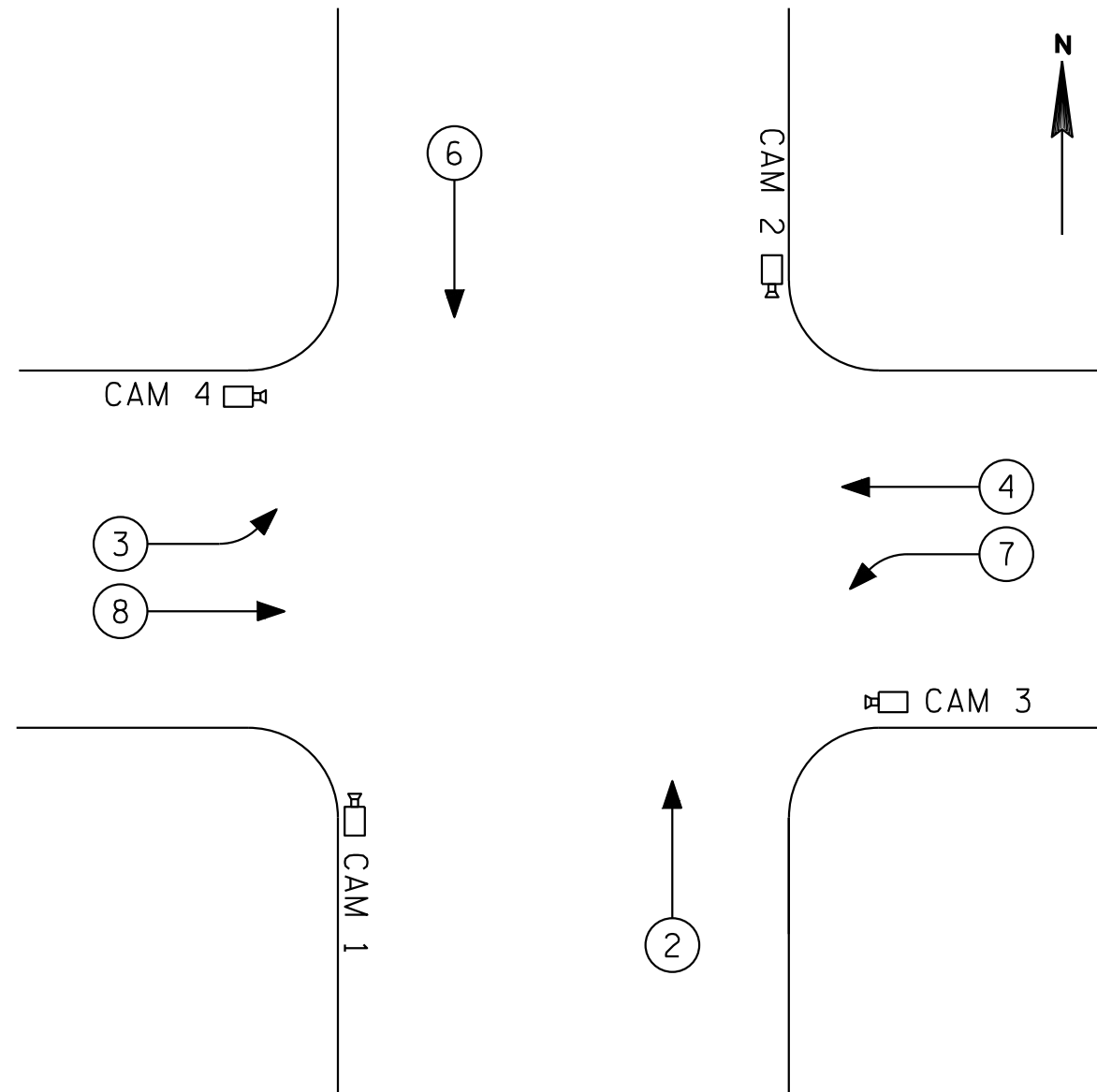


LEGEND CONTINUED

-  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 AND V3 TO PROPOSED MASTARM SB1 AND EXISTING V2 AND V4 TO PROPOSED MASTARM SB5
 - 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

REVISION	
SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & UIHLEIN SOCCER PARK DRIVEWAY CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC066	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 3	



PHASE	VEHICLE	PHASES		OVERLAPS		
		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		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	
SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & UIHLEIN SOCCER PARK DRIVEWAY CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC066	
MILWAUKEE COUNTY DOT	
PAGE 2 OF 3	

PROJECT ID:	2984-07-76
INTERSECTION:	W. GOOD HOPE RD. (CTH PP) & UIHLEIN SOCCER PARK

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


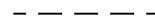
















CB1 TO	# OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR								PED BUTTONS		
				RED	YELLOW	GREEN	<RED>	<YELLOW>	<FL YLW>	<GREEN>	D/WALK	WALK		
SB1	12	14 / 15 / 16	8	RED	ORG	GRN								
		17	8P									BLU	BLK	
SB2	* 12	1	2	RED	ORG	GRN								
		11	6	RED/BLK	ORG/BLK	GRN/BLK								
SB3	12	12	6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

NOTES:

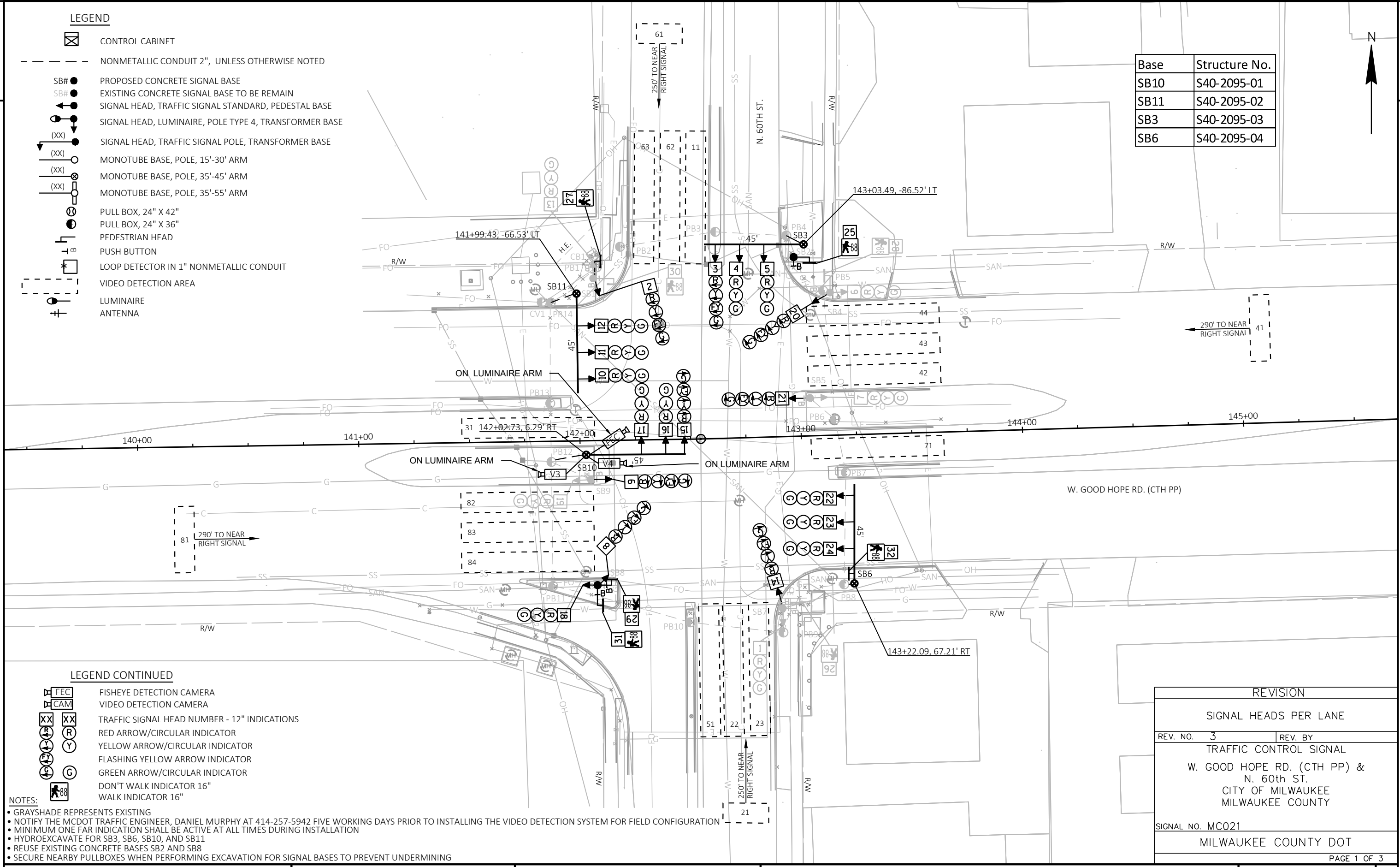
- DO NOT USE THE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR SIGNAL INDICATIONS.
 - ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
- * EXISTING SIGNAL WIRING TO REMAIN.

REVISION	
SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & UIHLEIN SOCCER PARK DRIVEWAY	
CITY OF MILWAUKEE	
MILWAUKEE COUNTY	
SIGNAL NO. MC066	
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 REMAIN
-  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.
SB10	S40-2095-01
SB11	S40-2095-02
SB3	S40-2095-03
SB6	S40-2095-04

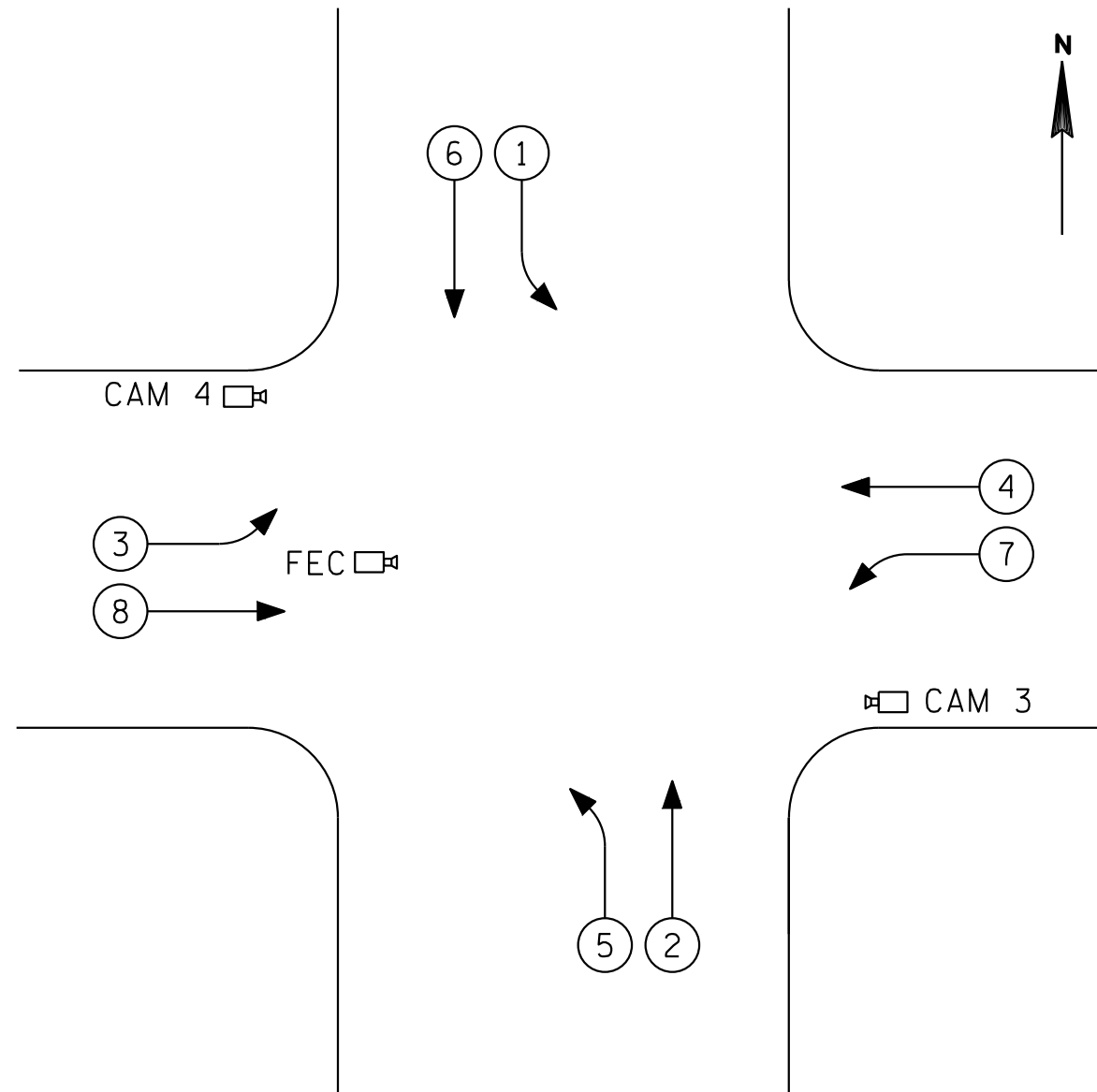


LEGEND CONTINUED

-  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
 - 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
 - HYDROEXCAVATE FOR SB3, SB6, SB10, AND SB11
 - REUSE EXISTING CONCRETE BASES SB2 AND SB8
 - SECURE NEARBY PULLBOXES WHEN PERFORMING EXCAVATION FOR SIGNAL BASES TO PREVENT UNDERMINING

REVISION	
SIGNAL HEADS PER LANE	
REV. NO. 3	REV. BY
TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. 60th ST.	
CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC021	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 3	



PHASE	VEHICLE	PHASES		OVERLAPS		
		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	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	
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. 60th ST. CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC021	
MILWAUKEE COUNTY DOT	
PAGE 2 OF 3	

PROJECT ID:	2984-07-76
INTERSECTION:	W. GOOD HOPE RD. (CTH PP) & N. 60TH ST.



















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	15	13	6	RED	ORG	GRN								
		2	5				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK				
		27	4P								BLU	BLK		
		30	6P								BLU/WHT	GRN/WHT		
SB2	*7	B	4P									WHT/BLK	BLK/WHT	
		B	6P									RED/WHT	BLK/WHT	
		25	2P							BLU	BLK			
SB3	12	4 / 5	2	RED	ORG	GRN								
		B	4P											
SB4	12	3	5				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK				
		6	4	RED	ORG	GRN								
SB5	*12	20	3				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK				
		28	4P								BLU	BLK		
		B	2P										WHT/BLK	BLK/WHT
		7	4	RED	ORG	GRN								
SB6	12	21	7				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK				
		B	2P									WHT/BLK	BLK/WHT	
		22 / 23 / 24	8	RED	ORG	GRN								
SB7	*15	32	8P								BLU	BLK		
		1	2	RED	ORG	GRN								
SB8	15	14	1				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK				
		26	2P								BLU	BLK		
		B	2P										WHT/BLK	BLK/WHT
		B	8P										GRN/WHT	BLK/WHT
SB9	*12	18	8	RED	ORG	GRN								
		8	7				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK				
		29	6P								BLU	BLK		
		31	8P								BLU/WHT	GRN/WHT		
SB10	12	B	6P									WHT/BLK	BLK/WHT	
		B	8P									RED/WHT	BLK/WHT	
		19	8	RED	ORG	GRN								
SB11	12	9	7				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK				
		B	6P									WHT/BLK	BLK/WHT	
SB11	12	16 / 17	6	RED	ORG	GRN								
		15	1				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK				
SB11	12	10 / 11 / 12	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. 60th ST.	
CITY OF MILWAUKEE	
MILWAUKEE COUNTY	
SIGNAL NO. MC021	
MILWAUKEE COUNTY DOT	
PAGE 3 OF 3	

LEGEND

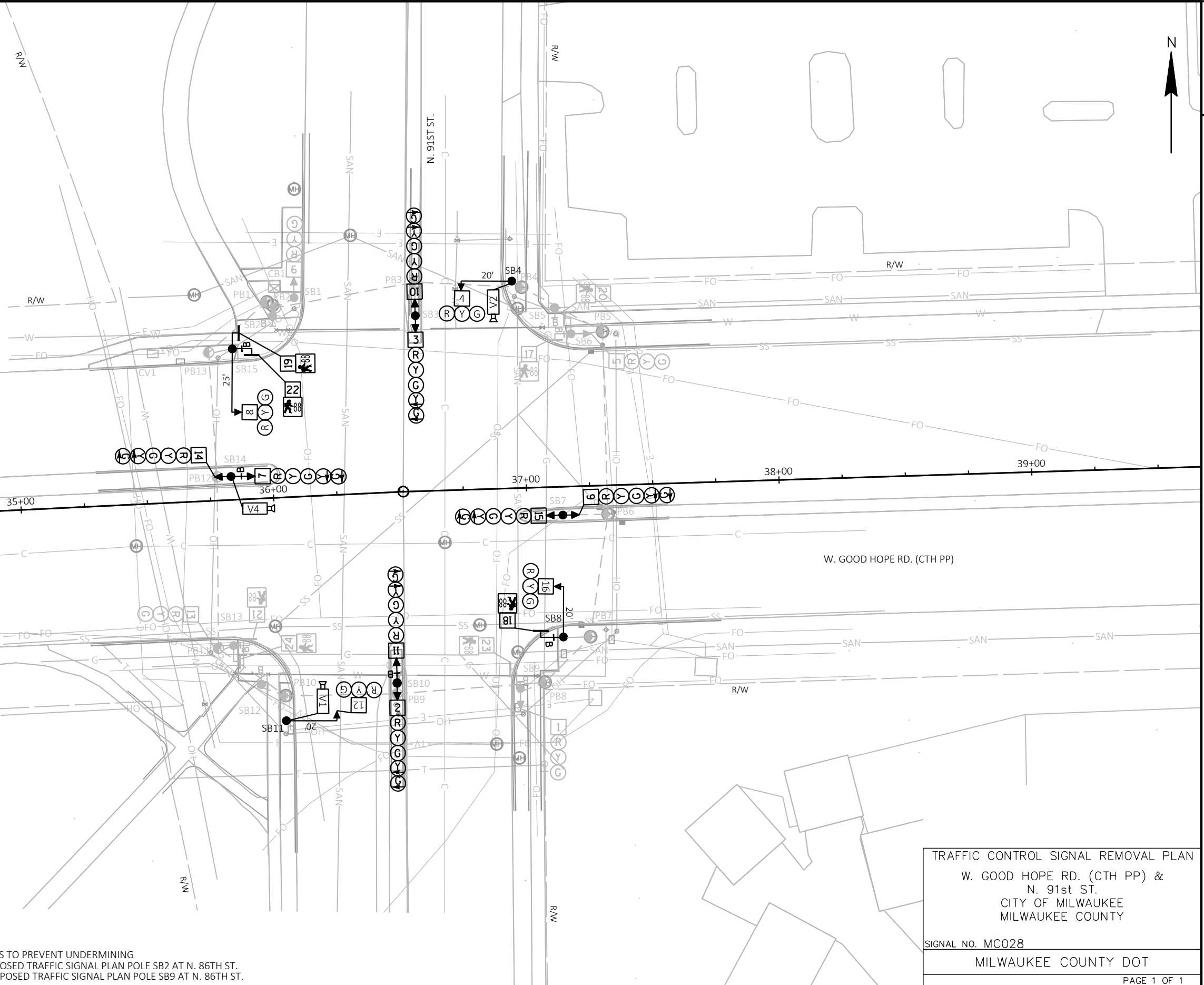
-  CONTROL CABINET
-  NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
-  SB# ● PROPOSED CONCRETE SIGNAL BASE
-  SB# ● EXISTING CONCRETE SIGNAL BASE TO REMAIN
-  SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
-  SIGNAL HEAD, LUMINAIRE, POLE TYPE 4, TRANSFORMER BASE
-  (XX) SIGNAL HEAD, TRAFFIC SIGNAL 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

-  CAM VIDEO DETECTION CAMERA
-  XX 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
- REMOVE AND SALVAGE EXISTING V1, V2, AND V4
- REUSE EXISTING CONCRETE BASES SB10 AND SB15
- SECURE NEARBY PULLBOXES WHEN PERFORMING EXCAVATION FOR SIGNAL BASES TO PREVENT UNDERMINING
- RELOCATE EXISTING TROMBONE ARM SB8 WITH EXISTING SIGNAL HEAD TO PROPOSED TRAFFIC SIGNAL PLAN POLE SB2 AT N. 86TH ST.
- RELOCATE EXISTING TROMBONE ARM SB11 WITH EXISTING SIGNAL HEAD TO PROPOSED TRAFFIC SIGNAL PLAN POLE SB9 AT N. 86TH ST.





















TRAFFIC CONTROL SIGNAL REMOVAL PLAN
 W. GOOD HOPE RD. (CTH PP) &
 N. 91st ST.
 CITY OF MILWAUKEE
 MILWAUKEE COUNTY

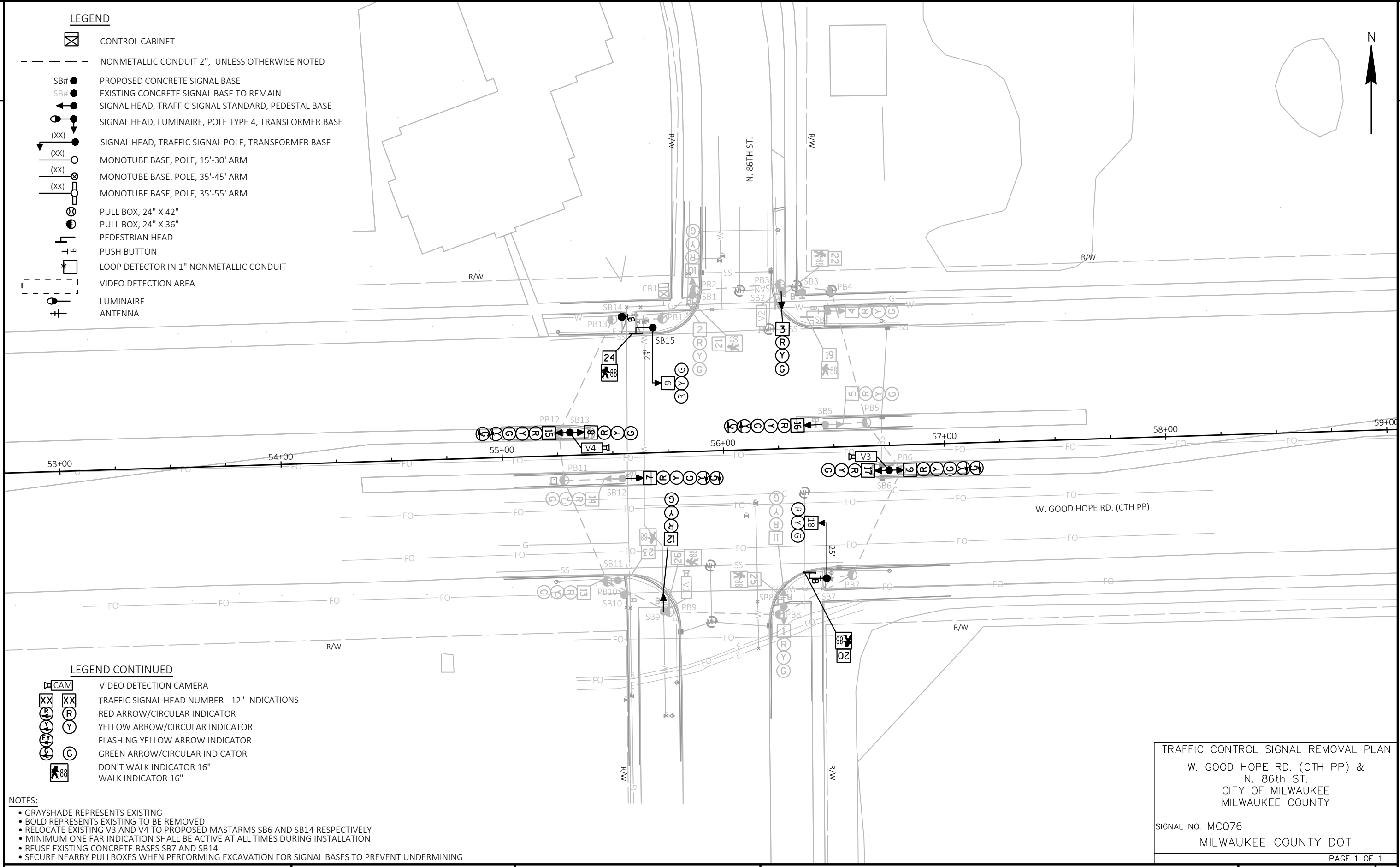
SIGNAL NO. MC028

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 REMAIN
-  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

-  VIDEO DETECTION CAMERA
-  (XX) (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 V3 AND V4 TO PROPOSED MASTARMS SB6 AND SB14 RESPECTIVELY
- MINIMUM ONE FAR INDICATION SHALL BE ACTIVE AT ALL TIMES DURING INSTALLATION
- REUSE EXISTING CONCRETE BASES SB7 AND SB14
- SECURE NEARBY PULLBOXES WHEN PERFORMING EXCAVATION FOR SIGNAL BASES TO PREVENT UNDERMINING

TRAFFIC CONTROL SIGNAL REMOVAL PLAN
 W. GOOD HOPE RD. (CTH PP) &
 N. 86th ST.
 CITY OF MILWAUKEE
 MILWAUKEE COUNTY


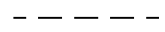
















SIGNAL NO. MC076

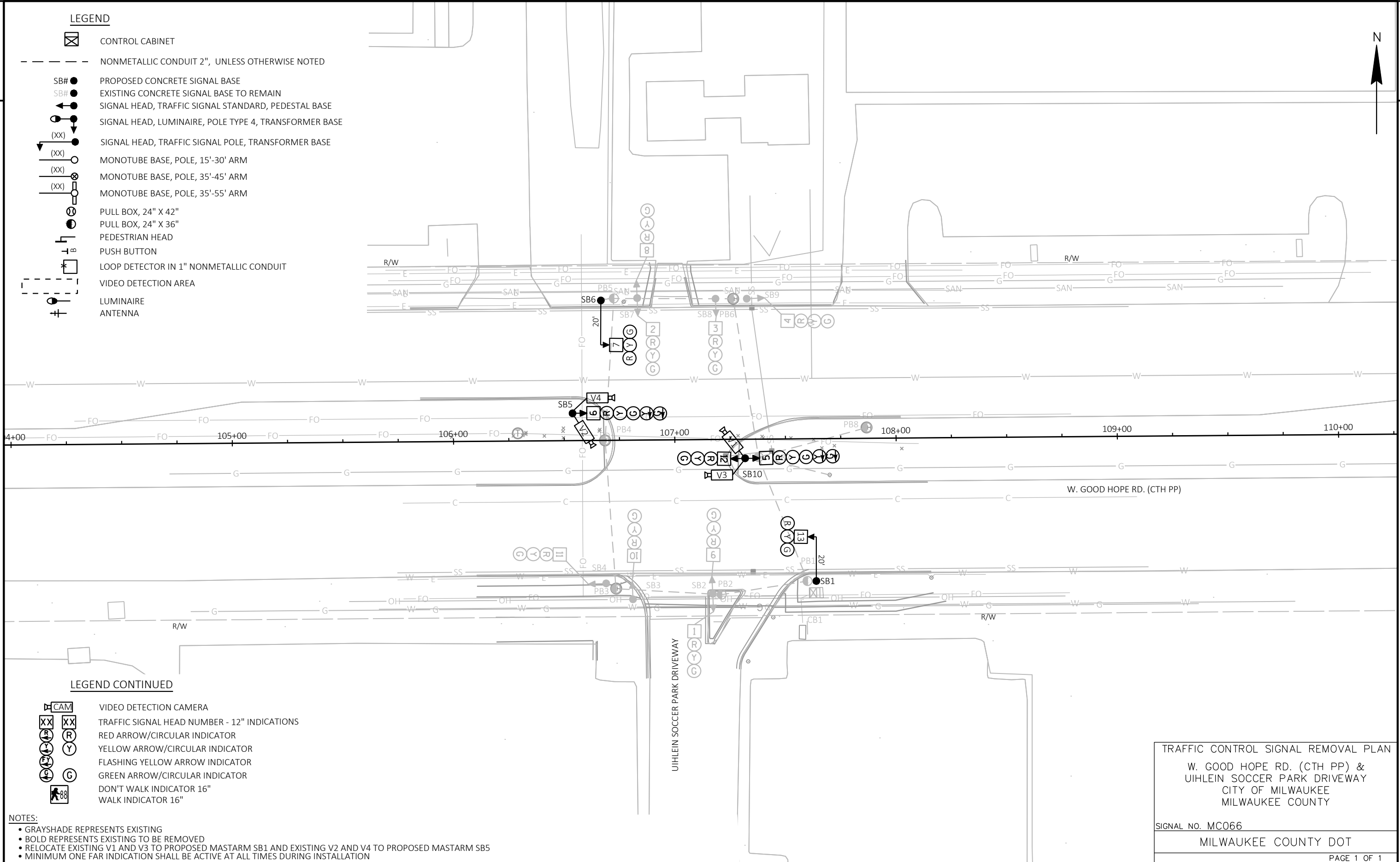
MILWAUKEE COUNTY DOT

PAGE 1 OF 1











LEGEND

-  CONTROL CABINET
-  NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
-  PROPOSED CONCRETE SIGNAL BASE
-  EXISTING CONCRETE SIGNAL BASE TO REMAIN
-  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


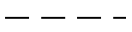
















-  VIDEO DETECTION CAMERA
-  TRAFFIC SIGNAL HEAD NUMBER - 12" INDICATIONS
-  RED ARROW/CIRCULAR INDICATOR
-  YELLOW ARROW/CIRCULAR INDICATOR
-  FLASHING YELLOW ARROW INDICATOR
-  GREEN ARROW/CIRCULAR INDICATOR
-  DON'T WALK INDICATOR 16"
-  WALK INDICATOR 16"

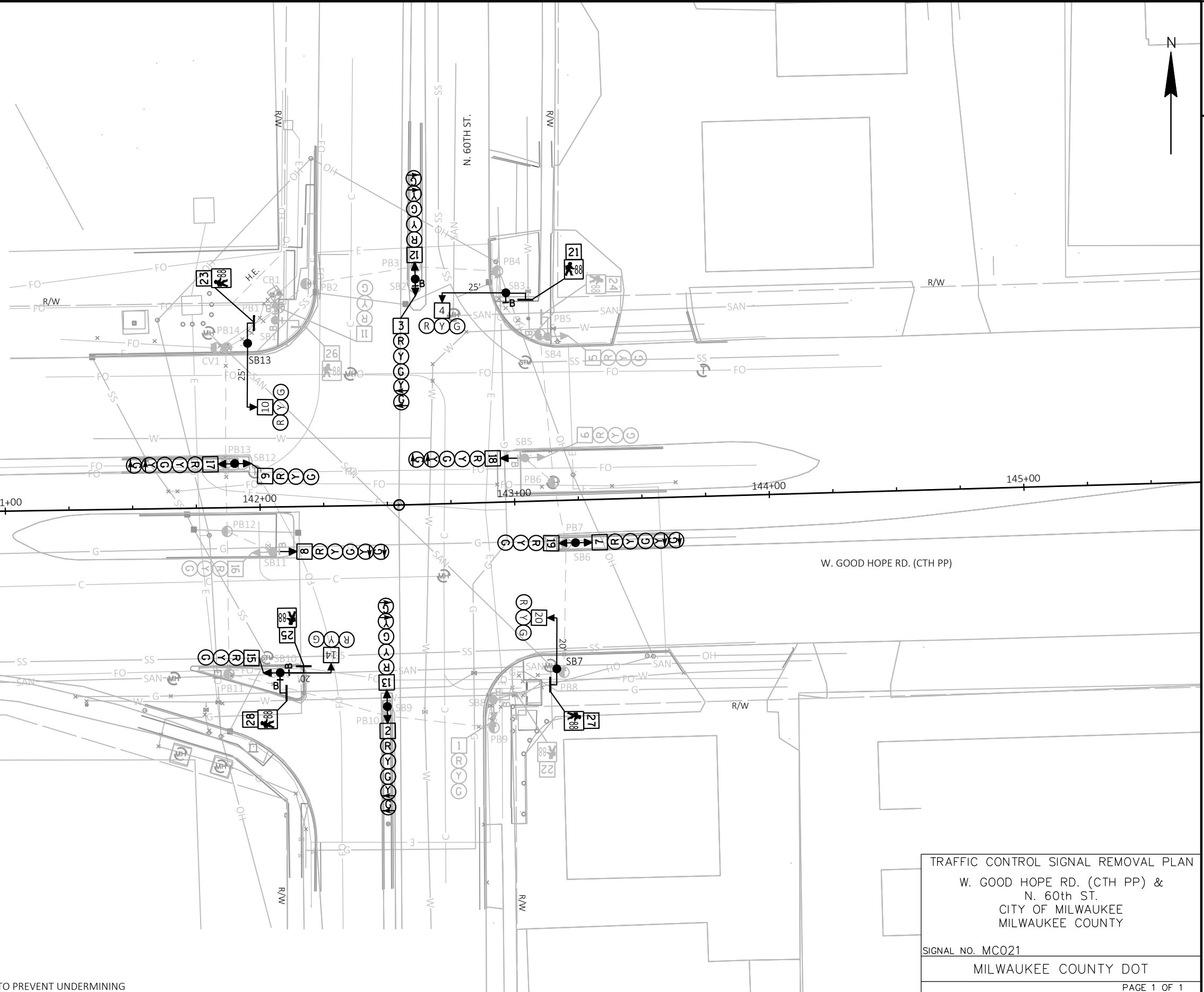
- NOTES:
- GRAYSHADE REPRESENTS EXISTING
 - BOLD REPRESENTS EXISTING TO BE REMOVED
 - RELOCATE EXISTING V1 AND V3 TO PROPOSED MASTARM SB1 AND EXISTING V2 AND V4 TO PROPOSED MASTARM SB5
 - MINIMUM ONE FAR INDICATION SHALL BE ACTIVE AT ALL TIMES DURING INSTALLATION

TRAFFIC CONTROL SIGNAL REMOVAL PLAN
 W. GOOD HOPE RD. (CTH PP) &
 UIHLEIN SOCCER PARK DRIVEWAY
 CITY OF MILWAUKEE
 MILWAUKEE COUNTY









SIGNAL NO. MC066
 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 REMAIN
-  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

-  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
- REUSE EXISTING CONCRETE BASES SB3 AND SB10
- SECURE NEARBY PULLBOXES WHEN PERFORMING EXCAVATION FOR SIGNAL BASES TO PREVENT UNDERMINING














TRAFFIC CONTROL SIGNAL REMOVAL PLAN
 W. GOOD HOPE RD. (CTH PP) &
 N. 60th ST.
 CITY OF MILWAUKEE
 MILWAUKEE COUNTY

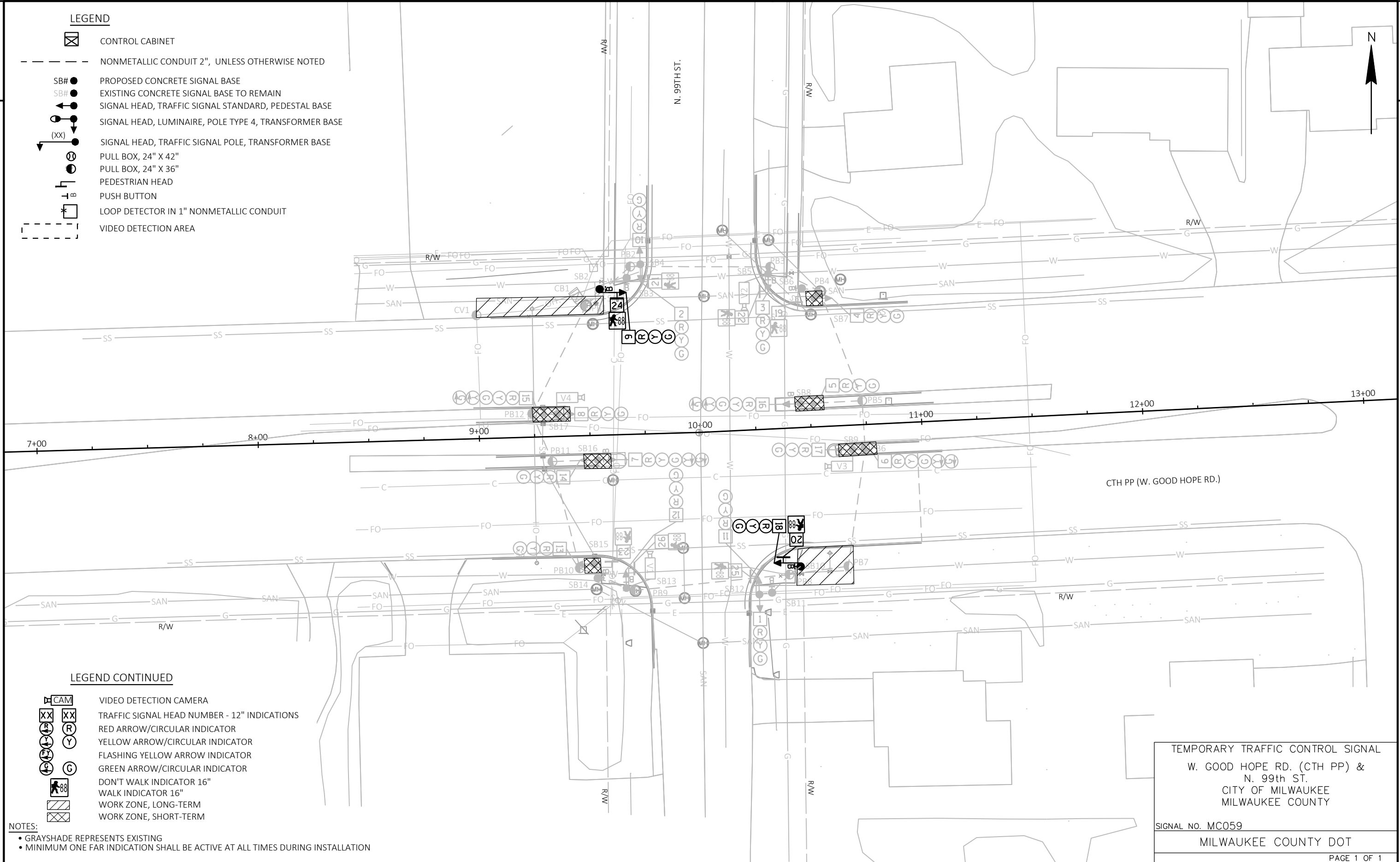
SIGNAL NO. MC021

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 REMAIN
-  SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
-  SIGNAL HEAD, LUMINAIRE, POLE TYPE 4, TRANSFORMER BASE
-  SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
-  PULL BOX, 24" X 42"
-  PULL BOX, 24" X 36"
-  PEDESTRIAN HEAD
-  PUSH BUTTON
-  LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
-  VIDEO DETECTION AREA



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"
-  WORK ZONE, LONG-TERM
-  WORK ZONE, SHORT-TERM


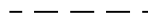













NOTES:

- GRAYSHADE REPRESENTS EXISTING
- MINIMUM ONE FAR INDICATION SHALL BE ACTIVE AT ALL TIMES DURING INSTALLATION











TEMPORARY TRAFFIC CONTROL SIGNAL
 W. GOOD HOPE RD. (CTH PP) &
 N. 99th ST.
 CITY OF MILWAUKEE
 MILWAUKEE COUNTY

SIGNAL NO. MC059
 MILWAUKEE COUNTY DOT

LEGEND

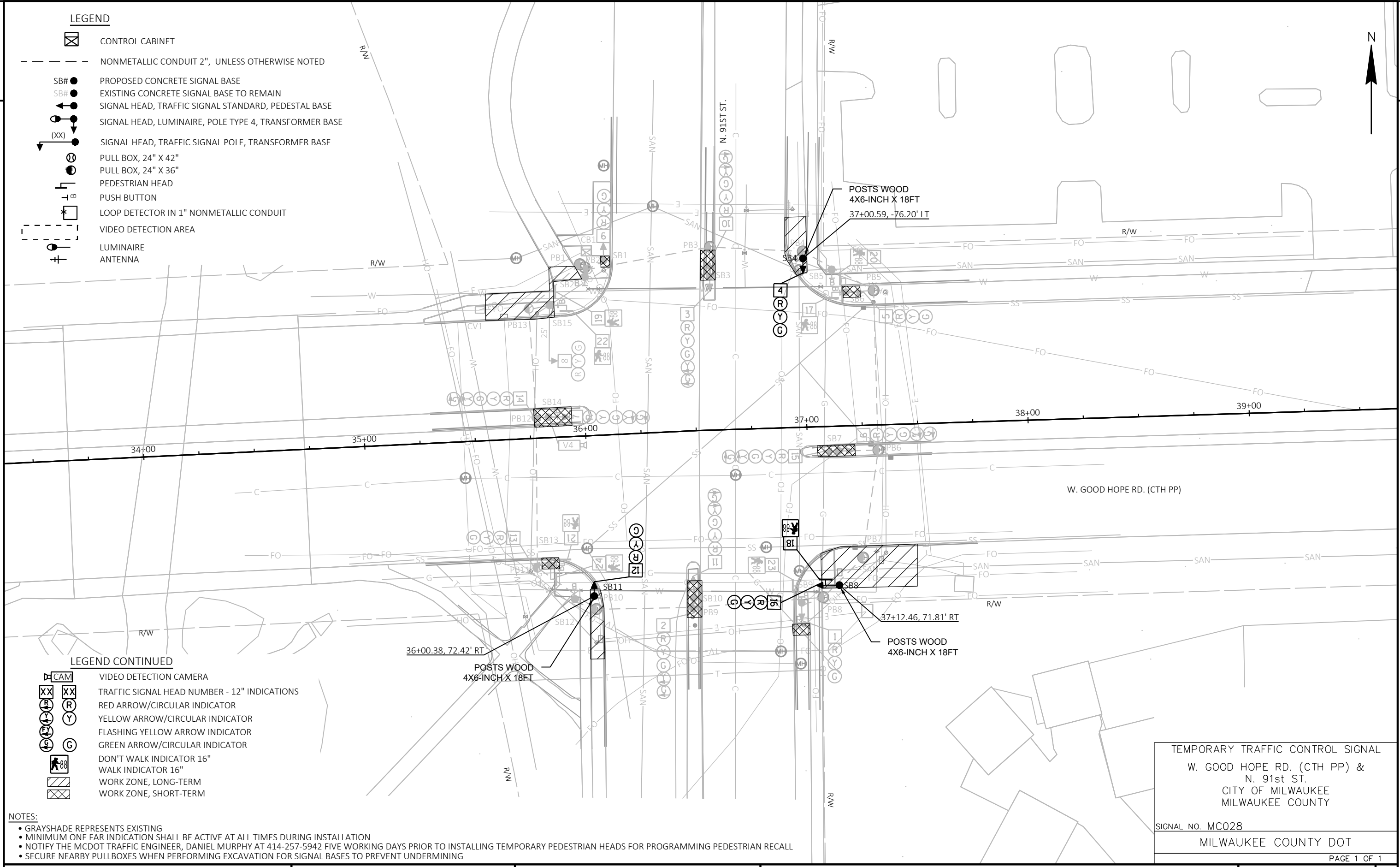
-  CONTROL CABINET
-  NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
-  SB# PROPOSED CONCRETE SIGNAL BASE
-  SB# EXISTING CONCRETE SIGNAL BASE TO REMAIN
-  SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
-  SIGNAL HEAD, LUMINAIRE, POLE TYPE 4, TRANSFORMER BASE
-  (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
-  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

-  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"
-  WZ WORK ZONE, LONG-TERM
-  WZ WORK ZONE, SHORT-TERM



















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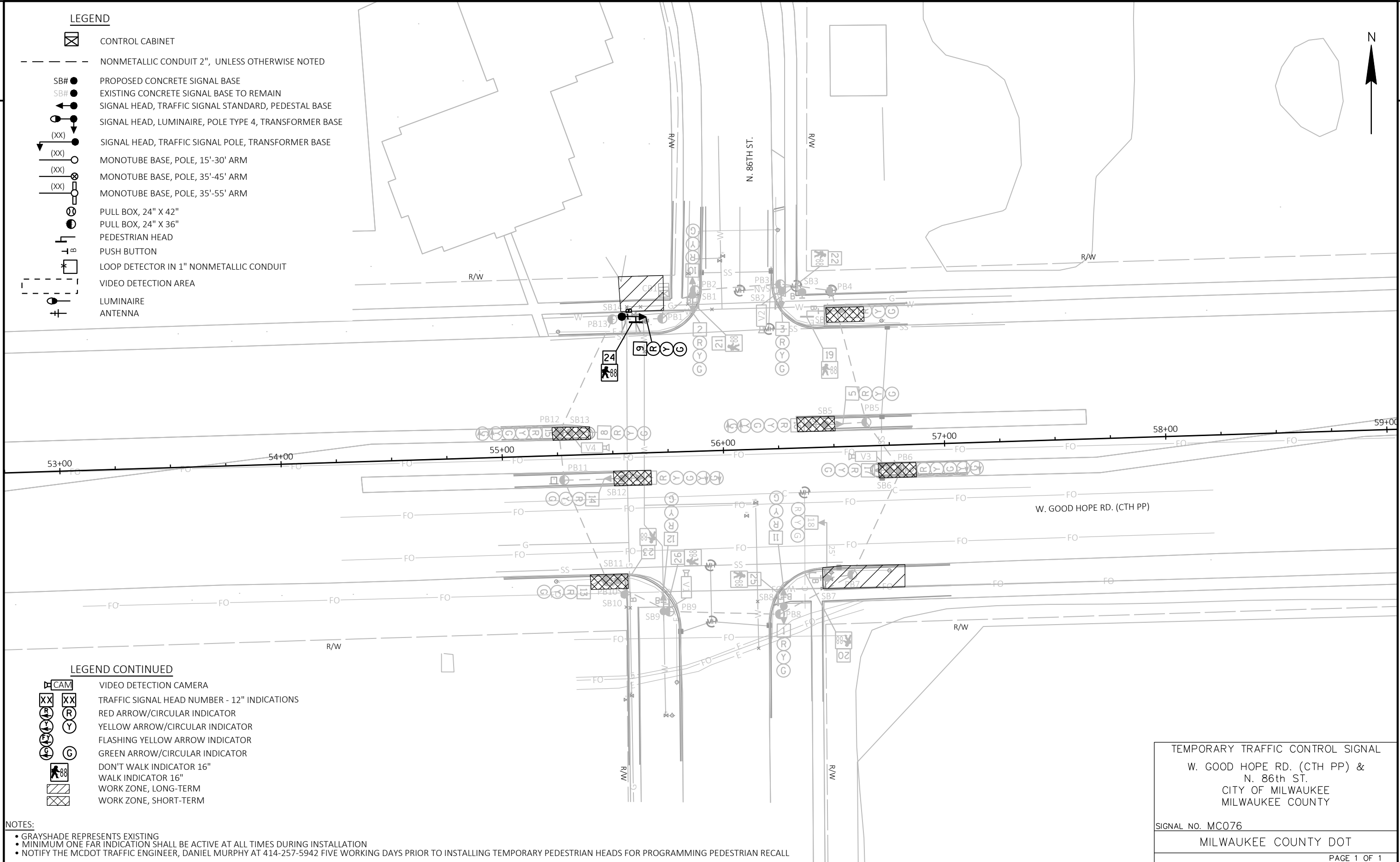
- GRAYSHADE REPRESENTS EXISTING
- MINIMUM ONE FAR INDICATION SHALL BE ACTIVE AT ALL TIMES DURING INSTALLATION
- NOTIFY THE MCDOT TRAFFIC ENGINEER, DANIEL MURPHY AT 414-257-5942 FIVE WORKING DAYS PRIOR TO INSTALLING TEMPORARY PEDESTRIAN HEADS FOR PROGRAMMING PEDESTRIAN RECALL
- SECURE NEARBY PULLBOXES WHEN PERFORMING EXCAVATION FOR SIGNAL BASES TO PREVENT UNDERMINING













TEMPORARY TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. 91st ST.	
CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC028	
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 REMAIN
-  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

-  VIDEO DETECTION CAMERA
-  (XX) (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 box) WORK ZONE, LONG-TERM
-  (Cross-hatched box) WORK ZONE, SHORT-TERM


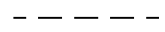
















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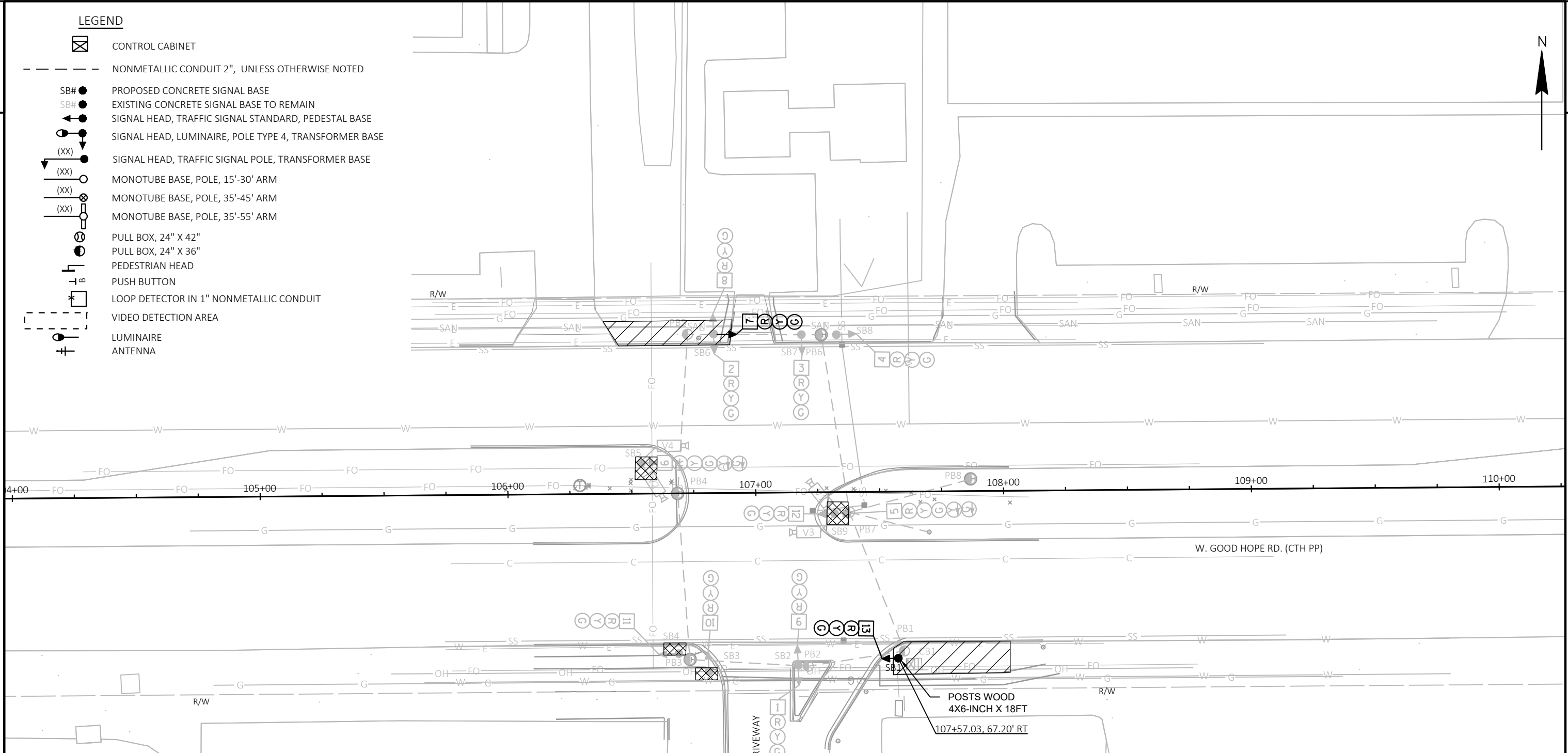
- GRAYSHADE REPRESENTS EXISTING
- MINIMUM ONE FAR INDICATION SHALL BE ACTIVE AT ALL TIMES DURING INSTALLATION
- NOTIFY THE MCDOT TRAFFIC ENGINEER, DANIEL MURPHY AT 414-257-5942 FIVE WORKING DAYS PRIOR TO INSTALLING TEMPORARY PEDESTRIAN HEADS FOR PROGRAMMING PEDESTRIAN RECALL

TEMPORARY TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & N. 86th ST.	
CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC076	
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 REMAIN
-  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"
-  WORK ZONE, LONG-TERM
-  WORK ZONE, SHORT-TERM











NOTES:
 • GRAYSHADE REPRESENTS EXISTING
 • MINIMUM ONE FAR INDICATION SHALL BE ACTIVE AT ALL TIMES DURING INSTALLATION

TEMPORARY TRAFFIC CONTROL SIGNAL	
W. GOOD HOPE RD. (CTH PP) & UIHLEIN SOCCER PARK DRIVEWAY CITY OF MILWAUKEE MILWAUKEE COUNTY	
SIGNAL NO. MC066	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 1	

LEGEND

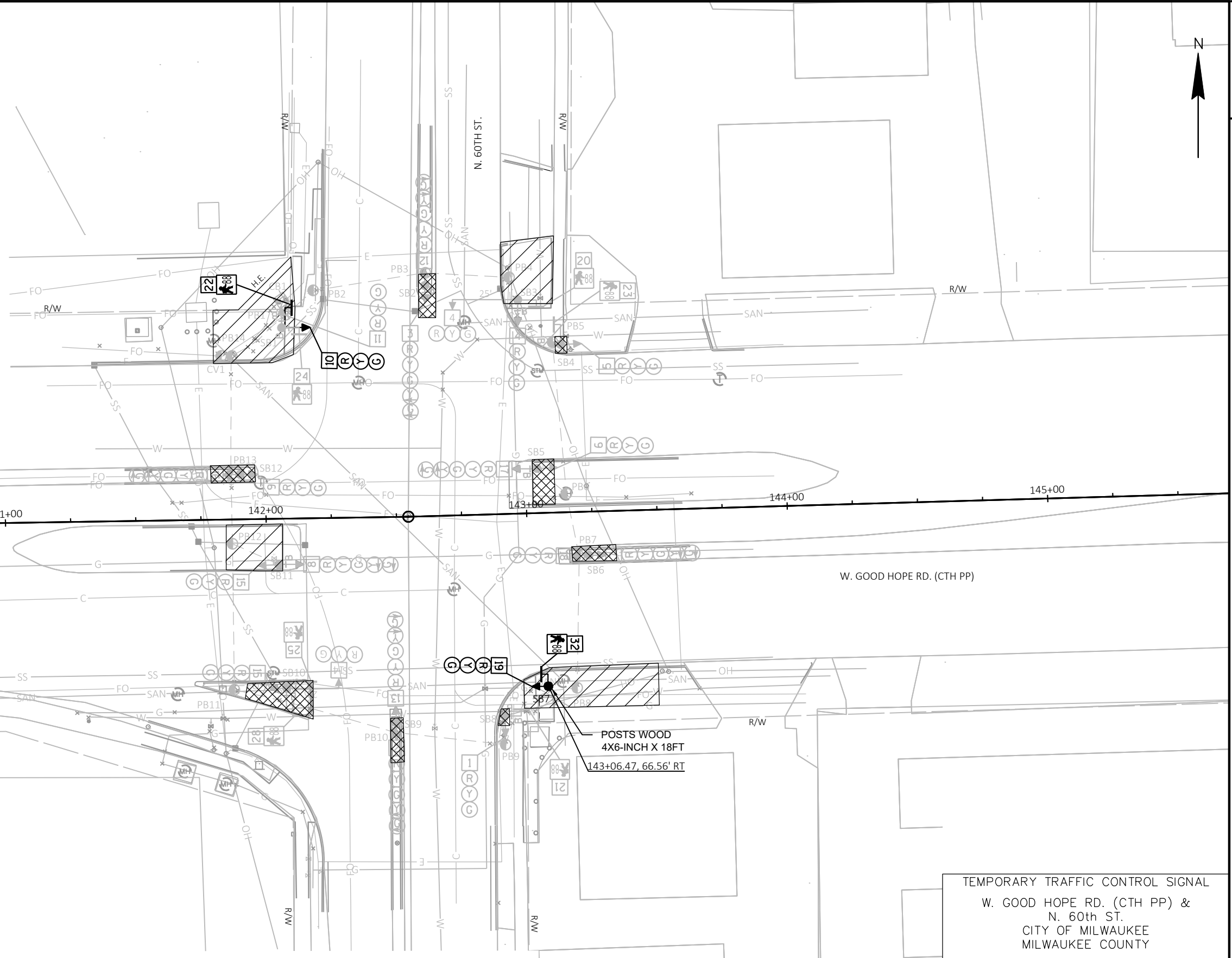
-  CONTROL CABINET
-  NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
-  SB# ● PROPOSED CONCRETE SIGNAL BASE
-  SB# ● EXISTING CONCRETE SIGNAL BASE TO REMAIN
-  SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
-  SIGNAL HEAD, LUMINAIRE, POLE TYPE 4, TRANSFORMER BASE
-  (XX) SIGNAL HEAD, TRAFFIC SIGNAL 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

-  VIDEO DETECTION CAMERA
-  (XX) (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"
-  (Hatched) WORK ZONE, LONG-TERM
-  (Cross-hatched) WORK ZONE, SHORT-TERM

NOTES:

- GRAYSHADE REPRESENTS EXISTING
- MINIMUM ONE FAR INDICATION SHALL BE ACTIVE AT ALL TIMES DURING INSTALLATION
- NOTIFY THE MCDOT TRAFFIC ENGINEER, DANIEL MURPHY AT 414-257-5942 FIVE WORKING DAYS PRIOR TO INSTALLING TEMPORARY PEDESTRIAN HEADS FOR PROGRAMMING PEDESTRIAN RECALL









TEMPORARY TRAFFIC CONTROL SIGNAL
 W. GOOD HOPE RD. (CTH PP) &
 N. 60th ST.
 CITY OF MILWAUKEE
 MILWAUKEE COUNTY

SIGNAL NO. MC021

MILWAUKEE COUNTY DOT

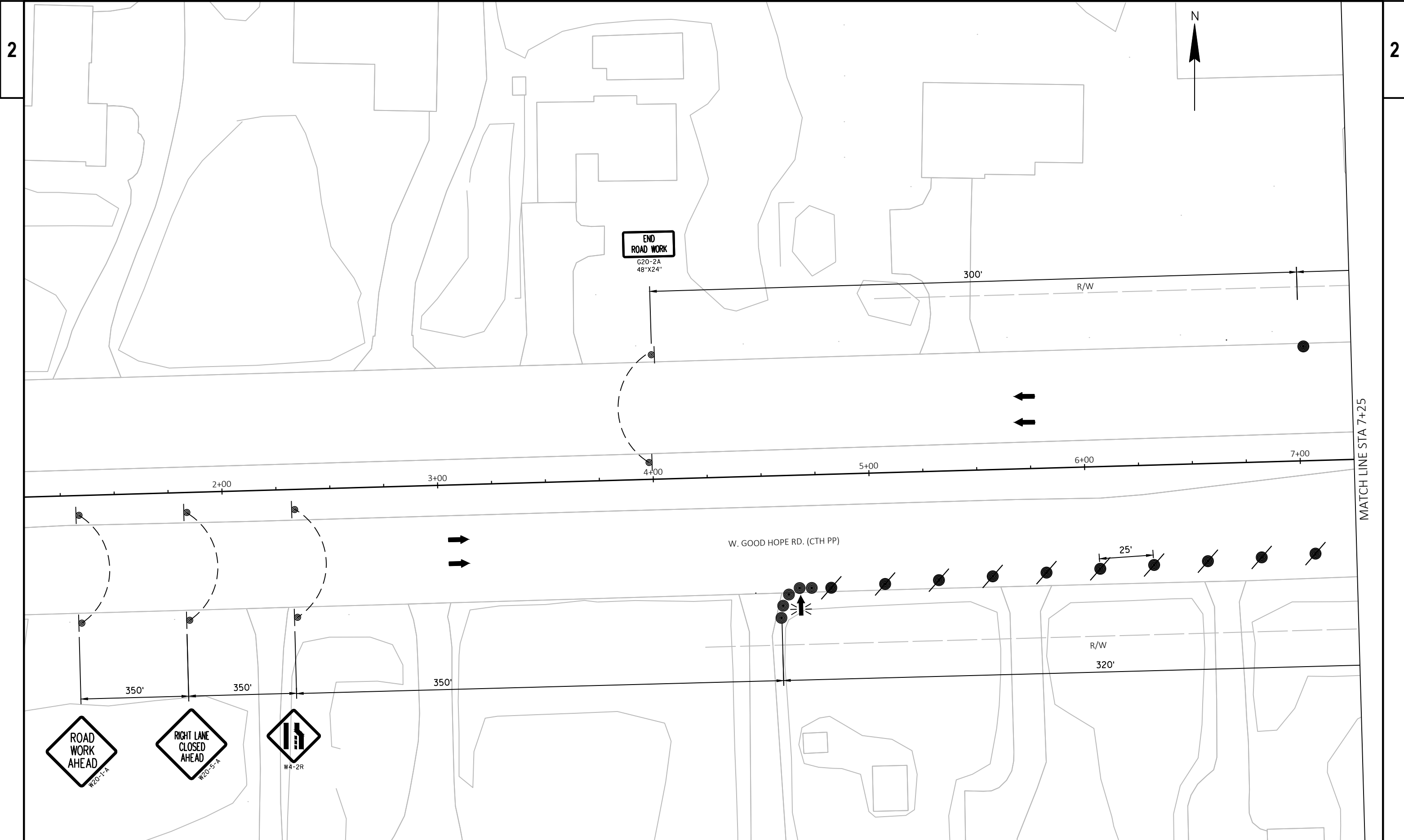
PAGE 1 OF 1

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 PEDESTRIAN CURB RAMP WITH TEMPORARY PEDESTRIAN DETECTABLE WARNING FIELD
	TEMPORARY PEDESTRIAN SURFACE MATTING, 5FT WIDE
	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
7. ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.



2

2



END
ROAD WORK
G20-2A
48"X24"

300'
R/W

2+00

3+00

4+00

5+00

6+00

7+00

MATCH LINE STA 7+25

W. GOOD HOPE RD. (CTH PP)

25'

R/W
320'

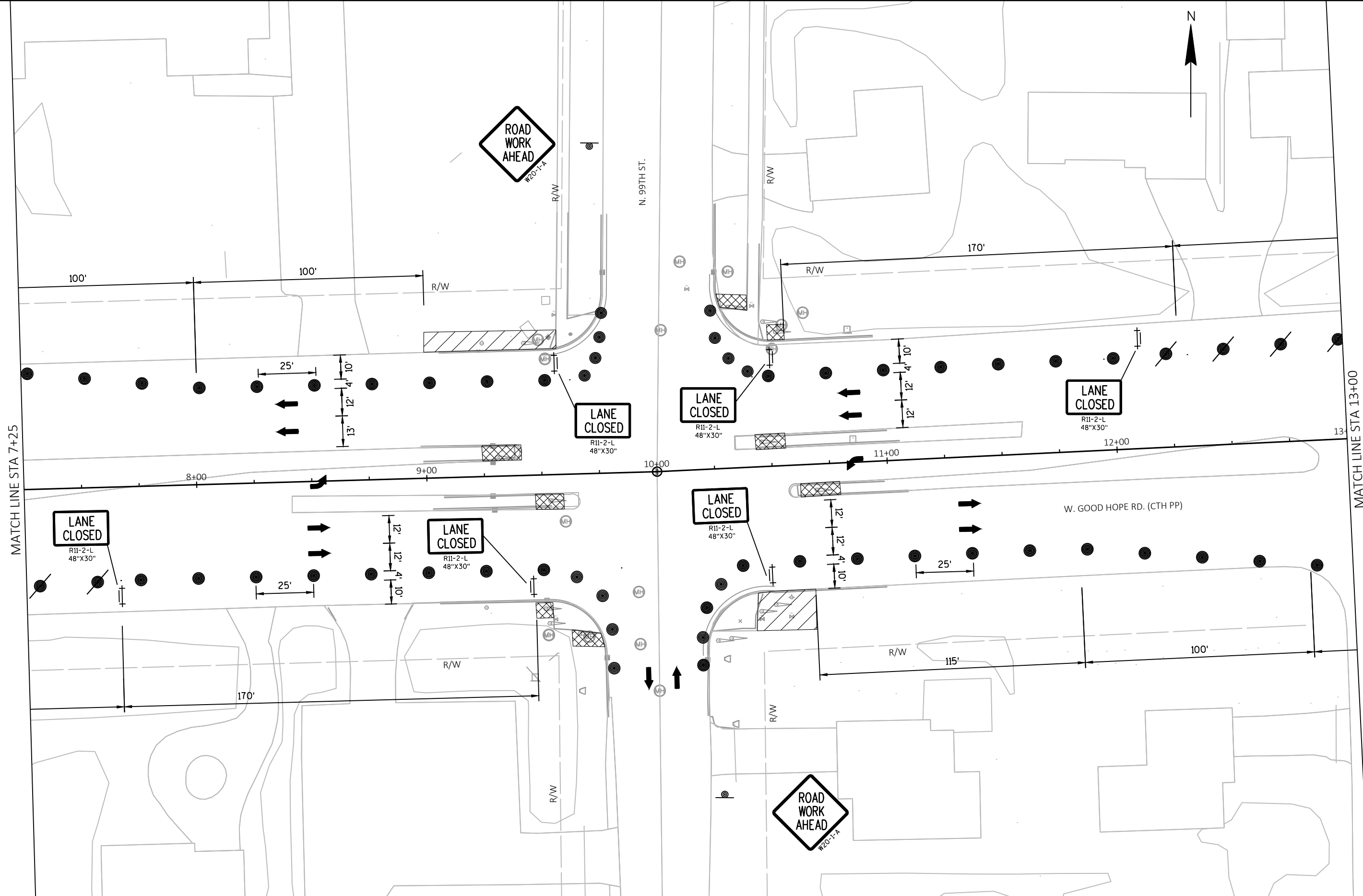
350'

350'

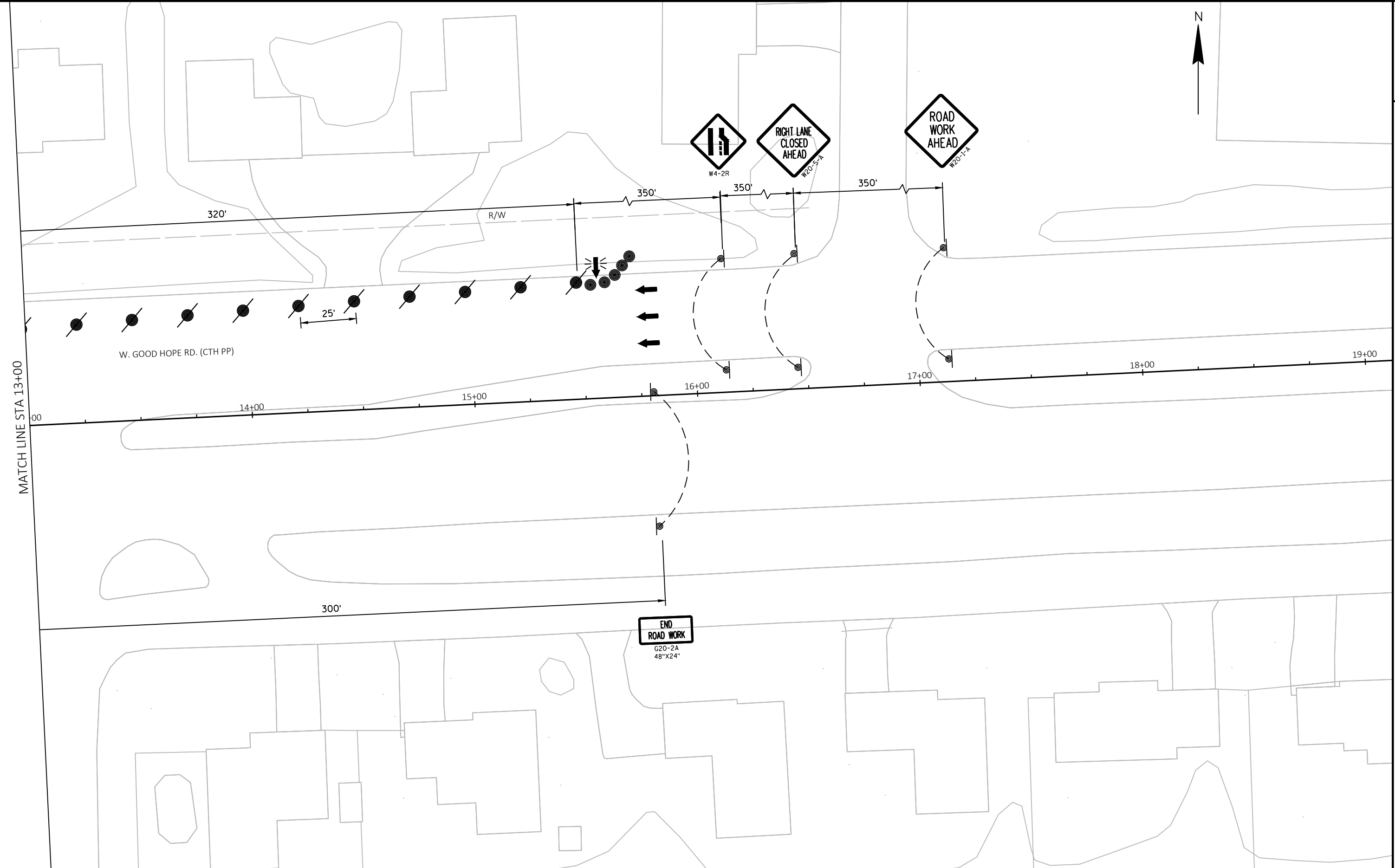
350'



PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	TRAFFIC CONTROL PLAN - W. GOOD HOPE RD. (CTH PP) & N. 99TH ST.	SHEET	E
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PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	TRAFFIC CONTROL PLAN - W. GOOD HOPE RD. (CTH PP) & N. 99TH ST.	SHEET	E
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PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	TRAFFIC CONTROL PLAN - W. GOOD HOPE RD. (CTH PP) & N. 99TH ST.	SHEET E
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N. GRANVILLE RD.

END ROAD WORK
G20-2A
48"X24"

R/W

300'



28+00

29+00

30+00

31+00

32+00

33+00

W. GOOD HOPE RD. (CTH PP)



25'

320'

350'

350'

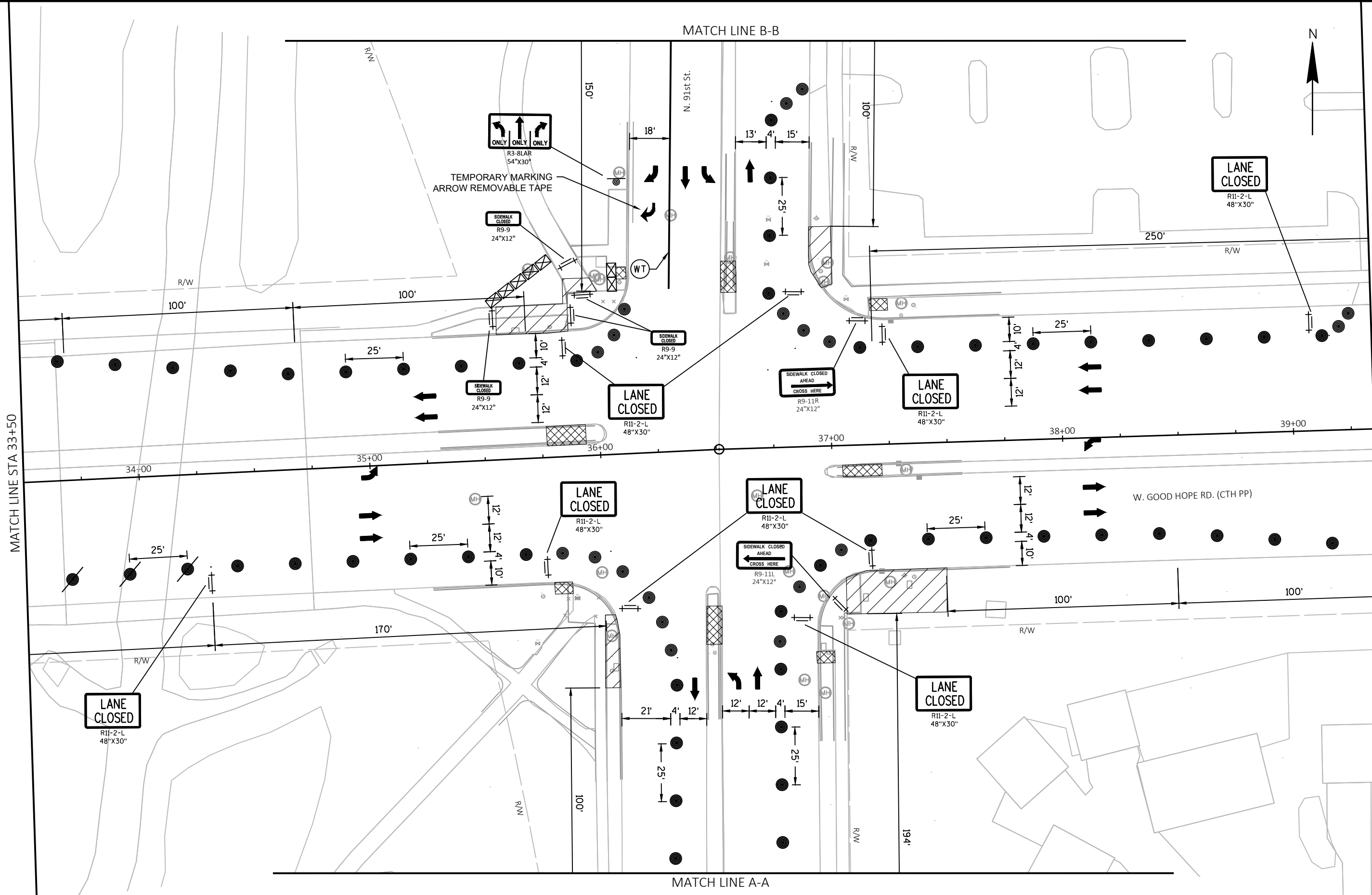
350'

R/W



MATCH LINE STA 33+50

MATCH LINE B-B



MATCH LINE STA 33+50

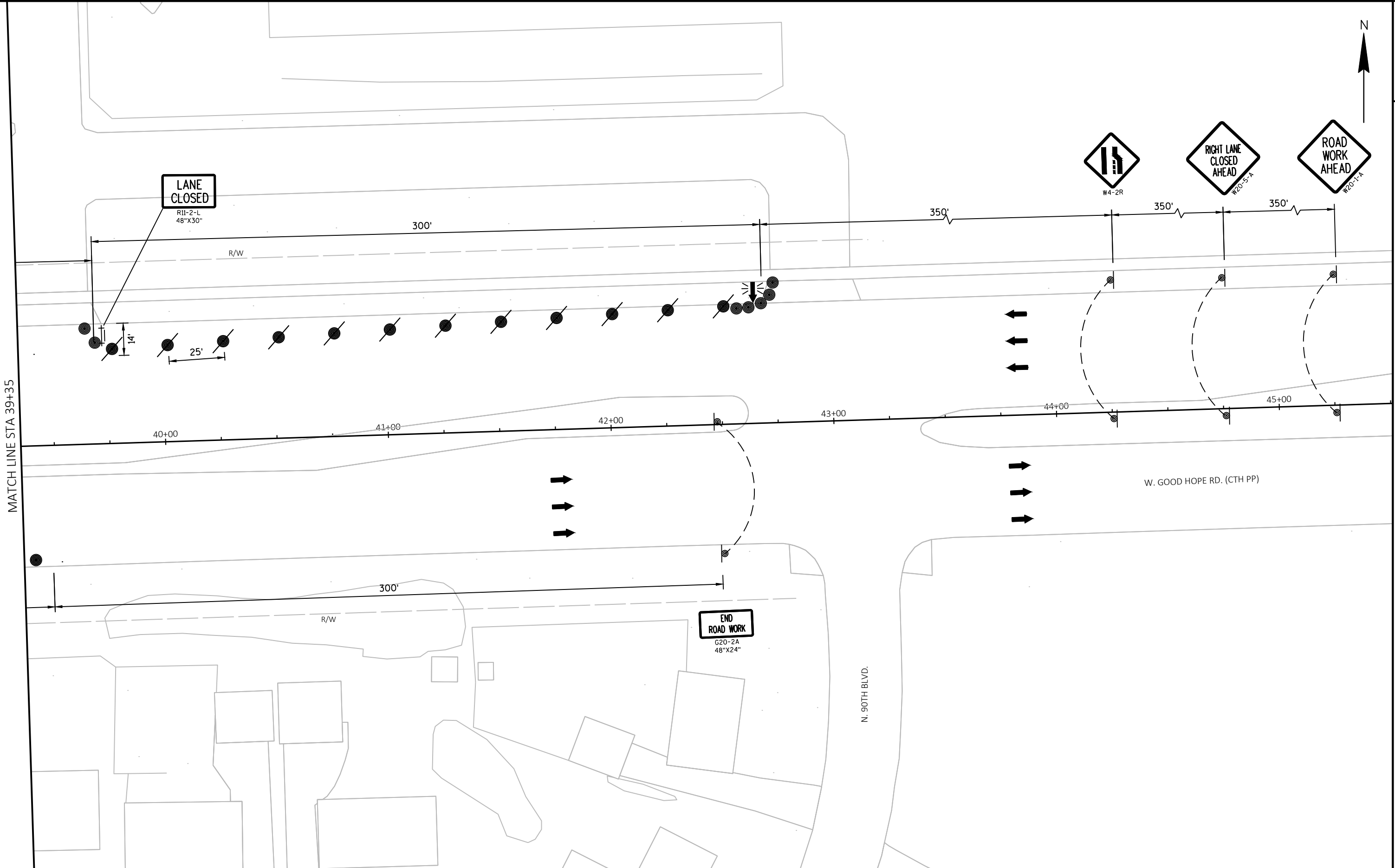
MATCH LINE STA 39+35

MATCH LINE A-A

PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	TRAFFIC CONTROL PLAN - W. GOOD HOPE RD. (CTH PP) & N. 91ST ST.	SHEET	E
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FILE NAME : O:\HIGHWAY OPERATIONS CONTROL FILE\CENTRAL FILES\2010-2014\CTH PP - W. GOOD HOPE RD\2984-07-06_76 CTH PP-99TH TO 60TH\PLANS\DWG\SHEETS\PLAN\91_TC.DWG PLOT DATE : 9/12/2022 10:29 AM PLOT BY : THORNBURG, ALEX PLOT NAME : PLOT SCALE : 1 IN:40 FT WISDOT/CADD SHEET 42

LAYOUT NAME - 2



PROJECT NO: 2984-07-76

HWY: CTH PP

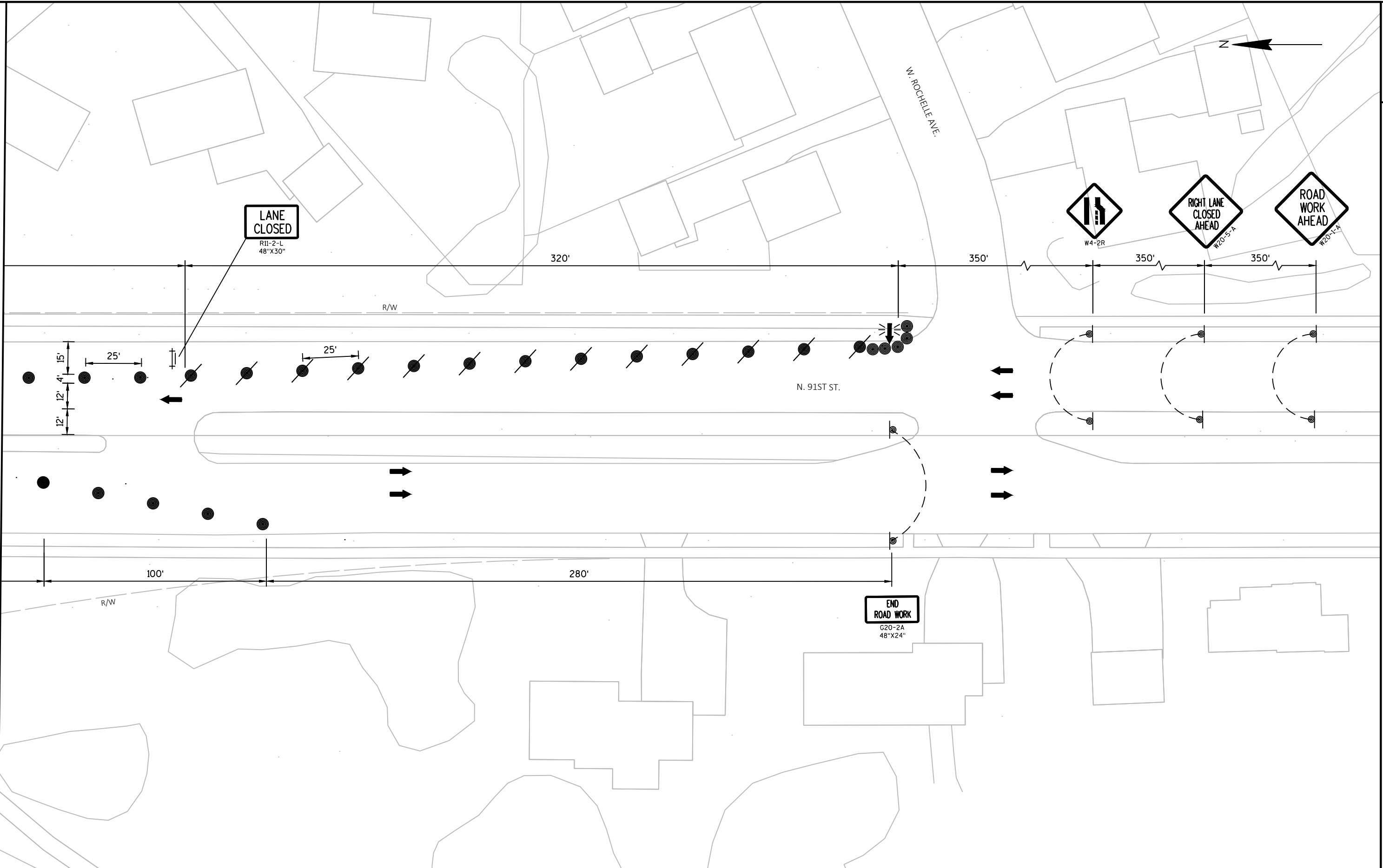
COUNTY: MILWAUKEE

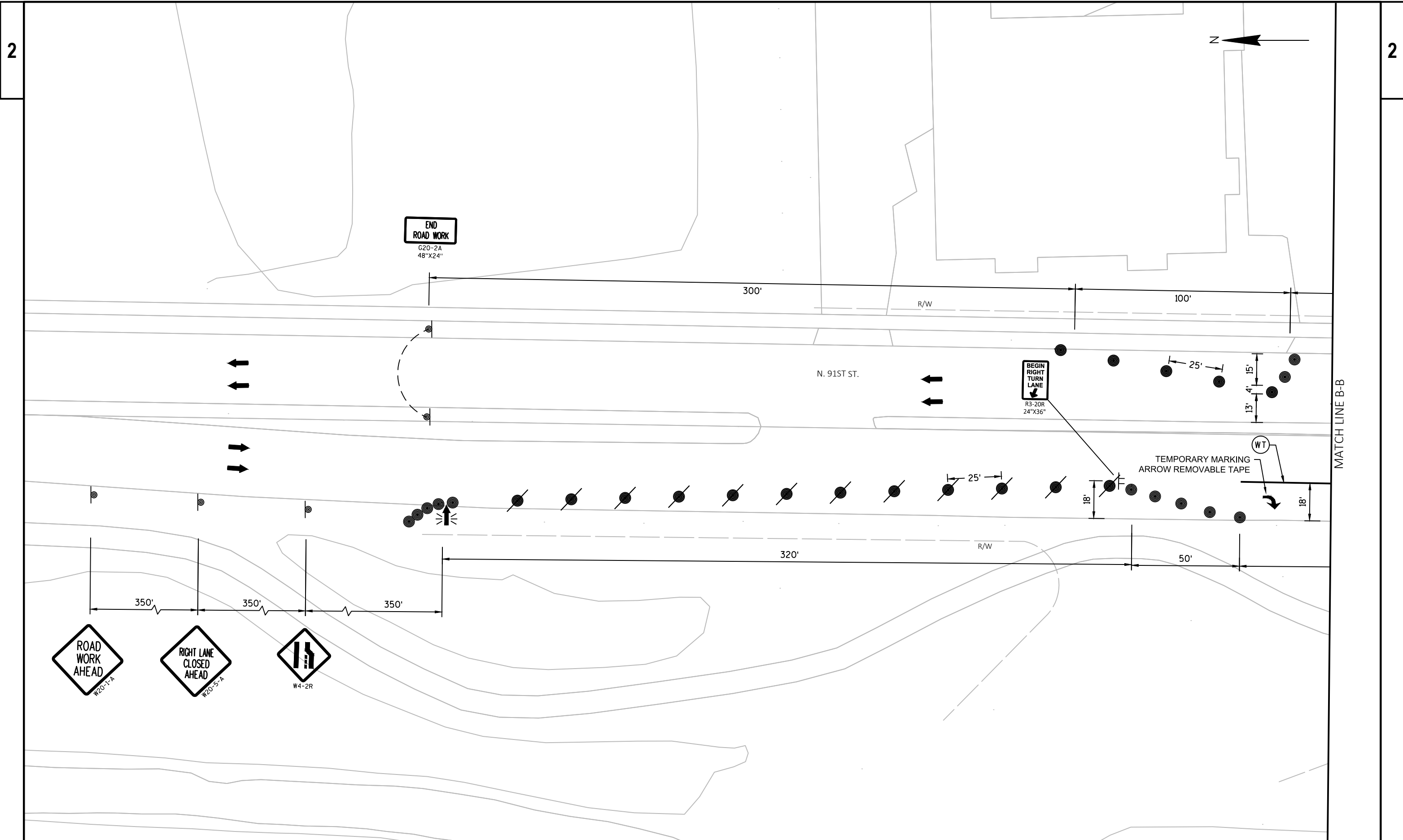
TRAFFIC CONTROL PLAN - W. GOOD HOPE RD. (CTH PP) & N. 91ST ST.

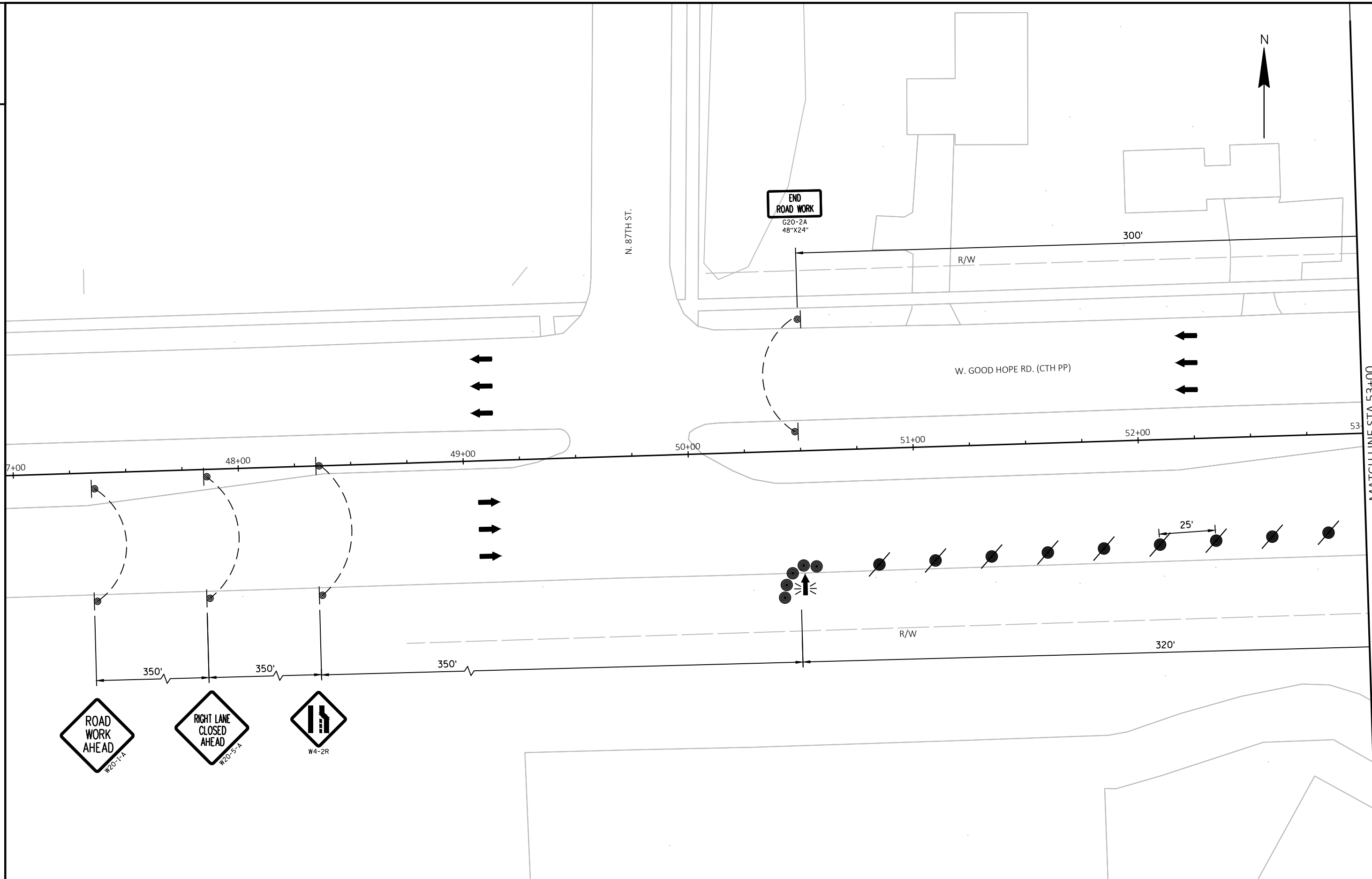
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E

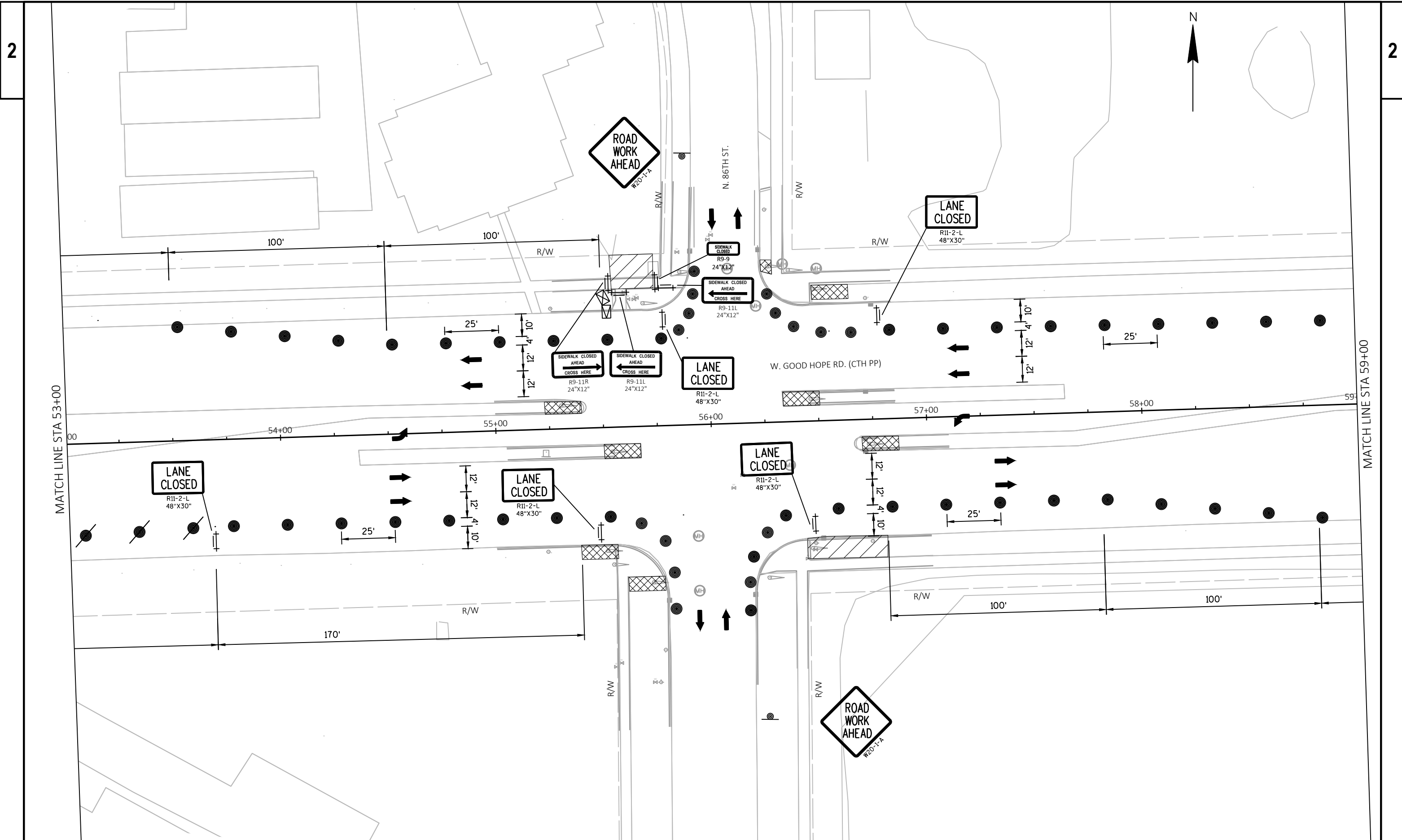
MATCH LINE A-A

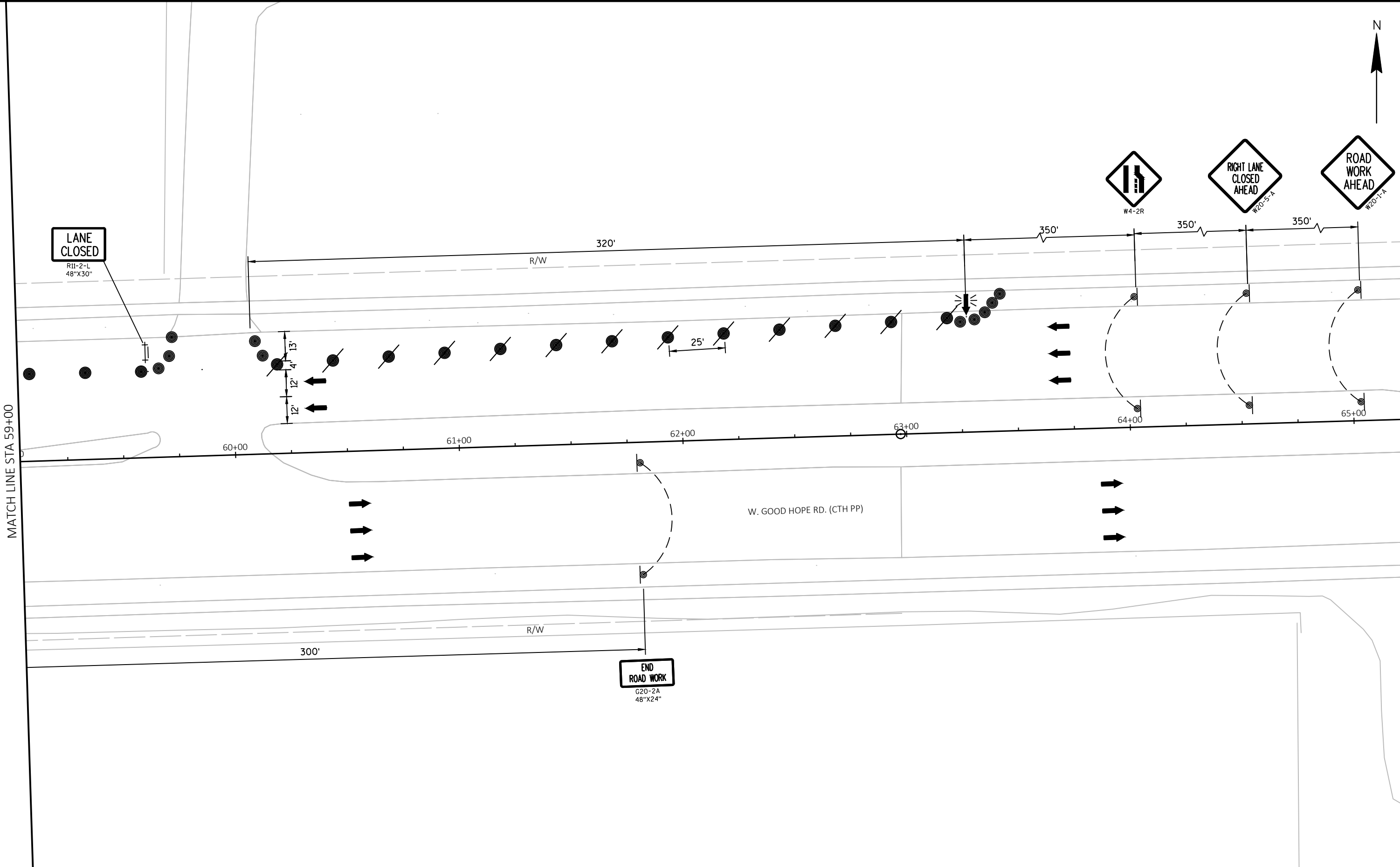






PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	TRAFFIC CONTROL PLAN - W. GOOD HOPE RD. (CTH PP) & N. 86TH ST.	SHEET	E
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PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	TRAFFIC CONTROL PLAN - W. GOOD HOPE RD. (CTH PP) & N. 86TH ST.	SHEET	E
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END ROAD WORK
G20-2A
48" X 24"

300'

R/W



99+00

100+00

101+00

102+00

103+00

104+00

MATCH LINE STA 104+25

W. GOOD HOPE RD. (CTH PP)



25'

R/W

320'

350'

350'

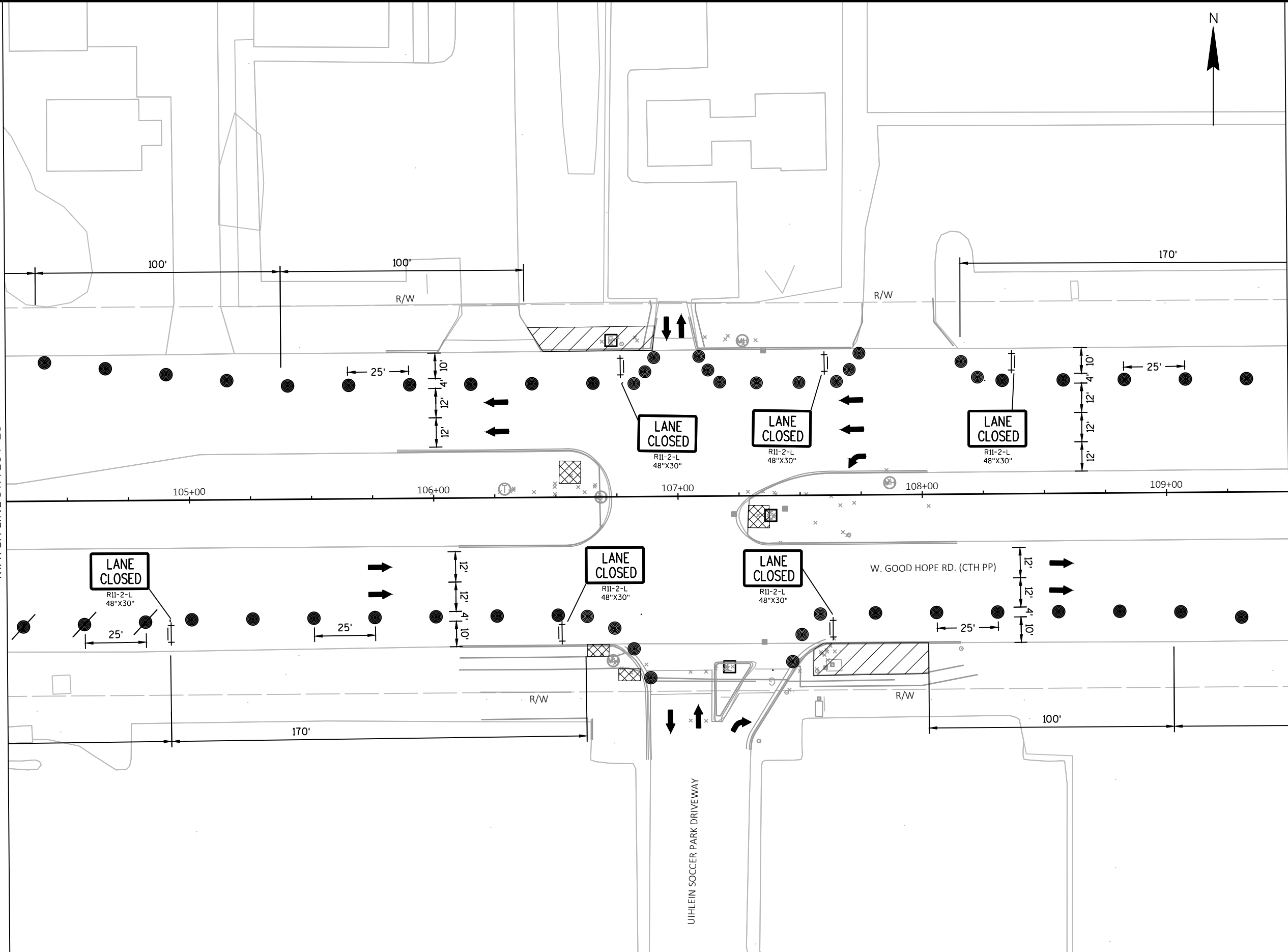
350'



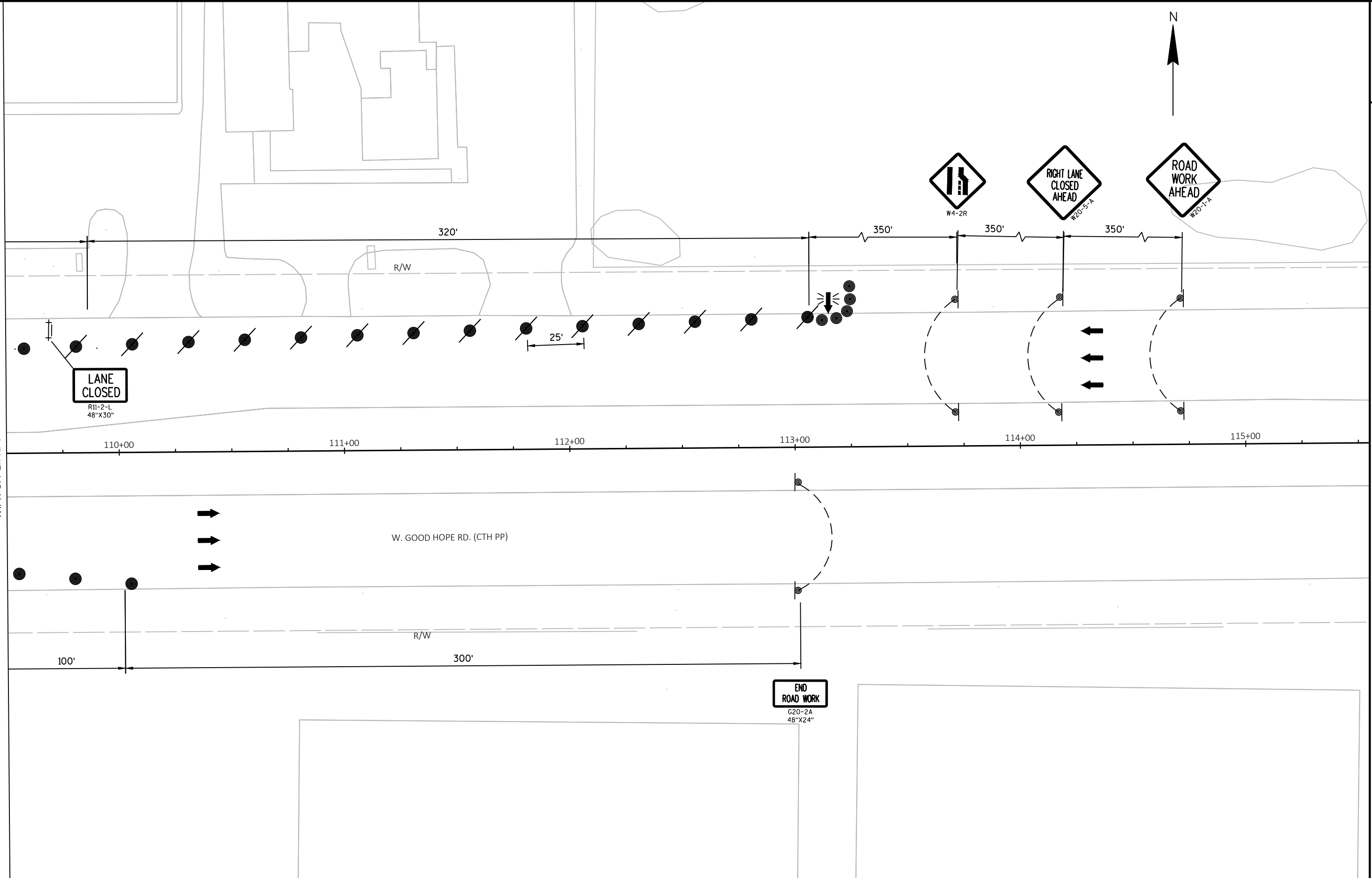


MATCH LINE STA 104+25

MATCH LINE STA 109+50



MATCH LINE STA 109+50





END ROAD WORK
G20-2A
48"X24"

300'

W. GOOD HOPE RD. (CTH PP)

LANE CLOSED
R11-2-L
48"X30"

134+00

135+00

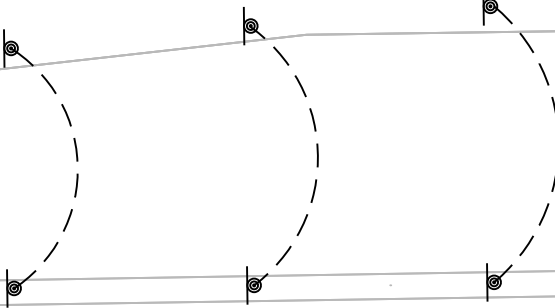
136+00

137+00

138+00

139+00

MATCH LINE STA 139+75



25'

350'

350'

350'

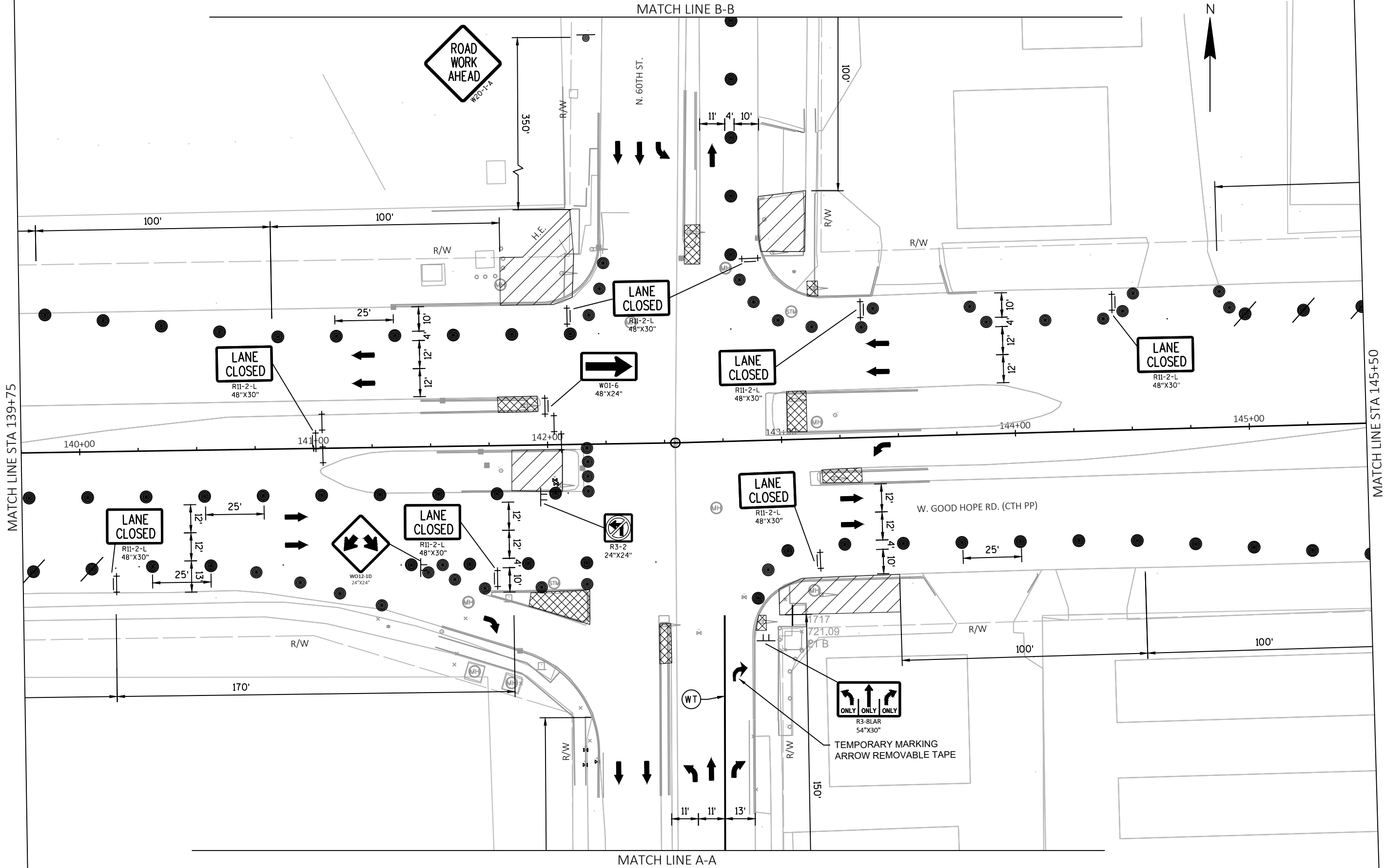
320'



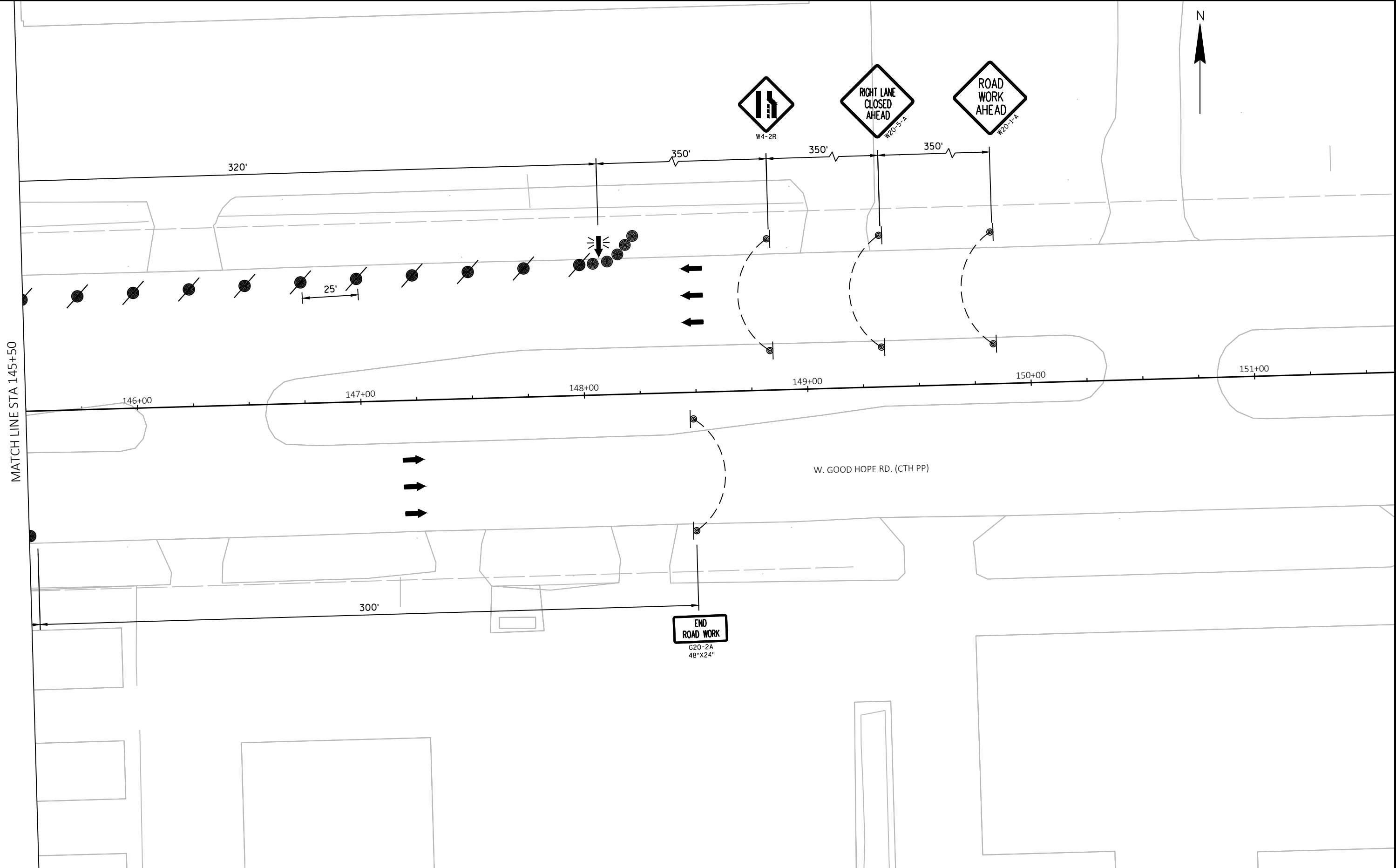
NOTES:

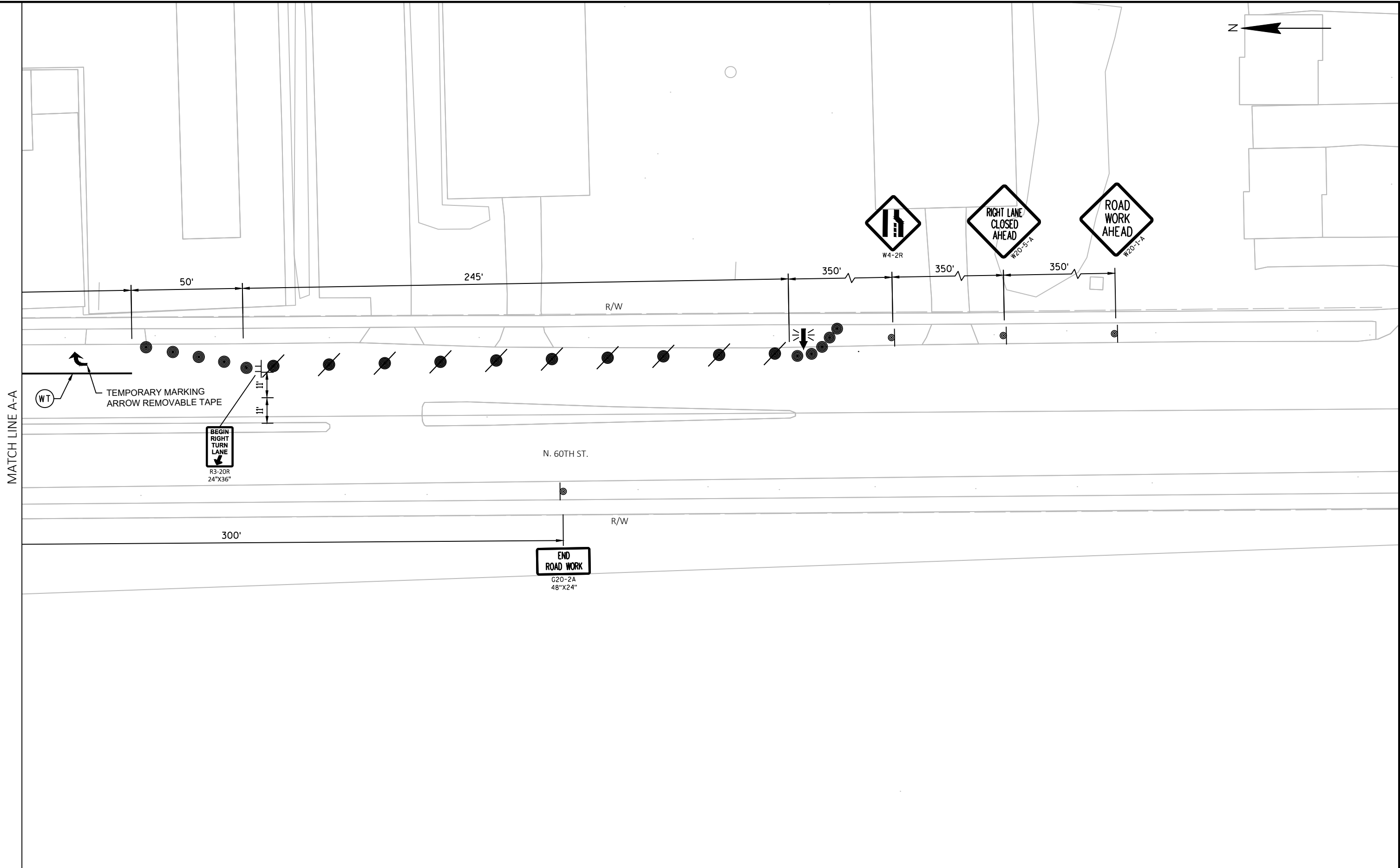
- THE EASTBOUND LEFT TURN LANE MAY ONLY BE CLOSED BETWEEN THE HOURS OF 9AM-3PM.

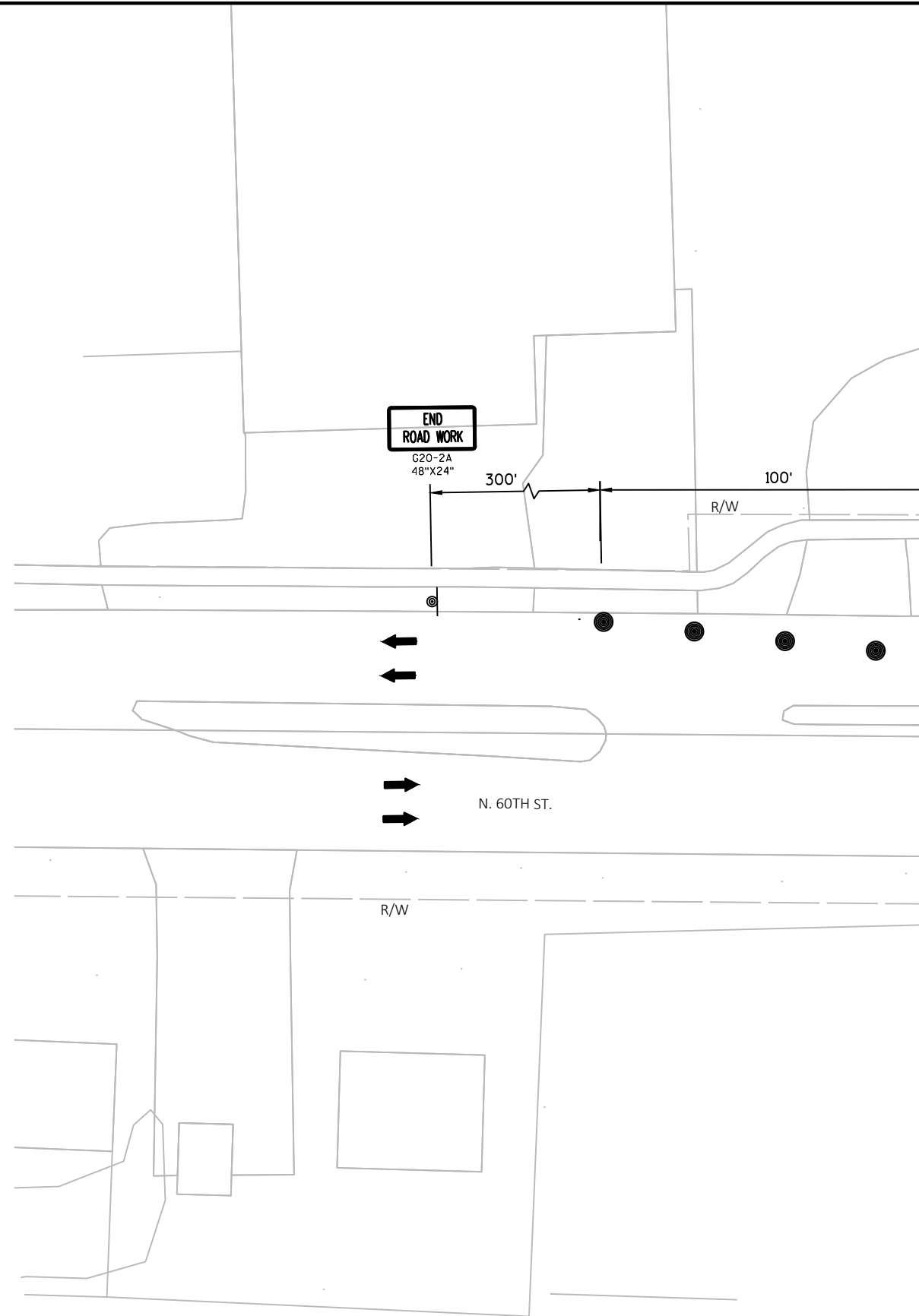
PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	TRAFFIC CONTROL PLAN - W. GOOD HOPE RD. (CTH PP) & N. 60TH ST.	SHEET	E
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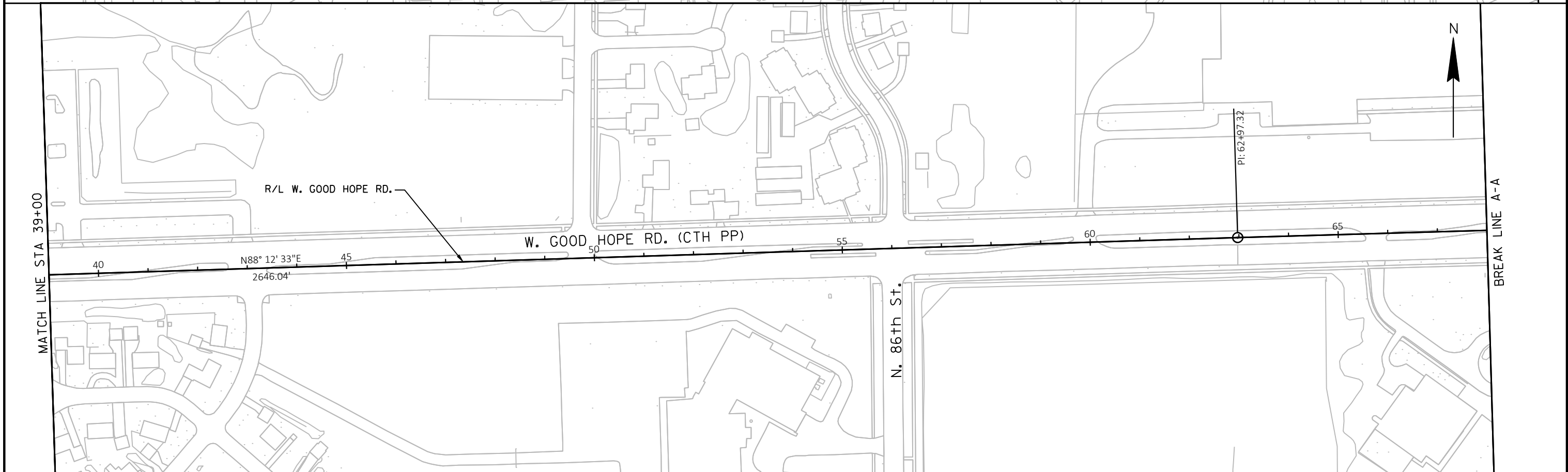
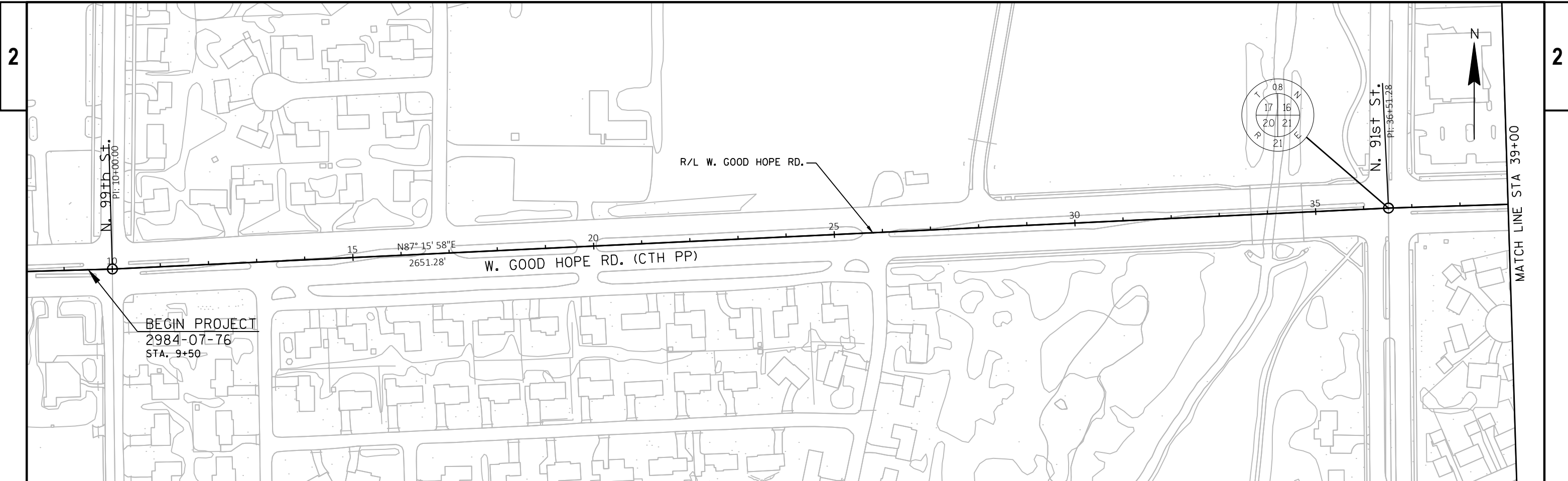


NOTES:
 • THE EASTBOUND LEFT TURN LANE MAY ONLY BE CLOSED BETWEEN THE HOURS OF 9AM-3PM.

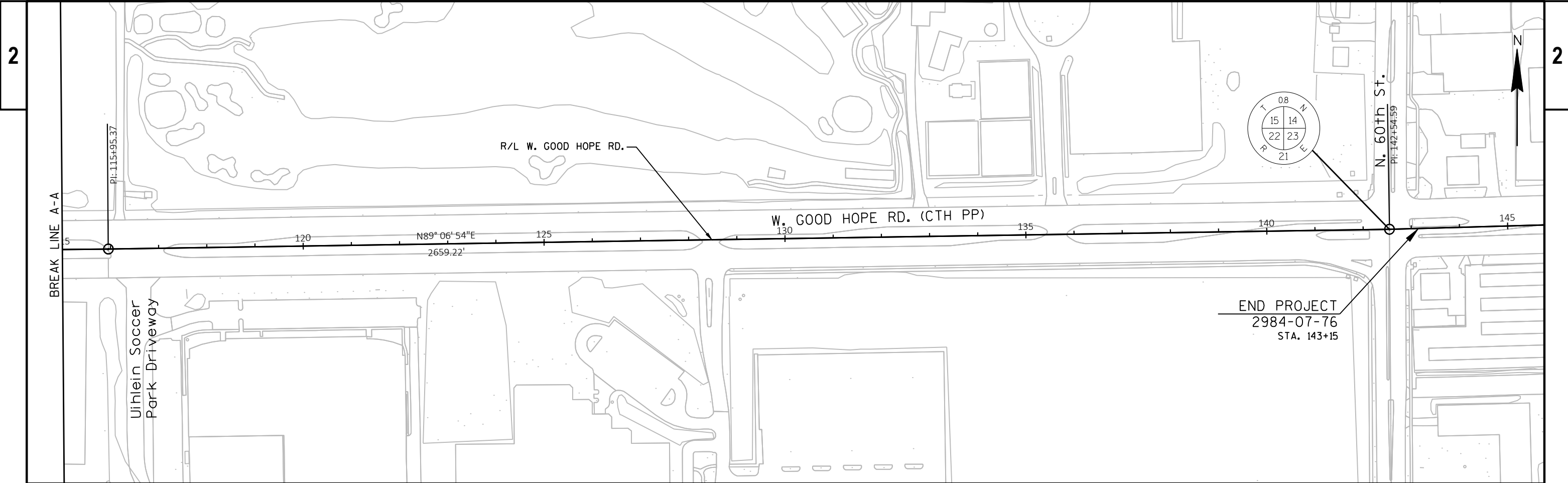








PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	ALIGNMENT DIAGRAM - CTH PP	SHEET	E
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PROJECT NO: 2984-07-76	HWY: CTH PP	COUNTY: MILWAUKEE	ALIGNMENT DIAGRAM - CTH PP	SHEET	E
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Estimate Of Quantities

2984-07-76

Line	Item	Item Description	Unit	Total	Qty
0002	201.0220	Grubbing	ID	20.000	20.000
0004	204.0155	Removing Concrete Sidewalk	SY	45.000	45.000
0006	204.0195	Removing Concrete Bases	EACH	13.000	13.000
0008	204.9060.S	Removing (item description) 01. Traffic Signal Equipment at Intersection	EACH	5.000	5.000
0010	204.9060.S	Removing (item description) 02. Concrete Base Bolts	EACH	11.000	11.000
0012	205.0501.S	Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	TON	7.000	7.000
0014	213.0100	Finishing Roadway (project) 01. 2984-07-76	EACH	1.000	1.000
0016	602.0410	Concrete Sidewalk 5-Inch	SF	250.000	250.000
0018	602.0420	Concrete Sidewalk 7-Inch	SF	200.000	200.000
0020	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	14.000	14.000
0022	619.1000	Mobilization	EACH	1.000	1.000
0024	625.0100	Topsoil	SY	750.000	750.000
0026	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0028	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0030	628.6510	Soil Stabilizer Type B	ACRE	0.200	0.200
0032	628.7005	Inlet Protection Type A	EACH	3.000	3.000
0034	628.7010	Inlet Protection Type B	EACH	68.000	68.000
0036	628.7015	Inlet Protection Type C	EACH	3.000	3.000
0038	629.0210	Fertilizer Type B	CWT	0.500	0.500
0040	631.0300	Sod Water	MGAL	25.000	25.000
0042	631.1000	Sod Lawn	SY	750.000	750.000
0044	634.0812	Posts Tubular Steel 2x2-Inch X 12-FT	EACH	12.000	12.000
0046	634.0814	Posts Tubular Steel 2x2-Inch X 14-FT	EACH	4.000	4.000
0048	637.2210	Signs Type II Reflective H	SF	289.250	289.250
0050	637.2215	Signs Type II Reflective H Folding	SF	82.880	82.880
0052	638.2602	Removing Signs Type II	EACH	47.000	47.000
0054	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0056	642.5001	Field Office Type B	EACH	1.000	1.000
0058	643.0300	Traffic Control Drums	DAY	30,400.000	30,400.000
0060	643.0420	Traffic Control Barricades Type III	DAY	2,830.000	2,830.000
0062	643.0705	Traffic Control Warning Lights Type A	DAY	5,560.000	5,560.000
0064	643.0715	Traffic Control Warning Lights Type C	DAY	9,610.000	9,610.000
0066	643.0800	Traffic Control Arrow Boards	DAY	660.000	660.000
0068	643.0900	Traffic Control Signs	DAY	8,310.000	8,310.000
0070	643.1050	Traffic Control Signs PCMS	DAY	720.000	720.000
0072	643.3150	Temporary Marking Line Removable Tape 4-Inch	LF	350.000	350.000
0074	643.3550	Temporary Marking Arrow Removable Tape	EACH	4.000	4.000
0076	643.5000	Traffic Control	EACH	1.000	1.000
0078	644.1440	Temporary Pedestrian Surface Matting	SF	500.000	500.000
0080	644.1601	Temporary Pedestrian Curb Ramp	DAY	40.000	40.000
0082	644.1605	Temporary Pedestrian Detectable Warning Field	SF	14.000	14.000
0084	650.8501	Construction Staking Electrical Installations (project) 01. 2984-07-76	EACH	1.000	1.000
0086	650.9000	Construction Staking Curb Ramps	EACH	1.000	1.000
0088	650.9500	Construction Staking Sidewalk (project) 01. 2984-07-76	EACH	1.000	1.000
0090	650.9911	Construction Staking Supplemental Control (project) 01. 2984-07-76	EACH	1.000	1.000
0092	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	100.000	100.000
0094	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	300.000	300.000
0096	652.0615	Conduit Special 3-Inch	LF	300.000	300.000
0098	652.0700.S	Install Conduit into Existing Item	EACH	18.000	18.000

Estimate Of Quantities

2984-07-76

Line	Item	Item Description	Unit	Total	Qty
0100	654.0113	Concrete Bases Type 13	EACH	4.000	4.000
0102	654.0120	Concrete Bases Type 10-Special	EACH	10.000	10.000
0104	655.0210	Cable Traffic Signal 3-14 AWG	LF	80.000	80.000
0106	655.0230	Cable Traffic Signal 5-14 AWG	LF	220.000	220.000
0108	655.0240	Cable Traffic Signal 7-14 AWG	LF	3,400.000	3,400.000
0110	655.0260	Cable Traffic Signal 12-14 AWG	LF	4,500.000	4,500.000
0112	655.0270	Cable Traffic Signal 15-14 AWG	LF	1,200.000	1,200.000
0114	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	260.000	260.000
0116	657.0100	Pedestal Bases	EACH	7.000	7.000
0118	657.0347	Poles Type 9-Special	EACH	4.000	4.000
0120	657.0352	Poles Type 10-Special	EACH	6.000	6.000
0122	657.0355	Poles Type 12	EACH	1.000	1.000
0124	657.0360	Poles Type 13	EACH	3.000	3.000
0126	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	3.000	3.000
0128	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	4.000	4.000
0130	657.0541	Monotube Arms 40-FT-Special	EACH	1.000	1.000
0132	657.0546	Monotube Arms 45-FT-Special	EACH	9.000	9.000
0134	657.0555	Monotube Arms 55-FT	EACH	4.000	4.000
0136	657.0815	Luminaire Arms Steel 15-FT	EACH	9.000	9.000
0138	658.0173	Traffic Signal Face 3S 12-Inch	EACH	39.000	39.000
0140	658.0174	Traffic Signal Face 4S 12-Inch	EACH	26.000	26.000
0142	658.0416	Pedestrian Signal Face 16-Inch	EACH	15.000	15.000
0144	658.0500	Pedestrian Push Buttons	EACH	9.000	9.000
0146	658.5070	Signal Mounting Hardware (location) 01. CTH PP & 99TH ST	EACH	1.000	1.000
0148	658.5070	Signal Mounting Hardware (location) 02. CTH PP & 91ST ST	EACH	1.000	1.000
0150	658.5070	Signal Mounting Hardware (location) 03. CTH PP & 86TH ST	EACH	1.000	1.000
0152	658.5070	Signal Mounting Hardware (location) 04. CTH PP & UIHLEIN	EACH	1.000	1.000
0154	658.5070	Signal Mounting Hardware (location) 05. CTH PP & 60TH ST	EACH	1.000	1.000
0156	661.0201	Temporary Traffic Signals for Intersections (location) 01. CTH PP & 99TH ST	EACH	1.000	1.000
0158	661.0201	Temporary Traffic Signals for Intersections (location) 02. CTH PP & 91ST ST	EACH	1.000	1.000
0160	661.0201	Temporary Traffic Signals for Intersections (location) 03. CTH PP & 86TH ST	EACH	1.000	1.000
0162	661.0201	Temporary Traffic Signals for Intersections (location) 04. CTH PP & UIHLEIN	EACH	1.000	1.000
0164	661.0201	Temporary Traffic Signals for Intersections (location) 05. CTH PP & 60TH ST	EACH	1.000	1.000
0166	678.0400	Fiber Optic Termination	EACH	8.000	8.000
0168	690.0150	Sawing Asphalt	LF	30.000	30.000
0170	690.0250	Sawing Concrete	LF	70.000	70.000
0172	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	800.000	800.000
0174	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,800.000	1,800.000
0176	SPV.0035	Special 01. Backfill Slurry	CY	9.000	9.000
0178	SPV.0060	Special 01. Remove and Reinstall Video Detection Camera	EACH	3.000	3.000
0180	SPV.0060	Special 02. Cabinet Modification	EACH	5.000	5.000
0182	SPV.0060	Special 03. Transport and Install 4-Camera System	EACH	1.000	1.000
0184	SPV.0060	Special 04. Transport and Install Fisheye and 2-Camera System	EACH	1.000	1.000
0186	SPV.0060	Special 05. Cored Sign Post Holes 6-Inch	EACH	11.000	11.000
0188	SPV.0060	Special 06. Utility Line Opening	EACH	10.000	10.000
0190	SPV.0060	Special 07. Remove and Reinstall Trombone Arm	EACH	4.000	4.000
0192	SPV.0090	Special 01. Tracer Wire, 12 AWG	LF	120.000	120.000
0194	SPV.0090	Special 02. Remove and Reinstall Fiber Optic Cable	LF	120.000	120.000
0196	SPV.0090	Special 03. Furnish and Install Camera Cable	LF	1,450.000	1,450.000

3

REMOVING CONCRETE BASES

CATEGORY	LOCATION	NO.	204.0195	204.9060.S.02
			REMOVING CONCRETE BASES EACH	REMOVING (02. CONCRETE BASE BOLTS) EACH
0010	W. GOOD HOPE RD (CTH PP) & N. 99TH ST	SB1	1	
0010		SB4	1	
0010		SB9		1
0010		SB10	1	
0010		SB18		1
0010	W. GOOD HOPE RD (CTH PP) & N. 91ST ST	SB3		1
0010		SB4	1	
0010		SB7		1
0010		SB8	1	
0010		SB11	1	
0010		SB14		1
0010	W. GOOD HOPE RD (CTH PP) & N. 86TH ST	SB6		1
0010		SB13		1
0010		SB15	1	
0010	W. GOOD HOPE RD (CTH PP) & UIHLEIN SOCCER PARK	SB1	1	
0010		SB5	1	
0010		SB6	1	
0010		SB10	1	
0010	W. GOOD HOPE RD (CTH PP) & N. 60TH ST	SB2		1
0010		SB6		1
0010		SB7	1	
0010		SB9		1
0010		SB12		1
0010		SB13	1	
0010				
	TOTAL 0010		13	11

CONTAMINATED SOILS

CATEGORY	STATION	TO	STATION	LOCATION	205.0501.S
					EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL TON
0010	142+85	-	143+45	W. GOOD HOPE RD (CTH PP) & N. 60TH ST	5
0010					
SUBTOTAL					5
UNDISTRIBUTED					2
TOTAL 0010					7

3

GRUBBING

CATEGORY	LOCATION	201.0220	REMARKS
		GRUBBING ID	
0010	W. GOOD HOPE RD (CTH PP) & N. 99TH ST	20	TREE STUMP REMOVAL
0010			
TOTAL 0010		20	

EROSION CONTROL ITEMS

CATEGORY	LOCATION	625.0100	628.1905	628.1910	628.6510	628.7005	628.7010	628.7015	629.0210	631.0300	631.1000
		TOPSOIL SY	MOBILIZATIONS EROSION CONTROL EACH	MOBILIZATIONS EROSION CONTROL EACH	SOIL STABILIZER TYPE B ACRE	INLET PROTECTION TYPE A EACH	INLET PROTECTION TYPE B EACH	INLET PROTECTION TYPE C EACH	FERTILIZER TYPE B CWT	SOD WATER MGAL	SOD LAWN SY
0010	W. GOOD HOPE RD (CTH PP) & N. 99TH ST	65	-	-	0.013	-	10	-	0.05	2	65
0010	W. GOOD HOPE RD (CTH PP) & N. 91ST ST	173	-	-	0.036	-	11	-	0.11	5	173
0010	W. GOOD HOPE RD (CTH PP) & N. 86TH ST	116	-	-	0.024	-	14	-	0.08	3	116
0010	W. GOOD HOPE RD (CTH PP) & UIHLEIN SOCCER PARK	111	-	-	0.023	-	9	-	0.07	3	111
0010	W. GOOD HOPE RD (CTH PP) & N. 60TH ST	234	-	-	0.048	-	18	-	0.15	6	234
0010											
SUBTOTAL		699	0	0	0.14	0	62	0	0.46	19	699
UNDISTRIBUTED		51	2	2	0.06	3	6	3	0.04	6	51
TOTAL 0010		750	2	2	0.20	3	68	3	0.50	25	750

PROJECT NO: 2984-07-76

HWY: CTH PP

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET

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FILE NAME :

PLOT DATE :

PLOT BY :

PLOT SCALE : 1:1

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3

SIGN SUMMARY

CATEGORY	SIGN NO.	SIGN CODE	DESCRIPTION	INCHES	SIZE		634.0812		634.0814		637.2210		637.2215		638.2602		638.3000		SPV.0060.05		REMARKS
					X	INCHES	POSTS TUBULAR		POSTS TUBULAR		SIGNS TYPE II		SIGNS TYPE II		REMOVING		REMOVING		SPECIAL (.05		
							STEEL 2X2-INCH	STEEL 2X2-INCH	REFLECTIVE H	REFLECTIVE H	FOLDING	FOLDING	SIGNS TYPE II	SIGNS TYPE II	SUPPORTS	SUPPORTS	POST HOLES 6-	POST HOLES 6-			
				X 12-FT	X 14-FT	SF	SF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
0010	1.01	R1-1F	STOP (FOLDING)	30.00	X	30.00	1	--	--	--	5.18	1	--	--	1	--	--	1	--	--	
0010	1.02	R4-7	KEEP RIGHT	24.00	X	30.00	--	--	--	5.00	--	1	--	--	--	--	--	--	--	--	SAME POST AS 1.01
0010	1.03	R1-1F	STOP (FOLDING)	30.00	X	30.00	--	--	--	--	5.18	--	--	--	--	--	--	--	--	--	ON SIGNAL POLE
0010	1.04	R4-7	KEEP RIGHT	24.00	X	30.00	1	--	--	5.00	--	1	--	--	--	--	--	--	--	--	
0010	1.05	R1-1F	STOP (FOLDING)	30.00	X	30.00	--	--	--	--	5.18	1	--	--	--	--	--	--	--	--	SAME POST AS 1.04
0010	1.06	M1-94H	N 99TH ST	66.00	X	18.00	--	--	--	8.25	--	1	--	--	--	--	--	--	--	--	ON MASTARM
0010	1.07	M1-94H	N 99TH ST	66.00	X	18.00	--	--	--	8.25	--	1	--	--	--	--	--	--	--	--	ON MASTARM
0010	1.08	M1-94H	W GOOD HOPE RD	108.00	X	18.00	--	--	--	13.50	--	1	--	--	--	--	--	--	--	--	ON MASTARM
0010	1.09	M1-94H	W GOOD HOPE RD	108.00	X	18.00	--	--	--	13.50	--	1	--	--	--	--	--	--	--	--	ON MASTARM
0010	1.10	R1-1F	STOP (FOLDING)	30.00	X	30.00	--	--	--	--	5.18	--	--	--	--	--	--	--	--	--	ON SIGNAL POLE
0010	2.01	R1-1F	STOP (FOLDING)	30.00	X	30.00	1	--	--	--	5.18	1	--	--	1	--	--	1	--	--	
0010	2.02	R4-7	KEEP RIGHT	24.00	X	30.00	--	--	--	5.00	--	1	--	--	--	--	--	--	--	--	SAME POST AS 2.01
0010	2.03	R4-7	KEEP RIGHT	24.00	X	30.00	1	--	--	5.00	--	--	--	--	--	--	--	--	--	--	
0010	2.04	R1-1F	STOP (FOLDING)	30.00	X	30.00	--	--	--	--	5.18	1	--	--	--	--	--	--	--	--	SAME POST AS 2.03
0010	2.05	R1-1F	STOP (FOLDING)	30.00	X	30.00	--	--	--	--	5.18	--	--	--	--	--	--	--	--	--	ON SIGNAL POLE
0010	2.06	R4-7	KEEP RIGHT	24.00	X	30.00	1	--	--	5.00	--	--	--	--	--	--	--	--	--	--	
0010	2.07	R1-1F	STOP (FOLDING)	30.00	X	30.00	--	--	--	--	5.18	1	--	--	--	--	--	--	--	--	SAME POST AS 2.06
0010	2.08	M3-4	WEST	24.00	X	12.00	--	1	--	2.00	--	1	--	1	--	--	--	--	--	--	
0010	2.09	M1-5A	COUNTY PP	24.00	X	24.00	--	--	--	4.00	--	1	--	--	--	--	--	--	--	--	SAME POST AS 2.08
0010	2.10	R7-1D	NO PARKING <->	18.00	X	24.00	--	--	--	3.00	--	1	--	--	--	--	--	--	--	--	SAME POST AS 2.08
0010	2.11	M1-94H	N 91ST ST	66.00	X	18.00	--	--	--	8.25	--	1	--	--	--	--	--	--	--	--	ON MASTARM
0010	2.12	M1-94H	N 91ST ST	66.00	X	18.00	--	--	--	8.25	--	1	--	--	--	--	--	--	--	--	ON MASTARM
0010	2.13	M1-94H	W GOOD HOPE RD	108.00	X	18.00	--	--	--	13.50	--	1	--	--	--	--	--	--	--	--	ON MASTARM
0010	2.14	M1-94H	W GOOD HOPE RD	108.00	X	18.00	--	--	--	13.50	--	1	--	--	--	--	--	--	--	--	ON MASTARM
0010	2.15	M3-2	EAST	24.00	X	12.00	--	1	--	2.00	--	1	--	1	--	--	--	--	--	--	
0010	2.16	M1-5A	COUNTY PP	24.00	X	24.00	--	--	--	4.00	--	1	--	--	--	--	--	--	--	--	SAME POST AS 2.15
0010	2.17	R7-1D	NO PARKING <->	18.00	X	24.00	--	--	--	3.00	--	--	--	--	--	--	--	--	--	--	SAME POST AS 2.15
0010	3.01	R1-1F	STOP (FOLDING)	30.00	X	30.00	1	--	--	--	5.18	1	--	--	1	--	--	1	--	--	
0010	3.02	R4-7	KEEP RIGHT	24.00	X	30.00	--	--	--	5.00	--	1	--	--	--	--	--	--	--	--	SAME POST AS 3.01
0010	3.03	R4-7	KEEP RIGHT	24.00	X	30.00	1	--	--	5.00	--	1	--	--	--	--	--	--	--	--	
0010	3.04	R1-1F	STOP (FOLDING)	30.00	X	30.00	--	--	--	--	5.18	1	--	--	--	--	--	--	--	--	SAME POST AS 3.03
0010	3.05	M1-94H	N 86TH ST	66.00	X	18.00	--	--	--	8.25	--	1	--	--	--	--	--	--	--	--	ON MASTARM
0010	3.06	M1-94H	N 86TH ST	66.00	X	18.00	--	--	--	8.25	--	1	--	--	--	--	--	--	--	--	ON MASTARM
0010	3.07	M3-4	WEST	24.00	X	12.00	--	1	--	2.00	--	1	--	1	--	1	--	--	--	--	
0010	3.08	M1-5A	COUNTY PP	24.00	X	24.00	--	--	--	4.00	--	1	--	--	--	--	--	--	--	--	SAME POST AS 3.07
0010	3.09	R7-1D	NO PARKING <->	18.00	X	24.00	--	--	--	3.00	--	--	--	--	--	--	--	--	--	--	SAME POST AS 3.07
0010	3.10	M3-2	EAST	24.00	X	12.00	--	1	--	2.00	--	1	--	1	--	1	--	--	--	--	
0010	3.11	M1-5A	COUNTY PP	24.00	X	24.00	--	--	--	4.00	--	1	--	--	--	--	--	--	--	--	SAME POST AS 3.10
0010	3.12	R7-1D	NO PARKING <->	18.00	X	24.00	--	--	--	3.00	--	--	--	--	--	--	--	--	--	--	SAME POST AS 3.10
0010	3.13		NO PARKING <->				--	--	--	--	--	1	--	--	--	--	--	--	--	--	ON LIGHT POLE
0010	3.14	M1-94H	W GOOD HOPE RD	108.00	X	18.00	--	--	--	13.50	--	1	--	--	--	--	--	--	--	--	ON MASTARM
0010	3.15	M1-94H	W GOOD HOPE RD	108.00	X	18.00	--	--	--	13.50	--	1	--	--	--	--	--	--	--	--	ON MASTARM
0010	4.01	R4-7	KEEP RIGHT	24.00	X	30.00	1	--	--	5.00	--	1	--	--	--	--	--	--	--	--	
0010	4.02	R1-1F	STOP (FOLDING)	30.00	X	30.00	--	--	--	--	5.18	1	--	--	--	--	--	--	--	--	SAME POST AS 4.01
0010	4.03	R7-1D	NO PARKING <->	18.00	X	24.00	--	--	--	3.00	--	--	--	--	--	--	--	--	--	--	ON SIGNAL POLE
0010	4.04	R7-1D	NO PARKING <->	18.00	X	24.00	--	--	--	3.00	--	--	--	--	--	--	--	--	--	--	ON SIGNAL POLE
0010	5.01	R1-1F	STOP (FOLDING)	30.00	X	30.00	1	--	--	--	5.18	1	--	--	1	--	--	1	--	--	
0010	5.02	R4-7	KEEP RIGHT	24.00	X	30.00	--	--	--	5.00	--	--	--	--	--	--	--	--	--	--	SAME POST AS 5.01
0010	5.03	R4-7	KEEP RIGHT	24.00	X	30.00	1	--	--	5.00	--	1	--	--	--	--	--	--	--	--	
0010	5.04	R1-1F	STOP (FOLDING)	30.00	X	30.00	--	--	--	--	5.18	1	--	--	--	--	--	--	--	--	SAME POST AS 5.03
0010	5.05	R4-7	KEEP RIGHT	24.00	X	30.00	1	--	--	5.00	--	--	--	--	--	--	--	--	--	--	
0010	5.06	R1-1F	STOP (FOLDING)	30.00	X	30.00	--	--	--	--	5.18	1	--	--	--	--	--	--	--	--	SAME POST AS 5.05
0010	5.07	R4-7	KEEP RIGHT	24.00	X	30.00	1	--	--	5.00	--	--	--	--	--	--	--	--	--	--	
0010	5.08	R1-1F	STOP (FOLDING)	30.00	X	30.00	--	--	--	--	5.18	1	--	--	--	--	--	--	--	--	SAME POST AS 5.07
0010	5.09	R5-1	DO NOT ENTER	30.00	X	30.00	--	--	--	6.25	--	1	--	--	--	--	--	--	--	--	ON SIGNAL POLE
0010	5.10	R1-1F	STOP (FOLDING)	30.00	X	30.00	--	--	--	--	5.18	1	--	--	--	--	--	--	--	--	ON SIGNAL POLE
0010	5.11	M1-94H	N 60TH ST	66.00	X	18.00	--	--	--	8.25	--	1	--	--	--	--	--	--	--	--	ON MASTARM
0010	5.12	M1-94H	N 60TH ST	66.00	X	18.00	--	--	--	8.25	--	1	--	--	--	--	--	--	--	--	ON MASTARM
0010	5.13	M1-94H	W GOOD HOPE RD	108.00	X	18.00	--	--	--	13.50	--	1	--	--	--	--	--	--	--	--	ON MASTARM
0010	5.14	M1-94H	W GOOD HOPE RD	108.00	X	18.00	--	--	--	13.50	--	1	--	--	--	--	--	--	--	--	ON MASTARM
0010	5.15	R7-1D	NO PARKING <->	18.00	X	24.00	--	--	--	3.00	--	--	--	--	--	--	--	--	--	--	ON SIGNAL POLE
0010			TOTAL 0010				12	4	289.25	82.88	47	4	11								

PROJECT NO: 2984-07-76

HWY: CTH PP

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET

E

FILE NAME :

PLOT DATE :

PLOT BY :

PLOT SCALE : 1:1

TRAFFIC CONTROL

LOCATION	DURATION DAYS *	643.0300		643.0420		643.0705		643.0715		643.0800		643.0900		643.1050		643.5000	644.1601	644.1605	644.1440	
		TRAFFIC CONTROL DRUMS *EACH	DAY	TRAFFIC CONTROL BARRICADES TYPE III *EACH	DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A *EACH	DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C *EACH	DAY	TRAFFIC CONTROL ARROW BOARDS *EACH	DAY	TRAFFIC CONTROL SIGNS *EACH	DAY	TRAFFIC CONTROL SIGNS PCMS *EACH	DAY	TRAFFIC CONTROL EACH	TEMPORARY PEDESTRIAN CURB RAMP *EACH	DAY	TEMPORARY PEDESTRIAN DETECTABLE WARNING SF	TEMPORARY PEDESTRIAN SURFACE MATTING SF
<u>W. GOOD HOPE RD (CTH PP) & N. 99TH ST</u>	40	90	3,600	6	240	12	480	28	1,120	2	80	24	960	2	80	--	--	--	--	
UNDISTRIBUTED	10	10	100	1	10	2	20	8	80	--	--	4	40	--	--	--	--	--	--	
SUBTOTAL	50		3,700		250		500		1,200		80		1,000		80					
<u>W. GOOD HOPE RD (CTH PP) & N. 91ST ST</u>	60	160	9,600	14	840	28	1,680	56	3,360	4	240	46	2,760	4	240	--	--	--	325	
UNDISTRIBUTED	10	20	200	4	40	8	80	6	60	--	--	6	60	--	--	--	--	--	75	
SUBTOTAL	70		9,800		880		1,760		3,420		240		2,820		240				400	
<u>W. GOOD HOPE RD (CTH PP) & N. 86TH ST</u>	40	100	4,000	10	400	20	800	28	1,120	2	80	28	1,120	2	80	--	1	40	12	75
UNDISTRIBUTED	10	10	100	5	50	5	50	8	80	--	--	8	80	--	--	--	--	--	2	25
SUBTOTAL	50		4,100		450		850		1,200		80		1,200		80			40	14	100
<u>W. GOOD HOPE RD (CTH PP) & UIHLEIN SOCCER PARK</u>	40	90	3,600	7	280	14	560	28	1,120	2	80	23	920	2	80	--	--	--	--	
UNDISTRIBUTED	10	10	100	2	20	4	40	8	80	--	--	8	80	--	--	--	--	--	--	
SUBTOTAL	50		3,700		300		600		1,200		80		1,000		80					
<u>W. GOOD HOPE RD (CTH PP) & N. 60TH ST</u>	60	150	9,000	15	900	30	1,800	42	2,520	3	180	37	2,220	4	240	--	--	--	--	
UNDISTRIBUTED	10	10	100	5	50	5	50	7	70	--	--	7	70	--	--	1	--	--	--	
SUBTOTAL	70		9,100		950		1,850		2,590		180		2,290		240	1				
TOTAL			30,400		2,830		5,560		9,610		660		8,310		720	1		40	14	500
CATEGORY 0010			DAY		DAY		DAY		DAY		DAY		DAY		DAY	EACH		DAY	SF	SF
* FOR INFORMATIONAL USE ONLY																				

TEMPORARY MARKING

CATEGORY	LOCATION	643.3150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH LF	643.3550 TEMPORARY MARKING ARROW REMOVABLE TAPE EACH
0010	W. GOOD HOPE RD (CTH PP) & N. 91ST ST	150	2
0010	W. GOOD HOPE RD (CTH PP) & N. 60TH ST	150	2
0010	UNDISTRIBUTED	50	
	TOTAL 0010	350	4

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
0010	W. GOOD HOPE RD (CTH PP) & N. 99TH ST	PB1	SB1		10	
0010		PB7	SB9		20	
0010		CV1	PB1	50		
0010	W. GOOD HOPE RD (CTH PP) & N. 91ST ST	PB4	SB3		10	
0010		PB7	SB6		10	
0010		PB10	SB9		10	
0010		PB13	SB12		15	
0010		CV1	PB1	10		
0010	W. GOOD HOPE RD (CTH PP) & N. 86TH ST	PB7	SB6		10	
0010		PB1	SB14		20	
0010	W. GOOD HOPE RD (CTH PP) & UIHLEIN SOCCER PARK	PB1	SB1		15	
0010		PB5	SB5		25	
0010	W. GOOD HOPE RD (CTH PP) & N. 60TH ST	PB4	SB3		10	
0010		PB8	SB6		10	
0010		PB12	SB10		20	
0010		PB14	SB11		20	
0010	UNDISTRIBUTED			40	95	300
	TOTAL 0010			100	300	300

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRING

(PUSH BUTTON**)

			*	*	*	*	*	
			655.0210	655.0230	655.0240	655.0260	655.0515	
			CABLE TRAFFIC	CABLE TRAFFIC	CABLE TRAFFIC	CABLE TRAFFIC	ELECTRICAL	
			SIGNAL 3-14	SIGNAL 5-14	SIGNAL 7-14	SIGNAL 12-14	WIRE TRAFFIC	
			AWG	AWG	AWG	AWG	SIGNALS 10	
LOCATION	THROUGH	TO	LF	LF	LF	LF	LF	
W. GOOD HOPE RD (CTH PP) & N. 99TH ST								
CB1	PB1	SB1	--	--	--	20	10	
CB1	PB1, PB2	SB3	--	--	--	55	--	
CB1	PB1, PB2, PB3, PB4	SB6	--	--	--	155	--	
CB1	PB1, PB2, PB3, PB4, PB5, PB6, PB7	SB8	--	--	--	315	20	
CB1	PB1, PB12, PB11, PB10	SB14	--	--	--	165	--	
BASE TO SIGNAL HEAD CABLING			10	35	415	--	--	
UNDISTRIBUTED			10	15	85	190	10	
W. GOOD HOPE RD (CTH PP) & N. 99TH ST			SUBTOTAL:	20	50	500	900	40
			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	THROUGH	TO	LF	LF	LF	LF	LF	LF	
W. GOOD HOPE RD (CTH PP) & N. 91ST ST									
CB1	PB2	SB1	--	--	--	30	--	--	
CB1	PB2, PB3, PB4	SB3	--	--	--	140	--	10	
CB1	PB2, PB3, PB4, PB5	SB5	--	--	--	--	185	--	
CB1	PB2, PB3, PB4, PB5, PB6, PB7	SB6	--	--	--	--	320	15	
CB1	PB2, PB3, PB4, PB5, PB6, PB7, PB8	SB7	--	--	--	365	--	--	
CB1	PB1, PB13, PB12, PB11, PB10	SB9	--	--	--	230	--	10	
CB1	PB1, PB13, PB12, PB11	SB11	--	--	--	--	195	--	
CB1	PB1, PB13	SB12	--	--	--	75	--	15	
BASE TO SIGNAL HEAD CABLING			5	15	705	--	--	--	
UNDISTRIBUTED			5	15	95	160	100	10	
W. GOOD HOPE RD (CTH PP) & N. 91ST ST			SUBTOTAL:	10	30	800	1,000	800	60
			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
W. GOOD HOPE RD (CTH PP) & N. 86TH ST							
CB1	PB1, PB2, PB3, PB4	SB4	--	--	--	135	--
CB1	PB1, PB2, PB3, PB4, PB5, PB6, PB7	SB6	--	--	--	295	10
CB1	PB1, PB2, PB3, PB4, PB5, PB6, PB7	SB7	--	--	295	--	--
CB1	PB1, PB13, PB12, PB11, PB10	SB11	--	--	--	210	--
CB1	PB1, PB13	SB13	--	--	--	65	--
CB1	PB1	SB14	--	--	--	50	20
BASE TO SIGNAL HEAD CABLING			10	30	415	--	--
UNDISTRIBUTED			10	10	190	145	10
W. GOOD HOPE RD (CTH PP) & N. 86TH ST			SUBTOTAL:	20	40	900	40
			CATEGORY	0010	0010	0010	0010

*ADDITIONAL QUANTITIES ELSEWHERE

**FOR INFORMATION ONLY

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRING

LOCATION FROM	THROUGH	TO	*	*	*	*
			655.0230	655.0240	655.0260	655.0515
			CABLE TRAFFIC SIGNAL 5-14	CABLE TRAFFIC SIGNAL 7-14	CABLE TRAFFIC SIGNAL 12-14	ELECTRICAL WIRE TRAFFIC SIGNALS 10
			AWG	AWG	AWG	AWG
			LF	LF	LF	LF
W. GOOD HOPE RD (CTH PP) & UIHLEIN SOCCER PARK						
CB1	PB1	SB1	--	--	30	15
CB1	PB1, PB2, PB3	SB3	--	--	130	--
CB1	PB1, PB2, PB3	SB4	--	--	130	--
CB1	PB1, PB2, PB3, PB4, PB5	SB5	--	--	280	25
BASE TO SIGNAL HEAD CABLING			30	335	--	--
UNDISTRIBUTED			10	65	130	10
W. GOOD HOPE RD (CTH PP) & UIHLEIN SOCCER PARK			SUBTOTAL:	40	400	700
			CATEGORY	0010	0010	0010

*ADDITIONAL QUANTITIES ELSEWHERE

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	THROUGH	TO	LF	LF	LF	LF	LF	LF
W. GOOD HOPE RD (CTH PP) & N. 60TH ST								
CB1	PB1	SB1	--	--	--	--	30	--
CB1	PB1, PB2, PB3, PB4	SB3	--	--	--	135	--	10
CB1	PB1, PB2, PB3, PB4, PB5	SB4	--	--	--	170	--	--
CB1	PB1, PB2, PB3, PB4, PB5, PB6, PB7, PB8	SB6	--	--	--	330	--	10
CB1	PB1, PB14, PB13, PB12, PB11	SB8	--	--	--	--	220	--
CB1	PB1, PB14, PB13, PB12	SB10	--	--	--	155	--	20
CB1	PB1, PB14	SB11	--	--	--	65	--	20
BASE TO SIGNAL HEAD CABLING			15	40	650	--	--	--
UNDISTRIBUTED			15	20	150	145	150	10
W. GOOD HOPE RD (CTH PP) & N. 60TH ST			SUBTOTAL:	60	800	1,000	400	70
			CATEGORY	0010	0010	0010	0010	0010

*ADDITIONAL QUANTITIES ELSEWHERE
 **FOR INFORMATION ONLY

CONCRETE SIDEWALK ITEMS

		204.0155	602.0410	602.0420	602.0515	650.9000	650.9500.01	690.0150	690.0250
		REMOVING	CONCRETE	CONCRETE	CURB RAMP	CONSTRUCTION	CONSTRUCTION	SAWING	SAWING
		CONCRETE	SIDEWALK 5-	SIDEWALK 7-	DETECTABLE	STAKING CURB	SIDEWALK	ASPHALT	CONCRETE
		SIDEWALK	INCH	INCH	NATURAL	RAMPS	(PROJECT) (01.	LF	LF
		SY	SF	SF	PATINA	EACH	2984-07-76)		
CATEGORY	LOCATION								
0010	W. GOOD HOPE RD (CTH PP) & N. 91ST ST	28	120	130	12	1	-	25	45
0010	W. GOOD HOPE RD (CTH PP) & N. 86TH ST	9	80	-	-	-	-	-	15
0010									
SUBTOTAL		37	200	130	12	1	-	25	60
UNDISTRIBUTED		8	50	70	2		1	5	10
TOTAL 0010		45	250	200	14	1	1	30	70

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

CATEGORY	LOCATION	NO.	657.0100	657.0425	657.0430	658.0173	658.0174	658.0416	658.0500
			PEDESTAL BASES 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	PEDESTRIAN SIGNAL FACE 16- INCH EACH	PEDESTRIAN PUSH BUTTONS EACH
0010	W. GOOD HOPE RD (CTH PP) & N. 99TH ST	SB1				2		1	
0010		SB3	1	1		2		1	1
0010		SB6					1		
0010		SB7					1		
0010		SB8				2		1	
0010		SB14					1		
0010		SB15					1		
0010	W. GOOD HOPE RD (CTH PP) & N. 91ST ST	SB1					1		
0010		SB3				2	1		
0010		SB5					1		
0010		SB6				3	1	1	1
0010		SB7					1		
0010		SB8	1	1			1		1
0010		SB9				2			
0010		SB11					1		
0010		SB12				3	1		
0010		SB13	1		1			2	1
0010	W. GOOD HOPE RD (CTH PP) & N. 86TH ST	SB4					1		
0010		SB5					1		
0010		SB6				3			
0010		SB7	1		1			1	1
0010		SB11					1		
0010		SB12					1		
0010		SB13	1		1			1	1
0010	SB14				3				
0010	W. GOOD HOPE RD (CTH PP) & UIHLEIN SOCCER PARK	SB1				3		1	
0010		SB3						1	
0010		SB4					1		
0010		SB5				3	1		
0010	W. GOOD HOPE RD (CTH PP) & N. 60TH ST	SB1					1	1	
0010		SB2	1		1			1	1
0010		SB3				2	1		
0010		SB4					1		
0010		SB5					1		
0010		SB6				3		1	
0010		SB7					1		
0010		SB8	1	1		1	1	2	2
0010		SB9					1		
0010		SB10				2	1		
0010		SB11				3			
		TOTAL 0010	7	3	4	39	26	15	9

3

3

CONCRETE BASES, POLES, AND MAST ARMS

CATEGORY	LOCATION	NO.	654.0113	654.0120	657.0347	657.0352	657.0355	657.0360	657.0541	657.0546	657.0555	657.0815
			CONCRETE BASES TYPE 13 EACH	CONCRETE BASES TYPE 10-SPECIAL EACH	POLES TYPE 9- SPECIAL EACH	POLES TYPE 10- SPECIAL EACH	POLES TYPE 12 EACH	POLES TYPE 13 EACH	MONOTUBE ARMS 40-FT- SPECIAL EACH	MONOTUBE ARMS 45-FT- SPECIAL EACH	MONOTUBE ARMS 55-FT EACH	LUMINAIRE ARMS STEEL 15- FT EACH
0010	W. GOOD HOPE RD (CTH PP) & N. 99TH ST	SB1		1		1				1		1
0010		SB8		1		1				1		1
0010	W. GOOD HOPE RD (CTH PP) & N. 91ST ST	SB3		1		1				1		1
0010		SB6	1					1			1	1
0010		SB9		1		1			1			1
0010		SB12	1					1			1	1
0010	W. GOOD HOPE RD (CTH PP) & N. 86TH ST	SB6		1		1				1		1
0010		SB14	1					1			1	1
0010	W. GOOD HOPE RD (CTH PP) & UIHLEIN SOCCER PARK	SB1		1	1					1		
0010		SB5	1				1				1	
0010	W. GOOD HOPE RD (CTH PP) & N. 60TH ST	SB3		1	1					1		
0010		SB6		1	1					1		
0010		SB10		1		1				1		1
0010		SB11		1	1					1		
0010	TOTAL 0010		<u>4</u>	<u>10</u>	<u>4</u>	<u>6</u>	<u>1</u>	<u>3</u>	<u>1</u>	<u>9</u>	<u>4</u>	<u>9</u>

FIBER, CONDUIT ENTRANCES, AND CAMERA CABLE

CATEGORY	LOCATION	652.0700.S	678.0400	SPV.0090.01	SPV.0090.02	SPV.0090.03
		INSTALL CONDUIT INTO EXISTING ITEM EACH	FIBER OPTIC TERMINATION EACH	SPECIAL (01. TRACER WIRE, 12 AWG) LF	SPECIAL (02. REMOVE AND REINSTALL FIBER OPTIC CABLE) LF	SPECIAL (FURNISH AND INSTALL CAMERA CABLE) LF
0010	W. GOOD HOPE RD (CTH PP) & N. 99TH ST	4	4	60	60	400
0010	W. GOOD HOPE RD (CTH PP) & N. 91ST ST	6	4	60	60	
0010	W. GOOD HOPE RD (CTH PP) & N. 86TH ST	2				350
0010	W. GOOD HOPE RD (CTH PP) & UIHLEIN SOCCER PAR	2				700
0010	W. GOOD HOPE RD (CTH PP) & N. 60TH ST	4				
0010	TOTAL 0010	<u>18</u>	<u>8</u>	<u>120</u>	<u>120</u>	<u>1,450</u>

3

3

TRAFFIC SIGNAL ITEMS

CATEGORY	LOCATION	204.9060.S.01 REMOVING (ITEM DESCRIPTION) (01. TRAFFIC SIGNAL EQUIPMENT AT INTERSECTION) EACH	658.5070.01 SIGNAL MOUNTING HARDWARE (LOCATION) (01. CTH PP & 99TH ST) EACH	658.5070.02 SIGNAL MOUNTING HARDWARE (LOCATION) (02. CTH PP & 91ST ST) EACH	658.5070.03 SIGNAL MOUNTING HARDWARE (LOCATION) (03. CTH PP & 86TH ST) EACH	658.5070.04 SIGNAL MOUNTING HARDWARE (LOCATION) (04. CTH PP & UIHLEIN) EACH	658.5070.05 SIGNAL MOUNTING HARDWARE (LOCATION) (05. CTH PP & 60TH ST) EACH	661.0201.01 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) (01. CTH PP & 99TH ST) EACH	661.0201.02 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) (02. CTH PP & 91ST ST) EACH	661.0201.03 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) (03. CTH PP & 86TH ST) EACH	661.0201.04 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) (04. CTH PP & UIHLEIN) EACH	661.0201.05 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) (05. CTH PP & 60TH ST) EACH	SPV.0060.01 SPECIAL (REMOVE AND REINSTALL VIDEO DETECTION CAMERA) EACH	SPV.0060.02 SPECIAL (CABINET MODIFICATION) EACH	SPV.0060.03 SPECIAL (TRANSPORT AND INSTALL 4- CAMERA SYSTEM) EACH	SPV.0060.04 SPECIAL (TRANSPORT AND INSTALL FISHEYE AND 2- CAMERA SYSTEM) EACH	SPV.0060.07 SPECIAL (REMOVE AND REINSTALL TROMBONE ARM) EACH	
0010	W. GOOD HOPE RD (CTH PP) & N. 99TH ST	1	1					1					1	1				2
0010	W. GOOD HOPE RD (CTH PP) & N. 91ST ST	1		1					1					1		1		
0010	W. GOOD HOPE RD (CTH PP) & N. 86TH ST	1			1					1			1	1				2
0010	W. GOOD HOPE RD (CTH PP) & UIHLEIN SOCCER PARK	1				1					1		1	1				
0010	W. GOOD HOPE RD (CTH PP) & N. 60TH ST	1					1					1	1	1			1	
0010																		
	TOTAL 0010	5	1	1	1	1	1	1	1	1	1	1	3	5	1	1	1	4

MISCELLANEOUS ITEMS

CATEGORY	LOCATION	213.0100.01 FINISHING ROADWAY (01. 2984-07-76) EACH	619.1000 MOBILIZATION EACH	642.5001 FIELD OFFICE TYPE B EACH	650.8501.01 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) (01. 2984-07-76) EACH	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 2984-07-76) EACH	SPV.0035.01 SPECIAL (BACKFILL SLURRY) CY	SPV.0060.06 SPECIAL (UTILITY LINE OPENING (ULO)) EACH
0010	UNDISTRIBUTED	1	1	1	1	1	9	10
	TOTAL 0010	1	1	1	1	1	9	10

NOTES:
THIS EXHIBIT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. REFER TO THE CONVEYANCE DOCUMENT FOR PARCEL RELATED DETAILS.

PURPOSE FOR HIGHWAY EASEMENT IS FOR HIGHWAY PURPOSES, UNLESS OTHERWISE NOTED.



R/W PROJECT NUMBER: 2984-07-06 EXHIBIT NUMBER: 1
HIGHWAY EASEMENT ACQUISITION EXHIBIT
CITY OF MILWAUKEE, WEST GOOD HOPE ROAD
99TH ST TO 60TH ST
MILWAUKEE COUNTY
PART OF THE SE 1/4 OF THE SE 1/4 OF SECTION 15, T8N, R21E, CITY OF MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN.

LOT 1
CSM 8240
DOC. 9869898
PL

LOT 4
CSM 8240
DOC. 9869898

SE-SE

NORTH 60TH STREET

SECTION LINE

12' EASEMENT PER
DOC. 5551880 R. 1457, I. 335

8' EASEMENT PER
DOC. 4732215 R. 698, I. 372

WISCONSIN CLUB
HOLDINGS, LLC.

1

50

TRANSFORMER

8' EASEMENT PER
DOC. 4732215 R. 698, I. 372

CHAIN LINK FENCE

TRANSFORMER

TRANSFORMER

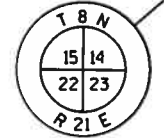
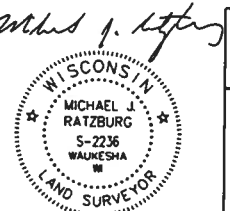
WEST GOOD HOPE ROAD

CTH PP

SECTION LINE

50 WE ENERGIES - ELECTRIC
NON DESCRIPT EASEMENT
DOC. 4185614 R. 252, I. 1918 PARCEL 1
NON DESCRIPT EASEMENT
DOC. 5551880 R. 1457, I. 335 PARCEL 1

51 AT&T WISCONSIN
NON DESCRIPT EASEMENT
DOC. 4185614 R. 252, I. 1918 PARCEL 1



SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE COUNTY.

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	HE S.F.
1	WISCONSIN CLUB HOLDINGS, LLC.	HE	200

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
50	WE ENERGIES - ELECTRIC	RELEASE OF RIGHTS
51	AT&T WISCONSIN	RELEASE OF RIGHTS

THIS MAP IS APPROVED FOR THE COUNTY OF MILWAUKEE

SIGNATURE: *Donna Brown-Martin* DATE: 5-10-22

PRINT NAME: Donna Brown-Martin

FILE NAME: EXHIBIT 1.DWG

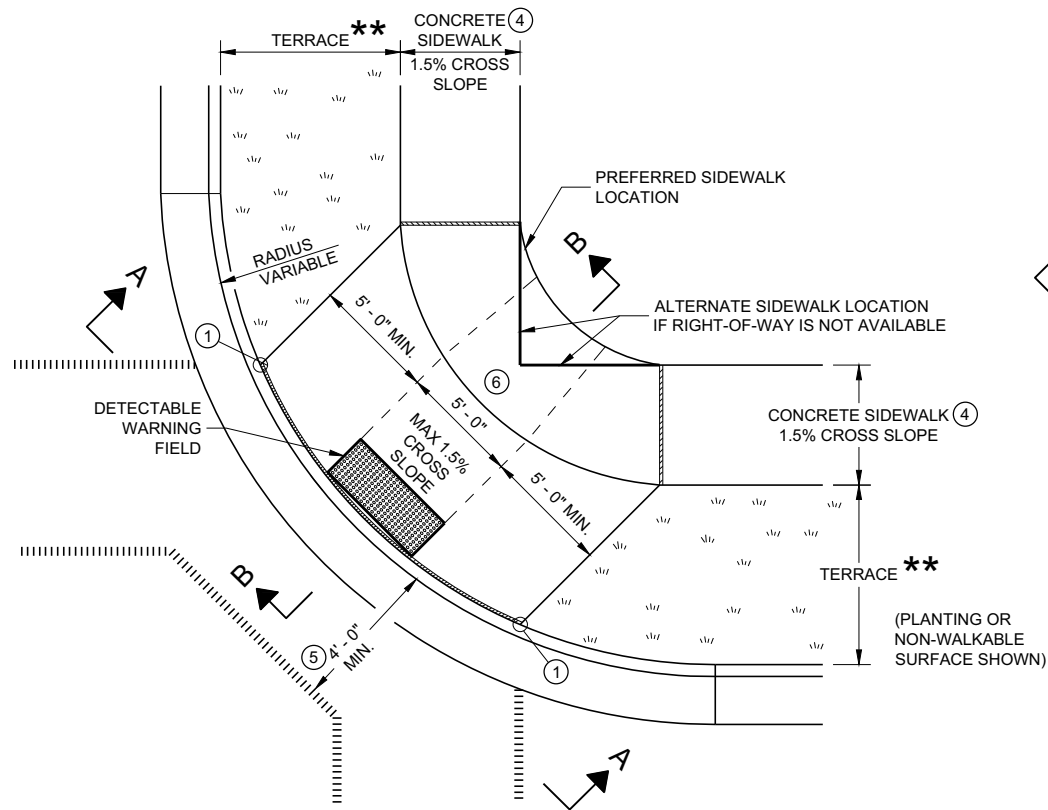
PLOT DATE: 5/10/2022 10:04 AM

R/W PROJECT: 2984-07-06 -1

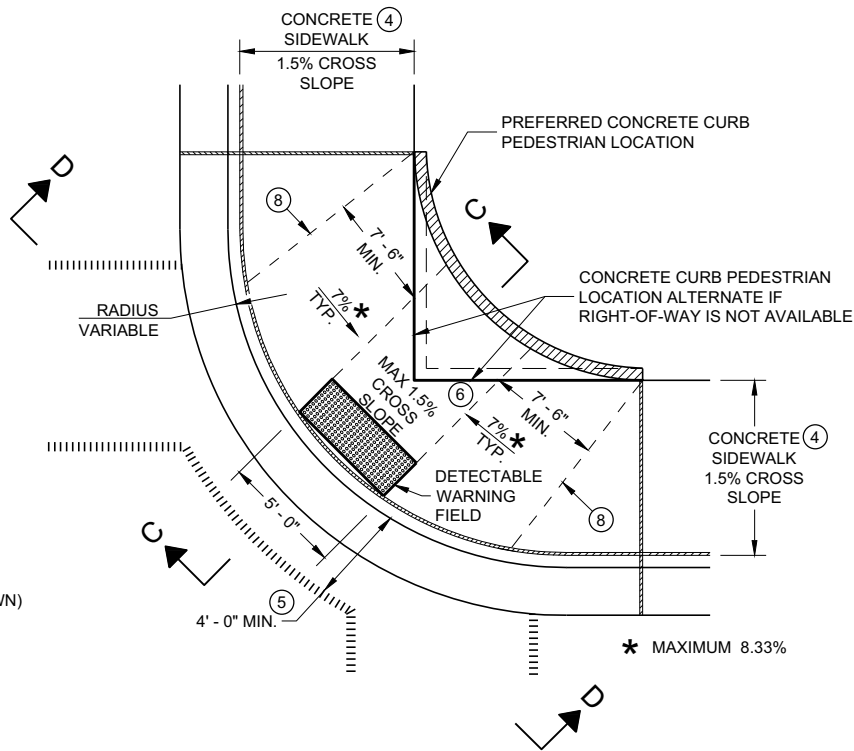
4

Standard Detail Drawing List

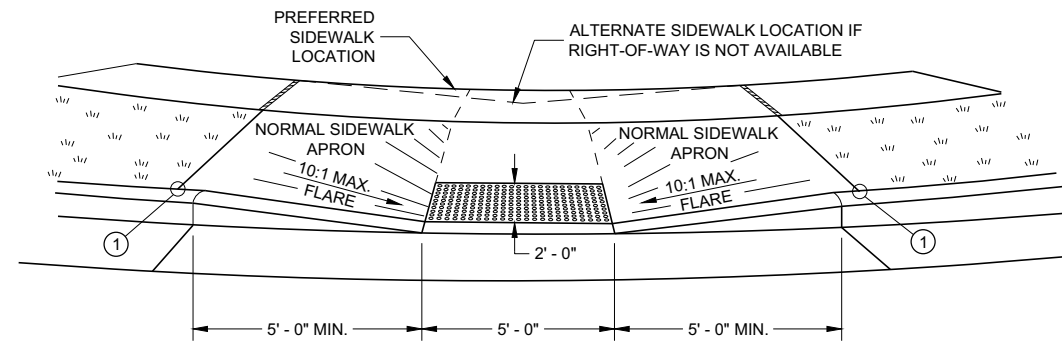
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-10	CONDUIT
09C03-04	TRANSFORMER/PEDESTAL BASES
09C12-09A	CONCRETE BASE TYPE 13
09C12-09B	CONCRETE BASE TYPE 13
09C15-01	CONCRETE BASE TYPE 10 SPECIAL
09E01-15A	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
09E01-15B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-15C	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4
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
09E08-09D	TYPE 9 SPECIAL POLE 45' MONOTUBE ARM
09E08-09G	TYPE 10 SPECIAL POLE 40' 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
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-22A	LONGITUDINAL MARKING (MAINLINE)
15C08-22D	PAVEMENT MARKING (TURN LANES)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D20-06A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D20-06B	TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D20-06C	TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D22-05	TRAFFIC CONTROL, TWO LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D23-07A	TRAFFIC CONTROL, INTERSECTION WITHIN TWO LANE CLOSURE
15D23-07B	TRAFFIC CONTROL, INTERSECTION WITHIN TWO LANE CLOSURE
15D30-07A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-07C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07D	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07E	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07F	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07G	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07H	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07I	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-07J	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION



PLAN VIEW
CURB RAMP TYPE 1
(CENTER OF CORNER RADIUS)

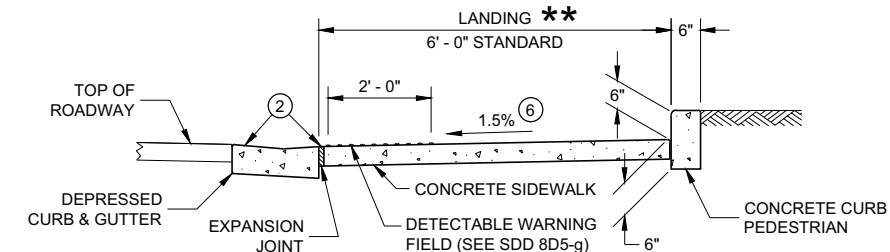


PLAN VIEW
CURB RAMP TYPE 1 - A
(NO TERRACE)

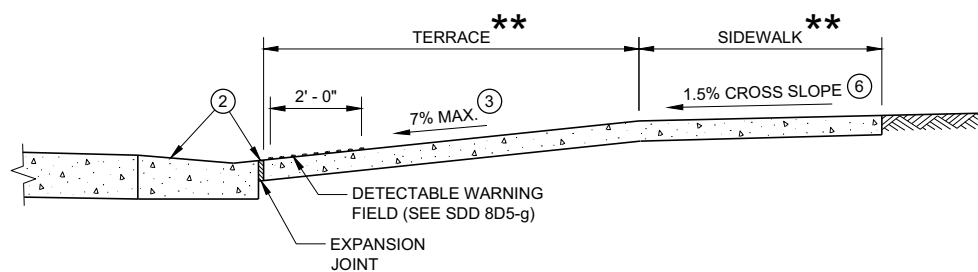


VIEW A - A FOR TYPE 1

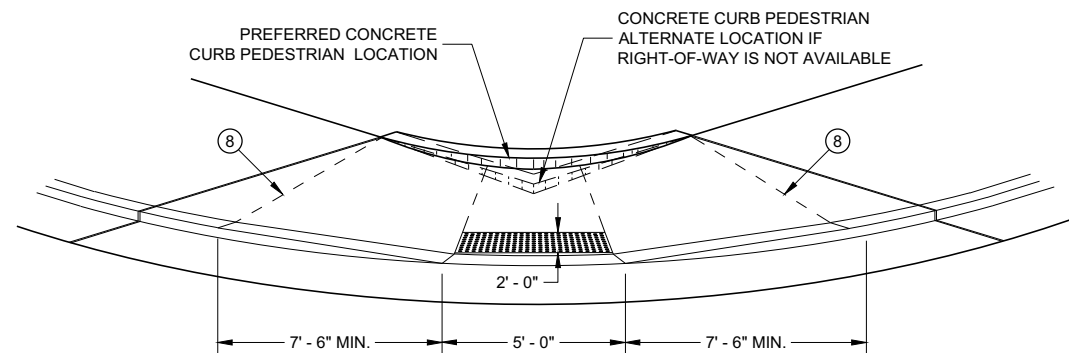
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



SECTION C - C FOR TYPE 1 - A



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.
TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

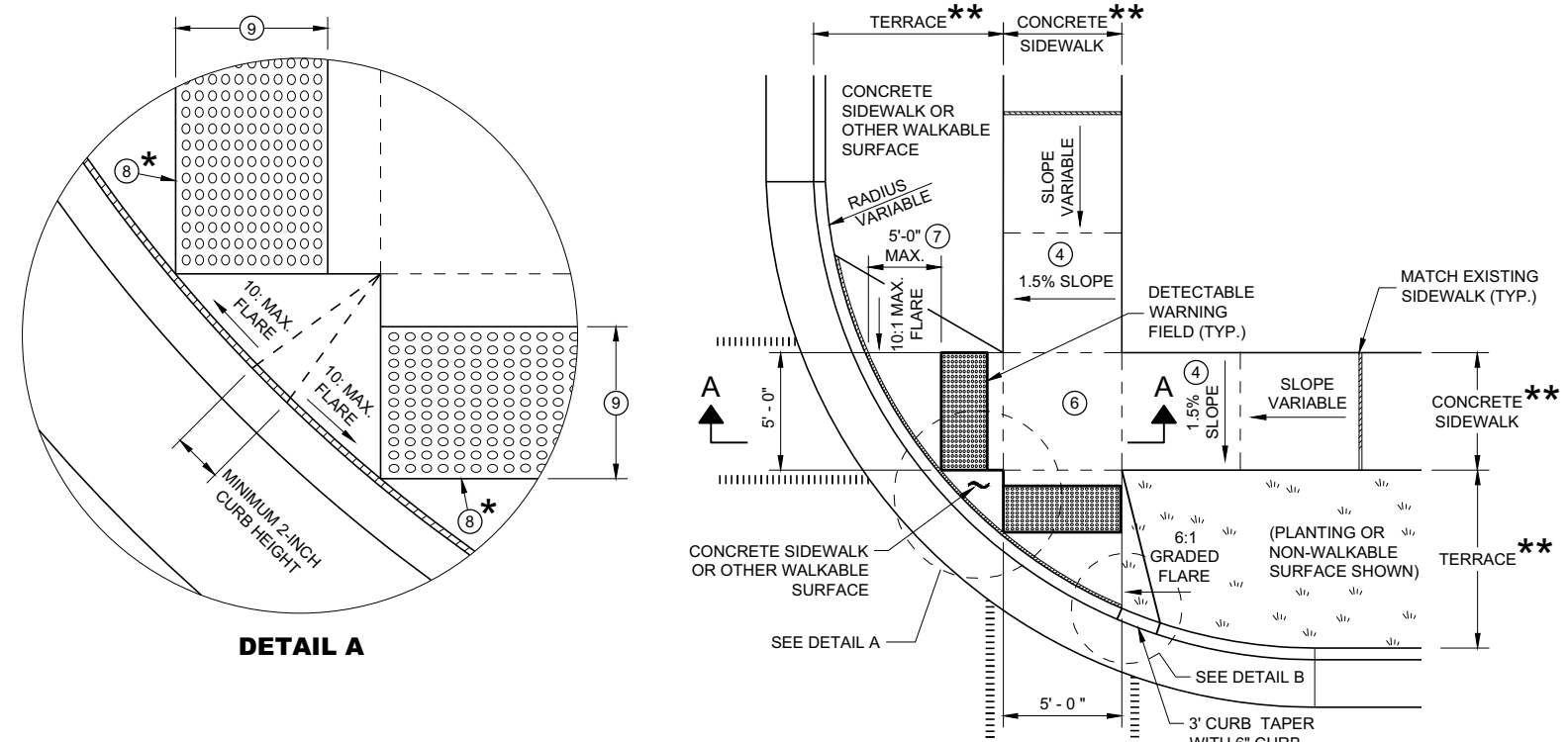
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||||| PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 1 AND 1-A

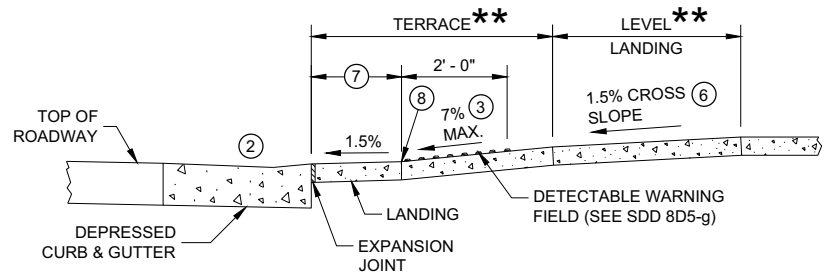
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW CURB RAMP TYPE 2 (CENTER OF CORNER RADIUS)

GENERAL NOTES

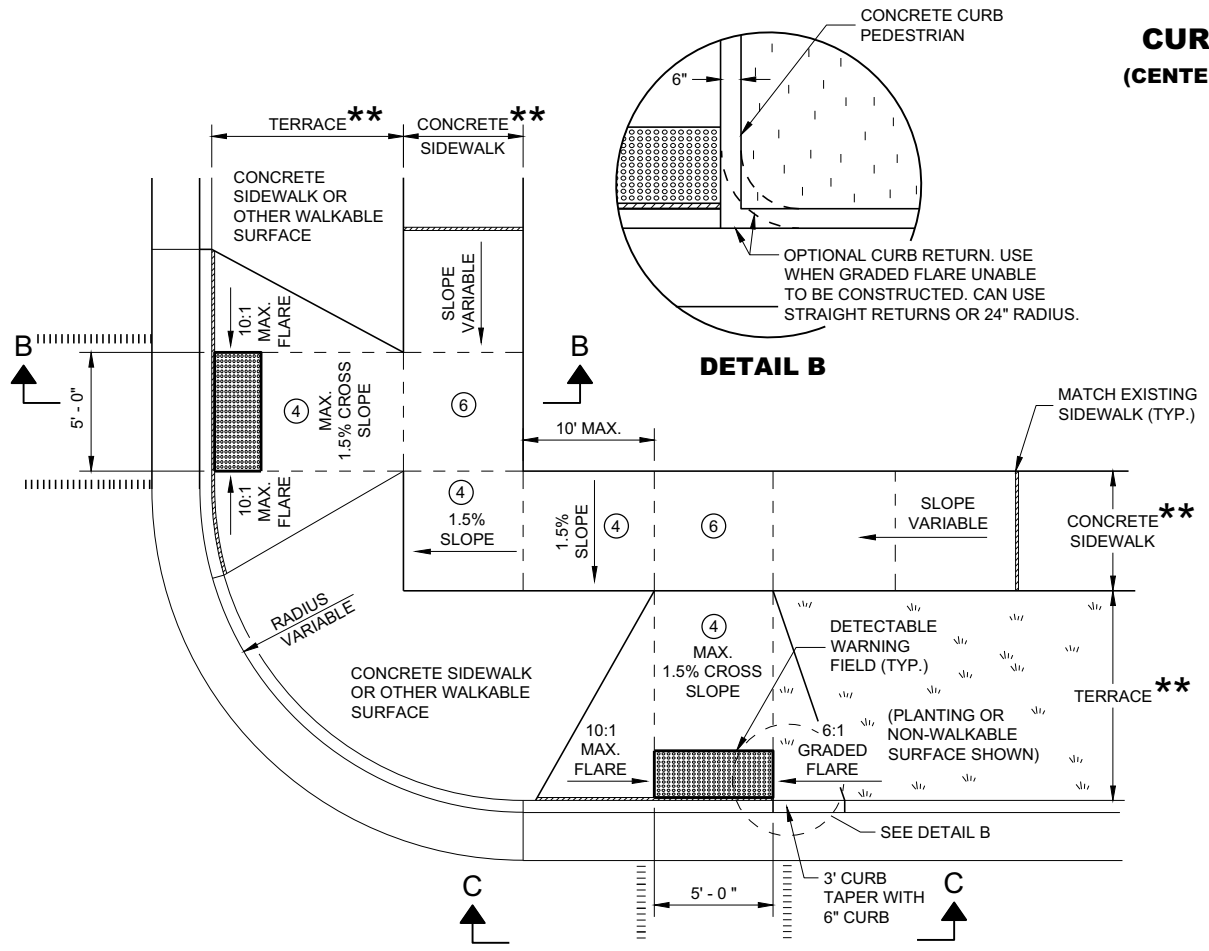
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
 - AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
 - ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
 - PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
 - WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
 - PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
 - WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



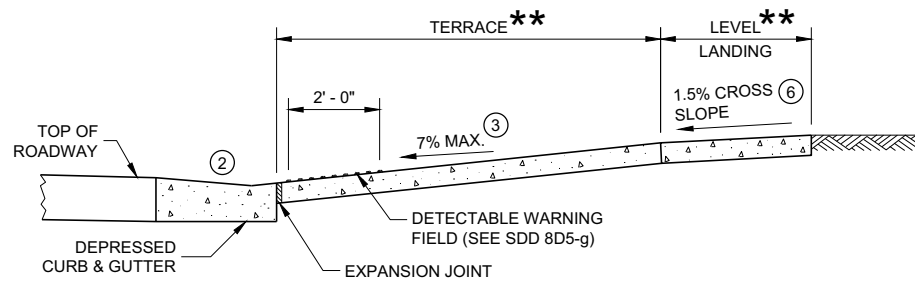
SECTION A - A FOR TYPE 2

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

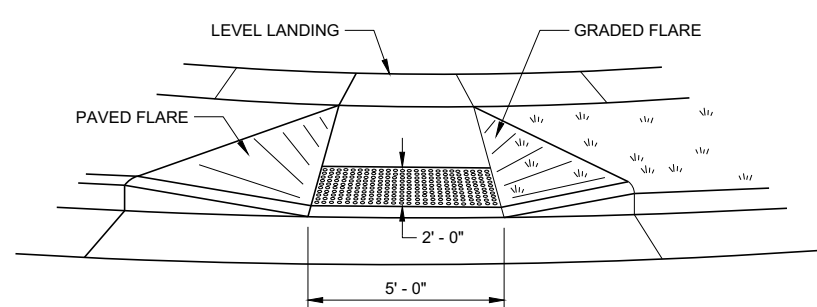
** WIDTH SHOWN ELSEWHERE IN THE PLANS



PLAN VIEW CURB RAMP TYPE 3 (OUTSIDE OF CROSSWALK AREA)



SECTION B - B FOR TYPE 3



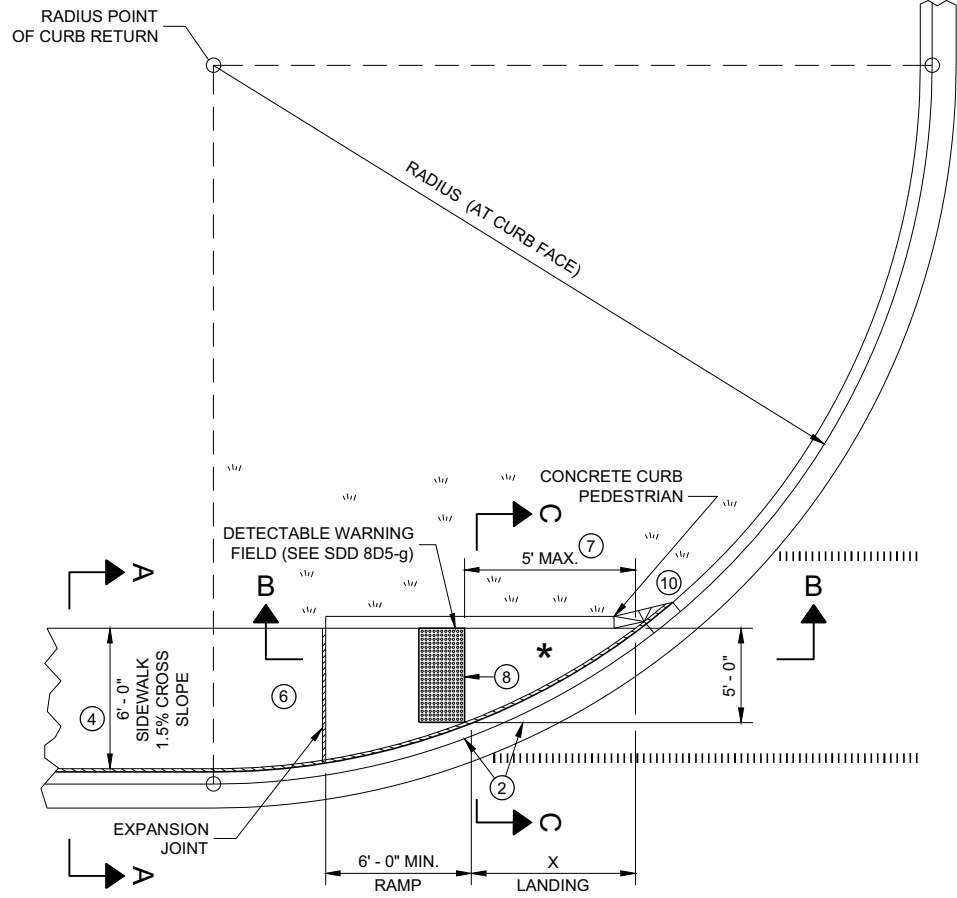
VIEW C - C FOR TYPE 3

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 2 AND 3

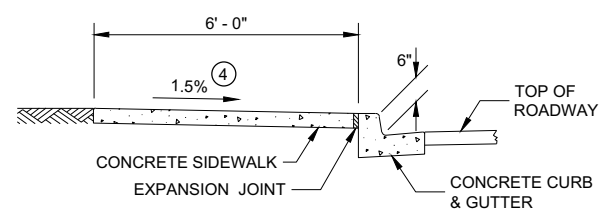
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**PLAN VIEW
CURB RAMP TYPE 4A**

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"
15 FEET	6' - 5 1/2"

INTERMEDIATE RADII CAN BE INTERPOLATED



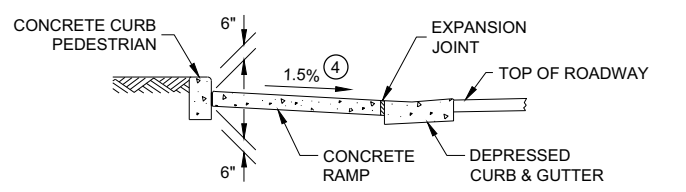
SECTION A - A FOR TYPE 4A

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

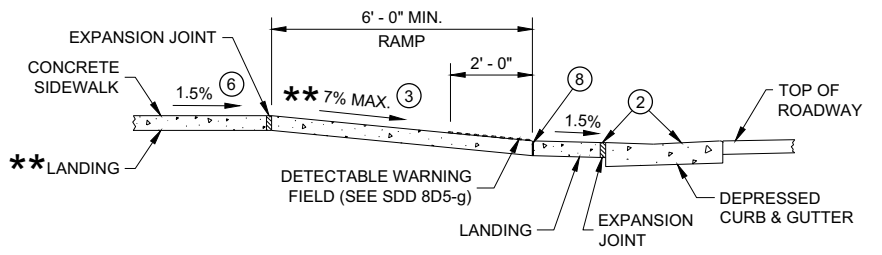
LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- - - CONTRACTION JOINT SIDEWALK
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)



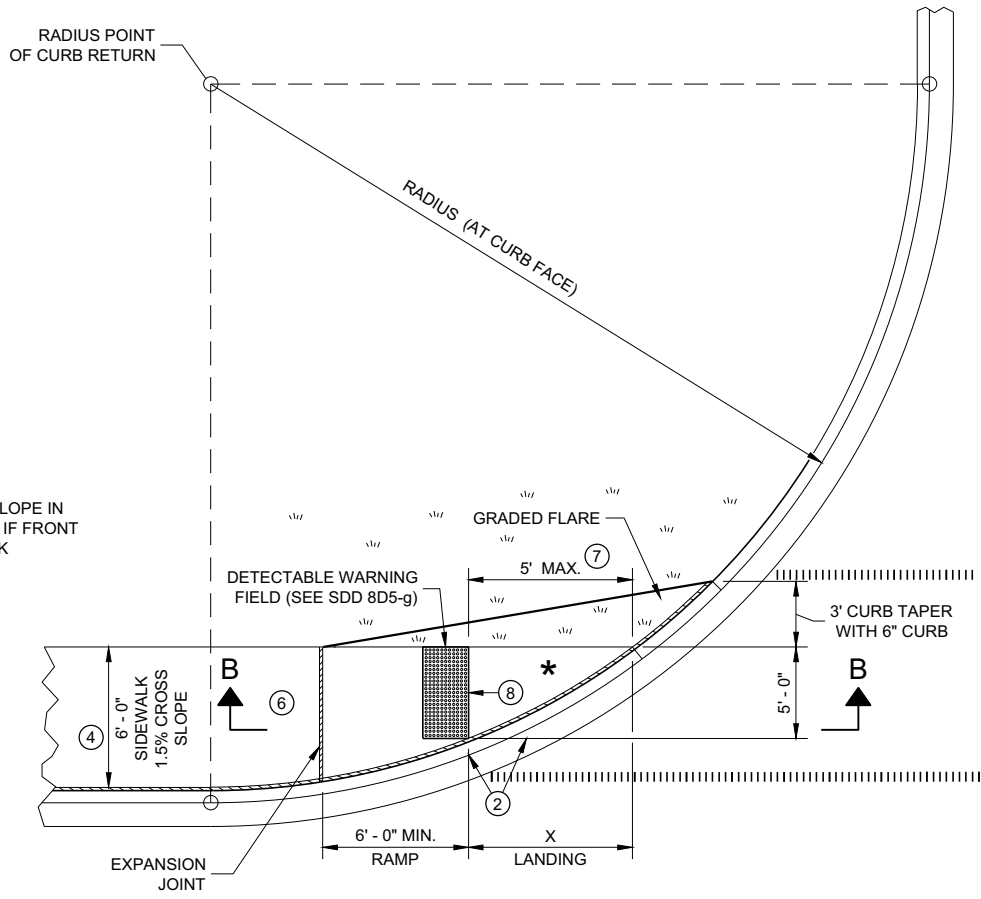
SECTION C - C FOR TYPE 4A

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

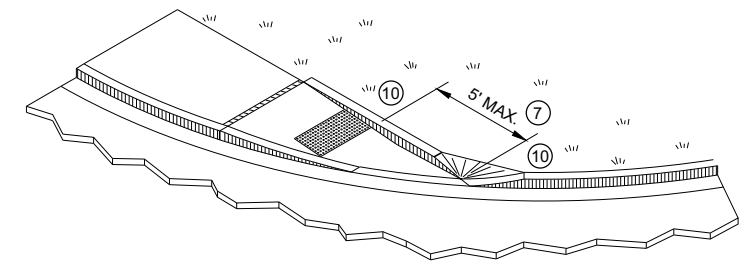


**SECTION B - B FOR
TYPE 4A AND TYPE 4A1**

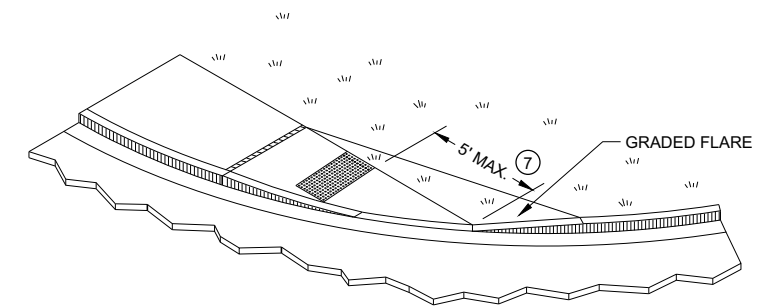
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED



**PLAN VIEW
CURB RAMP TYPE 4A1**



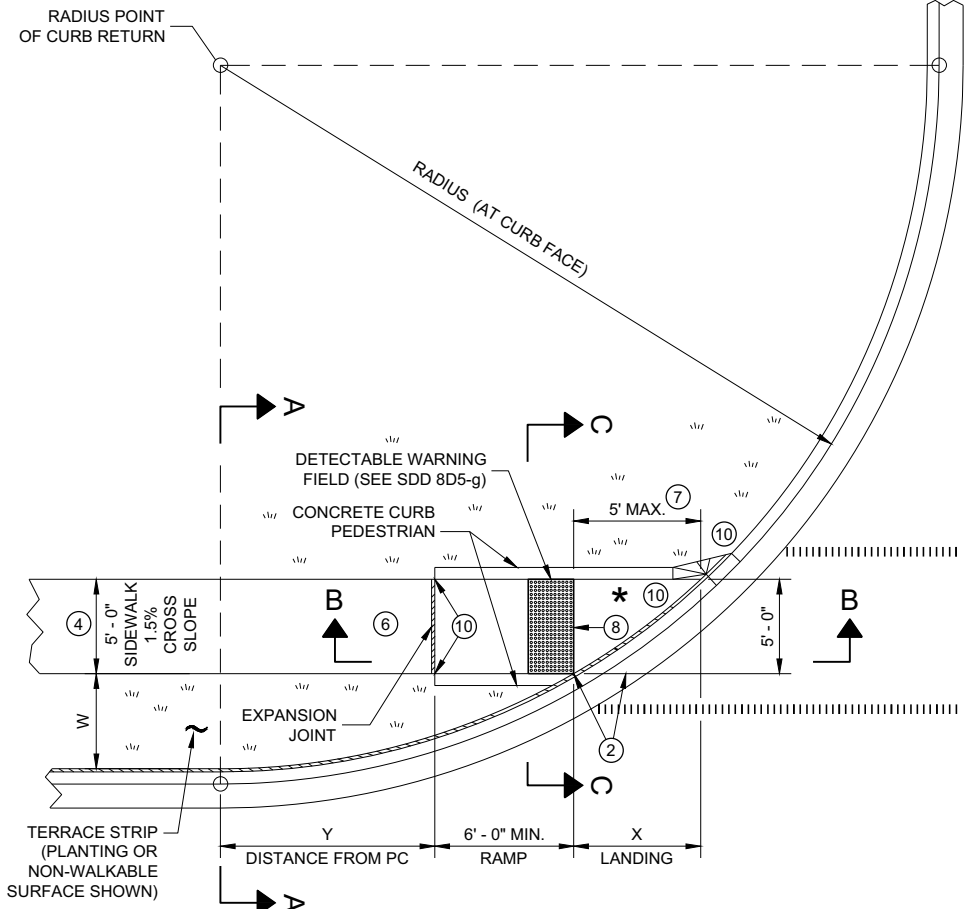
ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

**CURB RAMPS
TYPE 4A AND 4A1**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

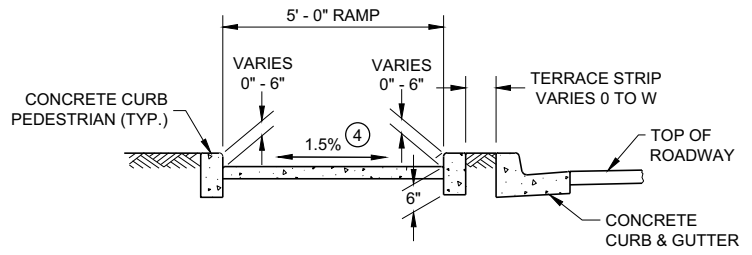


PLAN VIEW CURB RAMP TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 1/4"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 1/4"	3' - 0 1/4"						
15 FEET	4' - 6 3/4"	2' - 1 3/4"	3' - 9"	3' - 5 3/4"	3' - 1 1/4"	4' - 6"	2' - 6 3/4"	5' - 4 1/2"	2' - 1"	6' - 1"	1' - 8"	6' - 8 1/2"	1' - 3 1/4"	7' - 2 1/2"	0' - 10 3/4"	7' - 7 1/4"
20 FEET	5' - 9 3/4"	3' - 6 1/2"	4' - 11 1/2"	5' - 1 3/4"	4' - 3 1/4"	6' - 5 1/2"	3' - 8 3/4"	7' - 7"	3' - 3"	8' - 6 1/2"	2' - 10"	9' - 4 1/2"	2' - 5 1/2"	10' - 1 1/4"	2' - 1 1/4"	10' - 9"
30 FEET			6' - 9 1/4"	7' - 11 1/4"	6' - 0 1/4"	9' - 8"	5' - 5"	11' - 1 3/4"	4' - 10 3/4"	12' - 5 3/4"	4' - 5 1/2"	13' - 7 3/4"	4' - 0 3/4"	14' - 8 1/2"	3' - 8 1/2"	15' - 8 1/4"
40 FEET									6' - 1 3/4"	15' - 8 1/2"	5' - 8"	17' - 2"	5' - 3"	18' - 5 3/4"	4' - 10 3/4"	19' - 8 1/4"
50 FEET															5' - 10 1/4"	23' - 2"

INTERMEDIATE RADII CAN BE INTERPOLATED
 DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
 DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH

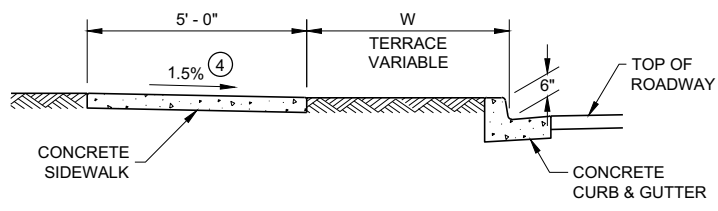
- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
 - CONTRACTION JOINT SIDEWALK
 - PAVEMENT MARKING CROSSWALK (WHITE)



SECTION C - C FOR TYPE 4B

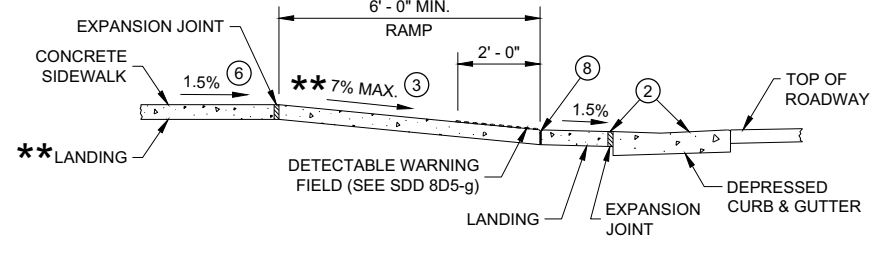
GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/2 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



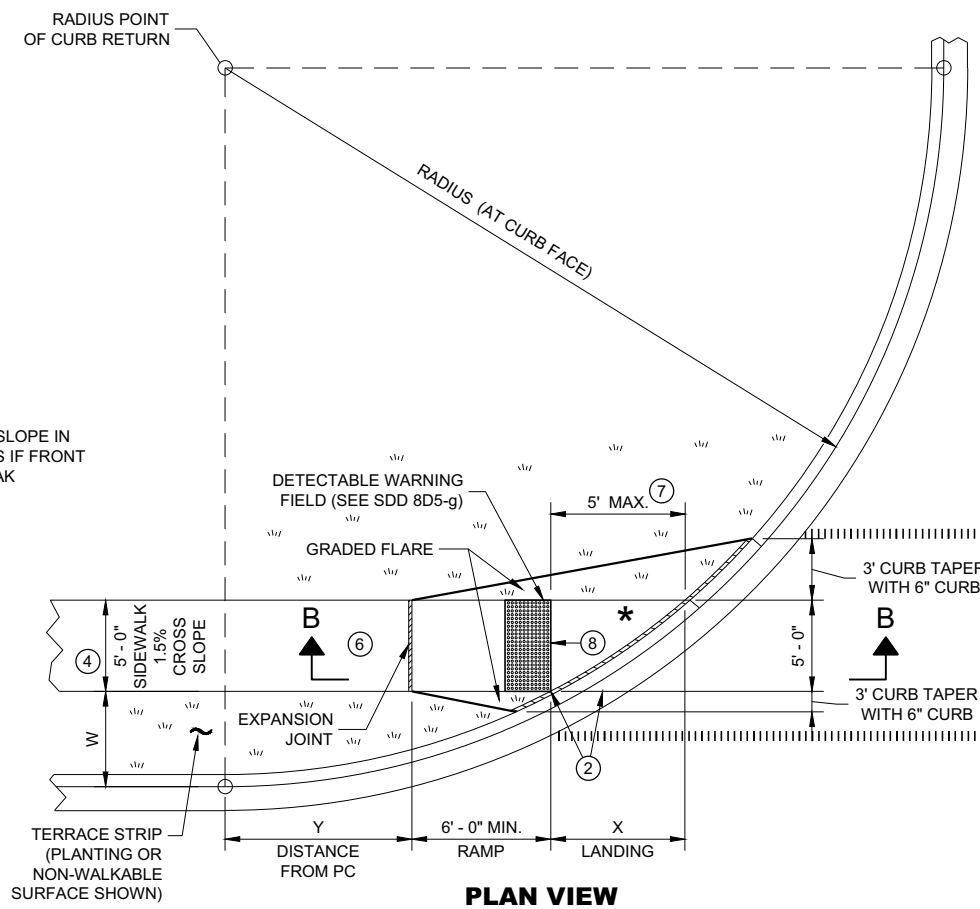
SECTION A - A FOR TYPE 4B

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

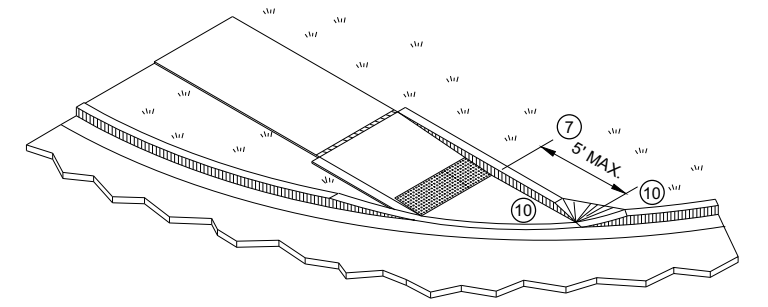


SECTION B - B FOR TYPE 4B AND TYPE 4B1

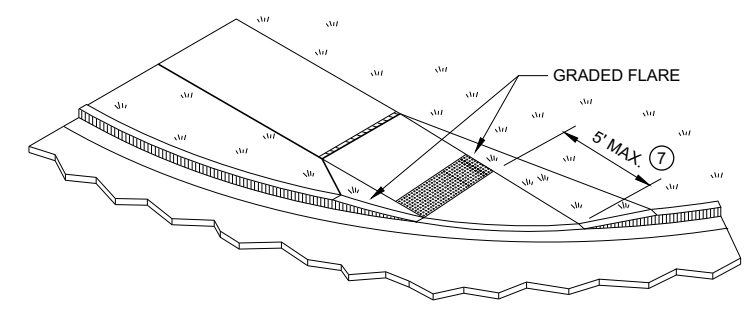
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED



PLAN VIEW CURB RAMP TYPE 4B1



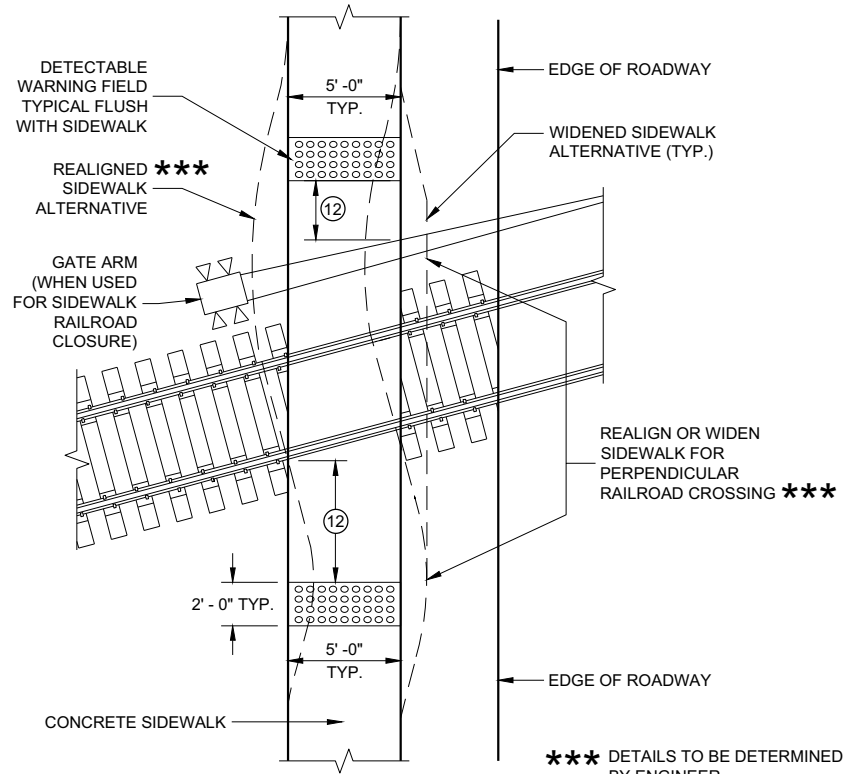
ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

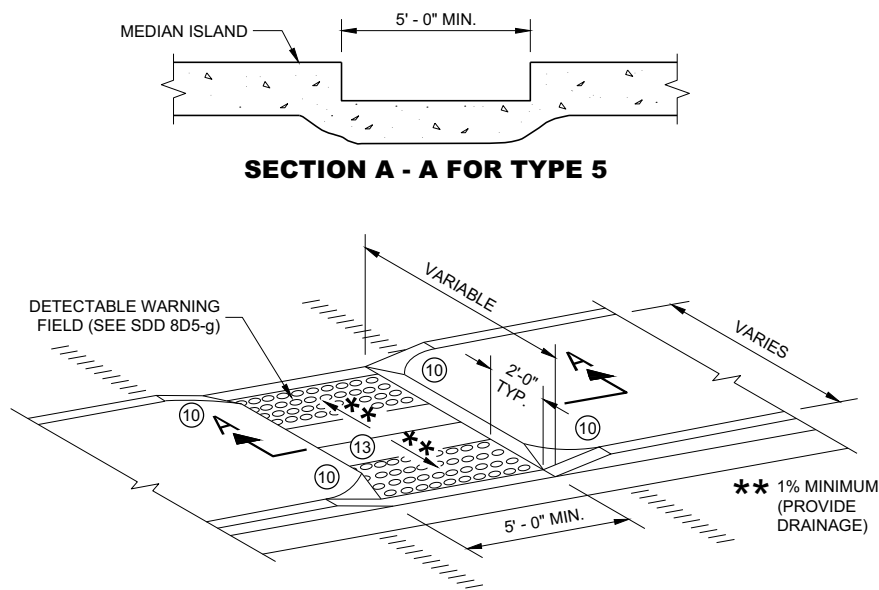
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION



CURB RAMP TYPE 8

DETECTABLE WARNINGS AT RAILROAD CROSSING

*** DETAILS TO BE DETERMINED BY ENGINEER



CURB RAMP TYPE 5
MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

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

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

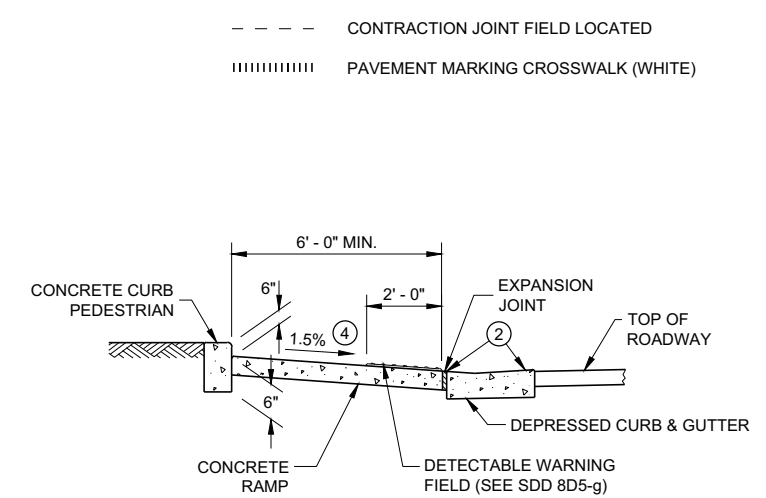
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

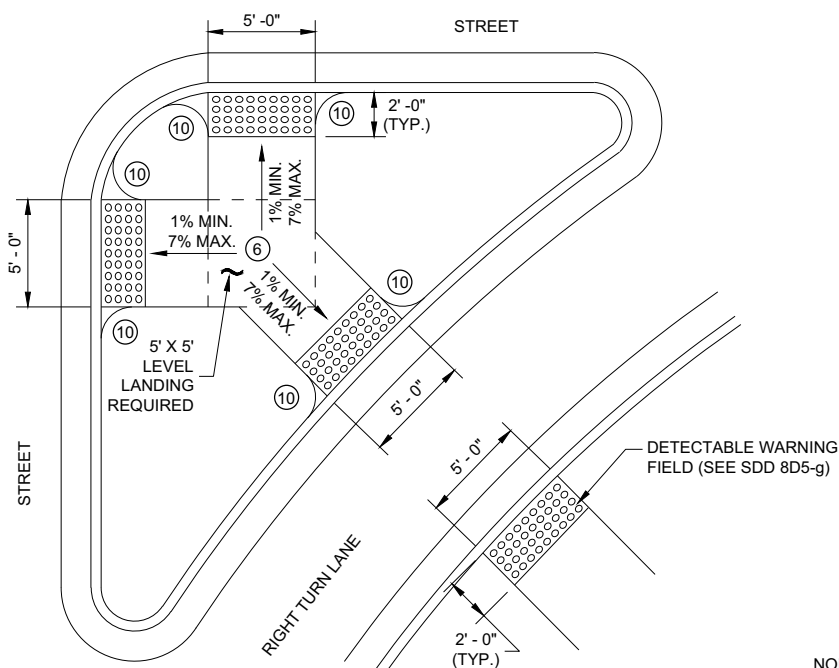
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

LEGEND

- ===== 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||||| PAVEMENT MARKING CROSSWALK (WHITE)

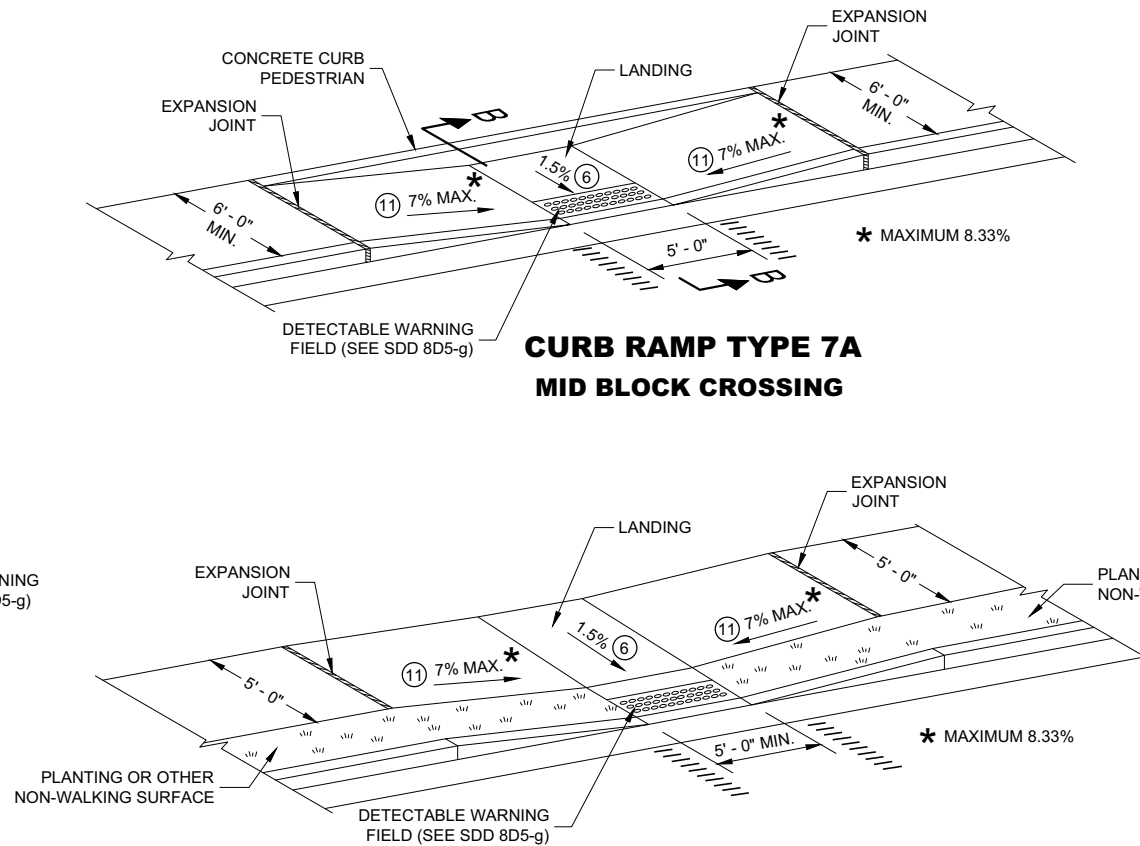


SECTION B - B FOR TYPE 7A



CURB RAMP TYPE 6
DETECTABLE WARNING AT ISLANDS

REFER TO GENERAL NOTES ② AND ③ FOR ALL ISLAND CURB RAMPS



CURB RAMP TYPE 7A
MID BLOCK CROSSING

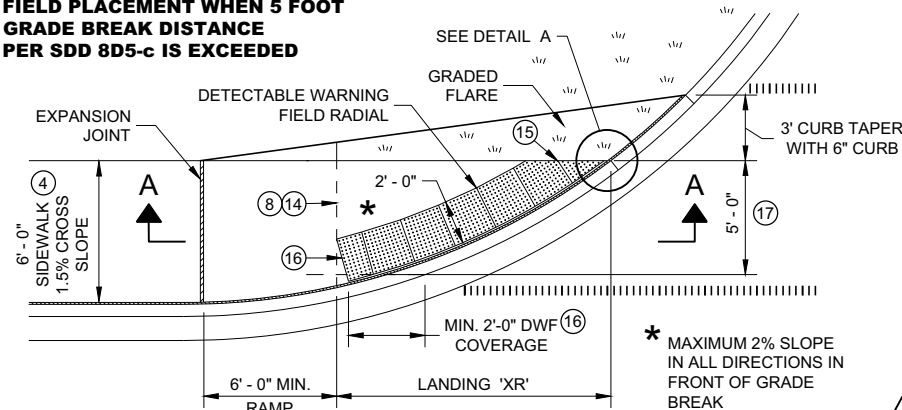
CURB RAMP TYPE 7B
MID BLOCK CROSSING

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

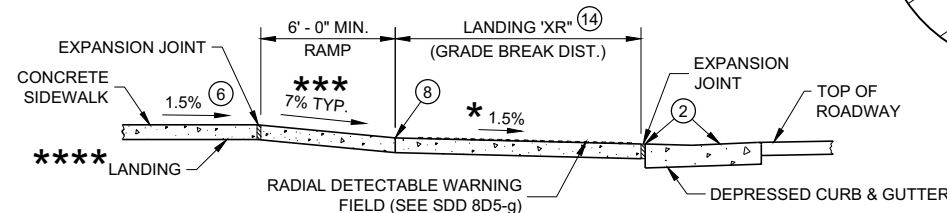
CURB RAMPS
TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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



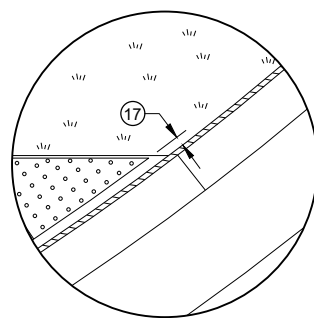
SECTION A - A FOR TYPE 4A1

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

*** MAXIMUM 8.33%

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- - - CONTRACTION JOINT SIDEWALK
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)

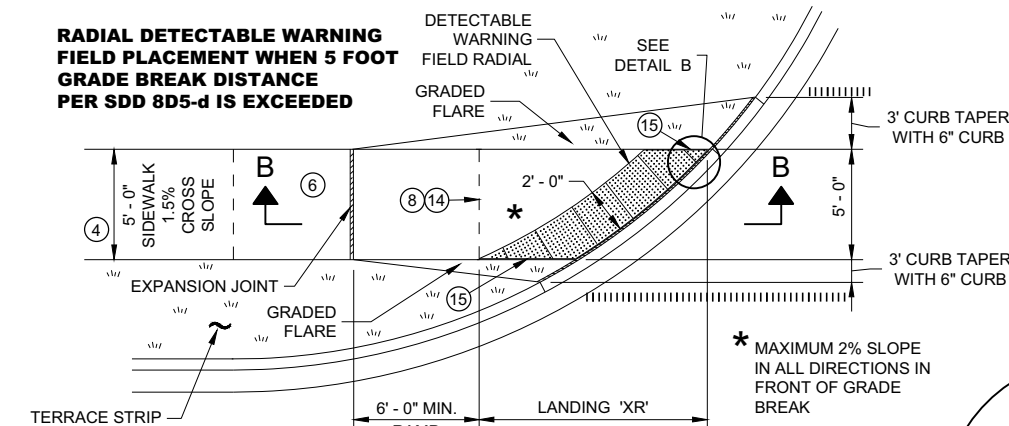


DETAIL A

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B RAMPS ARE NOT SHOWN.
- REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.
- FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.
- DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.
- 2 GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
 - 3 AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
 - 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
 - 6 PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
 - 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
 - 14 CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
 - 15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
 - 16 USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
 - 17 A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

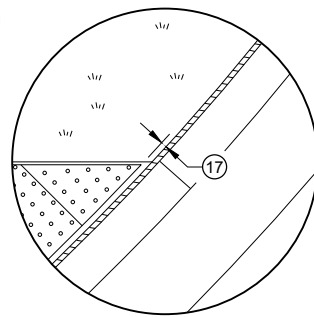
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



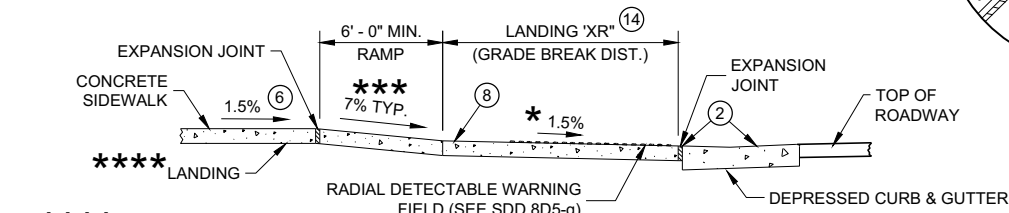
**PLAN VIEW
CURB RAMP TYPE 4B1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**

TERRACE STRIP (PLANTING OR NON-WALKABLE SURFACE SHOWN)

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



DETAIL B

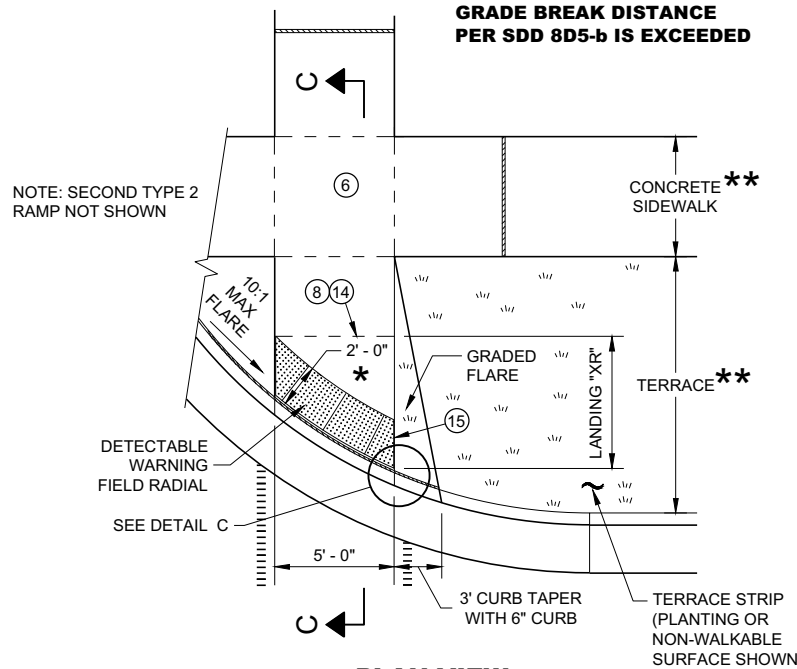


SECTION B - B FOR TYPE 4B1

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

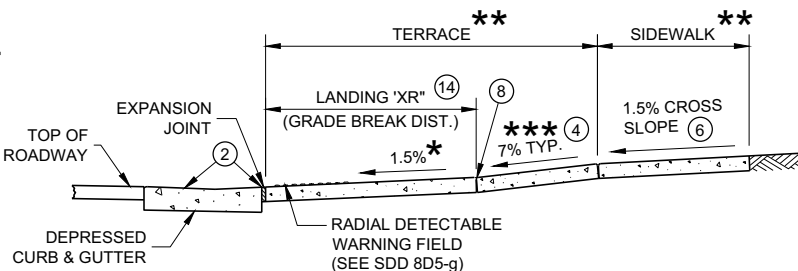
*** MAXIMUM 8.33%

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



**PLAN VIEW
CURB RAMP TYPE 2
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)**

NOTE: SECOND TYPE 2 RAMP NOT SHOWN

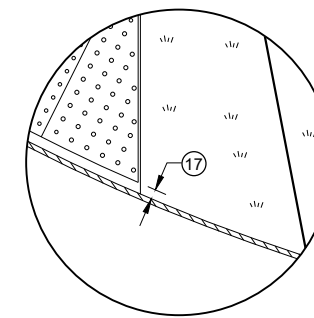


SECTION C - C FOR TYPE 2

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%



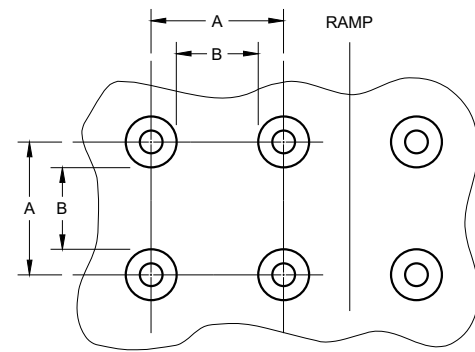
DETAIL C

**CURB RAMPS
RADIAL DETECTABLE WARNING
FIELD APPLICATIONS**

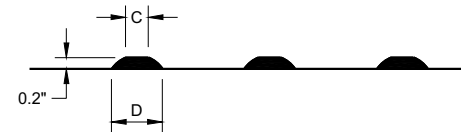
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

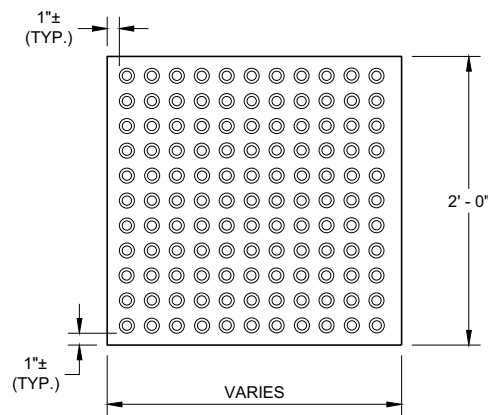


PLAN VIEW

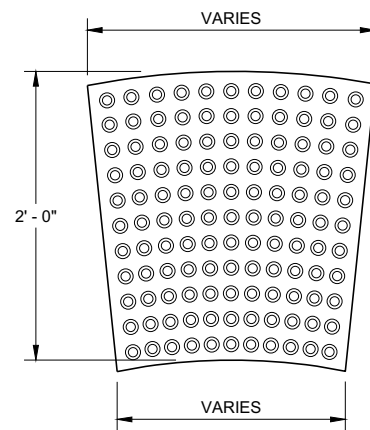


ELEVATION VIEW

**TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL**

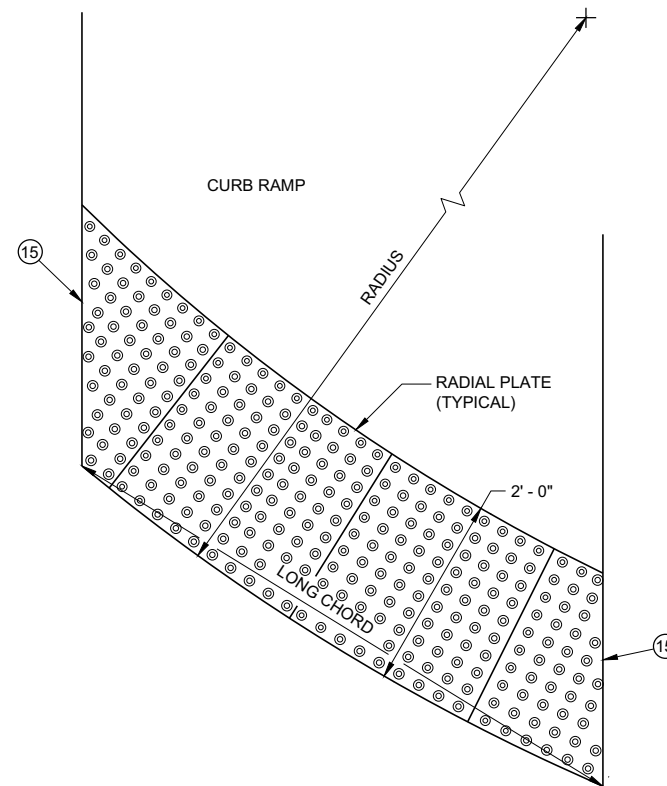


**RECTANGULAR
PLATES**

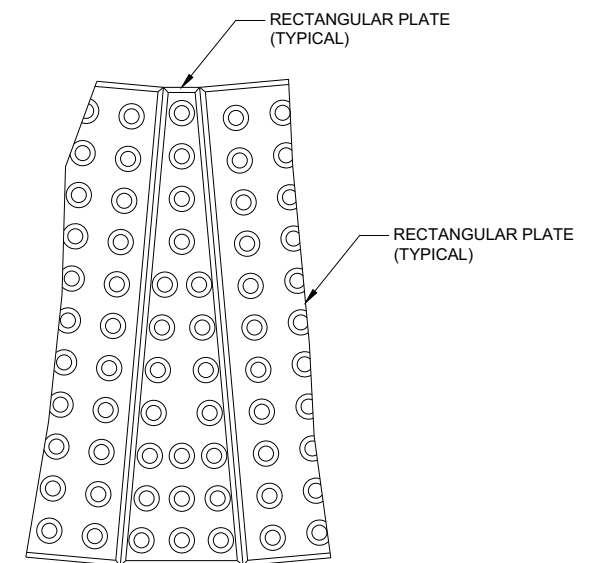


**RADIAL
PLATES**

**PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)**



**PLAN VIEW
RADIAL DETECTABLE
WARNING FIELD ATTRIBUTES**



**PLAN VIEW
RADIAL WEDGE PLATE
CONNECTION DETAIL**

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

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

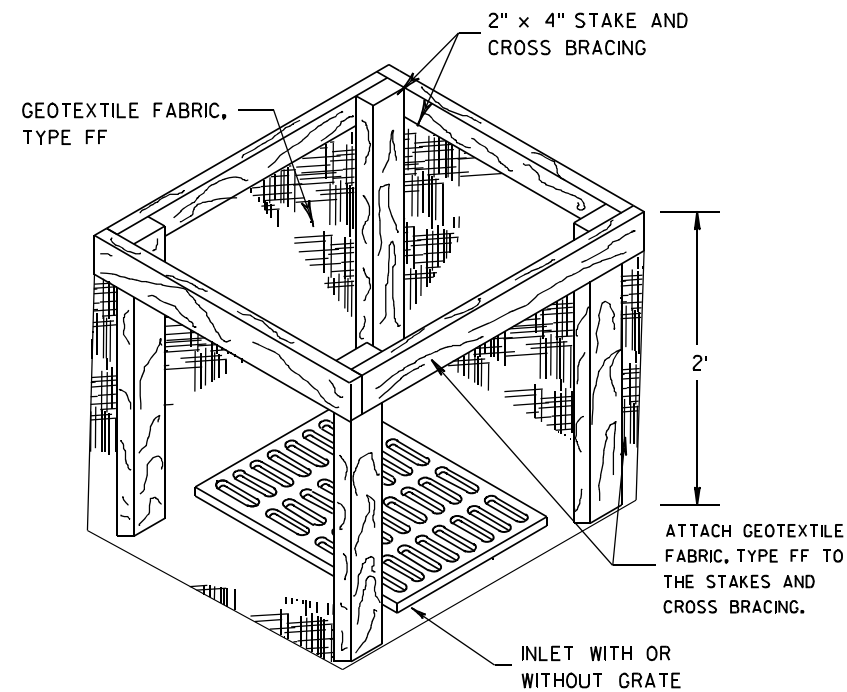
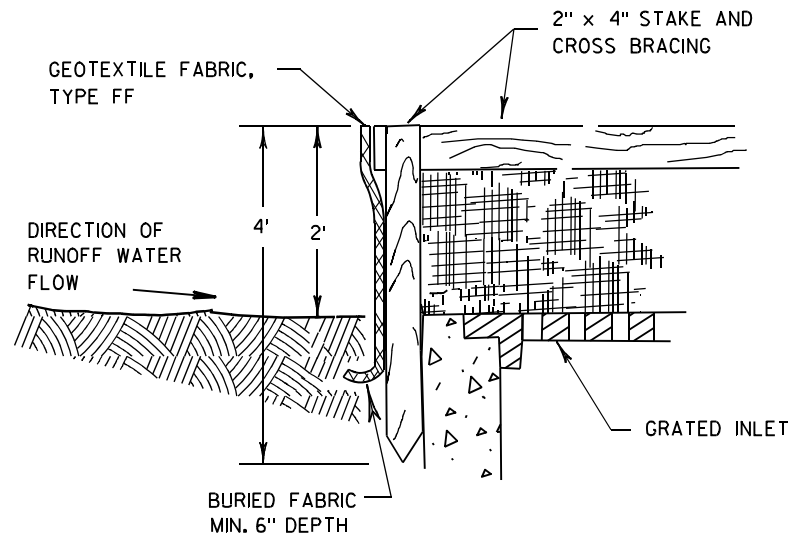
FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

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

CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
<small>FHWA</small>	



INLET PROTECTION, TYPE A

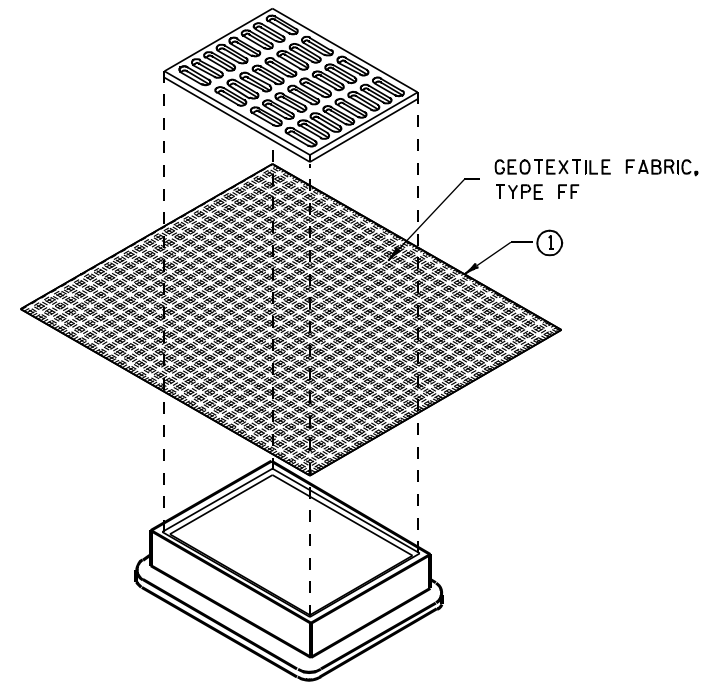
GENERAL NOTES

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.

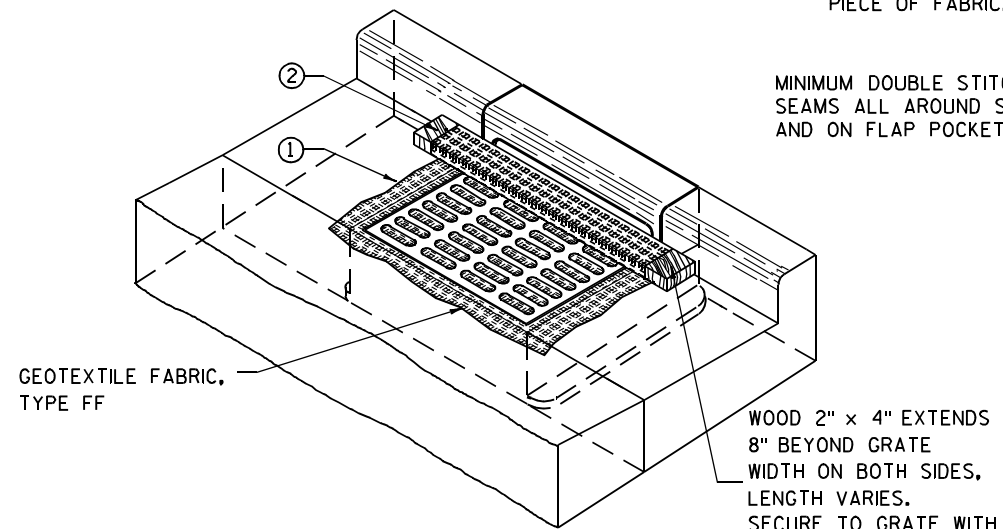
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.

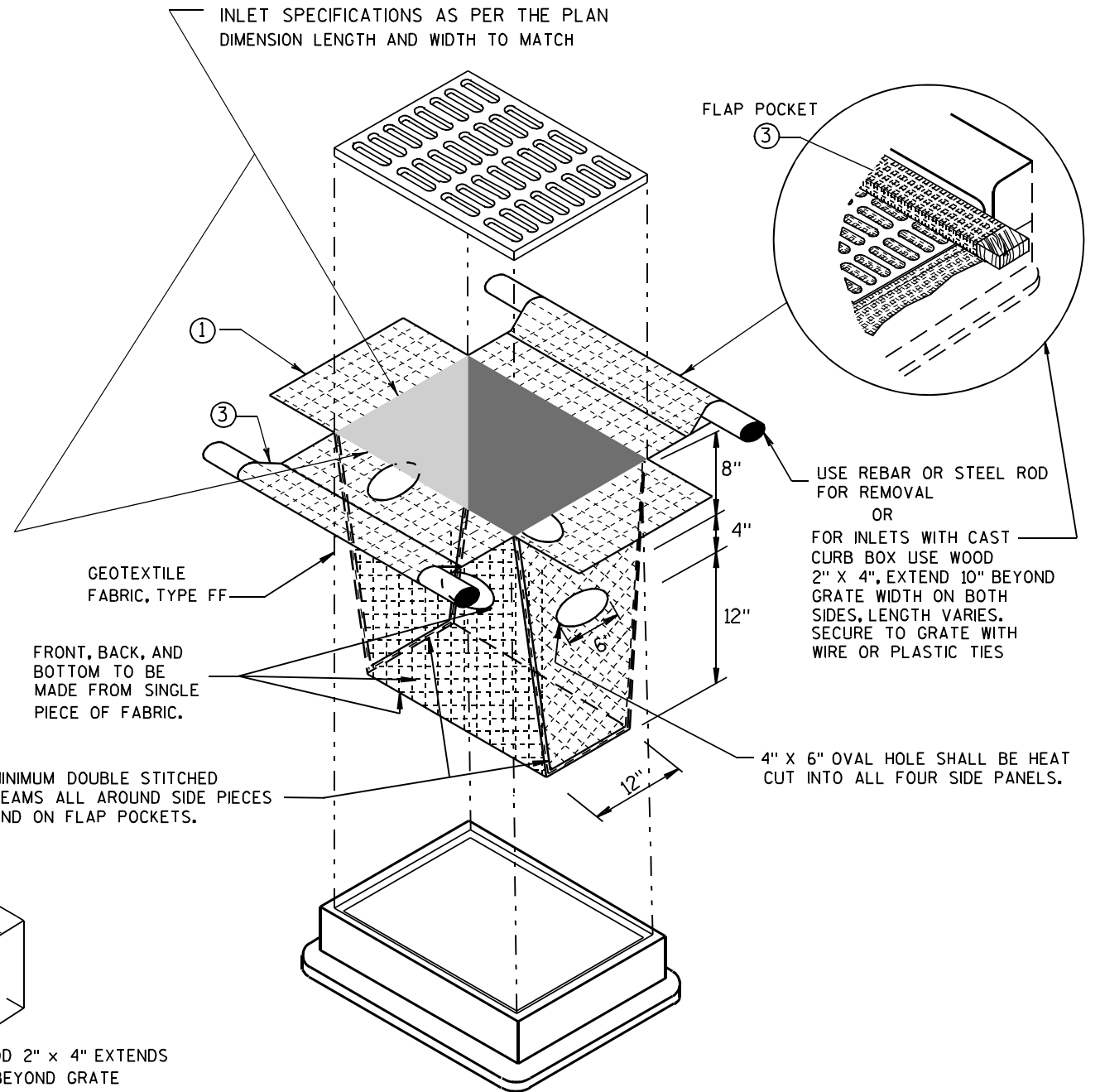
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

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.



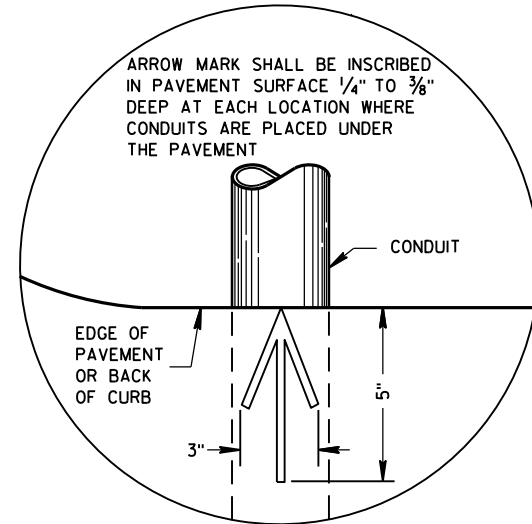
INLET PROTECTION, TYPE D

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

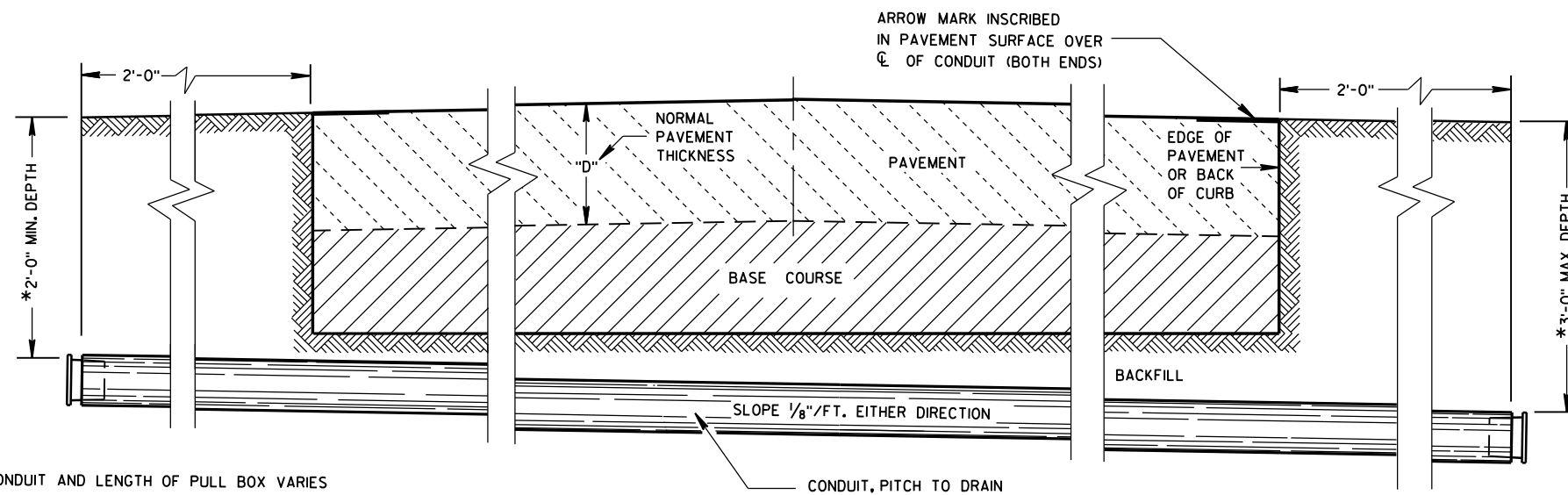
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Connestra
DATE
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	

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.

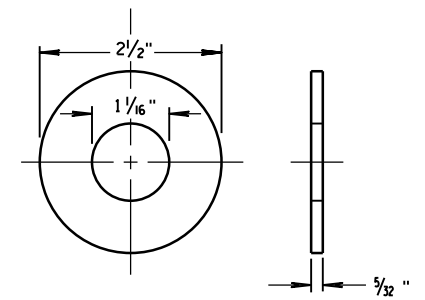
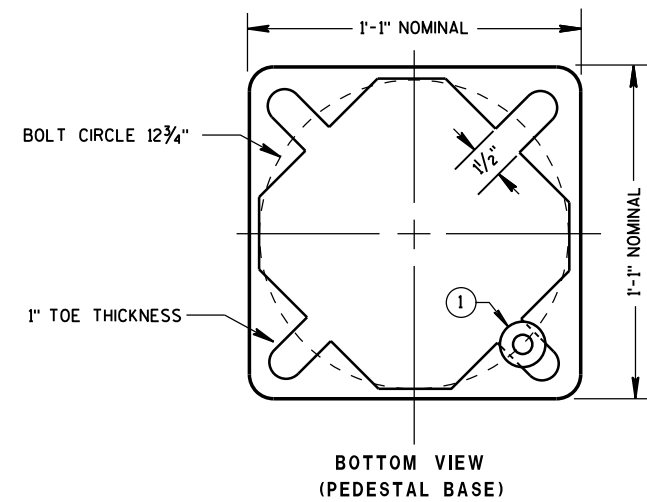
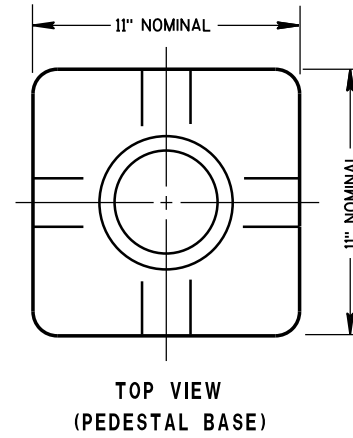
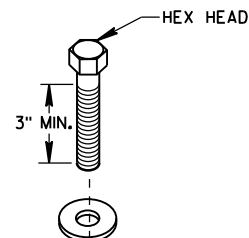
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

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.

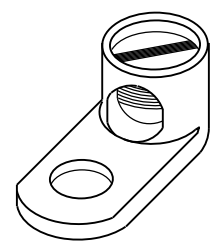
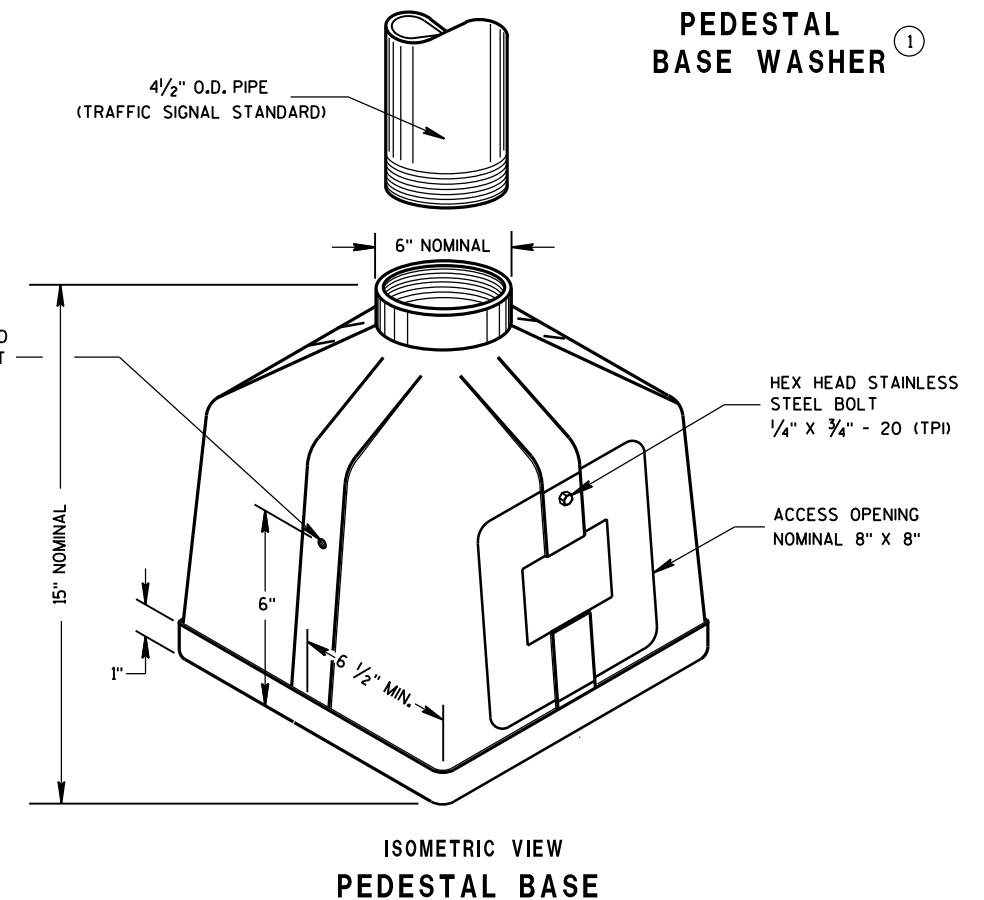
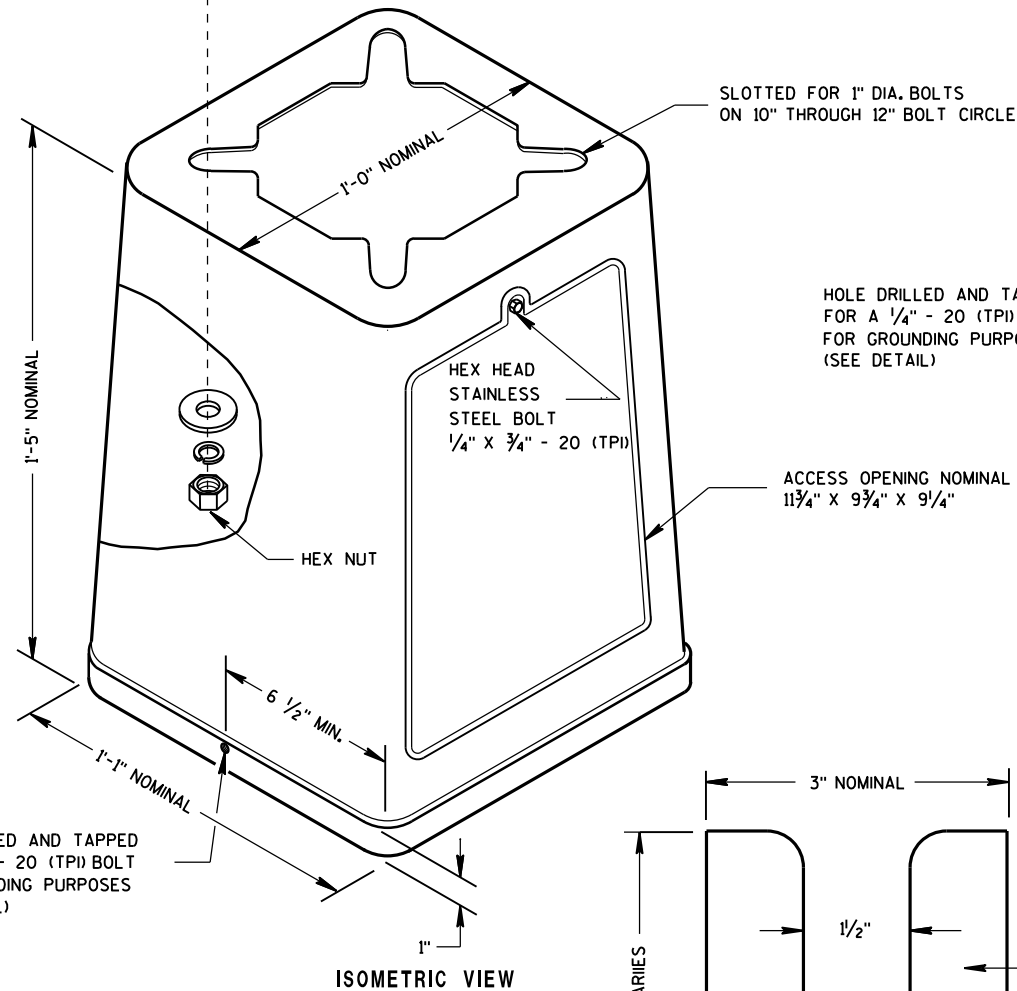
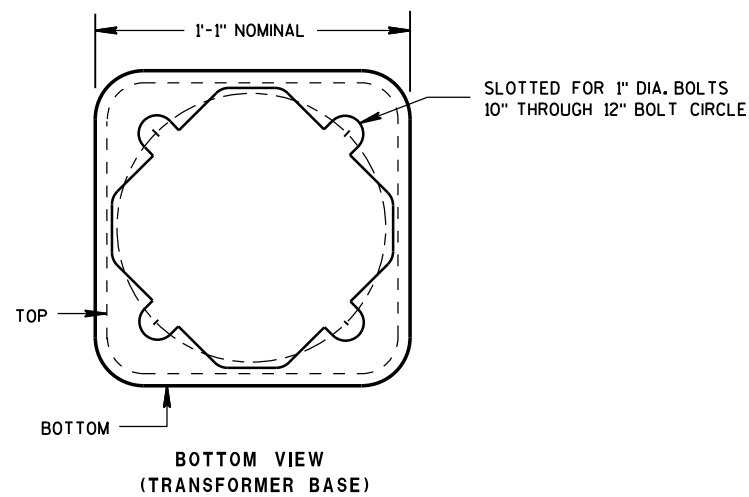
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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



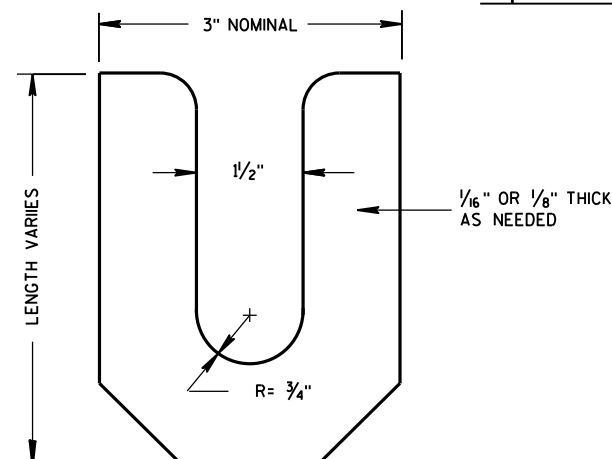
ZINC COATED STEEL WASHER TO BE PROVIDED BY THE CONTRACTOR

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

6

6

S.D.D. 9 C 3-4

S.D.D. 9 C 3-4

TRANSFORMER/PEDESTAL BASES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/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.

BASES (SHAFT), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

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

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

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

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

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

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

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

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

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4 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 CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

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

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTOR FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

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

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

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

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

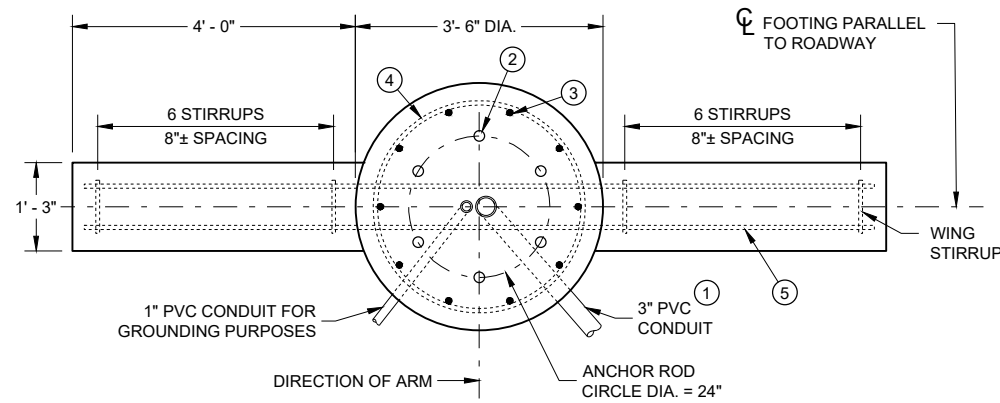
② (6) 1 3/4" DIA. X 7' - 2" ANCHOR RODS

③ (10) NO. 6 X 14' - 1" BAR STEEL VERTICAL REINFORCEMENT.

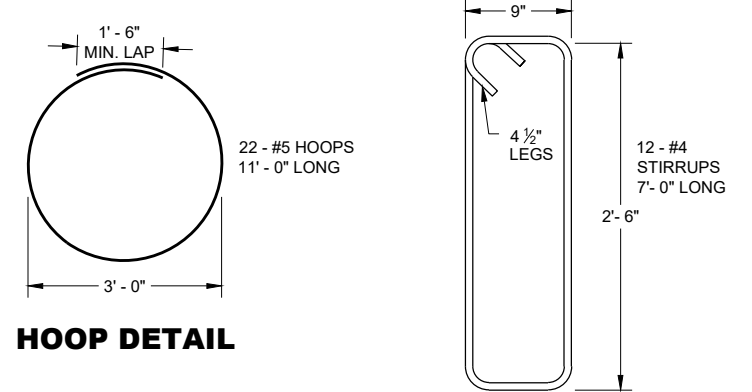
④ (22) NO. 5 X 11' - 0" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.

⑤ (10) NO. 5 X 11' - 0" BAR STEEL HORIZONTAL REINFORCEMENT

CONCRETE MASONRY.....fc = 3,500 p.s.i.
 HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.
 ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE 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.

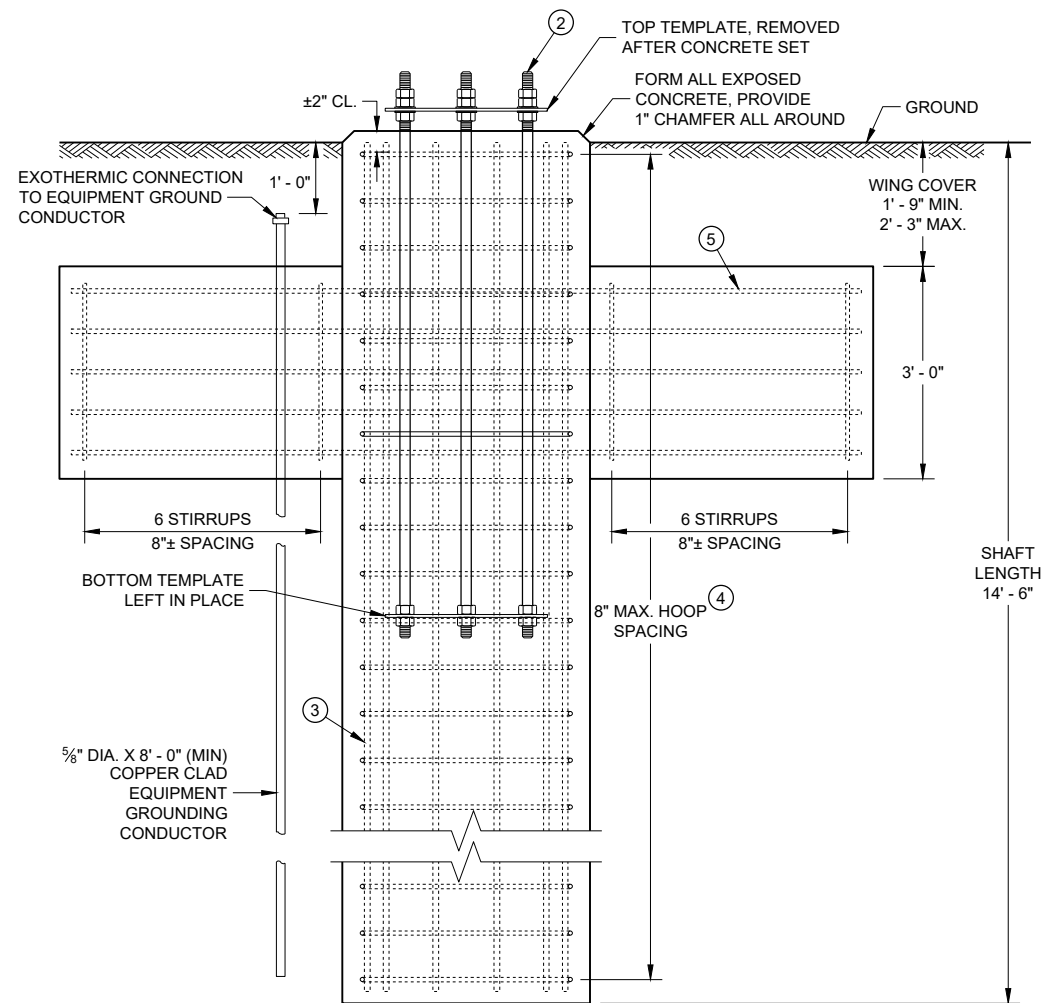


PLAN VIEW

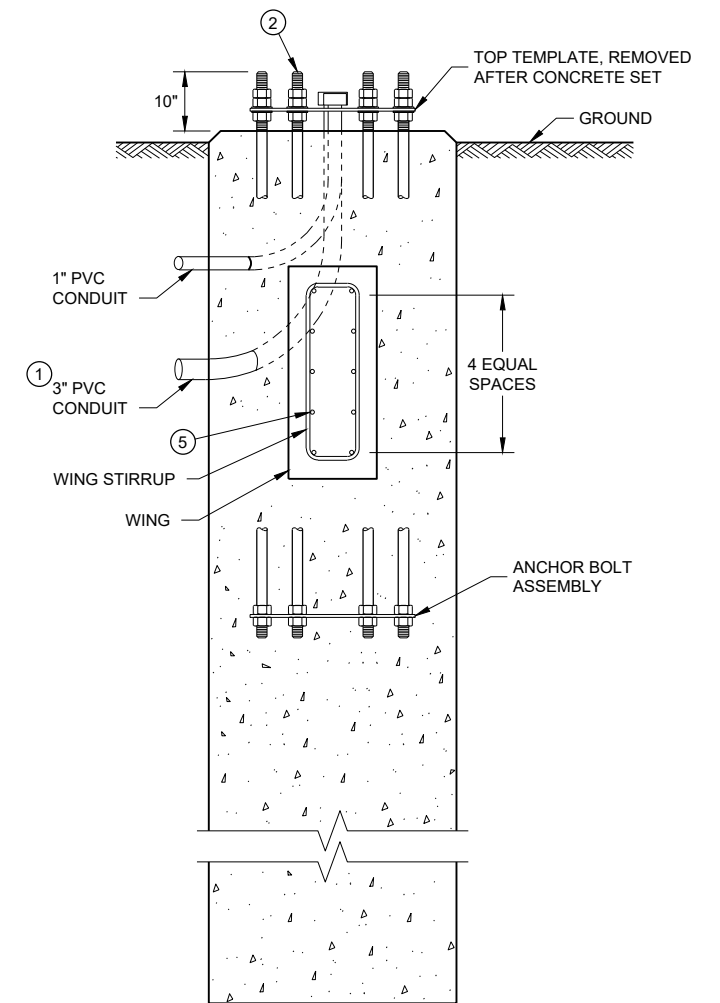


HOOP DETAIL

WING STIRRUP DETAIL



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



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

CONCRETE BASE, TYPE 13
(FOR TYPE 12, TYPE 13 AND OVER HEIGHT (OH) POLES)

CONCRETE = 6.3 CUBIC YARD
 H.S. REINFORCEMENT = 635 LBS.

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

CONCRETE BASE TYPE 13

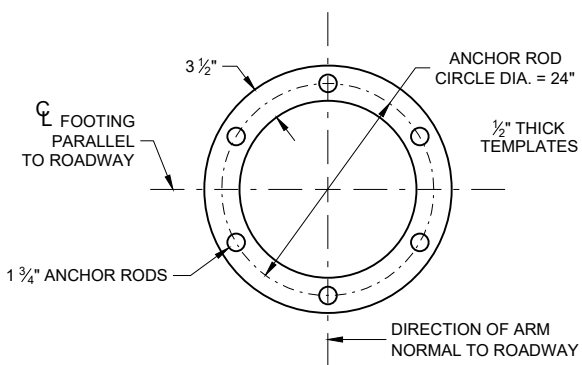
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

6

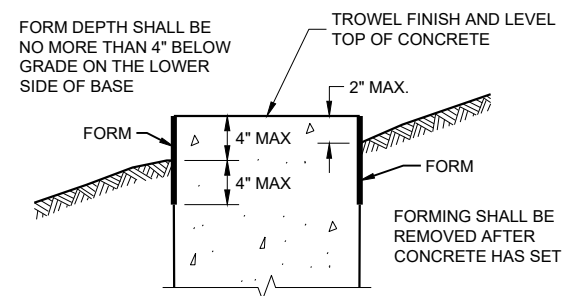
6

SDD 09C12 - 09a

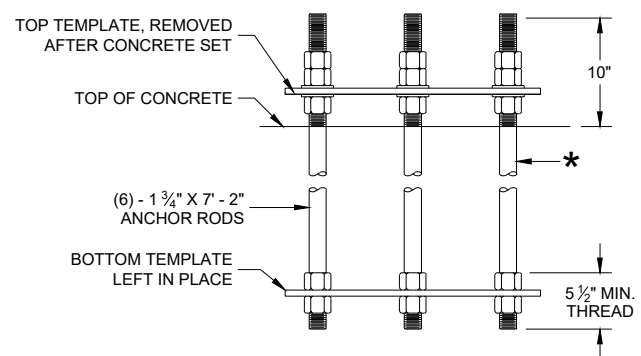
SDD 09C12 - 09a



TOP AND BOTTOM TEMPLATE



FORMING DETAIL



**ANCHOR ROD
ASSEMBLY DETAILS**

* THREAD TOP 11" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 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 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2017
DATE

/S/ Ahmet Demirelek
WIND LOADED STRUCTURES
PROGRAM LEADER

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.

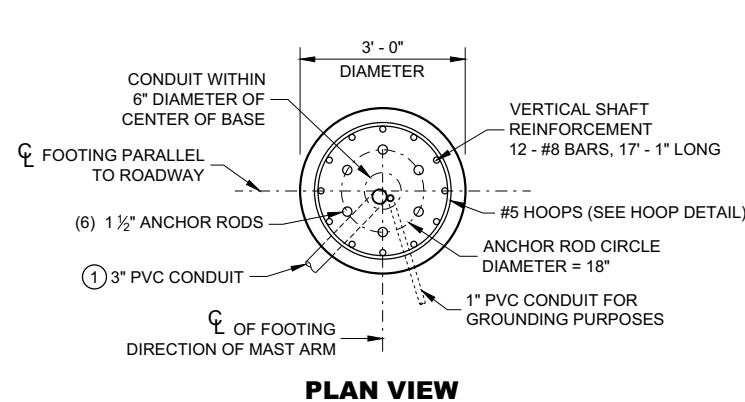
A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

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.

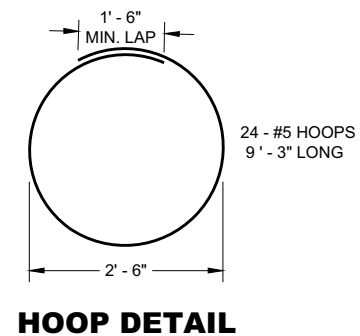
THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

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

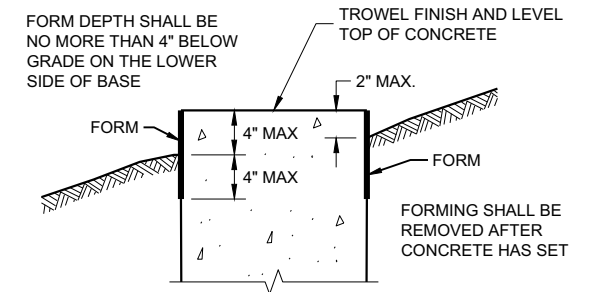
CONCRETE MASONRY.....fc = 3,500 p.s.i.
 HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.
 ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION).....fy = 55,000 p.s.i.
 TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.



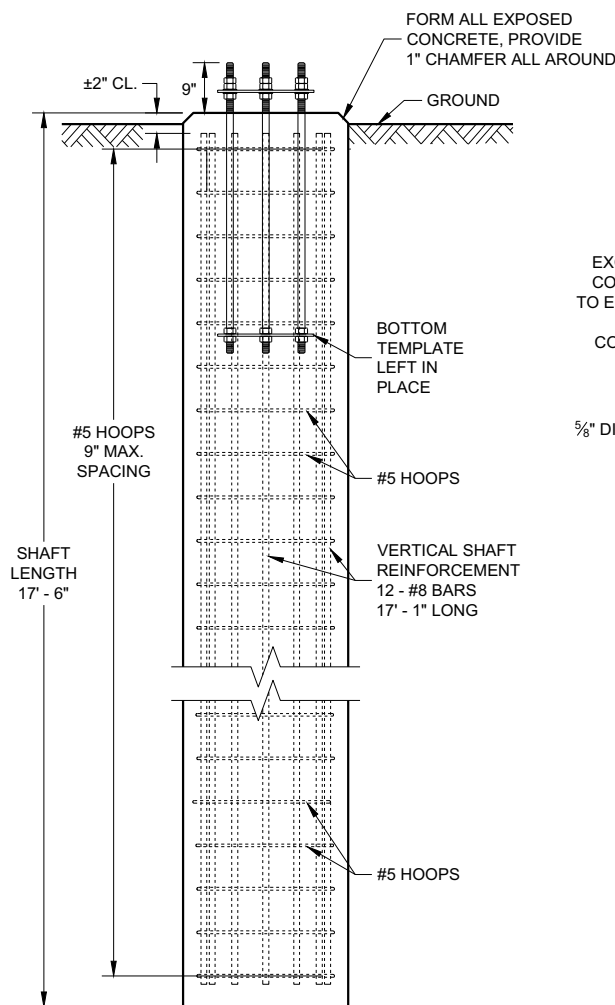
PLAN VIEW



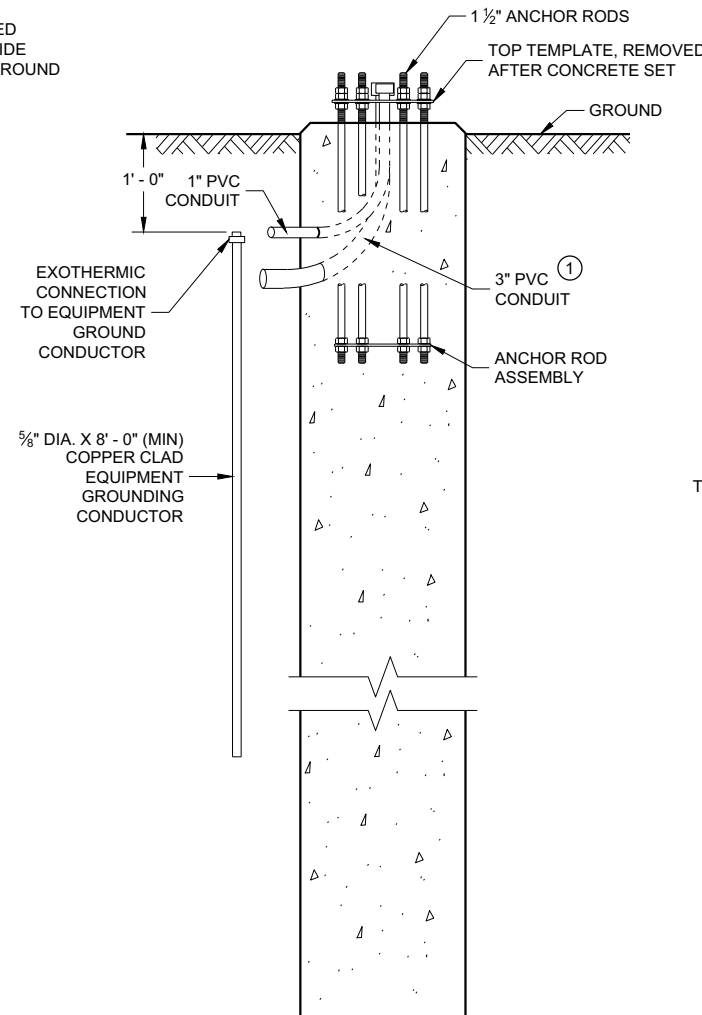
HOOP DETAIL



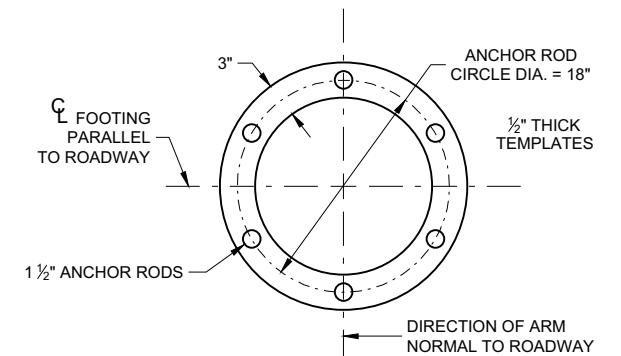
FORMING DETAIL



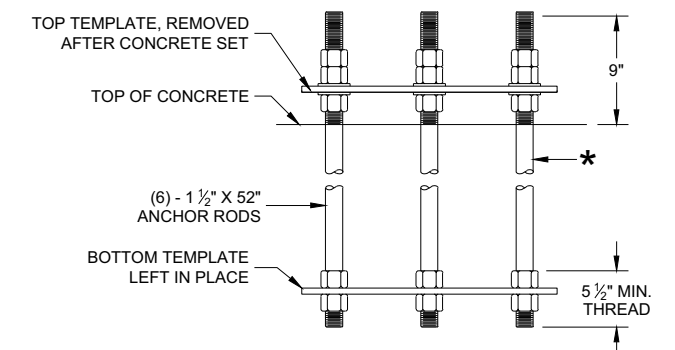
ELEVATION VIEW
(CONDUITS NOT SHOWN ON THIS VIEW FOR CLARITY)



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



TOP AND BOTTOM TEMPLATE



ANCHOR ROD ASSEMBLY DETAILS

* THREAD TOP 10" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 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.

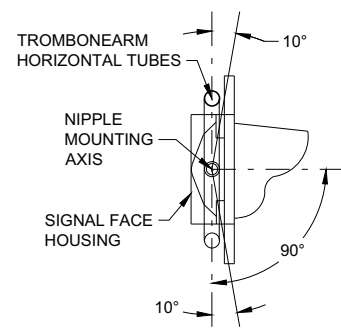
FOR USE WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.

**CONCRETE BASE
TYPE 10 SPECIAL**

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

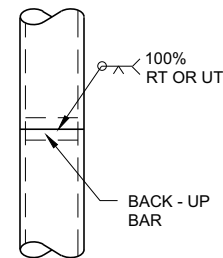
APPROVED
 August 2020 /S/ Alex Crabtree
 DATE WIND LOADED STRUCTURES PROGRAM LEADER

FHWA

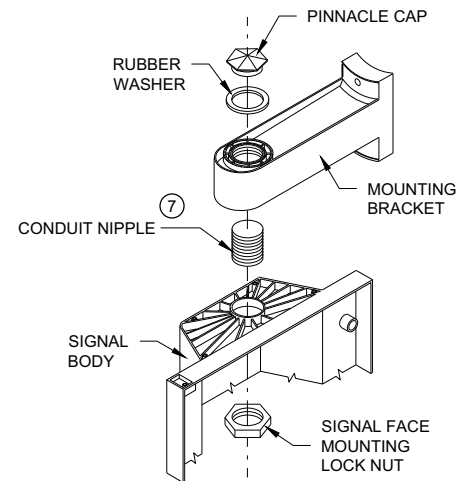


SECTION A-A
(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)

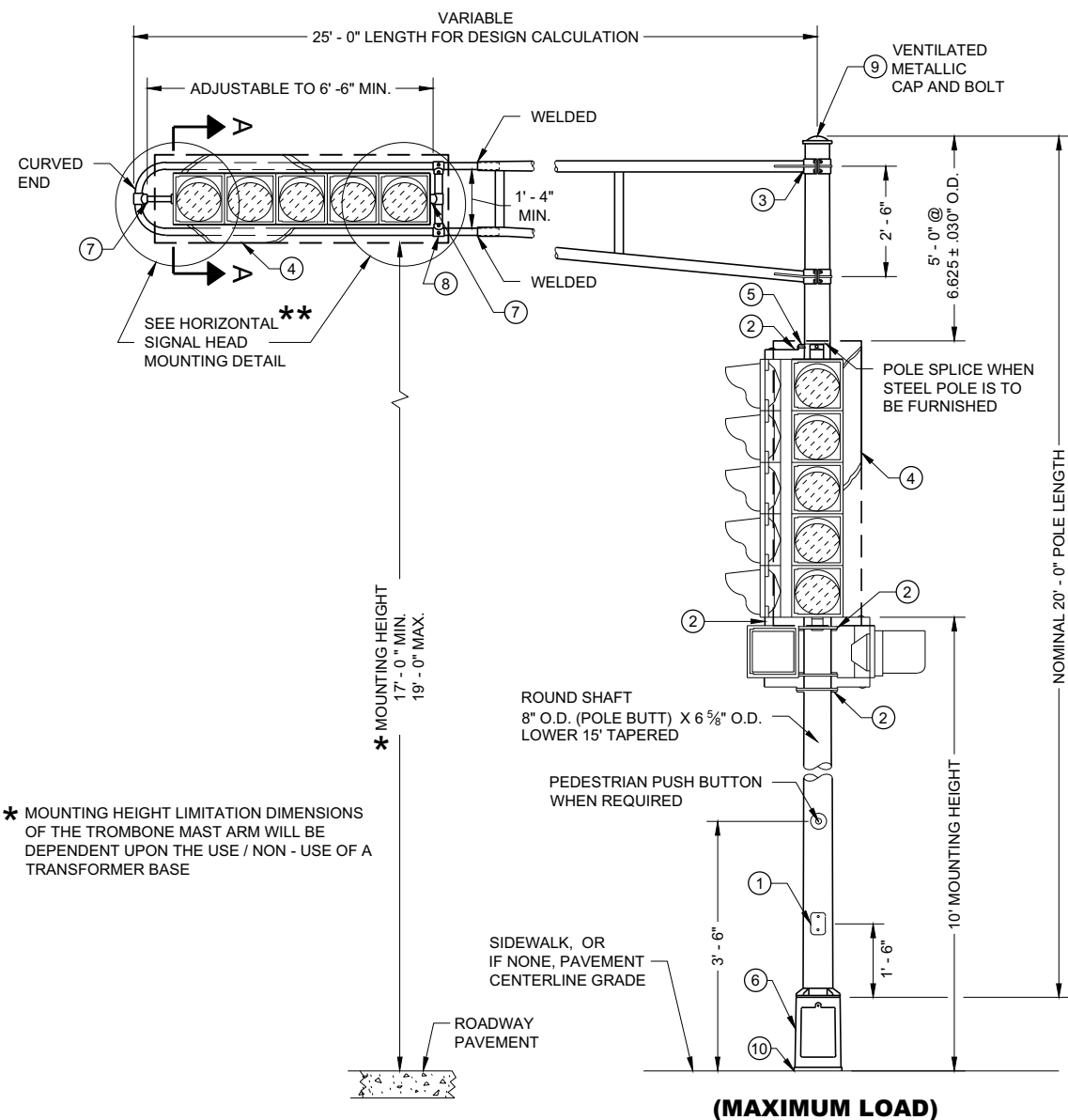
FOR MANUFACTURERS USE ONLY
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN / BRIDGE FOR VERIFICATION AND APPROVAL.



POLE SPLICE DETAIL

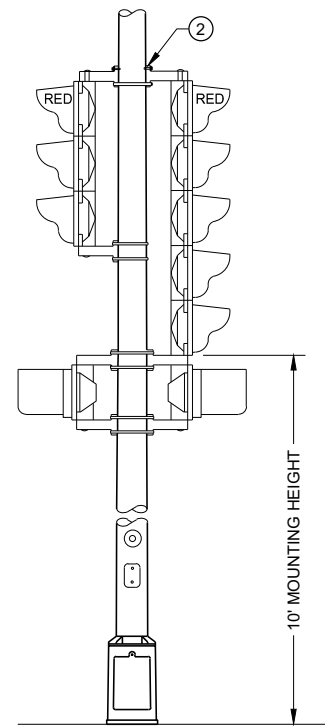


SIGNAL FACE MOUNTING DETAIL (BANDED)

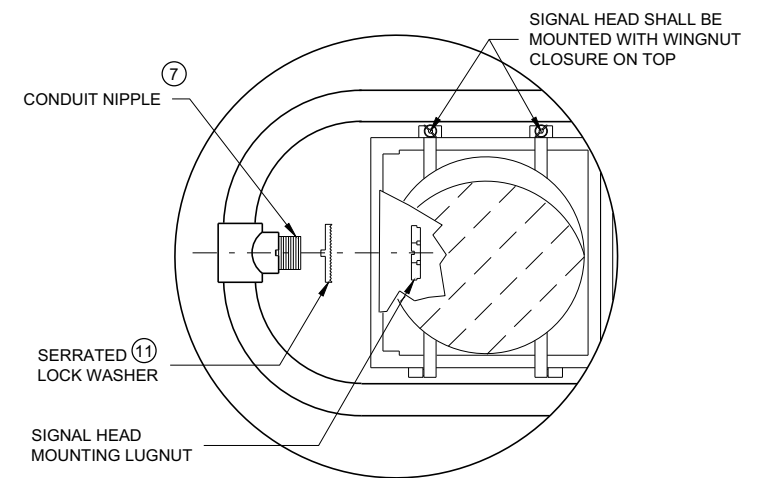
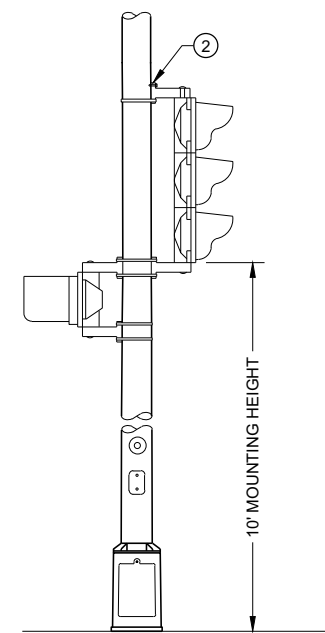


TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES

TYPE 2 POLE MOUNTING CONFIGURATION



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE



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

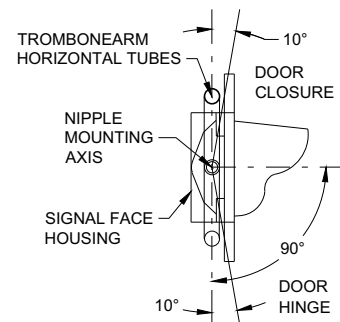
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
POLES SHALL BE EITHER ALUMINUM OR GALVANIZED STEEL AS CALLED FOR IN THE CONTRACT.
SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.
A PULL WIRE / ROPE SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.
TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.
WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

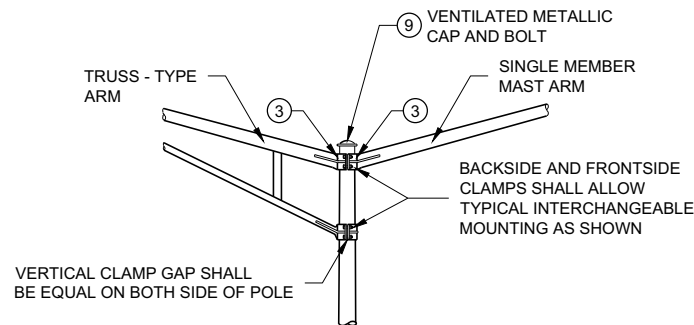
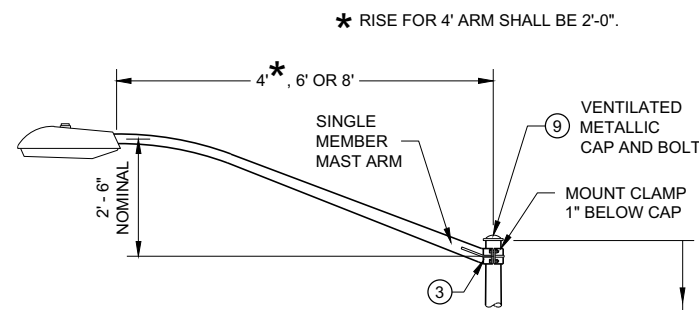
- ① 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) 1/4" X 3/4" - 20 TPI, STAINLESS STEEL, HEX HEAD BOLTS.
- ② SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.
- ③ GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
- ④ SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.
- ⑤ POLE MOUNTED SIGNAL FACES SHALL REQUIRE ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACES.
- ⑥ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- ⑦ USE 1 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 1/2" OPENING IN SIGNAL FACES AND BRACKET ENDS.
- ⑧ VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.
- ⑨ FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑩ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.
- ⑪ USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

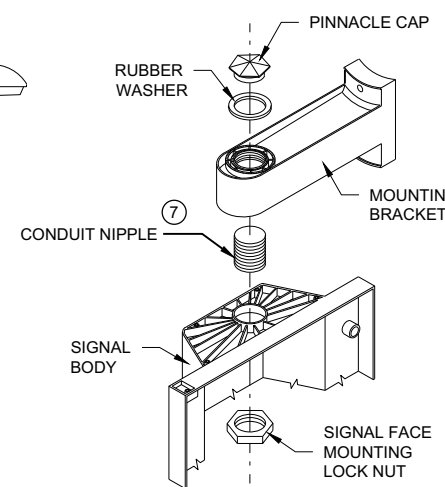
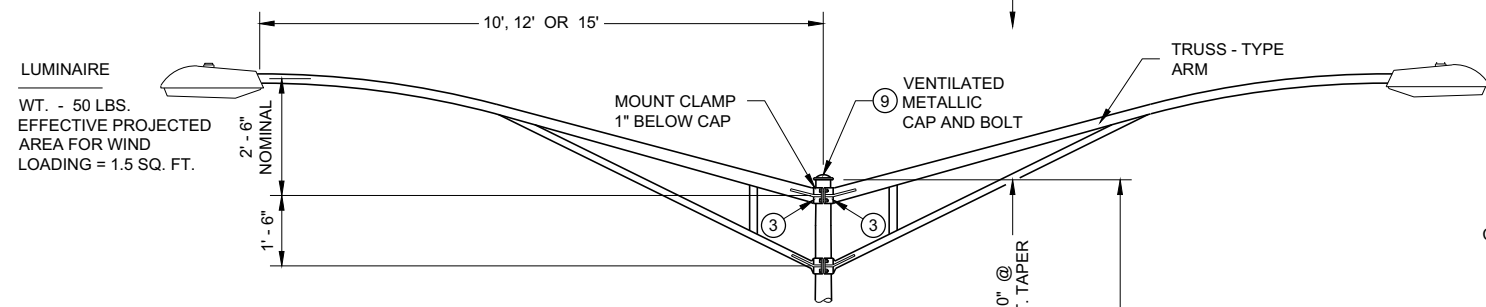
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



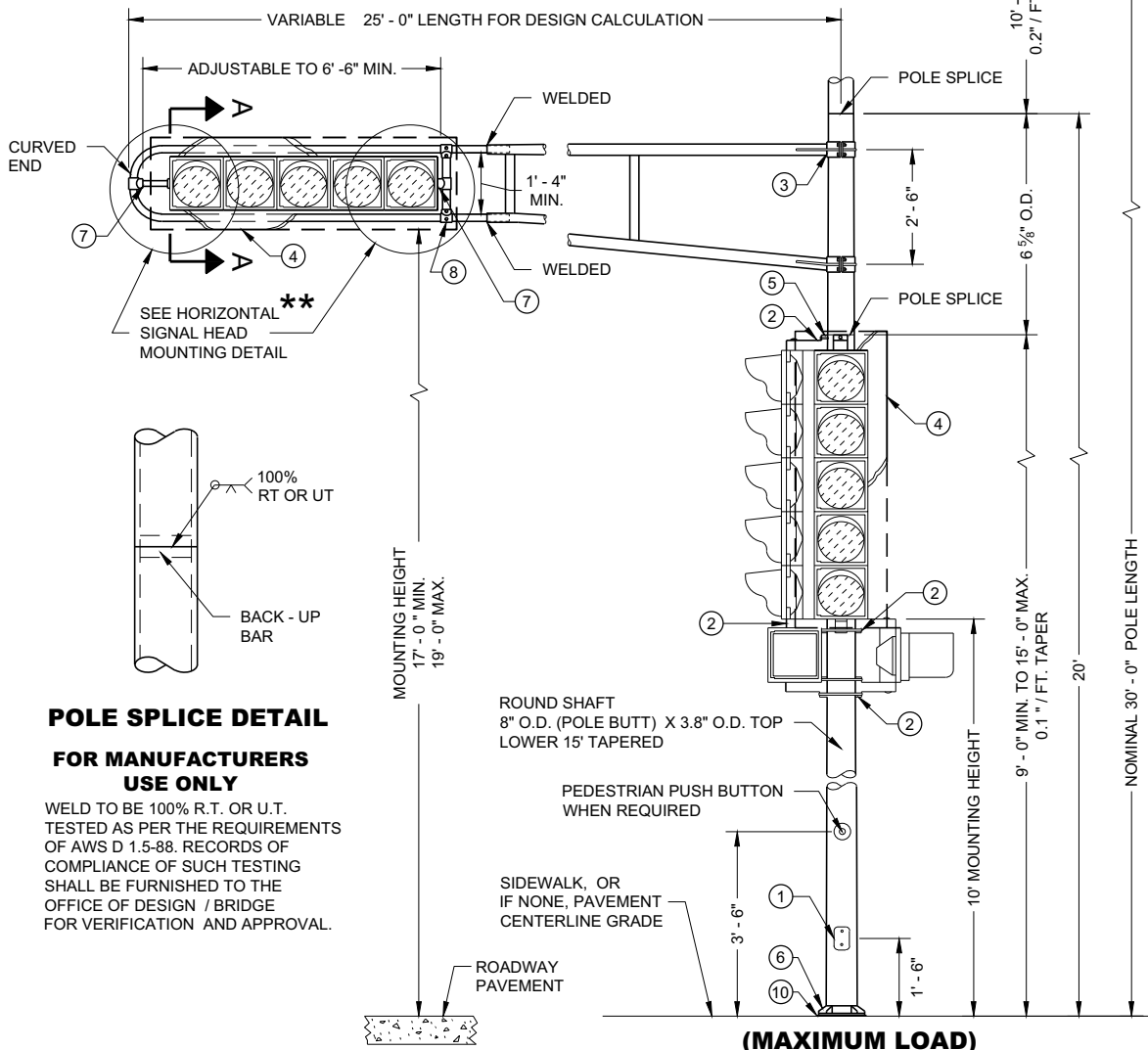
SECTION A-A



INTERCHANGEABLE MOUNTING DETAIL



SIGNAL FACE MOUNTING DETAIL (BANDED)

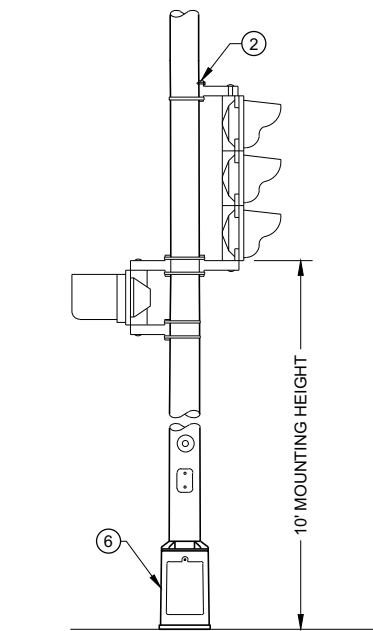
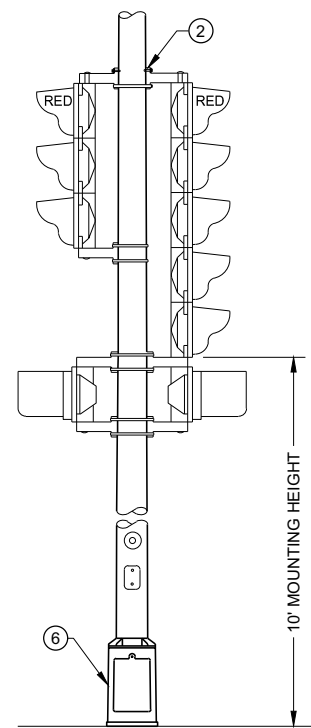


POLE SPLICE DETAIL FOR MANUFACTURERS USE ONLY

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

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

TYPE 3 POLE MOUNTING CONFIGURATION



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

GENERAL NOTES

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

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

POLES SHALL BE GALVANIZED STEEL.

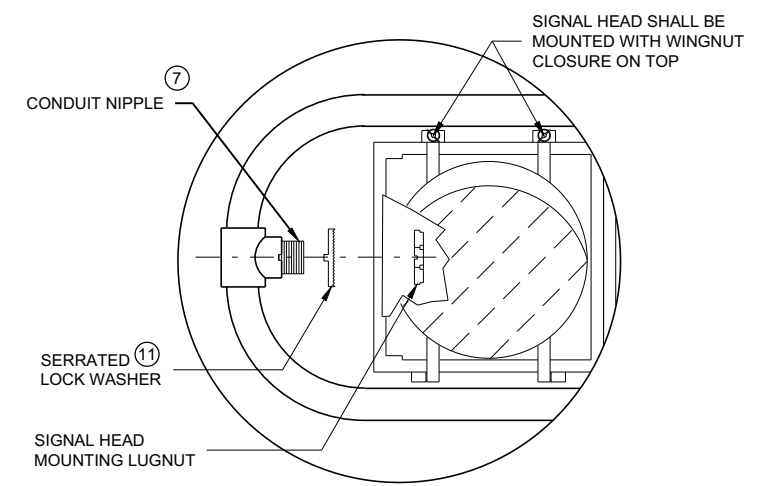
SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

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

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

- ① 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) 1/2" X 3/4" - 20 TPI, STAINLESS STEEL, HEX HEAD BOLTS.
- ② SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.
- ③ GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 1/2" HOLE IN POLE SHAFT FOR WIRING.
- ④ SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.
- ⑤ POLE MOUNTED SIGNAL FACES SHALL REQUIRE ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.
- ⑥ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED. UNDER MAX LOADING, TYPE 3 POLE SHALL BE MOUNTED DIRECTLY TO ITS CONCRETE BASE.
- ⑦ USE 1 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 1/2" OPENING IN SIGNAL FACES AND BRACKET ENDS.
- ⑧ VERTICAL STRUT (ADJUSTABLE), ONE (1) SET SCREW (1/2" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.
- ⑨ FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/2" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑩ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.
- ⑪ USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.



HORIZONTAL SIGNAL HEAD MOUNTING DETAIL

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

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

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

ALL TYPE 4 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL WITH A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

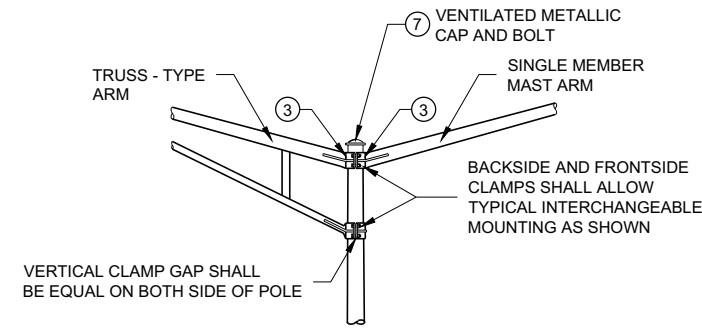
SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

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

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

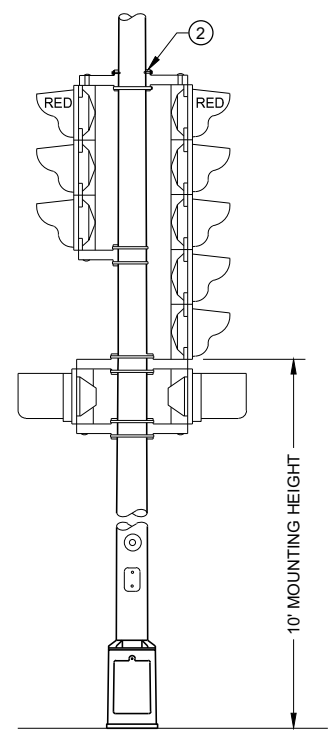
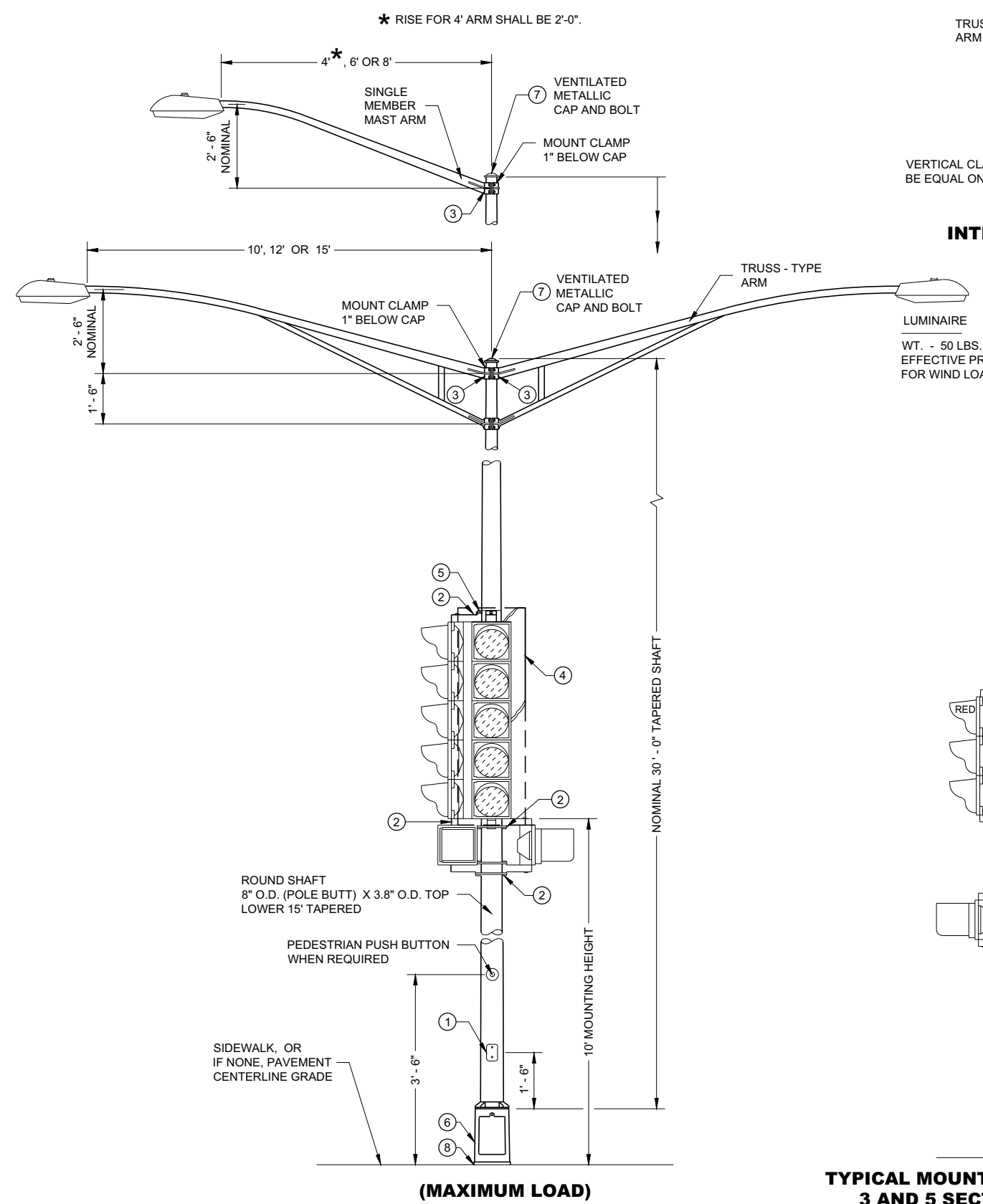
WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

- ① 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) 1/2" X 3/4" - 20 TPI, STAINLESS STEEL, HEX HEAD BOLTS.
- ② SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.
- ③ GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
- ④ SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.
- ⑤ POLE MOUNTED SIGNAL FACES SHALL REQUIRE ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.
- ⑥ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- ⑦ 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.
- ⑧ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.
- ⑨ USE 1 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 1/2" OPENING IN SIGNAL FACES AND BRACKET ENDS.

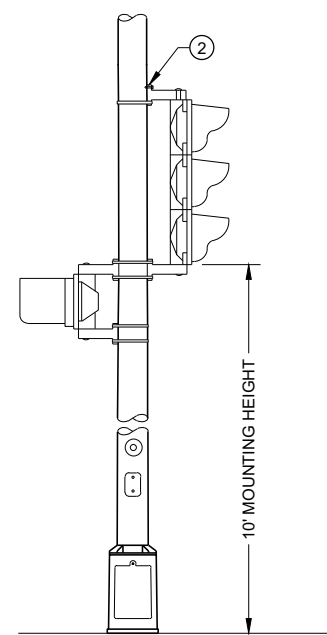


INTERCHANGEABLE MOUNTING DETAIL

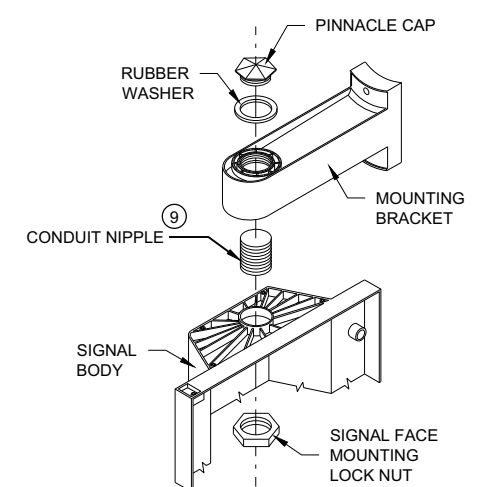
LUMINAIRE
WT. - 50 LBS.
EFFECTIVE PROJECTED AREA
FOR WIND LOADING = 1.5 SQ. FT.



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



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

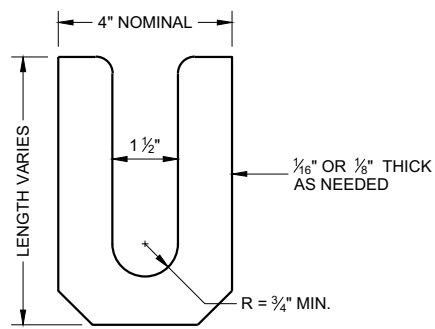


SIGNAL FACE MOUNTING DETAIL (BANDED)

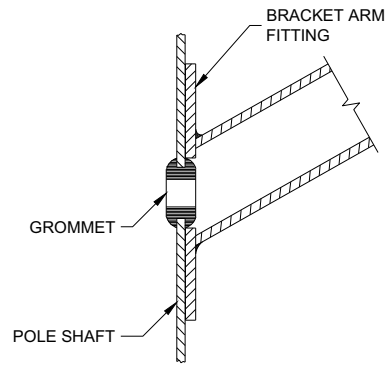
**POLE MOUNTINGS FOR
TRAFFIC SIGNALS AND
LIGHTING UNITS, TYPE 4**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

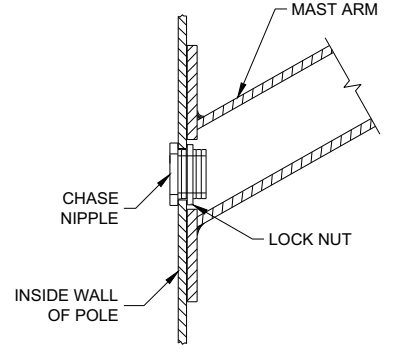
TYPE 4 POLE MOUNTING CONFIGURATION



LEVELING SHIM
SHALL BE ALUMINUM



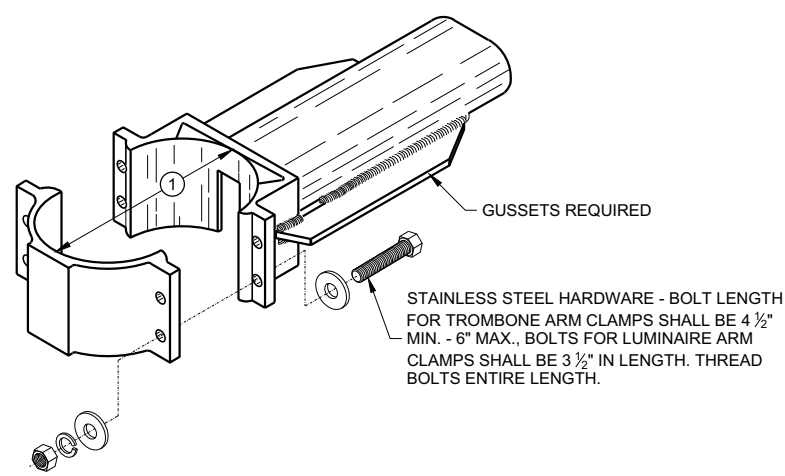
TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



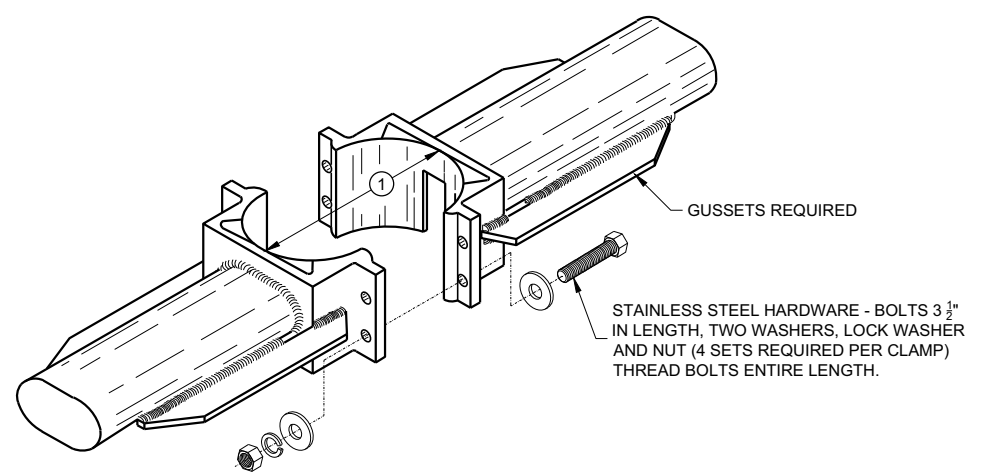
TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

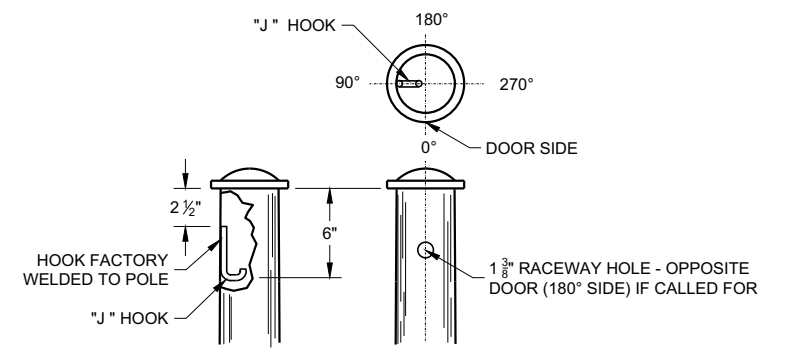
- CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.
- ① 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
 - ② INDIVIDUAL BASE PLATE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



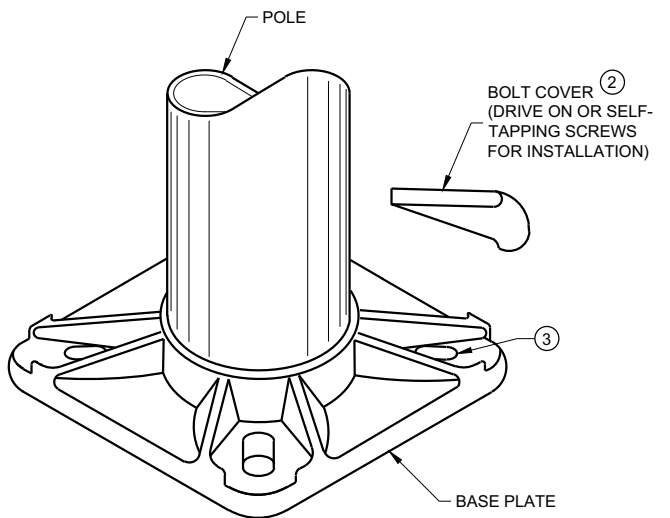
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



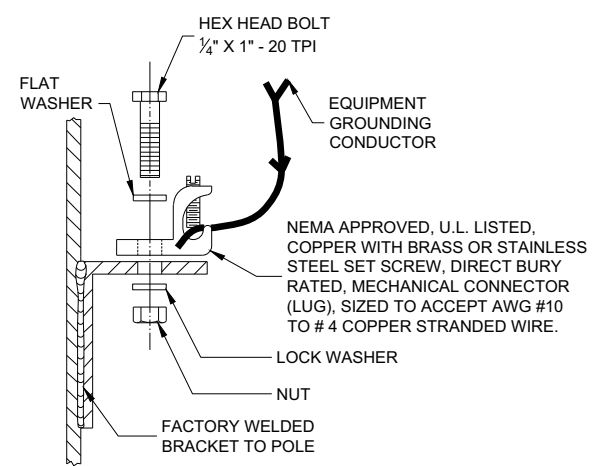
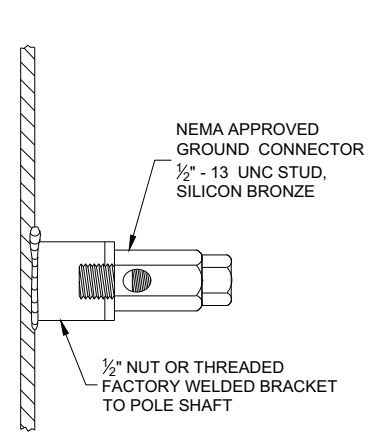
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS



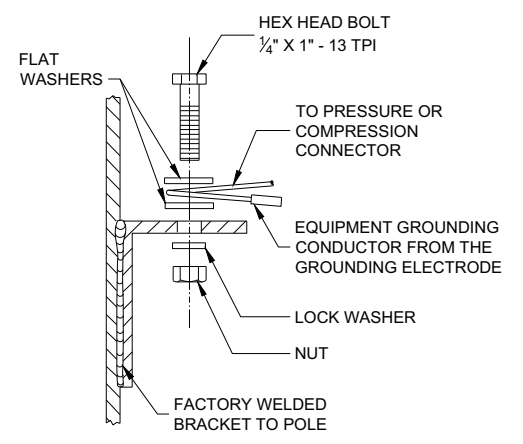
TYPICAL "J" HOOK LOCATION



BASE PLATE



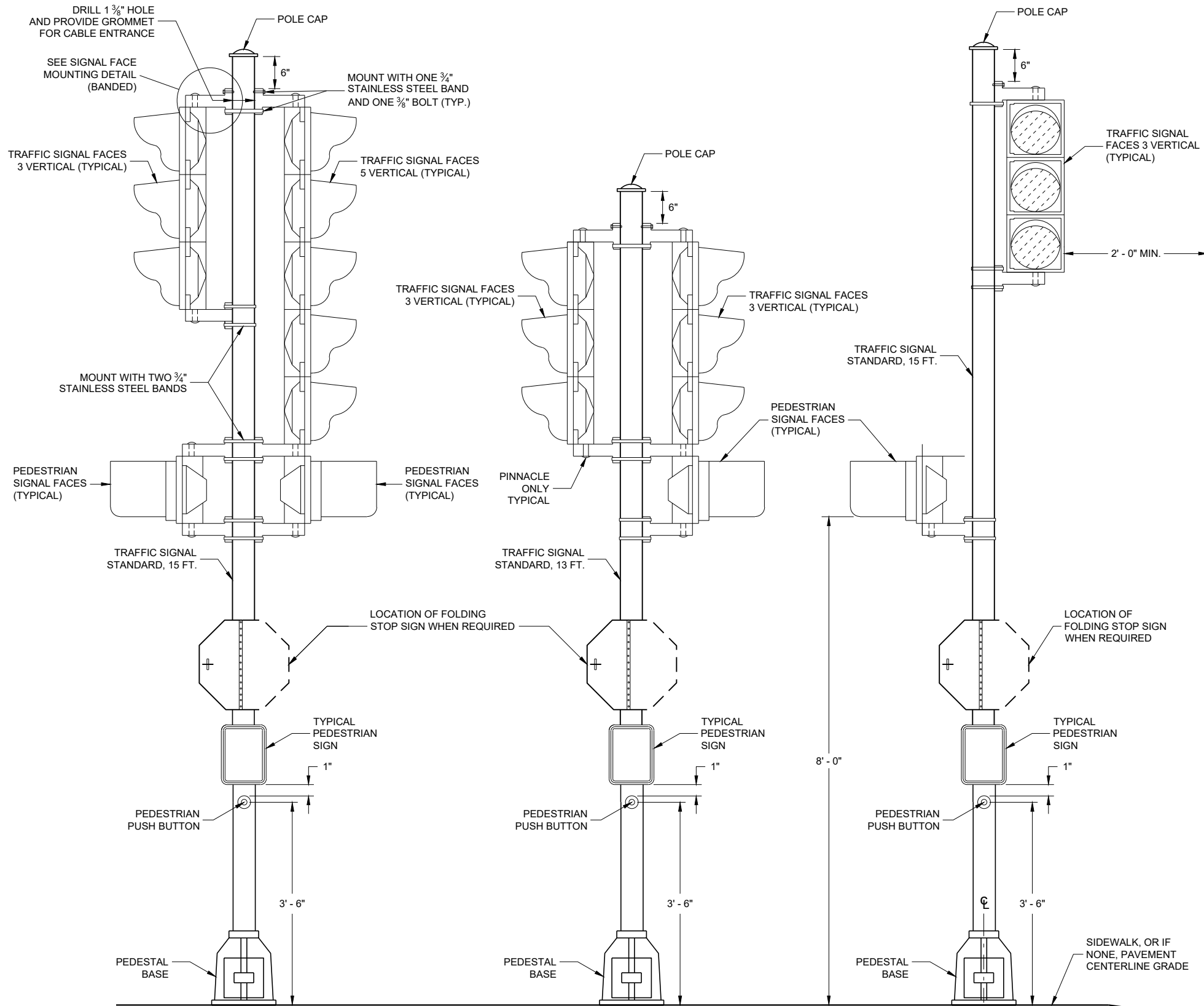
TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



TRAFFIC SIGNAL STANDARD - 15 FT.

TRAFFIC SIGNAL STANDARD - 13 FT.

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

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

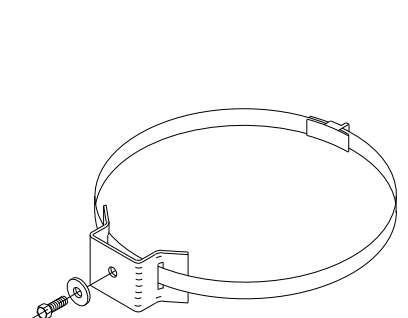
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

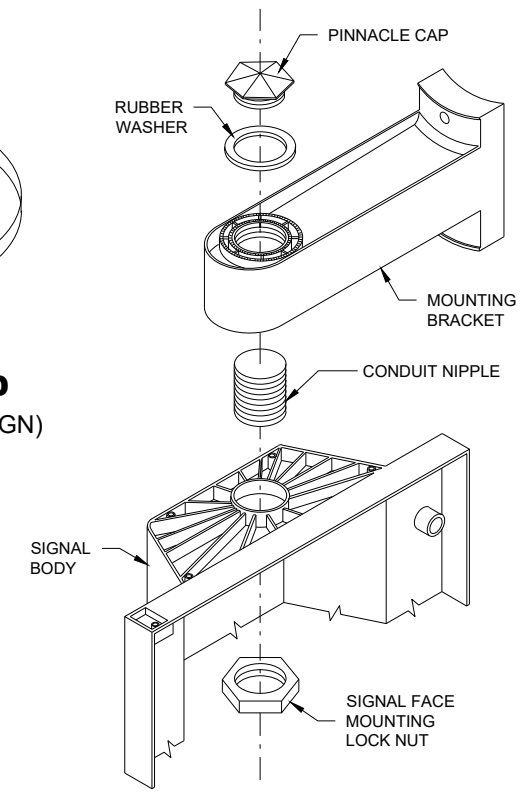
FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

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



TYPICAL SIGN MOUNTING BAND (TOP AND BOTTOM OF SIGN)



SIGNAL FACE MOUNTING DETAIL (BANDED)

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

STATE OF WISCONSIN
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APPROVED
2/28/2013 DATE /S/ Ahmet Demirelek
STATE ELECTRICAL ENGINEER

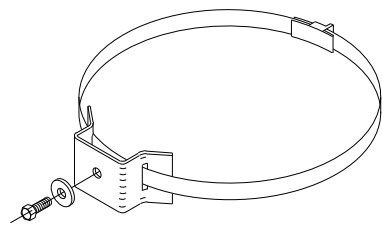
FHWA

6

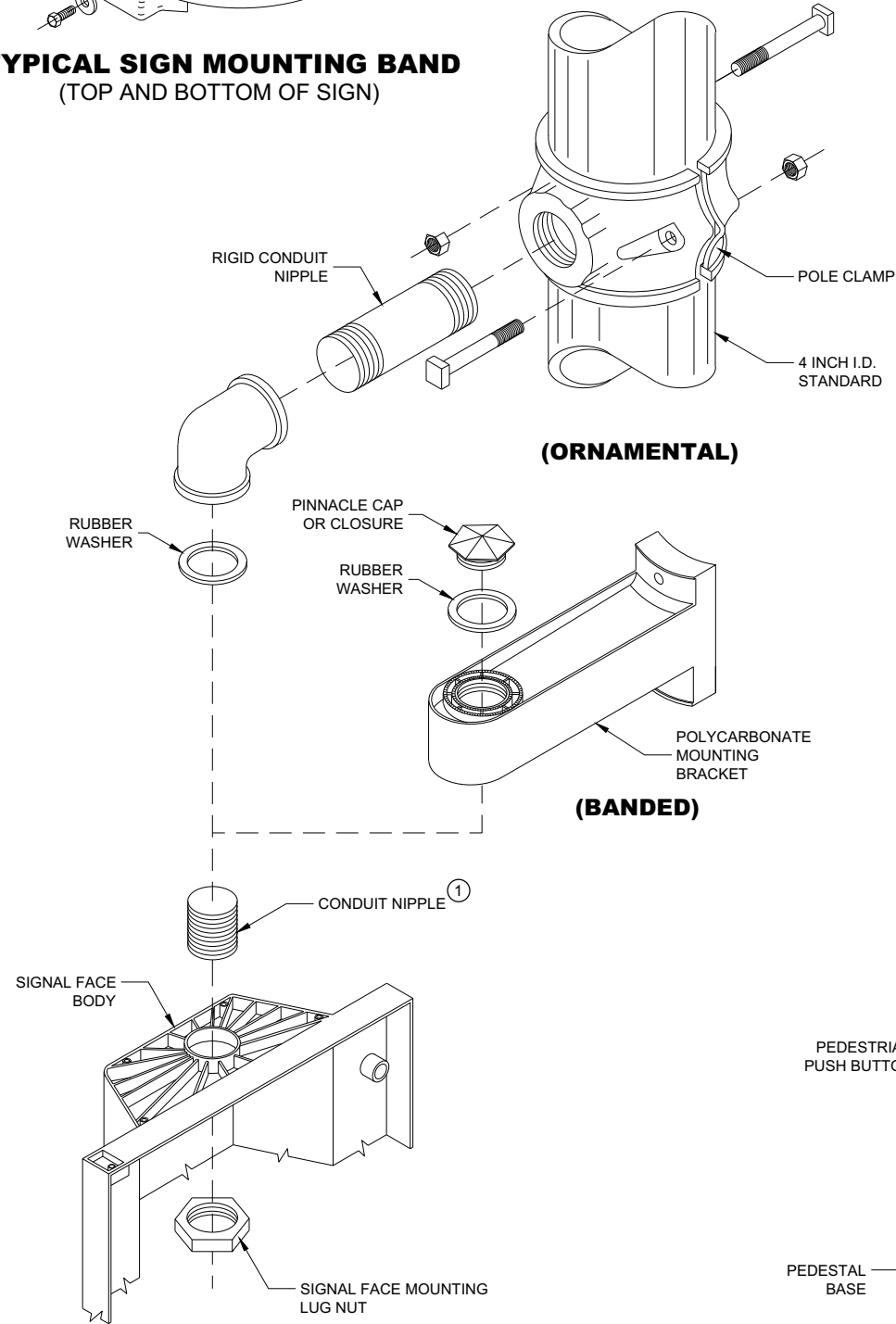
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SDD 09E06 - 05

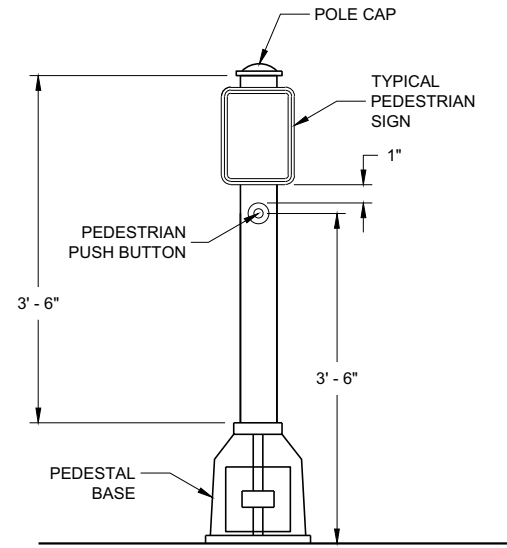
SDD 09E06 - 05



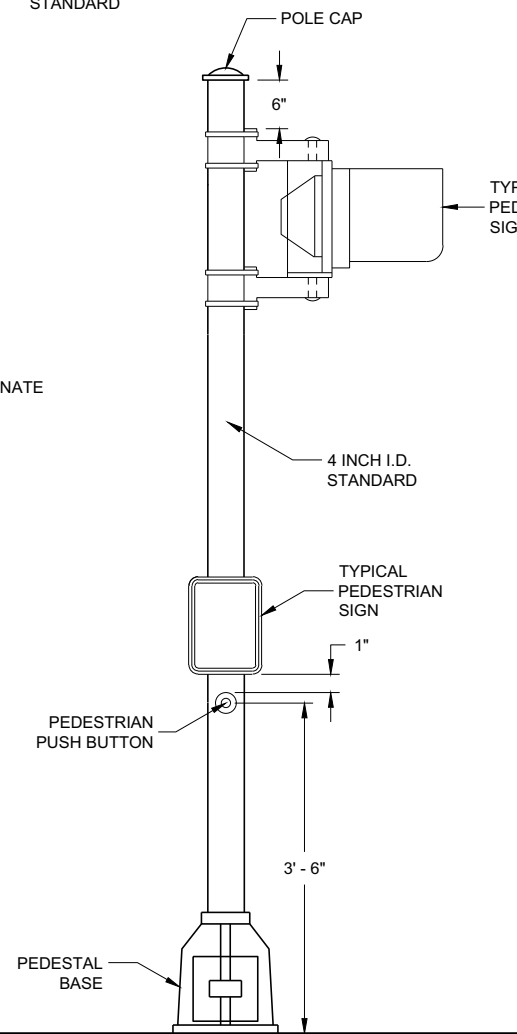
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



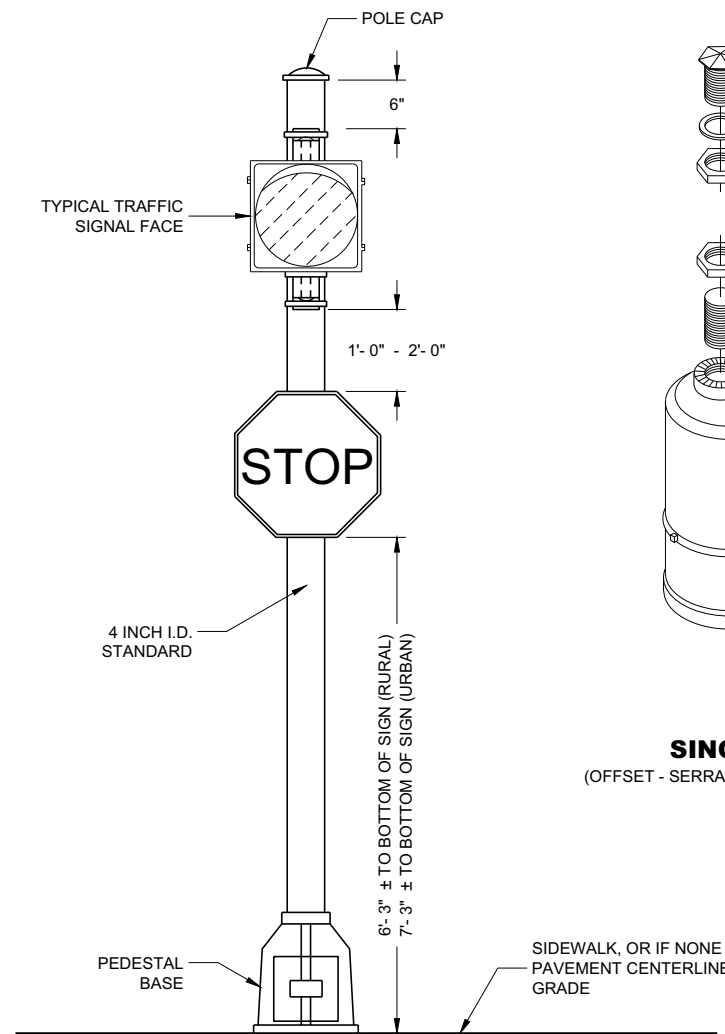
SIGNAL FACE MOUNTING DETAILS



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.

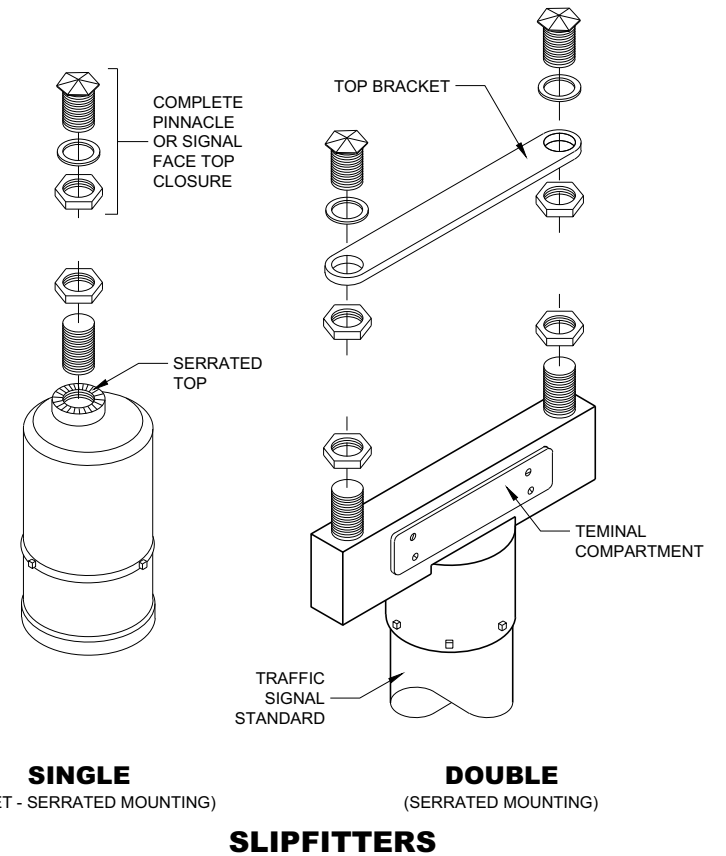
LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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



SINGLE
(OFFSET - SERRATED MOUNTING)

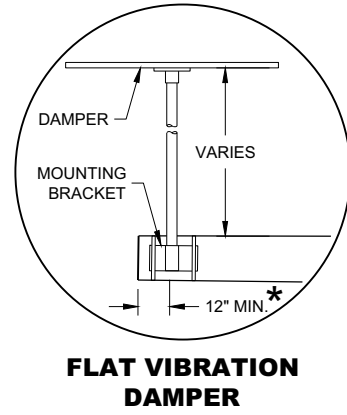
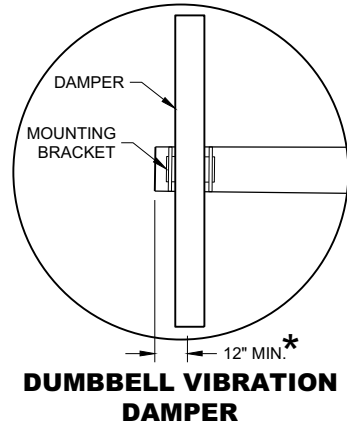
DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

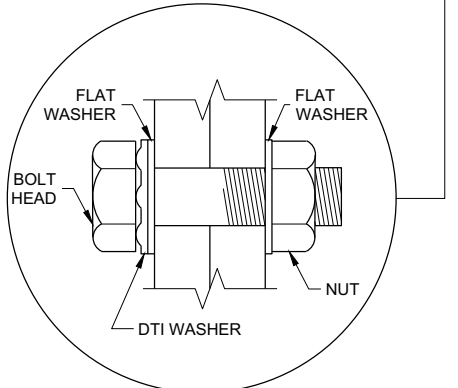
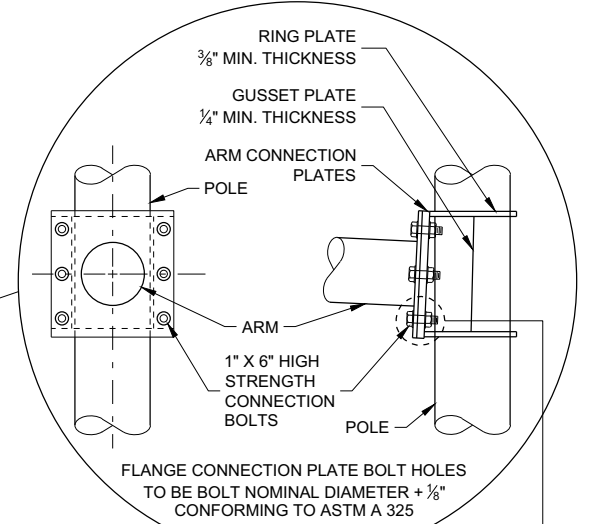
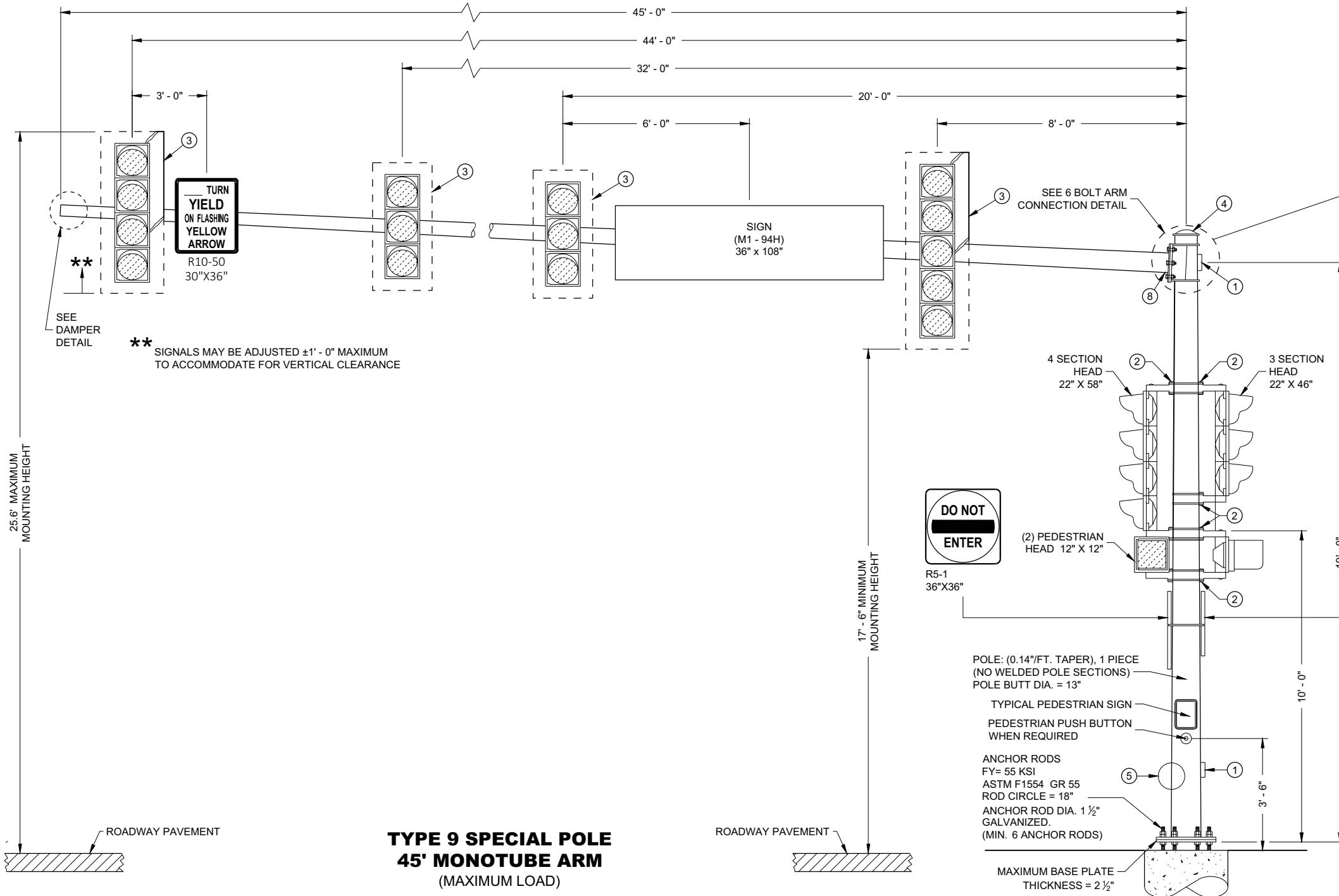
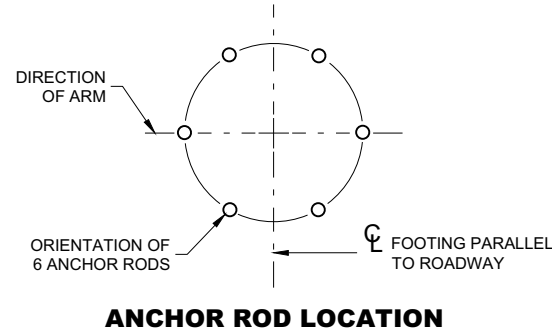
TRAFFIC SIGNAL STANDARD
PEDESTRIAN AND FLASHER
TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

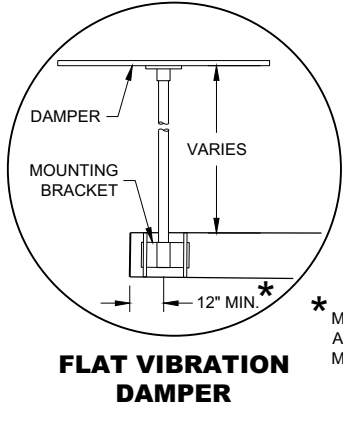
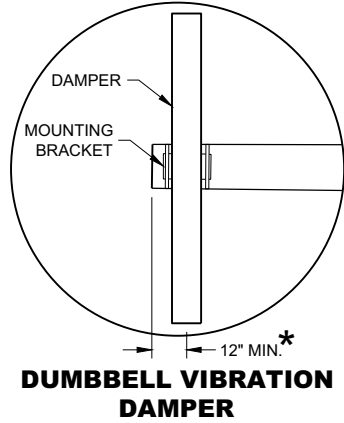


SDD 09E08 - 09d

**TYPE 9 SPECIAL POLE
45' MONOTUBE ARM
(MAXIMUM LOAD)**

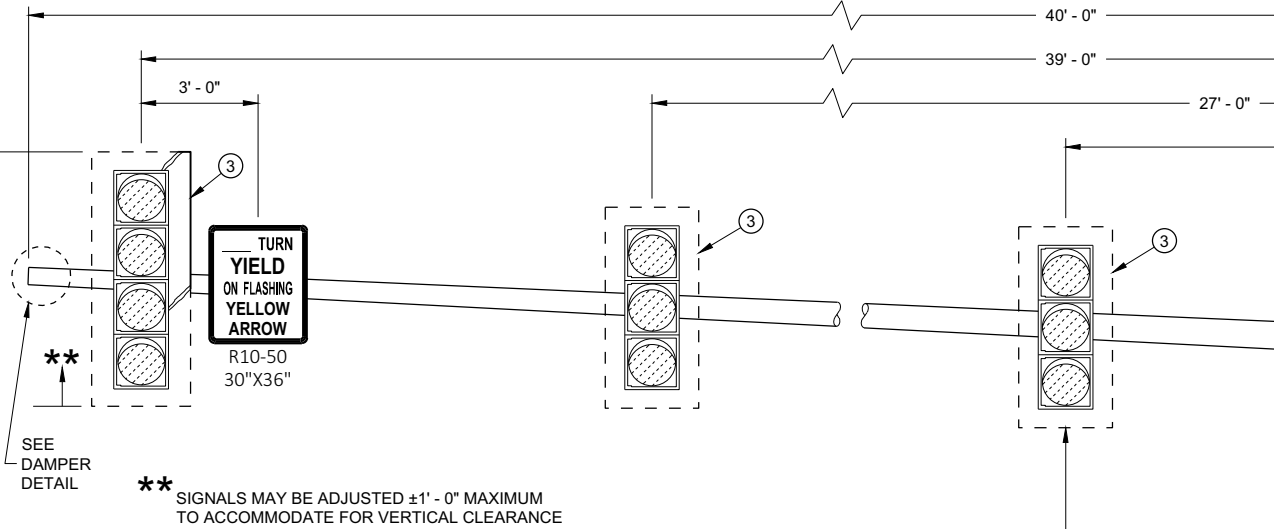
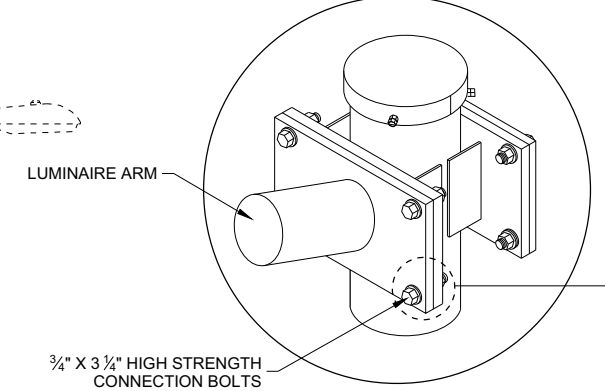
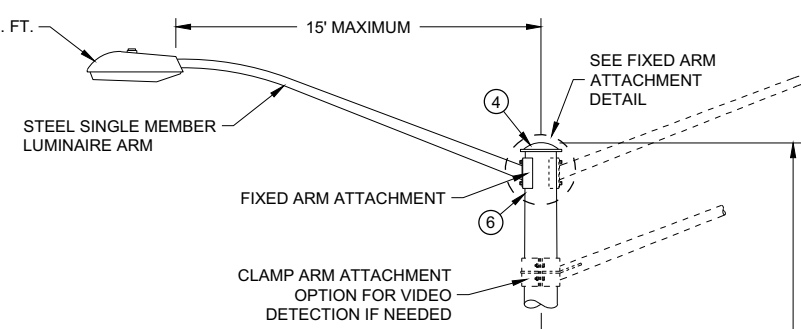
TYPE 9 SPECIAL POLE 45' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/s/ Ahmet Demirelek STATE ELECTRICAL ENGINEER
FHWA	

SDD 09E08 - 09d



* 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.

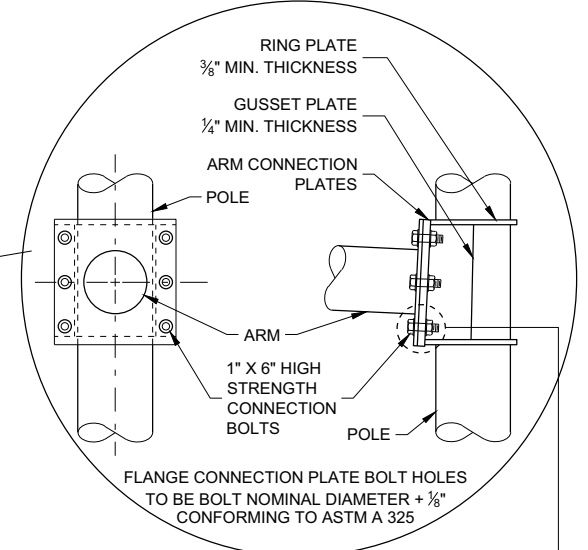


** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

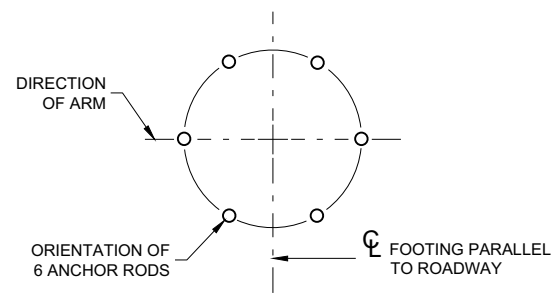
SEE DAMPER DETAIL



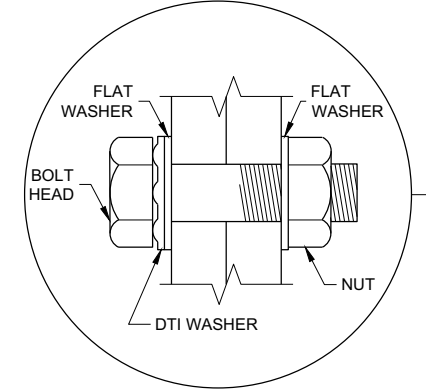
SEE 6 BOLT ARM CONNECTION DETAIL



6 BOLT ARM CONNECTION DETAIL



ANCHOR ROD LOCATION



RECOMMENDED BOLT ASSEMBLY DETAIL

25.6' MAXIMUM MOUNTING HEIGHT

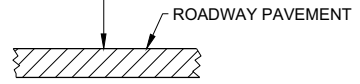
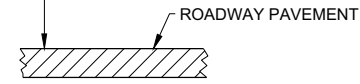
17' - 6" MINIMUM MOUNTING HEIGHT

30' - 0" NOMINAL

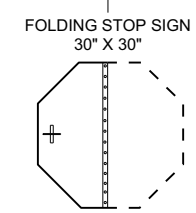
19' - 0"

10' - 0"

3' - 6"



MAXIMUM BASE PLATE THICKNESS = 2 1/2"



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)

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

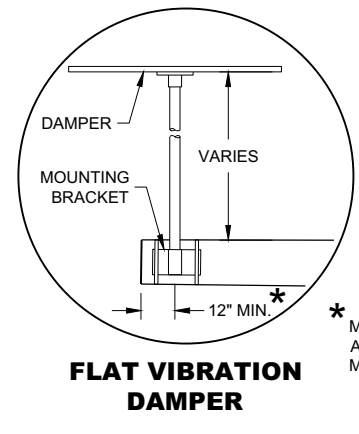
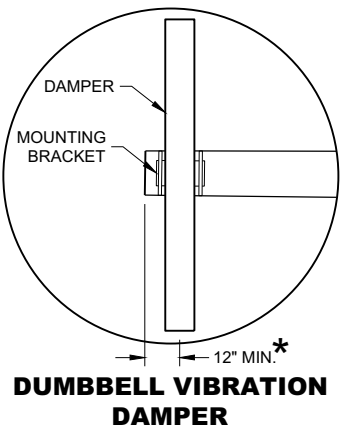
**TYPE 10 SPECIAL POLE
40' MONOTUBE ARM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

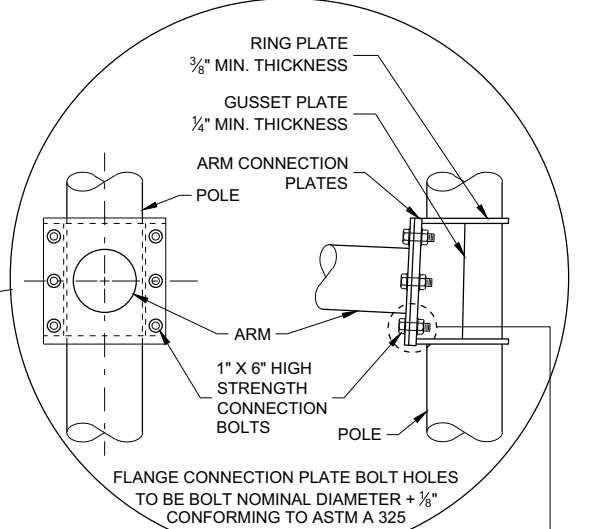
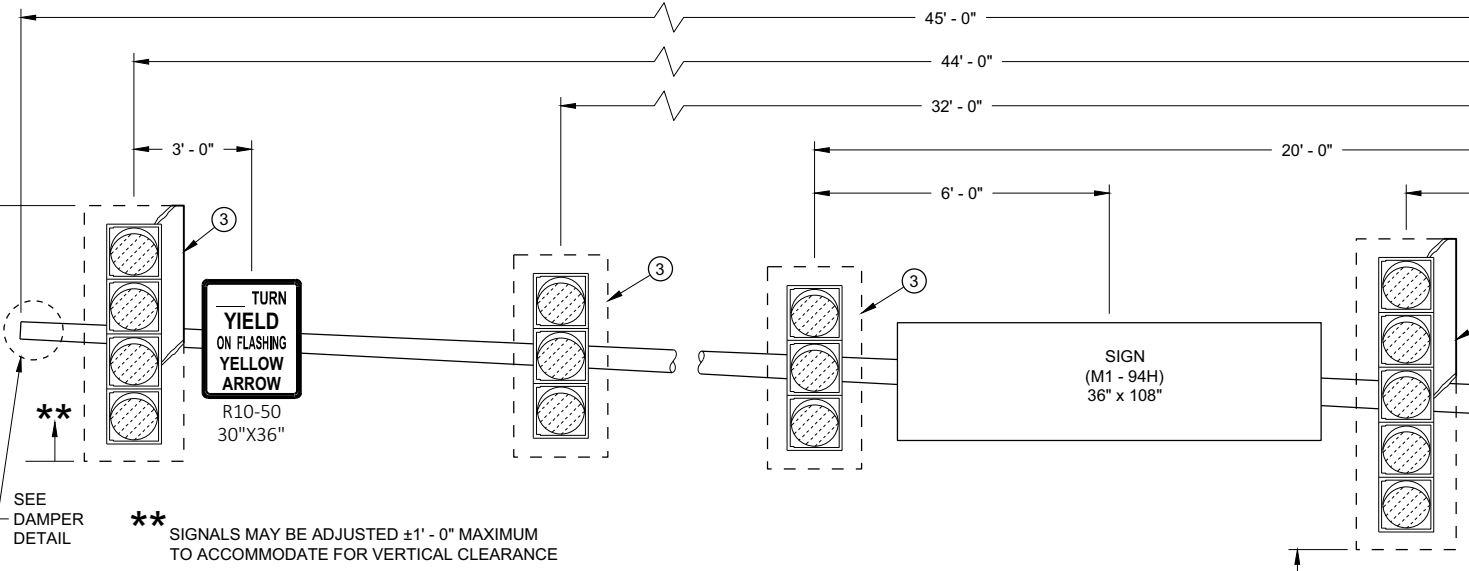
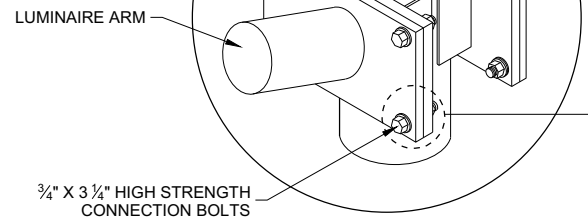
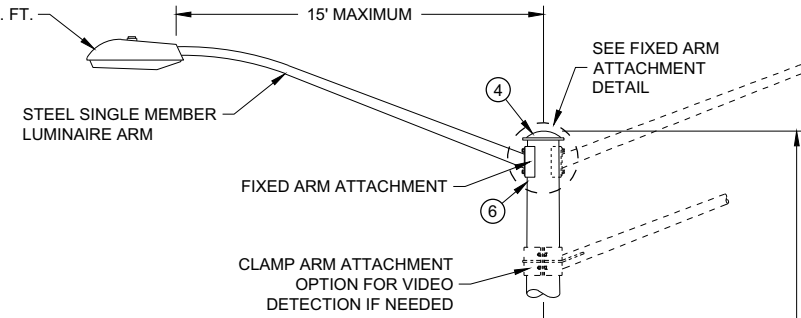
SDD 09E08 - 09g

SDD 09E08 - 09g

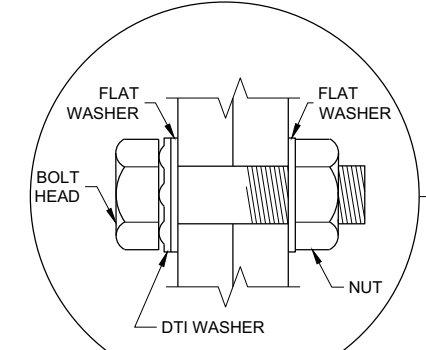
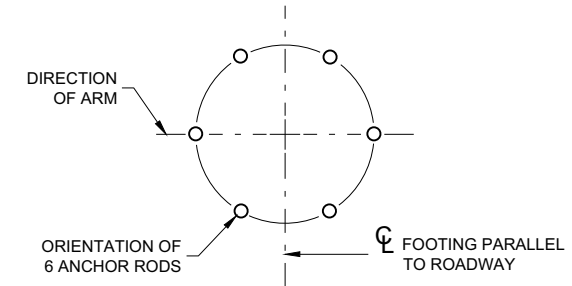


* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.

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



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



25.6' MAXIMUM MOUNTING HEIGHT

17.6' MINIMUM MOUNTING HEIGHT

30' - 0" NOMINAL

19' - 0"

10' - 0"

3' - 6"

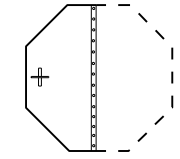
POLE: (0.14"/FT. TAPER), 1 PIECE (NO WELDED POLE SECTIONS) POLE BUTT DIA. = 13"

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)**

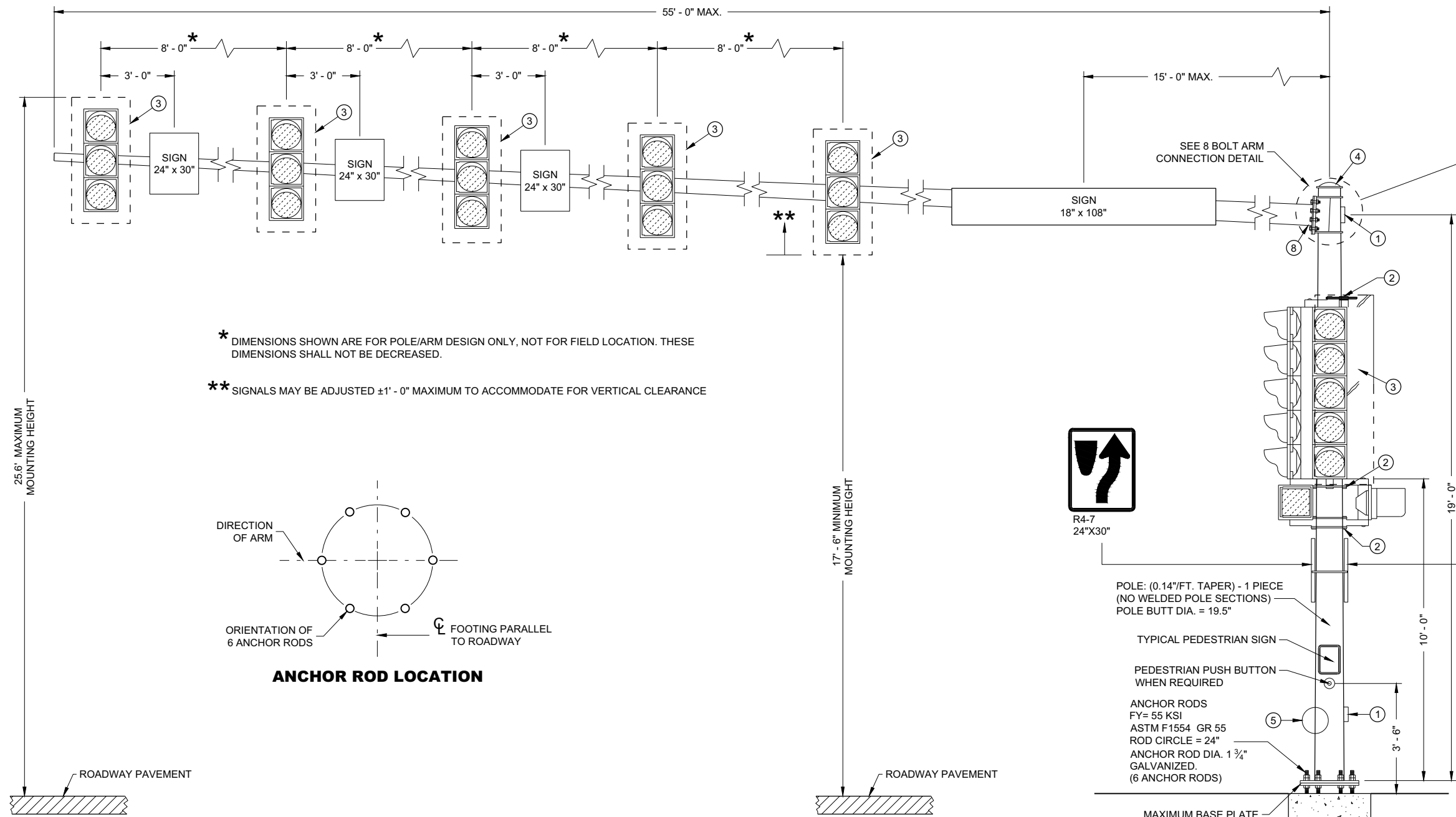
**TYPE 10 SPECIAL POLE
45' MONTUBE ARM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

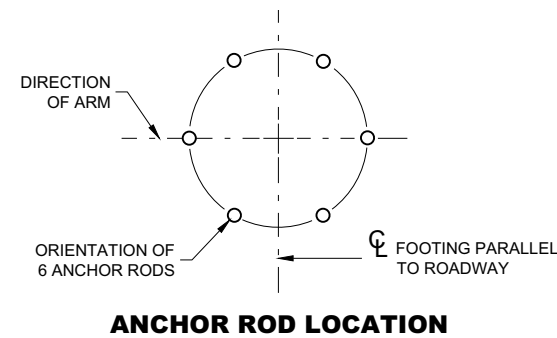
SDD 09E08 - 08h

SDD 09E08 - 08h

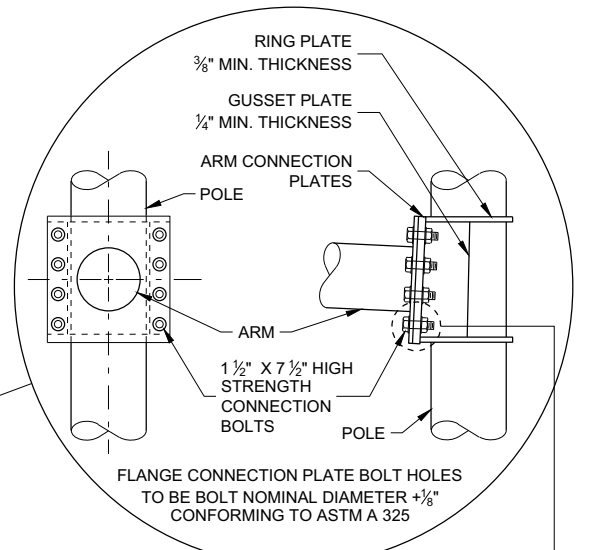


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

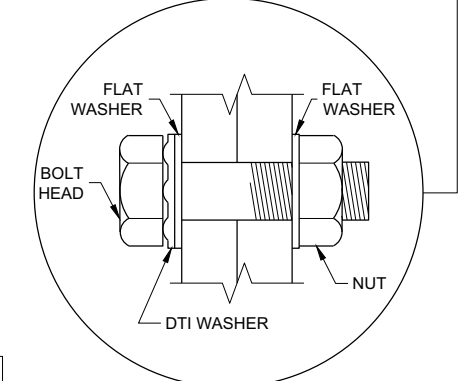
** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE



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



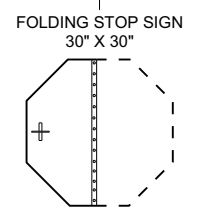
**8 BOLT ARM
CONNECTION DETAIL**



**RECOMMENDED BOLT
ASSEMBLY DETAIL**



- POLE: (0.14\"/>



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.

STEEL SINGLE MEMBER
LUMINAIRE ARM

SEE FIXED ARM
ATTACHMENT
DETAIL

FIXED ARM ATTACHMENT

CLAMP ARM ATTACHMENT
OPTION FOR VIDEO
DETECTION IF NEEDED

LUMINAIRE ARM

3/4" X 3 1/2" HIGH STRENGTH
CONNECTION BOLTS

FIXED ARM ATTACHMENT DETAIL

RING PLATE
3/8" MIN. THICKNESS

GUSSET PLATE
1/4" MIN. THICKNESS

ARM CONNECTION
PLATES

POLE

ARM

1 1/2" X 7 1/2" HIGH
STRENGTH
CONNECTION
BOLTS

POLE

FLANGE CONNECTION PLATE BOLT HOLES
TO BE BOLT NOMINAL DIAMETER +1/8"
CONFORMING TO ASTM A 325

8 BOLT ARM CONNECTION DETAIL

FLAT WASHER

FLAT WASHER

BOLT
HEAD

DTI WASHER

NUT

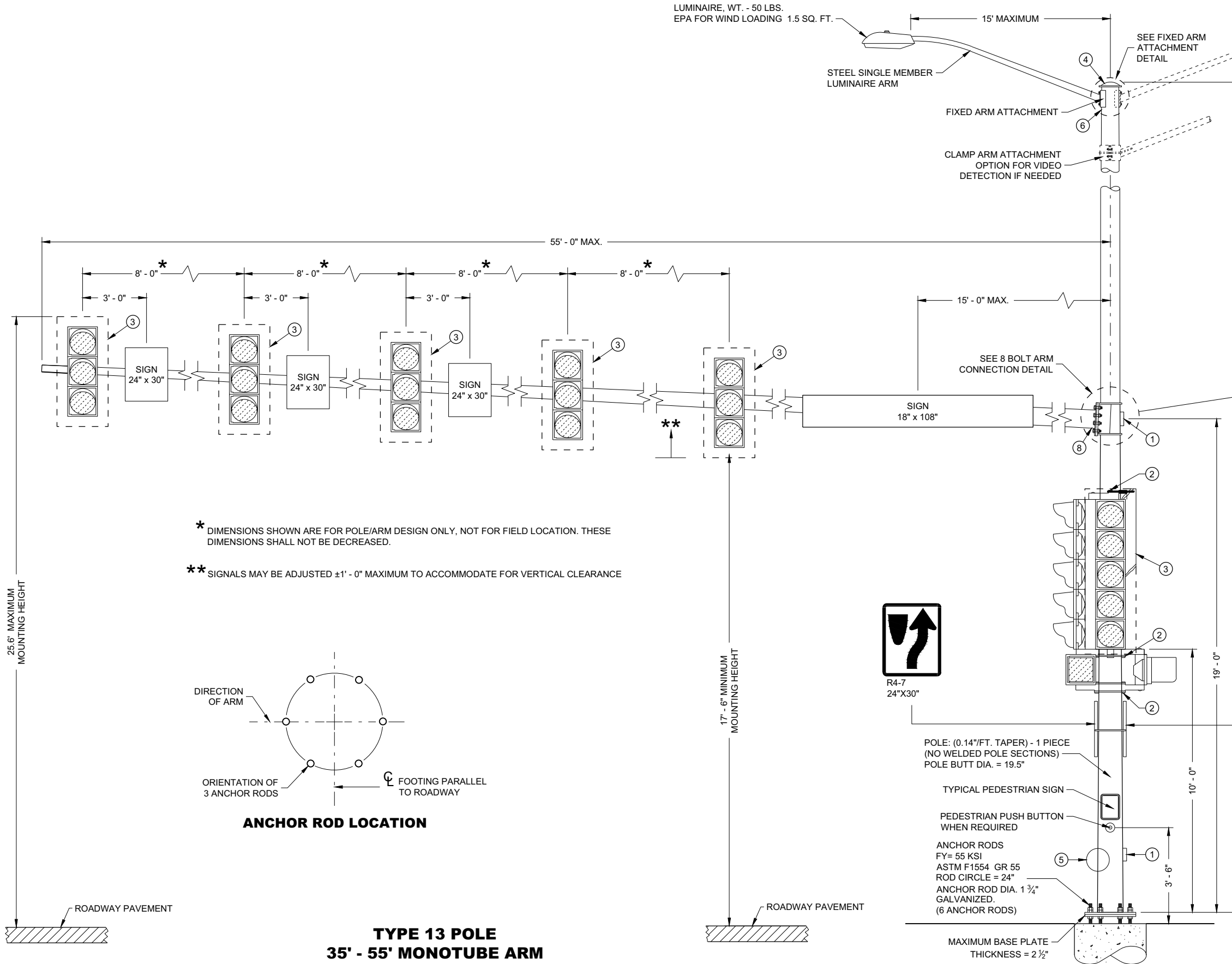
**RECOMMENDED BOLT
ASSEMBLY DETAIL**

**TYPE 13 POLE
35' - 55' MONOTUBE ARM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

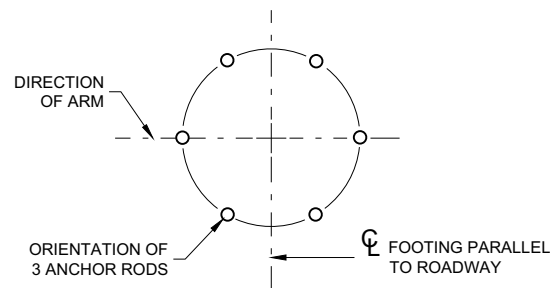
APPROVED
August 2020 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGINEER

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 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"

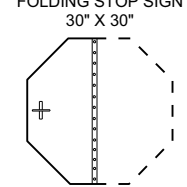
TYPICAL PEDESTRIAN SIGN

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"

FOLDING STOP SIGN
30" X 30"



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.

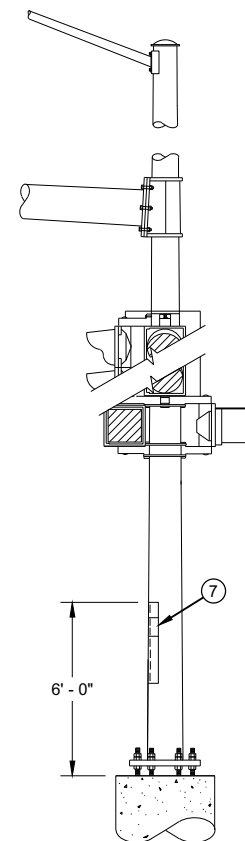
SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

- 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.

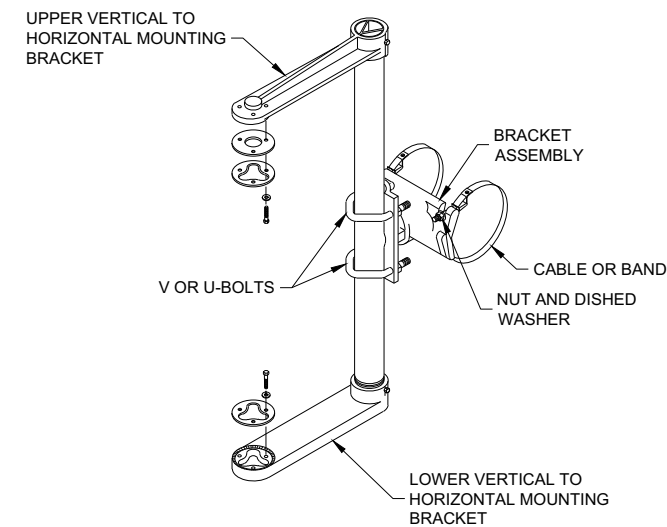
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

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.

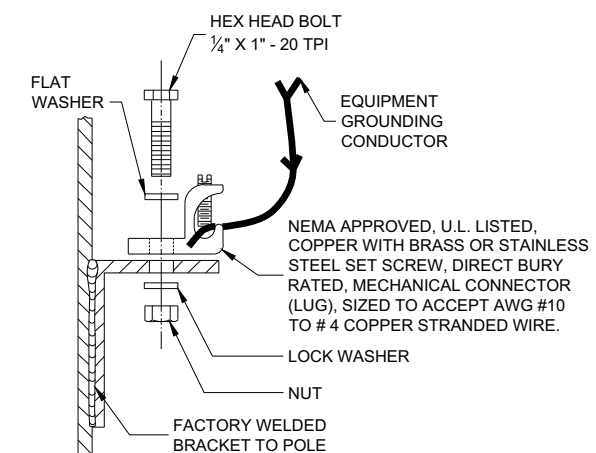


**STRUCTURAL IDENTIFICATION
PLAQUE PLACEMENT**



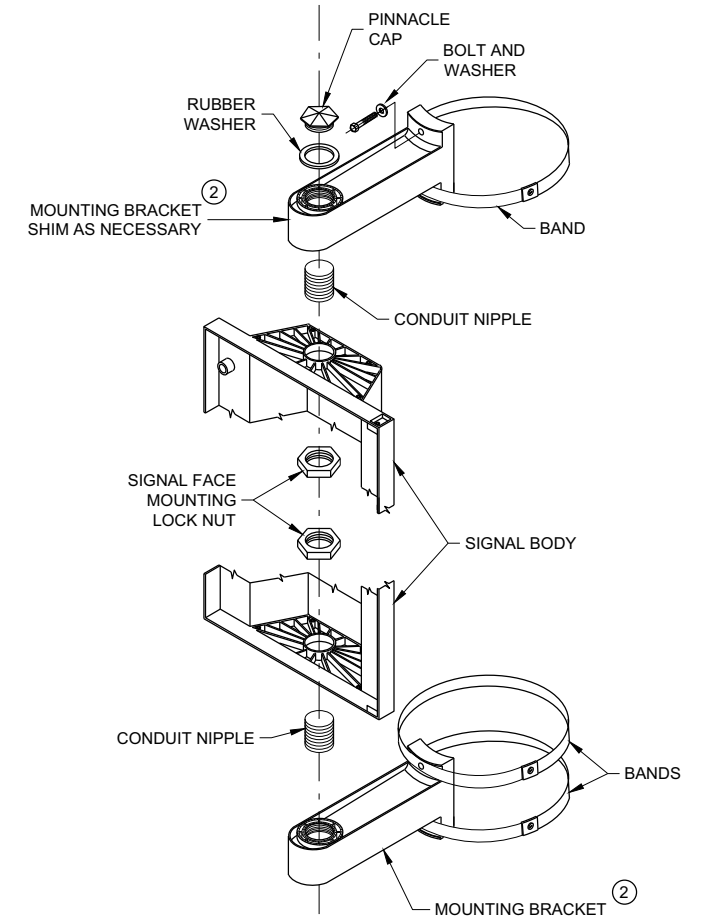
**SIGNAL FACE MOUNTING BRACKET
DETAIL FOR MONOTUBE ARM**

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

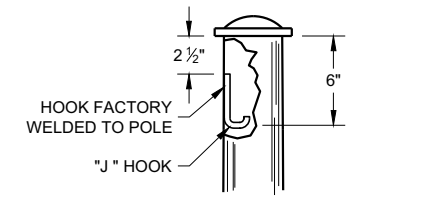


**TYPICAL GROUNDING
CONNECTIONS**

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



**SIGNAL FACE VERTICAL
MOUNTING DETAIL**



**TYPICAL "J" HOOK
WIRE SUPPORT**

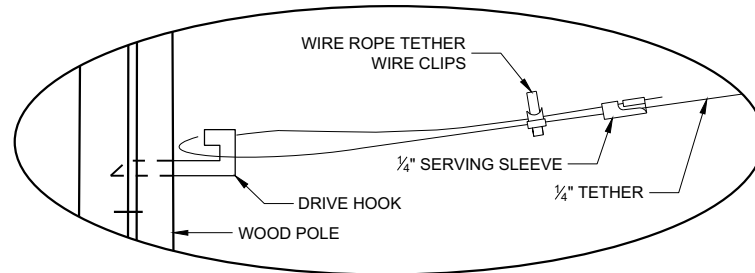
**GENERAL NOTES AND
HARDWARE FOR TYPES 9,10,
9/10 SPECIAL, 12 AND 13
POLES WITH MONOTUBE ARMS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

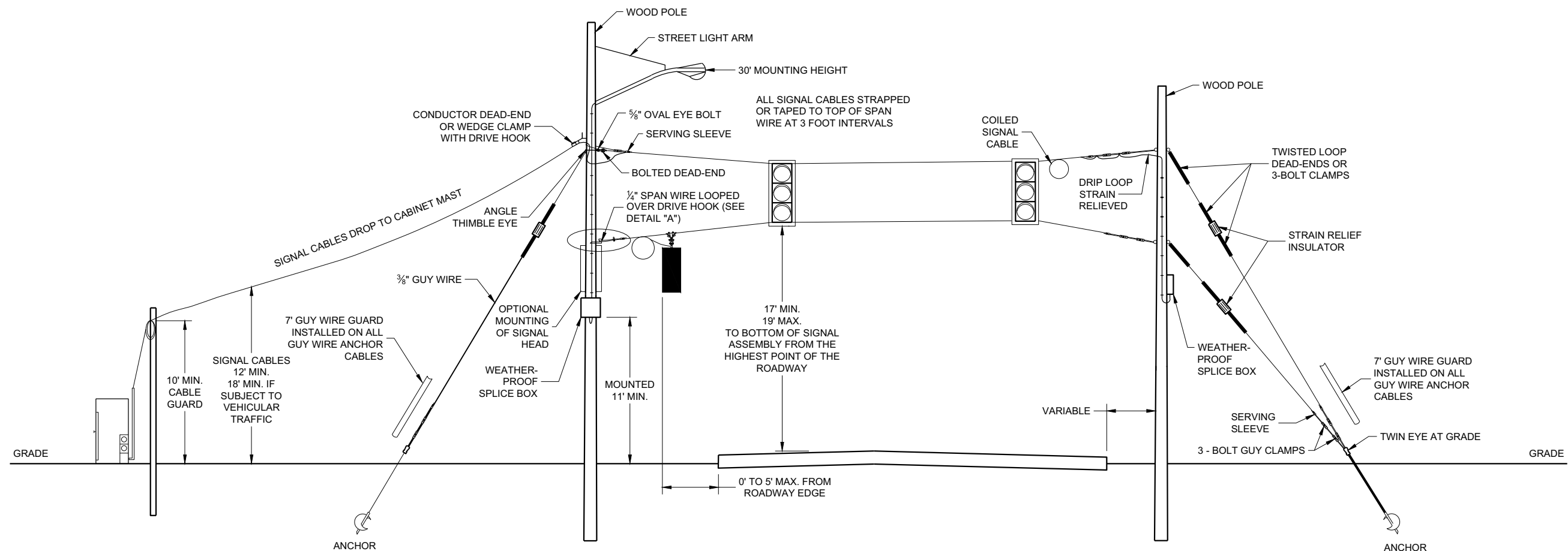


DETAIL "A"

GENERAL NOTES

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

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



SPAN WIRE TEMPORARY SIGNALS

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

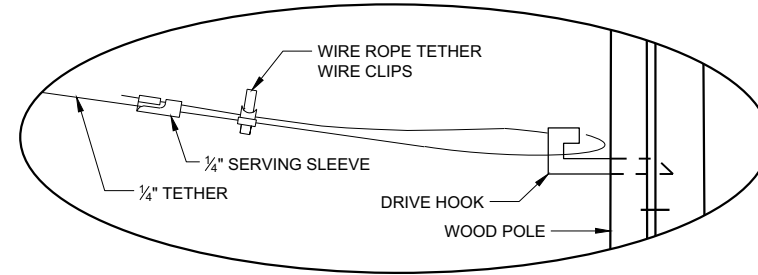
6

6

SDD09G01 - 04a

SDD09G01 - 04a

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

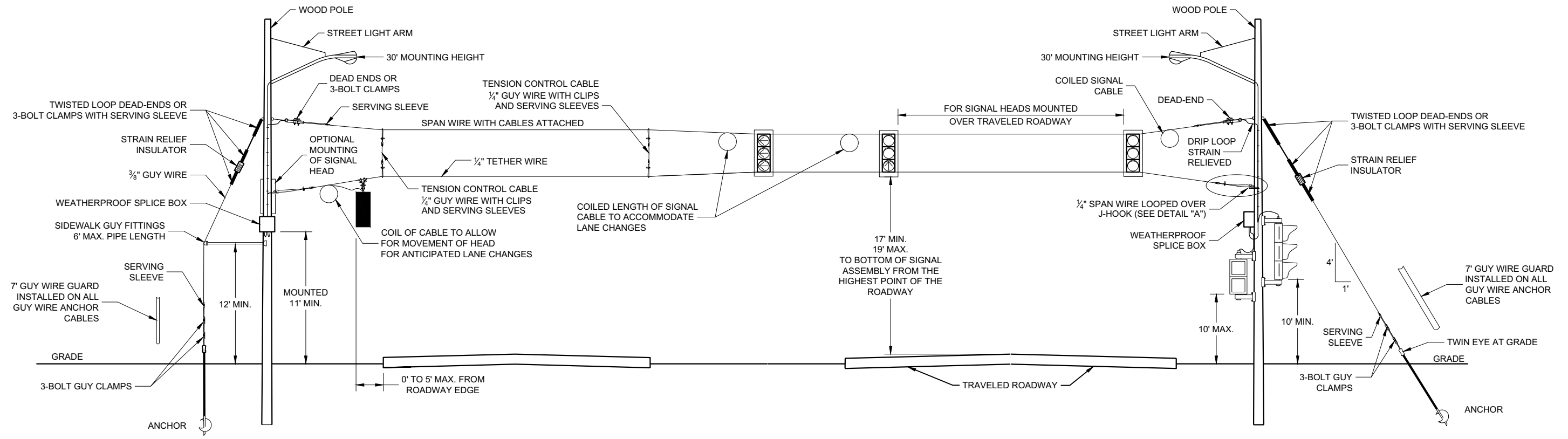


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 - NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
 - FAR INDICATION SHALL BE MAINTAINED OVER 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.



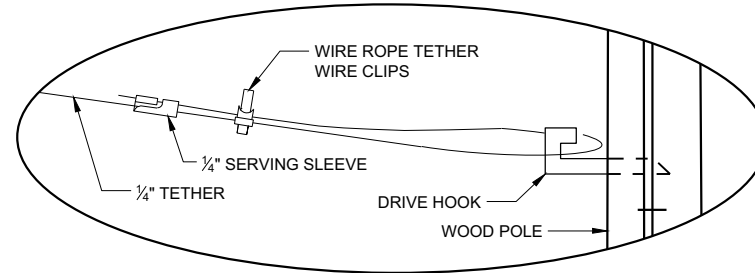
**SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS**

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

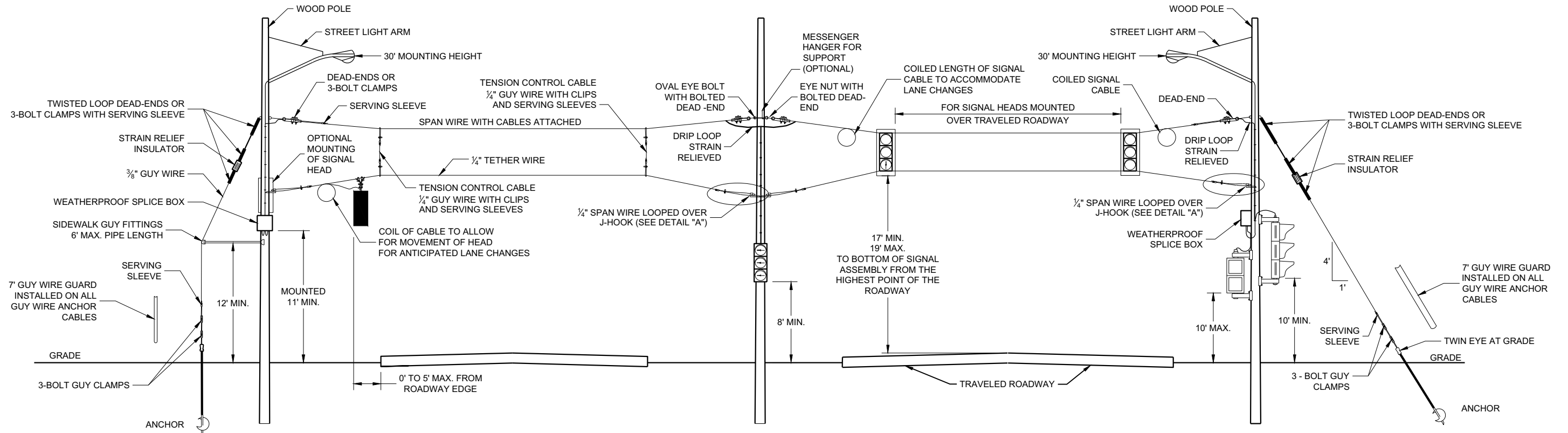


DETAIL "A"

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**SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS**

**SPAN WIRE TEMPORARY
TRAFFIC SIGNAL**

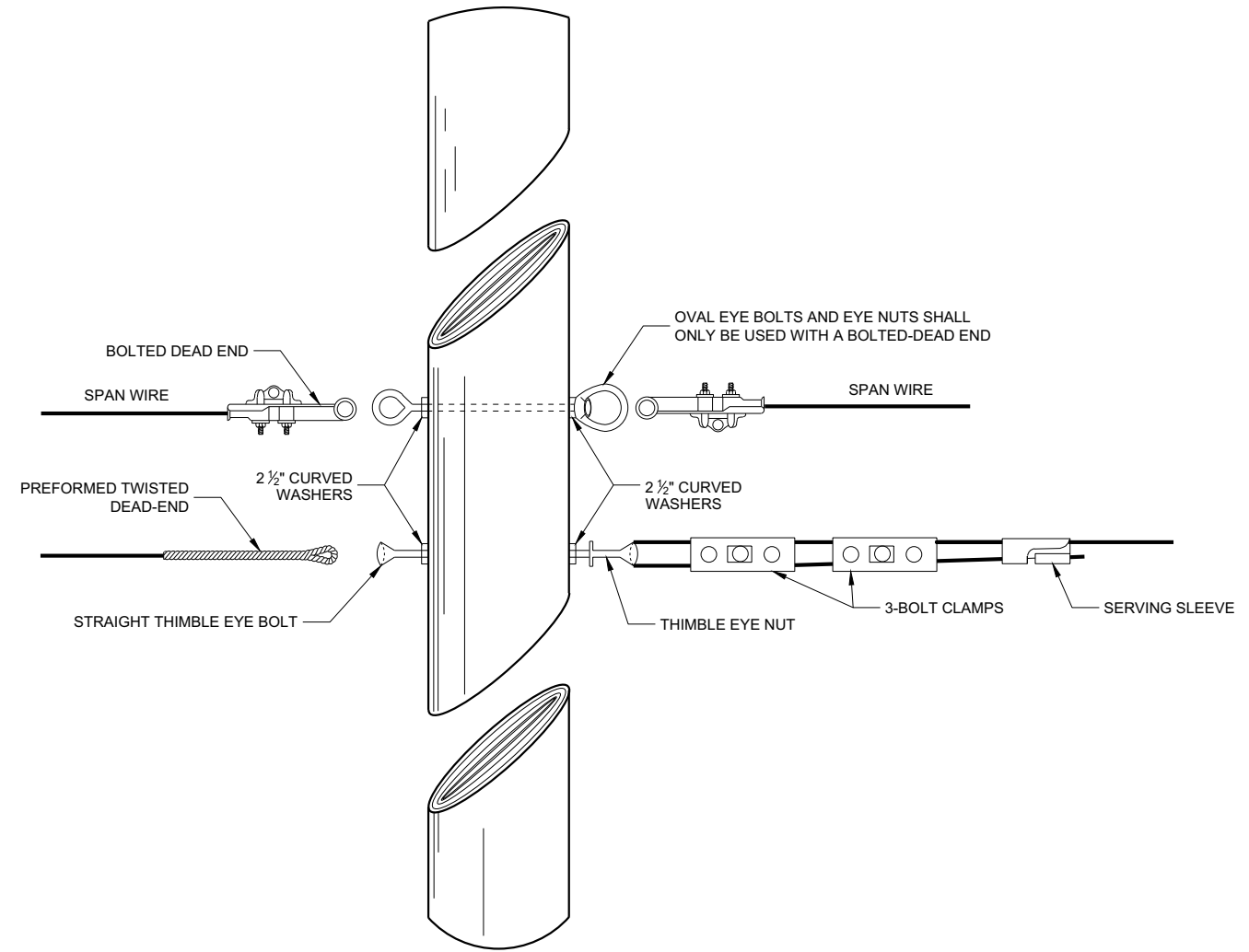
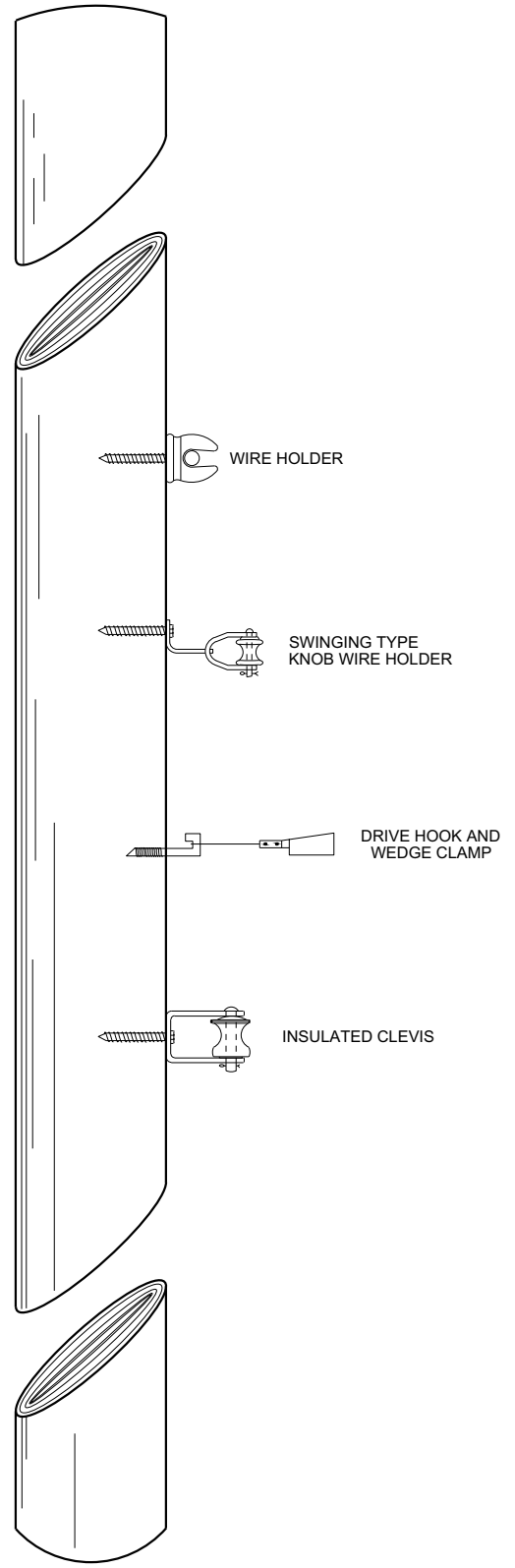
STATE OF WISCONSIN
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June 2015 /S/ Ahmet Demerbilek
DATE STATE ELECTRICAL ENGINEER

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SDD09G01 - 04c

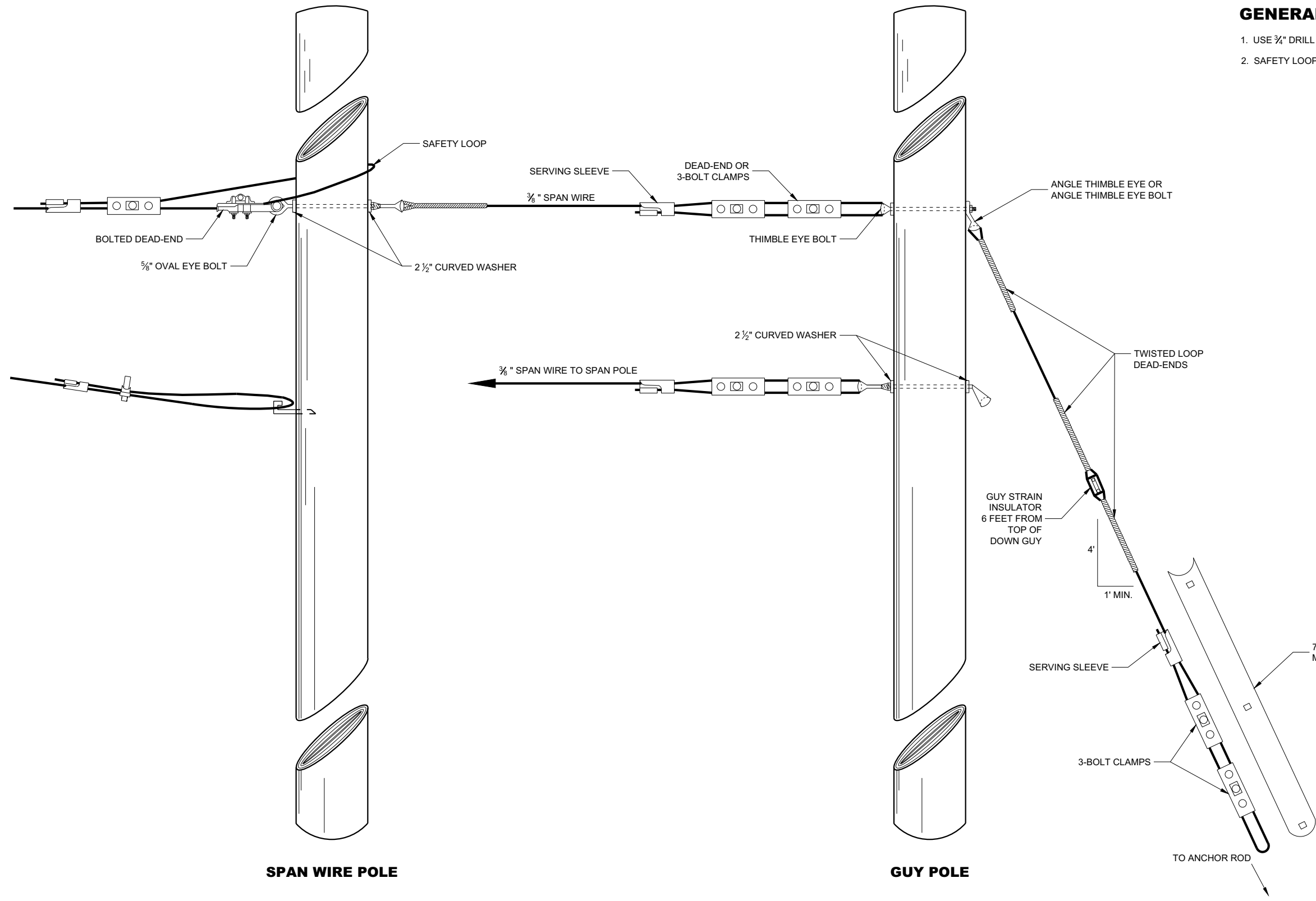
SDD09G01 - 04c



SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

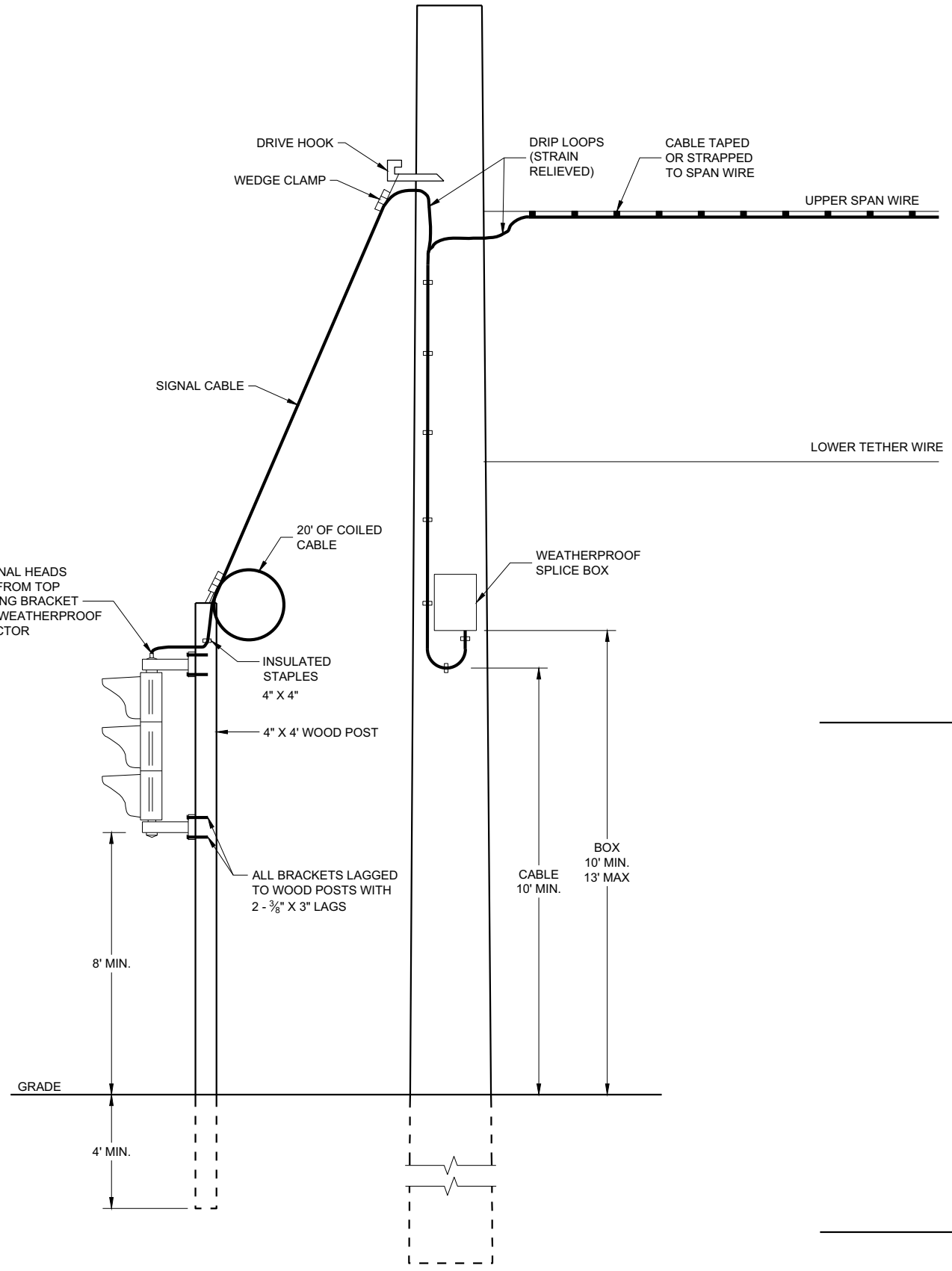
TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

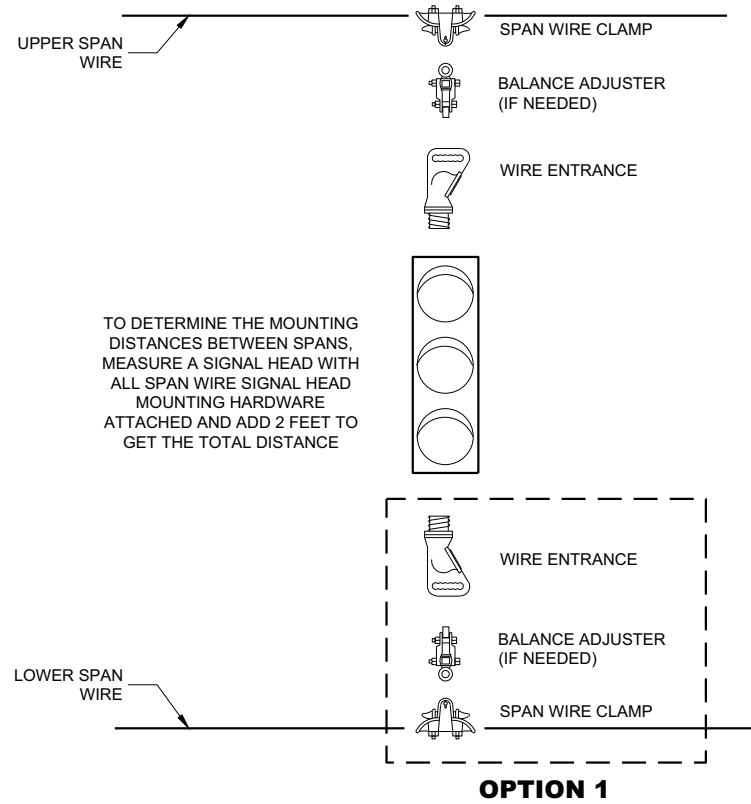
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
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DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

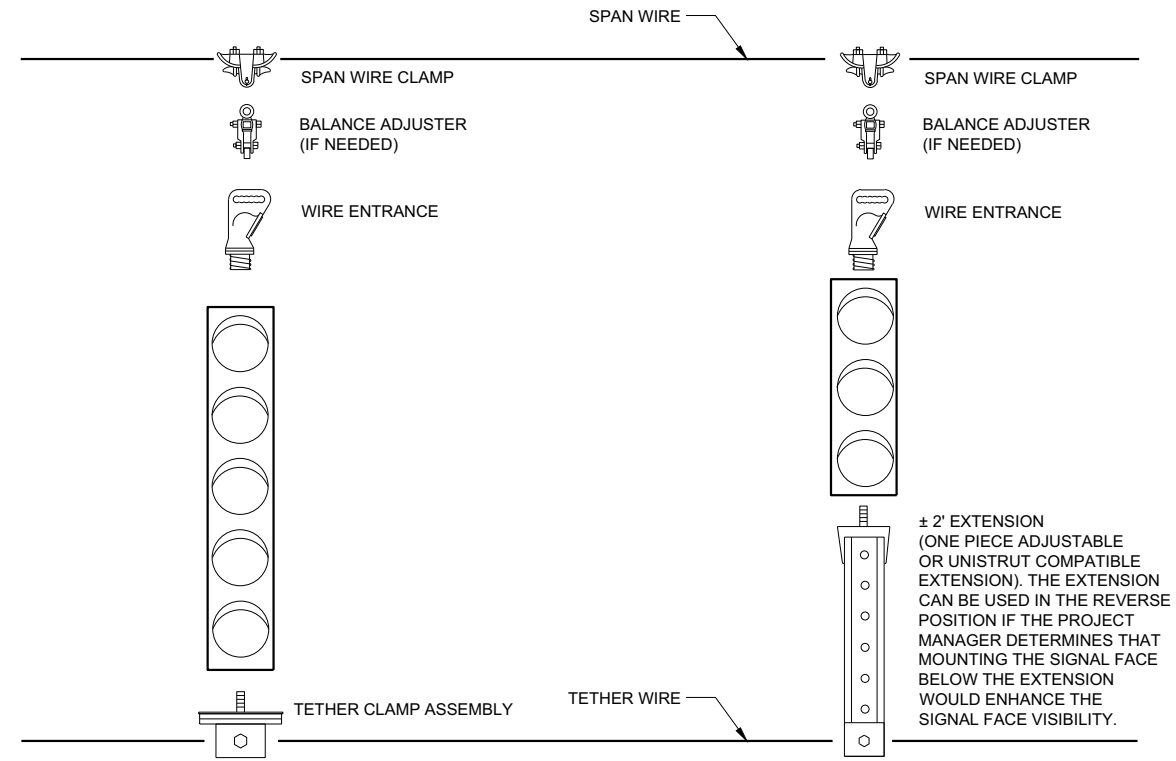
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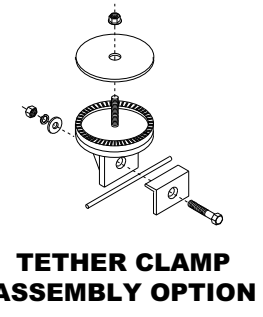
TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL



TYPICAL SPAN WIRE MOUNTING HARDWARE



5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE



USE OPTION 1 OR TETHER CLAMP ASSEMBLY

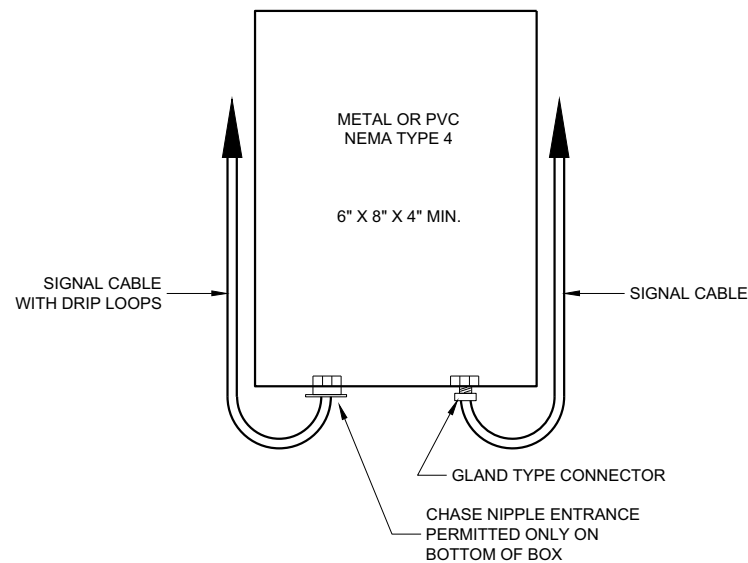
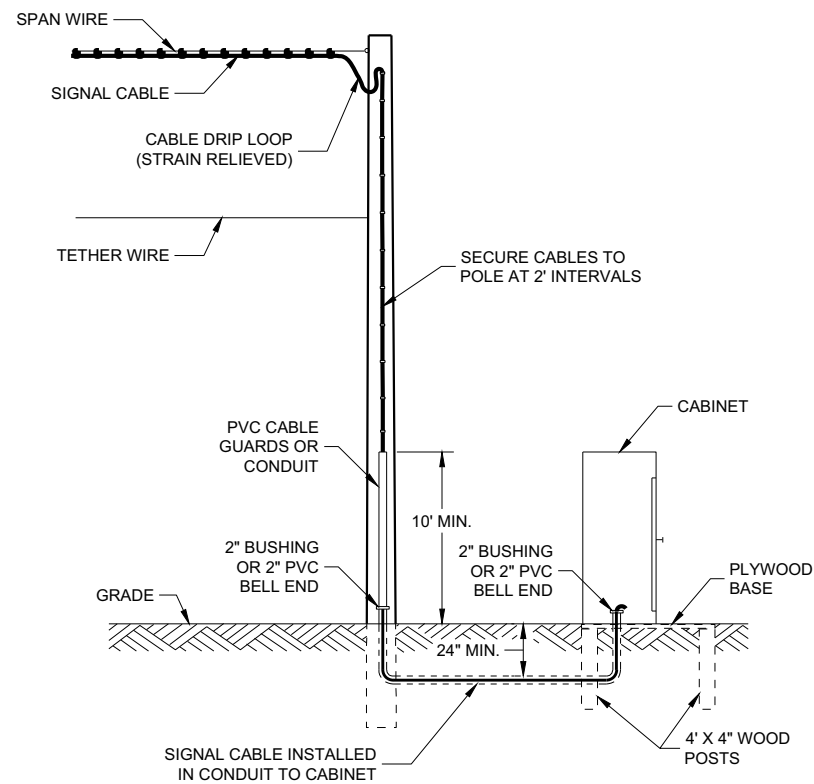
TETHER CLAMP ASSEMBLY OPTION

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

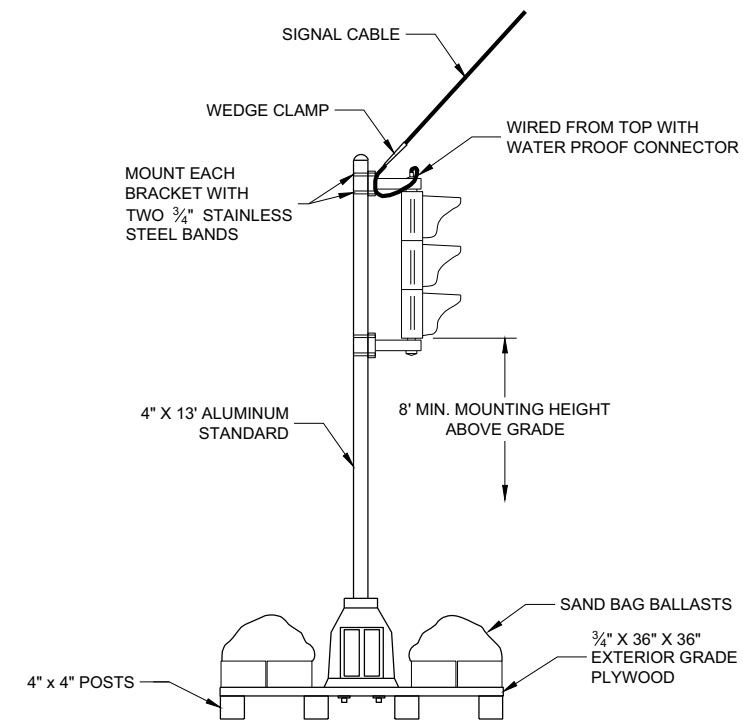
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

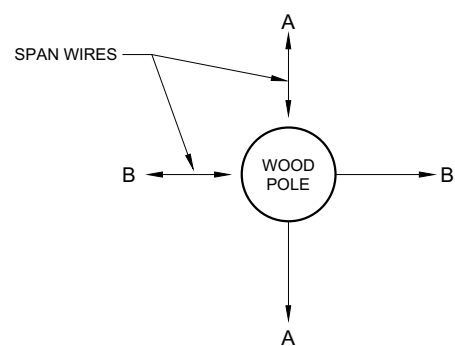
FHWA



SPLICE BOX

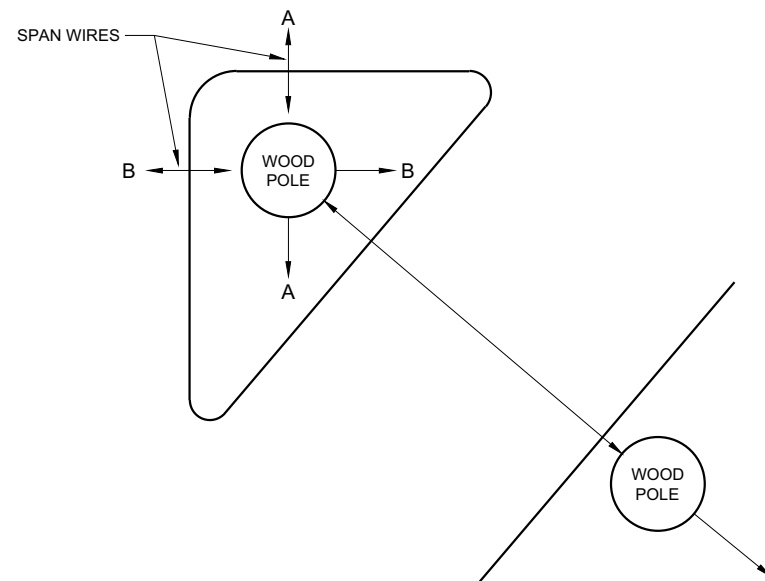


TYPICAL SKID TYPE TEMPORARY

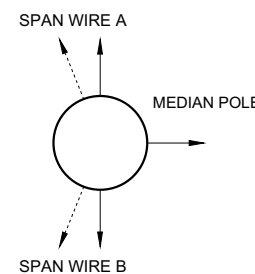


CORNER POLES

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



ISLAND POLES



MEDIAN POLES

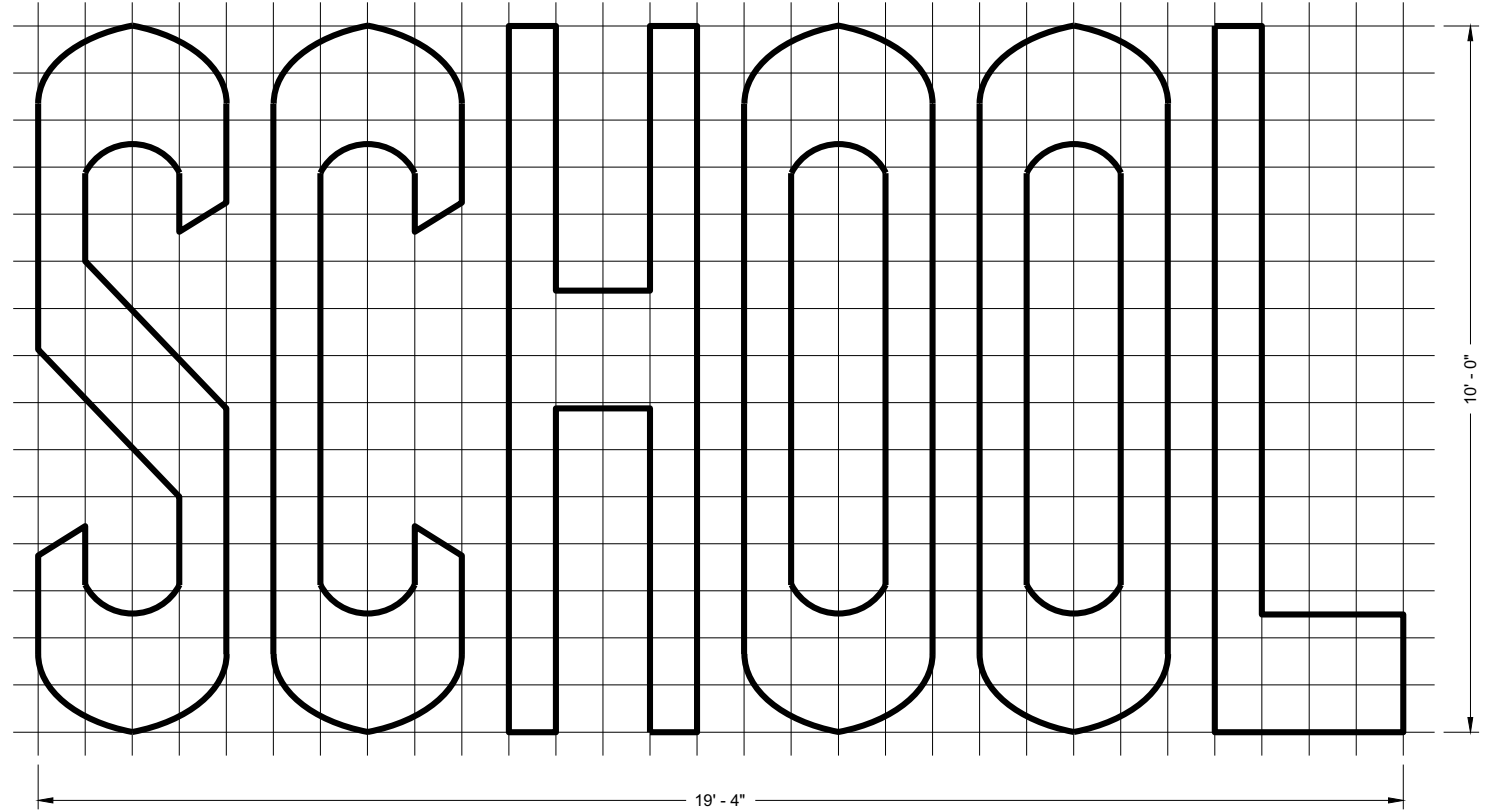
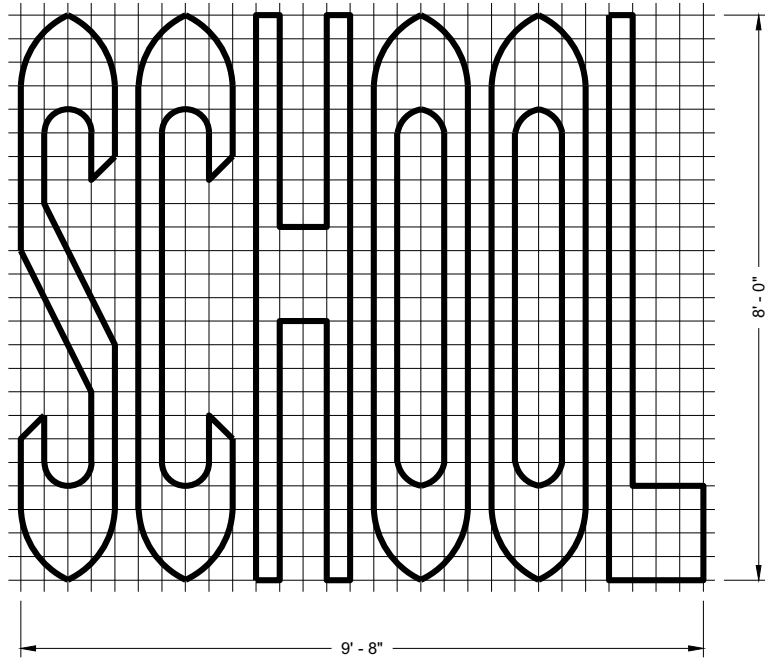
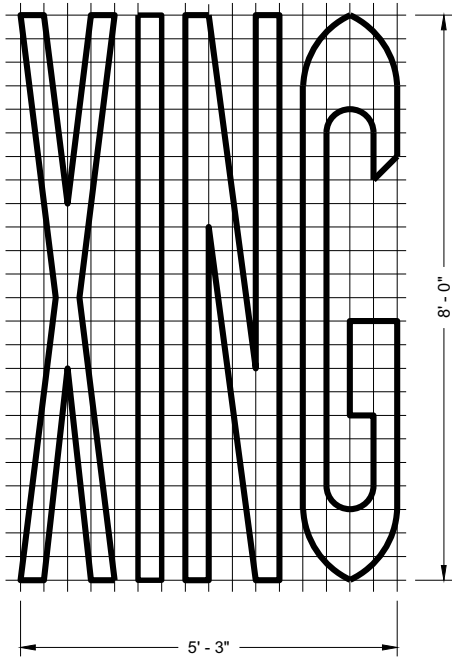
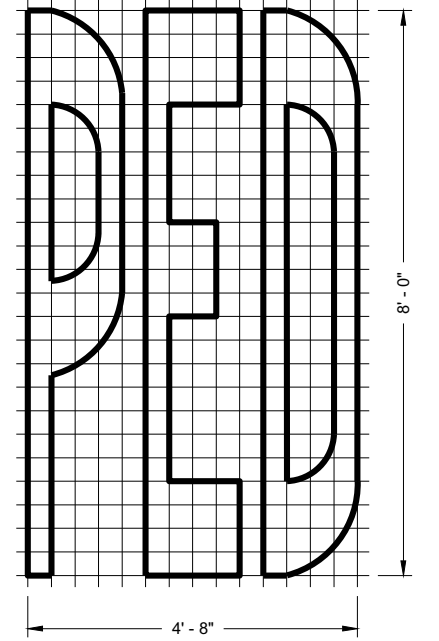
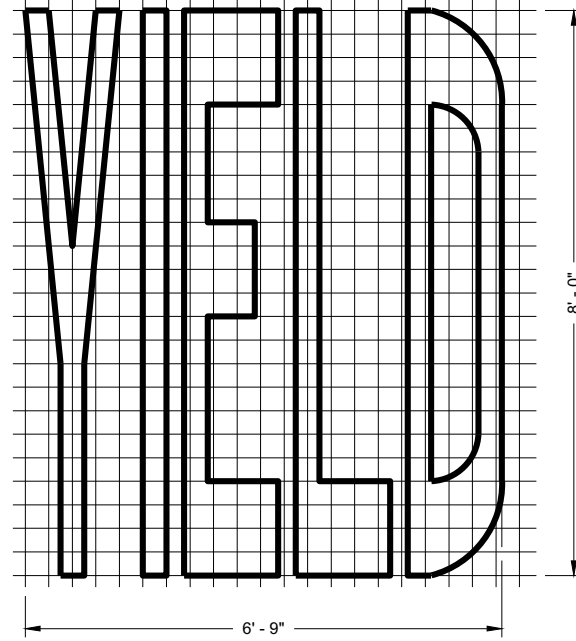
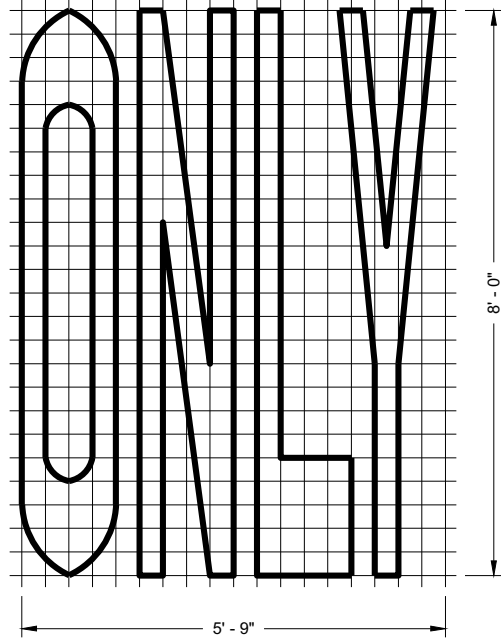
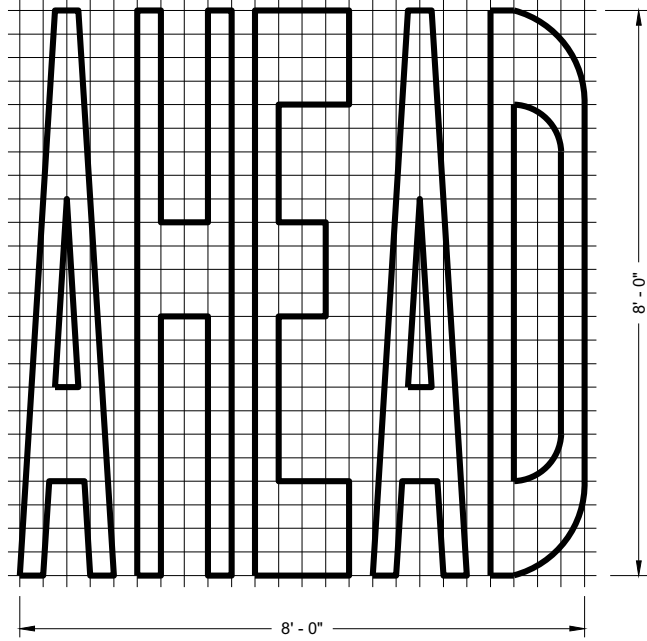
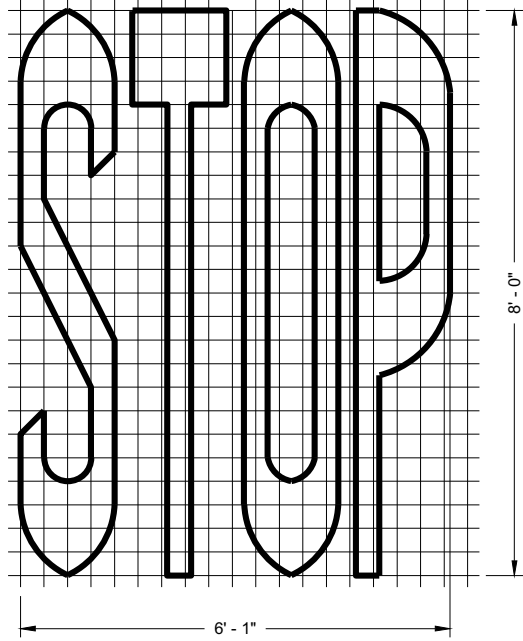
GUY AWAY FROM INTERSECTION OR IN OPPOSITE DIRECTION OF THE SPAN LOADING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015 /S/ Ahmet Demerbilek
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SINGLE LANE

TWO - LANE

GENERAL NOTES

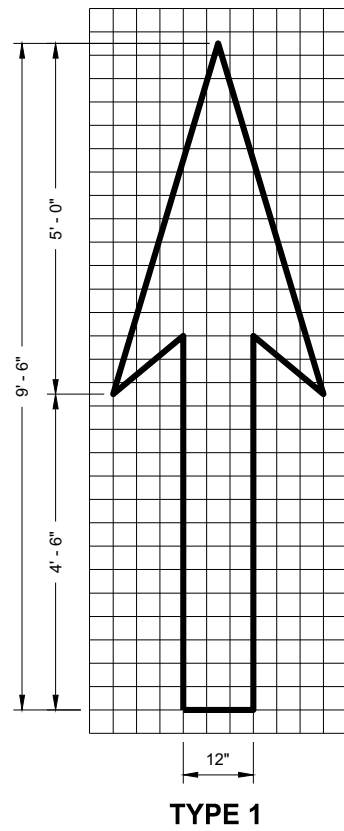
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PAVEMENT MARKING WORDS

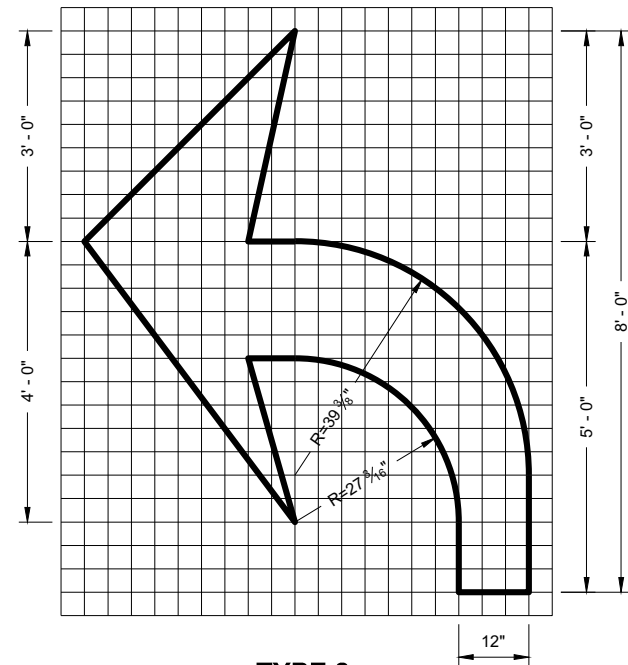
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING
ENGINEER

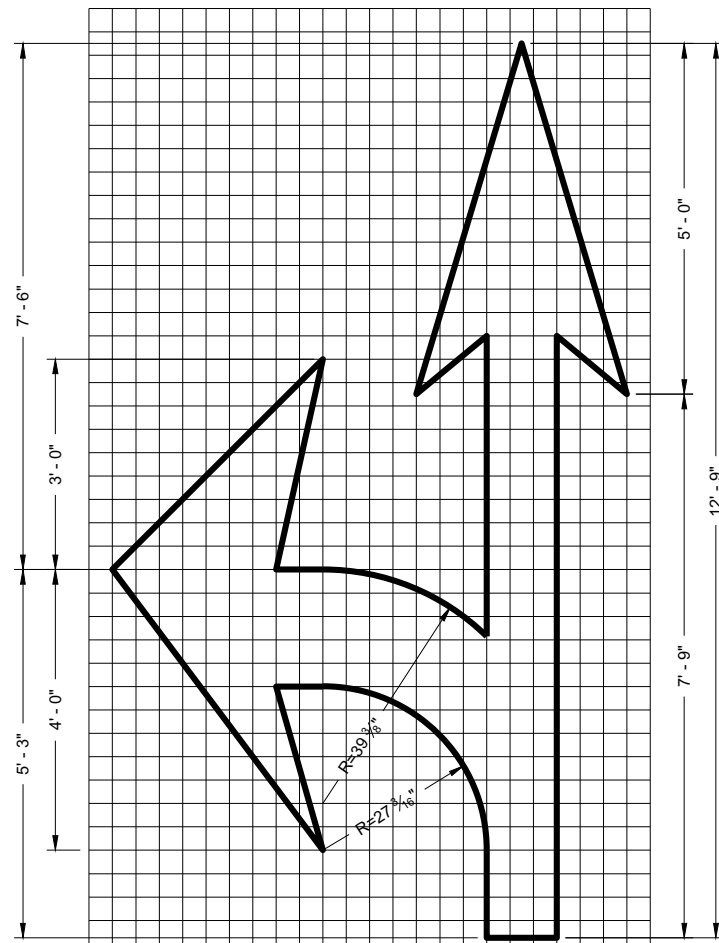
FHWA



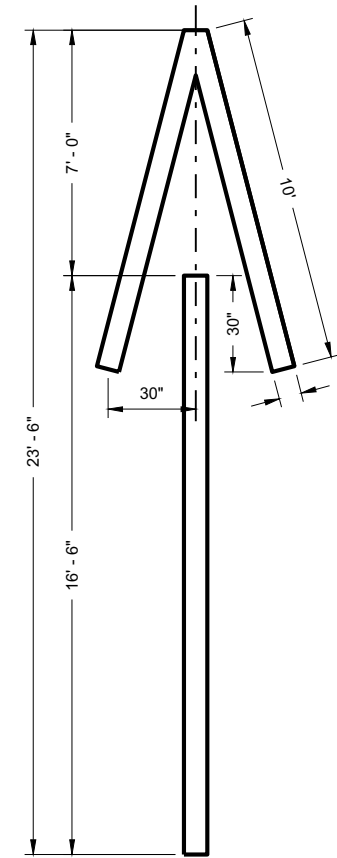
TYPE 1



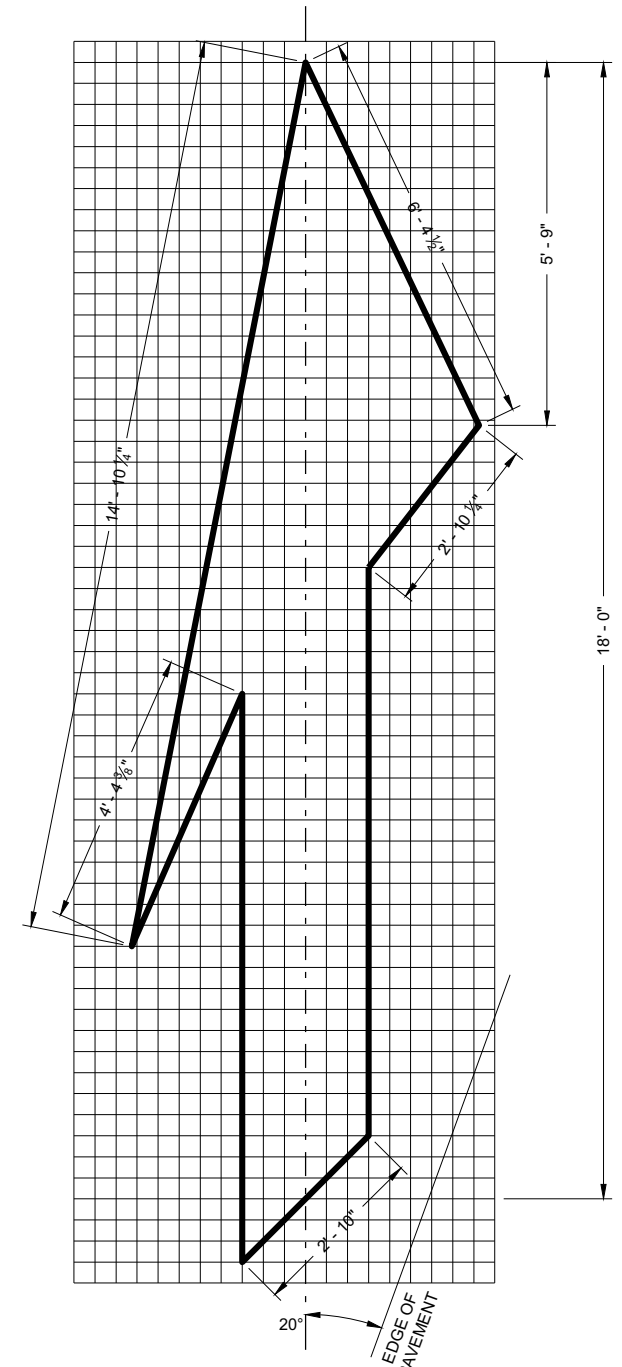
TYPE 2



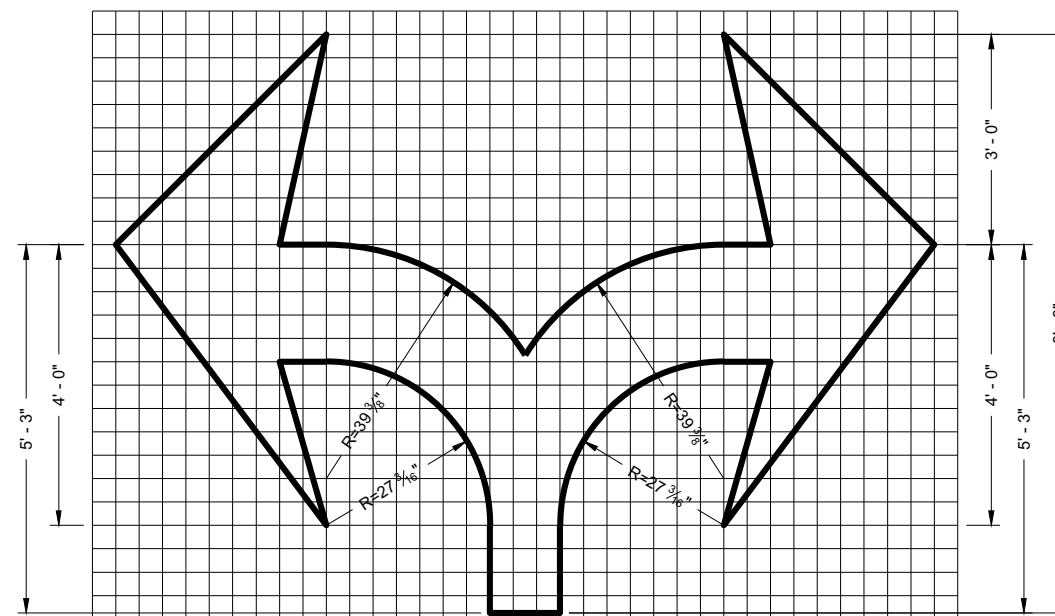
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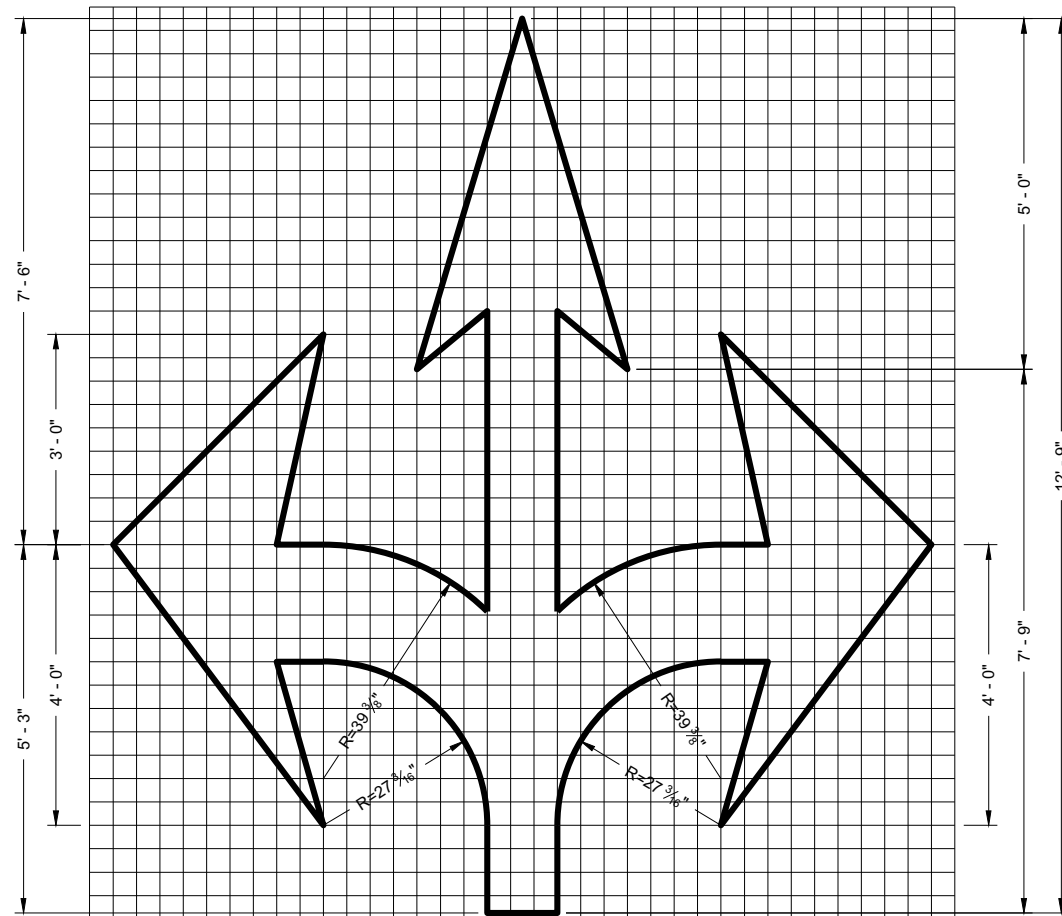
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 7



TYPE 6

GENERAL NOTES

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

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

November 2019

DATE

FHWA




/s/ Matthew Rauch
STATE SIGNING AND MARKING
ENGINEER

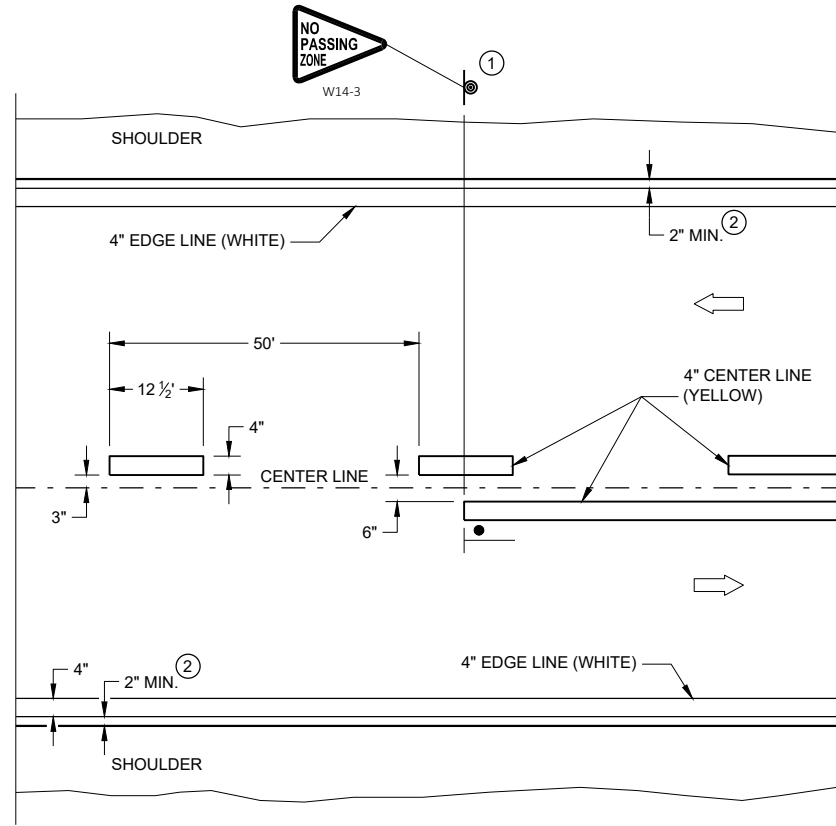
GENERAL NOTES

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

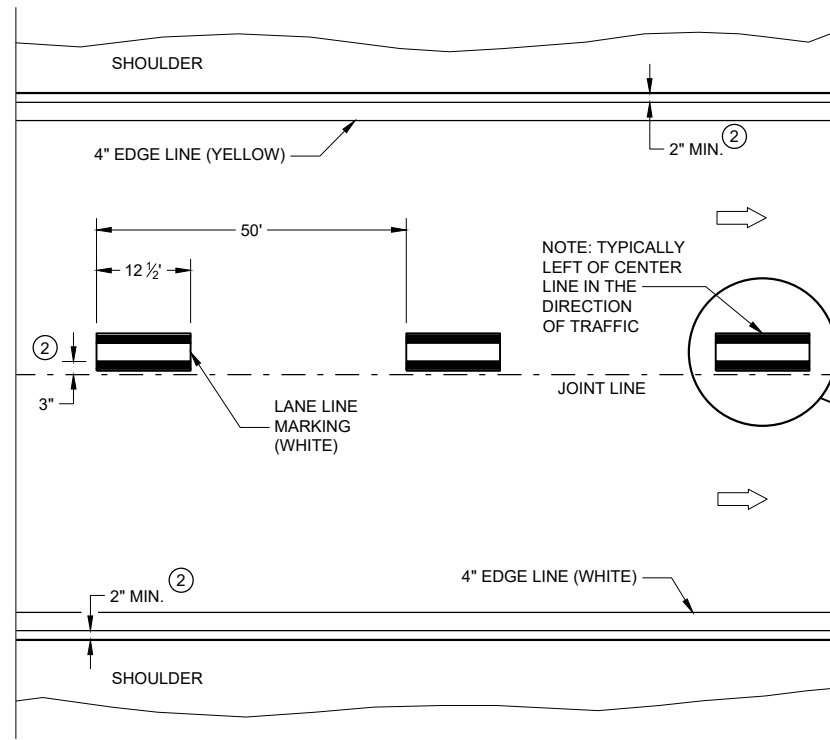
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

-  "T" MARKING
-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC

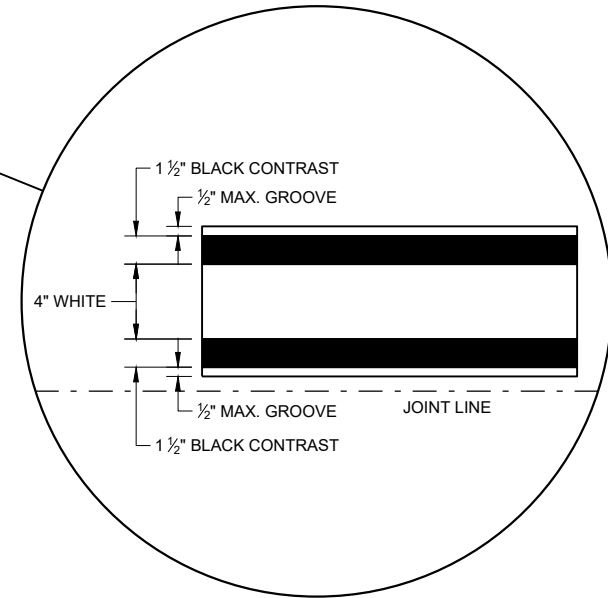


TWO WAY TRAFFIC



ONE WAY TRAFFIC

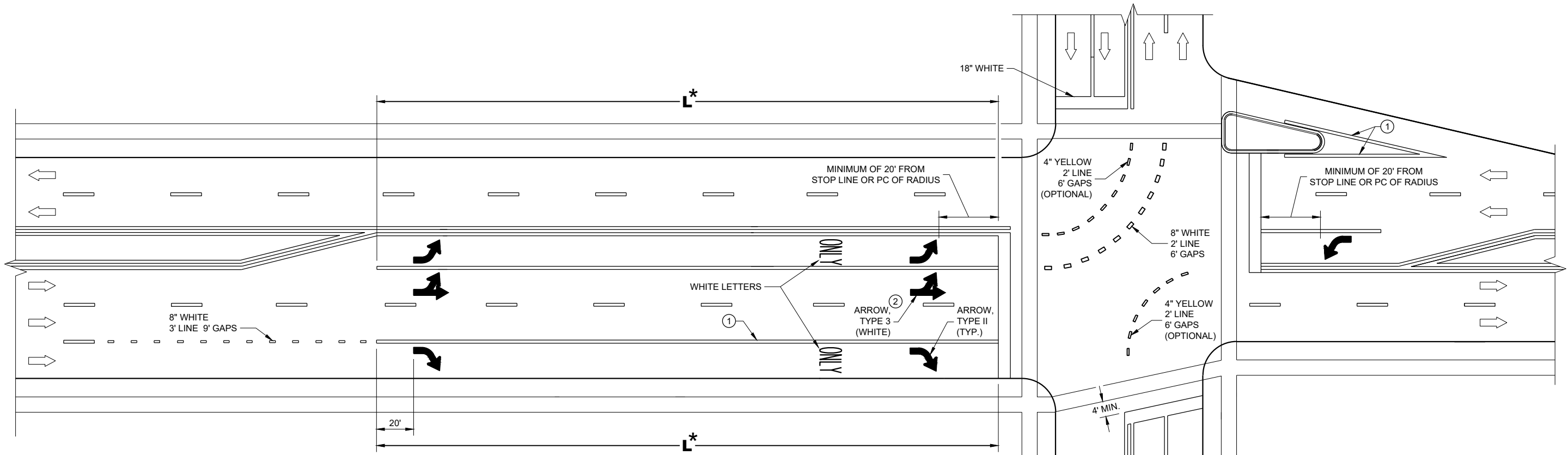
PERMANENT PAVEMENT MARKING



PERMANENT LONGITUDINAL PAVEMENT MARKINGS

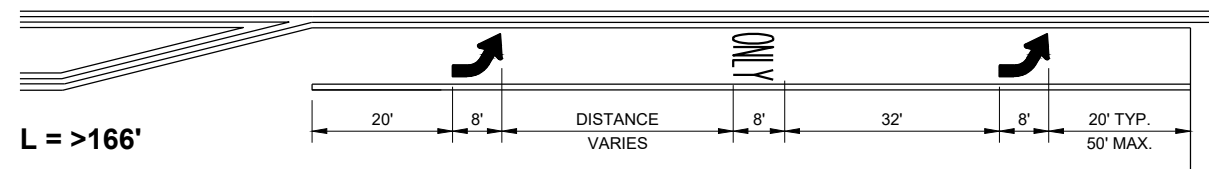
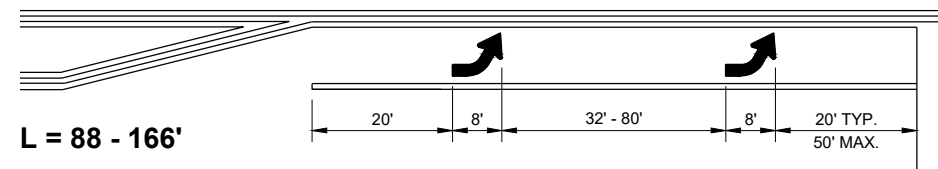
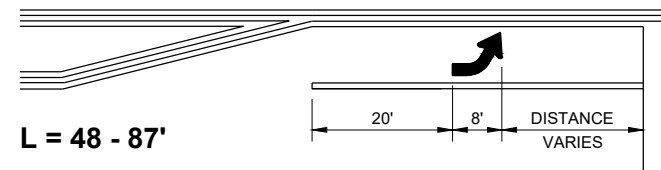
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2022 /S/ Jeannie Silver
STATEWIDE SIGNING AND MARKING ENGINEER



TURN LANE OPTIONS

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



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

GENERAL NOTES

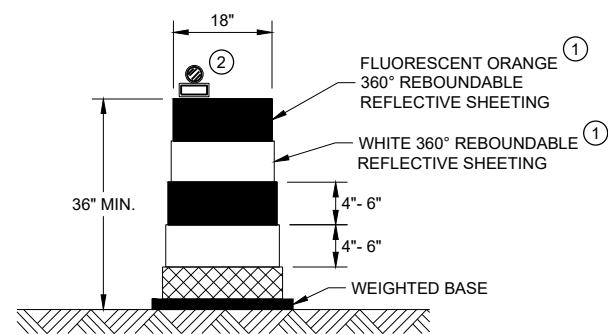
- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

➡ DIRECTION OF TRAFFIC

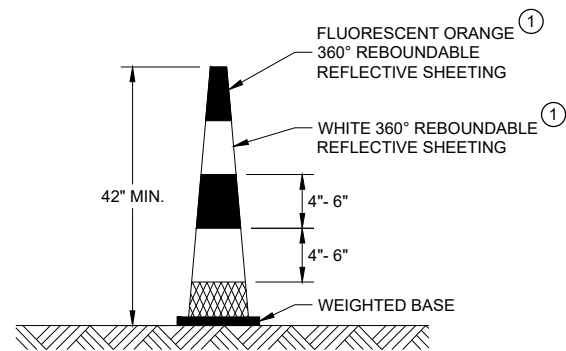
L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DRUM

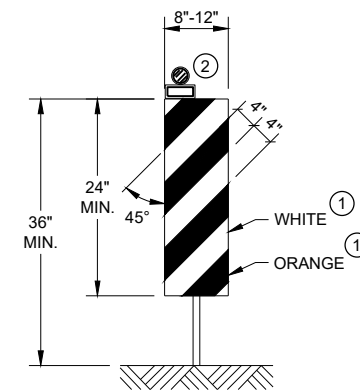


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

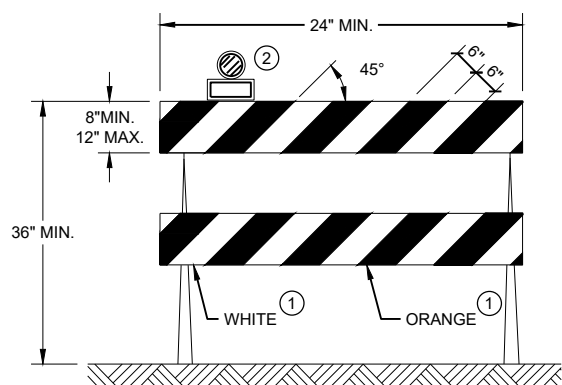
GENERAL NOTES

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



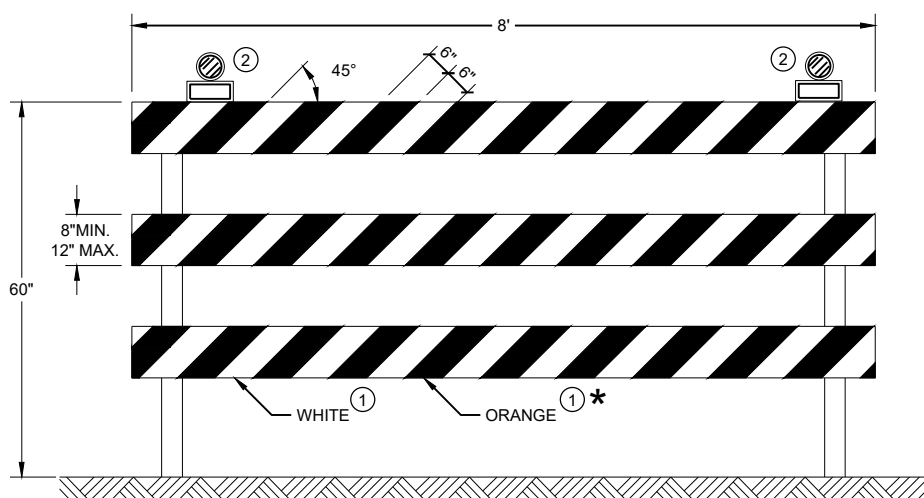
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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










* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

LEGEND

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

GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

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

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

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

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

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

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

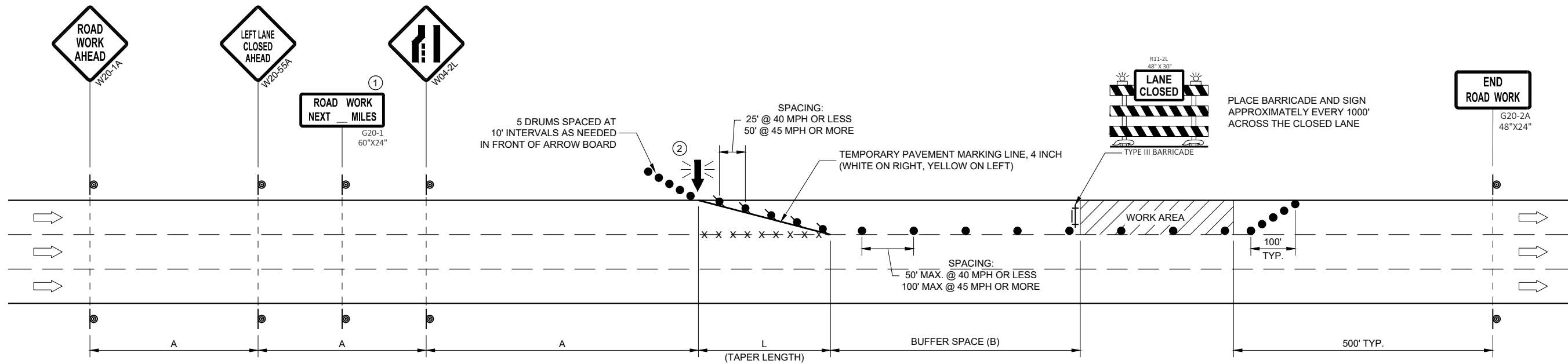
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

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

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

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

- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'










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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

LEGEND

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

GENERAL NOTES

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

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

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

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

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

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

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

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

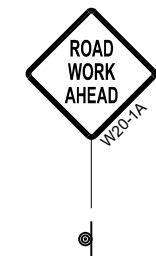
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

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

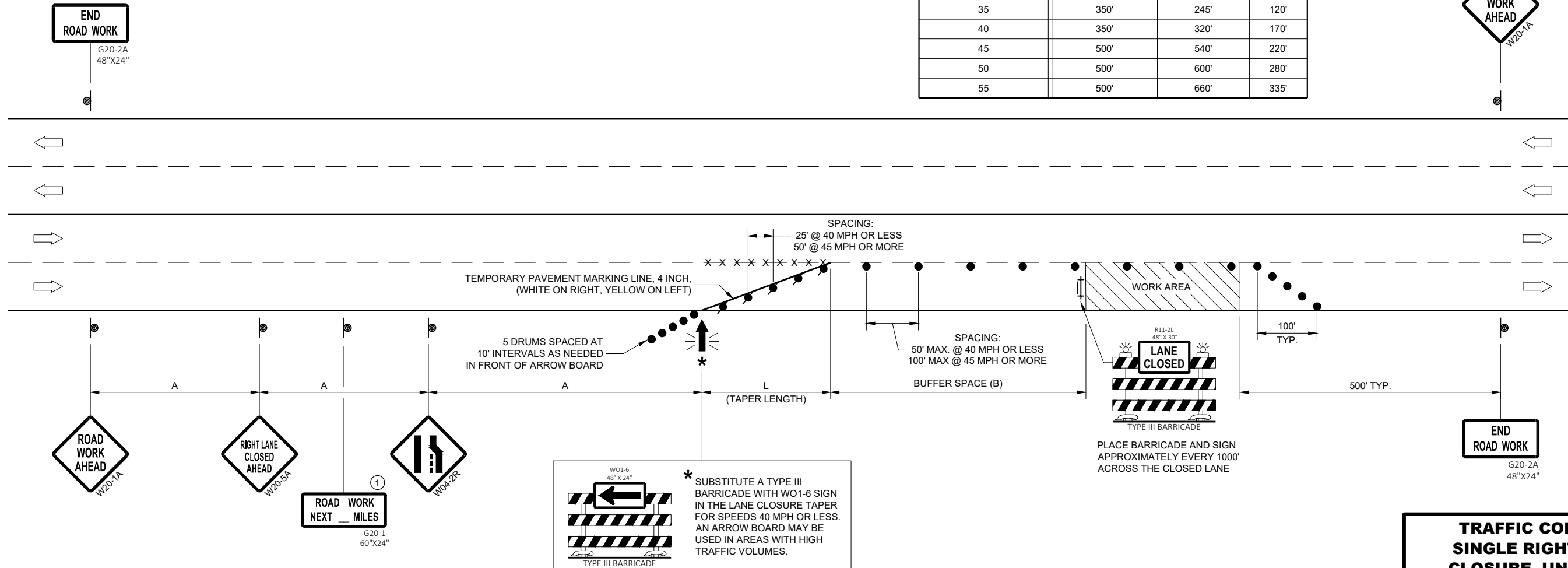
① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'



6

6



SDD 15D20 - 06b

SDD 15D20 - 06b










**TRAFFIC CONTROL,
SINGLE RIGHT LANE
CLOSURE, UNDIVIDED
NON-FREEWAY/EXPRESSWAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

LEGEND

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

GENERAL NOTES

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

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

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

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

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

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

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

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

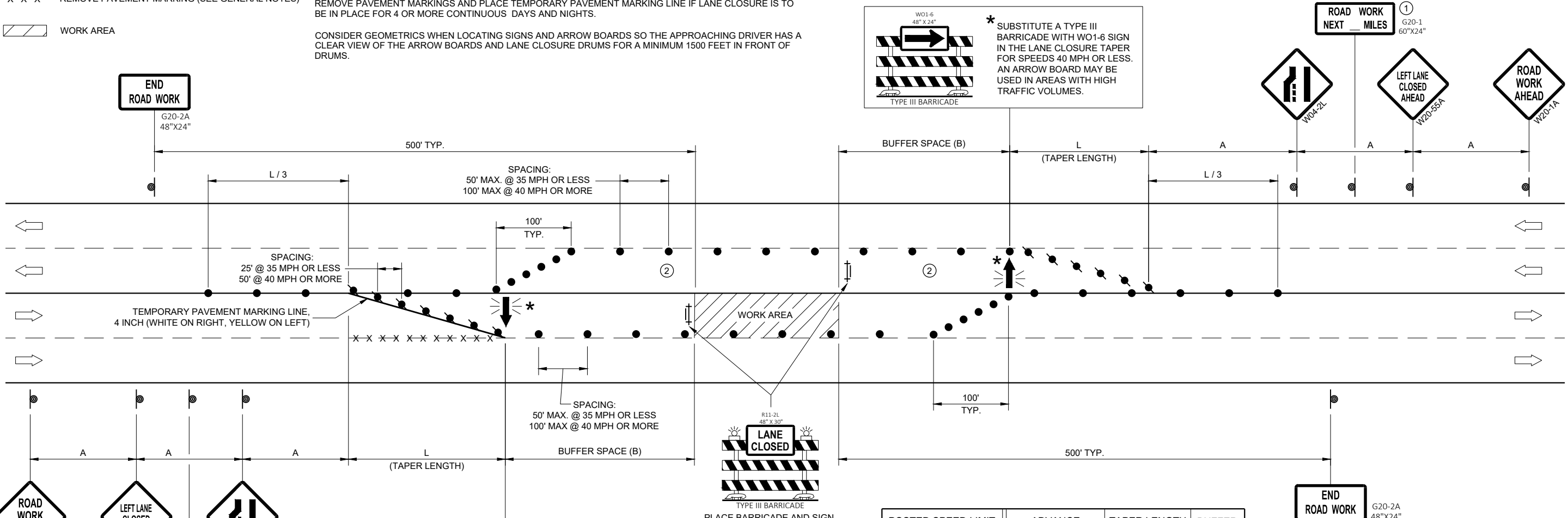
DUE TO LACK OF SHOULDER/MEDIAN, ARROW BOARD IS PLACED AT THE THE END OF THE TAPER.

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

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

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

- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② LANE MAY BE OPENED WHEN WORKERS ARE NOT PRESENT IN THE WORK AREA.



*** SUBSTITUTE A TYPE III BARRICADE WITH WO1-6 SIGN IN THE LANE CLOSURE TAPER FOR SPEEDS 40 MPH OR LESS. AN ARROW BOARD MAY BE USED IN AREAS WITH HIGH TRAFFIC VOLUMES.**

*** SUBSTITUTE A TYPE III BARRICADE WITH WO1-6 SIGN IN THE LANE CLOSURE TAPER FOR SPEEDS 40 MPH OR LESS. AN ARROW BOARD MAY BE USED IN AREAS WITH HIGH TRAFFIC VOLUMES.**

R11-2L 48"X30"

PLACE BARRICADE AND SIGN APPROXIMATELY EVERY 1000' ACROSS THE CLOSED LANE.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'

**TRAFFIC CONTROL,
SINGLE LEFT LANE
CLOSURE, UNDIVIDED
NON-FREEWAY/EXPRESSWAY**

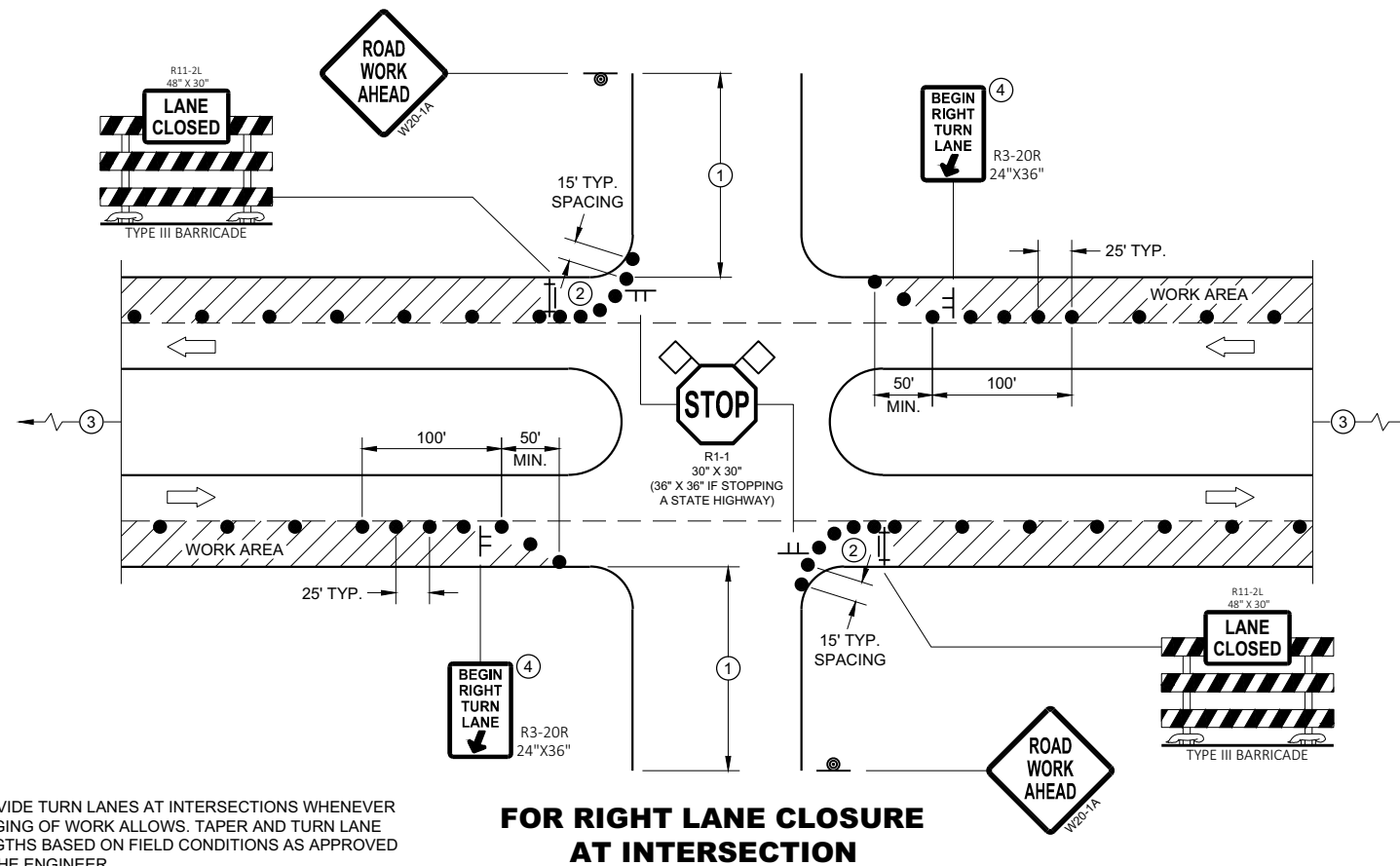
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

SDD 15D20 - 06C

SDD 15D20 - 06C



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

GENERAL NOTES

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

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

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

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

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

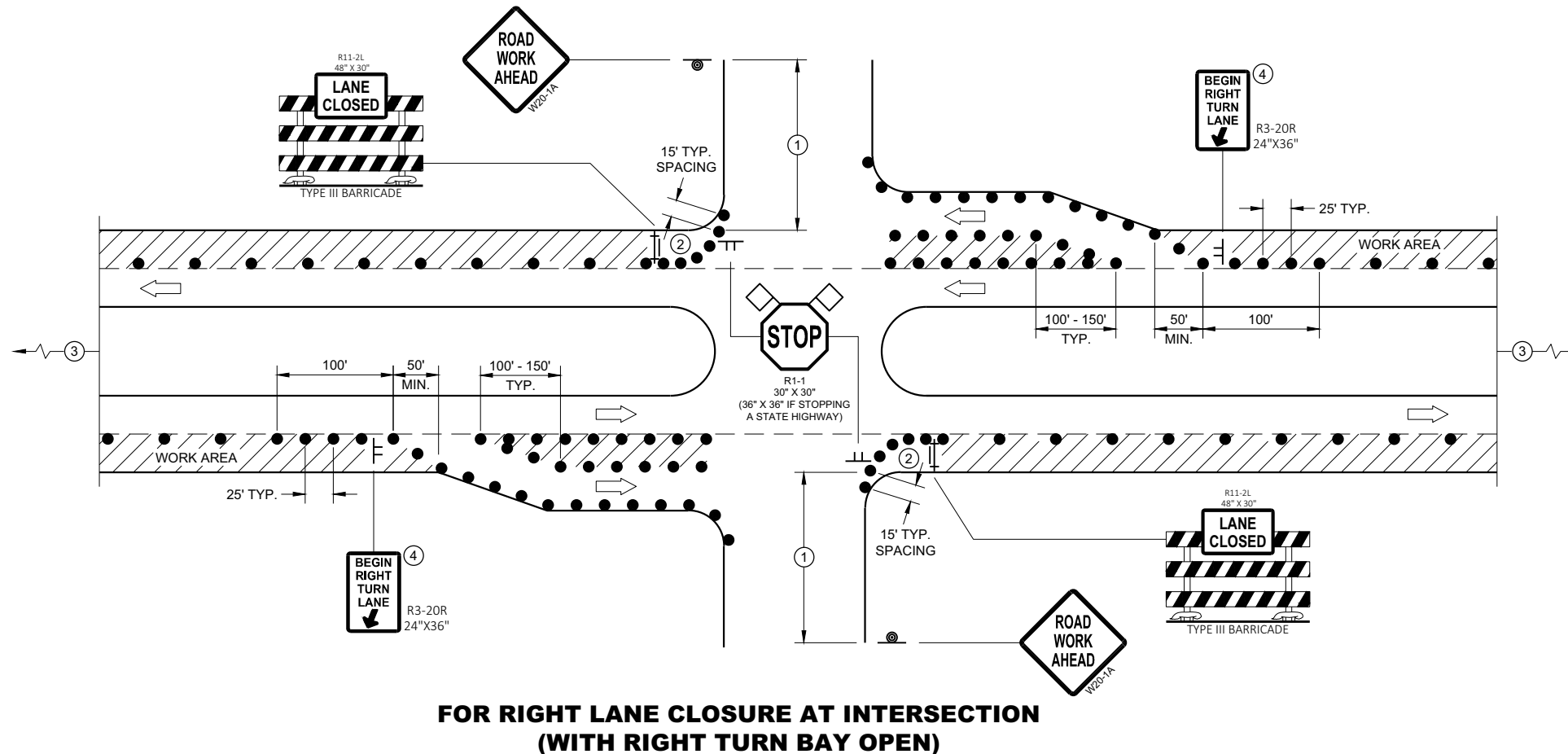
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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

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

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

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

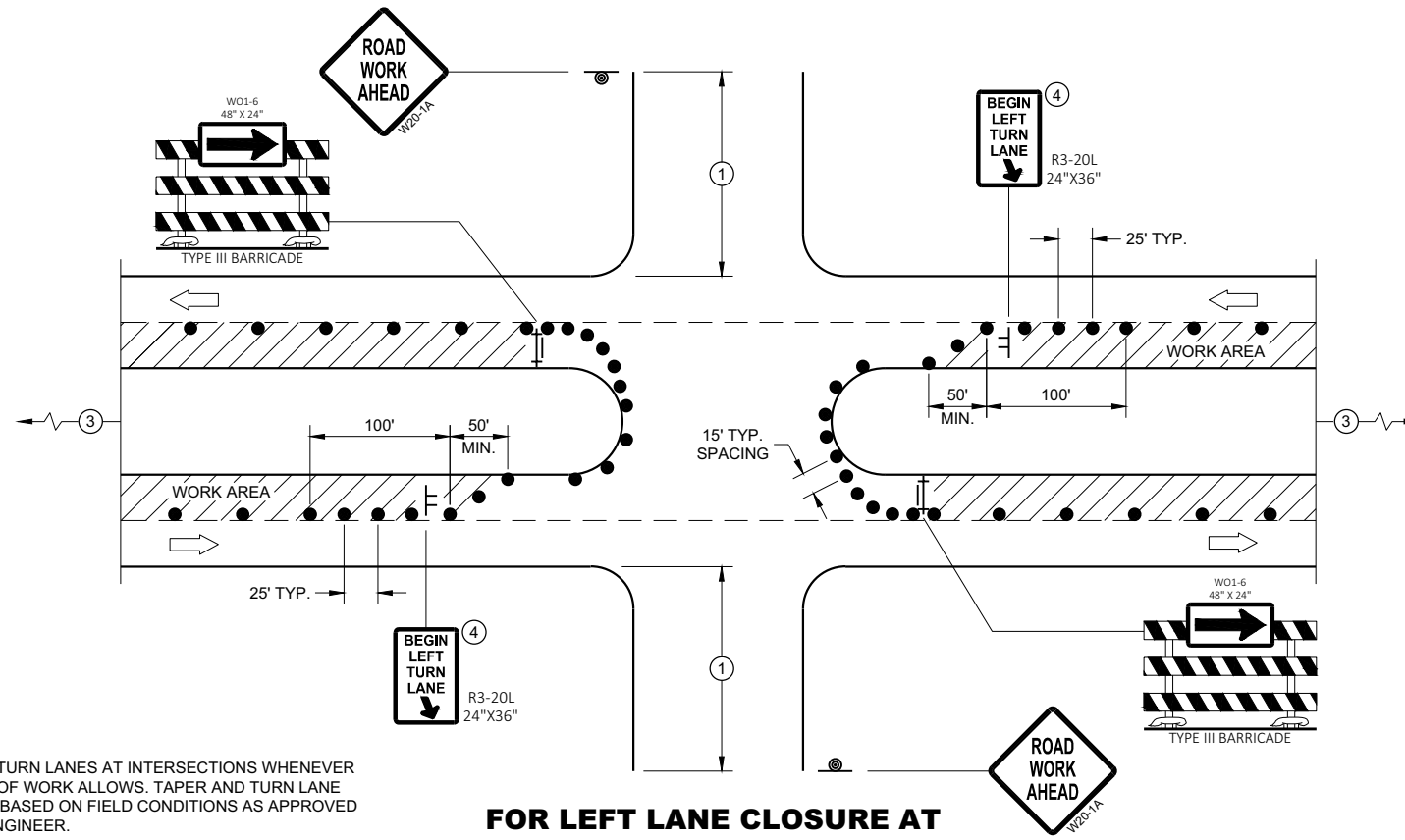


LEGEND

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

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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

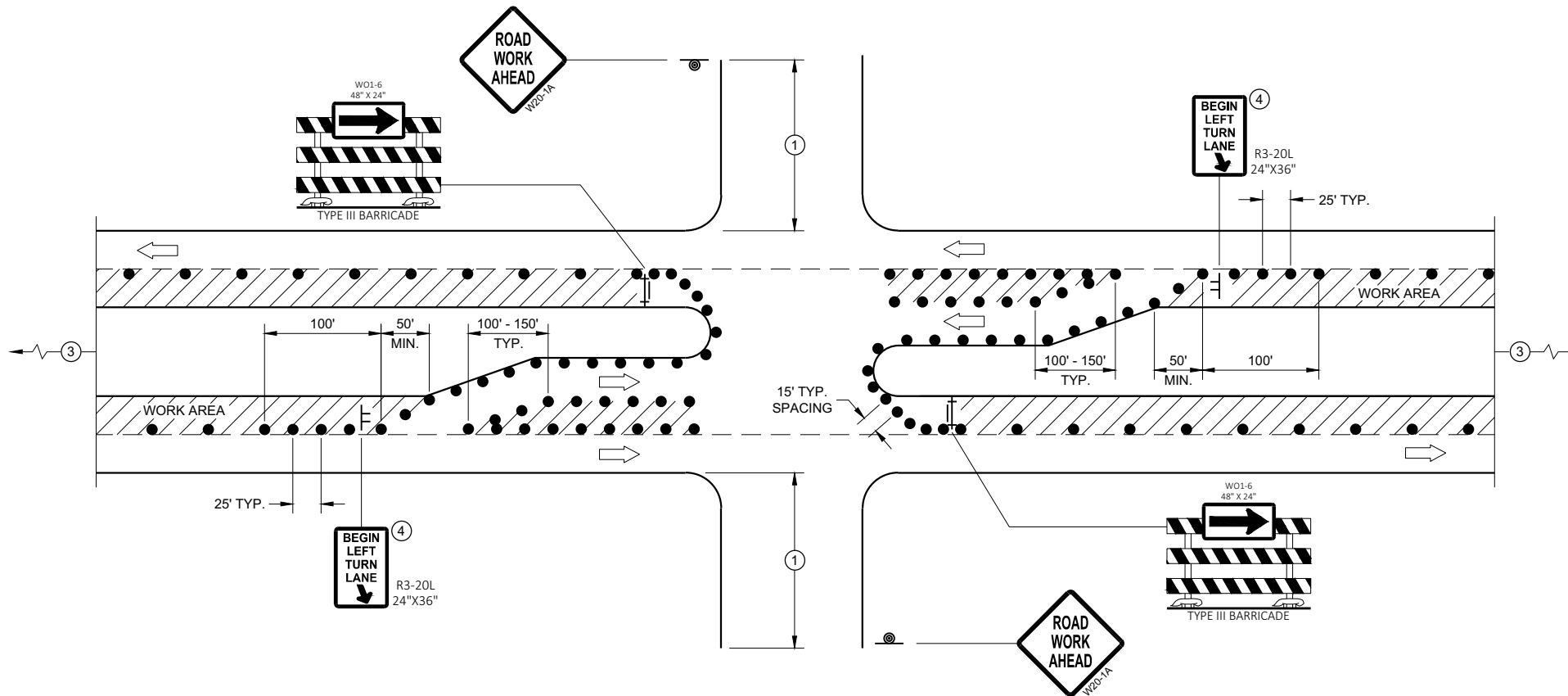
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

LEGEND

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

GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45 MPH, USE SDD 15D14.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

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

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

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

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

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

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

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

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

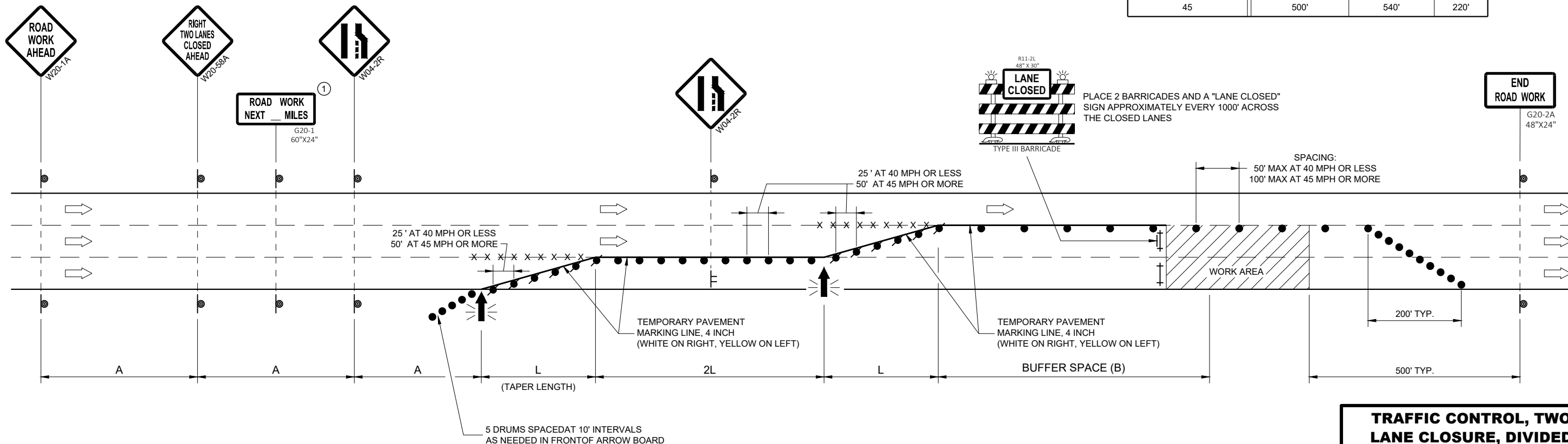
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

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

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

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'

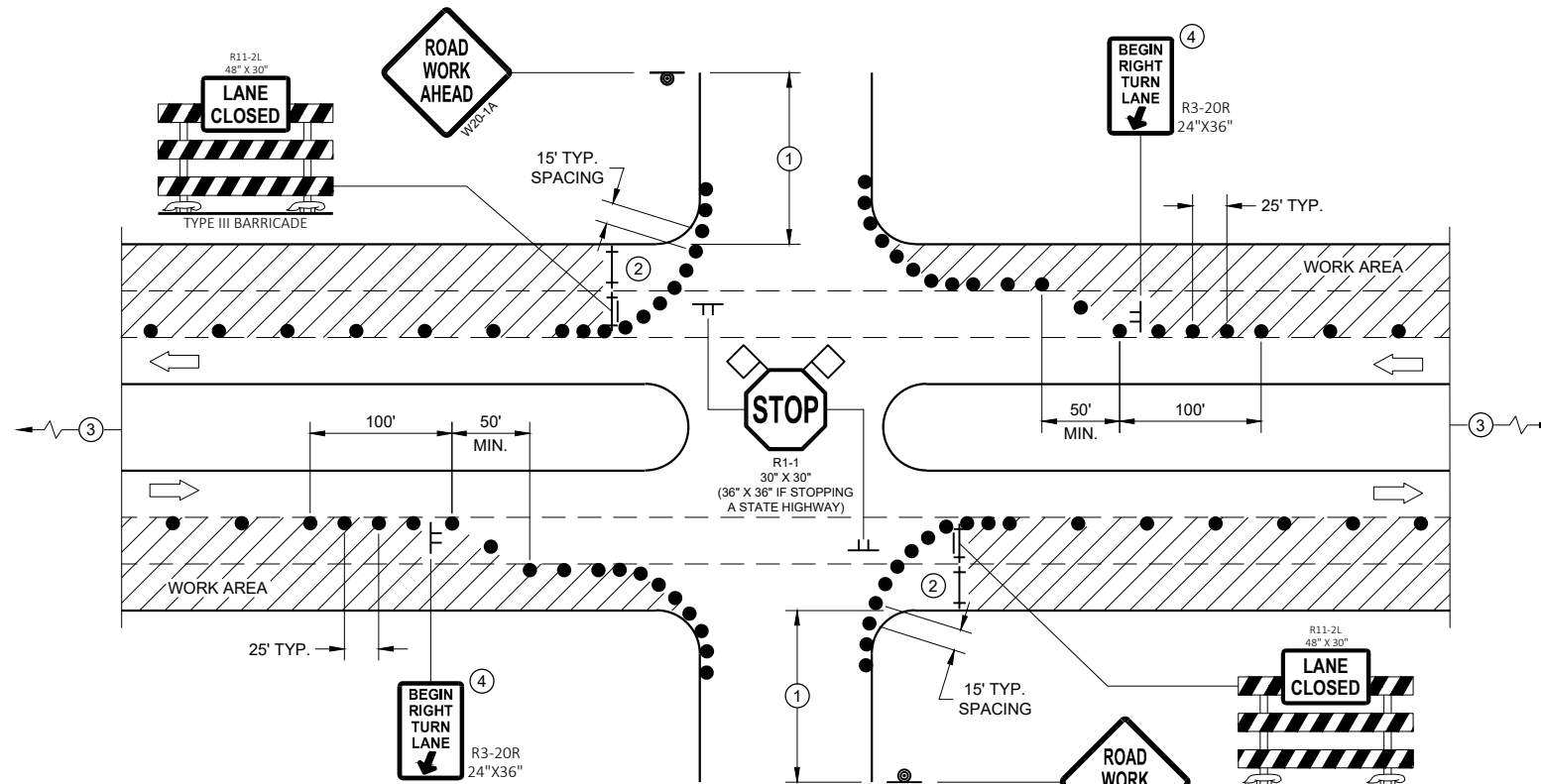


TRAFFIC CONTROL, TWO LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022 /S/ Andrew Heidtke
DATE 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 RIGHT TWO LANES CLOSED AT INTERSECTION

GENERAL NOTES

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

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

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

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

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

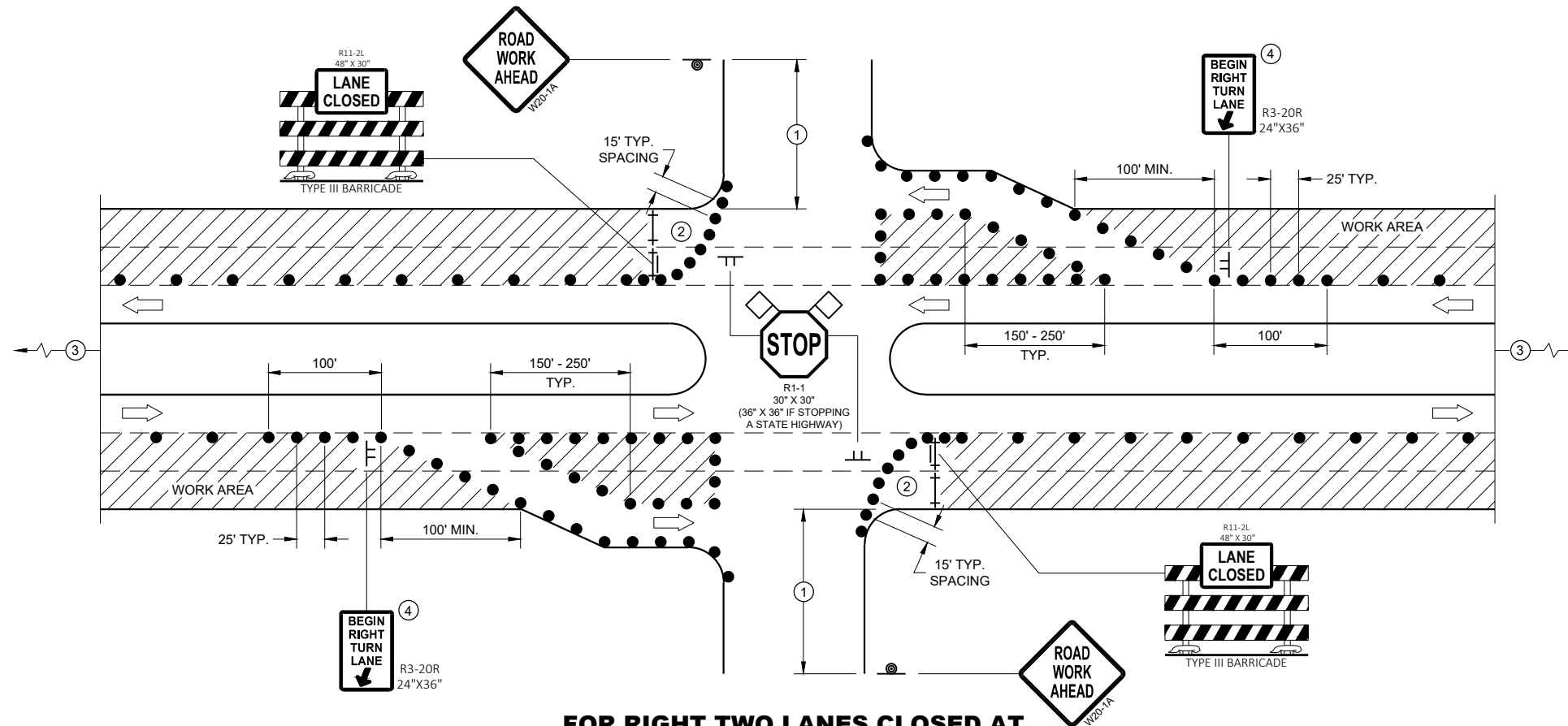
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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

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

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

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



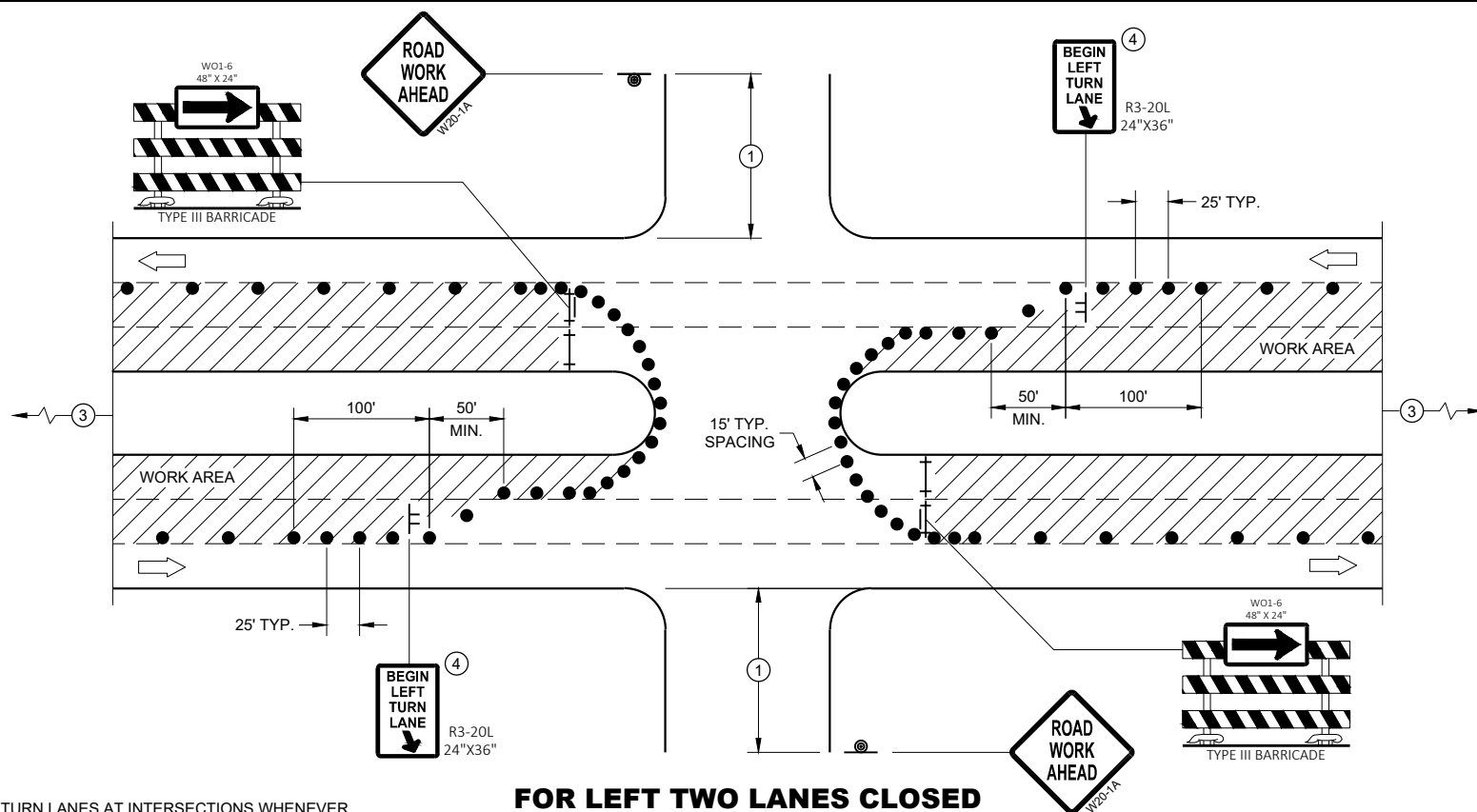
FOR RIGHT TWO LANES CLOSED AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

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

**TRAFFIC CONTROL,
INTERSECTION WITHIN
TWO RIGHT LANE CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FOR LEFT TWO LANES CLOSED AT INTERSECTION OR MEDIAN BREAK

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

GENERAL NOTES

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

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

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

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

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

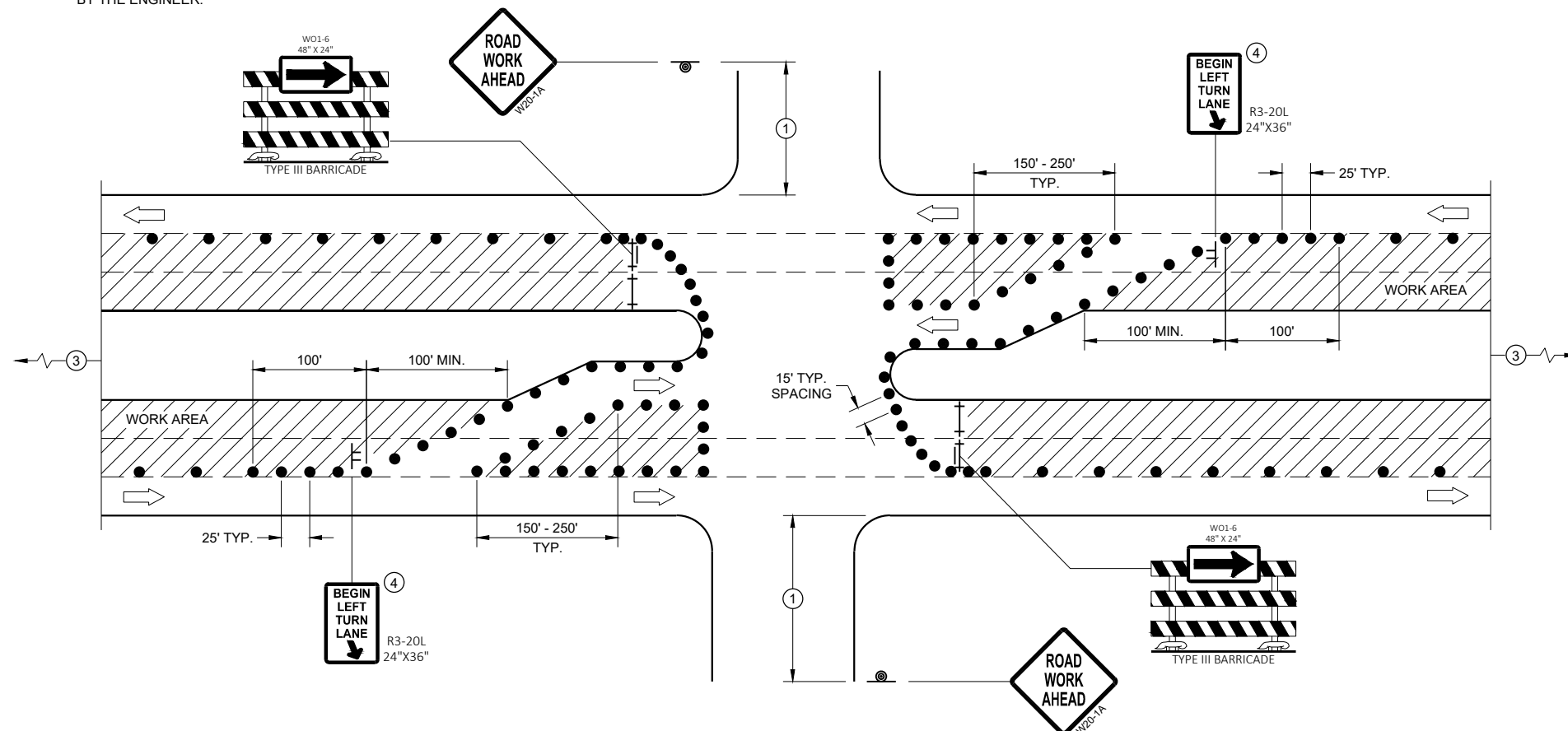
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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

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

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

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



FOR LEFT TWO LANES CLOSED AT INTERSECTION OR MEDIAN BREAK (WITH LEFT TURN BAY OPEN)

LEGEND

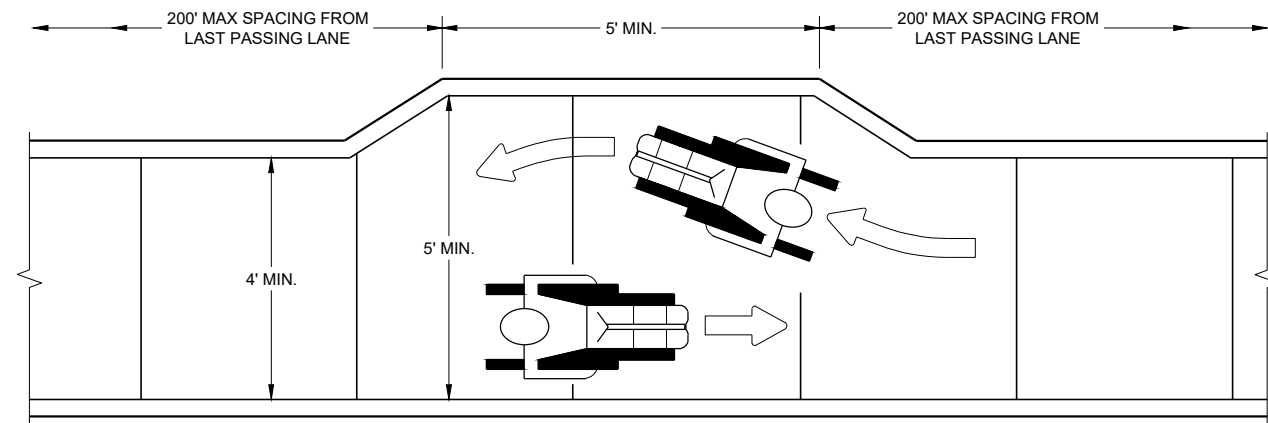
- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN TWO LEFT LANE CLOSURE

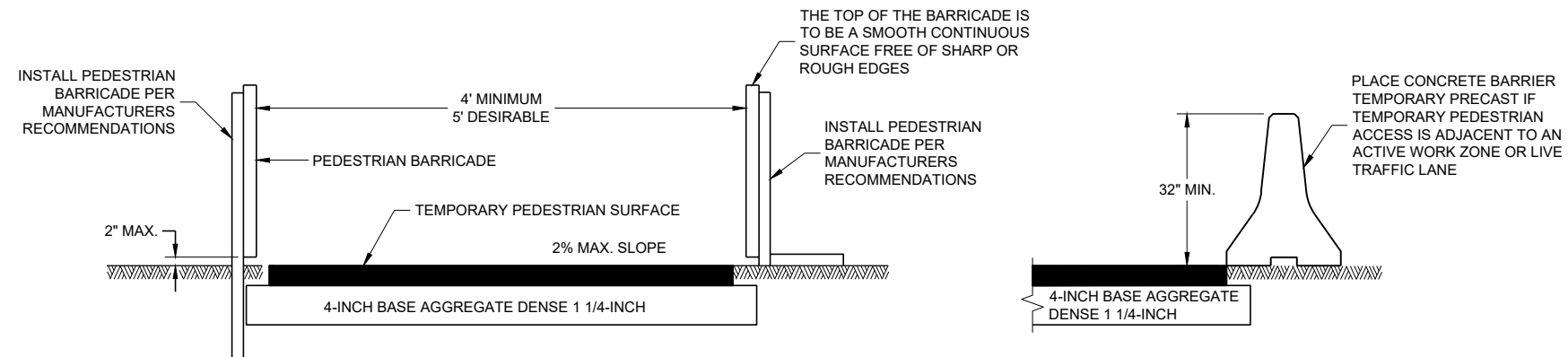
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



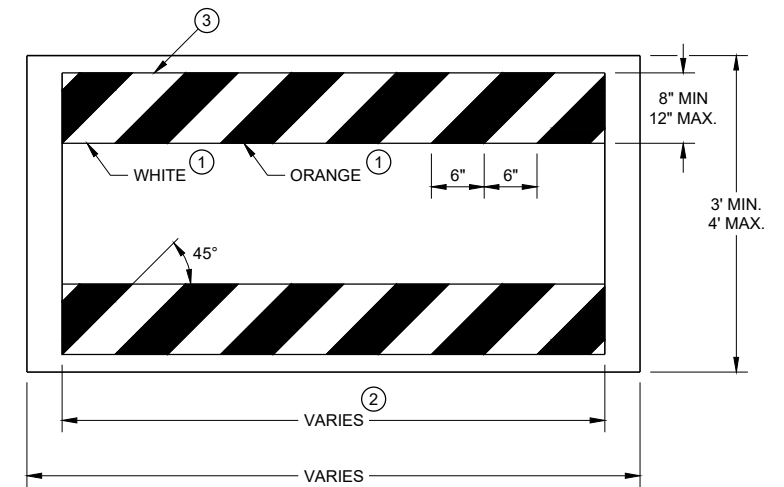
NARROW SIDEWALK PASSING DETAIL



TEMPORARY PEDESTRIAN ACCESS

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.

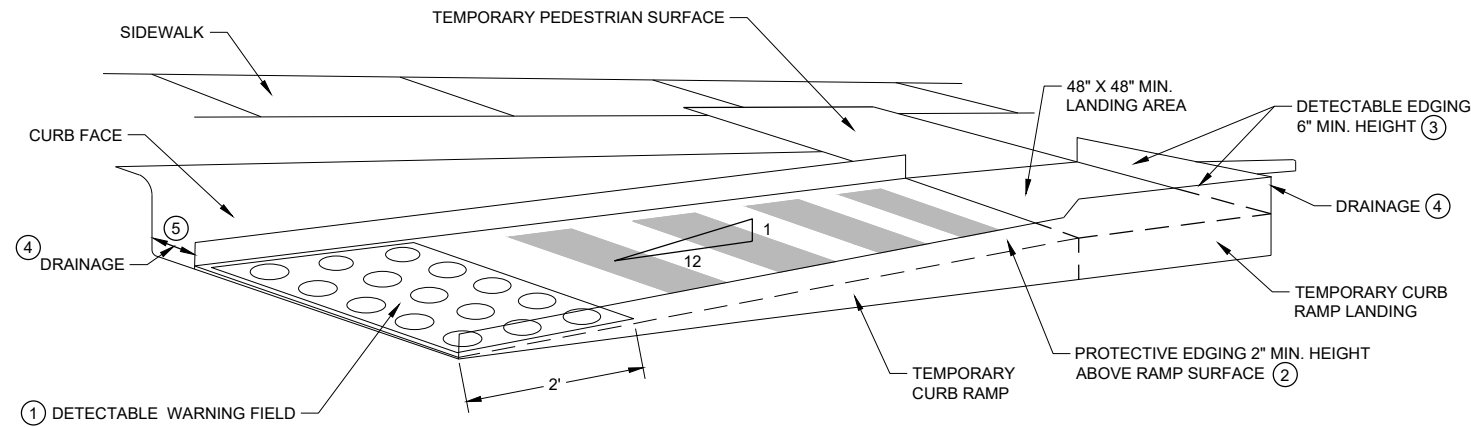


TEMPORARY PEDESTRIAN BARRICADE*

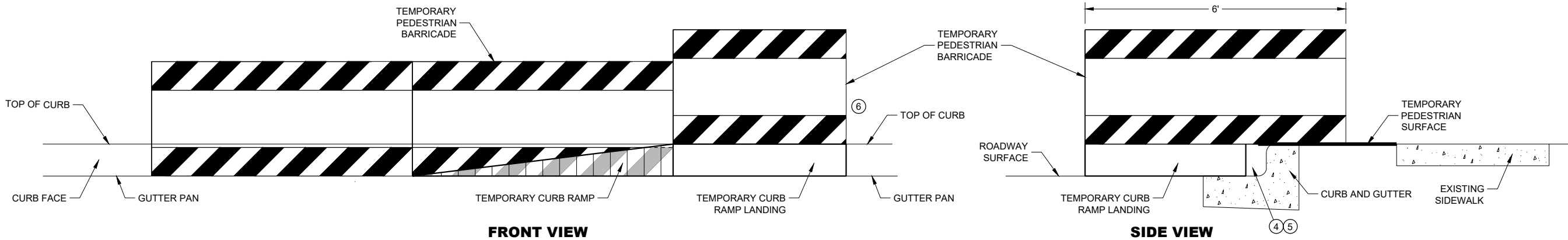
GENERAL NOTES

CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.
 CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.
 CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
 LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
 CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

- ① INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS.
- ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ⑤ 6" MINIMUM BETWEEN CURB FACE AND EDGE OF RAMP
- ⑥ IF ONLY PART OF THE END PANEL OF TEMPORARY PEDESTRIAN BARRICADE PANEL IS NEEDED, EXTEND EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL HERE.



PERSPECTIVE VIEW

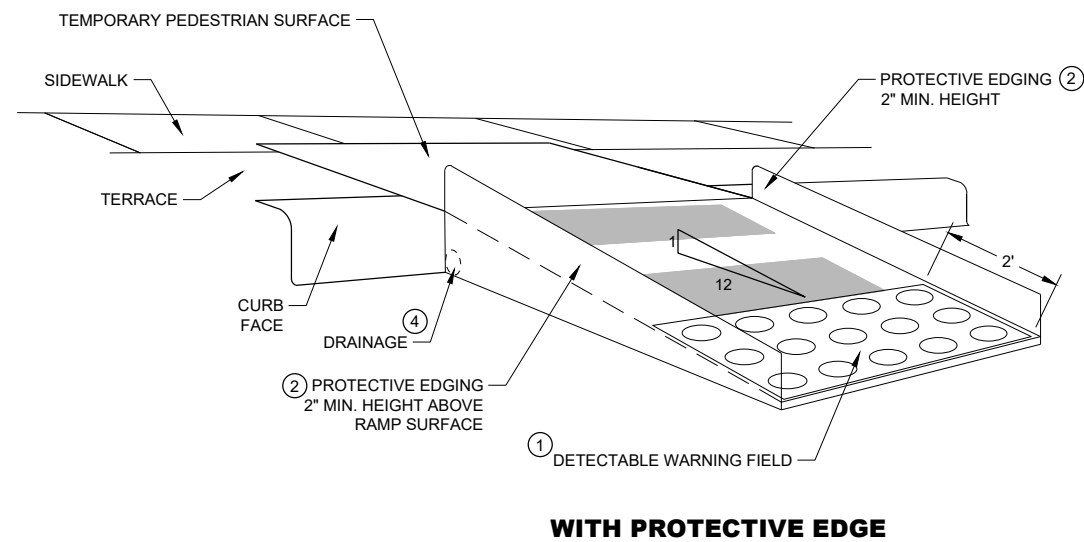
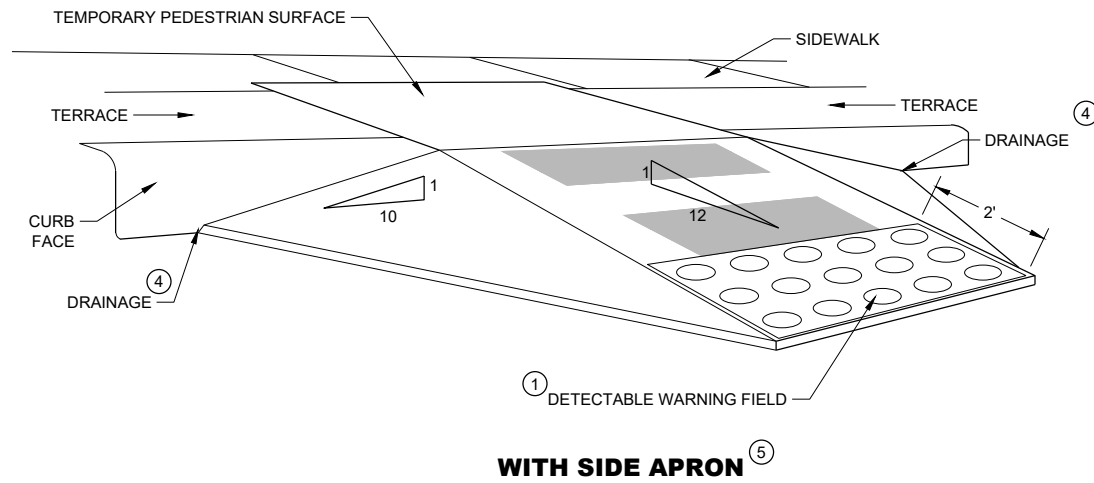


FRONT VIEW

SIDE VIEW

TEMPORARY CURB RAMP PARALLEL TO CURB

<p>TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION</p>
<p>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</p>



TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

CURB RAMPS SHALL BE 48" MINIMUM WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

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

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

CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

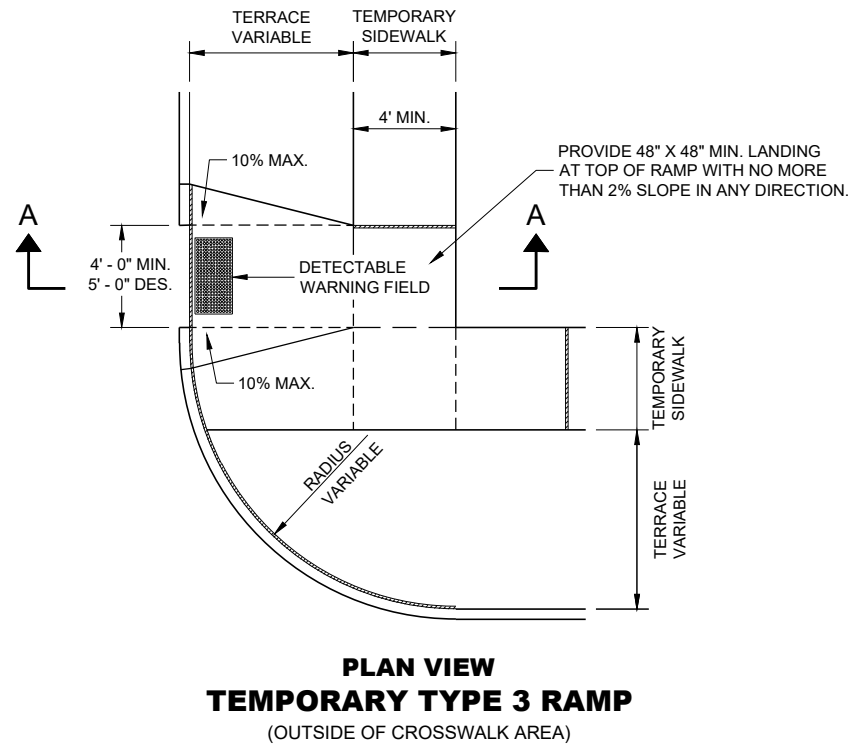
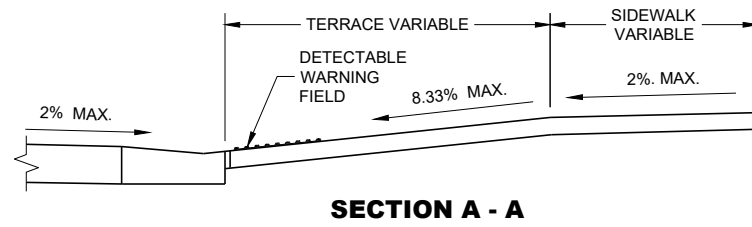
LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.

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

- ① INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS
- ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ⑤ CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.

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.



6

6

SDD 15D30 - 07d

SDD 15D30 - 07d

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

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

PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMP OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

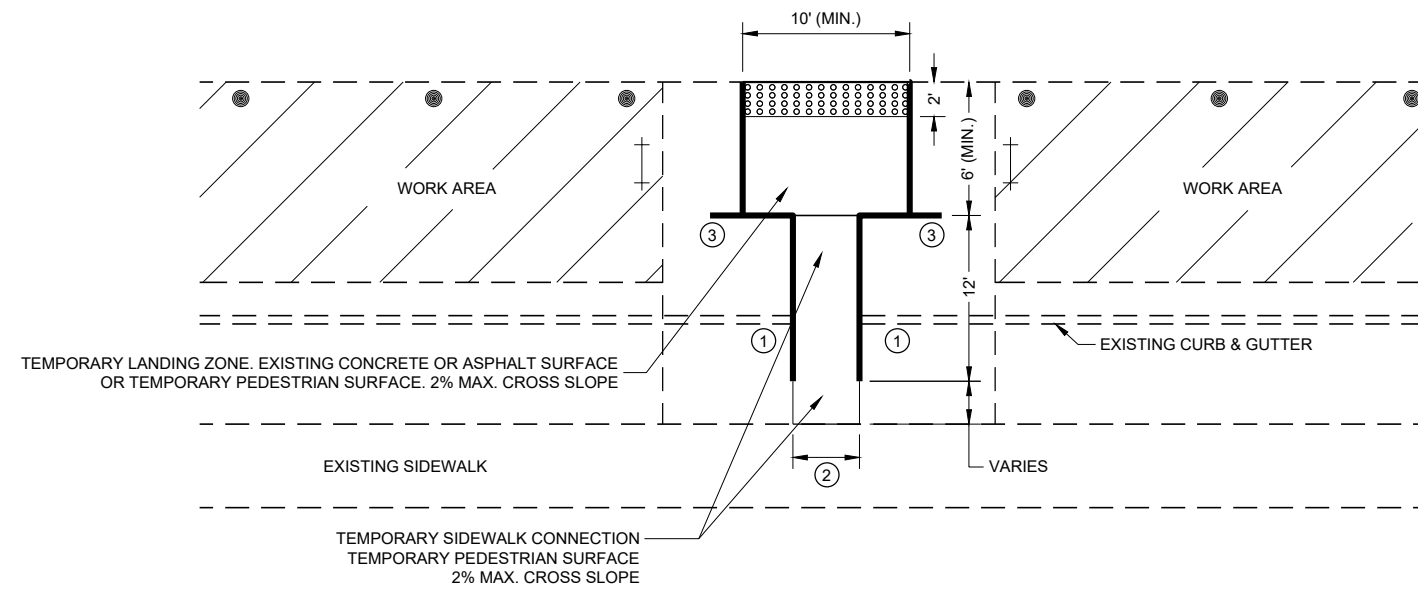
DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

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

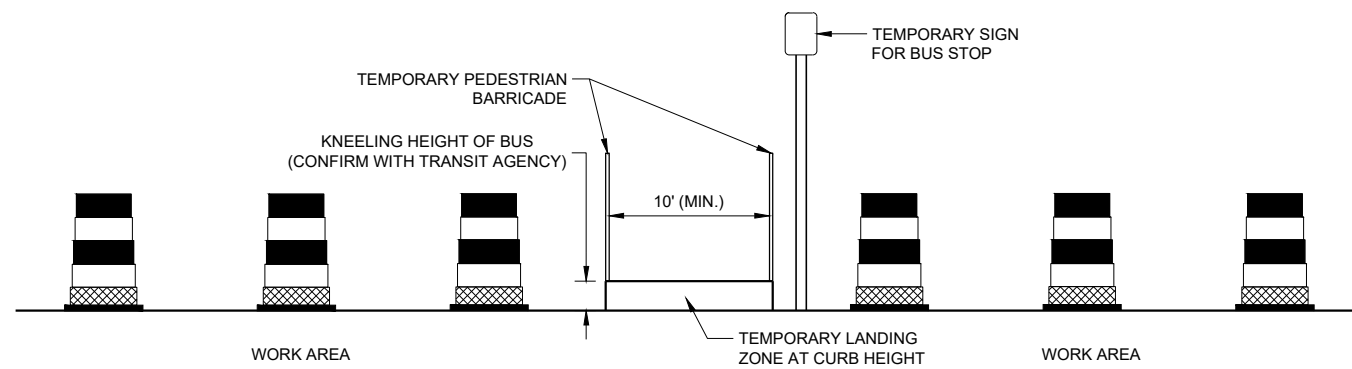
CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

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

- ① DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ② 5' WIDE MIN. WITH TEMPORARY PEDESTRIAN BARRICADE, 10' WIDE MIN. WITHOUT TEMPORARY PEDESTRIAN BARRICADE.
- ③ PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE INTO THIS SPACE.



PLAN VIEW



**PROFILE VIEW
TEMPORARY BUS STOP PAD**







LEGEND

- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TEMPORARY PEDESTRIAN BARRICADE
- TEMPORARY DETECTABLE WARNING FIELD
- WORK AREA

**TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION**

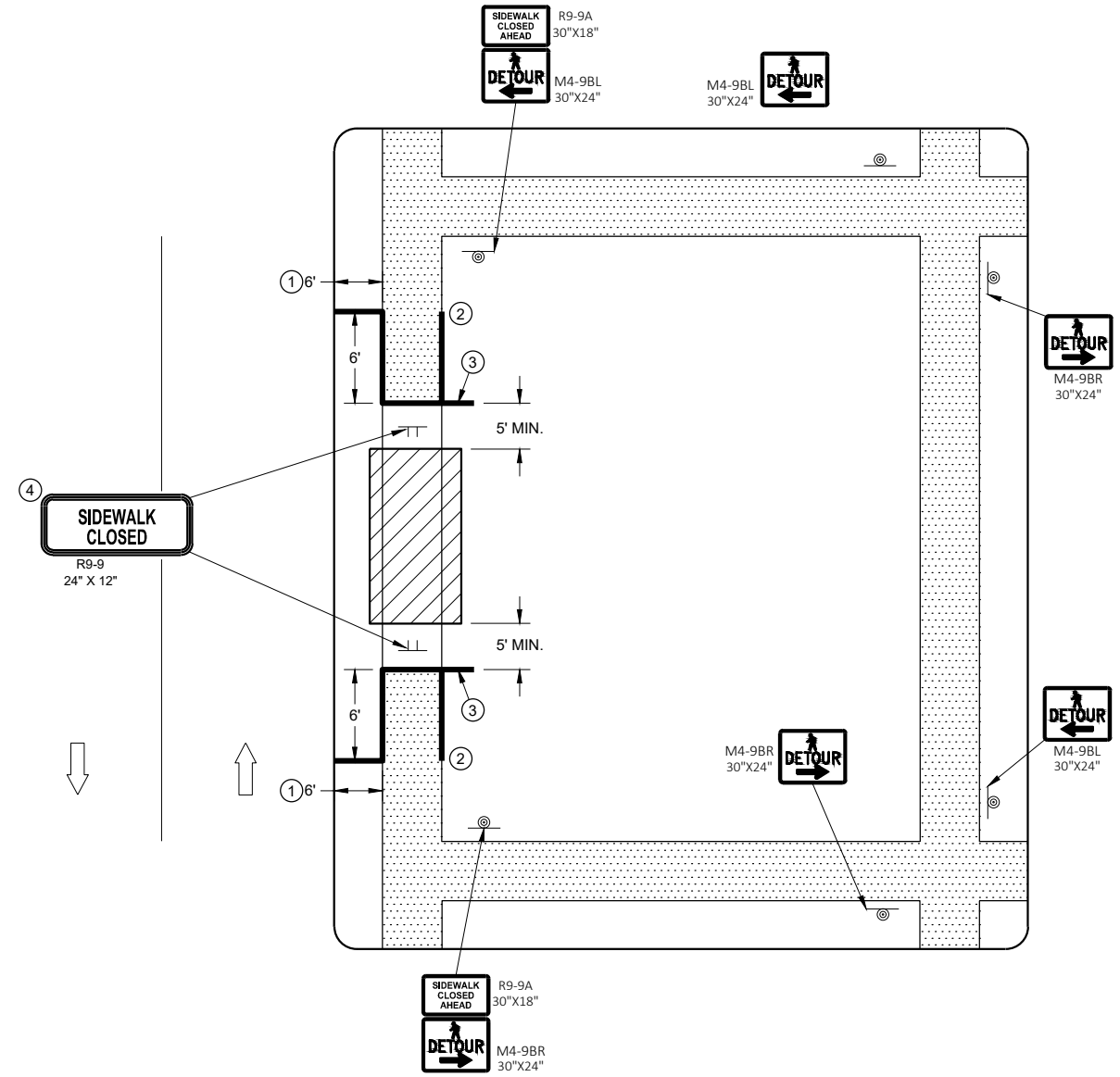
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  UNDER PEDESTRIAN TRAFFIC
-  WORK AREA
-  TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC

GENERAL NOTES

- SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.
- WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- SIGNS THAT REMAIN IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- ① IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
 - ② PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
 - ③ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
 - ④ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



SIDEWALK DETOUR, SIDEWALK ONLY ON ONE SIDE

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION








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SDD 15D30 - 07f

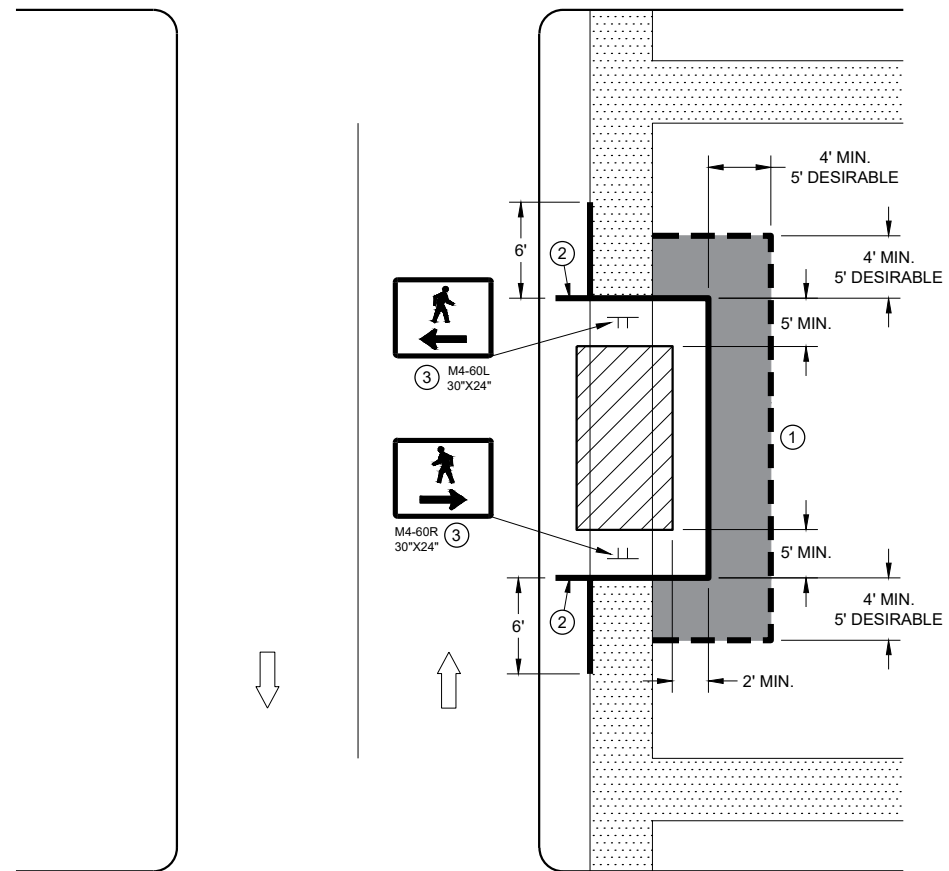
SDD 15D30 - 07f

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  WORK AREA
-  UNDER PEDESTRIAN TRAFFIC
-  TEMPORARY PEDESTRIAN SURFACE
-  TEMPORARY PEDESTRIAN BARRICADE
-  OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC










GENERAL NOTES

- TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.
- SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.
- WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- SIGNS THAT REMAIN IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- ① USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
- ② IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- ③ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



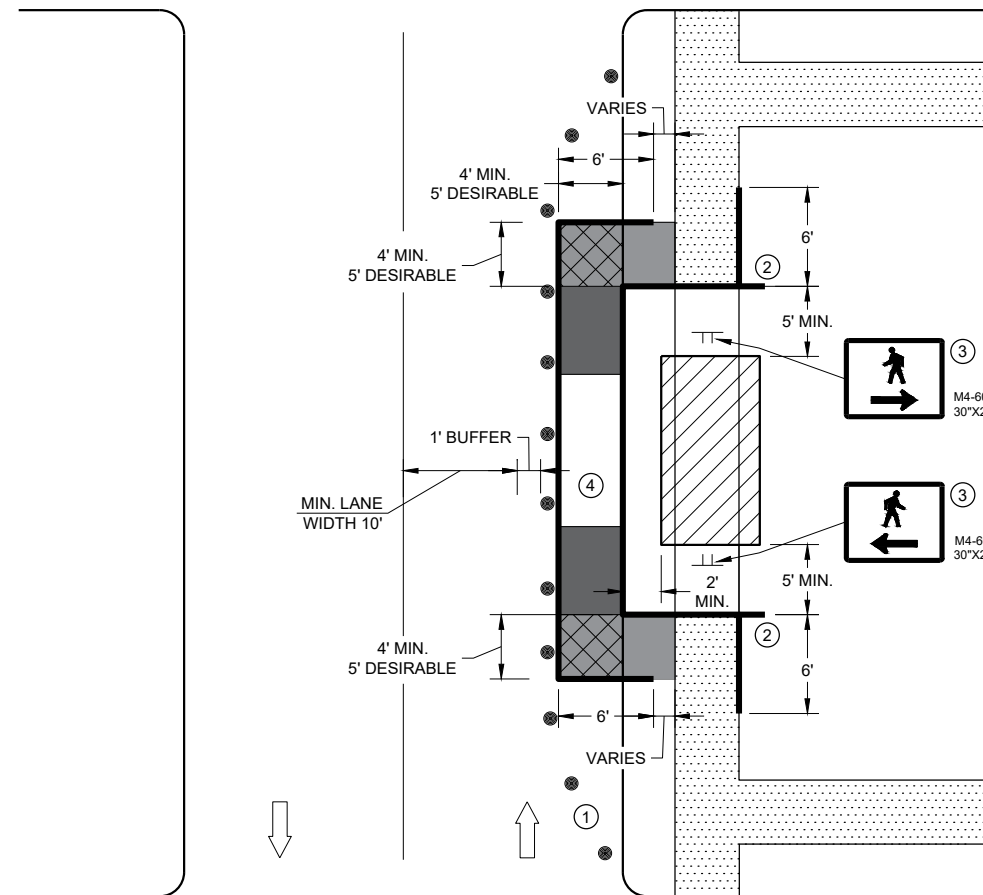
**SIDEWALK DIVERSION
SINGLE SIDE**

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  WORK AREA
-  UNDER PEDESTRIAN TRAFFIC
-  TEMPORARY CURB RAMP
-  TEMPORARY PEDESTRIAN SURFACE "A"
-  TEMPORARY PEDESTRIAN SURFACE "B"
-  TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC

GENERAL NOTES

- TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.
- SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.
- WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- ① SHOULDER OR LANE CLOSURE ADVANCE WARNING AND BUFFER SPACE REQUIRED.
 - ② PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL PAST THE SIDEWALK ON THE SIDE AWAY FROM THE ROAD.
 - ③ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.
 - ④ USE EXISTING PAVEMENT SURFACE. IF EXISTING PAVEMENT SURFACE HAS BEEN REMOVED, USE A TEMPORARY PEDESTRIAN SURFACE.



SIDEWALK DIVERSION, SINGLE SIDE

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

6

6

SDD 15D30 - 07h

SDD 15D30 - 07h

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.











SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

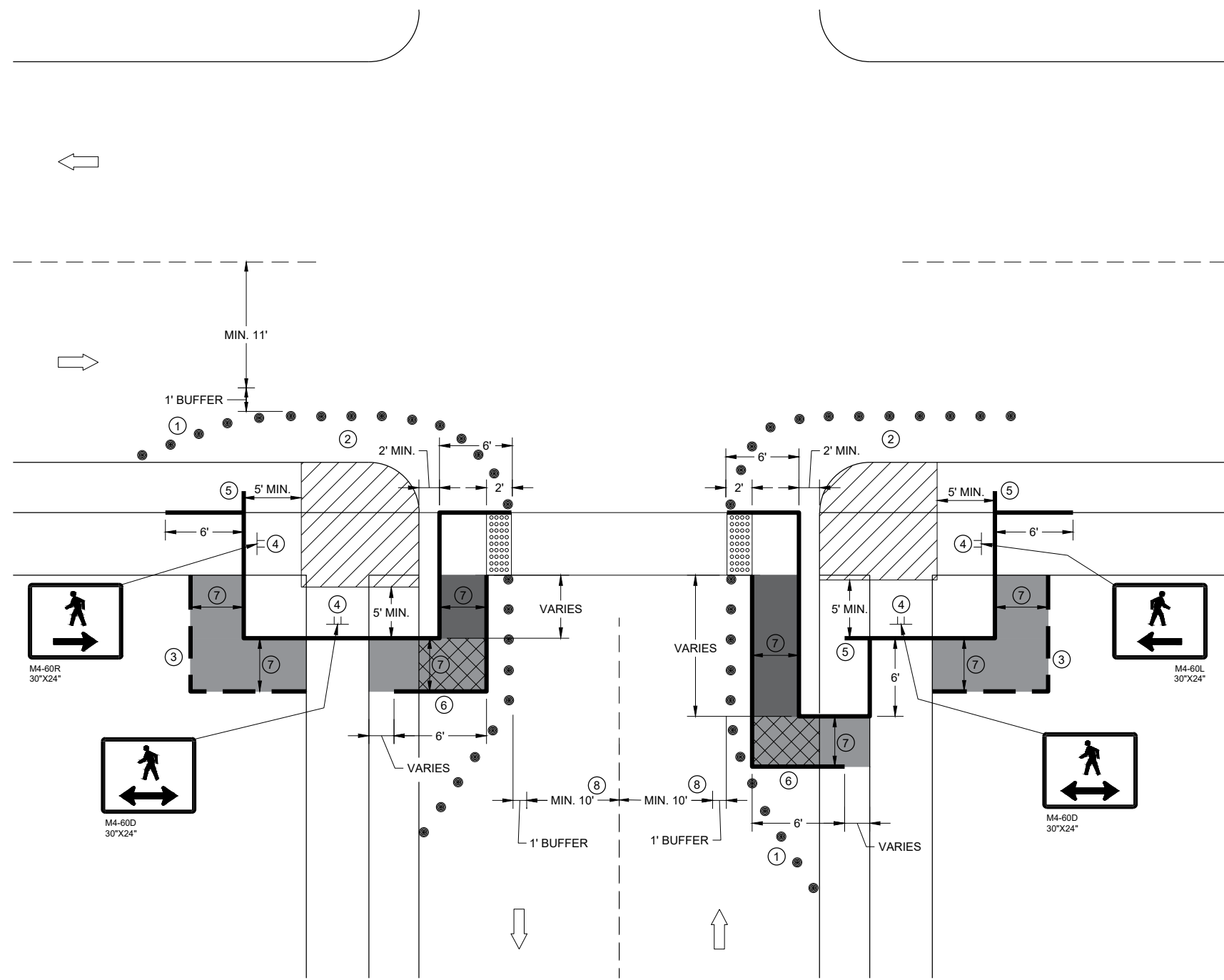
TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

- ① SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
- ② PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
- ③ USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
- ④ MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
- ⑤ PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
- ⑥ IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
- ⑦ 4 FEET MINIMUM, 5 FEET DESIRABLE
- ⑧ IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  WORK AREA
-  TEMPORARY CURB RAMP
-  TEMPORARY PEDESTRIAN SURFACE "A"
-  TEMPORARY PEDESTRIAN SURFACE "B"
-  TEMPORARY DETECTABLE WARNING FIELD
-  TEMPORARY PEDESTRIAN BARRICADE
-  OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC



**CURB RAMP PEDESTRIAN TRAFFIC CONTROL
SIDEWALK ON SINGLE SIDE**

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

6

6

SDD 15D30 - 07i

SDD 15D30 - 07i

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.











SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

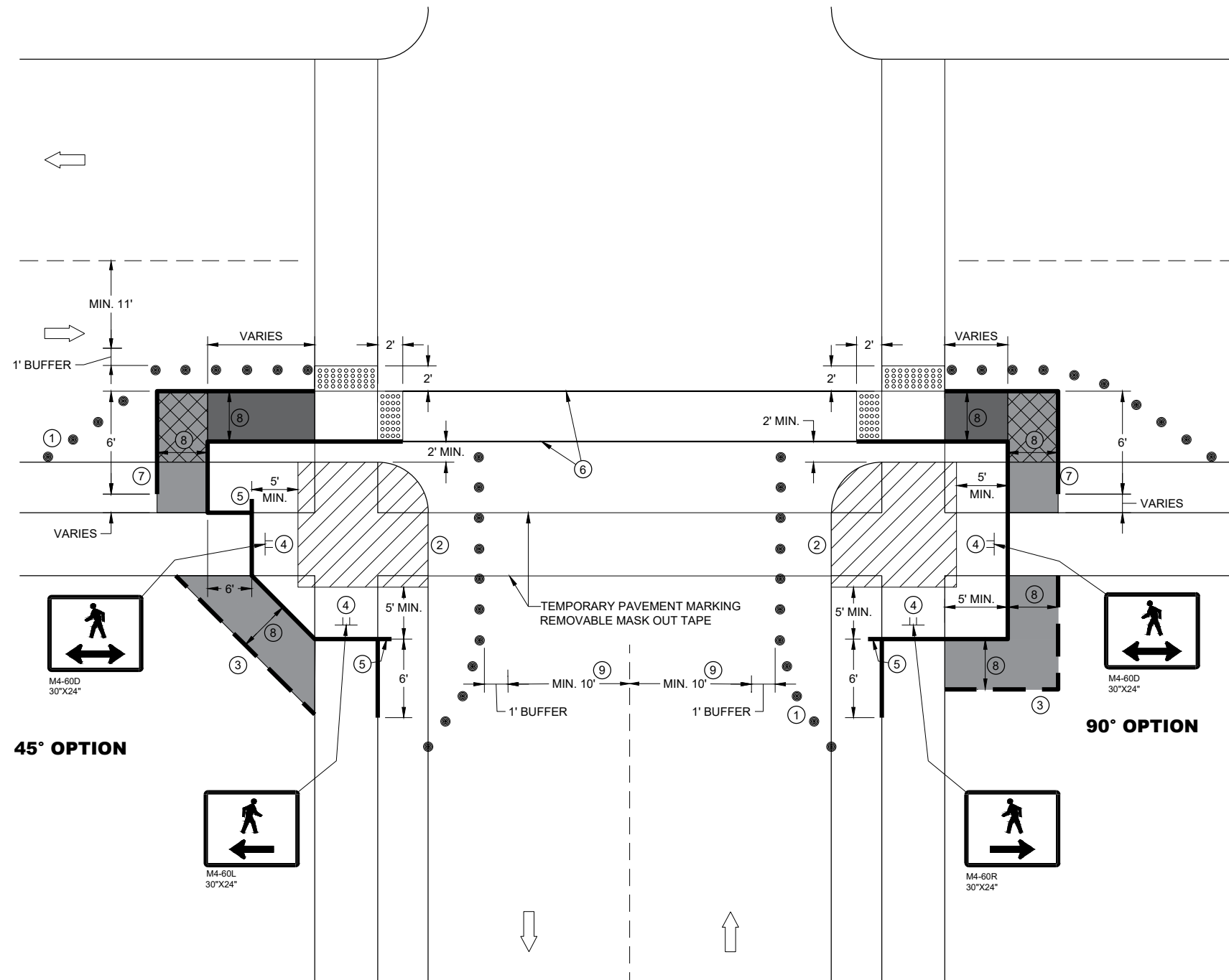
TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

- ① SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
- ② PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
- ③ USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
- ④ MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
- ⑤ PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
- ⑥ WHITE 6" TEMPORARY PAVEMENT MARKING
- ⑦ IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
- ⑧ 4 FEET MINIMUM, 5 FEET DESIRABLE
- ⑨ IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  WORK AREA
-  TEMPORARY CURB RAMP
-  TEMPORARY PEDESTRIAN SURFACE "A"
-  TEMPORARY PEDESTRIAN SURFACE "B"
-  TEMPORARY DETECTABLE WARNING FIELD
-  TEMPORARY PEDESTRIAN BARRICADE
-  OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC



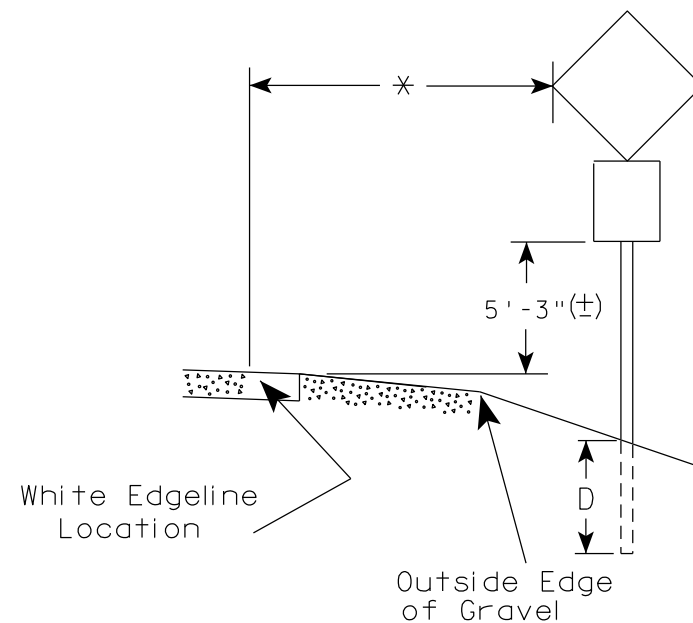
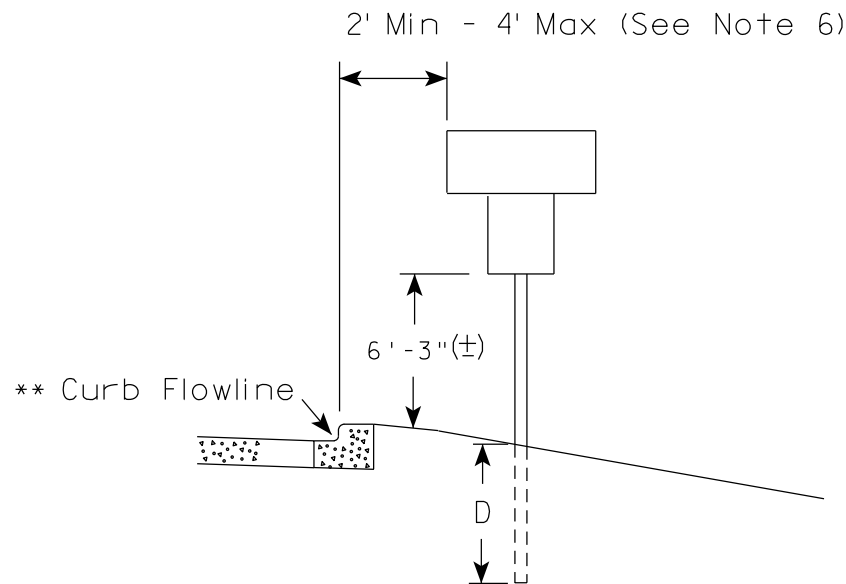
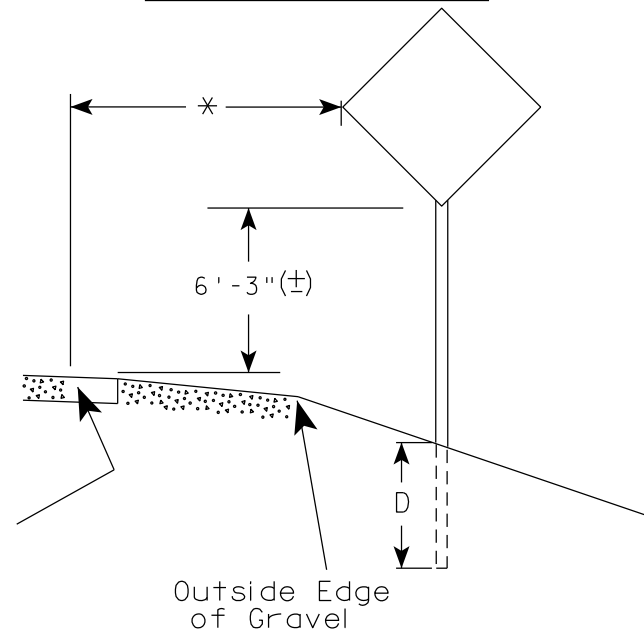
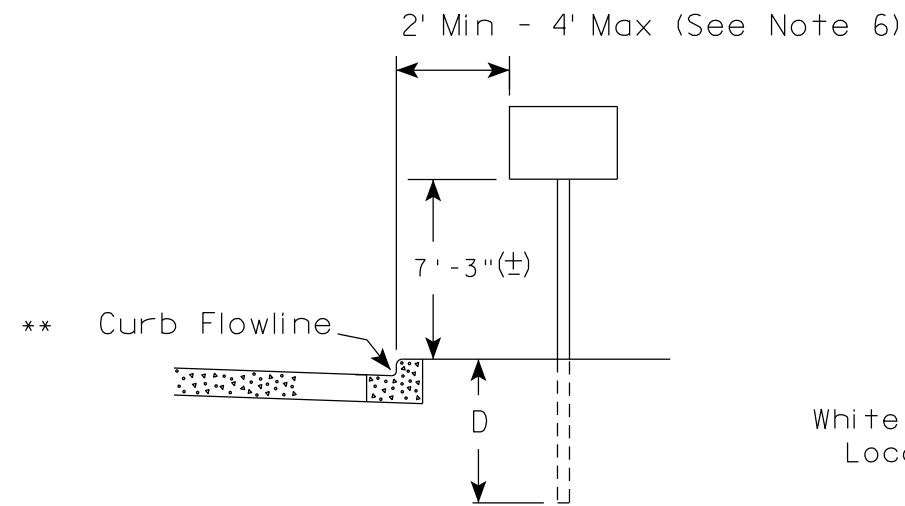
CURB RAMP PEDESTRIAN TRAFFIC CONTROL

**TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

URBAN AREA

RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

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

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

* 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

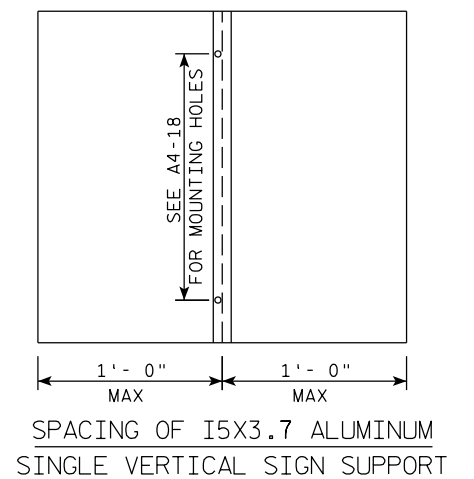
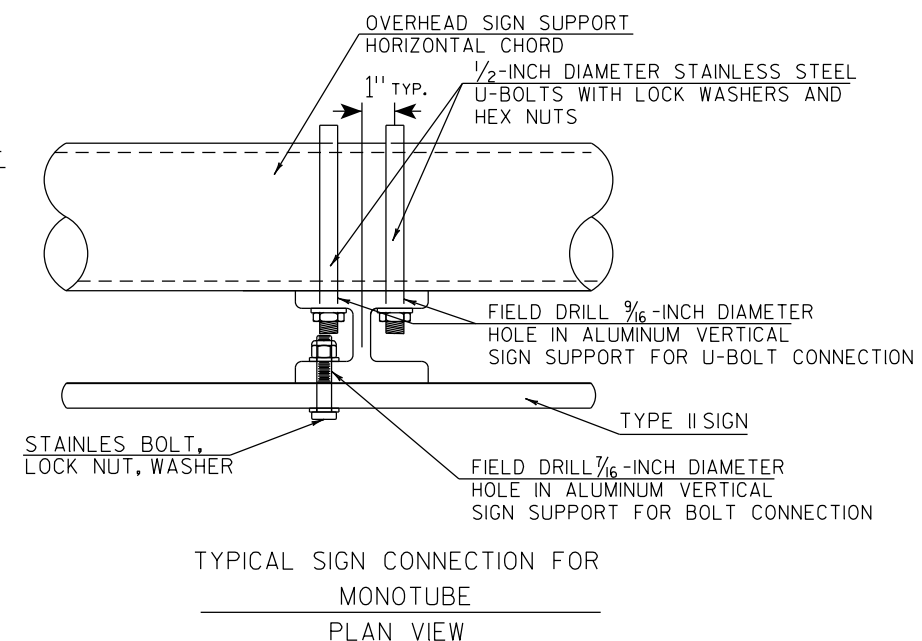
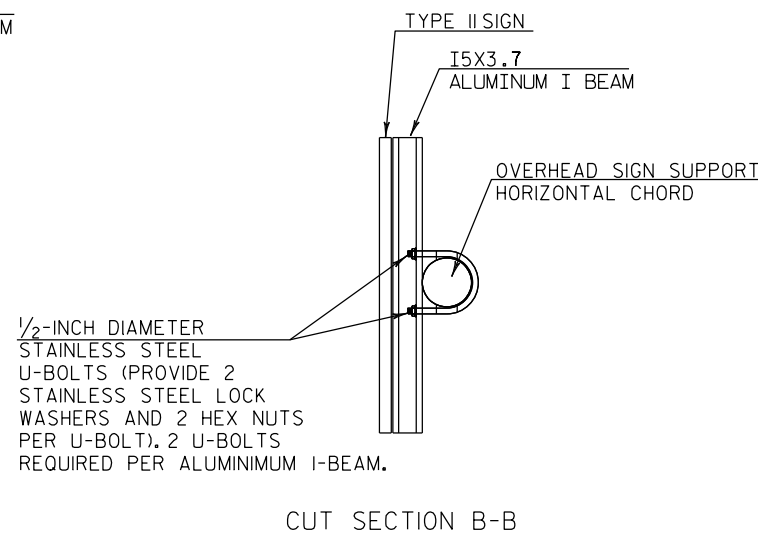
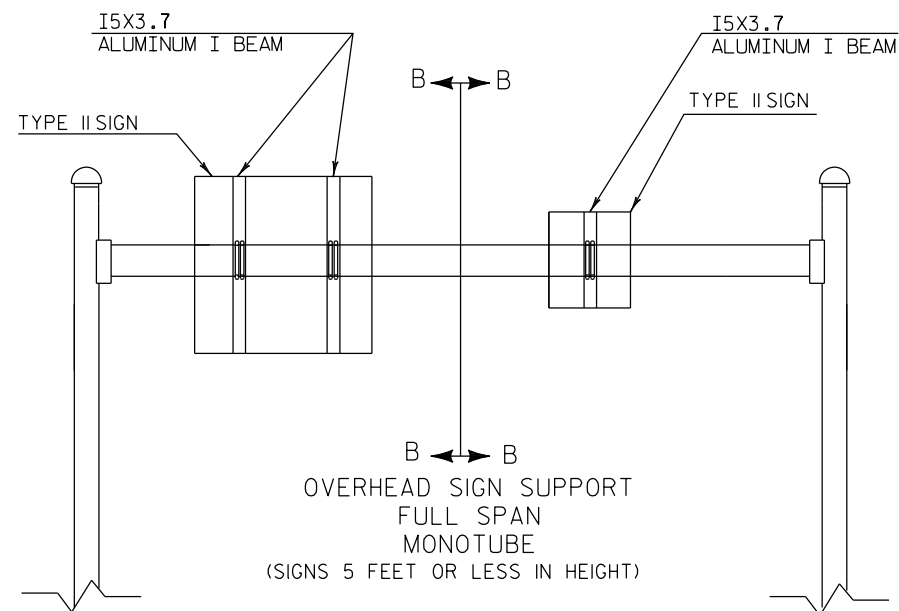
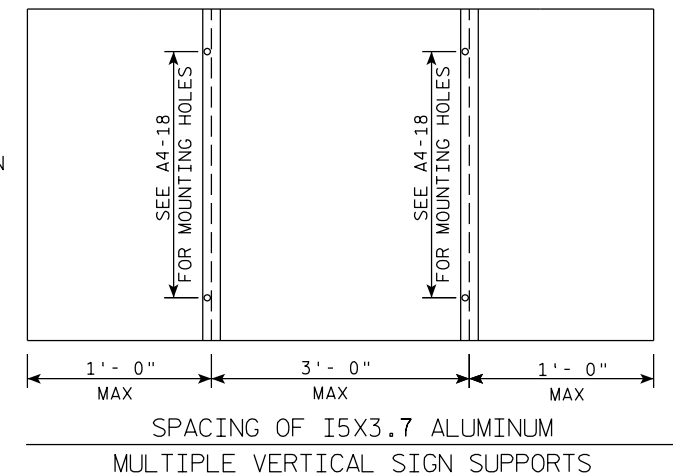
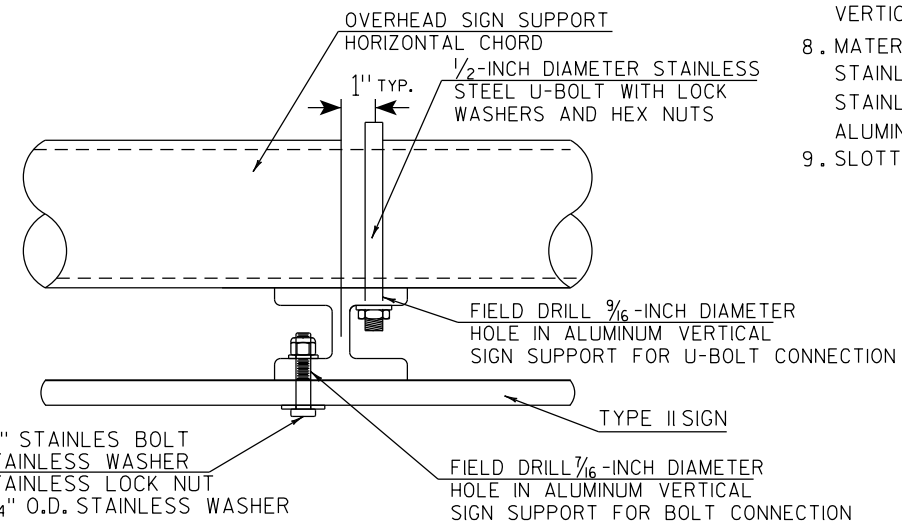
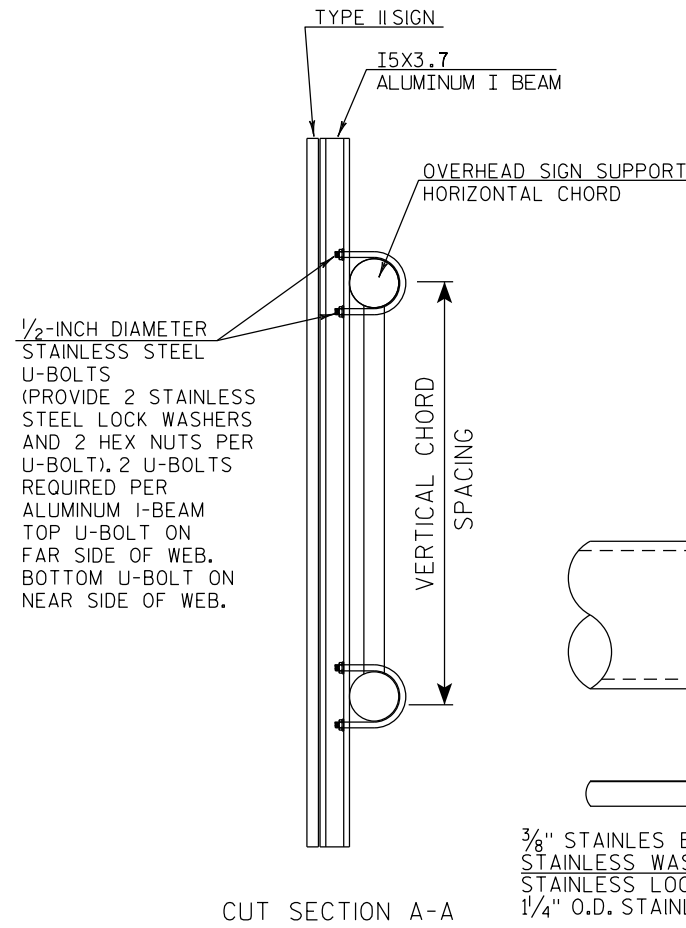
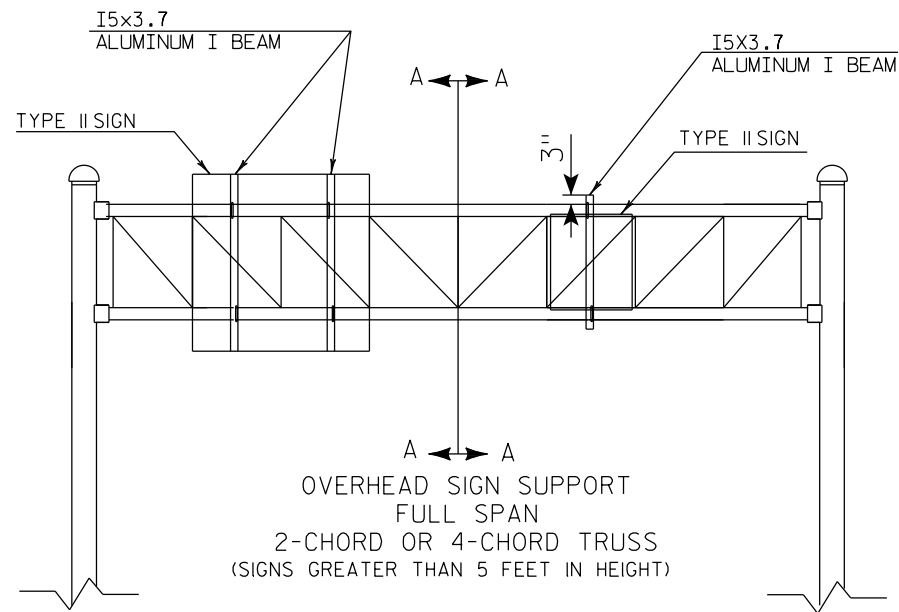
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

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

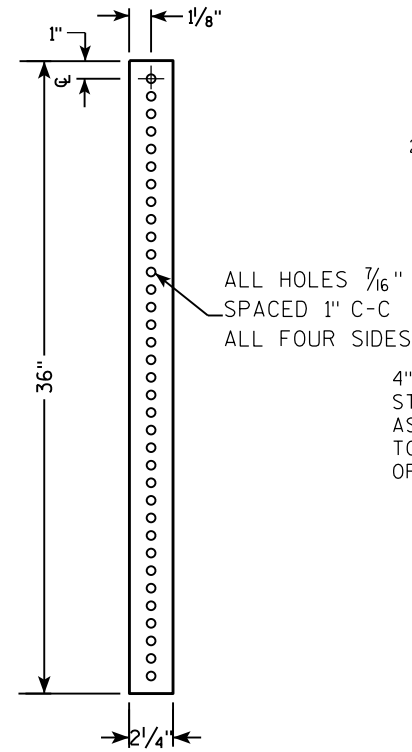


TYPE II SIGN CONNECTION
TO OVERHEAD SIGN SUPPORT

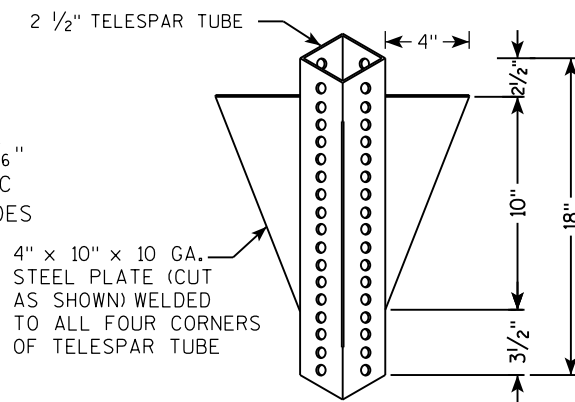
WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 1/07/20 PLATE NO. A4-7B.1

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

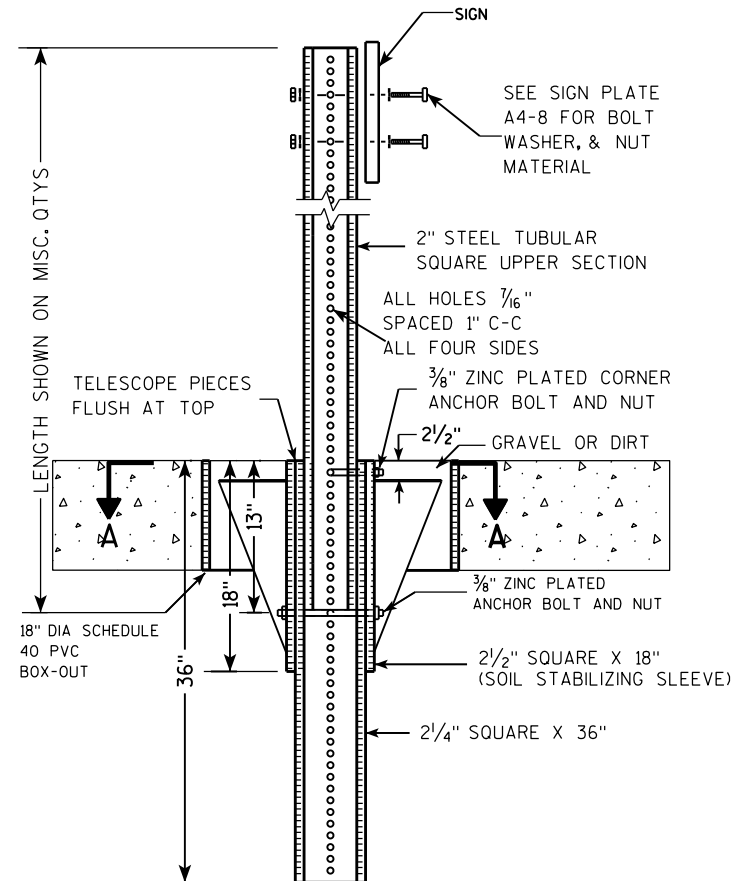
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



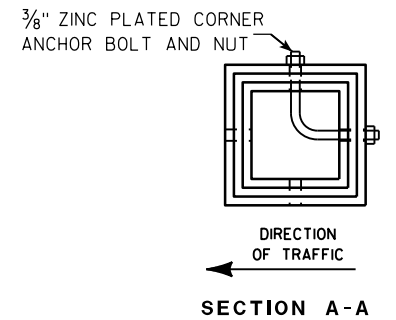
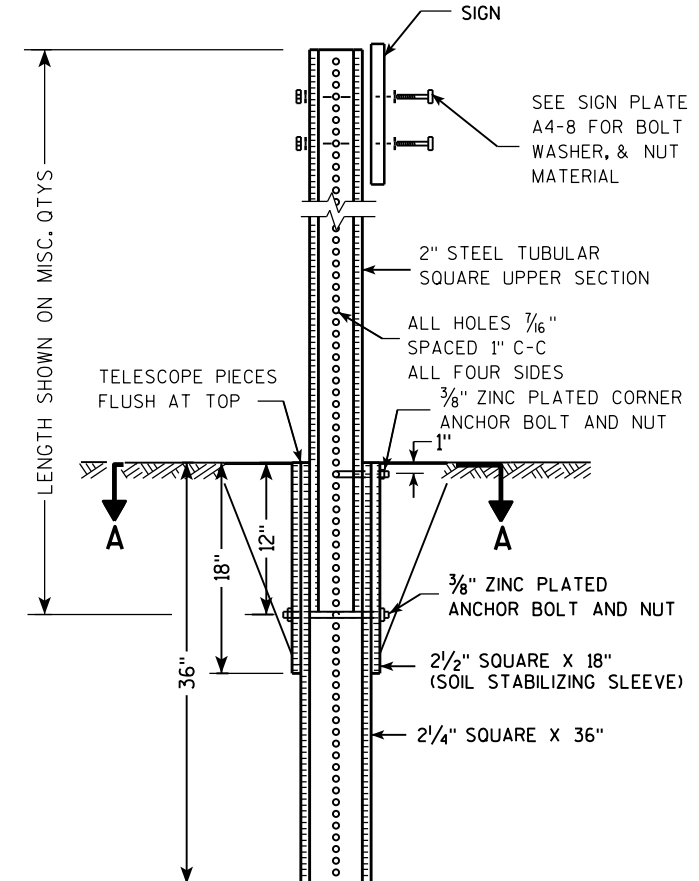
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



**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**

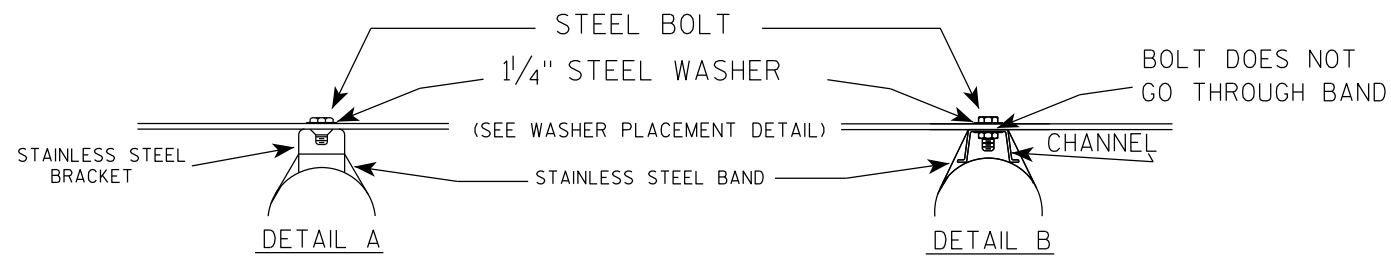
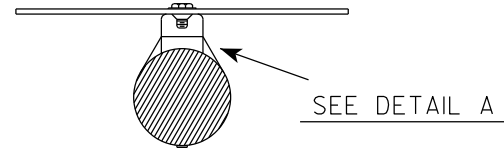
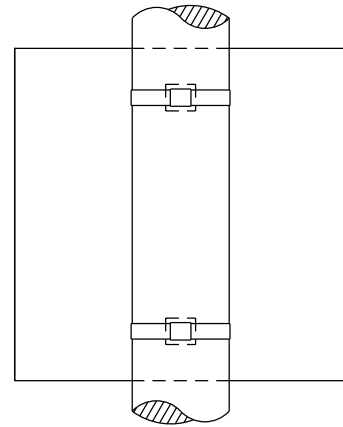
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9

BANDING

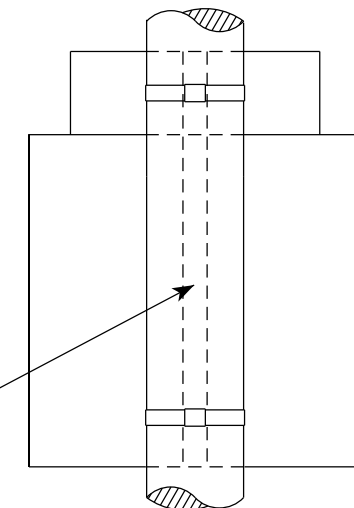
SINGLE SIGN



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 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

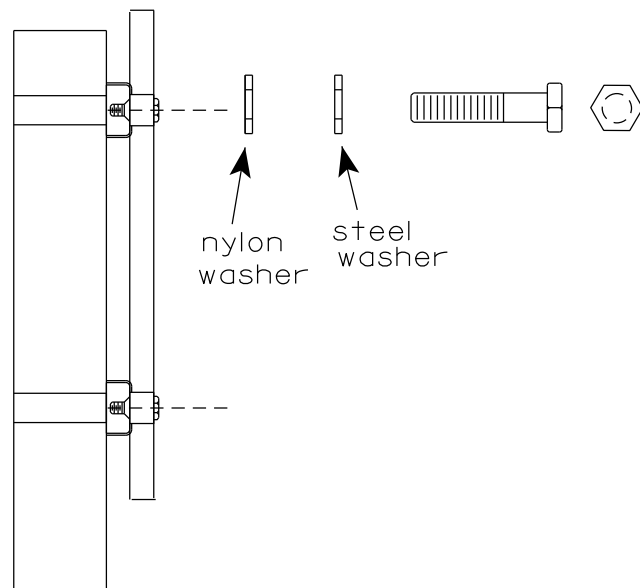
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



WASHER PLACEMENT

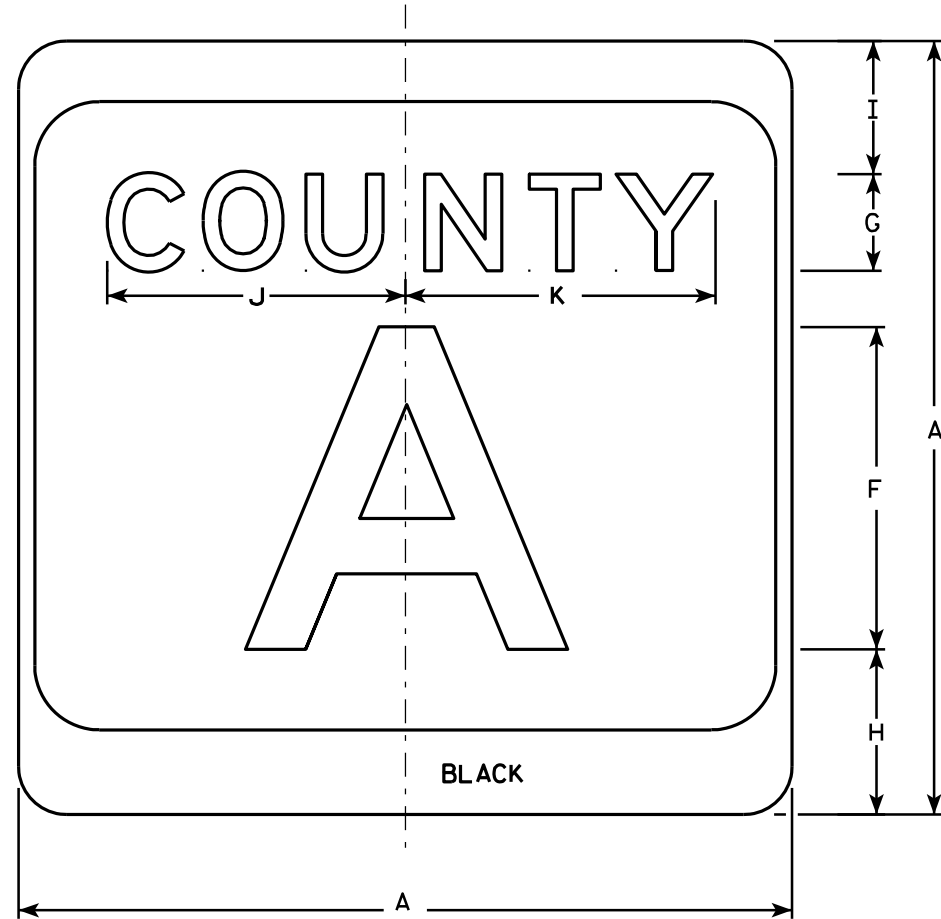


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

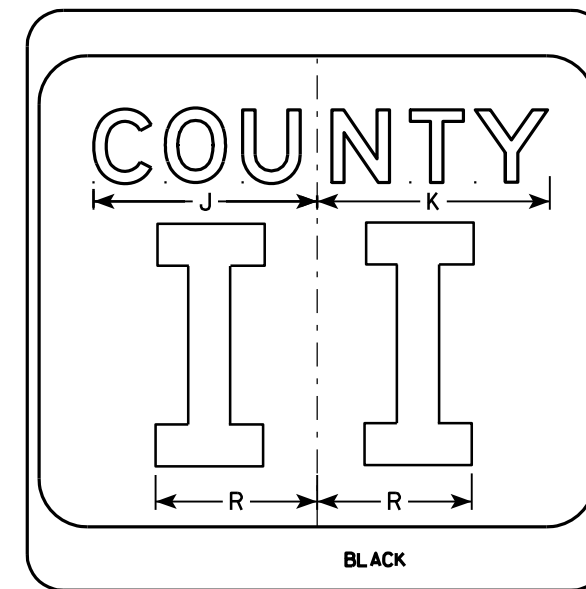
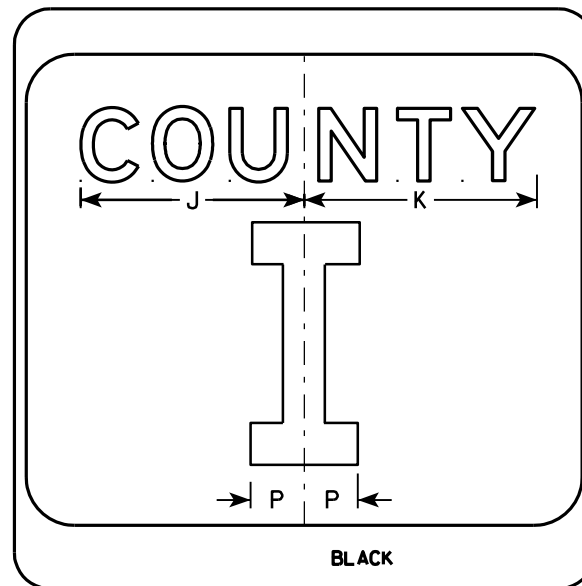
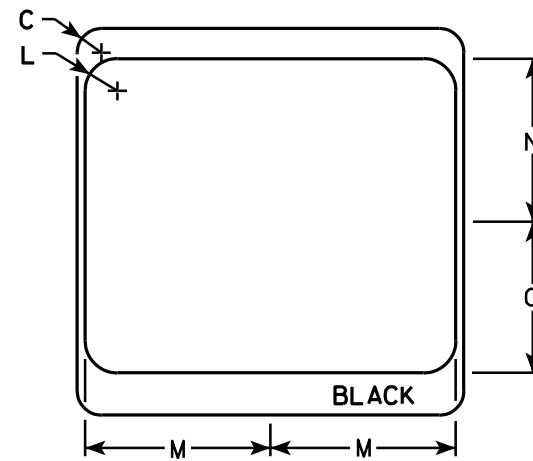
STANDARD SIGN SIGN BANDING DETAILS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 6/10/19	PLATE NO. A5-9.4

NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 7
Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
Message Series D for 2 letters unless message is too big then Series C.
Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective



M1-5A



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																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

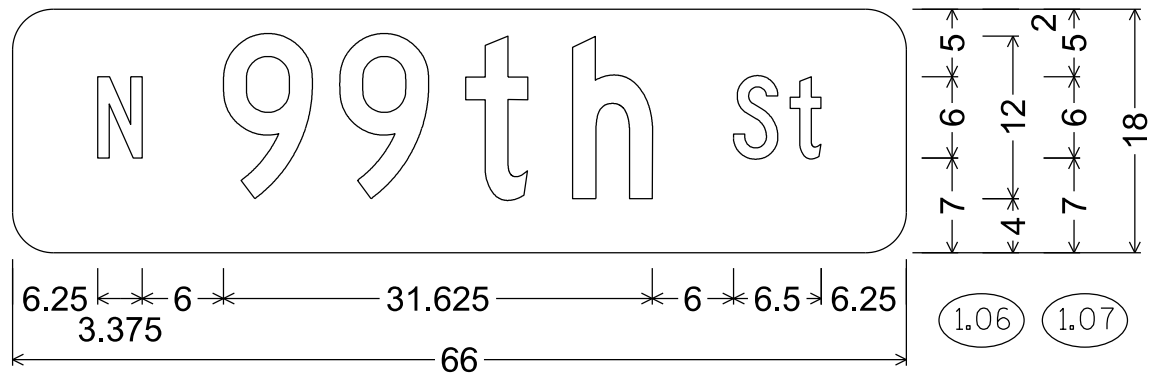
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

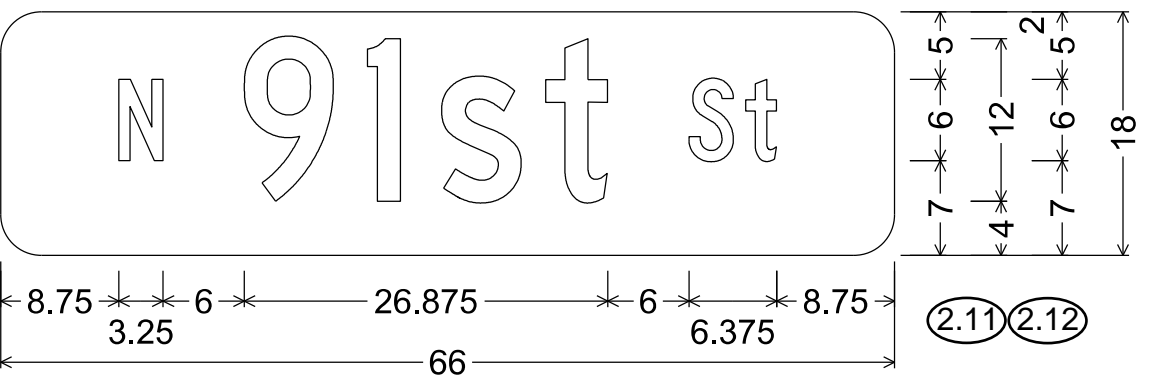
APPROVED *Matthew R. Raub*
For State Traffic Engineer

DATE 9/27/11 PLATE NO. MI-5A.8

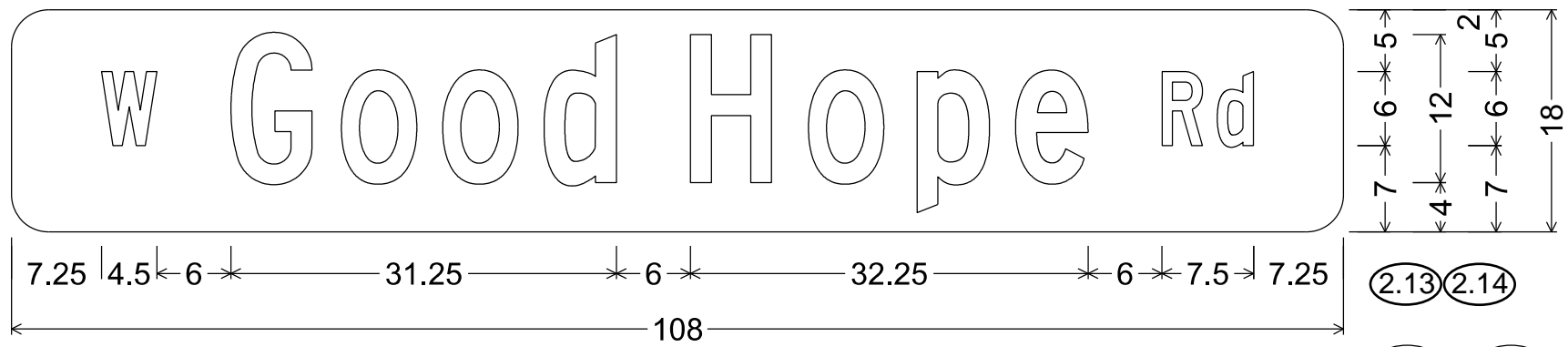
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



M1-94H; 3.000" Radius, No border

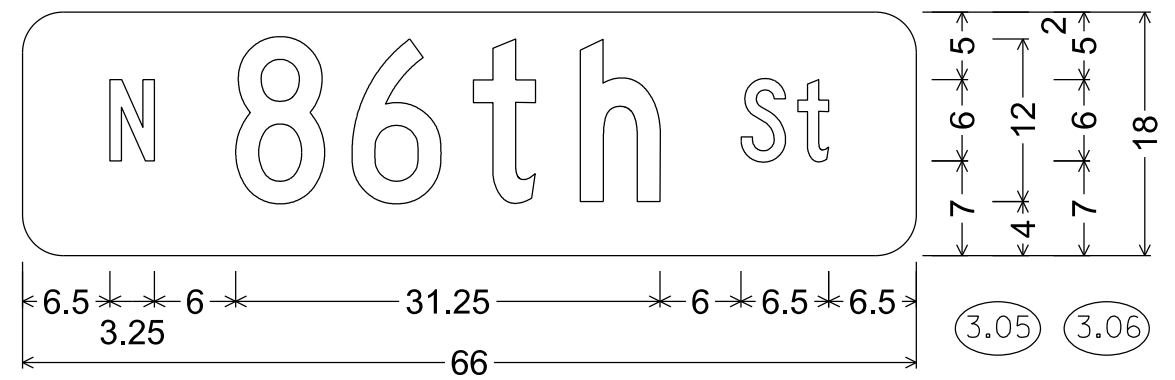


M1-94H; 3.000" Radius, No border

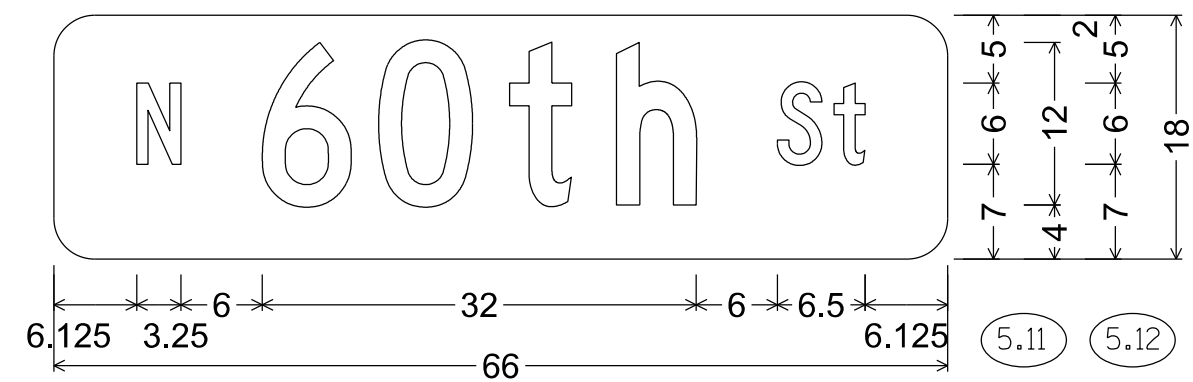


M1-94H; 3.000" Radius, No border

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



M1-94H; 3.000" Radius, No border



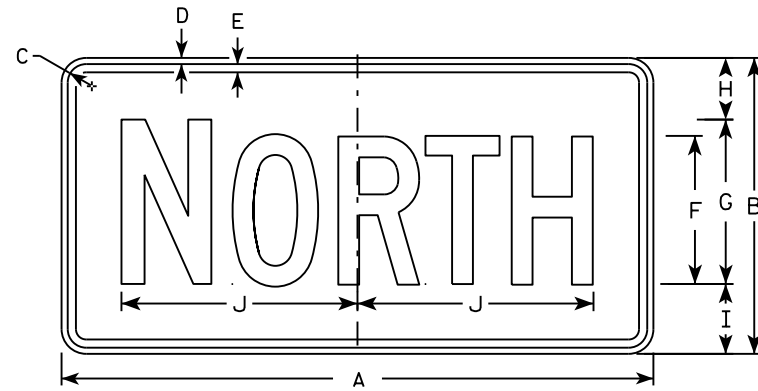
M1-94H; 3.000" Radius, No border

7

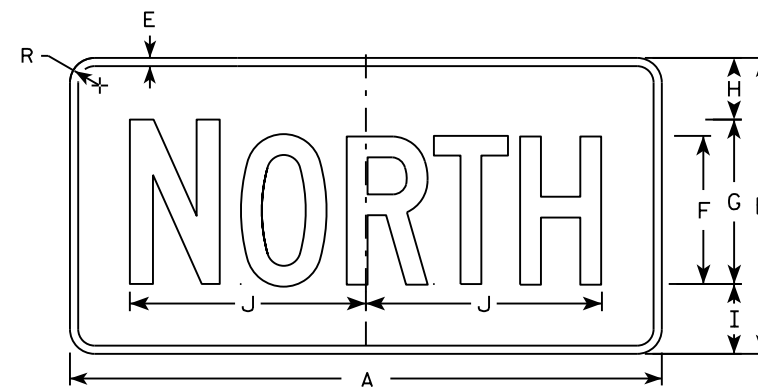
7

NOTES

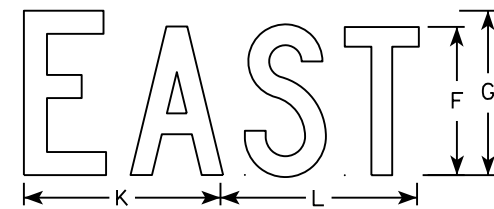
- All Signs Type II - Type H
- Color:
 - Background - See note 5
 - Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4 Background - White
 Message - Black
 MB3-1 thru MB3-4 Background - Blue
 Message - White
 MK3-1 thru MK3-4 Background - Green
 Message - White
 MM3-1 thru MM3-4 Background - White
 Message - Green
 MN3-1 thru MN3-4 Background - Brown
 Message - White
 MP3-1 thru MP3-4 Background - White
 Message - Blue
- Note the first letter of each direction is larger than the remainder of the message.



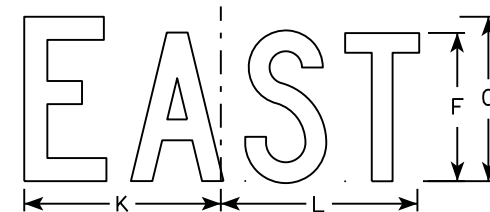
M3-1
MM3-1
MP3-1



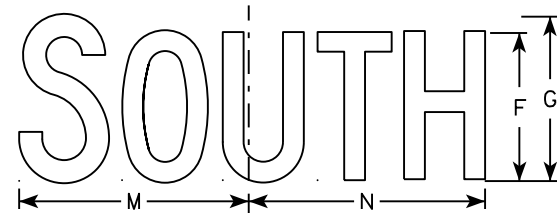
MB3-1
MK3-1
MN3-1



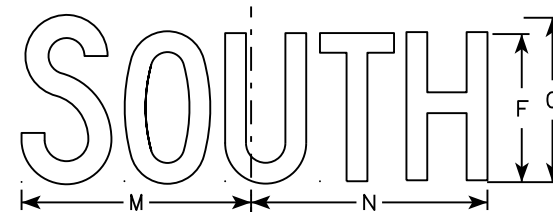
M3-2
MM3-2
MP3-2



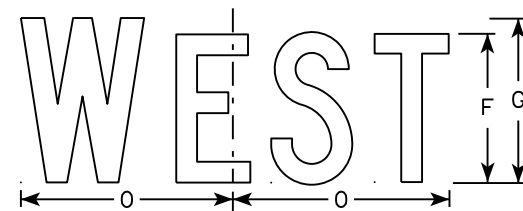
MB3-2
MK3-2
MN3-2



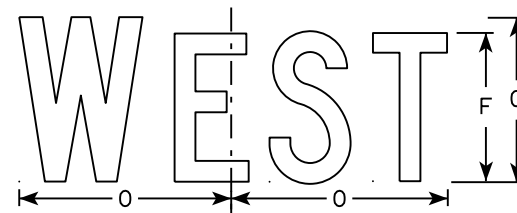
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

7

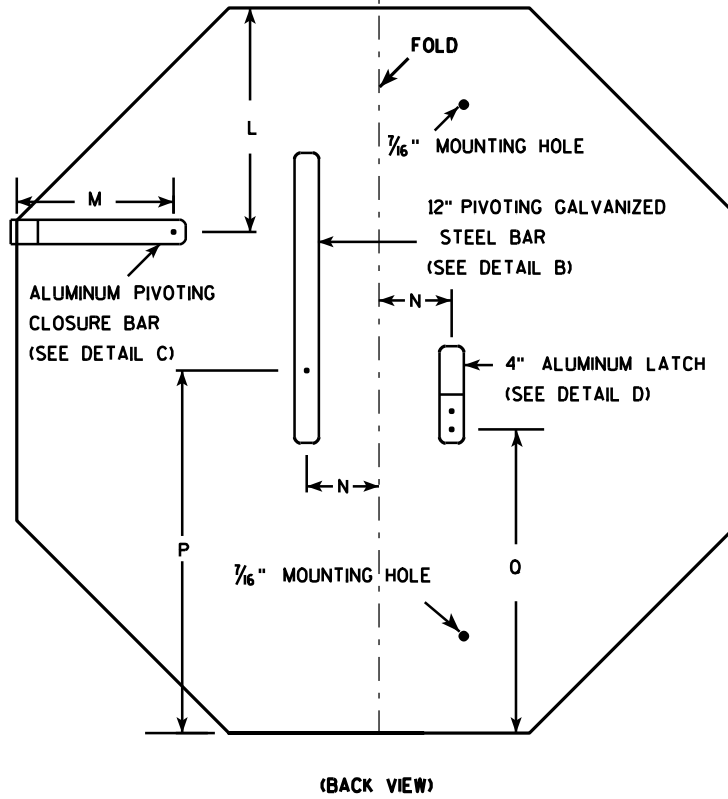
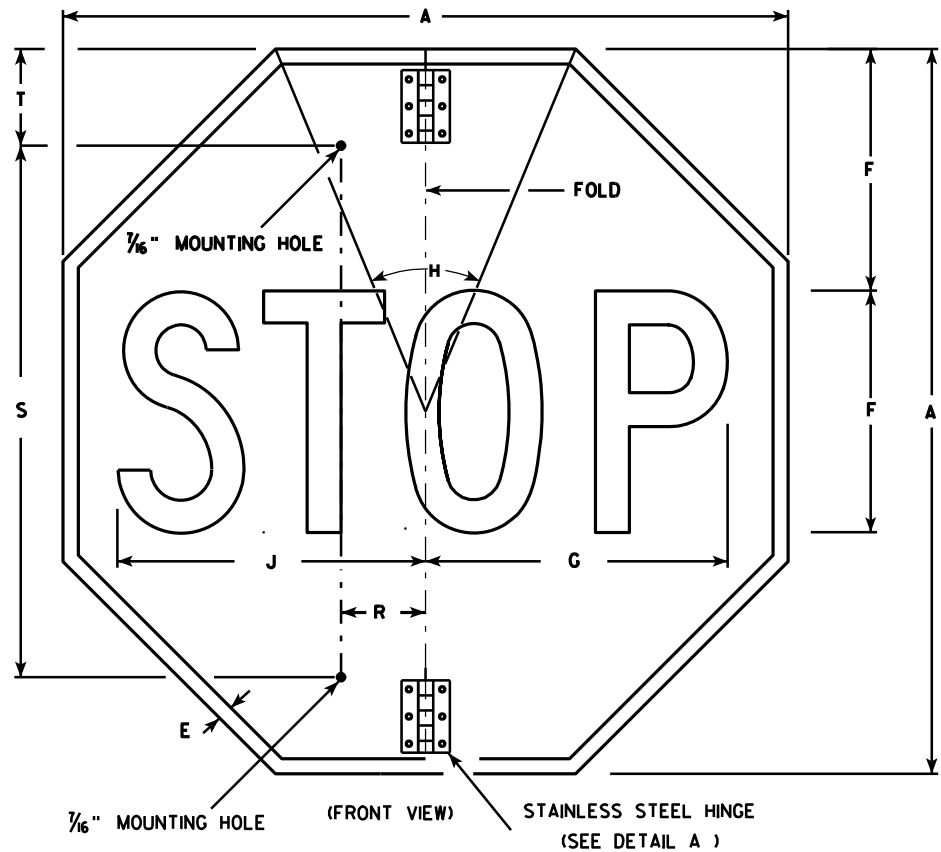
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thru M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

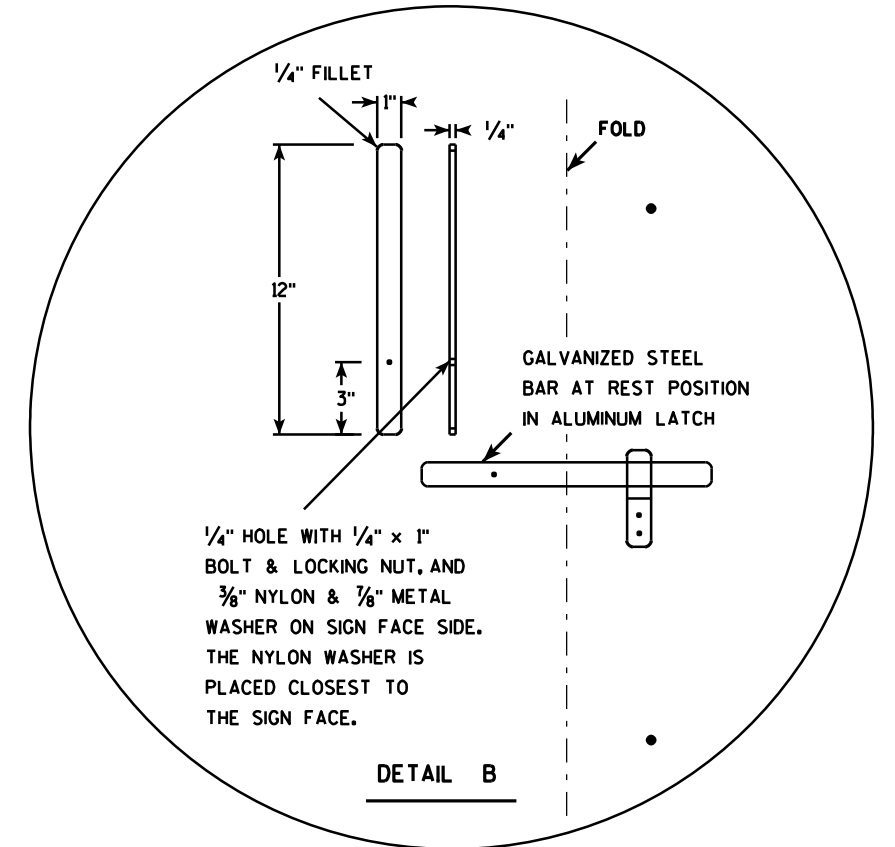
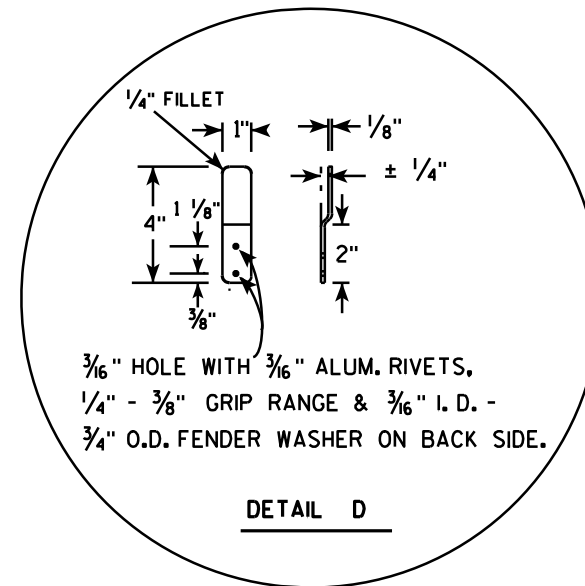
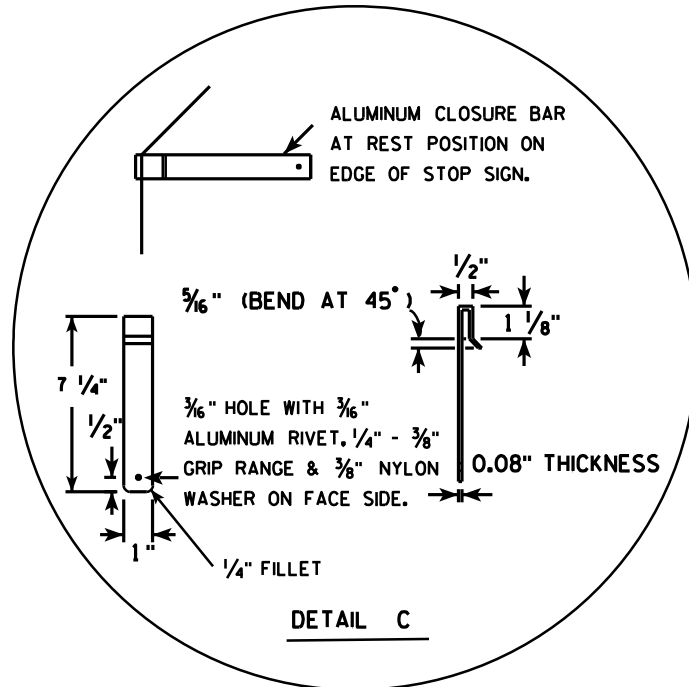
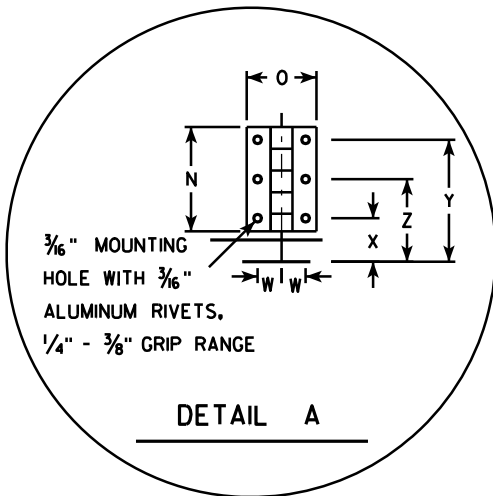
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14



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 1/8	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 1/8	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 1/8	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

STANDARD SIGN
R1-1F

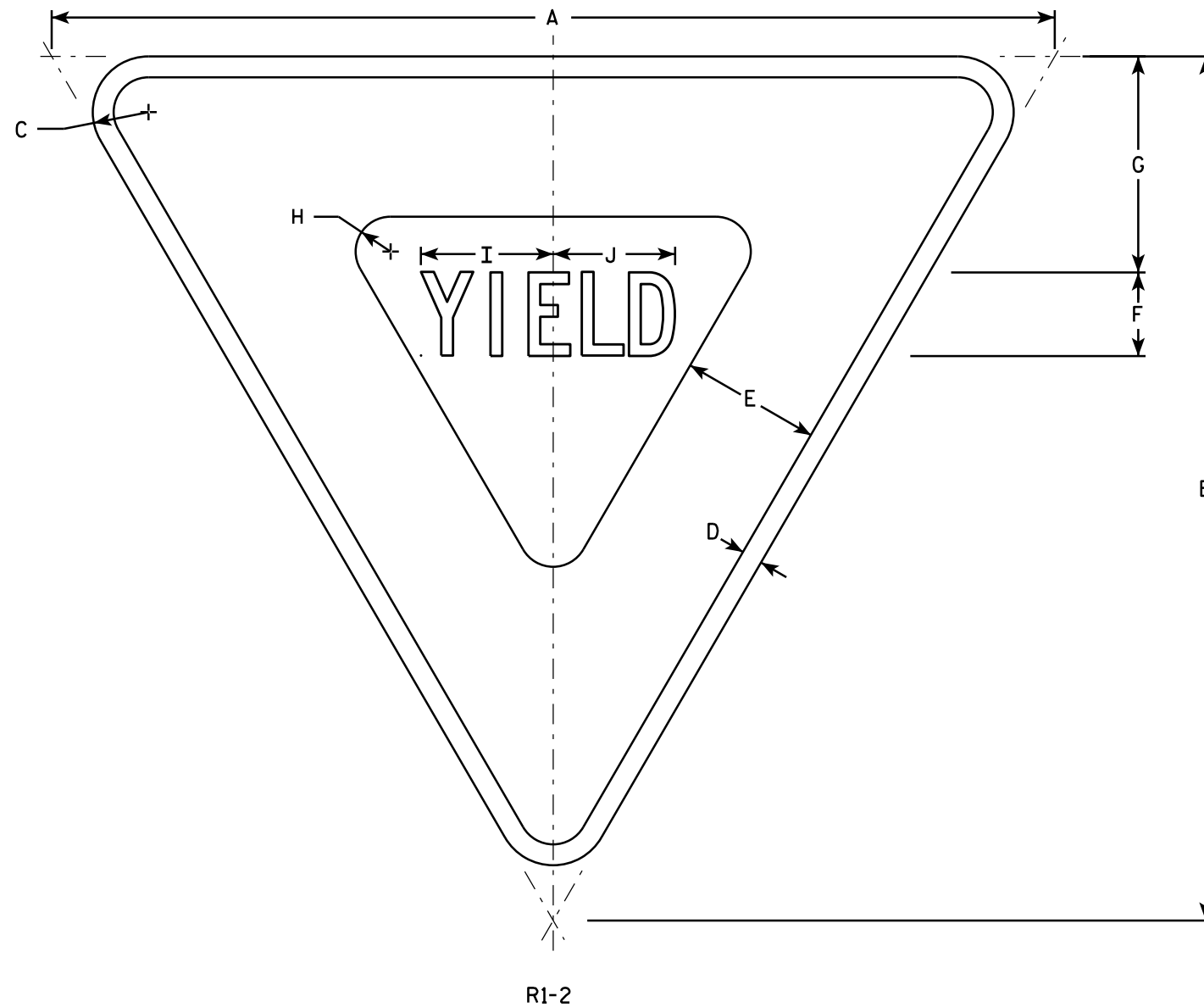
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.



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	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

WISCONSIN DEPT OF TRANSPORTATION

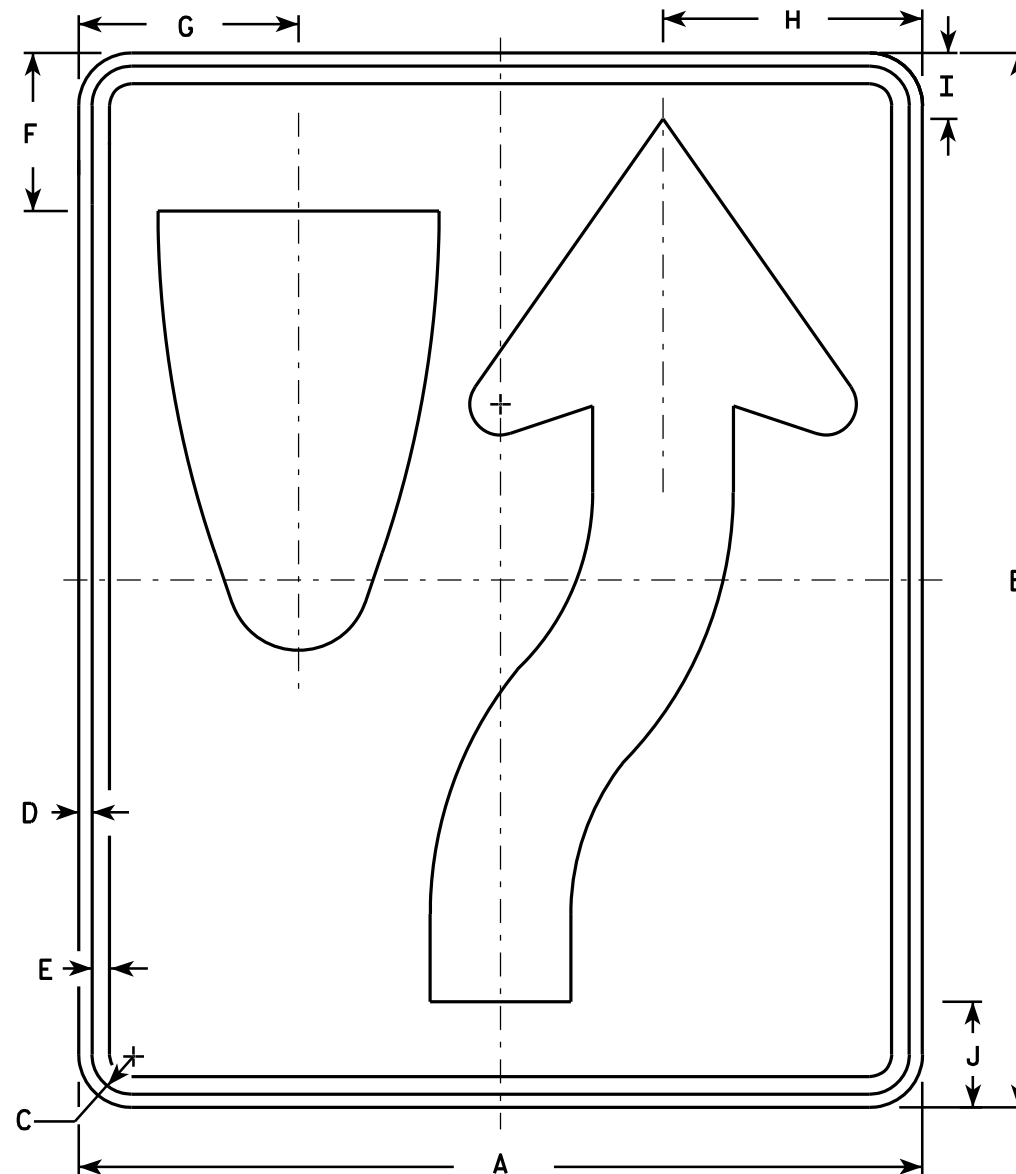
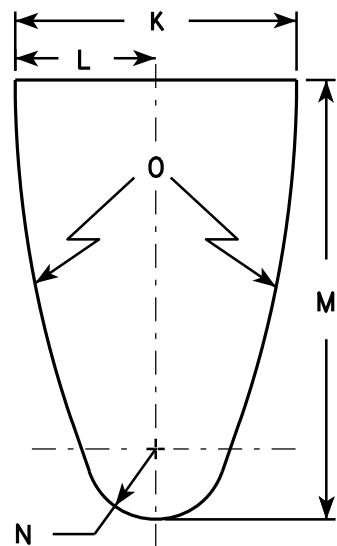
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/13/14 PLATE NO. R1-2.12

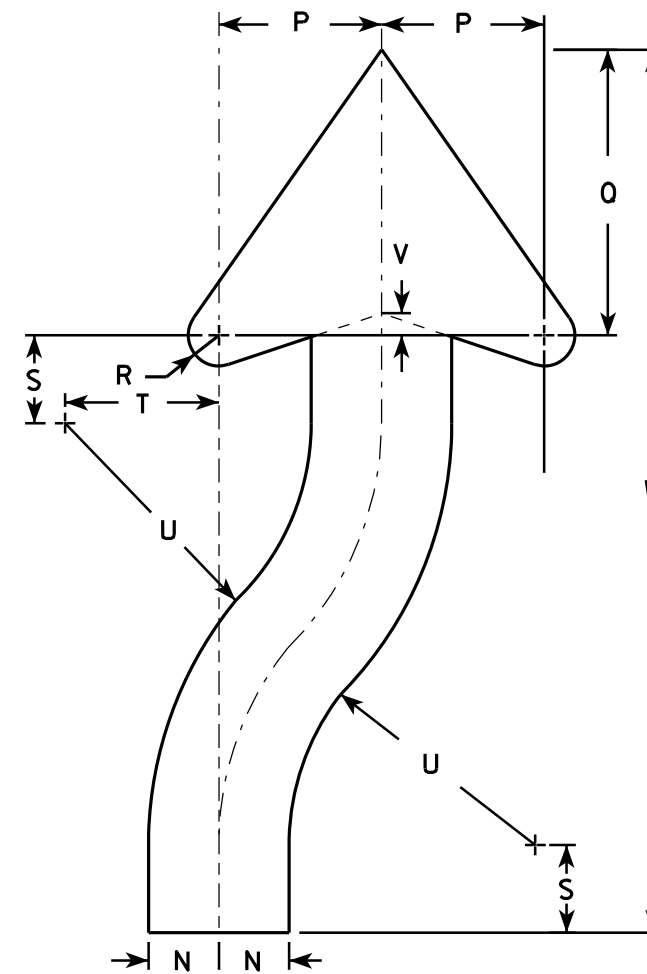
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ **E**

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

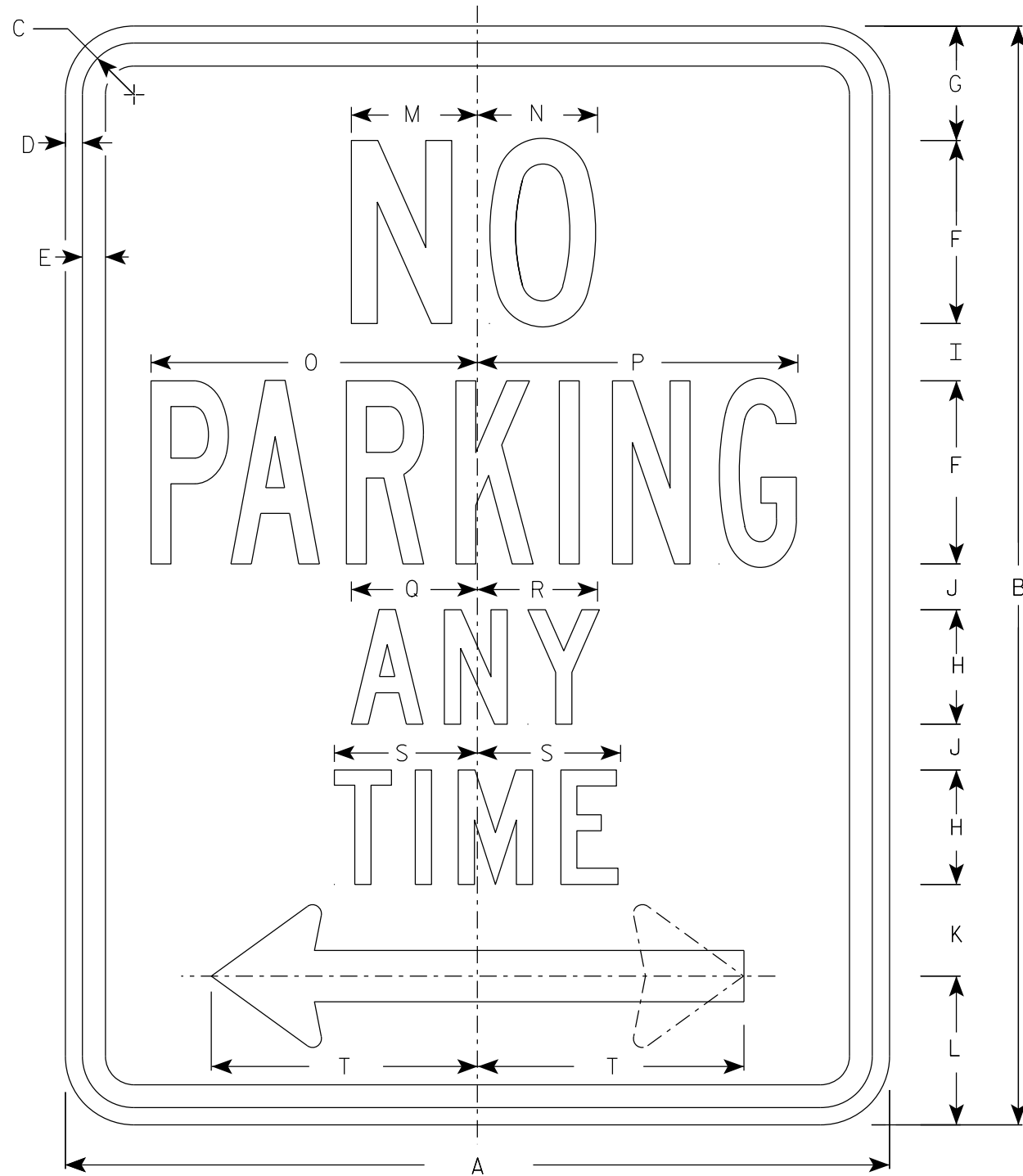
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

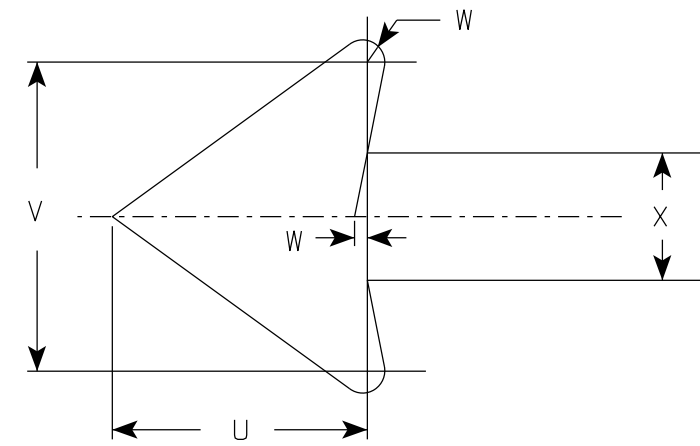
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



R7-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Red
3. Message Series - See Note 5
4. Lines 1, 3 and 4 are series C, line 2 is series B.
5. R7-1D (double arrow)
R7-1L (left arrow)
R7-1R (right arrow)



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4		1.5	
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8		3.0	
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2		5.0	
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2		5.0	
4																											
5																											

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

DATE 3/31/2021 PLATE NO. R7-1.10

Notes



Wisconsin Department of Transportation

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