WIS APR 2014

PROJECT ID: 1166-12-85

COUNTY: PORTAGE

ORDER OF SHEETS

TOTAL SHEETS = 52

PROJECT LOCATION

24

DESIGN DESIGNATION

		CTH B
A.A.D.T. (2013)	=	17,910
A.A.D.T. (2033)	=	26,980
D.H.V.	=	1,879
D.D.	=	58/42
T.	=	5.4%
DESIGN SPEED	=	45 M.P.H.
ESALS (RIGID)	=	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 (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

PLAINFIELD - STEVENS POINT

CTH B BRIDGE OVERHEIGHT DETECTION

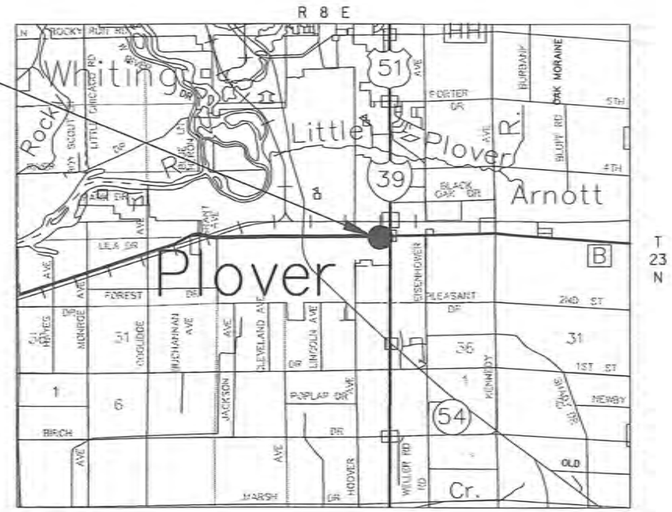
IH 39

PORTAGE COUNTY

STATE PROJECT NUMBER

1166-12-85

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1166-12-85		



LAYOUT SCALE 0 1 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), PORTAGE COUNTY

ORIGINAL PLANS PREPARED BY

SRF Consulting Group, Inc.

WISCONSIN
ERIK D. MINGE
E-30914
MINNEAPOLIS, MN
PROFESSIONAL ENGINEER
11/1/13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	QUEST CIVIL ENGINEERS
Designer	SRF CONSULTING GROUP, INC.
Project Manager	JEFFREY STEWART
Regional Examiner	CHERL SIMON
Regional Supervisor	MICHAEL KRETSCHMER

APPROVED FOR THE DEPARTMENT

DATE: 02/06/2014 (Signature)

E

FILE NAME : H:\PROJMDSN\7216\HI-MU\PLAN\SR_010101_TI.DWG PLOT DATE : $$...plottingdate...$$ PLOT BY : CORTNEY FALERO PLOT NAME : ----------

WISDOT/CADDS SHEET 10

GENERAL NOTES

THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS, AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE APPLICATION OF ALL WORK SHOWN IN THE PLANS TO THE ACTUAL PHYSICAL FIELD CONDITIONS TO PROVIDE A COMPLETE AND ACCEPTED PROJECT. IN THE EVENT THAT ACTUAL PHYSICAL FIELD CONDITIONS AFFECT OR PREVENT THE APPLICATION OR PROGRESSION OF ANY WORK SHOWN IN THE PLANS OR SPECIAL PROVISIONS, NOTIFY THE ENGINEER IMMEDIATELY, AND PRIOR TO ANY FURTHER WORK ACTIVITY. IMMEDIATELY NOTIFY THE ENGINEER OF ANY LOCATION CHANGES.

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

BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.

BE AWARE THAT NO TEST BORINGS WERE MADE WHERE CONDUIT, PULL BOXES, POLES, FOUNDATIONS, OR OTHER EQUIPMENT IS TO BE INSTALLED. THE CONTRACTOR IS FULLY RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

AREAS WITHIN RIGHT-OF-WAY DISTURBED SPECIFICALLY FOR ITS CONSTRUCTION ARE TO BE RESTORED TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER, AND SEED AND MULCH IN COMPLIANCE WITH STANDARD SPECIFICATIONS AND AS APPROVED BY THE ENGINEER. RESTORING AREAS DISTURBED FOR ITS CONSTRUCTION OPERATIONS SHALL BE INCIDENTAL TO OVERHEIGHT VEHICLE DETECTION ASSEMBLY.

CONTRACTOR SHALL STAKE ALL BASES AND ELECTRICAL EQUIPMENT. PRIOR TO POURING CONCRETE AND/OR INSTALLATION THE CONTRACTOR SHALL COORDINATE WITH THE WISDOT ELECTRICIAN FOR REVIEW AND APPROVAL. CONTACT KEN RADKE NORTH CENTRAL REGION ELECTRICIAN (715) 459-4264.

LEGEND

DESCRIPTION	SYMBOL
POLE MOUNTED CABINET	
POLE	
PULL BOX 24X36	
ITS CONDUIT	
ITS CONDUIT DIRECTIONAL BORE	
METER BREAKER PEDESTAL	
OVERHEIGHT VEHICLE DETECTOR	
SIGN, PEDESTAL MOUNT	
SIGN, WOOD POLE MOUNT	
SIGN, MONOTUBE	
SIGNAL HEAD	

STANDARD ABBREVIATIONS

PB ----- PULL BOX
OHS ----- OVERHEIGHT SYSTEM

UTILITIES

DAVID FRITSCH
VILLAGE OF PLOVER - WATER
2400 POST ROAD
P.O. BOX 37
PLOVER, WI 54467

RICH BODEN
VILLAGE OF PLOVER - SEWER
2400 POST ROAD
P.O. BOX 37
PLOVER, WI 54467

CHUCK BARTELT
AT&T WISCONSIN - COMMUNICATION LINE
70 EAST DIVISION STREET
FON DU LAC, WI 54435

RUDI RUDIGER
CHARTER COMMUNICATIONS
5024 HEFFERON STREET
STEVENS POINT, WI 54481

MIKE OLSON
ATC MANAGEMENT INC. - ELECTRICITY
801 O'KEEFE ROAD
P.O. BOX 6113
DE PERE, WI 554115

ELIZABETH STEMPIHAR
WISCONSIN PUBLIC SERVICE CORPORATION - GAS
2001 PLOVER ROAD
PLOVER WI, 54467

STEVE HARVEY
WISCONSIN PUBLIC SERVICES CORPORATION- ELECTRIC
2001 PLOVER ROAD
PLOVER, WI 54467

2

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

NOTES:
PLACE ALL PROPOSED INFRASTRUCTURE 18-INCHES OR MORE AWAY FROM EXISTING UTILITIES. INSTALL CONDUIT SO IT WILL BE OVER OR UNDER EXISTING UTILITY FACILITIES.

DISK DR

VILLAGE PARK DR

AMERICAN DR

AMERICAN DR

CTH B/PLOVER RD

CTH B/PLOVER RD

SB IH39

NB IH39

N

OVERHEIGHT SYSTEM (OHS-49-0002)
1-CONCRETE BASES TYPE 2
1-POLES TYPE 2 (ALUMINUM)
1-TRANSFORMER BASES BREAKAWAY 11 1/2 BOLT CIRCLE
1-OVERHEIGHT VEHICLE DETECTION ASSEMBLY
1-CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
(BETWEEN PB AND POLE)
1-CABLE TRAFFIC SIGNAL 3-14 AWG

OVERHEIGHT SYSTEM (OHS-49-0002)
1-CONCRETE BASES TYPE 2
1-POLES TYPE 2 (ALUMINUM)
1-TRANSFORMER BASES BREAKAWAY 11 1/2 BOLT CIRCLE
1-OVERHEIGHT VEHICLE DETECTION ASSEMBLY
1-CABINET FOR OVERHEIGHT VEHICLE DETECTION ASSEMBLY (INCIDENTAL)
1-CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
(BETWEEN CABINET AND PB)
4-CABLE TRAFFIC SIGNAL 3-14 AWG

1-ELECTRICAL SERVICE METER BREAKER PEDESTAL

1-CONDUIT SPECIAL 2-INCH
3-CABLE TRAFFIC SIGNAL 3-14 AWG

1-CONDUIT RIGID NONMETALIC SCHEDULE 40 2-INCH
2-CABLE TRAFFIC SIGNAL 3-14 AWG

PB-E7

PB-E6

55"BD"

PI

PB-E5

PB-E4

30"BD"

FLASHING BEACON ASSEMBLY (F49-0002)
1-PEDESTAL BASES
1-CONCRETE BASES TYPE 1
1-TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FOOT
1-CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
(BETWEEN PB AND SIGN)
1-CABLE TRAFFIC SIGNAL 3-14 AWG
2-TRAFFIC SIGNAL FACES 1-12 INCH VERTICAL
2-LED MODULES 12-IN YELLOW BALL
2-BACKPLATES SIGNAL FACE 1 SECTION 12-INCH

FLASHING BEACON ASSEMBLY (F49-0002)
1-PEDESTAL BASES
1-CONCRETE BASES TYPE 1
1-TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FOOT
1-CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
(BETWEEN PB AND SIGN)
2-CABLE TRAFFIC SIGNAL 3-14 AWG
2-TRAFFIC SIGNAL FACES 1-12 INCH VERTICAL
2-LED MODULES 12-IN YELLOW BALL
2-BACKPLATES SIGNAL FACE 1 SECTION 12-INCH

1-CONDUIT SPECIAL 2-INCH
1-CABLE TRAFFIC
SIGNAL 3-14 AWG

OVERHEIGHT SYSTEM (OHS-49-0001)
1-CONCRETE BASES TYPE 2 (25 FEET FROM BACK OF CURB)
1-POLES TYPE 2 (ALUMINUM)
1-TRANSFORMER BASES BREAKAWAY 11 1/2 BOLT CIRCLE
1-OVERHEIGHT VEHICLE DETECTION ASSEMBLY
1-CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
(BETWEEN POLE AND PB)
1-CABLE TRAFFIC SIGNAL 3-14 AWG

1-CONDUIT SPECIAL 2-INCH
1-CABLE TRAFFIC SIGNAL 3-14 AWG

PB-E1

PB-E2

PB-E3

110"B"

115"B"

120"B"

1-ELECTRICAL SERVICE METER BREAKER PEDESTAL

OVERHEIGHT SYSTEM (OHS-49-0001)
1-CONCRETE BASES TYPE 2 (10 FEET FROM BACK OF CURB)
1-POLES TYPE 2 (ALUMINUM)
1-TRANSFORMER BASES BREAKAWAY 11 1/2 BOLT CIRCLE
1-OVERHEIGHT VEHICLE DETECTION ASSEMBLY
1-CABINET FOR OVERHEIGHT VEHICLE DETECTION ASSEMBLY (INCIDENTAL)
1-CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
(BETWEEN CABINET AND PB)
3-CABLE TRAFFIC SIGNAL 3-14 AWG

FLASHING BEACON ASSEMBLY (F49-0001)
1-INSTALL POLES TYPE 12
1-INSTALL MONOTUBE ARMS 45-FT (S-49-06)
1-CONCRETE BASES TYPE 13 (20 FEET FROM TRAVELED WAY)
1-CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
(BETWEEN PB AND POLE)
1-CABLE TRAFFIC SIGNAL 3-14 AWG
2-TRAFFIC SIGNAL FACES 1-12 INCH VERTICAL
2-LED MODULES 12-IN YELLOW BALL
2-BACKPLATES SIGNAL FACE 1 SECTION 12-INCH

1-CONDUIT RIGID NONMETALIC SCHEDULE 40 2-INCH
1-CABLE TRAFFIC SIGNAL 3-14 AWG

PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	ITS PLAN	SHEET 3	E

NOTES:
PLACE ALL PROPOSED INFRASTRUCTURE 18-INCHES OR MORE AWAY FROM EXISTING UTILITIES.

N

PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	PERMANENT SIGNING	SHEET 4	E

FILE NAME : H:\ProjMDSN\7216\HI-MU\Plan\sr_050203_fm.dgn PLOT DATE : 10/31/2013 PLOT BY : SRF Consulting GroupPLOT NAME : PLOT SCALE : 100

WISDOT/CADDS SHEET 42

NOTES:
PLACE ALL PROPOSED INFRASTRUCTURE 18-INCHES OR MORE AWAY FROM EXISTING UTILITIES.

FURNISH AND INSTALL OVERHEAD

LOW BRIDGE
1/2 MILE
132" X 48"

14'-9"
W12-2
36" X 36"

6"X18"
W5-52R

6"X18"
W5-52L

HOOVER AVE S

VILLAGE PARK DRIVE

CTH B/PLOVER RD

MENARDS DRIVE

95'B"

100'B"

45'

1-INSTALL POLES TYPE 12
1-INSTALL MONOTUBE ARMS 45-FT (S-49-05)
1-CONCRETE BASES TYPE 13
ATTACH 6"X18" OBJECT MARKER TO MONOTUBE POLE TYPE 12

N

PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	PERMANENT SIGNING	SHEET 5	E

FILE NAME : H:\ProjMDSN\7216\HI-MU\Plan\sr_050204_fm.dgn PLOT DATE : 10/31/2013 PLOT BY : SRF Consulting GroupPLOT NAME : PLOT SCALE : 100

WISDOT/CADDS SHEET 42

NOTES:
PLACE ALL PROPOSED INFRASTRUCTURE 18-INCHES OR MORE AWAY FROM EXISTING UTILITIES. INSTALL CONDUIT SO IT WILL BE OVER OR UNDER EXISTING UTILITY FACILITIES.

DISK DR

DISK DR

VILLAGE PARK DR

AMERICAN DR

CTH B/PLOVER RD

CTH B/PLOVER RD

SB IH39

FURNISH AND INSTALL OVERHEAD

OVERHEIGHT EXIT RIGHT

132" X 48"

14'-9"

W12-2
36" X 36"

FURNISH AND INSTALL ROADSIDE

W12-2
36" X 36"

14'-9"

OVERHEIGHT NO LEFT TURN

42" X 24"

EXISTING LOW CLEARANCE SIGNS, FURNISH AND INSTALL FLAGS

14'-9"

EXISTING SIGN TO BE MOVED BY OTHERS

REMOVE EXISTING GUIDE SIGN AND EXISTING SIGN SUPPORT

FURNISH AND INSTALL ROADSIDE

Amherst
Waupaca
Portage

66" X 36"

FURNISH AND INSTALL SIGN ON BRIDGE, SEE SIGN MOUNTING SUPPORT DETAILS

CLEARANCE
14' 9"

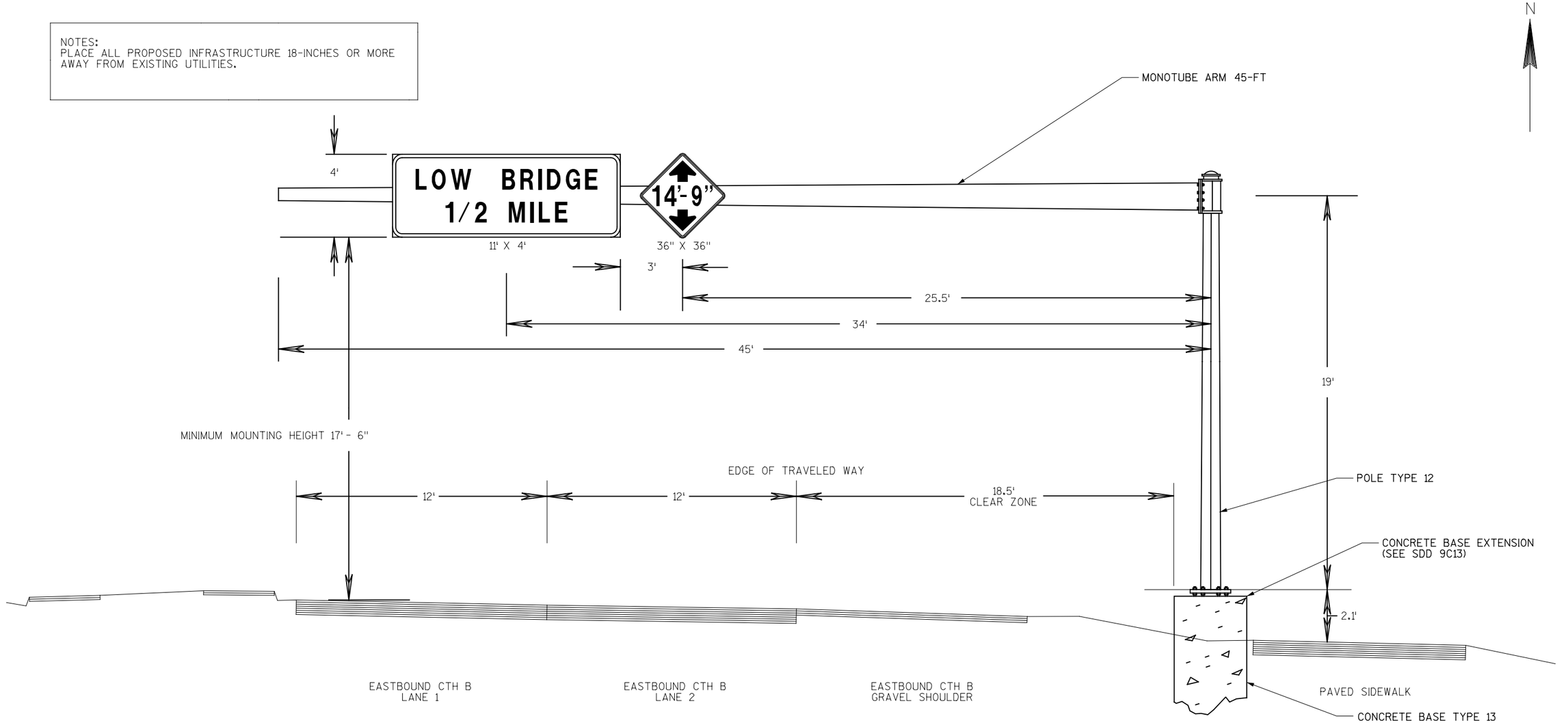
132" X 48"

PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	PERMANENT SIGNING	SHEET 6	E

FILE NAME : H:\ProjMDSN\7216\HI-MU\Plan\sr_050205_fm.dgn PLOT DATE : 10/31/2013 PLOT BY : SRF Consulting GroupPLOT NAME : PLOT SCALE : 100

WISDOT/CADDS SHEET 42

NOTES:
PLACE ALL PROPOSED INFRASTRUCTURE 18-INCHES OR MORE AWAY FROM EXISTING UTILITIES.



45' MONOTUBE ARM OVERHEAD SIGN CROSS SECTION
EASTBOUND CTH B WEST OF VILLAGE PARK DRIVE
S-49-05 STA 100"B"+50

PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	ITS CONSTRUCTION DETAILS	SHEET 7	E

NOTES:
PLACE ALL PROPOSED INFRASTRUCTURE 18-INCHES OR MORE AWAY FROM EXISTING UTILITIES. INSTALL CONDUIT SO IT WILL BE OVER OR UNDER EXISTING UTILITY FACILITIES.

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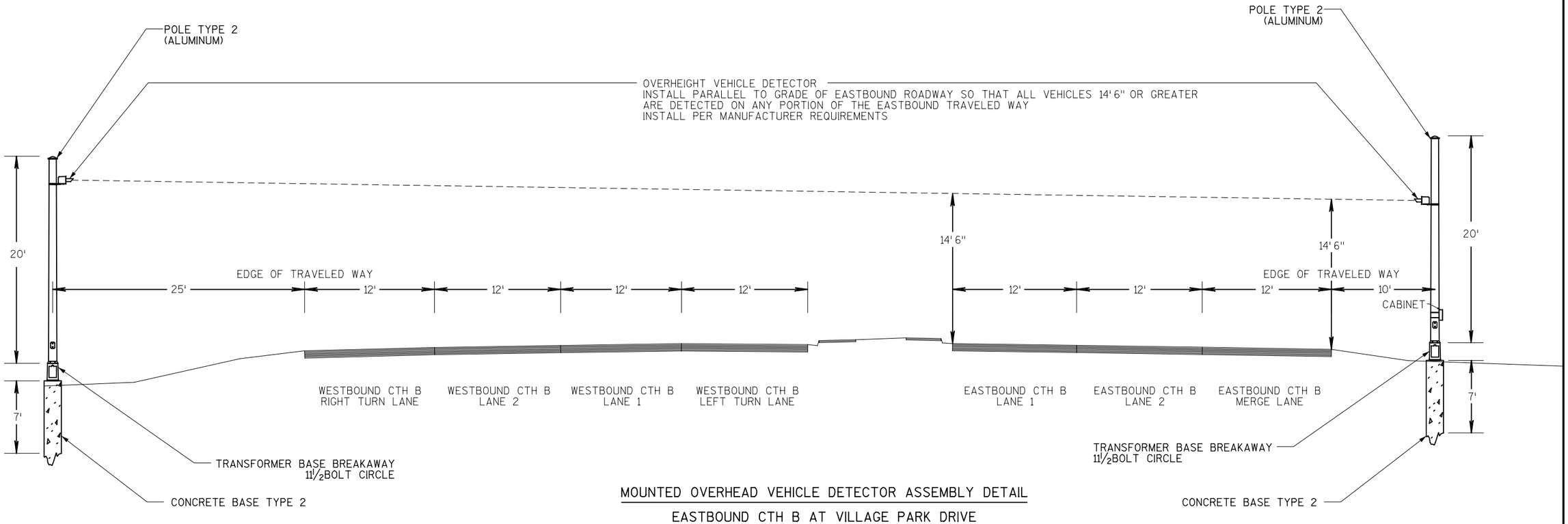
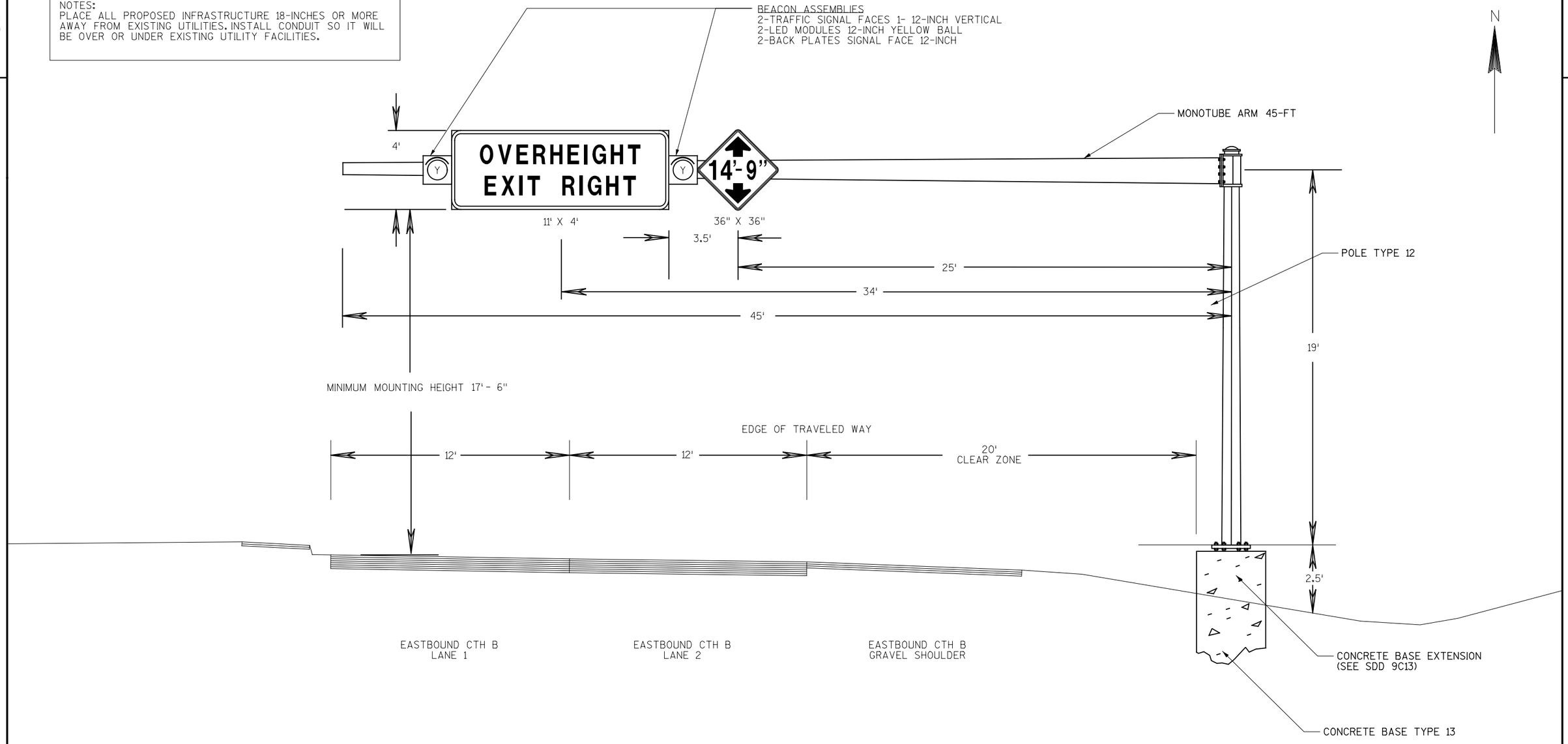


MOUNTED OVERHEAD VEHICLE DETECTOR ASSEMBLY DETAIL

EASTBOUND CTH B AT VILLAGE PARK DRIVE

OHS-49-0001 STA 107"B"+00

NOTES:
PLACE ALL PROPOSED INFRASTRUCTURE 18-INCHES OR MORE AWAY FROM EXISTING UTILITIES. INSTALL CONDUIT SO IT WILL BE OVER OR UNDER EXISTING UTILITY FACILITIES.



45' MONOTUBE ARM OVERHEAD SIGN CROSS SECTION
EASTBOUND CTH B EAST OF VILLAGE PARK DRIVE
S-49-06 STA 110"B"+90
FLASHING BEACON ASSEMBLY (F49-0001)

PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	ITS CONSTRUCTION DETAILS	SHEET 9	E

2

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OVERHEIGHT VEHICLE DETECTOR
INSTALL PARALLEL TO ROADWAY GRADE SO THAT ALL VEHICLES 14'6" OR GREATER
ARE DETECTED ON ANY PORTION OF THE TRAVELED WAY
INSTALL PER MANUFACTURER REQUIREMENTS

20'

POLE TYPE 2 (ALUMINUM)

14'6"

EDGE OF PAVEMENT

14'6"

EDGE OF PAVEMENT

POLE TYPE 2 (ALUMINUM)

20'

20'

25'

20'

TRANSFORMER BASE BREAKAWAY
11½-INCH BOLT CIRCLE

CABINET

7'

SOUTHBOUND IH 39
GRAVEL SHOULDER

SOUTHBOUND IH 39
EXIT RAMP
(LOOKING SOUTH)

SOUTHBOUND IH 39
GRAVEL SHOULDER

TRANSFORMER BASE BREAKAWAY
11½-INCH BOLT CIRCLE

CONCRETE BASE TYPE 2

CONCRETE BASE TYPE 2

20'

7'

NOTES:
PLACE ALL PROPOSED INFRASTRUCTURE 18-INCHES OR MORE AWAY FROM EXISTING UTILITIES. INSTALL CONDUIT SO IT WILL BE OVER OR UNDER EXISTING UTILITY FACILITIES.

MOUNTED OVERHEAD VEHICLE DETECTOR ASSEMBLY DETAIL

SOUTHBOUND IH 39 EXIT RAMP

OHS-49-0002 STA 34"BD"+80

PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	ITS CONSTRUCTION DETAILS	SHEET 10	E

2

N

BEACON ASSEMBLY
4-TRAFFIC SIGNAL FACES 1-12 INCH VERTICAL
4-LED MODULES 12-INCH
4-BACKPLATES SIGNAL FACE 1 SECTION 12-INCH

TRAFFIC SIGNAL STANDARD ALUMINUM 13-FT

36" X 36"

14'-9"

OVERHEIGHT NO LEFT TURN

42" X 24"

13' POLE

5' 3" MIN. FROM ROADWAY TO BOTTOM OF SIGN

EDGE OF PAVEMENT

12'

25'

EDGE OF PAVEMENT

12'

PEDESTAL BASE

5'

SOUTHBOUND IH 39
GRAVEL SHOULDER

SOUTHBOUND IH 39
EXIT RAMP
(LOOKING SOUTH)

SOUTHBOUND IH 39
GRAVEL SHOULDER

CONCRETE BASE TYPE 1

36" X 36"

14'-9"

OVERHEIGHT NO LEFT TURN

42" X 24"

13' POLE

5' 3" MIN. FROM ROADWAY TO BOTTOM OF SIGN

PEDESTAL BASE

5'

CONCRETE BASE TYPE 1

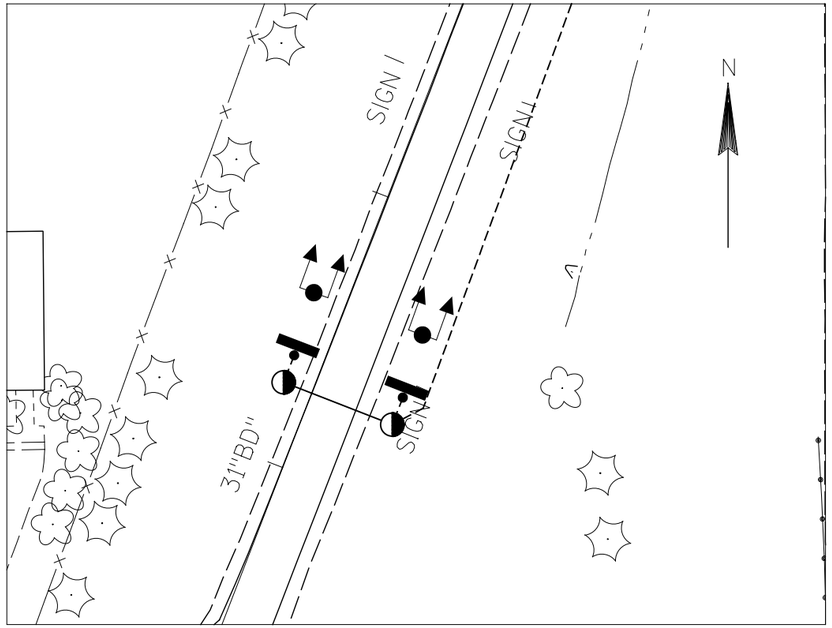
NOTES:
PLACE ALL PROPOSED INFRASTRUCTURE 18-INCHES OR MORE AWAY FROM EXISTING UTILITIES. INSTALL CONDUIT SO IT WILL BE OVER OR UNDER EXISTING UTILITY FACILITIES.

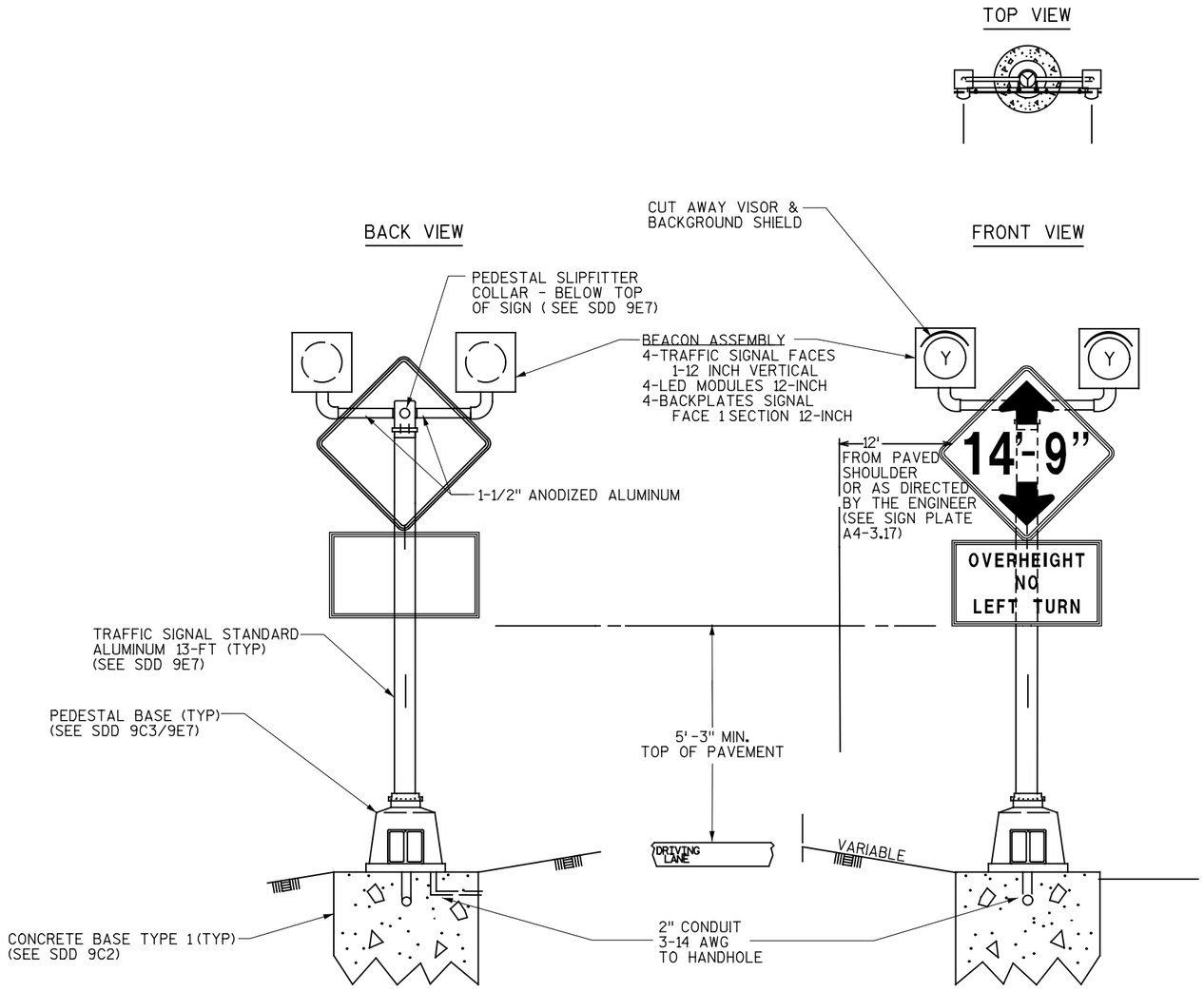
OVERHEAD VEHICLE DETECTION SIGN DETAIL

SOUTHBOUND IH 39 EXIT RAMP

STA 31"BD"+60

FLASHING BEACON ASSEMBLY (F49-0002)



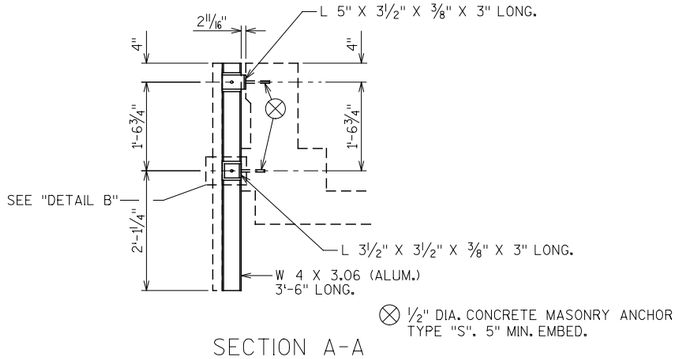


ADVANCE WARNING FLASHER DETAILS

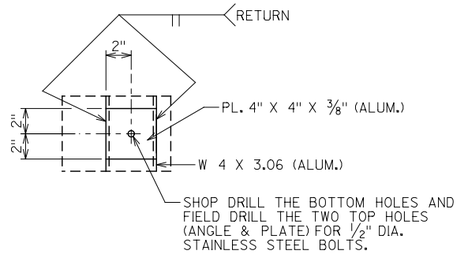
OVERHEIGHT WARNING SIGNAL SYSTEM

FLASHING BEACON ASSEMBLY (F49-0002)

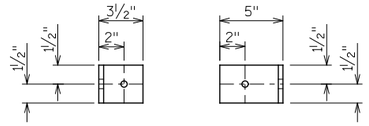
NOTES:
PLACE ALL PROPOSED INFRASTRUCTURE 18-INCHES OR MORE AWAY FROM EXISTING UTILITIES. INSTALL CONDUIT SO IT WILL BE OVER OR UNDER EXISTING UTILITY FACILITIES.



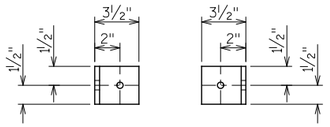
SECTION A-A



DETAIL B

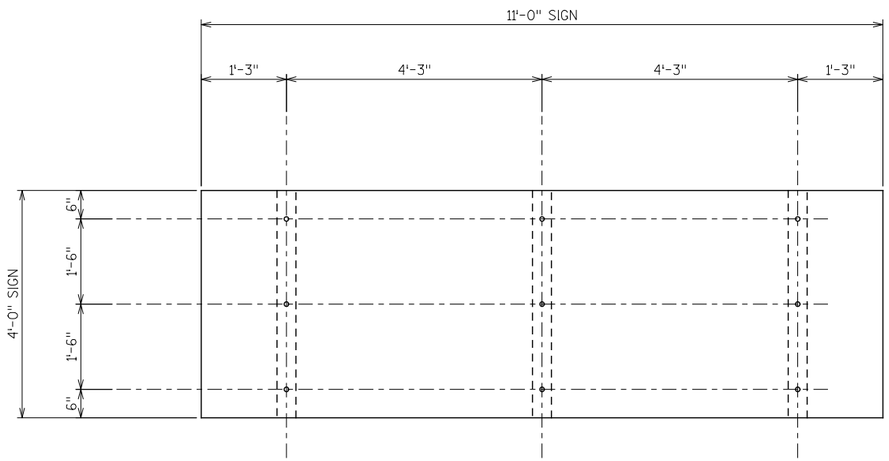


L 5" X 3 1/2" X 3/8" X 3" LONG.



L 3 1/2" X 3 1/2" X 3/8" X 3" LONG.

PLAN



SIGN ELEVATION

PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	SIGN MOUNTING SUPPORT DETAILS	SHEET 13	E

GENERAL NOTES

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

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

IF SIGNS CONFLICT WITH OTHER TRAFFIC CONTROL SIGNS, ADJUST THE SPACING ACCORDINGLY.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS, IF APPROVED BY DISTRICT TRAFFIC UNIT.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

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

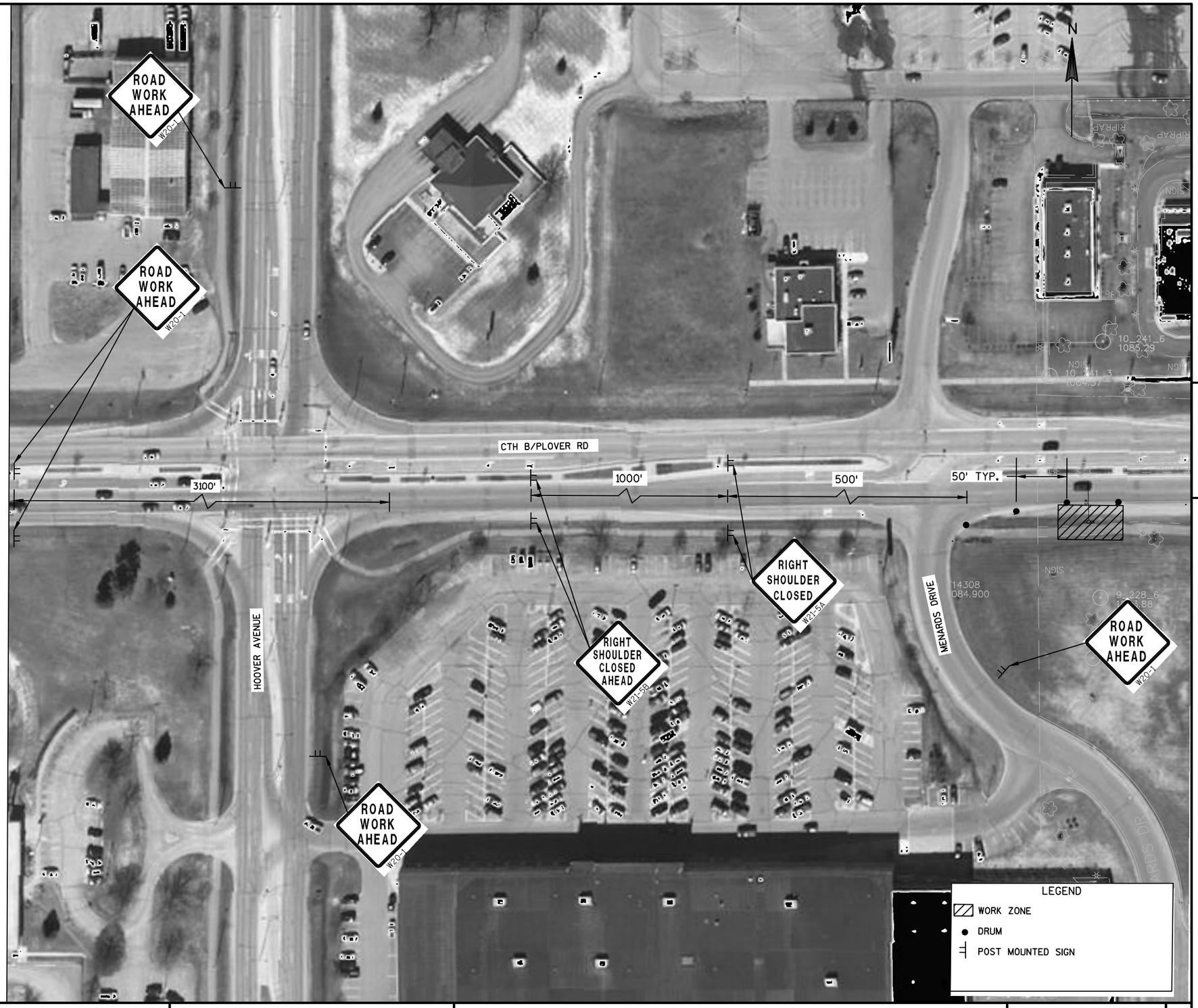
PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

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

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

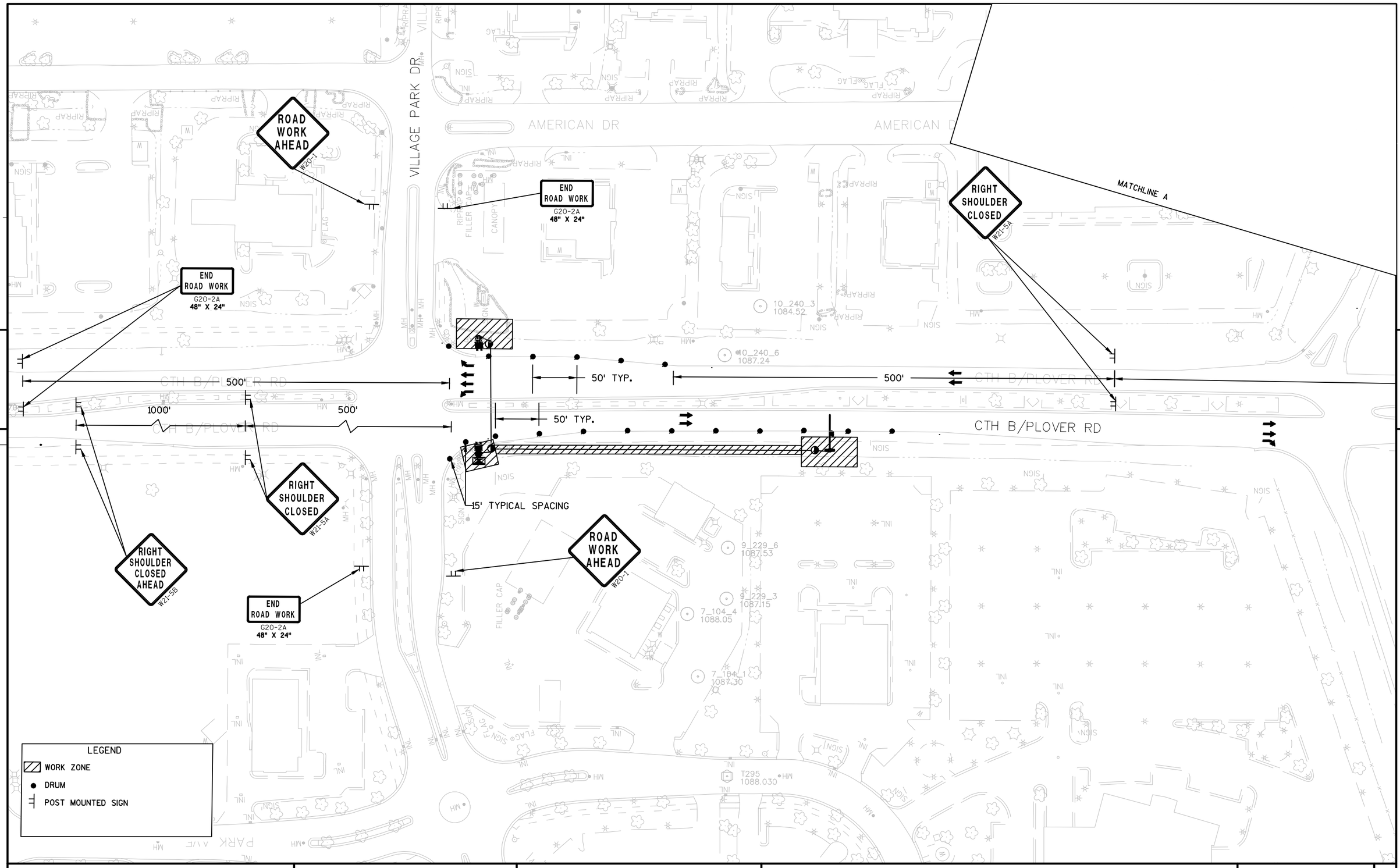
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	TRAFFIC CONTROL	SHEET 14	E



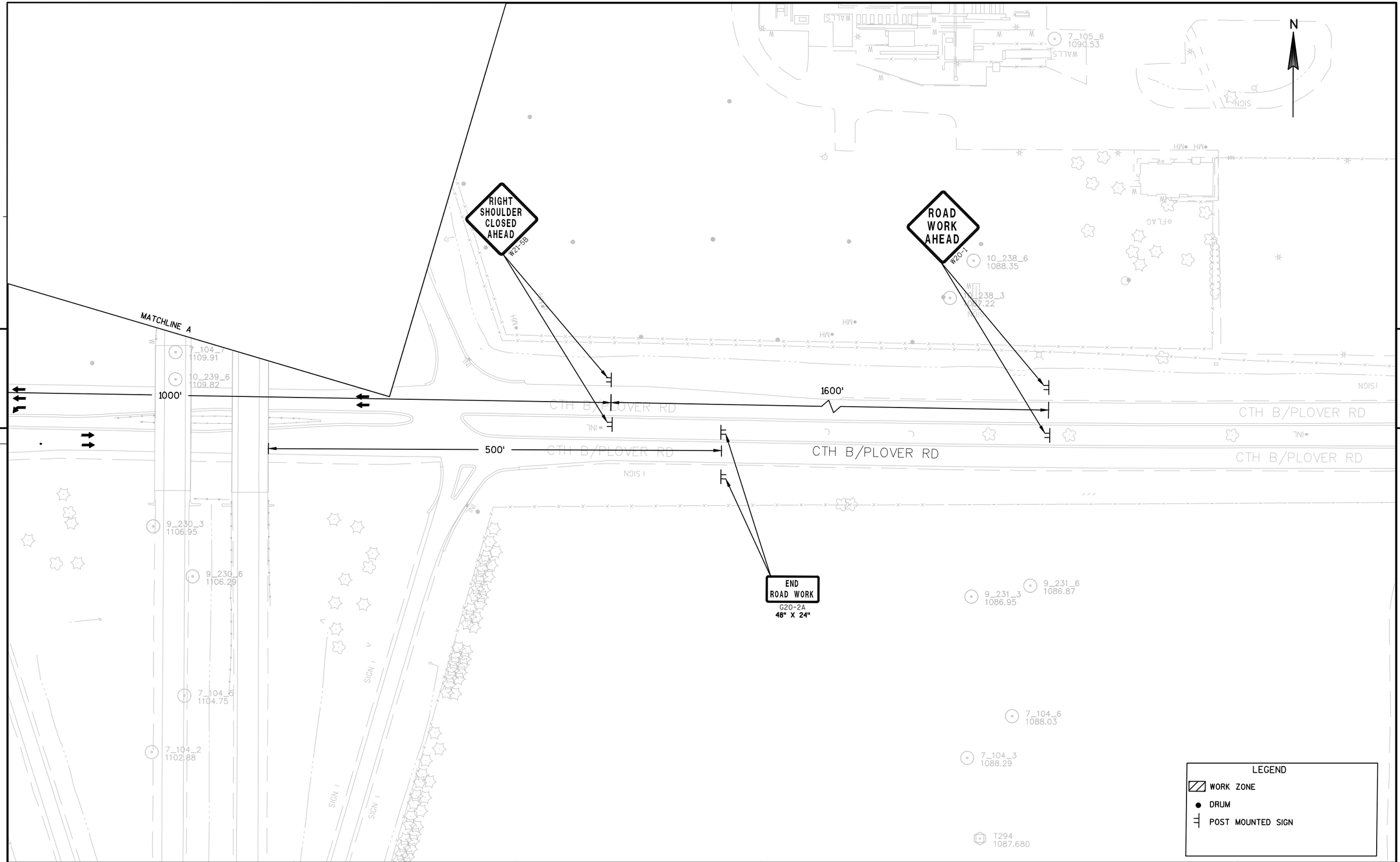
PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	TRAFFIC CONTROL - SHOULDER CLOSURES	SHEET	E

FILE NAME : H:\PROJECTS\7216\HI-MU\CIVIL3D\PLAN\TCS1-SLDR.DWG PLOT DATE : 10/1/2013 12:53 PM PLOT BY : BRIAN GENSKOW PLOT NAME : PLOT SCALE : 1:100_XREF



PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	TRAFFIC CONTROL - SHOULDER CLOSURES	SHEET 16	E

FILE NAME : H:\PROJECTS\7216\HI-MU\CIVIL3D\PLAN\TCS1-SLDR.DWG PLOT DATE : 10/1/2013 12:53 PM PLOT BY : BRIAN GENSKOW PLOT NAME : PLOT SCALE : 1:100_XREF



PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	TRAFFIC CONTROL - SHOULDER CLOSURES	SHEET	E

FILE NAME : H:\PROJECTS\7216\HI-MU\CIVIL3D\PLAN\TCS1-SLDR.DWG PLOT DATE : 10/1/2013 12:49 PM PLOT BY : BRIAN GENSKOW PLOT NAME : PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 44

2

N

RIGHT AND LEFT SHOULDERS CANNOT BE CLOSED SIMULTANEOUSLY.

200' TAPER

500'

1000'

1600'

50' TYP.

* RIGHT SHOULDER CLOSED
W21-5A

* RIGHT SHOULDER CLOSED AHEAD
W21-5B

ROAD WORK AHEAD
W20-1

* LEFT SHOULDER CLOSED
W21-5A

IH 39/USH 51

MATCHLINE A

WATER TOWER

LEGEND

- WORK ZONE
- DRUM
- POST MOUNTED SIGN

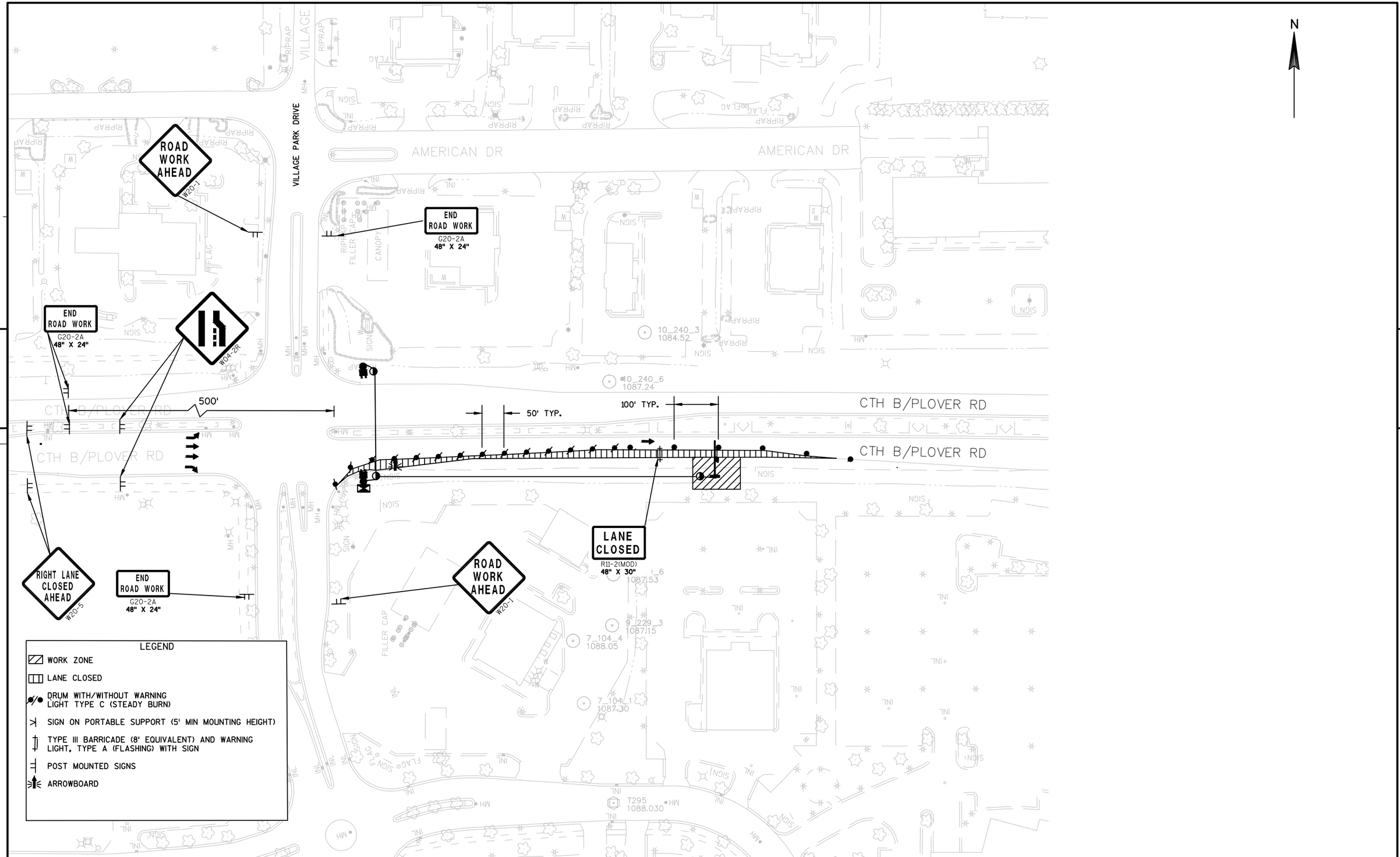
*COVER RIGHT SHOULDER SIGNS WHEN LEFT SHOULDER IS CLOSED, AND VICE VERSA.

PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	TRAFFIC CONTROL - SHOULDER CLOSURES	SHEET	E

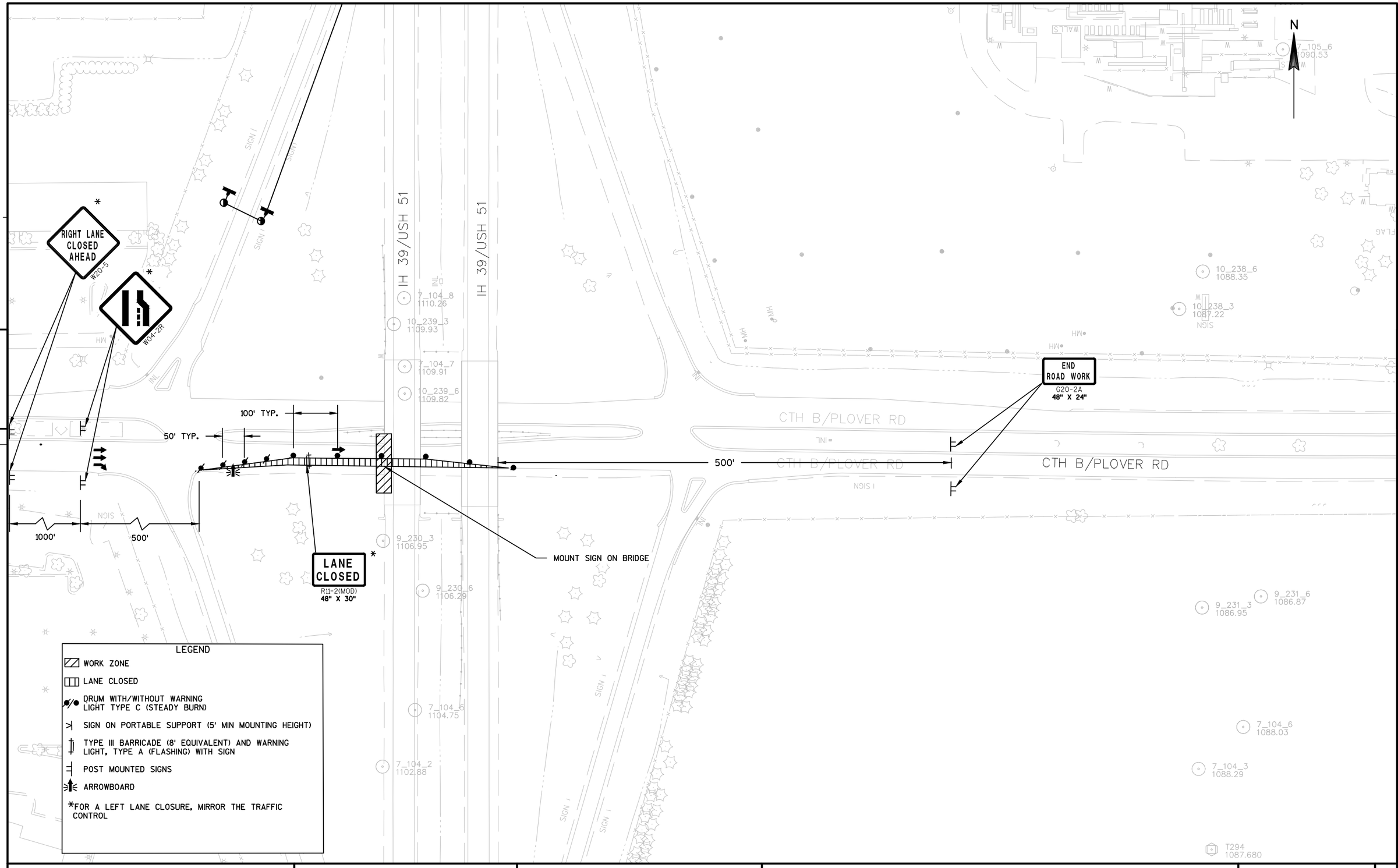
FILE NAME : H:\PROJECTS\7216\HI-MU\CIVIL3D\PLAN\TCS1-SLDR.DWG PLOT DATE : 10/1/2013 12:49 PM PLOT BY : BRIAN GENSKOW PLOT NAME : PLOT SCALE : 1:100_XREF

PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	TRAFFIC CONTROL - LANE CLOSURE	SHEET	E

FILE NAME : H:\PROJECTS\7216\HI-MU\CIVIL3D\PLAN\TCS2-LANE_CLSR.DWG PLOT DATE : 10/1/2013 12:49 PM PLOT BY : BRIAN GENSKOW PLOT NAME : PLOT SCALE : 1:100_XREF



PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	TRAFFIC CONTROL - LANE CLOSURE	SHEET 20	E



PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	TRAFFIC CONTROL - LANE CLOSURE	SHEET 21	E

FILE NAME : H:\PROJECTS\7216\HI-MU\CIVIL3D\PLAN\TCS2-LANE_CLSR.DWG PLOT DATE : 10/1/2013 12:49 PM PLOT BY : BRIAN GENSKOW PLOT NAME : PLOT SCALE : 1:100_XREF

DATE 10FEB14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1166-12-85 QUANTITY
0010	213.0100	FINISHING ROADWAY (PROJECT) 01. 1166-12-85	EACH	1.000	1.000
0020	619.1000	MOBILIZATION	EACH	1.000	1.000
0030	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	4.000	4.000
0040	634.0620	POSTS WOOD 4X6-INCH X 20-FT	EACH	2.000	2.000
0050	637.0620	SIGN FLAGS PERMANENT TYPE II	EACH	4.000	4.000
0060	637.2210	SIGNS TYPE II REFLECTIVE H	SF	16.500	16.500
0070	637.2230	SIGNS TYPE II REFLECTIVE F	SF	243.500	243.500
0080	638.2602	REMOVING SIGNS TYPE II	EACH	1.000	1.000
0090	643.0100	TRAFFIC CONTROL (PROJECT) 01. 1166-12-85	EACH	1.000	1.000
0100	643.0300	TRAFFIC CONTROL DRUMS	DAY	501.000	501.000
0110	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	3.000	3.000
0120	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	17.000	17.000
0130	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	3.000	3.000
0140	643.0900	TRAFFIC CONTROL SIGNS	DAY	773.000	773.000
0150	650.8500	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01. 1166-12-85	LS	1.000	1.000
0160	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	845.000	845.000
0170	652.0605	CONDUIT SPECIAL 2-INCH	LF	225.000	225.000
0180	653.0135	PULL BOXES STEEL 24X36-INCH	EACH	7.000	7.000
0190	654.0101	CONCRETE BASES TYPE 1	EACH	2.000	2.000
0200	654.0102	CONCRETE BASES TYPE 2	EACH	4.000	4.000
0210	654.0113	CONCRETE BASES TYPE 13	EACH	2.000	2.000
0220	655.0210	CABLE TRAFFIC SIGNAL 3-14 AWG	LF	2,085.000	2,085.000
0230	655.0515	ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	LF	2,580.000	2,580.000
0240	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. CTH B	LS	1.000	1.000
0250	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 02. IH 39	LS	1.000	1.000
0260	657.0100	PEDESTAL BASES	EACH	2.000	2.000
0270	657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	EACH	4.000	4.000
0280	657.0305	POLES TYPE 2	EACH	4.000	4.000
0290	657.0420	TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT	EACH	2.000	2.000
0300	657.1355	INSTALL POLES TYPE 12	EACH	2.000	2.000
0310	657.1545	INSTALL MONOTUBE ARMS 45-FT	EACH	2.000	2.000
0320	658.0103	TRAFFIC SIGNAL FACE 1-12 INCH VERTICAL	EACH	6.000	6.000
0330	658.0210	BACKPLATES SIGNAL FACE 1 SECTION 12-INCH	EACH	6.000	6.000
0340	658.0605	LED MODULES 12-INCH YELLOW BALL	EACH	6.000	6.000
0350	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 01. 1166-12-85	LS	1.000	1.000
0360	659.0802	PLAQUES SEQUENCE IDENTIFICATION	EACH	6.000	6.000
0370	670.0100	FIELD SYSTEM INTEGRATOR	LS	1.000	1.000
0380	670.0200	ITS DOCUMENTATION	LS	1.000	1.000
0390	SPV.0060	SPECIAL 01. OVERHEIGHT VEHICLE DETECTION ASSEMBLY	EACH	2.000	2.000
0400	SPV.0060	SPECIAL 02. CONTRACTOR PROVIDED H.S. BOLT ASSEMB LIES FOR MONO. ARMS, POLES TYPE 12	EACH	2.000	2.000
0410	SPV.0105	SPECIAL 01. SIGN MOUNTING SUPPORTS	LS	1.000	1.000
0420	SPV.0105	SPECIAL 02. TRANSPORT DEPARTMENT FURNISHED TRAFFIC SIGNAL MONOTUBE MATERIALS	LS	1.000	1.000

3

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PULL BOX ITEMS

STATION	LOCATION	ITEM ID	653.0135 PULL BOXES STEEL 24x36-INCH EACH
CATEGORY 0010			
STA 107"B"+00	LT	PB-E1	1
STA 107"B"+00	RT	PB-E2	1
STA 110"B"+80	RT	PB-E3	1
STA 31"BD"+35	LT	PB-E4	1
STA 31"BD"+35	RT	PB-E5	1
STA 34"BD"+70	RT	PB-E6	1
STA 34"BD"+70	LT	PB-E7	1
TOTALS			7

CONDUIT ITEMS

FROM	TO	LINEAR DISTANCE LF	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH LF
CATEGORY 0010				
OVERHEIGHT DETECTOR STA 34"BD"+80 LT	PB-E7	10	10	---
ELECTRICAL SERVICE METER BREAKER PEDESTAL	PB-E7	20	20	---
OVERHEIGHT DETECTOR STA 34"BD"+80 RT	PB-E6	10	10	---
PB-E7	PB-E6	60	---	60
SIGN STA 31"BD"+60 RT	PB-E5	10	10	---
PB-E6	PB-E5	340	340	---
SIGN STA 31"BD"+60 LT	PB-E4	10	10	---
PB-E5	PB-E4	40	---	40
OVERHEIGHT DETECTOR STA 106"B"+90 LT	PB-E1	15	15	
PB-E1	PB-E2	125	---	125
OVERHEIGHT DETECTOR STA 106"B"+90 RT	PB-E2	15	15	---
ELECTRICAL SERVICE METER BREAKER PEDESTAL	PB-E2	20	20	---
PB-E2	PB-E3	385	385	---
S-49-06	PB-E3	10	10	---
TOTALS			845	225

3

3

CABLE ITEMS

FROM	TO	655.0210 CABLE TRAFFIC SIGNALS 3-14 AWG LF	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG (GREEN) LF
CATEGORY 0010			
OVERHEIGHT DETECTOR STA 34"BD"+80 LT	PB-E7	120	60
ELECTRICAL SERVICE METER BREAKER PEDESTAL	PB-E7	90	60
OVERHEIGHT DETECTOR STA 34"BD"+80 RT	PB-E6	30	60
PB-E7	PB-E6	210	140
SIGN STA 31"BD"+60 RT	PB-E5	60	60
PB-E6	PB-E5	700	700
SIGN STA 31"BD"+60 LT	PB-E4	30	60
PB-E5	PB-E4	50	100
OVERHEIGHT DETECTOR STA 106"B"+90 LT	PB-E1	35	70
PB-E1	PB-E2	135	270
OVERHEIGHT DETECTOR STA 106"B"+90 RT	PB-E2	100	70
ELECTRICAL SERVICE METER BREAKER PEDESTAL	PB-E2	90	60
PB-E2	PB-E3	380	760
S-49-06	PB-E3	55	110
TOTALS		2085	2580

POWER CONNECTION ITEMS

STATION		LOCATION DESCRIPTION	656.0200.01 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS	656.0200.02 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
CATEGORY 0010				
STA 107"B"+00	RT	CTH B	1	---
STA 34"BD"+70	LT	IH 39 RAMP	---	1
TOTALS			1	1

ITS DEVICES & SIGNING ITEMS

STATION	LOCATION	LOCATION DESCRIPTION	ITEM ID	634.0614 POSTS WOOD 4X6-INCH X 14 FT EACH	634.0620 POSTS WOOD 4X6-INCH X 20 FT NOTE (1) EACH	650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT 1166-12-85) LS	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH
CATEGORY 0010								
N/A	RT	EB CTH B EAST OF CLEVELAND AVE	---	1	1	---	---	---
N/A	LT	EB CTH B EAST OF CLEVELAND AVE	---	1	1	---	---	---
STA 100"B"+50	RT	EB CTH B EAST OF MENARDS DR	S-49-05	---	---	---	---	---
STA 106"B"+90	LT	WB CTH B EAST OF VILLAGE PARK DR	OHS-49-0001	---	---	---	---	1
STA 106"B"+90	RT	EB CTH B EAST OF VILLAGE PARK DR	OHS-49-0001	---	---	---	---	1
STA 110"B"+90	RT	EB CTH B EAST OF VILLAGE PARK DR MID BLOCK	S-49-06, F-49-0001	2	---	---	---	---
STA 119"B"+90	---	IH 39 SB BRIDGE (B-49-15)	---	---	---	---	---	---
STA 31"BD"+45	RT	IH 39 OFF RAMP	F-49-0002	---	---	---	1	---
STA 31"BD"+45	LT	IH 39 OFF RAMP	F-49-0002	---	---	---	1	---
STA 34"BD"+80	RT	IH 39 OFF RAMP	OHS-49-0002	---	---	---	---	1
STA 34"BD"+80	LT	IH 39 OFF RAMP	OHS-49-0002	---	---	---	---	1
UNDISTRIBUTED	---	---	---	---	---	1	---	---
TOTALS				4	2	1	2	4

NOTE (1): USE 20 FT WOOD POST FOR ATTACHING W12-2 SIGN ABOVE SPECIAL SIGN.

ITS DEVICES & SIGNING ITEMS

STATION	LOCATION	LOCATION DESCRIPTION	ITEM ID	654.0113 CONCRETE BASES TYPE 13 EACH	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2 BOLT CIRCLE EACH	657.0305 POLES TYPE 2 ALUMINUM EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH
CATEGORY 0010								
N/A	RT	EB CTH B EAST OF CLEVELAND AVE	---	---	---	---	---	---
N/A	RT	EB CTH B EAST OF CLEVELAND AVE	---	---	---	---	---	---
STA 100"B"+50	RT	EB CTH B EAST OF MENARDS DR	S-49-05	1	---	---	---	---
STA 106"B"+90	LT	WB CTH B EAST OF VILLAGE PARK DR	OHS-49-0001	---	---	1	1	---
STA 106"B"+90	RT	EB CTH B EAST OF VILLAGE PARK DR	OHS-49-0001	---	---	1	1	---
STA 110"B"+90	RT	EB CTH B EAST OF VILLAGE PARK DR MID BLOCK	S-49-06, F-49-0001	1	---	---	---	---
STA 119"B"+90	---	IH 39 SB BRIDGE (B-49-15)	---	---	---	---	---	---
STA 31"BD"+45	RT	IH 39 OFF RAMP	F-49-0002	---	1	---	---	1
STA 31"BD"+45	LT	IH 39 OFF RAMP	F-49-0002	---	1	---	---	1
STA 34"BD"+80	RT	IH 39 OFF RAMP	OHS-49-0002	---	---	1	1	---
STA 34"BD"+80	LT	IH 39 OFF RAMP	OHS-49-0002	---	---	1	1	---
UNDISTRIBUTED	---	---	---	---	---	---	---	---
TOTALS				2	2	4	4	2

ITS DEVICES & SIGNING ITEMS

STATION	LOCATION	LOCATION DESCRIPTION	ITEM ID	657.1355 INSTALL POLES TYPE 12 EACH	657.1545 INSTALL MONOTUBE ARMS 45-FT EACH	658.0103 TRAFFIC SIGNAL FACE 1-12 INCH VERTICAL EACH	658.0210 BACKPLATES SIGNAL FACE 1 SECTION 12-INCH EACH	658.0605 LED MODULES 12-IN YELLOW BALL EACH
CATEGORY 0010								
N/A	RT	EB CTH B EAST OF CLEVELAND AVE	---	---	---	---	---	---
N/A	RT	EB CTH B EAST OF CLEVELAND AVE	---	---	---	---	---	---
STA 100"B"+50	RT	EB CTH B EAST OF MENARDS DR	S-49-05	1	1	---	---	---
STA 106"B"+90	LT	WB CTH B EAST OF VILLAGE PARK DR	OHS-49-0001	---	---	---	---	---
STA 106"B"+90	RT	EB CTH B EAST OF VILLAGE PARK DR	OHS-49-0001	---	---	---	---	---
STA 110"B"+90	RT	EB CTH B EAST OF VILLAGE PARK DR MID BLOCK	S-49-06, F-49-0001	1	1	2	2	2
STA 119"B"+90	---	IH 39 SB BRIDGE (B-49-15)	---	---	---	---	---	---
STA 31"BD"+45	RT	IH 39 OFF RAMP	F-49-0002	---	---	2	2	2
STA 31"BD"+45	LT	IH 39 OFF RAMP	F-49-0002	---	---	2	2	2
STA 34"BD"+80	RT	IH 39 OFF RAMP	OHS-49-0002	---	---	---	---	---
STA 34"BD"+80	LT	IH 39 OFF RAMP	OHS-49-0002	---	---	---	---	---
UNDISTRIBUTED	---	---	---	---	---	---	---	---
TOTALS				2	2	6	6	6

ITS DEVICES & SIGNING ITEMS

STATION	LOCATION	LOCATION DESCRIPTION	ITEM ID	658.5069 SIGNAL MOUNTING HARDWARE (1166-12-85) LS	659.0802 PLAQUES SEQUENCE IDENTIFICATION EACH	670.0100 FIELD SYSTEM INTEGRATOR LS	670.0200 ITS DOCUMENTATION LS	SPV.0060.01 OVERHEIGHT VEHICLE DETECTION ASSEMBLY EACH
CATEGORY 0010								
N/A	RT	EB CTH B EAST OF CLEVELAND AVE	---	---	---	---	---	---
N/A	RT	EB CTH B EAST OF CLEVELAND AVE	---	---	---	---	---	---
STA 100"B"+50	RT	EB CTH B EAST OF MENARDS DR	S-49-05	---	1	---	---	---
STA 106"B"+90	LT	WB CTH B EAST OF VILLAGE PARK DR	OHS-49-0001	---	---	---	---	---
STA 106"B"+90	RT	EB CTH B EAST OF VILLAGE PARK DR	OHS-49-0001	---	2	---	---	1
STA 110"B"+90	RT	EB CTH B EAST OF VILLAGE PARK DR MID BLOCK	S-49-06, F-49-0001	---	1	---	---	---
STA 119"B"+90	---	IH 39 SB BRIDGE (B-49-15)	---	---	---	---	---	---
STA 31"BD"+45	RT	IH 39 OFF RAMP	F-49-0002	---	---	---	---	---
STA 31"BD"+45	LT	IH 39 OFF RAMP	F-49-0002	---	---	---	---	---
STA 34"BD"+80	RT	IH 39 OFF RAMP	OHS-49-0002	---	2	---	---	1
STA 34"BD"+80	LT	IH 39 OFF RAMP	OHS-49-0002	---	---	---	---	---
UNDISTRIBUTED	---	---	---	1	---	1	1	---
TOTALS				1	6	1	1	2

3

ITS DEVICES & SIGNING ITEMS

STATION	LOCATION	LOCATION DESCRIPTION	ITEM ID	SPV.0060.02 CONTRACTOR PROVIDED H.S. BOLT ASSEMBLY FOR MONO. ARMS POLES MATERIALS EACH	SPV.0150.01 SIGN MOUNTING SUPPORTS LS	SPV.0105.02 TRANSPORT DEPT. FURNISHED TRAFFIC SIGNAL MONOTUBE MATERIALS LS
CATEGORY 0010						
N/A	RT	EB CTH B EAST OF CLEVELAND AVE	---	---	---	---
N/A	RT	EB CTH B EAST OF CLEVELAND AVE	---	---	---	---
STA 100"B"+50	RT	EB CTH B EAST OF MENARDS DR	S-49-05	1	---	---
STA 106"B"+90	LT	WB CTH B EAST OF VILLAGE PARK DR	OHS-49-0001	---	---	---
STA 106"B"+90	RT	EB CTH B EAST OF VILLAGE PARK DR	OHS-49-0001	---	---	---
STA 110"B"+90	RT	EB CTH B EAST OF VILLAGE PARK DR MID BLOCK	S-49-06, F-49-0001	1	---	---
STA 119"B"+90	---	IH 39 SB BRIDGE (B-49-15)	---	---	1	---
STA 31"BD"+45	RT	IH 39 OFF RAMP	F-49-0002	---	---	---
STA 31"BD"+45	LT	IH 39 OFF RAMP	F-49-0002	---	---	---
STA 34"BD"+80	RT	IH 39 OFF RAMP	OHS-49-0002	---	---	---
STA 34"BD"+80	LT	IH 39 OFF RAMP	OHS-49-0002	---	---	---
UNDISTRIBUTED	---	---	---	---	---	1
TOTALS				2	1	1

SIGN LIST

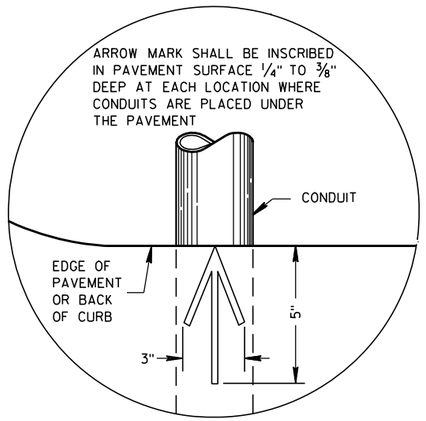
STATION		LOCATION	SIGN CODE	MESSAGE	WIDTH (FT)	HEIGHT (FT)	QUANTITY	637.0620 SIGN FLAGS PERMANENT TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	673.2210 SIGNS TYPE II REFLECTIVE H SF	673.2230 SIGNS TYPE II REFLECTIVE F SF
N/A	RT	EB CTH B EAST OF CLEVELAND AVE	W12-2	14'-9"	3	3	1	---	---	---	9
N/A	LT	EB CTH B EAST OF CLEVELAND AVE	W12-2	14'-9"	3	3	1	---	---	---	9
N/A	RT	EB CTH B EAST OF CLEVELAND AVE	---	LOW BRIDGE 1.8 MILES AHEAD ON B USE 54	7	3	1	---	---	---	21
N/A	LT	EB CTH B EAST OF CLEVELAND AVE	---	LOW BRIDGE 1.8 MILES AHEAD ON B USE 54	7	3	1	---	---	---	21
STA 100"B"+50	RT	EB CTH B EAST OF MENARDS DR	W12-2	14'-9"	3	3	1	---	---	---	9
STA 100"B"+50	RT	EB CTH B EAST OF MENARDS DR	---	LOW BRIDGE 1/2 MILE	11	4	1	---	---	---	44
STA 100"B"+50	RT	EB CTH B EAST OF MENARDS DR	W5-52R	OBJECT MARKER	0.5	1.5	1	---	---		0.75
STA 100"B"+50	RT	EB CTH B EAST OF MENARDS DR	W5-52L	OBJECT MARKER	0.5	1.5	1	---	---		0.75
STA 110"B"+90	RT	EB CTH B WEST OF VILLAGE PARK DR MID BLOCK	W12-2	14'-9"	3	3	1	---	---	---	9
STA 110"B"+90	RT	EB CTH B WEST OF VILLAGE PARK DR MID BLOCK	---	OVERHEIGHT EXIT RIGHT	11	4	1	---	---	---	44
STA 110"B"+90	RT	EB CTH B WEST OF VILLAGE PARK DR MID BLOCK	---	AMHERST WAUPACA PORTAGE DIRECTIONAL SIGN	5.5	3	1	---	---	16.5	---
STA 118"B"+17		WEST OF IH 39 SB BRIDGE (B-49-15)		ATTACH FLAGS TO WARNING SIGNS INPLACE				2			
STA 118"B"+17		WEST OF IH 39 SB BRIDGE (B-49-15)		ATTACH FLAGS TO WARNING SIGNS INPLACE				2			
STA 118"B"+90	---	IH 39 SB BRIDGE (B-49-15)	---	CLEARANCE 14'9"	11	4	1	---	---	---	44
STA 31"BD"+60	RT	IH 39 OFF RAMP	W12-2	14'-9"	3	3	1	---	---	---	9
STA 31"BD"+60	LT	IH 39 OFF RAMP	W12-2	14'-9"	3	3	1	---	---	---	9
STA 31"BD"+60	RT	IH 39 OFF RAMP	---	OVERHEIGHT NO LEFT TURN	3.5	2	1	---	---	---	7
STA 31"BD"+60	LT	IH 39 OFF RAMP	---	OVERHEIGHT NO LEFT TURN	3.5	2	1	---	---	---	7
STA 31"BD"+40	RT	IH 39 OFF RAMP	---	SAS			1	---	1		
TOTALS								4	1	16.5	243.5

TRAFFIC CONTROL

LOCATION	* OF DAYS	643.0100 TRAFFIC CONTROL (PROJECT) EACH	643.0300 TRAFFIC CONTROL DRUMS DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAYS	643.0800 TRAFFIC CONTROL ARROW BOARDS DAYS	643.0900 TRAFFIC CONTROL SIGNS DAYS
EB/WB CTH B WEST OF WILSON AVE	1		---	---	---	---	3
EB CTH B WEST OF VILLAGE PARK DR (S-49-05)	11		57	1	6	1	47
WB CTH B EAST OF VILLAGE PARK DR	11		66	---	---	---	44
EB CTH B EAST OF VILLAGE PARK DR (S-49-06)	12		154	1	8	1	49
EB CTH B EAST OF SB IH 39 ON RAMP	1		6	1	3	1	5
SB IH 39 EXIT RAMP	11		218	---	---	---	33
WB CTH B ADVANCED WARING	37		---	---	---	---	148
EB CTH B ADVANCED WARING	37		---	---	---	---	148
SB IH 39 EXIT RAMP ADVANCED WARNING	37		---	---	---	---	37
HOOVER AVE	37		---	---	---	---	74
MENARDS DR	37		---	---	---	---	37
VILLAGE PARK DR	37		---	---	---	---	148
ITEM TOTAL			501	3	17	3	773

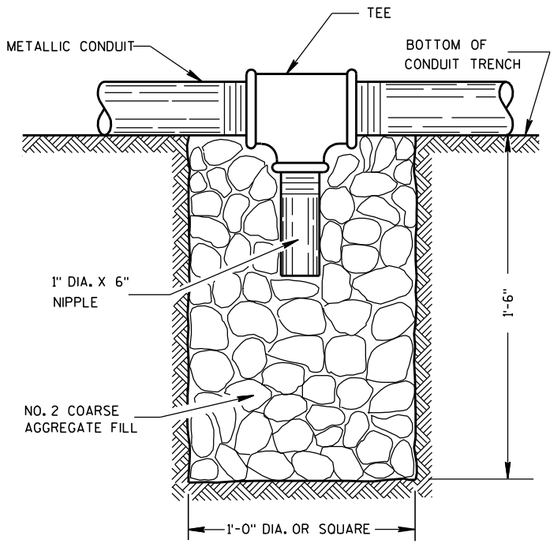
Standard Detail Drawing List

09B02-07	CONDUIT
09B04-10	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09C03-03	TRANSFORMER/PEDESTAL BASES
09C12-03A	CONCRETE BASE TYPE 13
09C12-03B	CONCRETE BASE TYPE 13
09C13-01	CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION
09D01-04	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09E07-05	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
15D20-02	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH



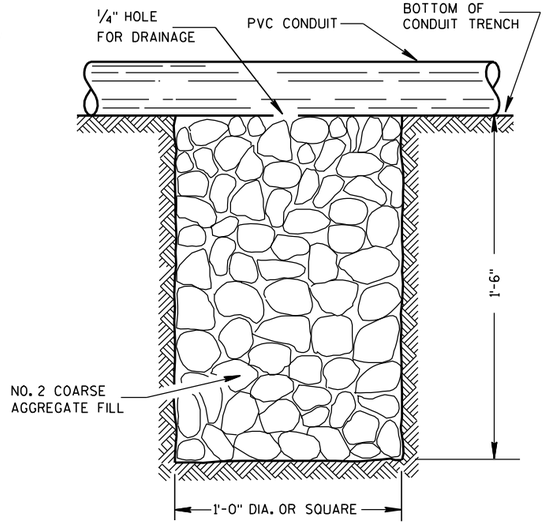
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

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.

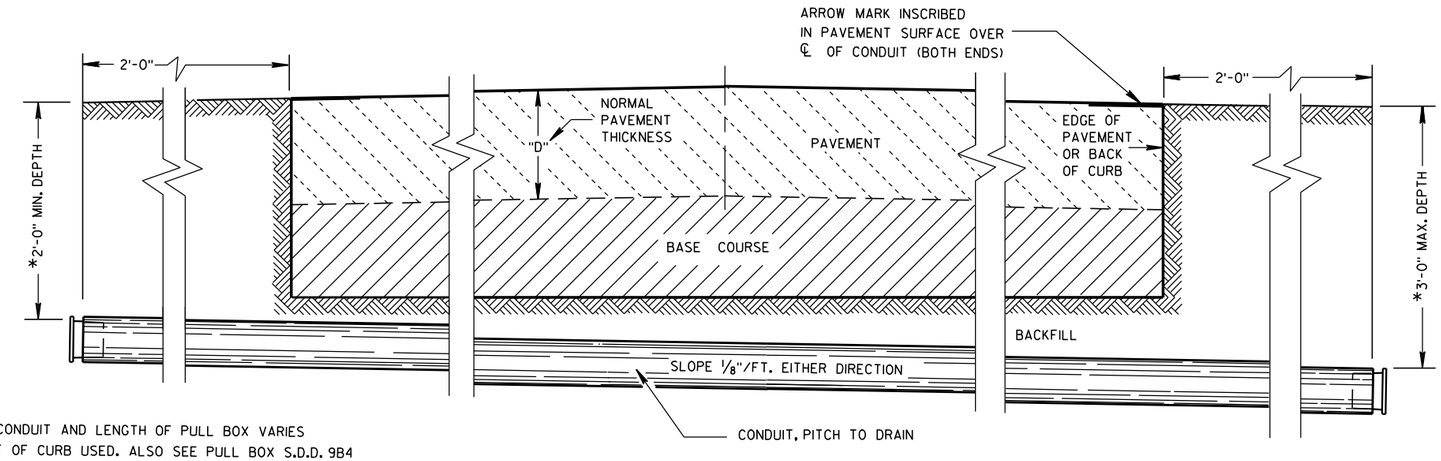
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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.).

POLY ROPE OR A PULL 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.



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

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/23/03 — DATE

/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI

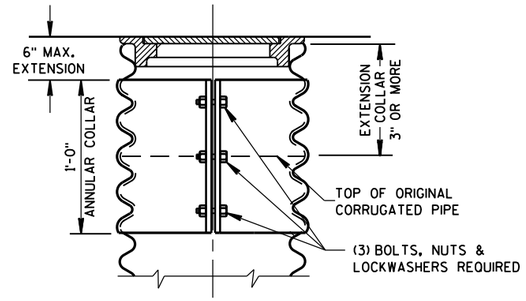
FHWA — 30 — HWYS

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

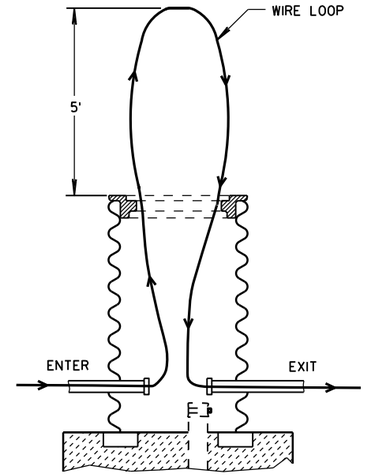
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2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

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

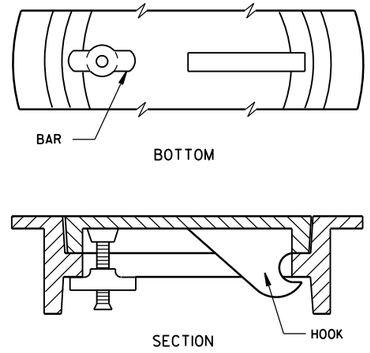
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

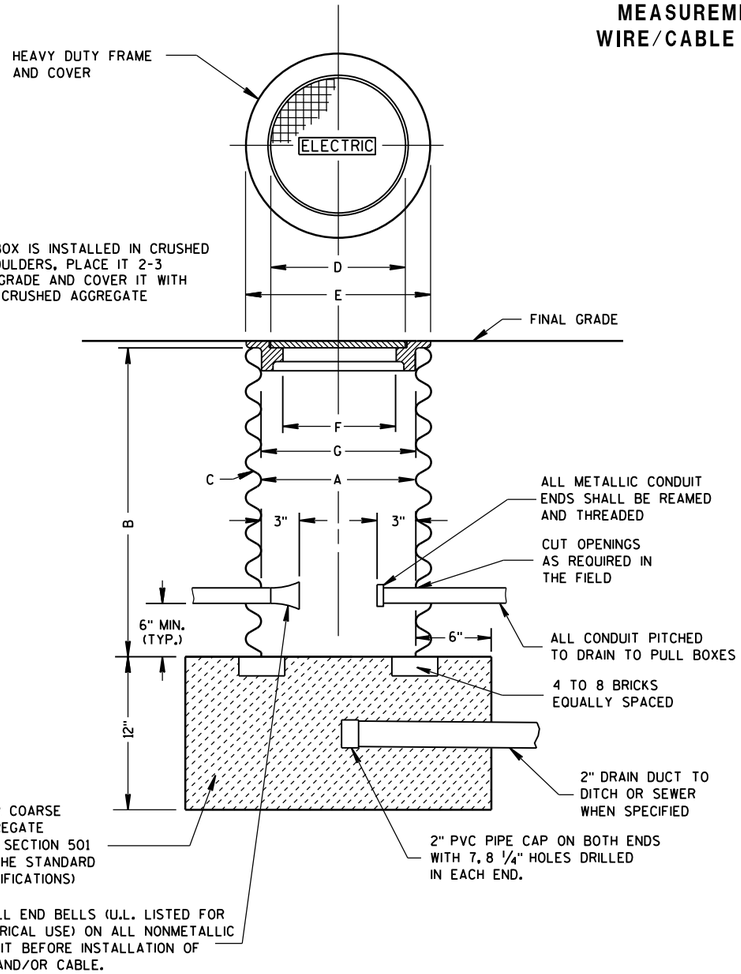


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



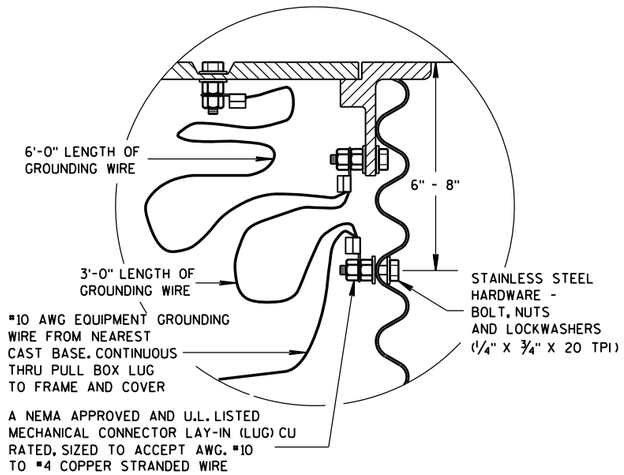
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

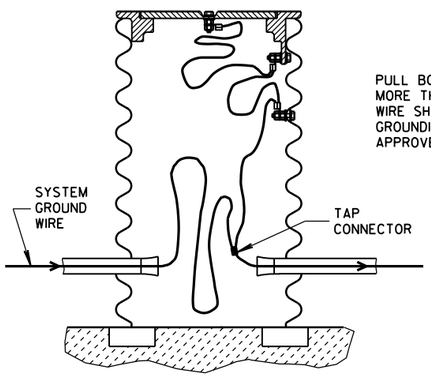


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

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

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

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

GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

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

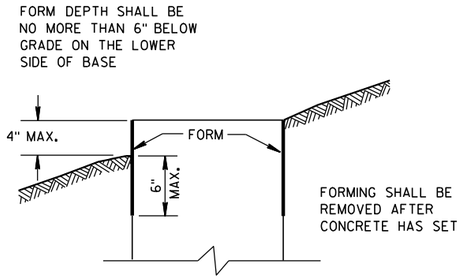
S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

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

PULL BOX	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
2-7-2013 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL
FHWA	

6

S.D.D. 9 B 4-10



FORMING DETAIL

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

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

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

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

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

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

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

GENERAL NOTES (CONTINUED)

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

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

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

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

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

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

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

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

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

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

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

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

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

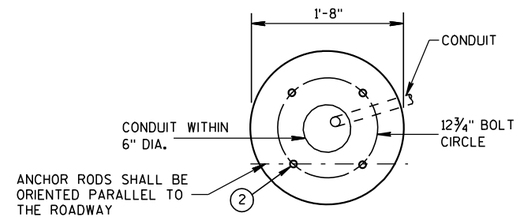
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

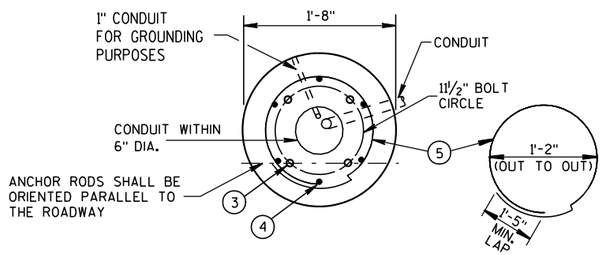
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

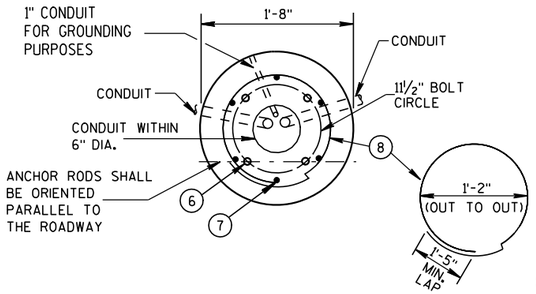
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

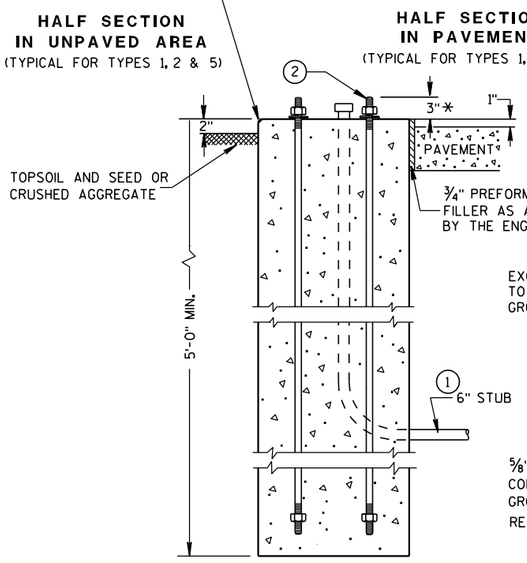






FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

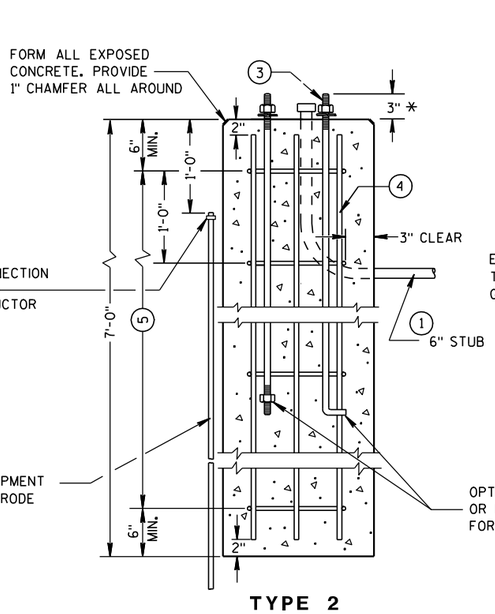
HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2 & 5)



HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2 & 5)

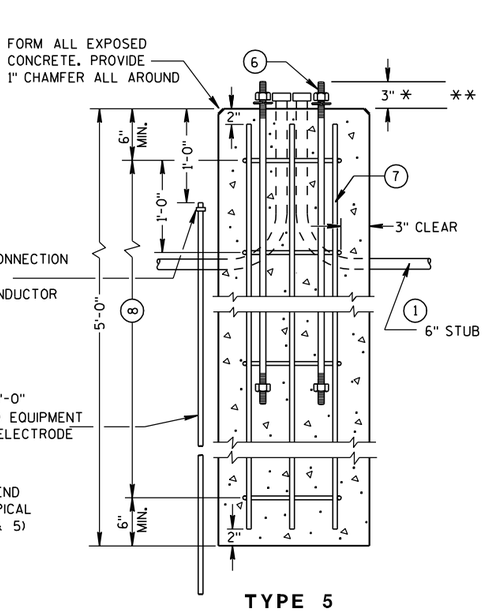
TYPE 1

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 2

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 5

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2 & 5

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/3/10 — DATE
/S/ Joanna L. Rush — STATE ELECTRICAL ENGI
32
HWYS
FHWA

6

S.D.D. 9 C 2-6

6

S.D.D. 9 C 2-6

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-325, (92,000 YIELD) HEAVY HEX NUT AND BE GALVANIZED IN ACCORDANCE WITH ASTM A-153, CLASS C.

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 AND U.L. LISTED MECHANICAL CONNECTOR (LUG) AL/CU RATED AND SIZED TO ACCEPT #10 AWG STRANDED WIRE, SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

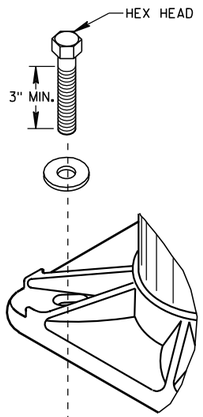
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

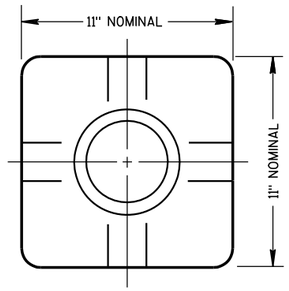
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

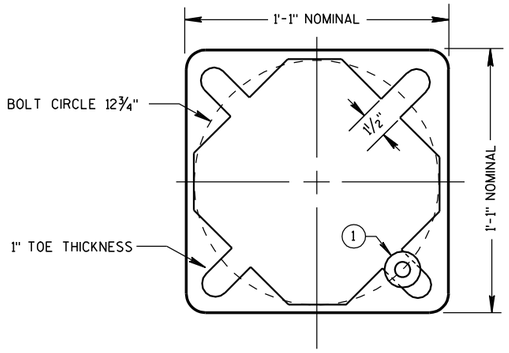
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1½", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

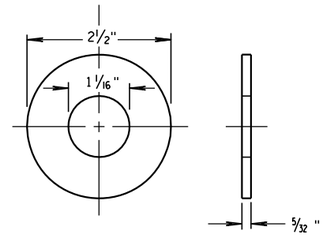




TOP VIEW
(PEDESTAL BASE)

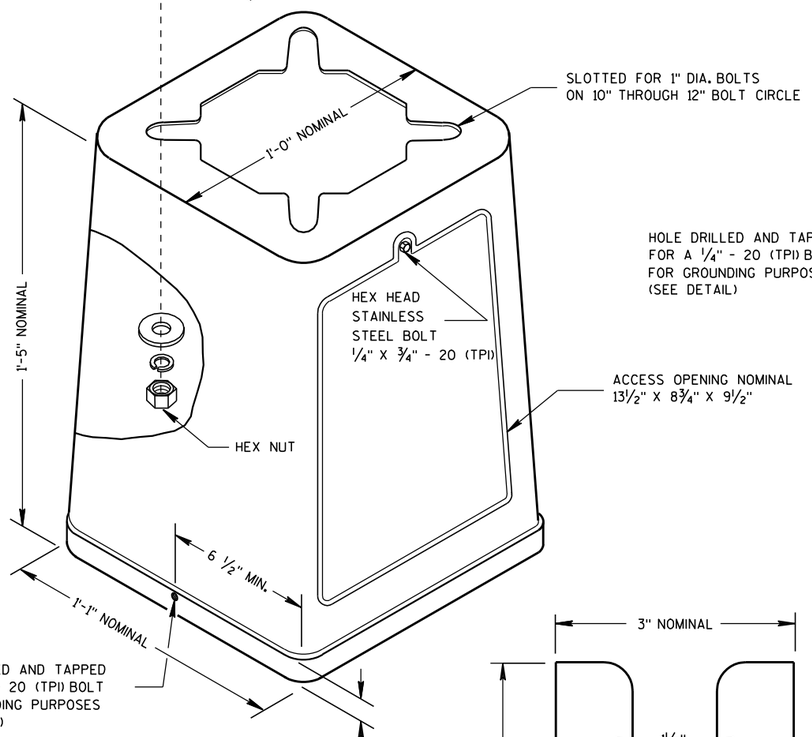


BOTTOM VIEW
(PEDESTAL BASE)

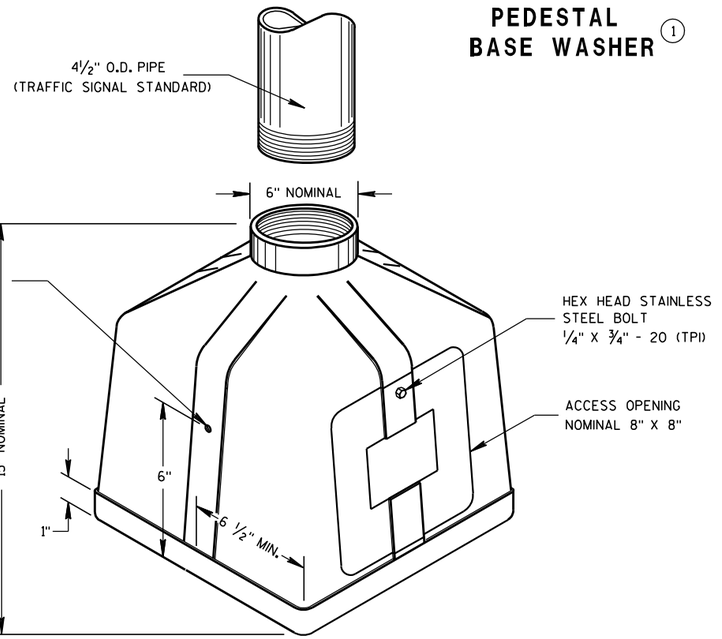


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

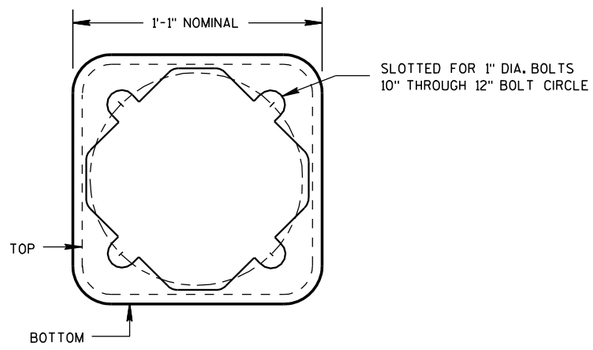


ISOMETRIC VIEW

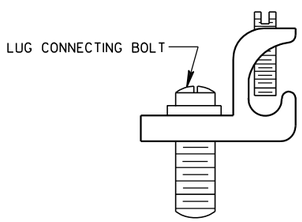


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

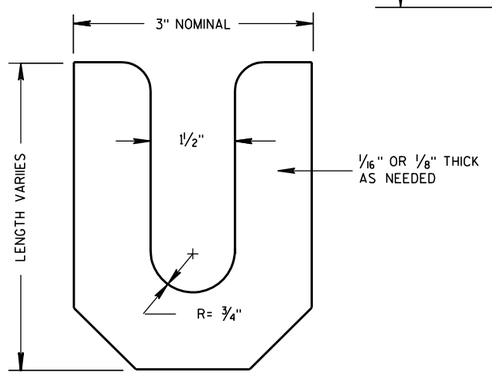


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

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



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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/S/ Joanna L. [illegible] — STATE ELECTRICAL ENGI
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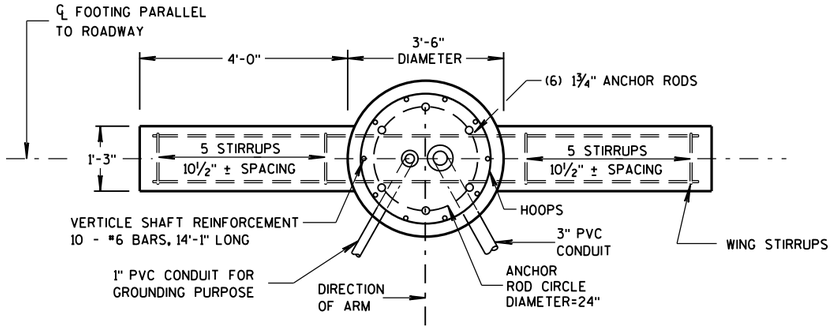
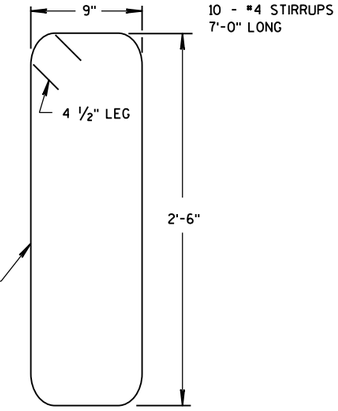
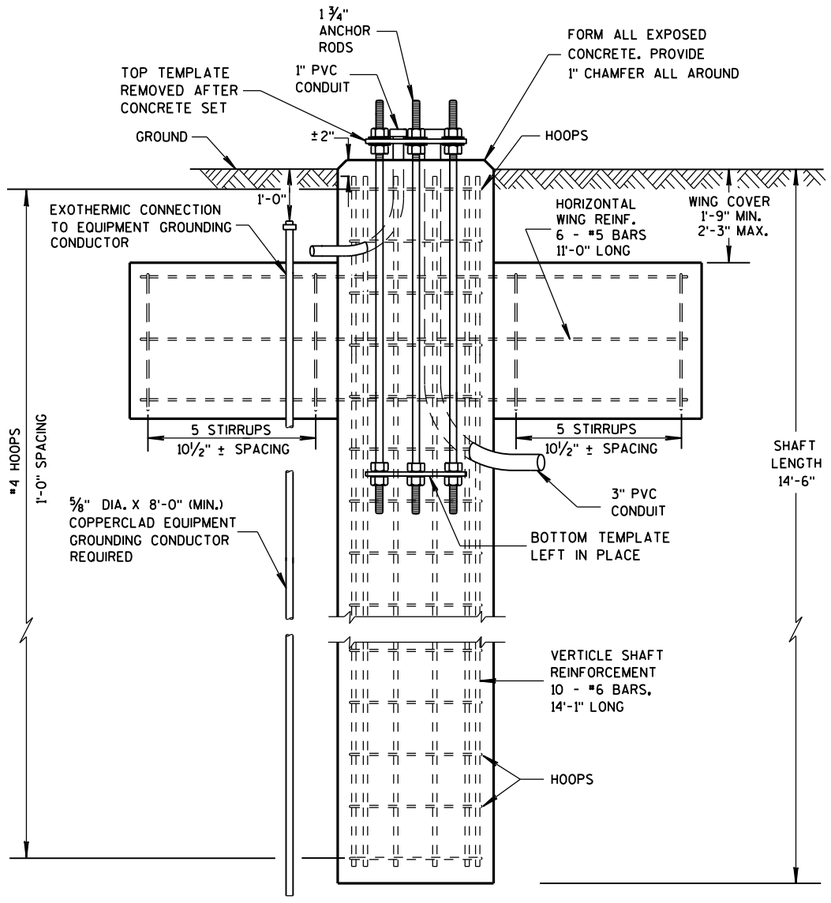


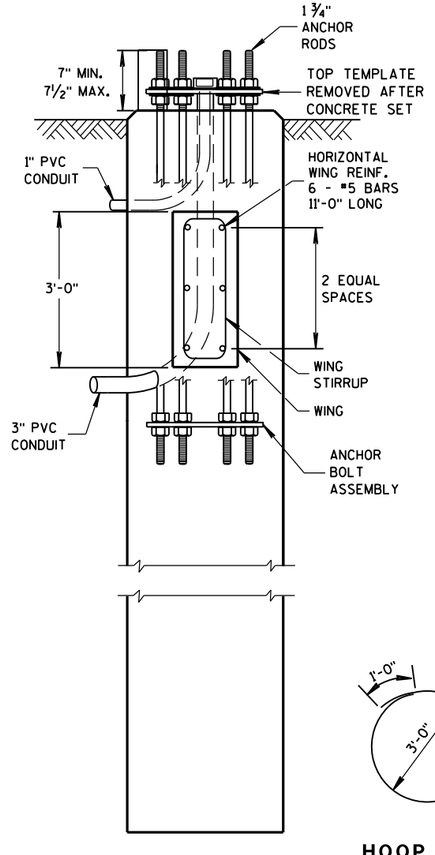
PLAN VIEW



WING STIRRUP

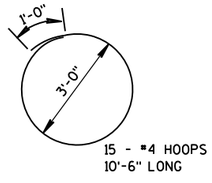


ELEVATION VIEW



SIDE VIEW

DOES NOT SHOW HOOPS OR VERTICAL SHAFT REINFORCEMENT



HOOP DETAIL

GENERAL NOTES

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

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

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

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

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

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

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

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

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

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4½" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

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

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

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

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

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

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

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

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

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM A709 GRADE 36	fy=36,000 p.s.i.

(FOR TYPE 12 & 13 POLES)

CONCRETE = 6.3 C.Y.
H.S. REINFORCEMENT = 433 LBS.

TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.
SEE S.D.D. 9C13-1 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

CONCRETE BASE TYPE 13

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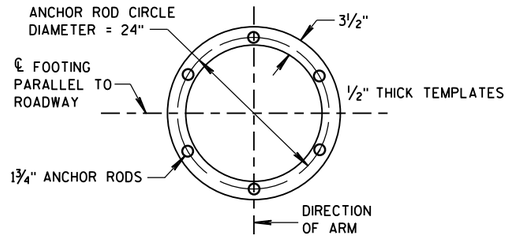
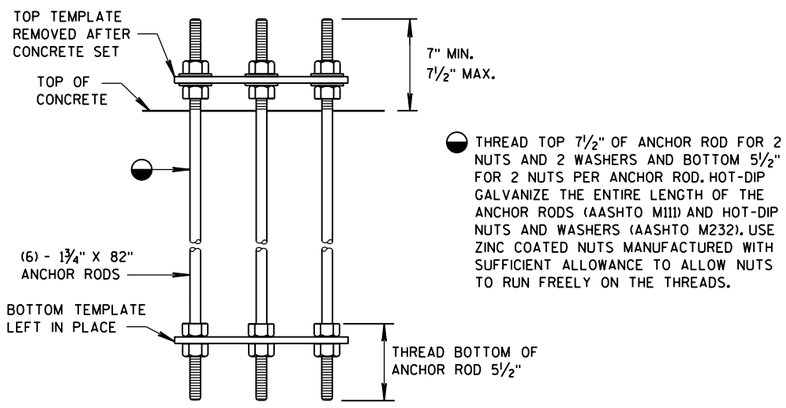
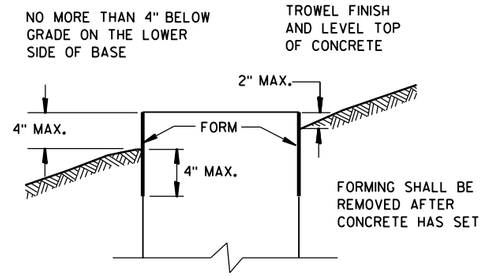


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



FORMING DETAIL

CONCRETE BASE TYPE 13	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
1-16-2013 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL
FHWA	

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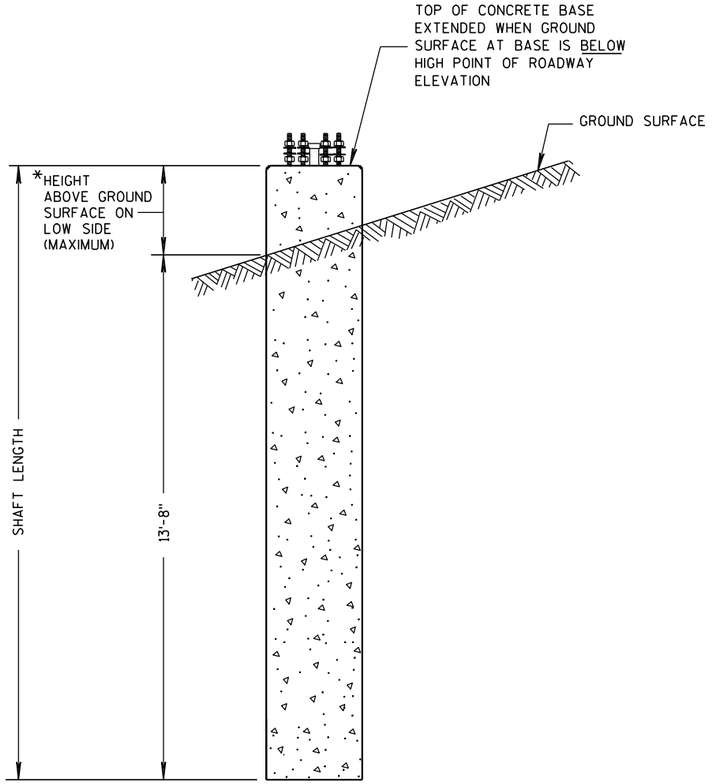
S.D.D. 9 C 12-3b

REINFORCEMENT AND CONCRETE QUANTITIES ADJUSTED FOR EXTENDED TYPE 10 CONCRETE BASE

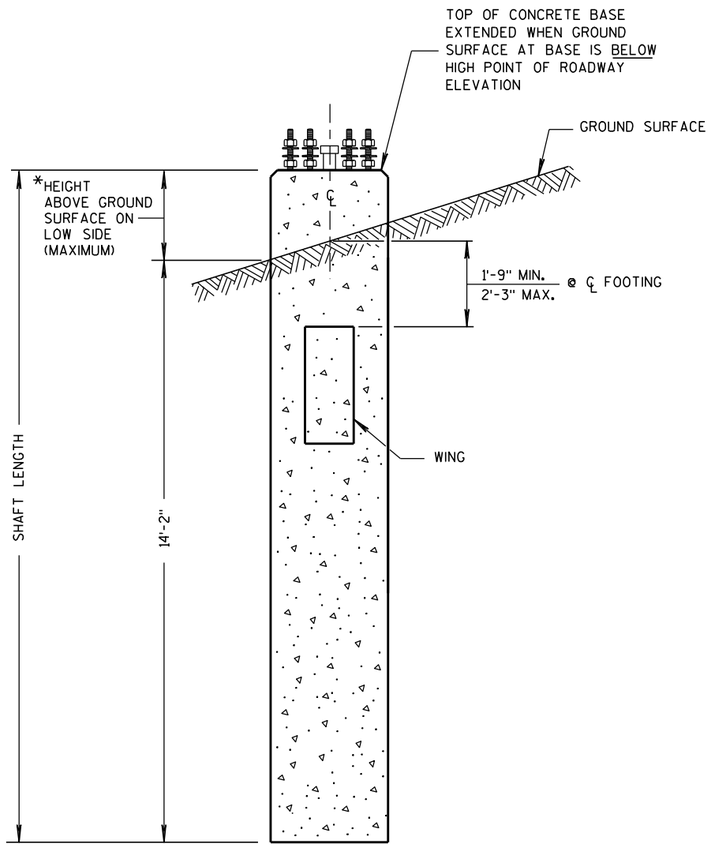
HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF HOOP BAR STEEL	LBS. OF VERTICAL BAR STEEL
>0" TO 6"	10"	14'-6"	14'-1"	16	2.6	78	127
>6" TO 1'-0"	1'-4"	15'-0"	14'-7"	16	2.7	78	131
>1'-0" TO 1'-6"	1'-10"	15'-6"	15'-1"	17	2.8	83	136
>1'-6" TO 2'-0"	2'-4"	16'-0"	15'-7"	17	2.9	83	141



CONCRETE BASE TYPE 10 (EXTENDED)

REINFORCEMENT AND CONCRETE QUANTITIES ADJUSTED FOR EXTENDED TYPE 13 CONCRETE BASE

HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF H.S. BAR STEEL
>0" TO 6"	10"	15'-0"	14'-7"	16	6.5	447
>6" TO 1'-0"	1'-4"	15'-6"	15'-1"	16	6.6	454
>1'-0" TO 1'-6"	1'-10"	16'-0"	15'-7"	17	6.8	469
>1'-6" TO 2'-0"	2'-4"	16'-6"	16'-1"	17	7.0	476



CONCRETE BASE TYPE 13 (EXTENDED)

CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3-3-10 DATE — /S/ Joanna L. Rush STATE ELECTRICAL ENGI — HWYS

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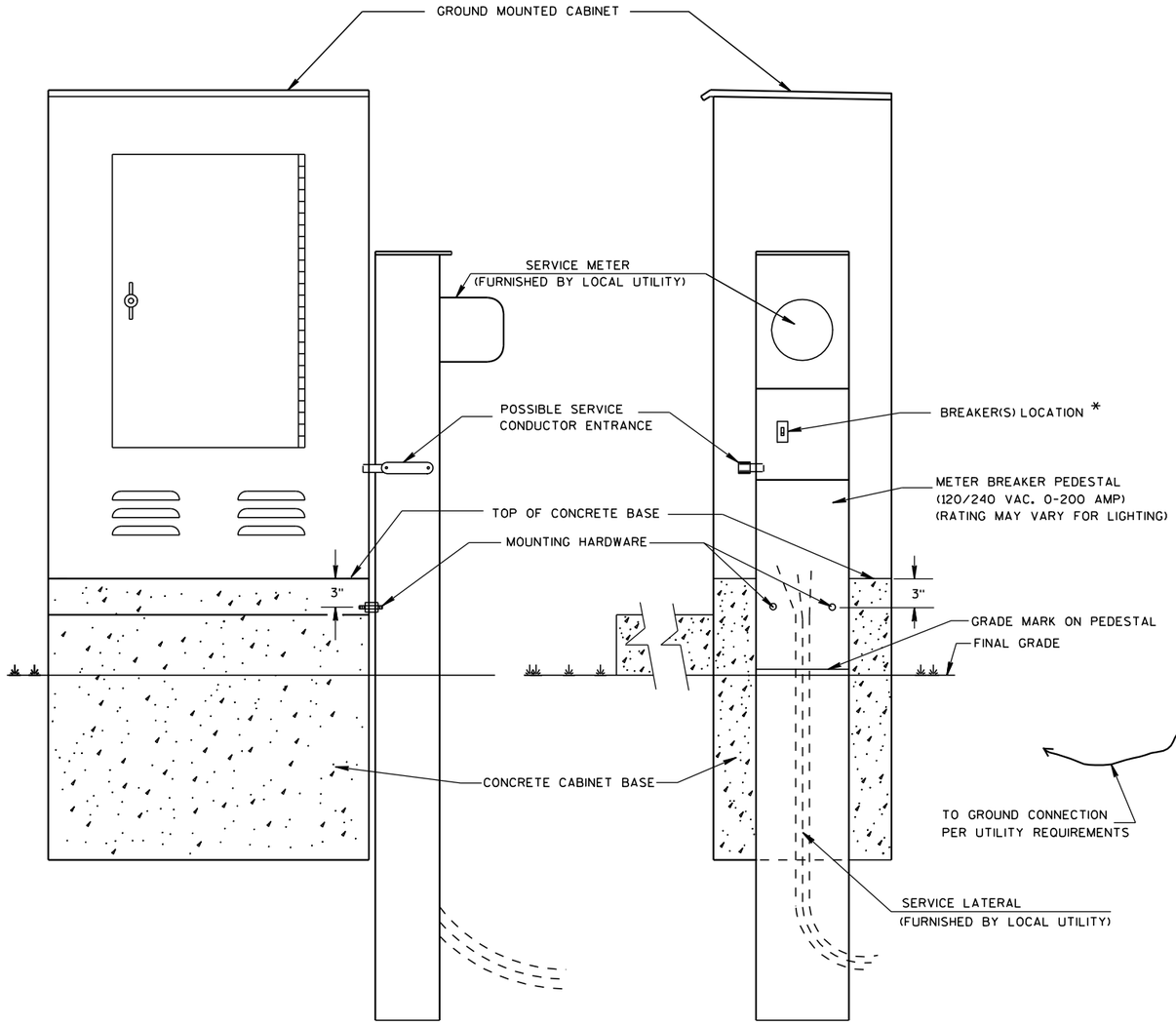

TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

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CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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10/27/09 — DATE

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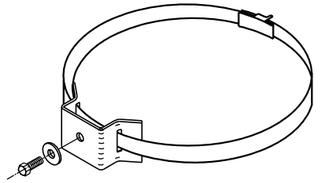
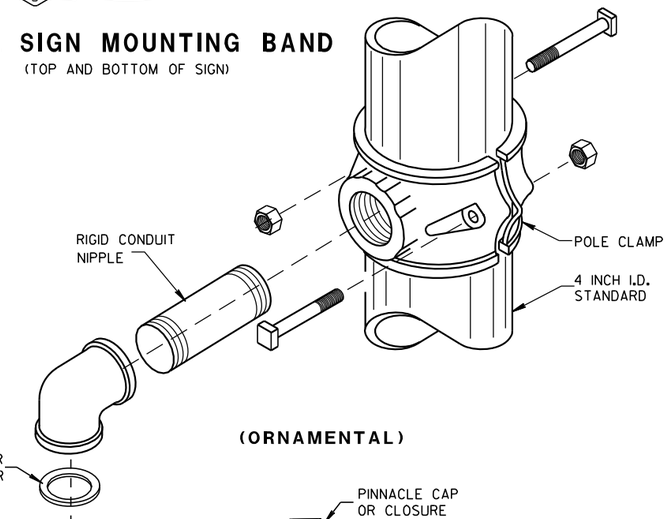


TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



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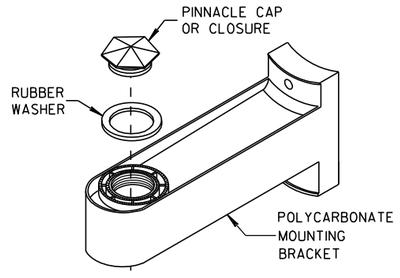

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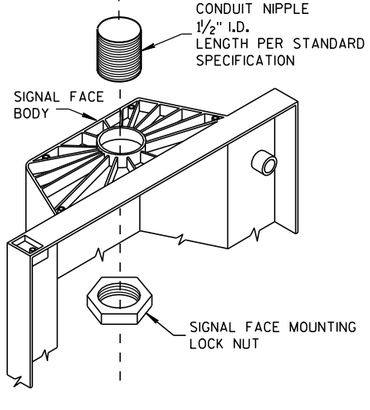
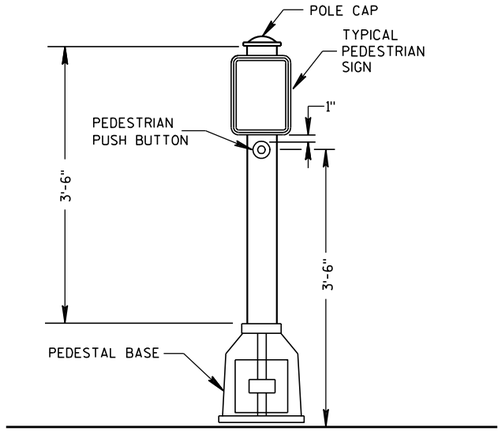


SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

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

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

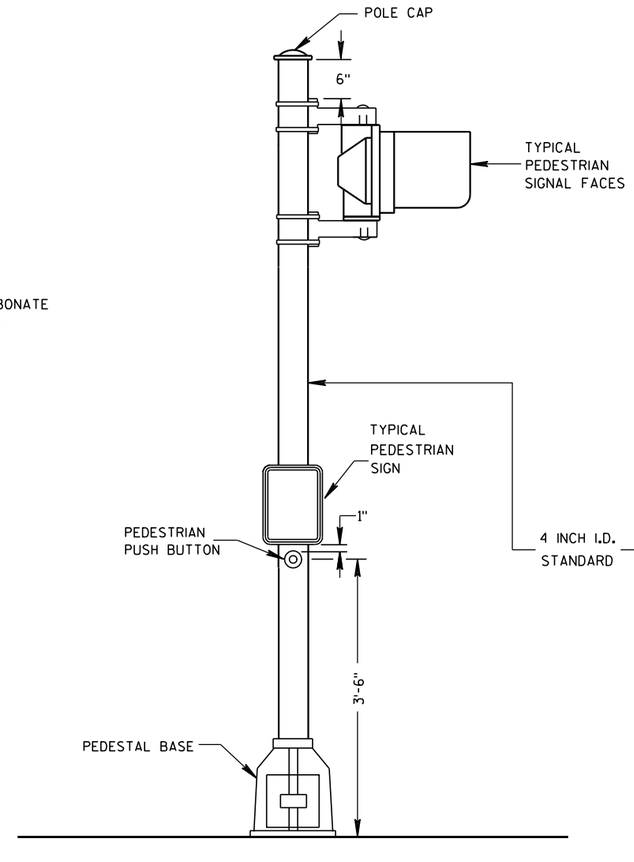
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

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

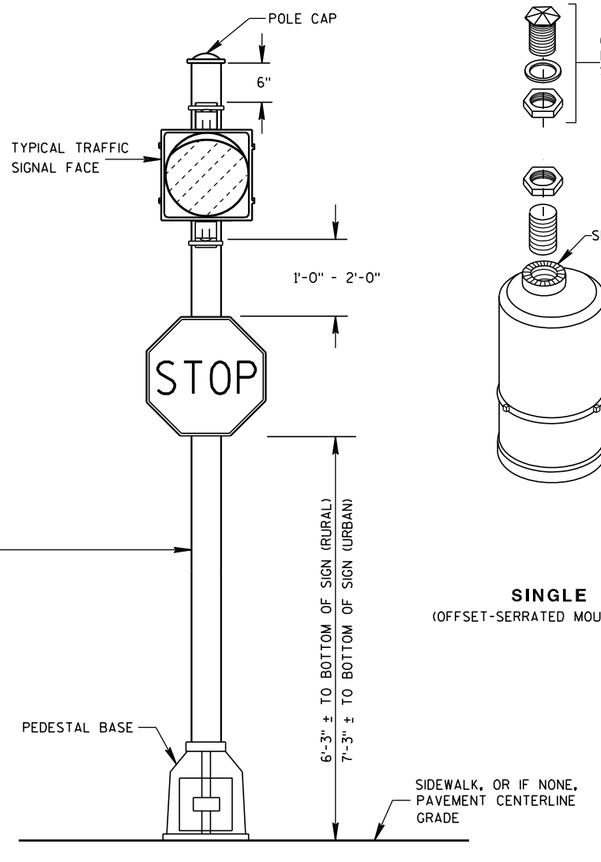
MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

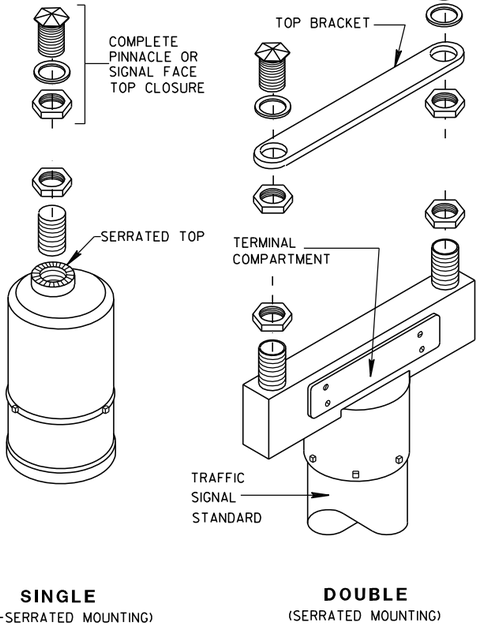
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



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



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



SINGLE
(OFFSET-SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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/S/ John Corbin — STATE ELECTRICAL ENGI

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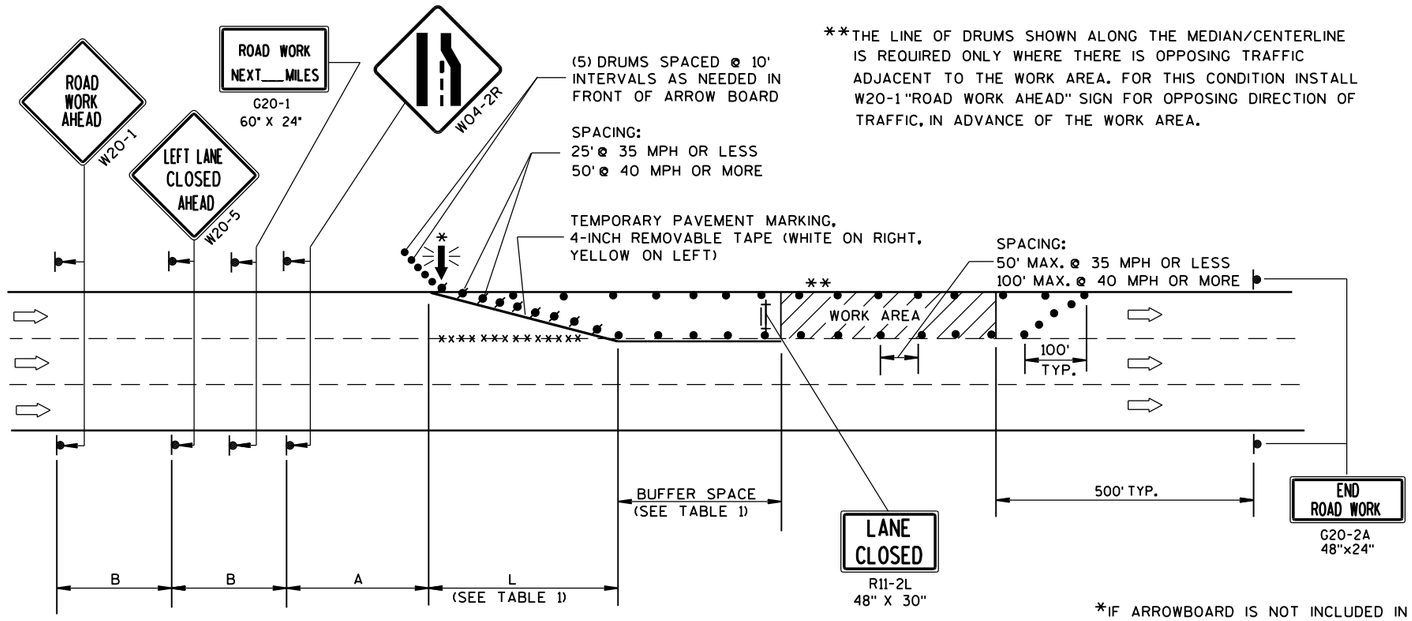

**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

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

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

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

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

W01-6
48"x24"

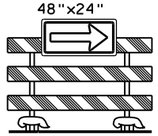

TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

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

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

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

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

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

GENERAL NOTES

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

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

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

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

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

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

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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LEGEND

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

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

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

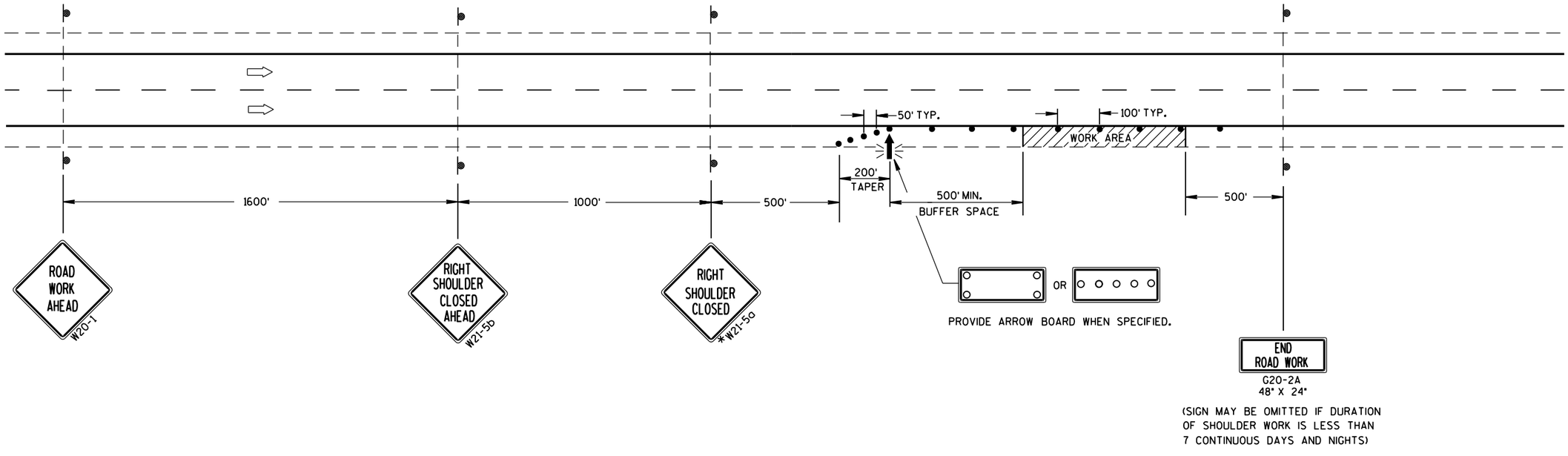
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

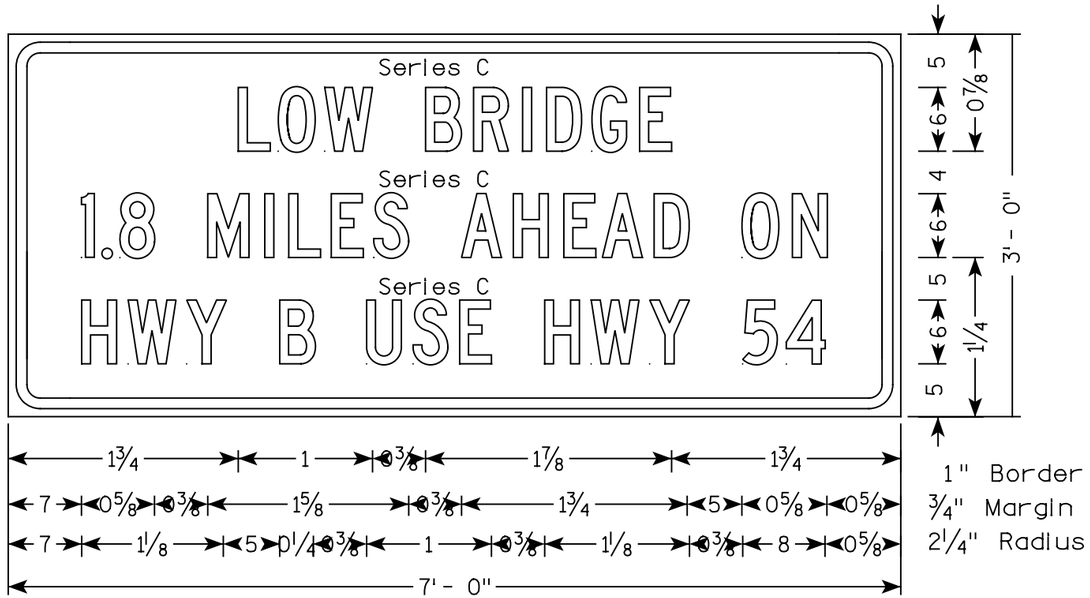
8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

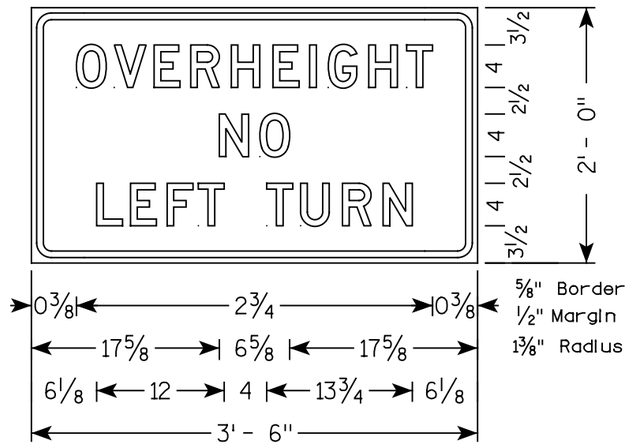
6

S.D.D. 15 D 27-2



NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - D except as noted



7

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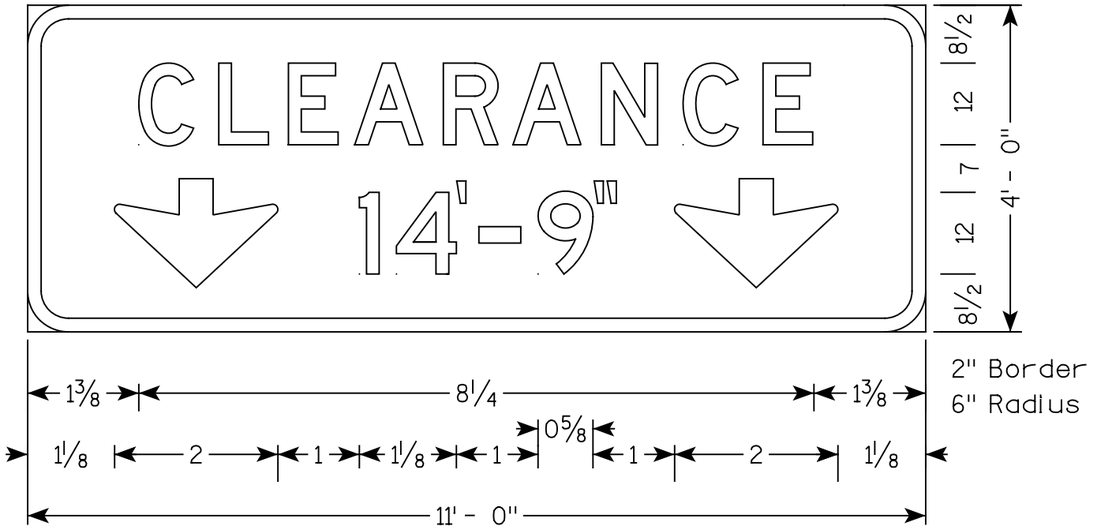
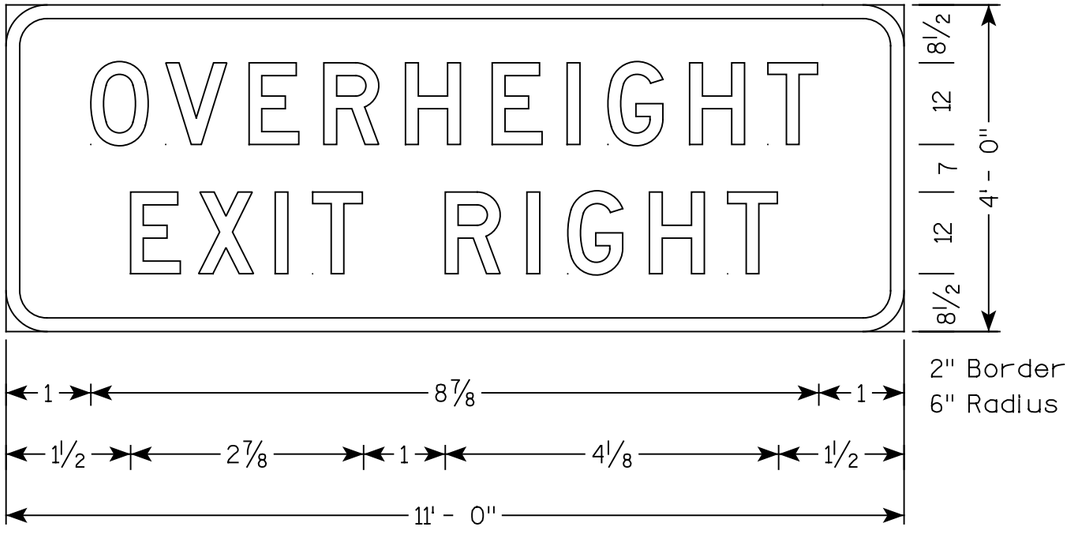
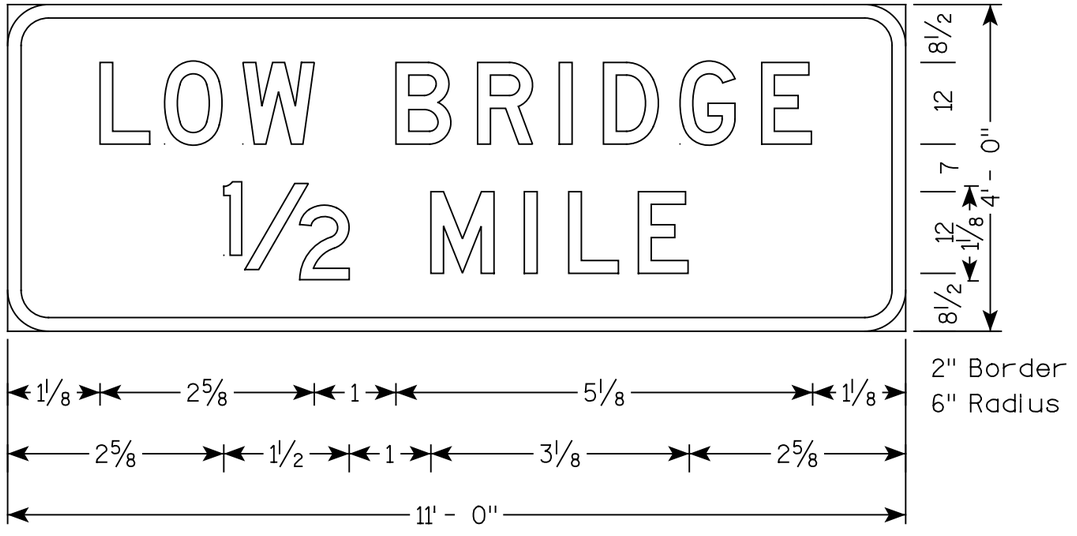
PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	PERMANENT SIGNING	SHEET NO. 41	E







NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - D

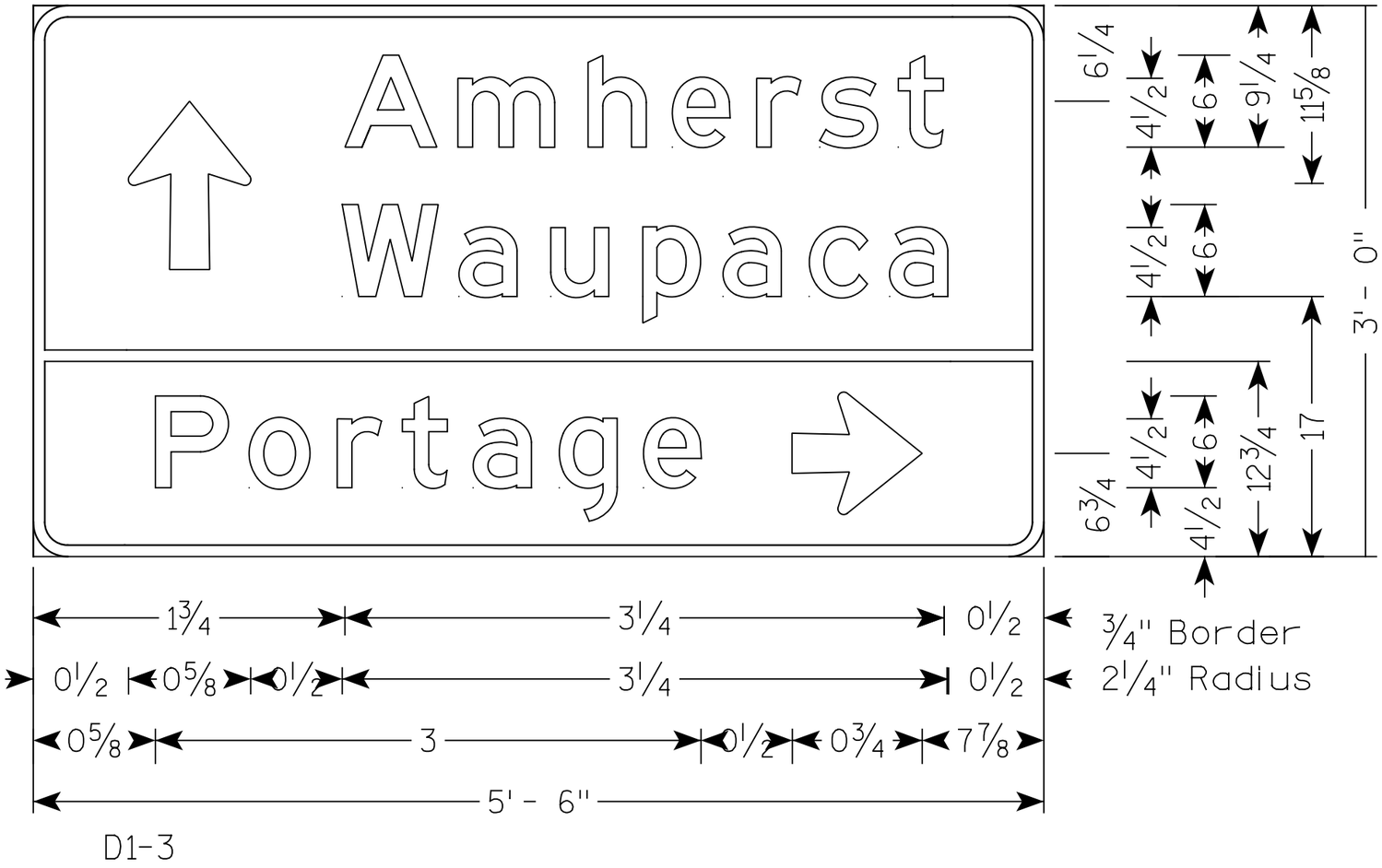
7

7

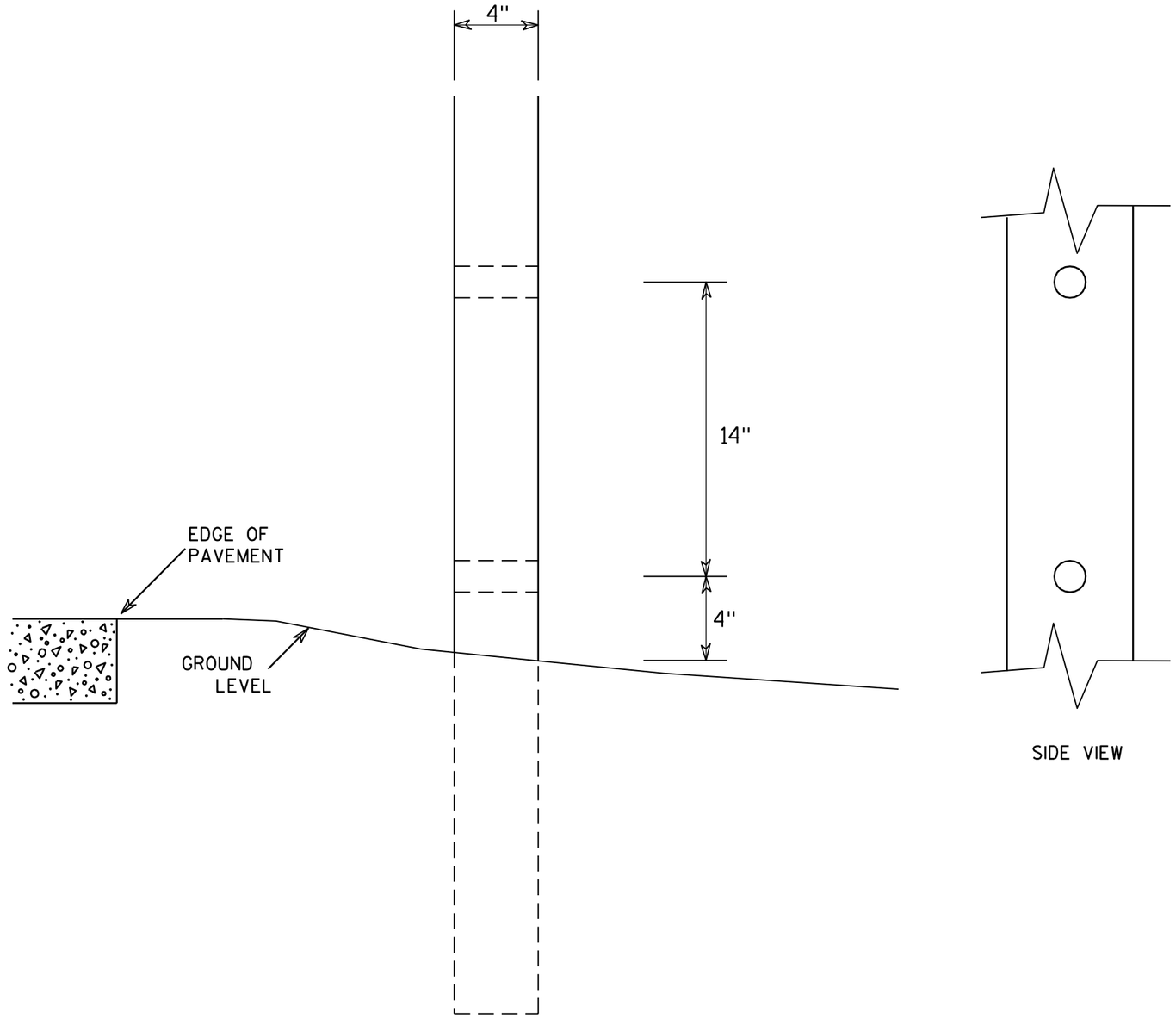
PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	PERMANENT SIGNING	SHEET NO. 42	E

NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White
3. Message Series - E



PROJECT NO: 1166-12-85	HWY: IH 39	COUNTY: PORTAGE	PERMANENT SIGNING	SHEET NO. 43	E



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

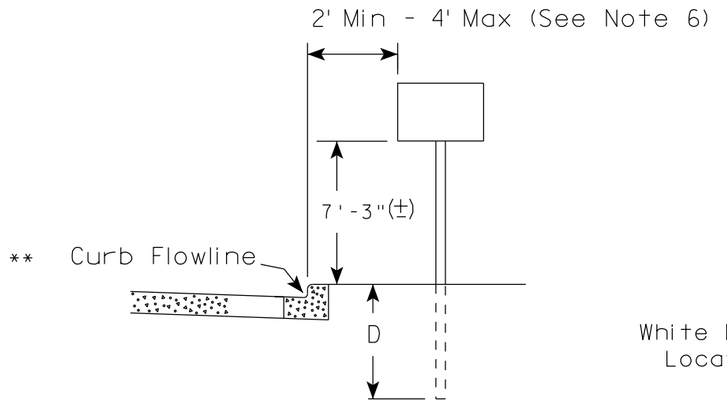
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

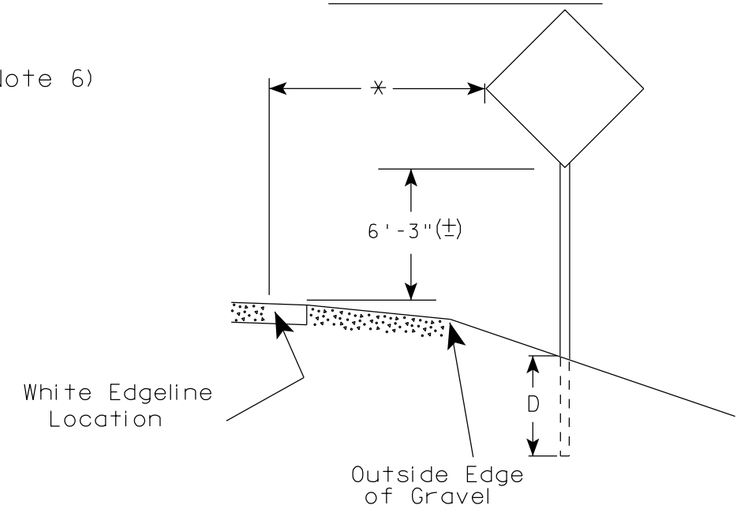
DATE 3/27/97 PLATE NO. A4-11.2

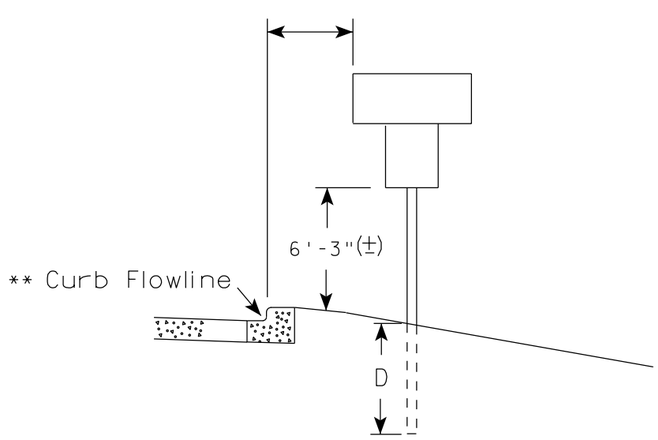
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 44	E

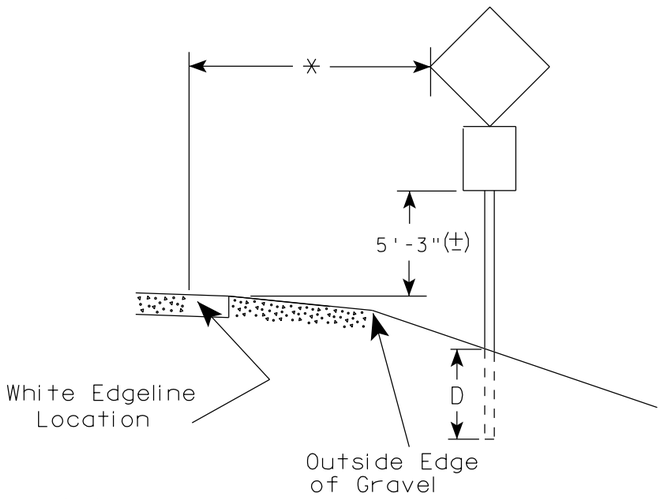
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

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

GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

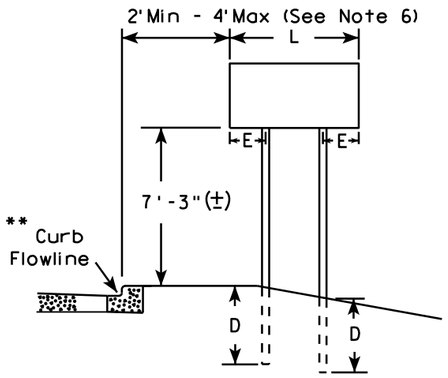
APPROVED Matthew R Rauch
for State Traffic Engineer

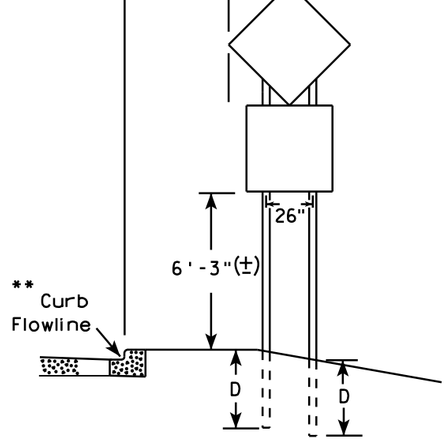
DATE 9/30/13 PLATE NO. A4-3.18

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

7

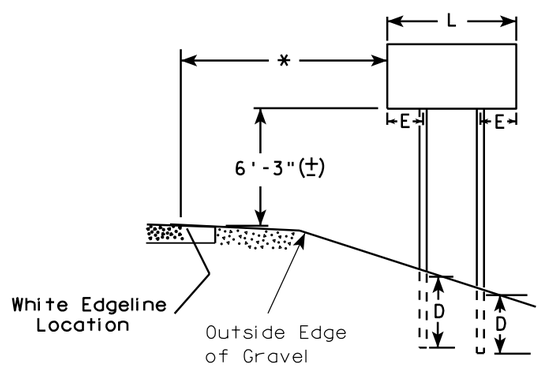
URBAN AREA

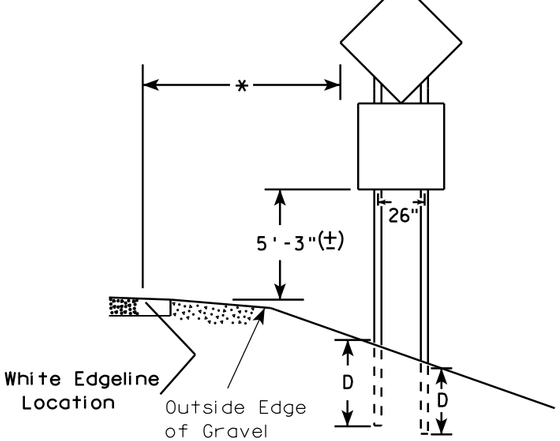




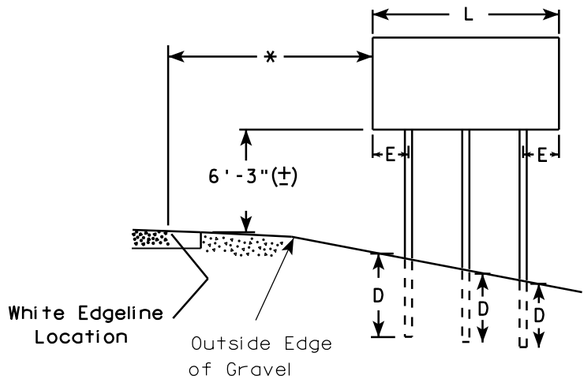
48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)





48" DIAMOND WARNING SIGN



GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4"-3" (±).

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

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width or 20 S.F. or less in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

***

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

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

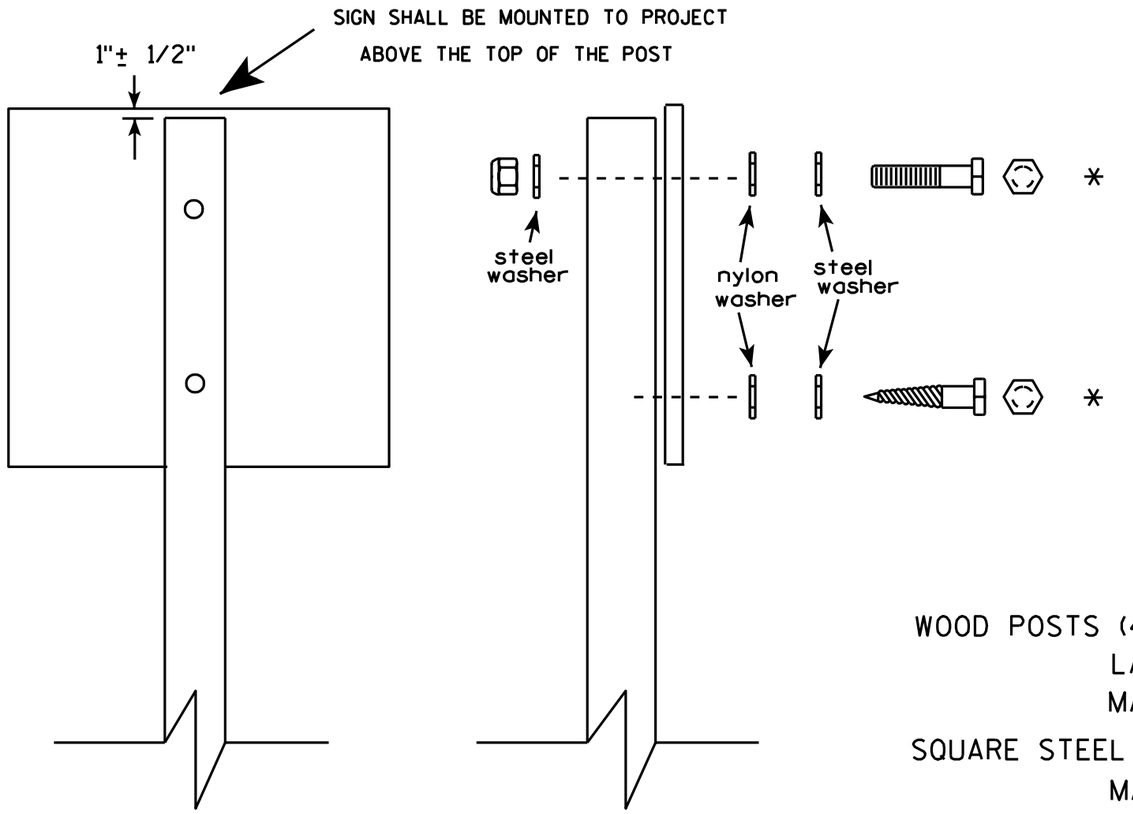
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-4 12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



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

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

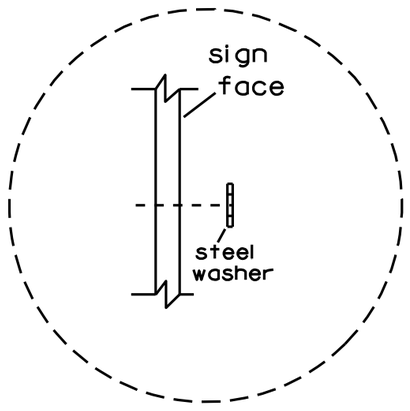
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

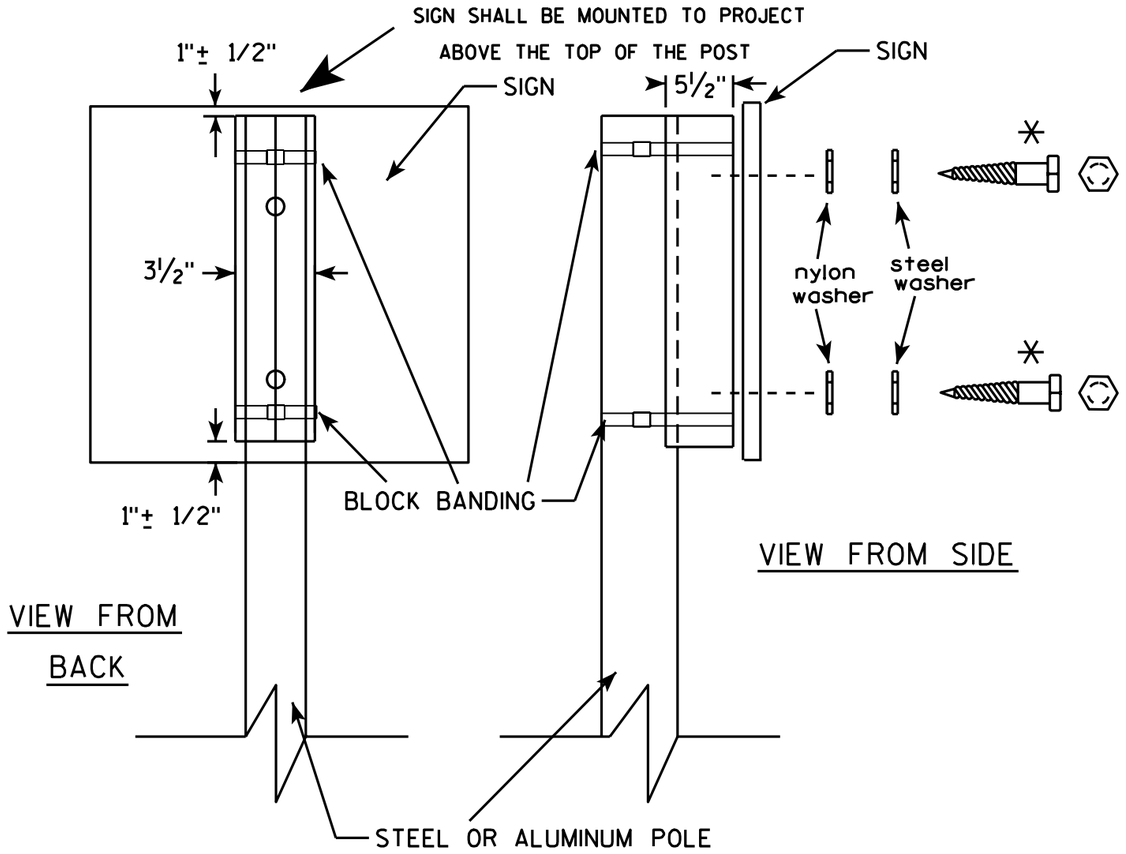
DATE 3/23/10 PLATE NO. A4-8.7

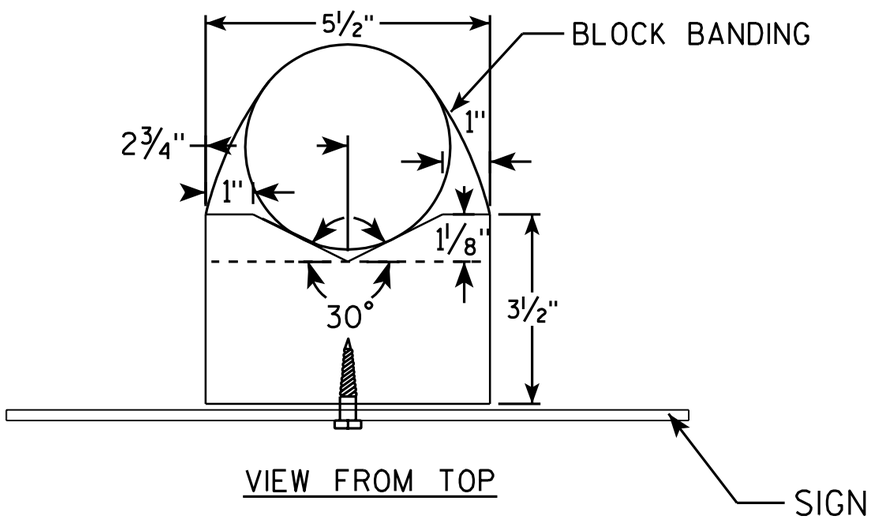
7

7

PROJECT NO:

SHEET NO: 47 E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

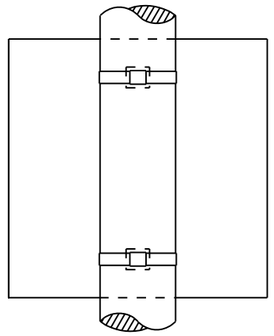
SHEET NO: 48 E

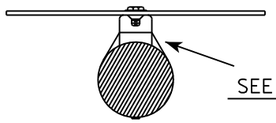
FILE NAME : C:\Users\Projects\tr_stdplate\A510.dgn PLOT DATE : 06-AUG-2007 13:37 PLOT BY : ditjph

WISDOT/CADDS SHEET 42

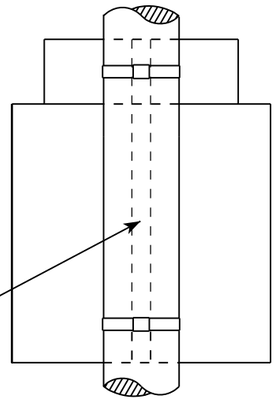
BANDING

SINGLE SIGN

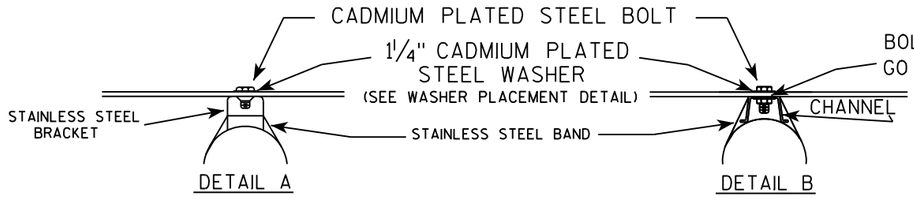




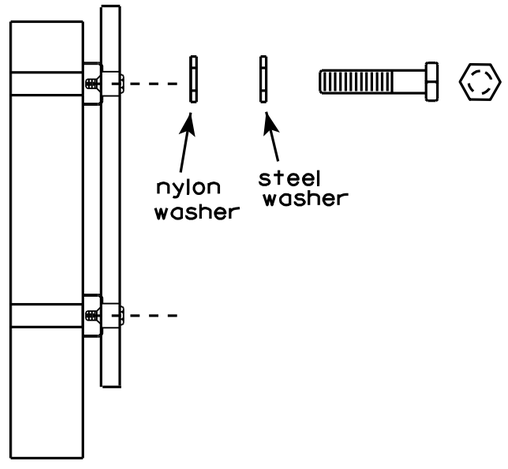
"J" ASSEMBLY



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

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.

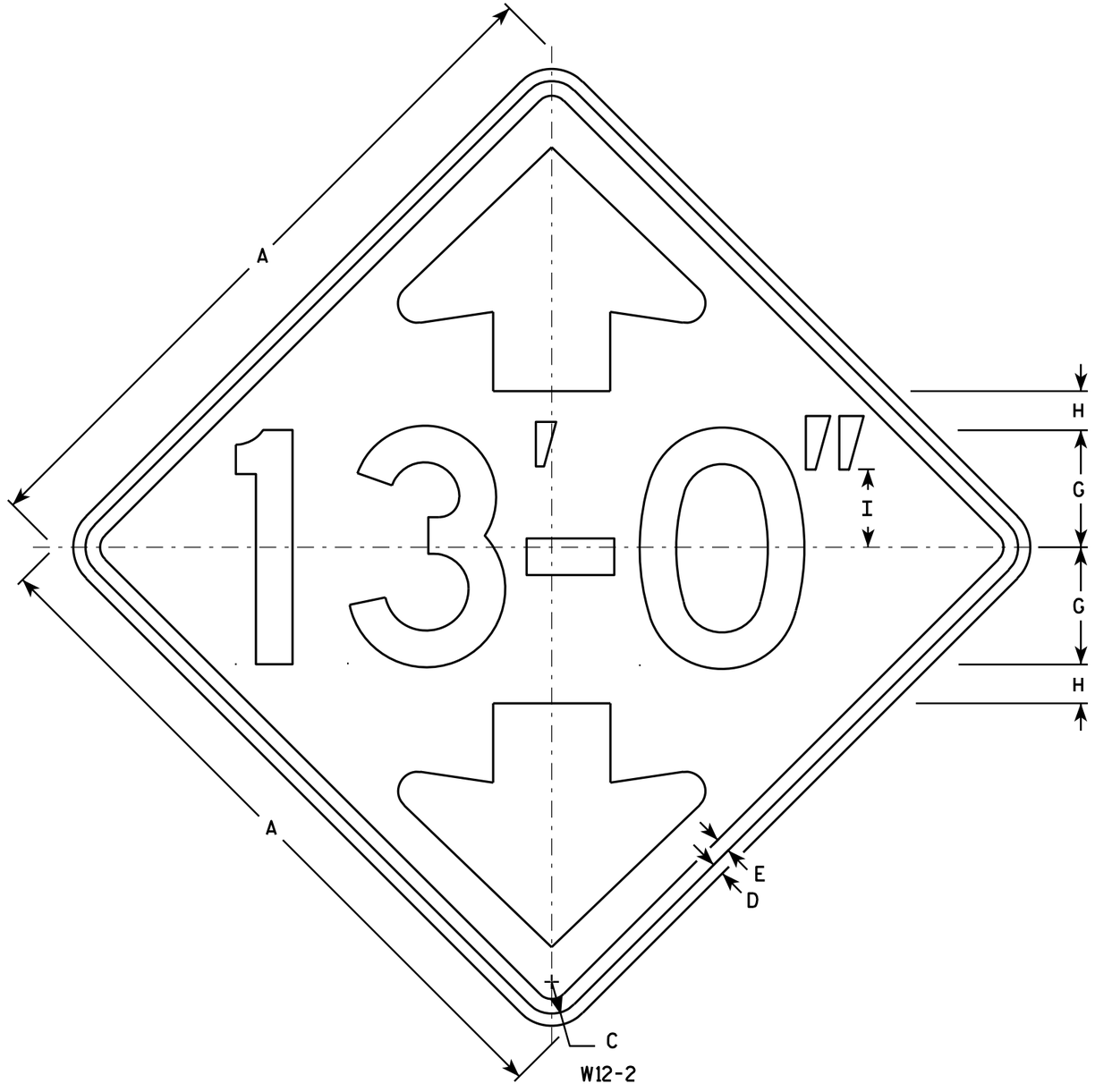
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

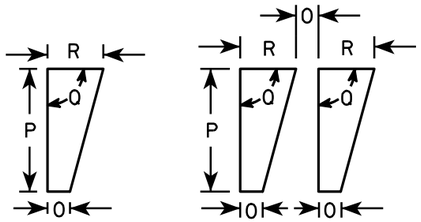
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 49	E



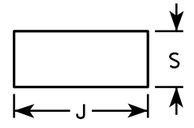
NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing of numerals, hyphen, foot & inch marks to achieve proper balance.

Arrow Detail



Foot Mark & Inch Mark Detail



Hyphen Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		5	1 5/8	3 3/8	3 3/4	6 5/8	5 3/4	3/4	2 1/2	1/2	2 1/4	90°	1	1 5/8								6.25
2S	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
2M	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
3	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
4	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
5	48		2 1/4	3/4	1		8	2 5/8	5 1/2	5 7/8	10 5/8	9 1/4	1 3/8	4	5/8	3 5/8	90°	1 5/8	2 1/2								16.00

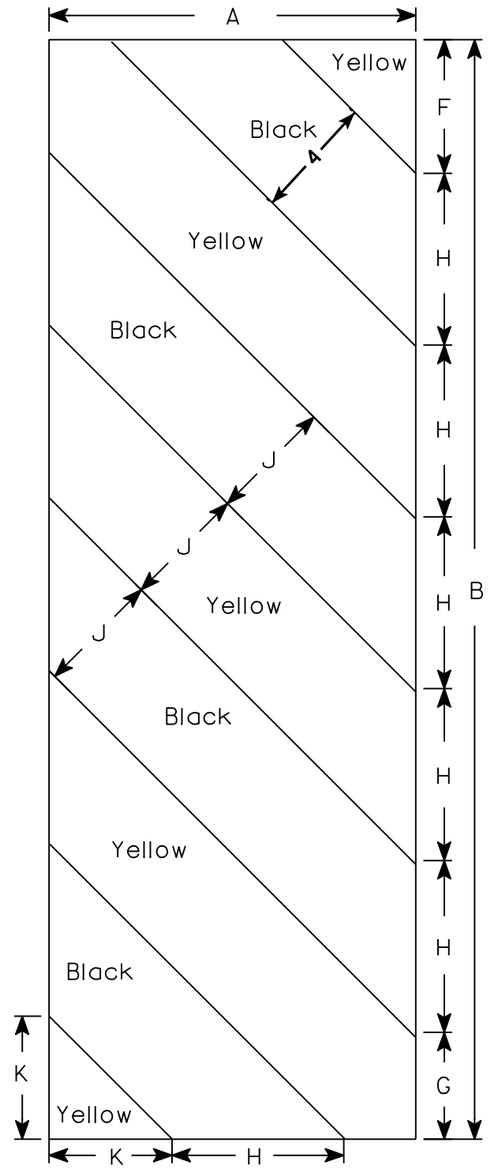
STANDARD SIGN
W12-2

WISCONSIN DEPT OF TRANSPORTATION

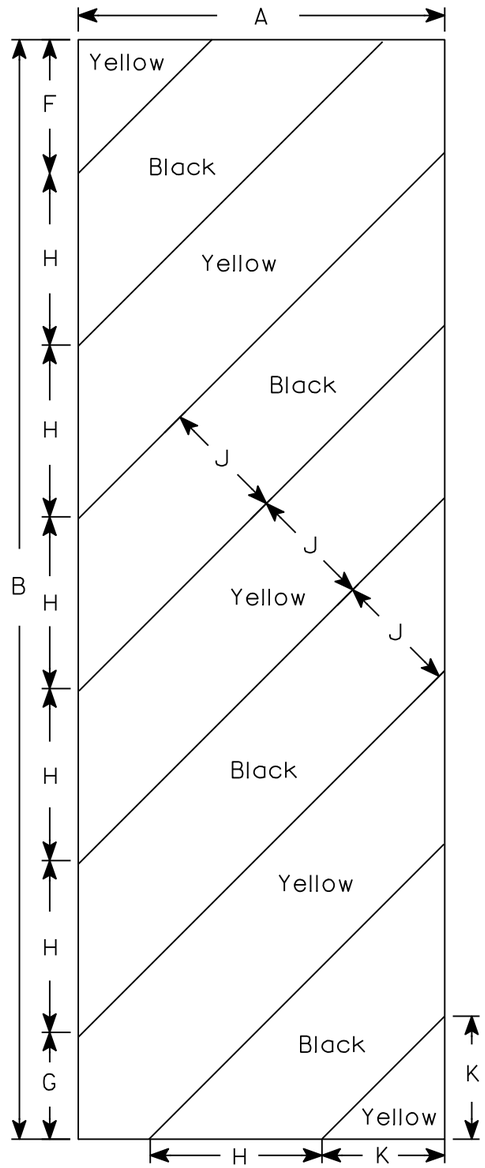
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-2.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 50	E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 51	E

Wisconsin Department of Transportation

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