NWL APR 2015

PROJECT ID: 1540-00-72

WITH:

COUNTY: ST. CROIX

ORDER OF SHEETS

TOTAL SHEETS = 24

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1540-00-72	WISC 2015194	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

C RIVER FALLS, NORTH MAIN STREET

UNION STREET INTERSECTION

LOCAL STREET

ST. CROIX COUNTY

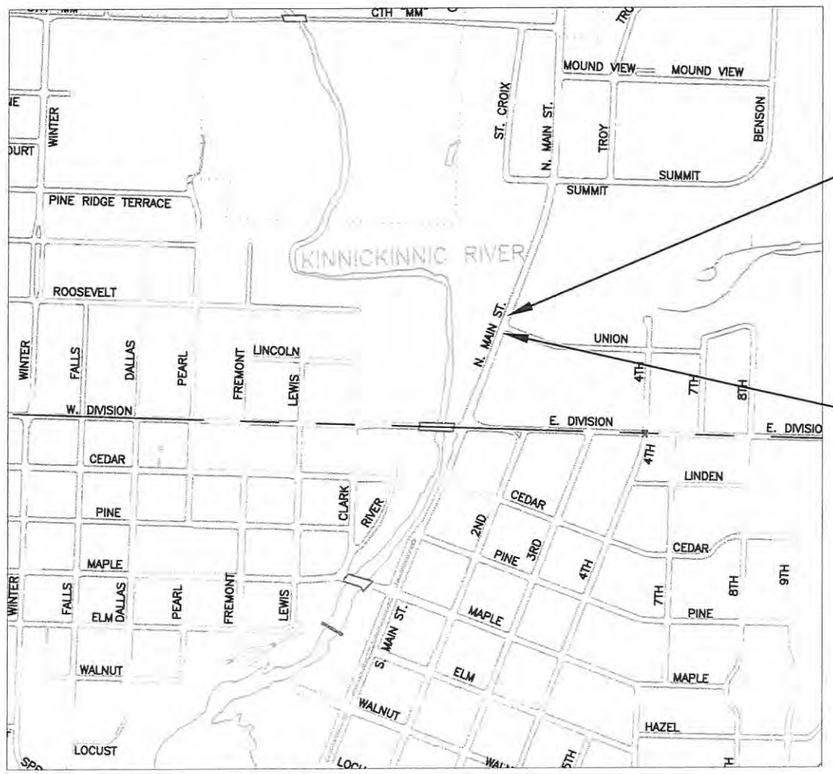
STATE PROJECT NUMBER
1540-00-72

DESIGN DESIGNATION

A.A.D.T.	2014	= 17,300
A.A.D.T.	2034	= NA
D.H.V.		= NA
D.D.		= NA
T.		= NA
DESIGN SPEED		= NA
ESALS		= NA

CONVENTIONAL SYMBOLS

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



LAYOUT
SCALE 0 500

END PROJECT
STA 6+10.00
Y=387020.004
X=1288599.316

BEGIN PROJECT
STA 2+58.00
Y=386694.057
X=1288466.418

TOTAL NET LENGTH OF CENTERLINE = 0.067

COORDINATES ON THIS PLAN ARE REFERNCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), ST. CROIX COUNTY.

ACCEPTED FOR
CITY of RIVER FALLS
10-21-2014 (Date)
DPW/CE (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY
WISCONSIN
VANCE P. POWERS
E-36761
WAUSAU, WI
10-20-2014 (Date)
(Signature)
PROFESSIONAL ENGINEER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor: SEH
Designer: SEH
Management Consultant: KNIGHT, E/A

APPROVED FOR THE DEPARTMENT
DATE: 10/29/14 Ryan B McKane (Management Consultant Signature)

E

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GENERAL NOTES

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

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE RESTORED WITH 4 INCHES OF TOPSOIL, SOD, FERTILIZER AND MULCH. FINISHED SOD SURFACES SHALL BE 1-INCH BELOW TOP OF ADJACENT CONCRETE. RESTORATION MATERIALS AND LABOR SHALL BE CONSIDERED AS INCIDENTAL WORK TO THE ENTIRE PROJECT. NO DIRECT COMPENSATION WILL BE MADE FOR RESTORATION.

HORIZONTAL ALIGNMENT SHOWN IS FOR QUANTITATIVE PURPOSE ONLY.

DESIGN CONTACT

SEH INC
3535 VADNAIS CENTER DRIVE
ST. PAUL, MN 55110-5196
TELEPHONE: 651.490.2000
ATTN: JOHN GRAY
EMAIL: JGRAY@SEHINC.COM

WDNR CONTACT

WIS DNR
1400 WEST CLAIREMONT AVENUE
EAU CLAIRE WI 54701
TELEPHONE: 715.839.1609
ATTN: CHRIS WILLGER
EMAIL: CHRISTOPHERJ.WILLGER@WISCONSIN.GOV

UTILITY CONTACTS

CITY OF RIVER FALLS (STORM SEWER)
222 LEWIS STREET
RIVER FALLS, WI 54022
TELEPHONE: 715.426.3409
ATTN: RICK WRONSKI, CITY ENGINEER

RIVER FALLS MUNICIPAL UTILITIES
222 LEWIS STREET
RIVER FALLS, WI 54022
TELEPHONE: 715.425.0906
ATTN: TAMARRA JAWORSKI
EMAIL: TJAWORSKI@RFCITY.ORG
(WATER, SEWER AND ELECTRIC)

AT&T
304 S. DEWEY STREET
EAU CLAIRE, WI 54701
TELEPHONE: 715.839.5565
ATTN: RICK PODOLAK

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

NOTE:
THE EXACT LOCATION OF UNDERGROUND UTILITIES SUCH AS GAS, TELEPHONE, FIBER OPTIC, ELECTRIC, CABLE TV AND PIPES LINES ARE UNKNOWN. THE CONTRACTOR SHALL CONTACT DIGGERS HOTLINE AND ALL OTHER UTILITY OWNERS WHICH ARE WITHIN PROJECT LIMITS, BEFORE COMMENCING EXCAVATION.

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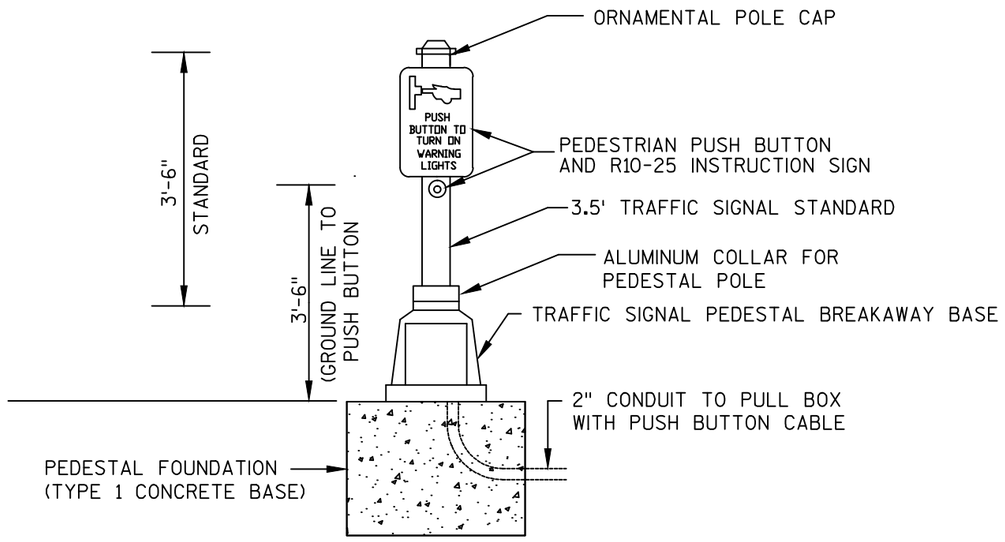
TYPICAL
CABLE AND WIRING

FROM	TO	CABLE SIZE	COLOR CODE
CABINET (CB)	FLASHING BEACON (RRFB)	4/C*14	BLK, W, R, G
CABINET (CB)	VIDEO DETECTOR (V)	CAT 5e (VIDEO)	BR/W, BL, BL/W, BR, O/W, O, G/W, G
CABINET (CB)	VIDEO DETECTOR (V)	3/C*14 (POWER)	BLK, W, R
CABINET (CB)	DISCONNECT (SP)	3-1/C*10	BLK, W G (GRD)
CABINET (CB)	PUSH BUTTON	3/C*14	BLK, W, R
DISCONNECT (SP)	SERVICE CABINET	3-1/C*6	BLK, W, G (GRD)

ELECTRICAL WIRE 10 AWG, XLP (WHITE)		ELECTRICAL WIRE 10 AWG, XLP (GREEN)		BONDING JUMPERS	
FROM	TO	FROM	TO	FROM	TO
CB-1	SB-1	CB-1	SB-3	SB-1	PB-2
CB-1	SB-2	SB-3	SB-1	SB-2	PB-4
CB-1	SB-3	SB-1	LP-1	SB-3	PB-5
CB-1	SB-4	LP-1	SB-2	SB-4	PB-5
CB-1	SB-5	SB-1	SB-5	SB-5	PB-7
CB-1	LP-1	SB-3	SB-4	LP-1	PB-2

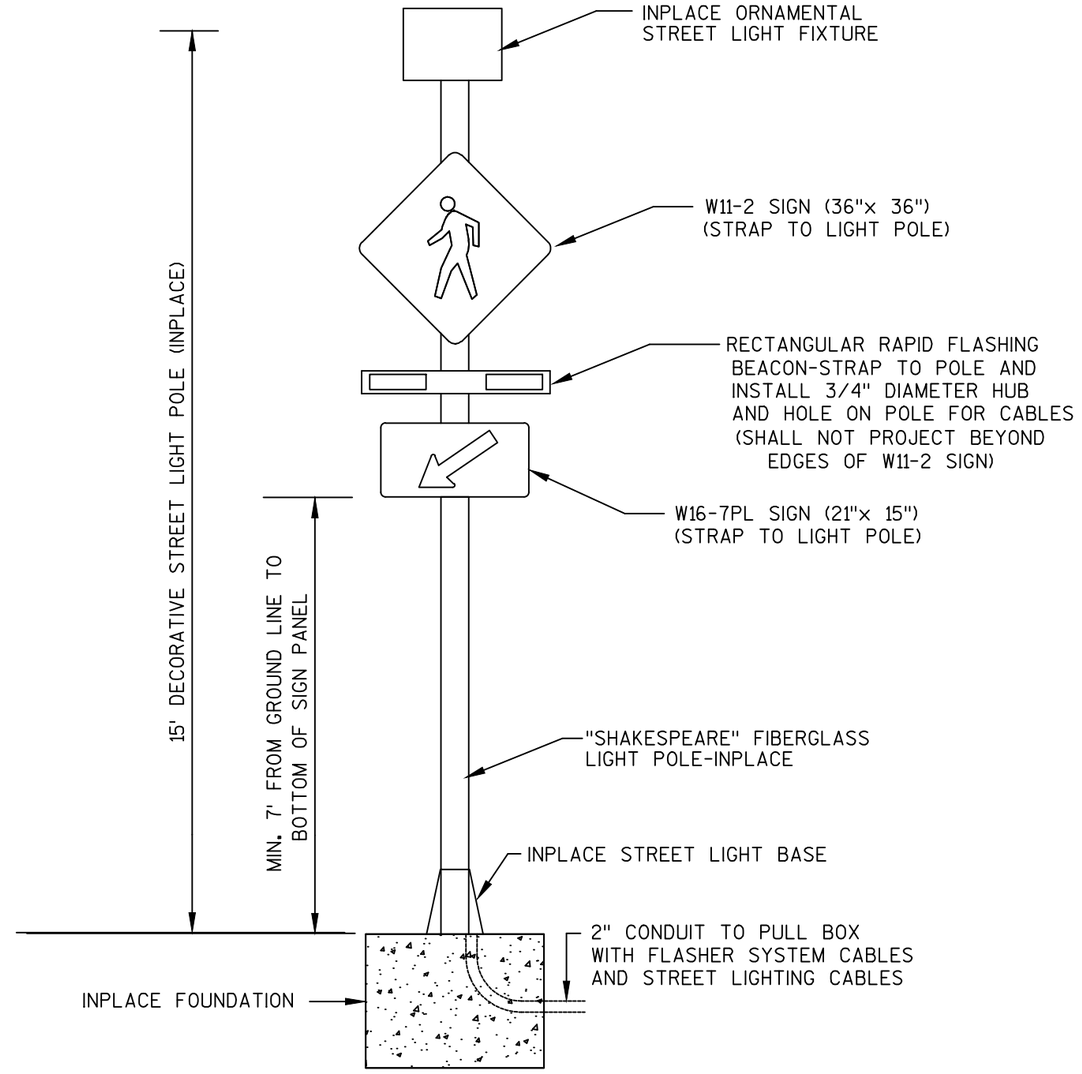
FLASHER POLE DETAILS
(SIGNAL BASE SB-1)

FRONT SIDE



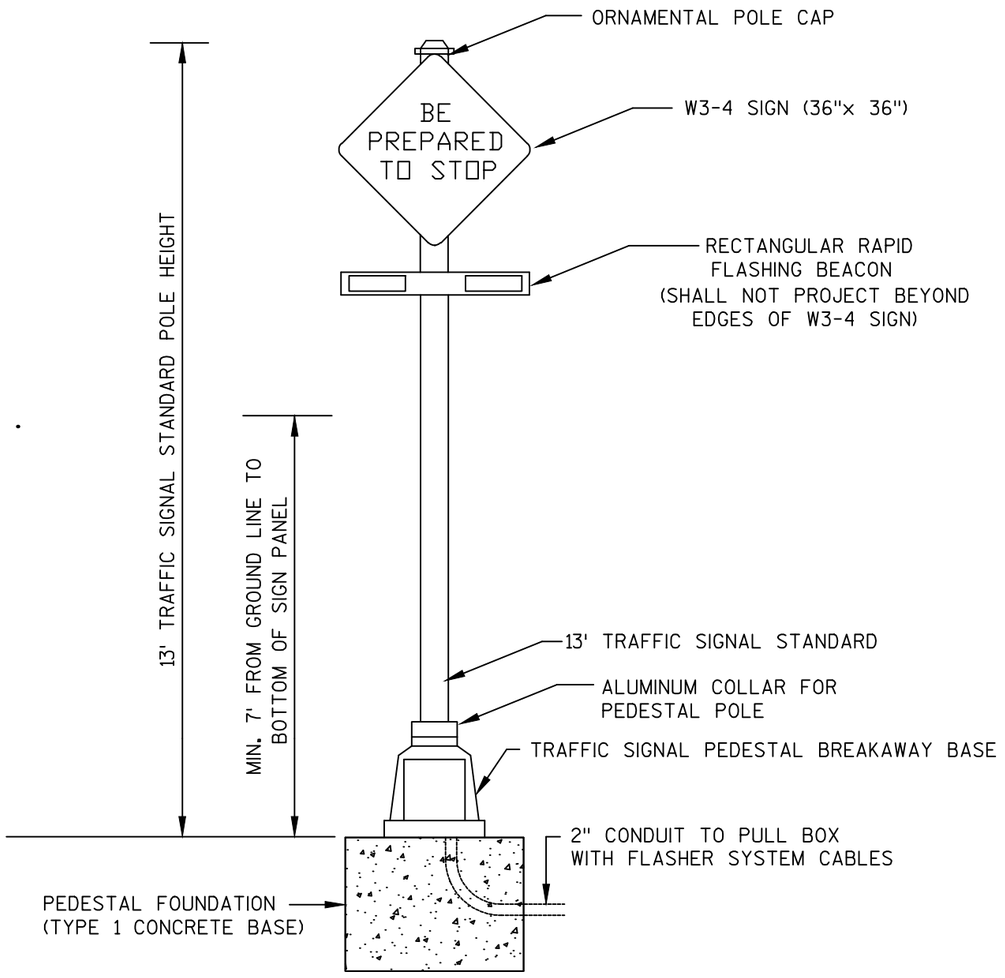
FLASHER POLE DETAILS
(LIGHT POLE LP-1)

FRONT SIDE



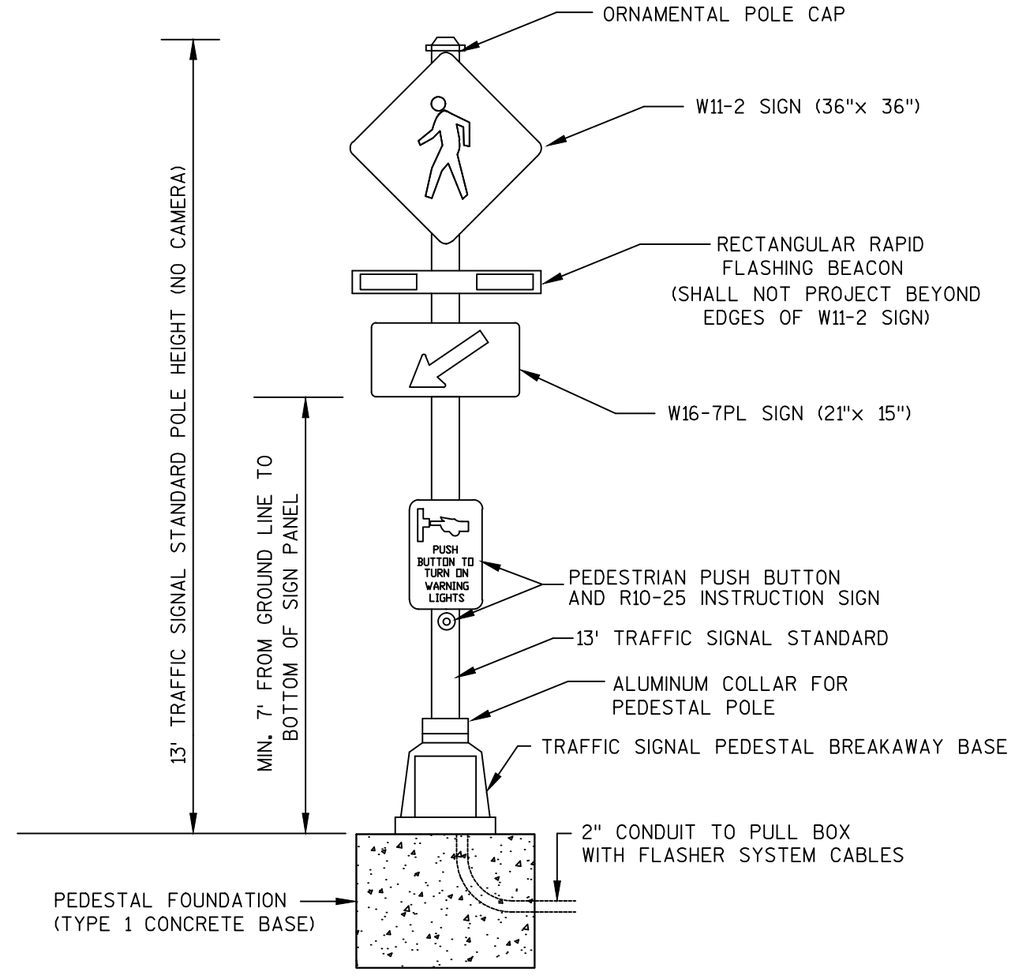
FLASHER POLE DETAILS
(SIGNAL BASES SB-2, SB-5)

FRONT SIDE



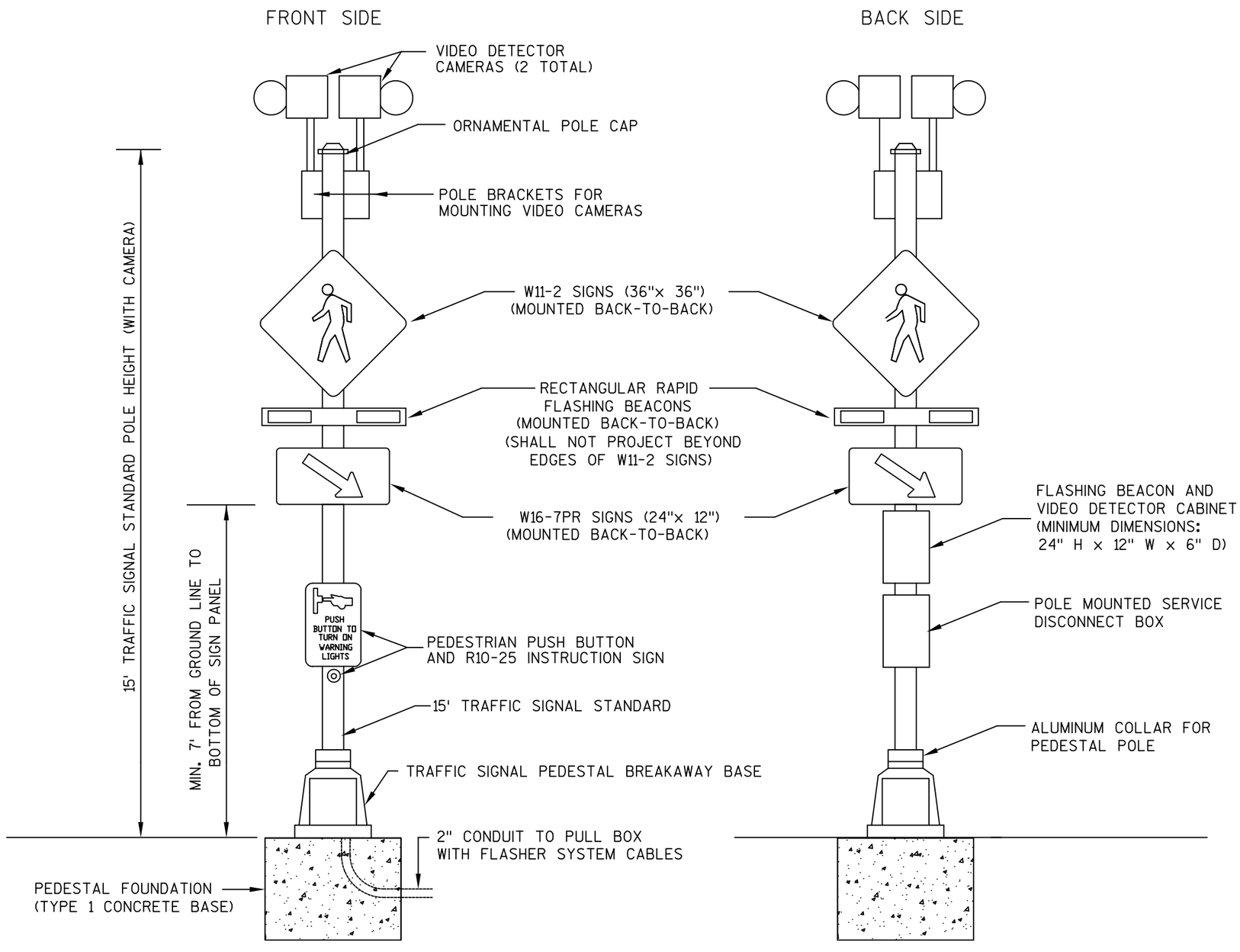
FLASHER POLE DETAILS
(SIGNAL BASE SB-4)

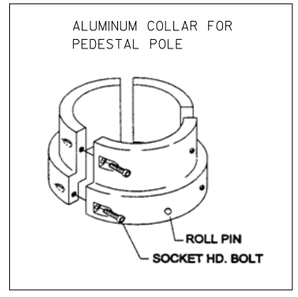
FRONT SIDE



2

FLASHER POLE DETAILS
(SIGNAL BASE SB-3)





PROJECT NO:1540-00-72	HWY: MAIN STREET	COUNTY: ST. CROIX	DETAILS	SHEET	E

2

TRAFFIC CONTROL NOTES:

TRAFFIC CONTROL SHOWN IS TYPICAL DETAIL AND SHALL BE USED AND MAINTAINED AT CROSSWALK LOCATION WHEN WORK IS ON GOING THAT WILL DISRUPT TRAFFIC AND PEDESTRIANS.

MAINTAIN 11-FOOT MINIMUM THROUGH LANE FOR TRAFFIC AT ALL TIMES EXCEPT AS NOTED BELOW (FOR LOOP DETECTOR INSTALLATION WORK).

FOR ALL BOULEVARD INSTALLATION WORK, CONSTRUCTION VEHICLES MAY BE PARKED ON BOULEVARD AND SIDEWALK AREAS TO EXPEDITE FLASHER SYSTEM INSTALLATION WORK.

FOR ALL MEDIAN WORK, DO NOT PARK CONSTRUCTION VEHICLES ON MEDIAN OR IN MAIN STREET THROUGH LANES (ACCEPTABLE FOR CONSTRUCTION VEHICLES TO BE TEMPORARILY PARKED DIRECTLY SOUTH OF RAISED MEDIAN AREA IN CENTER LEFT TURN LANE WHEN WORK IS ACTIVELY BEING COMPLETED ON MEDIAN AREA).

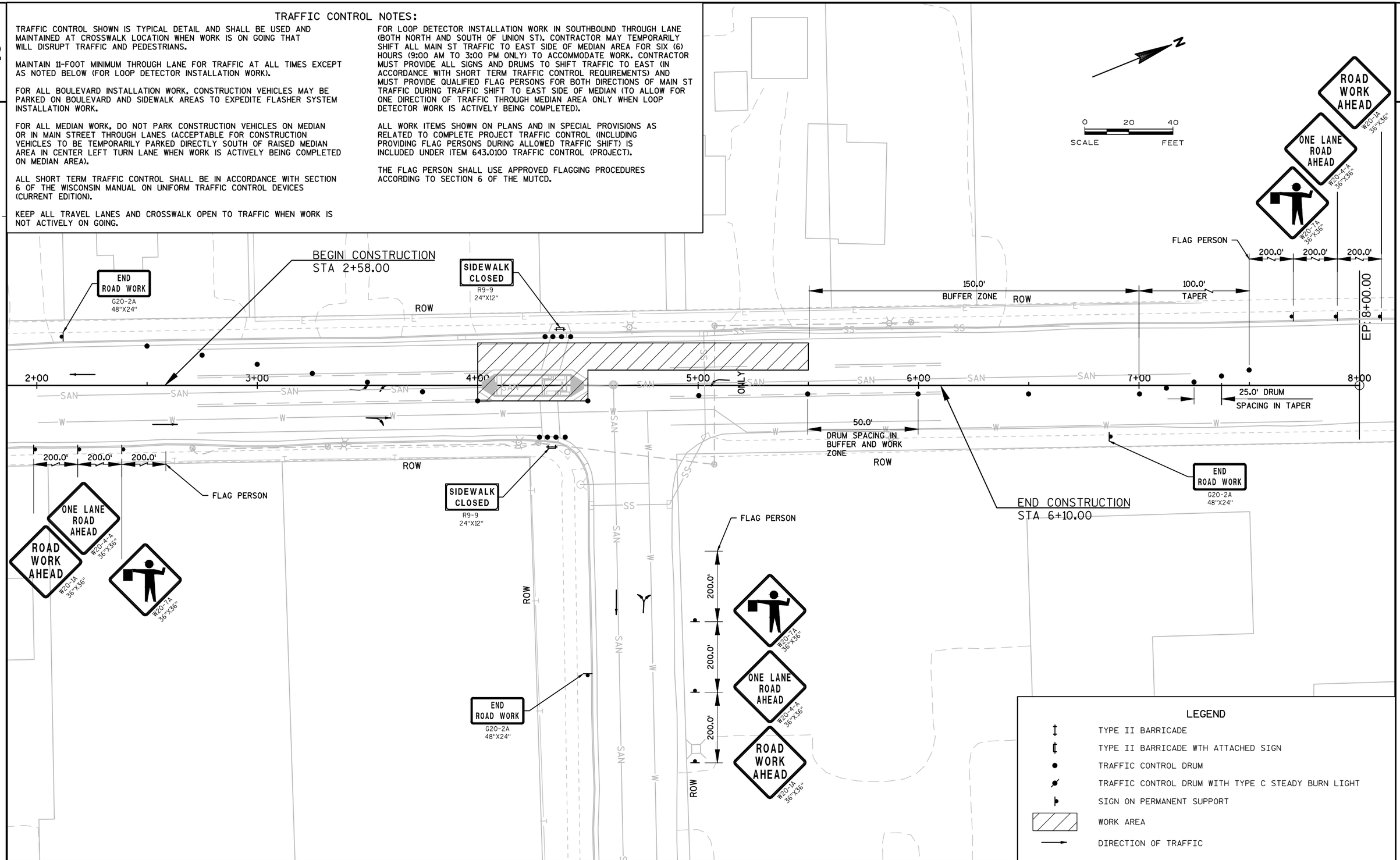
ALL SHORT TERM TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH SECTION 6 OF THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CURRENT EDITION).

KEEP ALL TRAVEL LANES AND CROSSWALK OPEN TO TRAFFIC WHEN WORK IS NOT ACTIVELY ON GOING.

FOR LOOP DETECTOR INSTALLATION WORK IN SOUTHBOUND THROUGH LANE (BOTH NORTH AND SOUTH OF UNION ST). CONTRACTOR MAY TEMPORARILY SHIFT ALL MAIN ST TRAFFIC TO EAST SIDE OF MEDIAN AREA FOR SIX (6) HOURS (9:00 AM TO 3:00 PM ONLY) TO ACCOMMODATE WORK. CONTRACTOR MUST PROVIDE ALL SIGNS AND DRUMS TO SHIFT TRAFFIC TO EAST (IN ACCORDANCE WITH SHORT TERM TRAFFIC CONTROL REQUIREMENTS) AND MUST PROVIDE QUALIFIED FLAG PERSONS FOR BOTH DIRECTIONS OF MAIN ST TRAFFIC DURING TRAFFIC SHIFT TO EAST SIDE OF MEDIAN (TO ALLOW FOR ONE DIRECTION OF TRAFFIC THROUGH MEDIAN AREA ONLY WHEN LOOP DETECTOR WORK IS ACTIVELY BEING COMPLETED).

ALL WORK ITEMS SHOWN ON PLANS AND IN SPECIAL PROVISIONS AS RELATED TO COMPLETE PROJECT TRAFFIC CONTROL (INCLUDING PROVIDING FLAG PERSONS DURING ALLOWED TRAFFIC SHIFT) IS INCLUDED UNDER ITEM 643.0100 TRAFFIC CONTROL (PROJECT).

THE FLAG PERSON SHALL USE APPROVED FLAGGING PROCEDURES ACCORDING TO SECTION 6 OF THE MUTCD.



PROJECT NO: 1540-00-72	HWY: MAIN STREET	COUNTY: ST. CROIX	TRAFFIC CONTROL	SHEET 6	E

DATE 16FEB15 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	1540-00-72 QUANTITY
0010	204.0155	Removing Concrete Sidewalk	SY	34.000	34.000
0020	213.0100	Finishing Roadway (project) 01. 1540-00-72	EACH	1.000	1.000
0030	602.0405	Concrete Sidewalk 4-Inch	SF	102.000	102.000
0040	619.1000	Mobilization	EACH	1.000	1.000
0050	637.2210	Signs Type II Reflective H	SF	20.250	20.250
0060	638.2102	Moving Signs Type II	EACH	8.000	8.000
0070	638.2602	Removing Signs Type II	EACH	4.000	4.000
0080	643.0100	Traffic Control (project) 01. 1540-00-72	EACH	1.000	1.000
0090	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	40.000	40.000
0100	652.0605	Conduit Special 2-Inch	LF	30.000	30.000
0110	652.0800	Conduit Loop Detector	LF	117.000	117.000
0120	652.0900	Loop Detector Slots	LF	107.000	107.000
0130	653.0135	Pull Boxes Steel 24x36-Inch	EACH	1.000	1.000
0140	654.0101	Concrete Bases Type 1	EACH	5.000	5.000
0150	655.0210	Cable Traffic Signal 3-14 AWG	LF	210.000	210.000
0160	655.0220	Cable Traffic Signal 4-14 AWG	LF	855.000	855.000
0170	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	1,735.000	1,735.000
0180	655.0525	Electrical Wire Traffic Signals 6 AWG	LF	495.000	495.000
0190	655.0700	Loop Detector Lead In Cable	LF	225.000	225.000
0200	655.0800	Loop Detector Wire	LF	566.000	566.000
0210	656.0200	Electrical Service Meter Breaker Pedestal (location) 01. Main Street & Union Street Intersection	LS	1.000	1.000
0220	656.0500	Electrical Service Breaker Disconnect Box (location) 01. Main Street & Union Street Intersection	LS	1.000	1.000
0230	657.0100	Pedestal Bases	EACH	5.000	5.000
0240	657.0405	Traffic Signal Standards Aluminum 3.5-FT	EACH	1.000	1.000
0250	657.0420	Traffic Signal Standards Aluminum 13-FT	EACH	3.000	3.000
0260	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	1.000	1.000
0270	658.0500	Pedestrian Push Buttons	EACH	3.000	3.000
0280	658.5069	Signal Mounting Hardware (location) 01. Main Street & Union Street Intersection	LS	1.000	1.000
0290	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	300.000	300.000
0300	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	1,200.000	1,200.000
0310	SPV.0060	Special 01. Video Detector Special	EACH	2.000	2.000
0320	SPV.0090	Special 01. Video Detector Cable Cat 5e Special	LF	30.000	30.000
0330	SPV.0105	Special 01. Rrfb System (Main Street / Union Street Crosswalk)	LS	1.000	1.000

3

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REMOVING CONCRETE SIDEWALK

LOCATION	204.0155 SY
MAIN STREET & UNION STREET INTERSECTION	34
ITEM TOTAL	34 **

(**) = INCLUDES 72 SF OF CONCRETE MEDIAN REMOVAL AND REPLACEMENT TO ACCOMMODATE PULL BOX AND FLASHER POLE INSTALLATION, AND 30 SF OF SIDEWALK REMOVAL AND REPLACEMENT TO ACCOMMODATE SB-1 INSTALLATION.

FINISHING ROADWAY (PROJECT)

LOCATION	213.0100 EACH
MAIN STREET & UNION STREET INTERSECTION	1
ITEM TOTAL	1

CONCRETE SIDEWALK 4-INCH

LOCATION	602.0405 SF
MAIN STREET & UNION STREET INTERSECTION	102
ITEM TOTAL	102 **

(**) = INCLUDES 72 SF OF CONCRETE MEDIAN REMOVAL AND REPLACEMENT TO ACCOMMODATE PULL BOX AND FLASHER POLE INSTALLATION, AND 30 SF OF SIDEWALK REMOVAL AND REPLACEMENT TO ACCOMMODATE SB-1 INSTALLATION.

MOBILIZATION

LOCATION	619.1000 EACH
MAIN STREET & UNION STREET INTERSECTION	1
ITEM TOTAL	1

FLASHER SYSTEM PEDESTAL MOUNTED SIGNING (TYPE II SIGNS)

SIGNS TYPE II REFLECTIVE H

MUTCD CODE	PANEL LEGEND	NO. REQ.	SIZE (IN)	AREA PER SIGN (SF)	637.2210 TOTAL AREA (SF)	POLE NO.
R10-25	PUSH BUTTON TO TURN ON WARNING LIGHTS	3	9x12	0.75	2.25	SB-1,3,4
W3-4	BE PREPARED TO STOP	2	36x36	9.00	18.00	SB-2,5
ITEM TOTAL					20.25	

REMOVING SIGNS TYPE II

PLAN CODE	MUTCD CODE	PANEL LEGEND	638.2602 EACH	SIZE (IN)	SIGN MOUNTING
C-1	-	STOP FOR PEDESTRIAN IN CROSSWALK	2	18x24	
C-3	W11-2	PEDESTRIAN XING	2	36x36	WOOD POST
ITEM TOTAL			4		

MOVING SIGNS TYPE II

PLAN CODE	MUTCD CODE	PANEL LEGEND	638.2102 EACH	SIZE (IN)	POLE NO.
C-1, C-2	W11-2	PEDESTRIAN XING	4	36x36	SB-3,3,4 AND LP-1
C-1	W16-7PL	DOWN ARROW (LEFT)	2	21x15	SB-4 AND LP-1
C-2	W16-7PR	DOWN ARROW (RIGHT)	2	24x12	SB-3,3
ITEM TOTAL			8		

NOTES:

1) CORNERS EXTENDING BEYOND THE BORDER SHALL NOT BE TRIMMED.
2) ALL NEW SIGNS SHALL BE FABRICATED USING TYPE H SHEETING.
3) FURNISHING AND INSTALLING NEW SIGN MOUNTING HARDWARE SHALL BE CONSIDERED INCIDENTAL TO SIGNS TYPE II REFLECTIVE H AND MOVING SIGNS TYPE II.
4) SIGN POSTS AND SIGN POST MOUNTING HARDWARE SHALL BE REMOVED AND SALVAGED TO THE CITY OF RIVER FALLS BY THE CONTRACTOR AS NOTED (INCIDENTAL TO "REMOVING SIGNS TYPE II").

TRAFFIC CONTROL (PROJECT)

LOCATION	643.0100 EACH
MAIN STREET & UNION STREET INTERSECTION	1
ITEM TOTAL	1

CONDUIT RIGID NONMETALLIC, SCHEDULE 40, 2-INCH

FROM	TO	652.0225 LF	652.0605 CONDUIT SPECIAL 2-INCH LF
PB-2	SB-1	10	
PB-4	SB-2	10	
PB-5	SB-3	10	
PB-5	SB-4		30
PB-7	SB-5	10	
ITEM TOTALS		40	30

NOTE: CONDUIT SPECIAL 2-INCH DENOTES CONDUIT TO BE DIRECTIONALLY BORED UNDER EXISTING ROADWAY (NO OPEN TRENCHING OF ROADWAY ALLOWED).

PULL BOXES

NUMBER	STATION	LOCATION	653.0135 STEEL 24x36-INCH EACH
PB-1	INPLACE	-	
PB-2	INPLACE	-	
PB-3	INPLACE	-	
PB-4	INPLACE	-	
PB-5	4+21	MEDIAN	1
PB-6	INPLACE	-	
PB-7	INPLACE	-	
ITEM TOTAL			1

LOCATION OF NEW PULL BOX SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER PRIOR TO INSTALLATION BY CONTRACTOR.

COMPONENTS OF RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEMS

FOR INFORMATION PURPOSES ONLY

FLASHER BASE NO.	RRFB SYSTEM	FLASHING BEACON (RRFB) EACH	CONTROLLER CABINET EACH
LP-1	MAIN STREET & UNION STREET CROSSWALK	1	
SB-2		1	
SB-3		1	1
SB-3		1	
SB-4		1	
SB-5		1	
ITEM TOTALS		6	1

NOTE: COMPONENTS LISTED ABOVE ARE INCLUDED AS PART OF THE PAY ITEM FOR THE INDIVIDUAL RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEM AND WILL NOT BE MEASURED AND PAID FOR SEPARATELY.

LOOP DETECTOR

LOOP NUMBER	LOCATION	SIZE FOOT	TURNS EACH	652.0800 CONDUIT LOOP DETECTOR CONDUIT LF	652.0900 LOOP DETECTOR SLOTS LF	655.0700 LOOP DETECTOR LEAD IN CABLE LF	655.0800 LOOP DETECTOR WIRE LF
11	30' NORTH	6' x 20'	4	72	67	205	368
12	30' SOUTH	6' x 6'	3	45	40	20	198
ITEM TOTALS				117	107	225	566

ALL LOOP DETECTORS SHALL BE CENTERED IN CORRESPONDING LANE.

LOCATION = DISTANCE FROM NORTH SIDE OF CROSSWALK TO FRONT OF LOOP DETECTOR.

CABLE AND WIRING

FROM	TO	655.0210 CABLE TRAFFIC SIGNAL 3-14 AWG LF	655.0220 CABLE TRAFFIC SIGNAL 4-14 AWG LF	655.0525 ELECTRICAL WIRE, TRAFFIC SIGNALS 6 AWG LF	655.0515* ELECTRICAL WIRE, TRAFFIC SIGNALS 10 AWG LF	SPV.0090.01 VIDEO DETECTOR CABLE CAT 5e SPECIAL LF
CB-1	R2		10			
CB-1	R3		10			
CB-1	V1	15				15
CB-1	V2	15				15
CB-1	BUTTON	10				
CB-1	SP-1				15	
SP-1	PB-5			90		
CB-1	PB-5	60	120			
PB-5	SB-4	40	40			
SB-4	R4		15			
SB-4	BUTTON	10				
PB-5	PB-2	35	105	105		
PB-2	SB-1	15				
SB-1	BUTTON	10				
PB-2	LP-1		20			
LP-1	R1		15			
PB-2	PB-3		100			
PB-3	PB-4		85			
PB-4	SB-2		25			
SB-2	R5		15			
PB-2	PB-1		80	240		
PB-1	SERVICE "A"			60		
PB-1	PB-6		70			
PB-6	PB-7		105			
PB-7	SB-5		25			
SB-5	R6		15			
ITEM TOTALS		210	855	495	15	30

CABLE AND WIRING (CONT)

		655.0515* ELECTRICAL WIRE, TRAFFIC SIGNALS 10 AWG LF
NEUTRAL (WHITE)		
CB-1	SB-1	80
CB-1	SB-2	275
CB-1	SB-3	10
CB-1	SB-4	70
CB-1	SB-5	345
CB-1	LP-1	95
ITEM TOTALS		875

		655.0515* ELECTRICAL WIRE, TRAFFIC SIGNALS 10 AWG LF
NEUTRAL (GREEN)		
CB-1	SB-3	10
SB-3	SB-1	70
SB-1	LP-1	30
LP-1	SB-2	230
SB-1	SB-5	300
SB-3	SB-4	60
		700

		655.0515* ELECTRICAL WIRE, TRAFFIC SIGNALS 10 AWG LF
BONDING JUMPERS		
SB-1	PB-2	15
SB-2	PB-4	25
SB-3	PB-5	15
SB-4	PB-5	45
SB-5	PB-7	25
LP-1	PB-2	20
		145

(*) ITEM SHOWN ELSEWHERE IN PLAN

TRAFFIC SIGNAL

FLASHER BASE NO.	654.0101 CONCRETE BASES TYPE 1 EACH	656.0500 ELECTRICAL SERVICE BREAKER DISCONNECT BOX L.S.	657.0100 PEDESTAL BASES EACH	657.0405 STANDARDS ALUMINUM 3.5-FOOT EACH	657.0420 STANDARDS ALUMINUM 13-FOOT EACH	657.0425 STANDARDS ALUMINUM 15-FOOT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	SPV.0060.01 VIDEO DETECTOR SPECIAL EACH
SB-1	1		1	1			1	
SB-2	1		1		1			
SB-3	1	1	1			1	1	2
SB-4	1		1		1		1	
SB-5	1		1		1			
ITEM TOTALS	5	1	5	1	3	1	3	2

ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION)

LOCATION	656.0200 L.S.
MAIN STREET & UNION STREET INTERSECTION	1
ITEM TOTAL	1

ELECTRICAL SERVICE EQUIPMENT SHALL BE SET UP AND PROVIDED TO ACCEPT AVAILABLE 120/240 SINGLE PHASE SERVICE FROM THE CITY OF RIVER FALLS (RFMU). USE EXISTING METER BREAKER PEDESTAL AND EXISTING CABINET ON NE QUADRANT OF INTERSECTION FOR POWER CONNECTION.

SIGNAL MOUNTING HARDWARE (LOCATION)

LOCATION	658.5069 L.S.
MAIN STREET & UNION STREET INTERSECTION	1
ITEM TOTAL	1

RRFB SYSTEM (MAIN STREET/UNION STREET CROSSWALK)

LOCATION	SPV.0105.01 L.S.
MAIN STREET & UNION STREET CROSSWALK	1
ITEM TOTAL	1

LEGEND OF SYMBOLS

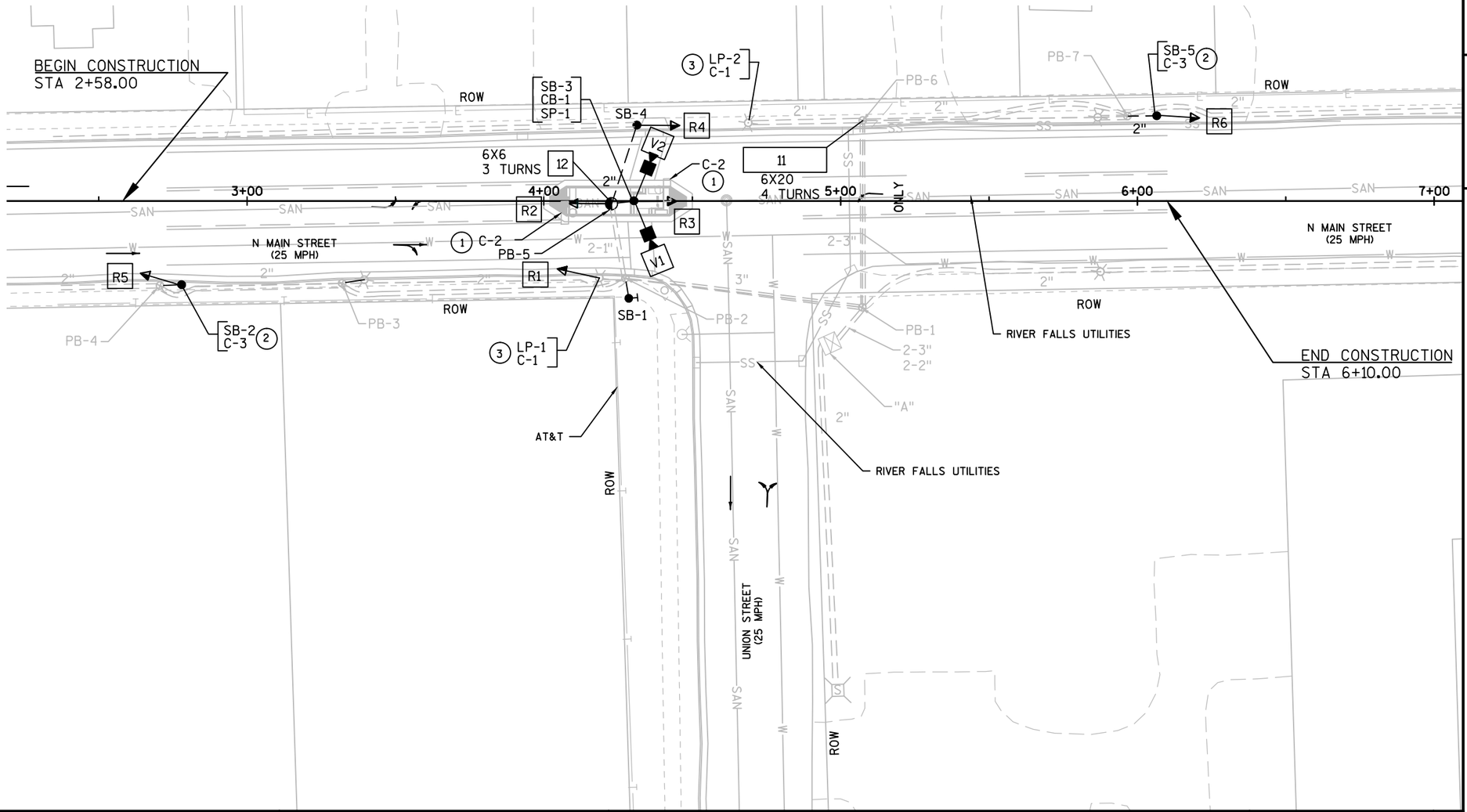
- PROPOSED NON-METALLIC ELECTRICAL CONDUIT (2" UNLESS OTHERWISE NOTED)
- EXISTING NON-METALLIC ELECTRICAL CONDUIT (2" UNLESS OTHERWISE NOTED)
- PB-1 — EXISTING FLASHER SYSTEM PULL BOX
- PB-5 — PROPOSED PULL BOX STEEL 24" X 36"
- RECTANGULAR RAPID FLASHING BEACON-PEDESTAL MOUNT (ON TYPE 1 CONCRETE BASE)
- VIDEO SENSOR-PEDESTAL MOUNT (MOUNTED NEAR TOP OF PEDESTAL POLE-FACING ADJACENT CROSSWALK)
- CB-1 — CAMERA/FLASHING BEACON CABINET-PEDESTAL MOUNT
- PEDESTRIAN PUSH BUTTON AND SIGN (SEE DETAIL)
- SP-1 — SERVICE DISCONNECT-PEDESTAL MOUNT
- V1 — VIDEO SENSOR NUMBER
- R1 — RECTANGULAR RAPID FLASHING BEACON NUMBER
- EXISTING SERVICE CABINET A (120/240 VOLT METERED)-ON EXISTING FOUNDATION
- S — INPLACE GROUND MOUNTED TRANSFORMER (FOR SERVICE)
- EXISTING SIGN PANEL AND POST
- EXISTING LUMINAIRE AND POLE
- 12 — PROPOSED LOOP DETECTOR IN 1" P.V.C. CONDUIT (SIZE AND NUMBER OF TURNS AS SHOWN)

NOTES:

1) SERVICE CABINET, SOURCE OF POWER, AND SERVICE CABLES AND CONDUIT FROM SERVICE CABINET "A" TO GROUND MOUNTED TRANSFORMER ARE INPLACE AND SHALL BE MAINTAINED INPLACE.
2) FURNISH AND INSTALL ONE-2" PVC CONDUIT FROM EACH PEDESTAL POLE BASE TO THE ADJACENT PULL BOX.
3) ARROWS SHOWN ARE FOR LANE DESIGNATION AND ARE FOR INFORMATIONAL PURPOSES ONLY.
4) CONTRACTOR SHALL TAKE CARE TO NOT DISTURB DECORATIVE SIDEWALK AND LANDSCAPING DURING ALL FLASHER SYSTEM WORK, AND SHALL RESTORE ALL DISTURBED ITEMS TO THE SATISFACTION OF THE ENGINEER, ALL AT NO EXPENSE TO THE OWNER.
5) CONTRACTOR SHALL SALVAGE AND INSTALL INPLACE SIGNS, REMOVE AND SALVAGE CORRESPONDING SIGN POSTS AND MOUNTING HARDWARE, AND SHALL FURNISH AND INSTALL NEW PEDESTAL POLE MOUNTED SIGNS AS SHOWN ELSEWHERE IN THESE PLANS.
6) CONTRACTOR SHALL COORDINATED DIRECTLY WITH SUPPLIER OF VIDEO DETECTOR UNITS AND PEDESTAL MOUNTED CABINET IN ORDER TO PROGRAM, AIM, AND MAKE EACH VIDEO DETECTOR AND FLASHER SYSTEM OPERATIONAL TO THE SATISFACTION OF THE ENGINEER.
7) SEE DETAILS FOR FURTHER INFORMATION REGARDING PEDESTAL POLE MOUNTED FLASHER SYSTEM COMPONENTS TO BE FURNISHED, INSTALLED, AND MADE OPERATIONAL BY THE CONTRACTOR.
8) THE MAIN SERVICE CABINET FOR THE SOURCE OF POWER CONNECTION FOR THE FLASHER SYSTEM IS LOCATED ON THE NORTHEAST QUADRANT OF THE INTERSECTION (INPLACE 120/240 VOLT METERED CABINET). POWER FROM A NEARBY INPLACE GROUND MOUNTED TRANSFORMER TO THE INPLACE SERVICE CABINET IS INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, LABELING, AND MAKING OPERATIONAL A SEPARATE 30A/2P CIRCUIT BREAKER FOR THE COMPLETE INTERSECTION FLASHER SYSTEM INSTALLATION IN THE EXISTING SERVICE CABINET "A". POWER CABLES FROM INPLACE SERVICE CABINET "A" TO THE INTERSECTION FLASHER SYSTEM PEDESTAL POLE MOUNTED DISCONNECT SHALL BE FURNISHED, INSTALLED AND MADE OPERATIONAL BY THE CONTRACTOR.
9) ALL RESTORATION TO BOULEVARDS AND SIDEWALK DISTURBED BY WORK BY THE CONTRACTOR IN ORDER TO INSTALL AND MAKE THE COMPLETE FLASHER SYSTEM OPERATIONAL IS INCIDENTAL TO THE COMPLETE PROJECT.

N

0 20 40
SCALE FEET

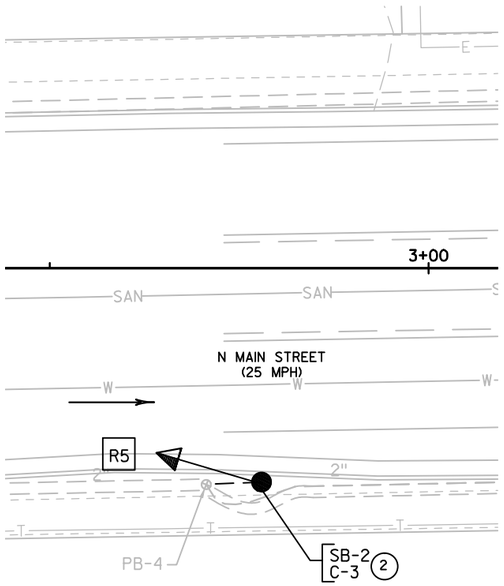


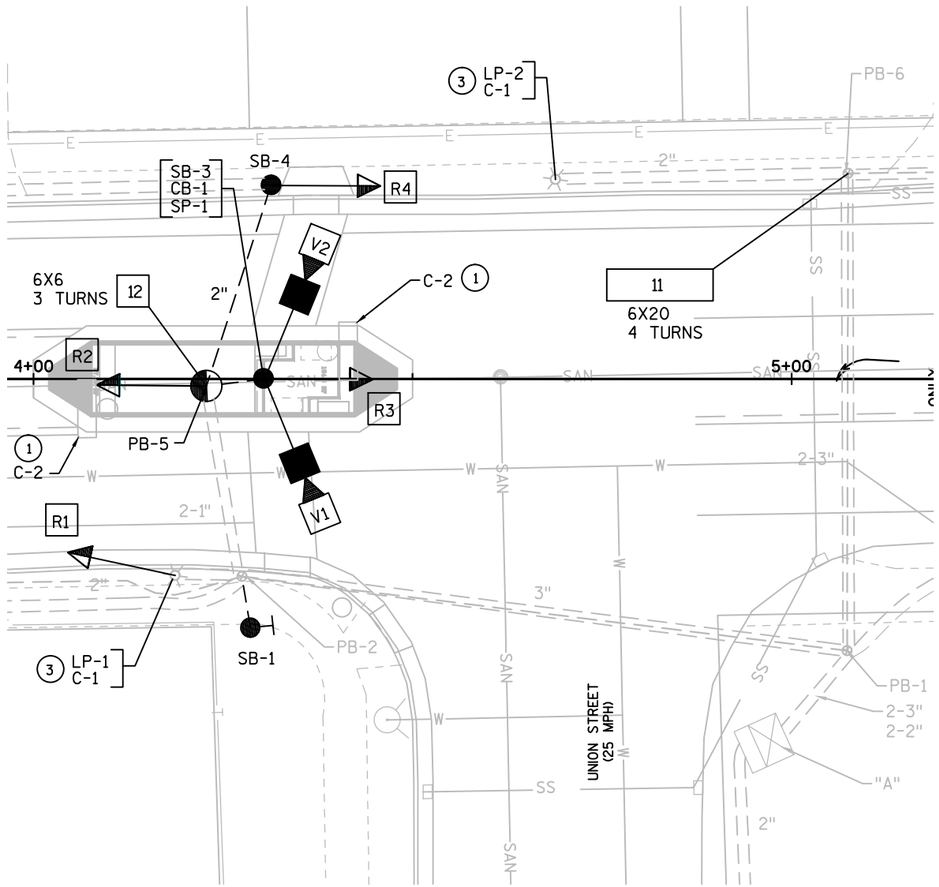
SIGNING NOTES:

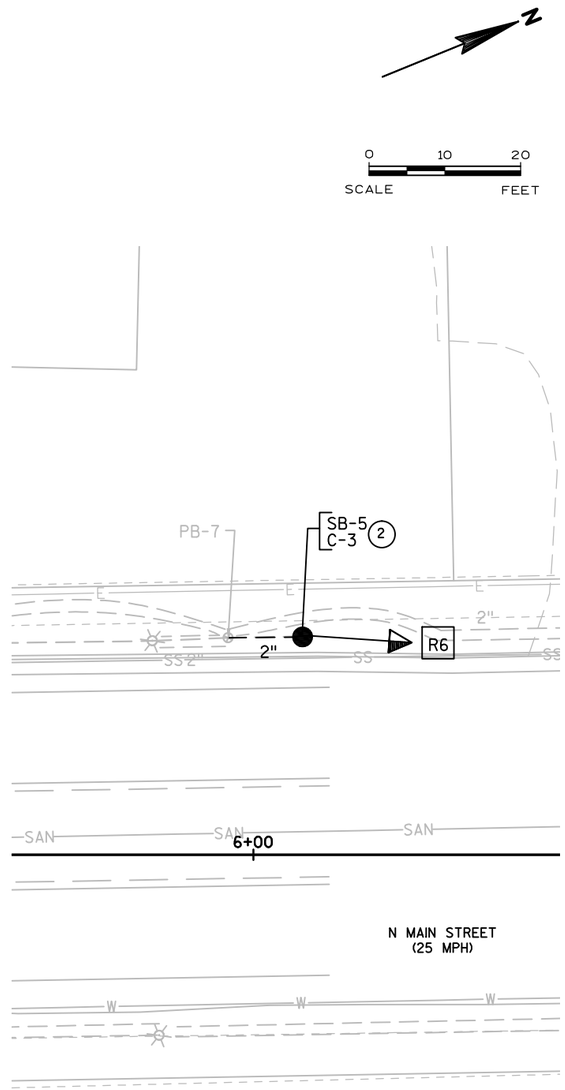
1. SALVAGE INPLACE SIGN PANELS AND REINSTALL ON ADJACENT FLASHER PEDESTAL POLE (SALVAGE INPLACE SIGN POST AND MOUNTING HARDWARE TO CITY OF RIVER FALLS).
2. SALVAGE INPLACE SIGN PANEL TO CITY OF RIVER FALLS (REMOVE INPLACE WOOD POST AND MOUNTING HARDWARE INCLUDING FLASHER EQUIPMENT).
3. SALVAGE INPLACE SIGN PANELS AND REINSTALL W11-2 AND W16-7P SIGNS ON ADJACENT FLASHER PEDESTAL POLE OR ON INPLACE STREET LIGHT POLE (SALVAGE UNUSED SIGNS AND MOUNTING HARDWARE TO CITY OF RIVER FALLS).

C-1, C-2, C-3 — SEE REMOVING SIGNS TYPE II AND MOVING SIGN TYPE II SIGNING CHARTS REGARDING INPLACE SIGNS LOCATED AT SPECIFIC LOCATION

PROJECT NO:1540-00-72	HWY: MAIN STREET	COUNTY: ST. CROIX	FLASHER SYSTEM PLAN - MAIN ST AT UNION ST	SHEET 10	E







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PROJECT NO:1540-00-72	HWY: MAIN STREET	COUNTY: ST. CROIX	FLASHER SYSTEM ENLARGED INTERSECTION LAYOUT	SHEET 11	E

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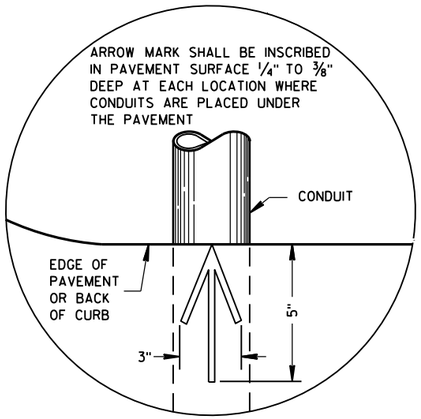
LAYOUT NAME - 050202 PN - 02011
PLOT DATE : 11/3/2014 9:52 AM PLOT BY : ANNIE JEROME PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

Standard Detail Drawing List

09B02-08	CONDUIT UNDER PAVED HIGHWAYS
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09E07-05	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09F13-04	LOOP DETECTOR INSTALLED IN EXISTING ASPHALTIC PAVEMENT

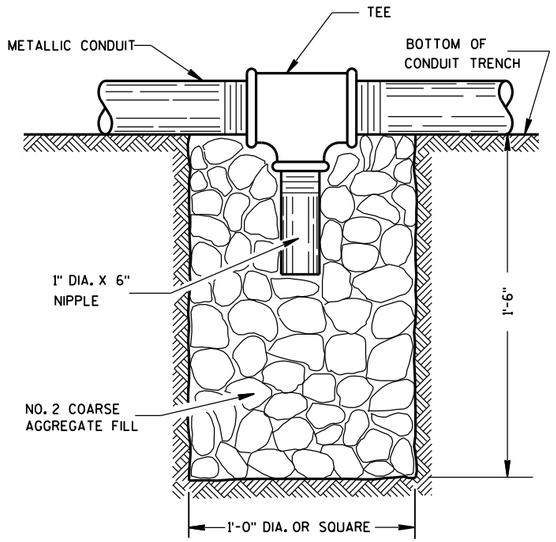
6

6



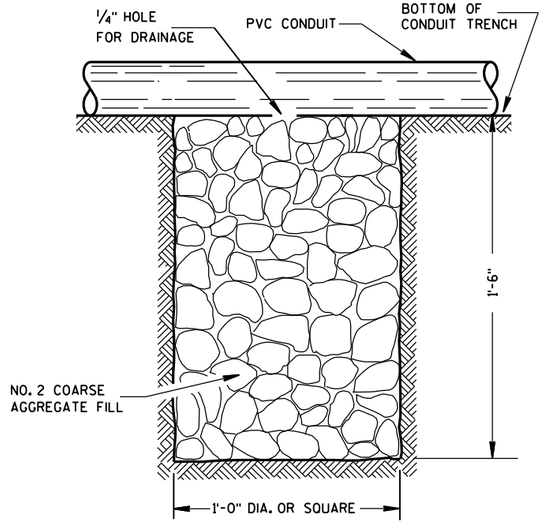
PLAN VIEW

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.

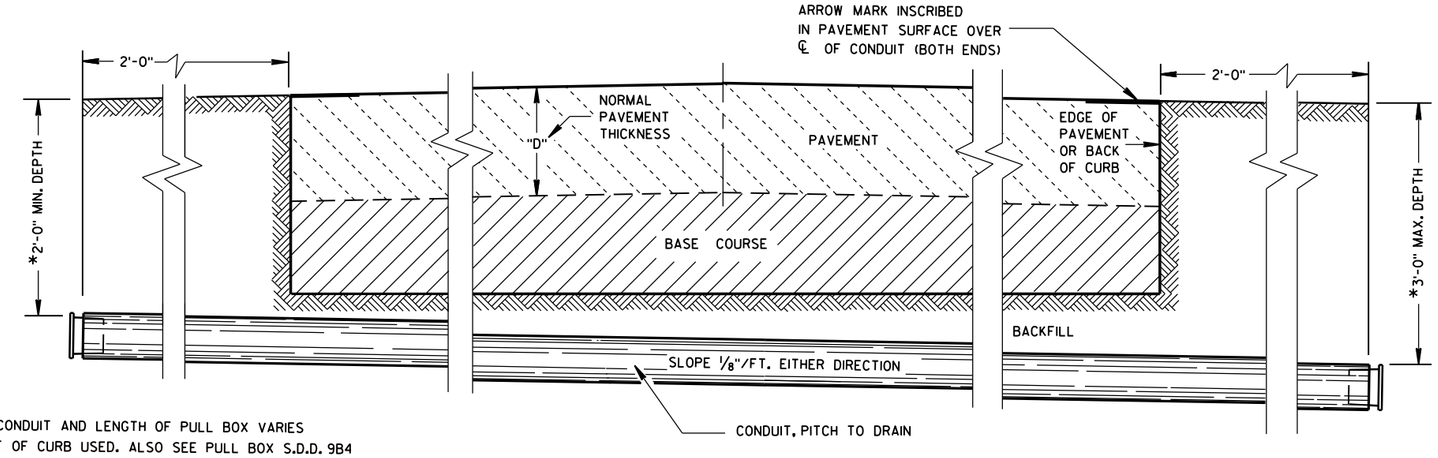
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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 UNDER PAVED HIGHWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2014 — DATE

/S/ Ahmet Demirbilek — STATE ELECTRICAL

FHWA

6

S.D.D. 9 B 2-8

6

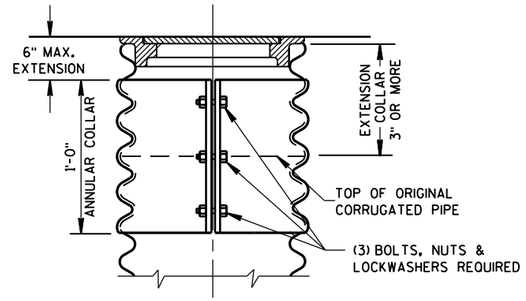
S.D.D. 9 B 2-8

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

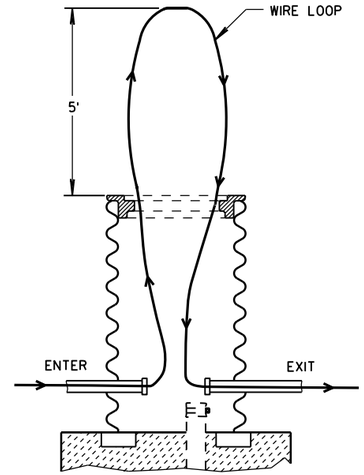
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	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.

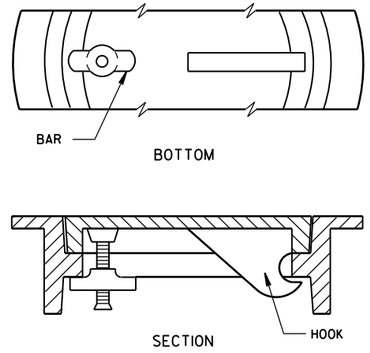
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

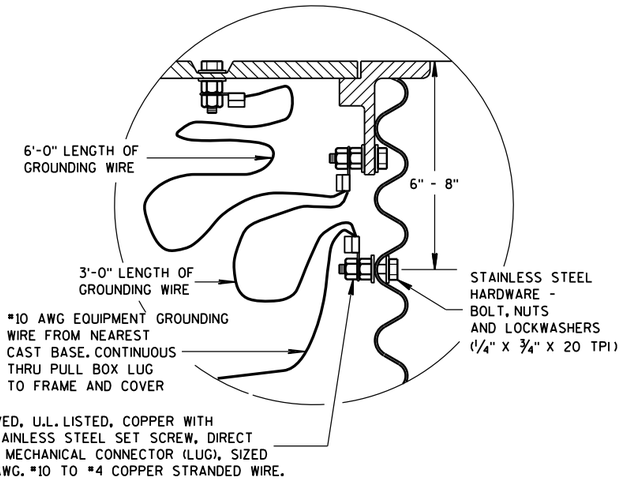


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

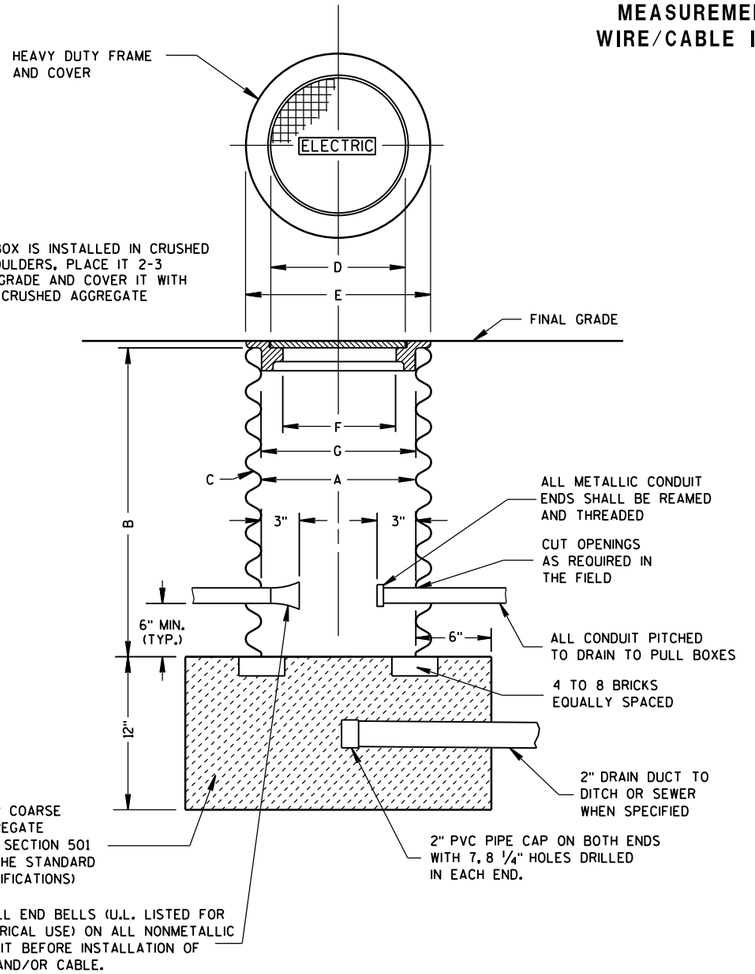


ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

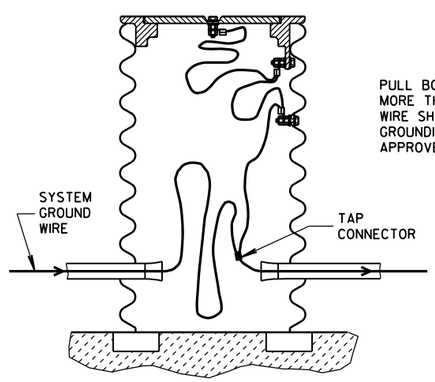
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

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

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

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

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



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

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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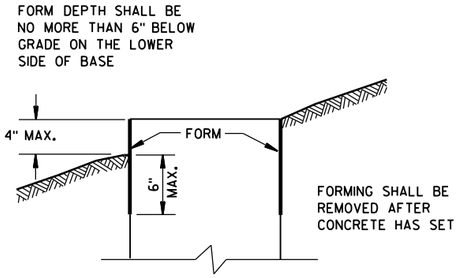
S.D.D. 9 B 4-11



FORMING DETAIL

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

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

CONDUIT SIZES AND LOCATIONS SHALL BE 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 1, TYPE 2, TYPE 5, AND TYPE 6 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 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "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.

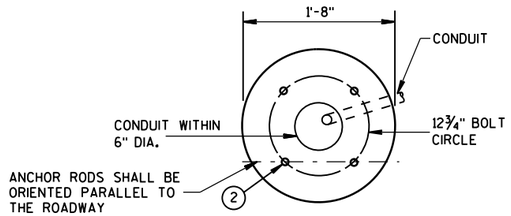
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

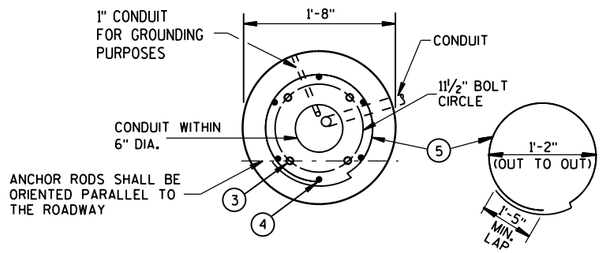
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

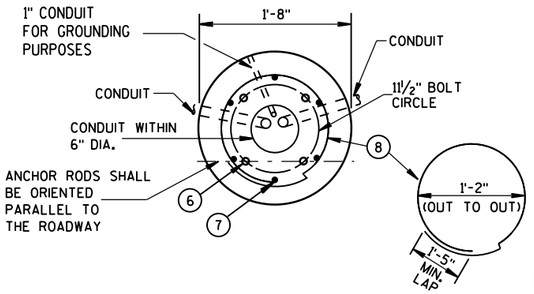
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

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

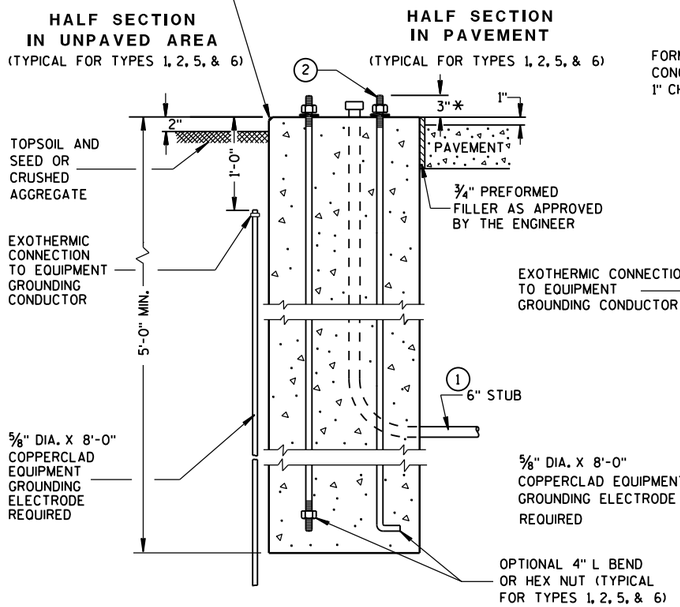
(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.



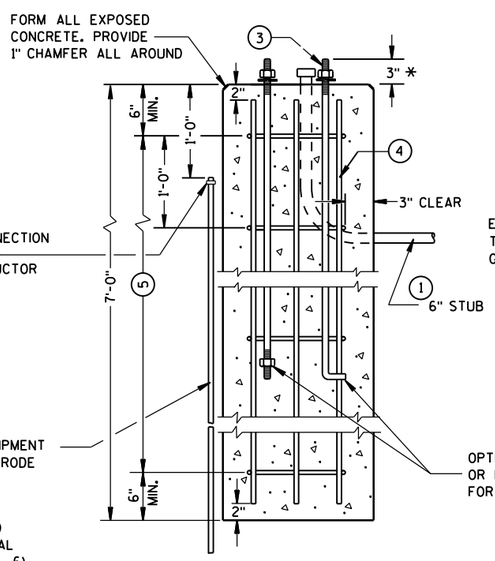




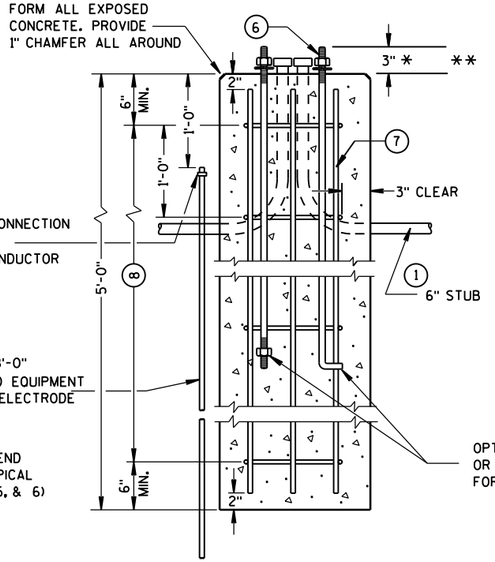
HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5, & 6)



HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5, & 6)



TYPE 2



TYPE 5 & 6

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, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 9 C 2-7

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

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

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

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

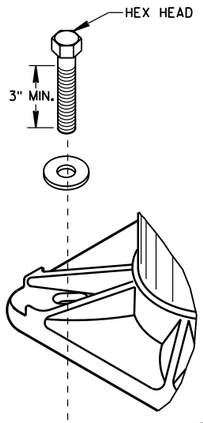
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

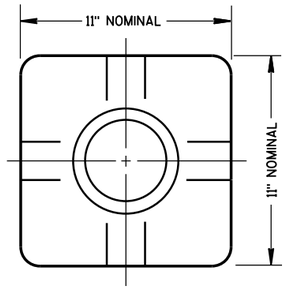
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

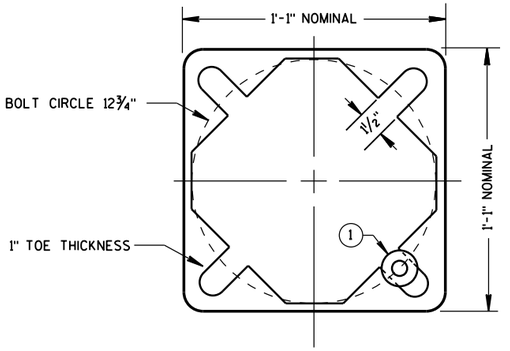
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

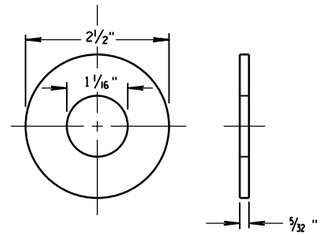




TOP VIEW
(PEDESTAL BASE)

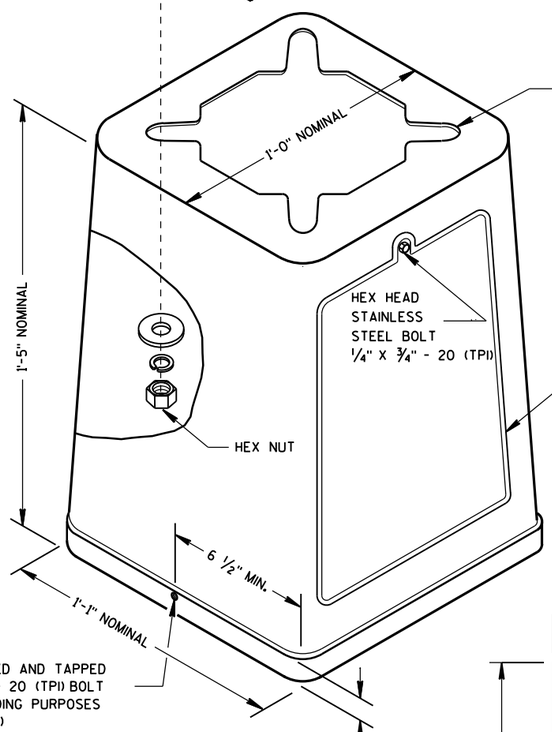


BOTTOM VIEW
(PEDESTAL BASE)

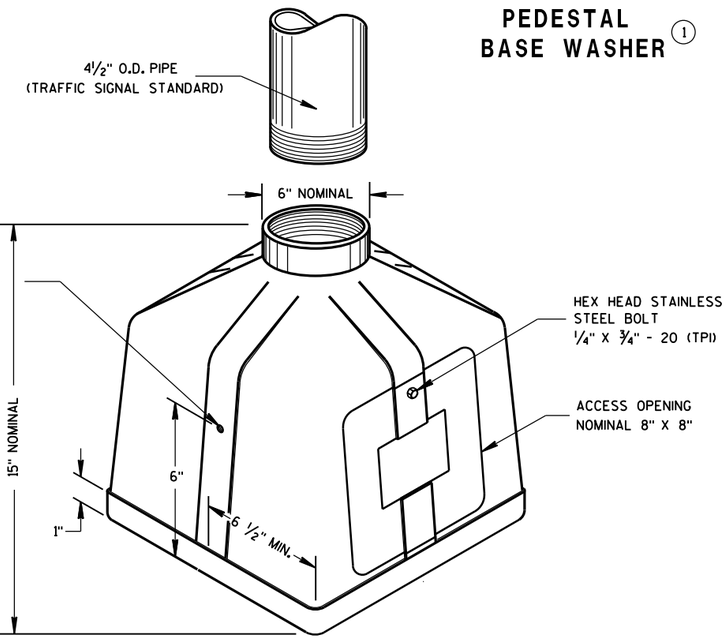


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

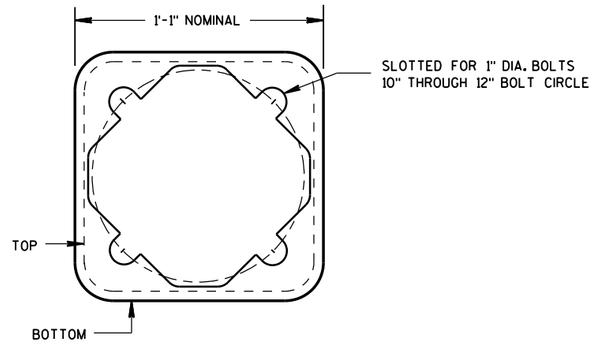


ISOMETRIC VIEW

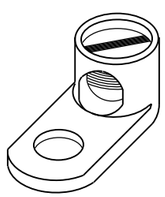


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

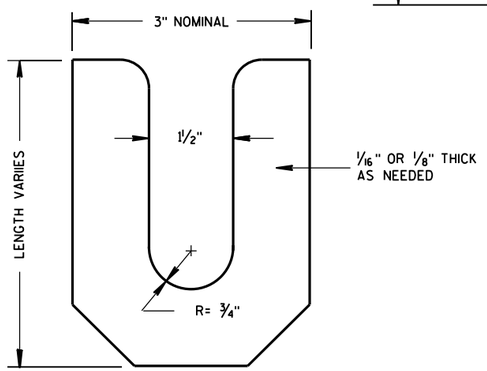


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

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



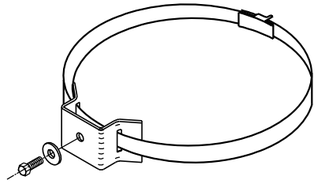
LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

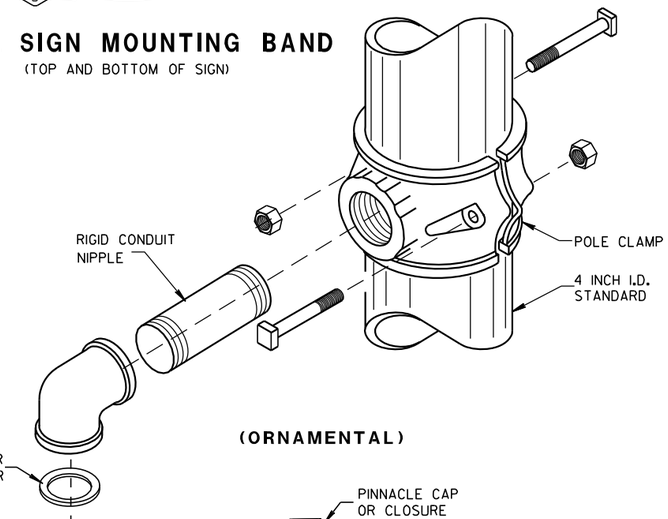
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

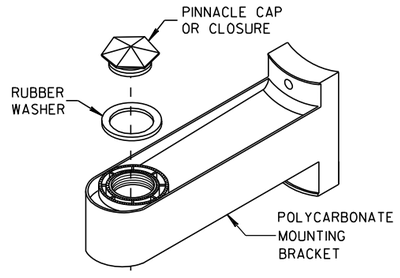
6
S.D.D. 9 C 3-4



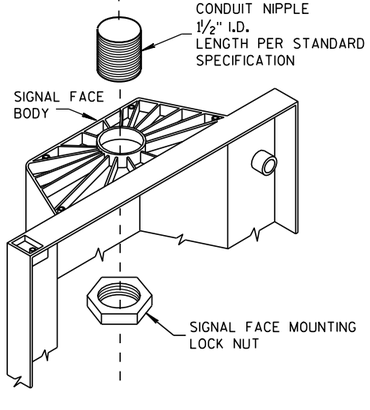
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



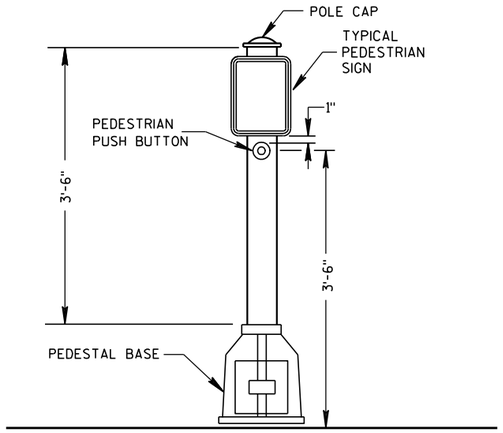
(ORNAMENTAL)



(BANDED)



SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

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

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

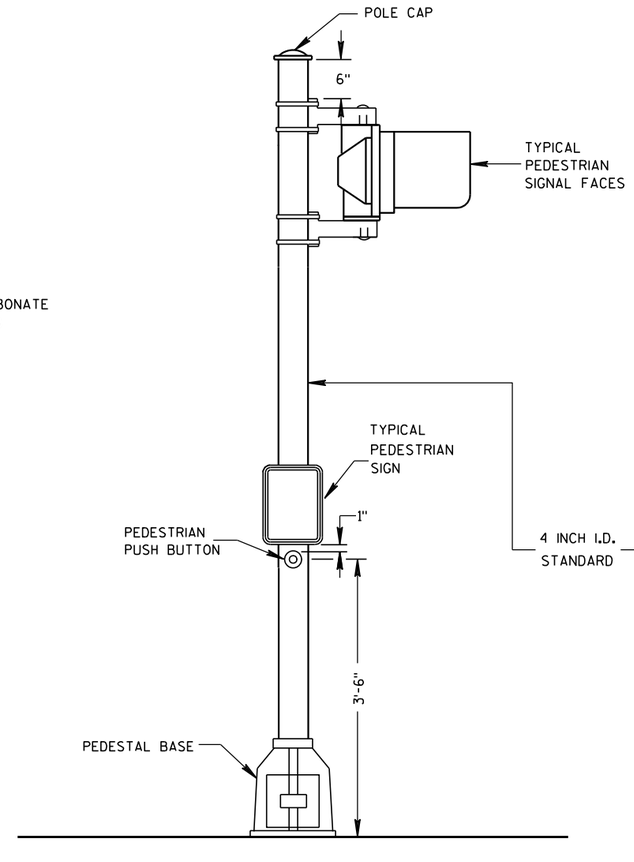
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

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

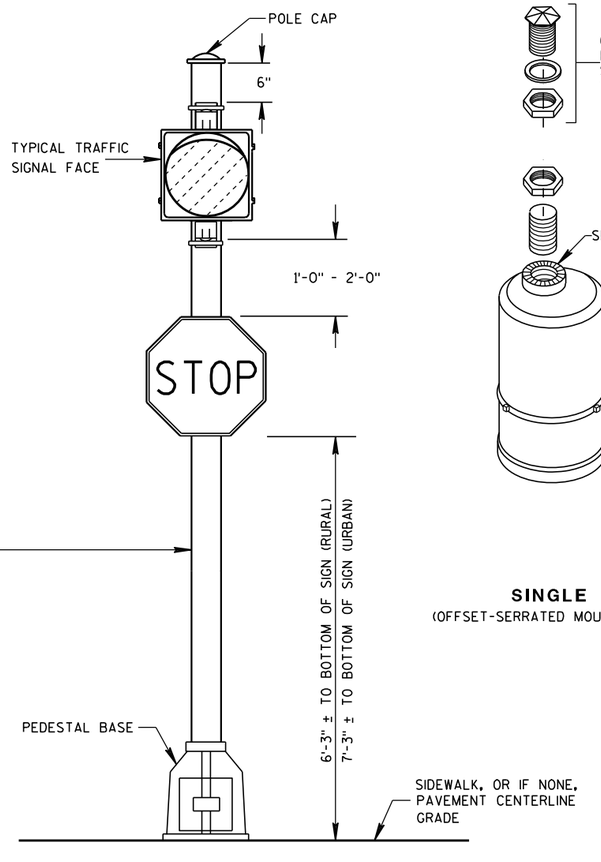
MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

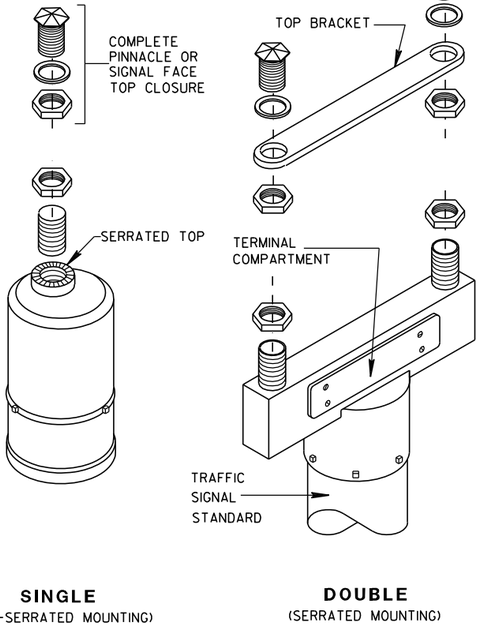
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



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

APPROVED

5/11/10
DATE

/S/ John Corbin
STATE ELECTRICAL ENGI

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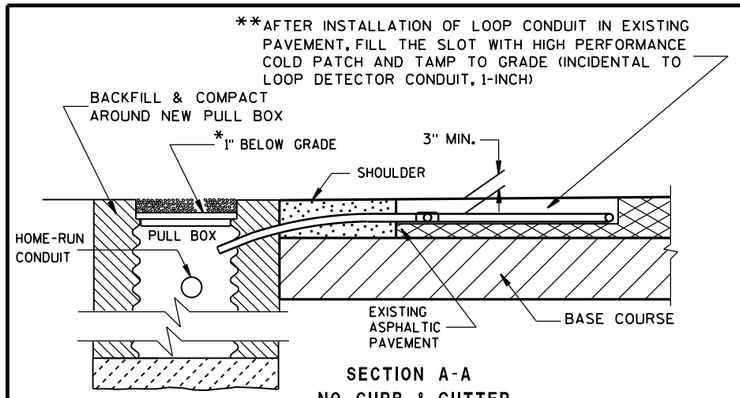
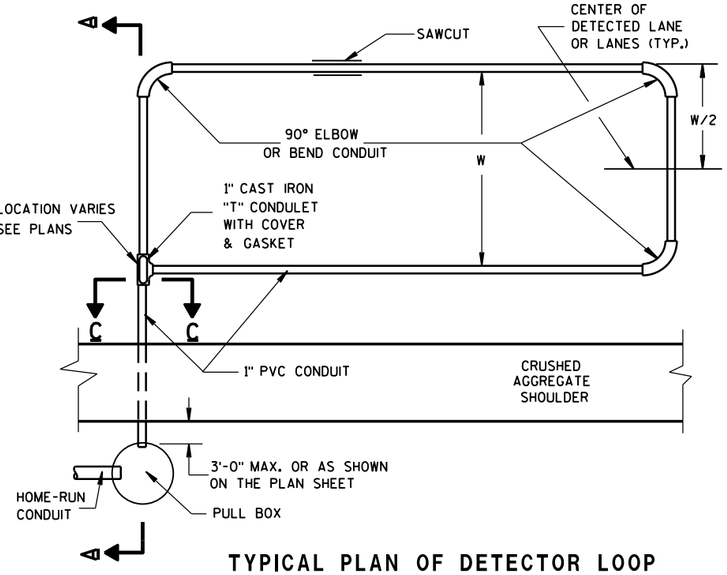


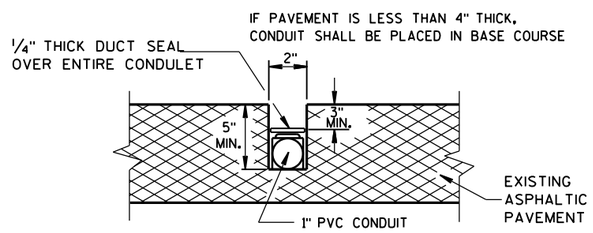
SECTION A-A
NO CURB & GUTTER

TYPICAL PLAN OF LOOP DETECTOR

*RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.



TYPICAL PLAN OF DETECTOR LOOP



SIDE VIEW
SECTION C-C

LOOP DETECTOR SLOT DETAIL

GENERAL NOTES

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

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

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISITANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

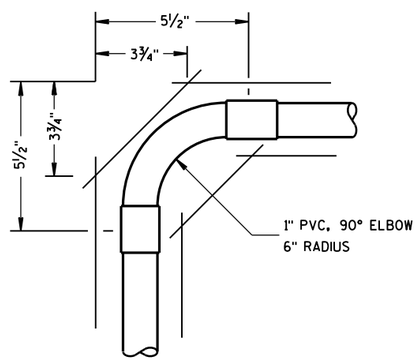
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

IN THE EVENT THAT THE EXISTING PAVEMENT IS MORE THAN 5 INCHES THICK, AND THEREFORE , THE 1 INCH CONDUIT DOES NOT REQUIRE INSTALLATION BELOW THE PAVEMENT INTO THE BASE COURSE, PLACE SOME OF THE TAR OR EPOXY SEALANT IN THE SLOT TO A DEPTH OF APPROXIMATELY 1/2 INCH BEFORE INSTALLATION OF THE CONDUIT. IF THE CONDUIT MUST BE PLACED IN THE BASE COURSE, DO NOT PLACE THE TAR OR EPOXY SEALANT IN THE SLOT.

ONCE THE 2" LOOP SLOT HAS BEEN CHIPPED OUT, THE LOOP INSTALLATION SHALL BE COMPLETED PRIOR TO OPENING THE LANE(S) TO TRAFFIC.

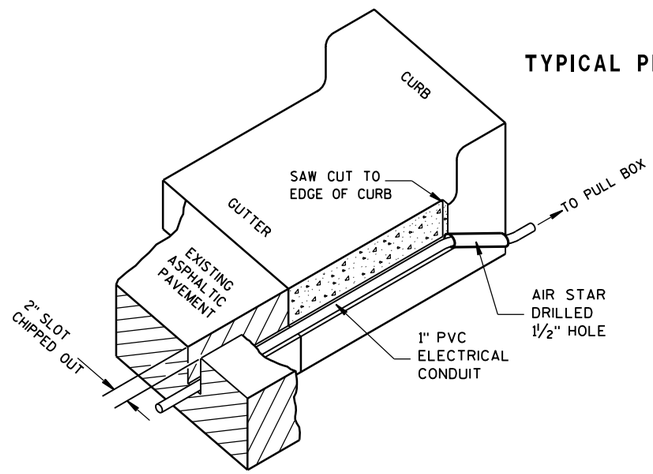
** AFTER THE HIGH PERFORMANCE COLD PATCH HAS BEEN TAMPED, SEAL THE SLOT/HIGH PERFORMANCE COLD PATCH/ PAVEMENT OPENING WITH HOT POURED ELASTIC TYPE MATERIAL CONFORMING TO THE REQUIREMENTS OF THE "SPECIFICATION FOR JOINT SEALANTS, HOT POURED, FOR CONCRETE AND ASPHALT PAVEMENTS, ASTM DESIGNATION: D3405".

IN THE EVENT HIGH PERFORMANCE COLD PATCH IS NOT AVAILABLE, AND FLEXIBLE TYPE EPOXY IS USED AS A LOOP SLOT FILLER, THE 2 INCH SLOT SHALL BE TOTALLY CLEAN AND DRY BEFORE ITS INSTALLATION. EPOXY USE SHALL BE APPROVED BY THE DISTRICT TRAFFIC ENGINEER AND THE FURNISHED EPOXY SHALL BE INSTALLED AFTER WRITTEN APPROVAL BY THE PROJECT ENGINEER.



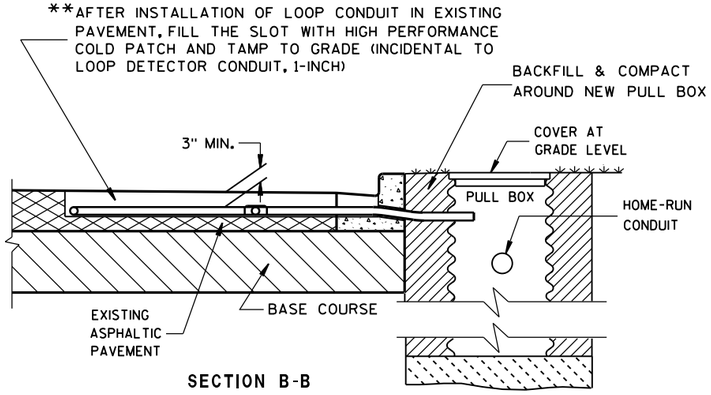
TOP VIEW

CORNER SAW SLOT DETAIL



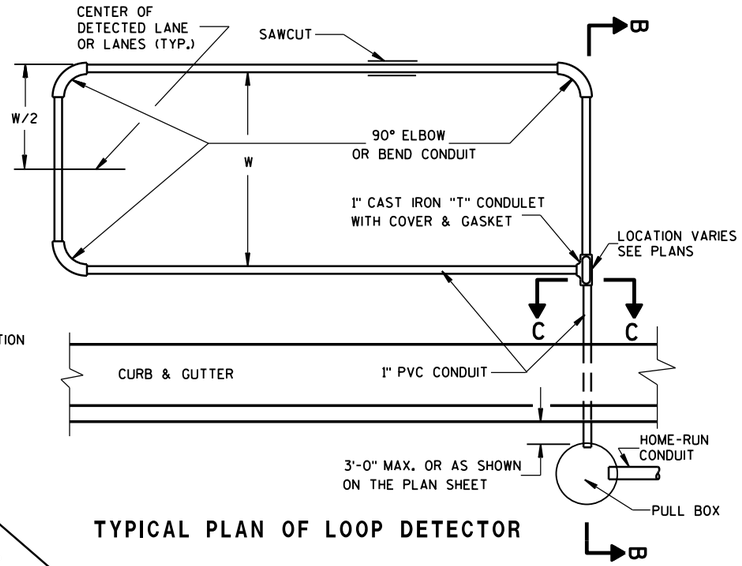
ISOMETRIC VIEW

TYPICAL SAW CUT DETAIL FOR LEAD-IN CONDUIT



SECTION B-B
CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR

LOOP DETECTOR INSTALLED IN EXISTING ASPHALTIC PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

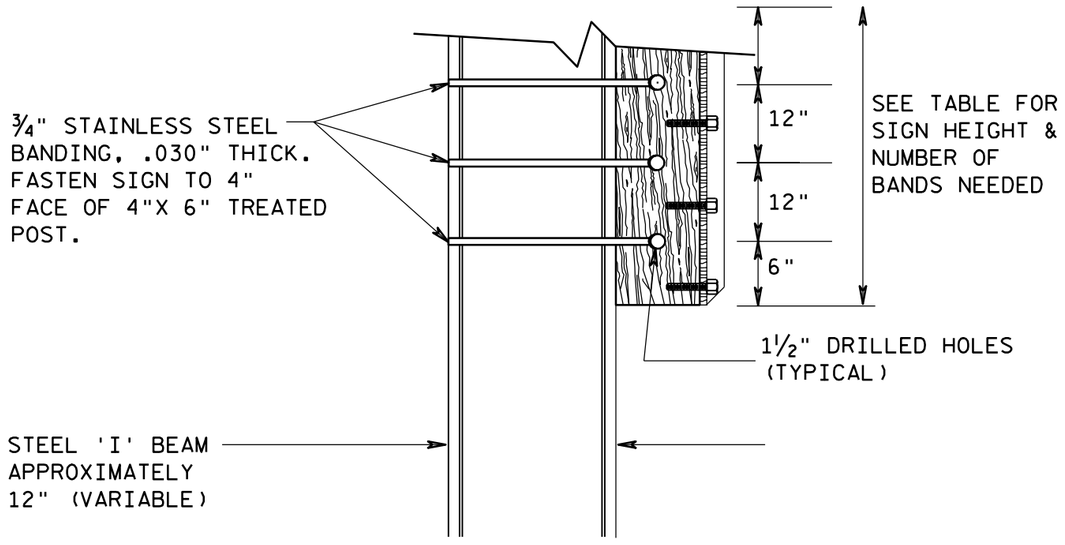
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6
S.D.D. 9 F 13-4

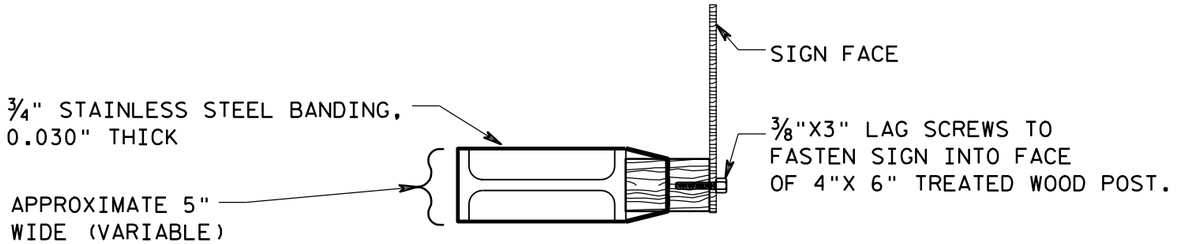
TYPE II SIGN MOUNTING ON STEEL I BEAMS

SIGN HEIGHT	NUMBER OF BANDS
24"	2
30"	2
36"	3
42"	3
48"	4
54"	4

SIGN HEIGHT	NUMBER OF BANDS
60"	5
66"	5
72"	6
78"	6
84"	7
90"	7



SIDE VIEW



TOP VIEW

TYPE II SIGN MOUNTING

WISCONSIN DEPT OF TRANSPORTATION

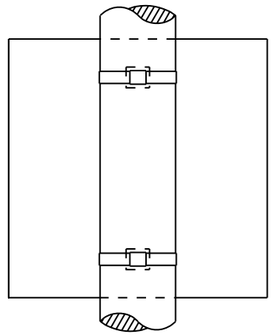
APPROVED Matthew R Rauch
for State Traffic Engineer

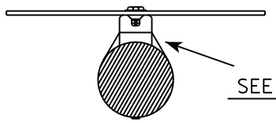
DATE 1/24/07 PLATE NO. A5-8.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 19	E

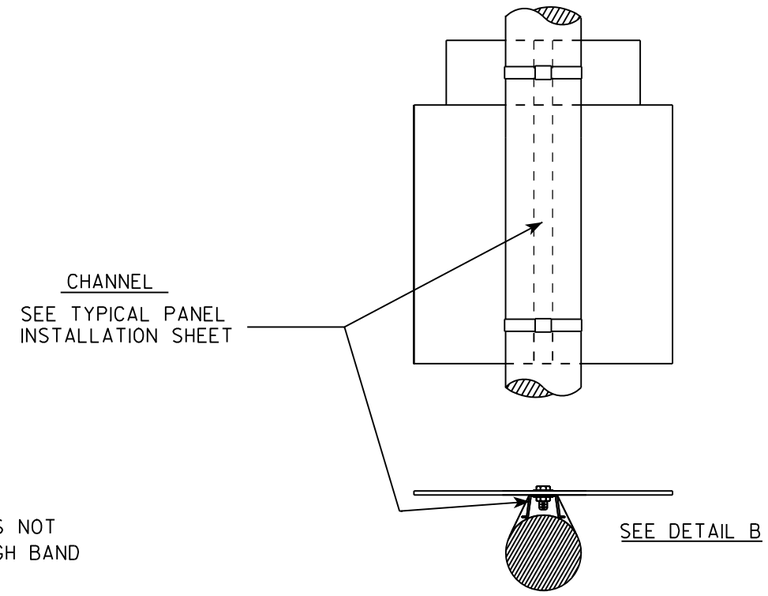
BANDING

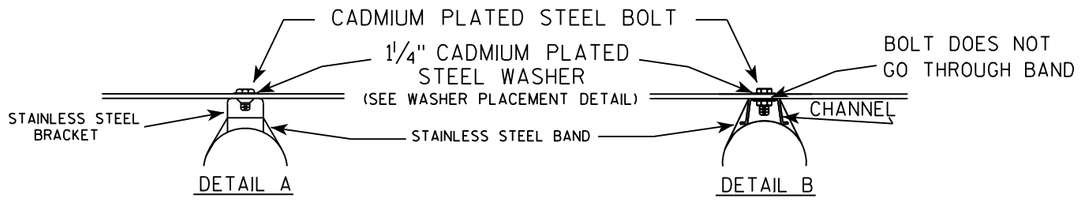
SINGLE SIGN



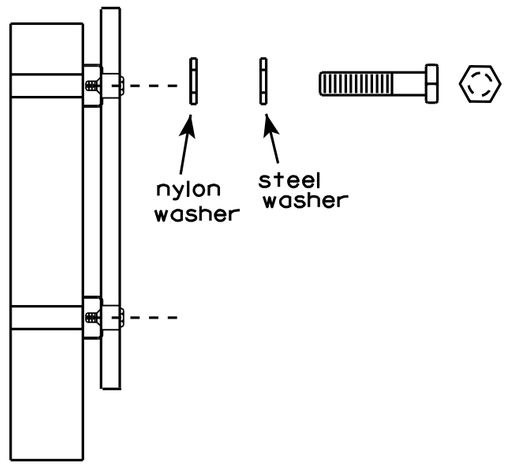


"J" ASSEMBLY





WASHER PLACEMENT



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

GENERAL NOTES

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

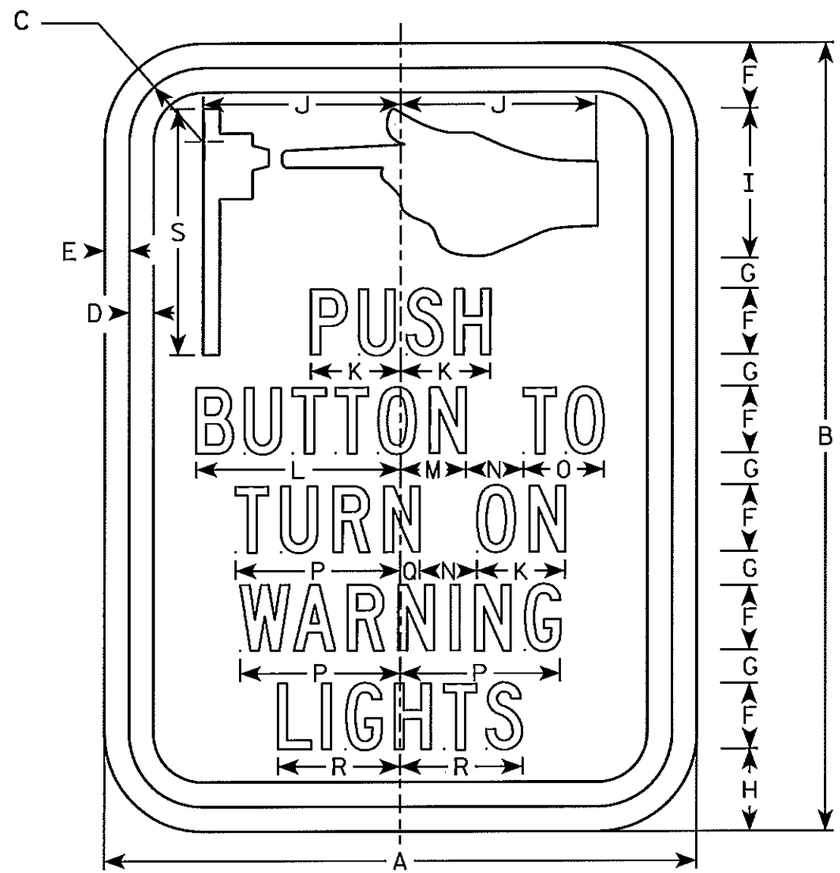
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 20	E



R10-25

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Size (1) comes as a decal only.

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	6	9	1 1/8	3/8	3/8	3/4	3/8	1	1 3/4	2	7/8	2 1/8	5/8	5/8	7/8	1 5/8	1/4	1 1/4	2 7/8								.38
2S	9	12	1 1/8	3/8	3/8	1	1/2	1 1/4	2 1/4	3	1 3/8	3 1/8	1	7/8	1 1/4	2 1/2	1/4	1 7/8	3 3/4								.75
2M	9	12	1 1/8	3/8	3/8	1	1/2	1 1/4	2 1/4	3	1 3/8	3 1/8	1	7/8	1 1/4	2 1/2	1/4	1 7/8	3 3/4								.75
3																											
4																											
5																											

STANDARD SIGN
R10-25

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/8/10 PLATE NO. R10-25.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\Users\PROJECTS\fr_stdplate\R1025.dgn PLOT DATE : 08-NOV-2010 15:07 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 2.234639:1.000000 WISDOT/CADD

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 1/8	3/8	1/2	5	2 1/8	3 1/8	13 1/4	14 1/8	6 1/8	3 3/8	2	11 1/2													6.25
2S	36		1 3/8	1/2	5/8	6	2 1/2	3 3/4	15 7/8	16 7/8	7 3/8	4	2 3/8	13 3/4													9.0
2M	36		1 3/8	1/2	5/8	6	2 1/2	3 3/4	15 7/8	16 7/8	7 3/8	4	2 3/8	13 3/4													9.0
3	36		1 3/8	1/2	5/8	6	2 1/2	3 3/4	15 7/8	16 7/8	7 3/8	4	2 3/8	13 3/4													9.0
4	48		2 1/4	3/4	1	8	4	5	21 1/2	22 1/2	9 7/8	5	3 3/8	18 1/4													16.0
5	48		2 1/4	3/4	1	8	4	5	21 1/2	22 1/2	9 7/8	5	3 3/8	18 1/4													16.0

STANDARD SIGN
W3-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W3-4.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 22	E

Notes

Wisconsin Department of Transportation

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