TTSHT10A.DGN

NWL MAY 2013

PROJECT ID: 7640-00-71
WITH: N/A

COUNTY: PIERCE

ORDER OF SHEETS



TOTAL SHEETS = 32

| STATE PROJECT | FEDERAL PROJECT | |
|---|---|---|
| | PROJECT | CONTRACT |
| 7640-00-71 | WISC 2013288 | 1 |
| | | |
| | | |
| | | |

# STATE OF WISCONSIN
# DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

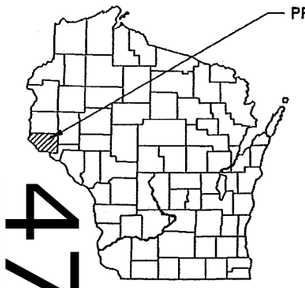
# C RIVER FALLS, CASCADE AVENUE

SPRUCE STREET TO SIXTH STREET

## LOCAL STREET

## PIERCE COUNTY

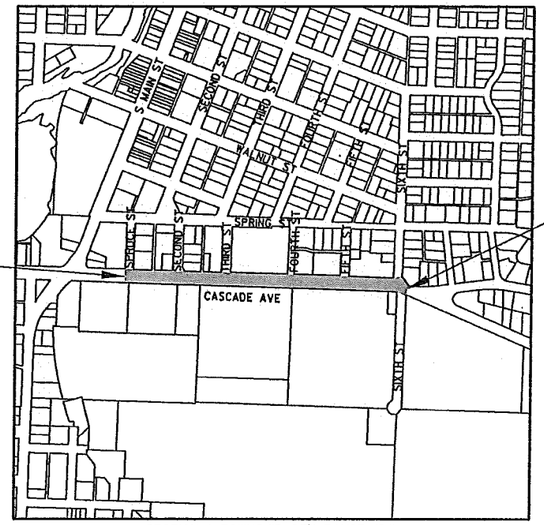
STATE PROJECT NUMBER
**7640-00-71**




47

DESIGN DESIGNATION

| | | |
|---|---|---|
| A.A.D.T. | 2012 | = N/A |
| A.A.D.T. | 2032 | = N/A |
| D.H.V. | | = N/A |
| D.D. | | = N/A |
| T. | | = N/A |
| DESIGN SPEED | | = N/A |
| ESALS | | = N/A |




SECTION 1, TOWNSHIP 27N, RANGE 19W

CONVENTIONAL SYMBOLS

| | | | |
|---|---|---|---|
| COUNTY LINE | | COMBUSTIBLE FLUIDS | CAUTION |
| CORPORATE LIMITS | | UNDERGROUND UTILITIES | |
| PROPERTY LINE | P.L. + 58.1 | GAS | G |
| LOT LINE | | ELECTRIC | E |
| LIMITED EASEMENT | | TELEPHONE OR TELEGRAPH | T |
| EARTHWORK BALANCE POINT | | TV/CABLE | TV |
| EXISTING RIGHT OF WAY | | SERVICE PEDESTAL | |
| PROPOSED OR NEW R/W LINE | | POWER POLE | |
| SURVEY LINE | | TELEPHONE POLE | |
| SLOPE INTERCEPT | | RAILROAD | |
| ORIGINAL GROUND | | SANITARY SEWER | SAN |
| MARSH OR ROCK PROFILE (To be noted as such) | ROCK | STORM SEWER | SS |
| | | WATER | W |
| MARSH AREA | | EXISTING CULVERT | |
| | | PROPOSED CULVERT (Box or Pipe) | |
| WOODED OR SHRUB AREA | | CULVERT (Profile View) | |

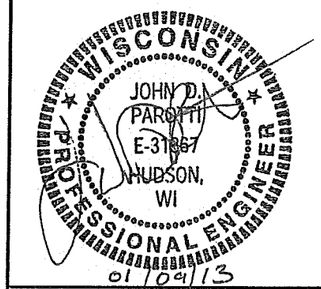
LAYOUT
SCALE 0 500'

TOTAL NET LENGTH OF CENTERLINE = 0.360 MI

Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS), Pierce County.

ACCEPTED FOR
CITY of RIVER FALLS
1-9-13
DATE:

ORIGINAL PLANS PREPARED BY:
SEH




STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor: SEH
Designer: SEH
Management Consultant: KNIGHT E/A INC
C.O. Examiner:

APPROVED FOR THE DEPARTMENT
DATE: 1/23/2013 Ryan B McKane
(Management Consultant Signature)

E

## STANDARD ABBREVIATIONS

| | |
|---|---|
| ABUT | ABUTMENT |
| AC | ACRE |
| AGG | AGGREGATE |
| AECPRC | APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE |
| ASPH | ASPHALTIC |
| AVG | AVERAGE |
| ADT | AVERAGE DAILY TRAFFIC |
| BF | BACK FACE |
| BM | BENCH MARK |
| BR | BRIDGE |
| CE | COMMERCIAL ENTRANCE |
| CL OR C/L OR ℄ | CENTER LINE |
| △ | CENTRAL ANGLE OR DELTA |
| CONC | CONCRETE |
| CPRC | CULVERT PIPE REINFORCED CONCRETE |
| CPRCHE | CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL |
| CR | CREEK |
| CY | CUBIC YARD |
| C & G | CURB AND GUTTER |
| D | DEGREE OF CURVE |
| DHV | DESIGN HOUR VOLUME |
| DISCH | DISCHARGE |
| DG | DITCH GRADE |
| DWY | DRIVEWAY |
| X | EAST GRID COORDINATE |
| EAT | STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL |
| EOR | END POINT OF RADIUS |
| EL | ELEVATION |
| ENT | ENTRANCE |
| ESALS | EQUIVALENT SINGLE AXLE LOADS |
| EXC | EXCAVATION |
| EBS | EXCAVATION BELOW SUBGRADE |
| EXIST | EXISTING |
| FC | FACE OF CURB |
| FF | FACE TO FACE |
| FERT | FERTILIZE |
| FE | FIELD ENTRANCE |
| FL | FLOW LINE |
| FO | FIBER OPTIC |
| CWT | HUNDREDWEIGHT |
| HYD | HYDRANT |
| ID | INSIDE DIAMETER |
| INV | INVERT |
| IP | IRON PIPE ON PIN |
| LHF | LEFT-HAND FORWARD |
| L | LENGTH OF CURVE |
| LF | LINEAR FOOT |
| LC | LONG CHORD OF CURVE |
| LS | LUMP SUM |
| MH | MANHOLE |
| MOR | MID POINT OF RADIUS |
| NC | NORMAL CROWN |
| NO | NUMBER |
| OBLIT | OBLITERATE |
| PAVT | PAVEMENT |
| PE | PRIVATE ENTRANCE |
| PVRC | POINT OF VERTICAL REVERSE CURVE |
| QOR | QUARTER POINT OF RADIUS |
| R | RADIUS |
| REQ'D | REQUIRED |
| RES | RESIDENCE OR RESIDENTIAL |
| RHF | RIGHT-HAND FORWARD |
| R/W | RIGHT-OF-WAY |
| R | RIVER |
| RDWY | ROADWAY |
| R/L OR ℄ | REFERENCE LINE |
| SALV | SALVAGED |
| SAN | SANITARY SEWER |
| SF | SQUARE FEET |
| SY | SQUARE YARD |
| SDD | STANDARD DETAIL DRAWINGS |
| STA | STATION |
| SS | STORM SEWER |
| SSPRC | STORM SEWER PIPE REINFORCED CONCRETE |
| SE | SUPERELEVATION RATE |
| TC | TOP OF CURB |
| T OR TN | TOWN |
| T | TRUCKS (PERCENT OF) |
| TYP | TYPICAL |
| VAR | VARIABLE |
| VC | VERTICAL CURVE |
| Y | NORTH GRID COORDINATE |
| YD | YARD |

## GENERAL NOTES

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

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 THE 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 PURPOSES ONLY.

## DESIGN CONTACT

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

## WIS DNR CONTACT

DEPT OF NATURAL RESOURCES
WEST CENTRAL REGION HEADQUATERS
1300 WEST CLAIREMONT AVE
EAU CLAIRE, WI 54701
TELEPHONE: 715.839.3700
ATTENTION: NICK SCHAFF

## UTILITY CONTACTS

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

RIVER FALLS MUNICIPAL UTILITIES
222 LEWIS STREET
RIVER FALLS, WI 54022
TELEPHONE: 715.425.0906
ATTENTION: TAMARRA JAWORSKI
(WATER, SEWER, AND ELECTRIC)

ST. CROIX VALLEY NATURAL GAS
PO BOX 6
RIVER FALLS, WI 54022
TELEPHONE: 715.425.6177
ATTENTION: GREG LEE

C & L COMMUNICATIONS FOR
RIVER FALLS SCHOOL DISTRICT
(FIBER OPTIC)
C & L: PO BOX 362
OWATONNA, MN 55060
TELEPHONE: 507.451.3326
ATTENTION BRUCE LOUCKS

RIVER FALLS SCHOOL DISTRICT
852 EAST DIVISION STREET
RIVER FALLS, WI 54022
TELEPHONE: 715.425.1800
ATTENTION: BRIAN DADO

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

COMCAST
2611 FAIRVIEW AVENUE N
ROSEVILLE, MN 55113
TELEPHONE: 651.493.5127
ATTENTION: SCOTT RUPPERT

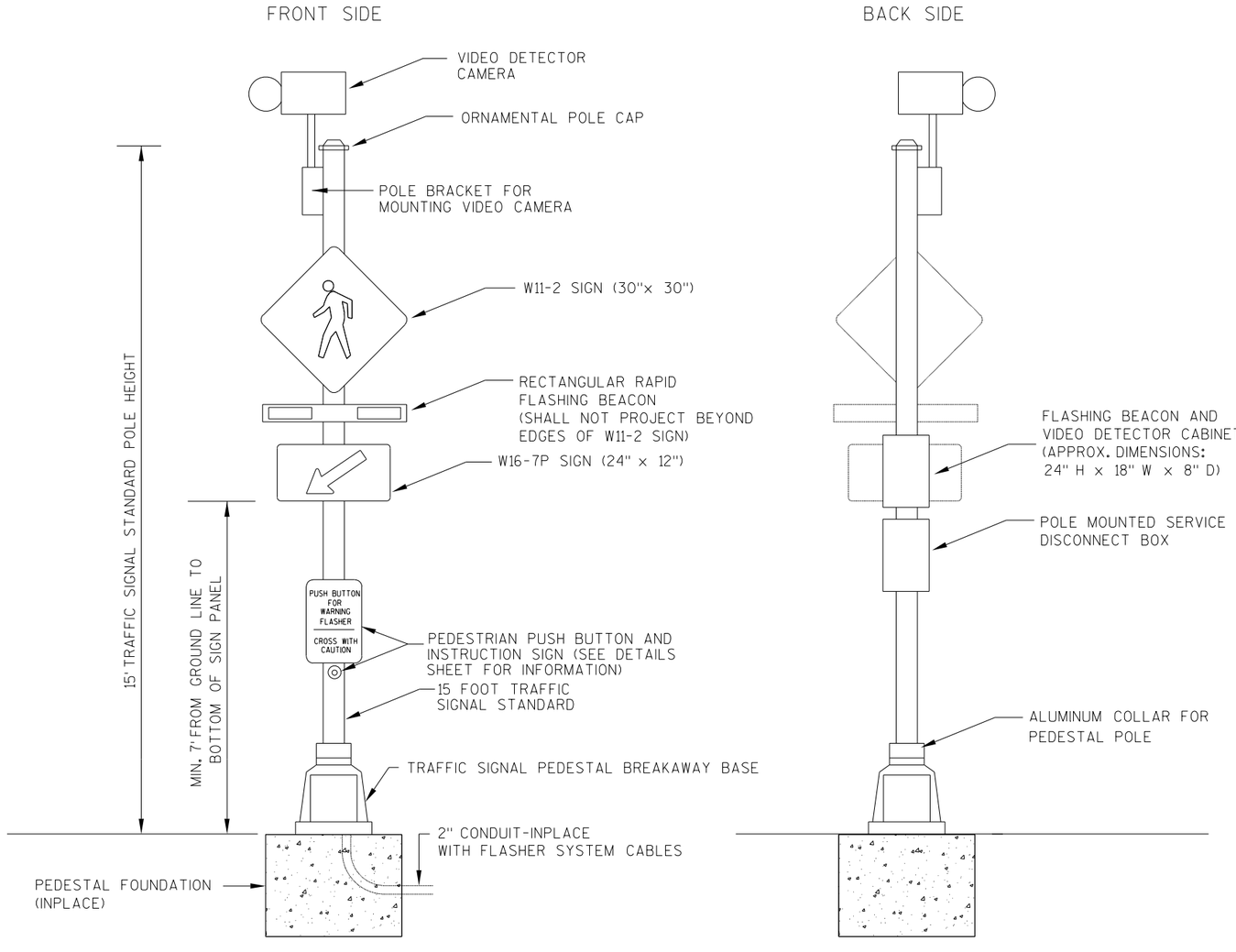
811 DIGGERS HOTLINE

CALL 811 OR (800)242.8511
(877)500.9592 (EMERGENCY ONLY)
www.DiggersHotline.com

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

2

# FLASHER POLE DETAIL




| PROJECT NO: 7640-00-71 | HWY: CASCADE AVENUE | COUNTY: PIERCE | FLASHER POLE DETAILS | SHEET 3 | E |
|---|---|---|---|---|---|



FILE NAME : N:\PT\R\River\119076\5-final-dsgn\51-drawings\10-Civil\DGN\021001 CD.dgn PLOT TIME : 10:14:15 AM PLOT DATE : 12/28/2012 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A
WISDOT/CADDS SHEET 42

# FLASHER SYSTEM PEDESTAL MOUNTED SIGNING (TYPE II SIGNS)

CASCADE AVENUE FLASHERS

| SIGNS, TYPE II REFLECTIVE (REGULATORY SIGNS) - F & I | | | | | | |
|---|---|---|---|---|---|---|
| MUTCD CODE | PANEL LEGEND | NO. REQ. | SIZE (IN) | AREA PER SIGN (SF) | TOTAL AREA (SF) | POLE NO. |
| W11-2 | PEDESTRIAN XING | 6 | 30x30 | 6.25 | 37.50 | SB-2,2,5,6,21,22 |
| W16-7PL | DOWN ARROW (LEFT) | 6 | 24x12 | 2.00 | 12.00 | SB-2,2,5,6,21,22 |
| - | PUSH BUTTON SIGN | 22 | 12x18 | 1.50 | 33.00 | SB-1,3,4-23 |
| | | | | | | |
| | TOTAL QUANTITIES | 34 | | | 82.50 | |

CASCADE AVENUE FLASHERS

| REMOVING SIGNS TYPE II | | | | | |
|---|---|---|---|---|---|
| PLAN CODE | MUTCD CODE | PANEL LEGEND | NO. REQ. | SIZE (IN) | SIGN MOUNTING |
| C-1 | R4-7 | KEEP RIGHT | 1 | 24x30 | 1-POST |
| C-2 | W11-2 | PEDESTRIAN XING | 12 | 30x30 | 1-POST |
| | W16-7PL | DOWN ARROW (LEFT) | 12 | 24x12 | |
| C-3 | W11-2 | PEDESTRIAN XING | 6 | 30x30 | 1-POST |
| | W16-7PR | DOWN ARROW (RIGHT) | 6 | 24x12 | |
| | TOTAL QUANTITIES | | 37 | | |

CASCADE AVENUE FLASHERS

| MOVING SIGNS TYPE II | | | | |
|---|---|---|---|---|
| MUTCD CODE | PANEL LEGEND | NO. REQ. | SIZE (IN) | POLE NO. |
| W11-2 | PEDESTRIAN XING | 12 | 30x30 | SB-1,3,4,7,8,11,12,15,16,19,20,23 |
| W16-7PL | DOWN ARROW (LEFT) | 12 | 24x12 | SB-1,3,4,7,8,11,12,15,16,19,20,23 |
| W11-2 | PEDESTRIAN XING | 6 | 30x30 | SB-9,10,13,14,17,18 |
| W16-7PR | DOWN ARROW (RIGHT) | 6 | 24x12 | SB-9,10,13,14,17,18 |
| | | | | |
| | TOTAL QUANTITIES | 36 | | |

12"

18"

PUSH BUTTON FOR WARNING FLASHER

CROSS WITH CAUTION

BLACK LEGEND AND BORDER ON WHITE BACKGROUND, FULLY REFLECTORIZED.

NOTES:

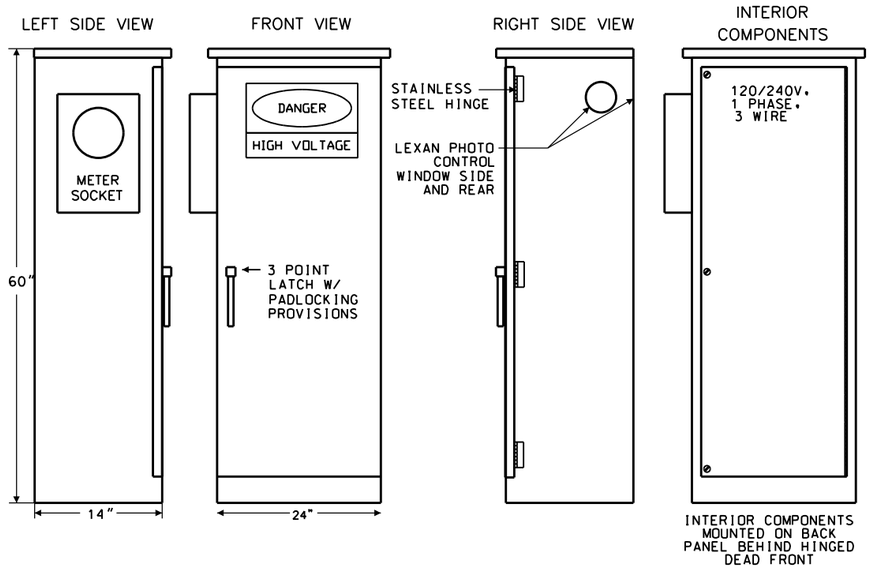
1) CORNERS EXTENDING BEYOND THE BORDER SHALL NOT BE TRIMMED.
2) ALL NEW SIGNS SHALL BE FABRICATED USING TYPE SH SHEETING.
3) FURNISHING AND INSTALLING NEW SIGN MOUNTING HARDWARE SHALL BE CONSIDERED INCIDENTAL TO SIGNING BID ITEMS.
4) SIGN POSTS AND SIGN POST MOUNTING HARDWARE SHALL BE REMOVED AND SALVAGED TO THE CITY OF RIVER FALLS BY THE CONTRACTOR (INCIDENTAL TO SIGNING BID ITEMS).

# CABLE ROUTING DETAILS

TYPICAL CABLE AND WIRING

| FROM | TO | CABLE SIZE | COLOR CODE |
|---|---|---|---|
| CABINET (CB) | FLASHING BEACON (R) | 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) |
| CABINET (CB) | LUMINAIRE | 1-1/c#12 | BLK |
| LUMINAIRE (BACK TO) | CABINET (CB) | 1-1/c#12 | WH |

| ELECTRICAL WIRE 10 AWG, XLP (WHITE) | | ELECTRICAL WIRE 10 AWG, XLP (GREEN) | | BONDING JUMPERS | |
|---|---|---|---|---|---|
| FROM | TO | FROM | TO | FROM | TO |
| CB-1A | SB-1 | CB-1A | SB-1 | SB-1 | PB-1 |
| CB-1A | SB-2 | SB-1 | SB-2 | SB-2 | PB-2 |
| CB-2A | SB-2 | SB-2 | SB-3 | SB-3 | PB-3 |
| CB-2A | SB-3 | SB-3 | CB-2A | SB-4 | PB-7 |
| CB-1B | SB-4 | CB-1B | SB-4 | SB-5 | PB-8 |
| CB-1B | SB-5 | SB-4 | SB-5 | SB-6 | PB-8 |
| CB-2B | SB-6 | SB-6 | SB-7 | SB-7 | PB-9 |
| CB-2B | SB-7 | SB-7 | CB-2B | SB-8 | PB-11 |
| CB-1C | SB-8 | CB-1C | SB-8 | SB-9 | PB-12 |
| CB-1C | SB-9 | SB-8 | SB-9 | SB-10 | PB-12 |
| CB-2C | SB-10 | SB-10 | SB-11 | SB-11 | PB-13 |
| CB-2C | SB-11 | SB-11 | CB-2C | SB-12 | PB-15 |
| CB-1D | SB-12 | CB-1D | SB-12 | SB-13 | PB-16 |
| CB-1D | SB-13 | SB-12 | SB-13 | SB-14 | PB-16 |
| CB-2D | SB-14 | SB-14 | SB-15 | SB-15 | PB-17 |
| CB-2D | SB-15 | SB-15 | CB-2D | SB-16 | PB-18 |
| CB-1E | SB-16 | CB-1E | SB-16 | SB-17 | PB-19 |
| CB-1E | SB-17 | SB-16 | SB-17 | SB-18 | PB-19 |
| CB-2E | SB-18 | SB-18 | SB-19 | SB-19 | PB-20 |
| CB-2E | SB-19 | SB-19 | CB-2E | SB-20 | PB-24 |
| CB-1F | SB-20 | CB-1F | SB-20 | SB-21 | PB-23 |
| CB-1F | SB-21 | SB-20 | SB-21 | SB-22 | PB-23 |
| CB-2F | SB-22 | SB-22 | SB-23 | SB-23 | PB-22 |
| CB-2F | SB-23 | SB-23 | CB-2F | | |




SERVICE CABINET DETAIL (TYPE 1)

SERVICE CABINET NOTES:

PROVIDE METER SOCKET PER UTILITY COMPANY REQUIREMENTS.

CIRCUIT BREAKERS SHALL BE 120 VOLT AC, 60HZ AND SHALL BE CLEARLY MARKED WITH THE "ON" AND "OFF" POSITIONS AND IDENTIFIED WITH THE LOAD TO WHICH IT IS CONNECTED.

SHORT CIRCUIT RATING - 14,000 AIC SYMMETRICAL.

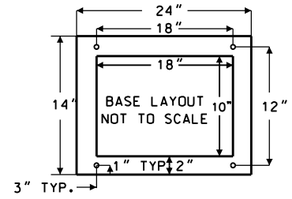
SELECTOR SWITCH ALLEN BRADLEY #800TJ2A.

CIRCUIT CONTACTORS SHALL HAVE A 240 VOLT RATING, WITH 120 VILT COIL.

PROVIDE PANEL WITH DIMENSTIONS AS REQUIRED TO FIT EQUIPMENT PROPOSED.

BOTH PHOTOELECTRIC CONTROL AND SOCKET SHALL BE 3 TERMINAL, POLARIZED, TWIST-LOCK TYPE. IT SHALL BE EQUIPPED WITH A MOVRO TYPE LIGHTING ARRESTER.

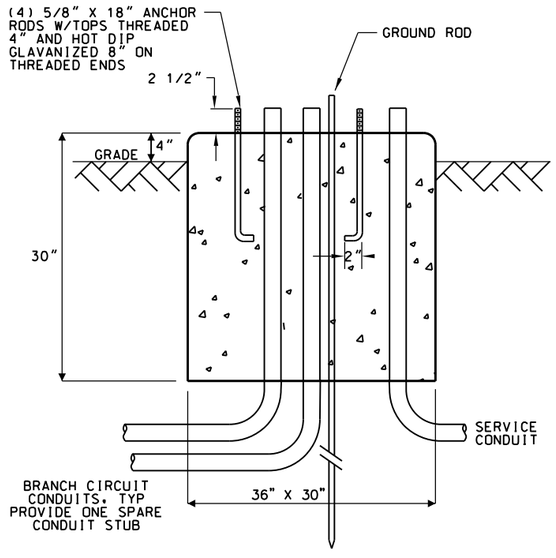
COORDINATE CONNECTION TO EXISTING TRANSFORMERS WITH CHUCK BERANEK, RIVER FALLS MUNICIPAL UTILITIES 715.222.2356



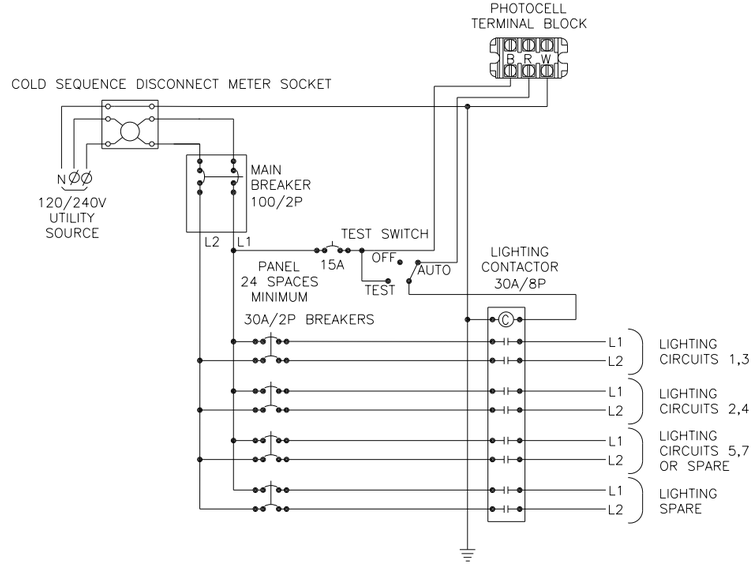

CABINET CONSTRUCTION

-NEMA 3R
-INTERIOR COMPONENTS MOUNTED ON BACK PANEL BEHIND DEAD FRONT
-1/8" ANODIZED ALUMINUM (DURANODIC BLACK)
-NEOPRENE GASKETED DOORS
-STAINLESS STEEL HARDWARE
-ETL LISTED IN ACCORDANCE WITH UL508A

SERVICE CABINET A & B SCHEMATIC (UNMETERED (TYPE 1)




EQUIPMENT PAD DETAIL
SERVICE CABINET FOUNDATION




| PROJECT NO: 7640-00-71 | HWY: CASCADE AVENUE | COUNTY: PIERCE | INPLACE SERVICE EQUIPMENT DETAILS (FOR INFORMATION ONLY) | SHEET 5 | E |
|---|---|---|---|---|---|



FILE NAME : N:\PT\R\River\119076\5-final-dsgn\51-drawings\10-Civil\DGN\021003 CD.dgn PLOT TIME : 10:14:36 AM PLOT DATE : 12/28/2012 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A

DATE 06MAR13 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 | 7640-00-71 QUANTITY |
|---|---|---|---|---|---|
| 0010 | 108.3100.S | INCENTIVE/DISINCENTIVE FOR INTERIM COMPLETION OF WORK | CD | 10.000 | 10.000 |
| 0020 | 213.0100 | FINISHING ROADWAY (PROJECT) 01. 7640-00-71 | EACH | 1.000 | 1.000 |
| 0030 | 619.1000 | MOBILIZATION | EACH | 1.000 | 1.000 |
| 0040 | 637.0202 | SIGNS REFLECTIVE TYPE II | SF | 82.500 | 82.500 |
| 0050 | 638.2102 | MOVING SIGNS TYPE II | EACH | 36.000 | 36.000 |
| 0060 | 638.2602 | REMOVING SIGNS TYPE II | EACH | 37.000 | 37.000 |
| 0070 | 642.5001 | FIELD OFFICE TYPE B | EACH | 1.000 | 1.000 |
| 0080 | 643.0100 | TRAFFIC CONTROL (PROJECT) 01. 7640-00-71 | EACH | 1.000 | 1.000 |
| 0090 | 652.0225 | CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH | LF | 100.000 | 100.000 |
| 0100 | 652.0605 | CONDUIT SPECIAL 2-INCH | LF | 200.000 | 200.000 |
| 0110 | 652.0615 | CONDUIT SPECIAL 3-INCH | LF | 200.000 | 200.000 |
| 0120 | 655.0210 | CABLE TRAFFIC SIGNAL 3-14 AWG | LF | 1,085.000 | 1,085.000 |
| 0130 | 655.0220 | CABLE TRAFFIC SIGNAL 4-14 AWG | LF | 1,110.000 | 1,110.000 |
| 0140 | 655.0515 | ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG | LF | 5,045.000 | 5,045.000 |
| 0150 | 655.0525 | ELECTRICAL WIRE TRAFFIC SIGNALS 6 AWG | LF | 7,635.000 | 7,635.000 |
| 0160 | 655.0610 | ELECTRICAL WIRE LIGHTING 12 AWG | LF | 1,785.000 | 1,785.000 |
| 0170 | 656.0300 | ELECTRICAL SERVICE UNMETERED (LOCATION) 01. CASCADE AVENUE & SECOND STREET INTERSECTION | LS | 1.000 | 1.000 |
| 0180 | 656.0300 | ELECTRICAL SERVICE UNMETERED (LOCATION) 02. CASCADE AVENUE & SIXTH STREET INTERSECTION | LS | 1.000 | 1.000 |
| 0190 | 656.0500 | ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 01. CASCADE/SPRUCE | LS | 1.000 | 1.000 |
| 0200 | 656.0500 | ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 02. CASCADE/SECOND | LS | 1.000 | 1.000 |
| 0210 | 656.0500 | ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 03. CASCADE/THIRD | LS | 1.000 | 1.000 |
| 0220 | 656.0500 | ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 04. CASCADE/ FOURTH | LS | 1.000 | 1.000 |
| 0230 | 656.0500 | ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 05. CASCADE/FIFTH | LS | 1.000 | 1.000 |
| 0240 | 656.0500 | ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 06. CASCADE/SIXTH | LS | 1.000 | 1.000 |
| 0250 | 657.0100 | PEDESTAL BASES | EACH | 23.000 | 23.000 |
| 0260 | 657.0425 | TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT | EACH | 23.000 | 23.000 |
| 0270 | 658.0500 | PEDESTRIAN PUSH BUTTONS | EACH | 24.000 | 24.000 |
| 0280 | 658.5069 | SIGNAL MOUNTING HARDWARE (LOCATION) 01. CASCADE AVENUE & SPRUCE STREET INTERSECTION | LS | 1.000 | 1.000 |
| 0290 | 658.5069 | SIGNAL MOUNTING HARDWARE (LOCATION) 02. CASCADE AVENUE & SECOND STREET INTERSECTION | LS | 1.000 | 1.000 |
| 0300 | 658.5069 | SIGNAL MOUNTING HARDWARE (LOCATION) 03. CASCADE AVENUE & THIRD STREET INTERSECTION | LS | 1.000 | 1.000 |
| 0310 | 658.5069 | SIGNAL MOUNTING HARDWARE (LOCATION) 04. CASCADE AVENUE & FOURTH STREET INTERSECTION | LS | 1.000 | 1.000 |
| 0320 | 658.5069 | SIGNAL MOUNTING HARDWARE (LOCATION) 05. CASCADE AVENUE & FIFTH STREET INTERSECTION | LS | 1.000 | 1.000 |
| 0330 | 658.5069 | SIGNAL MOUNTING HARDWARE (LOCATION) 06. CASCADE AVENUE & SIXTH STREET INTERSECTION | LS | 1.000 | 1.000 |

3

DATE 06MAR13 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 | 7640-00-71 QUANTITY |
|---|---|---|---|---|---|
| 0340 | ASP.1T0A | ON-THE-JOB TRAINING APPRENTICE AT $5.00/HR | HRS | 1,200.000 | 1,200.000 |
| 0350 | ASP.1T0G | ON-THE-JOB TRAINING GRADUATE AT $5.00/HR | HRS | 300.000 | 300.000 |
| 0360 | SPV.0060 | SPECIAL 01. VIDEO DETECTOR, SPECIAL | EACH | 14.000 | 14.000 |
| 0370 | SPV.0090 | SPECIAL 01. VIDEO DETECTOR CABLE, CAT 5E, SPECIA | LF | 180.000 | 180.000 |
| 0380 | SPV.0105 | SPECIAL 01. RRFB SYSTEM (CASCADE/SPRUCE NORTH CROSSWALK) | LS | 1.000 | 1.000 |
| 0390 | SPV.0105 | SPECIAL 02. RRFB SYSTEMS (CASCADE/SPRUCE SOUTH CROSSWALK) | LS | 1.000 | 1.000 |
| 0400 | SPV.0105 | SPECIAL 03. RRFB SYSTEM (CASCADE/SECOND NORTH CROSSWALK) | LS | 1.000 | 1.000 |
| 0410 | SPV.0105 | SPECIAL 04. RRFB SYSTEM (CASCADE/SECOND SOUTH CROSSWALK) | LS | 1.000 | 1.000 |
| 0420 | SPV.0105 | SPECIAL 05. RRFB SYSTEM (CASCADE/THIRD NORTH CROSSWALK) | LS | 1.000 | 1.000 |
| 0430 | SPV.0105 | SPECIAL 06. RRFB SYSTEM (CASCADE/THIRD SOUTH CROSSWALK) | LS | 1.000 | 1.000 |
| 0440 | SPV.0105 | SPECIAL 07. RRFB SYSTEM (CASCADE/FOURTH NORTH CROSSWALK) | LS | 1.000 | 1.000 |
| 0450 | SPV.0105 | SPECIAL 08. RRFB SYSTEM (CASCADE/FOURTH SOUTH CROSSWALK) | LS | 1.000 | 1.000 |
| 0460 | SPV.0105 | SPECIAL 09. RRFB SYSTEM (CASCADE/FIFTH NORTH CROSSWALK) | LS | 1.000 | 1.000 |
| 0470 | SPV.0105 | SPECIAL 10. RRFB SYSTEM (CASCADE/FIFTH SOUTH CROSSWALK) | LS | 1.000 | 1.000 |
| 0480 | SPV.0105 | SPECIAL 11. RRFB SYSTEM (CASCADE/SIXTH NORTH CROSSWALK) | LS | 1.000 | 1.000 |
| 0490 | SPV.0105 | SPECIAL 12. RRFB SYSTEM (CASCADE/SIXTH SOUTH CROSSWALK) | LS | 1.000 | 1.000 |

3

| | FROM | TO | 655.0210 TRAFFIC SIGNAL CABLE 3 CONDUCTOR NO. 14 FT | 655.0220 TRAFFIC SIGNAL CABLE 4 CONDUCTOR NO. 14 FT | 655.0525 ELECTRICAL WIRE, TRAFFIC SIGNALS NO.6 FT | 655.0515* ELECTRICAL WIRE, TRAFFIC SIGNALS NO.10 FT | 655.0610 ELECTRICAL WIRE, LIGHTING NO. 12 FT | SPV.0090.01 VIDEO DETECTOR CABLE CAT 5e (SPECIAL) FT |
|---|---|---|---|---|---|---|---|---|
| SPRUCE STREET SYSTEMS | CB-1A | R1 | | 10 | | | | |
| | CB-1A | V1 | 15 | | | | | 15 |
| | CB-1A | BUTTON | 10 | | | | | |
| | CB-1A | SP-A | | | | 15 | | |
| | CB-1A | PB-1 | | | | | 50 | |
| | PB-1 | LUM (NORTH) | | | | | 30 | |
| | CB-1A | R2 | | 80 | | | | |
| | SP-A | PB-1 | | | 75 | | | |
| | PB-1 | SERVICE "A" | | | 1,800 | | | |
| | SP-A | CB-2A | | | | 375 | | |
| | CB-2A | R3 | | 75 | | | | |
| | PB-3 | LUM (SOUTH) | | | | | 20 | |
| | PB-3 | CB-2A | | | | | 50 | |
| | CB-2A | R4 | | 10 | | | | |
| | CB-2A | V2 | 15 | | | | | 15 |
| | CB-2A | BUTTON | 10 | | | | | |
| SECOND STREET SYSTEMS | CB-1B | R5 | | 10 | | | | |
| | CB-1B | V3 | 15 | | | | | 15 |
| | CB-1B | BUTTON | 10 | | | | | |
| | CB-1B | SP-B | | | | 15 | | |
| | CB-1B | PB-7 | | | | | 35 | |
| | PB-7 | LPB-3 | | | | | 110 | |
| | LPB-3 | LUM (MEDIAN) | | | | | 100 | |
| | CB-1B | R6 | | 65 | | | | |
| | CB-1B | BUTTON (SB-5) | 60 | | | | | |
| | SP-B | PB-7 | | | 75 | | | |
| | PB-7 | SERVICE "A" | | | 375 | | | |
| | SP-B | CB-2B | | | | 360 | | |
| | CB-2B | R7 | | 90 | | | | |
| | CB-2B | BUTTON (SB-6) | 85 | | | | | |
| | CB-2B | PB-9 | | | | | 60 | |
| | PB-9 | PB-7 | | | | | 130 | |
| | CB-2B | R8 | | 10 | | | | |
| | CB-2B | V4 | 15 | | | | | 15 |
| | CB-2B | BUTTON | 10 | | | | | |
| THIRD STREET SYSTEMS | CB-1C | R9 | | 10 | | | | |
| | CB-1C | V5 | 15 | | | | | 15 |
| | CB-1C | BUTTON | 10 | | | | | |
| | CB-1C | SP-C | | | | 15 | | |
| | CB-1C | PB-11 | | | | | 50 | |
| | PB-11 | PB-12 | | | | | 60 | |
| | PB-12 | LUM (MEDIAN) | | | | | 40 | |
| | CB-1C | R10 | | 80 | | | | |
| | CB-1C | BUTTON (SB-9) | 75 | | | | | |
| | SP-C | PB-11 | | | 75 | | | |
| | PB-11 | SERVICE "A" | | | 675 | | | |
| | SP-C | CB-2C | | | | 390 | | |
| | CB-2C | R11 | | 90 | | | | |
| | CB-2C | BUTTON (SB-10) | 85 | | | | | |
| | CB-2C | PB-13 | | | | | 50 | |
| | PB-13 | PB-12 | | | | | 70 | |
| | CB-2C | R12 | | 10 | | | | |
| | CB-2C | V6 | 15 | | | | | 15 |
| | CB-2C | BUTTON | 10 | | | | | |
| FOURTH STREET SYSTEMS | CB-1D | R13 | | 10 | | | | |
| | CB-1D | V7 | 15 | | | | | 15 |
| | CB-1D | BUTTON | 10 | | | | | |
| | CB-1D | SP-D | | | | 15 | | |
| | CB-1D | PB-15 | | | | | 50 | |
| | PB-15 | PB-16 | | | | | 70 | |
| | PB-16 | LUM (MEDIAN) | | | | | 40 | |
| | CB-1D | R14 | | 95 | | | | |
| | CB-1D | BUTTON (SB-13) | 90 | | | | | |
| | SP-D | PB-15 | | | 75 | | | |
| | PB-15 | SERVICE "A" | | | 1,950 | | | |
| | SP-D | CB-2D | | | | 345 | | |
| | CB-2D | R15 | | 80 | | | | |
| | CB-2D | BUTTON (SB-14) | 75 | | | | | |
| | CB-2D | PB-17 | | | | | 40 | |
| | PB-17 | PB-16 | | | | | 70 | |
| | CB-2D | R16 | | 10 | | | | |
| | CB-2D | V8 | 15 | | | | | 15 |
| | CB-2D | BUTTON | 10 | | | | | |
| SUBTOTALS: | | | 670' | 735' | 5100' | 1530' | 1125' | 120' |

| | FROM | TO | 655.0210 TRAFFIC SIGNAL CABLE 3 CONDUCTOR NO. 14 FT | 655.0220 TRAFFIC SIGNAL CABLE 4 CONDUCTOR NO. 14 FT | 655.0525 ELECTRICAL WIRE, TRAFFIC SIGNALS NO.6 FT | 655.0515* ELECTRICAL WIRE, TRAFFIC SIGNALS NO.10 FT | 655.0610 ELECTRICAL WIRE, LIGHTING NO. 12 FT | SPV.0090.01 VIDEO DETECTOR CABLE CAT 5e (SPECIAL) FT |
|---|---|---|---|---|---|---|---|---|
| FIFTH STREET SYSTEMS | CB-1E | R17 | | 10 | | | | |
| | CB-1E | V9 | 15 | | | | | 15 |
| | CB-1E | BUTTON | 10 | | | | | |
| | CB-1E | SP-E | | | | 345 | | |
| | CB-1E | PB-18 | | | | | 50 | |
| | PB-18 | PB-19 | | | | | 70 | |
| | PB-19 | LUM (MEDIAN) | | | | | 40 | |
| | CB-1E | R18 | | 95 | | | | |
| | CB-1E | BUTTON (SB-17) | 90 | | | | | |
| | SP-E | PB-20 | | | 60 | | | |
| | PB-20 | SERVICE "B" | | | 1,710 | | | |
| | SP-E | CB-2E | | | | 15 | | |
| | CB-2E | R19 | | 75 | | | | |
| | CB-2E | BUTTON (SB-18) | 70 | | | | | |
| | CB-2E | PB-20 | | | | | 40 | |
| | PB-20 | PB-19 | | | | | 60 | |
| | CB-2E | R20 | | 10 | | | | |
| | CB-2E | V10 | 15 | | | | | 15 |
| | CB-2E | BUTTON | 10 | | | | | |
| SIXTH STREET SYSTEMS | CB-1F | R21 | | 10 | | | | |
| | CB-1F | V11 | 15 | | | | | 15 |
| | CB-1F | BUTTON | 10 | | | | | |
| | CB-1F | SP-F | | | | 360 | | |
| | CB-1F | PB-24 | | | | | 60 | |
| | PB-24 | LUM (MEDIAN) | | | | | 180 | |
| | CB-1F | R22 | | 100 | | | | |
| | CB-1F | BUTTON (SB-21) | 95 | | | | | |
| | SP-F | PB-22 | | | 45 | | | |
| | PB-22 | SERVICE "B" | | | 720 | | | |
| | SP-F | CB-2F | | | | 15 | | |
| | CB-2F | R23 | | 65 | | | | |
| | CB-2F | BUTTON (SB-22) | 60 | | | | | |
| | CB-2F | PB-22 | | | | | 30 | |
| | PB-22 | PB-23 | | | | | 60 | |
| | PB-23 | PB-24 | | | | | 70 | |
| | CB-2F | R24 | | 10 | | | | |
| | CB-2F | V12 | 15 | | | | | 15 |
| | CB-2F | BUTTON | 10 | | | | | |
| SUBTOTALS: | | | 415' | 375' | 2535' | 735' | 660' | 60' |
| TOTALS: | | | 1085' | 1110' | 7635' | 2265' | 1785' | 180' |

| NEUTRAL (WHITE) | | 655.0515* ELECTRICAL WIRE, TRAFFIC SIGNALS NO.10 FT |
|---|---|---|
| CB-1A | SB-1 | 10 |
| CB-1A | SB-2 | 75 |
| CB-2A | SB-2 | 70 |
| CB-2A | SB-3 | 10 |
| CB-1B | SB-4 | 10 |
| CB-1B | SB-5 | 70 |
| CB-2B | SB-6 | 95 |
| CB-2B | SB-7 | 10 |
| CB-1C | SB-8 | 10 |
| CB-1C | SB-9 | 85 |
| CB-2C | SB-10 | 105 |
| CB-2C | SB-11 | 10 |
| CB-1D | SB-12 | 10 |
| CB-1D | SB-13 | 100 |
| CB-2D | SB-14 | 85 |
| CB-2D | SB-15 | 10 |
| CB-1E | SB-16 | 10 |
| CB-1E | SB-17 | 90 |
| CB-2E | SB-18 | 75 |
| CB-2E | SB-19 | 10 |
| CB-1F | SB-20 | 10 |
| CB-1F | SB-21 | 100 |
| CB-2F | SB-22 | 75 |
| CB-2F | SB-23 | 10 |
| TOTALS: | | 1145' |

| NEUTRAL (GREEN) | | 655.0515* ELECTRICAL WIRE, TRAFFIC SIGNALS NO.10 FT |
|---|---|---|
| CB-1A | SB-1 | 10 |
| SB-1 | SB-2 | 70 |
| SB-2 | SB-3 | 65 |
| SB-3 | CB-2A | 10 |
| CB-1B | SB-4 | 10 |
| SB-4 | SB-5 | 65 |
| SB-6 | SB-7 | 90 |
| SB-7 | CB-2B | 10 |
| CB-1C | SB-8 | 10 |
| SB-8 | SB-9 | 80 |
| SB-10 | SB-11 | 100 |
| SB-11 | CB-2C | 10 |
| CB-1D | SB-12 | 10 |
| SB-12 | SB-13 | 95 |
| SB-14 | SB-15 | 80 |
| SB-15 | CB-2D | 10 |
| CB-1E | SB-16 | 10 |
| SB-16 | SB-17 | 85 |
| SB-18 | SB-19 | 70 |
| SB-19 | CB-2E | 10 |
| CB-1F | SB-20 | 10 |
| SB-20 | SB-21 | 95 |
| SB-22 | SB-23 | 70 |
| SB-23 | CB-2F | 10 |
| TOTALS: | | 1085' |

| BONDING JUMPERS | | 655.0515* ELECTRICAL WIRE, TRAFFIC SIGNALS NO.10 FT |
|---|---|---|
| SB-1 | PB-1 | 25 |
| SB-2 | PB-2 | 15 |
| SB-3 | PB-3 | 25 |
| SB-4 | PB-7 | 20 |
| SB-5 | PB-8 | 15 |
| SB-6 | PB-8 | 30 |
| SB-7 | PB-9 | 30 |
| SB-8 | PB-11 | 25 |
| SB-9 | PB-12 | 25 |
| SB-10 | PB-12 | 35 |
| SB-11 | PB-13 | 25 |
| SB-12 | PB-15 | 25 |
| SB-13 | PB-16 | 35 |
| SB-14 | PB-16 | 20 |
| SB-15 | PB-17 | 20 |
| SB-16 | PB-18 | 25 |
| SB-17 | PB-19 | 25 |
| SB-18 | PB-19 | 15 |
| SB-19 | PB-20 | 20 |
| SB-20 | PB-24 | 30 |
| SB-21 | PB-23 | 25 |
| SB-22 | PB-23 | 20 |
| SB-23 | PB-22 | 20 |
| TOTALS: | | 550' |

*ITEM SHOWN ELSEWHERE IN PLAN

3

ELECTRICAL SERVICE UNMETERED

| LOCATION | SERVICE UNMETERED L.S. | |
|---|---|---|
| CASCADE AVENUE & SECOND STREET INTERSECTION | 1 | (656.0300.01) |
| CASCADE AVENUE & SIXTH STREET INTERSECTION | 1 | (656.0300.02) |
| TOTALS: | 2 | |

ELECTRICAL SERVICE EQUIPMENT SHALL BE SET UP AND PROVIDED TO ACCEPT AVAILABLE 120/240 SINGLE PHASE SERVICE FROM THE CITY OF RIVER FALLS (RFMU).

PEDESTAL BASES (657.0100)
TRAFFIC SIGNAL STANDARDS, ALUMINUM, 15-FOOT (657.0425)
PEDESTRIAN PUSH BUTTON (658.0500)
VIDEO DETECTOR, SPECIAL (SPV.0060.01)
ELECTRICAL SERVICE BREAKER DISCONNECT BOX (656.0500.01, 656.0500.02, 656.0500.03, 656.0500.04, 656.0500.05, 656.0500.06)

| FLASHER BASE NO. | PED. BASE EACH | 15-FOOT STAND. EACH | PUSH BUTTON EACH | VIDEO DETECTOR SPECIAL EACH | SERVICE BREAKER DISCONNECT BOX L.S. |
|---|---|---|---|---|---|
| SB-1 | 1 | 1 | 1 | 1 | 1 |
| SB-2 | 1 | 1 | | | |
| SB-3 | 1 | 1 | 1 | 1 | |
| SB-4 | 1 | 1 | 1 | 1 | 1 |
| SB-5 | 1 | 1 | 1 | | |
| SB-6 | 1 | 1 | 1 | | |
| SB-7 | 1 | 1 | 1 | 1 | |
| SB-8 | 1 | 1 | 1 | 1 | 1 |
| SB-9 | 1 | 1 | 1 | | |
| SB-10 | 1 | 1 | 1 | | |
| SB-11 | 1 | 1 | 1 | 1 | |
| SB-12 | 1 | 1 | 1 | 1 | 1 |
| SB-13 | 1 | 1 | 1 | | |
| SB-14 | 1 | 1 | 1 | | |
| SB-15 | 1 | 1 | 1 | 1 | |
| SB-16 | 1 | 1 | 1 | 1 | |
| SB-17 | 1 | 1 | 1 | | |
| SB-18 | 1 | 1 | 1 | | |
| SB-19 | 1 | 1 | 1 | 1 | 1 |
| SB-20 | 1 | 1 | 1 | 1 | |
| SB-21 | 1 | 1 | 1 | | |
| SB-22 | 1 | 1 | 1 | | |
| SB-23 | 1 | 1 | 1 | 1 | 1 |
| SPARES | 0 | 0 | 2 | 2 | 0 |
| TOTALS: | 23 | 23 | 24 | 14 | 6 |

(658.5069.01, 658.5069.02, 658.5069.03, 658.5069.04, 658.5069.05, 658.5069.06)

| SIGNAL MOUNTING HARDWARE | |
|---|---|
| LOCATION | L.S. |
| CASCADE AVENUE & SPRUCE STREET INTERSECTION | 1 |
| CASCADE AVENUE & SECOND STREET INTERSECTION | 1 |
| CASCADE AVENUE & THIRD STREET INTERSECTION | 1 |
| CASCADE AVENUE & FOURTH STREET INTERSECTION | 1 |
| CASCADE AVENUE & FIFTH STREET INTERSECTION | 1 |
| CASCADE AVENUE & SIXTH STREET INTERSECTION | 1 |
| ITEM TOTAL | 6 |

| RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEMS | | |
|---|---|---|
| LOCATION | L.S. | ITEM # |
| CASCADE/SPRUCE NORTH CROSSWALK | 1 | SPV.0105.01 |
| CASCADE/SPRUCE SOUTH CROSSWALK | 1 | SPV.0105.02 |
| CASCADE/SECOND NORTH CROSSWALK | 1 | SPV.0105.03 |
| CASCADE/SECOND SOUTH CROSSWALK | 1 | SPV.0105.04 |
| CASCADE/THIRD NORTH CROSSWALK | 1 | SPV.0105.05 |
| CASCADE/THIRD SOUTH CROSSWALK | 1 | SPV.0105.06 |
| CASCADE/FOURTH NORTH CROSSWALK | 1 | SPV.0105.07 |
| CASCADE/FOURTH SOUTH CROSSWALK | 1 | SPV.0105.08 |
| CASCADE/FIFTH NORTH CROSSWALK | 1 | SPV.0105.09 |
| CASCADE/FIFTH SOUTH CROSSWALK | 1 | SPV.0105.10 |
| CASCADE/SIXTH NORTH CROSSWALK | 1 | SPV.0105.11 |
| CASCADE/SIXTH SOUTH CROSSWALK | 1 | SPV.0105.12 |
| ITEM TOTAL | 12 | |

NOTE: SEE COMPONENTS OF RRFB FOR ADDITIONAL ITEM INFORMATION

COMPONENTS OF RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEMS

RECTANGULAR RAPID FLASHING BEACON UNITS
CONTROLLER CABINET-PEDESTAL MOUNTED

| FLASHER BASE NO. | RRFB SYSTEM | FLASHING BEACON (RRFB) EACH | CONTROLLER CABINET EACH |
|---|---|---|---|
| SB-1<br>SB-2 | CASCADE/SPRUCE NORTH CROSSWALK (SPV.0105.01) | 1<br>1 | 1 |
| SB-2<br>SB-3 | CASCADE/SPRUCE SOUTH CROSSWALK (SPV.0105.02) | 1<br>1 | <br>1 |
| SB-4<br>SB-5 | CASCADE/SECOND NORTH CROSSWALK (SPV.0105.03) | 1<br>1 | 1 |
| SB-6<br>SB-7 | CASCADE/SECOND SOUTH CROSSWALK (SPV.0105.04) | 1<br>1 | <br>1 |
| SB-8<br>SB-9 | CASCADE/THIRD NORTH CROSSWALK (SPV.0105.05) | 1<br>1 | 1 |
| SB-10<br>SB-11 | CASCADE/THIRD SOUTH CROSSWALK (SPV.0105.06) | 1<br>1 | <br>1 |
| SB-12<br>SB-13 | CASCADE/FOURTH NORTH CROSSWALK (SPV.0105.07) | 1<br>1 | 1 |
| SB-14<br>SB-15 | CASCADE/FOURTH SOUTH CROSSWALK (SPV.0105.08) | 1<br>1 | <br>1 |
| SB-16<br>SB-17 | CASCADE/FIFTH NORTH CROSSWALK (SPV.0105.09) | 1<br>1 | 1 |
| SB-18<br>SB-19 | CASCADE/FIFTH SOUTH CROSSWALK (SPV.0105.10) | 1<br>1 | <br>1 |
| SB-20<br>SB-21 | CASCADE/SIXTH NORTH CROSSWALK (SPV.0105.11) | 1<br>1 | 1 |
| SB-22<br>SB-23 | CASCADE/SIXTH SOUTH CROSSWALK (SPV.0105.12) | 1<br>1 | <br>1 |
| TOTALS: | | 24 | 12 |

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

| MISCELLANEOUS ITEMS | | | | |
|---|---|---|---|---|
| DESCRIPTION | UNIT | QUANTITY | | REMARKS |
| MOBILIZATION | EACH | 1 | (619.1000) | |
| FIELD OFFICE TYPE B | EACH | 1 | (642.5001) | |
| TRAFFIC CONTROL (PROJECT) | EACH | 1 | (643.0100) | |
| CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH | LF | 100 | (652.0225) | UNDISTRIBUTED |
| CONDUIT SPECIAL 2-INCH (DIRECTIONAL BORE) | LF | 200 | (652.0605) | UNDISTRIBUTED |
| CONDUIT SPECIAL 3-INCH (DIRECTIONAL BORE) | LF | 200 | (652.0615) | UNDISTRIBUTED |

NOTE: SEE SPECIAL PROVISIONS REGARDING CONDUIT REQUIREMENTS AND USE OF THE CONDUIT BID ITEMS

(CASCADE AVENUE FLASHER SYSTEMS)

| SIGNING QUANTITIES | | | |
|---|---|---|---|
| DESCRIPTION | UNIT | QUANTITY | |
| SIGNS REFLECTIVE TYPE II | S.F. | 82.5 | (637.0202) |
| MOVING SIGNS TYPE II | EACH | 36 | (638.2102) |
| REMOVING SIGNS TYPE II | EACH | 37 | (638.2602) |

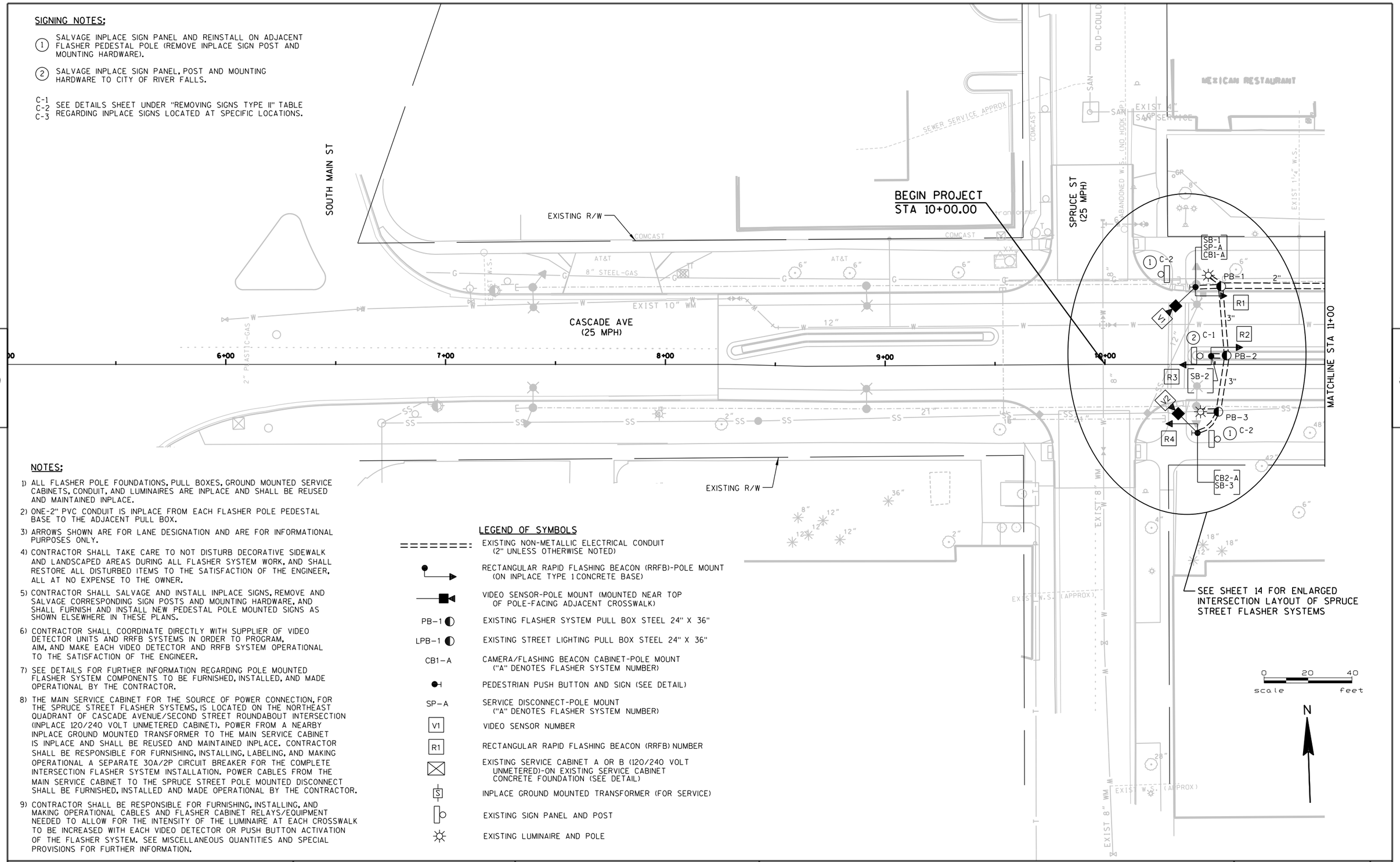
NOTE: SEE DETAILS SHEET FOR ADDITIONAL ITEM INFORMATION

SIGNING NOTES:

(1) SALVAGE INPLACE SIGN PANEL AND REINSTALL ON ADJACENT FLASHER PEDESTAL POLE (REMOVE INPLACE SIGN POST AND MOUNTING HARDWARE).

(2) SALVAGE INPLACE SIGN PANEL, POST AND MOUNTING HARDWARE TO CITY OF RIVER FALLS.

C-1
C-2
C-3 SEE DETAILS SHEET UNDER "REMOVING SIGNS TYPE II" TABLE REGARDING INPLACE SIGNS LOCATED AT SPECIFIC LOCATIONS.




NOTES:

1) ALL FLASHER POLE FOUNDATIONS, PULL BOXES, GROUND MOUNTED SERVICE CABINETS, CONDUIT, AND LUMINAIRES ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE.
2) ONE-2" PVC CONDUIT IS INPLACE FROM EACH FLASHER POLE PEDESTAL 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 LANDSCAPED AREAS 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 COORDINATE DIRECTLY WITH SUPPLIER OF VIDEO DETECTOR UNITS AND RRFB SYSTEMS IN ORDER TO PROGRAM, AIM, AND MAKE EACH VIDEO DETECTOR AND RRFB SYSTEM OPERATIONAL TO THE SATISFACTION OF THE ENGINEER.
7) SEE DETAILS FOR FURTHER INFORMATION REGARDING 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 SPRUCE STREET FLASHER SYSTEMS, IS LOCATED ON THE NORTHEAST QUADRANT OF CASCADE AVENUE/SECOND STREET ROUNDABOUT INTERSECTION (INPLACE 120/240 VOLT UNMETERED CABINET). POWER FROM A NEARBY INPLACE GROUND MOUNTED TRANSFORMER TO THE MAIN 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. POWER CABLES FROM THE MAIN SERVICE CABINET TO THE SPRUCE STREET POLE MOUNTED DISCONNECT SHALL BE FURNISHED, INSTALLED AND MADE OPERATIONAL BY THE CONTRACTOR.
9) CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAKING OPERATIONAL CABLES AND FLASHER CABINET RELAYS/EQUIPMENT NEEDED TO ALLOW FOR THE INTENSITY OF THE LUMINAIRE AT EACH CROSSWALK TO BE INCREASED WITH EACH VIDEO DETECTOR OR PUSH BUTTON ACTIVATION OF THE FLASHER SYSTEM. SEE MISCELLANEOUS QUANTITIES AND SPECIAL PROVISIONS FOR FURTHER INFORMATION.

LEGEND OF SYMBOLS

| | |
|---|---|
| ======= | EXISTING NON-METALLIC ELECTRICAL CONDUIT (2" UNLESS OTHERWISE NOTED) |
| | RECTANGULAR RAPID FLASHING BEACON (RRFB)-POLE MOUNT (ON INPLACE TYPE 1 CONCRETE BASE) |
| | VIDEO SENSOR-POLE MOUNT (MOUNTED NEAR TOP OF POLE-FACING ADJACENT CROSSWALK) |
| PB-1 | EXISTING FLASHER SYSTEM PULL BOX STEEL 24" X 36" |
| LPB-1 | EXISTING STREET LIGHTING PULL BOX STEEL 24" X 36" |
| CB1-A | CAMERA/FLASHING BEACON CABINET-POLE MOUNT ("A" DENOTES FLASHER SYSTEM NUMBER) |
| | PEDESTRIAN PUSH BUTTON AND SIGN (SEE DETAIL) |
| SP-A | SERVICE DISCONNECT-POLE MOUNT ("A" DENOTES FLASHER SYSTEM NUMBER) |
| V1 | VIDEO SENSOR NUMBER |
| R1 | RECTANGULAR RAPID FLASHING BEACON (RRFB) NUMBER |
| | EXISTING SERVICE CABINET A OR B (120/240 VOLT UNMETERED)-ON EXISTING SERVICE CABINET CONCRETE FOUNDATION (SEE DETAIL) |
| S | INPLACE GROUND MOUNTED TRANSFORMER (FOR SERVICE) |
| | EXISTING SIGN PANEL AND POST |
| | EXISTING LUMINAIRE AND POLE |

| PROJECT NO: 7640-00-71 | HWY: CASCADE AVENUE | COUNTY: PIERCE | FLASHER SYSTEM PLAN-CASCADE AVE AT SPRUCE ST | SHEET 8 | E |
|---|---|---|---|---|---|



FILE NAME : N:\PT\R\River\119076\5-final-dsgn\51-drawings\10-Civil\DGN\050201 PN.dgn PLOT TIME : 10:15:47 AM PLOT DATE : 12/28/2012 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A
WISDOT/CADDS SHEET 44

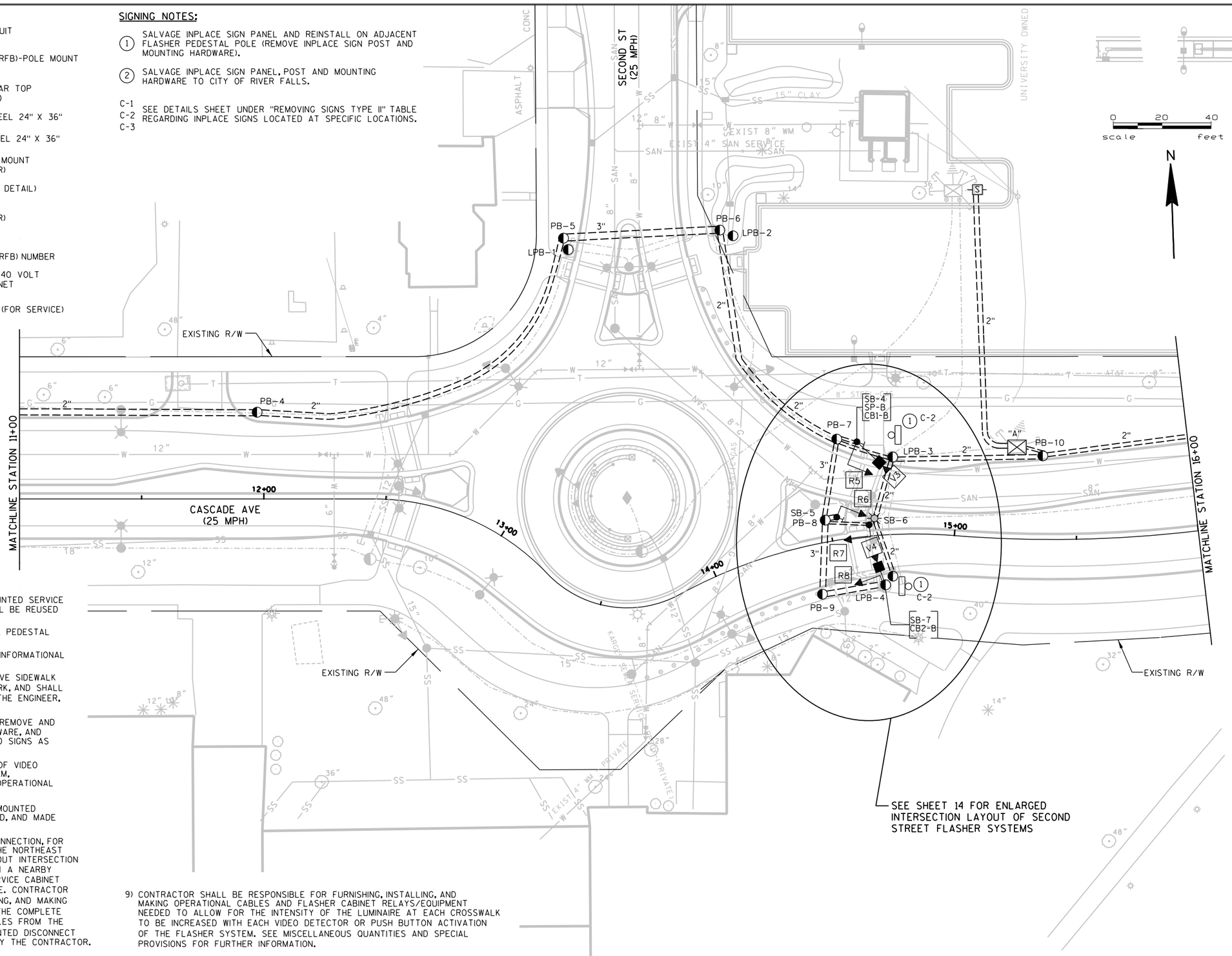
## LEGEND OF SYMBOLS

- EXISTING NON-METALLIC ELECTRICAL CONDUIT (2" UNLESS OTHERWISE NOTED)
- RECTANGULAR RAPID FLASHING BEACON (RRFB)-POLE MOUNT (ON INPLACE TYPE 1 CONCRETE BASE)
- VIDEO SENSOR-POLE MOUNT (MOUNTED NEAR TOP OF POLE-FACING ADJACENT CROSSWALK)
- PB-1 — EXISTING FLASHER SYSTEM PULL BOX STEEL 24" X 36"
- LPB-1 — EXISTING STREET LIGHTING PULL BOX STEEL 24" X 36"
- CB1-A — CAMERA/FLASHING BEACON CABINET-POLE MOUNT ("A" DENOTES FLASHER SYSTEM NUMBER)
- PEDESTRIAN PUSH BUTTON AND SIGN (SEE DETAIL)
- SP-A — SERVICE DISCONNECT-POLE MOUNT ("A" DENOTES FLASHER SYSTEM NUMBER)
- V1 — VIDEO SENSOR NUMBER
- R1 — RECTANGULAR RAPID FLASHING BEACON (RRFB) NUMBER
- EXISTING SERVICE CABINET A OR B (120/240 VOLT UNMETERED)-ON EXISTING SERVICE CABINET CONCRETE FOUNDATION (SEE DETAIL)
- S — INPLACE GROUND MOUNTED TRANSFORMER (FOR SERVICE)
- EXISTING SIGN PANEL AND POST
- EXISTING LUMINAIRE AND POLE

## SIGNING NOTES:

1. SALVAGE INPLACE SIGN PANEL AND REINSTALL ON ADJACENT FLASHER PEDESTAL POLE (REMOVE INPLACE SIGN POST AND MOUNTING HARDWARE).
2. SALVAGE INPLACE SIGN PANEL, POST AND MOUNTING HARDWARE TO CITY OF RIVER FALLS.

C-1
C-2
C-3 SEE DETAILS SHEET UNDER "REMOVING SIGNS TYPE II" TABLE REGARDING INPLACE SIGNS LOCATED AT SPECIFIC LOCATIONS.




## NOTES:

1) ALL FLASHER POLE FOUNDATIONS, PULL BOXES, GROUND MOUNTED SERVICE CABINETS, CONDUIT, AND LUMINAIRES ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE.
2) ONE-2" PVC CONDUIT IS INPLACE FROM EACH FLASHER POLE PEDESTAL 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 LANDSCAPED AREAS 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 COORDINATE DIRECTLY WITH SUPPLIER OF VIDEO DETECTOR UNITS AND RRFB SYSTEMS IN ORDER TO PROGRAM, AIM, AND MAKE EACH VIDEO DETECTOR AND RRFB SYSTEM OPERATIONAL TO THE SATISFACTION OF THE ENGINEER.
7) SEE DETAILS FOR FURTHER INFORMATION REGARDING 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 SECOND STREET FLASHER SYSTEMS, IS LOCATED ON THE NORTHEAST QUADRANT OF CASCADE AVENUE/SECOND STREET ROUNDABOUT INTERSECTION (INPLACE 120/240 VOLT UNMETERED CABINET). POWER FROM A NEARBY INPLACE GROUND MOUNTED TRANSFORMER TO THE MAIN 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. POWER CABLES FROM THE MAIN SERVICE CABINET TO THE SECOND STREET POLE MOUNTED DISCONNECT SHALL BE FURNISHED, INSTALLED AND MADE OPERATIONAL BY THE CONTRACTOR.
9) CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAKING OPERATIONAL CABLES AND FLASHER CABINET RELAYS/EQUIPMENT NEEDED TO ALLOW FOR THE INTENSITY OF THE LUMINAIRE AT EACH CROSSWALK TO BE INCREASED WITH EACH VIDEO DETECTOR OR PUSH BUTTON ACTIVATION OF THE FLASHER SYSTEM. SEE MISCELLANEOUS QUANTITIES AND SPECIAL PROVISIONS FOR FURTHER INFORMATION.

| PROJECT NO: 7640-00-71 | HWY: CASCADE AVENUE | COUNTY: PIERCE | FLASHER SYSTEM PLAN-CASCADE AVE AT SECOND ST | SHEET 9 | E |
|---|---|---|---|---|---|



FILE NAME : N:\PT\R\River\119076\5-final-dsgn\51-drawings\10-Civil\DGN\050202 PN.dgn PLOT TIME : 10:15:59 AM PLOT DATE : 12/28/2012 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A
WISDOT/CADDS SHEET 44

## LEGEND OF SYMBOLS

| | |
|---|---|
| ========: | EXISTING NON-METALLIC ELECTRICAL CONDUIT (2" UNLESS OTHERWISE NOTED) |
| | RECTANGULAR RAPID FLASHING BEACON (RRFB)-POLE MOUNT (ON INPLACE TYPE 1 CONCRETE BASE) |
| | VIDEO SENSOR-POLE MOUNT (MOUNTED NEAR TOP OF POLE-FACING ADJACENT CROSSWALK) |
| PB-1 | EXISTING FLASHER SYSTEM PULL BOX STEEL 24" X 36" |
| LPB-1 | EXISTING STREET LIGHTING PULL BOX STEEL 24" X 36" |
| CB1-A | CAMERA/FLASHING BEACON CABINET-POLE MOUNT ("A" DENOTES FLASHER SYSTEM NUMBER) |
| | PEDESTRIAN PUSH BUTTON AND SIGN (SEE DETAIL) |
| SP-A | SERVICE DISCONNECT-POLE MOUNT ("A" DENOTES FLASHER SYSTEM NUMBER) |
| V1 | VIDEO SENSOR NUMBER |
| R1 | RECTANGULAR RAPID FLASHING BEACON (RRFB) NUMBER |
| | EXISTING SERVICE CABINET A OR B (120/240 VOLT UNMETERED)-ON EXISTING SERVICE CABINET CONCRETE FOUNDATION (SEE DETAIL) |
| S | INPLACE GROUND MOUNTED TRANSFORMER (FOR SERVICE) |
| | EXISTING SIGN PANEL AND POST |
| | EXISTING LUMINAIRE AND POLE |

## SIGNING NOTES:

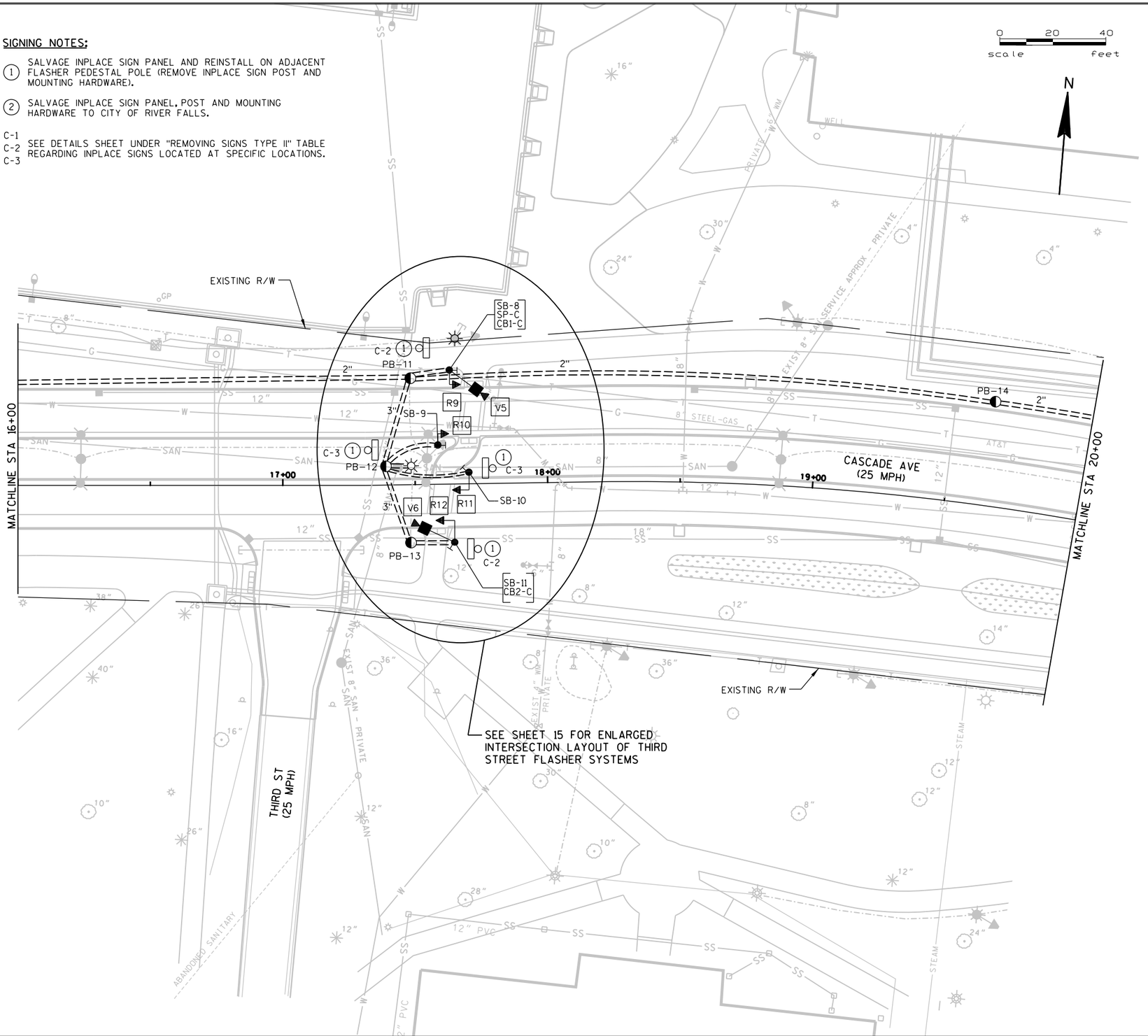
(1) SALVAGE INPLACE SIGN PANEL AND REINSTALL ON ADJACENT FLASHER PEDESTAL POLE (REMOVE INPLACE SIGN POST AND MOUNTING HARDWARE).

(2) SALVAGE INPLACE SIGN PANEL, POST AND MOUNTING HARDWARE TO CITY OF RIVER FALLS.

C-1
C-2
C-3 SEE DETAILS SHEET UNDER "REMOVING SIGNS TYPE II" TABLE REGARDING INPLACE SIGNS LOCATED AT SPECIFIC LOCATIONS.

## NOTES:

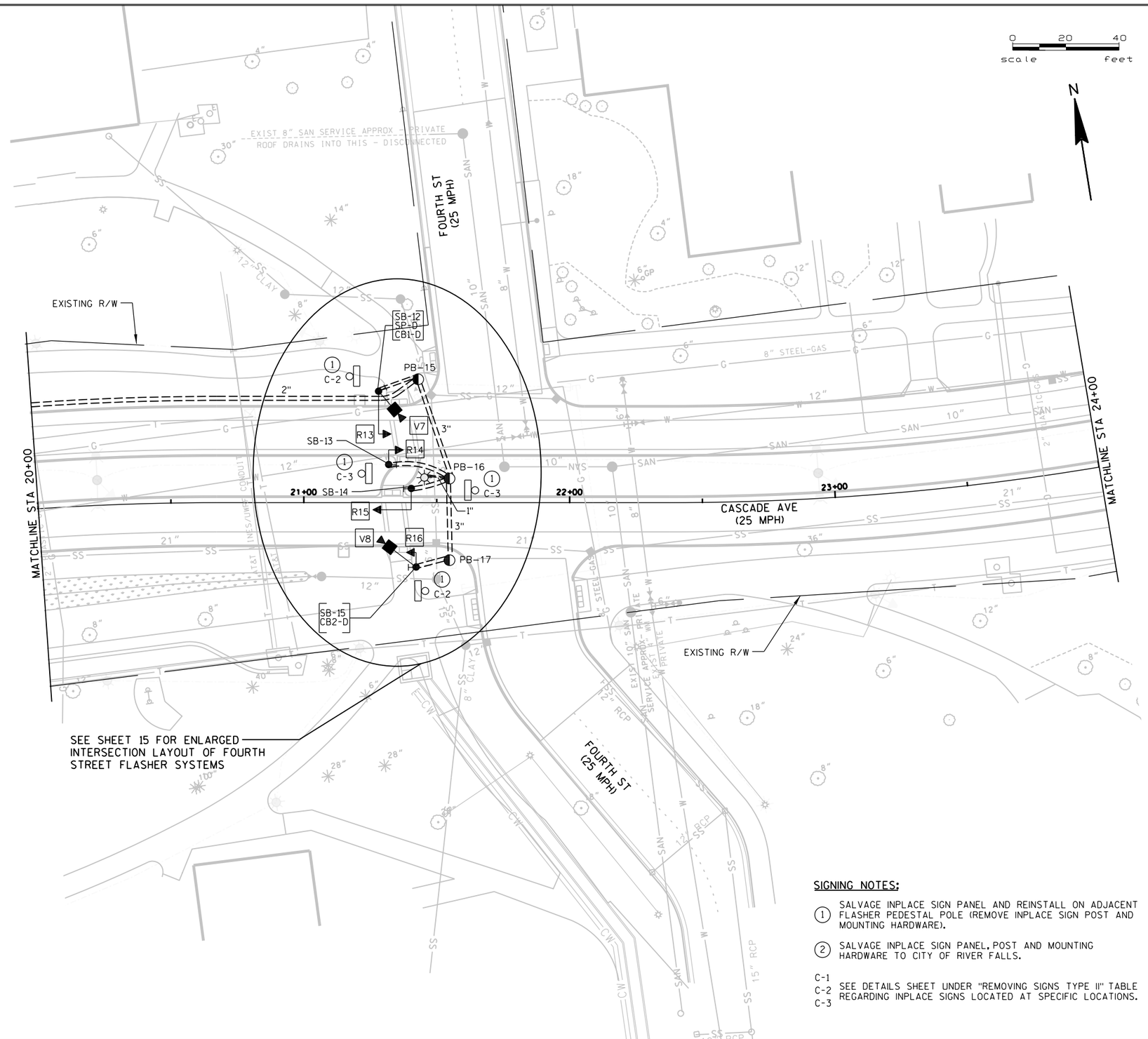
1) ALL FLASHER POLE FOUNDATIONS, PULL BOXES, GROUND MOUNTED SERVICE CABINETS, CONDUIT, AND LUMINAIRES ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE.
2) ONE-2" PVC CONDUIT IS INPLACE FROM EACH FLASHER POLE PEDESTAL BASE TO THE ADJACENT PULL BOX.
3) ARROWS SHOWN ARE FOR LANE DESIGNATION AND ARE FOR INFORMATIONAL PURPOSES ONLY.
4) CONTRACTOR SHALL TAKE CARE TO NOT DISTURB DECORATIVE SIDEWALK AND LANDSCAPED AREAS 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 COORDINATE DIRECTLY WITH SUPPLIER OF VIDEO DETECTOR UNITS AND RRFB SYSTEMS IN ORDER TO PROGRAM, AIM, AND MAKE EACH VIDEO DETECTOR AND RRFB SYSTEM OPERATIONAL TO THE SATISFACTION OF THE ENGINEER.
7) SEE DETAILS FOR FURTHER INFORMATION REGARDING 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 THIRD STREET FLASHER SYSTEMS, IS LOCATED ON THE NORTHEAST QUADRANT OF CASCADE AVENUE/SECOND STREET ROUNDABOUT INTERSECTION (INPLACE 120/240 VOLT UNMETERED CABINET). POWER FROM A NEARBY INPLACE GROUND MOUNTED TRANSFORMER TO THE MAIN 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. POWER CABLES FROM THE MAIN SERVICE CABINET TO THE THIRD STREET POLE MOUNTED DISCONNECT SHALL BE FURNISHED, INSTALLED AND MADE OPERATIONAL BY THE CONTRACTOR.
9) CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAKING OPERATIONAL CABLES AND FLASHER CABINET RELAYS/EQUIPMENT NEEDED TO ALLOW FOR THE INTENSITY OF THE LUMINAIRE AT EACH CROSSWALK TO BE INCREASED WITH EACH VIDEO DETECTOR OR PUSH BUTTON ACTIVATION OF THE FLASHER SYSTEM. SEE MISCELLANEOUS QUANTITIES AND SPECIAL PROVISIONS FOR FURTHER INFORMATION.




| PROJECT NO: 7640-00-71 | HWY: CASCADE AVENUE | COUNTY: PIERCE | FLASHER SYSTEM PLAN-CASCADE AVE AT THIRD ST | SHEET 10 12 | E |
|---|---|---|---|---|---|

## LEGEND OF SYMBOLS

| | |
|---|---|
| ======== | EXISTING NON-METALLIC ELECTRICAL CONDUIT (2" UNLESS OTHERWISE NOTED) |
| | RECTANGULAR RAPID FLASHING BEACON (RRFB)-POLE MOUNT (ON INPLACE TYPE 1 CONCRETE BASE) |
| | VIDEO SENSOR-POLE MOUNT (MOUNTED NEAR TOP OF POLE-FACING ADJACENT CROSSWALK) |
| PB–1 | EXISTING FLASHER SYSTEM PULL BOX STEEL 24" X 36" |
| LPB–1 | EXISTING STREET LIGHTING PULL BOX STEEL 24" X 36" |
| CB1–A | CAMERA/FLASHING BEACON CABINET-POLE MOUNT ("A" DENOTES FLASHER SYSTEM NUMBER) |
| | PEDESTRIAN PUSH BUTTON AND SIGN (SEE DETAIL) |
| SP–A | SERVICE DISCONNECT-POLE MOUNT ("A" DENOTES FLASHER SYSTEM NUMBER) |
| V1 | VIDEO SENSOR NUMBER |
| R1 | RECTANGULAR RAPID FLASHING BEACON (RRFB) NUMBER |
| | EXISTING SERVICE CABINET A OR B (120/240 VOLT UNMETERED)-ON EXISTING SERVICE CABINET CONCRETE FOUNDATION (SEE DETAIL) |
| S | INPLACE GROUND MOUNTED TRANSFORMER (FOR SERVICE) |
| | EXISTING SIGN PANEL AND POST |
| | EXISTING LUMINAIRE AND POLE |




## NOTES:

1) ALL FLASHER POLE FOUNDATIONS, PULL BOXES, GROUND MOUNTED SERVICE CABINETS, CONDUIT, AND LUMINAIRES ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE.
2) ONE-2" PVC CONDUIT IS INPLACE FROM EACH FLASHER POLE PEDESTAL 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 LANDSCAPED AREAS 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 COORDINATE DIRECTLY WITH SUPPLIER OF VIDEO DETECTOR UNITS AND RRFB SYSTEMS IN ORDER TO PROGRAM, AIM, AND MAKE EACH VIDEO DETECTOR AND RRFB SYSTEM OPERATIONAL TO THE SATISFACTION OF THE ENGINEER.
7) SEE DETAILS FOR FURTHER INFORMATION REGARDING 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 FOURTH STREET FLASHER SYSTEMS, IS LOCATED ON THE NORTHEAST QUADRANT OF CASCADE AVENUE/SECOND STREET ROUNDABOUT INTERSECTION (INPLACE 120/240 VOLT UNMETERED CABINET). POWER FROM A NEARBY INPLACE GROUND MOUNTED TRANSFORMER TO THE MAIN 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. POWER CABLES FROM THE MAIN SERVICE CABINET TO THE FOURTH STREET POLE MOUNTED DISCONNECT SHALL BE FURNISHED, INSTALLED AND MADE OPERATIONAL BY THE CONTRACTOR.
9) CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAKING OPERATIONAL CABLES AND FLASHER CABINET RELAYS/EQUIPMENT NEEDED TO ALLOW FOR THE INTENSITY OF THE LUMINAIRE AT EACH CROSSWALK TO BE INCREASED WITH EACH VIDEO DETECTOR OR PUSH BUTTON ACTIVATION OF THE FLASHER SYSTEM. SEE MISCELLANEOUS QUANTITIES AND SPECIAL PROVISIONS FOR FURTHER INFORMATION.

## SIGNING NOTES:

(1) SALVAGE INPLACE SIGN PANEL AND REINSTALL ON ADJACENT FLASHER PEDESTAL POLE (REMOVE INPLACE SIGN POST AND MOUNTING HARDWARE).

(2) SALVAGE INPLACE SIGN PANEL, POST AND MOUNTING HARDWARE TO CITY OF RIVER FALLS.

C-1
C-2 SEE DETAILS SHEET UNDER "REMOVING SIGNS TYPE II" TABLE
C-3 REGARDING INPLACE SIGNS LOCATED AT SPECIFIC LOCATIONS.

| PROJECT NO: 7640-00-71 | HWY: CASCADE AVENUE | COUNTY: PIERCE | FLASHER SYSTEM PLAN-CASCADE AVE AT FOURTH ST | SHEET 11 | E |
|---|---|---|---|---|---|



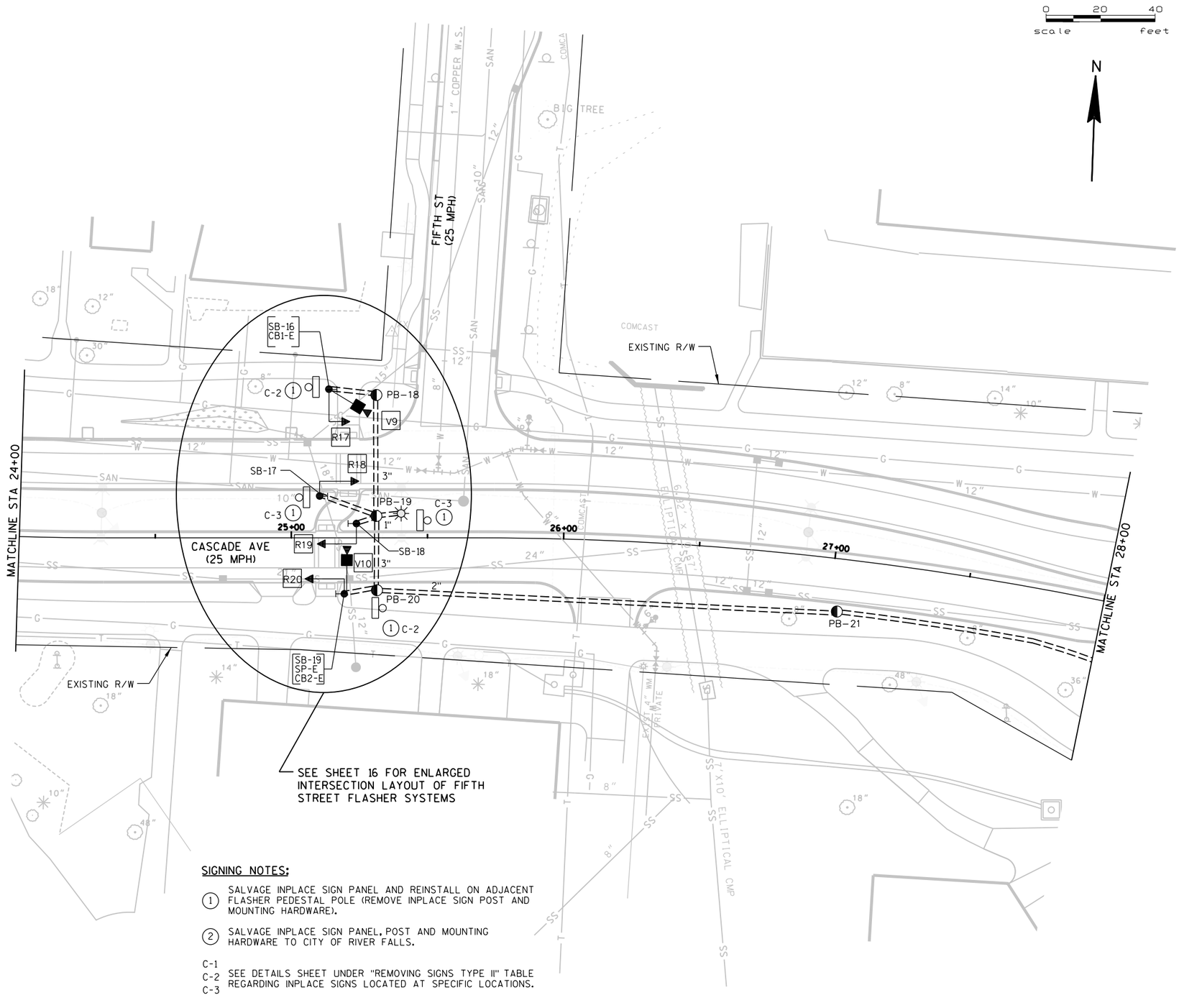
FILE NAME : N:\PT\R\River\119076\5-final-dsgn\51-drawings\10-Civil\DGN\050204 PN.dgn PLOT TIME : 10:16:24 AM PLOT DATE : 12/28/2012 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A
WISDOT/CADDS SHEET 44

## LEGEND OF SYMBOLS

| | |
|---|---|
| ======= | EXISTING NON-METALLIC ELECTRICAL CONDUIT (2" UNLESS OTHERWISE NOTED) |
| | RECTANGULAR RAPID FLASHING BEACON (RRFB)-POLE MOUNT (ON INPLACE TYPE 1 CONCRETE BASE) |
| | VIDEO SENSOR-POLE MOUNT (MOUNTED NEAR TOP OF POLE-FACING ADJACENT CROSSWALK) |
| PB–1 | EXISTING FLASHER SYSTEM PULL BOX STEEL 24" X 36" |
| LPB–1 | EXISTING STREET LIGHTING PULL BOX STEEL 24" X 36" |
| CB1–A | CAMERA/FLASHING BEACON CABINET-POLE MOUNT ("A" DENOTES FLASHER SYSTEM NUMBER) |
| H | PEDESTRIAN PUSH BUTTON AND SIGN (SEE DETAIL) |
| SP–A | SERVICE DISCONNECT-POLE MOUNT ("A" DENOTES FLASHER SYSTEM NUMBER) |
| V1 | VIDEO SENSOR NUMBER |
| R1 | RECTANGULAR RAPID FLASHING BEACON (RRFB) NUMBER |
| | EXISTING SERVICE CABINET A OR B (120/240 VOLT UNMETERED)-ON EXISTING SERVICE CABINET CONCRETE FOUNDATION (SEE DETAIL) |
| S | INPLACE GROUND MOUNTED TRANSFORMER (FOR SERVICE) |
| | EXISTING SIGN PANEL AND POST |
| | EXISTING LUMINAIRE AND POLE |

## NOTES:

1) ALL FLASHER POLE FOUNDATIONS, PULL BOXES, GROUND MOUNTED SERVICE CABINETS, CONDUIT, AND LUMINAIRES ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE.
2) ONE-2" PVC CONDUIT IS INPLACE FROM EACH FLASHER POLE PEDESTAL 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 LANDSCAPED AREAS 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 COORDINATE DIRECTLY WITH SUPPLIER OF VIDEO DETECTOR UNITS AND RRFB SYSTEMS IN ORDER TO PROGRAM, AIM, AND MAKE EACH VIDEO DETECTOR AND RRFB SYSTEM OPERATIONAL TO THE SATISFACTION OF THE ENGINEER.
7) SEE DETAILS FOR FURTHER INFORMATION REGARDING 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 FIFTH STREET FLASHER SYSTEMS, IS LOCATED ON THE NORTHEAST QUADRANT OF CASCADE AVENUE/SIXTH STREET ROUNDABOUT INTERSECTION (INPLACE 120/240 VOLT UNMETERED CABINET). POWER FROM A NEARBY INPLACE GROUND MOUNTED TRANSFORMER TO THE MAIN 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. POWER CABLES FROM THE MAIN SERVICE CABINET TO THE FIFTH STREET POLE MOUNTED DISCONNECT SHALL BE FURNISHED, INSTALLED AND MADE OPERATIONAL BY THE CONTRACTOR.
9) CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAKING OPERATIONAL CABLES AND FLASHER CABINET RELAYS/EQUIPMENT NEEDED TO ALLOW FOR THE INTENSITY OF THE LUMINAIRE AT EACH CROSSWALK TO BE INCREASED WITH EACH VIDEO DETECTOR OR PUSH BUTTON ACTIVATION OF THE FLASHER SYSTEM. SEE MISCELLANEOUS QUANTITIES AND SPECIAL PROVISIONS FOR FURTHER INFORMATION.




## SIGNING NOTES:

(1) SALVAGE INPLACE SIGN PANEL AND REINSTALL ON ADJACENT FLASHER PEDESTAL POLE (REMOVE INPLACE SIGN POST AND MOUNTING HARDWARE).

(2) SALVAGE INPLACE SIGN PANEL, POST AND MOUNTING HARDWARE TO CITY OF RIVER FALLS.

C-1
C-2 SEE DETAILS SHEET UNDER "REMOVING SIGNS TYPE II" TABLE REGARDING INPLACE SIGNS LOCATED AT SPECIFIC LOCATIONS.
C-3

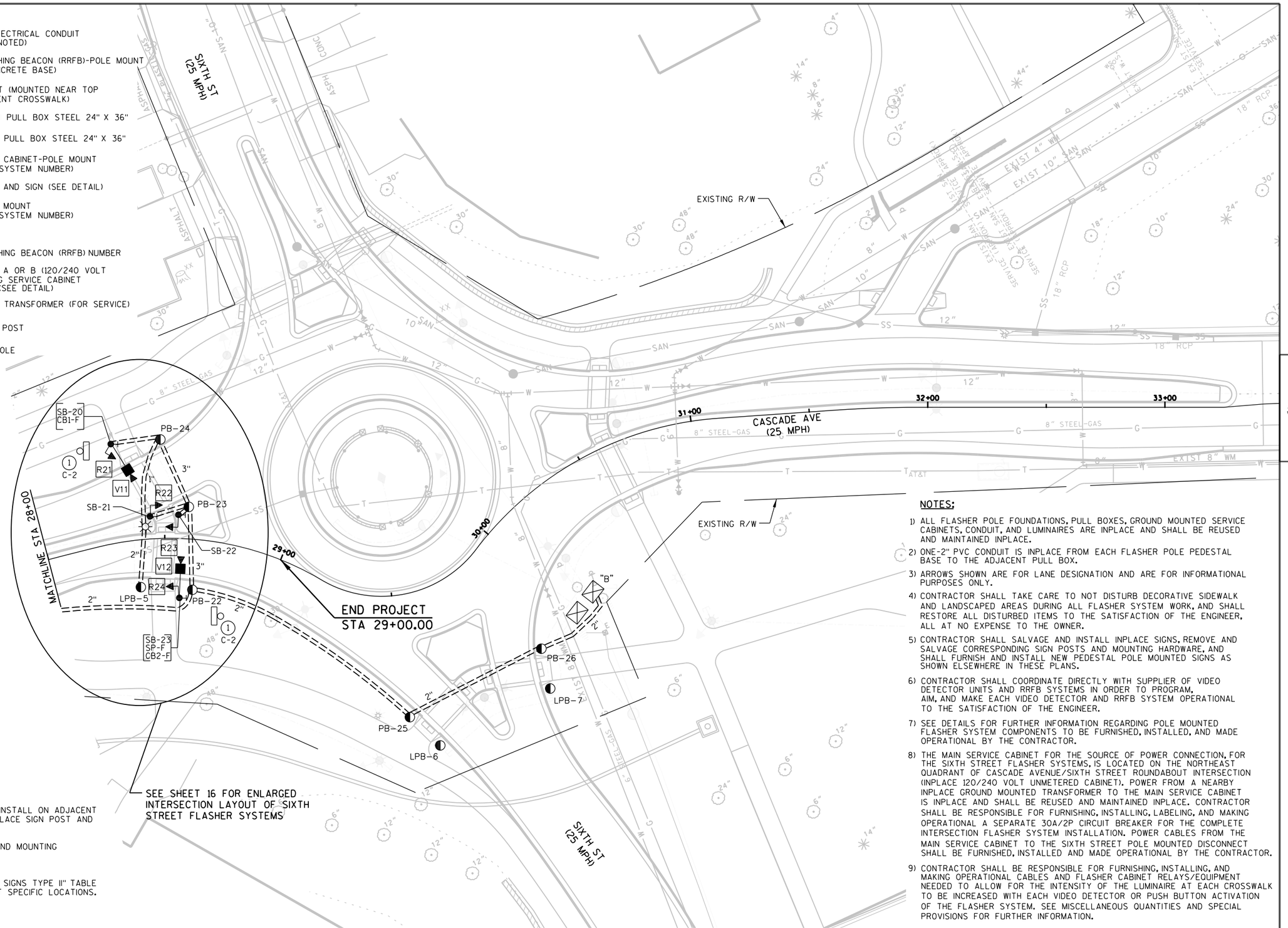
| PROJECT NO: 7640-00-71 | HWY: CASCADE AVENUE | COUNTY: PIERCE | FLASHER SYSTEM PLAN-CASCADE AVE AT FIFTH ST | SHEET 12 | E |
|---|---|---|---|---|---|



FILE NAME : N:\PT\R\River\119076\5-final-dsgn\51-drawings\10-Civil\DGN\050205 PN.dgn PLOT TIME : 10:16:37 AM PLOT DATE : 12/28/2012 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A
WISDOT/CADDS SHEET 44

## LEGEND OF SYMBOLS

- EXISTING NON-METALLIC ELECTRICAL CONDUIT (2" UNLESS OTHERWISE NOTED)
- RECTANGULAR RAPID FLASHING BEACON (RRFB)-POLE MOUNT (ON INPLACE TYPE 1 CONCRETE BASE)
- VIDEO SENSOR-POLE MOUNT (MOUNTED NEAR TOP OF POLE-FACING ADJACENT CROSSWALK)
- PB-1 — EXISTING FLASHER SYSTEM PULL BOX STEEL 24" X 36"
- LPB-1 — EXISTING STREET LIGHTING PULL BOX STEEL 24" X 36"
- CB1-A — CAMERA/FLASHING BEACON CABINET-POLE MOUNT ("A" DENOTES FLASHER SYSTEM NUMBER)
- PEDESTRIAN PUSH BUTTON AND SIGN (SEE DETAIL)
- SP-A — SERVICE DISCONNECT-POLE MOUNT ("A" DENOTES FLASHER SYSTEM NUMBER)
- V1 — VIDEO SENSOR NUMBER
- R1 — RECTANGULAR RAPID FLASHING BEACON (RRFB) NUMBER
- EXISTING SERVICE CABINET A OR B (120/240 VOLT UNMETERED)-ON EXISTING SERVICE CABINET CONCRETE FOUNDATION (SEE DETAIL)
- INPLACE GROUND MOUNTED TRANSFORMER (FOR SERVICE)
- EXISTING SIGN PANEL AND POST
- EXISTING LUMINAIRE AND POLE




## SIGNING NOTES:

(1) SALVAGE INPLACE SIGN PANEL AND REINSTALL ON ADJACENT FLASHER PEDESTAL POLE (REMOVE INPLACE SIGN POST AND MOUNTING HARDWARE).

(2) SALVAGE INPLACE SIGN PANEL, POST AND MOUNTING HARDWARE TO CITY OF RIVER FALLS.

C-1, C-2, C-3 SEE DETAILS SHEET UNDER "REMOVING SIGNS TYPE II" TABLE REGARDING INPLACE SIGNS LOCATED AT SPECIFIC LOCATIONS.

## NOTES:

1) ALL FLASHER POLE FOUNDATIONS, PULL BOXES, GROUND MOUNTED SERVICE CABINETS, CONDUIT, AND LUMINAIRES ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE.
2) ONE-2" PVC CONDUIT IS INPLACE FROM EACH FLASHER POLE PEDESTAL 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 LANDSCAPED AREAS 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 COORDINATE DIRECTLY WITH SUPPLIER OF VIDEO DETECTOR UNITS AND RRFB SYSTEMS IN ORDER TO PROGRAM, AIM, AND MAKE EACH VIDEO DETECTOR AND RRFB SYSTEM OPERATIONAL TO THE SATISFACTION OF THE ENGINEER.
7) SEE DETAILS FOR FURTHER INFORMATION REGARDING 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 SIXTH STREET FLASHER SYSTEMS, IS LOCATED ON THE NORTHEAST QUADRANT OF CASCADE AVENUE/SIXTH STREET ROUNDABOUT INTERSECTION (INPLACE 120/240 VOLT UNMETERED CABINET). POWER FROM A NEARBY INPLACE GROUND MOUNTED TRANSFORMER TO THE MAIN 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. POWER CABLES FROM THE MAIN SERVICE CABINET TO THE SIXTH STREET POLE MOUNTED DISCONNECT SHALL BE FURNISHED, INSTALLED AND MADE OPERATIONAL BY THE CONTRACTOR.
9) CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAKING OPERATIONAL CABLES AND FLASHER CABINET RELAYS/EQUIPMENT NEEDED TO ALLOW FOR THE INTENSITY OF THE LUMINAIRE AT EACH CROSSWALK TO BE INCREASED WITH EACH VIDEO DETECTOR OR PUSH BUTTON ACTIVATION OF THE FLASHER SYSTEM. SEE MISCELLANEOUS QUANTITIES AND SPECIAL PROVISIONS FOR FURTHER INFORMATION.

| PROJECT NO: 7640-00-71 | HWY: CASCADE AVE | COUNTY: PIERCE | FLASHER SYSTEM PLAN-CASCADE AVE AT SIXTH ST | SHEET 13 | E |
|---|---|---|---|---|---|



FILE NAME : N:\PT\R\River\119076\5-final-dsgn\51-drawings\10-Civil\DGN\050206 PN.dgn PLOT TIME : 10:16:50 AM PLOT DATE : 12/28/2012 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A
WISDOT/CADDS SHEET 44

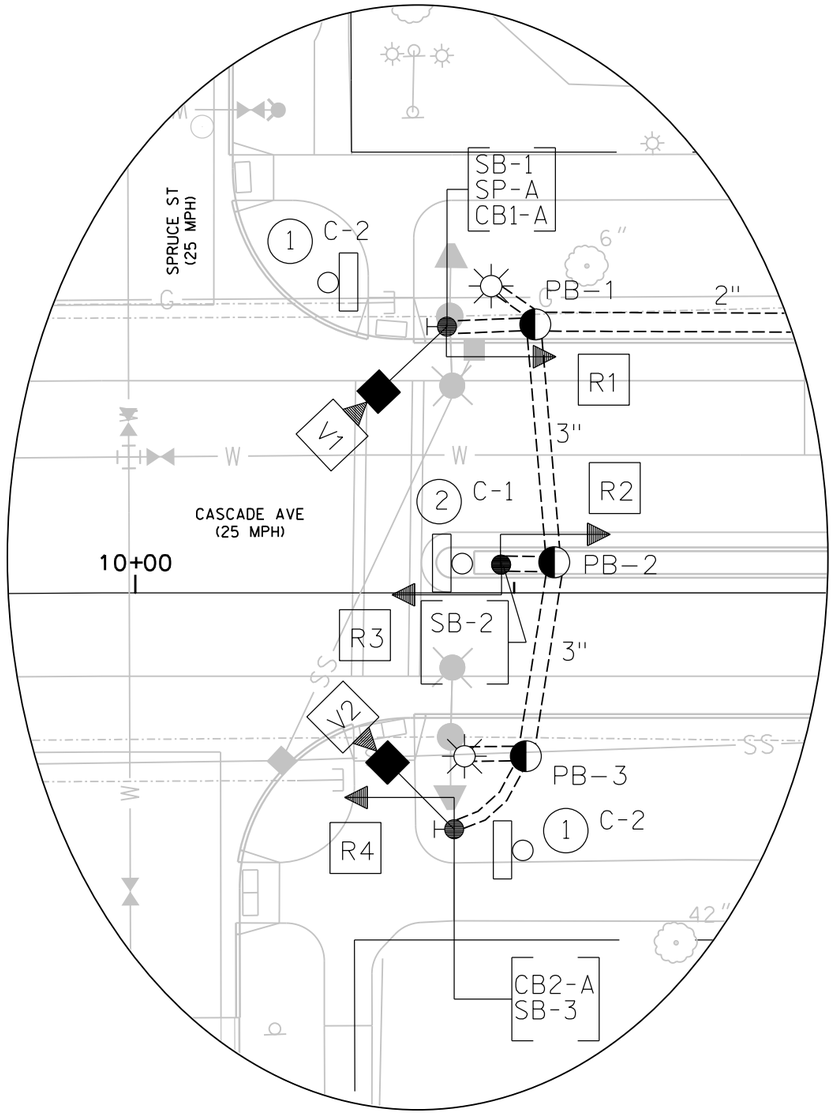
EXISTING UTILITY LEGEND

- ELECTRICAL- RIVER FALLS MUNICIPAL UTILITIES
- SS STORM SEWER- CITY OF RIVER FALLS
- W WATERMAIN- RIVER FALLS MUNICIPAL UTILITIES
- SAN SANITARY SEWER- RIVER FALLS MUNICIPAL UTILITIES
- G GAS MAIN- ST. CROIX GAS
- T COMMUNICATIONS- AT&T

0 10 20
scale feet

N

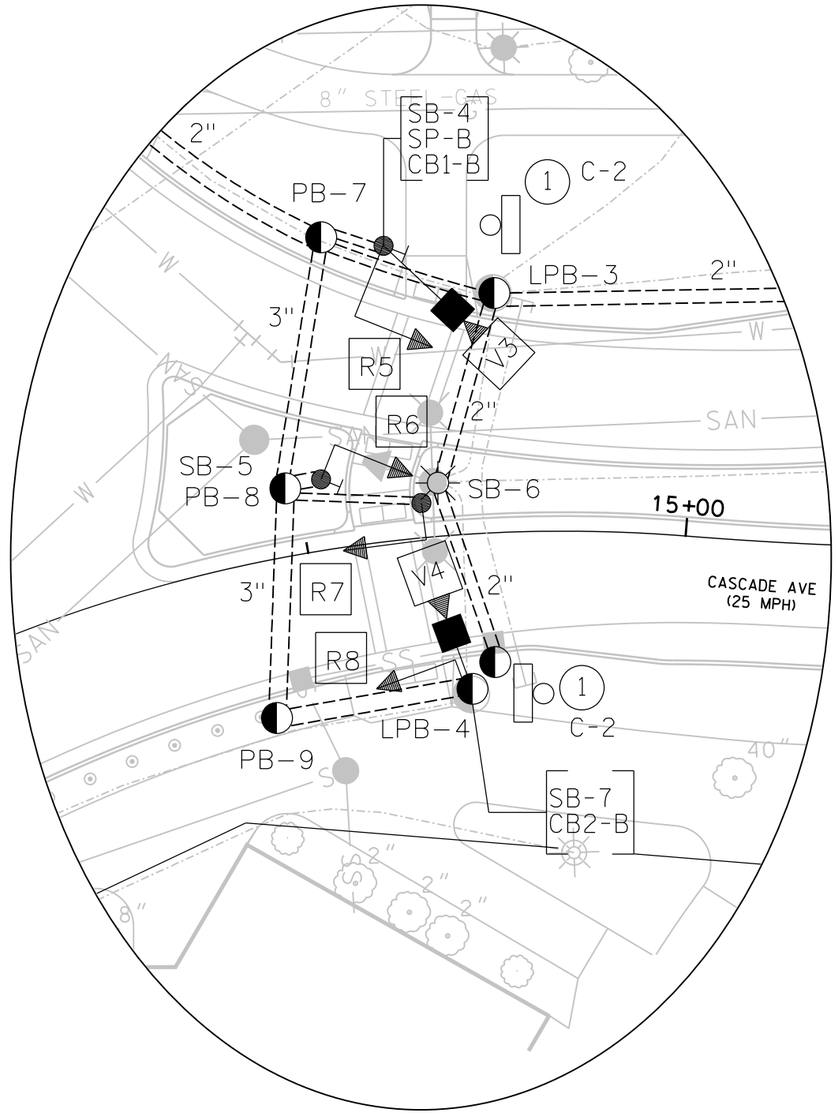
SPRUCE STREET
FLASHER SYSTEMS




0 10 20
scale feet

N

SECOND STREET
FLASHER SYSTEMS




| PROJECT NO: 7640-00-71 | HWY: CASCADE AVENUE | COUNTY: PIERCE | FLASHER SYSTEMS - ENLARGED INTERSECTION LAYOUT | SHEET 14 | E |
|---|---|---|---|---|---|



FILE NAME : N:\PT\R\River\119076\5-final-dsgn\51-drawings\10-Civil\DGN\050207 PN.dgn PLOT TIME : 10:17:03 AM PLOT DATE : 12/28/2012 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A

WISDOT/CADDS SHEET 44

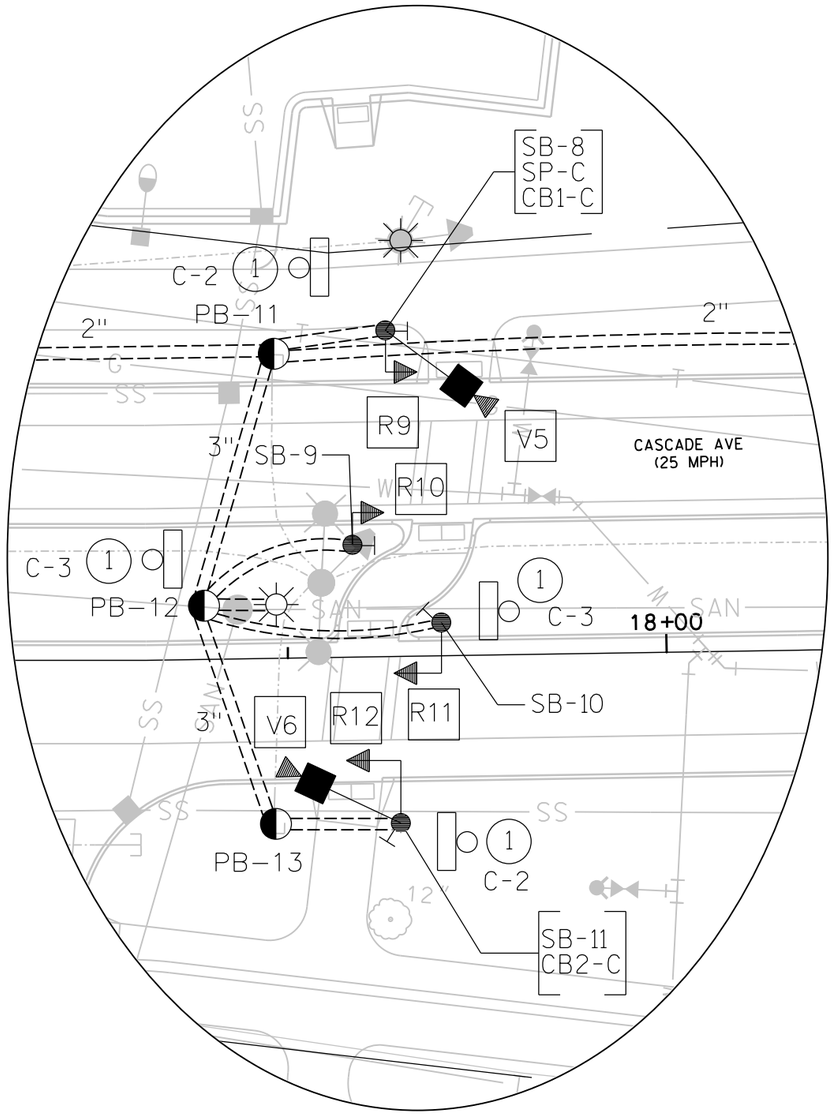
EXISTING UTILITY LEGEND

- ELECTRICAL- RIVER FALLS MUNICIPAL UTILITIES
- SS — STORM SEWER- CITY OF RIVER FALLS
- W — WATERMAIN- RIVER FALLS MUNICIPAL UTILITIES
- SAN — SANITARY SEWER- RIVER FALLS MUNICIPAL UTILITIES
- G — GAS MAIN- ST. CROIX GAS
- T — COMMUNICATIONS- AT&T

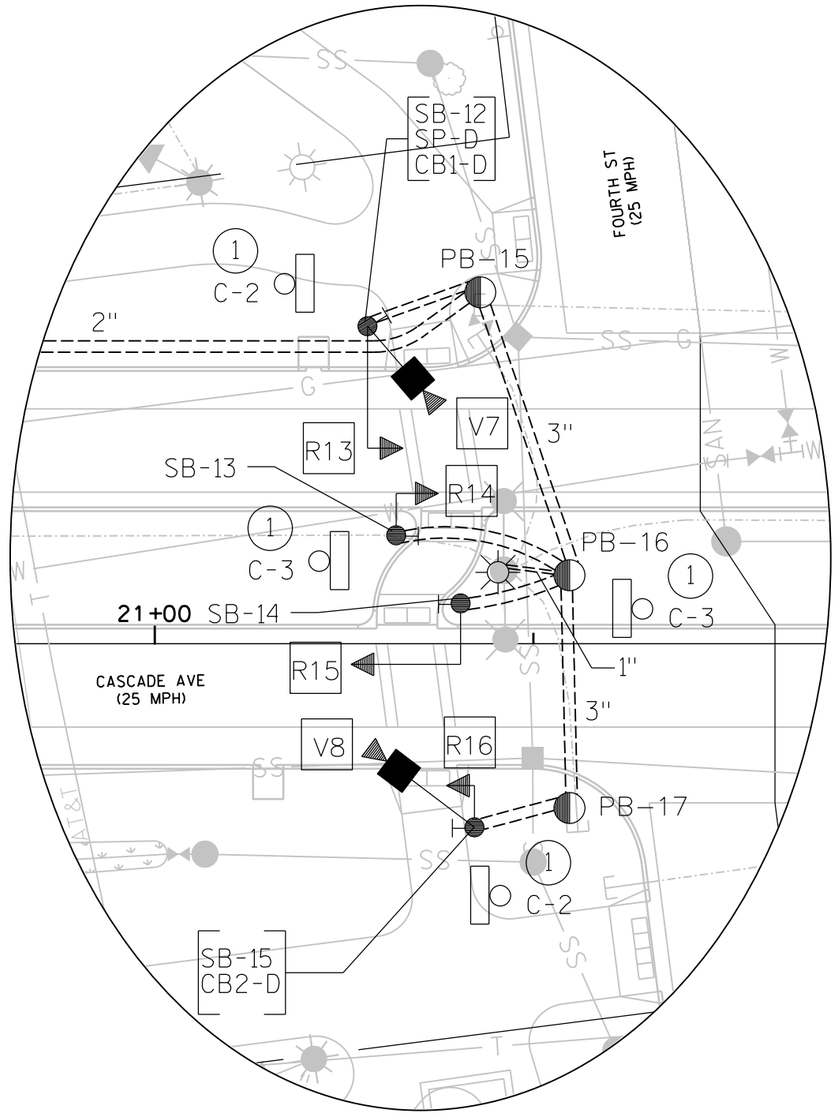
0 20 40
scale feet

N

## THIRD STREET FLASHER SYSTEMS




## FOURTH STREET FLASHER SYSTEMS




| PROJECT NO: 7640-00-71 | HWY: CASCADE AVENUE | COUNTY: PIERCE | FLASHER SYSTEMS - ENLARGED INTERSECTION LAYOUT | SHEET 15 17 | E |
|---|---|---|---|---|---|

FILE NAME : N:\PT\R\River\119076\5-final-dsgn\51-drawings\10-Civil\DGN\050208 PN.dgn PLOT TIME : 10:17:16 AM PLOT DATE : 12/28/2012 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A
WISDOT/CADDS SHEET 44

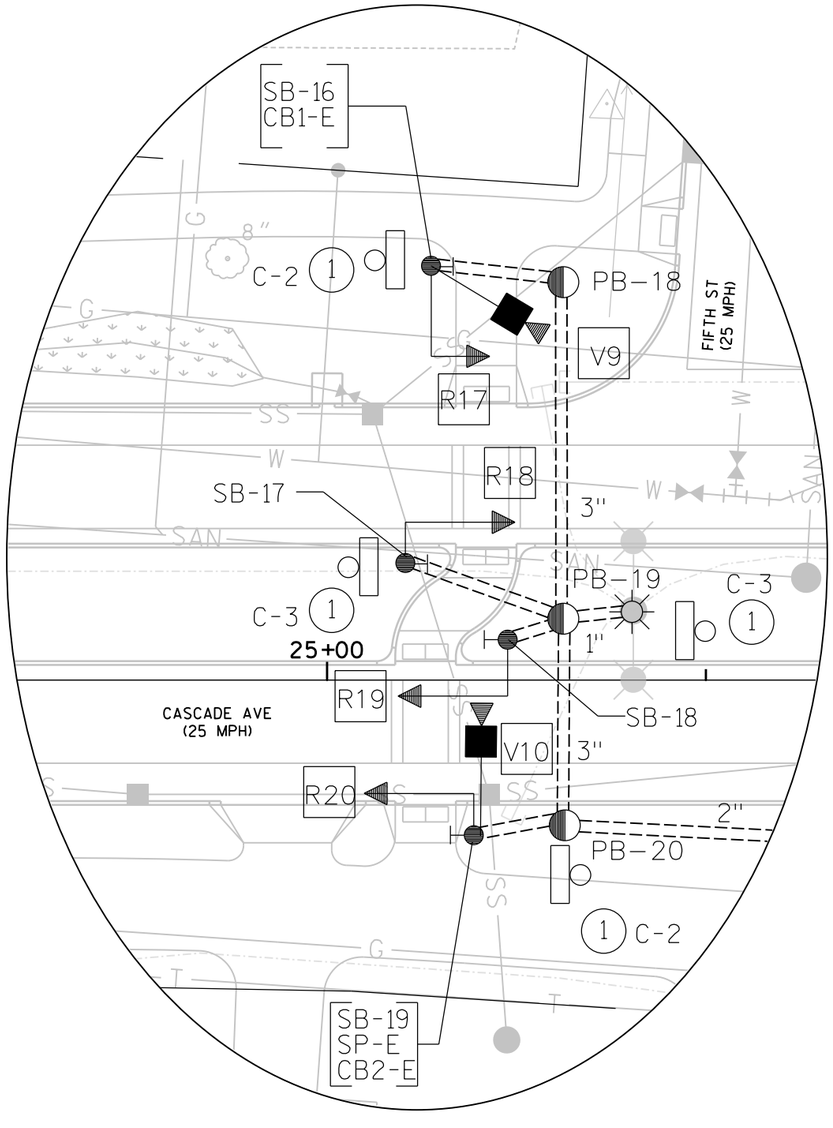
EXISTING UTILITY LEGEND

- ELECTRICAL- RIVER FALLS MUNICIPAL UTILITIES
- SS — STORM SEWER- CITY OF RIVER FALLS
- W — WATERMAIN- RIVER FALLS MUNICIPAL UTILITIES
- SAN — SANITARY SEWER- RIVER FALLS MUNICIPAL UTILITIES
- G — GAS MAIN- ST. CROIX GAS
- T — COMMUNICATIONS- AT&T

0 10 20
scale feet

N

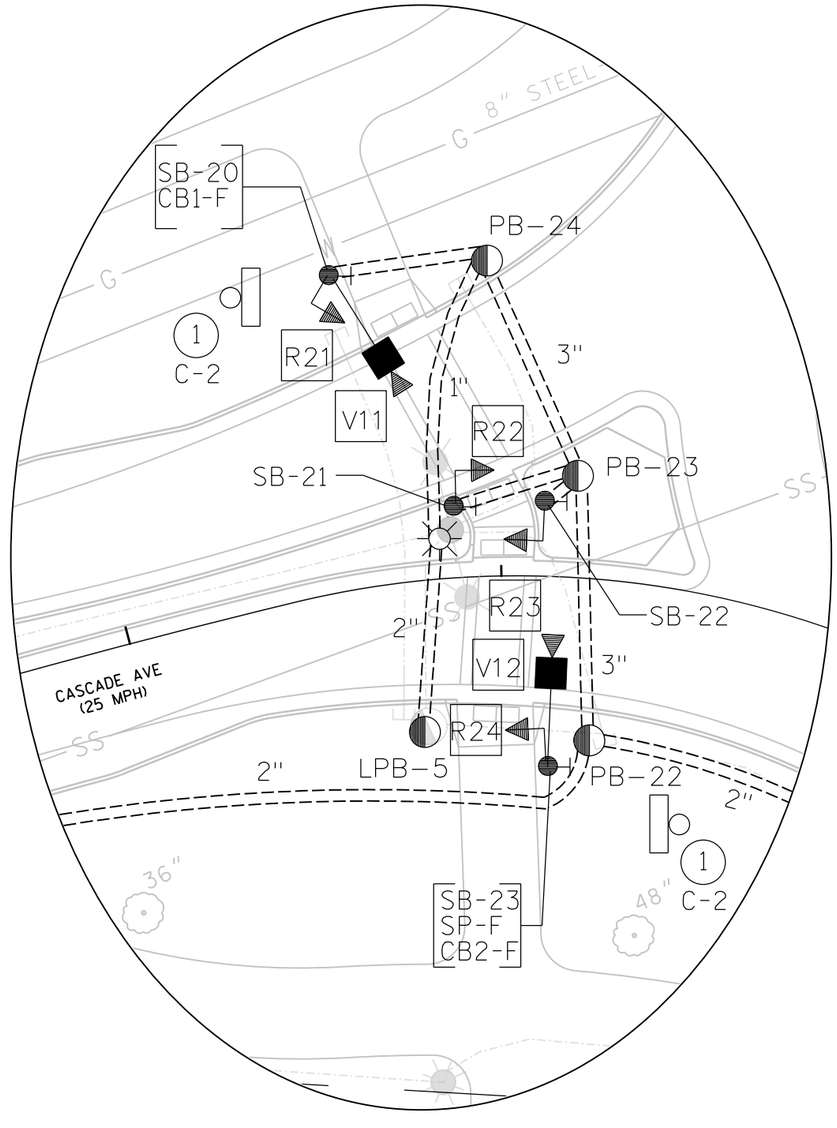
## FIFTH STREET FLASHER SYSTEMS




0 10 20
scale feet

N

## SIXTH STREET FLASHER SYSTEMS




| PROJECT NO: 7640-00-71 | HWY: CASCADE AVENUE | COUNTY: PIERCE | FLASHER SYSTEMS - ENLARGED INTERSECTION LAYOUT | SHEET 16 | E |
|---|---|---|---|---|---|

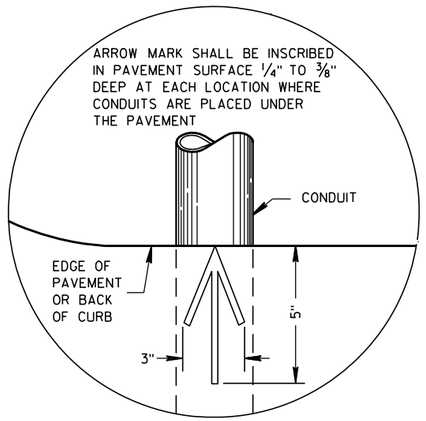


FILE NAME : N:\PT\R\River\119076\5-final-dsgn\51-drawings\10-Civil\DGN\050209 PN.dgn PLOT TIME : 10:17:29 AM PLOT DATE : 12/28/2012 PLOT BY : SEH PLOT NAME : PLOT SCALE : N/A

WISDOT/CADDS SHEET 44

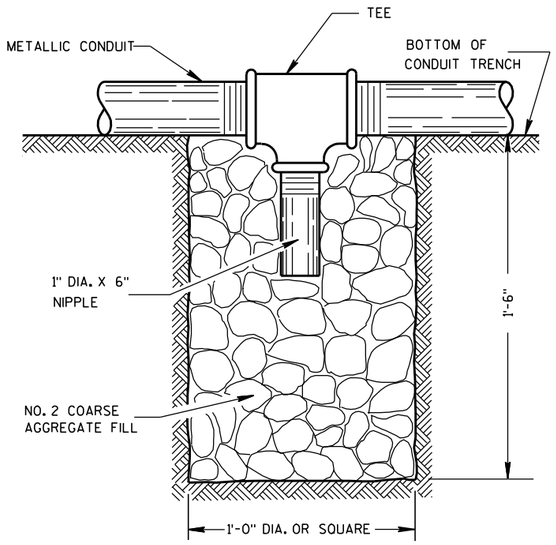
# Standard Detail Drawing List

| | |
|---|---|
| 09B02-07 | CONDUIT |
| 09B04-09 | PULL BOX |
| 09C02-06 | CONCRETE BASES, TYPES 1, 2 & 5 |
| 09C03-03 | TRANSFORMER/PEDESTAL BASES |
| 09D02-02 | SIGNAL OR LIGHTING CONTROL CABINET |
| 09D03-02 | POST MOUNTED CONTROLLER SERVICE INSTALLATION |
| 09E01-11G | HARDWARE DETAILS FOR POLE MOUNTINGS |
| 09E05-05 | TRAFFIC SIGNAL STANDARD ORNAMENTAL BRACKET MOUNTINGS TYPICAL FOR 13 FT. OR 15 FT. |
| 09E07-05 | TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL  MOUNTING DETAILS |



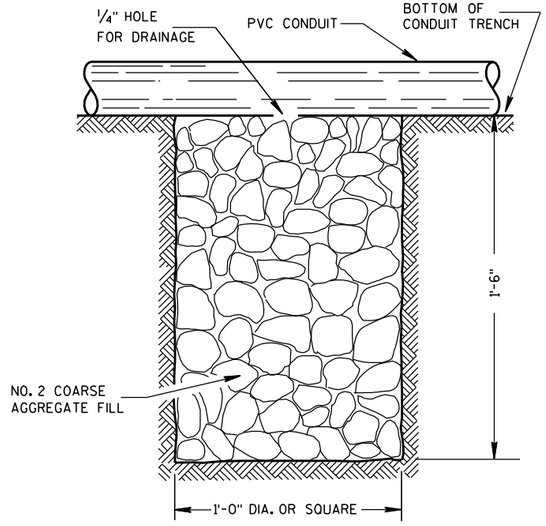

PLAN VIEW

**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.

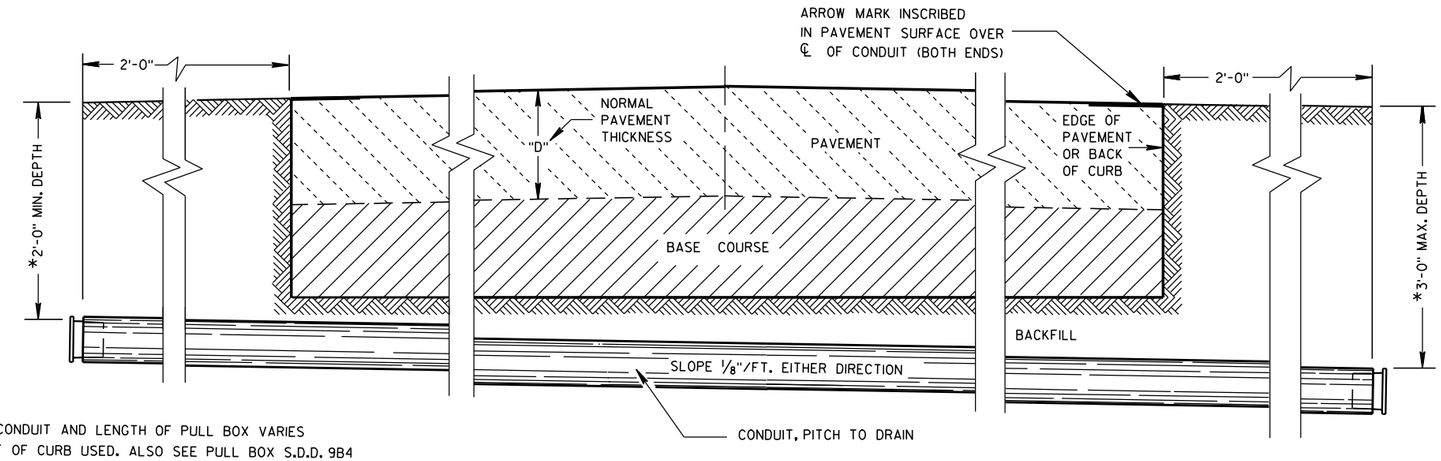
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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

HWYS





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S.D.D. 9 B 2-7

## 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.

## 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. THE MECHANICAL CONNECTION (INSIDE AND OUTSIDE) TO THE PULL BOX, SHALL BE TOTALLY AND PERMANENTLY SEALED WITH A SILICONE OR RUBBERIZED CAULKING COMPOUND AS APPROVED BY THE ENGINEER.

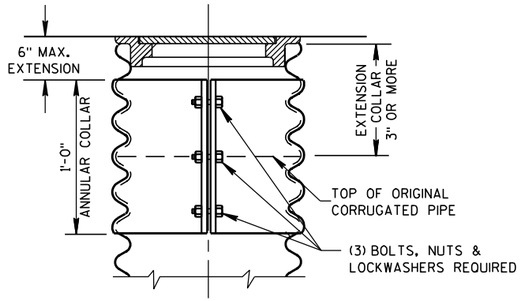
GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

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

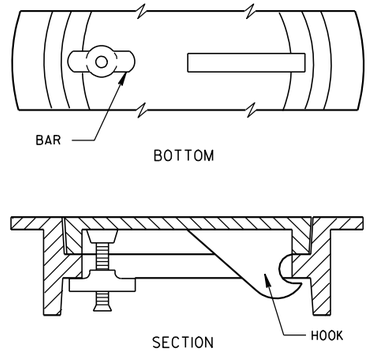
S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

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.

IF PULL BOX EQUIPMENT GROUNDING IS REQUIRED USING AN EQUIPMENT GROUNDING ELECTRODE IN EACH PULL BOX, THE EQUIPMENT GROUNDING ELECTRODE SHALL BE 5/8" X 8'-0", COPPERCLAD AND BE EXOTHERMICALLY WELDED TO A #4 AWG, COPPER, STRANDED WIRE (BARE OR GREEN INSULATED). THE #4 AWG WIRE SHALL BE 4 FEET IN LENGTH, NEATLY COILED, TAPED AND AVAILABLE FOR USE WHEN REQUIRED.

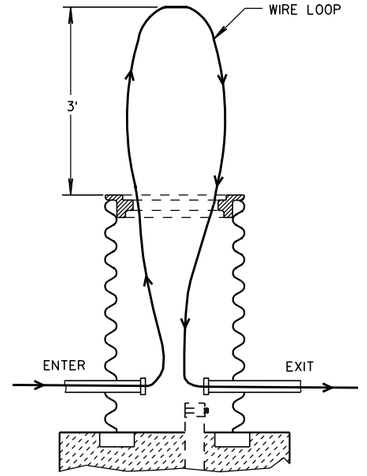



**CORRUGATED PIPE EXTENDER**

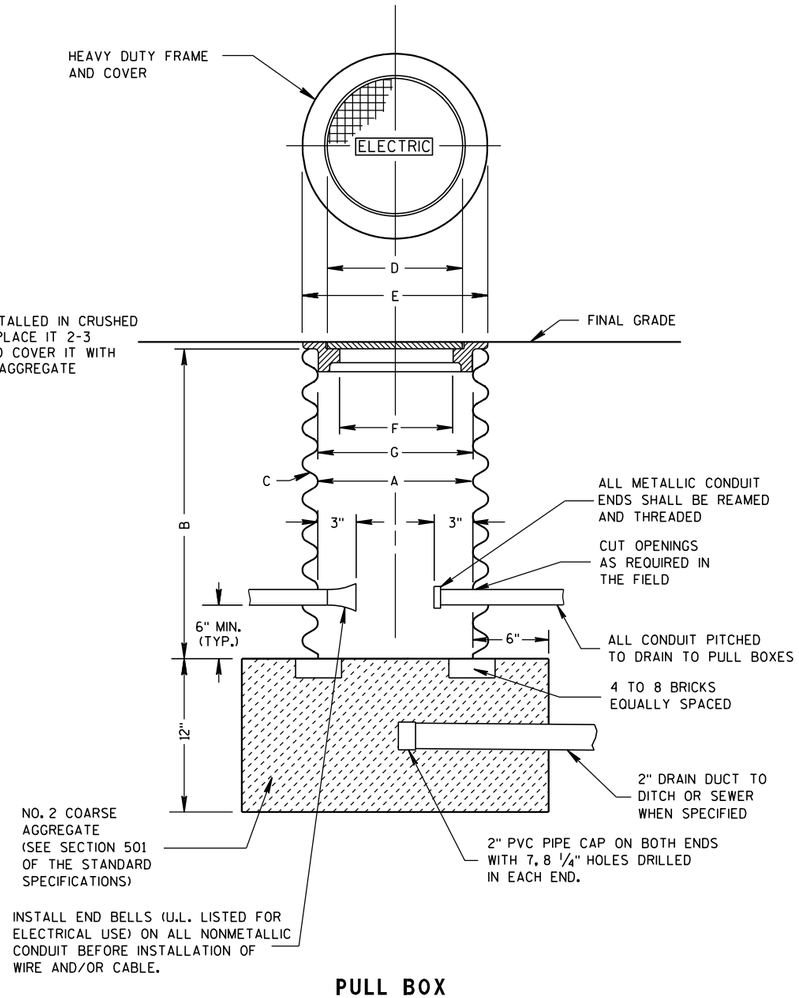



**ALTERNATE COVER (LOCKING)**

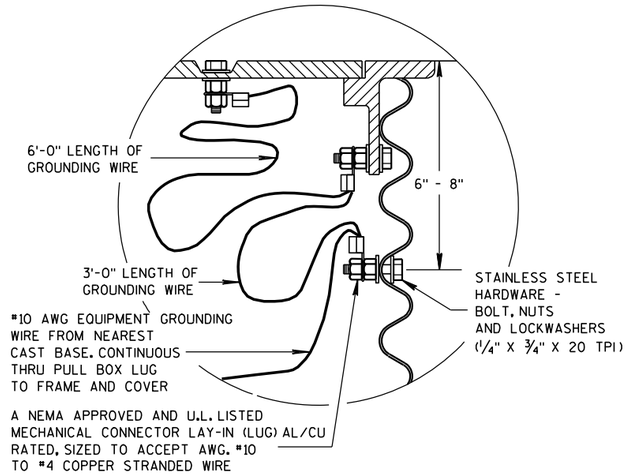
TIGHTENING BAR TYPE




**MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX**




**PULL BOX**




**EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES**

**PULL BOX**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/27/06 DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI



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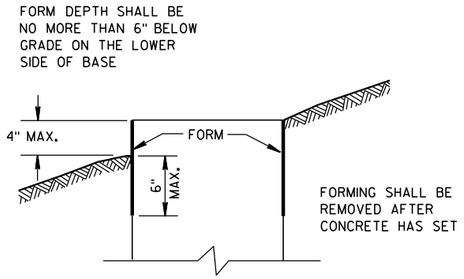
S.D.D. 9 B 4-9




## 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.

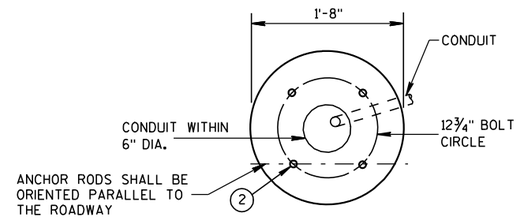
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

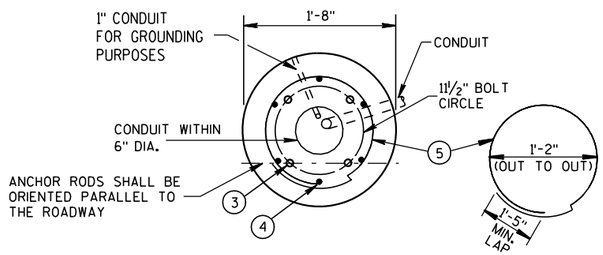
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

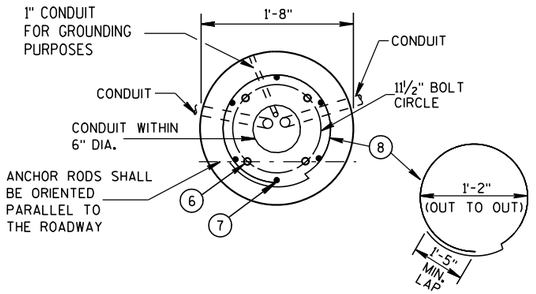
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

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

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

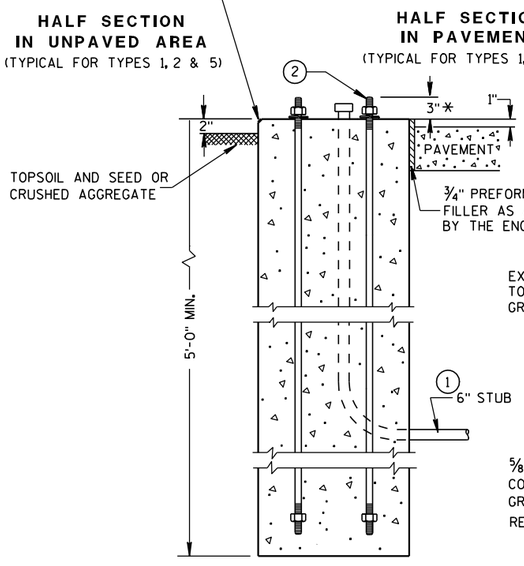



FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

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

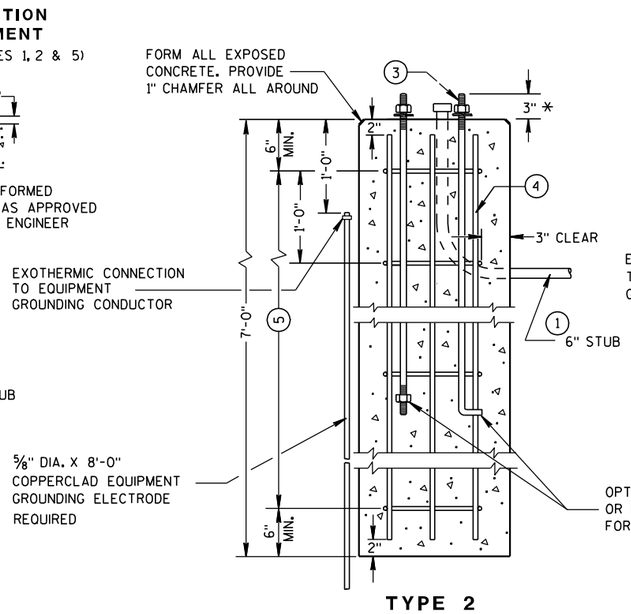



### HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2 & 5)



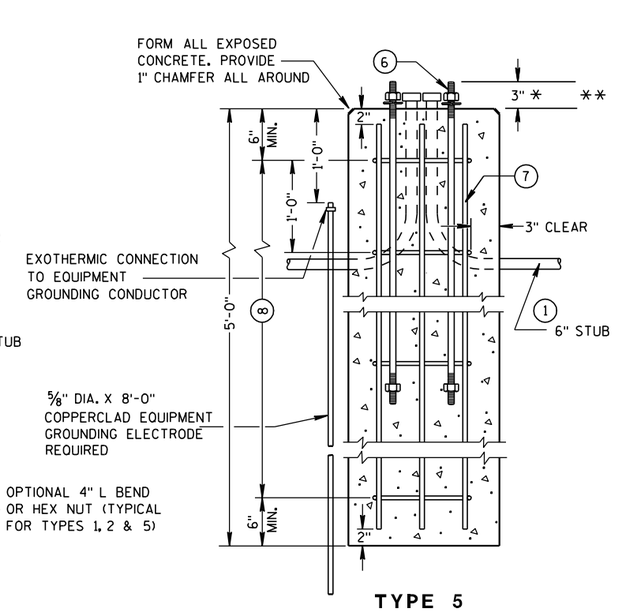

**TYPE 1**

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
22
HWYS
FHWA

## GENERAL NOTES

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

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

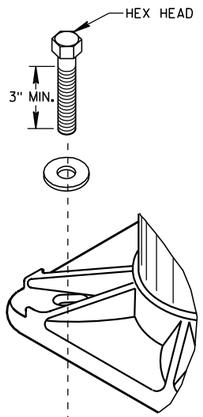
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

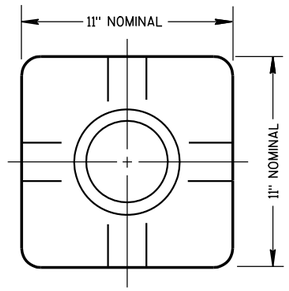
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

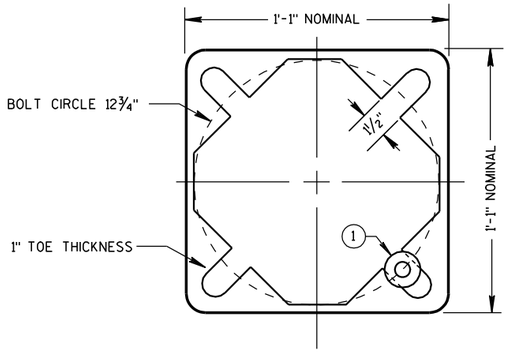
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1½", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

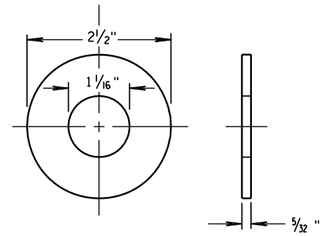



TOP VIEW
(PEDESTAL BASE)

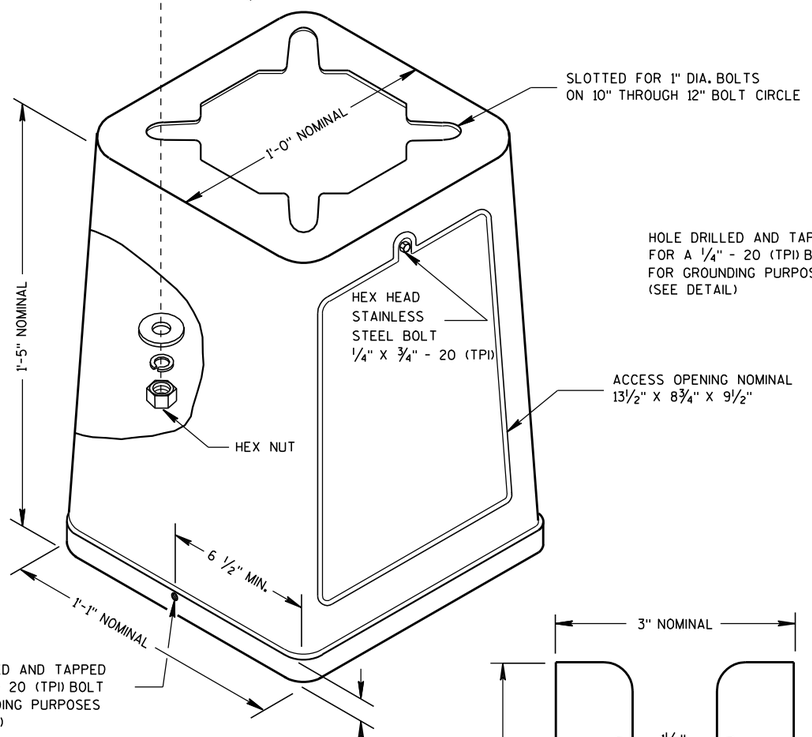



BOTTOM VIEW
(PEDESTAL BASE)

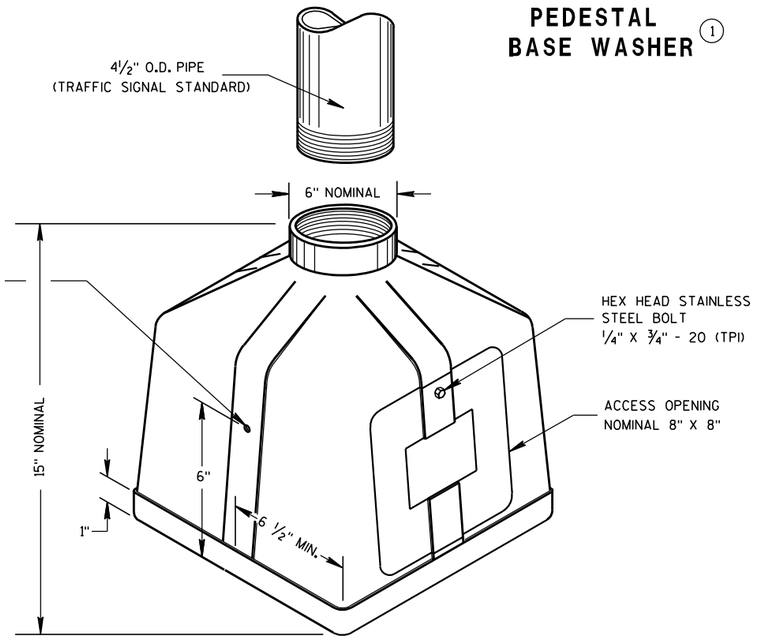



ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

**PEDESTAL BASE WASHER** (1)

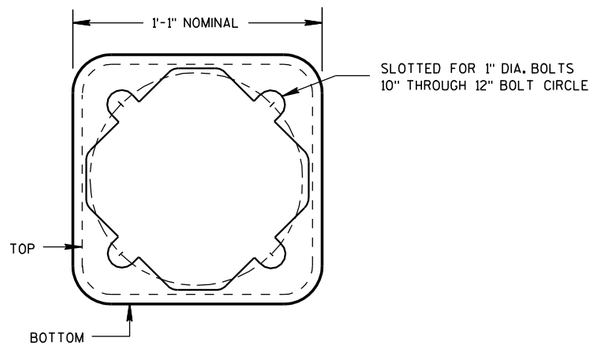



ISOMETRIC VIEW

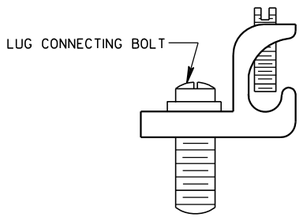



ISOMETRIC VIEW

**PEDESTAL BASE**




BOTTOM VIEW
(TRANSFORMER BASE)

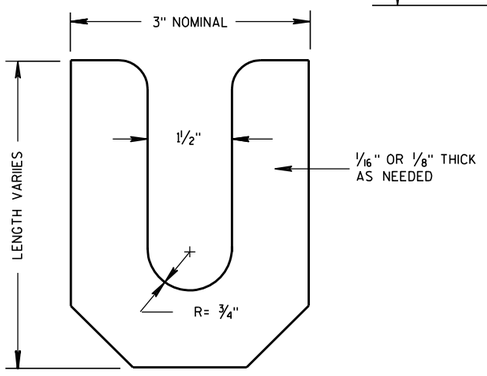



**TYPICAL MECHANICAL CONNECTOR LUG**

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

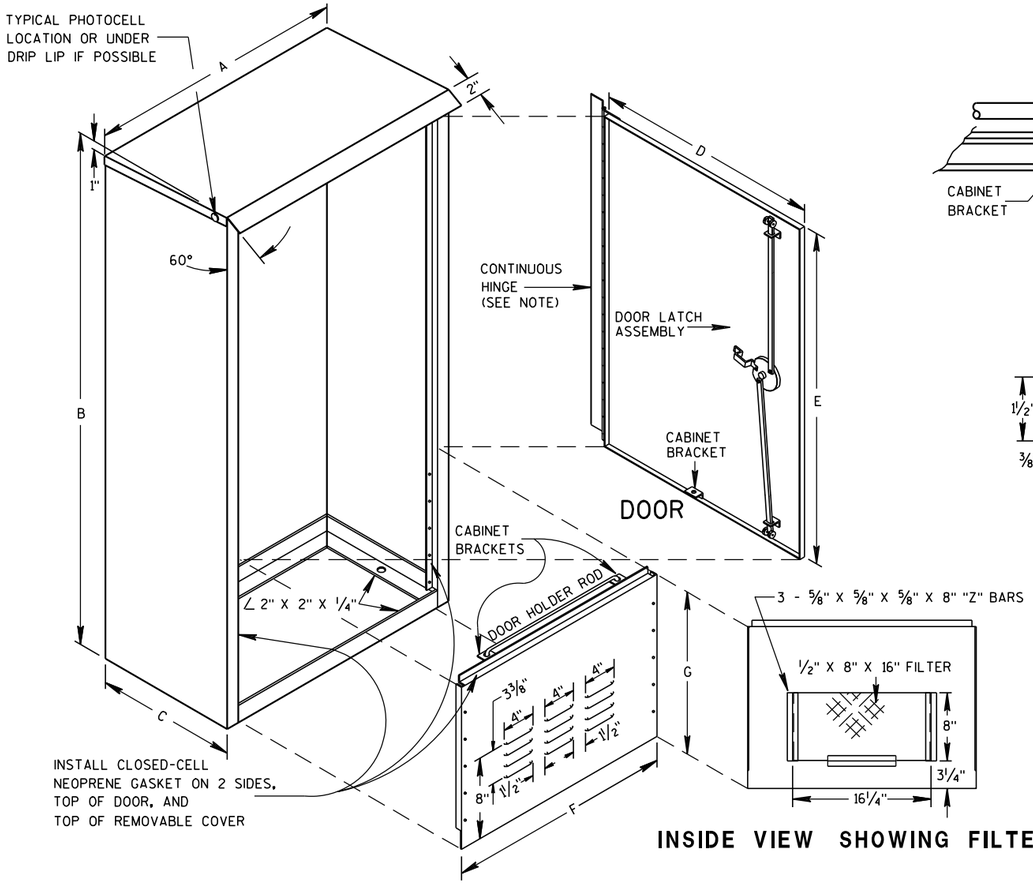
APPROVED
10/27/09 — DATE
/S/ Joanna L. Rich — STATE ELECTRICAL ENGI
23 — HWYS
FHWA

6

S.D.D. 9 C 3-3

6

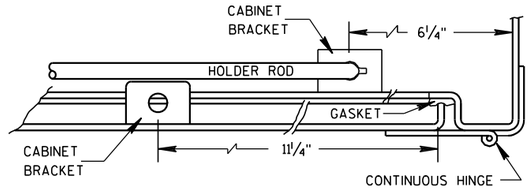
S.D.D. 9 C 3-3



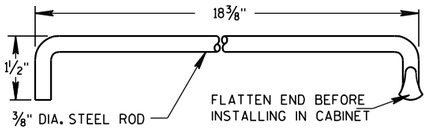

DOOR

REMOVABLE COVER

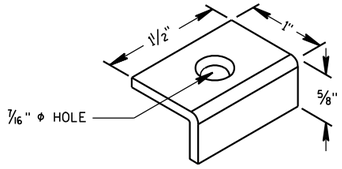
INSIDE VIEW SHOWING FILTER




HINGE & DOOR HOLDER




HOLDER ROD



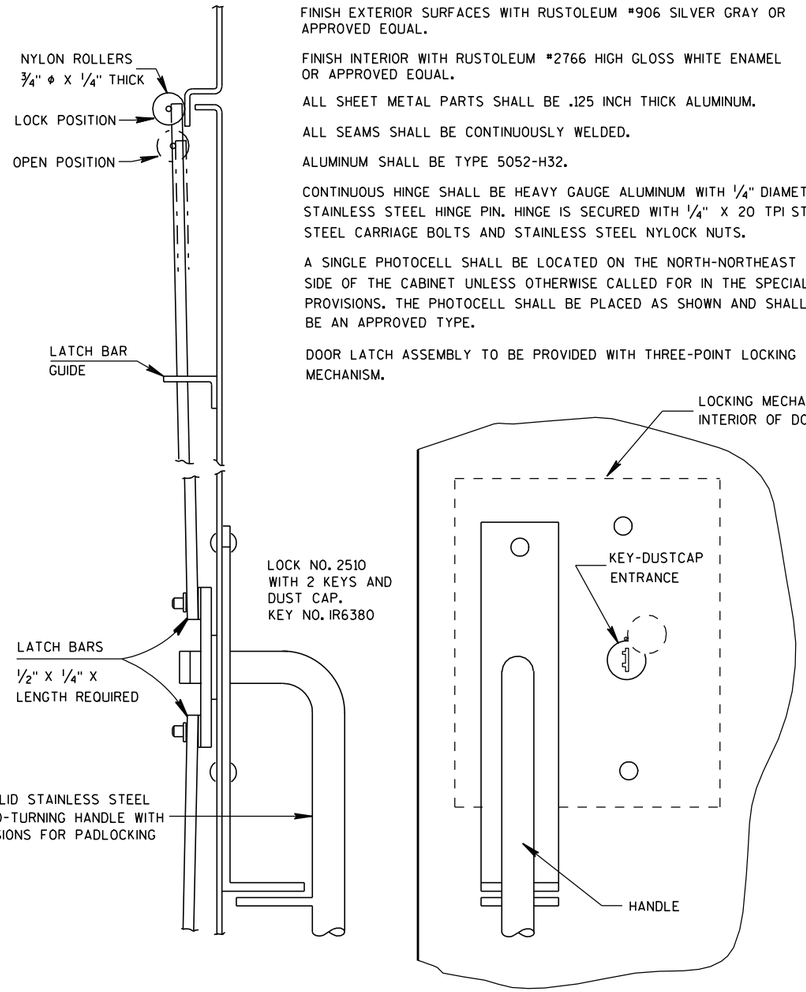

CABINET BRACKET




MOUNTING BASE

## TABLE OF DIMENSIONS (INCHES)

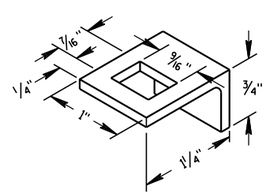
| MARK | CABINET TYPE | | |
|---|---|---|---|
| | 3060 | 3860 | 3866 |
| A | 30 | 38 | 38 |
| B | 60 | 60 | 66 |
| C | 16 1/2 | 16 1/2 | 24 |
| D | 26 1/2 | 34 3/4 | 33 3/4 |
| E | 38 3/4 | 38 3/4 | 38 3/4 |
| F | 26 1/2 | 34 3/4 | 33 3/4 |
| G | 19 | 19 | 25 |
| H | 16 1/2 | 16 1/2 | 24 |
| H/2 | 8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




SIDE VIEW

FRONT VIEW

LATCH ASSEMBLY




LATCH BAR GUIDE

## GENERAL NOTES

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

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH 1/4" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH 1/4" X 20 TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH-NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE AN APPROVED TYPE.

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

# SIGNAL OR LIGHTING CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/21/96 — DATE
/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI
HWYS
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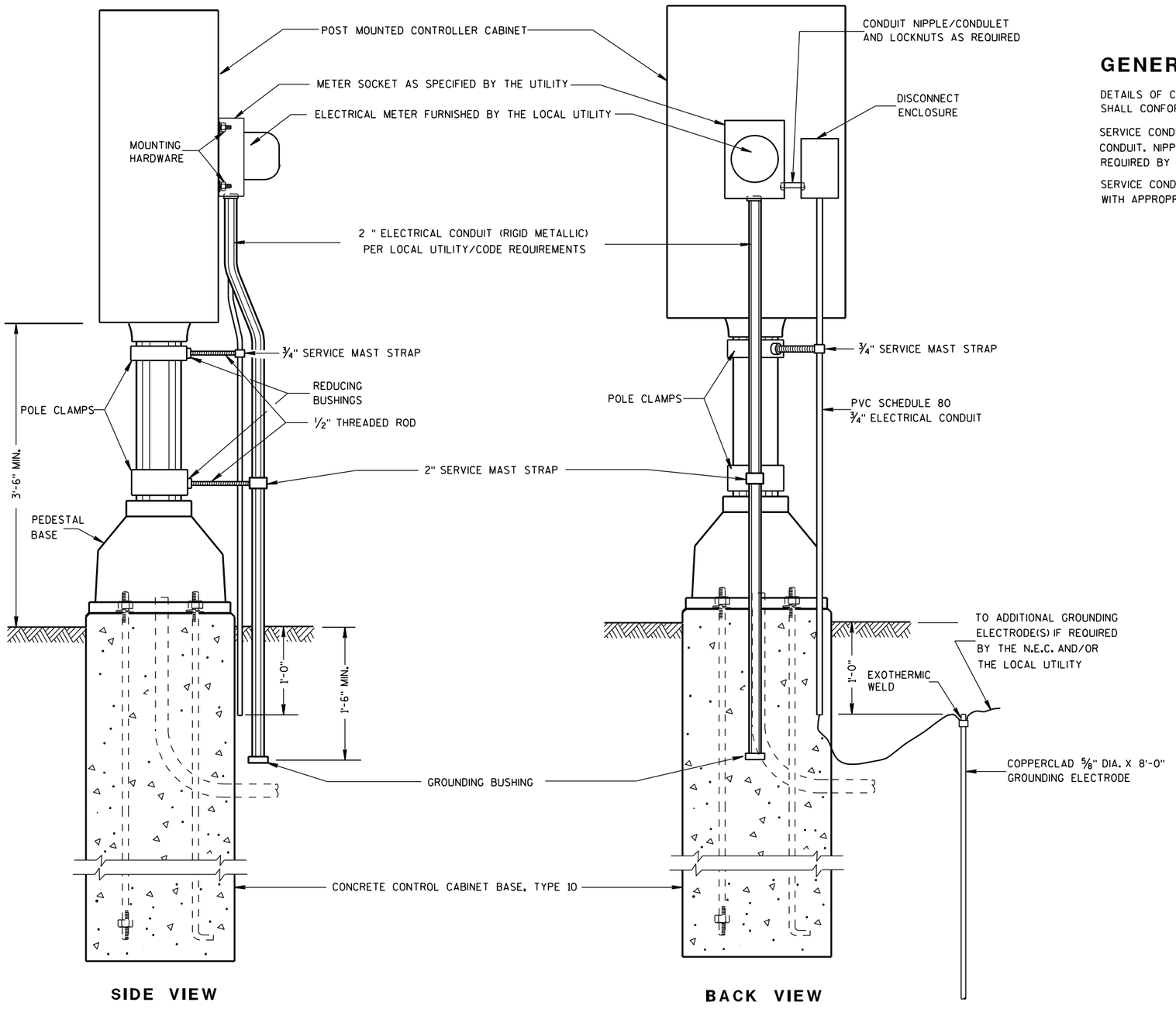
6
S.D.D. 9 D 2-2




# POST MOUNTED CONTROLLER SERVICE INSTALLATION

## GENERAL NOTES

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

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID STEEL OR SCHEDULE 80 PVC ELECTRICAL CONDUIT. NIPPLES AND/OR CONDULETS, WITH LOCK NUTS AND GROUNDING BUSHINGS AS REQUIRED BY THE N.E.C. OR THE LOCAL UTILITY.

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

**POST MOUNTED CONTROLLER SERVICE INSTALLATION**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2003 — DATE

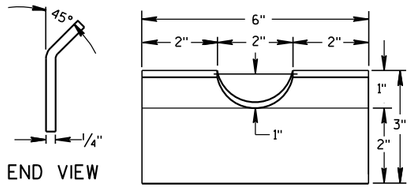
/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI — HWYS

FHWA



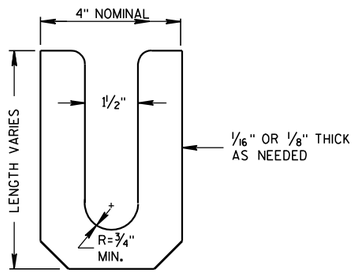


6 S.D.D. 9 D 3-2



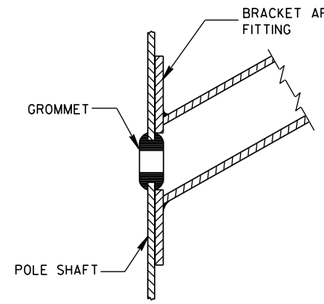

## RECTANGULAR CLAMP SHIM

(4 TO A SET)

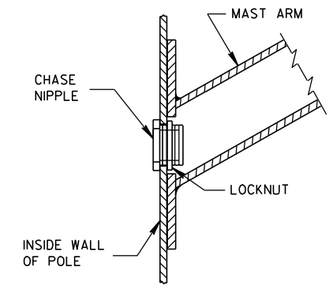



## LEVELING SHIM (15)

SHALL BE ALUMINUM




## TYPICAL APPLICATION OF GROMMET IN POLE SHAFT




## TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

## GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

(10.) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

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

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

(13.) OUTSIDE SHIM DIAMETER - (4.5" O.D. FOR LUMINAIRE MAST ARM)
(6.625" O.D. FOR TROMBONE MAST ARM)

(14.) VARIABLE SHIM THICKNESS - (0.10", 0.25", 0.35", 0.53" OR 0.70")

SHIM THICKNESS FOR TROMBONE MAST ARMS MAY BE TYPICALLY 0.25", 0.35", 0.53" OR 0.70".

SHIM THICKNESS FOR LUMINAIRE MAST ARMS MAY BE TYPICALLY 0.10", 0.25" OR 0.35".

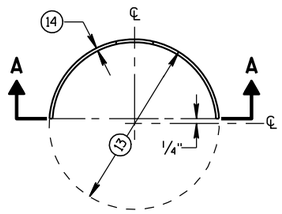
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.

SHIM THICKNESS SHALL BE IMPRESSED INTO EACH SHIM. NUMERALS SHALL BE 1/4" HIGH AND LEGIBLE.

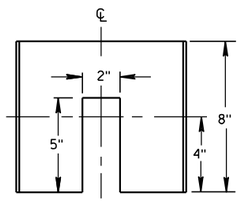
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.

(15.) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

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



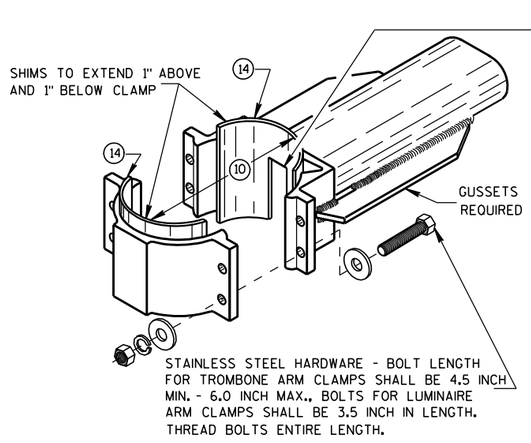

PLAN VIEW



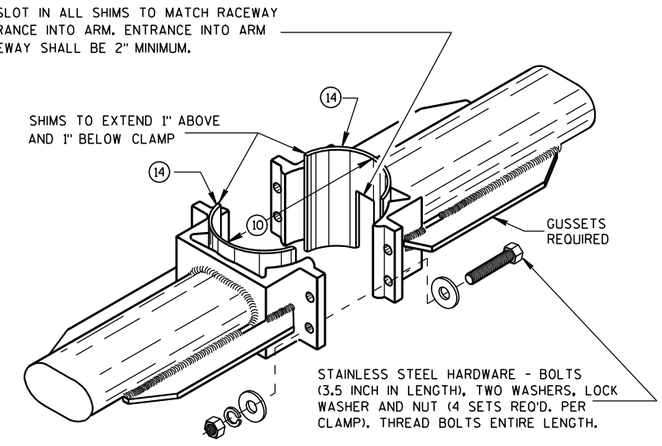

SECTION A-A

## CIRCULAR CLAMP SHIM

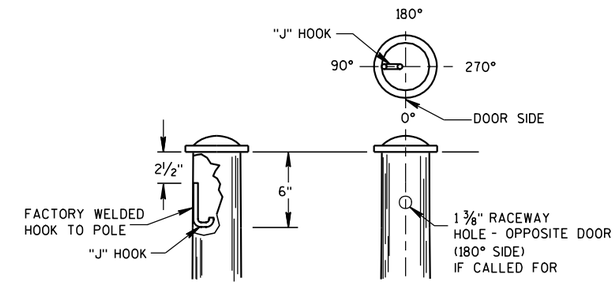
(2 TO A SET)



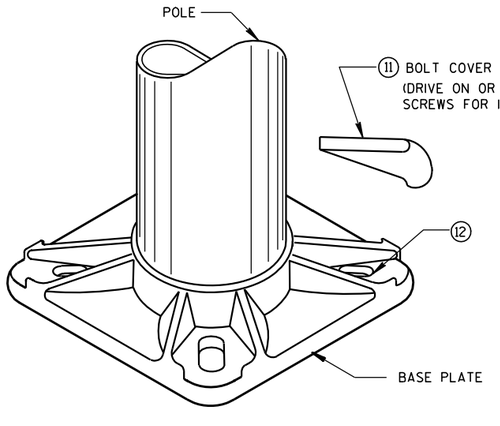

## TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



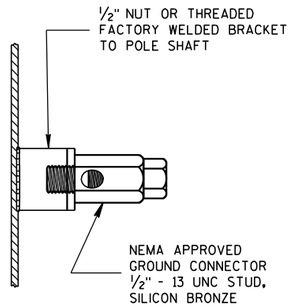

## TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

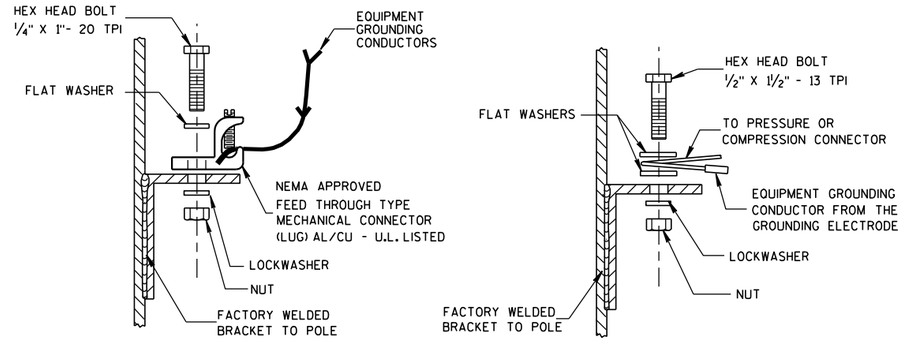



## TYPICAL "J" HOOK LOCATION




## BASE PLATE




## TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

## HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/2/11 — DATE
/S/ Thomas J. Gosling — STATE ELECTRICAL ENGI
26
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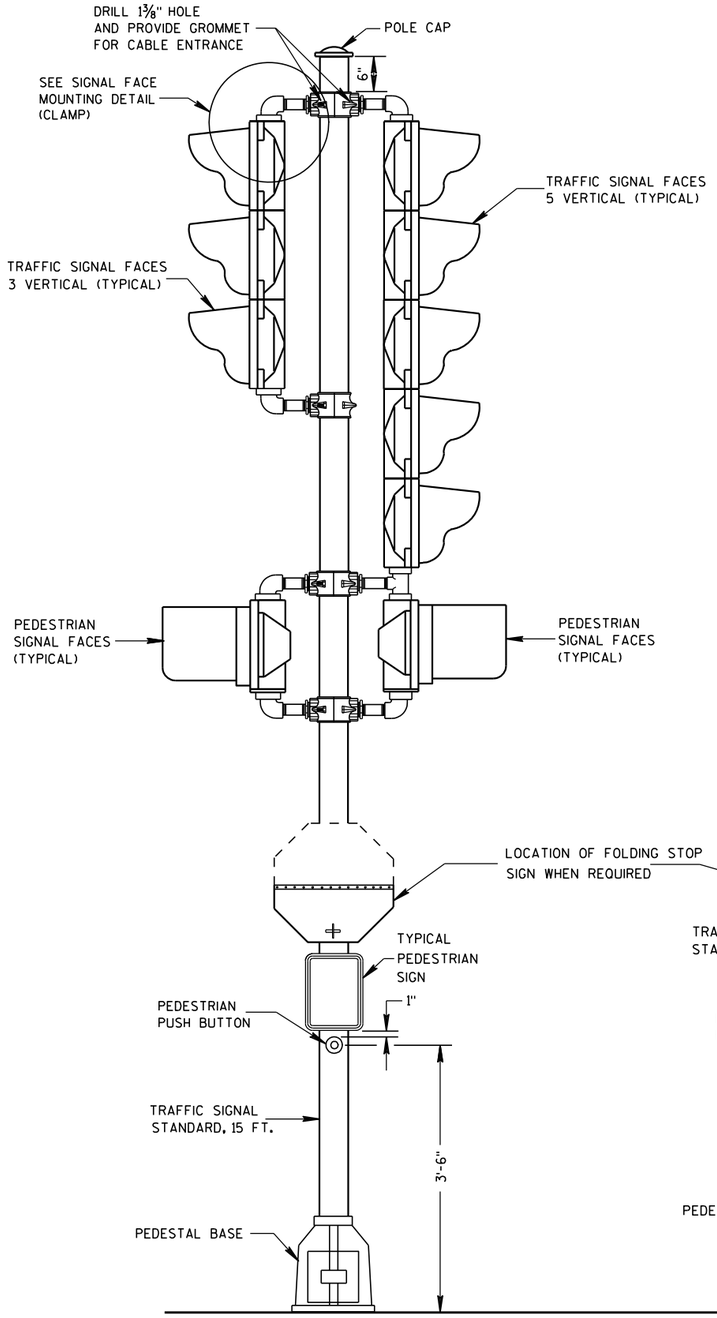
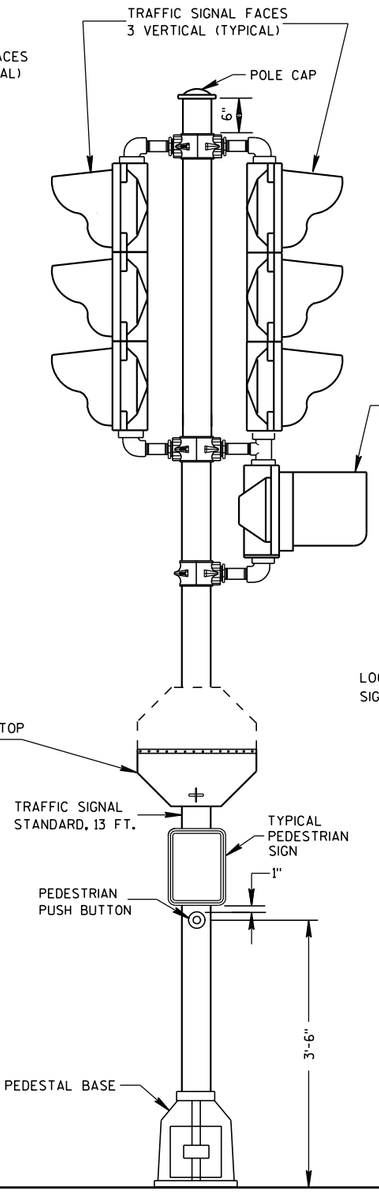
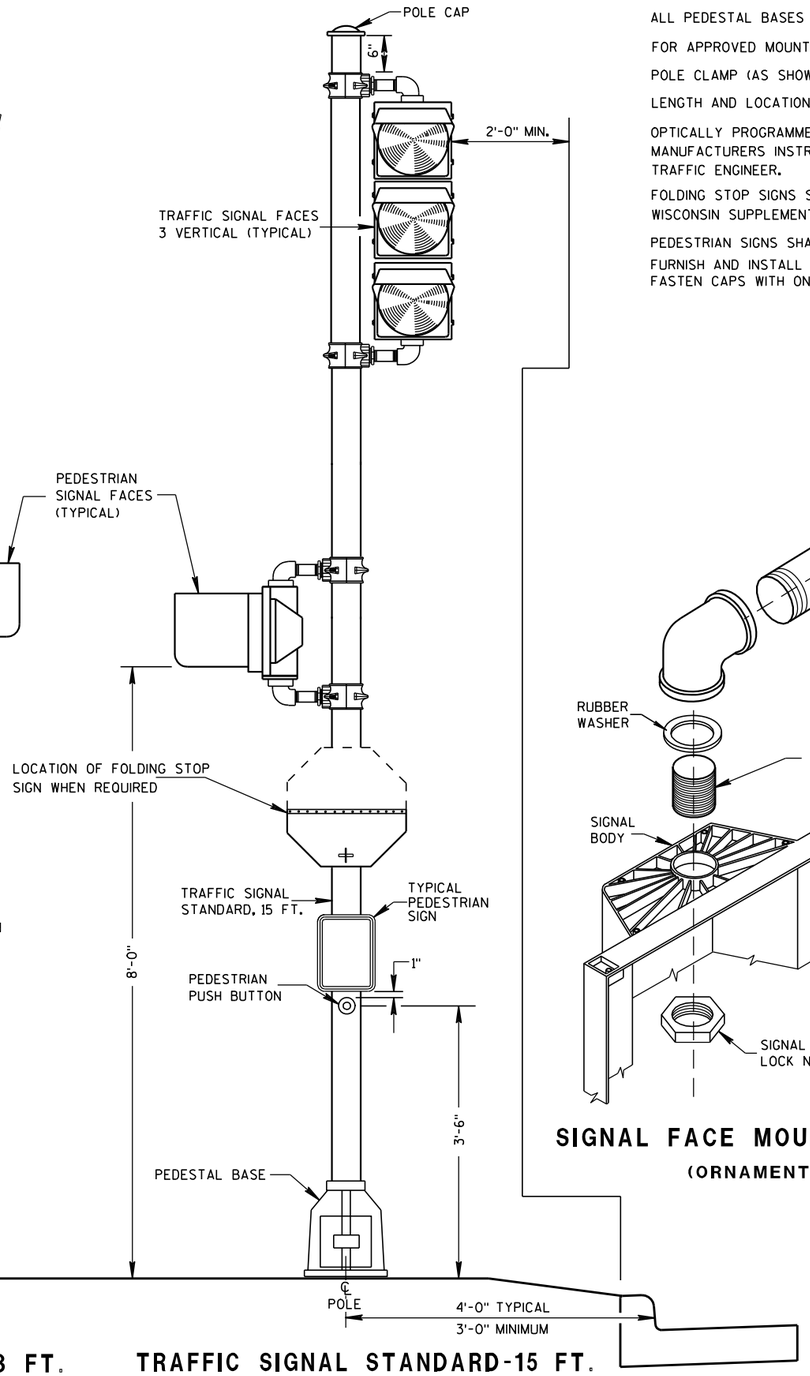
6
S.D.D. 9 E 1-11g




TRAFFIC SIGNAL STANDARD-15 FT.




TRAFFIC SIGNAL STANDARD-13 FT.




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

## GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

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

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLE CLAMP (AS SHOWN) MOUNTING BRACKETS SHALL BE USED.

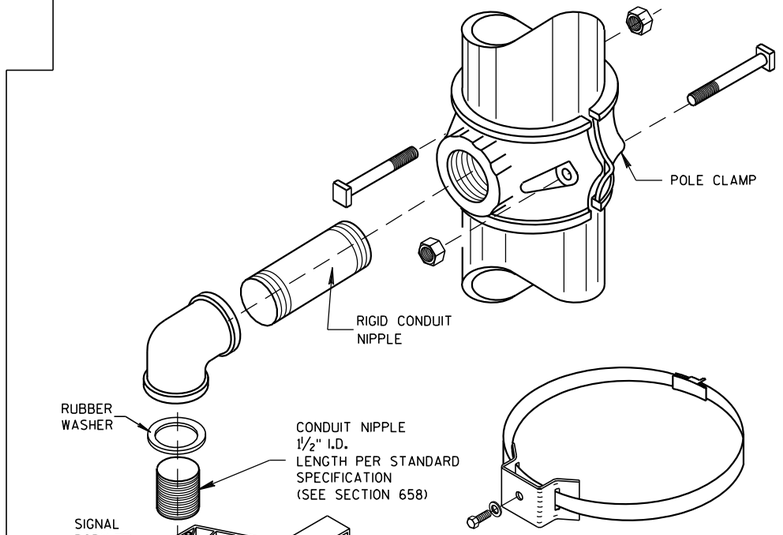
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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

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

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

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






TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)




SIGNAL FACE MOUNTING DETAIL
(ORNAMENTAL)

**TRAFFIC SIGNAL STANDARD ORNAMENTAL BRACKET MOUNTINGS TYPICAL FOR 13 FT. OR 15 FT.**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

| 5/11/10 | /S/ John Corbin | |
|---|---|---|
| DATE | STATE ELECTRICAL ENGI | HWYS |

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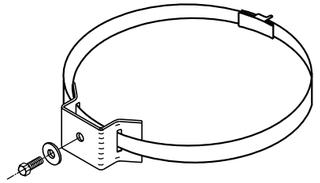
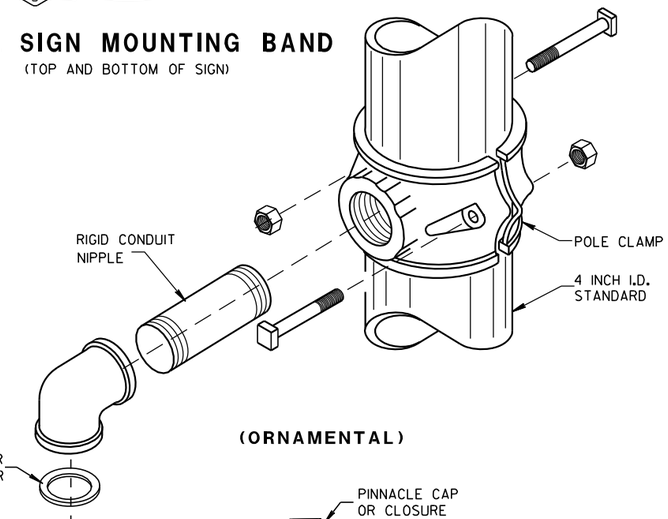
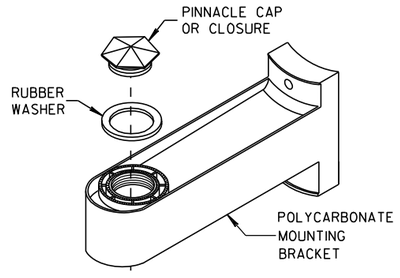
S.D.D. 9 E 5-5



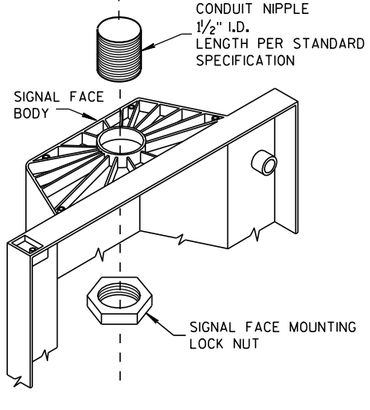
## TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



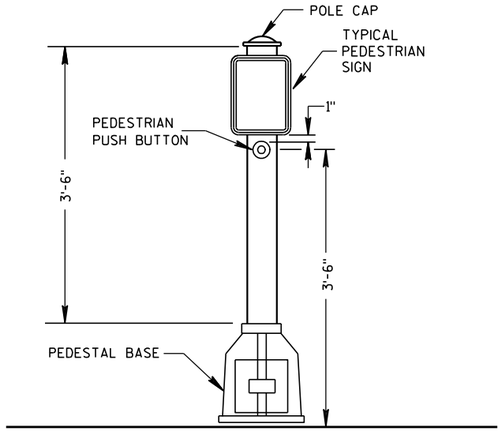

(ORNAMENTAL)




(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.

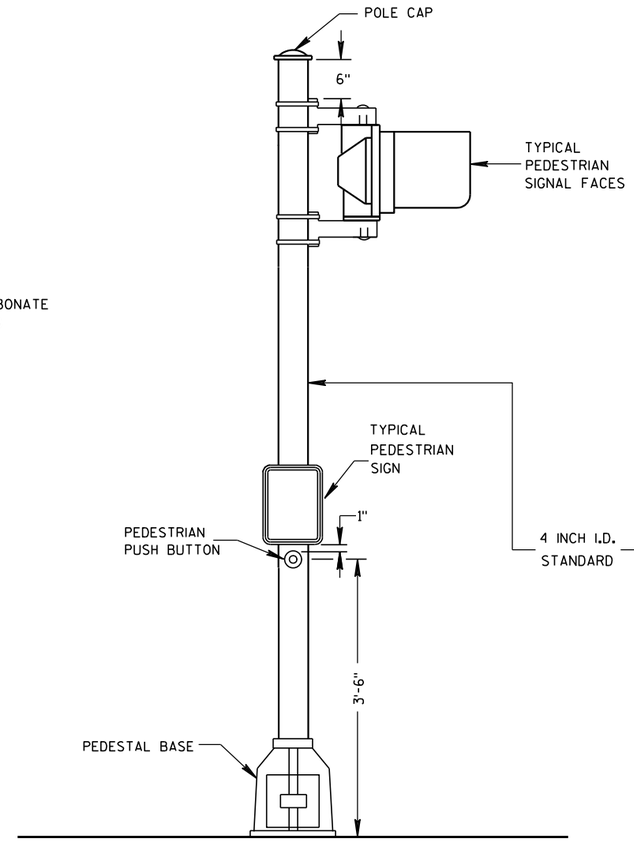
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

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

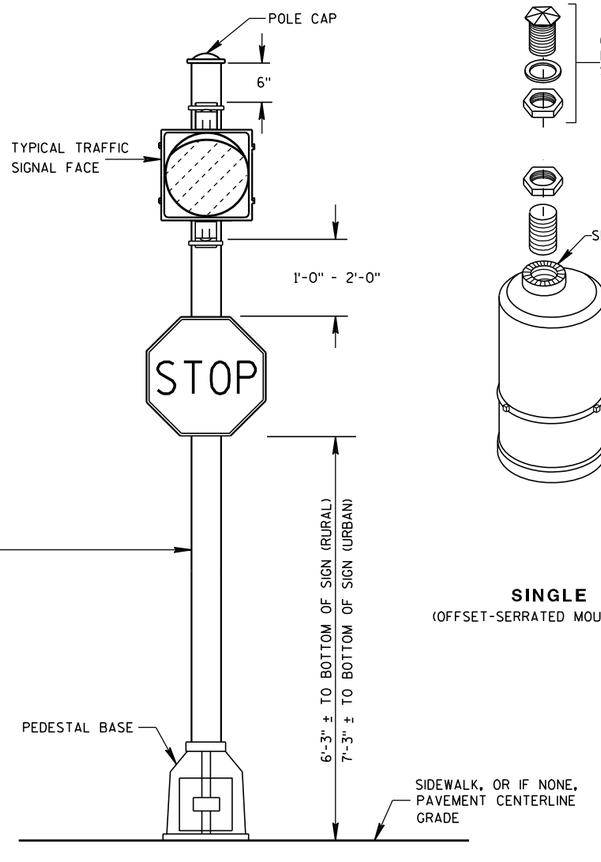
MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

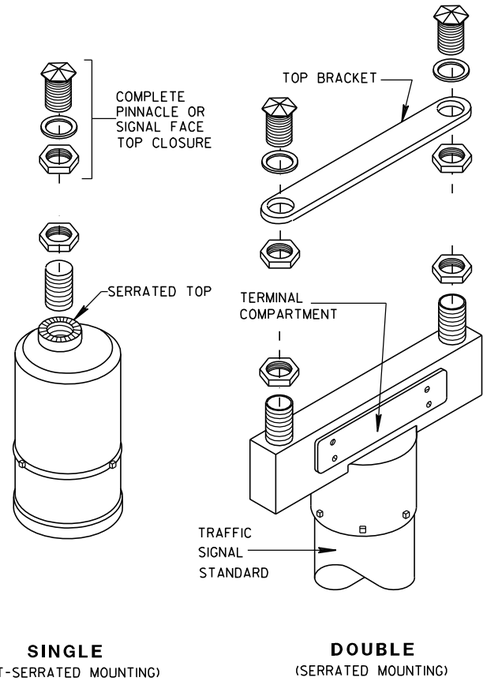
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.




## 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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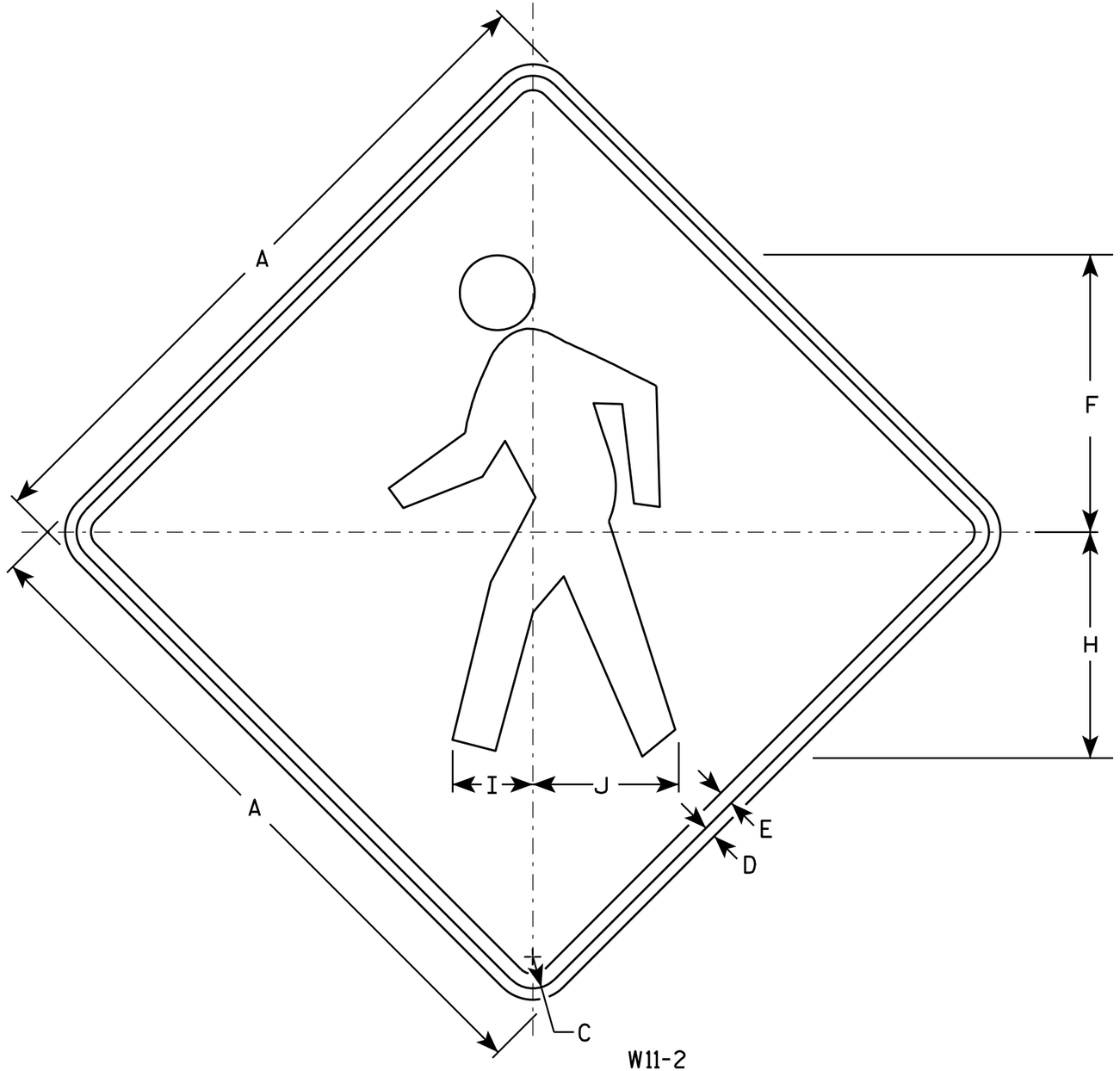



W11-2

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.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24 | | 1 1/8 | 3/8 | 1/2 | 9 3/4 | | 7 7/8 | 2 7/8 | 5 1/8 | | | | | | | | | | | | | | | | | 4.0 |
| 2S | 30 | | 1 3/8 | 1/2 | 5/8 | 12 1/8 | | 9 7/8 | 3 1/2 | 6 3/8 | | | | | | | | | | | | | | | | | 6.25 |
| 2M | 36 | | 1 5/8 | 5/8 | 3/4 | 14 1/2 | | 11 7/8 | 4 1/4 | 7 5/8 | | | | | | | | | | | | | | | | | 9.0 |
| 3 | 36 | | 1 5/8 | 5/8 | 3/4 | 14 1/2 | | 11 7/8 | 4 1/4 | 7 5/8 | | | | | | | | | | | | | | | | | 9.0 |
| 4 | 48 | | 2 1/4 | 3/4 | 1 | 19 3/8 | | 15 3/4 | 5 5/8 | 10 1/4 | | | | | | | | | | | | | | | | | 16.0 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

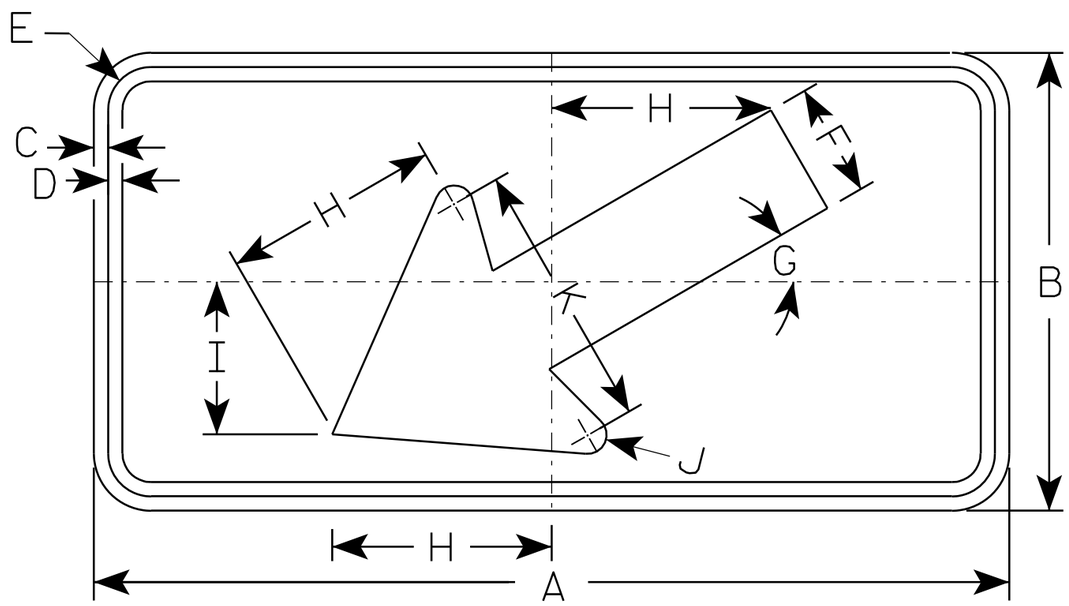
# STANDARD SIGN
# W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W11-2.7

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 29 | E |
|---|---|---|---|---|---|




W16-7L

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. W16-7R is the same as W16-L except the arrow is reversed along the vertical centerline.

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 24 | 12 | 3/8 | 3/8 | 1 1/8 | 3 | 30° | 5 3/4 | 4 | 1/2 | 7 | | | | | | | | | | | | | | | | 2.0 |
| 2M | 30 | 18 | 3/8 | 1/2 | 1 1/8 | 4 1/2 | 30° | 8 1/2 | 6 | 5/8 | 10 1/4 | | | | | | | | | | | | | | | | 3.75 |
| 3 | 30 | 18 | 3/8 | 1/2 | 1 1/8 | 4 1/2 | 30° | 8 1/2 | 6 | 5/8 | 10 1/4 | | | | | | | | | | | | | | | | 3.75 |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 |

STANDARD SIGN
W16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/02/10 PLATE NO. W16-7.5

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 30 | E |
|---|---|---|---|---|---|

Notes

*Wisconsin Department of Transportation*

Dedicated people creating transportation solutions
through innovation and exceptional service.

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