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## CITY OF SPOKANE STANDARD PLANS – SECTION J

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NOTES
1. SIGNAL & WIRING PLANS SHALL BE ORIENTED IN THE NORTH DIRECTION. Ø2 SHALL CORRESPOND WITH THE NORTHBOUND TRAFFIC OR CLOSEST TRAFFIC IN THE NORTHBOUND DIRECTION.

2. SHEET SCALE FOR SIGNAL & WIRING PLAN IS 1"=20'.

3. LETTER LABELS FOR SIGNAL STANDARDS SHALL START WITH (A) IN THE NORTHWEST CORNER & CONTINUES IN THE COUNTER-CLOCKWISE DIRECTION.

4. LETTER LABELS FOR PRE-EMPTIONS SHALL START WITH (A') FOR Ø2 & Ø5 & CONTINUE IN THE COUNTER-CLOCKWISE DIRECTION.

5. LABELS FOR HEADS SHALL START WITH "1" WITH STANDARD (A) WITH PED. HEADS, THEN SIGNAL HEADS ON VERTICAL POLE, & CONTINUES WITH HEAD(S) ON MAST ARM CLOSEST TO POLE.

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BASIC 8 PHASE INTERSECTION PHASING & EQUIPMENT LAYOUT

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J–100A
### SIGNAL MOUNTING BRACKET DESIGNATION

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<th>MAST ARM MOUNTED</th>
<th>OF PED DISPLAYS</th>
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<td>P (X)</td>
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### EXAMPLE

A(4)1 - A(3)1, F2

- TOP OF POST MOUNTED
- ONE 4 SECTION HEAD
- ONE 3 SECTION HEAD
- TWO PED DISPLAYS

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<th>14–7 COND. FOR 5 SECTION HEAD</th>
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<tr>
<td>6</td>
<td>BLUE</td>
<td>GREEN ARROW/SPARE</td>
<td>GREEN ARROW/SPARE</td>
<td>GREEN ARROW/SPARE</td>
<td>GREEN ARROW/SPARE</td>
</tr>
<tr>
<td>7</td>
<td>WHITE/BLACK*</td>
<td>SPARE</td>
<td>SPARE</td>
<td>SPARE</td>
<td>SPARE</td>
</tr>
<tr>
<td>8</td>
<td>RED/BLACK*</td>
<td>SPARE</td>
<td>SPARE</td>
<td>SPARE</td>
<td>SPARE</td>
</tr>
<tr>
<td>9</td>
<td>GREEN/BLACK*</td>
<td>SPARE</td>
<td>SPARE</td>
<td>SPARE</td>
<td>SPARE</td>
</tr>
<tr>
<td>10</td>
<td>ORANGE/BLACK*</td>
<td>SPARE</td>
<td>SPARE</td>
<td>SPARE</td>
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</tbody>
</table>

*TRACER COLOR

### SIGNAL POLE PEDESTRIAN DISPLAY & BUTTON WIRING

<table>
<thead>
<tr>
<th>CONDUCTOR NO.</th>
<th>INSULATION COLOR</th>
<th>14–5 COND. 1 PEDESTRIAN HEAD DISPLAY</th>
<th>14–10 COND. 2 PEDESTRIAN HEAD DISPLAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BLACK</td>
<td>SPARE</td>
<td>SPARE</td>
</tr>
<tr>
<td>2</td>
<td>WHITE</td>
<td>COMMON–AC</td>
<td>COMMON–AC</td>
</tr>
<tr>
<td>3</td>
<td>RED</td>
<td>DON'T WALK</td>
<td>DON'T WALK PH 2 OR 6</td>
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<tr>
<td>4</td>
<td>GREEN</td>
<td>WALK</td>
<td>WALK PH 2 OR 6</td>
</tr>
<tr>
<td>5</td>
<td>ORANGE</td>
<td>PUSH BUTTON PH 2 OR 6</td>
<td>PUSH BUTTON PH 2 OR 6</td>
</tr>
<tr>
<td>6</td>
<td>BLUE</td>
<td>SPARE</td>
<td>SPARE</td>
</tr>
<tr>
<td>7</td>
<td>WHITE/BLACK*</td>
<td>COMMON–PUSH BUTTON</td>
<td>COMMON–PUSH BUTTON</td>
</tr>
<tr>
<td>8</td>
<td>RED/BLACK*</td>
<td>DON'T WALK PH 4 OR 8</td>
<td>DON'T WALK PH 4 OR 8</td>
</tr>
<tr>
<td>9</td>
<td>GREEN/BLACK*</td>
<td>WALK PH 4 OR 8</td>
<td>WALK PH 4 OR 8</td>
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<tr>
<td>10</td>
<td>ORANGE/BLACK*</td>
<td>PUSH BUTTON PH 4 OR 8</td>
<td>PUSH BUTTON PH 4 OR 8</td>
</tr>
</tbody>
</table>

*TRACER COLOR

---

**SIGNAL HEAD & PEDESTRIAN DISPLAY WIRING**

ADOPTED: 3/2015
REVISED: 11/2018
SUPERSEDES: 3/2015
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: MDH

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON
STANDARD PLAN No. J–100B
SIGNAL MOUNTINGS, POST TOP
TYPES A(3)2-F2, A(3)1-F2, A(3)1-F1, A(3)2-F1

10 FT. STANDARD

A(3)2-F2

A(3)1-F2

A(3)1-F1

A(3)2-F1

ADOPTED: 2/86
REVISED: 04/2015
SUPERSEDES: 04/2004
CHECKED BY: GTO
SCALE: NT
DWG/REV. BY: GOM

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD
PLAN No. J-101B
SIGNAL MOUNTINGS, POST TOP

TYPES A(5)1–A(3)1–F2, A(5)1–F2, A(5)1–A(3)1–F1, A(5)1–F1, A(3)1–A(5)1–F1

APPROVED BY

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No.
J–101C

A(5)1–A(3)1
F2

10 FT. STANDARD

A(5)1
F2

VERTICAL TERMINAL COMPARTMENT

A(5)1–A(3)1
F1

10 FT. STANDARD

A(5)1
F1

VERTICAL TERMINAL COMPARTMENT

A(3)1–A(5)1
F1

10 FT. STANDARD
SIGNAL MOUNT COLOR – DARK GREEN

NOTES
1. VERTICAL TERMINAL COMPARTMENT. MOUNT WITH \( \frac{3}{4} \)" STAINLESS STEEL BOLTS.
STEEL CHANNEL IRON BETWEEN SIGNAL POST & SIGNAL ASSEMBLY

3/4 IN. X 0.030 IN. NON-MAGNETIC STAINLESS STEEL BANDING STRAP, BAND-IT TYPE C206 OR EQUAL

VERTICAL TERMINAL COMPARTMENT FOR B(3)1 SIGNAL MOUNT, MOUNTED OPPOSITE OF B(5)1 VERTICAL TERMINAL COMPARTMENT.

VERTICAL TERMINAL COMPARTMENT MOUNT WITH 1/2" STAINLESS STEEL BOLTS.

3/4 IN. STAINLESS STEEL BUCKLE, BAND-IT C256 OR EQUAL

SIGNAL POST

CHANNEL IRON BOLTED TO SIGNAL ASSEMBLY

SIGNAL ASSEMBLY

TOP VIEW

DRILL HOLES(2) TO ACCEPT #12-24 BOLT(S) (BRASS)

1/8 IN.

3 TO 4 IN.

3/16 IN.

1 IN.

2 IN.

END VIEW

* STEEL CHANNEL IRON

* STEEL CHANNEL IRON AND APPLICABLE APPURTENANCES SHALL BE SUPPLIED BY THE CONTRACTOR INSTALLING THESE TYPES OF SIGNAL MOUNTS.

SIGNAL MOUNT COLOR – DARK GREEN

APPROVED BY

ADOPTED: 05/1997
REvised: 04/2015
SUPERSEDES: 05/2007
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: COM

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

BRACKET SIGNAL MOUNTS
TYPES B(5)1-B(3)1 & B(5)1

STANDARD PLAN No. J-102B
NOTE

INSTALL 2 INCHES OF #3931 YELLOW TYPE 4 HIGH INTENSITY PRISMATIC REFLECTIVE SHEETING ON SIGNAL BACK PLATE ALONG PERIMETER.
NOTE
INSTALL 2 INCHES OF #3931 YELLOW TYPE 4 HIGH INTENSITY PRISOMATIC REFLECTIVE SHEETING ON SIGNAL BACK PLATE ALONG PERIMETER.
D(5)

NOTE
INSTALL 2 INCHES OF #3931 YELLOW TYPE 4 HIGH INTENSITY PRISMATIC REFLECTIVE SHEETING ON SIGNAL BACK PLATE ALONG PERIMETER.
D(3B)

NOTES
1. INSTALL 2 INCHES OF #3931 (OR EQUIVALENT) YELLOW TYPE IV SHEETING ON SIGNAL BACK PLATE ALONG PERIMETER.
2. SHEETING MAY BE OMITTED WITH THE APPROVAL OF STREETS.
NOTES

1. CMP SHALL BE LEFT EMPTY & HIGH UNTIL STREET CURB IS INSTALLED.

2. CMP SHALL BE CUT OFF BELOW SIDEWALK GRADE PRIOR TO FOUNDATION POUR.

3. THE TOP 1 FT. SHALL BE Poured WITH A STRIPPABLE CARDBOARD TYPE FORM.
APPURTENANCE ORIENTATION
ORIENTATION OF ARMS
VIEW FROM TOP

NOTE 3

NOTE 2

VIDEO DETECTION CAMERA

30 FT. MOUNTING HEIGHT

NOTE 1

OF LUMINAIRE ARM

OF HAND HOLE 1


VERTICAL POLE BASE

<table>
<thead>
<tr>
<th>BOLT CIRCLE</th>
<th>BOLT SIZE</th>
<th>BOLT TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 1/2 INCHES</td>
<td>1 1/2 INCHES</td>
<td>ASTM-F1554</td>
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</table>

FOUNDATION

<table>
<thead>
<tr>
<th>A DIAMETER</th>
<th>B LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 FEET</td>
<td>5 FEET</td>
</tr>
</tbody>
</table>

FOUNATION DETAIL

- 2 THREADS MIN. ABOVE TOP NUT
- #4 ROUND HOOP 1'-0" OC
- 2.5" CLEARANCE
- 8-#7 BARS EQUALLY SPACED

BASE COVER
SEE STD. PLAN J-120

HAND HOLE 1
4 IN X 6 IN MIN

NOTE 5

SIGNAL POLE/LUMINAIRE MAST ARM & FOUNDATION
TYPE 4

NOTES
1. SIGNAL STANDARDS SHALL BE DESIGNED FOR 80 MPH WIND LOADING.
2. LUMINAIRE ARMS GREATER THAN 20 FEET ARE TO BE SPECIAL DESIGN STANDARDS.
3. 1 3/8 INCH HOLE UNDERNEATH MAST ARM FOR VIDEO WIRES—ACCESS TO BE DRILLED BY CONTRACTOR.
4. OPTIONAL—NEAR RIGHT OR LEFT SIDE B(3) VEHICLE HEAD FOR APPROACH TRAFFIC IN RADIUS. SIDE OF POLE, HEIGHT VEHICLE HEAD IS LOCATED & DIRECTION VEHICLE HEAD IS FACING MAY VARY DEPENDING ON SPECIFIC DESIGN NEEDS OF THE INTERSECTION.
5. INSTALLATION OF A TERMINAL CABINET WILL VARY WITH SPECIFIC DESIGN NEEDS.
NOTES
1. SIGNAL STANDARDS SHALL BE DESIGNED FOR 80 MPH WIND LOADING.
2. LUMINAIRE ARMS GREATER THAN 20 FEET ARE TO BE SPECIAL DESIGN STANDARDS.
3. 3/8 INCH HOLE UNDERNEATH LUMINAIRE ARM FOR V Weekly Wires—ACCESS TO BE DRILLED BY CONTRACTOR.
4. 3/8 INCH HOLE ON SIDE OF MAST ARM FOR SIGNAL Wires—ACCESS TO BE DRILLED BY CONTRACTOR.
5. MOUNT SIGN OR FOUR SECTION HEAD CENTERED ON TURN LANE.
6. MOUNT 5 SECTION HEAD CENTERED ON TURN POCKET LANE LINE.
7. MOUNT SIGNAL CENTERED ON CURB LINE.
8. MOUNT SIGNAL HEAD CENTERED ON SKIP STRIPE WHEN USING 5 SECTION HEAD FOR LEFT TURN LANE.
9. MOUNT TWO SIGNAL HEADS CENTERED ON LINES WHEN USING 3 OR 4 SECTION HEAD FOR LEFT TURN LANE.
10. VIDEO DETECTION CAMERA WILL BE INSTALLED ON SIGNAL MAST ARM AS OPTION ONLY, PRIMARY LOCATION SHALL BE LUMINAIRE ARM.
11. OPTIONAL—NEAR RIGHT OR LEFT SIDE B (3) VEHICLE HEAD FOR APPROACH TRAFFIC IN RADIUS. SIDE OF POLE, HEIGHT VEHICLE HEAD IS LOCATED & DIRECTION VEHICLE HEAD IS FACING MAY VARY DEPENDING ON SPECIFIC DESIGN NEEDS OF THE INTERSECTION.

SIGNAL POLE/SINGLE MAST ARM/ LUMINAIRE ARM & FOUNDATION
TYPE 3

ADOPTED: 04/2023
REVISED: 02/2021
SUPERSEDES: GTO
CHECKED BY: NTS
SCALE: BDH

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON
STANDARD PLAN No. J-105B
LUMINAIRE ARM ATTACHMENT DETAIL

8 IN NOMINAL STRAIGHT SECTION REFORMED TO 2.38 IN OD

MATERIAL DATA

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>ASTM DESIGNATION</th>
<th>MINIMUM YIELD</th>
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</thead>
<tbody>
<tr>
<td>TAPERED TUBES</td>
<td>A595 GRA OR A572</td>
<td>55</td>
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<tr>
<td>BASE PLATE</td>
<td>A36</td>
<td>36</td>
</tr>
<tr>
<td>ANCHOR BOLTS</td>
<td>F1554 GR.55</td>
<td>55</td>
</tr>
<tr>
<td>LUM. ARM ATTACHMENT</td>
<td>A36</td>
<td>36</td>
</tr>
<tr>
<td>LUM. ARM CONN. BOLTS</td>
<td>SAE GR. 5</td>
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<td>GALVANIZING-STRUCTURE</td>
<td>A123</td>
<td>–</td>
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<tr>
<td>GALVANIZING-HARDWARE</td>
<td>F2329</td>
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VERTICAL POLE BASE PLATE

<table>
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<tr>
<th>BOLT CIRCLE</th>
<th>BOLT SIZE</th>
<th>BOLT TYPE</th>
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<tbody>
<tr>
<td>11.0 IN TO 11.5 IN</td>
<td>1 IN</td>
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NOTES:
1. STANDARDS SHALL BE DESIGNED FOR 80 MPH WIND LOADING.
2. LUMINAIRE ARMS GREATER THAN 20 FEET ARE TO BE SPECIAL DESIGN STANDARDS.

FOUNDATION DETAIL

<table>
<thead>
<tr>
<th>FOUNDATION</th>
<th>A DIAMETER</th>
<th>B LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 FT</td>
<td>5 FT</td>
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LUMINAIRE POLE & FOUNDATION

ADOPTED: 04/2023
REVISED: 02/2023
SUPERSEDES: 02/2021
SCALE: NTS
DWG/REV. BY: BDH

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON
STANDARD PLAN No. J-105C
APPURtenANCE ORIENTATION

QTY. MAST ARM LENGTH
1 UP TO 60 FT. MAXIMUM

Q OF HAND HOLE 2
90° 90°

Q OF LUMINAIRE ARM
Q OF MAST ARM
Q OF HAND HOLE 1

ORIENTATION OF ARMS VIEW FROM TOP

30" FT MOUNTING HEIGHT
21 FT 6 IN TO 22 FT MOUNTING HEIGHT

2 THREADS MIN., 1" MAX.
ABOVE TOP NUT

#4 ROUND HOOP
1 FT-0 IN OC

2.5 IN CLEARANCE

8-#7 BARS EQUALLY SPACED

NOTES:
1. SIGNAL STANDARDS SHALL BE DESIGNED FOR 80 MPH WIND LOADING.
2. LUMINAIRE ARMS GREATER THAN 20 FT ARE TO BE SPECIAL DESIGN STANDARDS.
3. 1 3/8 IN. HOLE ON SIDE OF MAST ARM OR SIGNAL STANDARD FOR SIGNAL WIRES. ACCESS TO BE DRILLED BY CONTRACTOR.
4. SEE STANDARD PLAN G-95 FOR SIGNING AND STRIPING.
5. A SIGNAL DISPLAY MAY BE ADDED TO THE LEFT SIDE SIGNAL STANDARD (AS NEEDED).
6. PEDESTRIAN PUSH BUTTONS SHALL BE APS.
7. LOCATION OF SIGNAL HEADS OVER LANE.

FOUNDATION

MAST ARM LENGTH (FT.)
A DIA. B LENGTH

≤ 30 3 FT. 5 FT.
35, 40, 45 4 FT. 7 FT.
50, 55 4 FT. 9 FT.
≥ 60 4 FT. 12 FT.

CMF:
SEE NOTES ON STANDARD PLAN J-104

PEDESTRIAN HYBRID BEACON
MAST ARM/LUMINAIRE ARM AND FOUNDATION TYPE 3

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

APPROVED BY
DIRECTOR OF ENGINEERING SERVICES DAN BULLER, P.E.

ADOPTED: 04/2023
REVISED: 02/2021
SUPERSEDES: 02/2021
CHECKED BY: GTI
SCALE: NTS
DWG/REV. BY: BDH

STANDARD PLAN No.
J-105D
TERMINAL CABINET NOTES

1. COMPLETELY FABRICATED FROM .125" THICK TYPE 5052-H32 VINYL COATED, MILL FINISHED ALUMINUM UTILIZING CONTINUOUS WELDED CONSTRUCTION.

2. NORMAL DIMENSIONS OF 18" (457mm) HEIGHT X 12" (305mm) WIDTH X 8" (203mm) DEPTH.

3. HEAVY GAGE STAINLESS STEEL PIANO HINGE.

4. MEET NEMA 3R RATING AND HAS A DOUBLE FLANGED DOOR.

5. INCLUDES A DRIP SHIELD.

6. (2-4) 12 POSITION 600V TERMINAL BLOCKS (MARATHON 1512DJ).

7. MARKER STRIPS PER FIELD REQUIREMENTS.

8. MAIN DOOR LOCK IS BEST EX SERIES GREEN CORE LOCK WITH A LATCH TYPE LOCKING BOLT.

9. CLOSED CELL NEOPRENE DOOR GASKET USED.

10. FABRICATED IN THE USA.

20 CONDUCTOR CABLE CONFIGURATION

NORTH/SOUTH PHASE 2 & 6—SOLIDS
- RED—RED BALL
- AMBER—AMBER BALL
- GREEN—GREEN BALL
- BLUE—WALK
- BLACK—DON'T WALK
- BLUE/W/WHITE—PED CALL
- WHITE/W/ BLACK—PED COMMON

EAST/WEST PHASE 4 & 8—STRIPES
- RED W/ BLACK—RED BALL
- AMBER W/ BLACK—AMBER BALL
- GREEN W/ BLACK—GREEN BALL
- BLUE W/ BLACK—WALK
- BLACK W/ WHITE—DON'T WALK
- BLACK W/ RED—PED CALL
- WHITE W/ BLACK—PED COMMON

FLASHING YELLOW ARROW PHASE 1,3,5,7
- GREEN W/ WHITE—GREEN ARROW LEFT TURN
- RED W/ WHITE—RED ARROW
- AMBER W/ RED—AMBER ARROW
- BLUE W/ RED FLASHING—YELLOW ARROW
- WHITE—NEUTRAL

16 CONDUCTOR CABLE CONFIGURATION

NORTH/SOUTH PHASE 2 & 6—SOLIDS
- RED—RED BALL
- AMBER—AMBER BALL
- GREEN—GREEN BALL
- BLUE—WALK
- BLACK—DON'T WALK
- BLUE/W/WHITE—PED CALL
- WHITE—PED COMMON

EAST/WEST PHASE 4 & 8—STRIPES
- RED W/ BLACK—RED BALL
- AMBER W/ BLACK—AMBER BALL
- GREEN W/ BLACK—GREEN BALL
- BLUE W/ BLACK—WALK
- BLACK W/ WHITE—DON'T WALK
- BLACK W/ RED—PED CALL
- WHITE—PED COMMON

PHASE 1,3,5,7
- RED W/ WHITE—RED ARROW
- AMBER W/ RED—AMBER ARROW
- GREEN W/ WHITE—GREEN ARROW LEFT TURN
- BLUE W/ BLACK—YELLOW ARROW
- WHITE—NEUTRAL

6’ 5½ MIN. (IN) x 15.75” (IN) GAL. STEEL CHANNEL

TWO EACH:
- 1/2” (IN) — 13 NC x 2 1/2” (IN)
- S.S. HEX HEAD BOLT
- LOCK WASHERS (DRILL AND TAP POLE TO ACCEPT)

WIREFAY (SEE DETAIL THIS SHEET)

METAL POLE

CABINET MOUNTING DETAIL

END BUSHING

SEALING LOCKNUT

CABINET WALL DRILLED 1/8” (IN) OVERSIZE OF NIPPLE

CHANNEL DRILLED 1/8” (IN) OVERSIZE OF NIPPLE

2” (IN) DIAM. X 4” (IN) NIPPLE (UNLESS OTHERWISE NOTED)

POLE WALL DRILLED SO BUSHING WILL PASS THROUGH ~ HOLE SIZE TO BE A MAXIMUM OF 1/8” (IN) LARGER DIAMETER THAN THE CONDUIT NIPPLE END BUSHING ~ INSTALL NIPPLE IN POLE WITH BUSHING INSTALLED

6’ 6” MIN.

SECTION A

ELEVATION VIEW

TERMINAL CABINET

SUPERSEDES: _______________________
CHECKED BY: GTO
SCALE: NTS
DWG/REV. BY: MDH

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON
STANDARD PLAN No. J–105E

ADOPTED: 11/2018
REVISED: _______________________

ENGINEERING SERVICES MANAGER: KYLE TWICK
CITY ENGINEER: DANIEL ALBERT BULLER, P.E.
ANCHOR BOLT PLACEMENT PER MANUFACTURES TEMPLATE

BEVELED EDGES

[Diagram showing anchor bolt placement with dimensions X and Y]

MAX = Y/2

[Dimensions and notes for anchor bolt placement]

ONE OF TWO 8 FT GROUNDING RODS. SEE STANDARD PLAN J-110, J-111A, & J-119

FIELD ADJUST BACK OF FORM FOR INSTALLATIONS WHERE ROW IS AN ISSUE

<table>
<thead>
<tr>
<th>BASE TYPE</th>
<th>X</th>
<th>Y</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE 4 BASE</td>
<td>28 IN.</td>
<td>22 IN.</td>
<td>22 IN.</td>
</tr>
<tr>
<td>TYPE M BASE</td>
<td>35 IN.</td>
<td>21 IN.</td>
<td>22 IN.</td>
</tr>
<tr>
<td>TYPE P BASE</td>
<td>48 IN.</td>
<td>30 IN.</td>
<td>18 IN.</td>
</tr>
</tbody>
</table>

CONDUIT AND WIRE AS REQUIRED ON SIGNAL PLAN

GROUNDING CONDUCTOR

THERMAL WELD CONNECTION

3/4 IN. PVC

J-BOX

6 IN. MIN.
ANCHOR BOLT LOCATION

TYPE "M" CABINET

17 IN.

23 1/2 IN.

25 1/2 IN.

30 IN.

1 IN.

2 IN.

CENTER 5/8 IN. ANCHOR BOLT

SCALE ADOPTED REVISED

NONE 3-99

TRANSPORTATION DEPARTMENT
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-106A

APPROVED BY

Katy D. Allen
Director, Engineering Services

Donald A. Ramsey
City Traffic Engineer

REVISED
SUPERSEDES

EXECUTIVE
CABINET

CABINET

ANCHOR BOLT

CABINET
ANCHOR BOLT LOCATION
TYPE "P" CABINET

SCALE  NONE
ADOPTED  3-99
REVISED  
SUPERSEDES  

TRANSPORTATION DEPARTMENT
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No.  J-106b
**TYPE 1 DETECTOR LOOP**

- Optional outlet ~ complete connection at A and break connection at B
- Two twists per foot minimum

**TYPE 2 DETECTOR LOOP**

- 6 ft. square
- 4 turns
- Additional turns may be required for loops installed under concrete intersection or loops installed more than 350 ft. from the controller
- Two twists per foot minimum typical for all loops

**TYPE 3 DETECTOR LOOP**

- 6 ft. round
- 4 turns

**TYPE 5 BICYCLE DETECTOR LOOP**

- 4 turns
- Two twists per foot minimum

**TYPICAL CONDUIT LOCATION**

- Excavate small hole, patch to 1 in. greater depth than paving

---

**Vehicle Induction Loop Wiring**

Types 1, 2, 3, and 5

**Adopted:** 01/2012  
**Revised:** 11/2018  
**Supersedes:** 04/2015  
**Checked by:** GTO  
**Scale:** NTS  
**Drawing/Revision:** GOM/MDH  
**Engineering Services:** City of Spokane, Washington  
**Standard Plan No.:** J-107A
RIGID BODY, RE-ENTERABLE SPLICE CLOSURE
FACTORY FILLED WITH ENCAPSULENT.

CRIMP TYPE BUTT SPLICE,
TWIST BEFORE SOLDERING
AND CRIMPING.

TERMINATE FOIL SHIELD AND DRAIN
WIRE WITHIN 1/2 IN. OF INSULATION END.

TERMINATE DUCT

LOOP WIRE

LOOP LEAD-IN CABLE
NOTE:

PROBE SHALL BE VERTICAL

TYPICAL MICROLOOP BURIAL INSTALLATION

EXISTING PAVEMENT

SECTION A-A

TYPICAL SAWCUTS

NEW PAVEMENT OR RESURFACING

THE INFORMATION PROVIDED HEREON IS TYPICAL FOR STANDARD SITUATIONS. FOR NON-STANDARD DESIGN SITUATIONS, THE ENGINEER OF RECORD SHALL DETERMINE AN APPROPRIATE DESIGN BASED UPON THE INTENT AS PROVIDED HEREON AND SUBMIT FOR REVIEW AND APPROVAL BY THE CITY TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE. FOR NON-STANDARD FIELD SITUATIONS, THE CONTRACTOR SHALL DETERMINE AN APPROPRIATE APPLICATION BASED UPON THE INTENT, AS PROVIDED HEREON AND CONFIRM SUCH WITH THE CITY TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE BEFORE PERMANENT IMPLEMENTATION.
BICYCLE LOOP LABELING
WITHIN J-BOX

BIKE LOOPS
LOOP # B-x
B FOR BIKE LOOP IDENTIFIER
VEHICLE PHASE

INDUCTION LOOP LABELING
WITHIN J-BOX

STOP BAR LOOPS AND ADVANCED LOOPS
LOOP # X-x
LOOP POSITION FROM CURB
LOOP POSITION STOP BAR
COUNT LOOPS
LOOP LABEL C-x-x
LOOP POSITION FROM CURB
LOOP POSITION STOP BAR
DIRECTION OF TRAVEL: N-S-E-W

LEAD-IN CABLE LABELING
IN J-BOX AND IN CABINET

STOP BAR LOOPS AND ADVANCED LOOPS
CABLE LABEL X-x-x
VEHICLE PHASE
LOOP POSITION FROM CURB
LOOP POSITION STOP BAR
COUNT LOOPS
C FOR COUNT LOOP IDENTIFIER
LOOP POSITION FROM CURB
DIRECTION OF TRAVEL: N-S-E-W
BIKE LOOPS
CABLE LABEL B-x
B FOR BIKE LOOP IDENTIFIER
VEHICLE PHASE

DETECTION LOOP, COUNT LOOP AND BICYCLE LOOP LAYOUT AND LABELING

NOTES
1. PREFORMED LOOPS SHALL BE INSTALLED IN THE CRUSHED SURFACING WITH 3 INCHES OF COVER.
2. PREFORMED LOOPS SHALL BE LABELED ACCORDING TO THE LANE POSITION ON THE STREET SIDE OF SPLICE AND ACCORDING TO THE CABLE LABELING ON THE CONTROLLER SIDE OF THE SPLICE.
3. LOOP LEAD-INS SHALL BE LABELED ACCORDING TO THIS PLAN IN THE JUNCTION BOX ADJACENT TO THE CURB & IN THE TRAFFIC ISLAND.
4. LOOP CLOSEST TO STOP BAR, IN BIKE LANE, CURB LANE AND LEFT TURN LANE EACH HAVE A HOME RUN CABLE TO CONTROLLER CABINET.
   IF NO LEFT TURN LANE, THEN THE LANE THE VEHICLE WILL TURN LEFT FROM.
5. CABLE LABELING FOR LOOPS SPLICED IN SERIES UTILIZE THE LOWEST LOOP NUMBER.
NOTES
1. ALL THREADED SURFACES SHALL BE COATED WITH ANTI-SEIZE COMPOUND PRIOR TO ASSEMBLY.
2. APS PUSH BUTTON COMES WITH SIGN ATTACHED TO UNIT.
3. PELCO OR APS BUTTON ON STANDARD, NOT BOTH.
4. 36" MIN. BUTTON HEIGHT
5. 46" MAX. BUTTON HEIGHT
NOTES

CABLES AND CONDUCTORS WITHIN THE CABINET SHALL BE ROUTED AND BUNDLED TOGETHER IN SUCH A MANNER AS TO PRESENT A NEAT APPEARANCE. SELF-CLINCHING NYLON CABLE TIES SHALL BE USED TO SECURELY BUNDLE TOGETHER CABLES AND CONDUCTORS. CABLE TIES SHALL BE SPACED NOT MORE THAN 12-INCHES APART NOR CLOSER THAN 6-INCHES, UNLESS BREAKOUTS OR ROUTING DICTATES.


TRAFFIC SIGNAL CABLES AND CONDUCTORS JACKET IS TO BE STRIPPED TO WITHIN 2-INCHES OF BELL END.
NOTES
1. AVISTA HAS APPROVED THE CIRCLE AW 121314 METER BOX & THE MILBANK U3504-XL METER BOX.
2. WEATHER HEAD & DEAD HEAD SHALL BE ABOVE TELEPHONE & TELEVISION CABLE LINES.
3. ALL WORK WILL COMPLY W/ NATIONAL ELECTRICAL CODE (NEC) STANDARDS.
4. SERVICE GROUNDING CONDUCTOR SHALL BE CONTINUOUS & CONNECT TO TWO 8 FT. GROUNDING ELECTRODES SEPARATED A MINIMUM OF 6 FT.
#8 BARE A.C. SERVICE GROUNDING

GROUNDING RODS SHALL BE INSTALLED PER CITY REQUIREMENTS AFTER CITY ENGINEERS APPROVAL

GROUNDING WIRE DIAGRAM
TYPICAL
JUNCTION BOX
CORNER A
1-#12-2 UF
POLE MOUNTED
SERVICE DISCONNECT
A.C. SERVICE FROM
AVISTA UTILITIES
CORNER A SIGNAL
FOUNDATION

JUNCTION BOX
CORNER B
CONTROLLER
POWER PANEL
2-#6 THHN
A.C.

JUNCTION BOX
CORNER B
A.C. SERVICE FROM
AMSTA UTILITIES
CORNER B SIGNAL
FOUNDATION

JUNCTION BOX
CORNER C
1-#12-2 UF

JUNCTION BOX
CORNER C

JUNCTION BOX
CORNER D
1-#12-2 UF

JUNCTION BOX
CORNER D

CITY OF SPOKANE, WASHINGTON
SUPERSEDES:
STANDARD
PLAN No. J-111B

TYPICAL
ILLUMINATION DIAGRAM

ENGINEERING SERVICES
DIRECTOR, ENGINEERING SERVICES
TOM L. ARNOLD, P.E.
PRINCIPAL ENGINEER, DESIGN
KEN M. BROWN, P.E.

APPROVED BY

ADOPTED: 4/99
REVISED: 4/2004
SCALE: NTS
DWG/REV. BY: SRM
NOTES:

1. JUNCTION BOXES TYPE 7 AND TYPE 8 ARE IDENTICAL EXCEPT FOR THE ADDITION OF LOCKING BOLTS ON THE TYPE 8.

2. ALL BOX DIMENSIONS ARE APPROXIMATE. EXACT CONFIGURATIONS VARY AMONG MANUFACTURERS.

3. MINIMUM LID THICKNESS SHOWN. JUNCTION BOXES INSTALLED IN SIDEWALKS, WALKWAYS, AND SHARED-USE PATHS SHALL HAVE A SLIP RESISTANT COATING ON THE LID AND LIP COVER PLATE, AND SHALL BE INSTALLED WITH THE SURFACE FLUSH WITH AND MATCHED TO THE GRADE OF THE SIDEWALK, WALKWAY, OR SHARED-USE PATH.

4. LID SUPPORT MEMBERS SHALL BE 3/16" MIN. THICK STEEL C, L, OR T SHAPE, WELDED TO THE FRAME. EXACT CONFIGURATIONS VARY AMONG MANUFACTURERS.

5. A 1/4-20NC X 3/4" S.S GROUND STUD SHALL BE WELDED TO THE BOTTOM OF EACH LID; INCLUDE S.S NUT AND FLAT WASHER.

6. THE HINGES SHALL ALLOW THE LIDS TO OPEN 180°.

7. BOLTS AND NUTS SHALL BE LIBERALLY COATED WITH ANTI-SEIZE COMPOUND.

8. CONNECT A BONDING JUMPER TO STEEL CONDUIT BUSHING FOR GRS CONDUIT; CONNECT TO EQUIPMENT GROUNDING CONDUCTOR FOR PVC CONDUIT. AS AN ALTERNATIVE TO THE GROUND STUD CONNECTION, THE BONDING JUMPER SHALL BE ATTACHED TO THE FRONT FACE OF THE HINGE POCKET WITH A 5/16-20NC X 3/4" S.S. BOLT, NUT, AND FLAT WASHER. BONDING JUMPER SHALL BE #8 MIN. X 4" OF TINED BRAIDED COPPER.

9. THE SYSTEM IDENTIFICATION LETTERS SHALL BE 1/8" LINE THICKNESS FORMED BY A WELD BEAD. SEE SYSTEM LEGEND DETAIL SHEET 1.

10. SEE THE STANDARD SPECIFICATIONS FOR ALTERNATIVE REINFORCEMENT AND CLASS OF CONCRETE.
NOTEs

1. UNISTRUT/ "C" CHANNEL TO ACCEPT INDUSTRY STANDARD RACKING AND HARDWARE APPURTEANCES.
2. RACK CABLE PER J-112C.
3. WHEN MANHOLE RING & COVER IS INSTALLED IN A PLANTING STRIP, INSTALL CONCRETE APRON FLUSH WITH LID & CURB, AT LEAST 3' WIDE ALL AROUND RING PERIMETER.
4. DIMENSIONS ShOWN ARE PREFERRED, BUT CAN BE ADJUSTED TO ACCOMMODATE CONSTRUCTION OF BOX (4" - 6").
5. "AS REQ'D" NOTES INDICATE DIMENSIONS ARE DEPENDENT UPON DESIGN OF PULL BOX FOR TRAFFIC RATED DESIGN.

Adopted: 02/2023
Supersedes: 03/2015
Checked By: GTO
Scale: NTS
Drawing by: BDH

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

PULL BOX INSTALLATION

NOw

NEW CONSTRUCTION REQUIRES 8" ADJUSTMENT SECTION
GROUT VOIDS
AS REQ'D.

MANHOLE RING & COVER DETAil
- THE MANHOLE RING & COVER MUST BE TRAFFIC RATED.
- HANDLE(S) ON COVERS NOT ALLOWED.
- COVER SHALL BE ASTM A-536, GRADE 80-55-06
- DUCTILE IRON.
- RING SHALL BE ASTM A-48, CL. 308 CAST IRON.

(4) LIFT SLOTS

PULL BOX PLAN VIEW
MODIFIED U.S. WEST FRAME & COVER 30" DIA. CLEAR OPENING

(2) BOLT-DOWN HOLES

PROVIDE PULL POINTS, EACH CORNER

PULL BOX SIDE VIEW

EACH SIDE SHALL INCLUDE:
- (2) 18" x 18" KNOCKOUT AREAS
- (8) 4" TO 6" DIA KNOCKOUTS

UNISTRUT/ "C" CHANNEL, 3' LONG, 1 EA. SIDE, ALL SIDES.

as req'd

8" DIA. SUMP W/ 2" DRAIN HOLE

SECTION A-A
CABLE VAULT PLAN VIEW
MODIFIED U.S. WEST FRAME & COVER 30" DIA. CLEAR OPENING

EACH SIDE SHALL INCLUDE:
(2) 18" x 24" KNOCKOUT AREAS
(8) 4" TO 6" DIA KNOCKOUTS

LOCATION AS REQ'D.

SEE CITY STANDARD PLAN J-112 FOR LEGEND DETAIL

NEW CONSTRUCTION REQUIRES 8" ADJUSTMENT SECTION

MANHOLE RING & COVER DETAIL
• THE MANHOLE RING & COVER MUST BE TRAFFIC RATED.
• HANDLE(S) ON COVERS NOT ALLOWED.
• FOR MANHOLE COVER PLAN/PROFILE, SEE CITY STANDARD PLAN J-112A.
• COVER SHALL BE ASTM A-536, GRADE 80-55-06 DUCTILE IRON.
• RING SHALL BE ASTM A-48, CL. 30B CAST IRON.

MANHOLE COVER PLAN/PROFILE DETAIL

CABLE VAULT SIDE VIEW

NOTES
1. UNISTRUT/ "C" CHANNEL TO ACCEPT INDUSTRY STANDARD RACKING AND HARDWARE APPURTENANCES.
2. RACK CABLE PER J-112C.
3. WHEN MANHOLE RING & COVER IS INSTALLED IN A PLANTING STRIP, INSTALL CONCRETE APRON FLUSH WITH LID & CURB, AT LEAST 3" WIDE ALL AROUND RING PERIMETER.
4. DIMENSIONS ShOWN ARE PREFERRED, BUT CAN BE ADJUSTED TO ACCOMMODATE CONSTRUCTION OF BOX (±4" – 6")
5. "AS REQ'D" NOTES INDICATE DIMENSIONS ARE DEPENDENT UPON DESIGN OF CABLE VAULT FOR TRAFFIC RATED DESIGN.

CABLE VAULT INSTALLATION

Adopted: 04/2023
Revised: 03/2015
Supersedes: J-112C
Checked By: GTO
Scale: NTS
Dwg/Rev. By: BDH

Engineering Services
City of Spokane, Washington

Standard Plan No. J-112B
At no time shall the cable's minimum bending radius limitations be compromised.

INTERNAL OBLIQUE VIEW
COIL THE CABLE BY USING A "FIGURE 8" FOLDED IN THE MIDDLE TO FORM A LOOP

PIPE HANGER DETAIL
FABRICATE IF NOT AVAILABLE COMMERCIALLY

PULL BOX DETAILS

CABLE HANGER DETAIL
FABRICATE IF NOT AVAILABLE COMMERCIALLY

CABLE VAULT DETAILS

CABLE RACKING FOR PULL BOX & CABLE VAULT INSTALLATION

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-112C
**MULE TAPE TIES**

1. **DRILL A 3/8" TO 1/2" DIA. HOLE IN TOP OF BELL.**
2. **LOOP APPROX. 3-4 FT. MULE TAPE THROUGH 1/2" HORIZONTAL SLIT MADE IN TOP OF MAXCELL. TIE A KNOT ABOVE MAXCELL INSIDE CONDUIT.**
3. **FEED BOTH ENDS OF MULE TAPE UP THROUGH HOLE IN BELL AND WRAP AROUND OUTSIDE OF CONDUIT BELL 2 TIMES AND SECURE WITH A KNOT ON TOP.**

**CABLE VAULT OR PULL BOX**

**MAXCELL ANCHORED IN PULL BOX OR CABLE VAULT**
NOTES:
PER SECTION 9-22.1, THE CASTING SHALL BE GRAY-IRON CASTING, AASHTO M 105, CLASS 30B. THE COVER AND SEAT SHALL BE MACHINED SO AS TO HAVE PERFECT CONTACT AROUND THE ENTIRE CIRCUMFERENCE AND FULL WIDTH OF BEARING SURFACE.

APPROXIMATE WEIGHTS:
CASE: 60#
COVER 19#
TOTAL = 79#

SECTION OF RAISED LETTER
% IN. OVAL EYEBOLT
OR
% IN. THRU MACHINE BOLT

% IN. GALVANIZED GUY STRAND

7 FT. PLASTIC GUY GUARD (YELLOW)

FALSE DEAD END

**GUY STRAIN INSULATOR: REQUIRED IF ANY LINE ON POLE EXCEEDS 300 VOLTS.

FALSE DEAD END

10 FT. MINIMUM

% IN. THIMBLEYE ANCHOR ROD
6 FT. LENGTH

FALSE DEADEND (GUY GRIP OR EQUAL)

CROSS PLATE ANCHOR*
OR
8-WAY EXPANDING ANCHOR

SPECIAL HEAVY SQUARE ANCHOR NUT

* 20 IN. HOLE SIZE REQUIRED FOR CROSS PLATE ANCHOR
8 IN. HOLE SIZE REQUIRED FOR 8-WAY EXPANDING ANCHOR

** PER AVISTA UTILITIES: SPEC DO-1.401
(JOINT USE GENERAL REQUIREMENTS)

THE INFORMATION PROVIDED HEREON IS TYPICAL FOR STANDARD SITUATIONS. FOR NON-STANDARD DESIGN SITUATIONS, THE ENGINEER OF RECORD SHALL DETERMINE AN APPROPRIATE DESIGN BASED UPON THE INTENT AS PROVIDED HEREON AND SUBMIT FOR REVIEW AND APPROVAL BY THE CITY TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE. FOR NON-STANDARD FIELD SITUATIONS, THE CONTRACTOR SHALL DETERMINE AN APPROPRIATE APPLICATION BASED UPON THE INTENT, AS PROVIDED HEREON AND CONFIRM SUCH WITH THE CITY TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE BEFORE PERMANENT IMPLEMENTATION.
% IN. OVAL EYEBOLT
OR
% IN. THRU MACHINE BOLT

% IN. THIMBLEY ELET
SQUARE NUT
SHORT BAIL STRAN DVICE DEADEND

FALSE DEAD END

**GUY STRAIN INSULATOR: REQUIRED IF ANY LINE ON POLE EXCEEDS 300 VOLTS.

FALSE DEAD END

% IN. GALVANIZED GUY STRAND

2 IN. RIGID CONDUIT

7 FT. PLASTIC GUY GUARD (YELLOW)
OR
2 IN. RIGID CONDUIT

FALSE DEAD END
(GUY GRIP OF EQUAL)

% IN. THIMBLEY EANCHOR ROD
6 FT. LENGTH

CROSS PLATE ANCHOR
OR
8-WAY EXPANDING ANCHOR

SPECIAL HEAVY SQUARE ANCHOR NUT

* 20 IN. HOLE SIZE REQUIRED FOR CROSS PLATE ANCHOR
8 IN. HOLE SIZE REQUIRED FOR 8-WAY EXPANDING ANCHOR

** PER AVISTA UTILITIES: SPEC DO-1.401
(JOINT USE GENERAL REQUIREMENTS)

THE INFORMATION PROVIDED HEREBON IS TYPICAL FOR STANDARD SITUATIONS. FOR NON-STANDARD DESIGN SITUATIONS, THE ENGINEER OF RECORD SHALL DETERMINE AN APPROPRIATE DESIGN BASED UPON THE INTENT AS PROVIDED HEREBON AND SUBMIT FOR REVIEW AND APPROVAL BY THE CITY TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE. FOR NON-STANDARD FIELD SITUATIONS, THE CONTRACTOR SHALL DETERMINE AN APPROPRIATE APPLICATION BASED UPON THE INTENT, AS PROVIDED HEREBON AND CONFIRM SUCH WITH THE CITY TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE BEFORE PERMANENT IMPLEMENTATION.

Adopted: __________
Revised: __________
Supersedes: __________
Checked By: __________
Scale: __________
Dwg/Rev. By: __________

Sidewalk Back Guy

Engineering Services
City of Spokane, Washington

Standard Plan No. J-114
THE INFORMATION PROVIDED HEREON IS TYPICAL FOR STANDARD SITUATIONS. FOR NON-STANDARD DESIGN SITUATIONS, THE ENGINEER OF RECORD SHALL DETERMINE AN APPROPRIATE DESIGN BASED UPON THE INTENT AS PROVIDED HEREON AND SUBMIT FOR REVIEW AND APPROVAL BY THE CITY TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE. FOR NON-STANDARD FIELD SITUATIONS, THE CONTRACTOR SHALL DETERMINE AN APPROPRIATE APPLICATION BASED UPON THE INTENT, AS PROVIDED HEREON AND CONFIRM SUCH WITH THE CITY TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE BEFORE PERMANENT IMPLEMENTATION.

SOURCE: AVISTA UTILITIES DISTRIBUTION STANDARDS DWG. DO-1.401 AND DO-1.407
THE INFORMATION PROVIDED HEREON IS TYPICAL FOR STANDARD SITUATIONS. FOR NON-STANDARD DESIGN SITUATIONS, THE ENGINEER OF RECORD SHALL DETERMINE AN APPROPRIATE DESIGN BASED UPON THE INTENT AS PROVIDED HEREON AND SUBMIT FOR REVIEW AND APPROVAL BY THE CITY TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE. FOR NON-STANDARD FIELD SITUATIONS, THE CONTRACTOR SHALL DETERMINE AN APPROPRIATE APPLICATION BASED UPON THE INTENT, AS PROVIDED HEREON AND CONFIRM SUCH WITH THE CITY TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE BEFORE PERMANENT IMPLEMENTATION.

SOURCE: AVISTA UTILITIES DISTRIBUTION STANDARDS DWG. DO-1.401 AND DO-1.407
SECONDARY POWER LINES

SHORT BAIL

DEADEND

TELEPHONE LINES

**CLAMP CABLE AS NECESSARY**

SEAL CONDUIT END WITH DUCT SEALING COMPOUND

COORDINATE WITH AVISTA FOR RISER LOCATION.

**SOURCE: AVISTA UTILITIES DISTRIBUTION STANDARDS STANDARDS DWG. DO-1.446, DO-1.449, & DO-1.422.**

* SOURCE: AVISTA UTILITIES DISTRIBUTION STANDARDS STANDARDS DWG. DO-1.401 & DO-1.407.

THE INFORMATION PROVIDED HEREON IS TYPICAL FOR STANDARD SITUATIONS. FOR NON-STANDARD DESIGN SITUATIONS, THE ENGINEER OF RECORD SHALL DETERMINE AN APPROPRIATE DESIGN BASED UPON THE INTENT AS PROVIDED HEREON AND SUBMIT FOR REVIEW AND APPROVAL BY THE CITY TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE. FOR NON-STANDARD FIELD SITUATIONS, THE CONTRACTOR SHALL DETERMINE AN APPROPRIATE APPLICATION BASED UPON THE INTENT, AS PROVIDED HEREON AND CONFIRM SUCH WITH THE CITY TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE BEFORE PERMANENT IMPLEMENTATION.
THREE - BOLT - TYPE SUSPENSION CLAMP
WITH SERPENTINE GRIPPING SURFACES

SECONDARY POWER LINES

5/8 IN. THRU MACHINE BOLT (1)
SQUARE NUT (2)
FLAT WASHER (2)
"J" HOOK

CLAMP

"J" HOOK

SIDE VIEW

5 1/8 IN. MIN.
TYPICAL

1 12 IN. MIN.
TYPICAL

TELEPHONE LINES

FRONT VIEW

FIGURE 8 CABLE

*SOURCE: AVISTA UTILITIES DISTRIBUTION STANDARDS DWG. DO-1.401 & DO-1.407.
NOTES:
1. TERMINATE CONDUITS 1 INCH MAXIMUM ABOVE TOP OF FOUNDATION. INSTALL BELL END ON CONDUIT.
2. IN UNPAVED AREAS A RAISED PCC PAD 24" X 4" X WIDTH OF FOUNDATION SHALL BE PLACED IN FRONT OF NEW SERVICE INSTALLATION. PAD SHALL BE SET TO ELEVATION OF FOUNDATION.
3. ALL BOLTS, BOLTS AND SCREWS WILL BE STAINLESS STEEL.
4. PHENOLIC NAMEPLATES SHALL BE PROVIDED FOR EACH CONTROL COMPONENT.
5. SERVICE GROUNDING CONDUCTOR SHALL BE CONTINUOUS AND CONNECT TO 8 FT. GROUNDING ELECTRODES SEPARATED A MINIMUM OF 6 FT.
6. SERVICE CABINET SHALL BE A TAMPER RESISTANT, SLIMLINE, WEATHERPROOF, PAD MOUNTED PEDESTAL WITH MAIN AND SUBFEED CIRCUIT BREAKERS AND CONTROLS AS SHOWN.
7. THE SERVICE CABINET SHALL BE METERED, MAIN CIRCUIT BREAKER SHALL BE 10K AIC SERIES RATED.
8. CONSTRUCTION WILL BE NEMA 3R, RAINTIGHT, DUST TIGHT, WITH MILL FINISH.
9. EXTERNAL CORNERS AND SEAMS SHALL BE GROUND SMOOTH.
10. NUTS, BOLTS AND SCREWS WILL NOT BE VISIBLE FROM OUTSIDE OF ENCLOSURE.
11. HINGES SHALL BE CONTINUOUS ALUMINUM PIANO TYPE.
12. ENCLOSURE WILL BE FACTORY WIRED AND CONFORM TO REQUIRED NEMA AND UL STANDARDS.
13. CONTROL WIRING SHALL BE SEVEN STRAND #14 TW EXCEPT FOR HINGE WIRING, WHICH SHALL BE 19 STRAND #14 THHN.
14. WIRING SHALL BE ARRANGED SO THAT ANY PIECE OF APPARATUS MAY BE REMOVED WITHOUT DISCONNECTING ANY WIRING EXCEPT THE LEADS TO PERMANENT CLIP SLEEVE WIRE MARKERS.
15. ALL WIRING WILL BE MARKED AT BOTH ENDS BY PERMANENT WIRE MARKERS.
16. A PLASTIC COVERED WIRING DIAMOND WILL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
17. CABINET SHALL HAVE A 508 UL LABEL "INDUSTRIAL CONTROL PANEL" UL 508.
18. THE SERVICE CABINET SHALL BE SIMILAR IN DESIGN TO THE TESCO CLASS 27-100 SERVICE PEDESTAL.
NOTES:
1. TERMINATE CONDUITS 1 INCH MAXIMUM ABOVE TOP OF FOUNDATION. INSTALL BELL END ON CONDUIT.
2. IN UNPAVED AREAS A RAISED PCC PAD 24" X 4" X WIDTH OF FOUNDATION SHALL BE PLACED IN FRONT OF NEW SERVICE INSTALLATION. PAD SHALL BE SET TO ELEVATION OF FOUNDATION.
3. ALL NUTS, BOLTS AND SCREWS WILL BE STAINLESS STEEL.
4. PHENOLIC NAMEPLATES SHALL BE PROVIDED FOR EACH CONTROL COMPONENT.
5. SERVICE GROUNDING CONDUCTOR SHALL BE CONTINUOUS AND CONNECT TO 8 FT. GROUNDING ELECTRODES SEPARATED A MINIMUM OF 6 FT.
6. SERVICE CABINET SHALL BE A TAMPER RESISTANT, SLIMLINE, WEATHERPROOF, PAD MOUNTED PEDESTAL WITH MAIN AND SUBFEED CIRCUIT BREAKERS AND CONTROLS AS SHOWN.
7. THE SERVICE CABINET SHALL BE METERED. MAIN CIRCUIT BREAKER SHALL BE 100K AIC SERIES RATED.
8. CONSTRUCTION WILL BE NEMA 3R, RAINTIGHT, DUST TIGHT, WITH MILL FINISH.
9. EXTERNAL CORNERS AND SEAMS SHALL BE GROUND SMOOTH.
10. NUTS, BOLTS AND SCREWS WILL NOT BE VISIBLE FROM OUTSIDE OF ENCLOSURE.
11. HINGES SHALL BE CONTINUOUS ALUMINUM PIANO TYPE.
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15. ALL WIRING WILL BE MARKED AT BOTH ENDS BY PERMANENT WIRE MARKERS.
16. A PLASTIC COVERED WIRING DIAGRAM WILL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
17. CABINET SHALL HAVE A 508 UL LABEL "INDUSTRIAL CONTROL PANEL" UL 508.
18. ADDITIONAL CONTACTS MAY BE REQUIRED, BASED ON PROJECT SPECIFICATIONS.
19. PHOTO CELL CIRCUITRY AS NEEDED PER PROJECT SPECIFICATIONS.
20. THE SERVICE CABINET SHALL BE SIMILAR IN DESIGN TO THE SKYLINE SERIES #65842 SERVICE PEDESTAL.

DOWNTOWN UNDERGROUND
ELECTRICAL SERVICE
SHEET 2 OF 2

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No.
J-119A

APPROVED BY
DIRECTOR OF ENGINEERING SERVICES
DAN BULLER, P.E.

REvised:
04/2023

SUPERSEDES:
03/2021

CHECKED BY: QUIA

SCALE:
NTS

DWG/REV. BY: BDH

DOWNTOWN UNDERGROUND
ELECTRICAL SERVICE
SHEET 2 OF 2

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No.
J-119A
5/16 IN. CARBON STEEL NUT WELDED TO INSIDE OF TAB, CENTERED ON HOLES.

TOP VIEW

X/2

X/2

5 IN.

TAB WELDED TO INSIDE OF COVER
WITH FULL WELD SEAM ON THREE SIDES.

R = RADIUS OF POLE TUBE + 1/8 IN. ± 1/16 IN.

SIDE VIEW

X = TRAFFIC SIGNAL POLE BASE SIZE + 1/2 IN. ± 1/8 IN.

BOLT SLEEVE, SEE NOTE 5

BASE PLATE VARIES IN THICKNESS

EDGE VIEW

3/8 IN. HOLES
2 IN. C.T.C.

1 IN.

7/16 IN. HOLES
2 IN. C.T.C.

TO MATCH HOLES IN TAB

NOTES

1. BASE COVER SHALL BE 1/8 IN. STEEL WITH WELDED SEAMS.
2. TAB TO BE EITHER 1/8 IN. STEEL WELDED TO INSIDE OF COVER OR COVER BENT TO FORM TAB.
3. COVER TO BE SUPPLIED WITH 4 EACH 5/16 IN. X 1 1/2 IN. ZINC PLATED HEX HEAD BOLTS WITH ZINC PLATED OR STAINLESS STEEL SPLIT LOCKING WASHERS.
4. COMPLETED BASE COVER SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION, IN ACCORDANCE WITH ASTM 123. NUTS AND BOLTS SHALL BE ABLE TO MATE SECURELY AFTER GALVANIZATION.
5. BASE COVERS SHALL BE INSTALLED ON ALL SIGNAL STANDARDS EXCEPT WHEN BOLT SLEEVES ARE CALLED OUT ON THE CONTRACT PLANS.

EDGES OF COVER BENT TO FORM TAB.

5/16 IN. CARBON STEEL NUT WELDED TO INSIDE OF TAB, CENTERED ON HOLES

SIGNAL POLE BASE COVER

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

ADOPTED: 10/2020
REVISED: 2/2015
SUPERSEDES: N/A
SCALE: NTS
DWG/REV. BY: MDH

STANDARD PLAN No. J-120
NOTES
1. DRILL AND TAP HOLE ON BACK SIDE OF SIGNAL STANDARD AWAY FROM CENTER OF INTERSECTION 12" BELOW SIGNAL STANDARD CAP. ATTACH 3/4" 90° COMPRESSION ElBOW.
2. ATTACH 30" X 3/4" DIA. PIPE VERTICALLY TO COMPRESSION ElBOW.
3. USING UNISTRUT SPACER SECURE PIPE WITH 3-6" OF HOSE CLAMP.
4. ATTACH 3/4" COMPRESSION CONNECTOR TO TOP OF PIPE.
5. ATTACH PREEMPTION RECEIVER UNIT TO TOP OF 3/4" COMPRESSION CONNECTOR.
LUMCA CONCEPT SERIES CP2662 ACORN WITH BLACK FINISH AND HOOD

24" FLOWER ARM (BOTH SIDES) MAXIMUM LOADING 50 LBS EACH

POLE MOUNTED 15 AMP GFCI RECEPTACLE WITH WATERPROOF DIE CAST ALUMINUM COVER, COLOR TO MATCH POLE.

6" DIA. STRAIGHT FLUTED ALUMINUM POLE, HAPCO #35854P1, WALL ALLOY 6063-T. 0.250" WALL THICKNESS.

HAPCO 20" DIA. ARLEN CLAM SHELL BASE. CAST ALUMINUM TWO PIECE DECORATIVE BASE COVER ALLOY 319 WITH DOOR AND STAINLESS STEEL SCREWS, AND STAINLESS STEEL INSERTS.

NOTES
1. SEE STD. PLAN J-200 FOR CBD LIGHTING MAP.
2. SEE STD. PLAN J-208 FOR LUMINAIRE POLE DETAILS.
3. FOR OPTIONAL IRRIGATION IN POLE, NO BARB FITTING WILL BE ALLOWED. SEE STANDARD PLAN J-211.
4. FUSE EACH LUMINAIRE IN BASE HAND HOLE WITH A 5-AMP GLR IN-LINE FUSE.
5. USE ANTI-SEIZE LUBRICANT ON ALL SCREWS AND INSERTS.
DECORATIVE FINIAL
HAPCO F0002

2" NPS SLIPFITTER

1/2" THICK x 7" DIA.
ALUM. ADAPTER
ALLOY 6061-T6

Pole Top Detail

2 1/2" SCH. 40 ALUM. PIPE TENON
(2 7/8" O.D.) ALLOY 6063-T6

24" FLOWER ARM (BOTH SIDES)
MAXIMUM LOADING 50 LBS EACH

POLE MOUNTED 15 AMP GFCI
RECEPTACLE WITH WATERPROOF
DIE CAST ALUMINUM COVER,
COLOR TO MATCH POLE.

LUMCA CONCEPT
SERIES CPR-0662
PENDANT WITH BLACK
FINISH AND HOOD.

6" DIA. STRAIGHT FLUTED
ALUMINUM POLE, HAPCO
#35855P1, WALL ALLOY 6063-T.
0.250" WALL THICKNESS.

6" O.D.

HAPCO 20" DIA. ARLEN CLAM
SHELL BASE. CAST ALUMINUM
TWO PIECE DECORATIVE BASE
COVER ALLOY 319 WITH DOOR
AND STAINLESS STEEL SCREWS,
AND STAINLESS STEEL INSERTS.

17' 3/4" SHAFT HEIGHT
16' 6" SHAFT HEIGHT

TO SIDEWALK
TO STREET

Notes:
1. SEE STD. PLAN J-200 FOR CBD LIGHTING MAP.
2. SEE STD. PLAN J-208 FOR LUMINAIRE POLE DETAILS.
3. FOR OPTIONAL IRRIGATION IN POLE, NO BARB FITTING WILL BE ALLOWED. SEE STANDARD PLAN J-211.
4. FUSE EACH LUMINAIRE IN BASE HAND HOLE WITH A 5-AMP GLR IN-LINE FUSE.
5. USE ANTI-SEIZE LUBRICANT ON ALL SCREWS AND INSERTS.

P1B LUMINAIRE POLE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No.
J-202
LUMCA CONCEPT SERIES CPR-0662 PENDANT WITH BLACK FINISH AND HOOD.

24" FLOWER ARM (BOTH SIDES) MAXIMUM LOADING 50 LBS EACH

POLE MOUNTED 15 AMP GFCI RECEPTACLE WITH WATERPROOF DIE CAST ALUMINUM COVER, COLOR TO MATCH POLE.

6" DIA. STRAIGHT FLUTED ALUMINUM POLE, HAPCO #32570P1, WALL ALLOY 6063-T. 0.250" WALL THICKNESS.

HAPCO 20" DIA. ARLEN CLAM SHELL BASE. CAST ALUMINUM TWO PIECE DECORATIVE BASE COVER ALLOY 319 WITH DOOR AND STAINLESS STEEL SCREWS, AND STAINLESS STEEL INSERTS.

NOTES

1. SEE STD. PLAN J–200 FOR CBD LIGHTING MAP.
2. SEE STD. PLAN J–208 FOR LUMINAIRE POLE DETAILS.
3. FOR OPTIONAL IRRIGATION IN POLE, NO BARB FITTING WILL BE ALLOWED. SEE STANDARD PLAN J–211.
4. FUSE EACH LUMINAIRE IN BASE HAND HOLE WITH A 5–AMP GLR IN–LINE FUSE.
5. USE ANTI–SEIZE LUBRICANT ON ALL SCREWS AND INSERTS.
POLE TOP DETAIL

1. LUMCA CF44 DECORATIVE ARM
2. LUMCA CONCEPT SERIES CPL-6104 PENDANT WITH BLACK FINISH AND HOOD.
3. 2 1/2" SCH. 40 ALUM. PIPE TENON (2 7/8" O.D.) ALLOY 6063-T6
4. 1/2" THICK x 7" DIA. ALUM. ADAPTER ALLOY 6061-T6

DEVELOPMENT FINIAL HAPCO F0001

24" FLOWER ARM (BOTH SIDES) MAXIMUM LOADING 50 LBS EACH

POLE MOUNTED 15 AMP GFCI RECEPTACLE WITH WATERPROOF DIE CAST ALUMINUM COVER, COLOR TO MATCH POLE.

6" DIA. STRAIGHT FLUTED ALUMINUM POLE, HAPCO #33476, WALL ALLOY 6063-T. 0.250" WALL THICKNESS.

HAPCO 14" DIA. HOMWOOD CLAM SHELL BASE. CAST ALUMINUM TWO PIECE DECORATIVE BASE COVER ALLOY 319 WITH DOOR AND STAINLESS STEEL SCREWS, AND STAINLESS STEEL INSERTS.

TO SIDEWALK TO STREET

NOTES
1. SEE STD. PLAN J-200 FOR CBD LIGHTING MAP.
2. SEE STD. PLAN J-208 FOR LUMINAIRE POLE DETAILS.
3. FOR OPTIONAL IRRIGATION IN POLE, NO BARB FITTING WILL BE ALLOWED. SEE STANDARD PLAN J-211.
4. FUSE EACH LUMINAIRE IN BASE HAND HOLE WITH A 5-AMP GLR IN-LINE FUSE.
5. USE ANTI-SEIZE LUBRICANT ON ALL SCREWS AND INSERTS.

APPROVED BY

DIRECTOR OF ENGINEERING SERVICES  DAN BULLER, P.E.

ENGINEERING SERVICES  CITY OF SPOKANE, WASHINGTON

P1C LUMINAIRE POLE
LUMCA CONCEPT SERIES CPL-6104 PENDANT WITH BLACK FINISH AND HOOD.

POLE TOP DETAIL
DECORATIVE FINIAL HAPCO F0001

LUMCA CF44 DECORATIVE ARM
LUMCA CONCEPT SERIES CPL-6104 PENDANT WITH BLACK FINISH AND HOOD.

24" FLOWER ARM (BOTH SIDES) MAXIMUM LOADING 50 LBS EACH

POLE MOUNTED 15 AMP GFCI RECEPTACLE WITH WATERPROOF DIE CAST ALUMINUM COVER, COLOR TO MATCH POLE.

6" DIA. STRAIGHT FLUTED ALUMINUM POLE, HAPCO #33205, WALL ALLOY 6063-T. 0.250" WALL THICKNESS.

HAPCO 14" DIA. HOMewood CLAM SHELL BASE. CAST ALUMINUM TWO PIECE DECORATIVE BASE COVER ALLOY 319 WITH DOOR AND STAINLESS STEEL SCREWS, AND STAINLESS STEEL INSERTS.

NOTES
1. SEE STD. PLAN J-200 FOR CBD LIGHTING MAP.
2. SEE STD. PLAN J-208 FOR LUMINAIRE POLE DETAILS.
3. FOR OPTIONAL IRRIGATION IN POLE, NO BARB FITTING WILL BE ALLOWED. SEE STANDARD PLAN J-211.
4. FUSE EACH LUMINAIRE IN BASE HAND HOLE WITH A 5-AMP GLR IN-LINE FUSE.
5. USE ANTI-SEIZE LUBRICANT ON ALL SCREWS AND INSERTS.
Decorative Finial
Hapco F0002

3/8"-16NC Stainless Steel Set Screws
(2 Rows, 4 @ 90°)

2" NPS Slipfitter

2" Sch. 40 Alum. Pipe Arm (2 3/8" O.D.) Alloy 6063-T6 (86064)

Alum. Scroll Mounted into Rivnut in Arm and With Formed Bands to Pole with 3/8"-16NC Stainless Steel Hardware

Lumca Concept Series
CPR-0662 Pendant with Black Finish and Hood.

24" Flower Arm (Both Sides)
Maximum Loading 50 Lbs Each

Pole Mounted 15 Amp GFCI Receptacle with Waterproof Die Cast Aluminum Cover, Color to Match Pole.

6" Dia. Straight Fluted Aluminum Pole, Hapco #34229, Wall Alloy 6063-T. 0.250" Wall Thickness.

Hapco 14" Dia. Homewood Clam Shell Base. Cast Aluminum Two Piece Decorative Base Cover Alloy 319 with Door and Stainless Steel Screws, and Stainless Steel Inserts.

2 1/2" Sch. 40 Alum Pipe Tenon (2 7/8" O.D.) Alloy 6063-T6

1/2" Thick x 7" Dia. Alum. Adapter Alloy 6061-T6

Notes:
2. See Std. Plan J-208 for Luminaire Pole Details.
4. Fuse Each Luminaire in Base Hand Hole with a 5-Amp GLR In-Line Fuse.
5. Use Anti-Seize Lubricant on All Screws and Inserts.

Approved By:

Director of Engineering Services
Dan Buller, P.E.

Engineering Services
City of Spokane, Washington

Standard Plan No. J-206

S2B Luminaire Pole

Adopted:
04/2023

Revised:
08/2019

Supersedes:

Checked By:

Scale:

Dwg/Rev. By:

0/10

NTS

BDH
C.O.S. STANDARD STREET LIGHTING FIXTURE WITH BLACK FINISH.

2" NPS SLIPFITTER

2" SCH. 40 ALUM. PIPE ARM (2 3/8" O.D.) ALLOY 6063-T6 (86064)

DECORATIVE FINIAL HAPCO F0001

ALUM. SCROLL MOUNTED INTO RIVNUT IN ARM AND WITH FORMED BANDS TO POLE WITH 3/8"-16NC STAINLESS STEEL HARDWARE

2 1/2" SCH. 40 ALUM. PIPE TENON (2 7/8" O.D.) ALLOY 6063-T6

LUMCA CONCEPT SERIES CPL-6104 PENDANT WITH BLACK FINISH AND HOOD.

1/2" THICK x 7" DIA. ALUM. ADAPTER ALLOY 6061-T6

24" FLOWER ARM (BOTH SIDES) MAXIMUM LOADING 50 LBS EACH

POLE MOUNTED 15 AMP GFCI RECEPTACLE WITH WATERPROOF DIE CAST ALUMINUM COVER, COLOR TO MATCH POLE.

6" DIA. STRAIGHT FLUTED ALUMINUM POLE, HAPCO #33314, WALL ALLOY 6063-T. 0.250" WALL THICKNESS.

HAPCO 14" DIA. HOMWOOD CLAM SHELL BASE. CAST ALUMINUM TWO PIECE DECORATIVE BASE COVER ALLOY 319 WITH DOOR AND STAINLESS STEEL SCREWS, & STAINLESS STEEL INSERTS.

NOTES:
1. SEE STD. PLAN J-200 FOR CBD LIGHTING MAP.
2. SEE STD. PLAN J-208 FOR LUMINAIRE POLE DETAILS.
3. FOR OPTIONAL IRRIGATION IN POLE, NO BARB FITTING WILL BE ALLOWED. SEE STANDARD PLAN J-212.
4. FUSE EACH LUMINAIRE IN BASE HAND HOLE WITH A 5-AMP GLR IN-LINE FUSE.
5. USE ANTI-SEIZE LUBRICANT ON ALL SCREWS AND INSERTS.

ADOPTED: 04/2023
SUPERSEDES: 08/2019
CHECKED BY: D10
SCALE: NTS
DWG/REV. BY: BDH

S2C LUMINAIRE POLE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. J-207
POLE TOP P1A LUMINAIRE

3 1/2" SCH. 40 ALUM. PIPE
TENON (4" O.D.) ALLOY 6063–T6

1/2" THICK x 7" DIA.
ALUM. ADAPTER
ALLOY 6061–T6

POLE TOP ALL OTHER
LUMINAIRS

2 1/2" SCH. 40 ALUM. PIPE
TENON (2 7/8" O.D.) ALLOY
6063–T6

1/2" THICK x 7" DIA.
ALUM. ADAPTER
ALLOY 6061–T6

GROUNDING
PROVISION, INSIDE,
OPPOSITE DOOR

REINFORCED
HANDHOLE (3"x5")
WITH COVER AND
STAINLESS STEEL
HEX. HEAD SCREWS

CAST ALUM. BASE
FLANGE ALLOY
356–T6

9 3/4" SQ.

POLE BASE

9" TO 10" DIA.
BOLT CIRCLE

BOLT CIRCLE

CROSS SECTION OF FLUTES

LUMINAIRE POLE DETAILS

ADOPTED: 11/2018
REVISED: 
SUPERSEDES: 
CHECKED BY: ANM
SCALE: NTS
DWG/REV. BY: MDH

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON
STANDARD PLAN No. J–208
MONUMENT FRAME & COVER FOR IRRIGATION WHEN PLACED WITHIN SIDEWALK. SEE STANDARD PLAN J–213A.

4" TO 6" CONDUIT WITH BELL ENDS

BELL END

1/2" PLASTIC DRAIN PIPE REQUIRED

GROUT BENEATH FLANGE

PER MERS SPECS

4" SIDEWALK

LEVELING NUTS (TYP)

2 1/2" MIN

3 1/2" MAX

3" (TYP)

HAZARD TAPE

PVC CONDUIT TO TYPE 1 J-BOX. SEE SITE PLANS CONDUIT & WIRE SCHEDULE FOR REQUIREMENTS.

MANUFACTURER SUPPLIED 3'-0" GALVANIZED STEEL ANCHOR BOLTS. FOUR (4) WITH DOUBLE NUT & WASHERS REQUIRED FOR PLUMBING POLE. AASHTO M314-90 GRADE 55, 10" OF THREADED END GALV. PER ASTM A153.

8–#5 VERTICAL BARS EQUALLY SPACED (SEE PLAN VIEW)

7–#3 HOOP TIES @ 10" OC MAX. (1 @ 2" OC @ TOP 2 @ 1.5" @ TOP)

CONCRETE POLE FOUNDATION CL4000P CONCRETE

"P" SERIES FOUNDATION

NOTES
1. GROUND POLE PER NEC.
2. NO BARBED FITTINGS ALLOWED INSIDE POLE.
3. SEE STANDARD PLAN J–213A FOR IRRIGATION DETAILS.

"P" SERIES LUMINARIE FOUNDATION

PLANT VIEW

2", LAP 2", LAP 2", SPACES

NTS

NTS

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

APPROVED BY
DIRECTOR OF ENGINEERING SERVICES DAN BULLER P.E.

ADOPTED:
04/2023

SUPERSEDES:
07/2021

CHECKED BY:

REVISED:
04/2023

SCALE:
NTS

DWG/REV. BY:
BDH

STANDARD PLAN No.
J–211
NOTE: FOR USE ONLY WHEN SHALLOW ROCK ENCOUNTERED

"P" SERIES LUMINAIRE FOUNDATION

"P" SERIES FOUNDATION

MANUFACTURER SUPPLIED GALVANIZED STEEL ANCHOR BOLTS W/ 1"-9" EMBEDMENT BENEATH BOTTOM OF SIDEWALK SLAB. FOUR (4) WITH DOUBLE NUT AND WASHERS REQUIRED FOR PLUMBING POLE. AASHTO M314-90 GRADE 55, 10" OF THREADED END GALV. PER ASTM A153.

PVC CONDUIT TO TYPE 1 J-BOX. SEE SITE PLANS CONDUIT AND WIRE SCHEDULE FOR REQUIREMENTS.

PROVIDE 3/4" CONDUIT SLEEVE INSIDE POLE FOUNDATION FOR IRRIGATION Drip Line TO ADJACENT MONUMENT. SEE NOTE 4.

NOTE: WHERE SOLID BEDROCK IS ENCOUNTERED PRIOR TO REACHING 36" PILE EMBEDMENT DEPTH, PILE EMBEDMENT DEPTH CAN BE REDUCED TO 24". EMBED VERTICAL #7 REINFORCEMENT BARS 12" INTO BEDROCK W/ SIMPSON SET-XP EPOXY. GEOTECHNICAL ENGINEER TO PROVIDE SPECIAL INSPECTION TO VERIFY THAT ENCOUNTERED BEDROCK IS NOT WEATHERED OR FRACUTURED PRIOR TO APPROVAL OF REDUCED PILE EMBEDMENT DEPTH.

GROUND POLE PER NEC.

1. NO BARBED FITTINGS ALLOWED INSIDE POLE.
2. SEE STANDARD PLAN J-213A FOR IRRIGATION DETAILS.

NOTES
MONUMENT FRAME & COVER
FOR IRRIGATION WHEN PLACED
WITHIN SIDEWALK. SEE
STANDARD PLAN J-213A.

BELL END

1/2" PLASTIC DRAIN
PIPE REQUIRED

4" TO 6" CONDUIT WITH BELL END

LEVELING NUTS (TYP)

HAZARD TAPE

PROVIDE 3/4" CONDUIT SLEEVE INSIDE
POLE FOUNDATION FOR IRRIGATION
DRIP LINES TO ADJACENT MONUMENT.
SEE NOTE 3.

PVC CONDUIT TO TYPE 1 J-BOX. SEE
SITE PLANS CONDUIT & WIRE SCHEDULE
FOR REQUIREMENTS.

MANUFACTURER SUPPLIED 3'-0" GALVANIZED
STEEL ANCHOR BOLTS. FOUR (4) WITH DOUBLE
NUT & WASHERS REQUIRED FOR PLUMBING
POLE. AASHTO M314-90 GRADE 55, 10" OF
THREADED END GALV. PER ASTM A153.

8-#5 VERTICAL BARS EQUALLY SPACED
(SEE PLAN VIEW)

10-#3 HOOP TIES @ 10" OC MAX.
(1 @ 2" OC @ TOP 2 @ 1.5" @ TOP)

CONCRETE POLE FOUNDATION CL4000P

"S" SERIES FOUNDATION

NOTES
1. GROUND POLE PER NEC.
2. NO BARBED FITTINGS ALLOWED INSIDE POLE.
3. SEE STANDARD PLAN J-213A FOR IRRIGATION DETAILS.

"S" SERIES LUMINAIRE FOUNDATION

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD
PLAN No
J-212

SUPERSEDES:
07/2021
CHECKED BY:
STG
SCALE:
NTS
DVN/REV. BY:
BDH

REvised:
04/2023

APPROVED BY
DAN BULLER, P.E.
DIRECTOR OF ENGINEERING SERVICES
NOTE: FOR USE ONLY WHEN SHALLOW ROCK ENCOUNTERED

NOTES

1. WHERE SOLID BEDROCK IS ENCOUNTERED PRIOR TO REACHING 48" PILE EMBEDMENT DEPTH, PILE EMBEDMENT DEPTH CAN BE REDUCED TO 36". EMBED VERTICAL #7 REINFORCEMENT BARS 12" INTO BEDROCK W/ SIMPSON SET-XP EPOXY. GEOTECHNICAL ENGINEER TO PROVIDE SPECIAL INSPECTION TO VERIFY THAT ENCOUNTERED BEDROCK IS NOT WEATHERED OR FRACTURED PRIOR TO APPROVAL OF REDUCED PILE EMBEDMENT DEPTH.

2. GROUND POLE PER NEC.

3. NO BARBED FITTINGS ALLOWED INSIDE POLE.

4. SEE STANDARD PLAN J–213A FOR IRRIGATION DETAILS.
24V DC DECORATIVE TREE LIGHTING STRANDS.  
(PROVIDED BY OTHERS)

DECORATIVE TREE LIGHTING LEAD CABLE (PROVIDED BY OTHERS)

CUT SUPPLIER PROVIDED RECEPTACLE CABLE AND SPLICE IN JUNCTION BOX WITH LIQUID TIGHT SPLICE

12"X12"X6" NEMA 4X PVC JUNCTION BOX WITH SCREW LID

TO SERVICE CABINET (SEE PROJECT PLANS)

1" SCHEDULE 80 PVC CONDUIT

VERSALINE 60W POWER SUPPLY (24V DC OUTPUT)

1.0' TO LOWEST BRANCH

TIE WRAP CONDUIT TO TREE TRUNK

FINISHED GRADE

EDGE OF PLANTER OR TREE GRATE

3/4" FLEXIBLE PVC CONDUIT
1. Install manual valve in monument frame & 10" dia. cover. See city standard plan H-102. Cover shall be marked "irrigation".
2. Install manual shut-off valve so that it can be accessed & operated from above. Provide support as req'd. for on/off operation.
3. Extend PVC beyond valve body for min. 3" exposure of valve & lateral pipe.
4. Provide Teflon tape on all threaded fittings & stainless steel clamps on all P.E insert fittings.
5. Locate manual on/off valve adjacent to light pole.
6. No barbed fittings allowed in pole.
INSTALL AERIAL SERVICE & METER PER CITY OF SPAKANE STANDARD PLAN J-110

DESIGN CRITERIA
AASHTO 1994, 80 MPH WIND W/ 1.3 GUST,
WIRE LOAD 100’ SPAN 510 LBS. MAX.,
SPAN SAG 5%

22.5’ RADAR POLE
GALVANIZED STEEL

SPEED LIMIT SIGN
R2-1, 24” X 30”
SEE CONTRACT PLANS

RADAR SIGN:
MOUNT ACCORDING TO
MANUFACTURERS
RECOMMENDATIONS
30” X 36”, 32 LBS.

SPEED LIMIT
20
YOUR SPEED
23

BASE COVER
2 THREADS MIN. ABOVE TOP NUT
12.5” BOLT CIRCLE

HAND HOLE

FACE OF CURB
GROUT BENEATH FLANGE
SIDWALK

CONCRETE PREFORMED FOUNDATION
CLASS 4000P CONCRETE
4-1 1/4” ANCHOR BOLTS ASTM F1554
#4 ROUND HOOP 1”-0” ON CENTER
8-#7 BARS EQUALLY SPACED
2.5” CLEARANCE

FOUNDATION

RRFB/SPEED SIGN AERIAL POWER
FRONT VIEW

RRFB/SPEED SIGN—AERIAL POWER

ADOPTED: ________ 04/2023
REVISED: ________ 11/2018
SUPERSEDES: ________
CHECKED BY: ________
SCALE: NTS
DWG/REV. BY: ________

ENGINEERING SERVICES
CITY OF SPokane, WASHINGTON
STANDARD PLAN No. J-301A
RECTANGULAR RAPID–FLASHING BEACON (RRFB)

BASE PLATE BOLT TEMPLATE

FACE OF CURB

CONCRETE PREFORMED FOUNDATION
CLASS 4000 CONCRETE

3/4" ANCHOR BOLTS

7–#3 HOOP TIES @ 10" OC
(3 @ 2" OC @ TOP)

8–#5 VERTICAL BARS EQUALLY SPACED

FRANGIBLE BASE

W11–2
30" X 30"

RECTANGULAR RAPID–FLASHING BEACON
24" X 4" X 1.5"

SEE CONTRACT PLANS FOR SINGLE SIDED OR DOUBLE SIDED SIGNS AND SINGLE SIDED OR DOUBLE SIDED LIGHT BAR INSTALLATION

W16–7PR OR W16–7PL
30" X 18"

2 THREADS MIN.
1" MAX.
ABOVE TOP NUT

FOUNDATION

RRFB COMMERCIAL POWER FRONT VIEW

PLAN VIEW

NTS

NTS

NTS

NTS

NTS

4" DIA. X 16" SCHEDULE 40 ALUMINUM

13 3/4"

7" MIN.

4' MIN.

15"

23"

15"

4.0"