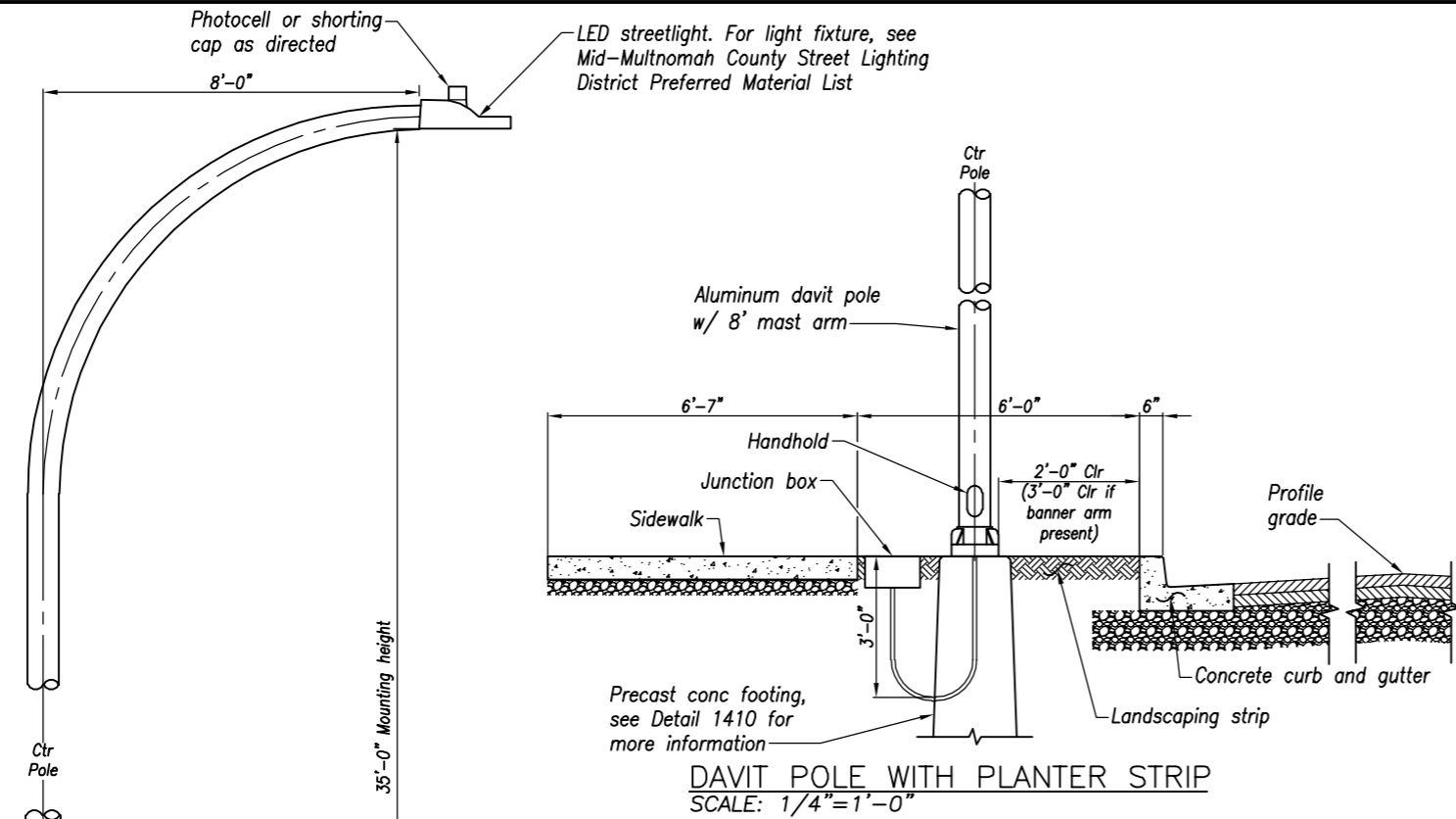
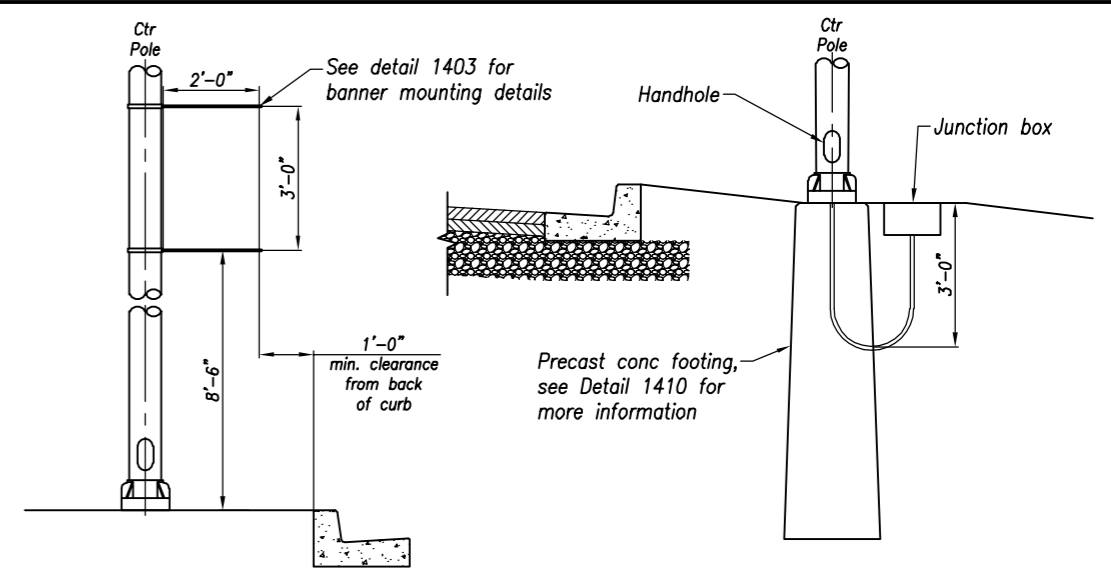


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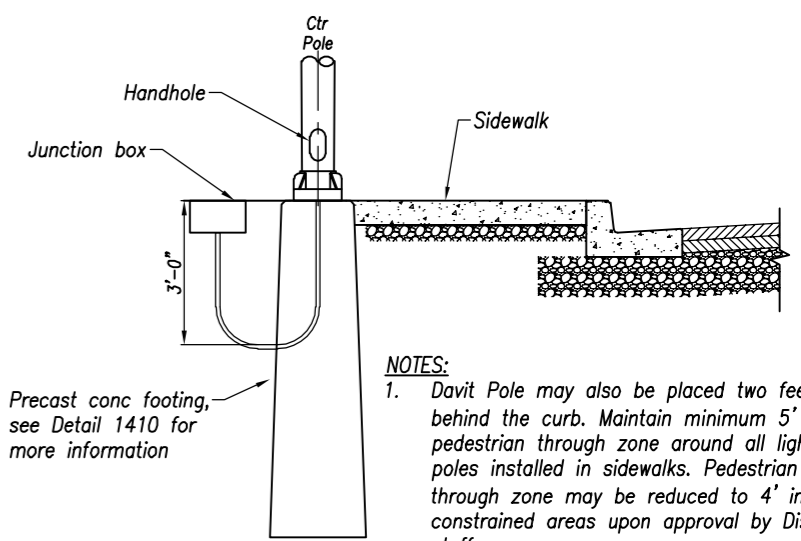


**DAVIT POLE WITH PLANTER STRIP**  
SCALE: 1/4"=1'-0"



**BANNER ATTACHMENT DETAIL**  
SCALE: 1/4"=1'-0"

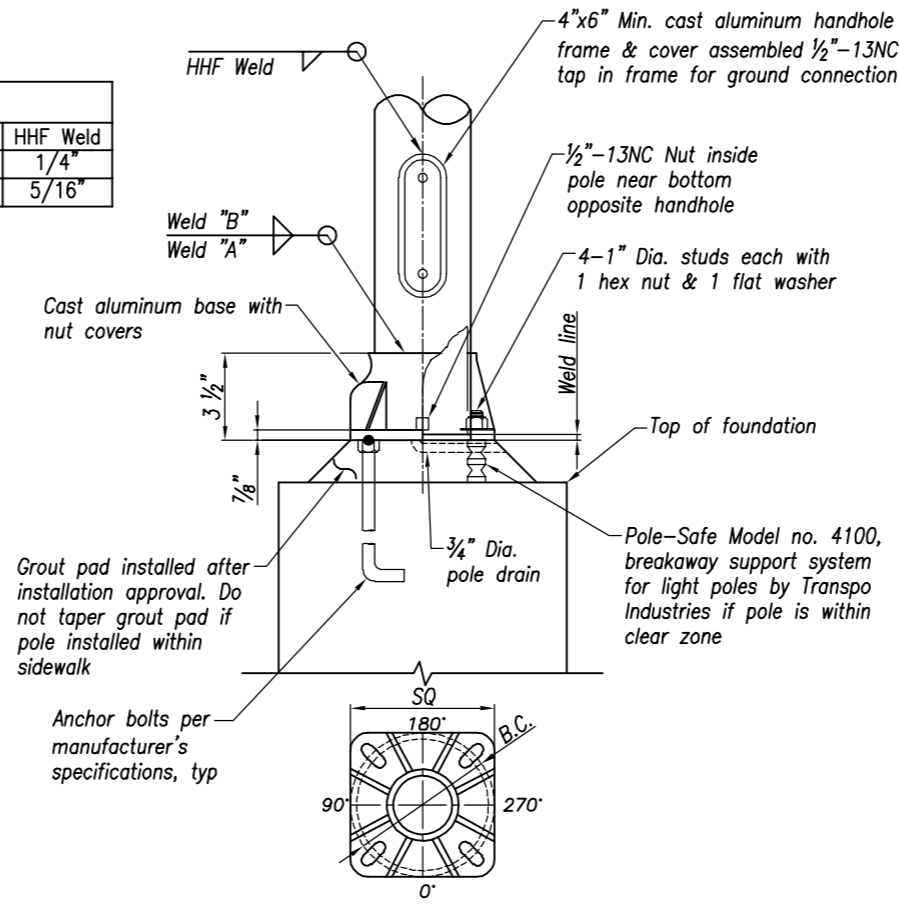
**DAVIT POLE WITH NO SIDEWALK**  
SCALE: 1/4"=1'-0"



**DAVIT POLE WITH CURB-TIGHT SIDEWALK**  
SCALE: 1/4"=1'-0"

**NOTES:**  
1. Davit Pole may also be placed two feet behind the curb. Maintain minimum 5' wide pedestrian through zone around all light poles installed in sidewalks. Pedestrian through zone may be reduced to 4' in very constrained areas upon approval by District staff.

Weld Table			
Wall Thk	Weld "A"	Weld "B"	HHF Weld
0.156"	1/4"	3/16"	1/4"
0.188"	5/16"	5/16"	5/16"



**BASE PLATE DETAIL**  
SCALE: 3/4"=1'-0"

Aluminum davit pole w/ 8' mast arm

5'-0" Min Handhole

Junction box

Sidewalk

3'-0"

1" electrical grade schedule 40 gray PVC conduit with 24" radius 90' fiberglass bends from 4" below handhole to inside junction box, (typical)

**NOTES:**

1. All poles, precast footings and junction boxes shall be from PGE's approved street lighting equipment list.
2. Use #10 AWG copper TC-ER conductor cable from fused disconnect to light fixture. See PGE approved products list. Color code: black/red/green (240V). Black/white/green (120V)
3. See Detail 1430 for ground rod installation in illumination junction boxes.

**DAVIT POLE WITH SWALE**  
SCALE: 1/4"=1'-0"

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

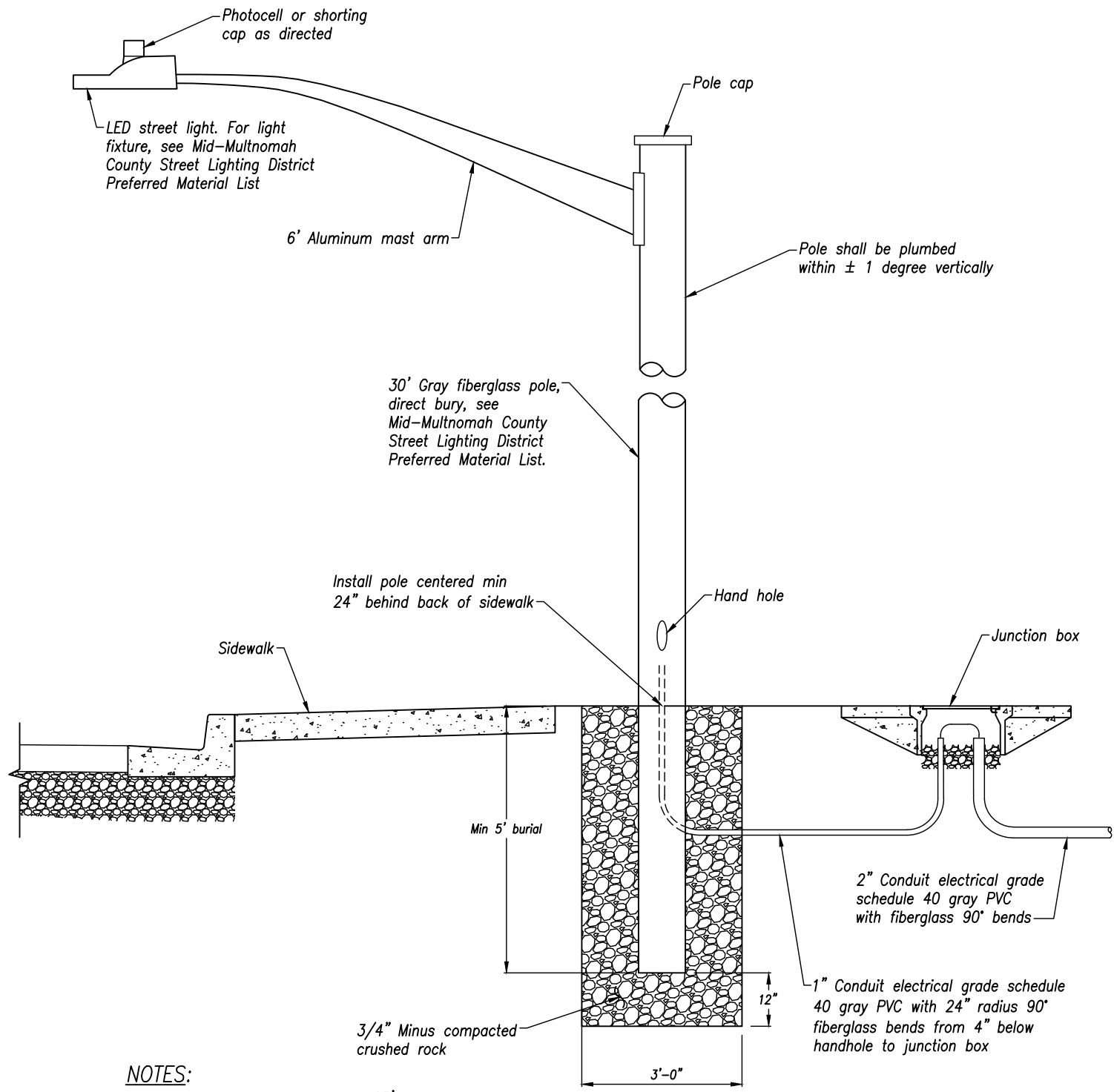
NOTE: All material and workmanship shall be in accordance with the current Multnomah County Standard Specifications

Multnomah County  
MID-MULTNOMAH COUNTY STREET LIGHTING SERVICE DISTRICT NO. 14

DETAIL - 1400  
TYPICAL ALUMINUM DAVIT POLE INSTALLATIONS

2020

DATE	REVISION DESCRIPTION




**NOTES:**

1. Luminaire mounting height is 25' above ground.
2. Use #10 AWG copper TC-ER conductor cable from fused disconnect to light fixture. See PGE approved products list. Color code: black/red/green (240V). Black/white/green (120V).
3. Install shorting cap on new street lights installed on an un-metered County electrical service with central photo control.

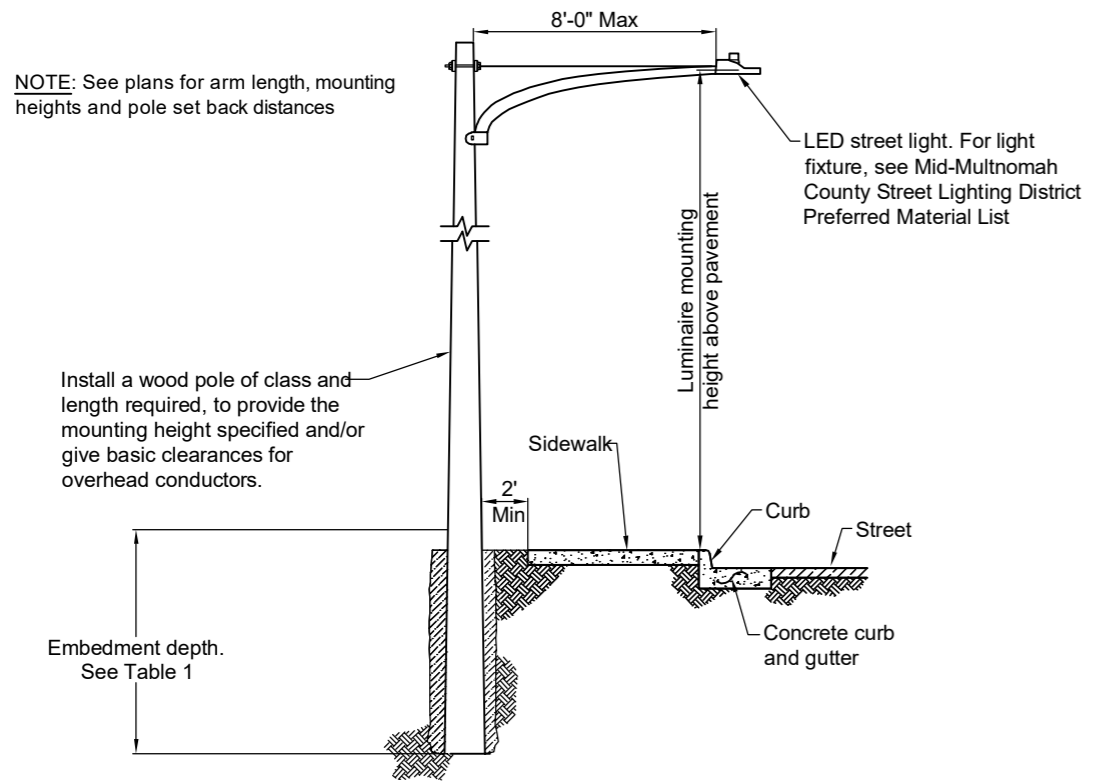
**FIBERGLASS STREET LIGHT POLE**

SCALE: No Scale

<p>The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.</p>	<p>NOTE: All material and workmanship shall be in accordance with the current Multnomah County Standard Specifications</p>	
	 <p>MID-MULTNOMAH COUNTY STREET LIGHTING SERVICE DISTRICT NO. 14</p>	
	<p>DETAIL - 1401 FIBERGLASS LIGHT POLE</p>	
	<p>2020</p>	
	DATE	REVISION DESCRIPTION
	3	

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Last Saved by: O'Donnell, on: Aug. 4, 2021, 3:26 PM File: K:\80549\_Multnomah\City\OnCall\80549D\_Lighting Standards Update\CADD\DWG\TYPICAL WOODEN POLE INSTALLATIONS.dwg



**TYPICAL WOOD POLE INSTALLATION**  
No Scale

**NOTES:**

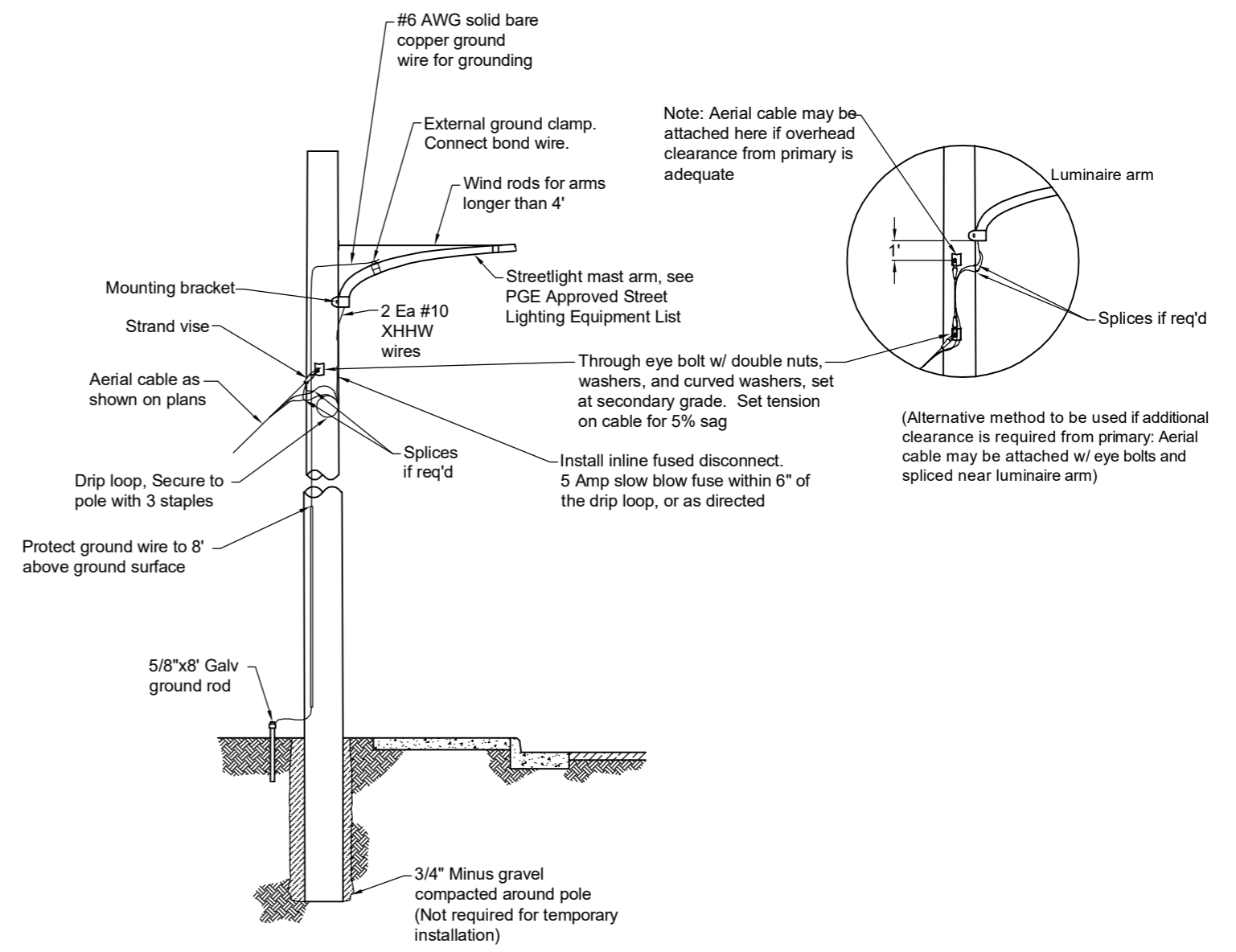
- Luminaire supports shall be designed in accordance with AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals.
- The design wind velocity shall be 100 mph unless shown otherwise on the plans or in the special provisions for the project.
- Bolts shall conform to ASTM specification A307. Steel sheet and plate shall be merchant quality.
- All structural steel including washers and nuts shall be hot dip galvanized after fabrication unless noted otherwise.
- Wind rods required for arms over 4'.
- Comply with utility standards, including clearance requirements to communications and primary, for luminaire arms mounted on wood utility poles.
- If other utilities are on pole, qualified worker shall perform the work and must follow NESC clearance rules.
- At District discretion, the luminaire arm may be bonded to utility service neutral instead of installing new ground rod and wire. Provide enough bare copper wire to reach utility service neutral and coil on pole. Utility will make the connection.

**TABLE 1**  
**SETTING DEPTH FOR WOOD POLES**

Length of Pole (feet)	Depth in Soil (feet)	Depth in Rock (feet)
25	5.0	3.5
30	5.5	3.5
35	5.5	4.0
40	6.0	4.0
45	6.5	4.5
50	7.0	5.0
55	7.5	5.0
60	8.0	5.5

**NOTES:**

- Where soil is underlain with rock, the depth of the hole in the rock is to be 70% of the depth required in soil.
- Where poles are located on other than level areas, measure the setting depth from the low side of the hole.



**TYPICAL WOOD POLE INSTALLATION DETAILS**  
No Scale

NOTE: All material and workmanship shall be in accordance with the current Multnomah County Standard Specifications

Multnomah County

MID-MULTNOMAH COUNTY STREET LIGHTING SERVICE DISTRICT NO. 14

DETAIL - 1402

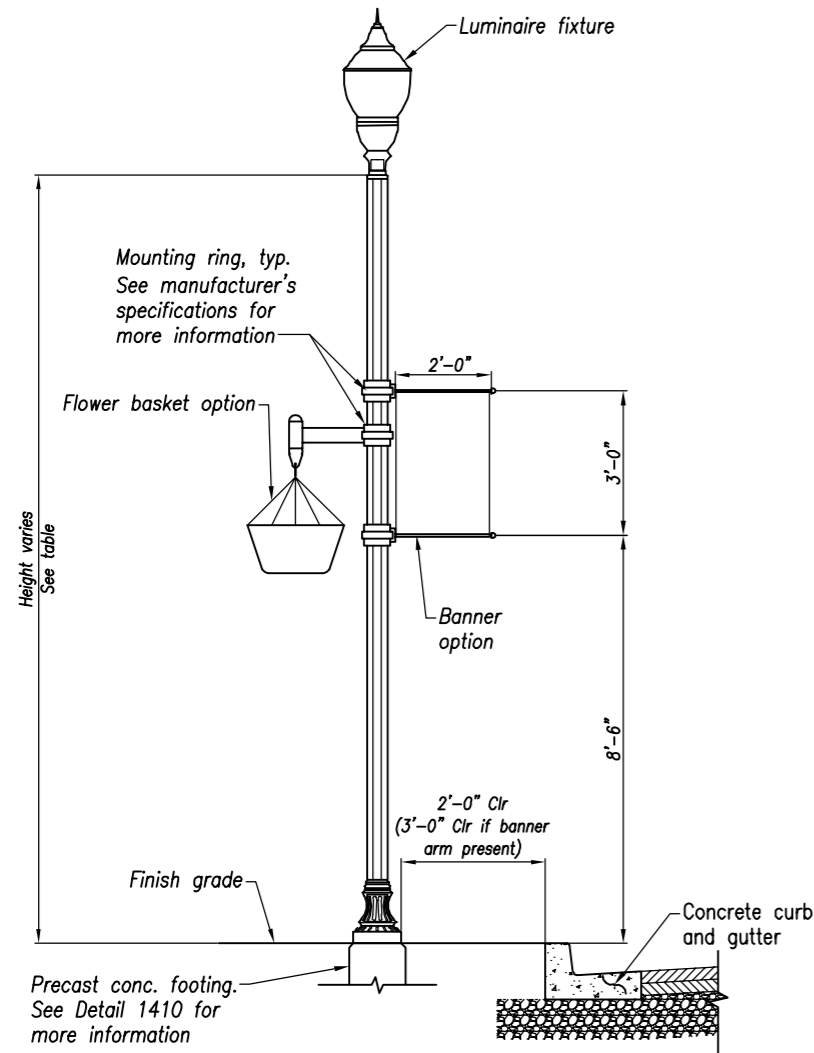
TYPICAL WOODEN POLE INSTALLATION

2020

DATE	REVISION DESCRIPTION

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

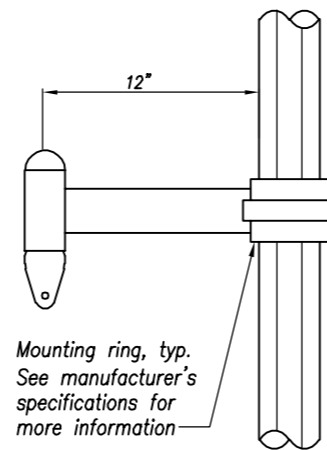
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**NOTE:**

- If light pole is installed within curb tight sidewalk, maintain minimum 5' wide pedestrian through zone behind light pole. Pedestrian through zone may be reduced to 4' in very constrained areas upon approval by District staff.

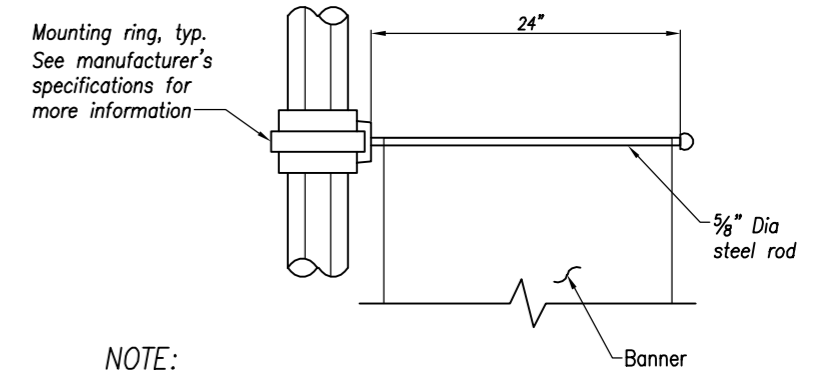
**DECORATIVE POST TOP POLE – DETAIL**  
SCALE: 1/4"=1'-0"



**NOTE:**

- Basket bracket from PGE Approved Street Lighting Equipment for New Installations List. A different product may be substituted upon approval by District staff.

**FLOWER-BASKET BRACKET DETAIL**  
NO SCALE



**NOTE:**

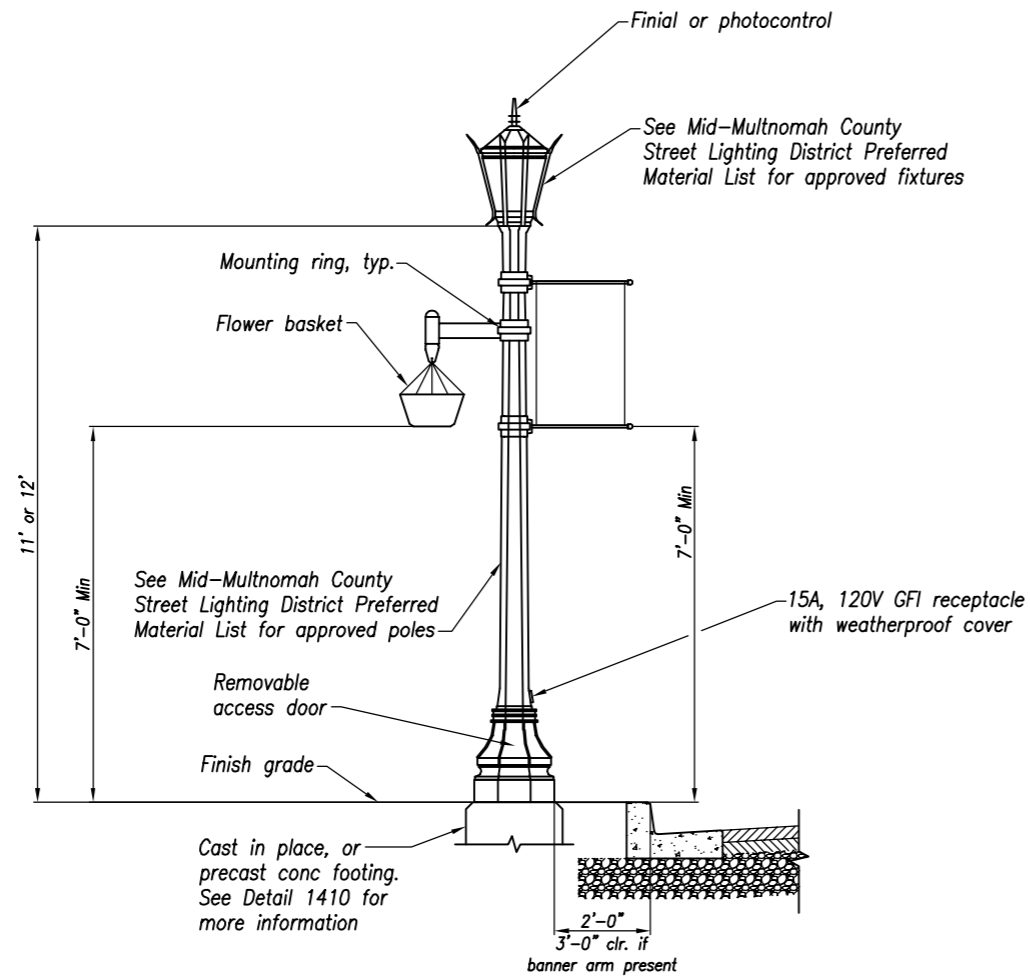
- Banner arm from PGE Approved Street Lighting Equipment for New Installations List. A different product may be substituted upon approval by District staff.

**BANNER MOUNTING DETAIL**  
NO SCALE

Lighting Zone	Functional Class	Pole Length	Luminaire	
			Luminaire Type	Manufacturer/Model
Neighborhood Decorative	Arterial	16'	Neighborhood Post Top	Holophane / Utility Washington
	Collector	16'	Neighborhood Post Top	Holophane / Utility Washington
	Local	14'	Neighborhood Post Top	Holophane / Utility Washington
Troutdale Town Center	Collector	16'	Troutdale Halsey Post Top	King / Cleveland
	Local	14' or 16'	Troutdale Halsey Local Post Top	King / Cleveland
Fairview Halsey	Arterial	16'	Fairview Halsey Post Top	King / Sol-Lux
Portland Urban Pocket	Local	14'	Neighborhood Post Top	Holophane / Utility Washington

<p>The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.</p>	<p>NOTE: All material and workmanship shall be in accordance with the current Multnomah County Standard Specifications</p>										
	<p>MID-MULTNOMAH COUNTY STREET LIGHTING SERVICE DISTRICT NO. 14</p>										
	<p>DETAIL - 1403 DECORATIVE POST TOP POLE</p>										
	<p>2020</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">DATE</th> <th>REVISION DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>		DATE	REVISION DESCRIPTION							
DATE	REVISION DESCRIPTION										

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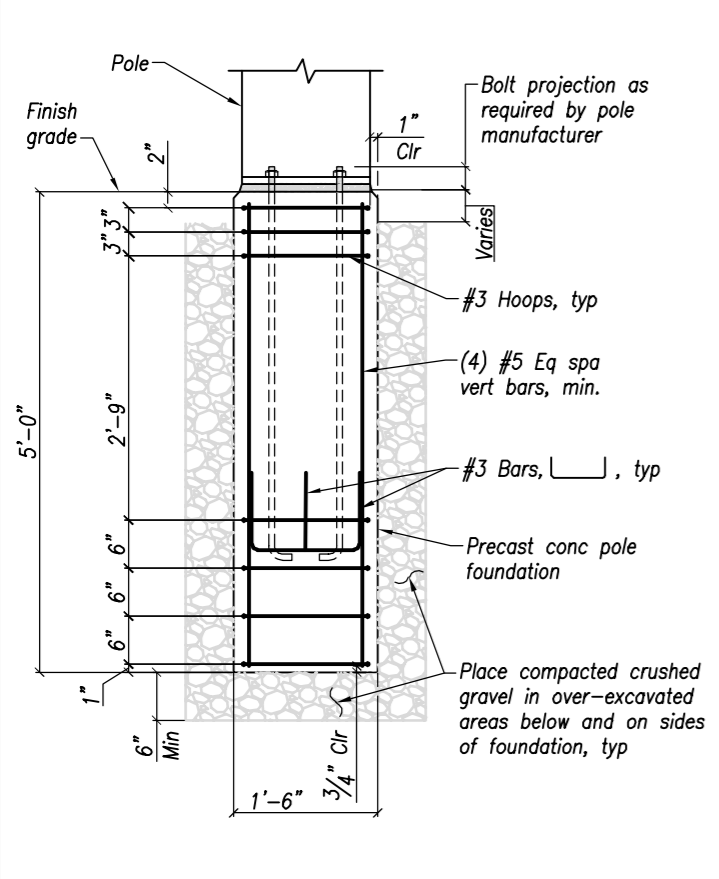
**GENERAL NOTES:**

1. Troutdale Historic Downtown poles and luminaires to be installed only within the Downtown Troutdale NE Halsey Street and Historic Columbia River Highway corridor upon direction from District Staff.
2. See Detail 1440 for GFI outlet wiring and grounding details.
3. See Detail 1410 for footing Details.
4. If light pole is installed within curb tight sidewalk, maintain minimum 5' wide pedestrian through zone behind light pole. Pedestrian through zone may be reduced to 4' in very constrained areas upon approval by District staff.

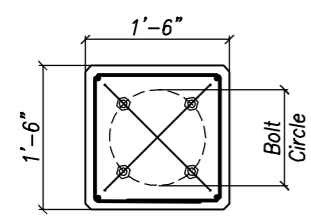
**TROUTDALE HISTORIC DOWNTOWN POLE - DETAIL**  
SCALE: 1/4"=1'-0"

<p>The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.</p>	<p>NOTE: All material and workmanship shall be in accordance with the current Multnomah County Standard Specifications</p>	
	<p>MID-MULTNOMAH COUNTY STREET LIGHTING SERVICE DISTRICT NO. 14</p>	
	<p>DETAIL - 1404 TROUTDALE HISTORIC DOWNTOWN POLE 2020</p>	
	DATE	REVISION DESCRIPTION

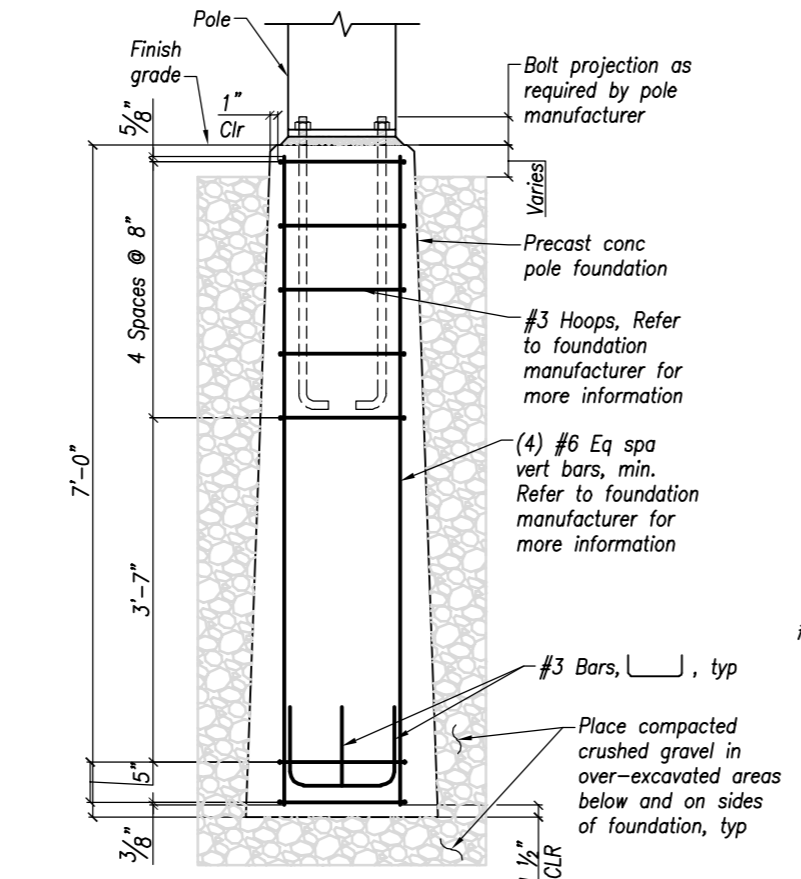
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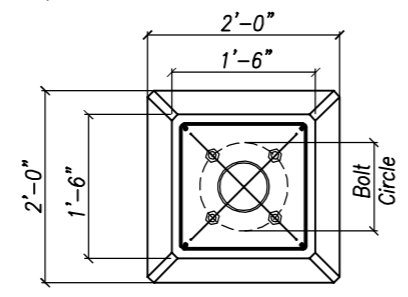
**5-LB FOOTING – ELEVATION**  
SCALE: 1/2"=1'-0"



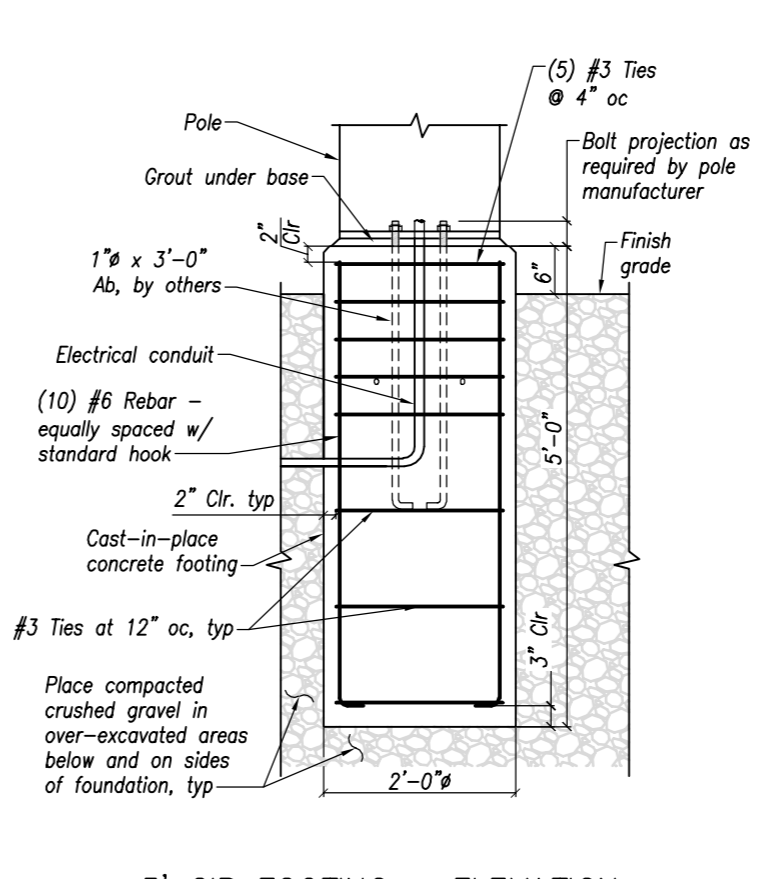
**5-LB FOOTING – PLAN VIEW**  
SCALE: 1/2"=1'-0"



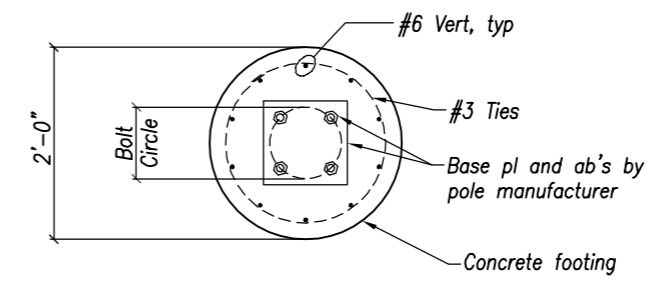
**7LB PGE FOOTING – ELEVATION**  
SCALE: 1/2"=1'-0"



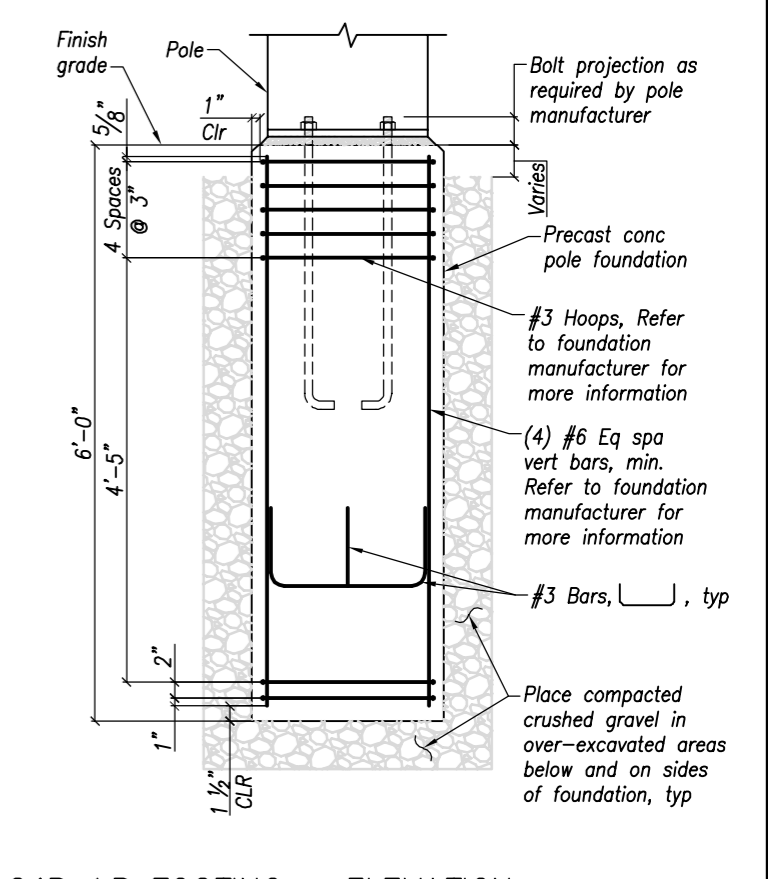
**7LB PGE FOOTING – PLAN VIEW**  
SCALE: 1/2"=1'-0"



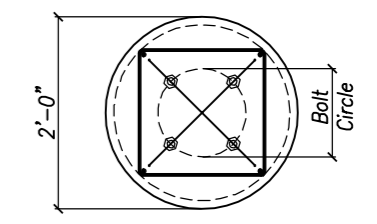
**5' CIP FOOTING – ELEVATION**  
SCALE: 1/2"=1'-0"



**5' CIP FOOTING – PLAN VIEW**  
SCALE: 1/2"=1'-0"



**24R-LB FOOTING – ELEVATION**  
SCALE: 1/2"=1'-0"



**24R-LB FOOTING – PLAN VIEW**  
SCALE: 1/2"=1'-0"

Standard Foundations Table				
Foundation Number	Pole	Mounting Height	Mast Arm Length	Footing Type
1	Decorative Post Top	14' to 16'	N/A	5-LB
2	Aluminum Davit	35'-0"	8'-0"	7LB-PGE
3	Troutdale Historic Downtown	11' or 12'	N/A	5' CIP or 24R-LB

**GENERAL NOTES:**

- Pole and foundation designed per 2015 AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals.
- Foundation reinforcement per foundation manufacturer.
- Anchorage and bolt circle diameter provided by pole manufacturer for precast elements.
- Concrete shall have a minimum compressive strength  $f'_c$  of 5500 psi.
- Alternative foundation geometry that includes blockouts below ground level for chase entrance is acceptable if approved by engineer.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

NOTE: All material and workmanship shall be in accordance with the current Multnomah County Standard Specifications

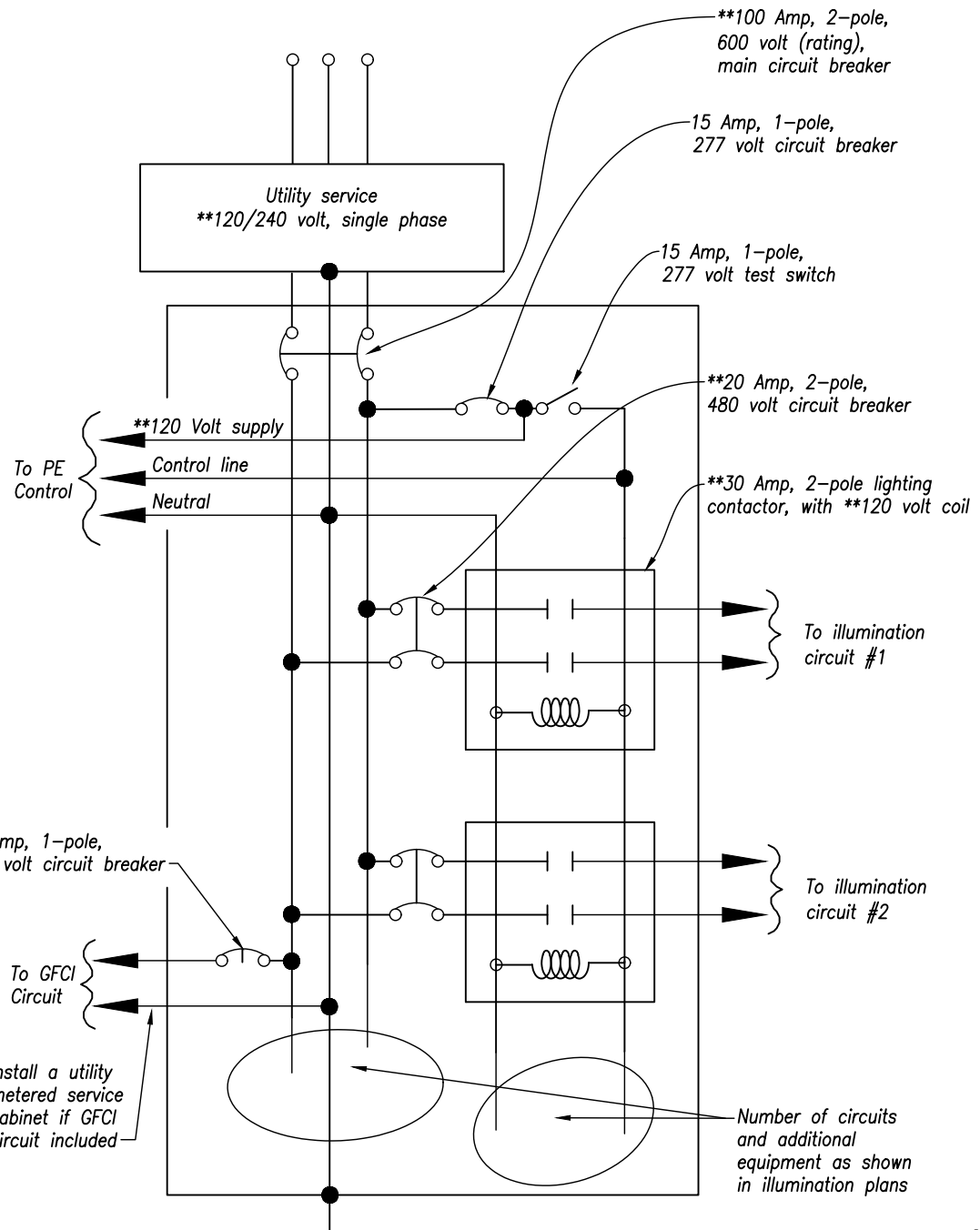
MULTNOMAH COUNTY  
STREET LIGHTING SERVICE  
DISTRICT NO. 14

DETAIL - 1410  
FOUNDATION DETAILS

2020

DATE	REVISION DESCRIPTION

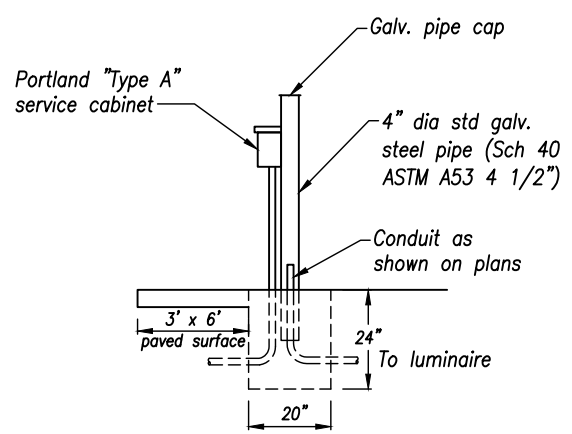
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**WIRING DIAGRAM SERVICE & CONTROL CABINETS**

SCALE: No Scale

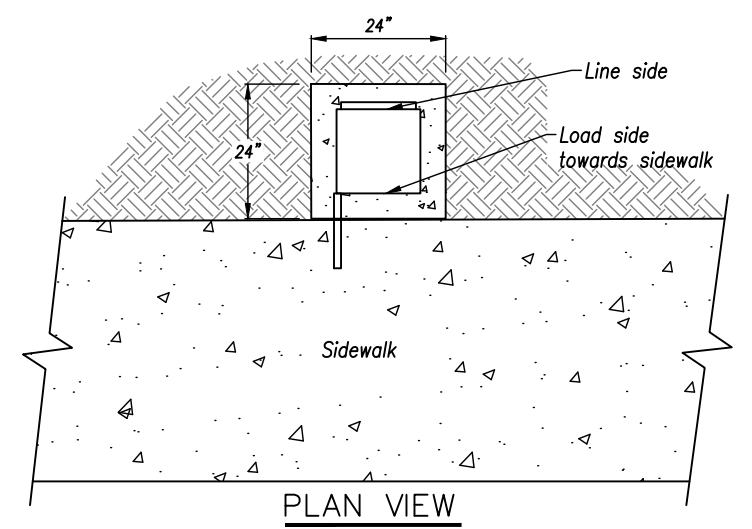
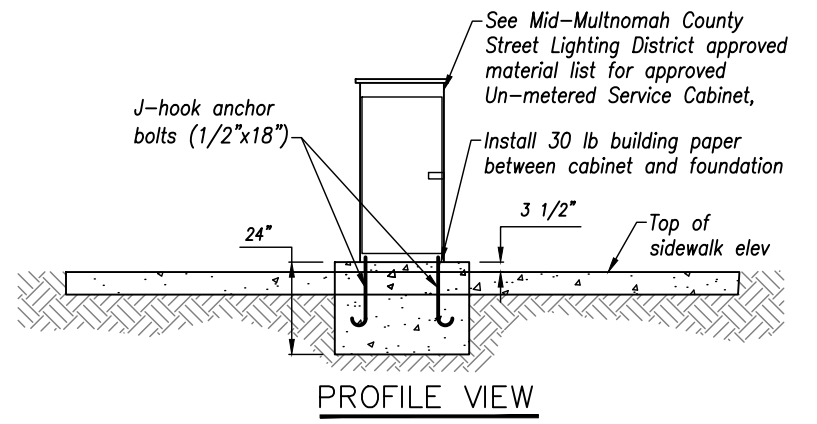
**\*\* Electrical service voltage, equipment voltage and rating, breaker sizes are per illumination plans. Specific wiring diagram for each cabinet shall be shown in illumination plans and checked by Engineer.**



**NOTES:**  
1. See Detail 1421 for street light pole mounting option.

**POLE-MOUNTED SERVICE CABINET GALVANIZED POLE MOUNTING OPTION**

SCALE: No Scale

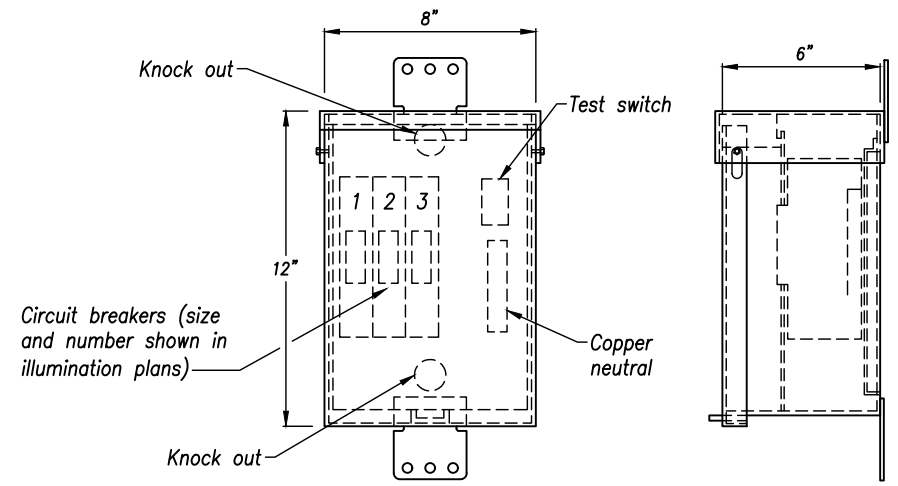


**NOTES:**

1. A service installation requires two ground rods spaced a minimum of 6 feet apart. One ground rod may be installed through the cabinet foundation.
2. Extend conduit ends minimum 2" above top of cabinet foundation.
3. Foundations and ground rod junction boxes must be installed within County right of way or within a general utility easement.
4. In special circumstances a metered service cabinet may be required. See Mid-Multnomah County Street Lighting District Approved Materials List for approved cabinets.
5. If possible, install service cabinet on property line.

**STREET LIGHT ELECTRICAL SERVICE PEDESTAL**

SCALE: No Scale



**NOTES:**

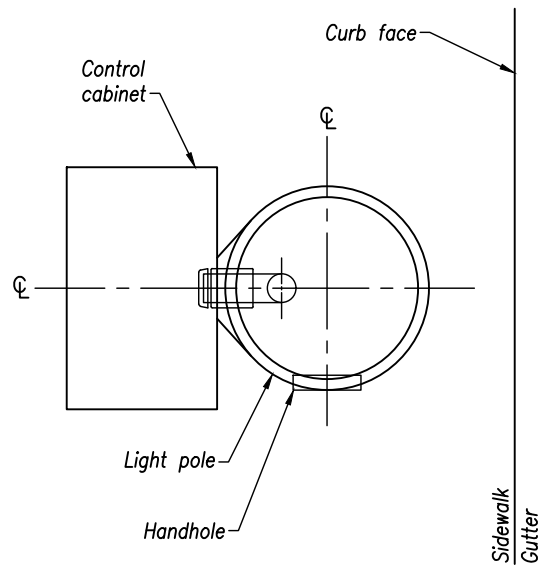
1. Cabinet shall include only one circuit breaker for a single lighting circuit, or shall include a main circuit breaker with two branch circuit breakers.
2. A photocell shall be installed on each luminaire connected to a Pole Mounted Service Cabinet. Limit illumination circuits to a maximum of 10 amps.

**POLE-MOUNTED SERVICE CABINET**

SCALE: No Scale

<p>The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.</p>	<p>NOTE: All material and workmanship shall be in accordance with the current Multnomah County Standard Specifications</p>	
	<p>MID-MULTNOMAH COUNTY STREET LIGHTING SERVICE DISTRICT NO. 14</p>	
	<p>DETAIL - 1420</p> <p>ELECTRICAL SERVICE PEDESTAL</p>	
	<p>2020</p>	
	DATE	REVISION DESCRIPTION

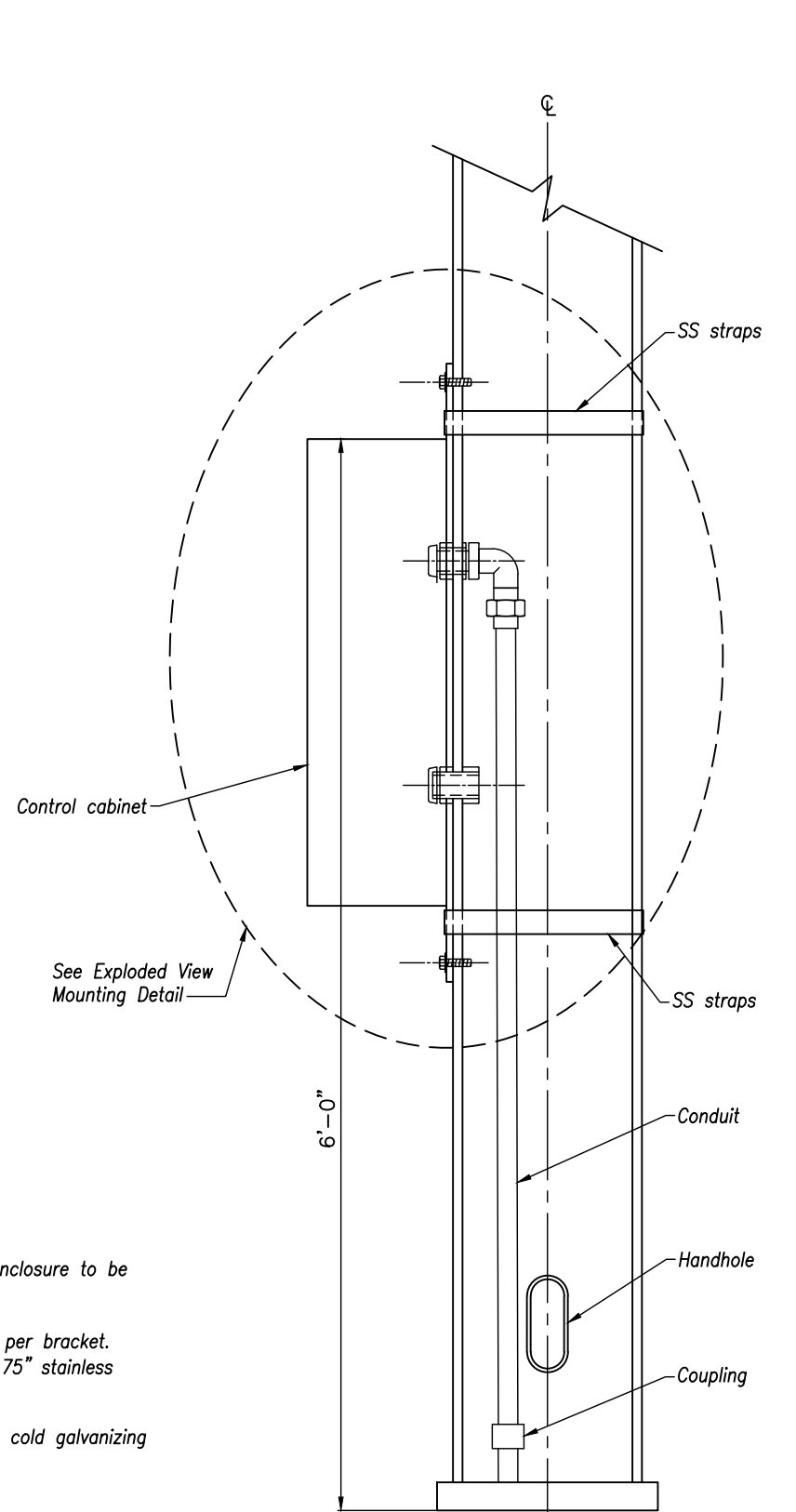
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**PLAN VIEW**  
NO SCALE

**NOTES:**

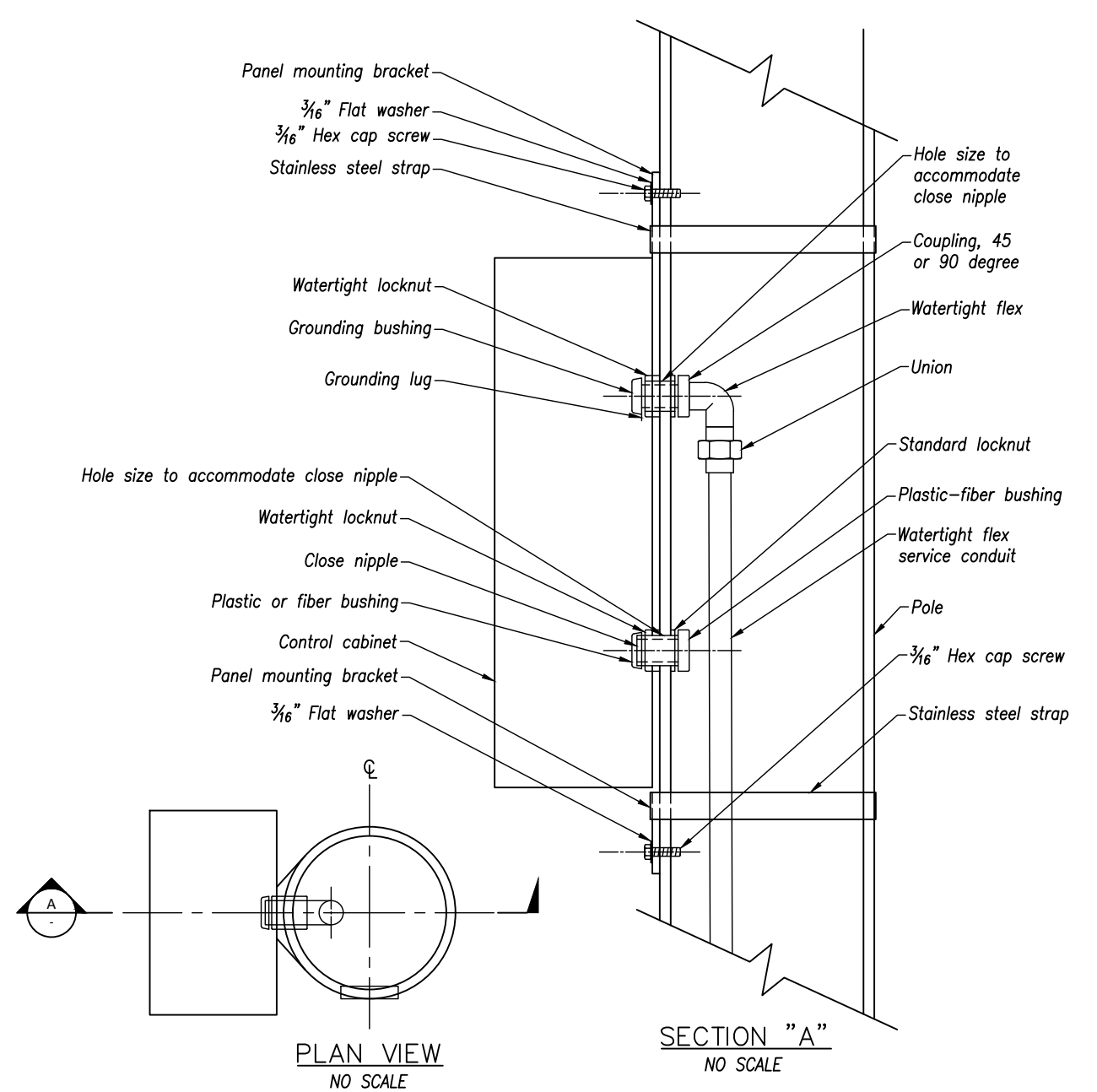
1. All inside edges shall be adequately chased to provide a smooth wire entrance and all entrances shall be water tight.
2. Aluminum poles: Use stainless steel straps with mounting bolts.



**LIGHTING POLE-MOUNTED PANEL**  
**GENERAL MOUNTING**  
NO SCALE

**GENERAL NOTES:**

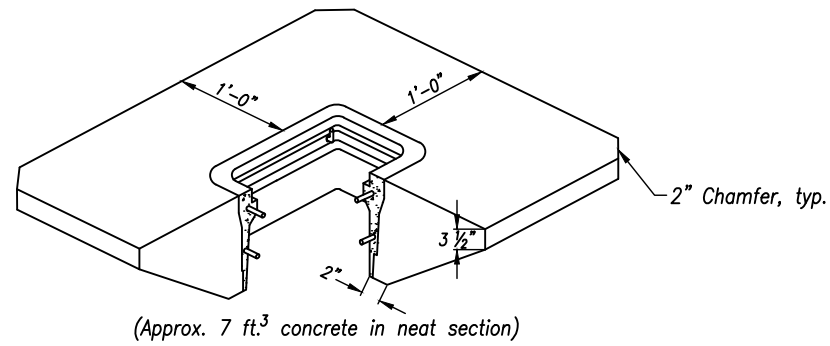
1. UL listed and labeled for use as service equipment, enclosure to be rain-tight. NEMA type 3R
2. Cabinet mounting:
  - A. Steel: Drill & tap for 0.375" hex cap screws -2 per bracket.
  - B. Aluminum: Same as steel, with the addition of 0.75" stainless steel strap -1 per bracket.
  - C. All mounting hardware to be stainless steel.
  - D. All openings cut in steel poles to have approved, cold galvanizing application prior to fittings installation.



**EXPLODED VIEW MOUNTING DETAIL**  
NO SCALE

<p>The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.</p>	NOTE: All material and workmanship shall be in accordance with the current Multnomah County Standard Specifications										
	<p><b>MID-MULTNOMAH COUNTY</b> <b>STREET LIGHTING SERVICE</b> <b>DISTRICT NO. 14</b></p> <p><b>DETAIL - 1421</b> <b>STREET LIGHTING</b> <b>POLE MOUNTED PANEL DETAILS</b> <b>2020</b></p>										
	<table border="1" style="width: 100%;"> <thead> <tr> <th style="width: 10%;">DATE</th> <th>REVISION DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	DATE	REVISION DESCRIPTION								
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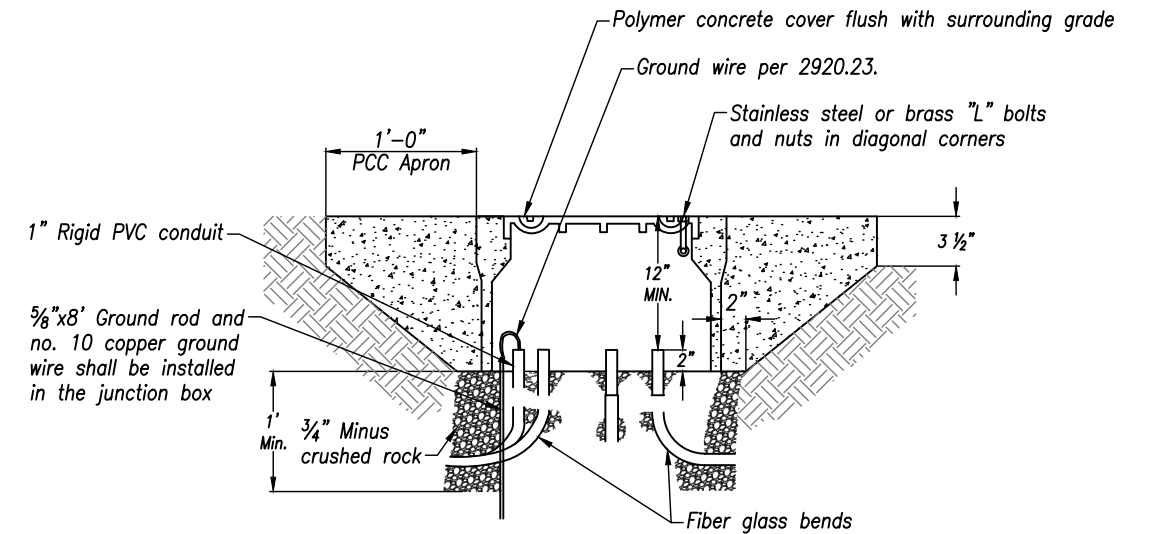




**NOTE:**

1. Install concrete apron on all junction boxes installed in unpaved areas.

**CONCRETE APRON AROUND JUNCTION BOX**  
NO SCALE



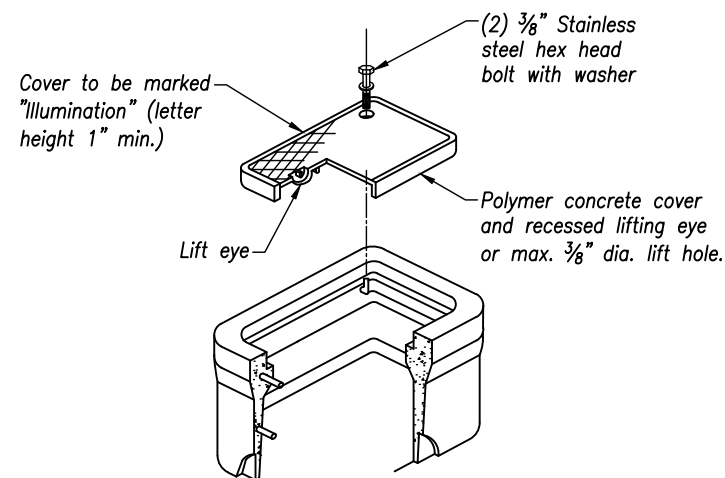
**NOTES:**

1. Illumination circuit wires are not shown. See illumination plans.
2. Illumination circuits shall be spliced according to section 02920.25

**JUNCTION BOX INSTALLATION WITH APRON**  
NO SCALE (NEAR ILLUMINATION POLE)

**GENERAL NOTES:**

1. Conduits shown are for example only. Additional conduits may be required as shown on the plan sheets.
2. For conduit end treatment refer to ODOT Standard Specifications for Construction Latest Edition (see section 00960.42) and Oregon Standard Drawing Latest Edition (TM472).
3. In junction boxes where there are existing wires and conduits, the contractor shall adjust them as necessary to maintain the system when work is complete.
4. Junction boxes and covers shall be rated tier 15 according to ANSI/SCTE 77-2007.
5. Junction boxes shall be installed behind the sidewalk or in the planter strip when possible.
6. Refer to the PGE-Approved Street Lighting Equipment for New Installations materials list for approved manufacturers and part numbers.
7. Junction box dimensions shall be 13"x24"x18" or 17"x30"x18".



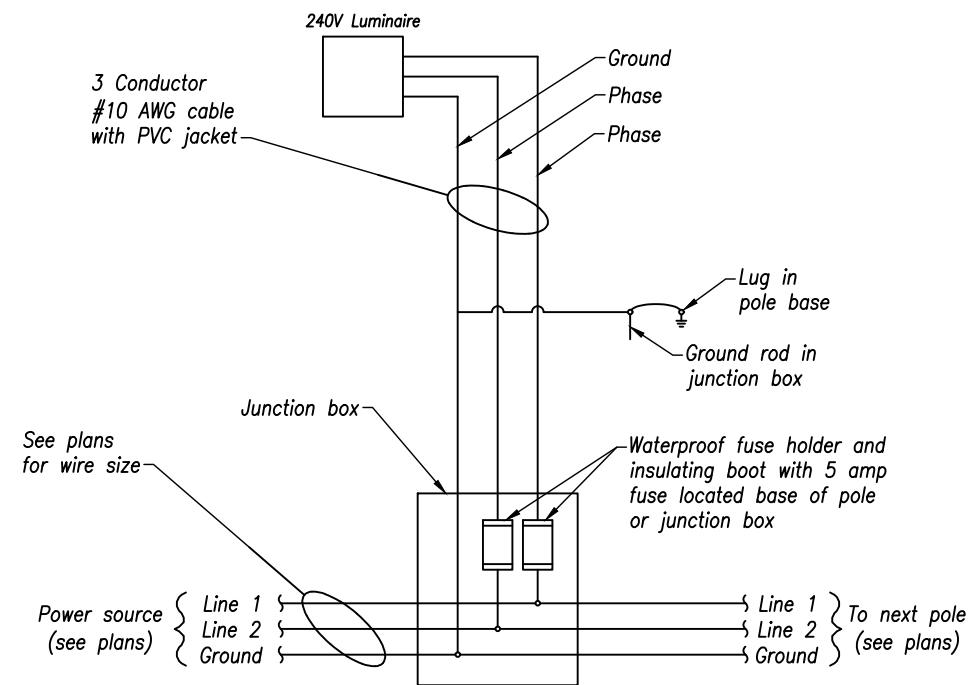
**NOTE:**

1. Not to be used in travel lanes, shoulders or areas exposed to traffic.

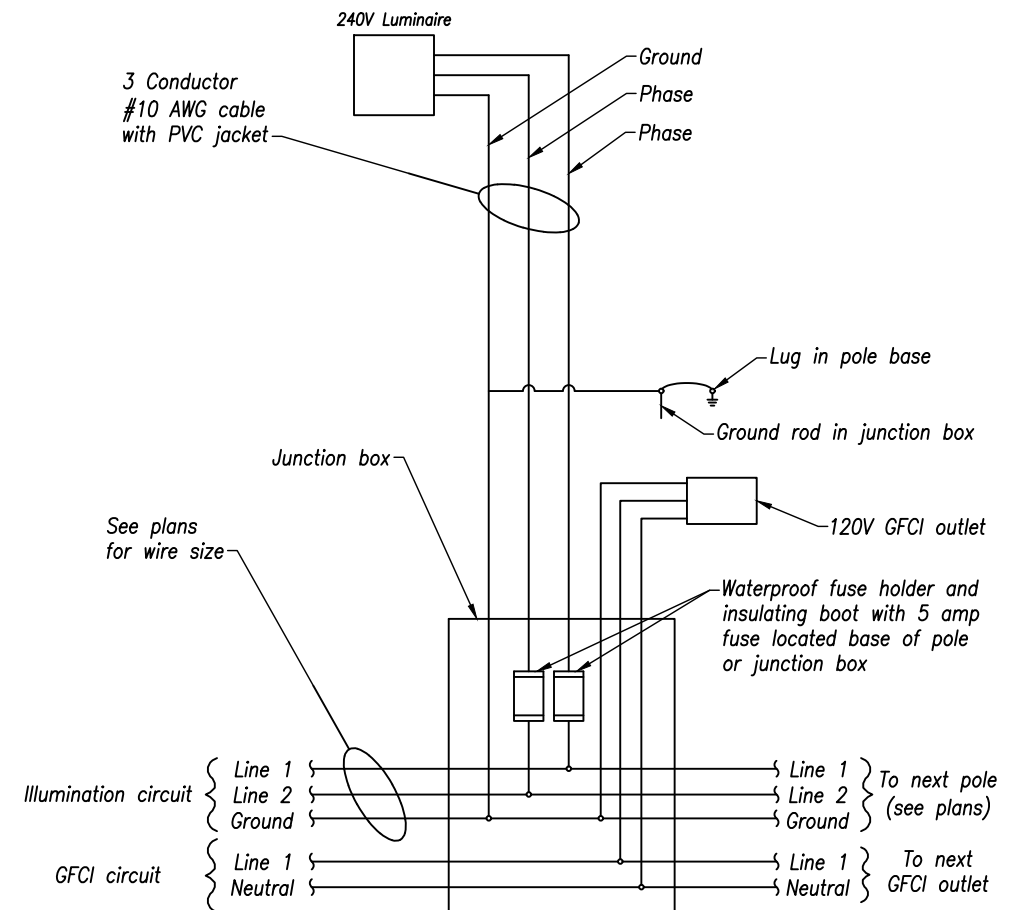
**ILLUMINATION JUNCTION BOX**  
NO SCALE

<p>The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.</p>	<p>NOTE: All material and workmanship shall be in accordance with the current Multnomah County Standard Specifications</p>										
	<p>MID-MULTNOMAH COUNTY STREET LIGHTING SERVICE DISTRICT NO. 14</p> <p>DETAIL - 1430 JUNCTION BOX DETAILS</p> <p>2020</p> <table border="1"> <thead> <tr> <th>DATE</th> <th>REVISION DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>		DATE	REVISION DESCRIPTION							
DATE	REVISION DESCRIPTION										

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**SCHEMATIC – LUMINAIRE LIGHT POLE WIRING**  
NO SCALE



**SCHEMATIC – LIGHT POLE WITH GFCI OUTLET WIRING**  
NO SCALE

<p>The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.</p>	<p>NOTE: All material and workmanship shall be in accordance with the current Multnomah County Standard Specifications</p>	
	<p>MID—MULTNOMAH COUNTY STREET LIGHTING SERVICE DISTRICT NO. 14</p>	
	<p>DETAIL - 1440 POLE WIRING DIAGRAM</p>	
	<p>2020</p>	
	<p>DATE</p> <p>3</p>	<p>REVISION DESCRIPTION</p>