1. **SCOPE**

   This standard covers district requirements for all foreign utility pole attachments. No foreign utility attachment or additional equipment attachments shall be made prior to first contacting and receiving written permission for each attachment from the district.

2. **REFERENCE STANDARDS**

   Each foreign utility shall meet the minimum requirements of the latest editions of the Washington Administrative Code (WAC) 296-44, the National Electrical Safety Code (NESC), and this standard, whichever is greater.

3. **DEFINITIONS**

   - **DISTRICT**
     - Public Utility District No. 1 of Grays Harbor County.
   - **FOREIGN UTILITY**
     - Any utility, public agency, communication company or other entity (except the district) that attaches to any district owned facility or joint ownership pole.
   - **JOINT OWNERSHIP POLE**
     - Poles which are jointly owned by the district and a foreign utility.
   - **THIRD PARTY**
     - Any non-owner foreign utility that attaches to a jointly owned pole.
   - **SUPPLY SPACE**
     - The vertical space on a pole that is occupied by the district’s electric supply conductors and/or hardware. The lower limit of the supply space is the bottom of the lowest supply conductor, hardware or equipment located within a 6ft radius around the pole. (Exclude street lights, conduits and certain control boxes.) Fiber glass guy strain insulators may enter the separation space.
   - **COMMUNICATION SPACE**
     - The vertical space on a pole below the 42° separation space which is occupied by communication lines as defined by the NESC. Communication lines include, but are not limited to telephone, CATV, and district owned fiber. The upper limit of the communication space is the top of the highest communications cable, hardware, or equipment located within a 6ft radius around the pole.
   - **SEPARATION SPACE**
     - The vertical 42° space on a pole separating the supply space and the communication space. This space is intended to provide a safe working clearance for workers in the communication space. (See WAC 29644-21287 and NESC 235)
   - **POLE FACE**
     - The side or half of the pole that contains the pole gain.
   - **POLE GAIN**
     - The notch in the pole that contains the pole manufacturing information. The pole gain is located 11 feet from the butt of the district 70 foot and smaller poles and 14 foot from the butt of district 75 foot and longer poles.

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**LINE CONSTRUCTION STANDARDS**

**PUBLIC UTILITY DISTRICT NO. 1**

**GRAYS HARBOR COUNTY, WASHINGTON**

**POLE ATTACHMENT GUIDELINES**

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<th>CHECKED BY:</th>
<th>PHIL BECKMAN</th>
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4. GENERAL ATTACHMENT REQUIREMENTS

4.0 DISTRICT APPROVAL

FOREIGN UTILITIES MUST RECEIVE WRITTEN DISTRICT APPROVAL BEFORE ATTACHING TO DISTRICT OR JOINT OWNERSHIP POLES.

4.1 CABLES AND GUYS

GROUND CLEARANCES SHALL BE BASED ON CALCULATED WORST CASE DESIGN CONDITIONS (INITIAL AND FINAL TEMPERATURE, ICE & WIND) PER NESC.

COMMUNICATION CABLES SHALL NORMALLY BE ATTACHED TO THE SAME SIDE OF THE POLE AS THE POWER NEUTRAL CONDUCTOR. IF THE POWER NEUTRAL CONDUCTOR IS ON A PRIMARY CROSSARM, COMMUNICATION CABLES SHALL BE INSTALLED ON THE ROAD SIDE OF THE POLE. ADDITIONAL CABLES AND CLIMBING SPACE MAY BE ACCOMMODATED BY THE USE OF OFFSET ARMS, BUT SEPARATION SPACE SHALL STILL BE MEASURED VERTICALLY BETWEEN THE SUPPLY SPACE AND THE COMMUNICATION SPACE. CABLE STORAGE / BRACKETS SHALL NOT OBSTRUCT CLIMBING SPACE.

ALL COMMUNICATION CABLES SHALL HAVE CABLE MARKERS THAT IDENTIFY THE OWNER OF THE CABLE AND CONTACT INFORMATION. (IE: NAME, ADDRESS, PHONE NUMBER)

COMMUNICATION CABLES SHALL BE TENSIONED AND GUED IN A WAY THAT DOES NOT ADVERSELY WEAKEN THE POLE OR ALTER THE PLUMB OF THE POLE OR CHANGE THE SAG CHARACTERISTICS OF POWER CONDUCTORS. COMMUNICATION CABLES SHALL BE ADEQUATELY GUED TO WITHSTAND ALL TENSIONS ATTRIBUTED TO THE ATTACHMENT UNDER APPLICABLE NESC WIND AND ICE LOADING CONDITIONS. STRUCTURAL LOADS AND SAGS SHALL BE CALCULATED BY THE FOREIGN UTILITY'S PROFESSIONAL ENGINEER AND STAMPED. THE FOREIGN UTILITY SHALL NORMALLY PROVIDE THEIR OWN ANCHOR. COMMUNICATION GUYS MAY BE ATTACHED TO DISTRICT ANCHORS ONLY WITH WRITTEN PERMISSION AND ONLY IF GUY STRAIN INSULATORS ARE USED, PROVIDED THE ANCHOR HAS SUFFICIENT UNUSED STRENGTH TO SUPPORT THE ATTACHMENT. HOLDING STRENGTH CALCULATIONS SHALL BE PROVIDED BY THE FOREIGN UTILITY'S PROFESSIONAL ENGINEER AND STAMPED.

ALL GUYS SHALL BE BONDED OR HAVE STRAIN INSULATORS INSTALLED.

4.2 POLE DRILLING

FIELD DRILLED POLE HOLES SHALL BE TREATED WITH A 2% COPPER NAPHTHENATE SOLUTION OR OTHER DISTRICT APPROVED WOOD PRESERVATIVE USING PRESSURE TYPE OIL CAN OR A BOTTLE BRUSH.

4.3 EQUIPMENT MOUNTING

THROUGH BOLT ENDS SHALL NOT PROTRUDE MORE THAN TWO INCHES BEYOND THE NUT ON THE OTHER SIDE OF THE POLE. ATTACHMENTS TO STEEL POLES SHALL BE BOLTED OR WELDED. BANDING ATTACHMENTS TO STEEL POLES IS NOT PERMITTED. GALVANIZED SURFACES DAMAGED DURING ATTACHMENT SHALL BE RECOATED.

4.4 RISERS

FOREIGN UTILITY CABLES TRANSITIONING FROM OVERHEAD TO UNDERGROUND SHALL BE MOUNTED IN RISER CONDUITS.

FOREIGN UTILITY RISERS SHALL BE INSTALLED ON THE POLE FACE (SEE FIGURE 4.1). ALL POWER SUPPLY CABLES RECEPTACLE THE POLE GROUND SHALL BE INSTALLED IN ROAD CONDUIT AND MOUNTED ON 15 INCH STANDOFF SIDE BRACKETS TO PROVIDE A MINIMUM 5 INCH CLEARANCE FROM THE POLE. EXISTING STANDOFF BRACKETS SHALL BE USED WHEN AVAILABLE.

FIGURE 4.1

LINE CONSTRUCTION STANDARDS
PUBLIC UTILITY DISTRICT NO. 1
GRAYS HARBOR COUNTY, WASHINGTON

POLE ATTACHMENT GUIDELINES

REVISED DATE: 8–27–2018
CHECKED BY: RDE
NO. SP 1780 P2
DATE: 9–2003
SCALE: NONE

APPROVED BY: SSB 8/29/18
DRAWN BY: PMB
NO. SP 1780 P2
4.4 RISERS (CONTINUED)

If new brackets are needed, the foreign utility shall provide and install brackets conforming to district approval. Lower brackets shall be spaced 8 ft - 10 ft apart. The top two brackets may have closer spacing. (See Figure 4.2)

Power risers for pole mounted foreign utility power supplies must be installed high enough to ensure that the 42 inch separation space is maintained between the bottom of the drip loop and the top of the communication space (See Figure 4.3).

Maximum power riser diameter is 1-1/2 inch. Pole mounted power supplies shall be designed for 120 volt, 15 amp single phase service.

Electric service for any equipment that is not a self contained pole mounted power supply shall be provided by a district installed underground service pedestal or overhead service drop, per current district rates and service policies.

A city or state electrical inspection shall be obtained prior to district connection of any power supply.

**Figure 4.2**

**Figure 4.3**

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**Line Construction Standards**

Public Utility District No. 1
Grays Harbor County, Washington

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4.5 ENCLOSURES

FOREIGN UTILITY ENCLOSURES SHALL BE MOUNTED ON THE ROAD SIDE OF THE POLE. ENCLOSURES SHALL BE MOUNTED ON STANDOFF BRACKETS TO PROVIDE A MINIMUM 5 INCH CLEARANCE FROM THE POLE. MAXIMUM ENCLOSURE SIZE SHALL BE 26 INCHES WIDE X 36 INCHES HIGH X 16 INCHES DEEP WITH A MAXIMUM WEIGHT OF 500 lbs. ALL METALLIC ENCLOSURES SHALL BE EFFECTIVELY GROUNDED.

A 3 FOOT ZONE ON THE ROAD SIDE OF THE POLE IS ALLOCATED FOR MOUNTING FOREIGN UTILITY ENCLOSURES. THIS ZONE EXTENDS FROM 15 TO 18 FEET ABOVE GROUND LINE (SEE FIGURE 4.3). MULTIPLE ENCLOSURES ARE ALLOWED WITHIN THIS 3 FOOT ZONE AS LONG AS A MINIMUM OF 1 FOOT SEPARATION BETWEEN ENCLOSURES IS MAINTAINED. NO MORE THAN ONE POWER SUPPLY PER UTILITY PER POLE IS PERMITTED. BATTERY PACK POWER SUPPLIES AND POWER SUPPLIES THAT MAY BE SUPPLIED BY PORTABLE GENERATORS DURING OUTAGE CONDITIONS MUST BE EQUIPPED WITH FEEDBACK VOLTAGE PROTECTION.

4.6 GROUNDING

CONDUCTIVE FOREIGN UTILITY MESSENGERS SHALL BE BONDED WITHIN THE COMMUNICATION SPACE WHEN DISTRICT POLE GROUNDS ARE PRESENT. THE POLE GROUND SHALL NOT BE CUT OR DAMAGED WHEN CONNECTING FOREIGN UTILITY GROUNDS.

IF A GROUND IS NEEDED AND NO DISTRICT POLE GROUND IS AVAILABLE, THE FOREIGN UTILITY MAY INSTALL THEIR GROUND AND EXTEND A #4 SOLID SOFT DRAWN COPPER GROUND WIRE UP TO THE TOP OF THE COMMUNICATION SPACE, LEAVING SUFFICIENT GROUND WIRE COILED TO REACH AND CONNECT TO THE DISTRICT’S NEUTRAL. IMMEDIATELY NOTIFY THE DISTRICT’S SERVICE DISPATCH AT (360) 538-6246 THAT THE GROUND WIRE IS READY FOR CONNECTION AND THE DISTRICT WILL EXTEND AND CONNECT THE GROUND WIRE TO THE DISTRICT’S NEUTRAL.

NOTE: NON-METALLIC/ NON-CONDUCTIVE SELF-SUPPORTING MESSENGERS (ie. KEVLAR-TYPE) DO NOT REQUIRE BONING.

4.7 DECORATIVE OBJECT ATTACHMENTS

ALL DECORATIVE OBJECT ATTACHMENTS, SUCH AS BANNERS, HANGING FLOWER BASKETS OR CHRISTMAS LIGHTS SHALL BE MOUNTED ON THE ROAD SIDE OF THE POLE AS INDICATED IN FIGURE 4.4. DECORATIVE OBJECTS SHALL BE MOUNTED BETWEEN 15 TO 18 FEET ABOVE GROUND AND SHALL EXTEND NO FARTHER THAN 42 INCHES AWAY FROM THE POLE. MAXIMUM ALLOWABLE WEIGHT OF DECORATIVE OBJECT AND MOUNTING BRACKET IS 50 lbs. DECORATIVE OBJECTS SHALL NOT OVERHANG THE ROADWAY. BANNERS OR OTHER OBJECTS SHALL NOT BE STRUNG BETWEEN DISTRICT POLES OR BETWEEN A DISTRICT POLE AND ANY OTHER SUPPORTING MEMBER.
5. CLEARANCE REQUIREMENTS

5.1 DISTRIBUTION CLEARANCES AT SUPPORTS

A minimum clearance of 42 inches must be maintained between the bottom of the supply space and the top of the communication space. The supply space begins at the bottom of the lowest piece of supply equipment. Supply equipment includes, but is not limited to, neutral and secondary clevises, bare and insulated secondary wires (except for street light wire drip loops), guy hardware and equipment platforms (see Figure 5.1 - Figure 5.10).
5.1 DISTRIBUTION CLEARANCES AT SUPPORTS (CONTINUED)

If the system neutral conductors are mounted on a crossarm at the same level as the primary conductor and there is no other supply equipment mounted below the primary arm, then the recommended clearance between the supply space and the communication space is 12 feet (See Figure 5.5).

This spacing will make future supply equipment installation possible without costly pole replacement or reframing at foreign utility's expense. This spacing also allows communication workers to maintain cables.

* Qualified electrical workers shall be used to construct or maintain communication cables closer than 10ft to primary voltage conductors and or fixed live parts.

Note: When working near energized wires, equipment or parts, refer to WAC 296-24-960 for minimum approach clearance requirements.
FIGURE 5.8

FIGURE 5.9

FIGURE 5.10

NOTE: COMMUNICATION CABLE IN THE SUPPLY SPACE MAY ONLY TRANSITION TO THE COMMUNICATION SPACE IN CONDUIT INSTALLED VERTICALLY ON A SINGLE POLE. ROLLING CABLE DOWN FROM THE SUPPLY SPACE ON ONE POLE TO THE COMMUNICATION SPACE ON THE NEXT POLE IN THE SPAN IS A VIOLATION OF NESC.

NOT TO BE USED FOR NEW CONSTRUCTION.
5.2 MIDSPAN DISTRIBUTION CLEARANCES


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**FIGURE 5.11**

![Diagram of midspan distribution clearances](image)

**FIGURE 5.12**

![Another diagram of midspan distribution clearances](image)
5.3 TRANSMISSION CLEARANCES
CLEARANCES ON TRANSMISSION POLES THAT HAVE NO DISTRIBUTION UNDERBUILD WILL BE STIPULATED ON THE ATTACHMENT PERMIT.

5.4 STREET LIGHT CLEARANCES

FIGURE 5.13
5.4 STREET LIGHT CLEARANCE (CONTINUED)


![Diagram showing street light clearance and communication space separations.]

**FIGURE 5.14**
5.5 SERVICE ENTRANCE CLEARANCE

Communication service drops shall have a minimum 12 inch clearance from district service drops at any point in the span down to their point of attachment at the customer’s service entrance (see Figure 5.15). This applies to service entrance attachments at buildings and meter poles. Minimum clearance at a district service pole or distribution pole is 42 inches.

5.6 CLIMBING SPACE

To provide adequate clearances on the pole for safe climbing by line personnel, a clear climbing space of 24 inches between communication cables must be provided (see Figure 5.16). This space must extend 42 inches above and below the limiting cables. The climbing space may be rotated around the pole for continued climbing if the climbing spaces in different quadrants overlap (refer to WAC 296-44-21273).

**FIGURE 5.15**

**FIGURE 5.16**
6. POLE SPACE ALLOCATION

6.1 POLE ATTACHMENTS

40 FOOT POLES ARE STANDARD FOR
JOINT OWNERSHIP POLES. DISTRICT,
AND COMMUNICATION ATTACHMENTS ON
40 FOOT DISTRIBUTION POLES
ARE SHOWN IN FIGURE 6.1.

A 24 INCH SPACE IS RESERVED
FOR COMMUNICATION ATTACHMENTS.
THIS SPACE EXTENDS FROM APPROXIMATELY
20 FEET TO 22 FEET ABOVE GRADE.
NO FOREIGN UTILITY ATTACHMENTS SHALL
BE MADE ABOVE OR BELOW THIS SPACE.
A 6 INCH CLEARANCE SHALL BE
MAINTAINED BETWEEN ATTACHMENTS
IN THIS SPACE. NEW ATTACHMENTS
MUST BE MADE AT THE HIGHEST
AVAILABLE POSITION IN THE
COMMUNICATION SPACE.

IF THE COMMUNICATION SPACE IS
FULL ON A 40 FOOT POLE AND
ANOTHER FOREIGN UTILITY
WISHES TO ATTACH, THEY
MAY REQUEST THE DISTRICT TO INSTALL
A TALLER POLE. THE COMPANY
REQUESTING THE TALLER POLE SHALL
BE BILLED PER THE SPECIFIC FOREIGN
UTILITY ATTACHMENT AGREEMENT.

FIGURE 6.1