



**PEDERNALES ELECTRIC COOPERATIVE**

# **POLE ATTACHMENT STANDARDS**

**Version 2.0**

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# Management Approval and Document Control

## Management Approval

Melody Horton

*Manager, Pole Contacts*

Date

Ted Hodgkiss

*Director of System Maintenance*

Date

Virgil Maldonado

*Vice President of Operations*

Date

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## Contents

- I. STATEMENT OF PURPOSE ..... 1
- II. GENERAL ADMINISTRATIVE PROVISIONS..... 3
  - A. Definitions .....3
  - B. Application Submittal ..... 13
  - C. Fees and Charges ..... 13
  - D. Claims ..... 15
- III. General Technical Provisions ..... 19
  - A. General Design & Construction Standards & Specifications ..... 19
  - B. Pole Modifications and /or Replacements .....29
  - C. Overlashing .....34
  - D. Inspection and Inventory of Licensee’s Facilities ..... 34
  - E. Operational Duties & Responsibilities .....38
- IV. Specifications for Wire Attachments .....41
  - A. Pole Attachment Application Process .....41
  - B. Standard Process-Wire Attachments .....41
  - C. Standard Process-Overlashing Existing Attachments .....57
- V. Specifications for Wireless Installations .....60
  - A. Wireless Installation Application Process.....60
  - B. Standard Process for Wireless Installations.....61
- VI. Appendices .....79
  - A. Pole Attachment Forms .....80
  - B. Vertical Clearance Requirements: .....92
  - C. Specifications for Attachments and Wireless Installations on PEC Poles.....92
  - D. Attachment Clearance Requirements ..... 111
  - E. PEC Pole Loading Requirements ..... 119
  - F. PEC Schedule of Rates, Fees, and Charges ..... 121
  - G. PEC Wireless Installation Diagrams ..... 126
  - H. PEC Pole Attachment List & Tag Detail ..... 166



## **I. STATEMENT OF PURPOSE**

**Given the increasing and varied demands of pole use by a large number of disparate communications providers in the Pedernales Electric Cooperative, Inc. (“PEC”) service area, PEC has established these Pole Attachment Standards (“Standards”) to govern access to and use of PEC Poles. Applicable to all communications providers and other stakeholders for attachment of Communications Facilities and Wireless Installations, these Standards are intended to provide for a non-discriminatory, uniform, and consistent approach for access to PEC Poles in a manner that is consistent and streamlined with the safe and reliable operation of PEC Facilities. These Standards endeavor to comply with all applicable federal and state laws in allowing communications providers and other stakeholders to attach to PEC Facilities.**

PEC may grant access to its Poles taking into account the burdens that these and all other Attachments place on PEC Facilities. Subject to certain restrictions and Make-Ready Work requirements as provided within these Standards, wireline Attachments and Wireless Installations may be installed on PEC’s Poles. Pursuant to a Pole Attachment Agreement, each Licensee shall fully comply with the terms and conditions set forth in these Standards as the terms and conditions by which to receive a Permit from PEC. Pole and Wireless Attachment Rental Rates for all types of Attachments will be calculated in accordance with the formula in Appendix A of the Pole Attachment Agreement, which may be updated as described therein.

PEC reserves the right to amend these Standards at any time and manner as necessary to comply with changes in applicable engineering and/or safety standards or changes in local, state, or federal law. Any such changes will be applied with respect to similarly situated entities and facilities. To the extent that issues arise that have not been contemplated by these Standards, PEC intends to work with the Licensees to reach a solution that effectively addresses the issue consistently with these Standards.

Upon the effective date, these Pole Attachment Standards shall be enforceable by PEC at all times upon any entity that attaches its facilities to a PEC-owned Pole regardless of the status of any type of contract, Pole Attachment Agreement (and any applicable addenda), Application, or Permit. Any Attachments and Wireless Installations in place at the time the corresponding Attachment Agreement expires or terminates, as well as any additional Unauthorized Attachments installed subsequent to such expiration or termination but prior to the execution of a successor agreement, will be subject to these Standards. Upon execution of a successor agreement, these



Standards will remain in effect and shall be incorporated into the contractual terms in such successor agreement.

These Standards supersede all prior PEC pole attachment rules and regulations. Amendments to these Standards will become effective upon the date PEC specifies.

These Standards are organized into six parts:

- Section I Statement of Purpose
- Section II General Administrative Provisions
- Section III General Technical Provisions
- Section IV Specifications for Wire Attachments
- Section V Specifications for Wireless Installations
- Section VI Appendices



## II. GENERAL ADMINISTRATIVE PROVISIONS

### A. Definitions

1. **Affiliate** means, when used in relation to the Licensee, another entity that owns or controls, is owned or controlled by, or is under common ownership or control with the Licensee.
2. **Antenna** means an FCC authorized electrical device by which electromagnetic waves are sent out or received. Antennas are inventoried Wireless Installation components.
3. **Antenna Area** means the area on a Pole where the Antenna is installed, which is a component of a Wireless Installation. For a Wireless Installation that utilizes the top of a Pole, the Antenna Area shall be the Pole Top Space.
4. **Application** means a complete Application for a Permit submitted by the Licensee to PEC for the purpose of requesting consent to install a new Attachment, Overlash, Mid-Span Installation, or Wireless Installation onto or supported by one or more PEC Poles, as appropriate.
5. **Application Fee** means the non-refundable fee compensating PEC for the administrative and other work required to process and review an Application.
6. **Attaching Entity** means any eligible person, public entity, or private company or corporation that places an Attachment or Wireless Installation on or supported by a Pole in accordance with PEC's applicable requirements, including an applicable Agreement, to provide services.
7. **Attachment** any wire, line, apparatus, or appurtenances attached to a Pole, including, but not limited to, cables, Service Drops, power supplies, amplifiers, pedestals, equipment, bonding wires, Overlashings, guy wires, and anchors required to support unbalanced loads.
  - A single Attachment includes the vertical space on the Pole six inches (6") above and six inches (6") below the point of contact; provided, however, that no more than one through-bolt Attachment may be placed within any twelve-inch vertical space;



- J-hooks and bonding wires located within a space consisting of twelve inches (12") either above or below (but not both) of a through-bolt or three-bolt clamp shall not constitute separate Attachments;
  - power supplies shall count as billable Attachments if installed upon a Pole;
  - Non-Guyed Service Drops shall count as one attachment so long as all such Attachments are contained within one foot (1') of space;
  - Overlapping, risers, and vertical ground wires, shall not be counted as additional Attachments; and
  - guy wires, unless a sole Attachment or drilled and bolted separately from its associated cabling, shall not constitute an additional Attachment.
  - Mid-Span Installations utilizing the same one foot of Communication Space as the messenger cable to which it is attached shall constitute an Attachment.
  - An Attachment occurs whether the Licensee's Communications Facilities are connected to the Pole itself or are supported by an Attachment Arm, bracket, support stand, or other support devices, provided however, that Overlapping an existing permitted Attachment and Service Drop shall not constitute separate Attachments.
  - Any other apparatus or facilities requiring vertical space located fully or partly outside the one foot (1') vertical space allocated for an Attachment shall constitute an additional Attachment or Attachments.
  - This definition shall not apply to communications wires or facilities installed by PEC for its own internal communications requirements or energy information services, but shall apply if such wires or facilities are used to provide retail Communications Services.
8. **Attachment Arm** means a PEC-approved metal or fiberglass bracket used to support attaching wires away from the face of the Pole in order to clear risers or other obstacles. Standoff brackets will not be allowed for the specific purpose of achieving the forty- (40) inch vertical clearance from the neutral as required by Applicable Engineering Standards.
9. **Authorization for Make-Ready Work** means the form, provided in Appendix A 5, PEC shall issue to the Licensee that requests the Licensee's authorization for PEC to undertake Make-Ready Electrical Construction. The Authorization for Make-Ready Work



form shall also provide an estimate for the advanced payment cost required to be paid for the Make-Ready Electrical Construction.

10. **Capacity** means the ability of an existing Pole to accommodate an additional Attachment, Overlash, Wireless Installation, and is based on the Specifications, including space, design, and loading considerations.
11. **Certificated Provider** means a competitive service provider of Communications Services, cable services, or video services that has received a Certificate of Convenience and Necessity, Certificate of Operating Authority, Service Provider Certificate of Operating Authority, or State-Issued Certificate of Franchising Authority from the Public Utility Commission of Texas.
12. **Communications Facilities** means wire or cable facilities including, but not limited to, a fiber optic, copper and/or coaxial cable or wire utilized by a Licensee to provide Communications Services, including any and all associated equipment. A Communications Facility also includes a messenger or other material, appurtenance, or apparatus of any sort necessary or desirable for use in the provision of a Licensee's Communications Services. A Communications Facility shall not include Wireless Equipment.
13. **Communications Services** means the provision of service, including but not limited to, any broadband service as that term is defined in Texas Utilities Code 253.0001, telecommunications services, cable services, video services, or information services over wire or cable facilities utilizing Attachments or Wireless Installations on or supported by Poles.
14. **Communications Space** The Communications Space is the portion of the usable space, available below the Supply Space, in which communications wires and devices are traditionally located and that can be accessed by a qualified communications worker.
15. **Communication Worker Safety Zone** The clearances specified by the NESC between the facilities located in the Supply Space and the facilities located in the Communications Space, both at the Pole and in the span between Poles.
16. **Complex Transfer** means the transfer or relocation of a third-party Attachment or Overlash onto a PEC Pole that will require cutting and splicing of a Communications Facility resulting in a network and/or member outage affecting the Attaching Entity that owns the Communications Facility subject to transfer or relocation, or the transfer or



relocation of such an Attached or Overlash Communications Facility located over and across a state or federal highway.

17. **Distributed Antenna System or DAS System** means an outdoor system of Antenna nodes and associated Wireless Equipment Cabinets attached to Poles interconnected by one or more fiber or coaxial cable Communications Facilities and supported by communications equipment and components housed within a hut structure located on private or public property away from PEC Facilities.
18. **Electrical Space or Supply Space** means the upper portion of a Pole reserved for the installation of electric distribution facilities to support existing and planned electric distribution equipment as described in the NESC.
19. **Inventory** means a physical count periodically conducted by PEC of Licensee's Attachments and Wireless Installations in accordance with Section III.D of these Pole Attachment Standards.
20. **Joint Meeting Transfer** means the coordinated transfer of a Pole-mounted Wireless Installation by its owner to take place at the same time as a Licensee schedules the installation of a new Attachment, Overlash, or Mid-Span Installation onto or supported by the same Pole that hosts the Wireless Installation, which requires adjustments of existing Attachments or Pole replacement as part of the One-Touch Transfer Process.
21. **Licensee Facilities** means the Communications Facilities owned by the Licensee.
22. **Make-Ready Charges** means all reasonable administrative, engineering design, construction, inspection, and management charges associated with Make-Ready Work.
23. **Make-Ready Communication Construction (“MRCC”)** means that portion of Make-Ready Work associated with construction work requiring access to Communications Facilities within the Communication Space of a Pole, including, but not limited to the movement, transfer, relocation, or modification of an existing Attachment, Overlash, or Mid-Span Installation; the replacement of a Pole; and all other construction activities necessary to accommodate the installation of a new Attachment, Overlash, or Mid-Span Installation. Make-Ready Communications Construction shall include, where applicable, the interconnection between aerial and underground communication construction.
24. **Make-Ready Electrical Construction (“MREC”)** means that portion of Make-Ready Work associated with construction work requiring access to PEC Facilities within the



Electrical Space, which includes, but is not limited to the movement, transfer, relocation, or modification of PEC electric distribution facilities; the replacement of a Pole; and all other construction activities necessary to accommodate the installation of a new Attachment, Overlash, or Wireless Installation. Make-Ready Electrical Construction shall include, where applicable, the interconnection between aerial and underground electrical construction.

- 25. Make-Ready Engineering** means that portion of Make-Ready Work associated with the preparation, submission, review, and approval of the Licensee's Application for Attachment, or Wireless Installation Permit. Make-Ready Engineering shall include, but is not limited to, the preparation of the following in support of the Application: the Pre-Construction Survey; the engineering design document(s) for Make-Ready Electrical Construction, Make-Ready Communications Construction, and Make-Ready Wireless Installation Construction; and the submission of such documents to PEC for review, potential modification, and approval. Make-Ready Engineering shall include, where required, the approval of a professional engineer, and the engineering design specifications related to the interconnection between aerial and underground construction of Communications Facilities as part of Make-Ready Communications Construction of a Wireless Installation as part of Make-Ready Wireless Installation Construction, and of electrical distribution facilities as part of Make-Ready Electrical Construction.
- 26. Make-Ready Wireless Installation Construction** means that portion of the Make-Ready Work associated with construction work requiring access to a Pole below the Communications Space and the Pole Top Space, as appropriate, or to access the Communication Space of pole structures to support a Mid-Span Installation, including, but not limited to the movement, transfer, relocation, or modification of an existing Attachment or Overlash when a pole structure replacement is necessary or otherwise in order to accommodate the Wireless Installation components; and all other construction activities necessary to accommodate the Wireless Installation on, or supported by, a pole structure. Make-Ready Wireless Installation Construction shall include, where applicable, the interconnection between aerial and underground communications construction
- 27. Make-Ready Work** means all work that is required to accommodate a Licensee's Attachment, Overlash, or Wireless Installation, onto a Pole, as appropriate, in



compliance with the Applicable Engineering Standards. Make-Ready Work may include, but is not limited to, Make-Ready Engineering, Make-Ready Electrical Construction, Make-Ready Communications Construction, and Make-Ready Wireless Installation Construction; along with PEC's review of the Application, engineering design documents, pole loading analysis, engineering work, construction work, permitting work, tree trimming (other than tree trimming performed for normal maintenance purposes), Pole replacement, and the Post-Construction Inspection. The Licensee's responsibility for Make-Ready Work costs shall not include work required to address recorded conditions or defects of the pole structure not caused by Licensee's facilities or a pole replacement resulting from the ordinary wear and tear or other natural causes and not caused by Licensee

27. **Mid-Span Installation** means a Wireless Installation consisting of a "micro network node," attached to a messenger cable suspended between two Poles, in the Communication Space, that was manufactured for this type of installation and designed to connect by means of an Overlashed Communications Facility for the purpose of providing Wireless Service.
28. **Non-Compliant Attachment** means an Attachment that does not comply with the specifications outlined in these Standards, together with the Pole Attachment Agreement.
29. **Non-Compliant Wireless Installation** means a Wireless Installation that does not comply with the specifications outlined in these Standards, together with the Pole Attachment Agreement.
30. **Non-Guyed Service Drop** means a Service Drop that requires no guys under standard industry design practice or applicable specifications in these Standards.
31. **One-Touch Transfer** mean the transfer, relocation, or alteration of third-party Attachment Communications Facilities or Mid-Span Installations whether conducted by a Licensee or PEC subject to the requirements described in Section IV.B.7, and Section V.B.5.
32. **Overlash (or Overlashing)** means to place an additional wire or cable Communications Facility onto an existing Attachment or messenger owned by Licensee already secured to the Pole in order to accommodate additional wire or cable Communications Facility capacity. An Overlash does not include a Mid-Span Installation.



33. **PEC Facilities** means all personal property and real property owned or controlled by PEC, including Poles.
34. **Pedestals/Vaults/Enclosures** means above- or below-ground housings that are used to enclose a cable/wire splice, power supplies, amplifiers, and passive devices and/or provide a service connection point and are not attached to PEC Poles.
35. **Permit** an approved Application to Attach providing authorization from PEC to make or maintain an Attachment, Overlash, Mid- Span or Wireless Installation to a specific PEC Pole, as appropriate, pursuant to the requirements of an applicable Pole Attachment Agreement and these Standards.
36. **Pole** means a structure owned by PEC made of wood, concrete, steel, aluminum, fiberglass, composite, or other material owned and normally used by Owner to support lines and related facilities of PEC, including drop/lift Poles and may include streetlight poles.
37. **Pole Attachment Agreement (or “Agreement”)** means an executed agreement between PEC and a requestor that grants a general license to access Poles for the purpose of installing Attachments and Wireless Installations pursuant to the specifications of these Standards, adopts and incorporates these Standards by reference, and under which the requestor agrees to abide by the terms and conditions of the agreement as well as the duties and obligations set out in these Standards as they may be amended from time to time. A Pole Attachment Agreement shall include additional legal protections and obligations of the parties not specifically covered in the Standards. A Pole Attachment Agreement may be referred to generally in the Standards as a “Pole Attachment Agreement”.
38. **Pole Attachment Standards (or Standards)** means these PEC Pole Attachment Standards as amended from time to time.
39. **Pole Top Antenna** means an Antenna that is a component of a Wireless Installation, which is installed in the Pole Top Space of a Pole.
40. **Pole Top Space** means the top portion of a Pole designated for the installation of Antennas which are components of a Wireless Installation, the bottom of which shall begin one inch (1”) above the highest electrical supply conductor and continue for sixty inches (60”) as the clearance between the conductor and the Pole Top Antenna. For



Wireless Installations that utilize the top of a pole structure, the Pole Top Space shall be considered the Antenna Area.

41. **Post-Construction Inspection** means the survey inspection required by PEC to determine and verify that the Make-Ready Electrical Construction, Make-Ready Communications Construction, Make-Ready Wireless Installation Construction, and all other Make-Ready Work, including the installation of an Attachment, Overlash, Mid-Span and/or Wireless Installation was made in accordance with Applicable Engineering Standards, the Application, and all other Permit requirements.
42. **Pre-Certified Equipment** means Wireless Equipment for which the Licensee has submitted manufacturing specifications and information to PEC for review and approval and that PEC has approved or pre-certified.
43. **Pre-Construction Survey** means the field survey and all other work and operations required by Applicable Engineering Standards to determine the Make-Ready Work necessary to accommodate a Licensee's Communications Facilities or Wireless Installation onto a Pole as appropriate. Such work includes, but is not limited to, field inspection and administrative processing.
44. **Remote Radio Heads (RRH)** means a transceiver with transmitting and receiving capability of radio frequencies. The RRH will be served by optical fiber, direct-current power, and output to a single or multiple Antennas. Remote Radio Heads are an inventoried Wireless Installation component.
45. **Request for Pre-Certification of Wireless System** means the form, provided in Appendix A4, a Licensee shall submit to PEC to request PEC to review and approve Pre-Certified Equipment for a Wireless Installation.
46. **Reserved Capacity** means Capacity or space on a Pole that PEC has identified and reserved for its own electric utility service or lighting requirements, including space for any and all associated internal communications functions that are essential to the proper operations of its electric utility service, pursuant to reasonable projected need.
47. **Safety Briefing** means a document or presentation materials prepared by a Wireless Provider and provided to PEC to educate PEC employees and contractors regarding specific process on how to work safely near and/or around the Wireless Provider's specific Wireless Installation technologies and locations.



48. **Safety Violation** means a violation of the Specifications of this Agreement, which is reasonably expected to endanger life or property; or poses a potential safety risk to any PEC or Attaching Entity Employee or contractor, or to the general public.
49. **Safety Violation Assessment Charge** means the charge payable by a Licensee for a Safety Violation.
50. **Service Disconnect Switch** means the electrical device owned by the Wireless Provider which purpose is to de-energize the entire Wireless Installation and must meet the requirements provided in the PEC Metering Specifications and all other applicable code requirements.
51. **Service Drop** means any connection from distribution facilities to the building or structure being served.
52. **Simple Transfer** means the transfer, relocation, or alteration of any Attachment or Overlash on an existing Pole or onto a new Pole that does not require cutting and splicing of the Communications Facility subject to such transfer, relocation, or alteration. A Simple Transfer may include the transfer, relocation, or alteration of a Wireless Installation that is mounted or otherwise supported by a Pole.
53. **Slab-Mounted Equipment Cabinet** means a stand-alone, weatherproof, metal, or composite enclosure consisting of a utility metering section and a Wireless Equipment section, which must be purchased, installed, and owned by the Wireless Provider, and approved by PEC as part of the pre-certification process.
54. **Tag** means to place a distinct marker within twelve inches (12”) of a Pole on the wires and cables, coded by number, color, or other means that will readily identify the owner of the Attachment Mid-Span Installation or Wireless Installation. The Tag shall be consistent with accepted communications industry standards.
55. **Transmitter** means any electronic device which purpose is to generate, amplify, and/or control, radio frequencies.
56. **Unauthorized Attachment** means any Attachment or Overlash of a Licensee for which the Licensee failed to obtain a Permit. An Attachment installed by an entity that failed to execute a Pole Attachment Agreement, or installed after the expiration or termination of such agreement shall also be considered an Unauthorized Attachment.



57. **Unauthorized Wireless Installation** means any Wireless Installation or Mid-Span Installation of a Licensee for which the Licensee failed to obtain a Permit. A Wireless Installation or Mid-Span Installation installed by an entity that failed to execute a Pole Attachment Agreement, or installed after the expiration or termination of such agreement, shall also be considered an Unauthorized Wireless Installation.
58. **Wireless Equipment** means any FCC-authorized radio equipment components owned by a Wireless Provider used for a Wireless Installation, including Antennas, Remote Radio Heads, Transmitters, transceivers, and related equipment of a Wireless Installation.
59. **Wireless Equipment Area** means the space on a Pole comprising of the area where the following components of a pole-mounted Wireless Installation are located:
- a) Antenna Area;
  - b) Wireless Equipment Cabinet; and
  - c) Backhaul Network Interface Device.
60. **Wireless Equipment Cabinet** means a weather-tight enclosure that houses Wireless Equipment and electronics. Wireless Equipment Cabinets are inventoried Wireless Installation components.
61. **Wireless Installation** means a Wireless Provider-owned installation the components of which are mounted onto or supported by a Pole, in whole or in part, that sends and/or receives licensed or unlicensed radio frequency signals, and consists of several wireless components, including but not limited to Wireless Equipment, Wireless Equipment Cabinet or Slab-Mounted Equipment Cabinet, and Antennas; along with support structures; riser cable; conduit; accessory equipment; and other ancillary equipment. The term Wireless Installation also includes a Mid-Span Installation and a DAS System that utilizes multiple pole structures.
62. **Wireless Provider** means an entity that provides Wireless Services to customers.
63. **Wireless Services** means the provision of service, including but not limited to, telecommunications services, cable services, video services, or information services over wire or cable facilities utilizing Wireless Installations on or supported by Poles.



## B. Application Submittal

1. **Applications shall be submitted for:**
  - new Attachments or Wireless Installations;
  - additional Attachments or Wireless Installations;
  - removal of Attachments or Wireless Installations; and/or
  - Overlapping.
2. **No Commingling of Attachments on Application.** When submitting an Application for a Permit, the Licensee must specify whether the Application is for a wire Attachment, Overlash, Mid-Span or Wireless Installation. The commingling of different types of facilities under one Application is strictly prohibited.
3. **Number of Poles per Application.** For new Attachments and/or Overlashings, the maximum number of Poles to be considered on a single Application is twenty-five (25) Poles. For a Wireless Installation (excluding Mid-Span Installations), a single Application shall only include one (1) Wireless Installation, together with the applicable Poles, provided that the Wireless Installations is the same or substantially similar in design as pre-certified by PEC, at each of the locations within the identified boundaries of a Wireless Project Area. Concerning Mid-Span Installations, an Application may include up to five (5) Mid- Span Installations.
4. **Authorization Process Required.** No Attaching Entity is authorized to install an Attachment, Overlash, Wireless Installation, or Mid-Span Installation on to a Pole, pursuant to these Standards, without first executing the Pole Attachment Agreement, submitting a complete Application, and securing and receiving an appropriate Permit.

## C. Fees and Charges

1. **Application Fee and Make-Ready Engineering Review.**
  - a) The appropriate Application Fee (see Appendix F) shall be paid by accessing PEC Smart Hub (<https://www.pec.coop/your-service/billing-payments/smarthub/>). Any Application submitted for PEC's consideration without payment of the non-refundable Application Fee shall be rejected and considered incomplete.
  - b) A Licensee shall reimburse PEC or its contractor for its actual costs to complete the Application process, as applicable. Such costs constitute Make-Ready Engineering services, including back-office engineering services and field inspection work. PEC



or its contractor shall invoice each Licensee for the work completed in processing the Licensee's Applications, as applicable. If the Licensee fails to dispute or pay the Make-Ready Engineering costs within forty-five (45) calendar days following issuance of the invoice; PEC will

- (i) suspend processing of the Licensee's pending Applications and any subsequent Applications and/or
  - (ii) revoke the Permits issued under the Applications for which Make-Ready Engineering review charges have not been paid. Upon full payment, PEC will resume processing and restore any Permits which may have been revoked.
- c) In the event that an Application is submitted by a Licensee and then is subsequently cancelled, the Licensee shall forfeit the Application Fee submitted with the cancelled Application. The Licensee shall also reimburse PEC or its contractor for the costs incurred up to the date of cancellation. Should PEC cancel the Application pursuant to these Standards, PEC will reimburse the Application Fee to the Licensee.

**2. Advance Payment for Make-Ready Electrical Construction.** Where Make-Ready Electrical Construction is required, the Licensee is required to make advance payment for the Make-Ready Electrical Construction. All required Make-Ready Electrical Construction must be completed before a Licensee shall install any Attachment, or Overlashing, Mid-Span or Wireless Installation. PEC shall provide an invoice and request authorization for the Make-Ready Electrical Construction by submitting to the Licensee the completed PEC Authorization for Make-Ready Work form. The estimate provided in the PEC Authorization for Make-Ready Work form shall be valid for thirty (30) days from the date of issuance. Should the Licensee not indicate its acceptance within the thirty- (30) day timeframe, the Application shall be deemed cancelled. If approved by the Licensee, the Licensee shall pay PEC pursuant to the terms of PEC Authorization for Make-Ready Work. PEC will not schedule or release to construction any Make-Ready Electrical Construction work on behalf of a Licensee until the advance payment is received in full by PEC or contractor.

- a) PEC will require advance payment of estimated expenses for Make-Ready Electrical Construction. PEC shall perform a true-up of costs for work orders closed upon request, and the following will apply:



- (i) to the extent that the actual costs of the work order exceeds the advance payments of estimated expenses by no more than twenty percent (20%), the Licensee shall pay PEC for the net difference in costs; or
  - (ii) to the extent that the actual costs of the work order is less than estimated costs, PEC will refund to the Licensee the net difference in costs.
  - (iii) in either event above, PEC shall either invoice or refund the appropriate costs to the Licensee within sixty (60) days following the close of each work order.
- b) For any actual costs incurred by PEC that are not reflected in the work order costs for any reason, an estimated cost will be determined by PEC and added to the actual work order costs in order to account for these costs during the true-up process.

## **D. Claims**

### **1. Upon Receipt of Claim.**

- a) Upon receiving notification of damages to PEC Facilities, whether by the Licensee or from another source, a claims file will be opened.
- b) The Licensee will be timely notified of the claim for damages to PEC Facilities and will be provided with a preliminary assessment of the damages to PEC Facilities.
- c) Once a determination of liability is made regarding the claims for damage to PEC Facilities, a notification will be sent to the Licensee in writing and provide a letter stating the amount of damages owed to PEC, and the Licensee will have an opportunity to respond.

### **2. Dispute of Claim.**

- a) In the event liability is disputed for a claim of damage, the Licensee must notify PEC within five (5) business days of receiving PEC's tender explaining the reason for disputing liability and providing documentary support for the dispute. Dispute of a claim shall not be capricious nor will assumption of responsibility by the Licensee be unreasonably withheld.
- b) A Licensee may conduct its own independent investigation of any claims for damage to PEC Facilities. PEC shall reasonably cooperate with the Licensee's investigation. PEC shall consider the findings of the Licensee's investigation



provided that the investigation is completed within forty-five (45) calendar days of the Licensee submitting to PEC the Notice of Dispute.

**3. Payment of Claims.**

- a) In the event the final determination is one of liability on the part of the Licensee, PEC will send a Claim Notice Letter. Upon receipt of the Collections Notice Letter, the Licensee must remit payment within forty-five (45) calendar days to the following address:

PEC Pole Contacts  
P.O. Box 1  
Johnson City, TX

**4. Failure to Pay Claims.**

- a) Failure to timely pay a non-disputed claim or otherwise follow these claim procedures shall constitute violation of these Standards and will result in the suspension of any existing Applications and rejection of any future Applications submitted by the Licensee until such time as the claim has been satisfied and closed.
- b) If a non-disputed payment is not timely received, PEC reserves the right to seek reimbursement under the Licensee's Security Instrument.
- c) PEC reserves the right to refer any unpaid outstanding claims to a collections agency and/or legal counsel.

**5. Safety Violations & Safety Violation Assessment Charge.**

- a) If during an Inventory or otherwise, PEC determines that one or more of a Licensee's Attachments, or Wireless Installations or any part thereof, are installed, used, or maintained in such a manner as to create one or more Safety Violations; PEC shall promptly notify the Licensee by issuing a Notice of Safety Violation & Assessment Charge, a copy of which is provided in Appendix A7. Should the Safety Violation(s) cause imminent danger to employees of either party, another Attaching Entity, or the public, the Licensee shall correct the Safety Violation(s) **as soon as possible**, but no later than five (5) calendar days from PEC's issuance of such notice. Should the Safety Violation(s) not involve imminent danger, the Licensee shall correct Safety Violation(s) within thirty (30) calendar days of notification by



PEC. If following PEC's verification, the Safety Violation has not been cured within the designated time period:

- (i) PEC may correct said conditions. PEC will attempt to notify the non-compliant Licensee in writing prior to performing such work whenever practicable. Should PEC determine the Safety Violation poses an emergency, interferes with the performance of PEC's service obligations, or poses an immediate threat to the physical integrity of PEC Facilities, PEC may perform such work and/or take such action as it deems necessary without first giving written notice to the Licensee with no recourse to PEC. As soon as practicable thereafter, PEC will advise the Licensee of the work performed or the action taken. The Licensee shall be responsible for all costs incurred by PEC in taking action. PEC will facilitate the resolution of responsibility for violations in the event that multiple Attaching Entities are on the same Pole.
  - (ii) PEC will impose a ten percent (10%) surcharge on its costs of conducting any work to correct or remedy a Safe Violation.
- b) The Licensee may dispute responsibility for such Safety Violation Assessment Charge within fifteen (15) calendar days of PEC's issuance of notice. PEC and the Licensee shall meet within fifteen (15) days of PEC receiving the notice of dispute to review all relevant facts and work towards an agreement on the question of responsibility of the Safety Violation(s). PEC will provide its determination of responsibility within ten (10) calendar days of the determination meeting. Should PEC in its reasonable judgment determine the Licensee was at fault, the Licensee shall be responsible for the Safety Violation Assessment Charge. However, should PEC in its reasonable judgment determine the Licensee is not at fault, PEC may in its discretion waive the Safety Violation Assessment Charge and investigate to determine the responsible party. The Licensee that owns the Attachment, or Wireless Installation imposing the Safety Violation is required to remedy the Safety Violation within the time frames defined in Section II.D.5(a) of PEC's issuance of the Notice of Safety Violation. Should the Licensee fail to dispute the Safety Violation Assessment Charge within fifteen (15) calendar days of PEC issuing the Notice of Safety Violation Assessment Charge as required, the Licensee shall be required to pay the full amount of any Safety Violation Assessment Charges levied



by PEC within forty-five (45) calendar days from receipt of invoice. Failure to make timely payment shall result in the following enforcement measure:

- (i) PEC will immediately suspend or stop processing Applications submitted by the non-compliant Licensee for future Permits until full payment is received by PEC.



### III. General Technical Provisions

#### A. General Design & Construction Standards & Specifications

1. **Contractors.** All work, including One-Touch Simple Transfers, but not including Pole Top Antenna installations, performed on PEC Facilities on behalf of a Licensee pursuant to a Permit shall be done by its own employees, contractors, or subcontractors. All Licensees shall require that all employees, agents, contractors, and subcontractors of Licensees used to install, remove, or maintain the Attachments either (i) have been certified or trained to work in the vicinity of Poles, or (ii) have received training with respect to work on Poles. Pole Top Antenna installations shall only be undertaken by electrically qualified contractors certified and pre-qualified by PEC for such work pursuant to Section V.B.5(c). Failure of any employee, contractor, or subcontractor of the Licensee to adhere to and comply with these Standards may result in such employee, contractor or subcontractor being unable perform work on PEC Facilities. The Licensee shall bear full responsibility for ensuring its employees, agents, contractors, and subcontractors are in full compliance with the requirements of these Standards. A Licensee may be required to remedy any and all work, conducted by either its employees, contractor, or subcontractor that does not comply with the Applicable Engineering Standards and other construction standards and requirements of PEC. PEC reserves the right to halt all work undertaken by the Licensee or its contractors/subcontractors that in PEC's sole discretion is deemed unsafe or undertaken contrary to these Standards and other construction standards and requirements of PEC.

2. **Right to Review.** PEC contemplates relying upon the Licensee's Pre-Construction Survey and other engineering/field evaluation reports developed and relied upon in connection with any Application submitted by the Licensee. Nonetheless, PEC reserves the right to perform its own (either by PEC employees or contractors) engineering and field evaluation or verification as appropriate or necessary. The costs for PEC to undertake such additional engineering and field evaluation shall be paid by the Licensee.

3. **Installation/Maintenance of Communications Facilities.** All Licensees shall be responsible for the installation and maintenance of their Communications Facilities, Wireless Installations in accordance with the requirements and specifications set out in the Pole Attachment Agreement, together with these Standards, including the Appendices. A Licensee shall at all times and at its own expense make and maintain its



Attachments, Overlashings, Wireless Installations, in a safe and workmanlike manner, and keep them in good repair and condition in accordance with all Applicable Engineering Standards. Notwithstanding the foregoing, Attachments, Overlashings, and Wireless Installations which complied with the Applicable Engineering Standards at the time they were originally installed may be operated in place until such time that such facilities are subject to modification, upgrade, rebuild, repair, transfer, relocation, or other such changes at which time, these facilities will be required to comply with the then-current Applicable Engineering Standards.

- a) Protective Equipment. The Licensee, its employees, and contractors, shall install and utilize adequate protective equipment to ensure the safety of people and facilities. The Licensee shall install, at its own expense, protective devices designed to handle the voltage and current impressed on its Communications Facilities or Wireless Installations in the event of a contact or due to close proximity with a supply conductor(s) or other energized equipment. PEC shall not be liable for any actual or consequential damages to the Licensee's Communications Facilities, Wireless Installations, or the Licensee's customers' facilities resulting from such contact or proximity with PEC's supply conductor(s) or other energized equipment.

**4. Tagging.** Each Licensee shall properly install identification tags on all of its Attachments, Overlashings, and Wireless Installations as specified in Appendix H and/or applicable federal, state, local, or industry regulations in effect at the time of installation. Failure of a Licensee to provide proper tagging of its Attachments, Overlashings, Wireless Installations, or failure to undertake in good faith its Tagging Plan shall be considered a violation of the Applicable Engineering Standards.

- a) Should PEC discover that a Licensee has Attachments, or Overlashings, Wireless Installations that are untagged or incorrectly tagged, excluding Service Drops, exceeding five percent (5%) of its total Attachments, or Wireless Installations respectively, the Licensee, at PEC's request, shall within two (2) months, provide to PEC a written plan (Tagging Plan) to Tag the Attachments, Overlashings, or Wireless Installations. The Tagging Plan shall identify an estimated schedule to complete the tagging of all untagged or incorrectly tagged Attachments, Overlashings, or Wireless Installations within an eighteen (18) month period for Attachments and Overlashings and within two (2) months for Wireless Installations. The Licensee and PEC shall meet every two months during the timeframe outlined



in the Tagging Plan to determine the Licensee's compliance with its Tagging Plan. PEC reserves the right to conduct field audits to assess the Licensee's compliance with its Tagging Plan.

- b) In the event any Attachment, Overlash, or Wireless Installation, is untagged or incorrectly tagged and PEC must determine the owner's identity in order to address the repair or maintenance of a PEC Facility where PEC cannot undertake such repair or maintenance absent the removal or transfer of such Attachment, Overlash, or Wireless Installation, PEC will undertake the following protocol:
  - (i) A thirty (30) minute reasonable effort to determine the owner of the untagged Attachment, Overlash, or Wireless Installation at no cost to the Licensee; then
  - (ii) Provided the initial thirty (30) minute effort is unsuccessful, PEC shall continue with its search until ownership is determined. PEC shall bill and the non-compliant Licensee shall pay PEC at the Tracing Line Ownership rate set forth in Appendix F for the time required to determine the Attachment, Overlash, or Wireless Installation ownership.

**5. Physical Interference with PEC Facilities.** A Licensee shall not allow its Communications Facilities, or Wireless Installations, to impede, impair, or interfere with the installation, placement, or operation of any PEC Facilities. A Licensee whose Communications Facilities, Wireless Installations, or any part thereof impede, impair, or interfere with any PEC Facilities shall correct such condition within fifteen (15) calendar days from receipt of written notice of such impairment from PEC. Failure to timely correct such condition will result in PEC, at its option, taking all necessary steps to correct said condition at the Licensee's expense plus ten percent (10%). PEC will attempt to notify the non-compliant Licensee in writing prior to performing such work whenever practicable.

If a Licensee continues to allow its Communications Facilities, or Wireless Installations, to impede, impair, or interfere with the operation of any PEC Facilities after the initial fifteen (15) calendar day correction period, the Licensee shall be subject to enforcement action, including but not limited to:

- a) Suspension of processing any further Applications by the Licensee, pending resolution of such interference; and
- b) Potential contractual claims.



A Licensee shall not be responsible for physical interference with future installations by other Attaching Entities, provided that the Licensee's prior Attachments are duly permitted by PEC and comply with all Applicable Engineering Standards and the requirements of these Standards at the time of the initial installation, unless otherwise required by applicable federal, state, or local laws. Where PEC needs to add to or modify PEC Facilities in a case other than remedying a non-compliant condition caused by a Licensee, and where that action would require the replacement of a Pole, as applicable, PEC and all affected Attaching Entities shall be responsible for their own cost of transferring their Attachments, Overlashing, or Wireless Installations. PEC will be responsible for the replacement cost of the pole structure.

- a) No Wireless Installations within Certain Distance from PEC Substations. No Applications will be approved for a Wireless Installation on PEC Poles within two thousand (2,000) feet of any Substation's outer fence.

**6. Performance Interference Impacting Licensee's Customer.** To the extent a Licensee identifies any interference with its Communications Services impacting its customers that may or may not be related to PEC Facilities, the Licensee shall not identify PEC to its customers as the source of such interference absent a test report verifying the source and prior notice to PEC of the report's findings. The Licensee shall cooperate with PEC to investigate the source of any such signal interference and shall at PEC's request conduct a test, at the Licensee's expense, verifying the source of such interference. The test equipment used for verifying the source of interference must be calibrated to the standards provided by the National Institute of Standards and Technology or any similar, mutually agreeable standards organization. In the event such testing provides conclusive evidence that PEC Facilities are the source of such interference, PEC shall reimburse the Licensee for the reasonable expense of the testing and will work with the Licensee to find a reasonable mitigation of the interference that does not impose undue burdens on PEC's ability to provide electric service.

**7. Wireless Interference.** All Wireless Installations, including Mid-Span Installations, shall be operated in such a manner which will not cause Wireless Interference to any existing or future PEC Facilities, PEC wireless systems or operations, or governmental public safety facilities or operations. Nor shall they cause Wireless Interference to the facilities or operations of any other Attaching Entity or FCC-licensed operator. In the event of Wireless Interference, the Wireless Provider shall shut down the Wireless Equipment



causing such interference within one (1) hour of PEC contacting the Licensee's "Network Operations Center". If the Licensee fails to timely shut down the Wireless Equipment within this timeframe, PEC reserves the right to disconnect electricity to the Wireless Installation. Thereafter, following receipt of written notice of the incident, the Licensee will take all commercially reasonable steps necessary to permanently eliminate such interference, including but not limited to, recalibration or replacement of Wireless Equipment, and the subsequent powering down of such equipment for intermittent testing. In the event the Wireless Interference cannot be eliminated through equipment recalibration or replacement, the Wireless Installation shall be removed, and the Wireless Equipment may be installed at an alternative pole site that does not cause Wireless Interference. These activities shall be carried out by the Wireless Provider at its own expense.

In the event of Wireless Interference as described in the previous paragraph, the Wireless Provider shall correct such condition within fifteen (15) calendar days from receipt of written notice. Failure to timely correct such condition permanently, and the reactivation of the Wireless Equipment to the same effect, will result in PEC, at its option, taking all necessary steps to eliminate the reoccurrence of Wireless Interference at Wireless Provider's expense. PEC will attempt to notify the non-compliant Wireless Provider in writing prior to performing such steps whenever feasible. If any Wireless Provider continues to allow its Wireless Installations to interfere with the operation of any PEC Facilities as described above after the initial fifteen (15) calendar day correction period, the Wireless Provider shall be subject to enforcement action, including but not limited to:

- a) Interruption of PEC supplied power to the identified Wireless Installation;
- b) Suspension of the processing any further Applications, submitted by the Wireless Provider, pending resolution of such interference; or
- c) Other remedies under the applicable Pole Attachment Agreement and Wireless Installation Agreement.

In situations where PEC determines that a Wireless Provider's impairment or interference condition poses a potential emergency situation, PEC may perform such work and/or take such action(s) as it deems necessary to eliminate the potential emergency situation without first giving written notice to the Wireless Provider. As soon as practicable thereafter, PEC will advise the nonconforming Wireless Provider of the work performed or the action(s) taken.



The nonconforming Wireless Provider shall be responsible for all costs incurred by PEC plus ten percent (10%) in taking action pursuant to this Section III.A.7.

- a) Interference Studies & Testing. In the Application process, and in the event of any Wireless Interference, PEC requires the documentation and analysis of testing for potential and possible Wireless Interference. PEC reserves the right to hire consultants and industry experts to perform Wireless Interference testing, investigations, and/or analysis at the sole expense of the Wireless Provider.
  - (i) *Initial Installation* - In the Pre-Certification and/or Application process for the initial installation of the Wireless Installation, an Intermodulation Test report will be provided by the Wireless Provider.
  - (ii) *Equipment Upgrades or Replacements* – In the Pre-Certification and/or Application process for an upgrade, or non-like for like replacement of the initial Wireless Installation, an Intermodulation Test report will be provided by the Wireless Provider.
  - (iii) *Interference Studies & Testing Report* – The Intermodulation Test report will have an executive summary stating “highly likely” or “not likely” for potential intermodulation issues. The Intermodulation Test report shall be prepared by an engineer trained and certified in radio frequency engineering.
- b) At PEC’s sole discretion, a more in-depth radio frequency (RF) interference study may be required at certain occurrences, to include but not, limited to:
  - (i) “highly likely” assessment of intermodulation issues in a summary of any Intermodulation Test report;
  - (ii) a known and/or unresolved RF interference complaint. The RF interference study will require an onsite visit(s) to gather field measurements and site conditions. The following area will be addressed: intermodulation products – transmitter and receiver, receiver noise & desensitization, transmitter noise & harmonics, and spurious emissions. Such RF interference study shall be undertaken and approved by an engineer, trained and certified in radio frequency engineering. Additionally, the RF interference report will have an executive summary with action statement, a method of RF interference remedies (if necessary), and all input parameters indexed.



- c) A Wireless Provider may intermittently, temporarily, or permanently shut-off power to remedy and/or troubleshoot Wireless Interference issues. Electric service shall not be re-established without PEC's written approval following a request from the Wireless Provider. PEC reserves the right to determine if all Wireless Interference issues are remedied prior to granting approval to reinstate electrical power.
- d) The RF interference studies and testing prescribed for Wireless Installations above, do not apply to Mid-Span Installations. This provision is not intended to be interpreted as authority to exempt a Mid-Span Installation from complying with any other requirements applicable to Wireless Installation, unless otherwise specifically stated elsewhere herein.

**8. Enclosures.** Except as to the Licensee's facilities located on the Licensee's private property and/or easements, no Licensee shall place new pedestals, vaults and/or other enclosures (excluding Wireless Equipment Cabinets and Slab-Mounted Equipment Cabinets) on or within four (4) feet of any Pole, or other PEC Facilities without PEC's prior written consent. The Licensee shall specifically identify this request in its Application for Permit submittal. If permission is granted by PEC, all such installations shall be in compliance with the specifications and drawings provided in Appendix D, Appendix G, or other Applicable Engineering Standards. A Licensee may retain any pedestals, vaults and/or other enclosures located within four (4) feet of any Pole, or other PEC Facilities that are in place on or before June 1, 2020, or result as part of a future pole replacement, provided the Licensee complies with any and all directives issued by PEC regarding such enclosures.

**9. Vegetation Management.** Licensees shall be responsible for performing, or causing the performance of, all tree trimming and other vegetation management necessary for the safe and reliable installation, use, and maintenance of their Attachments, Overlashings, or Wireless Installations and to avoid stress on Poles caused by contact between tree limbs and the Licensee's Attachments, Overlashings, or Wireless Installation components.

- a) Per NESC, all crossing span and adjoining spans on each side of a line crossing, railroad crossing, limited-access highway crossing, or navigable waterway requiring a crossing permit shall be kept free from overhanging or decayed trees or limbs that shall fall into the line, including both supply and communication cables.



- b) In emergency situations unrelated to the permit Application, please contact 1-888-883-3379 and report through NJUNS.
- c) All tree trimming shall be performed in accordance with OSHA regulations and/or PEC's Vegetation Management Standards and any applicable municipal ordinances.
- d) Licensees shall use qualified tree trimming contractors pre-qualified by PEC who shall adhere to industry and local municipal ordinances, standards, and requirements for tree trimming and vegetation management.
- e) Failure of a tree trimming contractor to adhere to and comply with such standards and requirements may result in such contractor being unable to perform further work on or around PEC Facilities. A Licensee may be required to remedy any and all work, conducted by its tree trimming contractor that fails to comply with the tree trimming standards and requirements.
- f) PEC reserves the right to halt any and all work by any such tree trimming contractor that PEC in its discretion deems to be unsafe or performs work contrary to the standards and requirements in PEC Vegetation Management Standards and the Applicable Engineering Standards.

**10. Removal of Licensee's Facilities.**

- a) Abandoned Facilities. The Licensee, at its own expense, shall remove all Attachments, Overlashings, Wireless Installations, and any related Communications Facilities which are abandoned, non-functional, and/or obsolete, on PEC Poles where such Attachment(s):
  - (i) are no longer utilized for providing Communications Service, telecommunications Services, or Wireless Service;
  - (ii) are abandoned or will be abandoned during the next reporting period; or
  - (iii) have been replaced with operating capacity of alternative facilities.

Except as otherwise provided, the Licensee shall remove these facilities coincident with their replacement, and in all cases within one (1) year of meeting any of the above conditions, unless the Licensee receives written notice from PEC that removal is necessary, in which case the Licensee shall remove such Attachments, Overlashings, or Wireless Installations no later than sixty (60) calendar days from



the issuance of such written notice. Should the Licensee receive notice and not remove its facilities, PEC may remove the facilities at the Licensee's expense.

- b) Removal on Expiration/Termination. Subject to the expiration or other termination of a Licensee's Attachment Agreement or any individual Permits, unless renewed; the Licensee shall submit a written plan which describes the commitment, schedule, and process for the removal of its Attachments, Overlashings, or Wireless Installations, from the affected Poles to PEC for approval. PEC shall review such plan and either approve or request additional details within fifteen (15) calendar days of receipt of the plan. Following approval of the plan by PEC, the Licensee shall make judicious progress toward fulfilling the removal commitments made by the Licensee in the plan. Such removals will be at the Licensee's sole expense. If the Licensee fails to remove such Attachments, Overlashings, or Wireless Installations, within the timeframe contemplated by the plan, PEC shall have the right to have such Attachments, Overlashings, or Wireless Installations, removed at the Licensee's expense without liability to PEC.

**11. Pre-Certification of Wireless System**. Pursuant to Section V.B, before submitting an Application for a Wireless Installation Permit, a Wireless Provider must submit a completed Request for Pre-Certification of Wireless System form to PEC in order for the Wireless Equipment configuration proposed for a Wireless Installation to be approved for installation on a Pole as part of the Pre-Certified Equipment process. A copy of this form is located in Appendix A4 and can be downloaded at <https://construction-drawings.pec.coop>. PEC requires the initial configuration of a specific technology of a Wireless Installation for each Wireless Provider to be pre-certified in order to minimize potential interference with communication equipment essential to PEC's core electric operations and for public safety. The Pre-Certification process shall consist of the following activities:

- a) Testing for Wireless Interference. The Wireless Provider shall identify in writing all FCC licensed frequencies, by FCC licensee, that will be used as part of a Wireless Installation and PEC shall disclose all licensed and unlicensed frequencies utilized in its operations. The Wireless Provider will then conduct and submit the reports required by Appendix C, Section 17(a).
- b) Representation of Wireless Installation. The Wireless Provider shall coordinate with the Pole Attachment Manager a schedule for the mock installation of a proposed



Wireless Installation at PEC's pole yard, in compliance with Appendix C, Section 17(n). The Pole Attachment Manager shall schedule a date for the mock-up installation to begin within thirty (30) days of a written request.

- c) Review of Request for Pre-Certification of Wireless System. PEC will conduct its timely review of the Request for Pre-Certification of Wireless System form in conjunction with the evaluation of the Wireless Provider's mock-up display of the Wireless Installation and submitted Wireless Interference reports. PEC shall complete the review of the aforementioned form and report within thirty (30) days of completion of the mock-up installation, and either approve or reject the proposed configuration of the Wireless Installation provided all other pre-certification requirements have been met including compliance with all the requirements of Appendix C. If the Wireless Provider is aware that it has not met all the requirements for pre-certification prior to expiration of the initial thirty (30) day review period, the Wireless Provider may request an additional thirty (30) days to complete the requirements.
- d) Pre-Certification Requirements for Mid-Span Installations. Mid-Span Installations will not be subject to the same pre-certification requirements applicable to other Wireless Installations. Rather, a Licensee engaged in the deployment of Mid-Span Installations shall comply with the following pre-certification requirements:
  - (i) submit the Pre-Certification Form;
  - (ii) submit written materials explaining the installation, operational, and safety procedures, features, and considerations associated with the deployment of Mid-Span Installations wireless technologies;
  - (iii) submit a twelve- (12) month and three- (3) year deployment plan and refresh the plan as appropriate;
  - (iv) determine the appropriate distance from a pole structure that the micro network nodes component of a Mid-Span Installation should be strand-mounted in order to protect line workers working on such poles from harmful radio frequency energy, and submit calculations;
  - (v) determine the appropriate distance that the micro network node component of a Mid-Span Installation should be installed away from a PEC wireless system



that operates in the same unlicensed frequency bands in order to prevent Wireless Interference, and submit results;

(vi) identify the location of the shutoff switch for the micro network node component of a Mid-Span Installation, and submit information; and

(vii) schedule a briefing with PEC prior to initiating deployment of Mid-Span Installations in order to provide an overview of all these issues.

## **B. Pole Modifications and /or Replacements**

1. **Restrictions on Attachments for Certain Poles.** PEC may require the removal or modification of an existing Attachment, or Wireless Installation at the Licensee's expense, if PEC reasonably determines that such Attachment or Wireless Installation 1.) did not meet the clearance requirements set forth in the Standards at the time of installation or modification, or 2.) may create a potential to disrupt or impair the reliability of PEC, its electric system, or its facilities, or 3.) endanger the safety of the public, PEC, its electric system or its facilities.

PEC may deny an Application for Permit for access to a Pole (as appropriate for the type of installation) where insufficient capacity exists, such as in flood zones, river or lake crossings or other locations, or if the proposed new Attachment or Wireless Installation cannot be accommodated without creating a potential to disrupt or impair the reliability of PEC, its electric system, or its facilities, or endanger the safety of the public, PEC, its electric system or its facilities, or conflict with Applicable Engineering Standards.

2. **Make-Ready Work.** To the extent a Pole is not available for Attachment or Wireless Installations, in such instances, PEC, may attempt to rearrange Attachments on a Pole through reasonable Make-Ready Work. Such costs of Make-Ready Work **are** to be borne by the requesting Licensee.

3. **Replacing Pole for New Pole Attachment.** PEC, in its sole discretion, may replace a Pole to accommodate a Licensee's Attachment or Wireless Installation. After the costs of such replacement have been allocated to the Licensee or to PEC if applicable and paid in advance, PEC and the Licensee agree the reasonable date for the change out of the Pole to take place shall be consistent with the times outlined in the Application process defined in Sections IV.B. and V.B.



**4. Pole Types for Attachment.** PEC will review requests by a Licensee to access various pole types. Certain pole types are not available for attachment:

- a) Steel Poles. PEC will consider requests by a Licensee to access existing distribution steel Poles. Attachments must be firmly secured with clamps and/or stainless-steel banding. The drilling of any additional holes into steel Poles or associated equipment is prohibited. The only exception permitted is the use of a self-tapping set screw for grounding of equipment on steel Poles. Regarding Wireless Installations, a Wireless Provider may request access to a steel Pole provided the components of the Wireless Installation are secured with clamps. All Riser cables necessary to connect the components of the Wireless Installation must be installed outside the steel Pole using a stand-off bracket, provided the structural integrity of the Pole is maintained.
- b) Streetlight Poles. Subject to these Standards, PEC may provide access to streetlight poles owned by PEC for the purpose of accommodating Wireless Installations only (wireline Attachments are not permitted), provided that such Installations do not interfere with the maintenance and operation of the overhead streetlights by PEC or any such third-party required to maintain and operate such lights.
- c) Transmission Structures. PEC's transmission poles, towers, or other structures are outside of the scope of these Standards and the Pole Attachment and Wireless Installation Agreements. No Attachments or Wireless Installations are permitted on PEC transmission poles, towers, or other structures regardless of the presence of distribution under-build facilities.
- d) Poles with Distribution Equipment Installed. Wireless Installations are prohibited on any PEC Pole that has electric distribution equipment installed on them such as, but not limited to transformers, capacitors, reclosers, sectionalizers, voltage-regulators, voltage-regulator racks, primary metering, etc.
- e) Restrictions Applicable to Mid-Span Installations. The restrictions applicable to Wireless Installations outlined above in Section III.B.4.c) applies to Mid-Span Installations; however, Section III.B.4.a), b), and d) are only applicable to Mid-Span Installations as described below, provided such installations otherwise comply with all Applicable Engineering Standards.



- (i) Steel Poles. All Riser cables necessary to connect the components of a Mid-Span Installation back to the Slab-Mounted Equipment Cabinet must be installed outside the steel Pole using U-Guard, provided the structural integrity of the Pole is maintained.
- (ii) Poles with Distribution Equipment Installed. Mid-Span Installations may be installed next to Poles that host electric distribution equipment, provided that the Riser that protects the coaxial cable supporting the strand-mounted micro network node component of the Mid-Span Installation shall not be installed on such a pole structure if the Riser:
  - would interfere with PEC's ability to operate or maintain its electrical equipment;
  - could not be installed in compliance with NESC requirements; or
  - the Pole already supports three Risers.
- f) Non-PEC Owned Poles. Some of the pole structures to which PEC's electrical lines are attached are not owned by PEC and are outside the scope of these Standards and not subject to these requirements. Therefore, PEC may not give permission to attach to such pole structures. The Licensee is solely responsible for obtaining permission from the respective pole owner to install any Attachments, or Wireless Installations on such non-PEC owned pole structures.

**5. PEC Not Required to Relocate, Remove or Replace**. Except as may be required by State law and as approved during the Make-Ready Electrical Construction process, no provision of these Standards requires PEC to relocate, remove or replace any Pole or other PEC Facility to accommodate any Licensee.

- a) Make-Ready Work. To the extent a Pole is not available for Attachment or Wireless Installations, in such instances, PEC, may attempt to rearrange Attachments on a Pole through reasonable Make-Ready Work. Such costs of Make-Ready Work to be borne by the requesting Licensee.
- b) Replacing Pole for New Pole Attachment. PEC, in its sole discretion, may replace a Pole to accommodate a Licensee's Attachment, or Wireless Installation. After the costs of such replacement have been allocated to the Licensee or to PEC if applicable and paid in advance, PEC and the Licensee agree the reasonable date for the change out of the Pole to take place shall be consistent with the times outlined in the Application process defined in Sections IV.B. and V.B.



6. **Guying.** All guying, including the installation of independent anchors for each Attachment requiring guying to accommodate a Licensee's Attachments, or Wireless Installations, shall be provided by and at the expense of the Licensee to the satisfaction of PEC as specified in the Applicable Engineering Standards.

7. **Relocation of PEC Facilities – (Aesthetic, Civic Project, Member-Requested or Underground Relocation)**. PEC directed by Member requests, City ordinance, or governmental entities may be required to relocate or move current overhead facilities underground, resulting in the removal of Poles by PEC.

- a) For any project that PEC undertakes for reasons as set forth above in these Standards, PEC will provide the affected Attaching Entities the estimated design and construction schedule applicable to each specific Project as soon as reasonably practical after PEC receives such design and construction schedule from the appropriate project authority, but not less than forty-five (45) calendar days of the date PEC expects to receive formal authorization or a directive to begin work. In this specific circumstance, PEC will require the Licensee to submit an Application for the transfer or relocation of its Attachments, or Wireless Installations to a new Pole, **for notification purposes only** (no Application fee will be required). PEC will perform a Post-Construction Inspection as described in Section II.A. Alternatively, should the Licensee not participate in the utility coordination described in Section III.B of the Project, PEC shall require the Licensee to submit an Application for Permit pursuant to the procedures in these Standards, as appropriate.
- b) In the event PEC is required to relocate its overhead electric distribution facilities underground, PEC may accommodate any affected Licensee in the design and construction of underground facilities, contingent upon the Licensee meeting Applicable Engineering Standards. Attaching Entities may have an opportunity to install their conduits during the timeframe that PEC has allowed for the relevant trenching to occur. Trenching, boring and other common construction costs for the project shall be shared by the parties. If any affected Licensee declines to do so, PEC shall provide it written notice thirty (30) calendar days in advance of the date upon which PEC will remove the Poles affected by the relevant Project. PEC shall bear no responsibility to any Licensee in any manner for the removal of Attachments, or Wireless Installations from the applicable Poles subject to removal.



- c) In the event a Wireless Provider has affixed a Wireless Installation on a Pole that is subject to removal as a result of a Project, the Wireless Provider shall remove the Wireless Installation at its own expense within the time frame specified. At the Wireless Provider's option, PEC may accommodate the removed Wireless Installation at another available Pole at the Licensee's expense pursuant to a new Application. PEC makes no guarantee that an alternative pole will be available or may be permitted in the general vicinity of the Project location.
- d) If any affected Licensee fails to relocate its Attachments, or Wireless Installations within forty-five (45) calendar days of issuance of written notice from PEC or such other period of time on which the parties agree; or find other means to accommodate its Attachments, or Wireless Installations, PEC shall have the right to remove such Attachments, or Wireless Installations at the Licensee's expense without liability to PEC.

**8. Replacement of Pole with Pole Top Antenna.** In the event a Pole Top Antenna has been installed on a Pole that is subject to replacement, the Wireless Provider shall, at its own expense, relocate the Wireless Installation, including the Pole Top Antenna, to the new replacement Pole, top the existing Pole within thirty (30) calendar days. The Wireless Provider must identify a contact person that will be responsible for coordinating the transfer of the Wireless Installation and must respond to PEC's request to relocate within five (5) calendar days of initial notification.

**9. Allocation of Costs.** The cost allocation under this Section III.B.9 only applies when PEC intends to modify or replace a Pole solely for its own electric utility requirements, including pole maintenance requirements, and not for an aesthetic, civic project, or member requested purposes. The costs for the replacement of the Pole and the rearrangement or transfer of PEC Facilities shall be the responsibility of PEC. Any affected Licensee shall be responsible for the rearrangement or transfer of its Attachment, or Wireless Installation at its expense. Prior to making any such pole modification or replacement, PEC shall provide the affected Licensee reasonable notice of its intent to allow the Licensee a reasonable opportunity to elect to modify or transfer the existing Attachment, or Wireless Installation. After PEC has changed out the Pole, the Licensee shall have thirty (30) days to transfer Attachments to the new Pole if they are first to Transfer. Each Attaching Entity thereafter shall have 30 days to transfer from the time they are provided notification through NJUNS to move. Should any Licensee fail to meet



the thirty-day requirement, PEC may transfer Licensee's facilities at Licensee's expense, including any costs for PEC or its contractors as to transportation costs to the location. The notification requirement of this Section shall not apply to emergency situations.

### **C. Overlashing**

1. **Application Required.** Refer to Section IV for details on the Application process for Overlashings Attachments. Regardless of Overlashing size or methodology, Licensees are required to maintain their Overlashing in compliance with the Applicable Engineering Standards in effect at the time of the Overlash installation except where a change is required by applicable law.

2. **Annual Pole Attachment Rental Rate.** A Licensee or an Overlashing third-party shall not be required to pay a separate annual Pole Attachment Rental Rate for such Overlashed Communications Facilities provided that the Annual Pole Attachment Rental Rate is already being billed for the original Attachment that was Overlashed.

### **D. Inspection and Inventory of Licensee's Facilities**

1. **Inspections.** PEC, at its discretion and in addition to any inspections undertaken during Make-Ready Work and Post-Construction Inspections, may engage in two other specific types of inspections or Inventory of Attachments, or Wireless Installations. These include: 1) routine visual inspections of Attachments, or Wireless Installations that PEC employees may conduct at any time; and 2) a formal Inventory that PEC may conduct no more frequently than once every five (5) years, in which PEC shall undertake with its own personnel or with outside contractors, the cost of which shall be borne by all Attaching Entities on a pro-rata basis. Regardless of inspection or Inventory method:

- a) PEC expects a Licensee to install, maintain, and inspect its Attachments, Overlashings, Mid-Span or Wireless Installations to ensure these facilities are in good order and safe to the general public at all times. If any inspection reveals that any Licensee's Attachments, Overlashings, Mid-Span or Wireless Installations are not in compliance with the Applicable Engineering Standards in effect at the time the Application was approved, PEC shall provide written notice and the Licensee shall make any and all corrections to bring the Attachment, Overlash, Mid-Span or Wireless Installation into compliance with the Applicable Engineering Standards. If the severity of the non-compliance warrants, PEC will assess and the Licensee will be required to pay a Safety Violation Assessment.



- b) If it is found that a Licensee has made an Attachment, Overlash, Mid- Span or Wireless Installation without a Permit, the Licensee shall pay an Unauthorized Attachment Charge or Unauthorized Wireless Installation Charge in addition to applicable Pole Attachment Rental Rates, Wireless Attachment Rental Rates, Application Fees, and Make-Ready Charges, if any.
- c) Notwithstanding any other provisions contained in these Standards, no revisions to the Applicable Engineering Standards shall apply retroactively to existing permitted Attachments, Overlashings, Mid-Span or Wireless Installations unless required by city, county, state, or federal law.
- d) All Attachments, Overlashings, Mid-Span and Wireless Installations must comply with the Applicable Engineering Standards in effect at the time of installation or modification of the Attachment, Overlash, Mid-Span or Wireless Installation.

**2. Routine Visual Inspections and/or Inventory.** Any qualified PEC employee may conduct a routine inspection and/or inventory of a Licensee's Attachments, Overlashings, or Wireless Installations. These routine inspections and/or inventory may be undertaken and completed as part of the daily work assignment of a PEC employee. The cost of this work is included in the determination of the Annual Pole Attachment Rental Rate or Wireless Attachment Rental Rate. In the course of a routine visual inspection, a PEC employee or contractor may require a Licensee or its contractors installing an Attachment, Overlash, or Wireless Installation to supply evidence of a valid Permit or permission from PEC to access a PEC Pole, as applicable. PEC reserves the right to demand the Licensee or its contractor to immediately suspend work on the Attachment, Overlash, or Wireless Installation should the Licensee or contractor be unable to furnish the valid Permit or other notice of permission for PEC's inspection. If PEC directs the work be suspended, the Licensee or its contractor shall suspend the work in a safe and orderly manner ensuring the suspension of the work will not cause a danger to PEC employees, contractors, or the general public.

**3. Formal Inventory Performed by PEC or Third-Party Contractor.** PEC may contract with a third-party contractor to conduct a formal Inventory of either all or designated Poles within the PEC service area. The cost of this formal Inventory shall not be included in the calculation of the Pole Attachment Rental Rate, or Wireless Attachment Rental Rate as described in the Agreement. All Licensees shall cooperate and participate in the Inventory. Each Licensee will share the total cost of the Inventory on a pro-rata basis with all other



Licensees based on the number of found Attachments and Wireless Installations belonging to each Licensee. For the limited purpose of determining the pro-rata shared costs, PEC Facilities will count as one (1) Attachment on each Pole. In undertaking this formal Inventory:

- a) PEC shall have sole responsibility for the management, review, and approval of the Inventory of its Poles.
- b) PEC shall routinely conduct meetings, communicate in writing, via electronic mail, with all Licensees to discuss the progress and on-going results of the Inventory. PEC will seek to find consensus with the Licensees as to the most effective schedule and methodology of these meetings and communications. Each Licensee shall be expected to cooperate fully with PEC and/or the third-party contractor conducting the Inventory by assigning a single point of contact to attend project meetings and receive the written communications and to answer any questions either PEC or the third-party contractor may have concerning the Licensee's Attachments, or Wireless Installations. Licensees shall be given access to the Inventory results and other supporting documentation, including maps, spreadsheets, and other related items.
- c) At the conclusion of the Inventory, PEC shall provide a written report to each Licensee containing a draft of the final Inventory Attachment, or Wireless Installation count for the Licensee and other documentation necessary to substantiate the third-party contractor's Inventory findings. Notwithstanding the challenge provisions below, if the Licensee does not provide a written challenge to the draft Inventory count or results within thirty (30) calendar days of the issuance of PEC's draft Inventory count, the Inventory count will be deemed correct.
- d) Should a Licensee wish to challenge the results of the draft Inventory report, the Licensee shall, within thirty (30) calendar day of PEC issuing the draft Inventory report, above, provide PEC written notice that the Licensee has cause to challenge the results. In this notice, the Licensee shall provide to PEC all relevant documentation to substantiate its challenge for review and consideration by PEC. All costs related to this challenge, including both PEC's and third-party contractor's labor and other expenses required to respond to and resolve the challenge shall be borne by the Licensee challenging the Inventory results. Should multiple Attaching Entities provide notice of their intent to challenge the results, PEC will pro-rate the



cost and expenses required to respond to the challenge as described in this Section to the Attaching Entities participating in the challenge. To the extent the Licensee prevails in identifying errors or omissions in the Inventory, PEC shall be responsible for its own and the third-party contractor costs. PEC will meet with the Licensee requesting the challenge within ten (10) calendar days of receiving the written notice of challenge to discuss the challenge and attempt to reach agreement and settlement on the Licensee's Attachment, or Wireless Installation count. PEC will issue its final decision in writing as to the resolution of the challenge within fifteen (15) days following this settlement meeting.

- e) Following resolution of all challenges, PEC shall issue a final Inventory report and shall true-up each Licensee's count to the number of Attachments, or Wireless Installations identified in the final Inventory report including any Unauthorized Attachments, or Unauthorized Wireless Installations as described in the Agreement. Unauthorized Attachments, or Unauthorized Wireless Installations reported shall incur an Unauthorized Attachment Charge, or Unauthorized Wireless Installation Charge. PEC shall invoice the applicable Licensee for the Unauthorized Attachments, or Unauthorized Wireless Installations, and payment shall be due within forty-five (45) calendar days of PEC's issuance of the invoice. Failure of the Licensee to pay the outstanding invoice timely and in full will result in the suspension of any current pending Applications and the immediate rejection of any future Applications until such payment is received in full.

**4. No Liability.** The making of any inspections or Inventory or the failure to do so, shall not operate to impose upon PEC any liability of any kind whatsoever or relieve a Licensee of any responsibility, obligations, or liability, whether assumed or otherwise existing.

**5. Licensee-Conducted Inventory.** Nothing in these Standards prevents a Licensee from performing its own Inventory of its own Attachments, or Wireless Installations, which PEC shall consider in the determination of that Licensee's total Attachment or Wireless Installation count. Before PEC will consider such inventory, the Licensee shall be required to meet with PEC and describe the methodology and approach used to conduct the inventory. The cost of such inventory shall be the sole risk and responsibility of the Licensee undertaking the inventory.



## E. Operational Duties & Responsibilities

1. **Duty to Inspect.** While recognizing its duty to maintain and update its electric distribution system, in order to provide safe and reliable electric service, PEC does not warrant that its Poles are free of defects or Non-Compliant Attachments or Wireless Installations. By submitting an Application, a Licensee acknowledges that it has an obligation to inspect PEC's Poles, as applicable, and the premises surrounding such pole structures prior to commencing any work utilizing the Poles or entering the premises surrounding such pole structures. **ANY PEC FACILITIES WHICH MAY BE IDENTIFIED AS UNSAFE SHALL BE REPORTED TO PEC AT (888) 883-3379 AS SOON AS PRACTICAL AFTER THEY ARE IDENTIFIED, FOR FURTHER HANDLING BEFORE THE LICENSEE UNDERTAKES ANY WORK AT THAT LOCATION.**

2. **Knowledge of Work Conditions.** In all situations, it is the continuing responsibility of a Licensee to acquaint itself, its employees, agents, contractors, and/or subcontractors with these Standards including all Applicable Engineering Standards relating to the work for which a Permit may be sought by the Licensee. Failure to become familiar with these Standards and with the facilities, difficulties, and/or restrictions attending the execution of such work may result in the denial of a Permit, delay in construction, assessment of fees, and removal of a non-conforming Attachment, Overlashing, or Wireless Installation, and any other remedies that PEC may impose for violations of these Standards.

a) PEC Poles may be treated with chemical wood preservatives.

b) PEC attempts to identify and mark such pole structures that should not be climbed. In all situations, it is the responsibility of any person having a valid reason to climb a pole structure in performance of assigned job duties to be personally satisfied as to the structural integrity of such poles prior to climbing or doing other work on the Pole.

3. **Duty of Competent Supervision and Performance.** All Licensees are on notice that in the performance of work under these Standards, a Licensee and its employees, agents, servants, contractors and/or subcontractors **will work near electrically energized lines, transformers, or other PEC Facilities**, and it is the intention that energy therein will not be interrupted at any time, except in an emergency endangering life, personal injury, or property. All Licensees shall ensure that their employees, agents, servants, contractors and/or subcontractors have the necessary qualifications, skill, knowledge, training, and



experience to protect themselves, their fellow employees, employees of PEC, and the general public from harm or injury while performing work for a Licensee pursuant to these Standards. In addition, all Licensees shall furnish their employees, agents, servants, contractors and/or subcontractors competent supervision; as well as ensure these employees, agents, servants, contractors and/or subcontractors have sufficient and adequate tools, equipment, and training for the required work to be performed in a safe manner.

- a) In the event of an emergency or otherwise in which it may be necessary for PEC to de-energize any part of PEC Facilities, the Licensee shall ensure that work is suspended until such PEC Facilities have been de-energized and properly grounded and that no such work is conducted unless and until an authorized PEC employee has communicated that such PEC Facilities are ready for the Licensee to work.

**4. Requests to De-energize.** A Licensee may request that PEC de-energize any PEC Facility to complete its work. Such request shall be made in writing and received by PEC at least five (5) calendar days in advance of the date the work is planned. The Licensee shall reimburse PEC in full for all costs and expenses incurred, in accordance with Article 27 of the Agreement, to comply with such request. Before any PEC Facilities are de-energized, with the exception of actions taken pursuant to an emergency, PEC shall provide upon request an estimate of all costs and expenses to be incurred in accommodating the Licensee's request.

**5. Interruption of Service.** In the event a Licensee causes an interruption of service by damaging or interfering with any PEC Facilities, the Licensee at its expense shall immediately do all things reasonable to avoid further injury or damages, direct and incidental, resulting therefrom and shall notify PEC immediately of these activities.

**6. Duty to Inform.** THE WORK CONTEMPLATED UNDER THESE STANDARDS INVOLVES IMMINENT DANGERS INCLUDING SERIOUS BODILY INJURY OR DEATH FROM ELECTROCUTION. The Licensee acknowledges such dangers and accepts as its duty and sole responsibility to notify, inform, and keep informed its employees, agents, servants, contractors and/or subcontractors of such dangers and shall not assign this duty and responsibility to any other third- party.



**7. Duty to Provide a Safety Briefing.** A Licensee that desires to install a Wireless Installation on the PEC system is required to prepare a Safety Briefing suitable for PEC employees and contractors who may be required to work near and/or around such Wireless Installations. The content of the Safety Briefing shall be submitted to PEC during the Pre-Construction process before distribution and conveyance to PEC employee and contractors.

**8. Maintenance on PEC Pole Structures.** Upon twenty-four (24) hours' notice, PEC shall de-energize Wireless Equipment mounted on a Pole any time its personnel or contractors are doing maintenance work on such pole structures. PEC shall provide at least twenty-four (24) hours advanced notice of planned maintenance work to the Wireless Provider's Network Operations Center by voice message or email. Advanced notice of de-energization of equipment shall not apply in emergency situations.



## IV. Specifications for Wire Attachments

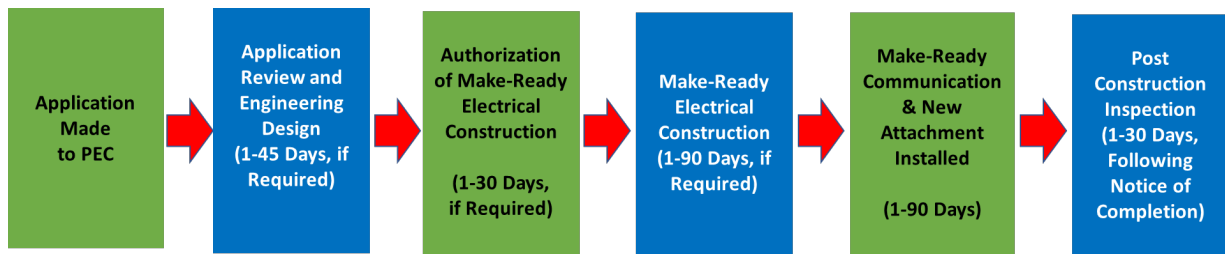
### A. Pole Attachment Application Process

The PEC Application process provides non-discriminatory access to Poles to all Licensees for wire Attachments, Wireless Installations, or Overlashings. Application forms and additional information regarding PEC Pole Attachment Program can be downloaded at <https://construction-drawings.pec.coop>.

### B. Standard Process-Wire Attachments

A high-level workflow of the Standard Process for wire Attachments to PEC Poles is illustrated below.

#### 1. Workflow.



Responsible Party:





**2. Key Phases and Responsible Parties of the PEC Pole Attachment Process.**

PROCESS PHASE	RESPONSIBLE PARTY
Make-Ready Electrical Engineering (MREE)	PEC
Application Review Period	30 Days; 45 Days with MREC
Make-Ready Electrical Construction (MREC)	PEC
Make-Ready Communication Construction (MRCC) 1-Touch Transfer Simple	Licensee
MRCC Complex Transfer	Licensee
Post-Construction Inspections	PEC

3. **Eligibility.** Any Licensee with a valid Pole Attachment Agreement.

4. **Application for Permit Required.** A Licensee shall not install any new Attachment or Overlashing, on any PEC Pole without first submitting an Application and obtaining a Permit pursuant to the requirement and procedures set forth below and elsewhere in these Standards.

- a) **Application Form.** All Licensees shall use the Application for Pole Attachment form, which is provided in Appendix A1, is available for download at <https://construction-drawings.pec.coop>, and which may be amended from time to time, provided that any such amendments are consistent with Applicable Engineering Standards and are applied to all similar types of Attachments.



- (i) A single Application may include up to a maximum of twenty-five (25) Poles for new Attachments.
  - (ii) PEC's acceptance of the submitted design documents required as part of a complete Application Form does not relieve the Licensee of full responsibility for any errors and/or omissions in the engineering analysis and compliance with all Applicable Engineering Standards.
- b) Service Drops. The submission of an Application is not required to install a Service Drop on a Pole on which the Licensee already has an authorized Attachment, provided that the Service Drop is installed within the previously authorized space. Service Drops on Poles for which the Licensee does not have an authorized Attachment may be authorized by PEC, provided the Licensee submits a corresponding Application for Permit within thirty (30) calendar days of the Service Drop installation.
- c) Pole Ownership. For the purposes of Application submittal, unless PEC records and/or Poles indicate otherwise, PEC shall be presumed to be the owner all Poles subject to Attachment. The Licensee is responsible for field verifying Pole ownership and notifying PEC of any discrepancies between PEC's maps/records and the actual Poles in the field.
- d) Compliance with Standards. The Licensee shall comply with the Texas Engineering Practice Act, Chapter 1001, of the Texas Occupations Code to the extent it is applicable to the work undertaken by the Licensee on or around PEC's Facilities, and with the most current version of the National Electrical Safety Code (NESC), including any and all revisions to both, and all other Applicable Engineering Standards. The Licensee shall certify its compliance with the above on each Application it submits to PEC for processing. The certification statement shall be signed by an employee or agent of the Licensee who has the final authority or responsibility to approve the Application. PEC will not process an Application that fails to provide the signed certification statement included therein.
- e) Submission of Application. Completed Applications may be submitted electronically to <https://osmose360.com>, or other means mutually agreeable by PEC and the Licensee. The Application shall include:
  - (i) A completed Application form, as provided in Appendix A1;



- (ii) A proposed installation schedule; and
- (iii) A map of the project.

Such Application shall be prepared by, or under the authority of, the Licensee. All actions shall be at the Licensee's cost and risk.

**5. PEC Review of Application.** PEC will respond to each completed Application and Make-Ready Engineering design documents submitted by the Licensee within thirty (30) calendar days of receipt. Should PEC be required to return an Application for clarification or modification, the time required for the Licensee to address the concerns raised and return the Application shall not count against the thirty (30) calendar day period. Any Application that does not conform to PEC's requirements and the Applicable Engineering Standards will be deemed incomplete and immediately rejected by PEC. If an Application is rejected as incomplete, the Licensee will be provided with a detailed description of changes, modifications, or revisions to the Application necessary for PEC's review and approval within thirty (30) calendar days of receipt of the Application.

In the event PEC does not finalize its review of a completed Application within thirty (30) calendar days, PEC may impose a one-time, additional fifteen (15) calendar day extension period in which to complete its review for each Application. PEC shall provide the Licensee with seven (7) calendar days prior notice that it intends to exercise its option to impose the extension period. Should PEC fail to take action on the Application within the extension period, all proposed Attachments or Overlashings included within that specific Application shall be deemed approved, subject to all then current Applicable Engineering Standards and all other procedural and operational requirements under these Standards.

- a) Review. In making its decision as to whether to approve an Application, PEC will consider the Application's proposed compliance with Applicable Engineering Standards. In addition, PEC shall consider Capacity constraints, including the future needs of PEC as determined in accordance with the Reserved Capacity provisions, flood zone requirements, in-flight PEC projects, and other circumstances known at the time that would directly affect the engineering, safety requirements, and Capacity constraints of the Application submission and review which may impact the Application, including any known third-party requests for Attachment to the same Pole.



- b) Make-Ready Electrical Construction. In the event a Licensee's proposed Application requires PEC to undertake and complete Make-Ready Electrical Construction, PEC will provide a cost estimate for the Make-Ready Electrical Construction to the Licensee for approval. The Licensee shall approve and make advanced payment of this cost estimate in order for any Make-Ready Electrical Construction to proceed. The Licensee shall have thirty (30) calendar days following the issuance of the PEC invoice for Make-Ready Work to approve the estimate and provide payment. Failure of the Licensee to respond to PEC or return the PEC invoice for Make-Ready Work within the thirty (30) calendar day period will result in the Application being cancelled by PEC, with all applicable Application Fees being non-refundable.
- c) Application Approval.
  - (i) *If Make-Ready Electrical Construction Is Required*. After payment of estimate, PEC will issue Authorization for Make-Ready Work.
  - (ii) *If Make-Ready Electrical Construction is Not Required*. After acceptance of all necessary revisions to the Application, PEC will issue Notice to Proceed.
- d) Treatment of Multiple Requests for Same Pole. PEC shall consider complete Applications received from multiple Licensees to attach to the same Pole on a first-come, first-served basis for non-discriminatory access.

**6. Make-Ready Electrical Construction**. If Make-Ready Electrical Construction is required to accommodate a Licensee's Attachment and/or Overlapping, PEC or its contractors shall perform such work at Licensee's expense.

- a) Advance Payment. Upon execution of the PEC Authorization for Make-Ready Work, PEC shall schedule the Make-Ready Electrical Construction. PEC shall require payment in advance for any Make-Ready Electrical Construction to be performed by PEC or its contractors based upon the estimated costs of such work.
- b) Work Performed by PEC or PEC Contractor. Make-Ready Electrical Construction shall be performed only by PEC and/or a contractor authorized by PEC to perform such work. Prior to commencement of Make-Ready Electrical Construction and upon receipt of advance payment, PEC will schedule a work order within thirty (30) calendar days for construction to commence. PEC will strive to perform the Make-Ready Electrical Construction to accommodate a Licensee's Communications



Facilities within sixty (60) calendar days of payment. PEC shall provide to the Licensee as soon as possible the estimated schedule for completing the Make-Ready Electrical Construction.

- c) Work Schedule. In performing all Make-Ready Electrical Construction to accommodate a Licensee's Attachments, PEC will include such work in its normal work schedule. In the event the Licensee requests that the Make-Ready Electrical Construction be performed on a priority basis or outside of PEC's normal work hours, the Licensee shall pay the appropriate increased costs. Nothing herein shall be construed to require performance of any Licensee's work before other scheduled work, PEC service restoration, or other emergency work.
- d) Notifying Other Attaching Entities. Prior to commencing Make-Ready Electrical Construction, PEC shall provide no less than three (3) calendar days written notice to the Attaching Entities on the affected Pole of the impending work. Such notification shall be provided through the National Joint Utilities Notification System (NJUNS).
- e) Notice to Proceed. Following completion of the Make-Ready Electrical Construction, PEC will issue a PEC Notice to Proceed to the Licensee (applicant) in writing that the Pole is available for Make-Ready Communications Construction and Attachment. When applicable, the Licensee shall proceed to install its Attachments utilizing the One-Touch Transfer Process. Whenever the transfer of an Attachment or Wireless Installation would require cutting or splicing of the Communications Facility or disruption of wireless service, the Complex Transfer Process shall apply.
- f) Failure to Attach. A Licensee must exercise the right granted by the PEC Notice to proceed within ninety (90) calendar days of issuance of the Notice to Proceed. If needed, the Licensee may request in writing to PEC an additional thirty (30) calendar day extension of the effective period of the Notice to Proceed. The request for this extension must be received by PEC no later than seven (7) calendar days before the expiration date provided in the Notice to Proceed. In considering this request, PEC will review past construction practices of the Licensee and current efforts underway to complete the installation for which the extension was requested. PEC will provide a written response to the request for extension within three (3) calendar days of receiving the request. PEC, at its discretion, may not consider any



requests for extension received within seven (7) calendar days of the expiration of the Notice to Proceed.

- (i) Failure to install an Attachment within the effective period of the Notice to Proceed, or extended period if granted by PEC, will result in expiration of the Application and the forfeiture of the applicable Application Fees and any payments made for Make-Ready Work already completed. Following expiration of an Application, should the Licensee wish to continue to install the Attachment subject to the expired Application, the Licensee must submit a new Application covering the same Attachment including all appropriate Application Fees.
- (ii) PEC and the Licensee shall determine a mutually agreeable schedule for the completion of the Make-Ready Work should an issue of Force Majeure, as described in the Pole Attachment Agreement, be asserted by either party.

**7. Make-Ready Communication Construction – One-Touch Transfer.** The transfer of third-party Attachments, whether conducted by a Licensee or PEC, shall be part of the “One-Touch Transfer Process” as further described herein. Pursuant to these Standards, the One-Touch Transfer Process allows a Licensee to transfer or rearrange an Attachment of one or more Attaching Entities in the Communications Space of a PEC distribution Pole as may be necessary to accommodate the installation of a new Attachment contingent upon compliance with the requirements in this Section. All One-Touch Transfers conducted by a Licensee or PEC must comply with the following requirements:

- a) Simple Transfers Only. One-Touch Transfers shall be limited to rearrangement or transfer of a third-party Attachment on an existing Pole and/or a Mid-Span Installation suspended by a messenger cable between two Poles. Such Attachment or Mid-Span Installation may be rearranged within an existing Pole or transferred onto a replacement Pole, provided the affected Attachment or Mid-Span Installation (along with any supporting Communications Facility or Overlash) is not subject to cutting and splicing and any affected Mid-Span Installation is not severed from the Communications Facility providing connectivity.
- b) Certified Contractors. A Licensee must engage qualified contractors approved by PEC.



- c) Applicability to PEC. PEC's communications wires or Facilities installed in the Communication Space of a Pole will also be subject to the One-Touch Transfer Process.
- d) One-Touch Transfers Subject to Applicable Engineering Standards. All Make-Ready Communication Construction performed under the One-Touch Transfer Process shall meet all Applicable Engineering Standards, including PEC's clearance standards. Applications that include Make-Ready Communications Construction and One-Touch Transfers that fail to meet Applicable Engineering Standards will be rejected by PEC.
- e) Cost Responsibility. PEC is responsible for the costs of removing and replacing a Pole: (1) with recorded conditions or defects that would reasonably be expected to endanger human life or property and which should be promptly corrected; or (2) that must be replaced for safety or reliability as a result of normal wear and tear or other natural causes and not on account of a pole Attachment or the action of a broadband provider or third party. Otherwise in all other instances, the Licensee shall pay all costs of Make-Ready Electrical Construction and Make-Ready Communications Construction associated with One-Touch Transfers as described below:
  - (i) Where the Pole includes one or more third-party Attachment(s) that fail to meet Applicable Engineering Standards but otherwise there is enough space on the Pole to accommodate the Licensee's Attachment, Make-Ready Work will not include the transfer of the third-party Attachment(s), unless the lowest Attachment on the Pole fails to meet NESC clearance standards and/or otherwise poses a public safety hazard. In that case, Make-Ready Work will include the relocation of the Non-Compliant Attachment and the Licensee may recover the cost to bring such Attachment into compliance from the owner of the Non-Compliant Attachment.
  - (ii) Where the Pole includes one or more third-party Attachment(s) that fail to meet Applicable Engineering Standards, and in order to accommodate the Licensee's Attachment on the same Pole the third-party Attachment(s) must be rearranged, the cost of rearranging the third-party Attachment(s) will be included in Make-Ready Work. Provided that if the lowest Attachment on the Pole fails to meet NESC clearance standards and/or otherwise poses a public



safety hazard, the Licensee may recover the cost to bring such Attachment into compliance from the owner of that Attachment, but no others.

- (iii) Where the Pole includes one or more third-Party Attachment(s) that fail to meet Applicable Engineering Standards, and in order to accommodate the Licensee's Attachment a new Pole must be installed, the cost of the new Pole and the transfer of the third-party Attachment(s) will be included in the Make-Ready Work.
  - (iv) Where the Pole includes one or more third-party Attachment(s) that meet Applicable Engineering Standards, and otherwise there is enough space on the Pole to accommodate the Licensee's Attachment, Make-Ready Work will not include the transfer of the third-party Attachment(s).
  - (v) Where the Pole includes one or more third-party Attachment(s) that comply with Applicable Engineering Standards, and in order to accommodate the Licensee's Attachment on the same Pole the third-party Attachment(s) must be rearranged, the cost of rearranging the third-party Attachment(s) will be included in Make-Ready Work.
  - (vi) Where the Pole includes one or more third-party Attachment(s) that comply with Applicable Engineering Standards, and in order to accommodate the Licensee's Attachment a new Pole must be installed, the cost of the new Pole and the transfer of the third-party Attachment(s) will be included in Make-Ready Work.
- f) Notice of Transfer. A Licensee shall provide all third parties having wire Attachments or Overlashings affected by a proposed One-Touch Transfer with advance written notice of such One-Touch Transfer no less than twenty-one (21) calendar days prior to undertaking such One-Touch Transfer. This notice shall be provided using the NJUNS to a duly designated representative of the affected Attaching Entity unless another method of notice is prescribed by PEC. Such notice shall identify the specific Pole subject to the Attachment and affected by such One-Touch Transfer. The Licensee who desires to utilize the One-Touch Transfer Process shall bear the responsibility of determining the appropriate representative for each Attaching Entity affected by the Licensee's implementation of the One-Touch Transfer Process.



- g) Critical Communications Facilities. If an affected Attaching Entity, in its reasonable discretion, determines that a proposed One-Touch Simple Transfer poses a risk of disconnection or interruption of service to a critical Communications Facility, the affected Attaching Entity shall notify the requesting Licensee and PEC in writing within ten (10) calendar days of receiving the Notice of Transfer described in Section IV B.7(f). The affected Attaching Entity is obligated to make the requested transfer of its critical Communications Facilities within fifteen (15) calendar days of providing such notice. Failure to transfer the critical Communications Facilities in a timely manner will subject the critical Communications Facilities to the One-Touch Transfer Process.
- h) Post-Transfer Notice. Within fifteen (15) calendar days following the completion of a One-Touch Transfer, the Licensee shall send written notice of the One-Touch Transfer and as-built reports to each affected Attaching Entity. Within thirty (30) calendar days of receipt of these as-built reports, the Attaching Entity that owns the Communications Facilities that were transferred or relocated may conduct an inspection at the expense of the Licensee who moved the facilities. If the One-Touch Transfer failed to meet all Applicable Engineering Standards, the owner of the Communications Facilities subject to transfer or relocation will notify the Licensee responsible for the One-Touch Transfer of any deficiency, which will be corrected within fifteen (15) calendar days following receipt of such written notice at the expense of the Licensee responsible for the One-Touch Transfer. The Licensee responsible for the One-Touch Transfer shall pay the actual, reasonable, and documented inspection expenses incurred by the owner of the Communications Facilities subject to transfer or relocated, within forty-five (45) calendar days of receipt of an invoice. Failure of the owner of the relocated Attachment to undertake and complete the inspection within the thirty (30) calendar day period shall be deemed acceptance of the One-Touch Transfer.
- i) Licensee's Attachments Subject to One-Touch Transfer by Other Entities. A Licensee's Communications Facilities shall be subject to the One-Touch Transfer Process conducted by another Attaching Entity or PEC pursuant to the same terms and conditions prescribed in these Standards.

**8. Make-Ready Communication Construction - Complex Transfers.**



- a) Responsibility for Complex Transfers. The accomplishment of a Complex Transfer is considered part of Make-Ready Communication Construction and shall be performed by the Attaching Entity which owns the Attachment subject to transfer. It is the responsibility of the Licensee requesting the Complex Transfer to negotiate a private process with the affected Attaching Entity to accomplish the Complex Transfer. The cost of the Complex Transfer shall be borne by the requesting Licensee.
- b) Complex Transfers Escalation Process. In the event an Attaching Entity refuses to reach agreement on a process for the expedient transfer of an Attachment subject to a Complex Transfer, the requesting Licensee may rely on the following escalation procedures. At any time during these escalation procedures, the requesting Licensee, and the owner of the Attachment subject to the Complex Transfer may reach agreement on a voluntary transfer process. In such event, the requesting Licensee shall notify PEC in writing of this agreement.
- (i) Level 1: Initial Request for Complex Transfer (Days 0 to 30)
- Initial Notice Letter. The requesting Licensee shall provide written notice to owner of the Attachment subject to Complex Transfer requesting the transfer of such Attachment using NJUNS with a copy to PEC. The Attaching Entity which owns such Attachment shall perform the transfer within thirty (30) calendar days of receipt of notice from the requesting Licensee.
- (ii) Level 2: Initial Escalation Process (Days 31 to 60)
- Escalation Notification. If the owner fails to transfer the Attachment subject to Complex Transfer within the initial thirty (30) calendar days, the requesting Licensee shall send a certified letter notifying the non-compliant Attaching Entity that failure to transfer the Attachment within a subsequent thirty (30) calendar days (escalation period) of receipt of notice will result in the Attachment in question being designated by PEC as non-compliant with the Complex Transfer Process and subject to penalty, as described in Appendix F, on the basis of interference with the requesting Licensee's permitted Attachment rights. The requesting



Licensee shall send PEC a copy of the escalation letter and all other correspondence between the parties related to this matter.

- *Duty to Negotiate*. The requesting Licensee is required to continue negotiations with the non-compliant Attaching Entity during the thirty (30) calendar day escalation period. Absent extraordinary circumstances, the non-compliant Attaching Entity's failure to transfer the Attachment subject to Complex Transfer by the end of the thirty (30) calendar day escalation period shall be considered a lack of cooperation on the part of the non-compliant Attaching Entity. Conversely, absent extraordinary circumstances, a refusal by the requesting Licensee to agree to an alternative process for the transfer of the Attachment in question within a reasonable date certain shall be considered a lack of cooperation on the part of the requesting Licensee.
- *Notice of Success Complex Transfer*. If the non-compliant Attaching Entity transfers the Attachment subject to Complex Transfer within the thirty (30) calendar day escalation period, or the requesting Licensee transfers the Attachment by mutual agreement of the parties, no further escalation will be necessary.

(iii) Level 3: PEC Finding of Non-Compliant Attachments (Days 61 to 90)

- *Request for Finding of Non-Compliant Attachments*. If the requesting Licensee and the non-compliant Attaching Entity cannot reach agreement and the non-compliant Attaching Entity fails to transfer the Attachment subject to Complex Transfer within the thirty (30) calendar day escalation period; the requesting Licensee within five (5) calendar days thereafter shall notify PEC in writing, provide a short summary of efforts to negotiate the rearrangement or transfer of the Attachment in question, and request PEC to make a finding of Non-complaint Attachment on the basis of interference with the requesting Licensee's permitted Attachment rights. The request shall explain why the requesting Licensee believes the non-compliant Attaching Entity is acting in bad faith.



- *Notification of Non-Compliant Attachments.* Within ten (10) calendar days of receiving the request for a finding of non-compliant Attachments, PEC will evaluate the request and if it finds the request credible; PEC will:
  - Notify the non-compliant Attaching Entity by certified mail that PEC has determined the Attachment subject to Complex Transfer is declared as “Non-Compliant Attachment”;
  - The non-conforming Attaching Entity will begin accruing fees as provided in Appendix F of these Standards until the Non-Compliant Attachment is transferred; and
  - PEC will suspend the processing of the non-compliant Attaching Entity’s Applications effective five (5) days after receipt of the certified letter.

Thereafter, the non-compliant Attaching Entity will have fifteen (15) days in which to transfer the Non-Compliant Attachment and notify PEC in writing in order to reinstate the processing of Applications. If the non-compliant Attaching Entity fails to transfer the Non-Compliant Attachment within the twenty (20) calendar day grace period, the Non-Compliant Attachment will be subject to further fees and transfer as provided in the Agreement and Appendix F. PEC will reinstate the processing of the non-compliant Attaching Entity’s Applications upon receipt of written notification of the transfer of the Non-Compliant Attachment and the payment of all assessed fees.

- *Duty to Negotiate.* The requesting Licensee is required to continue negotiations with the non-compliant Attaching Entity which owns the Non-Compliant Attachment during the twenty (20) calendar day grace period.
- *Notice of Transfer.* If the non-compliant Attaching Entity transfers the Non-Compliant Attachment within the twenty (20) calendar day grace period, or the requesting Licensee transfers the Non-Compliant Attachment by mutual agreement of the parties, the moving party shall notify PEC by electronic message, and PEC shall reinstate



processing of the non-compliant Attaching Entity's Applications within twenty-four (24) hours of receiving payment of all outstanding fees.

- Stop Processing Pole Attachment Permit Applications. If PEC does not receive written notification of the transfer of the Non-Compliant Attachment by the end of the twenty (20) calendar day grace period, PEC shall stop processing the non-compliant Attaching Entity's Applications pending further written notice of a successful transfer and the payment of all outstanding fees.

(iv) Level 4: Transfer or Removal of Unauthorized Attachments (Days 91 and Beyond)

- Notification of Failed Transfer. If the parties fail to negotiate the successful transfer of the Non-Compliant Attachment, the requesting Licensee shall promptly notify PEC in writing of the failed attempt and explain the reasons for the unsuccessful transfer.
- Notification of Transfer of Non-Compliant Attachments. Following receipt of the notification of failed transfer, PEC shall promptly proceed to transfer the Non-Compliant Attachment at the respective owner's expense. Following the transfer of the Non-Compliant Attachment, PEC will provide written notification of the transfer to the non-compliant Attaching Entity within twenty-four (24) hours. PEC shall reinstate processing of the non-compliant Attaching Entity's Applications within twenty-four (24) hours of receiving payment for the transfer cost and all outstanding fees.
- Notice of Transfer. In the event the non-compliant Attaching Entity transfers the Non-Compliant Attachment, or the requesting Licensee transfers the Non-Compliant Attachment, by mutual agreement of the parties, prior to PEC's transfer efforts, the moving party shall notify PEC in writing. The non-compliant Attaching Entity shall be assessed a one-time fine. Thereafter, PEC shall reinstate the processing of the non-compliant Attaching Entity's Applications within twenty-four (24) hours of receiving payment of all outstanding fees.



**9. Notice of Attachment Completion and Acceptance.** The Licensee shall notify PEC in writing by submitting the Completion of Licensee Construction form, which can be found in Appendix A6 and is also available at <https://construction-drawings.pec.coop>, within ten (10) calendar days following the acceptance by all Attaching Entities whose facilities were rearranged or transferred via Simple Transfers and/or Complex Transfers that all Make-Ready Communication Construction has been completed and accepted, and that the new Attachments and/or Overlashings and all Make-Ready Work are ready for PEC to undertake Post- Construction Inspection.

**10. Post-Construction Inspection.**

- a) Construction Subject to Inspection. PEC shall complete a Post-Construction Inspection of applicable Make-Ready Work at the Licensee's expense within thirty (30) calendar days of receiving the Licensee's notification PEC will conduct the Post-Construction Inspections to evaluate compliance with the requested Permit, these Standards, the Applicable Engineering Standards, or other design and installation requirements. Completion of a Post-Construction Inspection by PEC shall not in any way relieve any Licensee or an Attaching Entity's insurers of any responsibility, duty, obligation, or liability under these Standards, any conditions of the Pole Attachment Agreement or any other contractual agreement, or otherwise; nor does PEC's ability to make Post-Construction Inspections relieve a Licensee from its obligations to exercise due care in the installation of its Attachments or Overlashings. The Post-Construction Inspection provision set forth in this Section does not affect any other inspection requirements elsewhere in these Standards. This section also applies to supplemental Post-Construction Inspections where the Licensee reports "final corrections" of previously identified non-compliant work or locations as described below.
- b) Compliance. In the event a Post-Construction Inspection conducted reveals that corrections or other actions are required of a Licensee, including without limitation those required for reasons of safety or structural integrity, the Licensee shall make such required corrections or take the requested actions within thirty (30) calendar days after the date PEC sends written notice. If PEC determines in its reasonable judgment and discretion that the needed corrections rise to the level of an emergency, PEC may perform the necessary corrective work without providing notice, at the Licensee's sole risk and cost plus ten percent (10%). As soon as



practicable thereafter, PEC will advise the Licensee of the work performed or the action taken.

- c) Issuance of Permit. Upon satisfactory completion of the Post-Construction Inspection, PEC shall notify the Licensee in writing that PEC has approved the Attachments identified in the Application by submitting to the Licensee a Permit.



### C. Standard Process-Overlapping Existing Attachments

1. Key Phases and Responsible Parties.

PROCESS PHASE	RESPONSIBLE PARTY
Make-Ready Electrical Engineering (MREE)	PEC
Application Review Period	10 Days; 25 Days with MREC
Make-Ready Electrical Construction (MREC)	PEC
Make-Ready Communication Construction (MRCC) 1-Touch Transfer Simple	Licensee
MRCC Complex Transfer	Licensee
Post-Construction Inspections	PEC

2. Eligibility. Any Licensee with a valid Pole Attachment Agreement that is engaged in Overlapping existing Attachments.

3. Application for Permit Required. All provisions of Section IV shall be applicable to Applications considered under the Standard Process for Overlapping Existing Attachments,

a) Application for Pole Attachment form is provided in Appendix A1 and is available at <https://construction-drawings.pec.coop> and shall identify:

(i) The Poles and Attachments subject to Overlapping;



- (ii) Total diameter and estimated weight of the existing Communications Facilities subject to Overlash;
- (iii) Diameter and estimated weight of the added Communications Facilities;
- (iv) Owner of the Communications Facilities;
- (v) Total estimated diameter and weight of the Communications Facilities after the Overlash;
- (vi) Applicable Make-Ready Electrical Construction engineering design documents, if any.

**4. PEC Review of Application.** All provisions of Section IV B shall be applicable to Applications – Standard Process for Overlapping Existing Attachments, except as provided below:

- a) Where no Make-Ready Electrical Construction is required, PEC shall review and provide written Notices to Proceed.
- b) Where Make-Ready Electrical Construction is required.

**5. Make-Ready Electrical Construction.** If required, all provisions of Section IV B shall be applicable to Make-Ready Electrical Construction for Applications considered – Standard Process for Overlapping Existing Attachments.

**6. Make-Ready Communication Construction – One-Touch Transfers.** If required, all provisions of Section IV B shall be applicable to Make-Ready Communications Construction for Applications considered under the Standard Process for Overlapping Existing Attachments regarding One-Touch Transfers.

**7. Make-Ready Communication Construction - Complex Transfers.** If required all provisions of Section IV B shall be applicable to Make-Ready Communications Construction for Applications considered under the Standard Process for Overlapping Existing Attachments regarding Complex Transfers.

**8. Notice of Attachment Completion and Acceptance.** All provisions of Section IV B shall be applicable to Notice of Attachment Completion and Acceptance for Applications considered under the Standard Process for Overlapping Existing Attachments.



9. **Post-Construction Inspection.** All provisions of Section IV B shall be applicable to Post-Construction Inspection for Applications considered under the Standard Process for Overlapping Existing Attachments.



## V. Specifications for Wireless Installations

### A. Wireless Installation Application Process

PEC offers Wireless Providers access to Poles for the purpose of attaching Wireless Installations pursuant to the Application processes outlined in Figure B listed below. The technical specifications for Wireless Installations are found in Appendix C, Appendix E, and Appendix G. Additional information, including the Application Forms for a Wireless Installation, are available in Appendix A and may be downloaded at <https://construction-drawings.pec.coop>.

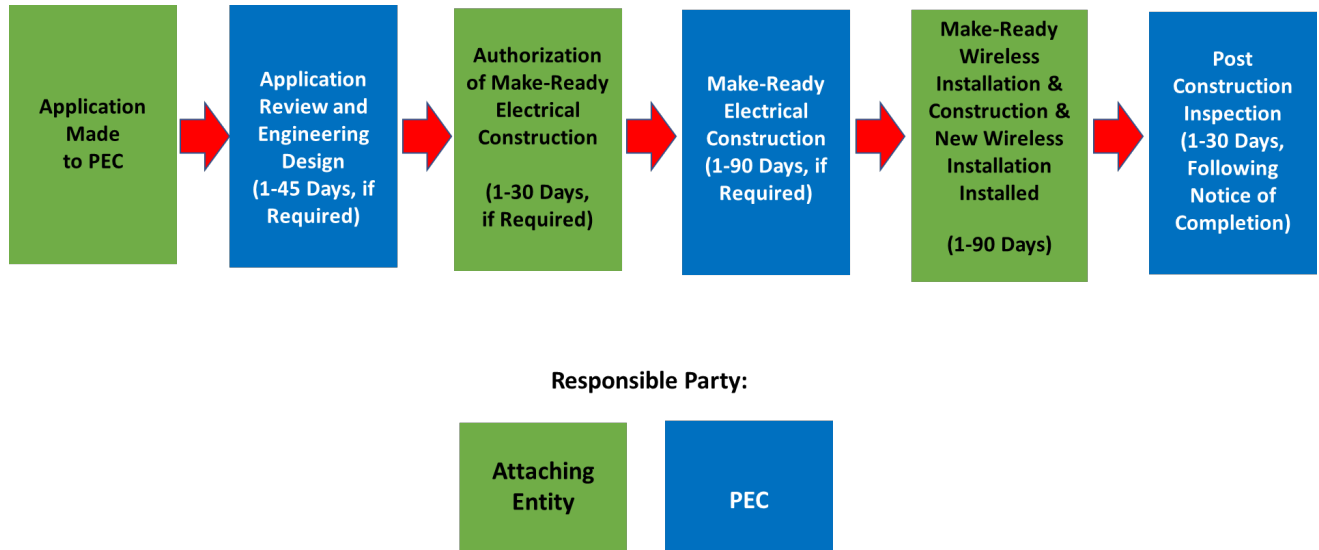
**Figure B: Wireless Installation Application Process**

PROCESS PHASE	WIRELESS AND MID-SPAN INSTALLATIONS
<b>Make-Ready Electrical Engineering (MREE)</b> Application Review Period	<b>PEC</b> <b>30 Days; 45 Days with MREE</b>
<b>Make-Ready Electrical Construction (MREC)</b>	<b>PEC</b> <b>90 Days</b>
<b>Make-Ready Wireless Installation Construction (MRWIC) 1-Touch Transfer-Simple</b>	<b>Licensee</b>
<b>MRWIC Complex Transfer</b>	<b>Licensee</b>
<b>Post-Construction Inspections</b>	<b>PEC</b>
<b>Control over Wireless Provider’s Contractors</b>	<b>Licensee</b>

## B. Standard Process for Wireless Installations

A high-level workflow of the Application review process, provided the Wireless Installation system has completed the Pre-Certified Equipment process, for the Standard Process for Wireless Installations on or supported by PEC Poles, is illustrated in Figure C below.

**Figure C: Standard Process for Wireless Installations following Pre-Certification**



1. **Eligibility.** A Wireless Provider with a valid Pole Attachment Agreement is eligible to elect to install Wireless Installations and Mid-Span Installations under this process.

2. **Application for Permit Required.** A Wireless Provider shall not install any new Wireless Installation or Mid-Span Installation on any PEC Pole without first submitting an Application, and obtaining a Permit pursuant to the requirements and procedures set forth below and elsewhere in these Standards.

- a) **Application Form.** All Wireless Providers shall use the Application for Wireless Installation form or a Mid-Span Installation form, provided in Appendix A and available for download at <https://construction-drawings.pec.coop>, which may be amended from time to time, provided that any such amendments are consistent with Applicable Engineering Standards and are applied to similar types of Wireless Installations and similarly situated Attaching Entities.



- (i) A single Application may include up to a maximum of one Wireless Installation sites or five Mid-Span Installations, together with the applicable Poles, provided that the Wireless Installation at each of the pole sites falls within the identified boundaries of a Wireless Equipment Area and is consistent with an approved Request for Pre-Certification Wireless System Form and Wireless Equipment design configuration.
  - (ii) PEC's acceptance of the submitted design documents required as part of a complete Application form does not relieve the Wireless Provider of full responsibility for any errors and/or omissions in the engineering analysis and compliance with all Applicable Engineering Standards.
- b) Pole Ownership. For the purposes of Application submittal, unless PEC records and/or Poles indicate otherwise, PEC shall be presumed to be the owner all Poles subject to Attachment. The Wireless Provider is responsible for field verifying Pole ownership and notifying PEC of any discrepancies between PEC's maps/records and the actual Poles in the field.
- c) Compliance with Standards. Wireless Provider shall comply with the Texas Engineering Practice Act, Chapter 1001, of the Texas Occupations Code, to the extent it is applicable to the work undertaken by the Wireless Provider on or around PEC's Facilities, and with the most current version of the National Electrical Safety Code (NESC), including any and all revisions to both, and all other Applicable Engineering Standards. The Wireless Provider shall certify its compliance with the above on each Application it submits to PEC for processing.
  - (i) *Pole Loading Analysis (PLA)*. A Wireless Provider, in connection with an Application, must comply with the PLA methodology described herein and in Appendix E. The Wireless Provider will gather the physical and technical information for the requested Pole, Wireless Equipment, and wire Attachment associated with the Wireless Installation required to conduct a PLA.
- d) Submission of Application. Completed Applications may be submitted by either U.S. mail, electronically to [osmose360.osmose.com](mailto:osmose360@osmose.com), or other means mutually agreeable by PEC and the Wireless Provider. Application shall include:
  - (i) Upon request, a complete Application with all applicable supporting documents, tests, reports, Applications, permit numbers, and license numbers;



- (ii) Upon request, a copy of an approved Request for Pre-Certification of Wireless System form for the type of Wireless Installation proposed;
- (iii) A copy of the Safety Briefing for the type of Wireless Installation proposed;
- (iv) Engineering design documents created using the ANSI/SCTE Graphic Symbols Drawing Standards, including a detail description of the Wireless Installation in compliance with all Applicable Engineering Standards, all detailed design documents for any required Make-Ready Electrical Construction.
- (v) Upon request, the proposed deployment plan for the proposed Wireless Project Area, including a description of how the Wireless Installation will be served with electricity and backhaul broadband telecommunications transport service;
- (vi) A copy of a PEC membership certificate for electric service, as defined in Appendix C17j.(ii), showing the member account number for the Wireless Installation, or a PEC letter identifying an existing member account number that will service the Wireless Installation upon completion of construction and confirmation on billing for electric service;
- (vii) Report certifying compliance with FCC OET Bulletin 65 signage requirements and the location of such signage on the Pole, if applicable;
- (viii) PLA worksheets and results.
- (ix) Relevant Pole identification data and equipment tagging information; and

Such Application shall be prepared by, or under the authority of, the Wireless Provider. The detailed design documents will be undertaken and completed in design tools to be determined by PEC. All actions to be undertaken as described in the Application shall be at the Wireless Provider's cost and risk.

**3. PEC Review of Application.** PEC will respond to each completed Application and Make-Ready Engineering design documents submitted by the Wireless Provider within thirty (30) calendar days of receipt. Should PEC be required to return an Application for clarification or modification, the time required for the Wireless Provider to address the concerns raised and return the Application shall not count against the thirty (30) calendar day period. If an Application is rejected as incomplete, the Wireless Provider will be



provided with a detailed description of changes, modifications, or revisions to the Application necessary for PEC's review and approval within ten (10) Calendar days of receipt of the Application.

In the event PEC does not finalize its review of a complete Application within thirty (30) calendar days, PEC may impose a one-time, additional fifteen (15) calendar day extension period in which to complete its review for each Application. PEC shall provide the Wireless Provider with seven (7) calendar days prior notice that it intends to exercise its option to impose the extension period. A Wireless Installation shall never be installed without the affirmative written consent of PEC and issuance of a Permit.

- a) Review. In making its decision as to whether to issue a Permit, PEC will consider Applicable Engineering Standards and safety requirements. In addition, PEC shall consider Capacity constraints, including the future needs of PEC as determined in accordance with the Reserved Capacity provisions, flood zone requirements, in-flight PEC projects, and other circumstances known at the time that would directly affect the engineering, safety requirements, and Capacity constraints associated with desired Poles. Specifically, PEC will not consider a pole-mounted Wireless Installation on a Pole that is subject to a pending Wireless Installation Application or which is already hosting a Wireless Installation.
- b) Make-Ready Electrical Construction. In the event a Wireless Provider's proposed Application requires PEC to undertake and complete Make-Ready Electrical Construction to accommodate the Wireless Provider's request, PEC will review the detailed design documents and the cost estimate for this Make-Ready Electrical Construction work provided by the Wireless Provider. Following PEC's approval of the Make-Ready Electrical Construction design and calculation of an estimated Make-Ready Electrical Construction costs, PEC will then submit this estimate of the cost of Make-Ready Electrical Construction to the Wireless Provider utilizing the PEC Authorization for Make-Ready Work form, provided in Appendix A, for approval from the Wireless Provider to proceed. The Wireless Provider shall approve and make advanced payment of this cost estimate, in order for any Make-Ready Electrical Construction to proceed. The Wireless Provider shall have thirty (30) calendar days following the issuance of the PEC Authorization for Make-Ready Work invoice to approve the estimate and provide payment. Failure of the Wireless Provider to respond to PEC or return the PEC Authorization for Make-Ready Work



invoice within the thirty (30) calendar day period will result in the Application being cancelled by PEC, with all applicable Application Fees being non-refundable.

- c) Changes Required. If PEC describes any changes, modifications, or revisions to the proposed Make-Ready Electrical Construction design documents, PEC shall notify the Wireless Provider. Upon receipt of such notice, the Wireless Provider may notify PEC that it agrees to the changes, modifications, or revisions to the proposed Make-Ready Electrical Construction required by PEC, in which case the Wireless Provider may resubmit the Application as amended and it shall be deemed granted. PEC shall have thirty (30) calendar days of receipt thereof to provide the Wireless Provider with:
- (i) A detailed description of any changes, modifications, or revisions to the alternative proposal necessary to comply with safety, reliability, or generally applicable engineering practices or standards.

In the event PEC fails to complete its review within thirty (30) calendar days of the resubmitted Application containing the alternative proposals for Make-Ready Electrical Construction, PEC may impose an additional ten (10) calendar day extension period in which to complete its review of the resubmitted Application. PEC shall provide the Wireless Provider with seven (7) calendar days prior notice that it intends to exercise its option to impose the extension period. A Wireless Installation shall never be installed without the affirmative written consent of PEC and the issuance of a Permit.

- d) Compliance by Wireless Provider. PEC's acceptance of the submitted Make-Ready Electrical Construction design and engineering documents does not relieve the Wireless Provider from compliance with the requirements of the National Electrical Safety Code, and all other Applicable Engineering Standards as required by these Standards.
- e) Application Approval.
- (i) If Make-Ready Electrical Construction Is Required. After acceptance of all necessary revisions, PEC will issue to the Wireless Provider the PEC Authorization for Make-Ready Work.



- (ii) *If Make-Ready Electrical Construction Is Not Required.* After acceptance of all necessary revisions to the Application, PEC will issue to the Wireless Provider the PEC Notice to Proceed.
- f) Treatment of Multiple Requests for Poles in the Same General Area.
- (i) One Wireless Installation Per Pole. PEC will not authorize more than one Wireless Installation per Pole. Pole assignments for Wireless Installation Applications shall be considered on a first-come, first-served basis for non-discriminatory access. Should a Wireless Provider fail to install a Wireless Installation within the allotted time frame, the requested Pole will be released and made available to another Wireless Provider.
    - Regarding a DAS System, an Antenna node shall not be attached on a Pole that already hosts a pole-mounted Wireless Installation and vice-versa.
  - (ii) Mid-Span Installations Exempted. The provisions of the subsection above, do not apply to Mid-Span Installations. Rather, a Licensee may install a Mid-Span Installation next to a Pole on which a small cell Wireless Installation has been attached, provided the Riser that protects the coaxial cable that energizes and provides connectivity to the strand-mounted micro network node component of the Mid-Span Installation is installed on a Pole other than the pole structure that hosts the Wireless Installation.

**4. Make-Ready Electrical Construction.** If Make-Ready Electrical Construction is required to accommodate a Wireless Installation, PEC or its contractors shall perform such work at Wireless Provider's expense.

- a) Advance Payment. Upon execution of PEC Authorization for Make-Ready Work by a Wireless Provider, PEC shall schedule the Make-Ready Electrical Construction. PEC shall require payment in advance for any Make-Ready Electrical Construction to be performed by PEC or its contractors based upon the estimated cost of such work.
- b) Work Performed by PEC or PEC Contractor. Make-Ready Electrical Construction shall be performed only by PEC and/or a contractor authorized by PEC to perform such work. Prior to commencement of Make-Ready Electrical Construction and upon receipt of advance payment, PEC will schedule a work order within thirty (30)



calendar days. PEC will strive to perform the Make-Ready Electrical Construction to accommodate a Licensee's Communications Facilities within sixty (60) calendar days of payment. PEC shall provide to the Wireless Provider as soon as possible the estimated schedule for completing the Make-Ready Electrical Construction.

- c) Work Schedule. In performing all Make-Ready Electrical Construction to accommodate a Wireless Provider's Wireless Installations, PEC will include such work in its normal work schedule. In the event the Wireless Provider requests that the Make-Ready Electrical Construction be performed on a priority basis or outside of PEC's normal work hours, the Wireless Provider shall pay the appropriate increased costs. Nothing herein shall be construed to require performance of any Wireless Provider's work before other scheduled work, PEC service restoration, or other emergency work.
- d) Notifying Other Attaching Entities. Prior to commencing Make-Ready Electrical Construction, PEC shall provide no less than three (3) calendar days' notice to the Wireless Providers, if any, on the affected Pole of the impending work. Such notice shall be provided through NJUNS.
- e) Notice to Proceed. Following completion of the Make-Ready Electrical Construction, PEC will issue a PEC Notice to Proceed to the Wireless Provider (applicant) in writing that the Pole is available for Make-Ready Wireless Installation Construction. When applicable, the Wireless Provider shall proceed to install its Wireless Installations utilizing the One-Touch Transfer Process. Whenever the transfer of an Attachment would require the cutting or splicing of the Communications Facility, the Complex Transfer Process below shall apply.
- f) Failure to Attach. A Wireless Provider must exercise the right granted by the PEC Notice to Proceed within ninety (90) calendar days of issuance of the Notice to Proceed. If needed, the Wireless Provider may request in writing to PEC an additional thirty (30) calendar day extension of the effective period of the Notice to Proceed. The request for this extension must be received by PEC no later than seven (7) calendar days before the expiration date provided in the Notice to Proceed. In considering this request, PEC will review past construction practices of the Wireless Provider and current efforts underway to complete the installation for which the extension was requested. PEC will provide a written response to the request for extension within three (3) calendar days of receiving the request. PEC,



at its discretion, may not consider any requests for extension received within seven (7) calendar days of the expiration of the Notice to Proceed.

- (i) Failure to install a Wireless Installation within the effective period of the Notice to Proceed, or extended period if granted by PEC, will result in expiration of the Application and the forfeiture of the applicable Application Fees and any payments made for Make-Ready Work already completed. Following expiration of an Application, should the Wireless Provider wish to continue to install the Wireless Installation subject to the expired Application, the Wireless Provider must submit a new Application covering the same Wireless Installation including all appropriate Application Fees.
- (ii) PEC and the Wireless Provider shall determine a mutually agreeable schedule for the completion of the Make-Ready Work should an issue of Force Majeure, as described in the Wireless Installation Agreement, be asserted by either party.

**5. Make-Ready Wireless Installation Construction – One-Touch Transfer.** The transfer of third-party Attachments, whether conducted by a Wireless Provider or PEC, in order to accommodate a Wireless Installation, shall be part of the One-Touch Transfer Process as further described herein. Pursuant to these Standards, under the One-Touch Transfer Process, a Wireless Provider permitted to make a Wireless Installation may transfer or rearrange the Attachments of one or more Attaching Entities in the Communications Space of a distribution Pole and coordinate the Joint Meeting Transfer of a Wireless Installation, as may be necessary to accommodate the installation of a new Attachment contingent upon compliance with requirements identified in this Section. All One-Touch Transfers conducted by a Wireless Provider or PEC must comply with the following requirements:

- a) Simple Transfers Only. One-Touch Transfers shall be limited to the rearrangement or transfer of a third-party Attachment on an existing Pole and Mid-Span Installation suspended by a messenger cable between two Poles. Such Attachment or Mid-Span Installation may be rearranged within an existing Pole or transferred onto a replacement Pole, provided the affected Attachment or Mid-Span Installation (along with any supporting Communications Facility or Overlash) is not subject to cutting and splicing and any affected Mid-Span Installation is not severed from the Communications Facility providing connectivity.



- b) Joint Meeting Transfer. Any Wireless Installation on a Pole that is hosting Attachments subject to One-Touch Transfer shall be modified within the same Pole or transferred onto a replacement Pole at the same time as the Attachments subject to Simple Transfer through the coordination of a Joint Meeting Transfer of the Wireless Installation.
- (i) Before a Licensee seeking to avail itself of the One-Touch Transfer process begins to undertake Make-Ready Communication Construction, it shall, not less than twenty-one (21) calendar days before the date contemplated for the start of Make-Ready Communication Construction, notify in writing each affected existing Attaching Entity owning a Wireless Installation on the affected Pole and arrange for a Joint Meeting Transfer of the Wireless Installation.
  - (ii) Such notice shall identify the specific Pole subject to Simple Transfer where the Wireless Installation is mounted. The written notice shall provide sufficient instructions to coordinate the Joint Meeting Transfer.
  - (iii) Either party may make earlier arrangements with the other for any proposed Joint Meeting Transfer. Both Attaching Entities have an obligation to cooperate to successfully complete the Joint Meeting Transfer of the Wireless Installation. In the event the Licensee utilizing the One-Touch Transfer Process fails to provide the required notice of the Joint Meeting Transfer to the Attaching Entity that owns the Wireless Installation, the former will be responsible for the cost of removing and relocating the Wireless Installation to a replacement Pole.
  - (iv) In the event the Attaching Entity that owns the Wireless Installation fails to attend the Joint Meeting Transfer or attends the meeting but fails to relocate the Wireless Installation as part of the One-Touch Transfer Process, such Attaching Entity shall be responsible for modifying the Wireless Installation within the same Pole or transferring the Wireless Installation onto a replacement Pole within ten (10) calendar days following the date of the failed Joint Meeting Transfer. Such failure to relocate the Wireless Installation within such ten (10) day period shall result in PEC finding the Wireless Installation in non-compliance with these Standards subject to a penalty as provided in Appendix F. In addition, such Attaching Entity shall be responsible for the cost of removing the original Pole should a replacement Pole be required to be installed as part of the One-Touch Transfer Process.



- c) Pre-Qualified Contractors. A Wireless Provider must engage qualified contractors pre-qualified by PEC pursuant to a certification program developed by PEC with the input of Wireless Providers.
- d) Applicability to PEC. PEC's communications wires or facilities installed in the Communication Space of a Pole will also be subject to the One-Touch Transfer Process.
- e) One-Touch Transfers Subject to Applicable Engineering Standards. All Make-Ready Wireless Installation Construction performed under the One-Touch Transfer Process shall meet all Applicable Engineering Standards, including PEC's clearance standards. As part of the Make-Ready Wireless Installation Construction, a Wireless Provider may modify one or more Attachments on a Pole and any Mid-Span Installation suspended from a messenger cable between two Poles, by relocating said Attachments/messengers within an existing Pole or transferring the Attachments/messengers onto a replacement Pole, as necessary to accommodate the Wireless Installation. Applications that include Make-Ready Wireless Installation Construction and One-Touch Transfers that fail to meet Applicable Engineering Standards will be rejected by PEC.
- f) Cost Responsibility. PEC is responsible for the costs of removing and replacing a Pole: (1) with recorded conditions or defects that would reasonably be expected to endanger human life or property and which should be promptly corrected; or (2) that must be replaced for safety or reliability as a result of normal wear and tear or other natural causes and not on account of a pole Attachment or the action of a broadband provider or third party. Otherwise, the Wireless Provider shall pay all costs of Make-Ready Wireless Installation Construction associated with One-Touch Transfers as described below:
  - (i) Where the Pole includes one or more third-party Attachment(s) that fail to meet Applicable Engineering Standards but otherwise there is enough space on the Pole to accommodate the Wireless Provider's Wireless Installation, Make-Ready Work will not include the transfer of the third-party Attachment(s), unless the lowest Attachment on the Pole fails to meet NESC clearance standards and/or poses a public safety hazard. In this specific case, the Wireless Provider shall notify PEC, who will notify the owner of the non-compliant Attachment that the Attachment is non-compliant with the Applicable



Engineering Standards or presents a Safety Violation in accordance with the provisions of Section II D5. The Wireless Provider requesting the Wireless Installation will not be allowed to undertake the installation of the Wireless Installation until the Non-Compliant Attachment is remedied.

- (ii) Where the Pole includes one or more third-party Attachment(s) that fail to meet Applicable Engineering Standards, and in order to accommodate the Wireless Provider's Wireless Installation on the same Pole, the third-party Attachment(s) must be rearranged, the cost of rearranging the third-party Attachment(s) will be included in Make-Ready Work. Provided that if the lowest Attachment on the Pole fails to meet NESC clearance standards and/or poses a public safety hazard, the Wireless Provider may recover the cost to bring such Attachment into compliance from the owner of that Attachment, but no others.
- (iii) Where the Pole includes one or more third-Party Attachment(s) that fail to meet Applicable Engineering Standards, and in order to accommodate the Wireless Provider's Wireless Installation, a new Pole must be installed, the cost of the new Pole and the transfer of the third-party Attachment(s) will be included in the Make-Ready Work.
- (iv) Where the Pole includes one or more third-party Attachment(s) that meet Applicable Engineering Standards, and otherwise there is enough space on the Pole to accommodate the Wireless Provider's Wireless Installation, Make-Ready Work will not include the transfer of the third- party Attachment(s).
- (v) Where the Pole includes one or more third-party Attachment(s) that comply with Applicable Engineering Standards, and in order to accommodate the Wireless Provider's Wireless Installation on the same Pole, the third-party Attachment(s) must be rearranged, the cost of rearranging the third-party Attachment(s) will be included in Make-Ready Work.
- (vi) Where the Pole includes one or more third-party Attachment(s) that comply with Applicable Engineering Standards, and in order to accommodate the Wireless Provider's Wireless Installation, a new Pole must be installed, the cost of the new Pole and the transfer of the third- party Attachment(s) will be included in Make-Ready Work.



- g) Notice of Transfer. A Wireless Provider shall provide all third parties affected by a proposed One-Touch Transfer with advance written notice of such One-Touch Transfer no less than twenty-one (21) calendar days prior to undertaking such One-Touch Transfer. This notice shall be provided using NJUNS to a duly designated representative of the affected Attaching Entity unless another method of notice is prescribed by PEC. Such notice shall identify the specific Pole subject to the Wireless Installation and affected by such One-Touch Transfer. The Wireless Provider that desires to utilize the One-Touch Transfer Process shall bear the responsibility of determining the appropriate representative for each Attaching Entity affected by the Wireless Provider's implementation of the One-Touch Transfer Process.
- h) Critical Communications Facilities. If an affected Attaching Entity, in its reasonable discretion, determines that a proposed One-Touch Simple Transfer poses a risk of disconnection or interruption of service to a critical Communications Facility, the affected Attaching Entity shall notify the requesting Wireless Provider and PEC in writing within ten (10) calendar days of receiving the notice of transfer described in Section V B5g. The affected Attaching Entity is obligated to make the requested transfer of its critical Communications Facilities within fifteen (15) calendar days of providing such notice. Failure to transfer the critical Communications Facilities in a timely manner will subject the critical Communications Facilities to the One-Touch Transfer Process.
- i) Post-Transfer Notice. Within fifteen (15) calendar days following the completion of a One-Touch Transfer, the Wireless Provider shall send written notice of the One-Touch Transfer and as-built reports to each affected Attaching Entity. Within thirty (30) calendar days of receipt of these as-built reports, the Attaching Entity that owns the Communications Facilities that were transferred or relocated may conduct an inspection at the expense of the Wireless Provider who moved the facilities. If the One-Touch Transfer failed to meet all Applicable Engineering Standards, the owner of the Communications Facilities subject to transfer or relocation will notify the Wireless Provider responsible for the One-Touch Transfer of any deficiency, which will be corrected within fifteen (15) calendar days following receipt of such written notice at the expense of the Wireless Provider responsible for the One-Touch Transfer. The Wireless Provider responsible for the One-Touch Transfer shall pay



the actual, reasonable, and documented inspection expenses incurred by the owner of the Communications Facilities subject to transfer or relocated, within forty-five (45) calendar days of receipt of an invoice. Failure of the owner of the relocated Attachment to undertake and complete the inspection within the thirty (30) calendar day period shall be deemed acceptance of the One-Touch Transfer.

- j) Attaching Entity's Attachments Subject to One-Touch Transfer by Wireless Providers. An Attaching Entity's Communications Facilities shall be subject to the One-Touch Transfer Process conducted by a Wireless Provider or PEC pursuant to the same terms and conditions prescribed in these standards.

**6. Make-Ready Wireless Installation Construction - Complex Transfers.**

- a) Responsibility for Complex Transfers. The accomplishment of a Complex Transfer is considered part of Make-Ready Wireless Installation Construction and shall be performed by the Attaching Entity which owns the Attachment subject to transfer. It is the responsibility of the Wireless Provider requesting the Complex Transfer to negotiate a private process with the affected Attaching Entity to accomplish the Complex Transfer. The cost of the Complex Transfer shall be borne by the requesting Wireless Provider.
- b) Complex Transfers Escalation Process. In the event a Wireless Provider refuses to reach agreement on a process for the expedient transfer of an Attachment or Wireless Installation subject to a Complex Transfer, the requesting Wireless Provider may rely on the following escalation procedures. At any time during these escalation procedures, the requesting Wireless Provider and the owner of the Attachment or Wireless Installation subject to the Complex Transfer may reach agreement on a voluntary transfer process. In such event, the requesting Wireless Provider shall notify PEC in writing of this agreement.
- (i) Level 1: Initial Request for Complex Transfer (Days 0 to 30)
- Initial Notice Letter. The requesting Wireless Provider shall provide written notice to owner of the Attachment or Wireless Installation subject to Complex Transfer requesting the transfer of such Attachment using NJUNS with a copy to PEC. The Attaching Entity which owns such Attachment or Wireless Installation shall perform the transfer within thirty



(30) calendar days of receipt of notice from the requesting Wireless Provider.

(ii) Level 2: Initial Escalation Process (Days 31 to 60)

- Escalation Notification. If the owner fails to transfer the Attachment or Wireless Installation subject to Complex Transfer within the initial thirty (30) calendar days, the requesting Wireless Provider shall send a certified letter notifying the non-compliant Attaching Entity that failure to transfer the Attachment or Wireless Installation within a subsequent thirty (30) calendar days (escalation period) of receipt of notice will result in the Attachment or Wireless Installation in question being designated by PEC as non-compliant with the Complex Transfer Process and subject to penalty, as described in Appendix F, on the basis of interference with the requesting Wireless Provider's permitted Attachment rights. The requesting Wireless Provider shall send PEC a copy of the escalation letter and all other correspondence between the parties related to this matter.
- Duty to Negotiate. The requesting Wireless Provider is required to continue negotiations with the non-compliant Attaching Entity during the thirty (30) calendar day escalation period. Absent extraordinary circumstances, the non-compliant Attaching Entity's failure to transfer the Attachment or Wireless Installation subject to Complex Transfer by the end of the thirty (30) calendar day escalation period shall be considered a lack of cooperation on the part of the non-compliant Attaching Entity. Conversely, absent extraordinary circumstances, a refusal by the requesting Wireless Provider to agree to an alternative process for the transfer of the Attachment or Wireless Installation in question within a reasonable date certain shall be considered a lack of cooperation on the part of the requesting Wireless Provider.
- Notice of Success Complex Transfer. If the non-compliant Attaching Entity transfers the Attachment or Wireless Installation subject to Complex Transfer within the thirty (30) calendar day escalation period, or the requesting Wireless Provider transfers the Attachment or Wireless



Installation by mutual agreement of the parties, no further escalation will be necessary.

(iii) Level 3: PEC Finding of Non-Compliant Attachments (Days 61 to 90)

- *Request for Finding of Non-Compliant Attachments or Wireless Installations.* If the requesting Wireless Provider and the non-compliant Attaching Entity cannot reach agreement and the non-compliant Attaching Entity fails to transfer the Attachment or Wireless Installation subject to Complex Transfer within the thirty (30) calendar day escalation period, the requesting Wireless Provider within five (5) calendar days thereafter shall notify PEC in writing, provide a short summary of efforts to negotiate the rearrangement or transfer of the Attachment or Wireless Installation in question, and request PEC to make a finding of Non-complaint Attachment or Wireless Installation on the basis of interference with the requesting Wireless Provider's permitted attachment rights. The request shall explain why the requesting Wireless Provider believes the non-compliant Attaching Entity is acting in bad faith.
- *Notification of Non-Compliant Attachments.* Within ten (10) calendar days of receiving the request for a finding of Non-Compliant Attachment or Wireless Installation, PEC will evaluate the request and if it finds the request credible; PEC will:
  - Notify the non-compliant Attaching Entity by certified mail that PEC has determined the Attachment or Wireless Installation subject to Complex Transfer is declared as either a "Non-Compliant Attachment" or "Non-Compliant Wireless Installation," as appropriate;
  - The nonconforming Attaching Entity will begin accruing fees as provided in Appendix F of these Standards until the Non-Compliant Attachment or Non-Compliant Wireless Installation is transferred; and PEC will suspend the processing of the non-compliant Attaching Entity's Applications effective five (5) days after receipt of the certified letter. Thereafter, the non-compliant Attaching Entity will have fifteen (15) calendar days in which to transfer the Non-Compliant Attachment or Non-Compliant Wireless Installation and notify PEC in



writing in order to reinstate the processing of Applications. If the non-compliant Attaching Entity fails to transfer the Non-Compliant Attachment or Non-Compliant Wireless Installation within the twenty (20) calendar day grace period, the Non-Compliant Attachment or Non-Compliant Wireless Installation will be subject to further fees and transfer as provided in the Agreement and Appendix F. PEC will reinstate the processing of the non-compliant Attaching Entity's Applications upon receipt of written notification of the transfer of the Non-Compliant Attachment or Non-Compliant Wireless Installation and the payment of all assessed fees.

- *Duty to Negotiate*. The requesting Wireless Provider is required to continue negotiations with the non-compliant Attaching Entity which owns the Non-Compliant Attachment or Wireless Installation during the twenty (20) calendar day grace period.
- *Notice of Transfer*. If the non-compliant Attaching Entity transfers the non-compliant Attachment or Non-Compliant Wireless Installation within the twenty (20) calendar day grace period, or the requesting Wireless Provider transfers the Non-Compliant Attachment or Non-Compliant Wireless Installation by mutual agreement of the parties, the moving party shall notify PEC by electronic message, PEC shall reinstate processing of the non-compliant Attaching Entity's Applications within twenty-four (24) hours of receiving payment of all outstanding fees.
- *Stop Processing Applications*. If PEC does not receive written notification of the transfer of the Non-Compliant Attachment or Non-Compliant Wireless Installation by the end of the twenty (20) calendar day grace period, PEC shall stop processing the non-compliant Attaching Entity's Applications pending further written notice of a successful transfer and the payment of all outstanding fees.

(iv) Level 4: Transfer or Removal of Unauthorized Attachments (Days 91 and Beyond)

- *Notification of Failed Transfer*. If the parties fail to negotiate the successful transfer of the Non-Compliant Attachment or Non-Compliant



Wireless Installation, the requesting Wireless Provider shall promptly notify PEC in writing of the failed attempt and explain the reasons for the unsuccessful transfer.

- *Notification of Transfer of Non-Compliant Attachments.* Following receipt of the notification of failed transfer, PEC shall promptly proceed to transfer the Non-Compliant Attachment or non-compliant Wireless Attachment at the respective owner's expense. Following the transfer of the Non-Compliant Attachment or non-compliant Wireless Attachment, PEC will provide written notification of the transfer to the non-compliant Attaching Entity within twenty-four (24) hours. PEC shall reinstate processing of the non-compliant Attaching Entity's Applications within twenty-four (24) hours of receiving payment for the transfer cost and all outstanding fees.
- *Notice of Transfer.* In the event the non-compliant Attaching Entity transfers the Non-Compliant Attachment or Non-Compliant Wireless Installation, or the requesting Wireless Provider transfers the Non-Compliant Attachment or Non-Compliant Wireless Installation by mutual agreement of the parties, prior to PEC's transfer efforts, the moving party shall notify PEC in writing. The non-compliant Attaching Entity shall be assessed a one-time fine as provided in Appendix F of these Standards. Thereafter, PEC shall reinstate the processing of the non-compliant Attaching Entity's Applications within twenty-four (24) hours of receiving payment of all outstanding fees.

**7. Notice of Attachment Completion and Acceptance.** The Licensee shall notify PEC in writing by submitting the Completion of Licensee Construction form, which is available in Appendix A6 and at <https://construction-drawings.pec.coop> within ten (10) calendar days following the acceptance by all Attaching Entities whose facilities were rearranged or transferred pursuant to Section V B (Simple Transfer) and/or Section V B (Complex Transfers) that all Make-Ready Wireless Installation Construction has been completed and accepted, and that the new Wireless Installation and all Make-Ready Work are ready for PEC to undertake Post-Construction Inspection.

**8. Post-Construction Inspection.**



- a) Construction Subject to Inspection. PEC shall complete a Post-Construction Inspection of applicable Make-Ready Work at the Wireless Provider's expense within thirty (30) calendar days of receiving the Licensee's notification. PEC will conduct the Post-Construction Inspections to evaluate compliance with the requested Permit, Applicable Engineering Standards, or other design and installation requirements. Completion of a Post-Construction Inspection by PEC shall not in any way relieve any Wireless Provider or the Wireless Provider's insurers of any responsibility, duty, obligation, or liability under these Standards, any contractual agreement, or otherwise; nor does PEC's ability to make Post-Construction Inspections relieve a Wireless Provider from its obligations to exercise due care in the installation of its Wireless Installations. The Post-Construction Inspection provision does not affect any other inspection requirements elsewhere in these Standards. This section also applies to supplemental Post-Construction Inspections where the Licensee reports "final corrections" of previously identified non-compliant work or locations.
- b) Compliance. In the event a Post-Construction Inspection conducted reveals that corrections or other actions are required of a Wireless Provider, including without limitation those required for reasons of safety or structural integrity, the Wireless Provider shall make such required corrections or take the requested actions within thirty (30) calendar days after the date PEC sends written notice. If PEC determines in its reasonable judgment and discretion that the needed corrections rise to the level of an emergency, PEC may perform the necessary corrective work without providing notice, at the Wireless Provider's sole risk and cost plus ten percent (10%). As soon as practicable thereafter, PEC will advise the Wireless Provider of the work performed or the action taken.
- 9. Issuance of Permit.** Upon satisfactory completion of the Post-Construction Inspection, PEC shall notify the Wireless Provider in writing that PEC has approved the Wireless Installation identified in the Application by submitting to the Wireless Provider a Permit.



## **VI. Appendices**

### **Appendices Summary**

- A. Pole Attachment Forms**
- B. Specifications for Attachments**
- C. Vertical Clearance Requirements**
- D. Attachment Clearance Requirements**
- E. Pole Loading Requirements**
- F. Schedule of Pole Attachment Rates, Fees, and Charges**
- G. Wireless Installation Diagrams**
- H. Pole Attachment Tag List & Detail**



## **A. Pole Attachment Forms**

**A1: Application for Pole Attachment**

**A2: Application for Wireless Installation Permit**

**A3: Application for Mid-Span Installation Permit**

**A4: Request for Pre-Certification of Wireless System**

**A5: Authorization for Make-Ready Work**

**A6: Completion of Licensee Construction**

**A7: Notice of Safety Violation & Assessment Charge**

**A8: Notice to Proceed**

**A9: Notice of Unauthorized Attachment or Unauthorized Wireless Installation & Charges**

**A10: Notice of Attachment Removal**



# A1: Application for Pole Attachment

	(Licensee) hereby request permission to add or give notice of the removal of contacts on the Pedernales Electric Cooperative poles shown below and on the attached drawing. These contacts will be installed or removed according to the Pole License Agreement of <b>AGREEMENT # 666666666</b> between these two organizations.										<b>Certification</b>		<b>Definitions:</b>  <b>One Touch Transfer:</b> Transfer of third-party Communication Facilities whether conducted by Attaching Entity, PEC, or other Attaching Entity subject to the requirements described in Section IV.B.6 of the PEC Pole Attachment Standards.  <b>Simple (Simple Transfer):</b> Transfer or relocation of any Attachment or Overhead on an existing Pole or onto a new Pole that does not require cutting and splicing of such Attachment and which will not result in a network outage affecting the Attaching Entity that owns the Attachment subject to transfer.  <b>Complex (Complex Transfer):</b> Transfer or relocation of third-party Attachment or Overhead onto a PEC Pole that will result in a network outage to the Attaching Entity that owns the Attachment or Overhead subject to transfer.					
	Pole attachment permission is hereby granted to attach the communication facilities described in this application to the number of poles indicated in the "Total # of Poles" box below and as indicated in the attached sketches or maps provided. However, if such attachment or removal are not completed within sixty (60) days of the authorization date, billing for said attachments will continue until the date of actual removal.										Signature: _____ Printed Name: _____ Title: _____							
	I certify that by signing this statement, the application attached hereto complies with the requirements of the Texas Engineering Act, the National Electrical Safety Code, and all other Applicable Standards. (Please see designated certification area on upper right corner of application)																	
<b>FOR PEC USE ONLY</b>																		
Approved By: _____		PEC WO#: _____		FILLED OUT BY PEC		FILLED OUT BY ATTACHER												
Title: _____																		
Telephone number: _____																		
Approval Date: _____																		
Date: _____		Attaching Company: _____		Number of New Attachments: _____		Total Pole Load Analysis: _____												
*Nearest Street Address: _____		Attacher Project#: _____		Number of Overhead: _____		Total Make Ready Simple: _____		Total Make Ready Complex: _____										
City: _____				Total Poles: _____		Total Upgrade Simple: _____		Total Upgrade Complex: _____										
State: _____		By: _____		Number of Renewals: _____		Total Simple: _____		Total Complex: _____										
*N.C. Coordinates: _____		Email: _____		Proposed Cable Count: _____		Existing Cable Count: _____												
*E.C. Coordinates: _____		Telephone: _____		Proposed Cable Diameter: _____		Existing Cable Count: _____												
				Proposed Cable Weight: _____		Existing Cable Count: _____												
Operation Number	Attachment Action: (Installing / Re-energizing / Existing)	Pole Owner	Pole #	Proposed Riser (Yes/No) & Qty	Proposed Gap (Yes/No) & Qty	PLA (%) with proposed attachment	Construction Grade of Analysis	Existing M&S Data		Make Ready Data			One Touch Transfer: Make Ready or Upgrade & Simple or Complex	Remedy Description and Explanation/ Additional Comments/ Variance Request/ Vegetation Maintenance Required	Responsible Party: Attacher or PEC	Existing PEC Reject Pole	Pole Data Missing in MAPPING SYSTEM (if yes fill out Missing Pole Data worksheet)	PEC Application Comments
								Height Lowest Con	Height Lowest Electrical	Attachment Description	Attachment Height	M&S Span (same span as existing)						
1								From Pole	To Pole	Existing	Proposed	Proposed						
2								From Pole	To Pole	Existing	Proposed	Proposed						
3								From Pole	To Pole	Existing	Proposed	Proposed						
4								From Pole	To Pole	Existing	Proposed	Proposed						
5								From Pole	To Pole	Existing	Proposed	Proposed						




## A2: Application for Wireless Installation Permit

FOR PEC USE ONLY																			
Approved By:																			
Title:																			
Telephone number:																			
Approval Date:	PEC WAM (if needed)																		
Date:	Wireless Installation Company																		
Nearest Street Address:	Application Number				PEC Pole #				Make Ready - One Touch (Y/N)				Make services to be requested (Y/N)						
City/Township:	4 year - 5 year - unique client app #				Dish Structure:				Make Ready - Simple (Y/N)				PEC ground rod permit (Y/N)						
State:									Make Ready - Complex (Y/N)				Load - Antenna Arm Weight (LBS)						
Nearest Cross Street:									Make Ready - Upgrade (Y/N)				Load PEC Area Weight (LBS)						
X-Y coordinates:									Wireless Installation Information				Load accessory & hardware weight (LBS)						
X-Z coordinates:	By:				Site Name:				Site Plan: Name/Rev/Date										
	Tel:				Site # or ID:				PEC license number:										
					Cluster Name:				PEC permit number:										
									PEC electric acct. #										
Wireless identification number - (used for attaching only for identification)	Installation Actor: ( I installing E Removing E Joining )	Installation Area: ( A Antenna W Wireless Equipment O if pole M id-Span Installation )	Type	Manufacturer	Model Number	Di. (inches)	Weight (LBS)	Highest Installation Point on Pole (Feet/Inches)	Lowest Installation Point on Pole (Feet/Inches)	QTY	Transmit Frequencies (MHz)	Receive Frequencies (MHz)	Active or Passive	Power (AC or DC)	Operating Voltage	Amperage (Max)	Installed in Conduit (Y/N)	Conduit (Size/QTY)	PEC Application Comments

Wireless installation permission is hereby granted to attach the communication facilities described in this application to the poles indicated below and as indicated in the attached sketches or maps provided. However, if such attachment or removals are not completed within sixty (60) days of the authorization date, billing for said attachments will continue until the date of actual removal.



### A3: Application for Mid-Span Installation Permit

 <b>APPLICATION FOR MID SPAN INSTALLATION</b>	Date		Attaching Company Name	
	City		Notification	
	Nearest Street		Name	
	W-Coordinator		Title	
	V-Coordinator		Telephone	
	Attach		Email	

Operation Number	Mid-Span Installation Action: (I) Installation (R) Removal	Pole Number	Existing Pole Attachment Date		Make-Ready Date		Use Track Transfer: Simple or Complex	Remedy Description and Explanation/Additional Comments/Force Majeure Requests	Responsible Party: (Make-Ready) or PEC (Upgrade)	Existing PEC Tag Number (Year or None)	Lat	Long
			Height of Lowest Conductor	Height of Electrical	Attachment Height							
					Existing	Proposed						
1												
2												
3												
4												
5												



### A4: Request for Pre-Certification of Wireless System



### Request for Pre-Certification of Wireless System

Attaching Entity Information	
Attaching Entity Name	
Address	
Contact Person	
Email	
Cell Number	

Manufacturer Information			
Manufacturer Name			
Address			
Manufacturer Website			
Manufacturer Contact Name			
Email		Phone	

Equipment Information			
Description			
Part / Item #		Model Number	
Dimensions (LxWxD inches)		Weight (lbs)	
Transmit Frequency Range		Receive Frequency Range	
Power Input (AC/DC)		Input (Volt/Amp/Watts)	
Power Output (AC/DC)		Output (Volt/Amp/Watts)	

Applicable manufacturer specification documents ("cut sheet") submitted with this form Y / N

Drawings of typical Attaching Entity proposed installation submitted with this form Y / N





## **A5: Authorization for Make-Ready Work**

***Dear Attacher:***

***Enclosed please find the invoice associated to the Electrical Make-Ready Construction, to be completed by PEC, related to the pole attachment Application submitted. You may pay these charges on PEC's Smart-Hub payment system. Please reference the invoice number on your payment to ensure that payment credit is applied to the correct work order. Additionally, please note that the work order associated with the invoice will not be scheduled for construction until after payment has been received and processed by PEC. If you have any questions concerning this invoice, please contact the PEC Representative that processed your Application.***

***Thank you,***

***Melody A. Horton, Pole Contact Manager***

***\*\*Estimate for electrical make-ready will be attached to letter.***



### A6: Completion Of Licensee Construction:

<b>Completion of Licensee Construction</b>
--

Submit form to [poleapplications@pec.com](mailto:poleapplications@pec.com)

Subject Line: Construction Completion

<b>Licensee</b>		<b>Application Number</b>	
-----------------	--	---------------------------	--

Reported By	
<b>Name</b>	
<b>Email Address</b>	
<b>Company</b>	
<b>Telephone Number</b>	
<b>Cell Number</b>	

Type and Date of Completed Construction <i>(Identify the type of construction and list the date the work was completed)</i>	
<b>Date Make-Ready Electrical Construction Completed</b>	
<i>Work Request Number</i>	WR#
<b>Date Make-Ready Communication Construction Completed</b>	
<i>Are all 3rd party Attachments Successfully Transferred</i>	Yes / No
<b>Date Make-Ready Wireless Installation Construction Completed</b>	
<i>Are all 3rd party Attachments Successfully Transferred</i>	Yes / No
<b>Other</b>	

Received by PEC	
<b>By</b>	
<b>Printed Name</b>	
<b>Title</b>	
<b>Date</b>	



## A7: Notice of Safety Violation & Assessment Charge

### Notice of Safety Violation

<b>Attaching Entity</b>	
<b>Contact Person</b>	
<b>Address</b>	
<b>Phone</b>	
<b>Email</b>	
<b>Date</b>	

***Pursuant to the PEC Pole Attachment Standards, Safety Violations have been identified on PEC Facilities.***

<b>PEC Pole Number</b>	<b>Description of Unauthorized Equipment</b>	<b>Date</b>	<b>Safety Violation Charge</b>

***Pursuant to Section II of the Standards, you are hereby given notice that you are required to correct the above referenced Safety Violation within the time periods designated in Section II.D.5(a) of issuance of this Notice. Failure to correct the Safety Violation will subject \_\_\_\_\_(Licensee) to enforcement actions and other remedies available to PEC under the Pole Attachment Contract and/or Standards.***

***Inquires related to this Notice shall be made to:***

***Melody A. Horton***

***Pole Contact Manager Pedernales Electric Cooperative***

***P.O. Box 1, Johnson City, TX 78636***

***[melody.horton@peci.com](mailto:melody.horton@peci.com)***



### A8: Notice to Proceed

*Notice to Proceed*

<b>Attaching Entity</b>		<b>Service Order</b>	
<b>Date of Application</b>		<b>WR# (if applicable)</b>	

In accordance with the applicable provisions of the PEC Pole Attachment Standards, PEC has:

\_\_\_\_\_

Approved the Application referenced above and has determined that no Make-Ready Electrical Construction is required for this Application. The Attaching Entity is now authorized to proceed with Make-Ready Communication Construction or Make-Ready Wireless Installation Construction, as appropriate, and to install its Attachment, Overlash, or Wireless Installation subject to compliance with the Standards.

\_\_\_\_\_

Approved the Application referenced above and completed all Make-Ready Electrical Construction required for this Application on \_\_\_\_\_. The Attaching Entity is now authorized to proceed with Make-Ready Communication Construction or Make-Ready Wireless Installation Construction, as appropriate, and to install its Attachment, Overlash, or Wireless Installation subject to compliance with the Standards.

Approved by PEC	
Approved by:	
Printed Name:	
Date:	



### A9: Notice of Unauthorized Attachment or Unauthorized Wireless Installation & Charges

<b>Attaching Entity</b>	
<b>Contact Person</b>	
<b>Address</b>	
<b>Phone</b>	
<b>Email</b>	

*Pursuant to the PEC Pole Attachment Standards, the following Unauthorized Attachments or Unauthorized Wireless Installations have been identified on PEC Facilities.*

PEC Pole Number	Description of Unauthorized Equipment	Date	Unauthorized Charge

*If you believe this finding of an Unauthorized Attachment or Unauthorized Wireless Installation is incorrect, you may dispute this finding within forty-five (45) days pursuant to Section II by providing to PEC a copy of either the Approved Permit for Attachment or Approved Permit for Wireless Installation.*

*If you do not dispute this finding, you must submit for the Unauthorized Attachment or Unauthorized Wireless Installation (1) An Application for a Permit, (2) Application Fee, and (3) The Unauthorized Attachment Charge or Unauthorized Wireless Installation Charge to PEC as noted in the above and invoiced.*

*Inquires related to this Notice shall be made to:*

**Melody A. Horton**  
**Pole Contact Manager Pedernales Electric Cooperative**  
**P.O. Box 1, Johnson City, TX 78636**  
[melody.horton@peci.com](mailto:melody.horton@peci.com)



### A10: Notice of Attachment Removal

<b>Project Name:</b>		<b>Date:</b>	
<b>Attaching Entity</b>			
<b>Contact Person</b>			
<b>Address</b>			
<b>Phone</b>			
<b>Email</b>			

Pursuant to the PEC Pole Attachment Standards, PEC must relocate facilities per Civic Project, Member request, LCRA, TxDOT, or other government entity. PEC reserves the right to remove any Wireline Attachment or Wireless Installation, at the Licensee's expense without liability to PEC if the owner fails to relocate its facilities.

WO #	Project Name	Remove by Date

Pursuant to Section III B4 of the Standards, you are hereby given notice that you are required to remove the above referenced facilities within (45) days of issuance of this Notice to Remove Attachments. Failure to remove attachments within (45) days of issuance of this Notice to Remove Attachments will be subject (Licensee) to enforcement actions and other remedies available to PEC under the Pole Attachment Contract or the Standards.

***Inquires related to this Notice shall be made to:***

***Melody A. Horton***  
***Pole Contact Manager Pedernales Electric Cooperative***  
***P.O. Box 1, Johnson City, TX 78636***  
[melody.horton@peci.com](mailto:melody.horton@peci.com)



## B. Vertical Clearance Requirements:

- a) Per NESC Rule 232, clearances are minimum requirements and can be higher by local laws and ordinances.
- b) Per Texas Administrative Code Texas Department of Transportation-Right of Way Utility Accommodation Overhead Electric and Communication Lines - Title 43 Part 1 Chapter 21 Subchapter C Rule 21.41.
- c) Vertical clearance. The minimum vertical clearance above the highway shall be 22 feet for electric and 18 feet for communication lines.

## C. Specifications for Attachments and Wireless Installations on PEC Poles

The following engineering and construction specification practices will be followed by the Licensee when attaching Wire and Wireless Installations to Pedernales Electric Cooperative, Inc. (PEC) pole structures. The items listed below are not an exhaustive list, and are intended to supplement, not replace the National Electrical Safety Code (NESC) or other Applicable Engineering Standards required by the Pole Attachment Agreement, Wireless Installation Agreement, PEC Attachment Agreement or other applicable PEC standards and specifications.

### 1. Wire Attachments.

- a) **Attachment and Cable Clearances:** Licensee's attachments on PEC poles, including metal attachment clamps and bolts, metal cross-arm supports, bolts and other equipment must be attached so as to maintain the minimum separations specified in the National Electrical Safety Code (NESC) and in the PEC drawings and specifications provided at the following link: <https://construction-drawings.pec.coop>. PEC adopts and requires Licensee's compliance with revisions of the NESC upon adoption by NESC of those revisions. Compliance with NESC sections pertaining to overhead communications lines ***will be stringently enforced*** by PEC.
- b) **Sag and Mid-Span Clearances:** Licensee will leave proper sag in the lines and cables and shall observe the established sag of power line conductors and other cables so that minimum clearances are (a) achieved at poles located on both ends of the span; and (b) retained throughout the span. At mid-span, a minimum of four



inches (4") of separation must be maintained between any other communications cables. At the pole support, a twelve inch (12") spacing must be maintained between Licensee's connection and any other Attaching Entities connection as noted on drawing 800-009.

- c) **Vertical Runs on Poles:** All vertical runs on poles, including those for power feed for amplifiers, Antennas or radio equipment shall be placed on the quarter faces of the pole and shall be covered by a riser guard with a two- inch (2") clearance in any direction from cable, bolts, clamps, metal supports and other equipment. The riser guard must not cover or obstruct any PEC identification tags on the pole. However, the Attachment Entity may request PEC to relocate the identification tags at the Attachment Entity's expense and subject to PEC's sole discretion. Secondary cable providing service to overhead streetlights may be covered with non-metallic conduit to allow minimum clearances to communication cables as permitted in the NESC.
- d) **Cable Bonding:** A Licensee's messenger cable shall be bonded to the PEC pole ground wire at each PEC pole that has a ground wire.
- e) Down Guys and Anchors:
- (i) Down guys shall not be bonded to ground or neutral wires of the PEC pole and shall not provide a current path to ground from the pole ground or power system neutral.
- All Licensees shall provide their own anchors. Under no circumstances is the Licensee allowed to attach its guy to a PEC anchor. Licensee's anchors shall strive to be a minimum of four (4) feet from the PEC anchor.
  - No attachments may be installed on a pole until all required guys and anchors are installed. No attachment may be modified, added to, or relocated in such a way as will materially increase the stress or loading on a pole until all required guys and anchors are installed.
  - Anchors and guys must be installed on each pole where an angle or dead-end occurs. Licensee shall make guy attachments to poles at or below the height of its cable attachment.

**2. Service Drop Clearance.** The parallel minimum separation between a Licensee's Service Drops and communications Service Drops shall be six inches (6"), and the crossover separation between the drops shall be twelve inches (12").



- 3. Service Clearances.** A four-inch (4”) separation shall be maintained between PEC’s service cable and any other Attaching Entities facilities located on the customer’s private property in accordance with the National Electric Code (NEC).
- 4. Climbing Space.** All attachments must be placed as to allow and maintain at all times, a clear and proper climbing space on the face of the PEC pole. Cable Attachments shall be placed on the same side of the pole as existing communications cables. In general, all other facilities and vertical runs should be placed on pole quarter faces.
- 5. Riser Installations.** All riser installations, including those providing 120/240-volt power for Licensee’s equipment enclosure shall be placed on the quarter faces of a pole and limited such that one side (180 degrees) of the pole is kept clear for climbing space and future replacement of the pole. The Licensee’s riser must be installed in PEC approved conduit with a weatherhead attached to the pole with metal stand-off brackets. Communication cable risers shall be located on the same side of the pole as the overhead communication cables are attached and must not cover or obstruct any PEC pole identification tags on the pole. However, Licensee may request PEC to relocate the PEC identification tags at the Licensee’s expense and subject to PEC’s sole discretion. Ground wires may be attached directly to the pole. There shall be forty (40”) inch separation from the top of an electric riser to the highest communication line.
- 6. Identification.** All Licensee’s Communications Facilities, including all cable, shall be identified with tags as required by these specifications and described on drawing 800-001.
- 7. Telecommunication Cables.** All telecommunication cables not owned by PEC shall be attached within the communication space that is located no less than forty inches (40”) below the lowest electrical conductor.
- 8. Communication Worker Safety Zone.** The Communication Worker Safety Zone between Communications Facilities and supply facilities on the same pole extends horizontally out to the boundaries of the climbing space and working space as described in the NESC. The Communication Worker Safety Zone is measured vertically from the level of the closest surface of the Communications Facility to the level of the closest surface of the electrical supply facility. The required clearance of the Communication Worker Safety Zone is measured vertically between the levels of the equipment involved. Standoff bracket installation will not be allowed to meet the 40-inch clearance requirement. No mounting brackets are permitted in the Communication Worker Safety Zone.



9. **Platforms.** Communications Facilities/Attachments must dip underground one pole before and one pole after on all PEC platforms for step-down and voltage regulator banks.

10. **Power Supply.** Licensee shall not install a power supply on any PEC pole on which underground services, capacitor banks, sectionalizing equipment, voltage-regulators, or other PEC equipment is already installed.

11. **Disconnect or Breaker.** No electrical service connection to a communication power supply shall be made or installed by Licensee until PEC has completed an inspection of an approved fused service disconnect or circuit breaker installed by the Licensee.

12. **Relocating Attachments.** When moving an attachment from one location to another, Licensee shall immediately treat all affected holes left in the pole with industry acceptable wood preservative and plug all holes left by such attachments.

13. **Bolts.** No bolt used by Licensee to attach its Communications Facilities shall extend or project more than one inch (1") beyond its nut.

14. **Workmanship.** Licensee shall install and maintain any and all of its Communications Facilities in a neat and workmanlike manner consistent with the maintenance of the overall appearance of the pole as determined by PEC in its sole discretion.

15. **Attachment Arm.** All wireline attachments shall be installed without the use of Attachment Arms, extension arms, stand-off brackets or similar hardware, unless otherwise approved in advance by PEC for each pole. The proposed use of Attachment Arms, extension arms, stand-off brackets or similar hardware by a Licensee shall be identified on the Application for Permit.

16. **Overhead Streetlight Clearances.** Any wireline attachment proposing to attach below the overhead streetlight fixture, shall be installed 12" minimum below the bottom mast arm or drip loop of the overhead streetlight supply conductor, whichever is lowest. If proposing to attach 4" above the top mast arm, the overhead streetlight supply conductor shall be covered with a non-metallic conduit. See drawing 800-010.

17. **Wireless Attachments.**

- a) **FCC OET Bulletin 65 (Maximum Permissible RF Exposure):** A Wireless Provider shall comply with all provisions and guidelines of the FCC OET Bulletin 65, as may be amended periodically. As part of the Pre-Certified Equipment process, and prior to PEC granting any permit to attach, a Wireless Provider shall submit a report



certifying FCC OET 65 compliance for each applied or licensed Wireless Installation location. The report can be in the format of the Wireless Provider's regulatory department standards. The following elements, at a minimum, must be contained within the report:

- (i) A statement of compliance (or non-compliance);
- (ii) Date of the report;
- (iii) Date of statement of compliance;
- (iv) PEC Pole Number proposed for the wireless installation;
- (v) Licensee's site or identification number for the wireless installation;
- (vi) GPS coordinates of the proposed pole for the wireless installation;
- (vii) Calculation of RF power at the transmitter or remote radio heads;
- (viii) Calculation of RF power at the Antennas; and
- (ix) Location of the applicable signage with above ground level height listed.
- (x) Wireless Equipment Specifications – Data sheets for all wireless equipment that make up the wireless installation setup. The data sheets shall include, at a minimum, voltage requirements, ERP, EHF, licensed and unlicensed frequencies, duty cycle, and FCC license reference copy. This information shall be organized based on the four components of the wireless installation
  - Antennas, including brackets, cables, conduit, and enclosures.
  - Wireless equipment electronics, including remote radio heads, transmitters, transceivers, receivers, related electronic components, communications cables, power supply wires, conduit, and enclosures.
  - Backhaul equipment, identify whether backhaul will be provided by wireless Antenna (including all applicable components) or by landline (fiber/other), including the type of Communications Facility providing backhaul, name of communications provider, conduit, and type of network interface device or other component marking the point of demarcation with the communications provider.



- Power supply, including the type of service disconnect switch used to shut off power and mark the point of delivery for electricity.

(xi) Wireless Interference Analysis Report

- The Wireless Provider must provide contact information for wireless interference analysis follow up and for coordination when operational circumstances require a power down of wireless equipment. Provide the following contact information:
  - Name
  - Phone Number(s)
  - Email
  - Company Name
  - Company Address

(xii) Interference Analysis – Report should include any calculated interference that could be produced via interaction with PEC licensed frequencies.

- C to I based study should be performed if carrier frequencies are adjacent or co-channel to PEC frequencies.
- Study should list results in dB and can be done on service area basis.

(xiii) Intermodulation Analysis – The Intermodulation Analysis Report (the “Report”) must include a clearly written interference analysis of the Wireless Provider’s licensed and unlicensed frequencies against the target frequencies provided by PEC.

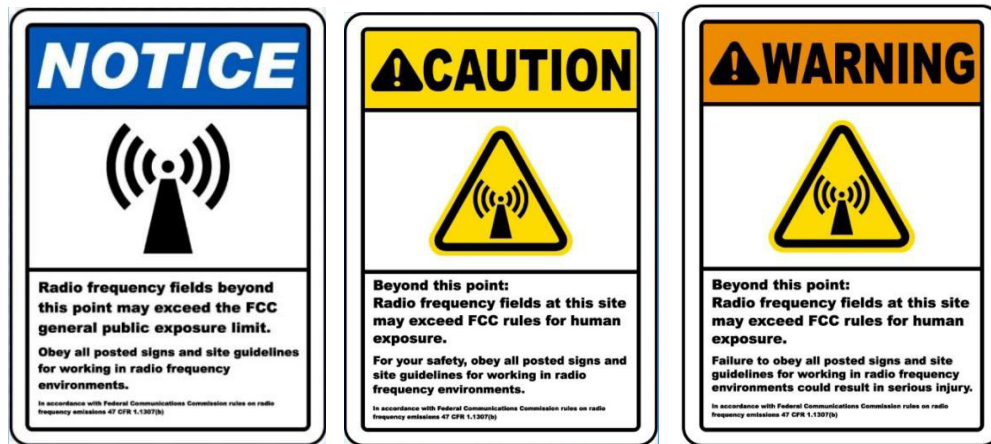
- Assume minimum range of collocation to maximum range of source to be two-thousand (2000’) feet.
- If planned wireless equipment is to be within one mile of another FCC licensed transmitter, the Report shall include those additional frequencies.
- The Report shall also include any known interference that could be produced via interaction with other FCC licensees in the referenced Application band of frequencies.



- For the purpose of this item, assumed minimum range of collocation to maximum range of source to be two-thousand feet (2000’).
- Resulting report shall show non-interference against the target PEC frequencies to the seventh order.

PEC reserves the right not to accept Reports that PEC in its reasonable discretion deem incomplete, contradictory, and/or erroneous. All statements of compliance must be signed by an authorized and responsible employee of the Wireless Provider or the FCC licensee that owns the licensed frequencies subject to compliance if the Wireless Provider is not the same party (the “Licensed Party”). The Wireless Provider or licensed party is required to resubmit an annual Report and Statement of Compliance for each permitted wireless installation location. The annual Report will be due on the anniversary date for annual Reports set by PEC.

- b) **RF Signage Requirements.** Approved signage compliant with FCC OET Bulletin 65 shall be posted at each pole or streetlight pole hosting a wireless installation, and/or at multiple locations on such pole structure as required by FCC OET 65. The RF signage shall comply with the appropriate and predetermined exposure level applicable to: “General Public”, “Occupational Worker”, and “Specialized Worker” as shown in the figure below.



**General  
Public**

**Occupational  
Worker**

**Specialized  
Worker**



- c) **Antenna.** All Antennas shall be located in a defined Antenna Area as provided in the illustrations on drawings 800-011 through 800-050. The Antenna Area is not exclusive for the Wireless Provider's sole use, but shall be subject to PEC's use and operation of the pole. Antennas shall be bracketed onto the poles or streetlight poles, excluding pole top Antennas poles.
- (i) Mid-Pole Antenna Type, Size and Quantity – Antennas can be of a panel or omnidirectional type. Panel Antennas cannot exceed twelve inches (12") in height (vertical length), twelve inches (12") in width, or eight inches (8") in depth. Omni directional Antennas cannot exceed twelve inches (12") in height (vertical length), twelve inches (12") in width (depth and width are the same measurement of an omnidirectional Antenna). There can only be one (1) Antenna cylinder enclosure for a Mid-Pole Antenna installation. Additional consideration for Antenna height is specified on drawings 800-011 through 800-030.
  - (ii) Pole-Top Antenna Type, Size and Quantity – Antennas can be of a panel and/or omnidirectional type. Panel Antennas cannot exceed thirty-six inches (36") in height (vertical length), twelve inches (12") in width, or eight inches (8") in depth. Omni directional Antennas cannot exceed thirty-six inches (36") in height (vertical length), twelve inches (12") in width (depth and width are the same measurement of an omnidirectional Antenna). There can only be four (4) Antenna cylinder enclosures for a pole-top Antenna installation. Additional consideration for Antenna height is specified on drawings 800-011 through 800-030.
  - (iii) Licensed Frequency - Antennas shall only transmit or receive frequencies that are licensed by the FCC to the Wireless Provider. No third-party agreements are accepted for non-licensed Wireless Providers to transmit or receive frequencies of another FCC-licensed entity. Frequency bands listed by the FCC to be unlicensed, and available for open use, may be transmitted or received, as long as they do not cause interference with another Attaching Entity, FCC license entity, or PEC.
  - (iv) Attachment Position and Defined Space



- Antenna clearances in any direction from supply and other communications lines shall be in compliance with this Appendix C 17(c) (Antenna), Appendix C 17(k) (Mid-Span Installations), Appendix C 17(l) (Pole Top Space Installations), Appendix C 17(m) (Mid-Pole Installations) and the drawings provided. In no circumstance shall an Antenna clearance be less than specified by the NESC.
  - A stand-off bracket, supplemental mounting pipe, and related hardware cannot be greater than twelve inches (12”) in height (vertically) and six inches (6”) in length (horizontally). Antenna Area cannot occupy more than three (3) individual quarters of any pole’s cross-section. Additional Antenna accessory equipment may be installed within the limitations of the defined Antenna Area. Antenna accessory equipment cannot interfere with the operation or use of the applicable pole by other Licensees or PEC. Antenna accessory equipment can be affixed to the Licensee’s stand-off or Antennas. All Antenna accessory equipment must be listed on the Application at the time of submittal and included in any post-installation inventory.
- (v) Emergency RF/Power Shut-Off – PEC shall open the service disconnect switch prior to performing any work on PEC pole in order to de-energize the Antenna. Any backup power shall also be disconnected when the service disconnect switch is operated.
- d) Riser Cable. Riser cables are used to connect Antennas and Antenna accessory equipment, backhaul services, and power lines to wireless equipment components. All riser cables shall be in conduit with top side weather heads. Power cables transporting AC power shall be in separate conduit from DC power or telecommunications cables. All conduit shall be schedule 40 rigid steel conduit (RSC) finished galvanized and painted to match the pole. All metallic conduit shall be bonded to ground at the Antenna Area ground point and at the wireless equipment area ground point.
- (i) Type, Size and Quantity - Cables can be coaxial, fiber optic, solid or stranded metallic conductor. Hybrid cables, cable with two or more cable types enclosed in one sheath, are permitted. No exposed riser cables or riser cables not in



conduit. Cables shall not exceed the nominal size of 5/8 inch for coaxial or fiber optic, or 2 AWG for solid or stranded metallic conductor.

- (ii) Attachment Position and Defined Space - Riser cables must be affixed to the structure with a two (2) hole pipe straps (minimum of 3 required to support the service raceway). No exposed riser cable slack to be stored externally. All slack to be stored in junction boxes or wireless equipment cabinets within the wireless equipment area.
- e) **Radio Equipment.** Radio equipment can be located in Remote Radio Heads (RRHs), housed in the wireless equipment cabinet, or even within the Antenna itself. The most common application of radio equipment is in the RRH. Radio equipment can transmit or receive.
  - (i) Type, Size and Quantity - Radio equipment is not limited to size or quantity.
  - (ii) Attachment Position and Defined Space - Radio equipment shall be housed in the wireless equipment cabinet. An RRH shall not be mounted within the Antenna Area or pole top space.
- f) **Wireless Equipment Cabinets and Slab-Mounted Cabinet.** A wireless equipment cabinet or slab-mounted cabinet is a weathertight housing purposed to mount components of the wireless installation. Typical devices housed in a wireless equipment cabinet or slab-mounted cabinet include radio equipment, routers, network interface devices, splice trays, computer electronics, DC power plants, power inverters, circuit breakers, batteries, fans, heat exchangers, and assorted cable jumper interfaces. Wireless installations shall be deployed based on the following two installation designs:
  - (i) Slab-Mounted Equipment Cabinet Installation. A slab-mounted equipment cabinet installation is an available option installation design for wireless installations, provided such installation does not create an obstruction in the public right of way. A slab-mounted equipment cabinet must be at least twenty-five feet (25') from any PEC pole structure, anchor, guy, conduit, or riser as shown on drawings 800-011 through 800-016, and must not exceed the dimension requirements in Chapter 284 of the Texas Local Government Code. Irrespective of statutory requirements, PEC encourages Wireless Providers to reduce the footprint of the slab-mounted equipment cabinet. PEC does not



grant permission for wireless equipment to be located on third-party property. It is the responsibility of the Wireless Provider to secure legal authority to use such private property. Slab-mounted equipment cabinet installations must include provisions for a PEC meter and the service disconnect switch. All such installations must comply with PEC Electric Service Specifications and are subject to review and approval. For slab-mounted equipment cabinet installation, the Antenna will be installed on a PEC pole structure.

(ii) Wireless Equipment Cabinet Installation. A pole-mounted wireless equipment cabinet installation design is an available option for a wireless installation. All wireless equipment shall be installed inside of the wireless equipment cabinet for all pole-mounted installations.

- Color and Dimensions - A wireless equipment cabinet mounted on a PEC pole structure shall match as close as possible the color of the pole structure. The maximum dimension for any wireless equipment cabinet shall not exceed sixty inches (60") in height, twenty-four (24") in width, and twenty-four (24") in depth; and must be bracketed to the pole structure.
- Weight of Equipment, Prohibited Poles - The total weight of any wireless installation for a wireless equipment area cannot exceed two-hundred pounds (200 lbs.). PEC will review the required Property Lease Agreement (PLA) in order to approve the pole structure chosen prior to the installation of all new wireless equipment cabinet to confirm that the structure is suitable for the installation. Wireless equipment cabinets may not be installed on:
  - Junction poles (a pole where the PEC primary electric distribution line runs in three or more directions)
  - Poles that are 60 feet or greater in size
  - Distribution fiberglass or concrete poles
  - Transmission poles
  - Poles with a wireless equipment cabinet already installed by another Attaching Entity



- Poles with cabinets containing controls such as fire alarm, police signal, or traffic signals
  - Poles with capacitor controls, regulator controls, recloser controls, air switch operating handles, or an existing three- phase overhead transformer bank;
  - Poles with single-phase transformers or equipment that is not accessible to mechanized equipment (i.e., a bucket truck)
  - Poles with underground electric or communication riser conduits
  - Pole structures used for guying purposes
- (iii) Markings – Wireless providers shall install 8” x 12” signs or decals made of weather, corrosion, and UV resistant materials easily visible from the ground level. At a minimum, each sign or decal shall indicate the Antenna’s owner/operator’s name, emergency 24-hour contact number, and unique identifier for that Antenna site.
- (iv) Wireless Equipment Installations - Installation of wireless equipment cabinets and wireless equipment area for Distributed Antenna Systems may be located outside the Public Right of Way. PEC does not grant permission for wireless installations to be located on third-party property. It is the responsibility of the Licensee to secure legal authority to use such private property.
- g) Conduit Requirements. Conduits described in this section refer to below ground conduits and transitions to riser cable conduits or wireless equipment cabinets.
- (i) Type, Size and Quantity - Below ground, all horizontal runs shall be schedule 40 PVC or SRD-11 HDPE. Transitions to above ground shall be in schedule 40 RGS conduit with galvanized finish. All coupling points shall be threaded mechanical or solvent-welded and watertight. Conduits cannot exceed a diameter of four inches (4”). No more than four (4) conduits shall be permitted to affix to wireless equipment cabinets or riser cable conduit.
- (ii) Conduit Location - Conduits shall remain twelve inches (12”) from all other wireless equipment below ground facilities. All conduit shall be locatable and the responsibility of the Licensee to locate per Texas law and the regulations of the Damage Prevention Councils of Texas.



- h) **Backhaul Service**. Backhaul service refers to the side of the network that communicates with the core network and not between localized components of the wireless installation installed on a pole structure. Backhaul service can either be wireline or wireless.
- (i) **Wireline Backhaul** - Wireline backhaul service is typically fiber optic, as copper circuits do not provide the necessary bandwidth for data throughput. Copper telephone circuits and coaxial cables can be used for wireline backhaul if bandwidth speeds allow. All provisions of Section IV and Section V of the Standards apply to the installation of wireline backhaul services.
- *Self-Provisioned* - The Wireless Provider may provide its own backhaul service if it has accepted a Pole Attachment Agreement and the Communications Facility. The self-provisioned wire Communications Facility may be existing or proposed. PEC will make best efforts to review both the wire Attachment Application and the Wireless Installation Application concurrently. Applications and all associated documents must have a common reference name for any concurrent Applications to be considered as part of a common project.
  - *Third-Party provided* - A Wireless Provider may contract backhaul service from another Attaching Entity. The third-party provided wire Communications Facility may be existing or proposed. If proposed, the third-party Attaching Entity must have an executed Pole Attachment Agreement and shall submit the Attachment Applications at the same time as the Wireless Installation Application is submitted. PEC will make best efforts to review both the third-party wire Attachment Application and the Wireless Installation Application concurrently, but each Application shall be treated separately for contractual purposes. Applications and all associated documents must have a common reference name for any concurrent Application to be considered as part of a common project.
  - *Type of Backhaul Facility* - Typically, the backhaul facility is a wire Attachment on the same pole structure as the wireless installation. Underground backhaul facilities are permitted when transitioning from any of the following: (1) another PEC pole line; (2) a transportation



crossing; or (3) to an Attaching-Entity-installed pole. Applications with predominately all underground backhaul services will not be approved.

- *Point of Demarcation* – The backhaul network interface device is to be clearly stated on the submitted engineering drawings, as required with the Pre-Certified Equipment form and the Application, with the provider of backhaul services clearly identified.

(ii) **Wireless Backhaul** - The wireless installation has the option to use wireless backhaul services. Any Antenna for wireless backhaul services is counted towards one (1) of the three (3) total cylinder Antenna enclosures allowed on a pole structure. Wireless backhaul service Antennas shall comply with all the specifications listed on drawings provided in this specification.

- *Type, Size and Quantity* - All specifications on drawings and Appendix C 17(c) shall apply. In addition, wireless backhaul Antennas shall have the specific azimuth (accurate to the degree) and the length of the link path (accurate to the tenth of a mile) listed on the submitted drawings required by the Application.
- *Attachment Position and Defined Space* - All specifications in Appendix C 17(c) shall apply.
- *Self-Provisioned* - Self-provisioned wireless backhaul services will be approved by PEC, consistent with the applicable provisions of the Wireless Installation Agreement and these specifications.
- *Third-Party Provided* - Third-party wireless backhaul services are prohibited by PEC.
- *Point of Demarcation* - Wireless backhaul services equipment shall be installed pursuant to the technical requirements of Appendix C 17(c).

i) **Bonding**. It is the policy and practice of PEC to ground all pole structures installed as part of PEC's distribution system and streetlight service. Wireless providers are required to install their own specific ground electrode and ground bond for their wireless installations. All of the following defined wireless equipment components, or Pole appurtenance listed, must be bonded: (1) Antenna(s), (2) Antenna brackets (if applicable), (3) riser conduit(s), (4) remote radio head(s) (RRH(s)), and (5)



wireless equipment cabinets. There will be one central point of bonding at the Antenna Area and also at the wireless equipment area (pole or ground mounted). Central points of bonding shall be a ground bar measuring no greater than, four inches (4") high, twelve inches (12") wide, and exactly one-fourth inch ( $\frac{1}{4}$ ") thick. Pole must be connected via #2 AWG solid wire (aluminum, copper, copper-clad aluminum, copper-clad steel) exothermically welded. All connections from wireless components with factory-installed ground posts will be bonded with solid or stranded wire mechanically (or hydraulically) crimped with lugs – the wire shall be aluminum, copper-clad aluminum, copper, copper-clad steel and between #2 AWG to #6 AWG in size. Lugs on the ground bar side will have two lug holes and two mechanical fasteners. A fastener bolt nominal thread size (or factory grounding post) for bonding shall be no smaller than one- sixteenth inch ( $\frac{1}{16}$ ") diameter than the lug hole or ground bar hole. The closest ground bar to grade on any pole structure will be bonded via #2 AWG solid wire exothermically welded to ground rod. Ground rods shall be steel or copper-clad steel,  $\frac{5}{8}$  to  $\frac{3}{4}$  inches in diameter, and driven at least eight feet (8') below grade in undisturbed soil. All mechanical connections shall be "tool tight" with no play or slack if manipulated by hand. All metal material bonded must be non-reactive to inhibit corrosion.

- (i) Existing Ground Present - An Application for any wireless installation shall note if a PEC ground is present or not at the specific pole structure location proposed for the wireless installation. When an existing PEC ground and/or an Attaching Entity ground is present, the Wireless Installation ground bonding electrode shall be bonded to existing ground rod(s) at a minimum of twelve inches (12") below grade. The ground wire size will be #2 AWG and exothermically bonded on each ground rod. All wireless installation ground rods shall be at a minimum twelve inches (12") from other ground rods and/or anchors.
- (ii) No Sharing of PEC Grounding Facilities - Wireless installations shall not bond to existing PEC Facilities for grounding unless specifically approved in writing by PEC.
- (iii) No Ground Present – An Application for any wireless installation shall note if a PEC ground is present or not at the specific pole location proposed for the



wireless installation. If no ground is present, adding a PEC ground may be an applicable task for any PEC-approved Make-Ready Work.

j) Electric Service.

- (i) Equipment Subject to Electric Service - Wireless equipment requiring electrical service shall follow all applicable codes and regulations, including the National Electric Code, as well as obtaining applicable local building and/or electrical permits.
- (ii) Compliance with PEC's Electric Service Specifications – The Wireless provider shall comply with all applicable requirements provided in the PEC Electric Service Specifications for its Wireless Installation.
  - *Application for Electric Service* – The Licensee must make an Application for Electrical Service from PEC as required by PEC's Tariff and Business Rules related to electric service. The Electric Service Application is not part of the Application for the wireless installation permit. Electric Service Applications shall be received and processed by PEC Member Relations not by PEC Pole Contacts. Completed Application may be submitted by either U.S. mail, electronically by signing up for PEC's SmartHub Application <https://pec.smarthub.coop/Login.html#registration>; and select "Contact Us" from the main navigation menu, or other means mutually agreeable by PEC and the Wireless Provider.
  - *Electric Metering* – Electric services for wireless installations may be metered. PEC's responsibility for the delivery of electricity to a wireless installation ends at the "point of delivery" as that term is defined in PEC Electric Service Specifications. The "point of delivery" for wireless installations shall be as follows:
    - *Slab-Mounted Equipment Cabinet* - For wireless installations deployed using the slab-mounted equipment cabinet design, the "point of delivery" shall be at the line side of the meter socket located in the cabinet as provided in PEC's Electric Service Specifications.
    - *Wireless Equipment Cabinet* – For wireless installations deployed using the pole-mounted wireless equipment cabinet design, the "point



of delivery” shall be at the junction (service head) as provided in PEC’s Electric Service Specifications.

- Technical Drawings of Equipment Subject to Electric Service – Technical drawings identifying all electrical specifications and requirements for the wireless installation shall be provided to PEC as part of the pre-certified equipment process, and shall accompany every Application for a Wireless Installation.
  - Backup Power – Backup power devices are not allowed.
- k) **Mid-Span Installations.** All Mid-Span Installations shall be no closer than thirty-six inches (36”) or no further than seventy-two inches (72”) from any PEC pole as shown on drawings.
- l) **Pole Top Space Installations.** Any Antenna installation in the pole top space portion of a PEC pole structure must be on a wood or steel pole, and the engineering and installation of such shall be part of the Make-Ready Work. All wood or steel pole structures must be approved by PEC. Pole top Antenna Installations shall comply with the following requirements:
- (i) Any Antenna in the pole top space must not exceed thirty-six (36”) in height (vertical length) and must meet the sixty inches (60”) clearance requirement from the closest electrical conductor. All other specifications for an Antenna in Appendix C 17(c). shall apply. Additional specifications and details for round-sectored Antenna designs are provided on drawings
  - (ii) U-Guard must be used to cover the cables which run from the pole top Antenna to the wireless equipment cabinet and must be installed opposite of “B” phase on the pole structure.
  - (iii) PEC shall install a ten foot (10’) cross arm on all pole top Antenna installation designs.
- m) **Mid-Pole Installations.** Any Antenna installation in the mid-pole portion of a PEC pole structure must be on a wood or steel pole, and the engineering and installation of such shall be part of the Make-Ready Work. All wood or steel pole structures must be approved by PEC. Mid-pole Antenna installations shall comply with the following requirements:



- (i) Any Antenna in the mid-pole section of the pole must not exceed twelve inches (12") in height (vertical length), all other specifications for an Antenna in Appendix C.17(c) shall apply. Additional specification and details for round-sectored Antenna designs are provided in drawings provided.
  - (ii) U-Guard must be used to cover the cables which run from the mid- pole Antenna to a pole-mounted wireless equipment cabinet.
- n) **Mock-Up Installations**. Prior to any submission of an Application for a Wireless Installation, a Wireless Provider shall coordinate the mock-up installation of the proposed wireless installation at PEC's training yard or any other location designated by PEC. The Wireless Provider shall schedule the mock-up demonstration with PEC. The mock-up installation shall be a realistic representation of how the wireless installation will be installed in public right of way. The following activities will be accomplished by a successful mock-up installation:
- (i) Compliance with Applicable Engineering Standards – The mock-up installation shall be constructed and inspected for compliance with all Applicable Engineering Standards and drawings provided.
  - (ii) Safety Training – The mock-up installation will be used for "on site" and/or "in class" safety training of PEC employees regarding the specifications of the wireless installation and any radio frequency occupational training related to working in close proximity to the Antenna devices. This content shall be incorporated into the Safety Briefing required by Section III. In addition, the Wireless Provider installing a pole top Antenna must use an electrically qualified contractor approved by PEC to perform all work in the Electrical Space on the pole.
  - (iii) Meter Installation – The mock-up display may include the installation of a slab-mounted equipment cabinet installation, or a pole-mounted wireless equipment cabinet installation, both of which may include a meter and service disconnect switch connected to the wireless installation in compliance with PEC's Electric Service Specifications.
  - (iv) Pole Use Measurement – Once PEC certifies that the mock-up installation is fully compliant with all the requirements of Appendix C 17 and the drawings provided, PEC will measure and document the number of feet that the wireless



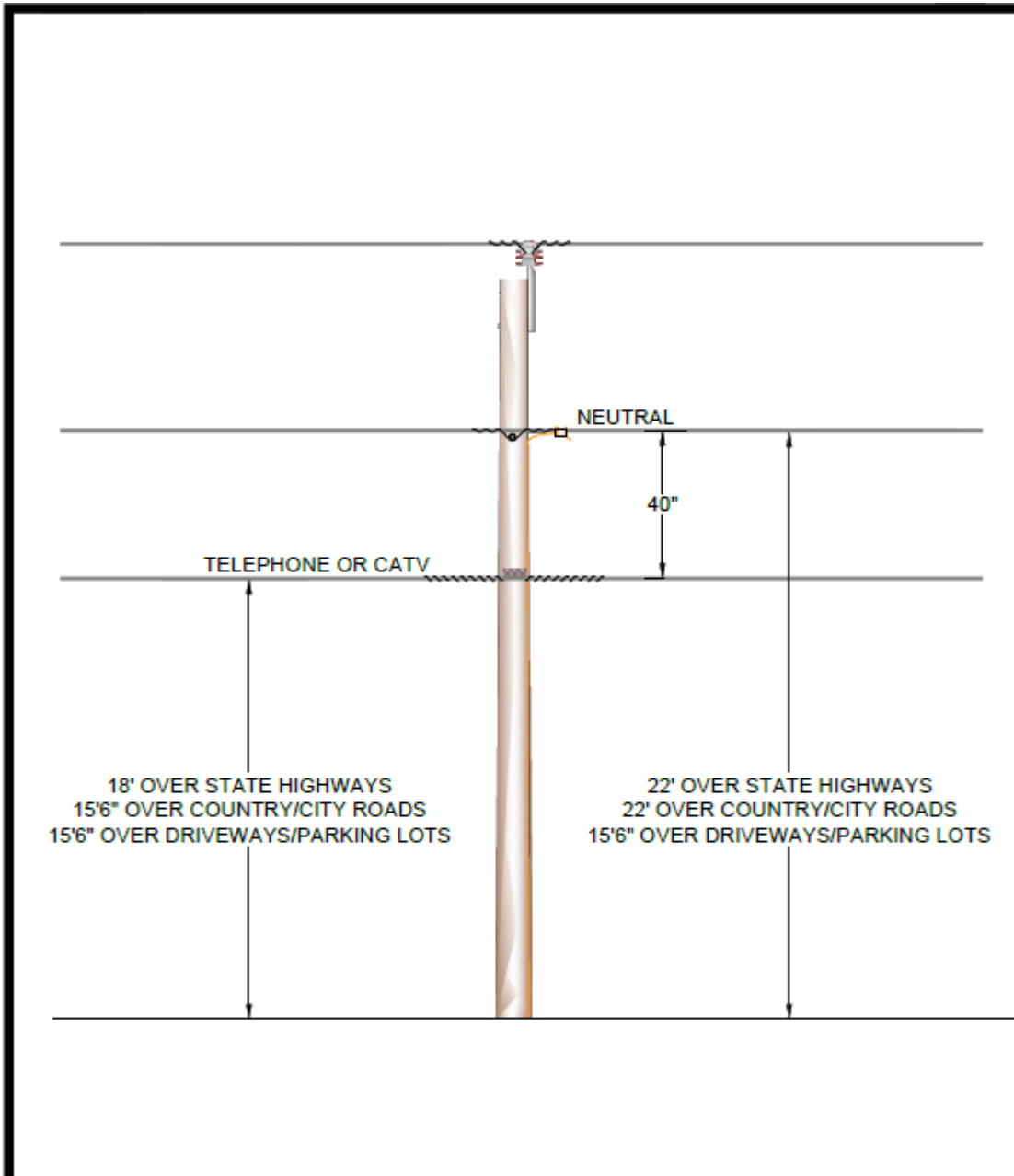
installation covers on the pole. This measurement will be used for the purpose of determining the annual Wireless Attachment Rental Rate for all wireless installations of the same configuration.

- (v) Approval of Pre-Certification of Wireless Equipment Form – Upon completion of the pre-certification process, PEC will approve the Pre-Certification of Wireless Equipment Form which will authorize the Wireless Provider to begin submitting Applications for the same pre-certified wireless installation configuration. Should the Wireless Provider at any time wish to upgrade wireless equipment that will substantially change the pre-certified wireless installation configuration, or deploy new wireless equipment technology under a different wireless installation configuration, the Wireless Provider shall coordinate a new mock-up installation to pre-certify the alternative wireless installation configuration. PEC will not accept Applications for an alternative wireless installation configuration that has not been pre-certified.
- o) **PEC Work on a Pole.** PEC shall de-energize wireless equipment prior to performing any work on a pole structure with twenty-four (24) hours' notice to the Wireless Provider. Such advance notice may be provided by telephone or email.



### D. Attachment Clearance Requirements

#### D1: Clearance No Attachments

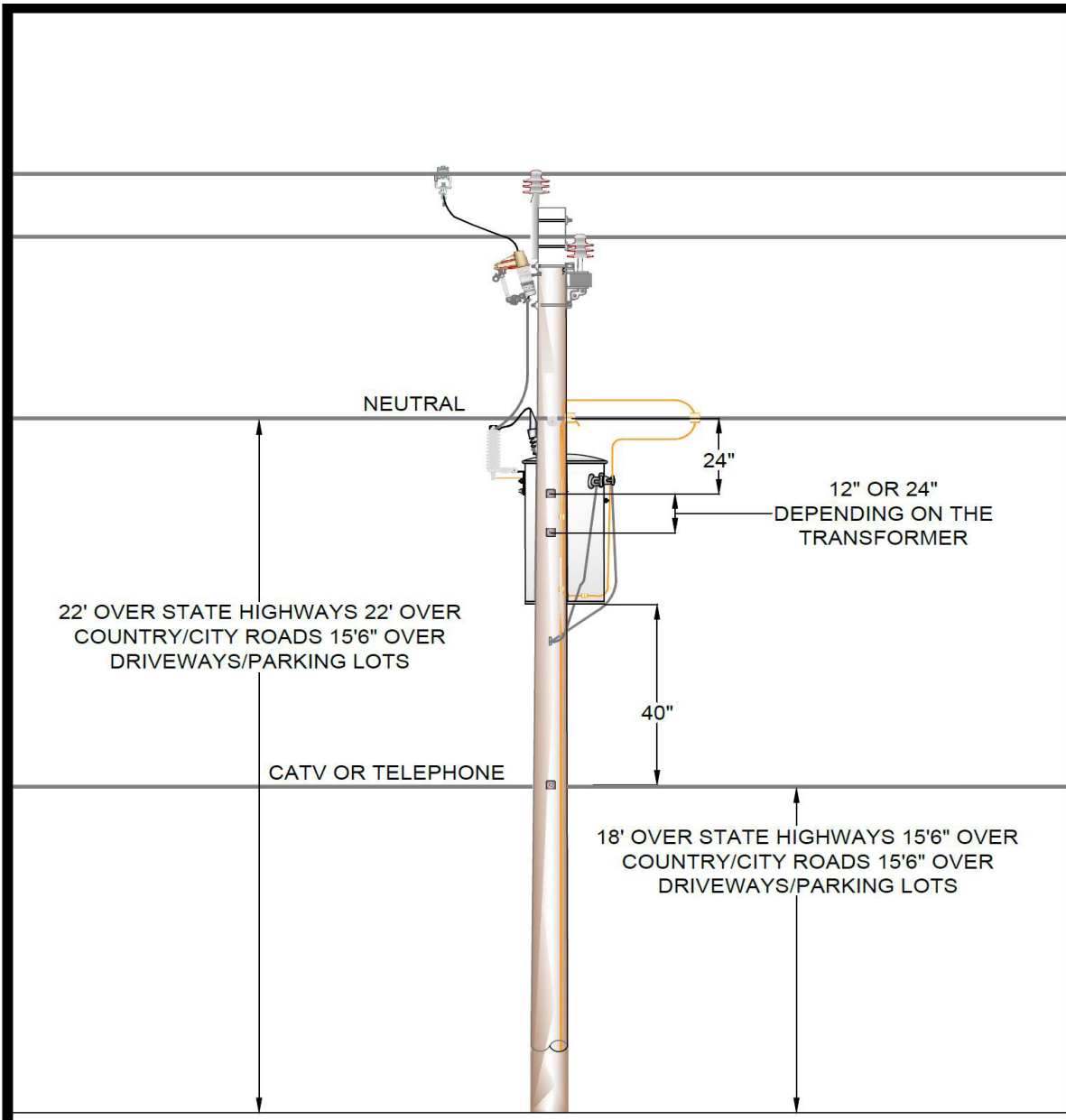


REV | A | DATE | 12/28/2018 | REVISION | ISSUE FOR CONSTRUCTION | BY | RWC | CHK | EJD | APR | MMG

	CONSTRUCTION ASSEMBLY UNIT			CLEARANCE NO ATTACHEMENTS	
				PAGE 1 OF 7	
	drawn:	approved:	date:	800-002	
RWC	MMG	12/28/2018			



### D2: Clearance Inline Transformer No Service



REV	A	DATE	12/28/2018	REVISION	ISSUE FOR CONSTRUCTION	BY	RWC	CHK	EJD	APR	MMG
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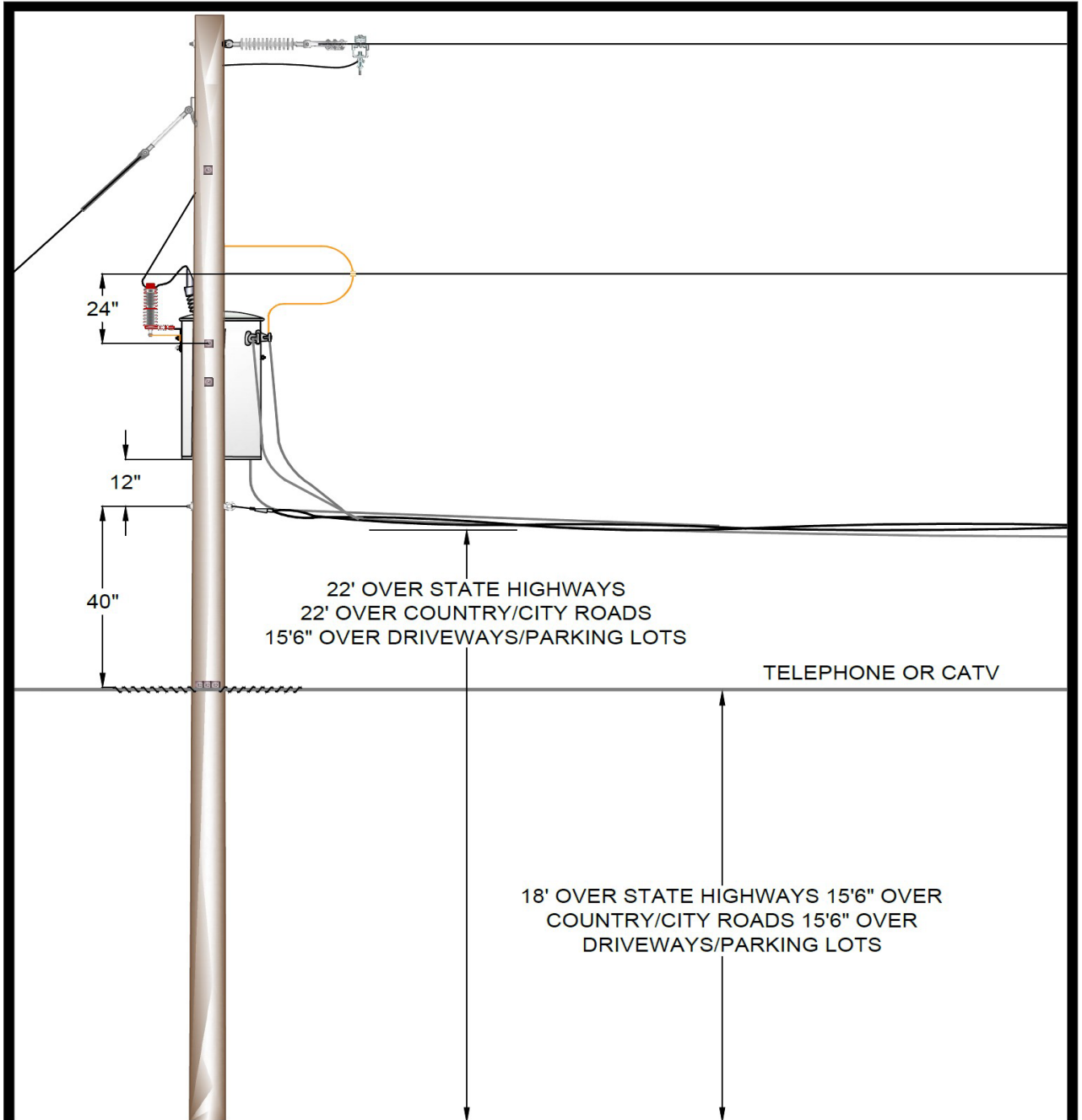
CONSTRUCTION  
ASSEMBLY UNIT

CLEARANCE INLINE TRANSFORMER  
NO SERVICE  
PAGE 2 OF 7

drawn:	approved:	date:	800-003
RWC	MMG	12/28/2018	



### D3: Clearance Dead End Transformer with Service



REV	A	DATE	12/28/2018	REVISION	ISSUE FOR CONSTRUCTION	BY	RWC	CHK	EJD	APR	MMG
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CONSTRUCTION  
ASSEMBLY UNIT

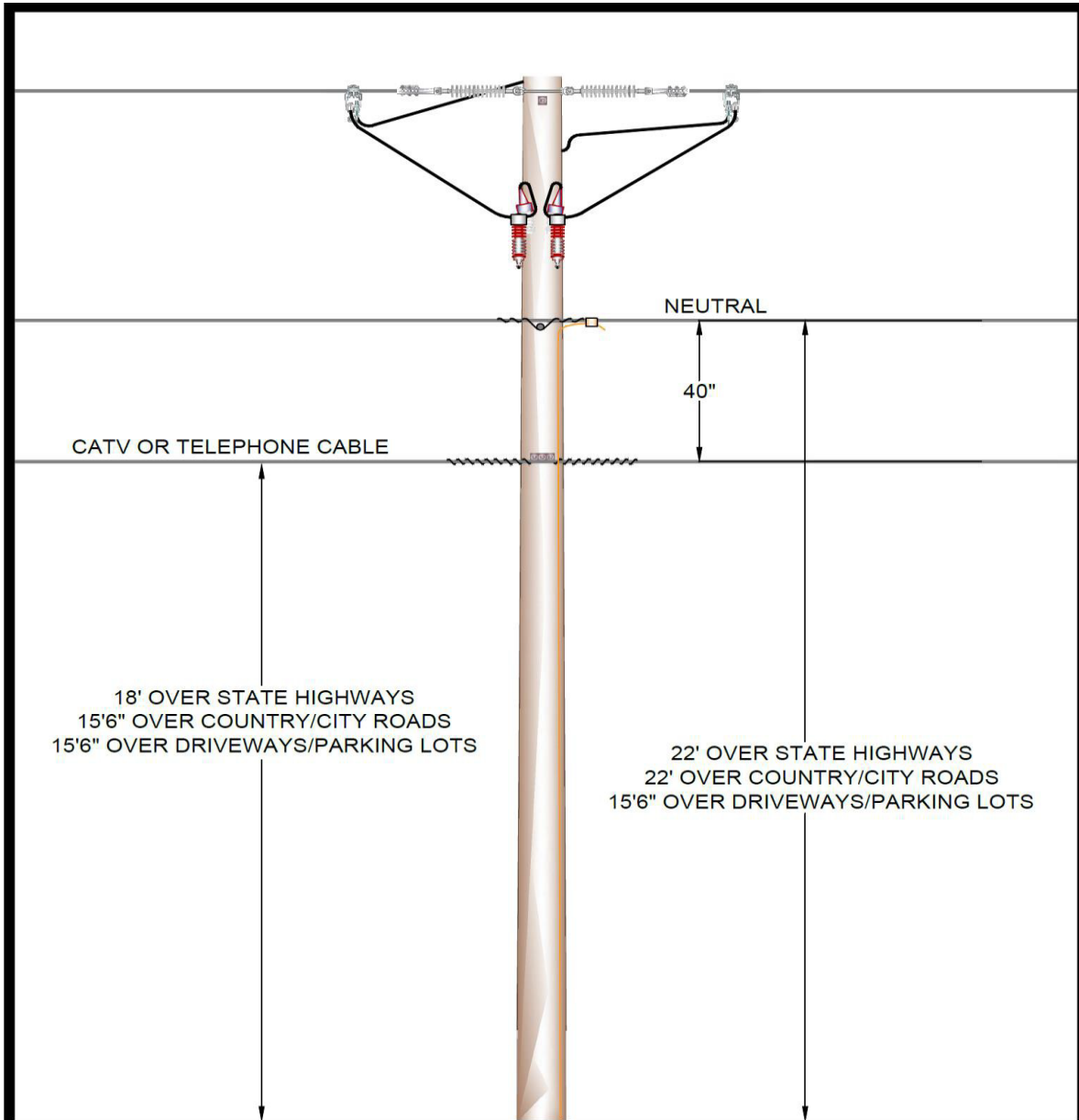
CLEARANCE DEAD END TRANSFORMER  
WITH SERVICE  
PAGE 3 OF 7

drawn:	approved:	date:
RWC	MMG	12/28/2018

800-004



### D4: Clearance on Recloser



REV   A	DATE   12/28/2018	REVISION   ISSUE FOR CONSTRUCTION	BY   RWC   CHK   EJD   APR   MMG
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CONSTRUCTION  
ASSEMBLY UNIT

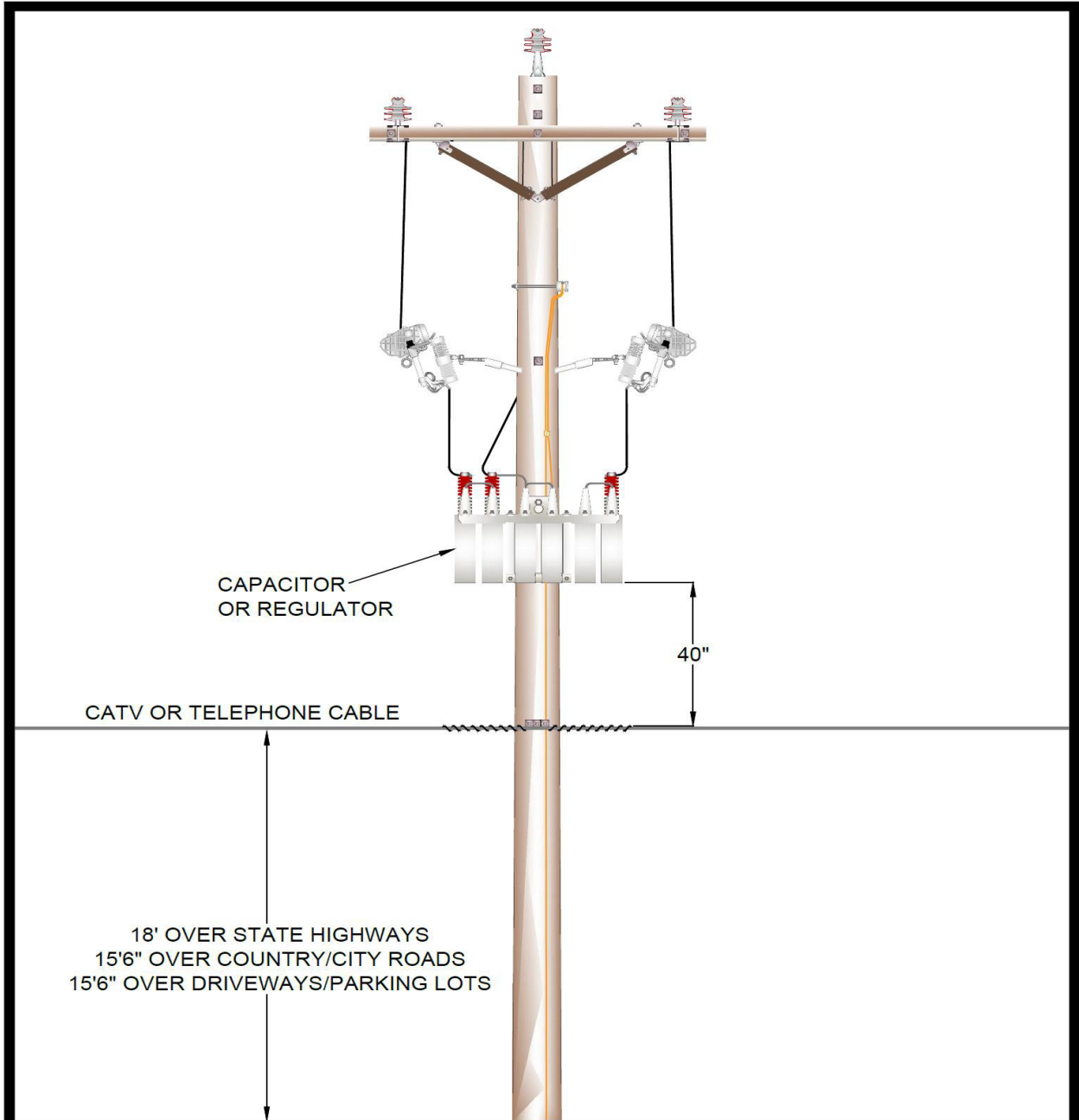
#### CLEARANCE ON RECLOSER

PAGE 4 OF 7

drawn:	approved:	date:	800-005
RWC	MMG	12/28/2018	



### D5: Clearance Capacitor or Regulator



REV	A	DATE	12/28/2018	REVISION	ISSUE FOR CONSTRUCTION	BY	RWC	CHK	EJD	APR	MMG
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CONSTRUCTION  
ASSEMBLY UNIT

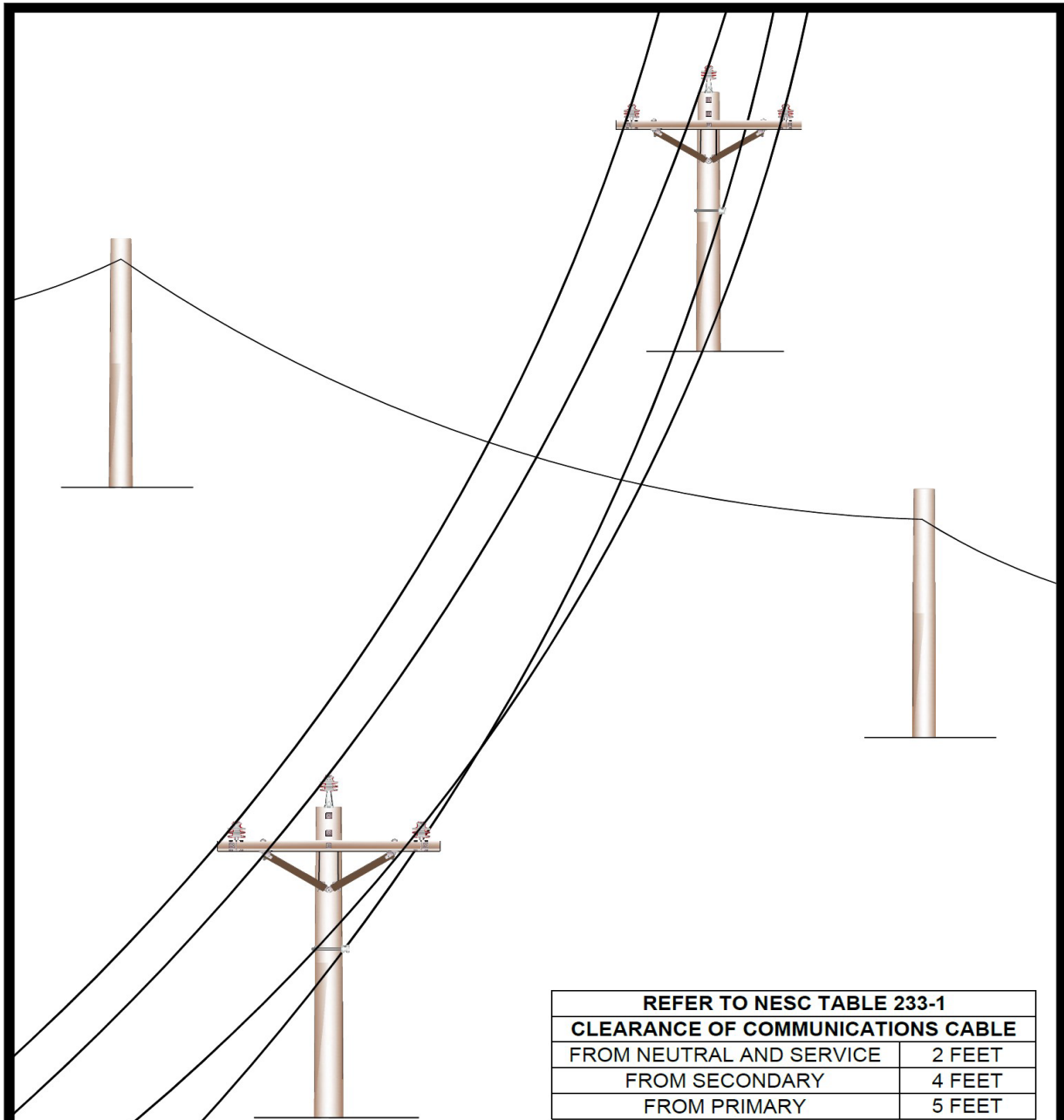
CLEARANCE CAPACITOR OR REGULATOR

PAGE 5 OF 7

drawn:	approved:	date:	800-006
RWC	MMG	12/28/2018	



### D6: Clearance between Electric and Communications on Different Supporting Structures



REV | A | DATE | 12/28/2018 | REVISION | ISSUE FOR CONSTRUCTION | BY | RWC | CHK | EJD | APR | MMG



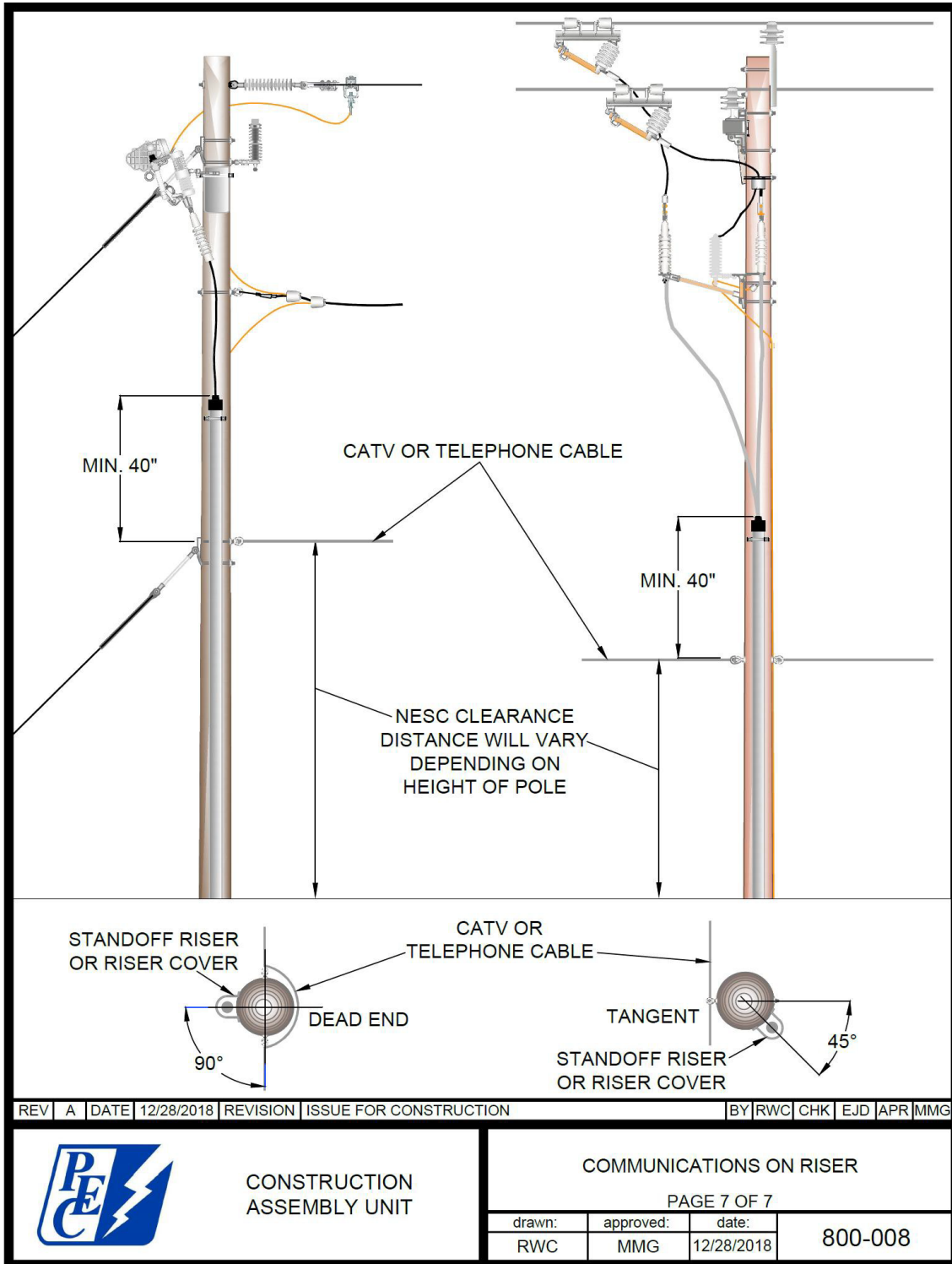
CONSTRUCTION  
ASSEMBLY UNIT

CLEARANCE BETWEEN ELECTRIC AND  
COMMUNICATIONS CABLE ON DIFFERENT  
SUPPORTING STRUCTURES  
PAGE 6 OF 7

drawn:	approved:	date:	800-007
RWC	MMG	12/28/2018	

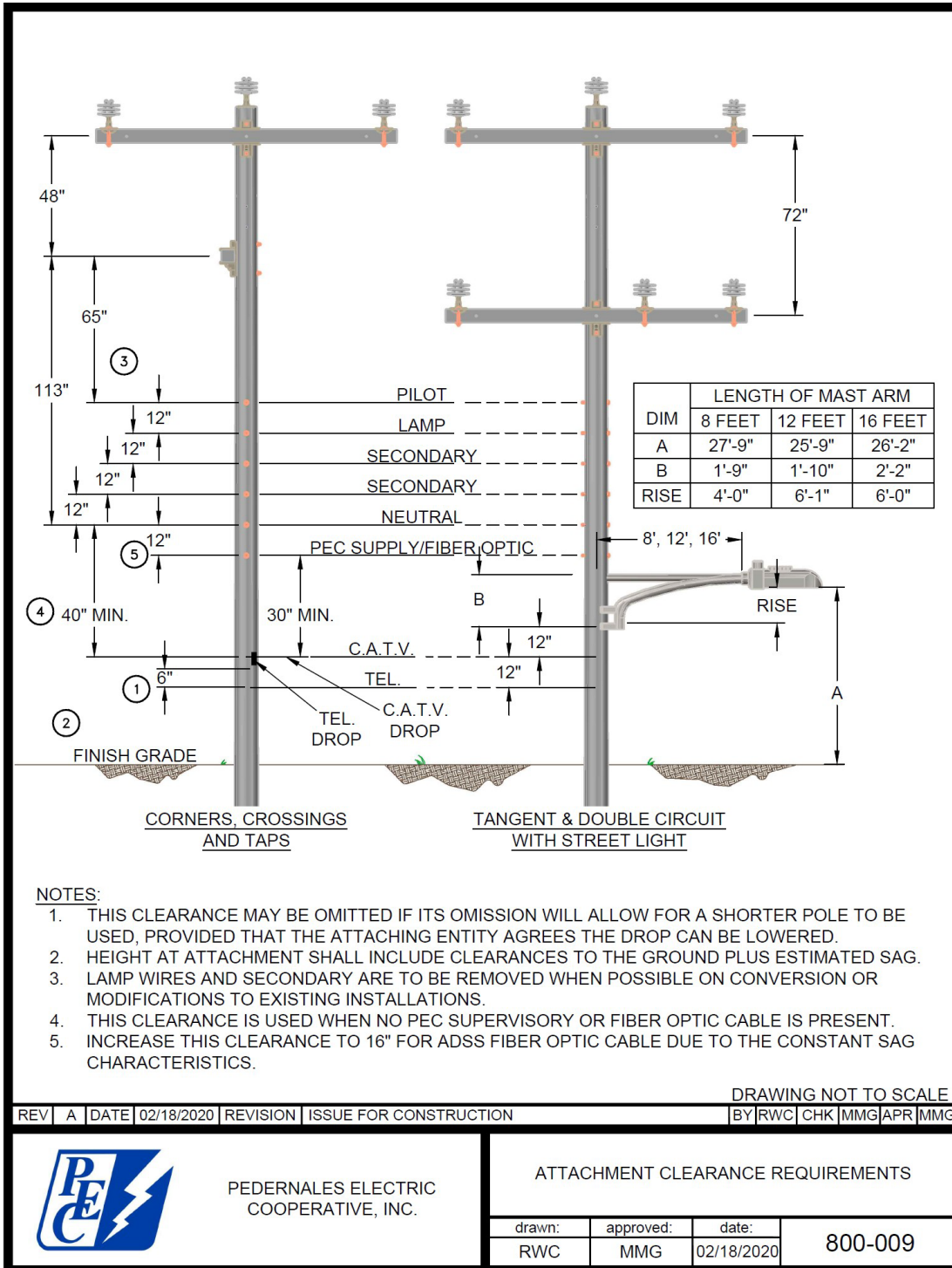


### D7: Communications on Riser





## D8: Attachment Clearance Requirements





## E. PEC Pole Loading Requirements

It is the determination of PEC that pole attachments can have a significant wind loading and stress effect on a pole and can cause overloading. Therefore, nothing should be attached to a pole that is not engineered to be there in advance.

1. **PLA Requirements.** PEC will perform a PLA study pursuant to this Appendix E at Licensee's expense.
2. **Pole Loading Parameters.** PLA is to be performed in accordance with the requirements of the current version of the National Electric Safety Code (NESC). PEC PLA Grade Requirements shall be as follows:
  - a) *Single Circuit:* NESC Grade C unless required to be Grade B by the current version of the NESC.
  - b) *Double Circuit:* NESC Grade C unless required to be Grade B by the current version of the NESC. PEC may require Grade B design at "critical" double circuit areas, as identified by PEC.
  - c) *Wireless Installations:* NESC Grade B is required for any Pole utilized for a pole-mounted equipment cabinet Wireless Installation.
3. **Required Conditions for PLA.** PEC will require PLA for the following conditions:
  - a) Poles with angles greater than 10° (guyed & un-guyed) - single & double circuit
  - b) Poles with primary spans greater than 200 feet
  - c) All un-guyed poles with "break-offs" or 3 phase primary breakoffs only
  - d) All PEC dead-end poles
  - e) All Poles with PEC 2 & 3 transformer banks, reclosers, and capacitor banks
  - f) All Poles less than Class 3 for which 3-phase electric distribution is installed
  - g) All Poles with five (5) or more Attachments, other than Mid-Span Installations, and primary, secondary, and Neutral attachments
  - h) All Poles for which a Wireless Installation is requested.



- i) Any critical Pole identified by PEC not specified in categories above, up to ten percent (10%) of total Poles per Application
- j) If Overlashing and wireline Attachments (excluding the Mid-Span Installation unit) exceeds a combined total of three and one-half inches (3.5") in diameter

**4. Reserved Capacity for Proposed Pole Change Outs.** PEC shall require Reserved Capacity for any new or replaced Pole as follows:

- a) *Single Circuit*: five percent (5%)
- b) *Double Circuit*: fifteen percent (15%)
- c) *Hollow composite Pole*: fifteen percent (15%)

**5. Pole Loading Analysis Time Limitations.** PLA analysis shall be valid for a time period of no longer than six (6) months from the time of Application submission. After this six (6) month period, a new PLA analysis will be required.

**6. Exceptions to PLA Requirements.** PEC will not require PLA for the following conditions:

- a) When Overlashing a 144-strand or smaller diameter and weight fiber optic or other cable
- b) When placing a fiber optic cable in an existing aerial inner duct



## F. PEC Schedule of Rates, Fees, and Charges

1. **Application Processing, Engineering, and Field Inspection Fees.** The following chart represents Application, engineering, and field inspection fees charged by OSMOSE and can be accessed on their website at <https://osmose360.osmose.com>

Item	Deliverable	Description of Deliverable Work	Phase / Time Frame	Compensation Description	Contract Rate		
					Labor	Vehicle / Other	
Back-Office" Engineering	A.	Initial Application Review and Invoicing & Billing of Licensee	<ul style="list-style-type: none"> <li>•Perform initial review following receipt of Application from Licensee. This review is required to verify that the submitted Application is complete and has been submitted in compliance with the PEC Pole Attachment Standards. (<i>Applications may contain up to 25 Poles for wire Attachments.</i>)</li> <li>•Prepare monthly invoice and documentation for work undertaken for each Licensee.</li> <li>•Submit to PEC for review.</li> <li>•Following PEC approval, submit to Licensees.</li> <li>•Prepare monthly A/R report for PEC.</li> </ul>	Process Applications within the time-lines provided in the Pole Attachment Standards.	Unit Price – Price per Application Submitted	\$154.50 per submitted Application	N/A
	B.	Pole Loading Analysis (PLA)	<ul style="list-style-type: none"> <li>•Perform PLA engineering on Poles as outlined in section VI.E of the Standards.</li> <li>•PLA required on all wireless Antenna applications</li> </ul>	Process Applications within the time-lines provided in the Pole Attachment Standards.	Unit Price – Price per Pole	\$41.20 per # of Poles requiring PLA in Application per Standards	N/A
	C.	Make-Ready Design Simple (Communication and Power Rearrangements)	<ul style="list-style-type: none"> <li>•Produce Make-Ready Engineering design documents in PEC's GIS system for Licensees.</li> <li>•Produce Make-Ready Electrical Construction cost estimates and submit to Licensee for approval.</li> <li>-Produce Construction Prints</li> </ul>	Process Applications within the time-lines provided in the Pole Attachment Standards.	Unit Price – Price per Pole requiring Simple Make-Ready Engineering	\$41.20 per # of Poles with Make-Ready Rearrangements required per Standards	N/A
	D.	Make-Ready Design Complex (Pole Changeouts)	<ul style="list-style-type: none"> <li>•Produce Make-Ready Engineering design documents in PEC's GIS system for Licensees.</li> <li>•Produce Make-Ready Electrical Construction cost estimates and submit to Licensee for approval.</li> <li>-Produce Construction Prints</li> </ul>	Process Applications within the time-lines provided in the Pole Attachment Standards.	Unit Price – Price per Pole requiring Complex Make-Ready Engineering	\$206 per # of Poles where Make-Ready Engineering Pole Replacement is required	N/A
	E.	Application Close-out	<ul style="list-style-type: none"> <li>•Complete all necessary "As-built" corrections and applicable field measurements and inspection reports are entered into PEC's GIS System.</li> </ul>	Process Applications within the time-lines provided in	Unit Price – Price per Pole Submitted	\$15.45 per total # of Poles	N/A



Pole Attachment Standards

Item	Deliverable	Description of Deliverable Work	Phase / Time Frame	Compensation Description	Contract Rate		
					Labor	Vehicle / Other	
		<ul style="list-style-type: none"> <li>•Ensure all information regarding the Pole and Attachments is accurate and up to date.</li> <li>•Ensure all documentation related to the Application is complete and properly archived.</li> </ul>	the Pole Attachment Standards.		in the Application		
Field Inspection Work	H.	Initial Field Inspection of Application	<ul style="list-style-type: none"> <li>•Perform initial field inspection following receipt of Application from Licensee. This inspection is required to verify that field physical data provided on the Application is accurate. <i>(Applications may contain up to 25 Poles for wire Attachments.)</i></li> </ul>	Perform all field inspections within the time frames provided in the PEC Pole Attachment Standards.	Unit Price – Price per Pole Inspected	\$15.45 per total # of Poles in the Application	\$2.63 / Mile
	J.	Conduct Post-Construction Field Inspections (Power Make-Ready)	<ul style="list-style-type: none"> <li>•Perform Post-Construction Inspection following notice by Electrical Construction entity that all work is complete on an Application. Engineer will verify that with all construction is in compliance with the Applicable Engineering Standards. Data to be gathered at the job site includes identification and measurements of all Attachments.</li> <li>•Prepare Post-Construction Inspection report for PEC and Licensee noting any deficiencies and required corrections.</li> </ul>	Perform all field inspections within the time frames provided in the PEC Pole Attachment Standards.	Unit Price – Price per Pole Inspected	\$20.60 per total # of Poles in the Application	\$2.63 / Mile
		Conduct Post-Construction Field Inspections (Initial)	<ul style="list-style-type: none"> <li>•Perform Post-Construction Inspection following notice by Licensee that all work is complete on an Application. Engineer will verify that with all construction is in compliance with the Applicable Engineering Standards. Data to be gathered at the job site includes identification and measurements of all Attachments.</li> <li>•Prepare Post-Construction Inspection report for PEC and Licensee noting any deficiencies and required corrections.</li> </ul>	Perform all field inspections within the time frames provided in the PEC Pole Attachment Standards.	Unit Price – Price per Pole Inspected	\$20.60 per total # of Poles in the Application	\$2.63 / Mile
	K.	Conduct Post-Construction Field Inspections (Subsequent)	Perform subsequent Post-Construction Inspection following notice by Licensee that all work required to be corrected has been completed. Engineer will verify that with all construction is in compliance with the Applicable Engineering Standards. Data to be gathered at the job site includes identification and measurements of all Attachments (if modified).	Perform all field inspections within the time frames provided in the PEC Pole Attachment Standards.	Unit Price – Price per Pole Inspected	\$26.78 per # of Poles subject to reinspection	\$2.63 / Mile



Pole Attachment Standards

Item	Deliverable	Description of Deliverable Work	Phase / Time Frame	Compensation Description	Contract Rate	
					Labor	Vehicle / Other
		•Prepare Post-Construction Inspection report for PEC and Licensee noting any deficiencies and required corrections.				
L2.		•Mileage (when applicable) will be calculated from the PEC Oak Hill Office Location (9115 Circle Dr Austin, TX 78736)		Per Mile	\$2.63 / Mile	



### Pricing Clarifications

- The pricing is for *January 1, 2022 through December 31, 2022*.
- Pricing will be escalated by the Consumer Price Index (CPI) for price rate adjustments with a minimum increase of 2% and a maximum increase of 3% annually.
- If a CPI rate percentage is negative, the rates would remain unchanged (0% increase) from the previous year. The annual increases will be based on each year's April "Table 3. Consumer Price Index for All Urban Consumers (CPI-U): U.S. city average, special aggregate indexes (Services)".



Other Fees:

**2. Other Fees**

- a) PEC Administrative Fee: \$300 PEC administration fee shall be applied to each application.
- b) PEC Transfer Fee: Transfer fees for Transfers, Removal, Drops, Tangents, Dead Ends, Anchor Placement, Guys and Risers performed by PEC or PEC contractors will be billed back to the attacher at cost, including transportation to the location, plus 10%. Current PEC cost is available upon request. Non-Compliance with Complex Transfer Process Charge: Pursuant to Section IV B8 of the PEC Pole Attachment Standards, PEC shall levy a penalty of \$350 per Non-Compliant Attachment to the Licensee failing to make the Complex Transfer in the required timeframe.
- c) Non-Compliance with Joint Meeting Transfer Charge: Pursuant to Section V B5 of the PEC Pole Attachment Standards, PEC shall levy a penalty of \$350 per day to the non-compliant Wireless Provider that fails to attend and/or fails to complete the transfer or modification of a Wireless Installation within the required Joint Meeting Transfer ten (10) day timeframe. The Penalty shall become automatically effective on the eleventh (11) day following the Joint Meeting Transfer.
- d) Safety Violation Assessment Charge: The Safety Violation Assessment Charge is \$500 per Safety Violation identified per the provisions in Section II D5.
- e) Tracing Line Ownership Charge: In the event any Attachment, Wireless Installation is untagged and PEC must determine the owner's identity to address the repair or maintenance of a PEC Pole, equipment, or facility that PEC cannot undertake absent removal or transfer of said Attachment, Wireless Installation, PEC shall bill the owner of the Attachment, Wireless Installation, for time reasonably undertaken by PEC to determine the identity of the owner of the Attachments, Wireless Installation. The Licensee that owns the untagged Attachment, or Wireless Installation, shall pay PEC the Tracing Line Ownership Fee of \$150.00 for the first hour plus \$100.00 per hour thereafter. Partial hours shall be rounded up. PEC shall bill the Licensee within thirty (30) days of determining the Licensee's identity.



## **G. PEC Wireless Installation Diagrams**

**G1: Mid-Pole - Slab-Mounted Equipment Cabinet**

**G2: Mid-Span - Slab-Mounted Equipment Cabinet**

**G3: Pole Top Space (Round- Sected) - Slab-Mounted Equipment Cabinet**

**G4: Pole Top Space (Round-Sected) with Mid Pole Wireless Backhaul Antenna - Slab-Mounted Equipment Cabinet**

**G5: Overhead Fed Streetlight Pole - Slab-Mounted Equipment Cabinet**

**G6: Overhead Fed Streetlight Pole with Mid Pole Wireless Backhaul Antenna – Slab-Mounted Equipment Cabinet**

**G7: Mid-Pole – Pole Mounted Equipment Cabinet**

**G8: Pole Top Space (Panel)**

**G9: Pole-Top Space (Round-Sected) – Pole Mounted Equipment Cabinet**

**G10: Pole Top Space (Round- Sected) with Mid Pole Wireless Backhaul Antenna – Pole Mounted Equipment Cabinet**

**G11: Pole Top Space (Combo) – Pole Mounted Equipment Cabinet**

**G12: Overhead Fed Streetlight Pole - Pole Mounted Equipment Cabinet**

**G13: Overhead Fed Streetlight Pole with Mid Pole Wireless Backhaul Antenna – Pole Mounted Equipment Cabinet**

**G14: Overhead Fed Streetlight Pole – Pole Top Space (Panel)**

**G15: Overhead Fed Streetlight Pole – Pole Top Space (Combo) – Pole Mounted Equipment Cabinet**

**G16: Node Support Pole (Electric Service Request) – Slab-Mounted Equipment Cabinet**

**G17: Node Support Pole (Electric Service Request) - Pole Mounted Equipment Cabinet**

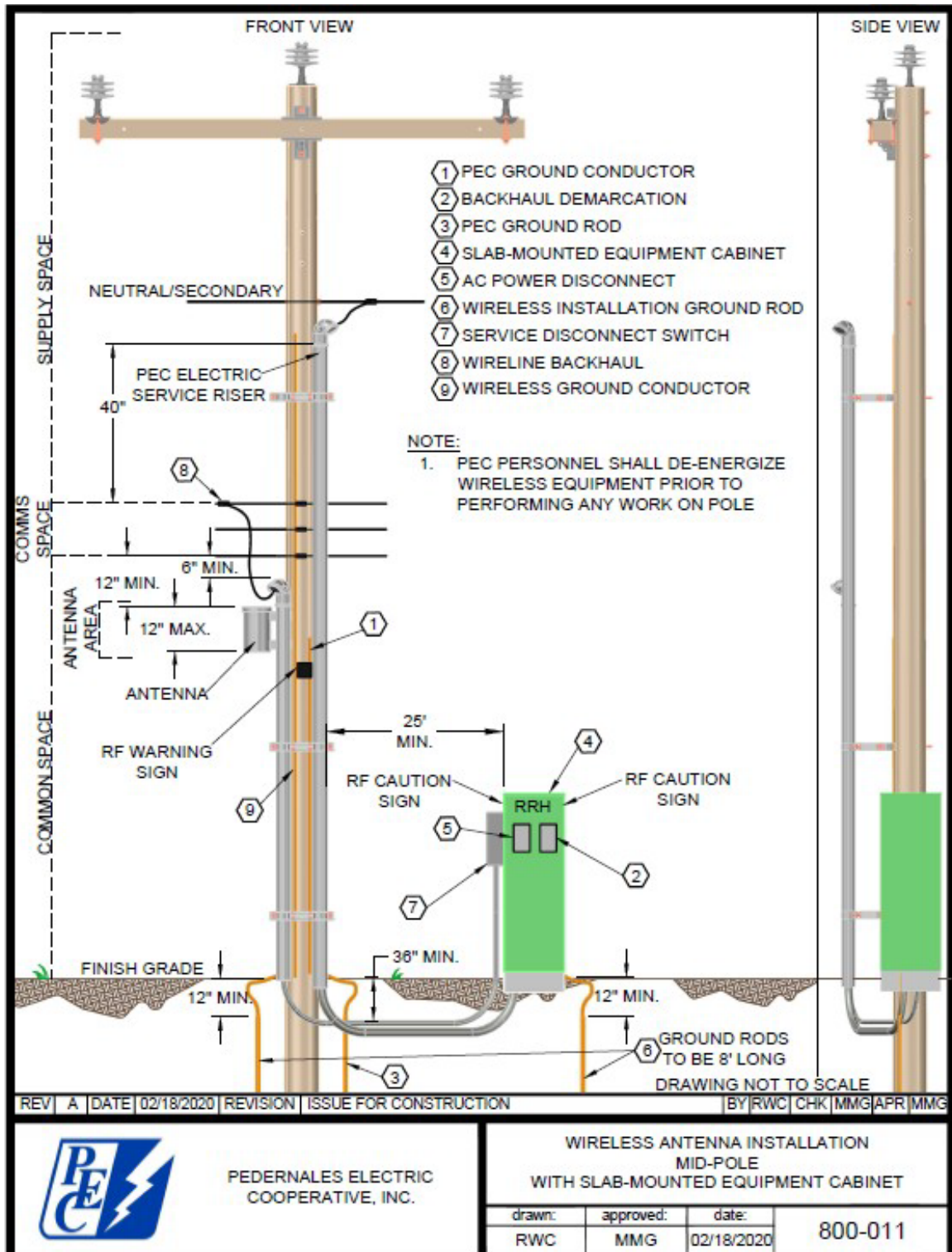
**G18: Node Support Pole (Electric Service Request) – Member Owned Steel Pole with Concrete Foundation – Pole Mounted Equipment**

**G19: Node Support Pole (Electric Service Request) Installation – Member Owned Pole – Pole Mounted Equipment Cabinet**

**G20: Node Support Pole (Electric Service Request) – Member Owned Steel Pole with Concrete Foundation – Pole Mounted Equipment Cabinet**

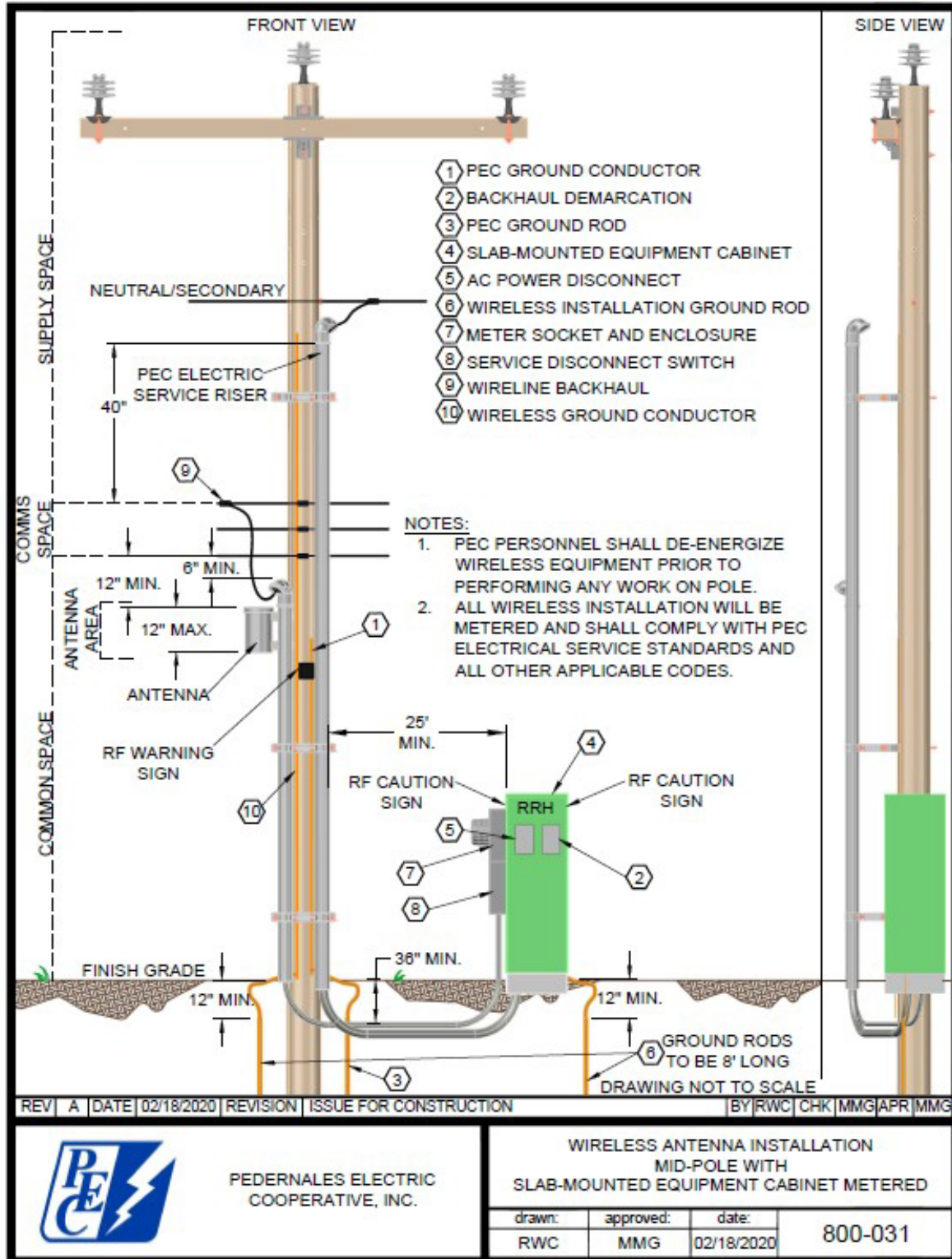


### G1: Mid-Pole Slab-Mounted Equipment Cabinet (unmetered)



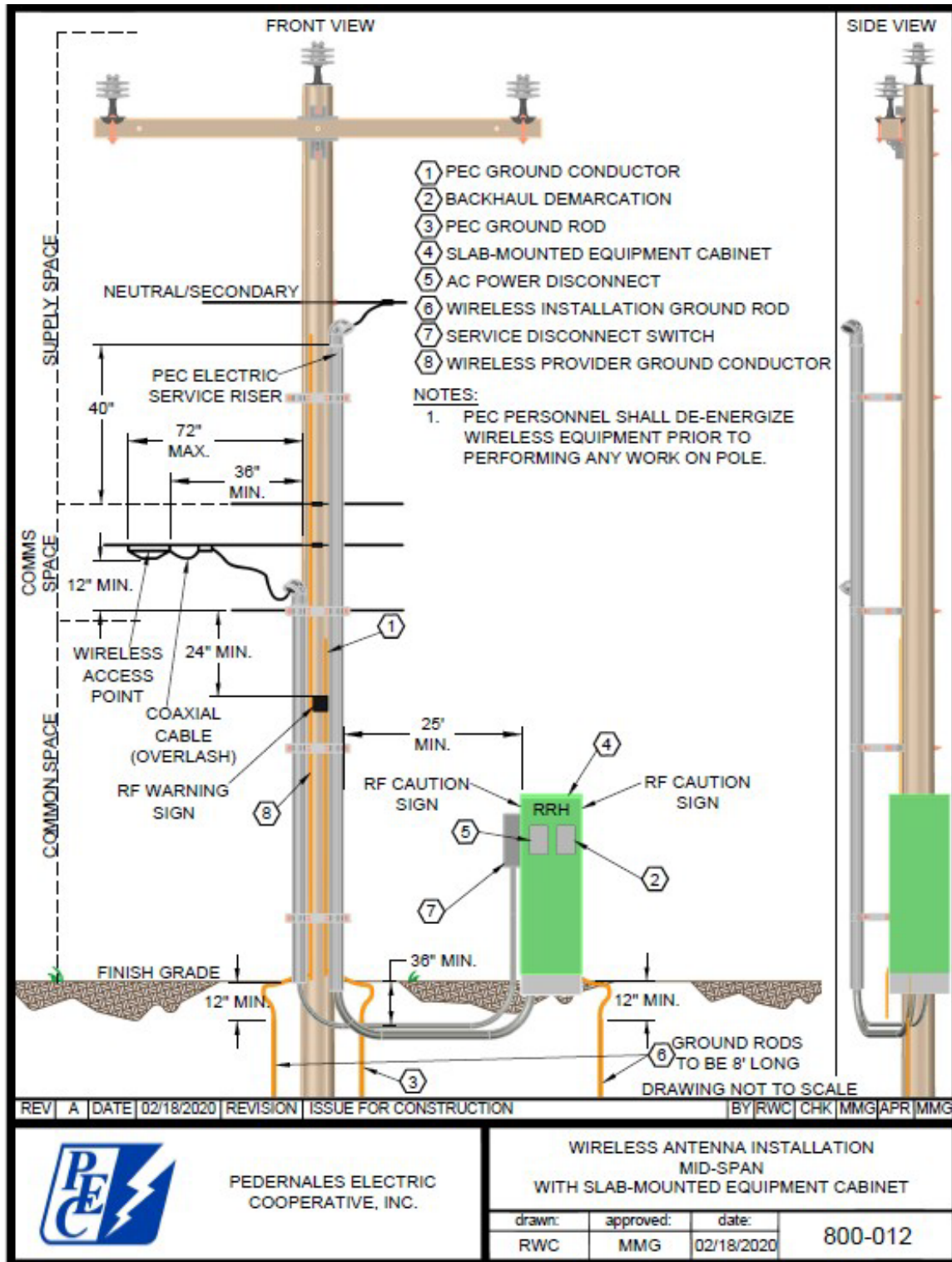


### G1: Mid-Pole Slab-Mounted Equipment Cabinet (metered)



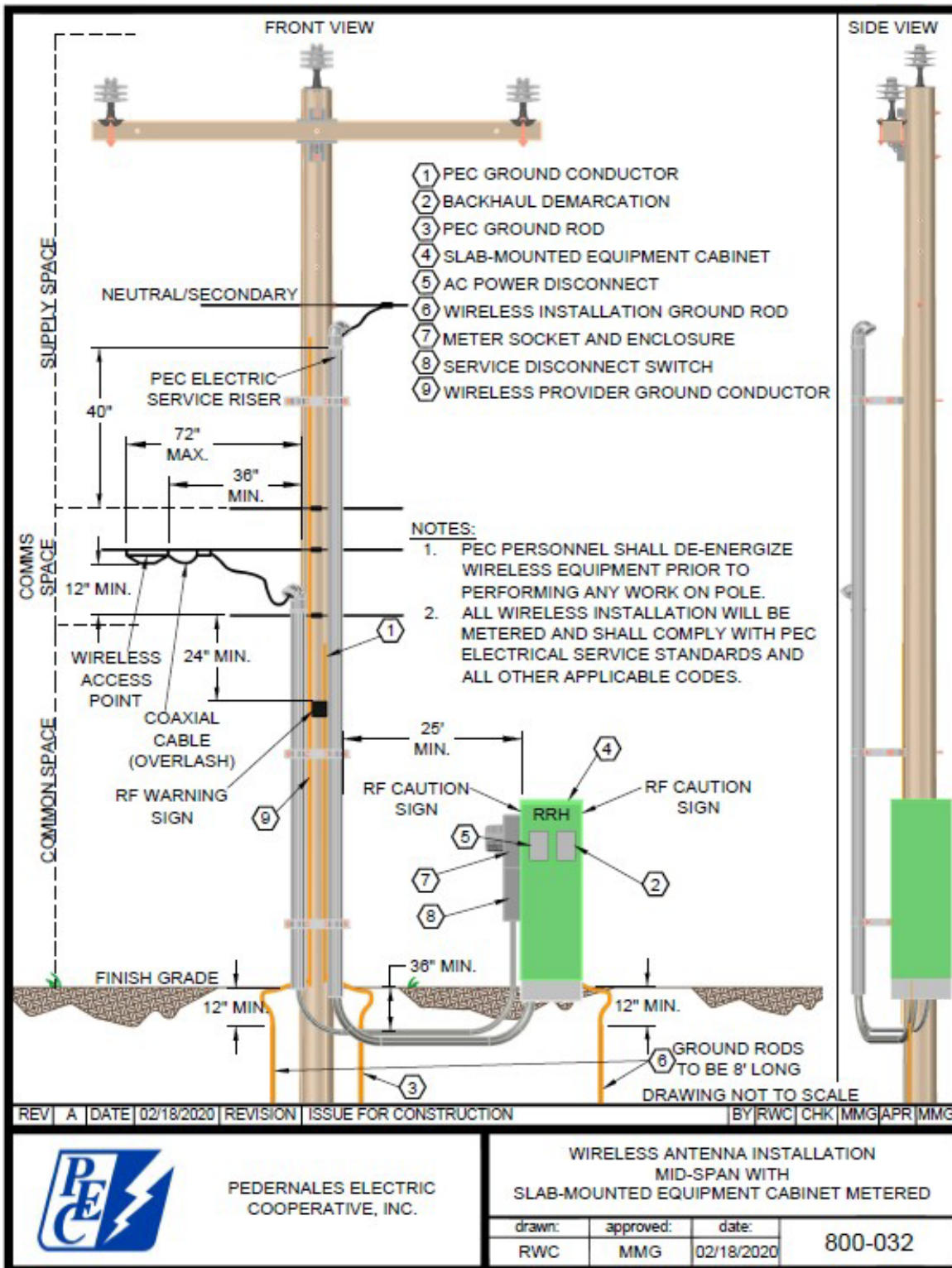


### G2: Mid-Span Slab-Mounted Equipment Cabinet (unmetered)

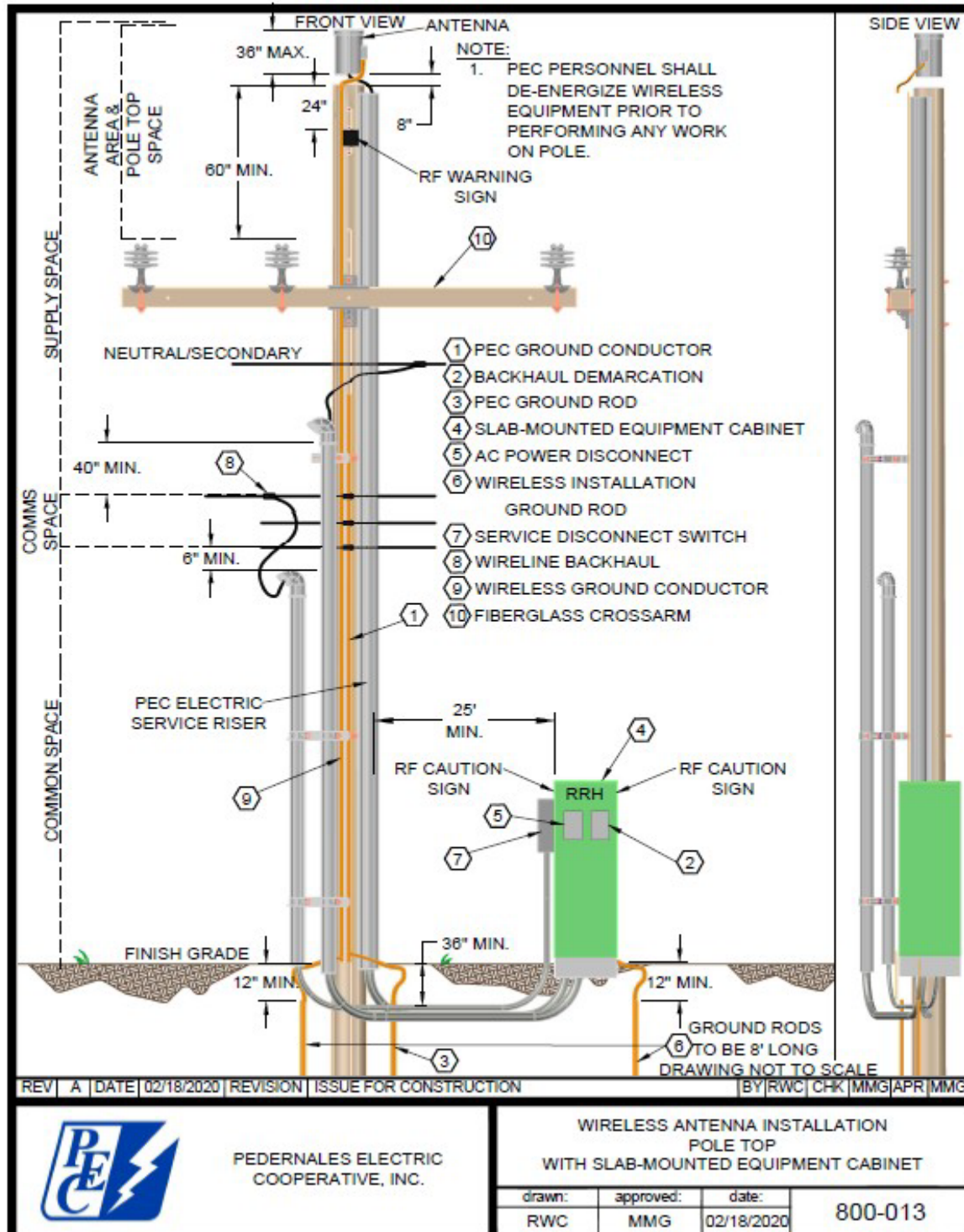




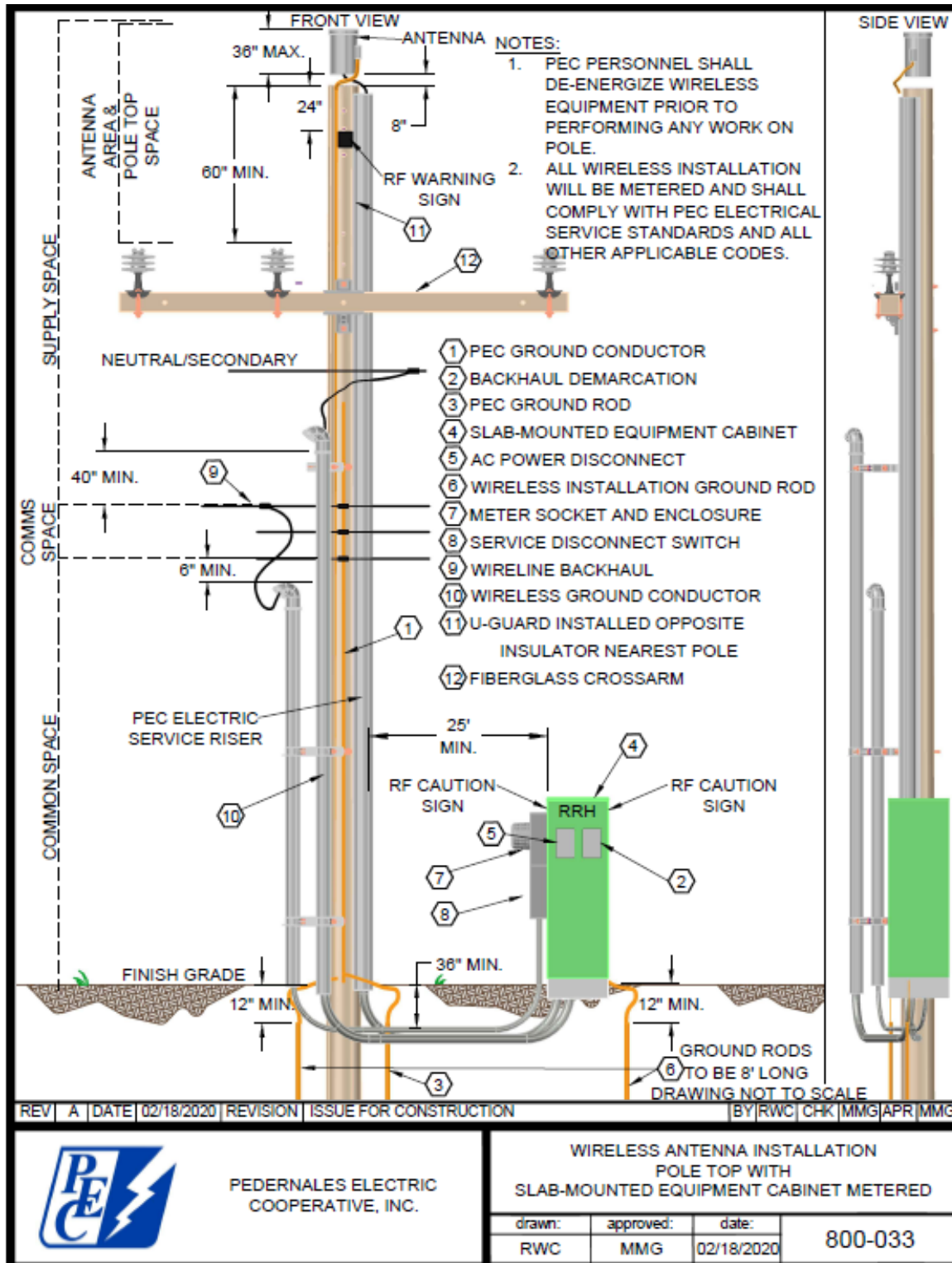
## G2: Mid-Span Slab-Mounted Equipment Cabinet (metered)



### G3: Pole Top Slab-Mounted Equipment Cabinet (unmetered)



### G3: Pole Top Slab-Mounted Equipment Cabinet (metered)



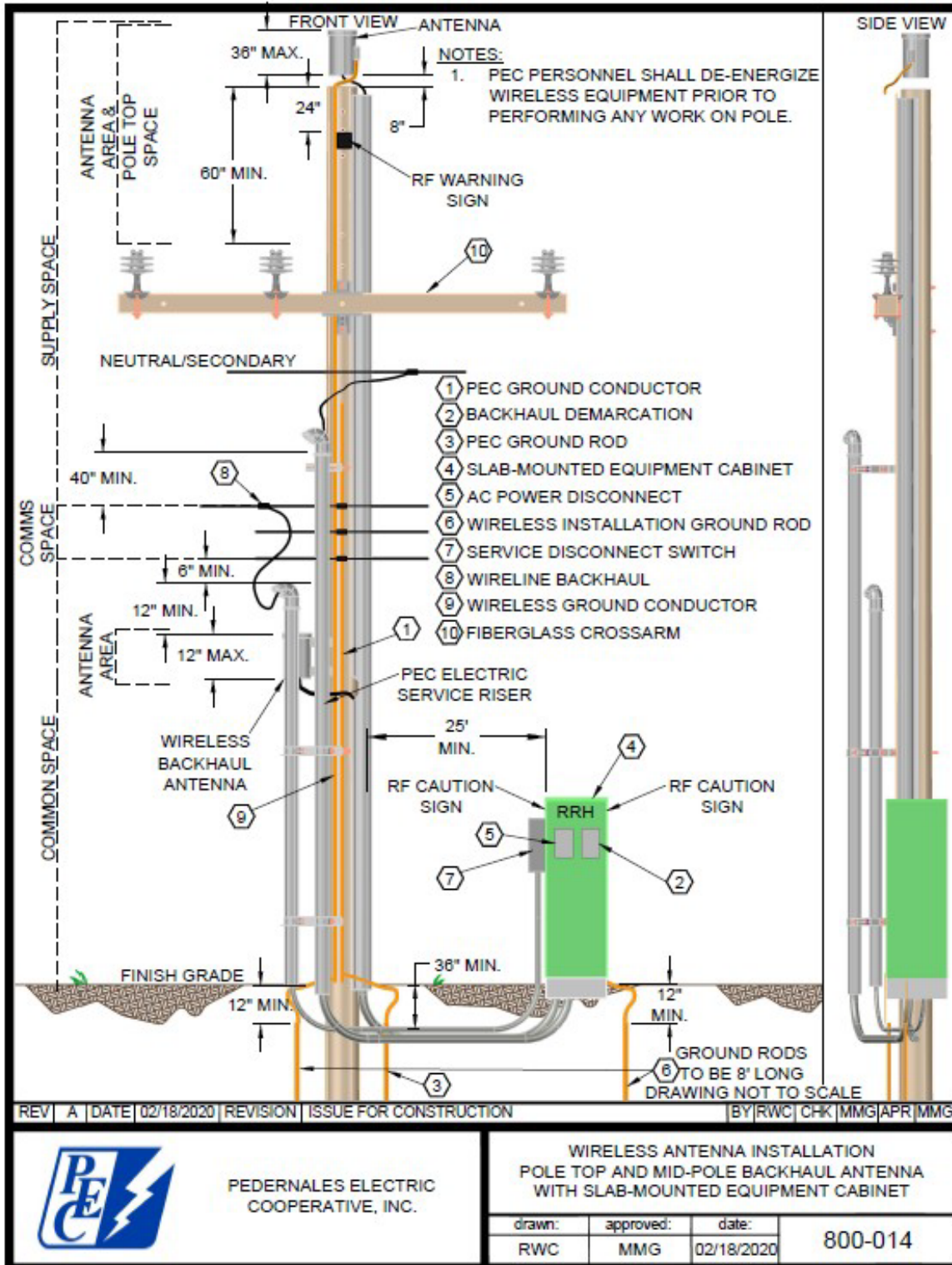
PEDERNALES ELECTRIC COOPERATIVE, INC.

WIRELESS ANTENNA INSTALLATION  
POLE TOP WITH  
SLAB-MOUNTED EQUIPMENT CABINET METERED

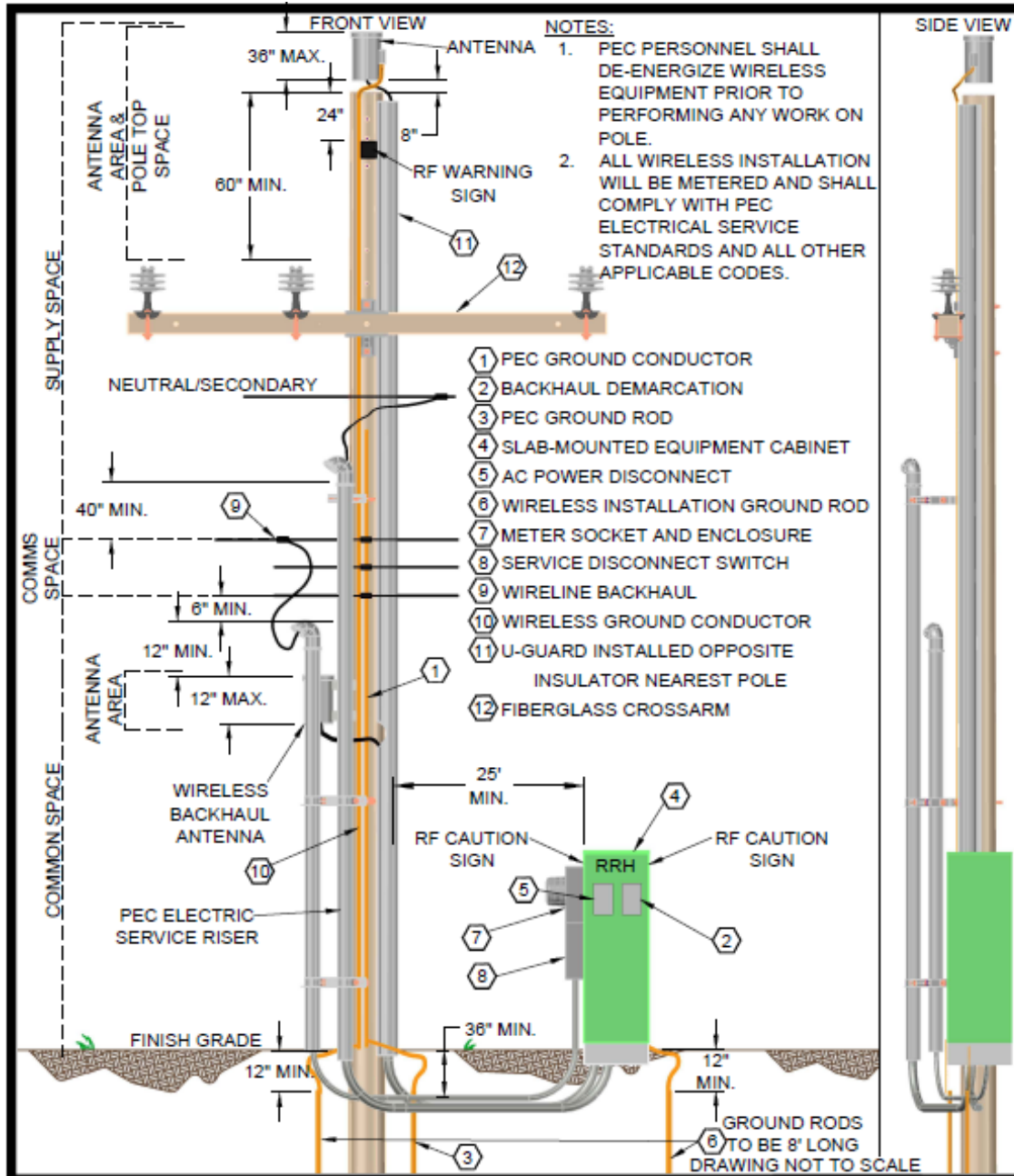
drawn:	approved:	date:
RWC	MMG	02/18/2020

800-033

### G4: Pole Top with Mid-Pole-Backhaul Antenna- Slab-Mounted Equipment Cabinet (unmetered)



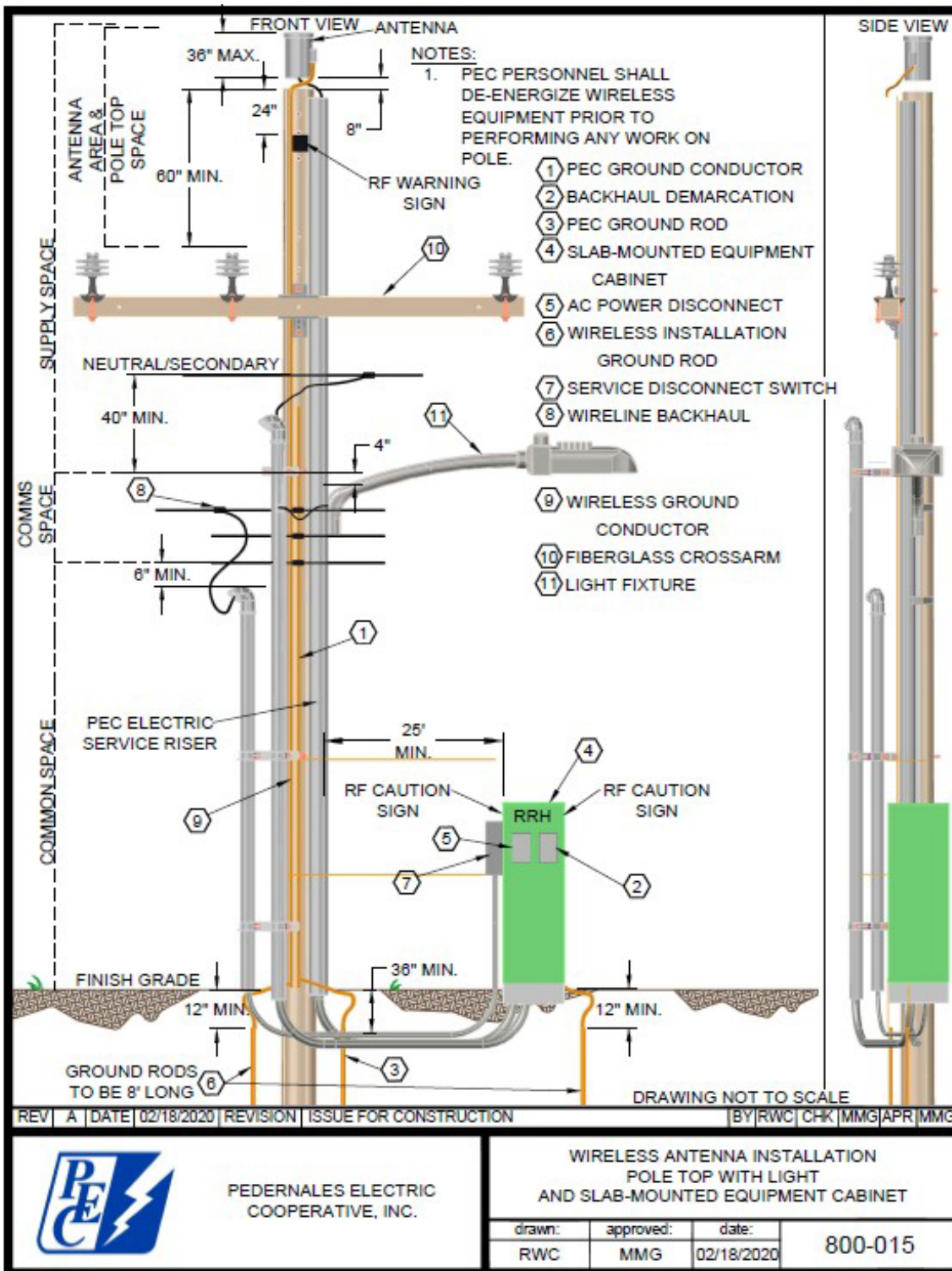
### G4: Pole Top with Mid-Pole Backhaul Antenna-Slab-Mounted Equipment Cabinet (metered)



	<b>PEDERNALES ELECTRIC COOPERATIVE, INC.</b>	<b>WIRELESS ANTENNA INSTALLATION POLE TOP AND MID-POLE BACKHAUL ANTENNA WITH SLAB-MOUNTED EQUIPMENT CABINET METERED</b>		
		drawn: RWC	approved: MMG	date: 02/18/2020



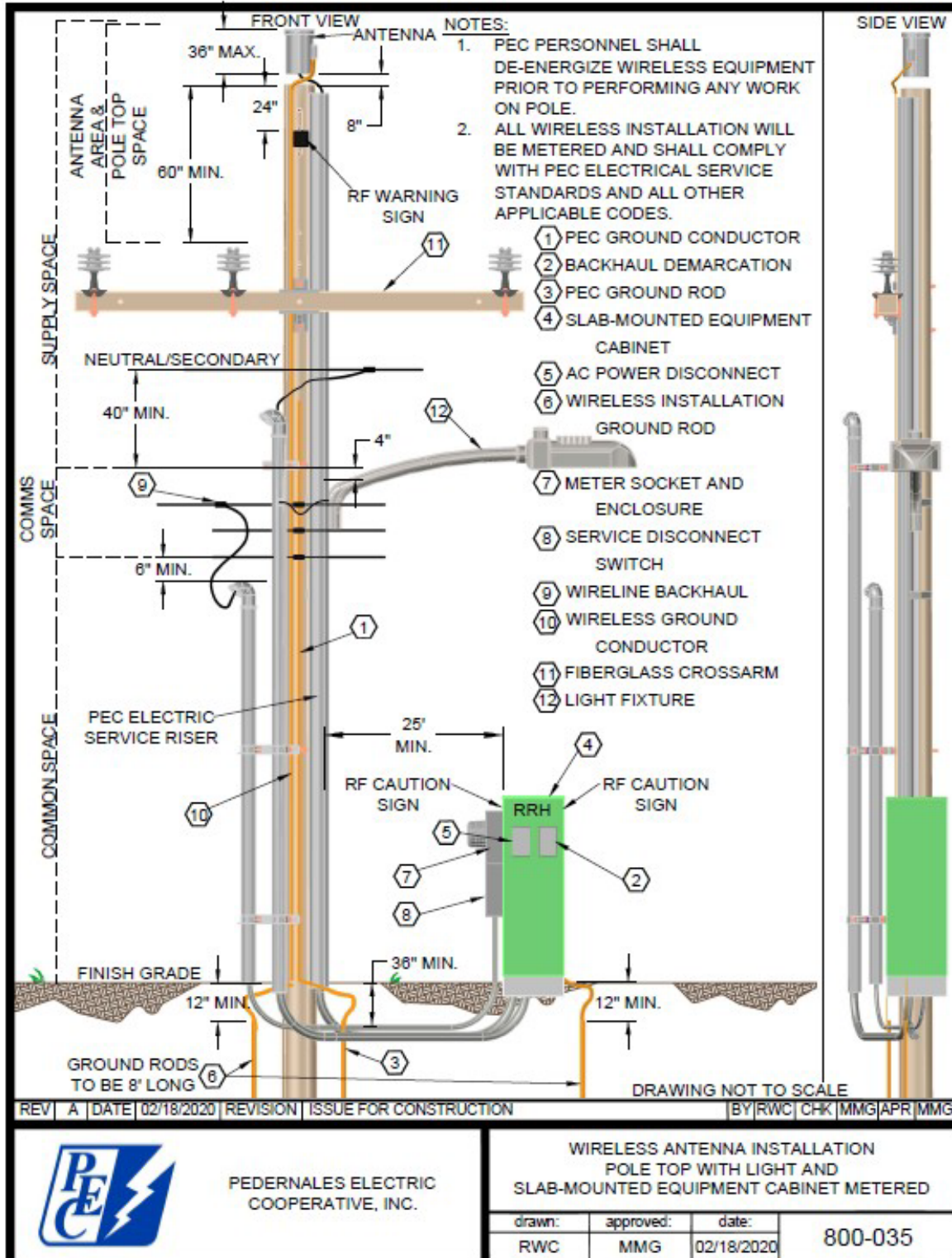
### G5: Pole Top with Light and – Slab-Mounted Equipment Cabinet



(unmetered)



### G5: Pole Top with Light and Slab-Mounted Equipment Cabinet (metered)



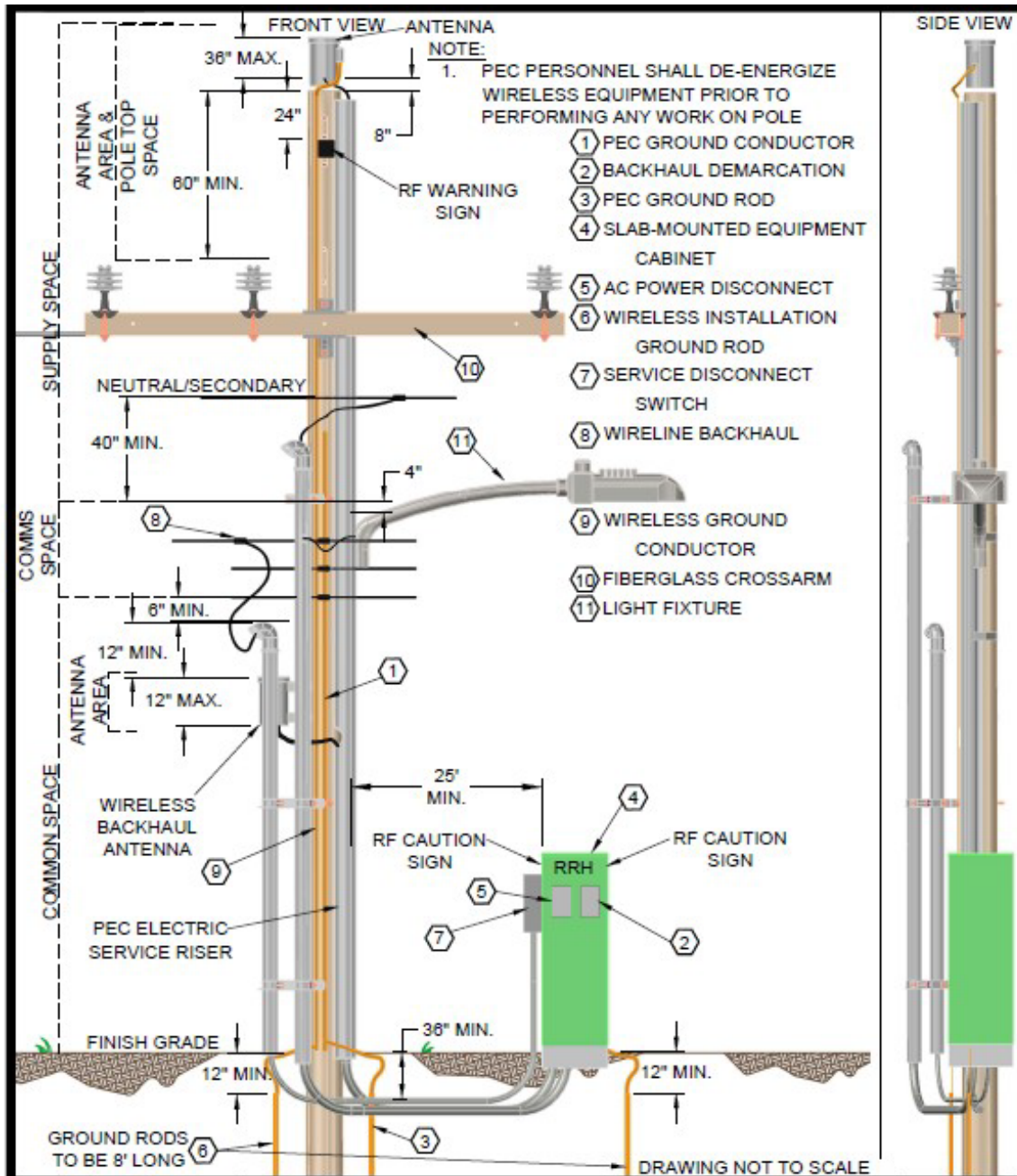
PEDERNALES ELECTRIC COOPERATIVE, INC.

WIRELESS ANTENNA INSTALLATION  
POLE TOP WITH LIGHT AND  
SLAB-MOUNTED EQUIPMENT CABINET METERED

drawn:	approved:	date:	800-035
RWC	MMG	02/18/2020	



### G6: Pole Top & Mid-Pole Backhaul with Light and Slab-Mounted Equipment Cabinet (unmetered)



REV | A | DATE | 02/18/2020 | REVISION | ISSUE FOR CONSTRUCTION | BY | RWC | CHK | MMG | APR | MMG



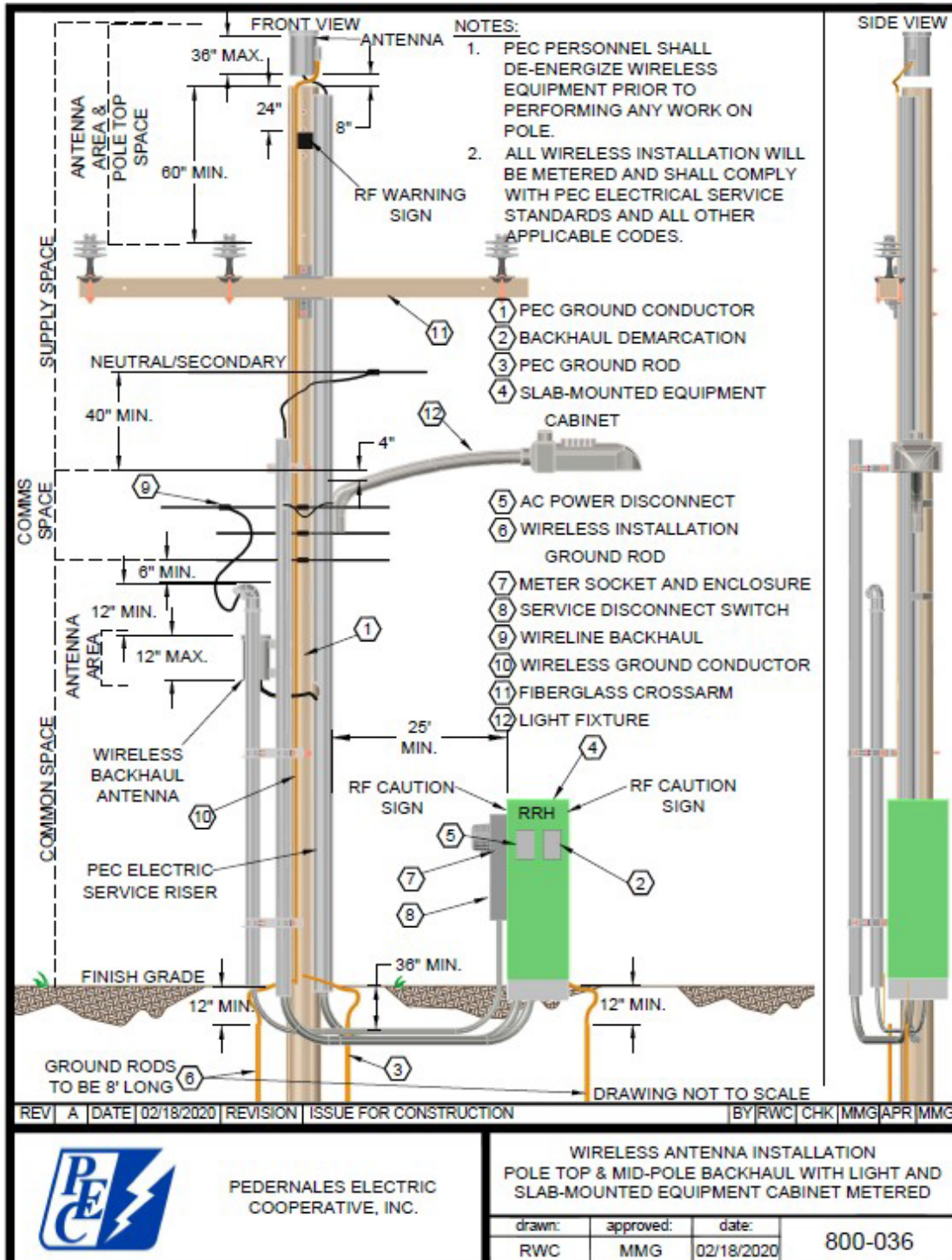
PEDERNALES ELECTRIC COOPERATIVE, INC.

WIRELESS ANTENNA INSTALLATION  
POLE TOP & MID-POLE BACKHAUL WITH LIGHT  
AND SLAB-MOUNTED EQUIPMENT CABINET

drawn:	approved:	date:	800-016
RWC	MMG	02/18/2020	

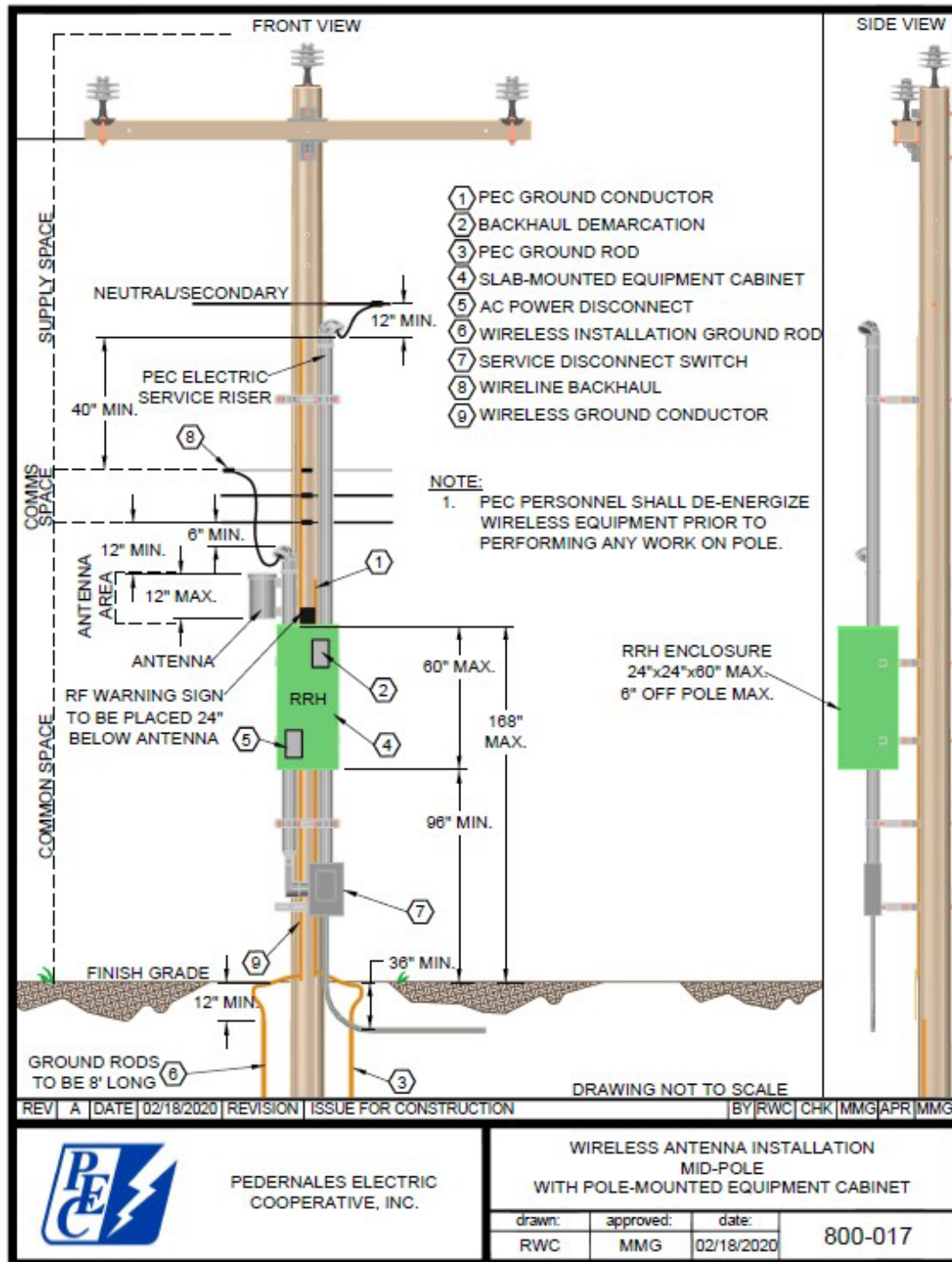


### G6: Pole Top & Mid-Pole Backhaul with Light and Slab-Mounted Equipment Cabinet (metered)



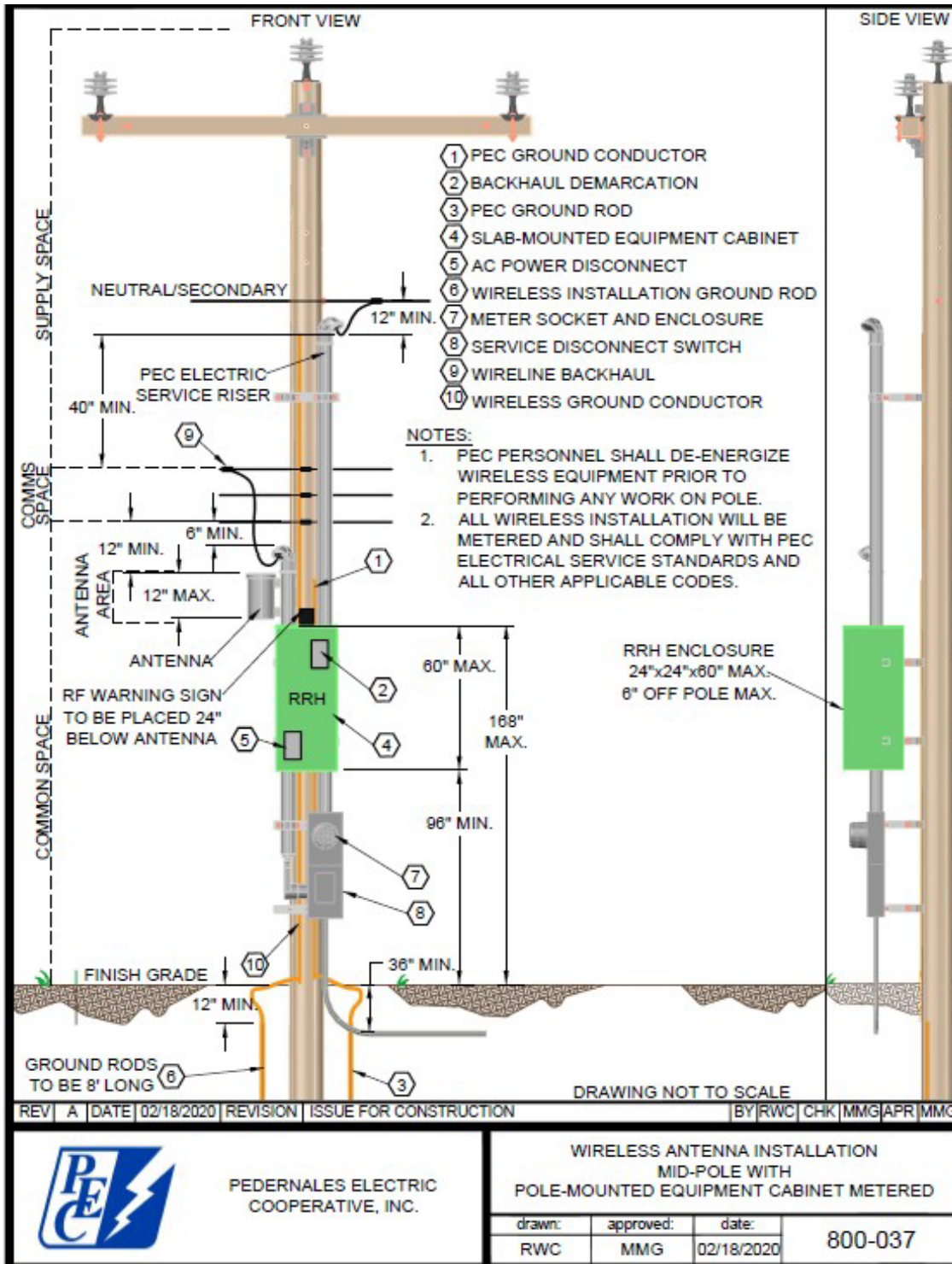


### G7: Mid Pole – Pole Mounted Equipment Cabinet (unmetered)



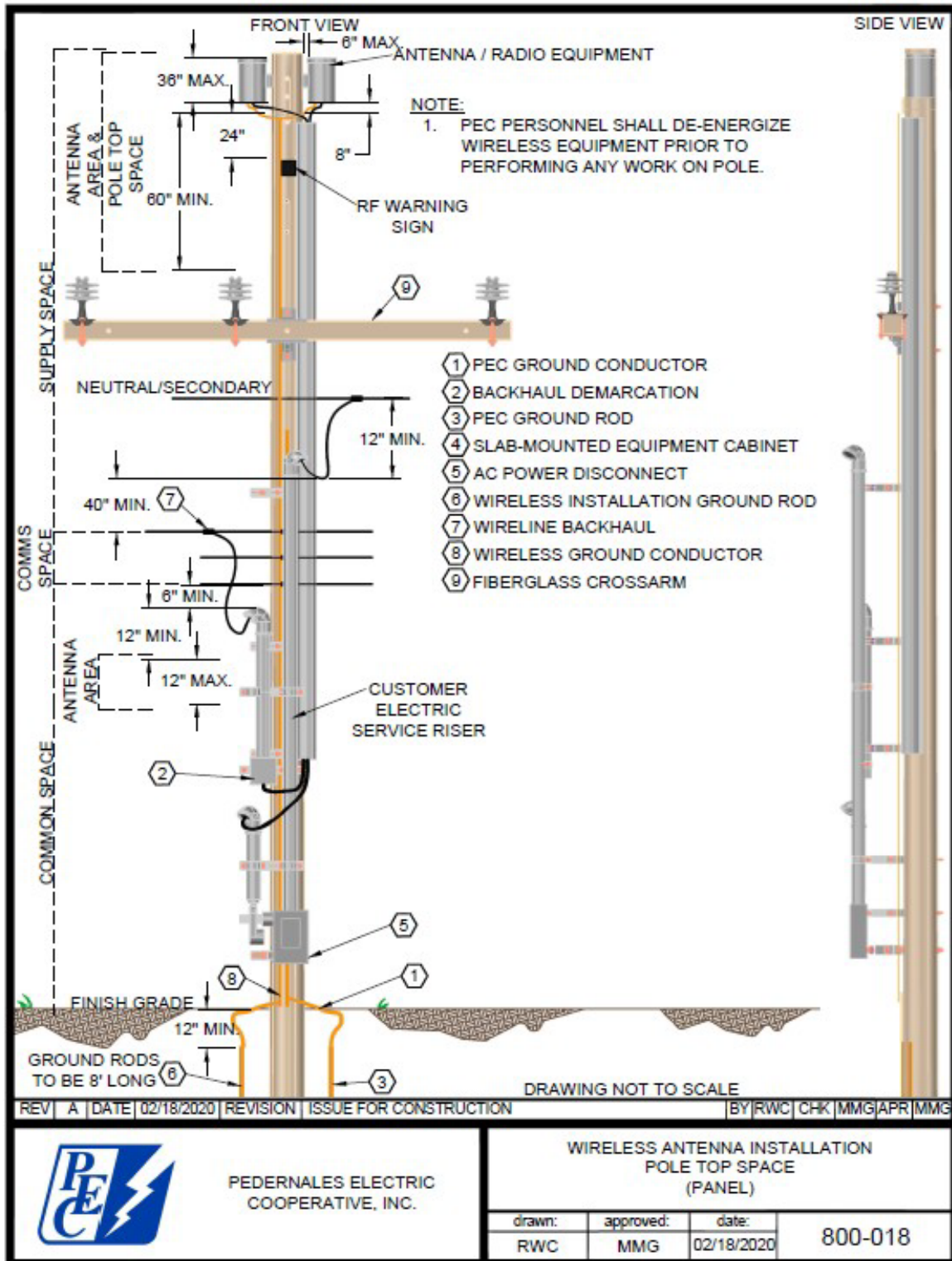


### G7: Mid Pole Pole Mounted Equipment Cabinet (metered)



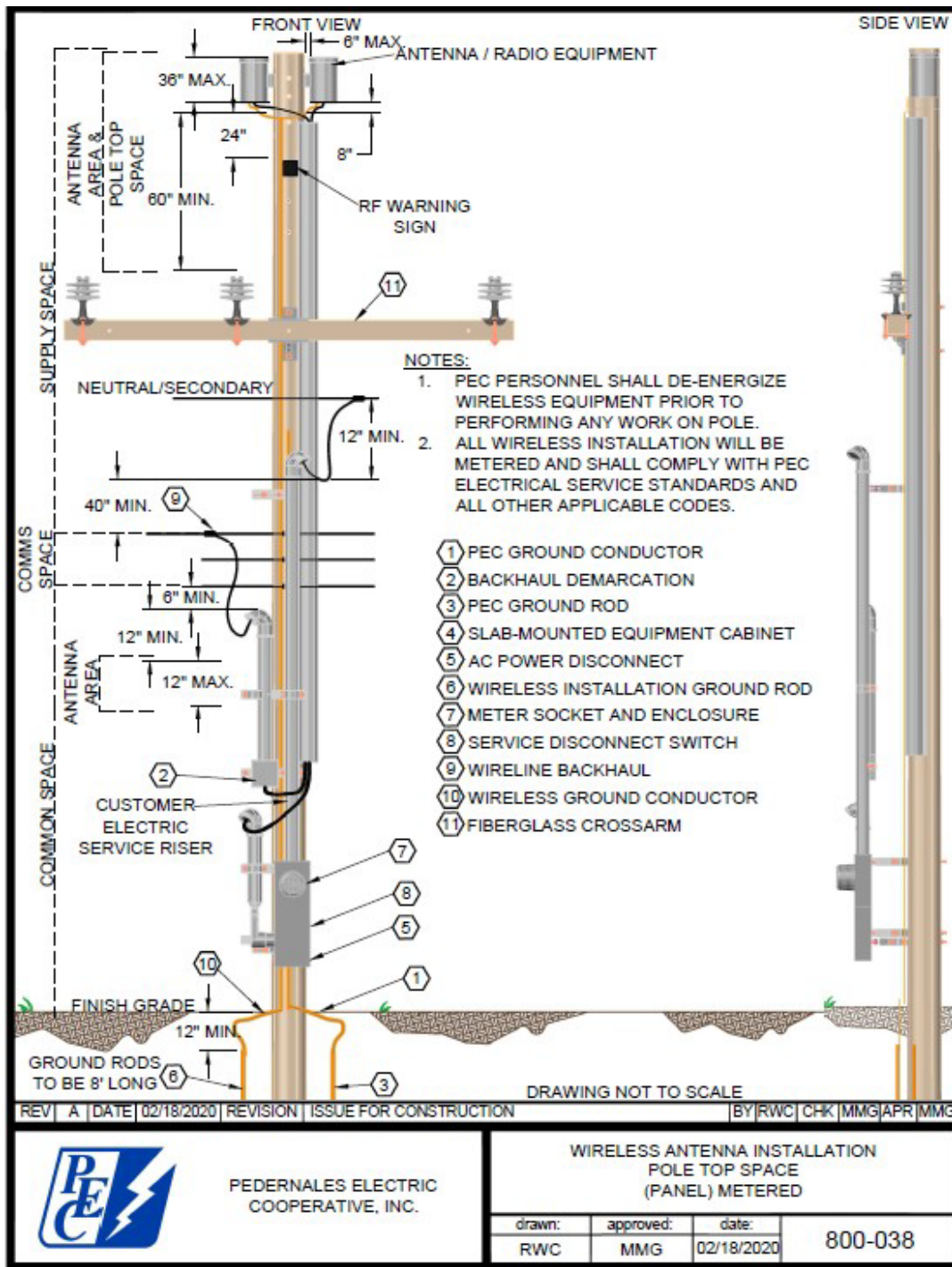


### G8: Pole Top Space (Panel) (unmetered)



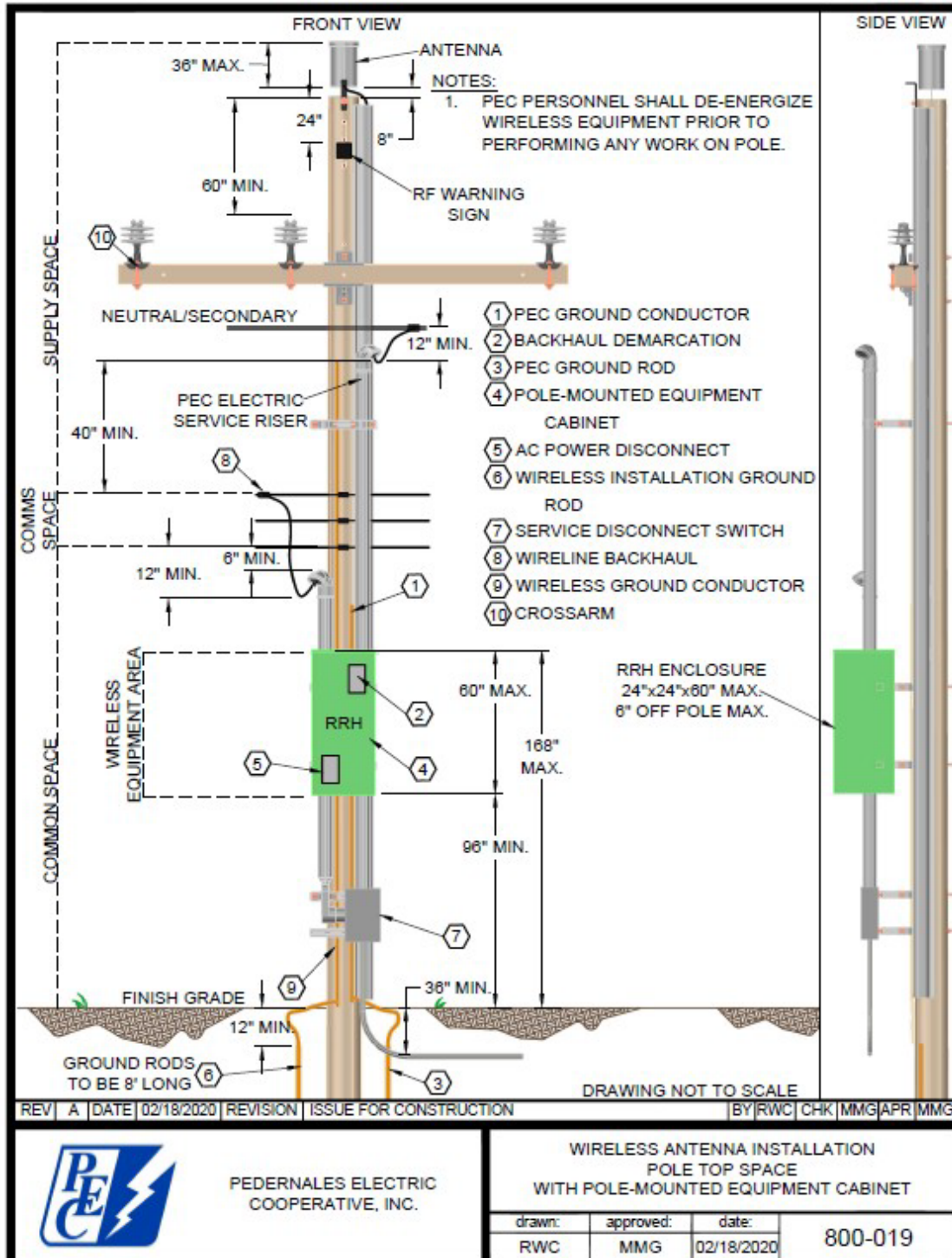


### G8: Pole Top Space (Panel) (metered)



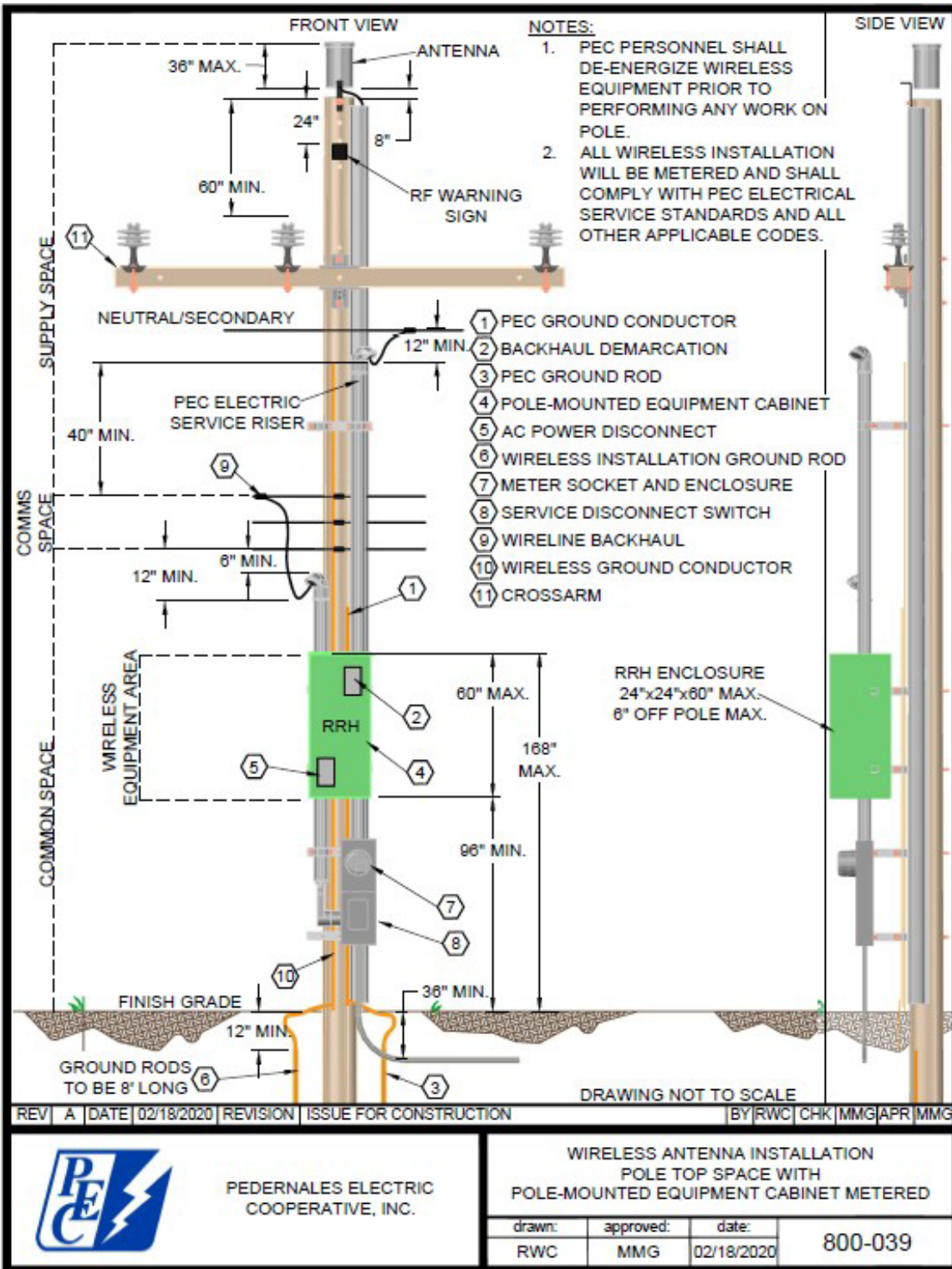


### G9: Pole Top Space with Pole Mounted Equipment Cabinet (unmetered)





### G9: Pole Top Space with Pole-Mounted Equipment Cabinet (metered)



PEDERNALES ELECTRIC COOPERATIVE, INC.

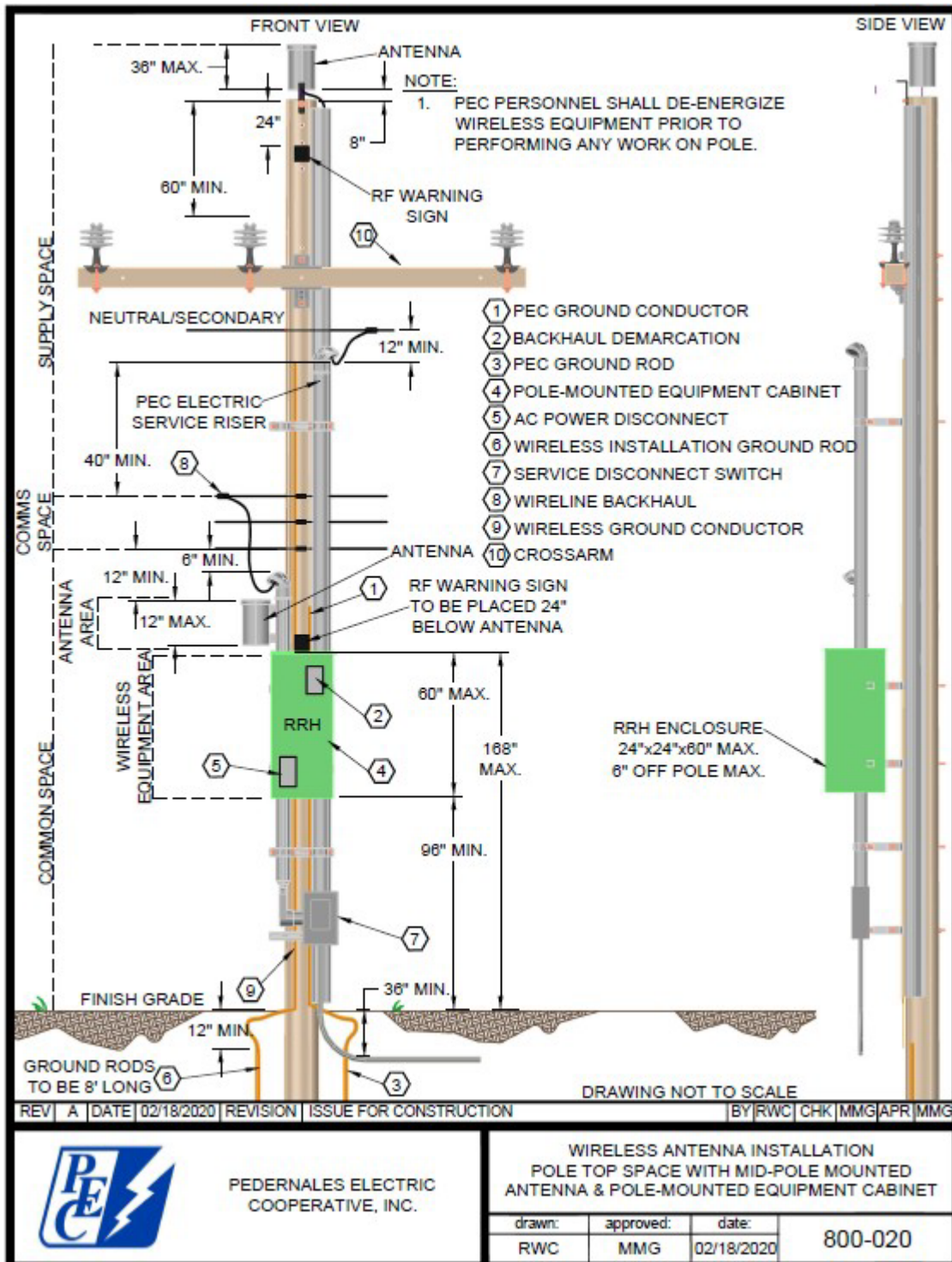
WIRELESS ANTENNA INSTALLATION  
POLE TOP SPACE WITH  
POLE-MOUNTED EQUIPMENT CABINET METERED

drawn:	approved:	date:
RWC	MMG	02/18/2020

800-039

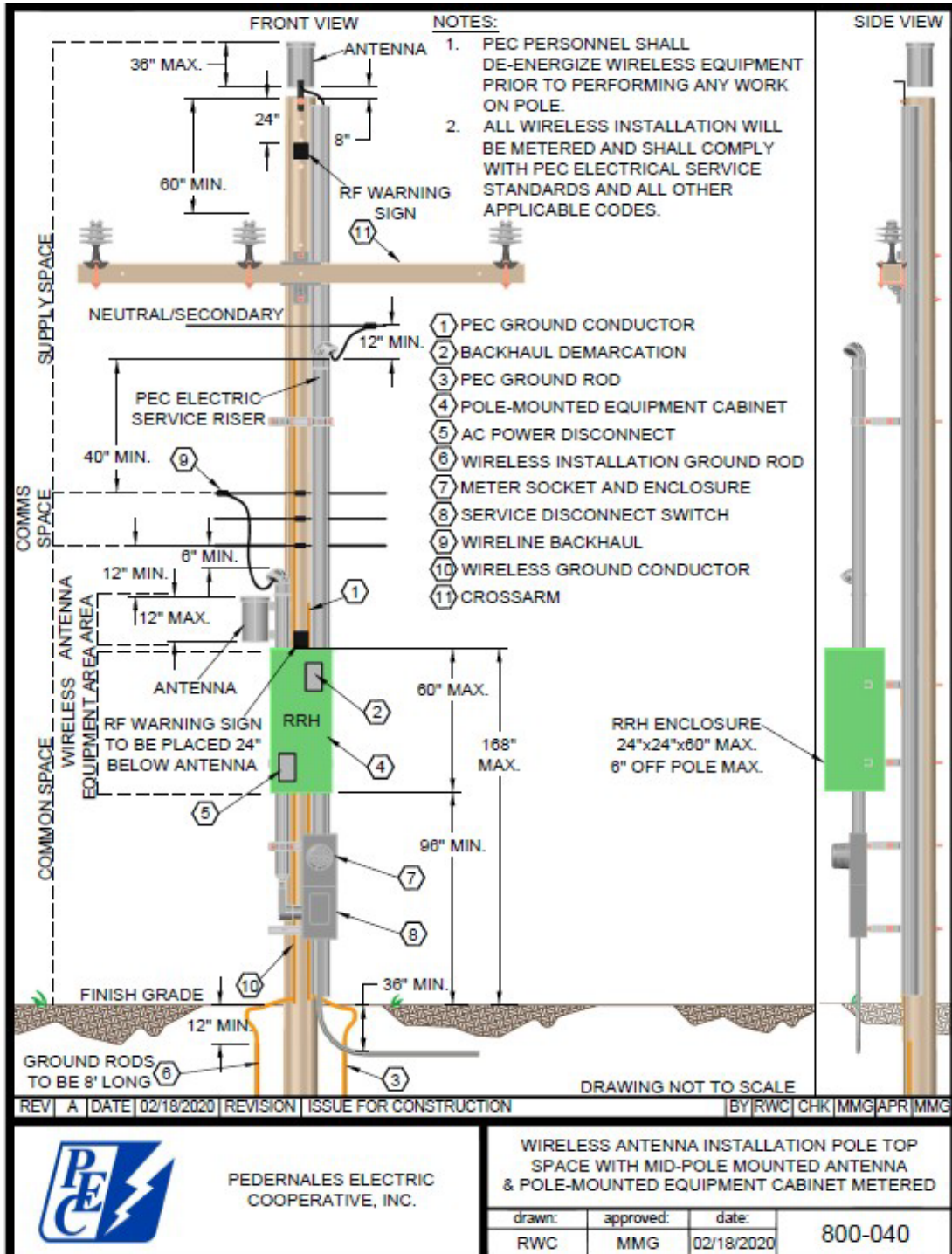


### G10: Pole Top Space with Mid Pole-Mounted Antenna Pole-Mounted Equipment Cabinet (unmetered)



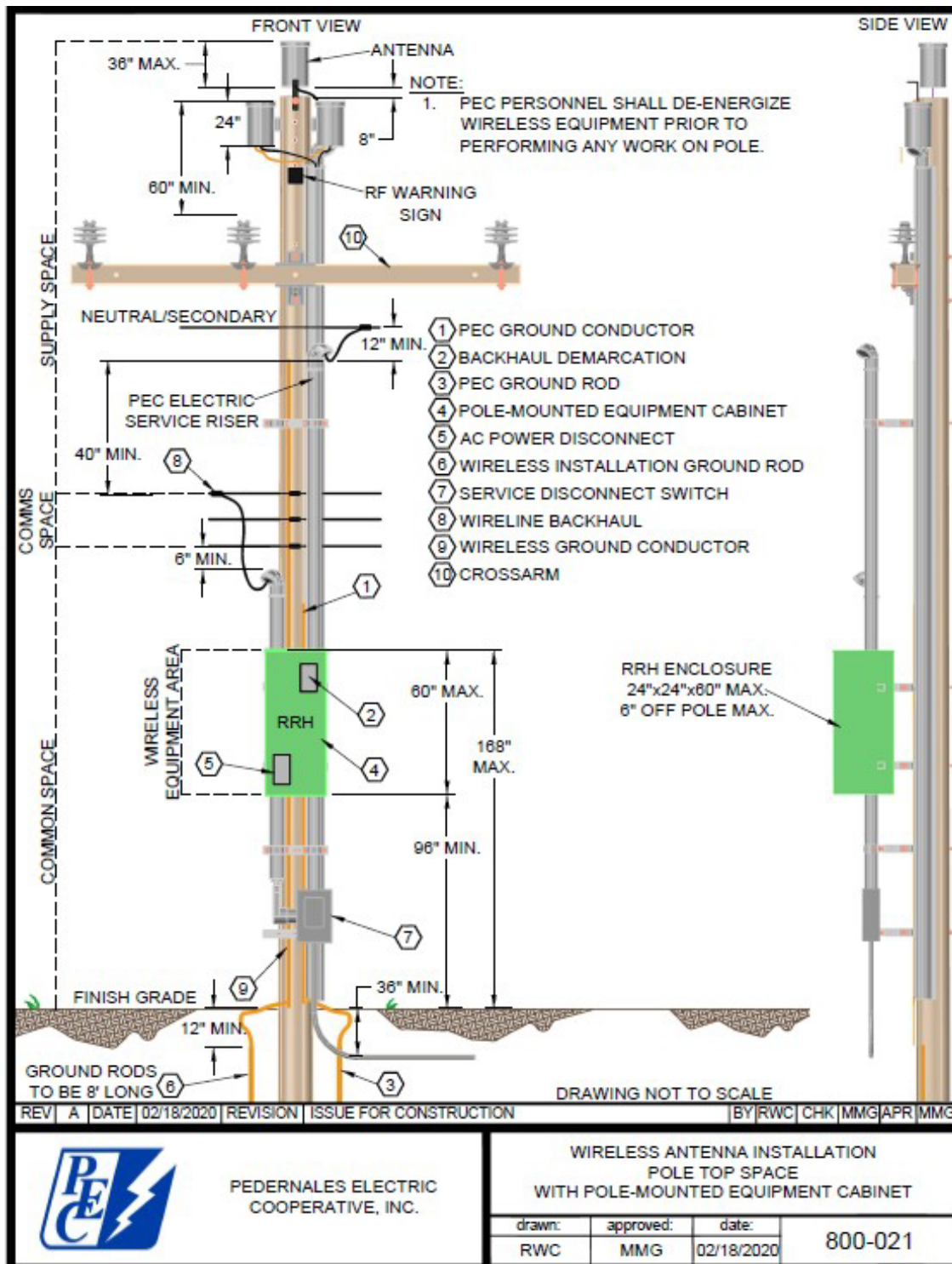


### G10: Pole Top Space with Mid Pole-Mounted Antenna Pole-Mounted Equipment Cabinet (metered)



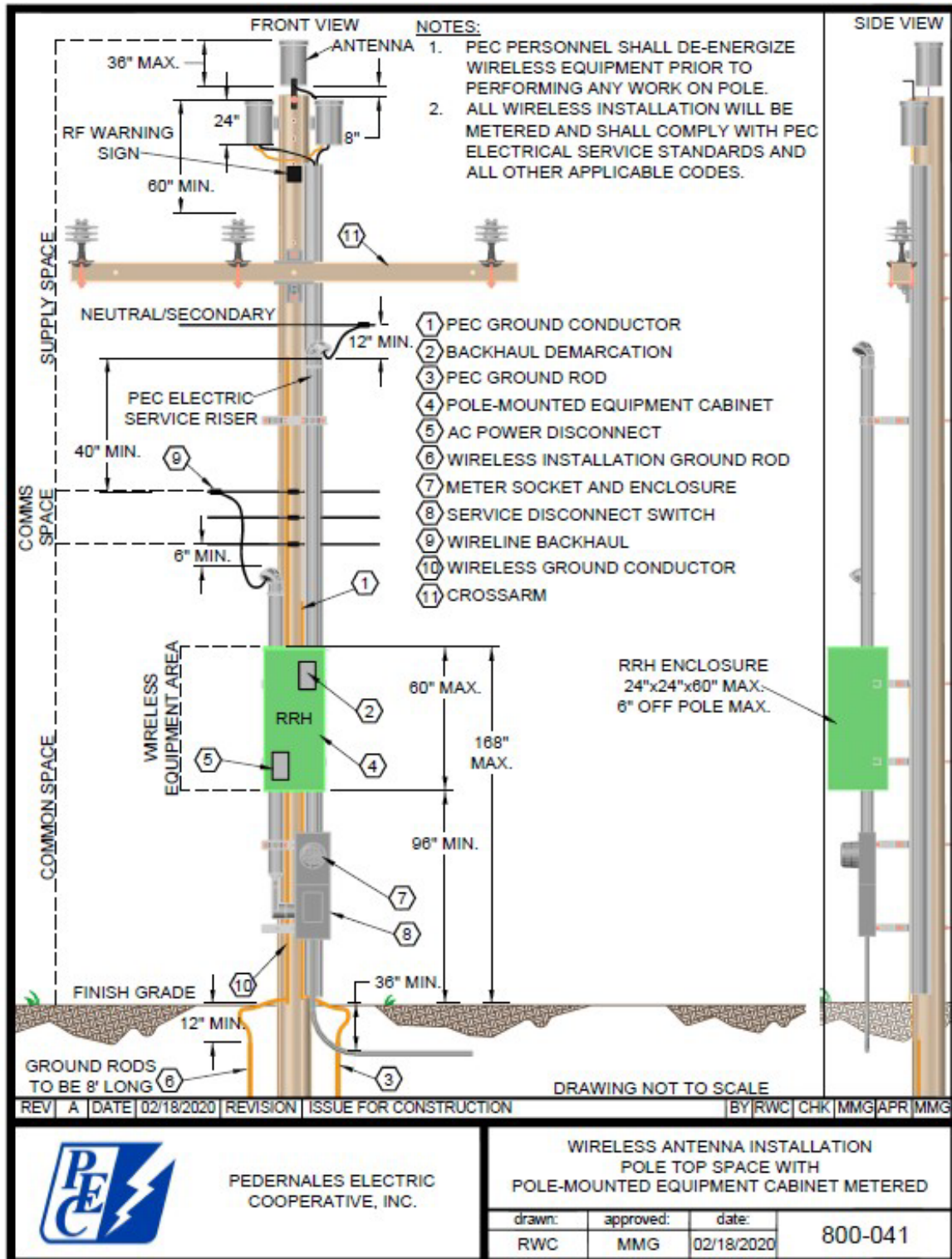


### G11: Pole Top Space – Pole Mounted Equipment Cabinet (unmetered)





### G11: Pole Top Space – Pole Mounted Equipment Cabinet (metered)

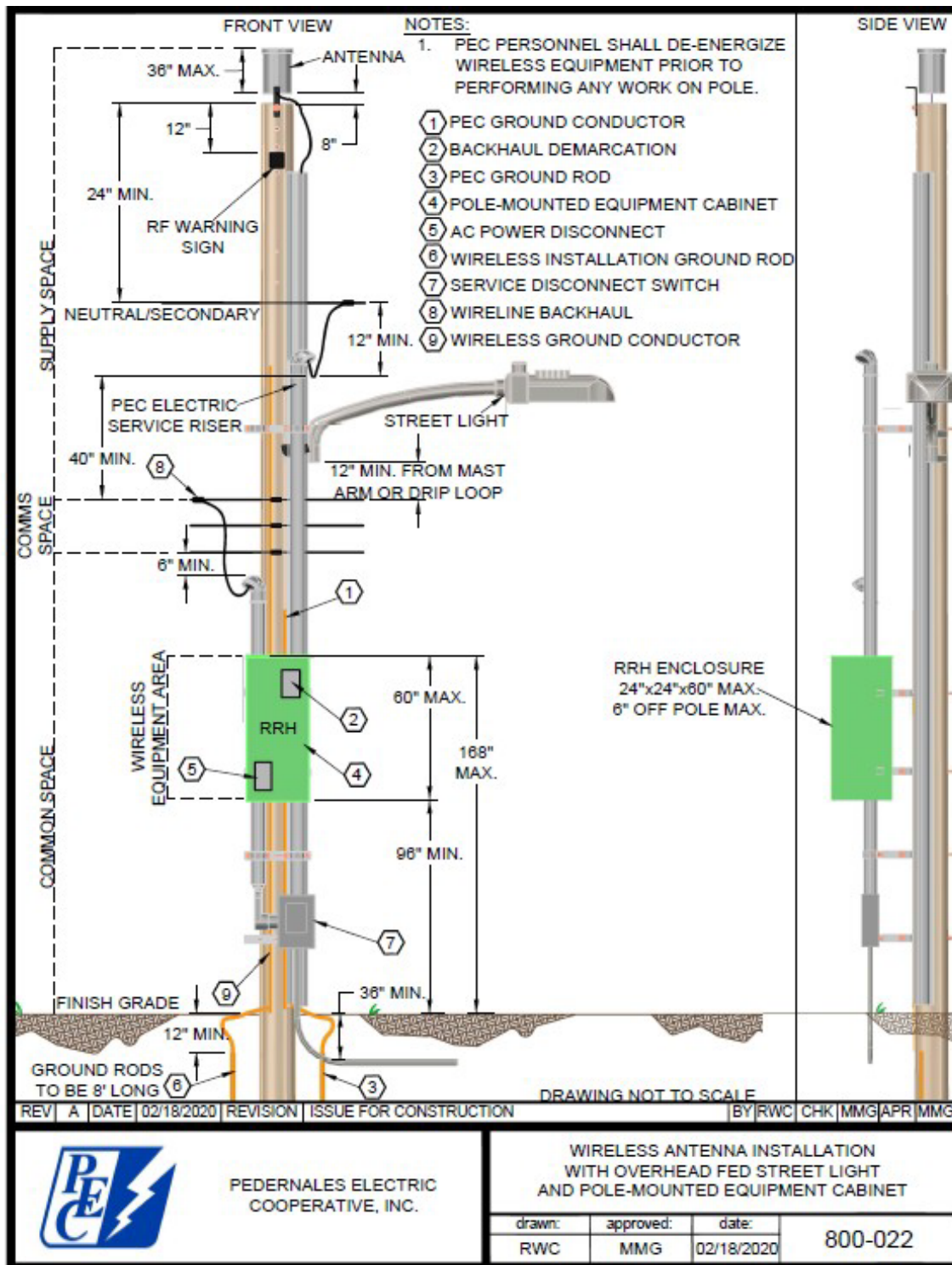


PEDERNALES ELECTRIC COOPERATIVE, INC.

WIRELESS ANTENNA INSTALLATION POLE TOP SPACE WITH POLE-MOUNTED EQUIPMENT CABINET METERED			
drawn:	approved:	date:	800-041
RWC	MMG	02/18/2020	

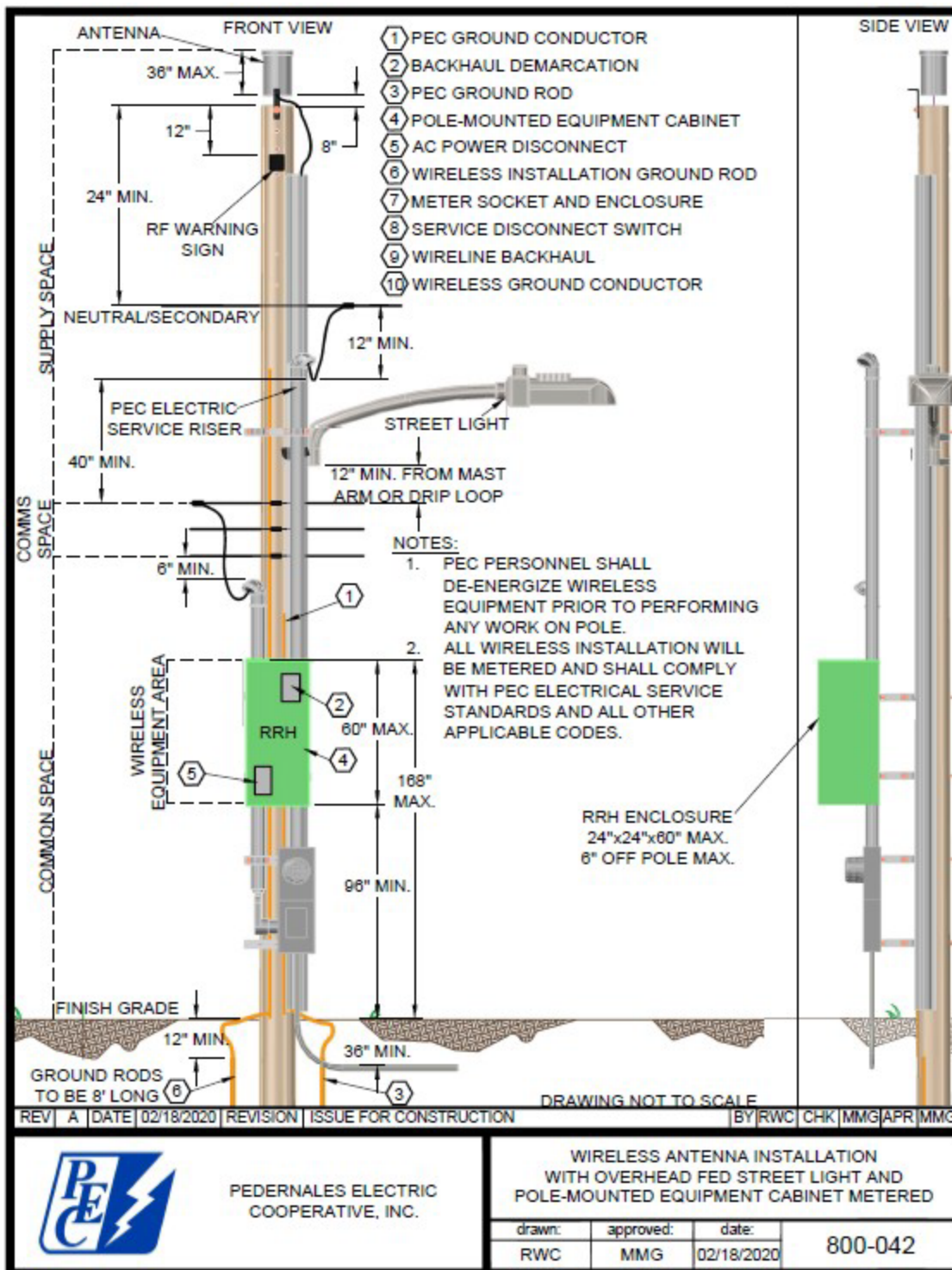


### G12: Overhead Fed Streetlight Pole - Pole Mounted



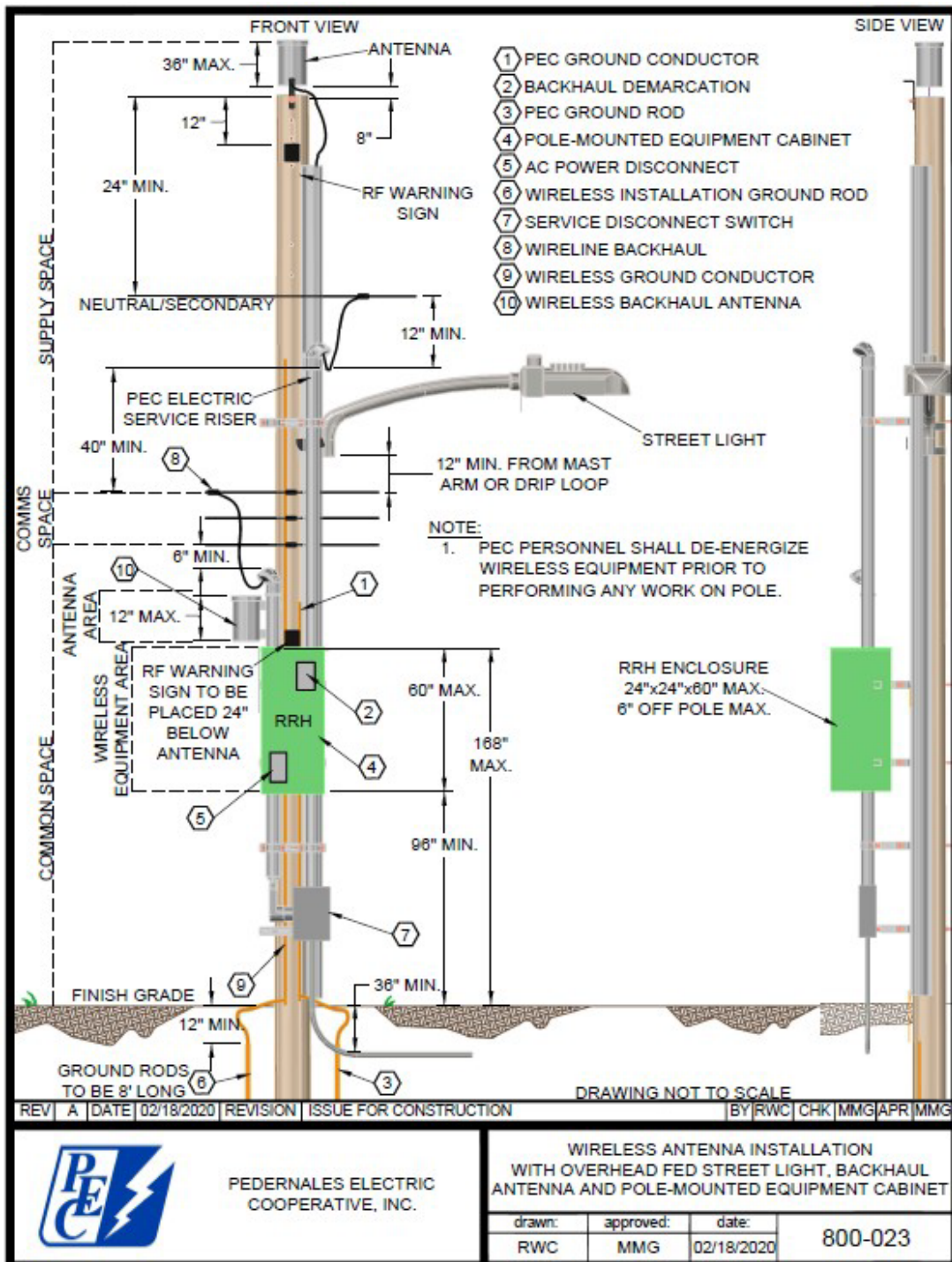


## G12: Overhead Fed Streetlight Pole - Pole Mounted Equipment Cabinet (metered)





### G13: Overhead Fed Streetlight Pole with Wireless Backhaul Antenna - Pole Mounted Equipment Cabinet (unmetered)



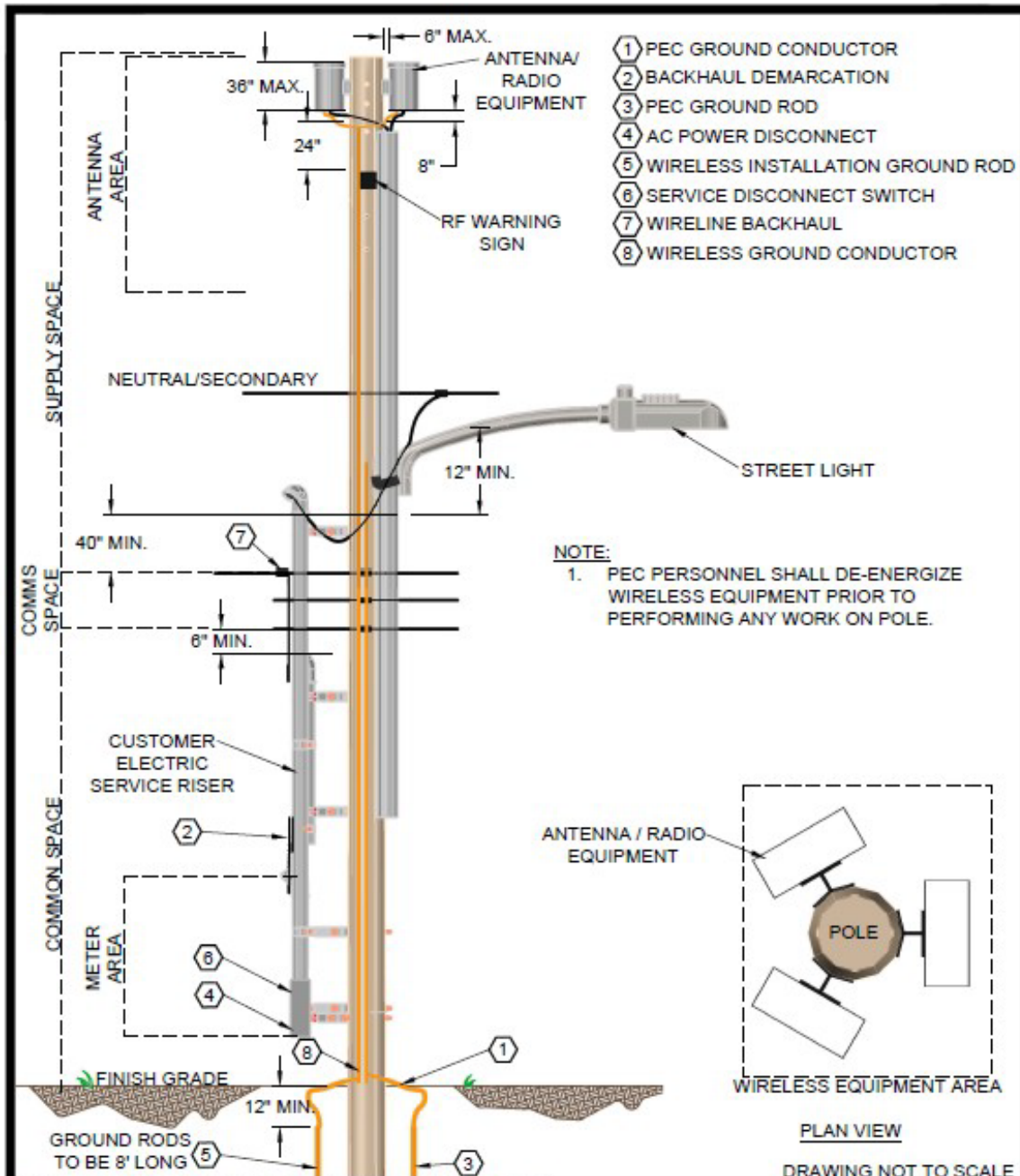
PEDERNALES ELECTRIC COOPERATIVE, INC.

WIRELESS ANTENNA INSTALLATION WITH OVERHEAD FED STREET LIGHT, BACKHAUL ANTENNA AND POLE-MOUNTED EQUIPMENT CABINET

drawn:	approved:	date:	800-023
RWC	MMG	02/18/2020	



### G13: Overhead Fed Streetlight Pole with Wireless Backhaul Antenna - Pole Mounted Equipment Cabinet (metered)



REV | A | DATE | 02/18/2020 | REVISION | ISSUE FOR CONSTRUCTION | BY | RWC | CHK | MMG | APR | MMG



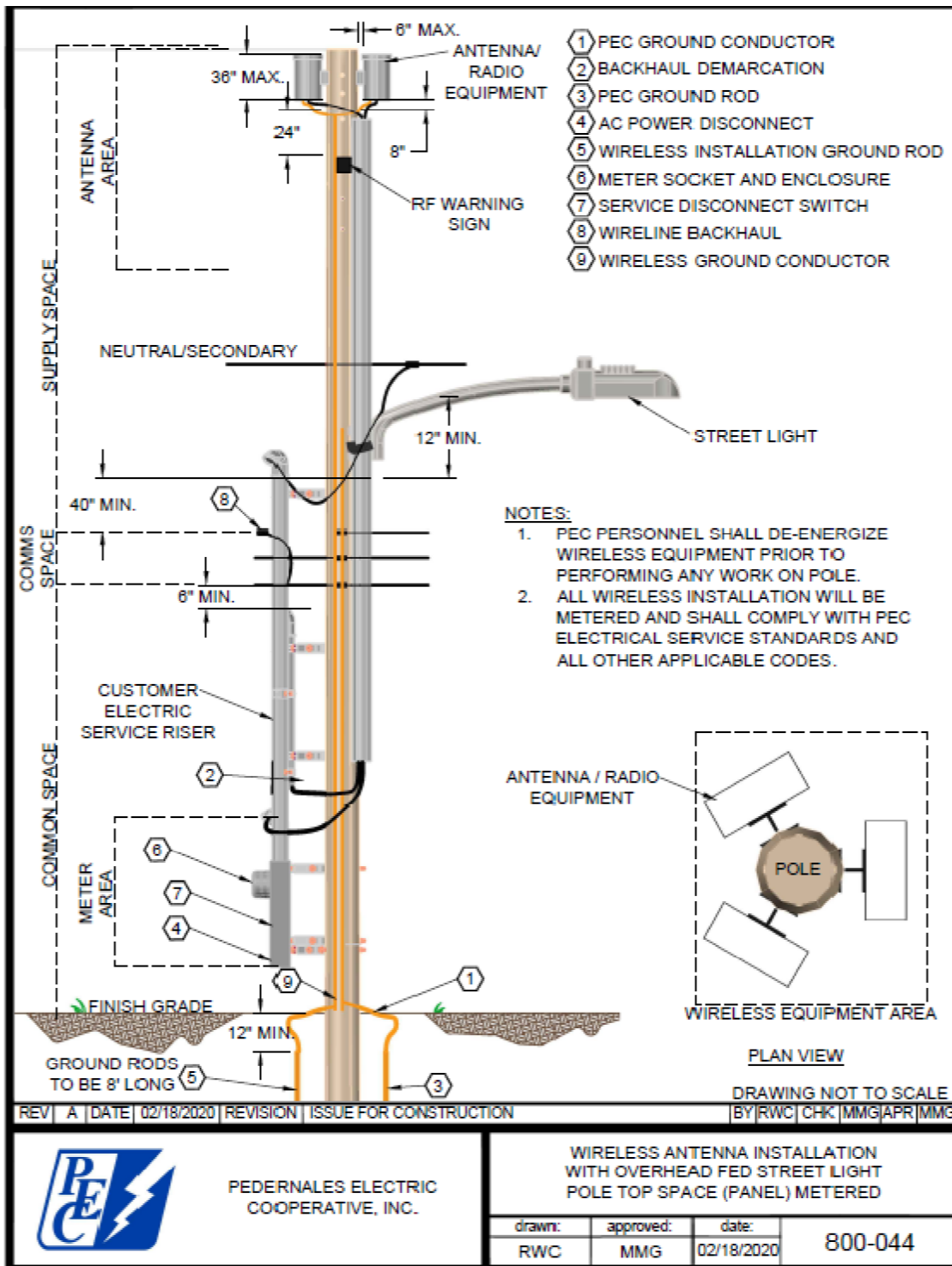
PEDERNALES ELECTRIC COOPERATIVE, INC.

WIRELESS ANTENNA INSTALLATION WITH OVERHEAD FED STREET LIGHT POLE TOP SPACE (PANEL)

drawn:	approved:	date:	800-024
RWC	MMG	02/18/2020	

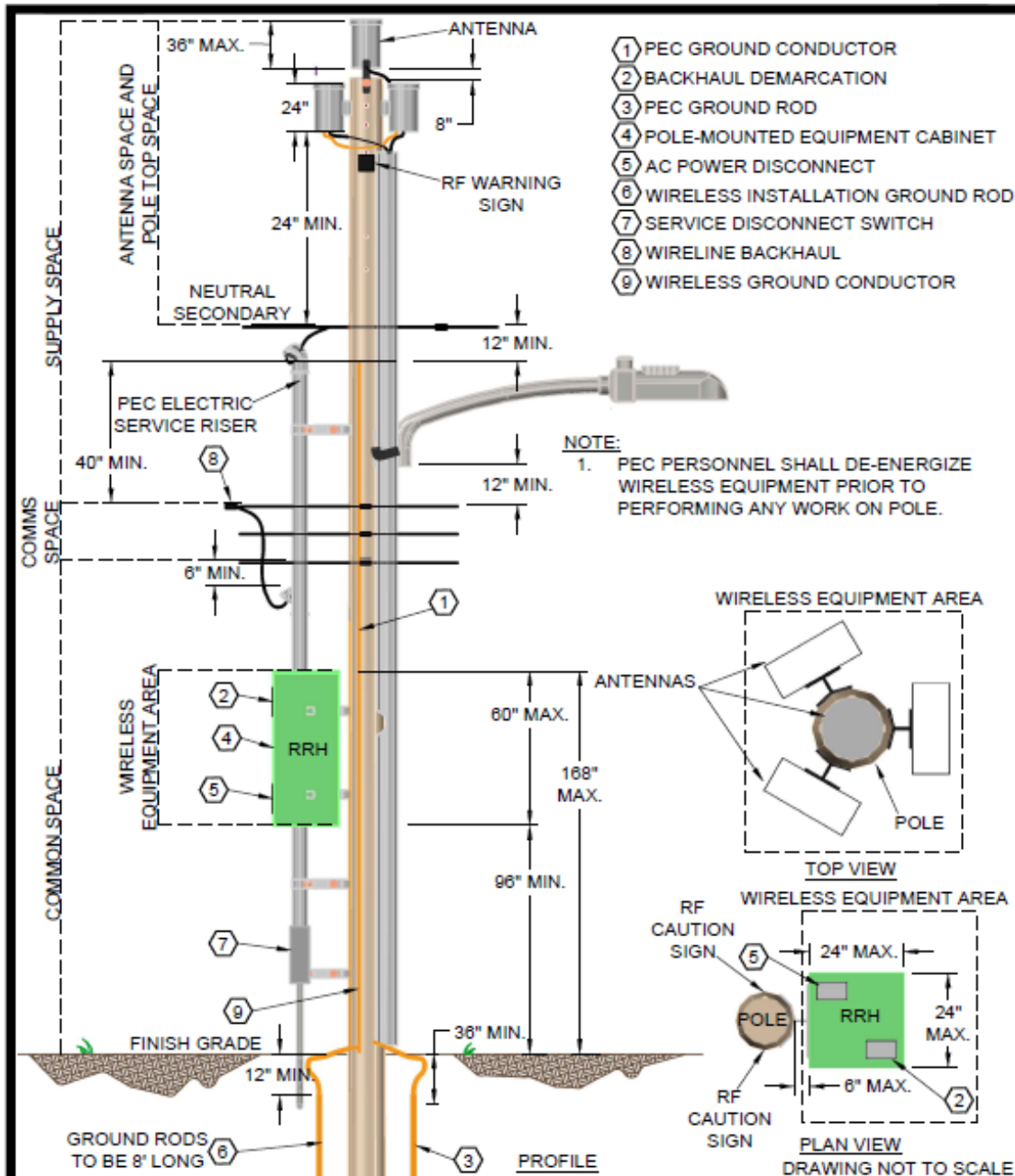


### G14: Overhead Fed Streetlight Pole – Pole Top Space (Panel) (metered)





### G15: Overhead Fed Streetlight Pole – Pole Top Space - Pole Mounted Equipment Cabinet (unmetered)



- ① PEC GROUND CONDUCTOR
- ② BACKHAUL DEMARCATION
- ③ PEC GROUND ROD
- ④ POLE-MOUNTED EQUIPMENT CABINET
- ⑤ AC POWER DISCONNECT
- ⑥ WIRELESS INSTALLATION GROUND ROD
- ⑦ SERVICE DISCONNECT SWITCH
- ⑧ WIRELINE BACKHAUL
- ⑨ WIRELESS GROUND CONDUCTOR

**NOTE:**  
1. PEC PERSONNEL SHALL DE-ENERGIZE WIRELESS EQUIPMENT PRIOR TO PERFORMING ANY WORK ON POLE.

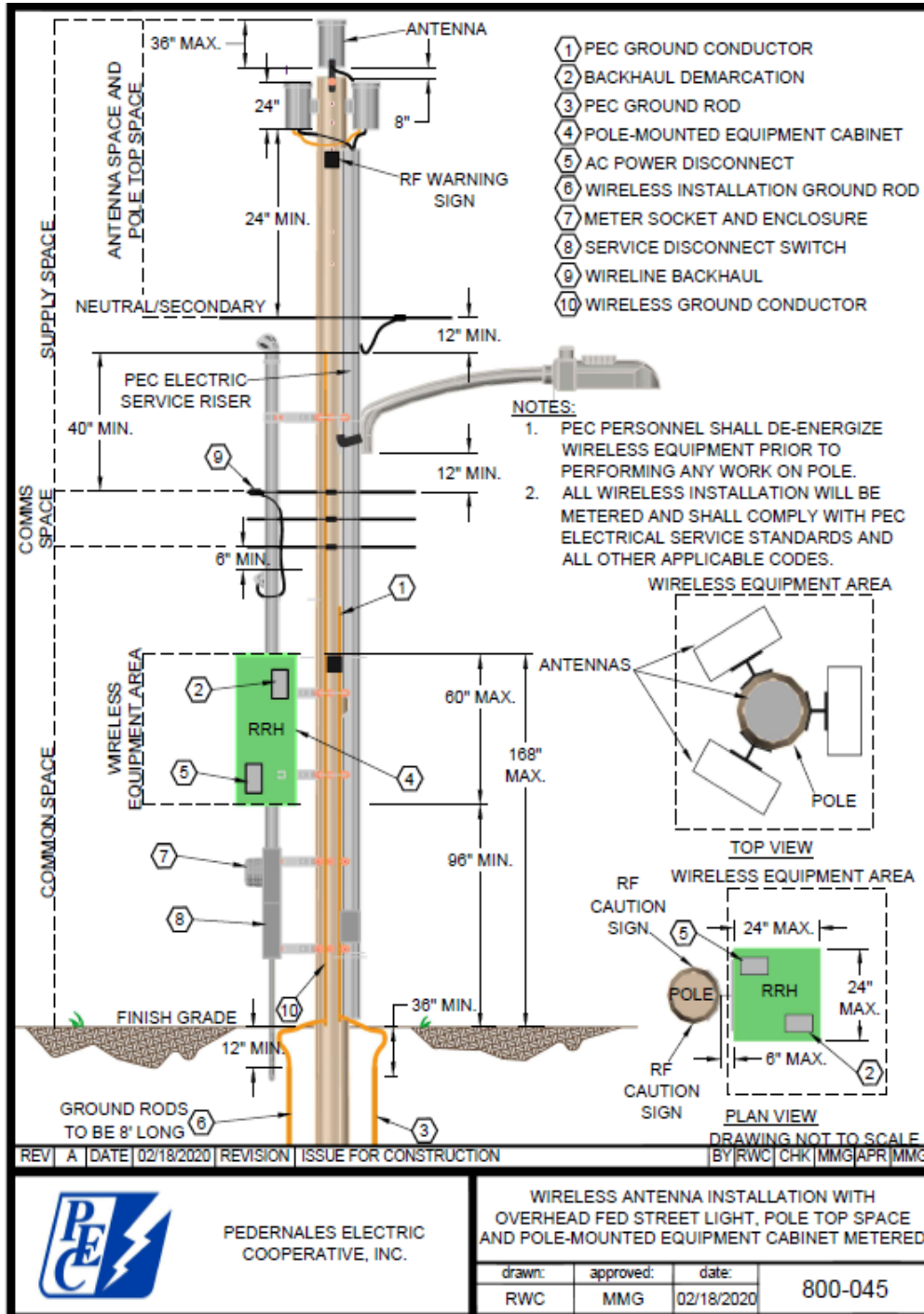
REV	A	DATE	02/18/2020	REVISION	ISSUE FOR CONSTRUCTION	BY	RWC	CHK	MMG	APR	MMG
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PEDERNALES ELECTRIC COOPERATIVE, INC.

WIRELESS ANTENNA INSTALLATION WITH OVERHEAD FED STREET LIGHT, POLE TOP SPACE AND POLE-MOUNTED EQUIPMENT CABINET			
drawn:	approved:	date:	800-025
RWC	MMG	02/18/2020	

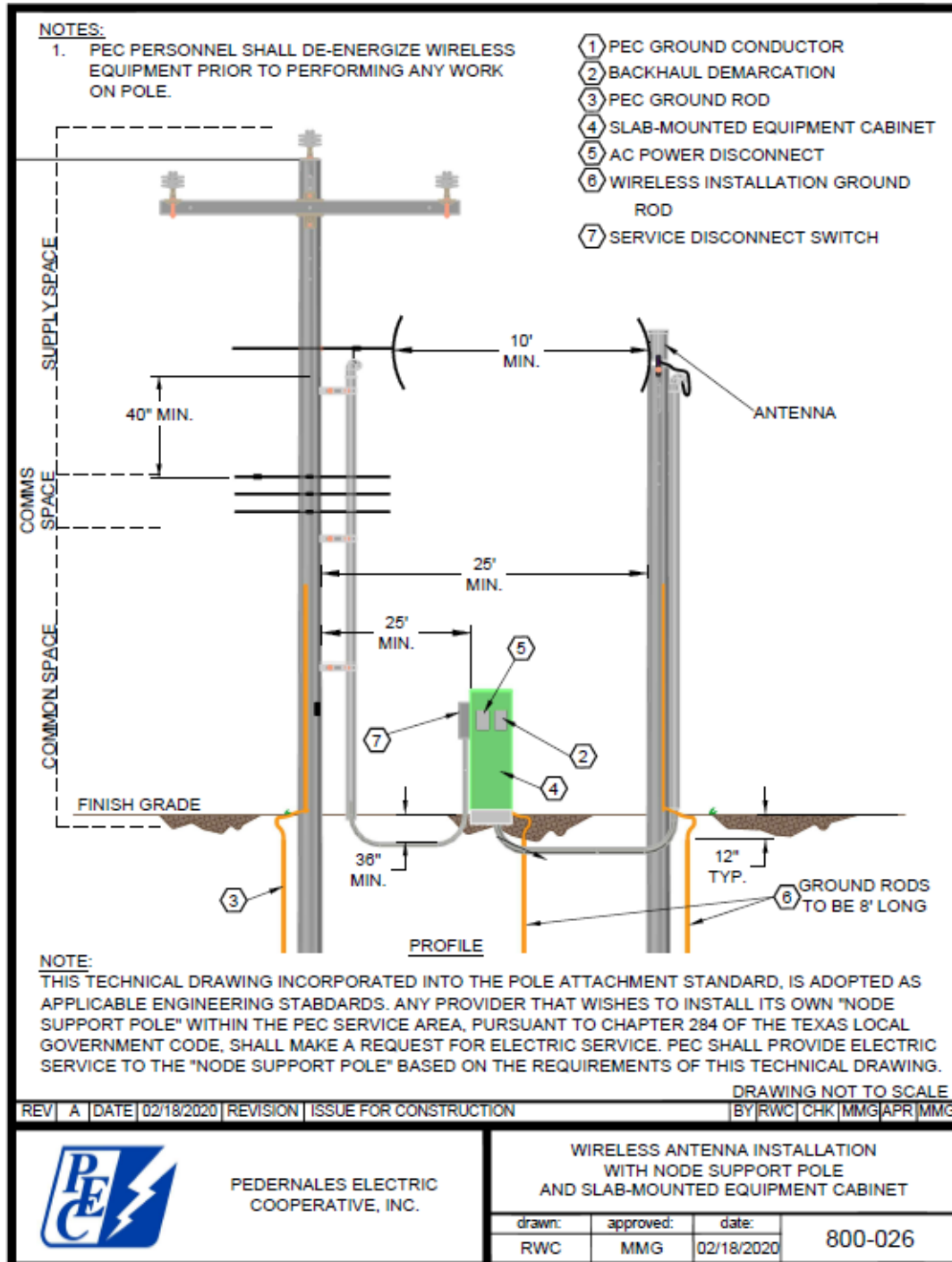


### G15: Overhead Fed Streetlight Pole – Pole Top Space - Pole Mounted Equipment Cabinet (metered)



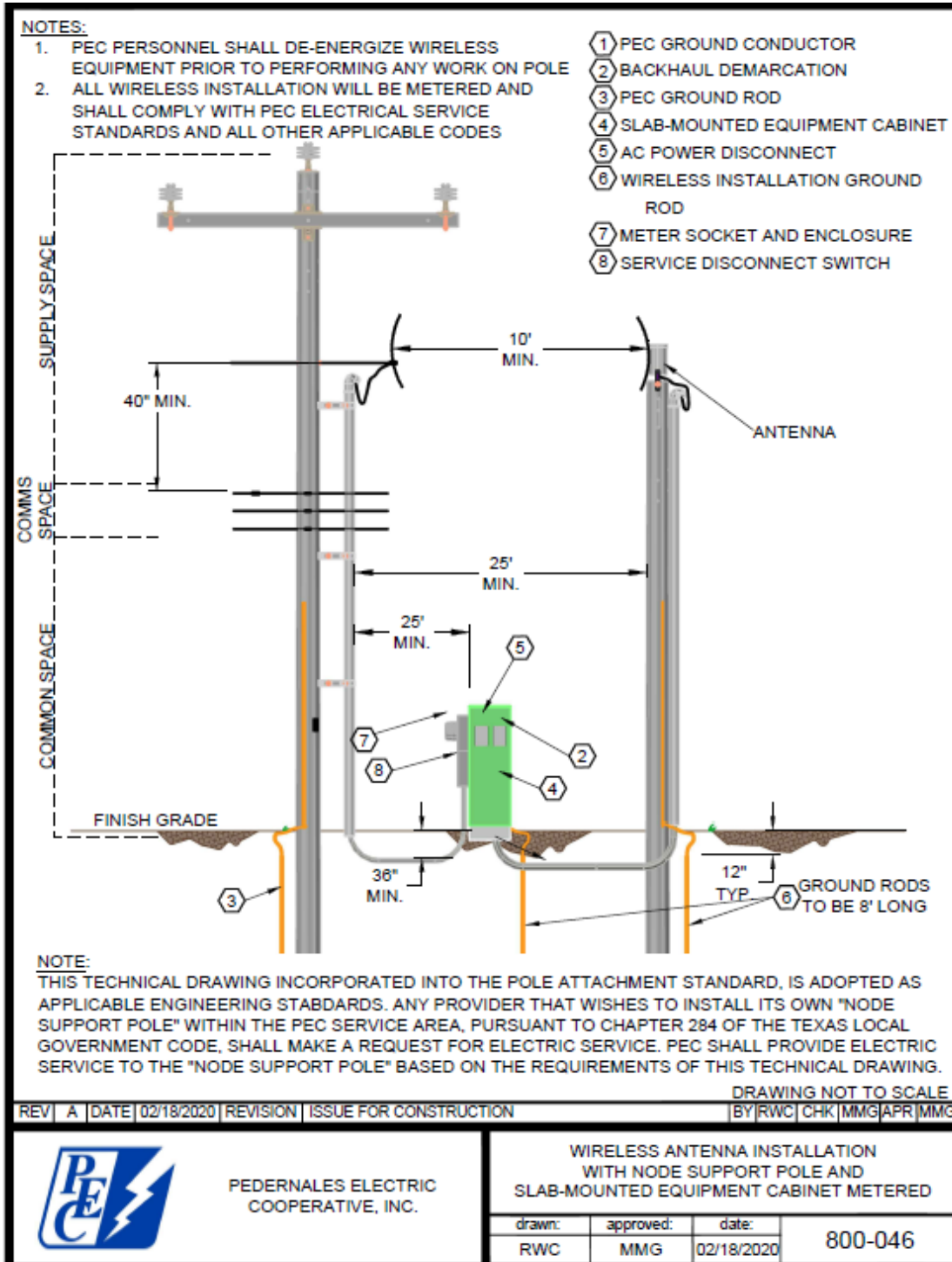


## G16: Node Support Pole and Slab-Mounted Equipment Cabinet (unmetered)



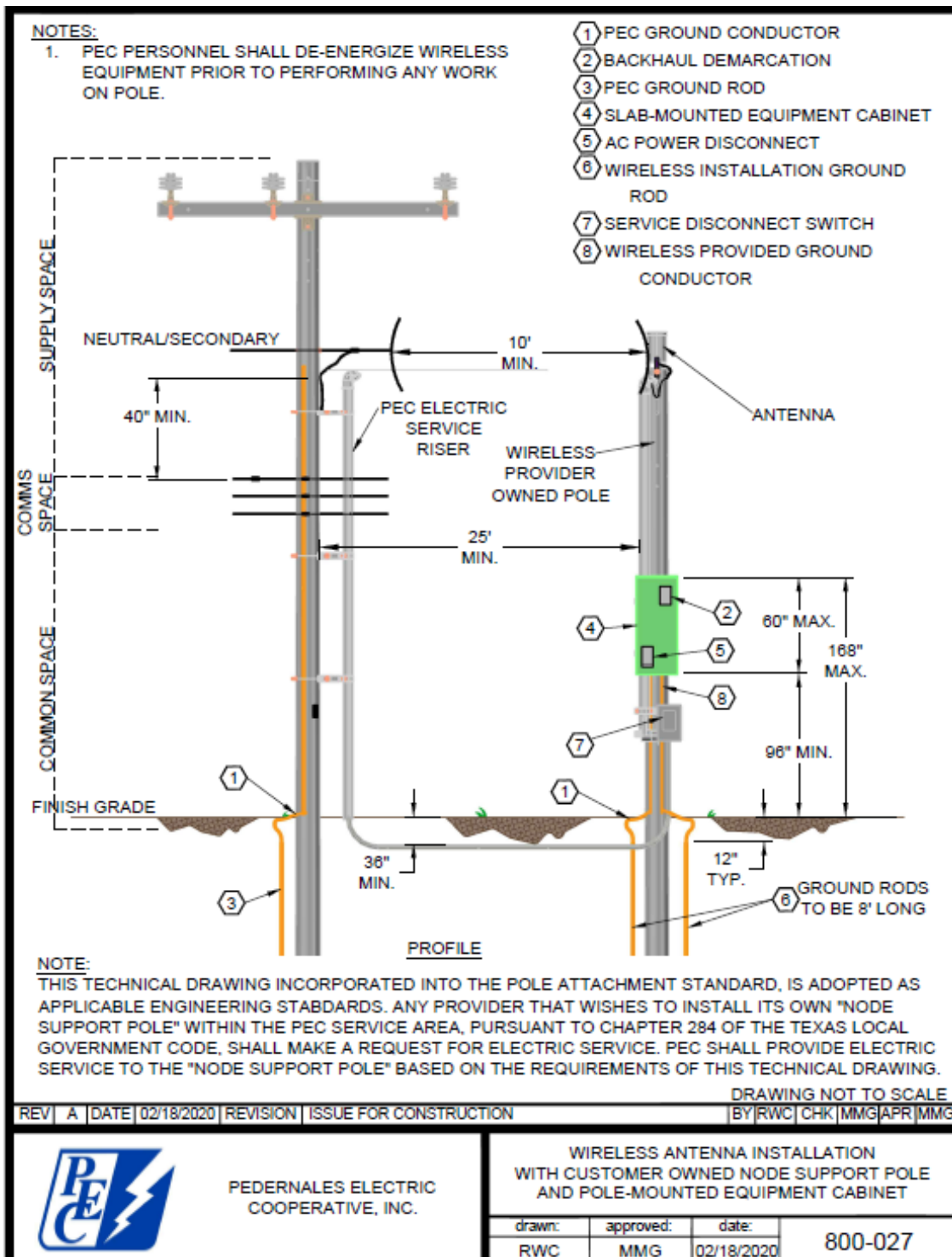


### G16: Node Support Pole and Slab-Mounted Equipment Cabinet (metered)



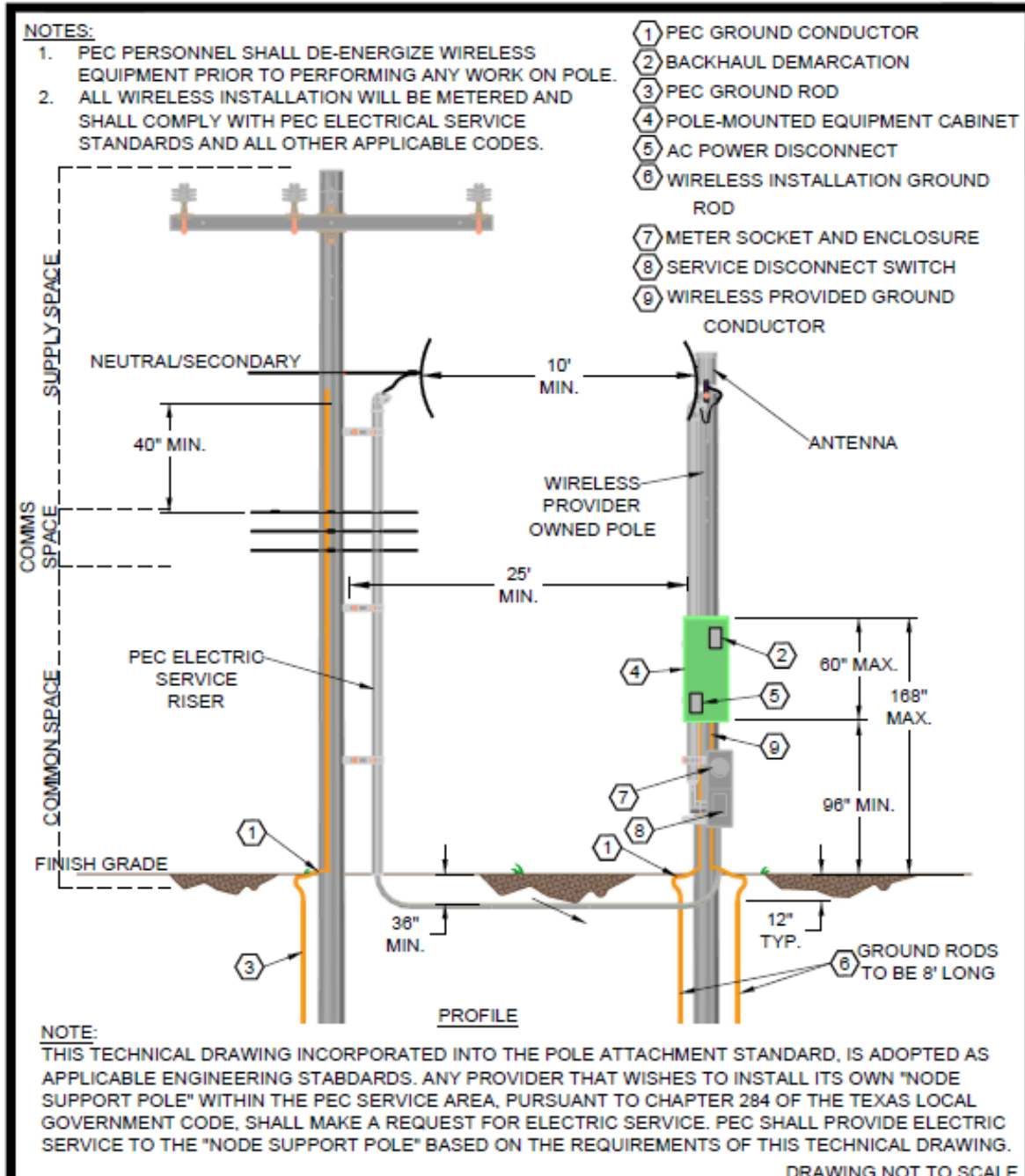


### G17: Customer Owned Node Support Pole and Pole Mounted Equipment Cabinet (unmetered)





### G17: Customer Owned Node Support Pole and Pole Mounted Equipment Cabinet (metered)

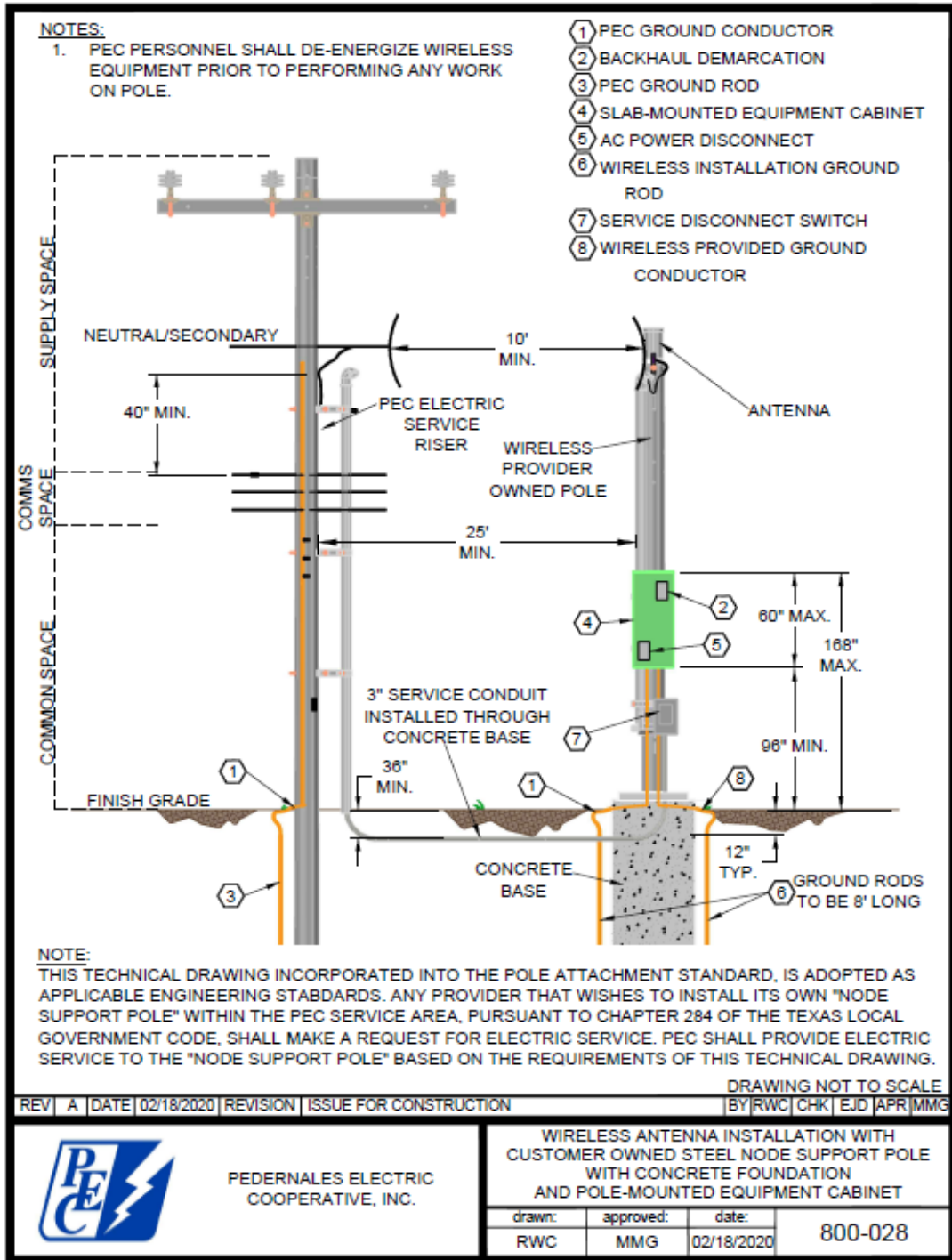


REV	A	DATE	02/18/2020	REVISION	ISSUE FOR CONSTRUCTION	BY	RWC	CHK	MMG	APR	MMG
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	<b>FEDERNALES ELECTRIC COOPERATIVE, INC.</b>	<b>WIRELESS ANTENNA INSTALLATION WITH CUSTOMER OWNED NODE SUPPORT POLE AND POLE-MOUNTED EQUIPMENT CABINET METERED</b>			
		drawn:	approved:	date:	800-047
		RWC	MMG	02/18/2020	

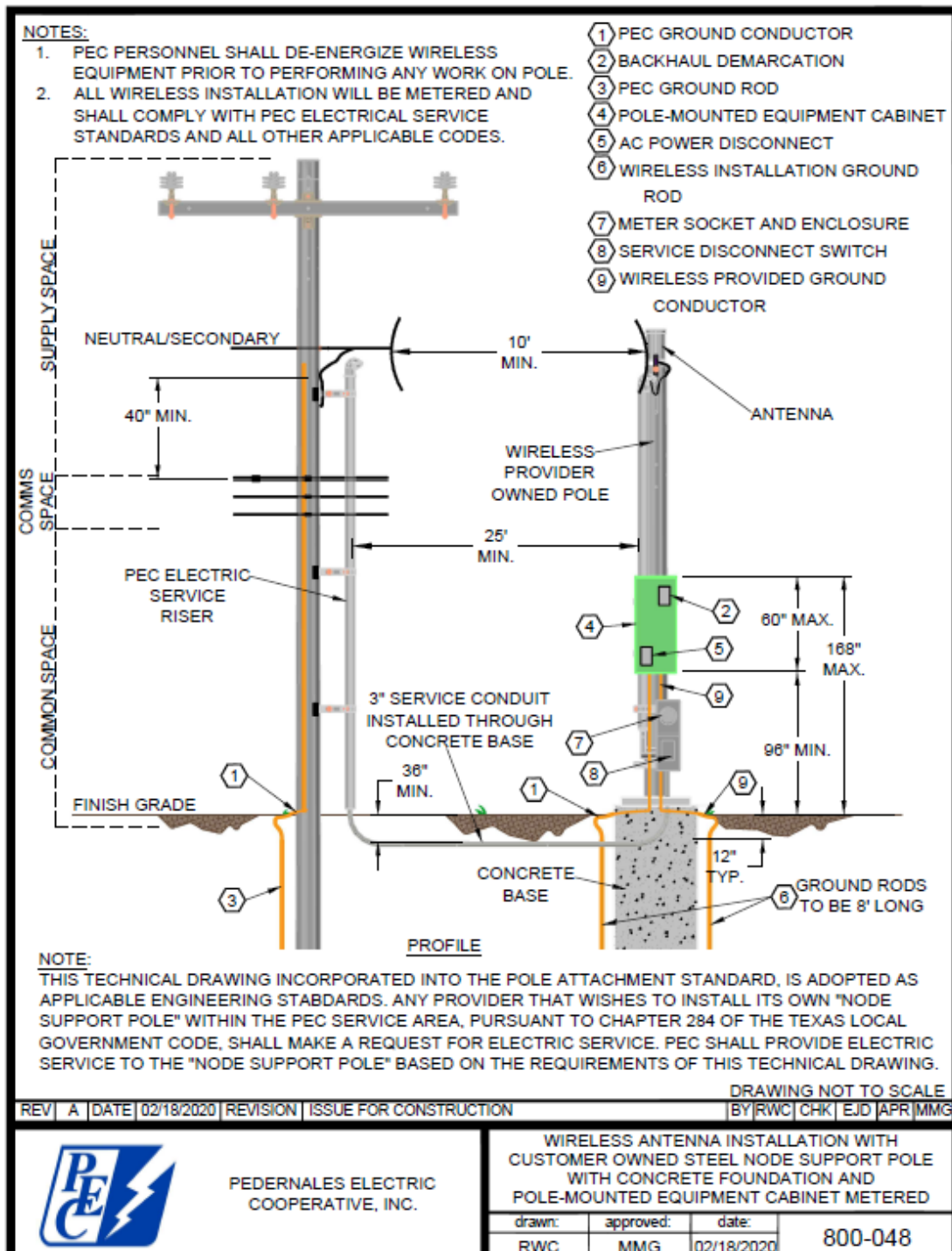


### G18: Customer Owned Steel Node Support Pole – Concrete Foundation and Pole Mounted Equipment Cabinet (unmetered)



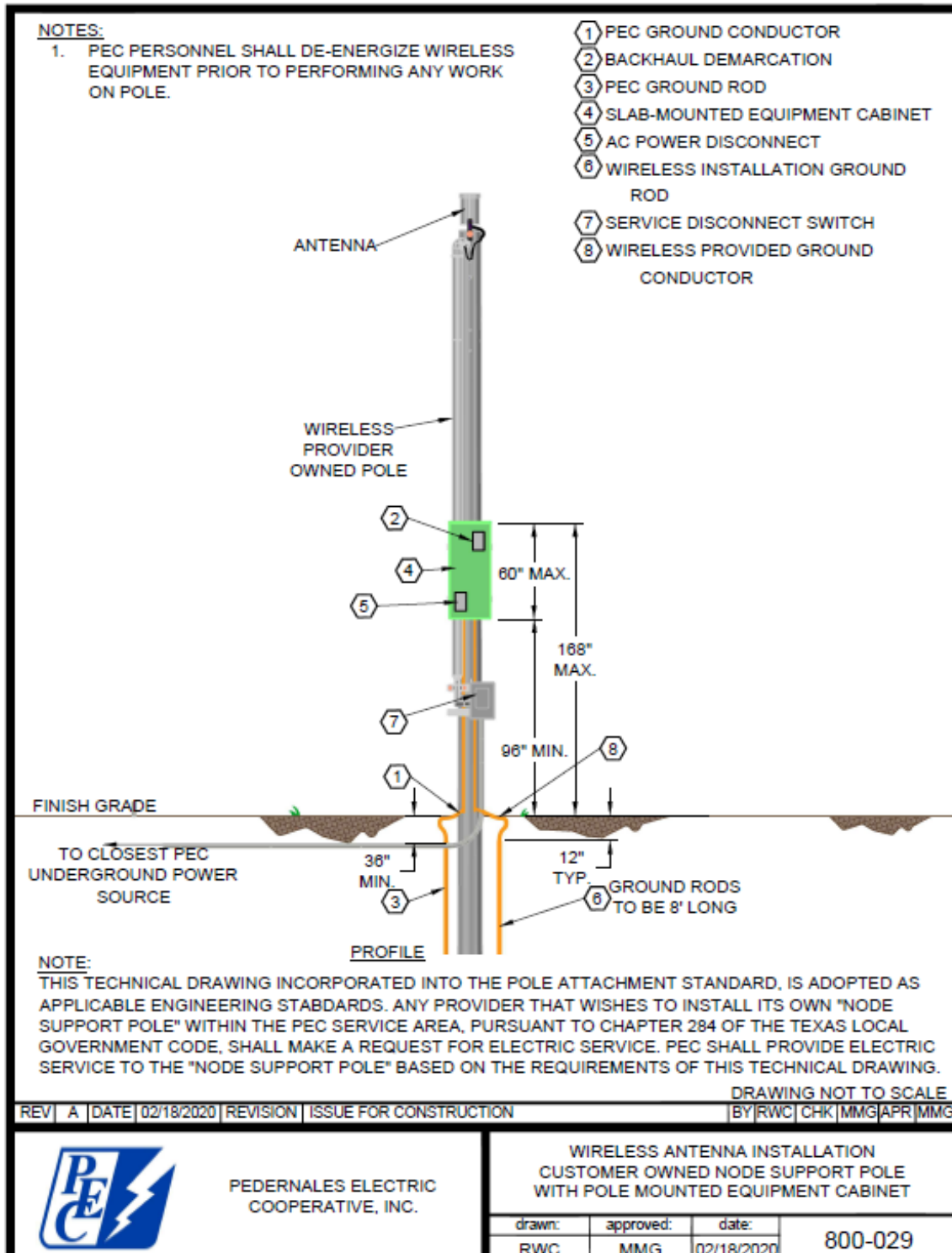


### G18: Customer Owned Steel Node Support Pole – Concrete Foundation and Pole Mounted Equipment Cabinet (metered)



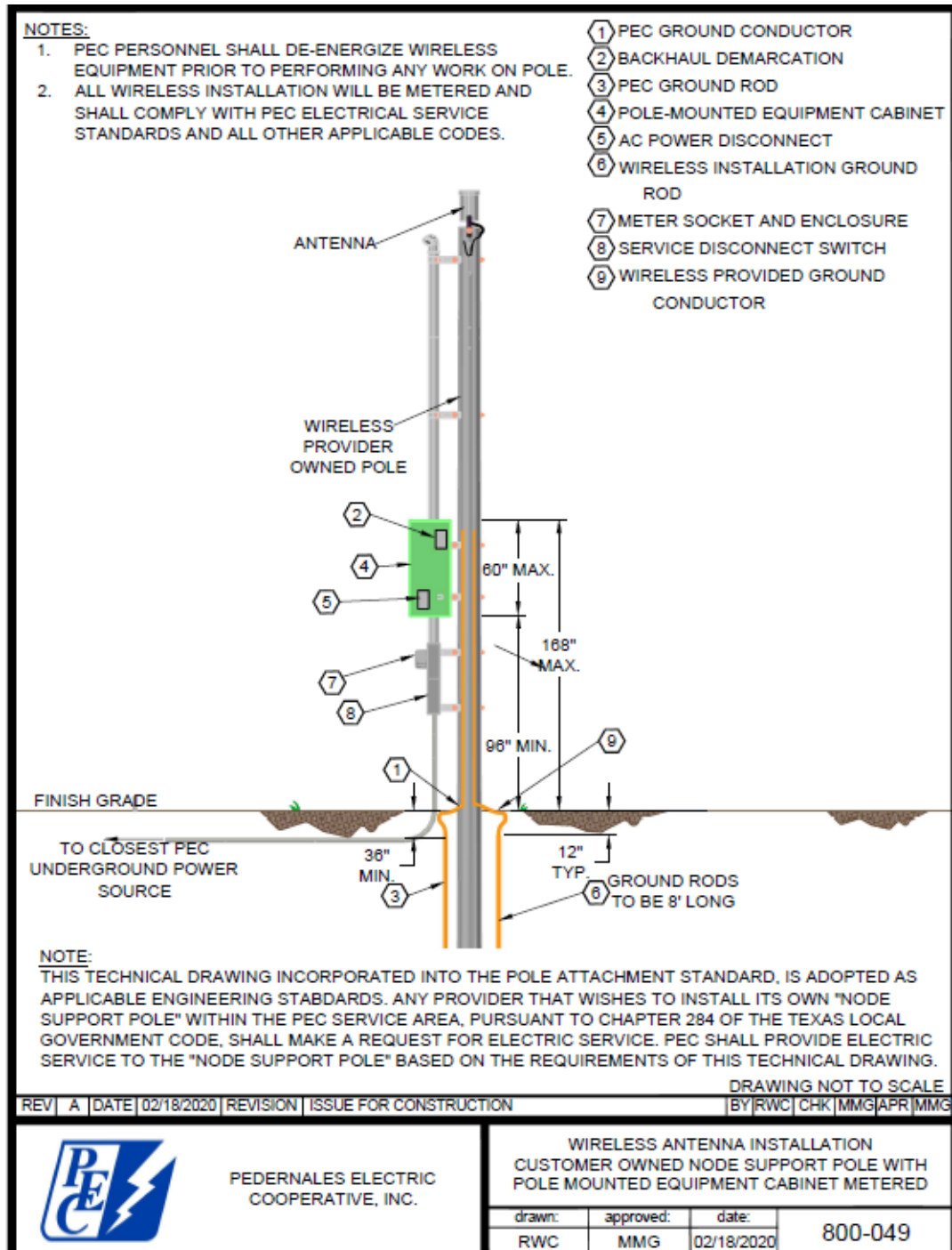


## G19: Customer Owned Node Support Pole and Pole Mounted Equipment Cabinet (unmetered)



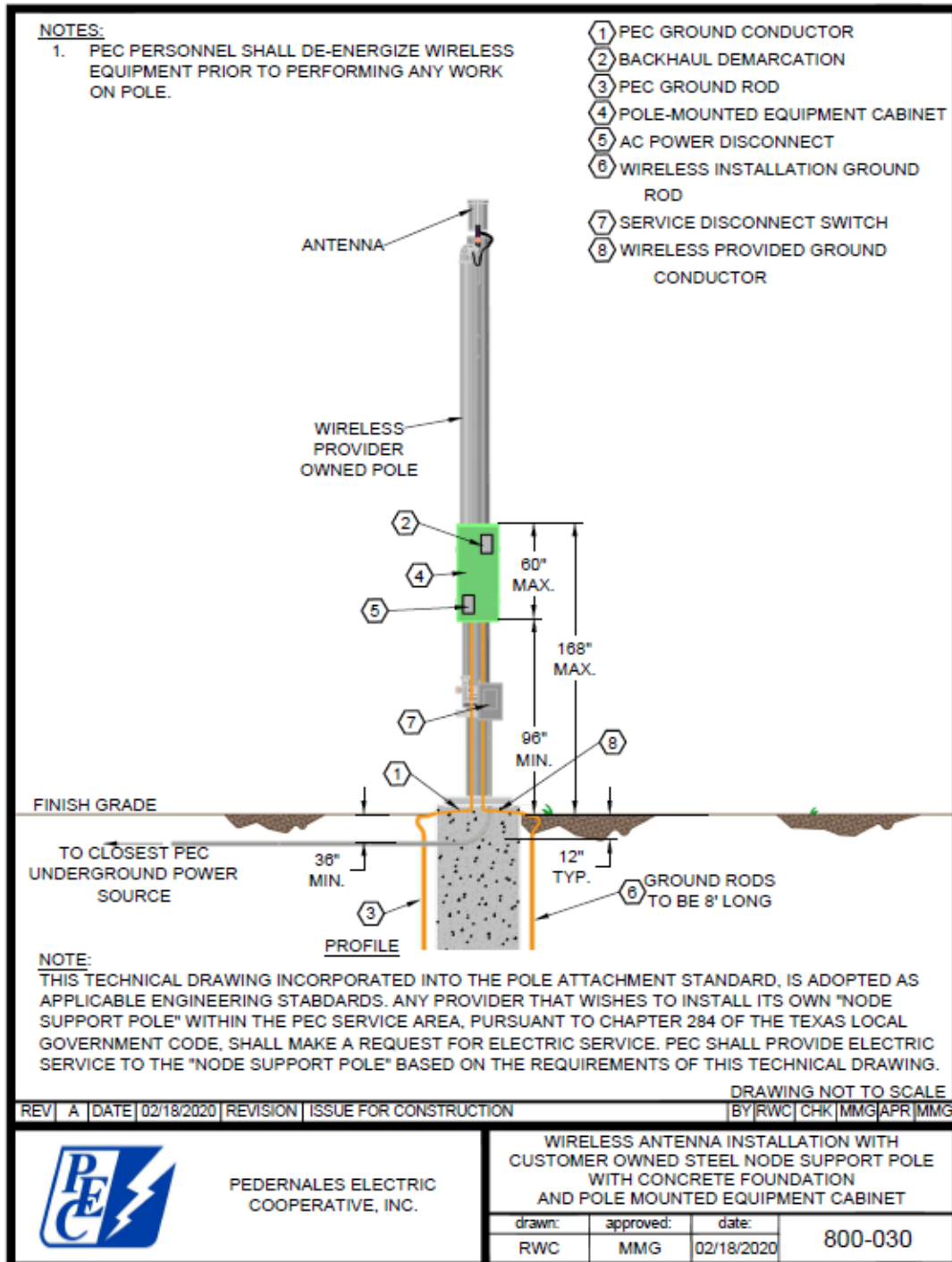


## G19: Customer Owned Node Support Pole and Pole Mounted Equipment Cabinet (metered)



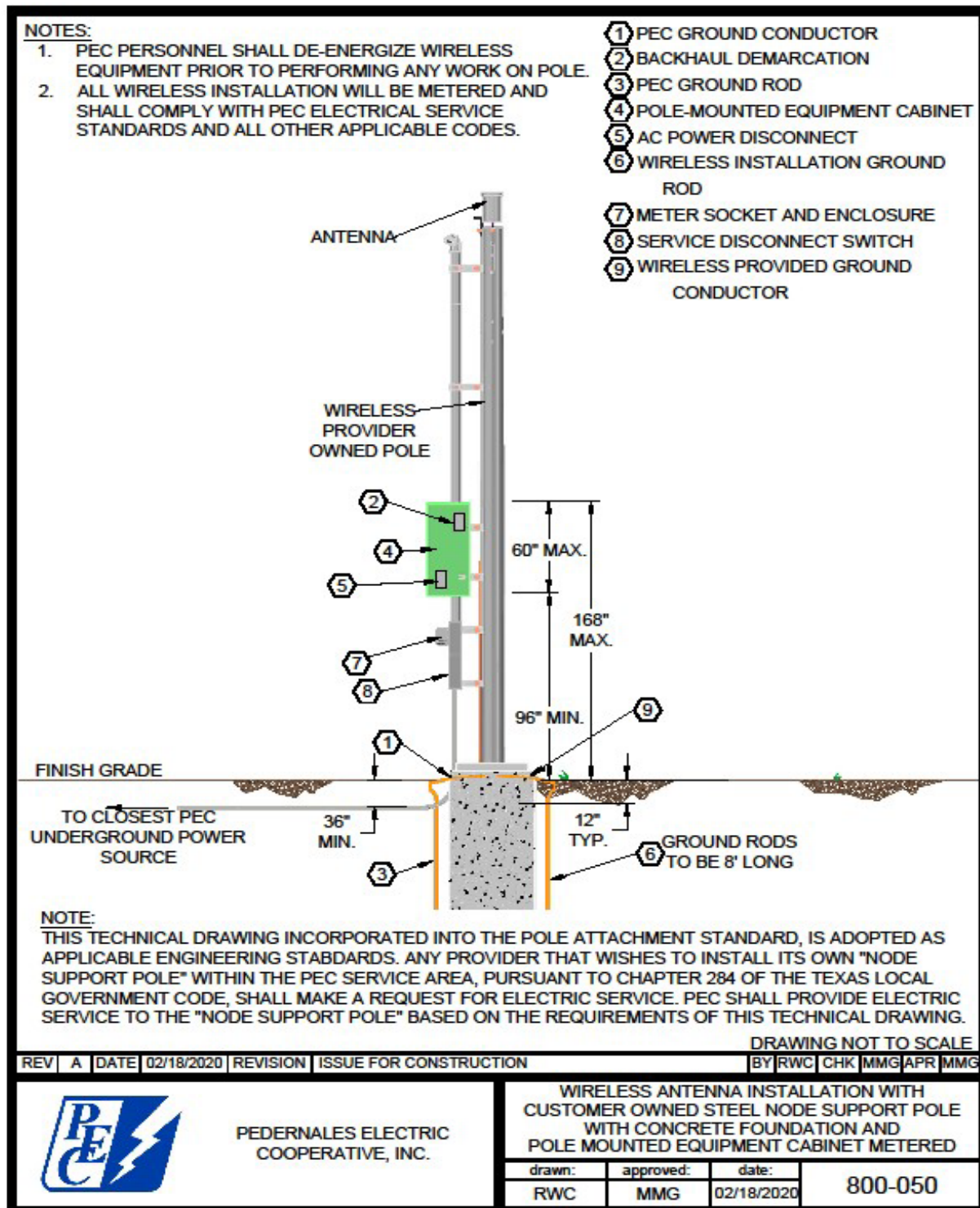


### G20: Customer Owned Steel Node Support Pole with Concrete Foundation – Pole Mounted Equipment Cabinet (unmetered)





## G20: with Customer Owned Steel Node Support Pole with Concrete Foundation – Pole Mounted Equipment Cabinet (metered)





## H. PEC Pole Attachment List & Tag Detail

### H1: Attachment Tagging Assignments as of May 23, 2022

#	Attaching Entity		#	Attaching Entity
1	PEC		36	CITY OF AUSTIN -GAATN FIBER
2	CHARTER SAN ANTONIO		37	CITY OF AUSTIN -CTM DEPT
3	AT&T		38	CITY OF BURNET-JOINT USE
4	GRANDE		39	CITY OF BURNET -POWER
5	MCI-VERIZON		40	CITY OF GEORGETOWN
6	HILL COUNTRY TELEPHONE COOP		41	CITY OF HORSESHOE BAY
7	HILL COUNTRY WIRELESS		42	CITY OF LAKEWAY
8	CHARTER AUSTIN		43	CITY OF SAN MARCOS
9	EMBARQ( SPRINT-CENTURY TEL)		44	
10	GVTC		45	
11	GVCS		46	
12	SUDDENLINK		47	GOOGLE
13	NORTHLAND CABLE		48	
14	CHARTER WACO		49	
15	SOUTHWEST TEXAS TELEPHONE		50	
16	WINDSTREAM		51	
17	FRONTIER		52	
18	WINDSTREAM		53	
19	CLARUS BROADBAND		54	COMAL ISD
20	CONSOLIDATED COMMUNICATION		55	HILL COUNTRY RESORTS
21	GRANDE COMMUNICATION		56	MOLECULAR REBAR
22	LCRA		57	RIO BONITO RV
23	CPS		58	BERTRAM VFD
24	ONCOR ELECTRIC DELIVERY		59	BAY MARINE SPORTS CENTER
25			60	BERRY AVIATION
26	NEXSTREAM		61	DRIPPING SPRINGS ISD
27	RAPID COMMUNICATIONS		62	HAYS ISD
28	ECPI (WESTERN BROADBAND)		63	JOHNSON CITY ISD
29	ZAYO		64	LAKE TRAVIS ISD
30	FIBERLIGHT		65	LAGO VISTA ISD
31	LEVEL 3 COMMUNICATIONS		66	LEANDER ISD
32	AT&T WIRELESS		67	MARBLE FALLS ISD
33	RIO BROADBAND		68	ROUND ROCK ISD
34			69	TEXAS STATE UNIVERSITY
35			70	WIMBERLEY ISD (CNS)



## H2. Pole Attachment Tag Detail

For the purposes of Tagging an Attachment, Overlash or Wireless Installation (including a Mid-Span Installation), PEC requires the use of a Tag placed within twelve inches (12") of a Pole on the wires and cables, coded by number, color, or other means that will readily identify the owner of the Attachment at a Pole from ground level. The Tag shall be as specified below or consistent with accepted communication industry standards or other Licensee supplied tag approved in writing by PEC, provided the Tag is made of materials which are weather, corrosion, and Ultraviolet (UV) resistant.

