



Tucson Electric Power

Pole Attachment

Guideline

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INTRODUCTION

This Pole Attachment Guideline (collectively referred to as “Guidelines”) provides the requirements necessary for Tucson Electric Power Company (the “Company”) to process Attachment requests. The Company only allows Attachments where there is an existing Distribution Pole.

DEFINITIONS

The following terms, phrases, words, acronyms and their derivations are defined below. The words "shall" and "will" are mandatory and "may" is permissive. Words not defined shall be given their common and ordinary meaning.

1. Abandoned Facility: Abandoned, non-functional, and obsolete Attachments, Overlashes, and any related apparatuses used to support the Attachment, which are no longer utilized by the Licensee for providing communication, telecommunications, or broadband services.
2. AldenOne: A web based communication system the Company utilizes to coordinate Attachments, Transfer Notifications, and other related matters. The Licensee must utilize this online system for all Attachment matters.
3. Application: The document(s) the Licensee prepares to request Wireline Attachment(s) or Wireless Attachment(s) to existing Company Distribution Poles or to request modifications to existing Attachments. Such documents must adhere to the Guidelines. The Company utilizes two types of Applications: (1) Wireline Permit to Attach; and (2) Small Cell & Wireless Permit to Attach.
4. Attachment: Any pole attachment by a cable television system, provider of telecommunications service, or local exchange carrier to a pole, duct, conduit, or right-of-way owned or controlled by the Company.
5. Architectural & Engineering Visit: The meeting scheduled by the Licensee to coordinate and discuss concerns regarding construction and power requirements for Wireless Attachments (excludes Strand Mount) with the Company’s field technicians.
6. Cell Modification: Any change, upgrade, rebuild, repair, transfer, relocation or other changes made by the Licensee to its Pole Top Antenna or on other structures owned by the Licensee located on Company property.
7. Company: Tucson Electric Power Company, its directors, officers, employees, agents, contractors, and subcontractors.
8. Complex Make-Ready Work: Transfers of Attachments and/or work within the Communications Space that are reasonably likely to cause an electric, cable, internet or telecommunications service outage(s) or facility damage, including without limitation, work such as splicing or cutting of any communication Attachment or relocation of existing Wireless Attachments. Any and all work related to Wireless Attachments, including those involving mobile, fixed, and point-to-point wireless communications and wireless internet are to be considered complex. Any Distribution Pole replacements are also considered complex.
9. Complex Safety Violation: An Attachment or Overlash that fails to comply with the specified Installation Specifications and such failure is likely to cause imminent danger to life or property.
10. Communications Space: The lower useable space on the Company’s Distribution Pole reserved for low-voltage communication.
11. Construction Make-Ready (“CMR” or “Make-Ready Work”): All work that the Company reasonably determines to be required to accommodate the Licensee’s Attachments or those of another user, and/or to comply with all applicable technical specifications and this Guideline. Such work includes, but is not limited to, rearrangement and/or Transfer of existing Attachments, Distribution Pole replacement, and construction. This work is normally completed by the Company.
12. Conversation: An electronic communication notification in AldenOne between the Licensee, Contractor (if applicable), and the Company.

13. Distribution Pole: A pole owned by the Company on which it has installed and is using conductors for the distribution of electricity to its customers, including “drop poles” at or near customer locations. This term includes anchors, ducts, conduits, and appurtenances used to support a pole for the distribution of electricity. This term does not include poles or other facilities that are not part of the Company’s distribution system, including, but not limited to: (i) poles and other structures that support conductors used exclusively for the transmission of electricity subject to the regulatory jurisdiction of the Federal Energy Regulatory Commission; and (ii) poles and other structures that may be used by, but not owned by the Company, for the purpose of providing electric service.
14. Facility Map: A geographical depiction that outlines the Company’s service territory, showing Distribution Poles that a Licensee can attach to.
15. Installation Specifications: The specifications in the following documents, which the Licensee must adhere to when placing Attachments on Distribution Poles: (1) the technical specifications listed on the Company’s website, which may be amended from time to time; (2) the Company’s Pole Attachment Guidelines, listed on the Company’s website, which may be amended from time to time; (3) the National Electric Safety Code current as of the time of Attachment, as may be amended or supplemented, from time to time; and (4) Occupational Safety and Health Act requirements, including Minimum Access Distance requirements.
16. Licensee: Includes the Licensee’s directors, officers, employees, agents, contractors, and subcontractors.
17. Licensee Construction Make-Ready: All work that the Licensee or other users must complete to attach and/or to comply with all applicable Installation Specifications.
18. One Touch Make Ready Process (“OTMR Process”): The process for an Attachment(s) that involves Simple Make Ready Work. The Licensee must elect to use one touch make ready timelines and processes in its Application. Such timelines allow for expedited access to the Company’s Distribution Pole as prescribed in 47 C.F.R. § 1.1411(j).
19. Overlash or Overlapping: A technique where the Licensee attaches a wire to its own existing wires or shares space with an existing Attachment.
20. Monitor: Company qualified lineman(s), as determined by the Company, who standby and monitor the Licensee’s work. Typically, a qualified lineman is present for all work located within the electrical space of a Distribution Pole.
21. Modification: A change to an existing Attachment made by the Licensee. All Modifications go through the Company’s Application process.
22. Pre-Construction Meeting (“Pre-Con Mtg”): The Meeting scheduled by the Licensee to coordinate and discuss concerns and construction requirements with the Company’s field technicians.
23. Pole Mount Small Cell Equipment. An Antenna that is a component of a Wireless Attachment, installed in the Communications Space on a Distribution Pole.
24. Pole Top Antenna: An Antenna that is a component of a Wireless Attachment, which is installed on the top of a Distribution Pole above the electrical space.
25. Post Inspection/Check: An inspection performed by the Company within ninety (90) days after an Attachment or Overlash is placed to determine if there are any Safety Violations.
26. Power Coordination: A site meeting where the power source is identified and preliminary easement requirements, specifications and costs are reviewed.
27. Simple Make Ready Work: Make-ready work where existing Attachments within the Communications Space of a Distribution Pole could be transferred without any reasonable expectation of an electric, cable, internet or telecommunications service

outage(s) or facility damage and does not require splicing or cutting of any existing communication Attachments. Simple Make Ready work is generally performed by the Licensee and will be the result of a Licensee electing to follow the One Touch Make Ready Process.

28. Safety Violation: Includes either a Complex or Simple Safety Violation.
29. Search Ring: The location where the Licensee wants to place its Pole Top Antenna and Pole Mount Small Cell Equipment on the Company's Distribution Pole. The Licensee will circle this location on a Company Facility Map and submit it with its Application.
30. Simple Safety Violation: A violation that occurs when an Attachment and/or Overlash fails to comply with the specified Installation Specifications which may pose a safety risk to the Company's Distribution Pole, but not imminent danger.
31. Simple Safety Violation Sanction ("Sanction"): An amount equal to two hundred dollars and zero cents (\$200.00) per month that may be charged to the Licensee per Safety Violation.
32. Small Cell Wireless Attachment. A Wireless Attachment for low-power (20 watts maximum) radio frequency transmitting and/or receiving devices, with antennas that are no greater than 26 inches in length in the vertical plane, and related equipment.
33. Standard Permit to Attach Process: The process for Wireline Attachment(s) where Licensee has not elected an OTMR Process. Strand Mounts are included in this process.
34. Strand Mount Small Cell Equipment: A Wireless Attachment mounted to the Licensee existing aerial cables in the Communication Space. Strand Mount requests follow the Standard Permit to Attach Process.
35. Structural Analysis: The determination that poles or other structures owned by Licensee or the Company will have the adequate strength to support the proposed Attachments or modifications. Structural Analysis will be provided to the Company, sealed and stamped by a Professional Engineer (PE Stamp).
36. Structural Letter: The determination that Company's Distribution Poles will have the adequate strength to support the proposed Attachments or modifications.
37. Third Party Overlapping: A technique where the Licensee attaches a wire to an existing wire it does not own.
38. Tag or Tagging: A distinct marker on the wires and cables that will readily identify the owner of the Attachment.
39. Transfer: When the Licensee must re-locate its Attachment(s) from one Company Distribution Pole to another. The Licensee must complete the re-location within the prescribed regulatory timeframe pursuant to 47 C.F.R. §1.1411 or 47 C.F.R. §1.1403(c).
40. Transfer Notification: The notification within AldenOne the Company sends to the Licensee, notifying the Licensee that it must Transfer.
41. Wireline Permit to Attach Application: The document the Licensee must complete and submit to the Company through AldenOne to request a Wireline Attachment. This includes Strand Mount Small Cell Equipment.
42. Wireline Attachment: The aerial cables, amplifiers, power supplies and associated hardware required to support the aerial Wireline Attachments utilized by the Licensee for the transmission and distribution of communications services to its Subscribers. It does not include Wireless Attachments, but does include unlicensed wireless equipment (e.g. Wi-Fi and other similar devices),
43. Wireless Permit to Attach Application: The document the Licensee must complete and submit to the Company through AldenOne to request a Wireless Attachment.

44. Wireless Attachment: An Attachment to the Distribution Poles using an antenna, transmitter, receiver, or associated equipment that is used for the transmission or reception of radiofrequency signals permitted by law. Typically, such Attachments are located in the Communications Space and electrical space of the Distribution Poles. In addition, the term includes Pole Top Antenna and Pole and Strand Mount Small Cell Equipment.
45. Unauthorized Attachment: An Attachment installed on the Company's Distribution Poles without a lawful agreement or permit from the Company.
46. Unauthorized Attachment Penalty: A fee of five hundred dollars and zero cents (\$500.00) per Distribution Pole for occupants without an agreement with the Company or five times the current annual rental fee per Distribution Pole if the pole occupant does not have a permit and the violation is self-reported, or discovered through a joint inspection, with an additional sanction of one hundred dollars and zero cents (\$100.00) per Distribution Pole if the violation is found by the pole owner in an inspection in which the pole occupant has declined to participate, or discovered during routine maintenance of the Company's electrical operations.

SAFETY

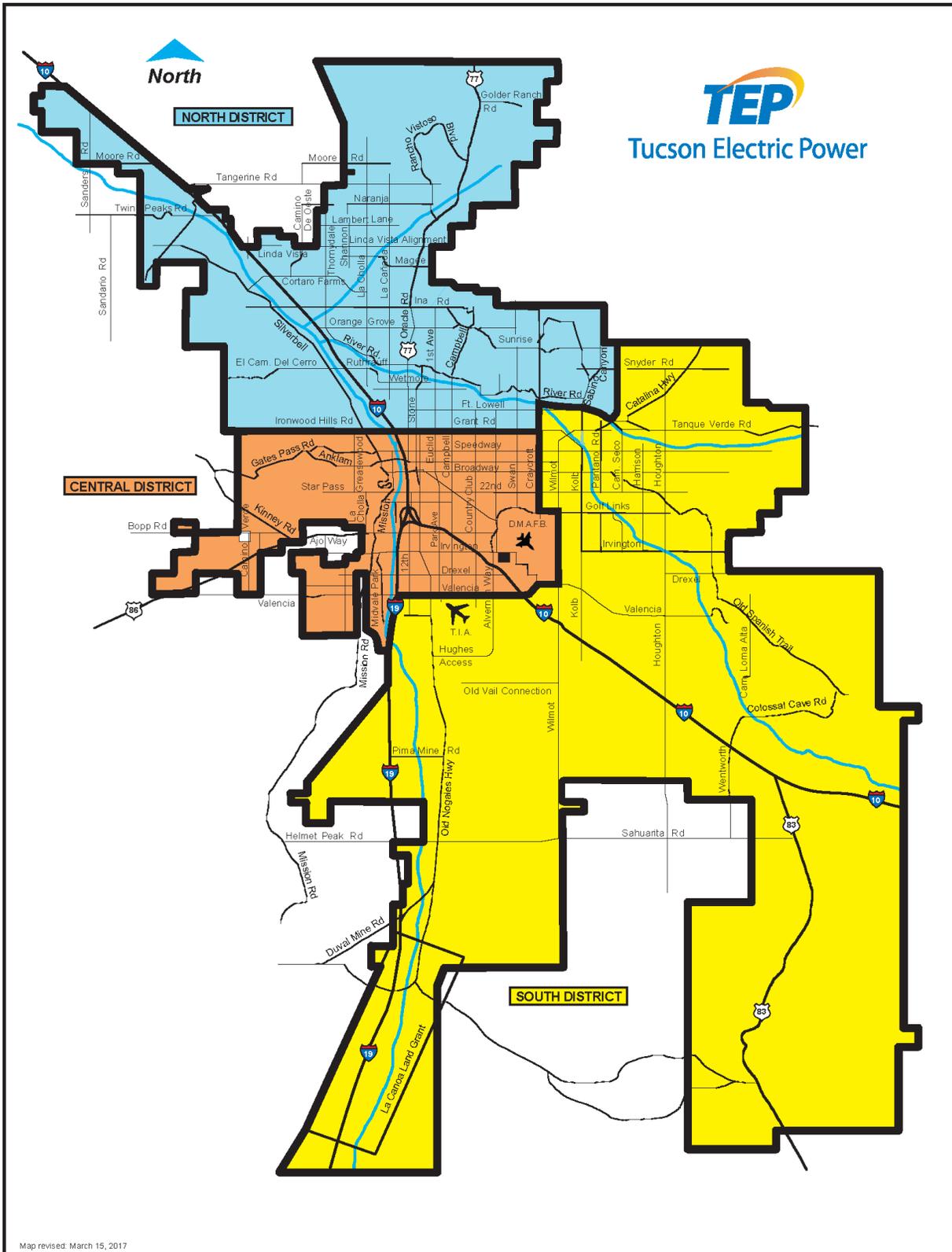
The Company is dedicated to providing reliable electric service to its customers and maintaining the safety of its employees and its Distribution Poles.

The Company's field employees will meet with property owners, builders, contractors or Licensee's at a work site to discuss safety concerns related to the Company's Distribution Pole at no cost. The Company may implement preventative measures to protect against injury and preserve the integrity of the Company's electrical Distribution Poles.

The Company power lines are energized, unless the Company confirms the power lines are de-energized. The Company can de-energize or re-configure its electrical equipment at or near a work site, if necessary. Property owners, builders, contractors or Licensees can contact the Company before beginning construction to prevent unintended outages, injury, and property damage.

It is the responsibility of the Licensee to be familiar with and adhere to the NESC, OSHA, and the Guidelines during installation, maintenance, and all related activities, surrounding its Attachments.

COMPANY'S SERVICE TERRITORY



POLE ATTACHMENT AGREEMENT PROCESS AND CONSIDERATIONS

POLE ATTACHMENT AGREEMENT

The Licensee must enter into a Pole Attachment License Agreement (“Agreement”) before placing any Attachments. To initiate the process, the Licensee must send an e-mail to ContractAdministrator@tep.com. The email shall include the Licensee’s name, Attachment request type, and contact information. The Company will provide an Agreement for review, comment, and signature.

The Company may schedule a meeting to discuss scope and project timelines upon receipt of a new Agreement request. The Company will also provide a high-level overview of its Guidelines.

Note: The Agreement process will align with the permit to attach process. However, the Licensee must execute the Agreement prior to attaching. Separate Agreements are required for Wireline and Wireless Attachments. For Wireless Attachments located in the electrical space, the Company will provide the Licensee a Master Service Agreement and then separate Site License Agreements for each Wireless Attachment.

REGISTRATION AND ANNUAL REPORTING INFORMATION

The Licensee Registration & Annual Reporting Form (“Form”) must be submitted by the Licensee annually by March 1st to Telecommunications@tep.com. The Licensee has an obligation and duty to maintain the accuracy of the information in the Form at all times. If there are updates to the Form during the year, please email an updated Form to Telecommunications@tep.com.

The Company’s website has the most up-to-date Registration & Annual Reporting Form.

STANDARDS AND SPECIFICATIONS

The Company has established technical specifications that apply to all Attachment requests. In the event of a conflict between the Company’s standards, NESC, OSHA, or other applicable laws or regulations, the Licensee must adhere to the more stringent requirement.

See Exhibit D and the Company’s website for all Attachment specifications.

IS A POWER SOURCE NEEDED?

There is a separate process for power sources. Once the Licensee obtains a building permit, a new service Application must be submitted to the Company. The application and all information surrounding this process is located at <https://www.tep.com/construction-applications/>.

The Licensee is responsible for all costs and requirements associated with obtaining the power source, including the line extension and necessary land rights. The Company assumes no responsibility and will not obtain, negotiate, or secure any permits, easements, and/or right-of-ways that may be required.

OBTAIN PERMITS OR OTHER AGREEMENTS

The Licensee must contact the appropriate authorities, including but not limited to, the city, county, and state to obtain any necessary permit(s) and agreements, for its Attachments.

APPROVED CONTRACTORS

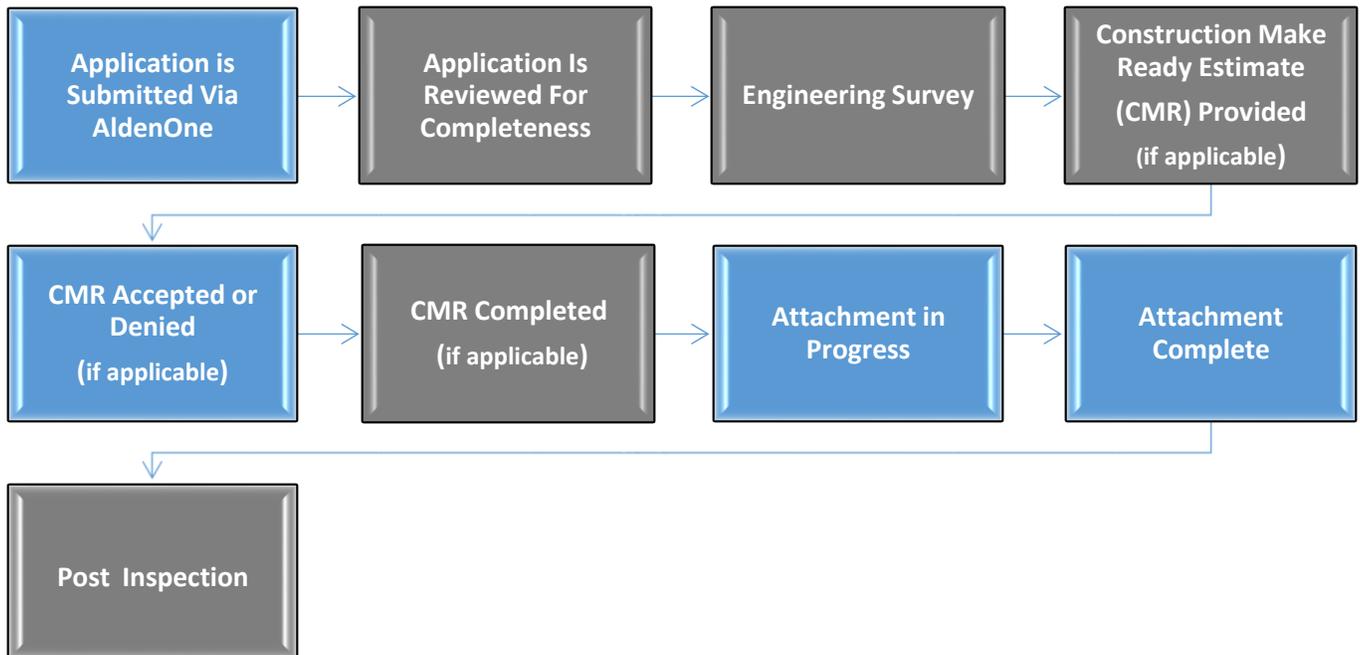
The Company does not publish a list of approved contractors for surveys or Simple Make-Ready Work in the Communications Space. The Licensee is required to use its own qualified contractor to perform work within the Communications Space.

If the Company fails to meet the ninety (90) day timeline for Make-Ready Work above the Communications Space, the Licensee can exercise its self-help remedy. If the Licensee utilizes the self-help remedy or completes any work in the electrical space, the Licensee must use an approved contractor the Company has listed on its website.

The Company is not a guarantor of the contractors provided on its website. The Company, by making available a list of approved contractors, has not made and makes no representations or warranties of any nature, directly or indirectly, express or implied, as to performance of the contractors. Selection of an approved contractor to perform the specified work is the sole decision of the Licensee. The list is not an endorsement by the Company of any product, service, individual or company. There is no work guarantee or warranty, expressed or implied, as to the quality, cost or effectiveness of the work performed by the contractor, employees or subcontractors.

WIRLEINE ATTACHMENT & OVERLASH NOTIFICATION BASIC PROCEDURE WORKFLOW

A high-level overview for Wireline Attachments and Overlashes is illustrated below (includes Strand Mount):

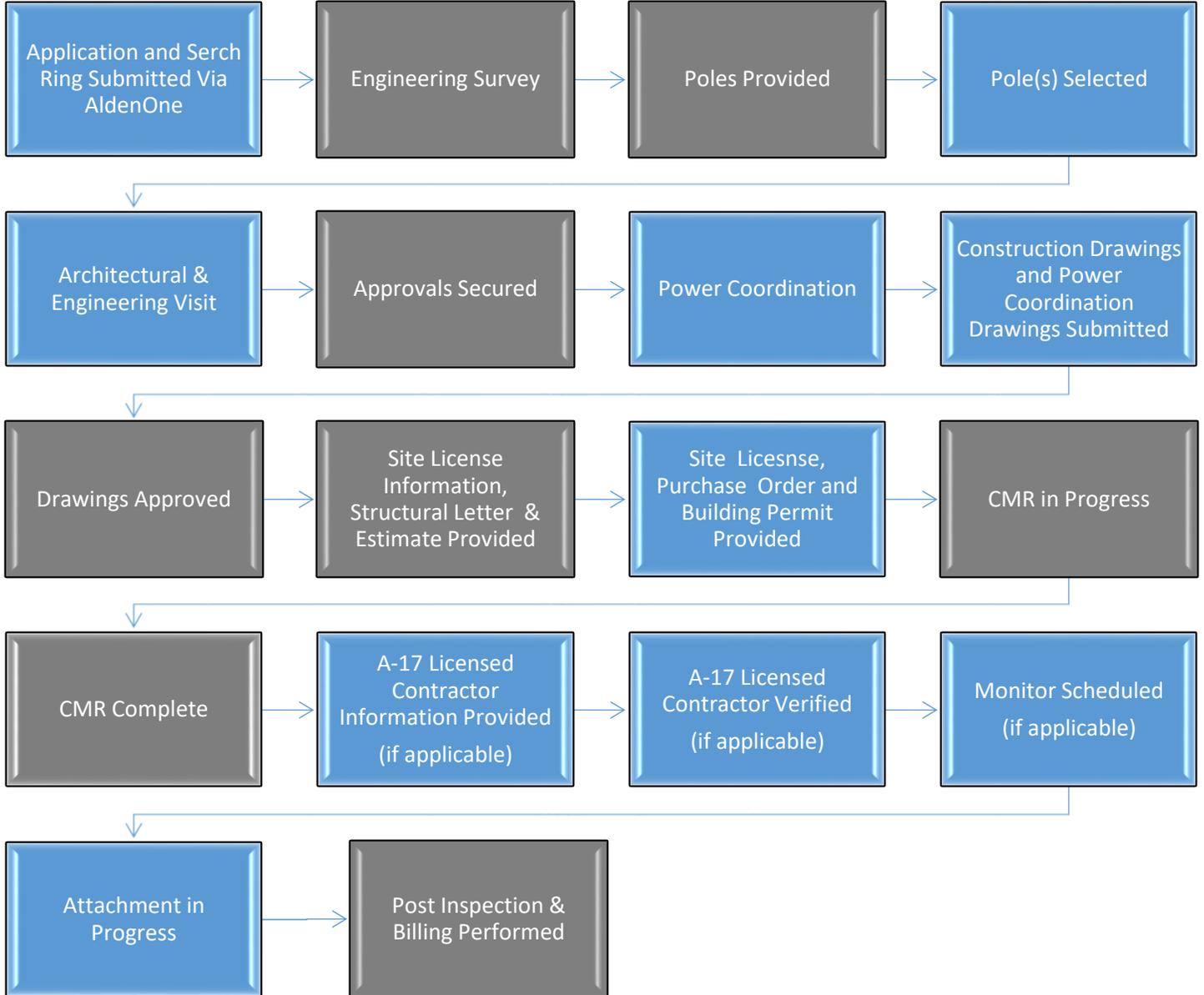


Responsible Party:



SMALL CELL & WIRELESS ATTACHMENTS BASIC PROCEDURE WORKFLOW

A high-level workflow for Small Cell & Wireless Attachments is illustrated below (excludes Strand Mount):



Responsible Party:



The basic procedure for Attachments is outlined below:

1. **Pre-Application Process:** The Licensee must follow the below pre-application process:
 - **Register in AldenOne:** AldenOne is a web-based communication system that the Company utilizes to coordinate Attachments, Transfer requests, and other related Attachment communications. Prior to making Attachments, the Licensee must register in AldenOne. See the Instructions listed on the Company's website for additional information.
 - **Request a Facility Map:** All Applications and Overlash Notifications must include a Company Facility Map, showing the Distribution Poles proposed for Attachment.
 - **Complete an Application/Notification:** The Licensee must provide a complete, accurate, and sufficient information for the Company's review. The Licensee will be responsible for providing a complete Application. Applications are listed on the Company's website.
 - **Create AldenOne Conversation & Submit Application or Notification:** Once the Application or Overlash Notification form is complete, the Licensee will upload it into AldenOne.
2. **Review of Application/Overlash Notification:** The Licensee will submit its proposed Applications or Overlash Notification to AldenOne:
 - **Application:** Upon receipt of an Application, the Company will review it for completeness within ten (10) business days. If rejected, the Licensee will have five (5) days to revise its Application and resubmit. If the Company deems the Application complete, it will begin the pre-attachment process (described below).
 - **Overlash Notification:** After receiving the fifteen (15) days advance Overlash Notification, the Company will determine whether the Overlash would create a capacity, safety, reliability, or engineering issue (collectively "identified issues"). The Company will inform the Licensee of any identified issues in writing. The Licensee must address the identified issues before placing the Overlash.
3. **Pre-Attachment Process:** The Company will review the Application or Overlash Notification and may perform an engineering survey to verify if the proposed Attachment(s) can be accommodated with or without Make-Ready Work.
 - **Standard Permit to Attach Process (includes Strand Mount):** The Company will perform the survey and add the contact information to AldenOne for the existing Attachers (if applicable). Once the survey is complete, the Company will respond with one or more of the below:
 - Provide a description and cost estimate of CMR and/or approve the Application. All affected Attachers are required to relocate or move their own Attachments;
 - Provide a written explanation as to why the Application is denied based on safety, reliability, capacity, or Technical Specifications.

Note: The Licensee shall be responsible for entering into an agreement with existing Attachers to reimburse them for any costs that they incur in rearranging or transferring their facilities to accommodate the requester's Attachments.

- **OTMR Permit to Attach Process:** After reviewing an application to determine its Complete, the Company will perform a survey within fifteen (15) days, to ensure the OTMR process can be used. If the Company determines an Attachment does not meet the criteria for Simple Make Ready Work, then the work is deemed complex. The Company will provide a written explanation as to its findings. The Company's determination is final and the Licensee must then submit a revised Standard Permit to Attach, not selecting the OTMR process. After the survey, if the Attachment meets the criteria for Simple Make-Ready Work, the Licensee must provide fifteen (15) days' notice, prior to commencing work.

Note: The Company does not require the Licensee to use an approved contractor for work done within the Communications Space. However, for all work done in the electrical space, the Licensee must select a contractor from the Company's approved list.

- **Small Cell & Wireless Attachment Process (excludes Strand Mount):** The Company will perform the survey and determine the available Distribution Poles within the Search Ring area. Once the survey is complete, the Company will respond with one or more of the below:
 - Provide the available Distribution Poles within the Search Ring area and indicate CMR required to accommodate the Attachment; or
 - Provide a written explanation regarding any denied Attachment requests based on safety, reliability, capacity, or engineering standards.

Once the Licensee selects a Distribution Pole, the Company will coordinate internally to accommodate the Attachment. The Company will notify the Licensee when the internal coordination is finalized and advises the Licensee to schedule an Architectural & Engineering Visit with the Company. The Licensee will also provide Power Coordination and Construction drawings. Upon approval of drawings by the Company, respond with one or more of the below:

- Provide the Site License Agreement
 - Pole Top Antenna only
- Structural Letter; and/or
- CMR estimates.

4. **CMR Performed by the Company:** Upon receipt of the CMR cost estimate, the Licensee has fourteen (14) days to approve the estimate, and provide a purchase order for the Company to perform the CMR. If an approval and purchase order is not received within fourteen (14) days from receipt of any estimate, the estimate is automatically withdrawn.

Before the Company starts CMR work, it shall notify all applicable existing Attachers and the Licensee of the date and location of the scheduled work within the following timelines:

- Sixty (60) days after design and blue-stake is approved where a pole replacement is required;
- Thirty (30) days for CMR in the Communications Space; and
- Ninety (90) days for CMR above the Communications Space.
- *Note: The Company can assert an additional fifteen (15) day right to complete CMR above the Communications Space.*

If there are extenuating circumstances that interrupt the CMR timelines mentioned above, the Company shall identify those circumstances to the Licensee and existing Attachers. Such circumstances include, but are not limited to: extreme weather events, unplanned electrical outages, or governmental agency delays (where permitting is required).

Upon completion of the CMR work, the Company shall invoice the Licensee for its actual costs. Payment is due within thirty (30) days from receipt of invoice.

Note: The Company may require advance payment for CMR work.

5. **Attachment Process:** Upon completion and inspection of any Make-Ready Work (if applicable), the Company will approve the Application, which serves as the authorization for the Licensee to attach.

- **Attachment Placement:** Within sixty (60) days of the approved Application or Overlash Notification, the Licensee must complete the CMR work and place or relocate its Attachment. If the Licensee's CMR work or its Attachment is not completed within sixty (60) days, or by the extended period granted by the Company, the Application will expire and the Licensee will forfeit the applicable Application fees and any payments made for Make-Ready Work. At the expiration of the sixty (60) days, the Licensee will need to either: (1) submit an Permit Extension Request Form to Telecommunications@tep.com. See Exhibit I; or (2) submit a new Permit to Attach if the Licensee did not submit a Permit Extension Request Form.

Note: Only a Company qualified A-17 Electrical and Transmission Line contractor is allowed to work above the Communication Space on the Company's Distribution Poles. For any work above the Communication Space, the Company will require that a Monitor is present while the Licensee's work is performed and Licensee will be invoiced for the actual costs of all material, labor to plan, and perform the Monitor.

- **Complete Notification Attachment:** The new Licensee shall notify the Company and existing Attachers upon its completion of a new Attachment within fifteen (15) days of its completion.

6. **Post Attachment Process:** The Company will perform a Post-Inspection for each Attachment or Overlash. The Licensee must reimburse the Company for all non-recurring costs associated with such inspections.

- **Post Inspection:** Upon notification from the Licensee that the Attachment or Overlash is complete, the Company and/or existing Attachers will have ninety (90) days from receipt of the notification to inspect the Attachment or Overlash. Within fourteen (14) days of the post inspection, the Company will notify the Licensee if the Attachment(s) or Overlash(es) fail to comply with the Installation Specifications. The Licensee will then have fourteen (14) days to correct any Violations.

If the Licensee does not correct the Violations within fourteen (14) days, the Company may correct the Violations at the Licensee's sole cost and expense or charge the Licensee a Sanction.

7. **Transfer Process:** The Company may need to replace, relocate, or remove its Distribution Pole(s). Such work may require the Licensee to transfer, detach, or relocate its Attachments. The Licensee shall remove, relocate, or Transfer any Attachments as directed by the Company.

- **Transfers:** The Company will create a Transfer Conversation within AldenOne when the Licensee needs to transfer, relocate, or remove its Attachments. The Licensee must remove, Transfer, or relocate its Attachments within sixty (60) days of receiving the notification request. The Licensee must advise the Company the transfer is complete within fifteen (15) days. See AldenOne Instructions on the Company's website at <https://www.tep.com/telecommunication-pole-attachments/>. *If the Licensee fails to timely Transfer, the Company will classify the Attachment as a Relocation Violation and the Company may charge the Licensee a Sanction.*
- **Emergencies:** In the event of an emergency, the Company is not required to provide sixty (60) days prior written notice to transfer, relocate, or remove the Attachment(s). The Company will make reasonable attempts to coordinate such transfers with the Licensee. Should the Company have to transfer, relocate, or remove an Attachment; the Company may do so without any liability. The Licensee must maintain current emergency contact information with the Company. Such information is located within the Annual Report Form listed on the Company's website.

8. **Modification Process:** The Licensee shall notify the Company through the Application process of any proposed Modifications to Licensee's existing Attachment. All Modifications are subject to review and approval by the Company and such proposed Modifications must adhere to the Installation Specifications.
9. **Fee(s):** The Licensee shall reimburse the Company for non-recurring costs associated with Post Inspection reviews, including but not limited to, surveys of the pole(s) where the Attachment or Overlash occurred. The Company will bill the Licensee annually for each Attachment at a rate specified by the Company. All fee(s) are due within thirty (30) days from receipt of invoice.

PRE-APPLICATION PROCESS

ALDENONE REGISTRATION

AldenOne is a web based communication system that the Company utilizes to coordinate pole Attachments, transfer notification, and other related pole Attachment communications. All communications surrounding Attachments and Overlashes will occur in AldenOne. The Licensee is obligated to maintain the accuracy of the information provided in AldenOne. Follow the instructions below to register. For the AldenOne user guide go to: www.aldenone.com.

A Licensee must first register their company and then register as an individual user. Steps to register are below:

1. Go to www.aldenone.com to start the registration process;
2. Click the "register" button from the login page;
3. After clicking the register button the "User Registration" page is displayed;
4. Complete all required fields on Registration page. *If your company is not listed, you must select the Company Not Listed hyperlink to register. Thereafter, an Alden system administrator must review your company information and approve the registration process, before the company name is available in the Company list; and
5. Click the register button to complete the user registration. The individual will receive an email that contains instructions to verify the owner of the email.

Note: If the individual's email domain (domain9@domain.com) does not match the company domain, then the company administrator must validate that the individual works for the company, prior to using AldenOne.

REQUEST A FACILITY MAP

A Company Facility Map is required for the completion of all Applications and Overlash Notifications.

A Facility Map can be obtained by emailing Telecommunications@tep.com and providing the TRSQ of the proposed attachment route. Please allow five (5) days to process this request. See Exhibit E for a Sample Facility Map and Legend.

Note: If a Facility Map is not attached, the Application will be considered incomplete.

COMPLETE AN APPLICATION OR OVERLASH NOTIFICATION

APPLICATION REQUIREMENTS

There are two (2) different types of Attachment Applications: (1) Wireline Permit to Attach; and (2) Wireless Permit to Attach. An Application will be denied if it does not adhere to the requirements specified below. In addition, the Company provides templates, on its website, that must be used when submitting an Attachment Application.

Note: There is a limit of forty (40) poles per Application. However, the Company does not limit the number of Applications.

WIRELINE PERMIT TO ATTACH APPLICATION REQUIREMENTS

A Wireline Permit to Attach Application ("Permit") is for any Standard, Strand Mount, or OTMR Wireline Attachment request. OTMR can only be selected if the Licensee's Attachments meet the criteria under the OTMR Process.

The Permit to Attach is on the Company's website at <https://www.tep.com/telecommunication-pole-attachments/>. The following information must be included in the Application:

Application Summary

- Licensee Agreement execution date
- # of poles
- Type of permit (Standard, Strand Mount or OTMR)
- Application No.
- Licensee Work Order No. (if applicable)
- Approximate location of proposed Attachments
- Company responsible party contact (Corporate)
- Company's local contact information
- Contractor's contact information

Strand Mount Permit to Attach Application Specifications

- Company pole number: obtained from the Company Facility Map
- TRSQ
- Location: Starting point
- Request Type
- New Equipment Specifications

Standard Permit to Attach Application Specifications

- Company pole number: obtained from the Company Facility Map
- TRSQ
- Location: Starting point
- Request Type
- Cable Type
- Size of strand
- Diameter of New Cable
- Weight of Cable/Footage
- Riser Quadrant: Only two risers are allowed. Must be same quadrant
- Anchor: Orientation and size (3/4T minimum)

OTMR Permit to Attach Application Specifications

- All of the Standard Permit to Attach Application specifications
- Midspan measurements (if applicable) –lowest point and direction
- Total # of risers
- Count of existing Attachments
- Existing Licensee Attachment height
- Existing Licensee name (if known)
- Attachment height of power (lowest point)
- CMR per Attachment (see exhibit H -CMR Legend)

The Licensee will use a Small Cell & Wireless Permit to Attach (“Wireless Permit”) Application for any Wireless Attachment request and include a Search Ring (excludes Strand Mount) with its Attachment request. The Company limits one Wireless Attachment per Distribution Pole.

The Wireless Permit is located on the Company’s website at <https://www.tep.com/telecommunication-pole-attachments/>. In addition to a Search Ring, the following information must be included in the Application:

- Licensee Agreement execution date
- Application Type (Pole Mount Small Cell, Pole Top Antenna)
- # of poles
- Licensee Application No.
- Licensee Work Order No. (if applicable)
- Approximate location of proposed Attachment
- Company responsible party contact (Corporate)
- Company’s local contact information
- Contractor’s contact information

There is a limit of forty (40) Distribution Poles per Application. However, the Company does not limit the number of Applications.

OVERLASH NOTIFICATION REQUIREMENT

The Company requires a fifteen (15) day advance notice of any Overlash Attachment including third-party Overlashing. Licensee is prohibited from Overlashing Facilities of a third-party, including an affiliate of the Licensee, unless both the Licensee and third-party have a pole Attachment Agreement with the Company. Overlash includes Strand Mount Small Cell Equipment and cable.

Note: There is a limit of forty (40) Distribution Poles per Application. However, the Company does not limit the number of Applications.

OVERLASH NOTIFICATION FORM REQUIREMENTS

Each Overlash must meet both the strength and clearance requirement of the NESC.

A sample Overlash Notification is located on the Company's website at <https://www.tep.com/telecommunication-pole-attachments/>. In its notification to the Company, the Licensee is required to provide the following cable characteristics and information:

- Notification date
- Licensee contact information
- Contractor contact information
- Company pole #
- TRSQ
- Cable Type
- Diameter of New Cable
- Weight of Cable/Footage
- Diameter and combined weight of all cables

Note: The sample notification is not mandatory for use; however, the above-mentioned information must be included in the Licensee's notification.

TREATMENT OF MULTIPLE REQUESTS FOR SAME POLE

The company will consider complete Applications received from multiple Licensees to attach to the same Distribution Pole on a "first-come, first-served," non-discriminatory basis.

If the Company receives a subsequent Attachment Application for the same Distribution Pole from a second Licensee, following acceptance of a complete Application for the first Licensee and prior to completing Make-Ready Work, the Company will inform the second Licensee of such Attachment request. The Company will require the second Licensee to revise its Application to eliminate the conflict with the first Application (or consider the implications from the first Licensee's Attachments). The second Licensee's application will be denied until such revision and resubmission occurs.

Should the first Application require Company Make-Ready Work on a Distribution Pole with a subsequent request for an Attachment received before the Company completes such Make-Ready Work, the Company will allocate the costs to complete this Make-Ready Work evenly between the requesting Licensees.

In the event that the first Licensee fails to complete its Attachment or Wireless Installation within sixty (60) days, the Company will withdraw the first Application and process the second Application without consideration to the initial first-in Application.

Should the second Application be for a Wireless Installation, the Company will evaluate the Wireless Installation Application as if the Attachment of the first Licensee has been completed.

UNAUTHORIZED ATTACHMENTS & SANCTIONS

At any time, the Company may audit all or any portion of Licensee's Attachments. Upon discovery of an Unauthorized Attachment, the Company may elect either of the following options: (i) notify Licensee of the Unauthorized Attachment and remove the Attachment within sixty (60) calendar days, if Licensee does not correct the Violation, or (ii) review the Attachment, at Licensee's expense, to determine if the Attachment is in compliance with the Company's Installation Specifications and, if necessary, require Licensee to comply with the Installation Specifications, including any necessary Make Ready Work. For each Unauthorized Attachment discovered by an audit conducted by the Company, the Licensee shall pay an Unauthorized Attachment Penalty.

If the Company discovers, through normal routine pole maintenance and inspection, Violations caused by an Attachment or Overlash then the Company will inform the Licensee in writing. Within sixty (60) days following Licensee's receipt of the Company's notification, the Licensee must submit a plan to the Company to correct the Violation no later than one hundred and eighty (180) days after receiving such notification. The Company will approve Licensee's plan in writing. If a plan to correct the Violation is not submitted within sixty (60) days and/or the work is not completed within one hundred and eighty (180) days, the Company may charge the Licensee a Sanction. If the Licensee fails to adhere to all of the provisions and deadlines set forth in its plan, the Company may impose a Sanction for the uncorrected Violations documented within the plan. For newly constructed or permitted Attachments or Overlashes placed on Company's Distribution Poles, during the Post Inspection, the Company may immediately charge a Sanction, if such Violation is not corrected with fourteen (14) days after receiving the Company's notification of the Violation.

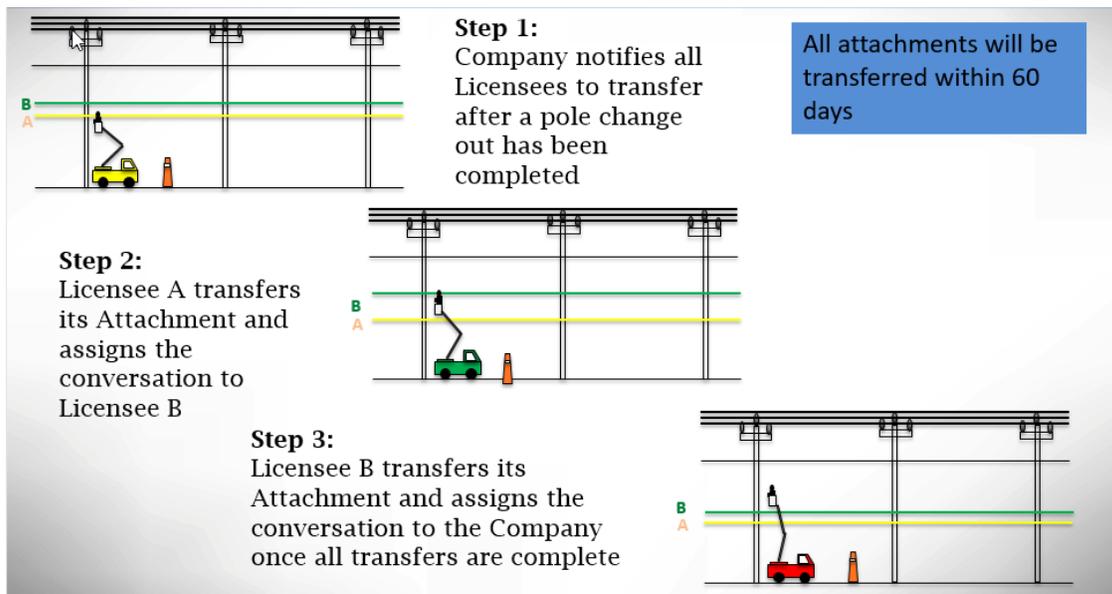
TRANSFER PROCESS

Except in the case of emergencies, the Company shall provide at least sixty (60) days prior written notice directing the Licensee to remove, relocate, or Transfer its applicable Attachments in cases where the Company is moving or replacing its Facilities. The Licensee will be notified via an AldenOne transfer Conversation. See AldenOne Instructions at Company's website at <https://www.tep.com/telecommunication-pole-attachments/>.

The Company creates a Company Transfer Notice in AldenOne when the Licensee needs to transfer, remove, or relocate its Attachment. The company adds all Licensees attached to the Distribution Pole(s) to the conversation. All applicable information is attached to the conversation. *If the Licensee fails to timely Transfer, the Company will classify the Attachment a Relocation Violation and the Company may charge the Licensee a Sanction.*

All attached Licensee's will have sixty (60) days from the date of the transfer notice to complete their transfers.

1. The Company assigns the conversation to the Licensee attached highest on the pole.
2. Once the Licensee completes its transfer, it will assign the conversation to the next Attacher on the pole; otherwise, it will assign the conversation to the Company.
3. When the last Licensee completes its transfer, the Company will perform a Post Check to verify each Attachment adheres to the Installation Specifications.
4. If Post Check does not pass, the Company assigns the conversation to the Attacher for correction.



Emergencies: If the Company elects not to immediately transfer Licensee's Attachment, the Company will create an Emergency Pole Replacement Conversation. This process follows the general Transfer Notice outlined above; however, the Company assigns a priority level that requires each Licensee to complete their transfer in the timeframe shown below:

Priority	Transfer Completion Timeframe
1	1 Working Day
2	5 Working Days
3	10 Working Days

If the Licensee does not respond to the Company's reasonable attempt to coordinate the emergency transfer, or the Licensee does not complete its transfer, the Company may transfer the Licensee's Attachment at its sole cost and expense.

The Licensee must maintain current emergency contact information with the Company at all times. This information is listed within the Annual Report Form.

REMOVAL NOTIFICATION PROCESS

The Licensee will provide the Company written notice when it removes its Attachment from the Company Distribution Poles, through a Standard Permit to Attach Application Conversation. Absent a Removal Notice, each Attachment will remain subject to the terms and conditions of the Pole Attachment Agreement, including paying an annual rental fee per Attachment.

The Licensee must **remove** all Abandoned Facilities coincident with their replacement.

The Company reserves the right to verify the removal and to remove any unused Attachments with no liability whatsoever to the Company. The Licensee will bear all the costs of the removal of unused Attachments incurred by the Company.

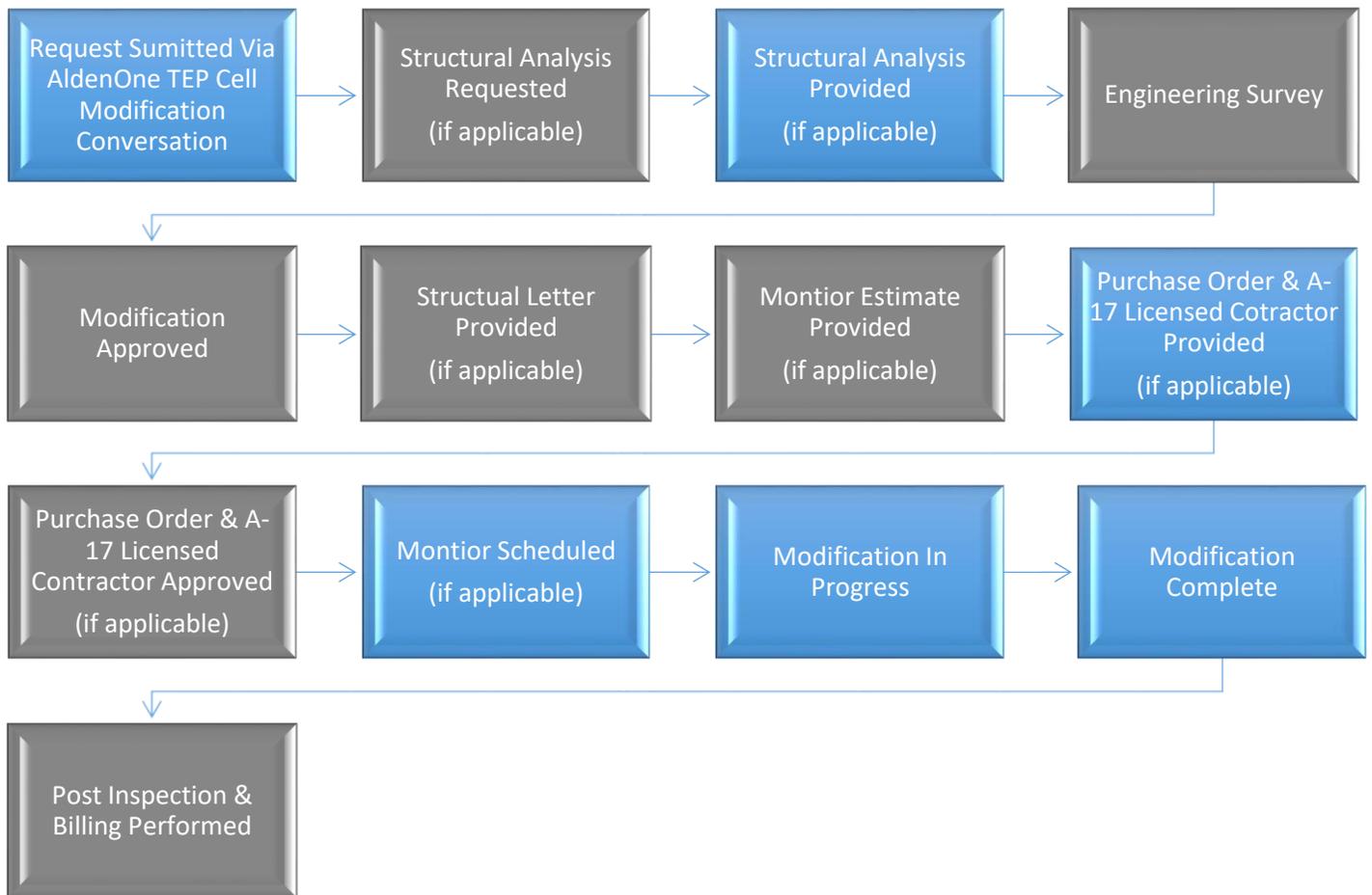
VEGETATION MANAGEMENT

The Licensee shall be responsible for all tree trimming and other vegetation management necessary for the safe and reliable installation, use, and maintenance of its Attachments, Overlashings and Wireless Installations as applicable, caused by contact between tree limbs and the attaching entities' Attachments, Overlashing and Wireless Installation.

CELL MODIFICATION PROCESS

BASIC PROCEDURE WORKFLOW

Below is high-level overview of the basic procedure for Cell Modifications:



Responsible Party:

Company

Licensee

BASIC PROCEDURE

The basic procedure for Cell Modifications is outlined below:

1. **Review of A Cell Modification Request:** The Licensee will submit its proposed Cell Modifications to AldenOne. See AldenOne Instructions at Company's website at <https://www.tep.com/telecommunication-pole-attachments/>.
 - **Conversation:** Upon receipt of a Cell Modification conversation, the Company will review and advise the Licensee if a structural analysis is required or if it rejects the request within ten (10) business days. If rejected, the Licensee will have five (5) days to revise the conversation and resubmit. The Company will approve the request if a structural analysis is not required or at such time that the structural analysis is provided by the Licensee. Once approved, the Company will begin the engineering survey process.
2. **Engineering Survey:** The Company will perform the survey. Once the survey is complete, the company will respond with one or more of the below:
 - Provide a Structural Letter;
 - Modification approved: No Monitor required, Licensee can proceed with modification;
 - Modification approved: A-17 Licensed Contractor and Monitor required, TEP will provide a Monitor estimate;
 - Modification approved: A-17 Licensed contractor not required, Monitor is required, TEP will provide a Monitor estimate;
or
 - Modification Denied.
3. **Estimates:** Upon receipt of any estimate, the Licensee has sixty (60) days to approve the estimate, and provide the purchase order and Company approved A-17 License Contractor information. If an approval of cost estimate and purchase order is not received within sixty (60) days from receipt of any estimate, the estimate is automatically withdrawn.
4. **Verification of Purchase Order and Contractors:** The Company will approve or deny the purchase order and A-17 License Contractor. Once approved the customer can proceed with its Cell Modification.
5. **Modification in Progress:** The Licensee must complete its Cell Modifications within sixty (60) days of being notified to proceed. If the Licensee does not complete its modifications within sixty (60) days, or by the extended period granted by the Company, it will result in the expiration of the approved modification. The Licensee must request an extension five (5) days prior to the expiration of the approved modification by emailing a Permit Extension Request Form to Telecommunications@tep.com. See Exhibit I.
6. **Post Inspection:** Upon notification from the Licensee that the modification is complete, the Company and/or existing Attachers will have ninety (90) days from receipt of the notification to inspect the Attachment or Overlash. Within fourteen (14) days of the Post Inspection, the Company will notify the Licensee if the Attachment(s) or Overlash(s) fail to comply with the Installation Specifications. The Licensee will then have fourteen (14) days to make corrections.

If the Licensee does not correct the Violations within fourteen (14) days, the Company may correct the Violations at the Licensee's sole cost and expense or charge the Licensee a Sanction.
7. **Fee(s):** The Company will bill the Licensee for the actual costs of the Company's monitor work. Fee(s) are due within thirty (30) days from receipt of invoice.

EXHIBIT A

SEARCH RING

SAMPLE SEARCH RING

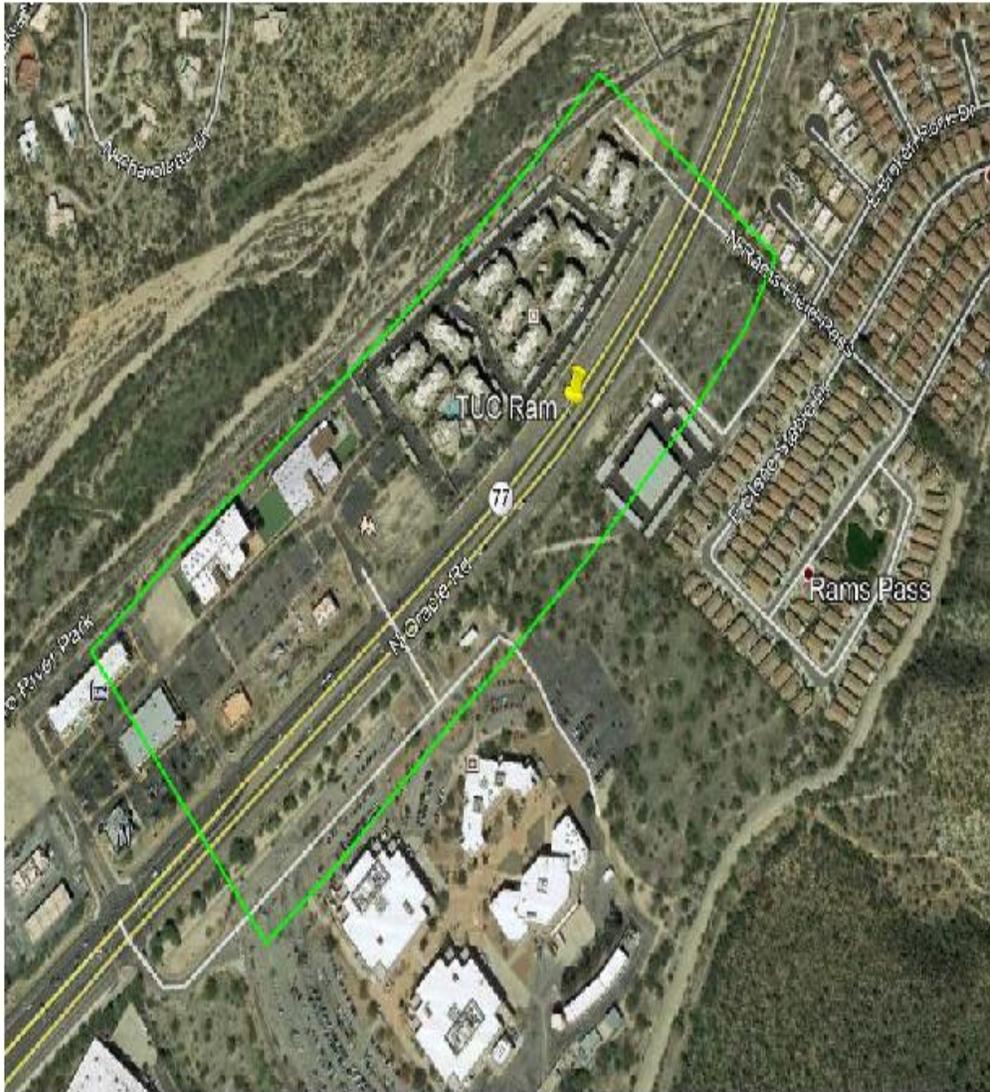
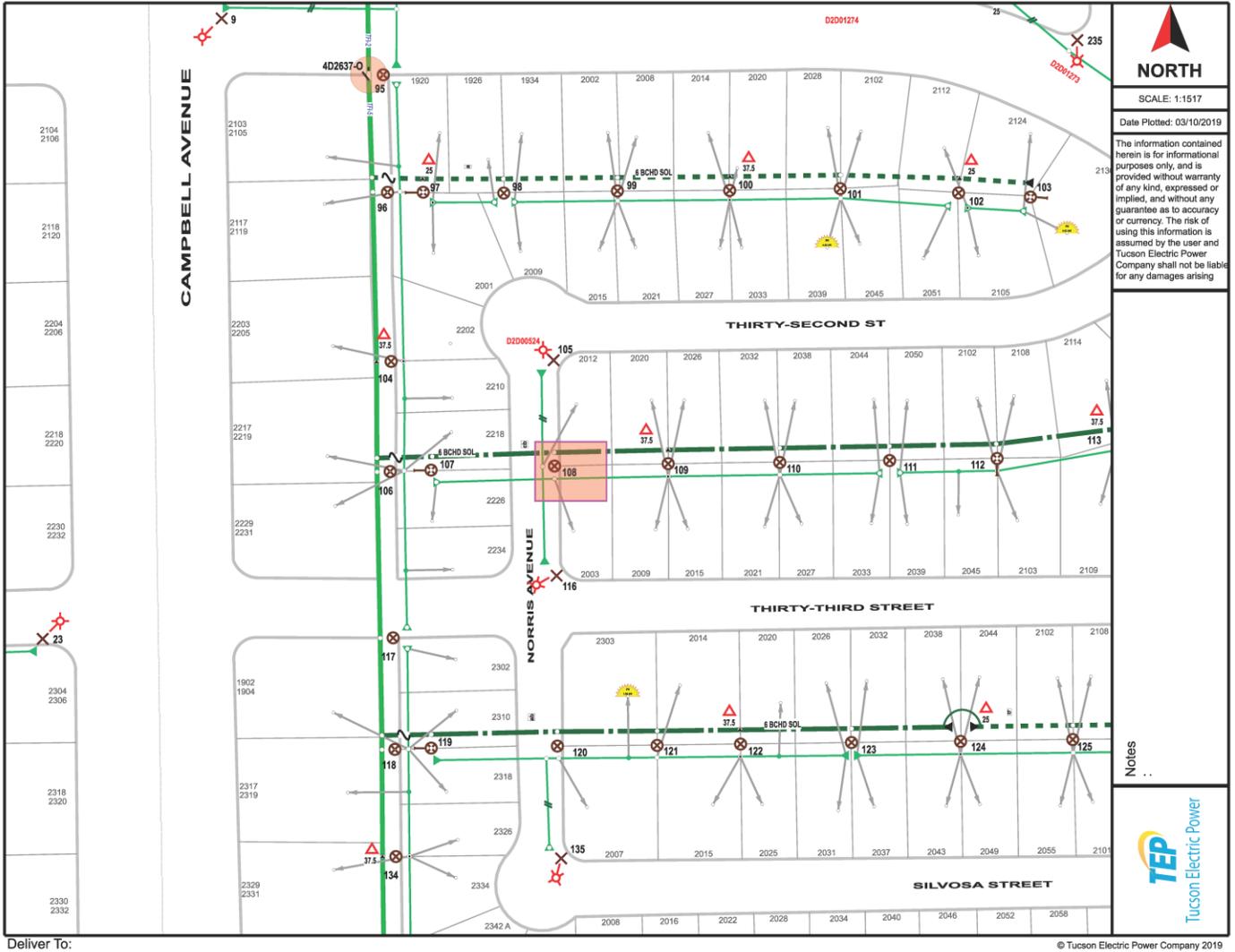


EXHIBIT B

FACILITY MAPS

All Applications and notifications will be submitted with a Company Facility Map.

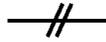
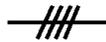
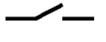
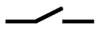
SAMPLE FACILITY MAP



Deliver To:

© Tucson Electric Power Company 2019

OVERHEAD MAPPING LEGEND

	TEP NON-JOINT USE		VOLTAGE REGULATOR
	TEP JOINT USE		PRIMARY METERING
	TELCO JOINT USE		O.H. SERVICE 2 WIRE
	POLE REMOVAL		O.H. SERVICE 3 WIRE
	TOWER STRUCTURE		O.H. SERVICE 4 WIRE
	O.H. TRANSFORMER		O.H. SECONDARY 2 WIRE
	O.H. OPEN DELTA BANK		O.H. SECONDARY 3 WIRE
	3 PHASE O.H TRANSFORMER BANK		O.H. SECONDARY 4 WIRE
	ANCHOR		O.H. PRIMARY 1 PHASE
	ANCHOR REMOVAL		O.H. PRIMARY 2 PHASE
	SPAN GUY		O.H. PRIMARY 3 PHASE
	DUSK TO DAWN LIGHT		FAULT INDICATOR
	DUSK TO DAWN LIGHT REMOVAL		PUSH BRACE ANCHOR
	CAPACITOR		
	SWITCH CAPACITOR		
	FUSED CUTOUTS		
	INLINE DISCONNECT		
	UNDERSLUNG DISCONNECT		
	LINE RECLOSER		

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EXHIBIT C

NEW ELECTRIC SERVICE CONSTRUCTION FORM

If a power source is required, a new electric service construction form will be submitted once a building permit has been obtained.

Online: <https://apps.tep.com/CustomerForms/Construction/CommercialConstruction>

By Phone: [520-918-8300](tel:520-918-8300) option 3

By Email: NewConstReq@tep.com

1. State that you are requesting a Service Application for a **Telecommunications Site**
2. Building permit # with a scanned/picture of the permit
3. AldenOne conversation number
4. Contractors name & contact name, phone(s) and e-mail
5. Licensee name & billing address (for line extension agreement)
6. Name and contact information of entity submitting the Application
7. TRSQ
8. Site address for new service
9. Service type (i.e. 200 AMP 120/240V Single Phase Underground)
10. Billing information for monthly bills

The Company will create a work order for the service and assign it to the Telecommunications Tech Specialist.



Commercial Underground Project Outline

Customer Responsibilities	Service Provider Responsibilities
<p>Step 1-Customer contacts Company's Design Services Department, refer to SR-101 for contact information. Customer provides the following:</p> <ol style="list-style-type: none"> 1) Residential New Construction Application Information 2) Site plan if (1) acre or larger, and legal description of the property 3) Electric load plan if over 200 amps 4) Electrical Permit Number 	<p>Step 2-Design Services reviews the plans and provide a Preliminary Electrical Design drawing for the customer within 20 days (if necessary). The Preliminary Electrical Design will include the Electrical Service Requirements specifications, easement requirements (if required) and the need for a contract and/or costs for the project (if required)</p>
<p>Step 4-Customer approves or requests changes of the Preliminary Electrical Design. Customer signs the approval letter & faxes it to the assigned Scheduling Coordinator (if one is sent to the customer).</p>	<p>Step 3-An Approval Letter is mailed to the customer by Design Services. This correspondence will include the Preliminary Electrical Design Drawing, related Electrical Service Requirements, and the request for a legal description and sketch for the new easement (if required).</p>
<p>Step 6-If required, customer submits the original copies of the legal description and sketch written by a Registered Land Surveyor (RLS).</p>	<p>Step 5-Design Services prepares a final Construction Drawing of the electrical system. Copies are sent to the customer and other utilities (not all utilities receive copies, customer to inquire with each utility) within 20 days.</p>
<p>Step 8-Customer signs, notarizes the easement and returns to Service Provider.</p>	<p>Step 7-Design Services forwards the legal description & sketch to Company Land Department to review & prepare for the customer's signature. The prepared easement package is sent to the customer within 20 days.</p>
<p>Step 10-Customer executes the agreement and returns it to Service Provider, if required.</p>	<p>Step 9-Design Services prepares any required Billable estimates. The Company sends the agreement to the customer. (i.e. Line Extensions, Prior to Improvements, etc.)</p>
<p>Step 12-Customer makes service application and provides the electrical permit number and clears credit on the billing account.</p>	<p>Step 11-Design Services sends the "Approved for Construction Drawing" and correspondence letter AFTER the easements and/or Agreements are received.</p>
<p>Step 13-Customer may contact Design Services prior to starting construction, either by phone (to answer any questions) or an on site pre-construction meeting (if required).</p>	<p>Step 15-Service Provider's representative inspects the civil work per Step 14 and notifies the customer if Passed or Failed the inspection. NOTE: For three-phase & single-phase projects, if executed easements are not returned at this point, courtesy inspections can be given up to the point of pulling a mandrel through the conduit system.</p>
<p>Step 14-Stakes out easement for trenching contractor and Service Provider's inspector. For three-phase commercial projects:</p> <ul style="list-style-type: none"> • Trenches and installs duct and all sweeps plus 10 ft. riser section. Calls for inspection before concrete encasement. • Encases sweeps with concrete as needed. Calls for inspection before and after concrete encasement. • Backfills trench and installs pad. (If pouring pad, calls for framing inspection before pouring). • Installs bumper posts if required. Calls for inspection. • Installs pull rope in conduit system and calls for mandrel inspection. Mandrel will be pulled through the conduit system in the presence of a Service Provider's inspector. If necessary, calls 918-8300 for access into existing Company equipment. <p>NOTE: Refer to Service Provider's construction drawing for all required specifications for pull box, PMH, PME and J-2 installation.</p>	<p>Step 16-Design Services releases the job to construction once all the civil work is inspected and approved.</p>
<p>Step 18-Customer installs service entrance, pulls in service conductors, color code tape ID the conductors and install an address label on each neutral conductor (for three-phase installations). If single-phase installation, install the service entrance and conduit system (In preparation for Service Provider cable installation). Calls Service Provider for trench, conduit, backfill and mandrel inspections.</p>	<p>Step 17-Service Provider's schedules work in Construction that installs primary cable facilities (transformer, J-2's, PME units, etc.). Estimated 15 working days to complete job (30 days for project with a feeder system). NOTE: If a planned power outage is required to schedule the job, then Service Provider will coordinate the outage. The job will be completed when the outage can be scheduled.</p>
<p>Step 19-Customer digs the service trench, installs the remaining service conduit system and service meter panel. Customer calls Service Provider for service inspection if service is over 200A and/or a manufactured home. Customer must also call the governmental agency for inspection, refer to SR-101 for contact information.</p>	<p>Step 20-Service Provider taps the customer's wires at the transformer (if three-phase commercial) and sets meter. If single-phase, Service Provider installs service cable & sets meter. However, the following contingencies must be met:</p> <ul style="list-style-type: none"> • All Service Provider inspections passed. • Customer's credit clears. • Final governmental clearance received.

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				EFFECTIVE DATE	9-18	



2 INFORMATION FOR REGISTERED LAND SURVEYOR

Introduction

This section outlines the requirements which the professional land surveyor must consider when preparing a legal description and exhibit drawing for a proposed easement on behalf of their client, our customer. These requirements are provided to achieve an optimum degree of uniformity of product submitted to TEP/UES.

- Legal description will be prepared and stamped by a Professional Land Surveyor in good standing registered in the State of Arizona.
- The submitted legal description for an easement to be granted shall meet the criteria set forth in Section 14 of the PDF titled, "Arizona Boundary Survey Minimum Standards," available on the Arizona Board of Technical Registration website. Page size must be 8.50 x 11.00 inches in portrait orientation.
- An exhibit drawing must accompany the legal description to visually support the written narrative (see requirements below).

Legal Description

1. Caption

- a) Indicate use in a general manner, such as: "An electric easement within a portion of..." DO NOT state specific use (i.e., particular type of equipment nor its use as overhead or underground).
- b) State geographic location by:
 - Reference to a government land division within the U.S. Public Land Survey System, a Land Grant, a Reservation, a Homestead, etc.
 - Lot or parcel (number or letter), block or tract within a county recorded subdivision identifying said County Recorder's Office and the recordation number of said subdivision.
 - Citation of the recorded deed of the parcel of land the easement will encumber.

2. Body

- A clearly stated basis of bearing, referencing two existing, physically described controlling monuments.
- Sufficient data to enable a mathematical verification of the easement being inscribed within the property being encumbered.
- Where described, curve segments shall contain sufficient information to allow verification of the data by mathematical analysis. Curves are presumed to be circular and tangent. All other non-tangent and/or non-circular curves must be noted in the description.
- Identify and note any existing, recorded electric easement(s) which is/are intended to join with the new easement as a continuous, uninterrupted land right.
- Report the total area of the easement(s) in square feet when less than an acre (rounded to the nearest foot) or in acres when area exceeds 43,560 square feet (three places to right of the decimal).

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INFORMATION FOR REGISTERED LAND SURVEYOR

Exhibit Drawing

- Page size to be 8.50 x 11.00 inches (ANSI A).
- Title block must state the township, range, section(s) and meridian of the easement location.
- A north arrow.
- If applicable, a line table and/or curve data will be shown.
- Note assessor's parcel number (APN) of affected parcel.
- The county recording number of the deed of the underlying parcel.
- Boundary lines shown of all parcels affected by the easement.
- Depict existing, recorded electric easement(s) which is/are intended to join with the new easement.

Deliverables

In an effort to operate and maintain a geographic information system (GIS) for both corporate land rights and facility mapping purposes, TEP/UES now requires delivery of specific electronic files by the customer (see b & c below).

- An original, stamped paper final draft which meets County recording requirements based on A.R.S. 11-480.
- CAD file of the results of survey drawing (AutoCAD 2005 or newer) (.DWG or .DXF) geo-referenced to the minimal standard of Arizona State Plane Grid Coordinate System NAD83/HARN92, AZ Central Zone, State Plane Int'l Feet. Newer published National Spatial Reference System (NSRS) datums by the NGS such as NAD83(CORS96), NAD83(2007) and NAD83(2011) are acceptable. Please note as part of the required metadata file.
- Metadata text file (include projection, datum, project name, Company/Firm, name of preparer and date).

Below are a resources for geodetic control for GPS RTK localization of an easement survey:

- PCDOT/TDOT geodetic control points found at <http://gis.pima.gov/maps/mapguide/>
- NOAA NGS Survey Marks and Datasheets site <http://www.ngs.noaa.gov/datasheets/>
- Santa Cruz County (AZ) Public Works Department, a comprehensive control survey by CPE Consultants LLC (March 2014) titled, "**Santa Cruz County GIS Control Monument Survey**"
- NOAA NGS OPUS online positioning solution of a GPS static session <http://www.ngs.noaa.gov/OPUS/>

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EXHIBIT D

SPECIFICATIONS

Communication cables must be identified by tagging every cable at every pole and affixed at the point of Attachment. Existing untagged cables will be identified during installation, overlashing, at reconstruction of facilities and with normal maintenance.

The owner of the cable supporting the overlashed installation is responsible for maintaining both the supporting cable and the overlashed cable in compliance with NESC and these specifications.

Telecommunication cables must be properly guyed and anchored before tensioning. This means attaching companies must install separate guying and anchoring devices to secure their cables. **Joint use of the Company guys and anchors is prohibited.**

ALL UNUSED ATTACHMENTS, INCLUDING RISERS, SERVICES DROPS, AND UNUSED CABLE, WILL BE REMOVED BY THE LICENSEE

GENERAL ATTACHMENT SPECIFICATIONS

These General Attachment Specifications apply to any pole attachment and request by a cable television system or provider of telecommunications service to attach to a pole owned by TEP. All requests to attach to a pole owned by TEP must be submitted utilizing TEP's electronic Permit to Attach process. TEP's written approval for the specific request and a validly existing agreement is required prior to installing any attachments to a pole owned by TEP.

ATTACHMENT HEIGHT

- A. Each pole attachment is allotted one attachment height (elevation) per pole.
- B. A minimum separation of 12" (inches) is required from bolt-hole to bolt-hole between pole attachments.
- C. A minimum of 18' (feet) attachment height at the pole is required above street, road, driveway crossings or potential drivable areas.
- D. A minimum of 15'- 6" ground clearance is required at mid-span above street, road, driveway crossings or potential drivable areas.
- E. If additional height is required to maintain separation between pole attachments, attachment height, or mid_span ground clearance, then, upon TEP's prior written approval, adjustments may be made in increments of no less than 6" (inches).
- F. Standoff brackets or arm installation must maintain at least the minimum clearance from other pole attachments.

SEPARATION FROM TEP EQUIPMENT

- A. The standard separation is 13'- 6" from the pole's primary arm to the nearest pole attachment. Upon request, TEP may evaluate, but is not required to approve, accommodations for attachments on existing facilities. Minimum clearance requirements shall always apply.
- B. A minimum separation of 40" (inches), measured vertically below the lowest point of the following items to the pole attachment, is required:
 - 1. Top of riser pipe on primary, secondary, or service risers.
 - 2. Lowest point of secondary or neutral attachment.
 - 3. Street light metal frame or drip loop (measured from the bottom of the mount bracket).
- C. A minimum separation of 12" (inches) is required below bonded span guys or down guys to the pole attachment.
- D. All splice cases shall be a minimum of 5' (feet) from the pole.

HOLES

- A. A minimum separation of 6" (inches) between pole holes is required.
- B. Double-drilling holes at the same height is prohibited.
- C. Bands are prohibited on steel poles, except upon TEP's prior written approval.
- D. Eye-bolts for the slack span are required for false dead ends.
- E. Thru-bolts with an eye nut are required for attachment of aerial service wires to steel poles.

GUYING

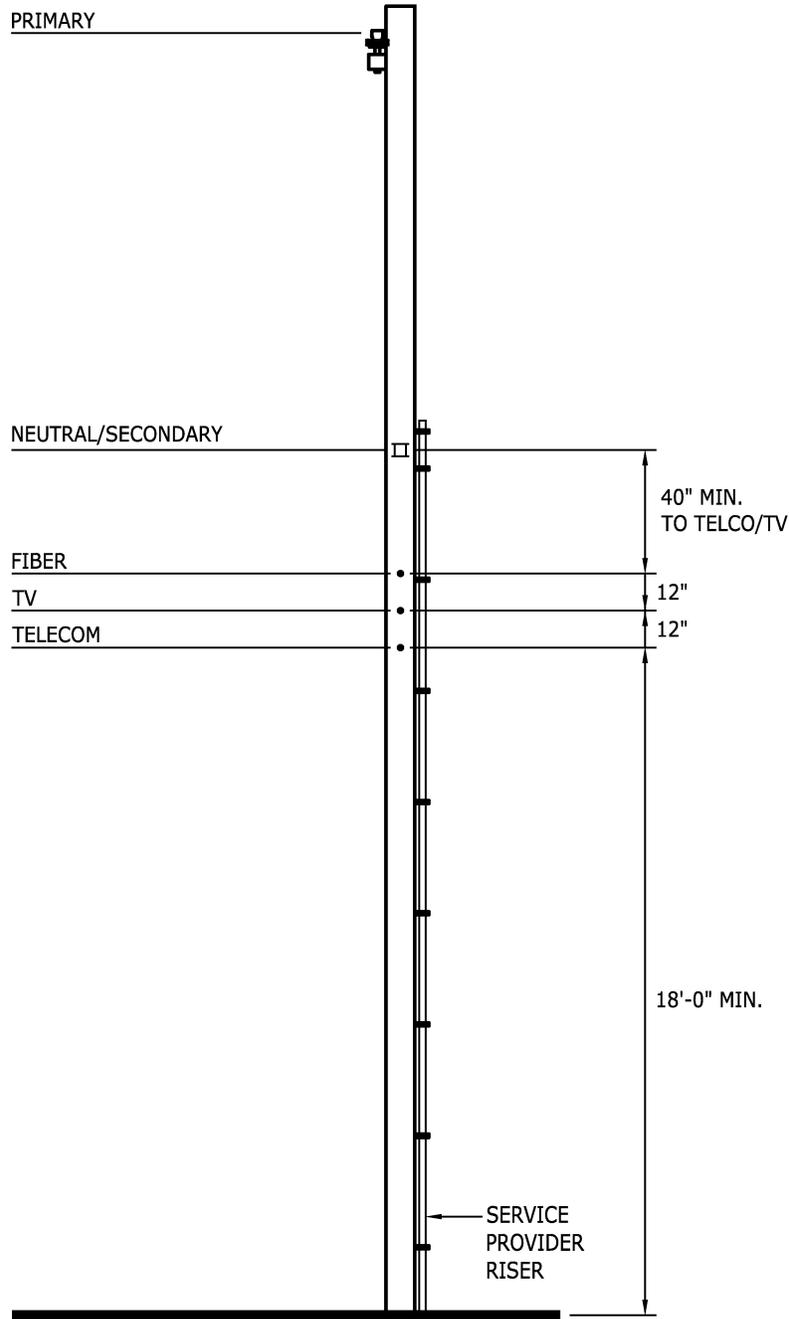
- A. Design of adequate guying and anchoring specific for the proposed attachment is required.
- B. Reliance on existing guying to support the proposed attachment is prohibited.
- C. All guying must be installed prior to installing support messenger.
- D. Utilizing triple anchor eyes is recommended to avoid congestion of attachments.
- E. Slack spans must not place excessive loading or cause additional movement of existing facilities.

LICENSEE'S RISERS

- A. All risers must conform with TEP's Electric Service Requirement Standards (SR-805).

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GENERAL ATTACHMENT SPECIFICATIONS POLE DETAILS



NOTE:

1. FOR RISER ATTACHMENT DETAIL, SEE SR-220 & SR-805.

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	ESR COMM.	-	ESR COMM.	-	
	ESR COMM.	-	EFFECTIVE DATE	-	



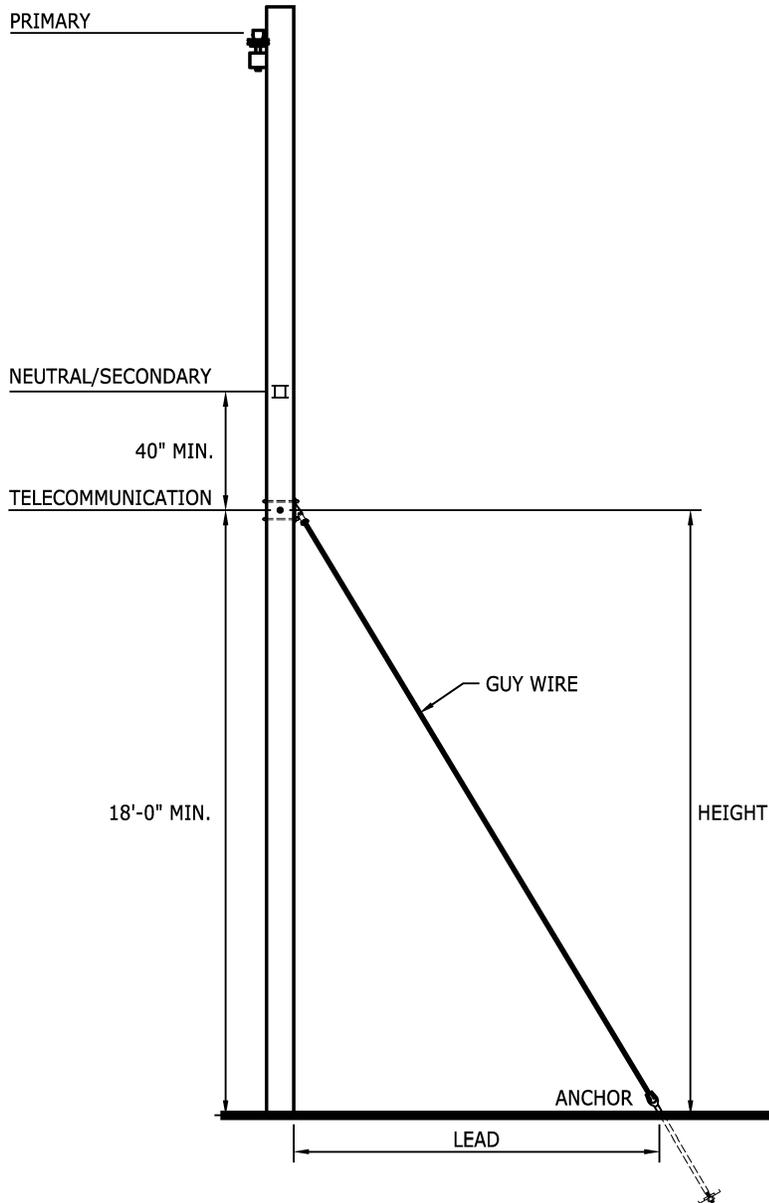
TELECOMMUNICATIONS AND FIBER IDENTIFICATION

Licensee shall identify all attachments and overlashing as per this standard. It is the responsibility of the Licensee to install and maintain wrap-around tags to allow for easy identification of attachment owner from ground level.

1. Telecommunication and fiber attachments shall be tagged at the time of installation, during overlashing, at reconstruction of facilities including transfers and with normal maintenance.
2. Tags shall be replaced when damaged or faded.
3. Tags shall be installed at every pole.
4. Tags shall be affixed at the point of attachment.
5. Tag shall be a wrap-around marker that will be secured so as to remain permanently attached to the cable.
6. Tag shall be able to be read from the ground, or from a safe distance in the event of a downed cable or pole.
7. Tag shall be UV stable and resistant to fading from the effects of weather, chemicals, etc.
8. Tag shall be reflective for enhanced visibility in low-light conditions.
9. All tags must be generally consistent in appearance for a given attaching company throughout the Company's service area.
10. Letters shall be black or white dependent on color of wrap, which ever allows for greatest contrast and visibility from ground level.
11. Letters shall be no smaller than 3/8 inch.
12. Wrap around length shall be no smaller than 6 inches.
13. Information must be in the visible area when rolled.
14. All tags shall have the following information as a minimum;
 - Identify the telecommunication fiber/cable owner
 - Provide a 24-hour contact number

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**GENERAL ATTACHMENT SPECIFICATIONS
ANCHOR AND GUYING DETAILS**



**INFORMATION REQUIRED
ON PERMIT TO ATTACH:**

NEW ANCHOR

- LEAD LENGTH
- ATTACHMENT HEIGHT
- FEET OF PULL
- GUY WIRE SIZE
- ANCHOR SIZE (SEE NOTE#4)

EXISTING ANCHOR

- LEAD LENGTH
- ATTACHMENT HEIGHT
- FEET OF PULL
- GUY WIRE SIZE
- SIZE OF EXISTING ANCHOR
- NUMBER OF EYES
- IS THERE A VACANT EYE?

NOTES:

1. RELIANCE ON EXISTING GUYING TO SUPPORT NEW ATTACHMENTS IS PROHIBITED.
2. BREAKING STRENGTH OF GUYS CAN NOT EXCEED BREAKING STRENGTH OF AN ANCHOR.
3. ANCHORING REQUIRED AT DEADENDS, SIDE PULLS AND FALSE DEAD ENDS.
4. TEP RECOMMENDS A 3/4" (INCH) TRIPLE MINIMUM ANCHOR ON ALL NEW INSTALLATIONS.

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**STRAND MOUNTED SMALL CELL EQUIPMENT
ATTACHED IN THE COMMUNICATION SPACE**

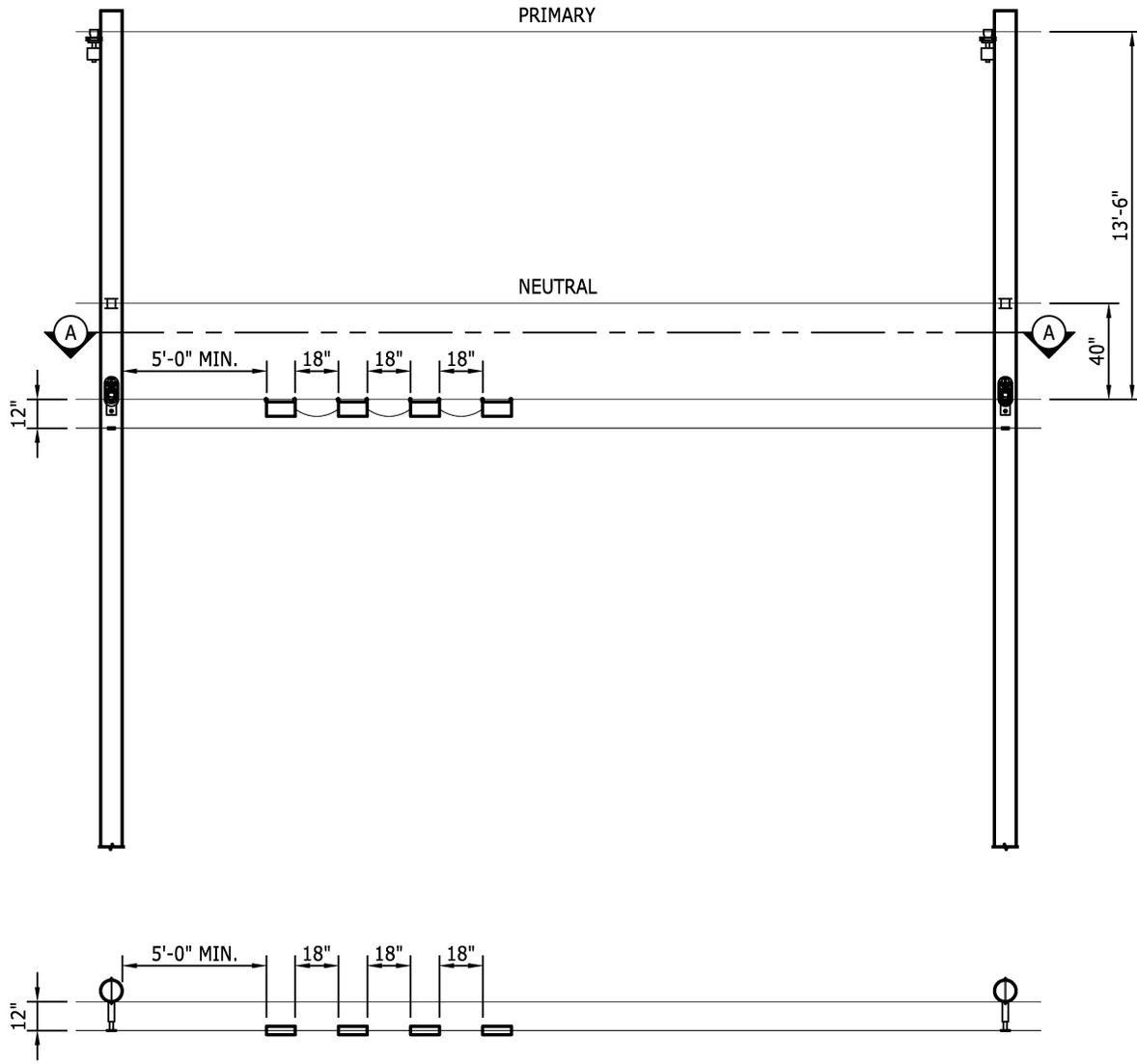
These specifications apply to any pole attachment and request by a cable television system or provider of telecommunications service to attach to a pole owned by TEP for strand mounted small cell equipment attached in the communication space ("Strand Mounted Equipment"). All requests to attach to a pole owned by TEP must be submitted utilizing TEP's electronic Permit to Attach process. TEP's written approval for the specific request and a validly existing agreement is required prior to installing any attachments to a pole owned by TEP.

GENERAL REQUIREMENTS

- A. In addition to these specifications, all Strand Mounted Equipment must meet TEP's General Attachment Specifications, TEP standards, and any other applicable industry and/or governing standards. In the event of a conflict between these specifications and any other specification or standard, TEP may apply the more stringent requirement.
- B. Panel-type antennas are limited to no more than two (2) antennas and two (2) radios on one side of a pole with its ancillary equipment, such as a router and power conversion unit, on the other side of the pole for weight distribution purposes. If a single panel antenna and a single radio are used, then all of the equipment including any ancillary equipment, such as the router and power conversion equipment, may be mounted on one side of the pole.
- C. Omni-type antennas are limited to no more than two (2) Omnis attached to a single radio on the same bracket and no more than two (2) radios with their associated Omnis and supporting ancillary hardware, such as a router and power conversion unit, may be mounted on one side of a pole. If a single radio is attached with its two (2) Omni antennas mounted on the same bracket, then all of the equipment including any ancillary equipment, such as the router and power conversion equipment, may be mounted on one side of the pole.
- D. "Mixed use" installations may consist of: (1) a single radio with Omni-type antennas on the same bracket and an associated ancillary router mounted on one side of the pole; and (2) a single panel antenna with a single radio including any ancillary equipment mounted on the other side of the pole.
- E. Strand Mounted Equipment is prohibited on or near poles with reclosers, regulators, capacitors, switches, or other TEP equipment that may be affected by radio control.
- F. Color schemes for all Strand Mounted Equipment are limited to grey or black. All Strand Mounted Equipment must blend in with the existing cables to the greatest extent practicable.
- G. RF warning labels must be attached to all Strand Mounted Equipment - consistent with all applicable OSHA requirements - and on the closest pole.
- H. The phone number for the communications Network Operations Center (NOC) must be prominently labeled on the Strand Mounted Equipment.
- I. All Strand Mounted Equipment shall be a minimum of 5' (feet) from the pole.
- J. All Strand Mounted Equipment is limited to a maximum vertical profile of 12" (inch) and a maximum horizontal profile of 24" (inch).
- K. Separation of all Strand Mounted Equipment from other pole attachments shall be a minimum of 4" (inch) anywhere in the span.
- L. TEP may require 12" (inch) standoff brackets to offset Strand Mounted Equipment from other pole attachments, as determined by engineering survey.

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STRAND MOUNTED SMALL CELL SPECIFICATION



SECTION A-A

NOTES:

1. TWELVE (12) INCH STANDOFF BRACKET(S) MAY BE REQUIRED.
2. EQUIPMENT SHALL BE A MINIMUM OF 5 FEET FROM POLE.
3. RF WARNING LABELS SHALL BE ATTACHED TO SMALL CELL ANTENNAS AND THE CLOSEST POLE.

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POLE MOUNTED SMALL CELL EQUIPMENT ATTACHED IN THE COMMUNICATION SPACE



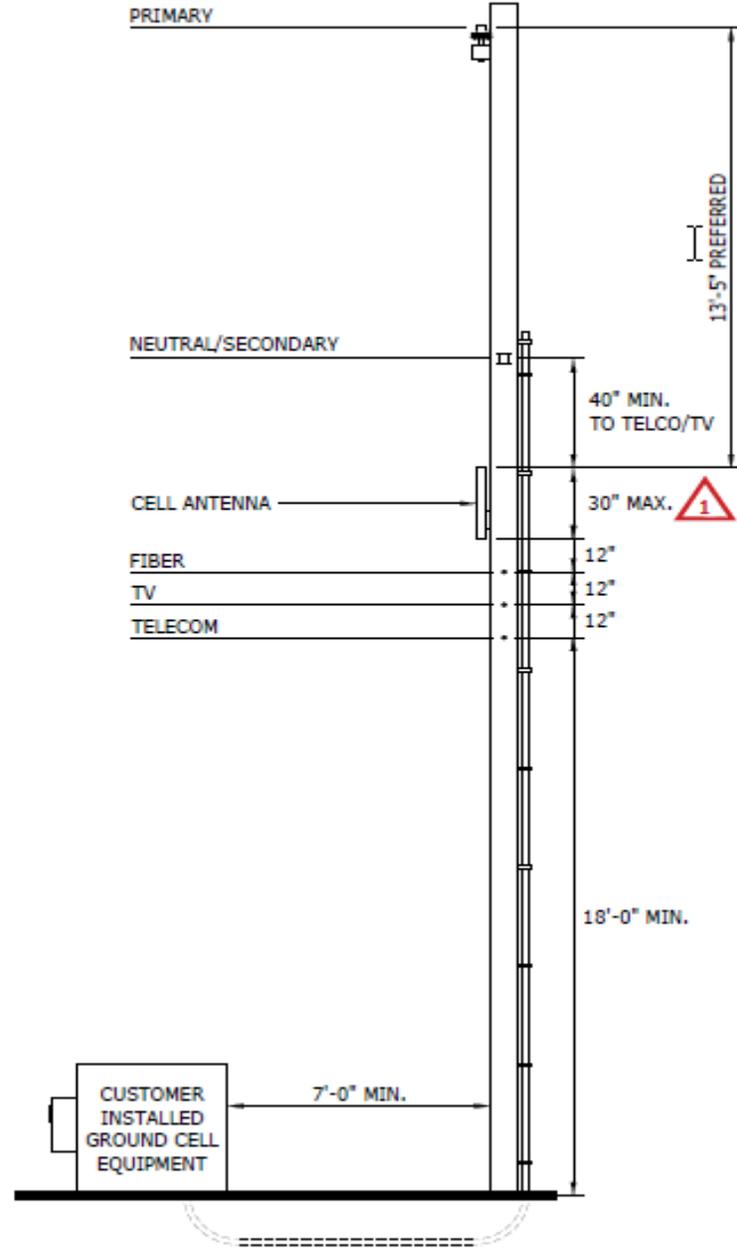
These specifications apply to any pole attachment and request by a cable television system or provider of telecommunications service ("Licensee") to attach to a distribution pole ("Pole") owned by TEP for pole mounted small cell antennas and risers attached in the communication space ("Pole Mounted Small Cell Equipment"). All requests to attach to a pole owned by TEP must be submitted utilizing TEP's electronic Permit to Attach process. TEP's written approval for the specific request and a validly existing agreement is required prior to installing any attachments to a pole owned by TEP.

GENERAL REQUIREMENTS

- A. In addition to these specifications, all Pole Mounted Small Cell Equipment must meet TEP's Pole Attachment Guidelines, General Attachment Specifications, Standards, and any other applicable industry and/or governing standards. In the event of a conflict between these specifications and any other specification or standard, TEP may apply the more stringent requirement.
- B. Attachments for Pole Mounted Small Cell Equipment other than antennas and risers is prohibited.
- C. Attachment requests are evaluated to ensure safety, reliability, and proper engineering on TEP's Poles and electric system. All attachments must meet TEP Standards, including but not limited to SR-805 and SR-220 (when there are existing risers on the Pole). Refer to TEP's Pole Attachment Guidelines (available at TEP.com) for the requirements necessary to process Attachment requests.
- D. Pole Mounted Small Cell Equipment is prohibited on a Pole that is located in a walk-in easement or where there is no bucket truck access.
- E. Pole Mounted Small Cell antennas must be installed on the face of the pole. Upon request, TEP may evaluate, but is not required to approve, installation on the quadrant of the pole.
- F. No more than three (3) Pole Mounted Small Cell sector antennas may be installed on any one pole.
- G. Pole Mounted Small Cell antennas are limited to a maximum vertical profile of 30 inches and a maximum of 6 cubic feet in volume.
- H. Customer installed ground equipment must meet all applicable TEP Electric Service Requirements.
- I. Pole Mounted Small Cell Equipment is prohibited on or near poles with reclosers, regulators, capacitors, switches, or other TEP equipment that are radio controlled.
- J. Color schemes for all Pole Mounted Small Cell Equipment are limited to grey or black. All Pole Mounted Small Cell Equipment must blend in with the existing cables to the greatest extent practicable.
- K. RF warning labels must be attached to all Pole Mounted Small Cell Equipment - consistent with all applicable OSHA requirements - and on the pole where the equipment is attached.
- K. Licensee is solely responsible for radio frequency ("RF") radiation emitted by Licensee's equipment. Licensee is responsible for ensuring RF radiation from its small cell antenna(s) is within the limits allowable under all Federal Law and Regulations.
- L. The phone number for the communications Network Operations Center (NOC) must be prominently labeled on the Pole Mounted Small Cell Equipment and on the Pole where the equipment is attached.
- M. TEP reserves the right to disconnect power, at the source, to the small cell antenna(s) in the event of an emergency or for TEP system maintenance.

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POLE MOUNTED SMALL CELL SPECIFICATION



NOTES:

1. FOR RISER ATTACHMENT DETAIL, SEE SR-220 & SR-805.
2. FOR APPROVED METER & SERVICE EQUIPMENT, SEE SR-452.
3. MAXIMUM ANTENNA HEIGHT SHALL NOT EXCEED 30 INCHES. 
4. ANTENNA SHALL ONLY BE INSTALLED ON POLES THAT ARE BUCKET TRUCK ACCESSIBLE.
5. PAD-MOUNTED EQUIPMENT PLACEMENT SHALL BE NO LESS THAN 7 FEET FROM THE BASE OF POLE.



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USE: Installation option for metering equipment on customer owned poles.

SERVICE ENTRANCE ON CUSTOMER OWNED SMALL WIRELESS FACILITY (SWF) OR LIGHT POLE



These requirements apply to any request by a cable television system or provider of telecommunication service to co-locate metering equipment on a customer owned SWF or governing agency owned street light pole. All requests to attach metering equipment to a customer owned pole must be submitted by utilizing TEP's Service Application process. Approval from Company Design Services is required prior to installation of any such facility.

GENERAL NOTES:

1. Attachment of metering equipment to any pole where Service Provider owned area lighting and/or electric distribution or transmission wires are attached, is not allowed.
2. Location of pole and side of pole where service entrance is to be attached, shall be mutually agreed upon between the Customer and Design Services.
3. Designated Point of Service per this standard will be the the customer installed sub-grade pedestal.
4. Service entrance panel shall be mounted on the customer owned pole parallel to the sidewalk or roadway to prevent interference with pedestrian traffic. Installation shall be on the pole side opposite on-coming traffic to support safety of Company employees during installation and maintenance of the meter.
5. Metered and un-metered wires shall be separated by a suitable barrier and shall not pass through the same section(s) of the service entrance. Barrier(s) shall be metallic, 16 gauge minimum.
6. Protective meter cover will be required, at customer's expense, if Service Provider determines that excessive vandalism occurs to meter. Notification will be provided and 30 days allowed for installation of a protective meter cover.
7. Do not trench under Company owned pad-mount equipment without Service Provider personnel present. Service Provider's access crew can be scheduled to assist with conduit placement and/or if trenching is required under company owned equipment. Arrangements must be made by calling 520-918-8300 (TEP) or 520-761-7951 (UES), a minimum of five working days in advance.
9. Other utilities are not permitted to pass underneath any Company equipment.
10. Refer to SR-108 for Right-of-Way and Easement requirements.

CUSTOMER RESPONSIBILITIES:

1. Ensure pole is engineered to support weight and allow for solid attachment of metering equipment. Pole shall comply with applicable wind/seismic code requirements as required by the Authority Having Jurisdiction (AHJ).
2. Purchase, install and maintain meter socket per the Company SR-400 Series standards. Ringless sockets are not acceptable. All meter sockets shall be mounted between 3'-6" minimum and 6'-3" maximum from final grade to the center of the meter.
3. Provide a 17" x 30" (H-20 Rated Junction Box) sub-grade pedestal, refer to SR-308, FIGURE 1, for approved manufacturers.
4. Provide a service disconnecting device which meets all requirements of the current National Electric Code (NEC). The operation of the device shall be such that the neutral (grounded conductor) is not broken when the device is opened. The operating handle or member shall be capable of being sealed either open or closed.

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USE: Installation option for metering equipment on customer owned poles.

SERVICE ENTRANCE ON CUSTOMER OWNED SMALL WIRELESS FACILITY (SWF) OR LIGHT POLE



CUSTOMER RESPONSIBILITIES (continued):

5. The service disconnect shall be effectively grounded in compliance with the National Electrical Code (NEC) and applicable requirements of local governmental codes (AHJ).
6. A test-bypass block with rigid insulation barriers shall be furnished, installed and wired or bussed to the meter socket by the manufacturer. Connection sequence is LINE-LOAD from left to right. Each line and load position shall be clearly identified by 3/4 inch minimum block letter labeling. Test-bypass cover panels shall be sealable and fitted with a lifting handle. All panels exceeding 16 inches in width shall require two lifting handles.
7. Communication riser(s), on Service Provider pole, shall be installed in compliance with SR-805.
8. Provide and install a continuous 2 1/2 inch conduit run from Service Provider pad-mount transformer, pedestal or pole to sub-grade pedestal (Point of Service). Trench depth to be 36 inches. Conduit sweeps into existing equipment shall be 2.5" x 36" x 90 degree, grey PVC Electrical Grade, Schedule 40. The total of all deflections shall not exceed 360 degrees in any continuous duct run between outlets. Refer to SR-205 (duct/concrete and mandrel pull), SR-207 (bedding and backfill), SR-209 (trenching and conduit) and SR-220 (riser).
9. The customer is to provide and install the service cable under the supervision of a Company Access Crew. An outage may be required. The conductor size shall have a range of #6 - 350kcmil, in order to connect to the Company supplied connectors at the Point-of-Service. The neutral conductor is to be identified with white tape at both ends for 3 inches in length. An address tag (Dymo aluminum embossing tape or similar) shall be attached to the neutral conductor at the Point-of-Service. The customer owned service cable shall be in compliance with the National Electrical Code (NEC) and applicable requirements of local governmental codes (AHJ).

SERVICE PROVIDER RESPONSIBILITIES:

1. Specify location for sub-grade pedestal, which will be considered the Point of Service, location of pedestal will normally be 7 to 12 feet from pole, in a non-traffic area.
2. If service is provided from a pole, provide and install continuation of duct on Company owned pole and ground the metal riser.
3. Provide, install and maintain service conductor from Company pad-mount transformer, pedestal or pole to a customer installed sub-grade pedestal (Point of Service). Upon connection to the Company's distribution system, the sub-grade pedestal will be maintained by the Service Provider.
4. Provide, install and maintain meter.
5. Design Services will document in Company mapping system that conductor from Point of Service to the Service Entrance is customer owned.

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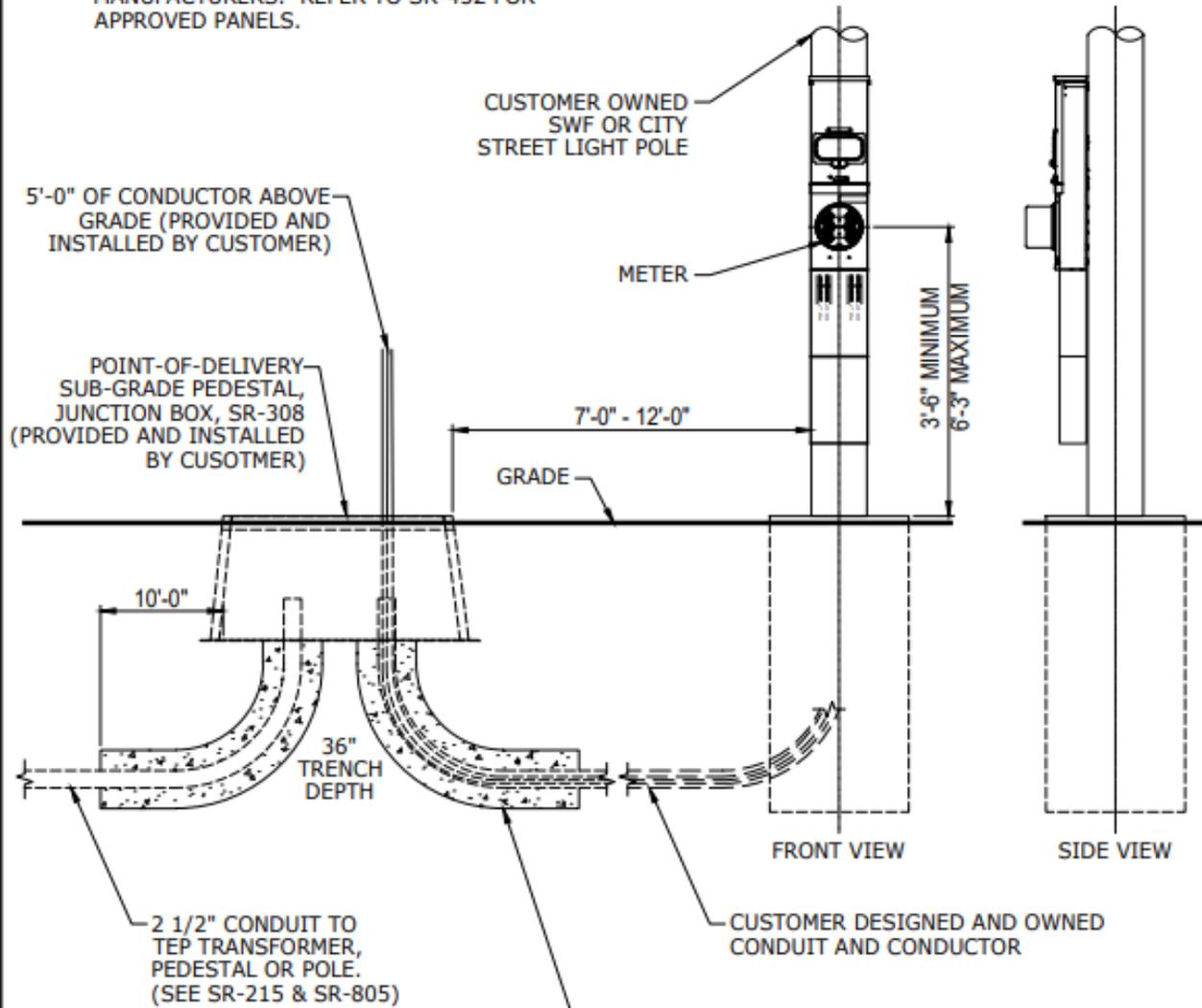
USE: Installation option for metering equipment on customer owned poles.

SERVICE ENTRANCE ON CUSTOMER OWNED SMALL WIRELESS FACILITY (SWF) OR LIGHT POLE



NOTE:
SERVICE ENTRANCE SHOWN FOR REFERENCE MAY NOT DEPICT CONFIGURATION OF ALL MANUFACTURERS. REFER TO SR-452 FOR APPROVED PANELS.

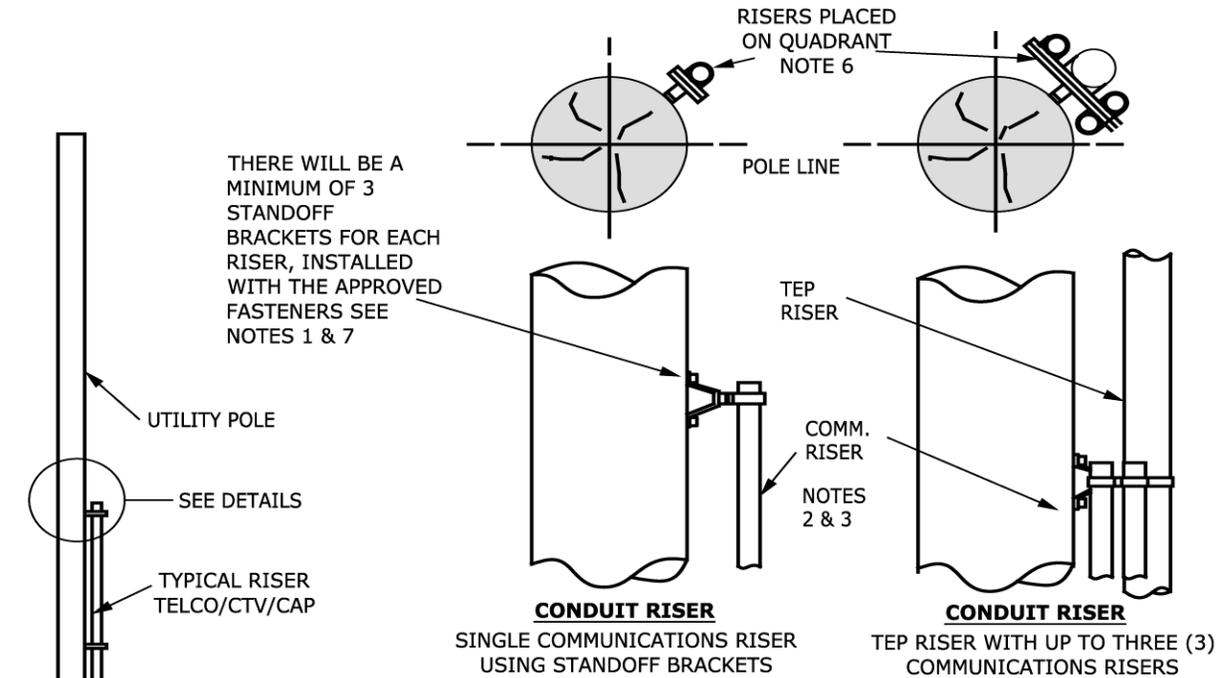
DIRECTION OF TRAVEL FOR NEAREST TRAFFIC LANE
←



3" MIN. - 5" MAX. CONCRETE ENCASEMENT FOR ALL DUCT SIZES (SEE SR-205). CONCRETE ENCASEMENT IS REQUIRED IF A CONDUIT RUN IS MORE THAN 150 FEET IN LENGTH, OR ANY LENGTH WITH A COMBINATION OF 270 DEGREES (OR MORE) OF BENDS, NOT TO EXCEED 360 DEGREES.

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RISER DETAILS - TELCO/CATV



RISER INSTALLATION SEE DETAILS

APPROVED CONDUIT BRACKETS CATALOG NUMBERS	
2"	4-CSO-7/stk-2T
2.5"	4-CSO-7/stk-2.5K
4"	4-CSO-7/stk-4
6"	4-CSO-7stk-6

RISER POLE ATTACHMENT NOTES:

1. NAILS SHALL NOT BE USED FOR ATTACHMENT OF ANY TYPE OF CONDUIT RISERS. LAG SCREWS ONLY, (3/8"x3" MIN.). RIV-NUTS ON STEEL AND FIBERGLASS POLES.
2. RIGID STEEL OR ALUMINUM, IMC CONDUIT IS REQUIRED FOR RISERS WITH PROPER THREADED COUPLING. NO PVC PRODUCTS ARE ALLOWED
3. THERE SHALL BE NO MORE THAN 3 COMMUNICATIONS CONDUITS, UP TO 3" IN DIAMETER OR 2-4" CONDUITS ON ANY UTILITY POLE.
4. IF THERE IS A PRIMARY OR SECONDARY TEP RISER ON A POLE, IT SHALL NOT BE RE-POSITIONED WITHOUT TEP AUTHORITY. CONTACT DESIGN FOR CONSTRUCTION REQUIREMENTS. COMMUNICATIONS RISERS SHALL BE CLUSTERED (SEE DETAILS ABOVE) IN THE SAME QUADRANT AS THE UTILITY RISER.
5. IF THERE IS NO TEP RISER ON THE POLE, THE COMMUNICATIONS RISER SHALL BE ON THE OPPOSITE SIDE OF POLE FROM ON-COMING TRAFFIC.
6. STANDOFF BRACKETS SHALL HOLD CONDUIT 4" OFF OF WOOD POLES. ALUMA-FORM MANUFACTURES UNITS USED BY TUCSON ELECTRIC POWER CO., SEE APPROVED CAT. NUMBERS.
7. SEE SR-220, PG. 2 OF 2 FOR PROPER RISER INSTALLATION.
8. FOR POLES CONTAINING INTERNAL CABLES, RISERS OR FIBER, ONLY EXTERNAL BANDING METHODS MAY BE USED. FOR QUESTIONS ABOUT POLES WITH INTERNAL CABLES, OR TO ENSURE SUCH POLES ARE PROPERLY IDENTIFIED PER TEP SPEC EM-S31, PLEASE CONTACT TEP TELECOMMUNICATION PROJECT MANAGER AT 918-8360.

FORMERLY SR-221, SECTION 200

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INTERNAL RISERS

For poles containing internal cables, risers or fiber, only external banding methods may be used. See below example label and picture.

**SIGN, WARNING AND CAUTION
Internal Cables**

USE: Warning sign - For installation on poles with internal cables containing hazardous voltage

Stores No. 2-15-1988

USE: Caution sign - For installation on poles with internal cables that may be damaged but do not contain hazardous voltage

Stores No. 2-15-1989

orange yellow

1/8" round corners

NOTES:

1. Sign shall meet Z535 latest revision
2. Sign shall have a 30 year life expectancy
3. Material shall be reflective polycarbonate and measure .25" thick
4. For installation, signs on tangent structures shall be mounted on two opposite sides of the pole 10' from the ground and parallel to conductors. Signs on deadend structures shall be mounted on two opposite sides of the pole 10' from the ground and perpendicular to conductors. (Use banding material found on EM-B02 for mounting)

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HIERARCHY ON POLE/TAGGING

The Licensee will use tags to identify ownership of Attachments to poles. The Licensee will identify communication cables by tagging every cable at every pole at a minimum. The Licensee will identify existing untagged cables at every other pole during normal maintenance and the Licensee shall work toward tagging all existing cables not previously tagged. See Exhibit D for Telecommunication and Fiber Identification specifications.



EXHIBIT E

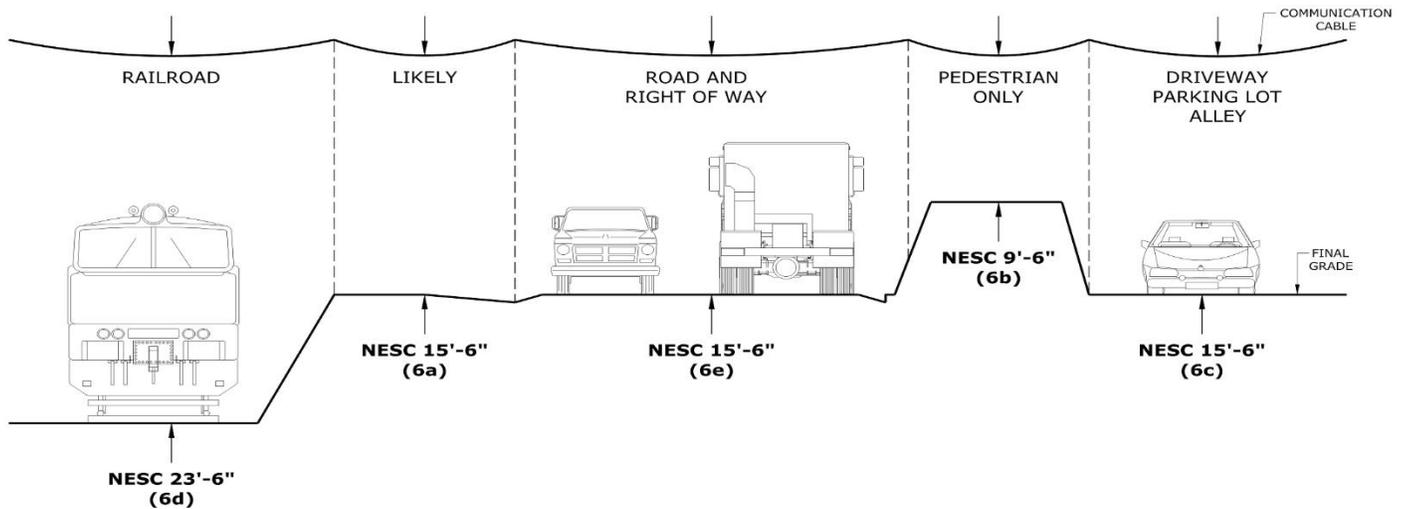
CONSTRUCTION MAKE-READY (CMR) LEGEND

The below acronyms will be used when noting make-ready.

<u>CMR</u>	<u>Acronym</u>	<u>CMR</u>	<u>Acronym</u>
Anchor	ANC	Quadraplex	QUAD
Attach	ATT	Raise	RSE
Band	BND	Riser	RSR
Cable	CA	Secondary	SEC
Cable Extension Arm	CE ARM	Secondary Riser	SEC RSR
Capacitor	CAP	Service Riser	SERV RSR
Concrete	CONC	Side Pull	SP
Cross Arm	X-Arm	Sidewalk Anchor	SW ANC
Dead-end	DE	Slack Span	S/S
Double Dead End	DDE	Steel	STL
Drop Wire	DW	Steel with Concrete	STL/CONC
Duplex	DUPL	Strand	STR
Extend	EXT	Street Light	ST LT
False Dead End	FDE	Transfer	TRF
Fiber	FBR	Transformer	XFMR
Fiberglass	FG	Transmission	TRANS
Galvanized Iron Pipe	GIP	Trim Tree	TR TREE
Ground	GRD	Quadraplex	QUAD
Guy	GUY	Raise	RSE
Height	HT	Riser	RSR
Lead	LD	Secondary	SEC
Loops	LPS	Secondary Riser	SEC RSR
Lower	LWR	Service Riser	SERV RSR
Midspan	M/S	Side Pull	SP
Midspan Cross Over	M/S XO	Sidewalk Anchor	SW ANC
Midspan Pull Off	M/S PO	Slack Span	S/S
Overhead Guy	OHG	Steel	STL
Overlash	OL	Steel with Concrete	STL/CONC
Primary	PRIM	Strand	STR
Primary Riser	PRIM RSR	Street Light	ST LT
Quadraplex	QUAD	Transfer	XFR
Raise	RSE	Transformer	XFMR
Riser	RSR	Transmission	TRANS
Secondary	SEC	Trim Tree	TR TREE
Secondary Riser	SEC RSR		

CLEARANCE OF COMMUNICATION CABLES

The Company minimum ground clearance for communication cables for common situations follow the below. The Company minimum equals NESC minimum at the lowest point (mid-span).



a. **Parallel to Highways, Roads, Streets, Alleys or other Road Rights-Of-Way:** Company minimum: fifteen feet - six inches (15'-6"). The clearances may be reduced by six inches (6") if the pole is located behind a curb.

b. **Pedestrian Traffic Only:** Company minimum: nine feet—six inches (9'-6"). Spaces and ways subject to pedestrians or restricted traffic only are those areas where riders on horses or other large animals, vehicles, or other mobile units exceeding a total height of 8 ft. are prohibited by regulation or permanent terrain configurations, or are otherwise not normally encountered nor reasonably anticipated.

c. **Driveways, Parking Lots and Alleys:** Company minimum: fifteen feet—six inches (15'-6").

d. **Railroad Crossings:** Company minimum: Twenty-three feet—six inches (23'-6"). Note: Always check the individual requirements of each railroad being crossed. Where railroad requirements exceed the Company Minimum, meet railway clearance requirements set by the operator of the rail the line will be crossing.

e. **State Roads and Interstates:** Company minimum: fifteen feet—six inches (15'-6").

For additional information, please reference Table 232-1 of the NESC.

CLEARANCES OF OVERHEAD LINES

Clearances of conductors and communication cables on Company facilities based on NESC Rule 235-C.

Conductor above Communication Cable	At the Structure	Mid-Span
Neutrals*	40 in	30 in
120V-13.8 kv Cables and Conductors	40 in	30 in
20.8 kv Conductors	42 in	32 in
46kv Conductors	48 in	36 in

*The mid-span clearance will usually be the limiting factor, which will require a much greater clearance at the structure than that specified in the above table.