
WELCOME

CPS Energy Quarterly Pole Attachment Workshop

November 15, 2017

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HOUSEKEEPING

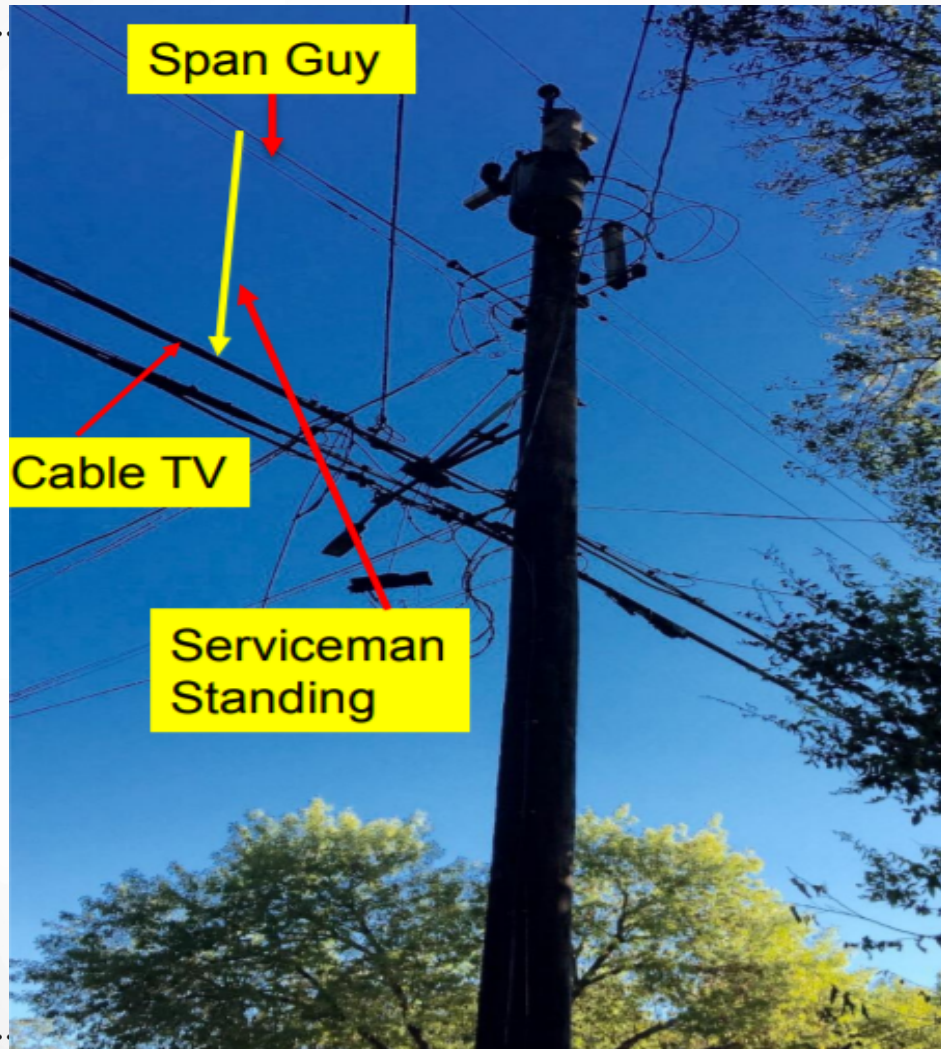
- **Sign-up Sheets**
- **Restrooms**
- **Evacuation / Staging**
- **Introductions in the room**



SAFETY EVENT - JOURNEYMAN



SAFETY EVENT



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PURPOSE OF TODAY'S WORKSHOP

- Provide update on the various initiatives of the CPS Energy Pole Attachment Program
- Continue constructive dialogue with Attaching Entities

TODAY'S AGENDA

CPS Energy
Quarterly Pole Attachment Workshop - November 15, 2017

CPS Energy EMC Auditorium
4514 Frank Bryant – San Antonio

Agenda #	Item	Presenter	
1	Welcome & Introductions	Jesse Lopez	9:00 – 9:10 am
2	Pole Attachment Webpage, Standards & Application Submittal	Jesse Lopez	9:10 – 9:25 am
3	Work Manager - Business Case Authorization (BCA)	Jesse Lopez	9:25 – 9:35 am
4	Wireless Standards accomplishments and Process update	Jesse Lopez	9:35 – 9:45 am
5	Small cell installation permitting	Jesse Lopez	9:45 – 10:00 am
6	Wireless Standards next steps	Jesse Lopez	10:00 – 10:15 am
7	Discussion of Wireless Agreements / Legislative Update	Gabriel Garcia	10:15 – 10:25 am
8	Banner Attachment Agreement update	Gabriel Garcia	10:25 – 10:35 am
9	Discussion of Ongoing Pole Attachment Inventory	Claudia Valles-Tovar	10:35 – 10:45 am
10	Issues / Concerns	Jesse Lopez/Attendees	10:45 – 11:00 am
11	Open Discussion / Questions	Attendees	11:00 – 11:30 am
12	Final Wrap-up	Jesse Lopez	
13	Adjourn		

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POLE ATTACHMENT WEBPAGE

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WEBSITE LAYOUT

Pole Attachment Services

CPS Energy Pole Attachment Program

CPS Energy's distribution system can facilitate the delivery of the variety of communication services offered today.

With a streamlined pole attachment process, we're dedicated to partnering with companies to assist with speed-to-market processes for future technologies.

CPS Energy's Pole Attachment Services Office is the single point of contact for all who wish to attach infrastructure to our distribution poles.

The Pole Attachment Services Office is responsible for:

- Registration
- Attachment agreements
- Applications for new pole attachments or removals
- Surveys of existing attachments
- Billing and collections for all the above services

For questions or more information on the pole attachment process, [SEND US AN EMAIL.](#)

CPS Energy has released for comment the revised Pole Attachment Standards (the "Standards") today, October 5, 2017, which include the revised Wireless Attachment Standards and the addition of Banner Attachment Standards. CPS Energy is working diligently with stakeholders to ensure the Pole Attachment Standards improve operations for all attaching entities. Part of our goal is also to improve communications with our stakeholders through quarterly workshops and by soliciting written comments to draft revisions to the Standards. We remind you that the principles of Safety, Reliability, and Customer Service, which guide our Pole Attachment Services Department, also guided the development of the proposed revisions to the Standards.

CPS Energy is now soliciting formal written comments from stakeholders by October 27, 2017. Please use the "Pole Attachment Standard Comment Form" and email the form to poleattach@cpsenergy.com. The revised Pole Attachment Standards will be posted on the Pole Attachment Services page on CPS Energy's public website (www.cpsenergy.com/poleattachments). We expect to post tomorrow on the CPS Energy website a table that shows the major additions and revisions to the Standards as a guide to assist stakeholders in understanding the proposed changes.

Thank you for your consideration and patience.



Pole Inventory Project

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WEBSITE LAYOUT

Future Meetings/Workshops

- ▶ Quarterly Pole Attachment Workshop: Nov 15 2017
- ▶ Quarterly Pole Attachment Workshop: Jan 25 2018
- ▶ Quarterly Pole Attachment Workshop: Apr 12 2018
- ▶ Quarterly Pole Attachment Workshop: Jul 26 2018
- ▶ Quarterly Pole Attachment Workshop: Nov 8 2018

[Map of Meetings/Workshops](#)

Previous Meetings/Workshops

- ▶ Quarterly Pole Attachment Workshop: May 11 2017
- ▶ Quarterly Pole Attachment Workshop: Aug 15 2017
- ▶ Quarterly Pole Attachment Workshop: Feb 16 2017
- ▶ EUCI Pole Attachment CPSE Case Study: Jan 2017
- ▶ Quarterly Pole Attachment Workshop: Nov 14 2016
- ▶ Quarterly Pole Attachment Workshop: Aug 22 2016
- ▶ Technical Workshop: Jul 11 2016
- ▶ Technical Workshop: Jun 2 2016
- ▶ Quarterly Pole Attachment Workshop: May 19 2016
- ▶ Quarterly Pole Attachment Workshop: Feb 17 2016

Pole Attachment Standards

- ▶ Pole Attachment Standards - Oct 5 2017 - NEW
- ▶ Pole Attachment Standards Comment Form - NEW
- ▶ Pole Attachment Standards-Major Revisions List - NEW
- ▶ CPSE Pole Attachment Standards-V2-Effective Jan 1 2017
- ▶ CPSE Response to Comments to Standards - V2 - Jan 2017
- ▶ CPS Energy FCC Rate Calculation Support Jan 2017
- ▶ Pole Attachment Unit Pricing - Effective Jan 1 2017

Pro Forma Agreements

- ▶ Standard Pole Attachment Agreement (Pro-Forma) Revised July 2016
- ▶ Wireless Addendum Final Revised Dec 2016
- ▶ Wireless Installation Agreement Final Revised Dec 2016
- ▶ Infrastructure Provider Sublicensee Wireless Installation Agreement Final Version Dec 2016

Pole Inventory Project

- ▶ Davey DRG Pole Inventory Customer Notification Letter

Helpful Links

- ▶ Certificate of Authority (City of San Antonio)
- ▶ NJUNS
- ▶ NEW! Approved Contractors

Special software is required to open PLA Client File links.

Forms

- ▶ A1 Registration and Annual Reporting Form
- ▶ B1 Standard Pole Attachment Application
- ▶ B2 Standard Wireless Installation Application
- ▶ B3 Request for Pre Certification of Wireless System
- ▶ B4 Request for Waiver of Applicable Engineering Standards
- ▶ B6 Request for Temporary Attachment
- ▶ B7 Completion of Attaching Entity Construction
- ▶ B11 Pole Attachment Standards Revision Request
- ▶ B12 Pole Attachment Standards Revision Request

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POLE ATTACHMENT STANDARDS

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PROGRAM PRINCIPLES AND VALUES

Safety

Reliability

Customer Service



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APPLICATION SUBMITTAL

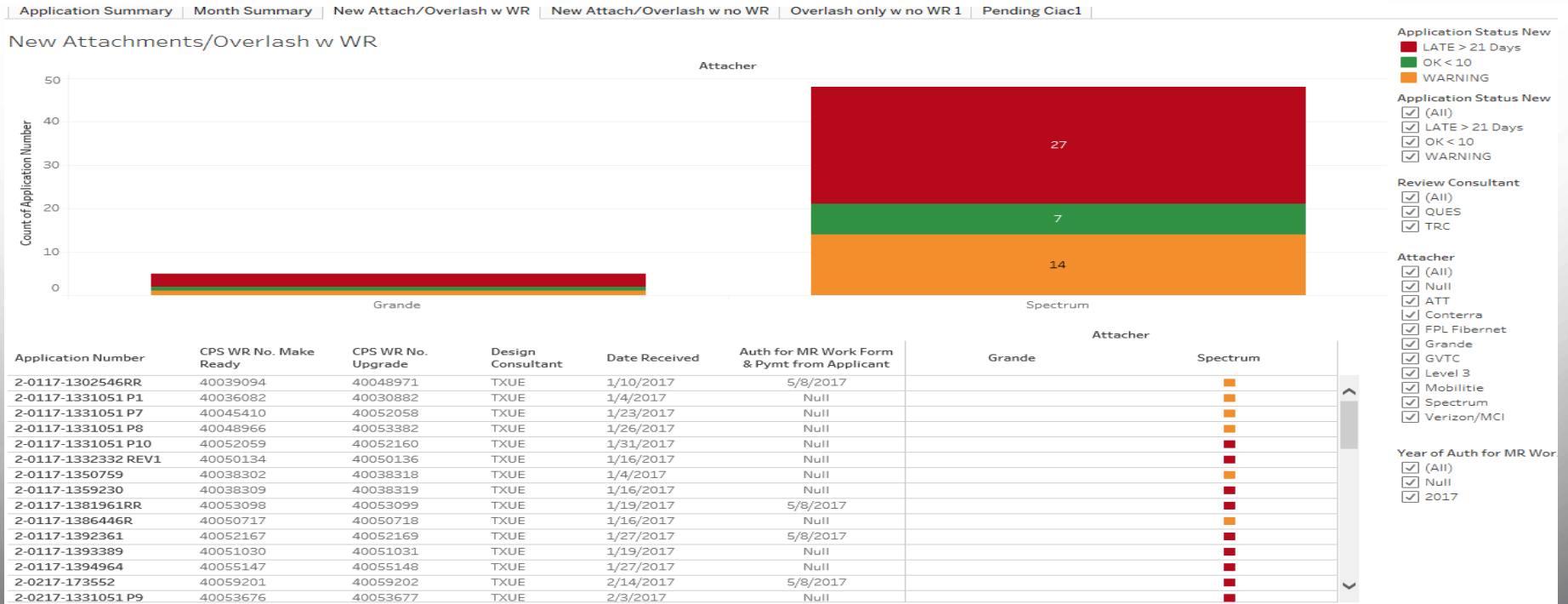
- **Submission of Application**
 - Completed applications may be submitted to poleapplications@cpsenergy.com
- **Submission of Application for Electric Service**
 - Completed applications may be submitted to ce@cpsenergy.com

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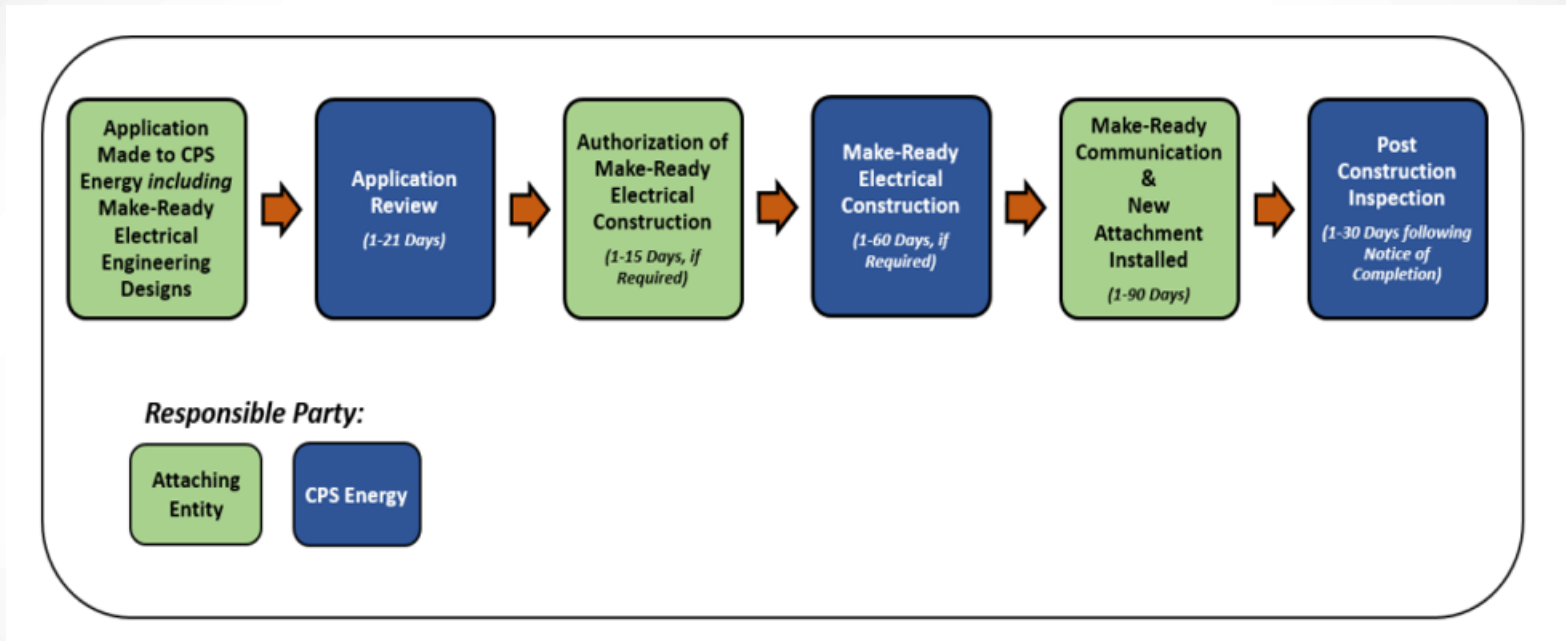


WORK MANAGER - BUSINESS CASE AUTHORIZATION (BCA)

- Adoption of Business Case Authorization:
 - Introduces electronic process to create the BCA and Work Orders per application
 - Improves visibility of application status regardless of Make Ready work
 - Enhances oversight and management application process through reports and dashboards



VISIBILITY OF APPLICATION



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UPDATE ON **WIRELESS STANDARDS AND PROCESS**

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WIRELESS STANDARDS- ACCOMPLISHMENTS MOCK UPS

- **Pole Attachment Services worked with Construction and Wireless Providers to do mock-ups of their proposed installations at the EDS training grounds**
 - which help guide CPS Energy's proposed revisions to the Pole Attachment Standards.
- **CPS Energy has approved the small cell pole attachment installation design for the following providers:**
 - Mobilitie (T-Mobile)
 - Mobilitie (Sprint)
 - ATT Mobility
- **CPS Energy has developed updated technical drawings as part of the proposed revisions to the Pole Attachment Standards.**

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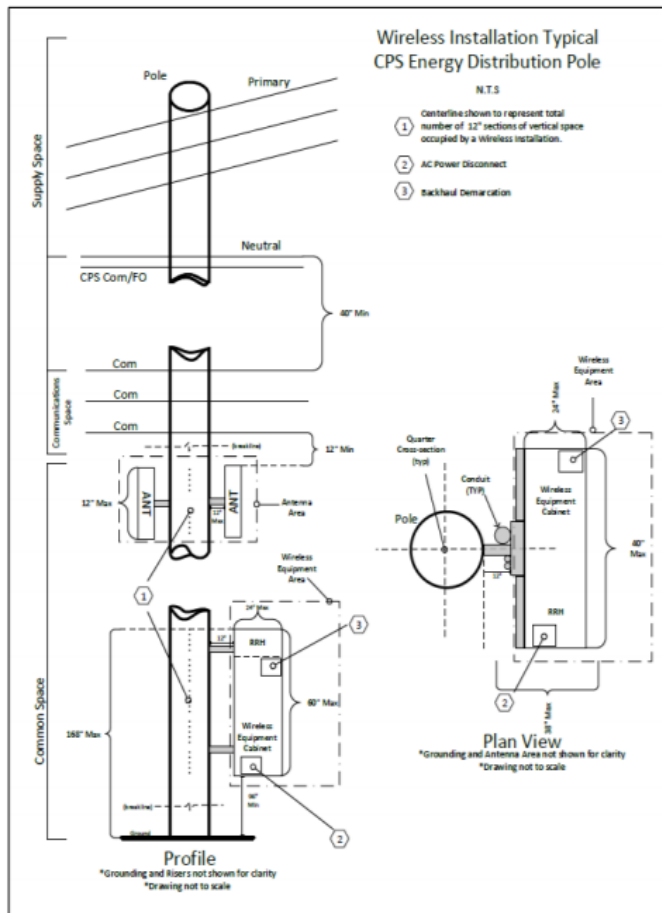


DRAWINGS- BEFORE & AFTER

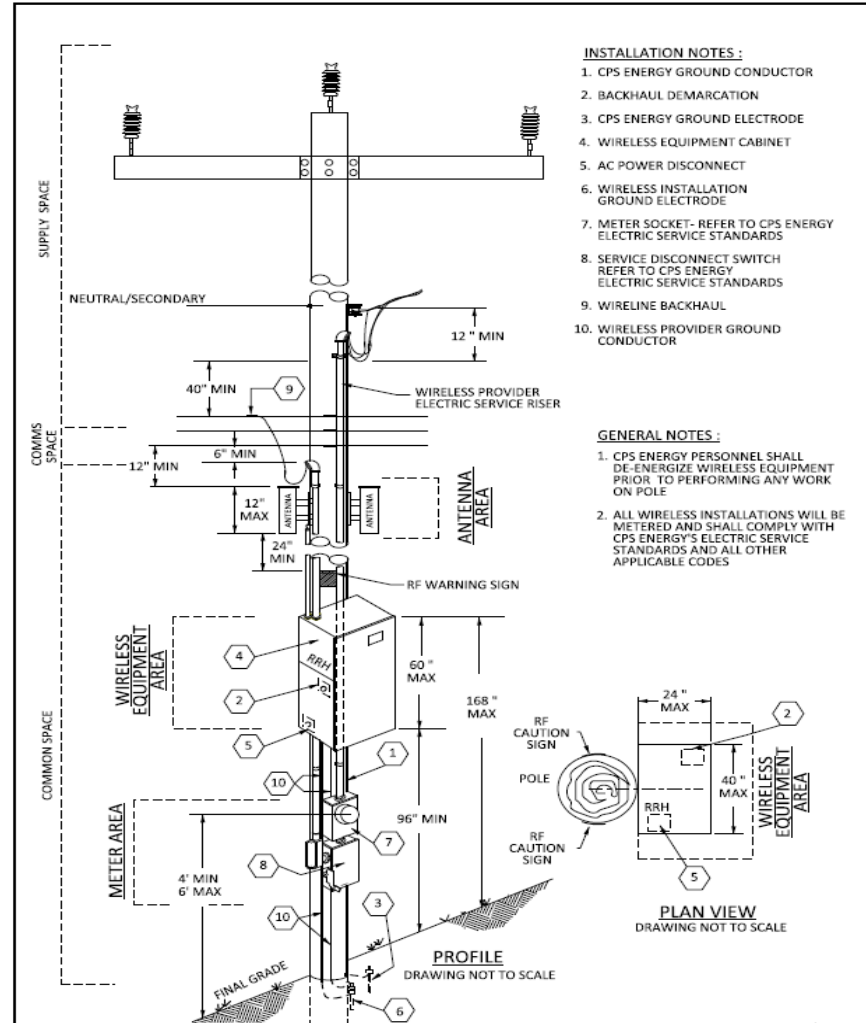


CPS Energy
Pole Attachment Standards

11: CPS Energy Typical Wireless Installation – Distribution Pole



CPS ENERGY EXCEPTION WIRELESS ANTENNA INSTALLATION - MID POLE



LESSONS LEARNED

- Reality: Communications Contractor \neq Power Contractor



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LESSONS LEARNED CONT.

- **Safety**

- Only contractors in the electrical space
- Pole top antenna 5' clearance from electrical primary
- No backup batteries permitted
- All wires must be protected by conduit or U-Guard
- All small cell equipment must be properly grounded
- All wireless antennas must have appropriate warning signs
- All wireless providers must complete interference testing
- All small cell equipment will be de-energized prior to CPSE performing any work on pole
- Poles not accessible by bucket truck will not be available for small cell installation
- Ground cabinets must be 25' from pole
- Micro network nodes minimum clearance of 15" to 72" from pole



LESSONS LEARNED CONT.

- **Reliability**

- Installation of electric meter for each small cell
 - Co-habitation of electric meter in ground equipment cabinet
 - Inspection of mock up installation and all field installations
 - Prohibition of macro cell equipment on poles
 - Determination of number of pole feet used by small cell installation as part of mock up process for billing purposes
 - Establishment of 10' cross-arm for electrical primary
 - Not allow small cell installations on poles subject to private easements
 - Establish multiple wireless installation options to address different ROW pole conditions
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CUSTOMER SERVICE



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LESSONS LEARNED CONT.

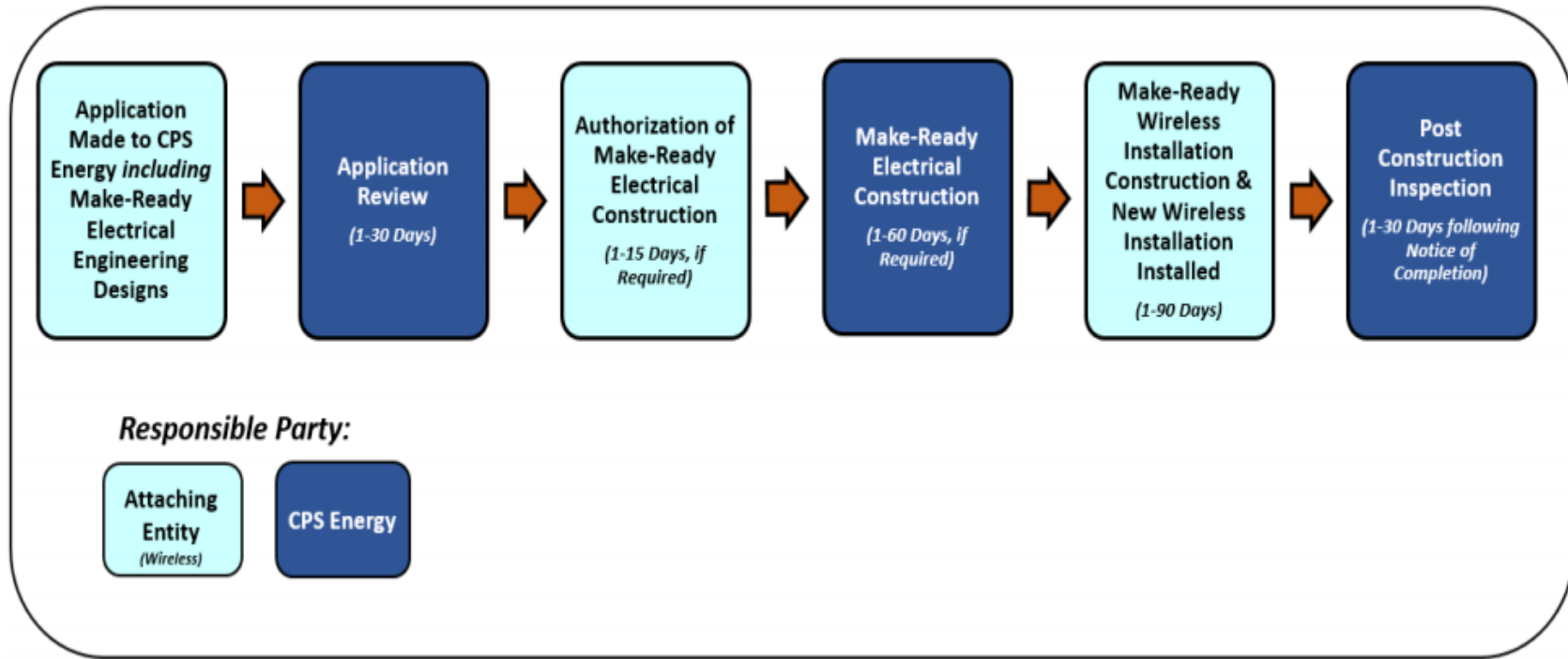
- **Customer Service**

- Require radio equipment to be enclosed in shroud cabinet on pole or ground cabinet in ROW
 - Require pole mounted cabinet to be flush with pole
 - Limit Mid-Pole antennas to be installed no more than 24” from pole
 - Require antenna to be embedded in cylinder enclosure or shroud cabinet
 - Limit pole mounted cabinet to 5’ in height and ground cabinet to 42”x42”x42” consistent with Chapter 284
 - Require all pole mounted equipment to be the same color as pole
 - Make available Overhead fed streetlight poles for small cell installations
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STANDARD PROCESS FOR WIRELESS INSTALLATIONS ON CPS POLE



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GOAL

- The goal is not how fast we get out of the gate but making sure we cross the finish line with the least issues and in a timely manner.
 - Establish a smoother process and ensure we all follow the process established between all stakeholders.
 - Have options for different scenarios.
 - Communication is key
 - Teamwork, Teamwork, Teamwork
-



SMALL CELL INSTALLATION PERMITTING APPROVALS

- **Small cell attachment design approval (CPSE Pole)**
 - CPSE Pole Attachment Services pre-certification process
 - **Electric service for small cell installation (any pole)**
 - CPSE Customer Engineering
 - **Pole Attachment Permit for small cell (CPSE pole)**
 - CPSE Pole Attachment Services
 - **Addressing for pole site (any pole)**
 - City of San Antonio Development Services Department (or equivalent local jurisdiction)
 - **Small cell Right of Way permit (any pole)**
 - City of San Antonio Right of Way Management Office
 - **Inspection for Electric service (any pole)**
 - City of San Antonio Development Service Department
 - **Post inspection for Small cell installation (CPSE pole)**
 - CPSE Pole Attachment Services
 - **Inspection for Small cell installation in Right of Way (any pole)**
 - City of San Antonio Right of Way Management office
-

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WIRELESS INSTALLATION COORDINATION PROCESS UPDATE

- **Process for each proposed wireless installation to include five parties:**
 - City of San Antonio ROW Management Offices
 - City of San Antonio Development Services Department
 - CPSE Pole Attachment Services
 - CPSE Customer Engineering
 - Wireless Providers
- **Small cell installation site considerations:**
 - Joint field survey by Wireless Provider, CPS Energy, and COSA at each proposed pole site or wireless project area
 - City of San Antonio to dictate type of installation in Right of Way
 - Pole mounted vs Padmount equipment cabinets
 - Customer owned pole options wood vs steel
 - ROW aesthetic considerations-stealth pole options
 - CPSE Customer Engineering to verify and approve service delivery at proposed pole site
 - CPSE Pole Attachment Services
 - Pre-certification application completion
 - Mock up installation-approval of proposed small cell design
 - Review and approval of Small cell pole attachment application
 - Wireless providers to schedule meetings with CPSE representatives and COSA to discuss proposed sites

COORDINATION AND APPROVAL



Network Node: Joint Review – City of San Antonio & CPS Energy

Section 1: Joint Review Acknowledgment

- City of San Antonio-Right of Way (ROW)
- CPS Energy-Pole Attachment Services (pole attachment only)
- CPS Energy-Customer Engineering (electric service only)

Section 2: Network Node Installation Information

Pole Owner:

- Municipally Owned
 - Municipal Name: [Click here to enter text.](#)
 - Type: Choose an item.
- Utility Owned
 - Name of Pole Owner: Choose an item.
- Provider Owned
 - Pole Material Type: Choose an item.

Utility Installation Type:

- Mid-Pole wireless antenna installation (pad mount cabinet)
- Mid-Pole wireless antenna installation (pole mounted cabinet)
- Mid-Span wireless antenna installation (pad mount cabinet)
- Mid-Span wireless antenna installation (pole mounted cabinet)
- Pole-Top wireless antenna installation (pole mounted cabinet)
- Pole-Top wireless antenna installation (pad mount cabinet)

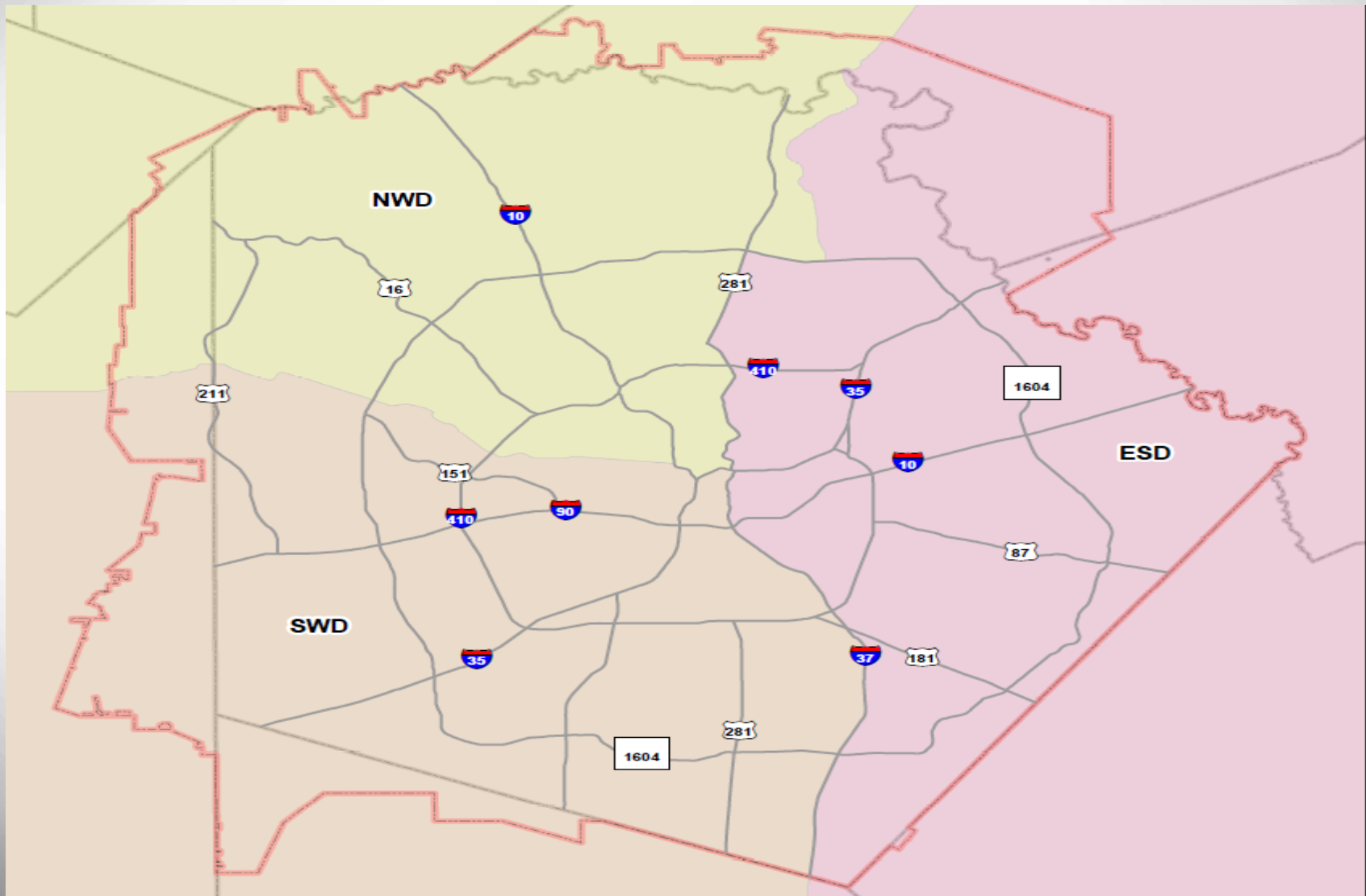
Section 3: Additional Comments

[Click here to enter text.](#)

NEXT STEPS

- **Pole Attachment Services continues to train construction crews at service districts on the small cell wireless equipment installations**
- **Continue to work with CPS Energy Safety Team**
- **Continue to work with all wireless communications providers on:**
 - Pre-Certification Process
 - Wireless Attachment Applications
 - Make Ready Work Orders for the Different Types of Installations
- **Wireless Provider – need approved engineering and electrical distribution construction contractors**

CPS ENERGY SERVICE DISTRICT BOUNDARIES



WIRELESS AGREEMENTS/LEGISLATIVE UPDATE

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TYPES OF WIRELESS ATTACHERS

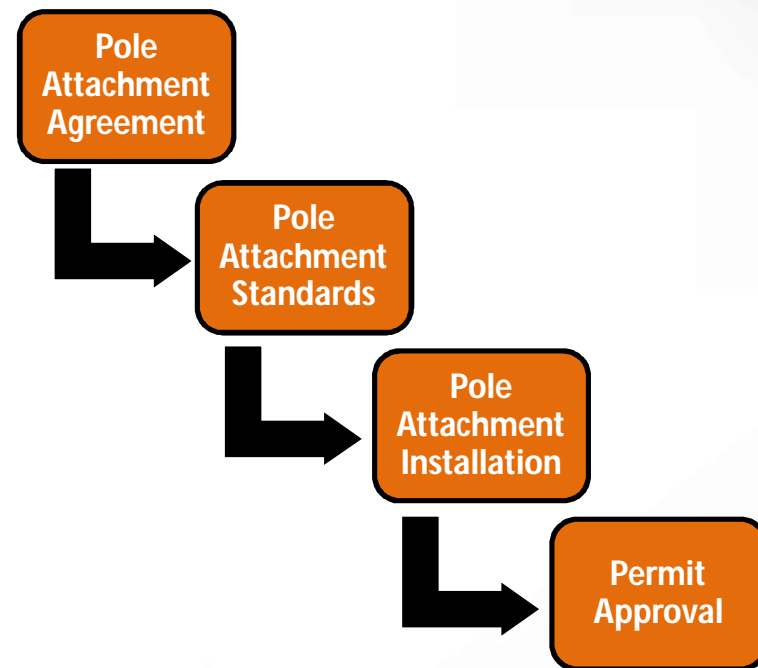
- **Wireless Carriers:** FCC licensed commercial wireless service providers with authority over specific radio frequencies utilized to operate a wireless network; not a PUC “certificated telecommunications providers” (CTPs).
 - **Cable Providers:** FCC licensed “cable operators” and holder of PUC “State-Issued Certificate of Franchise Authority” (SICFA).
 - **Video/Broadband Providers:** Not licensed by FCC, but holders of SICFA certificate of authority
 - **Infrastructure Providers:** Not licensed by FCC but may holders of PUC “Service Provider Certificate of Authority” (SPCOA); business model is to lease small cell wireless equipment to wireless carriers.
-

TYPES OF AGREEMENTS

- **Wireless Addendum:** Required for Attaching Entities who have a Wire Agreement but also want to install Wireless Installations
- **Wireless Installation Agreement:** Required for Attaching Entities to install Wireless Installations only
- **Infrastructure Provider Sublicensee Agreement:** Required for entities which do not own wireless infrastructure on CPS Energy poles, but lease wireless infrastructure from Infrastructure Providers

POLE ATTACHMENT AGREEMENT STRUCTURE

- An executed **Agreement** will grant the entity a license to attach to CPS Energy Poles contingent on securing an Attachment or Wireless Installation Permit.
- A **Permit** will grant authority to attach to a specific Pole provided there is compliance with the **Pole Attachment Standards**.
- A Pole Attachment or Wireless Installation Agreement without compliance with the Pole Attachment Standards does not authorize the access to any Poles.



BANNER ATTACHMENTS

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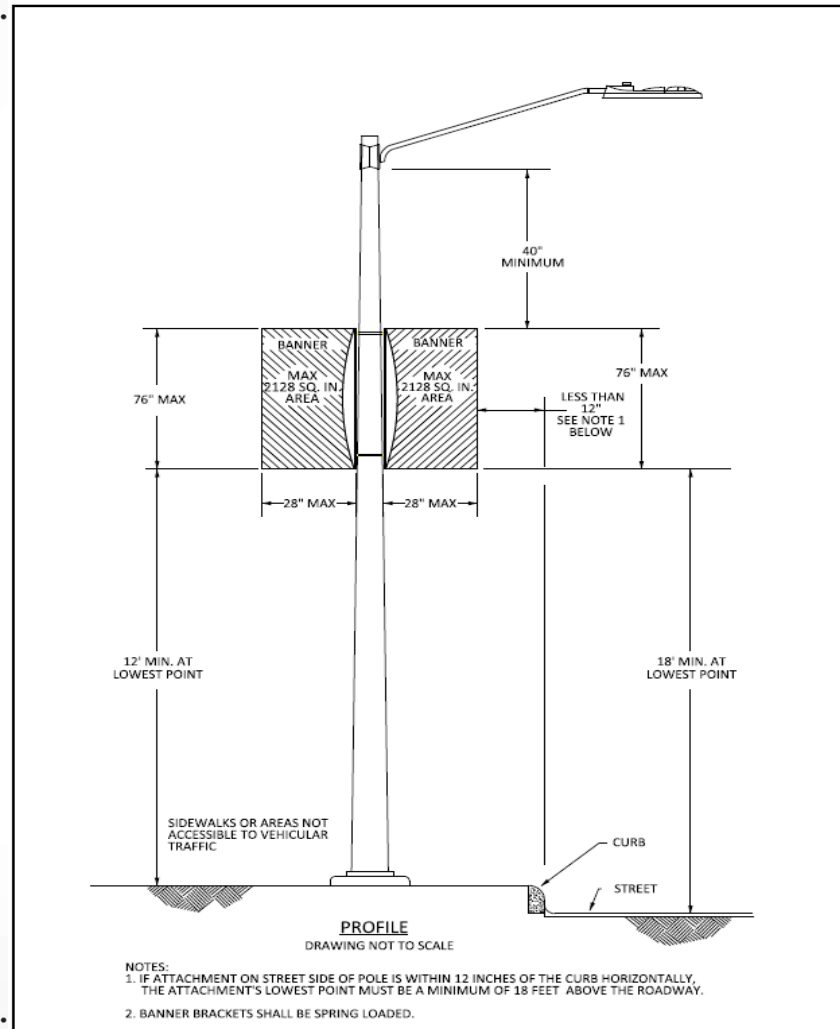


BANNER ATTACHMENTS ACTIVITIES

- CPS Energy is reviewing all stakeholders comments submitted for the proposed revisions to the Pole Attachment Standards.
 - Final version of Banner Standards and Banner Agreement will become effective 11/24/17
 - Revised Pole Attachment Standards become effective 11/17/17
 - Deadline to Execute New Banner Agreement will be 12/24/17
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BANNER STREETLIGHT DRAWINGS



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UPDATE ON
**POLE ATTACHMENT INVENTORY
PROJECT**

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UPDATED PROJECT SCHEDULE

Milestones/Descriptions	Estimated Completion
*CPS Energy/DRG QA Data	December 1, 2017
Create and deliver individual pole attachment report	December 15, 2017
Create and deliver Pole Inventory Project Invoice	December 15, 2017
Hold Final Monthly Project Meeting	December 19, 2017
Deadline to submit written notice of intent to challenge results	January 26, 2017

* Item delayed

UPDATE ON **CONFLATION**

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GIS CONFLATION FREEZE PLAN

- **Phase 1: Pre-Soft Freeze (Starts Nov 16)**
- **Phase 2: Soft Freeze (Nov 17-Dec 6)**
- **Phase 3: Hard Freeze (Dec 7 – Dec 10)**
- **Phase 4: Post Go-Live (Starts Dec 11)**

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Issues / Concerns

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CURRENT ISSUES

- *Applications and addresses are not being submitted before site visits, so work orders can't be created.
- *Numerous locations are in areas where there are no CPS facilities.
- *We have had a few that the only CPS power is Street Light Cable which we cannot utilize for power.

QUESTIONS

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