

Small Cell Wireless Overview



Background

History

- *Nearly 20 Years of Experience With Wireless Collocation*
- *400+ Existing Wireless Attachments*

Small Cell Wireless

- *Presents New Challenges With Increased Volume & New Applications.*

Pole Services Department

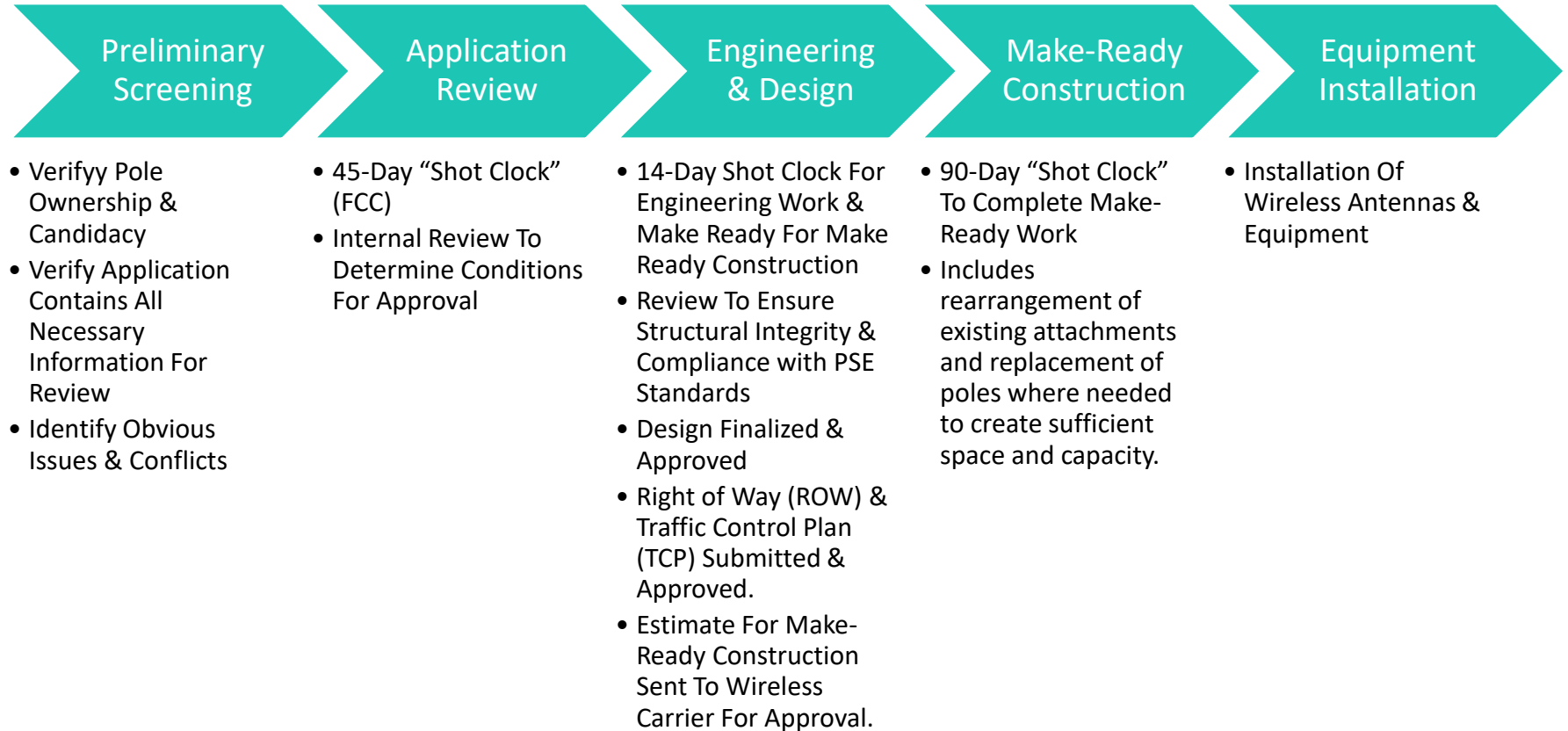
- *Consolidated PSE's wireless, wireline and streetlight operations.*
- *Resource Optimization (People, Systems & Budget).*
- *Streamlined Pole Asset Utilization, Planning, Coordination & Tracking*

Key Business Drivers

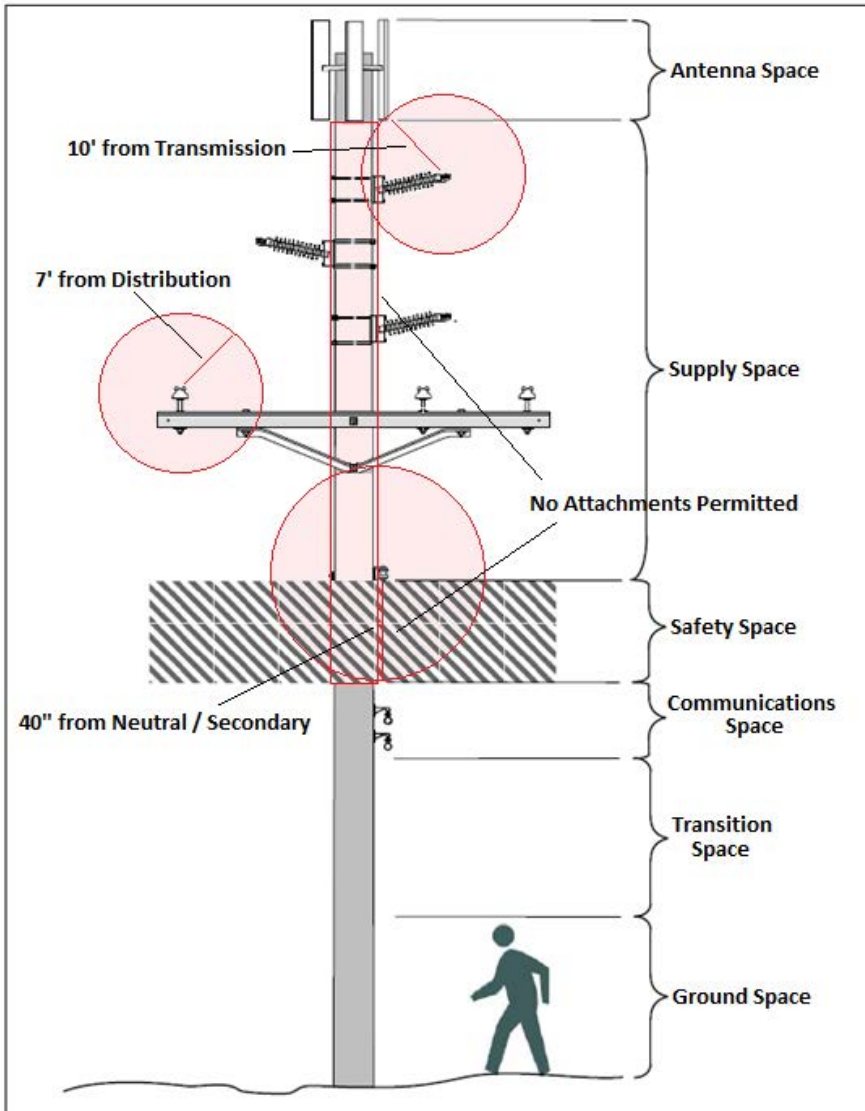
- *Safety Focus*
 - *Ensure Public Safety & Safety of PSE Crews and Contractors*
- *Regulatory Adherence*
 - *Federal (FCC), State of Washington (RCW/UTC) & Local Jurisdictions*
- *Minimize Service Outages & Increase Reliability*

Business Line	# Existing Attachments or Units
Street & Area Lights	118,000
Wireless	405*
Wireline	378,949
TOTALS	497,354

Process Overview



Separations & Clearances



NESC

- *Minimum 40" from distribution conductor.*
- *Minimum approach distance starts at 10' and increases as voltage increases.*
- *Safety Space: Off Limits.*
- *Qualified Workers Required For Energized Conductor Work.*

PSE

- *Minimum 7' from distribution*
- *Minimum 10' from transmission*
- *Attachments of radiating antenna in Supply Space & Communications Space are currently not permitted.*