

# PBOT

PORTLAND BUREAU OF TRANSPORTATION

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**Jo Ann Hardesty** Commissioner **Chris Warner** Director

June 2, 2022

To: Portland Design Commission  
Cc: Tim Heron, Kara Fioravanti  
From: Gene Yamamoto, Anne Hill

RE: Vertical Infrastructure in the ROW

City owned vertical infrastructure (poles) in the right-of-way (ROW) are suddenly in high demand for wireless and data services. Currently, City Code restricts attachments to vertical infrastructure in the ROW in Underground Wiring Districts thereby preventing attachments to poles. Existing policies and guidelines do not address the needs and constraints of today and the future. Small cells or distributed antennae systems (DAS) are short range, low power cellular facilities which allow mobile phone users greater reliability because they provide a density and increased capacity of cell reception in population centers. Recently, cell carriers are racing against each other to be the first to locate on poles—streetlight, signal light, catenary or other—in the ROW as they build out their small cell networks. The perception of the cell carriers is that local jurisdictions' requirements are restrictions which are prohibiting the deployment of more DAS systems. As a result, industry is appealing to the FCC asking for preemption. This "preemption", they argue is needed because local jurisdictions are creating barriers to delivering communications. It is estimated that there could be more than 1000 small cell attachments in the city center alone.

## Summary

In Summer of 2018, Portland Historic Landmarks Commissioner Annie Mahoney and former Portland Design Commissioner Tad Savinar met with city staff to continue developing vertical infrastructure guidelines and goals.

- Prioritization of intersections and existing, non-decorative poles such as signal poles and cobra head streetlights in the Underground Wiring District.
- Adoption of a new cobra street light standard engineered for the additional structural loads and designed with new small cell RF equipment as integral components.

Since that time, there has been significant progress in the creation of a Vertical Infrastructure program. In 2019, the Portland Design Commission & Portland Historic Landmarks Commission agreed to appointing a volunteer liaison from each commission to participate in the new design for streetlight replacement process and to provide written support for the 2019 Underground Wiring District code update allowing for small cell attachments in the underground wiring district in the right of way on non-ornamental street light poles. Design Commissioner Brian McCarter and



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Landmarks Commissioner Maya Foty have attended workshop sessions and provided guidance to PBOT staff and the consultant team.

PBOT staff have continued to work throughout 2020 and 2021 to complete designs for both the twin ornamentals for use in the downtown core, and South Waterfront poles specific to that design district. Understanding the precedent in the Central City of a larger, twin ornamental designed to support overhead electrification for light rail, PBOT, in partnership with the Portland Design Commission & Portland Historic Landmarks Commission, issued a Request for Proposal for a new streetlight pole design supporting wireless small cell attachments in the right of way. Aero Smart Communities (an Aero Wireless Group company) was awarded the contract. Two design concepts were approved for consideration by the Portland Design Commission & Portland Historic Landmarks Commission for the advancement of one design to be the replacement of ornamental streetlight poles in the underground wireless district. PBOT has also partnered with Valmont Industries, Inc to create a new set of poles for use in the South Waterfront special design district. Given Valmont owns the designs for the current poles in South Waterfront, is currently working with them to create updated versions of these which can accommodate small cells and other telecommunications equipment.

### **PBOT Request**

PBOT asks for a letter of support endorsing the two South Waterfront poles. These poles will be used exclusively in the South Waterfront special design district area.