

BWP Requirements for Street Light Attachments

This document outlines the design and operation requirements for street lighting facilities hosting telecommunication equipment. The specifications below allow for the installation of Wireless Telecommunication Facilities, while maintaining the operation of street lighting systems per the City of Burbank's (City) current Streetlight Master Plan.

Burbank Water and Power (BWP) is responsible for the installation, operation, and maintenance of the City's streetlights. BWP strives to maintain a high standard for roadway and related illumination to its customers in a safe, responsive, aesthetically sensitive, and fiscally sound manner. Based on the potential aesthetic impacts to the community, obstruction of the sidewalks and right-of-way, and ongoing operational costs incumbent with pole attachment proposals, BWP has concluded that any proposed telecommunication attachments must be concealed and integrated within the streetlight pole.

New installations, when approved, shall be placed on BWP pre-approved steel or concrete poles, hereon referred to as Wireless Telecommunication Facilities (WTF) poles. Existing street lighting poles will be replaced, at the cost of the applicant, to accommodate the new attachment. The replacement WTF poles shall be in accordance with the requirements below. The requirements below outline the installation of WTF equipment on street lighting facilities. They provide a uniform standard solution for different applicants, with specifications that ensure adequate service to existing and potential assets. The poles in Exhibit A and B, or their BWP approved equivalent, meet the pole structural and aesthetic requirements listed below. Shrouding and other attachments to the poles in Exhibit A and B are subject to the requirements below and subject to review and approval.

Plan Information

1. The following information shall be included on the construction plans:
 - a. Location of proposed streetlight pole to be replaced. Location details to include the tag number (barcode on pole e.g. "SL-106342") and a nearby address.
 - b. Dimensions of the proposed equipment.
 - c. Load schedule with voltage and amperage information.
 - d. Desired installation date.
2. Plan approval will not be given until an electric service confirmation is obtained. Contact BWP Electrical Engineering at (818) 238-3575. The plans must show the pertinent information related to the method of service as specified on the confirmation.

Installation

1. A WTF pole may not be installed unless it is replacing an existing streetlight pole.
2. A WTF pole may not replace poles with traffic equipment, decorative/ornamental poles, poles operating on series circuits, or power poles.

3. The number of installations in one city block should adhere to the Burbank Municipal Code (BMC 7-3-708 B) limits.
4. BWP reserves the right to reject any proposed installation. BWP reserves the right to remove any existing installation if it fails to comply with BWP and City codes.

Structural Requirements

5. The submittal must include design of the new WTF pole and foundation to meet the existing City adopted requirements. Please consult with BWP for the latest specifications.
6. WTF pole must be manufactured to match adjacent street lighting poles.
7. Equipment or concealment device may be 12” in diameter or less.
8. WTF pole must have a 2” (outer diameter) mast arm with a length of 8’. Shape and attachment height to conform to the most recent BWP standards BSL-404 and BSL-405.
9. Structure loading and wind loading studies by a licensed Civil Engineer are required for all installations along with their respective professional engineer’s stamp.

Aesthetics

10. The new pole and all attachments should have subdued colors and non-reflective materials per BWP’s requirements for the area.
11. Boxes or other strapped attachments are not allowed on street lighting poles.
12. The new pole should not have excessive holes or gaps beyond those of adjacent street lighting poles.
13. Concealment devices and shrouds shall have the smallest feasible size to enclose the proposed equipment. Venting should be concealed or otherwise screened from view.
14. The concealment device or shroud shall be of good quality and craftsmanship with good fit and finish. There shall be no visible gaps or surface deviations on the surface and between components of the shroud. There shall be no visible gaps where the shroud meets the standard.

Electrical Requirements

15. A load schedule and secondary service schematic will be required to determine the extent of the electrical load requirements. An electronic copy of a plot plan of the site, showing all the existing and proposed substructures, complying with BWP AutoCAD standards shall also be provided to BWP Electrical Engineering to aid the electrical design. BWP will provide full comments after the electrical sheets are provided.

16. Any system expansion/upgrade to accommodate the new equipment will be billed to the applicant as an Aid-in-Construction project including and not limited to distribution transformers, conductors, power poles and associated equipment, risers, and substructure.
17. The amperage draw of the equipment shall not exceed 15 amps.
18. Service from the utility meter to the WTF equipment shall be either 2-wire 120V or 2-wire 240V.
19. Multiple services may be installed to a WTF pole with BWP's prior approval.
20. Applicant shall notify BWP before starting and after completing any work, and ensure that the streetlight is operating. If it is not, repairs will be charged to applicant.

Maintenance

21. Applicants must obtain BWP's approval before performing any work on streetlight poles.
22. When servicing the luminaire or the pole, BWP is not responsible for any discontinuation in the service of the communication equipment.
23. In case the pole is removed or replaced, the WTF owner is responsible for relocation of their equipment.
24. The applicant is responsible for any damage to the streetlight during their installation or maintenance work.
25. If lighting will be not operational during the maintenance of the WTF equipment then it is the applicant's responsibility to provide adequate lighting until the maintenance is complete and the streetlight is back in operation.
26. BWP is responsible for reestablishing street lighting in case of an accident. However, availability of spare WTF poles and telecommunication equipment reinstallation is the responsibility of the applicant.

Substructure

27. In cases where the existing streetlight is supplied overhead, the applicant will be required to convert to underground. Non-LED lights will be replaced with an LED equivalent. Luminaries will be supplied by BWP at the applicant's expense.
28. Overhead BWP streetlight and fiber facilities traversing the pole are to be converted to underground at the applicant's expense.
29. For existing underground fed street lighting infrastructure to be utilized, it must conform to the latest service substructure standards. Any upgrades to the existing system required to meet the service standard shall be at the applicant's expense.

30. A 17"x30" pull-box shall be required at the base of the service riser pole. An additional 17"x30" pull-box shall be required if the WTF light is more than 100 linear feet from the riser pole.
31. The applicant's contractor will provide as-built drawings showing the exact location of underground substructure installed to serve the pole.
32. All substructure work including pads, pull boxes, grounding systems, and conduits are the responsibility of the applicant and shall be done in accordance with Burbank Water and Power drawings and specifications.
33. Any existing and proposed substructure which may affect the location of the new underground electrical system and any other improvements shall be identified and shown on the final plans in order to avoid a potential conflict with other substructure.
34. BWP will provide a construction drawing and engineering support, inspect contractor's work, and install the cables and metering devices, at the applicant's cost.

Safety/Clearances

35. All installations shall fully comply with the specifications and clearance requirements of Public Utilities Commission General Order 95 regarding construction, maintenance and operation of overhead lines.
36. The State of California Public Utilities Commission General Order No. 95 requires that no street lighting pole or antennas be allowed to encroach within the envelope 3' radial from the existing low voltage lines (0-750V). The actual height and location of the conductor attachment has to be surveyed and shown on the plans.
37. The State of California Public Utilities Commission General Order No. 95 requires that no street lighting pole or antennas be allowed to encroach within the envelope 6' radial from the existing low and medium voltage lines (750-22,500V). The actual height and location of the conductor attachment has to be surveyed and shown on the plans.

Aid-in-Construction

38. The Burbank Water and Power fees for providing electric service are Aid-in-Construction (AIC) charges set forth in Section 3.26 of BWP's Rules and Regulations for Electric Service. AIC charges are to recover the actual cost of:
 - a) Conducting feasibility studies and engineering;
 - b) Providing and installing new facilities to serve the customer;
 - c) Installing, relocating or upgrading overhead or underground facilities.
39. Actual costs vary from project to project and AIC examples can be found in the Burbank Water and Power "Guide for Electric Service".

Metering/Service

40. All electrical installations must conform to applicable Burbank Water and Power Rules and Regulations for Electric Service (latest revision).
41. The service rating shall be limited to 15 Amps. Service shall not be energized or de-energized by non-BWP personnel.
42. The new equipment will be metered by BWP. The applicant will need to register for a new service before energizing.
43. The new equipment will be energized through the streetlight standard and metered separately via BWP approved equipment. BWP will install or oversee the installation of the metering equipment. The applicant will be required to provide a space to accommodate the meter. The applicant will be required to provide a compatible socket meeting the standards of ANSI C136.41 – 7 pin streetlight receptacle.
44. All new metered services require a path for meter communications to BWP communication networks. Meters that fail to continuously communicate with BWP communication networks will require additional BWP approved equipment to be installed at the applicant's expense in order to create the appropriate communications path.
45. BWP will make a reasonable effort to provide reliable service without interruptions, but will not guarantee power with 100% reliability. Critical loads and equipment should have battery back-up and applicant should take appropriate precautions, and make appropriate arrangements to ensure their continued comfort should service be interrupted.

Fiber/Communication

46. If fiber optic backhaul is to be used within BWP electric substructure, it must utilize BWP's fiber optic cable. Third party fiber optic will not be permitted in BWP's electric substructures. Contact Burbank Water and Power at (818) 238-3113 or email: support@oneburbank.com for further information.

Energy Efficiency and Power Quality

47. The electrical design shall comply with California Building Code Title 24 energy efficiency requirements and shall use, wherever practical, surge suppressors, filters, isolation transformers, or other available means to preserve a quality of power of its electrical service and to protect sensitive electronic and computer-controlled equipment from voltage surges, sags, and fluctuations. BWP also recommends the use of an uninterruptible power supply (UPS). Power factor correction to a minimum of 90% will be requested to minimize kVA demand as well as energy use. The applicant must use California Nonresident Building Standard to consider and implement energy efficient electrical equipment and devices for minimizing peak demand and wasteful energy consumption.

Exhibit B

MATERIAL DATA		FINISH DATA	
COMPONENT	ASTM YIELD DESIGNATION (MIL)	FINISH	YIELD (PSI)
POLE SHAFT	A572 GR. A	FINISH PAINTED (FPI)	50
BASE PLATE	A36	PRIME COAT: NONE	36
PIPE ARM	A513	FINISH COAT: 100% OR URETHANE POLYESTER VALMONT BLACK F-264A	36
ARM SHAFT	A513	COLOR: VALMONT BLACK F-264A	36
ANCHOR BOLTS	F1554 GR. 55	SPEC: F-264A	95
HARDWARE COATINGS	HOT DIP ZINC		--

POLE DATA																	
ITEM	QTY	POLE TUBE			POLE BASE			ANCHOR BOLT			LUMINAIRE ARM DATA						
		BASE DIA. (IN)	TOP DIA. (IN)	LENGTH (FT)	SQUARE (IN)	BOLT THK. (IN)	CLIP THK. (IN)	HOLE DIA. (IN)	HOOK DIA. (IN)	LENGTH (IN)	ARM DIA. (IN)	FIXED DIA. (IN)	FREE DIA. (IN)	NOM. HEIGHT (FT)	RISE HEIGHT (FT)		
1	30	8.00	3.94	29.00	7	11.50	11.00	1.25	1.50	42.00	6.00	6.00	8.00	2.38	0.154	2.25	30.00

NOTES:

- PLEASE CONFIRM ALL LOCATIONS AND ORIENTATIONS PRIOR TO RELEASE FOR MANUFACTURE.
- TOP MOUNT ANTENNA (NOT TO EXCEED 3.0 SP. FT. EPA, 130LBS), 12" DIAMETER MAX., 72" HEIGHT MAX. TO BE MOUNTED WITH THE ARM HOLDING A DOWNWARD FACING AREA OR REDUCED LUMINAIRE (NOT TO EXCEED 2.5 SQ. FT. EPA, 50 POUNDS)

VIBRATION DISCLAIMER

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DESIGN CRITERIA		JOB	
ASSTG-2013	100 MPH	JOB NO.	TITLE
RD7 02/24/20	118 02/26/2020	SMALL CELL LIGHTING STRUCTURE	SMALL CELL LIGHTING STRUCTURE
DRWN BY DATE	CHECK BY DATE	AMOUNT	PREFERRED SALES

VALMONT INDUSTRIES, INC. RESERVES ALL RIGHTS IN THIS DOCUMENT. ENGINEER APPROVED WATERFALL LOGGING ACCOMMODATIONS TO FACILITATE THE MANUFACTURING PROCESS.

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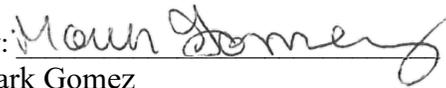
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