September 28, 2020

Small Cell Antenna Permit Documents

City of Allentown, Department of Public Works

This document contains the following:

1. Small Cell Antenna Permit Application Checklist
2. City of Allentown Small Cell Antenna Ordinance
3. City of Allentown Small Cell Standards
4. Preapproved Pole Details

Small Cell Antenna (SCA) Application Checklist (10.1.2020)

The following items and minimum information must be provided with the SCA application (Additional items may be required in accordance with the City's SCA Ordinance and COA SCA Design and Construction Standards - DCS):

_____ **Provide evidence that a Business License was obtained to perform work within the City of Allentown**

_____ **Application fees appropriate to the application being made. (Ord. 15631, 914.03)**

_____ **Indicate whether the application is for a New Pole or an Existing Pole.**

_____ **Indicate the Pole Location by Street Address, Pole Number, and Latitude and Longitude.**

_____ **Provide evidence that the City Building Standards and Safety Electrical Permit has been acquired.**

_____ **For a New Pole, Site location plan indicate all existing poles within 260' of the proposed SCA location. Include all pole locations within 260' by address and pole numbers. (Ord. 15631, 914.02.4.)**

_____ **For an Existing Pole, indicate the number of existing SCA's on the pole. (Ord. 15631, 914.03.1&2)**

_____ **Total number of SCA's proposed for an Existing or New pole. (Ord. 15631, 914.03.1&2)**

_____ **Provide evidence that the Pole height less than 39' (Ord. 15631, 914.01.6.a.i)**

_____ **If a Pole is proposed at a height greater than 39' and less than 50', provide basis of justification for the request. (Ord. 15631, 914.01.6.a.1 and DCS Sect. 7.)**

_____ **Provide evidence that the SCA Antenna is less than 3 cubic feet (Ord. 15631, 914.01.6.b.)**

_____ **Provide evidence that the SCA Antenna Equipment is less than 28 cubic feet (Ord. 15631, 914.01.6.c)**

_____ **Provide RF Certification by PA PE licensed RF engineer certifying compliance with FCC regulations for frequency range and power output (Ord. 15631., 914.02.5)**

_____ **Provide a statement of compliance with all Standard of Care Design Requirements outlined in the City's SCA Ordinance (Ord. 15631, 914.05.1)**

_____ **Provide indemnification language consistent with the City's SCA ordinance (Ord. 15631, 914.10)**

_____ Provide Certificate of Insurance consistent with the City's SCA ordinance (Ord. 15631, 914.10)

_____ Provide evidence of whether a PUC regulated company. (DCS Sect. 1.2.)

_____ If a non-PUC regulated company, provide evidence of meeting the provisions of the DCS (DCS Sect. 1.3.a through d.)

_____ Provide dimensioned Site Plans and details at a scale of 1"=5' including all existing features within 40' of the site and Structural Calculations meeting the provisions of the DCS (DCS Sect. 1.)

_____ Provide Photo Simulations meeting the provisions of the DCS (DCS Sect. 1.)

_____ Provide Equipment Specifications meeting the provisions of the DCS (DCS Sect. 1.)

_____ Provide Foundation Design meeting the provisions of the DCS (DCS Sect. 1.)

_____ Provide Operating Frequency information meeting the provisions of the DCS (DCS Sect. 1.)

_____ Provide evidence of Collocation investigation meeting the provisions of the DCS (DCS Sect. 2.)

_____ Provide evidence of meeting the design standards for the Antenna concealment within a radome, provisions for pole mounted equipment cages/ shrouds are being met, poles meet the paint type and color requirements, ground mounted equipment meet dimensional and all other requirements as outlined in the DCS (DCS Sect 2.)

_____ Provide evidence that the location of a new pole meets the criteria regarding general location and obstructions (DCS Sect 3.)

_____ Provide new pole and foundation detail drawings and dimensions for drop and swap poles consistent with the design criteria outlined in the DCS (DCS Sect. 5)

_____ Provide a completed Small Cell Antenna Checklist with permit application

ORDINANCE NO. 15631

FILE OF CITY COUNCIL

BILL NO. 53 - 2020

JULY 15, 2020

AN ORDINANCE

Amending Part Nine, Streets, Utilities, and Public Services Code, Title One, Street and Sidewalk Areas, of the Codified Ordinances of Allentown, Pennsylvania, by adding a new Article entitled "Small Cell Antenna".

WHEREAS, the City of Allentown ("City") desires to encourage wireless infrastructure investment by providing a fair and predictable process for the deployment of small cell antenna and associated poles, while enabling the City to manage the rights-of-way of the City of Allentown in the overall interests of the public health, safety and welfare; and

WHEREAS, the City recognizes that small cell antenna and associated poles are critical to delivering wireless access to advanced technology, broadband, and 9-1-1 services to homes, businesses, and schools within the City; and

WHEREAS, the City recognizes that small cell antenna and associated poles often may be deployed most effectively in the public rights-of-way; and,

WHEREAS, the City intends to fully comply with State and Federal law to the extent it preempts local municipal control.

WHEREAS, (C) The City has the authority to enact this ordinance pursuant to its police powers; the Pennsylvania Constitution, Art. IX, Sec. 2; The Home Rule and Optional Plan Government Law, 53 Pa.C.S.
§ 2961; and the City of Allentown Home Rule Charter.

NOW, THEREFORE, BE IT ORDAINED, Article 914 shall be established and amended as follows:

914 SMALL CELL ANTENNA

Purpose. The purpose of this Chapter is to establish policies and procedures for the placement of Small Cell Antennas and associated poles in rights-of-way within the City's jurisdiction, in compliance with state and federal law to the extent it preempts local municipal control, which will provide public benefit consistent with the preservation of the integrity, safe usage, and visual qualities of the City rights-of-way and the City as a whole.

Intent. In enacting this Chapter, the City is establishing uniform standards to address issues presented by small wireless facilities, including, without limitation, to:

Provide for the managed development of small cell antennas and associated poles in a manner that enhances the benefits of wireless communication and accommodates the needs of both City residents and wireless carriers in accordance with federal and state laws and regulations;

Establish procedures for the design, siting, construction, installation, maintenance and removal of small cell antennas and associated poles inside the public rights-of-way;

Encourage the collocation of small cell antennas on existing structures rather than the construction of new pole-based structures;

Ensure that small cell antennas and associated poles will be removed in the event that such structures are abandoned or become obsolete and are no longer necessary;

Limit interference with the use of streets, sidewalks, alleys, parkways, public utilities, public views, certain city corridors, and other public ways and places;

Limit the creation of visual and physical obstructions and other conditions that are hazardous to vehicular and pedestrian traffic;

Limit environmental damage, including damage to trees;

Respect the character of the neighborhoods and other areas in which facilities are installed; and

facilitate rapid deployment of small cell facilities to provide the benefits of advanced wireless

services.

914.01 DEFINITIONS

1. **Antenna** shall mean any system of wires, rods, discs, panels, flat panels, dishes, whips, or other similar devices used for the transmission or reception of wireless signals. An Antenna may include an omnidirectional antenna (rod), directional antenna (panel), parabolic antenna (disc) or any other wireless antenna. An Antenna shall not include private residence-mounted satellite dishes or television antennae or amateur radio equipment including, without limitation, ham or citizen band radio antennae.

2. **Collocation** shall mean the mounting or installing of one or more SCAs on an existing structure; and/or modifying a structure for the purpose of mounting or installing a SCA on that structure.

3. **FCC** shall mean Federal Communications Commission.

4. **Pole** shall mean a self-supporting lattice pole, guy pole, monopole, or any other pole, that may be utilized to support an antenna for receiving and/or transmitting a wireless signal

5. **Right-of-Way** shall mean the area on, below, or above a roadway, highway, street, sidewalk, alley, utility easement, or similar property, but not including a federal interstate highway, in the City.

6. **Small Cell Antenna (SCA)** shall mean the Antennae, nodes, control boxes, poles, poles, conduits, ducts, pedestals, electronics and other equipment used for the purpose of transmitting, receiving, distributing, providing, or accommodating wireless communications services. An SCA shall also be a facility that meets each of the following conditions:

   a. The structure on which antenna facilities are mounted;

      i. Are 39 feet or less in height, or up to 50 feet in height as may be allowed by the Public Works Department as outlined in the "Small Cell Standards" appeal process; or

      ii. Are no more than 10 percent taller than other adjacent structures; or

      iii. Do not extend existing structures on which they are located to a height of more than 39 feet or by more than 10 percent, whichever is greater.

   b. Each antenna (excluding associated antenna equipment) is no more than three cubic feet in volume; and

   c. All antenna equipment associated with the facility (excluding antennas) is cumulatively no more than 28 cubic feet in volume; and

   d. The facility does not require antenna structure registration under 47 CFR Part 17; and

   e. The facility does not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in 47 CFR § 1.1307(b)

7. **Small Cell Antenna Applicant (SCA Applicant)** shall mean any person that applies for a SCA permit.

8. **Stealth Technology** shall mean camouflaging methods applied to SCAs and other related facilities which render them more visually appealing or blend the proposed facility into the existing structure or visual backdrop in such a manner as to render it minimally visible to the casual observer. Such

methods include, but are not limited to, architecturally screened roof-mounted Antennae, building-mounted Antennae painted to match the existing structure and facilities constructed to resemble trees, shrubs, and light poles.

9. Structure means a pole, tower, base station, or other building, whether or not it has an existing antenna facility, that is used or to be used for the provision of personal wireless service (whether on its own or comingled with other types of services).

10. **Wireless** shall mean transmissions through the airwaves including, but not limited to, infrared line of sight, cellular, PCS, microwave, satellite, or radio signals.

914.02 PERMIT FOR INSTALLATION OF A SMALL CELL ANTENNA

1. No person shall place a SCA, or associated pole, in the right-of-way without first filing an application and obtaining a permit to do so, except as otherwise provided in this Chapter.

2. All applications for permit shall be in such form and shall provide such information as may be lawfully required by the Director of the City of Allentown's Department of Public Works and is consistent with the FCC Small Cell Order. The City of Allentown Department of Public Works may develop new or additional permit application forms, checklists, updated aesthetic and safety standards, and other related materials as required to optimally meet the goals of Allentown, its citizens, and its leadership.

3. In considering an application for permit, the Director shall take into account any objections made to the whole or any part of such application. The Director may attach to any permit granted hereunder any conditions or modifications deemed necessary.

4. Collocation. An application for a SCA requiring a newly constructed pole in the right-of-way shall not be approved unless the Applicant provides evidence that SCA cannot be accommodated on an existing pole within 260 feet of the proposed location because use of the existing pole (i) imposes technical limits, or (ii) would involve additional material costs.

5. RF Certification. An application for a SCA shall include design and operation certification by a PA PE licensed RF engineer that the proposed SCA(s) comply with FCC regulations governing RF emissions and safety-related signage.

6. Time limit for work. The proposed collocation, the modification or replacement of a pole or the installation of a new pole with SCAs attached for which a permit is granted under this section shall be completed within one year of the permit issuance date unless the municipality and the applicant agree in writing to extend the period.

914.03 FEES

1. **Application Fee -** All applications for collocation on an existing pole shall be accompanied by a fee of $500 for a single up-front application that includes up to five SCAs, with an additional $100 fee for

each SCA beyond five; All applications for new or replacement poles shall be accompanied by a fee of $1,000 per new of replacement pole.

2. **Annual Maintenance Fee for Right-Of-Way Use** - Every SCA in the right-of-way is subject to the City's right, in accordance with State and Federal law, to fix annually a fair and reasonable compensation to be paid for use and occupancy of the right-of- way. Such compensation for right-of-way use shall be directly related to the City's actual right-of-way management costs including, but not limited to, the costs of the administration and performance of all reviewing, inspecting, documenting, permitting, supervising and other right-of-way management activities by the City. Owners of SCAs shall pay the following fees to compensate the City for the City's costs incurred in connection with the activities described above.

   a. The owner of each SCA shall pay an $195 annual fee; or

   b. If a wireless provider owns more than one SCA collocated on the same pole, the owner shall pay a $195 annual fee and a $25 fee for each additional SCA owned by the wireless provider that is collocated on the same pole, not to exceed $270 for all SCAs on a single pole.

914.04 WHEN PERMIT NOT REQUIRED

1. A permit shall not be required for:

   a. routine maintenance;

   b. the replacement of a SCA with another SCA that is substantially similar or smaller in size, weight, and dimensions.

914.05 DESIGN REQUIREMENTS

1. Standard of Care. All SCAs shall be designed, constructed, operated, maintained, repaired, modified and removed in strict compliance with all current applicable technical, safety and safety-related codes, including but not limited to, the most recent editions of the Americans With Disabilities Act Guidelines (ADA), American National Standards Institute (ANSI) Code, National Electrical Safety Code (NESC), National Electrical Code (NEC), the Occupational Safety and Health Act (OSHA), Pennsylvania Public Utilities Commission (PUC) regulations and the Federal Communications Commission (FCC) Regulations, as well as the accepted and responsible workmanlike industry practices of the National Association of Tower Erectors (NATE). Any SCA shall at all times be kept and maintained in good condition, order and repair by qualified maintenance and construction personnel, so that the same shall not endanger the life of any person or any property in the City.

2. All SCAs must comply with the design requirements of the City of Allentown's current Small Cell Antenna General Design and Construction Standards, and compliance will be a basis of permit issuance.

3. The SCA shall employ the most current Stealth Technology commercially available in an effort to appropriately blend into the surrounding environment and minimize aesthetic impact. The application of the Stealth Technology chosen by the SCA applicant shall be subject to the approval of the City

4. Subject to applicable law, any height extensions to an existing pole shall require prior approval of the City. The City reserves the right to deny such requests based upon aesthetic and land use impact, or any other lawful considerations related to the character of the City which are stated in the design requirements published at the time of application.

5. Where technically feasible and subject to reasonable aesthetic and cost considerations, any proposed SCA shall be designed structurally, electrically, and in all respects to accommodate both the SCA applicant's Antennas and comparable Antennae for future users.

6. Operating Frequency and Transmission Power Range

   a. Frequencies: All applications for a new small cell antenna installation shall use one of the licensed frequency bands for 5G. No use of shared bands will be allowed in order to minimize interference with City Traffic and Police band uses.

   b. If the City experiences interference to any of its police cameras, traffic control systems, or any other City radio devices, immediately after the installation and initial operation of a SCA facility, the City may require the SCA owner of the newly installed SCA to adjust their operation and / or perform a radio study to prove the new facility is operating within FCC permitted SCA frequencies and power output ranges.

914.06 DAMAGE AND REPAIR

1. A wireless provider shall repair all damage to the right-of-way or any other land so disturbed, directly caused by the activities of the wireless provider and return the right-of-way to its functional equivalence as it existed prior to any work being done in the right-of-way by the wireless provider.

2. If the wireless provider fails to make the required repairs within 30 days after written notice, the City may perform those repairs and/or remove the damaged article(s) and charge the wireless provider the reasonable, documented cost of the repairs.

3. The City may suspend the ability of an SCA applicant to receive a new permit from the City until the applicant has paid any and all outstanding repair costs to the City.

914.07 ADDITIONAL ANTENNAE

1. As a condition of approval for all new poles for SCAs in the right-of-way, the SCA applicant shall provide the City with a written commitment that it will allow the City and/or other service providers to collocate antennae on their poles where technically and commercially reasonable. Written approval is not required if the additional Antennae are contained within a previously approved shroud designed to

include the additional Antennae. Providers shall notify the City when adding any additional antennae under previously approved shrouds.

914.08 RELOCATION OR REMOVAL OF FACILITIES

1. Notice. Within ninety days following written notice from the City, a wireless provider shall, at its own expense, protect, support, temporarily or permanently disconnect, remove, relocate, change, or alter the position of any SCA or pole for which it has a permit hereunder whenever the City has determined that such removal, relocation, change or alteration, is reasonably necessary for the construction, repair, maintenance, or installation of any City improvement in or upon, or the operations of the City in or upon, the right-of-way and all other occupiers of the same right-of-way are required to relocate their facilities in a similar manner.

2. Emergency Removal or Relocation of Facilities. The City retains the right to cut or move any SCA or pole located within the right-of-way, as the City may determine to be necessary, appropriate, or useful in response to any public health or safety emergency. If circumstances permit, the City shall notify the wireless provider and provide it an opportunity to move its SCA or pole prior to cutting or removing them, and in all circumstances shall promptly notify the wireless provider after cutting or removing a SCA or pole. The City may recover the actual cost of such removal from the wireless provider.

3. Abandonment of Facilities. The City may require a wireless provider to remove an abandoned SCA or pole permitted hereunder within ninety (90) days of abandonment. The City shall notify the wireless provider in writing if the City requires removal of the abandoned SCA or pole. Should the wireless provider fail to timely remove the abandoned SCA or pole, the City may remove the SCA or pole after reasonable written notice to the wireless provider of the City's intent to remove the SCA or pole, and may recover the actual cost of such removal from the wireless provider. A SCA or pole shall be deemed abandoned at the earlier of the date that the wireless provider indicates in any way that it is abandoning the SCA or pole, or the date that is ninety (90) days after the date that the SCA or pole ceases to be used, unless the wireless provider gives the City reasonable evidence that it is diligently working to place the SCA or pole back in service.

914.09 REVIEW OF SMALL CELL ANTENNA APPLICATIONS

1. Within ten (10) business days of receiving an initial application, the City will determine and notify the applicant in writing whether the application is materially complete. If an application is materially incomplete, the City will specifically identify the missing documents or information, and the specific rule or regulation creating the obligation to submit such documents or information. The application review periods set forth in section 914.9.3 shall restart at zero on the date which the applicant submits all the documents and information identified by the City to make the application complete.

2. If the applicant's supplemental submission(s) fails to make the application complete, and the City notifies the applicant within 10 business days of the supplemental submission, the application review period set forth in section 914.9.3 shall be tolled until the applicant provides the missing documents

and information. The application review period resumes (the date calculation does not restart) to run on the date when the applicant submits all the documents and information identified by the City to render the application complete.

3. All applications shall be processed on a nondiscriminatory basis, and the City shall approve or deny an application for:

   a. collocation of SCA on an existing pole within 60 days of submission of the application, or

   b. within 90 days for applications to deploy a SCA using a replacement or new pole.

4. An applicant and the City may enter into a written agreement to toll the time periods set forth in Section 914.9.3.

914.10 BONDING AND INSURANCE

1. Every owner of an SCA or pole located in the public right-of-way shall at all times fully indemnify, protect and save harmless, the City of Allentown, from and against all claims, actions, suits, damages and charges, and against all loss and necessary expenditures arising out of the installation and operation of the SCA or pole, or from the neglect or failure to maintain its equipment in good order and condition.

2. Every owner of a SCA or pole shall procure and maintain insurance to protect themselves and the City of Allentown from any and all claims for damages to property and/or personal injury, including death, which may arise from their operations and the maintenance of the SCA or pole. Certificates of Insurance shall name the City of Allentown as Additionally insured and shall be filed with the Department of Public Works at the time of the permit application and kept in force at all times. The limits of insurance shall be subject to the approval of the City's Risk Manager. Notwithstanding the foregoing, a wireless provider may self-insure the required insurance under the same terms and conditions as outlined above.

914.11 CONFLICTS WITH OTHER CHAPTERS

1. This Chapter supersedes all Chapters or parts of Chapters adopted prior hereto that are in conflict herewith, to the extent of such conflict.

914.12 CONFLICTS WITH STATE AND FEDERAL LAWS

1. In the event that applicable federal or state laws or regulations conflict with the requirements of this Chapter, the wireless provider shall comply with the requirements of this Chapter to the maximum extent possible without violating federal or state laws or regulations.

914.13 AUTHORITY GRANTED; NO PROPERTY RIGHT OR OTHER INTEREST CREATED

1. A permit from the City authorizes an applicant to undertake only certain activities in accordance with this Chapter, and does not create a property right or grant authority to the applicant to impinge upon the rights of others who may already have an interest in the right-of-way.

914.14 MISCELLANEOUS

1. Police Powers. The City, by granting any permit or taking any other action pursuant to this Chapter, does not waive, reduce, lessen or impair the lawful police powers vested in the City under applicable federal, state and local laws and regulations.

2. Time, Place and Manner. The City shall determine the time, place and manner of construction, maintenance, repair and/or removal of all SCAs in the right-of-way based on public safety, traffic management, physical burden on the right-of-way, and related considerations. For public utilities, the time, place and manner requirements shall be consistent with the police powers of the City and the requirements of the Public Utility Code.

3. Severability. If any section, subsection, sentence, clause, phrase or word of this Ordinance is for any reason held illegal or invalid by any court of competent jurisdiction, such provision shall be deemed a separate, distinct and independent provision, and such holding shall not render the remainder of this Chapter invalid.
4. Effective Date. This Ordinance shall become effective 10 days after adoption.

914.99 PENALTY

1. Any person violating the provisions of this article will, upon conviction thereof, be fined not more than Six Hundred ($600.00) for each and every offense, together with costs, and in the default of payment thereof, be imprisoned for not more than thirty (30) days. Each failure to obtain a permit, or having obtained a permit, to comply with any of the requirements of this article, and each day during which such violation continues, will constitute a separate offense.

2. The Department of Public Works reserves the right to deny the issuance of future permits to any person or company who violates the provisions of this article.

	Yea	Nay
Candida Affa	X	
Julio A. Guridy, VP	X	
Ce-Ce Gerlach	X	
Cynthia Mota	X	
Joshua Siegel	X	
Ed Zucal	X	
Daryl Hendricks, Pres.	X	
TOTAL	7	0

I hereby certify that the foregoing Ordinance was passed by City Council on August 5, 2020 and signed by the Mayor on August 7, 2020.

CITY CLERK

LEGISLATIVE TEMPLATE

- **What Department or bureau is Bill originating from? Where did the initiative for the bill originate?**

  Public Works / Engineering

- **Summary and Facts of the Bill**

  Amending Article 914 ; Part Nine, Streets, Utilities, and Public Services Code, Title One, Street and Sidewalk Areas, of the Codified Ordinances of Allentown, Pennsylvania, by adding a new Article entitled "Small Cell Antenna".

- **Purpose – Please include the following in your explanation:**
  - **What does the Bill do – what are the specific goals/tasks the bill seek to accomplish**
  - **What are the Benefits of doing this/Down-side of doing this**
  - **How does this Bill related to the City's Vision/Mission/Priorities**

  The City of Allentown desires to encourage wireless infrastructure investment while enabling the City to manage the rights-of-way of the City of Allentown. The purpose of this ordinance is to establish policies and procedures for the placement of Small Cell Antennas and associated poles in rights- of-way within the City's jurisdiction.

- **Financial Impact – Please include the following in your explanation:**
  - **Cost (Initial and ongoing)**
  - **Benefits (initial and ongoing)**

  Application Fees and Annual Maintenance Fees for Right-Of-Way Use as noted in the proposed ordinance; section 914.03 FEES

- **Funding Sources – Please include the following in your explanation:**
  - **If transferring funds, please make sure bill gives specific accounts; if appropriating funds from a grant list the agency awarding the grant.**

A General Fund revenue account will need to be created in order to properly account for the fees received.

- **Priority status/Deadlines, if any 10 days after Council approval.**

- **Why should Council unanimously support this bill?**

  The City recognizes that small cell antenna and associated poles are critical to delivering wireless access to advanced technology, broadband, and 9-1-1 services to homes, businesses, and schools within the City of Allentown.

July 8, 2020

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Small Cell Standards

City of Allentown, Department of Public Works

May 27, 2020

Small Cell Antenna Standards

The following standards reflect the desire of the City of Allentown ("City" or "Allentown") to maintain safety and aesthetics within the City, while allowing for an increase in the availability and quality of wireless broadband.

This document applies to all small cell antenna applications for placement of new small cell antennas on non-City-owned poles in the public right-of-way. Applications that conform to these standards will be reviewed by the Department of Public Works.

At locations where a utility provider already has a pole that needs to be replaced at the same location in order to meet height requirements (but not to exceed 39'-0" or as allowed by the City appeal process up to a maximum of 50 feet in height), the same material type of pole may be replaced as was existing at that location. Any new poles at new locations must meet the requirements of the City Small Cell Antenna Ordinance and these specifications for height, diameter, and materials.

The City may consider the location of small cell antenna(s) on City owned traffic signal poles if the applicant acquires agreements and traffic signal pole permit approvals from PennDOT to do so. These agreements and permits from PennDOT must be submitted as part of the small cell antenna permit application to the City of Allentown.

Principles

This document applies to all small cell antenna applications for placement of new small cell antennas on non-City-owned poles at new locations in the public right-of-way. Applications that conform to these standards will be reviewed by the Department of Public Works. It is intended to create a simplified and streamlined review process by the Department of Public Works, establishing a clear and consistent standard for placement in the City. For small cell antenna structures installed on non-City owned poles in the public right-of-way, these guidelines seek:

1. to establish a clear, defined standard for use throughout the City.
2. to establish a menu of design options for providers to select from when applying for new small cell antenna placement on non-City poles.
3. to minimize unnecessary quantities of new poles by encouraging collocation of small cell facilities.
4. to require, in situations where new poles will be placed, that equipment be placed on new, pre-designed and approved stealth poles, such that all equipment, including any wiring, can be concealed inside the pole.
5. to require, in situations where attachments will be made to existing non-City owned poles, that equipment, cabling, and conduit be concealed through the use of approved shrouding or camouflaging equipment.

Section 1. Application Requirements

The City of Allentown Department of Public Works may develop new or additional permit application forms, checklists, updated standards, and other related materials as required to optimally meet the goals of Allentown, its citizens, and its leadership. To avoid unnecessary delay in application processing, applicants are strongly encouraged to check the City website at www.Allentownpa.gov before submitting an application in order to confirm that the applicant is completing and following the most up-to-date application and requirements.

1. No person shall place a SCA, or associated pole, in the right-of-way without first filing an application and obtaining a permit to do so, except as otherwise provided in this Chapter.

2. Application for City permit shall be applied for by a PUC regulated company.

3. A non-PUC regulated company may apply for a City permit when;

   a. In the case of collocation on a PUC regulated company's pole, the non-PUC regulated company has a written agreement with a PUC regulated company confirming that the PUC regulated company is allowing collocation on their pole; or

   b. If the non-PUC company is erecting a new pole, the non-PUC company has a written agreement with a PUC regulated company establishing that the PUC regulated company will own and maintain the completed pole; and

   c. The non-PUC regulated company provides the City with a copy of the written agreement with the permit application.

   d. A permit application from a non-PUC regulated company will not be considered complete until the City receives a copy of the written agreement with the PUC regulated company.

   e. All application fees and reoccurring maintenance fees must be paid by the PUC regulated company.

Site Plans and Structural Calculations: For new pole installations, the applicant must submit fully dimensioned site plans, elevation drawings, foundation and pole construction details, structural foundation and wind load calculations to be prepared, sealed, stamped and signed by a Professional Engineer licensed and registered by the State of Pennsylvania. Drawings must depict existing physical features at the proposed installation location including but not limited to curb lines, sidewalks, signs, utilities, inlets, manholes, valve boxes, underground utilities (with plans acquired through PA-One Call), buildings, poles, right of way lines, ADA handicapped ramps, all within 40' feet of the proposed pole location. Drawings must also depict proposed power conduit and pole foundation locations as well as any existing wireless facilities, with all existing transmission equipment identified; other improvements; the proposed facility, with all proposed transmission

equipment and other improvements; and the boundaries of the area surrounding the proposed facility and any associated access or utility easements and setbacks. Plan and elevation view drawings shall be a scale no smaller than 1" = 5' horizontal and 5' vertical.

1. Photo Simulations: For all applications, photo simulations from at least three reasonable line-of-site locations near the proposed project site. The photo simulations must be taken from the viewpoints of the greatest pedestrian or vehicular traffic. Angles of photo simulation separations must be at least 90 degrees or greater and provide a full profile depiction. Photo simulations must be included in the application packet.
2. Equipment Specifications: For all equipment depicted on the plans, the applicant must include:
    a. the manufacturer's name and model number;
    b. physical dimensions including, without limitation, height, width, depth, volume and weight with mounts and other necessary hardware;
    c. Technical rendering of all external components, including enclosures and all attachment hardware; and
    d. which selection(s) from the approved aesthetic standards match the desired design.
3. Foundation: foundation design details for metal or concrete poles must indicate the proposed structural reinforcing, all dimensions, anchor bolts, and a minimum foundation depth of 4' feet. All structural calculations shall be provided and sealed by a Professional Engineer registered in the state of Pennsylvania.
4. Frequencies: All applications for a new small cell antenna installation shall use one of the licensed frequency bands for 5G. These are the 600 MHz band, the 3.7-4.2 GHz band, the 24.25 to 28.35 GHZ bands. No use of shared bands will be allowed in order to minimize interference with City Traffic and Police band uses.

Section 2. General Design and Construction Standards

Allentown desires to promote safe, cleanly organized and aesthetically acceptable facilities using the smallest and least intrusive means available to provide wireless services to the community. All wireless facilities in the public right-of-way must comply with all applicable provisions in this section. If any other law, regulation or code requires any more restrictive structural design and/or construction requirements, the most restrictive requirement will control.

Collocation: Allentown desires and encourages collocations between limited numbers of multiple separate wireless service providers on the same support structure whenever feasible. If the applicant chooses to not collocate when options appear available, demonstrative proof must be provided as to why collocation is not feasible.

Antennas: The antenna must be top-mounted and concealed within a radome that also conceals the cable connections, antenna mount and other hardware. GPS antennas must be placed within the radome or directly above the radome not to exceed six inches. The radome or side-mounted

antenna and GPS antenna must be non-reflective and painted or otherwise colored to match the existing pole.

Pole-Mounted Equipment Cages/Shrouds: When pole-mounted equipment is either permitted or required, all equipment other than the antenna(s), electric meter and disconnect switch must be concealed within an equipment shroud not to exceed eleven ($11ft^3$) cubic feet in total volume. The equipment must be installed no lower than fifteen (15') feet above ground level. The equipment shroud must be black powder coated materials or painted using epoxy paint Gloss Black #17038 per Federal Color Standard 595. It is preferred that equipment shrouds be mounted flush to the pole, subject to the pole owner's approval. Standoff mounts are permitted for the equipment shroud; but may not exceed six (6") inches and must include metal flaps (or "wings") to conceal the space between the shroud and the pole.

Poles with additional features: New poles, at new locations, should be black in color, using epoxy paint Gloss Black #17038 per Federal Color Standard 595, and designed to include blank connections (handholds and J-hooks) for City permitted uses, such as: cameras, food truck connections, wi-fi, and wayfinding signage or banners.

Ground-Mounted Equipment: Ground-mounted equipment may be allowed if sufficient right-of-way exists and when placed in conjunction with a new stealth pole and concealed in a ground mounted cabinet. The maximum acceptable dimensions of ground-mounted cabinet will be thirty (30") inches wide by thirty (30") inches deep by four (4') feet high and must be square in shape. Ground mounted cabinets must be installed flush to the ground and will be black in color, using epoxy paint Gloss Black #17038 per Federal Standard 595. Ground mounted equipment on sidewalks must not interfere with the flow of pedestrian traffic and must conform to the American's with Disabilities Act (ADA) regarding appropriate sidewalk spacing. A separate City of Allentown encroachment permit will be required for ground mounted equipment. Encroachment permit applications are available through the City Clerk's office.

Concealment: Allentown requires the applicant to incorporate concealment elements into the proposed design. Concealment will include approved camouflage or shrouding techniques.

Utility Lines: New service lines must be undergrounded whenever possible to avoid additional overhead lines. For metal poles, undergrounded cables and wires must transition directly into an external junction box prior to entering the people base. All roadway and/or sidewalk disturbance shall be replaced in-kind and shall be subject to the provisions of the City street cut ordinance and City sidewalk replacement standards.

Lights: Unless otherwise required for compliance with FAA or FCC regulations, the facility shall not include any permanently installed lights, unless directed by the City to install an LED light on a case by case basis. Any other lights associated with the electronic equipment shall be appropriately shielded from public view. This subsection is not meant to prohibit installations on streetlights or the installation of luminaires or additional street lighting on new poles when required by Allentown.

Generally Applicable Health and Safety Regulations: All facilities shall be designed, constructed, operated and maintained in compliance with all generally applicable health and safety standards, regulations, and laws, including without limitation all applicable regulations for human exposure to RF emissions.

Section 3. General Location Criteria

General: All new poles should be placed to minimize the potential of impact damage by vehicles. Where feasible, new poles shall be placed near the rear of the right-of-way. Pole locations shall be selected to respect minimum horizontal and vertical clearances from power lines. Approval by PPL will be required for any proposed pole location that will be closer than a 15' horizontal and vertical distance of a PPL power line. Small cell providers assume all responsibility for correcting any RF interference with other utility providers if they are transmitting outside of the FCC parameters for Small Cell Antennas.

Obstructions: Any new pole and/or equipment and other improvements associated with a new pole or an existing pole must not obstruct any:

1. access to any above-ground or underground infrastructure for traffic control, streetlight or public transportation, including without limitation any curb control sign, parking meter, vehicular traffic sign or signal, pedestrian traffic sign or signal, barricade reflectors;
2. access to any public transportation vehicles, shelters, street furniture or other improvements at any public transportation stop (including, without limitation, bus stops, streetcar stops, and bike share stations);
3. access to above ground or underground infrastructure owned or operated by any public or private utility agency;
4. fire hydrant access;
5. access to any doors, gates, sidewalk doors, passage doors, stoops or other ingress and egress points to any building appurtenant to the right-of-way; and/or
6. access to any fire escape.
7. ADA accessible pathway along a sidewalk area.

Section 4. New and Replacement Poles

Replacement of Non-City Owned Street Infrastructure in Right of Way: Any new poles must coincide with existing pole locations or a new pole location approved by the City, and the new structure must adhere to the aesthetic standards included in this document. Replacement pole height shall not exceed the height of the existing pole by more than 10% or 39' maximum, or as allowed by the City appeal process up to a maximum of 50 feet in height.

Poles: The provider shall purchase the New or Replacement Pole and shall be responsible for the maintenance of the Pole.

Overall Height: New pole height may not exceed the height of surrounding utility poles or streetlights, whichever is greater. If no utility poles are present, the maximum height, including antennas or any other extensions, is limited to thirty-nine (39') feet, or as allowed by the City appeal process up to a maximum of 50 feet in height. Allentown shall consider other poles in the vicinity of the proposed location, the built environment, the neighborhood character, the overall site appearance and the purposes, in connection with these Standards.

Lighting: Allentown may require the applicant to install functional streetlights when technically feasible and Allentown determines that such additions will enhance the overall appearance and usefulness of the proposed facility. When directed to add a streetlight, the City will give the type of luminaire, wattage, orientation, and davit arm length to include on the permit plans.

Section 5. Menu of Options

Telecommunication Facilities Located Within the Public Right-of-Way:

Any telecommunications facility installation on non-City owned poles within the public right of way shall conform to antenna and equipment volume or dimensional limitations set forth in these standards and any other applicable guidelines in the City. The pictures and profile drawings below represent appropriate installation designs for a small cell antenna installation both on new poles and on existing poles in the right of way.

Existing Pole Replacement:

Existing poles in the right of way may be replaced with a new Pole where applicable. Replacement poles must match adjacent poles in style and form (round, octagonal, fluted, tapered, etc.) Replacement poles must have LED luminaire(s) attached to match adjacent poles. Pole height restrictions as outlined in the Small Cell Antenna Ordinance shall apply.

Color Choices:

New poles placed during the installation of small cell antennas will be black in color, using epoxy paint Gloss Black #17038 per Federal Standard 595. Where existing poles are used, the color of all attachments associated with the small cell antenna will, as closely as possible, match the existing pole color. If the existing pole is wood, the attachments must be black in color, using epoxy paint Gloss Black #17038 per Federal Standard 595.

ConcealFab Corporation (www.concealfab.com) provided information in the preparation of this document, and can be used as a source to procure approved designs, or an approved equal may be considered. All small cell installations, whether on new poles or attached to existing non-City poles, must be procured to meet the specifications listed in this document, regardless of the source from which the poles and/or material is procured.

Lighting: Archeon type --- Eaton Archeon Medium LED Model #Arch-M-AF48-150-D-U- T3 or T5-4N7-AP Color 4000K with Telecell photocell manufactured by Telensa System.

Grounding/Testing: Install ground Rods system and test the earth-ground resistance all the new and existing pole, the resistance to ground shall be 10 ohms or less. Testing shall be performed with an approved ohm meter for testing earth-ground resistance. Provide each ground rod system test result to the City for the final acceptance and approval.

Pole Options for Drop and Swap and New Pole Placement in the Public Right-of-Way:

Integrated Pole with Pedestal Base: (Applicant to submit for review and approval)

- Pedestal base shall be square in shape with design dimensions not to exceed thirty (30") inches wide by thirty (30") long by forty-eight (48") inches in height.
- Total height of the pole shall not exceed thirty-nine (39') feet, or as allowed by the City appeal process up to a maximum of 50 feet in height, and the height shall match adjacent poles.
- Pole diameter shall not exceed twenty-four (24") inches and must be octagonal, fluted, or round in shape dependent on matching adjacent City poles.
- Top mount antenna shroud dimensions shall not exceed twenty-four (24") in diameter by sixty (60") inches height.
- Poles must be black power coated aluminum poles or painted using epoxy paint Gloss Black #17038 per Federal Standard 595
- Where required by the City, attached luminaire(s) and luminaire arm(s) must match adjacent City lighting standard and must contain an LED fixture in accordance with City specifications.
- All Drop and Swap and New Poles placed in the Public Right-of-Way shall be black in color using epoxy paint Gloss Black #17038 per Federal Color Standard 595.

Section 6. Future Pole Ownership

Ownership: Small cell antenna non-City owned polls shall remain in ownership of the provider while the antenna system is maintained and in use. In the future event that the small cell antenna system and pole are no longer used or maintained by the provider, or owned and maintained by a new provider (through legal assignment of ownership and maintenance duties) the City reserves the right to take ownership and remove the small cell pole and systems from the City right of way.

In the instance the provider discontinues use of the pole, they shall notify the City of the discontinuance and shall remove the pole and any potential tripping hazards that may remain after the pole is removed. The finished surface of the restoration area shall match the adjoining

existing materials. If the pole was in a sidewalk area, the restoration shall include new replacement sidewalk.

Section 7. Appeal Process

Appeals: Provider applicants applying for small cell antenna system and pole placements in the City right of way who wish to make an appeal from any of the provisions of the City's small cell standards may do so to the City's Department of Public Works. Any such appeal shall state the standard provision from which relief is being sought, provide a basis of reason why the relief from the standard is being sought, and provide supporting information as to why the appeal should be granted. The City's Department of Public Works shall evaluate and decide concerning the appeal in the best interests of the residents of the City of Allentown. In no instance shall a new pole be erected that will exceed 50' feet in height.

Figure 1: Integrated Pole with Pedestal Base

Fully Integrated Poles:

- Pole diameter shall not exceed twenty-four (24”) inches and must be octagonal, fluted, or round in shape dependent on matching adjacent City poles. The twenty-four (24”) inches diameter radio storage section may rise to a maximum height of twenty (20’) feet.
- Total height of the pole shall not exceed thirty-nine (39’) feet, and the height shall match adjacent poles or as allowed by the City appeal process up to a maximum of 50 feet in height.
- Top mount antenna shroud dimensions shall not exceed twenty-four (24”) in diameter by sixty (60”) inches height.
- Poles must be constructed of aluminum or steel. Foundation designs shall comply with the requirements outlined in Section 1 Application requirements.
- Attached luminaires and luminaire arm must match adjacent lighting standard and must contain an LED fixture in accordance with City specifications.
- All Drop and Swap and New Poles placed in the Public Right-of-Way shall be black in color using either black powder coating or painted using epoxy paint Gloss Black #17038 per Federal Color Standard 595.

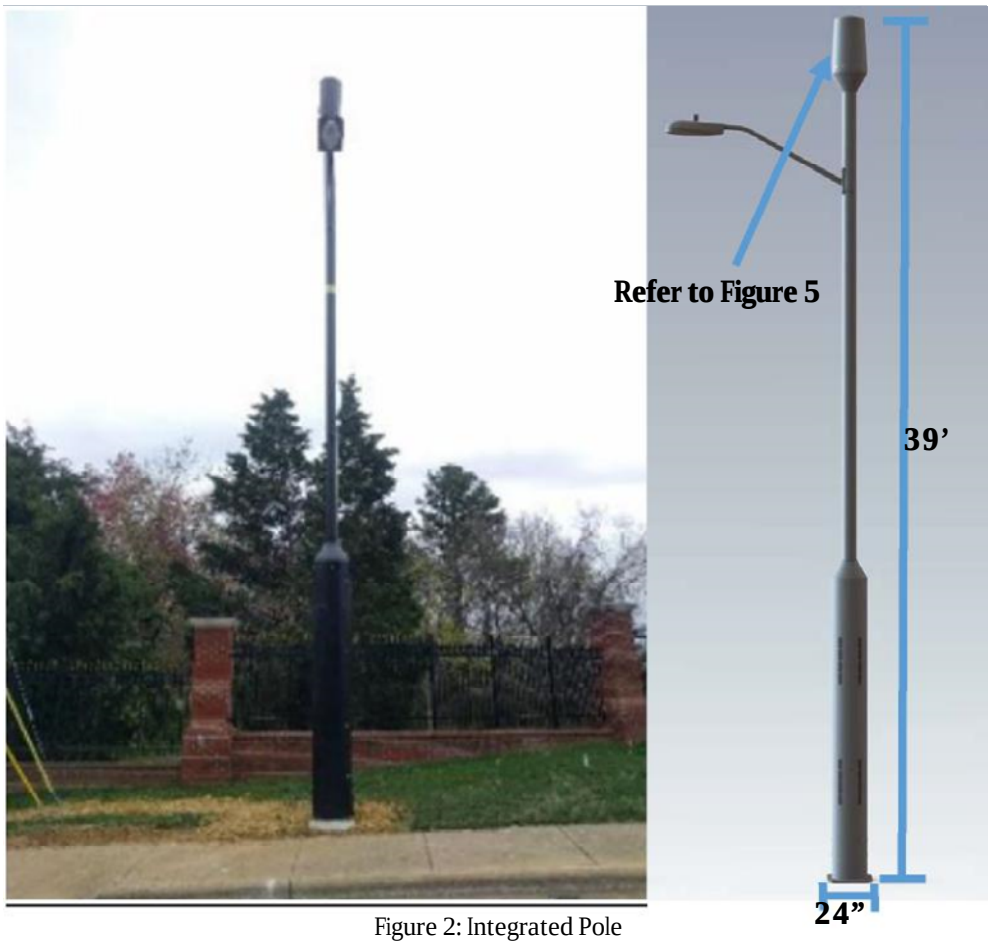


Figure 2: Integrated Pole

Replacement Pole with Attached Radio Shroud and Antenna Shroud:

- May be used only when sidewalk space is limited to less than ten (10') feet from road edge.
- Pole diameter shall not exceed twelve (12") inches and must be octagonal, fluted, or round in shape dependent on matching adjacent City poles.
- Total height of the pole shall not exceed thirty-nine (39') feet, and the height shall match adjacent poles or as allowed by the City appeal process up to a maximum of 50 feet in height.
- Radio Shroud shall be mounted no lower than fifteen (15') feet above ground level (AGL)
- Radio shroud dimensions shall not exceed eleven ($11ft^3$) cubic feet
- City preference is that the shroud be flush mounted to the pole; however, offset mount not to exceed six (6") inches is acceptable. If the offset mounting method is used, the offset must be concealed through the use of shrouding connecting the radio shroud to the pole.
- Top mount antenna shroud dimensions shall not exceed twenty-four (24") in diameter by sixty (60") inches height.
- All cabling must traverse the interior of the pole.
- Poles must be constructed of aluminum or steel. Foundation designs shall comply with the requirements outlined in Section 1 Application requirements.
- Attached luminaires and luminaire arm must match adjacent lighting standard and must contain an LED fixture in accordance with City specifications.
- All Drop and Swap and New Poles placed in the Public Right-of-Way shall be black in color using black powder coating or using epoxy paint Gloss Black #17038 per Federal Color Standard 595.

Figure 3: Replacement Pole with Attached Equipment Shrouded

Concealment Options for Placement on Existing City and non-City owned Poles:

Pole Mounted Radio Shroud:

- Radio Shroud shall be mounted no lower than fifteen (15') feet above ground level (AGL)
- Radio shroud dimensions shall not exceed eleven ($11ft^3$) cubic feet
- City preference is that the shroud be flush mounted to the pole; however, offset mount not to exceed six (6") inches is acceptable. If the offset mounting method is used, the offset must be concealed through the use of shrouding connecting the radio shroud to the pole.
- Cabling entering and exiting the radio shroud must be adjacent to the pole.
- Cabling traversing the pole shall be covered using minimum two (2") inches in diameter U-guard of steel or aluminum construction.
- Color of shroud and mounting equipment shall be made to match the existing pole color. Where the pole is wood, then the shroud and mounting equipment shall be either black powder coated materials or painted using epoxy paint Gloss Black #17038 per Federal Color Standard 595.

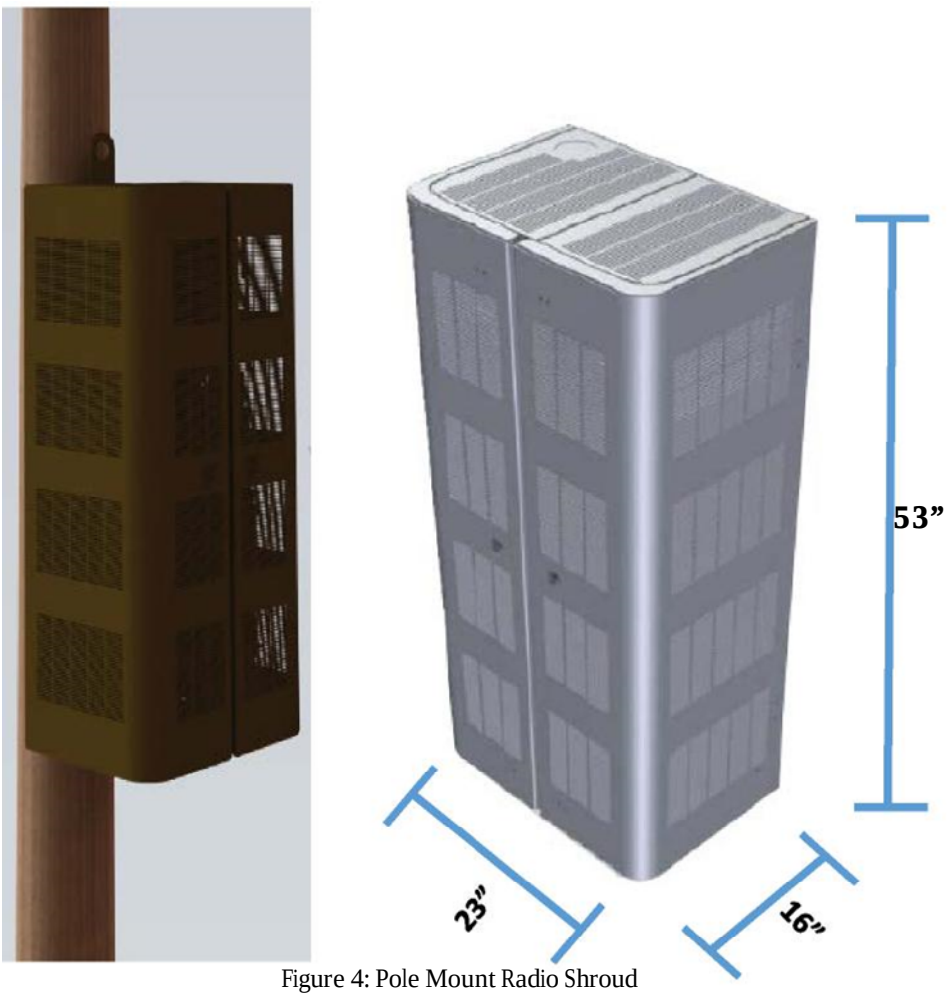


Figure 4: Pole Mount Radio Shroud

Top Mounted Antenna Shroud:

- Antenna shall be mounted at the top of the pole and shall not increase the height of the pole by more than five (5') feet.
- Diameter of the shroud shall not exceed twenty-four (24") inches.
- Mounting hardware shall be concealed by the inclusion of a tapered concealment shroud connecting the base of the radio shroud to the pole.
- Cabling traversing the pole shall be covered using minimum two (2") inches in diameter U-guard of steel or aluminum construction.
- Color of shroud and mounting equipment shall be made to match the existing pole color. Where the pole is wood then the shroud and equipment shall be black powder coated or painted using epoxy paint Gloss Black #17038 per Federal Color Standard 595.

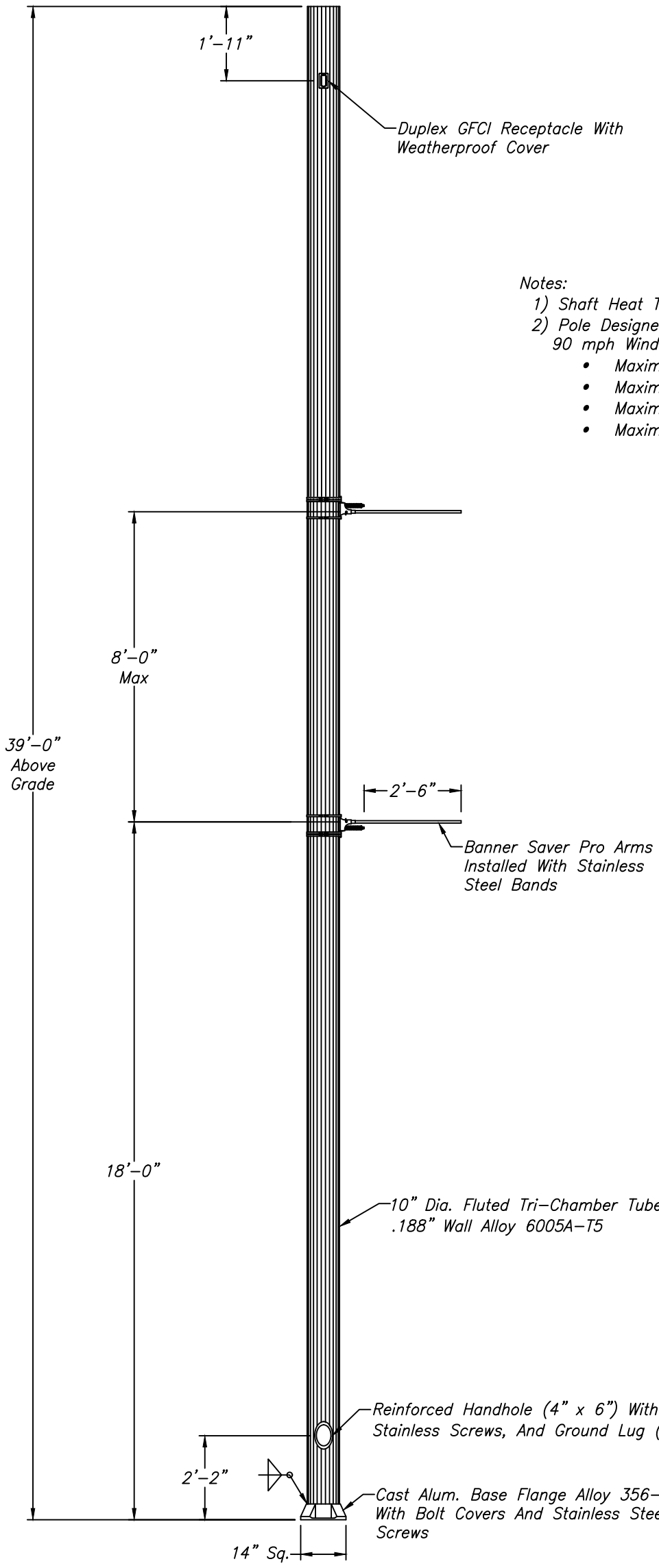
Figure 5: Top Mount Antenna Shroud

October 1, 2020

Preapproved Pole Details

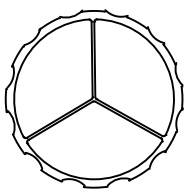
City of Allentown, Department of Public Works

Alternative poles may be used but will be subject to review.



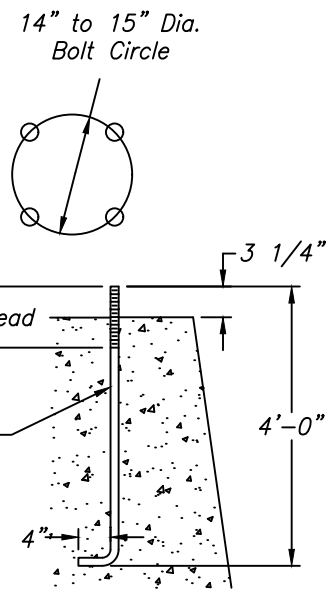
Notes:

1) *Shaft Heat Treated To –T6 Temper After Welding.*
2) *Pole Designed To Meet AASHTO 2013 Edition, Except Breakaway, For A 90 mph Wind Velocity, For The Following Design Conditions:*
   - *Maximum Luminaire Size: 2.48 ft² E.P.A. (ea.) And 63 lbs. (ea.)*
   - *Maximum Antenna Size: 36.6 ft² E.P.A. And 136 lbs.*
   - *Maximum Banner Saver Size: 2'–6" x 8'–0"*
   - *Maximum Cabinet Size: 8.0 ft² E.P.A. And 175 lbs.*



Cross Section Of Flutes

Item No.	"A"
SKTB091020A–006	6'–0"
SKTB091020A–008	8'–0"



SKTB091020A

WARNING: DO NOT INSTALL LIGHTING POLES WITHOUT LUMINAIRES

NO.	REVISIONS	DATE

hapco

Abingdon, Va.

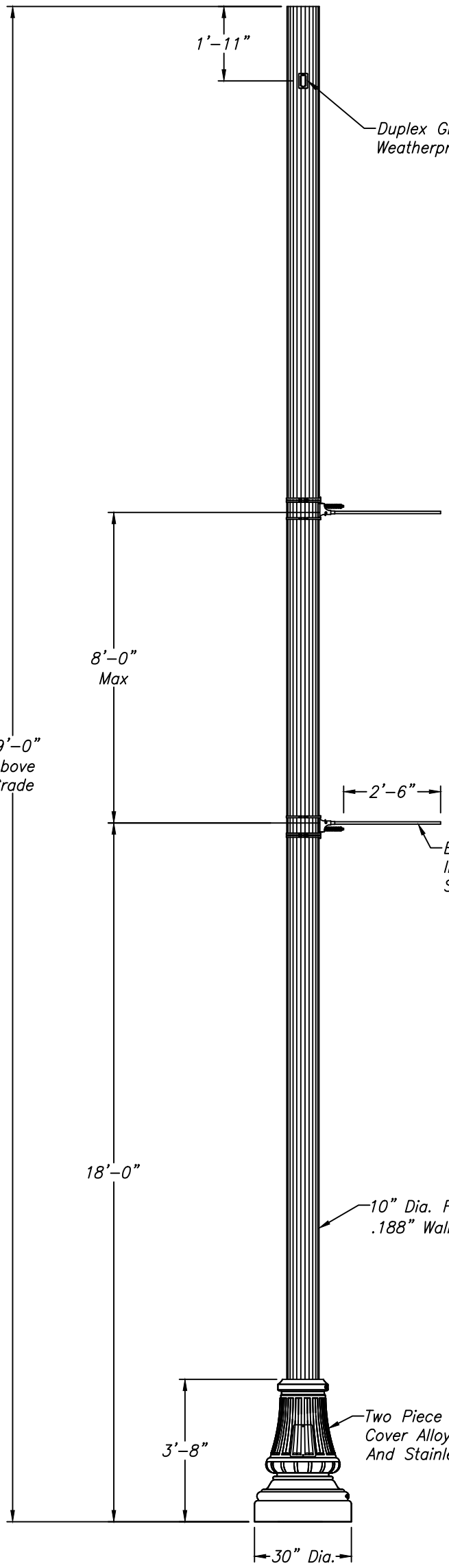
TITLE 39' Smart Trac Pole

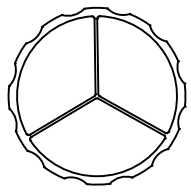
CUSTOMER

SCALE 28 | DATE 09/10/2020

BY TNB | DWG. NO. SKTB091020A

CHK'D





Cross Section Of Flutes

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2) Pole Designed To Meet AASHTO 2013 Edition, Except Breakaway, For A 90 mph Wind Velocity, For The Following Design Conditions:
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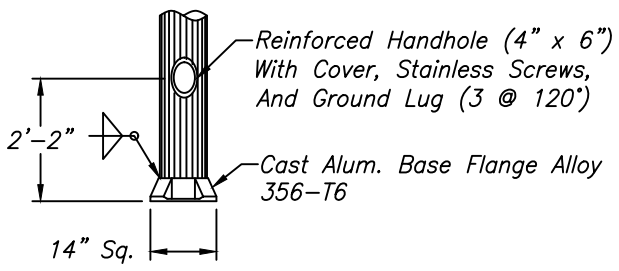
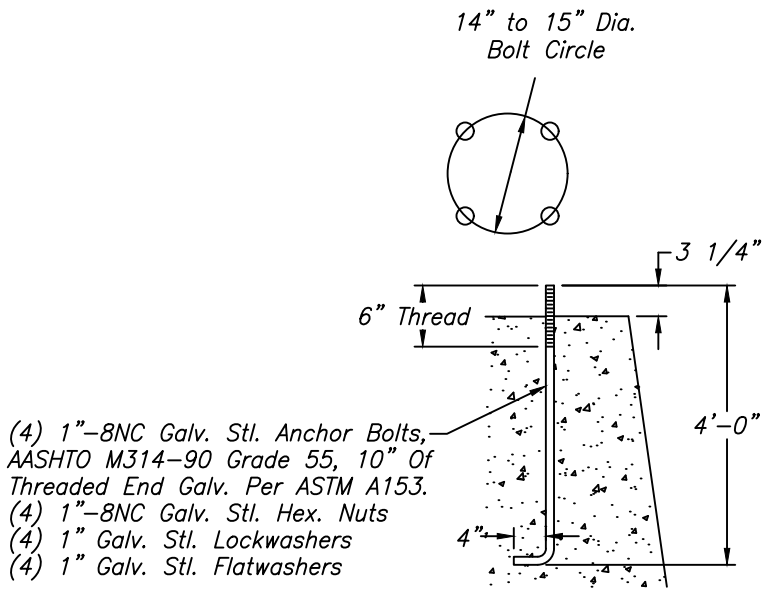
   - Maximum Banner Saver Size: 2'–6" x 8'–0"
   - Maximum Cabinet Size: 8.0 ft² E.P.A. And 175 lbs.

Item No.	"A"
SKTB091020B–006	6'–0"
SKTB091020B–008	8'–0"



Pole Detail With Cover Removed



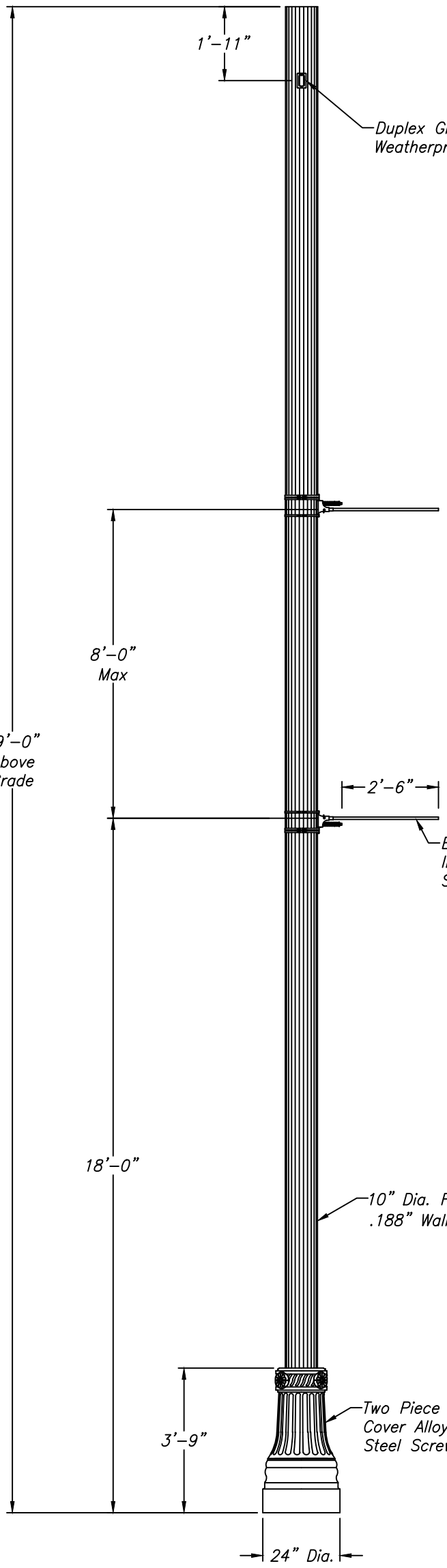
SKTB091020B

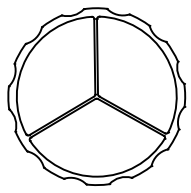
WARNING: DO NOT INSTALL LIGHTING POLES WITHOUT LUMINAIRES

NO.	REVISIONS	DATE

hapco
Abingdon, Va.

TITLE 39' Smart Trac Pole	
CUSTOMER	
SCALE 28	DATE 09/10/2020
BY TNB	DWG. NO. SKTB091020B
CHK'D	





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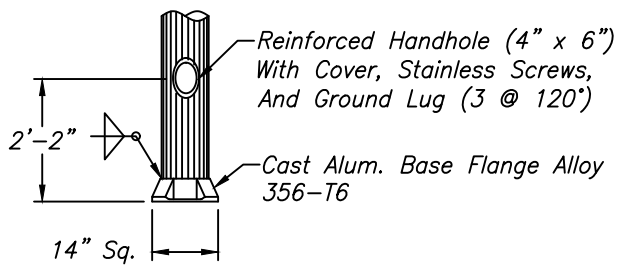
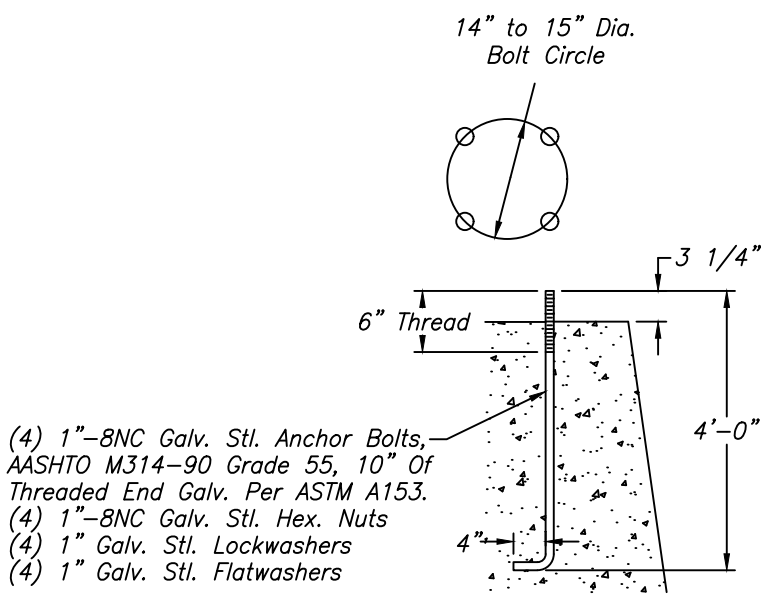
   - Maximum Cabinet Size: 8.0 ft² E.P.A. And 175 lbs.

Item No.	"A"
SKTB091020C–006	6'–0"
SKTB091020C–008	8'–0"



Pole Detail With Cover Removed



SKTB091020C

WARNING: DO NOT INSTALL LIGHTING POLES WITHOUT LUMINAIRES

NO.	REVISIONS	DATE

hapco
Abingdon, Va.

TITLE 39' Smart Trac Pole
CUSTOMER
SCALE 28 | DATE 09/10/2020
BY TNB | DWG. NO. SKTB091020C
CHK'D