

CITY OF HENDERSON  
PUBLIC RIGHT-OF-WAY  
TELECOMMUNICATIONS FACILITY POLICIES AND PROCEDURES MANUAL

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## 1. PURPOSE; DEFINITIONS

- 1.1. Purpose. The purpose of this Manual is to establish policies, procedures and requirements for the design, construction, installation, operation, maintenance, condition, repair, relocation or removal of Communications Facilities and supplement the relevant provisions of the Henderson Municipal Code (HMC) to the fullest extent permitted by Law. The Manual may be updated by the Department of Public Works from time to time at the discretion of the Director of Public Works. The Manual is published on the City's Public Works website ([www.cityofhenderson.com/public-works/home](http://www.cityofhenderson.com/public-works/home)). The public is encouraged to check this website regularly for updates.
- 1.2. Interpretation. The Manual is not intended to, nor may they be interpreted or applied to (a) prohibit or effectively prohibit telecommunications provider's ability to provide telecommunications service; (b) prohibit or effectively prohibit any provider's ability to provide any interstate or intrastate telecommunications service, subject to any competitively neutral and nondiscriminatory rules or regulations; (c) unreasonably discriminate among providers of functionally equivalent services; (d) otherwise authorize the City to preempt or nullify the effect of any applicable federal or Nevada state law. The Manual is not intended to conflict with any provision of the HMC and in the event of any such conflict, the HMC provision prevails.
- 1.3. Business Days. Any reference in this Manual to time of day refers to local time in Nevada. All references to days in this Manual refer to calendar days, unless stated otherwise. Any reference in this Manual to a "business day" refers to a day that is not a Friday, Saturday, Sunday or observed as a holiday by City. If the final date for payment of any amount or performance of any act required by the HMC, the Agreement or this Manual falls on a Friday, Saturday, Sunday or holiday, that payment is required to be made or act is required to be performed on the next business day.
- 1.4. Definitions. Capitalized terms have the meaning ascribed to such terms in the HMC or are defined as follows.

*Affiliate* means each person or entity which falls into one or more of the following categories: (a) each person or entity having, directly or indirectly, a controlling interest in a Licensee; (b) each person or entity in which a Licensee has, directly or indirectly, a controlling interest; or (c) each person or entity that, directly or indirectly, is controlled by a third party which also directly or indirectly controls a Licensee. An Affiliate shall in no event mean any creditor of a Licensee solely by virtue of its status as a creditor and which is not otherwise an Affiliate by reason of owning a controlling interest in, being owned by, or being under common ownership, common management, or common control with, a Licensee.

*Commence Construction or Commence Installation* means the date when first access is made to the City ROW for installation of Communications Facilities, the first connection is physically made to a Municipal Facility for overhead Communications Facilities, when trenching is initiated for underground Communications Facilities, or when foundations are excavated for transmission Communications Facilities, whichever occurs first, if applicable, provided the appropriate permits are issued for such work.

*Commence Operation* means the date, after Construction or Installation Completion, when a Communication Facility is first operated.

*Designated Configuration* means any Communications Facility, pole design or installation configuration which has been pre-approved by the Department of Public Works in accordance with requirements of the Standards Manual and Laws and designated for use by a Licensee.

*Public Improvement* means new or existing roadways and pavements, sidewalks, curbs and gutters, landscaping, street lights, foundations, poles and traffic signal conduits, water mains, sanitary and storm sewers, tunnels, subways, people movers, viaducts, bridges, underpasses, and overpasses, or other public facilities across, along, over or under any street or streets, or other such improvements which are to be used by the general public.

*Requirements* means Laws, Standards and the terms and conditions of a Licensee's Use Agreement, License Authorization and related permits.

*Standards Manual* or *Standards* means this Manual, including Appendix A, together with any other requirements or standards for the design, construction, installation, operation, maintenance, condition, repair, relocation or removal of Communications Facilities and supplements to the provisions of the HMC that are prepared and made public by the Department of Public Works as revised from time to time at the discretion of the Director of Public Works.

## 2. PRE-APPLICATION

- 2.1. Voluntary. Prospective Applicants may, but are not required to, present plans, including proposed configurations for Communications Facilities, pole designs and installations, to City staff on an informal basis in order to ask questions or get clarification on whether plans or a potential request for license authorization are likely to meet all applicable requirements prior to the submission of an application for formal review.
- 2.2. Designated Configuration. Prospective Applicants may request pre-approval of configurations for Communications Facilities, pole designs and installations. Approval of Designated Configuration is not a representation or covenant that the configuration will comply with Requirements as thereafter amended or modified. Applications containing a Designated Configuration will be subject to approval or denial as appropriate under applicable Requirements.
- 2.3. Tolling. Prospective Applicants will be required to sign a written acknowledgment that any submittal for pre-application review or request for a Designated Configuration is not an application subject to any deemed-approved or shot clock requirements under applicable law before submitting it for informal discussion, feedback or designation of a configuration. If a Prospective Applicant does not provide the acknowledgment, then any submittal will be treated as an application subject to approval or denial as appropriate.

## 3. TYPES OF APPLICATION REQUESTS

- 3.1. Use Agreement. No person is eligible to apply for a license to construct, install operate Communications Facilities in, over, or under any Right-of-Way or on municipal property without first requesting and obtaining a Use Agreement issued by the City. When a request is certified as complete by the Department of Public Works, and a Use Agreement has been executed and delivered by Applicant, the Use Agreement will be presented to the City Manager for approval or denial. If the request is approved, the Department of Public Works will issue a Use Agreement. If the request is denied, the Department of Public Works will notify the Applicant in writing.

- 3.2. License Authorizations. No person shall construct, install operate or maintain a Communications Facility in, over, or under any Right-of-Way or on municipal property without first requesting and obtaining a License Authorization executed by the City. A License Authorization is required for each Communications Facility.
- 3.3. Modification of Facilities. No person shall substantially modify a Communications Facility located in, over, or under any the Right-of-Way or on municipal property without first requesting and obtaining a permit executed by the City.
- 3.4. Removal of Facilities. No person shall permanently remove a Communications Facility from the Right-of-Way or municipal property without first requesting and obtaining a permit executed by the City.

#### 4. APPLICATION REQUIREMENTS

##### 4.1. Use Agreement.

An Applicant must make a written request to the City Manager for a Use Agreement using the application form available at the City of Henderson, Department of Public Works. An Applicant must return a signed copy of the City's form of Use Agreement within seven (7) days. Failure to return the signed agreement will cause the request to be deemed incomplete. An Applicant shall pay to the City the applicable Use Agreement application fee in accordance with the HMC. In addition to other information required by the application for a Use Agreement, an Applicant will provide:

- (1) A copy of all certificates or letters of registration issued by the PUCN pertaining to Applicant's activity in the Right-of-Way.
- (2) A copy of all City business licenses pertaining to Applicant's activity in the Right-of-Way.
- (3) A statement that Applicant will have sole ownership and control of the Facilities and, if not, a list of Persons other than Applicant known at the time of the request that will own or control any portion of the Facilities.

- 4.2. License Authorizations. In addition to other information required by the application for a License Authorization, a Licensee must comply with all conditions set forth in the HMC.

#### 5. AUTHORIZATION CONDITIONS

- 5.1. Use Agreements. A Use Agreement will incorporate all applicable provisions of the HMC and this Manual, including such other conditions as may be required by the City to the fullest extent permitted by Law.
- 5.2. License Authorizations. Any executed License Authorization shall incorporate all applicable provisions of the HMC, all provisions and conditions of the Use Agreement and this Manual, including such other conditions as may be required by the City to the fullest extent permitted by Law.

#### 6. INSTALLATION AND CONSTRUCTION

- 6.1. Electrical Power. Licensee is responsible for establishing electrical power services for all Communications Facilities and for the payment of all electrical utility charges to the applicable electric service provider based upon applicable tariffs. Licensee shall not electrically connect its

Communications Facilities to, nor draw any electric power from, any Municipal Facility, Traffic Signal Pole or City-owned facility. Licensee must obtain City's approval of the location and installation of any facilities required for electrical power to Communications Facilities and use commercially reasonable efforts to minimize disruption to the public and to the ROW.

- 6.2. Installation on Municipal Facilities. If City verifies that the design, and the Communications Facilities proposed to be used in the design submitted by Licensee comply with a Designated Configuration, if applicable, and Requirements, City will identify those Municipal Facilities on which Licensee may install its Communications Facilities. Decorative Streetlight Poles may not be used for the installation of Communications Facilities without prior written approval by the City Manager or City Manager's designee, and review by the homeowner's association, if any such Decorative Streetlight Pole is located within a community regulated by a homeowner's association and such installation shall conform to camouflaging such that a Communications Facility is located in a camouflaged pedestal at the base of the Decorative Streetlight and camouflaged antenna mounted on top in the Decorative Streetlight. Licensee must also submit the proposed Facilities and installation configuration to the homeowner's association for review and provide any comments to City.

6.2.1. Before installing a Communications Facility on a Municipal Facility, Licensee must cause a Nevada-licensed engineer to perform a structural analysis of the Municipal Facility and provide to City the written results of that structural analysis (stamped by that engineer), including "load" (structural) calculations. Notwithstanding the foregoing sentence, no Communications Facility may be installed on a Municipal Facility that City determines is structurally inadequate to accommodate the Communications Facility. If the City determines that Licensee has selected a Municipal Facility that is structurally inadequate to accommodate Communications Facility or in accordance with Subsection 6.8.8, Licensee elects to replace the Municipal Facility with one that is capable of housing the Communications Facility inside the Municipal Facility, Licensee may at its sole cost and expense replace the Municipal Facility with one that (a) is structurally adequate to accommodate the Communications Facility, following the procedures set forth in the first sentence of Subsection 6.2.1, (b) is installed by a Nevada-licensed contractor, and (c) is consistent with surrounding Municipal Facilities and acceptable to and approved by City.

6.2.2. Any City authorization for Licensee to replace a Municipal Facility under Subsection 6.2.1 and/or under Subsection 6.8.8 is subject to the conditions set forth in this Subsection. Licensee must guarantee, regardless of City's authorization and acceptance, all work Licensee and its contractors/subcontractors perform and all Municipal Facilities Licensee furnishes against defects in materials and workmanship for a period of two (2) years following City's acceptance of the Municipal Facility ("Initial Warranty Period"). Licensee must also guarantee any corrective work and replaced or repaired Municipal Facility against defects for an additional two-year period following completion of the work ("Subsequent Warranty Period" and, together with the Initial Warranty Period, the "Warranty Period"). City may, at its option and Licensee's sole cost, either itself remedy or require Licensee to remedy any defect in materials or workmanship provided by Licensee or its contractors/subcontractors that develop during the Warranty Period. The option and obligation to repair extend to any damage to facilities or work caused by the particular defect or repair of the defect. Licensee must remedy the defect(s) to City's satisfaction. Should City choose to remedy a defect, Licensee must pay City all amounts it incurred

within sixty (60) days after receiving an invoice from City. Licensee also agrees to sign and deliver a bill of sale in a form acceptable to City that conveys all of Licensee's rights, title, and interest to City in the Municipal Facility Licensee replaced and certifies that the Municipal Facility is free of all liens and other encumbrances.

- 6.2.3. A denial by City of an application for the installation of a Communications Facility on Municipal Facilities will not be based upon the size, quantity, shape, color, weight, configuration, or other physical properties of Licensee's Communications Facility if the Communications Facility proposed for such application conforms to a Designated Configurations and complies with Requirements, except that (a) Communications Facilities, including any pre-approved Facilities, must conform as closely as practicable with the design and color of the Municipal Facility, and (b) this Subsection shall not apply to Decorative Streetlight Poles.
- 6.2.4. In the event that routine streetlight bulb maintenance or graffiti abatement must be performed ten (10) feet or higher above ground level on a Municipal Facility on which Licensee has installed Communications Facilities, City will notify Licensee and Licensee will perform such maintenance at Licensee's sole expense. In such case, City will contact Licensee at the contact telephone number referenced in the Use Agreement and Licensee will promptly schedule its contractor to perform the required streetlight bulb maintenance or graffiti abatement. If Licensee fails to respond within seven (7) days from such contact or provides express written authorization to the City, City may deactivate said Communication Facility(ies) to perform or contract with a third-party to perform the necessary streetlight bulb maintenance or graffiti abatement at City's expense and City will have no liability to Licensee for any loss to Licensee arising from such work.
- 6.2.5. In the event of an emergency or to protect the public health or safety, prior to City accessing or performing any work on a Municipal Facility on which Licensee has installed Communications Facilities, City may require Licensee to immediately deactivate such Communications Facilities if any City employee or agent must move closer to the Communications Facilities than the recommended one (1) foot minimum distance or such other distance, as posted by Licensee on a particular Communications Facility. In such case, City will contact Licensee at the contact telephone number referenced in the Use Agreement to request immediate deactivation. If Licensee fails to respond in a manner timely to the emergency, City may deactivate said Communications Facilities to perform necessary work and City will have no liability to Licensee arising out of the performance of such work.
- 6.3. Installation on Third Party Structures. Licensee may seek permission from the owner of a Third-Party Structure to install its Communications Facilities on or in that structure. Licensee must submit a proposed design showing any proposed installation of Communications Facilities and showing the Third-Party Structure facilities Licensee proposes to use. Licensee must otherwise follow the procedures set forth in this Manual, HMC Title 19 and other applicable Requirements. Subject to Licensee obtaining the written permission of the owner(s) of the affected Third-Party Structure(s), to Licensee furnishing to City acceptable documentation that such permission has been obtained, and to Licensee complying with Requirements, including without limitation Section 4, City will provide Licensee the authorization to use the ROW as set out in the Use Agreement and this Manual, including the authority to enter upon the ROW and to install, operate, maintain, manage, and remove such Communications Facilities in a Licensed Location in or on such Third-Party Structures. If City revokes a third-party owner's right to be in the ROW or requires the Third-Party

Structure to be removed or relocated, Licensee will be required to remove and relocate its Communications Facilities at no cost to City and within the timeframe as prescribed for that removal or relocation such that no delays are caused by the combined removal. A denial of an application by City for the installation of Communications Facilities on Third-Party Structures, or installation of a Licensee Pole, in the ROW shall not be based upon the size, quantity, shape, color, weight, configuration, or other physical properties of Licensee's Communications Facilities if the Communications Facilities proposed for such application conforms to a Designated Configuration and complies with Requirements, except that the Communications Facilities must conform as closely as practicable with the design, dimensions and color of existing poles and equipment in the vicinity of Licensee's Communications Facilities and/or pole location.

- 6.4. Installation on Suspension Cable Between Poles. If no existing pole, such as a Municipal Facility or a Third-Party Structure, is functionally suitable for the direct installation of Wireless Communications Facilities, or if City determines a City-owned building that Licensee asks to use is not available or suitable for use, Licensee (a) may, with the permission of the owner of the Third-Party Structures on which Licensee suspension cable is attached, use suspension cable lawfully in the ROW that is owned by Licensee or its Affiliate to attach Licensee's Facilities to that suspension cable or (b) may seek permission from the owner of suspension cable lawfully in the ROW and from the owner of the Third-Party Structures on which that cable is attached to install Licensee's Facilities on that cable.

6.4.1. Licensee shall submit to the City a proposed design showing any proposed installation of the Facilities and showing the suspension cable and Third-Party Structures Licensee proposes to use and shall otherwise follow the procedures set forth in this Manual, HMC Title 19 and other applicable Requirements. Subject to Licensee obtaining the written permission of the owner(s) of the affected suspension cable and Third-Party Structures, to Licensee furnishing to City acceptable documentation that such permission has been obtained, and to Licensee's compliance with the terms and conditions of Requirements and the Use Agreement, including without limitation Section 5, City hereby provides Licensee the authorization to use the ROW as set out in Use Agreement and this Manual, including the authority to enter upon the ROW and to install, operate, maintain, control, and remove such Facilities in a Licensed Location on such suspension cable.

6.4.2. Licensee acknowledges that if City revokes the right of an owner of the Third-Party Structure or suspension cable to be in the ROW or requires the Third-Party Structure or suspension cable to be removed or relocated, Licensee will be required to remove and relocate its Wireless Communications Facilities at no cost to City and within the timeframe as prescribed for that removal or relocation such that no delays are caused by the combined removal.

- 6.5. Use of City-Owned Buildings Outside ROW. In the event that no Municipal Facilities, Third-Party Structure, or suspension cable (in the case of Wireless Communications Facilities) is functionally suitable or installation of the Facilities underground is physically possible, and if there is a City-owned building outside the ROW in the area of the requested Licensed Location that is available (as solely determined by City) and capable of supporting the Facilities (as demonstrated through documentation provided by Licensee), Licensee may request use of the City-owned building instead of installing a new Licensee Pole. Licensee must submit to the City a proposed design showing any proposed installation of Communications Facilities and showing the City-owned building Licensee proposes to use and shall otherwise follow the procedures in this Manual, HMC Title 19 and other



applicable Requirements. City, in its sole discretion, may deny Licensee's request. The installation, if any, of Communications Facilities on a City-owned building, will be subject to a duly authorized contract executed between Licensee and City, Licensee's payment of compensation in accordance with that contract, Licensee's compliance with applicable Requirements.

- 6.6. Installation of Licensee Pole and Communications Facilities on Licensee Poles. Licensee acknowledges there is a preference to install Communications Facilities underground (eg – in conduit in the case of Wireline Communications Facilities) or on an existing structure to minimize the visual impact associated with the proliferation and clustering of poles. In the event that no Municipal Facilities or Third-Party Structure is technically feasible for use, installation of Facilities underground would render the Facilities not technically feasible for use, installation on Licensee - owned suspension cable is not technically feasible (in the case of Wireless Communications Facilities) for use, or City does not approve such an installation(s), Licensee may, at its sole cost and expense, install a Licensee Pole; provided, however that Licensee follows the procedures set forth in this Manual and the other applicable provisions of the Use Agreement and the HMC and obtains all permits, consents, and approvals required for initial installation of the proposed Licensee Pole and any Communications Facilities installed on a Licensee Pole and thereafter any modification of a Licensee Pole and additional Communications Facilities installed on an approved Licensee Pole.

6.6.1. Notwithstanding the foregoing paragraph, Licensee may install a Licensee Pole in the ROW only if (a) Licensee represents in writing and demonstrates to City that the failure to approve the Licensee Pole in the ROW would prohibit or have the effect of prohibiting the provision of Commercial Mobile Service, Commercial Mobile Radio Service, and/or Telecommunications Service, and (b) the City Manager or City Manager's designee approves such additional Licensee Pole installation(s) in writing on that basis.

6.6.2. Licensee shall provide nondiscriminatory, fair, and reasonable access to all Licensee Poles in accordance with the provisions at 47 U.S.C. § 224 and 47 C.F.R. § 1.1401 et seq. and any statute or regulation adopted by the state of Nevada implementing the state's regulatory authority over pole attachments, shall follow the procedures set forth in this Manual and the other applicable provisions of the Use Agreement and the HMC, and shall obtain all permits, consents, and approvals required for the initial installation or the modification of any proposed third-party Communications Facilities installed on a Licensee Pole in a Licensed Location.

6.6.3. All above-ground Communications Facilities and Licensee Poles must conform as closely as practicable to the design and color of poles or structures existing in the vicinity of such Licensee's above-ground Communications Facilities or Licensee Pole(s). Licensee is responsible for all maintenance, repair and liability for all Communications Facilities and Licensee Poles.

- 6.7. Camouflage; Noise Minimization. Licensee shall use best efforts to camouflage, conceal, or otherwise minimize the visual impact of Licensee Poles and of above-ground Communications Facilities whether installed on a Municipal Facility, Third-Party Structure, or Licensee Pole by employing screening, concealment, camouflage, or other stealth techniques so that the Communications Facilities and Licensee Poles are architecturally integrated with existing buildings, structures and landscaping, including height, color, style, massing, placement, design and shape, and therefore do not stand out when viewed with the naked eye. Licensee must comply with all

noise control Laws, including those in HMC Chapter 8.84, and any Communications Facilities that generates over forty-five (45) decibels from three (3) feet away (as measured at the height of the Communications Facilities) that is also located within ten (10) feet of a property line on which a residence, daycare, public library, institution of learning, court in session, nursing home, retirement home, hospital, rehabilitation facility, or hospice facility is located is generally prohibited.

- 6.8. Construction. All Company construction hereunder, including the installation of Facilities and Licensee Poles, shall be performed by a State of Nevada licensed contractor. Licensee shall comply with all applicable federal, State, and City technical specifications and requirements and all applicable Laws related to the construction, installation, operation, maintenance, management, and control of Licensee's Facilities and Licensee Poles installed in the ROW. Licensee shall not install, maintain, or operate any Licensee Pole or Facilities in the ROW, or install, maintain, or operate any Facilities in or on a Municipal Facility, without first receiving a License Authorization for each location and in accordance with the Requirements. Licensee is solely responsible for ensuring compliance with applicable Laws, including the Americans with Disabilities Act and chapter 455 of the NRS and NAC, and for maintaining sight visibility zones (SVZs) as identified in HMC Title 19. Licensee shall cause all construction work in the ROW to be performed in such a manner as to ensure a minimum of delay or inconvenience to City and the public and shall prosecute such work diligently until completion.

6.8.1. Coordination. At City's request, Licensee will provide City a construction schedule, coordinate its construction activities with City, and correct any deficiencies identified by City in connection with the construction work. In no event shall any work that requires a lane or street closure be performed from 7:00 a.m. to 9:00 a.m. or from 4:00 p.m. to 6:00 p.m. except for emergency repairs and only if Licensee first obtains the written permission of the City's Director of Public Works for such emergency repairs. No work within the ROW may be performed until after Licensee obtains a City-approved traffic control plan. Licensee, its contractors and subcontractors, and all work shall comply with the terms of that traffic control plan.

6.8.2. Commencement. Licensee must Commence Installation of its Facilities or Licensee Pole approved by City through a License Authorization no later than six (6) months after the date Licensee obtains all required permits and approvals to install the Facilities or Licensee Pole in the Licensed Location. Licensee must Commence Operation no later than twelve (12) months after obtaining said permits and approvals. Failure to Commence Operation within twelve (12) months from the date Licensee obtains all required permits and approvals to install the Facilities or Licensee Pole in the Licensed Location may be considered a default of a material covenant or term of the Use Agreement.

6.8.3. Other Required Permits. Installation of Communications Facilities and Licensee Poles requires various other permits from City. Licensee must provide all of the information specified in the application materials for the appropriate permits, pay any standard and customary application and permit fees and reference the CMTS # of the Use Agreement on the application materials and communications for such permits. City will promptly respond to Licensee's application(s) and communications and will otherwise cooperate with Licensee in facilitating the deployment, maintenance or modification of the Communications Facilities in a reasonable and timely manner in accordance with Requirements. Permit conditions may include, without limitation, (a) approval by City of traffic control plans prepared by Licensee for Licensee's work in City ROW; (b) approval

by NDOT of traffic control plans prepared by Licensee for Licensee's work within ROW controlled by NDOT; (c) adherence to time restrictions for work in streets as specified by City and/or NDOT; and (d) standard and specialized conditions in City-issued permits, including restricting lane and street closures to certain hours. Licensee and Licensee's contractor and any subcontractors are required to comply with all permit conditions and have a copy of all permits in their physical possession prior to commencing and while performing any physical work in the ROW.

6.8.4.Location and Drawings. The proposed locations of Licensee's planned initial installation of Communications Facilities and any proposed Licensee Poles is to be provided to City in the form of a map or on an annotated aerial photograph, either of which must be in a format acceptable to City, promptly after Licensee's field review of available Municipal Facilities and prior to deployment of any Facilities or Licensee Poles. For Facilities which are designed to include more than one conduit, the maps and drawings must show the overall size, material and configuration of the duct bank. Prior to Commencement of Installation of the Communications Facilities or any Licensee Pole in the ROW or upon or within any Municipal Facility, Licensee shall obtain written approval from the authorized representative of City for such installation in the ROW or in or on such Municipal Facility from City pursuant to and in accordance with the Requirements. City may approve or disapprove a location and installation, based upon reasonable regulatory factors consistent with HMC Title 19 and other applicable provisions of the HMC, including but not limited to the ability of the Municipal Facility to structurally support the Facilities, the location of other present or future communication or other utility facilities, efficient use of scarce physical space to avoid premature exhaustion, potential interference with other utility facilities and services, the public safety and other critical services. To the extent permitted by Law, upon the completion of each installation or modification, Licensee promptly shall furnish to City in a hard copy and electronic format acceptable to City a current and cumulative (a) list of Licensee Poles, Facilities installed on Licensee Poles, Third-Party Structures in the ROW on which Facilities are installed, Municipal Facilities in or on which Facilities are installed, suspension cable on which Facilities are installed, and Municipal Facilities adjacent to the ROW on which Facilities are installed, Facilities installed in the ROW, and the License Authorization number and Licensee's alphanumeric designation for the Licensed Location associated with each of the foregoing; and (b) an as-built drawing or annotated aerial photograph that depicts the exact location, including applicable depth, of each of the foregoing Licensee Poles, Communications Facilities, Third-Party Structures, and Municipal Facilities.

6.8.5.Height and Use of Median Restrictions. No portion of Licensee's Facilities shall extend higher than thirty-six (36) inches above the height of any above-ground structure on which those Facilities are installed. In the case of a new installation or modification by Licensee, the overall height of a Licensee Pole together with the Facilities installed thereon shall not exceed thirty-five (35) feet above grade unless otherwise approved by City through the HMC Title 19 process. No Licensee may place any Facilities in, over or within the median portion of the ROW without first obtaining written authorization of the Director of Public Works under a License Authorization.

6.8.6.ROW Location; Underground Installation. Any Facility that is not installed on a Licensee Pole, Municipal Facility, suspension cable, or Third Party Structure must be installed

below-ground if located in the ROW as further addressed in Subsection 6.8.8. Licensee Poles and underground Facilities shall be placed in accordance with any specifications used by the City regarding the location of Facilities. Licensee Poles and Facilities shall not impede pedestrian or vehicular traffic in the Right-of-Way. If a Licensee Pole or Facilities are installed in a location that is not in accordance with the plans approved by City or is installed in a location approved by City but City determines that the approved location impedes pedestrian or vehicular traffic or does not comply – or otherwise renders the Right-of-Way non-compliant – with applicable Laws, including the Americans with Disabilities Act, then Licensee will be required to remove the Facilities or Licensee Pole and, as applicable, restore the ROW to its before condition: (a) within thirty (30) days after City notifies Licensee of the noncompliance; or (b) within twenty-four (24) hours after receiving oral or written notice from City if City determines the Facilities or Licensee Pole might create a safety issue. If Licensee does not remove the Licensee Pole or Facilities by the deadline identified in City's notice, Licensee shall be subject to a one thousand dollar (\$1,000) per day penalty until such Licensee Pole or Facilities is removed and the ROW restored, regardless of whether or not Licensee's contractor, subcontractor, or vendor installed the Licensee Pole or Facilities, City approved the location of the Licensee Pole or Facilities, or City has not approved a new location for the Licensee Pole or Facilities.

6.8.7. Detection of Facilities. In each underground Facility that cannot be detected from or above the surface of the ground by means of either the material incorporated into the underground Facility or the Facilities within the underground Facility, a permanent device must be installed by Licensee that provides a means of detecting location and depth of each underground Facility through the use of a noninvasive method from or above the surface of the ground. Such a device includes, without limitation, an Electronic Marker, Marker, or Tracer Wire. All conduit runs shall have Tracer Wire installed in the conduit prior to restoration or paving. If Licensee uses a device that physically designates the location of an underground Facility and such device is not located along the entire length of the underground Facility but rather is placed intermittently, Licensee shall use a sufficient number of permanent devices, place them at the termini and middle of the subsurface Facility, place them immediately adjacent to or inside the subsurface Facility, and space each device no more than two hundred fifty (250) feet apart along the length and at all boxes, junctions, bends and angle points.

6.8.8. Street Furniture and Cabinets. Except as otherwise required by Requirements, above-ground street furniture and cabinets for Facilities located in the ROW are generally prohibited and that any such installation of above-ground street furniture or cabinets for Facilities will be required to be placed in an easement on private property adjacent the ROW and will require additional approvals and/or permitting under the HMC and other applicable Laws. Notwithstanding anything in the foregoing and with respect to Facilities that Licensee would typically install in above-ground street furniture or cabinets, Licensee may instead (a) house, install, and camouflage such Facilities inside the Municipal Facility, Third-Party Structure, or Licensee Pole on which Licensee is authorized to install associated Facilities pursuant to a License Authorization, or (b) install such Facilities in a below-ground vault within the ROW, provided that under either (a) or (b) Licensee obtains City's approval of the particular installation through a License Authorization, follows the applicable procedures, and pays all costs associated with such installation, including without limitation replacing the Municipal Facility, Third-Party Structure, or Licensee Pole

and any relocation costs of any public improvements and public utilities facilities to accommodate such installation. Licensee is responsible for complying with City's then current Requirements regarding such installations as well as any future Requirements that may be adopted by City respecting such installations. In no instance shall the installation of any of Licensee's Facilities or any appurtenant structures block pedestrian walkways in ROW, result in violation of the Americans with Disabilities Act, violate any clearance requirements, or obstruct sight visibility as defined by City ordinance or Regional Transportation Commission of Southern Nevada standard drawings.

6.8.9. Visual Impact of Cross-Arm Installations. In order to minimize the visual impact of Facilities on a Third-Party Structure, in any instance where a cross-arm is set on such a structure as the locus for the installation of Facilities, Licensee is required to use best efforts to work with the applicable third parties to ensure that such Facilities shall be installed at a point on the cross-arm that is acceptable to City. If, however, the third party does not accommodate City's request, Licensee shall be allowed to install the Facilities in a fashion required by the third party and consistent with the approval received from City under HMC Title 19.

## 7. RELOCATION AND REMOVAL

### 7.1. Relocation and Displacement of Facilities or Licensee Poles.

7.1.1. Licensee must, at City's direction and upon sixty (60) days' prior written notice (or with less notice in event of an emergency), relocate Communications Facilities or Licensee Poles at Licensee's sole cost and expense whenever City determines that the relocation is necessary to accommodate the construction, modification, completion, repair, relocation, or maintenance of a City or other public project or to accommodate any other public work that City determines necessary.

7.1.2. Licensee must, at City's direction and upon thirty (30) days' prior written notice (or with shorter notice in event of an emergency), relocate Communications Facilities or Licensee Poles at Licensee's sole cost and expense whenever City determines that the relocation is necessary to avoid or prevent the Communications Facilities or Licensee Poles from interfering with or adversely affecting proper operation, modification, repair, relocation, or maintenance of Municipal Facilities, traffic signals, communications, or other City-owned facilities.

7.1.3. Licensee must, at City's direction and immediately prior written or oral notice, relocate Communications Facilities or Licensee Poles at Licensee's sole cost and expense whenever City reasonably determines that the relocation is necessary to protect or preserve the public health or safety.

7.1.4. Licensee must prosecute relocation work diligently until completion, and City will use reasonable efforts to afford Licensee a reasonably equivalent alternate location if one is available. Before relocating the Communications Facility or Licensee Pole to an alternate location in the ROW, Licensee must submit to City a new application for a Licensed Location in accordance with Requirements.

7.1.5. If Licensee does not relocate any Communications Facilities or Licensee Poles as requested by City within a reasonable time under the circumstances in accordance with Section 7, City

will be entitled to remove or relocate the Communications Facilities or Licensee Poles (without liability to Licensee or its customers or Qualified Service Providers), to restore the ROW and any Municipal Facilities.

- 7.1.6. To the extent City has actual knowledge thereof, City will attempt promptly to inform Licensee of the displacement or removal of any Municipal Facility on which any Communications Facility is located. If the Municipal Facility is damaged or downed for any reason, and as a result is not able to safely hold the Communications Facilities, City will have no obligation to repair or replace such Municipal Facility for the use of Licensee or the installation of its Communications Facilities. Licensee shall bear all risk of loss as a result of damaged or downed Municipal Facilities pursuant to the Use Agreement and may choose to replace such Municipal Facilities in accordance with the applicable provisions in under this Manual and the Use Agreement.
- 7.1.7. Within ten (10) days after completing a relocation, Licensee must send City written notice, confirming that Licensee has removed and, as applicable, relocated the Communications Facilities or Licensee Pole. After Licensee or City has removed the Communications Facilities or Licensee Pole and receives Licensee's written notice, City will issue a notice terminating the License Authorization for the removed Communications Facilities or Licensee Pole.
- 7.2. Relocations at Licensee's Request. In the event Licensee desires to relocate any Communications Facility from one Municipal Facility to another, Licensee may so advise City by submitting an application to modify the applicable License Authorization. City will use reasonable efforts to accommodate Licensee by making another reasonably equivalent Municipal Facility(ies) available for use, at no cost to City, in accordance with and subject to Requirements.
- 7.3. Change in Facilities or Licensee Poles. If Licensee proposes to modify a Facility or Licensee Pole that is different in any material way (e.g., increase in weight, increase in a dimension, increase in the number of cables or conduit, or change to external appearance) from the Facility or Company Pole approved in a License Authorization, Licensee shall submit an application to modify the License Authorization, following the procedures set forth hereunder. In addition to any other submittal requirements, Licensee shall provide "load" (structural) calculations stamped and signed by a Nevada-licensed engineer, for all Municipal Facilities on which it intends to install its Facilities in the ROW, notwithstanding any original installation or by way of Facility type changes.
- 7.4. Removal of Facilities and Licensee Poles. Licensee is responsible for the prompt, safe and careful removal of all of its Facilities and Licensee Poles from the ROW and restoration of the ROW and Municipal Facilities to their original condition, reasonable wear and tear excepted, (a) before the expiration of the Use Agreement, (b) before Licensee's termination of a License Authorization becomes effective, (c) within sixty (60) days' after City's written notice terminating the Use Agreement, or (d) within sixty (60) days' after City's written notice terminating a License Authorization, as applicable. If Licensee does not complete the removal of the Communications Facilities and Licensee Poles and the restoration activities before the removal deadline, then City, upon written notice to Licensee, will have the right at City's sole election, but not the obligation, to remove Licensee's Facilities from all Municipal Facilities (without liability to Licensee or its customers or Qualified Service Providers), to remove Licensee Poles (without liability to Licensee or its customers or Qualified Service Providers), to restore the ROW and Municipal Facilities.

- 7.5. Relocation and Removal Charges. Licensee will be responsible for the actual costs and expenses of any City work under this Section 7, including, without limitation, including, without limitation, reasonable administrative costs and the cost of storage of Licensee's property (collectively, "Relocation and Removal Charges"). Licensee will then be required to pay to City the Relocation and Removal Charges within thirty (30) days after receiving a written invoice from City. Upon City's receipt of payment of the invoice, City shall promptly make available to Licensee the Communications Facilities and Licensee Poles removed by City pursuant to this Subsection at no liability or cost to City. If City does not receive payment of the invoice within such 30-day period, or if City does not elect to remove the Communications Facilities or Licensee Poles and restore the ROW and Municipal Facilities after Licensee's failure to do so after the applicable period expires, or if Licensee does not claim the Communications Facilities and Licensee Poles within thirty (30) days after the foregoing having been made available by City after Licensee's payment of the Relocation and Removal Charges, any Communications Facilities and Licensee Poles remaining on or about the ROW, Municipal Facilities, or stored by City after City's removal thereof may, at City's option, be deemed abandoned property and City may dispose of such Facilities and Licensee Poles in any manner allowed by Law. Alternatively, City may elect to take title to the abandoned Communications Facilities and Licensee Poles, in which case Licensee must submit to City an instrument satisfactory to City transferring to City the ownership of the Communications Facilities and Licensee Poles.

## 8. GENERAL

- 8.1. Compliance; No Interference. Licensee, in the performance and exercise of its rights and obligations under the Requirements, must comply with all such Requirements and not interfere in any manner with the existence and operation of any and all public and private rights-of-way, sanitary sewers, water mains, storm drains, gas mains, poles, aerial and underground electrical and telephone wires, traffic signals, communication facilities, cable television, location monitoring services, public safety and other equipment and utility or municipal property, without the express written approval of the owner or owners of the affected property or properties, except as permitted by applicable Requirements.
- 8.2. Permits; Noncompliance. Whenever Licensee is in noncompliance in any of its obligations under applicable Requirements, after notice and lapse of any applicable cure period under the Requirements, City may deny further encroachment, excavation or similar permits until such time as Licensee cures any such noncompliance.
- 8.3. Damage to Communications Facilities. Licensee is required, at its sole cost and expense and to the satisfaction of City to remove, repair or replace any of its Communications Facilities and Licensee Poles that are damaged, becomes detached or Licensee has not used for Telecommunications Service and/or Information Service over the Network or to provide Commercial Mobile Service and/or Commercial Mobile Radio Service or to provide services to a Qualified Service Provider for a period of more than ninety (90) days.
- 8.4. Damage to Other Property. Licensee is required furthermore, at its sole cost and expense and to the satisfaction of City, repair any damage to ROW, Municipal Facilities or property, whether public or private, caused by Licensee, its agents, employees or contractors in their actions relating to installation, operation, repair, removal, or maintenance of Communications Facilities or Licensee Pole, including any vegetation then- or thereafter-located within or near the Licensed Location. Except in the case of an emergency (which is defined to be the sudden and immediate threat of harm

to a person or personal property), Licensee shall not cut, trim, or remove vegetation in the ROW unless approved in writing by the Director of Public Works. If there is such an emergency, Licensee shall notify the Director of Public Works as soon as practicable and provide a written description of the emergency and work performed in that notice. If Licensee cuts, trims, or removes vegetation in the ROW, Licensee shall restore the affected ROW to its prior condition, reasonable wear and tear excepted, in compliance with then-applicable requirements or conditions in the HMC and permits. If Licensee does not remove, repair or replace such damage to its Communications Facilities or Licensee Pole, or to ROW, Municipal Facilities or other property or restore the ROW, City may, upon thirty (30) days' prior written notice to Licensee, perform or cause to be performed such removal, repair, replacement, or restoration on behalf of Licensee and Licensee must pay the actual costs incurred by City for such removal, repair, replacement, or restoration. If any damage or detachment of Licensee's Facilities or Licensee Pole causes a public health or safety emergency, as reasonably determined by City, City may immediately perform reasonable and necessary repair or removal work (but not any technical work on Licensee's Facilities) or restoration work on behalf of Licensee and will notify Licensee as soon as practicable; provided, however, such repair work may only involve reinstallation of Licensee's Facilities to a Streetlight Pole or repair of the Streetlight Pole itself, and shall not include any technical work on Licensee's Facilities. Upon the receipt of a demand for payment by City, Licensee shall within thirty (30) days after such receipt reimburse City for the full cost of removing, repairing, replacing and/or restoring the Communications Facility, Licensee Pole, the Municipal Facility, or the ROW.

8.5. No Waiver of NRS Chapters 41 and 268. All rights and protections afforded the City under NRS Chapter 41 and NRS Chapter 268 are not waived and expressly reserved.

8.6. Security for Performance.

8.6.1. General Requirements. As security for Licensee's compliance with the Requirements, Licensee must, no later than ten (10) days after the issuance of a permit by City to install Licensee's Facilities and prior to the placement of any Communications Facilities in the ROW or on or in a Municipal Facility, provide security to City in the form of, at Licensee's sole discretion, either cash deposited with City, or (provided the terms and conditions of the security are acceptable to City and issued by a bank or surety, as applicable, satisfactory to City) an irrevocable letter of credit or a performance bond to remain in full force and effect for so long as Licensee has Communications Facilities or Licensee Poles in the ROW, payable in each instance to City, in an amount of ninety thousand dollars (\$90,000) ("Security Funds").

8.6.2. Increase in Security Funds. No later than five (5) business days after City issues the License Authorization for Communications Facility or Licensee Pole that triggers the increase in the amount of the Security Funds, Licensee is required to increase the amount of the Security Funds in accordance with the requirements in the preceding sentence and as follows:

- (1) Ten thousand dollars (\$10,000) for each Licensee Pole authorized in the ROW that is less than or equal to thirty-five (35) feet in height; and
- (2) Fifteen thousand dollars (\$15,000) for each Licensee Pole authorized in the ROW that is more than thirty-five (35) feet in height but less than or equal to fifty (50) feet in height; and



- (3) Twenty-five thousand dollars (\$25,000) for each Licensee Pole authorized in the ROW that is more than fifty (50) feet in height but less than or equal to seventy (70) feet in height; and
- (4) Fifty thousand dollars (\$50,000) for each Licensee Pole authorized in the ROW that is more than seventy (70) feet in height; and
- (5) After City issues License Authorizations for above-ground Wireline Communications Facilities installed on a Municipal Facility or on a Licensee Pole that total one hundred (100) linear feet, one hundred dollars (\$100.00) for each additional batch of License Authorizations that authorize one hundred (100) linear feet of Wireline Communications Facilities to be installed on a Municipal Facility or on a Licensee Pole; and
- (6) After City issues twenty-five (25) License Authorizations for Wireless Communications Facilities installed on a Municipal Facility or on a Third-Party Structure, twenty-five thousand dollars (\$25,000) for each additional batch of twenty-five (25) License Authorizations for Wireless Communications Facilities installed on a Municipal Facility or on a Third-Party Structure; and
- (7) After City issues License Authorizations for underground Wireline Communications Facilities installed in a Municipal Facility or in a Licensee Facility that total five hundred seventy-one (571) linear feet, one thousand dollars (\$1,000) for each additional batch of License Authorizations that authorize five hundred seventy one (571) linear feet of Wireline Facilities to be installed in a Municipal Facility or in a Licensee Facility.

8.6.3. Bond Requirements. If bonds are used to satisfy these security requirements, they shall be in accordance with the following: All bonds shall, in addition to all other costs, provide for payment of reasonable attorneys' fees. All bonds shall be issued by a surety Licensee authorized to do business in the State of Nevada, and which is listed in the U.S. Department of the Treasury Fiscal Service (Department Circular 570, current revision): Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies. Licensee shall require the attorney-in-fact who executes the bonds on behalf of the surety to affix thereto a certified and current copy of his or her power of attorney. All bonds prepared by a licensed nonresident agent must be countersigned by a registered agent per NRS 680A.300. All bonds shall guarantee the performance of all of Licensee's obligations under the Requirements.

8.6.4. Claim of Security Funds; Replenishment of Security. City may claim all or a portion of the Security Funds, as increased, as payment for removal, restoration, or other charges assessed in accordance with Subsection 6.8.6 and Section 7 of this Manual, or another provision in the HMC and the Use Agreement, as payment for liquidated damages assessed in accordance with the Use Agreement, and to recover losses resulting from Licensee's failure to perform any of its obligations to the City, including the installation of Communications Facilities, Licensee Poles, or appurtenances that are not authorized by a License Authorization. If at any time City draws upon the Security Funds, as increased, Licensee must replenish such Security Funds to the amount required hereunder shall within thirty (30) days after receiving notice from City.

#### 8.4 Insurance.

8.4.1. General. Licensee must procure and maintain, and cause its contractors to procure and maintain, insurance identified by the City in accordance with the Use Agreement and this Manual. Coverage shall be in an occurrence form and in accordance with the limits and provisions specified therein. Claims-made policies are not acceptable. Such insurance shall not be canceled, nor shall the occurrence or aggregate limits set forth therein be reduced, until City has received at least thirty (30) days' advance written notice of such cancellation or change. Licensee shall be responsible for notifying City of such change or cancellation. Unless prohibited by applicable Law, all required insurance policies shall contain provisions that the insurer will have no right of recovery or subrogation against City, its council members, officers, employees, and insurers, except if losses are caused by the sole negligence of City. Any insurance provider of Licensee shall be admitted and authorized to do business in the State of Nevada and shall carry a minimum rating assigned by A.M. Best & Licensee's Key Rating Guide of "A" Overall and a Financial Size Category of "VII". Insurance policies and certificates issued by non-admitted insurance companies are not acceptable. Any deductibles or self-insured retentions must be stated on the certificate(s) of insurance, which shall be sent to City. "Severability of interest" or "separation of insureds" clauses shall be made a part of the Commercial General Liability and Commercial Automobile Liability policies

8.4.2. Filing of Certificates and Endorsements. Prior to the commencement of any work, Licensee must file with City the required original certificate(s) of insurance with endorsements, which shall state (a) the policy number; name of insurance company; name and address of the agent or authorized representative; name and address of insured; project name; policy expiration date; and specific coverage amounts; (b) that City shall receive thirty (30) days' prior written notice of cancellation, except for non-payment of premium, then ten (10) days prior notice may be given; (c) that Company's Commercial General Liability insurance policy is primary as respects any other valid or collectible insurance that City may possess, including any self insured retentions City may have; and any other insurance City does possess shall be considered excess insurance only and shall not be required to contribute with this insurance; and (d) that Company's insurance company for the Commercial General Liability insurance policy waives any right of recovery or subrogation the insurance company may have against City, its council members, officers, employees, and insurers, as specified in the above paragraph The certificate(s) of insurance with endorsements and notices shall be mailed to City at the address specified in this Manual.

#### 9. RECORDS; AUDITS

9.1. Recordkeeping. Licensee will establish and maintain an accounting system and accurate and complete records in accordance with generally accepted accounting principles and applicable Law for the purpose of determining the amounts due to City under the HMC and the Use Agreement. Licensee will also maintain accurate and complete records of the Communications Facilities and Licensee Poles installed in the ROW and the location of all such installations in the ROW. All such records are subject to audit by City.

9.2. Maps, As-Built Drawings, and Operational Data. Licensee will maintain on file maps, as-built drawings, and operational data pertaining to its Facilities and Licensee Poles. Such records are subject to inspection by the City at any time during normal business hours upon reasonable notice

to Licensee. Licensee will furnish, upon request by the City and without charge, current maps and as-built drawings either in a hard-copy printed form, electronic form, or in such other format or compatible database specified by City, showing the location and dimension of any existing and proposed Communications Facilities, but not other proprietary information, used in operating the Communications Facilities.

- 9.3. Additional Records. City may require Licensee to produce the records identified in Section 9.1 and 9.2 and any such additional information, records, and documents from time to time that City may determine are appropriate in order to reasonably monitor compliance. Licensee agrees to collect and produce to City such supplementary information as needed.
- 9.4. Production of Records. Records must be produced within twenty (20) business days after a request by City for production of the same unless City consents in writing to additional time. Such records shall be made available at the City of Henderson City Hall. Failure to provide records in a timely manner will subject Licensee to liquidated damages under the Use Agreement. If any person other than Licensee maintains records on Licensee's behalf, Licensee will be responsible for making such records available to City.

#### 10. NOTICES; CONTACTING LICENSEE

- 10.1. Notices to the City. All notices which shall or may be given to the City under the Use Agreement shall be in writing and delivered personally or transmitted (a) through the United States mail, by registered or certified mail, postage prepaid; or (b) by means of prepaid courier service, addressed as follows:

CITY OF HENDERSON  
Attn: Director of Public Works  
240 South Water Street  
P.O. Box 95050  
Henderson, NV 89009-5050

with a copy to:

CITY OF HENDERSON  
Attn: City Traffic Engineer  
240 South Water Street  
P.O. Box 95050  
Henderson, NV 89009-5050

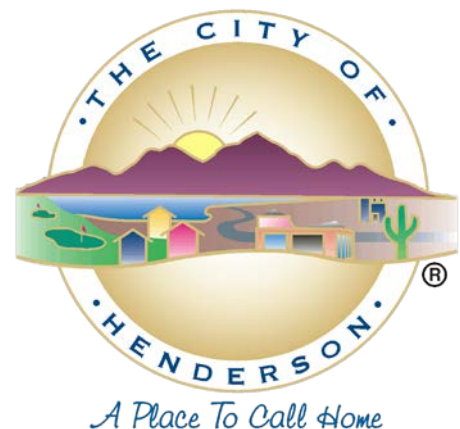
CITY OF HENDERSON  
Attn: City Attorney  
240 South Water Street  
P.O. Box 95050  
Henderson, NV 89009-5050

Notices will be deemed given upon receipt in the case of personal delivery, on the third business day after the date of mailing if mailed by certified mail, or on the date officially recorded as delivered according to the record of delivery if delivered by courier. The City may change its contact information by giving written notice to the other party in the manner as may be set forth in the Use Agreement or by updating this Manual.

- 10.2. Contacting Licensee. Licensee shall be available to the employees of any City department having jurisdiction over Licensee's activities 24 hours a day, seven days a week, regarding problems or complaints resulting from the installation, operation, maintenance, repair, or removal of Communications Facilities and Licensee Poles. City may contact the network control center operator at the telephone number set forth in the Use Agreement regarding such problems or complaints and Licensee must make every effort to investigate and resolve them within three (3) business days of receipt. Within four (4) business days of receipt, the City must receive a written report from Licensee that describes how Licensee resolved the problem or complaint and, if Licensee cannot resolve a problem or complaint within three (3) business days of receipt, Licensee will include an explanation of why resolution could not be reached within that period and describe the actions that Licensee has taken or will take to resolve the problem or complaint and the timeline to reach a resolution of the problem or complaint. Upon request, Licensee will provide City with a written monthly report, in a form satisfactory to City, summarizing such problems or complaints received by Licensee and the resolutions thereof for the preceding month. At City's written request and within ten (10) days of such a request, Licensee will confirm in writing (and provide City documentation) that the Communications Facility or Licensee Pole that is the subject of the problem or complaint complies with all FCC regulations, including without limitation, all regulations regarding radio frequency emissions and exposure limitations to Communications Facilities. Licensee is required to affix and maintain a permanent, weatherproof label, tag, or similar mark displaying such telephone number, together, in the case of Wireless Communications Facilities, with the unique alphanumeric designation described in Subsection 6.8.4, in a conspicuous location on each Licensee Pole, on all Communications Facilities, and on all street furniture cabinets or vaults used in connection with the Communications Facilities.

# APPENDIX A:

## City of Henderson Small Cell Infrastructure Design Guidelines



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# 1 PURPOSE

These City of Henderson Small Cell Infrastructure Design Guidelines are incorporated into and made a part of the City's *Telecommunications Facility Policies and Procedures Manual*. The purpose of these Design Guidelines is to provide the aesthetic requirements and specifications that all small cell telecommunications facilities must meet prior to installation in the City of Henderson and otherwise supplement the Standards Manual and HMC. The Design Guidelines are not intended to conflict with any provision of the HMC or the Standards Manual. In the event of any conflict with the HMC, the applicable provision of the HMC prevails. Capitalized terms have the meaning ascribed to such terms in the HMC and the Standards Manual, except as otherwise defined hereunder. The Department of Public Works may update the Design Guidelines from time to time at the discretion of the Director of Public Works. These Design Guidelines are published on the City's Public Works website ([www.cityofhenderson.com/public-works/telecommunications-agreements-leases](http://www.cityofhenderson.com/public-works/telecommunications-agreements-leases)). The public is encouraged to check this website regularly for updates.



## 1.1 Type 1 Attachments to Utility Poles

The Attachments to Utility Poles chapter establishes the specification requirements and design guidelines for small cell equipment that will be attached to existing wooden utility poles located in the City's Right of Way.

Figure 1- 1 and Figure 1- 2 below show both a pole mounted enclosure and strand mounted enclosure.

Figure 1- 1: Type 1A - Utility Pole Mounted Shroud

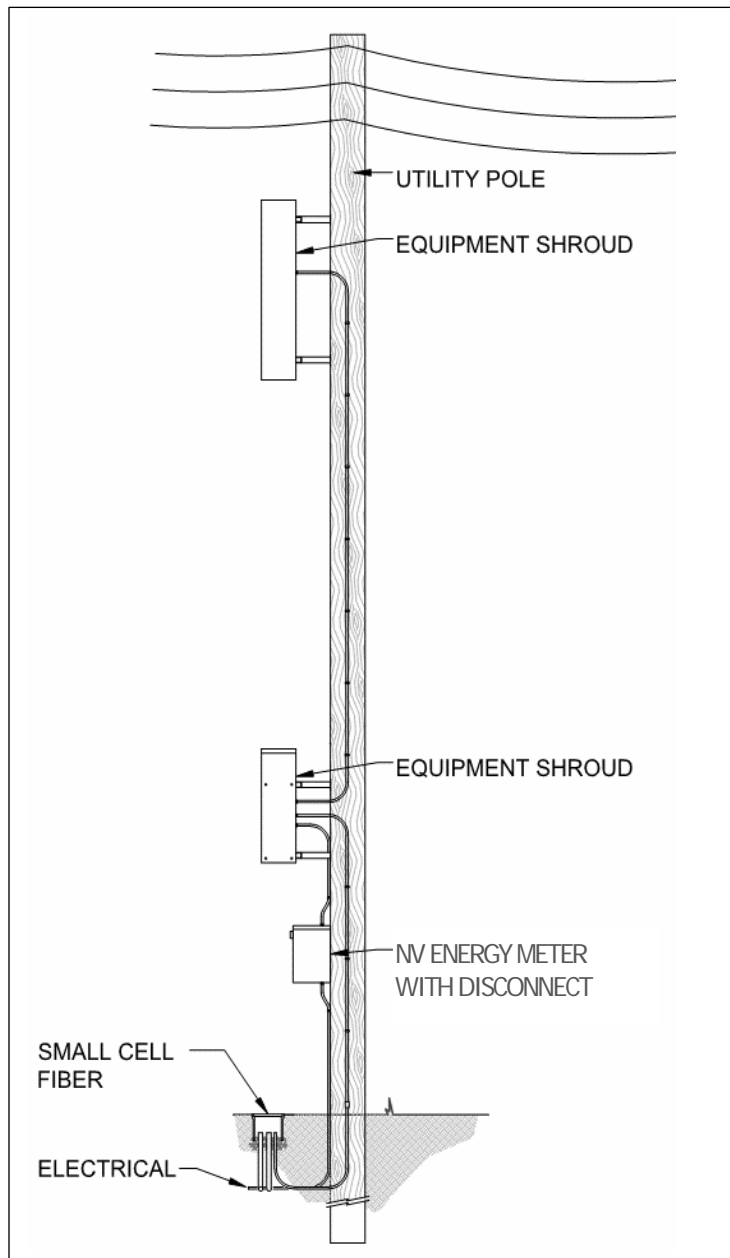
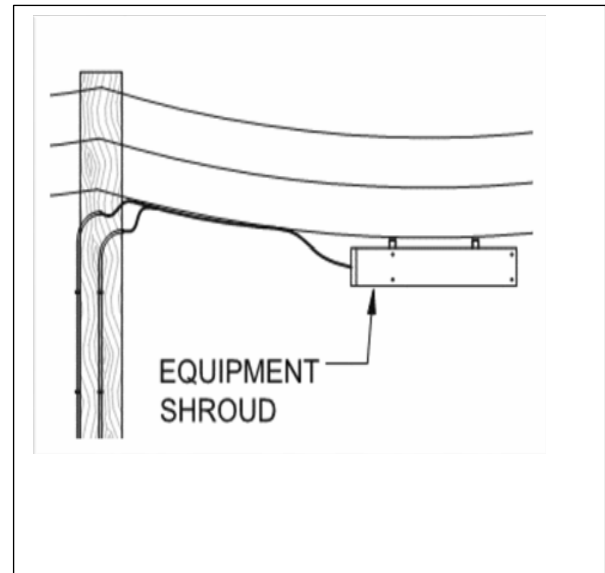


Figure 1- 2: Type 1B - Strand Mounted Shroud

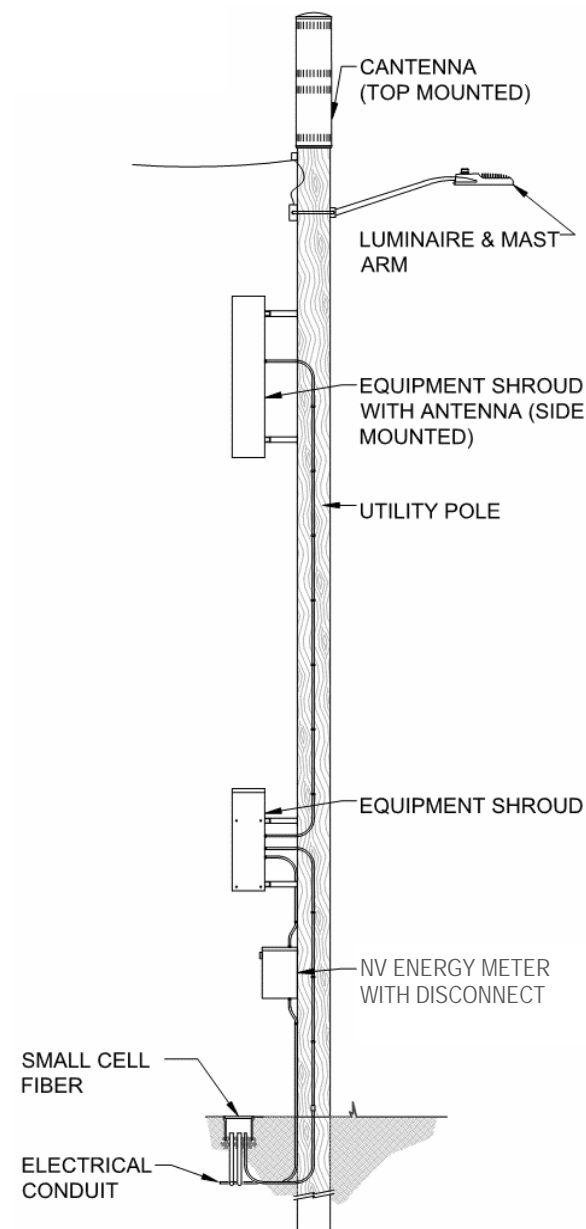


## 1.2 Type 2 Small Cell on Existing Wooden Pole with Streetlight

The Attachments to Wooden Streetlight Pole chapter establishes the specification requirements and design guidelines for small cell equipment that will be attached to existing wooden streetlight poles within the public ROW.

Figure 1- 3 below shows an attachment to a wooden streetlight pole.

Figure 1- 3: Type 2 - Attachment to Wooden Streetlight Pole

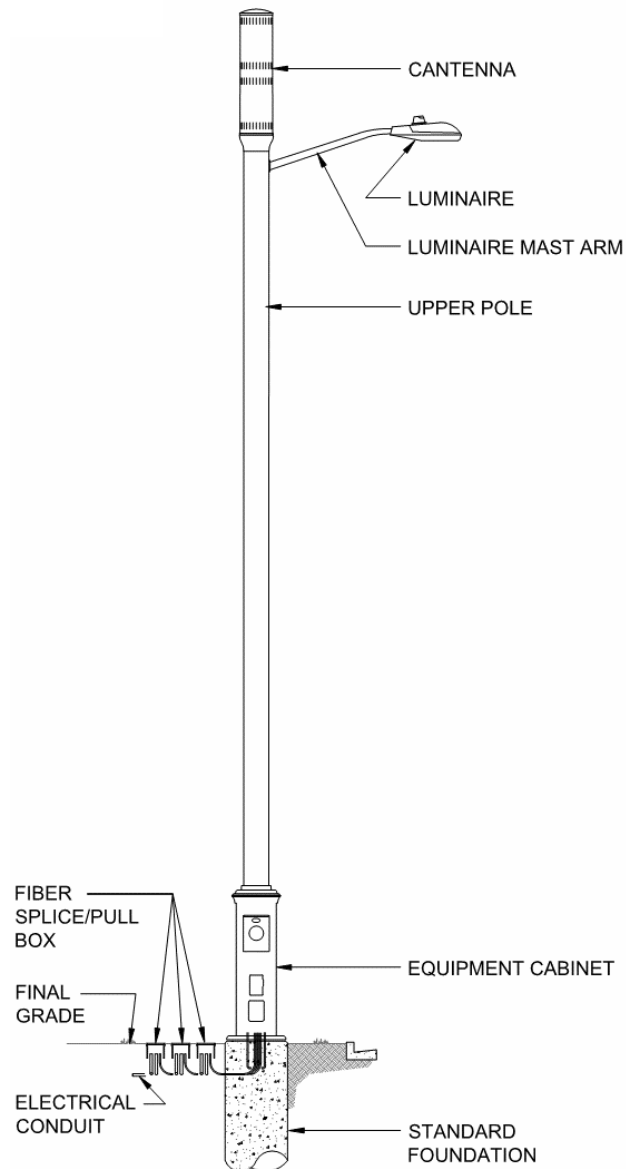


## 1.3 Type 3 Combination Small Cell and Streetlight

The Combination Small Cell and Streetlight Assembly chapter establishes requirements when removing existing metal streetlight poles in the public ROW and replacing with combination small cell and streetlight poles. Three variations of the combination pole are shown in Figure 1-4 through Figure 1-6. Only one carrier may be installed per pole.

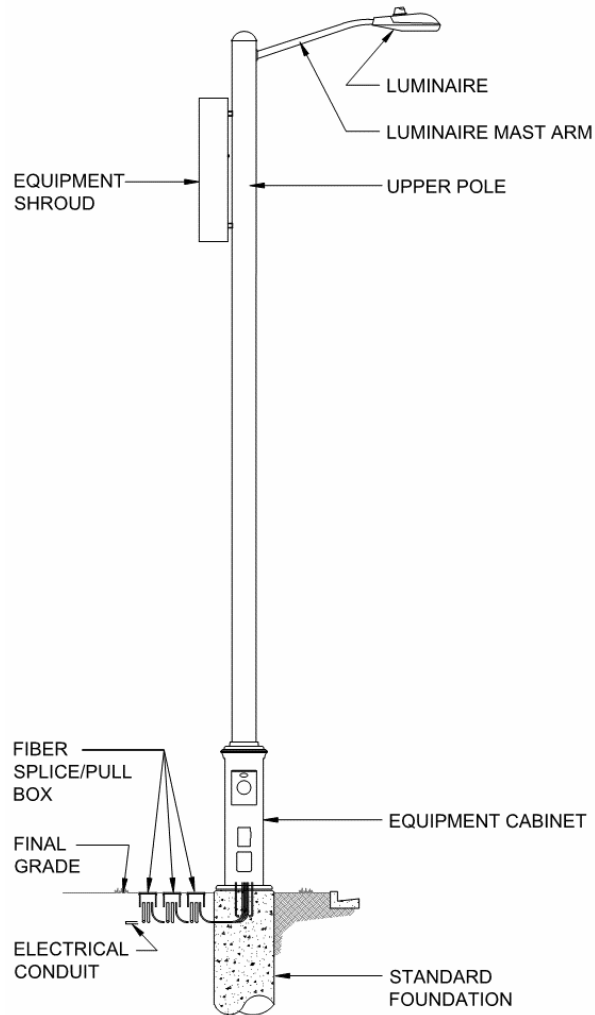
Small Cell Type 3A, shown in Figure 1-4, is intended for a single carrier installation. This pole type includes a antenna and no externally mounted equipment.

**Figure 1- 4: Type 3A - Combination Pole with Antenna**



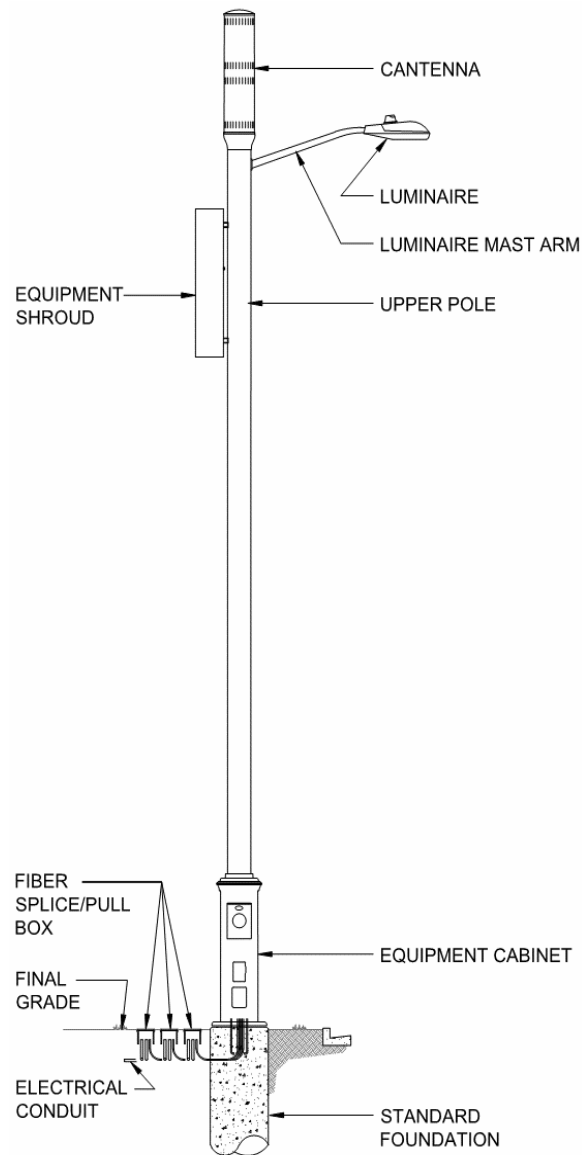
A Type 3 combination pole with a single external shroud mounted to the pole will be allowed in place of a cantenna. The shroud shall be strapped to the pole in such a way that the wiring, cables, and equipment is hidden from view. The shroud shall be colored to match the pole.

Figure 1- 5: Type 3B - Combination Pole with Equipment Shroud



A Type 3 combination pole with both a cantenna and a single shroud mounted to the pole is allowed when various small cell technologies (ie: LTE and 5G) provided by a single carrier are installed on the same pole. The shroud shall be strapped to the pole in such a way that the wiring, cables, and equipment is hidden from view. The cantenna and shroud shall be colored to match the pole.

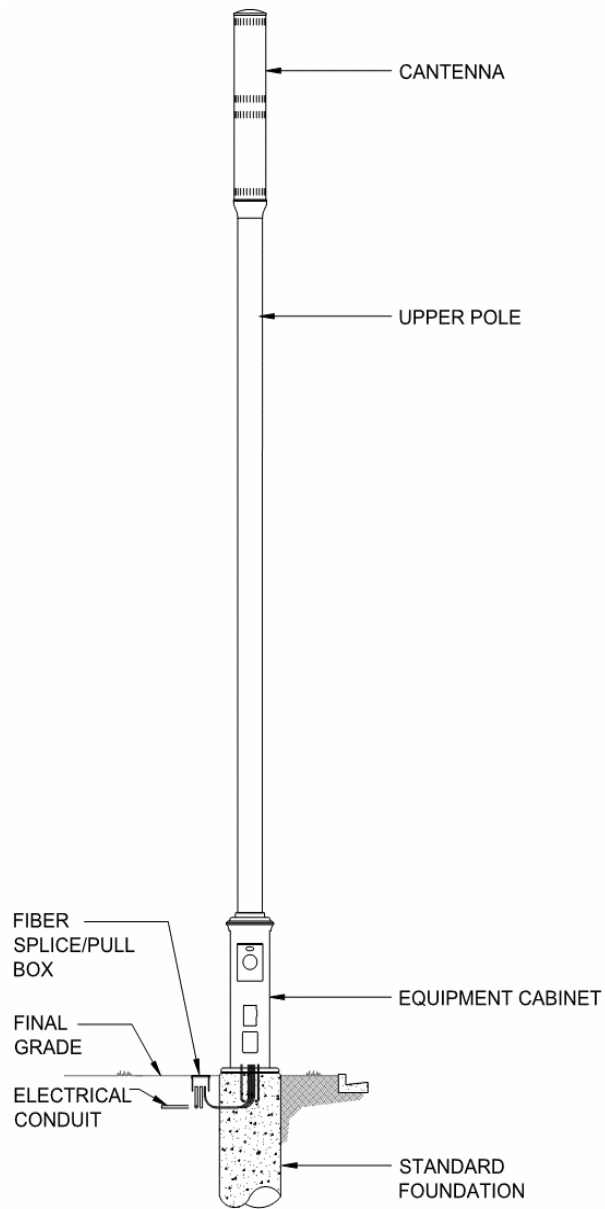
Figure 1- 6: Type 3C - Combination Pole with Cantenna and Equipment Shroud



## 1.4 Type 4 Freestanding Small Cell

The Freestanding Small Cell chapter establishes specification requirements and design guidelines for installing privately-owned freestanding small cell poles in the public ROW.

Figure 1- 7: Type 4 - Freestanding Small Cell



## 2 ATTACHMENTS TO UTILITY POLES AND UTILITY LINES

### 2.1 Purpose

This chapter of the Design Guidelines is to be used when locating small cell attachments on existing utility poles or utility lines. Refer to Chapter 3 for projects involving existing wooden streetlight small cell attachments.

### 2.2 General Guidance

All attachments to utility poles shall be approved by the City and the pole owner prior to installation. All equipment shall meet the requirements of the City's Standards Manual.

All small cell carrier equipment shall be shrouded. Only two enclosures including the disconnect and antenna shall be installed at each utility pole location. No ground mounted enclosures, including backup power supply, shall be allowed. All equipment located within the public ROW and not attached to the utility pole, shall be installed underground subject to applicable Requirements.

All carrier equipment shall be removed and relocated at no cost to the City if the City or the pole owner decides to underground the utility lines in the future. The equipment must be removed within a reasonable time frame determined by the pole owner. A reasonable time frame refers to a period of time that does not delay the removal of the utility poles and lines.

No strand-mounted small cell devices shall be installed on poles with mounted streetlights. Deviations from this guideline shall be approved on a case-by-case basis by the City prior to installation.

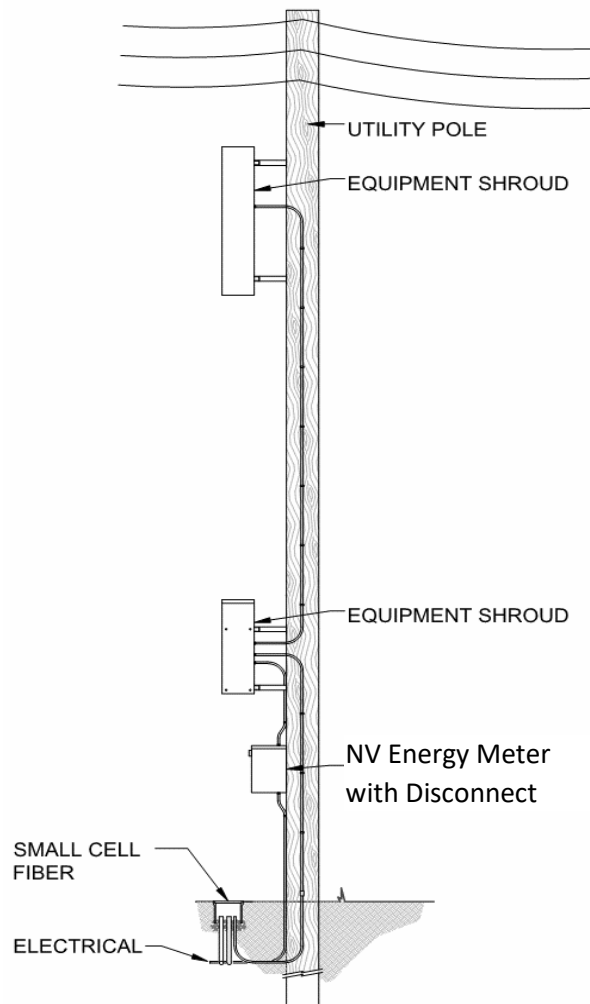
## 2.3 Utility Pole Small Cell Attachments Specification Overview

Prior to submitting a permitting application, the pole owner shall ensure the supporting poles are appropriately sized and have sufficient strength to accommodate the additional small cell equipment loads. The small cell equipment loads shall be provided by the network provider.

A non-ionizing radiation electromagnetic radiation report (NIER) shall be submitted to the pole owner and retained on file for equipment type and model. The NIER report shall be endorsed by an RF PE licensed in the State of Nevada. It shall specify minimum approach distances to the general public as well as electrical and communication works that are not trained for working in an RF environment (uncontrolled) when accessing the pole by climbing or bucket.

All installations shall meet or exceed all applicable structural standards, clearance standards, and provisions of the latest National Electrical Safety Code (NESC), or applicable City construction standards. In case of conflict, the most stringent requirements shall prevail. All necessary permits shall be obtained by the wireless carrier owner and provided to the pole owner and City.

Figure 2- 1: Utility Pole Attachment





**Table 2- 1: Small Cell Attachments to Utility Pole Specification Overview**

<b>Electrical Service</b>	Per City and NV Energy's requirements.
<b>Grounding</b>	Per City and NV Energy's requirements
<b>Separation of Service</b>	All new electrical conduit and fiber shall be separated by Owner
<b>Utility Equipment</b>	Per NV Energy
<b>Equipment Color</b>	Visible attachments and hardware shall be colored to match pole, or colored gray (7047) if located on a wooden pole.
<b>Equipment Shroud</b>	38"H x 16"W x 12"D maximum Only one equipment shroud, containing all required small cell equipment, shall be installed per pole. Except, one additional equipment shroud shall be allowed per pole if the antenna is located within the second equipment shroud. Equipment shall be located such that it meets the Americans with Disabilities Act of 1990 and does not obstruct, impede, or hinder the usual pedestrian or vehicular travel way.
<b>Cantenna</b>	If a cantenna is located on top of the pole the outer diameter shall be 14" maximum and the cantenna shall be no more than thirty-six (36) inches above the height of any structure on which the equipment is installed, including antenna, radio head, mounting bracket, and all other hardware necessary for a complete installation.
<b>RF Equipment Disconnect</b>	Radio frequency equipment shall have a disconnect that meets or exceeds NV Energy's requirements.
<b>Pole Mounted Warning Label</b>	If required, radio frequency warning labels shall be mounted exterior to Licensee's equipment.
<b>Strand Mounted Warning Label</b>	Radio frequency warning labels shall be mounted on the equipment, and clearly marked and be visible from the ground.
<b>Owner Identification</b>	A 4-inch by 6-inch (maximum) plate with the Licensee's name, location identifying information, and emergency telephone number shall be permanently fixed to the shroud.

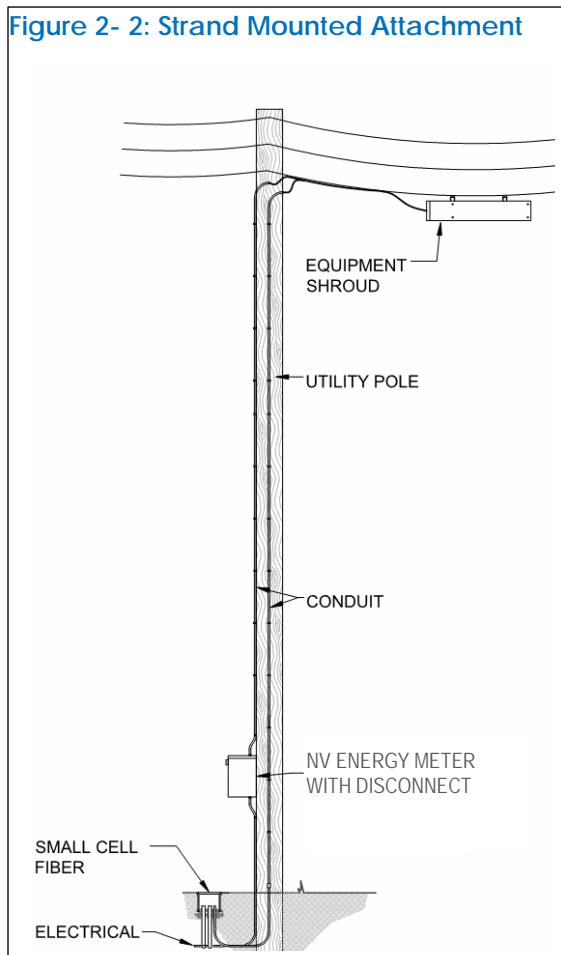
## 2.4 Strand Mounted Small Cell Attachments Specification Overview

Prior to submitting a permitting application, the strand owner shall ensure the supporting poles are appropriately sized and have sufficient strength to accommodate the additional equipment loads.

A non-ionizing radiation electromagnetic radiation report (NIER) shall be submitted to the strand owner and retained on file for equipment type and model. The NIER report shall be endorsed by an RF PE licensed in the State of Nevada. It shall specify minimum approach distances to the general public as well as electrical and communication workers that are not trained for working in an RF environment (uncontrolled) when accessing the pole by climbing or bucket.

All installations shall meet or exceed all applicable structural standards, clearance standards, and provisions of the latest NESC or applicable City construction standards. In case of conflict, the most stringent requirements shall prevail. All necessary permits shall be obtained by the wireless carrier owner and provided to the utility owner and City.

**Figure 2- 2: Strand Mounted Attachment**



**Table 2- 2: Small Cell Attachments to Utility Pole and Utility Lines Specification Overview**

<b>Electrical Service</b>	Per City and NV Energy's requirements.
<b>Grounding</b>	Per City and NV Energy's requirements.
<b>Separation of Service</b>	All new electrical conduit and fiber shall be separated by Owner
<b>Utility Equipment</b>	Per NV Energy
<b>Equipment Color</b>	Visible attachments and hardware shall be colored gray (RAL 7047)
<b>Strand Mount Equipment Shroud</b>	5.5 cubic feet maximum strand mount equipment shroud. Only one equipment shroud shall be installed per permit location.
<b>RF Equipment Disconnect</b>	Radio frequency equipment shall have a disconnect that meets or exceeds NV Energy's requirements.
<b>Pole Mounted Warning Label</b>	If required, radio frequency warning labels shall be mounted exterior to Licensee's equipment.
<b>Strand Mounted Warning Label</b>	Radio frequency warning labels shall be mounted on the equipment, and clearly marked and be visible from the ground.
<b>Owner Identification</b>	A 4-inch by 6-inch (maximum) plate with the Licensee's name, location identifying information, and emergency telephone number shall be permanently fixed to the shroud.

## 2.5 Small Cell Attachments to Utility Poles and Utility Lines Placement Requirements

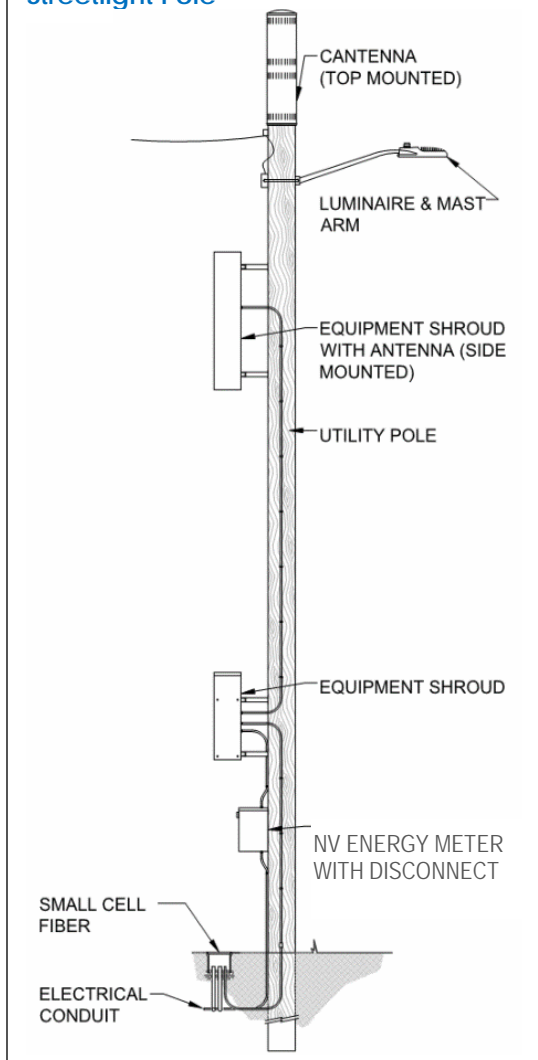
Small cell shall be located such that all new equipment, including but not limited to Network Provider small cell equipment and NV Energy equipment, meets ADA requirements. NV Energy, and the City when applicable, shall approve all fiber and power source locations prior to installation.

## 3 ATTACHMENTS TO WOODEN STREETLIGHT POLES

### 3.1 Purpose

This chapter of the Design Guidelines is to be used when locating small cell equipment on existing wooden streetlights. If an existing wooden streetlight pole, that small cell equipment is proposed upon, requires replacement, the applicant shall be required to replace said pole with a Type 3 installation.

**Figure 3-1: Attachment to Wooden Streetlight Pole**



### 3.2 General Guidance

All attachments to wooden streetlights shall be approved by the City prior to installation. All equipment shall meet applicable Requirements. All equipment located within the public ROW shall be located such that it meets ADA requirements and does not obstruct, impede, or hinder usual pedestrian or vehicular travel. All small cell carrier equipment shall be mounted behind a shroud. Only two shrouds, including the disconnect and antenna, shall be installed at each location. No ground mounted equipment, including backup power supply, shall be allowed. No small cell devices shall be installed without confirming that the intended installation has no impact on the streetlight's operational performance.

The lighting design shall meet the luminaire specifications and design requirements set forth in the *Regional Transportation Commission Uniform Standard Specifications and Drawings, as amended*.

All carrier equipment shall be removed and relocated at no cost to City if City or pole owner decides to remove the wooden pole and streetlight in the future. The equipment must be removed within a reasonable time frame determined by the pole owner. A reasonable time frame refers to a duration of time that does not delay the removal of the utility poles and lines.

Deviations from any Requirements shall be approved on a case-by-case basis by the City prior to installation.

### 3.3 Wooden Streetlight with Small Cell Specification Overview

Prior to submitting a permitting application, the applicant shall ensure the supporting poles are appropriately sized and have sufficient strength to accommodate the additional small cell equipment loads. All installations shall meet or exceed all applicable structural standards, clearance standards, and provisions of the latest NESC or City construction standards. In case of conflict, the most stringent requirements shall prevail. All necessary permits shall be obtained by the wireless carrier owner and provided to the pole owner and the City.

A non-ionizing radiation electromagnetic radiation report (NIER) shall be submitted to the pole owner and retained on file for equipment type and model. The NIER report shall be endorsed by an RF PE licensed in the State of Nevada. It shall specify minimum approach distances to the general public as well as electrical and communication workers that are not trained for working in an RF environment (uncontrolled) when accessing the pole by climbing or bucket.

**Table 3-1: Wooden Streetlight Attachments Specification Overview**

<b>Luminaire</b>	Per <i>RTC Uniform Standard Specifications and Drawings, as amended</i>
<b>Luminaire Mast Arm</b>	Per <i>RTC Uniform Standard Specifications and Drawings, as amended</i>
<b>Luminaire Mounting Height</b>	All luminaires shall be the same height as surrounding streetlights
<b>Electrical Service</b>	Per City and NV Energy's requirements
<b>Grounding</b>	Per City and NV Energy's requirements
<b>Separation of Service</b>	All new electrical conduit and fiber shall be separated by Owner, in pull/splice boxes located adjacent to the wooden streetlight pole.
<b>Utility Equipment</b>	Per NV Energy's requirements
<b>Color</b>	Small cell equipment shall be colored gray (RAL 7074)
<b>Equipment Shroud</b>	38"H x 16"W x 12"D maximum
<b>Cantenna</b>	If a cantenna is located on top of the pole the outer diameter shall be 14" maximum and the cantenna shall be no more than thirty-six (36) inches tall, including antenna, radio head, mounting bracket, and all other hardware necessary for a complete installation.
<b>RF Equipment Disconnect</b>	Radio frequency equipment shall have a disconnect that meets or exceeds NV Energy's requirements.
<b>Warning Label</b>	Radio frequency warning labels shall be mounted on the equipment and clearly marked and be visible from the ground.
<b>Owner Identification</b>	A 4-inch by 6-inch (maximum) plate with the Licensee's name, location identifying information, and emergency telephone number shall be permanently fixed to the equipment.

### 3.4 Wooden Streetlight with Small Cell Placement Requirements

Small cell shall be located such that all new equipment, including but not limited to Network Provider small cell equipment and NV Energy equipment, meets ADA requirements. NV Energy, and City when applicable, shall approval all fiber and power source locations prior to installation.

## 4 COMBINATION SMALL CELL AND STREETLIGHT

### 4.1 Purpose

This chapter of the Guidelines is to be used when replacing an existing streetlight pole with a combination small cell and streetlight pole. Combination small cell and streetlight poles are often referred to as “combination poles”, “Type 3 poles”, or “removed and replaced poles” in these Guidelines. Refer to Chapter 5 for projects involving freestanding small cell installations.

A Type 3 combination small cell and streetlight pole should only be located where an existing streetlight pole can be removed and replaced, or at a new location where it has been identified that a streetlight is necessary. Existing streetlights are owned by the City; City-owned Type 3 combination poles that replace existing streetlights shall meet City standards. Privately-owned Type 3 combination poles shall be approved via City’s permitting process.

### 4.2 General Guidance

Combination small cell and streetlight permitting applications and aesthetics shall be approved by the City prior to installation. All equipment shall meet the City’s utility requirements and design aesthetics. The same small cell pole aesthetic is to be used in the same area to maintain a cohesive appearance. Combination small cell aesthetics and proposed locations shall meet all applicable Requirements. The lighting design shall follow the luminaire specifications and design requirements set forth in the *RTC Uniform Standard Specifications and Drawings, as amended*.

The *RTC Uniform Standard Specifications and Drawings, as amended* provide guidance on luminaire design aesthetics, lighting level criteria, typical streetlight spacing, streetlight specifications, and electrical and streetlight details. The applicant shall provide all documentation required by the *RTC Uniform Standard Specifications and Drawings, as amended* to the City during the permitting process.

All small cell carrier equipment shall be housed internal to the pole or hidden behind an exterior shroud. No network provider equipment shall be mounted to the exterior of the pole unless it meets the Type 3B and Type 3C requirements in Section 4.3. Deviations from these Guidelines shall be approved on a case-by-case basis by the City prior to installation.

### 4.3 Basis of Design

The following pages describe the small cell requirements for installation in the City.

The combination pole design shall match the aesthetics of existing streetlights installed adjacent to the pole. The Licensee shall perform a visual inspection prior to submitting a permitting application to determine existing aesthetics.

The combination pole components include the foundation, equipment cabinet, upper pole, luminaire, mast arm, luminaire control node if applicable, antenna or antenna enclosure, and all hardware and electrical equipment necessary for a complete assembly.

The small cell components shall also be sized to be visually pleasing. For a combination pole to be considered visually pleasing, the transition between the equipment cabinet and upper pole should be considered. A decorative transition shall be installed over the equipment cabinet upper bolts, or decorative base cover shall be installed to match the equipment cabinet size. The upper pole shall be scaled to 0.5 to 0.75 the size of the equipment cabinet, with a 10-inch minimum outer diameter. All hardware connections shall be hidden from view. No horizontal flat spaces greater than 1.5 inches shall exist on the equipment cabinet to prevent cups, trash, and other objects from being placed on the equipment cabinet. Each

pole component shall be architecturally compatible to create a cohesive aesthetic. An example of an unacceptable small cell installation, and acceptable installation can be found in Figures 4-1 and 4-2.

Three variations of combination small cell equipment attachments will be considered for installation in the City. These equipment attachments include a single cantenna, a single equipment shroud, or cantenna and a single exterior equipment shroud when multiple cellular technologies provided by a single carrier are installed on a single pole (ie: LTE and 5G). Each type can be found in Figures 4-3 through 4-5.

Decorative Streetlight Pole means any Streetlight Pole that: (a) is made from a material other than metal; or (b) incorporates artistic design elements not typically found in standard metal Streetlight Poles per *RTC Uniform Standard Specifications and Drawings, as amended*. The term Decorative Streetlight Pole includes any historically or architecturally significant or designated Streetlight Poles.

Installation on Municipal Facilities. City shall verify that the proposed telecommunications facilities submitted by Licensee comply with a Designated Configuration, if applicable, and Requirements. Decorative Streetlight Poles may not be used for the installation of Communications Facilities without prior written approval by the City Manager or City Manager's designee, and review by the homeowner's association, if any such Decorative Streetlight Pole is located within a community regulated by a homeowner's association and such installation shall conform to camouflaging such that Communications Facility is located in a camouflaged pedestal at the base of the Decorative Streetlight and camouflaged antenna mounted on top in the Decorative Streetlight.

Figure 4-1: Unacceptable Type 3 Installation



Conduit, mounting bracket, and other hardware must be hidden from view



Cantenna must include a smooth transition between upper pole and Cantenna attachment

Upper pole shall be smooth and straight, with 1.5-inch (max.) of flat surface where mounted to the equipment cabinet

Equipment cabinet shall be round. 16-inch diameter is preferred, 20-inch diameter max.

Figure 4.2: Acceptable Type 3 Installation



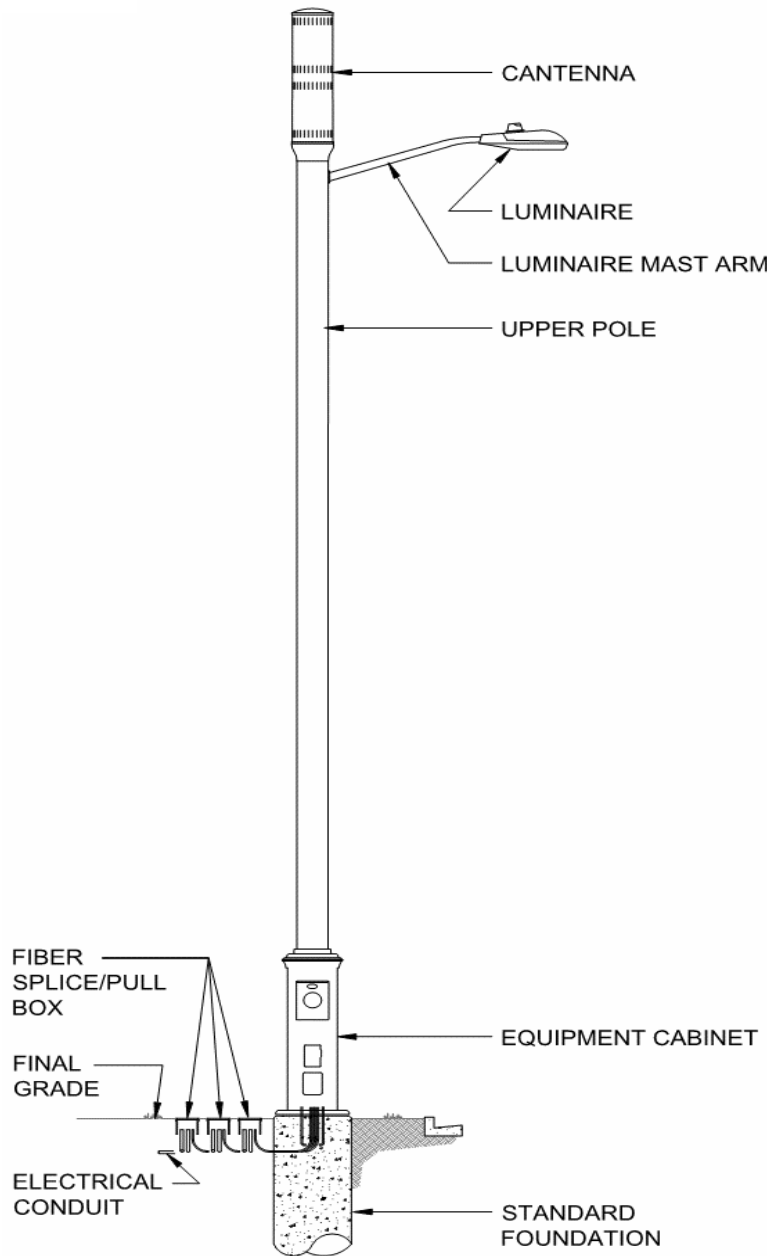
<sup>1</sup> Images courtesy of Aero Wireless Group



### 4.3.1 Type 3A Combination Pole

The Type 3A combination pole is composed of an equipment cabinet, upper pole, streetlight, and antenna. All equipment shall be located internal, or recessed per City requirements, to the appropriate enclosure.

Figure 4-3: Type 3A - Combination Pole with Antenna

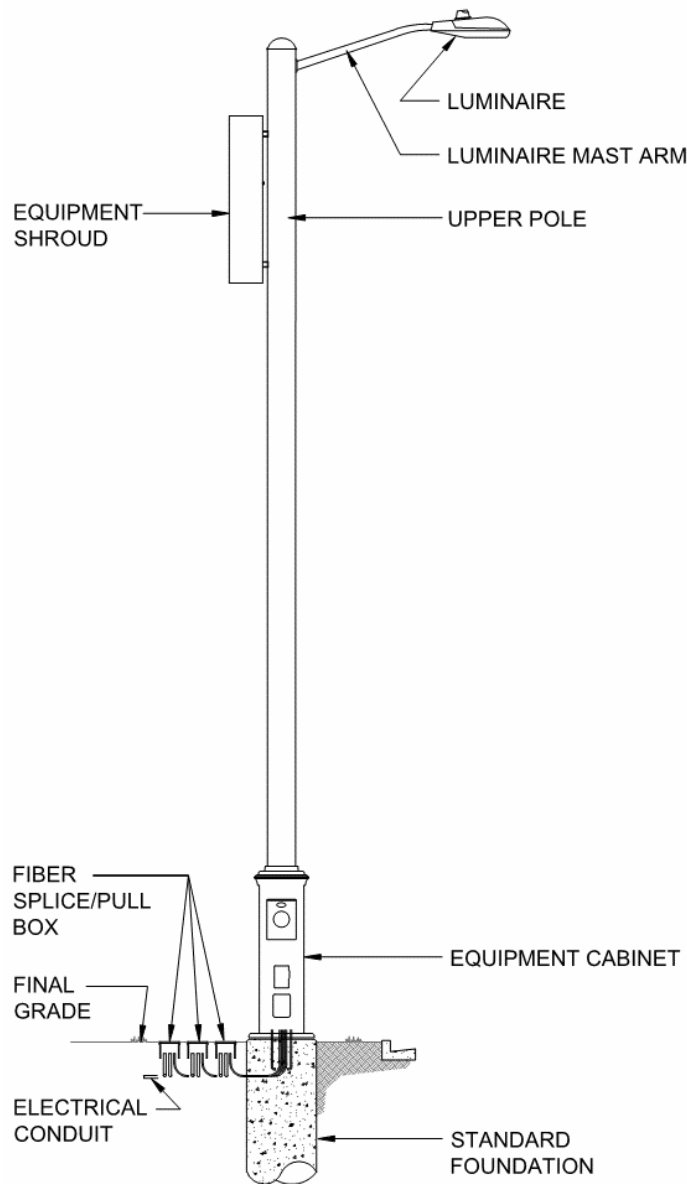


### 4.3.2 Type 3B Combination Pole

The Type 3B combination pole is composed of an equipment cabinet, upper pole, streetlight, and externally mounted equipment shroud. This type of pole shall only be used if a Type 3A combination pole is physically unable to be used. Licensee must demonstrate that the technology cannot be integrated into the equipment cabinet or the antenna. All equipment shall be located internal, shrouded, or recessed per City requirements, to the appropriate housing. The antenna, radio head, mounting brackets, and all hardware necessary for a complete installation shall be located inside an aesthetically pleasing equipment shroud, securely strapped to the pole.

Wires and cabling shall be hidden from view. Cables and wires shall internal to the pole until it reaches a cable grommet. Weatherproof grommets shall be installed at all cable entry points. All pole openings shall be weatherproofed to prevent interior rusting of the pole.

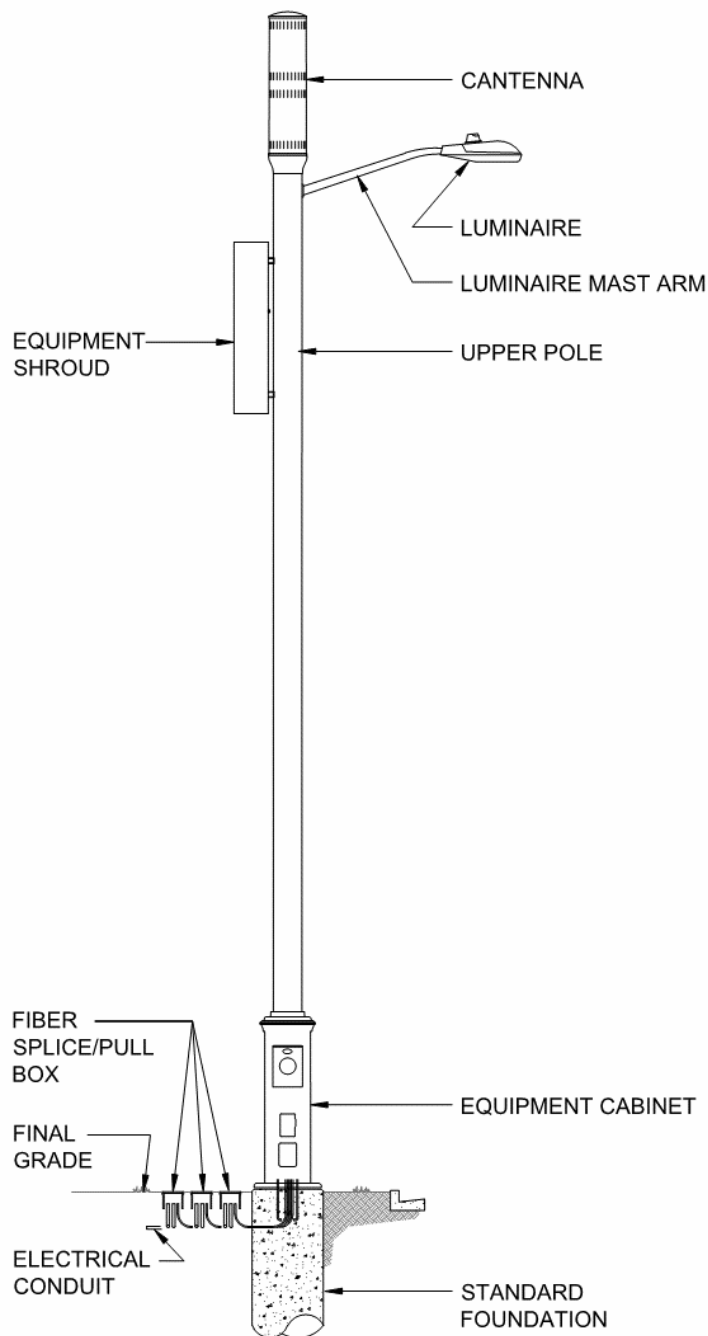
**Figure 4-4: Type 3B - Combination Pole with Equipment Shroud**



### 4.3.3 Type 3C Combination Pole

The Type 3C combination pole will be allowed when multiple technologies offered by the same carrier are installed on a single pole. To qualify for this permit, the Licensee must demonstrate that the additional technology cannot be integrated into the equipment cabinet or the antenna. This Type 3C pole is composed of a single equipment cabinet, upper pole, streetlight, antenna, and a single externally mounted equipment shroud.

**Figure 4-5: Type 3C - Combination Pole with Antenna and Equipment Shroud**



The additional equipment shroud shall match the combination pole aesthetics. Care should be taken to integrate the mounting attachments into the enclosure design. The enclosure shall be securely strapped to the pole.

A combination small cell and streetlight specification overview is found in Section 4.4. Details showing conduit burial; pull box dimensions; light standard foundations; grounding; and pole bases can be found in *RTC Uniform Standard Specifications and Drawings, as amended*

## 4.4 Combination Small Cell and Streetlight Specifications Overview

**Table 4-1: Streetlight Specification Overview**

<b>Luminaire</b>	Per <i>RTC Uniform Standard Specifications and Drawings, as amended</i>
<b>Luminaire Mast Arm</b>	Per <i>RTC Uniform Standard Specifications and Drawings, as amended</i>
<b>Electrical Service</b>	Per City and NV Energy's requirements
<b>Grounding</b>	Per City and NV Energy's requirements
<b>Pole Requirements</b>	Per <i>RTC Uniform Standard Specifications and Drawings, as amended</i> At least 15% of the pole design structural capacity shall be reserved for future City IOT installations.
<b>Pole Type</b>	Per <i>RTC Uniform Standard Specifications and Drawings, as amended</i>
<b>Pole Color</b>	Equipment cabinet and pole shall be galvanized in accordance with <i>RTC Uniform Standard Specifications and Drawings, as amended</i> . If the pole is painted to match existing streetlight aesthetics, paint shall be powder coated over zinc paint (Pole and equipment cabinet shall still be galvanized).
<b>Combination Pole Height</b>	The top of the cantenna shall be no higher than thirty-six (36) inches above the top of the pole, and the combination of pole and cantenna shall be no greater than thirty-five (35) feet tall. All luminaires shall be the same height as adjacent streetlights. Luminaires shall be installed as shown in <i>RTC Uniform Standard Specifications and Drawings, as amended</i> .
<b>Design Wind Velocity</b>	Per <i>RTC Uniform Standard Specifications and Drawings, as amended</i> .
<b>Foundation</b>	Precast concrete or cast-in-place pole foundations shall be designed per <i>RTC Uniform Standard Specifications and Drawings, as amended</i> .
<b>Conduit Sweeps in Foundation</b>	Eight (8) 2" PVC conduit sweeps shall be installed. Conduit shall accommodate City electrical, City fiber, and Small cell carrier electrical and fiber with up to four (4) spare sweeps for future service.
<b>Bolt Circle</b>	Per <i>RTC Uniform Standard Specifications and Drawings, as amended</i> .
<b>Anchor Bolt Shroud</b>	Per <i>RTC Uniform Standard Specifications and Drawings, as amended</i> .

**Table 4-2: Equipment Cabinet Specification Overview**

<b>Equipment Cabinet Style</b>	Round to match diameter below. Other shapes subject to City approval.		
<b>Diameter</b>	16 inches is preferred, 20 inches maximum.		
<b>Height</b>	5' maximum		
<b>Shroud/Cover</b>	All hardware attachments shall be hidden. Equipment cabinet and/or equipment cabinet cover shall not have a flat, horizontal surface larger than 1.5 inches.		
<b>Color</b>	Equipment cabinet and pole shall be galvanized in accordance with AASHTO M 111. If the pole is painted to match existing streetlight aesthetics, paint shall be powder coated over zinc paint (Pole and equipment cabinet shall still be galvanized).		
<b>Required Equipment</b>	Utility access	City access	Licensee access
	Per NV Energy's meter access requirements. The meter shall be recessed as much as possible into the pole base.	Hand hole	Lockable access door sized to install, maintain, and remove all small cell equipment as needed
	Utility Equipment*	City Equipment*	Licensee Equipment*
	Per NV Energy's requirements	Fused power disconnect	Per small cell carrier requirements
*All equipment shall be located internal to the equipment cabinet or recessed in the equipment cabinet to meet Utility requirements. All equipment shall be mounted per the Owner's requirements. Pole bases shall be sized to handle the listed equipment and all other equipment required by the Owner.			
<b>Equipment separation</b>	All equipment shall be separated by owner. All access doors shall be secured by owner requirements.		
<b>Ventilation</b>	Passive louvers and/or other passive ventilation systems shall be provided as the primary means of temperature control.		
<b>Motorized Ventilation</b>	If required, fan(s) shall not emit noise greater than forty-five (45) dBA measured from three (3) feet away (as measured at the height of the Equipment).		

**Table 4-3: Upper Pole Specification Overview**

<b>Upper Pole Type</b>	Per <i>RTC Uniform Standard Specifications and Drawings, as amended</i> .
<b>Potential Shroud</b>	All fixed connections shall be hidden from view.
<b>Upper Pole Diameter</b>	The upper pole shall be scaled to 0.5 to 0.75 times the size of the equipment cabinet with 10" minimum outer diameter. the City prefers a 10" upper pole diameter. The pole diameter shall be scaled such that no flat, horizontal surface larger than 1.5 inches exists between the equipment cabinet and upper pole.
<b>Electrical Separation</b>	An internal divider shall separate electrical wiring and fiber, per Owner. Separation of service shall meet City requirements.
<b>Grommets</b>	Weatherproof grommets shall be integrated into the pole design to allow cable to exit the pole, for external shrouds, without water seeping into the pole.
<b>Hand Holes</b>	A hand hole shall be provided at the top of the extension pole to maintain City fiber and electrical service for streetlights and future IOT attachments. An optional hand hole may be provided at the bottom of the upper pole.

**Table 4-4: Cantenna Specification Overview**

<b>Cantenna Diameter</b>	14-inch maximum outer diameter with shroud.
<b>Cantenna Height</b>	The cantenna height - including antenna, radio equipment, conduit or wires, brackets, transition shroud, and all other hardware required for a complete installation - from the top of the pole to the top of the cantenna shall not exceed thirty-six (36) inches.
<b>Antenna Enclosure</b>	If an antenna is located on the side of the pole, the antenna, radio equipment, brackets, and all other hardware required for a complete installation shall fit behind a 38"H x 16"W x 12"D maximum shroud, securely strapped to the pole.
<b>Shroud</b>	The antenna and antenna pole attachment shall be shrouded to meet City's aesthetics. A tapered transition between the upper pole and cantenna shall be included.
<b>Color</b>	Antenna shroud shall be colored to match pole.
<b>Warning Label</b>	If required, radio frequency warning labels shall be mounted exterior to the pole.
<b>Owner Identification</b>	A 4-inch by 6-inch (maximum) plate with the Licensee's name, location identifying information, and emergency telephone number shall be permanently fixed to the pole.

## 4.5 Placement Requirements

A Type 3 combination small cell and streetlight pole should only be located where an existing pole can be removed and replaced, or at a new location where it has been identified that a streetlight is necessary. Type 3 poles shall be owned by the applicant. When submitting to the City as a privately-owned Type 3 pole, the pole shall be located as follows:

- In a manner that does not impede, obstruct, or hinder pedestrian or vehicular travel.
- In alignment with existing utility poles, and streetlights.
- With appropriate clearance from existing utilities.
- Outside of clear zones at intersection corners per *RTC Uniform Standard Specifications and Drawings, as amended*. Any new Type 3 pole general location and spacing shall be as determined by the *RTC Uniform Standard Specifications and Drawings, as amended*.

# 5 FREESTANDING SMALL CELL INFRASTRUCTURE

## 5.1 Purpose

This chapter of the Guidelines is to be used when installing a freestanding small cell. Refer to Chapter 4 for projects involving combination small cell installations.

## 5.2 General Guidance

The specifications provided in this chapter are for single carrier with single technology installations within the public ROW only. Dual carrier, dual technology installations, or small cell locations not in the public ROW may vary from these guidelines with City approval.

**Figure 5-1: Freestanding Small Cell Pole**



Photo courtesy of Aero Wireless Group

All freestanding small cell permitting applications shall be approved by the City prior to installation. All equipment shall meet the City's design aesthetics. The same small cell pole aesthetic is to be used along adjacent blocks to maintain a cohesive appearance. Freestanding small cell aesthetics and proposed locations shall meet Requirements. All small cell carrier equipment shall be housed internal to the equipment cabinet or hidden behind the antenna. No network provider equipment shall be strapped to the outside of the pole. If a dual-carrier pole is approved by the City, all the network provider equipment shall be located internal to the pole and antenna.

Deviations from these Guidelines shall be approved on a case-by-case basis by the City prior to installation

## 5.3 Basis of Design

The following pages describe the small cell requirements for installation in the City's ROW.

The pole design shall match the aesthetics of existing streetlights installed adjacent to the pole. The Licensee shall perform a visual inspection prior to submitting a permitting application to determine existing aesthetics.

The small cell components shall be sized to be visually pleasing. For a pole to be considered visually pleasing, the transition between the equipment cabinet and upper pole should be considered. A decorative transition shall be installed over the equipment cabinet upper bolts, or decorative base cover shall be installed to match the equipment cabinet size. The upper pole shall be per the *RTC Uniform Standard Specifications and Drawings, as amended*. All hardware connections shall be hidden from view. No horizontal flat spaces greater than 1.5 inches shall exist on the equipment cabinet to prevent cups, trash, and other objects from being placed on the equipment cabinet. Each pole component shall be architecturally compatible to create a cohesive aesthetic. An example of an unacceptable small cell installation, and acceptable installation can be found in Figures 5-2 and 5-3.



Figure 5-2: Unacceptable Type 4 Installation

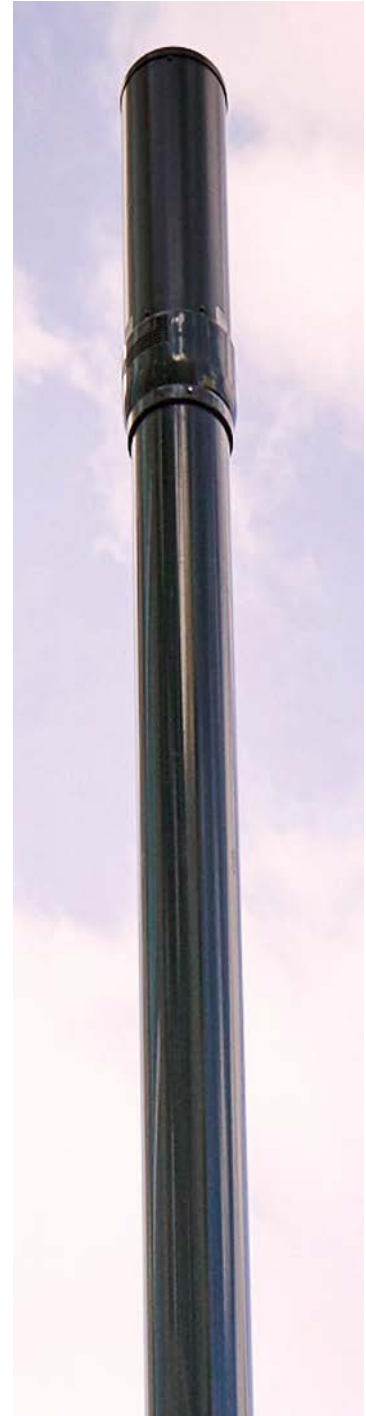


Cantenna must include a smooth transition between upper pole and cantenna.

Conduit, mounting bracket, and other hardware must be hidden behind a cantenna or in a shroud

All conduit, wires, and other hardware shall be located internal to the upper pole

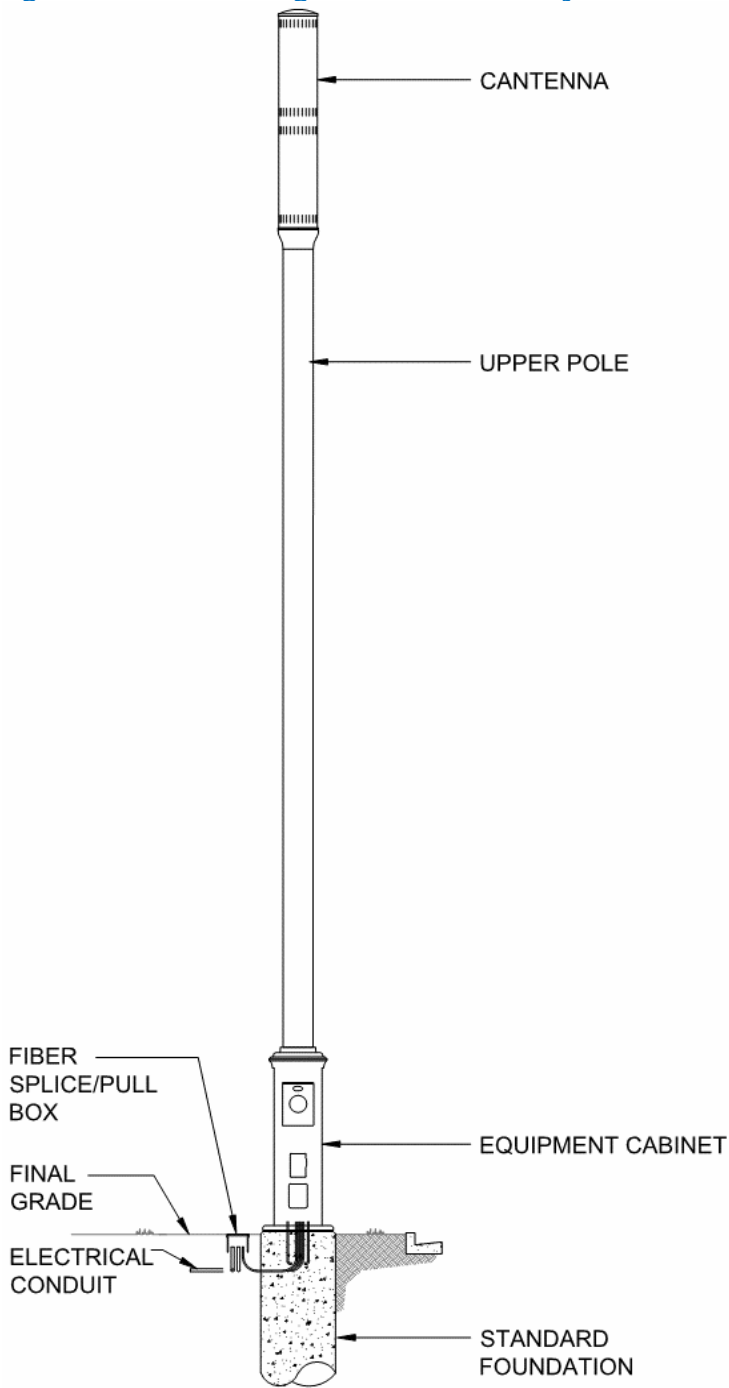
Figure 5-3: Acceptable Type 4 Installation





Freestanding small cell pole components include the foundation, equipment cabinet, upper pole, antenna, and all hardware and electrical equipment necessary for a complete assembly, as shown in Figure 5-4.

Figure 5-4: Freestanding Small Cell Assembly



## 5.4 Freestanding Small Cell Specification Overview

**Table 5-1: Freestanding Small Cell Infrastructure Specification Overview**

<b>Electrical Service</b>	Per City and NV Energy's requirements	
<b>Pole Type</b>	Per the <i>RTC Uniform Standard Specifications and Drawings, as amended</i>	
<b>Pole Color</b>	Per the <i>RTC Uniform Standard Specifications and Drawings, as amended</i> . If the pole is painted to match existing streetlight aesthetics, paint shall be powder coated over zinc paint (Pole and equipment cabinet shall still be galvanized).	
<b>Pole Height</b>	The freestanding small cell shall not exceed thirty-five (35) feet. Pole shall be measured from the top of the foundation to the top of the cantenna.	
<b>Design Wind Velocity</b>	Per the <i>RTC Uniform Standard Specifications and Drawings, as amended</i>	
<b>Foundation</b>	Per the <i>RTC Uniform Standard Specifications and Drawings, as amended</i>	
<b>Conduit Sweeps in Foundation</b>	Eight (8) 2" PVC conduit sweeps shall be required. Conduit shall accommodate small cell carrier electrical and fiber with up to four (4) spare sweeps for future service.	
<b>Bolt Circle</b>	Per the <i>RTC Uniform Standard Specifications and Drawings, as amended</i>	
<b>Anchor Bolt Shroud</b>	Anchor bolts shall either be hidden from view, preferred, or treated and painted to match the pole color with City approval.	
<b>Equipment Cabinet Style</b>	Round to match diameter below. Other shapes subject to City approval.	
<b>Equipment Cabinet Diameter</b>	16 inches is preferred, 20 inches maximum.	
<b>Equipment Cabinet Height</b>	5' maximum	
<b>Equipment Cabinet Shroud/Cover</b>	All hardware attachments shall be hidden. Equipment cabinet and equipment cabinet cover shall not have a flat, horizontal surface larger than 1.5 inches.	
<b>Equipment Cabinet Access Doors</b>	Lockable access door sized to install, maintain, and remove all small cell equipment as needed shall meet Licensee's requirements. Utility access shall be per NV Energy's requirements. The meter shall be recessed into the pole base.	
<b>Equipment Cabinet Required Equipment</b>	All equipment shall be located internal to the equipment cabinet or recessed as much as possible in the equipment cabinet to meet Utility requirements. All equipment shall be mounted per the Owner's requirements. Pole bases shall be sized to handle the listed equipment and all other equipment required by the Owner.	
	<b>Utility Equipment</b>	<b>Licensee Equipment</b>
	Per NV Energy requirements	Per small cell carrier requirements
<b>Ventilation</b>	Passive louvers and/or other passive ventilation systems shall be provided as the primary means of temperature control.	
<b>Motorized Ventilation</b>	If required, fan(s) shall not emit noise greater than forty-five (45) dBA measured from three (3) feet away (as measured at the height of the Equipment).	
<b>Upper Pole Diameter</b>	Per the <i>RTC Uniform Standard Specifications and Drawings, as amended</i> . The pole diameter shall be scaled such that no flat, horizontal surface larger than 1.5 inches exists between the equipment cabinet and upper pole.	
<b>Cantenna</b>	Antenna and pole attachment shall be shrouded to meet City aesthetics. A tapered transition between the upper pole and cantenna shall be included	
<b>Cantenna Diameter</b>	14-inch maximum outer diameter with shroud	
<b>Cantenna Height</b>	The cantenna height - including antenna, radio equipment, brackets, transition shroud, and all other hardware required for a complete installation - to the pole shall not exceed thirty-six (36) inches.	
<b>Cantenna Color</b>	Antenna shroud shall be colored to match pole	
<b>Warning Label</b>	If required, radio frequency warning labels shall be mounted exterior to the pole.	

<b>Owner Identification</b>	A 4-inch by 6-inch (maximum) plate with the Licensee's name, location identifying information, and emergency telephone number shall be permanently fixed to the pole.
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## 5.5 Placement Requirements

All Type 4 freestanding small cell poles shall be privately owned and must be permitted by the City per the Requirements

- In a manner that does not impede, obstruct, or hinder pedestrian or vehicular travel.
- So as not to be located along the frontage of a Historic building, deemed historic on a federal, state, or local level.
- So as not to significantly create a new obstruction to property sight lines.
- At the intersection of property lines, or along secondary property street facing.
- In alignment with existing utility poles, and streetlights.
- With appropriate clearance from existing utilities.
- Outside of clear zones at intersection corners per *RTC Uniform Standard Specifications and Drawings, as amended*.