

ENGINEERING DESIGN MANUAL
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ENGINEERING DESIGN MANUAL

SECTION 11– NETWORK NODES AND NODE SUPPORT POLES

DG 11.0 GENERAL

- A. Local Government Code, Chapter 284 (Chapter 284) allows certain wireless Network Providers to install in the public rights-of-way their wireless facilities, described and defined in Chapter 284, Section 284.002 as “Micro Network Nodes”, “Network Nodes”, and “Node Support Poles.”
- B. As expressly allowed by Texas Local Government Code, Chapter 284, Section 284.108, and pursuant to its police power authority reserved in Sec. 284.301¹, the City enacts these Design Guidelines in order to meet its fiduciary duty to the citizens of the City, and to give assistance and guidance to wireless telecommunications providers to assist such companies in the timely, efficient, safe and aesthetically pleasing installation of technologically competitive equipment.

DG11.1 PURPOSE

- A. The City of Pflugerville (“City”) recognizes that the State of Texas has delegated to the City the fiduciary duty, as a trustee, to manage the public right-of-way for the health, safety, and welfare of the public to Texas municipalities.
- B. The standards and procedures provided in this wireless facilities design manual are adopted to protect the health, safety, and welfare of the public by minimizing and reducing impacts to public safety within the City’s public right-of-way and to minimize and reduce impacts to the City, its residents, and visitors and to give assistance and guidance to wireless telecommunications providers to assist providers in the timely, efficient, safe, and aesthetically pleasing installation of technologically competitive equipment.
- C. Due, in part, to the increasing number of facilities in the City’s Public right-of-way, the City has adopted Chapter 96, Right-of-Way Management of public rights-of-way of the Code of Ordinances, which is applicable to all public service providers, including wireless service providers or

network providers (collectively, “providers”) as defined by chapter 284 of the Texas Local Government Code.

- D. In addition, the City has adopted Wireless Services Design Standards for Network Nodes, Node Support Poles and Transfer Facilities to provide technical criteria and details necessary for Providers seeking to install and construct network nodes and node support poles in the City’s public right-of-way.

DG11.2

APPLICABILITY

- A. The standards and procedures provided in the Wireless Services Design section are adopted to protect the health, safety and welfare of the public by minimizing and reducing impacts to public safety within the City’s Right-of-Way and reduce impacts to the City’s residents and visitors; and for the general health and welfare of public.
- B. Providers shall adhere to the requirements found in Chapter 96 Right of Way Management, of Public Rights-of-Way of the Code of Ordinances and this Wireless Facilities Design Manual for the installation, operation, maintenance, repair, modification, and replacement of wireless facilities within the City’s public right-of-way.
- C. This Wireless Facilities Design Manual is for siting and criteria for the installation of wireless facilities, including micro network nodes, network nodes, node support poles, and related ground equipment, being installed pursuant to Chapter 284 of the Texas Local Government Code. This Wireless Facilities Design Manual shall apply to any sitings, installations, colocations in, on, over or under the public rights-of-way of such wireless facilities, whether they are installed pursuant to Chapter 284, or installed pursuant to an agreement with the City in its discretion, or installed as may otherwise be allowed by state law.
- D. To the extent that the provisions of Chapter 284 of the Texas Local Government Code; Chapter 96 Right of Way Management of the Code of Ordinances; or other applicable laws, ordinances, codes, rules and regulations of the City are in conflict with provisions of this Wireless Facilities Design Manual or each other, the provisions of Chapter 284 of the Texas Local Government Code; this Wireless Facilities Design Manual; Chapter 96, Right of Way Management of the Code of Ordinances; or other applicable laws, ordinances, codes, rules and regulations of the City shall prevail and control with regard to a Provider in that order.

DG11.3 DEFINITIONS

- A. The definitions as used in Texas Local Government Code, Chapter 284, Section 284.002 shall be used in this Design Manual, unless otherwise noted in this Section 2, below.²
1. *Abandon* and its derivatives means the facilities installed in the right-of-way (including by way of example but not limited to: poles, wires, conduit, manholes, hand holes, cuts, network nodes and node support poles, or portion thereof) that have been left by Provider in an unused or non-functioning condition for more than 120 consecutive calendar days unless, after notice to Provider, Provider has established to the reasonable satisfaction of the City that the applicable facilities, or portion thereof, is still in active use.
 2. *Antenna* means communications equipment that transmits or receives electromagnetic radio frequency signals used in the provision of wireless services.
 3. *Applicable codes* means:
 - (A) uniform building, fire, electrical, plumbing, or mechanical codes adopted by a recognized national code organization; and
 - (B) local amendments to those codes to the extent not inconsistent with Chapter 284.
 4. *City* means the City of Pflugerville, Texas or its lawful successor and its officers and employees.
 5. *City Council* means the municipal governing body of the City of Pflugerville, Texas.
 6. *City Manager* shall mean City Manager or designee.
 7. *Chapter 284* means Tex. Loc. Gov. Code, Chapter 284, as it exists or may be amended.
 8. *Collocate* and *collocation* mean the installation, mounting, maintenance, modification, operation, or replacement of network nodes in a public right-of-way on or adjacent to a pole.

9. *Concealment or Camouflaged* means any Wireless Facility or Pole that is covered, blended, painted, disguised, camouflaged or otherwise concealed such that the Wireless Facility blends into the surrounding environment and is visually unobtrusive as allowed as a condition for City advance approval under Chapter 284, Sec. 284.105 in Historic or Design Districts. A Concealed or Camouflaged Wireless Facility or Pole also includes any Wireless Facility or Pole conforming to the surrounding area in which the Wireless Facility or Pole is located and may include, but is not limited to hidden beneath a façade, blended with surrounding area design, painted to match the supporting area, or disguised with artificial tree branches.
10. *Decorative pole* means a streetlight pole specially designed and placed for aesthetic purposes and on which no appurtenances or attachments, other than specially designed informational or directional signage or temporary holiday or special event attachments, have been placed or are permitted to be placed according to nondiscriminatory municipal codes.
11. *Design District* means an area that is zoned, or otherwise designated by municipal code, and for which the City maintains and enforces unique design and aesthetic standards on a uniform and nondiscriminatory basis.
12. *Disaster emergency or disaster or emergency* means an imminent, impending, or actual natural or humanly induced situation wherein the health, safety, or welfare of the residents of the City is threatened, and includes, but is not limited to any declaration of emergency by City state or federal governmental authorities.
13. *Distributed Antenna System or DAS* shall be included as a type of “Network Node.”
14. *Easement* means and shall include any public easement or other compatible use created by dedication, or by other means, to the City for public utility purposes or any other purpose whatsoever. "Easement" shall include a private easement used for the provision of utilities.
15. *Engineer* means the City Engineer for the City of Pflugerville, Texas, or designee.
16. *Federal Communications Commission or FCC* means the Federal Administrative Agency, or lawful successor, authorized to oversee cable television and other multi-channel regulation on a national level.

17. *Highway right-of-way* means right-of-way adjacent to a state or federal highway.
18. *Historic district* means an area that is zoned or otherwise designated as a historic district under municipal, state, or federal law.
19. *Law* means common law or a federal, state, or local law, statute, code, rule, regulation, order, or ordinance.
20. *Local* means within the geographical boundaries of the City.
21. *Location* means the City approved and lawfully permitted location for the Network Node or other communication hub; i.e., fiber optic or wireless facilities.
22. *Macro tower* means a guyed or self-supported pole or monopole greater than the height parameters prescribed by Chapter 284, Section 284.103 and that supports or is capable of supporting antennas.
23. *Mayor* means the Mayor for the City.
24. *Micro network node* means a network node that is not larger in dimension than 24 inches in length, 15 inches in width, and 12 inches in height, and that has an exterior antenna, if any, not longer than 11 inches.
25. *Municipal park* means an area that is zoned or otherwise designated by municipal code as a public park for the purpose of recreational activity.
26. *Municipally owned utility pole* means a utility pole owned or operated by a municipally owned utility, as defined by Section 11.003, Utilities Code, and located in a public right-of-way.
27. *TMUTCD* means Texas Manual of Uniform Traffic Control Devices.
28. *Network node* means communication hub with equipment at a fixed location that enables wireless communications between user equipment and a communications network. The term:
 - (A) includes:
 - (i) equipment associated with wireless communications;
 - (ii) a radio transceiver, an antenna, a battery-only backup power supply, and comparable equipment, regardless of technological configuration; and
 - (iii) coaxial or fiber-optic cable that is immediately adjacent to and directly associated with a particular collocation; and
 - (B) does not include:

- (i) an electric generator;
- (ii) a pole; or
- (iii) a macro tower

29. *Network provider* means:

- (A) a wireless service provider; or
- (B) a person that does not provide wireless services and that is not an electric utility but builds or installs on behalf of a wireless service provider:
 - (i) network nodes; or
 - (ii) node support poles or any other structure that supports or is capable of supporting a network node.

30. *Permit* means a written authorization for the use of the public right-of-way or collocation on a service pole required from a municipality before a network provider may perform an action or initiate, continue, or complete a project over which the municipality has police power authority.

31. *Pole* means a service pole, municipally owned utility pole, node support pole, or utility pole. Below are subsets of poles:

Service pole means a pole, other than a municipally owned utility pole, owned or operated by a municipality and located in a public right-of-way, including:

- (A) a pole that supports traffic control functions;
- (B) a structure for signage;
- (C) a pole that supports lighting, other than a decorative pole; and
- (D) a pole or similar structure owned or operated by a municipality and supporting only network nodes.

Substitution pole shall mean a pole that is installed that will replace an existing municipal or utility pole that serve the original intended purpose and support the new network node

Node support pole means a pole installed by a network provider for the primary purpose of supporting a network

Utility pole means a pole that provides:

- (A) electric distribution with a voltage rating of not more than 34.5 kilovolts; or
- (B) services of a telecommunications provider, as defined by Chapter 284.

32. *Private easement* means an easement or other real property right that is only for the benefit of the grantor and grantee and their successors and assigns.
33. *Provider* has the same meaning as “Network Provider.”
34. *Public right-of-way* means the area on, below, or above a public roadway, highway, street, public sidewalk, alley, waterway, or utility easement in which the municipality has an interest. The term does not include:
 - (A) a private easement; or
 - (B) the airwaves above a public right-of-way with regard to wireless telecommunications.
35. *Public right-of-way management ordinance* means an ordinance that complies with Chapter 284, Subchapter C.
36. *SCADA or Supervisory Control and Data Acquisition systems* means a category of software application programs and hardware used by the City for process monitor, control and gathering of data in real time from remote locations in order to monitor equipment and conditions of the City public water and wastewater utility facilities. These systems may utilize both cable and wireless communications.
37. *Small cell* shall be included as a type of “Network Node” *Street* means only the paved portion of the right-of-way used for vehicular travel, being the area between the inside of the curb to the inside of the opposite curb, or the area between the two parallel edges of the paved roadway for vehicular travel where there is no curb. A “Street” is generally part of, but smaller in width than the width of the entire right-of-way, while a right-of-way may include sidewalks and utility easements, a “Street” does not. A “street” does not include the curb or the sidewalk, if either are present at the time of a permit application or if added later.
38. *SWPPP* shall mean Storm Water Pollution Prevention Plan.
39. *TAS* means Texas Accessibility Standards.
40. *Traffic Signal* means any device, whether manually, electrically, or mechanically operated by which traffic is alternately directed to stop and to proceed.
41. *Transport facility* means each transmission path physically within a public right-of-way, extending with a physical line from a network node directly

to the network, for the purpose of providing backhaul for network nodes.

42. *Underground Requirement Area* shall mean means an area where poles, overhead wires, and associated overhead or above ground structures have been removed and buried or have been approved for burial underground pursuant to municipal ordinances, zoning regulations, state law, private deed restrictions, and other public or private restrictions, that prohibit installing aboveground structures in a public right-of-way. Without first obtaining zoning or land use approval
43. *Wireless service* means any service, using licensed or unlicensed wireless spectrum, including the use of Wi-Fi, whether at a fixed location or mobile, provided to the public using a network node.
44. *Wireless service provider* means a person that provides wireless service to the public.
45. *Wireless facilities* mean “Micro Network Nodes,” “Network Nodes,” and “Node Support Poles” as defined in Texas Local Government Code Chapter 284.

DG11.4 PERMITTING

A. General Requirements And Information

A provider shall not install, modify, or relocate a network node or install, modify, or relocate a node support pole within the public right-of-way without first obtaining a right-of-way permit from the city. Prior to installation, modification, or relocation of a network node or installation, modification, or relocation of a node support pole, provider shall complete and submit to the city a commercial building (electrical) permit application and a right-of-way permit application in the form provided by the city, along with standard required documents and the following items:

1. **Payment.** Permit application fee and all other fees required under chapter 284, including but not limited to annual fees set forth in Section 284.053(a) of Chapter 284, as such fees may be adjusted from time to time

pursuant to Section 284.054 of Chapter 284, and fees set forth in Section 284.055 and Section 284.056 of Chapter 284, as applicable;

2. Map. An aerial map showing the location of the existing pole or structure to which the network node is proposed to be attached, and a street view image of the same;
3. GIS data. Geographic information system (GIS) data for the location of each proposed wireless facility or node support pole in the format acceptable to the City;
4. Size Limits. Network Providers shall provide detailed drawings, with calculations to show strict conformity to the size limitations as set forth in Chapter 284, in accordance with, but not limited to Chapter 284, Sec. 284.002, size of a Micro Network Node, Sec. 284.003, Size of Network Nodes, and Sec. 284.103, Max. pole height, with each application and with each request for a permit for each location.
5. Non-interference with City Safety Communication Networks. Documentation identifying the frequency on which the proposed network node will operate and a certification that the proposed network node shall not cause any interference with the City's traffic signal light system, public safety radio system, private police cell system, or other City communications components in accordance with Chapter 284, Sec. 284.304;

It shall be the responsibility of the Network Provider to evaluate, prior to making application for permit, the compatibility between the existing City infrastructure and Provider's proposed Network Node. A Network Node shall not be installed in a location that causes any interference. Network Nodes shall not be allowed on City's public safety radio infrastructure.
6. Emergency Contacts. The names and telephone numbers of at least two persons serving as emergency contacts for the Provider who can be reached by telephone 24 hours a day, seven days a week, in the event of an emergency;
7. Electrical Drawings. Sealed engineering drawings for the electrical service providing power to the proposed network node, which must include the conduit size, circuit size, calculations for amp, and distances running. Provider shall use 120 voltage when connecting to any City service pole or decorative pole and shall provide a disconnect switch and key to meter enclosure upon inspection. The City is entitled to disconnect power to the network node or other wireless facilities in emergency situations;
8. Engineering Drawings. Scaled dimensional construction and engineering drawings indicating the current public right-of-way line and

showing any proposed underground conduit and equipment and its spacing from the City's existing utility facilities. Such drawings shall also show a sectional profile of the public right-of-way and identify all existing utilities and existing utility conflicts;

9. State and Federal Rights-of-way permit. If the project lies within right-of-way adjacent to a state or federal highway, the Provider must provide evidence of a permit from the state or federal government; and
10. Daily Work Information. If the work proposed in the Right-of-Way Permit application involves more than five hundred (500) feet of continuous trenching or boring or the installation of more than three (3) new node support poles or more than three (3) electrical meter pedestals or ground boxes, then the Provider shall submit daily work location information, before work can begin;
11. Other. All other information required to be submitted by a right of user in connection with a Right of Way Permit application under Chapter 13, Article III (Management of Public Rights-of-Way) of the Code of Ordinances or other applicable laws, ordinances, codes, rules and regulations of the City.
12. Traffic Control/Storm Water Pollution Prevention/Trench Safety. Where required by the City, based on the proposed scope of work, Provider shall submit a traffic control plan, storm water pollution prevention plan, and/or trench safety plan;

B. Attachments To Existing Poles Or Structures

In addition to the items in the general requirements and information section 3.1, provider will submit the following items prior to installation, modification, or relocation of a network node on an existing pole or structure or modification or relocation of an existing node support pole:

1. Construction and engineering drawings prepared by a professional engineer licensed in the State of Texas, and for wireless facilities proposed to be attached to a service pole, a decorative pole or other City-owned or -controlled structure, a certification from the engineer that the existing pole or structure and its foundations have sufficient structural stability to support the proposed network node and can bear the wind load without pole modification, or in the event the installation will require pole re-enforcement, that such re-enforced pole will have sufficient structural stability to support the proposed network node and can bear the wind load without further pole modification. Such construction and engineering drawings must also address the design of the connection of any item to the pole. If pole re-enforcement is

necessary, Provider shall provide construction and engineering drawings for the proposed alteration to the existing pole. Any re-enforcement or replacement of a pole shall match the color of the existing pole. Any pole re-enforcement or replacement shall be at Provider's sole cost;

2. A certificate that the network node complies with applicable regulations of the Federal Communications Commission;

C. SUBSTITUTION OF EXISTING MUNICIPAL POLES

A Provider shall not replace an existing Municipal Service Pole without first obtaining a Right-of-Way permit from the City. Each permit application shall disclose if it is a proposed substitution pole.

A Provider may elect to remove an existing Municipal Service Pole, replace it with a similar pole (with some modification) that serves primarily as a Node Support Pole in addition to the original purpose. Once construction of a Substitution Pole is complete, it shall become a Node Support Pole and shall be the responsibility of the Provider to maintain.

Maintenance – Streetlights. If the Substitution Pole also serves as a street light, City agrees to perform routine maintenance, at Providers expense, of the street light including maintenance and all repair and/or replacement of switches, bulbs, ballasts, and starters in accordance with City's standard practices and procedures for maintaining City's standard street lights. Nothing herein shall obligate City to undertake pole replacement, pole repair, decorative modifications, painting, or other repairs deemed aesthetic in nature. Pole replacement, pole repair, and aesthetic improvements shall be at the sole cost and expense of Provider.

D. INSTALLATION OF NETWORK NODES ON NEW POLES

In addition to the items in the General Requirements and Information Section 11.4.A, Provider will submit the following items prior to installation or modification of a new node support pole or a new network node on a new support pole:

1. Scaled dimensional drawings or pictures of the proposed node support pole and any other proposed wireless facilities to be installed in connection with the proposal, indicating the spacing from existing curbs, driveways, sidewalks, and other existing poles. This shall include

a before-and-after street view image of the pole and all proposed attachments and associated standalone equipment;

E. INSTALLATION OF TRANSPORT FACILITIES

A Provider shall not install or modify a new transport facility within the public right-of-way without first obtaining a Right-of-Way Permit from the City. Before beginning excavation in any public right-of-way, Provider shall be responsible for complying with all Laws relating to verifying the location of existing utility lines and facilities and avoiding encroachment thereon, including the requirements of Section 11, Wireless Facilities Design of the Engineering Design Manual.

DG11.5 REVIEW PROCESS

- A. Determination of Application Completeness: The City shall determine whether the Right-Of-Way permit application is complete and notify the applicant of that determination:
1. *For network nodes and node support poles:* no later than thirty (30) calendar days after the date the City receives the permit application.
 2. *For a Transport Facility:* no later than ten (10) calendar days after the date the City receives the permit application.
- B. Approval or Denial of Application: The City shall approve or deny a completed application after the date it is submitted to the City:
1. *For network nodes:* No later than sixty (60) calendar days after the date the City receives the complete application.
 2. *For Network Support Poles:* No later than one hundred and fifty (150) calendar days after the date the City receives the complete application.
 3. *For Transport Facilities:* No later than twenty-one (21) calendar days after the City receives the complete application.
- C. Basis for Denial of Application: If an application is denied by the City, the City shall document the basis for the denial, including the specific applicable City code provisions or other City rules, regulations, or other law upon which the denial is based. The documentation generated for the denial, including the basis for such denial shall be sent by electronic mail to the applicant on or before the date that the City denies the application.
- D. Resubmission of Denied Application: The applicant may cure the deficiencies identified in the denial application.
1. The applicant has 30 calendar days from the date the City denies the completed application to cure the deficiencies identified in the denial documentation without paying an additional application fee, other than any fee for actual costs incurred by the City.
 2. The City shall approve or deny the revised completed application after a denial not later than the 90th calendar day after the City receives the revised

completed application. The City's review shall be limited to the deficiencies cited in the denial documentation.

- E. Nondiscriminatory Review: Each completed application shall be processed by the City on a nondiscriminatory basis.

DG11.6 TIME OF INSTALLATION

A network provider shall begin installation for which a permit is granted no later than six (6) months after final approval of the application and shall diligently pursue installation to completion. The City Engineer may in his/her sole discretion grant reasonable extensions of time as requested by the network provider.

DG11.7 APPLICABLE FEES AND RENTAL RATES TO THE CITY

PLEASE REFER TO THE LATEST VERSION OF THE CITY OF PFLUGERVILLE FEE SCHEDULE.

DG11.8 ELECTRICAL SUPPLY

- A. Network Provider shall be responsible for obtaining any required electrical power service to the Micro Network Node, Network Node facilities, Node Support Poles and ground equipment. The City shall not be liable to the Network Provider for any stoppages or shortages of electrical power furnished to the Micro Network Node, Network Node facilities, Node Support Poles or ground equipment, including without limitation, stoppages or shortages caused by any act, omission, or requirement of the public utility serving the structure or the act or omission of any other tenant or Network Provider of the structure, or for any other cause beyond the control of the City.
- B. Network Provider shall be prohibited from installing generators or back-up generators in the Public Right-of-Way in accordance with Chapter 284.

DG11.9 NETWORK NODE AND NODE SUPPORT POLE REQUIREMENTS

Provider shall, at its own cost and expense, install all wireless facilities in a good and workmanlike manner in accordance with the requirements promulgated by this Wireless Facilities Design, Section 11 of the Engineering Design Manual, Chapter 96 of the Right-of-Way Management of the Code of Ordinances, Chapter 284 of

the Texas Local Government Code, and all other applicable laws, ordinances, codes, rules and regulations of the City, the state, and the United States (collectively, “laws”), as such may be amended from time to time. Provider’s work shall be subject to the regulation of the City. All work done in connection with the installation, operation, maintenance, repair, modification, and/or replacement of wireless facilities shall be in compliance with all applicable laws. The following requirements shall apply to installation, operation, maintenance, repair, modification and/or replacement of wireless facilities:

1. Concealment. Wireless facilities shall be concealed or enclosed as much as possible in an equipment box, cabinet or other enclosure that may include ventilation openings. External cables and wires hanging off a pole shall be sheathed or enclosed in a conduit, so that wires are protected and not visible or visually minimized to the extent possible in strict accordance with Chapter 96, (Right-of-Way Management) of the Code of Ordinances and other applicable ordinances, except to the extent not consistent with Chapter 284;
2. Visibility triangles. No wireless facility shall be located or placed in a manner that encroaches on existing or proposed city site visibility triangles;
3. Meters. Electrical meters shall not be mounted on a service pole, decorative pole or other city-owned or -controlled structure. Standalone electrical meters shall be located on or within a pad-mounted pedestal enclosure that is powder coated dark bronze. Provider may be required to provide a key (#2195) to each meter upon inspection by city. All electrical meters serving network nodes must display the provider’s name and contact information;
4. Power disconnect. All power to a network node located on or attached to a service pole, decorative pole or other City-owned or -controlled structure must be able to be disconnected to provide a safe working environment;
5. City conduit. Use of city conduits for a Provider’s wireless facilities is prohibited;
6. Height of attachments. All attachments on all service poles shall be at least 8 feet above grade, in accordance with Chapter 284, **Section 284.108** (a) (1) - (2) and if a Network Node attachment is projecting toward the street, for the safety and protection of the public and vehicular traffic, the attachment shall be installed no less than seventeen (17) feet above the ground.
7. Protrusion. In accordance with Section 284.003(a)(1)(c), Section 284.003 (a)(2)(c) and Section 284.003(a)(3)(b) of Chapter 284, no protrusion from the outer circumference of the existing structure or pole to which a network node is attached shall be more than two (2) feet;
8. Color. The color of network nodes shall match the color of the poles or structures to which they are attached such that the network nodes blend with the color of the poles or structures and new node support poles shall match the finish

and coating of other poles in the vicinity (i.e. Galvanized or powder-coated dark bronze);

9. Locates. Before beginning excavation in any public right-of-way, provider shall be responsible for complying with all laws relating to verifying the location of existing utility lines and facilities and avoiding encroachment thereon, including the requirements of Chapter 96, (Right-of-Way Management) of the Code of Ordinances;
10. Meeting. A pre-construction meeting is required before any work is commenced that involves installing a network node on a city pole or structure;
11. Wooden poles. Wooden node support poles are prohibited in the public right-of-way. All new node support poles located within the public right-of-way must be installed on breakaway supports that meet the requirements contained in the American Association of State Highway and Transportation officials' (AASHTO) Manual and must be in a material and color matching standard City poles unless otherwise approved by the City in writing;
12. New node support pole spacing. Unless otherwise approved by City in writing, new node support poles shall be spaced apart from existing utility poles or node support poles at the same distance as the spacing between utility or city poles in the immediate vicinity, but no less than at a minimum three hundred (300) feet from a colocated utility pole or another node support pole to minimize the hazard of poles adjacent to roadways and to minimize effect on property values and aesthetics on the area; AND
13. Identifying Labels. All colocated utility or city poles or any new node support pole shall have the contact information of the Provider conspicuously displayed (i.e. visible from an observer standing on the ground) on the pole in a permanent fashion in accordance with Section 11.19.G (Signage), for the purpose of contacting by the City or other interested parties to affect adjustment, repair, or in event of emergency. Such contact information must be kept current. Out-dated or incorrect information will result in the network node equipment being considered abandoned and action in accordance with Section 11.17.C will ensue. Contact information shall include provider name, a phone number, and physical address.

DG11.10 INSTALLATION AND INSPECTIONS

The City may perform visual inspections of any wireless facilities located in the public right-of-way as the city deems appropriate without notice. If the inspection requires physical contact with any wireless facilities, the city shall provide written

notice to the Provider within five (5) business days of the planned inspection. Provider may have a representative present during such inspection.

In the event of an emergency situation, the City may, but is not required to, notify Provider of an inspection. The City may take all actions necessary to remediate the emergency situation and the City shall notify Provider as soon as practicable after remediation is complete.

A. INSTALLATION.

1. Network Provider shall, at its own cost and expense, install the Micro Network Node, Network Node facilities, Node Support Poles and related ground equipment in a good and workmanlike manner in strict accordance with the City's rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284
2. Network Provider shall, at its own cost and expense, install the Micro Network Node, Network Node facilities, Node Support Poles and related ground equipment in a good and workmanlike manner and in accordance with the requirements promulgated by the City Engineer or designee, as such may be amended from time to time. Network Provider's work shall be subject to the regulation, control and direction of the City Engineer or designee. All work done in connection with the installation, operation, maintenance, repair, modification, and/or replacement of the Micro Network Node, Network Node facilities, Node Support Poles and related ground equipment shall be in compliance with all applicable laws, ordinances, codes, rules and regulations of the City, applicable county, the state, and the United States ("Laws").

B. INSPECTIONS.

1. The City Engineer, or designee, may perform visual inspections of any Micro Network Node, Network Node, Node Support Pole or related ground equipment located in the Right-of-Way shall be allowed in strict accordance with the City's rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284
2. The City Engineer, or designee, may perform visual inspections of any Micro Network Node, Network Node, Node Support Pole or related ground equipment located in the Right-of-Way as the City Engineer deems appropriate without notice. If the inspection requires physical contact with the Micro Network Node, Network Node, Node Support Poles or related ground equipment, the City Engineer shall provide written notice to the Network Provider within five business days of the

planned inspection. Network Provider may have a representative present during such inspection.

DG11.11 PLACEMNT OF NETWORK NODES AND NODE SUPPORT POLES

A. Generally.

In accordance with Chapter 284.102, a Network Provider shall construct and maintain Network Nodes and Node Support Poles in a manner that does not:

1. obstruct, impede, or hinder the usual travel or public safety on a public right-of-way;
2. obstruct the legal use of a public right-of-way by other utility providers;
3. violate nondiscriminatory applicable codes;
4. violate or conflict with the City's publicly disclosed public right-of-way management ordinance or this Design Manual.
5. violate the federal Americans with Disabilities Act of 1990 (42 U.S.C. Section 12101 et seq.).

B. The installation of small cell infrastructure will affect the aesthetic and functional aspects of the public spaces we experience every day. The following are general placement requirements introduce the different considerations influencing placement. More detailed requirements appear in the individual department requirements presented in UDC Chapter 13 Not impeding, obstructing, or hindering pedestrian or vehicular travel;

1. 2.5 ft. away from back of curb
2. All equipment and support structures are to be installed such that they do not obstruct, impede or hinder vehicular, pedestrian or bicycle travel, including any facilities necessary to meet Americans with Disabilities Act of 1990 along with any updates to the ADA guidelines. A clear pedestrian path shall be maintained at all locations, and the minimum width of the path may vary and will be determined by City Engineer with each application Example can be seen in Figure 1.

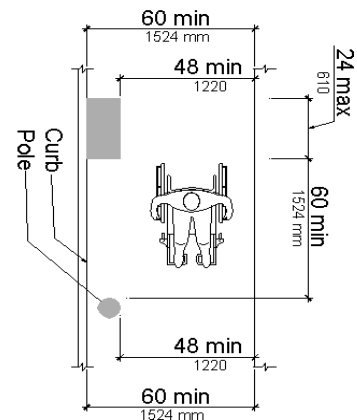


Figure 1. Example of pedestrian clearance for pole installation.

- Equidistant between trees when possible, with a minimum of 15 feet separation;
- With clearance from existing utilities as required by the City of Pflugerville design criteria;
- Outside of clear sight triangles:
 - 5-foot leg pedestrian sight triangle at each residential driveway,
 - 10-foot leg pedestrian sight triangle at each driveway and alley,
 - 30-foot leg corner sight triangle,
 - Roadway sight triangles shall be based on AASHTO standards for each driveway, alley, and intersection.

B. General Requirements and Information:

1. *Size Limits.* Network Providers shall provide detailed drawings, with calculations to show strict conformity to the size limitations as set forth in Chapter 284, in accordance with, but not limited to Chapter 284, Sec. 284.002, size of a Micro Network Node, Sec. 284.003, Size of Network Nodes, and Sec. 284.103, Max. pole height, with each application and with each request for a permit for each location.³
2. *State and Federal Rights-of-way permit.* If the project lies within a Highway Right-of-Way, the applicant must provide evidence of a permit from the State or Federal Government.
3. *Confirmation of non-interference with City Safety Communication or SCADA Networks.*
 - a. The Network Provider shall provide analysis that the proposed network node shall not cause any harmful interference with City public safety radio system, traffic signal light system, SCADA system, or other City safety communications components in accordance with Chapter 284,
 - b. It shall be the responsibility of the Network Provider to evaluate, prior to making application for permit, the compatibility between the existing City infrastructure and Provider’s proposed Network Node. A Network Node shall not be installed in a location that causes any harmful radio frequency interference. Network Nodes shall not be allowed on City’s public safety radio infrastructure.
4. *Improperly Located Network Node facilities, Node Support Poles and related ground equipment:*
 - a. Improperly Located Network Node facilities, Node Support Poles and related ground equipment shall not impede pedestrian or vehicular traffic in the Right-of-Way. If any Network Node

facilities, Node Support Poles or ground equipment are installed in a location that is not in accordance with the plans approved by the City Engineer and impedes pedestrian or vehicular traffic or does not comply or otherwise renders the Right-of-Way non-compliant with applicable Laws, including the American Disabilities Act, then Network Provider shall promptly remove the Network Node facilities, Node Support Poles or ground equipment at the Network Provider's cost.

- b. Notice to Remove unauthorized facilities and relocate and penalty: After 30 days' notice to remove of Network Node facilities, Node Support Poles or ground equipment that is located in the incorrect permitted location, if not relocated the Network Provider shall be subject to a penalty according to the latest version of the EDM until the Network Node facilities, Node Support Poles or ground equipment is relocated to the correct area within the permitted Location, regardless of whether or not the Network Provider's contractor, subcontractor, or vendor installed the Network Node facilities, Node Support Poles or ground equipment in strict conformity with the City Rights-of-way management ord., and other applicable ordinances concerning improperly located facilities in the rights-of-way.

C. Underground Requirement Areas.

1. In accordance with Chapter 284.107, a Network Provider shall, in relation to installation for which the City approved a permit application, comply with nondiscriminatory undergrounding requirements, including municipal ordinances, zoning regulations, state law, private deed restrictions, and other public or private restrictions, that prohibit installing aboveground structures in a public right-of-way without first obtaining zoning or land use approval.
2. If a location is designated by the City to transition to be an Underground Requirement Area, then a Network Provider's permit for the location of the Micro Network Node, Network Node, Node Support Pole, and related ground equipment at such location will be revoked 90 days after the designation, with removal of said the Micro Network Node, Network Node, Node Support Pole, and related ground equipment at such location within 90 days of such designation, or as otherwise reasonably allowed by the City for the transition of other overhead facilities.

3. Before commencing underground installation, Texas 811 and City of Pflugerville Public Works (512-990-6400) must be called so that the area can be flagged for underground utilities.

D. Network Node facilities placement:

1. *Right-of-Way*: Network Node facilities, Node Support Poles and related ground equipment shall be placed, as much as possible, within two feet of the outer edge of the Right-of-Way line to minimize any obstruction, impediment, or hindrance to the usual travel or public safety on a public right-of-way.
2. *Height above ground*. Network Node attachments to a pole shall be installed at least eight (8) feet above the ground in accordance with Chapter 284, Sec. 284.108, and if a Network Node attachment is projecting toward the street, for the safety and protection of the public and vehicular traffic, the attachment shall be installed no less than sixteen (16) feet above the ground.
3. *Protrusions*. In accordance with Chapter 284, Sec. 284.003 (a) (1) (C), Sec. 284.003 (a) (2) (C) and Sec. 284.003 (a) (3) (B) no protrusion from the outer circumference of the existing structure or pole shall be more than two (2) feet.
4. *Limit on number of Network Nodes per Site*. Shall be based on the Industry Load Analysis

E. New Node Support Poles.

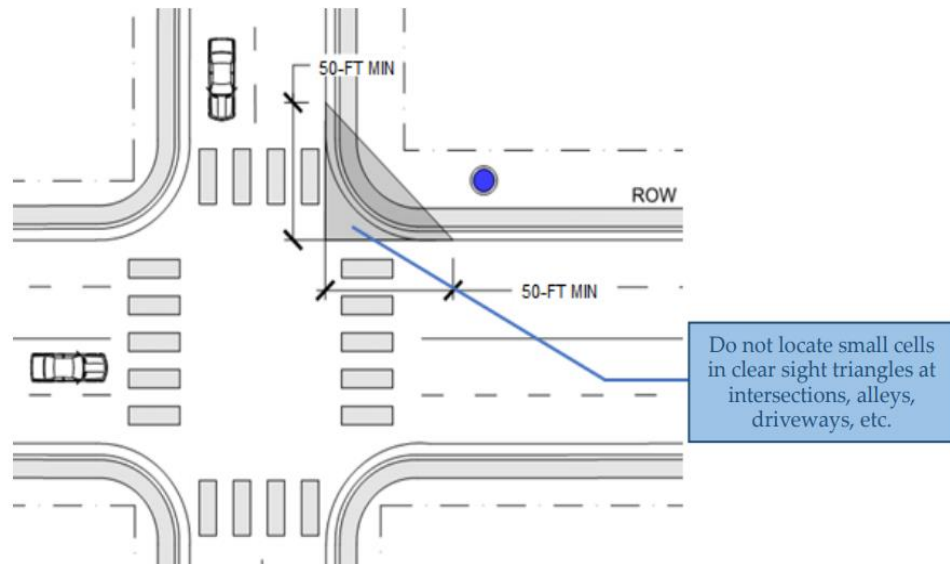
1. *New Node Support Poles Spacing*. New node support poles shall be spaced apart from existing utility poles or Node Support poles at the same as the spacing between utility poles in the immediate proximity, but no less than at a minimum 300 feet from a utility pole or another Node Support Pole to minimize the hazard of poles adjacent to road ways and to minimize effect on property values and aesthetics on the area.
2. *Height of Node Support Poles or modified Utility Pole*. In accordance with Chapter 284, a Node support pole or modified Utility Pole may not exceed the lesser of:
 - a. 10 feet in height above the tallest existing utility pole located within 500 linear feet of the new pole in the same public right-of-way; or
 - b. 55 feet above ground level.

- c. Coordination with TXDOT will be required by the applicant if the Pole is in the TXDOT ROW

F. Ground Equipment.

1. *Ground Equipment near street corners and intersections:* Ground equipment should be minimal and the least intrusive. In accordance with Chapter 284.102 (1), to minimize any obstruction, impediment, or hindrance to the usual travel or public safety on a public right-of-way the maximum line of sight required to add to safe travel of vehicular and pedestrian traffic and in order to maximize that line of sight at street corners and intersections and to minimize hazards at those locations, ground equipment may not be installed within 250 feet of a street corner or a street or driveway intersection or within the sight visibility triangle computed using the latest AASHTO design guideless, whichever is more restrictive.

Figure 2. No small cells will not impede driver's sight triangle.



Sight triangles are to be computed using the latest ASHTO design guidelines.

Figure 3 Shows In alignment with existing trees, utility poles, or streetlights.



Figure 3. Small cell towers will be aligned with trees and existing vertical infrastructure.

- i. Non-Preferred Locations. The applicant should avoid locating new support structures, towers, or utility poles within designated open space, conservation areas, or within special interest area districts depending on the location, the Applicant may need to meet additional design requirements for placement in special interest areas. If possible, it is preferred to avoid installation in residential neighborhoods, especially in locations where there as a commercial or industrial area nearby.
- ii. Not located along the frontage of a building deemed “historic” on any level;
- iii. Not to significantly create a new obstruction to property sight lines;
- iv. At the intersection of property lines or along secondary property street facing;
- v. Freestanding small cells which shall be a minimum of 300 feet apart, radially, between another Network Provider’s pole. Poles owned by the same Network Provider shall be 750 feet apart radially. See figure 4 as an example of the radial distance between small cell towers. This radius extends around corners and into alleys.
- vi. Not located within 100’ of the apron of a fire station or other adjacent emergency service facility; and
- vii. Not encroach into a municipal park beyond the right of way line

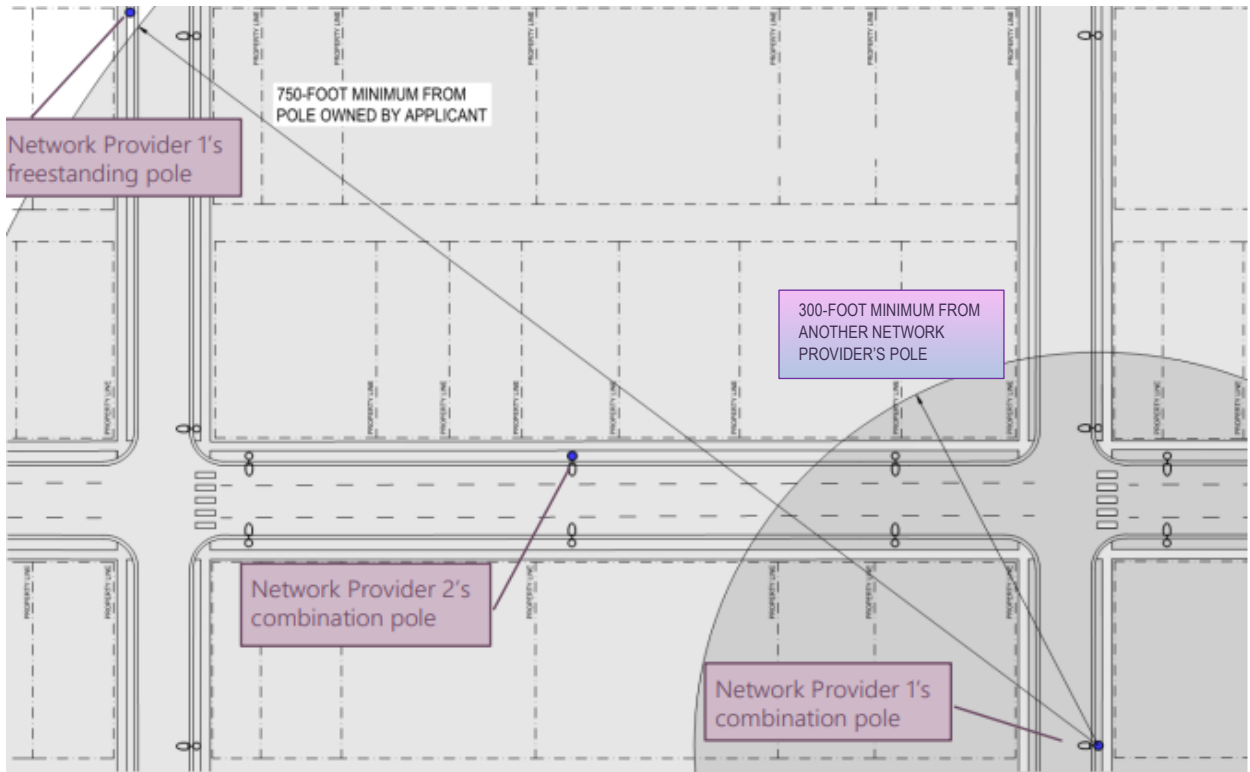


Figure 4. Freestanding Small Cell Spacing Radius

2. *Ground Equipment near Municipal Parks.* For the safety of Municipal park patrons, particularly small children, and to allow full line of sights near Municipal park property, the Network Provider shall not install Ground Equipment in a Right-of-Way that is within a Park or within 250 feet of the boundary line of a Park, unless approved by the City Engineer, or designee in writing.
3. *Minimize Ground equipment density:*
 In accordance with Chapter 284, Sec. 284.102 (1) to enhance the safety requirements of line of sight of pedestrians, particularly small children, the City Engineer, or designee, may deny a request for a proposed Location if the Network Provider installs Network Node ground equipment where existing ground equipment within 300 feet already occupies a footprint of 25 sq. ft. or more.
4. *Water, Sewer and Storm Drainage Lines:*
 Special precautions must be taken where underground fiber optic cable is installed in Public Street right-of-ways commonly used for utility corridors.

- a. Underground utilities and service connections must be identified prior to excavation. City Utility locates 512-990-6400, “Dig Alert,” “One Call,” or similar underground utility contractor must be contacted to identify the locations of subsurface utilities.
- b. If temporary disruption of service is required, the installation contractor must notify the City, the service provider, and customers at least 24 48 hours in advance as stated in the application and in the preconstruction meeting. No service on such lines may be disrupted until prior approval is received from the City and the service provider.
- c. At locations where the fiber optic cable will cross other subsurface utilities or structures, the cable must be installed to provide a minimum of 18 inches of vertical clearance between it and the other subsurface utilities or structures, while still maintaining the other applicable minimum depth requirement. To maintain the minimum depth requirement, the cable must be installed under the existing utility. If the minimum 18-inch clearance cannot be obtained between the proposed cable facility and the existing utility, the fiber optic cable must be encased a minimum of 5 feet in each direction over the centerline of said utility in steel pipe to avoid future damage.
- d. *Existing Water Lines, Sewer Lines and Storm Drainage Lines:* No communication lines shall be placed on top of a water line but may be placed to the side of a water line at least 5 feet from the nearest edge of the water line. When crossing a water line, an 18-inch vertical or horizontal clearance must be maintained. Poles must be at least 5 feet from a water line.

5. *Blocking streets, roads, alleys or lanes:*

Texas Department of Transportation (TxDOT) standards must be followed for work zone areas that will block or abut streets, roads, alleys or lanes. An actual traffic plan must be submitted to the City prior to construction. This includes an actual traffic control plan layout and not just TXDOT and/or TMUTCD details.

G. Service Poles:

1. *In accordance with Agreement:* Installations on all Service Poles shall be in accordance with a City Service Pole Use agreement as allowed by Chapter 284, A standard City Service Pole Use agreement form shall be adopted by Resolution by City Council. City Council authorizes the City

Manager to execute City Service Pole Use agreements in substantial similar form.

2. *Required industry standard pole load analysis:* Installations on all Service Poles and traffic signals shall have an industry standard pole load analysis completed and submitted to the municipality with each permit application indicating that the Service Pole to which the Network Node is to be attached will safely support the load, in accordance with Chapter 284.
3. *Height of attachments:* All attachments on all Poles shall be at least 8 feet above grade, in accordance with Chapter 284 and if a Network Node attachment is projecting toward the street, for the safety and protection of the public and vehicular traffic, the attachment shall be installed no less than sixteen (16) feet above the ground.
4. *Installations on Traffic Signals:* Installations on all Traffic signal structures must not interfere with the integrity of the facility in any way that may compromise the safety of the public and must be in accordance with an agreement as allowed by Chapter 284, and (b). Installation of Network Node facilities on any traffic signal structures shall:
 - a. Be encased in a separate conduit than the traffic light electronics;
 - b. Have a separate electric power connection than the traffic signal structure; and
 - c. Have a separate access point than the traffic signal structure; and
5. *Installations on Street signage:* Installations on all street signage structures must not interfere with the integrity of the facility in any way that may compromise the safety of the public. Use of school traffic zone signs with flashing lights is strictly prohibited. Installation of Network Node facilities on any street signage structures that has electrics shall:
 - a. Be encased in a separate conduit than any City signage electronics;
 - b. Have a separate electric power connection than the signage structure;
 - c. Have a separate access point than the signage structure; and
 - d. Submit a pole load analysis.
6. *Restoration of City facilities and private property:* The Network Provider shall be responsible for repairing any damage to any street, street right-of-way, ditch or any structure to its original condition

immediately upon completing the installation. Any change to the slope of the land must be remedied, and there must be replacement of top soil and grass to its original condition.

DG11.12 PROHIBITED AND PREFERRED LOCATIONS OF MICRO NETWORK NODE, NETWORK NODE, NODE SUPPORT POLE AND RELATED GROUND EQUIPMENT

A. Prohibited or Restricted Areas for Certain Wireless facilities, except with Separate City Agreement or Subject to Concealment Conditions.

1. *Municipal Parks and Residential Areas.* In accordance with Chapter 284, a Network Provider may not install a Node Support Pole in a public right-of-way without the City's discretionary, nondiscriminatory, and written consent if the public right-of-way is in a Municipal park or is adjacent to a street or thoroughfare that is:

a. not more than 50 feet wide of paved street surface, being the area measured as the shortest distance between the inside of the curb to the inside of the opposite curb, or the area measured as the shortest distance between the two parallel edges of the paved roadway for vehicular travel where there is no curb; and

b. adjacent/bordering/on property line to single-family residential lots or other multifamily residences or undeveloped land that is designated for residential use by zoning or deed restrictions.

1.1 In accordance with Chapter 284a Network Provider installing a Network Node or Node Support Pole in a public right-of-way described above shall comply with private deed restrictions and other private restrictions in the area that apply to those facilities.

1.2 Each permit application shall disclose if it is within a Municipal Park and Residential Areas as described above.

2. *Historic District and Design Districts.* In accordance with Chapter 284,, a Network Provider must obtain advance written approval from the City before collocating Network Nodes or installing Node Support Poles in a Design District with Decorative Poles or in an area of the City zoned or otherwise designated as a Design District or Historic District.

2.1 As a condition for approval of Network Nodes or Node Support Poles in Design Districts with Decorative Poles or in a Historic District, the City shall require reasonable design or Concealment

measures for the Network Nodes or Node Support Poles. Therefore, any request for installations in a Design District with Decorative Poles or in a Historic District, must be accompanied with proposed Concealment measures in the permit applications.

- 2.2 The City require that a Network Provider explore the feasibility of using Camouflage as well decorative measures as possible to improve the aesthetics of the Network Nodes, Node Support Poles, or related ground equipment, or any portion of the nodes, poles, or equipment, to minimize the impact to the aesthetics in Design Districts or in an Historic District.
 - 2.3 A Network Provider shall comply with and observe all applicable City, State, and federal historic preservation laws and requirements.
 - 2.4 Each permit application shall disclose if it is within a Design District with Decorative Poles or in an area of the City zoned or otherwise designated as a Design District or Historic District.
3. Historic Landmarks. A Network Provider shall not install a Network Node or Node Support Pole within 300 feet of a historic site or structure or Historic Landmark recognized by the City, state or federal government (*see, for example, and not limited to* §442.001(3) of the Texas Government Code, as of the date of the submission of the permit. Each permit application shall disclose if it is with 300 feet of such a historic landmark.
 4. Compliance with Undergrounding Requirements. In accordance with Chapter 284, Section 284.107, a Network Provider shall comply with nondiscriminatory undergrounding requirements, including municipal ordinances, zoning regulations, state law, private deed restrictions, and other public or private restrictions, that prohibit installing aboveground structures in a public right-of-way without first obtaining zoning or land use approval.
 - 4.1 Areas may be designated from time to time by the City as Underground Requirement Areas in accordance with filed plats, and or conversions of overhead to underground areas, as may be allowed by law. “All electric utility infrastructure including but not limited to telephone, cable television, electric utility lateral and service lines shall be installed in accordance with the City of Pflugerville Engineering Design Manual, as amended.”
 - 4.2 Each permit application shall disclose if it is within an area that has undergrounding requirements.

B. Least preferable locations.

1. Residential Areas and Parks. A Network Provider shall not install a Network Node on an existing pole in a public right-of-way without written consent from the City Engineer if the public right-of-way is located in or adjacent/bordering/on property line to a street or thoroughfare that is adjacent to a municipal park or single-family residential lots or other multifamily residences or undeveloped land that is designated for residential use by zoning or deed restrictions.
 - i. In accordance with Chapter 284, Section 284.104 (b) a Network Provider installing a Network Node or a Node Support Pole in a public right-of-way shall comply with private deed restrictions and other private restrictions in the area that apply to those facilities.
 - ii. Historic Districts and Design Districts. A Network Provider is discouraged from installing a Network Node or a Node Support Pole in the public right-of-way in any area designated by the City as a Design Districts or in an area of the City zoned or otherwise designated as a Historic District unless such a Network Node or a new Node Support Pole is camouflaged at locations as deemed by the City Engineer or designee and require a special design approval based on site conditions.

C. Most preferable locations

1. *Industrial areas* if not adjacent to a Municipal Park, Residential area, Historic District or Design District.
2. *TXDOT Highway Rights-of-Way* areas if not adjacent to a Municipal Park, Residential area, Historic District or Design District.
3. *Retail and Commercial areas* if not adjacent to a Municipal Park, Residential area, Historic District or Design District.

D. Designated Areas.

1. The City Council may designate an area as a Historic District or a Design District under Chapter 284.at any time.
2. The failure to designate an area in this Manual, Right-Of-Way Ordinance, or other ordinance shall not mean that such an area is not within a defined district, if so designated by the City Council. Future areas may be designated as one of these Districts at any time. Such a designation does not require a zoning case.

3. While not required under Chapter 284 to designate Underground Requirement Areas to prohibit above ground Wireless facilities, the City may also, from time to time, also designate Underground Compliance Areas.

E. Order of Preference regarding Network Node attachment to existing facilities and New Node Support Poles.

1. *Existing telephone or electrical lines between existing utility poles.* Micro Network Nodes shall only be lashed on existing telephone or electrical lines between existing utility poles (electric poles or telephones poles), with notice to the pole owner as required by the Federal Pole Attachment Act, and not placed on Utility Poles, Node Support Poles or Service Poles.
2. *Existing Utility Poles* (electric poles or telephones poles), shall be the preferred support facility for Network Nodes and related ground equipment.
3. *Substitution or Replacement Poles, City has the authority to replace any poles due to construction, maintenance and/or accidents.*
4. *Service Poles:*
 - a. *Non-decorative street lights* as determined by City Engineer or designee upon review of the proposed design.
 - b. *Traffic signal structures* when such installation will not interfere with the integrity of the facility and will not interfere with the safety of the public and in accordance with an agreement as allowed by Chapter 284,
 - c. *Other municipal Service pole* use is discouraged. Use of school traffic zone signs with flashing lights is strictly prohibited.
5. *Ground Equipment.* Ground equipment should be minimal and the least intrusive. This includes placing landscaping around said ground equipment and/or hiding near existing landscaping.

DG11.13 GENERAL AESTHETIC REQUIREMENT

A. Concealment.

1. Concealment of Network Nodes and Node support poles shall be required by the City in Design Districts with Decorative Poles and in Historic Districts pursuant to Chapter 284.

2. It is also the City's preference that all new node support poles be camouflaged, except those located in an area zoned or predominantly industrial area. Companies shall submit their proposal for camouflage with the permit application.
3. The Network Node facilities shall be concealed or enclosed as much as reasonably possible in an equipment box, cabinet, or other unit that may include ventilation openings. External cables and wires hanging off a pole shall be sheathed or enclosed in a conduit, so that wires are protected and not visible or visually minimized to the extent possible in strict accordance with the City's rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.
4. The Network Node facilities shall be concealed or enclosed as much as possible in an equipment box, cabinet, or other unit that may include ventilation openings. External cables and wires hanging off a pole shall be sheathed or enclosed in a conduit, so that wires are protected and not visible or visually minimized to the extent possible, except to the extent not consistent with Chapter 284.

B. New Node Support Pole Spacing.

New node support poles shall be placed as far as possible from a utility pole or another Node Support Pole to minimize the hazard of poles adjacent to road ways and to minimize effect on property values and aesthetics on the area.

C. Minimize Ground Equipment Concentration.

In order to minimize negative visual impact to the surrounding area, and in accordance with Chapter 284 to enhance the safety requirements of line of sight of pedestrians, particularly small children, the City's designee may deny a request for a proposed Location if the Network Provider installs Network Node ground equipment where existing ground equipment as far as possible from existing ground equipment that already occupies a footprint of 25 sq. ft. or more to minimize effect on property values and aesthetics on the area.

D. Allowed Colors.

1. Colors in non-Historic Districts and non-Design Districts must be in strict accordance with the City's rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284
2. Colors in Historic Districts and Design Districts must be approved by the City Engineer from a palette of approved colors. Unless otherwise provided, all colors shall be earth tones or shall match the background of any structure the facilities are located upon and all efforts shall be made for the colors to be inconspicuous. Colors in areas other than in

Historic Districts and Design Districts shall conform to colors of other installations of telecommunication providers in the immediately adjacent areas.

DG11.14

MUNICIPAL SERVICE POLES

- A. Conformance. Installation of wireless facilities on a service pole shall be in strict conformance with the agreement applicable to each such installation pursuant to **Section 284.056** and Section 284.101(a)(3) and (b) of Chapter 284.
- B. Installations on Traffic Signals or Lighting Structures
 - 1. Installations of wireless facilities on a traffic signal structure or lighting structure must not interfere with the integrity of the structure in any way that may compromise the safety of the public and must be in strict conformance with an agreement applicable to each such installation pursuant to **Section 284.056** and Section 284.101(a)(3) and (b) of Chapter 284. Installation of wireless facilities on any traffic signal structure shall:
 - i. Utilize conductor or wiring encased in a separate conduit than the traffic signal or lighting electronics;
 - ii. Have a separate electric power connection than the traffic signal or lighting structure;
 - iii. Have a separate access point than the traffic signal or lighting structure; and
 - iv. Shall not puncture, penetrate, or cut the Municipal Pole in any way.
- C. Provider shall provide the City a key to each electrical meter providing power to a wireless facility at the time of inspection and shall have the ability to temporarily cut-off electricity to its wireless facilities for the safety of maintenance personnel. In the event of failure of components of the traffic signal system for whatever reason, including damage resulting from vehicular collisions, weather-related events, or malicious attacks, City will respond to restore traffic signal operations as a matter of public safety. Should the events that result in damage or failure of the traffic signal system also affect Provider's wireless facilities, Provider shall have the sole responsibility to repair or replace its wireless facilities and shall coordinate its own emergency efforts with the City.
- D. Installations on Street Signage or other Traffic Control Structures Installations of wireless facilities on a street signage or traffic control structure must not interfere with the integrity of the structure in any way that may compromise the safety of the public and must be in strict conformance with an agreement

applicable to each such installation pursuant to **Section 284.056** and Section 284.101(a)(3) and (b) of Chapter 284. Installation of wireless facilities on any street signage or traffic control structure that has electrical power shall:

1. Utilize electric conductor or wiring encased in a separate conduit than any City signage or traffic control electronics;
2. Have a separate electric power connection than the signage or traffic control structure;
3. Have a separate access point than the signage or traffic control structure; and
4. Shall not puncture, penetrate, or cut the Municipal Pole in any way.

E. Reservation of Rights

1. The City reserves the right to install, and permit others to install, utility facilities in the public right-of-way. In permitting such work to be done by others, the City shall not be liable to Provider for any damage caused by those persons or entities.
2. The City reserves the right to locate, operate, maintain, and remove City traffic signal poles in the manner that best enables the operation of its traffic signal system and protects public safety.
3. The City reserves the right to locate, operate, maintain, and remove any City pole or structure located within the public right-of-way in the manner that best enables the City's operations and protects public safety.

DG11.15 INTERFERENCE WITH OPERATIONS

- A. No Liability. The City shall not be liable to a Provider for any damage caused by other Providers with wireless facilities sharing the same pole or for failure of Provider's wireless facilities for whatever reason, including damage resulting from vehicular collisions, weather-related events, or malicious attacks.

The City shall not be liable to a Provider by reason of inconvenience, annoyance, or injury to the Provider's wireless facilities or activities conducted by Provider related thereto, arising from the necessity of repairing any portion of the public right-of-way, or from the making of any necessary alterations or improvements in, or to, any portion of the public right-of-way or in, or to, City's fixtures, appurtenances, or equipment. The City will use reasonable efforts not to cause material interference to Provider's operation of its wireless facilities.

- B. No interference. In the event that Provider's wireless facilities interfere with the City's traffic signal system, public safety radio system, private police cell system, or other City communications infrastructure operating on spectrum where the City is legally authorized to operate, Provider shall promptly cease

operation of the wireless facility causing such interference upon receiving notice from the City and refrain from operating such wireless facility in the future. Provider shall respond to the City's notice to address the source of the interference as soon as practicable, but in no event later than twenty-four (24) hours of receiving notice. Documentation shall be submitted with the Provider's permit application that identifies the frequency on which the wireless facility will operate, which must not interfere with the City's traffic signal system, public safety radio system, private police cell system, or other City communications infrastructure. Wireless facilities shall not be located or collocated on the City's public safety radio infrastructure.

- C. Protocol for responding to event of interference. For each event of prohibited interference, Provider shall provide the City an interference remediation report that includes the following items:
1. Remediation Plan. Provider shall devise a proposed remediation plan to stop the event of inference;
 2. Time Frame for Execution. Provider shall provide the expected time frame for execution of the remediation plan; and
 3. Additional Information. Provider shall include any additional information relevant to the execution of the remediation plan.

In the event that interference with City facilities, services, or operations cannot be eliminated, Provider shall shut down the interfering wireless facility and remove or relocate the wireless facility that is the source of the interference as soon as possible to a suitable alternative location approved by City.

- D. Testing. Following installation or modification of a network node, the City may require Provider to test the network node's radio frequency and other functions to confirm it does not interfere with the City's facilities, services, or operations.

DG11.16 REQUIREMENTS IN REGARD TO REMOVAL, REPLACEMENT, MAINTENANCE AND REPAIR

A. REMOVAL OR RELOCATION BY NETWORK PROVIDER.

1. Removal and relocation by the Network provider of its Micro Network Node, Network Node facilities, Node Support Pole or related ground equipment at its own discretion, shall be in strict accordance with the City's rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284
2. If the Network Provider removes or relocates a Micro Network Node, Network Node facilities, Node Support Pole or related ground equipment at its own discretion, it shall notify the City Engineer or designee in writing not less than 10 business days prior to removal or relocation. Network Provider shall obtain all or any Permits required prior for

relocation or removal of its Micro Network Node, Network Node facilities, Node Support Poles and related ground equipment prior to relocation or removal.

3. The City shall not issue any refunds for any amounts paid by Network Provider for Micro Network Node, Network Node facilities, Node Support Poles or related ground equipment that have been removed.

B. REMOVAL OR RELOCATION REQUIRED FOR CITY PROJECT.

1. Removal and Relocation of Network Provider's Micro Network Node, Network Node, Node Support Pole or related ground equipment, or portion thereof required for a City project shall be in strict accordance with the City's rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284, except as provided in existing state and federal law.
2. In accordance with Chapter 284, except as provided in existing state and federal law, a Network Provider shall relocate or adjust Micro Network Node, Network Node, Node Support Pole and related ground equipment in a public right-of-way in a timely manner and without cost to the City managing the public right-of-way
3. Network Provider understands and acknowledges that the City may require Network Provider to remove or relocate its Micro Network Node, Network Node, Node Support Pole and related ground equipment, or any portion thereof from the Right-of-Way for City construction projects as allowed by state and federal law, including the common-law.
4. Network Provider shall, at the City Engineer's or designee direction, remove or relocate the same at Network Provider's sole cost and expense, except as otherwise provided in existing state and federal law, whenever the City Engineer or designee reasonably determines that the relocation or removal is needed for any of the following purposes: Required for the construction, completion, repair, widening, relocation, or maintenance of, or use in connection with, any City construction or maintenance project of a street or public rights-of-way to enhance the traveling public's use for travel and transportation.
5. If Network Provider fails to remove or relocate the Micro Network Node, Network Node, Node Support Pole or related ground equipment, or portion thereof as requested by the City Engineer within 90 days of Network Provider's receipt of the request, then the City shall be entitled to remove the Micro Network Node, Network Node, Node Support Pole or related ground equipment, or portion thereof at Network Provider's sole cost and expense, without further notice to Network Provider.

6. Network Provider shall, within 30 days following issuance of invoice for the same, reimburse the City for its reasonable expenses incurred in the removal (including, without limitation, overhead and storage expenses) of the Micro Network Node, Network Node, Node Support Pole or related ground equipment, or portion thereof.

C. REMOVAL REQUIRED BY CITY FOR SAFETY AND IMMINENT DANGER REASONS.

1. Network Provider shall, at its sole cost and expense, promptly disconnect, remove, or relocate the applicable Micro Network Node, Network Node, Node Support Pole and related ground equipment within the time frame and in the manner required by the City Engineer or designee if the City Engineer or designee reasonably determines that the disconnection, removal, or relocation of any part of a Micro Network Node, Network Node, Node Support Pole and related ground equipment (a) is necessary to protect the public health, safety, welfare, or City property, (b) the Micro Network Node, Network Node, Node Support Pole and related ground equipment, or portion thereof, is adversely affecting proper operation of streetlights or City property, or (c) Network Provider fails to obtain all applicable licenses, Permits, and certifications required by Law for its Micro Network Node, Network Node, Node Support Pole and related ground equipment, or use of any Location under applicable law in strict accordance with the City's rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.
2. If the City Engineer or designee reasonably determines that there is imminent danger to the public, then the City may immediately disconnect, remove, or relocate the applicable Micro Network Node, Network Node, Node Support Pole and related ground equipment at the Network Provider's sole cost and expense in strict accordance with the City's rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.
3. Network Provider shall, at its sole cost and expense, promptly disconnect, remove, or relocate the applicable Micro Network Node, Network Node, Node Support Pole and related ground equipment within the time frame and in the manner required by the City Engineer or designee if the City Engineer or designee reasonably determines that the disconnection, removal, or relocation of any part of a Micro Network Node, Network Node, Node Support Pole and related ground equipment
 - i. is necessary to protect the public health, safety, welfare, or City property,
 - ii. the Micro Network Node, Network Node, Node Support Pole and related ground equipment, or portion thereof, is adversely affecting proper operation of streetlights or City property, or

- iii. Network Provider fails to obtain all applicable licenses, Permits, and certifications required by Law for its Micro Network Node, Network Node, Node Support Pole and related ground equipment, or use of any Location under applicable law.

If the City Engineer reasonably determines that there is imminent danger to the public, then the City may immediately disconnect, remove, or relocate the applicable Micro Network Node, Network Node, Node Support Pole and related ground equipment at the Network Provider's sole cost and expense.

4. The City Engineer or designee shall provide 90 days written notice to the Network Provider before removing a Micro Network Node, Network Node, Node Support Pole and related ground equipment under this Section, unless there is imminent danger to the public health, safety, and welfare.

5. Network Provider shall reimburse City for the City's actual cost of removal of Micro Network Node, Network Node, Node Support Pole and related ground equipment within 30 days of receiving the invoice from the City.

DG11.17

REQUIREMENTS UPON ABANDONMENT OF OBSOLETE MICRO NETWORK NODE, NETWORK NODE, NODE SUPPORT POLE AND RELATED GROUND EQUIPMENT

- A. Abandoned or obsolete Micro Network Node, Network Node, Node Support Pole and related ground equipment shall be removed in strict accordance with the City's rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.
- B. Network Provider shall remove Micro Network Node, Network Node, Node Support Pole and related ground equipment when such facilities are abandoned regardless of whether or not it receives notice from the City. Unless the City sends notice that removal must be completed immediately to ensure public health, safety, and welfare, the removal must be completed within the earlier of 90 days of the Micro Network Node, Network Node, Node Support Pole and related ground equipment being abandoned or within 90 days of receipt of written notice from the City.
- C. When Network Provider removes, or abandons permanent structures in the Right-of-Way, the Network Provider shall notify the City Engineer in writing of such removal or Abandonment and shall file with the City Engineer the location and description of each Micro Network Node, Network Node, Node Support Pole and related ground equipment removed or abandoned. The City Engineer may require the Network Provider to complete additional remedial measures necessary for public safety and the integrity of the Right-of-Way.

- D. In accordance with Chapter 284, Sec. 284.107, except as provided in existing state and federal law, a Network Provider shall relocate or adjust Micro Network Node, Network Node, Node Support Pole and related ground equipment in a public right-of-way in a timely manner and without cost to the municipality managing the public right-of-way.
1. Provider shall remove and relocate a wireless facility at its own expense to an alternative location not later than ninety (90) days after receiving written notice that removal, relocation, and/or alteration of the wireless facility is necessary due to:
 - i. Construction, completion, repair, widening, relocation, or maintenance of, or use in connection with, any City construction, city-sanctioned improvement by others, or maintenance project or other public improvement project;
 - ii. Maintenance, upgrade, expansion, replacement, removal or relocation of the City's pole or structure upon which Provider's network nodes are attached;
 - iii. The wireless facility, or portion thereof, is adversely affecting proper operation of traffic signals, streetlights, or other City property;
 - iv. Closure of a street or sale of City property;
 - v. Projects and programs undertaken to protect or preserve the public health, safety or welfare;
 - vi. Activities undertaken to eliminate a public nuisance;
 - vii. Provider's failure to obtain all applicable licenses, permits, and certifications required by Law for its wireless facility; or
 - viii. Duty otherwise arising from applicable Law.
- E. Provider's duty to remove and relocate its wireless facility at its expense is not contingent on the availability of an alternative location acceptable for relocation. City may make reasonable efforts to provide an alternative location within the public right-of-way for relocation, but regardless of the availability of an alternative site acceptable to Provider, Provider shall comply with the notice to remove its wireless facility as instructed.
- F. The City may remove the wireless facility if Provider does not remove the wireless facility within ninety (90) days of Provider's receipt of request. In such event, Provider shall reimburse City for the City's actual cost of removal of Provider's wireless facility within thirty (30) days of receiving an invoice from the City.

- A. Insurance, bonding and security deposits shall be in strict accordance with the City's rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.
1. A utility company or other applicant, unless exempted by the City Engineer or designee (e.g., individual single family lot owners, etc.), shall obtain and maintain insurance in the amounts provided in this section with an insurance company licensed to do business in the State of Texas, with an AM Best rating of at least A-. An applicant shall file and maintain proof of insurance in compliance with this section with the City at the time of the request for right-of-way permit, prior to commencement of work
 2. An applicant shall furnish to the City a certificate of insurance showing proof of commercial general liability insurance in an aggregate annual amount of at least \$1,000,000.00.
 3. The insurance certificate required under subsection (A)(2) of this section shall:
 - i. Include a cancellation provision in which the insurance company is required to provide the City a thirty (30) day written notice before a cancellation, nonrenewal, reduction of policy limits, or other material change; and
 - ii. Provide that notice of claims related to public rights-of-way construction shall be provided to the City by certified mail.
 4. The coverage shall be on an occurrence basis and shall include coverage for personal injury, contractual liability, premises liability, medical damages, underground, explosion, and collapse hazards.
 5. An insurance certificate obtained in compliance with this section is subject to city approval. An applicant shall immediately advise the City of actual or potential litigation that may develop and may affect an existing carrier's obligation to defend and indemnify.
 6. Insurance shall be primary coverage for losses covered by the policies and non-contributory with respect to any insurance or self-insurance carried by the City for liability arising out of the applicant's activities in the public rights-of-way. Insurance policies shall also provide waivers of subrogation in favor of the City.

7. The City will accept certificates of self-insurance issued by the State of Texas, or letters written by the utility company in those instances where the state does not issue such certificates, which provide the same coverage as required herein. The city has the right to require proof of financial stability prior to accepting the proof of self-insurance, provided that defense of the City shall be comparable as provided by an insurance carrier. The defense and claims processing required of holders of a state-issued certificate of franchising authority to provide cable or video services shall be in accordance with Texas Utilities Code, Chapter 66.

B. Bonds

1. Unless otherwise provided for by a utility company's or other applicant's valid franchise or agreement, the City shall require reasonable bonding requirements of a utility company or other applicant. Such bonding amounts will be reasonably determined by the City depending on several factors based on public safety and risk of harm to persons and property. Such factors may include, but are not limited to:
 - i. The nature of the construction project;
 - ii. The type of facility; and
 - iii. Past construction history of the applicant in the City as to any damage claims, repairs and timeliness of construction.
2. The utility company or other applicant shall file an annual surety bond with the City, which will be valid each year prior to the commencement of any construction and will extend for a period of one (1) year after the end of the then current year for the construction completed in any given year. The surety bond shall be obtained from a surety company authorized to do business in the State of Texas. The terms of the bond shall be subject to city approval. Such surety bond will be in the amount of the estimated cost to restore the public rights-of-way for the work anticipated to be completed in that year. If the City determines that the annual surety bond on file is insufficient to restore the public rights-of-way related to a specific project for which a permit application has been filed, then the City, as a condition of right-of-way permit issuance may require the utility company or other applicant to file an additional surety bond for such project.

3. The City may either waive or reduce the amount of the surety bond in the event the utility company or other applicant has had a two-year history of no claims or damages to city property with the city, or has promptly paid such claims upon request. No surety bonds for aerial construction will be required of holders of a state-issued certificate of franchising authority to provide cable or video services, in accordance with Texas Utilities Code Chapter 66.

C. *Alternate compliance methods.* The above requirements may be met by utility companies with a current franchise or agreement with the City if their current franchise or agreement adequately provides for insurance and bonds in favor of City.

D. Indemnity shall be in accordance with Chapter 283, as provided for in Chapter 283, Sec. 283.057 of the Texas Loc. Gov't Code.

DG11.19. GENERAL PROVISIONS

A. As Built Maps and Records. Network Provider's as built maps and records shall be in strict accordance with the City's rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.

1. A Network Provider shall maintain accurate maps and other appropriate records of its Network Node facilities, Node Support Poles and related ground equipment as they are actually constructed in the Rights-of-Way, including, upon request, the use of Auto CAD/GIS digital format. Network Provider will provide additional maps to the City upon request.

B. Courtesy and Proper Performance. Courtesy and Proper Performance of Network provider's personnel, and contractors shall be in strict accordance with the City's rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.

1. A Network Provider shall make citizen satisfaction a priority in using the Right-of-Way. Network Provider shall train its employees to be customer service-oriented and to positively and politely interact with citizens when dealing with issues pertaining to its Micro Network Node, Network Node, Node Support Pole and related ground equipment in the Right-of-Way. Network Provider's employees shall be clean, courteous, efficient, and neat in appearance and committed to offering the highest quality of interaction with the public. If, in the opinion of the City Engineer or designee, Network Provider is not interacting in a positive and polite manner with citizens, he or she shall

request Network Provider to take all remedial steps to conform to these standards. This includes contacting HOA's, residences, schools and businesses that are within 500 lf of said construction.

- C. DRUG POLICY. Drug policy of Network provider's personnel, and contractors in the public rights-of-way shall be in strict accordance with the City's rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.
- D. ALLOCATION OF FUNDS FOR REMOVAL AND STORAGE. The City Council has currently appropriated no funds to pay for the cost of any removal or storage of Micro Network Node, Network Node, Node Support Pole and related ground equipment, as authorized under the law.
- E. OWNERSHIP. Ownership of Network Node and related equipment shall be in strict accordance with the City's rights-of-way management ordinance, and other applicable codes and ordinances, except to the extent not consistent with Chapter 284.
 - 1. No part of a Micro Network Node, Network Node, Node Support Pole and related ground equipment erected or placed on the Right-of-Way by Network Provider will become, or be considered by the City as being affixed to or a part of, the Right-of-Way. All portions of the Micro Network Node, Network Node, Node Support Pole and related ground equipment constructed, modified, erected, or placed by Network Provider on the Right-of-Way will be and remain the property of Network Provider and may be removed by Network Provider at any time.
- F. Tree Maintenance. Tree maintenance shall be in strict accordance with the City's rights-of-way management ordinance, Subchapter 12 Tree Preservation Standards of the Unified Development Code, the Tree Technical Manual, and other applicable ordinances, except to the extent not consistent with Chapter 284.
 - 1. A Network Provider, its contractors, and agents shall obtain written permission from the City Engineer before trimming trees hanging over its Micro Network Node, Network Node, or Node Support Pole, to prevent branches of such trees from contacting attached Micro Network Node, Network Node, or Node Support Pole. When directed by the City Engineer, Network Provider shall trim under the supervision and direction of the City Engineer. The City shall not be liable for any damages, injuries, or claims arising from Network Provider's actions under this section.

- G. Signage. Signage shall be in strict accordance with the City's rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.
1. Network Provider shall post its name, location identifying information, and emergency telephone number in an area on the cabinet of the Network Node facility that is visible to the public. Signage required under this section shall not exceed 4" x 6", unless otherwise required by law (e.g. RF ground notification signs) or the City Engineer.
 2. Except as required by law or by the Utility Pole owner, a Network Provider shall not post any other signage or advertising on the Micro Network Node, Network Node, Node Support Pole, Service pole or Utility Pole.
- H. Graffiti Abatement. Graffiti abatement shall be in strict accordance with the City's Code of Ordinances, and other applicable ordinances, except to the extent not consistent with Chapter 284.
1. As soon as practical, but not later than fourteen (14) calendar days from the date Network Provider receives notice thereof, Network Provider shall remove all graffiti on any of its Micro Network Node, Network Node, Node Support Pole, and related ground equipment located in the Right of Way. The foregoing shall not relieve the Network Provider from complying with any City graffiti or visual blight ordinance or regulation.
- I. Restoration.
- A. A Network Provider shall restore and repair of the public rights-of-way from any damage to the Right-of-Way, or any facilities located within the Right-of-Way, and the property of any third party resulting from Network Provider's removal or relocation activities (or any other of Network Provider's activities hereunder) in strict accordance with the City's rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.
 - B. A Network Provider shall restore site to original condition and repair any damage to the Right-of-Way, or any facilities located within the Right-of-Way, and the property of any third party resulting from Network Provider's removal or relocation activities (or any other of Network Provider's activities hereunder) within 10 calendar days following the date of such removal or relocation, at Network Provider's sole cost and expense, including restoration of the Right-of-Way and such property to substantially the same condition as it

was immediately before the date Network Provider was granted a Permit for the applicable Location or did the work at such Location (even if Network Provider did not first obtain a Permit), including restoration or replacement of any damaged trees, shrubs or other vegetation. Such repair, restoration and replacement shall be subject to the sole, reasonable approval of the City Engineer or designee.

J. Network provider's responsibility.

1. A Network Provider shall be responsible and liable for the acts and omissions of the Network Provider's employees, temporary employees, officers, directors, consultants, agents, Affiliates, subsidiaries, sub-Network Provider's and subcontractors in connection with the installations of any Micro Network Node, Network Node, Node Support Pole and related ground equipment, as if such acts or omissions were Network Provider's acts or omissions in strict accordance with the City's rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.

DG11.20. ADMINISTRATIVE HEARING – REQUEST FOR EXEMPTION

12.1 Should the Network Provider desire to deviate from any of the standards set forth in the Design Manual, the Network Provider may request an exemption from the Board of Adjustment.

12.2 The process for an application, hearing and vote shall follow the process set out for a variance.

DG11.21-29 RESERVED

DG11.30 DESIGN MANUAL – UPDATES

Placement or Modification of Micro Network Node, Network Node, Node Support Pole, Transport Facility, and related ground equipment shall comply with the City's Design Manual at the time the Permit for installation or Modification is approved and as amended from time to time.

¹ Sec. 284.301. LOCAL POLICE-POWER-BASED REGULATIONS. (a) Subject to this chapter and applicable federal and state law, a municipality may continue to exercise zoning, land use, planning, and permitting authority in the municipality's boundaries, including with respect to utility poles.

(b) A municipality may exercise that authority to impose police-power-based regulations for the management of the public right-of-way that apply to all persons subject to the municipality.

(c) A municipality may impose police-power-based regulations in the management of the activities of network providers in the public right-of-way only to the extent that the regulations are reasonably necessary to protect the health, safety, and welfare of the public.

² The definitions as used in Tx. Loc. Gov. Code, Chapter 284, Sec. 284.002 shall be used in this Design Manual.

Tex. Loc. Gov. Code, Chapter 284, Sec. 284.002. DEFINITIONS. In this chapter:

(1) "Antenna" means communications equipment that transmits or receives electromagnetic radio frequency signals used in the provision of wireless services.

(2) "Applicable codes" means:

(A) uniform building, fire, electrical, plumbing, or mechanical codes adopted by a recognized national code organization;

and

(B) local amendments to those codes to the extent not inconsistent with this chapter.

(3) "Collocate" and "collocation" mean the installation, mounting, maintenance, modification, operation, or replacement of network nodes in a public right-of-way on or adjacent to a pole.

(4) "Decorative pole" means a streetlight pole specially designed and placed for aesthetic purposes and on which no appurtenances or attachments, other than specially designed informational or directional signage or temporary holiday or special event attachments, have been placed or are permitted to be placed according to nondiscriminatory municipal codes.

(5) "Design district" means an area that is zoned, or otherwise designated by municipal code, and for which the city maintains and enforces unique design and aesthetic standards on a uniform and nondiscriminatory basis.

(6) "Historic district" means an area that is zoned or otherwise designated as a historic district under municipal, state, or federal law.

(7) "Law" means common law or a federal, state, or local law, statute, code, rule, regulation, order, or ordinance.

(8) "Macro tower" means a guyed or self-supported pole or monopole greater than the height parameters prescribed by Section 284.103 and that supports or is capable of supporting antennas.

(9) "Micro network node" means a network node that is not larger in dimension than 24 inches in length, 15 inches in width, and 12 inches in height, and that has an exterior antenna, if any, not longer than 11 inches.

(10) "Municipally owned utility pole" means a utility pole owned or operated by a municipally owned utility, as defined by Section 11.003, Utilities Code, and located in a public right-of-way.

(11) "Municipal park" means an area that is zoned or otherwise designated by municipal code as a public park for the purpose of recreational activity.

(12) "Network node" means equipment at a fixed location that enables wireless communications between user equipment and a communications network. The term:

(A) includes:

(i) equipment associated with wireless communications;

(ii) a radio transceiver, an antenna, a battery-only backup power supply, and comparable equipment, regardless of technological configuration; and

(iii) coaxial or fiber-optic cable that is immediately adjacent to and directly associated with a particular collocation; and

(B) does not include:

(i) an electric generator;

(ii) a pole; or

(iii) a macro tower.

(13) "Network provider" means:

(A) a wireless service provider; or

(B) a person that does not provide wireless services and that is not an electric utility but builds or installs on behalf of a wireless service provider:

(i) network nodes; or

(ii) node support poles or any other structure that supports or is capable of supporting a network node.

(14) "Node support pole" means a pole installed by a network provider for the primary purpose of supporting a network node.

(15) "Permit" means a written authorization for the use of the public right-of-way or collocation on a service pole required from a municipality before a network provider may perform an action or initiate, continue, or complete a project over which the municipality has police power authority.

(16) "Pole" means a service pole, municipally owned utility pole, node support pole, or utility pole.

(17) "Private easement" means an easement or other real property right that is only for the benefit of the grantor and grantee and their successors and assigns.

(18) "Public right-of-way" means the area on, below, or above a public roadway, highway, street, public sidewalk, alley, waterway, or utility easement in which the municipality has an interest. The term does not include:

(A) a private easement; or

(B) the airwaves above a public right-of-way with regard to wireless telecommunications.

(19) "Public right-of-way management ordinance" means an ordinance that complies with Subchapter C.

(20) "Public right-of-way rate" means an annual rental charge paid by a network provider to a municipality related to the construction, maintenance, or operation of network nodes within a public right-of-way in the municipality.

(21) "Service pole" means a pole, other than a municipally owned utility pole, owned or operated by a municipality and located in a public right-of-way, including:

- (A) a pole that supports traffic control functions;
- (B) a structure for signage;
- (C) a pole that supports lighting, other than a decorative pole; and
- (D) a pole or similar structure owned or operated by a municipality and supporting only network nodes.

(22) "Transport facility" means each transmission path physically within a public right-of-way, extending with a physical line from a network node directly to the network, for the purpose of providing backhaul for network nodes.

(23) "Utility pole" means a pole that provides:

- (A) electric distribution with a voltage rating of not more than 34.5 kilovolts; or
- (B) services of a telecommunications provider, as defined by Section 51.002, Utilities Code.

(24) "Wireless service" means any service, using licensed or unlicensed wireless spectrum, including the use of Wi-Fi, whether at a fixed location or mobile, provided to the public using a network node.

(25) "Wireless service provider" means a person that provides wireless service to the public.

³ Sec. 284.002. DEFINITIONS (8) "Micro network node" means a network node that is not larger in dimension than 24 inches in length, 15 inches in width, and 12 inches in height, and that has an exterior antenna, if any, not longer than 11 inches.

Sec. 284.003. LIMITATION ON SIZE OF NETWORK NODES. (a) Except as provided by Section 284.109, a network node to which this chapter applies must conform to the following conditions:

(1) each antenna that does not have exposed elements and is attached to an existing structure or pole:

- (A) must be located inside an enclosure of not more than six cubic feet in volume;
- (B) may not exceed a height of three feet above the existing structure or pole; and
- (C) may not protrude from the outer circumference of the existing structure or pole by more than two feet;

(2) if an antenna has exposed elements and is attached to an existing structure or pole, the antenna and all of the antenna's exposed elements:

- (A) must fit within an imaginary enclosure of not more than six cubic feet;
- (B) may not exceed a height of three feet above the existing structure or pole; and
- (C) may not protrude from the outer circumference of the existing structure or pole by more than two feet;

(3) the cumulative size of other wireless equipment associated with the network node attached to an existing structure or pole may not:

- (A) be more than 28 cubic feet in volume; or
- (B) protrude from the outer circumference of the existing structure or a node support pole by more than two feet;

(4) ground-based enclosures, separate from the pole, may not be higher than three feet six inches from grade, wider than three feet six inches, or deeper than three feet six inches; and

(5) pole-mounted enclosures may not be taller than five feet.

(b) The following types of associated ancillary equipment are not included in the calculation of equipment volume under Subsection (a):

- (1) electric meters;
- (2) concealment elements;
- (3) telecommunications demarcation boxes;
- (4) grounding equipment;
- (5) power transfer switches;
- (6) cut-off switches; and
- (7) vertical cable runs for the connection of power and other services.

(c) Equipment attached to node support poles may not protrude from the outer edge of the node support pole by more than two feet.

(d) Equipment attached to a utility pole must be installed in accordance with the National Electrical Safety Code, subject to applicable codes, and the utility pole owner's construction standards.