Design Manual

for the

Installation of Network Nodes and Node Support Poles pursuant to Texas Local. Government Code, Chapter 284.

Promulgated Pursuant to Dallas City Code Chapter 43 Article VIII

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SECTION 1. PURPOSE AND APPLICABILITY.

The City of Dallas ("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.

Purpose: Chapter 284 of the Texas Local Government Code allows certain wireless Network providers to install in the Public rights-of-way their wireless facilities, described and defined in Texas Local Government Code, Chapter 284, Sec. 284.002 as "Micro network nodes", "Network nodes", and "Node support poles".

As expressly allowed by Tex. Loc. Gov. Code, Chapter 284, Section 284.108, and pursuant to its police power authority reserved in Sec. 284.301, 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.

Applicability: This Design Manual is for siting and criteria for the installation 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 Design Manual shall apply to any sitings, installations, collocations in, on, over or under the public rights-of-way of Network nodes, Node support poles, Micro network nodes, Distributed Antenna Systems, microwave communications or other Wireless Facilities, by whatever nomenclature, whether they are installed pursuant to Chapter 284 of the Texas Local Government Code, or installed pursuant to an agreement as agreed to and consented to by the City in its discretion, or installed as may otherwise be allowed by state law.

Compliance with City Public Rights-of-Way Management Ordinance and All Applicable State and Federal Law: A Network provider shall comply with the City's Public rights-of-way management ordinance except where in conflict with this Design Manual or Chapter 284, Subchapter C of the Texas Local Government Code. All facilities must comply with all applicable state and federal requirements, including the Americans with Disabilities Act and must not create a visibility or accessibility issue as finally configured. No components may obstruct any signage or signals. All components must be positioned as to assure that all intersection and driveway visibility requirements are maintained.

SECTION 2. DEFINITIONS.

1. General Definitions

The definitions as used in Texas Local Government Code, Chapter 284, Sec. 284.002 shall be used in this Design Manual, unless otherwise noted in this Section 2.

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, handholes, 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.

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

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.

City means the City of Dallas, Texas, a home-rule municipality.

City Manager shall mean City Manager or designee.

Chapter 284 means Texas Local Government Code, Chapter 284.

Collocate and c*ollocation* mean the installation, mounting, maintenance, modification, operation, or replacement of Network nodes in a public right-of-way on or adjacent to a pole.

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.

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.

Design District means an area the city council has designated as a:

(A) public improvement district pursuant to Chapter 372 of the Texas Local Government Code, as amended;

(B) reinvestment zone pursuant to Chapter 311 of the Texas Tax Code, as amended;

(C) planned development zoning district;

(D) form zoning district subject to Chapter 51A of this code, as amended; or

(E) conservation district.

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.

Distributed Antenna System or DAS shall be included as a type of Network node.

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.

Highway right-of-way means right-of-way of a state or federal highway.

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

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

Local means within the geographical boundaries of the City.

Location means the City approved and lawfully permitted location for a Network node.

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.

Mayor means the Mayor of the City.

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.

Modification means any addition, removal, or alteration of any kind, to the facility or equipment, including altering the concealment, camouflage or stealth appearance, from the exact approved equipment and layout, except for routine maintenance or replacement with equipment that has identical dimensions and appearance or, in the case of routine maintenance, replacing or upgrading a network node or pole with a node or pole that is substantially similar in size or smaller and that does not require excavation or closing of sidewalks or vehicular lanes in a public right-of-way.

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

Municipally owned utility pole means a utility pole owned or operated by a municipally owned utility, as defined by Section 11.003 of the Texas Utilities Code, and located in a Public right-of-way.

MUTCD means Texas Manual of Uniform Traffic Control Devices.

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.

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.

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

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 City has police power authority.

Pole means a service pole, City-owned utility pole, Node support pole, or Utility Pole.

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.

Provider has the same meaning as "Network provider."

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.

Public right-of-way management ordinance means Chapter 43, Article VIII of the Dallas City Code as revised to comply with Chapter 284, Subchapter C.

Service pole means a pole, other than a City-owned Utility Pole, owned or operated by the City 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 the City and supporting only Network nodes.

Small cell shall be included as a type of "Network node."

Street means only the paved portion of the Public 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 Public right-of-way, while a Public 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. Width measurements shall be taken at sections without designated turn lanes or cross-overs.

Street Light means pole mounted infrastructure located in the public right of way that provides lighting, regardless of ownership.

SWPPP shall mean Storm Water Pollution Prevention Plan.

TAS means Texas Accessibility Standards.

Timely manner for relocation means the completion of all work required to be relocated within 90 calendar days of notification by the City of required relocation.

Traffic Signal means any device, whether manually, electrically, or mechanically operated by which traffic is alternately directed to stop and to proceed.

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.

Underground Facility Area means any area where there are currently no above ground utility facilities or an area that has been designated by the City as an area where only underground utility facilities can be placed, including a City-designated underground district.

Underground Requirement Area means an area where poles, Utility 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.

User means a person or organization which conducts a business over facilities occupying the whole or a part of a public Street or Public right-of-way, depending on the context.

Utility Pole means a pole or vertical structure in the Public right-of-way pursuant to separate City or State law authorization, e.g., by either a City license or franchise agreement, or Texas Local Government Code, Chapter 283, or Texas Utility Code, Chapter 66 for either the electric utility services, wireline telecommunications, or cable or video services lines. *Utility Pole* also 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, and Section 51.002, Utilities Code.

Vehicular Lanes means street or alley pavement designed for vehicular traffic.

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.

Wireless service provider means a person that provides wireless service to the public.

Wireless facilities mean "Micro network nodes, Network nodes, and "Node support poles as defined in Chapter 284.

2. Definitions Related to City-Owned Poles

Applicable Standards means all applicable engineering and safety standards governing the installation, maintenance, and operation of facilities and the performance of all work in or around pole infrastructure and conduit infrastructure within the public right-of-way and includes the most current versions of the National Electrical Safety Code (NESC), the National Electric Code (NEC) and the regulations of the Occupational Safety and Health Administration (OSHA), "Load and Resistance Factor Specifications (LRFD) for Structural Supports for Highway Signs, Luminaires, and Traffic Signals", Manual on Uniform Traffic Control Devices (MUTCD), Standard for the Installation of Lightning Protection Systems (NFPA 780), Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings (ASTM 780), "A Local Government Officials Guide to Transmitting Antenna RF Emissions Safety: Rules, Procedures, and Practical Guidance," by the Federal Communications Commission, Local and State Government Advisory Committee, June 2, 2000, each as may be amended from time to time, and/or other reasonable construction, safety and engineering national, state and local requirements (including this Design Manual).

Attachment means any equipment relating to the deployment of Network nodes affixed to or placed within the City Pole infrastructure.

Conduit Infrastructure means all the underground conduits, hand holes, pull boxes and manholes utilized for streetlights, traffic signals and traffic control devices that are owned by the City.

lnnerduct means a flexible conduit installed inside a larger conduit for the placement of proposed cable.

Label means the placement of permanent identifying markers/tags on attachment to make the nature of the attachment and their ownership readily identifiable to all users.

Pole Infrastructure means all the poles and associated foundations utilized for streetlights, traffic signals and traffic control devices that are owned by the City.

Service Cable means any power or communications cable, wire, or strand, including without limitation fiber optic cable, coaxial cable, and twisted pair copper cable for the attachment.

Unauthorized Attachment means any attachment installed and/or maintained without approval, required permit, approved traffic control and required notice to the City.

SECTION 3. 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, Sec. 284.104 (a), 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:

(1) 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 (width measurements shall be taken at sections without designated turn lanes or cross-overs); and

(2) adjacent 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 284, Sec. 284.104(b), a 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.

Each permit application shall disclose if it is within a Municipal park and/or residential area as described above.

2. ***Historic district and Design Districts***. In accordance with Chapter 284, Sec. 284.105, 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 request that a Network provider explore the feasibility of using Camouflage measures 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 is discouraged from installing 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, and 16 U.S.C. §470), as of the date of the submission of the permit. It is recommended that each permit application disclose if it is with 300 feet of such a structure.

4***. Compliance with Undergrounding Requirements*.** In accordance with Chapter 284, Sec. 284.107, a Network provider shall comply with nondiscriminatory undergrounding requirements, including City 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.

4.2 Each permit application shall disclose if it is within an area that has undergrounding requirements.

B. **Least preferable and prohibited locations**.

1. **Residential Areas and Parks**. A Network provider is prohibited from installing a Node support pole in a Public right-of-way without written consent from the City Council if the Public right-of-way is located in or adjacent 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.

1.1 In accordance with Chapter 284, Sec. 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.

2. **Historic districts and Design Districts**. A Network provider is prohibited 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 Network node or a new Node support pole is camouflaged.

C. Most preferable locations

1. *Industrial areas* if not adjacent to a Municipal park, residential area, Historic district or Design District.

2. *Highway Right-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 284.105 at any time.

E. Exceptions

The City by its discretionary consent and agreement may grant exception to the above prohibited locations and sizes, but only in a non-exclusive, and non-discriminatory manner, as allowed or required by Chapter 284, Sec. 284.109 and Sec. 284.110.

F. Order of Preference regarding Network Node installations.

1. *Existing telephone or electrical lines between existing utility poles*. Micro network nodes shall only be lashed on existing 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. *City Service Poles*:

a. Replacement of *Non-decorative street light poles.* .

b. *Other municipal Service pole* use is discouraged.

4. *New Node support poles* shall be the least preferred type of allowed facility for attachment of Network nodes.

5. *Ground Equipment***.** Ground equipment should be minimal and the least intrusive.

SECTION 4. GUIDELINES ON PLACEMENT.

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 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. 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, maximum pole height, with each application and with each request for a permit for each location. The maximum dimension measured for the antenna components of the installation shall not exceed 24 inches wide or 36 inches tall, for a maximum of 6 cubic feet in volume. Antenna components shall not be more than 3 feet above the existing structure or pole and both antenna components, including radios must not protrude out from the outer circumference of the existing structure or pole by more than 2 feet.

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 Networks*.

a. The Network provider needs to provide analysis that the proposed Network node shall not cause any interference with City public safety radio system, traffic signal light system, or other city safety communications components in accordance with Chapter 284, Sec. 284.304.

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 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 Public right-of-way. If any Network node facilities, Node support poles, or ground equipment is installed in a location that is not in accordance with the plans approved by the City Manager and impedes pedestrian or vehicular traffic or does not comply or otherwise renders the Public right-of-way non-compliant with applicable Laws, including the American Disabilities Act, then Network provider shall promptly remove the Network node, Node support poles, and/or ground equipment.

b. Notice to remove unauthorized facilities and relocate and penalty: After 30 days' notice to remove 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 of $500 per day until the Network node, 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, Node support poles, or ground equipment in strict conformity with the City Public rights-of-way management ordinance, and other applicable ordinances concerning improperly located facilities in the Public rights-of-way.

5. *Identifying Marks*. Each network node shall have identifying marks to identify the owner and a unique number to identify the unit. These should be as non-intrusive as possible, while still being legible when viewed from ground level. The identification must be weather and fade resistant to assure continued readability over time. If a Network Node is composed of several components, each separate component shall have the identifying marks.

6. *Damaged or Deteriorating Components*. Components that pose a safety risk to the public due to damage or deterioration shall be corrected within 48 hours of notification by the City.

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 City 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 Network Provider will be required to remove the Micro network node, Network node, Node support pole, and related equipment in compliance with the relocation requirements of Chapter 43 of the Dallas City Code applicable to all users of the public right of way.

D. Network Node facilities placement*:*

1. Public *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 Public 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, other than electrical meter bases, 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, except in circumstances where a lesser height would be consistent with safety and protection of the public and vehicular traffic and it is not possible to locate the attachment in compliance with this requirement. Electrical meter bases can be less than eight (8) feet above the ground, as long as they are in compliance with applicable electrical codes, but must be positioned as not to encroach into a walkway or ADA Path. The grounding rod and connection point

must be configured to prevent encroachment into a walkway or ADA Path, and to prevent it becoming a trip hazard.

3. *Ground equipment*. Ground equipment will be considered for approval where they reduce visual clutter without producing visual or physical obstructions to vehicular or pedestrian traffic. In all other instances components, will be located on upright structures or buried sub-surface where space to do so is available. If ground-mounted components are viable, the total may not exceed 3 feet 6 inches in length, width or height above grade and comply with the requirements of Subsection F, Ground Equipment, below.

4. *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. All Pole-mounted components (existing and included with the permit) on the exterior of a Pole must not encumber more than one-half of the circumference of the Pole at any location on the Pole.

5. *Limit on number of Network nodes per site*. There shall be no more than one Network node on any one Pole.

E. New Node support poles and Alternatives.

1. *New Node support poles Spacing.* New Node support poles shall be spaced apart from existing Poles (except for a structure for signage) and Street Lights, at the same as the spacing between Poles (except for a structure for signage) or Street Lights, in the immediate proximity, but no less than 150 feet from a) another Node Support Pole, b) a Pole (except for a structure for signage), c) Street Light or d) other poles 16 feet or more in height, regardless of ownership, located in the public ROW, so as to reduce pole proliferation, improve public safety, provide a path forward for Smart City applications and infrastructure, and minimize the effect on property values and aesthetics in the area adjacent to the installation.

2. *Alternatives to New Node Support Poles*.

a. If existing Utility Poles or Street Lights are available within a 150 foot radius of the desired location, they must be used for collocation of a network node. If a metal Street Light pole is used it shall be replaced in accordance with the requirements of Appendix B.

b. If Utility Poles or Street Lights are within a 150 foot radius of the desired location, but are not available for collocation of a network node, a new Street Light may be placed (i.e. a Street Light where no Street Light existed before) in accordance with the requirements of Appendix B. If a new Street Light is allowed, it must be at least 75 feet from an existing Pole (except for a structure for signage), Street Light and other poles 16 feet or more in height, regardless of ownership, located in the public ROW when in-line with other Poles (except for a structure for signage), Street Lights and other poles 16 feet or more in height, regardless of ownership, located in the public ROW or when in the median or on the opposite side of the public right-of-way measured from the point on the median or the opposite side of the public right-of-way which is directly across the right of way from the closest pole.

c. If none of the options above in this Section 4.E. are available for the Network Providers desired location, the City will consider an alternative proposed by the Network Provider that implements to the greatest extent possible the City's goal of reducing pole

proliferation, improving public safety, providing a path forward for Smart City applications and infrastructure, and minimizing the effect on property values and aesthetics in the area adjacent to the installation.

3. *Waivers Applicable to a Street Light Installation in Accordance with Appendix B.* In addition to the waiver of the 150-foot spacing requirement in this Section 4.E., applications for Network Nodes located on Street Lights installed in accordance with Appendix B will not count against the 30 permit applications limit contained in Section 12.3.

4. *Height of Node support poles or modified Utility Pole*. In accordance with Chapter 284, Sec. 284.103 a Node support pole or modified Utility Pole may not exceed the lesser of:

(1) 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

(2) 55 feet above ground level.

A modified Utility Pole must be at least 75 feet from an existing pole when in-line with other Poles or when on the opposite side of the Public right-of-way, unless the Pole is on the opposite side of an alley and has 13 feet of clearance from face of Pole to face of Pole. Poles should be placed as close to outside of the public Right of Way as possible and as close to property lot lines as possible.

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 the visibility triangle or as prohibited by sight distance calculations set out in the City of Dallas Paving Design Manual or other applicable law.

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 Public right-of-way that is within a Municipal park or within 250 feet of the boundary line of a Municipal park, unless approved by the City Manager and Parks Director in writing.

3. *Minimize Ground equipment density*:

In accordance with Chapter 284, Sec. 284.102 (1) to enhance the public 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 within 100 feet radius already occupies a footprint of a total of 25 sq. ft. or more.

G. Municipal Service Poles and Other City-Owned Poles:

1. *In accordance with Agreement*: Installations on all Service Poles and Other City-Owned Poles shall be in accordance with an agreement as allowed by Chapter 284, Sec. 284.056 and Sec. 284.101 (a) (3), and (b).

2. *Required industry standard pole load analysis*: Installations on all Service Poles and Other City-Owned Poles 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 284.108.

3. *Height of Attachments*: All Attachments on all Service poles and Other City-Owned Poles, other than electrical meter bases, shall be at least 8 feet above grade, in accordance with Chapter 284, Sec. 284.108(a)(1) and Sec. 284.108(a)(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 sixteen (16) feet above the ground. Electrical meter bases can be less than eight (8) feet above the ground, as long as they are in compliance with applicable electrical codes, but must be positioned as not to encroach into a walkway or ADA Path. The grounding rod and connection point must be configured to prevent encroachment into a walkway or ADA Path, and to prevent it becoming a trip hazard.

3. *Installations*: Installations on Service Poles and Other City-Owned Poles 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, Sec. 284.056 and Sec. 284.101 (a) (3), and (b). Installation of Network node facilities shall:

i. Be encased within the pole and in a separate conduit or similar method to physically separate equipment intended for Service Pole and Other City-Owned Pole;

ii. Have a separate electric power connection than Service Pole and Other City-Owned Pole; and

iii. Have a separate access point than the Service Pole and Other City-Owned Pole; and

4. *Additional Requirements:* See Section 14, Additional Requirements for Service Poles and City Owned Poles.
5. All Pole-mounted components (existing and included with the permit) on the exterior of a Pole must not encumber more than one-half of the circumference of the Pole at any location on the pole.

SECTION 5. GENERAL AESTHETIC REQUIREMENTS

A. Concealment and Enclosure.

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 284.105.

2. All new Node support poles should be camouflaged, except those located in an area zoned for predominantly industrial uses. Companies shall submit their proposal for camouflage with the permit application.

3. All Network node facilities shall be designed so as blend into the surrounding area and 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 Public rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.

B. Minimize Ground Equipment Concentration.

In order to minimize negative visual impact to the surrounding area, and in accordance with Chapter 284, Sec. 284.102 (1) to enhance the public 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 within 300 feet already occupies a footprint of 25 sq. ft. or more to minimize effect on property values and aesthetics on the area.

C. Allowed Colors.

Colors in Historic districts and Design Districts must be in strict accordance with the City's Public rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.

Colors in Historic districts and Design Districts must be approved by the City Manager 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.

SECTION 6. 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 not allow or install generators or back-up generators in the Public right-of-way in accordance with Chapter 284, Sec. 284.002 (12) (B) (1).

SECTION 7. INSURANCE, INDEMNITY, BONDING AND SECURITY DEPOSITS.

1. 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.

2. Indemnity shall be in accordance with Chapter 284, Sec. 284.302, and as provided for in Chapter 283, Sec. 283.057 (a) and (b) of the Texas Loc. Gov't Code.

SECTION 8. 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 Public rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.

2. The Network provider shall notify the City Manager in writing not less than 10 business days prior to removal or relocation. The Network provider shall obtain all Permits required 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. In accordance with Chapter 284, Sec. 284.303, except as provided in existing state and federal law, a Network provider shall relocate or adjust any Micro network nodes, Network nodes, Node support poles, and related ground equipment in a Public right-of-way in a timely manner and without cost to the City.

2. The Network provider understands and acknowledges that the City may require the Network provider to remove or relocate its Micro network nodes, Network nodes, Node support poles, and related ground equipment, or any portion thereof from the Public right-of-way for City construction projects as allowed by state and federal law, including the common-law.

3. The Network provider shall, at the City Manager's direction, remove or relocate its Micro network nodes, Network nodes, Node support poles, and related ground equipment at the Network provider's sole cost and expense, except as otherwise provided in existing state and federal law, whenever the City Manager reasonably determines that the relocation or removal is needed for any of the following purposes: 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 right-of-way for the purpose of enhancing the traveling public's travel and transportation uses.

3. If the Network provider fails to remove or relocate the Micro network nodes, Network nodes, Node support poles, and related ground equipment, or portion thereof as requested by the City Manager within 90 days of the Network provider 's receipt of the request, then the City shall be entitled to remove the Micro network nodes, Network nodes, Node support poles, and related ground equipment, or portion thereof at Network provider's sole cost and expense, without further notice to Network provider.

4. The 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 nodes, Network nodes, Node support poles, and 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 nodes, Network nodes, Node support poles, and related ground equipment within the time frame and in the manner required by the City Manager if the City Manager reasonably determines that the disconnection, removal, or relocation of any part of its Micro network nodes, Network nodes, Node support poles, and related ground equipment (a) is necessary to protect the public health, safety, welfare, or City property; (b) the Micro network nodes, Network nodes, Node support poles, 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 nodes, Network nodes, Node support poles, and related ground equipment, or use of any Location under applicable law in strict accordance with the City's Public rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.

2. If the City Manager reasonably determines that there is imminent danger to the public, then the City may immediately disconnect, remove, or relocate the applicable Micro network nodes, Network nodes, Node support poles, and related ground equipment at the Network provider's sole cost and expense in strict accordance with the City's Public rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.

3. The City Manager shall provide 90 days written notice to the Network provider before removing Micro network nodes, Network nodes, Node support poles, and related ground equipment under this Section, unless there is imminent danger to the public health, safety, and welfare.

4. The Network provider shall reimburse City for the City's actual cost of removal of Micro network nodes, Network nodes, Node support poles, and related ground equipment within 30 days of receiving the invoice from the City.

SECTION 9. INSTALLATION AND INSPECTIONS

A. INSTALLATION.

Network provider shall, at its own cost and expense, install the Micro network nodes, Network nodes, Node support poles, and related ground equipment in a good and workmanlike manner in strict accordance with the City's Public rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.

B. INSPECTIONS.

Visual inspections by the City Manager, or designee, of any Micro network nodes, Network nodes, Node support poles, and related ground equipment located in the Public right-of-way shall be allowed in strict accordance with the City's Public rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.

SECTION 10. REQUIREMENTS UPON ABANDONMENT OF OBSOLETE MICRO NETWORK NODE, NETWORK NODE, NODE SUPPORT POLE AND RELATED GROUND EQUIPMENT.

Network provider shall remove its Micro network nodes, Network nodes, Node support poles, 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 nodes, Network nodes, Node support poles, and related ground equipment being Abandoned or within 90 days of receipt of written notice from the City. When Network provider removes, or Abandons permanent structures in the Public right-of-way, the Network provider shall notify the City Manager in writing of such removal or Abandonment and shall file with the City Manager the location and description of each Micro network node, Network node, Node support pole, and related ground equipment removed or Abandoned. The City Manager may require the Network provider to complete additional remedial measures necessary for public safety and the integrity of the Public right-of-Way in accordance with all applicable City ordinances and state and federal law.

SECTION 11. GENERAL PROVISIONS.

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

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 Public right-of-way, including, upon request, the use of Auto CAD/GIS digital format. Network provider will provide additional maps to the City upon request.

2. Allocation Of Funds For Removal And Storage. The City has 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 this Article, and no other funds will be allocated.

3. Ownership. Ownership of Network nodes and related equipment shall be in strict accordance with the City's Public rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.

No part of any Micro network nodes, Network nodes, Node support poles, and related ground equipment erected or placed in or on the Public right-of-way by Network provider will become, or be considered by the City as being affixed to or a part of, the Public right-of-way. All portions of any Micro network nodes, Network nodes, Node support poles, and related ground equipment constructed, modified, erected, or placed by Network provider in or on the Public right-of-way will be and remain the property of Network provider and may be removed by Network provider at any time, provided the Network provider shall notify the City Manager prior to any work in the Public right-of-way.

4. Tree Maintenance. Tree maintenance 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.

5. Signage. Signage shall be in strict accordance with the City's Public rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.

6. **Identifying Information.** 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 Manager.

7. **Signs and Advertising.** Except as required by Laws or by the Utility Pole owner, Network provider shall not post any other signage or advertising on its Micro network nodes, Network nodes, Node support poles, and related ground equipment, or on Service poles or Utility Poles.

8. Graffiti Abatement. Graffiti abatement shall be in strict accordance with the City's Public rights-of-way management ordinance, and other applicable ordinances, except to the extent not consistent with Chapter 284.

9. Restoration. Network provider shall restore and repair the Public right-of-way any facilities located within the Public right-of-way, and the property of any third party resulting from Network provider's construction, installation, removal, or relocation activities allowed pursuant to this Design Manual, applicable City ordinances, and state and federal law, except to the extent not consistent with Chapter 284.

10. Network provider's responsibility. Network provider shall be responsible and liable for the acts and omissions of Network provider's employees, temporary employees, contractors, officers, directors, consultants, agents, Affiliates, subsidiaries, sub-Network provider's and subcontractors in connection with the installations of any Micro network nodes, Network nodes, Node support poles, and related ground equipment, as if such acts or omissions were Network provider's acts or omissions in strict accordance with this Design Manual, applicable City ordinances, and state and federal law, except to the extent not consistent with Chapter 284.

SECTION 12. APPLICATION PROCESS & APPLICATION FEES

1. Application Process

a) Submit completed application form, including application fee calculation.

b) Pay application fee by mechanically printed company check or cashier's check, payable to the City of Dallas.

c) Submit application form and application fee at the Oak Cliff Municipal Center, 320 East Jefferson Blvd., Room 312, Dallas, Texas 75203.

d) Applications may only be submitted by a public service provider registered with the City pursuant to Dallas City Code Chapter 43, Article VIII. Failure of an applicant to register under Chapter 43 is grounds for denial of their application.

2. Application Fees

a) An application fee of $500.00 for an application for up to 5 Network nodes and an additional $250.00 fee for each additional Network node per application.

b) An application fee of $1,000.00 per application for each pole.

3. Pending Applications

a) A person shall not file, or have pending, more than 30 permit applications for the installation or collocation of network nodes at any time.

b) As the number of permits pending drops below 30, a network provider may file additional applications until the number of applications pending once again reaches 30.

SECTION 13. PERMIT PROCESS

Separate information must be submitted into the on-line system for each Network node, Node support pole, Transport facility, Collocation or Utility Pole.

1. Pole Replacement Permit

Apply for a Public right-of-way Permit and traffic control approval through the City's On-Line System at https://rowmanagement.dallascityhall.com.

Items needed for pole permit:

Work description-must include:

(pole owner) to place a XX foot pole to replace a XX foot Utility pole at same location.
(pole owner) to place a XX foot pole to replace a XX foot Traffic Signal pole at same location.
(pole owner) to place a XX foot pole to replace a XX foot Street Light pole at same location.
(pole owner) to place a XX foot pole in a location where a pole currently does not exist.
Name of the company applying for the Permit.

Address

Must match plans provided and be the 911 address provided by the City.

Owners Information

Include the owner of the Pole, the owner's representative and contact information.

Contractor Information

Include contractor and any sub-contractors that will be working in the Public right-of-way in connection with this project.

If contractor or sub-contractor is not in the database, please fill out the applicable form to get added.

Documents

Applicants must submit a scaled site plan showing the area surrounding the Pole. Include all belowground facilities within a 15 foot radius from the Pole and aboveground facilities located in the public right of way within a 150 foot radius from the Pole. Provide suffient information to demonstrate that it does not obstruct, impede, or hinder the usual travel or public safety, or violate the Federal Americans with Disabilities Act.

Applicants must submit pictures showing existing Pole, what is currently on it, and where the replacement Pole will be placed.

Applicants must provide detailed engineering drawings for components and show all existing facilities, both above ground and, if any ground mounted equipment will be installed, underground. All components required for the facility must be included in the detailed plans and dimensions must be shown for all components.

Order of Approval

A Public right-of-way Permit must be obtained from Public Works prior to any work occurring in the field. Separate information must be submitted into the City's on-line system for each Network node, Node support pole, Transport facility, Collocation or Utility Pole.

Traffic control plans (Vehicular and Pedestrian Traffic) must be submitted and approved by the City's Transportation Department prior to any work in the field.

Any electrical work requires a building permit from Building Inspection.

Applicants shall provide, with the Permit information, an executed Pole attachment agreement from all facility owners that any components of the system will connect to or be mounted on.

Each installation shall be inspected by the Public Works Department and, if electrical work is required, by Building Inspection.

Once permit has been issued:

- **Request start up inspection**

- City will close start up inspection once replacement Pole is installed.

- **Request Permanent inspection**

-Old pole must be removed, lines switched over and the area cleaned up.

City closes permanent inspection once all required work and clean-up is verified.

Now a Public right-of-way Permit and traffic control approval can be submitted.

2. Network nodes, Node support poles and Transport facilities

Once a Pole Permit has been closed out, the Network node Owner can apply for a Public right-of-way Permit and traffic control approval for small cell installation on the Pole.

Network node Permit

Items needed for Permit:

Work Description - Must include:

This permit is to place a Network node/Node support pole or Transport facility (select one) for (Company Name).

Identify what this permit is being applied under:

1. Chapter 283 of the Local Government Code
2. Chapter 284 of the Local Government Code
3. License Agreement issued by the City. Provide License number.
4. Franchise Agreement with the City.
5. Other. Please specify.

Address

Must match plans provided and be the 911 address provided by the City.

Owners Information

Include the owner of Network node, the owner's representative and contact information.

Contractor Information

Include contractor and any sub-contractors that will be working in the Public right-of-way in connection with this project.
If contractor or sub-contractor is not in the database, please fill out the applicable form to get added

Required Documents

1. Copy of the approved application form showing application fees have been paid and the addresses of the elements included in the permit.
2. Copy of the Pole Permit associated with this address.
3. Copy of approved License Agreement (if applicable).
4. Traffic control plans (Vehicular and Pedestrian Traffic).
5. Site plan / dimensioned design plans for all components.
6. Executed Pole Attachment agreement(s) (If owned by others).
7. Picture of the Pole where unit will be placed and drawings showing the location and dimensions of all components to be installed and all components existing on the Pole.
8. Proof of Insurance as required by applicable City ordinances.
9. Copy of Building Permit for electrical work.
10. Copy of contractor authorization for electrical work.

For Transport Facilities add:
A plan and profile drawing showing all existing above ground and below ground facilities in the Public right of way along the proposed route, overlaid with the proposed facilities.

Request Start Up Inspection - 24 hours prior to starting work in the field.
- City closes start up inspection (once all elements are installed, pending electrical inspections).

Request Permanent Inspection – Once electrical inspections have been passed and electrical meter is installed and operational.

- City closes permanent inspection once electrical green tag is provided, meter is installed and final clean-up is verified.

SECTION 14. ADDITIONAL REQUIREMENTS FOR SERVICE POLE AND CITY-OWNED POLES

1. Overview

The information contained in this Section is intended to communicate the criteria that will be utilized to review requests from Network providers to Collocate by Attachment to City owned Pole infrastructure. These requirements are in addition to the general requirements applicable to all Network nodes. Adherence to these criteria will improve timeliness of application and approval processes. It is the responsibility of all Network providers that apply for Pole attachments to follow all applicable standards. All permit applications that propose attachment to City-owned poles, including poles the provider intends to replace with a new pole, must be accompanied by a fully executed pole attachment agreement with the City.

2. Definitions

See Section 2, Definitions Related to City-owned Poles.

3. Design

The Network provider shall submit a design proposal for the proposed Attachment as a part of the permit application. No employee, agent contractor, or sub-contractor of the Network provider shall access the Pole infrastructure without the presence of an authorized representative of the City. When access to the Pole infrastructure is necessary, the Network provider shall provide adequate notice to the City for an authorized representative to be present for gathering the information submitted in the design proposal. If a design proposal is submitted utilizing the information gathered without the required presence of an authorized representative of the City, the Permit application associated with the design proposal will be declined. During installation and/or maintenance, the owner of the Attachment shall provide a minimum 7 working days of notice to the City for an authorized representative to be present. Any damages to the City property during the installation and/or maintenance of the Attachment shall be corrected to the existing City standards at the sole expense of the Attachment owner within the response times specified by the City.

The design proposal shall at a minimum include the following:

a. Location Information

The Location information provided shall include the 911 address of the Pole proposed to be utilized, GPS coordinates of the Pole and the location of the Attachment. An electronic GIS map identifying the Pole, adjacent Pole infrastructure and City-owned radio frequency equipment within 300 foot radial distance, and nearby historic landmarks shall be provided.

b. Attachment Details

The Attachment details provided shall include pictures, scaled engineering drawings and specifications of all the equipment relating to the deployment of Network nodes at the location

identified. The color of the proposed service cable exterior jacket shall need to be different from the standard colors that are in use by the City. The standard colors currently in use by the City are white, black, blue, gray, green and red.

c. Attachment Installation Details

The attachment installation details shall include detailed information about methods proposed to be utilized to install all equipment relating to the deployment of Network nodes. The details shall also identify the existing Pole infrastructure that is proposed to be utilized. Innerduct shall need to be utilized for installing service cable. Underground conduit entry into the Pole infrastructure shall be the only permitted access for installing service cable. Refer to Appendix A, Traffic Signal Mast Arm Pole - Attachment Location for allowable area and location where an Attachment could be installed on a traffic signal mast arm pole.

d. Pre-Construction Survey

Information submitted as a part of the Pre-Construction survey shall include detailed photos showing the 360-degree panoramic view of the Pole infrastructure and the surrounding location. Electronic photos submitted shall include geo spatial metadata including but not limited to latitude, longitude, altitude, bearing and time stamp. Information submitted shall also include physical condition, structural integrity and occupancy of the Pole infrastructure.

Nondestructive ultrasonic testing of existing Pole infrastructure that is proposed to be utilized shall be required. Nondestructive ultrasonic testing analysis and a document sealed by a professional structural engineer licensed in the state of Texas certifying the structural integrity of Pole infrastructure shall need to be provided.

e. Structural Analysis

Pole loading analysis with all equipment relating to the deployment of Network nodes based on the latest version of the LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals will need to be conducted. Pole loading analysis sealed by the pole manufacturer's licensed professional structural engineer shall be provided. Also, foundation analysis and a document sealed by a professional structural engineer licensed in the state of Texas certifying that the existing foundations in the field can safely support the additional load from the attachment shall need to be provided.

f. Electrical Analysis

NESC clearance requirements shall be verified for all proposed equipment relating to the deployment of Network nodes. Available clearances measured in the field shall be documented. A sealed document from a professional electrical engineer licensed in the state of Texas certifying that the proposed attachment installation meets or exceeds all applicable NESC, NEC and NFPA 780 requirements shall need to be provided.

g. Lighting Analysis

Lighting level analysis utilizing the "Point by Point" method will need to be conducted for existing conditions and for conditions after the installation of all equipment relating to the deployment of Network nodes. Lighting level analysis and a document sealed by a professional engineer licensed

in the state of Texas certifying that the proposed attachment will not impact existing lighting levels shall be provided.

h. Radio Frequency Analysis

As a condition of approval for Installations on all Service Poles and Other City-Owned Poles, applicants shall provide an evaluation of proposed wireless equipment to prove compliance with FCC guidelines for human exposure to radiofrequency fields (RF). Evaluations shall include uncontrolled exposure in the near field and far field regions. Additional evaluations shall be provided whenever the transmitting power of existing equipment is increased. Traffic signals typically utilize cellular modems and radios for wireless communication. Also, traffic signal detection could utilize blue tooth, Wi-Fi, thermal imaging, and radar (K band, X band) equipment. As part of the attachment agreement, a radio frequency analysis needs to be conducted. The analysis shall document existing radio frequencies, proposed radio frequencies and summarize possible radio-frequency interference. If the equipment relating to the deployment of Network nodes utilizes and/or operates in the same radio frequency as the existing equipment, the Pole Attachment shall not be permitted. If City proposes to install equipment that would operate in the same radio frequency as the Attachment, the Attachment shall be relocated at the sole expense of the Attachment owner. The Attachment owner shall remove the Attachment within 25 working days after receiving a notice from the City. Any Attachment that remains after the 25 working days shall be considered an unauthorized Attachment.

i. Construction Drawings

Detailed construction drawings shall be provided. The construction drawings shall include all relevant information needed for proper installation of all equipment relating to the deployment of Network nodes. Construction drawings shall include the proposed service cable and conduit route detail from power source to equipment, power source location/address and emergency shut off location/address. Construction drawings shall clearly demarcate all proposed equipment in the Public right-of-way. New underground conduit system, owned and operated by the Network provider, shall need to be specified to access the Pole that is proposed to be utilized. Existing City owned conduit infrastructure shall not be utilized for the deployment of Network nodes. The use of anti-friction agents shall be specified for installation of proposed service cable. Also, external entry of Pole infrastructure shall not be permitted. Fusible quick disconnects shall be specified in the pull boxes and hand holes. ASTM A780 shall need to be utilized for touch up of Pole infrastructure areas impacted by attachment installation. Separate lightning protection system and power grounding shall need to be specified for the attachment as per applicable standards.

All-weather labels shall need to be specified for all equipment relating to the deployment of Network nodes. Service cable will need to be labeled in the Poles and at all access openings. Labels shall avoid the use of sharp edges and corners to prevent injury to personnel and damage to cables and at a minimum shall include company name and emergency contact number. Radio Frequency warning signs shall also be specified as per applicable standards. The radio frequency warning signs shall also include the information about the emergency shut off locations.

Construction drawings will also need to include information about the proposed on-call contractor(s) that will be responsible for repair of traffic signal and street light related damages during installation and maintenance of attachment.

j. Traffic Control

A traffic control plan (vehicular and pedestrian) shall be submitted for the work proposed to be performed on any part of Pole infrastructure and/or equipment located in Public rights-of-way or easements granted to the City. The traffic control plan shall need to be utilized during installation, maintenance and removal of any equipment relating to the deployment of Network nodes.

SECTION 15. FEES FOR RIGHT OF WAY RENTAL

1. Fees for Network nodes

Fees for Network nodes shall be based on reasonable fair market value of the use allowed in accordance with the anti-gift provisions of the Texas Constitution. The initial rental fee shall be $2000 annually and shall be adjusted each January 1st to reflect changes in the annual revised Consumer Price Index for All Urban Consumers for Texas, as published by the federal Bureau of Labor Statistics, unless otherwise provided by valid, constitutional, state law.

2. Fees for Service Poles

Fees for Service poles shall be based on reasonable fair market value of the use allowed in accordance with the anti-gift provisions of the Texas Constitution. The initial rental fee shall be $1000 annually and shall be adjusted each January 1st to reflect changes in the annual revised Consumer Price Index for All Urban Consumers for Texas, as published by the federal Bureau of Labor Statistics, unless otherwise provided by valid, constitutional, state law.

3. Fees for Transport facilities

Fees for Transport facilities shall be based on reasonable fair market value of the use allowed in accordance with the anti-gift provisions of the Texas Constitution. The initial rental fee shall be a minimum of $28 monthly and shall be adjusted each January 1st to reflect changes in the annual revised Consumer Price Index for All Urban Consumers for Texas, as published by the federal Bureau of Labor Statistics, unless otherwise provided by valid, constitutional, state law.

SECTION 16. PRE-APPLICATION REVIEW

1. Voluntary

Providers may, but are not required to, present plans to City staff, prior to submitting their applications for formal review, in order to ask questions or get clarification on whether the plans are likely to meet the requirements of City ordinances and this Design Manual.

2. Must Acknowledge Not An Application

Providers will be required to acknowledge that their submittal is not an application subject to the deemed-approved provisions of Chapter 284 before submitting it for informal discussion and feedback. If a provider refuses to acknowledge that the submittal is not an application, then the submittal will be treated as an application and will be approved or denied as appropriate.

SECTION 17-19 RESERVED

SECTION 20. DESIGN MANUAL - UPDATES

Placement or Modification of any Micro network nodes, Network nodes, Node support poles, 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.

Appendix A
Traffic Signal Mast Arm Pole - Attachment Location

Traffic Signal Mast Arm Pole - Attachment Location

Not to Scale
August 15, 2017

FIXED MOUNT TRAFFIC SIGNAL ARM

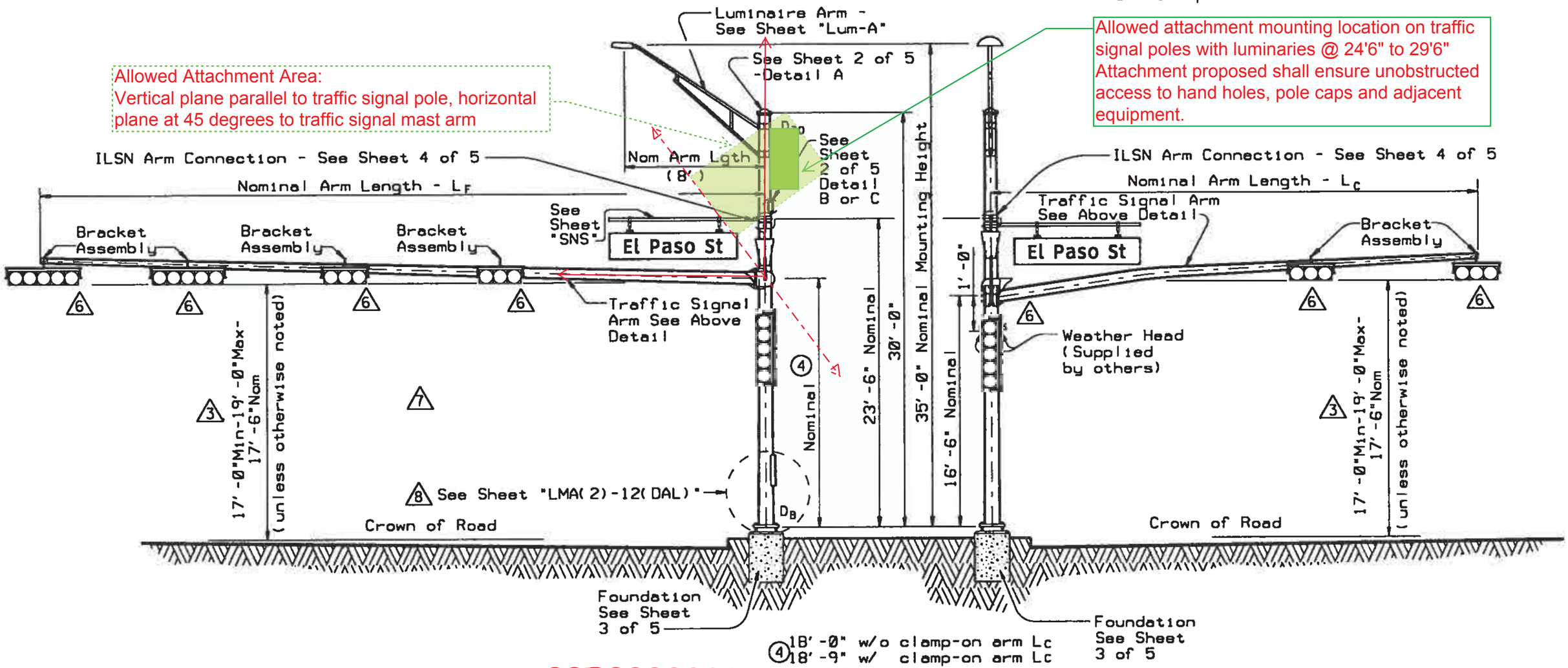
① See Sheet 3 of 5 for Arm Rise

CLAMP-ON TRAFFIC SIGNAL ARM (IF REQUIRED)

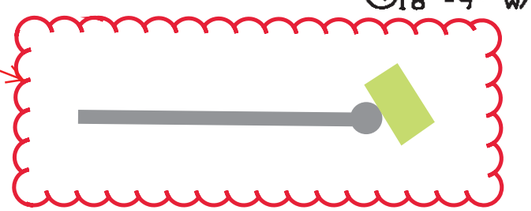
② See Sheet 4 of 5 for Arm Rise and Clamp-on Arm Details

Allowed Attachment Area:
Vertical plane parallel to traffic signal pole, horizontal plane at 45 degrees to traffic signal mast arm

Allowed attachment mounting location on traffic signal poles with luminaries @ 24'6" to 29'6" Attachment proposed shall ensure unobstructed access to hand holes, pole caps and adjacent equipment.



Simplistic top view of traffic signal pole, mast arm and possible attachment



Appendix B

City of Dallas - Street Light Design - Replacement or New Placement

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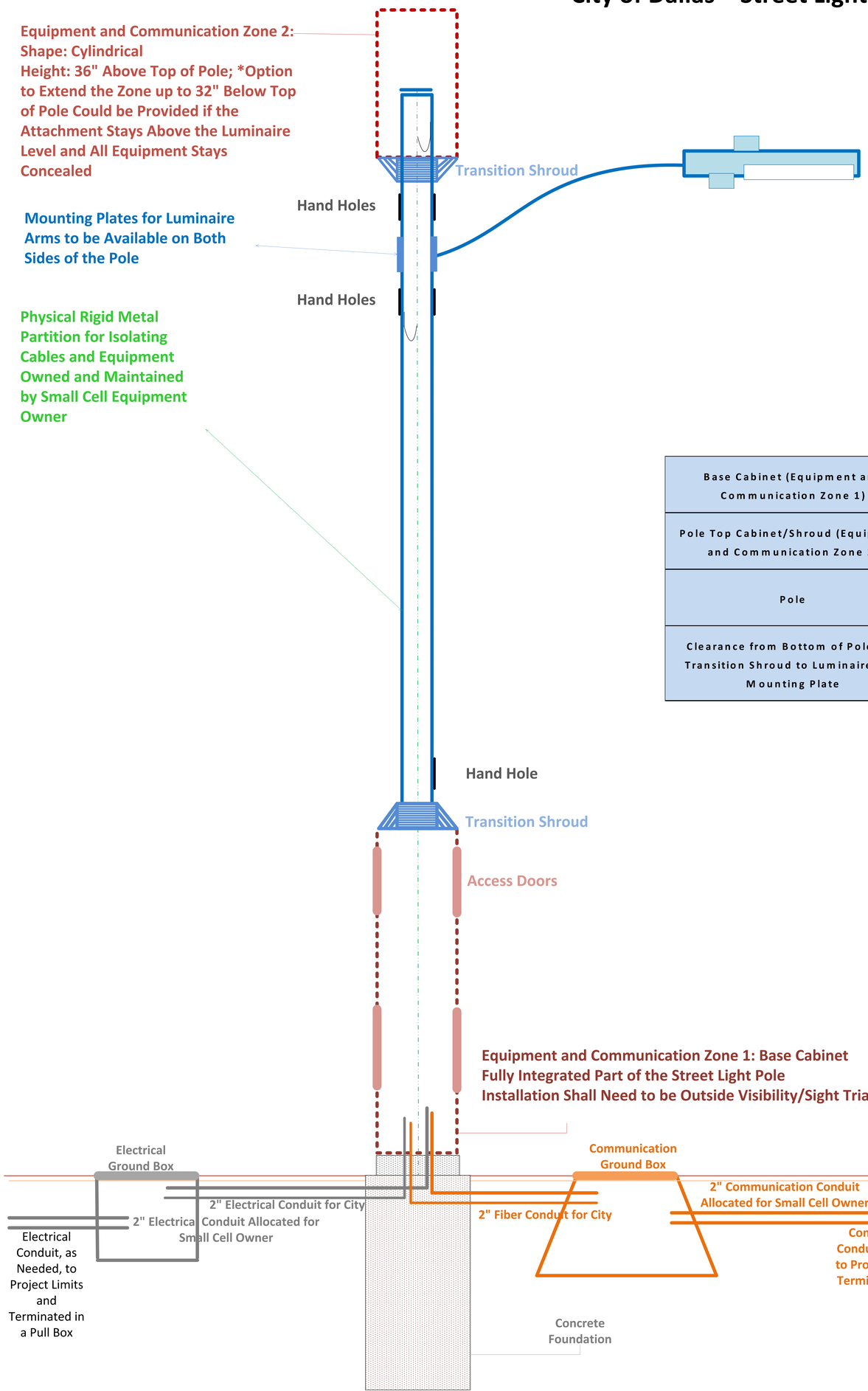

Base Cabinet (Equipment and Communication Zone 1)	Shape: Cylindrical
	Height to Top of Shroud : 108" to 144"
	Diameter: 14" to 18"
Pole Top Cabinet/Shroud (Equipment and Communication Zone 2)	Shape: Cylindrical
	Total Height: 36"; *Option up to 68"
	Diameter: 8" to 24"
Pole	Shape: Cylindrical
	Height: Variable
	Diameter: 8"
Clearance from Bottom of Pole Top Transition Shroud to Luminaire Arm Mounting Plate	2' (Minimum) or as Needed to Accommodate the Rise of the Luminaire Arm Proposed

NOTES:

Design, Manufacturing, Installation and Maintenance Criteria for Pole and Foundation: Latest Edition and Revision of AASHTO LRFD LTS. Design to include 2 Unbalanced 50 lb. Luminaires (and Associated Sensors) of Minimum Size of 18" X 24" X 30", Mounted at the End of 12' (Minimum) Luminaire Arms, Banners of Minimum Size 32" x 102" Mounted on Either Side of Pole Between 12' to 27' Height, Existing Signage and Additional Small Cell Equipment.
Design Wind Speed to be a Minimum of 110 MPH. Breakaway or Fixed Support Based on Site Conditions. Bolt Circle to be 14". Actual Foundation Embedment Depth to be Based off Texas Cone Penetrometer Value. Embedded Foundation Width Could Vary Based on Actual Site Conditions. Circular Foundation Cap of 3" Thickness Shall be Installed above Grade and Shall Match the Circumference of Base Cabinet. Exposed Foundation Shall have ¾" Chamfer.

Street Light Pole Material: Aluminum (Anodized and Seamless) and/or Steel (Hot Dipped Galvanized). All Hardware Accessories to be Stainless Steel or Pre-Approved Material.
Shape: Cylindrical Round Pole with 4-Bolt Anchor Base; 14" Bolt Circle
Banner Arms: Match Existing
Color: Powder Coat to Match Existing, Anodized Finish or White Color in Design District
Pole Offset: 2' minimum from Back of Curb to Face of Base Cabinet
UL Classification: Poles, Hand Holes and Access Doors to be UL Classified (Preferred).
Labels: For Pole Identification Labels, Use City Criteria. Include Additional Labels to Provide Small Cell Equipment Owner Name, Address, 24 Hour Contact Number, Pole Manufacturer, Manufactured Date, Project #. If UL Classified, Include UL Classified Label (UL1598, Category IEUR) for Poles. Labels to be Affixed at Eye Level, on Hand Holes and in Equipment and Communication Zones. Radiofrequency Hazard Warning Signs to be Installed as Needed.

Electrical Ground Box to be Owned by ONCOR. Street Light Pole, Luminaire Arm, Luminaire, Communication Vault/Ground Box, Conduit between Ground Boxes and Pole to be Owned by the City but, Maintained by the Small Cell Equipment Owner. For New Street Light Installations, not Replacing an Existing Street Light, Wireless Provider has the Option to Own and Maintain the Pole.

Provide Structural, Electrical and Foundation Plans Sealed by Professional Engineers Licensed in the State of Texas. Electrical Plans Shall Meet or Exceed Applicable NESC, NEC and NFPA 780 requirements.

Design, Manufacturing, Installation and Maintenance to Meet all Applicable Standards as Defined in the Design Manual. Provide Separate Grounding for Small Cell and Street Lighting Equipment. Grounding, Fusing and Quick Disconnects to Meet ONCOR Preferences.

Conduit Markers to be Installed. Communication Conduit Color Shall be "Orange". Conspicuous Weather and Chemical Resistant Labelling to be Affixed to the Ground Boxes and Conduits. Ground Boxes Should be Installed at About 10' Radial Distance From the Pole. Color of Service Cable to Small Cell Equipment and Street Light Cable Shall be Different.

Multiple Access Doors to be Available in Equipment and Communication Zone 1, Facing away from the Travel Way for Secure Equipment Access. One of the Door Allocated to Access Physically Separated and Secured Space for City Equipment to be Equipped with Built-in Lock (Slam Type, Key #2 Corbin Style), Option to Secure with a Pad Lock and a Door Switch with Alarm Capability.

J-Hooks Shall be Available in the Pole for Cable Support. Captive Chains, Nuts and Bolts Shall be Provided for all Hand Hole Covers. Equipment and Communication Zones to Include Weep Holes to Prevent Water Related Damage.

Disturbed Surfaces and Equipment Installed (Including Ground Box Surfaces) in Pedestrian Circulation Paths to be ADA/PROWAG Compliant.

Power Meter to be Enclosed Within the Base Cabinet Provided that ONCOR can Remotely Read the Power Meter and has 24 X 7 Secure Physical Access to the Power Meter. Fusible Disconnect Shall be Installed to De-energize Equipment In the Event of a Knockdown or Other Potentially Unsafe Situation(s).