

## EXHIBIT "A"

# Design Manual

## I. Introduction

### A. Purpose

The following design specifications are required by the City to

- i) prevent obstruction, impediment, or hindrance of the usual travel or public safety on a Public right-of-way;
- ii) prevent obstruction of the legal use of the public rights-of-way by utility providers; and
- iii) protect the health, safety, and welfare of the public.

### B. Scope

Any Person that constructs, modifies, maintains, operates, relocates, or removes structures within the right-of-way shall conform to the following design specifications and all applicable construction Codes of the City. The City Administrator, or designee, shall deny Permit application that does not strictly conform to the applicable requirements.

### C. Definitions

Terms defined in Chapter 70, Article VI of the Code of Ordinances of the City of Hedwig Village, Texas, shall have those same meanings when used in this Design Manual.

## II. Design Requirements for all rights-of-way

### A. Pole stability requirements

Nodes, equipment cabinets, and Poles shall be constructed based on an industry standard Pole load analysis, completed and submitted to the City, indicating that the Service Pole or Network Support Pole to which the Network Node is to be attached will safely support all proposed and existing equipment. Documentation shall be completed and submitted to the City, indicating that the Pole foundation or anchoring mechanism is (i) sufficient for the type of soil in the proposed location and (ii) sufficient to withstand typical area wind loads as identified by adopted building Codes of the City. Poles shall be constructed with foundations based on (i) soils test, if the proposed Pole is over thirty (30') feet in height, or (ii) a geotechnical survey, if the proposed Pole is over forty-five (45') feet in height.

### B. Limit on number of Network Nodes per Pole.

The number of Network Nodes allowed per Pole shall be limited based on the Pole load analysis. The total number of Nodes allowed on a Node Support Pole shall be shown on the submitted construction plans, and all measures to conceal additional Nodes shall be included in the design of the Node Support Pole(s).

### **C. Minimum placement height**

Network Node equipment placed on new and existing Poles shall be placed more than twelve (12') feet above ground level. If a Network Node or other equipment is projecting toward the street, for the safety and protection of the public and vehicle traffic, the attachment shall be installed no less than sixteen (16') feet above the ground.

### **D. Equipment size limitations**

All Facilities shall be constructed and limited in size in accordance with Section 284.003 of the Texas Local Government Code.

### **E. Compliance with all applicable Building Codes**

Facilities must be installed in accordance with all applicable building Codes, as adopted, and any Utility Pole Owner's construction standards.

### **F. New Node Support Pole locations and construction requirements**

New Poles shall be constructed with breakaway bases and located as close as possible to the outside edge of the right-of-way. New Poles shall be spaced apart from existing Poles by no less than one hundred (100') feet. New Poles may not be located within three (3') feet of sidewalks, pedestrian paths, or bicycle paths. New Poles may not be located within ten (10') feet of driveways. New Poles should provide minimum disruption of visibility and sight lines for nearby driveways, windows, and other existing improvements.

### **G. Installations near intersections and driveways**

A sight distance analysis shall be performed, according to the guidelines of the American Association of State Highway and Transportation Offices (AASHTO), for highways and streets sealed by a professional Engineer, as licensed by the Texas Board of Professional Engineers. A User shall not install structures within twenty-five (25) feet of any intersection, as measured from the closest outside corner of the two intersecting streets.

### **H. Installation near school and parks**

For the safety of pedestrians, particularly small children, and to allow full line of sight, near school property and parks, a User shall not install ground equipment, or new Poles, within a right-of-way inside the boundary line of school property, or within two hundred fifty (250) feet of the boundary line of school property, without a sight distance analysis, according to Section II G.

### **I. Installation of wires, conduits, or cables**

Any structures that include wires, conduits, or cables shall be located underground; except where the City Engineer identifies that existing utility or other structures prevent the safe installation of the proposed structures underground, based on the Permit application. Where wires, conduits, or cables are required to be installed aboveground, they shall be attached to existing Poles, where possible, and must not hang lower than twelve (12) feet above ground level. New Poles installed to support aboveground shall be attached to existing Poles, where possible, and must not hang lower than twelve (12') feet above ground level. New Poles installed to support aboveground wires, conduits, or cables shall comply with all location and construction requirements for new Poles.

**J. Installation in Utility easements**

Facilities may be installed in utility easements where i) the installation will not interfere with existing or planned utilities and ii) the underlying property owner grants written authorization, except where installation of a Collocated Network Node does not require installation of any ground equipment.

**K. Height limitation**

A User shall ensure that the vertical height of a structure installed in a Public right-of-way does not exceed the lesser of:

- i. ten (10) feet in height above the tallest existing Utility Pole located within five hundred (500) linear feet of the proposed structure in the same Public right-of-way; or
- ii. fifty-five (55) feet above ground level.

**L. Electrical supply**

Users shall be responsible for obtaining any required electrical power service to the structures. Users shall not allow or install generators or back-up generators in the rights-of-way.

**M. Protection of trees**

Users shall not place Network Node Support Poles or Decorative Poles in ways that cause harm to existing trees within the rights-of-way. Proposed Node Support Poles or decorative Poles adjacent to existing trees are subject to the approval of the City Forester.

**N. Streetlighting requirements**

All streetlights not governed by regulations of federal, state, or other superseding jurisdiction shall follow the following guidelines:

- i. New Residential Streetlights shall not have a color temperature over three thousand (3,000) Kelvins, and New Commercial streetlights shall not have a color temperature over four thousand (4,000) Kelvins.
- ii. Low-density residential lighting shall follow the standards of Lighting Zone LZ-1.
- iii. Commercial Areas adjacent to low-density Residential Districts shall follow the standards of Lighting Zone LZ-2
- iv. Commercial Areas not adjacent to low-density Residential Districts shall follow the standards of Lighting Zone LZ-3.

**Ornamental Streetlight – Uplight Control Requirements**

Lighting Zone	Maximum Uplight Rating
LZ-0	U-0
LZ-1	U-1
LZ-2	U-2
LZ-3	U-3
LZ-4	U-4

Source: Dark Skies model ordinance, Ornamental Lighting Standards.

#### **O. Protection of residential property**

For the protection of the safety, health and welfare of the City's residents, a User shall not install new network node support poles, decorative street light poles, or related equipment within a Public right-of-way in front of or on the side of a residential property's front yard.

### **III. Designated Areas; Right-of-way Management Map**

Providers are not required to obtain conditional-use Permits or other land-use approvals for locations in City rights-of-way, except as specified in this Section. In addition to the requirements of Section II of this Design Manual, the following requirements shall apply to any structures to be located in designated areas as described by this Section. A conditional-use Permit or other land-use approval is required in addition to any other Permit required by City Code.

#### **A. Historic Areas/Design Areas with Decorative Poles**

A User must obtain advance written consent from the City Council before installing structures in an area of the City that has been designated as a Historic Area or as a Design Area with Decorative Poles. The City may designate new Historic Areas and Design Areas at a future date.

#### **B. Underground Areas**

A User shall comply with undergrounding requirements where applicable, 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 a right-of-way user permit or City Council approval, if required.

#### **C. Parks/Residential Areas**

A User may not install a new Node Support Pole or new Network Node in a Public right-of-way without City Council's written consent, if the Public right-of-way is in a Park or is adjacent to a Street or thoroughfare that is:

- 1) Not more than fifty (50') feet wide; and
- 2) Adjacent to single-family residential lots or other multi-family residences or development land that is designated for residential-use by zoning or deed restrictions.

#### **D. Designation of Areas under this Section**

Design Areas with Decorative Poles, Historic Areas, Underground Areas, Parks, and Residential Areas adjacent to streets not more than fifty (50') feet wide shall be those shown on the Rights-of-way Management Map, as adopted and amended from time to time by City Council. A User's structures in a particular location shall be subject to the Area Designations in place at the time of Permit application for those particular structures. Any area where all Poles within one thousand (1,000') feet of a proposed location of similar design, with no additional permanent appurtenances attached, are designated by this Section as Design Areas with Decorative Poles, even where such an area is not shown as a Design Area on the Right-of-way Management Map.

## E. City Council approval process

The following shall constitute the process for obtaining advance written consent of City Council for the installation of any new Node Support Pole(s) or new Network Nodes to obtain such approval by this Design Manual.

- 1) Application. The User shall submit a Right-of-way User Permit application, in addition to any other Permit(s) required for construction of structures and use of the Public rights-of-way. This Permit application shall include documentation for the following:
  - a) Plans or design specifications compliant with specific design criteria for an area;
  - b) A Right-of-way User's Permit fee;
  - c) The locations of all other buildings, structures, Facilities, and Poles located within two hundred (200') feet of the proposed location; and
  - d) At least one (1) photo of the nearest Pole to the proposed location.
- 2) Processing. The applicant must submit an application for a Right-of-way User Permit, and this Permit request shall be processed for review by the City's Building Official. After an application is deemed complete, the Building Official will schedule the application to be presented to City Council on a regularly scheduled City Council Meeting date.
- 3) Evaluation criteria. Permit applications for Facilities shall be evaluated using only the following criteria:
  - a) Alternative locations available within two hundred (200') feet for the specific type of structure being requested; and
  - b) Concealment measures proposed for minimizing the impact of the proposed structures on surrounding land-uses;
- 4) Exception. Decorative Poles (Streetlight Poles) that satisfy the minimum requirements of these Design Guidelines and Chapter 70, Article VI of the Code of Ordinances of the City of Hedwig Village. Decorative Poles not satisfying these requirements are required to go to administrative hearing, as stipulated in Section VII.

## IV. Design requirements in Underground Areas

All Facilities must be installed underground, or obtain land-use approval in accordance with Section III E of this Design Manual to install aboveground Facilities in designed underground areas, including areas where utilities are required to be installed underground by City Ordinance, zoning regulations, State Law, private deed restrictions, and other public or private restrictions that prohibit installing aboveground utilities or structures in a Public right-of-way without first obtaining zoning or land-use approval. Areas may be designated from time to time by the City as underground areas in accordance with filed plats and/or conversions of overhead to underground areas, as may be allowed by Law.

## **V. Design requirements in Historic and Design Areas**

### **A. Concealment measures required**

For all structures in Design Areas with Decorative Poles or in a Historic Area, the City shall require Concealment measures for any above ground structures. Any request for installations in designated areas must be accompanied with proposed Concealment measures.

### **B. Concealment shall comply with other City Code requirements**

Concealment shall comply with other City Code requirements, where applicable. Colors in designated areas must be approved by the City Administrator, or designee, from a palette of approved colors for that area. Unless otherwise provided, all colors shall be earth tones, match decorative street signage, 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.

## **VI. Design requirements in Historic and Design Areas**

### **A. Decorative Pole (Streetlight):**

A User may not install a Decorative Pole (Streetlight Pole) without approval of a Right-of-way User Permit in conformance with all of the requirements of the Design Manual and Chapter 70, Article VI of the Code of Ordinances of the City of Hedwig Village.

- 1) A new or replacement Decorative Pole (Streetlight Pole) shall be designed to adhere as closely as possible to the Decorative Streetlight Poles, as depicted in Exhibit "B" and Exhibit "C", depending on the Areas where these Poles are located.
- 2) All utility pedestals or aboveground structures must follow the Concealment requirements in Section V.

### **B. Right-of-way User Permit approval by City Council**

A User may not install a new Node Support Pole, or a new Network Node in a Public right-of-way without the City's written consent, obtained in accordance with Section III E of this Design Manual, if the Public right-of-way is within a Design District.

## **VII. Administrative hearing**

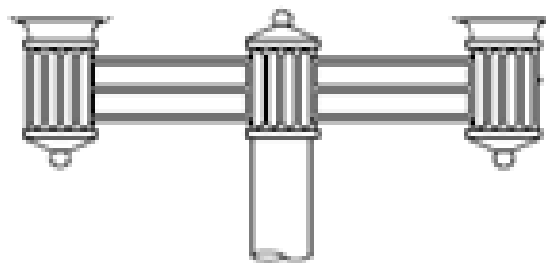
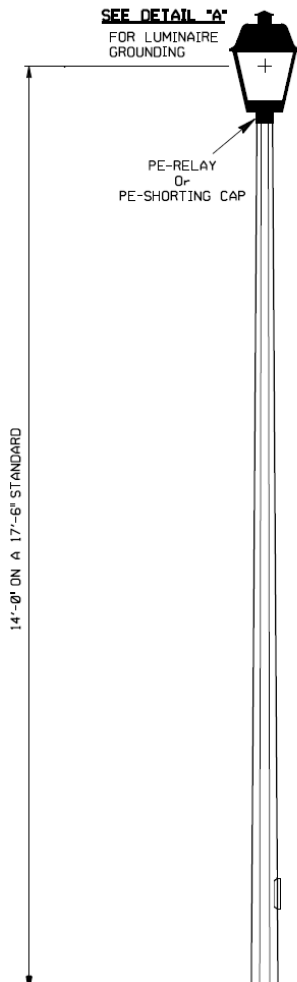
Should a User desire to deviate from any of the standards set forth in the Design Manual to appeal an interpretation by City staff of the City regulations applicable to structures located in the Rights-of-way or allege a specific provision of this Design Manual is inconsistent with State or Federal Law as applied specifically to that User, the User may request an administrative hearing before a Board of Appeals. The Zoning Board of Adjustment shall act as the Board of Appeal of administrative decision. The applicant shall present before the Zoning Board of Adjustment for an application hearing, and vote shall follow the process set out for a zoning variance.

### **VIII. Unauthorized and improperly located structures**

If any structures are installed in a location that has not obtained a Permit, impedes pedestrian or vehicular traffic, or obstructs the legal use of a Public right-of-way by utility providers, the User shall promptly remove the structure(s). After thirty (30) days advance written notice to remove unauthorized or improperly located structures has been provided, the City may remove and dispose of structures that remain unauthorized or improperly located.

# Exhibit "B" to Design Manual: Residential Streetlight Design

Luminaire: Postop



METRO ARM



## Exhibit "C" to Design Manual: Commercial Streetlight Design

**Streetlight Type: Black Cobra**

Height: 35'

Major Roadways and Commercial Areas.

