

**CITY OF WEST DES MOINES
ADMINISTRATIVE POLICY**

DEVELOPMENT SERVICES

1.0 Purpose

- 1.1 The previous street lighting policy was originally adopted by the Council on August 12, 1985 and was reformatted and adopted August 20, 2012. The policy was developed in concert with the local franchised electric utility company who provided street lighting analysis and design for all public street light proposals, as well as the installation of the street lights. The utility company no longer provides the lighting analysis and design services for the street light installation. The local franchised electric utility company will continue to purchase and install street lights for the City. Specified street lights will need to meet the requirements of the local franchised utility company. This policy will serve as a guideline to the City staff and consultants when designing the street lights for the City's public street system.

2.0 Scope

- 2.1 The City shall require that this policy be implemented when street lights are installed along a City street with an urban cross section.
- 2.2 The policy can be modified partially or in its entirety at any time by action of the City Council.

3.0 Policy

- 3.1 **All single family and commercial developments, site plans, major modification site plans and permitted conditional use permits are responsible for the installation of street lights adjacent to public streets.**
- 3.2 **If existing overhead electric distribution lines are present and there is not enough room to physically install the utility company's standard metal street light poles and fixtures with underground wiring, the Developer will need to provide an agreement to install the street lights with the standard metal poles and fixtures with underground wiring at such time the overhead electric is placed underground or when directed by the City to do so.**
- 3.3 **Mid American Energy will install their standard street light which consists of underground wiring, a standard metal pole and fixture with either a cobra-head or Nema style light fixture or equivalent fixture. The fixture and lamp output will be determined in the lighting analysis.**

- 3.4 **If the Developer desires another style of street light other than the standard pole and fixture, they have the option of choosing an alternate street light. The alternate street light will be considered private and will need to meet or exceed the City's illuminance and uniformity standard. The Developer will pay for the installation and maintenance costs of the street lights. The Developer will need to provide an electric meter for the street light circuit and the City will pay for the electric costs of the private street lights on the public street. An agreement will be executed between the Developer and the City outlining the responsibilities.**
- 3.5 Public streets with an urban cross section shall be lighted in accordance with specific standards for their respective street classification as described in the Comprehensive Plan.
- 3.6 All new street light poles and appurtenances installed within the clear zone of any public street right-of-way shall be of a design to break-away when hit by a vehicle. The break-away design shall conform to the definitions of the US Department of Transportation.
- 3.7 The design methodology described in the most recent edition of the Illuminating Engineering Society (IES) standards, ANSI/IES RP-8, will be utilized to perform the analysis and design of the street lighting system.
- 3.8 Detailed street light designs will be subject to the approval of the City Engineer.
- 3.9 Any fixture or light source type not addressed in this policy will be subject to the approval of the City Engineer.
- 3.10 The analysis will be based on the ultimate roadway configuration and the illumination values noted in this policy. Illuminance levels significantly above the minimum levels are subject to the approval of the City Engineer.
- 3.11 For lighting systems utilizing High Pressure Sodium lighting, all lighting calculations shall be performed using an overall Light Loss Factor (LLF) of 0.70 applied to each luminaire.
- 3.12 Light source type shall utilize a High Pressure Sodium fixture or equivalent energy efficient lamp ~~and fixture in accordance with State Law~~ as defined in Chapter 11 in the State Wide Urban Design Standards and Specifications.

3.13 Local Streets

Local streets shall be lighted by luminaires utilizing a maximum 70 Watt High Pressure Sodium or equivalent energy efficient light source.

Illuminance

- Single Family Residential Area will be 0.14 – 0.19 average foot candles.
- Medium and High Density Residential Area will be 0.46 average foot candles.
- Commercial/Office Area will be 0.56 average foot candles.

Lighting uniformity ratio will be no greater than 6:1 (ave/min).

Street light poles will be located only on one side of the street. On east-west streets the poles will be located on the north side of the street. On north-south streets the poles will be located on the east side of the street. The poles should be installed plumb and in a straight line 3ft to 6ft behind the back of curb. Any deviations on street light location must be approved by the City Engineer.

3.14 Major and Minor Collector Streets

Street Light Spacing – Fixtures shall be sized and poles shall be spaced as required to meet the specified lighting level and uniformity coefficients.

Minimum Illuminance

- Single Family Residential will be 0.37 average foot candles.
- Medium and High Density Residential Area will be 0.56 average foot candles.
- Commercial/Office Area will be 0.74 average foot candles.

Lighting Uniformity ratio will be no greater than 4:1 (ave/min).

Street light poles will be located only on one side of the street for streets ultimately planned to be 31 feet or less in width as measured from back of curb to back of curb. On east-west streets the poles will be located on the north side of the street. On north-south streets the poles will be located on the east side of the street. Streets planned to be wider than 31 feet in width generally will have the street lights installed in a staggered pattern on both sides of the street. Confer with the office of the City Engineer for design standards for streets with

landscaped medians. The poles should be installed plumb and in a straight line 4ft to 6ft behind the back of curb. Any deviations on street light location must be approved by the City Engineer.

3.15 **Major and Minor Arterial Streets**

Street Light Spacing – Fixtures shall be sized and poles shall be spaced as required to meet the specified lighting level and uniformity coefficients.

Minimum Illuminance

- Single Family Residential Area will be 0.56 average foot candles.
- Medium and High Density Residential Area will be 0.84 average foot candles.
- Commercial/Office Area will be 1.11 average foot candles.

Lighting Uniformity ratio will be no greater than 3:1 (ave/min).

Street light poles will be located only on one side of the street for streets ultimately planned to be 31 feet or less in width as measured from back of curb to back of curb. On east-west streets the poles will be located on the north side of the street. On north-south streets the poles will be located on the east side of the street. Streets planned to be wider than 31 feet in width generally will have the street lights installed in a staggered pattern on both sides of the street. Confer with the office of the City Engineer for design standards for streets with landscaped medians. The poles should be installed plumb and in a straight line 4ft to 6ft behind the back of curb. Any deviations on street light location must be approved by the City Engineer.

4.0 **Distribution**

Originally distributed to all Department Directors and Development Services

Authorized by the City Council effective December 09, 2013.