ORDINANCE NO. 2019-16

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF FREDERICKSBURG, TEXAS, AMENDING ARTICLE XV. OUTDOOR LIGHTING, OF CHAPTER 5 - BUILDINGS AND BUILDING REGULATIONS - OF THE CODE OF ORDINANCES, CLARIFYING DEFINITIONS AND ESTABLISHING ADDITIONAL OUTDOOR LIGHTING REQUIREMENTS TO MEET MINIMUM STANDARDS SET FORTH IN THE INTERNATIONAL DARK SKY ASSOCIATION COMMUNITY GUIDELINES.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF FREDERICKSBURG, TEXAS:

Section 1. That, SECTION 5-502. - Definitions, of ARTICLE XV. OUTDOOR LIGHTING, of CHAPTER 5 - BUILDINGS AND BUILDING REGULATIONS, of the Code of Ordinances, is hereby amended by addition of the following definitions:

- **Fixture** means the complete assembly that holds or contains a lamp, including any elements designed to provide light output control such as a reflector or refractor, the ballast and housing.

- **Fully shielded fixtures** means fixtures, as installed, that are designed or shielded in such a manner that all light rays emitted by the fixture, either directly from the luminaires or indirectly from the fixture, are not permitted to project above a horizontal plane running through the lowest point on the fixture where light is emitted. See Figures A and C for examples of acceptable lighting fixtures, and Figure B for examples of unacceptable fixtures.

- **Net acre** means the unit of land area which comprises an acre, less that portion of land area covered by any building.

Section 2. That, SECTION 5-502. - Definitions, of ARTICLE XV. OUTDOOR LIGHTING, of CHAPTER 5 - BUILDINGS AND BUILDING REGULATIONS, of the Code of Ordinances, is hereby amended by deletion of the following definition:

- **Full cut-off fixtures** means fixtures, as installed, that are designed or shielded in such a manner that all light rays emitted by the fixture, either directly from the luminaires or indirectly from the fixture, are not permitted to project above a horizontal plane running through the lowest point on the fixture where light is emitted. See Figures A, D and E for examples of acceptable lighting fixtures, and Figures C and F for examples of unacceptable fixtures.

Section 3. That, SECTION 5-504. - Nonconforming existing lighting, of ARTICLE XV.
OUTDOOR LIGHTING, of CHAPTER 5 - BUILDINGS AND BUILDING REGULATIONS, of the Code of Ordinances, is hereby deleted in its entirety, and the following substituted therefore:

Sec. 5-504. - Nonconforming existing lighting.

All existing Outdoor lighting that was legally installed before the effective date of this Article, and that does not comply with the standards, rules and regulations established by this Article shall be deemed nonconforming. Nonconforming existing Outdoor lighting shall be brought into compliance with this Article upon the earlier of:

(a) All nonconforming existing Outdoor lighting located on a property for which an application for a conditional use permit, subdivision approval, building permit for construction of a new building or site plan permit, is made shall be brought into compliance with this Article before final inspection, issuance of a certificate of occupancy, final plat recordation, or occupancy of the improvement, whichever is applicable.

(b) All maintenance of nonconforming existing Outdoor lighting, such as repairs that do not include replacement of the fixture part of the light, changing bulbs and the like is exempt from the provisions of this ordinance. Any other repairs or replacements are required to comply with the provisions of this Article.

(c) All existing nonconforming Outdoor Lighting, including City streetlights, shall be brought into compliance with the requirements of this Article on or before May 1, 2029. The City Manager shall have discretion to grant exemptions for existing nonconforming Outdoor Lighting of church steeples after May 1, 2029, based upon preservation of the City's historic steeple architecture and cityscape.

Section 4. That, SECTION 5-505. – Full cut-off, shielding and total outdoor light output standards, of ARTICLE XV. OUTDOOR LIGHTING, of CHAPTER 5 - BUILDINGS AND BUILDING REGULATIONS, of the Code of Ordinances, is hereby deleted in its entirety and the following substituted therefore:

Sec. 5-505. – General Outdoor Lighting Standards

(a) Streetlights installed, repaired, or replaced on and after the effective date shall be Fully shielded fixtures in order to limit light trespass (See Figure A) and shall have a correlated color temperature of 3000K or less. City streetlights installed before the effective date of this Ordinance shall be brought into compliance with the requirements of this Article on or before May 1, 2029, including but not limited to the installation of Fully shielded fixtures in order to limit light trespass (See Figure A) and having a correlated color temperature of 3000K or less.
(b) All Outdoor lighting, except streetlights and as otherwise specifically permitted by this Article, shall be (1) Fully shielded fixtures, (2) the Luminous elements of the fixture shall not be visible from any other property and the fixture shall have a correlated color temperature of 3000K or less. (See Figure C for examples of acceptable light fixtures. See Figure B for examples of unacceptable light fixtures. See Figure A for shielding illustration.)

(c) Outdoor lighting fixtures with a maximum output of 300 lumens per fixture, regardless of the number of bulbs, may be left unshielded, provided that the fixture has an opaque top to prevent light from shining directly up and the source of the light is not visible from any other property. Outdoor lighting fixtures with a maximum output of 600 lumens per fixture, regardless of the number of bulbs, may be shielded with a colored lens, provided such lens reduces the lumen output in half, the fixture has an opaque top to prevent light from shining directly up, and the source of the light is not visible from any other property. The aggregate lumen output from all fixtures set forth in this Section 5-505(c) shall not exceed twenty percent (20%) of the allowable aggregate total Outdoor lighting set forth in Section 5-505(d).

(d) The aggregate total Outdoor lighting on any residential property shall not exceed 17,500 lumens per net acre. The aggregate total Outdoor lighting on any non-residential property shall not exceed 75,000 lumens per net acre, unless approved in writing by the City Manager.

(e) Outdoor lighting at public and private outdoor recreational facilities, including but not limited to playing fields, arenas, tracks, and swimming pools: (1) shall be Fully shielded fixtures, (2) the Luminous elements of the fixture shall not be visible from any adjacent property, and (3) shall comply with the levels of illumination consistent with the IESNA “Recommended Practice for Sports and Recreational Area Lighting” (IESNA RP-6-10) or successor recommendations for the class of play appropriate for the kinds of facilities in the City.

Section 5. That, SECTION 5-508 – Lighting curfews, of ARTICLE XV. OUTDOOR LIGHTING, of CHAPTER 5 - BUILDINGS AND BUILDING REGULATIONS, of the Code of Ordinances, is hereby amended by addition of the following subsection (c):

Sec. 5-508 – Lighting curfews

(c) The City Manager shall have discretion to determine when and under what circumstances new public outdoor lighting is warranted and will be permitted, based upon public safety hazards or concerns that can only be mitigated by additional public outdoor lighting. The City Manager shall have discretion to determine the adaptive controls or curfews to be employed in all future installations of public outdoor lighting, considering the circumstances indicating the need for said public outdoor lighting based on the presence or absence of citizens on public property or rights of way. For the
purposes of this subsection, “public outdoor lighting” shall be defined as all City public street lighting and outdoor lighting on other City property and City owned rights-of-way.

**Section 6.** That, SECTION 5-509(b) – a subsection of SECTION 5-509 – Prohibitions, of ARTICLE XV. OUTDOOR LIGHTING, of CHAPTER 5 - BUILDINGS AND BUILDING REGULATIONS, of the Code of Ordinances, is hereby deleted in its entirety and the following substituted therefore:

Sec. 5-509 – Prohibitions

(b) The installation of any wall pack style fixture for use as Outdoor lighting is prohibited unless the fixture is rated by the manufacturer as Fully shielded. Examples of acceptable wall packs, when mounted with light directed downward only are shown in Figure C.

**Section 7.** That, SECTION 5-509(c) – a subsection of SECTION 5-509 – Prohibitions, of ARTICLE XV. OUTDOOR LIGHTING, of CHAPTER 5 - BUILDINGS AND BUILDING REGULATIONS, of the Code of Ordinances, is hereby deleted in its entirety and the following substituted therefore:

Sec. 5-509 – Prohibitions

(c) The installation of any barn-light style fixture for use as Outdoor lighting is prohibited unless the fixture includes a full opaque reflector instead of the standard translucent lens and otherwise complies with the shielding requirements of this Article. An example of barn-light style with and without the required opaque reflector is shown in Figure C.

**Section 8.** That, SECTION 5-511(a) – a subsection of SECTION 5-511 – Exemptions, of ARTICLE XV. OUTDOOR LIGHTING, of CHAPTER 5 - BUILDINGS AND BUILDING REGULATIONS, of the Code of Ordinances, is hereby deleted in its entirety.

**Section 9.** That, SECTION 5-511(b) – a subsection of SECTION 5-511 – Exemptions, of ARTICLE XV. OUTDOOR LIGHTING, of CHAPTER 5 - BUILDINGS AND BUILDING REGULATIONS, of the Code of Ordinances, is hereby deleted in its entirety.

**Section 10.** That FIGURES A, B, C, D, E, F, and G, of ARTICLE XV. OUTDOOR LIGHTING, of CHAPTER 5 - BUILDINGS AND BUILDING REGULATIONS, of the Code of Ordinances, are hereby deleted in their entirety, and the FIGURES A, B, and C attached hereto are substituted therefore.
Section 11. **Severability or Invalidity.** If any provision of this ordinance or the application hereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of the ordinance which can be given effect without defeating the purpose or objective of the provisions, and to this end, the provisions of this ordinance are declared to be severable.

Section 12. **Repealer.** All ordinances and parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

Section 13. **Effective Date.** This ordinance shall be effective on and after June 1, 2019.

PASSED AND APPROVED on this the 6th day of May, 2019.

Linda Langerhans, Mayor
City of Fredericksburg, Texas

ATTEST:
Shelley Goodwin, City Secretary

APPROVED AS TO FORM:
Daniel Jones, City Attorney
Examples of Acceptable & Unacceptable Lighting Fixtures

Unacceptable/Not Compliant
Fixtures that produce glare and light trespass

- Unshielded Floodlights or Poorly-shielded Floodlights
- Unshielded Wellpacks & Unshielded or Poorly-shielded Well Mount Fixtures
- Drop-Lens & Sap-Lens Fixtures w/ exposed bulb / refractor lens
- Unshielded Streetlight
- Unshielded Barn Light
- Unshielded Period Style Fixtures
- Drop-Lens Canopy Fixtures
- Unshielded PAR Floodlights
- Louvered Marine style Fixtures
- Unshielded PAR Floodlights

Acceptable/Compliant
Fixtures that shield the light source to minimize glare and light trespass and to facilitate better vision at night.

- Full Cutoff Fixtures
- Full Shielded Wellpack & Wall Mount Fixtures
- Full Shielded Fixtures
- Fully Shielded Decorative Fixtures
- Fully Shielded Wavey Bollards
- Fully Shielded Bollards
- Fully Shielded Barn Light
- Fully Shielded Period Style Fixtures
- Fully Shielded Barn Light
- Full Cutoff Streetlight
- Full Cutoff Streetlight
- Full Cutoff Streetlight
- Full Cutoff Streetlight

FIGURE B

FIGURE C