



Town of Walden, TN Outdoor Lighting Ordinance

ORDINANCE NO. _____

**AN ORDINANCE AMENDING THE WALDEN ZONING ORDINANCE TO
REGULATE OUTDOOR LIGHTING FOR COMMERCIAL AND INDUSTRIAL
DEVELOPMENTS AND ADOPT VOLUNTARY RESIDENTIAL DARK SKY
PRACTICES**

WHEREAS, the Town of Walden recognizes the importance of preserving its view of the natural night sky and rural character for the benefit of residents, visitors, and future generations; and

WHEREAS, excessive or misdirected artificial lighting contributes to light pollution, which diminishes the visibility of the night sky, wastes energy, disrupts wildlife, and can adversely affect human health and well-being; and

WHEREAS, the Town finds that appropriate outdoor lighting practices can enhance safety and security while minimizing glare and light trespass onto neighboring properties; and

WHEREAS, the Town of Walden Plan, as adopted by Ordinance No. ____, provides the long-range land use vision and development framework for the Town of Walden, and recommends the adoption of lighting standards to mitigate light pollution from new development; and

WHEREAS, the Walden Municipal Planning Commission has reviewed the Design Review Standards for consistency with the adopted Land Use Plan and recommended approval by the Board of Mayor and Aldermen at their regular meeting on _____.

Now, therefore, BE IT ORDAINED by the Board of Mayor and Alderman of the Town of Walden:

Section 1. That a new Article 16 be added to the Town of Walden Zoning Ordinance as follows:

Article 16. Outdoor Lighting Standards

Purpose. The policy of the Town and purpose of this ordinance is to encourage the use of well-designed outdoor lighting in commercial structures consistent with the following principles:

1. Limit the use of light to where and when it has a clear purpose;
2. Direct light only to areas where it is needed;
3. Limit lighting levels to no brighter than necessary;
4. Operate lighting only when it is useful by requiring lighting controls, such as timers or motion sensors to ensure that light is available when it is needed, dimmed when possible, and turned off when not needed; and
5. Use warmer color lights where possible by limiting the use of blue-rich, “cool” white outdoor light.

B. Administrative actions. The Town Administrator is authorized to take all actions in the award of contracts, approval of permits, planning and implementation of regulations consistent with the Purpose stated in Section A of this Chapter, and is further authorized to: (i) develop and publish homeowner and business guidance materials for dark-sky-friendly lighting; (ii) conduct community education and outreach; and (iii) offer pre-application consultations to assist applicants in preparing compliant lighting plans.

C. Definitions. As used herein, the terms below shall mean as follows.

Correlated Color Temperature (CCT): A measure of the color properties of light emitted by lamps, being equal to the temperature, expressed in kelvins (K), of a blackbody whose visual appearance best approximates that of the light source in question. CCT values are typically provided in lighting manufacturer data sheets.

Allowable tolerances for CCT values are specified by ANSI standard C78.377 (“American National Standard for Electric Lamps”).

Fully Shielded: An outdoor luminaire constructed so that in its installed position all of the light emitted by the luminaire is projected below the horizontal plane passing through the lowest light-emitting part of the luminaire. Figure 1 shows the correct configuration of a fully shielded luminaire, indicating the ninety (90) degree angle between the horizontal plane passing through the lowest light emitting part of the luminaire and the nadir, defined as the local vertical pointing toward the center of the Earth.

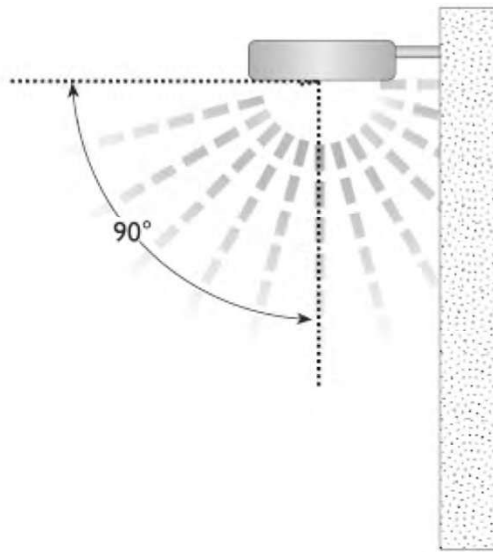


Figure 1.

Initial lumens: The number of lumens of light emitted by a luminaire when the lamp is new, not accounting for any depreciation due to the age of the lamp or environmental conditions that may be detrimental to its performance.

Light trespass: A condition in which artificial light emitted from a luminaire on one property, not inclusive of light incidentally scattered or reflected from adjacent surfaces, is directed in such a manner that it is directly visible from any other property. For the purposes of this chapter, light trespass is declared to be a form of public nuisance.

Lighting controls: Electronic devices such as (but not limited to) dimmers, motion sensors, astronomical time switches and other advanced adaptive controls used for

reducing the output of a luminaire at a specified time or when there is no activity in the area.

Lumen: The SI unit of luminous flux, equal to the amount of light emitted per second into a unit solid angle of one steradian from a uniform source of one candela.

Luminaire: A complete lighting assembly, consisting of a lamp, housing, optic(s), and other structural elements, but not including any mounting pole, support or surface.

Outdoor lighting: Lighting attached to the exterior of a structure or on a pole or other support, or surface, with the effect of providing lighting to the exterior structure and the outdoor area surrounding the structure.

Shielding: Opaque material surrounding a luminaire designed to limit the emission of light in the horizontal and upward directions, thereby directing light towards the ground.

D. Applicability.

1. The provisions of this chapter shall apply to all new development of real property in the General Commercial Zone (C-1), Town Center mixed-use district (TC-MU) or Light Manufacturing Zone (LM-1) that involves:
 - a. New construction for which a development permit is required;
 - b. Remodeling of an existing building or structure for which a development permit is required; provided, however, that compliance with the requirements of this Chapter is required for a remodel of an existing building or structure only with respect to the remodeled portion of the existing building or structure; or
 - c. Permanent installation of new outdoor luminaires for any other purpose.
2. The provisions of this ordinance shall not apply to any residential use or in any residential zone. Notwithstanding the foregoing, residents are encouraged to adopt the voluntary practices set forth in Section J (Voluntary Residential Dark Sky Practices). Walden sets forth these voluntary practices with the intent to adopt outdoor lighting regulations for residential uses within two (2) years of the adoption of this ordinance.

E. General requirements. Unless otherwise exempted, all outdoor luminaires shall conform to the following requirements:

1. Shielding. Luminaires emitting more than 1000 initial lumens shall be fully shielded. Examples of luminaires meeting the shielding requirements are provided in Exhibit A.
2. Color and Spectrum: All luminaires shall be rated with a Correlated Color Temperature less than or equal to 3000 kelvins (K).
3. Control with Timers, Dimmers, or Motion Detectors

a. **Timer Controls Required.**

Except as otherwise provided in this section, all outdoor luminaires shall be controlled by an automatic timing device that extinguishes lighting no later than one (1) hour after the end of normal business hours and activates lighting no earlier than one (1) hour prior to the start of normal business hours.

Lighting located immediately adjacent to building egress points or loading docks shall be exempt from this requirement.

b. **Commercial Outdoor Sales Lots.**

Outdoor lighting for commercial outdoor sales lots shall comply with one (1) of the following options:

1. **Automatic Shutoff.**

All outdoor lighting shall automatically extinguish one (1) hour after the close of business or at midnight, whichever occurs later.

2. **Dimming.**

Outdoor lighting shall be reduced to no more than fifty percent (50%) of full output beginning thirty (30) minutes after dusk and continuing until thirty (30) minutes prior to the start of normal business hours.

c. **Motion Sensor Control.**

Outdoor lighting may alternatively be controlled by motion sensors that activate lighting only when human motion is detected within the sensor range and extinguish lighting within five (5) minutes after motion is no longer detected.

4. Light trespass prohibited. The installation and operations of conforming luminaires that create conditions of light trespass are prohibited.

F. Lighting plans required. For all construction as described in Section D of this Ordinance subject to permitting, permit applications shall include a lighting plan describing all conforming lighting used. An acceptable lighting plan shall identify all luminaires and include for each luminaire:

1. Manufacturer name and model name or number;
2. Manufacturer data sheet for the lighting product;
3. Rated initial lumen output; and
4. The Correlated Color Temperature of the lamp or light source.

G. Legal non-conforming lighting. All luminaires that were lawfully installed prior to the effective date of this chapter but that do not comply with the requirements of this chapter are declared legally non-conforming. The town of Walden shall make educational materials available to owners of legal non-conforming luminaires to facilitate timely and cost-effective compliance. Legal non-conforming lighting may continue to be used and maintained after the adoption of this Chapter, but shall be brought into compliance with the requirements of Section E upon any of the following conditions:

1. An application for a Town Planning Department design review, conditional use, or building permit;
2. A change in occupancy of the property;
3. Any renovation to the property equal to or exceeding twenty (20) percent of its assessed value;
4. More than fifty (50) percent of the total appraised value of a structure, as determined from the records of the Hamilton County Tax Assessor, is destroyed;
5. A determination by the Town Administrator that the legal non-conforming luminaire constitutes a public hazard or nuisance;
6. A certificate of occupancy is issued for a property previously determined by the Director to be abandoned for at least six (6) months;

7. The replacement of any legal non-conforming luminaire with new lighting equipment, not inclusive of lamps or similar consumable parts; or

Input from
consultant needed



8. The elapse of three (3) years from the effective date of this Ordinance.

H. Prohibitions. The use of the following types of outdoor lighting are prohibited, except as specifically exempted here or elsewhere in this Chapter:

1. Outdoor floodlighting by projection of light above the horizontal plane running through the lowest light-emitting portion of a luminaire with respect to grade;
2. Searchlights, skybeams, and similar lighting, except as required by response personnel during emergency conditions;
3. Lasers;
4. Any light that dynamically varies its output by intermittently fading, flashing, blinking, or rotating. This type of lighting includes strobe lighting; and
5. Any luminaire that uses mercury vapor lamps.
6. Fossil fuel lighting. Open fires are not permitted at any time within Town limits.

I. Exemptions. The following are exempt from compliance with all provisions of this Ordinance, except as noted:

1. Publicly owned lighting, including street lighting and other lighting in public rights of way;
2. Holiday lighting, only during dates between November 15 and January 15 of the following calendar year. The total quantity of light meeting this definition permitted is not limited, but excessive displays may be declared public nuisances. All holiday lighting must be fully extinguished each night by 11 (eleven) P.M. during the allowed period;
3. Underwater lighting of swimming pools and similar water features;
4. Lighting required by law to be installed on motor vehicles;

5. Emergency lighting, only for as long as emergency conditions so identified by qualified personnel continue to exist;
6. Lighting employed during repairs of roads, utilities and similar infrastructure, including unshielded lighting, provided that such lighting is deployed, positioned and aimed such that the resulting glare is not directed toward any roadway or highway;
7. Any form of lighting whose use is mandated or otherwise governed by any legal jurisdiction higher than that of the Town;
8. Lighting required to save life, limb or property from imminent peril, provided that use persists only during the hours of the peril; and
9. Temporary lighting allowed under the permitting process described in Section K of this Chapter.

J. Voluntary Residential Dark Sky Practices

1. Statement of encouragement. The Town of Walden encourages all residential property owners to adopt dark-sky–friendly lighting to preserve night skies, reduce glare, and improve neighborhood safety and comfort. While these voluntary practices are not required, the Town of Walden intends to re-evaluate residential outdoor lighting standards within two (2) years of the adoption of this ordinance for new residential construction. The two (2) year period will allow for education, adjustment, and voluntary adoption by residents.
2. Recommended practices (voluntary). Residents are encouraged to:
 - a) Use fully shielded exterior luminaires that direct light downward;
 - b) Select lamps with a Correlated Color Temperature (CCT) of 3000K or less;
 - c) Employ lighting controls (timers, dimmers, or motion sensors) to reduce unnecessary lighting and avoid dusk-to-dawn operation where not needed;
 - d) Select lamps/bulbs under 1,000 lumens. The number of lumens may be found on product packaging or info sheets available from lighting manufacturers.
 - e) Turn off decorative or security lighting during overnight hours when areas are unoccupied; and
 - f) Avoid projecting light above the horizontal.
3. Non-enforcement. This Section is advisory and does not create obligations or penalties for residential properties.

K. Temporary permitting

1. Temporary lighting that does not conform to the provisions of this Chapter may be approved at the discretion of the Town Administrator subject to submission of an acceptable Outdoor Lighting Permit.
 2. Permit term and renewal. Permits issued shall be valid for no more than thirty (30) calendar days and subject to no more than one renewal, at the discretion of the Town Administrator, for an additional thirty (30) calendar days.
 3. Conversion to permanent status. Any lighting allowed through by permit that remains installed after sixty (60) calendar days from the issue date of the permit is declared permanent, and is immediately subject to all of the provisions of this Chapter.
 4. Permit contents. A request for temporary exemption to any provision of this Chapter shall contain minimally the following listed information:
 - a. Specific exemptions requested;
 - b. Previous temporary exemptions, if any;
 - c. Duration of time requested exemption;
 - d. Type and use of exterior light involved;
 - e. Type and initial lumens of proposed lamps;
 - f. A plan with proposed luminaire locations; and
 - g. Manufacturer data sheets for proposed luminaires.
 5. In addition to the above data, the Town Administrator may request any additional information which would enable a reasonable evaluation of the request for temporary exemption.
- L. **Lighting complaint procedure.** Any resident may voice a concern regarding outdoor lighting that appears to be a serious nuisance or non-conforming. Complaints may be submitted by email or in person to Town Hall. All complaints shall be forwarded to the Mayor and Board of Aldermen. Upon approval by the Mayor or Town Administrator, the Codes Enforcement Officer may contact the property owner to provide educational materials and request, respectfully, that they review and adjust their lighting. For residential properties, this remains advisory.

M. **Penalties.** Lighting determined to be in violation of this ordinance shall be subject to written notice of violation specifying the corrective action required and a cure period of not less than sixty (60) days from notice. If the violation remains uncorrected after the cure period, the Town may issue a cease-and-desist order and assess a penalty not to exceed \$50 (fifty dollars) per fixture per day until corrected.

Section 2: If any provision of this ordinance, or the application hereof to any person or circumstance, is held invalid, all other provisions and applications of this ordinance that can be given effect without defeating the purpose or objective of the provisions will be considered as remaining valid. To this end, the provisions of this ordinance are declared to be severable.

Section 3: This ordinance shall become effective upon final reading and passage by the Walden Board of Mayor and Aldermen, Tennessee, and after its publication, the public welfare requiring it.

First Reading and Public Hearing

Yea:

Nay:

Final Reading

Yea:

Nay:

Mayor

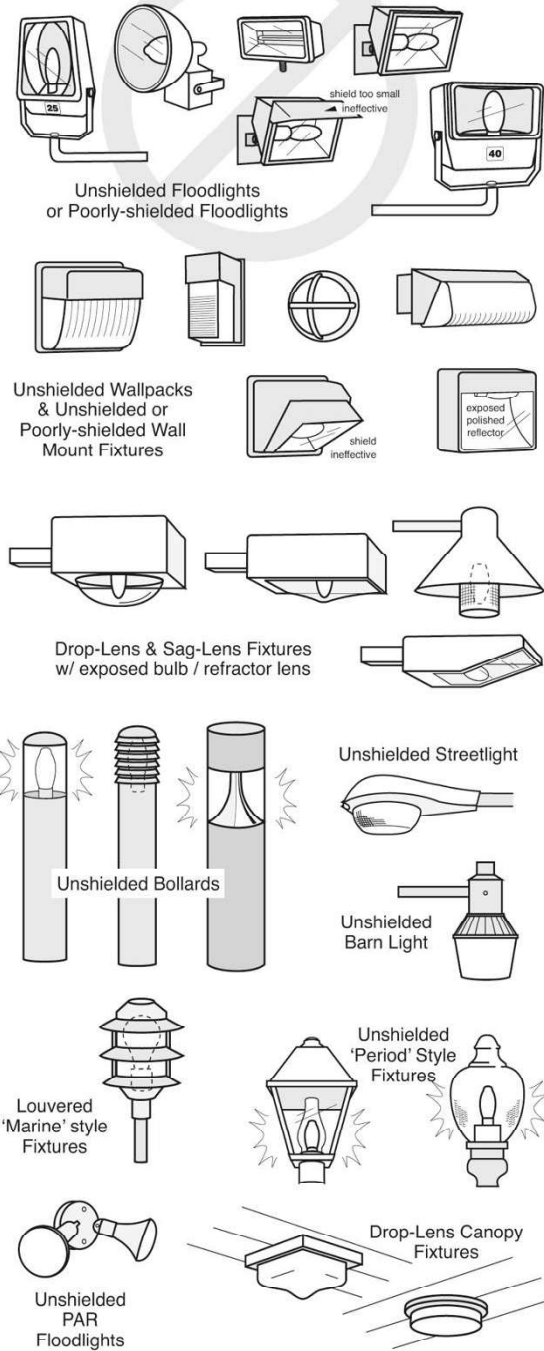
Attest: _____

Exhibit A.

Examples of Acceptable & Unacceptable Lighting Fixtures

Unacceptable/Not Compliant

Fixtures that produce glare and light trespass



Acceptable/Compliant

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



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