



City of Lake Geneva, 626 Geneva St, Lake Geneva, WI 53147-262.248.3673-[www.cityoflakgeneva.gov](http://www.cityoflakgeneva.gov)

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**Avian Committee Agenda**  
**Tuesday, March 10, 2026 - 6:00 PM**  
**Lake Geneva City Hall; Conference Room 2A (2nd Floor)**

Members:

President: Sarah McConnell

Beverly Leonard, Jill Rodriguez, Karen Gallo, Victoria Ross, Kelley Happ, and Alderperson JaNelle Powers

1. Call to Order
2. Roll Call
3. Approval of the minutes from February 10, 2026
4. Comments from the public limited to 5 minutes, limited to items on this agenda
5. Review Financial Reports
6. Policy & Ordinance Initiatives
  - a. Discussion/Recommendation regarding Exterior Lighting Standards/Dark Sky Ordinance
  - b. Climate Related Topics
7. Annual Events and Applications
  - a. Swift Night Out
  - b. Bird City Application
  - c. World Migratory Bird Day
8. Projects and Partnerships
  - a. Hotel Birding Backpacks
  - b. Purple Martin/Kestrel Houses
  - c. Native Plant Grant Project
9. Adjournment

A quorum of the Council may be present; however, no official Council action will be taken.  
Requests from persons with disabilities who need assistance to participate in this meeting should be made to the City Clerk's office in advance so that the appropriate accommodations can be made.

# City of Lake Geneva Avian Committee Minutes

## February 10, 2026 6 p.m.

### Lake Geneva City Hall; Conference Room 2A

**Members:** President – Sarah McConnell, Secretary – Kelley Happ, Jill Rodriguez, Beverly Leonard, Karen Gallo, Victoria Ross and Alderperson JaNelle Powers

**1. Call to Order:** 6:00 p.m. by Sarah McConnell

**2. Roll Call. The following members were present:** Sarah McConnell, Kelley Happ, Karen Gallo, Victoria Ross and Alderperson JaNelle Powers. Jill Rodriguez and Beverly Leonard were excused. Others present: David Winger; Betty Volquardsen and Peg Esposito from Friends of Hillmoor

### **3. Approval of minutes from January 6, 2026**

**Motion:** Happ moved to amend the minutes to correct the date of the past minutes from January 26 to January 6. Seconded by Ross.

**Voice Vote:** Amended minutes approved by voice vote

**4. Comments from the Public:** Esposito reported that the chimney formerly used by Chimney Swifts at Jaynes may have been capped. She has not been able to reach the management. Volquardsen asked about swifts, and if there is advance notice that they are returning. (Yes, their movement is tracked). She reported that she is working on a grant for furniture for the location near our proposed Bird city plant grant. If the grant is approved, they will show plans to Winger to coordinate esthetics.

### **5. Financial Report:**

Ross reported that we did not yet receive a report.

McConnell requested a motion to approve a half payment to our landscape contractor, who asked for an advance to get started. Winger stated the city does not do half payments; that he would have to send us an invoice, not a proposal. Winger will call the contractor to work out the details. Esposito commented that Friends of Hillmoor will front the initial payment. Avian will then requisition funds to pay the other half

### **6. Policy and Ordinance Initiatives:**

**a. Exterior Lighting Standards/Dark Sky Ordinance.** Ross reported that we are moving forward with the Dark Sky Ordinance proposal, but not fast. Lighting standards is set by zones: Renee Hanlon, head of Building and Zoning Department suggested it would be better to go by land use. Adam McCulloch agreed to help us with the wording.

**Motion:** Ross made a motion to move the City of Lake Geneva Avian Committee donate \$50.00 to Geneva Lakes Astrophysics and Steam Inc (GLAS) in recognition of Adam McCulloch's enormous support, research and efforts in drafting revisions to the City's Sec. 98-707 Exterior Lighting Standards. Second by Happ

**Voice Vote:** passed unanimously.

**b: Climate Related Topics.** No discussion at this time

### **7. Annual Events and Applications:**

**a. Swift Night Out:** McConnell confirmed the new September 10 with Schlitz Audubon. Gallo confirmed the May 12 date with the Museum. Happ will ask Carol Elkins from the Geneva Lake Conservancy to speak on natural plantings for ecology and migration. McCulloch will speak on Dark Skies. The focus for both speakers will be on migration.

Winger will check with the city to see if the tuckpointing project for the Museum's chimney will be complete before September. He reported that the Water department chimney was capped with cement. No further information about St. Francis's chimney cap status was available.

**b. Bird City Application:** Ross reported that the updated Bird City application is available on the web. She inquired about the Bird City decals that used to be sold in City Hall -no one currently on staff at the city know about the decals. Otherwise, she has all the information she needs to update. The due date for the application is March 10. Winger will submit the application from the city. McConnell thanked Winger for getting the Resolution read at the City Council and uploaded onto the application.

**c. World Migratory Bird Day:** Confirmed aTuesday@2 talk at the Museum at 2 pm on May 12. Our goal is to educate the public about bird migration, with topics including plantings and dark skies that help birds on their journey.

## **8. Projects and Partnerships:**

**A. Hotel Birding Backpacks:** Fairfield Inn is very happy to participate in the program

**B. Purple Martin/Kestrel houses:** Lakeland Audubon donated a Kestrel Box to the Avian Committee for a selected spot at Hillmoor. If we make a list of supplies needed to build a post for the box, Winger said the city will purchase the materials with Avian funds and put it up. McConnell and Happ will get the specs and location.

McConnell and Gallo were contacted by a birding enthusiast from Delavan Lake for help with the placement of Purple Martin Houses there. This information could be included as part of our outreach on next year's Bird City application. The impact of our birding outreach was also reported – we had 612 people 18 years of age or older on our site and 210 younger than 18. We also had many inquiries from our Martin house sites

**C. Native Plant Grant Project:** Volquardsen (Friends of Hillmoor) had reported contact with White Pelican Farm regarding plants that might be available through the grant, and suggested adding red twig dogwood to the list. DOT will be rebuilding the culvert under Route 50 for the construction project. They will meet in March to determine how much land will be needed and how many trees along Route 50 will be removed. The bridge at the project site is needs serious repair – it is an issue for the city, and Winger reports it is on his radar.

**Motion:** McConnell requested \$100 for the purchase of 12 42-inch stakes for barrier fencing to be erected around the project site to keep visitors from walking on the newly restored area. Second by Ross.

**Voice Vote:** Motion carried

Happ will contact the GLC about their plant sale

## **9. Adjournment:**

**Motion** to adjourn by Ross, seconded by McConnell

**Voice vote** carried at 6:50 p.m.

## **Next Meeting Date and Time**

The next Avian meeting will be held on **Tuesday March 10 at 6 pm in Conference Room 2 A.**

Respectfully submitted

Kelley Happ

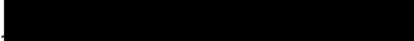
Secretary, Avian Committee

Account Number	Account Title	2026-26 Period Actual	2026-26 Current year Actual	Current year Budget	Variance Current year	% of Budget
<b>GENERAL FUND</b>						
<b>MISCELLANEOUS</b>						
<b>MISCELLANEOUS</b>						
11-70-00-47300	AVIAN DONATIONS	.00	.00	250.00	250.00	.00
Total MISCELLANEOUS:		.00	.00	250.00	250.00	.00
<b>MISCELLANEOUS</b>						
11-70-00-57800	AVIAN COMMITTEE EXPENSES	50.00	540.00	3,500.00	2,960.00	15.43
Total MISCELLANEOUS:		50.00	540.00	3,500.00	2,960.00	15.43
Net Total GENERAL FUND:		50.00-	540.00-	3,250.00-	2,710.00-	16.62
Net Grand Totals:		50.00-	540.00-	3,250.00-	2,710.00-	16.62

**APPLICATION FOR ZONING TEXT AMENDMENT**

Name of Applicant: City of Lake Geneva Avian Committee

Address of Applicant: 626 Geneva St, Lake Geneva WI 53147

Telephone No.  \_\_\_\_\_

Email:  \_\_\_\_\_


Description of Text Amendment:

The text of the amendment replaces, in full, the current Sec 98-707 of the City of Lake Geneva's  
Municipal Code to conform with DarkSky Internationals recommended standards which follow the five  
principles of responsible outdoor lighting at night. The principles are: Useful; Targeted; Low Level;  
Controlled; and Warm-colored.

Reason for requesting Text Amendment: Light pollution, with its harmful effects, disrupts wildlife  
& their ecosystems, disrupts bird migrations, allows for increase crime due to glare from excessive  
lighting, and disrupts human sleep patterns. Using DarkSky International recommendations will allow  
the natural surroundings to continue to thrive and allow the beauty of the City to shine -with the  
appropriate light levels.

*Fee of \$500.00 payable upon filing application.*

3.10.26  
Date

  
Signature of Applicant

\_\_\_\_\_ Cost Recovery # \_\_\_\_\_

Petitioner Name

Project Address

OFFICE USE ONLY

Description of Request \_\_\_\_\_

**Agreement for Services**

REIMBURSABLE BY THE PETITIONER / APPLICANT. The city may retain the services of the professional consultants (including planners, engineers, architects, attorneys, environmental specialists, recreation specialists, and other experts) to assist in the City’s review of a proposals coming before the Plan commission and/or Common Council. The submittal of a development proposal application or petition by a Petitioner shall be construed as an agreement to pay for such professional review services applicable to the proposal including any financing charges that may accrue. The City applies the charges for these services to the Petitioner. The City Administrator at any time may require an applicant to submit an advance deposit of **\$500 to \$5,000 depending on the complexity and anticipated involvement of the City’s consultants** or continuing advance deposits against future billings by the City for recovery of costs provide by this ordinance 98-935(4). **An advanced deposit shall be required for the application related to Extraterritorial matters.** Surplus deposits shall be returned to the Applicant at the conclusion of the project.

\_\_\_\_\_, as applicant/petitioner for

Project: \_\_\_\_\_

Project Address: \_\_\_\_\_

Parcel No. \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Cell Phone: ( ) - -

Phone: ( ) - -

Email: \_\_\_\_\_

Dated this \_\_\_\_\_ Day of \_\_\_\_\_, 20 \_\_\_\_\_

\_\_\_\_\_  
Printed Name of Applicant / Petitioner

\_\_\_\_\_  
Signature of Applicant/Petitioner

## Sec. 98-707 Exterior lighting standards.

### 1.1 Purpose

This outdoor lighting standard is intended to protect the health and welfare of all residents within the City of Lake Geneva, enhance its character and quality of life, prevent inappropriate and poorly installed outdoor lighting, reduce lighting conflicts between property owners, prevent the increase of potentially harmful sky glow, and preserve the naturally dark sky for the benefit of residents, visitors, wildlife, and the environment. The *Five Principles for Responsible Outdoor Lighting* will guide the City of Lake Geneva's outdoor lighting decisions to reduce Artificial Light at Night (ALAN) produced by inefficient or unnecessary outdoor lighting. This will preserve and enhance the area's dark sky while promoting safety, conserving energy, and preserving the environment for astronomy and reduce collisions and save birds' lives during spring and fall.

### 1.2 Applicability

- A. This standard applies to all sources of outdoor lighting installed or replaced within the City of Lake Geneva after **[enactment date]**. This includes, but is not limited to, newly permitted development and construction projects involving homes, dwellings, signage, billboards, buildings, facilities, properties, landscape, parking lots, hardscape, non-habitable structures, and monuments.
- B. Existing outdoor lighting lawfully installed prior to **[date]** and not meeting the requirements of this standard shall be considered legal and repairable but non-conforming. All non-conforming *Luminaires* may continue to be used and maintained until one of the following occurs:
  - 1. A determination by the Building & Zoning Director that an outdoor light source constitutes a hazard to public safety or constitutes a nuisance.

### 1.3 Exemptions

- A. **Lawful:** Lighting requirements mandated by a legal jurisdiction with broader authority (e.g., federal, state, or territorial) than the City of Lake Geneva, including but not limited to:
  - 1. Lighting for radio, communication and navigation towers, provided that the owner or occupant demonstrates to the satisfaction of the City that Federal Aviation Administration (FAA) regulations can only be met through the use of lighting that does not comply with this section, and that the provisions of this section are otherwise met to the fullest extent possible. Lighting for any wireless communications facility shall not be permitted unless required by the FAA; in which case, required lighting shall be of the lowest allowed intensity that meets FAA requirements.
  - 2. Any contradictory building code or Department of Transportation illumination requirements.
  - 3. Lighting for worker safety as mandated by the Occupational Safety and Health Administration.
- B. **Safety:** *Luminaires* installed for the benefit of public safety, including but not limited to:
  - 1. *Security Lighting* as determined by a Chief of Police or his designee.
  - 2. Temporary lighting used by authorized first responders during emergency procedures.

- C. **Historic:** *Luminaires* replicating time period historical character and lighting effect that are protected by historical registration, or otherwise permitted by an authority having jurisdiction.
- D. **Permitted:** Temporary and semi-permanent lighting approved by municipal permit for special events, festivals, and community benefit, provided the permitted lighting still meets light trespass requirements and does not add further disruption to ecological migration or habitat.
- E. **Seasonal:** *Seasonal Lighting* used from October 20 through January 31 of the following year.
- F. **Flags:** Upward lighting of flags in the form of a single, ground mounted, narrow cone spotlight located at the base of the flagpole which confines the illumination to the flag itself.
- G. **Swimming Pools:** Underwater lighting used for swimming pools, provided such lighting meets all relevant electrical codes.
- H. **Decorative Lighting:** Decorative lighting should be fully shielded (directing light down only), use warm-colored LEDs (ideally 2700K or lower, but not to exceed 3000k), is low-intensity (under 1000 lumens), and is used only when needed (with timers/sensors).

## 1.4 Prohibitions

- A. Mobile or ground mounted searchlights, except those used for governmental or emergency purposes.
- B. Strobe lights and laser lights, including laser light shows and aerial laser lights.
- C. Rope lighting.
- D. Neon lights.
- E. Flashing, blinking, flickering, scrolling, rotating, pulsating, tracing lights or revolving lighting, unless temporarily triggered by a security system and extinguished within 30 minutes after the time of security response. Refer to Section 98-804(1)(c).
- F. Lighting which is used to outline a building, structure, or window, including but not limited to rope, neon, and fluorescent tube lighting.
- G. Any light fixture that may be construed as or confused with a traffic signal, traffic control device or maritime navigational markers.
- H. Lighting that is determined by the City of Lake Geneva Police Department to contribute to a condition of disabling or distracting glare into a public roadway.
- I. Lighting used to illuminate property other than that on which the fixture is located and which constitutes light trespass.
- J. Mercury vapor exterior lighting fixtures installed after August 14, 2000.

## 2.0 OUTDOOR LIGHTING REQUIREMENTS

### 2.1 General

- A. **Legal:** All outdoor *Luminaires* and *Luminaire* installations shall comply with federal and state law; county and municipal codes; applicable energy and building codes; product safety labeling; the requirements of this standard; and shall be subject to the appropriate permit and inspection requirements thereof.
- B. **Light Level:** Unless otherwise specified in this ordinance, lighting installed for an outdoor use shall not exceed 25% more than the *Light Level* recommended by the applicable *ANSI/IES Lighting Standard*, or a state approved alternate, as published by [enactment date].
- C. **Distribution:** Unless otherwise specified in this ordinance, *Luminaires* emitting more than 1,000 *Lumens* shall be *Fully Shielded* and shall emit no more than 5% of their total *Lumen* output above 80 degrees from *Nadir*. Exceptions are:
  - 1. Festoon string lighting where no individual lamp emits more than 50 lumens, and the lumen density of the string is no greater than 25 lumens per foot.
  - 2. Directional *Luminaires* used for façade illumination which are shielded and aimed to hit their target such that the light is contained by architectural elements.
- D. **Trespass:** Unless otherwise specified in this ordinance, *Light Trespass* shall meet the following:
  - 1. *Luminaire* light sources shall not be visible from federal or state designated wilderness, natural area, habitat, or reserves, and *Light Trespass* shall measure no greater than 0.1 *Lux*.
  - 2. *Light Trespass* onto Waters of the United States shall measure no greater than 1 *Lux*.
  - 3. *Light Trespass* onto *Residential Use* property shall measure no greater than 1 *Lux*.
- E. **Controls:** *Luminaires* activated by motion detection shall automatically turn off or return to their dimmed state no more than 5 minutes after activity is no longer detected.
- F. **Spectrum:** Unless otherwise specified in this ordinance, the maximum allowable correlated color temperature (*CCT*) for outdoor *Luminaires* is 3000 K. **Exception:** *CCT* exemptions are allowed if a public safety need is documented.

### 2.2 Residential Use

The following requirements are supplementary to the General Outdoor Lighting Requirements (Section 2.1 and its subsections) and shall further regulate outdoor lighting on *Residential Use* property:

- A. Lighting for *Residential Use*, excluding roadway, parking, and public right-of-way, shall be exempt from the requirement in **Section 2.1(B)** provided no single Luminaire exceeds 1,000 lumens and the total installed lumens per dwelling, prorated for multifamily, does not exceed the following:

Property Size		Total Lumens	Max Kelvin
(acre)	(sf)		
1.33	58,000+	13,000	3,000
1.00	43,000	11,500	3,000
0.75	32,000	10,200	3,000
0.50	21,000	8,700	3,000
0.33	14,000	7,000	3,000
0.25	10,800	5,900	3,000
0.20	8,700	5,000	3,000
0.13	5,400	3,600	3,000
0.05	2,100	1,700	3,000
0.03	<2,100	850	3,000

Multi-Family Example: 32 townhome units on a 3.2-acre development equals .10 acres per dwelling. Therefore, each dwelling is allowed 1,700 lumens.

- B. *Light Trespass* leaving *Residential Use* property shall be no greater than 1 Lux.
- C. Outdoor lighting for recreation areas **not** intended for organized athletic competition shall comply with the General Outdoor Lighting Requirements set forth in Section 2.1 and shall not be subject to the requirements of Section 2.4 unless otherwise specified.

## 2.3 Non-Residential Use

The following requirements are supplementary to the General Outdoor Lighting Requirements (**Section 2.1** and its subsections) and shall further regulate outdoor lighting on non-residential property:

- A. *Non-Residential Use* lighting shall be exempt from the requirement in **Section 2.1(B)**, provided there is no *Luminaire* installed on the property capable of exceeding a total output greater than 3,000 Lumens.
- B. *Light Trespass* leaving non-*Residential Use* property onto adjacent public right-of-way shall be no greater than 3 Lux when measured 20 feet beyond the property line.

## 2.4 Organized Sports Lighting

The following requirements supplement the General Outdoor Lighting Requirements set forth in Section 2.1 and apply to outdoor lighting installed for organized athletic facilities, including fields and courts intended for scheduled competitive play, training, or spectator events. Incidental park lighting, pathway lighting, playground lighting, and general area lighting not intended for organized athletic use are not governed by this section.

- Eighty-five percent (85%) of the lumens generated by sports lighting luminaires shall be confined to within 10 meters (33 feet) or a distance of one pole height, whichever is greater, of the playing field or the spectator track or bleacher area, whichever is greater.
- Lighting installations for non-aerial sports shall emit no direct light above horizontal (90 degrees from nadir). Lighting installations for aerial sports may emit up to eight percent (8%) of the total lumen output above horizontal, as demonstrated by certified photometric analysis.

3. When the recommended sports field *Light Level* is higher than 100 lux, installed lighting shall not exceed 10% more than the *Light Level* recommended by the applicable *ANSI/IES lighting standard*, or a state approved alternate, as published by [enactment date].
4. The correlated color temperature (CCT) of outdoor sports lighting shall be the lowest practicable for the sport, class of play, and viewing requirements as defined by applicable ANSI/IES standards and shall not exceed five thousand seven hundred (5,700) Kelvin. Lower CCT values are encouraged where feasible to reduce glare, skyglow, and ecological impacts.
5. The maximum luminous intensity from any luminaire lighting a sports field shall not exceed 10,000 *candelas* (cd) as measured along a perimeter that is 46 meters (150 feet) from the edge of the field, at 1.5 meters (5 feet) above grade.
6. Sports lighting shall be controlled by automatic systems and shall be extinguished when no scheduled play is occurring and no later than eleven o'clock (11:00 p.m.). Reduced lighting levels may be permitted for up to thirty (30) minutes following the conclusion of scheduled play to allow for safe egress.
7. The mounting height for sports lighting shall not exceed one-fourth (1/4) of the distance from the luminaire location to the nearest property line, unless an alternative height is approved through the City's review process based on site constraints, safety considerations, or compliance with applicable athletic standards.
8. Sports lighting trespass shall not exceed 0.5 footcandle of illumination at any point on the property line.
9. Designs for all sports lighting installations shall be submitted to the City for review and approval prior to installation and shall include certified photometric plans demonstrating compliance with this section.
10. Upon installation, all sports lighting systems shall be tested, aimed, and calibrated to confirm compliance with the approved photometric plans. Once verified, the lighting installation shall be deemed compliant for the operational life of the system, except where fixtures are replaced, optics are modified, substantiated complaints demonstrate noncompliance, or public safety considerations require adjustment.
11. Existing sports lighting installations lawfully installed prior to adoption of this ordinance shall be considered nonconforming but may continue in use. Substantial modifications or replacements shall require compliance with this section to the maximum extent practicable.

## 3.0 ADMINISTRATIVE REQUIREMENTS

### 3.1 Enforcement and Penalty

**A. Enforcement:** Unless otherwise noted in this standard, the Zoning Board of Appeals, or designee, shall be responsible to implement, administer, and enforce this standard, including investigations of alleged violation. A private right of action may also constitute enforcement of the requirements within this standard.

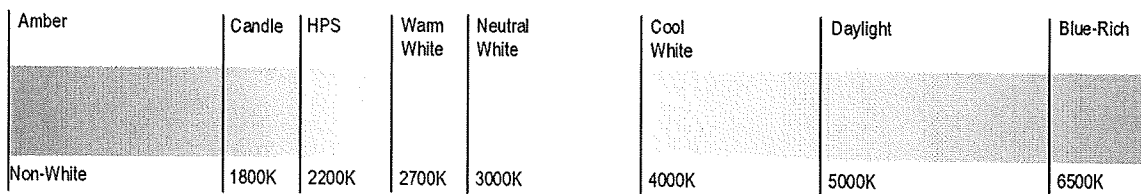
The Zoning Board of Appeals charged with enforcing this chapter shall have the authority to grant partial waiver of specific standard requirements for up to one year if a property owner demonstrates that compliance creates unreasonable hardship, as balanced against the potential impacts of non-compliance, or results in conditions that are materially detrimental to health, safety or welfare.

**B. Penalty:** Any property owner that does not meet the requirements of this standard shall be in violation. A person, firm, or corporation found to have violated, disobeyed, omitted, neglected, or refused to comply with any provisions of this standard shall be issued a notice and administrative citation as provided by the municipal code Section 98-936.

## 4.0 DEFINITIONS

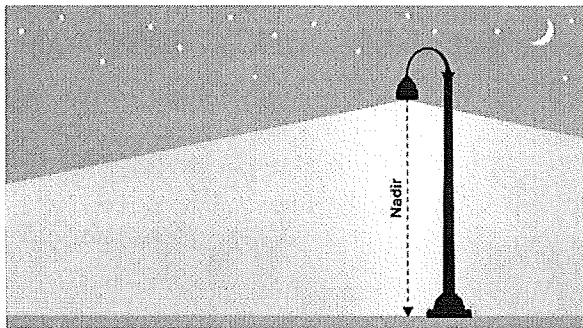
The following definitions apply to terms used in this ordinance:

- A. ANSI:** American National Standards Institute.
- B. ANSI/IES Lighting Standards:** Applicable outdoor lighting standards and metrics include but are not limited to:
  1. RP-2: outdoor retail spaces
  2. RP-6: outdoor sports and recreational areas
  3. RP-7: outdoor industrial areas
  4. RP-8: roadway and parking facilities
  5. RP-40: port terminals
  6. RP-43: outdoor pedestrian areas
- C. ALAN (artificial light at night):** Light that is created from human technology, rather than a naturally occurring process. Also known as anthropogenic lighting.
- D. Candela (cd):** The unit of measure for luminous intensity.
- E. CCT (correlated color temperature):** The measured color appearance of light emitted by a light source described using a nominal value stated in kelvins (K). Lower CCTs (1800 K to 2200 K) appear very warm or amber. Medium CCTs (2700 K to 3000 K) appear “warm white,” similar to standard incandescent bulbs. High CCTs (4000 K and higher) appear “cool white” or “blue.”



- H. DarkSky Approved Outdoor Sports Lighting:** A standalone program put forth by DarkSky International to guide and/or certify sports lighting that meets stringent glare and *Light Trespass* requirements.
- I. Five Principles for Responsible Outdoor Lighting:** Co-authored and published by DarkSky International and the Illuminating Engineering Society: 1) Use light only if needed; 2) distribute light only where it is needed; 3) use light that is no brighter than needed; 4) control light so it is on only when needed; and 5) use warmer color light when possible.
- J. Fully Shielded:** A *Luminaire* designed or shielded in such a manner that no light is emitted, either directly or indirectly, at or above a horizontal plane running through the lowest light-emitting part of the luminaire.

- K. IES (Illuminating Engineering Society):** An ANSI-recognized Standards Development Organization. ANSI/IES Recommended Practices are universally recognized as authoritative references for lighting applications.
- L. Illuminance:** Measured in *Lux* or footcandles, the total luminous flux incident at a point on a surface.
- M. Light Level:** The maintained *Luminance* or *Illuminance* value.
- N. Light Pollution:** *ALAN* traveling into areas where it is not needed or wanted. This can be in the form of *Light Trespass*, glare, or atmospheric sky glow.
- O. Light Trespass:** *ALAN* illuminating past property lines without permission. Unless specified otherwise, light trespass limits are measured at any location along a property line both horizontally at the ground plane facing upward and vertically at 1.5 meters (5ft) above grade with the meter aimed toward the light source in question.
- P. Lumen (lm):** A unit of measure of the *luminous flux* of a light source.
- Q. Luminaire:** A complete lighting unit, including the light source, housing, optics, electronics, and other necessary components for the purpose of providing outdoor illumination.
- R. Luminance:** The intensity of light emitted from a surface per unit area in a given direction.
- S. Lux (lx):** The SI metric system unit of measure for *Illuminance*.
- T. Nadir:** A downward vertical vector directly beneath a luminaire, opposite to zenith.



- U. Nighttime Hours:** The time between 11 PM and sunrise, or 7 AM (whichever comes earlier).
- V. Non-essential:** Lighting that is not directly associated with the physical safety of motor vehicle and pedestrian threats, including but not limited to: landscape lighting, illuminated signage or advertising after business hours, façade lighting, vacant sports fields, and seasonal lighting.
- W. Residential Use:** Municipal zoning districts dedicated exclusively to places of low-rise (i.e., 3 stories or less) human residence and dwelling. Examples include single family, duplex, dual family, multi-family, apartment, townhouse, and mobile home. This does not include mixed-use or commercial districts with combined dwellings.
- X. Seasonal Lighting:** Outdoor or site lighting that is portable, temporary, decorative, and used in connection with holidays and traditions. This includes but is not limited to string lighting, icicle lighting, and lighted inflatables, none of which are intended for general illumination.
- Y. Security Lighting:** Illumination used specifically to protect people, property, and infrastructure from criminal threat.
- Z. Shielding:** A *Luminaire* design, optical intervention, or physical accessory (such as a louver) preventing light emission from traveling into a particular area, angle, or region.