



City of Lake Geneva, 626 Geneva St, Lake Geneva, WI 53147- 262.248.3673- www.cityoflakegeneva.gov

**AVIAN COMMITTEE AGENDA
TUESDAY, NOVEMBER 11, 2025 - 6:00 PM
LAKE GENEVA CITY HALL; CONFERENCE ROOM 2A (UPPER LEVEL)**

Members:

President - Sarah McConnell; Members - 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 October 14, 2025
4. Comments from the public limited to 5 minutes, limited to items on this agenda
5. Financial Review and Update
6. Discussion/Recommendation that the proposed revisions to Sec. 98-707 Exterior Lighting Standards of the City of Lake Geneva's Municipal Code be sent to the Building & Zoning Director for consideration of adoption by the City of Lake Geneva
7. Discussion Regarding Membership
8. Discussion/Update Regarding Swift Night Out
9. Discussion/Update Regarding Bird City Application
10. Discussion/Update Regarding Hotel Birding Backpacks
11. Discussion Regarding Holiday Tree at Geneva Lake Museum
12. Discussion/Recommendation Regarding Climate Change Topics and Projects
13. Discussion Regarding Purple Martin Houses and other Birding Projects
14. Discussion/Recommendation Regarding Partnerships and Grants
15. Discussion Relating to Educational Mission
16. 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
Tuesday, October 14, 2025 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: 6:03 p.m. by Sarah McConnell

2. Roll Call. The following members were present: Sarah McConnell, Victoria Ross and Karen Gallo. Happ arrived at 6:20. Jill Rodriguez, Beverly Leonard and Alderperson JaNelle Powers were excused

Others present: Betty Volquardsen and David Winger

3. Approval of minutes from September 9 and the Special Meeting September 17, 2025

Motion by Ross to approve both minutes, second by Gallo.

Voice vote approved, motion carried.

4. Visitors and Comments from the Public:

5. Financial Review and 2026 Budget Update:

6. Discussion/Recommendation regarding the proposed revisions to Sec. 98-707 Exterior Lighting Standards of the City of Lake Geneva’s Municipal code be sent to the Building & Zoning director for consideration and adoption by the City of Lake Geneva

Motion by Ross and second by Gallo to move item 6 to item 11.

Voice Vote approved.

7. Discussion/Update Regarding Swift Night Out

It was pointed out that our SNO event is usually held on the first Thursday in September. Next year it would fall on the day before the Labor Day weekend and there may be too many activities going on that weekend.

Motion by Ross, second by Gallo, to move the 2026 SNO event one week later, to September 10. After a brief discussion the committee agreed to check availability of location, and activities that could interfere with the change. The item will be moved to next month’s agenda.

8. Discussion/Update Regarding Bird City Application:

Ross reported progress on the application and that she will present a draft at the December meeting.

9. Discussion/Update Regarding Hotel Birding Backpacks

McConnell brought a backpack to the Fairfield Hotel and reported they were very excited to be included.

Questions remain about how the hotels will keep track of the materials and brochures.

10. Discussion Regarding Holiday Tree at Geneva Lake Museum

Tree decorating is November 18 and 19 at the museum. We will meet at 10 am Thursday at the Geneva Lake Museum to decorate the Avian Tree. Materials are at Rodriguez’s house.

6. Discussion/Recommendation regarding the proposed revisions to Sec. 98-707 Exterior Lighting Standards of the City of Lake Geneva’s Municipal code be sent to the Building & Zoning director for consideration and adoption by the City of Lake Geneva

Ross met with Building and Zoning Director Renee Hanlon to discuss replacing Lake Geneva’s current lighting ordinance section relating to Dark Skies with the Dark Skies organization’s recommended wording. If the City Council passes the changed ordinance we can be certified as a Dark Skies community. This would replace the exterior lighting portion of our code with the Dark Skies recommended ordinance. We will

redline the city's current ordinance and submit the new wording to Hanlon. She will include our presentation at the December 15 Planning Committee meeting. Dr. Amanda Bauer, the Deputy Director of Science & Education at Yerkes and Adam McCulloch, Education and Outreach Manager of GLAS (Geneva Lake Astrophysics and STEAM) also plan to attend the December 15 Planning meeting to talk about the importance of dark skies.

In a discussion about enforcement of such an ordinance, it was suggested that the Village of Williams Bay's ordinance and enforcement policies could be used as a template. It was further decided to leave in the section about private action.

Motion: Ross moved that the Avian Committee send to the Building and Zoning Director a request that the wording of Sec. 98-707 of the City's Municipal Code be replaced in full with the attached wording recommended by DarkSkies.org. The motion was seconded by Happ

Vote: The vote passed unanimously.

Ross will submit the application for zoning text amendment

11. Discussion/Recommendation Regarding Climate Change Topics and Projects

No discussion at this time

12. Discussion Regarding Purple Martin Houses and other Birding Projects

Gallo reported that all the Purple Martin houses and gourds have been power washed/cleaned, supplied with clean nesting material and are ready for winter

13. Discussion/Recommendation Regarding Partnerships and Grants

The Bird City/White Pelican Farm grant was submitted – we should hear by early November if we are successful. The Avian committee has \$500 we can dedicate to this project. Working with the Hillmoor Commission, the Friends of Hillmoor and the Geneva Lake Conservancy, we have a potential site in mind along the stream bed near Route 50. Next steps about selecting and preparing the site will be taken if we receive the grant. Winger reported there is an RFP for Zone 4.

14. Discussion/Projects Regarding Local Parks and Hillmoor Property

See discussion above

15. Discussion/Projects Relating to Educational Mission

No discussion

16. Next Meeting Date and Time

The next Avian meeting will be held on **Tuesday November 11 at 6 pm in Conference Room 2 A.**

17. Adjournment:

Motion to adjourn by Ross, second by Happ.

Voice vote carried at 7:18 p.m.

Respectfully submitted

Kelley Happ

Secretary, Avian Committee

Account Number	Account Title	2025-25 Period Actual	2025-25 Current year Actual	Current year Budget	Variance Current year	% of Budget
GENERAL FUND						
MISCELLANEOUS						
MISCELLANEOUS						
11-70-00-47300	AVIAN DONATIONS	.00	.00	250.00	250.00	.00
Total MISCELLANEOUS:		.00	.00	250.00	250.00	.00
MISCELLANEOUS						
11-70-00-57800	AVIAN COMMITTEE EXPENSES	400.00	2,836.27	4,100.00	1,263.73	69.18
Total MISCELLANEOUS:		400.00	2,836.27	4,100.00	1,263.73	69.18
Net Total GENERAL FUND:		400.00-	2,836.27-	3,850.00-	1,013.73-	73.67
Net Grand Totals:		400.00-	2,836.27-	3,850.00-	1,013.73-	73.67

Journal	Reference Number	Payee or Description	Debit Amount	Credit Amount	Balance
11-70-00-47300 AVIAN DONATIONS					
		09/30/2025 (09/25) Balance	.00 *	.00 *	.00
		10/31/2025 (10/25) Period Totals and Balance	.00 *	.00 *	.00
YTD Encumbrance	.00	YTD Actual	.00	Total	.00
		YTD Budget	250.00-	Unearned	250.00
11-70-00-57800 AVIAN COMMITTEE EXPENSES					
		09/30/2025 (09/25) Balance	.00 *	.00 *	2,436.27
AP	424	GALLO, KAREN	400.00		
		**Desc: PURPLE MARTIN HOUSE PWR WASH			
		10/31/2025 (10/25) Period Totals and Balance	400.00 *	.00 *	2,836.27
YTD Encumbrance	.00	YTD Actual	2,836.27	Total	2,836.27
		YTD Budget	4,100.00	Unexpended	1,263.73
11-70-00-57810 AVIAN COMMITTEE DONATION EXP					
		09/30/2025 (09/25) Balance	.00 *	.00 *	.00
		10/31/2025 (10/25) Period Totals and Balance	.00 *	.00 *	.00
YTD Encumbrance	.00	YTD Actual	.00	Total	.00
		YTD Budget	.00	Unexpended	.00
Number of transactions: 1 Number of accounts: 3			Debit	Credit	Proof
Grand Totals:			400.00	.00	400.00

Report Criteria:

Actual amounts

All accounts

Account.Account number = "11700047300","11700057800","11700057810"

MEMORANDUM

TO: Avian Committee Members
FROM: Victoria Ross
DATE: November 6, 2025
RE: Application for Zoning Text Amendment

I received comments back from the City regarding the above referenced Application.

Some of the comments I believe are fine to accept, but some are above my understanding.

I have sent the comments to Adam McCulloch and asked if he can make recommendations as to what should be accepted, amended or kept. The odds that he will be able to accomplish this in time for the 11.11.25 Avian Committee Meeting are not good in my opinion. Additionally, we have the 11.21.25 deadline to get this back to Renee Hanlon in order for the Public Hearing on December 15, 2025.

I have also offered that the Committee members would be willing to meet with him and Dr. Bauer in person if that makes the process more productive. I will need to check with the City Clerk to see if we can have a working meeting, or if it would need to be a single topic special meeting.

Since I will not be at the meeting on Tuesday, I will leave it to those members present to determine if the Committee should complete the process at the meeting, or wait for input from Adam & Dr Bauer and plan to submit this for a Public Hearing at the January Plan Commission Meeting.

I know the Dark Skies issue is something that has been on the Committee agenda for several years, but I feel we have moved this so far forward it would be better to wait and get the input and have a solid Amendment, then risk having it voted down.

Attachment A

Benjamin Zuckerberg

Background

Growing up in Brooklyn, New York, I arrived a bit late to the wonderful world of ecology. I was, however, lucky enough to start studying birds as an undergraduate at Connecticut College (under the tutelage of Bob Askins), and went on to get my Masters from the University of Massachusetts-Amherst. After spending several years studying birds in the field, I became interested in how the environment influences bird populations at geographic scales. I received my Ph.D. from SUNY-ESF where I focused on studying range shifts in bird distributions as a consequence of climate change. I got hooked, and then spent three great years as a postdoc and research associate at the Cornell Lab of Ornithology. I joined the faculty at UW-Madison in 2011 and it's been a wild ride working with great collaborators and building a lab focused on studying how modern climate change impacts birds and mammals. I remain a strong advocate for the role of the public in collecting data on wildlife and feel that citizen science has opened entirely new fields in ecological research. Although I enjoy all the natural beauty and craft beers of Wisconsin, I am a New Yorker at heart and remain a diehard Yanks, Knicks, and Giants fan.



Contact Information

Benjamin Zuckerberg, Ph.D.

Professor

Department of Forest and Wildlife Ecology

University of Wisconsin-Madison

226 Russell Labs

1630 Linden Drive; Rm. 213

Madison, WI 53706-1598

Email: bzuckerberg@wisc.edu

[Google Scholar Profile](#)

[Curriculum vitae](#)

Education

- Connecticut College; B.A. in Zoology, 1998
- University of Massachusetts-Amherst; M.S. in Wildlife & Fisheries Conservation, 2002
- State University of New York College of Environmental Science and Forestry; Ph.D. in Ecology, 2008
- Cornell Lab of Ornithology; Research Associate, 2008-2011

Affiliations

- Chair, Wildlife Working Group, Wisconsin Initiative on Climate Change Impacts
- Affiliate Member, Center for Climatic Research (University of Wisconsin-Madison)

Attachment B

Purple Martin Palace



by Lucy Jerue

Illustrated by the Artists
of "Young At 'Art"

This unique book is the story of Martin and Martina, two Purple Martins who migrate from Brazil to New Jersey for the summer. Martin, in humorous fashion, tells of their search for the perfect home. He hopes it will be just the place to raise a family. Children will delight in the colorful illustration as they learn about these fascinating birds, often described as the acrobats of the bird world.

28 pages, Paperback

Published November 13, 2020 by Blurb

ISBN 9781715800437 (ISBN10: 1715800435)

ASIN 1715800435

Language English

Attachment C

Some groups we would be targeting as potential partners and event word spreaders are:

- Lake Geneva Public Library - [Lake Geneva Public Library \(lglibrary.org\)](http://lglibrary.org)
- Geneva Lake Museum - [Home - Geneva Lake Museum](#)
- Badger High School Environmental Club - [Activities & Clubs - Badger High School \(lakegenevaschools.com\)](#) & students in the Agricultural Science Curriculum - [2024 - 2025 BHS Career Planning & Course Guide \(updated 9/9/24\) | PDF to Flipbook \(heyzine.com\)](#)
- Wild Ones - [Chapters in Wisconsin - Wild Ones: Native Plants, Natural Landscapes](#)
- Lyons Biodiversity Project - [Lyons Biodiversity Project – Kettle Moraine Land Trust \(kmlandtrust.org\)](#)
- Michael Fields Agricultural Institute - [Michael Fields Agricultural Institute](#)

Proposed Text Amendment Section 98-707 Exterior Lighting Standards

Text Amendment Application PC-49	Current Zoning Ordinance/Planning Staff Notes
<p>1.1 Purpose This section states the purpose but also includes language that is better suited for the enabling ordinance than the purpose statement.</p>	<p>The current Ordinance has a very similar purpose statement. The proposed Ordinance includes language that is better suited for the enabling ordinance than the purpose statement. Staff suggests removing the “whereas” statements for a more concise purpose statement.</p>
<p>1.2 Applicability A. Brings areas of the city (roadways and public right of way)not currently regulated by the Zoning Ordinance under this authority. B. This section requires that when a property is rezoned, all lighting standards must be brought into compliance. This section also provides for a city wide amortized implementation which would be a date certain by which time ALL lighting standards throughout the city must be brought into compliance.</p>	<p>The current Ordinance excludes rights-of- way and public property from these regulations. Staff suggest that any regulation of roadways and public rights-of-way be written into the Subdivision Ordinance as that is the code where all street design standards are found. Requiring upgrade at rezoning is currently provided for in that any commercial development, subdivision, or conditional use permit requires a photometric plan submittal and adherence to the current Ordinance standards. To have citywide amortization does not seem feasible given the limited staff resources. We would not be able to provide enforcement to a level that would be meaningful. Staff is also concerned that this may create financial hardships to private property owners.</p>
<p>1.3 Exemptions A.2. “Any contradictory building code or Department of Transportation Illumination requirement” A.3 “lighting for worker safety as mandated by the Occupational Safety and Health Administration.” B.1.”Security Lighting as determined by a municipal official with authority.” E. “Seasonal Lighting used from October 20 and January 31 of the following year”</p>	<p>Staff question the impact of exceptions A.2 and A.3. By allowing for DOT standards could essentially negate the inclusion of roadways and public rights-of-way in the proposed Ordinance. Staff are concerned about the confusion that his statement of exemption may cause and would like more information on the impact of this exemption. Staff suggest that “municipal Official with authority” be replaced with “Chief of Police or his designee”. The seasonal lighting language needs to be improved to indicate from October 20 through January 31. Staff are concerned that Decorative lighting is popular all year long. What about holidays that do not fall within those calendar dates? Current Ordinance also exempts landscape lighting and pedestrian pathway lighting . The current Ordinance also exempts doorway lighting in residential districts. Current Ordinance also exempts</p>

	<p>Flagpole lighting as this lighting is required under the U.S. Flag Code. Maybe more consideration should be given to low level and decorative lighting exceptions.</p>
<p>1.4 Prohibitions</p>	<p>The current Ordinance has a much more extensive list. Staff believe that the items prohibited in the current Ordinance should be included in any new Ordinance adopted. An example is “lighting which is used to outline a building, structure, or window, including but not limited to rope, neon, and fluorescent tube lighting.”</p>
<p>2.0 Outdoor Lighting Requirements 2.1 General B. Light Level. “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 alternative, as published by?” C. Distribution. Requires any light above 1,000 lumens to be fully shielded with exception of festoon lighting and façade lighting. E. Curfew. F. Spectrum 1.”Exemption: CCT exemptions are allowed if a public safety need is documented”</p>	<p>Staff do not have the technical expertise to understand this regulation. Can committee please provide the regulating standard that staff is expected to use? Why is there a 25% overage allowed on the lighting standards? Does the state of Wisconsin have alternative standards?</p> <p>The current Ordinance requires shielded lighting where the proposed Ordinance required fully shielded lighting. The difference, according to ordinance definitions, is light may emit up to a 15 degree angle from the light source by current Ordinance standards. The proposed Ordinance will require fully shielded light so that light only emits from the bottom of the source. There is an allowance that 5% total lumens may be emitted from the top of the fixture. The current Ordinance requires shielding at 1600 lumens where the proposed Ordinance drops that to 1000 lumens. Staff questions if the gooseneck fixtures popular downtown and encouraged for sign illumination meet this requirement.</p> <p>Curfew seems like a big change for this community. Staff do not know of any energy code that would apply under E.1. Does Avian committee know of such code, and can they supply it to staff? If not that line should be deleted.</p> <p>Staff have concerns about the ability to enforce F.1. exception. How is an exemption documented and who is authorized to approve the exemption. This needs to be expanded in more detail.</p>
<p>2.2 Residential Use A. Lighting for Residential Use C. “When needed, Residential Use roadway Luminaires shall be a maximum CCT of 2400K”</p>	<p>What is the difference between these total light levels and the standard set forth in 2.1.B? Staff are concerned that these calculations would be cumbersome for enforcement. Is this table to be used in coordination with the table in Annex A? How will the lighting zones be determined? Will the zones follow zoning district</p>

	<p>lines or some other factors? These tables need more detailed explanation, and a map must be included to designate lighting zones.</p> <p>What is “Residential Use roadway Luminaires”? If this is a reference to streetlights, staff questions whether or not the maximum CCT would be consistent with DOT standards. As stated above the best place to codify street lighting standards is in the Subdivision Ordinance and the Streets Code.</p>
<p>2.3 Non-Residential Use</p> <p>A. Exemption if no light exceeds 3,000 lumens</p> <p>B. Light Trespass</p>	<p>Staff do not understand the relevance of the standard set in section 2.1.B if there is an exception to it for all properties.</p> <p>The current Ordinance prohibits light trespass greater than .5 Fc at the property line no matter the use of the property. The proposed Ordinance limits the amount of light trespass to 1 Lux onto residential property which is more restrictive than our current Ordinance. The proposed Ordinance does not include a light trespass limit on non-residential properties.</p> <p>The proposed Ordinance provides a limitation on light trespass from non-residential properties onto public rights-of-way which the current Ordinance does not. However, staff would suggest being more specific in where the measure is taken, “20 feet past the property lines”? Which side of the property line?</p>
<p>3.0 Administrative Requirements</p> <p>3.1 Permit Application</p> <p>A Submittal: “Whenever a building, subdivision, site plan, or outdoor lighting permit is applied for, an outdoor lighting plan must be submitted along with a compliance statement that the proposed work will comply with all standards requirements.”</p>	<p>Staff are very concerned that this requirement is overly burdensome on permit applicants. This reads as though any zoning or building permit will require a lighting plan. Does this mean that any building permit, zoning permit, etc... would require bringing lighting up to current code? The proposed Ordinance only makes the upgrade requirement clear when there is “rezoning” of a property or at amortized implementation date. This section needs a good deal of discussion. This section appears to require that a lighting plan by a certified lighting professional be submitted with any permit that requires submission of a Site Plan which is all permits. Currently, subdivisions, planned developments, uses that require conditional uses are required to submit photometric plans. If the intent is to require the resident building a new shed (for example) to submit a photometric plan of their property that must be stated more clearly. Again, staff would like to have more discussion about these</p>

	<p>permitting requirements to ensure that they are not overly burdensome to our residents.</p> <p>All appeals and variances should go to the Zoning Board of Appeals instead of the Zoning Administrator.</p>
<p>3.2 Enforcement and Penalty</p> <p>C. Private Action: “Any person adversely affected by lighting that does not meet the requirement of this standard shall have a private cause of action for nuisance against the person, firm, or corporation responsibility for such lighting”</p>	<p>It is staff’s understanding that any person can take civil action against their neighbor for nuisance. Why does this need to be included? Does including this make the City a party to such civil legal actions between neighbors?</p>

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. 323/804-1286

Email: vikiross2012@gmail.com

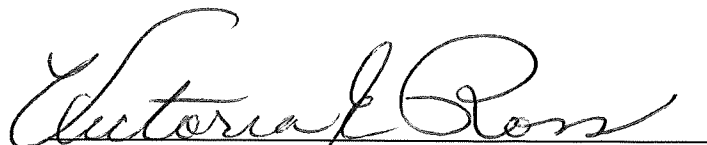
Description of Text Amendment:

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.

10.23.25
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.**

[1-19-2022]

~~(1) Purpose. The purpose of this section is to regulate the spillover of light and glare on operators of motor vehicles, pedestrians, and land uses in the vicinity of a light source in order to promote traffic safety and prevent the creation of nuisances. A further purpose of this section is to regulate outdoor night lighting fixtures to preserve and enhance the area's dark sky while promoting safety, conserving energy, and preserving the environment for astronomy and to reduce collisions and save birds lives during spring and fall. [Ord. No. 14-12]~~

~~(2) Applicability. The requirements of this section apply to all private exterior lighting within the jurisdiction of this chapter, except for lighting within public rights of way and/or lighting located on public property. For the purpose of this section, "Exterior lighting" means an outdoor artificial illuminating device, whether permanent or portable used for illumination or advertisement, including general lighting fixtures, searchlights, spotlights and floodlights, whether for architectural lighting, parking lot lighting, landscape lighting, signage or other purposes. "Shielded" means a fixture that is shielded in such a manner that light rays emitted by the fixture, either directly from the lamp or indirectly from the fixture, are projected at least 15° below a horizontal plane running through the lowest point on the fixture where light is emitted.~~

~~(3) Depiction on required site plan. Any and all exterior lighting shall be depicted as to its location, orientation and configuration on the site plan required for the development of the subject property. (Refer to Section 98-908).~~

(4) Requirements:

~~(a) Orientation of Fixture. all exterior lighting shall be shielded, except for UL-rated fixtures of 1,600 lumens or less. In no instance shall an exterior lighting fixture be oriented so that the lighting element (or a transparent shield) is visible from a property located within a residential zoning district, except where a clear glass, decorative/ornamental fixture is used with a UL-rated fixture of 1,600 lumens or less. The use of shielded luminaries and careful fixture placement is required so as to facilitate compliance with this requirement. All floodlighting and spotlighting fixtures shall be shielded.~~

~~(i) Exceptions are as follows:~~

~~(1) Landscape lighting. Unshielded landscape lighting is permitted and is not required to be angled downward, provided that the lighting element or transparent shield is not visible from adjoining properties and that each UL-rated fixture has a light output of 1,600 lumens or less.~~

~~(2) Driveway/walkway, identity sign or decorative lighting. Unshielded lighting at entryways, including driveways and walkways and lighting for property identity signs, gates, fences, and post top entrances is permitted, and the fixture is not required to be angled downward, provided that each UL-rated fixture has a light output of 1,600 lumens or less.~~

~~(3) Architectural lighting. All architectural lighting shall use UL-rated fixtures of 1,600 lumens or less. All exterior lighting during such period shall have a minimum of 90% of their light fall onto the illuminated structure, rather than into sky or space beyond the structure. Under no circumstances shall the illumination of architecture be permitted between 11:00 p.m. and 7:00 a.m.~~

~~(b) Intensity of illumination and filtering. In no instance shall the amount of illumination attributable to exterior lighting, as measured at the property line, exceed 0.50 footcandle above ambient lighting conditions on a cloudless night. In addition to this requirement, all exterior lighting fixtures shall not exceed the illumination levels recommended by the Illuminating Engineering Society of America (IES) as given in Appendix A. All metal halide fixtures shall be filtered by a smoke, tinted, or frosted glass or acrylic enclosure. Quartz glass shall not be considered as meeting this requirement.~~

~~(c) Maximum light output. For all residential uses, the maximum light output of all nonexempt exterior lighting shall not exceed a total on any given property under single ownership equal to 10,000 lumens multiplied by the total number of acres of such property. For all nonresidential uses, the maximum light output of all nonexempt exterior lighting shall not exceed a total on any given property under single ownership equal to 50,000 lumens multiplied by the total number of acres~~

~~of such property. Lighting beneath a gas station canopy shall be exempted from this total; however, such lighting may not exceed a maximum light output of 25 footcandles.~~

~~(d) Maximum height. The maximum fixture mounting height shall be as follows:~~

- ~~(i) CR-5ac, ER-1, SR-3, SR-4, and TR-6 districts: eight feet.~~
- ~~(ii) MR-8, NB, and NO districts: 12 feet.~~
- ~~(iii) PI, GI, and HI districts: 30 feet.~~
- ~~(iv) All other districts: 20 feet.~~
- ~~(v) For sports lighting, see Section 98-707(7).~~

~~(e) Location. Light fixtures shall not be located within required buffer yards.~~

~~(f) Minimum lighting standards. All areas designated on required site plans for vehicular parking, loading, or circulation and used for any such purpose after sunset shall provide artificial illumination in such areas at a minimum intensity as recommended in the Lighting Tables of Appendix A.^[1]~~

~~[1] Editor's Note: Appendix A is included as an attachment to this chapter.~~

~~(g) Lamp types. In an effort to foster sustainability, the City requires energy-efficient exterior light sources. High-pressure sodium, fluorescent, low-pressure sodium lamps, light emitting diodes (LED), or metal halide shall be used for all light fixtures UL-rated to be lamped greater than 1,800 lumens. All light bulbs and fixtures not in compliance with this regulation may continue to be used, but replacement light bulbs and fixtures must conform to the requirements of this section.~~

~~(h) Nonconforming lighting. All lighting fixtures existing prior to the effective date of this chapter shall be considered as legal conforming structures, (see Section 98-207). However, such nonconforming fixtures are encouraged to be extinguished by 11:00 p.m. All replacement fixtures shall fully comply with the requirements of this section.~~

~~(i) Special events lighting. Any temporary use using exterior lighting which is not in complete compliance with the requirements of this section shall secure a temporary use permit. Refer to Section 98-906.~~

~~(j) Hours of operation.~~

- ~~(i) Display lot lighting. Display lot lighting shall be extinguished within 30 minutes after closing of the business. Under no circumstances shall the illumination of display lots be permitted between 11:00 p.m. and 7:00 a.m. All exterior lighting during such period shall be at low levels for security purposes only.~~

~~(ii) Lighting of commercial and industrial uses. Lighting shall be extinguished within 30 minutes after closing of the business, except in the case of a special event in which a temporary use permit has been granted under Section 98-906. The Zoning Administrator may permit security lighting or lighting for after hours and maintenance employees, provided such lighting is on separate circuits, and provided that the areas to remain lighted are located or screened in such a way to reduce impact substantially from the normal lighting.~~

~~(iii) Landscape lighting. Landscape lighting shall not be operated between the hours of 11:00 p.m. to dawn, except solar powered landscape lighting lacking an on/off switch may be operated between the hours of 11:00 p.m. to dawn, provided that such lighting does not exceed 0.1 footcandle of illumination, subject to Subsections 4(a)i1 and (4)(c) of this section.~~

~~(5) Exempt lighting. The following are exempt from the provisions of this section:~~

~~(a) Security lighting.~~

~~(b) Doorway lighting within residential zoning districts.~~

~~(c) All temporary emergency lighting necessary to ensure public safety as determined by the City of Lake Geneva Police Department, Fire Department, or other emergency service providers.~~

~~(d) Lighting used in the undertaking of municipal road construction, emergency repair or maintenance of utility lines, sewer, water mains or similar public infrastructure.~~

~~(e) Holiday lighting between October 20 and January 31 of the following year.~~

~~(f) 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) Underwater lighting used for swimming pools, provided such lighting meets all relevant electrical codes.~~

~~(h) Temporary lighting reviewed and approved in connection with a permit issued by the City, provided that the lighting is extinguished and removed according to the permit.~~

~~(i) 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.~~

~~(j) Lighting for outdoor activities, including pool areas, tennis courts, paddle courts, hockey and/or skating rinks, horse arenas; provided such lighting shall be extinguished by 11:00 p.m.~~

~~(k) Lighting that is used for a specified period of time which is necessary for a specific task or purpose while said task or purpose is actively being performed.~~

~~(6) Prohibited lighting. The following lighting shall not be permitted within the City:~~

~~(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, except by conditional use permit.~~

~~(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.~~

~~(7) Sports lighting. "Sports lighting" refers to light fixtures used to illuminate courts, arenas, riding arenas, fields, tracks and other recreational areas generally utilizing high light output fixtures, higher light levels and are mounted on higher than average freestanding poles. For sports lighting, the following shall apply:~~

~~(a) Light fixtures shall be shielded as designed and installed.~~

~~(b) Light levels shall not exceed the appropriate Illuminating Engineering Society of America (IES) recommended level of spectator/play for the activity.~~

~~(c) Sports lighting shall be set to automatically shut off when there is no scheduled play and shall be extinguished no later than 11:00 p.m. Lower light levels for off the field lighting may be provided for an additional 30 minutes for safe egress.~~

~~(d) The mounting height for sports lighting shall be no greater than one-fourth the distance to the nearest property line from where the sports lighting is located.~~

~~(e) Sports lighting trespass shall not exceed 0.5 footcandle of illumination at any point on the property line.~~

~~(f) Designs for all sports lighting shall be submitted to the City prior to installation to assure that the requirements of this section are satisfied.~~

Sec. 98-707 Exterior lighting standards.

1.1 Purpose

- A. 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 because:
1. Whereas, outdoor uses of *Artificial Light at Night (ALAN)* often include inappropriate and bright sources of light that cause an unsafe reduction in human visual performance; and
 2. Whereas, excessive, unnecessary, and misdirected *ALAN* contributes to *Light Pollution* and wastes energy resources that would, if corrected, generate tangible cost savings; and
 3. Whereas, increased use of *ALAN* has contributed to an escalation of *Light Pollution*, thus increasing the brightness of the night sky by 10% annually and rendering the current night sky orders of magnitude (often hundreds of times) brighter than the natural and original sky background; and
 4. Whereas, *Light Pollution* from *ALAN* is known to cause adverse effects on the health and well-being of birds, wildlife, nocturnal ecosystems, vegetation, and under certain circumstances, human health;
 5. Now, therefore, let it be resolved that the City of Lake Geneva, which has the authority to protect natural resources and maintain a healthy environment for present and future generations, chooses to enact this outdoor lighting standard.

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, roadways, public right-of-way, 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.
 2. When a property is re-zoned for a new land use, at which time all outdoor lighting on the property shall meet the requirements of this standard before the new use commences
 3. [acceptable date of amortized implementation], the date whereupon all lighting must conform to this ordinance.

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. Navigational lighting systems regulated by the Federal Aviation Administration and the US Coast Guard.
 - 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 municipal official with authority.
 - 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 and January 31 of the following year.

1.4 Prohibitions

- A. *ALAN* must not interfere with the safe movement of motor vehicles. Any lighting that distracts or disables the vision of a motor vehicle operator (e.g., excessively bright or rapid blinking, flashing, and/or motion video) or contributes to traffic control confusion (e.g., sources resembling or imitating traffic or railroad signals) is prohibited.
- B. Beacons and searchlights, except for emergency use by authorized first responders.

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. Curfew:** *Non-essential* outdoor lighting, including but not limited to landscape and decorative lighting elements, shall be extinguished during *Nighttime Hours*.
1. When applicable, outdoor lighting shall dim or be extinguished during *Nighttime Hours* as prescribed by an adopted energy code.
- F. 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.
- G. Spectrum:** Unless otherwise specified in this ordinance, the maximum allowable correlated color temperature (*CCT*) for outdoor *Luminaires* is 3000 K.
1. 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:

TABLE 2.2: PER DWELLING LUMEN ALLOWANCE RESIDENTIAL USE				
Property Size		Lz0	Lz1	Lz2
(acre)	(sf)			
1.33	58,000+ sf	5,200	13,000	22800
1.00	43,000 sf	4,600	11,500	20200
0.75	32,000 sf	4,100	10,200	17900
0.50	21,000 sf	3,500	8,700	15300
0.33	14,000 sf	2,800	7,000	12300
0.25	10,800 sf	2,400	5,900	10400
0.20	8,700 sf	2,000	5,000	8800
0.13	5,400 sf	1,500	3,600	6300
0.05	2,100 sf	850	1,700	3000
0.03	< 2,100 sf	850	850	1500

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 when located in Lz1.

- B.** *Light Trespass* leaving *Residential Use* property shall be no greater than 1 *Lux*.
- C.** When needed, *Residential Use* roadway *Luminaires* shall be a maximum *CCT* of 2400 K.

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 past the property line.

2.4 Sports Lighting

The following requirements are supplementary to the General Outdoor Lighting Requirements (**Section 2.1** and its subsections) and shall further regulate outdoor lighting for sports and recreational areas shall also meet the following requirements:

1. 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.
2. Lighting installations for aerial sports are allowed a maximum of 8% of the total lumen output to be emitted above 80 degrees from *Nadir*.
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 maximum *CCT* for outdoor sports lighting should be the lowest possible for the sport, class of play, and viewing audience as defined by the relevant *ANSI/IES lighting standard*, or any state approved alternative, but never exceeding 5700 K.
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.

3.0 ADMINISTRATIVE REQUIREMENTS

3.1 Permit Application

- A. **Submittal:** Whenever a building, subdivision, site plan, or outdoor lighting permit is applied for, an outdoor lighting plan must be submitted along with a compliance statement that the proposed work will comply with all standards requirements. The outdoor lighting plan must follow one of the following:
 1. **Schedule Method:** Only available for renovation and *Residential Use* lighting; projects to be documented using a spreadsheet format by listing the *Luminaire* identifications (i.e., manufacturer, model number, type), *Luminaire* quantities, installation locations, and *Lumen* outputs for each; or

2. Calculation Method: Available for all project types but required for sports lighting and when specifically requested by the planning commission; an outdoor lighting design shall be prepared by a certified lighting professional or licensed professional engineer using lighting design software and *Luminaire* .ies files. This outdoor lighting plan shall include:
 - a) *Luminaire* identification (model number), installation locations, mounting heights, targeted directions, buildings, and other physical objects within the site that could affect the lighting outcome.
 - b) Site plan and *Illuminance* calculation plots demonstrating conformance with this ordinance, including the sports lighting luminous-intensity *Light Trespass* limit.
- B. **Review:** Submitted spreadsheets, site lighting plans, and compliance affidavits shall be subject to review and approval by the [administrator], or designee. The [administrator] shall have the authority to refer an application to the [planning and zoning commission] or the [historic commission] if deemed appropriate.
- C. **Appeals:** Any appeals related to decisions regarding outdoor lighting shall be made to the [administrator], or designee.

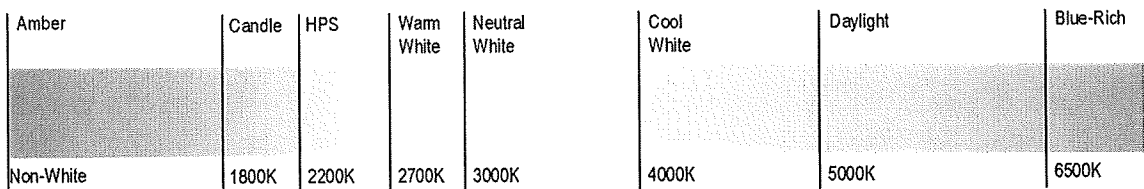
3.2 Enforcement and Penalty

- A. **Enforcement:** Unless otherwise noted in this standard, the [administrator], 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.
 1. The [administrator] 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 [appropriate section numbers]. Any person, firm, or corporation found to have violated any portion of this standard shall correct the violations within thirty (30) days of the citation date. Each day a violation continues beyond thirty (30) days of the citation date without having been corrected shall be required to pay a forfeiture of not more than \$500.00 for each day the violation continues after being issued a citation.
- C. **Private Action:** Any person adversely affected by lighting that does not meet the requirements of this standard shall have a private cause of action for nuisance against the person, firm, or corporation responsible for such lighting.

4.0 DEFINITIONS

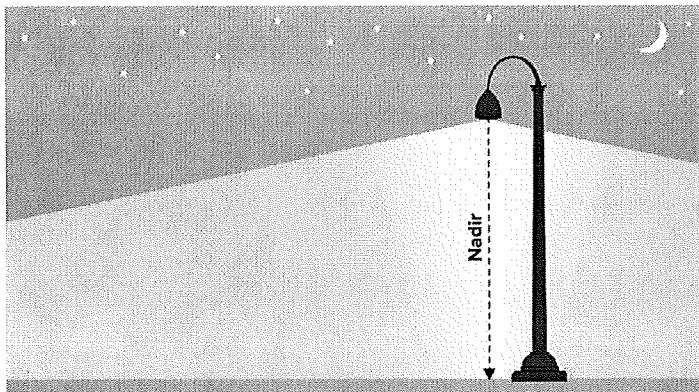
- 4.1 The following definitions apply to terms used in this ordinance:

- 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. **Lighting Zones:** An ANSI/IES/DarkSky system describing the luminous environment and related lighting conditions based on land uses and expected tasks. These range from natural and intrinsically dark zones to very bright zones.
- Q. **Lz0:** No ambient lighting. Areas where the natural environment will be seriously and adversely affected by lighting.
- R. **Lz1:** Low ambient lighting. Areas where lighting might adversely affect flora and fauna or disturb the character of the area.
- S. **Lz2:** Moderate ambient lighting. Areas of human activity where the vision of human residents and users is adapted to moderate light levels.
- T. **Lumen (lm):** A unit of measure of the *luminous flux* of a light source.
- U. **Luminaire:** A complete lighting unit, including the light source, housing, optics, electronics, and other necessary components for the purpose of providing outdoor illumination.
- V. **Luminance:** The intensity of light emitted from a surface per unit area in a given direction.
- W. **Lux (lx):** The SI metric system unit of measure for *illuminance*.
- X. **Nadir:** A downward vertical vector directly beneath a luminaire, opposite to zenith.



- Y. **Nighttime Hours:** The time between [10] PM and sunrise, or 7 AM (whichever comes earlier). For businesses and events with operating hours later than [10] PM, nighttime hours will begin one hour after closing.
- Z. **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.
- AA. **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.
- BB. **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.
- CC. **Security Lighting:** Illumination used specifically to protect people, property, and infrastructure from criminal threat.

DD. 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.

ANNEX A – EXAMPLE FORMATS TO ASSIGN LIGHTING ZONES

Table Example

Lighting Zone Designations by Land Use																			
Zone District	Residential						Mixed-Use				Non-Residential								
Lighting Zones	R-A	R-1	R-T	R-MC	R-ML	R-MH	MX-T	MX-L	MX-M	MX-H	NR-C	NR-BP	NR-LM	NR-GM	NR-PO				
															A	B	C	D	
NLz																X ¹	X ¹		
Lz0	X ³	X ³	X ³	X ³	X ³		X ³								X ²	X ²	X ²	X ²	
Lz1	X	X	X	X	X	X ⁴	X	X ⁴	X ⁴	X ⁴	X	X	X	X	X				X
Lz2						X		X	X	X	X ⁵			X ⁵	X ⁶				
Lz3									X ⁵	X ⁵					X ⁷				

Notes:
 [1] NLz is required in NR-PO zones for open space where no anthropogenic light is allowed.
 [2] Lz0 is required in NR-PO zones for open space where artificial light is needed during nighttime hours.
 [3] A lower lighting zone is required on subject properties with sensitive lands.
 [4] A lower lighting zone is required on subject properties adjacent to low-density uses.
 [5] A higher lighting zone is allowed unless the subject property is adjacent to any residential zone district.
 [6] Lz2 is allowed in parks with high pedestrian activity and many amenities.
 [7] Lz3 is allowed in parks containing nighttime stadiums or entertainment activities.