Energy Efficiency Update: Parking Garage Lighting in City of Pittsburgh

Free-standing parking garages are often identified as poor energy performers. In 2014, 73% of garages in Pittsburgh's Central Business District and Oakland neighborhoods reported energy consumption greater than national averages. Modernizing garage lighting enables operators to utilize high efficiency lighting and control systems which can create cost savings, energy consumption reductions, and advancements in building performance.

Did You Know?

Due to 2014 code changes, Pittsburgh parking garages can achieve 50% reductions in energy consumption. As a direct result, the Sports and Exhibition Authority of Pittsburgh and Allegheny County created a parking garage retrofit model now being following by the Urban Redevelopment Authority of Pittsburgh and the Pittsburgh Parking Authority. Called the Pittsburgh Green Garage Initiative, these governmental entities are all collaborating to maximize energy efficiency, reduce resource use, and encourage sustainable mobility solutions for municipally operated parking facilities in the City of Pittsburgh.

If you are interested in being added to the Pittsburgh Green Garage initiative, contact us at info@gbapgh.org.

Parking Code? Yes, Please!

Others interested in applying the Pittsburgh Green Garage Initiative strategies will likely find the City's 2015 parking lighting code updates of interest, so they are provided here in detail. Attached, please find:

- 2014 ordinance amending a previously conflicting code.
    - In Section G, the **bold text is the new language**, while the ~~strikethrough~~ shows the removed prior code.
- City of Pittsburgh Codes, Title 12 Lighting Code, Chapter 1201 Lighting Code.
    - A yellow highlight has been added to "Section 1201.07 Required Calculations for Lighting Installations, Table 7 (E) and (F) Recommended Maintained Illuminance and Luminance Values" referenced by the 2014 ordinance.

The national average energy use intensity (EUI) for parking garages is 11 kBTU/ft^2 for fully enclosed garages and 9 kBTU/ft^2 for partially enclosed garages. These figures do not include spaces inside garages used for retail, restaurants, or other uses. To reach 2030 District goals, parking garages are working to halve these numbers by the year 2030, reaching 5.5 kBTU/ft^2 for fully enclosed garages and 4.5 kBTU/ft^2 for partially enclosed garages.

What Can I Do to Improve?

In updating your own parking garages, please consider incorporating the following items:

- Light emitting diode (LED) lighting fixtures throughout.
- LED fixtures for roof deck lighting, including integral photosensors for dusk-to-dawn control.
- LED stairway lighting with occupancy sensors.
- Motion-based and daylight-harvesting controls for all fixtures that allow for a low and/or unoccupied setting up to 70% of the time (dependent upon garage use conditions).
- Joining the national Lighting Energy Efficiency in Parking (LEEP) Campaign and the Green Parking Council's Green Garage Certification.

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An ordinance amending the Pittsburgh City Code, Title Seven Business Licensing, Article VII Service Businesses, Chapter 763 Parking Lots, Section 763.04 Safety Requirements to update lighting requirements for enclosed parking garages to be consistent with the City of Pittsburgh Lighting Code.

Be it resolved by the Council of the City of Pittsburgh as follows:

Section 1.

§ 763.04 SAFETY REQUIREMENTS

The operator shall maintain each parking place in a condition so as not to constitute a hazard to the patrons thereof or the motor vehicles parked therein, and shall also comply with the following requirements:

(a) Parking and driving areas shall be of smooth and compact surfacing;

(b) Parking places located on open lots shall be properly enclosed or maintained with bumper protection for sidewalks and adjacent property;

(c) Entrances and exits to and from parking places shall be plainly marked and so situated as to avoid obstructing traffic on the abutting street and to prevent interference with or obstruction of pedestrian traffic on the sidewalk; and

(d) Reasonable effort shall be made to keep the parking area free and clear of all debris.

(e) All open lots shall be lit so that all spaces may be observed from the adjoining public streets, alleys or walkways or, if the open lot is one (1) that is not observable in the regular course from adjoining public streets, alleys or walkways, it shall comply with the licensing and safety requirements for enclosed parking lots applicable to that particular open lot.

(f) There shall be surveillance of all areas of all enclosed parking garages in which attendants do not park all of the vehicles for the entire period that the parking garage is in operation. The surveillance shall include at a minimum, uniformed garage personnel to patrol each area of the parking garage at least one (1) time every thirty (30) minutes, unless the person is detained for security reasons, as verified by Detex or comparable equipment or methodology. No person who is responsible for collecting money or parking cars shall be responsible for surveillance. The areas to be patrolled shall include the perimeter as well as interior of the garage. Copies of the surveillance records shall be submitted monthly to the License Officer or his or her designee and shall be kept for a period of three (3) years for inspection by the License Officer.

(g) On and after January 1, 1985, the lighting in every part of all enclosed parking garages in which attendants do not park all vehicles shall be **consistent with the standards set forth in the City of Pittsburgh Lighting Code, Title 12 Lighting Code, Chapter 1201 Lighting Code, Section 1201.07 Required Calculations for Lighting Installations, Table 7 (E) and (F) Recommended Maintained Illuminance and Luminance Values.** ~~a minimum of five (5) foot candles at all times, measured at a level of five (5) feet above the ground. The License Officer may grant an extension for compliance to this provision to any parking garage for the minimum period required to complete renovations for any parking garage which began planning renovations prior to July 1, 1984, but could not complete those renovations which include new lighting by January 1, 1985.~~

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(h) All access to enclosed parking garages shall be through secured entrances during all hours of operation. The access may be secured by alarm and/or lock and key, or closed circuit TV, or verifiable uniformed security patrols at a minimum of at least once every fifteen (15) minutes.

(i) All enclosed parking garages in which attendants do not park all of the vehicles shall be in compliance with BOCA regulations, and in particular fire suppression equipment and emergency alarms/phones for elevators.

Within six (6) months of the effective date of this subsection, the structures shall have emergency phones installed on all parking levels, or panic buzzers/alarms zoned to a central station which is staffed at all times, or comparable equipment. The equipment will be strategically located, visibly marked and accessible to the handicapped.

(j) All enclosed parking garages with three (3) or more floors shall provide escort service for all customers who request the service. Escort service shall be available during all hours of operation, by an employee readily identifiable as a representative of the garage.

(k) All enclosed parking garages which provide escort service shall post a sign at all entrances clearly defining the service. A patron should wait no longer than fifteen (15) minutes for an escort.

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ORDINANCE No. 8

Adopted by City Council April 30, 2011

Ordinance supplementing the Pittsburgh Code by adding Title Twelve entitled Lighting Code, to create uniformity and guidelines for lighting standards throughout the City.

Be it resolved by the Council of the City of Pittsburgh as follows:

Section 1. The Pittsburgh Code is hereby supplemented by adding Title Twelve, Lighting Code, to create uniformity and guidelines for lighting standards throughout the City, as follows:

CHAPTER 1201 LIGHTING CODE

§1201.01 COMMITMENT TO SUSTAINABILITY

a) The City of Pittsburgh Lighting Code is constructed to allow for the use of sustainable technologies and design methods in the application of all lighting systems.

b) The development of sustainable technologies and their benefit to energy conservation and elimination of light pollution shall be utilized to the fullest extent under this Code.

c) To act in accordance with the *Pittsburgh Climate Action Plan*, adopted by the City of Pittsburgh on August 5, 2008, in its effort to afford opportunities that will "reduce the impacts of local and global climate change, improve the local environment and the local economy, and enhance Pittsburgh's reputation as an environmentally progressive city".

§1201.02 DEFINITIONS

a) B50/L70: The effective life of a solid state lighting fixture, at which 50% of installed LEDs have decayed 70% of the initial lumens.

b) DIRECT LIGHT: Light emitted directly from the lamp, off of the reflector or reflector diffuser, or through the refractor or diffuser lens, of a luminaire.

c) FOOTCANDLE: A unit of illuminance equal to 1 lumen per square foot of area (fc).

d) FULL CUTOFF: Attribute of a lighting fixture from which no light is emitted at or above a horizontal plane drawn through the bottom of the luminaire and no more than 10% of the candela is emitted at or above an angle 10º below that horizontal plane, at all lateral angles around the luminaire viewing angles.

e) CUTOFF- Attribute of a lighting luminaire from which no more than 2.5% of the candela is emitted at or above a horizontal place drawn through the bottom of the luminaire and no more than 10% of the candela is emitted at or above an angle 10% below that horizontal plane, at all lateral angles around the luminaire viewing angles.

f) FULLY SHIELDED: Condition of an installed outdoor luminaire such that all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal as determined by

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photometric test or certified by the manufacturer. Any structural part of the light fixture providing this shielding must be permanently attached.

g) GLARE: Lighting entering the eye directly from luminaires or indirectly from reflective surfaces that causes visual discomfort or reduced visibility.

h) HEIGHT OF LUMINAIRE: The height of a luminaire shall be the vertical distance from the ground directly below the centerline of the luminaire to the lowest direct-light-emitting part of the luminaire.

i) IESNA: Illuminating Engineering Society of North America.

j) ILLUMINANCE: The amount of luminous flux falling onto a unit area of surface measured in lumens per square foot (footcandles, fc) or lumens per square meter (lux).

k) INDIRECT LIGHT: Direct light that has been reflected or has scattered off of other surfaces.

l) LAMP: The component of a luminaire that produces actual light.

m) LIGHT TRESPASS: Illuminance emitted by a lighting installation, which extends beyond the boundaries of the property on which the installation is sited as measured from any orientation of the measuring device.

n) LUMEN: SI unit of luminous flux. One footcandle is one lumen per square foot. For the purposes of this section, the lumen output values shall be the initial lumen output ratings of a lamp.

o) LUMINAIRE: The complete lighting unit (fixture), consisting of a lamp, or lamps and ballast(s) or driver(s) (when applicable), together with the parts designed to distribute the light (reflector, lens, diffuser), to position and protect the lamp(s) and to connect the lamp(s) to the power supply.

p) LUMINANCE*:* The quotient of the luminous flux at an element of the surface surrounding a point, and propagated in the direction of measurement.

q) OUTDOOR LIGHTING FIXTURE: An illuminating device, luminous tube, lamp or similar apparatus located exterior to the building envelope for the purpose of illumination, decoration or advertisement. Such devices shall include, but are not limited to luminaires used for: parking lots, roadways, recreational areas, landscaping, façades, product displays, building overhangs, and open canopies.

r) SI: Abbreviation for the International System of units.

§1201.03 APPLICABILITY

The Pittsburgh Lighting Code shall apply to the following installations:

a) Public Realm: All government and public buildings and areas within the City of Pittsburgh are required to follow this Code.

b) New Uses and Buildings: For all proposed new land uses, developments, buildings, and structures that require a permit, all outdoor lighting installations shall meet the

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requirements of this Code.

Major Additions and Modifications: For all building additions or modifications exceeding twenty-five percent (25%) in terms of additional dwelling units, gross floor area, or parking spaces, and that require a permit, either with a single addition or cumulative additions, shall invoke the requirements of this Code. This requirement shall hold for the entire property, including previously installed and any new outdoor lighting.

c) Minor Additions and Modifications: For all additions or modifications of less than twenty-five percent (25%), gross floor area, or parking spaces, and that require a permit, new lighting on the site shall meet the requirements of 1201.06 LIGHT POLLUTION**.** The total outdoor light output after the modifications are complete shall not exceed that on the site before modification, or that permitted by this Ordinance, whichever is smaller.

d) Resumption of Use Following Abandonment: If a property or use with non-conforming lighting is considered abandoned as classified by the City of Pittsburgh, then all outdoor lighting shall be reviewed and brought into compliance with this Code before the use is resumed.

§1201.04 LIGHTING CLASSIFICATIONS

a) For purposes of determining appropriate lighting levels and distinguishing the applicability of all or specific parts of this Code to areas within the City of Pittsburgh, the following classes of lighting are defined:

1) Class 1 Lighting – Roadway: Exterior lighting used for roadways.

2) Class 2 Lighting – Public Realm: All exterior lighting used for, but not limited to, illumination for walkways, parking areas (including garages), and outdoor security, where general illumination for circulation, safety, or security of the illuminated area is the primary objective.

3) Class 3 Lighting – Residential: Any lighting used for exterior illumination of a single family home or duplex that is not considered part of the public realm.

4) 4) Class 4 Lighting – Commercial: Any lighting used for exterior illumination of a storefront, office building, multi-unit dwelling (other than a duplex), restaurant, or commercial establishment, that is not considered part of public realm. This shall include, but not be limited to; properties in LNC zoned areas and other commercially zoned districts.

5) Class 5 Lighting – Industrial: Any lighting used for exterior illumination of an industrial use in an industrially zoned area. This includes, but is not limited to, properties in the UI and GI zoning categories.

6) Class 6 Lighting – Decorative (including façade lighting): Any lighting used for aesthetic effects including but not limited to, architectural illumination of a building, flag and monument lighting, and illumination of landscape.

b) Applicability: Refer to each Code section to determine applicability to each Lighting Classification defined by this section.

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§1201.05 ENERGY CONSERVATION AND CONFORMANCE WITH ALL APPLICABLE CODES

a. Energy Conservation

1) Applicability: Class 1 - Roadway, Class 2-Public Realm, and Class 4-Commercial

2) Purpose: All lighting installations shall be designed to minimize the usage of energy for the purposes of illumination. Use of advanced lighting technologies in combination with optically designed reflectors shall be considered in conjunction with lighting controls.

3) Exterior Power Densities: Exterior lighting energy calculations shall conform to the required exterior power densities as listed in Table 5 – Lighting Power Densities for Exterior Areas.

4) Exterior Lighting Control: All installed lighting fixtures shall be controlled to eliminate or reduce energy consumption by use of individual, group, or master control systems. The system provided shall be automatic and programmable. Example controls include photocells, astronomic timers (complete with 10 hour battery backup), and remote controlled dimmers or switching.

b. Conformance with All Applicable Codes: All exterior lighting installations shall conform to all other applicable codes adopted by the City of Pittsburgh under appropriate permit and inspection.

c. All exterior lighting installations shall not exceed lighting power densities per chapter 1002 of the UCC Building Codes adopted by the City of Pittsburgh

§1201.06 LIGHT POLLUTION

a) Applicability: Refer to each individual lighting metric defined in this section for applicability of defined Lighting Areas.

b) Minimal Shielding Requirement:

1) Applicability: Class 1-Roadway, Class 2-Public Realm, and Class 4-Commercial

2) All lighting installations shall be designed to minimize or eliminate Light Pollution to the fullest extent possible by use of permanently installed shielding on luminaires. The extent of shielding shall be determined in conjunction with the optical classification to meet trespass requirements listed in Section 7.

c) Cutoff Optics Required:

1) Applicability: Class 1-Roadway, Class 2-Public Realm, and Class 4-Commercial

2) All exterior lighting luminaires with an initial lamp lumens output greater than 3500 lumens and less than 14,000 lumens shall be classified as having CUTOFF OPTICS.

3) All exterior lighting luminaires with an initial lamp lumens output greater than 14,000 lumens shall be classified as having FULL CUTOFF OPTICS.

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d) Exterior Vertical Surface Illumination (i.e. Façade illumination):

1) Applicability: Class 5 – Decorative (Class 6 – Signage, refer to Section 9)

2) All lighting installations utilizing vertical surface illumination for aesthetic effects, where the initial lamp lumens of the luminaires are greater than 3500 lumens, must provide calculations indicating building uplight being accomplished with 80% direct illumination (as a percentage of lumens) of the intended surface.

3) Grazing and Moveable Objects: Where properly demonstrated that the 80% criteria cannot be met due to individual project constraints, lighting must utilize time clock management for automatic shutoff at midnight.

§1201.07 REQUIRED CALCULATIONS FOR LIGHTING INSTALLATIONS

a. Applicability: Refer to each individual lighting metric defined in this section for applicability of defined Lighting Areas.

b. Purpose: Each lighting installation shall be required to submit evidence per Section 9 that the intended design meets required values for lighting metrics defined under this code.

c. Illuminance (E)

1) Applicability: Class 1-Roadway, Class 2-Public Realm, and Class 4-Commercial

2) Illumination levels, in foot-candles (FC), shall be used as the defining metric for evaluating the overall lighting levels on surfaces.

3) Required Calculations: The required levels for illuminance shall meet the listed values in Table 7 – Recommended Maintained Illuminance and Luminance Values contained in this Section. Calculations shall be performed by recognized lighting software listed for this purpose.

4) Required Submission: The approved design shall clearly indicate on the submitted “Site Lighting Plan” illuminance levels measured in Footcandles (FC). Refer to Section 9 for overall submission requirements.

d. Luminance (L)

1) Applicability: Class 1-Roadway

2) Luminance Level, in candela per meter squared (CD/M2), shall be the defining metric for evaluating surface brightness on surfaces:

3) Required Calculation: The required levels for Luminance shall meet the listed values in Table 7 – Recommended Maintained Illuminance and Luminance Values contained in this Section. Calculations shall be performed by recognized lighting software listed for this purpose.

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e. All exterior lighting installations shall be designed to meet the values listed in Table 7 – Recommended Maintained Illuminance and Luminance Values.

1) Minimum Values: The levels presented in the table are minimum values.

2) Higher than Minimum Value Requests: Values higher than those listed may be required due to public safety concerns. Request to exceed values listed in this ordinance shall be detailed in a project specific Request For Proposal (RFP) issued by the City of Pittsburgh.

Table 7 - Recommended Maintained Illuminance and Luminance Values

A. Roadways – Average Maintained Illuminance Values (E_{avg}) in Footcandles

Roadway Type		Pavement Reference[5]			Illuminance Uniformity Ratio E_{ave} to E_{min}
		R1	R2 and R3	R4	
Expressway	Commercial	1.0	1.4	1.3	3 to 1
	Intermediate	0.8	1.2	1.0	
	Residential	0.6	0.9	0.8	
Major	Commercial	1.2	1.7	1.5	3 to 1
	Intermediate	0.9	1.3	1.1	
	Residential	0.6	0.9	0.8	
Collector	Commercial	0.8	1.2	1.0	4 to 1
	Intermediate	0.6	0.9	0.8	
	Residential	0.4	0.7	0.5	
Local	Commercial	0.6	0.9	0.8	6 to 1
	Intermediate	0.5	0.7	0.6	
	Residential	0.3	0.4	0.4	

B. Roadways- Maintained Luminance Values (L_{avg}) in Candelas per Square Foot

Roadway Type		Average Luminance L_{avg}	Luminance Uniformity		Veiling Luminance Ratio (maximum) L_v to L_{avg}
			L_{avg} to L_{min}	L_{max} To L_{min}	
Expressway	Commercial	0.1	3 to 1	5 to 1	0.3 to 1
	Intermediate	0.08	3 to 1	5 to 1	
	Residential	0.06	3.5 to 1	6 to 1	
Major	Commercial	0.12	3 to 1	5 to 1	0.3 to 1
	Intermediate	0.09	3 to 1	5 to 1	
	Residential	0.06	3.5 to 1	6 to 1	
Collector	Commercial	0.08	3 to 1	5 to 1	0.4 to 1
	Intermediate	0.06	3.5 to 1	6 to 1	
	Residential	0.04	4 to 1	8 to 1	
Local	Commercial	0.06	6 to 1	10 to 1	0.4 to 1
	Intermediate	0.05	6 to 1	10 to 1	
	Residential	0.03	6 to 1	10 to1	

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C. Pedestrian Sidewalks And Bikeways - Average Maintained Illuminance Values (E_{avg}) in Footcandles			
Walkway and Bikeway Classification		Minimum Average Horizontal Levels (E_{avg})	Average Vertical Levels for Special Pedestrian Security $(E_{avg})^2$
Sidewalks (roadside) and Type A Bikeways	Commercial Areas Intermediate Areas Residential Areas	1.0 0.6 0.2	2.2 1.1 0.5
Walkways distant from roadways and Type B Bikeways	Walkways, bikeways, and stairways	0.5	0.5
Pedestrian Tunnels		4.3	5.4

D. Exterior Non-Defined Surface Areas - Average Maintained Illuminance Values (E_{avg}) in foot-candles				
Class	Minimum Maintained Avg. Illumination	Uniformity Ratio (Ave/Min)	Maximum Trespass	
			Pre-Curfew	Post-Curfew
Ambient Lighting Levels				
Sky Only	0.25	2.5:1	0.1	0.1
Low	0.5	5:1	0.3	0.1
Medium	1	5:1	0.8	0.2
High	2	5:1	1.5	0.5

Table Notes for A, B, and C:

1. *Lv*= veiling luminance
2. Shall be calculated for areas where facial recognition is critical.
3. The relationship between individual and respective luminance and illuminance values is derived from general conditions to dry paving and straight road sections. This relationship does not apply to averages.
4. For divided highways, where the lighting on one roadway may differ from that on the other, calculations should be made on each roadway independently.
5. Pavement references are as follows: R1-Mostly Diffuse, R2–Semi Diffuse, R3–Semi Specular, R4-Specular

E. Parking Lots - Average Maintained Illuminance Values (E_{avg}) in Footcandles		
Fields of Measurement	Basic	Special Pedestrian Security
Minimum Horizontal Illuminance	0.2	0.5
Uniformity Ratio, Max-to-Min	20:1	15:1
Minimum Vertical Illuminance	0.1	0.25

F. Recommend Maintained Illuminance for Parking Garages			
	Minimum Horizontal[2] fc	Maximum/Minimum Horizontal Uniformity Ratio[3]	Minimum Vertical[4] fc
Basic[1]	1.0	10:1	0.5
Ramps[5]	2.0		
Day[6]	2.0	10:1	1.0
Night	1.0	10:1	0.5
Entrance Areas[7]			
Day[6]	50		25
Night	1.0	10:1	0.5
Stairways	2.0		1.0

[1]For typical conditions. While these values are intended to address personal security issues, some retailers may increase them to further offset perceived concerns. Research has shown that, under certain conditions of limited contrast (such as concrete wheel stops on a concrete garage floor), this level is needed to provide good visibility of the wheel stop.

[2]Measured on a parking surface, without any shadowing effect from parked vehicles or columns. For preliminary design, and average value of 50 horizontal lux (5 hfc) for basic illuminance (and equivalent for other conditions) may be calculated.

[3]The highest horizontal illuminance area, divide by the lowest horizontal illuminance point or area, should not be greater than the ratio shown.

[4]Measured at 1.5 meters (5.0 ft.) above parking surface at the point of lowest horizontal illuminance, excluding facing outward along boundaries.

[5]Applies to clearway ramps (no adjacent parking) but not to sloping floor designs.

[6]Daylight may be considered in the design calculation

[7]A high illumanance level for about the first 20 meters (66 ft.) inside the structure is needed to effect a transition from bright daylight to a lower internal level.

§1201.08 LUMINAIRES AND LAMP SOURCES

a) Applicability: Class 1-Roadway, Class 2-Public Realm, Class 4-Commercial

b) Purpose: Lighting sources utilized in the illumination of exterior areas shall be chosen with specific regard to meet the criteria established in the Code and for sensitivity to environmental impacts.

c) Minimum Lamp Criteria: refer to Table 8 below for required criteria for lamps and ballast depending on classification:

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Table 8 – Minimum Lamp Criteria per Lighting Classification				
	Class 1 - Roadway		Class 2-Public Realm, Class 4-Commercial	
	High Intensity Discharge (HID)	Solid State Lighting (SSL)	High Intensity Discharge (HID)	Solid State Lighting (SSL)
Luminous Efficacy	93 Lumens/W	80 Delivered Lumens/W per IES LM-79-08 testing	93 Lumens/W	80 Lumens/W
Lamp Life	20,000 hours at 70% rated life	50,000 hours at B50/L70 life between -20C and 40C operating temp	20,000 hours at 70% rated life	50,000 hours at 70% rated life between -20C and 40C operating temp
Correlated Color Temperature (CCT)	Between 3000K and 5000K	Between 3000K and 5000K	Between 3000K and 5000K	Between 3000K and 5000K
Color Rendering Index (CRI)	60 or higher	60 or higher	70 or higher	70 or higher

d) Minimum Ballast Criteria:

1) High Intensity Discharge Sources: All ballast shall utilize end- of-life features that include automatic shutdown to protect the ballast from damage during lamp end-of-life.

§1201.10 SUBMISSION OF PLANS AND EVIDENCE OF COMPLIANCE

a) Submission Contents: The applicant in connection with proposed work involving outdoor lighting within the City of Pittsburgh shall submit (as part of the design process) evidence that the proposed work will comply with this Code. The submission shall contains but shall not necessarily be limited to the following, all or part of which may be part or in addition to the information required elsewhere in the City of Pittsburgh upon application for performance of the work:

1) Complete plans indicating the location of luminaires, and the type of illuminating devices, fixtures, supports, reflectors, and other devices, shall be clearly indicated.

2) Description of the illuminating devices, fixtures, lamps, supports, reflectors, and other devices as summarized in a fixture schedule.

3) Catalog cutsheets by manufactures including photometric information.

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b) Additional Information: The above required submission contents are intended to enable the plans examiner to readily determine whether compliance with the requirements of this Code are met. If such plans, descriptions and data cannot enable this ready determination, by reason of the nature or configuration of the devices, fixtures, or lamps proposed, the applicant will provide additional information to substantiate code compliance.

1) Lamp or fixture Substitution: Should any outdoor light fixture or type of light source therein be changed after permit has been issued, a change request must be submitted to design professional and building official for his/her approval, together with adequate information to assure compliance with this code, which must be received prior to substitution.

§1201.11 PROHIBITIONS

Mercury Vapor Lamps Fixtures and Lamps: The installation, sale, offer for sale, lease or purchase of any mercury vapor lamp for use as outdoor lighting is prohibited.

§1201.12 TEMPORARY EXEMPTION

a) Request; Renewal; Information Required: Any person may submit a written request, to the City of Pittsburgh for a temporary exemption request. A temporary exemption shall contain the following information:

1) Specific exemption or exemptions requested;

2) Type and use of outdoor light fixture involved;

3) Duration of time of the requested exemption;

4) Type of lamp and lamp lumens;

5) Total wattage of lamp or lamps and number of lamps to be used;

6) Proposed location on premises of the outdoor light fixture(s);

7) Previous temporary exemptions, if any, and addresses or premises thereunder;

8) Physical size of outdoor light fixture(s) and type of shielding provided;

9) Such other data and information as may be required by the building official.

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10) Approval; Duration: The City of Pittsburgh shall have thirty business days from the date of submission of the request for temporary exemption to act, in writing, on the request. The request shall only be granted if the building official determines it will not interfere with existing observations. The building official may approve a request subject to conditions. If approved, the exemption shall be valid for not more than thirty calendar days from the date of issuance of the approval. The approval shall be renewable at the discretion of the building official upon a consideration of all the circumstances. Each such renewable exemption shall be valid for not more than thirty additional calendar days.

11) Disapproval; Appeal. If the request for temporary exemptions is disapproved, the person making the request will have the appeal rights provided in Section 13.

§1201.13 NONCONFORMANCE

All other outdoor light fixtures lawfully installed prior to and operable on the effective date of the Ordinance are exempt from all requirements of this Code. There shall be no charge in use or lamp type, or any replacement or structural alteration made, without conforming to all applicable requirements of this Ordinance. Further, if the property is abandoned, or if there is a change in use of the property, the provisions of this Ordinance will apply when the abandonment ceases or the new use commences.

§1201.14 ENFORCEMENT AND PENALTY

Enforcement shall be done by the Department of Public Works. Violation of any section of this code shall result in a fine of $100 per day.

§1201.15 SEVERABILITY

If any of the provisions of this Chapter or the application thereof is held invalid, such invalidity shall not affect other provisions or applications of the chapter which can be given effect, and to this end, the provisions of this chapter are declared to be severable.

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