

BRAINERD, MN
Chapter 515 ZONING

515-4-8 Outdoor Lighting.

- A. **Purpose and Intent.** It is the purpose of this Section to encourage the use of lighting systems that will reduce light pollution and promote energy conservation while increasing nighttime safety, utility, security, and productivity.
- B. **Exemptions.** The provisions of this Section shall not apply to the following:
1. The use of temporary outdoor lighting used during customary holiday seasons.
 2. The use of temporary outdoor lighting used for civic celebrations and promotions.
 3. Lighting required by a government agency for the safe operation of airplanes, or security lighting required on government buildings or structures.
 4. Emergency lighting used by police, fire, and rescue authorities.
 5. Outdoor athletic facilities, except that lighting for such facilities, shall be shut off within ninety (90) minutes of final activity.
- C. **Non-Conforming Uses.**
1. Existing Fixtures. All outdoor lighting fixtures existing and installed prior to the effective date of this Ordinance are exempt from regulations of this Section except that the light source shall be controlled to minimize light trespass onto adjacent property. Light trespass shall not exceed one (1) foot candle at the center line of a street or four-tenths (0.4) foot candles at the property line of adjacent residential property.
 2. New Fixtures. Whenever a light fixture existing on the effective date of this Ordinance is replaced by a new outdoor light fixture, the provisions of this Section shall be satisfied.
- D. **Light Trespass.**
1. Maximum Light Levels. Light trespass shall not exceed one (1) foot candle at the center line of a public street or four-tenths (0.4) foot candles at the property line of adjacent residential property as measured at the property line per the method outlined in this Section.
 2. The foot candle level of a light source shall be measured at the property line and taken after dark with the light meter held six (6) inches above the ground with the meter facing the light source. A reading shall be taken with the light source on, then with the light source off. The difference between the two readings will be identified as the light intensity.
- E. **Performance Standards.**
1. Residential Use Standards. All exterior lighting shall be directed away from adjoining residential property or from any public right-of-way. All lighting shall be installed in accordance with the following provisions:
 - a. The light source shall be controlled so as not to light adjacent property in excess of the maximum light levels defined by this Ordinance.
 - b. The maximum height of the fixture, pole and base above the ground grade permitted for light sources is thirteen (13) feet. A light source mounted on a structure shall not exceed the height of the structure.
 - c. If the bulb/light source is fully recessed and/or shielded from view by an observer at five (5) feet above grade at the nearest property line, an increase in light source height to a maximum of twenty (20) feet may be allowed.
 - d. Any luminaire affixed to a structure shall contain a full cut off fixture which directs and cuts off light at an angle of ninety (90) degrees or less.
 - i. Any luminaire or light source not affixed to a structure shall be hooded and down cast to protect the night sky.

BRAINERD, MN
Chapter 515 ZONING

2. Business/Industrial Use Standards. All exterior lighting shall be directed away from adjoining residential property or from any public right-of-way. All lighting shall be installed in accordance with the following provisions:
 - a. The luminaire shall contain a full cut off fixture which directs and cuts off light at an angle of 90 degrees or less.
 - b. The light source shall be controlled so as not to light adjacent property in excess of the maximum light levels defined by this Ordinance.
 - c. Architectural/historical lights that include fixtures that are not shielded, or lighting of entire facades or architectural features of a building are permitted. In no case shall the light affect adjacent property in excess of the maximum light levels defined in this Ordinance.
 - d. In GC and CC Districts, the maximum height of the fixture, pole and base above the ground grade permitted for light sources is thirteen (13) feet. A light source mounted on a structure shall not exceed the height of the structure.
 - i. If the bulb/light source is fully recessed and/or shielded from view by an observer at five (5) feet above grade at the nearest property line, an increase in light source height to a maximum of 20 feet may be allowed.
 - e. In TC, MS, ME Districts, the maximum height of the fixture, pole and base above the ground grade permitted for light sources is 20 feet. A light source mounted on a structure shall not exceed the height of the structure.
 - i. If the bulb/light source is fully recessed and/or shielded from view by an observer at five (5) feet above grade at the nearest property line, an increase in light source height to a maximum of 25 feet may be allowed.
 - f. In the GI District, the maximum height of the fixture, pole and base above the ground grade permitted for light sources is 25 feet. A light source mounted on a structure shall not exceed the height of the structure.
 - i. If the bulb/light source is fully recessed and/or shielded from view by an observer at five (5) feet above grade at the nearest property line, an increase in light source height to a maximum of 30 feet may be allowed.
 - g. *Location.*
 - i. The light source of an outdoor light fixture shall be set back a minimum of three (3) feet from a street right-of-way or residential property and three (3) feet from any other property line.
 - ii. No light source shall be located on the roof unless said light enhances the architectural features of the building and is approved by an Administrative Permit.
 - iii. Direct or reflected light from high temperature processes such as combustion or welding shall not be visible from any adjoining property.
3. Outdoor Recreation. Outdoor commercial or public recreational uses such as, but not limited to, baseball fields, football fields, hockey rinks, and tennis courts have special requirements for nighttime lighting. In such cases, an Administrative Permit shall be required and compliance with the following:
 - a. No outdoor recreation facility shall be illuminated after 12:00 a.m. except for security lighting. Exceptions may be granted by the Zoning Administrator for special events.
 - b. Off-street parking areas for outdoor recreation uses shall meet the requirements stated for business or industrial applications as found in Section [515-4-12] of this Ordinance.
 - c. The provisions for an Administrative Permit, Section [515-5-9] of this Ordinance, are considered and satisfactorily met.

BRAINERD, MN
Chapter 515 ZONING

F. **Submission of Plans.** All zoning and building applications, except single and two family residential, that include outdoor lighting shall submit the following information in addition to other information required by the Zoning Administrator:

1. Sketch Plans indicating the location of all lighting devices.
2. Description of the lighting devices, fixtures, lamps, supports, and reflectors. The description shall include, but is not limited to, catalog cuts by manufacturers and drawings.
3. Photometric plans showing the location of each light source and the level of light (measured in foot candles) every 20 feet.