



**TOWN OF KNIGHTDALE**  
**P L A N N I N G   D E P A R T M E N T**

[www.knightdalenc.gov](http://www.knightdalenc.gov)

950 Steeple Square Court  
Knightdale, NC 27545  
(v) 919.217.2245  
(f) 919.217.2249

**ORD #09-11-18-001**  
**AN ORDINANCE TO AMEND THE UNIFIED DEVELOPMENT ORDINANCE**  
**OF THE TOWN OF KNIGHTDALE,**  
**REGARDING THE DEFINITION OF PROFESSIONAL SERVICES AND THE VARIOUS TYPES OF**  
**LIGHTING FIXTURES; TECHNICAL AMENDMENTS TO LIGHTING REQUIREMENTS;**  
**CLARIFICATION OF FINAL PLAT REQUIREMENTS; ADDITION OF A THRESHOLD FOR THE**  
**REQUIREMENT OF ADDITIONAL VEHICULAR ACCESS POINTS INTO A RESIDENTIAL**  
**DEVELOPMENT; AND OVERALL READABILITY**

WHEREAS, the Town of Knightdale has received a petition to amend the Unified Development Ordinance in regard to the definition of professional services and the various types of lighting fixtures; technical amendments to lighting requirements; clarification of final plat requirements; addition of a threshold for the requirement of additional vehicular access points into a residential development; and overall readability; and

WHEREAS, the Town of Knightdale Unified Development Ordinance Section 15.15 establishes uniform procedures for amending the text of the Ordinance; and

WHEREAS, the proposed zoning text changes comply with the goals of the Town's Comprehensive Plan because they are reasonable in that they advance the stated objective of influencing and better managing the development of the community by more clearly defining "professional services", defining how tree cover areas are to be depicted at the time of final plat, streamlining and better ordering the Town's lighting standards, and establishing a minimum threshold for access points into and out of residential developments; as well as being furthermore consistent with the Comprehensive Plan's stated goal of providing balanced and responsible urban design, planning and development;

NOW, THEREFORE BE IT ORDAINED by the Town Council of the Town of Knightdale, North Carolina:

SECTION 1. That the Unified Development Ordinance of the Town of Knightdale Code be amended to read as follows:

**9.4 Vehicular Connectivity**

...

**F. Second and Additional Points of Access Required for Residential Developments**

At a minimum, a second point of open and functioning vehicular access from the existing public street system (not a stub-out) is required for developments that exceed 100 residential units, and a third shall be required for developments that exceed 500 residential units. These second and third points shall be open and functioning prior to the issuance of the 101<sup>st</sup> and 501<sup>st</sup> Certificate of Occupancy respectively for the

development. The number of further open and functioning vehicular access points shall be controlled and determined by the development's Town-approved TIA (Section 16.12). If a TIA should establish a higher standard for the number of open and functioning vehicular access points from the existing public street system, the requirement of the TIA shall prevail. The requirements herein shall not preclude a development from also meeting the connectivity index required in Section 9.4(C). For purposes of this section, a median-divided vehicular access point counts as a single vehicular access point. This section does not preclude developments from connecting to existing street stubs and/or street stub right-of-ways abutting their property.

### **11.3 Outdoor Lighting Standards**

**A.** Outdoor lighting shall not shine directly into the yard or into windows of an adjacent residence. In cases of elevated and non-elevated commercial sites that adjoin residential property; non-perimeter pole locations, fixture shielding and/or other prescriptive measures may be required by the Administrator to reduce light trespass and glare.

**B.** Outdoor lighting shall be designed in coordination with the landscaping plan (Section 16.8), located outside of landscaping islands, located as far from large shade trees as the landscaping plan will allow, and mounted at heights no greater than 18 feet above grade for pedestrian lights or 37 feet above grade for street or parking area lights.

**C.** Pedestrian lights (those mounted at a height no greater than 18 feet above grade) are exempt from Section 11.2(D) and Section 11.2(E) below. These fixtures shall provide for uniform lighting distribution to produce minimal shadows, shall not exceed 9,500 lumens, shall be capped with a solid top to limit uplight and may be non-cutoff fixtures to provide adequate vertical illumination for safety and security.

**D.** All outdoor lighting fixtures other than pedestrian lights and flood/spot lights that use a lamp or lamps at a total of more than 2,000 lumens shall be full-cutoff fixtures. Light sources may be located within the perimeter landscaped area and along pedestrian walkways providing Section 11.2(F) is met.

**E.** Where permitted, any non full-cutoff outdoor lighting other than pedestrian lights, flood/spot lights that use a lamp or lamps rated at a total of 2,000 lumens or more shall be coated with an internal white frosting inside the outer lamp envelope to reduce glare.

**F.** All outdoor lighting fixtures shall be designed and located such that the maximum light level shall be 0.5 maintained FC at any commercial to residential or group care facility property line. Any parking area lighting fixture within 200 feet of a commercial to residential or group care facility property line must also be shielded to reduce glare and light trespass. Parking area lighting fixtures within 25 feet of any public street right-of-way or a commercial to residential/group care facility property line must be a forward throw fixtures (type IV light distribution as defined by IESNA). High intensity lighting fixtures that produce excessive glare are not allowed. See Section 11.3 for additional light level information.

**G.** Wall-mounted fixtures on buildings may be used at entrances to a building to light unsafe areas. They are not intended to provide general building or site lighting. Wall-mounted fixtures shall be fully shielded or full-cutoff to direct the light downward so the light source (lamp) is not visible from off-site. Low wattage lamps (100 watts or lower) are required unless justified otherwise through the planning approval process.

**H. Accent Lighting - Building, Landscaping and Signs:**

1. Accent lighting should be integrated with the architectural character of the building and must be approved through the planning approval process.
2. Low wattage lamps (100 watts or lower) are required unless justified otherwise through the planning approval process.
3. To avoid glare and light trespass, only cutoff or full-cutoff fixtures shall be used.
4. Shielding of fixtures must be added unless it is demonstrated as not needed due to the type of control of the distribution of light from the fixture(s) used.
5. Lighting fixtures used to illuminate outdoor advertising signs shall be mounted on the top of the sign structure whenever possible.

**I.** Flood/spot lights are prohibited unless they meet the following criteria:

1. All flood/spot lights shall be installed such that the fixture shall be aimed down at least 45 degrees from vertical.
2. Flood/spot lights shall be positioned such that any such fixture located within 50 feet of a public right-of-way is mounted and aimed perpendicular to the right-of-way, with a side-to-side horizontal aiming tolerance not to exceed 15 degrees from perpendicular to the right-of-way.
3. Flood/spot lights shall not be aimed at residential property.
4. Shields shall be added as needed for conformity to this Section.  
(associated pictures)

**J. Vehicular Canopies and Gas Station/Convenience Store Aprons:**

Areas under a vehicular canopy and the approach to the canopy shall have an average horizontal illumination as specified in the table in Section 11.3(B) "Other Outdoor Areas" and as measured at ground level. Lighting under vehicular canopies shall be designed so as not to create glare off site. Acceptable methods include one or more of the following:

5. Recessed fixture incorporating a lens cover that is either recessed or flush with the bottom surface of the vehicular canopy. (associated picture)
6. Surface mounted fixture incorporating a flat lens that provides a fully shielded light distribution. (associated picture)
7. Other method approved by the Administrator
8. Lights shall not be mounted on the top or sides (fascia) of the canopy, and the sides of the canopy shall not be externally illuminated.

**K.** Canopies used for building accents over doors, windows, etc. shall not be internally lit (i.e. from underneath or behind canopy).

**L.** No flickering, rotating, flashing lights or search lights shall be permitted.

M. Gas powered lighting may be used for decorative purposes only and are not used to satisfy the requirements of this Section.

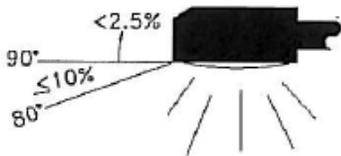
N. Neon, argon or similar tubes shall not be used as a source of lighting except as provided for signs in Chapter 12.

## 16.7 Final Plat Requirements

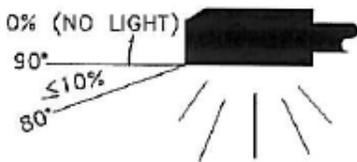
...

J. The exact location of stream corridor buffer boundaries including all buffer zones as well as all buffer requirements and required tree cover areas must be specified on the record plat, on individual deeds, and in property association documents for land held in common.

## Chapter 19



**Cutoff Fixture:** A luminaire light distribution where the candela per 1000 lamp lumens does not exceed 25 (2.5 percent) at or above an angle of 90 degrees above nadir, and does not exceed 100 (10 percent) at or above a vertical angle of 80 degrees above nadir. This applies to all lateral angles around the luminaire.



**Full Cutoff Fixture:** A luminaire light distribution where zero candela intensity occurs at or above an angle of 90 degrees above nadir. Additionally, the candela per 1000 lamp lumens does not numerically exceed 100 (10 percent) at or above a vertical angle of 80 degrees above nadir. This applied to all lateral angles around the luminaire.

**Professional Services 2.3C(3)r:** Services provided that make available the knowledge and skills of their employees to sell expertise and perform professional, scientific and technical services to others such as legal services; accounting, tax, bookkeeping and payroll services; graphic, industrial and interior design services; consulting services; research and development services; advertising, media and photography services; investment banking, securities, brokerages and insurance-related services; and hair, nail and skin care services. (LBCS F2230, F2240, F2300, F2410-2417 and F2610)

SECTION 2. That all laws and clauses of law in conflict herewith are hereby repealed to the extent of said conflict.

SECTION 3. That if this ordinance or application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions of this ordinance which can be given separate effect and to the end the provisions of this ordinance are declared to be severable.

SECTION 4. That this ordinance has been adopted following a duly advertised public hearing of the Town Council and following review and recommendation by the Land Use Review Board.

SECTION 5. That this ordinance shall be enforced as provided in G.S. 160A-175 or as provided for in the Knightdale Town Code.

SECTION 6. That this ordinance shall become effective upon its adoption by Town Council.

Adopted this 18<sup>th</sup> day of November, 2009.

ATTEST:

\_\_\_\_\_  
Sheila H. Hardin, Deputy Town Clerk

\_\_\_\_\_  
Russell B. Killen, Mayor

APPROVED AS TO FORM:

\_\_\_\_\_  
Clyde Holt, III; Town Attorney