# ORANGE COUNTY, VIRGINIA

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### ORDINANCE OF APPROVAL

**MOTION:** **HALE**

**SECOND:** **VAN HOVEN**

**December 16, 2025**
**Regular Meeting**
**Ord. No. 251216 – PH2**

**RE: ORDINANCE APPROVING ZTA 25-02 FOR AMENDMENTS TO CHAPTER 70 (ZONING), ARTICLE IV (DISTRICT REGULATIONS), OF THE ORANGE COUNTY CODE OF ORDINANCES CONCERNING CREATION OF THE TECHNOLOGY (T) ZONING DISTRICT**

**WHEREAS,** pursuant to §15.2-2286 of the Code of Virginia and Sec. 70-212 of the Orange County Code, amendments to the Orange County Zoning Ordinance may be initiated by the Board of Supervisors; and

**WHEREAS,** on October 14, 2025, the Board of Supervisors adopted a Resolution (Res. No. 251014 – 7A), initiating amendment of the Zoning Ordinance and referring said amendment for creation of a Technology District, referred to as ZTA 25-02, to the Planning Commission for public hearing and recommendation; and

**WHEREAS,** pursuant to §§15.2-2285 and -2286 of the Code of Virginia and Sec. 70-213 of the Orange County Code, the Orange County Zoning Ordinance may be amended by the Board of Supervisors after said amendment has been reviewed and considered by the Planning Commission; and

**WHEREAS,** the recommended language for the text amendment was developed and the Planning Commission advertised and conducted its public hearing on the proposed text amendment on December 4, 2025; and

**WHEREAS,** after discussing the proposed text amendment and receiving public comment, the Planning Commission recommended approval of the proposed text amendment to the Board of Supervisors, as modified during the public hearing; and

**WHEREAS,** the Board of Supervisors advertised and conducted its public hearing on the proposed text amendment on December 16, 2025; and

**WHEREAS,** following discussion and receipt of public comment at its public hearing, the Board of Supervisors hereby supports the proposed text amendment, as modified following its public hearing; and

**WHEREAS,** public necessity, convenience, general welfare, and/or good planning and zoning practice also support approval of the proposed text amendment, as presented during the public hearing;

**NOW, THEREFORE, BE IT ORDAINED,** on this 16th day of December, 2025, that the Orange County Board of Supervisors hereby **approves** the amendment to Chapter 70 (Zoning), Article IV (District Regulations), of the Orange County Code of Ordinances concerning creation of the Technology (T) Zoning District, as presented and attached hereto.

**Votes:**

| | |
|---|---|
| **Johnson:** | **Aye** |
| **Van Hoven:** | **Aye** |
| **Marshall:** | **Aye** |
| **Hale:** | **Aye** |
| **Nicol:** | **Aye** |

**Attachment:** **Amendments to the Orange County Code of Ordinances**

**For Information:** **Amy Wilson, County Attorney**
**Alyson Simpson, Senior Paralegal**
**Michelle Mixell, Director of Development Services**
**Josh Frederick, Planning and Zoning Services Manager**

**CERTIFIED COPY** R. Mark Johnson

**R. Mark Johnson, Chairman**
**Board of Supervisors**

**Amendments to the Orange County Zoning Ordinance**

**As adopted in Ord. No. 251216 – PH2**
**by the Orange County Board of Supervisors**
**on December 16, 2025**

*ZTA 25-02 – Proposed amendment language in green text*

**Chapter 70 – ZONING ORDINANCE**

**Article 70-I In General**

**Sec. 70-1 Definitions**

[…]

*Technology college, university, or technical school* means a post-secondary institutional use that may be specifically located in the Technology (T) District where specialized education in technology-focused and/or research-intensive fields is offered, or in the case of a technical school, an institution, which may be secondary or post-secondary, offering non-degree-credit courses which typically provide vocational education and hands-on training in specific fields or trades.

*Technology research and development facility* means an institutional use that may be specifically located within the Technology (T) District where a building or complex of buildings in which scientific, experimental, or technical processes are conducted to develop new or more efficient means of making various products/technologies, and in which manufacturing is limited to prototyping and similar one-off iterations of items.

[…]

**Article 70-II Administration**

[…]

**Division 70-II-7 Zoning Map Amendments**

**Sec. 70-194 Application Submittal Requirements And Review**

Application submittal requirements and review procedures for an owner-initiated zoning map amendment shall be the same as those for special use permits, as prescribed in Sec. 70-145, except that, applications submitted for a zoning map amendment for a Technology District (T) shall also require the following (*see Article 70-IV District Regulations for additional reference and applicability*).

1. A general concept plan, drawn to scale on a property survey, prepared by a licensed professional engineer or architect registered in Virginia, showing at a minimum: property boundaries, proposed buildable area, setbacks and buffer areas, access points and internal circulation, utility corridors and connections, stormwater management areas, phasing plan (if applicable). A general concept plan is a preliminary representation of proposed site development submitted as part of a special use permit application within the Technology District, depicting the general scope, location, and character of anticipated concepts for grading, utilities, structures, and/or uses. A general concept plan is illustrative in nature and subject to refinement during detailed engineering and site plan review.
2. Landscape Plan including a tree preservation and buffer plan
3. Sample Elevations or Photo Montage of representative building facades
4. Viewshed analysis
5. Water Services Plan

6. Sound Study
7. Emergency Action Plan
8. Spill Prevention Plan
9. Comprehensive Lighting Plan (Dark Sky principles)

Additionally, the owner may choose to volunteer proffers, pursuant to Sec. 70-193, ~~in conjunction with the application~~ which are voluntary conditions, including but not limited to, infrastructure improvements, public facility contributions, environmental mitigation measures, and community benefit programs

[...]

**Article 70-IV District Regulations**

**Division 70-IV-1 Generally**

**Sec. 70-276 Zoning Districts**

a) For the purpose of this chapter, the unincorporated areas of Orange County, Virginia are hereby divided into the following zoning districts.

Agricultural (A).
Limited Residential (R-1).
General Residential (R-2).
Planned Residential (R-3).
Multifamily Residential (R-4).
Limited Commercial (C-1).
General Commercial (C-2).
Limited Industrial (I-1).
General Industrial (I-2).
Barboursville Village Overlay District
Planned Development – Business (PDB).
Planned Development – Mixed Use (PDM).
Planned Development – Traditional Design (R-5)
Technology (T)

[...]

**Division 70-IV-16 Technology (T) District (*new division*)**

**Sec. 70-596A – Purpose and Intent**

The Technology (T) District is intended to accommodate data centers and other specialized and evolving supportive Artificial Intelligence (AI) and similar technology-based uses in a manner that minimizes impacts on surrounding residential, agricultural, and commercial communities. These uses often require substantial acreage and are typically developed in a campus-style setting that emphasizes functional separation from dense development. The district is intended to be located in proximity to adequate resources and infrastructure with a transportation network of sufficient capacity to support associated activity levels, diversify the tax base and attract high wage employment. The T District supports economic development diversification objectives and encourages investment in technology sectors while maintaining community values and preserves rural character and quality of life through targeted, context- sensitive development, that champions environmental sustainability and resource conservation.

**Sec. 70-596B – Permitted Uses**

In the T District land may be used the following uses and any customarily incidental accessory use:

1) Technology college, university, or technical school
2) Technology research and development facility

**Sec. 70-596C – Uses Permitted by Special Use Permit**

In the T District the following uses may be permitted upon issuance of a special use permit by the Board of Supervisors:

1) Data Center
2) On-site primary power generation for Data Center.
3) Public utility facility, not to include utility-scale solar.
4) Telecommunications tower, pursuant to Article 70-IX

**Sec. 70-596D – Setbacks and Buffers**

In the T District all required setbacks and buffers shall extend continuously around the entire perimeter of the T District property. For campus-style developments containing multiple data center buildings, the perimeter of the overall project site shall establish the buffer requirement boundaries.

The final buffer design, including plant species, spacing, and supplemental screening elements, shall be determined during the rezoning process and incorporated into concept plan.

Whether development occurs in a single phase or in multiple phases, the complete perimeter buffer must be installed following the installation of the erosion and sediment control measures for phase I construction and completed prior to installation of any utilities or building footers.

This ensures that adjacent properties receive immediate and continuous protection from visual and other impacts throughout the project's buildout period.

Performance security in the amount of 125% of the buffer installation cost shall be provided prior to site plan approval.

1) Setbacks. All setbacks shall be measured from property lines to nearest point of any building or structure.
    a. Setbacks from primary highways shall be 500 feet. Section 70-646 Primary Highways shall not apply.
    b. The setback from any adjacent lot zoned technology shall be 25 feet.
    c. The setback from a commercial district shall be 500 feet.
    d. The setback from an industrial district shall be 100 feet.
    e. The setback from an agricultural district shall be 500 feet
    f. The setback from a residential district shall be 500 feet.
    g. The setback minimum from the Rapidan River ~~or any~~ **shall be 1,000 feet and the setback from a** Perennial Stream shall be 500 feet as measured from the top of the ~~river~~bank to any building, structure, or use associated with development on the site. **These setbacks may be reduced or increased through a Special Use Permit based on site-specific conditions.**
    ~~h. The setback from an occupied residence shall be 1,000 feet.~~
    i. The setback from a state or federally designated historic district shall be ~~1,000 feet~~ **determined through a Special Use Permit**.
    j. No equipment yards shall be facing the public right of way or nonindustrial use.
    k. Screen walls for equipment yards (side of equipment yards) shall be provided when

visible from the public right of way or nonindustrial use.

l. The setback from any Orange County School Building with students shall be 1,000 feet.

2) Buffers.

a. Every setback area required by subsections 1(a) (primary highways), 1(c) (commercial), 1(d) (industrial), 1(e) (agricultural), 1(f) (residential), and 1(g) (Rapidan River or Perennial Stream) above shall contain a buffer which is a minimum of 50 percent of the depth of the required setback. Buffers shall be comprised of vegetation and may include berming as noted in Section 2.b below with the intent to create a dense screen to screen the use from view from adjoining properties and public rights-of-way.

b. Buffers may include a combination of earthwork features, such as berms, and a variety of plantings to meet the intent of the buffer requirements. To the maximum extent practical, existing woods and vegetation shall be retained to meet the buffer requirements and shall be supplemented with berms and/or native species plantings as necessary where existing woodlands and vegetation does not currently exist within the buffer zone.

i. If additional plantings are required to achieve screening intent, the minimum planting rates shall be determined to create a dense screen for the buffer width established by Section 2.a. above.

ii. At a minimum, native evergreen trees shall be planted at a rate of one per 20 linear feet, three rows staggered, minimum 8-feet of height at time of planting for the length of the buffer.

iii. Deciduous shade trees shall be planted at a rate of one per 25 linear feet, two rows staggered, minimum of 2.5-inch caliper at time of planting for the length of the buffer.

iv. Understory trees planted at a rate of one per 15 linear feet, two rows staggered for the length of the buffer.

v. Deciduous and/or evergreen shrubs planted at a rate of five shrubs every 15 feet on center for the length of the buffer.

vi. The rate of plantings is determined by the length of any area not adequately buffered by existing mature woodlands.

vii. The above native plant material may be distributed along berms and to infill areas within existing natural areas not reaching a dense screening effect.

c. The adequacy of the buffers shall be determined by the Board of Supervisors with a zoning map amendment application, or in the case of existing zoning, by the Zoning Administrator prior to approval of the site plan for the use.

d. At the request of the Professional Landscape Architect, the plantings defined above may be redistributed and clustered (rather than the installed in the soldiered pattern) should the alternative provide a more desirable and aesthetic buffer design while meeting the screening intent.

i. The Zoning Administrator may approve minor modifications to buffer design (not exceeding 10% variation) for preservation of specimen trees or significant natural features, accommodation of existing utilities or easements, or technical/engineering constraints.

ii. The Board of Supervisors may approve more substantial modifications only upon finding that:

1. The alternative design provides equal or better screening;
2. Adjacent property owners have been notified and given opportunity to comment; and

3. The modification is consistent with the purpose and intent of this district.

e. Buffers may be located anywhere within the required setback areas provided that the buffers are installed in a manner to maximize the screening of the proposed use while ensuring the screening measures are done in a manner to ensure long-term survival of the buffer density and the viewshed is maintained.

f. Stormwater facilities shall not be located within buffers unless they are dual-purpose and incorporate open space such as a wet retention pond designed as a site amenity with fountain, perimeter landscaping and shade trees to serve as natural passive open spaces and wildlife corridors.
   i. Such site amenities shall be incorporated into the overall landscape aesthetic and depicted on the Landscape Plan.
   ii. In no instance shall the stormwater facility proposed within a required buffer or setback area detract from the natural aesthetic indented by the established setbacks and buffers from the adjacent land uses.
   iii. This option shall be at the discretion of the Board of Supervisors with a zoning map amendment application.

g. Permitted elements within buffers include guard houses/security facilities, signage (per section 70-596F), drive aisles (perpendicular crossing only), underground utilities, and dual-purpose stormwater facilities (with Board approval) provided the intent of the buffer requirements is met.

h. Prohibited elements within buffers include security fencing (must be behind buffers), parking areas, above-ground utilities (except perpendicular crossings), and buildings (except security facilities).

i. Any security fencing, such as chain-link fencing or barbed wire fencing, shall be located behind buffers or at the setback line, whichever is further from the property line, with the exception of allowing the site security fence to tie into any site security booth/entrance. Decorative ornamental, wooden post, or similar fencing may be located between property lines and in front of buffers to enhance the rural aesthetic though shall ensure the function of the buffer and setback area as a wildlife corridor are not impeded by such fencing.

j. Parking lot landscaping required pursuant to Sec. 70-677 shall not count towards these buffer requirements.

k. All buffers shall be maintained by the owner(s) in perpetuity for as long as the property remains improved.

l. A tree preservation and buffer plan shall be an element of a required Landscape Plan to be prepared and sealed by a Professional Landscape Architect (PLA) and submitted with any zoning map amendment, or in the case of existing zoning, with the site plan prior to approval of the use. At a minimum the Landscape Plan shall identify the location and extent of existing mature healthy trees (woodlands) to be preserved and maintained within the buffer area and method for existing tree protection during and after construction.
   i. Additionally, the buffer plan element shall detail proposed berms and native plantings necessary to achieve opacity should existing woodlands need to be supplemented and/or should no existing woodlands are located on site.
   ii. Added plantings shall be identified by plant type, size, and location on the landscape plan with the requirement for full desired density to be reached within 10 years of planting.
   iii. Plantings shall be designed to reflect and maintain the natural character of the rural area.

iv. Every effort shall be undertaken to utilize and preserve existing woodlands for the full width and length of the minimum required buffer.

m. A surety agreement for landscape maintenance in a form approved by the County Attorney shall be submitted and approved prior to the issuance of any land disturbance permits.
   i. The amount of the surety shall be determined by an independent landscape architect selected and compensated by the Applicant but approved by the County Administrator and/or his designee.
   ii. The amount of the surety shall be equal to a reasonable estimate of the amount needed to establish, and following establishment, to maintain the landscaping required by the approved landscaping plan for five years after initial installation. Once the landscaping has been successfully established, the surety amount may be reduced to that needed for maintenance thereafter.
   iii. The surety will be fully released after five years if successfully established.
   iv. The County reserves the right to impose conditions on the site plan approval which specify species of landscaping, for example pollinator species.
   v. The use of herbicides and pesticides shall be limited.

n. In granting a special use permit, the Board of Supervisors may permit modifications to these "buffer" requirements.

**Sec. 70-596E – Height Regulations**

In the T District, structures shall be 85 feet or less in height. An increase in height above 85 feet can be increased to a maximum height of 100 feet provided the building is setback an additional 5 feet for every foot in building height above 85 feet.

1) See Article 70-IX (Telecommunication Towers and Facilities) for height requirements and other regulations specific to telecommunications towers.

**Sec. 70-596F – Signs**

1) In the T District, signs are permitted as set forth in this section.
2) Each improved lot may be permitted one monument sign, not to exceed 8 feet in height or 32 square feet in area. A corner lot or double frontage lot may be permitted one additional such sign provided there is driveway access to the lot from the additional frontage.
3) Each unimproved lot may be permitted one sign advertising the lot for sale, not to exceed 8 feet in height or 16 square feet in area.
4) Building signs visible from a public right-of-way are not permitted.
5) Signs on improved lots may be lighted such that they have one or more lights shining on them so that each face of the sign is illuminated. Lights used to externally illuminate each face of a sign shall be directed so as to minimize glare to adjacent properties, passing motorists and pedestrians as well as meet the exterior lighting requirements of Sec. 70-624.

**Sec. 70-596G – Use-Specific Regulations**

1) All uses.
   a. Maximum impervious coverage: 70 percent.
   b. Exterior lighting shall comply with the requirements of Sec. 70-624.
   c. Adequate fire apparatus and emergency access roads shall be provided at the discretion of the Zoning Administrator, after consultation with the County Fire Marshal.
   d. Roof-mounted equipment shall be screened from view with parapets or architectural screens.

e. All onsite fuel tanks for generators shall be considered as a Storm Water Management (SWM) hotspot. A narrative shall be provided with the site plan to address how all SWM hotspots shall be addressed.
f. An Emergency Action Plan shall be submitted for all onsite generators to the Fire Marshal's office with the first submission of the site plan.

2) Data centers.
a. All exterior façade and roof treatments and materials shall utilize muted earth color tones (such as soft forest-neutral-palette—greens, browns, and grays tuned to blend with the buffer) and shall be non-reflective so as to avoid glare from adjoining properties and the air.
b. Where a building is visible from an adjacent public right of way or adjacent properties, the building façade shall:
    i. Avoid the use of monotonous uniform surfaces and include differentiated design elements to reduce the appearance of flat blank walls.
    ii. Include differentiated surfaces at horizontal linear intervals that may vary in frequency but must be no less frequent than 150 horizontal linear feet or no less frequent than 3 times the average height of the building and include a change in 1 of the following design elements:
        1. Building material;
        2. Pattern;
        3. Texture;
        4. Color;
        5. Accent Material; or
        6. Building step-backs or recesses.
    iii. ~~At a minimum,~~ **F**enestration (which includes the arrangement of windows and doors on the building elevations) shall be ~~required for at least 30% of the total surface coverage of a visible building façade~~ **determined through a Special Use Permit**.
    iv. Fenestration coverage pattern (the placement pattern of individual or clustered bays of fenestration) must be distributed horizontally and vertically across the principal façade to create design interest.
    v. Fenestration must be compatible with the other design, materials, details, and treatment used on the same principal façade.
    vi. Alternative design standards to the above may be considered at the request of the Applicant as approved by the Board of Supervisors to ensure compatibility with the surrounding rural aesthetic.
c. For any zoning map amendment/special use permit application, a viewshed analysis containing visual simulations of the proposed site, as if the proposed use(s) were constructed, shall be submitted with the application.
    i. The analysis shall include at least 4 vantage points from surrounding public roads and/or adjacent properties to adequately simulate the visual impact of the use in all districts, photo-simulations for all seasons, line of sight analysis, and mitigation measures for identified impacts.
    ii. At a minimum, the analysis shall demonstrate adequacy of the proposed buffers at both the time of installation and at mature height (to be achieved within 10 years of planting) considering both East to West and a North to South elevation and account for 4 seasons.
d. Any water management system for industrial processes to include cooling shall utilize a closed loop or recycled water system. In no instance shall groundwater or raw water

from the Rapidan River be used for industrial processes or data center cooling. Further, no potable water, whether from an aquifer via well or from any perennial stream including the Rapidan River via Rapidan Service Authority (RSA) or other means, shall be used for industrial processes or data center cooling. The foregoing shall not apply to domestic water requirements (drinking water and sanitary facilities for employees and occupants) and fire suppression requirements.

e. A Water Services Plan (feasibility study) must be submitted either with the zoning map amendment application or, for properties with existing zoning, before site plan approval. Data centers shall only be approved when they demonstrate sufficient water supply availability and verify no harmful effects on local groundwater and surface water systems.
    i. The Applicant shall provide payment in full for 3rd party review of the proposed Water Services Plan. The plan will be reviewed by a 3rd party as selected by the County during the review process.
    ii. Such plan shall at a minimum, identify the method for industrial equipment cooling, the water source, quantity of water required, water capture and storage, the term for use of such water, and contingency plan for alternative water sources. Additionally, the plan shall demonstrate that the cooling system utilized will not impact the underlying aquifer, yields from the Rapidan River, or in the yield(s) of existing wells within 1,000 feet of the property boundary. The plan shall also indicate how any water will be recycled or released into surrounding water bodies (if applicable) and any environmental impact of the release. The plan shall also include how wastewater treatment will be addressed. The study shall be prepared by a licensed geologist, certified hydrologist, and/or other applicable design and engineering professionals as required.
    iii. When a reuse water system ("purple pipe system") is required for data center cooling, a Water Services Agreement (WSA) shall be required prior to the construction and development of said system, which WSA shall include, at least the following requirements: (i) that the data center developer shall finance and construct all of the reuse water cooling system; (ii) establishment of fees for availability and use of the reuse water cooling system; (iii) confirm the available amounts of wastewater capacity to operate the reuse water cooling system and discharging requirements for the same; (iv) term for the WSA; (v) periodic reporting of water usage; and (vi) other terms and conditions mutually agreeable to the County, Rapidan Service Authority (RSA), and data center operator.

f. Air Quality. All federal and state laws with respect to air emissions shall be met.

g. Fuel Storage. All federal and state laws with respect to fuel storage shall be met and include a Spill Prevention Plan.

~~h. Data centers shall provide quarterly electric and water usage reports for the facilities and facility supports which will be published and available to the public in a timely fashion~~.

i. All emergency power generators shall be restricted to backup or emergency use only and shall be enclosed within Tier 4 sound attenuation enclosures. Generator testing shall only occur between the hours of 10:00 am and 4:00 pm unless otherwise required by the Virginia Department of Environmental Quality.

j. A sound study must be submitted either with the zoning map amendment/special use permit application or, for properties with existing zoning, before site plan approval. The study shall be prepared by a licensed professional acoustic engineer or recognized acoustic consultant and shall demonstrate that sound emanating from or otherwise associated with the use, as measured at property lines, does not exceed a decibel level of 65 dB(A) during daytime hours and a decibel level of 60 dB(A) during nighttime hours. Such study shall be conducted using Sound Level Meters described in ANSI SI.4-2104 and generally accepted methodology The use shall adhere to these limits as long as it is in operation.
    i. The study shall include at a minimum, the measured pre-construction ambient sound levels, the amount of noise to be produced by normal operations and generator testing and provide strategies to minimize noise and achieve the threshold levels described above.
    ii. The study shall also include recommended sound reducing materials or systems needed to meet the aforesaid decibel limits and incorporated into the construction plans.
    iii. In presence of a "prominent discrete tones", as measured at a receiving property line, the decibel limits set forth above are decreased of 5 dB(A). A "prominent discrete tone" is defined as a sound that can be heard distinctly as a single pitch or a set of pitches. A prominent discrete tone exists if the one-third octave band sound pressure level in the band with the tone exceeds the arithmetic average of the sound pressure levels of the 2 contiguous one-third octave bands by:
        1. 5 dB for center frequencies of 500 Hz and above;
        2. 8 dB for center frequencies between 160 and 400 Hz; or
        3. 15 dB for center frequencies less than or equal to 125 Hz.

k. Any sound-generating ground-mounted equipment shall be fully enclosed where technically feasible. Where enclosure is not technically feasible both buffering and screening methods shall be provided to reduce noise output and at a minimum include screening walls, berms, and opaque evergreen buffers depending on the design proposal.

l. A post-occupancy sound study shall be required no sooner than 90 days and no later than 180 days after the full extent of the use approved by the site plan has been constructed and commenced operation. In the case of a phased site plan, such a study shall be required for each phase. The study shall demonstrate compliance with the decibel limits set forth above. In the event of noncompliance, a remediation plan shall be required to be submitted to the Zoning Administrator and necessary work to remediate the noncompliance shall be performed within a reasonable timeframe as determined by the Zoning Administrator.

m. In addition to meeting the minimum lighting requirements of Section 70-624, outdoor lighting for buildings and parking areas shall comply with the Dark Sky principles demonstrated through a comprehensive lighting plan for the project site. Where standards in this Section conflict with Dark Sky principles, the more stringent shall take precedent. In general, the Dark Sky principles include the following:
    i. Useful: All outdoor lighting should have a clear purpose. Before installing a light, consider if it is necessary for safety or security. In building and parking lot design, this means avoiding over-illumination and unnecessary cosmetic lighting.

ii. Targeted: Light should only be directed to where it is needed.
iii. Fully Shielded Fixtures: All fixtures on buildings and in parking areas must be "full cutoff," meaning they are fully shielded to emit no light above the horizontal plane. This prevents light from escaping upwards and creating "sky glow".
iv. Proper Aiming: Lights must be aimed downward to illuminate only the target area, such as a parking space or walkway, without spilling into neighboring properties or the night sky.
v. Low-Level: Lighting should be no brighter than necessary.
vi. Minimal Illumination: Use the lowest possible light levels needed for safety and security.
vii. Reflective Surfaces: Consider the reflectivity of surfaces like asphalt when calculating light levels. A reflective surface can increase the amount of light cast into the night sky.
viii. Controlled: Lights should only be used when they are useful.
ix. Timers and Motion Sensors: Employ controls like timers or motion sensors to automatically dim or turn off lights when they are not needed.
x. Variable Use: Reduce lighting levels during off-peak hours, such as late at night when a parking lot is mostly empty.
xi. Warm-Colored: Use warm-colored lighting wherever possible.
xii. Color Temperature (CCT): Use bulbs with a correlated color temperature (CCT) of 3000 Kelvin (K) or lower, as these produce a warmer, amber-toned light.
xiii. Reduced Blue Light: Avoid cool, blue-white light, which is more disruptive to nocturnal wildlife and human circadian rhythms. Warmer light is less likely to be scattered by the atmosphere, reducing sky glow.