

# CHAPTER 7: STREETS, PARKING & LIGHTING

## SECTION 7.1: GENERAL STREET DESIGN STANDARDS

The Land Development Code encourages the development of a network of interconnecting streets that work to disperse traffic while connecting and integrating neighborhoods with the existing urban fabric of the Town. Equally as important, the Code encourages the development of a network of sidewalks and bicycle lanes that provide an attractive and safe mode of travel for pedestrians and cyclists. In addition to dispersing traffic, interconnecting street networks encourages alternate modes of transportation to the automobile, enhances transit service opportunities, improves traffic safety through promoting slower speeds, and potentially reduces vehicle miles traveled within the street network. The overall network function and the comfort and safety of multi-modal or “shared” streets to slow and disperse traffic are primary to vehicular efficiency.

It is the intent of this Code to build streets that are integral components of community design. Streets shall be detailed to compliment neighborhoods and commercial centers and shall be pedestrian in scale. Street materials shall conform to the provisions of the Mecklenburg County Land Development Standards Manual. Exceptions may be made for pedestrian crosswalks. Sidewalk material may vary according to the overall design and character of the development. Streets are encouraged to be designed with on-street parking. All streets shall be landscaped. In an effort to protect this investment, the Town views streets as the most important public space and therefore has developed a set of principles which permit this space to be used by both cars and people.

### **Connectivity**

Connectivity shall be evaluated within a development and with adjoining development and undeveloped properties. Connectivity shall be provided in multiple directions, unless the evaluation proves otherwise, based on the criteria noted.

- A. Evaluation of connectivity shall include all modes of connectivity such as vehicle, pedestrian and bicycle. Evaluation may include the following:
  1. Impacts on neighborhood quality of life
  2. Adequacy of infrastructure (appropriate cross sections, public streets, condition of streets, etc.)
  3. Traffic analysis
  4. On street parking
  5. Traffic calming
  6. Speed limits
  7. Types of uses proposed for interconnectivity
  8. Potential costs of upgrades that may be necessary to accommodate appropriate connectivity
- B. Cul-de-sacs are permitted only where topographic conditions and/or exterior lot line configuration offer no practical alternatives for connection or through traffic.
- C. Street stubs shall be evaluated with development adjacent to open land to provide for future connections. Streets should be planned with due regard to the designated corridors shown on the Metropolitan Transportation Plan (MTP) and/or the Comprehensive Transportation Plan (CTP).
  1. The stub street must be extended to the boundary of the abutting property to the point where the connection to the anticipated street is expected.
  2. If a stub street exists on an abutting property, the street system of any new development must connect to the stub street to form a through street.



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3. When stubbing to the edge of the site the stub street will be built to the furthest point possible or a payment in lieu of construction shall be paid or a financial guarantee posted, for the remaining construction. Any right-of-way or easements needed to build the connection shall be dedicated by deed and recorded plat.
  4. Where a stub street is required, a barricade shall be constructed according to the Charlotte Mecklenburg Land Development Standards manual and a sign noting the future street extension shall be posted at the developer's expense.
    - a. The stub street sign shall be eight (8) square feet and state: "This street may be extended in the future."
    - b. Street stub signage may be required upon any Town action, whether by ordinance, resolution, or permit.
- D. Streets shall be designed as the main public space of the Town and shall be scaled to the pedestrian.
- E. Streets shall be bordered by sidewalks on both sides. In areas where no sidewalk currently exists, the Planning Director or designee may allow for an improvement guarantee in lieu of installation.
- F. Streets shall be designed with street trees planted in a manner appropriate to their function. Commercial streets shall have trees which complement the face of the buildings and which shade the sidewalk. Residential streets shall provide for an appropriate canopy, which shades both the street and sidewalk, and serves as a visual buffer between the street and the home.
- G. Wherever possible, street locations should account for difficult topographical conditions, paralleling extreme contours to avoid excessive cuts and fills and the destruction of significant trees and vegetation outside of street rights-of way on adjacent lands.
- H. Whenever an irreconcilable conflict exists among vehicular and pedestrian usage, the conflict should be resolved in favor of the pedestrian unless in the best interest of public safety.
- I. All streets, whether publicly or privately maintained, shall be constructed in accordance with the design and construction standards in this Code and the Mecklenburg County Land Development Standards Manual and shall be maintained for public access whether by easement or by public dedication.
- J. Street acceptance for public maintenance is at the discretion of the Town Board of Commissioners following submission of a petition for acceptance.
- K. Closed or gated streets are strictly prohibited on publicly maintained streets and public/private alleys. Closed or gated streets may be permitted on privately maintained streets subject to the following conditions:
1. Provide stacking for at least four (4) vehicles (approximately 100 linear feet).
  2. Provide a turn-around to allow vehicles not entering a place to safely exit.
  3. Gates must allow passage for Fire, EMS, Police, and other public service vehicles.
  4. Maintain all components of the gate system in operating condition. A proper power supply shall be maintained to all electronic components at all times. In addition, each gate must have a manual release mechanism, which is activated by a power failure, or another method of



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assuring entry in event of a power failure, which is approved by the fire marshal and the chief of police.

5. Any vertical obstruction must have a minimum of 14-foot clearance.
6. If gate extends to sidewalk, pedestrian access must be accommodated.
7. If gated private streets are petitioned for street acceptance, petitioner must remove gates prior to the Town Board considering the street acceptance petition.
8. If there is any opportunity for connectivity or if connectivity was anticipated during the original approval, the requested gates shall be reviewed and considered by the Town Board.

The use of traffic calming devices such as raised intersections, lateral shifts, and traffic circles are encouraged as alternatives to conventional traffic control measures.

Minor variations and exceptions to street engineering and design may be permitted at the discretion of the Planning Director. Such exceptions include variations to the pavement width, tree planting areas, street grade, sight distances, and centerline radii in accordance with principles above. Right-of-way widths should be preserved for continuity.

### SECTION 7.2: STREET ENGINEERING AND DESIGN SPECIFICATIONS

Street designs shall permit the comfortable use of the street by cars, bicyclists, and pedestrians. Pavement widths, design speeds, and the number of vehicle lanes should be minimized without compromising safety. The specific design of any given street must consider the building types which front on the street and the relationship of the street to the Town's street network. New development with frontages on existing publicly maintained streets shall be required to upgrade all their frontages to meet the standards of this Section. The following specifications shall apply to street design:

#### **Pavement Schedule**

Pavement shall be constructed according to the Mecklenburg County Land Development Standards Manual.

#### **Rights-of-Way**

Right-of-way shall be provided in accordance with the Mecklenburg County Land Development Standards.

#### **Utility Location**

Underground utilities may be located under pavement providing future utility connections are stubbed prior to paving. For all other street conditions, underground utilities shall be located in alleys and lanes. If no alley or lane is provided, then a five-foot (5') minimum utility easement shall be provided behind the sidewalk located within either the right-of-way or a public utility easement.

#### **Centerline Radius**

A 90-foot minimum centerline shall be provided between reverse curves on all streets. Centerlines may be varied upon approval of the Planning Director.



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### **Curbs and Drainage**

Curb and gutter are required upon all alleys and town maintained or future town maintained (dedicated) streets, unless it is not warranted in the Zoning Administrator or designee's discretion. On all State maintained roadways, curb and gutter is not required by the Town. However, curb and gutter shall be installed if the North Carolina Department of Transportation requires the installation. Also, in the event the Town feels that the public health, safety and welfare requires it, the Town may require curb and gutter installation on state maintained roadways.

Streets facing commercial, mixed-use, and attached residential development require standard curb and gutter. Curbs shall be constructed in accordance with the Mecklenburg County Land Development Standards Manual. In all instances when curbing is provided, standard curbing is required. Drainage shall be provided using closed curb and gutter systems along all streets except in rural areas. All storm drainage systems shall be designed in accordance with the Mecklenburg County Storm Drainage Design Manual.

### **Curb Cuts**

Generally, curb cuts should be minimized to reduce vehicle/pedestrian/bicycle conflicts.

### **Intersections**

All streets shall intersect as nearly as possible at right angles and no street shall intersect at less than 70 degrees.

Where a centerline offset occurs at an intersection, the distance between centerlines of the intersecting streets shall not be less than 125 feet.

Property lines at street intersections shall be rounded with a minimum radius of 20 feet. At an angle of intersection of less than 90 degrees, a greater radius may be required.

Proper sight lines shall be maintained at all intersections of streets to permit adequate sight distance. Minimum stopping distances should conform to the design speed and stopping distances required for wet pavement through both vertical and horizontal alignment.

### **Curb Radii**

Curb radii shall be designed to reduce pedestrian crossing times along all streets requiring sidewalks. In general, curb radii should not exceed 20 feet.

### **Cul-de-sacs**

Cul-de-sacs shall not exceed 250 feet in length from the nearest intersection with a street providing through access.

### **Block Lengths**

Streets shall have block lengths between 200 to 500 feet. Exceptions are permitted however, due to topography, environmental protection, preservation of existing buildings, and similar considerations.



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### **On-Street Parking**

Generally, on-street parking may provide a physical buffer between the pedestrian and traffic and may reduce the need for off-street surface parking. Marked, on-street parking requires standard curb and gutter. Informal parking is permitted along neighborhood streets.

The Town encourages the use of reverse angle parking which:

1. Allows driver to make eye contact with oncoming traffic when exiting the parking space as well as making the sidewalk more accessible for pedestrians.
2. Provides improved driver visibility
  - When exiting the parking space, drivers are facing the road with a good view of oncoming traffic.
  - Pulling forward into traffic allows cyclists to be more visible to drivers
  - Results in a decreased number of collisions
3. Allows for easier loading/unloading
  - The trunk is accessible from the sidewalk as opposed to the road
  - Door opening provides a barrier between the pedestrian and traffic
4. Allows for accessible parking and curb ramps
  - Direct access to sidewalk for drivers and passengers exiting the vehicle
  - Makes loading wheelchairs and handicap accessories from side and rear easier and away from traffic
  - Traffic Calming
  - The on-street parking visually narrows the roadway width, which contributes to driver attentiveness and slower speeds

Parallel or pull-in angled parking may be allowed at the discretion of the Planning Director.

### **Pedestrian Street Crossings**

Mid-block crossings, bulb-outs, raised crosswalks, and similar techniques may be used to accommodate pedestrians when appropriate traffic and site conditions exist.

### **Street Lights**

As a rule, shorter lights are preferred in lieu of fewer, taller, high-intensity light. The scale of lighting fixtures and the illumination provided must be appropriate for both pedestrian and vehicular movements. Street lights shall be installed by the developer on all streets in accordance with the Town of Cornelius Street Light Policy. The Town will accept responsibility of the lights in accordance with the Town of Cornelius Street Light Policy.

### **Street Markers and Traffic Control Signs**

All street markers and traffic control signs posted in accordance with the Manual of Uniform Traffic Control Devices shall be installed by the developer prior to the issuance of any certificates of occupancy for any building on that street.



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### **Bicycle and Pedestrian Facilities**

Bicycle and pedestrian facilities shall be provided in accordance with the Bicycle Master Plan, Comprehensive Pedestrian Plan, and Comprehensive Parks and Greenways Master Plan.

### **Planting Strips**

Planting strips should be typically located between the curb and sidewalk and parallel to the street. Within commercial areas and other sidewalks with high pedestrian volumes, grated tree wells may be used in lieu of planting strips. Trees should be planted to not impede the site distances of intersections. The minimum width of all planting strips shall be six feet (6').

### **Trees**

All street trees shall be installed in accordance with Mecklenburg County Land Development Standards Manual.

### **SECTION 7.3: OFF STREET PARKING AREA DESIGN SPECIFICATIONS**

- A. Parking lots should not dominate the frontage of pedestrian-oriented streets, interrupt pedestrian routes, or negatively impact surrounding neighborhoods. Lots should be located behind buildings or in the interior of a block whenever possible.
- B. No off-street parking area shall be located within any front yard except for single-family residential uses. All off-street parking spaces for multi-family buildings shall be in the rear yard only.
- C. Parking lots shall not occupy more than one-third (1/3) of the frontage of the adjacent building or no more than 75 feet, whichever is less.
- D. No parking lot shall be closer than ten feet (10') behind the frontage line of an adjacent building.
- E. All parking areas shall be screened from view in accordance with Section 9.4.2(B) Type 'B' screening buffer.
- F. Off-street parking areas for new commercial, industrial, or multi-family residential developments shall be designed to accommodate containment facilities for both garbage and recycling containers.
- G. Off-street parking areas shall be designed so that parked vehicles do not encroach upon or extend onto public rights-of-way, sidewalks, or strike against or damage any wall, vegetation, utility, or other structure.
- H. Large surface parking lots should be visually and functionally segmented into several smaller lots. Alternative parking area designs shall create separate and distinct outdoor rooms for no more than 36 cars per room. The size of any single surface parking lot shall be limited to three (3) acres, unless divided by a street or building.



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- I. Designated parking areas and driveways for all uses (except single- and two-family dwellings) shall meet the following requirements:
  - 1. Standard curbing, with a minimum width of 1'6", shall be provided along the periphery of all driveways and designated parking areas. This requirement may be waived in a Watershed Protection Overlay District to permit sheet flow drainage into pervious areas.
  - 2. The following shall be paved or contain a similar type material approved by the Planning Director. Gravel and other stabilization material without a permanent wearing surface is not permitted in:
    - a. Front yard parking areas.
    - b. Any off-street parking areas with 12 or more parking spaces
  - 3. Off-street parking areas in the side or rear yards with 11 or less parking spaces may use pea gravel or some other approved ground stabilization material in lieu of a paving material provided that handicap parking meets ADA standards and pea gravel is contained to the parking area using landscaping timbers or other containment device. All driveways are required to be paved a minimum of 50 feet from the street where the driveway leads to unpaved internal parking.
  
- J. Short-term and long-term bicycle parking facilities shall be provided for all non-residential and multi-family developments, schools, and civic uses.
  - 1. Bicycle parking shall be located in the side or rear yard and shall not block pedestrian access.
  - 2. Short-term bike parking may be provided with traditional bike racks (see image at right). A minimum of four (4) spaces is required for short-term parking.
  - 3. Long-term parking shall be provided in a covered area or inside a building as follows:
    - a. Xx spaces per square foot of retail/commercial area.
    - b. Xx spaces per unit in multi-family developments.
    - c. Xx spaces per seat for civic uses.



## SECTION 7.4: GENERAL PARKING REQUIREMENTS

### 7.4.1: Minimum Parking Ratios

Parking requirements may be satisfied using on-street parking in front of buildings or public lots within 300 feet of primary building entrances.

Residential - Apartment	1 per bedroom
Residential - Attached and Detached Homes	2 per home

All other uses shall provide parking at a rate of no more than 4 spaces/1000 square feet and no less than 2 spaces/1000 square feet. Any proposed parking ratios outside these parameters will be required to obtain a Special Use Permit through the Board of Adjustment, unless the parking is being proposed and reviewed through the conditional zoning process.

In all non-single family residential uses, vehicles must be parked on an approved improved surface. For single-family residential uses, see Section 6.2.39, Outdoor Storage.



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## 7.4.2: Parking Space Dimensions

- A. Parking space dimensions (other than those designed for the disabled) shall be a minimum of 19 feet long and nine feet (9') wide. Parking spaces shall be dimensioned in relation to curbs or aisles, so long as their configuration, area and dimensions satisfy the requirements of this Section.
- B. Parallel parking space dimensions shall be a minimum of 20 feet by eight feet (8').

## 7.4.3: Aisle and Driveway Widths

- A. Parking area aisle widths shall conform to the following table, which varies the width requirement according to the angle of parking.

Angle of Parking					
Aisle Width	0	30	45	60	90
<b>One Way Traffic</b>	13	13	18	20	24
<b>Two Way Traffic</b>	19	20	22	24	24

- B. Driveways shall be a maximum of 12 feet in width for one-way traffic and 24 feet in width for two-way traffic. In no case shall a driveway width exceed 24 feet, except as required by the North Carolina Department of Transportation (NCDOT).

## 7.4.4: Shared Parking

The joint use of shared off-street parking between two uses may be made by contract between two or more adjacent property owners.

## 7.4.5: Disabled Parking

- A. Except for a lot containing a single-family or duplex dwelling, all uses shall provide parking for the disabled in accordance with the North Carolina Building Code. The number of such spaces shall be in addition to any required spaces.
- B. Off-street parking spaces for the disabled shall be designed as follows:
  1. All spaces for the disabled shall have access to a curb-ramp or curb-cut to allow access to the building served, and that access is not facilitated by movement behind parked vehicles. These spaces shall be located the shortest possible distance between the parking area and the entrance to the principal building.
  2. Parallel parking spaces for the disabled shall be located either at the beginning or end of a block or adjacent to alley entrances. Curbs adjacent to such spaces shall not interfere with the opening and closing of vehicle doors.
  3. Each parking space for the disabled shall be paved and prominently outlined with paint, with a permanent sign of a color and design approved by the North Carolina Department of Transportation, bearing the internationally accepted wheelchair symbol, posted at the head of the parking space.





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4. The size of the parking space and associated access ramps or curb cuts shall be per building code specifications.

### SECTION 7.5: EXTERIOR LIGHTING

#### 7.5.1: Purpose and Intent

Outdoor lighting shall be designed to provide the minimum lighting necessary to ensure adequate safety, night vision, and comfort, and not create or cause excessive glare onto adjacent properties and public street rights-of-way.

#### 7.5.2: Definitions

- **Cutoff fixture** - An outdoor light fixture shielded or constructed in such a manner that no more than 2 ½% of the total light emitted by the fixture is projected above the horizontal plane of the fixture.
- **Flood lamp** - A form of lighting designed to direct its output in a specific direction with a reflector formed from the glass envelope of the lamp itself. Such lamps are so designated by the manufacturers and are typically used in residential outdoor area lighting.
- **Flood light** - A form of lighting designed to direct its output in a diffuse, more or less specific direction, with reflecting or refracting elements located external to the lamp.
- **Foot candle (FC)** - A quantitative unit measuring the amount of light cast onto a given point, measured as one (1) lumen per square foot.
- **Full cutoff fixture** - An outdoor light fixture shielded or constructed in such a manner that it emits no light above the horizontal plane of the fixture.
- **Glare** - The effect produced by a light source within the visual field that is sufficiently brighter than the level to which the eyes are adapted, to cause annoyance, discomfort, or loss of visual performance and ability.
- **IESNA** - The Illuminating Engineering Society of North America, a non-profit professional organization of lighting specialists that has established recommended design standards for various lighting applications.
- **Internal refractive lens** - A glass or plastic lens installed between the lamp and the sections of the outer fixture globe or enclosure. Refractive refers to the redirection (bending) of the light as it goes through the lens, softening and spreading the light being distributed from the light source thereby reducing direct glare.
- **Light source** - The element of a lighting fixture that is the point of origin of the lumens emitted by the fixture.
- **Lumen** - A quantitative unit measuring the amount of light emitted by a light source.
- **Maintained foot candles** - Illuminance of lighting fixtures adjusted for a maintenance factor accounting for dirt build-up and lamp output depreciation. The maintenance factor used in the design process to account for this depreciation cannot be lower than 0.72 for high-pressure sodium and 0.64 for metal halide and mercury vapor.
- **Medium base** - The size of lamp socket designed to accept a medium or Edison base lamp.
- **Semi-cutoff fixture** - An outdoor light fixture shielded or constructed in such a manner that it emits no more than 5% of its light above the horizontal plane of the fixture, and no more than 20% of its light ten (10) degrees below the horizontal plane of the fixture.
- **Wall pack** - A type of light fixture typically flush-mounted on a vertical wall surface.
- **Wide-body refractive globe** - A translucent lamp enclosure used with some outdoor fixtures to provide a decorative look (including but not limited to acorn- and carriage light-style fixtures).



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"Wide-body" refers to a wider than average size globe (greater than 15.75 inches in diameter).

"Refractive" refers to the redirection (bending) of the light as it goes through the lens, rendering the light fixture more effective. Wide-body refractive globes are intended to soften and spread the light being distributed from the light source thereby reducing direct glare.

### 7.5.3: Light Measurement Technique

Light level measurements shall be made at the property line of the property upon which the light to be measured is being generated. If measurement on private property is not possible or practical, light level measurements may be made at the boundary of the public street right-of-way that adjoins the property of the complainant or at any other location on the property of the complainant. Measurements shall be made at finished grade (ground level), with the light-registering portion of the meter held parallel to the ground pointing up. The meter shall have cosine and color correction and have an accuracy tolerance of no greater than plus or minus 5%. Measurements shall be taken with a light meter that has been calibrated within the year. Light levels are specified, calculated and measured in foot candles (FC). All FC values below are maintained foot candles.

### 7.5.4: General Standards for Outdoor Lighting

- A. Unless otherwise specified in Section 7.5.5 through Section 7.5.11, the maximum light level shall be 0.3 maintained foot candle at any property line in a residential district, or on a lot occupied by a dwelling, congregate care or congregate living structure, and 2.0 maintained foot candles at any public street right-of-way, unless otherwise approved by the Planning Board.
- B. All flood lights shall be installed such that the fixture shall be aimed down at least 45 degrees from vertical, or the front of the fixture is shielded such that no portion of the light bulb extends below the bottom edge of an external shield. Flood lights and display lights shall be positioned such that any such fixture located within 50 feet of a public street 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.
- C. All flood lamps emitting 1,000 or more lumens shall be aimed at least 60 degrees down from horizontal, or shielded such that the main beam from the light source is not visible from adjacent properties or the public street right-of-way.
- D. All wall pack fixtures shall be cutoff fixtures.
- E. Service connections for all freestanding fixtures installed after application of this ordinance shall be installed underground.
- F. Within non-residential districts and developments, all outdoor lighting fixtures shall be at minimum semi-cutoff fixtures.
- G. All light fixtures installed by public agencies, their agents, or contractors for the purpose of illuminating public streets are otherwise exempt from this regulation.

### 7.5.5: Lighting in Parking Lots and Outdoor Areas

- A. Other than flood lights and flood lamps, all outdoor area and parking lot lighting fixtures of more than 2,000 lumens shall be cutoff fixtures, or comply with subsection (3) below.



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- B. The mounting height of all outdoor lighting, except outdoor sports field lighting and outdoor performance area lighting shall not exceed 35 feet above finished grade.
- C. Exceptions:
  - 1. Non-cutoff fixtures may be used when the maximum initial lumens generated by each fixture shall not exceed 9,500 initial lamp lumens per fixture.
  - 2. All metal halide, mercury vapor, fluorescent, induction, white high pressure sodium and color improved high pressure sodium lamps used in non-cutoff fixtures shall be coated with an internal white frosting inside the outer lamp envelope.
  - 3. All metal halide fixtures equipped with a medium base socket must utilize either an internal refractive lens or a wide-body refractive globe.
  - 4. All non-cutoff fixture open-bottom lights shall be equipped with full cutoff fixture shields that reduce glare and limit uplight.

### 7.5.6: Lighting for Vehicular Canopies

Areas under a vehicular canopy shall have a maximum point of horizontal illuminance of 24 maintained foot candles (FC). Areas outside the vehicular canopy shall be regulated by the standards of subsection (d) above. Lighting under vehicular canopies shall be designed so as not to create glare off-site.

Acceptable methods include one (1) or more of the following:

- A. Recessed fixture incorporating a lens cover that is either recessed or flush with the bottom surface (ceiling) of the vehicular canopy.
- B. Light fixture incorporating shields, or shielded by the edge of the vehicular canopy itself, so that light is restrained to 5 degrees or more below the horizontal plane.
- C. Surface mounted fixture incorporating a flat glass that provides a cutoff fixture or shielded light distribution.
- D. Surface mounted fixture, typically measuring two feet (2') by two feet (2'), with a lens cover that contains at least 2% white fill diffusion material.
- E. Indirect lighting where light is beamed upward and then reflected down from the underside of the vehicular canopy. Such fixtures shall be shielded such that direct illumination is focused exclusively on the underside of the vehicular canopy.
- F. Other method approved by the Planning Board.

### 7.5.7: Outdoor Sports Field/Outdoor Performance Area Lighting

- A. The mounting height of outdoor sports field and outdoor performance area lighting fixtures shall not exceed 80 feet from finished grade, unless approved by the Planning Board as having no adverse effect or approved by the Town Board as part of a conditional zoning.
- B. All outdoor sports field and outdoor performance area lighting fixtures shall be equipped with a glare control package (louvers, shields, or similar devices). The fixtures must be aimed so that their beams are directed and fall within the primary playing or performance area.



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- C. The hours of operation for the lighting system for any game or event shall not exceed one (1) hour after the end of an event or administrative activity.

### **7.5.8: Lighting of Outdoor Display Areas**

- A. Parking lot outdoor areas shall be illuminated in accordance with the requirements for Section 7.5.5 above. Outdoor display areas shall have a maximum point of illuminance of 24 maintained foot candles (FC).
- B. All light fixtures shall meet the IESNA definition of cutoff fixtures. Forward throw fixtures (type IV light distribution, as defined by the IESNA) are required within 25 feet of any public street right-of-way. Alternatively, directional fixtures (such as flood lights) may be used provided they shall be aimed and shielded in accordance with Section 7.6.4 (1) and (2) above.
- C. The mounting height of outdoor display area fixtures shall not exceed 35 feet above finished grade, unless approved by the Planning Board as having no adverse effect.

### **7.5.9: Sign Lighting**

Lighting fixtures illuminating signs shall be aimed and shielded so that direct illumination is focused exclusively on the sign.

### **7.5.10: Lighting of Buildings and Landscaping**

Lighting fixtures shall be selected, located, aimed, and shielded so that direct illumination is focused exclusively on the building facade, plantings, and other intended site feature and away from adjoining properties and the public street right-of-way.

### **7.5.11: Lighting Plan**

- A. A point-by-point foot candle array in a printout format indicating the location and aiming of illuminating devices shall be provided. The printout shall indicate compliance with the maximum maintained foot candles required by this Code.
- B. Description of the illuminating devices, fixtures, lamps, supports, reflectors, poles, raised foundations and other devices (including but not limited to manufacturers or electric utility catalog specification sheets and/or drawings, and photometric report indicating fixture classification [cutoff fixture, wall pack, flood light, etc.]).

The Planning Director or designee(s) may waive any or all of the above permit requirements, provided the applicant can otherwise demonstrate compliance with this Code.

