

- 10.3.6.5 Regulation of number, design and location of ACCESS drives, drive-up windows and other traffic features;
- 10.3.6.6 Requirement of off-STREET parking and other special features;
- 10.3.6.7 Requirement for performance bonds or other security; and
- 10.3.6.8 Installation and certification of mechanical or other devices to limit present or potential hazard to human health, safety, welfare or the environment resulting from smoke, odor, particulate matter, toxic matter, fire or explosive hazard, glare, noise, vibration or any other objectionable impact generated by any given USE of land.
- 10.3.6.9 Installation of sidewalks along the entire FRONTAGE of a LOT and of other walkways and paths as it deems necessary to accommodate the safe movement of pedestrians and bicyclists. Such a sidewalk or other walkways or paths may be located on the LOT or within the layout of the STREET and shall be designed to connect with existing sidewalks on adjacent LOTS, if any. Sidewalks, walkways or paths shall be designed and constructed according to standards established in the Town of Acton Subdivision Rules and Regulations, except when otherwise approved by the Special Permit Granting Authority.
- 10.3.7 Time Limitation on Special Permit – A special permit shall lapse if a substantial use thereof has not commenced except for good cause or, in the case of a permit for construction, if construction has not commenced except for good cause within a period of time to be specified by the special permit granting authority, not to exceed two years from the date of grant thereof.
- 10.3.8 Effective Date of Special Permit – No special permit or any modification, extension or renewal thereof shall take effect until a copy of the decision has been recorded in the Middlesex County South District Registry of Deeds. Such decision shall bear the certification of the Town Clerk that 20 days has elapsed after the decision has been filed in the office of the Town Clerk and no appeal has been filed, or that if such an appeal has been filed, it has been dismissed or denied.
- 10.3.9 Planning Board Associate Members – When the Planning Board is acting as a Special Permit Granting Authority under this Bylaw, the Chairman of the Planning Board may designate an associate member, duly appointed by the Board of Selectmen, to sit on the Board for the purposes of acting on a special permit application in the case of absence, inability to act, or conflict of interest on the part of any regular member of the Planning Board or in the event of a vacancy on the Planning Board.
- 10.4 Site Plan Special Permit – The Board of Selectmen may grant a Site Plan Special Permit in accordance with the standards of this Bylaw.**
  - 10.4.1 Applicability – A Site Plan Special Permit shall be required as follows:
    - 10.4.1.1 In the EAV, SAV, and WAV Districts, a Site Plan Special Permit shall be required in all instances
      - 1) for the initial development of land specified in Section 3, Table of PRINCIPAL USES as requiring a Site Plan Special Permit and for all ACCESSORY USES thereto, or
      - 2) where the NET FLOOR AREA of an existing BUILDING is increased 500 square feet or more for USES designated as requiring a Site Plan Special Permit on the Table of PRINCIPAL USES, or

- 3) where a USE designated as requiring a Site Plan Special Permit on the Table of PRINCIPAL USES is expanded in ground area by 500 square feet or more of either impervious material, open storage or any area of the site devoted to the conduct of the PRINCIPAL or ACCESSORY USE.
- 10.4.1.2 In all other zoning districts, a Site Plan Special Permit shall be required in all instances
- 1) for the initial development of land specified in Section 3, Table of PRINCIPAL USES as requiring a Site Plan Special Permit and for all ACCESSORY USES thereto, or
  - 2) where the NET FLOOR AREA of an existing BUILDING is increased 1,200 square feet or more for USES designated as requiring a Site Plan Special Permit on the Table of PRINCIPAL USES, or
  - 3) where a USE designated as requiring a Site Plan Special Permit on the Table of PRINCIPAL USES is expanded in ground area by 1,200 square feet or more of either impervious material, open storage or any area of the site devoted to the conduct of the PRINCIPAL or ACCESSORY USE.
- 10.4.1.3 Any activity, construction or installation conducted solely for the purpose of environmental clean-up or remediation, and required or approved by the United States Environmental Protection Agency or the Massachusetts Department of Environmental Protection shall not require a Site Plan Special Permit.
- 10.4.2 Administration – Except as provided in Section 10.3.5, all of the requirements of Section 10.3 shall apply to a Site Plan Special Permit.
- 10.4.3 Site Design Standards for Site Plan Special Permits – The purpose of the following site design standards is to ensure that adequate consideration will be given to the natural resources and characteristics of a site, to its topographic, hydrologic and geologic conditions, to public convenience and safety and to the suitability of a proposed USE on a site. Before the granting of any Site Plan Special Permit, the Board of Selectmen shall assure that each site plan submitted for its review shall comply in full with the following site design standards:
- 10.4.3.1 Storm Water Runoff – The peak rate of storm water runoff from the development site shall not exceed the rate existing prior to the new construction based on a 10-year design storm. The storm water drainage facilities on the site shall be designed to prevent any overflow onto a STREET. The Board of Selectmen may authorize the use of storm water drainage facilities located off the development site and designed to serve one or more LOTS provided it finds that:
- 1) the peak rate of storm water runoff from such off-site facilities does not exceed the rate existing prior to the new construction based on a 25-year design storm; and
  - 2) the applicant has retained the rights and powers necessary to assure that the off-site storm water drainage facilities will be properly maintained in good working order.
- 10.4.3.2 Outdoor Lighting – Developments and redevelopments requiring a Site Plan Special Permit or an amendment thereof, shall comply with the standards for outdoor lighting set forth in section 10.6.
- 10.4.3.3 Common Driveway – The Board of Selectmen may permit a common driveway to serve two or more LOTS. Such common driveway shall be defined as a driveway that is shared by two or more LOTS and located wholly within the required setback areas of such LOTS. Such a common driveway can be either a shared ACCESS driveway to a STREET or a driveway to a STREET or a driveway connecting such LOTS with each other. The common driveway shall not be wider than 24 feet except where, in the

opinion of the Board of Selectmen, a greater width is necessary in order to provide adequate room for safe vehicular turning movements and circulation. The Board of Selectmen shall ensure that the common driveway enhances the objectives of improving circulation within and between business and industrial establishments and of reducing the number of curb-cuts onto STREETS. The Board of Selectmen shall also ensure that common driveways will not derogate from the intent of the Bylaw to provide adequate OPEN SPACE on each LOT, except that the Board of Selectmen may authorize that the area of one such common driveway on each LOT be designated as OPEN SPACE. If a common driveway is authorized under a Site Plan Special Permit to lead onto an adjacent LOT which is not subject to such Site Plan Special Permit, no separate Site Plan Special Permit shall be required for the adjacent LOT in order to permit the construction of the common driveway.

- 10.4.3.4 Sidewalks – A sidewalk shall be required along the entire FRONTAGE of a LOT. The Board of Selectmen may also require other walkways and paths as it deems necessary to accommodate the safe movement of pedestrians and bicyclists.
- a) Such a sidewalk or other walkways or paths may be located on the LOT or within the layout of the STREET and shall be designed to connect with existing sidewalks on adjacent LOTS, if any.
  - b) If a sidewalk or other walkway or path is authorized under a Site Plan Special Permit to lead onto an adjacent LOT, which is not subject to such Site Plan Special Permit, no separate Site Plan Special Permit shall be required for the adjacent LOT in order to permit the construction of such sidewalk or walkway or path.
  - c) Sidewalks, walkways or paths shall be designed and constructed according to standards established in the Town of Acton Subdivision Rules and Regulations, except when otherwise approved by the Board of Selectmen.
  - d) The Board of Selectmen may waive the sidewalk requirement provided it finds that such a sidewalk is not necessary for the safe movement of pedestrians and bicyclists.
  - e) Sidewalks, walkways or paths authorized under a Site Plan Special Permit and located on a LOT shall be OPEN SPACE.
  - f) The voluntary installation of sidewalks along the FRONTAGE of LOTS in the Business, Village and Industrial Districts shall not require a Site Plan Special Permit, although other permits may be required.
  - g) In the Kelley's Corner District, the Board of Selectmen shall require on-site and off-site sidewalks, walkways, bikeways and crosswalks consistent with the planning objectives set forth in the 1995 Kelley's Corner Plan, as amended. The Kelley's Corner Plan identifies necessary improvements designed to accommodate future growth in the Kelley's Corner District. Off-site improvements hereunder shall be made as determined by the Board of Selectmen to encourage pedestrian circulation and bicycle use within the Kelley's Corner District and to adjacent areas as a direct measure to help minimize traffic impacts from the proposed development. Off-site improvements shall be located on ways and land owned or controlled by the Town of Acton, or in other locations where their owner allows and agrees to the improvements. The cost of the required off-site improvements shall be kept in reasonable proportion to the anticipated pedestrian and vehicular traffic from the development.
- 10.4.3.5 OPEN SPACE Landscaping Standards - Any landscaping on OPEN SPACE shall be designed to enhance the visual impact of the USE upon the LOT and adjacent property. Where appropriate, existing vegetation may be retained and used to satisfy the landscaping requirements. OPEN SPACE areas shall be kept free of encroachment by all BUILDINGS, STRUCTURES, storage areas or parking. OPEN SPACE landscaping

shall be maintained as open planted areas and used to (1) ensure buffers between properties, (2) provide landscaped areas between BUILDINGS, (3) minimize the visual effect of the bulk and height of BUILDINGS, STRUCTURES, parking areas, lights or signs and (4) minimize the impact of the USE of the property on land and water resources.

- 1) In the Industrial Districts where a business or industrial USE abuts a Residential District, a landscape buffer up to a maximum of 30 feet in depth designed to mitigate the impact of the business or industrial USE on abutting Residential Districts may be required by the Board of Selectmen.
- 2) In the Kelley's Corner District where a business or industrial USE abuts a Residential District, the Board of Selectmen shall require a substantially opaque landscape buffer of at least 20 feet in depth that is designed to reduce noise and other impacts of the business or industrial USE on abutting Residential Districts.
  - a) Where deemed appropriate and necessary to protect abutting residential USES, the Board of Selectmen may require an increase in the width of this landscape buffer to 30 feet.
  - b) In areas where abutting LOTS in Residential Districts have single family dwellings on them, the Board of Selectmen may require that this buffer shall include a fence, up to eight feet in height, designed to prevent access to abutting LOTS.

10.4.3.6 Special Landscaping Provisions Applicable to the Limited Business District, Office Districts, Small Manufacturing Districts, and the Light Industrial-1 District.

- 1) No STRUCTURE, pavement, display of goods, materials or vehicles, or other impervious materials, other than allowed ACCESS driveways, landscaping elements and signs, shall be placed within the minimum front yard.
- 2) Landscaped Buffer Areas – The required front yard of any nonresidential USE, and the required side and rear yards of any nonresidential USE on a LOT abutting a Residential District, whether abutting it directly or separated by a public or railroad right-of-way, shall contain a landscaped buffer strip which shall be no less than thirty (30) feet in width. The landscaped buffer strip shall comply with the following standards and must be approved by the Board of Selectmen as part of the Site Plan Special Permit:
  - i) Front yards of nonresidential USES shall include a semi-opaque screen. Said screen shall be opaque from the ground to a height of three feet, with intermittent visual obstruction from above the opaque portion to a height of at least 20 feet. The semi-opaque screen is intended to block visual contact between uses and to create a strong impression of the separation of spaces. The opaque screen may be composed of a wall, fence, landscaped earth berm or densely planted vegetation. The semi-opaque screen may be composed of planted vegetation or existing vegetation. At maturity, the portion of intermittent visual obstructions should not contain any completely unobstructed openings more than ten (10) feet wide. The zone of intermittent visual obstruction may contain deciduous plants. Examples of screens meeting this standard include combinations of the following:
    - small trees planted 30 feet on center, or large shade trees planted 40 feet on center; and
    - a 3-foot high stone wall or landscaped earth berm, or 3-foot high evergreen hedge shrubbery planted 3 feet on center.
  - ii) A landscaped buffer strip separating a nonresidential USE from a Residential District shall include an opaque screen. Said screen shall be opaque from the ground to a height of at least six (6) feet, with intermittent visual obstruction to a

height of at least 20 feet. An opaque screen is intended to exclude all visual contact between uses and to create a strong impression of spatial separation. The opaque screen may be composed of a wall, fence, landscaped earth berm or densely planted vegetation. The semi-opaque screen may be composed of planted vegetation or existing vegetation. The opaque portion of the screen must be opaque in all seasons of the year. At maturity, the portion of intermittent visual obstructions should not contain any completely unobstructed openings more than ten (10) feet wide. Examples of screens meeting this standard include combinations of the following:

- small trees planted 30 feet on center, or large shade trees planted 40 feet on center; and
- 6-foot high evergreen shrubbery planted 4 feet on center; or
- tall evergreen trees, stagger-planted, with branches touching the ground.

iii) Landscaped buffer areas shall not interfere with adequate sight distance at driveway curb cuts.

3) See also Section 6.7.9 for Flexible Parking Plans and potential waivers from this Section 10.4.3.6.

10.4.3.7 DEVELOPABLE SITE AREA – The DEVELOPABLE SITE AREA shall be calculated by subtracting from the LOT area all land which is located in:

- 1) a wetland, which shall mean a "freshwater wetland" as defined in M.G.L. Chapter 131, Section 40;
- 2) a Flood Plain District as defined in Section 4.1 of the Town of Acton Zoning Bylaw;
- 3) another zoning district in which the PRINCIPAL USE of the LOT is not also permitted, subject to the provision of Section 2.3.4;
- 4) an ACCESS or right-of-way easement.

10.4.3.8 Maximum NET FLOOR AREA – The maximum NET FLOOR AREA on a LOT shall not exceed the product of the DEVELOPABLE SITE AREA and the maximum FLOOR AREA RATIO set forth in the Table of Standard Dimensional Regulations.

10.4.3.9 Special Provisions Applicable to the WAV and SAV Districts – In the WAV and SAV Districts, the design and placement of BUILDINGS, STRUCTURES and other site improvements shall be carefully considered to ensure the retention and enhancement of the village character and environment. Proposed BUILDINGS and STRUCTURES shall be related harmoniously to the terrain and to the scale and architecture of existing BUILDINGS in the village, which have a functional or visual relationship to the proposed BUILDINGS or STRUCTURES. Proposed BUILDINGS and STRUCTURES shall be compatible with their surroundings with respect to: height; facade facing the STREET; rhythm of solid surfaces and openings; spacing of BUILDINGS or STRUCTURES; roof slopes; and scale. To minimize the impact of mechanical equipment on the village environment and character, window air-conditioning units, condenser elements, and heating units shall not be located on the front facades. A certificate issued by the Acton Historic District Commission for development activity proposed on a LOT that is located within a Local Historic District shall be deemed to satisfy this section.

10.4.3.10 Special Provisions Applicable to the KC District – In the KC District the site and BUILDING design shall be in compliance with Section 5.6 of this Bylaw.

10.4.3.11 Special Provisions Applicable to the EAV District – In the EAV District the site and BUILDING design shall be in compliance with Section 5.5B of this Bylaw.

10.4.3.12 Special Provisions Applicable to the SM District – On LOTS in the Small Manufacturing (SM) District the Board of Selectmen, when granting a new or amended Site Plan Special Permit, may increase the Maximum FLOOR AREA RATIO and the Maximum Height above the limits set forth for BUILDINGS and STRUCTURES in the Table of Standard Dimensional Regulations, subject to the following conditions and limitations:

- 10.4.3.12.1 To be eligible under this Section 10.4.3.12, a LOT shall have on it IMPERVIOUS COVER as defined in Section 4.3 – GROUNDWATER Protection District of this Bylaw, which by its size or coverage may or may not be conforming to the limitations of this Bylaw, but shall have been installed or constructed legally in accordance with the zoning bylaw standards in effect at the time of installation or construction.
- 10.4.3.12.2 To be eligible under this Section 10.4.3.12 and to retain ongoing eligibility, the amount and percentage on the LOT of OPEN SPACE, and of UNDISTURBED OPEN SPACE as defined in Section 4.3 – GROUNDWATER Protection District of this Bylaw, shall not be reduced below the amount and percentage existing on the LOT on or before January 1, 2006; and the amount and percentage on the LOT of IMPERVIOUS COVER as defined in Section 4.3 – GROUNDWATER Protection District of this Bylaw shall not be increased above the amount and percentage existing on the LOT on or before January 1, 2006.
- 10.4.3.12.3 Eligibility under this Section 10.4.3.12 shall be limited to the following USES on the LOT, provided they are otherwise allowed in the SM District, and subject to the applicable regulations of the Groundwater Protection District Zone that overlays the LOT: Municipal; Child Care Facility; Industrial USES; and Business USES except Office, Health Care Facility, Hospital, Medical Center, and Commercial Recreation.
- 10.4.3.12.4 Any Maximum Height increases under this section shall not result in a height of BUILDINGS and STRUCTURES greater than 45 feet, plus 12 feet for appurtenant roof STRUCTURES that in aggregate may not occupy more than 20% of the roof plan area.
- 10.4.3.12.5 Any NET FLOOR AREA increases under this section shall not increase the Maximum FLOOR AREA RATIO above 0.50.
- 10.4.3.12.6 There shall remain adequate space for vehicular parking on the site that meets the applicable requirements of Section 6 of this Bylaw for the USE or USES on the LOT.

10.4.4 Reserve Parking Spaces – Under a Site Plan Special Permit, the Board of Selectmen may authorize a decrease in the number of parking spaces and shall have the authority to require an increase in the number of parking spaces required under Section 6, in accordance with the following:

- 10.4.4.1 The Board of Selectmen may authorize a decrease in the number of parking spaces required under Section 6 provided that:
  - 1) The decrease in the number of parking spaces is no more than 75% of the total number of spaces required under Section 6. The waived parking shall be set aside and shall not be intended for immediate construction. Such spaces shall be labeled as "Reserve Parking" on the site plan.
  - 2) Any such decrease in the number of required parking spaces shall be based upon documentation of the special nature of a USE or BUILDING.
  - 3) The parking facility in question has made optimum use of the small car parking provision as prescribed in Section 6.6, if applicable.

- 4) The parking spaces labeled "Reserve Parking" on the site plan shall be properly designed as an integral part of the overall parking layout, located on land suitable for parking development and in no case located within area counted as buffer, parking setback or OPEN SPACE.
  - 5) The decrease in the number of required spaces will not create undue congestion or traffic hazards and that such relief may be granted without substantial detriment to the neighborhood and without derogating from the intent and purpose of this Bylaw.
  - 6) Such relief may be granted without substantial detriment to the neighborhood and without derogating from the intent and purpose of this Bylaw.
- 10.4.4.2 If, at any time after the Certificate of Occupancy is issued for the BUILDING or USE, the Zoning Enforcement Officer determines that additional parking spaces are needed, the Zoning Enforcement Officer shall notify the Board of Selectmen, in writing, of such finding and the Board of Selectmen may require that all or any portion of the spaces shown on the approved site plan as "Reserve Parking" be constructed.
- 10.4.4.3 The Board of Selectmen may require provisions for an increase in the number of parking spaces required under Section 6 provided that:
- 1) The increase in the number of parking spaces is no more than 20% of the total number of spaces required under Section 6 for the USE in question.
  - 2) Any such increase in the number of required parking spaces shall be based upon the special nature of a USE or BUILDING.
  - 3) The increased number of parking spaces shall be labeled "Increased Reserve Parking" on the site plan and shall be properly designed as an integral part of the overall parking layout, located on land suitable for parking development and in no case located within area counted as buffer or parking setback. The applicant shall not be required to construct any of the parking spaces labeled as "Increased Reserve Parking" for at least one year following the issuance of a Certificate of Occupancy. Where the "Increased Reserve Parking" area is required and the applicant has otherwise provided the number of parking spaces required under Section 6, the area of land reserved for the increased number of parking spaces may be deducted from the minimum OPEN SPACE required under Section 5.
- 10.4.4.4 If after one year after the issuance of a Certificate of Occupancy the Zoning Enforcement Officer finds that all or any of the "Increased Reserve Spaces" are needed, the Zoning Enforcement Officer shall notify the Board of Selectmen, in writing, of such finding and the Board of Selectmen may require that all or any portion of the spaces identified as "Increased Reserve Spaces" on the site plan be constructed within a reasonable time period as specified by the Board of Selectmen.
- 10.4.5 Action by the Board of Selectmen – The Board of Selectmen, in considering a site plan, shall ensure a USE of the site consistent with the USES permitted in the district in which the site is located and shall give due consideration to the reports received under Section 10.3.3. Prior to the granting of any special permit, the Board of Selectmen shall find that, to the degree reasonable, the site plan:
- 10.4.5.1 Is consistent with the Master Plan.
  - 10.4.5.2 Protects the neighborhood and the Town against seriously detrimental or offensive USES on the site and against adverse effects on the natural environment.
  - 10.4.5.3 Provides for convenient and safe vehicular and pedestrian movement and that the locations of driveway openings are convenient and safe in relation to vehicular and pedestrian traffic circulation, including emergency vehicles, on or adjoining the site.

- 10.4.5.4 Provides an adequate arrangement of parking and loading spaces in relation to the proposed USES of the premises.
- 10.4.5.5 Provides adequate methods of disposal of refuse or other wastes resulting from the USES permitted on the site.
- 10.4.5.6 Will not derogate from the intent of this Bylaw to limit the adverse effects of the USE and development of land on the surface and groundwater resources of the Town of Acton. If a proposed USE has obtained a special permit from the Planning Board under Section 4.3 of this Bylaw, the requirement of this Section shall be deemed to have been met.
- 10.4.5.7 Complies with all applicable requirements of this Bylaw.
- 10.4.6 When granting a Site Plan Special Permit or when approving an amendment thereto, the Board of Selectmen shall require, and in reviewing an application for a building permit, the Zoning Enforcement Officer shall require that any repair, replacement, or reconstruction of improvements to the site, including but not limited to, drainage, exterior lighting, landscaping, pedestrian and vehicular circulation or parking facilities, required or approved by the Site Plan Special Permit, shall, to the extent practicable, comply with the currently applicable standards of this Bylaw, whether or not such repair, replacement or reconstruction requires a new Site Plan Special Permit. When evaluating an application for such repair, replacement, or reconstruction of existing facilities, the Board of Selectmen or the Zoning Enforcement Officer shall consider the practicability of compliance with currently applicable standards in light of the existing site configuration, and the cost of compliance compared to the increase in public safety or convenience achieved thereby.
- 10.5 Variance** – Variances from the specific requirements of this Bylaw may be authorized by the Board of Appeals, except that variances authorizing a USE not otherwise permitted in a particular zoning district shall not be granted.
- 10.5.1 **Rules and Regulations and Fees** – The Board of Appeals shall adopt, and from time to time amend, Rules and Regulations, not inconsistent with the provisions of this Bylaw or Chapter 40A of the General Laws or other applicable provision of the General Laws, and shall file a copy of said Rules and Regulations with the Town Clerk. Such Rules shall prescribe as a minimum the size, form, contents, style and number of copies of plans and specifications, the Town boards or agencies from which the Board of Appeals shall request written reports and the procedure for submission and approval of such permits. The Board of Appeals may adopt, and from time to time amend, fees sufficient to cover reasonable costs incurred by the Town in the review and administration of variances.
- 10.5.2 **Application** – Any person who desires to obtain a variance from the requirements of this Bylaw shall file a written application with the Office of the Town Clerk on a form prescribed by the Board of Appeals. On the same day, the Petitioner shall submit said application, including the date and time of filing, certified by the Town Clerk, to the Board of Appeals. Each application shall be completed on a form and accompanied by the information required by the Board of Appeals.
- 10.5.3 **Reports from Town Boards or Agencies** – The Board of Appeals shall transmit forthwith a copy of the application and plan(s) to other boards, departments, or committees as it may deem necessary or appropriate for their written reports.

- 10.5.4 Public Hearing and Decision – The Board of Appeals shall hold a public hearing no later than 65 days after the filing of an application. The decision of the Board of Appeals shall be made within 100 days following the date of the filing of such application. The Board of Appeals shall have the power to continue a public hearing if it finds that such continuance is necessary to gather additional information in order to make an informed decision. Such continuance shall not automatically extend the required time limits set forth herein. The required time limits for a public hearing and/or a decision by the Board of Appeals may be extended by written agreement between the Petitioner and the Board of Appeals. A copy of such agreement shall be filed in the Office of the Town Clerk. Failure by the Board of Appeals to take final action within said 100 days or extended time, if applicable, shall be deemed to be a grant of the variance subject to the applicable provisions of Chapter 40A, Section 15, of the Massachusetts General Law.
- 10.5.5 Mandatory Findings – Before granting any variance from the requirements of this Bylaw, the Board of Appeals must specifically find:
- 10.5.5.1 That owing to circumstances relating to the soil conditions, shape, or topography of the LOT or STRUCTURES in question and especially affecting such LOT or STRUCTURES but not affecting generally the zoning district in which it is located, a literal enforcement of the provisions of this Bylaw would involve substantial hardship, financial or otherwise, to the Petitioner; and
- 10.5.5.2 That desirable relief may be granted without substantial detriment to the public good and without nullifying or substantially derogating from the intent or purpose of this Bylaw. In deciding whether the requested variance nullifies or substantially derogates from the intent or purpose of this Bylaw, the Board of Appeals shall consider whether the granting of such variance is consistent with the Master Plan.
- 10.5.6 Conditions and Safeguards – The Board of Appeals may impose such conditions, safeguards and limitations as it deems appropriate upon the grant of any variance.
- 10.5.7 Time Limitation on Variance – Any rights authorized by a variance which are not exercised within one year from the date of grant of such variance shall lapse and may be reestablished only after notice and a new hearing pursuant to this Section.
- 10.5.8 Effective Date of a Variance – No variance or any modification, extension or renewal thereof shall take effect until a copy of the decision has been recorded in the Middlesex County South District Registry of Deeds. Such decision shall bear the certification of the Town Clerk that 20 days has elapsed after the decision has been filed in the Office of the Town Clerk and no appeal has been filed, or that if such an appeal has been filed, it has been dismissed or denied.
- 10.6 Outdoor Lighting Regulations for Site Plan Special Permit** – This section uses defined terms that apply specifically in this section. These terms are defined in section 10.6.6 below and are capitalized in addition to the terms defined in section 1.3 of this bylaw. Figures and Tables referred to in this section are located in section 10.6.7 below.
- 10.6.1 Applicability –
- 10.6.1.1 The following regulations shall apply to all LUMINAIRES, including existing LUMINAIRES, whose LAMP wattage exceeds the values contained in Table 1, Column A, on any LOT undergoing new development, or a major modification or expansion under a Site Plan Special Permit. A major modification, as used here, shall mean that more than 25% of the LUMINAIRES on the LOT are modified, moved or replaced. A

major expansion, as used here, shall mean that the number of LUMINAIRES on a LOT increases by more than 25% of the original number.

10.6.1.2 LUMINAIRES installed before the effective date of this bylaw shall be maintained or, if necessary, modified, to meet the zoning bylaw applicable at the time of their installation.

#### 10.6.2 Standards

10.6.2.1 LUMINAIRE design and shielding – Any LUMINAIRE whose LAMP wattage exceeds the values in Table 1, Column A, shall be SHIELDED. Any LUMINAIRE whose LAMP wattage exceeds the values in Table 1, Column B shall be FULLY SHIELDED (Figure 1).

#### 10.6.2.2 Control of LIGHT TRESPASS and GLARE –

- a) Any LUMINAIRE whose distance from a LOT line is less than three times its height (3xH) shall be additionally SHIELDED so that all DIRECT LIGHT cast in the direction of STREETS, or abutting LOTS that are in Residential or Conservation USE, is cut off at an angle no more than 70 degrees measured from a vertical line directly below the LUMINAIRE (Figure 2). This requirement shall apply to all sides of the LUMINAIRE that emit light toward a LOT line that is less than 3xH away from the LUMINAIRE. The cut-off may be accomplished either by the LUMINAIRE photometric properties, or by a supplementary external shield.
- b) Additional shields that are installed to control LIGHT TRESPASS and GLARE as required herein shall be designed so that the parts of the shields that are exposed to the DIRECT LIGHT of the LUMINAIRE and visible from STREETS, or abutting LOTS that are in Residential or Conservation USE, shall have a flat-black, low-reflectivity finish.
- c) LUMINAIRES shall be SHIELDED so that LIGHT TRESPASS onto STREETS is less than 0.8 fc, and onto abutting LOTS that are in Residential or Conservation USE, including such LOTS abutting on the opposite side of a STREET, is less than 0.3 fc. This measurement shall be made with a photometer placed horizontally on the ground at points at the LOT lines. The Lighting Plan (Section 10.6.4) shall include calculations demonstrating that this LIGHT TRESPASS criterion will be met.
- d) LUMINAIRES installed on one LOT to illuminate another LOT, or installed in a STREET, railroad, utility, or other right-of-way to illuminate an adjacent LOT, are prohibited. As used in this subsection, LOT shall always mean LOT as defined in section 1.3 of this Bylaw.
- e) No single LUMINAIRE shall employ LAMP(S) exceeding a total of 400 watts, not including power for ballast or transformer.
- f) Strobe and flashing lights, and laser illumination, are prohibited except as allowed under Section 10.6.5 (Exemptions).

#### 10.6.2.3 Hours of operation –

- a) All non-residential OUTDOOR LIGHTING, with the exception of STREETLIGHTS and safety or security lighting as defined herein, may be turned on no earlier than one hour before business hours and shall be turned off no later than 11 PM or one half an hour after close of business, whichever is later.
  - i. Business hours, as used here, is defined as the period of time during which at least one person is present for the purpose of conducting or concluding business on the LOT or in a STRUCTURE on the LOT.
  - ii. Safety lighting, as used here, is defined as lighting to safeguard the movement of persons by foot or by non-motorized vehicles or by vehicles for disabled persons over hazardous footing or in areas that conflict with vehicle traffic, or

lighting for the purpose of aiding the visible detection and recognition of other persons. Safety lighting includes lighting for stairs, pedestrian ramps and tunnels, and pedestrian routes that are reasonably expected to be used after business hours.

- iii. Security lighting, as used here, is defined as lighting to protect BUILDINGS, and property stored outdoors.
- b) Lighting controlled by motion detectors or infrared sensors with an on-time of no more than 10 minutes per activation is exempt from the hours-of-operation restriction. The motion detector shall be adjusted so that normal movement of vehicles and traffic along a STREET or public right of way shall not cause its activation.
- c) Lighting of recreational facilities must be turned off no later than one half-hour after the end of use.
- d) Lighting of the United States Flag and public monuments is exempt from these hours of operation provisions.

#### 10.6.2.4 Special Provisions –

- a) Externally Illuminated Signs – Lighting for externally illuminated signs shall be projected downward from above. The LUMINAIRE shall be SHIELDED and shall comply with Section 10.6.2.2 (Control of LIGHT TRESPASS and GLARE). It shall be focused directly at the SIGN DISPLAY AREA and SHIELDED so that the LAMP is not visible from STREETS, or abutting LOTS that are in Residential or Conservation USE (Figure 3).
- b) UP-LIGHTING – UP-LIGHTING is prohibited, except for illumination of the United States Flag, a BUILDING façade, or a public monument. For any UP-LIGHTING, the LUMINAIRE shall be equipped with shields as necessary and shall comply with Section 10.6.2.2 including subsections b) through f). It shall be focused directly at the area of the target and SHIELDED so that the LAMP is not visible from a STREET, or a LOT that is in Residential or Conservation USE. Building facade illumination shall not exceed 0.25 watts of LAMP power per square foot of facade surface. The Lighting Plan shall specifically demonstrate compliance for any facade or monument UP-LIGHTING.
- c) Illuminated Outdoor Recreation Facilities – Notwithstanding the requirement of Section 10.6.2.1 (LUMINAIRE design and shielding), the illumination of outdoor recreational facilities such as, but not limited to playing fields, pools, rinks, tennis courts, driving ranges, ski areas, or skateboard parks, shall be by either SHIELDED or FULLY SHIELDED LUMINAIRES. Such lighting shall be exempt from Sections 10.6.2.2.a) (seventy degree cut-off), 10.6.2.2.c) (LIGHT TRESPASS), and 10.6.2.2.e) (LAMPS not to exceed 400 watts per LUMINAIRE). The following requirements shall apply to illuminated outdoor recreation facilities:
  - i. Such SHIELDED LUMINAIRES shall be mounted at sufficient height and aimed so that the brightest part of the beam is elevated no more than 60 degrees above a point directly vertically below the LUMINAIRE (Figure 4). Light poles for recreation facilities may be as high as necessary to adequately illuminate the facility in compliance with the maximum 60-degree elevation angle, but shall not exceed a height of 85 feet. See section 5.3.5.3 of this Bylaw for a special permit to increase pole height.
  - ii. The LUMINAIRES shall be SHIELDED so that LIGHT TRESPASS onto STREETS, or abutting LOTS in Residential or Conservation USE, is less than 0.8 fc. This measurement shall be made with a photometer positioned at the boundary and aimed directly at the LUMINAIRE. The Lighting Plan shall include calculations demonstrating that the LIGHT TRESPASS requirement will be satisfied.

- iii. The LAMP shall not be visible from a STREET, or an abutting LOT that is in Residential or Conservation USE. Alternatively, the installer may retain a qualified independent lighting consultant to measure the maximum luminance visible from STREETS, or abutting LOTS that are in Residential or Conservation USE. The measurement report shall be delivered to the Zoning Enforcement Officer and shall demonstrate that the maximum luminance apparent from a STREET, or an abutting LOT that is in Residential or Conservation USE, is not more than 2500 cd/sq.m.
- d) LUMINAIRES in a Local Historic Districts – In Local Historic Districts, LUMINAIRES may be exempted from Section 10.6.2.1 (LUMINAIRE design and shielding) if the Historic District Commission specifically requires LUMINAIRES of a type that is not available in a version that meets the FULLY SHIELDED criterion. In such cases, such LUMINAIRES shall comply with IESNA CUTOFF light distribution standards. Illumination for externally illuminated signs in a Local Historic District may be from below using UP-LIGHTING from SHIELDED LUMINAIRES. In this case, the LAMP shall not be visible from a STREET, or from an abutting LOT that is in Residential or Conservation USE, and shields shall comply with Section 10.6.2.2 b) (Visible part of shield has flat-black finish).

### 10.6.3 Total Site Power Limits

- 10.6.3.1 This section regulates the total amount of lighting that may be used on a LOT. For simplicity, this is accomplished through regulation of the total amount of outdoor LAMP watts installed on the LOT, instead of the total lumen output. An OUTDOOR LIGHTING installation complies with this section if the actual Total Installed Watt Ratings of all LAMPS is no greater than the Allowed Lighting Power. Ballast and transformer power is not counted in this total.
- 10.6.3.2 The Allowed Lighting Power shall be the sum of contributions calculated according to the Activity Areas listed in sections 10.6.3.2 a) through f) below. Only those spaces on a LOT, which are covered with impervious materials, shall be counted towards Activity Areas. Activity Areas on a LOT shall be clearly marked and labeled on the Site Plan. There shall be no overlapping Activity Areas. For a space to be included in the total of an Activity Area, a LUMINAIRE must be within 100 feet of any such space.
  - a) Parking lots, driveways, walkways, bikeways – 0.1 watts per square foot of the area of parking lots, driveways, walkways, bikeways, and any other outdoor impervious surfaces on the LOT. These Activity Areas include a 5-foot wide margin of grade or landscaping around the impervious surfaces.
  - b) BUILDING entrance areas – 13 watts per linear foot of the width of all doors, plus six feet per door.
  - c) BUILDING CANOPIES – 0.4 watts per square foot of the ceiling area of walkway CANOPIES. For portions of BUILDING walkway CANOPIES extending over an entrance area, the Allowed Lighting Power may be regulated by section 10.6.3.2.b) above.
  - d) Retail sales CANOPIES - 0.9 watts per square foot of the ceiling area of service station and retail sales CANOPIES. Retail sales CANOPIES are covered spaces that are used for display or dispensing of products for sale.
  - e) Retail sales frontage – 20 watts per linear foot of sales frontage. Sales frontage is measured along the edge, as viewed from a STREET, of a paved or otherwise improved area used exclusively for the display of vehicles or other large objects for sale. For this purpose, sales frontage shall be assumed to be 20 feet deep.
  - f) OUTDOOR SALES AREA – 0.8 watts per square foot times the area of the OUTDOOR SALES AREA. This area shall be specifically for the display and

storage of vehicles, structures, or other large objects offered for sale, and shall not include driveways, walkways, service areas, storage, or other uses.

10.6.3.3 Unlit areas of the LOT may not be used to calculate Allowed Lighting Power. An illuminated area of the LOT is defined as within 100 feet of a LUMINAIRE on the LOT, or, if under a CANOPY, within 25 feet of a LUMINAIRE mounted under the CANOPY.

#### 10.6.4 Lighting Plan

10.6.4.1 A Lighting Plan shall be included in all applications for a Site Plan Special Permit that proposes new or replacement lighting installations. For initial developments of land, a major modification (more than 25% of LUMINAIRES being modified or replaced), or a major addition (more than 25% increase in the number of LUMINAIRES), this lighting plan shall be certified to be valid and correct by its designer. The Lighting Plan shall contain:

- a) On the site plan – the location, height, shielding type of all existing and proposed outdoor LUMINAIRES, and the wattage rating of all LAMPS in each LUMINAIRE, including BUILDING or CANOPY mounted LUMINAIRES. Any existing off-site LUMINAIRES used to illuminate the LOT shall be included in the Lighting Plan. Activity areas (Section 10.6.3) shall be clearly marked on the Site Plan.
- b) Manufacturer's data – For all LUMINAIRES, whose LAMP wattage is greater than Table 1, Column B, the manufacturer's specification data and technical drawings, including the LUMINAIRE LAMP wattage; photometric data showing that the LUMINAIRE is FULLY SHIELDED, including an electronic copy of the IES photometric file, or a reference to the file location on the manufacturer's web site. Manufacturer's photometric specification that the LUMINAIRE is rated IESNA Full Cutoff (FCO) is sufficient to show that it is FULLY SHIELDED. For all LUMINAIRES whose LAMP wattage is less than values shown in Table 1, Column B but greater than values shown in Table 1, Column A, the manufacturer's specification data and technical drawings showing that it meets the definition of SHIELDED LUMINAIRE.
- c) The data of previous sections a) and b) shall be organized into a table, with one line per LUMINAIRE.
- d) Calculations showing that the maximum LIGHT TRESPASS allowed, Sections 10.6.2.2.c) (Light Trespass) and 10.6.2.4.c) (Outdoor Recreational Facilities), will be satisfied by the design.
- e) Calculation of the Allowed Lighting Power for the LOT according to Section 10.6.3 (Total Site Energy [Power] Limits). Activity areas (Section 10.6.3) shall be clearly marked on the Site Plan.
- f) Calculation of the Total Installed Lighting Power from the LUMINAIRES proposed for installation on the Lighting Plan plus any existing LUMINAIRES intended to remain in use, and demonstration that Total Installed Lighting Power does not exceed the Allowed Lighting Power.

10.6.4.2 Submission and subsequent approval of a plan does not relieve the applicant of responsibility to demonstrate conformity to all sections of this bylaw, both in the individual LUMINAIRES as built, and for the entire LOT as built. The designer shall submit an as-built plan that correctly reflects the as-built installation, and shall certify that the as-built installation conforms to the requirements of this Bylaw.

10.6.5 Exemptions – The following lights shall be exempt from the standards of this Bylaw:

10.6.5.1 Internally illuminated signs.

10.6.5.2 Temporary holiday lighting.

- 10.6.5.3 Emergency lighting such as used by the Police, Fire Department, or other official or utility emergency personnel. Placement of longer-term emergency lighting shall, to the largest extent possible, take into consideration the detrimental effects of GLARE on passing motorists and pedestrians, and on residential LOTS.
- 10.6.5.4 Temporary lighting used on construction sites. All such lighting shall be placed and directed to minimize the detrimental effects of GLARE on passing motorists and pedestrians, and on residential LOTS.
- 10.6.5.5 Lighting during special events such as fairs, celebrations, or concerts sponsored by the Town of Acton or authorized by the Acton Board of Selectmen. Lighting for festivals and carnivals is exempt but should be in keeping with the intent of this Bylaw.
- 10.6.5.6 Warning and alarm lights that alert to a malfunction or emergency situation.
- 10.6.6 Definitions
- CANOPY - an opaque ceiling over installed lighting.
  - CUTOFF (CO) – A LUMINAIRE light distribution, specified by the IESNA, where the intensity in candela per 1000 LAMP lumens does not numerically exceed 25 (2.5%) at a vertical angle of 90 degrees above nadir, and 100 (10%) at a vertical angle of 80 degrees above nadir. Nadir is the point directly vertically below the LUMINAIRE. A FULL CUTOFF (FCO) LUMINAIRE is also a CUTOFF LUMINAIRE.
  - DIRECT LIGHT – Light emitted directly from the LAMP, from the reflector or reflector diffuser, or through the refractor or diffuser lens of a LUMINAIRE.
  - FOOT CANDLE (fc) – Unit of ILLUMINANCE; One lumen per square foot.
  - FULL CUTOFF (FCO) – A LUMINAIRE light distribution, specified by the IESNA, where zero candela intensity occurs at an angle of 90 degrees above nadir, and at all greater angles from nadir. Additionally, the candela per 1000 LAMP lumens does not numerically exceed 100 (10%) at a vertical angle of 80 degrees above nadir. Nadir is the point directly vertically below the LUMINAIRE. A FCO LUMINAIRE is FULLY SHIELDED.
  - FULLY SHIELDED – Constructed in such a manner that no 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 above a horizontal plane passing through the lowest direct-light-emitting part of the LUMINAIRE (Figure 1). BUILDING CANOPIES, overhangs, roof eaves and similar types of construction shall not be considered as the means for providing the FULLY SHIELDED light cut-off characteristic. This shall be achieved by the LUMINAIRE itself (Figure 5).
  - GLARE – The sensation of visual discomfort or loss in visual performance and visibility produced by luminance within the visual field that is sufficiently greater than the luminance to which the eyes are adapted.
  - INDIRECT LIGHT – DIRECT LIGHT that has been reflected off the surface of any permanently constructed object other than the source LUMINAIRE.
  - IESNA or IES – Illuminating Engineering Society of North America. A professional association of lighting engineers and lighting manufacturers generally recognized as the definitive source for illumination recommendations in the United States. An IES photometric file is defined by IESNA standards.
  - ILLUMINANCE – The luminous flux incident per unit area, expressed in FOOT CANDLE (one LUMEN per square foot). Horizontal or vertical ILLUMINANCE is that measured with a photometer cell mounted horizontally or vertically.

- LAMP – The light source component of a LUMINAIRE that produces the actual light.
- LIGHT TRESPASS – DIRECT or INDIRECT LIGHT produced by an artificial light source and which shines outside the boundaries of the LOT containing the LUMINAIRE.
- LUMINAIRE – A complete OUTDOOR LIGHTING unit or fixture including a LAMP or LAMPS, together with the parts designed to distribute the light, to position and protect the LAMPS, and to connect the LAMPS to the power supply, but not including a pole on which the LUMINAIRE may be mounted.
- OUTDOOR LIGHTING – The night-time illumination of an outside area or object by a LUMINAIRE located outdoors. LUMINAIRES under a CANOPY are considered outdoor lights and are regulated by this Bylaw.
- OUTDOOR SALES AREA – A static display of goods for sale at night, such as automobile sales lots, landscaping and nursery businesses, outdoor construction materials sales lots, and outdoor activity areas such as miniature golf, family fun centers, and permanent swap meets. An OUTDOOR SALES AREA location is not covered by CANOPIES or other STRUCTURES.
- SHIELDED – A LUMINAIRE employing a shield to prevent GLARE. The LUMINAIRE shall have a generally downward distribution of light and must have a top shield to minimize upward light.
- STREETLIGHTS – LUMINAIRES installed within a STREET and intended primarily for the illumination of the STREET.
- UP-LIGHTING – DIRECT LIGHT illumination distributed above a 90 degree horizontal plane through the lowest DIRECT LIGHT emitting part of the LUMINAIRE.

10.6.7 Figures and Tables

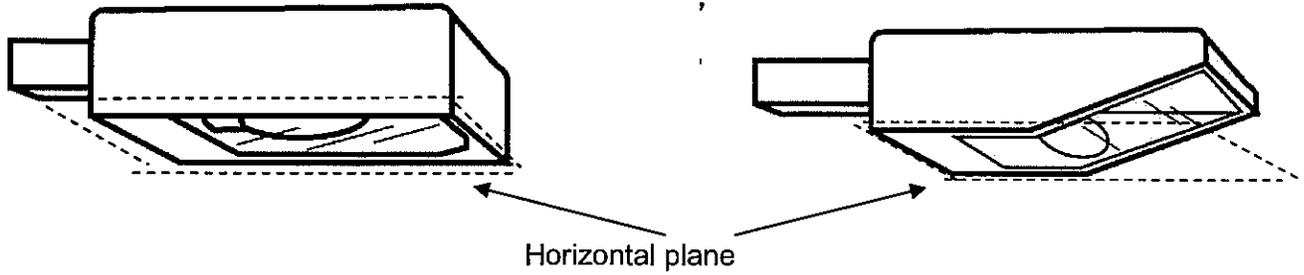
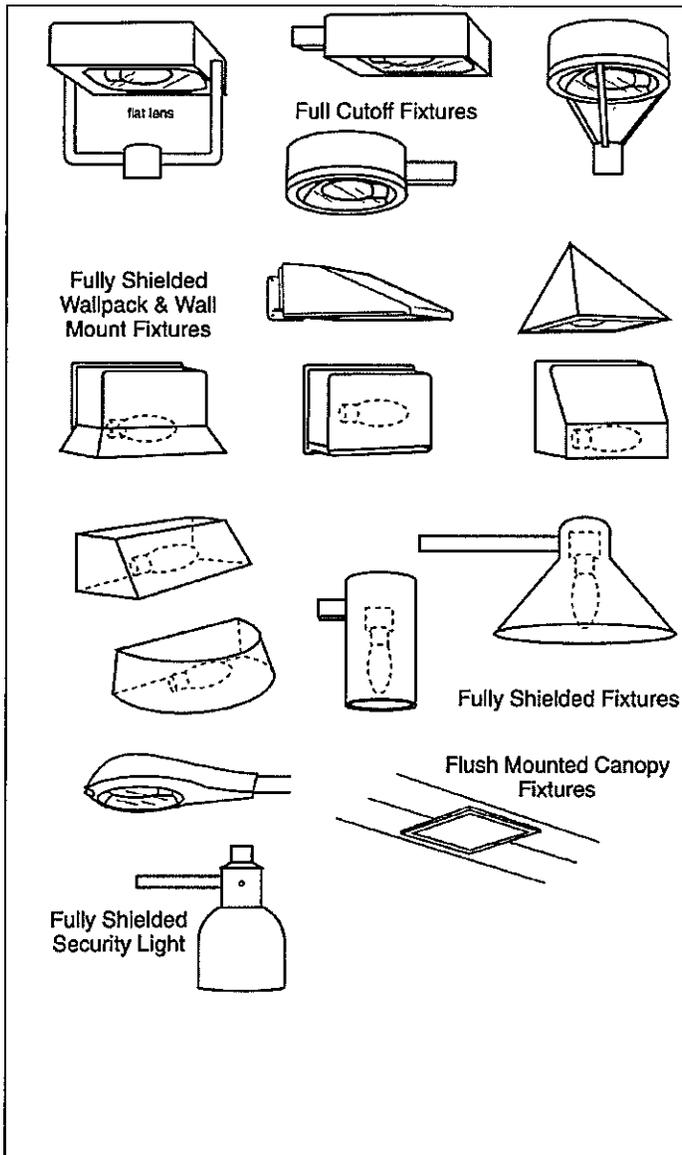


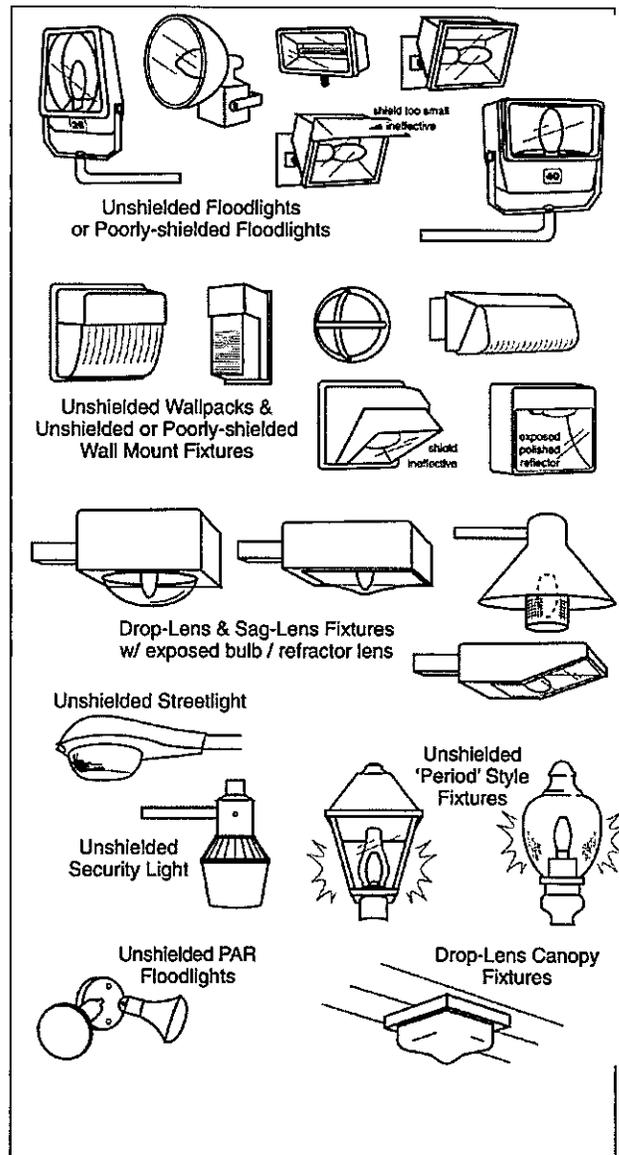
Figure 1A. FULLY SHIELDED. No light emitted above a horizontal plane through the lowest DIRECT-LIGHT-EMITTING part of LUMINAIRE.

Figure 1B. Not FULLY SHIELDED. Light is emitted above a horizontal plane through the lowest DIRECT-LIGHT-EMITTING part of LUMINAIRE.

Examples of FULLY SHIELDED LUMINAIRES



Examples of LUMINAIRES that are NOT FULLY SHIELDED



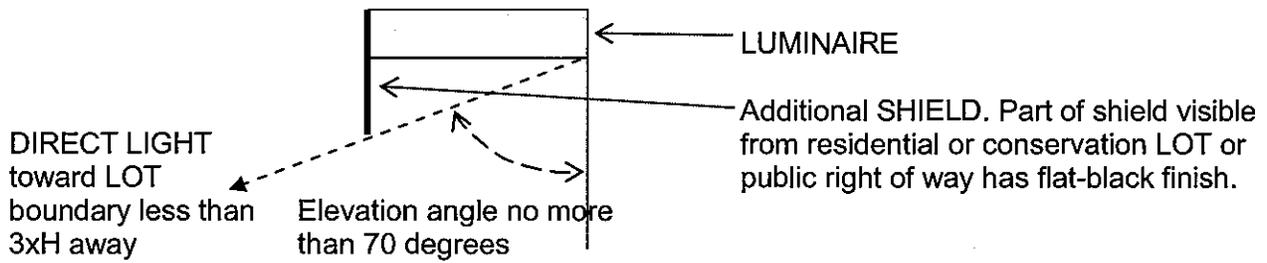


Figure 2. Any outdoor LUMINAIRE whose distance from the LOT boundary is less than three times its height shall be shielded so that all DIRECT LIGHT cast in the direction of residential or conservation LOTS and public rights-of-way is cut-off at an angle no more than 70 degrees measured from a vertical line directly below the LUMINAIRE.

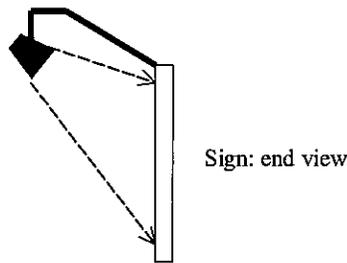


Figure 3. Lighting for externally illuminated signs shall be projected downward from above. The LUMINAIRE shall be SHIELDED and shall comply with Section 3.2 (Control of LIGHT TRESPASS and GLARE).

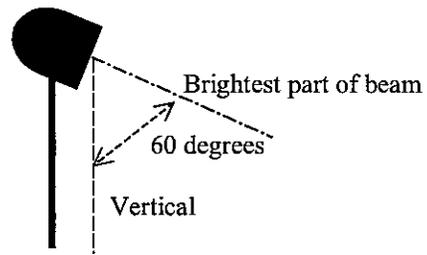


Figure 4. Illumination for outdoor recreational facilities shall be SHIELDED LUMINAIRES and shall be mounted at sufficient height and aimed so that the brightest part of the beam is elevated no more than 60 degrees above a point directly vertically below the LUMINAIRE

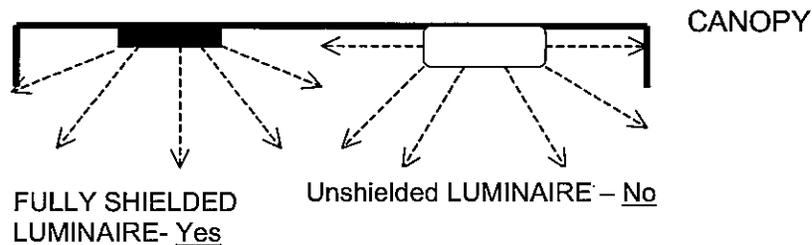


Figure 5. Building canopies, overhangs, roof eaves and similar types of construction shall not be considered as the means for providing the light cutoff. The cutoff characteristics shall be achieved by the LUMINAIRE itself.

Table 1. LUMINAIRES whose LAMP wattage exceeds the values in Column A of this table shall be SHIELDED. LUMINAIRES whose LAMP wattage exceeds the values in Column B of this table shall be FULLY SHIELDED.

Lamp type	A – SHIELDED	B – FULLY SHIELDED
Incandescent, Halogen	60 w	120 w
High Pressure Sodium, Metal Halide, Mercury Vapor, other HID	35 w	35 w
Fluorescent, Low Pressure Sodium	13 w	20 w