

ARTICLE 600 SPECIAL REGULATIONS

601 SIGN REGULATIONS

The provisions of Section 601 shall apply to all zoning districts.

The purpose of the following regulations to all types of signs is to reasonably regulate the size, location, illumination and types of materials in order to:

1. Encourage signs that have locations, materials and designs that are compatible with the surrounding neighborhood and buildings;
2. Eliminate excessive and confusing signs; and
3. Eliminate potential hazards to motorists and pedestrians.

601.1 Definitions

Sign

Any word, letter, symbol, drawing, picture, design, device, article or object which advertises, calls attention to or indicates the location of any premises, person or activity; whatever its manner of composition or construction and however displayed.

Accessory Sign

A sign, which advertises or indicates the person occupying the premises on which it is erected or the business transacted thereon or advertises the property itself for sale or rent and which contains no other matter.

Freestanding Sign

Any sign not attached to a building.

Hanging Sign

Any sign which projects more than eight (8) inches from a wall or façade.

Primary Sign

A sign which contains information on the name of the business, the owner, and/or goods or services offered, located on the same side of the premises as the main entrance.

Sign, Area of

1. The area of a sign shall be considered to include all lettering, wording, and accompanying designs and symbols, together with the background on which they are displayed, any frame around the sign and any "cutouts" or extensions, but shall not include any supporting structure or bracing.
2. The area of a sign consisting of individual letters or symbols attached to or painted on a surface, building, wall or window, shall be considered to be that of the smallest quadrangle or a triangle which encompasses all of the letters and symbols.
3. The area of a sign consisting of a three-dimensional object shall be considered to be the area of the largest vertical cross-section of that object.
4. In computing the area of double faced signs, the area of one side shall be used.

Sign, Temporary

Any sign maintained for a continuous period of not more than thirty days in a calendar year.

601.2 Procedure

A written application for the installation of all types of signs shall be submitted at the office of the Zoning Enforcement Officer, including signs requiring Special Permits. The application shall include all information necessary to determine compliance with the regulations of this Bylaw.

601.3 General Requirements

1. In all districts, all exterior signs or advertising devices erected or maintained must, unless expressly provided, conform to the following requirements.
2. The information contained on all signs for business shall be limited to the type of business, goods or service offered and name of business and/or owner.
3. Whenever possible, a flush mounted sign attached to the wall of the building shall be used. The method of attaching the sign must be approved by the Zoning Enforcement Officer.
4. If, in the opinion of the Board of Appeals a flush mounted sign would not be adequately visible from a public way, a Special Permit may be sought from the Board of Appeals for the erection of one freestanding sign of not more than two faces. The Special Permit may be conditional upon restrictions that regulate design, illumination, size, colors and construction.
5. Private signs shall not be placed on publicly owned property unless authorized by the Board of Selectmen.
6. Signs not exceeding one square foot containing cautionary or directional information for traffic flow require the approval of the Zoning Enforcement Officer. Informational, directional and traffic signs owned and installed by a government agency are permitted by right.
7. Sign materials should be durable and easy to maintain. Materials such as wood, brass or bronze are most appropriate.
8. In the case of a sign for business use, a primary sign containing information on the name of the business, owner, and goods or services offered shall be limited to one that is located on the same side of the building as the main entrance. In addition, one accessory sign may be erected on any other side of the building in view of a parking area or public way.

601.4 Signs Requiring Special Permit Approval

All freestanding signs and projecting/hanging signs, which are attached by a bracket to a wall and project more than eight inches, require a Special Permit issued by the Board of Appeals.

1. Sign applications for a Special Permit approval must include the following information: Three (3) copies of a scale drawing showing the dimensions of the proposed sign, construction details, any designs or logo, lettering, colors, materials and a cross section of the sign with dimensions. The proposed location of the sign must be identified on a photograph or scale architectural drawing of the building that shows the height above grade and any other necessary dimensions or design

- features requested by the Board of Appeals. The Design Review Board shall review the application and submit its comments to the Board of Appeals.
2. Proposed signs should, by their location and design, be harmonious with the buildings and sites that they occupy. When acting upon a Special Permit application for a sign, the Board of Appeals shall consider the proposed sign in relation to the character of the building and surrounding neighborhood. Signs should be informative, legible and designed to improve the quality of the streetscape.

601.5 Signs Approved by the Zoning Enforcement Officer

Flush mounted, awning, special events and temporary signs require approval of the Zoning Enforcement Officer.

1. Applications for sign permits must include two copies of the following information. The proposed size, colors, dimensions, materials and location of the sign in sufficient detail for the Zoning Enforcement Officer to evaluate the application. The method of attaching the sign to a structure or erecting the sign must be described.
2. The Zoning Enforcement Officer shall evaluate the proposed sign's location, size, materials, and design to determine if the sign is in compliance with the dimensional regulations set forth in Section 601.6 prior to issuance of a sign permit.

601.6 Dimensional Requirements

General: Lettering shall not exceed fourteen (14) inches in vertical dimension.

1. Awning Signs: Advertising on awnings must be painted on or attached flat against the surface of the awning and not project beyond the valance nor be attached to the underside.
2. Cautionary Signs: Not to exceed three (3) square feet in area.
3. Directional Signs: Not to exceed three (3) square feet in area.
4. For Sale, Rent or Lease Signs:
 - a) Advertising a lot, building or portion thereof: not to exceed six (6) square feet in area;
 - b) Advertising lots or buildings in approved subdivisions: not to exceed twenty (20) square feet in area or be larger than ten (10) linear feet any side.
5. Flush Mounted Signs: Not to exceed one (1) square foot for each linear foot of the façade or wall on the side of the premises containing the main entrance minus the area of any accessory signs, to a maximum of fifty (50) square feet.
6. Freestanding Signs: Not to exceed twenty-five (25) square feet in area with a maximum height of twelve (12) feet and a minimum height above the ground of thirty (30) inches.
7. Hanging Signs: Not to exceed five (5) square feet in area with the lowest part of the sign a minimum of ten (10) feet above ground and not extending above the top of the wall or façade.
8. Temporary Signs:
 - a) Political signs: May be erected.
 - b) Special Event Signs: Not to exceed six (6) square feet in area, may be erected no sooner than fourteen (14) days before the event, and must be removed no later than twenty-four (24) hours after the event.
9. Window Signs: Signs mounted on windows in addition to the requirements for flush mounted signs, shall not cover more than thirty percent (30%) of the window area.

601.7 Prohibited Signs

1. No sign shall extend above the roof line of the building to which it is fastened.
2. Electric or any other powered signs shall not blink, flash or have moving parts. Neon signs are prohibited. Signs containing reflective elements which sparkle in the sunshine are not permitted.
3. Billboards are not permitted.
4. Any sign advertising a business or organization no longer located on the premises is not permitted.
5. Any signs that obstruct the corner clearance, clear site triangle of any intersection as defined in Section 603.10.3 of this Bylaw are not permitted.
6. String lights used in connection with commercial enterprises, except for temporary lighting used for decoration during the specific holiday season.

601.8 Exempted Signs

1. Signs not exceeding one square foot in area and bearing only property numbers, names of occupants or other identification of premises not having commercial connotations.
2. Flags and insignia of any government except when displayed in connection with commercial promotion.
3. Legal notices, identification, informational or directional signs erected or required by governmental bodies.
4. Carved or other integral devices identifying the building name or date of erection.
5. Signs directing and guiding traffic and parking on private property, but bearing no advertising matter.
6. Standard gasoline pumps, vending machines, or similar devices bearing thereon in usual size and form the product name and type, provided that copy area not exceed four (4) square feet.
7. Temporary signs erected for any charitable or religious cause or allowed by the Board of Selectmen.
8. Signs not exceeding three (3) square feet, necessary to warn of a hazard or to post land, shall be permitted as required to accomplish these purposes.
9. Signs that advertise the sale, lease or rent of a lot or building shall be located only on the property which is being advertised. Signs shall not exceed six (6) square feet in area or two in number. One sign advertising the sale of lots or buildings in approved subdivisions is permitted at the intersection of the new and existing streets. Said sign shall not exceed twenty (20) square feet or be greater than ten (10) feet in any dimension. Any such signs shall be removed within five days of the lease or sale of the premises or the sale of the last lot in the subdivision.

601.9 Illumination

Signs may be illuminated by a constantly steady white light that is shielded and directed at the sign in order to prevent direct glare on a public way or adjacent property. Signs using interior lighting shall have non-exposed white lights of reasonable intensity. Signs shall only be lighted during the hours of operation and shall require a Special Permit.

601.10 Nonconforming Signs

Nonconforming signs shall not be altered by changing the design, construction, wording, painting or lighting without written approval of the Zoning Enforcement Officer.

601.11 Enforcement

1. Maintenance and Removal:

Every sign shall be maintained in good structural condition at all times. All signs shall be kept neatly painted, including all metal parts and supports thereof that are not galvanized or of rust resistant material. The Zoning Enforcement Officer shall inspect and shall have the authority to order the painting, repair, alteration or removal of a sign which shall constitute a hazard to safety, health, or public welfare by reason of inadequate maintenance, dilapidation, or obsolescence.

2. Abandoned Signs:

Except as otherwise provided in the section, any sign that is located on property which becomes vacant and is unoccupied for a period of three months or more, or any sign which pertains to a time, event or purpose which no longer applies, shall be deemed to have been abandoned. Permanent signs applicable to a business temporarily suspended because of a change of ownership or management of such business shall not be deemed abandoned, unless the property remains vacant for a period of six months or more. An abandoned sign is prohibited and shall be removed by the owner of the sign or owner of the premises.

3. Dangerous or Defective Signs:

No person shall maintain or permit to be maintained on any premises owned or controlled by him any sign which is in a dangerous or defective condition. Any such sign shall be removed or repaired by the owner of the sign or the owner of the premises.

4. Removal of Signs by the Zoning Enforcement Officer:

The Zoning Enforcement Officer shall cause to be removed any sign that endangers the public safety, such as an abandoned, dangerous, or materially, electrically, or structurally defective sign, or a sign for which no permit has been issued.

603 PARKING REGULATIONS

603.1 General Requirements

Off-street parking shall be provided in all zoning districts for new construction, conversion, expansion or increase in intensity of use for any structure. In the case of an expansion or conversion these standards shall apply to the expanded or converted areas.

603.2 Use of Setback Areas for Parking

In Neighborhood Business Districts, a strip not less than ten feet wide on which to grow grass, bushes, flowers or trees shall be maintained open, unpaved and not parked upon along each side and rear property line of such a lot wherever it abuts a residential district.

603.3 Purpose

The purposes of the parking standards are to:

1. Provide adequate parking for business and residences in all zoning districts.
2. Promote traffic safety for both vehicular and pedestrian traffic.
3. Ensure orderly access and egress to and from the public way.

4. Protect abutting residential properties from such nuisances as noise, fumes, headlight glare, dust and increased surface water runoff from the land covered by impervious surfaces.
5. Provide visual relief from broad expanses of pavements and vehicles.
6. Reduce congestion on public ways.

603.4 Number of Parking Spaces, Loading Areas

The following table sets forth the required number of parking spaces and loading areas for uses in all zoning districts. The Board of Appeals may, by Special Permit allow fewer spaces than are required below if they make a finding that the proposed use or site conditions do not warrant the number of spaces specified in this section. The Zoning Enforcement Officer shall determine the number of parking spaces required for any use or structure not specifically provided for in this section.

PARKING REQUIREMENTS FOR PERMITTED USE

TYPE OF USES	REQUIRED NUMBER OF SPACES
In All Districts:	
Dwelling/apartment over business structure	2 spaces
Automobile retail and service establishment and other retail and service establishments involving usually extensive display areas, either indoor or outdoor in relation to customer traffic.	2 spaces per 800 square feet of gross floor space. In case of outdoor display areas, one space for each 1,000 square feet of lot area.
Commercial, retail, and personal service establishments. Professional and business offices, including banks, insurance, and real estate establishments.	1 space per 300 square feet of gross floor area.
Medical / dental office / clinics / kennels / veterinary establishments	5 spaces per professional office / establishment. Parking areas adequate to accommodate, under normal conditions, the vehicles of occupants, employees, members, customers, clients, and visitors to the premises, shall be provided as determined by the Board of Appeals.
Gas / service stations	3 spaces for each service bay.
Funeral parlors	10 spaces per repose room.
Restaurants, taverns	1 space for every 4 seats. One additional space for every 2 employees on the largest shift.
All other business uses, including, but not limited to, farm stands, tradesman’s shops, storage, or distribution plants.	Parking spaces adequate to accommodate, under normal conditions, the vehicles of occupants, employees, members, customers, clients, and visitors to the premises shall be provided as determined by the Board of Appeals.

603.5 Design Standards

All parking spaces shall have dimensions of nine feet in width and eighteen and one half feet in length. Curbing or wheel stops shall be used where needed for safety or to delineate spaces in gravel lots. A maximum of two feet of landscaped setback area adjacent to the front or back of the stall for bumper overhang, may be used to satisfy the stall length requirements.

All driveways and maneuvering aisles shall be designed so that traffic flows freely at all times and can exit and enter into a public way being driven in a forward direction. All travel aisles must be a minimum of twenty-four feet wide.

Parking and loading areas shall not be located wholly or partially within the right-of-way of a public street.

603.6 Drainage / Surfacing

1. Parking and loading areas shall be designed and constructed to contain all stormwater runoff on the premises. The drainage system shall be designed and constructed to include the following:
 - a) Oil and grease traps;
 - b) Accommodate the fifteen-year storm event if connected to an existing Town system; connections are subject to Town Engineer's approval; and
 - c) All structures within parking and loading areas shall be designed for H-20 loading capacity.
 - d) Best Management Practices in accordance with industry standards and Massachusetts Department of Environmental Management Guidelines for Stormwater Management, as revised.
2. The following information shall be submitted for review of the drainage design:
 - a) Location and types of inlets;
 - b) Drainage watershed limits, flow paths and acreage of areas tributary to drainage structures and water detention areas;
 - c) The location, type, size, length, invert elevations and slope of all drainage pipes and culverts;
 - d) Construction details of proposed drainage structures including inlets, outlets, manholes, pipes, headwalls and all other proposed drainage structures;
 - e) The location of wetlands and waterbodies within one hundred feet of the site. The boundaries of wetland areas shall be approved by the Duxbury Conservation Commission.
 - f) Drainage calculations prepared by a registered professional engineer, licensed in the Commonwealth of Massachusetts.

All drainage systems must be constructed to adequately dispose of surface water generated on that property and to have low maintenance.

Consideration must be given to the location of snow piles and where meltwater will travel. This must be accounted for in the drainage design.

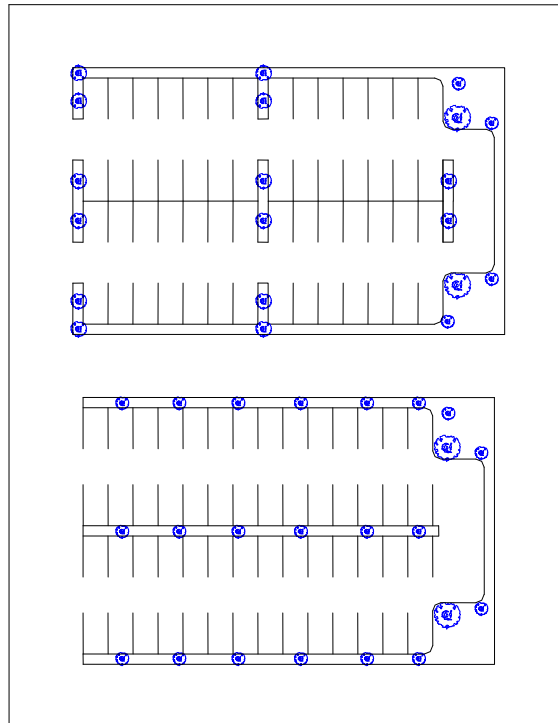
603.7 Lighting

Where lighting is needed, it shall be designed and located so as to provide sufficient illumination of the ground below, for the safe passage and identification of vehicles and

pedestrians in the immediate areas and directed away from any public or private way or adjacent property. An average of three- to five-foot candle lighting level throughout the parking area shall be required for safe and sufficient illumination. Lighting shall not be projected from the lighting fixture in excess of a forty-five degree angle above the parking lot. Where lighting levels in excess of the above average are deemed necessary by owners, lessees or others exercising control of said parking areas, the Board of Appeals may grant a Special Permit for lighting level in excess of five foot candles. The type and height of lighting fixtures is subject to review by the Board of Appeals and the Design Review Board.

603.8 Landscaping

1. In large parking areas with fifty or more spaces, the parking lot shall be subdivided by landscaped islands. The landscaped islands shall have a width of not less than three feet and shall be planted with bushes and mulched. One tree or bush shall be provided for every five parking spaces. The diagram below illustrates two alternative types of parking for landscaping.
2. A landscaped elevated berm shall be provided adjacent to the traveled way to separate parking and other uses from the road. This buffer strip shall be planted with grass and shrubs or trees. Plantings must not obstruct the clear sight distance of driveways.
3. Storage and loading areas, dumpsters, utility buildings, machinery and other unsightly uses shall be screened from view by a tight fence or dense plantings.
4. All areas that are landscaped must be properly maintained. Trees and shrubs that die must be replaced within one growing season.
5. Parking areas that abut the Residential Compatibility District shall provide a ten-foot (10') landscaped buffer strip that will adequately screen the parking lot from residential buildings. Trees, hedges, bushes, berms or tight fences shall be provided. All landscaped areas shall be properly maintained. Shrubs or trees that die must be replaced within one (1) growing season.



603.9 Mixed Uses

In the case of mixed uses, the required parking spaces shall be the sum of the requirements of the individual uses computed separately. Parking facilities for one use shall not be considered as providing the required parking spaces for any other use unless it can be clearly demonstrated that the need for parking occurs at different times.

603.10 Entrance Requirements

1. **Curb Cuts:** The number of curb cuts on state and local roadways shall be minimized in order to promote the orderly flow of traffic on public streets and provide for pedestrian safety. The number of driveways shall be limited to two per street line. To the extent feasible, access to business shall be provided by one of the following:
 - a) Access via a common driveway serving adjacent lots or businesses;
 - b) Access via an existing side street;
 - c) Access via a cul-de-sac or loop road that serves adjacent lots or business.
2. **Width:** The width of an entrance or exit for one-way traffic shall not be less than twelve (12') feet wide. The width of a driveway for two way traffic shall be twenty-four (24') feet wide. Both shall have the appropriate radius curbing installed.
3. **Sight Distance:** All driveways serving a business must comply with the corner clearance requirements of this section. Parking plans shall include delineation of the clear sight triangle. Clear sight distance at the intersection of a driveway serving a business and an existing way shall be defined by a clear sight triangle at the intersection. Two sides of the triangle shall coincide with the centerline of the access road and the existing way respectively. The third side of the triangle, measured from the centerline of the access road at a point thirty (30') feet from the centerline of the existing way, shall be identified as the clear sight distance. Depending on the speed limit along the existing way, the minimum sight distance shall be as follows:

Maximum Design Approach Speed	Clear Sight Distance
45 mph*	350 feet
35 mph	250 feet
25 mph	150 feet

*miles per hour

Measurements of the clear sight distance shall be based on a line of sight at a level three and one-half (3.5) feet above road surface at each end of the clear sight distance.

Inside the clear sight triangle, no vision-obstructing object or landscaping shall be permitted between a height of three and one-half (3.5') feet and eight (8') feet above the plane identified by the adjacent curb grades.

603.11 Loading Zones

Areas for loading and unloading shall be provided in all parking lots. They shall be of sufficient size to accommodate all vehicles making routine deliveries to the facility. The location of the loading areas shall be designed so that trucks can maneuver safely and conveniently to and from the public way and, when in use, vehicles do not block the public

way, any parking space or parking lot aisle. The areas used for the loading zone cannot be used for parking.

603.12 Handicapped Parking

All parking lots shall provide for handicapped parking in accordance with the Rules and Regulations of the Architectural Access Board, 521 CMR 1.00-3.00.

603.13 Erosion Control

During and after construction all soils, mulch, wood chips, etc. will be confined to the property.

603.14 Location of Facilities

Required off-street parking facilities shall be provided on the same lot. Where the requirements of the section cannot be met on the same lot, the Board of Appeals may, by Special Permit, allow the provision of the required parking on any lot in the same zoning district and in the same ownership within three hundred (300') feet of the use served or on a municipal parking lot located within three hundred feet of the use served.

603.15 Change of Use

Whenever there is an expansion or change of the use of a property which necessitates an increase of more than twenty percent (20%) of the required parking as measured by the parameters of this Bylaw, the required parking facilities shall be provided.

603.16 Restrictions

Parking areas shall be used for registered motor vehicle parking only, with no sales, dead storage, repair work, dismantling or servicing of any kind. The required parking areas shall be permanently available for use by patrons and employees of establishments for which such space was provided.

609 DEMOLITION OF HISTORICALLY SIGNIFICANT BUILDINGS

609.1 Purpose

This Bylaw is adopted to protect and preserve buildings and structures within the Town, which reflect or constitute distinctive features of the architectural, cultural, economic, political, or social history of the Town and to encourage the preservation and restoration rather than demolition of such buildings and structures. By furthering these purposes, the public welfare shall be promoted, making the Town a more attractive and desirable place in which to live, learn and work.

609.2 Definitions

Demolition

The intentional act of pulling down, destroying, removing, or razing a building or structure or commencing the work of total or substantial destruction with intent of completing same.

Regulated Buildings or Structures

The provisions of this Bylaw shall apply only to buildings or structures which in whole or in part were built seventy-five (75) years or more prior to the date of the application for a demolition permit and are:

- a) Listed or eligible to be listed on the National Register of Historic Places, or on the State Register of Historic Places; or
- b) Associated with one or more historic persons or events, or with broad architectural, cultural, economic, political or social history of the Town; or
- c) Historically or architecturally significant in terms of period style, method of building construction or association with a significant architect or builder either by itself or as part of a group of buildings.

609.3 Procedures

No permit for the demolition of any building or structure shall be issued other than in conformity with this Bylaw. Upon receipt of an application for a demolition permit, the Zoning Enforcement Officer shall forward a copy to the Historical Commission and to the Planning Director.

Within thirty (30) business days of receipt of the application from the Zoning Enforcement Officer to the Commission, the Commission shall make a determination whether or not the building or structure is a "regulated building or structure." If the Commission determines that the building or structure is not regulated by this Bylaw, it shall sign the permit immediately and forward it to the Zoning Enforcement Officer who shall issue the permit.

If the Commission determines that the building or structure is regulated by this Bylaw, it shall review the application for demolition at a public hearing to be held within twenty (20) business days of determining that the building or structure is a regulated building or structure. The Commission shall publish a notice of the hearing in a newspaper of local circulation during each of the two weeks preceding the date of the public hearing, noting the date, location and subject of the hearing. Such notice shall be paid for by the applicant for a demolition permit. The Commission shall also mail, certified return receipt, a copy of said notice to the applicant, and, by regular mail, to the owners of all properties within three hundred (300') feet of the regulated building's or structure's property as they appear on the most recent real estate tax list of the Board of Assessors; and the Planning Board.

No less than ten (10) business days after the public hearing on the demolition permit, the Commission shall make its determination and notify the applicant in writing stating its reasons with a copy to the Zoning Enforcement Officer and Planning Director.

If a determination is made that the building or structure is historically significant meeting one of the three criteria of a "regulated building or structure," the Zoning Enforcement Officer shall not issue a demolition permit for a period of six (6) months from the date of notification to the Zoning Enforcement Officer.

Once the Commission determines the building or structure is historically significant and demolition should be delayed, the Commission shall invite the owner of record of the building, the Zoning Enforcement Officer, the Planning Director, and a representative of the Design Review Board to participate in an investigation of alternatives to demolition including

but not limited to incorporation of the building or structure; utilization of financial incentives to rehabilitate the building or structure; seeking new owners willing to purchase and preserve, restore or rehabilitate the building or structure, or moving the building or structure.

The Zoning Enforcement Officer may issue a demolition permit prior to the expiration of the six (6) month period after receiving written notice from the Commission that:

- a) The Commission is satisfied that there is no reasonable likelihood that either the owner or some other person or group is willing to purchase, preserve, rehabilitate, restore or relocate such building or structure; or
- b) The Commission is satisfied that the owner has made continuing, bona fide, and reasonable efforts to locate a purchaser to preserve, rehabilitate, restore or relocate the subject building or structure, and that such efforts have been unsuccessful. These efforts could include, but not be limited to, listing the building with a realtor or realtors, advertising in local general circulation newspapers; and advertising in one Boston general circulation newspaper; or
- c) The applicant has agreed to accept specific conditions approved by the Commission.

In an emergency, nothing in this Bylaw shall prohibit the Zoning Enforcement Officer from exercising the authority of G. L. c. 143, but the Zoning Enforcement Officer shall make every reasonable effort to inform the Commission of his actions in such an emergency.

610 WIRELESS TELECOMMUNICATIONS SERVICES FACILITIES

610.1 Purpose

The purpose of this section is to regulate the design and location of wireless telecommunications service facilities in a manner that minimizes the visual and environmental impacts of such facilities consistent with both the requirements of the Federal Telecommunications Act of 1996, 47 U.S. C. sec 332(c) et seq., and rights conferred to local government thereby. The standards set forth herein are intended to preserve the safety, character, appearance, property values, natural resources and historic structures of the Town; mitigate adverse visual effects through proper design, location and screening; encourage co-location of antennas on a structure where feasible in order to minimize the number of sites and structures required; encourage location of antennas on existing towers; and protect the Town from the effects of uncontrolled development and location of wireless telecommunications towers, wireless service facilities and accessory structures, while recognizing federally granted rights of carriers to provided necessary and marketable telecommunications services and the desire of the public and the Town departments to access and utilize new technologies.

610.2 Scope

In addition to any applicable sections of the Protective Bylaw, Section 610 shall apply to all wireless telecommunications service antennas and tower related equipment, fixtures and enclosures, including any modifications to any of these, but shall not apply to Police, Fire, ambulance or any other communications systems used by the Town, amateur ham radio or citizens band radio antennas, or non-transmitting television antennas.

610.3 Definitions

Above Ground Level (AGL)

A measure of vertical distance from the average existing natural grade of a site at the base of a wireless service structure to a point of a structure.

Antenna

The surface from which wireless radio signals are sent and/or received by a wireless service facility.

Camouflaged

A wireless service facility that is disguised, hidden, part of an existing or proposed structure or placed within an existing or proposed structure is considered "camouflaged".

Carrier

A company that provides wireless service.

Co-location

The use of a single mount on the ground by more than one carrier (vertical co-location) and/or several mounts on an existing building or structure by more than one carrier.

Environmental Assessment (EA)

An EA is the document required by the Federal Communications Commission (FCC) and the National Environmental Policy Act (NEPA) when a wireless service facility is placed in certain designated areas.

Equipment Shelter

An accessory, enclosed structure, cabinet, shed or box at the base of the mount within which are housed batteries and electrical equipment.

Fall Zone

The area on the ground within a prescribed radius from the base of a wireless service facility. The fall zone is the area within which there is a potential hazard from falling debris (such as ice) or collapsing material.

Guyed Tower

A monopole or lattice tower that is secured to the ground or other surface by diagonal cables.

Licensed Carrier

A company authorized by the FCC to construct and operate a commercial mobile radio services system.

Monopole

The type of mount that is self-supporting with a single shaft of wood, steel or concrete and a platform (or racks) for panel antennas arrayed at the top.

Mount

The structure or surface upon which antennas are mounted, including the following four types of mounts:

- 1) Roof-mounted. Mounted on the roof of a building.
- 2) Side-mounted. Mounted on the side of a building.
- 3) Ground-mounted. Mounted on the ground.
- 4) Structure-mounted. Mounted on a structure other than a building.

Omnidirectional (Whip) Antenna

A thin rod that transmits and/or receives a signal in all directions.

Panel Antenna

A flat surface antenna usually developed in multiples.

Radio Frequency Engineer (RF)

An engineer specializing in electrical or microwave engineering, especially the study of radio frequencies.

Radio Frequency Emission

The emissions from wireless service facilities.

Security Barrier

A locked, impenetrable wall, fence or berm that encloses an area to prevent unauthorized entry or trespass.

Telecommunications Specialist

A qualified professional with expertise in monitoring of electromagnetic fields and telecommunications engineering who has a record of service to municipalities.

Tower

A structure that is intended to support equipment used to receive and/or transmit electromagnetic waves. Design examples include: lattice tower (self-supporting with multiple legs and cross-bracing structural steel) and monopole (self-supporting with a single shaft).

Wireless Telecommunications Service Facility

Facility, fixture, structure or equipment for the provision of wireless services for resale or lease, as defined by the Federal Telecommunications Act, used or intended for use by a public utility or an FCC-licensed carrier.

Wireless Telecommunications Services

All forms of wireless communication included in the definition in the Federal Telecommunications Act of 1996, including commercial mobile radio services, licensed wireless services, common carrier wireless exchange services and other forms of wireless communication of a similar nature. Common carrier wireless exchange services include cellular telephone services, communications systems and paging services, wireless computer networking, wireless internet access and wireless communication services of a similar nature. Wireless telecommunications services shall not be construed to include a telephone exchange.

610.4 Use Regulations

A wireless telecommunications service facility shall require a building permit in all cases and may be permitted as follows:

1. A wireless telecommunications service facility antenna may be attached to any existing lattice tower, monopole, utility pole, electric utility transmission tower or water tank in any zoning district, except on towers supporting antennas used for citizen's bands, amateur radio, or television receiving antennas, provided that the installation of the new facility does not substantially alter the size or increase the height of the existing structure. Issuance of a building permit for such installations shall require prior site plan approval by the Planning Board in accordance with the applicable requirements and determinants under Section 615. The installation of a wireless telecommunications service facility attached to such existing structure may exceed the height of the existing structure by no more than ten (10) feet, subject to the issuance of a Special Permit by the Board of Appeals and prior site plan approval by the Planning Board.

2. A wireless telecommunications service facility antenna may be installed within any existing church steeple in any zoning district, provided such antenna and accessory equipment is completely enclosed and not visible from outside the structure.
3. A wireless telecommunications service facility antenna may be installed within any structure used exclusively for business in a business district, provided such antennas are completely enclosed and not visible from any adjacent street. Issuance of a building permit for such installations shall require prior site plan approval by the Planning Board in accordance with the applicable requirements and determinants under Section 615.1. The installation of an exterior wireless communication facility antenna on a structure used exclusively for business in a business district shall not exceed the existing height of the building by more than ten (10) feet, subject to the issuance of a Special Permit by the Board of Appeals and prior site plan approval by the Planning Board.
4. A wireless telecommunications service facility tower and accessory equipment shelter(s) may be constructed provided the maximum tower height shall be one-hundred (100) vertical feet above ground level. Whip antennas may extend a maximum of ten (10) feet above the top of a tower. Such facilities shall require a Special Permit by the Board of Appeals and prior site plan approval by the Planning Board. Guyed towers are prohibited. No more than one such tower may be located on a lot.
5. Wireless telecommunications service facilities and antennas shall not be located:
 - a) Within or on residences, business structures within which there is a dwelling unit, schools, nursing homes, or structures of historic significance, and except as otherwise permitted under Section 610.5(2);
 - b) Within one-hundred (100) feet, or such greater distance at which radio frequency emissions therefrom can be detected and determined unacceptable by the Duxbury Board of Health, of a dwelling unit, school, nursing home, or structure of historic significance, except where a greater separation is required under Section 610.6(3);
 - c) Within any area in which the Telecommunications Specialist has determined that the applicant has adequate coverage and capacity measured by the minimum FCC standards for such coverage and capacity;
 - d) In the Dunes Protection District and Wetlands Protection Overlay District or in wetlands, wetland buffer areas or other environmentally sensitive natural areas that are subject to the jurisdiction of the Conservation Commission under the Massachusetts Wetlands Protection Act, the Duxbury Wetlands Bylaw or this Bylaw, without approval of the Conservation Commission. All proposals shall be subject to review by the Conservation Commission as authorized by state and local regulations.

610.5 Dimensional Requirements

1. Height
 - a) Height shall be one-hundred (100) vertical feet above ground level. Whip antennas may extend a maximum of ten (10) feet above the top of a tower. The maximum height of any equipment shelter shall be twelve (12) feet above ground level.
 - b) Existing structures. New wireless telecommunication service antennas may be attached to any existing tower, monopole, utility pole, electric

transmission tower or water tank in any zoning district, except on towers supporting antennas used for citizen's bands, amateur radio, or television receiving antennas, provided that such structure is not increased in vertical height or substantially altered except for strengthening and maintenance. Installation of a wireless service facility on such existing structure may exceed the height of the original structure by up to ten (10) vertical feet, subject to a Special Permit by the Board of Appeals and prior site plan approval by the Planning Board.

- c) Business District. The installation of a wireless telecommunication service facility antenna on a business structure shall not exceed the maximum vertical height of the original structure by more than ten (10) feet, subject to issuance of a Special Permit by the Board of Appeals and prior site plan approval by the Planning Board.
2. Setback from Side Lot Lines and Street. Any wireless telecommunications service tower shall be set back from adjacent lot lines and any street line by the sum of its vertical height above ground level and the height of the highest attached whip antenna above the structure, or by its fall zone, whichever is greater.
3. Setback from Nearest Dwelling Unit. The minimum distance from the center of the tower base of any wireless telecommunications service tower to a dwelling unit located on adjacent or nearby property shall be four hundred (400) feet.
4. Equipment Shelters. An equipment shelter accessory to a tower shall not exceed an aggregate of eight hundred (800) square feet in structure footprint. No more than one (1) such above-ground auxiliary structure shall be constructed.

610.6 Approval Standards

Approval Standards. In addition to the standards for Special Permits under Section 906.2 of the Bylaw, all wireless telecommunications service facilities and any equipment shelters shall meet the following standards:

1. Federal and State Requirements. Wireless telecommunications service facilities and equipment shelter shall be constructed, installed, maintained and used in compliance with all applicable Federal and State laws, rules and regulations.
2. Visibility. Wireless telecommunications service facilities shall be as unobtrusive as possible and, if mounted on a business structure, shall be compatible with the style and color of the structure upon which it is located.
 - a) Camouflage. Where a wireless telecommunications service facility extends over the roof height of a business structure on which it is mounted, every reasonable effort shall be made to conceal the facility within or behind architectural features to limit its visibility from streets and adjacent properties. Facilities mounted on a roof shall be stepped back from the front façade in order to mitigate impact on the building silhouette. Wireless telecommunications service facilities that are side-mounted shall blend with the existing structure's architecture and, if over five (5) square feet, shall be painted or screened with material that is consistent with the design features and materials of the building.
 - b) Color. Wireless telecommunications service facilities that are side-mounted or top-mounted on business structures shall be painted or constructed of materials to match the color of the building material to which they are attached. All other facilities including towers shall be painted or finished in

light gray / blue hue that blends with sky and clouds, shall not be lighted, and shall not be painted with hazard paint.

- c) Existing on-site vegetation shall be preserved to the maximum extent practicable.
3. Co-Location. To the extent feasible, licensed carriers and Town communication systems shall co-locate on a single wireless telecommunications service monopole or tower. The Town shall reserve the right to place its communications antenna(s) within the top twenty (20) percent of the vertical height above ground level of any monopole or tower in order to accommodate its communications needs. It shall remain the licensed carrier's responsibility to ensure that the installation or location of other antenna(s) on the monopole or tower does not cause interference with the Town's communications system. Such facility shall be designed insofar as is reasonable to structurally accommodate foreseeable future users. A new tower or monopole facility shall be considered only upon a finding that existing or approved structures or facilities cannot accommodate the equipment planned for the proposed facility.
4. Fencing. Fencing at least eight (8) feet in height shall be erected around the base of any wireless telecommunications service tower or monopole and any equipment shelter sufficient to prevent public entry to the facility. Barbed wire is prohibited.
5. Plantings. A dense hedge of fast-growing, evergreen material shall be planted and maintained around the exterior of required fencing. This material shall not be less than four (4) feet in height when planted. The Board of Appeals may require that evergreen trees and/or other suitable material be planted between a wireless telecommunications tower facility and residential units.
6. Signs. No exterior signs shall be installed on a wireless telecommunications service tower, equipment shelter, surrounding property or fence, except as necessary for security, safety, and to identify the property.
7. Lighting. Lighting of an equipment shelter or a wireless telecommunications service tower is prohibited except insofar as required for security and maintenance purposes at ground story level. Such lighting shall be shielded from adjacent properties by a total cutoff of light at the property line, and foot-candle measurements at the property line shall be 0.0 foot-candles when measured at grade.
8. Noise. Ground-mounted equipment for wireless telecommunication service facilities shall not generate noise in excess of fifty (50) dB at the property line. Roof-mounted or side-mounted equipment for wireless telecommunications service facilities shall not generate noise in excess of fifty (50) dB at ground level at the base of the building closest to the antenna.
9. Radio Frequency Radiation (RFR) Standards. All equipment proposed for a wireless telecommunications service facility shall be authorized in accordance with the FCC Guidelines for Evaluating the Environmental Effects of Radio Frequency Radiation.
10. Fumes and Hazardous Waste. The generation of noxious fumes and the storage or disposal of hazardous waste on the site of a wireless telecommunications service facility is prohibited.
11. Access. Any driveway required to construct and maintain a wireless telecommunications service tower shall not be paved and shall minimize cut and fill and vegetation removal to the maximum extent practicable.
12. Utilities. Any utility lines to serve a wireless telecommunications tower facility shall be placed underground.

610.7 Administration

1. Special Permit Granting Authority. The Special Permit granting authority shall be the Board of Appeals, which shall review and decide applications for wireless telecommunication service facilities that require the issuance of a Special Permit under Section 610.4 Use Regulations, in accordance with the procedures and standards set forth in Sections 906.2 and 906.4, the requirements and standards of Section 610, and the findings and conclusions of the Planning Board pursuant to Section 615.
2. Site Plan Approval. The site plan approval authority shall be the Planning Board, which shall report its findings and conclusions under Section 615, and any regulations it may adopt, to the Zoning Enforcement Officer within twenty-five (25) days of receipt of an application for a building permit for a wireless telecommunications service facility antenna that does not require a Special Permit under Section 610.5. For those wireless telecommunication service facilities that require a Special Permit under Section 610.4, the Planning Board shall report its findings and conclusions under Section 615, and any regulations it may adopt, to the Board of Appeals five (5) days prior to the public hearing on the Special Permit application.
3. Submission Requirements
 - a) An application for a building permit for the installation of a wireless telecommunications service facility antenna that does not require a Special Permit under Section 610.4 shall include for submission to the Zoning Enforcement Officer seventeen (17) copies of a site plan(s) that shall meet the applicable requirements of Section 615, and shall provide such other information as is necessary to show compliance with the applicable provisions and standards of Section 610 and any regulations adopted by the Planning Board. Such plan(s) shall also be submitted by the applicant to the Planning Board.
 - b) An application for a Special Permit for the construction of a wireless telecommunications service facility shall, in addition to the above submission requirements, include for submission to the Board of Appeals seventeen (17) copies of the following:
 - (i) The name, address, telephone number, and original signature of any applicant(s), who shall include a licensed telecommunications carrier.
 - (ii) Identification of the subject property by name of nearest ways, street address, assessors map parcel number.
 - (iii) A map, to scale, showing lot lines of the subject property, the location of all buildings and accessory structures on all properties within 300 feet of the proposed wireless services facility and within 1000 feet of a proposed tower, property lines of all properties adjacent to the subject property within 300 feet of the subject property line, location of the proposed wireless telecommunication services facility and any equipment shelter, location of any existing ways on the subject property, and any proposed driveway for the wireless telecommunication service facility.

- (iv) Proposed changes to the subject property, including grading, vegetation removal and drainage prepared by a registered civil engineer, and a landscaping plan prepared by a registered landscape architect.
- (v) Plans and elevations, dimensioned and to scale, and specifications of any proposed structure, mount, antennas, equipment shelter, signs, plant material, fencing and buffers, showing location on building façade or roof, height above building roof and existing grade, dimensions, materials, color and camouflage, parking area, and any other construction attendant to the facility.
- (vi) A map showing the anticipated range of coverage for a proposed wireless telecommunications service facility and the location and range of coverage of any existing wireless telecommunications facility within six (6) miles of the subject property.
- (vii) Where a wireless telecommunications tower is proposed, a map showing the farthest point from which the facility will be visible and eight (8) view lines in a one (1) mile radius from the subject property, beginning at True North and continuing clockwise at forty-five (45) degree intervals. Two (2) weeks prior to the public hearing, the Board of Appeals may require the applicant to float a balloon or use a crane test at the location of the facility, at its maximum proposed elevation, to demonstrate its height and visibility from Town ways and neighborhood dwelling units. The balloon shall be at least four (4) feet in diameter. The time and date of this demonstration, and a rain date, shall be advertised in a newspaper of general circulation in the Town one (1) week prior to the test, such advertisement to be paid for by the applicant.
- (viii) An explanation shall be submitted as to the reasons and process used in selecting a site for the construction or installation of a wireless telecommunications service facility and other alternatives explored.
- (ix) Where a wireless telecommunications tower is proposed, a report shall be required for a registered structural engineer on safety aspects. The report shall include manufacturer's specifications for a proposed tower describing the reasons for its design, safety aspects, its capacity for co-location, including the location, number and type of antennas it can accommodate.
- (x) Where there are existing dwelling units within one thousand (1000) feet of a proposed wireless telecommunications tower or monopole, the applicant shall submit sight line graphs or photographic superimpositions showing the appearance of the tower at completion from the three (3) dwellings that are closest or most significantly affected.
- (xi) Copies of submittals to all state and Federal agencies pertaining to licensing shall be submitted, and if a tower or monopole is proposed, documentation from the Federal Aviation Administration (FAA) must be submitted stating that it has determined that hazard lighting and paint are not required. Prior to the issuance of a

- building permit, copies of the FCC license, and any other required Federal or state licenses, shall be submitted to the Zoning Enforcement Officer.
- (xii) Any required environmental assessment under the National Environmental Policy Act (NEPA), and/or by the FCC, shall be submitted.
 - (xiii) Any materials proposed for use within a wireless telecommunications service facility that are considered hazardous under state, Federal, or local laws shall be listed by location, type, and amount, including trace elements.
 - (xiv) An ambient emissions baseline reading and plan for continuous monitoring and certification by a radio frequency engineer, stating that radio frequency emission measurements are accurate and meet FCC and state guidelines, shall be submitted, as well as the maximum projected range of emissions from any wireless telecommunications facility.
 - (xv) If lighting at ground-story level is proposed for security and maintenance purposes, the applicant shall indicate the locations and types of lighting proposed and submit a manufacturer's computer-generated, point-to-point printout, indicating the horizontal foot-candles at grade within the site, and twenty-five (25) feet beyond the property lines.
4. Referral. The Board of Appeals shall refer a Special Permit application and all related submittals, plans, and statements to Town boards and commissions for their written comments and recommendations pursuant to Section 906.4.
 5. Telecommunications Specialists. The Planning Board and the Board of Appeals may each hire a telecommunications specialist as they deem necessary to assist with their respective reviews of an application for a building permit or Special Permit under this Bylaw. The boards may adopt regulations establishing a fee for such professional services to be paid by the applicant(s).
 6. Monitoring and Maintenance. The owner/operator of any wireless telecommunications service facility shall annually, after the issuance of a certificate of zoning compliance by the Zoning Enforcement Officer under Section 904.2, submit calculations of cumulative radio frequency emissions levels to the Zoning Enforcement Officer and Board of Health. The calculations shall be signed and certified by a registered radio frequency engineer and shall include a statement that they meet the emissions standards of the FCC and Massachusetts Department of Health. The owner/operator shall maintain a facility in good appearance and operating condition including structural repair, painting of the facility and equipment shelter, and maintenance of fencing, screening, and landscaping.
 7. Fees.
 - a) A performance bond equal to the removal cost of the proposed wireless telecommunications service facility and restoration of the site may be required as a condition of approval, such bond to be submitted to the Zoning Enforcement Officer prior to issuance of a building permit, and held by the Town Treasurer.
 - b) In addition to a building permit fee, a monitoring fee to be determined by the Zoning Enforcement Officer shall be required and used to create and maintain

an inventory of all wireless telecommunications service antennas in the Town and to monitor emissions and maintenance.

8. Proof of Continued Operation. The owner/operator or successor shall, prior to January 1 of each year subsequent to the date of issuance of a certificate of zoning compliance for a wireless telecommunications service facility, file a signed affidavit with the Zoning Enforcement Officer and Town clerk stating that the facility is in operation. Failure to do so shall be construed as meaning the facility is no longer in use.
9. Amendment of Special Permit. If at any time after the issuance of a Special Permit, the FAA notifies the owner/operator that hazard lighting and paint are required for a wireless telecommunications service tower, the owner/operator shall notify the Zoning Enforcement Officer and Board of Appeals, and shall file a request for an amendment to the Special Permit. The Board of Appeals shall, after a public hearing, determine whether the Special Permit should be rescinded, or amended to require a reduction in the height of such tower, sufficient for a determination by the FAA that hazard lighting and paint are not required.
10. Abandonment. All wireless telecommunications service facilities and equipment shelters not in use for a period of one (1) year shall be dismantled and removed at the owner/operator's expense following notification by the Zoning Enforcement Officer to the owner/operator. The site shall be restored to its pre-construction condition to the extent practicable, with the exception of landscaping improvements. Absent such removal and restoration after notification, the Zoning Enforcement Officer shall initiate action to dismantle a facility and restore the site.

610.8 Validity

The invalidity of any provision of this section shall not render invalid any other provision of this section.

611 LAND CLEARING AND GRADING REGULATION

611.1 The purposes of this Bylaw are to:

1. Protect the health, safety and property of the residents of the Town by regulating clearing and grading activities associated with land development, preserving existing trees and vegetation, preventing erosion and sedimentation of inland and coastal wetlands, ponds and other waterbodies, controlling stormwater runoff, minimizing fragmentation of wildlife habitat and loss of vegetation;
2. Limit land clearing and alteration of natural topography prior to development review;
3. Protect specimen trees and significant forest communities from damage or removal during site development;
4. Protect water quality of adjacent wetlands and surface water bodies;
5. Encourage the use of Best Management Practices that prevent and reduce nonpoint source of pollutants;
6. Promote land development and site planning practices that are responsive to the Town's scenic character without preventing the reasonable development of land;
7. Protect archaeological and/or historic resources.

611.2 Definitions

In this Bylaw, the following words have the meanings indicated:

Applicant

Any person proposing to engage in or engaged in any non-exempt clearing of trees or under-story vegetation or grading within the Town.

Best Management Practices (BMPs)

A structural, nonstructural, or managerial technique recognized to be the most effective and practical means to prevent and reduce nonpoint source pollutants. BMPs should be compatible with the productive use of the resource to which they are applied, and should be cost-effective.

Caliper

American Association of Nurserymen standard for measurement of trunk size of nursery stock. Caliper of the trunk shall be taken 6 inches above the ground up to and including 4-inch caliper tree, and 12 inches above the ground for larger sizes.

Certified Arborist

A professional who possesses the technical competence through experience and related training to provide for or supervise the maintenance of trees and other woody plants in the residential, commercial, and public landscape.

Clearing

Removal or causing to be removed, through either direct or indirect actions, trees, shrubs, sand and gravel and/or topsoil from a site, or any material change in the use or appearance of the land. Actions considered to be clearing include, but are not limited to: causing irreversible damage to roots or trunks; destroying the structural integrity of vegetation; and/or any filling, excavating, grading, or trenching in the root area of a tree which has the potential to cause irreversible damage.

Dripline

An area encircling the base of a tree which is delineated by a vertical line extending from the outerlimit of a tree's branch tips down to the ground.

Essential Root Zone

An area located on the ground between the tree trunk and 10 feet beyond the drip-line of a tree which is required for protection of a tree's root system.

Diameter/Diameter-Breast-Height(dbh)

The diameter of any tree trunk, measured at 4.5 feet above existing grade.

Filling

The act of transporting or placing (by any manner or mechanism) material from, to, or on any soil surface or natural vegetation.

Grading

Any excavating, filling, clearing, or the creation of impervious surface, or any combination thereof, which alters the existing surface of the land.

Hazardous Tree

A tree with a structural defect or disease, or which impedes safe sight distance or traffic flow, or otherwise currently poses a threat to life or property.

Landscape Architect

A person licensed by the Commonwealth of Massachusetts to engage in the practice of landscape architecture.

Protected Tree/Vegetation

A tree or area of understory vegetation identified on an approved landscape plan to be retained and protected during construction.

Specimen Tree

A native, introduced or naturalized tree that is important because of its impact on community character, its significance in the historic/cultural landscape or its value in enhancing the effects of wildlife habitat. Any tree with a dbh of 6 inches or larger is eligible to be considered a specimen tree. Trees that have a small height at maturity or are slow growing, such as flowering dogwood or American holly with a dbh of four (4) inches or larger are eligible to be considered specimen trees.

Significant Forest Community

Unfragmented forests including forest types that provide habitat for rare species, unusual ecological processes, highly diverse forest communities, rare forest types, and those forest types which maintain connections between similar or different habitat patches.

Site Alteration Special Permit

A Special Permit issued by the Planning Board authorizing land clearing and grading activities in the Town.

Understory Vegetation

Small trees, shrubs, and groundcover plants, growing beneath and shaded by the canopy of trees.

611.3 Applicability

The Special Permit Granting Authority under Section 611 shall be the Planning Board. No person shall undertake clearing or grading activities of an area greater than 30,000 square feet at any one time or in increments such that the total land area of abutting property within the control of any person graded in a thirty-six (36) month period will exceed 30,000 square feet, without first obtaining a Site Alteration Special Permit from the Planning Board, unless specifically exempted under Section 611.5 of this Bylaw.

611.4 Review and Decision

Upon receipt of a completed application and required plans as described in Section 611.6 below, the Planning Board shall transmit one copy each to the Conservation Commission, Zoning Enforcement Officer, Director of Lands and Natural Resources, and Department of Public Works. Within 45 days of receipt of completed application/plans, these agencies shall submit recommendations to the Planning Board. The Planning Board shall act on applications according to the procedure specified in G. L. c. 40A, sec.9 and Section 906.2 of the Zoning Bylaw.

611.5 Exemptions

The provisions of this Bylaw shall not apply to the following activities:

1. Clearing and grading in conjunction with construction of structures intended for residential habitation if the land area to be cleared or graded is less than 30,000 square feet;
2. Removal of hazardous trees, as defined herein;
3. Routine maintenance of vegetation and removal of dead or diseased limbs and/or trees necessary to maintain the health of cultivated plants, to contain noxious weeds and/or vines in accordance with a Department of Environmental Management (DEM)

- approved Forest Management Plan, or to remedy a potential fire or health hazard or threat to public safety;
- 4. Construction and maintenance of public and private streets and utilities within Town-approved roadway layouts and recorded easements;
- 5. Work conducted in accordance with a valid earth removal permit issued by the Board of Selectmen under Section 8.1 of the General Town Bylaws;
- 6. Agricultural activities work conducted in accordance with an approved Natural Resource Conservation Service Agricultural Plan;
- 7. Construction of roadways, associated infrastructure and related slope and view easements for subdivisions shown on a definitive plan approved and endorsed by the Planning Board in accordance with Duxbury Subdivision Rules and Regulations, or a Planned Development approved by the Board of Appeals in accordance with Article 700 of the Zoning Bylaws;
- 8. Construction or installation of public utilities; and
- 9. Construction of structures, roadways, parking lots, and associated activities for nonresidential structures or uses in receipt of a Special Permit from the Board of Appeals or Planning Board.
- 10. Clearing and grading activities in the Dune Protection District in accordance with plans approved and permitted by local, state and federal agencies.

611.6 Application Requirements

The Planning Board may require the submission of some or all of the information listed as 1 through 9 below. Said determination to be made in relation to the extent of clearing proposed by the applicant. For example, the clearing of 35,000 square feet to create a residential dwelling would not typically require the same degree of information necessitated by a proposal to clear 100,000 square feet of land for a commercial structure.

1. Survey of existing vegetation conducted by an individual qualified through appropriate academic credentials and field experience. A statement of credentials should be submitted with the survey.
 - (a) Major upland vegetational communities located on the site, including trees, shrub layer, ground cover and herbaceous vegetation;
 - (b) Size and height of trees, noting specimen trees and/or forest communities; and
 - (c) Location of any rare and endangered species as mapped by the Massachusetts Natural Heritage Program.
2. Submission of a locus map at a scale of 1" = 500' showing the proposed site in relation to the surrounding area.
3. Submission of a plan at a scale of 1" = 40' of the project site showing existing and proposed contour lines at intervals of not more than 2 feet prepared by a registered land surveyor or a professional engineer.
4. Soil survey or soil logs indicating predominant soil types on the project site, including information on erosion potential from the Natural Resources Conservation Service.
5. Delineation of all bodies of water, including wetlands, vernal pools, streams, ponds, and coastal waters within 100 feet of the project site/limit of work and delineation of the 100-year floodplain.
6. Submission of a plan at a scale of 1" = 40' indicating the limit of work. The limit of work shall include all building, parking, and vehicular use areas, and any grading associated with the proposed development. The plan or accompanying narrative

- shall document the species and quantities of specimen trees and/or other vegetation to be removed or relocated within the project area.
7. Construction schedule that describes the timing of vegetation removal, transplanting or replacement in relation to other construction activities.
 8. Plans and/or description of Best Management Practices to be employed in development of the project site.
 9. Submission of an erosion and sedimentation control plan at a scale of 1" = 40'. This plan shall include BMPs for erosion and sediment control (vegetative and/or structural) to prevent surface water from eroding cut and fill side slopes, road shoulders and other areas and measures to avoid sedimentation of nearby wetlands and ponds. The following information shall be submitted on erosion control and sedimentation plans submitted with the project application:
 - a) Plans and details of any sediment and erosion control structure drawn at a scale of 1" = 40';
 - b) Spillway designs showing calculations and profiles;
 - c) Notes and construction specifications;
 - d) Type of sediment trap;
 - e) Drainage area to any sediment trap;
 - f) Volume of storage required;
 - g) Outlet length or pipe sizes; and
 - h) A description of the sequence of construction activities that specifies the time frame for soil stabilization and completion and any necessary winter stabilization measures.

611.7 Review Standards

The applicant shall demonstrate that the following measures are employed in the clearing or grading of the site:

1. Minimize site alteration/land clearing:
 - a) Site/building design shall preserve natural topography outside of the development footprint to reduce unnecessary land disturbance and to preserve natural drainage channels on the site.
2. Clearing for utility trenching shall be limited to the minimum area necessary to maneuver a backhoe or other construction equipment. Roots should be cut cleanly rather than pulled or ripped out during utility trenching. Tunneling for utility installation should be utilized wherever feasible to protect root systems of trees.
3. Protect hilltops and/or scenic views within Duxbury:
 - a) Placement of buildings, structures, or parking facilities shall not detract from the site's scenic qualities and shall blend with the natural landscape. Building sites shall be directed away from the crest of hills, and foundations shall be constructed to reflect the natural terrain.
4. Protect wildlife habitat:
 - a) Sites shall be designed in such a way as to avoid impacts to rare and endangered species and wildlife habitat on a site, and to maintain contiguous forested areas.
5. Avoid impacts to archaeological resources:
 - a) Applicants shall submit a response from the Massachusetts Historical Commission (MHC) regarding the potential for archaeological or historical resources on the site.

6. Preserve open space and specimen trees on the site:
 - a) In the design of a development, priority shall be given to retention of existing stands of trees, trees at site perimeter, contiguous vegetation with adjacent sites (particularly existing sites protected through conservation restrictions), and specimen trees.
7. Understory vegetation beneath the dripline of preserved trees shall also be retained in an undisturbed state. During clearing and/or construction activities, all vegetation to be retained shall be surrounded by temporary protective fencing or other measures before any clearing or grading occurs, and maintained until all construction work is completed and the site is cleaned up. Barriers shall be large enough to encompass the essential root zone of all vegetation to be protected. All vegetation within the protective fencing shall be retained in an undisturbed state.
8. Forested areas shall be preserved if they are associated with:
 - a) Significant forest communities as defined herein;
 - b) Wetlands, waterbodies and their buffers;
 - c) Critical wildlife habitat areas; and
 - d) Slopes over 25%.
9. Minimize cut and fill in site development:
 - a) Development envelopes for structures, driveways, wastewater disposal, lawn areas and utility work shall be designated to limit clearing and grading;
 - b) Other efforts to minimize the clearing and grading on a site associated with construction activities shall be employed, such as parking of construction vehicles, offices/trailers, stockpiling of equipment/materials, etc. in areas already planned for permanent structures. Topsoil shall not be stockpiled in areas of protected trees, wetlands, and/or their vegetated buffers;
 - c) Finished grades should be limited to no greater than a 2:1 slope, while preserving, matching, or blending with the natural contours and undulations of the land to the greatest extent possible;
 - d) Employ proper site management techniques during construction:
 - (i) BMPs shall be employed to avoid detrimental impacts to existing vegetation, soil compaction, and damage to root systems, and
 - (ii) The extent of a site exposed at any one time shall be limited through phasing of construction operations. Effective sequencing shall occur within the boundaries of natural drainage areas;
 - e) Protect the site during construction through adequate erosion and sedimentation controls:
 - (i) Temporary or permanent diversions, berms, grassed waterways, special culverts, shoulder dikes or such other mechanical measures as are necessary may be required by the Planning Board to intercept and divert surface water runoff. Runoff flow shall not be routed through areas of protected vegetation or revegetated slopes and other areas. Temporary runoff from erosion and sedimentation controls shall be directed to BMPs such as vegetated swales. Retaining walls may be required where side slopes are steeper than a ratio of 2:1.
 - (ii) Erosion and sedimentation controls shall be constructed in accordance with the Department of Environmental Protection's Stormwater Guidance manual.

- (iii) Erosion control measures shall include the use of erosion control matting, mulches and/or temporary or permanent cover crops. Mulch areas damaged from heavy rainfalls, severe storms and construction activity shall be repaired immediately.
 - (iv) Erosion control matting or mulch shall be anchored where plantings are on areas subject to mulch removal by wind or water flows or where side slopes are steeper than 2:1 or exceed ten (10) feet in height. During the months of October through March, when seeding and sodding may be impractical, anchored mulch may be applied at the Planning Board's discretion.
 - (v) Runoff from impervious surfaces shall be recharged on the site by stormwater infiltration basins, vegetated swales, constructed wetlands or similar systems covered with natural vegetation. Runoff shall not be discharged directly to rivers, streams, or other surface water bodies. Dry wells shall be used only where other methods are not feasible. All such basins and wells shall be preceded by oil, grease, and sediment traps. The inlets of all catch basins shall be fitted with filter fabric during the entire construction process to minimize siltation or such basins shall be designed as temporary siltation basins with provisions made for final cleaning.
 - (vi) The applicant shall be required to conduct weekly inspections of all erosion and sedimentation control measures on the site to ensure that they are properly functioning as well as to conduct inspections after severe storm events.
- f) Revegetate the site immediately after grading:
- (i) Proper revegetation techniques shall be employed using native plant species, proper seedbed preparation, fertilizer and mulching to protect germinating plants. Revegetation shall occur on cleared sites within seven (7) calendar days of final grading.
 - (ii) A minimum of four (4) inches of topsoil shall be placed on all disturbed surfaces that are proposed to be planted.
 - (iii) Finished grade shall be no higher than the trunk flare(s) of trees to be retained. If a grade change of six (6) inches or more at the base of the tree is proposed, a retaining wall or tree well may be required.

611.8 Required Security

The Planning Board may require a performance guarantee in a form acceptable to the Town to cover the costs associated with compliance with this Bylaw under a Site Alteration Special Permit.

1. The required performance guarantee in the amount of 150% of the cost of site restoration shall be posted prior to the issuance of a Site Alteration Special Permit for the proposed project.
2. The performance guarantee shall be held for the duration of any prescribed maintenance period required by the Planning Board, and may be reduced from time to time to reflect completed work. Securities shall not be fully released without a final inspection and approval of vegetation replacement by the Town.

611.9 Monitoring and Inspections

1. Prior to commencement of construction, the applicant, land owner, contractor and construction crew, Director of the Department of Public Works, Zoning Enforcement Officer or their designee and site engineer shall conduct a meeting to review the proposed construction phasing and number and timing of site inspections.
2. Initial site inspection of erosion and sedimentation controls and placement of tree protection measures shall occur after installation of barriers around preserved areas and construction of all structural erosion and sedimentation controls, but before any clearing or grading has begun.
3. Routine inspections of preserved areas and erosion and sedimentation controls shall be made at varying intervals depending on the extent of site alteration and frequency and intensity of rainfall.
4. Effective stabilization of revegetated areas must be approved by the Town before erosion and sedimentation controls are removed. The Town shall complete an inspection prior to removal of temporary erosion and sedimentation controls.

611.10 Enforcement

The Town may take any or all of the enforcement actions prescribed in this Bylaw to ensure compliance with, and/or remedy a violation of this Bylaw; and/or when immediate danger exists to the public or adjacent property, as determined by the Zoning Enforcement Officer. The Town in carrying out any necessary enforcement actions may use securities described in Section 611.8 above.

1. The Zoning Enforcement Officer may post the site with a Stop Work order directing that all vegetation clearing not authorized under a Site Alteration Permit cease immediately. The issuance of a Stop Work order may include remediation or other requirements that must be met before clearing activities may resume.
2. The Town may, after written notice is provided to the applicant, or after the site has been posted with a Stop Work order, suspend or revoke any Site Alteration Special Permit issued by the Town.
3. No person shall continue clearing in an area covered by a Stop Work order, or during the suspension or revocation of a Site Alteration Special Permit, except work required to correct an imminent safety hazard as prescribed by the Town.

615 ADMINISTRATIVE SITE PLAN REVIEW

615.1 Purpose

The purpose of this Bylaw is to promote functional and aesthetic design, construction, and maintenance of certain developments and to minimize any harmful effects on surrounding areas. Such developments include but are not limited to certain multi-family residential, non-residential or mixed use activities, business and professional offices, government activities, commercial establishments, not-for-profit facilities, medical-service facilities, and public recreational facilities, together with their associated outdoor areas for vehicular movement and parking. Owing to their physical characteristic and the nature of their operations, such developments may affect neighboring properties and adjacent sidewalks and streets. Religious and educational facilities shall be exempt from the provisions of this section of the Bylaw.

The provisions of this section are designed to assure that all development activities regulated by this Bylaw will be carried out so as to provide for and maintain:

1. Protection of neighboring properties against harmful effects of uses on the development site;
2. Convenient and safe access for fire-fighting and emergency rescue vehicles within the development site and in relation to adjacent streets;
3. Convenience and safety of vehicular and pedestrian movement within the development site and in relation to adjacent streets, properties or improvements;
4. Satisfactory methods for drainage of surface water to and from the development site;
5. Satisfactory methods for storage, handling, and disposal of wastewater, refuse, and other wastes resulting from the normal operations of the establishment(s) on the development site;
6. Convenience and safety of off-street loading and unloading of vehicles, goods, products, materials and equipment incidental to the normal operation of the establishment(s) on the development site; and
7. Harmonious relationships to the terrain and to existing buildings in the vicinity of the development site.

615.2 Scope of Application

1. The provisions of this section shall apply to:
 - a) Any construction, demolition, grading, clearing or other land development activity which would add one thousand (1,000) square feet or more of gross floor area or which would under Section 603 require a total of ten (10) or more parking spaces based upon both existing and new development or any change of use which would under Section 603 require ten (10) or more additional parking spaces based only on new development, even if the parking requirements are or could be reduced by provisions of the Zoning Bylaw or actions by a Special Permit Granting Authority;
 - b) The construction or creation of any new parking lot or the expansion, or redesign of any existing parking lot containing ten (10) or more parking spaces, used or to be used for non-residential purposes; and
 - c) Any use or structure, in any zoning district, for which a Special Permit is required, except as provided for below.
2. The provisions of this section shall not apply to:
 - a) Improvements made as shown on a definitive subdivision plan approved by the Duxbury Planning Board;
 - b) Clearing necessary to accomplish soil test borings, percolation tests and similar site testing and investigation; or
 - c) Any activity related to only a single family residential structure;
 - d) Clearing and grading activities in the Dunes Protection District in accordance with plans approved and permitted by local, state, and federal agencies.

615.3 Approved Site Plan/When Required

1. No building permit or occupancy permit shall be issued for any activity or use within the scope of Section 615 herein unless a Site Plan has been approved therefore, and the site is constructed in accordance with said approved site plan.

2. No activity within the scope of Section 615 herein shall be carried out without an approved Site Plan. Any work done in deviation from an approved Site Plan shall be a violation of this Bylaw, unless such deviation is approved in writing by the Planning Board as being of no significant detriment to the achievement of any of the purposes set forth in Section 615 herein.
3. Approval of a Site Plan under this Section shall not substitute for the requirement of obtaining a Special Permit or other forms of relief as required by the Zoning Bylaw.

615.4 Contents of Site Plan

The Site Plan shall include one or more appropriately scaled maps or drawings of the property, drawn to an engineer's scale, and stamped by a Registered Engineer, Registered Architect, Registered Landscape Architect or Registered Land Surveyor, as appropriate to the work involved. The Site Plan shall clearly and accurately indicate the following information as is/are pertinent to the proposed development activity:

1. Legal description, Assessors' Map and Parcel number and address of the property.
2. Name, address and telephone number of the property owner, and applicant, if different than the property owner.
3. Name, address and telephone number of the developer, contractor, engineer, other design professional and agent or legal representative.
4. Complete property dimensions, area, and zoning classification of property.
5. Existing and proposed topographical contours of the property taken at two-foot (2') contour intervals by a registered engineer or registered land surveyor.
6. The nature, location and size of all significant existing natural land features, including, but not limited to, tree, shrub, or brush masses, all individual trees over ten inches(10") in caliper, grassed areas, large surface rock in excess of six feet (6') in diameter and soil features.
7. Location of all wetlands or waterbodies on the property and within one hundred (100') feet of the perimeter of the development activity.
8. The location, grade, and dimensions of all present and/or proposed streets, ways and easements and any other paved surfaces.
9. Engineering cross-sections of proposed new curbs and pavements, and vision triangles measured in feet from any proposed curb cut along the street on which access is proposed.
10. Location, height, elevation, interior and exterior dimensions and uses of all buildings or structures, both proposed and existing; location, number and area of floors; number and type of dwelling units; location of emergency exits, retaining walls, existing and proposed signs.
11. Location of all existing and proposed utilities and storage facilities including sewer connections, septic systems, wells, and any storage tanks, noting applicable approvals, if received.
12. Proposed surface treatment of paved areas and the location and design of drainage systems with drainage calculations prepared by a professional engineer, registered in the Commonwealth of Massachusetts.
13. Complete parking and traffic circulation plan, if applicable, showing location and dimensions of parking stalls, dividers, bumper stops, required buffer areas and planting beds.
14. Lighting plan showing the location, direction, and intensity of existing and proposed external light fixtures.

15. A landscaping plan showing the location, name, number and size of plant types, and the locations and elevation and/or height of planting beds, fences, walls, steps and paths.
 16. A location map or other drawing at appropriate scale showing the general location and relation of the property to surrounding areas including, where relevant, the zoning and land use pattern or adjacent properties, the existing street system in the area and location of nearby public facilities.
 17. Location within a Historical District and any other designation as a Historically Significant property, and the age and type of each existing building and structure on the site, which is more than fifty (50) years old.
 18. Location of site with regard to the APOD (Aquifer Protection Overlay District) as shown on the Duxbury Zoning Map.
 19. Location of site with regard to Flood Hazard Areas as regulated by Section 402 of the Zoning Bylaw.
- Additional information may be required by the Planning Board or their designee, as reasonably necessary, to make determinations required by this section.

615.5 Site Development Standards

1. A reasonable effort shall be made to conserve and protect natural features that are of some lasting benefit to the site, its environs and the community at large.
2. Slopes, which exceed ten percent (10%), shall be protected by appropriate measures against erosion, runoff, and unstable soil, trees and rocks. Measures shall be taken to stabilize the land surface from unnecessary disruption. Such stabilization measures shall be the responsibility of the property owner.
3. The placement of buildings, structures, fences, lighting, and fixtures on each site shall not interfere with traffic circulation, safety, appropriate use and enjoyment of adjacent properties.
4. All roadway and driveway design shall take into consideration safe sight distances not only at intersections but also along all traveled ways, in accordance with appropriate AASHTO requirements. Clear sight distances shall take into account topography, density of dwelling units and horizontal and vertical alignment.
5. Adequate illumination, in the opinion of the Planning Board, shall be provided to parking lots and other areas for vehicular and pedestrian circulation. In no case shall freestanding illumination devices be installed to a height exceeding fifteen feet (15') in a residential district. All illumination shall be directed and/or shielded so as not to shine beyond the perimeter of the site or interfere with traffic.
6. All areas designed for vehicular use shall be paved with a minimum of either a three inch (3") bituminous asphalt concrete, a six inch (6") Portland cement concrete pavement, or other surface, such as brick, cobblestone or gravel.
7. All parking spaces shall be arranged and clearly marked in accordance with the Parking Lot Design Standards contained in Section 603.5 herein.
8. All utility service transmission systems, including but not limited to water, sewer, natural gas, electrical and telephone lines, shall, whenever practicable, be placed underground.
9. All surface water runoff from structures and impervious surfaces shall be collected on site; but in no case shall surface water drainage be directed across sidewalks or public or private ways. In no case shall surface water runoff be drained directly into wetlands or waterbodies. Drainage systems shall be designed, using Best

Management Practices, to minimize the discharge of pollutants by providing appropriately designed vegetated drainage channels and sedimentation basins that allow for adequate settling of suspended solids and maximum infiltration. Dry wells, leaching pits and other similar drainage structures may be used only where other methods are not practicable. Oil, grease and sediments traps to facilitate removal of contaminants shall precede all such drainage structures.

615.6 Minimum Parking Lot Design Standards

1. Parking lots shall comply with the standards and requirements of Section 603 of the Zoning Bylaw.

615.7 Required Procedures for Site Plan Review

1. At least seventeen (17) copies are required of all Site Plan sheets, drawings, and written information. Submissions shall be delivered to the Planning Department.
2. Within five (5) working days of receiving a Site Plan, the Planning Director or his/her designee shall distribute copies of the Site Plan to the Planning Board, the Department of Public Works, the Police Department, the Fire Department, Highway Safety Committee, the Conservation Commission, the Duxbury Bay Management Commission, and the Board of Health. If the proposed activity requires a Special Permit, the Special Permit Granting Authority shall receive a copy of the Site Plan.
3. Upon receipt of a Site Plan from the Planning Director or his/her designee, the agencies as noted in 615.7(2) shall respond in writing as to the propriety of the proposed development, within the context of each agency's jurisdiction. Such response shall be made to the Planning Director or his/her designee within fifteen (15) working days of each agency's receipt of the Site Plan.
4. The Planning Director or his/her designee may solicit the advice of any other Town agency or department he/she deems necessary to properly make the determinations required by this section.
5. Within thirty (30) days after receipt of a completed site plan by the Planning Director, the Planning Board shall review said Site Plan in a public meeting, together with any comments received from Town agencies or departments on said plan. Site Plans shall be reviewed for consistency with zoning and other applicable regulations and standards. Within forty (40) working days of receiving a Site Plan, the Planning Board shall notify the applicant and state reasons for any approval, conditional approval or disapproval.
6. One (1) copy of the approved Site Plan shall be provided each to the applicant, the Department of Inspectional Services, the Department of Public Works, Board of Appeals, Police Department, the Fire Department, the Conservation Commission and the Board of Health. One (1) copy of the approved Site Plan shall remain in the records of the Planning Department.
7. Upon completion of all work, an As-Built plan and a letter of certification, made upon knowledge and belief according to professional standards, shall be submitted to Zoning Enforcement Officer or his/her designee by a Registered Engineer, Registered Architect, Registered Landscape Architect or Registered Land Surveyor, as appropriate to the work involved, that all work has been done substantially in compliance with the approved Site Plan.

616 COMMUNITY-SCALE WIND FACILITIES

616.1 Purpose and Applicability

The purpose of this section is to provide by Special Permit for the construction and operation of Community-Scale Wind Facilities, to generate power for use at municipally owned facilities and to provide standards for the placement, design, construction, monitoring, modification and removal of such Community-Scale Wind Facilities that address public safety, minimize impacts on scenic, natural and historic resources of the Town of Duxbury and to provide adequate financial assurance for operating and decommissioning such Community-Scale Wind Facilities.

This section applies to all Community-Scale Wind Facilities proposed to be constructed after the effective date of this section. It shall apply to any size turbines, regardless of rated nameplate capacity. Any new Community-Scale Wind Facility or physical modifications to existing Community-Scale Wind Facilities that materially alters the type or increases the size of such facilities or other equipment shall require a Special Permit processed in accordance with this section.

Community-Scale Wind Facilities shall be constructed only in the Publicly Owned Land Overlay District (POLOD) and exclusive of the Dunes Protection District and the Wetlands Protection Overlay District.

616.2 Definitions

Community-Scale Wind Facility

A Community-Scale Wind Facility is a Wind Facility where the primary use of the facility is to generate electrical power for use by the Town, inclusive of all equipment, machinery and structures utilized in connection with the conversion of wind energy to electricity. This includes, but is not limited to, transmission, storage, collection and supply equipment, substations, transformers, service and access roads, and one or more Wind Facility.

Height

When referring to a Community-Scale Wind Facility, the height of a Wind Facility will be measured from natural grade to the tip of the rotor blade at its highest point.

Nacelle

The housing around the electrical generator and other systems such as gearboxes and blade controls on a wind turbine. The rotor blades are typically connected to the nacelle.

Rated Nameplate Capacity

The maximum rated output of electric power production equipment. This output is typically specified by the manufacturer with a "nameplate" on the equipment.

Setback

The distance from the base of the Community-Scale Wind Facility tower, measured from the centerline of the Community-Scale Wind Facility tower, to the nearest property line.

Special Permit Granting Authority

The Special Permit Granting Authority shall be the Planning Board.

Wind Monitoring or Meteorological Tower

A temporary tower (Met. Tower) equipped with devices to measure wind speeds and direction used to determine how much wind power a site can be expected to generate.

Wind Facility

A wind turbine device that converts kinetic wind energy into rotational energy that drives an electrical generator. A Wind Facility typically consists of a tower, nacelle body at the top of the tower, and a rotor with two or more blades, also known as a Horizontal- Axis Wind Turbine configuration. However, a Wind Facility could also consist of a Vertical-Axis Wind Turbine configuration. (Refer to Wind Turbine Configurations diagram 616.2a below.)

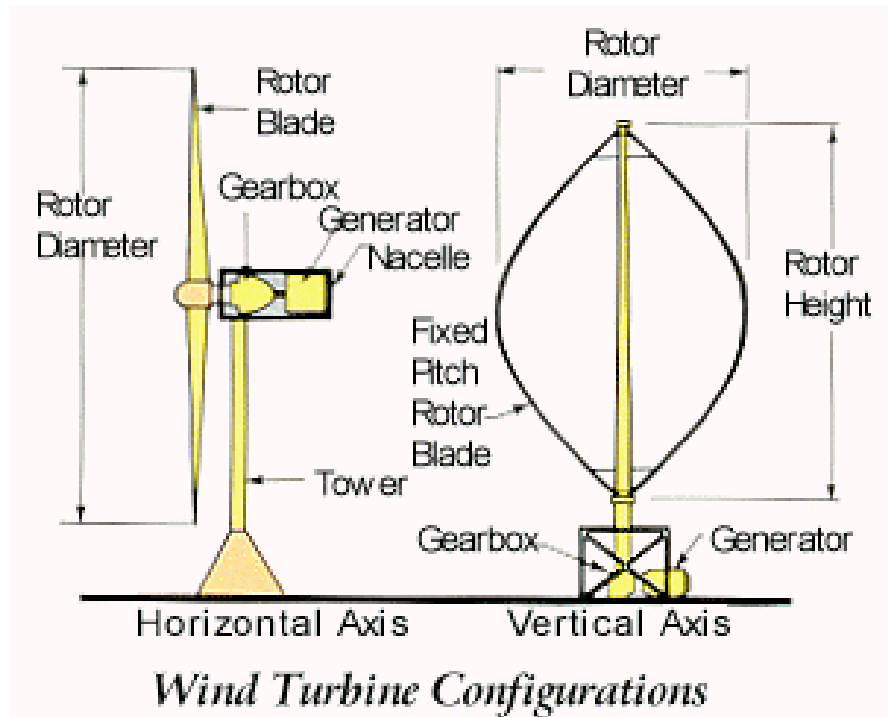


Diagram 616.2a

616.3 Permitting

1. Special Permit Granting Authority. No Community-Scale Wind Facility shall be erected, constructed, installed or modified as provided in this section without first obtaining a Special Permit from the Special Permit Granting Authority (a "Special Permit"). The construction of a Community-Scale Wind Facility shall comply with all requirements set forth in sections 616.3, 616.4, 616.5 and 616.6. All such Community-Scale Wind Facilities shall be constructed and operated in a manner that minimizes any adverse visual, safety, and environmental impacts. A Special Permit may be granted if the Special Permit Granting Authority finds that:
 - a) The specific site is an appropriate and approved location for such use;
 - b) The use is not expected to adversely affect the neighborhood;
 - c) There is not expected to be any appreciable hazard to pedestrians, vehicles or wildlife from the use;
 - d) Adequate and appropriate infrastructure will be provided for the proper and safe operation of the Community-Scale Wind Facility; and

- e) The requirements of section 616-3-616.10 are complied with in all respects.

Temporary erection of Wind Monitoring or Meteorological Towers shall also be required to be permitted as a temporary structure subject to issuance of a building permit for a temporary structure for not more than eighteen months. Wind Monitoring or Meteorological Towers shall comply with the minimum height, setback, lighting and signage requirements as set forth in section 616.4.

2. Compliance with Laws, Ordinances and Regulations. The construction and operation of all such proposed Community-Scale Wind Facilities shall be consistent with all applicable local, state and federal requirements, including but not limited to all applicable safety, construction, environmental, electrical, communications and aviation requirements.
3. Proof of Liability Insurance. The applicant and all appropriate contractors shall provide evidence of liability insurance in an amount and for a duration sufficient to cover loss or damage to persons and structures occasioned by the failure of the facility or reasonably foreseeable events thereat.
4. Site Control. At the time of its application for a Special Permit, the applicant shall submit documentation of actual or prospective control of the project site sufficient to allow for installation and use of the proposed facility. Documentation shall also include proof of control over setback areas and access roads, if required.
5. Contact Data. The applicant or Community-Scale Wind Facility permit holder shall maintain a phone number, email address, and physical address (all to be posted at the facility) and identify a responsible individual person for the public to contact with inquiries and complaints throughout the life of the project. Such persons shall be accessible at all times during normal business hours and for emergencies on a 24 hour a day, every day basis. The Special Permit shall specify the requirements for a contact person(s).

616.4 Certain Specific Requirements

1. Height. Community-Scale Wind Facilities and or Monitoring or Meteorological Towers shall be no higher than 250 feet above the current grade of the land.
2. Setbacks. Community-Scale Wind Facilities and or Monitoring or Meteorological Towers shall be set back a minimum distance equal to 1.1 times the overall height of the Wind Facility from the nearest property line and private or public way and a minimum distance equal to two (2) times the overall height of the Wind Facility from the nearest existing residential or commercial structure not owned by the applicant seeking to permit the Community-Scale Wind Facility and or Wind Monitoring or Meteorological Towers. The setback zone for Community-Scale Wind Facilities and or Wind Monitoring or Meteorological Towers can fall within the limits of Wetlands Protection Overlay and the Flood Hazard Overlay Districts.

3. Color and Finish. The Special Permit Granting Authority shall have discretion over the color of the Community-Scale Wind Facility, although a neutral, non-reflective exterior color designed to blend with the surrounding environment is encouraged.
4. Lighting and Signage. No lighting shall be permitted on Community-Scale Wind Facilities and or Monitoring or Meteorological Towers other than lighting required by the Federal Aviation Administration (FAA). Lighting of other parts of the Community-Scale Wind Facility and or Monitoring or Meteorological Towers, such as appurtenant structures, shall be limited to that required for safety and operational purposes, and shall be reasonably shielded from abutting properties. Unless good cause is shown for an exemption, signs on the Community-Scale Wind Facility and or Monitoring or Meteorological Towers shall comply with the requirements of Duxbury's sign regulations, and shall be limited to:
 - a) Those necessary to identify the owner, provide a 24-hour emergency contact phone number, and warn of any danger, whether inherent or perceived;
 - b) Educational signs providing information about the facility and the benefits of renewable energy.Community-Scale Wind Facilities shall not be used for displaying any advertising or signage.
5. Utility Connections. Utility connections from the Community-Scale Wind Facility to the utilities power grid shall be located underground. Electrical transformers for utility interconnections may be above ground if required by the utility provider.
6. Appurtenant Structures. All appurtenant structures to such Community-Scale Wind Facilities shall be subject to reasonable regulations concerning the bulk and height of structures and determining yard sizes, lot area, setbacks, open space, parking and building coverage requirements. All such appurtenant structures, including but not limited to, equipment shelters, storage facilities, transformers, and substations, shall be architecturally compatible with each other and shall be contained within the Wind Facility tower whenever technically and economically feasible. Structures shall only be used for housing of equipment for this particular site. Whenever feasible, structures shall be shielded from view by vegetation or fencing and or located in an underground vault and joined or clustered to avoid adverse visual impacts.
7. Support Towers. Monopole towers are the preferred type of support for Community-Scale Wind Facilities and shall be used unless good cause is shown that a substantial economic hardship or safety consideration merits an alternative.

616.5 Emergency Services

The applicant shall provide a copy of the project summary and site plan to the local emergency services entity, as designated by the Special Permit Granting Authority. Upon request, the applicant shall cooperate with local emergency services in developing an emergency response plan. Wind turbines or other structures part of a Community-Scale Wind Facility shall be designed to prevent unauthorized access.

616.6 Specific Environmental Considerations

1. Shadow/Flicker. Community-Scale Wind Facilities shall be sited in a manner that minimizes shadowing or flicker impacts caused by motion of the rotor blades as they pass in front of the sun. The applicant has the burden of proving that this effect does not have significant adverse impact on neighboring or adjacent uses through either siting or mitigation. It is acknowledged that a degree of shadow/flicker effect results from any wind turbine, and that the existence of some "shadow flicker" alone shall not be cause for the refusal to permit a Community-Scale Wind Facility.
2. Noise. The Community-Scale Wind Facility and associated equipment shall conform with the provisions of the Department of Environmental Protection's, Division of Air Quality Noise Regulations (310 CMR 7.10), unless the Department agrees that those provisions shall not be applicable. A source of sound will be considered to be violating these regulations if the source:
 - a) Increases the broadband sound level by more than 10 dB(A) above ambient level, or
 - b) Produces a "pure tone" condition, when an octave band center frequency sound pressure level exceeds the two adjacent center frequency sound pressure levels by three (3) decibels or more.These criteria are measured both at the property line and at the nearest inhabited residence. Ambient is defined as the background A-weighted sound level that is exceeded ninety percent (90%) of the time measured during equipment hours. The ambient may also be established by other means with consent from the Department of Environmental Protection (DEP). An analysis prepared by a qualified engineer shall be presented to demonstrate compliance with these noise standards.
3. Land Clearing, Soil Erosion and Habitat Impacts. Clearing of natural vegetation shall be limited to that which is reasonably necessary for the construction, operation and maintenance of the Community-Scale Wind Facility and is otherwise prescribed by applicable laws, regulations, and ordinances. Community-Scale Wind Facilities shall be designed to minimize land clearing and fragmentation of open space areas.

616.7 Facility Conditions

The applicant shall maintain the Community-Scale Wind Facility in good condition and as a condition for the Special Permit shall submit with the application a plan for maintaining the Community-Scale Wind Facility in accordance herewith. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Site access shall be maintained to a level acceptable to the local Fire Chief and Emergency Medical Services. The project owner shall be responsible for the cost of maintaining the Community-Scale Wind Facility and any access road, unless accepted as a public way, and the cost of repairing any damage occurring as a result of operation and construction. All material modifications to a Community-Scale Wind Facility made after issuance of the Special Permit shall require approval by the Special Permit Granting Authority as provided in this section.

616.8 Removal

1. Removal Requirements. Any Community-Scale Wind Facility, Wind Monitoring or Meteorological Tower which has reached the end of its useful life, permit term or has been abandoned shall be removed by the facility owner. When the Community-Scale

Wind Facility, Wind Monitoring or Meteorological Tower is scheduled to be decommissioned, the applicant shall notify the Special Permit Granting Authority by certified mail of the proposed date of discontinued operations and plans for removal. The owner/operator shall physically remove the Community-Scale Wind Facility, Wind Monitoring or Meteorological Tower no more than 150 days after the date of discontinued operations. At the time of removal, the Community-Scale Wind Facility, Wind Monitoring or Meteorological Tower site shall be restored to the state it was in before the facility was constructed, or to other less stringent restorative conditions approved by the Special Permit Granting Authority. More specifically, decommissioning shall include provision for:

- a) Physical removal of all wind turbines, Wind Monitoring or Meteorological Tower structures, equipment, security barriers and transmission lines from the site;
 - b) Disposal of all solid and hazardous waste in accordance with local and state waste disposal regulations;
 - c) Stabilization or re-vegetation of the site as necessary to minimize erosion. The Special Permit Granting Authority may allow the owner to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation.
2. Abandonment. Absent notice of a proposed date of decommissioning, the Community-Scale Wind Facility shall be considered abandoned when the facility fails to operate for more than one year without the written consent of the Special Permit Granting Authority. The Special Permit Granting Authority shall determine in its sole discretion what proportion of the facility is inoperable for the facility to be considered abandoned. If the applicant fails to remove the Community-Scale Wind Facility in accordance with the requirements of this section within 150 days of abandonment or the proposed date of decommissioning, the Town shall have the authority to enter the property and physically remove the facility and be indemnified for the costs and all other liabilities associated with the removal.
 3. Surety. A performance bond equal to the removal cost of the proposed wind facility and restoration of the site may be required as a condition of approval, such bond to be submitted to the Zoning Enforcement Officer prior to issuance of a building permit, and held by the Town Treasurer.

616.9 Duration

A Special Permit issued for a Community-Scale Wind Facility shall be valid for the projected useful life of the facilities as determined by the Special Permit Granting Authority based on submissions of the applicant, but in any case not more than 25 years, unless extended or renewed. The time period may be extended or the permit renewed by the Special Permit Granting Authority upon satisfactory operation of the facility. Request for renewal must be submitted at least 180 days prior to the expiration date of the Special Permit. Submitting a renewal request shall allow for continued operation of the facility until the Special Permit Granting Authority acts. At the end of that period (including extensions and renewals), the Community-Scale Wind Facility shall be removed as required by this section.

616.10 Application Procedures

1. General. The application for a Community-Scale Wind Facility shall be filed in accordance with section 906 of this Bylaw and the rules and regulations of the Special Permit Granting Authority concerning Special Permits as the same maybe revised from time to time, including such revisions and requirements as may be imposed that are consistent with this section and including the items set forth below. Each application for a Special Permit shall be filed by the applicant with the Duxbury Town Clerk pursuant to Massachusetts General Laws.
2. Required Compliance Documents. The applicant shall provide the Special Permit Granting Authority with seven (7) copies of the application and all required exhibits. All plans and maps shall be prepared, stamped and signed by a professional engineer or surveyor licensed to practice in the Commonwealth of Massachusetts. Included in the application shall be:
 - a) Name, address, phone number and signature of the applicant, as well as all co -applicants or property owners, if any;
 - b) The name, contact information and signature of any agents representing the applicant;
 - c) A textual description of the project, including the names of all contractors and control persons and consent to the publications of such description in the local newspaper;
 - d) Documentation of the legal right to use the Community-Scale Wind Facility site;
 - e) Detailed architectural and structural plans of the proposed Community-Scale Wind Facility including foundation plans and structural calculations;
 - f) Proof of liability insurance that satisfies section 616.3.3;
 - g) Certification of height approval from the FAA;
 - h) A statement that satisfies section 616.6.2, listing existing and maximum projected noise levels from the Community-Scale Wind Facility.
3. Siting and Design. Unless otherwise waived by the Special Permit Granting Authority, the applicant shall provide the Special Permit Granting Authority with a description of the property which shall include:
 - a) Copy of a portion of the most recent USGS Quadrangle Map, at a scale of 1:25,000, showing the proposed facility site, including turbine sites, and the area within at least two miles from the facility. Zoning district designation for the subject parcel and surrounding parcels shall be included;
 - b) A one inch (1") equals forty feet (40') site plan of the proposed Community-Scale Wind Facility site, with contour intervals of no more than two feet (2'), showing the following:
 - (i) Property lines for the subject parcel and adjacent parcels within 500 feet;
 - (ii) Outline of all existing buildings, including purpose (e.g. residence, garage, etc.) on subject parcel and all adjacent parcels within 500 feet. Include distances from the Community-Scale Wind Facility to each building shown;
 - (iii) Location of all roads, public and private on the site parcel and adjacent parcels within 500 feet, and proposed roads or driveways,

- either temporary or permanent, including any associated drainage facilities;
 - (iv) Existing areas of tree cover, including average height of trees, on the site parcel and adjacent parcels within 500 feet;
 - (v) Proposed location and design of Community-Scale Wind Facility, including all turbines, ground equipment, appurtenant structures, transmission infrastructure, access, fencing, exterior lighting, etc; and
 - (vi) Location of viewpoints referenced in 616.10.4 of this section.
4. Visualizations. The Special Permit Granting Authority shall select between three (3) and six (6) sight lines, including from the nearest building with a view of the Community-Scale Wind Facility, for pre-and post-construction view representations. Sites for the view representations shall be selected from populated areas or public ways within a two (2)-mile radius of the Community-Scale Wind Facility. View representations shall have the following characteristics:
- a) View representations shall be in color and shall include actual pre-construction photographs and accurate post-construction simulations of the height and breadth of the Community-Scale Wind Facility (e.g. superimpositions of the Community-Scale Wind Facility onto photographs of existing views); and
 - b) All view representations will include existing, or proposed, buildings or tree coverage.
5. Landscape Plan. The applicant shall submit a landscape plan indicating all proposed changes to the landscape of the site, including temporary or permanent roads or driveways, grading, vegetation clearing and planting, exterior lighting, screening vegetation or structures. Lighting, other than required by the FAA, shall be designed to minimize glare onto abutting properties and be directed downward with full cut-off fixtures to reduce light pollution.
6. Development, Operation and Maintenance Plan. The applicant shall submit a plan for the development of the Community-Scale Wind Facility (including the specifications for the Community-Scale Wind Facility and the development timeline and process from ground breaking to commissioning), as well as a plan for maintenance of access roads and storm water controls, and general procedures for operational maintenance of the Community-Scale Wind Facility.
7. Independent Consultants. Upon submission of an application for a Special Permit, the Special Permit Granting Authority will be authorized to hire outside consultants pursuant to Massachusetts General Laws. The applicant shall be required to pay all reasonable costs associated with the consultant reviews required by the Special Permit Granting Authority. Such costs shall be pre-paid by the applicant per the rules and regulations of the Special Permit Granting Authority.

616.11 Right of Appeal

Any person aggrieved by the decision of the Special Permit Granting Authority may take an appeal to the courts in accordance with Massachusetts General Laws.