SECTION 7. SPECIAL PROVISIONS

7.1 Nonconforming Uses

7.1.1 Applicability. This zoning bylaw shall not apply to structures or uses lawfully in existence or lawfully begun, or to a building or special permit issued before the first publication of notice of the public hearing required by G.L. c. 40A, s. 5 at which this zoning bylaw, or any relevant part thereof or amendment thereto, was adopted. Such prior, lawfully existing nonconforming uses and structures may continue, provided that no change or substantial extension of such use or any reconstruction, extension or structural change of such structure or any alteration of a structure for its use for a substantially different purpose or for the same purpose in a substantially different manner or to a substantially greater extent is undertaken, unless authorized hereunder.

7.1.2 Nonconforming uses. The Board may grant a special permit to change or substantially extend a nonconforming use in accordance with this section only if it determines that such change or substantial extension shall not be substantially more detrimental than the existing nonconforming use to the neighborhood.

7.1.3 Nonconforming structures. The Board may grant a special permit to reconstruct, extend, alter, or change a nonconforming structure in accordance with this section only if it determines that such reconstruction, extension, alteration, or change shall not be substantially more detrimental than the existing nonconforming structure to the neighborhood. The following types of changes to nonconforming structures may be considered by the Board:

(a) Reconstructed, extended or structurally changed;

(b) Altered to provide for a substantially different purpose or for the same purpose in a substantially different manner or to a substantially greater extent.

7.1.4 Variance required. Except as provided in subsection 7.1.5, below, the reconstruction, extension or structural change of a nonconforming structure in such a manner as to increase an existing nonconformity, or create a new nonconformity, shall require the issuance of a variance. The extension of an exterior wall at or along the same nonconforming distance within a required yard shall require a special permit from the Board.

7.1.5 Nonconforming single and two family residential structures. Nonconforming single and two family residential structures may be reconstructed, extended, altered, or structurally changed upon a determination by the Building Inspector that such proposed reconstruction, extension, alteration, or structural change does not increase the nonconforming nature of said structure. Where the proposed extension does not increase the gross floor area contained within the existing structure by more than fifty percent (50%), the following circumstances shall not be deemed to increase the nonconforming nature of said structure:

(a) alteration to structure located on a lot with insufficient area which alteration complies with all current setback, yard, building coverage, and building height requirements.

(b) alteration to a structure located on a lot with insufficient frontage which alteration complies with all current setback, yard, building coverage, and building height requirements.

(c) alteration to a structure which encroaches upon one or more required yard or setback areas, where the alteration will comply with all current setback, yard, building coverage and building height requirements.

In all other cases, the Board may, by special permit, allow such reconstruction, extension, alteration, or change where it determines that the proposed modification will not be substantially more detrimental than the existing nonconforming structure to the neighborhood.

7.1.6 *Abandonment or non-use.* A nonconforming use or structure which has been abandoned, or not used for a period of two years, shall lose its protected status and be subject to all of the provisions of this zoning bylaw.

7.1.7 *Reconstruction after catastrophe or involuntary demolition.* A nonconforming structure may be reconstructed within two years after a catastrophe or after involuntary demolition. Such reconstruction shall only proceed if authorized by the Board by special permit after finding that the reconstruction of the structure would not:

(a) Substantially impinge upon any public right-of-way that adjoins the lot on which the structure is to be reconstructed.

(b) Create a danger to public safety by reason of traffic access, flow and circulation; and,

(c) Be out of character with the traditional settlement and construction patterns of the area in which it is to be reconstructed.

7.1.8 *Reversion to nonconformity.* No nonconforming use shall, if changed to a conforming use, revert to a nonconforming use.

7.2 Flood Plain Conservancy District

7.2.1 *Definitions.*

7.2.1.1 *Flood plain:* All flood storage areas along the Concord, Sudbury and Assabet Rivers and their tributaries as designated on the "Flood Plain Conservancy District" Map and all special flood hazard areas designated on the Middlesex County Flood Insurance Rate Maps as Zone A, AE, AH.

7.2.1.2 *Floodway:* The channel of the watercourse and those portions of the adjoining flood plain which are reasonably required to carry and discharge the base flood.

7.2.1.3 *Floodway data:* In Zone A, AE, AH, and along watercourses that have not had a regulatory floodway designated the best available Federal, State, local and other floodway data shall be used to prohibit encroachments in floodways which would result

in any increase in flood levels within the community during the occurrence of the base flood discharge.

7.2.1.4 Base flood: A flood known to have occurred in the Town with a frequency of once in one hundred (100) years and reasonably characteristic of what can be expected to occur on a particular stream.

7.2.1.5 Base flood elevation data: Base flood elevation data is required for subdivision proposals or other developments on parcels greater than 50 lots or 5 acres, whichever is the lesser, within unnumbered A zones.

7.2.1.6 Lowest floor: The lowest floor of the lowest enclosed area of a building.

7.2.1.7 Water surface elevation: The height in relation to the North American Vertical Datum (NAVD) of 1988 of floods of various magnitudes and frequencies in the flood plains of riverine areas.

7.2.2 Purpose.

7.2.2.1 To protect persons and property against the hazards of flood water inundation by assuring the continuation of the natural flow pattern of the rivers and those portions of their tributaries located within the Flood Plain Conservancy District within the Town and by preserving natural floodwater storage areas;

7.2.2.2 To maintain the quality and level of the groundwater table and water recharge areas for existing or potential water supplies; and

7.2.2.3 To protect the Town against unsuitable use or development of areas subject to flooding.

7.2.3 Standards.

7.2.3.1 Within Zone AH on the FIRM, adequate drainage paths must be provided around structures on slopes, to guide floodwaters around and away from proposed structures.

7.2.3.2 In Zone AE, along watercourses that have a regulatory floodway within the Town of Concord designated on the Middlesex County FIRM, encroachments are prohibited in the regulatory floodway which would result in any increase in flood levels within the community during the occurrence of the base flood discharge.

7.2.3.3 All site plan proposals shall be designed to assure that: a) such proposals minimize flood damage; b) all public utilities and facilities are located and constructed to minimize or eliminate flood damage; and, c) adequate drainage is provided to reduce exposure to flood hazards.

7.2.4 *Uses permitted without review by the Board.* The following uses are permitted within the Flood Plain Conservancy District:

7.2.4.1 Wildlife management, boating, fishing and hunting where otherwise legally permitted;

7.2.4.2 Construction and maintenance of at-grade sidewalks, duckwalks, bicycle, equestrian and foot paths or bridges, and unpaved recreation areas which do not alter the existing topography;

7.2.4.3 Flower and vegetable gardens, lawns, pastures, soil conservation, forestry, grazing and farming, including nurseries, truck gardening and harvesting of crops;

7.2.4.4 Construction and maintenance of public and private water supplies, and maintenance or improvement of ponds, ditches, and other water bodies;

7.2.4.5 Construction and maintenance of at-grade roads, driveways, utilities and other associated roadway facilities when access to land which is not situated in the Flood Plain Conservancy District is not possible because of ownership patterns or the provisions of the Subdivision Rules and Regulations of the Planning Board;

7.2.4.6 Construction and improvements of public sewers, including accessory facilities used for their operation and maintenance, and improvements to existing roads and systems used in the service of the public, including drainage, electric power (including conversion to underground facilities), gas, telephone, telegraph and other telecommunication devices; and

7.2.4.7 Repairs to septic disposal systems (SDS), including leaching facilities, but excluding any expansion of SDS capacity beyond the minimum design flow for the existing use of the property as required by applicable Board of Health regulations.

7.2.5 *Uses permitted subject to review by the Board.* The following uses may be permitted by the Board after notice and a public hearing:

7.2.5.1 Any use permitted in the underlying district in which the land is situated, subject to the same use and development regulations as may otherwise apply thereto, whether by right or by special permit, provided that all development, including structural and non-structural activities, are in compliance with other State regulations.

7.2.5.2 Any use permitted in the underlying district in which the land is situated, subject to the same use and development restrictions as may otherwise apply thereto, provided that the land designated as being within the Flood Plain Conservancy District is found to be not, in fact, subject to flooding through a Letter of Map Amendment, Letter of Map Revision or physical map revision submitted to and approved by the Federal Emergency Management Agency.

7.2.6 Procedure for review by the Board.

7.2.6.1 Any person who desires to use land within the Flood Plain Conservancy District for a use permitted subject to review by the Board shall submit a written application for a special permit to the Board, with copies to the Planning Board and Natural Resources Commission. Each such application shall be accompanied by the following submissions:

(a) A written statement detailing the proposed work, the history of flooding at the subject premises and the calculations of the volume of water which will be displaced prepared by a registered professional engineer or a registered land surveyor;

(b) Development plans, including specific topographic details within the flood plain area, meeting, to the extent applicable, the requirements set forth for a definitive plan in the Subdivision Rules and Regulations of the Planning Board; and

(c) In the case of any proposed alteration or relocation of a watercourse, the following agencies shall also be notified:

- Town of Sudbury; Town Manager, 278 Old Sudbury Road, Sudbury, MA 01776
- Town of Acton; Town Manager, 472 Main Street, Acton, MA 01720
- Town of Maynard; Town Administrator, 195 Main Street, Maynard, MA 01754
- Town of Bedford; Town Manager, 10 Mudge Way, Bedford, MA 01730
- Town of Lincoln; Town Administrator, 16 Lincoln Road, Lincoln, MA 01773
- Town of Wayland; Town Administrator, 41 Cochituate Road, Wayland, MA 01778
- NFIP State Coordinator, Massachusetts Department of Conservation and Recreation, 251 Causeway Street, Suite 600-700, Boston, MA 02114-2104
- NFIP Program Specialist, Federal Emergency Management Agency, Region I, 99 High Street, 6th Floor, Boston, MA 02110; and,

(d) Such additional information as the Board may require.

7.2.6.2 The Planning Board and Natural Resources Commission shall submit to the Board written recommendations including at least:

(a) An evaluation of the proposed use, including its probable effect or impact upon the Town's water supply, the quality of water in the area, the natural flow pattern of watercourses, nearby or pertinent floodwater storage areas or other areas subject to seasonal or periodic flooding and the general health, safety and welfare of the inhabitants of the Town; and

(b) A recommendation as to whether the special permit should be granted and whether any restrictions should be imposed upon the proposed use as a condition of such permit.

7.2.6.3 If a special permit is granted, the Board shall impose such conditions and safeguards as public safety, welfare and convenience may require. The Board shall give due consideration to the reports of the Planning Board and Natural Resources Commission and, where the decision of the Board differs from the recommendations of either, the reasons therefor shall be stated in writing.

7.3 Wetlands Conservancy District

7.3.1 *Definition:* Wetlands are wet meadows, marshes, swamps, bogs, and areas of flowing or standing water. Wetlands are characterized by the presence of wetland soils, hydrology, and the presence of wetland plant communities, which can tolerate the presence of water at or near the ground surface for a significant portion of the year. The Wetlands Conservancy District consists of areas within the Town, which have been mapped as wetlands.

7.3.2 *Purpose:* The purpose of the Wetlands Conservancy District is to provide preliminary wetlands information in a zoning context for planning purposes without the requirement of delineating actual wetlands in accordance with the Town's Wetlands Bylaw and the Commonwealth of Massachusetts Wetlands Protection Act. Development of a site or property that has wetlands located thereon shall be required to comply with any Order of Conditions issued under the Wetlands Protection Act and/or the Town's Wetlands Bylaw.

7.4 By-Pass District

7.4.1 *Standards.*

7.4.1.1 Prohibited Uses: No building, above ground structure or parking shall be permitted within the By-Pass District.

7.4.1.2 Permitted Uses: The establishment of one vehicular entrance and one exit per lot through the By-Pass District may be authorized by the Board by special permit, provided that the Board shall find that access to a way from a lot located within the By-Pass District cannot be accomplished except through the By-Pass District and that the lot was not created from a larger lot after January 1, 1989. Underground structures may be constructed without review by the Board.

7.4.1.3 By-Pass Dimensional Regulations:

(a) Frontage: In all districts, any lot which gains its minimum lot frontage along Route 2 shall have at least two hundred (200) feet of frontage.

(b) Front, side and rear yards: In all districts where the By-Pass District divides a lot, the yard requirements for such lot shall be measured from the boundary line of the By-Pass District nearest the proposed use.

(c) Landscape buffer: Existing trees, to the extent practicable, shall be retained.

7.5 Earth Removal

7.5.1 [*Generally*] The removal from any property not in public use of soil, loam, peat, sand, gravel or stone (herein, "earth") is prohibited in all districts, except when incidental to and in connection with the construction of a building or street or other activity authorized by this Bylaw. No earth removal permit shall be required for moving earth within the limits of a lot or contiguous lots in the same ownership, provided that no such moving shall take place across or within a street.

7.5.2 *Removal of earth permitted without review by the Board.* Under the following conditions the removal of not more than one thousand (1,000) cubic yards of earth shall be permitted, provided that the Chief of Police has approved the days of operation, the trucking route and type of vehicle to be used on any street for removal of earth and provided further that, at least forty-eight (48) hours prior to any removal, the Building Inspector has been given written notification of the volume of earth to be removed, the approval of the Chief of Police and a notice of approval by one or more of the following procedures as applicable:

7.5.2.1 Building Permit: Removal by building permit when such removal is at the site of, incidental to and in connection with the excavation and grading necessary for the construction of a principal or accessory use permitted by this Bylaw;

7.5.2.2 Subdivision: Removal by approval of a definitive plan under the Subdivision Control Law when such removal is necessary to construct an approved street or definitive subdivision; and

7.5.2.3 Wetlands Protection Act and the Town's Wetlands Bylaw: Removal pursuant to an order of conditions issued under the Wetlands Protection Act (G.L. c. 131 sec.40) and the Town's Wetlands Bylaw when such removal is incidental to a use permitted without review by the Board in the Flood Plain Conservancy District.

7.5.3 *Removal of earth subject to board approval.* The removal of earth in excess of one thousand (1,000) cubic yards may be permitted by the Board after notice and a public hearing if the Board finds that:

7.5.3.1 The volume proposed for removal does not exceed the minimum practical removal required to accomplish the construction, development, or improvement in accordance with the plans therefor;

7.5.3.2 The plans submitted in connection with the removal are designed to minimize changes in existing contours to enhance attractive land utilization, effective drainage, suitable road gradients, access or other design considerations; and

7.5.3.3 Effecting the removal will not be detrimental or injurious to abutters or the neighborhood, either by the alteration of existing topography or by a substantial change in the use of the streets in the neighborhood.

7.5.4 Procedure for review by the Board.

7.5.4.1 Any person who desires to remove in excess of one thousand (1,000) cubic yards of earth shall submit a written application for a special permit to the Board. Each such application shall be accompanied by plans and specifications prepared by a registered professional engineer or registered land surveyor as follows:

(a) A plan of the area from which removal is proposed and a strip one hundred (100) feet wide surrounding said area, showing all manmade features, lot lines, zoning boundaries, vegetative cover, soil characteristics and existing topography;

(b) A plan of the area showing the finished grade and treatment of the site after the proposed completion of the excavation;

(c) The estimated quantity of materials to be removed and topsoil to be stripped and replaced, together with a detailed statement of the hours and days of operation, the trucking route and type of vehicle to be used on any street for the removal of earth, the treatment of the site during operations to reduce dust and mud and, where appropriate, the proposed form of bond; and

(d) Such additional information as the Board may determine.

7.5.4.2 If a special permit is granted, the Board shall impose limitations on the time and the extent of the permitted removal and such other appropriate conditions, limitations and safeguards as the Board deems necessary for the protection of the neighborhood and of the public health, safety, convenience and welfare of the Town and may condition the continuance of the permit upon compliance with regulations of the Board then in force or thereafter adopted. The Board shall require sufficient security, including necessary covenants, to insure compliance with the terms, conditions, and limitations of the earth removal permit.

7.6 Groundwater Conservancy District

7.6.1 Definition: The Groundwater Conservancy District is an overlay district superimposed on existing zoning districts, consisting of those areas within the Town which are delineated on the Groundwater Conservancy District map referred to in subsection 2.2.

7.6.1.1 Commercial fertilizers: Any substance containing one or more recognized plant nutrients which is used for its plant nutrient content and which is designed for use, or claimed by its manufacturer to have value in promoting plant growth. Commercial fertilizers do not include unmanipulated animal and vegetable manures, marl, lime, limestone, wood ashes, and gypsum.

7.6.1.2 Discharge: The accidental or intentional disposal, deposit, injection, dumping, spilling, leaking, incineration, or placing of toxic or hazardous material or waste upon or into any land or water so that such hazardous waste or any constituent thereof may enter the land or waters of the Commonwealth. Discharge includes, without limitation, leakage of such materials from failed or discarded containers or storage systems and disposal of such materials into any on-site leaching structure or sewage disposal system.

7.6.1.3 Hazardous material: A product, waste or combination of substances which because of its quantity, concentration, or physical, chemical, toxic, radioactive, or infectious characteristics may reasonably pose a significant, actual, or potential hazard to human health, safety, welfare, or the environment when improperly treated, stored, transported, used, disposed of, or otherwise managed. Hazardous materials include, without limitation, synthetic organic chemicals, petroleum products, heavy metals, radioactive or infectious materials, and all substances defined as "toxic" or "hazardous' under Massachusetts General Laws (M.G.L.) Chapter 21C and 21E.

7.6.1.4 Historical high groundwater table elevation: A groundwater elevation that is determined from local historical data and/or USGS monitoring wells and historical water table fluctuation data.

7.6.1.5 Impervious surface: Material or structure on or above the ground that does not allow precipitation or surface water to penetrate directly into the soil.

7.6.1.6 Landfill: A facility established in accordance with a valid site assignment for the purposes of disposing solid waste into or on the land.

7.6.1.7 Non-sanitary wastewater: Wastewater discharges from industrial and commercial facilities containing wastes from any activity other than collection of sanitary sewage.

7.6.1.8 Open dump: A facility established without a valid site assignment for the purposes of disposing solid waste into or on the land.

7.6.1.9 Septage: The liquid, solid, and semi-solid contents of privies, chemical toilets, cesspools, holding tanks, or other sewage waste receptacles.

7.6.1.10 Sludge: The solid, semi-solid, and liquid residue that results from a process of wastewater treatment or drinking water treatment. Sludge does not include grit, screening, or grease and oil which are removed at the headworks of a facility.

7.6.1.11 Solid waste: Useless, unwanted or discarded solid, liquid or contained gaseous material resulting from industrial, commercial, agricultural, municipal or household activities that is abandoned by being disposed or incinerated, but does not include hazardous waste, septage, sludge, waste-water treatment facility residuals or compostable or recyclable materials.

7.6.1.12 Treatment works: Any and all devices, processes and properties, real or personal, used in the collection, pumping, transmission, storage, treatment, disposal, recycling, reclamation, or reuse of waterborne pollutants, but not including any works receiving a hazardous waste from off the site of the works for the purpose of treatment, storage, or disposal.

7.6.1.13 Use of toxic or hazardous materials: The handling, generation, treatment, storage, or management of toxic or hazardous materials.

7.6.1.14 Very small quantity generator: Any public or private entity, other than residential, which produces less than 27 gallons (100 kilograms) a month of hazardous waste or waste oil, but not including any acutely hazardous waste.

7.6.1.15 Waste oil retention facility: A waste oil collection facility for automobile service stations, retail outlets, and marinas which is sheltered and has adequate protection to contain a spill, seepage, or discharge of petroleum waste products.

7.6.2 Purpose

7.6.2.1 To promote the health, safety, and general welfare of the community by ensuring an adequate quality and quantity of drinking water for the residents, institutions, and businesses of the Town of Concord;

7.6.2.2 To preserve and protect the Town's existing and potential sources of public drinking water supplies;

7.6.2.3 To conserve the natural resources of the Town; and

7.6.2.4 To prevent temporary and permanent contamination of the environment.

7.6.2.5 To preserve and protect the existing and potential sources of public drinking water supplies for the towns adjacent to the Town of Concord.

7.6.3 Applicability: Within the boundaries of the Groundwater Conservancy District, land use shall be subject to the provisions of this section in addition to the requirements of the underlying district. Where the line of the Groundwater Conservancy District divides a lot, only that portion of the lot within the district shall be subject to the provisions of this section.

7.6.4 Uses permitted without review by the Board: The following uses are permitted within the Groundwater Conservancy District:

7.6.4.1 Any extensive use and residential use permitted in the underlying district in which the land is situated, subject to the same use and development regulations as may otherwise apply thereto, whether by right or by special permit, provided that all development, including structural and non-structural activities, are in compliance with Section 7.6 and do not require a special permit as herein after provided in Section 7.6.5;

7.6.4.2 Any institutional use, governmental and utility use, business use and industrial use permitted in the underlying district in which the land is situated, subject to the same use and development regulations as may otherwise apply thereto, whether by right or by special permit, provided,

(a) all development, including structural and non-structural activities are in compliance with Section 7.6 and do not require a special permit as hereinafter provided in Section 7.6.5; and,

(b) the maximum lot coverage by the total ground area covered by the principal and accessory structures and all paved areas does not exceed 15 percent or 2,500 square feet per lot, whichever is greater.

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7.6.5 *Uses permitted subject to review by the Board:* The following uses may be permitted by special permit by the Board after notice and a public hearing:

7.6.5.1 Any institutional use, governmental and utility use, business use and industrial use permitted under Section 7.6.4.2 which exceeds the maximum lot coverage permitted under Section 7.6.4.2(b) provided, in part, that the proposed lot coverage does not exceed the maximum permitted in the underlying district.

7.6.5.2 Storage of sludge and septage;

7.6.5.3 Storage of roadway de-icing chemicals, such as calcium chloride, chemically treated abrasives, or other chemicals and the storage of chemical fertilizers or pesticides in quantities greater than those associated with normal household use.;

7.6.5.4 Open air or unenclosed storage of animal manure;

7.6.5.5 Storage of liquid hazardous materials and/or liquid petroleum products when such materials or products are not stored above-ground, on an impervious surface and in a container within a building, or outdoors in covered containers designed and operated to provide secondary containment of such materials or products.

7.6.5.6 The replacement of underground storage tanks or systems for the keeping, dispensing or storing of petroleum products;

7.6.5.7 Floor drains in an industrial or commercial facility and/or a petroleum, toxic, or hazardous materials and/or waste storage area;

7.6.5.8 On-site subsurface disposal which requires a minimum design flow under Title V in excess of four hundred and forty (440) gallons per day per acre.

7.6.5.9 Any alteration of a structure served by a failed septic system when such alteration is part of the work required to address the failed septic system.

7.6.5.10 Any use permitted in the underlying district in which the land is situated, subject to the same use and development restrictions as may otherwise apply thereto, provided that the land designated as being within the Groundwater Conservancy District is found by the Board not, in fact, to be within an area contributing to drinking water resources;

7.6.6 *Prohibited uses:* The following uses and activities are prohibited within the Groundwater Conservancy District:

7.6.6.1 Uses prohibited under Section 4.7.1;

7.6.6.2 Auto service station with underground storage tanks;

7.6.6.3 Private sanitary landfills and open dumps;

7.6.6.4 Commercial car washes not connected to the municipal sewer system;

7.6.6.5 Commercial and coin-operated laundries and dry-cleaning establishments (where dry-cleaning is done on-site) not connected to the municipal sewer system;

7.6.6.6 Sludge and septage landfills;

7.6.6.7 Storage and/or disposal of chemically treated snow and ice that have been removed from highways and roadways outside the Groundwater Conservancy District;

7.6.6.8 Petroleum, fuel oil and heating oil bulk stations and terminals, other than propane tanks;

7.6.6.9 Facilities for the treatment or disposal of non-sanitary wastewater are prohibited within the Groundwater Conservancy District, with the following exceptions:

(a) Replacement or repair of an existing system is exempt if the existing design capacity is not exceeded;

(b) Treatment works approved by the Department of Environmental Protection (DEP) and designed for the treatment of contaminated ground or surface waters and operated in compliance with DEP regulations; and

(c) Publicly owned treatment works.

7.6.6.10 Facilities that generate, treat, store, or dispose of hazardous waste are prohibited within the Groundwater Conservancy District, with the following exceptions:

(a) Very small quantity generators;

(b) Household hazardous waste collection centers or collection events;

(c) Waste oil retention facilities; and

(d) Treatment works for the restoration of contaminated ground or surface waters.

(e) Hospitals and other medical facilities in existence and licensed as such by the Department of Public Health, and identified by the Department of Environmental Protection as a "small quantity generator of hazardous waste."

7.6.6.11 Removal of soil, loam, sand, gravel, or any other mineral substances within four feet of the historical high groundwater table elevation is prohibited within the Groundwater Conservancy District, with the following exceptions:

(a) Substances which are removed and redeposited (or suitable alternative material deposited) within 45 days of removal on site to achieve a final grade equal to preexisting ground contours or greater than four feet above the historical high water mark; and

(b) Excavations for the construction of residential building foundations and other structures accessory to the principal residential use and the installation of utilities.

7.6.6.12 Any expansion of a structure served by a failed septic system, unless such expansion is required to address the failed septic system.

7.6.7 Procedure for review by the Board

7.6.7.1 Any person who desires to use land within the Groundwater Conservancy District for a use permitted subject to review by the Board shall submit a written application for a special permit to the Board, with copies to the Planning Board, Public Works Commission, the Natural Resources Commission and the Board of Health. Each such application shall be accompanied by the following submissions:

(a) A complete list of chemicals, pesticides, herbicides, fertilizers, fuels, and other potentially hazardous materials to be used or stored on the premises in quantities greater than those associated with normal household use;

(b) For those activities using or storing such hazardous materials, a hazardous materials management plan shall be prepared and filed with the Fire Department, and Board of Health. The plan shall include:

i. Provisions to protect against the discharge of hazardous materials or wastes to the environment due to spillage, accidental damage, corrosion, leakage, or vandalism, including spill containment and clean-up procedures;

ii. Provisions for indoor, secured storage of hazardous materials and wastes with impervious floor surfaces; and

iii. Evidence of compliance with any local, state and/or federal regulations.

(c) Proposed down-gradient location(s) for groundwater monitoring well(s), should the Board deem the activity a potential groundwater threat.

7.6.7.2 The Planning Board, Public Works Commission, the Natural Resources Commission and Board of Health shall submit to the Board written recommendations including an evaluation that the project:

(a) Minimizes any adverse effects to the existing or potential quality or quantity of water that is available in the Groundwater Conservancy District;

(b) Is designed to avoid substantial disturbance of the soils, topography, drainage, vegetation, and other water-related natural characteristics of the site to be developed;

(c) Provides a system of artificial recharge of precipitation that will not result in the degradation of groundwater quality; and

(d) Where a portion of the lot is located partially outside the Groundwater Conservancy District, site design shall, to the extent feasible, locate potential pollution sources, such as on-site disposal systems, outside the district boundaries.

7.6.7.3 If a special permit is granted, the Board shall impose such conditions and safeguards as public safety, welfare and convenience may require. The Board shall give due consideration to the reports of the Planning Board, Natural Resources Commission, Public Works Commission and the Board of Health, and where the decision of the Board differs from the recommendations of the Planning Board, the Public Works Commission,

the Natural Resources Commission, or the Board of Health, the reasons therefor shall be stated in writing.

7.7 Off-street Parking, Loading, and Design Standards

7.7.1 Purpose: The purpose of this section is to ensure that all uses be provided with sufficient off-street parking and loading facilities to meet the needs of persons employed at or having commerce at such uses; to ensure that off-street parking and loading facilities are designed so as to reduce hazards to pedestrians and drivers; to reduce congestion in the streets; to reduce nuisance to abutters from noise, fumes, and headlight glare ordinarily associated with parking lots; to reduce environmental deterioration to surrounding neighborhoods resulting from the glare, heat, dust, light spillover, light pollution, accelerated storm water run-off, and unattractive views associated with large expanses of pavement and vehicles.

7.7.2 Parking and Loading Regulations

7.7.2.1 Required spaces: Table IV, Minimum Parking, indicates the minimum number of parking spaces required for each principal use.

TABLE IV
MINIMUM PARKING

Principal Use	*Required Spaces*
Extensive Uses:	
Greenhouse	One (1) space per two hundred fifty (250) square feet of gross floor area of inside sales or display room.
Private recreation:	
camps	One (1) space per employee, plus one (1) space per camp vehicle kept on the premises.
handball, racquetball, tennis courts	Three (3) spaces per court plus one (1) space per employee on the largest shift.
golf courses	Five (5) spaces per hole plus one (1) space per employee on the largest shift plus fifty (50) percent of the spaces otherwise required for accessory uses (bars, restaurants, etc.)
swimming pool	One (1) space per seventy-five (75) square feet of gross water area.
fitness clubs	One (1) space per two-hundred-fifty (250) square feet of gross floor area.

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Principal Use	*Required Spaces*
Extensive Uses Cont.:	
other outdoor recreational facilities including country clubs	One (1) space per four (4) persons generally expected on the premises at any one time.
Residential Uses:	
Single- and two-family dwelling and planned residential development	Two (2) spaces per dwelling unit or one and one-half (1-1/2) spaces per dwelling unit for subsidized low and moderate income housing or elderly housing developments.
Boarding house and tourist home	Two (2) spaces plus one (1) space per rentable room or suite.
Hotel, Extended-stay hotel and Motel	One (1) space per rentable room or suite, plus one (1) space per two (2) employees on the largest shift, plus one (1) space per four (4) persons to maximum rated capacity of each meeting or banquet room, plus fifty (50) percent of the spaces otherwise required for accessory uses (bars, restaurants, shops, etc.)
Institutional Uses:	
Educational:	
elementary and middle schools	One (1) space per staff member plus one (1) space per classroom.
senior high school	One (1) space per staff member plus one (1) space per five (5) students.
other nonprofit educational use	To be determined by the Building Inspector based upon the most comparable other use in Table IV

Principal Use	*Required Spaces*
Institutional Uses Cont.:	
Child care facility	One (1) space for every teacher and employee, one (1) space for visitors plus one (1) space for every six children based on the largest enrollment on site at any given time; the Board or the Planning Board, whichever is responsible for site plan approval, may allow a reduction in the number of required parking spaces for the purposes of improving site utilization but not to increase permitted enrollment if the number of spaces provided is adequate to provide one space for every teacher and employee and to support, without detriment to the neighborhood, drop-off and pick-up areas for the maximum number of children arriving and departing the facility at any one time in accordance with a parking and traffic management plan approved by the Planning Board. In the case of a parking and traffic management plan, the Planning Board shall have the authority to monitor compliance and to amend the plan as necessary to achieve compliance with the standards set forth in the plan.
Religious	One (1) space per four (4) seats or one (1) space per four (4) persons to maximum rated capacity of the hall or meeting room.
Philanthropic (community and recreation centers, libraries and museums)	One (1) space per two hundred fifty (250) square feet of gross floor area.
Assisted living residence	0.35 parking spaces per dwelling unit, plus one (1) parking space per two employees during the largest shift, plus one (1) space per company vehicle kept on the premises.
Hospital	One (1) space per two (2) beds plus three (3) spaces per staff doctor plus one (1) space per other employee on the largest shift.
Nursing home	One (1) space per two (2) beds.
Lodge or club	One (1) space per four (4) persons to maximum rated capacity of the facility.

SPECIAL PROVISIONS

Business Uses:

Retail store	One (1) space per two hundred fifty (250) square feet gross floor area.
Personal service shop and craft shop	Three (3) spaces per operator in a barber or beauty shop; otherwise one (1) space per two hundred fifty (250) square feet of gross floor area.
Restaurant	One (1) space per three (3) seats rated capacity, plus one (1) space per employee on the largest shift.
Indoor amusement	One (1) space per four (4) persons to maximum rated capacity of the facility.
Outdoor amusement:	
driving range	One (1) space per tee.
miniature golf	One (1) space per hole.
skating rink or other outdoor amusements	One (1) space per three hundred (300) square feet of gross area of facility plus one (1) space per employee on the largest shift.
Funeral home	One (1) space per four (4) patron seats.
Repair shop and building trade	One (1) space per employee on the largest shift and one (1) space for each company vehicle kept on the premises.
Medical center and laboratory	Three (3) spaces per staff doctor, dentist or other professional [e.g. nurse practitioner, dental hygienist, phlebotomist] plus one (1) space per other employee on the largest shift.
Auto service station and auto body shop	Three (3) spaces per lubrication or repair bay excluding such bays, plus one (1) space per employee on the largest shift plus one (1) space per company vehicle kept on the premises.
Vehicular dealerships and boat sales and rentals	One (1) space per fifteen hundred (1500) square feet of gross floor area of indoor and outdoor display area.
Veterinary and kennel	Three (3) spaces per doctor plus one (1) space per other employee on the largest shift.

Principal Use	*Required Spaces*
Business Uses Cont.:	
Financial and business office: bank, loan agency, travel & real estate agency or other consumer services offices	One (1) space per two hundred fifty square feet of gross floor area, plus two spaces per Automated Teller Machine (ATM).
general offices, administrative offices and executive offices	One (1) space per three hundred (300) square feet of gross floor area.
Professional office	One (1) space per two hundred fifty (250) square feet of gross floor area.
Industrial Uses:	
Warehouse and storage yard/open air sales	One (1) space per one thousand (1,000) square feet of gross floor area plus one (1) space per company vehicle kept on the premises.
R&D and Light manufacturing	One (1) space per three hundred (300) square feet of gross floor area used for office and one (1) space per four hundred (400) square feet of gross floor area used for research, testing, training or light manufacturing.
Manufacturing, packaging, processing and testing	One (1) space per four hundred (400) square feet of gross floor area.
Repair garage	One (1) space per employee on the largest shift plus one (1) space per company vehicle kept on the premises.

7.7.2.2 Increased parking demand: When a building or use undergoes a change which involves any increase in the number of dwelling units, gross floor area, seating capacity or other unit of measurement used as a means of determining off-street parking, and when such change would result in a requirement for a greater number of parking spaces than exists on the site, the off-street parking shall be increased to meet the requirements of subsection 7.7.2.1, Table IV, for the entire building or use as changed.

7.7.2.3 Use of required parking as commercial or public lot: No parking area designated as required parking in connection with a building or use shall be operated as a commercial or public parking lot providing spaces for the general public or for the tenants, customers, clients or residents of any other use or activity for a fee or other compensation except in accordance with subsection 7.7.2.4. In no event shall tenants of a building be charged an optional fee for use of required parking.

7.7.2.4 Joint parking facilities: Off-street parking facilities for different buildings or uses may be provided and used collectively or jointly in any zoning district in which the separate uses would be permitted, subject to the following provisions:

(a) Up to fifty (50) percent of the parking spaces required for educational, religious, lodge and club, indoor amusement, and restaurant uses may be provided and used jointly by banks, offices, retail stores, repair shops, service establishments, and other uses not normally open, used, or operated during similar hours if specifically approved by the Planning Board. The approval may be rescinded and additional parking shall be provided by the owners in the event that the Planning Board, after notice and public hearing thereon, determines joint use is resulting in a public nuisance or other adverse effects on the public health, safety, and welfare.

(b) A written agreement, assuring the continued joint use of the common parking area, executed by all parties concerned and approved as to form and length of time by the Planning Board, shall be filed with and made part of the application for a building or occupancy permit.

7.7.2.5 Fractional numbers: Where the computation of required parking spaces results in a fractional number only the fraction of one-half or more shall be counted as one (1).

7.7.2.6 Mixed use facilities: Buildings or lots which contain more than one principal use are considered mixed use facilities. For the purpose of determining parking requirements for such a facility, each use component shall be treated as a separate principal use.

7.7.2.7 Location: All required parking or loading spaces shall be provided on the same parcel of land occupied by the use or building to which it is appurtenant; provided, however, that where, in the opinion of the Planning Board, there are practical difficulties in satisfying the requirement for parking spaces and/or if the public safety and convenience would be served better by another location, the Planning Board may authorize an alternative location for nonresidential parking subject to the following provisions:

(a) The property to be occupied as parking shall be in the same possession as the facility served either by deed, by easement, or by long-term lease. If the property is leased, the terms of the lease shall be subject to Planning Board approval as to form and length of time and a copy of the lease shall be filed with and made part of the application for a building or occupancy permit.

(b) The distance between the use or building and its parking area shall not be more than six hundred (600) feet.

(c) The separated parking area shall not create unreasonable traffic congestion or create a hazard to pedestrians or vehicular traffic.

(d) The parking area shall be located on property zoned for the same or less restrictive use as the principal use being served by the parking.

7.7.2.8 Reserved parking spaces: The Planning Board may, based upon documentation of the special nature of the use, or building, authorize a phased development of required off-street parking with the following provisions:

(a) The total number of spaces required to be shown on the site plan shall be determined in accordance with the standards set forth in subsection 7.7.2.1, Table IV.

(b) The spaces that are not intended for construction immediately shall be labeled "Reserve Parking" on the site plan and shall be properly designed as an integral part of the overall parking layout, located on land suitable for parking development and in no case located within area counted as buffer, setback, or open space under other provisions of this Bylaw.

(c) No more than fifty (50) percent of the total number of required spaces may be reserved for later construction.

(d) If, at any time after the certificate of occupancy is issued for the building or use, the Building Inspector determines that additional spaces may be needed, he shall notify the Planning Board concerning his finding and that Board may require that all or any portion of the spaces shown on the approved site plan as "Reserved Parking" shall be constructed.

7.7.2.9 Use of parking area: No parking area shall be used for any use that interferes with its availability for the parking need it is required to serve.

7.7.2.10 Off-street loading: For every building or part thereof which is to be used by retail, industrial, hospital, hotel, extended-stay hotel or similar uses requiring the regular receipt or distribution by vehicles of materials or merchandise, off-street loading space(s) shall be provided according to the following schedule:

Sq. Ft. of Gross Floor Area in Use	*No. of Loading Spaces*
0 to 10,000	None
10,000 to 50,000	1
50,000 to 100,000	2
Each additional 100,000 or fraction thereof	1

However, an assisted living residence, as defined in Section 4.3.6, shall not be required to install more than one of-street loading space provided that the facility has no more than 100,000 square feet of gross floor area.

7.7.2.11 Exceptions: The parking and loading requirements set forth in subsection 7.7.2.1, Table IV, shall not apply to any building or use in existence on January 31, 1985, provided that existing off-street parking or loading areas are not reduced and provided further that the building is not substantially altered nor its use changed.

7.7.2.12 Relief from parking requirements: The Board may, upon advice of the Planning Board, grant relief from the parking and loading requirements in Section 7.7.2 provided the Board finds that a literal application of such requirements would be unreasonable and that the desired relief may be granted without substantial detriment to the neighborhood and without derogating from the intent and purpose of this Bylaw. The Board may require the applicant to submit a written report, prepared by a qualified parking consultant, defining and evaluating the nature and impact of the requested relief.

7.7.3 Design Standards.

7.7.3.1 Parking dimensions: The minimum dimensions of parking spaces and maneuvering aisles shall be as follows:

A. Parking Angle
B. Stall Width
C. Distance of Stall to Curb
D. Aisle Width
E. Curb Length Per Car
F. Stall Depth

9' x 18'
FULL SIZE SPACES

	A	B*	C**	D		E	F
				1-way	*2-way*		
(parallel)	0	22'	9'	12'	24'	22'	NA
	45	9'	17'	14'	24'	12.7'	18'
	60	9'	18.5'	18'	24'	10.4'	18'
	75	9'	19'	22'	24'	9.3'	18'
	90	9'	18'	24'	24'	9'	18'

8' x 16'
SMALL CAR SIZE SPACES

	A	B*	C**	D		E	F
				1-way	*2-way*		
(parallel)	0	20'	8'	12'	24'	20'	NA
	45	8'	15.5'	14'	24'	11.3'	16'
	60	8'	16.8'	18'	24'	9.2'	16'
	75	8'	17'	22'	24'	8.3'	16'
	90	8'	16'	24'	24'	8'	16'

* Non-parallel end spaces, restricted on one of the long sides by curbs, walls, fences or other similar obstructions, shall have a minimum width of ten (10) feet, and maneuvering space at the aisle end of at least five (5) feet in depth and nine (9) feet in width.

** Non-parallel spaces may include no more than two (2) feet of landscaped island or setback area at the front of the space, provided there are no obstructions to the vehicle's bumper overhang and provided, further, that the bumper overhang does not interfere with availability of the island or setback area for snow storage.

7.7.3.2 Loading space dimensions: Each loading space shall be at least ten (10) feet in width, thirty (30) feet in length, and shall be provided with a fourteen-foot-high clearance.

7.7.3.3 Circulation: Driveways and parking areas shall be designed with due regard to topography, integration with surrounding streets, general interior circulation, and separation of pedestrian and vehicular traffic so as to reduce hazards to pedestrians and motorists.

7.7.3.4 Layout: Required parking and loading facilities shall be laid out so that each vehicle may proceed to and from its parking space without requiring the movement of any other vehicle. The Planning Board may waive this requirement for parking facilities under full-time attendant supervision.

In no case shall parking or loading spaces be so located as to require the backing or maneuvering of a vehicle onto the sidewalk or onto a public way in order to enter or leave the space.

7.7.3.5 Driveways: All driveways shall be located and designed so as to minimize conflict with traffic on public streets and to provide good visibility and sight distances for observation of approaching vehicular and pedestrian traffic.

7.7.3.6 Small car spaces: In parking lots with more than thirty (30) spaces, up to a maximum of thirty (30) percent of the total number of required spaces may be designed for small cars. In parking lots of thirty (30) or less spaces, up to a maximum of twenty (20) percent of the total number of required spaces may be designed for small cars.

Small car spaces shall be located such that they are grouped in one or more areas which are neither more nor less convenient to the use or building served than the full size spaces. Small car spaces shall be suitably and conspicuously identified through appropriate signing or pavement markings.

7.7.3.7 Handicapped parking: Parking facilities shall provide specially designated parking spaces for the physically handicapped in accordance with the rules and regulations of the Architectural Barriers Board of the Commonwealth of Massachusetts Department of Public Safety.

Signs for the handicapped shall be clearly identified by a sign indicating that the spaces are reserved for physically handicapped persons. Such spaces shall be located nearest to the entrance to the use or building served.

7.7.3.8 Bicycle parking: Bicycle parking or storage shall be provided for use by residents, employees and other users of the site. Long-term bicycle parking for residents and employees shall be located in secure, weather-protected, restricted access facilities. Short-term bicycle parking for visitors and users of a site shall be located in convenient and accessible locations.

7.7.3.9 Surfacing, drainage and curbing: All parking facilities shall be graded, surfaced with asphalt, concrete or similar nonerosive material, and drained in a manner deemed adequate by the Planning Board to prevent nuisance of erosion or excessive water flow across public ways or abutting properties.

Entrance and exit driveways shall be defined clearly with curbing, signs, and pavement markings. Parking and loading spaces shall be marked clearly in accordance with the dimensions specified in subsections 7.7.3.1 and 7.7.3.2, above.

7.7.3.10 Landscaping: In order to separate parking areas from abutting streets, to provide areas for disposal of snow, and to provide visual relief from expanse of pavement and

vehicles, landscaping shall be provided in all parking areas containing five (5) or more parking spaces according to the Planning Board site plan rules and regulations in effect at the time.

7.7.3.11 Lighting: Exterior lighting shall be designed for safety and for personal security. Glare and light spillover, as defined below, shall be controlled to protect inhabitants from the consequences of stray light shining into inhabitant's eyes or onto adjoining properties. Light pollution, as defined below, control shall be required to minimize the negative effect of misdirected upward light. All exterior lighting shall be aimed, located, designed, fitted and maintained so that it illuminates the task intended and does not shine directly onto neighboring properties, roadways or distribute excessive light skyward.

(a) *Glare* shall mean the sensation produced by luminance within the visual field that is sufficiently greater than the luminance to which the eyes are adapted so as to cause annoyance, discomfort or loss in visual performance and visibility. The magnitude of the sensation of glare depends upon factors such as the size, position, and luminance of the source, the number of sources, and the luminance to which the eyes are adapted.

(b) *Light spillover* shall mean illumination produced by a light fixture, which extends beyond the boundaries of the lot or parcel upon which the light fixture is located.

(c) *Light pollution* shall mean illumination which extends beyond an object, structure or area, which the light fixture is designed to serve, so as to produce glare, or otherwise interfere with viewing of natural vistas such as the night sky.

7.7.3.12 Maintenance: Parking and loading facilities and landscaping shall be continuously maintained in good condition and appearance. Whenever necessary, surfacing, lighting, curbing, markings and plantings shall be repaired or replaced with new materials, and drainage structures shall be cleaned or replaced in order to insure continued compliance with the provisions of Section 7.7. Failure to maintain parking facilities properly shall be considered a violation of the Zoning Bylaw.

7.7.3.13 Relief from design standards: The Board may, upon advice of the Planning Board, grant relief from the design standards contained in section 7.7.3 where the variation in the standards can be supported by a study prepared by a qualified consultant and where the Board finds that the desired relief may be granted without substantial detriment to the neighborhood and without derogating from the intent and purpose of this Bylaw.

7.8 Personal Wireless Communications Facility

7.8.1 Purpose and Intent: The purpose of this Section is to establish a district within the Town in which personal wireless communication facilities may be provided, to regulate their impacts and to accommodate their location and use in a manner which:

(a) protects the visual, aesthetic, scenic, historic, environmental and natural or man-made resources of the Town;

(b) encourages the use of existing structures and towers;

(c) protects property values;

(d) minimizes the total number and height of towers located within the community by requiring tower sharing and clustering of personal wireless communication facilities where possible;

(e) minimizes any adverse impacts on the residents of the Town (such as, but not limited to, visual blight on viewsheds, attractive nuisance, noise and falling objects) with regard to the general safety, welfare and quality of life in the community;

(f) provides standards and requirements for regulation, placement, construction, monitoring, design, modification and removal of personal wireless communication facilities; and

(g) provides a procedural basis for action within a reasonable period of time for requests for authorization to place, construct, operate or modify personal wireless communication facilities;

The intent of this Section is to be in compliance with the federal Telecommunications Act of 1996.

7.8.2 *Definitions:* As used in this Section, the following terms shall have the meanings indicated:

7.8.2.1 *Act:* The federal Telecommunications Act of 1996.

7.8.2.2 *Adequate coverage:* Coverage is considered to be "adequate" within that area surrounding a base station where the predicted or measured median field strength of the transmitted signal is greater than minus 95 (-95)dbm. It is acceptable for there to be holes within the area of adequate coverage where the signal is less than –95dbm, as long as the signal regains its strength to greater than –95dbm further away from the base station. For the limited purpose of determining whether the use of a repeater is necessary or desirable, there shall be deemed not to be adequate coverage within said holes. The outer boundary of the area of adequate coverage, however, is that location past which the signal does not regain its strength to greater than –95dbm. In applications to the Board, predictions of field strength in proposed coverage areas shall be supported by submission of actual measurements or drive test data, using at least two methodologies, along the most heavily traveled roads in the proposed coverage area for review and analysis by the independent consultant referred to in subsection 7.8.4.3.

7.8.2.3 *Adequate capacity:* In an area where coverage exists, capacity is considered "adequate" if, during the busiest hour of the day on at least fifty percent (50%) of the days in any month preceding the date of application, 95% or more of the attempted calls are able to connect on their first attempt, as measured using direct measurement of the coverage area in question.

7.8.2.4 *Antenna:* A device that is attached to a tower, or other structure for transmitting and receiving electromagnetic waves.

7.8.2.5 *Array:* A set of antennas for one carrier or personal wireless communication service provider that are placed on a mount at a given height above ground level and spaced so as to avoid internal interference.

7.8.2.6 Available space: The space on a tower or other structure to which antennas of a personal wireless communication service provider are both structurally able and electromagnetically able to be attached.

7.8.2.7 Base station: A fixed-location sending and receiving site serving a coverage area within a wireless communication network. More than one base station and/or facilities as used or operated by more than one variety of personal wireless communication service provider can be located on a single tower or structure.

7.8.2.8 Channel: A segment of the radiation spectrum radiating from an antenna. An antenna may radiate on many channels simultaneously.

7.8.2.9 Communication equipment shelter: A structure located at the base of a tower or other structure designed principally to enclose equipment used in connection with personal wireless communication transmissions.

7.8.2.10 Coverage or propagation studies: Computer generated estimates of the radiation emanating from antennas or repeaters sited on a specific tower or structure. The height above ground, power input and output, frequency output, type of antenna, antenna gain, topography of the site and its surroundings are all taken into account to create these simulations. They are a preliminary tool for determining whether a site will provide adequate coverage for a personal wireless communication service facility proposed for that site.

7.8.2.11 Facility site: A property, or any part thereof, which is owned or leased by one or more personal wireless communication service providers and upon which one or more personal wireless communication facility(s) and required landscaping are located.

7.8.2.12 Filler site: a small, lower-powered site that uses a repeater or other similar technology to fill a gap in coverage that is otherwise not filled by a base station array.

7.8.2.13 Modification of an existing facility: Any material change or proposed change to a personal wireless communication facility including but not limited to power input or output, number of antennas, or change in number of channels per antenna above the maximum number approved under an existing special permit.

7.8.2.14 Monitoring: The measurement, by the use of instruments in the field, of the radiation from a facility site as a whole, or from individual personal wireless communication facilities, towers, antennas or repeaters.

7.8.2.15 Monitoring protocol: the testing protocol adopted by the Board, which is to be used to monitor the emissions from existing and new personal wireless communication facilities. A copy of the monitoring protocol shall be on file with the Building Inspector.

7.8.2.16 Monopole: A single self-supporting vertical pole with no guy wire anchors, usually consisting of a galvanized or other painted metal, or a wooden pole with below grade foundations.

7.8.2.17 Personal wireless communication services: Commercial mobile services, unlicensed wireless services, and common carrier wireless exchange services. These services include (but are not limited to): cellular services, personal communication services (PCS), specialized mobile radio services and paging services.

7.8.2.18 Personal wireless communication facility: All equipment (including any repeaters, micro-cells or other similar technology) with which a personal wireless communication service provider broadcasts and receives the radio-frequency waves that carry their services and all locations of said equipment or any part thereof.

7.8.2.19 Personal wireless communication service provider: An entity licensed by the Federal Communication Commission (FCC) to provide personal wireless communication services to individuals or institutions.

7.8.2.20 Repeater: A small receiver/relay transmitter designed to provide service to areas which are not able to receive adequate coverage from a base station in a wireless communications network and has no significant visual impact on the surrounding area.

7.8.2.21 Structurally able: The determination that a tower or structure is capable of carrying the load imposed by the new antennas under all reasonably predictable conditions as determined by professional structural engineering analysis.

7.8.2.22 Tower: A freestanding lattice structure or framework, or monopole, that is self-supporting, fixed to the ground and is designed to support personal wireless communication transmissions, receiving and/or relaying antennas and/or equipment. An existing lattice tower may be replaced in an existing location but no new lattice structures shall be permitted.

7.8.3 *Exemptions:* The following wireless communication facilities are exempt: police, fire, ambulance and other emergency dispatch; amateur (ham) radio; citizens band radio; any existing commercial radio tower; and radio dispatch for local businesses. No personal wireless communication facility shall be considered exempt from this Section for any reason whether or not said facility is proposed to share a tower or other structure with such exempt uses.

7.8.4 *Procedure for review by the Board:* Any person who desires to construct or install a personal wireless communication facility, including co-location on an existing facility, shall submit a written application for a special permit and site plan approval to the Board, with copies to the Planning Board. Applications shall be submitted in accordance with the requirements outlined in the Rules and Regulations for Personal Wireless Communication Facility(s) adopted by the Board. A special permit is required for: a) new tower construction (or modification of an existing tower); and b) personal wireless communication service facilities (or modification of an existing facility) to be mounted in or on an existing or newly permitted tower or structure, except where modification of an existing tower or facility does not substantially change the physical dimensions or appearance of such tower or facility or transmission equipment, or involves the removal of transmission equipment. The following additional information shall also be submitted:

7.8.4.1 Adequate coverage, adequate capacity and justification of need:

(a) The applicant shall provide written documentation of any facility sites in the Town and in abutting towns in which it has a legal or equitable interest, whether by ownership, leasehold or otherwise. Said documentation shall demonstrate the following: that these facility site(s) are not already providing, or do not have the

potential, by adjusting the personal wireless communication facility on the site(s), to provide adequate coverage and/or adequate capacity; that there is a significant gap in coverage; and, that the proposal reduces or eliminates the significant gap in coverage in a manner that is least intrusive upon the interests of the Town as expressed in the purpose and intent of this Section. A "gap" in coverage exists when a remote user of personal wireless communication services is unable to either connect, directly or indirectly, with a base station or to maintain a connection capable of supporting a reasonably uninterrupted communication. A "significant gap" depends upon the physical size of the gap and upon the number of customers affected by that gap. Documentation shall include, for each facility site listed, the exact location, ground elevation, height of tower or structure, type of antennas, antenna gain, height of antennas on tower or structure, output frequency, number of channels, power input and maximum output per channel. Potential adjustments to these existing facility sites, including changes in antenna type, orientation, gain, height or power output shall be specified. Radial plots from each of these facility sites, as they exist and with adjustments as above, shall be provided as part of the application.

(b) The applicant shall provide written documentation that they have examined all personal wireless communication facility sites located in the town and in abutting towns in which the applicant has no legal or equitable interest to determine whether those existing facility sites can be used to provide adequate coverage and/or adequate capacity. Documentation shall include all information outlined above. Radial plots from each of these facility sites as proposed shall also be provided.

(c) The applicant shall provide written documentation (including radial plots) that they have analyzed the provision of adequate coverage and adequate capacity through the use of filler sites in conjunction with all personal wireless communication facility sites listed above.

(d) The applicant shall provide a map of all proposed facilities to be applied for over the next twenty (20) months (or a complete build-out analysis) by the personal wireless communication service provider. Such map shall also include any and all existing personal wireless communication facility(s) of the provider and known proposed facilities of other personal wireless communication service providers.

(e) The applicant shall provide written documentation that the applicant has examined potentially viable personal wireless facility sites in the overlay districts in the town and relevant sites in abutting towns that could provide adequate coverage and capacity in the town, including the existing structures and open areas that comply with the relevant zoning bylaws of those towns and are consistent with Section 7.8.1 *Purpose and Intent (a)* through *(e)*. The applicant shall list all such sites examined and state fully and completely the rationale for rejecting any such sites that are less intrusive upon the interests of the Town than the site(s) for which application is being made.

7.8.4.2 General requirements:

(a) New towers shall be set back a distance at least equal to the height of the tower from all lot lines of the site on which the tower is located, unless the tower has been

designed to break away at a certain point above the ground, in which case the new tower may be set at least the breakaway distance from all lot lines.

(b) If the facility site is in a wooded area, a vegetated buffer strip of undisturbed trees shall be retained around the entire perimeter of the personal wireless communication facility site for at least the lesser of (i) the distance to the lot line or (ii) fifty (50) feet. The landowner shall enter into a recordable easement, restriction, or similar instrument enforceable by the Town to ensure that the buffer strip is retained while the facility site is in place.

(c) Fencing and signs: the area around the tower and communication equipment shelters shall be completely fenced for security to a height of six feet and gated (unless the communication equipment shelter is otherwise secured). Use of razor wire is not permitted. A sign shall be posted adjacent to the entry gate indicating the facility owner(s) and a 24-hour emergency telephone number and any legally required radio-frequency warning sign shall be posted in an appropriate location. Commercial advertising on any antenna, tower, fencing, accessory building or communication equipment shelter is prohibited.

(d) Communication equipment shelters and accessory buildings shall be designed to be architecturally similar and compatible with each other and the surrounding area. The building shall be used only for the housing of equipment related to the site. Whenever practical, the buildings shall be located underground. Additional supplemental landscape screening may be required by the Board to lessen adverse visual impacts.

(e) New towers shall not exceed the minimum height necessary to provide adequate coverage for the personal wireless service facilities proposed for use on the tower, unless the Board determines that co-location with another service provider is desirable, suitable and consistent with this Section. In areas where there is no significant tree canopy, the maximum height of a tower shall not exceed one-hundred-twenty (120) feet above finished grade of the ground elevation. Such finished grade shall not be distorted above the pre-existent natural grade as a way to achieve additional height.

In areas where there is significant tree canopy, the maximum height of a tower shall not exceed twenty (20) feet above the average height of the natural pre-existent tree canopy within a one-hundred fifty (150) foot radius of the tower.

The Board may permit an increase in the height of a tower, or attachment thereto, to facilitate co-location, provided the Board determines that no material increase in visual impacts will result from the increased height, but in no case shall the height exceed one-hundred fifty (150) feet.

The design of the tower and supporting base structure shall accommodate an ultimate height of whatever is approved by the Board.

(f) If primary coverage from the proposed personal wireless communication facility (greater than 50%) is outside the Town of Concord, the permit may be denied unless the Applicant can show that they are unable to locate within the Town which is primarily receiving service from the proposed facility.

(g) A personal wireless communication facility proposed to be located on an existing, suitable, non-residential structure or tower for which an occupancy permit was issued as of January 1, 2001 and located within this district, shall not exceed the height of such structure by more than twenty (20) feet.

(h) Unless required by the Federal Aviation Administration or Emerson Hospital medi-flight program, no exterior night lighting of towers or the personal wireless communication facility is permitted except for manually operated emergency lights for use when operating personnel are on site.

(i) A personal wireless communication facility subject to jurisdiction by the Federal Aviation Administration (FAA) shall be designed to minimize, to the extent feasible, adverse visual effects upon existing single-family detached dwellings and historic or scenic viewsheds. No new tower that requires striping or lighting per FAA requirements shall be located within one-thousand (1000) feet of an existing school, day care center, single-family detached dwelling or historic resource.

(j) No new tower for a personal wireless communication facility, shall be located within:

i. One-thousand (1000) feet, on a horizontal plane, to any existing structure which is, or is able to be, occupied or habitable on the property of any existing child care facility or school;

ii. One thousand (1000) feet, on a horizontal plane, to the structure of an existing single-family detached dwelling;

iii. One thousand (1000) feet, on a horizontal plane, to any structure in an Historic District, or listed, or eligible to be listed, on the state or federal Register of Historic Places;

iv. Town, Massachusetts, or federally regulated bordering vegetated wetland;

v. a Massachusetts certified vernal pool;

vi. the habitat of any Massachusetts listed rare or endangered wildlife or rare plant species;

(k) New personal wireless communication facilities in or on an existing, suitable, non-residential structure or tower for which an occupancy permit was issued as of January 1, 2000 shall be located at least:

i. five hundred (500) feet, on a horizontal plane, from any existing structure which is, or is able to be, occupied or habitable on the property of a child care facility or school;

ii. three hundred (300) feet, on a horizontal plane, from the structure of an existing single-family detached dwelling; or

iii. three hundred (300) feet, on a horizontal plane, from any structure in a Historic District or listed (or eligible to be listed) on the State or Federal Register of Historic Places.

(l) The following locations are ranked in order of preference and are encouraged:

i. personal wireless communication facility sites that are most distant from single-family detached dwellings and schools.

ii. municipal lands which comply with other requirements of this section.

iii. where the visual impact of towers can be minimized by the use of camouflage, stealth design or other innovative measures to reduce, eliminate or disguise the negative visual impact.

iv. filler sites to provide adequate coverage without requiring new towers.

v. existing personal wireless communication facility(s).

(m) Personal wireless communication facilities shall be located so as to provide adequate coverage and adequate capacity with the fewest number of base stations, towers and antenna arrays that are technically feasible. The Board may limit the number of base stations, towers and antenna arrays upon any single parcel. The Board may limit the number of base stations, towers and antenna arrays in any given overlay district.

(n) Subsequent applicants are required to co-locate and shall submit an application to add to existing towers, installed under the provisions of this Bylaw.

(o) The Board shall request input from the Fire, Police and other town emergency services regarding the adequacy for emergency access to the site.

(p) Balloon test: Within 35 days of submitting an application, the applicant shall arrange to fly, or raise upon a temporary mast, a three foot diameter brightly colored balloon at the maximum height and at the location of the proposed tower. The date(s) (including a second date, in case of poor visibility on the initial date), times and location of the balloon test shall be advertised, by the applicant at seven (7) and fourteen (14) days in advance of the first test date in a newspaper with a general circulation in the Town. The applicant shall inform the Board and the Planning Board in writing of the dates and times of the test at least fourteen days in advance. The balloon shall be flown for at least five consecutive hours between 7:00 a.m. and 5:00 p.m. on the date(s) chosen. The applicant shall bear any and all expenses associated with such balloon test.

7.8.4.3 Evaluation by independent consultants: Upon submission of a complete application for a special permit under this Section, the Board shall engage the services of a qualified independent consultant and shall provide the independent consultant with the completed application and existing documentation for analysis and review. The independent consultant shall gather additional documentation and conduct additional research as necessary to support the analysis and review. Access to the site to conduct any necessary site visits shall be provided to the qualified independent consultant. The qualified independent consultant shall submit to the Board a written recommendation and an opinion as to the conformance of the application with the requirements of this Section.

7.8.4.4 Fees and insurance: Personal wireless service facilities shall be continuously insured by the owner(s) against damage to persons or property. The owner(s) shall provide a Certificate of Insurance to the Building Inspector on an annual basis in which the Town shall be specifically listed as an additional insured. A schedule of fees for

personal wireless service facilities permitting and renewal, any monitoring of emissions and inspection of structures, and any other fees shall be established by the Board as part of the Rules and Regulations for Personal Wireless Communication Facility(s).

7.8.4.5 Relief from general requirements: The Board may, upon advice of the Planning Board and a qualified independent consultant, grant relief from the general requirements contained in subsection 7.8.4.2 (rather than require an applicant to seek a variance from this Bylaw) where the Board finds that the relief is supported by the submittal of a study prepared by a qualified technical consultant showing a significant gap in coverage, where the Board finds that the extent of the granted relief is mitigated by a showing that the project provides a minimally intrusive viable means of reducing or eliminating such significant gap in coverage, and where the Board finds that the desired relief may be granted without substantial detriment to the neighborhood and without derogating from the intent and purpose of this Bylaw. However, the Board shall not grant relief from the maximum height limitation in subsection 7.8.4.2(e). The Board shall be empowered to grant relief from any setback requirement in subsection 7.8.4.2(i), (j) or (k) provided that the site proposed is demonstrated to be necessary to achieve adequate coverage or capacity and to be minimally intrusive upon the interests of the Town, consistent with Section 7.8.1 *Purpose and Intent (a)* through *(e)*. The applicant shall provide the Board with a written statement describing why the requested relief is in the best interest of the Town with references to Section 7.8.1 *Purpose and Intent (a)* through *(e)*."

7.8.4.6 Approval criteria: A special permit shall be issued under this section only if the Board shall find that the project is in harmony with the general purpose and intent of this Section. In addition, the Board, in consultation with the independent consultant referred to in subsection 7.8.4.3 shall make all the applicable findings before granting the special permit, as follows:

(a) that the applicant is not already providing adequate coverage and/or adequate capacity and that a significant gap in coverage exists;

(b) that the applicant is not able to use existing personal wireless communication facility site(s) either with or without the use of filler sites to provide adequate coverage and adequate capacity;

(c) that the proposed personal wireless communication facility site selected by the applicant minimizes adverse impacts on historic resources, scenic views (viewsheds) and residential property values by being located most distant from historic resources, scenic views (viewsheds) and single-family detached dwellings.

(d) that the proposed personal wireless communication facility site minimizes adverse impacts on historic resources, scenic views, residential property values and natural or man-made resources through the use of camouflage, stealth or other innovative technology;

(e) that the applicant has agreed to implement all reasonable measures to mitigate the potential adverse impacts of the facilities;

(f) that the proposal shall comply with the appropriate FCC Regulations regarding emissions of electromagnetic radiation and that the required monitoring program is in place and shall be paid for by the applicant; and

(g) that the applicant has agreed to rent or lease available space on the tower, under the terms of a fair-market lease, without discrimination to other Personal wireless service providers;

If a special permit is granted the Board shall impose any such additional conditions and safeguards as public safety, welfare and convenience may require, either as recommended by the independent consultant, the Planning Board or upon its own initiative.

Any decision by the Board to deny a special permit under this Section shall be in conformance with the Act, in that it shall be in writing and supported by substantial evidence contained in a written record.

7.8.5 *Monitoring and evaluation of compliance:* Pre-testing and post-testing (including monitoring) shall be required and in accordance with the Office of Engineering Technology Bulletin 65 "Evaluating Compliance the FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields" and as defined in "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance".

(a) Structural Inspection: The tower owner(s) shall pay for an independent licensed professional structural engineer to conduct inspection of the tower's structural integrity and safety. Pre-existing guyed towers shall be inspected every three years. Monopoles and non-guyed lattice towers shall be inspected every five years. A report of the inspection results shall be prepared by the structural engineer and submitted to the Building Inspector, the Town Clerk and the Planning Board. Any modification of an existing facility that increases tower dimensions or antenna numbers or type shall require a new structural inspection.

(b) Unsafe Structure: Should the inspection of any tower reveal any structural defect(s) that, in the opinion of the independent structural engineer, render(s) the tower unsafe, the following actions shall be taken. Within ten business days of written notification of unsafe structure, the owner(s) of the tower shall submit a plan to remediate the structural defect(s). This plan shall be initiated within ten business days of the submission of the remediation plan and completed as soon as reasonably possible.

7.8.6. *Removal requirements:* Any personal wireless communication facility that ceases to operate for a period of one year shall be removed. Cease to operate is defined as not performing the normal functions associated with the personal wireless communication facility and its equipment on a continuous and ongoing basis for a period of one year. At the time of removal, the facility site shall be remediated such that all personal wireless communication facility improvements that have ceased to operate are removed. If all facilities on a tower have ceased to operate, the tower (including the foundation to depth of three feet below grade) shall also be removed and the site shall be revegetated by the owner of the tower. Existing trees shall only be removed if necessary to complete the required removal. The applicant shall, as a condition of the special permit, provide a financial surety

or other form of financial guarantee acceptable to the Board, to cover the cost of removal of the facility and the remediation of the landscape, should the facility cease to operate.

7.9 Large-Scale Ground-Mounted Solar Photovoltaic Installation

7.9.1 Purpose and Intent: The purpose of this bylaw is to promote the creation of new large-scale ground-mounted solar photovoltaic installations by providing standards for the placement, design, construction, operation, monitoring, modification and removal of such installations that address public safety, and minimize impacts on scenic, natural and historic community resources.

The provisions set forth in this section shall apply to the construction, operation, and/or repair of large-scale ground-mounted solar photovoltaic installations in any zoning district.

This section applies to large-scale ground-mounted solar photovoltaic installations proposed to be constructed after the effective date of this section. This section also pertains to physical modifications that materially alter the type, configuration, or size of these installations or related equipment.

Solar installations with a rated nameplate capacity of less than two hundred-fifty kilowatts (250 kW) direct current (DC) are not subject to this Bylaw and shall instead be considered either an above-ground utility under Section 4.4.3 or an accessory use.

7.9.2 Definitions: As used in this Section, the following terms shall have the meanings indicated:

7.9.2.1 Large-Scale Ground-Mounted Solar Photovoltaic Installation: A solar photovoltaic system that is structurally mounted on the ground and is not roof-mounted, and has a rated nameplate capacity of at least two hundred-fifty kilowatts (250 kW) direct current (DC).

7.9.2.2 Rated Nameplate Capacity: The maximum rated output of electric power production of the Photovoltaic system in Direct Current (DC).

7.9.2.3 Solar Photovoltaic Array: an arrangement of solar photovoltaic panels.

7.9.3 General Requirements for all Large-Scale Ground-Mounted Solar Photovoltaic Installations: The following requirements apply to all large-scale ground mounted solar photovoltaic installations.

7.9.3.1 Site Plan Review: Large-scale ground-mounted solar photovoltaic installations are subject to site plan review by the Planning Board. Proponents shall submit site plans showing:

(a) existing conditions, including property lines, physical features and roads,

(b) proposed changes to the landscaping of the site, including grading, vegetation to be cleared, new plantings, exterior lighting, and screening vegetation,

(c) the proposed layout of the large-scale ground-mounted solar photovoltaic installation, including all appurtenant structures,

(d) driveways and other means of access to the site of the large-scale ground-mounted solar photovoltaic installation, and

(e) other reasonable documentation requested by the Planning Board.

7.9.3.2 Site Control: The project proponent shall submit documentation of actual or prospective access and control of the project site sufficient to allow for construction and operation of the proposed large-scale ground-mounted solar photovoltaic installations.

7.9.3.3 Security: Adequate security measures and fencing shall be provided to control access to the large-scale ground-mounted solar photovoltaic installation in order to prevent unauthorized access. The use of barbed wire or razor wire fencing is prohibited.

7.9.3.4 Operation & Maintenance Plan: The project proponent shall submit a plan for the operation and maintenance of the large-scale ground-mounted solar photovoltaic installation, which shall include measures for maintaining safe access to the installation, stormwater controls and general procedures for operations and maintenance of the installation.

7.9.3.5 Utility Notification: No large-scale ground-mounted solar photovoltaic installation shall be constructed until evidence has been given to the Planning Board that the Concord Municipal Light Plant (CMLP) has been informed of the solar photovoltaic installation owner or operator's intent to install an interconnected customer-owned generator. Off-grid solar photovoltaic arrays shall be exempt from this requirement. The Building Commissioner may issue a permit only if the large-scale ground-mounted solar photovoltaic device complies with this section.

7.9.3.6 Waivers: If the installation does not comply with one or more of the Dimensional Requirements or Design Requirements, the applicant shall be required to apply for a special permit from the Planning Board seeking waivers from any such requirement(s). The Planning Board may grant requested waivers upon a finding that such waiver(s) will not derogate from the intent of this bylaw or be detrimental or injurious to the public.

7.9.4 Dimensional Requirements:

7.9.4.1 Lot Area: For large-scale ground-mounted solar photovoltaic installations, the minimum lot area shall be 5 acres.

7.9.4.2 Setbacks: For large-scale ground-mounted solar photovoltaic installations, front, side and rear setbacks shall be as follows:

(a) Front yard: The front yard setback shall be at least 50 feet.

(b) Side yard: Each side yard shall have a setback of at least 50 feet.

(c) Rear yard: The rear yard setback shall be at least 50 feet.

Where a proposed large-scale ground-mounted solar photovoltaic installation does not abut a residential zoning district or use, the Planning Board may waive the above dimensional requirements for front, side and rear yard setbacks by special permit as provided in subsection *7.9.3.6*. In no case, however, shall the front, side or rear yard setback be less than 10 feet.

7.9.4.3 Appurtenant Structures: All appurtenant structures to large-scale ground-mounted solar photovoltaic installations shall be subject to reasonable regulations concerning the bulk and height of structures, 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. Whenever reasonable, structures should be screened from view by vegetation and/or joined or clustered to avoid adverse visual impacts.

7.9.5 Design Requirements

7.9.5.1 Lighting: Lighting of the large-scale ground-mounted solar photovoltaic installations and appurtenant structures shall be limited to that required for safety, security, and operational purposes, and shall be reasonably shielded from abutting properties. Lighting of the solar photovoltaic array and appurtenant structures shall be directed downward and shall incorporate full cut-off fixtures to reduce light pollution.

7.9.5.2 Signage: Signs appurtenant to the large-scale ground-mounted solar photovoltaic installation shall comply with the Town's Sign Bylaw. A sign consistent with the Town's Sign Bylaw shall be required to identify the owner and provide a 24-hour emergency contact phone number.

Large-scale ground-mounted solar photovoltaic installations shall not be used for displaying any advertising except for reasonable identification of the manufacturer, owner or operator of the large-scale ground-mounted solar photovoltaic installation.

7.9.5.3 Screening / Landscape Buffer: At a minimum, half of the provided side and rear yard setback areas shall be designed to reduce the visual impact of the solar photovoltaic array upon adjacent property by use of trees, shrubs, walls, fences, or other landscape elements. Where the area to be developed abuts land developed for residential use, suitable landscaping shall consist of a substantially sight-impervious screen of evergreen foliage at least eight (8) feet in height or planting of shrubs and trees complemented by a sight-impervious fence of at least five (5) feet, but not more than eight (8) feet, in height, or such other type of landscaping as may be required under site plan review.

7.9.5.4 Utility Connections: Reasonable efforts shall be made to place all utility connections from the large-scale ground-mounted solar photovoltaic installation underground, depending on appropriate soil conditions, shape, and topography of the site, any requirements of the CMLP and other site permitting requirements. Where an aboveground connection solution already exists, it may be used if it meets the

requirements of the CMLP, and electrical transformers for utility interconnections may be located aboveground if required by the CMLP.

7.9.5.5 Stormwater Management: Best management practices shall be used for controlling and managing stormwater run-off and drainage for the large-scale ground-mounted solar photovoltaic installation in compliance with all applicable federal, state and local regulations.

7.9.6 Safety and Environmental Standards:

7.9.6.1 Emergency Services: The large-scale ground-mounted solar photovoltaic installation owner or operator shall provide a copy of the project summary, electrical schematic, and site plan to the local fire chief and CMLP. Upon request, the owner or operator shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the solar photovoltaic installation shall be clearly marked. The owner or operator shall identify a responsible person for public inquiries for as long as the installation is in active use.

7.9.6.2 Land Clearing, Soil Erosion and Habitat Impacts: Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the large-scale ground-mounted solar photovoltaic installation or otherwise prescribed by applicable laws, regulations, and bylaws. Clearing to minimize shading is acceptable.

7.9.7 Maintenance and Modifications:

7.9.7.1 Physical Conditions: The large-scale ground-mounted solar photovoltaic installation owner or operator shall maintain the installation in good condition. 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, CMLP and emergency medical services. The owner or operator shall be responsible for the cost of maintaining the solar photovoltaic installation and any access driveway.

7.9.7.2 Modifications: All substantial material modifications or changes to a large-scale ground-mounted solar photovoltaic installation require site plan review by the Planning Board and acceptance by the CMLP.

7.9.8 Abandonment or Decommissioning:

7.9.8.1 Removal Requirements: Any large-scale ground-mounted solar photovoltaic installation which has reached the end of its useful life, is no longer operational or has been abandoned consistent with Section 7.9.8.2 of this bylaw shall be removed. The owner or operator shall physically remove the installation no more than 150 days after the date of discontinued operations. The owner or operator shall notify the Planning Board, Building Commissioner and CMLP by certified mail of the proposed date of discontinued operations and plans for removal. Decommissioning shall consist of:

(a) Physical removal of all large-scale ground-mounted solar photovoltaic installations, structures, equipment, security barriers and transmission lines from the site.

(b) Disposal of all solid and hazardous waste brought to the site or generated by the owner or operator or otherwise related to the large-scale ground-mounted solar photovoltaic installation in accordance with local, state, and federal waste disposal law and regulations.

(c) Stabilization or re-vegetation of the site as necessary to minimize erosion. The Planning Board may allow the owner or operator to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation.

7.9.8.2 Abandonment: The large-scale ground-mounted solar photovoltaic installation shall be considered abandoned when it does not operate for more than one year. If the owner or operator of the large-scale ground-mounted solar photovoltaic installation fails to remove the installation in accordance with the requirements of this section within 150 days of abandonment or the proposed date of discontinued operations, the Town may enter the property and physically remove the installation.

7.9.8.3 Financial Assurance: Proponents of large-scale ground-mounted solar photovoltaic installations shall be required to enter a covenant with the Planning Board to ensure adequate funds are available to provide for decommissioning and removal of the installation.

7.10 Public Service Corporation Overlay District (PSCOD)

7.10.1 Purpose. The purpose of the Public Service Corporation Overlay District (PSCOD) is to provide a mechanism for the approval of uses by public service corporations including but not limited to wastewater treatment, municipal public works operations, large-scale ground mounted solar photovoltaic installations, and peaking power plants.

7.10.2 Definitions. Within this Section, the following terms shall have the following meanings:

(a) Public Service Corporation (PSC): Facilities, equipment, and structures necessary for conducting a service by a public or private utility facility. Such facilities shall include public or private wastewater treatment facilities, large-scale ground mounted solar photovoltaic installations, and peaking power plants.

(b) Public Service Project (PSP): A project sponsored by a PSC, including facilities, equipment, and structures necessary for conducting a service by a public, private or quasi-private utility facility.

(c) Peaking Power Plant: A power plant that generally runs only when there is a high demand for energy.

7.10.3 Applicability. The PSCOD shall be construed as an overlay district. Within the PSCOD, the requirements of the underlying zoning district(s) shall remain in full force and effect until site plan approval pursuant to Section 11.8 has been granted by the Planning Board, and the decision is filed with the Town Clerk, and the appeal period set forth herein has expired, except where the requirements herein are more restrictive or provide for uses or structures not otherwise available in the underlying district; in such cases, the requirements herein shall supersede the underlying zoning regulations.

7.10.4 Use Regulations. A PSP may be constructed, subject to the requirements set forth herein, upon the issuance of site plan approval pursuant to Section 11.8 by the Planning Board. In the case of a large-scale ground mounted solar photovoltaic installation, the provisions of Section 7.9 of this By-Law shall apply unless superseded by Section 7.10.8 herein. No other use or structures shall be permitted, except as specifically provided herein.

7.10.5 Administration. The Planning Board shall serve as the site plan approval authority pursuant to this Section. The Planning Board may waive the submittal of technical information or documents otherwise required hereunder where the Applicant demonstrates that, due to the simplicity of the proposal, such information is not necessary for or applicable to the Planning Board's decision pursuant to this Section. An application for site plan approval shall be governed by the requirements set forth in Sections 7.10.6 through 7.10.9.

7.10.6 Application. An application for site plan approval shall be submitted to the Planning Board on forms furnished by the Planning Board. Each such application shall be accompanied by a filing fee as set forth in the Planning Board's Rules and Regulations and a technical review fee pursuant to G.L. c. 44, s. 53G and applicable regulations of the Planning Board. The application shall be accompanied by all of the applicable information required for the Board's considerations of site plan review, as set forth in subsection 11.8.5 of the Zoning By-Law.

7.10.7 Dimensional and Design Requirements. A proposed PSP shall meet all of the following requirements:

(a) Parcel Size and Frontage. Minimum parcel size for a PSP shall be one acre of upland, excluding any resource area protected by G.L. c. 131, s. 40. There shall be no minimum frontage requirement for a PSP and access shall not be required to the PSP via the frontage, if any, serving the parcel.

(b) More than One Principal Use or Building. More than one principal use or building may be located on the same parcel or lot. In such cases, the Planning Board shall ensure that adequate access exists to all such principal uses for fire, police and emergency vehicles, and for expected vehicular and pedestrian traffic. Ownership and maintenance responsibilities shall be clearly outlined for each facility and its associated infrastructure, including but not limited to utilities, stormwater management, and access drives.

(c) Buffer. A buffer area of 50 feet shall be provided at the perimeter of the PSCOD where it abuts residentially occupied properties existing at the time this overlay district was adopted, except for driveways necessary for access and egress to and from the site, or

for storm water retention facilities. No vegetation in this buffer area will be disturbed, destroyed or removed, except for normal maintenance or for required stormwater management systems. The Planning Board may waive the buffer requirement (i) where the land abutting the site is the subject of a permanent restriction for conservation or recreation; or (ii) where the land abutting the site is held for conservation or recreation purposes; or (iii) the Planning Board determines that a smaller buffer will suffice to buffer adjacent residentially occupied properties.

(d) *Site Access Drives.* The principal driveway(s) serving the PSP shall be adequate for the intended use and vehicular traffic and shall be maintained by the operator of the PSP.

(e) *Parking.* Parking shall be adequate to serve all anticipated uses on the property, with information provided detailing the method used to calculate the number of parking spaces.

(f) *Loading.* Screening and landscaping shall be provided to block all views of loading areas (except those specifically designated for emergency vehicles) from the public right-of-way and adjacent properties.

(g) *Stormwater Management.* The stormwater management system shall be designed in accordance with Massachusetts Department of Environmental Protection Stormwater Management Regulations and the Concord Public Works Storm Water Regulations and Design and Construction Standards and Details.

(h) *Utilities.* Reasonable efforts shall be made to place all electric, gas, telephone, and cable lines underground.

(i) *Emergency Systems.* The PSP shall have an integrated emergency call, telephone and other communications system to provide monitoring by operators. There shall be sufficient site access for public safety vehicles. A plan shall be approved by the Fire Department for emergency conditions.

(j) *Lighting.* All exterior lighting shall not produce lighting so as to unreasonably interfere with the use and enjoyment of property within the Town. Lighting practices and systems shall reduce light pollution, light trespass and glare in order to preserve and enhance the natural, scenic, and aesthetic qualities of the Town; conserve energy and decrease lighting cost without decreasing night time safety, security, and productivity; and preserve the night sky as a natural resource to enhance nighttime enjoyment of property within the Town.

7.10.8 *Large-scale Ground Mounted Solar Photovoltaic Installations:* A large-scale ground mounted solar photovoltaic installation shall be permitted as a PSP, subject to the provisions of Section 7.9 of this Bylaw, with the following exceptions.

(a) There shall be no minimum lot or parcel area requirement.

(b) A large-scale ground mounted solar photovoltaic installation may be located on the same lot or parcel as another PSP.

(c) The setback requirements of Section 7.9.4.2 shall not apply.

7.10.9 Action by the Planning Board. The Planning Board may grant site plan approval for a PSP where it makes the findings required by Section 11.8 of this Bylaw. The proposed PSP shall comply with the requirements of this Section; provided, however, the Planning Board may waive a substantive requirement when the Board determines that the waiver will not result in substantial detriment to the District or the Town.