

DIVISION 10. SUPPLEMENTARY AREA AND HEIGHT REGULATIONS.**Sec. 6-119. RESTORATION OF UNSAFE BUILDINGS.**

Nothing in this Article shall prevent the strengthening of or restoring to a safe condition, any part of any building or structure declared unsafe by the Building Inspector or any other duly authorized person.

Sec. 6-120. REDUCTION OR DUPLICATION OF REQUIRED YARD.

- (a) No lot area shall be reduced or diminished so that the area, yards or other open spaces shall be smaller than prescribed by this Article, except that this Section shall not apply when land or an interest therein is acquired by the Federal Government, the State, the Country or by the Town for public purpose, or by a Connecticut non-profit corporation or organization for use as a horticultural and wildlife reservation or natural park area.
- (b) No yard or other open spaces or portion thereof provided about any building or structure shall be used as the required yard, or other space or portion thereof for another building or structure, except in the case of group housing as authorized in Section 6-98.

Sec. 6-121. YARD REQUIREMENTS ON THROUGH LOTS.

The front yard requirements of the particular zone shall apply on each street front so that no building or structure may be closer to a street line than the front yard requirement of the particular zone.

Sec. 6-122. LIGHT AND VENTILATION.

Except as otherwise provided in this Article, every room in which persons live, sleep, work or congregate, shall have adequate light and ventilation.

Sec. 6-123. REAR YARD REQUIRED.

- (a) Except as provided in Section 6-132(c), a rear yard of at least ten percent (10%) of the lot depth shall be required in business zones on every lot more than fifty-five (55) feet deep, provided that where any lot adjoins a railroad right of way or municipally owned parking area no rear yard shall be required along the line held in common with the railroad or municipality.
- (b) If a rear yard is provided where not required, it shall not be less than three and one-half (3 ½) feet. No rear yard shall be required in respect to lots to which a rear building line is applicable as provided in Section 6-130.
- (c) Notwithstanding any other provisions of these Regulations to the contrary, for lots in business zones which adjoin the right of way of the Connecticut Turnpike, the Planning and Zoning Commission, upon application for a Special Permit pursuant to the provisions of Section 6-17, shall have the authority to reduce the rear yard otherwise required by these Regulations along the line of said lot which adjoins said right of way, provided that the Commission finds that granting any such reduction will result in a development which meets

the standards set forth in Sections 6-15 and 6-17 of these Regulations, and further provided that consideration has been given to the safety of nearest adjoining residences and other adjoining buildings by way of man made or topographic features.

Sec. 6-124. MINIMUM STREET WIDTH.

- (a) No plot shall be subdivided into lots and no lot shall be improved with one (1) or more buildings unless all such lots shall front upon a street having a minimum width of fifty (50) feet.
- (b) This limitation however shall not apply where the maximum width of the street in front of a given plot or lot on February 1, 1926 is less than fifty (50) feet.

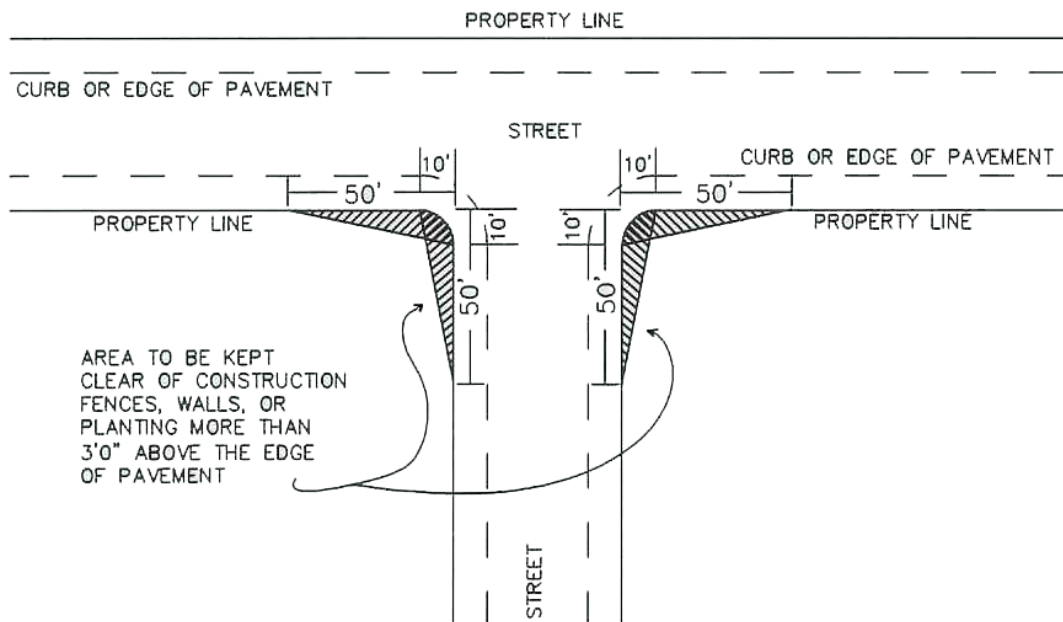
Sec. 6-125. YARD REQUIREMENTS ALONG ZONE BOUNDARY LINE.

Where a lot adjoins a lot in a more restricted zone, any adjoining side yard of such lot shall have a width at least equal to the required minimum side yard in the more restricted zone. Any adjoining front yard shall have a depth at least equal to the minimum required depth of the front yard in the more restricted zone.

Sec. 6-126. VISIBILITY AT INTERSECTIONS.

On a corner lot in any residential zone, no planting, fence, wall, tree or obstruction to vision shall be placed or maintained if it does not conform to the vehicle sight distance requirement as illustrated below and is considered in the judgment of the Traffic Engineer and Highway Superintendent to be hazardous to vehicular and or pedestrian safety. Prior to removal or reduction of any tree or landscaped plantings blocking said vision, a review and recommendation by the Town Tree Warden is required. (5/4/2005)

Illustration



(5/4/2005)

Sec. 6-127. HEIGHT EXCEPTIONS.

The building height limitations of this Article shall not apply to church spires, belfries, radio towers, cupolas, domes, monuments, water towers, chimneys, flues, or flag poles; to a parapet wall extending not more than four (4) feet above the limiting height of the buildings on which it rests, provided, however, that the Planning and Zoning Commission, or their designee, after giving due consideration to the Standards of Sec. 6-15 and 6-17 and after consultation with the Architectural Review Committee, may authorize an increase in the height of any such parapet wall in the event such increase is desirable in order to make mechanical equipment less visible and make the proposed building architecturally more compatible with surrounding buildings or the surrounding streetscape; to ventilators, skylights, air conditioning equipment, water tanks, bulkheads, roof-mounted satellite earth stations subject to provisions of Sec. 6-140.1., necessary mechanical appurtenances and similar features not used for human occupancy and usually extended above the roof level, provided that the total area covered by all such features shall, with the exception of bulkheads for stair towers, be enclosed in a single structure not exceeding twenty-five percent (25%) of the roof area, height of such structure shall not be more than seventeen (17) feet above the roof level, and the structure shall be set back one (1) foot for each one (1) foot of height above roof level on those sides of the building having street frontage. (10/07/85)

Sec. 6-128. PROJECTIONS IN REQUIRED YARDS.

- (a) Decks, and patios when located in a rear or side yard and constructed not more than three (3) feet above existing grades shall not be permitted within five (5) feet of any side or rear lot line in the R-6, R-7 and R-12 zones, within ten feet (10) feet of any side or rear lot line in the R-20 and RA-1 zones and within twenty-five (25) feet of any side or rear lot line in the RA-2 and RA-4 zones. Uncovered stairs may be erected in any required front or rear yard, but in the case of a side yard, uncovered stairs may not be erected within five (5) feet of the property line. (6/15/00) (Revised 7/19/2006)
- (b) Decks, and patios when located in the rear or side yard and constructed more than three (3) feet above existing grades shall be considered part of a principal structure and shall not be permitted in a required rear or side yard setback of a principal structure. (Revised 7/19/2006)
- (c) Decks, and patios built at or above existing grade, located in a front yard, shall not be permitted in the required front yard, or side yard setback of a principal structure. (7/19/2006)
- (d) Any bay window, oriel, entrance, vestibule, chimney, balcony or window or stair well, or similar projection that is not more than ten (10) feet in width, and any cornice, balcony, eave, or similar projection may project or extend two (2) feet into any required yard or court. Such projection may have a connection to the ground beneath. No projection except for an eave and minor architectural features including sill, leader, gutter, belt course, water table less than 6" shall be permitted within five (5) feet of any property line. The wall from which a projection extends must comply with the required yard. (7/19/2006)
- (e) Mechanical equipment shall not be allowed in any required yard. (4/30/2002)

(7/19/2006)

Sec. 6-129. FRONT AND STREET SIDE YARD REQUIREMENTS.

- (a) In all business zones if three (3) or more principal buildings which are non-conforming in respect to front yard and street side yard exist within the same block and within the same business zone as a lot in question, the average setback line of all existing principal buildings within the block and the zone may be followed in locating a new building or in reconstructing or altering an existing building on such lot. If both the block and the zone have the length of more than one thousand (1,000) feet between intersecting streets, for the purpose of this Section the block shall be deemed to be that portion thereof within the zone and extending up to two hundred (200) feet on each side of the lot in question.
- (b) The provisions of this Section shall, however, in no case be applied so as to keep the street wall, walls or covered porches of the buildings further back from the street line than the minimum depth of the front yard indicated in the "Schedule of Required Open Space, Height and Bulk of Buildings" for the zone in which such building is located.

Sec. 6-130. BUILDING LINES.

- (a) No building or addition thereto, either above or below grade, shall be constructed nearer to a street or proposed street than any front building line established for such street, as shown on maps referred to in Section 6-205.1 or any portion of a lot, to which a rear building line is applicable as shown on a map in Section 6-205.1 which extends beyond the rear building line applicable to the lot.
- (b) No portion of any lot extending to the rear of the rear building line applicable to the lot, may be used in computing parking area credit under Section 6-158 for any other lot. In ascertaining such portion of a lot extending to the rear of a rear building line applicable to the lot, the boundaries of the portion existing as of the date of the establishment of the rear building line applicable to the lot shall be determinative and controlling. Notwithstanding any front yard requirements of this Article, or any building line heretofore established for the Town and former Borough of Greenwich, a building or addition thereto either above or below grade may be constructed on that portion of any lot extending from the front building line to the rear building line applicable to the lot.

Sec. 6-131. MINIMUM FRONTAGE EXCEPTIONS.

- (a) A rear lot not fronting on a street, whether or not in separate ownership and whether or not the rear or front lots are presently built upon, may be improved in accordance with requirements of the particular zone provided that:
 - 1) Such lot has access to a street by means of an unobstructed access way held in the same fee simple ownership as the rear lot;
 - 2) That such access way shall be at least 20 feet wide and no greater than 35 feet shall continue undiminished for at least the depth of the front yard setback of the zone. (5/4/2005)
 - 3) Within the lines of such access way there shall be constructed a graveled or other paved way at least 12 feet wide and of sufficient thickness to support fire apparatus and other mobile equipment;
 - 4) At no point shall the driveway exceed a vertical rise of 15%;

(5/4/2005)

- 5) The area of access way shall be excluded from lot area calculation for lot size and FAR. Lot size is determined to begin at a point where the lot shape requirement of the zone can be demonstrated (either circle or rectangle); (5/4/2005)
 - 6) The access way is considered to end at that point where the front lot line width and the lot shape requirements of the zone are satisfied. (2/7/2001)
 - 7) Such access way shall not be included for the purpose of meeting the area required by Section 6-205 of the rear lot.
 - 8) Such access way does not adjoin any other access way to a rear lot.
- (b) In the case of two rear lots not fronting on a street, whether or not in separate ownership and whether or not the rear or front lots are presently built upon, said lots may be improved in accordance with requirements of the particular zone provided that:
- 1) Each such lot have access to a street by means of adjoining 20 ft. wide unobstructed access ways held in the same fee simple ownership as the rear lot;
 - 2) That each such access way shall be at least 20 feet wide and no greater than 35 feet and shall continue undiminished for at least the depth of the front yard setback of the zone; (5/4/2005)
 - 3) Within the lines of such combined access ways there shall be constructed a single graveled or other paved way at least 16 feet wide;
 - 4) There shall be a 2 foot wide strip on either side of the paved way which shall be clear of obstructions and shall be of sufficient thickness to support fire apparatus and other mobile equipment;
 - 5) At no point shall the 16 foot paved way and two foot shoulders exceed a vertical rise of 15%;
 - 6) The area of access way is excluded from lot area calculation for lot size and FAR. Lot size is determined to begin at a point where the lot shape requirement of the zone can be demonstrated (either circle or rectangle). (5/17/00)
 - 7) Such access way does not adjoin any other access way to a rear lot. The use of a rear lot for other than a single family or two-family house shall not be permitted unless, upon application for Special Permit, the Commission finds the standards of Section 6-17 are met;
- (c) Before the right to use such paved way is terminated by legal instrument or by operation of law, such access ways shall be required to conform to the provisions of Subsection (a) or (b) of this Section whichever is applicable.
- (d) Before a Certificate of Occupancy may be issued proof of location of the graveled or paved surface within the lines of the access way shall be submitted for approval. (2/14/79)
- (e) The owner of a rear lot shall have the privilege of electing any lot line as the front line. (5/2/79)

Sec. 6-132. YARD REQUIREMENTS ON CORNER LOTS.

- (a) In the case of a corner lot, the owner shall, for the purpose of this Article, have the privilege of electing any street line as the front lot line, regardless of where any entrance doorways may be located in a building on such corner lot, provided that such choice, in the opinion of the Building Inspector, will not be injurious to the development of adjoining properties.
- (b) On any corner lot in a residence zone, the least width of any side yard along the street lot line shall not be less than on half (1/2) of the sum of the minimum side and front yards required of the lot abutting the rear lot line of such corner lot.

(5/4/2005)

- (c) In the case of a corner lot in a business zone, the rear yard of which abuts a lot in a residence zone, the minimum depth of said rear yard shall not be less than ten (10) feet. No rear yard shall be required in respect to lots to which a rear building line is applicable as provided in Section 6-130.
- (d) On any corner lot in a business zone, which lot does not adjoin a residence zone, no rear yard shall be required on that portion thereof within sixty-five (65) feet of the street side lot line.
- (e) On any corner lot in a business zone, the minimum width of the side yard on the street side shall be ten (10) feet. On lots located in the CGBR Zone, the Planning and Zoning Commission may waive this requirement in whole or in part after a finding pursuant to a Special Permit application. (7/7/98)

Sec. 6-133. SEPARATION REQUIRED IN PROXIMITY OF HIGH PRESSURE GAS TRANSMISSION LINES.

No building shall be permitted within forty (40) feet of gas transmission pipe lines which are operated at a maximum service pressure in excess of two hundred (200) p.s.i.g. (Pounds per square inch gauge), except that tennis courts, platform tennis courts and similar recreational facilities and their appurtenances, without roofs, shall be permitted.

Sec. 6-134. MEASUREMENTS.

- (a) All measurements specified in this Article involving distances between similar uses or between a use and a zone boundary line shall be measured along the center line of the adjacent and intervening street or streets with terminal points located as follows:
 - (1) In the case of a gasoline filling or service station, the nearest edge of the premises at street frontage extended at right angles to the center line of the street.
 - (2) In the case of all other uses, the inside face of the building wall surrounding the use extended at right angles to the center line of the street.
 - (3) In the case of a zone boundary line, the point where the boundary line intersects with the center line of the street along which the measurement is taken.
- (b) When determining Grade Plane if fill is retained by a retaining wall, the height of the retaining wall above the next outward level shall not be greater than five (5) feet. Multiple retaining walls shall be spaced so that a minimum five (5) foot wide horizontal strip is provided between the face of each wall and the face of the next wall. (4/19/2006)

Sec. 6-135. SCREENING REQUIREMENT ALONG BOUNDARY LINE.

The buildings and parking areas on each lot developed for a non-residential use or special exception use shall be screened from adjacent residential zones, schools or parks by trees or shrubs, except where such screening is accomplished by the natural topography.

(4/19/2006)

Sec. 6-136. AWNINGS.

No awning, canopy, or similar weather shielding device, projecting beyond the property line of any lot into the sidewalk portion of a public street shall be erected or maintained on any building or structure unless such awning be at all points at least seven (7) feet six (6) inches above the level of the sidewalk, nor may any such awning project beyond said property line a distance greater than six (6) feet. Any such awning shall be firmly affixed to the building and not support other than that provided by the building shall be allowed.

Sec. 6-137. BUSINESS ACCESS.

No entrance to or exit from a business or industrial use shall be located on any street frontage opposite a residence zone where the lot containing the business or industrial use has frontage in a business zone. No lot in a business zone shall be decreased in area, or otherwise subdivided, so that any part of it would have frontage only opposite a residence zone.

Sec. 6-138. LAND UNDER WATER.

Underwater lands that extend beyond the mean high water line as determined in the most recent Tidal Epoch published by the National Oceanic and Atmospheric Administration shall, whether owned by the State of Connecticut or claimed by an adjoining property owners to be held in fee, shall not be considered in determining compliance with the minimum lot size, setback and bulk controls of these regulations. (4/19/2006)

Sec. 6-139. BUSINESS ZONE SETBACK MEASUREMENTS.

Except for those instances where specific setback lines have been established in a particular business zone, no building may be closer to a street (measured as a straight line from the closest point of the building to the nearest point of the street) than the minimum front, rear, or street side yard depth requirement of the particular zone, regardless of the number of separate properties between the building and the street.

Sec. 6-139.1 FLOOD HAZARD OVERLAY ZONE.

Application for review and certification of projects in regards to the FHO zone standards shall be initiated through the office of the Building Inspector/Zoning Enforcement Officer. Permits are required for all proposed development in any area of special flood hazard. Applications may also be reviewed by Planning and Zoning simultaneously with the ZEO review if a Coastal Site Plan application is involved. (4/7/99)

(a) Purpose

The FHO zone is intended to add additional safeguards to those areas of Greenwich subject to riverine and coastal flooding as shown on the Flood Insurance Rate Maps and Flood Insurance Study of the Town of Greenwich effective August 19, 1986, and revised June 18, 2010, and as amended from time to time. The zone is not intended to remove existing permitted uses as stated in these Regulations. It is the purpose of this section to: (6/18/2010)

(6/18/2010)

- (1) Promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas.
- (2) Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities.
- (3) Require that uses and structures vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction.
- (4) Control the alteration of natural flood plains, stream channels, and natural protective barriers which are involved in the accommodation of flood waters.
- (5) Control filling, grading, dredging and other development which may increase erosion or flood damage.
- (6) Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

(b) Objectives

The objectives of this section are to:

- (1) Protect human life and health.
- (2) Minimize the expenditures of public money for costly flood control projects.
- (3) Minimize the need for rescue and relief efforts associated with flooding which are generally undertaken at the expense of the general public.
- (4) Minimize prolonged business interruptions.
- (5) Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in flood plains.
- (6) Help maintain a stable tax base by providing for the sound use and development of flood prone areas in such a manner as to minimize flood blight areas.
- (7) Insure that potential home buyers are notified that property is in a flood hazard area.

(c) Definitions

The following definitions are for use in this section only, except as they may apply to Section 6-111 and Section 6-119.

- (1) Addition to an Existing Building - means any walled and roofed expansion to the perimeter of a building in which the addition is connected by a common load-bearing wall other than a fire wall. Any walled and roofed addition which is connected by a fire wall or is separated by independent perimeter load-bearing walls is considered new construction.
- (2) Administrator - means the Federal Insurance Administrator, to whom the Federal Emergency Management Agency has delegated the administration of the National Flood Insurance Program, (NFIP).
- (3) Appeal - means a request for a review of the Zoning Enforcement Officer's interpretation of any provision of this section or a request for a variance.
- (4) Area of Special Flood Hazard - is the land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year. On the Flood Insurance Rate Map (FIRM), the flood zones are delineated as zones A, AE and VE. The determination of flood hazard areas shall be based on the flood elevation shown on the FIRM map in conjunction with an up-to-date and accurate topographical survey of the site prepared by a Connecticut Licensed Land Surveyor.

(6/18/2010)

Special Flood Hazard Zones shall also include areas where the land surface elevation is lower than the base flood elevations as shown in the Flood Insurance Study, and the area is not protected from flooding by a natural or man-made feature. In no case shall the regulated area be closer to the source of flooding than that shown on the FEMA maps without revising or amending the maps in accordance with FEMA procedures. (6/18/2010)

- (5) Base Flood - means the flood having a one percent chance of being equaled or exceeded in any given year.
- (6) Base Flood Elevation (BFE) – means the elevation reached by the base flood, a flood having a one percent chance of being equaled or exceeded in a given year, also known as the 100-year flood event, referred to the vertical datum of the community's Flood Insurance Rate Map. (6/18/2010)
- (7) Basement - means that portion of a building having its floor subgrade (below ground level) on all sides.
- (8) Breakaway Wall - means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or the supporting foundation system.
- (9) Building - means any structure build for support, shelter or enclosure for any occupancy or storage.
- (10) Coastal High Hazard Area - means the area of special flood hazard subject to high velocity waters caused by, but not limited to, storms and hurricane wave wash. The area is designated on a FIRM as Zone VE. (6/18/2010)
- (11) Development - means any man-made change to improved or unimproved real estate, including, but not limited to the construction of buildings or structures; the construction of additions, alterations or substantial improvements to buildings or structures; the placement of buildings or structures; mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment; the storage, deposition, or extraction of materials; and the installation, repair or removal of public or private sewage disposal systems or water supply facilities. (6/18/2010)
- (12) Elevated Building - means a building without a basement built to have the lowest floor elevated the above ground level by means of fill, solid foundation perimeter walls, pilings, columns (posts and piers), shearwalls, or breakaway walls, as allowed under applicable standards.
- (13) Existing Manufactured Home Park or Subdivision - means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured home are to be affixed (including, as a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date, August 19, 1986, of the floodplain management ordinance adopted by the community. (6/18/2010)
- (14) Expansion to an Existing Manufactured Home Park or Subdivision - means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufacturing homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads). (6/18/2010)
- (15) Federal Emergency Management Agency (FEMA) - is the federal agency that administers the National Flood Insurance Program (NFIP). (6/18/2010)

(6/18/2010)

- (16) Flood or Flooding - means a general and temporary condition of partial or complete inundation of normally dry land areas due to the overflow of inland or tidal water and/or the unusual and rapid accumulation or runoff of surface waters from any source.
- (17) Flood Insurance Rate Map - means an official map of a community on which the Federal Emergency Management Agency has delineated both the areas of special flood hazard and the applicable risk premium zones.
- (18) Flood Insurance Study (FIS) - is the official report (dated June 18, 2010) by the Federal Emergency Management Agency. The report contains flood profiles as well as the Flood Insurance Rate Map (FIRM) and the water surface elevation of the base flood. (6/18/2010)
- (19) Floodway - means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.
- (20) Floor - means the top surface of an enclosed area in a building (including basement) i.e. top of slab in concrete slab construction or top of wood flooring in wood frame construction. The term does not include the floor of a garage used solely for parking of vehicles.
- (21) Functionally Dependent Facility - means a facility which cannot be used for its intended purpose unless it is located in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities. The term does not include seafood processing facilities, long-term storage, manufacturing, sales or service facilities. (6/18/2010)
- (22) Free Board - the distance from the water surface to the top of the facility. It provides a factor of safety usually expressed in feet above a flood level for purposes of flood plain management. Freeboard tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings and the hydrological effect of urbanization of the watershed.
- (23) Historic Structure - means any structure that is: (a) Listed individually in the National Register of Historic Places (a) listing maintained by the Department of the Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register; (b) Is part of a Local Historic District or Historic Overlay Zone; (c) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historic significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district; (c) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or (d) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either: (1) By an approved state program as determined by the Secretary of the Interior or (2) Directly by the Secretary of the Interior in states without approved programs. (6/18/2010)
- (24) Lowest Floor - means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable, solely for parking of vehicles, building access or storage, in an area other than a basement area is not considered a building's lowest floor. In Special Flood Hazard areas, these areas must be designed in accordance with Section 6-139.19 (f) (11) (D) of these regulations and with the definition of elevated Buildings and Section 31 of these regulations. (6/18/2010)

- (25) Manufactured Home - means a structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term also includes recreational vehicles, park trailers, travel and recreational trailers, and similar transportable structures placed on a site for 180 consecutive days or longer and intended to be improved property. (6/18/2010)
- (26) Manufactured Home Park or Subdivision - means a parcel, or contiguous parcels of land divided into two or more manufactured home lots for rent or sale.
- (27) Market Value - means the market value of the structure shall be determined by the appraised value of the structure using the cost approach to value method prior to the start of the initial repair or improvement, or in the case of damage, the value of the structure prior to the damage occurring. (6/18/2010)
- (28) Mean Sea Level - means, for purposes of the National Flood Insurance Program, the North American Vertical Datum (NAVD) of 1988 or other datum, to which base flood elevations shown on the community's Flood Insurance Rate Map are referenced. (6/18/2010)
- (29) National Geodetic Vertical Datum (NGVD) - National Geodetic Vertical Datum of 1929 (NGVD 29) – an obsolete vertical datum, superseded by the North American Vertical Datum of 1988 (NAVD 88), shall only be used when base flood elevations shown on the community's Flood Insurance Rate Map are referenced thereto. (6/18/2010)
- (30) New Construction - means structure for which the "start of construction" commenced on or after the effective date of this section. (8/19/986)
- (31) New Manufactured Home Park or Subdivision - means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date, August 19, 1986, of the floodplain management regulation adopted by the community. (6/18/2010)
- (32) Recreational Vehicle - means a vehicle which is: a) built on a single chassis, b) 400 square feet or less when measured at the largest horizontal projection, c) designed to be self-propelled or permanently towable by a light duty truck; and, d) designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping travel, or seasonal use.
- (33) Regulatory Floodway - means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot.
- (34) Riverine - means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.
- (35) Sand Dunes - means naturally occurring accumulations of sand ridges or mounds landward of the beach.
- (36) Special Flood Hazard Areas - the determination of flood hazard areas shall be based on the flood elevation shown on the FIRM map in conjunction with an up-to-date and accurate topographical survey of the site prepared by a Connecticut Licensed Professional Land Surveyor. Special Flood Hazard areas shall also include areas where the land surface elevation is lower than the base flood elevations as shown in the Flood Insurance Study, and the area is not protected from flooding by a natural or man made feature. In no case shall the regulated area be closer to the source of flooding than that shown on the FEMA maps without revising or amending the maps in accordance with FEMA procedures.

(6/18/2010)

- (37) Start of Construction - (for other than new construction or substantial improvements under the Coastal Barrier Resources Act (P.L. 97-348), includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, or improvement was within 180 days of the permit date. The actual start means the first placement or permanent construction of a structure (including a manufactured home) on a site such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation or placement of a manufactured home on a foundation. Permanent construction does not include land preparations, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundation or the erection of temporary forms; nor does it include the installation on the property or accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the structure. (6/18/2010)
- (38) Structure - means a walled and roofed building that is principally above ground, a manufactured home, a gas or liquid storage tank, or other man-made facilities or infrastructures.
- (39) Substantial Damage - means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50% of the market value of the structure before the damage occurred.
- (40) Substantial Improvement - means any combination of repairs, reconstruction, alteration, or improvements to a structure taking place during the life of a structure, in which the cumulative costs equal or exceeds fifty percent of the market value of the structure. The market value of the structure should be (1) the appraised value of the structure (using the cost approach to value) prior to the start of the initial repair or improvement, or (2) in the case of damage, the value of the structure prior to the damage occurring. For purposes of this definition, "Substantial Improvement" is considered to occur when the first alteration (after 8/19/86) of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the extended dimensions of the structure. The term does not however, include any improvement project required to comply with existing health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions. Separate conditions govern any alteration of a structure listed on the National Register of Historical Places of the State Inventory of Historical Places.
- (41) Variance - is a grant of relief from the requirements of this ordinance which permits construction in a manner otherwise prohibited by this ordinance where specific enforcement would result in unnecessary hardship.
- (42) Violation – means a failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without required permits, lowest floor elevation documentation, flood-proofing certificates or required floodway encroachment calculations is presumed to be in violation until such time as that documentation is provided. (6/18/2010)

(6/18/2010)

- (43) Water Surface Elevation - means the height of various magnitudes and frequencies in the flood plains of coastal or riverine areas, with respect to the vertical datum to which the community's Flood Insurance Rate Map is referenced. (6/18/2010)

(d) General Provisions

- (1) This section shall apply to all areas of special flood hazard within the jurisdiction or the Town of Greenwich.
- (2) The areas of special flood hazard identified by the Federal Emergency Management Agency (FEMA) in its Flood Insurance Study (FIS) for Fairfield County, Connecticut, dated June 18, 2010, and accompanying Flood Insurance Rate Maps (FIRM), dated June 18, 2010, other special flood hazard areas as defined in Sections (c)4 and (c)36, and other supporting data applicable to the Town of Greenwich, and any subsequent revisions thereto, are adopted by reference and declared to be a part of this regulation. Since mapping is legally adopted by reference into this regulation it must take precedence when more restrictive until such time as a map amendment or map revision is obtained from FEMA. The area of special flood hazard includes any area shown on the FIRM as Zones A, AE, and VE, including areas designated as a floodway on a FIRM. Zone VE is also identified as a Coastal High Hazard Area. Areas of special flood hazard are determined utilizing the base flood elevations (BFE) provided on the flood profiles in the Flood Insurance Study (FIS) for a community. BFEs provided on a Flood Insurance Rate Map (FIRM) are only approximate (rounded up or down) and should be verified with the BFEs published in the FIS for a specific location. The determination of areas of special flood hazard shall be based on the flood elevations shown on the FIRM and published in the FIS in conjunction with an up-to-date and accurate topographical survey of the site prepared by a Connecticut Licensed Land Surveyor. Areas of special flood hazard shall also include areas where the land surface elevation is lower than the base flood elevations as shown in the FIS, and the area is not protected from flooding by a natural or man-made feature. In no case shall the regulated area be closer to the source of flooding than that shown on the FEMA maps without revising or amending the maps in accordance with FEMA procedures. (6/18/2010)
- (3) Establishment of a floodplain development permit. A development permit shall be required by the ZEO and/or Planning and Zoning in conformance with the provisions of this section prior to the commencement of any development activities.
- (4) No structure or land shall hereafter be located, extended, converted, or structurally altered without full compliance with the terms of this regulation and other applicable regulations.
- (5) This regulation is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this regulation and another conflict or overlap, which imposes the more stringent restrictions shall prevail.
- (6) In the interpretation and application of this regulation all provisions shall be:
 - a) Considered as minimum requirements,
 - b) Liberally construed in favor of the governing body, and
 - c) Deemed neither to limit nor repeal any powers granted to the Town.
- (7) The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Longer floods can and will occur on rare occasions. Flood heights may be increased by man-

(6/18/2010)

made or natural causes. This regulation does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of the Town of Greenwich or any officer or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made thereunder.

- (8) Portion of Structure in Flood Zone - If any portion of a structure lies within the Special Flood Hazard Area (SFHA), the entire structure is considered to be in the SFHA. The entire structure must meet the construction requirements of the flood zone. The structure includes any attached additions, garages, sunrooms, or any other structure attached to the main structure. (6/18/2010)
- (9) Structures in Two Flood Zones - If a structure lies within two or more flood zones, the construction standards of the most restrictive zone apply to the entire structure (i.e., V zone is more restrictive than A zone; structure must be built to the highest BFE). The structure includes any attached additions, garages, sunrooms, or any other structure attached to the main structure. (6/18/2010)
- (10) Severability - If any section, subsection, paragraph, sentence, clause, or phrase of this regulation should be declared invalid for any reason whatsoever, such decision shall not affect the remaining portions of this regulation, which shall remain in full force and effect; and to this end the provisions of this regulation are hereby declared to be severable. (6/18/2010)

(e) Administration

- (1) The Zoning Enforcement Officer is hereby appointed to administer and implement the provisions of this regulation.
- (2) Where required under this regulation, a registered professional engineer or architect shall certify that design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of this regulation. Such certification must be provided to the Zoning Enforcement Officer.
- (3) Prior to any development activities, application for any development and/or Zoning and/or Building Permit shall be made to Planning & Zoning and to the Zoning Enforcement Officer on forms furnished by him or her. Such application shall be accompanied by four sets of plans, done by a Connecticut Licensed Professional Engineer in accordance with State Statutes, drawn to scale showing, at a minimum, the property lines and location of the parcel; existing and proposed contours; existing or proposed structures, fill, storage of materials or equipment, drainage facilities and the location of the foregoing. This following information shall also be submitted to the Planning & Zoning Office and to the Zoning Enforcement Officer. (6/18/2010)
 - A) Application Stage: Elevation in relation to mean sea level of the proposed lowest floor (including basement) of all structures, [Sec. (f) (11) and (f) (12) (B)].
 - B) Elevation in relation to mean sea level to which any non-residential structure will be flood proofed. [Sec. (f) (11) (c)].
 - C) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.
 - D) A statement as to whether or not the proposed alterations to an existing structure meet the criteria of the substantial improvement definition, [Sec. (c) (34)].
 - E) A statement as to whether there will be dry access to the structure during the 100-year storm event.

(6/18/2010)

- F) Certification as to flood proofing, as required by [Sec. (f) (11) (C)].
- G) Certification as to the provisions of [Sec. (f) (11) (d)] governing fully enclosed areas below base flood elevation, if the minimum design criteria in [Sec. (f) (11) (d) - (f) (11) (d) (i- v)] is not used.
- H) Certification as to floodway heights, as required by [Sec. (f) (10) (A) and (f) (11) (E) and (f) (11) (F)].
- I) Certification as to breakaway walls. If the design criteria stated in [Sec. (f) (12) (H)] is not utilized then the design and construction methods must be certified as explained in [Sec. (f) (12) (H) (I) and (f) (12) (H) (ii)].
- J) Certification as to the structural anchoring provisions of [Sec. (f) (12) (c) and (f) (12) (D)].
- K) Construction Stage: Upon completion of the applicable portion of construction, the applicant shall provide the Zoning Enforcement Officer with verification by a Connecticut Licensed Land Surveyor of the as-built lowest floor elevation, defined as follows:
 - i) In the A zone: The top of the lowest floor (including basement) [Sec. (f) (11) (A) and Sec. (f) (11) (B)];
 - ii) In the V zone: The lowest point of the lowest supporting horizontal member (excluding pilings or columns) [Sec. (f) (12) (B)]; and
 - iii) Floodproofed structures: The elevation to which the flood proofing is effective [Sec. (f) (11) (c)].
 - iv) Compliance: Deficiencies in the lowest floor elevations shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit an acceptable survey or failure to make corrections required hereby shall be caused for issuance of a stop-work order. Final as-built plans of the finished project will be certified by a Connecticut Licensed Engineer or Architect of Record as appropriate in addition to the confirmation of lowest floor elevation by a Connecticut Licensed Land Surveyor.
- L) The Zoning Enforcement Officer, in the Administration of this regulation shall perform the following duties, among others:
 - i) Review all permit applications to determine whether proposed building sites will be reasonably safe from flooding.
 - ii) Review all development permits to assure that the requirements of this regulation have been satisfied.
 - iii) Advise permittee that additional Federal or State permits may be required, and if specific Federal or State permit requirements are known, require that copies of such permits be provided and maintained on file with the Zoning Permit. Such additional permit requirements may include, but not be limited to: Stream Channel Encroachment Line Permit, Coastal Area Management Permit, Water Diversion Permit, Dam Safety Permit, Corps of Engineers 404 Permit.
 - iv) Notify the regional planning agency and the affected municipality at least 35 days prior to the public hearing if any change of regulation or use of a flood zone will affect an area within 500 feet of another municipality.
 - v) Notify adjacent communities and the Department of Environmental Protection, Inland Water Resources Management Division prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.

(4/7/99)

- vi) Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.
 - vii) Record the elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, in accordance with [Sec. (f) (11) (A), (f) (11) (B) and (f) (12) (B)].
 - viii) Record the elevation (in relation to mean sea level) to which the new or substantially improved structures have been flood-proofed, in accordance with [Sec. (f) (11) (C)].
 - ix) Obtain and maintain all certificates required under this regulation and assure that they meet the standards of [Sec. (e) (2)].
 - x) Make the necessary interpretation, where needed, as to the exact location of boundaries of the areas of special flood hazard (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this article.
 - xi) Obtain review and reasonably utilize any base flood elevation and floodway data available from a Federal, State or other source in order to administer the provisions of [Sec. (f) (11)], when base flood elevation data or floodway data have not been provided in accordance with Article 3, Section B.
 - xii) Maintain all records pertaining to the provisions of this section.
 - xiii) Review plans for adequacy of breakaway walls in Coastal High Hazard Areas in accordance with [Sec. (f) (12)].
- (4) Upon completion of the permitted development and prior to issuance of a Certificate of Occupancy, necessary as-built surveys (prepared by a Connecticut Licensed Professional Engineer per Connecticut State Statutes) and engineering or architectural certifications shall be provided to ZEO and Planning & Zoning demonstrating compliance with the approved plans and standards set forth by [Sec. (e)(3)]. (6/18/2010)

(f) Provisions for Flood Hazard Reduction:

General Standards: In all areas of special flood hazard the following provisions shall apply:

- (1) New construction and substantial improvements shall be anchored to prevent floatation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
- (2) New construction and substantial improvements shall be constructed with materials resistant to flood damage.
- (3) New construction or substantial improvements shall be constructed using methods and practices that minimize flood damage.
- (4) Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- (5) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the system into flood waters;

(6/18/2010)

- (6) New and replacement sanitary sewage system shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the system into flood waters;
- (7) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding of a frequency determined by the State and Local Department of Health.
- (8) In any portion of a watercourse which is altered or relocated the flood carrying capacity shall be maintained;
- (9) Manufactured Homes: All manufactured homes including those located outside of a manufactured home park or subdivision, in a new manufactured home park or subdivision, in an existing manufactured home park or subdivision, in an expansion to an existing manufactured home park or subdivision, or in an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage as a result of a flood, (including recreational vehicles [homes] placed on a site for 180 consecutive days or longer) to be placed or substantially improved shall be:
(6/18/2010)
 - (A) Elevated so that the lowest floor is one foot above the base flood elevation, in accordance with this regulation. (6/18/2010)
 - (B) Placed on a permanent foundation which itself is securely anchored and to which the structure is securely anchored so that it will resist floatation, lateral movement, and hydrostatic and hydrodynamic pressures. Anchoring may include, but is not limited to, the use of over-the-top or frame ties to ground anchors.
 - (C) Installed using methods and practices which minimize flood damage. Elevation construction standards include piling foundations placed no more than 10 feet apart, and the provision of reinforcement for piers more than six feet above ground level. Work within a Special Flood Hazard Area, but outside the Floodway must not result in an increase in the Base Flood Elevation of more than 0.1 foot.
 - (D) Adequate access and drainage should be provided.
 - (E) Meet all the construction standards for Zones A and AE as per Section 6-139.1 (f) (11). (6/18/2010)
 - (F) Recreational vehicles shall either be on the site for fewer than 180 consecutive days, and be fully licensed and ready for highway use, or meet all the general standard of Sec. 6-139.1 (f) (1)-(8) and the elevation and anchoring requirement of Sec. 6-139.1 (f) (9) (A)-(D). A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions. (6/18/2010)
- (10) Standards for Streams without Established Base Flood Elevations and/or Flooding: The Zoning Enforcement Officer shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a Federal, State or other source, including data developed pursuant to [Sec. (g) (4)] of this regulation, as criteria for requiring that new construction, substantial improvements, or other development in Zone A on Greenwich's FIRM meet the standards in [Sec. (f) (11)].

(6/18/2010)

- (B) Should data be requested and/or provided, the Town shall adopt a regulatory floodway based on the principle that the floodway must be able to convey the waters of the base flood without increasing the water surface elevation more than one (1) foot at any point along the watercourse.
- (11) Specific Standards: In all areas of special flood hazard A and AE where base flood elevation data has been provided the following provision shall apply: (6/18/2010)
- (A) Residential Construction. New construction or substantial improvement of any residential structure shall have the lowest floor, including basement, elevated at least to one (1) foot above the base flood elevation.
- (B) Non-Residential Construction. New construction or substantial improvement of any commercial, industrial, or non-residential structure located in A and AE Zones shall have the lowest floor including basement, elevated at least to one (1) foot above the level of the base flood elevation, or (6/18/2010)
- (C) Non-Residential Structures located in all A and AE Zones may be flood-proofed in lieu of being elevated provided that together with all attendant utilities and sanitary facilities the areas of the structure below the required elevation are water tight with walls substantially impermeable to the passage of water, and use structural components having the capability or resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. A registered professional engineer or architect shall review and/or development structural design specifications and plans for the construction, and shall certify that the design and methods of construction are in accordance with acceptable standards of practice for meeting the provisions of this sub-section. Such certification shall be provided to the Zoning Enforcement Officer as set forth in [Sec. (e) (3) (F)]. (6/18/2010)
- (D) Fully Enclosed Areas Below Base Flood Elevation. New construction or substantial improvements of Non-Residential buildings not flood proofed per Section (f) (11) (c) and all Residential Buildings that include fully enclosed areas formed by foundation and other exterior walls below the base flood elevation shall be designed to preclude finished living space and designed to allow for the automatic entry and exit of flood waters to equalize hydrostatic flood forces on exterior walls. Designs for complying with this requirement must either be certified by a professional engineer or architect and meet the following minimum criteria: (2/9/2000)
- (i) Provide a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding:
 - (ii) The bottom of all openings shall be no higher than one foot above grade; and
 - (iii) Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwaters in both directions. Non-supporting breakaway wall, lattice work on mesh screening may be allowed below the base flood elevation provided it is not part of the structural support of the building and is designed so as to breakaway, under abnormally high tides or wave action, without damage to the structural integrity of the building on which it is to be used and provided the following design specifications are met:
Design safe loading resistance of each wall shall not be less than 10 nor more than 20 pounds per square foot; or

(6/18/2010)

- If more than 20 pounds per square foot, a registered professional engineer or architect shall certify that the design wall collapse would result from water load less than that which would occur during the base flood event, and the elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components during the base flood event. Maximum wind and water loading values to be used in this determination shall each have one percent (1%) chance of being equaled or exceeded in any given year (100-year mean recurrence interval).
- (iv) Mechanical equipment including but not limited to electrical and plumbing equipment, HVAC ducts, generators, and air conditioning units must be located one foot above the base flood elevation and all utility connections below the BFE such as into sewer lines or underground electrical conduits must be floodproofed both indoors and outdoors. (6/18/2010)
- (v) Access to the enclosed area shall be the minimum necessary to allow for the parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator).
- (E) Floodways: Located within areas of special flood hazard established in Sec. (d) (2) are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris and potential projectiles and have erosion potential, no encroachments including fill, new construction, substantial improvements and other developments shall be permitted unless certification (with supporting technical data), by a registered professional engineer is provided demonstrating, through hydrologic and hydraulic analyses performed in accordance with standard engineering practice, that encroachments shall not result in any (0.00 feet) increase in flood levels during occurrence of the base flood discharge. (6/18/2010)
- (F) Work within a Special Flood Hazard Area, but outside the floodway must not result in an increase in the Base Flood Elevation of more than 0.1 foot.
- (12) Coastal High Hazard Areas (VE Zone). Located within the areas of special flood hazard established in Sec. (d) (2) are areas designated as Coastal High Hazard Areas (Zone VE). Since these areas have special flood hazards associated with high velocity waters, including hurricane wave wash, the following provisions shall apply: (6/18/2010)
 - (A) All new construction or substantial improvement shall be located landward of the reach of the mean high tide;
 - (B) All new construction or substantial improvement shall be elevated so that the bottom of the lowest supporting horizontal member (excluding pilings or columns) is located no lower than one (1) foot above the base flood elevation level, with all space below the lowest supporting member so as not to impede the flow of water; Mechanical equipment including but not limited to electrical and plumbing equipment, HVAC ducts, generators, and air conditioning units must be located one foot above the base flood elevation and all utility connections below the BFE such as into sewer lines or underground electrical conduits must be floodproofed both indoors and outdoors; (6/18/2010)

(6/18/2010)

- (C) All new construction or substantial improvement shall be securely anchored on pilings or columns.
- (D) All pilings and columns and the attached structures shall be anchored to resist floatation collapse and lateral movement due to the effect of wind and water loads acting simultaneously on all building components. The anchoring and support system shall be designed with wind and water loading values which equal or exceed the 100 year mean recurrence interval (one percent annual chance floods and winds);
- (E) A registered professional engineer or architect shall review and/or develop structural design specifications and plans for construction and shall certify that the design specifications and methods of construction are in accordance with acceptable standards of practice for meeting the provisions contained in Sec. (f) (12) (B) - (f) (12) (D) of this section;
- (F) There shall be no fill used as structural support. Non-compacted fill may be used around the perimeter of a building for landscaping/aesthetic purposes provided the fill will wash out from storm surge, (thereby rendering the building free of obstruction) prior to generating excessive loading forces, ramping effects, or wave deflection.

The Zoning Enforcement Officer shall approve design plans for landscaping/aesthetic fill only after the applicant has provided an analysis by an engineer, architect, and/or soil scientist, which demonstrates that the following factors have been fully considered.

- (i) Particle composition of fill material does not have a tendency for excessive natural compaction;
 - (ii) Volume and distribution of fill will not cause wave deflection to adjacent properties; and
 - (iii) Slope of fill will not cause wave run-up or ramping.
- (G) There shall be no alteration of sand dunes which would increase potential flood damage;
 - (H) Non-supporting breakaway wall, lattice work or mesh screening may be allowed below the base flood elevation provided it is not part of the structural support of the building and is designed so as to breakaway, under abnormally high tides or wave action, without damage to the structural integrity of the building on which it is to be used and provided the following design specifications are met.
 - (i) Design safe loading resistance of each wall shall not be less than 10 nor more than 20 pounds per square foot; or
 - (ii) If more than 20 pounds per square foot, a registered professional engineer or architect shall certify that the design wall collapse would result from a water load less than that which would occur during the base flood event, and the elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components during the base flood event. Maximum wind and water loading values to be used in this determination shall each have a one percent (1%) chance of being equaled or exceeded in any given year (100-year recurrence interval).

(6/18/2010)

- (J) Prior to construction, plans for any structures that will have breakaway walls, lattice work or screening must be submitted to the Zoning Enforcement Officer for approval.
- (K) Any alteration, repair, reconstruction or improvement to a structure shall not enclose the space below the lowest floor except with breakaway walls, lattice work or screening as provided for in [Sec. (f) (12) (H) - (f) (12) (I)].
- (L) The placement of manufactured homes or recreational vehicles is prohibited.

(g) Standards for Subdivision Proposals:

In all special flood hazard areas the following requirements shall apply:

- (1) All subdivision proposals shall be consistent with the need to minimize flood damage;
- (2) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.
- (3) All subdivision proposals shall provide adequate drainage to reduce exposure to flood hazards; and
- (4) Base flood elevation data shall be provided for all subdivision proposals and other proposed development which are five acres or fifty lots, whichever occurs first, and are located in Zone A.

(h) Variance Procedures:

- (1) The Planning and Zoning Board of Appeals as established by these regulations shall hear and decide appeals and requests for variances from the requirements of this section of the regulations.
- (2) The Planning and Zoning Board of Appeals shall hear and decide appeals when it is alleged this is an error in any requirement, decision or determination made by the Zoning Enforcement Officer in the enforcement or administration of this regulation.
- (3) Any person aggrieved by the decision of the Planning and Zoning Board of Appeals or any person owning land which abuts or is within a radius of (100) one hundred feet of the land in question may appeal within 15 days after such decision to the State of Connecticut Superior Court as provided in Section 8-8 of the General Statutes.
- (4) Specific Situation Variances:
 - (A) Buildings on Historic Register. Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places on the State Inventory of Historic Places without regard to the procedures set forth in the remainder of this section, except for [Sec. (h) (6) (A-D)] and provided the proposed reconstruction, rehabilitation or restoration will not result in the structure losing its historical character.
 - (B) Pre-existing, Small Lot Location. Variances may be issued for new construction and substantial improvements to be erected on a lot of one half acre or less in size which is contiguous to and surrounded by lots with existing structures constructed below the base flood level, in conformance with [Sec. (h) (6) (A-D)].
 - (C) Functionally Dependent Uses. Variances may be issued for new construction and substantial improvements and other development necessary for the conduct of a functionally dependent use provided the structure or other development is protected by methods that minimize flood damage, creates no additional threat to public safety and meets the requirements of [Sec. (h) (6) (A-D)].

(4/7/99)

- (D) Floodway Prohibition. Variances shall not be issued within any designated floodway if any increase in flood levels during discharge would result.
- (5) Consideration for Variances. In passing upon such applications the Planning and Zoning Board of Appeals shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this regulation; and
 - (A) The danger that materials may be swept into other lands to the injury of others;
 - (B) The danger to life and property due to flooding or erosion damage;
 - (C) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - (D) The importance of the services provided by the proposed facility to the community;
 - (E) The necessity of the facility to waterfront location, in the case of a functionally dependent facility;
 - (F) The availability of alternative locations which are not subject to flooding or erosion damage for the proposed use;
 - (G) The compatibility of the proposed use with existing and anticipated development;
 - (H) The relationship of the proposed use to the comprehensive plan and flood plain management program for that area;
 - (I) The safety of access to the property in times of flood for ordinary and emergency vehicles;
 - (J) The expected heights, velocity, direction, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and
 - (K) The cost of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.
 - (L) Upon consideration of the factors listed above and the purpose of this ordinance, the Planning and Zoning Board of Appeals may attach such conditions to the granting of variances as it deems necessary to further the purpose of this regulation.
- (6) Conditions for Variances
 - (A) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief; and in the instance of a historical building, a determination that the variance is the minimum necessary as not to destroy the historic character and design of the building.
 - (B) Variances shall only be issued upon:
 - (i) A showing of good and sufficient cause.
 - (ii) A determination that failure to grant the variance would result in exceptional hardship; and
 - (iii) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extra-ordinary public expense, creation of a nuisance, cause fraud on or victimization of the public or conflict with existing local laws or regulations.
 - (C) Any applicant to whom a variance is granted shall be given written notice specifying the difference between base flood elevation and the elevation to which the structure is to be built and stating that the cost of the flood insurance will commensurate with the increased risk resulting from the reduced lowest floor elevation up to amounts as high as \$25.00 for \$100.00 of insurance coverage.

(4/7/99)

- (D) The Zoning Enforcement Officer shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.
- (i) Penalties for Violation. Violation of the provisions of this regulation or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a misdemeanor. Any person who violates this ordinance or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than \$250.00 per day if proven done willfully and \$100.00 per day if not, or imprisoned for not more than 10 days for each day of violation, or both, and in addition, shall pay all costs and reasonable legal fees involved in the case. Nothing herein contained shall prevent the Town of Greenwich from taking such other lawful action as is necessary to prevent or remedy any violation.

Sec. 6-140. AIRCRAFT LANDING – TAKEOFF FACILITIES.

No aircraft landings, takeoffs and/or facilities or any related activities shall be permitted as a principal or accessory use in any business or residential zone. (11/14/84)

Sec. 6-140.1 TELECOMMUNICATION FACILITIES AND SITES. (Sec. 6-140.1 Telecommunication Facilities and Sites replaced former Sec. 6-140.1 Satellite Earth Stations (SES) 12/19/2001)

1. Statement of Purpose: In accord with the Federal Telecommunications Act of 1996, this section of the regulations is intended to accommodate the needs of residents, businesses and the general public, while protecting the public safety and general welfare of the Town, and minimizing any adverse visual and operational effects of towers or wireless communication facilities through careful analysis, design, siting and screening. The Planning and Zoning Commission recognizes that it is in the public interest to permit the siting of wireless communication towers and antennas within the Town's boundaries. This regulation establishes standards and requirements for telecommunication facilities and sites.

These regulations are also meant to meet the spirit and intent of Sec. 16-50 L (e) of the CGS for projects that are subject to the approval of the Connecticut State Siting Council by which municipalities are afforded the right of pre-filed technical information and consultation with applicants for telecommunication towers and facilities 60 days before an application is filed with the Connecticut State Siting Council. The purposes are to regulate placement of antennas, towers, and other related facilities in a manner that will protect the town's visual quality; and safeguard the community by having the following objectives:

OBJECTIVES:

- to obtain information necessary to evaluate a proposed facility;
- to minimize locations in residential zones, seek locations in business zones;

(12/19/2001)

- to limit the number and/or height of telecommunication towers throughout the community, especially by requiring multiple-user sharing of telecommunication facilities wherever possible (co-location);
- to establish locations least disruptive to the public safety and welfare of the Town of Greenwich and are consistent with the Town Plan of Conservation and Development;
- to minimize the number of towers needed to serve the community both now and in the future by maximizing the use of existing and approved suitable facilities (including existing towers, buildings and other facilities) to accommodate new wireless telecommunications antennas;
- to minimize adverse visual effects through proper design, siting and screening in keeping with the Town's character;
- to minimize negative effect on adjoining property values;
- to protect scenic roads and historic resources as identified in the Town Plan of Conservation and Development from encroachment by inappropriate structures;
- to avoid injury and potential damage to adjacent properties from tower failure through high structural standards of engineering and careful siting of tower structures and setback requirements;
- to enhance the ability of providers of telecommunication services to provide such services to the community effectively and efficiently;
- to provide for the orderly removal of antennas and towers;
- to assure that these regulations are consistent with federal law, specifically the Telecommunications Act of 1996 by making sure the regulations:
 - (a) Do not prohibit or have the effect of prohibiting Personal Wireless Service as defined in the Telecommunication Act of 1996.
 - (b) Are not intended to be used to unreasonably discriminate among providers of functionally equivalent services.
 - (c) Do not regulate Personal Wireless Services on the basis of the environmental effects of radio frequency emission, as long as the regulated services and facilities comply with the FCC's regulations concerning such emissions.

2. Definitions: When used in this section, the following words or phrases shall have the meaning defined below:

Adequate Capacity: Capacity is considered to be "adequate" if the Grade of Service (GOS) is p.01 or better for median traffic levels offered during the typical busy hour, as assessed by direct measurement of the Personal Wireless Service Facility in question. The GOS shall be determined by the use of standard Erlang B Calculations. As call blocking may occur in either the landline or radio portions of a

(12/19/2001)

wireless network, Adequate Capacity for this regulation shall apply only to the capacity of the radio components. Where Adequate Capacity must be determined prior to the installation of the Personal Wireless Services Facility in question, Adequate Capacity shall be determined on the basis of the busiest hour of the surrounding existing cell sites.

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 transmittal signal is greater than or equal to -85dbm for at least 95% of the intended coverage area. It is acceptable for there to be "holes" within the area of Adequate Coverage where the signal is less than -85dbm, as long as the signal regains its strength to greater than or equal to -85dbm farther away from the Base Station within the cell. 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 a strength of greater than or equal to -85dbm.

Alternative Tower Structure: Includes such things as man-made trees, clock towers, flag poles, bell steeples and similar alternative-design mounting structures that camouflage or conceal the presence of antennas or towers.

Antenna: A device used to collect, transmit and/or receive electromagnetic telecommunication or radio signals. Examples include panels, satellite dish antennas, parabolic (microwave) dishes and single pole devices.

Base Station: the primary sending and receiving site in a wireless telecommunication network.

Camouflaged: A wireless communication facility that is significantly disguised, hidden, part of an existing or proposed structure, or placed within an existing or proposed structure is considered "camouflaged." Flush mounted antennas painted to match a structure will be considered camouflaged as part of an existing or proposed structure as well as rooftop equipment cabinets that appear similar to other rooftop equipment units.

Carrier: A company that provides wireless services.

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

Commission: The Planning and Zoning Commission of the Town of Greenwich.

dbm: a measure of radio frequency signal power referenced to 1 milliwatt that indicates the relative loudness in relationship to the reference. For example, the level of 30 dbm is 30 db above 1 milliwatt which is 1 watt.

Elevation: The elevation at grade or ground level shall be given in Above Mean Sea Level (AMSL). The height of a wireless service facility shall be given in Above Ground Level (AGL). AGL is a measurement of height from the natural grade of a site to the highest point of a structure. The maximum elevation of the wireless service facility is AGL plus AMSL.

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

(12/19/2001)

Equipment Shelter: An enclosed structure, cabinet, shed or box where the batteries and electrical equipment are housed.

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

Grid System: A network of wireless communications facilities comprising the geographic service region of a wireless provider.

Licensed Carrier: A company authorized by the FCC to construct and operate a wireless communication facility.

(12/19/2001)

Mount: The structure or surface upon which antennas are mounted, including the following four types of mounts: Roof mounted - on the roof of a building. Side mounted - on the side of a building. Ground mounted Tower - mounted on the ground (see Tower), and Structure mounted - mounted on a structure other than a building.

Monopole: A freestanding tubular tower.

Omni-directional (Whip) Antenna: A thin rod that beams and receives a signal in all directions. These antennas shall not exceed 20 feet in height or 7" in diameter unless otherwise permitted by the Commission.

Panel Antenna: A flat surface antenna usually developed in multiples. A directional or panel antenna shall not exceed 6 feet in height or 2 feet in width unless otherwise permitted by the Commission.

Personal Wireless Services: Commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services. These services include: cellular services, personal communication services (PCS), specialized mobile radio services, and paging services.

Radio Frequency Engineer: An engineer specializing in electrical or microwave engineering, especially the study of radio-frequencies.

Radio Frequency Radiation (RFR): The emissions from a wireless telecommunications service facility.

Regulated Facility, Service and/or Site: The equipment, towers, mount, antennas and other telecommunication structures subject to local zoning regulation. This includes all telecommunication services not exempt from local regulation under the provisions of the Connecticut General Statutes and the authority of the Connecticut Siting Council or not exempt from local regulation pursuant to the Telecommunication Act of 1996 or such other federal legislation or a federal authority.

Repeater: A small receiver/relay transmitter of not more than 20 watts output designed to provide service to areas that are not able to receive adequate coverage directly from a base station.

Satellite Earth Station Antenna: A parabolic dish and appurtenant tower or other antenna, tower or device the purpose of which is to receive, distribute or transmit a variety of signals in the form of microwaves to or from orbiting satellites or other extra-terrestrial or terrestrial sources.

(12/19/2001)

Satellite and Microwave Dish Antennas: Shall not exceed 2 meters, (6.56 feet) in diameter. Building or rooftop mounted antennas shall be located so as not to be visible from abutting public streets or adjoining residences.

Security Barrier: A security system which may include a locked, impenetrable wall, or fence that is designed to secure an area.

Separation: The distance between one carrier's array of antennas and another carrier's array.

Temporary Personal Wireless Communication Facility: A facility that is to be placed in use for a limited amount of time, is not deployed in a permanent manner, and does not have a permanent foundation. The temporary facility must meet the FCC guidelines for RFR levels. Temporary facilities for less than 30 days shall be permitted with a letter from the applicant. For facilities to be installed for more than 30 days, a fuller explanation of the need for the temporary facility shall be included in the applicant's letter.

Tower: Any structure that is designed and constructed primarily for the purpose of supporting and/or acting as one or more antennas for telephone, radio, television, paging and similar communication purposes. This term includes but is not limited to:

Guyed Tower: A monopole tower or lattice tower that is tied to the ground or other surface by diagonal cables.

Lattice Tower: A type of mount that is self-supporting with multiple legs and cross bracing of structural steel.

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

3. Use Regulations:

- a. Exemptions. The following shall be exempt from this regulation, but may be subject to a Building Permit issuance:
 - (1) Repair of towers and antennas, provided no changes in design, height or appearance occur.
 - (2) Antenna with no tower used solely for residential household television and radio, including amateur radio, reception if they are 18" in diameter or less, or no higher than 6 feet in height.
 - (3) Satellite Antennas measuring 2 meters (6.56 feet) or less in diameter and located in commercial districts on screened rooftops and satellite antenna 1 meter (3.28 feet) or less in diameter regardless of location. Larger Satellite Antennas shall be considered Regulated Facilities allowed as a Permitted Use under these regulations subject to site plan approval by the Commission and/ or the Town Planner's administrative approval as well as subject to the following special provision unless it is demonstrated that an adequate signal cannot be received:

(12/19/2001)

- In residential zones ground mounted antennas shall be confined to the rear yard and not visible from a street.
 - In residential zones, a roof-mounted antenna may be allowed if:
 - It is not visible from a street.
 - Its visibility from adjacent properties is minimized.
 - Any proposed screening is reviewed by the Architectural Review Committee for compatibility with the design of the principal structure.
 - It is consistent with the purposes and standards of Sec. 6-15.
 - In residential zones where placed in a rear yard or in a side yard, if a side yard location is required, antennas shall be set back from rear and side lot lines a minimum distance of ten (10) feet for R-6, R-7 and R-12 zones, fifteen (15) feet for the R-20 zone.
- (4) Amateur radio antennas subject to the following provisions:
- Any ground mounted amateur radio tower shall be located in the rear yard only.
 - Any tower and antenna less than 40 feet in total height, that is owned and operated by an amateur radio operator licensed by the FCC shall not be erected nearer to any property line than a distance equal to the vertical height of the tower.
 - A tower or antenna affixed to a residential structure shall be located on the rear of the structure.
 - For the purposes of safety where there is no existing fence with a locked gate at a height to restrict unauthorized access, a fence or locked gate is to be installed surrounding the base of an amateur radio tower. The fence and locked gate must be at a height to be sufficient to restrict unauthorized access.
- b. Regulated Facilities are allowed as a Permitted Use in all districts subject to Site Plan review by Planning & Zoning Commission and/or Town Planner administrative approval shall be acted on within 65 days of the day of receipt unless an applicant requests an extension or extensions up to a maximum of 65 days. Regulated Facilities include:
- (1) A Regulated Facility proposed on or in an existing structure as within a stealth flagpole, steeple, chimney, or similar structure that meets zoning requirements.
 - (2) A Regulated Facility proposed on an existing structure including but not limited to a guyed, lattice, or monopole tower, or water tower, provided the installation does not increase the height of the existing structure.

(12/19/2001)

- (3) An antenna(s) located on an electric transmission and distribution tower, telephone pole and similar existing utility structure, provided there is no more than an increase of twenty feet in the height of the existing structure as a result of the installation. No increase in height shall be permitted on a utility structure located within historic districts designated by the Greenwich Historic District Commission or within 150 feet of the pavement of any Town road or State highway designated as a Town Scenic Road or State Scenic Highway.
- (4) Antenna(s), either on the roof or side mounted, provided such facility does not project more than ten feet above the building or height limit of the zoning district within which the facility is located whichever is lower. However, such mount may be located on a building or structure that is legally non-conforming with respect to height, provided it does not project above the existing building or structure height.
- (5) A regulated facility intended solely for the purpose of Police, Fire, Ambulance and other Emergency Dispatch. A tower may be erected as a Permitted Use for these purposes unless it is to be shared by a commercial wireless service carrier, which shall require a Special Permit.

c. Regulated Facilities allowed, as a Special Permit Use subject to Site Plan approval shall include:

- (1) Any regulated facility that does not qualify as a Permitted Use as set forth in 3.b above.
- (2) All proposed Ground Mounted Towers except in the WB (Waterfront Business) Zone, where towers are prohibited.
- (3) Any device designated for over-the-air reception of television broadcast signals, multi-channel distribution service or direct broadcast satellite service shall be in accordance with Section 207 of the Telecommunication Act of 1996.

4. General Standards and Requirements for All Permitted and Special Permit Uses:

- a. If feasible, regulated facilities shall be located on existing structures, including but not limited to buildings, water towers, flag pole existing telecommunications facilities, utility poles and towers, and related facilities, provided that such installation preserves the character and integrity of those structures. In particular, applicants are urged to consider use of existing telephone and electric utility structures as sites for regulated activities. Where co-location is not proposed, the Commission in making a decision on the application may request information from the applicant to demonstrate that co-location is not feasible.
- b. A licensed carrier shall be either an applicant or co-applicant and documentation of qualifications as a licensed carrier shall be provided. Where the application includes a facility regulated by the Connecticut Siting Council, the applicant shall document submission of an application to the Siting Council.

(12/19/2001)

- c. In the case of an existing facility, a copy of the current FCC license and the application for modification shall be provided. In the case of a proposed facility, a copy of the application for State or Federal approvals to construct a facility shall be submitted.
 - d. A structural analysis signed by a Professional Engineer licensed in the State of Connecticut indicating that the tower, structure and foundation meets all applicable building codes for all proposed antennas with ½" radial ice. Any changes to an existing structure requires a new structural analysis indicating that the original design requirements have not been compromised. This does apply to towers and antennas on or adjacent to private residences for amateur and direct broadcast video services.
 - e. All submittals supplied in accordance with any standards and/or guidelines shall be in accordance with those in effect at the time of filing.
 - f. Provide a statement from the applicant's engineer indicating that the proposed facility will not cause any interference to public safety radio systems.
 - g. All towers shall be protected against unauthorized climbing.
 - h. All new towers shall be designed to provide co-location of additional antenna systems.
 - i. The applicant shall submit documentation, in the form of a letter from the property owner of the facility on which the antenna is proposed to be located that the owner has reviewed the applicant's submittal and is aware of its implications. This letter should also acknowledge the property owner's legal right to install an antenna and use an existing structure at the time of application for a Site Plan approval and/or Special Permit approval.
 - j. Where an antenna or mount is proposed on an existing structure:
 - For a Permitted Use the Fall Zone shall be shown on the site plan and shall not pose a safety threat to surrounding property.
 - For Site Plan and Special Permit Use the Fall Zone shall be shown on the site plan, shall be contained within the property lines and shall not pose a safety threat to surrounding property.
 - k. Ground-mounted, roof-mounted or side-mounted equipment for Regulated Facilities shall be consistent with the noise standards as stated in the Town of Greenwich Noise Ordinance, Chapter 6B of the Town of Greenwich Code.
5. General Standards and Requirements - Ground Mounted Tower Special Permit:
- a. Where a ground-mounted tower is proposed, the applicant shall have the burden of proving that there are no feasible and available existing structures upon which to locate as an alternative to the proposed ground mounted tower, and there are no other locations in a business zone. If 50% or more of the service area of a site is in another municipality, additional justification is required as to why the site chosen for the tower is in Greenwich.

(12/19/2001)

If the applicant demonstrates that it is not feasible to locate on an existing structure, the ground mounted tower shall be designed to be camouflaged to the greatest extent possible, including but not limited to use of compatible building materials and colors, screening, landscaping and placement within trees.

In all cases where the Commission determines that an expert/peer review of the applicant's application, service area, tower sharing, alternative location or other technical issues is reasonably warranted, the applicant shall be required to reimburse the Town for the cost of performing such expert/peer review.

b. Towers shall be located to minimize adverse impacts upon:

(1) Historic Places, Districts and Scenic Roadways: Where possible, towers shall be sited to have the least detrimental visual impact to designated scenic roads and historic districts, ridge lines, areas within National Historic Districts within the Town, properties listed in the State or Federal Register of Historic Places, and designated historic overlay zones in the Town's Building Zone Regulations.

(2) Minimize impacts on Residential Property Values: To the extent possible, the facility shall not be seen from residential properties or adversely impact residential property values because of a tower's proximity to residences.

(12/19/2001)

(3) Structural Safety: Structural failure, danger to buildings and attractive nuisance. Towers shall, when possible, not be sited in Flood Plain Zones or Special Flood Hazard Areas.

(4) Electromagnetic Safety: Emissions from the tower or Personal Wireless Service Facility shall not exceed the FCC guidelines.

(5) Environmental Degradation:

a. A detailed description of technical alternatives for any proposed tower and their environmental impacts and mitigation measures shall be submitted.

b. Towers shall be sited to avoid affecting rare or endangered flora and fauna in areas shown on the Connecticut DEP and Federal Listed Species and Natural Communities Map. They should also be sited, when possible, away from wetlands. All new towers shall be monopole unless adequate engineering reasons acceptable to the Commission justify an alternative type of construction.

c. In order to ensure public safety, the minimum distance from the base of any new proposed ground-mounted regulated facility to any property line, road, habitable dwelling, business or institutional use, or public recreational area shall be the height of the facility/mount, including any antennas or other appurtenances.

d. In reviewing a Special Permit application for a ground-mounted facility, the Commission will be guided by the following preferred locations: a) totally enclosed within existing structures, b) on existing utility structures, c) on institutional structures, d) on existing approved towers, poles, etc., e) in commercial zones, and along major transportation routes.

(12/19/2001)

The Commission may allow an encroachment within the setback on the applicant's property if it finds that a substantially better design will result from such reduction. In making such a finding, the Commission shall consider both the visual and safety impacts of the proposed facility. Monopoles shall be the preferred type of such ground-mounted facility under this provision. Service providers shall submit full information establishing that they have exhausted all technically feasible alternatives for minimizing size and visual impacts of the proposed installation and for sharing space or using an existing facility or structure before any permit for a new tower shall be granted.

6. Special Permit Application Requirements: All applications for a Special Permit shall be filed with the Commission and shall include:
- a. Topographic - Location Map. The applicant shall provide a topographic location map at a scale of 1" = 2,000' showing:
 - (1) The antenna or tower location.
 - (2) Existing and proposed facilities in and within a three mile radius of the site outside the Town that would connect or be interconnected with, or "hand off" to the proposed facility.
 - (3) The boundaries of the tower view shed i.e., the area within which the Tower can be seen based upon an assessment of the topography surrounding the site.
 - (4) The applicant shall provide coverage parameters used in their analysis and the following coverage maps indicating adequate coverage for:
 - (a) Proposed site
 - (b) All existing facilities that would connect or be interconnected with or "hand off" to the proposed facility (composite map).
 - (c) All existing facilities, and the proposed facility that would connect to or be interconnected with, or "hand off" to the proposed facility (composite map).
 - (d) All rejected sites.
 - b. The applicant shall provide adequate information to justify that the site is needed to provide adequate capacity and/or coverage.
 - c. For ground-mounted towers the applicant shall provide an evaluation of the visual effect of the proposed tower location both within the Town and adjacent municipalities. Areas of special concern to be addressed in this evaluation shall include, but not be limited to:
 - (1) The areas identified as existing or proposed open space or preservation areas in the Town Plan of Conservation and Development, especially land lying within 300 feet of a sub-regional watershed line as shown on maps prepared by the State DEP Natural Resources Center and on file in the Town Hall.

(12/19/2001)

- (2) Areas within National Historic Districts within the Town which include but are not limited to: the Putnam Hill; Round Hill; Fourth Ward; Strickland Road; Greenwich Avenue; and the Municipal Designed District Historic Districts; properties that appear on the National Register of Historic Places; and any present or future historic districts, historic overlay zones, ridge lines and scenic roads that have been or will be designated by the Planning and Zoning Commission.
- (3) The applicant shall provide an additional copy or copies of the application for municipalities located within 3 miles of the proposed site. The Commission shall submit this copy to adjacent municipalities for review and comment.

7. Site Plan Requirements:

The Site Plan shall meet the requirements of the Site Plan Sec. 6- 14 of these Regulations. In addition, the following information shall be provided on the Site Plan. The Commission may waive one or more of the following items at the request of the applicant where the Commission or its designated representative determines that such is not necessary to determine compliance with these Regulations.

- a. Property lines within 300 feet.
- b. Significant tree cover for trees of 12inches (dbh) or greater by dominant species and average height on the subject property and within 300 feet, where permission to survey trees is granted by the property owner. Trees to remain and to be removed shall be noted on the plans.
- c. Outline of all existing buildings, including description of use (e.g. residential, etc) on the subject property and all adjacent property within 300 feet where permission to enter an adjoining property is granted by the property owners.
- d. Proposed location of antennas, mount and equipment shelter.
- e. Proposed security barrier, indicating type and extent as well as point of controlled entry.
- f. Location of all roads, including driveways to serve the facility, public and private, on the property and all adjacent properties within 300 feet, where permission to enter an adjoining property is granted by the property owner.
- g. Distances, at grade, from the proposed facility to each building within 300', including those on adjoining property, where permission to enter an adjoining property is granted by the property owner, on a vicinity plan.
- h. Contours at two-foot intervals based upon AMSL (see "elevation" in definitions section) for the subject property and adjacent property, where permission to enter an adjoining property is granted by the property owner, within 300 feet.
- i. All proposed changes to the existing property, including grading, vegetation removal and temporary or permanent roads or driveways, drainage facilities existing and proposed. A drainage report shall be submitted if grading, driveways or roads are proposed.

(12/19/2001)

- j. Illustrations, dimensioned and to scale, of the proposed mount, antennas, equipment shelters, cable runs, parking areas, and any other construction or development attendant to the facility.
8. Special Permit applications with Site plans shall also provide the following information regarding sight lines and elevations of the proposed facility where the Commission determines that such is necessary to determine compliance with these Regulations:
- a. Sight line representation. A sight line representation shall be drawn from any public road and/or building within 300 feet and if beyond the property on adjoining property where permission to enter an adjoining property is granted by the property owner, to the highest point (visible point) of the regulated facility. Each sight line shall be depicted in profile, drawn at one-inch equals 40 feet horizontal, and one-inch to 10 feet vertical scale. The profiles shall show all intervening trees and buildings.
- b. Existing (before condition) photos. Each sight line shall be illustrated by one four inch by six inch color photo of the existing conditions seen from any public road within 300 feet.
- c. Proposed (after condition) photos. Each of the existing condition photos shall have the proposed regulated facility superimposed on it to show what will be seen from public roads if the proposed facility is built.
- d. Site elevations, or views at grade from the north, south, east and west for a 50-foot radius around the proposed regulated facility plus from all existing public and private roads that serve the subject property. Elevations shall be at either one-quarter inch equals one foot or one-eighth inch equals one-foot scale and show the following:
- (1) Antennas, mounts and equipment shelters with total elevation dimensions and AGL of the highest point.
 - (2) Security barrier. If the security barrier will block views of the facility, the barrier drawing shall be cut away to show the view behind the barrier.
 - (3) Any and all structures on the subject property.
 - (4) Existing significant trees of 12 inches (dbh) or greater at current height and proposed trees and shrubs at proposed height at time of installation with approximate elevations dimensioned.
 - (5) Existing and proposed grades using two foot contours above mean sea level.
- e. Specifications by a Connecticut Licensed Engineer to certify that the pole or tower can sustain winds based on the current building code standards of the State of Connecticut.
9. Other Special Permit/Use Requirements: The following reports and requirements shall be addressed as part of the Special Permit application for new tower locations.
- a. Report on Adequate Coverage, Adequate Capacity and Justification of Need for Ground Mounted Tower. A written report prepared by an RF engineer shall address the following:
(12/19/2001)

General Requirements and Standards:

- (1) A description of the service area for each communication system on the tower including a map showing the location of the planned facility and the extent of the proposed service area.
- (2) A statement setting forth the rationale and justification for the proposed antenna or tower in the proposed location.
- (3) A statement of the signal strength service objectives for each proposed wireless service on the tower.
- (4) An analysis for each proposed use demonstrating that the proposed location will provide the required level of service and that other potential co-location sites in the service area will not provide equal or better service.
- (5) Documentation that for each proposed use of the tower the proposed antenna height is the minimum necessary to provide Adequate Coverage.
- (6) Demonstration that the service proposed can not be provided with equipment added to an existing or other proposed antennas or tower.
- (7) Alternative locations explored and why not chosen.
- (8) Submit a statement that the site does or does not require lighting per the FAA regulations. If the lighting is required an explanation shall be provided as to the type of lights to be used and what will be done to minimize the effects to the surrounding area and migrating birds.
- (9) A map of sufficient detail to indicate the area where the FCC RFR exposure standard are calculated to be exceeded for the general public. Sufficient detail power density calculations shall be provided by the applicant to support the map.

Specific Requirements:

- (1) The applicant shall provide written documentation of all Facility Sites in Greenwich and any Facility Sites outside of Greenwich that are within 3 miles of the proposed site, in which it has a legal interest, whether by ownership, leasehold or otherwise. From each such Facility Site, it shall demonstrate with written documentation that these Facility Sites are not already providing, or do not have the potential by adjusting the Site, to provide Adequate Coverage and/or Adequate Capacity to the Town of Greenwich.

The documentation shall include, for each Facility Site listed, the exact location in latitude and longitude, in degrees, minutes and seconds, 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 proposed maximum power 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.

(12/29/2001)

- (2) Distance from existing tower: the applicant must certify that existing Towers within 1000' of the proposed new tower do not meet the applicant's structural specifications or technical requirements or that a co-location agreement could not be obtained at reasonable terms and conditions, including price.
 - (3) The applicant shall demonstrate with written documentation that it has analyzed the feasibility of Repeaters in conjunction with all Facility Sites listed in compliance with subsections 1 & 2 (above) to provide Adequate Coverage and/or Adequate Capacity to the Town of Greenwich. Radial Plots of all Repeaters considered for use in conjunction with these Facility Sites shall also be provided as part of the application.
- b. A soil report complying with Appendix 1: Geo-technical Investigations, ANSI/EIA-222-E manual standards, as amended, verifying the design specifications of the tower foundation and anchors for the guy wires, if used.
 - c. An Environmental Impact and Evaluation of the Site Emissions Report assessing the impact of the proposed tower and site construction and operation, assessing its impact on:
 - (1) Areas designated as conservation or preservation areas in the Town's Plan of Conservation and Development and Open Space Plan, and in the State Plan of Conservation and Development. The following areas on, or adjacent to the site, shall be shown on the Site Plan and discussed in the Environmental Report.
 - Protected areas.
 - Areas for proposed septic and wells.
 - All inland wetlands and watercourses.
 - Critical habitats for plants and animals.
 - Historic structures or sites, unusual features, buildings, monuments, or areas.
 - Permanently protected lands, such as Town Park and forestlands, and land protected by a non-profit conservation organization.
 - (2) Site emissions and RFR filing requirements. The applicant shall provide a statement listing the existing and maximum future projected measurements of RFR from the proposed regulated facility, for the following situations:
 - Existing or ambient: the measurements of existing RFR.
 - Existing plus proposed facilities: maximum estimate of RFR from the proposed Regulated Facility plus the existing RFR environment.
 - Certification, signed by an RF engineer, stating that RFR measurements are accurate and meet FCC guidelines as specified in the Radio frequency Radiation Standards sub-section of this regulation.

(12/19/2001)

- d. **Landscape and Screening Requirements:** If the site is not already adequately screened by virtue of its location or natural topography as viewed from public roads or existing residences, the Commission may require a landscape plan and in addition, for a new tower, a fence with a minimum height of 6 feet shall be provided. Existing vegetation on and around the site shall be preserved to the greatest extent possible. A planting plan shall be provided to screen building(s), equipment shelters, fuel tanks, other man-made structures and as much of the tower as possible.

The plan shall show an evergreen screen surrounding the site. This shall be a row of evergreen trees (planted 10 feet on center maximum). Evergreens shall have a minimum height of 6 feet at planting and be a type that grows to a minimum of 15 feet at maturity. The Commission may accept any combination of existing vegetation, topography, walls, up to a maximum of six feet, or other features that meet or exceed the above evergreen screen requirement. The applicant and operator shall be responsible for continual maintenance of plantings and ensure continued effectiveness.

- e. **A Construction Plan:** A preliminary construction plan prepared by a Connecticut licensed engineer showing construction and drainage details, including the access road and construction or drainage improvements, including above-ground wires, cables, ducts, utility and signal cables, guying and guy-anchor details.
- f. **Monitoring and Maintenance.**
- (1) The applicant shall provide within 90 days after the facility is operational and on an annual basis from the granting of the permit, a report showing the actual field measurements at the site taken in accordance with the proper procedure to indicate the level of compliance with the RFR standards as established in the FCC guidelines. A RF engineer shall sign this report. If the site is not in compliance, the applicant shall take the corrective action within 30 days to bring the site into compliance. The applicant will provide a second field measurement to verify site compliance. The applicant as the owner of the tower will be responsible to ensure that all users are within compliance and take the necessary actions to maintain compliance. The report shall also indicate that the current signs and fencing are adequate or indicate changes that will be made.
 - (2) The Commission may require as a condition of the Special Permit that after the facility is operational, the applicant shall submit, within 90 days of beginning operations, and at annual intervals from the date of issuance of the Special Permit, existing measurement of noise from the facility. Such measurements shall be signed by an acoustical engineer, stating that noise measurements are accurate and meet the Noise Standards of the Town of Greenwich Health Department.
 - (3) Tower owner(s) shall pay for an independent consultant (a licensed professional structural engineer), hired by the Town, to conduct inspections of the tower's structural integrity and safety every ten years or when directed by the Town. A report of the inspection results shall be prepared by the Independent consultant and submitted to the Planning and Zoning Commission, the Commissioner of Public Works, and the Building Official. Any major modification of an existing facility, which includes changes to tower dimensions or antenna numbers or type, shall require a new structural inspection.

- (4) Should the inspection of any tower reveal any structural defects that in the opinion of the independent consultant renders the tower unsafe, the following action shall be taken. Within 10 business days of 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 10 days of the submission of the remediation plan, and completed as soon as reasonably possible. Failure to accomplish this remediation of structural defect(s) within 10 business days of initial notification shall be a violation of the special permit and subject the owner(s) to penalties and fines.
 - (5) A contact person or corporate department shall be designated in writing by the applicant as the person to contact regarding any matters concerning the proposed facility if and when constructed. The designation shall include at least the name, address and telephone number of the designated contact person and shall be included with the application and shall also be displayed on a sign mounted at the entrance to the facility. The purpose of this is to designate the person to whom should be reported any electro-magnetic interference with receptor devices on adjoining or nearby properties, with emergency services communications, any violations of these regulations, or any public safety and/or emergency conditions existing at the site. The contact person shall reply in writing within 2 business days to the person making the contact with a copy to the Zoning Enforcement Officer of the Town and shall take prompt action appropriate to the nature of the reported condition.
- g. A statement from the applicant indicating that, weather permitting, the applicant will raise a balloon with a diameter of at least eight feet, at the proposed ground mounted Tower site and to the proposed Tower height. Such balloon shall be raised and kept in place for at least three days prior to the date of the public hearing scheduled on the application. A legal notice of the scheduled balloon raising shall be published in a local newspaper. Proof of such publication shall be submitted with the application.
- h. A list of all federal, State, regional, district, and municipal agencies, which have conducted or will conduct a review of the proposed tower together with a copy of any of the issued position/decision/recommendation of such agency or board with respect to the proposed facility.
1. Federal Environmental Filing Requirement Information to be Supplied. Since the National Environmental Policy Act (NEPA) applies to all applications for wireless communication facilities applications will need to be accompanied by the information that will be provided to satisfy the NEPA requirement where applicable. NEPA is administered by the FCC via procedures adopted as Subpart 1, Section 1.1307 et seq. (47 CFR Ch.1). The FCC requires that an environmental assessment (EA) be filed with the FCC prior to beginning operations for any wireless communications facility proposed in or involving any of the following:
 - (1) Wilderness areas
 - (2) Wildlife preserves
 - (3) Endangered species habitat
 - (4) Historical site.
 - (5) Indian religious site

(12/19/2001)

- (6) Flood plain
- (7) Wetlands
- (8) High intensity white lights in residential neighborhoods
- (9) Excessive radio frequency radiation exposure

At the time of application filing, an Environmental Assessment that meets FCC requirements shall be submitted to the Commission for each Regulated Facility Site that requires such an environmental assessment to be submitted to the FCC. For all Special Permit uses the applicant shall identify and assess the impact of the proposed facility on areas recommended for conservation as presented in the Town Plan and State Plan of Conservation and Development. The applicant shall list location, type and amount (including trace elements) of any materials proposed for use within the facility that are considered hazardous by the federal, state or local governments.

i. Other Requirements.

- (1) Commercial advertising shall not be allowed on an antenna or Tower.
- (2) Signal lights shall not be permitted unless required by the FCC or FAA.
- (3) All other uses not clearly necessary to the operation/maintenance of the antenna or tower and associated equipment are prohibited, unless expressly approved as a condition of the permit. Applications shall describe in detail all associated equipment to be maintained or stored on the site.
- (4) Only unmanned facilities, including buildings are permitted and not more than one unmanned equipment shelter and/or storage building of a maximum of 400 square feet for each carrier may be permitted on a site provided the total area of such buildings and/or shelter contains no more than 1600 square feet of gross floor area and is not more than 12 feet in height.
- (5) Equipment shelters and buildings shall be designed to be in harmony with the surrounding neighboring properties and with due consideration for the impact that the tower will have on these properties, i.e., buildings in residential districts must have characteristics such as roof lines, siding, fenestration, etc., that are compatible with residential structures in the immediate area as determined by the Commission. The Commission may impose conditions that foster a compatible design of the antenna tower with the site and the surrounding environment.
- (6) Wireless telecommunication facilities shall be insured by the owner(s) of the poles, towers and antennas providers against damage to person or property. The owner(s) shall provide a Certificate of Insurance to the Commission on an annual basis in which the Town of Greenwich shall be an additionally named insured.
- (7) An "As-Built" plan certified by a Connecticut licensed land surveyor/engineer.
- (8) All utilities serving the Regulated Facility must be underground.

(12/19/2001)

- j. Fees: A schedule of fees for Towers and Personal Wireless Facilities permitting and renewal, any monitoring or emissions and inspection of structures, and any other fees shall be established by the Commission as provided by State Statutes or required to defray costs, and shall be amended from time-to-time as necessary.
- k. Abandonment: Immediate notification of discontinuance of use shall be made to the Town. The following shall apply to the removal of abandoned towers and related appurtenances:
 - (1) A pole, tower, or transmitting facility not in use for more than one year shall be removed by the service facility owner or its agents. This removal shall be completed within 90 days after the one-year period. Upon removal, the site shall be restored to its previous appearance. All cabling, antennas and mounting must also be removed.
 - (2) The Commission may require the posting of a bond or other security to the satisfaction of the Town Comptroller to secure compliance with the approved installation of all antenna towers and antenna(s) and to ensure the timely and proper removal of said tower and/or antenna and its supporting base to a depth of not less than two feet below the grade. Upon removal, the site shall be restored to its previous appearance.
- l. Severability: If a court of competent jurisdiction adjudges any part, sentence paragraph, section or clause of this Section unconstitutional the remainder of these regulations shall not be affected thereby.

Sec. 6-140.2 FENCES AND WALLS.

- (a) Zoning approval shall be required for all walls, fences or combinations thereof that are solid or substantially obstruct light, air or ventilation and are over six feet six inches (6'6") in height. Height shall be determined by a measurement taken from the side having the lower existing grade. Existing grade shall mean the elevation of the ground adjacent to the proposed fence, or wall, or combination thereof prior to any regarding, fill, excavation or berming and concurrent with or subsequent to the erection of the fence or wall.
- (b) Fences or walls or a combination thereof when located in the required yard may not have additional materials attached which would together exceed six feet six inches (6'6") in height.
- (c) A fence post may exceed the maximum permitted fence height by up to six (6) inches.
- (d) Building permits shall be required for any type of fencing constructed as an appurtenance to a sports court larger than 1,000 sq. ft. or any other recreational facility.
- (e) Fences, and walls located ten (10) feet or less from a front or street side lot line may not exceed three (3) feet in height as measured from the existing grade within ten (10) feet on both sides of a driveway. No fence or wall or plantings may impede the minimum sight distance set forth in the Department of Public Works Roadway Design Manual. (7/19/2006)

(7/19/2006)