

# TOWN OF DURHAM, NEW HAMPSHIRE



***\*DRAFT\****

## **SITE PLAN REGULATIONS PART III – DEVELOPMENT STANDARDS**

Original Version - September 17, 2014

**Articles 7 to 12 presented to the Planning Board on May 13, 2015**

Adopted by the Durham Planning Board:  
Most Recently Amended:

*[Comments are shown below in sections where a change from the original draft has been made. All of the changes below were made pursuant to the Planning Board's review and direction from April 8, 2015, except where otherwise specifically noted.]*

## **PART III. DEVELOPMENT STANDARDS**

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- Article 1 General Standards
- Article 2 Architectural Design Standards (The standards are contained in the Appendix)
- Article 3 Construction Practices Standards
- Article 4 Cultural Resources Standards
- Article 5 Landscaping and Screening Standards
- Article 6 Lighting Standards
- Article 7 Miscellaneous Design Standards
  - Building Configuration
  - Erosion and Sedimentation Control
  - Fences and Walls
  - Flood Zones
  - Recreation and Open Space
  - Signage
- Article 8 Natural Resources Standards
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- Article 10 Parking and Circulation Standards
- Article 11 Pedestrian, Bicycle, and Transit Facility Standards
- Article 12 Personal Wireless Service Facilities
- Article 13 Public Health and Safety Standards
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- Article 15 Stormwater Management Standards
- Article 16 Traffic and Access Management Standards
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## Article 7. Miscellaneous Design Standards

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Section 7.1	Building Configuration and siting
Section 7.1	Erosion and sedimentation control
Section 7.2	Fences and Walls
Section 7.3	Flood Zones
Section 7.4	Recreation and Open Space
Section 7.5	Signage

### Section 7.1 Building Configuration and Siting

#### *[“and siting” added per Bubar/Mower]*

**7.1.1** Buildings shall be configured on the site in a manner to promote walkability, create a connection with each other and with the road/street providing access to the building(s), and foster a sense of harmonious open space. In many cases, but not always, this involves buildings being placed parallel or perpendicular to the road/street (except where other site constraints and objectives direct otherwise) and multiple buildings being placed parallel or perpendicular to one another.

#### *[“with each other and” added per Bubar/Mower]*

7.1.2 Streetscapes. Buildings shall be configured and sited to enhance access to the structures and amenities on the site and views along the fronting streets.

#### *[add per Bubar and Mower]*

7.1.3 Solar access. Siting and structure designs shall provide protection of a reasonable amount of sunlight from shade from structures and vegetation whenever feasible both to buildings within the site and to adjacent sites in order to preserve the economic value of solar radiation falling on structures, investments in solar energy systems, and the options for future uses of solar energy. Any obstructions of solar access to a registered solar energy system shall be mitigated to the maximum extent feasible during the review of any permit to construct a building, wall, fence or other structure, or part of a structure on a solar-impacting property.

#### *[added per Bubar and Mower]*

### Section 7.1 Erosion and sedimentation control

An erosion and sedimentation control plan shall be submitted for any project: a) where there will be at least 10,000 square feet of ground disturbance; or b) where any area(s) of bare ground will be exposed during the construction process such that there would be a reasonable likelihood of adverse impacts on downgradient water or land from erosion or sedimentation without specific controls.

7.1.1 Stormwater manuals. The design and implementation of erosion and sedimentation control shall be guided by the practices laid out in the following manuals, as appropriate:

- a) New Hampshire Department of Environmental Services, Alteration of Terrain Program, New Hampshire Stormwater Manual, Volume 2 Post Construction Best Management Practices Selection and Design, latest version.
- b) New Hampshire Department of Environmental Services, Alteration of Terrain Program, New Hampshire Stormwater Manual, Volume 3 Construction Phase Erosion and Sediment Controls, latest version.

7.1.2 Standards. In addition, the following standards shall apply.

- a) Whenever practicable, native site vegetation shall be retained, protected, or supplemented. Any stripping of vegetation shall be done in a manner that minimizes soil erosion.
- b) Appropriate erosion and sediment control measures shall be installed and reviewed and approved by the Department of Public Works prior to any soil disturbance, unless other approaches are approved by the Department of Public Works.
- c) Measures shall be taken to control erosion within the project area. Sediment in runoff water shall be trapped and retained within the project area using approved measures. Wetland areas and surface waters shall be protected from sediment.
- d) All temporary erosion and sediment control measures shall be removed after final site stabilization. Trapped sediment and other disturbed soil areas resulting from the removal of these temporary measures shall be permanently stabilized, including seeding of disturbed soil areas, when appropriate, within 30 days unless conditions dictate otherwise.

*[added]*

- e) The area of disturbance shall be kept to a minimum and be limited to an area only large enough to accommodate construction activities for a particular construction phase.
- f) Sediment in runoff water shall be trapped and retained within the project

area using approved measures. Soil disturbance shall be avoided within established buffers. Wetland areas and surface waters shall be protected from sediment.

- g) Off-site surface water and runoff from undisturbed areas shall be diverted away from disturbed areas where feasible or measures to convey stormwater through the project area without causing erosion of sediment shall be included. Integrity of downstream drainage systems shall be maintained.
- h) Perimeter site controls shall not be placed within wetland areas, stream channels or wetland buffers.
- i) Disturbed soil areas shall be either temporarily or permanently stabilized consistent with the NHDES Stormwater Manual Volume 3 guidelines. In areas where final grading has not occurred, temporary stabilization measures should be in place within seven (7) calendar days for exposed soil areas that are within 100 feet of a surface water body or a wetland and no more than fourteen (14) calendar days for all other areas. Permanent stabilization shall be in place within three (3) calendar days following completion of final grading of exposed soil areas.
- j) All temporary erosion and sediment control measures shall be maintained in functioning condition until final site stabilization is accomplished. A proposed inspection schedule shall be included in the approved plans.
- k) For construction during the winter season an erosion and sedimentation control plan and timeline shall be submitted by September 1 to the Department of Public Works.
- l) Additional temporary stabilization for the winter season consistent with NHDES guidelines shall be in place for disturbed areas that are not permanently stabilized by October 1, or at the discretion of DPW.
- m) Special stabilization details shall be provided with the submission for any disturbance on slopes equal to or steeper than 3:1.
- n) Sediment Basins. For projects that will disturb and expose soils in areas of at least 1 acre in size, or less if stipulated by the Planning Board, a temporary sediment basin shall be provided with a minimum of 3,600 cubic feet of storage per acre of drainage area, until final stabilization of the site. In determining appropriate locations and number of sediment basin(s) needed, the operators may consider such factors as erodibility of site soils, slope lengths, available area on-site, construction period and other unique site considerations.

*[changes per Jamie Houle and April Talon]*

- o) Use of temporary sediment basins shall avoid any additional vegetation

clearing or site disturbance not otherwise needed for post-construction. Sediment basin locations must be reviewed by the Department of Public Works prior to construction and must consider the potential for offsite impacts including public safety, especially as it relates to sediment movement and/or sediment basin failure and alternative sediment controls must be used where site limitations preclude a safe design.

## Section 7.2 Fences and Walls

- 7.2.1 The finished or “good” side of fences shall face outward, away from the subject property.
- 7.2.2 Chain link fences shall not be used: a) between the primary building and any street; b) within 20 feet of any street; or c) in any location that would be prominently visible from any street. Where chain link fences are used, they shall be covered in a dark green or black vinyl or planted with vines that will grow into the fences.
- 7.2.3 The height of fences and walls shall not exceed six (6) feet from grade unless the Planning Board agrees that a greater height is appropriate for additional screening purposes.

*["agrees" inserted for "determines"]*

## Section 7.3 Special Flood Hazard Areas:

All site plan proposals governed by these regulations having lands identified as Special Flood Hazard Areas in the "Flood Insurance Study for the County of Strafford, N.H.", dated May 17, 2005, together with the associated Flood Insurance Rate Maps shall meet the following requirements:

- A. Site Plan proposals, including their utilities and drainage, shall be located and designed to be consistent with the need to minimize flood damage.
- B. All public utilities and facilities, such as sewer, electrical and water systems shall be located and constructed to minimize or eliminate flood damage.
- C. Adequate drainage shall be provided to reduce exposure to flood hazards.
  - 1) New and replacement water systems (including on-site systems) shall be located, designed and constructed to minimize flood infiltration.

2) New and replacement sanitary sewage systems shall be designed to minimize or prevent infiltration of flood waters into the systems and discharges from the systems into flood waters.

D. Within the altered or relocated portion of any watercourse, the applicant shall submit to the Planning Board certification provided by a registered professional engineer assuring that the 100 year flood carrying capacity of the watercourse has been maintained.

E. All site plan proposals shall include base flood elevation data.

*[As recommended by Jennifer Gilbert, CFM, ANFI Senior Planner, Floodplain Program Coordinator NH Office of Energy and Planning and reviewed by PB on April 8]*

#### Section 7.4 Recreation and Open Space

7.4.1 Recreation facilities and preservation of open space may be required as part of multi-unit residential site plans, depending on the location of the development, the scale of the development, the type of residents expected to occupy the development, and the availability of nearby public facilities.

7.4.2 The Planning Board may stipulate construction of passive recreational structures such as benches, picnic tables, and gazebos, and/or active recreational facilities such as tot lots, playground equipment, ball fields, basketball courts, or tennis courts. Such recreational facilities and open space shall be available for use by the residents of the subject development. The Planning Board may not require public access to these facilities unless acceptable to the developer.

7.4.3 The Planning Board may determine the suitability of particular open space areas based upon size, shape, topography, geology, access, location, proximity to neighboring open space areas, and other pertinent factors.

#### Section 7.5 Signage

7.5.1 Standards for signage regarding the number, location, dimensions, and other parameters are contained in the Town of Durham Zoning Ordinance. Proposed signs (except where exempt from review) are reviewed by the Zoning Administrator to ensure compliance with the ordinance.

7.5.2 As part of site plan review, when new signage will be installed, the applicant shall submit proposed sign designs to the Planning Board for the opportunity to make recommendations to the applicant regarding the design, in accordance with the suggested guidelines below. When the design meets the requirements of the Zoning Ordinance, the applicant need follow any such recommendations of the Planning Board, only at his or her option. No such review of signage is required

for changes to existing signage or new signage when site plan review is not involved.

7.5.3 Suggested Sign Guidelines. In order to enhance the aesthetic appeal of the community, the following approaches and types of signs are encouraged:

- a) Signage that is low in height and small in area;
- b) Signage which is non-illuminated
- c) Use of a dark background with light letters;
- d) Use of wood, metal, urethane, or other solid materials, rather than plastic;
- e) Use of a matte or non-reflective surface;
- f) Use of building-mounted signs rather than freestanding signs;
- g) For freestanding signs, use of two posts rather than one center pole; and
- h) Monument style signs (signage rising from a base connected to the ground) rather than pole signs

## **Article 8. Natural Resources Standards**

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Section 8.1	Purpose
Section 8.2	General Provisions
Section 8.3	Water Quality Protection
Section 8.4	Specific Features
Section 8.5	Energy Conservation

### **Section 8.1 Purpose**

The purpose of this section is to protect, preserve, and enhance Durham's rich and varied natural resources while accommodating appropriate growth and development by encouraging the applicant and the Planning Board to consider natural resources in the planning process.

### **Section 8.2 General Provisions**

- 8.2.1 Buildings, parking areas, travel ways, and other site elements shall be located and designed in such a manner as to preserve natural resources and maintain natural topography to the extent practicable. Extensive grading and filling shall be avoided.
- 8.2.2 Development shall be directed away from valuable and fragile resources to the extent practicable.



- 8.2.3 Development shall follow the natural contours of the landscape to the extent practicable to minimize grading.
- 8.2.4 The applicant is encouraged to make special efforts to protect elements considered to have significant value, which in many cases involves creating a buffer around them.
- 8.2.5 The Planning Board may request guidance from the Conservation Commission or other knowledgeable parties in its consideration of natural resources.
- 8.2.6 The Board may require the designation of buffer strips of at least 50-foot width around surface water, wetlands, or other natural features that may be adversely affected by erosion or stormwater runoff. The Board may require a vegetative buffer to provide screening, where appropriate.
- 8.2.7 Natural features and systems shall be preserved in their natural condition, wherever practicable. Such areas include watercourses, waterbodies, floodplains, wetland areas, steep slopes, aquifer recharge areas, wildlife habitats, large or unique trees, and scenic views.
- 8.2.8 All regulated substances shall be stored, transported, disposed, or transferred in accordance with the rules for Best Management Practices for Groundwater Protection of the New Hampshire Department of Environmental Services (NHDES).
- 8.2.9 The development shall meet all applicable federal, state, and Town regulations, statutes, ordinances, and standards.

**Section 8.3 Water Quality Protection**

- 8.3.1 The proposed development shall not adversely impact either the quality or quantity of groundwater available to surrounding properties or to public water supply systems.
- 8.3.2 For any on-site water system supplying 20,000 gallons per day (gpd) or more, evidence presented by a qualified hydrologist shall be sufficient to reasonably conclude that there will be no adverse effect on other public or private groundwater sources.

**Section 8.4 Specific Features**

The elements listed below are considered to be resources worthy of protection or special care or features which, if disturbed, could cause hazards to the environment, health, safety, or property.

These elements should be preserved, if practicable, and enhanced, where appropriate, or special design solutions should be incorporated to mitigate impacts or protect against hazard.

1. Wetlands
2. Rivers, streams, lakes, and ponds
3. Aquifers, aquifer recharge areas, and groundwater
4. High groundwater, perched groundwater, shallow depth to ledge, poorly drained soils, and excessively well drained soils
5. Flood plains

*["flood hazards, and fluvial erosion" removed]*

6. Steep slopes (i.e., those greater than 15% where there is a change in elevation of at least 4 feet)
7. Exposed ledge or areas with frequent or large rock outcrops
8. Large boulders
9. Individual specimen trees (unusually large, old, rare, or attractive trees)
10. Unusual, rare, threatened, or valuable tree and plant communities. Mast stands shall be preserved to the extent practicable.
11. Special habitats crucial to maintaining wildlife populations, e.g., deer yards and vernal pools. The current New Hampshire Wildlife Action Plan should be used as a reference in determining these possible locations. Development shall be directed away from habitat types that are rare statewide. Deer yards shall be preserved to the extent practicable.

## Section 8.5 Energy Conservation

- 8.5.1 The Applicant shall submit a completed Energy Considerations Checklist. Except for those items on the checklist with which compliance is required by specific regulation, such as the standards under Chapter 38 of the Town of Durham Code of Ordinances, the applicant is encouraged (but not required) to satisfy the objectives contained in the checklist. Prior to Planning Board site plan approval, the checklist must be submitted and the applicant must meet with a representative of the Durham Energy Committee and the Building Inspector. Thus, the checklist is required prior to approval not acceptance of the application.

*[I modified this provision to read exactly the same as the proposed site plan amendment for the Energy Checklist.*

- 8.5.2 Buildings should be sited and developed to benefit from solar heating and passive cooling to the extent practicable. It is recognized that this goal may conflict with the provision in the Architectural Standards, where applicable, for buildings to be oriented toward the street, so balance should be sought.
- 8.5.3 Solar panels. Where the applicant will be including solar panels, the Planning Board may request, in coordination with the applicant, architectural drawings to identify solar-ready zones on southern-exposure portions of the roofs of each building (See definition in Part I). These solar-ready zones are spaces that are unshaded, un-penetrated, and free of obstructions and may thus serve as a suitable place where solar panels can be installed as part of the project or at a future date.

*[minor changes per Robin Mower]*

## **Article 9. Operational Issues Standards**

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- Section 9.1 Hours of Operation
- Section 9.2 Maintenance of the Site
- Section 9.3 Snow Storage and Removal
- Section 9.4 Solid Waste
- Section 9.5 Flammable and Combustible Liquids
- Section 9.6 Street Addressing

### **Section 9.1 Hours of Operation**

The Planning Board may restrict hours of operation for businesses and other organizations as appropriate, such as for businesses that are located in close proximity to residences and that generate significant activity.

### **Section 9.2 Maintenance of the Site**

The property shall be maintained in a sanitary condition, with a neat and orderly appearance, free from refuse and debris.

### **Section 9.3 Snow Storage and Removal**

- 9.3.1 Snow shall be removed from driveways, parking areas, sidewalks, and other areas where its accumulation in the winter would impair safe and efficient use of the site. Snow shall not be pushed against trees or other vegetation. Provisions shall be made for storage of snow on site and/or removal of snow from the site when there is not sufficient space on site or when there will not be sufficient space in the event of excessive snowfall.

- 9.3.2 Snow storage areas shall be located such that no direct discharges to receiving waters are possible from the storage site. Runoff from snow storage areas shall enter treatment areas to remove suspended solids and other contaminants before being discharged to receiving waters or preferably be allowed to infiltrate into the groundwater.
- 9.3.3 Snow storage areas shall be selected to avoid:
- a) landscaped areas and natural vegetation, especially vegetation that is less hardy and more likely to be harmed by snow storage;
  - b) drainage ways whose function would be impaired if blocked by snow;
  - c) areas where spring flooding could result;
  - d) wetlands, ponds, and streams;
  - e) locations where vehicular or pedestrian visibility would be impaired;
  - f) vehicular and pedestrian travel ways;
  - g) areas where it might present a visual nuisance; and
  - h) other sensitive locations on the site.

*["To the extent practicable" at beginning removed. Per Bubar/Mower]*

- 9.3.4 Snow shall not be stored where it might accumulate on, slump onto, or result in spring flooding of, adjacent properties or public ways.
- 9.3.5 Snow shall not be stored where melting could create a hazard when refreezing occurs.
- 9.3.6 Snow shall be stored in a location to provide maximum protection to downstream sites from the accumulated ice control materials and chemicals that often end up in snow storage areas.
- 9.3.8 In some cases, it may be effective to direct snow toward stormwater basins in order to avoid rapid spring runoff from snow melt, prevent sediment loading of downstream waters, and allow for the settling out of salts and other contaminants prior to leaving the site.
- 9.3.9 When appropriate, the snow storage plan should include a calculation to show there will be sufficient space for storage of snow on site. Generally, there should be 1 square foot of storage area for every 5 to 10 square feet of area to be cleared. (See *New Hampshire Department of Environmental Services Best Management Practices* for snow storage.)

#### Section 9.4 Solid Waste

The applicant shall include adequate provisions for solid waste disposal and shall comply with Chapter 118. Solid Waste of the Town of Durham Code.

9.4.1 General Requirements

- a) All waste materials shall be contained in dumpsters or other acceptable receptacles. Disposal areas shall be fully enclosed and screened from the street and from abutting properties by a fence, a wall, vegetation, or another method to a height of at least 6 feet. For dumpsters over 6 feet in height, the height of the screening device shall be at least 1 foot above the height of the dumpster.
- b) All dumpsters shall be placed on a suitable surface. When there will be intensive usage, the dumpster shall be located on a minimum 6 inch thick concrete pad.
- c) Special safeguards may be stipulated to minimize odors, flyaway trash, and impacts upon environmental resources.
- d) The Planning Board may stipulate the following (or comparable) as part of a site plan approval, as appropriate: The property owner's waste management hauler's name, account number, and phone number shall be provided to the Durham Building Official/Health Officer (DHO) in order that the DHO can call and order an emergency pick up if necessary. The DHO is authorized to request this service at the applicant's expense should it be deemed necessary. The DHO is authorized to contact the waste management hauler only after first contacting the property owner and allowing the property owner to order a pick up.
- e) The owner of a property shall insure that the contents of all waste containers are to be emptied or removed for disposal as necessary to prevent nuisance odors and public safety hazards.

9.4.2 Location of Facilities

- a) Solid waste facilities shall be strategically located in order to minimize visibility from the street; minimize visibility and the impact of odors, noise, and flyaway trash upon abutters; minimize interference with the daily operations on the site; and allow for safe and convenient access and removal without damage to sidewalks or other Town property.
- b) Dumpster or other waste container pads shall be a minimum of 20 feet from any property line or yard.
- c) Dumpster or other waste container pads shall be a minimum of 20 feet from any inlet for stormwater collection.

- d) When a dumpster or other waste storage container pad is adjacent to a watercourse, a minimum landscaped area of 50 feet shall be maintained between the pad and the bank of the watercourse.

9.4.3 Storage Containers

- a) Every property shall be supplied with adequate solid, semi-liquid, and liquid waste storage containers, as appropriate. These containers shall be provided by the owner of the property, by the construction company, or by contract with a commercial hauler.
- b) All solid waste storage containers shall be resistant to insect or animal entry. Liquid waste may only be stored in tanks designed for the particular waste type.
- c) Containers shall be constructed with rust- and impact-resistant materials and shall be equipped with tight-fitting covers. Containers shall have an appropriate child-safe design and be securely locked to prevent unauthorized access after business hours. The property owner is responsible for maintaining containers in a neat, clean, sanitary, and leak-free condition.

*[minor changes by PB, April 8]*

- d) All containers for regulated substances shall meet all applicable federal, state, and local standards.

9.4.4 Recycling and Reuse

- a) Recycling shall comply with Chapter 118. Solid Waste of the Town of Durham Code.
- b) Site plans shall include provisions for collection of recyclable materials. These provisions shall include an appropriate, dedicated physical space for recycling receptacles sized to support the planned occupant load. The site waste management plan shall require the applicant to provide supervision to ensure that occupants know and comply with Town recycling standards.

*[per Kitty Marple and the IWMAC]*

- c) The waste management plan shall provide for single-stream recycling.

**Section 9.5 Flammable and Combustible Liquids**

9.5.1 All flammable and combustible liquids shall be contained and stored in accordance with the National Fire Protection Association’s standards and the International Fire Code.

9.5.2 The location of all flammable, combustible and hazardous material storage shall be provided to the Fire Department along with a copy of all required Material Safety Data Sheets (MSDS) prior to Fire Department approval.

**Section 9.6 Street Addressing**

9.6.1 New street addresses will be issued by the Durham Fire Department for new developments and for additions to, changes to, and redevelopment of, existing sites, when appropriate.

9.6.2 The Town may stipulate that a private driveway or travel way serving a new development be given a separate street name, where appropriate. In such cases, the applicant shall apply for a new street name and install a street sign in accordance with Town standards.

**Article 10. Parking and Circulation Standards**

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- Section 10.1 Required Parking
- Section 10.2 Shared Parking and Reduction in Parking Spaces
- Section 10.3 ADA Accessibility Requirements
- Section 10.4 Parking Lot Design
- Section 10.5 General Requirements for Parking Lots and Circulation
- Section 10.6 Pavement Structure
- Section 10.7 Curbing
- Section 10.8 Surface materials
- Section 10.9 Loading

**Section 10.1 Required Parking**

Parking shall be required as follows and shall be rounded up to the nearest whole number:

Type of use	Number of required parking spaces
<i>Residential</i>	
Single-family duplex or multi-unit dwellings	2 per dwelling unit
OR	
Dwelling units permitted to be occupied by 3 or more unrelated individuals	1 per resident
Rooming or boarding houses, fraternities, sororities, dormitories, or congregate housing	1 per resident
Elderly housing	1 per dwelling unit or lodging unit, plus 1 per employee
Homes for aged, disabled, or handicapped	1 per 5 beds, plus 1 per employee of the maximum shift
Educational facilities	1 per staff member, plus 1 for 4 seats in the largest public assembly room
<i>Commercial</i>	
Bed and breakfasts or Hotels and motels	2 for the resident family or manager, plus 1 per room rented, plus 1 for each 2 outside employees on the maximum shift, plus 1 per 400 square feet of meeting place
Veterinary clinics or commercial kennels	1 per 400 square feet of gross floor space; minimum of 4
Auditoriums, theaters, churches, or other places of assembly with fixed seating	1 per 4 seats or 40 square feet of gross floor area used for assembly purposes; whichever is greater
Libraries, museums, and art galleries	1 for every 500 square feet of gross floor area.
Day care	1 per 6 supervised children or adults, plus 1 per employee



Restaurant Carry-out	1 space per every two (2) seats, plus (1) space per each employee in the maximum shift, or one (1) space per fifty square feet of gross floor area, plus one (1) space per each employee in the maximum floor shift.
Restaurants less than 4,000 square feet	1 per 100 square feet of seating area, plus 1 per employee on the maximum shift
Restaurants over 4,000 square feet	40, and 1 per 200 square feet of gross floor area in excess of 4,000 square feet
Banks and financial institutions	1 per 250 square feet of gross floor area
Professional offices	1 per 350 square feet of gross floor area
Medical and dental offices	1 per 250 square feet of gross floor area, plus 1 per employee
Offices not providing customer service	1 per employee, but not fewer than 1 per 400 feet of gross floor area
Retail or personal service stores	1 per 250 square feet of gross floor area
Retail II (furniture, hardware or carpets)	1 space per 600 hundred square feet of gross floor area.
Service stations	3 per service bay, plus 1 per employee
Manufacturing uses, research testing and processing, assembling, all industries	1 per 1.5 employees on a maximum shift, but not less than 1 space for every 400 square feet of gross floor area
Other Uses	Closest similar use as shall be determined by the Director of Planning and Zoning Administrator.

*Maximum Number Allowed.* Parking lots may contain up to ten percent (10%) more spaces than the required minimum. Any additional spaces above ten percent (10%) shall be allowed only as a conditional use upon the finding that such additional spaces are needed.

## Section 10.2 Shared Parking and Reduction in Parking Spaces

When required parking reductions are anticipated, as a result of sharing between intermittent, seasonal, or compatible uses with non-conflicting parking demands (e.g. a church and a bank), then the reduction can be considered for approval by the Planning Board without a parking study. Individual spaces identified on a site plan for shared users shall not be shared by more than two different users.

*[The original draft was missing language after "...shall not be shared by more than..." I could not find anything in earlier iterations. Two users seems to make sense.]*

### **General Provisions Regarding Required Parking Spaces**

**Purpose.** The purpose for setting a minimum required number of on-site parking spaces is to eliminate or minimize inefficient and unsafe parking outside of designated areas, unauthorized parking on neighboring private parking lots, and disproportionate use of on-street parking spaces.

1. When a proposed use on an established site would require more parking spaces than the existing use, additional parking spaces shall be provided to accommodate the proposed use. If it is not practical to create additional parking spaces for the new use, the Planning Board may reduce or eliminate this requirement at its reasonable discretion.
2. Parking spaces, excluding employee parking, shall be on the same lot with the principal building unless arrangements have been made for shared parking on another property and approved by the Planning Board
3. Where multiple uses are shared within one facility or building, parking requirements shall be determined by adding the requirements for each individual use, such as for a retail sales business which also has spaces for office use and storage.
4. Required parking spaces shall not be used for any purposes other than vehicle parking unless specifically approved by the Planning Board.
5. All off-street parking shall be provided on-site unless other arrangements are approved by the Planning Board.
6. While the parking table above provides the minimum number of on-site parking

spaces, there shall not be created an excessive amount of parking either, in order to avoid unnecessary development and unsightly expanses of pavement. The Planning Board may limit the total amount of on-site parking spaces where it determines that an excessive amount is proposed, including, in unusual cases, stipulating a total amount less than what is specified in the subsection above.

7. Off-street loading spaces shall not be counted to satisfy the off-street parking requirements.

### **Reducing the Number of Required Parking Spaces**

**Exemptions.** All permitted uses shall be exempt from the parking requirements of this chapter within the Central Business District, provided that:

1. A one-time parking impact fee (as set by the Town Council) is paid by the owner and/or developer for the number of spaces required less the number of on-site spaces provided. The parking impact fee shall be reviewed by the Durham Town Council on an annual basis.
2. The existing number of required parking spaces shall not be reduced by any proposed development unless approved as part of a property redevelopment plan by the Planning Board.
3. When required parking reductions are anticipated, as a result of sharing between intermittent, seasonal, or compatible uses with non-conflicting parking demands (e.g. a church and a bank), then the reduction can be considered for approval by the Planning Board without a parking study. Individual spaces identified on a site plan for shared users shall not be shared by more than one user at the same time.
4. If a privately owned parking facility is to serve two or more separate properties, then a “Shared Parking Agreement” shall be filed with the Town of Durham for consideration by the Planning Board. Unless explicitly stated to the contrary, the property owner of the parking facility accepts responsibility for operating, maintaining, and accepting liability for personal injury and property damage.

### **Section 10.3 ADA-Accessibility Requirements**

- (1) All sites and parking lots shall be in compliance with the Americans With Disabilities Act of 1990, as amended (ADA). The number and design of ADA-accessible parking spaces shall conform to the N.H. Architectural Barrier Free Design Code, as prepared by the Governor’s Commission for the Handicapped and/or Title III of the deferral Americans with Disabilities Act.

*[“handicap” changed throughout to “ADA-accessibility” per Bubar/Mower]*

(2) Number of spaces.

- (a) Wheelchair accessible parking spaces must be provided on sites that provide on site parking, as follows:

<b>Minimum number of accessible spaces</b>	<b>Total number of Parking spaces</b>
<b>1</b>	<b>1 to 25</b>
<b>2</b>	<b>26 to 50</b>
<b>3</b>	<b>51 to 75</b>
<b>4</b>	<b>76 to 100</b>
<b>5</b>	<b>101 to 150</b>
<b>6</b>	<b>151 to 200</b>
<b>7</b>	<b>201 to 300</b>
<b>8</b>	<b>301 to 400</b>
<b>9</b>	<b>401 to 500</b>
<b>2 % of total</b>	<b>501 to 1,000</b>

- (b) At least 1 in every 8 wheelchair accessible spaces shall be designated as van accessible, or otherwise as provided for in ADA.

(3) Design of spaces.

- (a) ADA-accessible parking stalls shall be at least 8 feet in width. All ADA-accessible parking spaces shall be served by an adjacent access aisle that is at least 5 feet wide for standard spaces and at least 8 feet wide for van accessible spaces. The access aisle may be shared by two adjacent spaces.
- (b) Every wheelchair-accessible space shall be identified with appropriate pavement marking and a clearly visible vertical sign, between 5 and 8 feet in height. Signage for every van-accessible space shall indicate that the space is van accessible. Vertical “No Parking” signs shall be installed in front of each ADA-accessible parking space access aisle.

(4) Other Requirements

- (a) ADA-accessible parking spaces shall be located in close proximity to wheelchair accessible entrances to the building. Wherever practicable, the main entrance to the building should be wheelchair accessible.
- (b) The route from the access aisle to the nearest wheelchair accessible entrance must be paved.

- (c) The slope of wheelchair accessible parking spaces and adjoining access aisles shall not exceed 1 foot of rise per 48 feet of run.
- (d) Wheelchair ramps shall be provided, where appropriate, with a slope not exceeding 1 foot of rise per 12 feet of run.
- (e) ADA-accessible curb ramps shall be provided as necessary.

*["ADA-accessible" added]*

- (f) Truncated domes (textured plates) to alert visually-impaired persons shall be installed at tip downs where sidewalks meet streets, driveways, and parking lots. Truncated domes shall be constructed of cast iron or other materials acceptable under ADA.
- (g) All tip-downs on sidewalks located within any Town right-of-way shall be made of concrete.

## Section 10.4 Parking Lot Design

### 10.4.1 General Requirements

1. Applicants shall situate parking lots to the side and/or rear of buildings to preserve streetscapes, unless the Planning Board determines that placement at the rear or side is not practicable.

*[language altered by PB, April 8]*

2. Within the five Commercial Core Zoning Districts (C, CB, CC, CH, and PO) parking lots shall be located at the rear of principal buildings unless the Planning Board determines that placement at the rear is not practicable, in which case parking lots may be located at the side of principal buildings set back at least as far as the front of the building or 15 feet, whichever is greater.
3. All parking spaces shall be designed such that they can be accessed safely from the aisles and that there is sufficient room for backing and turning for spaces situated at the end of an aisle.
4. Parking areas shall be designed such that it is not necessary for vehicles to back into a public road.
5. All parking spaces shall be demarcated with white or yellow traffic paint/markings of two-inch minimum line width.

6. Parking areas shall have a minimum grade of 0.5% and a maximum grade of 5%.

10.4.2 Stall size

1. The standard parking stall, located perpendicular to the traffic aisle, shall be at least 9 feet wide and 18 feet long.
2. Parking stalls set at an angle to the traffic aisle shall be large enough to fully contain a rectangle measuring at least 9 feet in width and 18 feet in length.
3. Parking stalls oriented parallel to the traffic aisle (i.e., parallel parking spaces) shall be at least 8 feet wide and 22 feet long.
4. A compact parking space shall be no smaller than eight by sixteen (8 x 16) feet. No more than thirty percent (30%) of the off-street parking requirement shall be met by the use of compact spaces, and all such spaces shall be suitably marked on the site as compact spaces.

10.4.3 Design Requirements.

1. All parking areas and access driveways shall have bumper guards, curbs, or other measures, as appropriate, to define parking spaces or limits of paved areas, and to prevent vehicles from projecting into any setback, landscaping area, or other portion of a lot where parking is prohibited.
2. Parking lots for ten (10) or more vehicles shall be clearly marked with properly painted lines or other method approved by the Code Enforcement Officer.
3. Width of Drive Aisle. The width for traffic aisles shall be as follows:

<b>Angle of parking stall to drive aisle</b>	<b>Two-way circulation: Minimum aisle width</b>	<b>One-way circulation: Minimum aisle width</b>
90 degrees	24 feet	20 feet
60 degrees	Not Permitted	18 feet
45 degrees	Not Permitted	16 feet

4. One-way vs. two-way circulation. In most cases, the conventional parking layout with spaces situated perpendicular to the traffic aisle is preferred (middle column, above). However, there may be situations when a one way

circulation pattern with angled parking spaces works better (right-hand column, above).

## Section 10.5 General Requirements for Parking Lots and Circulation

- 10.5.1 Sites and parking lots shall be designed so that there is safe and efficient traffic circulation.
- 10.5.2 All travel ways shall be of sufficient width and configuration to accommodate the prospective traffic and to afford satisfactory access into, through, and out of the site for police, fire, and other emergency service vehicles.
- 10.5.3 Channelizing/stacking space shall be provided at entrances into sites, exits out of sites, and other appropriate areas.
- 10.5.4 The Planning Board may stipulate driveway and parking lot interconnection of adjoining parcels where it determines that such interconnection is practicable, will enhance traffic movement and on-site circulation, will reduce the number of vehicles entering and exiting the street, and will not lead to undue traffic cutting through lots or create back ups of vehicles. Where an adjacent lot is vacant a stub out to the property line may be required to accommodate future connection. For shared driveways and parking lot/driveway connections cross easements shall be recorded at the Registry of Deeds.
- 10.5.5 Each site shall have full internal vehicular circulation, with access from any location on the site to any other without need to use the adjacent street system.
- 10.5.6 All driveways shall be at least 20 feet in width, except for parking aisles, as specified in the table, above, and one-way driveways, where the Planning Board determines that a narrower width is workable.
- 10.5.7 Any driveway width greater than 24 feet shall be justified based upon large traffic volumes, the need to accommodate oversized vehicles, or other considerations as determined by the Planning Board.
- 10.5.8 Curbing, striping, islands, landscaping, or other appropriate means shall be provided as needed to control and direct traffic.
- 10.5.9 Appropriate directional signage shall be provided in accordance with the current USDOT Federal Highway Administration's "Manual on Uniform Traffic Control Devices for Streets and Highways" ("MUTCD"). Parking spaces, stacking lanes, entry and exit drives, and direction of traffic flow shall be appropriately demarcated.

- 10.5.10 Fire lanes and emergency vehicle access into and through the site shall be provided as necessary.
- 10.5.11 The maximum slope for any driveway for any project subject to these regulations is 8 percent.
- 10.5.12 Traffic Calming. Where the Planning Board determines appropriate, special techniques shall be employed to slow traffic on a site, in order to enhance safety for drivers, pedestrians, and bicyclists.

*[reference to an appendix describing various methods was removed]*

- 10.5.13 Zoning Ordinance. Until such time that Article XXI – Off-Street Parking and Loading, in the Durham Zoning Ordinance, is removed from the Zoning Ordinance, wherever any provision in these regulations is inconsistent with a provision in the Zoning Ordinance, the stricter provision shall apply.

## Section 10.6 Pavement Structure

- 10.6.1 All parking areas and travel ways shall be surfaced with a hard, finished surface - asphalt, concrete, porous asphalt or concrete, interlocking pavers, paving stones, or comparable material - that will provide good protection against potholes, erosion, and dust, and will not be subject to damage from snow plowing. However, developments that generate little parking and traffic, developments in rural or outlying areas, and low usage overflow parking areas may be finished with gravel, crushed stone and comparable materials. This exception does not apply to nonresidential uses which will generate significant traffic, multi-unit dwellings, fraternities, sororities, and rooming and boarding houses, for which a hard, finished surface shall be used.
- 10.6.2 All parking areas and travel ways that are paved with asphalt shall have a structural section with these minimum specifications, except where otherwise approved by the Planning Board with a recommendation from the Department of Public Works.
  - 1 inch top “wearing” course,
  - 2 inch base “binder” course,
  - 6 inch bank run gravel, and
  - 6 inch crushed gravel.
- 10.6.3 Loam or yielding material shall be removed to a depth of at least 21 inches below final grade and replaced with gravel. Muck shall be removed to a depth of at least 36 inches below finish grade and replaced with gravel. Given that these are



privately maintained areas, the Planning Board may adjust these standards appropriately on an individual basis.

## Section 10.7 Curbing

- 10.7.1 Curbing or other means of articulation may be required within the site to facilitate traffic circulation, direct drainage, and protect landscaping.
- 10.7.2 Curbing, including sloped curbing, shall have a 6-inch vertical reveal. Sloped curbing shall be set at a 45 degree angle unless otherwise approved by the Planning Board.
- 10.7.3 Where concrete curbing is used, it may be either cast in place or precast. It shall:
- have a minimum strength of 2,500 psi;
  - be at least 18 inches in depth; and
  - be at least 5 inches in width.
- 10.7.4 Where asphalt (bituminous) curbing is used, a tack coat of bituminous material shall be placed on the pavement for the width of the curb before placing the curb.
- 10.7.5 Where curbing forms the edge of a sidewalk, the curb shall be vertical.
- 10.7.6 Any curbing placed within or along the street right of way shall be vertical or sloped granite curbing, as specified by the Planning Board. Placement of curbing within the street right of way may be appropriate in order to articulate turning radii at the entrance, direct stormwater, protect sidewalks, reinforce road structure, continue existing curbing, or perform other functions.

## Section 10.8 Surface materials

- 10.8.1 Use of permeable (or “pervious” or “porous”) paved surfaces is encouraged for parking areas and travel ways.

*[a list of most applicable areas was removed per Jamie Houle]*

- 10.8.2 Whenever possible the applicant is encouraged to utilize alternate paving methods for parking lots, such as, but not limited to, permeable pavement, permeable concrete or grass pavers to reduce the environmental impact and drainage impacts.
- 10.8.3 When permeable pavement is used, the applicant shall: a) submit a maintenance plan; and b) erect a prominent sign in the parking lot/travel way pointing out that the pavement is permeable, salt, sand, and seal coating must not be applied, and the parking lot must be vacuumed at appropriate intervals. (For placement and design criteria, see the New Hampshire Stormwater Manual Volume 2 -

<http://des.nh.gov/organization/divisions/water/stormwater/manual.htm> and the UNH Stormwater Center - [http://www.unh.edu/unhsc/.](http://www.unh.edu/unhsc/))

## Section 10.9 Loading

- 10.9.1 All nonresidential and large residential multi-unit sites shall be provided with off-street loading facilities sufficient to meet the needs of the proposed use.
- 10.9.2 Loading areas shall be located and designed to allow shipping and delivery vehicles to maneuver safely and efficiently to and from a public street, without unduly interfering with vehicular movement either on-site or on a public street.
- 10.9.3 Loading areas shall be located on the side or rear of the building and shall be screened from abutting residences. No loading space shall be located within 50 feet of a residential district boundary nor the lot line of an abutting residential use within a residential district.
- 10.9.4 A typical loading bay contains a rectangular area of at least 50 feet in length and 12 feet in width with a minimum height clearance of 14 feet above grade. Loading bays may be larger or smaller depending upon the needs of the proposed use.
- 10.9.5 All loading spaces shall be appropriately graded and surfaced. Use of a concrete pad for heavy-duty vehicles is encouraged.
- 10.9.6 While it is not preferred, designated parking spaces may also serve as loading spaces, when deemed workable by the Planning Board.

## **Article 11 Pedestrian, Bicycle, and Transit Facility Standards**

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- Section 11.1 General Provisions
- Section 11.2 Sidewalks/Pedestrian Paths
- Section 11.3 Bicycles
- Section 11.4 Transit

### Section 11.1 General Provisions

- 11.1.1 The site plan shall provide for a system of pedestrian or bicycle paths, or a combination of both, as appropriate to the type and scale of development. This system shall connect the major building entrances and exits, parking areas and any existing or proposed sidewalks within or adjacent to the project.
- 11.1.2 Any paths shall be located within the lot lines of the site, unless it is determined by the Planning Board that it would be more appropriate to locate these in the public right of way.

- 11.1.3 The system shall be designed to link the project with residential, recreational, commercial facilities, schools, bus stops and existing bicycle or pedestrian facilities in the area. The Planning Board may stipulate off-site improvements to accomplish this objective, as appropriate, with the design of such improvements to be approved by the Planning board.
- 11.1.4 The system shall be designed to minimize conflicts among pedestrians, cyclists and drivers.
- 11.1.5 Use of permeable materials for sidewalks/pedestrian paths is encouraged, and may be required by the Planning Board, where conditions are conducive to use of permeable materials. Use of permeable pavement requires deeper excavation and thus can impact nearby tree roots. The Tree Warden or a professional arborist shall be consulted.

*[per Bubar/Mower]*

## Section 11.2 Sidewalks/Pedestrian Paths

- 11.2.1 Sidewalks/pedestrian paths longer than 500 feet, or shorter if determined appropriate by the Planning Board, shall provide areas for standing and sitting and may include amenities such as benches, tables, shade trees or grassy areas.
- 11.2.2 Sidewalk/pedestrian paths shall connect destinations efficiently and shall not require pedestrians to travel out of their way unnecessarily.
- 11.2.3 Sidewalks shall be ADA compliant. See ADA-accessibility requirements under Article 1- - Parking and Circulation Standards.

*[added]*

- 11.2.4 Sidewalks/pedestrian paths shall be clearly distinguished from vehicular and bicycle traffic areas through the use of paving materials, landscaping buffers, or other means.
- 11.2.5 Sites, particularly through parking lots, shall be designed to provide safe and convenient pedestrian access, including, as appropriate, sidewalks and footpaths, crosswalks, and pedestrian-oriented lighting.
- 11.2.6 Pedestrian circulation should be separated from vehicle circulation to the extent practicable or accommodated with appropriate shared use facilities that safely accommodate the most vulnerable user.

11.2.7 A protective railing shall be installed alongside any sidewalk/pedestrian path that is adjacent to and above a slope steeper than 1:3.

*["and above" added]*

11.2.8 Where there is a public sidewalk within the road right of way, a sidewalk shall be built on site to connect the entrance to the building to the public sidewalk.

11.2.9 In large parking lots with multiple aisles driving aisles shall be oriented perpendicular to the building in order to reduce the number of traffic aisles that a pedestrian must cross to reach the building.

11.2.10 All sidewalks/pedestrian paths shall be a minimum of 5 feet in width.

11.2.11 Where it is expected that there will be high vehicular and high pedestrian traffic, such as in large parking lots serving shopping centers, the Planning Board may stipulate the use of pedestrian refuge areas and traffic calming techniques - such as speed tables – when appropriate.

11.2.12 Stop signs shall be provided where vehicular travel ways intersect with sidewalks/pedestrian paths.

11.2.13 Sidewalks/pedestrian paths may be required to link multiple buildings on the same site and separate, adjoining sites if there is a reasonable expectation that pedestrians would travel between those sites.

11.2.14 Sidewalks/pedestrian paths shall be protected from parking and driving areas by curbing or other suitable methods.

11.2.15 The Planning Board may stipulate that a public sidewalk be constructed within the public right of way in front of the subject property, and it may stipulate that the sidewalk link with an existing or planned neighboring sidewalk.

11.2.16 Pedestrian crosswalks shall be distinguished by the use of durable, low maintenance surface materials such as pavers, bricks, stamped asphalt, or scored concrete to enhance pedestrian safety.

11.2.17 Landscaping and other elements designed to enhance the safety and comfort of pedestrian travel ways shall be incorporated as appropriate.

11.2.18 Except where deemed not practicable, a planting strip, measuring at least five feet in width, shall be installed between the sidewalk/pedestrian path and any paved area.

11.2.19 Construction Standards for sidewalks.

- (a) Sidewalks shall be constructed of either concrete or asphalt and have the following cross sections. These standards are established for public sidewalks and thus the Planning Board may adjust these specifications, as appropriate, for sidewalks situated in private developments, including those for which permeable pavement is proposed. These standards do not apply to pedestrian paths, such as those made of stone dust, gravel, or compacted dirt, that might be constructed outside of the primary development area. (See Parking and On-Site Circulation Section about standards for curbing.)
- (b) Concrete Sidewalks
  - 4 inches of concrete
  - #8 x #8, 6 inch x 6 inch mesh
  - 2 inches of crushed gravel
  - 4 inches of bank run gravel
- (c) Concrete Sidewalks crossing travel ways
  - 6 inches of concrete
  - #8 x #8, 6 inch x 6 inch mesh
  - 4 inches of crushed gravel
  - 8 inches of bank run gravel
- (d) Asphalt Sidewalks
  - 1 inch finish
  - 1.5 inch binder
  - 3 inches of crushed gravel
  - 6 inches of bank run gravel
- (e) Asphalt Sidewalks crossing travel ways
  - 1 inch finish
  - 2 inch binder
  - 4 inches of crushed gravel
  - 12 inches of bank run gravel

Section 11.3 Bicycles

11.3.1 General

1. If determined appropriate by the Planning Board, bicycle facilities (including routes and racks) may be combined with pedestrian facilities when designed according to shared path standards of AASHTO.

2. Bicycle facilities shall be designed in accordance with AASHTO, “Guide for the Development of Bicycle Facilities,” as amended.

### 11.3.2 Bicycle Routes

Bicycle routes may be required by the Planning Board in the form of separate off-street paths or on-street marked bicycle lanes, particularly where an existing network or paths or lanes will be extended.

### 11.3.3 Bicycle Storage. Bicycle storage shall be provided as follows:

- a) Bicycle racks shall be provided for all development that provides 5 or more parking spaces or where 5 or more parking spaces would be required (and is otherwise exempted or waived).
- b) All bicycle racks shall be located in a convenient and secure location.
- c) If bicycle racks are placed near trees, trees shall be protected with tree guards to prevent the securing of bicycles to trees.
- d) All bicycle racks shall be designed to allow the bicycle frame and at least one wheel to be locked to the rack with a high-security, U-shaped shackle lock if both wheels are left on the bicycle. “Wave” style racks shall not be used.

*[rephrased per Bubar/Mower.]*

- e) All bicycle racks shall be securely anchored to a durable, hard-paved (preferably concrete) permanent surface.
- f) For residential multi-unit developments which will accommodate more than 20 residents, a covered area shall be provided to protect bicycles stored overnight from the weather.
- g) For projects located in Central Business, Church Hill, Courthouse, and Professional Office zoning districts, the applicant shall provide a total number of bicycle storage spaces equal to or exceeding 1/3 the number of parking spaces that would be required for the project or 1/3 the number of residents who will occupy the project, whichever is greater. For projects not located in one of these zoning districts, the applicant shall provide a total number of bicycle storage spaces equal to or exceeding 1/5 the number of parking spaces that would be required for the project or

1/5 the number of residents who will occupy the project, whichever is greater.

When covered parking is required, at least 1/3 the total number of required parking spaces shall be outdoor covered spaces and/or indoor space.

The Planning Board may adjust any of the amounts in this section upward or downward, as appropriate, based upon such factors as the site location, site characteristics and layout, the type of users and residents, the amount of vehicle parking provided, and other pertinent factors.

*[\*The number of spaces was not addressed on April 8. I rewrote this section g) for the board's consideration.]*

#### Section 11.4 Transit

11.4.1 The applicant may be required to provide bus shelters, including pedestrian access to the shelters, bus turnouts, and other transit-related facilities for developments where transit services are expected to be provided.

11.4.2 Where appropriate for large scale developments, especially those located outside of the downtown area, the Planning Board may require applicants to arrange for adequate transit service for the development, including providing service at adequate times. In such cases, the applicant may need to coordinate/contract with the University of New Hampshire to provide the service.

## **Article 12. Personal Wireless Service Facilities Standards**

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### Section 12.1 Submittal Requirements Related to Design

12.1.1 Brochures. Equipment brochures for the proposed personal wireless service facility such as manufacturer's specifications or trade journal reprints shall be provided for the antennas, mounts, equipment shelters, cables as well as cable runs, and security barrier, if any.

12.1.2 Materials. Materials of the proposed personal wireless service facility specified by generic type and specific treatment (e.g., anodized aluminum, stained wood, painted fiberglass, etc.). These shall be provided for the antennas, mounts, equipment shelters, cables as well as cable runs, and security barrier, if any.

- 12.1.3 Colors. Colors of the proposed personal wireless service facility represented by a color board showing actual colors proposed. Colors shall be provided for the antennas, mounts, equipment shelters, cables as well as cable runs, and security barrier, if any.
- 12.1.4 Dimensions. Dimensions of the personal wireless service facility specified for all three directions: height, width and breadth. These shall be provided for the antennas, mounts, equipment shelters and security barrier, if any.
- 12.1.5 Photographs. Appearance shown by at least two (2) photographic superimpositions of the personal wireless service facility within the subject property. The photographic superimpositions shall be provided for the antennas, mounts, equipment shelters, cables as well as cable runs, and security barrier, if any, and for the total height, width and breadth.
- 12.1.6 Lighting. If lighting of the site is proposed, the applicant shall submit a manufacturers computer-generated point-to-point printout, indicating the horizontal footcandle levels at grade, within the property to be developed and twenty-five (25) feet beyond the property lines. The printout shall indicate the locations and types of luminaires proposed.
- 12.1.7 Co-location. Carriers shall share personal wireless service facilities and sites where feasible and appropriate, thereby reducing the number of personal wireless service facilities that are stand-alone facilities.
- a) All applicants for site plan review for a personal wireless service facility shall demonstrate a good faith effort to co-locate with other carriers. Such good faith effort includes contact with all the other carriers for personal wireless services operating in the Town of Durham or in adjoining or nearby jurisdictions.
  - b) If the applicant intends to co-locate or to permit co-location, drawings and studies that show the appearance and operation of the personal wireless service facility with maximum co-location shall be provided.
  - c) If the Planning Board approves co-location for a personal wireless service facility site, the site plan shall indicate how many facilities and of what type shall be permitted on that site. Facilities specified in the site plan approval shall require no further zoning approval, but shall require a Building Permit. However, the addition of any facilities not specified in the approved site plan shall require a new site plan.



## Section 12.2 Noise Standards

The applicant shall provide a statement listing the existing and maximum future projected measurements of noise from the proposed personal wireless service facilities, measured in decibels Ldn (logarithmic scale, accounting for greater sensitivity at night). Such statement shall be certified and signed by an acoustical engineer, stating that noise measurements are accurate and meet the Noise Ordinance of the Town of Durham and such statements shall include the following:

1. Existing, or ambient: the measurements of existing noise.
2. Existing plus the proposed personal wireless service facilities: maximum estimate of noise from the proposed personal wireless service facility plus the existing noise environment.
3. Existing plus the proposed personal wireless service facilities plus cumulative: maximum estimate of noise from the proposed personal wireless service facility plus the maximum estimate of noise from the total addition of co-located personal wireless service facilities plus the existing noise environment.

## Section 12.3 Radio Frequency Radiation (RFR)

The applicant shall provide a signed and stamped certificate by an RF Engineer stating that the maximum radio frequency radiation of the personal wireless service facility and the cumulative RFR of any existing personal wireless service facilities at the site will not exceed the FCC Guidelines. The FCC Guidelines shall be incorporated as part of this certification.

## Section 12.4 Environmental Filing Requirements

- 12.4.1 The National Environmental Policy Act (NEPA) applies to all applications for personal wireless service facilities. NEPA is administered by the FCC via procedures adopted as Subpart 1, Section 1.1301 et seq. (47 CFR Ch. I). The FCC requires that an environmental assessment (EA) be filed with the FCC prior to beginning operations for any personal wireless service facility proposed in or involving any of the following:

- a) Wilderness area
- b) Wildlife preserve
- c) Threatened or endangered species
- d) Historical site
- e) Native American religious site
- f) Floodplain
- g) Wetland
- h) High-intensity white lights in residential neighborhoods
- i) Excessive radio frequency radiation exposure

12.4.2 At the time of application filing, an EA that meets FCC requirements shall be submitted to the Town for each personal wireless service facility site that requires such an EA to be submitted to the FCC. In addition, a letter of concurrence substantiating the finding of the applicant for each of the NEPA checklist items shall be provided with the site plan application.

12.4.3 The applicant shall list the location, type, and amount (including trace elements) of any materials proposed for use within the personal wireless service facility that are considered hazardous by the federal, state, or county government, or by the Town of Durham.

#### Section 12.5 Structural Report for All Ground-Mounted Personal Wireless Service Facilities

The applicant shall provide a report prepared by a licensed professional civil engineer describing the facility and specifying the maximum number and types of antennas the facility is designed to accommodate. The report shall bear the seal of the engineer that prepared the report.

#### Section 12.6 Visibility Standards for Ground-Mounted Personal Wireless Service Facilities, Excluding Reconstruction of Existing Facilities

12.6.1 Sight Lines. Lines representing the sight line showing the viewpoint (point from which view is taken) and visible point (point being viewed) as described below:

- a) Sight line representation. A sight line representation shall be drawn from any public road within three hundred (300) feet and the closest facade of each residential building (viewpoint) within three hundred (300) feet to the highest point (visible point) of the personal wireless service facility. The three hundred (300) foot measure shall be measured from the subject property boundary. Each sight line shall be depicted in profile, drawn at one inch equals forty (40) feet. The profiles shall show all intervening trees and buildings. In the event there is only one (or more) residential building within three hundred (300) feet, there shall be at least two sight lines from the closest habitable structures or public roads, if any.
- b) Existing (before condition) photographs. Each sight line shall be illustrated by one (1) four-inch by six-inch or larger color photograph of what can currently be seen from any public road or residential building identified above.
- c) Proposed (after condition). Each of the existing condition photographs shall have the proposed personal wireless service facility superimposed on it to show what will be seen from public roads and residences if the proposed personal wireless service facility is built.

12.6.2 Elevations. Siting elevations, or views at-grade from the north, south, east and west for a fifty (50) foot radius around the proposed personal wireless service 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:

- a) Antennas, mounts and equipment shelter(s), with total elevation dimensions and AGL of the highest point.
  - b) Security barrier. If the security barrier will block views of the personal wireless service facility, the barrier drawing shall be cut away to show the view behind the barrier.
  - c) Any and all structures on the subject property.
  - d) Existing trees and shrubs at current height and proposed trees and shrubs at proposed height at time of installation, with approximate elevations dimensioned.
- 3) Grade changes, or cuts and fills, to be shown as original grade and new grade line, with two-foot contours above mean sea level.

12.6.3 Balloon Test. Within fourteen (14) days of the acceptance of the site plan application by the Planning Board, the applicant shall arrange for a balloon or crane test at the proposed site to illustrate the height of the proposed facility. The date, time and location of such test shall be advertised in a newspaper of general circulation in the Town at least ten (10) days prior to the test.

## 12.7 Site Plan Review

In accordance with RSA 674:43 V., site plan review shall not be required for a collocation or a modification of a personal wireless service facility, as defined in RSA 12-K:2.