

- 1. Nitrates EPA 353.3
- 2. Chlorides SW846 9252
- 3. Total Kjeldahl Nitrogen EPA 351.3
- 4. TOC

- D. REPORTING. Unless otherwise required by the Planning Board as a condition of site plan approval, a baseline groundwater monitoring report shall be submitted to the Zoning Administrator prior to the issuance of a Certificate of Occupancy. The report shall contain well specifications and installation data, boring logs, laboratory analytical reports, and the plan showing the location and identification of each well or sampling point. Copies of all annual water quality analysis reports will be submitted to the Town of Amherst Zoning Administrator by October 31 of each year.
- E. SAMPLING FREQUENCY. Groundwater monitoring and surface water monitoring, including retention and detention ponds, swales, and other run off areas, shall be conducted annually. If after the first year of analysis, the groundwater sampling results show no degradation of groundwater quality in relation to the baseline results, the monitoring program may be modified to reduce sampling frequency after approval of the Planning Board. (4-5-97, 5-7-97)

ARTICLE V -- LANDSCAPING STANDARDS

Section 5.1 General.

The purpose of these standards is to protect, enhance and promote and economic, ecological and aesthetically pleasing landscaping by breaking up visual expanse and connected impervious areas, delineating areas of vehicular and pedestrian traffic to improve safety, and to enhance the gateways to Amherst. In addition, soil and landscaping play an important role in stormwater quality and quantity. These standards are intended to increase absorption and cleansing of rainfall and runoff so that the quantity and quality are more reflective of the natural hydrology where vegetation will thrive with minimal need for additional water, pesticides and fertilizers.

A landscape plan shall be prepared in sufficient detail to indicate compliance with these regulations. The Plan shall be prepared by a Professional Landscape Architect who is licensed by the State of New Hampshire. The Landscape Architect shall sign and appropriately endorse the Plan as a requirement for a complete Site Plan application. The Planning Board may waive the requirements of this section where the overall cost of site improvements and building are less than five hundred thousand (500,000) dollars.

The landscape plan shall identify existing and proposed trees, shrubs, ground cover, walls and fences. Existing native vegetation shall be preserved and site disturbance shall be minimized wherever possible. The applicant shall use native plants, shrubs and trees wherever possible. Invasive species are prohibited (See NH Department of Agriculture Prohibited Invasive Plant Species Rule, as amended). Plant species selected should be hardy for the particular area in which they will be located. The size, number and type of plants shall be identified on the landscape plan.

Where an applicant proposes leaving a significant portion of health non-invasive species and other mature vegetation within the proposed construction area, the Board may consider alternative landscaping design. Removal of existing invasive species on the property is strongly encouraged.

Section 5.2 Site Features and Layout.

Landscaping should be designed to encourage biodiversity, remain functional and attractive during all seasons of the year through a thoughtful selection of deciduous, evergreen, flowering and non-flowering plant varieties.

Prominent natural or man-made features of the landscape such as mature trees, surface waters, natural rock outcrops or roadways should be retained and incorporated in to the landscape plan where possible. Stone walls must be retained in accordance with RSA 472:6 and biodiversity of species is encouraged. The addition of ornamental rocks, fencing and other features new to the landscape are encouraged.

Existing natural vegetation should be retained where possible. Existing trees and shrubs to be preserved may be substituted for any compatible required plantings. Maximum effort should be made to preserve small stands of trees rather than individual trees to minimize the potential for serious damage due to wind, grade changes or soil compaction. No construction materials, equipment, vehicles or temporary soil deposits shall be located within the drip line of existing trees to be preserved. Protective barriers shall be installed around each plant and/or groups of plants that are to remain on site. Snow fence installed around the drip line of the tree canopy is an example of an acceptable barrier.

Natural re-growth, mulched planting beds and alternative ground cover plant varieties are preferred to large expanses of lawns. Lawn areas should not be planted in strips of less than six (6') feet in width, especially adjacent to roads or parking areas, since such areas require watering but have little utility and are less likely to thrive.

Native, hybrid and naturalized non-invasive species are encouraged and should be used to meet the minimum requirements of this Section. Plant varieties selected should be hardy, drought and salt resistant (as necessary) and require minimal maintenance. Less hardy, exotic or higher maintenance plant varieties may be used to supplement minimum landscaping requirements where appropriate, but are not encouraged. Species listed on the current Invasive Species list for New Hampshire and Massachusetts are prohibited.

To promote on-site water retention and filtration, landscaped areas shall be designed in a manner that guides stormwater from on-site roof areas, impervious roads, parking areas, sidewalks and walkways to vegetated areas or approved retention areas.

Curbing or equivalent barriers shall be required to protect vegetation from vehicular damage. Barriers shall be designed with openings that allow stormwater to flow into vegetated areas. All curbing in the Town right-of-way shall be granite.

When irrigation systems are proposed, a temporary watering plan/schedule or low volume (drip irrigation) system shall be required. Irrigation systems shall be designed and installed for efficient and

effective water use to the landscaped area. Permanent irrigation shall utilize water saving technologies, including rain sensors, flowmeters and management systems that monitor current weather conditions.

Section 5.3 Soil Preparation.

For all newly landscaped areas a minimum of six (6") inches of topsoil, preferably with organic matter incorporated shall be spread in all planting and turf areas.

Section 5.4 Mulching.

Mulching trees, shrubs and plants helps retain soil moisture, moderates temperature fluctuations, provides protection from mechanical damage by mowers and trimmers and serves as temporary covering of exposed soil until understory plants and ground covers fill in. Excessively thick mulch applications should be avoided. Mulch against tree trunks fosters poor plant health and should be avoided. Mulches for stormwater management areas should be heavier and not a type that will float away. Man-made materials such as recycled tires are not acceptable for mulch materials.

Section 5.5 Landscape Buffers.

Landscape plans shall be designed to provide buffers in an effort to mitigate impacts to neighboring properties. Buffers are intended to physically separate one use or property from another so as to visually shield or block, noise, lights, provide a water quality benefit and to minimize other impacts.

- A. Along the periphery of a property, buffers are required in the following instances:
 - 1. Where a proposed non-residential use abuts a residential zoning district.
 - 2. Where a proposed non-residential use abuts an existing residential use.
 - 3. Where a proposed roadway abuts an existing property line or is within twenty (20') feet of a property line where the existing use is residential.
- B. On the periphery of a property:
 - 1. A landscaped buffer shall be at least ten (10') feet in width and six (6') feet in height to effectively screen from adjacent properties and may consist of evergreens, berms, mounds, fencing or combinations thereof in conjunction with complimenting shrubs and perennials. Chain link fence with privacy slats is discouraged.
 - 2. Where appropriate existing trees and vegetation shall be incorporated into landscape buffers.
- C. Within a property, buffers are required to provide visual screens in the following instances:
 - 1. Outdoor storage areas

2. Utility installations
3. Loading areas
4. Refuse and recycling collection areas

D. Within a property:

1. Buffers shall be located to prevent visibility of the above listed items from the parking areas, traveled right-of-way or neighboring properties.
2. Buffers shall be at least six (6') feet in height and may consist of fencing, evergreens, berms, mounds or combinations thereof. Chain link fence with privacy slats is discouraged.
3. All outdoor refuse and recycling facilities shall be located on a raised six (6") inch concrete pad.

Section 5.6 Landscaping Along Building Frontages.

Landscaping shall be provided along all building frontage. A minimum of one (1) shrub for every five (5') feet of building frontage shall be provided. In instances where it is not possible to locate all required shrubs along the building frontage due to doorways, walkways or other impervious surfaces, the required shrubs shall be utilized within the parking lot or landscape buffers. Plant locations are designed to be flexible and not necessarily in even spaced intervals.

Section 5.7 Landscaping Parking Lots and Access Ways.

All parking lot landscaping shall promote the safe flow of vehicular and pedestrian traffic within and out of the site.

- A. Peripheral landscaping shall be required along all sides of a parking lot or access way that abuts adjoining property or a public right-of-way as follows:
 1. A landscaped strip at least ten feet (10') in width shall be located between the paved area and the abutting property lines or public right-of-way except where driveways or other openings may be required; and
 2. At least one (1) tree for each thirty feet (30') of landscaped strip shall be provided. These trees shall be complemented by suitable ground cover and shrubs.
- B. Landscaping within parking lots or green space encompassing not less than five (5%) percent of the total parking area shall be required. A minimum of one (1) tree for every fifteen (15) parking spaces shall be provided. These trees shall be complemented by suitable ground cover and shrubs.
- C. Parking lots with more than fifty (50) parking spaces shall have curbed planting areas. Planting areas shall be placed within or at each end of a parking row. No parking row shall contain more than thirty (30) contiguous parking spaces without a curbed planting area.

1. Curbs around parking lot plantings shall have a shallow descending cut that is a minimum of five (5') feet wide to allow drainage to flow from the parking lot into the curbed planting areas for infiltration.
 2. Such planting areas shall be underlain by a suitable layer of crushed stone or other water holding reservoir, with an overlay of filter fabric to minimize clogging by superfine soils.
- D. Within the interior of the parking lot, landscaping should be used to delineate vehicular and pedestrian circulation patterns. Clear and legible signs, different color and texture paving materials, raised areas, and other techniques should be used to further direct the flow of both vehicular and pedestrian traffic within the site.
- E. A minimum four (4) foot wide landscape area shall be provided surrounding each free-standing sign base and should be designed to screen the foundation of the sign without blocking the view of the signage information.
- F. Bare soil is not acceptable. The introduction of groundcovers and/or perennials planted *en masse* and the use of mulch or other natural material as a soil covering is acceptable. However, no more than twenty (20) percent of the minimum landscaped area may be covered with non-living landscaping materials such as bark mulch, woodchips or leaf litter.
- G. Use of Existing Landscaping Towards Requirements:
1. Each existing healthy and native or non-invasive tree, with a caliper of three (3) inches or greater, preserved using proper protection methods within the interior parking lot area may be substituted for one tree required for every fifteen (15) parking spaces.
 2. Where an applicant proposes leaving a significant portion of healthy non-invasive trees and other vegetation within the proposed parking area, the Board may consider alternative landscaping designs.

Section 5.8 Planting Specifications.

All trees, shrubs and ground cover shall be planted according to accepted horticultural standards.

A. Trees and Shrubs

1. Minimum for shade or canopy trees shall be three (3") inches in diameter measured at breast height, with a height not less than twelve (12') feet.
2. Minimum size for small or minor shade trees shall be two and a half (2.5") inches in diameter measured breast height, with a height of not less than nine (9') feet.
3. Minimum size for ornamental or flowering fruit trees shall be two (2") inches in diameter measured at breast height, with a height of not less than seven (7') feet.

4. Minimum size for evergreen trees shall be six (6') feet in height.
5. Minimum size for a shrubbery shall be one and a half (1.5') feet in height or spread.

B. Planting Specifications

1. All trees, shrubs and plantings shall be planted according to accepted horticultural standards.
2. All trees and shrubs shall be appropriately pruned after planting with all broken or damaged branches removed.

C. Retention of Existing Vegetation

1. The boundary of areas to be cleared will be well defined on-site with tree markings, construction fencing, snow fencing or silt fencing as appropriate to avoid unnecessary cutting or removal. Care should be taken to protect root systems from damage due to excavation or compaction. Individual trees, rock formations and other landscape features to be retained should also be clearly marked and bounded on-site.

Section 5.9 Landscaping Standards – Subdivisions – New Roads.

Where cul-de-sacs are permitted, the island or center area of the cul-de-sac shall remain in a natural vegetated state, with any invasive species removed. If it will be used as a biofilter for stormwater treatment, the area shall be vegetated with a combination of living plant material including trees, shrubs and groundcovers. Non-living landscape materials may cover up to twenty (20%) percent of the island or center area. When planting of vegetation is required, cul-de-sac landscaping shall be installed after construction of the road is complete.

Section 5.10 Maintenance of Landscaping.

Low maintenance, drought, insect and disease resistant plant varieties are encouraged so that buffer areas and other required landscaping can be maintained with minimal care and the need for watering, pesticide or fertilizer use is minimized. For these reasons, native, hybrid and naturalized non-invasive species are preferred since such plant species are well adapted to the local environment.

To avoid maintenance problems and excessive watering, organic matter such as compost or peat should be added to the soil before planting as appropriate to increase the water holding capacity of the soil and to provide nutrients.

The owner and their representative shall be responsible for providing, protecting and maintaining all landscaping in healthy and growing condition, and replacing it when necessary to insure continuous conformance with these guidelines. Any landscape element that dies, or is otherwise removed, shall be promptly replaced with the same, if not similar to, height or texture element as originally intended. In addition, landscaped areas shall be kept free of all debris, rubbish, weeds and tall grass. Tall grass is acceptable when incorporated as a design element in an approved landscape plan.

If the ownership of a site is conveyed to a new property owner, the new owner shall be responsible for maintaining all landscaping in accordance with the approved final landscaping plan.

Section 5.11 Enforcement.

An inspection of all plantings to ensure compliance with the approved landscaping plan shall be conducted prior to the issuance of a Certificate of Occupancy.

Ongoing inspections of landscapes shall be conducted to ensure compliance of the site with the approved landscape plan in perpetuity.

Section 5.12 Landscaping Time Frame.

All landscaping should be completed prior to the issuance of a Certificate of Occupancy. If the landscaping cannot be completed prior to issuance of a Certificate of Occupancy, the owner shall be required to submit a security to the Community Development office to cover the complete cost of all planting, materials and labor required to complete the landscaping plan as depicted on the approved plan. A detail sheet itemizing the breakdown of costs shall accompany all bonds.

All landscaping shall be complete within one year of issuance of a Certificate of Occupancy.

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ARTICLE VI -- PARKING

Section 6.1 Parking Areas.

A. PARKING AREAS.

1. Planting islands should be used to define vehicular and pedestrian circulation patterns and to break up large expanses of pavement. In general, islands should be distributed throughout the parking lot. A combination of end cap islands and linear islands running parallel to parking rows are preferred. Islands should include trees and be planted with either grass or evergreen shrubs.
2. There shall be landscaped open space within the parameter of the parking areas in the minimum amount of five (5) percent of the gross parking area.
3. Break parking areas into sections not to exceed one hundred forty (140) cars; separate sections by landscaped buffers with combination of divider and terminal islands.
4. Provide minimum area of two hundred (200) sf per landscaped island and at least one (1) tree per island; trees must be minimum four (4) feet from curbing.