

City of Biddeford Sustainability Commission

May 5, 2025 at 5:30 PM

City Hall Second Floor Conference Room & Zoom

[Join Zoom Meeting Online](#)

Or call in by phone: +1 312 626 6799

Meeting ID: 924 8108 7736

Passcode:

1. Approval of Meeting Minutes
 - 1.a Approval of Meeting Minutes from April 28, 2025
2. Old Business
 - 2.a Follow up on presentation by York County Emergency Management
 - 2.b Landscaping ordinance-Max
3. New Business
4. Updates
 - 4.a Bide Ped Plan-
 - i. Bicycle Coalition of Maine
 - ii. Maine DOT
 - 4.b BSCAT
 - 4.c Beach Management Plan-Jeff
5. Adjourn

April 28, 2025 Sustainability commission meeting

Joie, Wendy, Will, Patrick, Jeff, Bev, Brad

Audience: David Plavin, Kevin Roche, Ken, Kathy

April 7 meeting minute approval

Wendy motion to approve

Joie second

Unanimous approval

Presentation from Art Cleaves and Chris McCall

York County EMA – resilience, disaster recovery, FMEA

Preparedness, response, recovery, mitigation

Resilience after January 2024 storms

York County Coastal Sand Dune Restoration and Protection Initiative

Roby Fecteau is Biddeford emergency management contact

Why York EMA got involved with dunes and beaches: January 2024 wiped out dunes, when the public assistance declaration was made, YCEMA got involved. This storm was different – the first time towns/cities wanted to get money to restore the sand/beach.

Every coastal town in York County saw coastal damage

Category B vs Category G –

B – emergency protective measures, 5-year storm

G – long-term 100-year storm

Both require extensive engineering work – need to show documentation and engineering schematics

We need to develop plans to engineer our beaches so that our communities become category G eligible for damage from future storms

We can currently get 90% cost-share on category B, need to work towards the same for G

Flood Mitigation Assistance - \$544,415 for Biddeford for Category G design

CDA – including money for Biddeford (\$3 million)

\$75k would get us about 30% design

If we have Cat G beach – we need to maintain it every year and monitor it

UNE monitoring could help with this – but we need proper records to maintain these systems and be eligible for future reimbursement

SMPDC data show that beaches support 27,000 jobs and \$1.6B in tourism spending

Somewhere between 1:6 and 1:13 dollars spent in mitigation to money saved in the future

Focus on nature-based solutions that support wildlife

What YCEMA needs from us:

- Letters of support for grant applications

- Talk with state legislators – demonstrate value of mitigation efforts

Currently signed the MOU – Ogunquit, OOB, Saco, Wells

What is holding up MOU in Biddeford – City Manager needs to be resolved, council support purchase 5-4, but still not signed MOU

Senator Collins is leading the big CDM

Smaller amount to Congresswoman Pingree's office

Comprehensive beach management plan to highlight maintenance and monitoring costs to make it happen in Biddeford – dune grass planting, monitoring, dune maintenance – height

County and engineering firm is working on the Beach Management Plan

FEMA will pay for restoration on private property because it protects infrastructure if there is public access to the area that is being restored

Could we create a website on the City's website explaining the beach process around Cat G and B?

Can we get documentation from Art on FEMA help for private land and infrastructure?

Summit for coastal residents? Bring YC EMA and property owners together

Patrick – motion to approve minutes from March 24 with two spelling corrections

Joie seconds

Unanimous approval

We are doing the Earth Day celebration this weekend, might need to delay again with rain forecasted

Patrick – could we do a temporary bike lane out to Rotary Park for an event – pollinator festival for example?

Joie motion to adjourn

Patrick second to adjourn

ARTICLE 5. BATH COMMUNITY FORESTRY ORDINANCE (Ord. 6/24/09)

Section 6-101 Purpose

The purpose of this ordinance is to promote and protect the public health, safety and general welfare by providing for the regulation of the planting, protection, maintenance, and removal of trees, shrubs, and other plants on property of the City of Bath, including city-owned rights-of-way.

Section 6-102 Administration and Enforcement

It shall be the duty of the Director of Cemeteries, Parks and Recreation and/or his designee to enforce and administer the provisions of this ordinance. Any person may appeal, in writing, any ruling or order issued by the Director of Cemeteries, Parks and Recreation and/or his designee by filing a notice of appeal with the City Manager within seven (7) days of date of the ruling or order.

Section 6-103 Bath Community Forestry Committee

A. Establishment: There is hereby established a Bath Community Forestry Committee.

B. Duties: The Committee shall have the duty and responsibility to oversee the administration and implementation of this ordinance, the purposes and activities of the Bath Community Forestry Trust, the Bath Community Forestry Management Plan and such other activities as affect the Bath community forest.

C. Ex Officio Members: The Director of Cemeteries, Parks and Recreation and the City Arborist serve the Committee as non-voting ex officio members.

D. Compensation: All members of the Committee shall serve without compensation.

Section 6-104 Applicability

The terms and provisions of this ordinance shall apply to all public trees located on public property, including city rights-of-way.

Section 6-105 Definitions

For purposes of this Article, the following terms shall have the meaning indicated. Terms not defined shall have their usual and customary meaning unless otherwise indicated by their use and context. Where the word "shall" is used, it is considered mandatory and not merely directory.

Abutter is one whose property touches or adjoins along a boundary or with a projecting part of the property of another.

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Forestry Division is the designated agency of the municipality of Bath under whose jurisdiction the public trees fall. This is a Division of the Cemeteries, Parks and Recreation Department.

Person is any individual, firm, partnership, association, corporation, company, organization, or legally organized entity of any kind.

Property Owner shall mean the person owning such property as shown by the City of Bath tax assessor's records, or the most recent transferee(s) as reflected in the indices or records of the Sagadahoc County Registry of Deeds.

Public Hazard is a condition of any public tree or any other non-public tree, shrub or plant or any portion of a public tree or any other non-public tree, shrub or other plant which constitutes a hazard to natural persons or property or harbors insects or disease which constitutes a potential threat to other public trees or any other non-public trees, shrubs, or plants within the City.

Public Property shall include all property owned, leased, or occupied by the City of Bath.

Public Tree shall include all trees, shrubs and other plants on public property, including City rights-of-way.

Skeletal Soils are defined as a soil matrix mixture of gap-graded gravels composed of: crushed stone narrowly graded from $\frac{3}{4}$ - 1 $\frac{1}{2}$ ", highly angular and with no fines; clay loam based on USDA soil classification system, with organic matter ranging between 2% and 5%; and a hydrogel added in a small amount to act as a tackifier, preventing the separation of the stone and soil during mixing and installation. The mixture ratio shall be 4:1.4 of stone:clay loam. The mixture shall be installed and compacted to achieve a compaction density to within 95% Proctor density.

Street or Highway is the entire width of every public way or right-of-way when all or any part thereof is open to the use of the public, as a matter of right, for the purposes of vehicular or pedestrian traffic.

Topping is the severe cutting back of limbs to stubs larger than three inches in diameter within the tree's crown to such a degree so as to remove the normal canopy and disfigure the tree.

Tree Sizes:

Large Trees are designated as those tree species that habitually attain a mature height of forty-five feet (45') or more.

Medium Trees are designated as those tree species that habitually attain a mature height of thirty (30) to forty-five feet (45').

Small Trees are designated as those tree species that habitually attain a mature height of 18 thirty feet (30') or less.

Section 6-106 Permits

A. Permit Required: Any person engaged in the business or occupation of pruning, planting, transplanting, treating, or removing public trees shall be required to secure a permit in advance of any such activity, said permit to be issued by the Director of Cemeteries, Parks and Recreation and/or his designee.

B. Permit Requirements:

(1) Each applicant shall possess and show proof of a current Maine Arborist License, and be a Certified Nurseryman, Tree Care Industry Association (TCIA) accredited, or International Society of Arboriculture (ISA) certified.

(2) Each applicant shall carry insurance furnishing benefits in accordance with the State of Maine General Laws or such other worker's compensation requirement as may pertain. The applicant shall also carry insurance coverage for employer's liability, general liability, including broad form coverage, and automobile liability, in an amount of not less than One Million Dollars (\$1,000,000.00), as well as insurance covering property damage in an amount not less than One Hundred Thousand Dollars (\$100,000.00) indemnifying the City or any person injured or damaged resulting from the pursuit of such endeavor as herein described.

(3) Any permit issued pursuant to this Section shall be revoked if the applicant's licensure identified in Section 6-106(B)(1) above is suspended or otherwise terminated, or if the applicant's required insurance coverage identified in Section 6-106(B)(2) above expires or lapses.

(4) Any permit issued shall run for a period of no longer than one (1) year from the date of issue, unless otherwise specified or terminated pursuant to Section 6-106(B)(3) above.

C. Notice Requirement: Prior to initiating any activity, the permittee shall notify the

Director of Cemeteries, Parks and Recreation and/or his designee as to the location of work on any public tree no less than forty-eight (48) hours prior to the commencement of the work.

D. Exception: Pruning, planting, removing or any other tree work done on public trees by volunteers or City employees under the supervision and operation of the Director of Cemeteries, Parks and Recreation and/or his designee, shall not require a permit under this section. Work on public trees by an electric utility company shall not require a City permit.

Section 6-107 Contract Supervision and Inspection

It shall be the duty of the Director of Cemeteries, Parks and Recreation and/or his designee to supervise and enforce all provisions of any contracts executed by or on behalf of the City concerning work within the scope of this ordinance.

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Section 6-108 Landscaping

Landscape plans and landscaping on Public Property and landscape plans and landscaping submitted for approval by the Bath Planning Board shall be reviewed by the Director of Cemeteries, Parks and Recreation and/or his designee with the assistance of the Bath Community Forestry Committee. Any landscaping plans submitted for approval by the Bath Planning Board shall include a Tree Preservation Plan reviewed and approved by the Director of Cemeteries, Parks and Recreation and/or his designee. Tree Preservation Plans submitted shall follow the City's Tree Preservation Guidelines.

Section 6-109 Specifications and Standards

American National Standards Institute (ANSI) Contract Specifications or any amendments or substitutes therefore shall be followed and enforced as a minimum standard for planting. All pruning shall meet, as a minimum standard, the Pruning Standards for Shade Trees published by the National Arborist Association or similar national organization. The Forestry Division may establish policies, procedures, or regulations which shall also be followed. Copies of these materials will be available to the general public at the Office of the Director of Cemeteries, Parks and Recreation.

Section 6-110 Tree Planting, Maintenance, and Removal

A. Authority to Plant or Remove Trees on Public Property

Trees planted on public property by abutting property owners or other persons shall be selected and located in accordance with Tree Planting, Section 6-110(B-G) of this ordinance and in accordance with Forestry Division policy. Notification shall be made to the Director of Cemeteries, Parks and Recreation and/or his designee and approval given, prior to any planting. In addition, Dig Safe, the Bath Public Works Department and the Bath Water District shall be consulted before any planting.

B. Tree Species To Be Planted On Public Property

The Recommended Tree Species List published by the Maine Urban & Community Forestry Council or its successor shall be used. This list shall be made available to the general public at the Office of the Director of Cemeteries, Parks and Recreation, and its use shall be encouraged for private planting. At the discretion of the Director of Cemeteries, Parks and Recreation and/or his designee resources identifying trees in similar hardiness zones may be relied upon.

C. Spacing and Minimum Area/Volume For Planting On Public Property

(1) Except in special plantings designed or approved by the Director of Cemeteries, Parks and Recreation and/or his designee, the spacing of City-owned trees shall be in accordance with the species sizes listed under Definitions, Section 6-105, of this ordinance, and no trees may

be planted closer together than the following:

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Species Size No less than: tree spacing

Small Trees 20 ft.

Medium Trees 30 ft

Large Trees 40 ft.

(2) Except in special plantings designed or approved by the Director of Cemeteries, Parks and Recreation and/or his designee, any tree planted must have an area of unrestricted soil surface open to air and water as follows:

Species Size No less than: area

Small Trees 36 sq. ft.

Medium Trees 48 sq. ft.

Large Trees 60 sq. ft.

(3) Except in special plantings designed or approved by the Director of Cemeteries, Parks and Recreation and/or his designee, any tree planted within a City right of way or adjacent to a sidewalk, shall have an adequate soil volume in relation to the tree's mature size as follows:

Species Size No less than: soil volume

Small Trees 36 cu. ft.

Medium Trees 48 cu. ft.

Large Trees 60 cu. ft.

These soil volumes can be achieved by using skeletal soils, as defined in 6-105, in the engineering of sidewalk design or renovation. All such designs shall be submitted to the Director of Cemeteries, Parks and Recreation and/or his designee for approval prior to any plantings.

D. Distance from Curb, Sidewalk, Street Corner, Driveway and Building on Public Property

The distance trees may be planted from curbs or curb-lines, sidewalks, street corners, driveways, buildings and sidewalks shall be in accordance with the species sizes listed in Definitions, Section 6-105, of this ordinance. No trees may be planted closer to any curb, sidewalk, driveway, building or street corner than the following:

Species Size Distance to Curb or

Sidewalk

Distance to

Driveway or

Building

Distance to

Street Corner

Small Tree 2 ft. 10 ft. 20 ft.

Medium Tree 3 ft. 10 ft. 20 ft.

Large Tree 4 ft. 10 ft. 20 ft.

E. Utilities and Hydrants

No public tree shall be planted within ten feet (10') of any hydrant or any underground utilities. Only small trees may be planted under or within 10 feet (10') of any overhead utility

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wire.

F. Public Tree Care

(1) The Forestry Division shall have the right to prune, spray, maintain, and remove public trees as may be necessary to ensure public safety or to preserve or enhance the beauty of public places. Spraying shall be undertaken in accordance with State laws. Notice of intent to remove, extensively prune or spray any public tree in a City-owned right-of-way shall be made in writing to abutters of that right-of-way. Any objecting person shall be allowed seven (7) days from the date of notice to request in writing a public hearing concerning the proposed work. Upon receipt of written request from any such abutter, the Director of Cemeteries, Parks and Recreation and/or his designee shall hold a public hearing concerning the proposed work within 14 days of the date of said request. Said work shall not occur until after said public hearing.

(2) The Forestry Division shall have the right to prune any public tree if, in the opinion of the Director of Cemeteries, Parks and Recreation and/or his designee, it interferes with visibility of any traffic control device or intersection, or interferes with pedestrian or vehicular traffic. A clearance of fourteen feet (14') above street surface or eight feet (8') above the sidewalk surface shall be maintained. If such obstructing public tree is on private property, the Director of Cemeteries, Parks and Recreation and/or his designee shall notify the property owner of the intent to prune. The property owner shall have a right to object in writing in accordance with the requirements of Section 6-110(F)(1) above, and a public hearing shall be held in accordance with the terms thereof.

(3) The Forestry Division may remove any public tree or part thereof which by reason of its nature damages or otherwise impairs sewers, electric power lines, gas lines, water lines, or other services, or is affected by an injurious fungus, disease, insect, or other pest. In each case, the abutters will be notified twenty-four (24) hours in advance. The abutters shall have a right to object in writing in accordance with the requirements of section 6-110(F)(1) above and a public hearing shall be held in accordance with the terms thereof.

(4) In case of an emergency as determined by the Director of Cemeteries, Parks and Recreation and/or his designee, work may be performed without written notification.

G. Tree Topping

It shall be unlawful for any person or the City to top any public tree. Trees severely damaged by storms or other causes may be exempted from this prohibition at the determination of the Director of Cemeteries, Parks and Recreation and/or his designee. In lieu of topping, public trees under utility wires or other obstructions where other pruning practices are impractical or not considered aboriculturally sound may be removed by the Director of Cemeteries, Parks and Recreation and/or his designee.

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Section 6-111 Protection of Trees on Public Property

A. During Excavation or Construction

All trees near any excavation or construction of any building, structure, or street work, shall be guarded with a substantial fence, frame, or box centered around the tree not less than four feet (4') high and enclosing an area of sixty-four square feet (64 sq. ft.), or at a distance in feet from the tree equal to the diameter of the trunk in diameter breast height (D.B.H.), whichever is greater, and all building material, dirt, or other debris shall be kept outside the barrier.

No person shall excavate any ditches, tunnels, trenches, or lay any drive within the radius of ten feet (10') from any city-owned tree without first obtaining a written permit from Director of Cemeteries, Parks and Recreation and/or his designee.

B. Placing Materials on Public Property

No person shall deposit, place, store, or maintain upon any public property anything which may impede the free passage of water, air or fertilizer to the roots of any tree growing therein, except by written permit of the Director of Cemeteries, Parks and Recreation and/or his designee.

C. Abuse or Mutilation of Trees On Public Property

Under no circumstance shall any person cut, carve, transplant, or remove any public tree; attach any rope, wire, nails, advertising posters, or other contrivance to any public tree; allow any gaseous, liquid or solid substance which is harmful to trees to come in contact with any public tree; or set fire or permit any fire to burn when such fire or the heat thereof will injure any portion of any public tree.

D. Destruction of Trees on Public Property

Any public tree deemed a public hazard or destroyed as a consequence of negligence, gross negligence, or intentional acts shall be valued by the Director of Cemeteries, Parks and Recreation and/or his designee as the sum of any removal and disposal costs, plus the replacement costs of a minimum two inch (2") caliper tree, its installation, care and maintenance, including watering, for the first three (3) years after planting. If the location of the destroyed tree does not meet the planting requirements of 6-110, the Director of Cemeteries, Parks and Recreation and/or his designee may replace the public tree at another location of his choosing.

Section 6-112 Interference With Forestry Division Employees

It shall be unlawful for any person to prevent, delay, or interfere with any Forestry Division employee, volunteer, or contractor hired by the Forestry Division, while engaging in and about the planting, cultivating, mulching, pruning, spraying, or removing of any public tree, as authorized in this ordinance Section 6-110.

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Section 6-113 Violations

Any failure to comply with the terms, conditions, provisions, or any notice issued pursuant to this ordinance, shall constitute a violation.

Section 6-114 Penalties

Any person who violates any provision of this ordinance shall be subject to a fine payable to the City of Bath of up to \$100.00 each day of the violation. No penalty shall be assessed for failure to act during any notice period, unless remediation ordered by any notice is not accomplished within the designated timeframe.

In addition, if, as a result of the violation of any provision of this ordinance, the injury, mutilation, or death of a public tree occurs, the penalty shall include the replacement value of the public tree as calculated in accordance with Section 6-111(D) hereof.

Section 6-115 Severability

Should any section, clause, or provision of this ordinance be declared by the Courts to be invalid, the same shall not affect the validity of the ordinance as a whole, or parts thereof, other than the part so declared to be invalid.

REFERENCES:

Buchanan, Tim, City Forester, City Forestry Standards and Specification. 1986. Municipal Code Fort Collins, Colorado.

1919 Code of the City of Bath, Maine re: City Forester.

Memo from Bath, Maine City Manager, Larry D. Cilley, to Therriault & Golin, City Solicitors, dated 5/9/78, re: Clarification of City Forester's Responsibilities and Authorities.

Memo from City Manager, Duncan Ballantyne, to Denis Hebert, dated 6/27/93, re: Transfer of Forestry Division to Cemeteries and Parks Department, Bath, Maine.

Municipal Tree Ordinance Manual. Revised Edition 1990. International Society of Arboriculture in cooperation with the Municipal Arborist and Forester Society, Savoy, IL.

Sample Municipal Tree Ordinance designed for mid-western communities. (General)

Sample Municipal Tree Ordinance for Stevens Point, Wisconsin.

South Portland, Maine, Tree Ordinance. 1975.

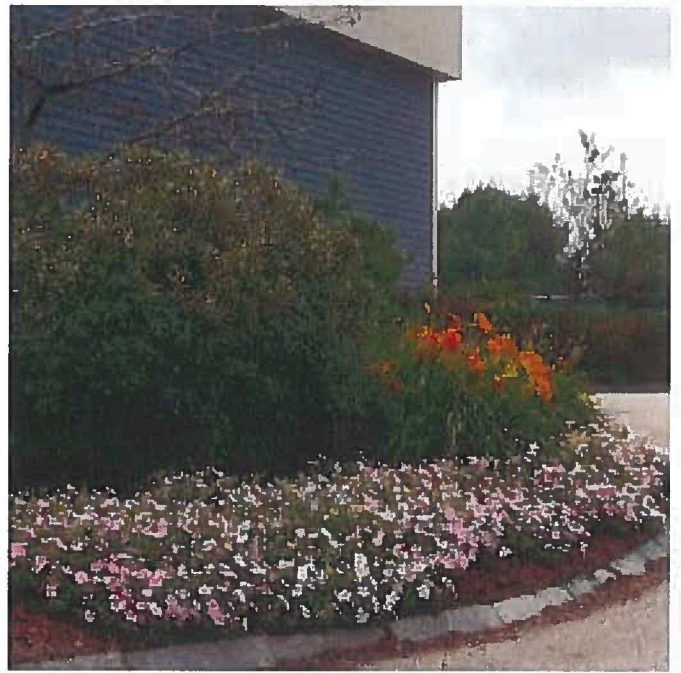
Maine State Law Title 30-A, Sections 3101, 3252-3264, 3282-3291; Title 12, Sections 8101-8305; Title 23, Sections 2702 and 2952.

Tree City USA Bulletin, No. 9, How to Write a Municipal Tree Ordinance. 1993. The National Arbor Day Foundation, Nebraska City, Nebraska.

Waterville, Maine, Tree Ordinance. 1990.

Westbrook, Maine, Tree Ordinance. 1972.

Tree Preservation Guidelines, 2006, and any amendments thereto



III. LANDSCAPE

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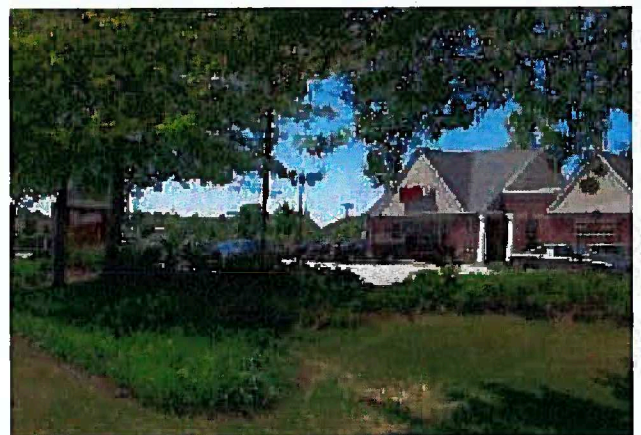
INTRODUCTION

Landscaping should be an integral part of all site plan developments. Trees, shrubs, and other landscape elements can be used to accentuate buildings, create a sense of identity, reduce the amount of impervious surfaces, and provide human scale. Applicants should carefully evaluate the physical characteristics of each site and their own maintenance abilities when making the final selection to ensure that the plantings will survive and achieve maturity in their selected location.

LUDC Reference. These Guidelines are intended to supplement, illustrate, and amplify the Landscaping Standards of the Kittery Land Use & Development Code (LUDC). The provisions of the Code vary from district to district. Check the applicable section of the Code for specific requirements.

Landscaping Goals

- Incorporated appropriate plantings that are in scale with their surroundings.
- Separate roadways from commercial development by attractive landscape planter strips.
- Incorporate plantings in parking lots to add aesthetic value, reduce their scale, provide canopy shade, reduce radiant heat from the surface, reduce headlight glare, and add seasonal interest.
- Preserve mature trees and other significant landscape features which help define the character of the community.
- Provide screening for less attractive parts of a site or incompatible land uses.
- Help define areas where pedestrians are safely separated from the road.
- Reinforce wayfinding by emphasizing entrances and circulation patterns.
- Manage invasive species using ecologically sound practices.



Landscaping is an integral part of site development. With proper planning, trees, shrubs, and other plantings can provide shade, emphasize entrances, screen undesirable views, and add yearlong color and interest.

OBJECTIVES

Kittery should be characterized by a rich variety of landscape materials that enhance human scale, complement the architecture, reinforce circulation paths, highlight entrances, provide canopy shade, and add seasonal interest.

DESIGN GUIDELINES

Landscape Plans should be prepared by a landscape architect registered in Maine, or other qualified professional familiar with local growing conditions. The plan should be accompanied by a simple narrative that describes the design intent, the plantings and other landscape features, maintenance, tree protection, and other relevant features of the plan.



A well-coordinated low-maintenance landscape that provides an attractive commercial setting.

Coordination with Site Features. The landscape plan should show all utilities, signage, lighting, and other site features that may influence the selection or location of plantings. The plan should be designed to avoid conflicts (both at the time of planting and in the future) between plantings and other site elements.



Smaller shrubs should have been used in front of this bank to avoid conflicts with the driveway. The tree on the left side of the walk may eventually block the view of the sign..

Safety. The selection of plant materials should consider public health and safety. Plants to be avoided include those with poisonous fruits, large thorns, or invasive growth patterns. The ultimate form and height of plantings as they mature should be considered so they will not create unsafe conditions or block sight lines for pedestrians, bicyclists, or motorists.



A mature shrub next to a driveway could cause problems with visibility for cars exiting the driveway.

GENERAL LANDSCAPE PRINCIPLES

Rocks. Large rocks should be used very sparingly as landscape elements and only as accents in mass plantings. Rocks should not be used as substitutions for shrubs. Where used, they should be buried for at least half of their depth.



Rocks may not be used in lieu of plantings.

These rocks define the edge of the driveway and keep cars off the grass. While they have been buried properly, some plantings would soften their angular edges.



While rocks keep cars out of the planter strip they do not provide the visual interest or texture of well-designed plantings.

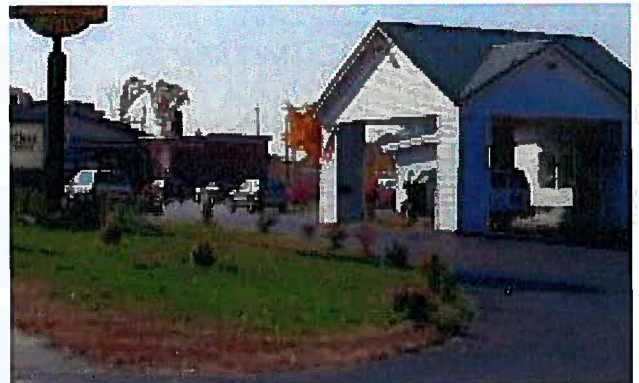
Variety. Plant materials should exhibit some seasonal color and interesting texture to create a distinctive, yet low maintenance environment. Landscape plans should strike a balance between monoculture (the use of a single species) and excessive variety. A list of approved plant materials is included on pages 13 and 14.

Minimum Plant Sizes. Plant materials should meet the following minimum sizes at planting:

Street Trees	2 1/2 inch caliper
Ornamental Trees	2 inch caliper
Evergreen Trees	5-7 foot height
Deciduous Shrubs	30 inch height
Evergreen Shrubs	18 inch ht./spread
Perennials	2 year clumps
Ornamental Grasses	2 year clumps
Ground Covers	3 inch pots

The measurement for deciduous trees (caliper) is taken at a point 4 inches above ground level.

Irrigation. Underground irrigation is encouraged in front setbacks, public spaces, and other highly visible areas. It should be designed to prevent overflow or flooding onto walkways or parking lots.



Trees and shrubs should be at least the minimum size to be effective and withstand the rigors of a commercial site.



The entrance to this medical building is reinforced by properly sized plantings that provide seasonal interest.

Planting Design. Planting design should stress simplicity in form and limit the number of species. Plantings should be massed to soften edges, corners, and pavement areas, and to integrate the building into the landscape.



Effective landscape plans often incorporate hardy perennials as a groundcover to complement the architecture.

Invasive Plant Species. Plant species that are considered invasive or potentially invasive in Maine should not be used in the landscape. The Landscape Plan should indicate how existing invasive species present on the site will be dealt with, using Best Management Practices. The following species are among those considered invasive in Kittery:

Shrubs

Berberis thunbergii	Japanese Barberry
Elaeagnus angustifolia	Russian Olive
Elaeagnus umbellata	Autumn Olive
Euonymus alatus	Winged Euonymus
Ligustrum sp.	Privet
Lonicera japonica	Japanese Honeysuckle
Lonicera morrowii	Bush Honeysuckle
Lonicera tatarica	Tatarian Honeysuckle
Rhamnus cathartica	Common Buckthorn
Rhamnus frangula	Glossy Buckthorn
Rosa multiflora	Multiflora rose

Trees

Acer ginnala	Amur Maple
Acer platanoides	Norway Maple

Vines and Perennials

Celastrus orbiculata	Oriental Bittersweet
Fallopia japonica	Japanese Knotweed
Lythrum salicaria	Purple Loosestrife
Phragmites australis	Common Reed

Guarantee Period. All lawns and plant materials must be guaranteed by the landscape contractor for a period of not fewer than two years. The developer shall submit a copy of a guarantee and a contract with the landscape contractor, indicating the terms of the guarantee period, or may obtain a letter of credit.

Resources. The following sources are recommended for additional information on the planting and care of trees:

American Standard for Nursery Stock. ANSI
[www.anla.org/applications/ Documents/Docs/ANLStandard2004.pdf](http://www.anla.org/applications/Documents/Docs/ANLStandard2004.pdf)

Architectural Graphic Standards. Planting Details. James Urban, ASLA. pp. 178-182. 1998.

Principles and Practice of Planting Trees and Shrubs. International Society of Arboriculture. 1997.

Trees in the Urban Landscape. Site Assessment, Design, and Installation. Peter J. Trowbridge and Nina L. Bassuk. John Wiley & Sons. 2004.



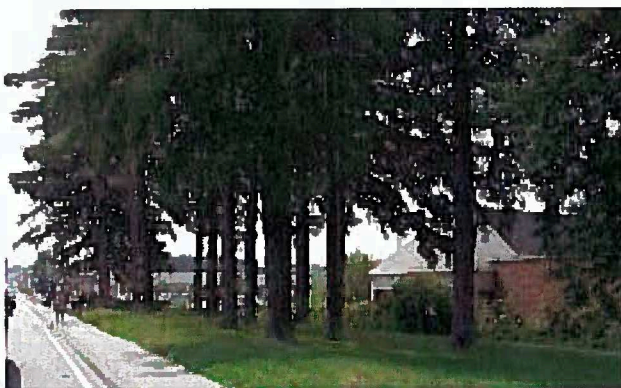
Plantings have been used to create outdoor use areas and increase the attractiveness of this commercial building.

OBJECTIVES

Mature trees along Kittery's roads are an important element of community character. They provide significant wildlife habitat, year-round visual interest, and comfort to pedestrians. Where practical, existing mature and specimen trees should be preserved during development. Preserving large existing trees within the planter strip will decrease the number of new trees required.

DESIGN GUIDELINES

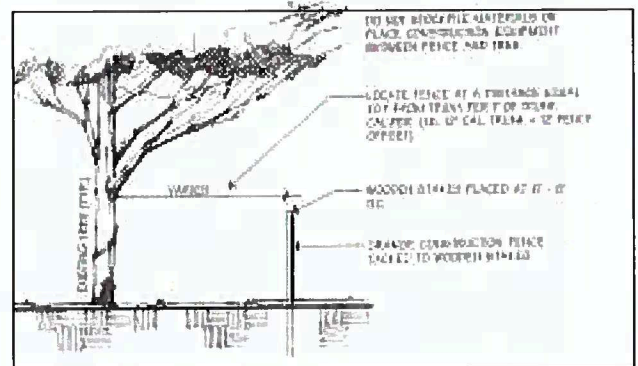
Existing Trees/Plants. The preservation of existing or unique trees or other significant plantings must be considered during the initial site inventory and development of the sketch plan. The landscape plan should illustrate which vegetation will be preserved and what protection measures will be taken during construction. Transplanting and reusing trees and other plantings is strongly encouraged. See the LUDC requirements for Streetside Trees and Open Space Standards.



These mature evergreens were carefully saved during the development of this shopping area. The trees add historic character, visual interest, and shade.

Tree Protection. The landscape plan should show how existing trees will be protected during construction. As a general rule, no construction activity should be allowed within the drip line (outer edge of tree canopy) during construction. This includes grading, compaction, utility installation, stockpiling of construction material, or movement of vehicles.

Temporary Measures. Barricades in the form of snow fencing or similar materials should be installed during construction to protect trees and their root zones. The radius of the protection fencing in feet should be at least the diameter of the tree in inches (i.e., a 12-inch diameter tree would require a fence with a radius of 12 feet.)



Professional Assistance. In the case of specimen or unusually large trees, the Planning Board may require a report from a Maine licensed arborist that describes the procedures that will be used to protect the tree during and following construction.

Tree Walls/Wells. Where grading is required near trees to be preserved, properly designed tree wells or walls may be used to ensure the long-term health of the tree. Such structural systems should be designed by a landscape architect or other qualified professional.

Grade Changes. Tree roots are at or near the surface. Grading within the drip line in excess of a few inches should be avoided since it may cause irreparable damage to the root system and cause the tree to die.



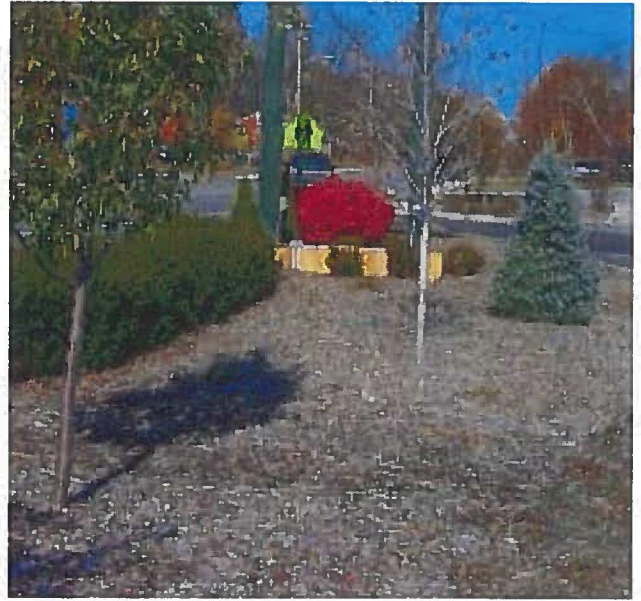
The retaining wall (l) was used to minimize grading that could have harmed the adjacent trees. The tree well (r) should have extended out to the drip line to protect the root system near the surface.

OBJECTIVES

Commercial development must be separated from the adjacent roads by landscaped planter strips. These areas must be designed to screen parking areas, separate land uses, and visually unify Kittery's commercial districts. See the LUDC for specific planter strip requirements.

DESIGN GUIDELINES

Ground Covers. Appropriate groundcovers include turf grass, ornamental grasses, perennials, low-growing evergreens and flowering shrubs. Planting other than turf grass must be spaced close enough to achieve full coverage within 3 years after installation. Stone, bark mulch, or other similar inert material must not be used as a substitute for vegetated ground-cover.



Bark mulch, stone, or other inert material should not be used as a groundcover in planter strips.



Planter strips should be fully vegetated with turf grass (above) or other living plant material.



Ornamental grasses used as an effective groundcover to emphasize their texture and color.



Wildflowers can be an effective groundcover if properly installed and maintained.

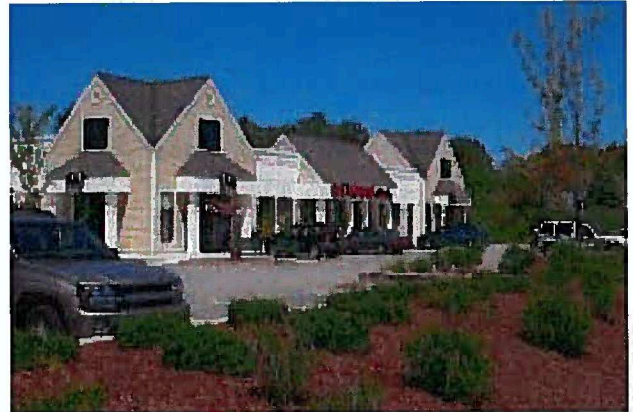
Mulch may be used directly under plantings to preserve soil moisture. However, it should not be used as the primary groundcover. Where used it should consist of dark, decomposed shredded bark, with no piece less than 4 inches in any dimension.

Plant Masses. Shrubs, perennials, annuals, and ornamental grasses used in planter strips should be installed in masses or 'drifts' that emphasize colors, forms, and textures. The use of excessive numbers of different species as well as individual specimens should be avoided.

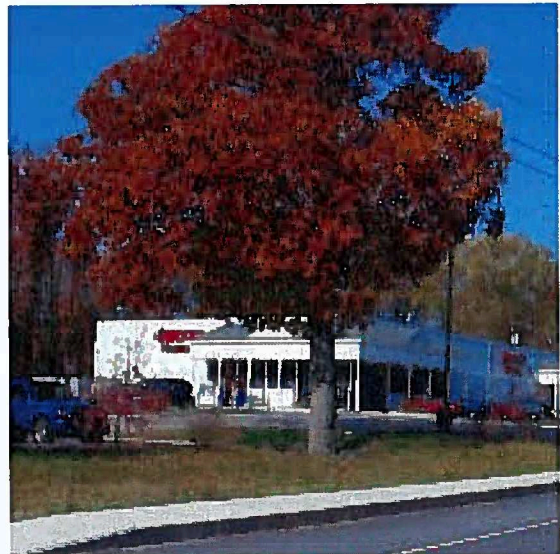
Streetside Trees. The required trees within planter strips may be installed in a linear fashion or informal groupings. Linear plantings may be appropriate along roadways to create a boulevard effect, using large spreading deciduous trees to define the edge of the travelway, provide shade for pedestrians, and add scale to commercial corridors. Informal groupings may be appropriate in areas where existing vegetation has already established a particular rhythm and pattern to the streetscape.

Roadside Plantings. Trees must be planted a minimum of 5 feet from the edge of the roadway, driveways, and parking areas. Trees and other landscaping planted at intersections must preserve a clear area within a sight triangle as required in Chapter 16.32.540.

Parking Lots must be separated from the street by plantings, earth berms, walls, and/or other landscape elements to minimize headlight glare and the view of vehicles, while still allowing the public to see the building.



Combination of berm and plantings to effectively screen a parking lot.



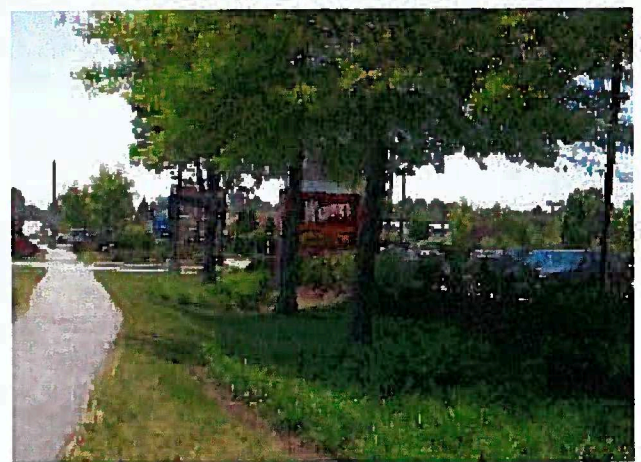
Planter strips should contain streetside trees. Credit is given for preserving existing trees.



To be effective, vegetation in planter strips should be tall enough to screen parking lots.



Informal groupings of trees are more commonly seen in Kittery, relating well to existing trees adjacent to roadways.



Linear grouping of trees can be used to create a boulevard effect.

OBJECTIVES

Landscaping in parking lots can be used to improve its appearance, reduce the scale and amount of paved areas, define edges, provide shade, reduce headlight glare, and add seasonal interest.

DESIGN GUIDELINES

Trees in Parking Lots. Parking lots with 10 or more spaces must have at least one tree per eight spaces, planted in or within five feet of the lot. At least 10% of the interior area of any parking lot with 25 or more spaces must be landscaped (Chapter 16.32.560.C). Larger and more visible parking lots should have more intensive landscape treatments.

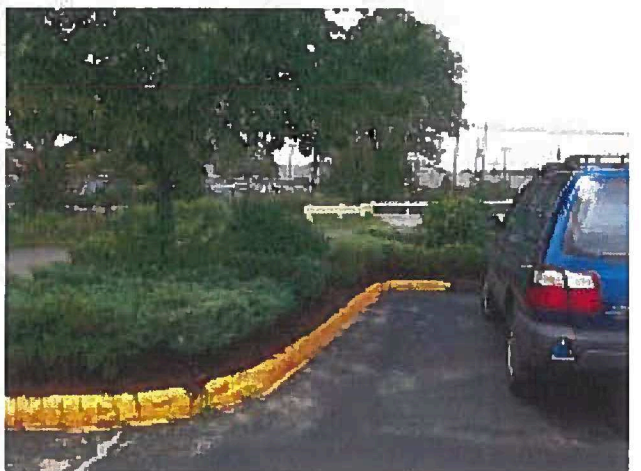
Undesirable Plant Materials. High-maintenance trees that may damage automobiles with dripping sap, messy fruit, or hard seeds should not be used in or around parking lots.

Location of Trees. Trees in parking lots should be planted in informal groups, straight rows, or irregular groupings as space permits, or concentrated in certain areas. Trees should be planted a minimum of five feet from the end of parking lot islands.

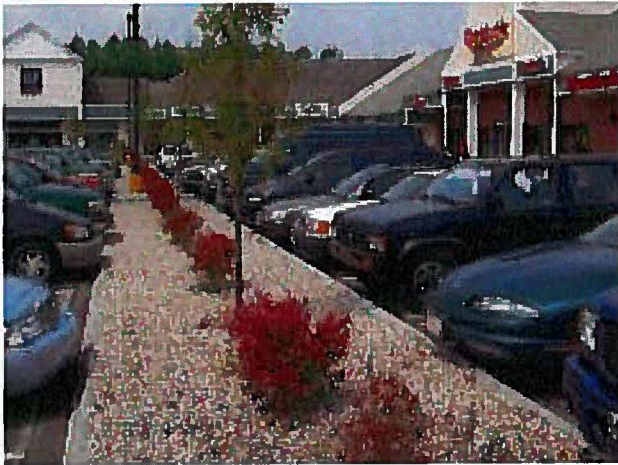
Safety. Trees in parking lots or those that abut walkways should be pruned to at least eight feet above the paved surface to avoid becoming an obstacle. Shrubs and ornamental plantings in parking lot islands should not exceed 3 feet in height to avoid blocking visibility.

Parking Stall Separation. Landscaped areas that separate rows of parking stalls should be a minimum of nine feet in width.

Snow Storage. Landscape materials surrounding parking lots and in islands should be able to tolerate large quantities of snow stored during winter months. Delicate plant material should not be used in areas where they are likely to be damaged by snow.



Trees in these parking lots have been given an adequate amount of room for their root systems to grow. The lower branches have been pruned above eye height. Planting trees in groups provides more effective shade than individual plantings.



Grass or other living groundcover is preferred in parking lot islands to counteract the heat island effect.



Tall shrubs in parking lots can block visibility and present a safety hazard. Their location also interferes with snow removal.



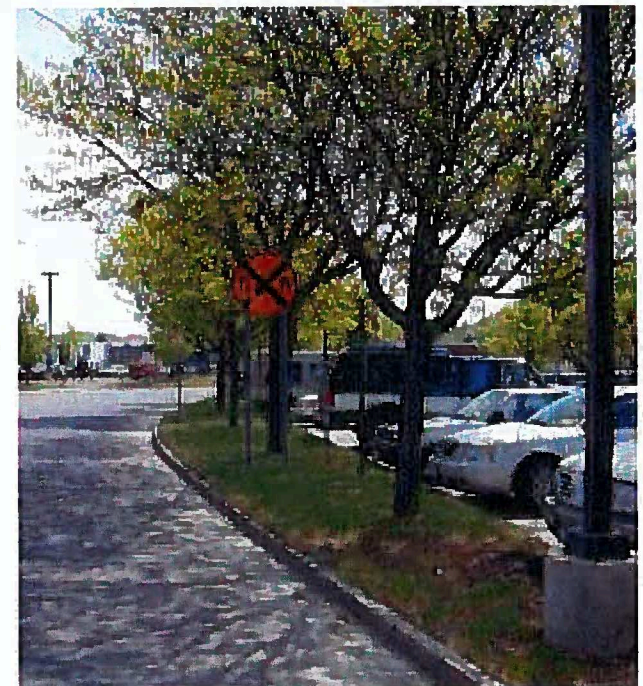
Ornamental trees lead the eye to the entrance of this outlet mall. Shrub masses and/or berms should have been used in addition to screen the parking lot.



Perennials can be an effective way to add color and visual interest to parking lots.



This island adds visual interest to the parking lot and can withstand harsh winter conditions.



Parking lot islands provide an opportunity to use a variety of plant species to break up the mass of pavement and introduce interesting textures.

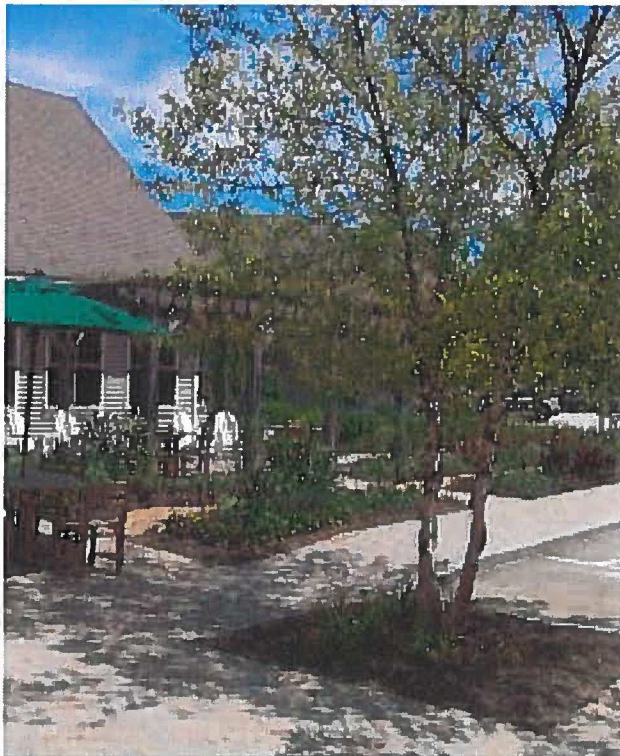
OBJECTIVES

Trees are used throughout Kittery – planted within the right of way, near buildings, and in parking lots. Trees should be sited to achieve full maturity and display their natural form. Planting plans should emphasize large shade trees within or near the right-of-ways in order to create a more unified streetscape.

DESIGN GUIDELINES

Suitability. Trees should be resistant to insect infestation, drought, disease, roadside salt, and auto emissions. All plant material must be suitable to Kittery's growing conditions. A list of street trees for Kittery is included in the **Approved Plant Materials List**, pp. 13 and 14.

Coordination with Architecture. Trees should be carefully selected and located to complement the building elevation without blocking storefronts, signs, or lighting.



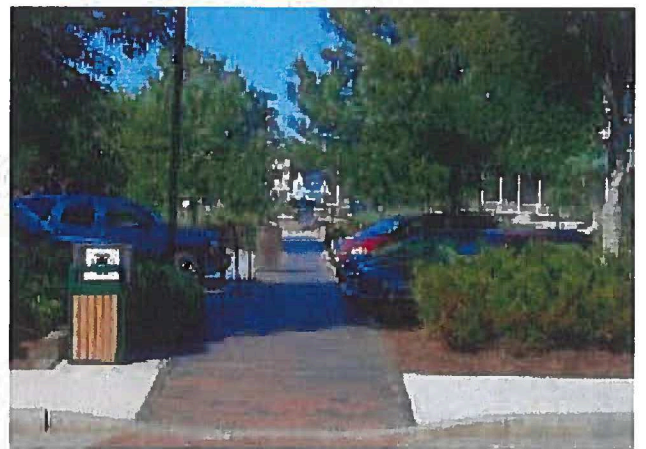
White birches add contrast to the building and cast a light shadow on this outdoor use area.



Trees should be planted at least five feet from curblines to protect them from plow damage. More perennials should have been used to achieve a mass effect.

Planting Locations. Trees should be planted in locations where their root development and branching patterns will not interfere with window displays, signage, underground or overhead utilities, streets, and sidewalks.

Pedestrian Movement. The lower branches of trees planted near pathways and sidewalks should be at least eight feet above the pavement to minimize interference with pedestrian movement throughout the year.



These trees have been pruned to 8 feet above the parking lot walkway to minimize interference at eye level for both drivers and pedestrians.

OBJECTIVES

A variety of shrubs and ornamental plantings should be used throughout the community to add seasonal color, provide visual interest, help define spaces, screen undesirable elements, and emphasize circulation routes.

DESIGN GUIDELINES

Variety in Plantings. The use of flowering shrubs, evergreen shrubs, perennials, annuals, vines, ornamental grasses, and other plant material is highly recommended, in addition to street trees, evergreen trees, and ornamental trees. A list of plantings suitable for Kittery is provided at the end of this chapter. See **Approved Plant Materials List**, pp. 13 and 14.

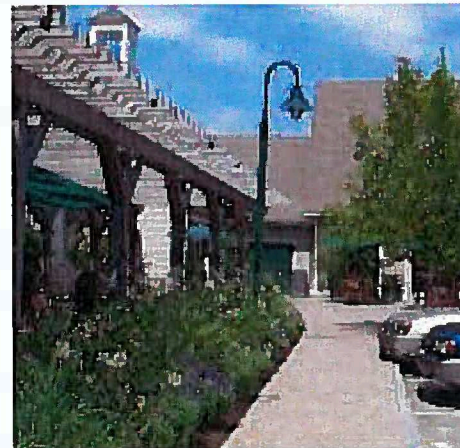
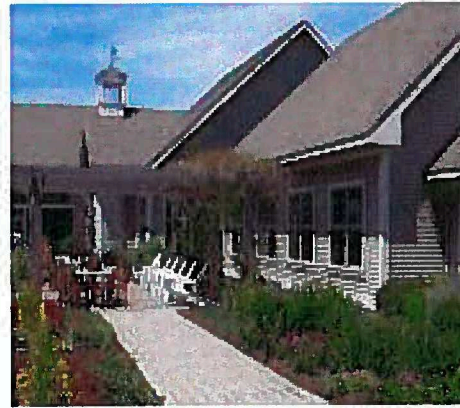
Selection. The selection of plantings should consider ultimate height and spread, maintenance, pest and disease tolerance and their nuisance potential (severe thorns, excessive leaf litter, etc.).

Foundation & Wall Plantings. Planting beds are recommended along exposed building edges, foundations and uninterrupted walls. Plantings should be installed a minimum of 18 inches from the wall to allow proper root zone development. Plantings should provide either a formal pattern or a naturalistic blend of heights, colors, and textures for visual relief.



A simple bed of flowering shrubs makes an effective, low-maintenance foundation planting.

Accent Plantings. The installation of special planting beds is encouraged in appropriate areas for visual accents in the landscape. These may include daylily beds, butterfly gardens, bog gardens, fragrant gardens, shade gardens, yellow foliage gardens, early blooming gardens, texture gardens, etc.



Small areas of accent plantings can add color, texture, and visual interest to the landscape.



Ornamental grasses and low shrubs can provide a cost-effective, low-maintenance way to add year-round texture.

OBJECTIVES

Landscape plans should anticipate 3-8 years for shrubs to achieve maturity, and 15-20+ years for trees. Proper maintenance must be provided to assure that the landscaping achieves its proper form and full height. Maintenance of all landscape elements should be considered in the development of the Site Plan.

DESIGN GUIDELINES



Maintenance Plan. A written maintenance plan should be provided as a supplement to the Landscape Plan for all landscape elements installed on the property. The maintenance plan

should include (but not be limited to) initial installation, guarantee period, replacement policy, periodic and seasonal maintenance, use of pesticides and fertilizers, irrigation, seasonal displays, and special considerations.

Natural Forms. All plant material should be allowed to achieve their natural forms without excessive pruning. Shaping shrubs into tight geometrical forms should be avoided.



Parking lots can present particular problems for maintenance, with plantings exposed to salt, snow plows, piles of snow, and errant vehicles.

Low Maintenance Materials. The use of plant materials and landscape elements that require a low degree of maintenance is strongly encouraged. Planting characteristics to be considered include: drought resistance (except where irrigated), tolerance to auto emissions, disease and insect resistance, lack of thorns that could trap debris, and relatively light leaf litter for ease of fall cleanups.

Replacement Planting. If plant materials specified do not survive or are damaged, they must be replaced in accordance with the two-year performance guarantee to maintain conformance with the approved planting plan and to provide the necessary landscape effect.



Dead, dying, or diseased plantings should be removed and replaced within the growing season to maintain a unified, attractive appearance throughout the landscape.



Tight planting pockets and installation too close to buildings may put stress on trees and present a problem when removing dead materials..

OBJECTIVES

The plants on this list have been derived from a number of sources to inspire a greater landscape variety in Kittery. The final selection of materials must consider the specific growing requirements and characteristics of each plant and the conditions present within the site.

Plants that are tolerant to road salt are italicized.

STREET TREES

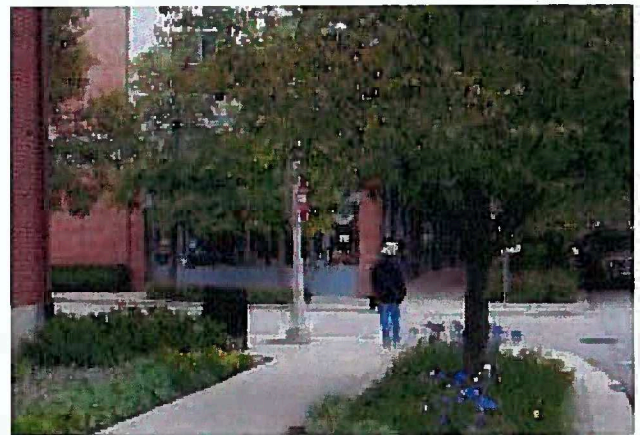
Aesculus hippocastanum *Baumanii* Horsechestnut

Acer x. freemanii	Autumn Blaze Maple
Acer rubrum	Red Maple
Acer saccharum	Sugar Maple
Betula nigra	River Birch
Cercidiphyllum japon.	Katsura Tree
Cladrastis lutea	Yellowwood
Fagus grandifolia	American Beech
Fraxinus americana	White Ash: 'Aut. Purp'
	'Aut. Applause'
Fraxinus pennsylvanica	Green Ash
Ginkgo biloba	Maidenhair Tree (m)
Gleditsia triacanthos	Thornless Honey Locust
Prunus maackii	Amur Chokecherry
Pyrus calleryana	Callery Pear
Quercus alba	White Oak
Quercus bicolor	Swamp White Oak
Quercus coccinea	Scarlet Oak
Quercus palustris	Pin Oak
Quercus robur	Upright English Oak
Quercus rubra	Red Oak
Quercus shumardi	Shumard Red Oak
Sophora japonica	Regent Scholartree
Tilia americana	American Linden
Tilia cordata	Littleleaf Linden
Tilia tomentosa	Silver Linden
Ulmus americana	Princeton American Elm; Frontier Elm
Zelkova serrata	Green vase Zelkova

ORNAMENTAL TREES

Aesculus carnea	Red Horsechestnut
Amelanchier canadensis	Serviceberry
Carpinus betulus	European Hornbeam
Carpinus caroliniana	American Hornbeam
Celtis occidentalis	Hackberry
Cornus kousa	Kousa Dogwood
Cornus mas	Cornelian Cherry

Crataegus crusgalli inermis 'cruzam'	Cockspur Hawthorne
Crataegus viridis	Winter King Hawthorn
Magnolia loebneri	Loebner Magnolia
Magnolia stellata	Star Magnolia
Malus species	Crabapple
Nyssa sylvatica	Tupelo
Ostrya virginiana	Ironwood
Phellodendron arboreum	Amur Corktree
Prunus sargentii	Sargent Cherry
Sorbus alnifolia	Korean Mountain Ash
Sorbus americana	American Mt. Ash
Syringa reticulata	Japanese Tree Lilac



Trees, shrubs, and perennial groundcover used to create a highly unified, inviting streetscape.

EVERGREEN TREES

Abies balsamea	Balsam Fir
Abies concolor	White Fir
Abies fraseri	Fraser Fir
Chamaecyparis thyoides	Atlantic White Cedar
Juniperus virginiana	Eastern Red Cedar
Larix deducua	European Larch
Larix laricina	American Larch
Picea abies	Norway Spruce
Picea glauca	White Spruce
Picea omorika	Serbian Spruce
Picea pungens	Colorado Spruce
Pinus nigra	Austrian Pine
Pinus resinosa	Red/Norway Pine
Pinus strobus	Eastern White Pine
Thuja occidentalis	American Arborvitae
Tsuga canadensis	Canadian Hemlock
Tsuga caroliniana	Carolina Hemlock

FLOWERING SHRUBS

Arctostaphylos uva-ursi	Bearberry
Aronia arbutifolia	Red Chokeberry
Aronia melanocarpa	Black Chokeberry
Azalea species	Azalea species
Clethra alnifolia	Sweetpepper Bush
Cotinus coggygria	Common Smoketree
Cotoneaster adpressa	Creeping Cotoneaster
Cotoneaster divaricatus	Spreading Cotoneaster
Cotoneaster horizontalis	Rockspray Cotoneaster
Enkianthus campanulat.	Redveined Enkianthus
Forsythia 'Sunrise'	Sunrise Forsythia
Fothergilla species	Fothergilla species
Hamamelis virginiana	Witchhazel
Hydrangea paniculata	Panicle Hydrangea
Ilex glabra	Inkberry
Ilex verticillata	Winterberry
Kalmia latifolia	Mountain Laurel
Lindera benzoin	Spicebush
<i>Myrica pennsylvanica</i>	<i>Bayberry</i>
Potentilla fruticosa	Bush Cinquefoil
<i>Prunus maritima</i>	<i>Beach Plum</i>
Rhododendron species	Rhododendron species
<i>Rosa rugosa</i>	<i>Beach Rose</i>
Rhus aromatica	Fragrant Sumac
<i>Rhus typhina</i>	<i>Staghorn Sumac</i>
Spirea species	Spirea species
Vaccinium corymbosum	Highbush Blueberry
Viburnum prunifolium	Blackhaw Viburnum
Viburnum sargentii	Sargent Viburnum
Viburnum trilobum	Amer. Cranberrybush
Xanthorrhiza	Yellowroot
simplicissima	



Flowering shrubs and perennials are an attractive way to edge a parking lot and soften the building.

PERENNIALS

Asclepias purpurescens	Purple Milkweed
Achillea millefolium	Yarrow
Aquilegia spp.	Columbine
Aster novae-angliae	New England Aster
Astilbe species	Astilbe
Cimicifuga racemosa	Bugbane
Coreopsis verticillata	Moonbeam Coreopsis
Echinacea purpurea	Purple Coneflower
Geranium manculatum	Cranesbill Geranium
<i>Hemerocallis species</i>	<i>Daylilies</i>
Hosta species	Plaintain Lily
Liatris spicata	Gayfeather
Lobelia cardinalis	Cardinal Flower
Malva alcea 'Fastigiata'	Hollyhock Mallow
Monarda spp.	Beebalm
Perovskia atriplicifolia	Russian Sage
Physostegia virginiana	Obedient Plant
Rudbeckia fulgida	Black-Eyed Susan
<i>Sedum telephium</i>	<i>Autumn Joy Sedum</i>



A simple planting plan that features drifts of perennials and ornamental grasses to accentuate the front of a medical office building.

ORNAMENTAL GRASSES

Calamagrostis acutiflora	Reed Grass
Deschampsia caespitosa	Tufted Hair Grass
Festuca ovina 'glaucua'	Blue Fescue
Panicum virgatum	Switch Grass



4. LANDSCAPING STANDARDS

4.1. GENERAL LANDSCAPING STANDARDS

4.1.1. Plant material.

A. Plants.

1. All trees and shrubs shall comply with the standards set forth by the American Standard for Nursery Stock (ANSI Z60.1 - 2004). These standards are available through the Department of Public Works.
2. All trees and shrubs shall be nursery grown, healthy, free of disease, and insect pests, and shall have a well-developed and compact root system. Plant material showing signs of a lack of proper nursery care or a lack of pruning or cultivation, or which is not true to name will be classified as collected stock regardless of its source and shall be rejected.
3. Proposed trees and shrubs installed as part of the landscape plan shall be comprised of at least 50% native species.
4. The developer shall be responsible for preventing the spread of existing or the introduction of new invasive species on the site, as identified below. If, within one (1) year following construction, invasive species are identified on the site or if such species are pre-existing on the site but are determined to have spread by the City Arborist, the applicant shall be required to implement appropriate control measures prior to the release of the defect guarantee. Accepted mechanical and chemical control methods are provided by the Maine Natural Areas Program (MNAP) of the Maine Department of Conservation in their Invasive Plant Fact Sheets (available through the Department of Public Services and through the MNAP program website: <http://www.maine.gov/doc/nrimc/mnap/features/invasives.htm>). The following plant species are recognized as invasive species that are characteristically adaptable, aggressive, and have a high reproductive capacity:
 - a. Asiatic Bittersweet (*Celastrus orbiculata*);
 - b. Autumn and Russian Olive (*Elaeagnus umbellata* & *angustifolia*);
 - c. Black Swallowwort (*Cynanchum louiseae*);
 - d. Brazilian Waterweed (*Egeria densa*);
 - e. Common and Glossy Buckthorn (*Rhamnus cathartica* and *Frangula alnus*);
 - f. Common Reed (*Phragmites australis*);
 - g. Eurasian Milfoil (*Myriophyllum spicatum*);
 - h. Fanwort (*Cabomba caroliniana*);
 - i. Garlic Mustard (*Alliaria petiolata*);
 - j. Hydrilla (*Hydrilla verticillata*);
 - k. Japanese Barberry (*Berberis thunbergii*);
 - l. Japanese Honeysuckle (*Lonicera japonica*);
 - m. Japanese Knotweed (*Fallopia japonica*);
 - n. Japanese Stilt Grass (*Microstegium vimineum*);
 - o. Lesser Celandine (*Ranunculus ficaria*);
 - p. Mile-a-Minute Weed (*Polygonum perfoliatum*);
 - q. Morrow and Tartarian Honeysuckle (*Lonicera morrowii* & *tartarica*);
 - r. Multiflora/Rambler Rose (*Rosa multiflora*);
 - s. Porcelainberry (*Ampelopsis*);
 - t. Milfoil (*Myriophyllum heterophyllum*);
 - u. Water Chestnut (*Trapa natans*);

- v. Norway Maple (*Acer platanoides*); and
- w. Yellow-flag Iris (*Iris pseudacorus*).

5. Trees selected from the Recommended Tree List (Figure IV-1) shall conform, at a minimum, to the sizes specified on the list.
6. All upright deciduous and evergreen shrubs shall be a minimum of 3 feet tall at mature height. All spreading evergreen and deciduous shrubs shall be a minimum of 2-2.5 feet in width at maturity.
7. Ground covers planted in lieu of grass shall be planted at a level of coverage equivalent to one complete growing season. Grass areas shall be planted with Kentucky Bluegrass (*Poa pratensis*), Red Fescue (*Festuca rubra*), Tall Fescue (*Festuca arundinacea*) or Perennial Ryegrass (*Lolium perenne* L.). Rolled turf, erosion reducing net or suitable vegetation along with landscaping shall be used in swales or other areas subject to erosion.
8. Mulching material shall be a minimum of three (3) inch deep wood chip or bark mulch. Inorganic mulches are not permitted.
9. No plantings used to satisfy City landscaping requirements shall be comprised of inorganic materials.

4.1.2. Street trees.

- A. Selection, arrangement and spacing of trees proposed in the City right of way and/or private roadway, and/or within 20 feet of the edge of the public or private right-of-way and visible to members of the public, shall be coordinated with the Portland City Arborist or their designee. Tree species shall be selected according to the City of Portland recommended tree list (Figure IV-1).
- B. Trees proposed in the sidewalk shall be planted in tree wells, as shown in Figures IV-4a, 4b, and 4c and as required by the City Arborist based upon site context and prospects for tree survival.
- C. Adequate soil volume, as determined by the City Arborist, shall be required to ensure tree survival.

4.1.3. Street tree alternatives.

A. Retention of existing trees.

Where an applicant is able to retain existing healthy and non-invasive trees within the public right-of-way, or within 20 feet of the edge of the right-of-way, such trees shall count towards a project's street tree requirement as described below, based upon the tree's diameter at breast height (DBH).

Over 12 inches DBH	3 street trees
8-12 inches DBH	2 street trees
6-8 inches DBH	1 street tree

B. Contribution to the tree fund.

Where the planting of required street trees is demonstrated to be infeasible, the applicant shall contribute to the City of Portland Tree Fund at a ratio of \$400 per required street tree.

4.1.4. On-site landscaping, screening and buffers.

A. Required on-site trees & plantings.

1. Required on-site plantings may be installed anywhere on the site (including a green roof) and may be planted in any arrangement.
2. The retention of existing and healthy shade trees or plantings, not identified by the City of Portland or State of Maine as an invasive species, shall be permitted to count toward this requirement.



4.1.5. Buffers & screening.

A. Parking Lot Screening along Public Right-of-Way. Where all or a portion of a surface parking area is located within 30 feet of a public right-of-way, and is not separated from the public right-of-way by a structure, the parking area shall include a buffer area five feet in width and utilize one of the following screening methods within five feet of the street line:

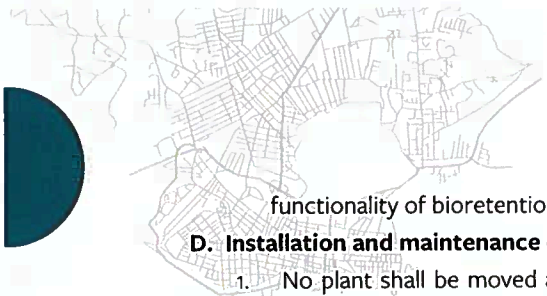
1. A masonry wall (excluding concrete masonry unit blocks) 30-36" in height with one planting per 10 feet of street frontage; or
2. A decorative wrought-iron-style fence 30-42" in height, with masonry piers that can extend to 48" in height but do not exceed 18" in width, and do not occupy more than 20% of the length of the fence with one planting per 10 feet of street frontage, or
3. A continuous line of shrubs that achieves 80% opaque screening 30-48" in height during summer months.

B. Walls & fences.

1. Fences and walls visible from the public right-of-way must be of high architectural quality.
2. Chain link and wire mesh fences shall not be directly visible from the public right-of-way and shall be vinyl coated and dark in color. Chain link fences shall meet the following design standards:
 - a. **Residential Development:** Be a minimum of 6-gauge fence fabric for
 - b. **Commercial/Industrial Development:** Be a minimum of 9-gauge fence fabric and mounted on schedule 40 pipe posts
3. Masonry walls shall be constructed of stone, brick or other durable and attractive materials. Concrete block walls are not permitted except where variety in color, design and detailing of the materials are of high architectural quality.
4. Electrified or barbed fencing is not permitted.

C. Buffer standards.

1. **General.** Where required, buffer areas shall be comprised of existing trees and vegetation, new landscaping or a combination thereof to create a dense, mixed buffer incorporating both understory and tree canopy layers. Such screening should also effectively provide screening when viewed from upper floors of surrounding properties, where applicable.
2. **Vegetative buffers.** New shrubs shall be spaced six (6) to eight (8) feet apart. Buffers between contrasting land uses may incorporate earthen berms not exceeding 4:1 slope, opaque fencing of high architectural quality, masonry wall or a combination thereof, in addition to landscape plantings. Where fencing or masonry wall is proposed as part of a buffer, less landscaping density is acceptable; however, buffers shall still include trees, shrubs and other vegetation.
3. **Parking areas.** Landscaping shall be incorporated into the development of surface parking to reduce adverse environmental and aesthetic impacts, to shade pavement to reduce heat island effect and to screen parking areas from public view. Plant materials shall be selected for appearance, durability, and tolerance to salt. Figures IV-6a and IV-6b provide examples of parking lot screening.
 - a. Landscaping that abuts areas of vehicular use shall be adequately protected and separated from vehicles. Protection should take the form of physical or visual separation, such as curb stops, bollards, or continuous curbing. Protection shall be designed with adequate visibility and durability in order to withstand normal snow plowing operations.
 - b. Landscaped islands shall be curbed and a minimum of eight (8) feet in width, not including curbing. The incorporation of bioretention into landscaped islands is strongly encouraged.
4. **Snow storage.** Snow storage areas may be located in landscaped areas provided that appropriate landscape materials are selected which can withstand such snow storage. Snow storage shall not be located in a stormwater treatment measure, shoreland zoning setback buffers, or where it would adversely impact the



functionality of bioretention or other stormwater management measures.

D. Installation and maintenance of plantings.

1. No plant shall be moved after the bud break unless so authorized by the City Arborist or their designee. Planting periods are between April 1st and July 1st and/or September 1st and November 1st.
2. Tree planting and other landscaping for subdivisions that cannot be installed prior to the release of the performance guarantee must be insured by a defect bond as described in Article 13 of the City Land Use Code.
3. All bare soil areas shall be vegetated and/or mulched prior to the issuance of a Certificate of Occupancy.
4. New vegetation that shows signs of construction damage within a one-year period following construction, including but not limited to bark damage or excessive root damage, grade changes other than those originally indicated in the approved grading plan, soil compaction due to heavy equipment traversing closely, or general decline due to mechanical or natural conditions shall be rejected and must be replaced prior to the release of any defect guarantee.
5. Slopes with between a 5% and 50% grade change shall incorporate installation of a mixture of vegetation, organic mulch and/or erosion control seed mix.
 - a. Stabilization of slopes greater than 50% must incorporate biotechnical and/or structural methods including but not limited to terracing rip rap or retaining walls in addition to vegetation. Retaining walls, if four (4) feet in height or greater from the bottom of the footing to the top of the wall and/or if supporting a surcharge, must be designed by a licensed engineer and require a City of Portland Building Permit.

Figure IV-1: City of Portland Recommended Tree List

Small Trees - (Mature Height < 25')

Common Name	Botanical Name	Cultivars	Uses	Native	Notes
Amelanchier or Shadbush	<i>Amelanchier</i>	"Autumn Brilliance", "Cumulus", "Robin Hill Pink"	Street tree/ Naturalize	X	Single stem tree forms
European Hornbeam	<i>Carpinus betulus</i>	Upright forms available	Street tree		
American Hornbeam	<i>Carpinus caroliniana</i>		Lawn/Landscape	X	
Hawthorn	<i>Crataegus crusgalli</i>	"Cusgali", "Winter King"	Street tree		Thornless
Flowering Crabapple	<i>Malus x</i>	"Adirondack", "Springsnow"	Street tree		
Sargent Cherry	<i>Prunus sargentii</i>	"Accolade", "Pink Flair"	Street tree & Ornamental		
Striped Maple	<i>Acer pennsylvanicum</i>		Naturalize	X	Naturalizing in shaded areas
Magnolia	<i>Magnolia spp.</i>	Many cultivars	Ornamental		
Hop-Hornbeam	<i>Ostrya virginiana</i>		Naturalize	X	Tolerates shade / understory
Sourwood	<i>Oxydendrum</i>		Ornamental	X	Interesting lat summer flower
"Arnold's Promise" Witchhaz <i>Hamamelis</i>					

Medium Trees to Large trees 25' > 45'

Common Name	Botanical Name	Cultivars	Uses	Native	Notes
Red Maple	<i>Acer rubrum</i>	"Armstrong", "Bowhall", "Karpick", "Red Pointe"	Street tree/ Landscape	X	Cultivars from upright to oval shape
Sugar Maple	<i>Acer saccharum</i>	"Green Mountain"	Naturalize Landscape use	X	
White Birch	<i>Betula papyrifera</i>	"Renaissance Reflection"	Naturalize	X	
River Birch	<i>Betula nigra</i>	"Heritage"	Naturalize	X	
Yellow Birch	<i>Betula lenta</i>		Naturalize	X	
Hackberry	<i>Celtis laevigata</i>		Street tree		
Ginkgo	<i>Ginkgo biloba</i>	"Mygar", "Autumn Gold"	Street tree		
Thornless Honeylocust	<i>Gleditsia inermis</i>	"Streetkeeper" (Upright form)	Street tree		
Tuliptree	<i>Liriodendron</i>		Street tree		
Tupelo	<i>Nyssa sylvatica</i>		Naturalize		
Swamp White Oak	<i>Quercus bicolor</i>		Street tree/Naturalize		
Red Oak	<i>Quercus rubra</i>		Street tree/Naturalize		
Upright-Growing Oaks	"Beacon" Oak		Street tree/Naturalize		
	"Urban Pinnacle" Oak		Street tree/Naturalize		
	"Kindred Spirit" Oak		Street tree/Naturalize		
	"Regal Prince"		Street tree/Naturalize		
American Elm	<i>Ulmus americana</i>	"Accolade", "Princeton"	Street tree	X	
Lacebark Elm	<i>Ulmus parvifolia</i>		Street tree		Interesting bark

Zelkova	<i>Zelkova serrata</i>	Musashino Zelkova	Street tree		
Conifers					
Common Name	Botanical Name	Cultivars	Uses	Native	Notes
Alaska Cedar	<i>Callitropsis nootkatensis</i>	Alaska Weeping Cedar	Buffer planting		Fast growing
Red Cedar	<i>Juniperus virginiana</i>		Naturalize/ Ornamental	X	
Eastern Larch or Tamarack	<i>Larix laricina</i>		Naturalize/ Ornamental	X	Deciduous
Dawn Redwood	<i>Metasequoia</i>		Ornamental		Deciduous
White Spruce	<i>Picea glauca</i>		Naturalize	X	
Serbian Spruce	<i>Picea omorika</i>		Ornamental		Upright / good for narrow locations
Pitch Pine	<i>Pinus rigida</i>	Small sizes available	Naturalize	X	Full sun, sandy soils
White Cedar	<i>Tuja occidentalis</i>	"Dark American", "Techny"	Naturalize	X	Can be pruned into hedge

Notes:

In the case of street trees, small trees (<25') are preferred in locations with overhead utilities, and fruiting varieties should generally be avoided.

DATE:
NOV. 2022

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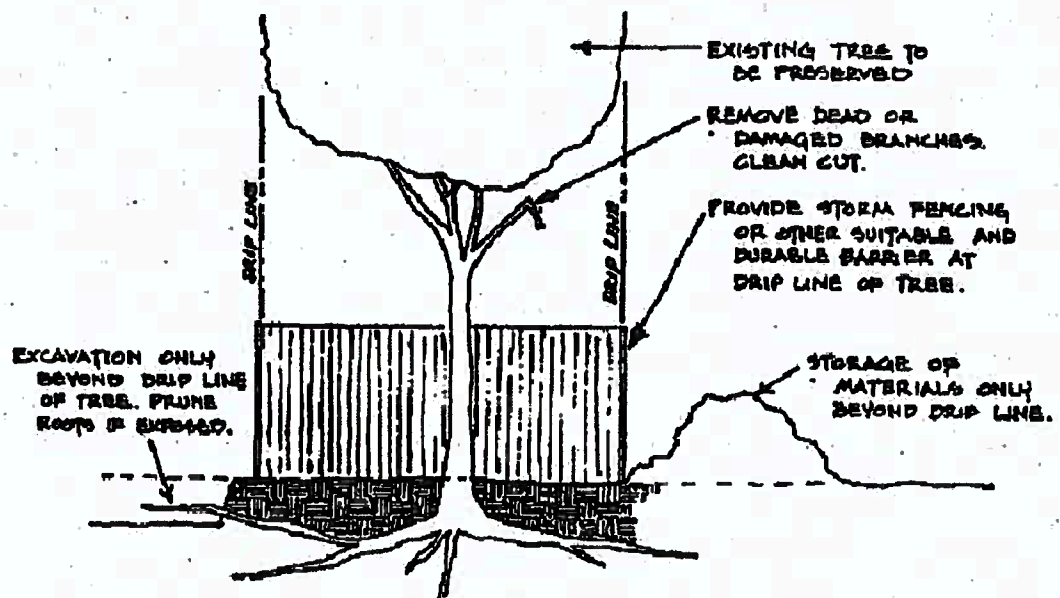
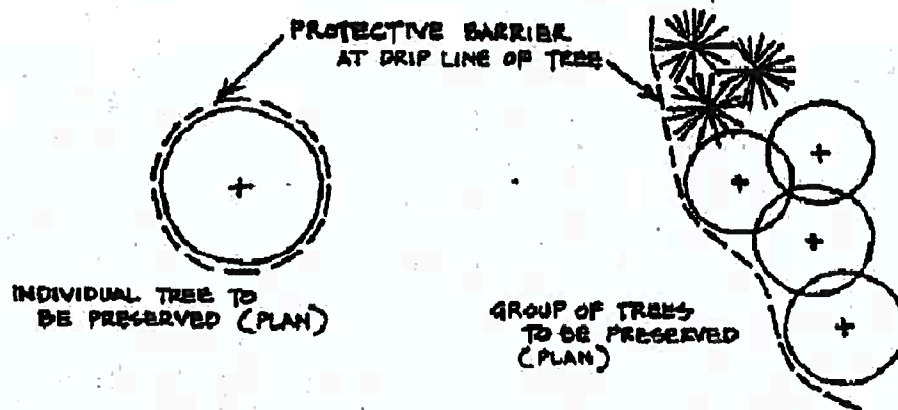
CITY OF PORTLAND, MAINE
TECHNICAL STANDARDS MANUAL

STANDARDS FOR LANDSCAPING
AND PRESERVATION OF
EXISTING VEGETATION
SECTION IV

RECOMMENDED TREE LIST - PAGE 1

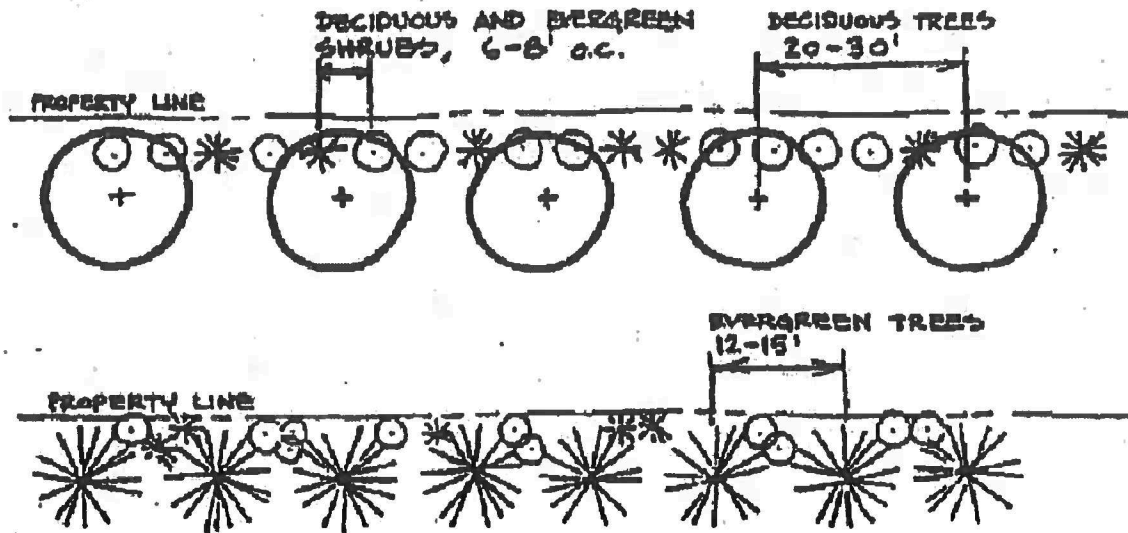
FIGURE:

IV-1

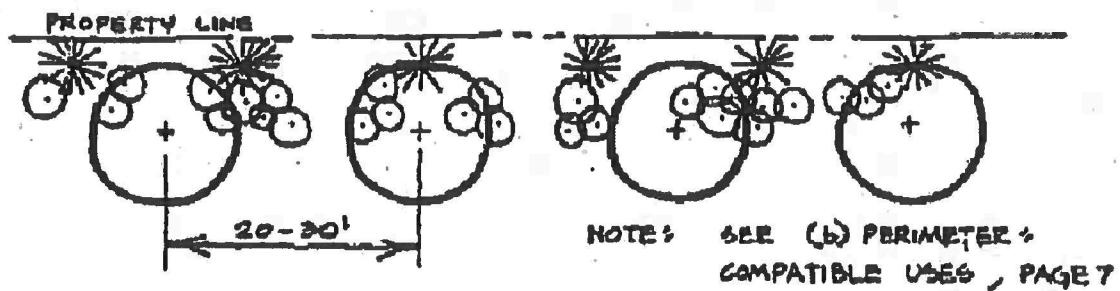


NOT TO SCALE

DATE: AUGUST 2009	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	STDS FOR LANDSCAPING AND PRESERVATION OF EXISTING VEGETATION SECTION IV	FIGURE:
REVISED:	TREE PRESERVATION DETAIL		IV-2



A. Commercial/Industrial Screening

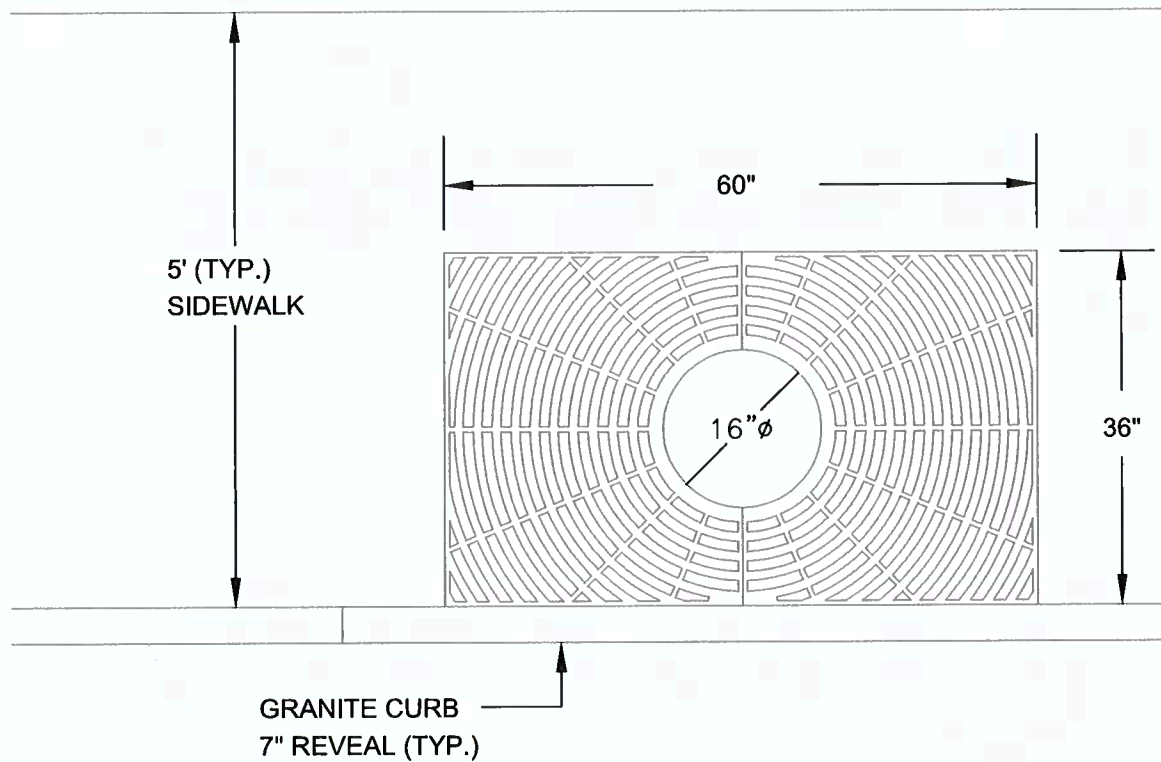


NOT TO SCALE

DATE: AUGUST 2009	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	STDS FOR LANDSCAPING AND PRESERVATION OF EXISTING VEGETATION SECTION IV	FIGURE:
REVISED:			IV-3
LANDSCAPING BETWEEN COMPATIBLE USES			

NOTES:

1. 16"Ø EXPANDABLE TREE OPENING. 0.25" SLOT OPENINGS.
2. ALL TREE GRATES SHALL COMPLY WITH CITY TECHNICAL STANDARDS AND MUST BE APPROVED BY THE CITY ARBORIST.
3. FINAL PLACEMENT LOCATION OF TREE GRATES SHALL BE APPROVED BY DPW AND SHALL CONSIDER SIDEWALK WIDTH AND ADA COMPLIANCE, ON-STREET PARKING CONFIGURATIONS, ABOVE AND BELOW GROUND UTILITIES AND OTHER OBSTRUCTIONS.
4. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY. SEE SIDEWALK CONSTRUCTION DETAILS IN SECTION 1 OF THE TECHNICAL MANUAL.
5. WHEN THE TREE GRATE IS INSTALLED IN A CONCRETE SIDEWALK, A NOTCH MUST BE INSTALLED ALONG THE EDGE TO HOLD THE GRATE, WHEN INSTALLED IN A BRICK SIDEWALK IT REQUIRES A FRAME TO BE INSTALLED TO HOLD THE GRATE IN PLACE.



PLAN VIEW

EXPANDABLE TREE GRATE WITH FRAME
NEENAH MODEL R-8810

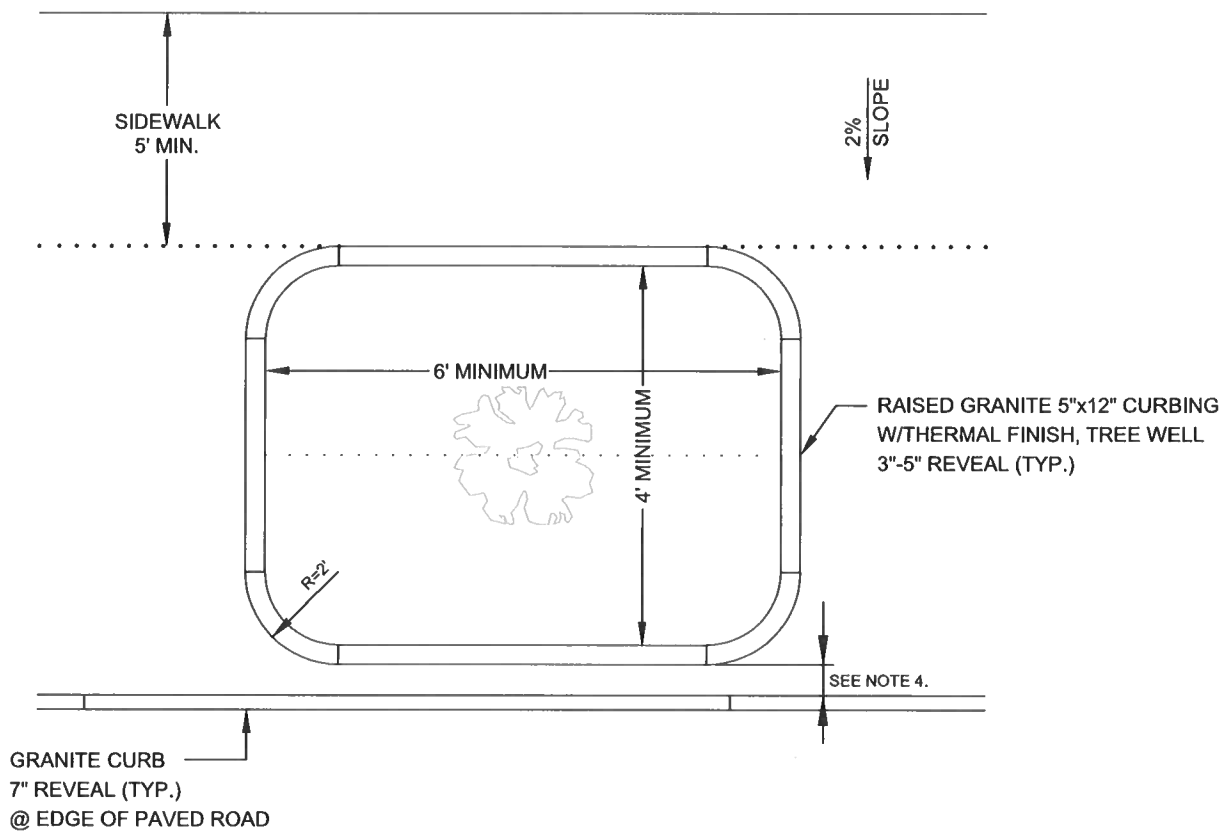
NOT TO SCALE

<http://www.nfco.com/literature/TreeGrateCatalog22/Avenue.pdf>

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	LANDSCAPE AND LANDSCAPING PRESERVATION EXISTING VEGETATION STANDARDS - SECTION IV	FIGURE:
	EXPANDABLE TREE GRATE WITH FRAME FOR NARROW RESIDENTIAL URBAN STREETS		IV-4A

NOTES:

1. ALL TREE WELLS SHALL COMPLY WITH CITY TECHNICAL STANDARDS AND MUST BE APPROVED BY THE CITY ARBORIST.
2. FINAL PLACEMENT LOCATION OF THE GRANITE CURB TREE WELL SHALL BE APPROVED BY DPW AND SHALL CONSIDER SIDEWALK WIDTH, STREET PARKING STATUS, ABOVE AND BELOW GROUND UTILITIES AND OTHER OBSTRUCTIONS.
3. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY. SEE SIDEWALK CONSTRUCTION DETAILS IN SECTION 1 OF THE TECHNICAL MANUAL.
4. RAISED CURB TREE WELL OFFSETS FROM THE CURB LINE SHALL TAKE THE LOCATION OF ON-STREET PARKING INTO ACCOUNT. WHERE ADJACENT TO ON-STREET PARKING AND SIDEWALK WIDTH ALLOWS, A MINIMUM OFFSET OF 2 FEET IS PREFERRED, UNLESS IT CAN BE DEMONSTRATED THAT THE PLACEMENT OF THE TREE WELLS WILL NOT INTERFERE WITH THE OPENING OF VEHICLE DOORS.



PLAN VIEW

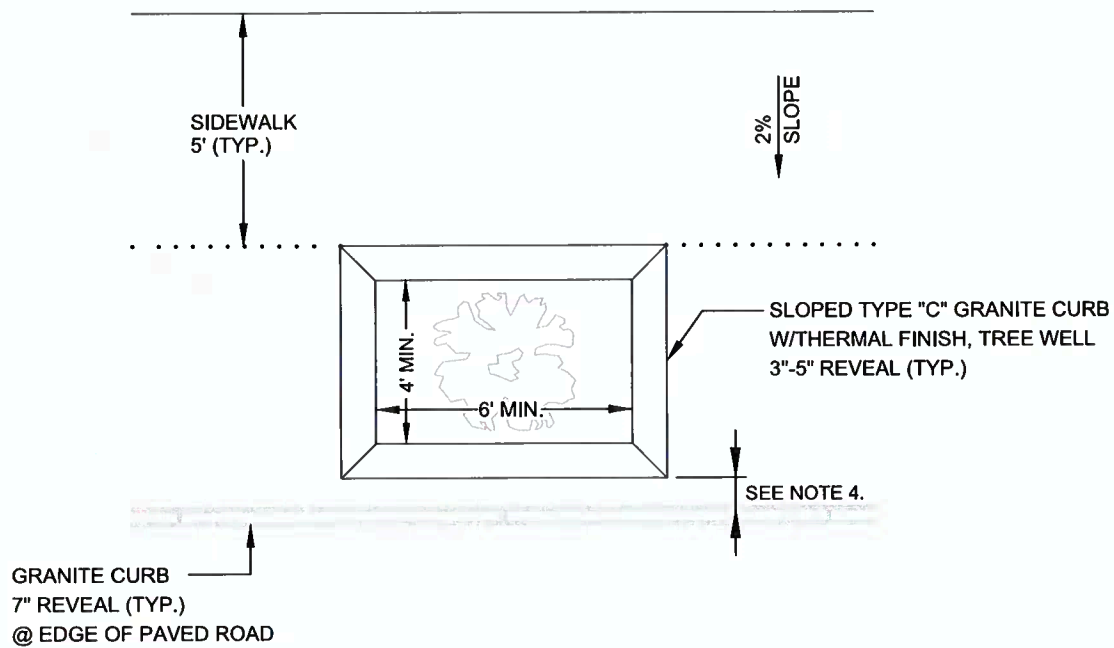
GRANITE BORDER TREETWELL IN SIDEWALK WITH NO ESPLANADE

NOT TO SCALE

DATE: NOV. 2022 REVISED:	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	LANDSCAPING AND LANDSCAPE PRESERVATION STANDARDS - SECTION IV	FIGURE:
	GRANITE BORDER TREE WELL IN SIDEWALK WITH NO ESPLANADE		IV-4B

NOTES:

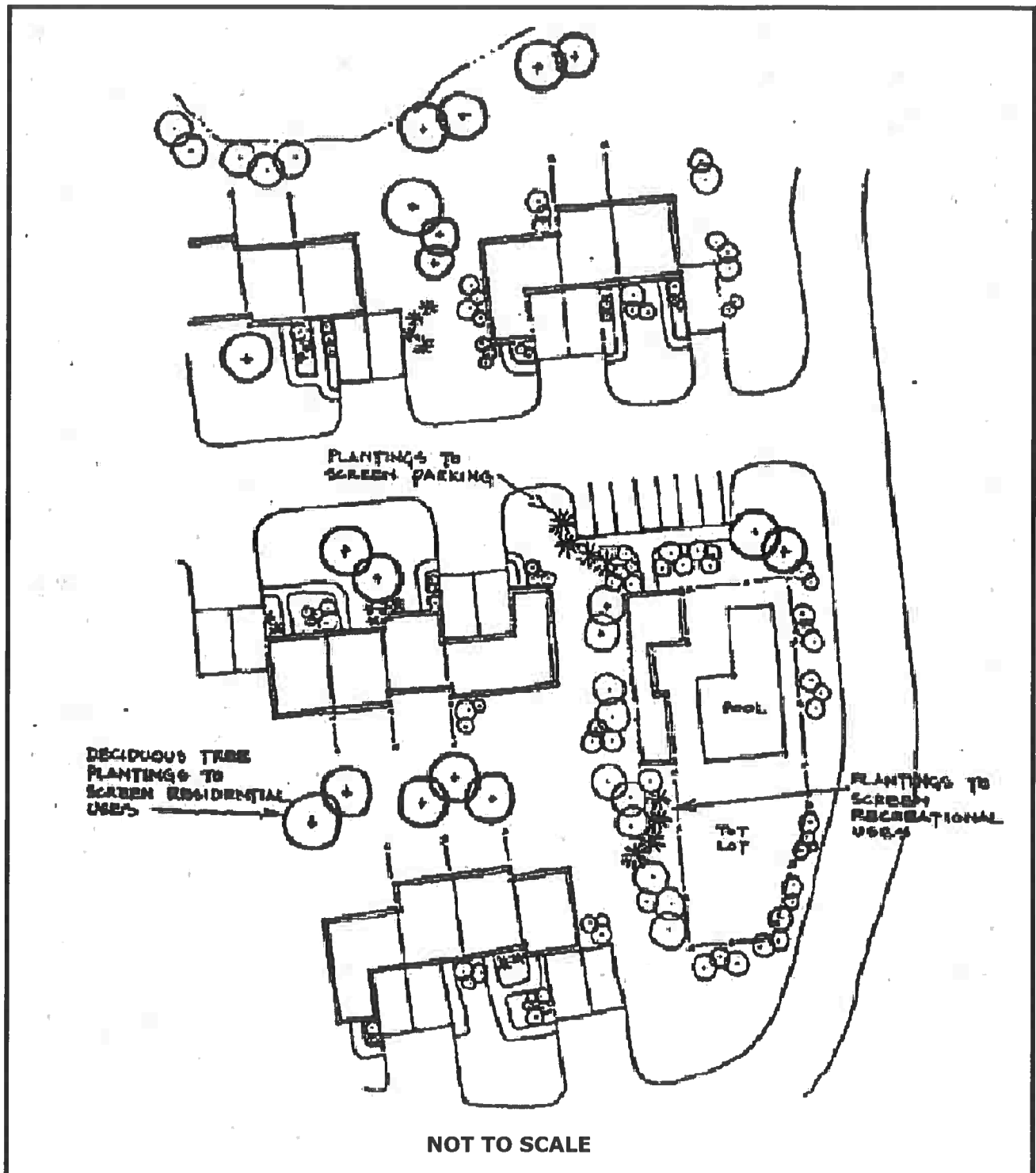
1. ALL TREE WELLS SHALL COMPLY WITH CITY TECHNICAL STANDARDS AND MUST BE APPROVED BY THE CITY ARBORIST.
2. FINAL PLACEMENT LOCATION OF THE GRANITE CURB TREE WELL SHALL BE APPROVED BY DPW AND SHALL CONSIDER SIDEWALK WIDTH, STREET PARKING STATUS, ABOVE AND BELOW GROUND UTILITIES AND OTHER OBSTRUCTIONS.
3. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY. SEE SIDEWALK CONSTRUCTION DETAILS IN SECTION 1 OF THE TECHNICAL MANUAL.
4. RAISED CURB TREE WELL OFFSETS FROM THE CURB LINE SHALL TAKE THE LOCATION OF ON-STREET PARKING INTO ACCOUNT. WHERE ADJACENT TO ON-STREET PARKING AND SIDEWALK WIDTH ALLOWS, A MINIMUM OFFSET OF 2 FEET IS PREFERRED, UNLESS IT CAN BE DEMONSTRATED THAT THE PLACEMENT OF THE TREE WELLS WILL NOT INTERFERE WITH THE OPENING OF VEHICLE DOORS.



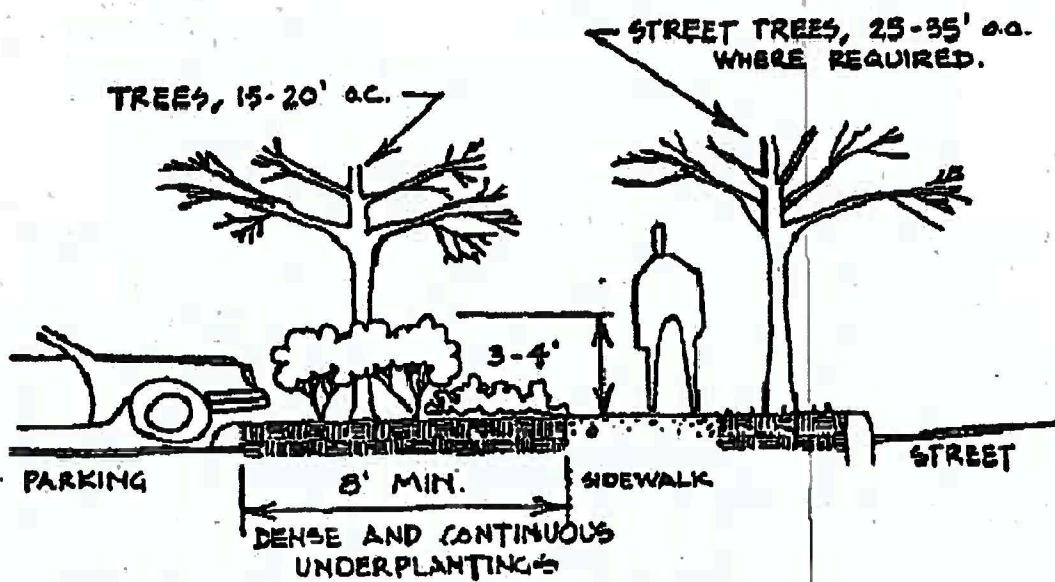
SLOPED TYPE "C" TREE WELL IN SIDEWALK WITH NO ESPLANADE

NOT TO SCALE

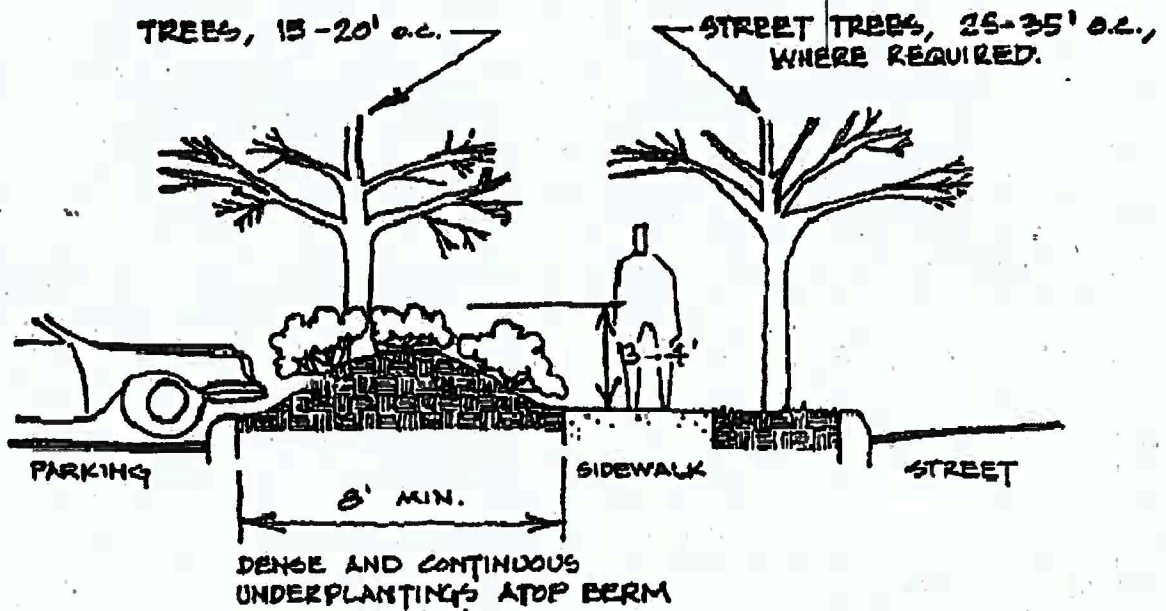
DATE: NOV. 2022	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	LANDSCAPING AND LANDSCAPE PRESERVATION STANDARDS - SECTION IV	FIGURE:
REVISED:		SLOPED TYPE "C" GRANITE TREE WELL IN SIDEWALK WITH NO ESPLANADE	IV-4C



DATE: AUGUST 2009	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	STDS FOR LANDSCAPING AND PRESERVATION OF EXISTING VEGETATION SECTION IV	FIGURE:
REVISED:	INTERIOR SITE LANDSCAPING		IV-5



A. Screening from Street (section)



NOT TO SCALE

DATE:
AUGUST 2009

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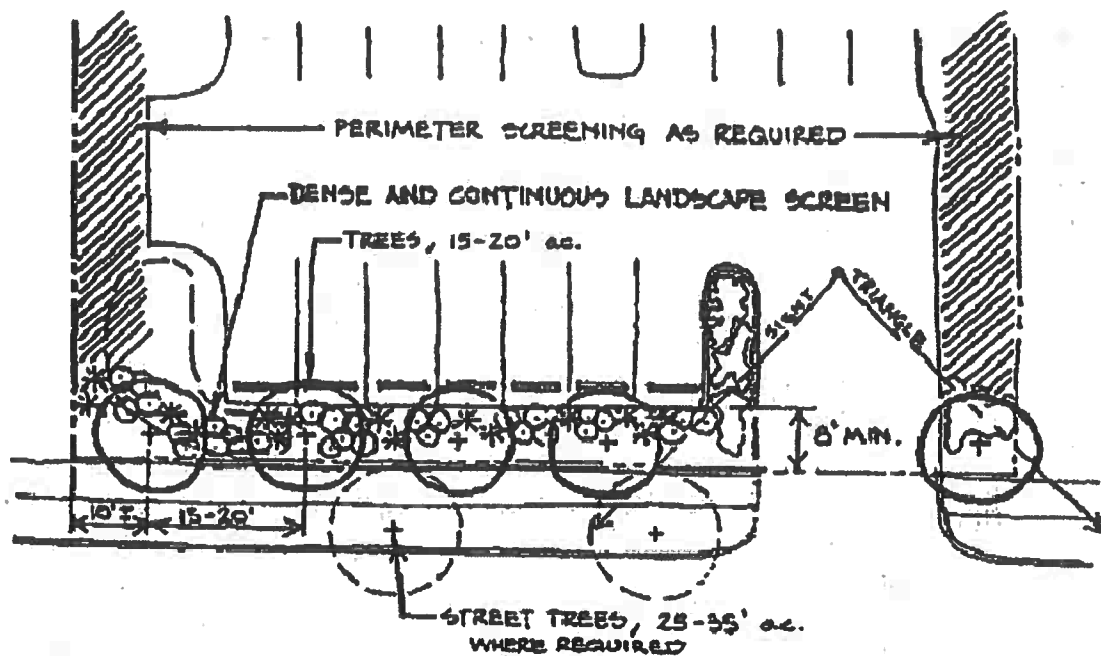
STDs FOR LANDSCAPING
AND PRESERVATION OF
EXISTING VEGETATION
SECTION IV

FIGURE:

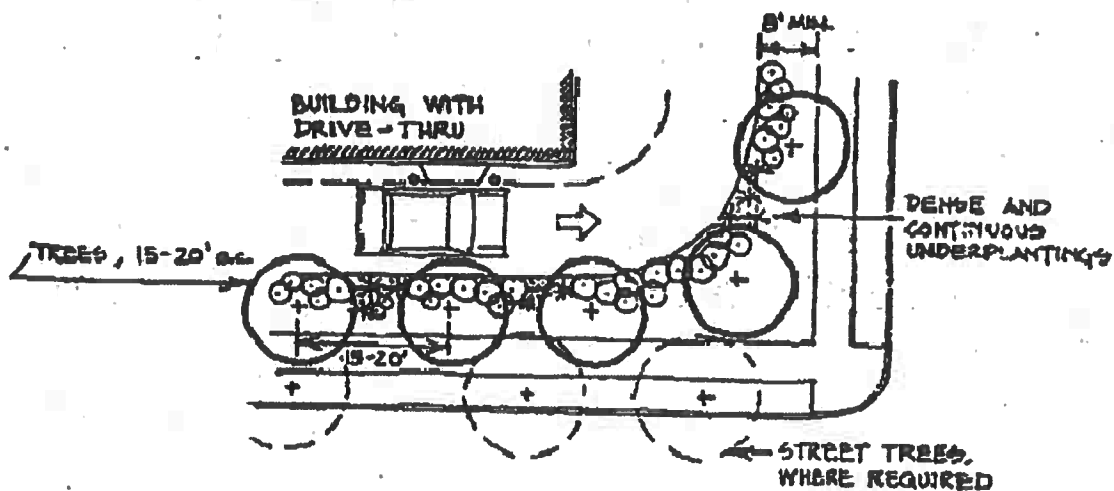
REVISED:

IV-6A

PARKING LOT SCREENING FROM PUBLIC VIEW



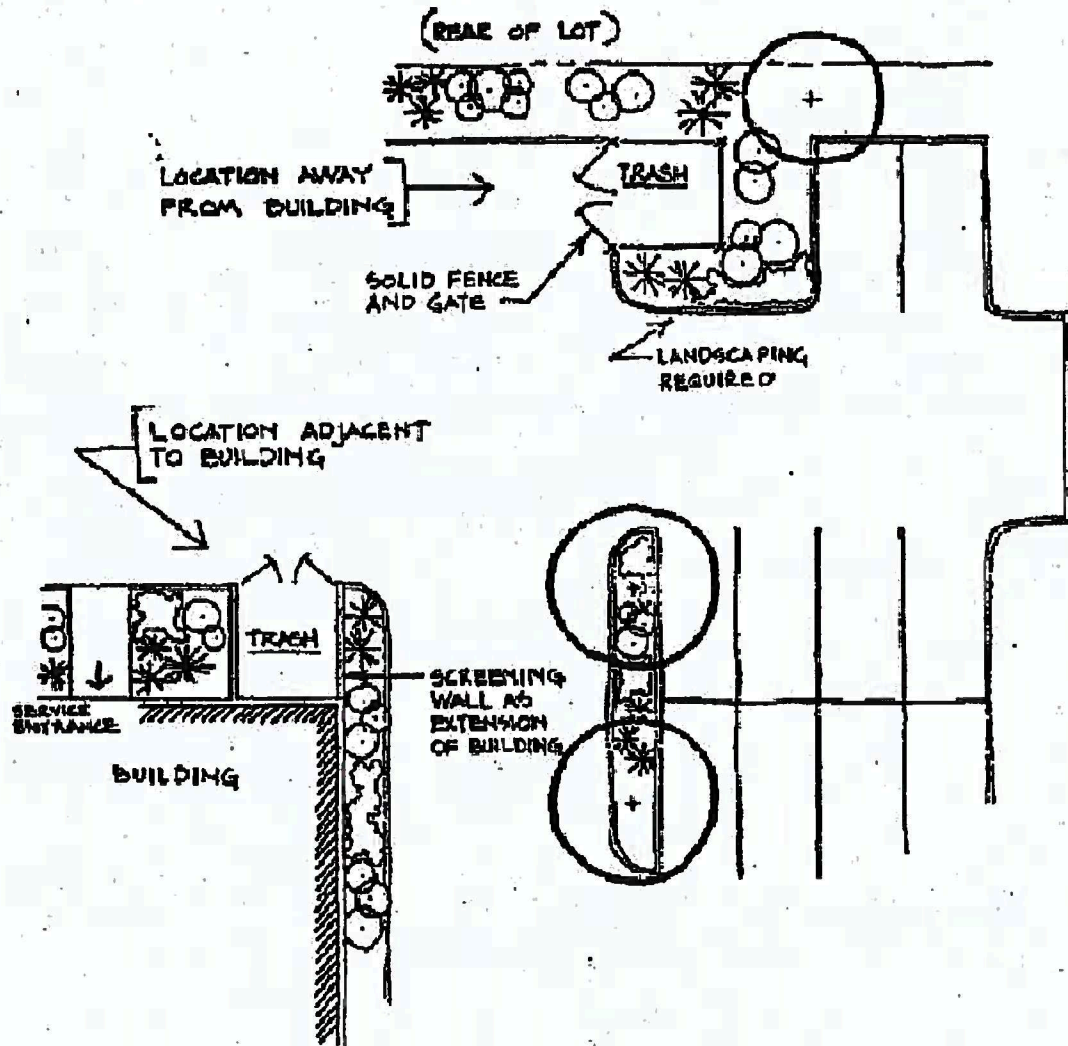
C. Screening from Street (plan)



D. Screening of Drive-Thru (plan)

NOT TO SCALE

DATE: AUGUST 2009	CITY OF PORTLAND, MAINE TECHNICAL STANDARDS MANUAL	STDS FOR LANDSCAPING AND PRESERVATION OF EXISTING VEGETATION SECTION IV	FIGURE:
REVISED:	PARKING LOT SCREENING FROM PUBLIC VIEW		IV-6B



NOT TO SCALE

DATE:
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CITY OF PORTLAND, MAINE
TECHNICAL STANDARDS MANUAL

STDs FOR LANDSCAPING
AND PRESERVATION OF
EXISTING VEGETATION
SECTION IV

FIGURE:

REVISED:

IV-7

SCREENING OF ACCESSORY SITE ELEMENTS

- d. For developments with significant traffic volumes of 50 or more peak trips, the Planning Board may consider requests for access to more than one street, providing a traffic study clearly demonstrates a traffic safety and congestion benefit will result.
- e. The Planning Board may relax driveway separation standards only upon finding, based on a traffic study, that the location of the street or driveway closer than these minimums is necessary for effective utilization of the site or to enable the sharing of an access with an adjacent lot to reduce the total number of necessary curb cuts, and will not cause unreasonable congestion or unreasonable safety hazards.
- f. The Planning Board may allow the payment of a fee-in-lieu for public sidewalk construction if recommended by the Town Engineer and Traffic Engineer due to site constraints or pending design plans.

B. Landscape and Screening Standards [amended 04/21/2021; amended 06/26/2024]

1. Purpose

Landscaping shall be used to complement the architecture, enhance the human scale, reinforce circulation paths, highlight entrances, provide shade, and add color and seasonal interest. Greenspace shall be designated to preserve the natural features or resources of a site, to provide areas for active or passive recreation, or for visual and aesthetic benefits.

2. Applicability

All landscaping approved after the date of effect of this Ordinance shall comply with these requirements. This includes, but is not limited to, new landscape, replacement planting, or any other landscaping proposed through the Site Plan or Subdivision process.

The provisions of this section shall not apply to individual single and two-family dwellings and their accessory buildings, structures and areas for parking.

Replacement planting for projects approved prior to this ordinance shall adhere to the plant species list in Section F.16. for vegetation selection.

3. General Standards

Trees and plantings shall be coordinated with the on-site architecture by complementing the building elevations without blocking storefronts, signs, or lighting and reinforce wayfinding by emphasizing entrances and circulation patterns.

A varying, but simple, collection of plant materials and species is encouraged to create a distinctive, yet low maintenance environment. Plantings plans shall strike a balance between monoculture (the use of a single species) and too much variety.

Shrubs, perennials, annuals, ornamental grasses, etc. used along the roadways should be planted in masses or 'drifts' that emphasize colors and textures, rather than used as single specimens.

Native species should be selected for their benefits of conserving water, protecting soil from erosion, and creating habitat and providing food for many different animals including birds, pollinators, and small mammals. Invasive species are prohibited.

4. Definitions

Bare-Root Plants: Bare-root plants are grown in the field, then harvested. The soil is washed or shaken from their roots after digging. Nearly all are dormant.

Balled-and-Burlapped Plants: Balled-and-burlapped (or B&B) trees and shrubs are grown in nursery rows.

Buffer: Landscaped areas, berms, fencing, walls or other physical features that are planted or installed to physically and visually separate land uses.

Container Grown Plants: Container-grown refers to a plant that has been grown in a container or one that has been transplanted into a container from the field.

Diameter at Breast Height (DBH): DBH is the diameter of a tree measured 4.5 feet above the ground.

Greenspace: Greenspaces are pervious areas of grass, trees or other vegetation, for recreation or aesthetic purposes.

Invasive Plants: An invasive plant is defined as a plant that is not native to a particular ecosystem, whose introduction does or is likely to cause economic or environmental harm or harm to human health.

Landscape Plan: A component of a development plan which shows the quantity, species, and size of all proposed vegetation.

Native Plants: A native or indigenous plant species is one that occurs in a particular place without the aid of humans. They are well adapted to the climate, light, and soil conditions that characterize their ecosystem. Species native to North America are generally recognized as those occurring on the continent prior to European settlement.

Site Furniture: Constructed, above-ground objects, such as outdoor seating, kiosks, bus shelters, sculpture, tree grids, trash receptacles, and fountains that have the potential for enlivening and giving variety to streets, sidewalks, plazas, and other outdoor spaces used by the public.

5. Minimum Landscaping Required

A minimum percentage of the total area being developed shall be landscaped in accordance with the following percentages:

- a. Multifamily dwellings: 15%
- b. Mixed-use buildings, commercial, retail and lodging use: 15%
- c. Office and professional uses: 15%
- d. Institutional and civic uses: 15%
- e. Industrial and manufacturing uses: 10%

Tree and shrub requirements for multi-family, commercial, institutional and civic uses:

- a. For every 500 square feet of landscaping required, or portion thereof, at least one (1) large tree and two (2) shrubs are required.
- b. Two (2) small ornamental trees may be substituted for one (1) required large tree, not to exceed 50% of the required large trees.

Tree and shrub requirements for industrial and manufacturing uses:

- a. For every 1,000 square feet of landscaping required, or portion thereof, at least one (1) large tree and two (2) shrubs are required.
- b. Two (2) small ornamental trees may be substituted for one (1) required large tree, not to exceed 50% of the required large trees.

Each development shall provide at least two (2) different species. No more than 50% of all trees, per development, shall be of the same species. This standard applies only to trees being planted to meet requirements, not to existing trees.

Ground cover is required. Landscaped area that is not planted with trees and shrubs must be planted in ground cover plants, which may include grasses and lawn areas. Mulch (as a ground cover) must be confined to areas underneath plants and is not a substitute for ground cover plants.

Stormwater treatment areas including retention and detention areas shall not be counted toward the required minimum landscaped area.

6. Buffer Yard - Streetscape

Planting plans shall emphasize large shade trees within or near the right-of-way in order to create a more unified streetscape. Large spreading deciduous trees shall be planted in appropriate locations along town roads and private access drives to define the edge of the travel way, provide shade for pedestrians, clean the air, and add scale to transportation corridors and commercial developments.

A vegetated buffer yard shall be established and/or maintained along the front property line of a lot where it abuts a public street as defined in the specific Zoning District for which the property is located. The minimum streetscape buffer yard shall be 10' deep for all streets not specifically designated.

Within a required buffer yard large trees shall be required at a rate of one (1) per thirty (30) feet. Trees may be planted in irregular groupings to accommodate utility conflicts and/or allow for design flexibility.

A buffer yard may be crossed by access roads or driveways and may include pedestrian and public utility facilities provided that the buffer function of the strip is maintained. Parking, internal roadways, structures, stormwater treatment areas and storage or service facilities may not be located within the buffer strip.

Trees and other landscaping planted at intersections shall preserve an adequate sight triangle as determined by the traffic engineer.

Landscape buffer strip requirements may be used to meet the overall landscape requirements established in Section F.5.

7. Buffer Yard – Residential Adjacency

Buffering shall be used to minimize any adverse impacts or nuisances on the site or from adjacent areas. Buffers shall be provided to shield structures and uses from the view of abutting properties, where the abutting properties would otherwise be adversely impacted.

A residential adjacency buffer yard is required when a side or rear yard abuts a residential district as defined in the specific Zoning District for which the property is located.

Buffer yards shall be installed by the more intense use. All required buffer yards abutting residential uses or districts shall maintain the district boundary in its natural state. Where no natural buffering can be maintained all side and rear yards abutting residential uses or districts shall be landscaped to provide a visual screen between districts.

Buffers may include fences, plantings, berms, grade changes and walls used to minimize any adverse impacts and nuisances on a given site or abutter.

Where residential adjacency buffers are required, the Planning Board may require evergreen or deciduous trees within these buffer areas as follows:

- a. Evergreen buffers require three (3) rows of staggered plantings. The rows shall be eight (8) feet apart and the evergreens planted six (6) feet on center.
- b. Deciduous buffers require trees with a minimum of 3-inch caliper and rows and spacing to be determined by the Board based on the characteristics of the site and uses.

8. Parking Lot Landscaping Required

Landscaping is necessary in parking lots to enhance their appearance, lessen the scale of paved areas, define edges, and provide shade and cover.

Parking Lot Screening. Plantings, trees, and other landscape elements shall separate parking lots from neighboring streets to minimize views of vehicles and paved areas, while still enabling views of the building. Where parking is provided between the building and the street, it shall be screened in accordance with the following:

- a. Landscape screening shall contain a continuous screen not less than three (3) feet in height in a minimum planting bed depth of five (5) feet. The five (5) foot planting bed is in addition to the depth required for the streetscape buffer yard.

The continuous screen may be comprised of:

- a. Shrubs provided every four (4) to six (6) linear feet within the required planting strip
- b. Three (3) feet tall fence or boulders in combination with shrubs; or
- c. Combination of the above

Planted screening must be capable of providing a screen of at least thirty-six (36) inches in height in two years.

Parking Lot Landscaping Required. Parking lot landscaping shall be in accordance with the following:

- a. Planting islands shall be included at a rate of one (1) island per fifteen (15) spaces.
- b. Landscape islands shall be required on both ends of all parking aisles, both single and double loaded, if such spaces are not adjacent to another landscaped area or entryway.
- c. Landscape islands shall be a minimum of 160 square feet, typically nine (9) feet wide and eighteen (18) feet deep, and shall contain at least one (1) large tree and four (4) shrubs.
- d. Parking lot entryways shall contain at least one (1) large tree and four (4) shrubs on each side.
- e. Vehicular use areas including drive aisles and/or parking space shall be screened from all abutting property by a continuous landscaped area not less than five (5) ten (10) feet deep. Stormwater treatment may be located in these areas upon approval by the Town Engineer.
- f. Trees in parking lots shall be planted in informal groups, straight rows, or concentrated in certain areas. Large trees shall be planted at least five feet from the end of parking lot islands for both motorist visibility and tree health.
- g. Areas adjacent to walkways shall be landscaped with trees, shrubs, ground cover, benches or other materials. Walkways in parking areas shall include landscaped islands for visual relief, shade, and scale.

Parking Lot Landscaping requirements may be used to meet the overall landscape requirements established in Section F.5.

9. Foundation Landscaping Required

Trees and plantings shall be coordinated with the on-site architecture by complementing the building elevations without blocking storefronts, signs, or lighting and reinforce wayfinding by emphasizing entrances and circulation patterns.

Planting beds are required along exposed building edges, foundations and uninterrupted walls. Plantings shall provide either a formal pattern or a naturalistic blend of heights, colors, and textures for visual relief.

In addition, all paved surfaces, excluding those adjacent to service areas and/or the rear of buildings, of parking areas shall be separated from buildings by a minimum five (5) feet landscape strip and a five (5) foot walkway.

- a. A minimum of one (1) shrub shall be provided every four (4) to six (6) linear feet within the required planting strip. Shrubs may be clustered to avoid utility conflicts.
- b. Small ornamental trees may be provided in the planting strip and substitute for four (4) shrubs.

Plantings shall be massed to soften edges, corners, and pavement areas, and to integrate the building into the landscape.

Large rocks may be used as landscape elements sparingly and as accents in mass plantings. Where used, they shall be buried for at least one third of their depth.

Where mulch is used, it shall consist of dark, decomposed shredded bark, with pieces less than one (1) inch in any one dimension.

Foundation landscaping requirements may be used to meet the overall landscape requirements established in Section F.5.

10. Screening – Service and Mechanical Areas

Refuse containers or disposal areas shall be screened from view by placement of a solid wood or vinyl fence or masonry wall as tall as the refuse containers, but no less than five (5) feet in height. All refuse materials shall be contained within the refuse area. Refuse containers and disposal areas shall be located to the side or rear of buildings, and in no instance shall be located in the front setback of a site.

- a. Structural screens and fencing shall complement the design of the main structure by repetition of materials, detailing, scale, and color.
- b. Where chain link fencing is required for safety, it shall be painted black or a similar dark color, or coated with dark vinyl. Plastic slats in chain link fencing are not permitted.
- c. Gates shall be designed to prevent sagging.
- d. Screening may be further enhanced with evergreen trees, shrubs, and earth berms.

All mechanical equipment, transformers, propane tanks and similar shall be screened from any public right-of way or adjacent residential use or zoning districts. Fencing, landscape or a combination shall be required

Screening requirements may be used to meet the overall landscape requirements established in Section F.5.

11. Screening – Outdoor Storage

Outdoor storage shall be permitted only as allowed by the Scarborough Zoning Ordinance.

The outside storage of goods, materials, merchandise, automobiles, automobile parts, containers, and the like shall be located to the side or rear of sites and screened from view, subject to the review and approval by the Planning Board. The Planning Board may require additional screening elements.

Areas for outdoor storage or containers shall be designed as an integral part of the site, landscaping, and architectural plan and shall be setback and screened from public and private ways, main entrances, public spaces, and abutting residential neighborhoods.

Screening requirements may be used to meet the overall landscape requirements established in Section F.5.

12. Landscape Preservation and Protection

Wherever practical, existing specimen trees, native species over 20" at DBH, tree clusters or other significant vegetation shall be preserved. Further, transplanting and reusing on-site trees and other vegetation is strongly encouraged.

When preservation is proposed, a tree inventory and survey showing the location, size, species and condition of existing protected trees on a lot, must be submitted and approved with the site plan application. The landscape plan shall illustrate which vegetation will be preserved and what protection measures will be implemented including the following minimums:

- a. Site features must be designed to minimize disturbance to protected trees.
- b. Tree wells or cut areas may be used to preserve the original grade around the tree. Raising the grade around protected tree trunks is prohibited.
- c. In the drip line of protected trees, no cut or fill may be at least four (4) inches deep unless a qualified arborist or forester evaluates and approves the disturbance.
- d. Finished grades must slope away from trunks to avoid water concentrated at tree bases.
- e. During construction, perimeter fencing must be erected around protected trees, at least six (6) feet from the trunk or one-half of the drip line, whichever is more.
- f. Storage or movement of equipment, material, debris, or fill in the tree protection zone is prohibited.
- g. Damaging attachments, wires, signs or permits cannot be fastened to protected trees.
- h. The developer is responsible for coordination with utility companies when trenching near protected trees. Trenches or footings should be at least eight (8) feet from trunk bases. Tunneling under large diameter roots may be required to prevent root damage.

Preserved landscaping may be used to meet the overall landscape requirements established in Section F.5.

13. Site Amenities

Public entrances to new or renovated buildings shall be complemented with outdoor seating or use areas. Canopies, recessed entrances, seating areas, decorative plantings, lawn areas and other elements shall be incorporated around the building entry to serve as pedestrian space or gathering areas.

14. Alternative Transportation and Bicycle Facilities

Provisions shall be made for alternative transportation if the site is located on a bus or bicycle route. Such provisions may consist of bus shelters, bicycle racks, or individual travel lanes for either mode of transportation.

Bicycle parking facilities are required for non-residential and multi-family uses. One (1) bicycle parking facility must be provided for every ten (10) vehicle parking spaces required. Bicycle parking design must follow recognized professional standards. The

location of bicycle facilities is subject to the approval by the Planning Board during the site plan process.

15. Snow Storage

Provisions shall be made for snow storage in the design of all parking areas. The areas shall be shown on the site plan to avoid conflicts with landscaping, visibility, drainage, or icing during the winter season.

Landscape materials surrounding parking lots and in islands shall be able to tolerate large quantities of snow stored during winter months. Delicate plant material shall not be used in areas where they are likely to be buried under snow.

All walkways and sidewalks shall be designed for efficient snow removal to enable year-round use.

Designated snow storage locations shall be required as follows:

- a. Located near the sides or rear of parking areas and driveways, away from primary street frontage.
- b. Located to maximize solar exposure to the greatest extent possible.
- c. Located so that snow moving equipment is not required to enter the public streets to move snow to the storage areas.
- d. Located in a manner to preserve sight lines of vehicles entering and exiting the site.
- e. Shall not block any required access, sidewalk, bicycle facility, trail or public path.
 - i. Shall not block drainage areas.
 - ii. Shall not be located in or near any stormwater treatment areas including retention and detention areas.
 - iii. May be located within parking areas, but such areas may not be counted towards required off-street parking.
 - iv. May be located within required landscaping areas, but the areas shall be planted with landscaping tolerant of snow storage.
 - v. Snow storage areas shall be located to avoid piling of snow against existing trees.

16. Approved Plant Species List

Plant material shall be selected with consideration to public health and safety. Plants to be avoided include those with poisonous fruits, large thorns, or shrubs that could provide hiding places along pathways or block the view of moving vehicles. The applicant shall use plant material and species that require a low degree of maintenance and that are resistant to insect infestation, drought, disease, road salt, and auto emissions, and are tolerant of local winter conditions.

All parking lot landscaping shall be appropriate for parking lot conditions. Trees that may damage automobiles (dripping sap, messy fruit, or hard seeds such as acorns) are discouraged in or around parking lots.

Invasive species shall not be used. The Do Not Sell Invasive plant list can be found here: [Maine Natural Areas Program Invasive Plant Fact Sheets](#)

The plants on the plant species list below have been derived from a number of sources to increase the use of native plants in Scarborough. This list is subject to periodic review based on factors that may change the viability or appropriateness of plantings.

All required trees shall be selected from the preferred or acceptable alternative list below, based on the size required for the landscape element. A minimum of sixty (60) percent of the total number of required trees shall be selected from the preferred species list.

When the ordinance requires a shrub, only plants classified as shrubs, perennials, ferns and grasses may be used. A minimum of forty (40) percent of the total number of shrubs shall be selected from the preferred species lists. Up to twenty-five (25%) percent of shrubs may be selected from an unlisted species subject to Site Plan approval. The [Maine Audubon Society](#) and the [University of Maine Cooperative Extension](#) provide extensive plant lists appropriate for Maine.

LARGE DECIDUOUS TREES		
Preferred Species		
Scientific Name	Common Name	Mature Height
<i>Acer x freemanii</i>	Armstrong Maple	40-55'
<i>Acer rubrum</i>	Red Maple	50-60'
<i>Acer saccharinum</i>	Silver Maple	60-80'
<i>Acer saccharum</i>	Sugar Maple	60-70'
<i>Betula alleghaniensis</i>	Yellow Birch	70-85'
<i>Betula borealis</i>	Northern Birch	30-60'
<i>Betula nigra</i>	River Birch	40-70'
<i>Betula papyrifera</i>	Paper Birch	60-70'
<i>Betula populifolia</i>	Gray Birch	20-40'
<i>Carya ovata</i>	Shagbark Hickory	70-90'
<i>Cladrastis kentukea</i>	Yellowwood	30-50'
<i>Fagus grandifolia</i>	American Beech	50-100'
<i>Larix laricina</i>	Larch, Hackmatack, Tamarack	50-60'
<i>Nyssa sylvatica</i>	Tupelo Black Gum	40-70'
<i>Platanus occidentalis</i>	Sycamore American Buttonwood	60-80'
<i>Prunus serotina</i>	Black Cherry	50-80'
<i>Quercus alba</i>	White Oak	60-70'
<i>Quercus bicolor</i>	Swamp Oak	50-60'
<i>Quercus coccinea</i>	Scarlet Oak	30-50'
<i>Quercus macrocarpa</i>	Bur Oak	60-100'

Quercus rubra	Northern Red Oak	60-80'
Tilia americana	American Basswood, American Linden	60-80'
Ulmus americana	Princeton American Elm	60-70'

LARGE DECIDUOUS TREES		
Acceptable Alternative Species		
Scientific Name	Common Name	Mature Height
<i>Aesculus x carnea</i>	Red Horse Chestnut	30-40'
<i>Aesculus hippocastanum</i>	Horse Chestnut	50-75'
<i>Betula jacquemonti</i>	Himalayan Birch	30-40'
<i>Catalpa speciosa</i>	Catalpa	40-60'
<i>Carpinus betulus</i>	European Hornbeam	40-60'
<i>Cercidiphyllum japonicum</i>	Katsura Tree	40-60'
<i>Fagus sylvatica</i>	European Beech	50-60'
<i>Ginkgo biloba</i>	Maidenhair Tree	60-100'
<i>Gleditsia triacanthos</i>	Thornless Honey Locust	65-100'
<i>Gymnocladus dioica</i>	Kentucky Coffee Tree	60-80'
<i>Juglans nigra</i>	Black Walnut	50-90'
<i>Liriodendron tulipifera</i>	Tulip Poplar Tree	60-90'
<i>Liquidambar styraciflua</i>	American Sweetgum	50-60'
<i>Magnolia acuminata</i>	Cucumber Tree	40-70'
<i>Metasequoia glyptostroboides</i>	Dawn Redwood	75-100'
<i>Platanus x acerfolia</i>	London Planetree	70-100'
<i>Quercus palustris</i>	Pin Oak	50-70'
<i>Quercus robur</i>	English Oak	40-70'
<i>Salix alba</i> 'Tristis'	Weeping Willow	50-75'
<i>Taxodium distichum</i>	Bald Cypress	35-100'
<i>Tilia cordata</i>	Littleleaf Linden	50-70'
<i>Tilia tomentosa</i>	Silver Linden	50-70'
<i>Zelkova serrata</i>	Zelkova	80-100'

LARGE EVERGREEN TREES		
Preferred Species		
Scientific Name	Common Name	Mature Height
<i>Abies balsamea</i>	Balsam Fir	60-70'
<i>Abies concolor</i>	White Fir	30-50'
<i>Abies fraseri</i>	Fraser Fir	30-50'
<i>Chamaecyparis thyoides</i>	Atlantic White Cedar	30-50'
<i>Juniperus virginiana</i>	Eastern Red Cedar	20-60'
<i>Picea glauca</i>	White Spruce	60-90'
<i>Picea rubens</i>	Red Spruce	60-80'
<i>Picea mariana</i>	Black Spruce	50-70'
<i>Pinus banksiana</i>	Jack Pine	50-60'
<i>Pinus rigida</i>	Pitch Pine	30-40'
<i>Pinus resinosa</i>	Red/Norway Pine	60-80'
<i>Pinus strobus</i>	Eastern White Pine	70-80'
<i>Thuja occidentalis</i>	Cedar Northern White	20-40'
LARGE EVERGREEN TREES		
Acceptable Alternative Species		
Scientific Name	Common Name	Mature Height
<i>Chamaecyparis</i> spp.	Cypress	10-60'
<i>Picea abies</i>	Norway Spruce	70-120'
<i>Picea engelmannii</i>	Engelmann Spruce	80-130'
<i>Picea omorika</i>	Serbian Spruce	50-60'
<i>Picea pungens</i>	Colorado Spruce	30-60'
<i>Pinus flexilis</i>	Limber Pine	60-80'
<i>Pinus nigra</i>	Austrian Pine	60-180'
<i>Pinus sylvestris</i>	Scots Pine	30-80'
<i>Thuja plicata</i>	Western Red Cedar/Arborvitae	50-70'

SMALL ORNAMENTAL TREES		
Preferred Species		
Scientific Name	Common Name	Mature Height
<i>Acer pensylvanicum</i>	Striped Maple	15-25'
<i>Amelanchier canadensis</i>	Eastern Serviceberry	30-40'
<i>Amelanchier arborea</i>	Downy Serviceberry	20-40'
<i>Amelanchier x grandiflora</i>	Apple Serviceberry	15-25'
<i>Amelanchier laevis</i>	Alleghany Serviceberry	15-40'
<i>Carpinus caroliniana</i>	American Hornbeam	10-25'
<i>Cercis canadensis</i>	Eastern Redbud	20-30'
<i>Cornus alternifolia</i>	Alternate Leaf Dogwood	15-25'
<i>Cornus florida</i>	Flowering Dogwood	12-20'
<i>Corylus Americana</i>	American Hazelnut	8-12' (also shrub)
<i>Crataegus crus-galli</i>	Cockspur Hawthorn	15-30'
<i>Hamamelis virginiana</i>	Common Witch-Hazel	15-20'
<i>Ostrya virginiana</i>	Eastern Hop Hornbeam	20-30'
<i>Oxydendrum arboretum</i>	Sourwood	20-25'
<i>Prunus virginiana</i>	Common Chokeberry	20-30'
<i>Sorbus americana</i>	American Mountain Ash	10-30'
<i>Cornus alternifolia</i>	Pagoda Dogwood	10-20'
<i>Viburnum lentago</i>	Nannyberry	10-30' (also shrub)

SMALL ORNAMENTAL TREES		
Acceptable Alternative Species		
Scientific Name	Common Name	Mature Height
<i>Acer campestre</i>	Hedge Maple	20-25'
<i>Acer griseum</i>	Paperbark Maple	20-30'
<i>Acer palmatum</i>	Japanese Maple	10-25'
<i>Acer triflorum</i>	Three Flower Maple	25-30'
<i>Amelanchier alnifolia</i>	Western Serviceberry	10-15'
<i>Chionanthus Virginicus</i>	American Fringetree	12-20'
<i>Cornus kousa</i>	Kousa Dogwood	20-30'
<i>Cornus mas</i>	Cornealian Cherry Dogwood	15-25'
<i>Cotinus obovatus</i>	American Smoketree	20-30'
<i>Crataegus viridis</i>	Winter King Hawthorne	20-35'
<i>Halesia Carolina</i>	Carolina Silverbell	30-40'
<i>Hamamelis vernalis</i>	Witchhazel	6-10' (also shrub)
<i>Hamamelis x intermedia</i>	Witchhazel	12-15'
<i>Maackia amurensis</i>	Amur Maackia	20-30'
<i>Magnolia x liliiflora</i>	Lily Magnolia	8-12' (also shrub)
<i>Magnolia loebneri</i>	Loebner Magnolia	20-30'
<i>Magnolia soulangiana</i>	Saucer Magnolia	20-25'
<i>Magnolia stellata</i>	Star Magnolia	15-20'
<i>Malus species</i>	Flowering Crabapple	15-25'
<i>Pinus mugo</i>	Mugo Pine	20-25'
<i>Prunus x accolade</i>	Accolade Flowering Cherry	20-25'
<i>Prunus sargentii</i>	Sargent Cherry	20-40'
<i>Stewartia pseudocamellia</i>	Stewartia	20-40'
<i>Syringa reticulata</i>	Japanese Tree Lilac	20-30'

SHRUBS			
Preferred Species			
Scientific Name	Common Name	Scientific Name	Common Name
<i>Aesculus parviflora</i>	Bottlebrush Buckeye	<i>Leucothoe fontanesiana</i>	Drooping Laurel
<i>Amelanchier arborea</i>	Downy Serviceberry	<i>Lindera benzoin</i>	Spicebush
<i>Amelanchier canadensis</i>	Canadian Serviceberry	<i>Myrica gale</i>	Sweet Gale
<i>Amelanchier stolonifera</i>	Running Serviceberry	<i>Myrica pennsylvanica</i>	Bayberry
<i>Aronia arbutifolia</i>	Red Chokeberry	<i>Physocarpus opulifolius</i>	Ninebark
<i>Aronia melanocarpa</i>	Black Chokeberry	<i>Prunus maritima</i>	Beach Plum
<i>Ceanothus americanus</i>	New Jersey Tea, Redroot	<i>Rhus aromatica</i>	Fragrant Sumac
<i>Cephalanthus occidentalis</i>	Buttonbush	<i>Rhus hirta</i>	Smooth Sumac
<i>Clethra alnifolia</i>	Sweet Pepperbush	<i>Rhus typhina</i>	Staghorn Sumac
<i>Comptonia peregrina</i>	Sweetfern	<i>Rosa carolina</i>	Pasture Rose, Carolina Rose
<i>Corylus Americana</i>	American Hazelnut	<i>Rosa palustris</i>	Swamp rose
<i>Cornus racemosa</i>	Gray Dogwood	<i>Rosa virginiana</i>	Virginia Rose
<i>Cornus sericea</i>	Redosier Dogwood	<i>Rubus odoratus</i>	Flowering Raspberry
<i>Diervilla lonicera</i>	Bush Honeysuckle	<i>Sambucus</i>	Elderberry
<i>Illex glabra</i>	Inkberry	<i>Vaccinium corymbosum</i>	Highbush Blueberry
<i>Illex verticillata</i>	Winterberry	<i>Viburnum</i> spp.	Viburnum
<i>Juniperus communis</i>	Common Juniper	<i>Xanthorrhiza simplicissima</i>	Yellowroot
<i>Kalmia angustifolia</i>	Sheep Laurel		
SHRUBS			
Acceptable Alternative Species			
Scientific Name	Common Name	Scientific Name	Common Name
<i>Azalea</i> spp.	Azalea	<i>Hydrangea</i> spp.	Hydrangea
<i>Buxus</i> spp.	Boxwood	<i>Pieris</i> spp.	Andromeda
<i>Cotoneaster</i> spp.	Cotoneaster	<i>Rhododendron</i> spp.	Rhododendron
<i>Deutzia gracilis</i>	Slender Deutzia	<i>Rose</i> spp.	Rose
<i>Enkianthus campanulatus</i>	Redveined Enkianthus	<i>Salix</i> spp.	Willow
<i>Fothergilla gardenia</i>	Dwarf Fothergilla	<i>Spiraea</i> spp.	Spiraea
<i>Fothergilla major</i>	Bottlebrush Bush	<i>Syringa</i> spp.	Lilac
<i>Forsythia</i> spp.	Forsythia	<i>Weigela</i> spp.	Weigela

PERENNIALS			
Preferred Species			
Scientific Name	Common Name	Scientific Name	Common Name
<i>Achillea millefolium</i>	Yarrow	<i>Iris versicolor</i>	Blue Flag Iris
<i>Actaea rubra</i> , <i>Actaea pachypoda</i>	Red Baneberry, White baneberry	<i>Liatris spicata</i>	Gayfeather
<i>Anemone canadensis</i>	Canadian Anemone	<i>Lobelia cardinalis</i>	Cardinal Flower
<i>Aquilegia canadensis</i>	Eastern Red Columbine	<i>Lupinus perennis</i>	Wild Lupine
<i>Asclepias tuberosa</i>	Butterfly weed	<i>Monarda didyma</i>	Scarlet Bee Balm, Oswego Tea
<i>Columbine aquilegia</i>	Columbine	<i>Monarda fistulosa</i>	Wild Bergamot
<i>Coreopsis lanceolata</i>	Lanceleaf Coreopsis	<i>Polygonatum pubescens</i>	Solomon's Seal
<i>Coreopsis verticillata</i>	Moonbeam Coreopsis	<i>Rudbeckia hirta</i>	Black-Eyed Susan
<i>Echinacea purpurea</i>	Purple coneflower	<i>Symphyotrichum novae-angliae</i>	New England Aster
<i>Eutrochium purpureum</i>	Joe Pye Weed	<i>Symphyotrichum novibelgii</i>	New York Aster
PERENNIALS			
Acceptable Alternative Species			
Scientific Name	Common Name	Scientific Name	Common Name
<i>Astilbe varieteis</i>	Astilbe	<i>Hosta</i> spp.	Hosta
<i>Agastache</i>	Anise Hyssop	<i>Leucanthemum</i>	Ox-eye Daisy
<i>Aruncus dioicus</i>	Goatsbeard	<i>Malva alcea</i> 'fastigiata'	Hollyhock Mallow
<i>Baptisia</i>	Wild Indigo	<i>Nepeta x faassenii</i>	Walker's Low Catmint
<i>Epimedium</i>	Barrenwort	<i>Perovskia atriplicifolia</i>	Russian Sage
<i>Geranium</i> spp.	Geraniums	<i>Phlox</i> spp.	Garden Phlox
<i>Hemerocallis</i> species	Daylilies	<i>Sedum telephium</i>	Autumn Joy Sedum
<i>Heuchera</i> spp.	Coral Bells		
FERNS			
Preferred and Acceptable Species			
Scientific Name	Common Name	Scientific Name	Common Name
<i>Adiantum pedatum</i>	Maidenhair Fern	<i>Osmundastrum cinnamomeum</i>	Cinnamon Fern
<i>Athyrium angustum</i>	Lady Fern	<i>Osmunda claytoniana</i>	Interrupted Fern
<i>Dennstaedtia punctilobula</i>	Hayscented Fern	<i>Osmunda regalis</i> var. <i>spectabilis</i>	Royal Fern
<i>Matteuccia struthiopteris</i> var. <i>pensylvanica</i>	Ostrich Fern	<i>Polystichum acrostichoides</i>	Christmas Fern
<i>Onoclea sensibilis</i>	Sensitive Fern		

GRASSES			
Preferred Species			
Scientific Name	Common Name	Scientific Name	Common Name
<i>Ammophila breviligulata</i>	Beachgrass	<i>Deschampsia cespitosa</i>	Tufted Hairgrass
<i>Andropogon gerardii</i>	Big Bluestem	<i>Deschampsia flexuosa</i>	Crinkled Hairgrass
<i>Carex appalachica</i>	Appalachian Sedge	<i>Panicum virgatum</i>	Switchgrass
<i>Carex pensylvanica</i>	Pennsylvania Sedge	<i>Juncus</i> spp.	Rush
<i>Chasmanthium latifolium</i>	Northern Sea Oats	<i>Schizachyrium scoparium</i>	Little Bluestem
<i>Eragrostis spectabilis</i>	Purple Lovegrass	<i>Sporobolus heterolepis</i>	Prairie Dropseed
GRASSES			
Acceptable Alternative Species			
Scientific Name	Common Name	Scientific Name	Common Name
<i>Calamagrostis x acutiflora</i>	Feather-Reed Grass	<i>Miscanthus sinensis</i>	Maiden Grass
<i>Calamagrostis brachytricha</i>	Feather-Reed Grass	<i>Molinia caerulea</i> subsp. <i>Arundin</i>	Moor Grass
<i>Festuca glauca</i>	Blue Fescue	<i>Pennisetum alopecuroides</i>	Fountain Grass
<i>Hakonechloa macra</i>	Hakone Grass		
GROUNDCOVERS			
Preferred and Acceptable Species			
Scientific Name	Common Name	Scientific Name	Common Name
<i>Arctostaphylos uva-ursi</i>	Bearberry	<i>Juniperus horizontalis</i>	Creeping Juniper
<i>Cornus canadensis</i>	Bunchberry	<i>Mitchella repens</i>	Partridgeberry
<i>Gaultheria procumbens</i>	Checkerberry, Wintergreen	<i>Vaccinium angustifolium</i>	Lowbush blueberry

Plant materials shall meet the following minimum sizes, unless alternative sizes are required given a particular site or location:

Landscape Element	Minimum Size
Large Deciduous Trees	2 ½ " caliper
Large Evergreen Trees	5-7' in height
Small Ornamental Trees	2" caliper
Shrubs	3gallons
Perennials	1 gallon
Ferns	1 gallon
Grasses	1 gallon
Groundcovers (plugs acceptable)	1 gallon

The Planning Board may require larger plants for special locations, such as within the Route One right-of-way and along Haigis Parkway.

17. Installation, Guarantee and Maintenance

Installation. The ultimate form and height of plantings shall be considered so they will not create unsafe conditions or block sight lines for pedestrians, bicyclists, or motorists as they mature.

Trees shall be planted in locations where their root development and branching patterns will not interfere with window displays, signage, underground or overhead utilities, streets, and sidewalks.

The installation of underground irrigation is encouraged in front setbacks, public spaces, and other highly visible areas. It shall be coordinated so it does not cause overflow or flooding in pedestrian use areas, such as walkways, sidewalks, or parking lots.

The Town recognizes the seasonal nature of landscape installation; however, all landscaping shall be installed according to the approved site plan prior to Certificate of Occupancy or within six (6) months after the Certificate of Occupancy has been issued and a performance guarantee has been provided and accepted by the Town.

Maintenance. Landscape plans shall anticipate a three (3) to eight (8) year growing cycle to achieve maturity for shrubs and fifteen (15) to twenty (20) plus years for trees. The plan shall be designed and plantings selected with due consideration for maintenance requirements.

A written maintenance plan shall be provided for the landscape elements to be installed on the site. The plan shall include initial installation, guarantee period, replacement policy, annual maintenance, and irrigation provisions. Maintenance plans shall include alternatives to regular mowing and pesticide use if possible. This may be established on the landscape plan with standard notes.

Trees and shrubs in and near parking areas and walkways shall be trimmed and maintained so that they do not block views needed for safe movement of motorists and pedestrians. Vertical clearances of at least eight (8) feet shall be maintained. Shrubs in parking lot islands shall not exceed three (3) feet in height to avoid blocking visibility.

All plant material shall be allowed to achieve their natural forms without excessive pruning. Shaping evergreen shrubs into tight geometrical forms shall be avoided.

Guarantee. All lawns and plant materials shall be guaranteed for a period of not less than two (2) years. The developer shall submit a copy of a guarantee and a contract with the landscape contractor, indicating the terms of the guarantee period, or may obtain a letter of credit. The guarantee period does not begin until all landscaping has been installed.

Where plant materials specified on the planting plan do not survive or are damaged, they shall be replaced and/or reinforced in accordance with the two-year performance guarantee to maintain conformance with the approved planting plan and to provide the necessary landscape effect.

Plants that die must be replaced in kind, unless another species is more appropriate given the site's growing conditions. A fine may be levied if the landscaping has not been maintained, and new plants required to be planted.

18. Landscape Plan Required

If site improvements will create ten (10) or more new parking spaces or create 2,000 sq. ft. or more of new building footprint, a landscape plan shall be prepared by a landscape architect registered in Maine.

The Planning Board, at their discretion, may require a peer review of landscape plans.

Landscaping for multiple building developments shall be coordinated with all other elements of the site. As part of the application for Site Plan approval, applicants shall submit a master landscape plan that shows how landscaping will be used to complement proposed buildings, reinforce circulation paths, help define pedestrian use areas, highlight entrances, provide shade, and add seasonal interest to the landscape.

Plantings used in stormwater treatment facilities should be designed by a qualified professional.

The planting plan shall illustrate how plantings shall be coordinated with the location of underground and overhead utilities and lighting.

Each landscape plan shall include the following table filled out for the specific site:

Minimum Landscape Required	Required	Provided
Minimum Landscape Area (square feet)		
Minimum Trees Required		
Trees (Preferred Species)	Min 60% = ##	% and #
Trees (Alternative Species)	Max 40% = ##	% and #
Minimum Shrubs Required		
Shrubs (Preferred Species)	Min 40% = ##	% and #
Shrubs (Alternative Species)	Max 60% = ##	% and #
Shrubs (Unlisted)	Max 25% = ##	% and #

Buffer Yard - Streetscape	Required	Provided
Street Name		
Street Frontage Depth		
Street Frontage Length (excluding entryways) (linear feet)		
Street Frontage Area (square feet)		
Street Trees		
Buffer Yard - Residential Adjacency (if required)	Required	Provided
RA Type Required		
RA Buffer Depth (feet)		
RA Buffer Length (linear feet)		
RA Buffer Area (square feet)		
RA Buffer Trees		
Parking Lot Screening (if required)	Required	Provided
Parking Lot Screen Depth (feet)		
Parking Lot Screen Length (excluding entryways) (linear feet)		
Parking Lot Screen Area (square feet)		
Parking Lot Screening Shrubs		
Parking Lot Landscape	Required	Provided
Parking Calculation Type		
Parking Spaces		
Parking Islands (number)		
Parking Islands Total Area (square feet)		
Parking Island Trees		
Parking Island Shrubs		
Entryway Trees		
Entryway Shrubs		
Continuous 5' Landscape Area - All Applicable Sides (square feet)		
Foundation Landscape	Required	Provided
Landscape Bed Depth (feet)		
Landscape Bed Length - All Applicable Sides (linear feet)		
Landscape Bed Area - All Applicable Sides (square feet)		
Landscape Bed Shrubs		
Landscape Bed Ornamental		

Trees (if provided)		
Additional Screening (if required)	Required	Provided
Dumpster Area Fence		
Dumpster Areas Shrubs		
Mechanical Screening Fence		
Mechanical Screening Shrubs		

19. Waivers Landscape and Screening Standards

The Planning Board may review and approve requests for waivers to landscaping standards for the following:

- a. The Planning Board may reduce the amount of landscaping required for parking lots if additional landscaping of equal or greater value is provided on other areas on site.
- b. The Planning Board may approve an alternative interior parking island design to address stormwater runoff if recommended for approval by the Town Engineer.
- c. The Planning Board may approve stormwater treatment areas located in the streetscape buffer yard if recommended for approval by the Town Engineer.
- d. The Planning Board may approve an alternative planting plan if the site is not able to accommodate the required plantings, only as follows:
 - i. One large tree may be substituted by two (2) ornamental trees
- e. The Planning Board may waive or decrease the five (5) foot landscape strip requirement between all parking areas and buildings if the development is in an urban setting.
- f. The Planning Board may waive residential adjacency buffer requirements if the site is in conjunction with a master planned development or within a mixed-use district.
- g. The Planning Board may waive the required snow storage areas if a snow storage management plan is submitted and approved by the Town that includes the following:
 - i. Designated temporary or interim snow storage areas that do not interfere with more than one-third (1/3) of the project required minimum parking.
 - ii. Interim snow storage shall be removed within five (5) calendar days following a storm cycle.
 - iii. Interim snow storage shall not be in a location that will damage trees, landscape or other facilities.
 - iv. Interim snow storage shall not block any required access, sidewalk, trail or public way.

- v. Snow shall be hauled to approved and permitted locations. The location shall be provided.
- vi. Snow hauling shall generally be completed during non-business hours.
- vii. The snow management plan shall designate the removal methods.
- h. The Planning Board may consider waivers for the number of bicycle parking facilities for parking lots with 50 or more parking spaces provided.

C. Stormwater Management [amended 04/21/2021]

Adequate provisions shall be made for the control, collection and disposal of all stormwater runoff from the site. Drainage plans, details, and calculations shall address the two, ten and twenty-five year, twenty-four hour storm events. These plans shall be designed to complement the hydrology and natural features of the site and shall not cause adverse impacts to abutters, downstream properties, or receiving waters. Post-development stormwater flow rates must be equal to or less than pre-development stormwater flow rates.

1. Stormwater management areas shall be treated as integral, attractive and natural parts of the landscape. Natural areas shall be used to retain and drain stormwater to the extent possible.
2. When areas of the site are to be paved they may be designed and constructed with pervious and semi-pervious alternatives to bituminous pavement. Alternative parking surfaces, such as porous pavement, are intended to minimize storm water run-off and facilitate infiltration and natural hydrological functions to the extent feasible.
3. Stormwater treatment basins shall be patterned after natural features and shall avoid hard geometric shapes. These basins shall be planted with wetland species to improve their aesthetic and habitat values.
4. Abrupt changes to natural drainage ways and grades shall be avoided. Natural drainage ways shall not be filled unless specifically permitted by the Applicable Reviewing Authority and transitional grading shall be used to blend all earthworks into the natural contours of the site.
5. Drainage systems shall be designed so as to not impact streets, adjacent properties, downstream properties, and local soils and vegetation. The system shall also consider and incorporate the upstream runoff that may pass over the site. Systems should include green infrastructure and low impact development practices.
6. The water quality of receiving waters shall not be degraded by the stormwater runoff from the site. Oil and grease traps, on-site vegetated waterways, drainage swales, and vegetated buffer strips shall be utilized as needed to aid in the prevention of degraded receiving waters.
7. Where ground protection and rip rap is necessary in visible locations it shall be constructed of hand-placed rock or geo-grid, rather than course rip-rap.