Landscape Design Guidelines

Fairfield Hills

Newtown, CT

17 July 2007

Prepared By:

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Fairfield Hills Landscape Design Guidelines

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(formerly Vollmer Associates LLP)

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(from Fairfield Hills Campus Master Plan, dated 3/3/2003)

Overview

These standards and guidelines shall be used when preparing preliminary landscape plans in association with all commercial, institutional, residential and planned development projects for the Fairfiled Hills Redevelopment including modifications to existing planned development(s). Each landscape plan shall be consistent with the Town of Newtown Municipal Codes and Regulations.

Furnishings and materials included herein are recommended for use within the Fairfield Hills Campus. Some materials or furnishings, such as pavements or benches, have multiple pages depicting a range of materials and/or furnishings relating to installation cost and proposed location.

The reader remains responsible to be fully aware of all other Town codes, policy, and guidelines which pertain to landscaping, whether specifically discussed or mentioned.

Purpose

The purpose of this manual is to establish minimum acceptable landscape design standards. To ensure continual and long term project results, the Fairfield Hills Authority will require the lease holder to give consideration to the following design principles:

A. Landscape Elements
B. Plant Materials
C. Entryway Landscaping
D. Planting Arrangement
E. Screening

A more detailed analysis of each principle follows:

A. Landscape Elements

A basic means of unifying the campus landscape is to use a consistent palette of elements. There are existing elements on the campus which, if adopted as standard, would support the integration of the campus environment. For Fairfield Hills, the large size and beauty of the existing architecture combined with the common use of brick greatly identifies the character of this campus. The landscape elements provided in this manual (i.e., lighting, trash receptacles, and benches) are chosen because they reflect and enhance the existing character and their implementation is strongly encouraged.

Purpose

B. Plant Materials

Landscaping should provide aesthetic enhancement of a project site, screen objectionable objects from public view, and replace scarred hillsides of missing vegetation impacted by grading activity. A successful landscape project will consider the appropriate use of plant materials, proper plant spacing and long term maintenance needs for each plant type as noted herein.

C. Entryway Landscaping

Entryway landscaping is encouraged and should include design elements which are common to the proposed development. Design elements may include, but not be limited to: entry wall monuments, raised planters, ornamental gates, specimen trees, monumental fences, and large shrubs.

D. Planting Arrangement

Plants need room to develop canopy and rooting structure. For best results, plants should be spaced so that no more than 1/3 of the plant's mature canopy (spread) will overlap into another plant's. Give careful consideration to the following plant spacing issues:

- The special arrangements (linear rows, groupings, or massing) and spacing of plants;
- The surrounding surface treatment and surface opening at the base of the plant;
- The proximity of the plant(s) to surrounding architecture and/or existing landscape areas;
- The plant's growth rate and coverage requirements.

E. Screening

The intent of the provision to provide screening is to screen from view all service dumpsters, exterior mechanical units and other exterior utility fixtures as necessary. Refer to the item's material sheet for recommended screening types.

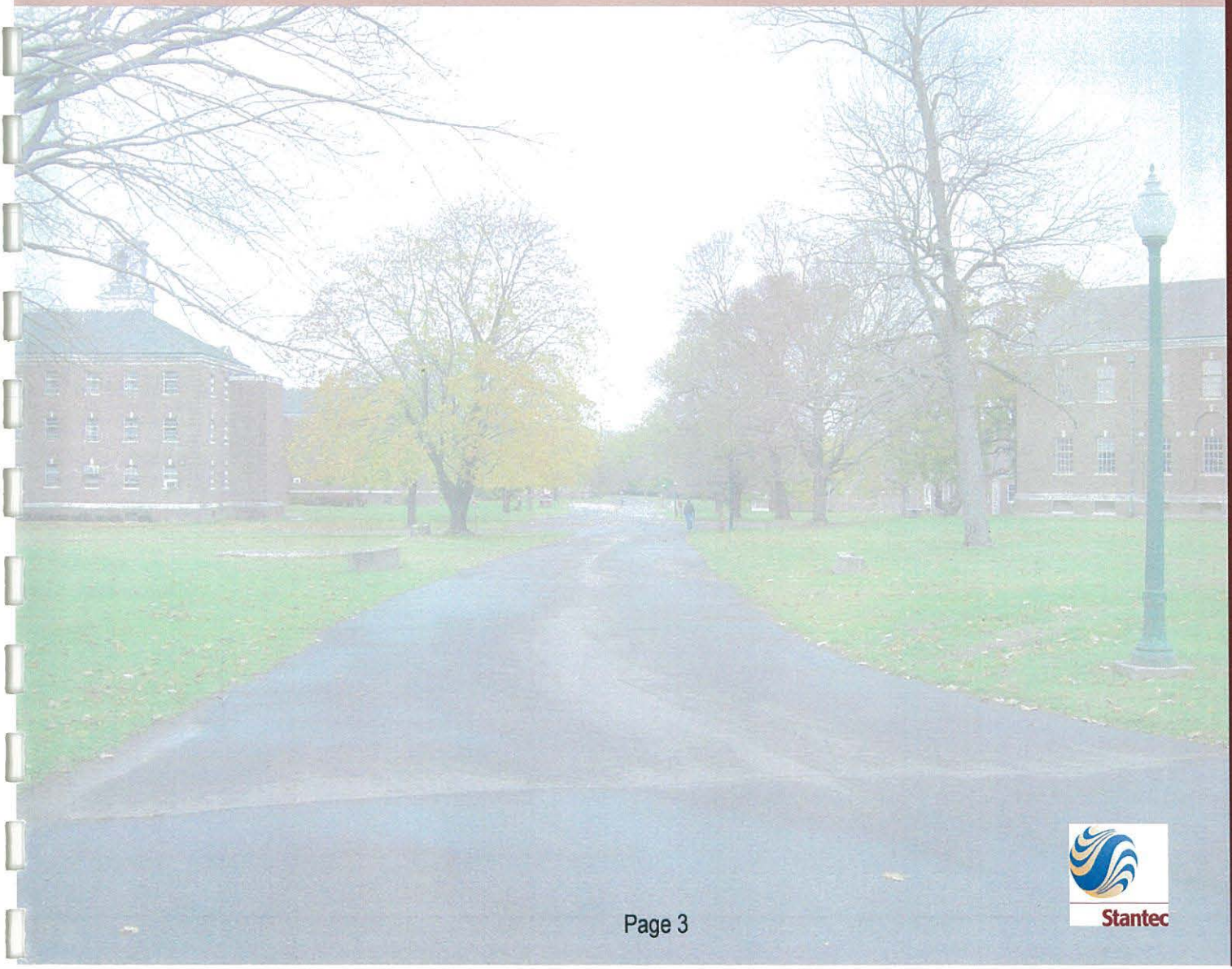
F. Recommendations

Recommendations for each of the items is listed on the item's material title sheet. The recommended option is the only acceptable standard for the common areas of the campus. Proposed deviations from the recommended option shall be subject to Fairfield Hills Authority approval.

G. Pricing

Pricing shown on material sheets is 2006 pricing.

Landscape Elements



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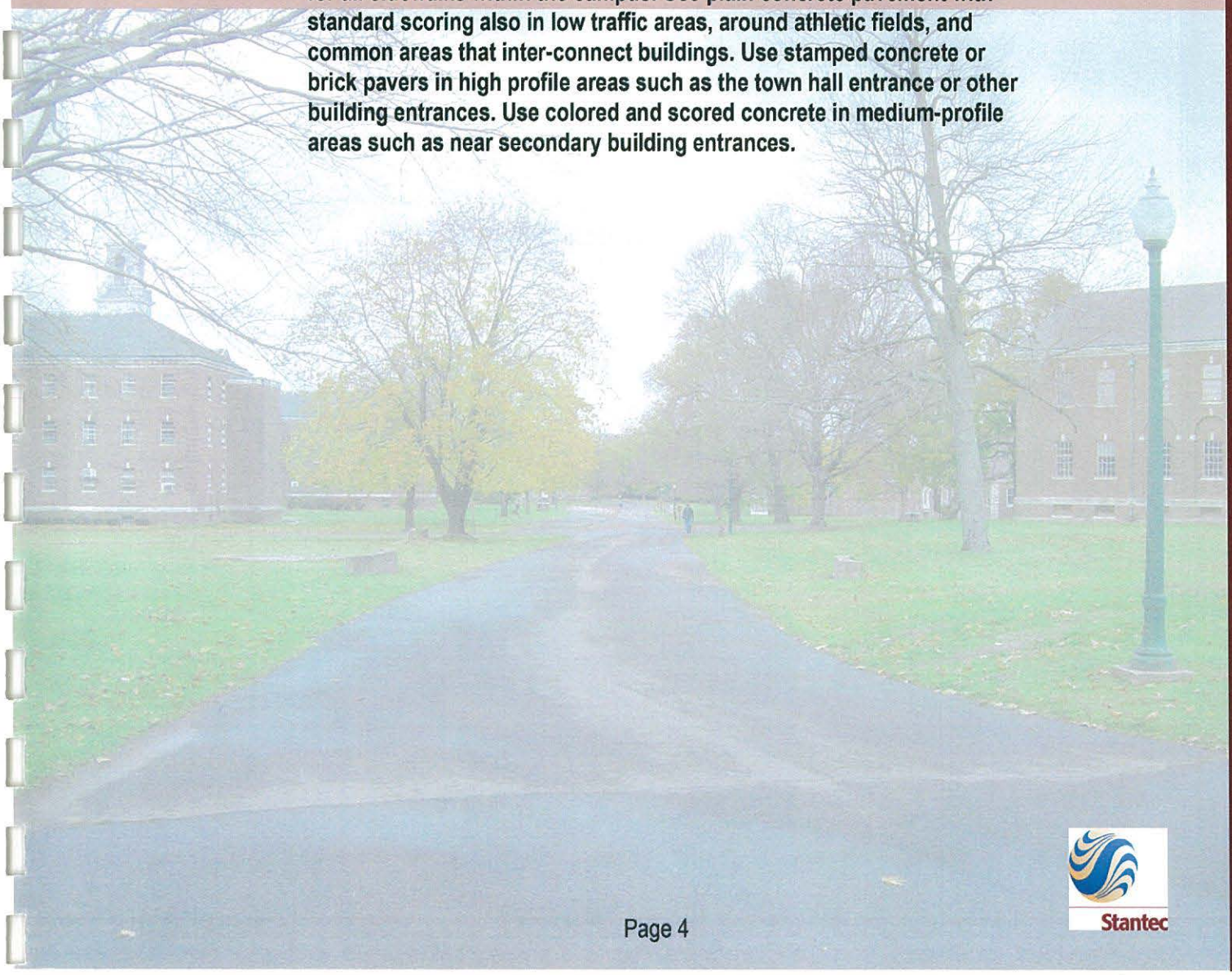
Pavements and Walkways

Cost Table

Concrete Pavement	SF	$6.00
Colored & Scored Concrete	SF	$7.50 to $8.50
Stamped (Patterned) Concrete	SF	$15.00 to $18.00
Brick Pavers (on Stone Screenings)	SF	$12.00 to $20.00
Brick Pavers (on Concrete Base)	SF	$12.00 to $20.00
Geoblock Porous Pavers	SF	$4.50 to $8.00

2006 Pricing Shown

Recommendation: Use plain concrete pavement with standard scoring for all sidewalks within the campus. Use plain concrete pavement with standard scoring also in low traffic areas, around athletic fields, and common areas that inter-connect buildings. Use stamped concrete or brick pavers in high profile areas such as the town hall entrance or other building entrances. Use colored and scored concrete in medium-profile areas such as near secondary building entrances.



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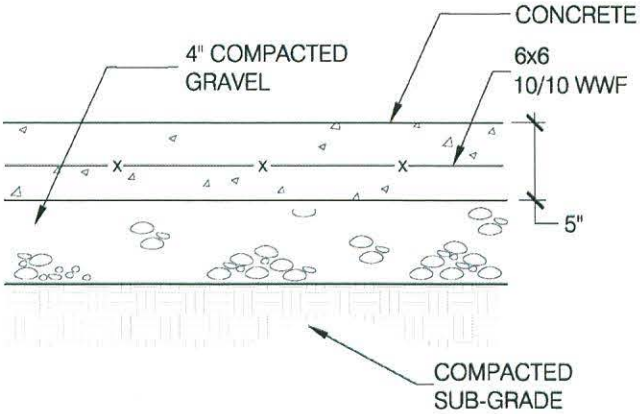
Pavements and Walkways



CONCRETE PAVEMENT

SCALE: NTS

Material: Concrete

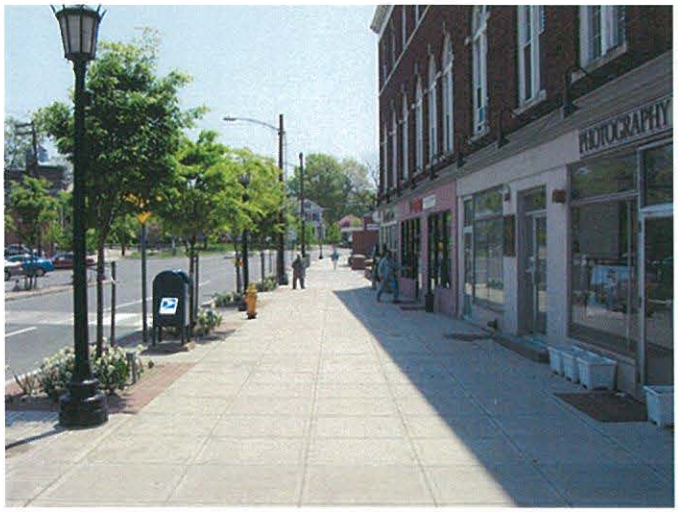
Use: Sidewalks, Walkways

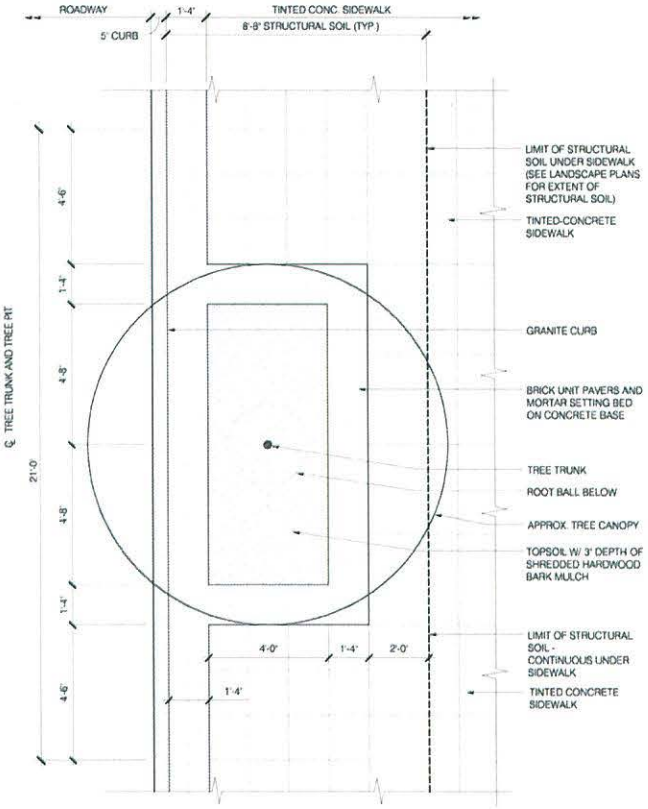
Approximate Cost: See Table

Advantages: Resists freezing, water, and chemicals and is an affordable option for paving

Disadvantages: Repairs can be costly

Pavement and Walkways





STREET TREE PIT PLANTING AND PAVEMENT DETAILS
SCALE: N.T.S.

Material: Colored and scored concrete

Use: Sidewalks, Walkways

Approximate Cost: See Table

Advantages: Resists freezing, water, and chemicals and is an affordable option for paving

Disadvantages: Repairs can be costly

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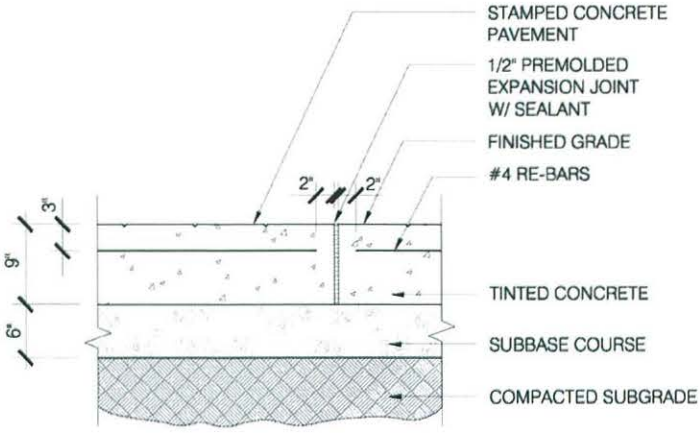
Pavements and Walkways



REINFORCED STAMPED CONCRETE

SCALE: N.T.S.

Material: Stamped (patterned) concrete

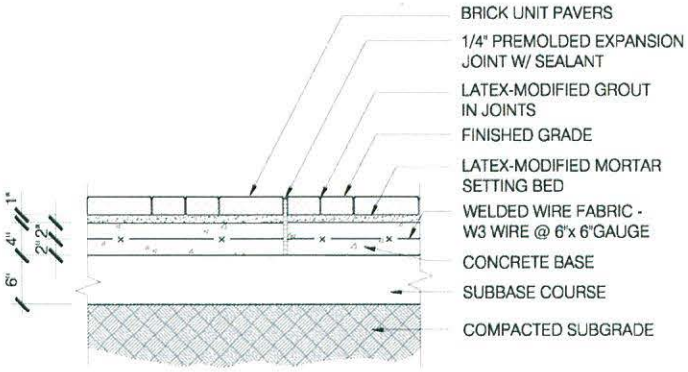
Use: Corners, sidewalks, walkways, high profile areas.

Approximate Cost: See Table

Advantages: Looks similar to pavers but costs less to install and more durable. Many patterns / colors available

Disadvantages: Prone to surface cracks, requires periodic spraying to retain color

Pavement and Walkways



BRICK UNIT PAVERS ON CONCRETE BASE

SCALE: 1" = 1'-0"

Material: Brick pavers

Use: Corners, sidewalks, walkways, high profile areas.

Approximate Cost: See Table

Advantages: Retains its color, highly aesthetic, durable, can repair single paver

Disadvantages: Installation is expensive

Pavement and Walkways

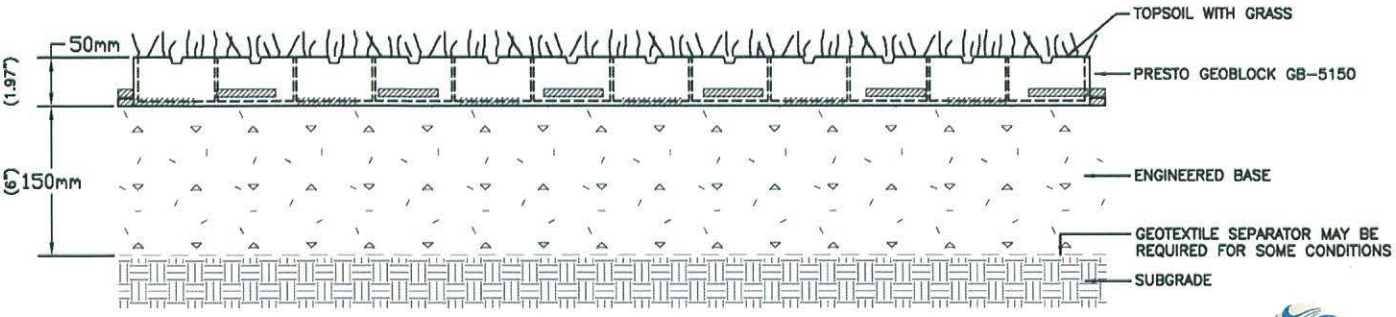
Material: Geoblock porous pavers

Use: Overflow parking areas, utility access, fire lanes.

Approximate Cost: See Table

Advantages: Permeable surface, reduced runoff, environmentally friendly

Disadvantages: May be damaged by snow plows



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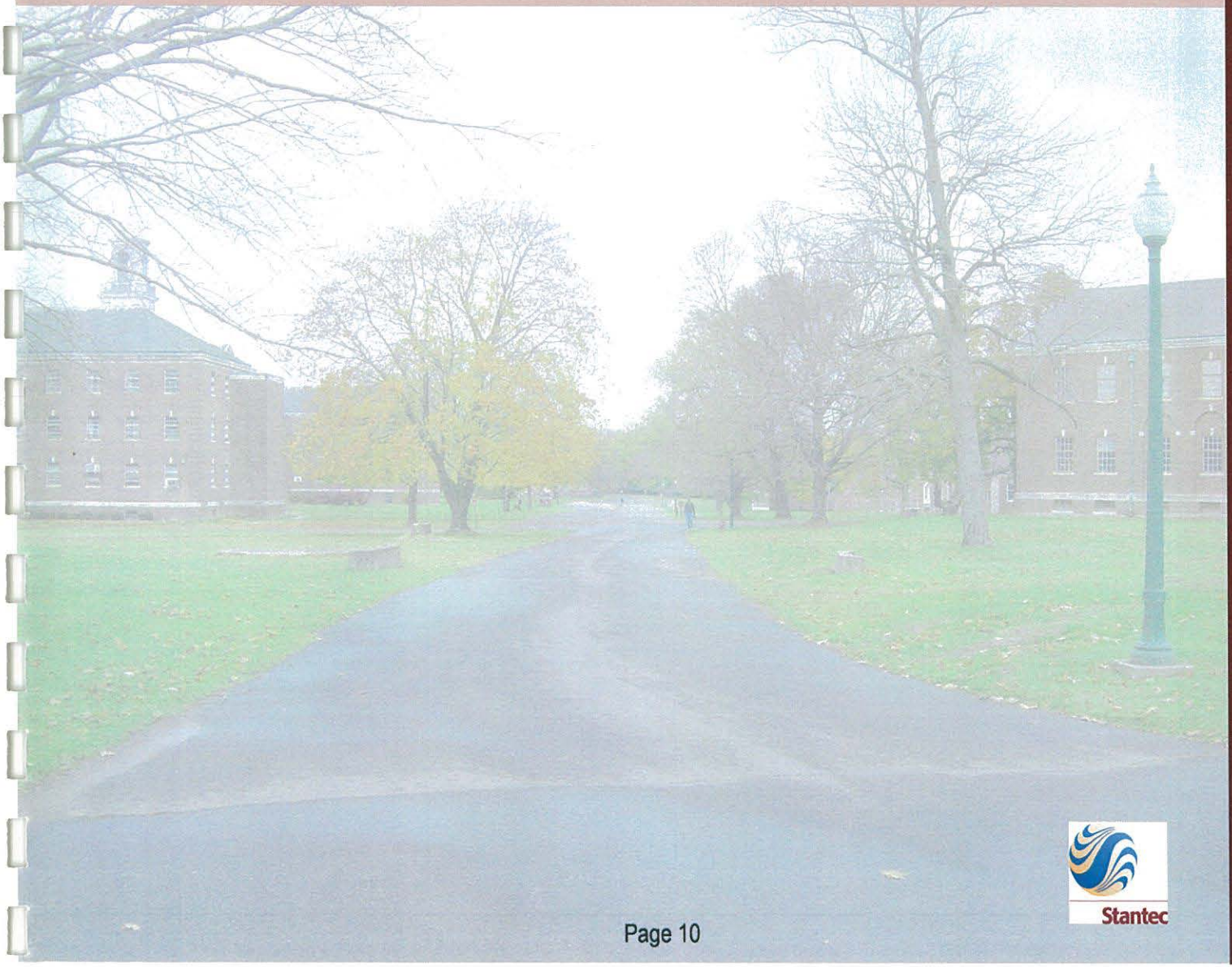
Curbs and Edging

Cost Table

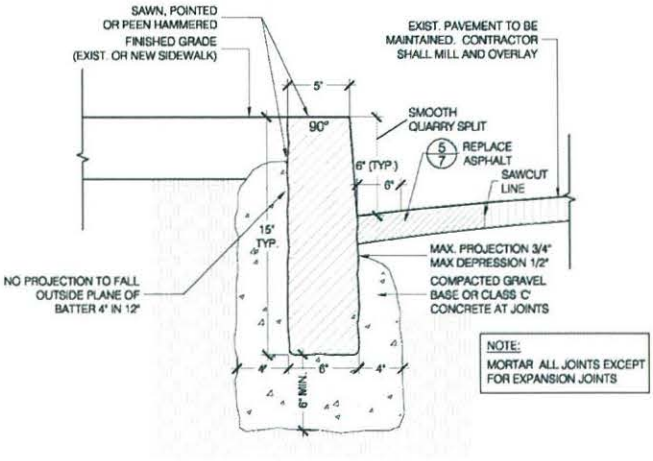
Granite	LF	$20.00 to $33.00
Concrete	LF	$15.00 to $18.00
Extruded Concrete	LF	$5.50 to $7.00

2006 Pricing Shown

Recommendation: Granite curb is recommended.



Curbs and Edging



3 GRANITE CURB
SCALE: NTS

Material: Granite

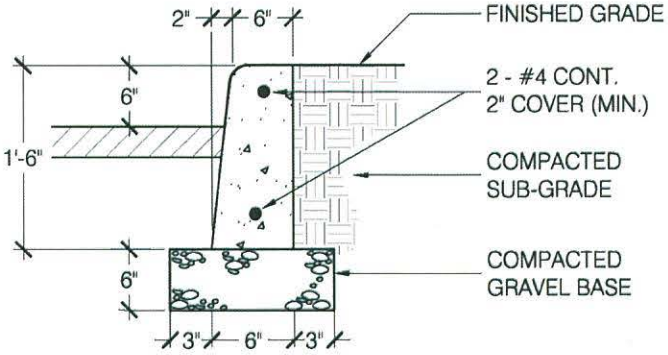
Use: Along parking areas and drives

Approximate Cost: See Table

Advantages: Very durable, low maintenance costs

Disadvantages: Expensive to install

Curbs and Edging



FULL DEPTH CONCRETE CURB

SCALE: NTS

Material: Concrete

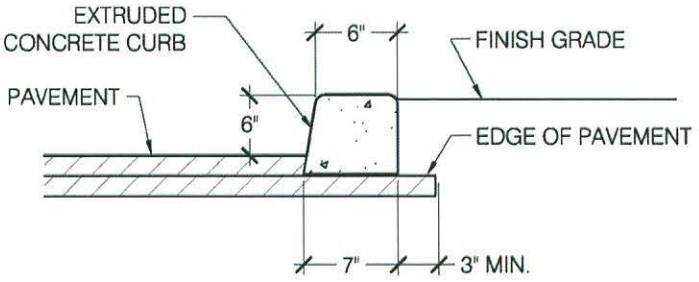
Use: Along parking areas and drives

Approximate Cost: See Table

Advantages: Very durable

Disadvantages: Aesthetically plain, may crack

Curbs and Edging



EXTRUDED CONCRETE CURB

SCALE: 1" = 1'-0"

Material: Extruded concrete

Use: Along parking areas and drives

Approximate Cost: See Table

Advantages: Inexpensive to install

Disadvantages: Aesthetically plain, may crack

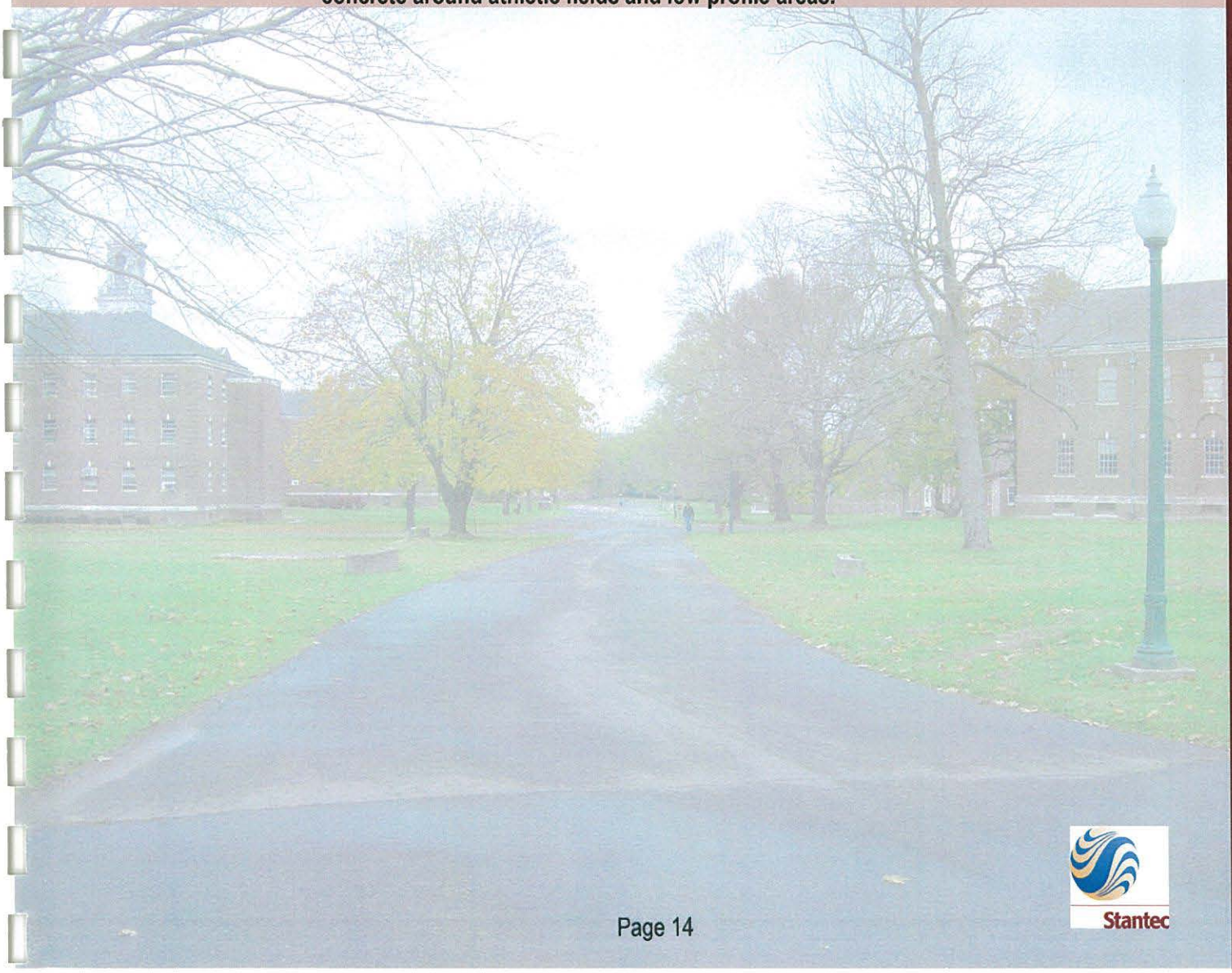
Crosswalks and Corners

Cost Table

Plain Concrete Pavement	SF	$6.00
Colored & Scored Concrete	SF	$7.50 to $8.50
Stamped (Patterned) Concrete	SF	$15.00 to $18.00
Brick Pavers (on Concrete Base)	SF	$12.00 to $20.00

2006 Pricing Shown

Recommendation: Use brick pavers and stamped concrete in high profile areas such as the town hall. Use colored and scored concrete in medium profile areas such as secondary building entrances. Use plain concrete around athletic fields and low profile areas.



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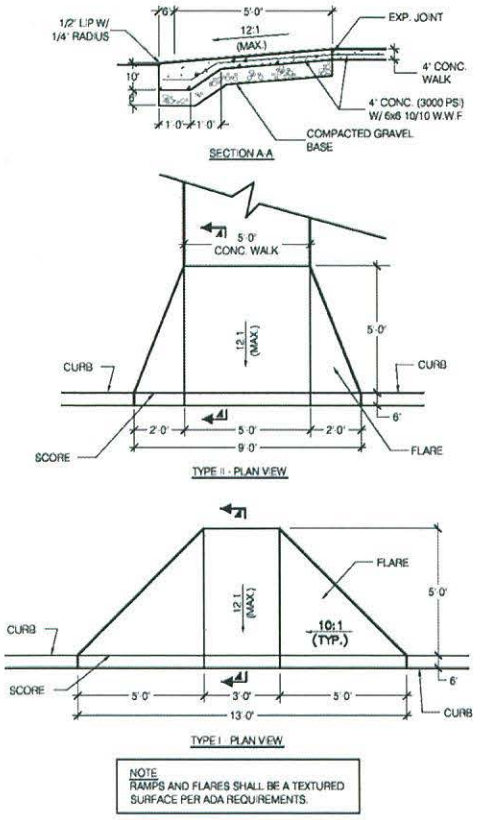
Crosswalks and Corners



NOTE
RAMPS AND FLARES SHALL BE A TEXTURED SURFACE PER ADA REQUIREMENTS.

CONCRETE CURB RAMP

SCALE: NOT TO SCALE

Material: Plain concrete

Uses: Crosswalks

Approximate Cost: See Table

Advantages: Inexpensive to install

Disadvantages: Aesthetically plain, can crack

Crosswalks and Corners

Materials: Colored scored concrete

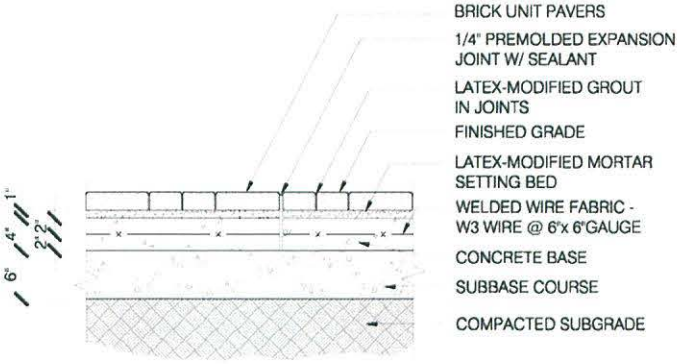
Use: Pedestrain crosswalks

Approximate Cost: See Table

Advantages: Inexpensive, aesthetically pleasing

Disadvantages: Can crack

Crosswalks and Corners



B BRICK UNIT PAVERS ON CONCRETE BASE *
SCALE: 1" = 1'-0"

Materials: Cobblestone or brick

Use: Pedestrain crosswalks

Approximate Cost: See Table

Advantages: Aesthetically pleasing, durable

Disadvantages: Expensive to install

***The above detail is the same for a cobblestone walk on a concrete base. Substitute cobblestone pavers for brick.**

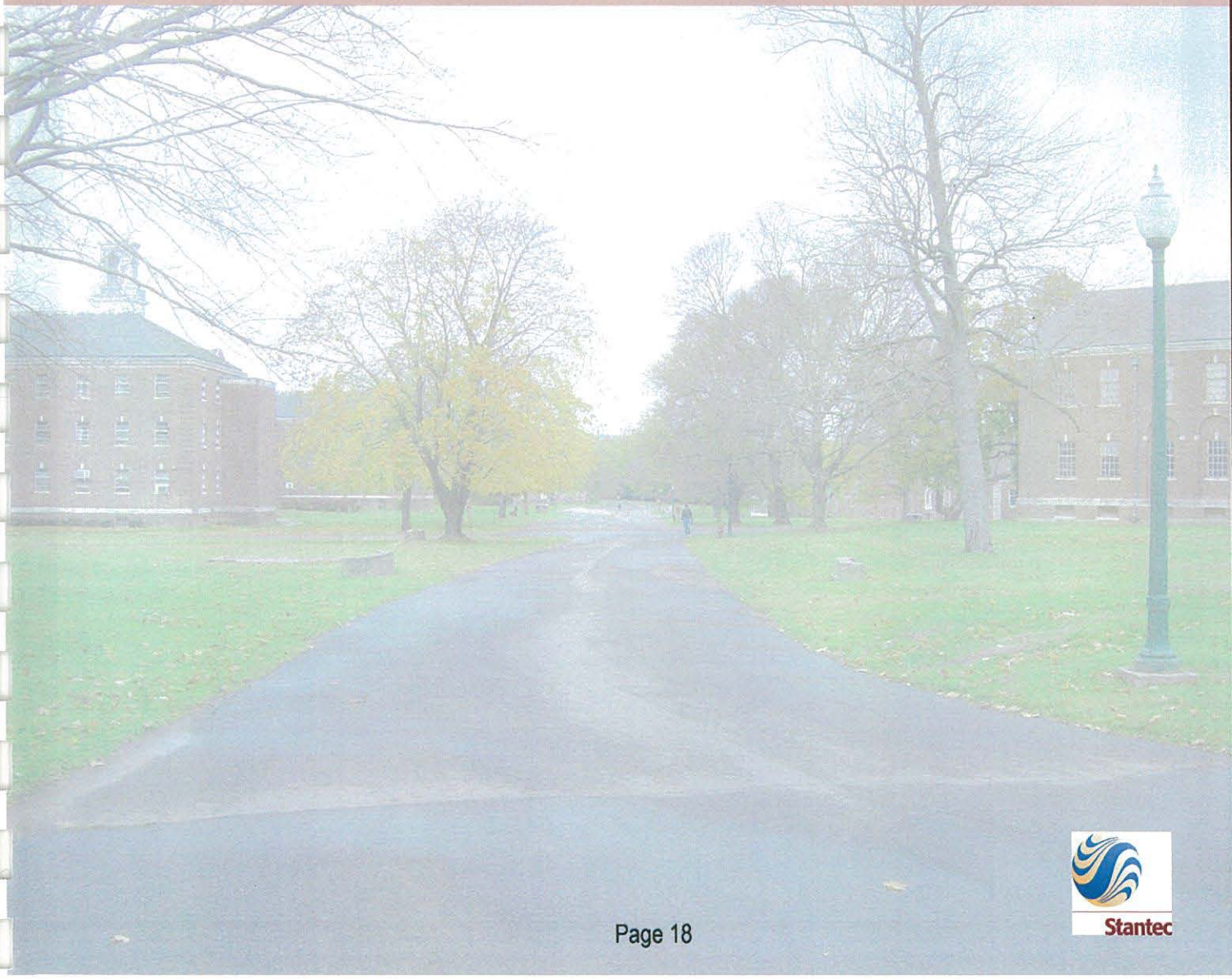
Lighting

Cost Table

Decorative Lamp and Post	EA	$3,000
Wall Lamp and Bracket	EA	$2,000
Lighted Bollard	EA	$2,000

2006 Pricing Shown

Recommendations: All lighting shown is recommended depending on specific site layout and location.



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Lighting

POST SPECIFICATIONS
Style: Northampton Bi-Metal Post
Height: 12" (approx.)
Finish Color: Black
Manufacturer: Spring City Electrical
Material: Cast Iron Base w/ Fabricated Column

GLOBE POST MOUNT/ GLOBE SPECIFICATIONS
Style: Form F Luminaire w/ PS11 Globe
Material: Cast Iron
Height: 3' (Luminaire w/ Globe)
Finish Color: Black (globe post mount)
Manufacturer: Spring City Electrical

Use: Illumination of pedestrian walkways, roads, and parking areas

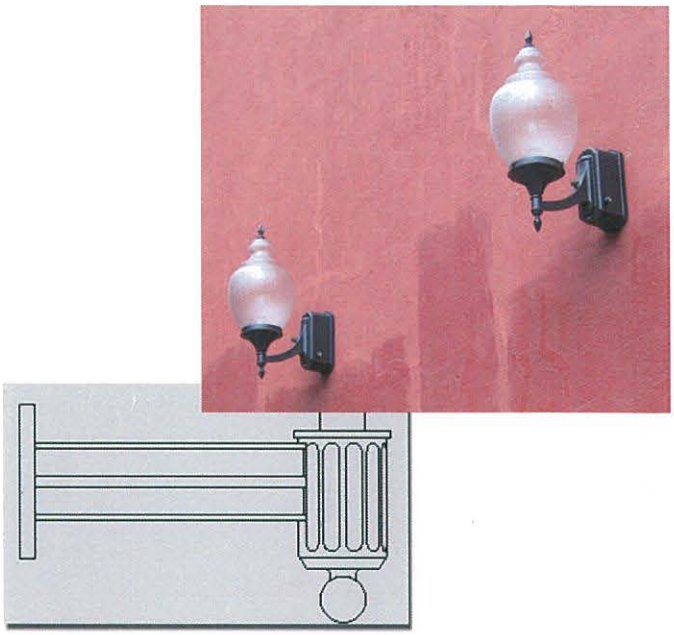
Approximate Cost: See Table

Advantages: Safety; even light distribution

Disadvantages: N/A

Note: All luminaires shall be dark sky compliant.

Lighting



WALL BRACKET SPECIFICATIONS
Style: Washington Simple
Material: Cast Iron
Height: 10"
Length: 21"
Finish Color: Black

Manufacturer: Spring City or approved equal

Use: Areas of interest, Town Hall, walkways

Approximate Cost: See Table

Advantages: Attractive and increases safety

Disadvantages: N/A

Note: All luminaires shall be dark sky compliant. Brackets shrown above show the variety available for attachment to buildings. Lease holders shall submit proposed selection to the Fairfield Hills Authority for approval.

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Lighting

LIGHTED BOLLARD SPECIFICATIONS
Style: SAL-B-LITE
Material: Cast iron
Height: 52"
Base Diameter: 18 1/2"
Finish Color: Black
Manufacturer: Sentry Lighting or approved equal

Use: Areas of interest, Town Hall, walkways

Approximate Cost: See Table

Advantages: Attractive and increases safety

Disadvantages: N/A

Note: All luminaires shall be dark sky compliant.

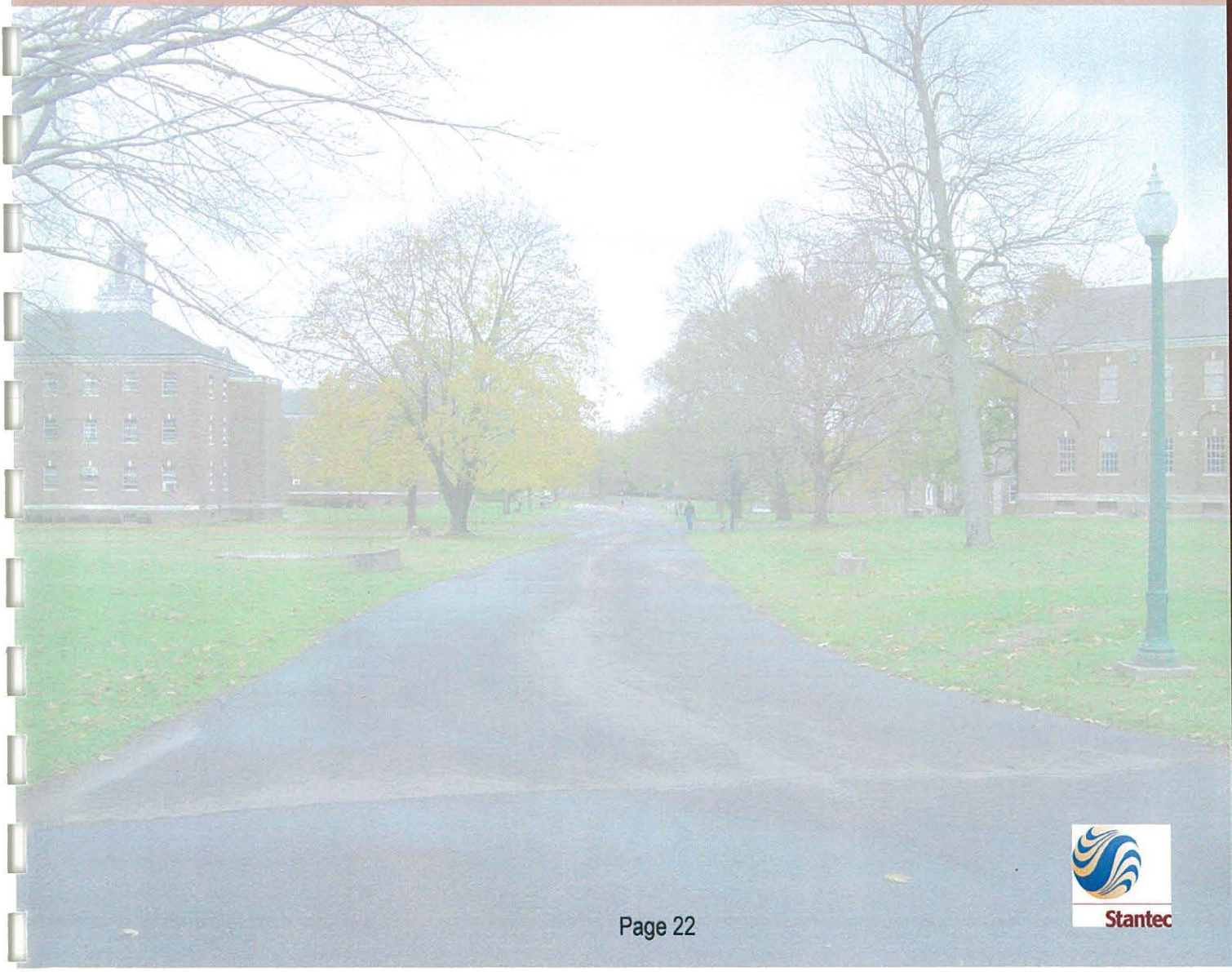
Signage

Cost Table

Entrance Signage	Ea.	Cost Varies
Directory Signage	Ea.	Custom Work
Secondary Internal Signage	Ea.	

2006 Pricing Shown

Signage is custom work and shown here in the guidelines as possibilities. Proposed signage should be sympathetic to the surrounding brick buildings and landscape of the campus.



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Signage

MAIN ENTRANCE SIGN

Material: Brick and wood

Background Color: Maroon; Dark Brick Red; Dark Tile Red. Color shall be submitted for approval by the Fairfield Hills Authority.

Lighting: Signage shall be lighted from the ground with up-lighting. Internal or back-lighted signage is prohibited.

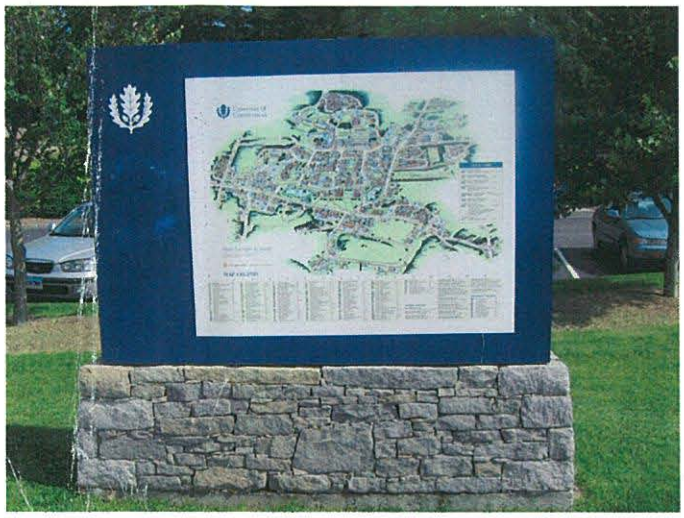
Use: A grand entrance sign

Approximate Cost: See Table

Advantages: A very noticeable and aesthetically pleasing entry

Disadvantages: N/A

Signage



CAMPUS DIRECTORY SIGNAGE and CORPORATE IDENTITY SIGNAGE

Materials: Metal, brick, plastic

Background Color: Maroon; Dark Brick Red; Dark Tile Red. Color shall be submitted for approval by the Fairfield Hills Authority.

Lighting: Signage shall be lighted from the ground with up-lighting. Internal or back-lighted signage is prohibited.

Use: Internal wayfinding

Approximate Cost: See Table

Advantages: Aesthetics, organization

Disadvantages: N/A

Signage

SECONDARY INTERNAL SIGNAGE

Materials: Metal, plastic

Background Color: Maroon; Dark Brick Red; Dark Tile Red. Color shall be submitted for approval by the Fairfield Hills Authority.

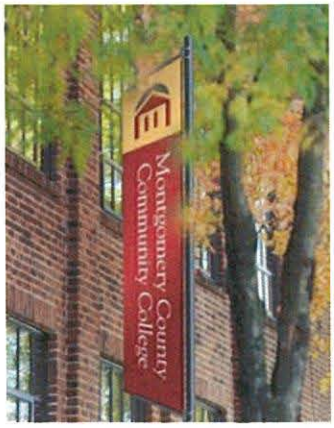
Use: Internal wayfinding

Approximate Cost: See Table

Advantages: Organization

Disadvantages: N/A

Signage



POLE MOUNTED SIGN BRACKETS/BANNERS

Materials: Metal, fabric, plastic

Use: Along walkways

Approximate Cost: See Table

Advantages: Durable, aesthetically pleasing

Disadvantages: N/A

Note: The banners shown above are not currently approved for use in the Town of Newtown Zoning Regulations, as of 07 July 2007. The Fairfield Hills Authority (FFHA), however, recognizes the value of using of banners within the campus setting and has included them herein. The FFHA will seek to have the use of banners added to Section 4.23 Fairfield Hills Adaptive Reuse.

Benches

Plastic/composite materials no longer preferred

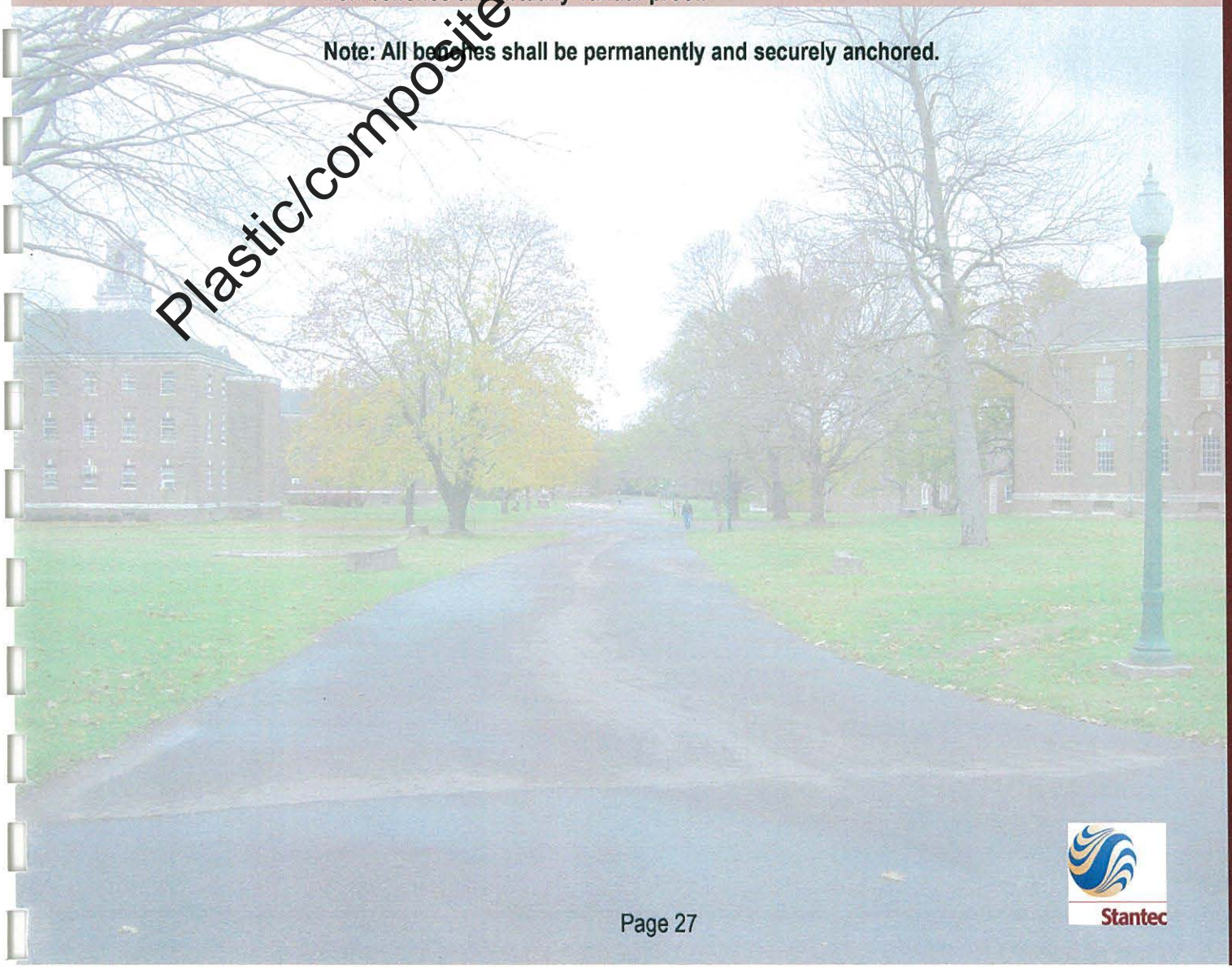
Cost Table

Iron and Recycled Plastic (Backless)	EA	$2,000
Iron and Recycled Plastic (Back)	EA	$2,500
Iron Ribbon Bench (Back)	EA	$2,500
Precast Concrete	EA	$2,000
Granite Bench	EA	$1,100

2006 Pricing Shown

Recommendation: The Iron Ribbon bench with a back is recommended in areas of long term sitting and backless iron in areas of short term sitting. Iron benches are virtually vandal-proof.

Note: All benches shall be permanently and securely anchored.



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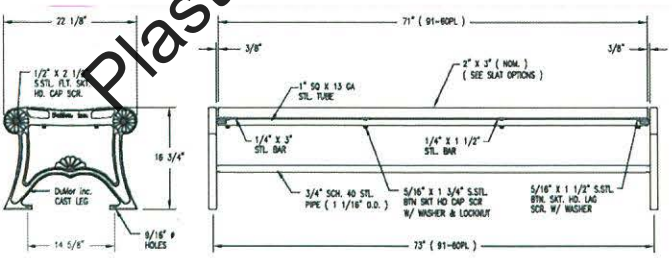
Benches

Plastic/composite materials no longer preferred



Material: Cast iron and recycled plastic

Finish Color: Metal - Black Powder-coat
Plastic Wood - Cedar/Terracotta

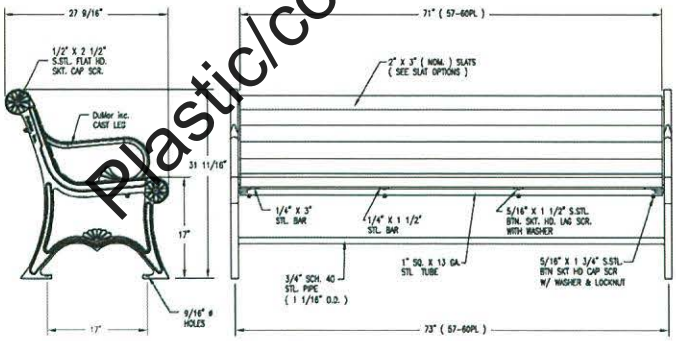
Use: Rest areas, paths, sidewalks, scenic areas

Approximate Cost: See Table

Advantages: Low maintenance, won't splinter or crack

Disadvantages: Can lose strength in high temperatures, can develop sag over time

Benches



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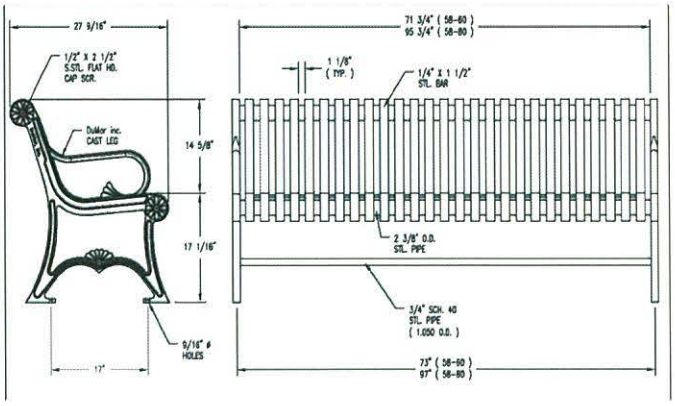
Plastic/composite materials no longer preferred

Benches



Material: Cast iron and steel; backed and backless

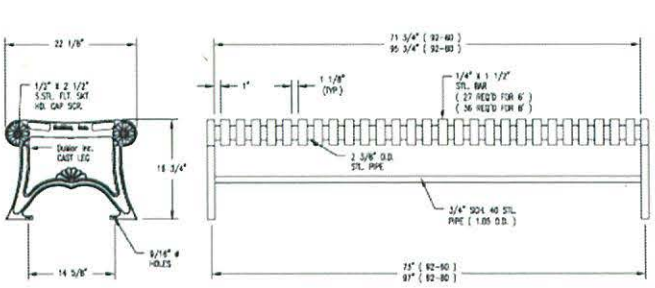
Finish Color: Black Powder-coat

Use: Rest areas, paths, sidewalks, scenic areas

Approximate cost: See Table

Advantages: One solid welded seat unit, durable

Disadvantages: Moderately aesthetic, cold to touch in colder months



Newtown Connecticut Park Bench Specifications

Approved for use on campus @ FHA meeting 6/22/15

Barco 6 Foot Cassidy Arched Back (Black):Model # 02CL1371-DC

Barco Bronze Plaque: 10" x 3": Model#02HQ1808 Bronze

Barco Pricing		
	Retail: $888	Newtown: $651
	Retail: $150	Newtown: $150

Benches

Material: Precast concrete or granite

Use: Rest areas, paths, sidewalks, scenic areas

Approximate cost: See Table

Advantages: One piece, durable

Disadvantages: Precast concrete may crack eventually or spall. Granite: none.

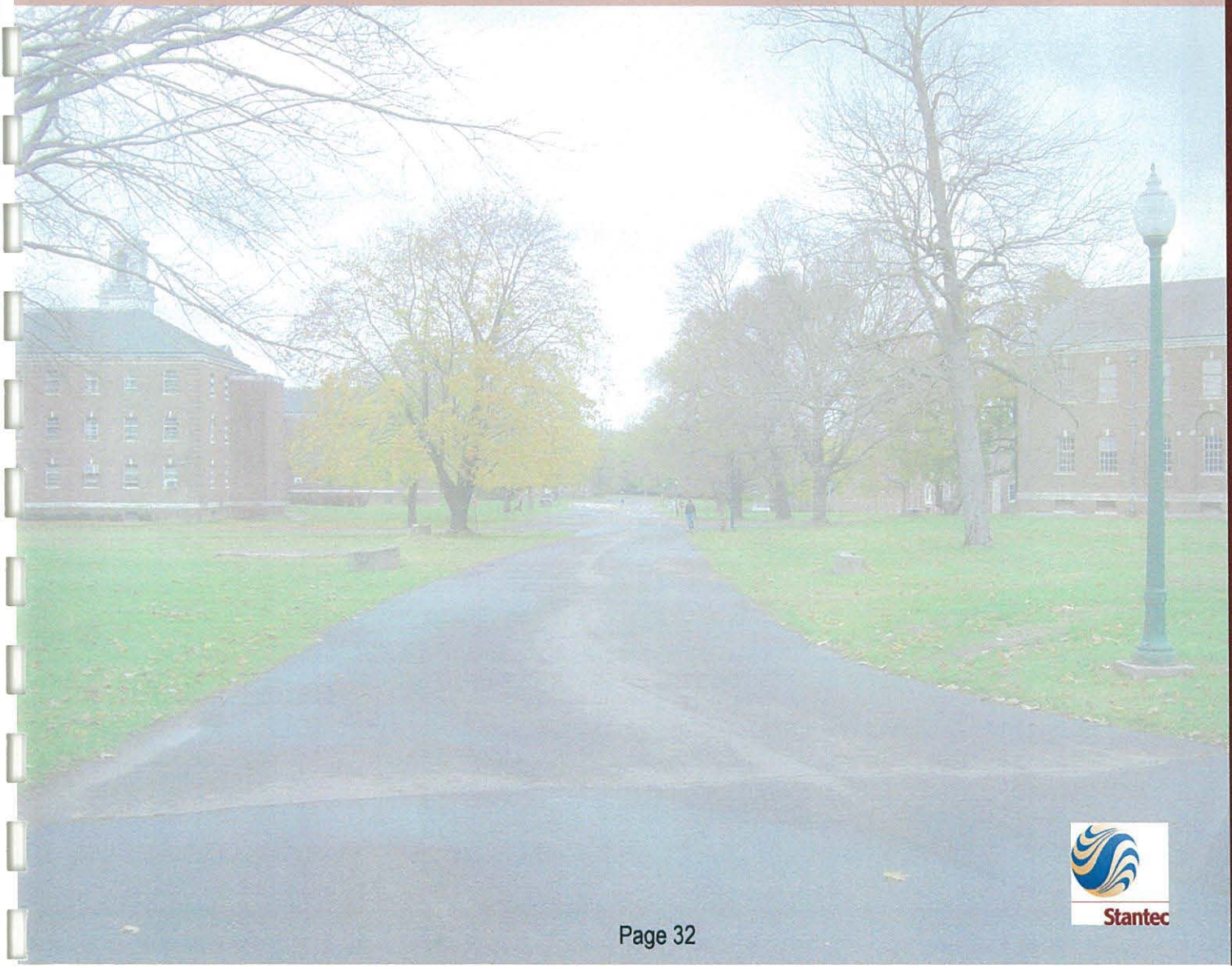
Trash Receptacles

Cost Table

Steel Ribbon Receptacle	EA	$800

2006 Pricing Shown

Recommendation: Trash receptacle shown is the recommended type. Custom modifications should be explored between the vendor and the town to accomodate recycling of cans, bottles, and paper.



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Trash Receptacles

Material: Cast iron

Finish Color: Black Powder-coat

Use: Along walkways, public gathering spaces

Approximate Cost: See Table

Advantages: Durable, aesthetically pleasing

Disadvantages: N/A

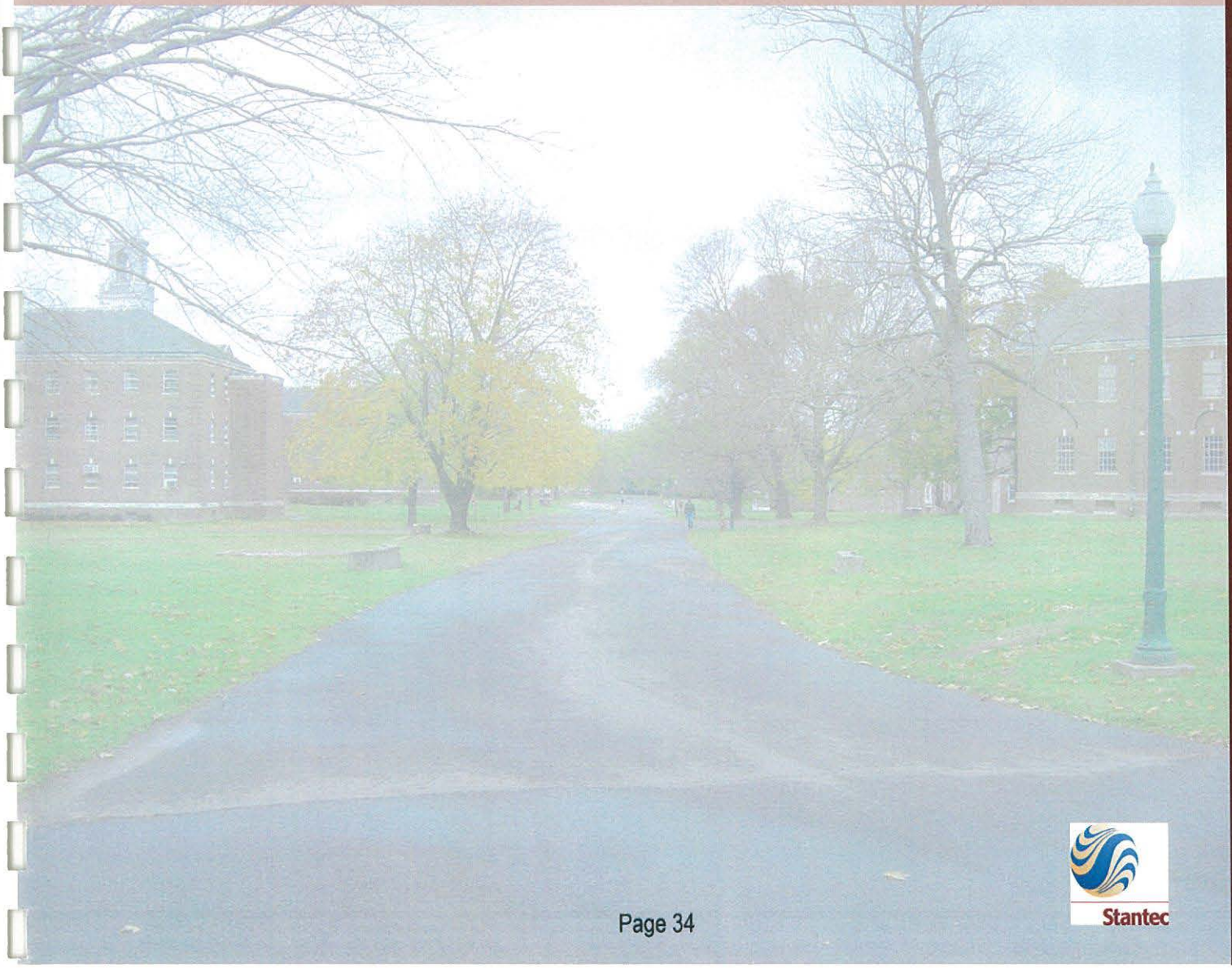
Bicycle Racks

Cost Table

Steel Ribbon Pipe Rack	EA	$250 to $850
Standard Bicycle Rack	EA	$400 to $750

2006 Pricing Shown

Recommendation: Steel Ribbon Pipe rack is recommended. Standard bicycle rack is shown for comparison purposes only.



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Bicycle Racks

Material: Powdercoated steel (black)

Finish Color: Black Powder-coat

Use: Building entrances, points of interest, along paths

Approximate Cost: See Table

Advantages: Function, durability, easy to install

Disadvantages: N/A

Bicycle Racks

Material: Galvanized steel

Use: Building entrances, points of interest, along paths

Approximate Cost: See Table

Advantages: Function, durability, easy to install

Disadvantages: N/A

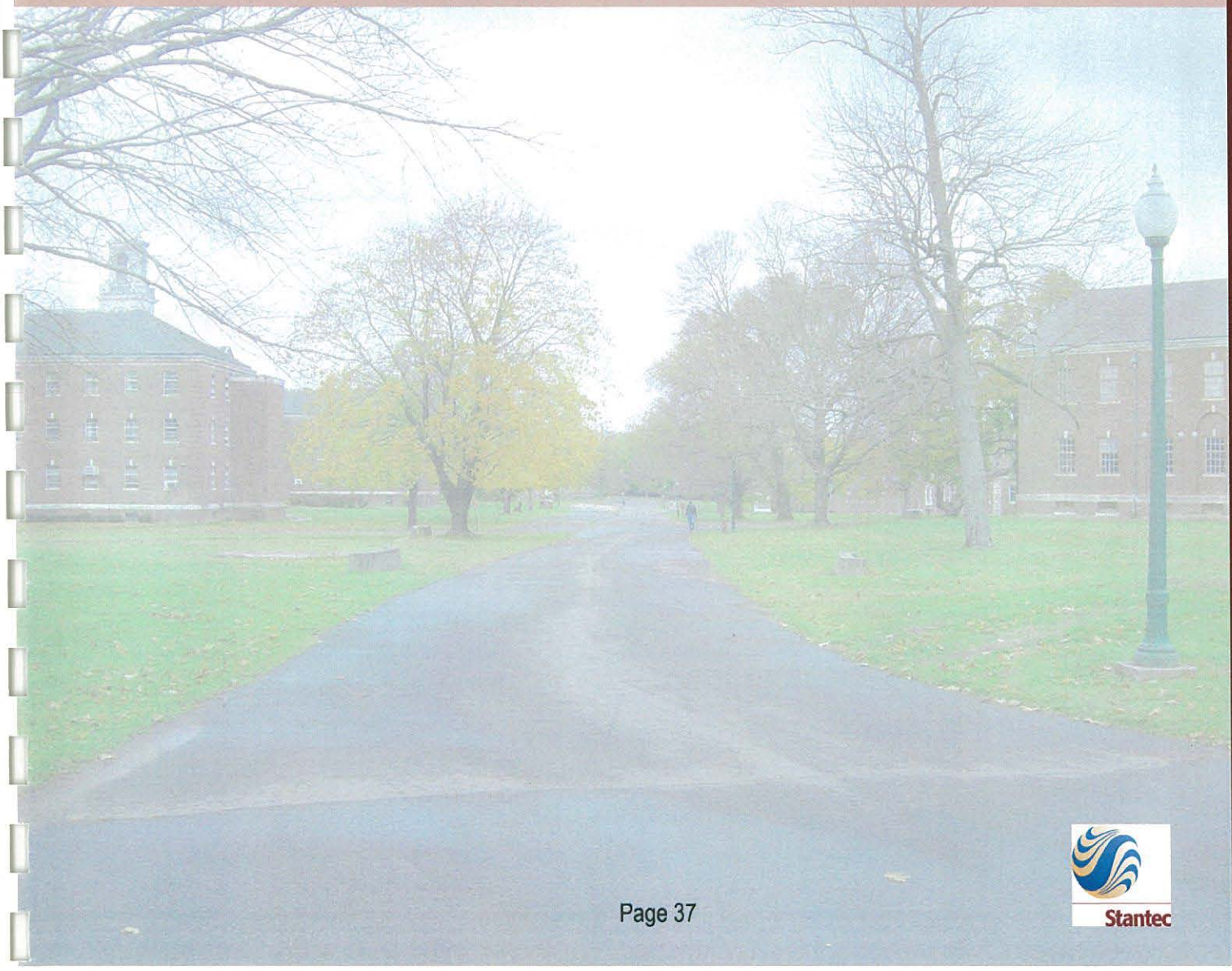
Fences

Cost Table

Vinyl Three-Rail Fence	LF	$55
Brick and Decorative Iron Fence	LF	varies
Vinyl-Coated Chain Link Fence	LF	$35
Ornamental Screening Fence	LF	$75

2006 Pricing Shown

Recommendation: Use rail fence type in rural areas, chain link fence around athletic fields and decorative iron fence in high profile areas such as the town hall.



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Fences

Material: Vinyl

Use: To be determined

Approximate Cost: See Table

Advantages: Low maintenance, water resistant

Disadvantages: Requires occasional cleaning

Fences

Material: Brick and monumental iron fence, provide ball top on pickets for safety or use monumental iron fence with flush/flat top.

Finish Color: Black Powder-coat

Location: To be determined

Approximate Cost: See Table

Advantages: Very durable; aesthetically pleasing

Disadvantages: Expensive to install

Fences

Material: Vinyl coated chain link fabric

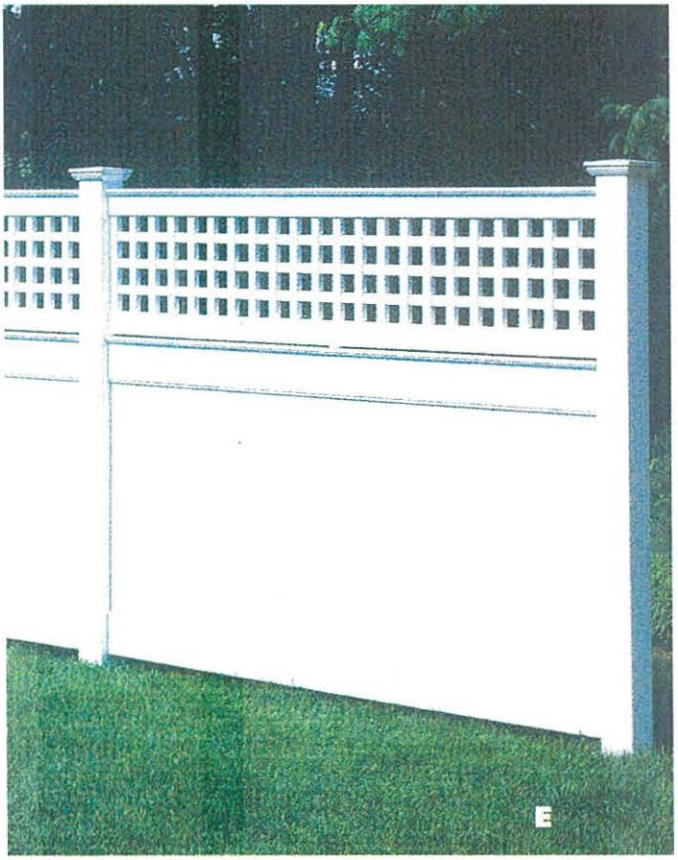
Location: For use at athletic fields only

Approximate Cost: See Table

Advantages: Inexpensive and easy to install

Disadvantages: N/A

Screening



Material: Wood Only or Wood and Brick

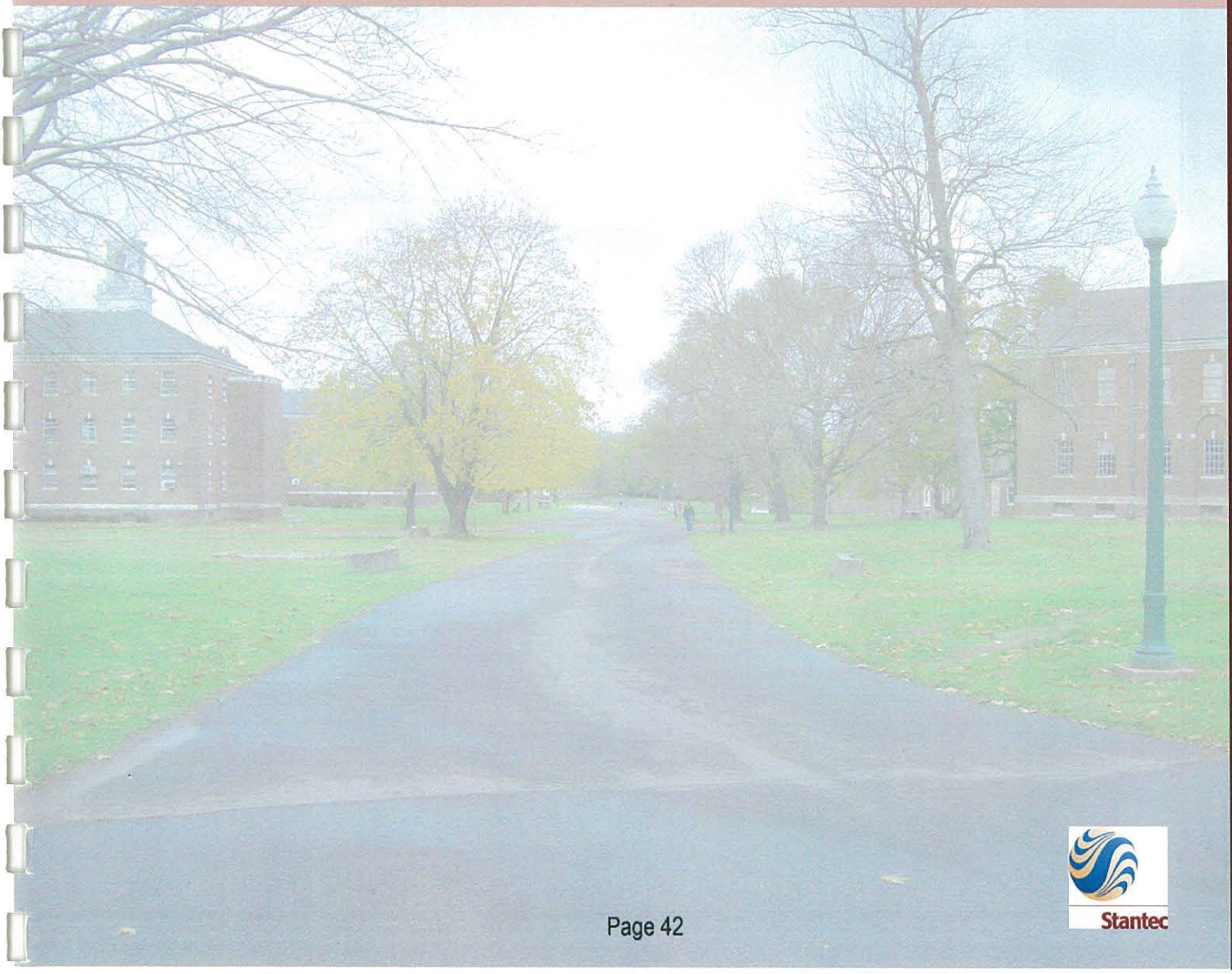
Location: For use screening service dumpsters, and exterior mechanical and utility system components

Approximate Cost: Varies with materials used

Advantages: Wood - Inexpensive and easy to install
Brick and wood - More expensive

Disadvantages: Neither are durable if trucks back into them

Roadway Elevations



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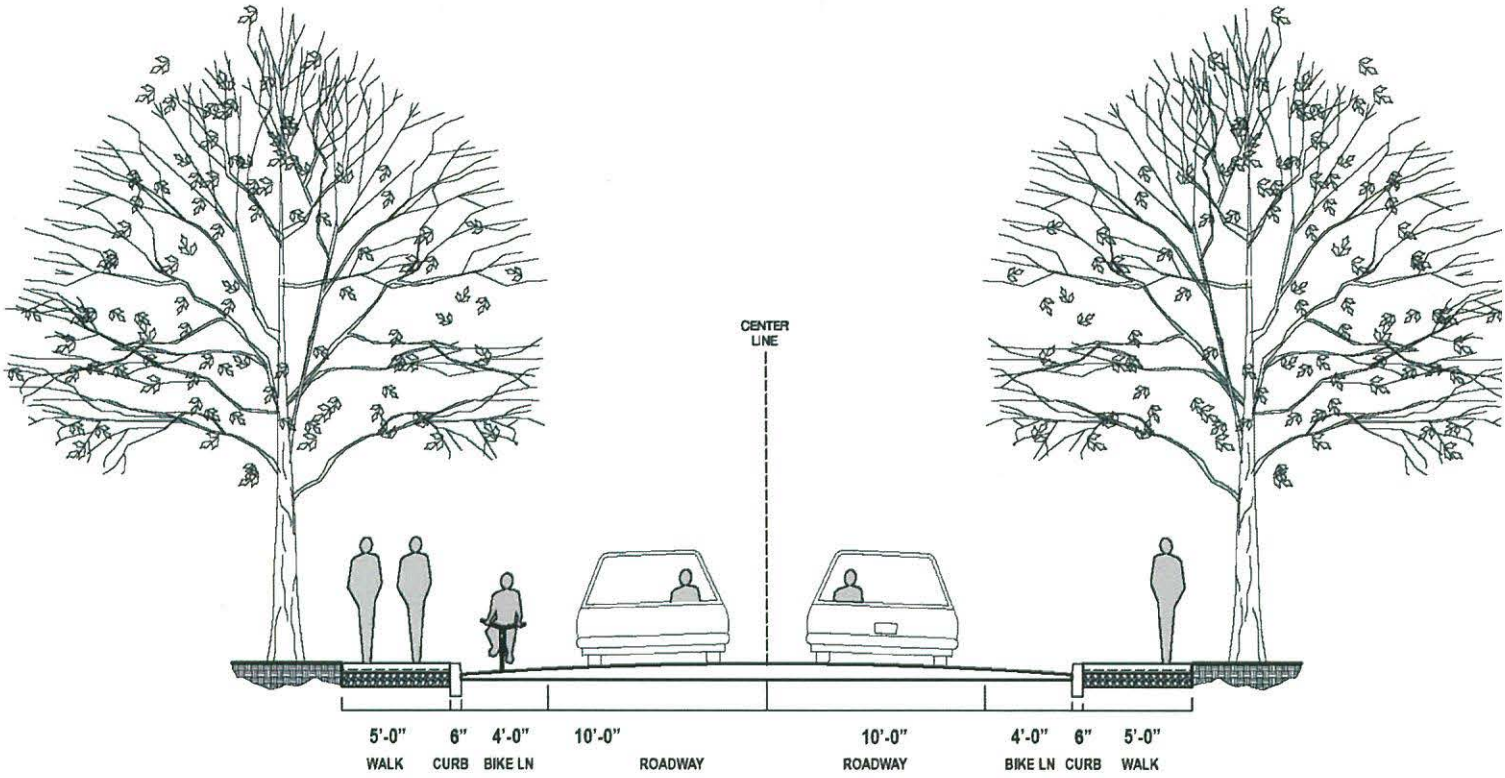
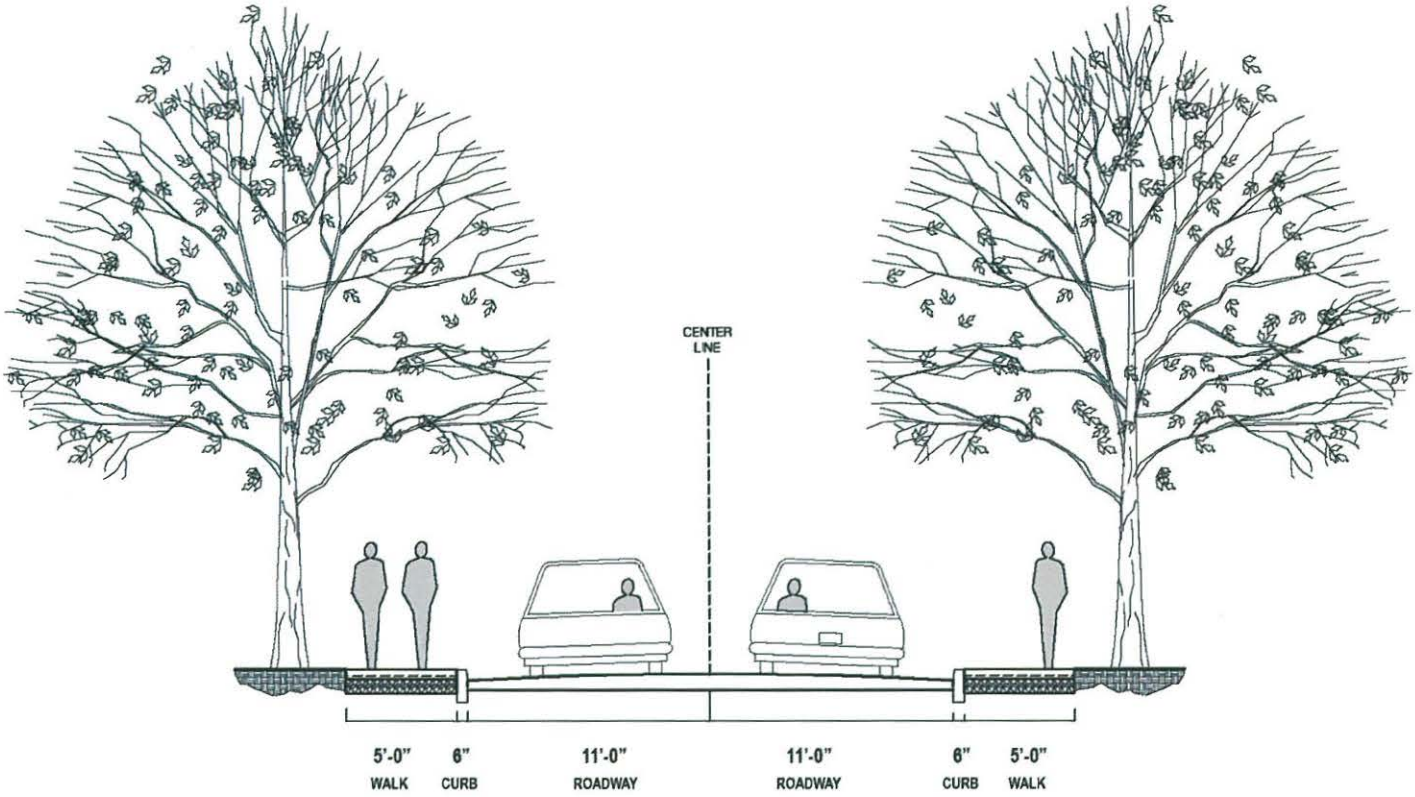
Roadway Elevation

SECTION A

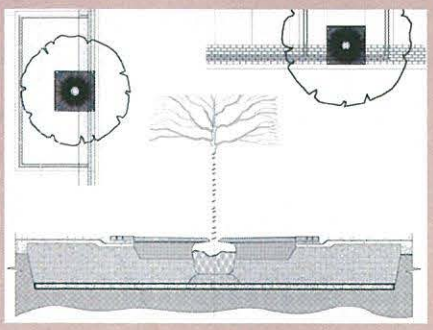


Roadway Elevation

SECTION B



Landscape Planting



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Campus Planting Goals

A. Goal: To preserve as much of the existing overstory tree canopy as possible. This will also preserve the campus landscape feel.

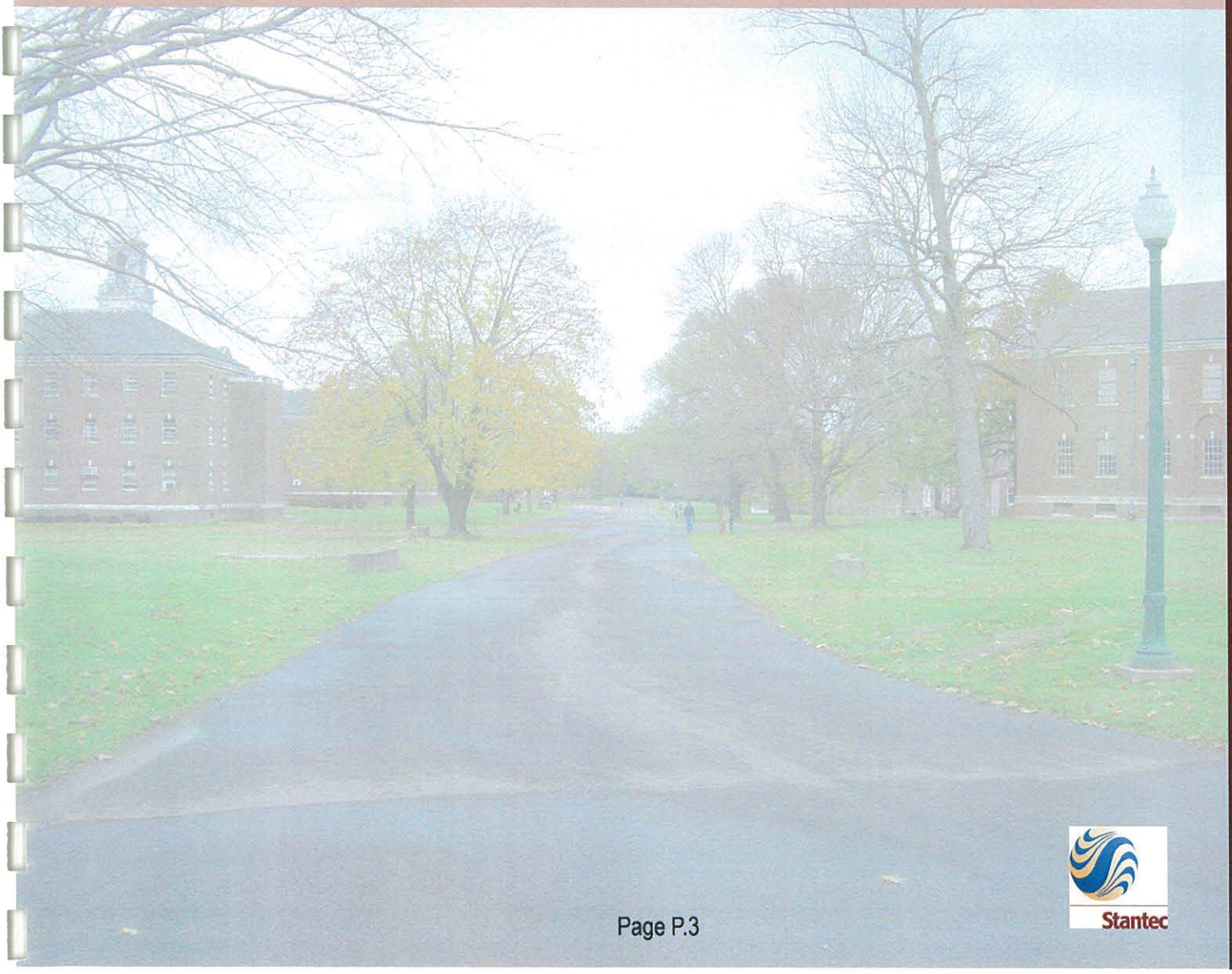
B. Enhance the existing tree canopy by planting a diversity of new trees using a variety of tree hardwood species (Oaks, Maples, Ash).

C. Enhance the entrance to the campus with shrub massings, perennial plantings and flowering tree species to provide a beautiful entrance to the campus.

D. Provide low plantings at new and existing parking lots to screen cars but allow for internal view for parking security.

E. Provide tree plantings in parking lots to shade and cool pavement.

Plant Material



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Plant List-Recommended Plant Species

The following plant list was recommended by the Newtown Conservation Commission to the Newtown P&Z Commission for use at the Fairfield Hills Campus. This list was adopted for inclusion herein by the Fairfield Hills Authority on 17 July 2007. The list includes native woody plants with good form, attractive foliage, flowers and/or bark. Most are deer resistant, but plants needing protection are noted.

TREES

Large Shade Trees (for streets and open areas):

Acer rubrum—Red Maple
Acer saccharum—Sugar Maple
Cladastris kentuckeana—American Yellowwood
Fagus grandifolia—American Beech
Platanus occidentalis—Sycamore
Quercus rubra—Northern Red Oak
Quercus palustris—Northern Pin Oak
Quercus alba—White Oak
Quercus coccinea—Scarlet Oak
Tilia americana—Basswood (Linden)
Ulmus americana—American Elm cultivars (disease resistant)

Smaller trees (for courtyards or other more confined spaces):

Amelanchier canadensis—Shadbush/Serviceberry
Betula nigra—River Birch
Carpinus carolinianum—American Hornbeam
Celtis occidentalis—Common Hackberry
Cercis canadensis—Redbud
Chionanthus virginicus—Fringetree
Cornus florida—Flowering Dogwood
Cornus alternifolia—Pagoda Dogwood
Crataegus phaenopyrum—Washington Hawthorne
Halesia tetraptera—Carolina Silverbell
Hamamelis virginiana—Common Witchhazel
Ilex opaca—American Holly
Magnolia virginiana—Sweetbay Magnolia
Ostrya virginiana—American Hophornbeam
Oxydendrum arboreum—Sourwood/Lily of the Valley Tree
Sorbus americana—American Mountain Ash
Viburnum lentago—Nannyberry Viburnum
Viburnum prunifolium—Blackhaw Viburnum
Viburnum seiboldianum—Siebold Viburnum

SHRUBS

Foundation plantings, "formal" areas :

Kalmia spp.—Mt. Laurel hybrids (may have to be sprayed or caged from deer for 1-2yrs).
Myrica pennsylvanica—Bayberry (prune annually for neater appearance)
Ilex glabra—Inkberry
Fothergilla gardenii—Dwarf Fothergilla
Follergilla major—Large Fothergilla

Foundation plantings, "formal" areas (continued):

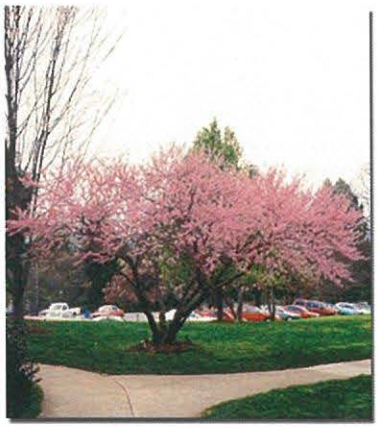
Clethra alnifolia—Summersweet Clethra 'Hummingbird'
Rhododendron periclymenoides—Pinxterbloom Azalea
Rhododendron viscosum—Swamp Azalea
Viburnum acerifolium—Mapleleaf Viburnum
Viburnum trilobum—American Cranberrybush Viburnum (compact form available)
Hydrangea arborescens—Smooth Hydrangea (may need deer protection)
Itea virginica—Virginia Sweetspire (may need deer protection)
Leucothoe fontanesiana—Drooping Leucothoe (for shaded, sheltered locations)
Calycanthus floridus—Carolina Allspice
Pieris floribunda—Mountain Pieris (native Andromeda-needs excellent drainage)

Naturalizing, erosion control, wetland areas:

Alnus rugosa—Speckled Alder
Aronia arbutifolia—Red Chokeberry
Aronia melanocarpa—Black Chokeberry
Callicarpa americana—Beauty Bush
Calycanthus floridus—Buttonbush
Clethra alnifolia—Clethra
Comptonia peregrina—Sweetfern
Cornus sericea—Red Twig Dogwood
Diervilla sessilifolia—Dwarf Bush Honeysuckle
Hammamelis virginiana—Common Witchhazel (may need deer protection until it grows out of their reach)
Ilex glabra—Inkberry
Juniperus virginiana—Eastern Red Cedar (may need deer protection until it grows out of their reach)
Lindera benzoin—Spicebush
Myrica pennsylvanica—Bayberry
Rhododendron maximum—Rosebay Rhododendron (protect from deer)
Salix caprea—Pussy Willow
Spirea latifolia—Meadowsweet
Vaccinium angustifolium—Lowbush Blueberry
Vaccinum corymbosum—Highbush Blueberry
Viburnum cassinoides—Witherod Viburnum
Viburnum dentatum—Arrowwood Virburnum
Viburnum nudum—Smooth Witherod

Plant List - Ornamental Trees

The following ornamental native and non-native trees were adopted for inclusion herein by the Fairfield Hills Authority on 17 July 2007. They are included for their beautiful spring flowering and to add interest when planted around entrances, buildings, and areas of high pedestrian circulation.



Eastern Redbud
Size: 20-30'
Shape: Small Tree
Growing Rate: Medium
Recommended Spacing: NA

Ball & Burlap 3 1/2" - 4" Caliper
Full Sun to Partial Shade

Flowering Dogwood
Size: 10-20'
Shape: Small Tree
Growing Rate: Slow to Medium
Recommended Spacing: NA

Ball & Burlap 3 1/2" - 4" Caliper
Full Sun to Partial Shade

Kwanzan Cherry
Size: 10-20'
Shape: Small Tree
Growing Rate: Slow to Medium
Recommended Spacing: NA

Ball & Burlap 3 1/2" - 4" Caliper
Full Sun to Partial Shade

Stantec

Plant List - Ornamental Trees

Crabapple
Size: 15-30'
Shape: Small Tree
Growing Rate: Medium
Recommended Spacing: NA

Ball & Burlap 3 1/2" - 4" Caliper
Full Sun to Partial Shade

Thornless Cockspur Hawthorn
Size: 10-20'
Shape: Small Tree
Growing Rate: Slow to Medium
Recommended Spacing: NA

Ball & Burlap 3 1/2" - 4" Caliper
Full Sun to Partial Shade; White Flowers

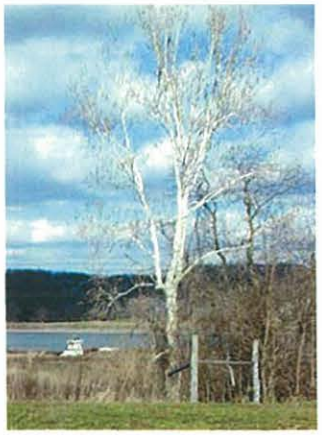
Plant Material - Native Trees

American Beech
Size: 50-70'
Shape: Short Trunk, Wide Spreading
Growing Rate: Slow
Recommended Spacing: Specimen

Ball & Burlap 3 1/2" - 4" Caliper
Full Sun

American Linden
Size: 20-30'
Shape: Pyramidal
Growing Rate: Medium
Recommended Spacing: 30'+/-

Ball & Burlap 3 1/2" - 4" Caliper
Full Sun



Sycamore
Size: 75-100'
Shape: Irregular, Wide Spreading
Growing Rate: Medium to Fast
Recommended Spacing: 30'+/-

Ball & Burlap 3 1/2" - 4" Caliper
Full Sun

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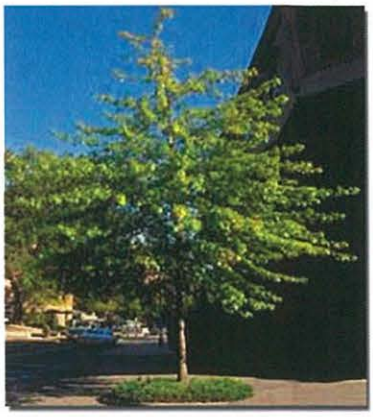
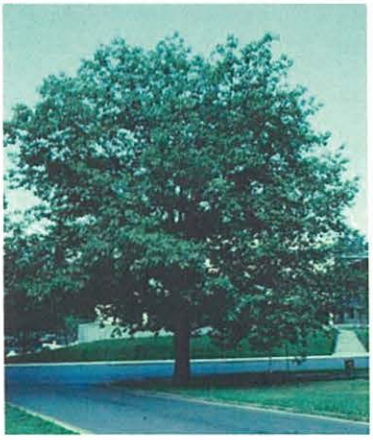
Plant Material - Native Trees



Pin Oak
Size: 60-70'
Shape: Strongly Pyramidal
Growing Rate: Medium to Fast
Recommended Spacing: 30' +/-

Ball & Burlap 3 1/2" - 4" Caliper
Full Sun



Red Oak
Size: 60-75'
Shape: Rounded
Growing Rate: Fast
Recommended Spacing: 30' +/-

Ball & Burlap 3" - 3 1/2" Caliper
Full Sun

Red Maple
Size: 40-60'
Shape: Pyramidal or Elliptical
Growing Rate: Medium to Fast
Recommended Spacing: 30' +/-

Ball & Burlap 3 1/2" - 4" Caliper
Full Sun

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Plant Material - Native Trees

Sweetbay Magnolia
Size: 20-30'
Shape: Rounded
Growing Rate: Medium to Fast
Recommended Spacing: 20' +/-

Ball & Burlap 2 1/2" - 3" Caliper
Full Sun / Partial Shade

Plant List - Stormwater Ponds, Swales, and BIO-treatment

3. Stormwater Ponds and Wetlands Plant List

This section contains planting guidance for stormwater ponds and wetlands. The following lists emphasize the use of plants native to Connecticut and southern New England and are intended as general guidance for planning purposes. Local landscape architects and nurseries may provide additional information, including plant availability, for specific applications.

Plantings for stormwater ponds and wetlands should be selected to be compatible with the various hydrologic zones within these treatment practices (NYDEC, 2001). The hydrologic zones reflect the degree and duration of inundation by water. Plants recommended for a particular zone can generally tolerate the hydrologic conditions that typically exist within that zone. **Table A-1** summarizes recommended plantings (trees/shrubs and herbaceous plants) within each hydrologic zone. This list is not intended to be exhaustive, but includes a number of recommended native species that are generally available from commercial nurseries. Other plant species may be acceptable if they can be shown to be appropriate for the intended hydrologic zone.

Table A-1 Plant List for Stormwater Ponds and Wetlands

Hydrologic Zone	Zone Description	Plant Name and Form	
Zone 1 Deep Water Pool	○ 1 to 6 feet deep, permanent pool ○ Submergent plants (if any at all) ○ Not routinely planted due to limited availability of plants that can survive in this zone and potential clogging of outlet structure ○ Plants reduce resuspension of sediments and improve oxidation/ aquatic habitat	***Trees and Shrubs*** Not recommended	
		Herbaceous Plants	
		Coontail (*Ceratophyllumdemersum*)	Submergent
		Duckweed (*Lemma sp.*)	Submergent/Emergent
		Pond Weed, Sago (*Potamogeton Pectinatus*)	Submergent
		Waterweed (*Elodea canadensis*)	Submergent
		Wild Celery (*Valisneria Americana*)	Submergent
Zone 2 Shallow Water Bench	○ 1 foot below the normal pool (aquatic bench in stormwater ponds) ○ Plants partially submerged ○ Emergent wetland plants ○ Plants reduce resuspension of sediments, enhance pollutant removal, and provide aquatic and nonaquatic habitat	***Trees and Shrubs*** Buttonbush (*Cepahlanthus occidentalis*)	Deciduous shrub
		Herbaceous Plants	
		Arrow arum (*Peltandra virginica*)	Emergent
		Arrowhead, Duck Potato (*Sagittaria latifolia*)	Emergent
		Blue Flag Iris (*Iris versicolor*)	Emergent
		Blue Joint (*Calamagrotis canadensis*)	Emergent
		Broomsedge (*Andropogon virginicus*)	Perimeter
		Bushy Beardgrass (*Andropogon glomeratus*)	Emergent
		Cattail (*Typha sp.*)	Emergent
		Common Three-Square (*Scirpus pungens*)	Emergent
		Duckweed (*Lemma sp.*)	Submergent/Emergent
		Giant Burreed (*Sparganium eurycarpum*)	Emergent
		Long-leaved Pond Weed (*Potamogeton nodosus*)	Rooted Submerged Aquatic
		Marsh Hibiscus (*Hibiscus moscheutos*)	Emergent
		Pickerelweed (*Pontederia cordata*)	Emergent
		Rice Cutgrass (*Leersia oryzoides*)	Emergent
		Sedges (*Carex spp.*)	Emergent
		Soft-stem Bulrush (*Scirpus validus*)	Emergent
		Smartweed (*Polygonum spp*)	Emergent
		Soft Rush (*Juncus effusus*)	Emergent
		Spatterdock (*Nuphar luteum*)	Emergent
		Switchgrass (*Panicum virgatum*)	Perimeter
		Sweet Flag (*Acorus calamus*)	Herbaceous
		Wild Rice (*Zizania aquatica*)	Emergent
		Wool Grass (*Scirpus cyperinus*)	Emergent

Plant List - Stormwater Ponds, Wetlands, Swales and Bio-Treatment

Table A-1 Plant List for Stormwater Ponds and Wetlands *(continued)*

Hydrologic Zone	Zone Description	Plant Name and Form	
Zone 3 Shoreline Fringe	○ 1 foot above the normal pool (includes safety bench of pond) ○ Frequently inundated if storm events are subject to extended detention ○ Plants must be able to withstand inundation during storms and occasional drought ○ Plants provide shoreline stabilization, shade the shoreline, enhance pollutant removal, and provide wildlife habitat (or selected to control overpopulation of waterfowl)	***Trees and Shrubs***	
		Arrowwood Viburnium *(Viburnum dentatum)*	Deciduous shrub
		Black Ash *(Fraxinus nigra)*	Deciduous tree
		Black Willow *(Salix nigra)*	Deciduous tree
		Buttonbush *(Cepahlanthus occidentalis)*	Deciduous shrub
		Common Spice Bush *(Lindera benzoin)*	Deciduous shrub
		Elderberry *(Sambucus canadensis)*	Deciduous shrub
		Larch, Tamarack *(Larix laricina)*	Coniferous tree
		Pin Oak *(Quercus palustris)*	Deciduous tree
		Red Maple *(Acer rubrum)*	Deciduous tree
		River Birch *(Betula nigra)*	Deciduous tree
		Silky Dogwood *(Cornus amomum)*	Deciduous shrub
		Slippery Elm *(Ulnus rubra)*	Deciduous tree
		Smooth Alder *(Alnus serrulata)*	Deciduous tree
		Speckled Alder *(Alnus rugosa)*	Deciduous shrub
		Swamp White Oak (Quercus bicolor)	Deciduous tree
		Swamp Rose (Rosa Palustrus)	Deciduous shrub
		Tupelo *(Nyssa sylvatica vari biflora)*	Deciduous tree
		Winterberry *(Ilex verticillata)*	Deciduous shrub
		Herbaceous Plants	
		Arrow arum *(Peltandra virginica)*	Emergent
		Arrowhead, Duck Potato *(Sagittaria latifolia)*	Emergent
		Blue Flag Iris *(Iris versicolor)*	Emergent
		Blue Joint *(Calamagrotis canadensis)*	Emergent
		Blue Vervain *(Verbena hastata)*	Emergent
		Boneset *(Eupatorium perfoliatum)*	Emergent
		Broomsedge *(Andropogon virginicus)*	Perimeter
		Bushy Beardgrass *(Andropogon glomeratus)*	Emergent
		Cattail *(Typha sp.)*	Emergent
		Chufa *(Cyperus esculentus)*	Emergent
		Creeping Bentgrass *(Agrostis stolonifera)*	Emergent
		Creeping Red Fescue *(Festuca rubra)*	Emergent
		Flat-top Aster *(Aster umbellatus)*	Emergent
		Fowl Bluegrass *(Poa palustris)*	Emergent
		Giant Burreed *(Sparganium eurycarpum)*	Emergent
		Green Bulrush *(Scirpus atrovirens)*	Emergent
		Marsh Hibiscus *(Hibiscus moscheutos)*	Emergent
		Pickerelweed *(Pontederia cordata)*	Emergent
		Redtop *(Agrostis alba)*	Perimeter
		Rice Cutgrass *(Leersia oryzoides)*	Emergent
		Sedges *(Carex spp)*	Emergent
		Soft-stem Bulrush *(Scirpus validus)*	Emergent
		Smartweed *(Polygonum spp.)*	Emergent
		Soft Rush *(Juncus effusus)*	Emergent
		Spotted Joe-pye weed *(Eupatorium maculatum)*	Emergent
		Swamp Aster *(Aster puniceus)*	Emergent
		Switchgrass *(Panicum virgatum)*	Perimeter
		Sweet Flag *(Acorus calamus)*	Herbaceous
		Water Plantain *(Alisma plantago-aquatica)*	Emergent
		Wild-rye *(Elymus spp.)*	Emergent
		Wool Grass *(Scirpus cyperinus)*	Emergent

Plant List - Stormwater Ponds, Wetlands, Swales and Bio-Treatment

Table A-1 Plant List for Stormwater Ponds and Wetlands *(continued)*

Hydrologic Zone	Zone Description	Plant Name and Form	
Zone 4 Riparian Fringe	◦ 1 to 4 feet above the normal pool ◦ Includes nearly all of temporary extended detention volume ◦ Periodically inundated after storms ◦ Plants must be able to withstand inundation during storms and occasional drought ◦ Plants provide shoreline stabilization, shade the shoreline, enhance pollutant removal, and provide wildlife habitat (or selected to control overpopulation of waterfowl)	***Trees and Shrubs***	
		American Elm *(Ulmus americana)*	Deciduous tree
		Arrowwood Viburnum *(Viburium dentatum)*	Deciduous shrub
		Bayberry *(Myrica pensylvanica)*	Deciduous shrub
		Black Ash *(Fraxinus nigra)*	Deciduous tree
		Blackgum or Sourgum *(Nyssa sylvatica)*	Deciduous tree
		Black Willow *(Salix nigra)*	Deciduous tree
		Buttonbush *(Cepahlanthus occidentalis)*	Deciduous shrub
		Common Spice Bush *(Lindera benzoin)*	Deciduous shrub
		Eastern Cottonwood *(Populus deltoides)*	Deciduous tree
		Eastern Red Cedar *(Juniperus virginiana)*	Coniferous tree
		Elderberry *(Sambucus canadensis)*	Deciduous shrub
		Green Ash, Red Ash *(Fraxinus pennsylvania)*	Deciduous tree
		Larch, Tamarack *(Larix laricina)*	Coniferous tree
		Pin Oak *(Quercus palustris)*	Deciduous tree
		Red Maple *(Acer rubrum)*	Deciduous tree
		River Birch *(Betula nigra)*	Deciduous tree
		Shadowbush, Serviceberry *(Amelanchier Canaderisis)*	Deciduous shrub
			Deciduous shrub
		Silky Dogwood *(Cornus amomum)*	Deciduous tree
		Slippery Elm *(Ulmus rubra)*	Deciduous tree
		Smooth Alder *(Alnus serrulata)*	Deciduous shrub
		Speckled Alder *(Alnus rugosa)*	Deciduous tree
		Swamp White Oak *(Quercus bicolor)*	Deciduous shrub
		Swamp Rose *(Rosa Palustrus)*	Deciduous tree
		Sycamore *(Platanus occidentalis)*	Deciduous tree
		Tulip Tree *(Liriodendron tulipifera)*	Deciduous tree
		Tupelo *(Nyssa sylvatica)*	Deciduous tree
		Winterberry *(Ilex verticillata)*	Deciduous shrub
		Witch Hazel *(Hamamelis virginiana)*	Deciduous shrub
		Herbaceous Plants	
		Big Bluestem *(Andropogon gerardi)*	Perimeter
		Birdfoot deervetch *(Lotus Corniculatus)*	Perimeter
		Blue Vervain *(Verbena hastata)*	Emergent
		Boneset *(Eupatorium perfoliatum)*	Emergent
		Blue Joint *(Calamagrotis canadensis)*	Emergent
		Cardinal flower *(Labelia cardinalis)*	Perimeter
		Chufa *(Cyperus esculentus)*	Emergent
		Fowl Bluegrass *(Poa palustris)*	Emergent
		Fowl mannagrass *(Glyceria striata)*	Perimeter
		Green Bulrush *(Scirpus atrovirens)*	Emergent
		Redtop *(Agrostis alba)*	Perimeter
		Sedges *(Carex spp)*	Emergent
		Smartweed *(Polygonum spp.)*	Emergent
		Soft Rush *(Juncus effusus)*	Emergent
		Spotted Joe-pye weed *(Eupatorium maculatum)*	Emergent
		Swamp Aster *(Aster puniceus)*	Emergent
		Switchgrass *(Panicum virgatum)*	Perimeter
		Water Plantain *(Alisma plantago-aquatica)*	Emergent
		Wild-rye *(Elymus spp.)*	Emergent
		Wild-rye *(Elymus spp.)*	Emergent

Plant List - Stormwater Ponds, Wetlands, Swales and Bio-Treatment

Table A-1 Plant List for Stormwater Ponds and Wetlands *(continued)*

Hydrologic Zone	Zone Description	Plant Name and Form	
Zone 5 Floodplain Terrace	◦ Extends from the maximum channel protection water surface elevation (typically 2-yr storm) to the 100-year water surface elevation ◦ Infrequently inundated ◦ Plants must be able to withstand occasional, brief inundation and occasional drought conditions ◦ Plants provide slope stabilization, shade, and wildlife habitat	***Trees and Shrubs***	
		American Elm *(Ulmus americana)*	Deciduous tree
		Bayberry *(Myrica pensylvanica)*	Deciduous shrub
		Black Ash *(Fraxinus nigra)*	Deciduous tree
		Black Cherry *(Prunus serotina)*	Deciduous tree
		Blackgum or Sourgum *(Nyssa sylvatica)*	Deciduous tree
		Black Willow *(Salix nigra)*	Deciduous tree
		Buttonbush *(Cepahlanthus occidentalis)*	Deciduous shrub
		Common Spice Bush *(Lindera benzoin)*	Deciduous shrub
		Eastern Cottonwood *(Populus deltoides)*	Deciduous tree
		Eastern Red Cedar *(Juniperus virginiana)*	Coniferous tree
		Elderberry *(Sambucus canadensis)*	Deciduous shrub
		Green Ash, Red Ash *(Fraxinus pennsylvania)*	Deciduous tree
		Hackenberry *(Celtis occidentalis)*	Deciduous tree
		Pin Oak *(Quercus palustris)*	Deciduous tree
		Red Maple *(Acer rubrum)*	Deciduous tree
		River Birch *(Betula nigra)*	Deciduous tree
		Shadowbush, Serviceberry *(Amelanchier canadensis)*	Deciduous shrub
		Silky Dogwood *(Cornus amomum)*	Deciduous shrub
		Slippery Elm *(Ulmus rubra)*	Deciduous tree
		Smooth Alder *(Alnus serrulata)*	Deciduous tree
		Swamp White Oak *(Quercus bicolor)*	Deciduous tree
		Sweetgum *(Liquidambar styraciflua)*	Deciduous tree
		Sycamore *(Platanus occidentalis)*	Deciduous tree
		Tulip Tree *(Liriodendron tulipifera)*	Deciduous tree
		Tupelo *(Nyssa sylvatica)*	Deciduous tree
		White Ash *(Fraxinus americana)*	Deciduous tree
		Winterberry *(Ilex verticillata)*	Deciduous shrub
		Witch Hazel *(Hamamelis virginiana)*	Deciduous shrub
		Herbaceous Plants	
		Annual Ryegrass *(Lolium multiflorum)*	Perimeter
		Big Bluestem *(Andropogon gerardi)*	Perimeter
		Birdfoot deervetch *(Lotus Corniculatus)*	Perimeter
		Cardinal flower *(Lobelia cardinalis)*	Perimeter
		Creeping Red Fescue *(Festuca rubra)*	Perimeter
		Fowl mannagrass *(Glyceria striata)*	Perimeter
		Redtop *(Agrostis alba)*	Perimeter
		Timothy *(Phleum pratense)*	Perimeter
		White Clover *(Trifolium repens)*	Perimeter
		Switchgrass *(Panicum virgatum)*	Perimeter
Zone 6 Upland Slopes	◦ Above the maximum 100-year water surface elevation ◦ Typically includes outer buffer of pond or wetland ◦ Plants should be selected based on soil condition, light, and function (not inundation since almost never inundated)	***Trees and Shrubs***	
		American Elm *(Ulmus americana)*	Deciduous tree
		Bayberry *(Myrica pensylvanica)*	Deciduous shrub
		Black Cherry *(Prunus serotina)*	Deciduous tree
		Blackgum or Sourgum *(Nyssa sylvatica)*	Deciduous tree
		Eastern Red Cedar *(Juniperus virginiana)*	Coniferous tree
		Elderberry *(Sambucus canadensis)*	Deciduous shrub
		Hackenberry *(Celtis occidentalis)*	Deciduous tree

Plant List - Stormwater Ponds, Wetlands, Swales and Bio-Treatment

Table A-1 Plant List for Stormwater Ponds and Wetlands *(continued)*

Hydrologic Zone	Zone Description	Plant Name and Form	
		Pin Oak *(Quercus palustris)*	Deciduous tree
		Red Maple *(Acer rubrum)*	Deciduous tree
		Shadowbush, Serviceberry *(Amelanchier canadensis)*	Deciduous shrub
		Sweetgum *(Liquidambar styraciflua)*	Deciduous tree
		Sycamore *(Platanus occidentalis)*	Deciduous tree
		Tulip Tree *(Liriodendron tulipifera)*	Deciduous tree
		White Ash *(Fraxinus Americana)*	Deciduous tree
		Herbaceous Plants	
		Birdfoot deervetch *(Lotus Corniculatus)*	Perimeter
		Cardinal flower *(Lobelia cardinalis)*	Perimeter
		Switchgrass *(Panicum virgatum)*	Perimeter

Source: Adapted from NYDEC, 2001; New England Wetland Plants, Inc.

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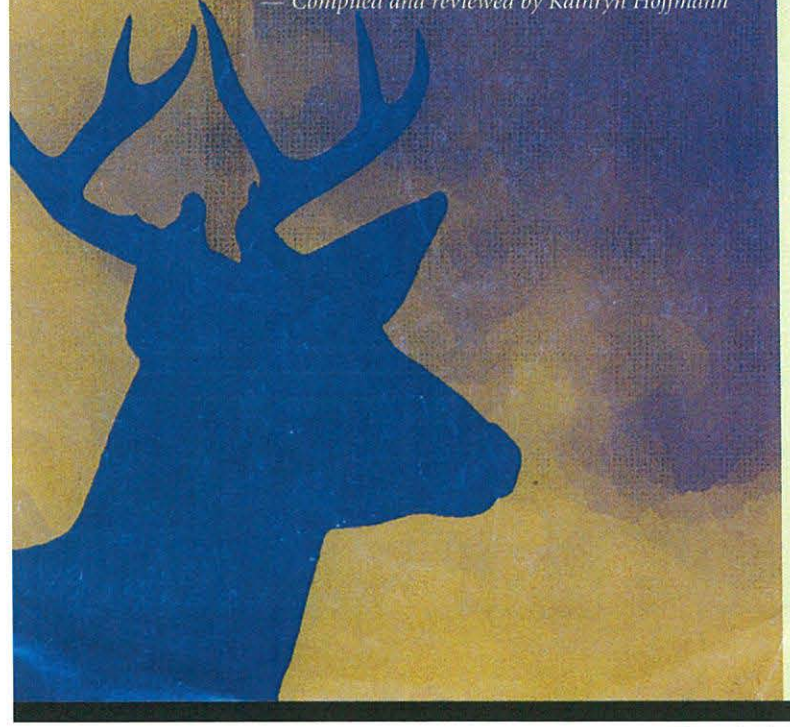
Plant List -Deer Resistant Plants

Deer Survey

Everyone, it seems, has a list of plants that deer won't eat. Before we presented ours, we heard from you in the form of a Survey of Deer Browse Damage. Continuing the work started by Dr. Jeffrey S. Ward at the University of Connecticut — see *PPP*'s Autumn 2001 issue — we are attempting to assign a numerical rating to every landscape plant. Actual plant damage in your yard will be determined by numerous factors, including deer hunger, the plants' proximity to the house and human activity, and overall deer population in your area.

— Compiled and reviewed by Kathryn Hoffmann



PERENNIALS

Betony, Lambs' ears	*Stachys*	1
Foam flower	*Tiarella*	1
Goldenrod	*Solidago*	1
Grasses, ornamental	*Various genera*	1
Lavender	*Lavandula*	1
Oregano, majorum	*Origanum*	1
Silvermound	*Artemesia*	1
Balloon flower	*Platycodon*	2
Bleeding heart	*Dicentra*	2
Carnation	*Dianthus*	2
Columbine	*Aquilegia*	2
English daisy	*Bellis*	2
False spirea	*Astilbe*	2
Foxglove	*Digitalis*	2
Hens and chicks	*Sempervivum*	2
Miniature hollyhocks	*Sidalcea*	2
Monkshood	*Aconitum*	2
Peony	*Paeonia*	2
Rose mallow	*Hibiscus*	2
Russian sage	*Perovskia*	2
Stokes' aster	*Stokesia*	2
Yarrow	*Achillea*	2
Bee balm	*Monarda*	3
Bellflower	*Campanula*	3
Blazing star	*Liatrus*	3
Coneflower	*Echinacea*	3
Cranesbill	*Geranium*	3
Daisy	*Chrysanthemum*	3
Ferns	*Various genera*	3
Golden sunflower	*Heliopsis*	3
Iris (rhizome)	*Iris*	3
Lily-of-the-valley	*Convallaria*	3
Loosestrife	*Lysimachia*	3
Lupine	*Lupinus*	3
Montauk daisy	*Nipponanthemum*	3
Phlox	*Phlox paniculata*	3
Phlox	*Phlox stonifera*	3
Pincushion flower	*Scabiosa*	3
Shasta daisy	*Leucanthemum*	3

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Plant List-Deer Resistant Plants

Soloman's seal	*Polygonatum*	3
Stone cress	*Aethionema*	3
Stonecrop	*Sedum*	3
Tree mallow	*Lavatera*	3
Turtlehead	*Chelone*	3
Violet	*Viola*	3
Aster	*Aster*	4
Daylily	*Hemerocallis*	4
Black-eyed Susan	*Rudbeckia*	4
Hollyhock	*Alcea*	4
Lily	*Lilium*	4
Hosta	*Hosta*	5

SHRUBS

Barberry	*Berberis*	1
Boxwood	*Buxus*	2
Butterfly bush	*Buddleia*	2
Candytuft	*Iberis*	2
Dogwood	*Cornus*	2
Forsythia	*Forsythia*	2
Honeysuckle	*Lonicera*	2
Spirea	*Spiraea*	2
Blueberry/cranberry	*Vaccinium*	3
Burning bush	*Euonymus*	3
Heath	*Erica*	3
Holly, evergreen	*Ilex*	3
Hydrangea	*Hydrangea*	3
Lilac	*Syringa*	3
Raspberry	*Rubus*	3
Rose of Sharon	*Hibiscus*	3
Shrub junipers	*Juniperus*	3
Summersweet	*Clethra*	3
Viburnum	*Viburnum*	3
Beautyberry	*Callicarpa*	4
Clematis	*Clematis*	4
PeeGee hydrangea	*Hydrangea*	4
Rose	*Rosa*	4
Winter creeper	*Euonymus*	4
Arborvitae	*Thuja*	5
Holly, deciduous	*Ilex*	5
Yew	*Taxus*	5

VINES

Grapes	*Vitis*	2

TREES

Birch	*Betula*	1
Ginkgo	*Ginkgo*	1
American holly	*Ilex*	2
Japanese maple	*Acer*	2
Pear	*Pyrus*	2
Pine	*Pinus*	2
Crabapple	*Malus*	3
Flowering almond	*Prunus*	3
Magnolia	*Magnolia*	3
Spruce	*Picea*	3
Willow	*Salix*	3
Atlantic white cedar	*Chamaecyparis*	4
Azalea, evergreen	*Rhododendron*	4
Azalea, deciduous	*Rhododendron*	4
Eastern red cedar	*Juniperus*	4
Fir	*Abies*	4
Hemlock	*Tsuga*	4
Holly, evergreen	*Ilex*	4
Mountain laurel	*Kalmia*	4
Rhododendron	*Rhododendron*	4

CORMS/BULBS

Daffodil	*Narcissus*	1
Glory of Snow	*Chionodoxa*	2
Iris (bulbs)	*Iris*	2
Siberian squill	*Scilla*	2
Autumn crocus	*Colchicum*	3
Grape hyacinth	*Hyacinthus*	3
Hyacinth	*Hyacinthus*	3
Crocus	*Crocus*	4
Tulip	*Tulipa*	5

TENDER PERENNIALS

Canna	*Canna*	2
Fibrous begonia	*Begonia*	3
Dahlia	*Dahlia*	3
Gladiolus	*Gladiolus*	4

ANNUALS

Geranium	*Pelargonium*	2
Nasturtium	*Tropaeolum*	2
Pinks	*Dianthus*	2
Salvia	*Salvia*	2
Snapdragon	*Antirrhinum*	2
Alyssum	*Lobularia*	3
Cosmos	*Cosmos*	3
Forget-me-not	*Myosotis*	3
Lobelia	*Lobelia*	3
Morning glory	*Ipomoea*	3
Pansy	*Viola*	3
Vinca	*Catharanthus*	3
Zinnias	*Zinnias*	3
Coleus	*Coleus*	4
Impatiens	*Impatiens*	4
Petunia	*Petunia*	4
Aster	*Callistephus*	5
Sunflower	*Helianthus*	5

GROUNDCOVERS

Pachysandra	*Pachysandra*	3
Euonymus	*Euonymus*	5

HERBS

Basil	*Ocimum*	2
Parsley	*Petroselinum*	2

RATING KEY

BEHIND THE NUMBERS . . . An approximate guide to their meaning and usefulness

1 — RARELY EATEN

2 — SELDOM EATEN

3 — OCCASIONALLY EATEN

4 — USUALLY EATEN

5 — ALWAYS EATEN

This survey would not be considered scientifically accurate data and is intended as a reference only, based on feedback from other Northeast gardeners. Your experience may vary greatly.

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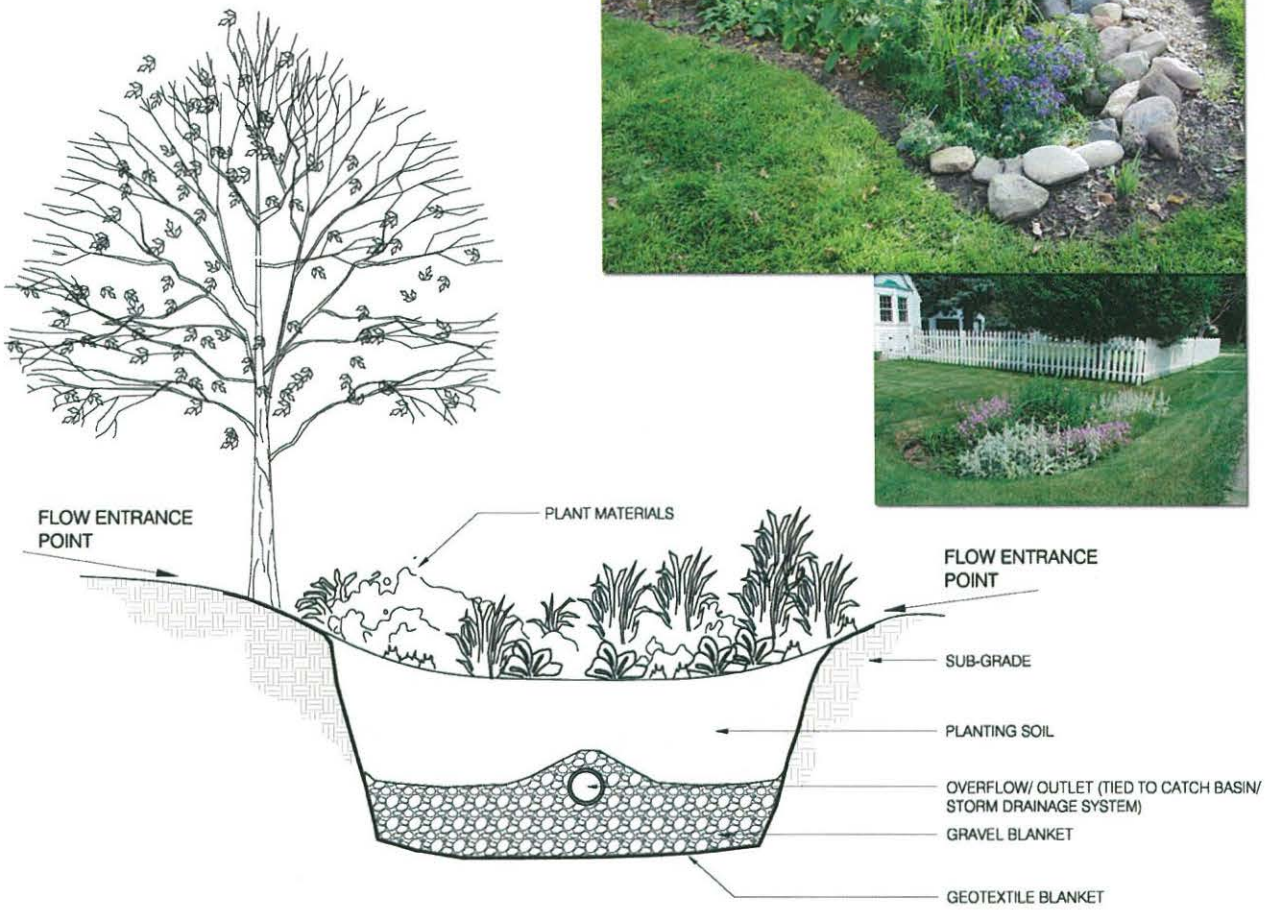
Rain Gardens



TYPICAL RAIN GARDEN AND PLANTED SWALE DESIGN
SCALE: N.T.S.

Use: Rain Gardens are shallow depressions in the landscape that typically include plants and a groundcover. Raingardens provide increased groundwater recharge and pollutant treatment.

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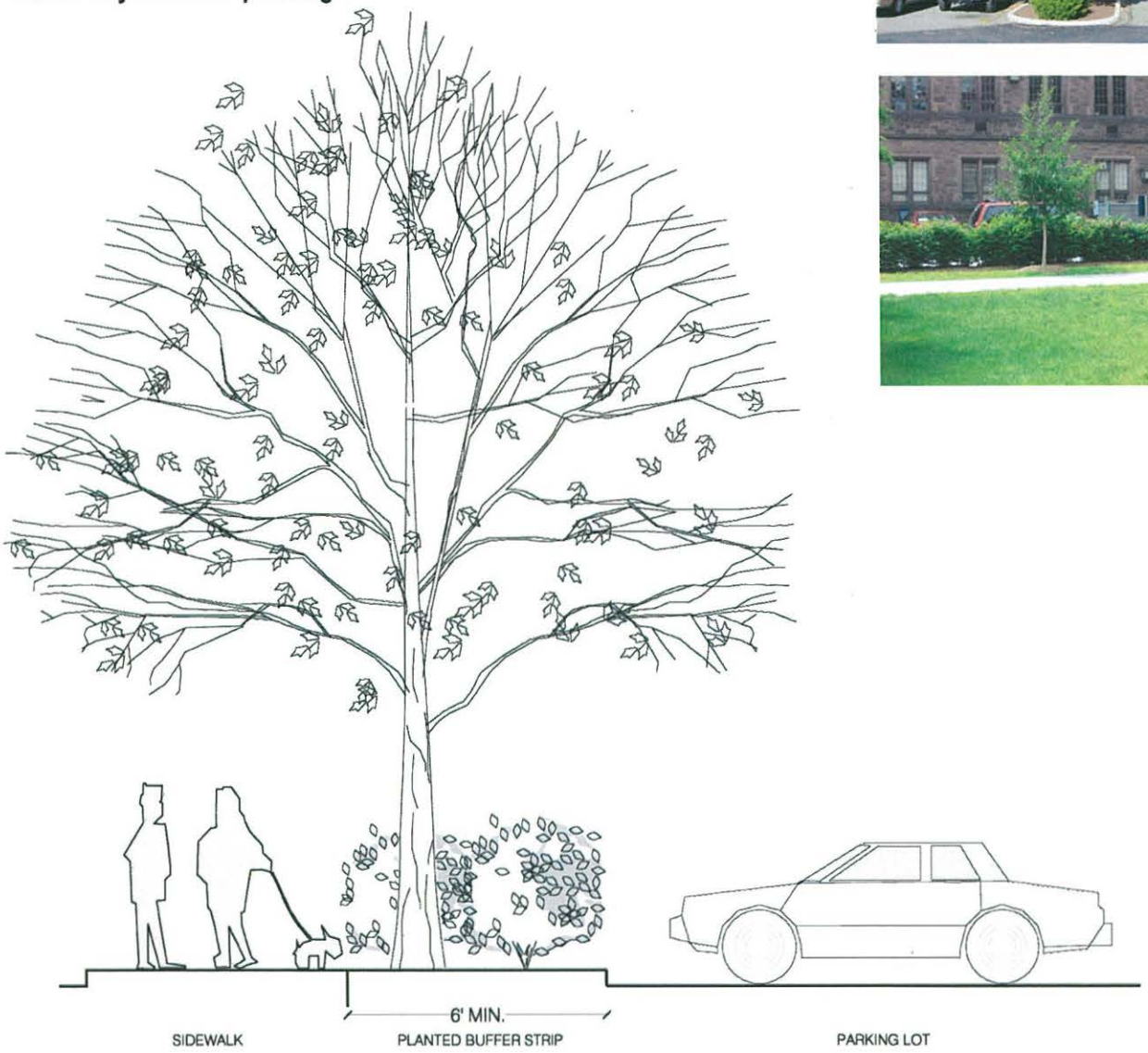
Plant Material (Parking Lot Landscaping)

Use: Landscaping of parking lot areas should include a combination of trees, shrubs, and groundcovers.

Landscaping for parking lots is intended to partially screen parked vehicles from public view and to ensure that more than 50% of the parking lot area is shaded within 15 years after planting.



Typical example of screening parking lot areas.

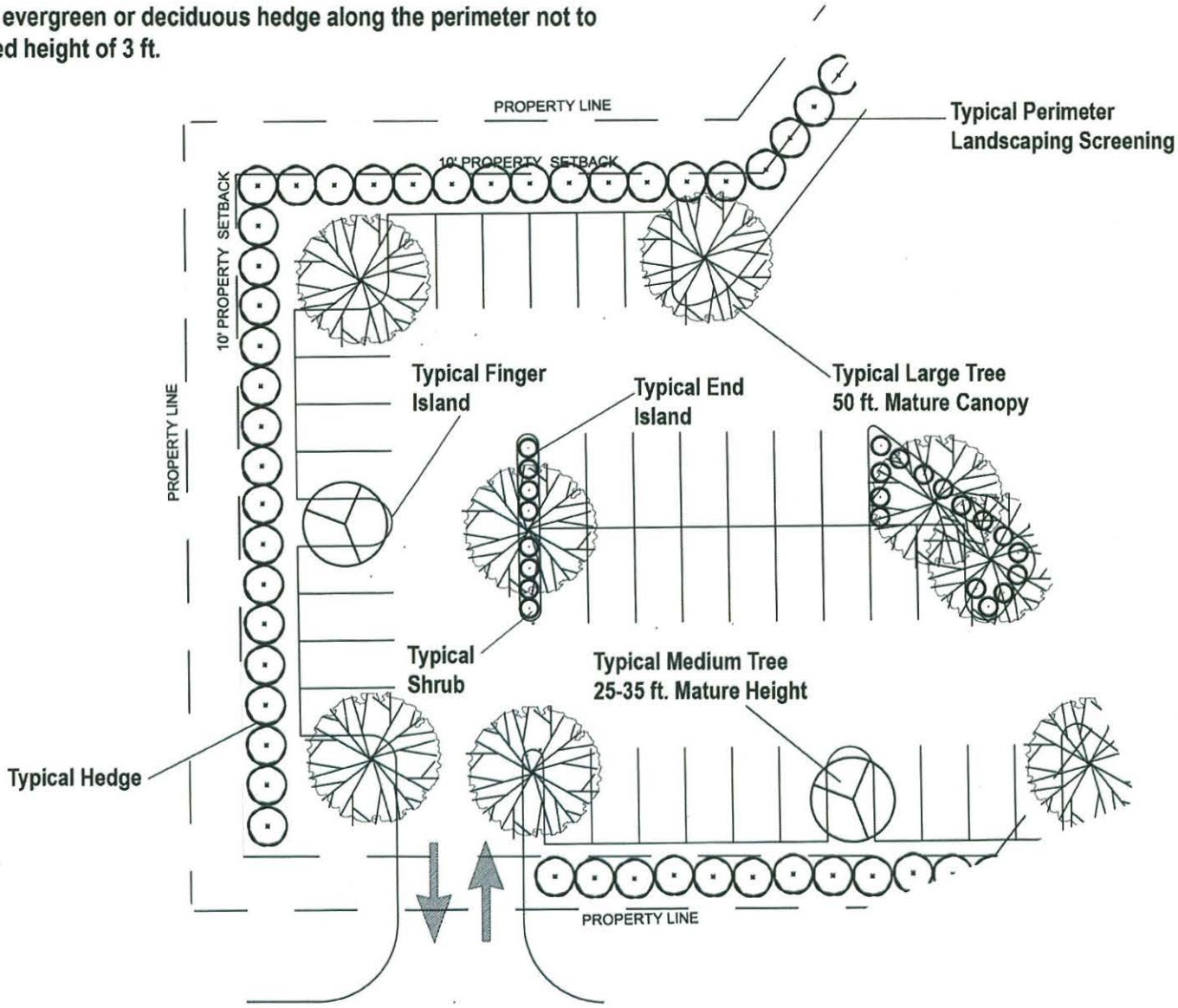
Plant Material (Parking Lot Landscaping)

Plant medium-scaled trees in finger islands with a mature height not to exceed 35 ft.

Plant shrubs in end islands with a mature height not to exceed 42".

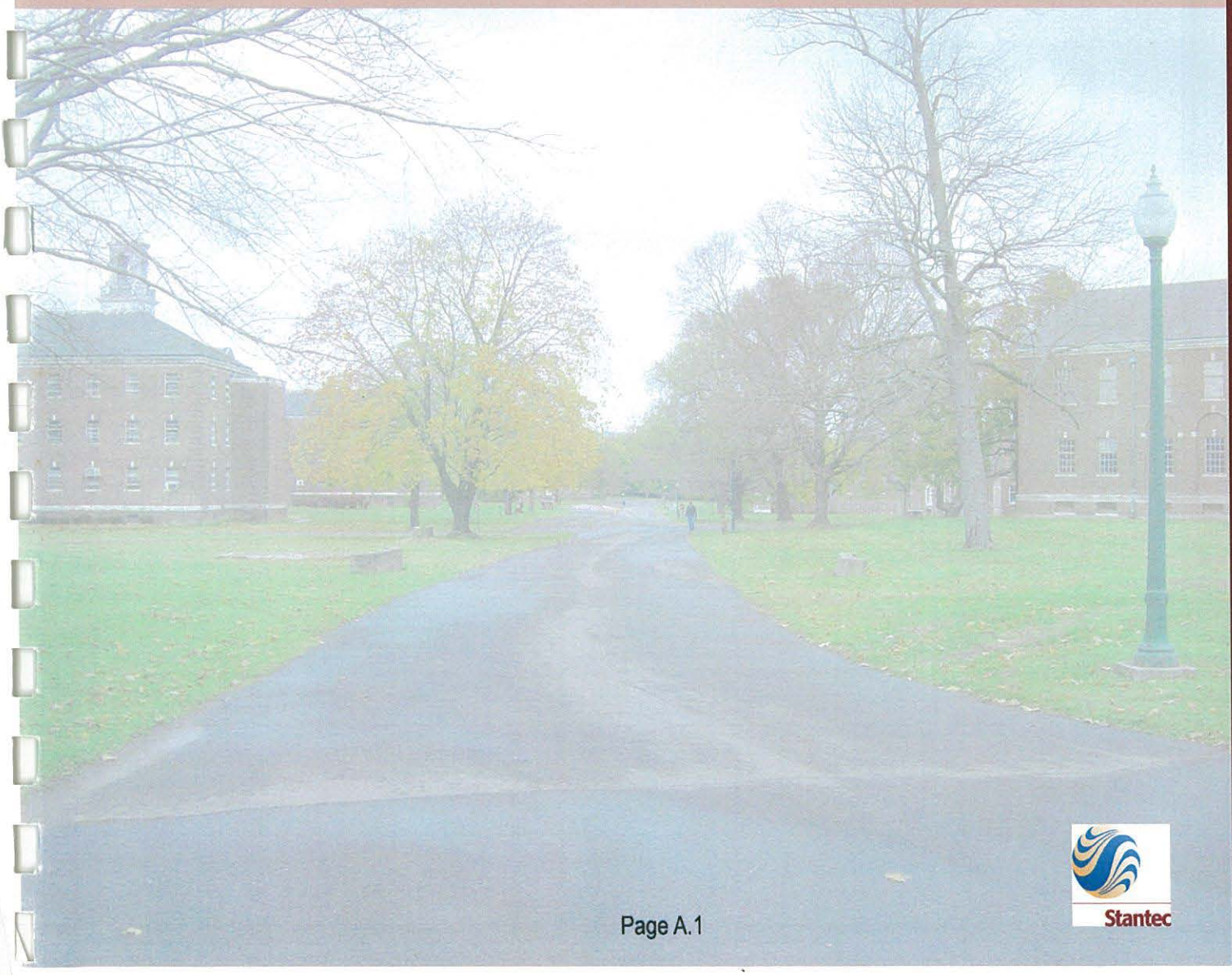
Plant large-scaled trees in end islands and at end of parking rows not to exceed a mature canopy of 50 ft.

Plant evergreen or deciduous hedge along the perimeter not to exceed height of 3 ft.



Typical landscape planting areas in a parking lot .

Appendix A.



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Appendix A

Fairfield Hills
Newtown, CT

Tree Survey

Date:5-17-02
By:GDH
Sheet:1

Tree #	Tree Species: Latin/Common Name	Landscape Value 1 = Good - 4 = Poor	Size (Cal.,HT.)	Health (Good/Decline)
1	Acer saccharum/ Sugar Maple	2	24" cal.	G
2	Acer platanoides/ Norway Maple	2	24" cal.	G
3	Acer platanoides/ Norway Maple	2	24" cal.	G
4	Acer platanoides/ Norway Maple	2	24" cal.	D
5	Acer platanoides/ Norway Maple	2	24" cal.	G
6	Acer platanoides/ Norway Maple	2	24" cal.	G
7	Acer saccharum/ Sugar Maple	4	36" cal.	G
8	Acer saccharum/ Sugar Maple	3	30" cal.	D
9	Pseudotsuga menzizsii/ Douglasfir	4	25' ht	G
10	Tsuga canadensis/ Eastern Hemlock	1	20, ht.	D
11	Pseudotsuga menzizsii/ Douglasfir	4	25' ht	G
12	Picea glauca/ White spruce	1	12' ht.	D
13	Acer saccharum/ Sugar Maple	4	30" cal.	G
14	Acer saccharum/ Sugar Maple	4	30" cal.	G
15	Acer platanoides/ Norway Maple	2	30" cal.	G
16	Acer saccharum/ Sugar Maple	4	30" cal.	G
17	Acer saccharum/ Sugar Maple	4	30" cal.	G
18	Acer platanoides/ Norway Maple	3	30" cal.	G
19	Acer platanoides/ Norway Maple	2	36" cal.	D
20	Acer platanoides/ Norway Maple	3	36" cal.	G
21	Ulmus americana/ American Elm	4	36" cal.	G
22	Cornus florida/ Flowering Dogwood	1	8" cal.	D
23	Cornus florida/ Flowering Dogwood	1	8" cal.	D
24	Prunus cerasifera/ Myrobalan Plum	2	12" cal.	G
25	Ulmus americana/ American Elm	4	48" cal.	D
26	Acer platanoides/ Norway Maple	3	36" cal.	G
27	Acer saccharum/ Sugar Maple	3	30" cal.	G

Appendix A

Fairfield Hills
Newtown, CT

Tree Survey

Date:5-17-02
By:GDH
Sheet:3

Tree #	Tree Species: Latin/Common Name	Landscape Value 1 = Good - 4 = Poor	Size (Cal.,HT.)	Health (Good/Decline)
55	Platanus occidentalis/ Sycamore	4	36" cal.	G
56	Acer saccharum/ Sugar Maple	2	30" cal.	D
57	Acer platanoides/ Norway Maple	3	30" cal.	G
58	Acer platanoides/ Norway Maple	3	30" cal.	G
59	Acer platanoides/ Norway Maple	3	30" cal.	G
60	Ginkgo biloba/ Maidenhair Tree	4	12" cal.	G
61	Acer saccharum/ Sugar Maple	4	48" cal.	G
62	Liquidamber styraciflua/ American Sweetgum	4	24" cal.	G
63	Qurecus palustrius/ Pin Oak	4	30" cal.	G
64	Acer platanoides/ Norway Maple	2	36" cal.	G
65	Liquidamber styraciflua/ American Sweetgum	4	30" cal.	G
66	Acer platanoides/ Norway Maple	2	36" cal.	G
67	Liquidamber styraciflua/ American Sweetgum	4	36" cal.	G
68	Acer platanoides/ Norway Maple	2	30" cal.	D
69	Cornus florida/ Flowering Dogwood	2	12" cal.	D
70	Acer platanoides/ Norway Maple	2	30" cal.	D
71	Acer platanoides/ Norway Maple	2	30" cal.	G
72	Ulmus americana/ American Elm	1	36" cal.	D
73	Ulmus americana/ American Elm	4	36" cal.	G
74	Platanus occidentalis/ Sycamore	4	36" cal.	G
75	Liquidamber styraciflua/ American Sweetgum	4	30" cal.	G
76	Tilla americana/ American Linden	3	30" cal.	G
77	Acer platanoides/ Norway Maple	1	36" cal.	D
78	Acer saccharum/ Sugar Maple	3	36" cal.	G
79	Acer saccharum/ Sugar Maple	3	36" cal.	G
80	Acer platanoides/ Norway Maple	2	30' ht.	G
81	Acer saccharum/ Sugar Maple	4	30" cal.	G

Appendix A

Fairfield Hills
Newtown, CT

Tree Survey

Date:5-17-02
By:GDH
Sheet:4

Tree #	Tree Species:	Landscape Value	Size	Health
	Latin/Common Name	1 = Good - 4 = Poor	(Cal.,HT.)	(Good/Decline)
82	Acer saccharum/ Sugar Maple	4	30" cal.	G
83	Acer saccharum/ Sugar Maple	1	48" cal.	D
84	Sorbus acuuparia/ European Mountainash	2	12" cal.	G
85	Acer platanoides/ Norway Maple	3	36" cal.	G
86	Acer platanoides/ Norway Maple	1	24" cal.	D
87	Acer saccharum/ Sugar Maple	4	30" cal.	D
88	Acer saccharum/ Sugar Maple	2	24" cal.	D
89	Acer saccharum/ Sugar Maple	4	36" cal.	G
90	Qurecus palustrius/ Pin Oak	4	36" cal.	G
91	Sorbus acuuparia/ European Mountainash	2	12" cal.	G
92	Acer platanoides/ Norway Maple	3	30" cal.	G
93	Acer saccharum/ Sugar Maple	3	24" cal.	G/D
94	Liquidamber styraciflua/ American Sweetgum	4	36" cal.	G
95	Thuja occidentalis/ Arborvitae	4	25' ht.	G
96	Thuja occidentalis/ Arborvitae	4	25' ht.	G
97	Cornus florida/ Flowering Dogwood	4	12" cal.	G
98	Acer saccharum/ Sugar Maple	4	36" cal.	G
99	Ulmus americana/ American Elm	4	36" cal.	G
100	Quercus bicolor/ Swamp White Oak	4	36" cal.	G/D
101	Acer platanoides/ Norway Maple	1	18" cal.	D
102	Acer platanoides/ Norway Maple	1	18" cal.	D
103	Acer platanoides/ Norway Maple	1	18" cal.	D
104	Quercus bicolor/ Swamp White Oak	4	36" cal.	G
105	Acer platanoides/ Norway Maple	2	30" cal.	G
106	Acer platanoides/ Norway Maple	2	24" cal.	G
107	Acer platanoides/ Norway Maple	3	24" cal.	G
108	Acer platanoides/ Norway Maple	3	30" cal.	G

Appendix A

Fairfield Hills
Newtown, CT

Tree Survey

Date:5-17-02
By:GDH
Sheet:5

Tree #	Tree Species:	Landscape Value	Size	Health
	Latin/Common Name	1 = Good - 4 = Poor	(Cal.,HT.)	(Good/Decline)
109	Acer platanoides/ Norway Maple	3	24" cal.	D
110	Acer saccharum/ Sugar Maple	4	30" cal.	G
111	Acer saccharum/ Sugar Maple	4	36" cal.	G
112	Acer rubrum/ Red Maple	1	12" cal.	G
113	Acer platanoides/ Norway Maple	3	24" cal.	D
114	Acer saccharum/ Sugar Maple	3	30" cal.	G
115	Tsuga canadensis/ Eastern Hemlock	1	20' ht.	D
116	Acer saccharum/ Sugar Maple	4	30" cal.	G
117	Picea abies/ Norway Spruce	4	40' ht.	G
118	Acer saccharum/ Sugar Maple	4	18" cal.	G
119	Acer saccharum/ Sugar Maple	4	18" cal.	G
120	Acer rubrum/ Red Maple	4	18" cal.	G
121	Acer platanoides/ Norway Maple	1	8" cal.	D
122	Cornus florida/ Flowering Dogwood	2	8" cal.	G
123	Acer saccharum/ Sugar Maple	4	18" cal.	G
124	Tsuga canadensis/ Eastern Hemlock	1	25' ht.	D
125	Tilla americana/ American Linden	3	18" cal.	G
126	Tilla americana/ American Linden	3	18" cal.	G
127	Tilla americana/ American Linden	3	18" cal.	G
128	Acer saccharum/ Sugar Maple	2	18" cal.	D
129	Acer saccharum/ Sugar Maple	4	24" cal.	G
130	Acer saccharum/ Sugar Maple	4	24" cal.	G
131	Acer saccharum/ Sugar Maple	4	30" cal.	G
132	Acer rubrum/ Red Maple	3	24" cal.	D
133	Acer saccharum/ Sugar Maple	3	24" cal.	G
134	Acer platanoides/ Norway Maple	3	30" cal.	G
135	Acer saccharum/ Sugar Maple	4	30" cal.	G

Appendix A

Fairfield Hills
Newtown, CT

Tree Survey

Date:5-17-02
By:GDH
Sheet:6

Tree #	Tree Species:	Landscape Value	Size	Health
	Latin/Common Name	1 = Good - 4 = Poor	(Cal.,HT.)	(Good/Decline)
136	Pinus strobus/ Eastern White Pine	1	12" cal.	G
137	Acer platanoides/ Norway Maple	1	12" cal.	D
138	Picea glauca/ White spruce	1	25' ht.	D
139	Pinus strobus/ Eastern White Pine	2	15' ht.	G
140	Picea glauca/ White spruce	1	25' ht.	G
141	Acer platanoides/ Norway Maple	1	24" cal.	D
142	Acer saccharum/ Sugar Maple	1	18" cal.	D
143	Picea glauca/ White spruce	1	25' ht.	G
144	Acer saccharum/ Sugar Maple	3	24" cal.	G
145	Acer saccharum/ Sugar Maple	4	36" cal.	G
146	Picea abies/ Norway Spruce	4	48" cal.	G
147	Acer saccharum/ Sugar Maple	4	30" cal.	G
148	Cornus florida/ Flowering Dogwood	3	10" cal.	G
149	Cornus florida/ Flowering Dogwood	3	8" cal.	G
150	Cornus florida/ Flowering Dogwood	3	10" cal.	G
151	Acer saccharum/ Sugar Maple	3	24" cal.	D
152	Picea pungens/ Colorado Spruce	2	25' ht.	G
153	Acer saccharum/ Sugar Maple	2	48" cal.	G
154	Acer rubrum/ Red Maple	1	18" cal.	D
155	Cornus florida/ Flowering Dogwood	2	10" cal.	G
156	Acer saccharum/ Sugar Maple	3	12" cal.	G
157	Acer saccharum/ Sugar Maple	3	24" cal.	G
158	Picea glauca/ White spruce	2	30' ht.	G
159	Acer saccharum/ Sugar Maple	4	30" cal.	G
160	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
161	Tilla cordata/ Littleleaf Linden	4	24" cal.	G/D
162	Tilla cordata/ Littleleaf Linden	4	24" cal.	G/D

Appendix A

Fairfield Hills
Newtown, CT

Tree Survey

Date:5-17-02
By:GDH
Sheet:7

Tree #	Tree Species:	Landscape Value	Size	Health
	Latin/Common Name	1 = Good - 4 = Poor	(Cal.,HT.)	(Good/Decline)
163	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
164	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
165	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
166	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
167	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
168	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
169	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
170	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
171	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
172	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
173	Tilla cordata/ Littleleaf Linden	4	24" cal.	D
174	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
175	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
176	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
177	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
178	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
479	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
180	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
181	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
182	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
183	Tilla cordata/ Littleleaf Linden	4	24" cal.	G
184	(8)Thuja occidentalis/ Arborvitae	3	20'-30' ht.	G
185	Malus species/ Crabapple	2	15' ht.	G
186	Picea glauca/ White spruce	1	20' ht.	G
187	Picea glauca/ White spruce	1	20' ht.	G
188	Prunus cerasifera/ Myrobalan Plum	1	10" cal.	G
189	Acer platanoides/ Norway Maple	1	10" cal.	G

Appendix A

Fairfield Hills
Newtown, CT

Tree Survey

Date:5-17-02
By:GDH
Sheet:8

Tree #	Tree Species: Latin/Common Name	Landscape Value 1 = Good - 4 = Poor	Size (Cal.,HT.)	Health (Good/Decline)
190	Acer platanoides/ Norway Maple	1	10" cal.	G
191	Acer platanoides/ Norway Maple	2	10" cal.	G
192	Acer platanoides/ Norway Maple	2	10" cal.	G
193	Picea glauca/ White spruce	2	25' ht.	G
194	Acer platanoides/ Norway Maple	2	10" cal.	G/D
195	Acer platanoides/ Norway Maple	1	10" cal.	G
196	Picea glauca/ White spruce	1	8' ht.	G
197	Tilla cordata/ Littleleaf Linden	1	18" cal.	D
198	Malus species/ Crabapple	1	10" cal.	G
199	Quercus palustrius/ Pin Oak	4	30" cal.	G
200	Malus species/ Crabapple	3	12" cal.	G
201	Quercus palustrius/ Pin Oak	4	30" cal.	G
202	Quercus palustrius/ Pin Oak	4	12" cal.	G
203	Quercus palustrius/ Pin Oak	4	12" cal.	G
204	Quercus palustrius/ Pin Oak	1	8" cal.	G
205	Malus species/ Crabapple	4	24" cal.	G
206	Quercus palustrius/ Pin Oak	4	18" cal.	G
207	Malus species/ Crabapple	3	12" cal.	G
208	Quercus palustrius/ Pin Oak	4	18" cal.	G
209	Acer rubrum/ Red Maple	2	18" cal.	G/D
210	Acer platanoides/ Norway Maple	4	24" cal.	G
211	Ginkgo biloba/ Maidenhair Tree	4	8" cal.	G
212	Ginkgo biloba/ Maidenhair Tree	4	8" cal.	G
213	Acer saccharum/ Sugar Maple	4	10" cal.	G
214	Acer saccharum/ Sugar Maple	4	10" cal.	D
215	Acer saccharum/ Sugar Maple	4	10" cal.	G
216	Acer saccharinum/ Silver Maple	1	36" cal.	D

Appendix A

Fairfield Hills
Newtown, CT

Tree Survey

Date:5-17-02
By:GDH
Sheet:9

Tree #	Tree Species:	Landscape Value	Size	Health
	Latin/Common Name	1 = Good - 4 = Poor	(Cal.,HT.)	(Good/Decline)
217	Liquidamber styraciflua/ American Sweetgum	3	30" cal.	G
218	Picea pungens/ Colorado Spruce	2	40' ht.	G
219	Acer saccharum/ Sugar Maple	3	24" cal.	G
220	Acer rubrum/ Red Maple	2	36" cal.	D
221	Acer rubrum/ Red Maple	2	36" cal.	D
222	Quercus palustrius/ Pin Oak	4	30" cal.	G
223	Quercus palustrius/ Pin Oak	4	30" cal.	G
224	Liquidamber styraciflua/ American Sweetgum	4	30" cal.	G
225	Quercus palustrius/ Pin Oak	4	36" cal.	G
226	Quercus palustrius/ Pin Oak	4	36" cal.	G
227	Liquidamber styraciflua/ American Sweetgum	4	36" cal.	D
228	Liquidamber styraciflua/ American Sweetgum	4	36" cal.	D
229	Liquidamber styraciflua/ American Sweetgum	4	36" cal.	G
230	Liquidamber styraciflua/ American Sweetgum	4	36" cal.	G
231	Quercus palustrius/ Pin Oak	4	36" cal.	G
232	Acer saccharum/ Sugar Maple	4	48" cal.	G
233	Acer rubrum/ Red Maple	4	36" cal.	G

Legend

- Parcel Boundary
- Project Boundary

Fairfield Hills - Tree Inventory

Newtown, Connecticut

Graphic Scale

Harrall - Michalowski Associates, Inc.
Hamden, Connecticut

SmithGroup JJR, L.L.C
Ann Arbor, Michigan

Milone & MacBroom, Inc.
Cheshire, Connecticut

Kaestle Boos Associates, Inc.
New Britian, Connecticut

Puss & O'Neill, Inc.
Manchester, Connecticut

The Downes Group
New Britian, Connecticut

Note:
Property lines depicted hereon are for planning purposes only. Delineations may not be exact.

Map Created: May 2002

Landscape Design Guidelines

Fairfield Hills

Newtown, CT

17 July 2007
Amended 20 May 2008

Prepared By:

Stantec

2321 Whitney Ave
Hamden, CT 06518-3510

Tel: 203.281.1350
Fax: 203.281.1470

Signage

Cost Table

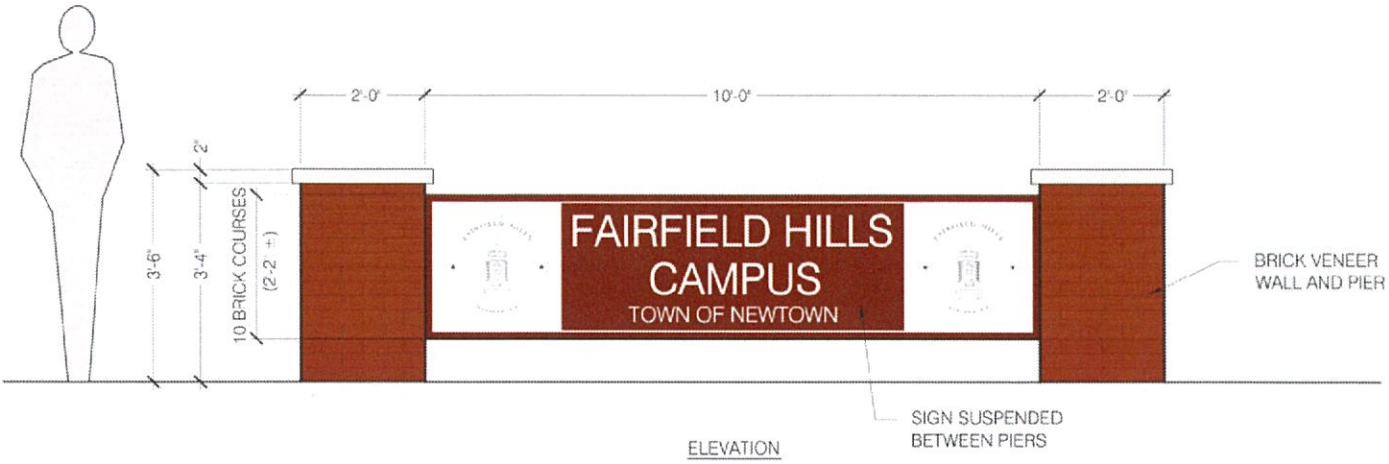
Campus Entrance Signage	EA	
Campus Directory Signage	EA	Custom Work
Corporate Identity Signage	EA	Cost Varies
Secondary Internal Signage	EA	

2006 Pricing Shown

Signage is custom work and shown here in the guidelines as possibilities. Proposed signage should be sympathetic to the surrounding brick buildings and landscape of the campus.

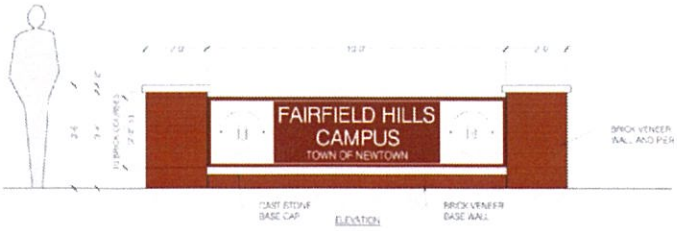
Stantec

Signage

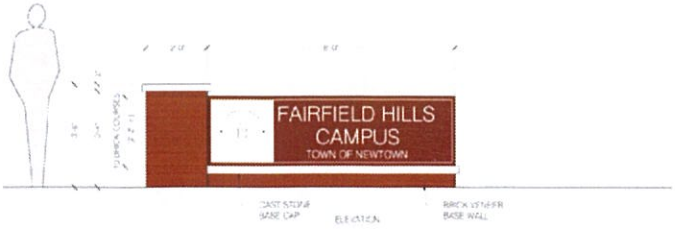


Preferred Main Entrance Sign

Alternate No. 1



Alternate No. 2



Alternate No. 3

CAMPUS ENTRANCE SIGNAGE

Material: Brick, Cast Stone, and Metal

Background Color: Maroon; Dark Brick Red; Dark Tile Red. Color shall be submitted for approval by the Fairfield Hills Authority.

Lighting: Signage shall be lighted from the ground with up-lighting. Internal or back-lighted signage is prohibited.

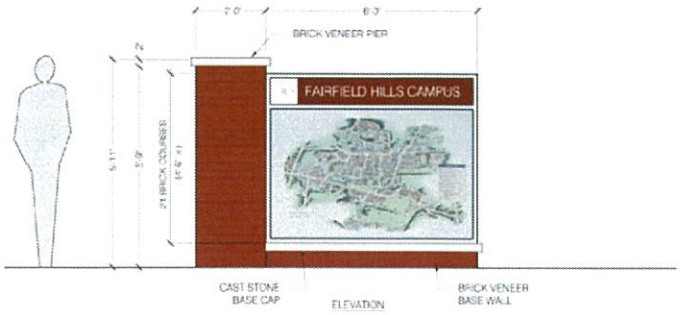
Use: Main entrance sign

Advantages: A very noticeable and aesthetically pleasing entry

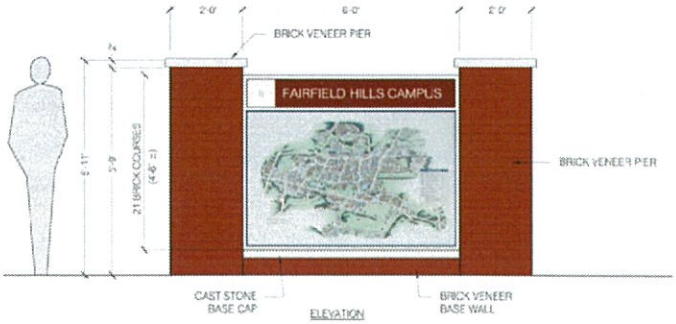
Disadvantages: N/A

Stantec

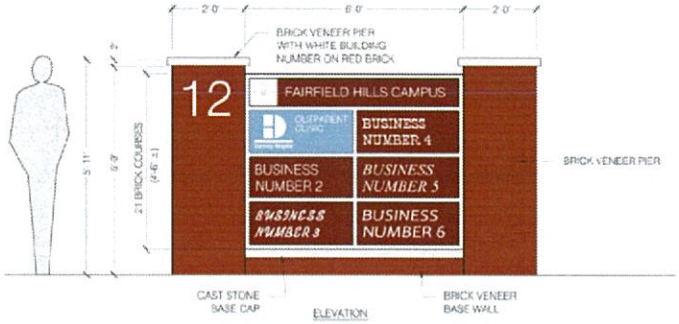
Signage



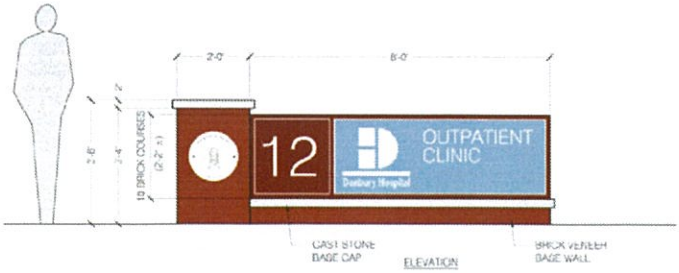
Campus Directory- Alternate No. 1



Campus Directory- Alternate No. 2



Corporate Identification - Alternate No. 1



Corporate Identification - Alternate No. 2

CAMPUS DIRECTORY SIGNAGE AND CORPORATE IDENTITY SIGNAGE

Materials: Brick, Cast Stone, and Metal
Background Color: Maroon; Dark Brick Red; Dark Tile Red. Color shall be submitted for approval by the Fairfield Hills Authority.

Lighting: Signage shall be lighted from the ground with up-lighting. Internal or back-lighted signage is prohibited.

Use: Internal wayfinding

Advantages: Aesthetics, organization

Disadvantages: N/A

Signage

SECONDARY INTERNAL SIGNAGE

Materials: Metal, plastic

Background Color: Maroon; Dark Brick Red; Dark Tile Red. Color shall be submitted for approval by the Fairfield Hills Authority.

Use: Internal wayfinding

Advantages: Organization

Disadvantages: N/A