Beatrix Farrand
Consultant Landscape Architect
to Yale Campus 1920-1945

Yale University Campus
Farrand Cultural Landscapes Study

Yale Office of Facilities
Kristina Chmelar, AIA, LEED AP BD&C, Major
Projects Planner
Michael West, Manager of Planning and Standards

Heritage Landscapes LLC
Patricia M. O’Donnell, PLA, FASLA, AICP, Principal
Peter F. Viteretto, PLA, ASLA, Senior Associate
Beth Powell Faragan, PLA, Associate ASLA
Thomas Helmkamp, ASLA
Norwalk Connecticut & Charlotte Vermont

Extent of Farrand campus landscapes documented
At Marsh Botanical Garden Greenhouse, 1927
Yale University Campus
Farrand Cultural Landscapes Study

Methodology

- Gather and Study Archival Documents
- Conduct Farrand Landscapes Field Review
- Study Secondary Sources
- Collaborate with Judith Tankard on Context Piece
- Assemble Corroborating Sources, 2 or more to Verify Farrand Contributions
- Describe Farrand Character-Defining Features
- List Character-Defining Features present 2019
- Prepare Selected Existing Landscape Plans
- Develop Recommendations by Category
  - Legible
  - Remnant
  - Overwritten
  - Unconfirmed

Extent of Farrand campus landscapes documented

At Marsh Botanical Garden, 1927
Yale University Campus
Farrand Cultural Landscapes Study

- Legible
- Remnant
- Overwritten
- Unconfirmed
<table>
<thead>
<tr>
<th>Year</th>
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<td>1921-22</td>
<td>Harkness Quadrangle</td>
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<td>1923</td>
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<td>Farrand hired as Consulting Landscape Gardener</td>
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Farrand Related Materials at Yale University Library
Manuscripts & Archives

- Yale University building and grounds photographs collection
- Yale University buildings and grounds architectural documentation
- Samuel Chamberlain postcards
- Mary Williams photographs of the Memorial Quadrangle collection
- Aerial Views 1926 to 1930s, some 70 count
- Farrand material from the University Treasurer’s reports, 1923-1927
- Forestry School Treasury records
- Marsh Botanical Garden correspondence and plant lists
- Marsh Botanical Garden Annual Reports
- Yale Courtyards brochure

Example of Mary Williams photographs circa 1930s Killingworth and Linonia Courts
April 24, 1936

Mr. Everett V. Meeks,
Gallery of Fine Arts,
Yale University

My dear Meeks:

Mrs. Max Farrand is interested in preparing a lecture on the educational values of the landscape work on the grounds of the University and elsewhere. It would be an illustrated lecture. It seems to me that this would be exceedingly interesting both for students and for the public generally. She plans to work on this during the next six months or so. What would you think of such a lecture next winter, perhaps under the auspices of your school?

Very sincerely yours,

ES/26

December 2nd, 1937

Henry S. Graves, Esquire,
Dean of Forestry,
Sage Hall, Yale University,
New Haven, Conn.

Dear Mr. Graves:

That attractive and nice person, Tom Parnan, has sent me a clipping from the New Haven Journal-Courier of November 26th implying that some announcement has been made of a collaboration between the Park Board and Yale. If there is anything you think I should know with regard to this, can you ask good Miss Coby to send it on.

Also I should be immensely interested and grateful to know whether Mr. Nichol’s visit to you with regard to Mr. Farnan’s garden really had any significance, and whether it frees the Farnan garden for a more attractive and less scientific future.

Max sends his best messages with mine to you.

Yours sincerely,

[Signature]
Farrand Cultural Landscapes Study

University of California, Berkeley, Farrand Archives

- Farrand plans, sketches, and annotated drawings
- Historic photographs

Lapham Field House with vines, roses UCB, undated

Branford Court, UCB, 23 May 1932

Pierson Sage Planting Plan, UCB, no date or signature, circa 1924
List of Yale University "Plantings to Emphasize" Harkness Memorial Quadrangle, Calliope Court, Planting Hand Annotated, 1920
Farrand Cultural Landscapes Study
University of California, Berkeley, Farrand Archives

Marsh Botanical Garden, Notes on Survey, undated, General Plan, 1924
Marsh Botanical Garden, Photographs, Entrance Gate and Elevation Sketches, Photographs of rustic fences, UCB, late 1920s
Preservation of Trees

- Farrand worked with and added to existing trees
- Elm trees planted by James Hillhouse
- New Haven Street Trees
- Sachems Woods

The Yale Campus was well known for the number and beauty of the numerous elm trees across its campus. The planting of elm trees in New Haven and on the Yale campus can be traced to James Hillhouse who began a tree planting program in the late eighteenth century leading to New Haven’s epithet: “City of Elms.” In a speech given in 1907, Mary Perkins Quincy described the impact of the New Haven elms on Litchfield, Connecticut:

The young Wolcotts of Litchfield, and other students on returning from Yale College had been greatly impressed with the beauty of the elms planted there by Mr. James Hillhouse, giving the name of ‘City of Elms’ to New Haven; and as Mr. Hillhouse had interested many of the young men in the value of shade on village or city streets, his wishes resulted in the beautifying of Litchfield with elm trees by his disciples.
Farrand, in fact, was singular among her colleagues, such as Ellen Shipman, Martha Brookes Hutcheson, and Marian Cruger Coffin, in this institutional aspect of her career. In recent years much has been discovered about Farrand’s life and work, but little has been published specifically on her importance as a landscape consultant to educational institutions.

After her successes at Princeton, Farrand was invited to consult on seven other campuses, including Yale University. However, none of her subsequent work was as involved and long-standing as that for Yale and Princeton. Other university commissions include Vassar College (1926-1927), California Institute of Technology/Caltech (1929-1938), University of Chicago (1929-1936), Occidental College (1937-1940), and Oberlin College (1937-1946).
Yale Campus ■ Character Defining Features

- **Spatial Organization**: open center, enclosing elements, gradient light and shadow, planted moats along streets, connected spaces

- **Views and Visual Relationships**: previews of landscapes beyond, expansive views within courtyards, along corridors, individually recognizable spaces, bright entries and archways frame views

Silliman College, 1940

Trumbull College, 1950

Cross Campus, 1940

Harkness Memorial Quad, Calliope Court, 1950
Yale Campus • Character Defining Features

- Topography—level courtyards, gentle grading, stepped retaining walls, vegetated hillsides

- Circulation—generous width, bluestone walks and terraces, rounded corners for ease of movement, use of contrast, curbs on planters and drives
Yale Campus ■ Character Defining Features

- **Vegetation** - plant for spring and fall interest of primarily native plants, canopy shade trees
- **Courtyards** - perimeter plantings of shrubs, understory trees, evergreen hedges and ground covers in beds along walks, canopy trees in lawns, building base plantings of shrub masses, wall-trained shrubs and flowering trees, and climbing vines trained on supports to soften architecture
- **Moats** - trained understory trees and/or pruned large shrubs against building, groundcover at base, trained vines
Yale Campus ■ Character Defining Features

- **Landscape Structures** – low and high walls with caps, wall-edged moats, retaining walls, entry piers, all shaping spaces and providing formal frames

- **Water Features** – limited, naturalistic pool, riffle Marsh Rock Garden and geometric fountain Sterling Memorial Library

- **Furnishings and Small Objects** – iron gates, wood fence, stone bench – straight or 1/4 circle, wood bench, light poles, bike racks

Berkeley Courtyard, 1950

Court yard, Sterling Memorial Library, 1950

Harkness Memorial Quadrangle, Killingworth Court 1982
Legible Landscapes
These seven landscapes are the most intact, requiring some rehabilitation to reinforce character and features

- Harkness Memorial Quadrangle
- Old Campus
- Old Library Street
- Sterling Divinity Quadrangle
- Sterling Memorial Library
- Silliman College
- Trumbull College
Past to Present Comparison ■ Old Library Street, Library Walk

Library Walk, 1940

2019
Character Defining Features • Old Library Street, Library Walk
Past to Present Comparison ■ Branford Court, Harkness Memorial Quadrangle

Harkness Memorial Quadrangle – Branford Court 1932

1940

2019
Past to Present Comparison ▬ Branford Court, Harkness Memorial Quadrangle

Harkness Memorial Quadrangle – Branford Court 1921

2019
Past to Present Comparison ■ Linonia Court, Harkness Memorial Quadrangle

Linonia Court 1921

Linonia Court 2019
Past to Present Comparison  ■ Linonia Court, Harkness Memorial Quadrangle
Farrand Annotated Planting Plan ■ Linonia Court, Harkness Memorial Quadrangle

Circa 1920
Past to Present Comparison ■ Old Campus

Old Campus, 1950

2019
Remnant Landscapes
Seven landscapes where discernable fragments of Farrand character and/or features remain, an opportunity to reinstate features may be pursued

- Berkeley College
- Calhoun College
- Golf Course
- Lapham Field House
- Yale Campus Nursery, Hamden
- Marsh Botanical Garden, Nursery, Building
- Pierson-Sage Square and Sloan Physics Laboratory

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<td>SB</td>
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<td>HPN Yale Campus Nursery, Hamden CT</td>
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Past to Present: Marsh Botanic Garden, Specimen Garden

View to Marsh Hall, 1927

General Plan, 1924

View of oak and greenhouse, View to Marsh Hall, 2019
Past to Present  ■ Marsh Botanic Garden, Rock Garden

- Rock Garden walk, boulders, planting, pool
- Rock Garden Installation, 1932
- Rock Garden Remnants, Boulders and Spring Pool, 2019
- Farrand sketch, nd
Character Defining Features ■ Marsh Botanical Garden, Rock Garden
- Overwritten Landscapes
  These Farrand campus landscapes are no longer legible as Farrand designs, overlaid by subsequent landscape design and construction

- New Athletic Field
- New Haven Hospital
- Peabody Museum
- Pump House
- Sterling Hall of Medicine and Institute of Human Relations
- Yale Alumni War Memorial
- Weir Hall / School of Architecture

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<th>VECI Study Code</th>
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Institute of Human Relations ■ Overwritten Landscape

1949 Aerial

Farrand plans for Sterling Hall of Medicine and Roof Garden, 1930
Character Defining Features ■ Institute of Human Relations

Roof Garden retains original shape
Unconfirmed Landscapes
While some evidence may exist, two corroborating sources were not located for these 10 campus landscapes, they may have Farrand influence

- Beta Theta Pi Fraternity House
- Cross Campus
- Davenport College Courtyard
- Jonathan Edwards College
- Pierson College Courtyard
- Sachem's Wood
- Sheffield Hall front (two weak sources)
- Sterling Law
- Timothy Dwight College, Temple College Group
- Walter Camp Memorial Gateway

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Opportunities Presented from Study

- Create Landscape Design and Maintenance Standards
- Add Landscape section to Basis of Design
- Implement FY20 Landscape Improvements Project
- Refresh Principles related to Landscape in “A Framework for Campus Planning”
Yale Design Standards

New Sections in Exterior Improvements

Section 32 01 01 Exterior Improvements
Landscape Design

Basis of Design – new chapter added “Landscape and Civil Systems”

Section 32 01 01 Exterior Improvements
Site Maintenance Plan

Submittals required –
- Site Layout by Area Type
- Planting Schedule
- Site Maintenance Plan Gantt Chart
Yale Design Standards

New Section 32 01 01 Exterior Improvements Landscape Design

Purpose

• to provide context and requirements for landscape design that will continue Yale’s distinctive campus vocabulary
• to know historic features and adapt to present conditions
• to support an ecosystems services approach

Requirement – all landscape projects

Includes

• References to Yale planning and sustainability studies, upcoming Yale Tree Management Plan, 01 Div Tree Protection Spec, and Recommended Planting Species List
• Site Evaluation and Sustainability Assessment
• Site Design Intent and Campus Integration
• Special Requirement – Landscape Character Definition
• Submittals – Site Maintenance Plan
• Site Protection from Construction Activity
Site Evaluation and Sustainability Assessment
• Gain understanding of existing physical conditions per LEED V4 Sustainable Sites
  • Use credits Environmental Site Assessment, Site Assessment and Rainwater Management as basis for evaluation
• Explore opportunities for sustainability
• Assess historic value

Site Design Intent and Campus Integration
• Concept
• Intended Use
• Material, Vegetation, Tree Selection
• Visibility – heights of plantings
• Soil
• Public Art
• Operations considerations – trash/recycling/card access/tents
Special Requirement – Landscape Character Definition

• Evaluate features that serve as design principles and tie to campus whole
  • Spatial Organization
  • Views and Visual Relationships
  • Etc.

Site Protection from Construction

• Evaluate minimal impact from construction per LEED V4 Sustainable Sites, Construction Activity Pollution Prevention, at a minimum evaluate
  • Pollutants from construction – monitor and manage
  • Soil – erosion and sedimentation control plan, soil protection and reuse
  • Vegetation – plant and tree protection, reuse
    • Tree and Plant Protection Specification
  • Habitat – ecosystem services approach - balance
Narrate design approach as outlined in the standards.

Applies to any project that includes -

- Exterior Landscape Design
- Exterior Landscape required for site staging or construction activities

If not then –

- No Exterior Landscape Impacts
Purpose
• Identify labor requirements for proposed projects
• “How to” for design firms to identify labor
• Match current staffing levels?
  • Change in staffing level
  • Change to design

Requirement – all landscape projects

Includes
• University expectations
• Area Types
• Sustainable Objectives
• Output – Site Maintenance Plan
Yale Design Standards

New Section 32 01 02 Exterior Improvements Site Maintenance Plan

University Expectations of the landscape
• Well maintained appearance

Area Types
• Components of the landscape
• Different tasks lists

Sustainable Objectives
• Plant health is the focus
• Integrated Pest Management
  • Correct plant selection is responsibility of the designer
Yale Design Standards

New Section 32 01 02 Exterior Improvements - Site Maintenance Plan

Site Maintenance Plan
- Goal of LGM: maintain the design intent
- Summary of the required labor
- Documents required
  - BoD narratives completion
  - Site Drawing of Area Types – include in “L” Series drawings
  - Planting Schedule – include “L” Series drawings
  - Site Maintenance Plan Gantt Chart – include in BoD
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<td>Xx</td>
<td>Botanical Name</td>
<td>Common Name</td>
<td>Visual purpose - framed for maintenance to achieve the visual purpose</td>
<td>Plant growth habits explaining physiological success in specific location</td>
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<td></td>
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<td>i.e. relating to Character Defining Features</td>
<td>i.e. relating to Sustainable Objectives - selection of plant material</td>
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<td>2</td>
<td>LR</td>
<td>Ulmus americana</td>
<td>Tulip Poplar</td>
<td>Grand stature when mature, sightlines under the canopy, yellow spring flowers</td>
<td>Native New England tree, very successful locally in a variety of environments</td>
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<td>Ny/ly</td>
<td>Sympo sylvestris</td>
<td>Wildfire Blackgum</td>
<td>Columnar stature when mature, sightlines under the canopy, red fall foliage</td>
<td>Swamp tree tolerant of wide varieties of soil, no serious disease or insect issues</td>
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<td>AmL</td>
<td>Amelanchier laveis</td>
<td>Allegheny Serviceberry</td>
<td>White showy/fragrant early spring flowers, frame stairwell</td>
<td>Tolerates sun to part shade</td>
</tr>
<tr>
<td>3</td>
<td>CeC</td>
<td>Cercis canadensis</td>
<td>Alba Eastern Redbud</td>
<td>Pink early spring flowers, random arrangement for texture</td>
<td>Native New England tree, tolerates sun to part shade</td>
</tr>
<tr>
<td>7</td>
<td>Have</td>
<td>Hamamelis vernalis</td>
<td>Vernal Witchhazel</td>
<td>Late winter/early spring color accent to entrances</td>
<td>Low maintenance, tolerate full sun to part shade</td>
</tr>
<tr>
<td>27</td>
<td>BCr</td>
<td>Ilex crenata ‘Helleri’</td>
<td>‘Helleri’ Japanese Holly</td>
<td>Hardy evergreen shrub to highlight bed edges, low growing</td>
<td>Low maintenance, disease and insect resistant</td>
</tr>
<tr>
<td>1572</td>
<td>VIM</td>
<td>Vinca minor</td>
<td>Common Periwinkle</td>
<td>Evergreen groundcover</td>
<td>Highly competitive with weeds</td>
</tr>
<tr>
<td>3579 sqft</td>
<td>Lawn</td>
<td>Tall Fescue</td>
<td>Festuca arundinacea</td>
<td>Hardy low maintenance/nutrient/water bunch type grass</td>
<td>Low water &amp; nutrient requirements, highly traffic tolerant, disease resistant</td>
</tr>
</tbody>
</table>
Required Annual Hours of Labor:

<table>
<thead>
<tr>
<th>Area Type/Task</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>0</td>
<td>41.2</td>
<td>41.2</td>
<td>41.2</td>
<td>41.2</td>
<td>41.2</td>
<td>41.2</td>
<td>41.2</td>
<td>41.2</td>
<td>41.2</td>
<td>41.2</td>
<td>41.2</td>
</tr>
</tbody>
</table>

**Notes:**
- Use Table 10.3 to determine labor requirements.
- River (amount, cost, labor, and cost, etc.)
- Use Table 10.4 to determine labor requirements.
- River (amount, cost, labor, and cost, etc.)
- Use Table 10.5 to determine labor requirements.
- River (amount, cost, labor, and cost, etc.)
- Use Table 10.6 to determine labor requirements.

**Areas and Types of Labor:**
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)

**River Description:**
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)

**Labor Requirements:**
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)

**River Habitat:**
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)

**Fishing:**
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)

**River Management:**
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)

**River Restoration:**
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)

**River Education:**
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)

**River Conservation:**
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)

**River Recreation:**
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)

**River Maintenance:**
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
- River (amount, cost, labor, and cost, etc.)
Yale Design Standards

Rollout Schedule

March 2020
- 32-01-01 Exterior Improvements Landscape Design
- 32-01-02 Exterior Improvements Site Maintenance Plan
- Basis of Design – Landscape and Civil Systems
- Review and coordinate with Master Deliverables Checklist

In-house Responsibilities

Planners/Project Managers:
- Inform Consultant Teams
- Include in Design and Budget Reviews
- Use as tools for design and to establish maintenance budgets
  - Each project must carry a maintenance budget in the overall project budget
- Hardcopies of Farrand Cultural Landscape Study are available on 7th floor, WGS.
FY20 Landscape Improvements – formulation phase

FY 20 Scope

Views and Visual Relationships
- Limb up canopy trees
- Clear views to entries
- Removal of invasives

Vegetation - Beds
- Install flowering beds
- Install climbing vines
- Test nursery

Library Walk

Branford Courtyard

HMQ, Saybrook Courtyard
FY20 Landscape Improvements

Berkeley Courtyard, 1950

Killingworth Courtyard, 1940

Hopper, 1950

Old Campus
Beatrix Farrand
Consultant Landscape Architect
to Yale Campus 1920-1945

Yale University Campus
Farrand Cultural Landscapes Study

Yale Office of Facilities
Kristina Chmelar, AIA, LEED AP BD&C, Major Projects Planner
Michael West, Manager of Planning and Standards

Heritage Landscapes LLC
Patricia M. O’Donnell FASLA, AICP, F.US/ICOMOS

Extent of Farrand campus landscapes documented
At Marsh Botanical Garden Greenhouse, 1927
FY20 Landscape Improvements ■ Old Library Street, Library Walk

1940

2019

FY 20 Scope

Views and Visual Relationships
limb up canopy trees

Vegetation - Beds
remove damaged trees
train understory trees for open, narrow form
install hedge as moat wall
install ground cover
install climbing vine

Vegetation - Court
install grass up to tree base
remove ground cover, plant grass

Soils
Improve soils for fertility, humus, pH, drainage

Future FY
Landscape Structures
remove wood bollards
remove bulletin board
FY20 Landscape Improvements ■ Branford Court, Harkness Memorial Quadrangle

FY20 Scope
Views and Visual Relationships
limb up canopy trees
train understory trees for open, narrow form

Vegetation - Beds
remove damaged and out of context trees
install/prune shrubs at building base
test native ground cover, naturalize spring bulbs,
install climbing vine

Vegetation - Court
install grass up to tree base, avoid tree trunk
damage when mowing
remove ground cover patches, plant grass
thin shrubs for open form

Irrigation
Provide as needed

Soils
Improve soils for fertility, humus, pH, drainage
Rehabilitate **Legible Landscape** Linonia Court, Harkness Memorial Quadrangle

**Scope –**

**Views and Visual Relationships**
- train understory trees for open, narrow form

**Soils**
- Improve soils for fertility, humus, pH, drainage

**Vegetation - Beds**
- install building base shrubs, test native ground cover, naturalize spring bulbs, install climbing vine

**Vegetation - Court**
- install and train flowering tree against wall

**Irrigation**
- For beds as required
FY20 Landscape Improvements  Old Campus

**FY20 Scope**

**Views and Visual Relationships**
- limb up canopy trees
- train understory trees for open, narrow form
- remove damaged trees, replant

**Vegetation - Beds**
- install building base shrubs, test native ground cover, naturalize spring bulbs

**Vegetation - Court**
- install grass up to tree bases, avoid mowing damage to trunks

**Irrigation**
- Provide as needed for beds

**Soils**
- Improve soils for fertility, humus, pH, drainage

**Future FY**

**Landscape Structures**
- repair wood fence
- relocate plastic bins
Test/Monitor Climbing Vine and Support Systems

Climbing Vines  Historic Images

Berkeley Courtyard, 1950  Killingworth Courtyard, 1940  Hopper, 1950
Test Vines  ■ Living Example

- Trim climbing Japanese hydrangea
- Trim ivy from wall down to bed
Test Vines ■ Living Example and Remaining Support

- Trim climbing wisteria
- Determine suitable twinning vines to use
- Plant new vines on existing supports

Harkness Memorial Quadrangle, Killingworth Courtyard   2019

HMQ, Saybrook Courtyard   2019
Test Nursery

- Plant 10-12 trees at Yale Farm / Farnam Gardens