NC STATE

2025 Landscape Framework Plan

North and Central Campus Precincts

March, 12, 2025

NC State Project Number: 202313020

2025 Landscape Framework Plan

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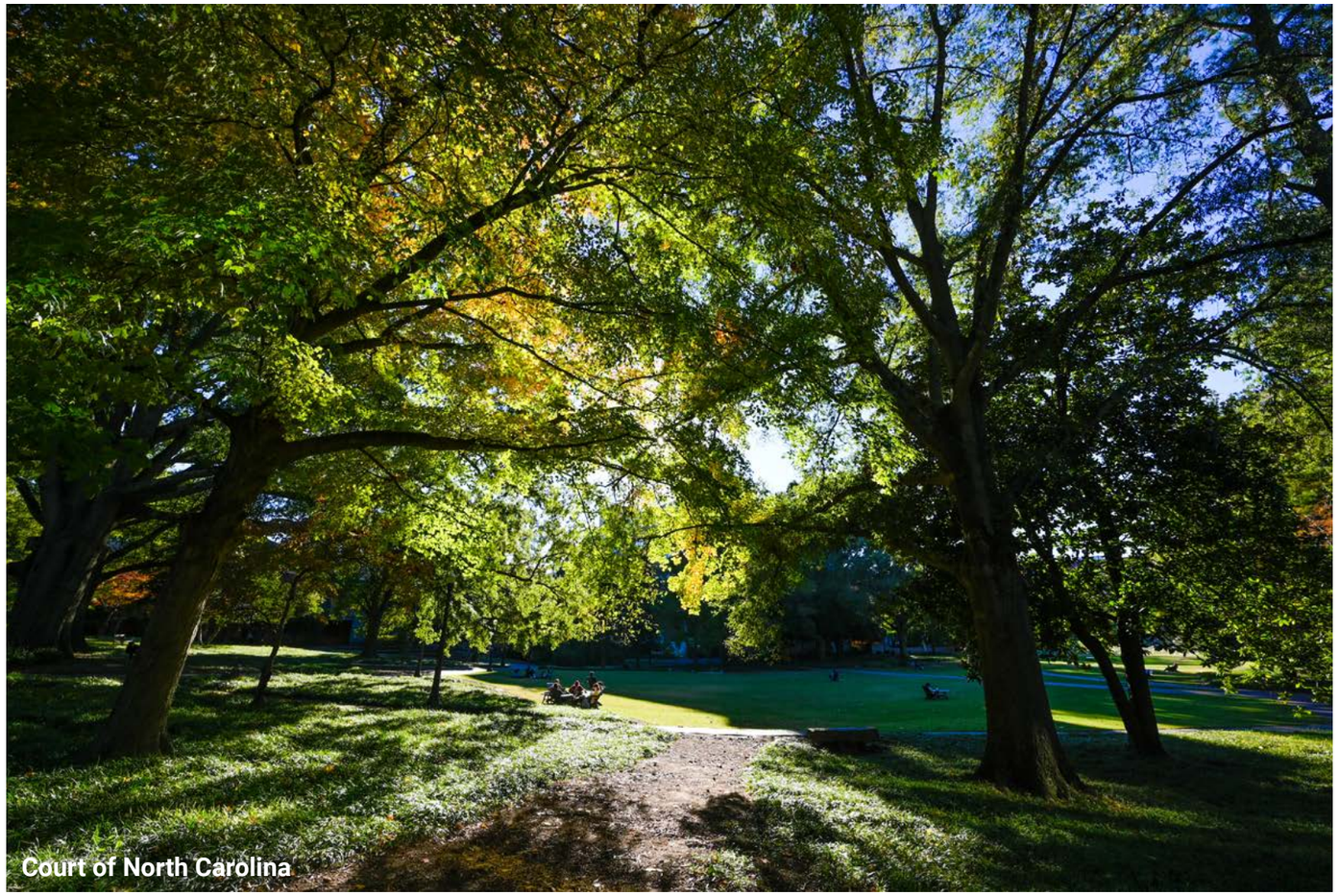


Court of North Carolina

This Landscape Frame Plan is an interactive plan with buttons and links that will assist in moving you through the document. You may read through in a linear or non-linear manner, and go directly to aspects of the plan that are most interesting to you.

Click on any of the content areas to the right, and use the navigation at the top of each page, or click on any links within the report.

HOW TO USE THIS DOCUMENT

This report document is designed to be interactive and contains buttons and hyperlinks that can be clicked or hovered over to provide direct access to desired content. For reference, the buttons in the upper top right hand are clickable to aid navigating the document or returning to the Table of Contents at any time.

2025 Landscape Framework Plan

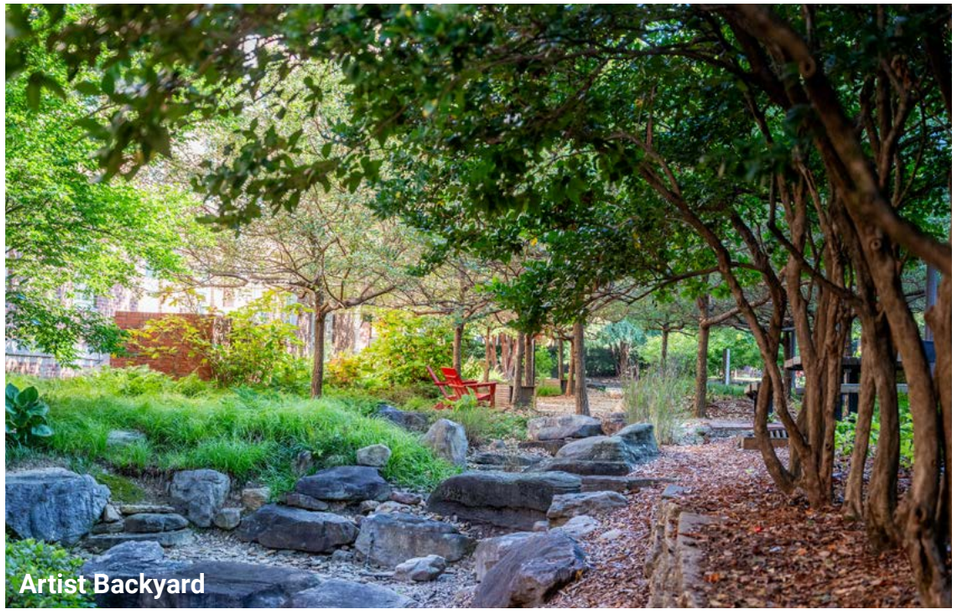
Introduction

The word landscape describes the physical features of outdoor spaces, including their chemistry, geology and composition of living beings. The campus landscapes are our exterior habitats, where we work, learn, relax, and engage with others. Campus landscapes and their plants, animals and even microbes sustain us. They clean our air and water, provide health benefits (particularly mental health), allow users to learn in multiple creative environments, beautify our surroundings, and provide us with motivation and inspiration. These roles of campus landscapes are not new; indeed the first classrooms were all outdoors.

The Landscape Framework Plan provides the campus community and administration with a vision of site concepts to unify campus grounds and bring cohesion to the spaces and paths that organize and connect the campus. At the same time, these concept plans will enhance sustainability and resiliency, and improve student well-being, creativity and even, we hope, scholarship.

Building on the 2023 Physical Master Plan's guiding principles and design guidelines, the plan also includes supplemental guidelines focused on the campus's outdoor environments.

Leazar Hall



Artist Backyard

Project Description

With proper design, direction, and support, campus landscapes are developed as multi-functional spaces that support teaching and research activities, promote the well-being of our campus community, and contribute to our economic success by drawing new students and donors to our doors. At the same time, these same landscapes allow us the potential to manage the living world while also, simultaneously, working with students and other scholars to study how best to do so.

Landscape management strategies can be implemented to transition the predominately tree and lawn landscapes to a series of landscape typologies that are more ecologically intense and require lower inputs of resources. This is in support of broader NC State objectives to increase overall campus sustainability and support NC State's goal to reduce campus water consumption by 65 percent from the 2001 baseline by implementing landscaping that reduces potable water consumption.

The project used the widely accepted principles of sustainability as a guide for this comprehensive approach. In pursuit of improved campus sustainability, this planning approach incorporates solutions for observed environmental, social, and economic issues.


Court of North Carolina


Court of North Carolina

Project Goals

The Landscape Framework Plan is designed to ensure that NC State's landscape investments align with the overarching goals of the campus's Physical Master Plan. By following the guiding principles and design guidelines established in the 2023 Physical Master Plan, this framework will identify new opportunities to support NC State's strategic objectives. To accomplish these objectives, the plan focus on the following goals:

Remedy issues in the campus environment

- Address gaps in connectivity, accessibility and wayfinding
- Foster a culture of non-vehicular mobility that makes pedestrians the highest priority
- Reduce urban heat hot spots
- Improve access to a variety of landscape typologies
- Enhance existing open spaces
- Promote green infrastructure, stormwater management, and water quality
- Decrease maintenance
- Address safety considerations
- Enhance the campus identity

Optimize landscape management through ecological intensification of the campus landscape

- Transition lawns without a programmatic use to a landscape typology with greater ecological value and lower inputs.
- Reduce greenhouse gas emissions from landscape operations and maintenance.
- Promote resilient and implementable landscapes by simplifying and clarifying a system landscape typologies across campus that provide ecological complexity.
- Increase self-reliance in plant procurement (use Facilities Division greenhouses).
- Facilitate periodic reviews & updates to the Landscape Framework Supplemental Guidelines that promote this goal.

Increase landscape performance and ecological health

- Protect existing and expand & diversify wildlife habitat areas.
- Increase biogenic (vegetation and soils) carbon sequestration.
- Reduce embodied carbon emissions from future campus construction projects.

Be a model for sustainable landscape innovation and education

- Develop pilot project(s) for implementation with support from the NC State community.
- Develop protocols for real-time data about new landscape typologies to communicate the project values and impetus for change.

Talley Student Union

Nelson Hall

Plan Components

The plan will encompass North and Central Campus precincts initially, addressing elements of landscapes using defined Framework Elements such as Landscape Typologies, Green Infrastructure, Connectivity and Wayfinding, and Collaborative Space. The Framework Elements will include site architecture, hardscapes, site furniture, plants, and supporting infrastructure. This plan will involve the following:

1. Framework Categories

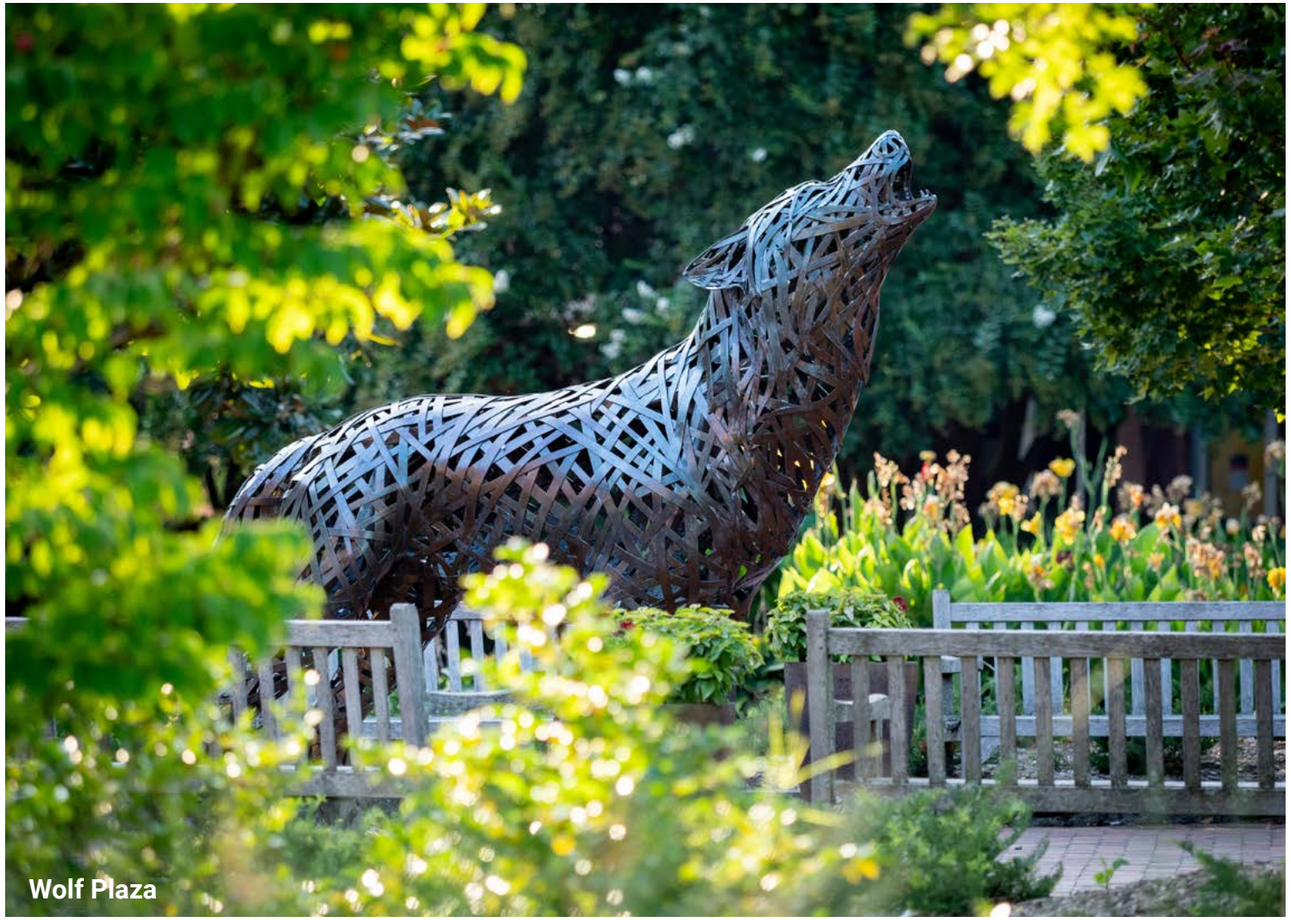
These plans advance key concepts expressed in the Physical Master Plan, and serve to guide landscape project development through analysis and recommendations for each overlay. Anticipated overlays include the following, but others may be added as the project progresses.

- Landscape patterns (Rhythm of the built and natural environment, scale of elements)
- Visual connectivity (Enhanced wayfinding, lines of sight, visual markers)
- Priority areas for higher maintenance landscapes
- Habitat/naturalization/sustainability

2. Framework Projects

For each project identified, the plan will provide a series of interrelated plan Framework Elements

- Conceptual landscape design
- Cost estimates and maintenance implications for each conceptual landscape plan
- Improvements regarding site development, green infrastructure, etc.
- Phasing recommendations that maximize impacts given available resources
- Reference to overlays in this plan (where applicable)
- Relation to other projects already proposed (where applicable



Wolf Plaza

3. Supplemental Guidelines

The Landscape Framework Plan supports and reinforces the Physical Master Plan, aiming to promote cohesion in the campus landscape design over time.

- Ensure that various landscape elements harmonize regardless of their Implementation timeline.
- An integrated approach to landscape design, considering aesthetics, function, ecology, water conservation, and long-term maintenance.

Planning Process

The Landscape Framework plan continues NC State's rich tradition of an inclusive approach to campus planning. The cross-functional Core Team and Advisory Team members provided a diversity of perspectives and expertise related to campus landscapes. Workshops and other outreach to a broad cross-section of campus stakeholders provided insight and inspiration for plan goals, tested framework categories, and refined project concepts.

Core Team:

- Campus Operations and Maintenance
- Campus Planning and Strategic Investment
- Design and Construction

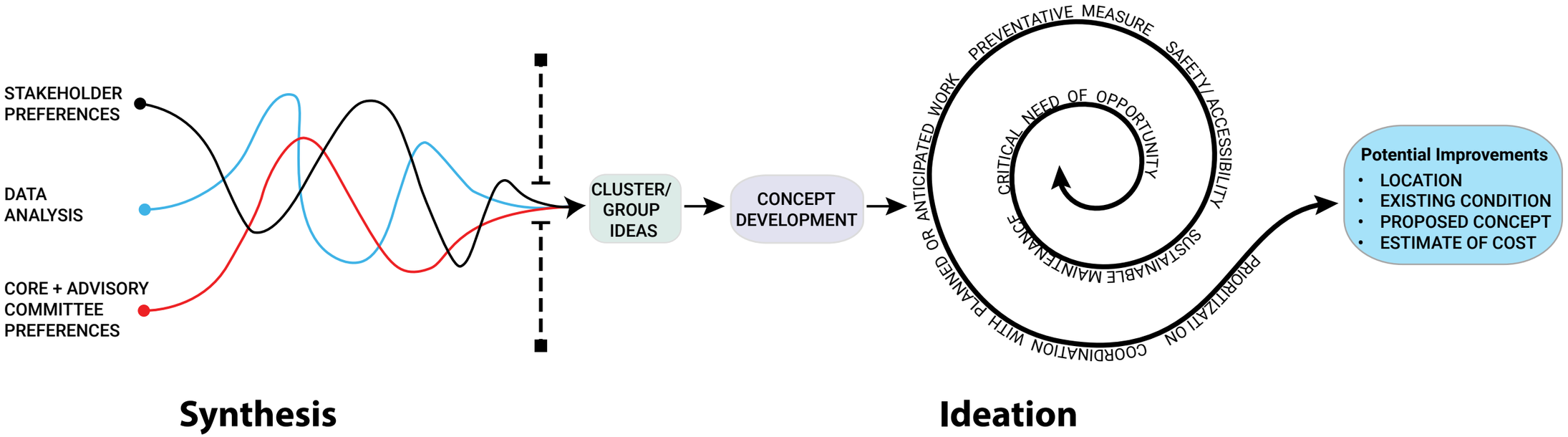
Advisory Team:

- Director, Land Planning
- Director, Landscape Maintenance and Operations
- Director, Utilities and Engineering Services
- Director, Sustainability Office
- Director, Transportation
- Assoc. Director, Center for Geospatial Analytics

Stakeholders:

- College of Agriculture and Life Sciences
- College of Design
- College of Engineering
- College of Humanities and Social Services
- College of Natural Resources
- College of Sciences
- Division of Academic and Student Affairs
- Office of the Provost
- University Libraries

Gardner Arboretum



Synthesis

Ideation

Adapted: Resilience Rural Framework Design Process 2022

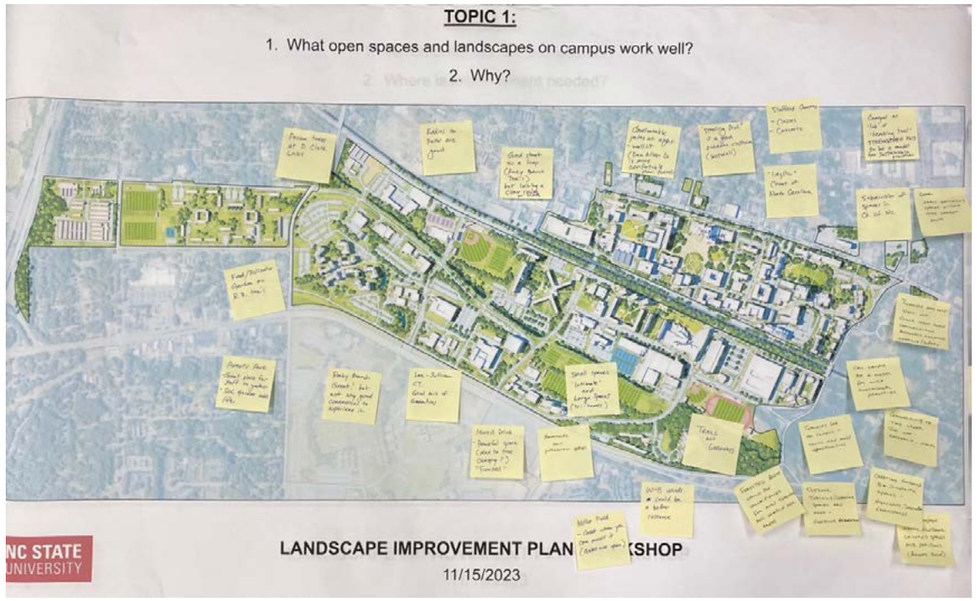
Lake Raleigh

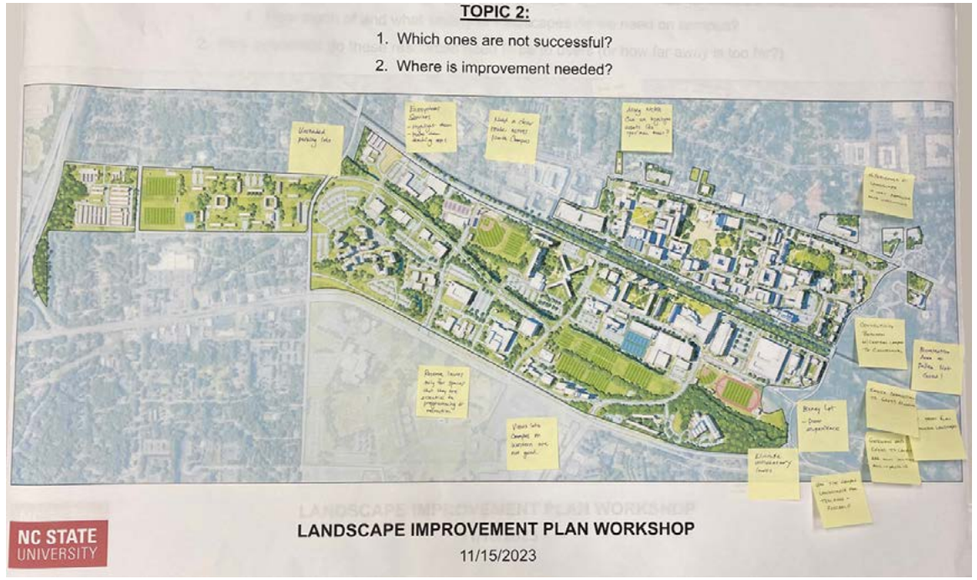
DATA ANALYSIS

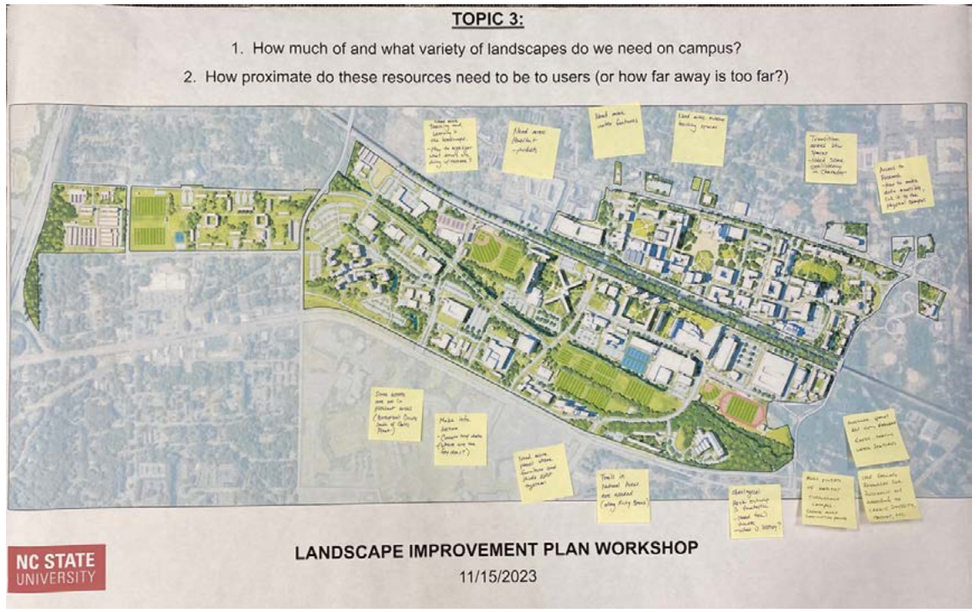
ANALYSIS INPUTS

In developing our recommendations, the plan carefully considered a variety of inputs and data points to ensure a comprehensive approach. These include feedback from stakeholder meetings, which provided valuable insights into community needs, which helped guide our focus on key areas. Additionally, the Annual Spend Plan and the Transition Plan Update were reviewed to align with budgetary and strategic goals. We also took into account critical factors such as areas prone to flooding, the need for accessible curb cuts and crosswalks, and safety issues related to utility tunnels. All of these elements were integrated into our final recommendations for the project.

- Stakeholder meetings feedback
- Integrated Priority List
- Annual Spend Plan
- Transition Plan Update
- Areas of Flooding
- Accessible Curb Cuts and Crosswalks
- Safety Issues







DATA ANALYSIS: Frequent Flooding

< Table of Contents < Back Urban Heat Island Map

Areas identified with Frequent Flooding

Thorough research and ongoing collaboration with campus partners have identified specific flood-prone areas in our campus Infrastructure. The prevalent strategy to protect buildings and other assets from flooding involves frequent and prolonged deployment of sandbags. A plan is being developed at regional and site-specific levels to address the chronic flooding, focusing on sustainable solutions beyond temporary sandbag use. The analysis will examine drainage systems, topography, and historical weather patterns to identify underlying factors, aiming to enhance resilience, minimize property damage, and optimize resource utilization. The overall objective is to contribute to a resilient and sustainable campus environment through innovative, site-specific measures.

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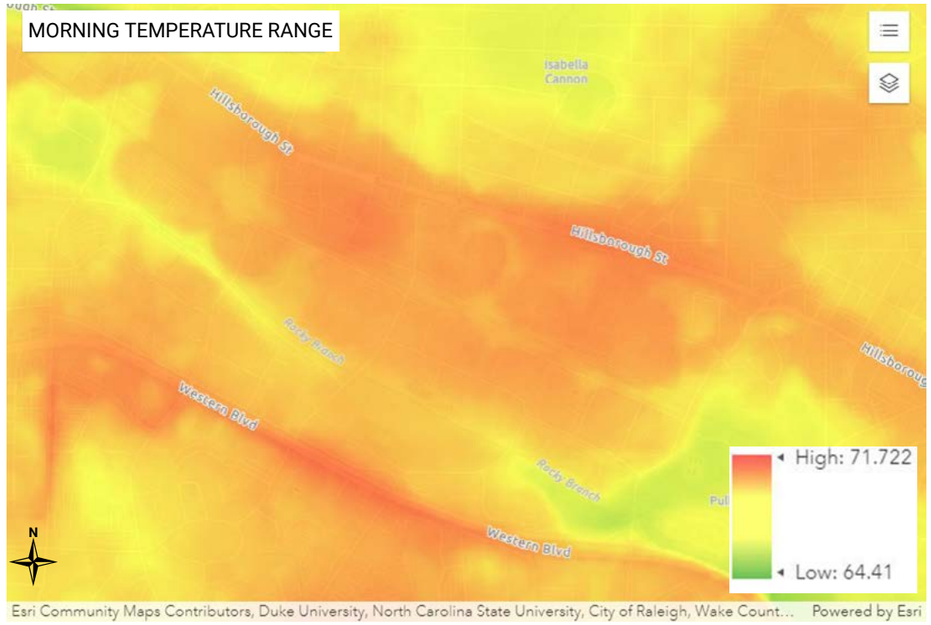
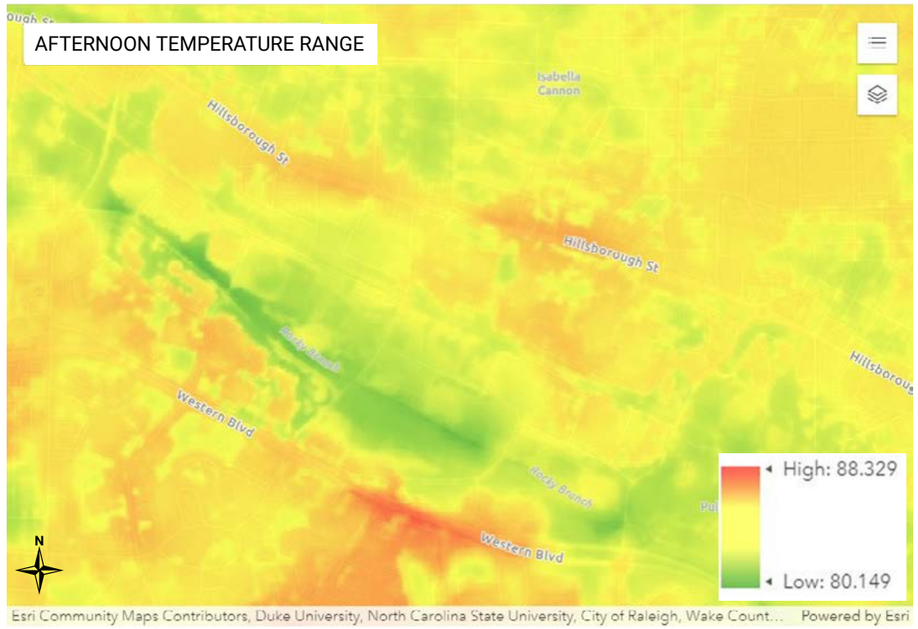
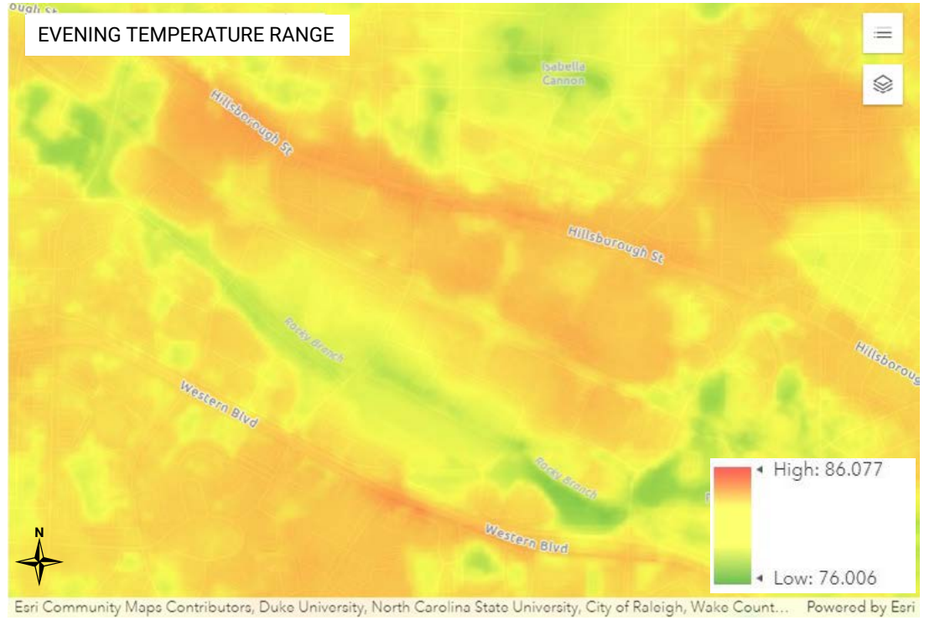
DATA ANALYSIS: Urban Heat Island Map





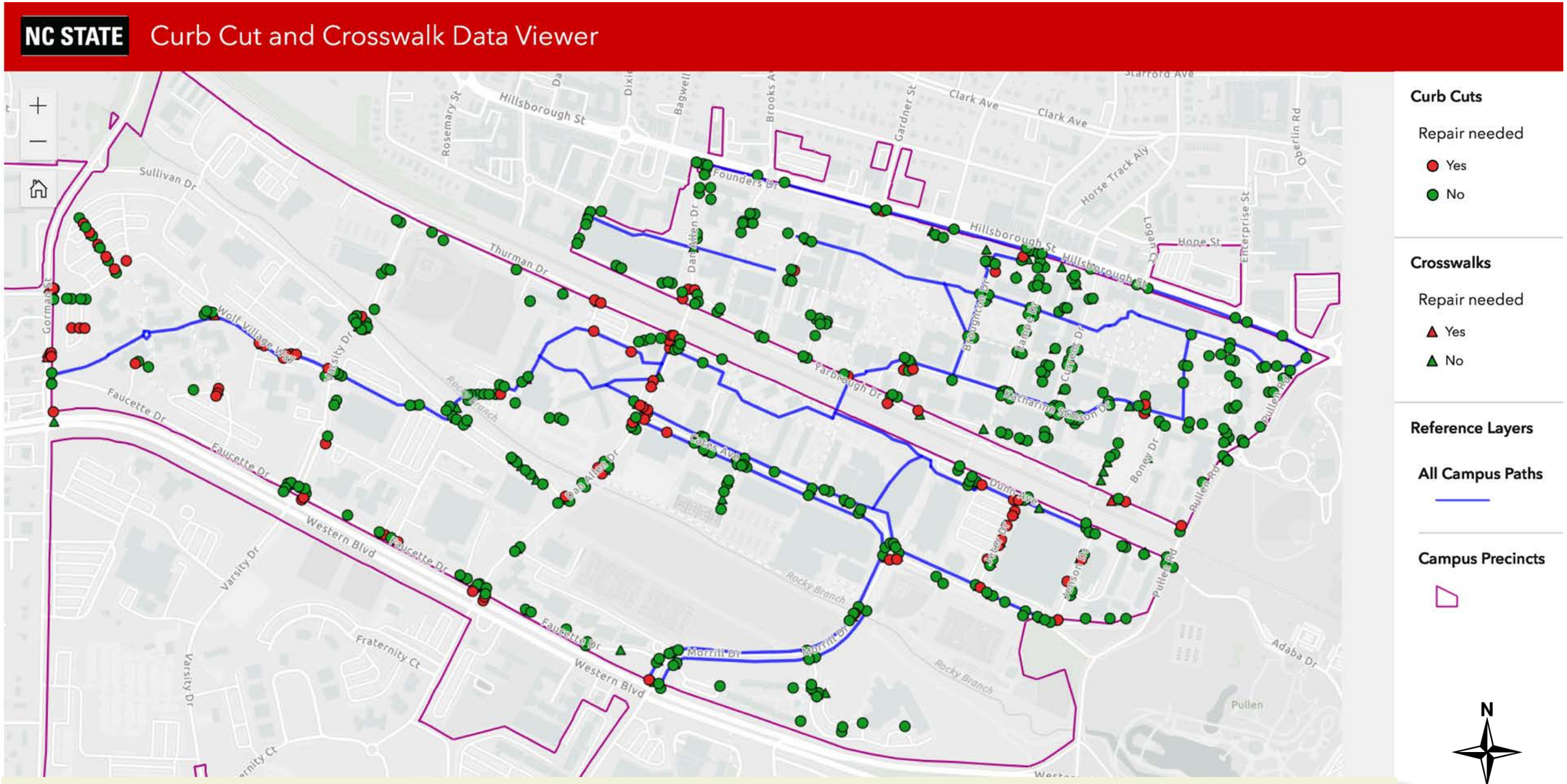


Urban Heat Island Effect - NC State University

On hot days, some areas feel much hotter than others due to differences in tree cover, green space, and paved surfaces. In cities, neighborhoods with few trees and lots of pavement can experience temperatures up to 20 degrees higher than shadier, less paved areas. These hotter areas are known as Urban Heat Islands (UHI), where residents face more extreme and potentially dangerous heat. Vulnerable populations, such as those with health conditions, young children, and the elderly, are especially at risk. The provided maps highlight the temperature differences across the city, showing cooler areas in green and yellow, and warmer areas in red, illustrating the heat distribution throughout the day.

Adapted from the City of Raleigh Office of Sustainability
sustainable.raleigh@raleighnc.gov

https://raleighnc.gov/climate-action-and-sustainability/services/mapping-urban-heat-islands



This map displays data collected during fieldwork in the summer of 2024. The goal was to identify non-compliant curb cuts (ADA ramps) and crosswalks on North and Central Campuses. An interactive map was created to pinpoint these locations, with clickable icons that show pictures of the current condition at each site. Permission to access the map is from Laurel Krynock, GISP, GIS Administrator, Campus Planning and Strategic Investment, NC State University, lwkrynoc@ncsu.edu
https://gismaps.oit.ncsu.edu/portal/apps/experiencebuilder/experience/?id=3c3eb0b4c6c8440bb8a0c415065e1cca

Mary Yarbrough Courtyard

FRAMEWORK CATEGORIES

KEY: FRAMEWORK CATEGORIES

Natural Areas

Natural areas, including tree groves, forests, forest/wooded preserves, meadows, prairies, and pollinator habitats, offer access to less-developed green spaces.

These areas provide a contrast to formal, ordered community landscapes, serving as living laboratories that boost ecological services and offer research opportunities.

- Forest/Wooded /Preserves
- Meadows/Pollinator/Prairie
- Stream Edge/buffers/lakes/ wetlands
- Contributing Open Space (Unprogrammed)

Green Infrastructure

Stormwater treatment on campus is approached holistically, aiming to Infiltrate water as close to the source as possible using various techniques such as bio-retention, rain gardens, bio-swales, permeable surfaces, underground storage, and rainwater harvesting.

The goal is to promote groundwater recharge, evapotranspiration, and effective stormwater management based on the specific characteristics of each site and its surrounding context.

- Stormwater Management (SCM)
- Water Quality
- Sustainable Practices

Collaboration Space

Strategic placement of outdoor classrooms along All Campus Paths, varying in size to suit individuals and groups, is essential for fostering a Collaborative learning environment at NC State.

To ensure year-round comfort and protection from the elements, the inclusion of shade structures or tree canopy is recommended depending on the location and use of the space.

- Covered outdoor space
- Outdoor Classrooms/ Education Areas
- Seating/Furniture options location
- Electric service/lighting
- Shade
- Reduction in heat island

Connectivity & Wayfinding

Campus Identity and Wayfinding are often a feature of a building or a free standing object that over time or through design has become part of the university's identity, and are protected.

Campus street landscapes should create shaded, safe, and comfortable environments for pedestrians, cyclists, and vehicles while presenting a unified campus image. Future street improvements should add bicycle lanes, street trees, and bioswales.

- Close a gap
- Visual Marker Viewshed/line of sight
- Promote accessibility
- Hierarchy of paths/Trails/Greenways/ Campus Paths
- Streetscape
- Proximity to student concentrations
- Public facing- visitor/day use
- Campus Edge/Gateway

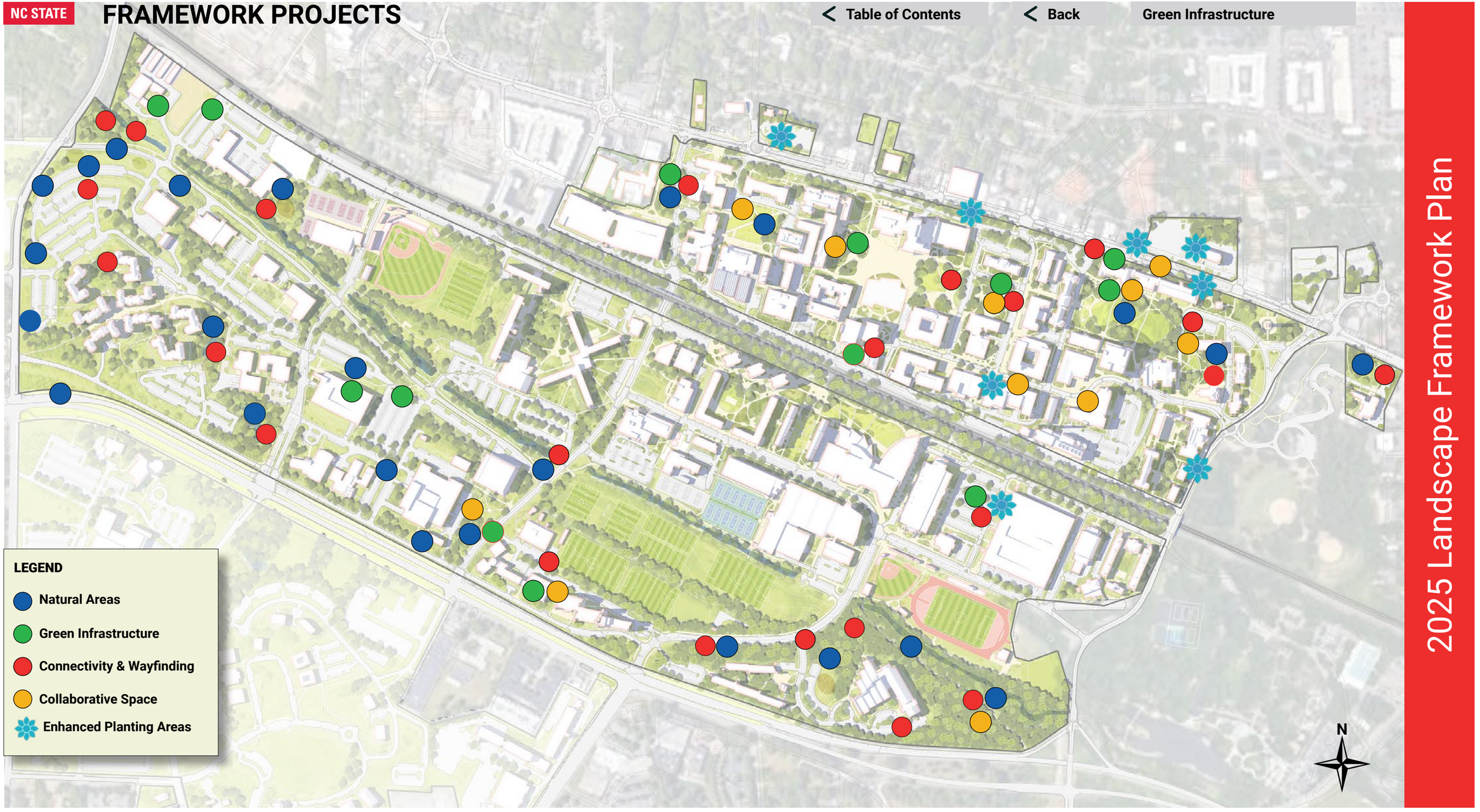
Enhanced Planting Areas

Annual/perennial plant beds enhance community spirit, aid in wayfinding, and highlight advances in horticulture. Strategically locate annual plant beds in high-impact areas such as Gateways and entrances to select public facing buildings.

Landscape renovations fill in gaps, creating cohesion or thoughtful transitions with the surrounding context as appropriate or unify disparate designs, strengthen rhythms and patterns.

- Landscapes should emphasize the harmony and unity of the overall composition through geometric order and symmetry.
- A limited palette of plantings should be arranged in simple, well-proportioned, elegant compositions.

FRAMEWORK PROJECTS



2025 Landscape Framework Plan

GREEN INFRASTRUCTURE

Green Infrastructure

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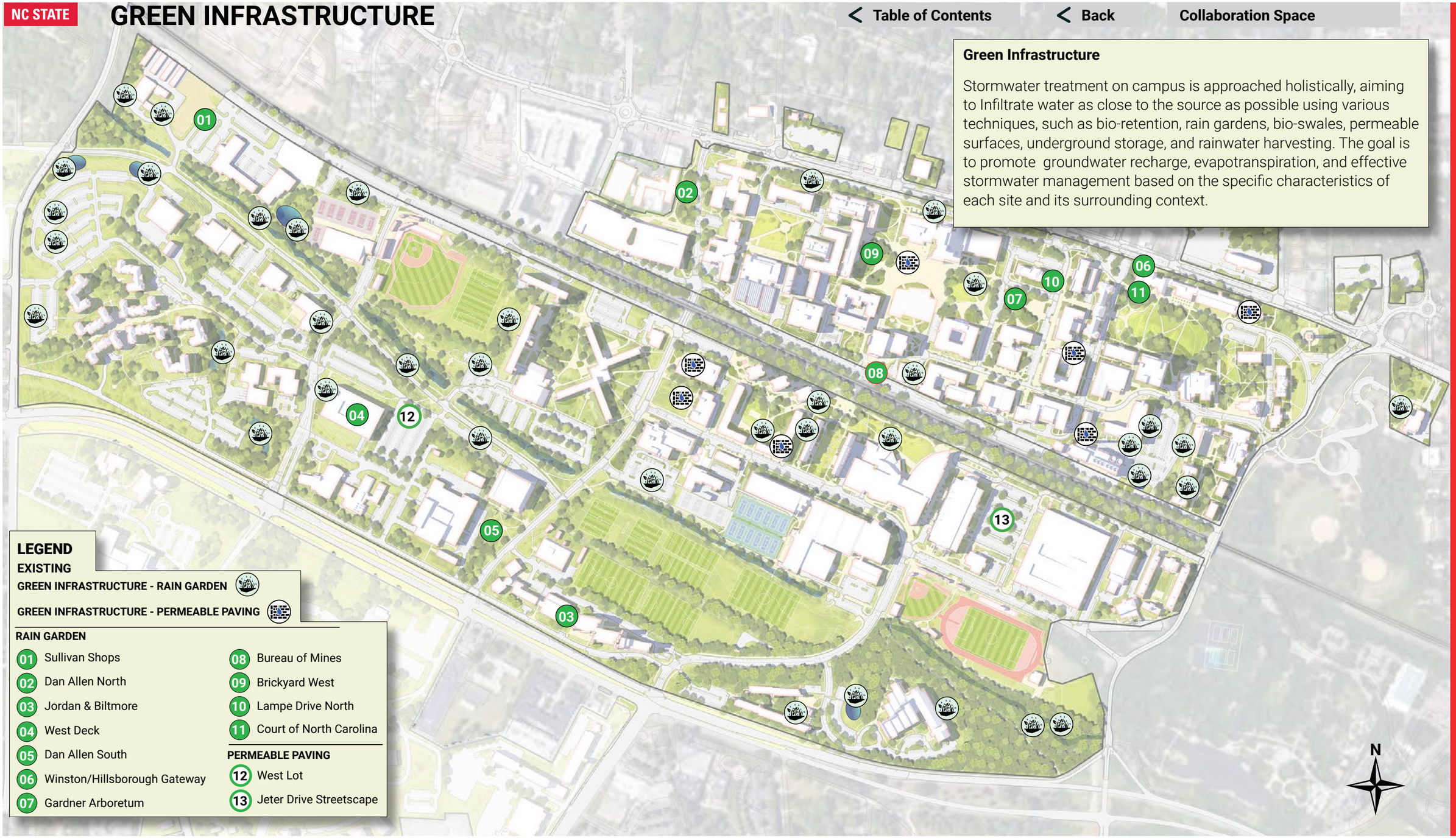


LEGEND

EXISTING

GREEN INFRASTRUCTURE - RAIN GARDEN

GREEN INFRASTRUCTURE - PERMEABLE PAVING

RAIN GARDEN

01 Sullivan Shops
02 Dan Allen North
03 Jordan & Biltmore
04 West Deck
05 Dan Allen South
06 Winston/Hillsborough Gateway
07 Gardner Arboretum
08 Bureau of Mines
09 Brickyard West
10 Lampe Drive North
11 Court of North Carolina

PERMEABLE PAVING

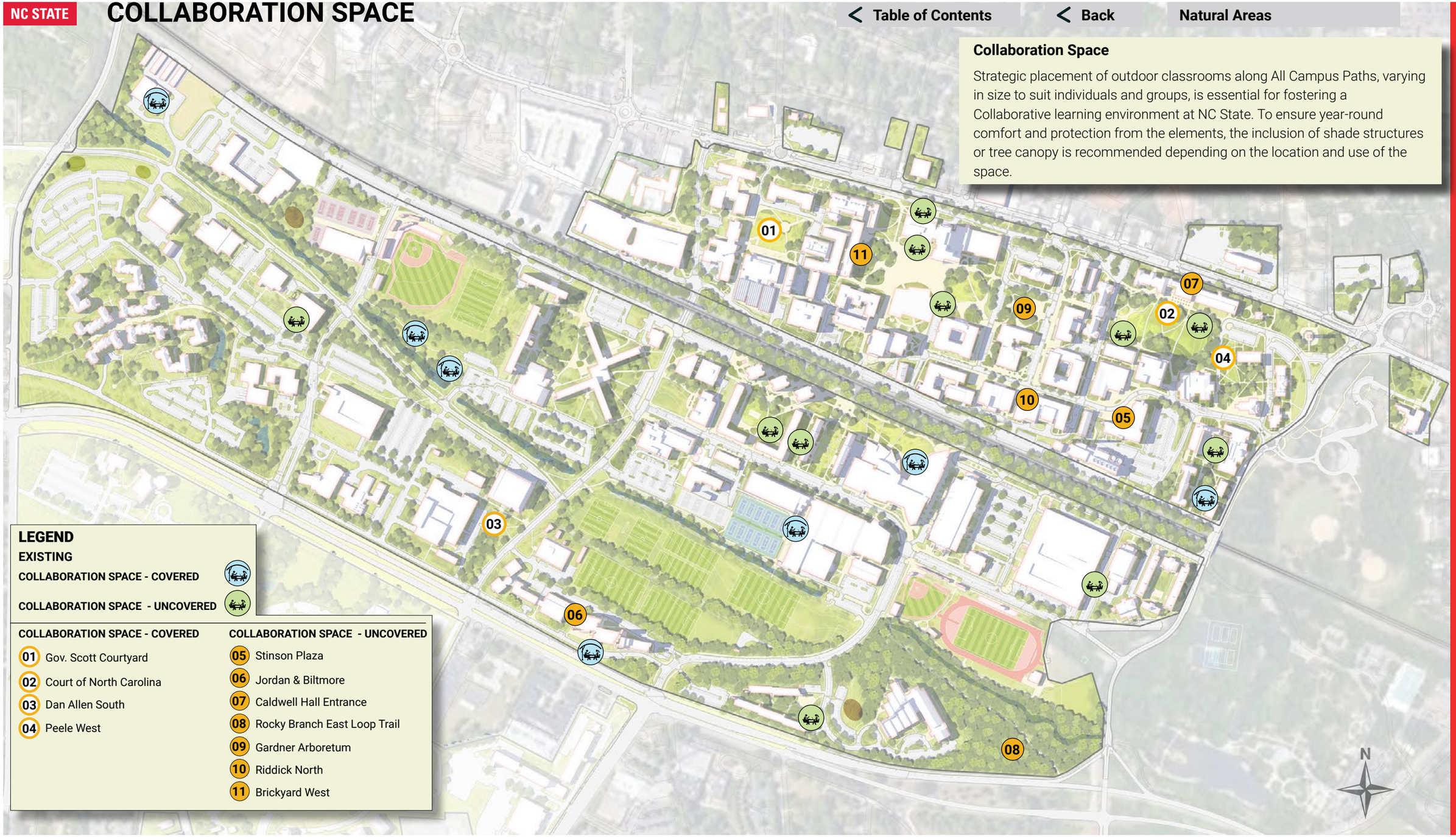
12 West Lot
13 Jeter Drive Streetscape

2025 Landscape Framework Plan

COLLABORATION SPACE

Collaboration Space

Strategic placement of outdoor classrooms along All Campus Paths, varying in size to suit individuals and groups, is essential for fostering a Collaborative learning environment at NC State. To ensure year-round comfort and protection from the elements, the inclusion of shade structures or tree canopy is recommended depending on the location and use of the space.



LEGEND

EXISTING

COLLABORATION SPACE - COVERED

COLLABORATION SPACE - UNCOVERED

COLLABORATION SPACE - COVERED

- 01 Gov. Scott Courtyard
- 02 Court of North Carolina
- 03 Dan Allen South
- 04 Peele West

COLLABORATION SPACE - UNCOVERED

- 05 Stinson Plaza
- 06 Jordan & Biltmore
- 07 Caldwell Hall Entrance
- 08 Rocky Branch East Loop Trail
- 09 Gardner Arboretum
- 10 Riddick North
- 11 Brickyard West

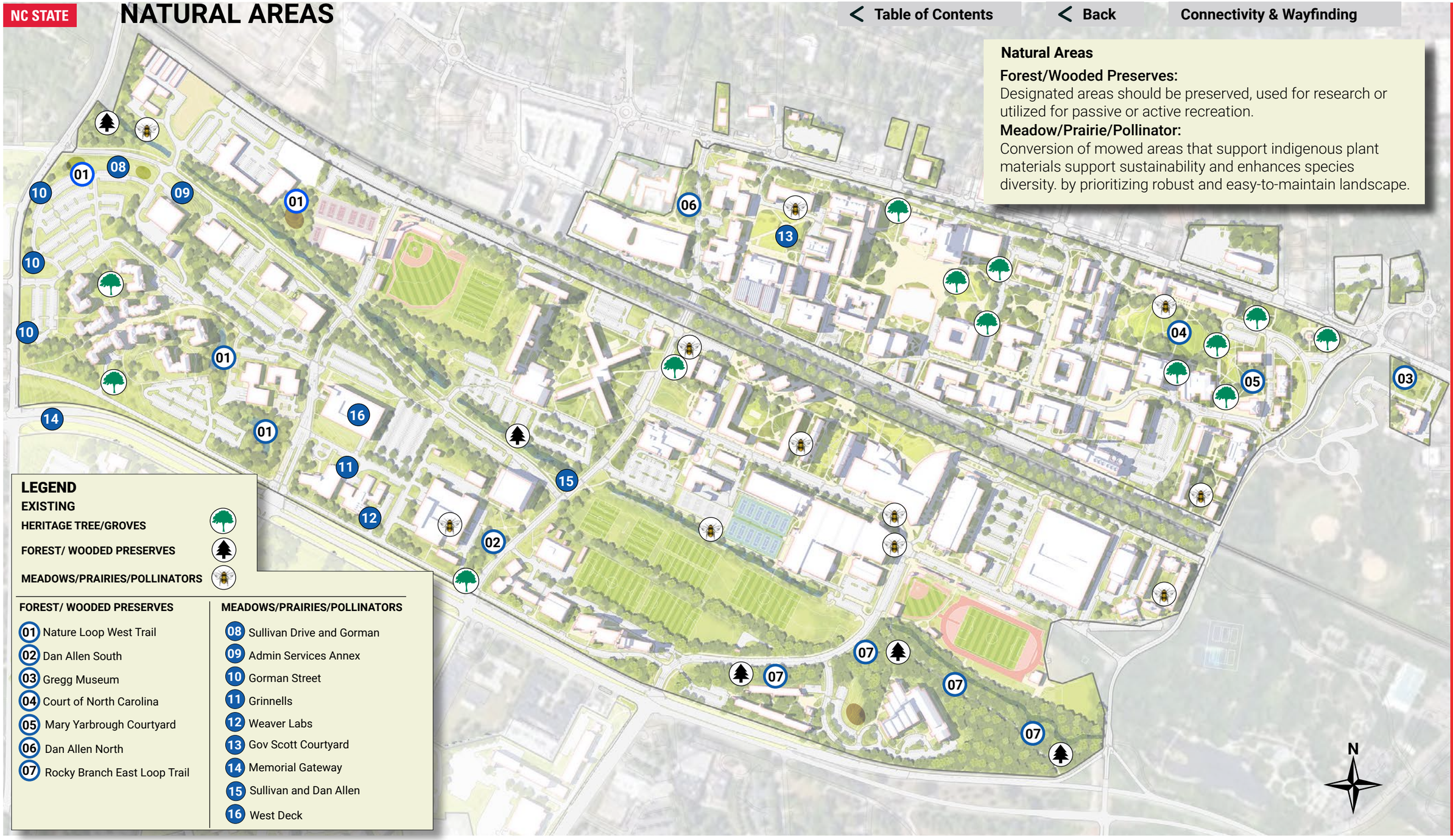
2025 Landscape Framework Plan

NATURAL AREAS

Natural Areas

Forest/Wooded Preserves:
Designated areas should be preserved, used for research or utilized for passive or active recreation.

Meadow/Prairie/Pollinator:
Conversion of mowed areas that support indigenous plant materials support sustainability and enhances species diversity. by prioritizing robust and easy-to-maintain landscape.



LEGEND

EXISTING

HERITAGE TREE/GROVES

FOREST/ WOODED PRESERVES

MEADOWS/PRAIRIES/POLLINATORS

FOREST/ WOODED PRESERVES

- 01 Nature Loop West Trail
- 02 Dan Allen South
- 03 Gregg Museum
- 04 Court of North Carolina
- 05 Mary Yarbrough Courtyard
- 06 Dan Allen North
- 07 Rocky Branch East Loop Trail

MEADOWS/PRAIRIES/POLLINATORS

- 08 Sullivan Drive and Gorman
- 09 Admin Services Annex
- 10 Gorman Street
- 11 Grinnells
- 12 Weaver Labs
- 13 Gov Scott Courtyard
- 14 Memorial Gateway
- 15 Sullivan and Dan Allen
- 16 West Deck

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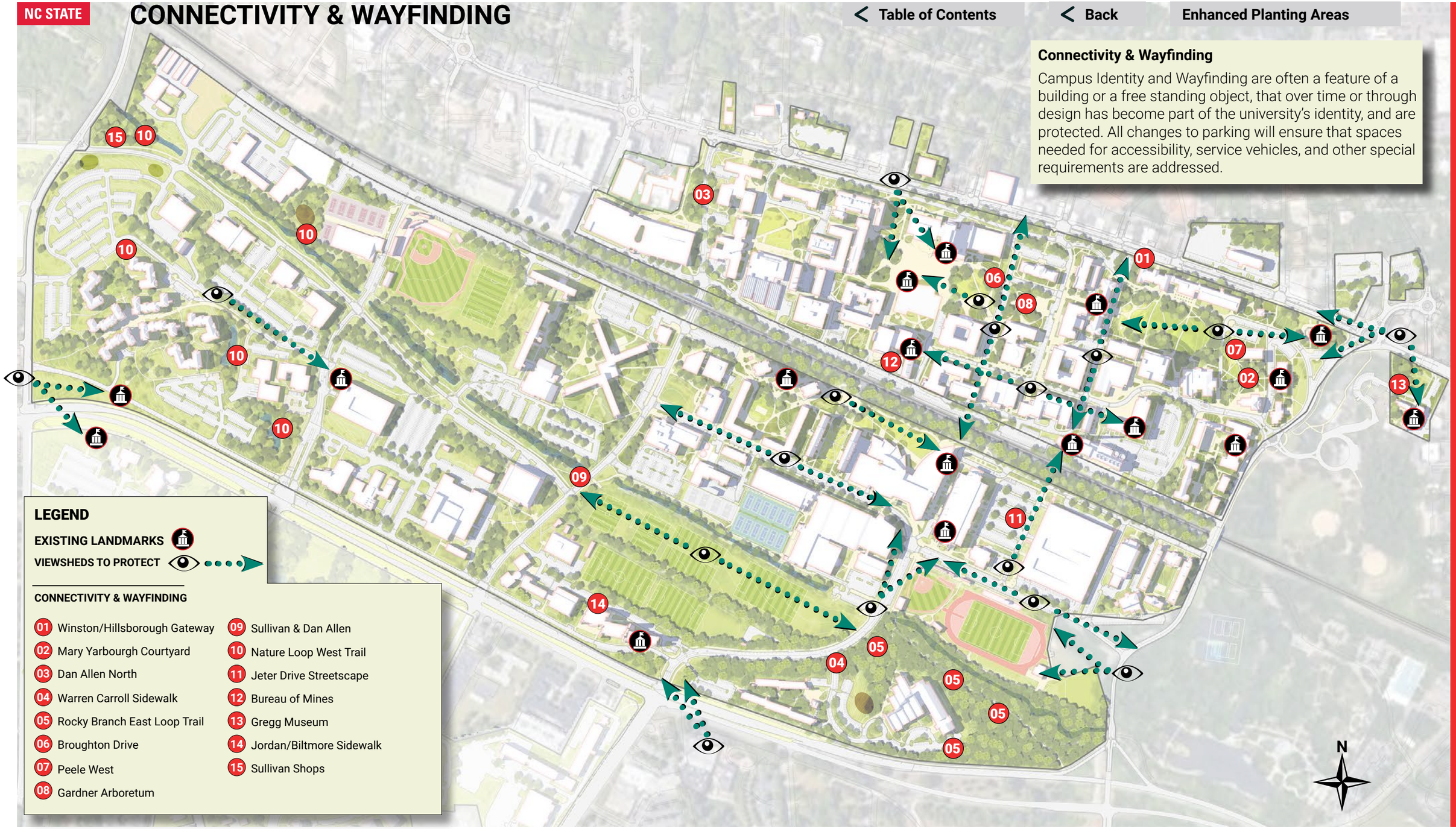
2025 Landscape Framework Plan

CONNECTIVITY & WAYFINDING

Connectivity & Wayfinding

Campus Identity and Wayfinding are often a feature of a building or a free standing object, that over time or through design has become part of the university's identity, and are protected. All changes to parking will ensure that spaces needed for accessibility, service vehicles, and other special requirements are addressed.

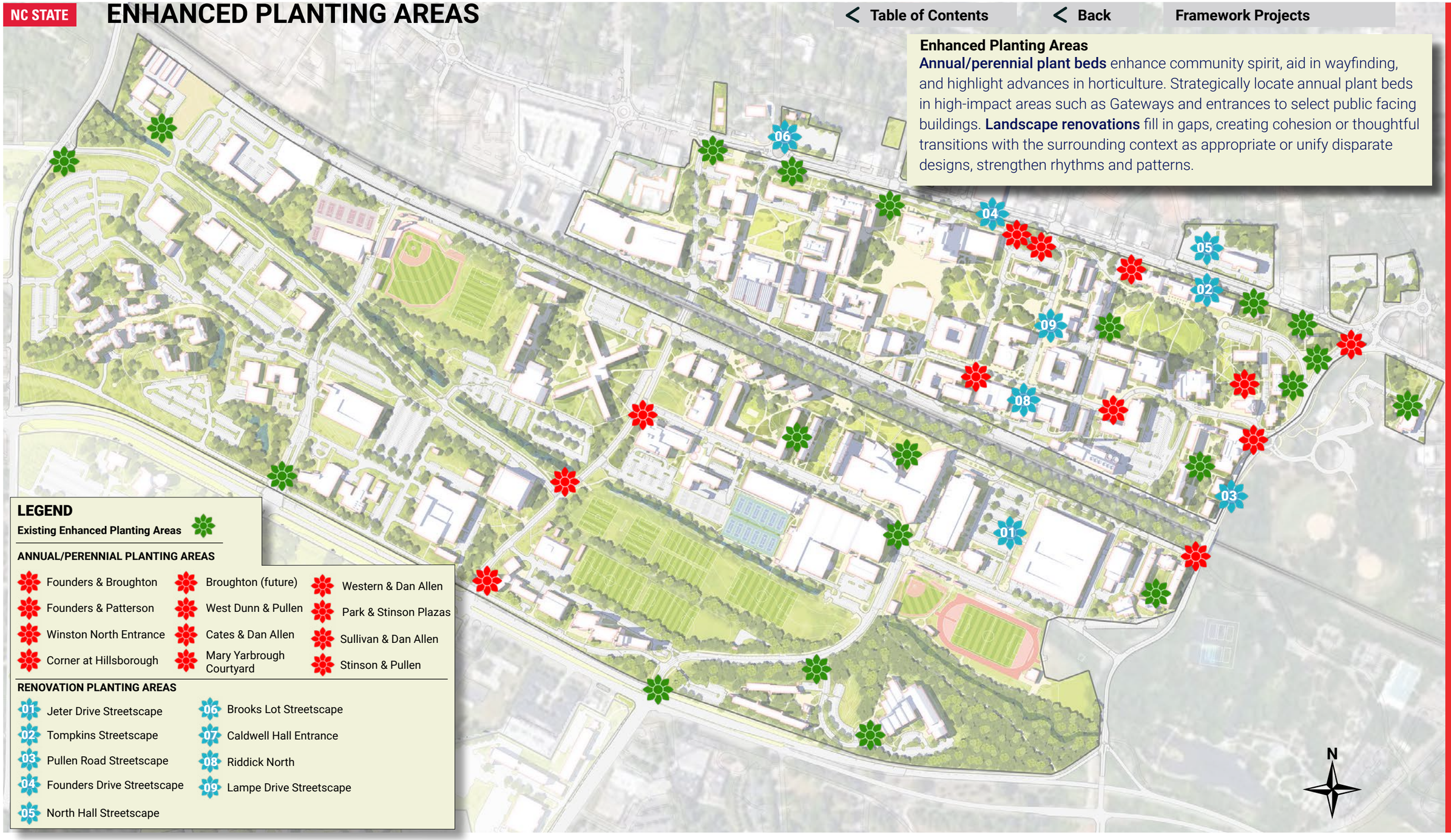


2025 Landscape Framework Plan

ENHANCED PLANTING AREAS

Enhanced Planting Areas

Annual/perennial plant beds enhance community spirit, aid in wayfinding, and highlight advances in horticulture. Strategically locate annual plant beds in high-impact areas such as Gateways and entrances to select public facing buildings. **Landscape renovations** fill in gaps, creating cohesion or thoughtful transitions with the surrounding context as appropriate or unify disparate designs, strengthen rhythms and patterns.



LEGEND

Existing Enhanced Planting Areas

ANNUAL/PERENNIAL PLANTING AREAS

- Founders & Broughton
- Founders & Patterson
- Winston North Entrance
- Corner at Hillsborough
- Broughton (future)
- West Dunn & Pullen
- Cates & Dan Allen
- Mary Yarbrough Courtyard
- Western & Dan Allen
- Park & Stinson Plazas
- Sullivan & Dan Allen
- Stinson & Pullen

RENOVATION PLANTING AREAS

- 01 Jeter Drive Streetscape
- 02 Tompkins Streetscape
- 03 Pullen Road Streetscape
- 04 Founders Drive Streetscape
- 05 North Hall Streetscape
- 06 Brooks Lot Streetscape
- 07 Caldwell Hall Entrance
- 08 Riddick North
- 09 Lampe Drive Streetscape

Parents Park

FRAMEWORK PROJECTS

KEY: FRAMEWORK PROJECTS

Priority 1

- Winston/Hillsborough Gateway 01 06
- Founders Drive Streetscape 04
- Tompkins Streetscape 02
- North Hall Streetscape 05
- Brooks Lot Streetscape 06
- Lampe Drive Streetscape 09
- Broughton Drive 06
- Rocky Branch East Loop Trail 07 08 05
- Warren Carroll Sidewalk 04
- Court of North Carolina 11 02 04
- Gov. Scott Courtyard 01 13
- Mary Yarbrough Courtyard 05 02
- Dan Allen North 06 02 03
- Gorman Street 10
- Dan Allen South 02 05 03
- Riddick North 10 08
- Stinson Plaza 05

NOTE: Magnitude of cost of work only provided for Priority 1 projects.

Priority 2

- Peele West 07 04
- West Deck 16 04
- Gardner Arboretum 08 07 09
- Memorial Gateway 14
- Sullivan and Dan Allen 09 15
- Lampe Drive North 10
- Jordan & Biltmore 03 06
- Nature Loop West Trail 01 10
- Jeter Drive Streetscape 13 11 01
- Bureau of Mines 12 08

Priority 3

- Weaver Labs 12
- Sullivan and Gorman 08
- Admin Services Annex 09
- Gregg Museum 13 03
- Grinnells 11
- Jordan/Biltmore Sidewalk 14
- Pullen Road Streetscape 03
- Sullivan Shops 01 15
- Brickyard West 09 11
- West Lot 12
- Caldwell Hall Entrance 07 07

OVERVIEW:

Frameworks:

01 Connectivity & Wayfinding

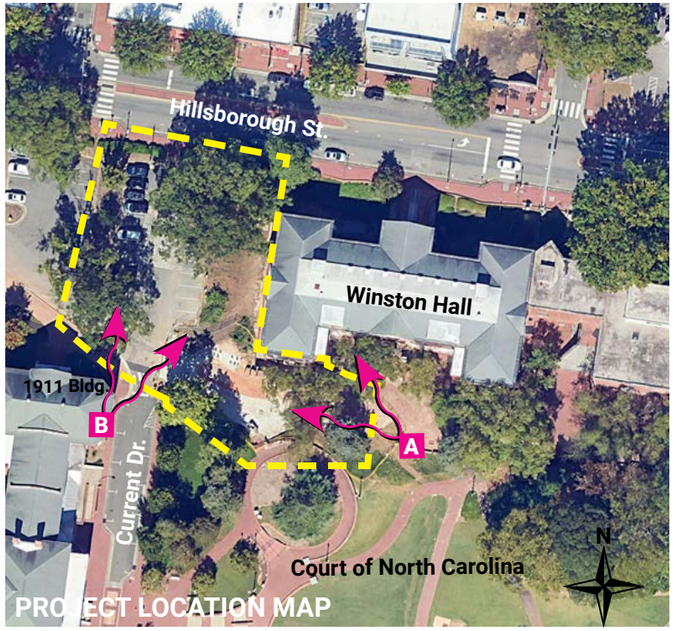
06 Green Infrastructure

Issue:

- Parking lot impedes pedestrian flow at this heavily traveled pedestrian entrance.
- 12% Sloped walk south of Winston presents safety and maintenance issues.
- Erosion and stormwater issues on the north and west side of Winston due to steep slopes.
- Maintenance safety issues to maintain and access.

Solution:

- Replace east parking bay with a pedestrian gateway per the 2023 Physical Master Plan recommendations.
- Replace sloped walk south of Winston with stairs and step pools to mitigate stormwater erosion.
- Ensure adequate accessible parking is maintained.

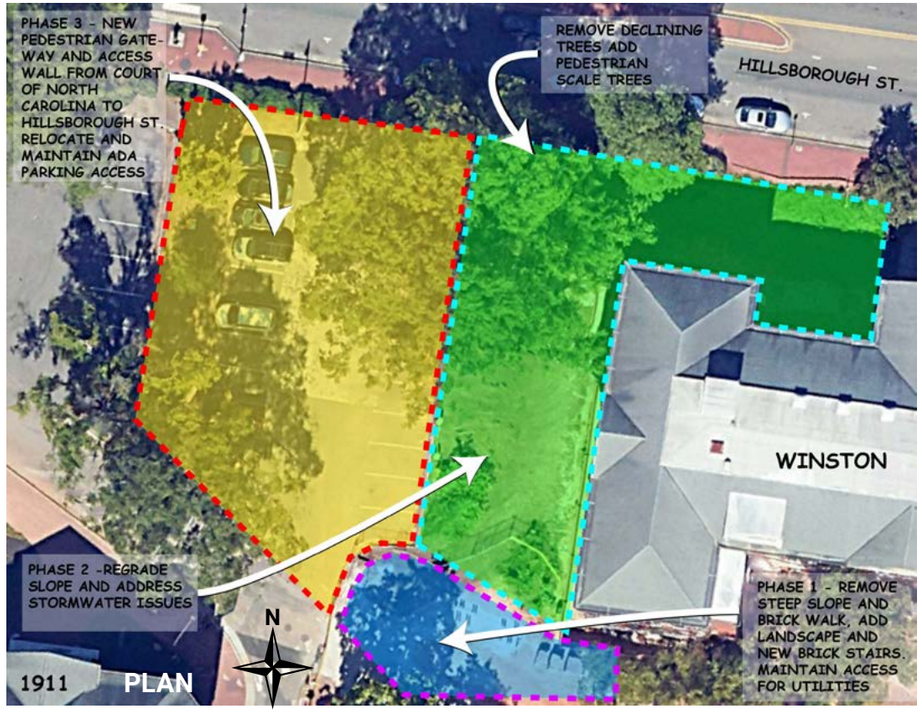


ESTIMATE OF PROBABLE COST

01/15/2025

Cost of Work:

Phase 1	$85,000
Phase 2	$60,000
Phase 3	$300,000
TOTAL	**$445,000**



2025 Landscape Framework Plan

CENTRAL CAMPUS PRECINCT - Dan Allen South

OVERVIEW:

Frameworks:

- 02 Natural Areas
- 05 Green Infrastructure
- 03 Collaboration Space

Issue:

- Lack of definition of public facing campus edge.
- Under utilized space.

Solution:

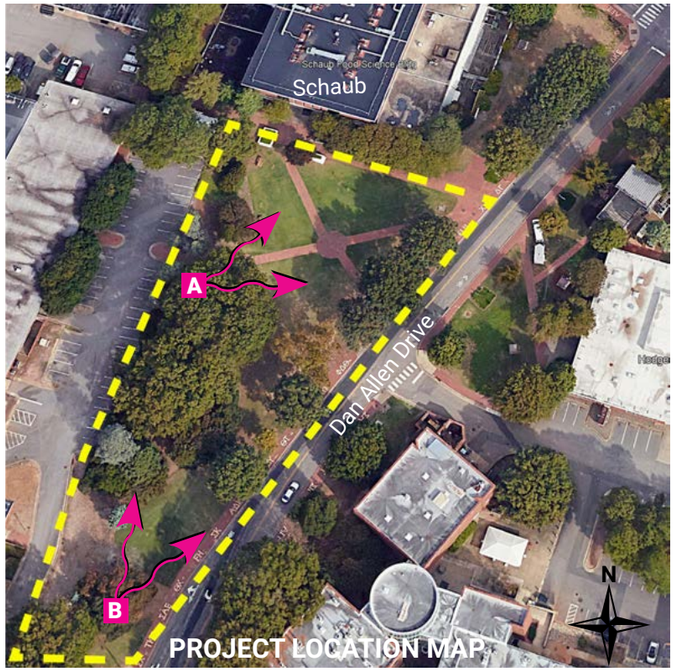
- Enhanced woodland planting and bio-retention mitigates stormwater runoff.
- Add covered collaborative space for study/classroom for adjacent academic neighborhood.
- Improve streetscape along public facing campus edge.

ESTIMATE OF PROBABLE COST

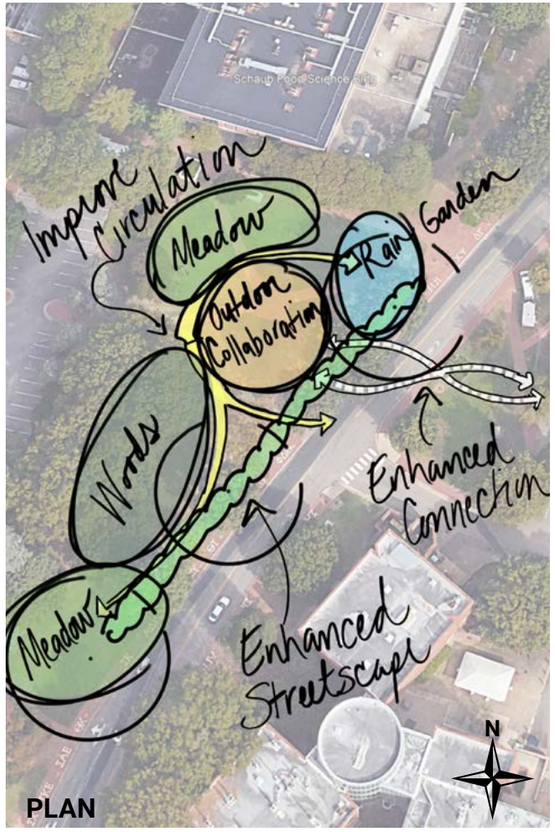
01/15/2025

Cost of Work:

Site Work	$55,000
Landscaping	$50,000
Structure & Furniture	$150,000
TOTAL	**$255,000**



PROJECT LOCATION MAP



PLAN

CONCEPTUAL RENDERING

EXISTING CONDITIONS

EXISTING CONDITIONS

2025 Landscape Framework Plan

NORTH CAMPUS PRECINCT - Mary Yarbrough Courtyard

OVERVIEW:

Frameworks:

02 Connectivity & Wayfinding 05 Natural Areas

Issue:

- Much of the original mature tree canopy has been lost in recent years.
- The ground plane of the landscape is challenging to maintain and contains invasive species.
- Much of the courtyard is not universally accessible.

Solution:

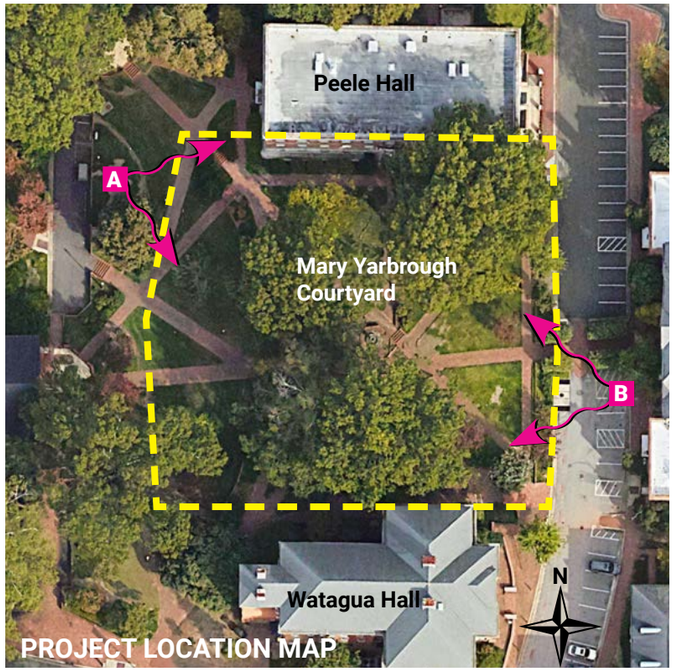
- Restore the woodland character of this Hallowed Place.
- As large shade trees are removed, replace the ground cover palette with species that require less maintenance.
- Replace shade trees with medium and large specimen that evoke the Piedmont Oak-Hickory woods.
- Clarify the path layout and provide accessible route.

ESTIMATE OF PROBABLE COST

01/15/2025

Cost of Work:

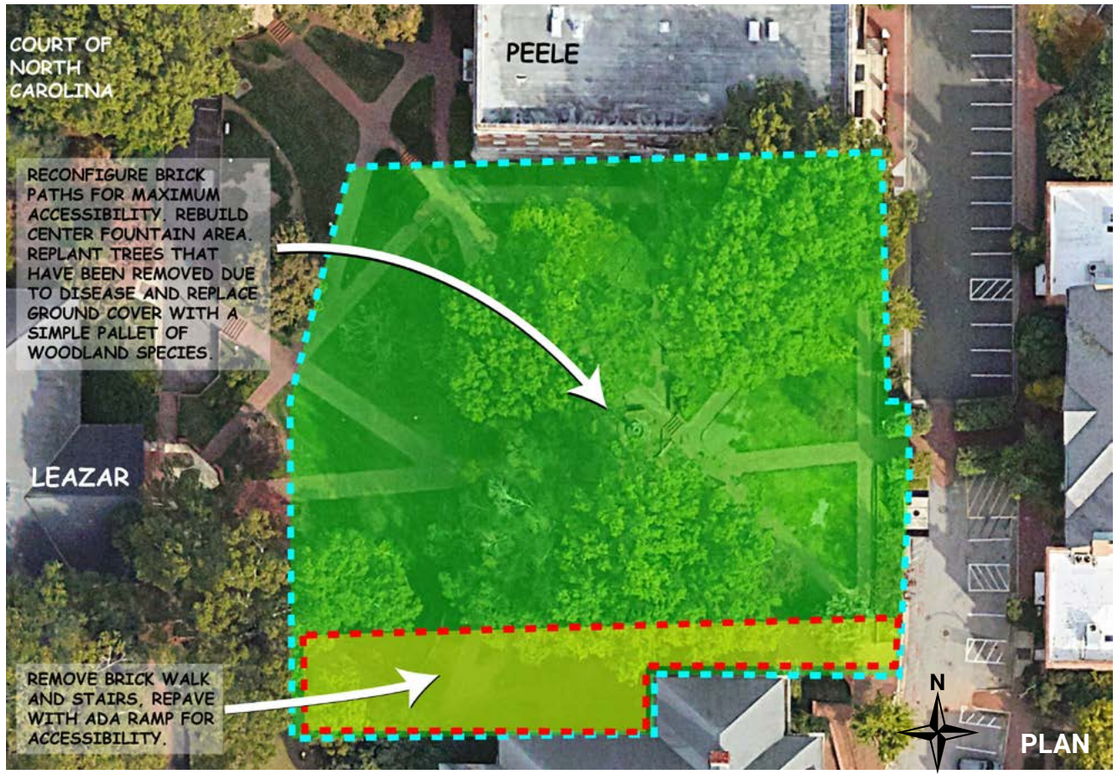
Site Work	$250,000
Landscaping	$75,000
TOTAL	**$325,000**



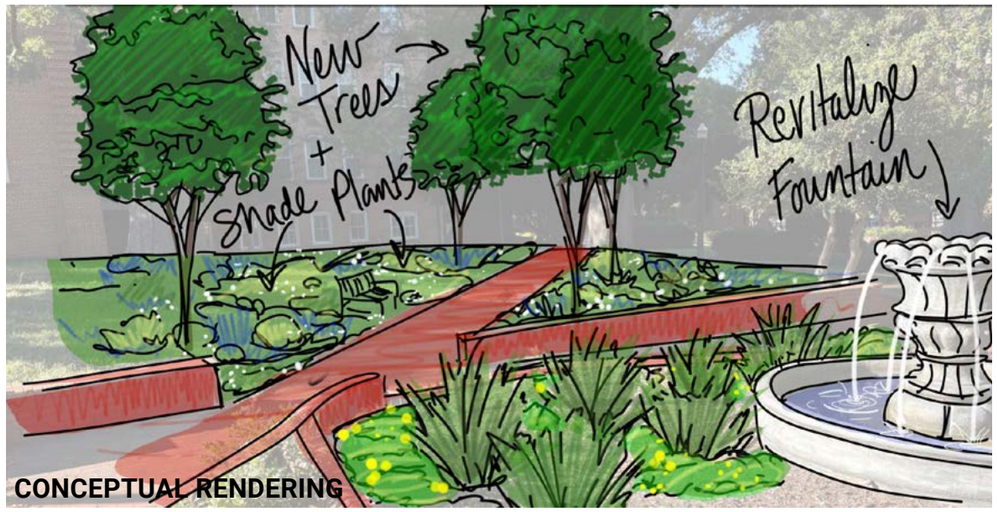
PROJECT LOCATION MAP

EXISTING CONDITIONS

EXISTING CONDITIONS



PLAN



CONCEPTUAL RENDERING

2025 Landscape Framework Plan

NORTH CAMPUS PRECINCT - Dan Allen North

OVERVIEW:

Frameworks:

06 Natural Areas 02 Green Infrastructure

03 Connectivity & Wayfinding

Issue:

- Site has not been actively developed and does not make a positive impression.
- Invasive species dominate the understory layer and create a visual barrier.
- Surface stormwater and steep side slopes impede maintenance.

Solution:

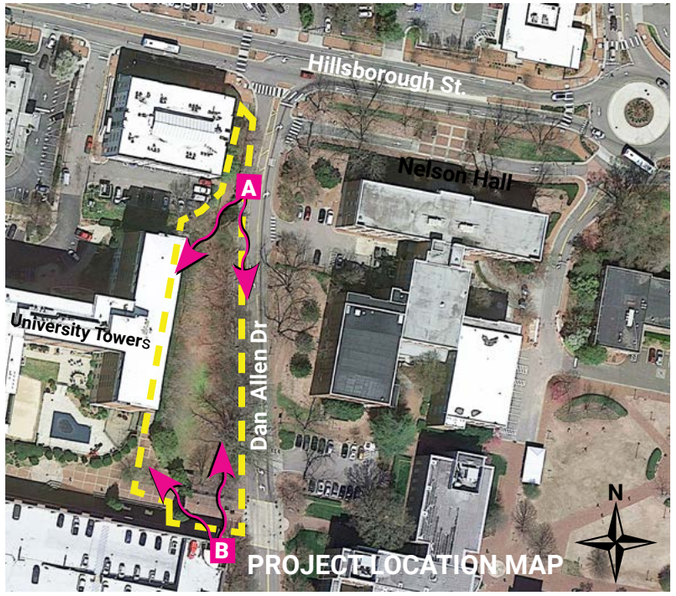
- Enhance plantings to showcase a woodland setting with informal seating areas for North Campus and improve view to University Towers.
- Bio-retention mitigates stormwater runoff, reducing maintenance.
- Add sidewalk along Dan Allen to address a missing link and improve the streetscape on a major campus entry.

ESTIMATE OF PROBABLE COST

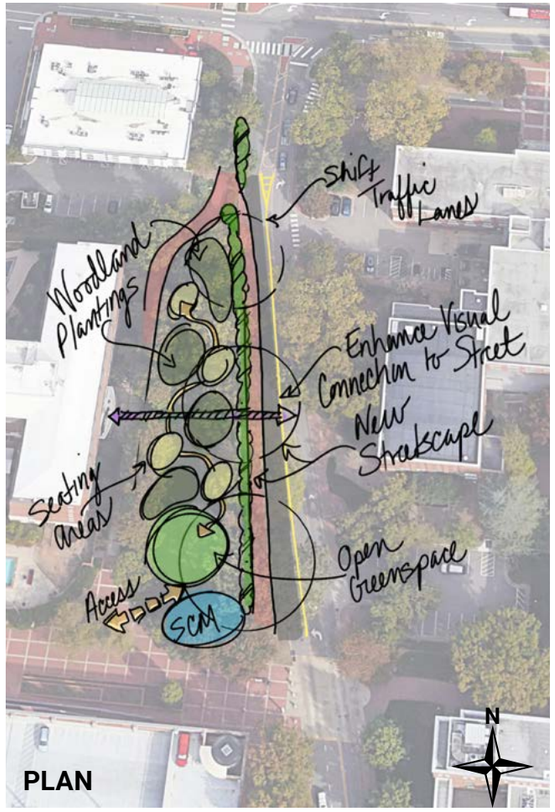
01/15/2025

Cost of Work

Site Improvements	$10,000
Brick Walk	$56,000
Landscape	$20,000
Site furniture	$10,000
TOTAL	**$97,000**



PROJECT LOCATION MAP



PLAN

CONCEPTUAL RENDERING - Looking South

EXISTING CONDITIONS

EXISTING CONDITIONS

2025 Landscape Framework Plan

OVERVIEW:

Frameworks:

10 Natural Areas

Issue:

- The large expanses of lawn are not used for activities or programs.
- Additional plantings are needed to enhance the campus edge and help screen the parking lot from the street.

Solution:

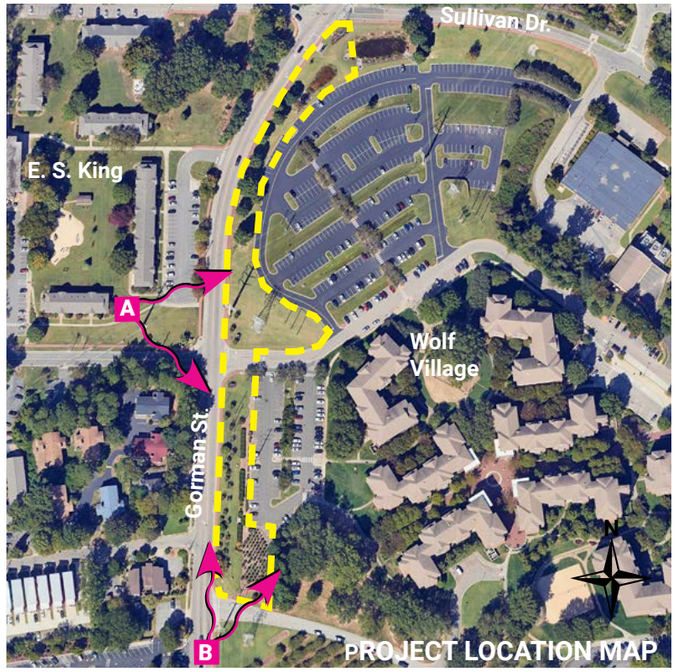
- Replace much of the lawn area with Piedmont Prairie, providing an additional teaching/learning opportunity to the existing stormwater features.

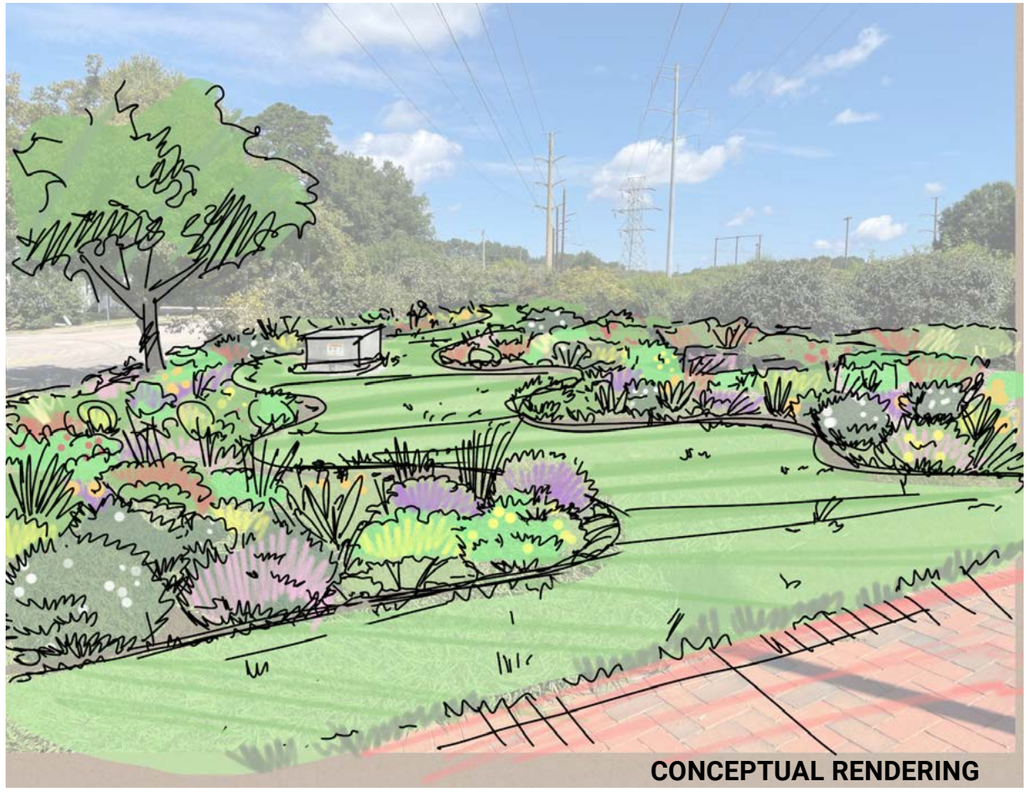
ESTIMATE OF PROBABLE COST

01/15/2025

Cost of Work:

Site Work	$100,000
Landscaping	$85,000
TOTAL	**$185,000**





2025 Landscape Framework Plan

OVERVIEW:
Frameworks:

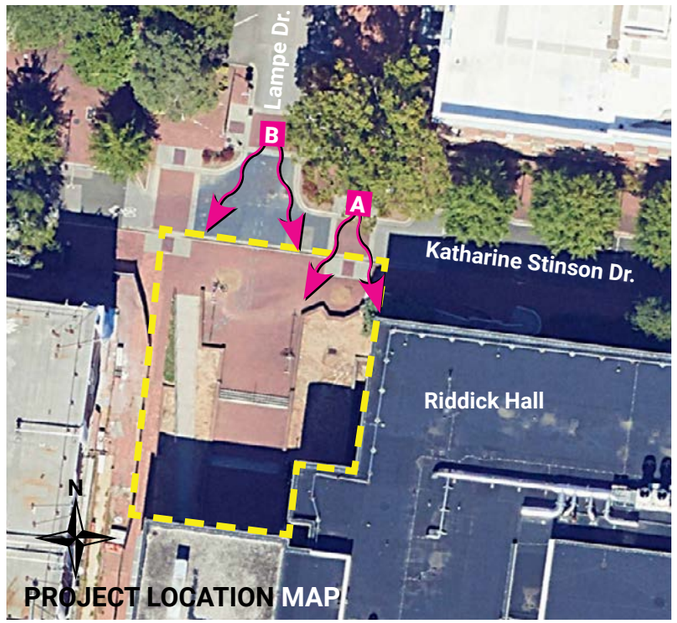
08 Enhanced Planting 10 Collaboration Space

Issue:

- Large mature anchor tree and smaller street trees were removed and not replaced losing the terminal viewshed wayfinding point of Riddick and Lampe Drive.
- Landscape is under preforming and was removed and replaced with mulch.

Solution:

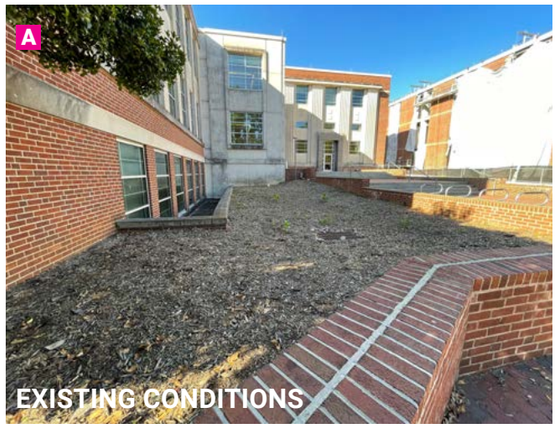
- Add small/medium sized street trees using engineered soil cells where utilities allow, to improve pedestrian comfort, experience, and re-instituting anchor tree for Lampe Drive.
- Replace mulch area with new landscape to feature entrance of Riddick.
- Add small uncovered patio for collaborative space with movable chairs and tables, remove portions of wall for access.

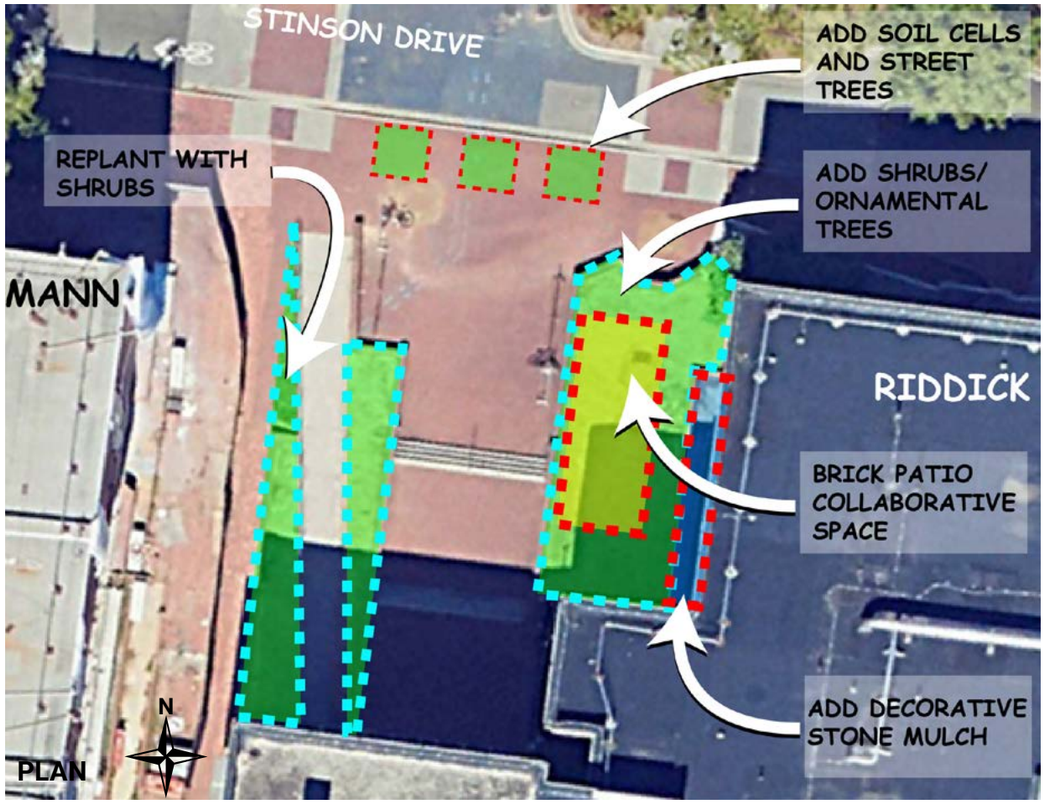


ESTIMATE OF PROBABLE COST

01/15/2025
Cost of Work:

Site Work	$45,000
Landscaping	$30,000
TOTAL	**$75,000**





2025 Landscape Framework Plan

OVERVIEW:

Frameworks:

05 Collaboration Space

Issue:

- Under-used space.
- Lack of landscape character.
- Benches do not promote collaboration.
- Raised planters have not performed.

Solution:

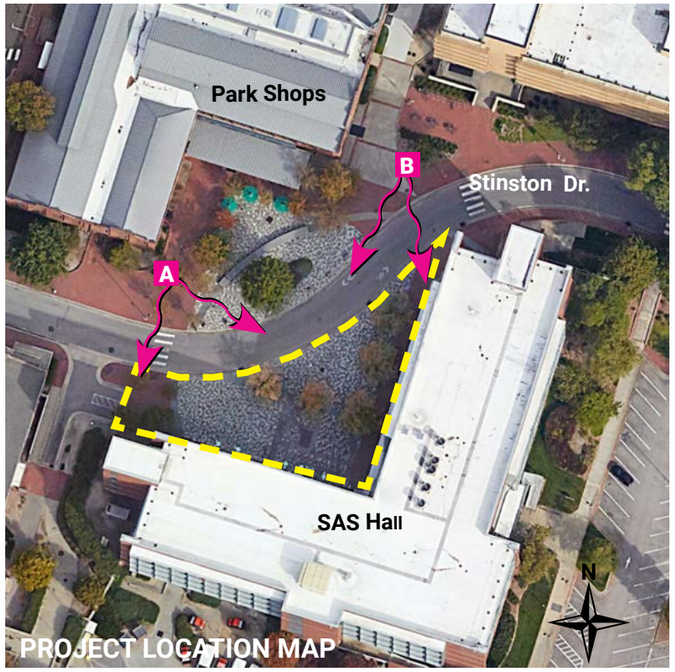
- Regrade south side of plaza to increase collaboration space with movable seating and tables.
- Revamp landscape to match park Shops.
- Add vehicular deterrents for both sides.
- Rehabilitate raised planter landscape.

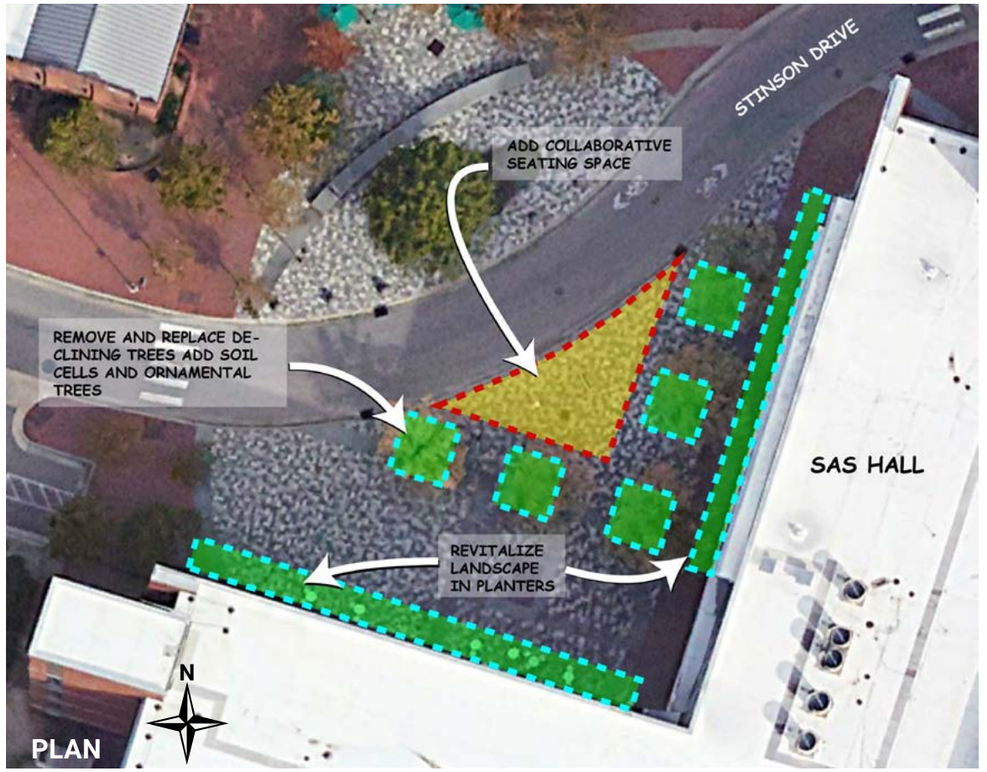
ESTIMATE OF PROBABLE COST

01/15/2025

Cost of Work:

Site Work	$150,000
Landscape	$40,000
Furniture	$50,000
TOTAL	**$240,000**





2025 Landscape Framework Plan

OVERVIEW:

Frameworks:

10 Green Infrastructure

Issue:

- Parking spaces are being taken out of service by transportation due to space requirements and small planters have been put in place as a temporary solution.
- Large mulch area to the west in existing landscape requires maintenance to keep mulch out of the road.

Solution:

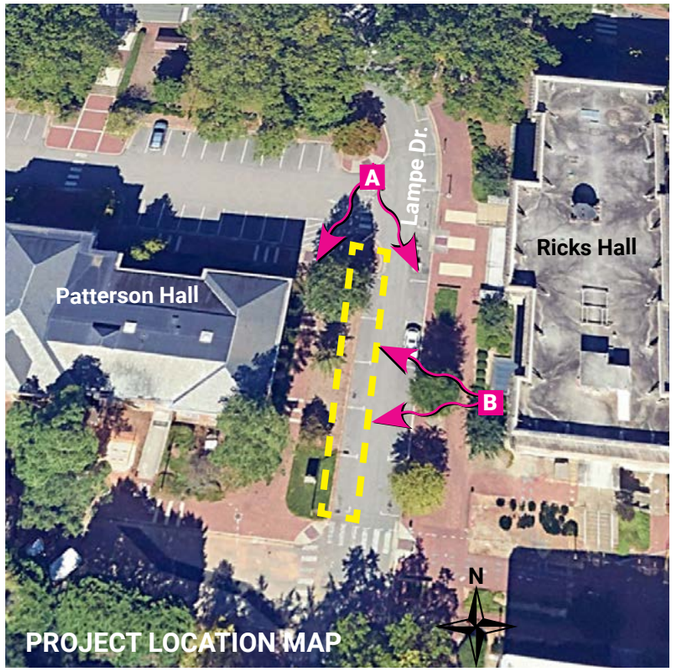
- Remove asphalt parking space area, and curb and gutter.
- Re-condition the existing found space into a SCM to capture stormwater from Patterson Hall rain gutters.
- Enhance western landscape bed by adding one large tree and shrubs.

ESTIMATE OF PROBABLE COST

Date: TBD

Cost of Work:

Site Work	$xx,xxx
Landscaping	$xx,xxx
TOTAL	**$xx,xxx**

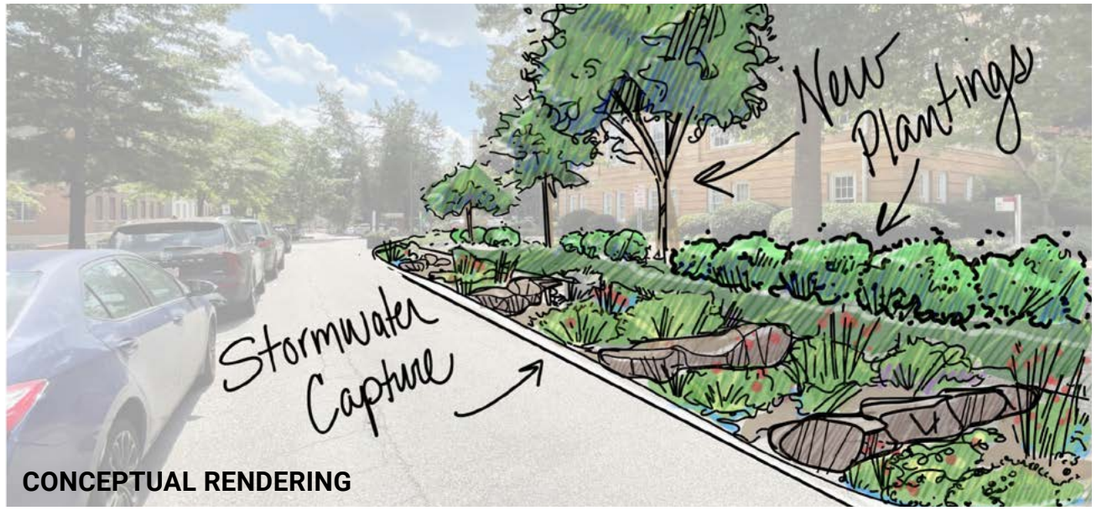


PROJECT LOCATION MAP

EXISTING CONDITIONS

EXISTING CONDITIONS

PLAN



CONCEPTUAL RENDERING

2025 Landscape Framework Plan

CENTRAL CAMPUS PRECINCT - Rocky Branch East Loop Trail

< Table of Contents | < Back | Warren Carroll Sidewalk

OVERVIEW:

Frameworks:

07 Natural Areas 08 Collaboration Space

05 Connectivity & Wayfinding

Issue:

- Lack of formal access to large boulder outcropping has caused multiple cut through trails to be formed.
- Numerous unimproved paths have caused erosion.

Solution:

- Designate loop trail to provide sustainable trail to features.
- Improve existing dirt and abandoned paths with mulch or wood chips.
- Enhance boulder area for informal collaboration space.
- Add simple trail markers for wayfinding different segments.
- Add a path from Wood Hall Complex to Morrill Drive.
- Remove non-native invasive vegetation, and promote area for research and collaborative teaching opportunities.

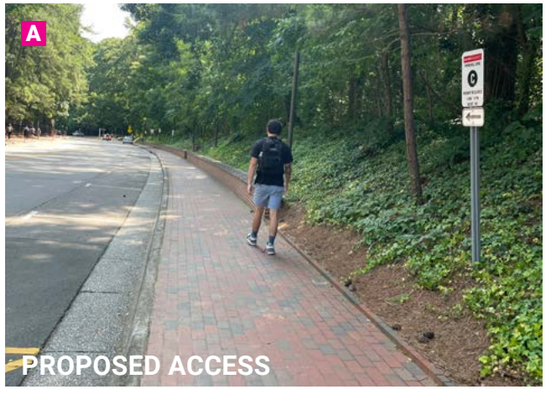
CONCEPTUAL RENDERING

ESTIMATE OF PROBABLE COST

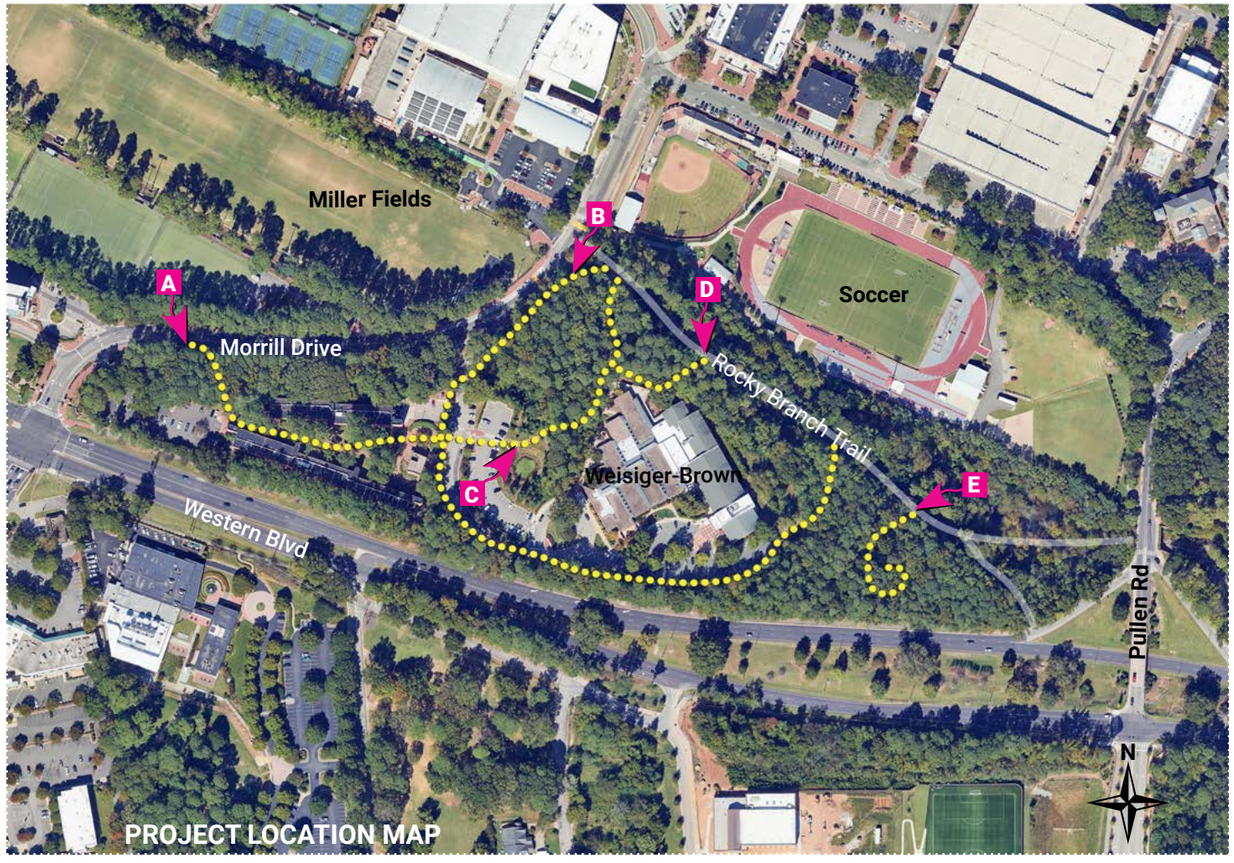
01/15/2025

Site Work:

Site Work A	$16,000
Site Work B	$14,000
Site Work C	$12,000
Site Work D	$18,000
Site Work E	$38,000
TOTAL	**$98,000**

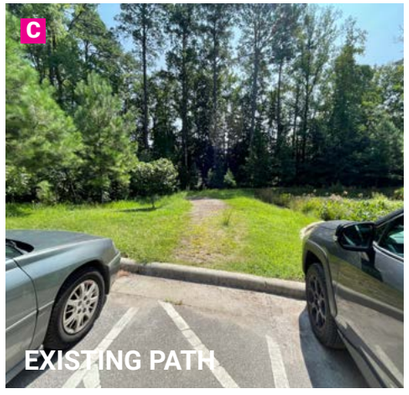


PROPOSED ACCESS



PROJECT LOCATION MAP

EXISTING PATH



EXISTING PATH

EXISTING PATH

EXISTING PATH

2025 Landscape Framework Plan

CENTRAL CAMPUS PRECINCT - Warren Carroll Sidewalk

OVERVIEW:

Frameworks:

04 Connectivity & Wayfinding

Issue:

- There is a missing pedestrian link from the parking lot to Morrill Drive.
- Students are walking through vegetation and a dirt path has been created.
- Large trees create challenges for improvements

Solution:

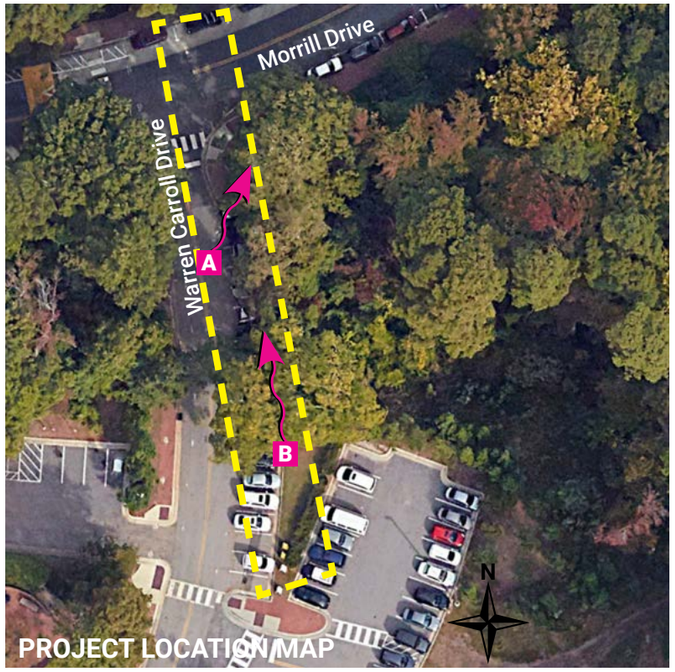
- Remove three large trees.
- Add a defined brick path from the parking lot to the north of the head in parking along Warren Carroll.
- Add pedestrian 12' light pole, and limb up tree branches.
- Add crosswalk and curb cuts on north side of Warren Carroll to the brick on the west side of Morrill Drive.

ESTIMATE OF PROBABLE COST

01/15/2025

Cost of Work:

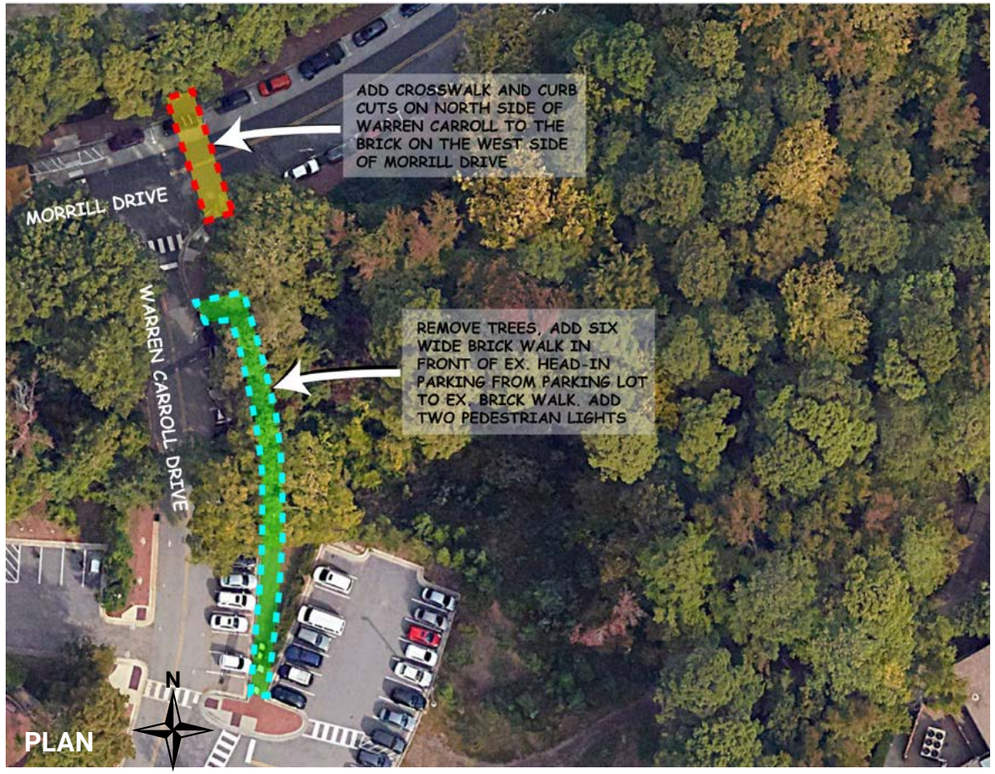
Site Work	$115,000
Landscaping	$20,00
TOTAL	**$135,000**



PROJECT LOCATION MAP

EXISTING CONDITIONS

EXISTING CONDITIONS



PLAN

CONCEPTUAL RENDERING

2025 Landscape Framework Plan

OVERVIEW:

Frameworks:

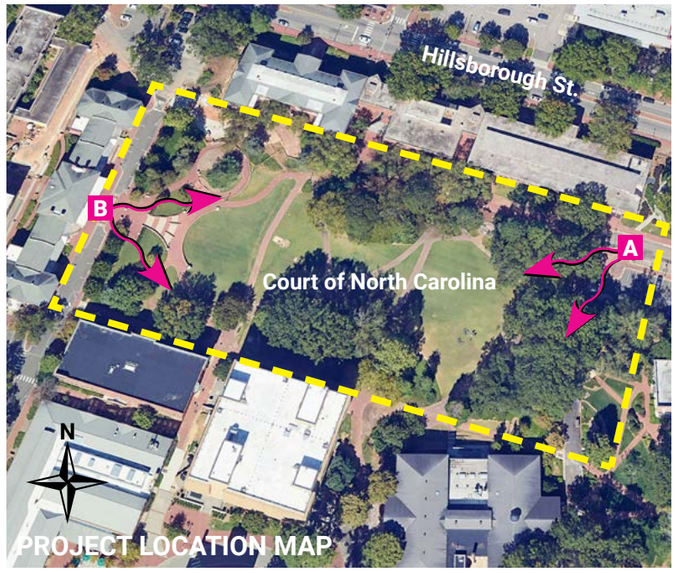
04 Natural Areas
11 Green Infrastructure
02 Collaboration Space

Issue:

- Perimeter plantings differ from building to building.
- Stormwater challenges include erosion in the northeast corner and erosive drainage on the steep walk south of Winston Hall.
- The space lacks collaboration space.

Solution:

- Design a textured landscape that enhances biodiversity and urban ecological value by incorporating seasonality, varied textures, and habitat potential. Create an absorptive, tiered system of planting beds that supports a diverse mix of plants adapted to urban conditions. The design should include layers of ephemeral woody shrubs, understory trees, and canopy trees to foster a resilient and dynamic urban environment.
- Create stormwater storage in lawn areas to mitigate
- Add covered outdoor space south Caldwell Hall
- Remove steep walk and add stairs, expand landscape bed to include SCM for drainage.



PROJECT LOCATION MAP

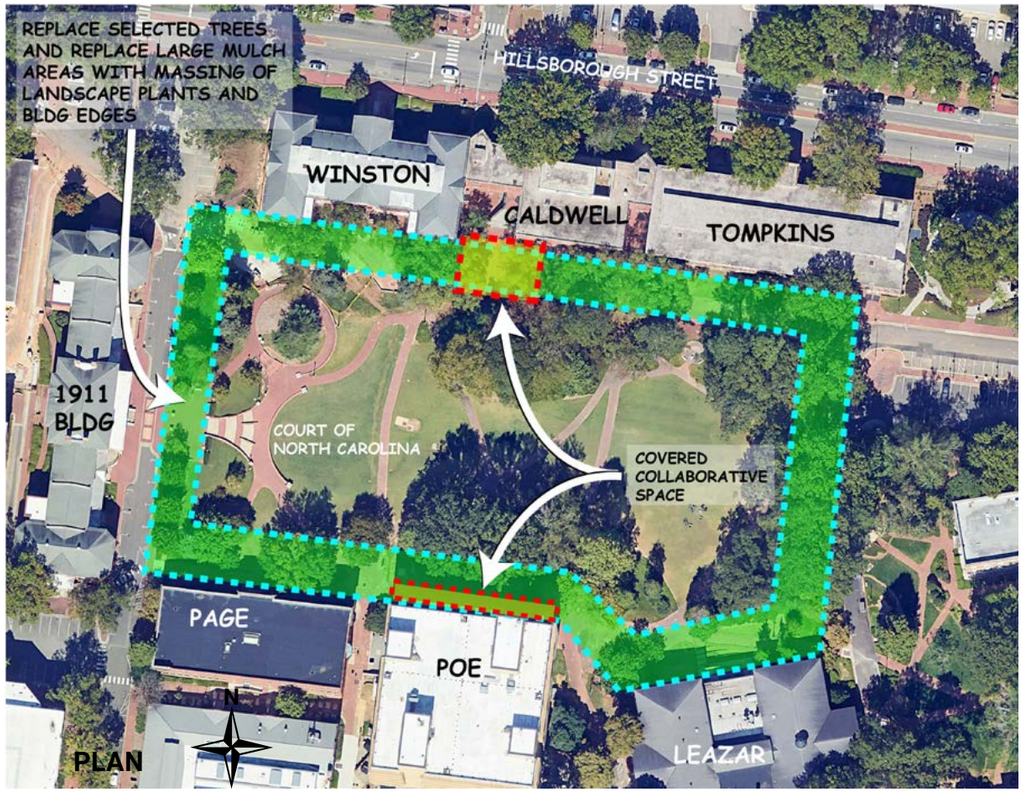
ESTIMATE OF PROBABLE COST

01/07/2025
Cost of Work:

Site Work	$65,000
Landscaping	$95,000
TOTAL	**$160,000**

EXISTING CONDITIONS

EXISTING CONDITIONS



PLAN

CONCEPTUAL RENDERING

2025 Landscape Framework Plan

NORTH CAMPUS PRECINCT - Governors Scott Courtyard

OVERVIEW:

Frameworks:

01 Collaboration Space

14 Natural Areas

Issue:

• Sloping lawns on the eastern side are not well-utilized, and are eroding as the turf is shaded by the maturing trees.
• There is a need for covered outdoor space in the neighborhood.

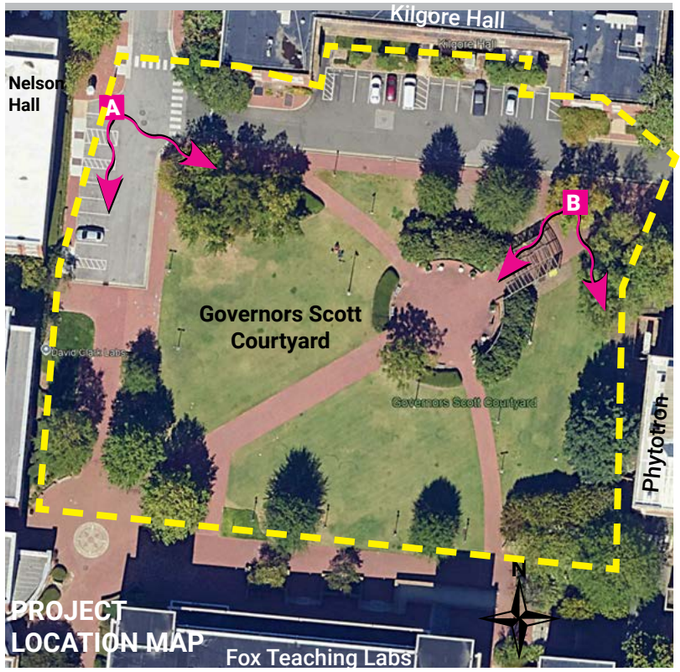
Solution:

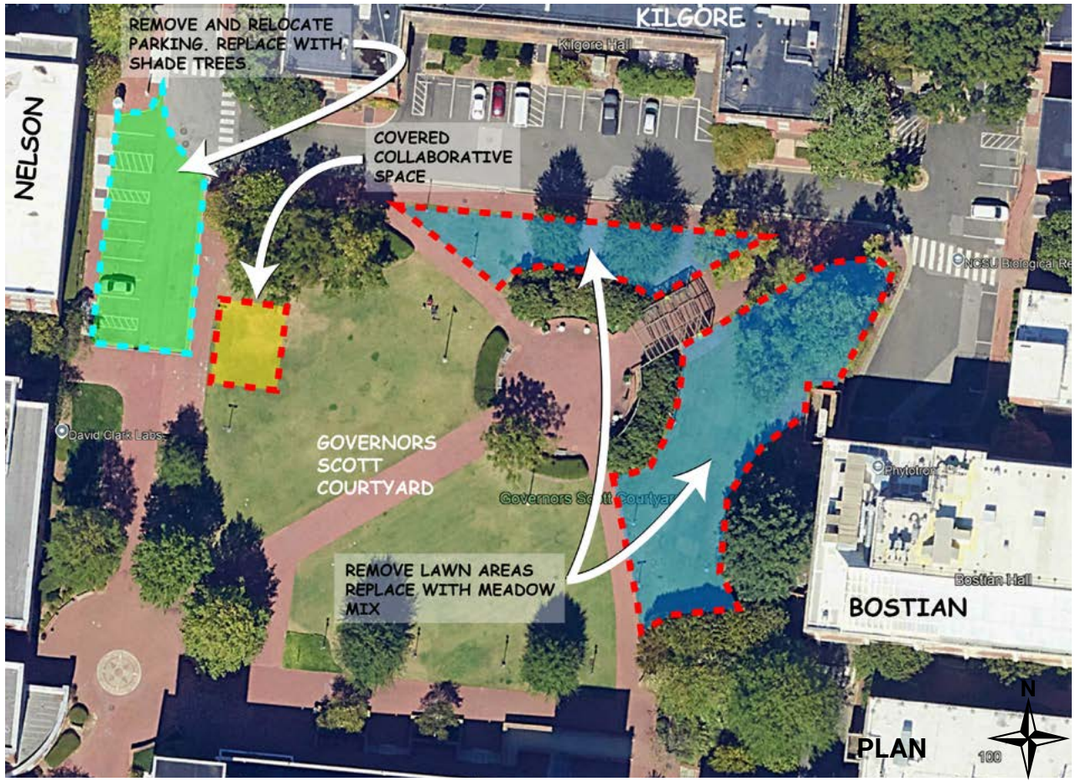
• Replace some lawn areas with meadow/prairie plantings.
• Consolidate accessible and service parking to add a pavilion along the western edge.

ESTIMATE OF PROBABLE COST

0107/2025
Cost of Work:

Site Work	$120,000
Landscaping	$50,000
Structure &Furniture	$225,000
TOTAL	**$395,000**





2025 Landscape Framework Plan

OVERVIEW:

Frameworks: 06 **Connectivity & Wayfinding**

Issue:

- Undersized sidewalk along the western edge of Broughton
- Numerous cut through by students through the landscape on steep slope.
- Street trees are in decline and need to be replaced.
- Parallel parking impacts the pedestrian experience.
- Lighting is not pedestrian focused.
- Road alignment jogs to the left adding to pedestrian conflicts
- Patterson Hall bus stop location overlaps with high volume pedestrian

Solution:

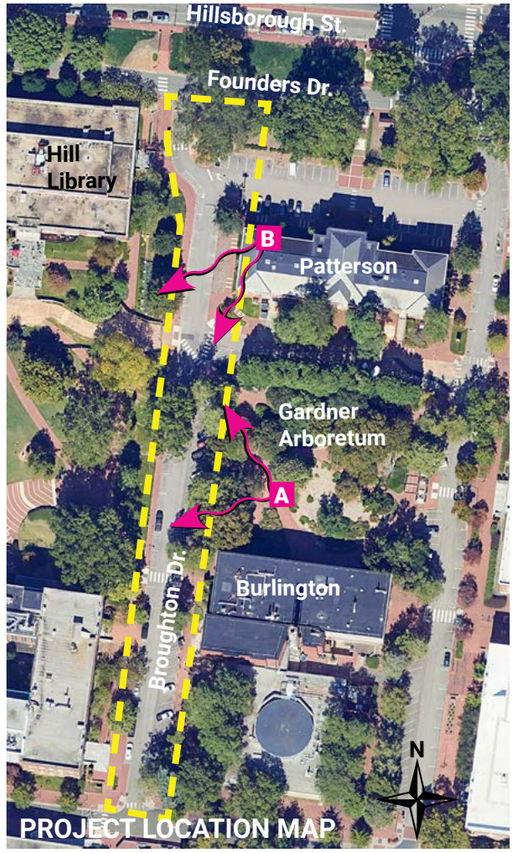
- Implement recommendations from 2023 Physical Master Plan.
- Remove parking from west side of Broughton Dr. Widen sidewalk and add decorative fencing, straighten road, move bus stop next to western side of new road alignment.
- Establish a street tree language for the street corridor.

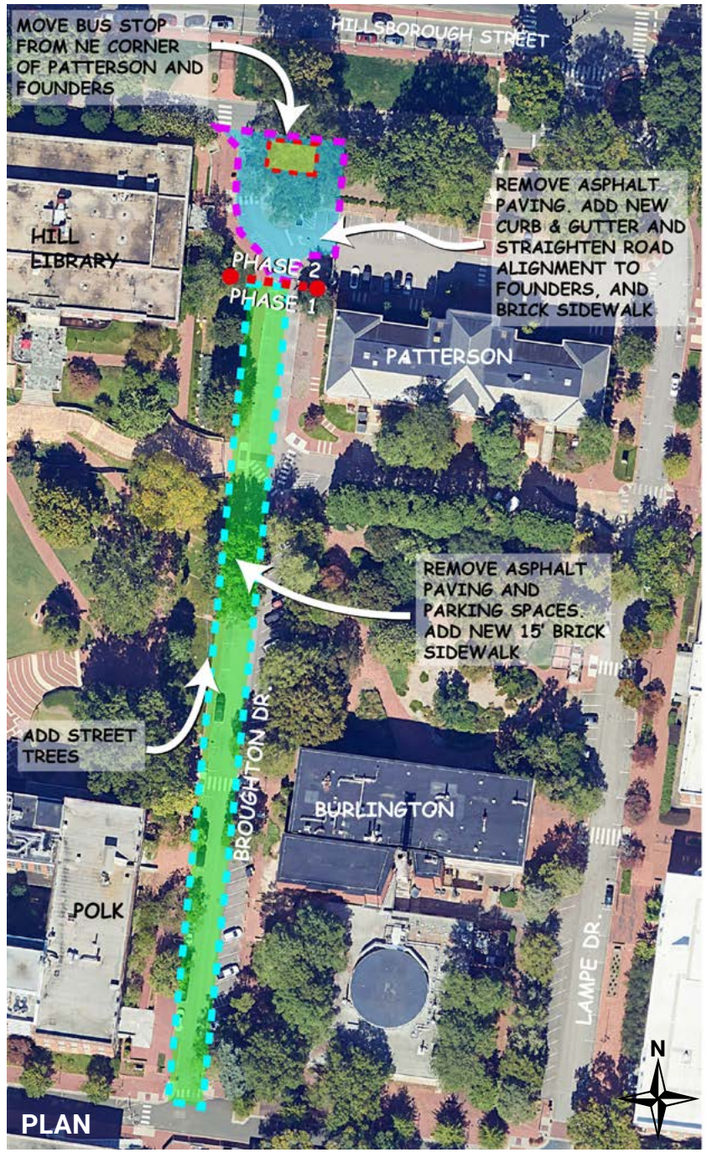
ESTIMATE OF PROBABLE COST

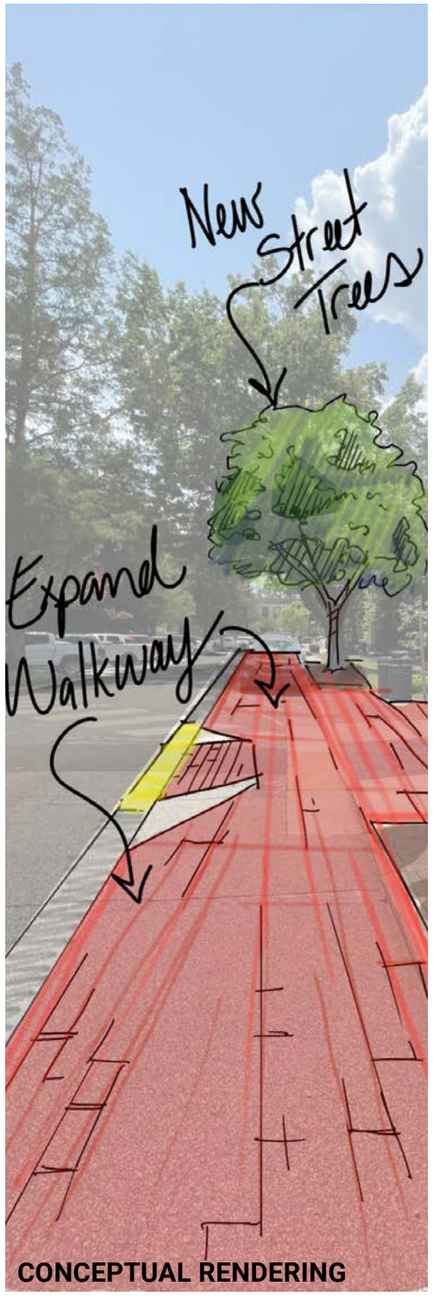
01/07/2025

Cost of Work:

Phase 1	$175,000
Phase 2	$160,000
Alt Relocate Bus stop part of Phase 2	$15,000
	$175,000
TOTAL (both phases)	**$350,000**







2025 Landscape Framework Plan

OVERVIEW:

Frameworks:

07 **Connectivity & Wayfinding** 04 **Collaboration Space**

Issue:

- Street remnant detracts from this prominent area where two Hallowed Places meet.
- There is a lack of an accessible path between Leazar and Tompkins Halls.
- Dumpsters in the Peele Hall lot are an highly visible

Solution:

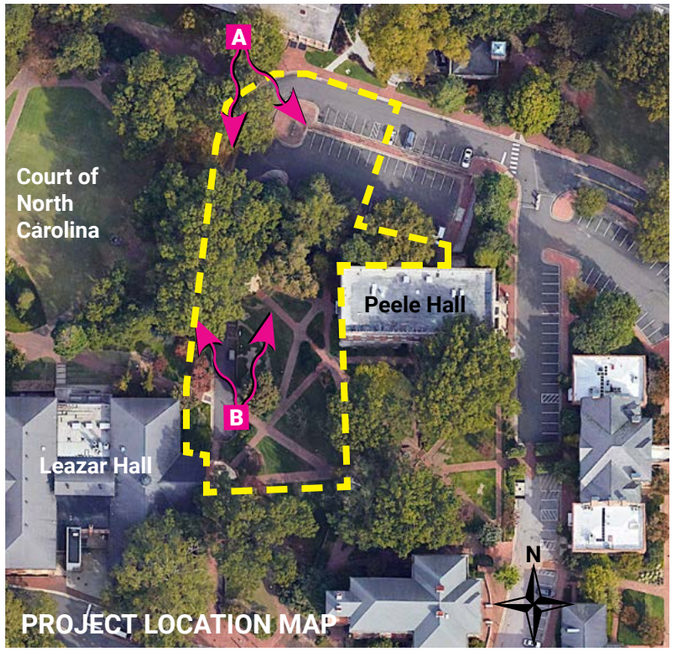
- Remove select parking to create an accessible path to beautifies the seam between the Court of North Carolina and Mary Yarbrough Courtyard.
- Replace shade trees that have been lost over time to restore the woodland character.
- Create a covered outdoor space next to the All Campus Path.

ESTIMATE OF PROBABLE COST

Date: TBD

Site Work:

Cost of Work	$xxx
XXXX	$xxx
XXXX	$xxx
XXXX	$xxx
TOTAL	**$xxxx**



2025 Landscape Framework Plan

CENTRAL CAMPUS PRECINCT - West Deck

OVERVIEW:

Frameworks:

18 **Natural Areas**

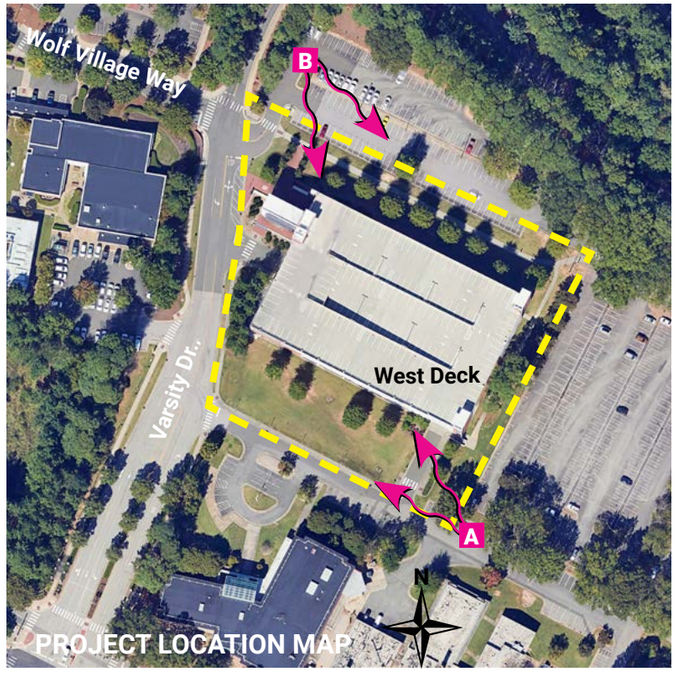
04 **Green Infrastructure**

Issue:

- Extensive lawn areas are not needed for programs.
- Mature trees are shading out grass on slopes causing erosion and increasing maintenance.

Solution:

- Alter topography.
- On the north side of the deck, add an SCM to solve erosion issue and replace lawn strip north of the walk with meadow/prairie plantings.
- On south side, replace lawn with a meadow/prairie.

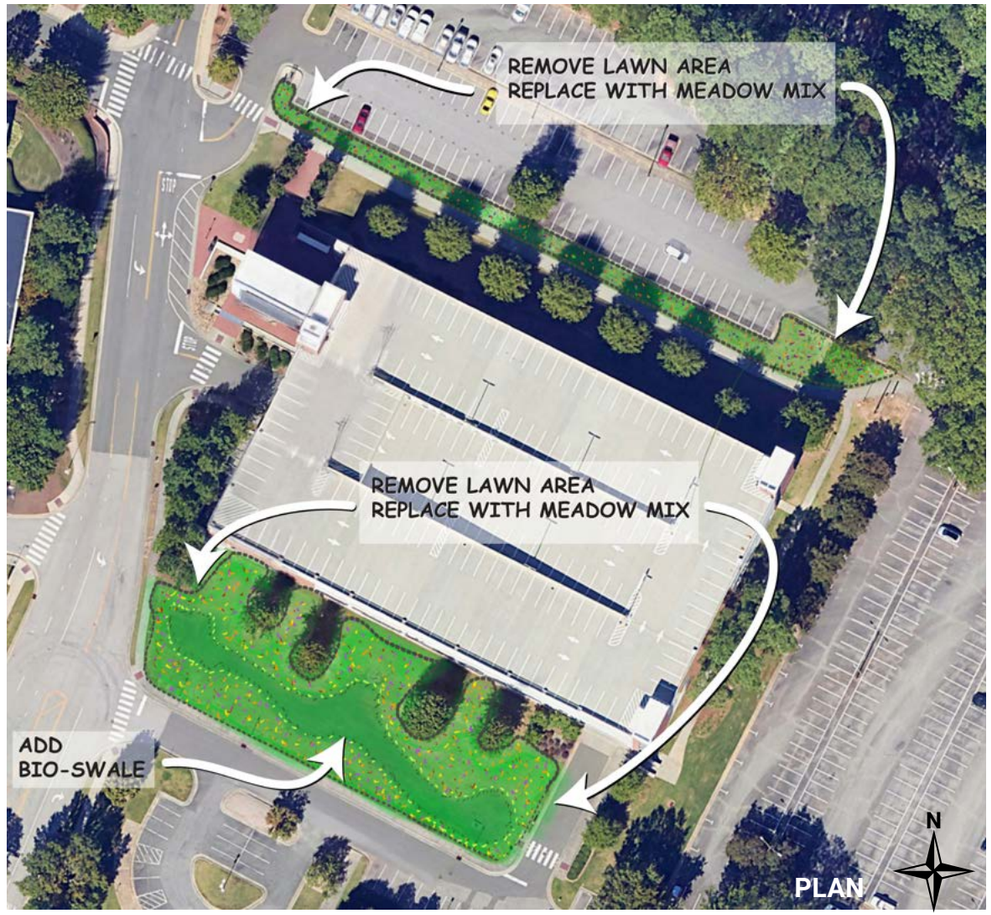


ESTIMATE OF PROBABLE COST

Date: TBD

Site Work:

Cost of Work	$xxx
XXXX	$xxx
XXXX	$xxx
XXXX	$xxx
TOTAL	**$xxxx**



2025 Landscape Framework Plan

OVERVIEW:

Frameworks:

08 **Connectivity & Wayfinding**

09 **Collaboration Space** 07 **Green Infrastructure**

Issue:

- The gap in the All Campus Path south of Patterson results in pedestrians walking through a parking lot.
- The wall of Leyland Cypress trees separates Patterson Hall and the main path from the courtyard.
- Plantings in the courtyard are in need of rejuvenation and organization.

Solution:

- Integrate the All Campus Path into the overall space.
- Create a unique theme for the Arboretum to reorganize the plantings.
- Add a rain garden to the space to mitigate stormwater impacts downstream.

ESTIMATE OF PROBABLE COST

Date: TBD

Site Work:

Cost of Work	$xxx
XXXX	$xxx
XXXX	$xxx
XXXX	$xxx
TOTAL	**$xxxx**

2025 Landscape Framework Plan

NORTH CAMPUS PRECINCT - Founders Drive Streetscape

OVERVIEW:

Frameworks:

04 **Enhanced Planting**

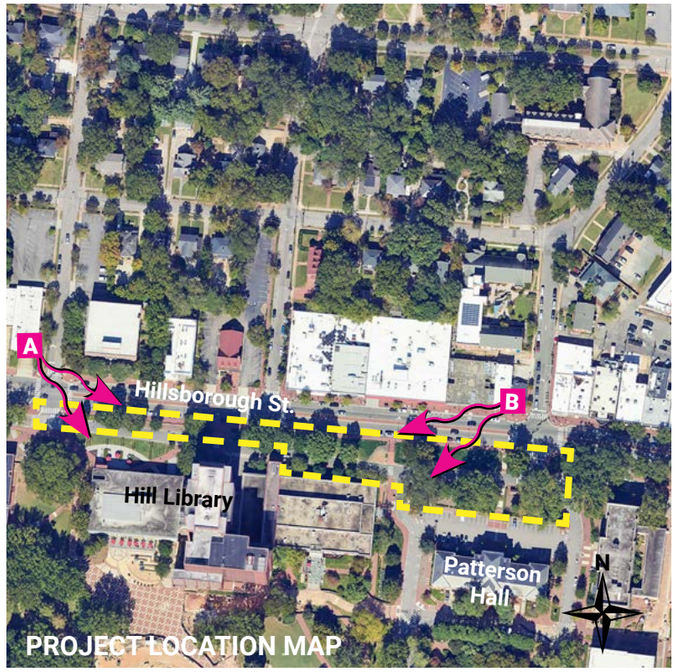
Issue:
- Mature trees are in decline.
- Open areas with lawn have replaced trees over time.

Solution:
- Replace street trees to enhance pedestrian path to help unify the streetscape on this prominent campus edge.

ESTIMATE OF PROBABLE COST

01/15/2025
Cost of Work:

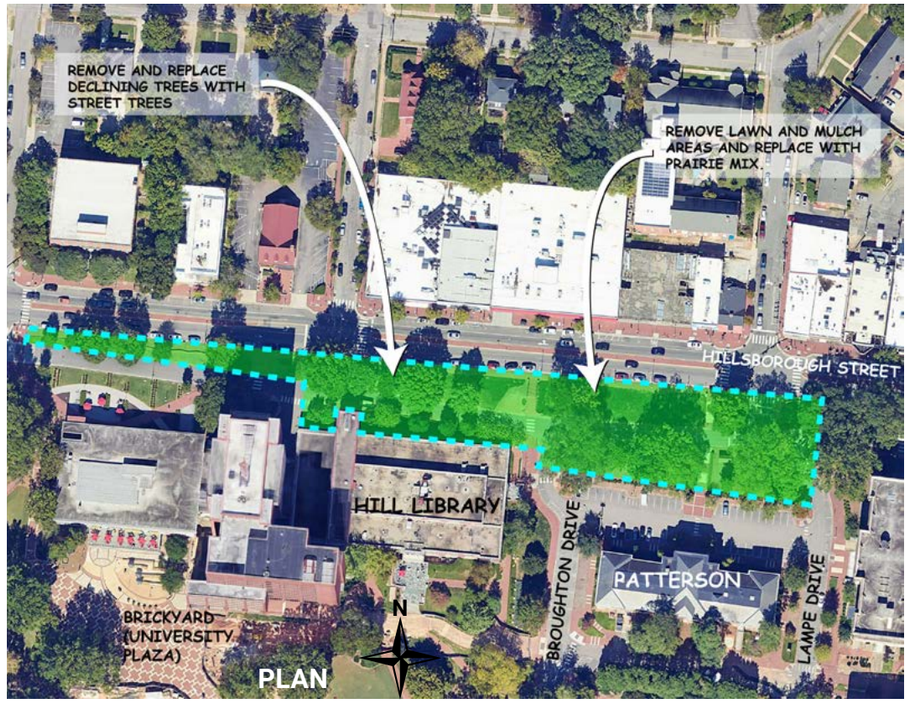
Site Work	$85,000
Landscaping	$135,000
TOTAL	**$220,000**



PROJECT LOCATION MAP

EXISTING CONDITIONS

EXISTING CONDITIONS



PLAN

2025 Landscape Framework Plan

OVERVIEW:

Frameworks:

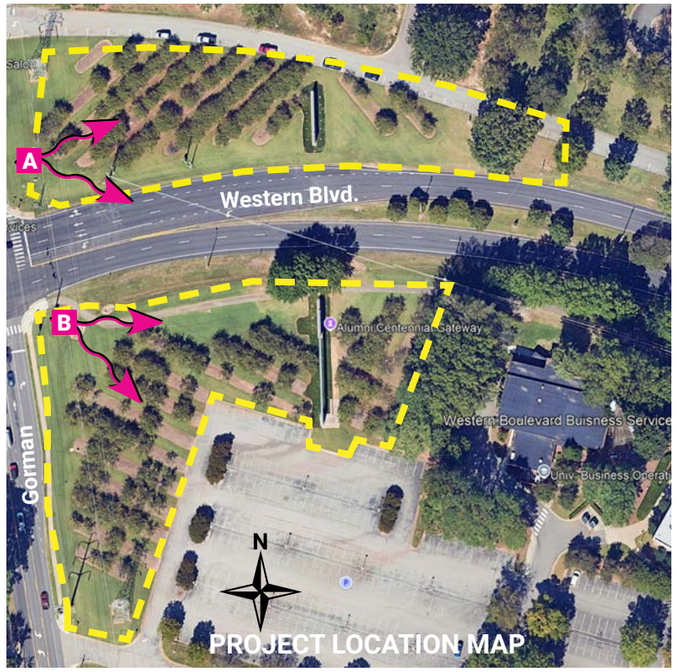
16 **Natural Areas**

Issue:

- Lawn and crabapple s are failing due to age and disease.
- Extensive maintenance is required.
- Continuing to replace crab-apples is not sustainable due since species is only available from one nursery in the Pacific Northwest.

Solution:

- Remove crab-apples and lawn.
- Alter topography to reinforce agricultural past as exaggerated row crop mounds.
- Replant with NC State introductions to promote area for research and teaching opportunities.



ESTIMATE OF PROBABLE COST

Date: TBD

Site Work:

Cost of Work	$xxx
XXXX	$xxx
XXXX	$xxx
XXXX	$xxx
TOTAL	**$xxxx**

2025 Landscape Framework Plan

CENTRAL CAMPUS PRECINCT - Sullivan and Dan Allen

OVERVIEW:

Frameworks:

17 Natural Areas 09 Connectivity & Wayfinding

Issue:

- Three different walk surfaces, brick and asphalt.
- Landscape needs renovation.
- Difficult crosswalk prior to campus health.
- Small areas of turf on the east of Dan Allen are hard to maintain.

Solution:

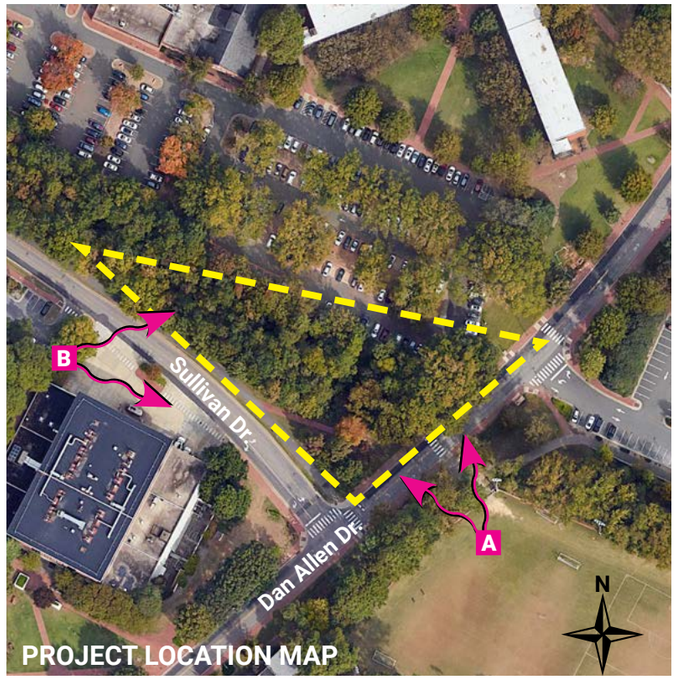
- Remove curb cut on west side of Dan Allen, install roll curb.
- Unify pavement material to brick.
- Realign Rocky Branch trail signage to point towards trail.
- Add small seating area.
- Remove lawn and replace with meadow mix.

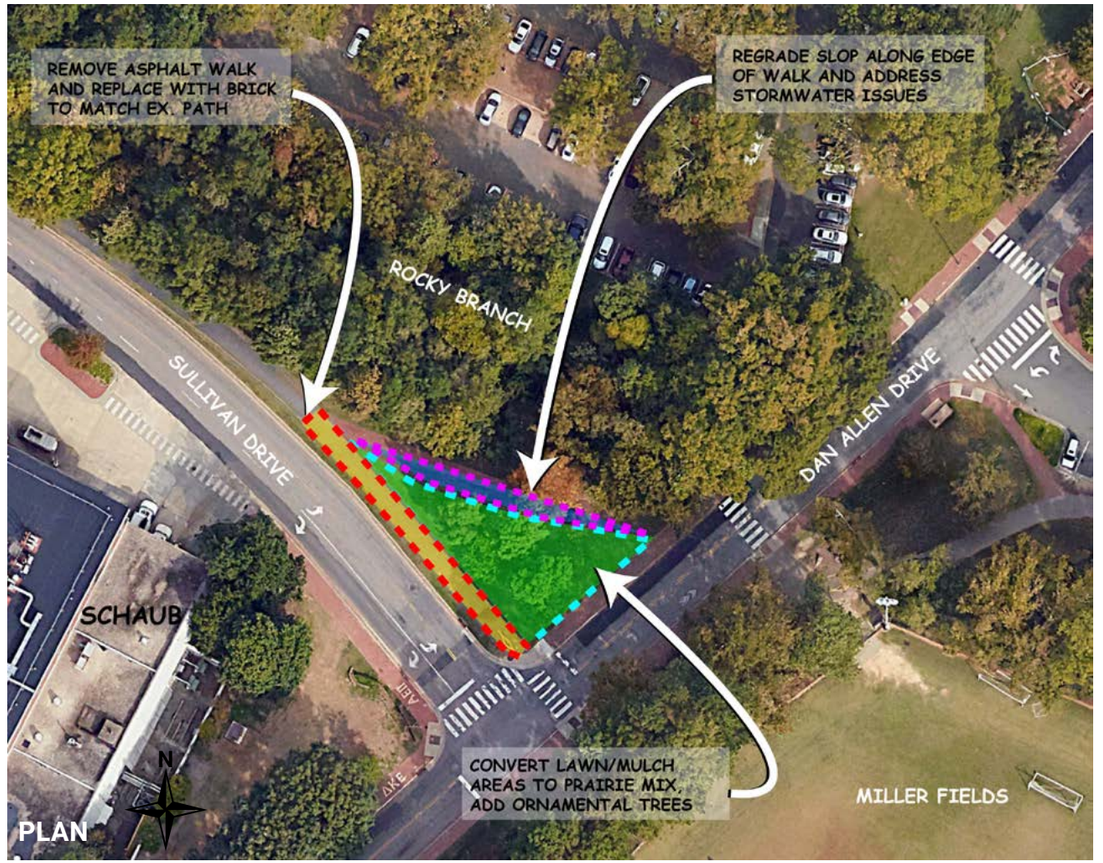
ESTIMATE OF PROBABLE COST

Date: TBD

Cost of Work:

Site Work	$xxx	
XXXX		$xxx
XXXX		$xxx
XXXX		$xxx
TOTAL		**$xxxx**





2025 Landscape Framework Plan

NORTH CAMPUS PRECINCT - Tompkins Streetscape

OVERVIEW:

Frameworks:

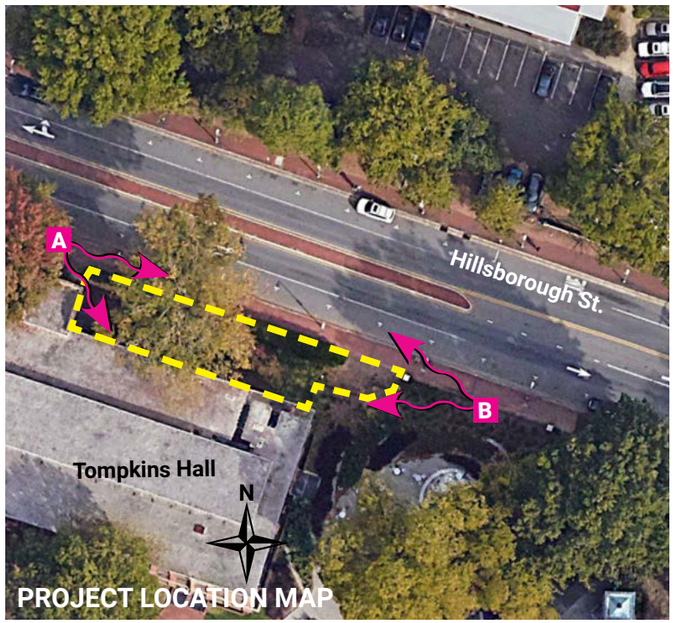
02 **Enhanced Planting**

Issue:

- Street trees in decline.
- Steep bank is hard to maintain.
- Drainage issues at Tompkins.
- Shrubs lining Hillsborough street do not enhance pedestrian experience.

Solution:

- Engineer slope to allow for small street trees, and access for maintenance.
- Remove hedge and unwanted vegetation.
- Link decorative fencing form Tompkins to Global Courtyard.
- Repair swale and drainage at the bottom of the slope.



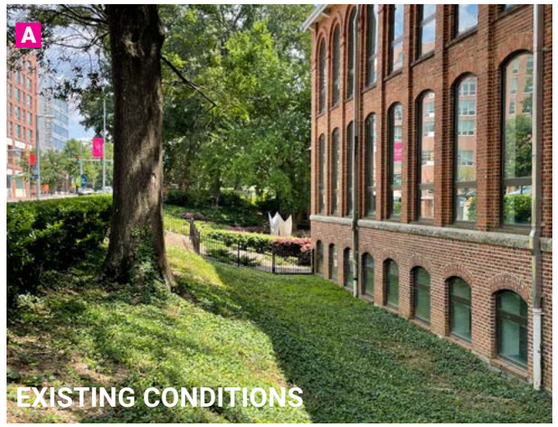
PROJECT LOCATION MAP

ESTIMATE OF PROBABLE COST

01/15/2025

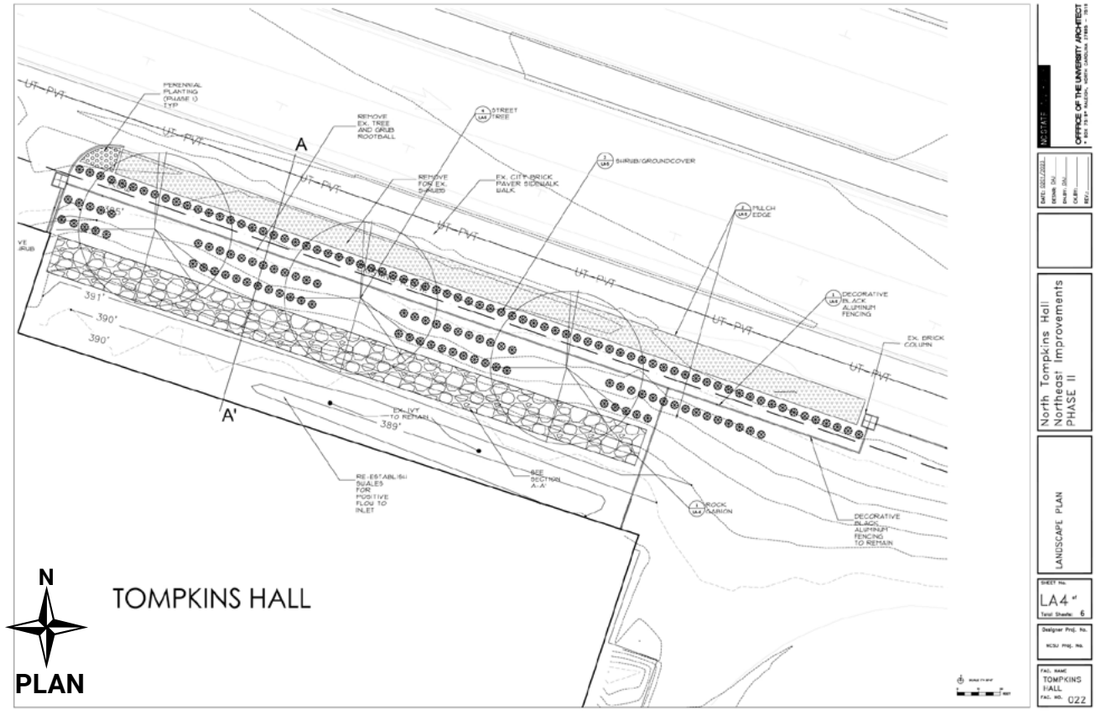
Cost of Work:

Site Work	$65,000
Landscaping	$25,000
TOTAL	**$90,000**

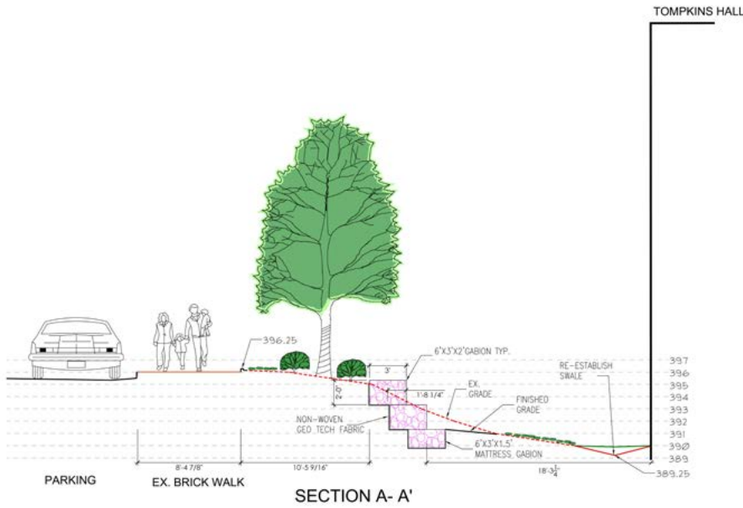


EXISTING CONDITIONS

EXISTING CONDITIONS



PLAN



RENDERING

2025 Landscape Framework Plan

OVERVIEW:

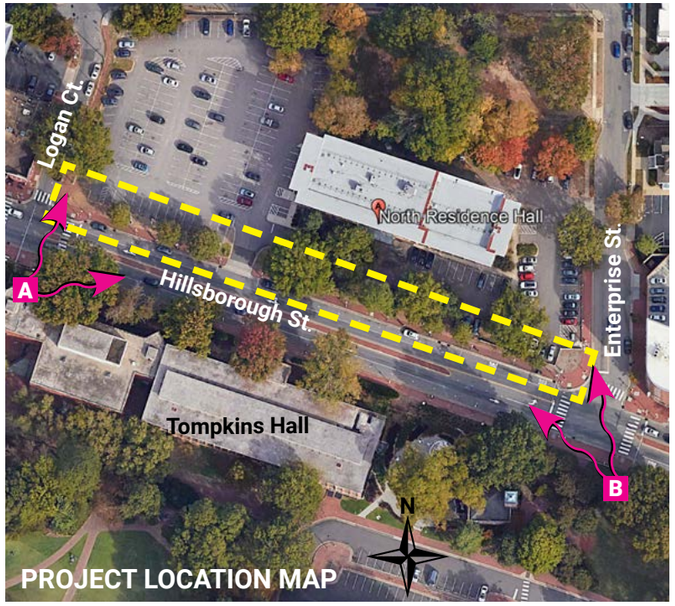
Frameworks: 05 **Enhanced Planting**

Issue:

- This area has been targeted by the Raleigh Downtown Alliance for improvement.
- Large areas of mulch that Large trees have shaded out the understory or are missing.
- Lack of shrubs to define space.
- The corners of Enterprise and Logan Ct. at Hillsborough St. are bare mulch and distracts from the pedestrian experience.

Solution:

- Add street trees to mimic established street tree language of Hillsborough Street.
- Add shrubs to enhance and screen parking lot and reduce mulched areas.
- Use the corner at Enterprise and Hillsborough as an opportunity to help unify the street language.

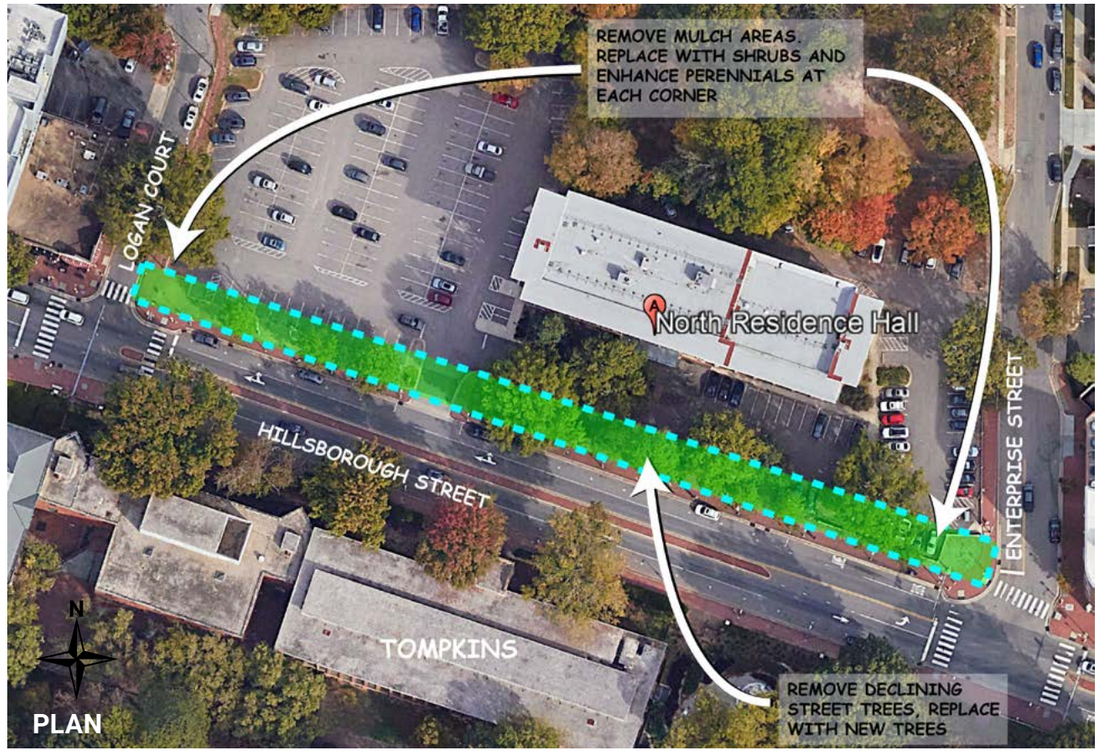


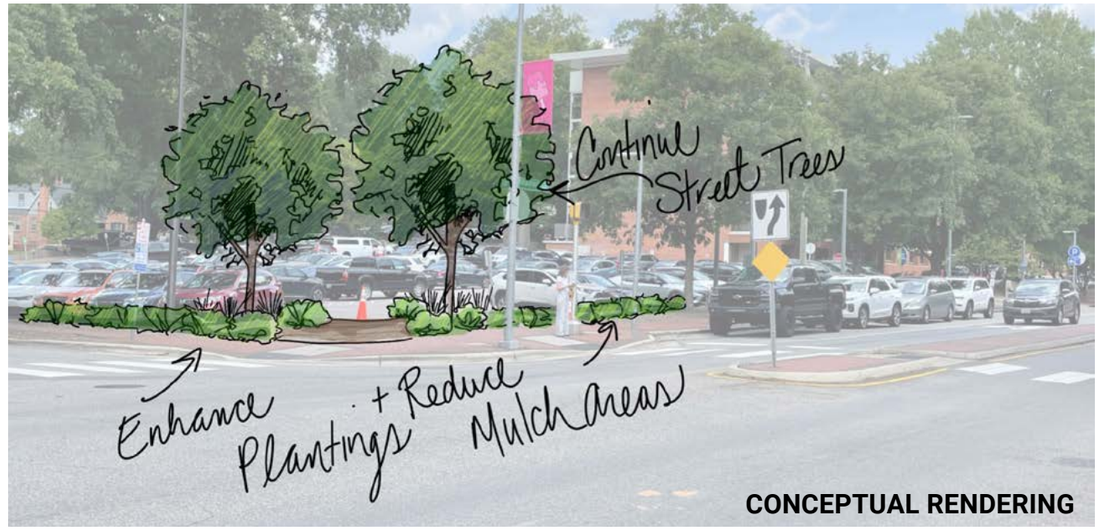
ESTIMATE OF PROBABLE COST

01/15/2025

Cost of Work:

Site Work	$25,000
Landscaping	$35,000
TOTAL	**$60,000**





2025 Landscape Framework Plan

CENTRAL CAMPUS PRECINCT - Jordan and Biltmore

OVERVIEW:

Frameworks:

06 Collaboration Space

03 Green Infrastructure

Issue:

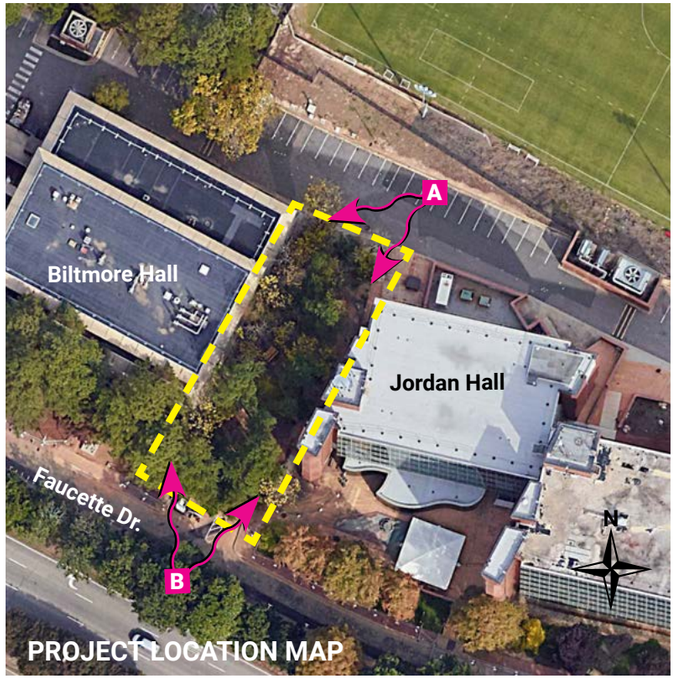
• Space is dense with mature canopy and lacks a defining space to collaborate.

• There are drainage issues and large areas of mulch.

Solution:

• Remove some of the replicate tree species and add more understory trees to define the space.

• Add uncovered collaborative space that can serve as outdoor class room space.



PROJECT LOCATION MAP

ESTIMATE OF PROBABLE COST

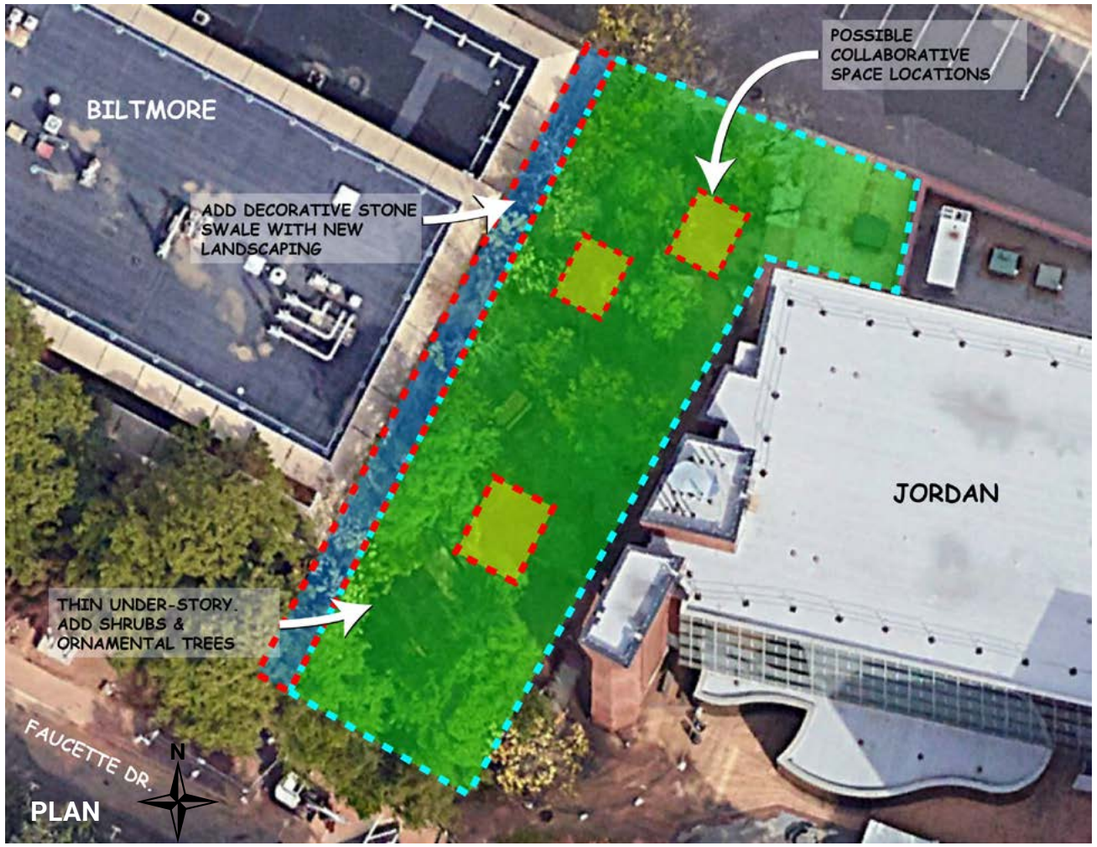
Date: TBD

Site Work:

Cost of Work	$xxx
XXXX	$xxx
XXXX	$xxx
XXXX	$xxx
TOTAL	**$xxxx**

EXISTING CONDITIONS

EXISTING CONDITIONS



PLAN

2025 Landscape Framework Plan

CENTRAL CAMPUS PRECINCT - Nature Loop West Trail

Table of Contents | Back | Jeter Drive Streetscape

OVERVIEW:

Frameworks:

01 Natural Areas 10 Connectivity & Wayfinding

Issue:

- The green space amenities are not well-known and lack formal access and defined routes.
- There is erosion around Ponds 1, 2, and 4, and the infrastructure for Ponds 1 and 4 is past its service life.
- The plant material is overgrown, and unsuitable vegetation is compromising the ponds.

Solution:

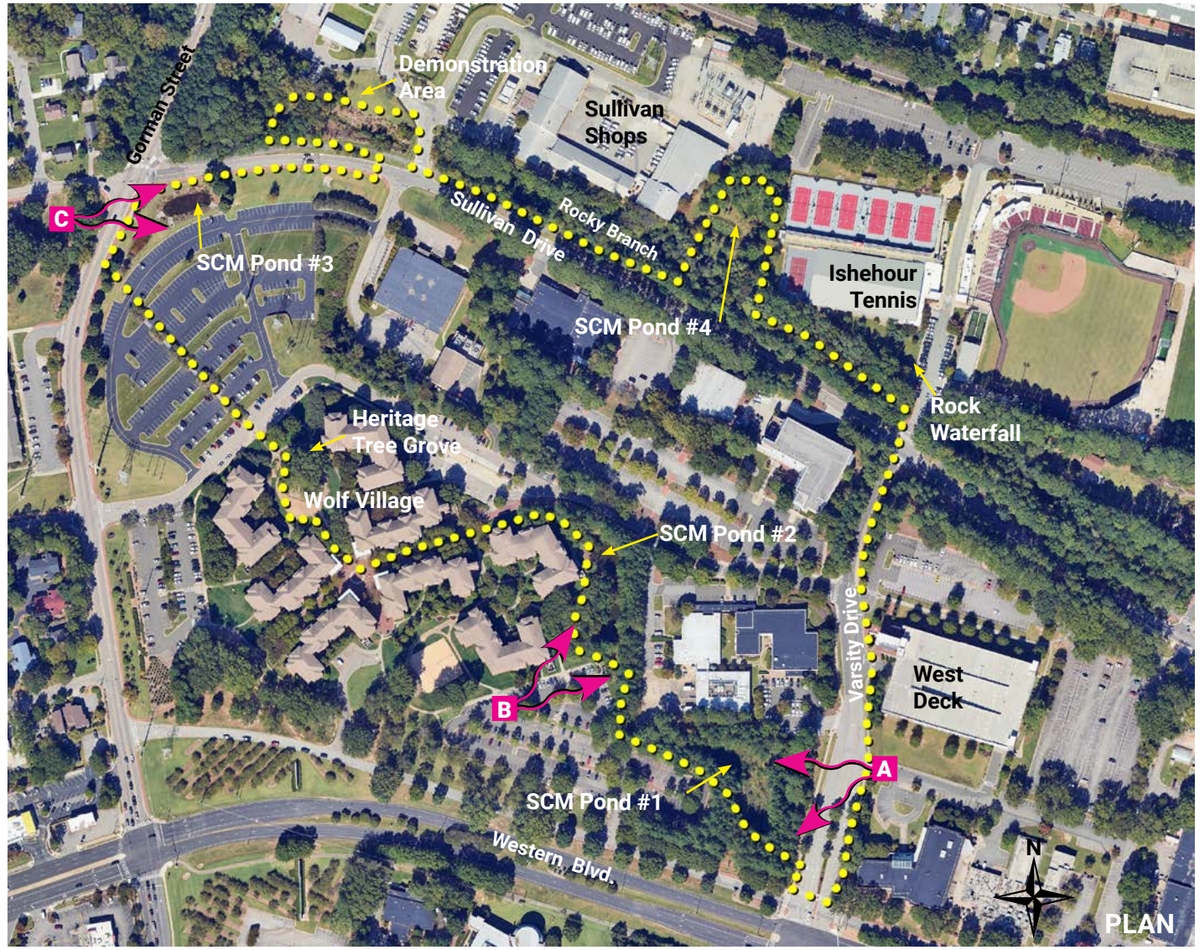
- Create connections to surrounding pathways to establish a "nature loop trail" through Central Campus.
- Install mulch paths throughout the site. Implement basic wayfinding signage with QR codes for interpretive information, similar to what is used in Lake Raleigh Woods.
- Provide furniture for informal gatherings in highly visible areas.
- Renovate the ponds and replace the pond infrastructure.

ESTIMATE OF PROBABLE COST

Date: TBD

Site Work:

Cost of Work	$xxx
Phase 1 (pond 1)	
Phase 2 (pond 2)	
Phase 3 (pond 4)	
Phase 4 (mulch trail/signs)	
XXXX	$xxx
TOTAL	**$xxxx**



2025 Landscape Framework Plan

CENTRAL CAMPUS PRECINCT - Jeter Drive Streetscape

OVERVIEW:

Frameworks:

12 **Green Infrastructure**

01 **Enhanced Planting**

11 **Connectivity & Wayfinding**

Issue:

- There is no sidewalk, causing students to walk in the street or parking lot.
- The iconic view of the iconic smoke stack is blocked by overgrown vegetation.

Solution:

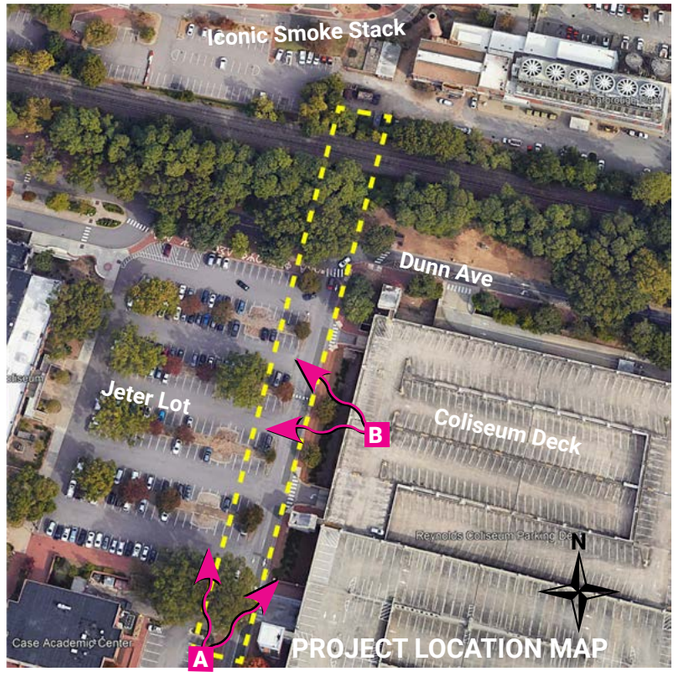
- Install a sidewalk along the western edge of Jeter to improve the streetscape on the public-facing side.
- Coordinate with transportation to enhance the tree landscape in the parking lot.
- Remove overgrown vegetation to restore the view of the smoke stack.

ESTIMATE OF PROBABLE COST

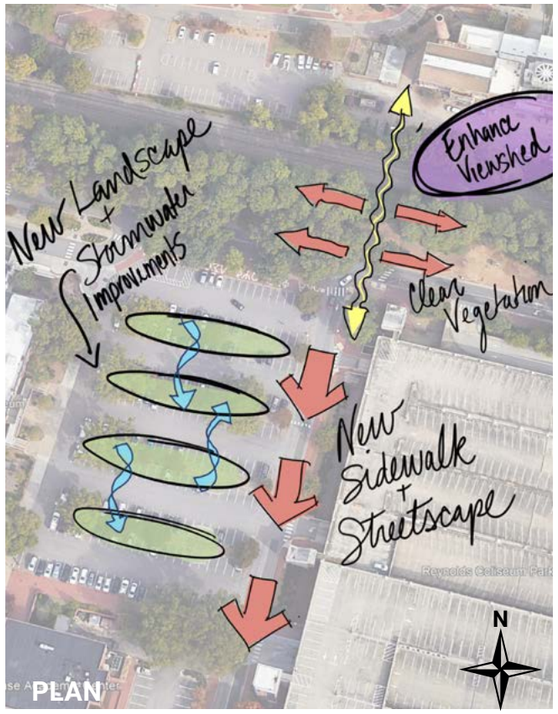
Date: TBD

Site Work:

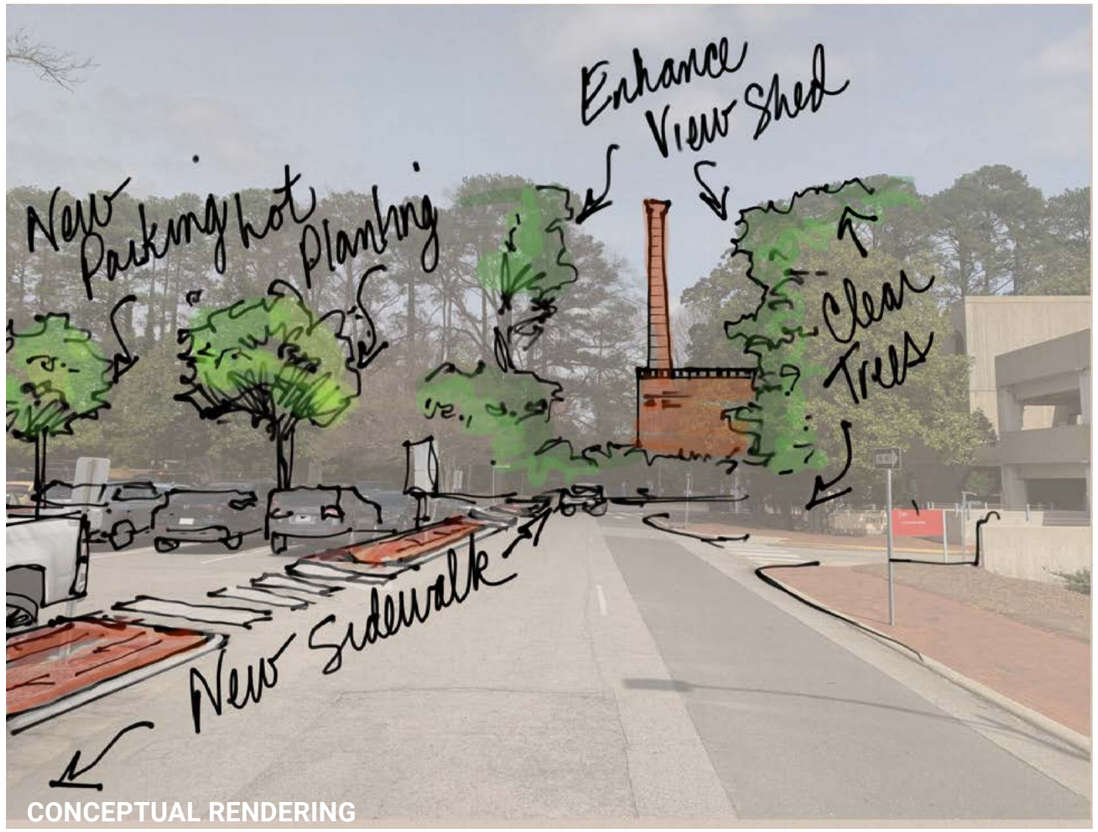
Cost of Work	$xxx
XXXX	$xxx
XXXX	$xxx
XXXX	$xxx
TOTAL	**$xxxx**



PROJECT LOCATION MAP

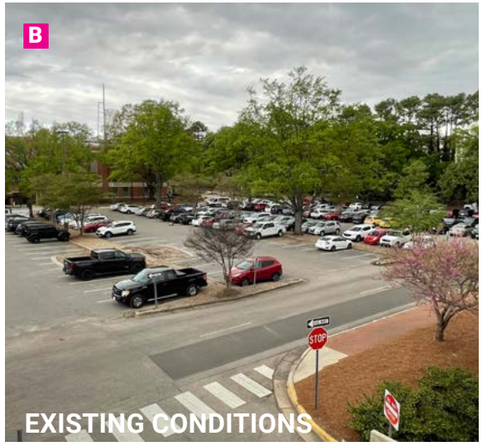


PLAN



CONCEPTUAL RENDERING

EXISTING CONDITIONS



EXISTING CONDITIONS

2025 Landscape Framework Plan

OVERVIEW:

Frameworks:

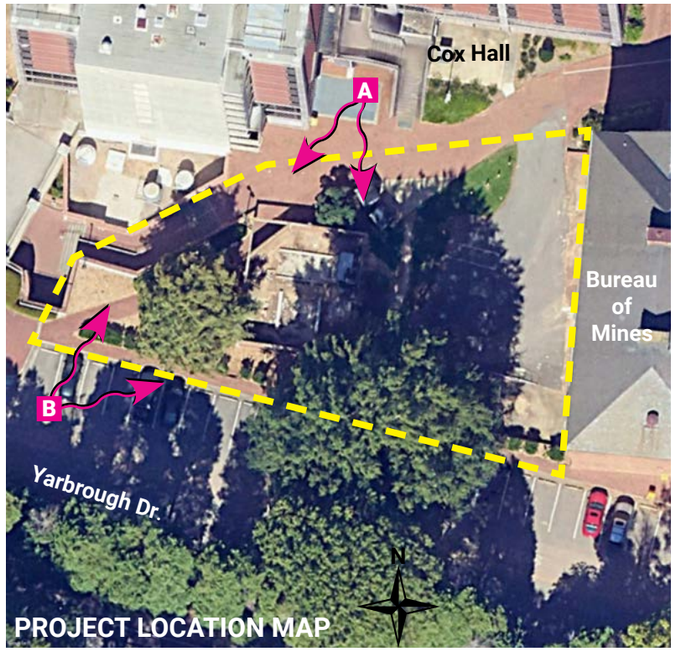
08 Green Infrastructure 12 Connectivity & Wayfinding

Issue:

- The building has a history of flooding due to an undersized inlet at the southern end of the parking lot.
- The sidewalk near the southeast corner of the building is only 3 feet wide, and the hedge, combined with the non-compliant sidewalk, forces pedestrians into the street.

Solution:

- Realign and enhance the All Campus Path.
- Remove the parking lot and hedge, and widen the sidewalk to a minimum of 6 feet.
- Add a brick wall that matches the existing wall at the Williams lot to maintain continuity and serve as a barrier.
- Eliminate the parking lot, provide service access, install a stormwater control measure (SCM), and create an informal hearth area for building occupants.

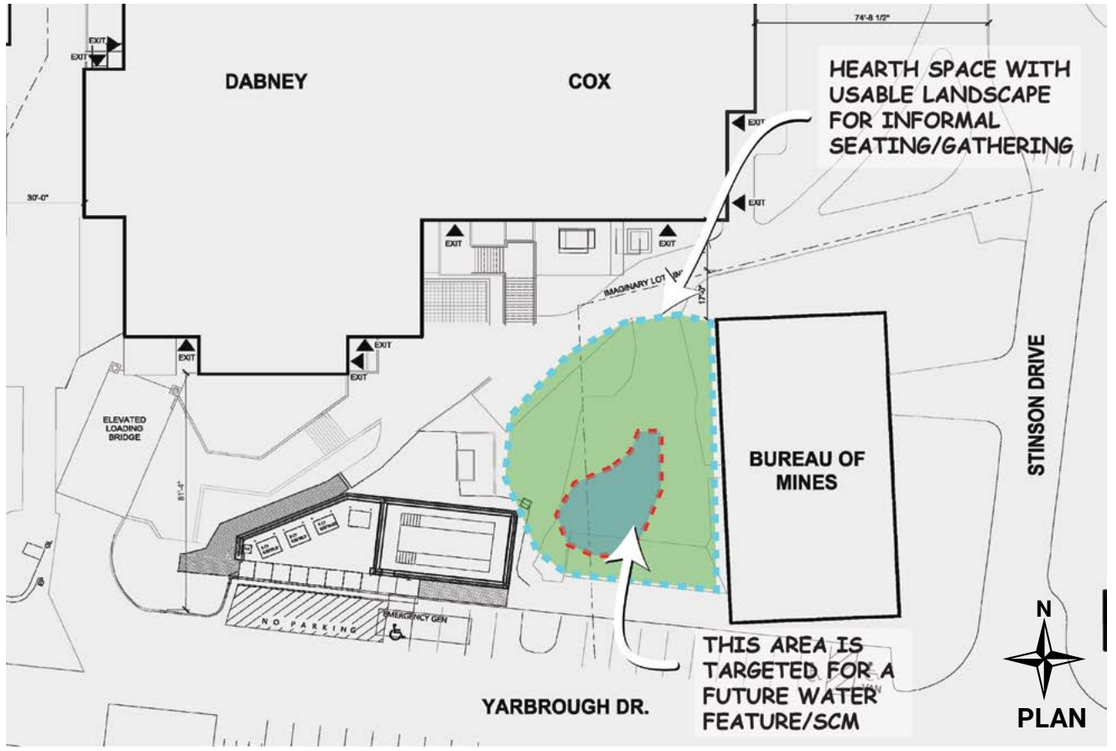


ESTIMATE OF PROBABLE COST

Date: TBD

Site Work:

Cost of Work	$xxx
XXXX	$xxx
XXXX	$xxx
XXXX	$xxx
TOTAL	**$xxxx**



2025 Landscape Framework Plan

CENTRAL CAMPUS PRECINCT - Weaver Labs

OVERVIEW:

Frameworks:

12 Natural Areas

Issue:

- Expansive turf area is not actively used.
- Drainage concerns. Large mulch beds.

Solution:

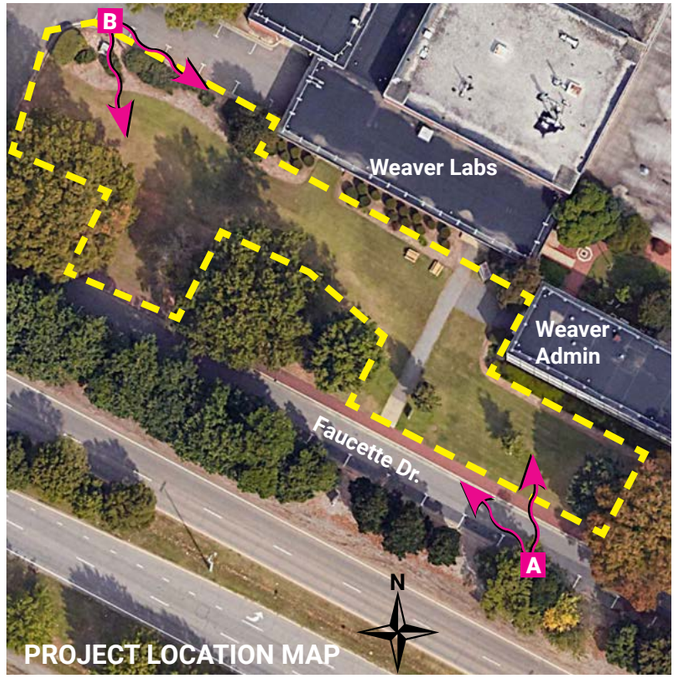
- Convert much of the turf areas to wooded area and small meadow. Accommodate BAE student use.

ESTIMATE OF PROBABLE COST

Date: TBD

Site Work:

Cost of Work	$xxx
XXXX	$xxx
XXXX	$xxx
XXXX	$xxx
TOTAL	**$xxxx**



2025 Landscape Framework Plan

CENTRAL CAMPUS PRECINCT - Sullivan and Gorman

OVERVIEW:

Frameworks:

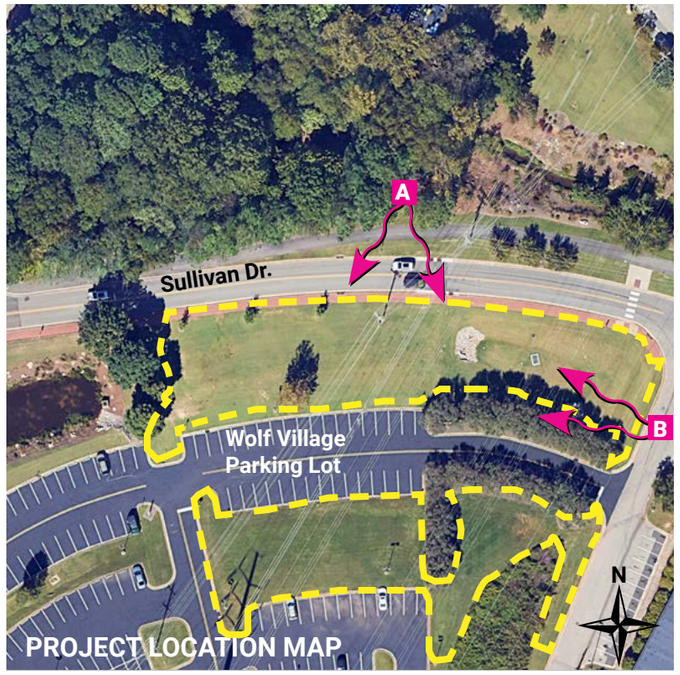
08 Natural Areas

Issue:

- **The expansive turf area is not actively used and requires high maintenance in this highly visible area when entering campus from Gorman Street.**
- **Overhead power-lines and existing easements restrict the size of plant material allowed.**

Solution:

- **Convert a significant portion of the turf area into a small meadow, while preserving the existing plantings in the SCMs (Stormwater Control Measures).**
- **Ensure the area accommodates BAE student use around the SCMs**



ESTIMATE OF PROBABLE COST

Date: TBD

Site Work:

Cost of Work	$xxx
XXXX	$xxx
XXXX	$xxx
XXXX	$xxx
TOTAL	**$xxxx**

2025 Landscape Framework Plan

OVERVIEW:

Frameworks:

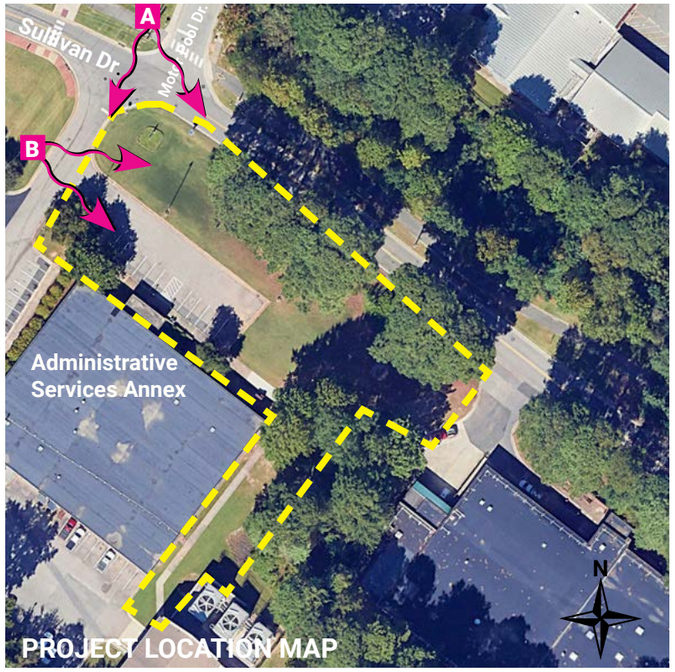
09 Natural Areas

Issue:

• The topography of this open space makes it unsuitable for active use.

Solution:

• Replace turf areas with pine trees and understory shrubs to extend the existing Sullivan Drive landscape to reduce maintenance.



ESTIMATE OF PROBABLE COST

Date: TBD

Site Work:

Cost of Work	$xxx
XXXX	$xxx
XXXX	$xxx
XXXX	$xxx
TOTAL	**$xxxx**

2025 Landscape Framework Plan

OVERVIEW:

Frameworks:

13 **Connectivity & Wayfinding** 03 Natural Areas

Issue:

- The west entry path is unwelcoming and in need of repairs.
- Portions of the mature landscape are overgrown, obstructing sight lines.

Solution:

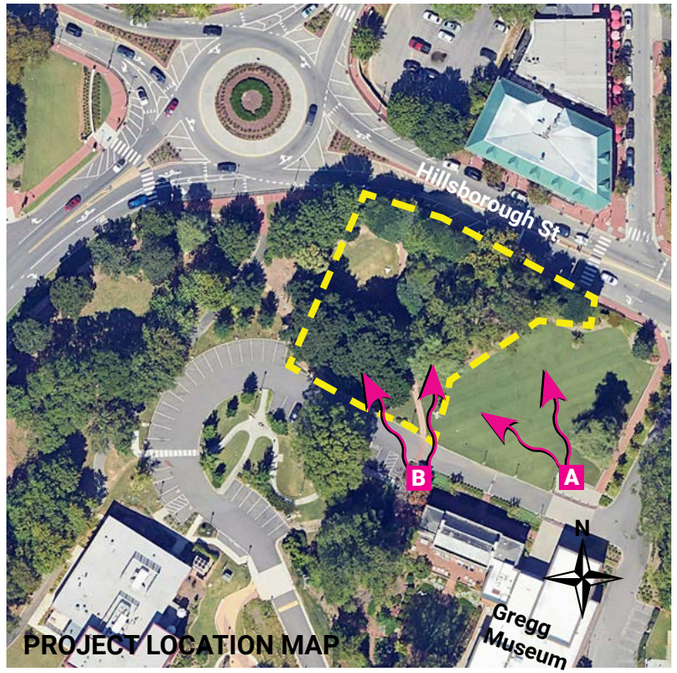
- Coordinate with the City of Raleigh to preserve the existing woodland.
- Repair and enhance the west entry path.
- Selectively prune and remove vegetation, and add accent lighting to improve safety, security, and enhance the overall museum experience.

ESTIMATE OF PROBABLE COST

Date: TBD

Site Work:

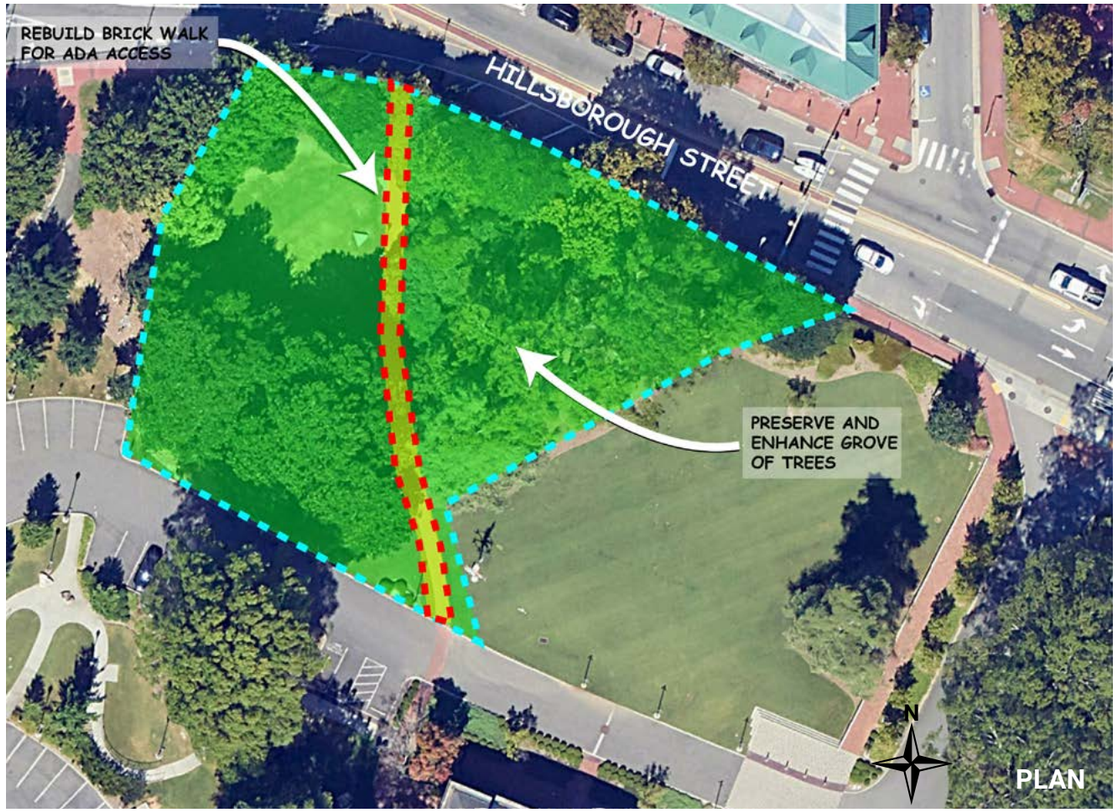
Cost of Work	$xxx
XXXX	$xxx
XXXX	$xxx
XXXX	$xxx
TOTAL	**$xxxx**



PROJECT LOCATION MAP

EXISTING CONDITIONS

EXISTING CONDITIONS



PLAN

2025 Landscape Framework Plan

CENTRAL CAMPUS PRECINCT - Grinnells

OVERVIEW:

Frameworks:

11 Natural Areas

Issue:

- Expansive turf area is not actively used.
- Steeply sloped lawn areas are unsafe to maintain.

Solution:

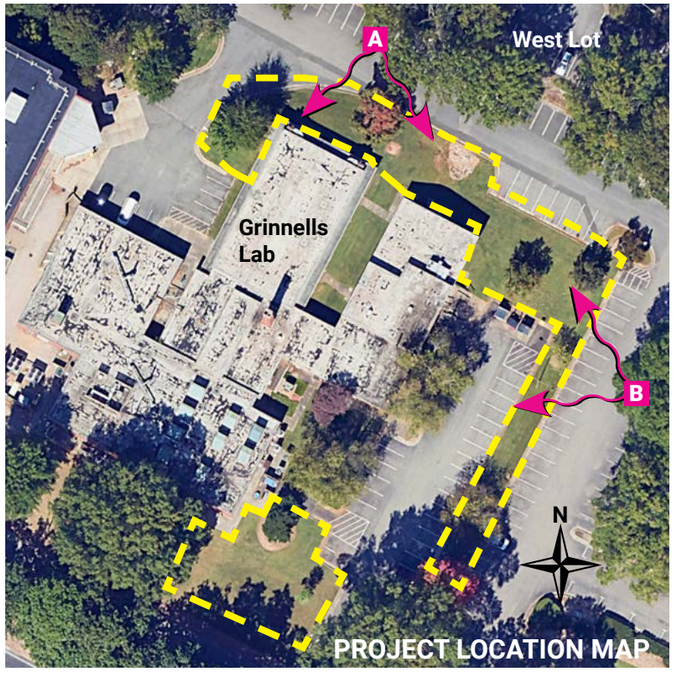
- Convert much of the turf areas to a mix of meadow and small tree woodland.

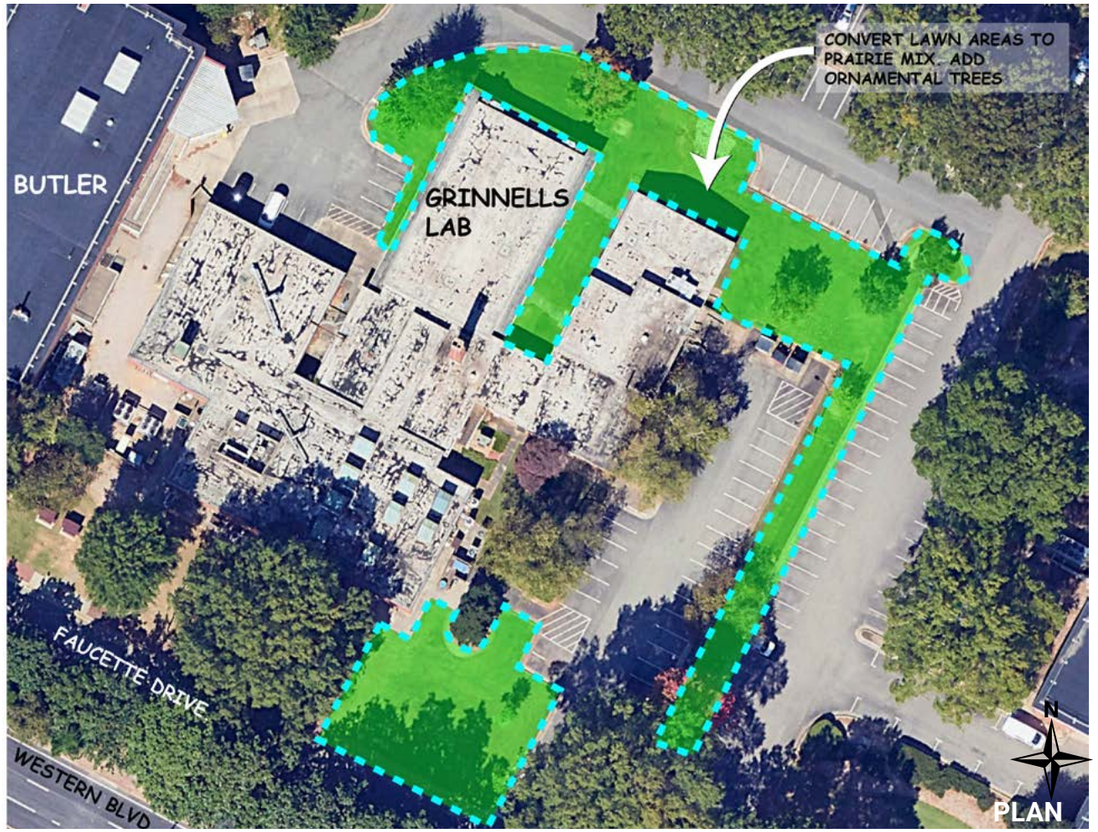
ESTIMATE OF PROBABLE COST

Date: TBD

Site Work:

Cost of Work	$xxx
XXXX	$xxx
XXXX	$xxx
XXXX	$xxx
TOTAL	**$xxxx**





2025 Landscape Framework Plan

CENTRAL CAMPUS PRECINCT - Jordan/Biltmore Sidewalk

OVERVIEW:

Frameworks:

14 **Connectivity & Wayfinding**

Issue:
- There is a lack of a continuous sidewalk on the north side of Biltmore and Jordan Hall's.
- Students and staff walk in the two vehicular parking area creating pedestrian and vehicular conflicts.

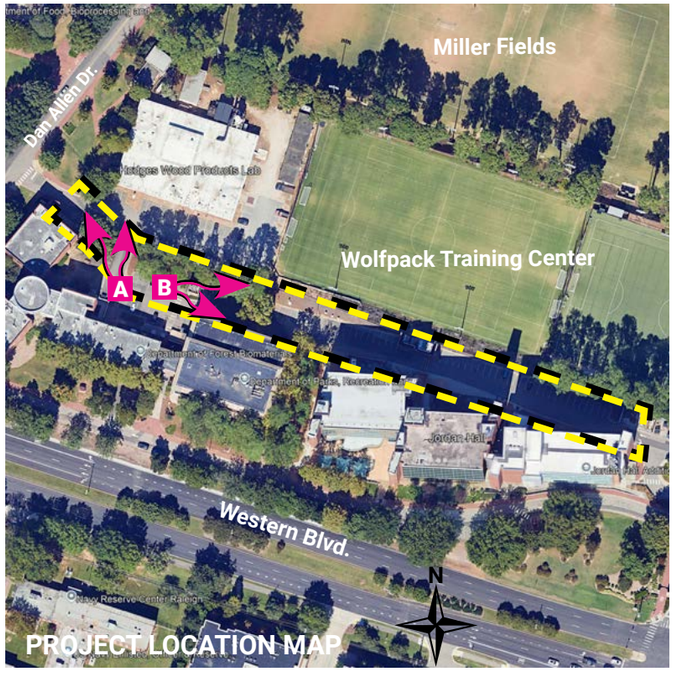
Solution:
- Add a continuous sidewalk from Dan Allen to Pullen road on the north side of the parking area.
- Reduce or relocate existing parking.

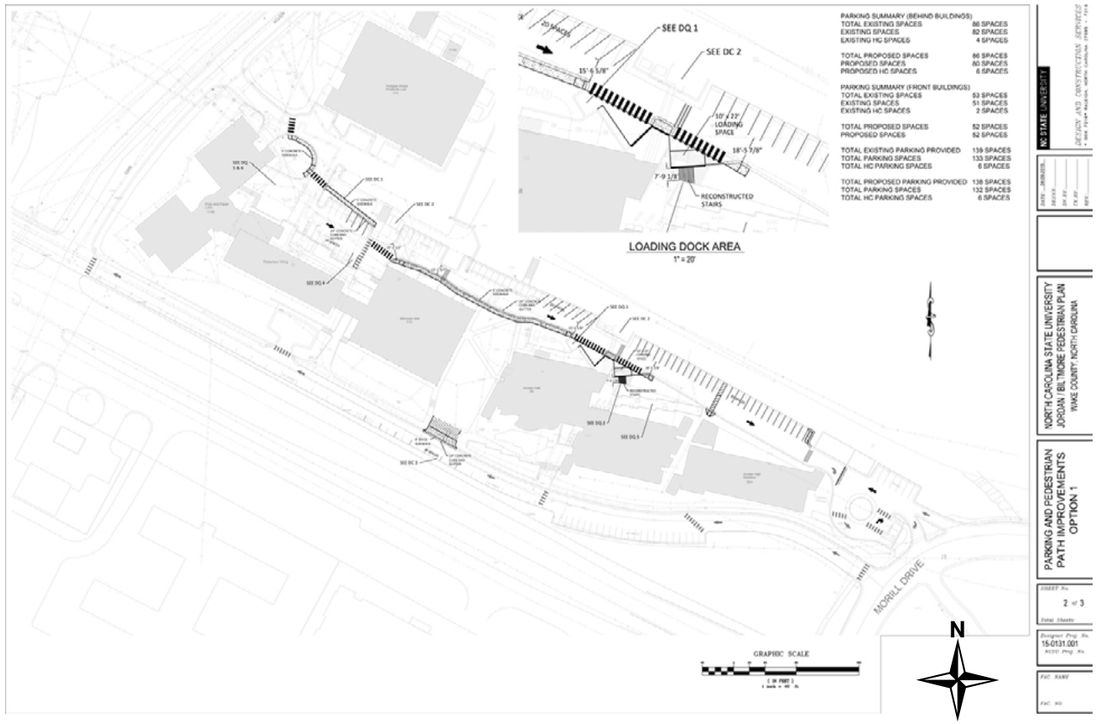
ESTIMATE OF PROBABLE COST

Date: TBD

Site Work:

Cost of Work	$xxx
XXXX	$xxx
XXXX	$xxx
XXXX	$xxx
TOTAL	**$xxxx**





2025 Landscape Framework Plan

OVERVIEW:

Frameworks:

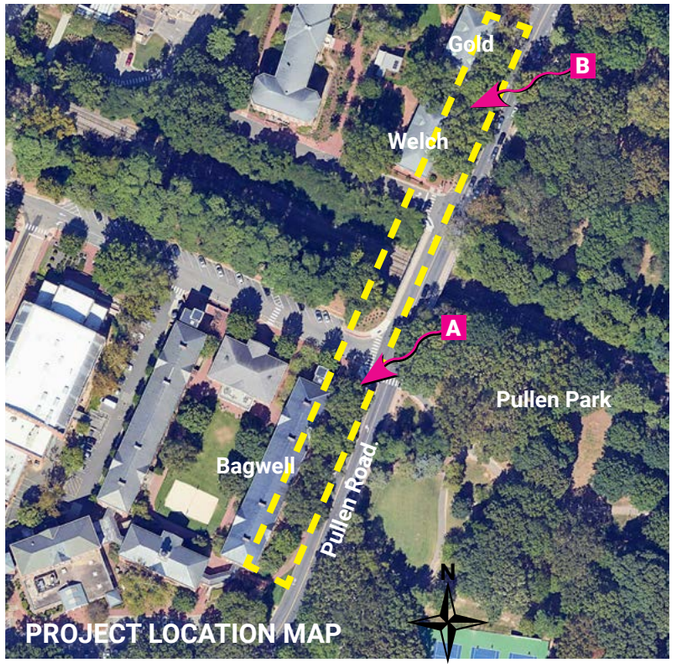
03 Enhanced Planting

Issue:

- Large, mature trees along the steep slope between the sidewalk and the building are in decline.
- The dense canopy and lack of soil moisture prevent other vegetation from growing, resulting in bare ground.
- The overhanging branches cause maintenance issues for the building's gutter system.

Solution:

- Remove the remaining trees and replace them with a pedestrian-scaled landscape design.
- Stabilize the slope using new plantings and add boulders or a retaining wall as necessary, depending on site conditions.



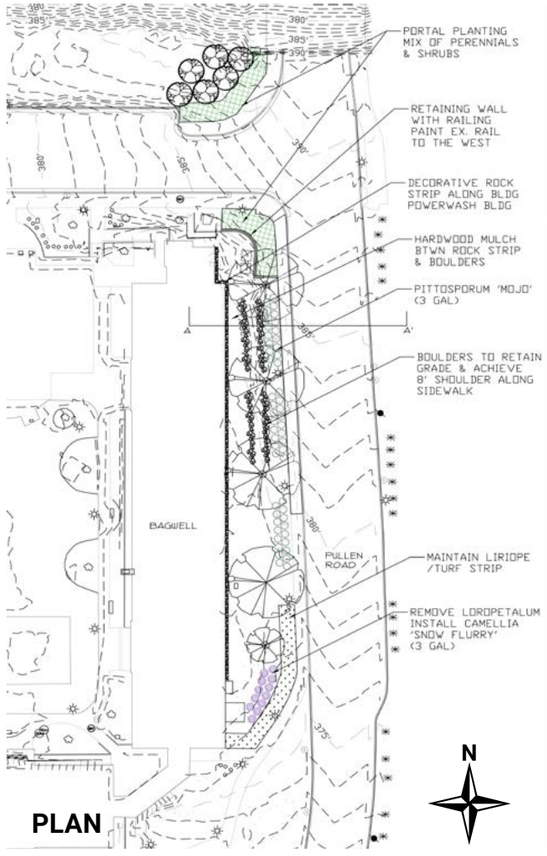
PROJECT LOCATION MAP

ESTIMATE OF PROBABLE COST

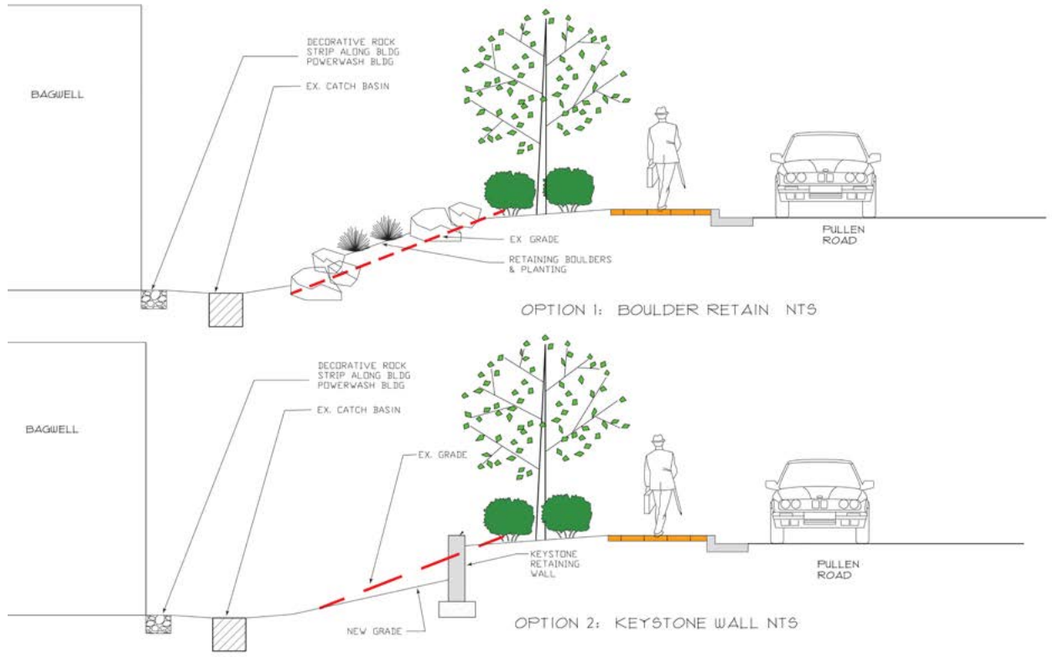
Date: TBD

Site Work:

Cost of Work	$xxx
XXXX	$xxx
XXXX	$xxx
XXXX	$xxx
TOTAL	**$xxxx**



PLAN



CONCEPTUAL RENDERING

EXISTING CONDITIONS

EXISTING CONDITIONS

2025 Landscape Framework Plan

CENTRAL CAMPUS PRECINCT - Sullivan Shops

OVERVIEW:

Frameworks:

01 Green Infrastructure

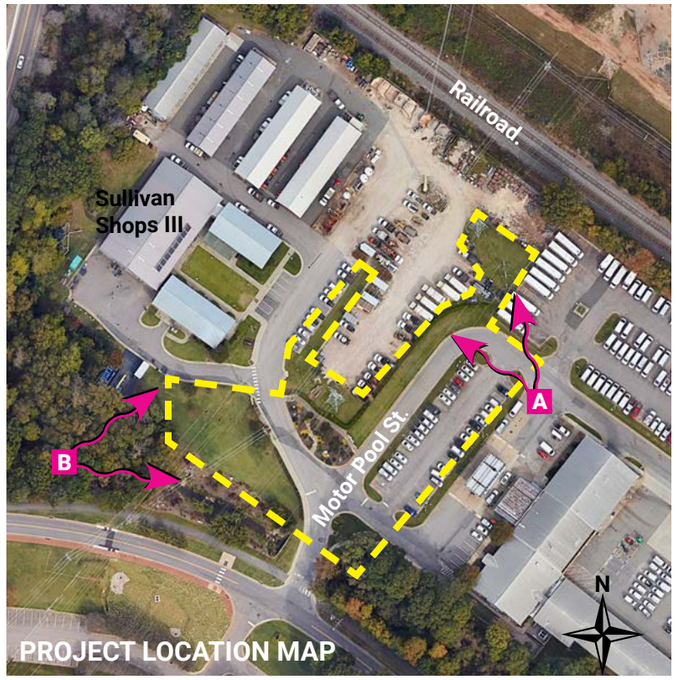
15 Connectivity & Wayfinding

Issue:

• Site runoff (heavy silt) into Rocky Branch. Contributes to flooding on Sullivan Dr.

Solution:

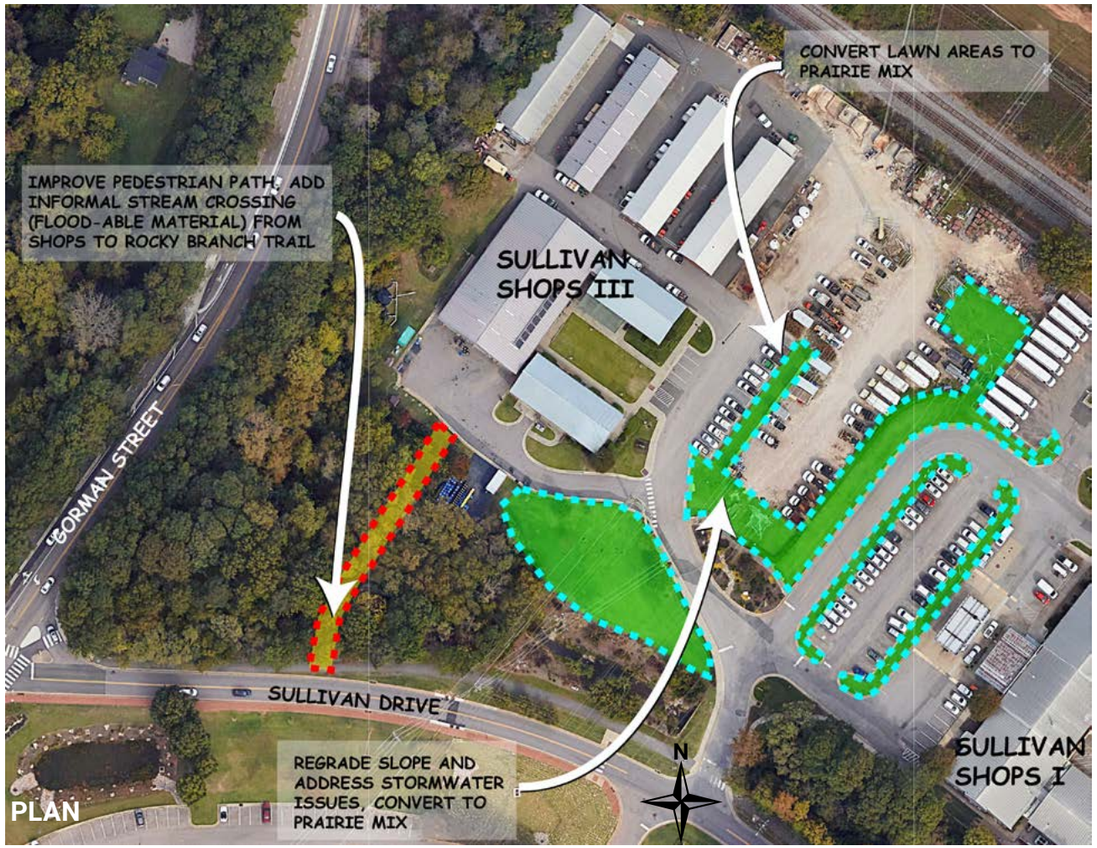
• Remove high maintenance lawn areas.
• Re-route existing drainage to new SCM for runoff.
• Provide access to spur trail off Rocky Branch Trail to showcase meadow research area and display garden.



ESTIMATE OF PROBABLE COST

Date: TBD
Site Work:

Cost of Work	$xxx
XXXX	$xxx
XXXX	$xxx
XXXX	$xxx
TOTAL	**$xxxx**



2025 Landscape Framework Plan

NORTH CAMPUS PRECINCT - Brooks Lot Streetscape

OVERVIEW:

Frameworks:

06 **Enhanced Planting**

Issue:

- This area has been targeted by the Hillsborough Street CSC for improvement.
- Large areas of mulch.
- Large tree is failing near corner.
- Lack of shrub layer needed to define space and screening of Brooks Lot.

Solution:

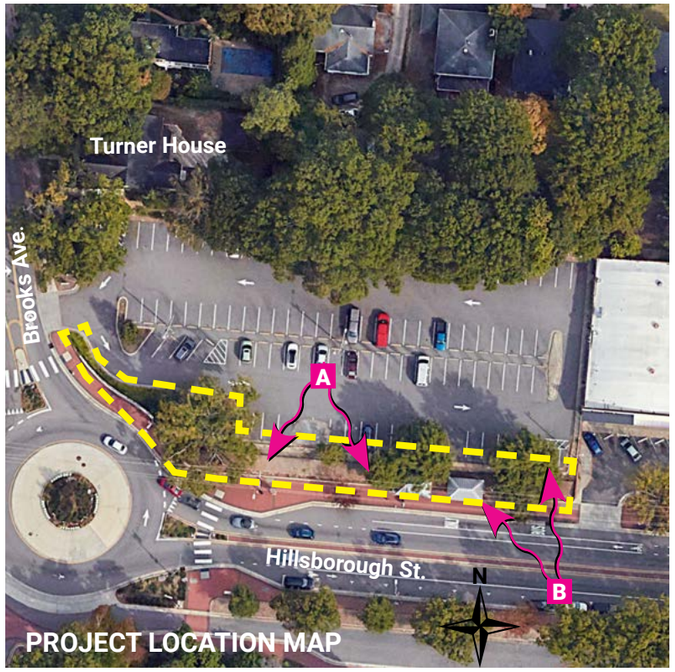
- Add street trees to mimic established street tree language of Hillsborough Street.
- Add shrubs to enhance and screen parking lot and reduce mulched area.

ESTIMATE OF PROBABLE COST

Date: 01/15/2025

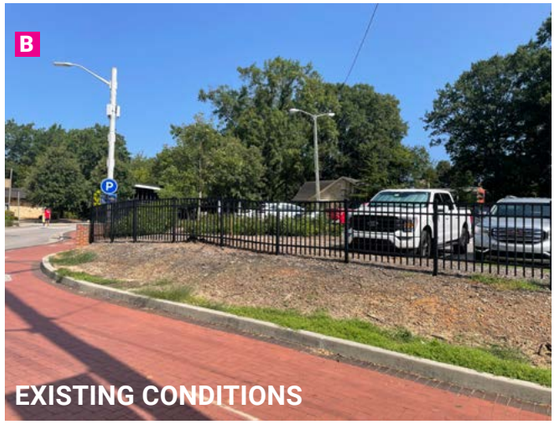
Cost of Work:

Site Work	$18,000
Landscaping	$16,000
TOTAL	**$34,000**

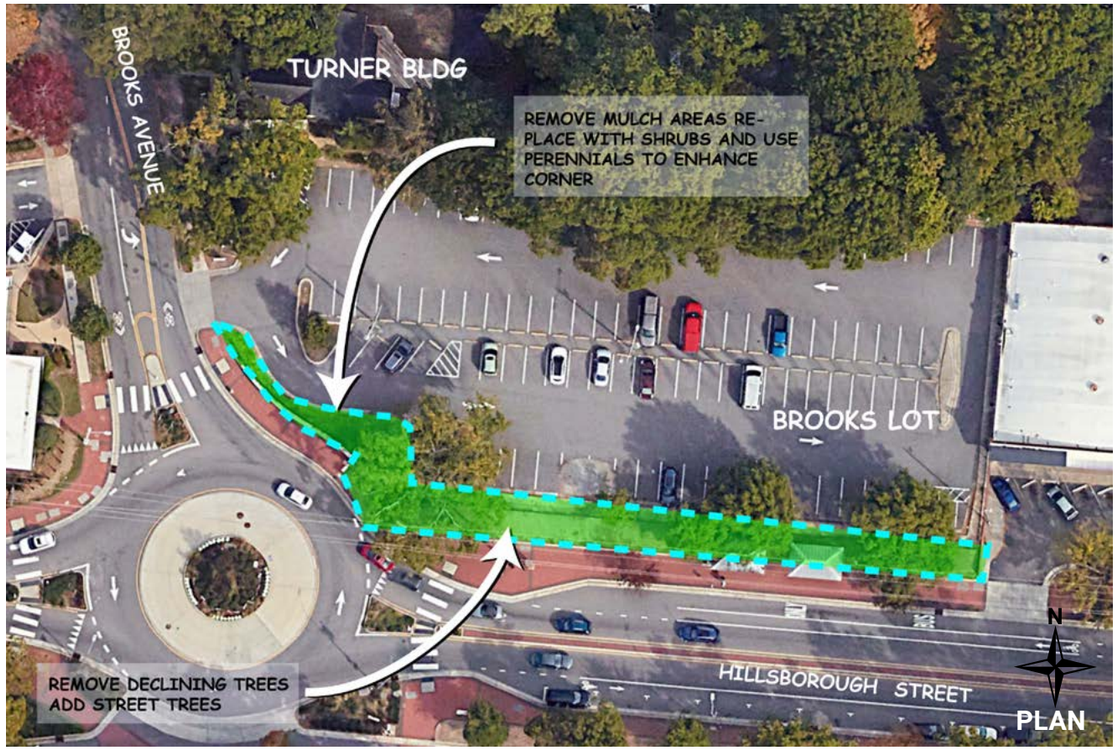


PROJECT LOCATION MAP

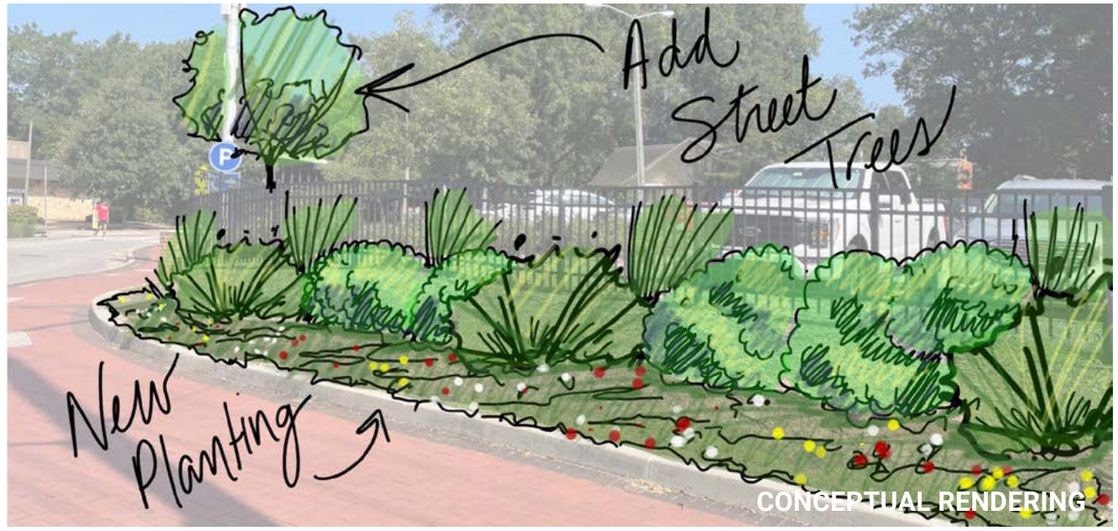
EXISTING CONDITIONS



EXISTING CONDITIONS



PLAN



CONCEPTUAL RENDERING

2025 Landscape Framework Plan

NORTH CAMPUS PRECINCT - Brickyard West

OVERVIEW:

Frameworks:

09 Green Infrastructure 11 Collaboration Space

Issue:

- The landscape lacks cohesion.
- Large mulch areas discourage student use of the space.
- Poor drainage causes ponding, limiting usability.
- There is no defined area for collaboration.
- ADA access is limited.

Solution:

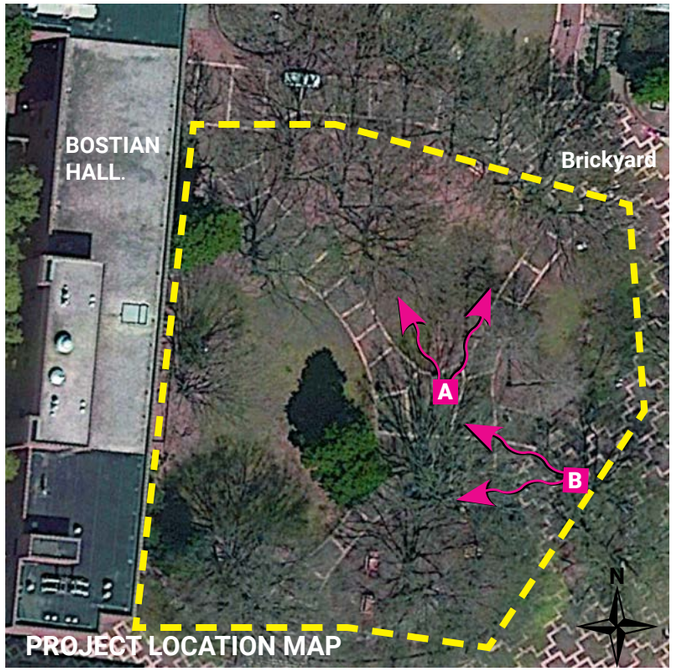
- Remove select trees to improve the usability of the landscape.
- Replace large mulch areas with natural plantings and grass panels to encourage informal use.
- Renovate the existing seating area near Bostian Hall to create a collaborative space.

ESTIMATE OF PROBABLE COST

Date: TBD

Site Work:

Cost of Work	$xxx
XXXX	$xxx
XXXX	$xxx
XXXX	$xxx
TOTAL	**$xxxx**



2025 Landscape Framework Plan

CENTRAL CAMPUS PRECINCT - West Lot

OVERVIEW:

Frameworks:

13 Green Infrastructure

Issue:

- Stormwater from parking lot overwhelms infrastructure.
- Concrete and wooden stairs to bus stop, are a constant maintenance issue, handrails are code complaint, and they are on top of utilities impacting utility maintenance access.

Solution:

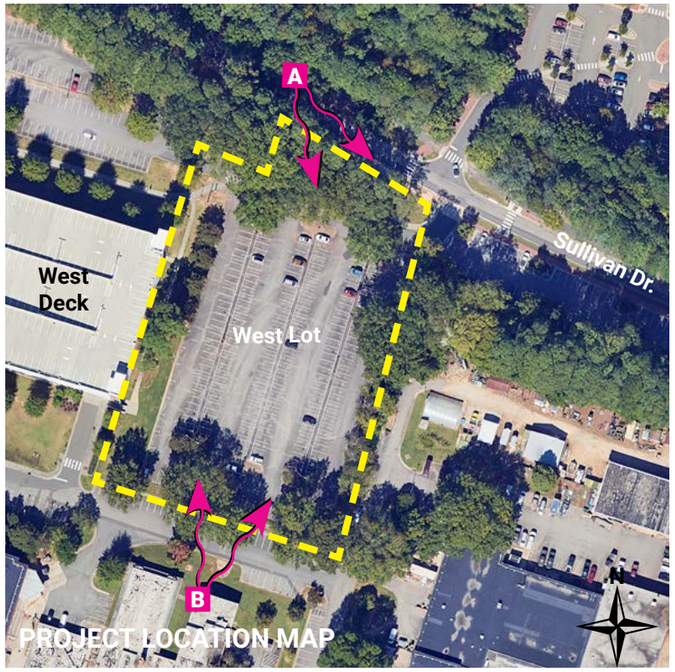
- Remove stairs, add guardrail to deter pedestrian traffic.
- Add SCM at the bottom of the parking lot to slow stormwater and mitigate high water surface temperature to Rocky Branch.

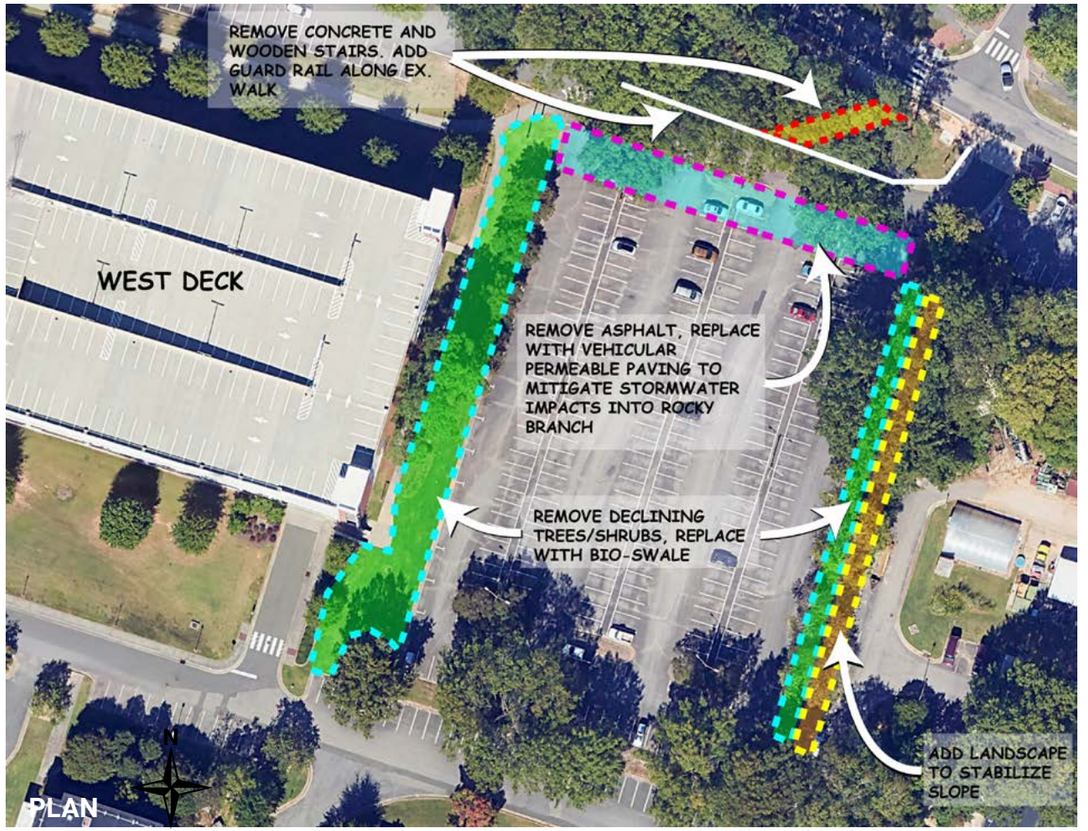
ESTIMATE OF PROBABLE COST

Date: TBD

Site Work:

Cost of Work	$xxx
XXXX	$xxx
XXXX	$xxx
XXXX	$xxx
TOTAL	**$xxxx**





2025 Landscape Framework Plan

NORTH CAMPUS PRECINCT - Caldwell Hall Entrance

OVERVIEW:

Frameworks:

07 Collaboration Space 07 Enhanced Planting

Issue:

- The landscape and hedgerow along Hillsborough Street are uninviting and do not enhance the pedestrian experience.
- The steep slope near the building makes maintenance difficult and raises safety concerns.
- Large mechanical infrastructure detracts from the streetscape.

Egress doors from stairwells lead into the landscape with no clear path to Hillsborough Street.

Solution:

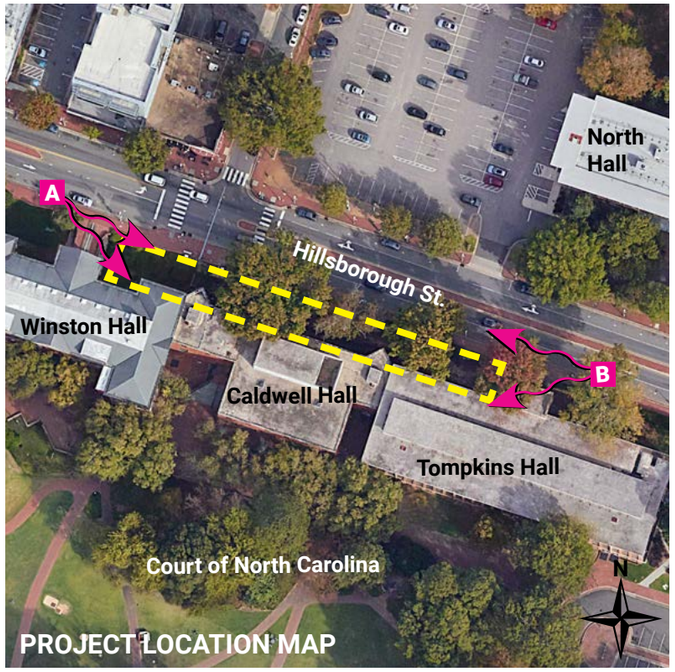
- Install a large deck system over the mechanical area to create a collaborative seating space at street level.
- Use the new deck area to help define and unify the landscape, adding new street trees to enhance the streetscape.

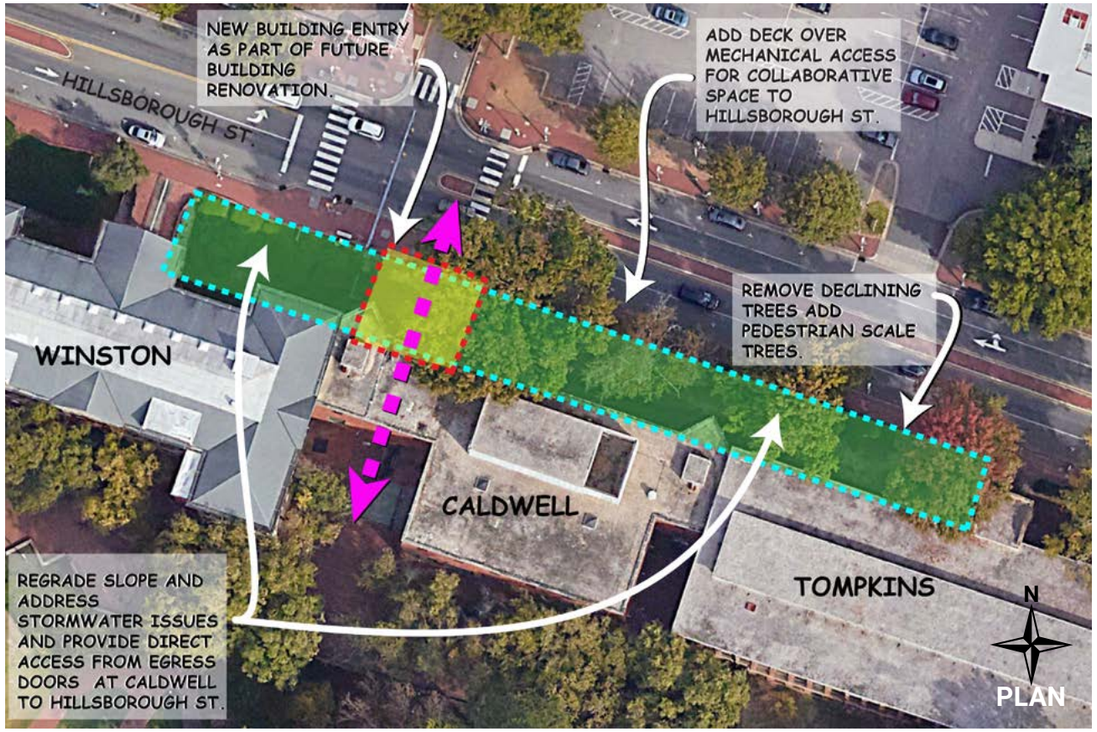
ESTIMATE OF PROBABLE COST

Date: TBD

Site Work:

Cost of Work	$xxx
XXXX	$xxx
XXXX	$xxx
XXXX	$xxx
TOTAL	**$xxxx**





2025 Landscape Framework Plan

OVERVIEW:

Frameworks:

09 **Enhanced Planting**

Issue:

- The mature trees along the eastern side of Lampe Drive have declined are many are missing due to age and the limited space to grow in the confined planters.
- Street has the feel of a service corridor and is not pleasant for students.

Solution:

- Remove above grade brick planters.
- Add engineered soil and drainage to promote long term tree health.
- Add tree species that provide a diverse streetscape to match pedestrian scale.

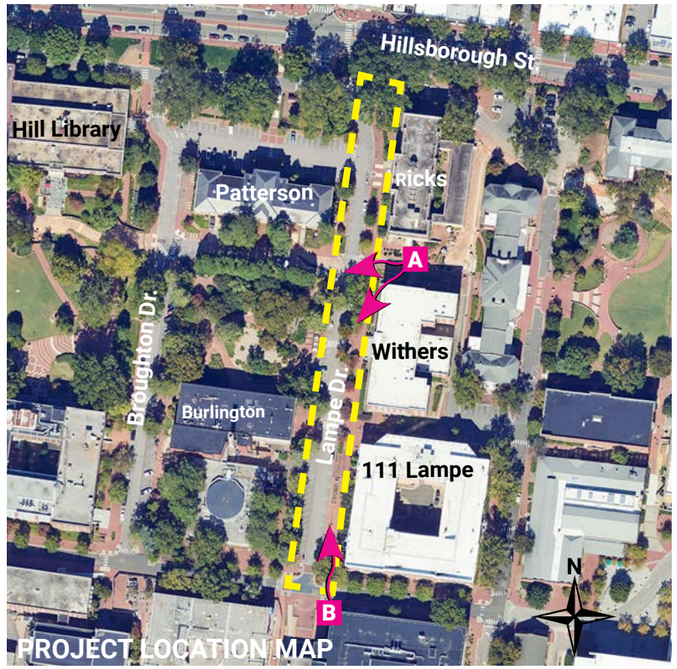
ESTIMATE OF PROBABLE COST

Date: 02/15/2025

Cost of Work:

Phase 1
Phase 2
Phase 3
Phase 4

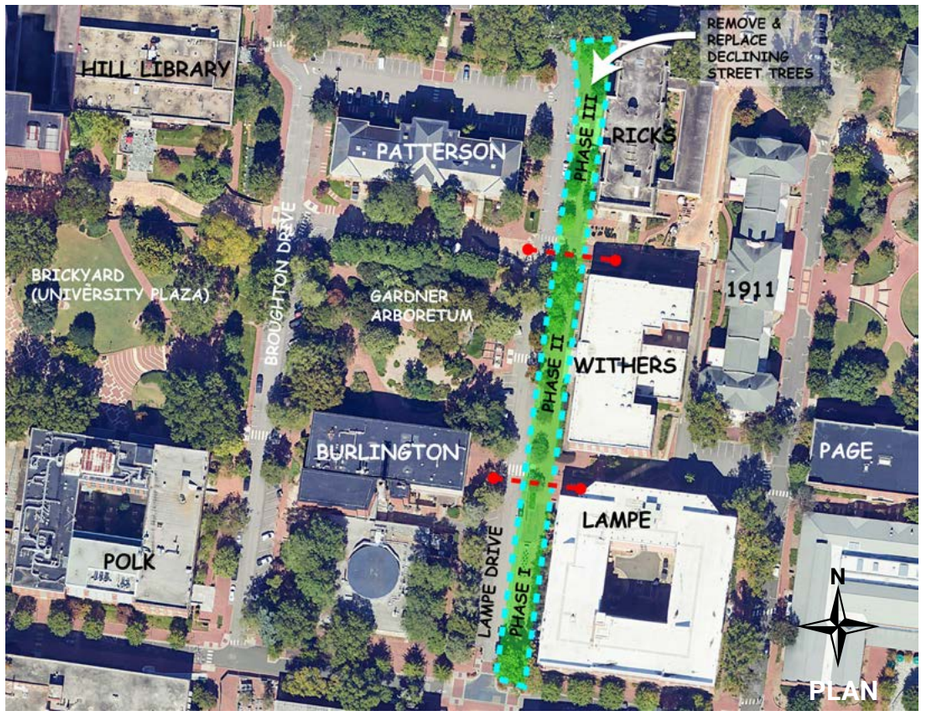
TOTAL **$350,000**



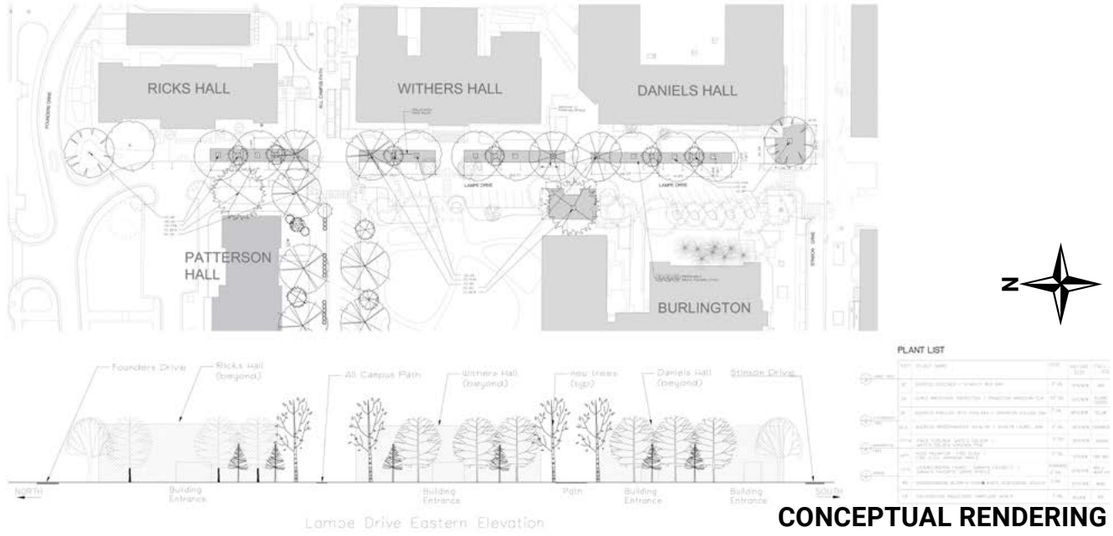
PROJECT LOCATION MAP

EXISTING CONDITIONS

EXISTING CONDITIONS



PLAN



CONCEPTUAL RENDERING

2025 Landscape Framework Plan

Hunt Library

SUPPLEMENTAL GUIDELINES

PURPOSE

The Supplemental Guidelines build upon the Design Guidelines in the 2023 Physical Master Plan. Where the Physical Master Plan provides broad standards for the exterior spaces on campus, these guidelines augment those, providing greater detail relating to the systems and landscape typologies that make up the diverse landscapes on campus.

All campus landscape should follow a consistent order and unified design, guided by these overarching concepts:

- Campus landscapes provide design consistency, enhance visual coherence, promote sustainability, decrease maintenance, and focus resources where they will have the greatest positive impact.
- Campus landscapes exhibit simplicity, restraint, and proper institutional scale, supporting the overall structure of the campus's physical master plan.

The supplemental guidelines for Landscape Elements emphasize ecosystem services such as climate regulation, water management, erosion control, and habitat preservation. These principles are crucial for creating an attractive, durable, cost-effective campus landscape.

The supplemental guidelines for Landscape Types offer added detail and guidance for landscape development in support of physical master plan guiding principles and concepts.

Mary Yarbrough Courtyard

Rocky Branch Trail

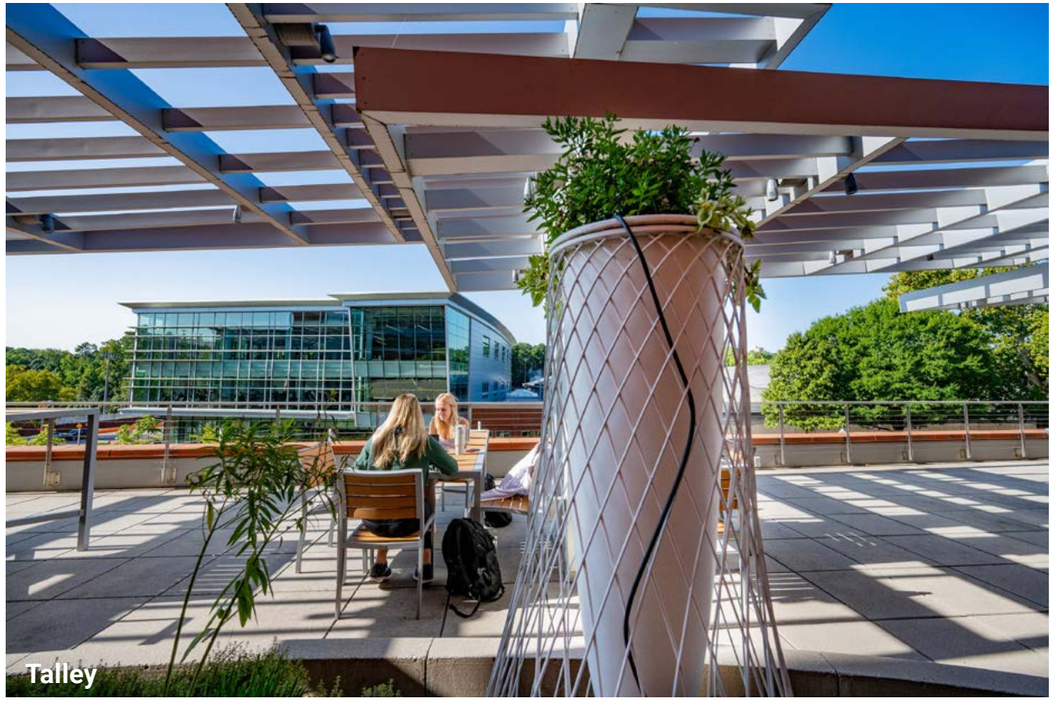
LANDSCAPE ELEMENTS

Micro-Climatic Conditions

NC State University is prone to the heat island effect due to its urban setting. Designing ecologically functional landscapes can regulate local temperature, precipitation run-off, evapotranspiration, and humidity by providing natural shade, windbreaks and non-heat absorbing ground plane materials. Techniques include:

- Providing shade during warmer months over asphalt, concrete, large mulched areas, and other material with high rates of heat absorption.
- Providing shade prioritizing high-use spaces like benches, courtyards, and walkways.
- Use of shade trees to reduce heat gain on buildings and other structures.
- Increasing vegetative layers in planted areas to reduce reflected heat and light.
- Providing natural and engineered water features.

Lampe Drive



Talley

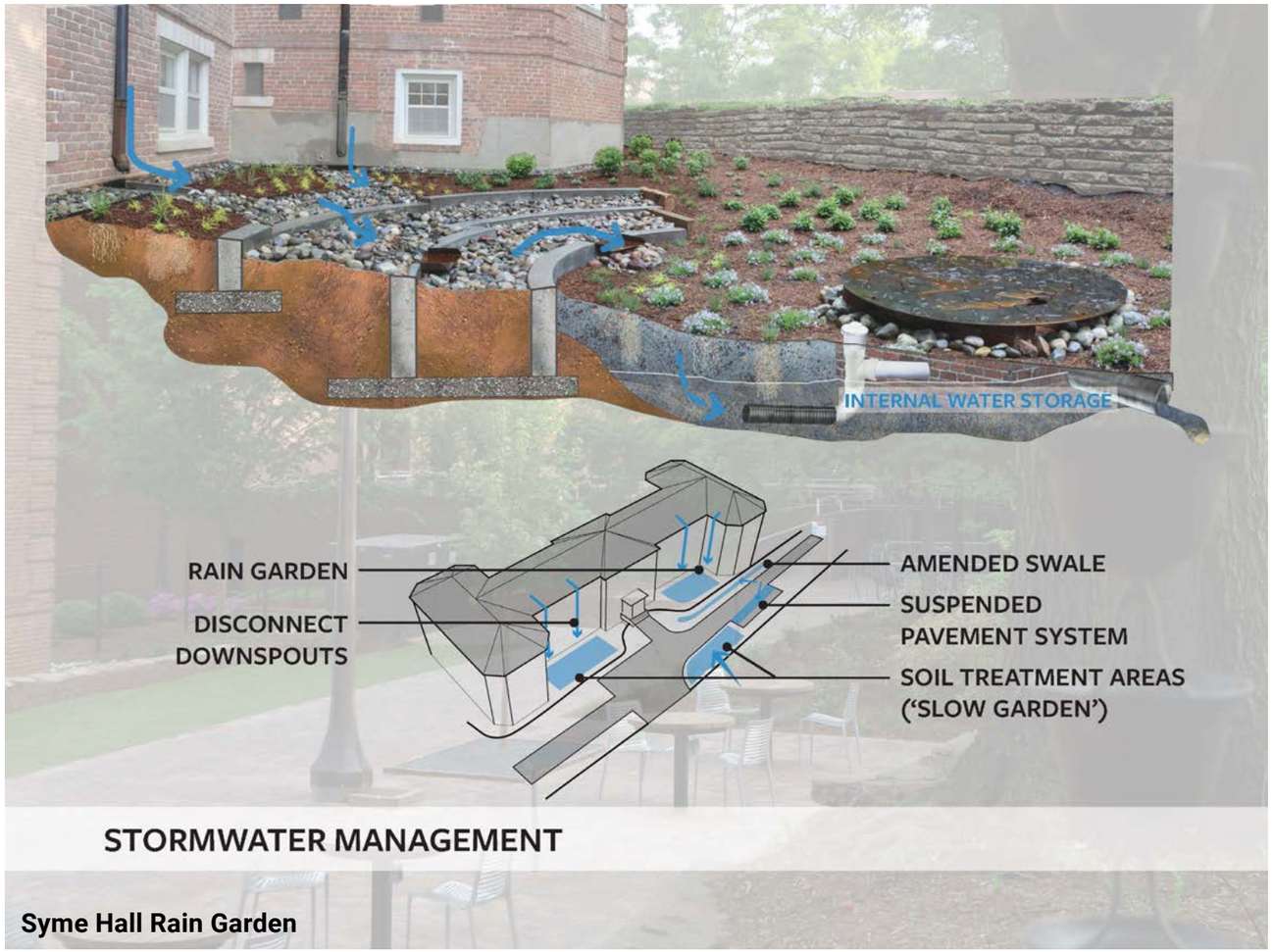
Wolf Village

Water Resources

Designed landscapes can manage and clean water resources through vegetated swales, rain gardens, rainwater harvesting systems, and permeable pavements. They also present opportunities to create amenities for wellness, and collaborative teaching and research. Whether using regulated or unregulated measures, developments in the landscape shall work toward:

- Preserving ecologically functional vegetation.
- Managing stormwater (quantity and quality) close to the sources.
- Reducing the rate, volume, and temperature of stormwater runoff.
- Directing stormwater to vegetated features to improve runoff quality.
- Promoting infiltration of stormwater.
- Reusing stormwater as a resource for the landscape or within built structures.

Lake Raleigh



Syme Hall Rain Garden

Ecological Resiliency

Landscapes should be designed as resilient systems, following these goals:

- Minimizing irrigation needs.
- Minimizing maintenance requirements and inputs.
- Designing for low water use.
- Selecting plant species that are native or adapted to the conditions.
- Selecting plants suitable to the site conditions and capable of handling varying water inputs.
- Using locally or regionally propagated and grown plant material
- Use university-generated compost for soil amendments.

Urban Forest

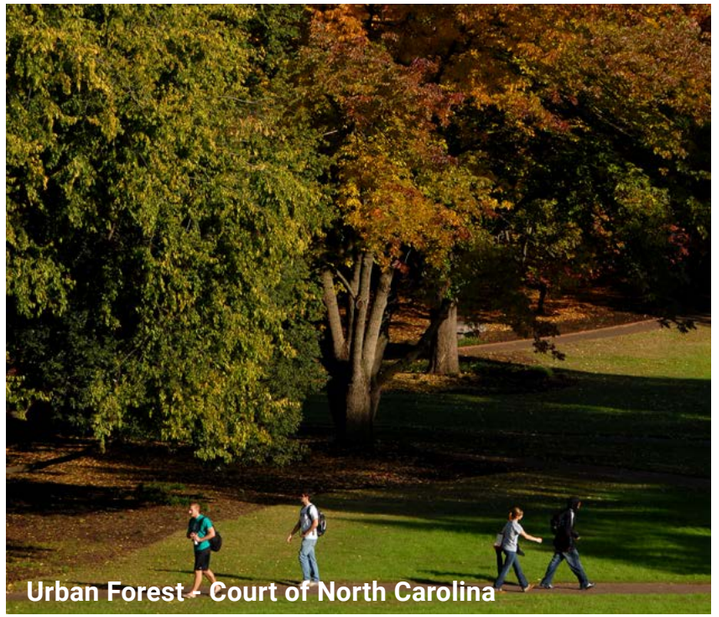
NC State's urban forest enriches the character of the campus by reflecting the changing seasons and significantly contributing to a unique sense of place. In an increasingly urbanizing city, protecting, restoring and enhancing the campus urban forest is vital to the health and well-being of the community. Whether they occur along streets, in courtyards, or in natural areas, the trees that collectively are the urban forest provide positive benefits such as reducing energy use, mitigating impacts of climate change, and providing habitat for a diversity of species.

- Plant trees in coordination with existing underground utilities, providing appropriate infrastructure to promote sustainable trees and to reduce conflict with utility maintenance.
- Locate new underground utilities so they avoid impacts to existing trees.
- Utilize boring in lieu of other methods to install infrastructure.
- Use soil cell pavement support systems to promote healthy tree growth near underground utilities and in heavily paved areas such as streetscapes, plazas, parking lots, etc.

Design for Minimal Maintenance

Selecting plant species that require less maintenance can reduce the resources used to support the landscape. Principles include:

- Selecting species that require minimal fertilizer and pesticide use.
- Choosing plants that require little to no mowing, pruning, or thinning
- Selecting plants with consistently appealing architecture requiring minimal pruning.
- Choosing plants that cover bare ground to minimize mulching.



Urban Forest - Court of North Carolina

Urban Forest - North Campus Edge

Ecological Resiliency - Partners Way Pollinator Garden

Planting Design

Design decisions should balance hardiness, resiliency, visual-sensory appeal, and functionality.

- Use regionally adaptive plants.
- Incorporate texture, color, and leaf shape to enhance diversity and visual interest through plant layering.
- Use the arrangement of trees and shrubs to define boundaries, scale, shape, and character of outdoor areas.
- Encourage the mix of of evergreen and deciduous plants.
- Provide flowering plants for all seasons.
- Use lawn areas only where needed for programmatic use or where deemed essential for maintenance, erosion control, and stormwater management.

Scale and Design Simplicity

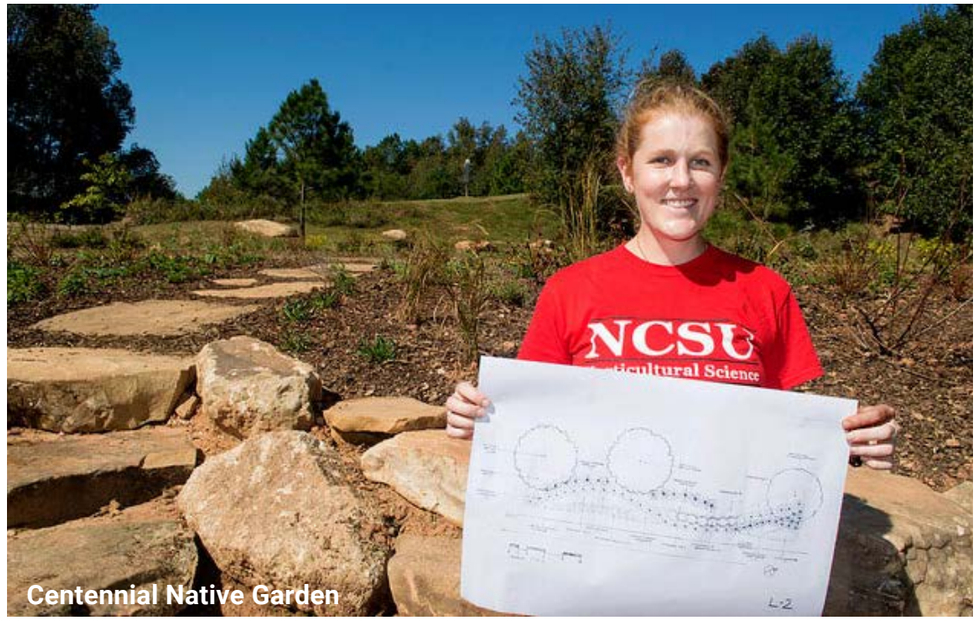
Design should be proportionate to campus buildings, streets, and exterior spaces.

- Avoid overly intricate designs that disrupt simplicity and tranquility.
- Use simple plantings in unified masses to complement the exterior spaces and align with campus architecture.

Variety and Unity

While plant diversity is encourage for ecological resilience, it should not compromise visual unity.

- Maintain a consistent and cohesive look by avoiding overly diverse plant choices.
- Courtyards and public-facing building entrances can feature richer, more intricate plantings due to their contained visual nature.



Centennial Native Garden


Mary Yarbrough Courtyard

LANDSCAPE TYPES

Campus Greens

Community landscapes should be perceived as large, continuous spaces, avoiding segmentation or small-scale ornamental features. Key visual axes and viewsheds, such as between the Belltower and the Court of North Carolina or from Engineering Building II to Lake Raleigh, should be preserved. Art installations are welcome and shall harmonize with the aesthetic and programmatic functions of these landscapes.

Planting:

- Use large canopy trees, shrubs, lawns, and ground covers arranged to emphasize the landscape's order.
- Avoid small-scale, decorative plantings with multiple species.
- Manage existing plantings for health and longevity.
- In areas with a historic design of clipped hedges and neat beds, less priority is given to native or adaptive plants, accepting higher maintenance.
- Employ large canopy trees, evergreen hedges, occasional ornamental trees, and low-maintenance ground covers.
- Prioritize human use in these public spaces while exploring improvements in stormwater management.

Landscape Amenities:

- Use traditional selections from the material standards palette or match existing neighborhood character.

Site Lighting:

- Use campus-standard, pedestrian-scaled 12’ LED lighting.
- Choose fixtures based on the neighborhood, such as KIM Archetype for typical use or Acorn style in historic areas like the Court of North Carolina.

Paving:

- Predominantly brick, matching historic paving where appropriate.

Governors Scott Courtyard

Court of North Carolina

Plazas & Courtyards

Plazas and Courtyards are public outdoor spaces where people study, socialize, and enjoy the environment. These areas should encourage social interaction providing amenities like tables, chairs, benches, and seat walls, tailored to human activity and unique features.

Planting:

- Provide planting designs that respond to unique settings and programmatic needs, and that create distinctive landscapes that fit within the overall campus design.
- Use high-canopied, regional, non-invasive shade trees and architectural elements to create comfortable environments.
- Garden-scale flowering plants are appropriate for human-scale settings.
- Enhance sensory richness with unique colors and textures of foliage and seasonal flowers.
- Tailor plantings to the micro-climate to minimize irrigation and maintenance.
- Integrate unique plants in bio-swales or rain gardens for stormwater management.

Landscape Amenities:

- Use traditional or contemporary selections from material standards, with standard campus waste receptacles.

Site Lighting:

- Use campus-standard pedestrian fixtures, depending on the location.

Paving:

- Use concrete, brick, and permeable concrete pavers in plazas, brick for traditional and concrete for contemporary areas in courtyards.

Global Courtyard

Hill Library

Natural Areas

Natural areas, including tree groves, forests, preserved areas, meadows, prairies, and pollinator habitats, offer access to less-developed green spaces.
These areas provide a contrast to formal, ordered community landscapes, serving as living laboratories that boost ecological services and offer research opportunities.

Planting - Tree Groves, Forests, and Preserved Areas:

- Use non-invasive native species to create a naturalistic landscape.
- Employ minimal maintenance with a layered native canopy, understory trees, shrubs, and ground cover.

Lighting :

- Typically, none; if used, employ campus-standard pedestrian fixtures.

Landscape Amenities:

- Typically, none; if used, employ country-casual 6’ teak benches or standard campus waste receptacles.

Paving:

- Maintain existing paths with wood mulch or other natural surfaces; paved paths may be incorporated for more active use.

Planting - Meadows, Prairies, and Pollinator Gardens:

- Use native plants with minimal maintenance and no irrigation.
- Manage these landscapes with prescribed burning (if allowed) or regular removal of excess biomass on a set schedule of either yearly or bi-annually.
- Create a mow strip area within five feet of buildings and a three-foot mow buffer along roads and pathways.
- Encourage native grasses and wildflowers through naturalization or seeding.

Lighting:

- Typically, none; if used, employ campus-standard pedestrian fixtures.

Landscape Amenities:

- Typically, none; if used, employ country-casual 6’ teak benches or standard campus waste receptacles for trash and recycling.

Paving:

- Use mulch for trails or mowed grass trails.

Lake Raleigh

Lake Raleigh Woods

Connective Spaces

Connective landscapes are multi-functional spaces between and behind buildings, serving as pedestrian corridors, bike parking areas, service spaces, and small planting areas.

Designs should emphasize simplicity and proper scale, using a limited variety of materials while supporting functionality for service, circulation, and emergency access.

Planting:

- Include canopy trees where possible to create shaded pedestrian environments and limit the heat island effect.
- Use simple broad-brush strokes of resilient plant materials with habitat value and minimal maintenance needs.
- Consider permeable pavements in high-use areas for stormwater retention and infiltration.

Landscape Amenities:

- Use traditional selections from the material standards palette or match existing neighborhood character.
- Include movable tables and chairs, benches, shade structures, waste, and recycling bins.

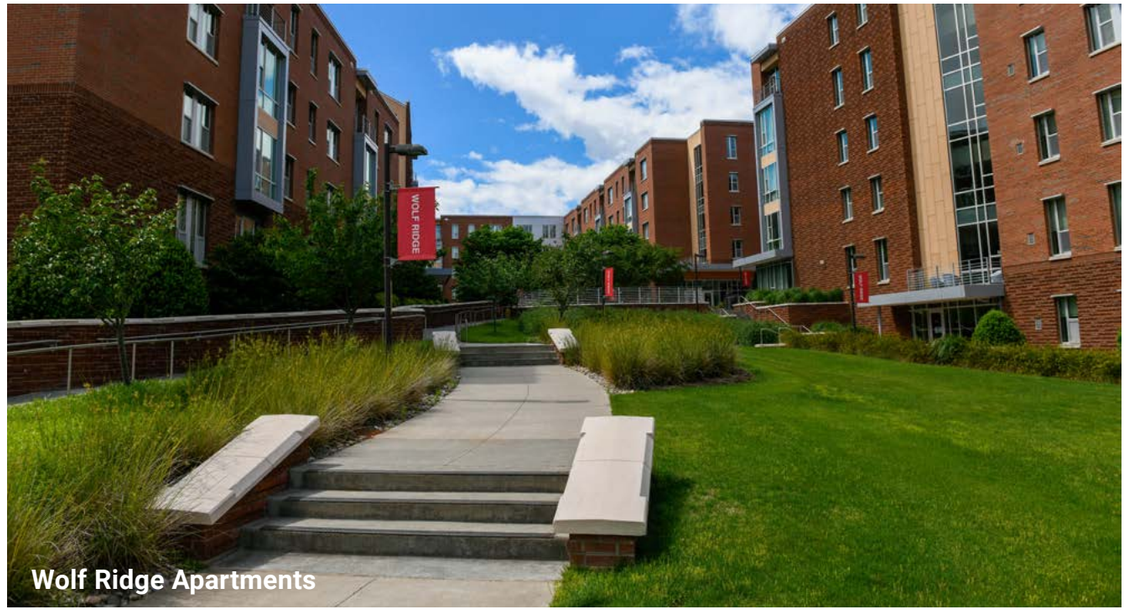
Site Lighting:

- Use campus-standard, pedestrian-scaled 12’ LED lighting, with fixtures dependent on the neighborhood.

Paving:

- Predominantly brick, matching paving where appropriate.

Page & Park Shops



Wolf Ridge Apartments

Campus Streetscapes

Campus street landscapes should create shaded, safe, and comfortable environments for pedestrians, cyclists, and vehicles while presenting a unified campus image. Streetscapes should reflect the visual simplicity of community landscapes, defining primary connective corridors through campus. Trees improve visual quality, human comfort, and ecological services, especially in pavement dominated areas that often are the public face of the university. Promoting a healthy tree canopy along all street corridors is fundamental for all street and utility improvements.


Stinson Drive


Park Shops Plaza

Planting:

- Differentiate campus edges with tree planting and natural greenery, creating a green enclave within the city.
- Enhance the pedestrian experience by using trees to separate paths from streets.
- Plant street trees along sidewalks to create continuous shade for pedestrians.
- Choose trees that allow pruning to a clear height of 15 feet or higher at maturity.
- Vary tree species along streets to avoid monotony and disease to support overall visual continuity.
- Reinforce the consistency of the tree canopy in campus street corridors.
- Coordinate plantings, lighting, paving, curbs, and signage along the length of the street.
- Integrate stormwater management practices where possible to improve water quality and reduce runoff.
- Use permeable pavement and water-receiving landscapes where possible.
- Plantings of shrubs and groundcovers should be simple and organized in broad strokes, consistent with the scale and order of the overall space.
- Use a limited number of resilient species in large, continuous masses.
- Simplify front yard landscape planting between the sidewalk and buildings.
- Frame planting beds at primary building entrances with hedges or architectural elements.

Lighting:

- Use campus-standard pedestrian fixtures.
- Promote a healthy tree canopy along all street corridors, considering utilities and other restrictions.

Landscape Amenities:

- Use traditional selections from material standards and standard campus waste receptacles

Paving:

- Use concrete, brick, permeable concrete pavers, or asphalt, depending on the context.

NC STATE

Court of North Carolina