INTRODUCTION

Where and how we live has an enormous impact on our health and wellness. The design of our immediate landscape, how it connects to the fabric of the larger community, and the legibility of its design and management all contribute to improved public health outcomes. Furthermore, campus design for health and wellness has an inherent didactic component: learning how to live in, utilize, and contribute to community space is an important aspect of a university education that operates outside of, and in addition to, the classroom.

NC State’s Wood Wellness Village is one of several “Living and Learning Villages” managed by University Housing to engage students around specific interest areas. The Wellness Village is located at Wood Hall on Central Campus and was initiated in Fall 2013 with a goal of providing “an environment that encourages and promotes the development and maintenance of a healthy body, mind, and spirit.”

The discipline of Landscape Architecture has a longstanding commitment to the betterment of public health; the development of public parks, the design of walkable communities, and the management of ecosystems are just three examples of landscape architecture practice that directly impact human health and well-being. During the Fall 2013 semester, graduate students in the Landscape Architecture program explored possibilities and precedents for synthesizing this broad knowledge for a campus landscape. In doing so, they created the following guidelines so that Wood Wellness Village may continue to develop as model for integrated wellness within a university campus context.

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01. BACKGROUND
Designing for health and wellness requires attention to all seven dimensions of wellness: physical, intellectual, emotional, social, spiritual, occupational, and environmental. Some of these are intangible, requiring creative design responses; others are somewhat easier to address, such as the physical, social, and environmental dimensions. It is of high importance, however, that all of these dimensions be considered as interrelated. For example, rather than addressing the physical dimension alone, all design improvements should additionally consider the potential impacts of the new element on the social/emotional, environmental, spiritual, and other dimensions discussed in this document.

A term relative to this theory is Universal Design. According to Edward Steinfield and Jordana Maisel, in their 2012 book *Universal Design: Designing Inclusive Environments*, Universal Design is defined as a process that enables and empowers a diverse populations by improving human performance, health and wellness, and social participation through the design of the physical environment. In an effort to answer this design challenge, the overarching purpose of this guideline document is to address ways in which outdoor environments can promote healthy and active lifestyles through landscapes that accommodate, to the maximum extent possible, the seven dimensions of wellness as they relate to the Wood Residence Hall and, more specifically, the Wood Wellness Village.

The Wood Wellness Village is a living and learning community housed within Wood Residence Hall on the North Carolina State University campus focused on holistic student wellness. Students participating in the Wellness Village have the opportunity to learn about and adopt healthy living techniques that they can take with them throughout their entire lives. In order for this program to be successful, however, residents need a dynamic environment that provides opportunities for—and actively promotes—health and wellness.
Additionally, The Wood Residence Hall and Wood Wellness Village communities are comprised of a very diverse group of people: students come from urban, rural, and suburban communities, represent various majors, and have different interest areas within the realm of health and wellness. Attention to Universal Design therefore permeates this entire document because it is important to understand that every person deserves the opportunity to achieve wellness and live a healthy life in a manner reflective of their personal choice and experience.

Historically, landscape architects have played a vital role in the health, safety, and wellbeing of the general public that continues in contemporary practice. They achieve this through facilitating a cohesive and healthy relationship between people and the environment. Toward these ends, this document is concerned with developing design guidelines that foster a supportive environment for the residents to achieve a healthier standard of wellbeing. The landscape architecture students at North Carolina State University have conducted extensive research and synthesized opportunities and potentials for a healthful campus landscape. This document represents the outcomes of that process; it provides a flexible framework to promote a holistic approach to designing, developing, and managing a thriving landscape system. The design guidelines are specific to Wood Residence Hall and its immediate environment, but are readily transferable to other parts of the NC State University Campus as well as other university campus contexts. The seven design guideline categories are: Universal Design, Social + Community, Connectivity, Character, Environmental + Ecology, Fitness + Exercise, and Perception + Engagement. These guidelines are strong recommendations to consider during ongoing design processes; they are not requirements. Each guideline has been carefully considered and developed to address the seven dimensions of wellness as they pertain to both Wood Residence Hall and the Wood Wellness Village, and therefore should be taken with high regard.

The overarching goal of this document is to create a unique and innovative tool that will guide the evolution of a landscape that supports the Wood Wellness Village vision and contribute to increased wellness across the entire North Carolina State University community.
PARTICIPANTS

NC STATE DEPARTMENT OF LANDSCAPE ARCHITECTURE
NC STATE UNIVERSITY HOUSING
NC STATE UNIVERSITY RECREATION
NC STATE STUDENT HEALTH SERVICES
NC STATE OFFICE OF THE UNIVERSITY ARCHITECT
NC STATE UNIVERSITY DINING
NC STATE OFFICE OF SUSTAINABILITY
SPECIAL THANKS TO...

Interdisciplinary and interdepartmental collaboration is imperative in creating meaningful, responsive, and sustained campus landscapes. Special thanks to the following University partners that have been instrumental in bringing this project to fruition, providing valuable feedback, and supporting cross-campus collaborations:

NC State University Housing*
NC State University Recreation*
NC State Counseling Center*
NC State Health Promotion*
NC State Wood Wellness Village Students*
NC State University Dining
NC State Department of Parks, Recreation and Tourism Management
NC State Office of the University Architect
NC State Office of Sustainability

*Indicates participants with members on the Wood Wellness Village Advisory Board

HEALTHFUL LANDSCAPE SYSTEMS
PROJECT TEAM
LAR 582.015

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This document is the result of a collaborative effort between the NC State Department of Landscape Architecture and numerous campus stakeholders. The process of creating this document represents a concerted effort to learn about, experiment with, and lay the groundwork for the development of healthful landscapes that support Wood Wellness Village programs, improve the Wood Residence Hall environment, and positively contribute to the larger NC State campus community. The work was conducted over a 16-week semester (Fall 2013) as the principal outcome of a graduate level seminar course, Healthful Landscape Systems (LAR 582-015). Project development involved five primary components: 1) case study research, 2) issues and opportunities mapping and visions/values studies, 3) guideline development, 4) research assessment, and 5) final production.

Initially, terms and definition relative to this document such as wellbeing, wellness, health, healthy, and healthful, were developed to create a cohesive, standardized vocabulary. The next step involved case study research of landscape-based projects and programs that have been shown to generate healthful outcomes for people, organizations, and communities. Precedent research included: The Emerald Necklace (Boston), Central Park (New York City), High Point (Seattle), Kunming Greenways (Kunming, China), The Piedmont Project at Emory University, The Environmental Leadership Center and Farm at Warren Wilson College, the Copenhagen cycling system (Denmark), Project for Public Spaces, and The Natural Learning Initiative (NC State University). The purpose of this research was to 1) examine the importance of landscapes as they are linked to physical, mental, emotional, and social health improvements, and 2) identify key lessons about the ways that carefully designed, programmed, and managed landscapes could impact the Wood Residence Hall environs.

Upon completion of the case studies, attention shifted to understanding the site. Students spent time on site gaining an understanding of current conditions and circumstances. Discussions were held regarding specific findings developed through a series of sketches and observations. This process continued with the review of physical and programmatic issues and opportunities relative to both Wood Hall and the Wood Wellness Village. These efforts included an interactive workshop session with Wood Wellness Village participants (n=16) and online surveys of the Wood Hall residents (n=35). Upon careful assessment of the data, it became evident that placemaking, academics/campus programs, and city wide/regional networks offer a the most significant health-related benefits associated with current and future area planning and landscape improvement efforts around Wood Hall.

These themes became key drivers to the design guideline development process. Extensive refining and distilling of guideline language was conducted over many weeks. Initially there were nine design guidelines: Sense of Place, Character, Fitness + Exercise, Environment + Ecology, Policy + Program, Social + Community, Connectivity, Universal Design, and Interpretation + Outreach. During a mid-semester review with stakeholders, these initial design guideline categories were revised and refined into the materials presented herein.

Lastly, the importance of on-going assessment and evaluation was explored through research of effective methods used in the design and public health disciplines. Students researched mechanisms of evaluating and assessing the effects of design interventions resulting from these guidelines, and wrote reports that summarized their findings. The methods incorporated within this document are specifically calibrated to university, campus, and interdisciplinary settings to test the efficacy of the interventions and to track the development of the Wood Wellness Village related to its impact on student health and well-being.
02. GUIDELINES
The Everybodyscape provides for universal and inclusive design. The scope of this category includes the application and design of inert components of the built environment, organic natural components, and their influence on the wellness of students in Wood Residence Hall.

Intangible needs (Maslow's Heirarchy of Needs) are supported by the tangible physical environment, which is regulated by code. Universal design can guide decisions to provide for the intangible needs.
INTENT
Produce a framework for the application of guidelines provided in this document to be applied for the mutual benefit of all users.

SUBCATEGORIES
1. ADA: Site Access and Safety
2. Beyond ADA: Health and Wellness
3. Universal Utopia: The “Everybodyscape”

Universal design helps everyone enjoy and engage with the built environment, not just those with visible differences in ability.
NC State University’s Physical Master Plan specifically mentions, in the Guiding Principles, Universal Design as an important aspect of the campus landscape:

The campus is built and retrofitted to be universally accessible for, and understandable to, all people, utilizing the standards of Universal Design, which is defined as “the design of products and environments to be usable by all people to the greatest extent possible without the need for adaptation of specialized design.” New projects are created and renovations to facilities and grounds are adapted to simplify life and to make the built environment beneficial to people of all ages and abilities.

The 2012 updated definition of universal design, proposed in Universal Design: Design for Inclusive Environments, challenges some of the statements above and should be considered for adoption in the design of Wood Hall as a guiding principle specifically addressing health and wellness. Consider the definition from the aforementioned book as a new definition:

“A process that enables and empowers a diverse population by improving human performance, health and wellness, and social participation.”
1.1.01 All sites must comply with North Carolina Building Code and Federal ADA guidelines.

1.1.02 Wood Hall should be analyzed to identify features that are not in compliance with the standards listed above. While many features may be technically “grandfathered-in”, they should still be considered for improvement. The landscape should aspire to solve all basic code compliance issues, regardless of their prior approval under old standards.

As a process involving user groups, universal design can enable increased human performance instead of simply providing for basic physical needs.

Note: The project team developed the iconic checklist above to indicate which of the seven dimensions of wellness are predominately related to each individual guideline. The impacts of one design intervention can have multiple effects on wellness, and these checklists are intended to provide a cursory example of the convergent impacts of the guidelines. A more thorough checklist appears on page 64.
Universal design should be a process involving multiple stakeholders, not a product meant for limited purposes.

INTENT

Use environmentally sound management practices that reduce energy input requirements while creating spaces that provide social opportunities and illicit emotional responses. People should "love" the place and become somewhat attached to the feeling they get when there.
GUIDELINES

1.2.01 All site features shall be accessible by all users of the Wood Hall landscape.

1.2.02 All residents shall feel comfortable using all features of the Wood Hall landscape.

1.2.03 Design solutions and landscape improvements shall provide aspects of a peaceful, tranquil, and calming environment.

1.2.04 Safety shall be provided for by designing and managing the landscape for optimum visibility, access to emergency services, and keeping features in good repair.

1.2.05 Small improvements and interventions shall keep in mind an overall master plan and contribute to the incremental implementation of the final vision.

7 DIMENSIONS CHECKLIST

Universal design for health and wellness may include special use features.
Create an environment that is universally useful for all users. Although this will be a difficult task, it does not mean that the idea of creating a utopian place should be abandoned. It does mean that, by setting the bar high and thinking of this as a process rather than a product, the landscape can be optimized if decision makers consider the following guidelines.

Human needs should be at the center of the decision making process, provided for by the seven dimensions of wellness.
1.3.01 Create places that are welcoming to all students, visitors, and employees to promote social equity in and around Wood Resident Hall.

1.3.02 Create multicultural landscapes that may not always adhere to or appear like the traditional southern vernacular to produce culturally diverse environments.

1.3.03 Design spaces for inclusion; create spaces that promote crossover between Wood Wellness Village programs and non-village students.

1.3.04 Create a concentrated hub for Wellness Village residents (i.e., a wellness territory) without developing barriers to social inclusion via the development of both a sense of privacy and unique sense of place (See Character).

1.3.05 Provide and promote access to common landscape resources and connections between the Wood Residence Hall landscape and shared NC State resources.

1.3.06 Extend opportunities for residents and staff to spend more time outdoors by creating places with shelter, more connections between residence buildings, and provisions for multipurpose use. (Examples include, but are not limited to bridges between floors, small and large study shelters with utilities, and outdoor food preparation areas.)

1 Accessibility should not be limited to the physical ability of an individual to access a space. The term is used more broadly to refer to the affordance of the environment to offer permissive access.
Campus landscapes should support social interactions and provide a sense of community.
INTENT

Create a community landscape that fosters a sense of belonging among Wood Hall residents via outdoor environments that provide increased opportunities for social interaction. Landscape features in and around Wood Residence Hall should support social interactions and sense of community to enhance students’ academic performance, personal development, and overall health and wellbeing, and increase opportunities for social engagement activities that provide a sense of belonging. Achieving these goals will lead to higher confidence and comfort levels among students in Wood Wellness Village.

SUBCATEGORIES

1. Foster an Inclusive Community
2. Provide a Variety of Social Spaces
3. Promote Chance Encounters

Wood Hall landscape should support social interaction.
1  FOSTER AN INCLUSIVE COMMUNITY

INTENT

Encourage “social insideness,” or a sense of connection to the community and recognition of that connection, to know others and to be known. Social insideness helps students feel safe, comfortable and emotionally at ease (Lefever, 2012).
GUIDELINES

2.1.01 Utilize current building arrangement to create positive outdoor space that is well defined. (Outdoor space is “positive” when you experience its embrace). Positive outdoor spaces help integrate the buildings into the site, expand usable area, and promote a healthy connection to the natural environment. Characteristics of places that have “positive space” according to the Living Neighborhoods Organization:
- Well Defined Edges
- Has a center
- Has a well-defined shape (not-ambiguous)
- Is a comfortable place to inhabit
- Has a discernable and unique character, including existing features that are both functional and valuable

2.1.02 Develop landscape spaces and features that support health and wellness programs and activities, such as group fitness activities, group study and/or worship, and social functions.

2.1.03 Advertise Health & Wellness programs so that students are aware of these offerings. Ensure advertisements:
- Catch the eye
- Clearly display the program being advertised
- Provide information on locations and directions

2.1.04 Use the landscape to support social programs at Wood Hall to encourage engagement among all campus residents. Whenever possible, connect with existing efforts to offer these type of programs:
- Project movies on buildings or structures
- Establish/sponsor concert series
- Offer healthy, locally sourced food & beverages at events
- Create opportunities for performances, recreational activities, markets, exhibits, festivals, and special events

7 DIMENSIONS CHECKLIST

- Physical
- Intellectual
- Emotional
- Social
- Spiritual
- Occupational
- Environmental
2 PROVIDE A VARIETY OF SOCIAL SPACES

INTENT

Provide students with diverse spaces, where they can read or think quietly; where they can read or prepare for class among others; where they can meet to work on group projects; and where they can access social functions and recreational opportunities.

GUIDELINES

2.2.01 Create a mix of private and public outdoor spaces that foster meeting and gathering spaces. Designs should aim to satisfy the following:
- Include visually interesting features
- Relate to bordering uses
- Provide an introduction to the space by establishing character and separating space from the surrounding environment.
- Be flexible for users to assemble in groups of differing sizes. The space should accommodate individuals, groups of 2-3, and larger groups.
- Provide paths that link entrances and gathering spaces. Paths should reinforce separation between gathering spaces and surroundings.

2.2.02 Utilize existing topography to enhance and define social space:
- Maximize existing views
- Provide areas of refuge in the landscape
- Suggest public and intimate spaces
- Work in concert with pathways and plantings to choreograph experience(s)
3 PROMOTE CHANCE ENCOUNTERS

INTENT

Promote student engagement through interactions that come from both planned and spontaneous encounters. These encounters can happen in exciting places where people like to hang out.

GUIDELINES

2.3.01 Provide walking paths to get from building to building and create a variety of seating alcoves along them.

2.3.02 Provide public places that will attract people, such as a coffee shop, indoor/outdoor games, or spaces that elicit conversations.
COMMUNITY CONNECTIONS

DEFINITION

Physical connections between Wood Residence Hall and the surrounding communities, such as the larger N.C. State campus and the City of Raleigh. More specifically, connectivity refers to the directness of links and the density of connections in a transportation network. A dense, well-connected network has many short links, numerous intersections, and minimal dead-ends. In an optimal system, connectivity is high, causing travel distances to decrease and route options to increase, allowing more direct travel between destinations, creating a more accessible and resilient transportation system.
INTENT

Increase connectivity via greater density, mixed-use planning, and good urban design to increase walkability and expand students' mental maps (their personal sense of place, space, and connection) in order to result in increased health and wellness.

SUBCATEGORIES

1. Neighborhood Connections
2. Campus Connections
3. City Connections

A compact neighborhood offers increased route options and more destinations, both residential and commercial, within walking distance.
COMMUNITY CONNECTIONS - GUIDELINES

1 NEIGHBORHOOD CONNECTIONS

INTENT
Establish a neighborhood feel that extends beyond the three buildings of Wood Residence Hall.

SPECIAL NOTE
The N.C. State Campus Physical Plan classifies Wood Residence Hall as part of the Central Campus Precinct, and as its own neighborhood. While students like the uniqueness of Wood Hall's forested setting, they dislike the resultant isolation. (Statement based on villager survey and focus group session.) Stronger connections to other parts of campus bordering Wood Hall via pleasant, clearly marked, and interesting paths will allow residents to feel better integrated into the campus community while maintaining its unique character as a distinct neighborhood within campus (See Character). Use these paths to promote walking as a primary means of transportation, which will increase students’ daily exercise, contribute to their physical wellness, and lead to more time spent outdoors—factors that benefit nearly every dimension of wellness.
GUIDELINES

3.1.01 Provide pedestrians, including those who parallel park on Morrill Drive, a safe place to walk, and eliminate the need to cross Morrill Drive without a crosswalk in order to reach a sidewalk. (See Character for sidewalk details.)

3.1.02 Make connections to nearby campus resources known to students. Residents of Wood Hall are in close proximity to Carmichael Gym, Carmichael Complex, and the Intramural fields (See Exercise and Fitness). In addition to being near resources that can aid students’ physical wellness. Wood Hall is also near the Talley Student Center and Case Dining Hall. Both of these locations offer a place for students to eat together as well as general gathering spaces, contributing to their social wellness. Additionally, Talley Student Center and Carmichael provide on-campus student jobs, contributing to students’ occupational wellness.

3.1.03 Encourage a preference for walking over driving: Clearly mark paths and path entrances. Provide benches and amenities such as weather protection along paths.

Nearby on-campus social/entertainment venues.
Promote connections between Wood Hall and the rest of campus, including Centennial Campus.

All connections should facilitate students getting to class as well as finding on-campus jobs and places to study. They should influence how and where students spend their free time. Ensure that students feel connected to and included in the broader campus community. Give residents the ability to easily visit friends in other residence halls by foot or bike and make the Wood Hall environment a place that makes their friends want to visit. Encourage responsibility and personal growth of students by making the necessary tasks of working and studying convenient and enjoyable.
GUIDELINES

3.2.01 Provide sidewalks and bike paths from Wood Hall to the existing campus path network to create and promote connections to the rest of campus. Both Wood Hall and the Wood Wellness Village are open to all academic majors, therefore residents take classes across the University campus. These non-vehicular connections should undergo improvements where necessary and their use should be encouraged.²

3.2.02 Provide live/work/study connections within the mixed-use³ environments called for in the guiding principles of the Campus Physical Master Plan.

3.2.03 Make connections to campus and community resources known to students via the development of a detailed campus map that is distributed to them upon move-in.

² Walking or biking to class provides a fitness experience that also has significant mental and emotional benefits; a brisk walk or bike has been shown to generate alertness, reduce stress, and provide a quick and calorie-free energy boost. http://www.webmd.com/depression/guide/exercise-depression

³ Mixed-use is defined as “the integration of a variety of activities and functions in open spaces and buildings” (http://www.ncsu.edu/facilities/physical_master_plan/pdfs/A_Campus_of_Neighborhoods_and_Paths_11-07-2007.pdf)

Streets should be designed to accommodate all users, not just vehicular traffic.
Provide connections to, and make students aware of, the greater Raleigh community and its resources.

SPECIAL NOTE
Resources may include, but are not limited to, destinations that provide necessary goods and services, jobs and volunteer opportunities (contributing to students’ occupational wellness), and cultural or historical destinations, such as the N.C. Museum of Art (contributing to intellectual and spiritual wellness).

Greater Raleigh area and some of its resources.
GUIDELINES

3.3.01 Connect Wood Hall via sidewalks and paths to greenways, trails, and sidewalks that extend to resources and destinations outside of the N.C. State Campus.

3.3.02 Make city connections known to students. Ways to do this include:

- Place signage and focal elements along paths
- Increase visibility of paths and connection points between them via improved lighting and the creation of nodes at path intersections.
- Create a map for distribution to residents at the beginning of the school year that locates resources and destinations in the nearby Raleigh area that are of interest to students (food sources, museums, shopping areas, cultural and historical landmarks, locations and dates of downtown festivals and cultural events, etc.). Show possible modes of transportation and travel time for respective modes for each map entry. Each year edit the map based on student feedback.

3.3.03 Encourage walking, biking, or the use of public transportation to reach citywide destinations. Although some residents have access to cars and some destinations require travel in a personal vehicle, these types of connections should not be given priority.

http://walkyourcity.org/

Students will be more likely to walk or ride their bikes to their destinations if they can easily see how long (or how little time) it will take them.
CHARACTER

DEFINITION

A distinct and recognizable pattern of elements that occur consistently around Wood Residence Hall and across the NC State campus that both enhance the unique identity of Wood Residence Hall and harmoniously connect it to the larger campus landscape.

The character of the NC State University campus is enhanced by consistent and innovative use of brick as a building and landscape material.
**INTENT**

Enrich the character of Wood Residence Hall through improvement to existing features and the addition of new amenities that fosters health and wellbeing through the creation of a unique and a desirable environment in which to live, work and play.

**SUBCATEGORIES**

1. Materials
2. Vegetation
3. Streetscapes
4. Site Furniture and Amenities
5. Management

Attention to detail and use of materials creates an identifiable character.

Campus residents feel a greater sense of belonging when the landscape and architectural character is identifiable and welcoming.
INTENT

Maintain unity with the larger university environment while creating a unique identity for areas within and adjacent to Wood Residence Hall.

GUIDELINES

4.1.01 Landscape materials (i.e., hardscape and plant materials) shall reflect NC State’s Design Guidelines while allowing for design and construction innovation that respects, augments and highlights the unique physical, environmental and programmatic identity of Wood Residence Hall.

4.1.01 To the maximum extent possible, environmentally friendly products should be given priority when choosing materials.

7 DIMENSIONS

CHECKLIST

Physical  Intellectual  Emotional  Social  Spiritual  Occupational  Environmental

Brick lattice commonly found on NC State’s campus.
2  VEGETATION

INTENT

Encourage the use of outdoor green spaces to enhance wellness opportunities via improved air and water quality and increased access to natural features and materials.

GUIDELINES

4.2.01 Landscape areas shall be used to promote improved environmental quality and appearance of Wood Residence Hall. Vegetation shall provide a seasonal aesthetic with special attention given to important university dates and events.

7 DIMENSIONS CHECKLIST

Vegetation should provide seasonal aesthetic with attention given to special dates such as student move-in and move-out
STREETSCAPES

INTENT

Enhance the street edge of Morrill Drive to create a safe and enjoyable streetscape environment that serves multiple modes of transportation.
GUIDELINES

4.3.01 Use trees and plantings to define spatial volume and create rhythm along the length of adjacent streetscape. Choose plants to provide spring bloom, summer shade, fall foliage color, winter branching and an opportunity for seasonal lighting and/or decorating during specific campus and/or Wood Residence Hall events.

4.3.02 Use tree grates where space is confined. Tree grates can be placed adjacent to the curb and have a setback for 2’-3’. Use planters when space allows, planters should be placed a minimum of 1’ from back of the curb.

4.3.03 Maintain parallel parking on both sides of the Morrill Drive. Provide parking to accommodate ultra compact and/or alternative fuel vehicles.

4.3.04 Improve streetscape surrounding with trees and other landscape plantings. Secondary elements should provide detail and texture to the landscape (i.e. sidewalk materials and patterns, roadway pavements, street furnishings, and traffic control devices).
4 SITE FURNITURE AND AMENITIES

INTENT

Improve the quality of open space and provide flexible environments for occupants.

GUIDELINES

4.4.01 Choose a standard palette of furniture for ease of maintenance, durability, and distinctiveness that highlight the uniqueness of Wood Residence Hall.

7 DIMENSIONS CHECKLIST

Physical    Intellectual    Emotional    Social    Spiritual    Occupational    Environmental

Movable furniture at Bryant Park
5 MANAGEMENT

INTENT

Implement comprehensive strategies that sensitively blend ecology, education, human use, and planned interventions to create landscapes that maximize biological and social functions while minimizing consumption of human, material and capital resources.

GUIDELINES

4.5.01 Develop a management program to maintain the positive attributes of Wood Residence Hall. Develop management strategies in collaboration with associated University departments and divisions (i.e., University Housing, Grounds Management, and the Office of the University Architect), and in concert with existing university best practices and guidelines, including those contained within this document.

7 DIMENSIONS CHECKLIST

- Physical
- Intellectual
- Emotional
- Social
- Spiritual
- Occupational
- Environmental

Ecological management & adaptation model example.

Nathan Bass
Components of environmental and ecological systems are closely intertwined and dependent upon each other.
INTENT

Preserve, enhance, conserve, and adapt existing natural features and amenities of the Wood Residence Hall to create a landscape that is conductive to socio-environmental wellness and promotes the importance of essential ecosystem services.

SUBCATEGORIES

1. Protect Water Resources
2. Waste management
3. Flora and Fauna
4. Soil, Terrain, and Topography
5. Addressing Climate Change

Students utilizing natural campus systems for study.
PROTECT WATER RESOURCES

INTENT

Conserve potable water and capture stormwater to minimize negative impacts to landscape areas in and around Wood Residence Hall.
GUIDELINES

5.1.01 Reduce runoff quantities to minimize adverse impacts to water resources, such as Rocky Branch Creek and the larger municipal water supply chain.

5.1.02 Minimize exposure to and introduction of pollutants in storm water runoff to protect water quality.

5.1.03 To the maximum extent practicable, expand the interconnected water resource network via implementation of green infrastructure to reduce storm volumes and resultant erosion.

5.1.04 Use drought tolerant, disease resistant plants to reduce water and petrochemical demands.

5.1.05 Design hydrozoned landscape areas to create viable plant communities capable of protecting water resources via their functional adaption to various hydrologic regimes, wet to dry.
Whenever possible, repurpose or reuse materials that have value and experiment with new and innovative functions.

5.2.01 Create a small, localized compost facility for students to capture and reuse organic waste generated on site.

5.2.02 Reuse waste materials, such as rocks, pallets, and metal to construct landscape structures and amenities.
Create interrelated landscape systems that support healthy ecological patterns and functional biodiversity, including habitat patches (biotopes), edges (ecotones), and corridors that enhance species diversity and population dynamic.

GUIDELINES

5.3.01 Develop design and conservation strategies to create and enhance habitat and connectivity to larger landscape systems.

5.3.02 Establish specific management practices to increase regionally native plants and animal biodiversity.

5.3.03 Integrate dynamic processes, such as natural disturbances, to facilitate the movement of disturbance dependent species within landscapes.

5.3.04 Whenever and wherever possible, remove invasive and aggressive plants species.
SOIL, TERRAIN, AND TOPOGRAPHY

INTENT
Make visible the connections between topography, geology, and hydrology to highlight the unique landscape that exists in and around Wood Residence Hall.

GUIDELINES

5.4.01 Use geology to clarify the soil capability classes and to determine best use, such as in determining appropriate plants communities.

5.4.02 Carefully analyze the soil biology to better match plants to soil conditions and improve the quality of in-situ soils.

5.4.03 To the maximum extent possible, utilize the existing topographical profile in the development of all landscape improvements to reduce soil disturbance.

7 DIMENSIONS CHECKLIST

The Wood Hall landscape has significant elevation change.
5 ADDRESSING CLIMATE CHANGE

INTENT

Utilize the landscape to lower energy demands in order to address current and future climate change/adaptation strategies.

GUIDELINES

5.5.01 All landscape design shall utilize solar orientation and exposure to minimize summer and maximize winter solar gain.

5.5.02 Organize landscape features and plantings into compositions that capture and direct summer breezes, and deflect winter breezes.

5.5.03 Explore all possible methods of energy conservation, including the-use of green roofs, to insulate buildings, geothermal to heat and cool the buildings, and photovoltaic panels to generate power and/or heat water.

7 DIMENSIONS

CHECKLIST

As climate change continues, adaptations to university campuses will be necessary.
FITNESS + EXERCISE

DEFINITION

Fitness is the state of being in good physical condition and exercise is the process of physical or mental exertion to condition or train any part of the body, including the mind and spirit.

Many opportunities exist for students to participate in organized and un-organized physical activity.
INTENT

Incorporate physical activity and exercise into the landscapes contained within and surrounding Wood Residence Hall, and integrate Wood Wellness Village programs into outdoor functions to promote and improve overall individual and communal wellness.

SUBCATEGORIES

1. Integration of Programs
2. Promote Physical Activity
3. Site Amenities

Trails provide opportunities for passive or active recreation, and also contribute to mental and emotional well-being through interactions with nature.
1 INTEGRATION OF PROGRAMS

INTENT

Create outdoor environments that provide opportunities for students to engage in physical activity via organized and impromptu workout activities and educational programs that promote social, environmental, physical, emotional, and spiritual wellness via increased contact with nature.

Nature trails provide a beautiful place to escape from everyday campus life.
GUIDELINES

6.1.01 Entice people to visit Wood Residence Hall by providing spaces that function as multi-purpose areas for a variety of social and programmatic activities (i.e., large meetings, concerts, unprogrammed sports). The areas shall be large enough for large groups (+10 people), but still comfortable for small groups (1-3 people).

6.1.02 The landscape around Wood Residence Hall should provide ample covered seating areas. This allows Wood Hall residents and guests to participate in programmed and unprogrammed activities tied to various health and exercise topics in outdoor environments where they are in contact with nature regardless of weather conditions.

6.1.03 All analysis, planning and design activities shall consider internal and external landscapes/forested areas in and adjacent to Wood Residence Hall for development into fitness and/or exercise amenities (i.e., nature walking trails and small scale low-ropes courses). This will allow for existing fitness programs to take place in areas that are not formally developed, thus providing students with a greater chance to connect with nature.

Covered areas allow people to meet outside regardless of weather conditions.
2 PROMOTE PHYSICAL ACTIVITY

INTENT

Promote physical, emotional, environmental, spiritual, and social wellness by encouraging various levels of exercise as well as promoting walking and cycling as alternative forms of transportation.

GUIDELINES

6.2.01 Accentuate local connections to amenities such as Miller Fields, the City of Raleigh greenway system, and Carmichael Gym through the use of signage. (see also, section #: Connectivity)

6.2.02 Place informational signage describing the intention of workout stations next to each workout stations. Signs shall include recommended exercises and statistical information that describe both the workout and its benefits, i.e. “Jumping rope for 15 minute burns “X” amount of calories.”

6.2.03 Place informational signage next to bike racks that include a map of designated routes to different campus destinations. Sign shall include statistical information describing distance, average travel time (non-stop), and average calories burned for walking, running, and cycling for each route.

6.2.04 Provide bike racks at a minimum of 1 bike stall for every 5 Wood Hall residents.

Cycling and walking as forms of transportation allow for contact with nature and help individuals achieve their daily physical activity requirements.
# 3 SITE AMENITIES

## INTENT

Create outdoor amenities for individual and group oriented activities where students can achieve their daily physical activity requirements and find opportunities to support their social, emotional, environmental, and spiritual dimensions of wellness.

## GUIDELINES

6.3.01 The landscape around Wood Residence Hall shall include at least one flat, open area of an eighth acre (5,445 sq ft) or greater. This will provide enough space for multiple physical activities to take place at the same time, including, but not limited to, volleyball (minimum 2,520 sq ft required), throwing a Frisbee, corn-hole (minimum 210 sq ft required), and throwing a football that are able to take place simultaneously.

6.3.02 Provide a minimum of three workout stations on site that target different regions of the body. One shall target the upper body, one the core, and one the lower body.

6.3.03 Provide at least one place for outdoor access to drinking water. Water stations should be centrally located between the previously mentioned workout stations.

6.3.04 Provide a universally accessible, multi-purpose path with distance indicators throughout the site and within the forested areas adjacent to the site.

6.3.05 All proposed trails, ropes courses, and workout stations shall incorporate different levels of exercise intensity, such as trails with different slopes or pull up bars of varying heights.

Balance courses provide different levels of physical and mental challenges.
PERCEPTION + ENGAGEMENT

DEFINITION

The landscape’s ability to engage and influence the campus community through interpretive elements that have both a physical and programmatic presence.
INTENT

Engender an understanding of landscape features that support wellness, influence the quality of life at NC State, and extend wellness landscape features into other parts of campus.

SUBCATEGORIES

1. Student
2. Campus
3. Community

Students at Harvard University take part in Housing Day activities.
Engage individual Wood Hall Residents in the activities and mission of the Wood Wellness Village.
GUIDELINES

7.1.01 Create a digital information “kiosk” located within the Wood Hall landscape that communicates information, schedules, and events that relate to WWV and/or other health and wellness activities.

7.1.02 Implement other WWV design guidelines that relate to the improvement of WWV aesthetic and functional qualities to create a desirable place to live, work, and play.

7.1.03 Encourage engagement through incentives for participation, such as offering WWV student discounts on local wellness-related products and services.

An interactive digital information kiosk at the University of Florida.
2 CAMPUS

INTENT

Promote the Wood Wellness Village program to enhance perception and increase visibility across the NC State campus community.

GUIDELINES

7.2.01 Create an “outdoor learning laboratory” within the Wood Hall landscape that is capable of hosting a series of wellness-related events and workshops offered to all students. This will allow WWV students to become ambassadors, or teachers, who will teach others about various wellness topics.

7.2.02 Create a network of “unconventional fitness stations” within the landscape. (see Fitness and Exercise guidelines for specifics on individual station configurations).

7.2.03 Establish a facility for the distribution of CSA (Community Supported Agriculture) shares to the campus population. Provide a centralized pick up location and/or stations with storage capability.

7.2.04 Install additional signage in and around Wood Hall, (i.e. Rocky Branch) that lead people to this “new” place.

Customers who purchase a CSA are provided with fresh produce year round. This subscription-like service allows farmers to have more consistent, reliable income, and saves the consumer money and time.
3 COMMUNITY

INTENT

Engage members of Wood Wellness Village in wellness-related activities and relationships outside the campus to diversify wellness education experiences and promote the program to the larger Raleigh community.

GUIDELINES

7.3.01 Host events that encourage members of the community to interact with Wood Wellness Village participants. For example, develop a lecture series that brings in wellness experts to speak and engage with the Wood Wellness Village programs.

7.3.02 Create a network of volunteering opportunities at wellness-related venues that allow members of the Wood Wellness Village to complete their service-learning hour requirements.

7.3.03 Create a series of printed maps or booklets that show WWV students where they can access health-related amenities in and around the campus, including Open Space, Quality Food, and Spaces for Contemplation/Reflection/Studying. (See Connectivity)

Landscape architecture firm Reed Hilderbrand recently distributed booklets at a conference that were able to be scanned with an iPhone and opened in GoogleMaps to guide users to locations.

7 DIMENSIONS CHECKLIST

Physical  Intellectual  Emotional  Social  Spiritual  Occupational  Environmental
03. CHECKLIST
The following checklist is provided as a convenient resource for designers, Wood Wellness students and leaders, and other stakeholders to utilize throughout the continued evaluation of existing and proposed developments and design interventions within the Village environment and throughout the programmatic efforts. These stakeholders may find it useful to review this checklist periodically, as a reminder of the variety of interrelated objectives and opportunities present in the design and management of a wellness landscape in a university campus context.

**EVERYBODYSCAPE**

**ADA: Site Access and Safety**
- All sites must comply with North Carolina Building Code and Federal ADA guidelines.
- Wood Hall should be analyzed to identify features that are not in compliance with the standards listed above. The landscape should aspire to solve all basic code compliance issues, regardless of their prior approval under old standards.

**Beyond ADA: Health and Wellness**
- All site features shall be accessible by all users of the Wood Hall landscape.
- All residents shall feel comfortable using all features of the Wood Hall landscape.
- Design solutions and landscape improvements shall provide aspects of a peaceful, tranquil, and calming environment.
- Safety shall be provided for by designing and managing the landscape for optimum visibility, access to emergency services, and keeping features in good repair.
- Small improvements and interventions shall keep in mind an overall master plan and contribute to the incremental implementation of the final vision.

**Universal Utopia: The Everybodyscape**
- Create places that are welcoming to all students, visitors, and employees to promote social equity in and around Wood Resident Hall.
- Create multicultural landscapes that may not always adhere to or appear like the traditional southern vernacular to produce culturally diverse environments.
- Design spaces for inclusion; create spaces that promote crossover between Wood Wellness Village programs and non-village students.
- Create a concentrated hub for Wellness Village residents (i.e., a wellness territory) without developing barriers to social inclusion via the development of both a sense of privacy and unique sense of place (See Character).
- Provide and promote access to common landscape resources and connections between the Wood Residence Hall landscape and shared NC State resources.
- Extend opportunities for residents and staff to spend more time outdoors by creating places with shelter, more connections between residence buildings, and provisions for multipurpose use.
SOCIAL + COMMUNITY

Foster an Inclusive Community
- Utilize current building arrangement to create positive outdoor space that is well defined.
- Develop landscape spaces and features that support health and wellness programs and activities, such as group fitness activities, group study and/or worship, and social functions.
- Advertise Health & Wellness programs so that students are aware of these offerings.
- Use the landscape to support social programs at Wood Hall to encourage engagement among all campus residents.

Provide a Variety of Social Spaces
- Create a mix of private and public outdoor spaces that foster meeting and gathering spaces.
- Utilize existing topography to enhance and define social space.

Promote Chance Encounters
- Provide walking paths to get from building to building and create a variety of seating alcoves along them.
- Provide public places that will attract people, such as a coffee shop, indoor/outdoor games, or spaces that elicit conversations.

COMMUNITY CONNECTIONS

Neighborhood Connections
- Provide pedestrians, including those who parallel park on Morrill Drive, a safe place to walk, and eliminate the need to cross Morrill Drive without a crosswalk in order to reach a sidewalk.
- Make connections to nearby campus resources known to students.
- Encourage a preference for walking over driving: Clearly mark paths and path entrances. Provide benches and amenities such as weather protection along paths.

Campus Connections
- Provide sidewalks and bike paths from Wood Hall to the existing campus path network to create and promote connections to the rest of campus.
- Provide live/work/study connections within the mixed-use environments called for in the guiding principles of the Campus Physical Master Plan.
- Make connections to campus and community resources known to students via the development of a detailed campus map that is distributed to them upon move-in.

City Connections
- Connect Wood Hall via sidewalks and paths to greenways, trails, and sidewalks that extend to resources and destinations outside of the N.C. State Campus.
- Make city connections known to students.
- Encourage walking, biking, or the use of public transportation to reach citywide destinations.
**CHECKLIST**

**CHARACTER**

**Materials**
- Landscape materials shall reflect NC State's Design Guidelines while allowing for design and construction innovation that respects, augments and highlights the unique physical, environmental and programmatic identity of Wood Residence Hall.
- To the maximum extent possible, environmentally friendly products should be given priority when choosing materials.

**Vegetation**
- Landscape areas shall be used to promote improved environmental quality and appearance of Wood Residence Hall. Vegetation shall provide a seasonal aesthetic with special attention given to important university dates and events.

**Streetscapes**
- Use trees and plantings to define spatial volume and create rhythm along the length of adjacent streetscape. Choose plants to provide spring bloom, summer shade, fall foliage color, winter branching and an opportunity for seasonal lighting and/or decorating during specific campus and/or Wood Residence Hall events.
- Use tree grates where space is confined.
- Maintain parallel parking on both sides of the Morrill Drive. Provide parking to accommodate ultra compact and/or alternative fuel vehicles.
- Improve streetscape surrounding with trees and other landscape plantings. Secondary elements should provide detail and texture to the landscape.

**Site Furniture and Amenities**
- Choose a standard palette of furniture for ease of maintenance, durability, and distinctiveness that highlight the uniqueness of Wood Residence Hall.

**Management**
- Develop a management program to maintain the positive attributes of Wood Residence Hall. Develop management strategies in collaboration with associated University departments and divisions and in concert with existing university best practices and guidelines, including those contained within this document.

**ENVIRONMENTAL + ECOLOGICAL**

**Protect Water Resources**
- Reduce runoff quantities to minimize adverse impacts to water resources, such as Rocky Branch Creek and the larger municipal water supply chain.
- Minimize exposure to and introduction of pollutants in storm water runoff to protect water quality.
- To the maximum extent practicable, expand the interconnected water resource network via implementation of green infrastructure to reduce storm volumes and resultant erosion.
- Use drought tolerant, disease resistant plants to reduce water and petrochemical demands.
- Design hydrozoned landscape areas to create viable plant communities capable of protecting water resources via their functional adaption to various hydrologic regimes, wet to dry.
Waste Management

☐ Create a small, localized compost facility for students to capture and reuse organic waste generated on site.

☐ Reuse waste materials, such as rocks, pallets, and metal to construct landscape structures and amenities.

Flora and Fauna

☐ Develop design and conservation strategies to create and enhance habitat and connectivity to larger landscape systems.

☐ Establish specific management practices to increase regionally native plants and animal biodiversity.

☐ Integrate dynamic processes, such as natural disturbances, to facilitate the movement of disturbance dependent species within landscapes.

☐ Whenever and wherever possible, remove invasive and aggressive plants species.

Soil, Terrain, and Topography

☐ Use geology to clarify the soil capability classes and to determine best use, such as in determining appropriate plants communities.

☐ Carefully analyze the soil biology to better match plants to soil conditions and improve the quality of in-situ soils.

☐ To the maximum extent possible, utilize the existing topographical profile in the development of all landscape improvements to reduce soil disturbance.

Addressing Climate Change

☐ All landscape design shall utilize solar orientation and exposure to minimize summer and maximize winter solar gain.

☐ Organize landscape features and plantings into compositions that capture and direct summer breezes, and deflect winter breezes.

☐ Explore all possible methods of energy conservation, including the-use of green roofs, to insulate buildings, geothermal to heat and cool the buildings, and photovoltaic panels to generate power and/or heat water.

**FITNESS + EXERCISE**

Integration of Programs

☐ Entice people to visit Wood Residence Hall by providing spaces that function as multi-purpose areas for a variety of social and programmatic activities.

☐ The landscape around Wood Residence Hall should provide ample covered seating areas.

☐ All analysis, planning and design activities shall consider internal and external landscapes/forested areas in and adjacent to Wood Residence Hall for development into fitness and/or exercise amenities.

Promote Physical Activity

☐ Accentuate local connections to amenities such as Miller Fields, the City of Raleigh greenway system, and Carmichael Gym through the use of signage.

☐ Place informational signage describing the intention of workout stations next to each workout stations. Signs shall include recommended exercises and statistical information that describe both the workout and its benefits.

☐ Place informational signage next to bike racks that include a map of designated routes to different campus destinations. Sign shall include statistical information describing distance, average travel time (non-stop), and average calories burned for walking, running, and cycling for each route.

☐ Provide bike racks at a minimum of 1 bike stall for every 5 Wood Hall residents.
CHECKLIST

FITNESS + EXERCISE (CONTINUED)

Promote Physical Activity

☐ Accentuate local connections to amenities such as Miller Fields, the City of Raleigh greenway system, and Carmichael Gym through the use of signage.

☐ Place informational signage describing the intention of workout stations next to each workout station. Signs shall include recommended exercises and statistical information that describe both the workout and its benefits.

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☐ Provide bike racks at a minimum of 1 bike stall for every 5 Wood Hall residents.

Site Amenities

☐ The landscape around Wood Residence Hall shall include at least one flat, open area of an eighth acre (5,445 sq ft) or greater.

☐ Provide a minimum of three workout stations on site that target different regions of the body. One shall target the upper body, one the core, and one the lower body.

☐ Provide at least one place for outdoor access to drinking water. Water stations should be centrally located between the previously mentioned workout stations.

☐ Provide a universally accessible, multi-purpose path with distance indicators throughout the site and within the forested areas adjacent to the site.

☐ All proposed trails, ropes courses, and workout stations shall incorporate different levels of exercise intensity, such as trails with different slopes or pull up bars of varying heights.

PERCEPTION + ENGAGEMENT

Student

☐ Create a digital information “kiosk” located within the Wood Hall landscape that communicates information, schedules, and events that relate to WWV and/or other health and wellness activities.

☐ Implement other WWV design guidelines that relate to the improvement of WWV aesthetic and functional qualities to create a desirable place to live, work, and play.

☐ Encourage engagement through incentives for participation, such as offering WWV student discounts on local wellness-related products and services.

Campus

☐ Create an “outdoor learning laboratory” within the Wood Hall landscape that is capable of hosting a series of wellness-related events and workshops offered to all students. This will allow WWV students to become ambassadors, or teachers, who will teach others about various wellness topics.

☐ Create a network of “unconventional fitness stations” within the landscape.

☐ Establish a facility for the distribution of CSA (Community Supported Agriculture) shares to the campus population.

☐ Install additional signage in and around Wood Hall, (i.e. Rocky Branch) that lead people to this “new” place.
Community

☐ Host events that encourage members of the community to interact with Wood Wellness Village programs and students.

☐ Create a network of volunteering opportunities at wellness-related venues that allow members of the Wood Wellness Village to complete their service-learning hour requirements.

☐ Create a series of printed maps or booklets that show WWV students where they can access health-related amenities in and around the campus.

When reviewing this checklist, keep in mind the goal of creating a convergence of benefits throughout the seven dimensions of wellness: