
American Society of Landscape Architects

PPN-001: Creating Welcoming & Inclusive Landscapes on
Higher Education Campuses

November 12, 2022

Campus Planning & Design Professional Practice Network

Creating Welcoming & Inclusive Landscapes on Higher Education Campuses



Hosted by:

**Stan Szwalek, David Cutter, Tony Catchot,
Krista Van Hove, Joe Favour**

Campus Planning & Design Professional Practice Network

Presented by:

Taylor Wilson

MLA Candidate, North Carolina State University

April Riehm

MLA & City and Regional Planning Candidate, Clemson University

Agenda

1. Welcome & Introduction
 2. Taylor Wilson
Trail Oriented Development's Role in Higher Education + Student Health
 3. April Riehm
Campus Playscapes: Designing a Built Environment that Creates more Equity and Inclusion for Students with ADHD and other Learning Disabilities at Clemson University
 4. Small Group Discussion (15 minutes)
 5. Reconvene & Closing
-

A photograph of a university campus entrance. In the center, a large, ornate, black wrought-iron archway spans across a paved walkway. The archway features intricate scrollwork and a central crest. Below the arch, several people are walking along the path. To the right, a tall, black, ornate lamppost stands on a stone pillar. The background is filled with lush green trees and a clear sky. The overall scene is bright and sunny.

How can we as landscape architects create more welcoming and inclusive landscapes on campus?

Taylor Wilson

MLA Candidate 2023, North Carolina State University

Trail Oriented Development's Role
in Higher Education + Student Health



Trail Oriented Development's Role in Higher Education + Student Health

Exploring Ideas at North Carolina State University
with Connections to Dorothea Dix Park

Taylor Wilson | MLA Candidate 2023 | North Carolina State University
2022 ASLA Conference | Campus Planning and Design PPN | November 12th, 2022



College Students Feeling Moderate to High Stress (79%)



College Students Feeling Moderate to High Psychological Distress (75%)

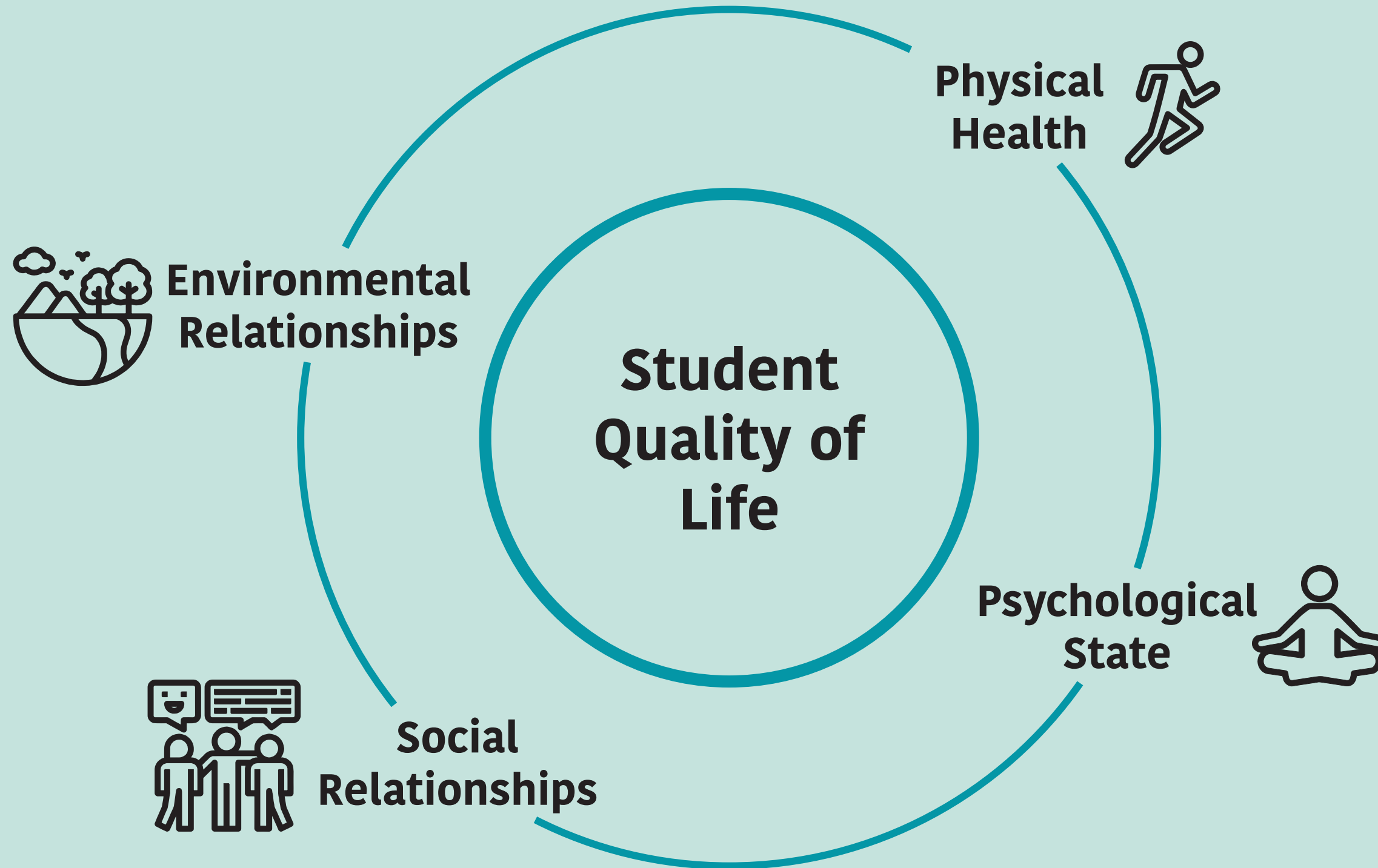
Student Mental Health

Trail Oriented Development (TrOD): an active transportation method using trails to link housing and popular community destinations, sparking opportunities for new development.

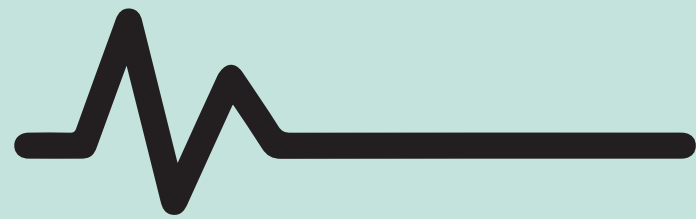


Razorback Greenway: Fayetteville Arkansas

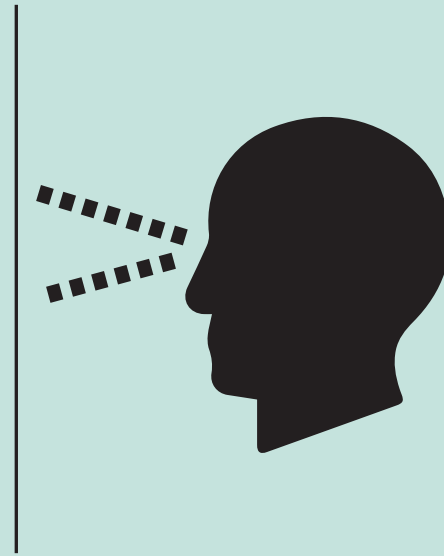
Trail Oriented Development



Trails + Higher Education



Inactivity



**Poor
Sight-**



**Lack of
Lighting**

Trails + Student Safety

Investigate how Trail Oriented Development can work with existing mobility networks to connect students to Dix Park and ultimately contribute to student health and wellbeing



Analyze existing conditions that contribute or detract from students walking and biking to Dix Park



Understand student sentiments about existing and preferred walking and biking conditions



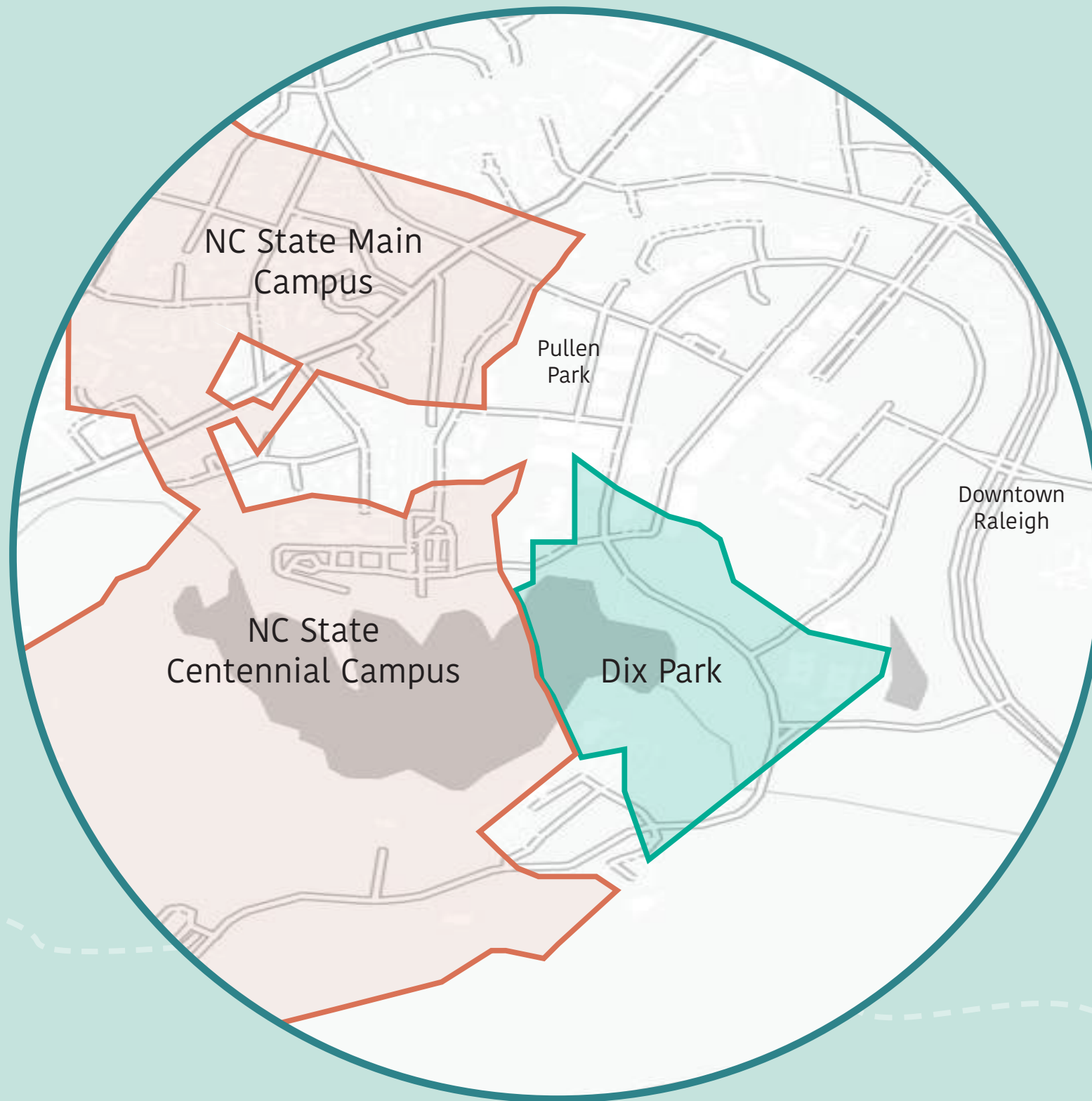
Explore design applications of Trail Oriented Development in the context of connecting NC State with Dorothea Dix Park



Research Goals

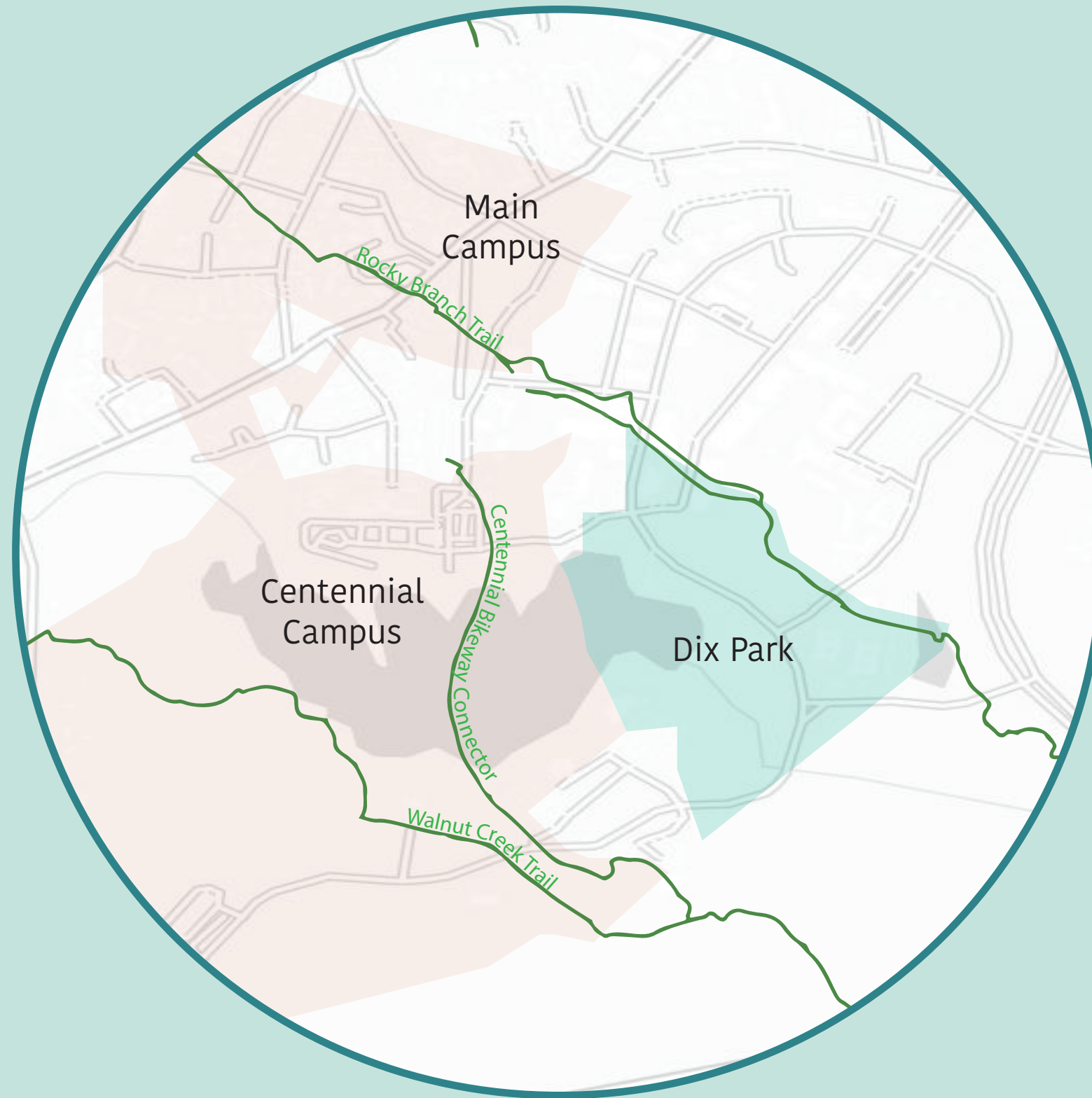


NC State Campus Master Plan



Dix Park Master Plan

NC State + Dix Park

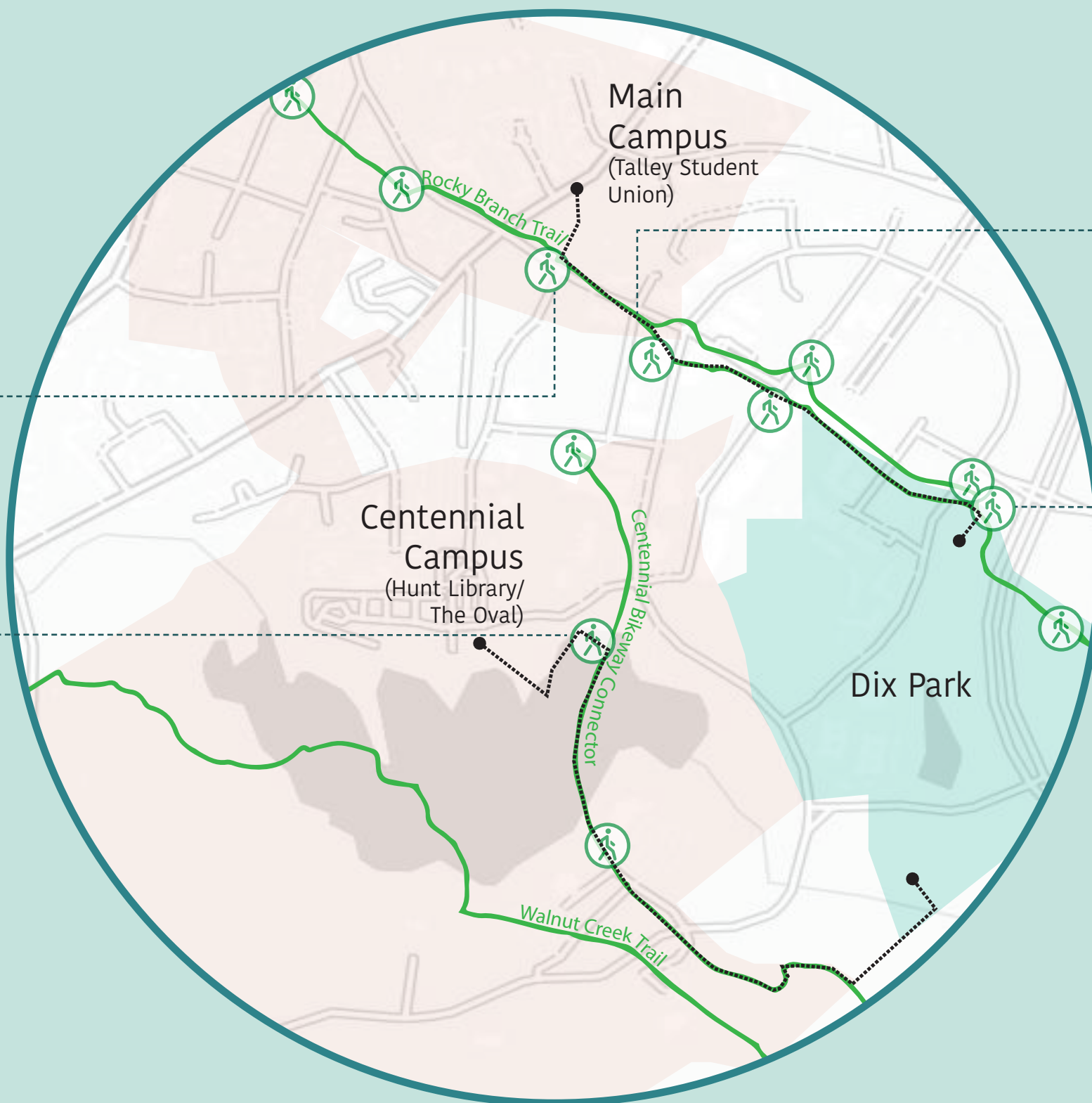


Greenway Network

Rocky Branch Signage



Rocky Branch Entrance to Main Campus



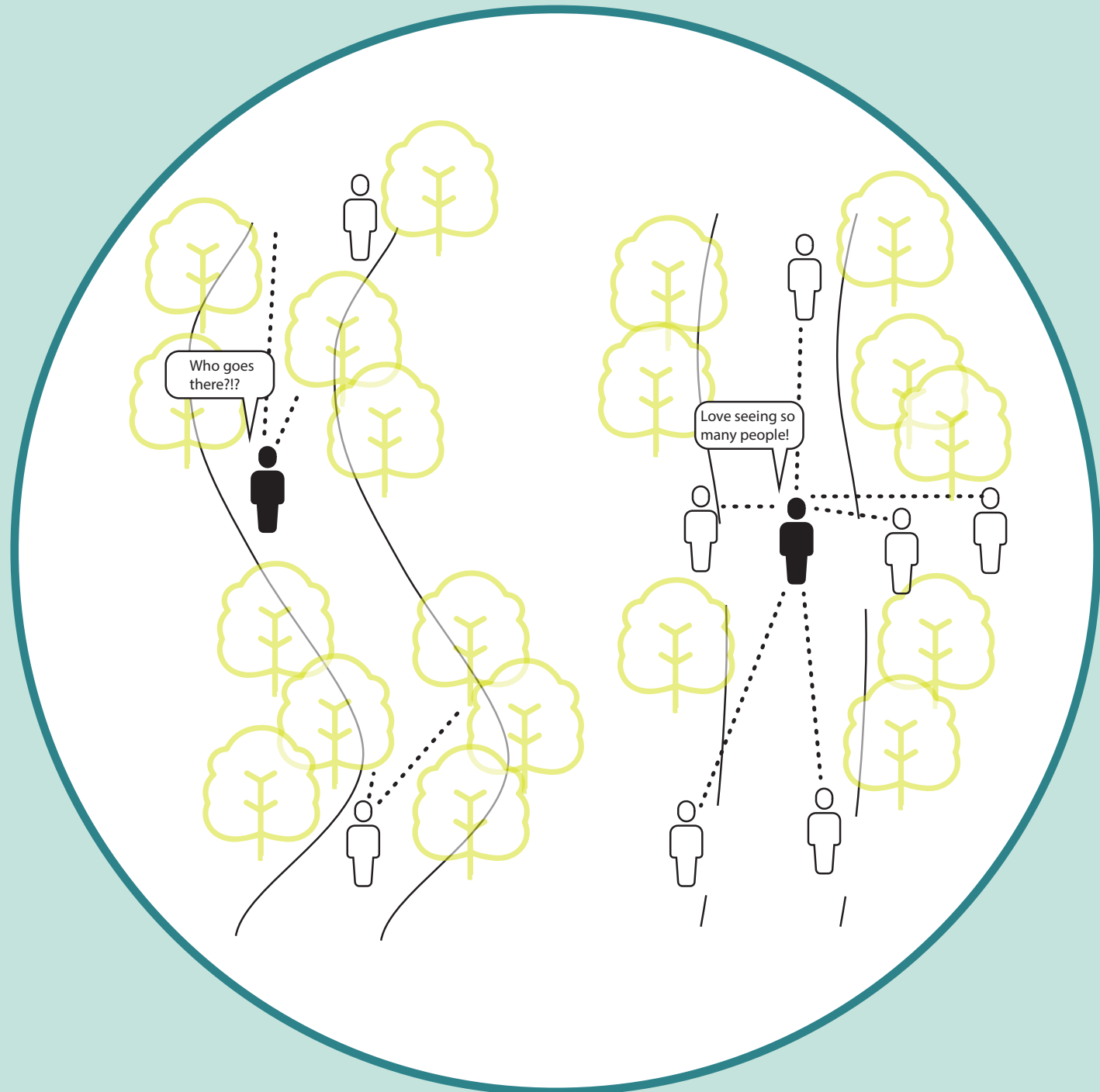
Rocky Branch Entrance to Dix Park

Trail Entrance

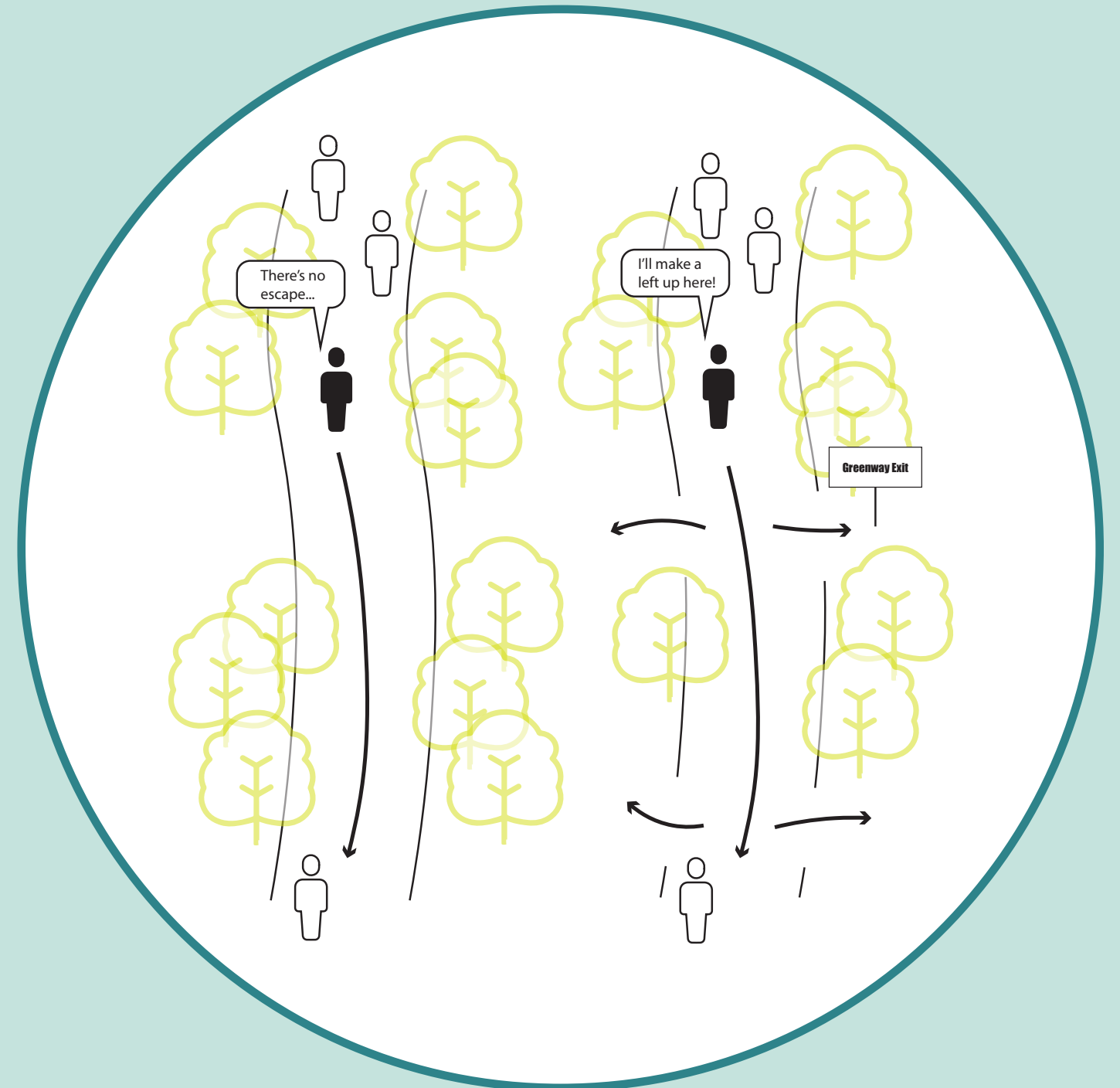
Centennial Entrance



Greenway Conditions

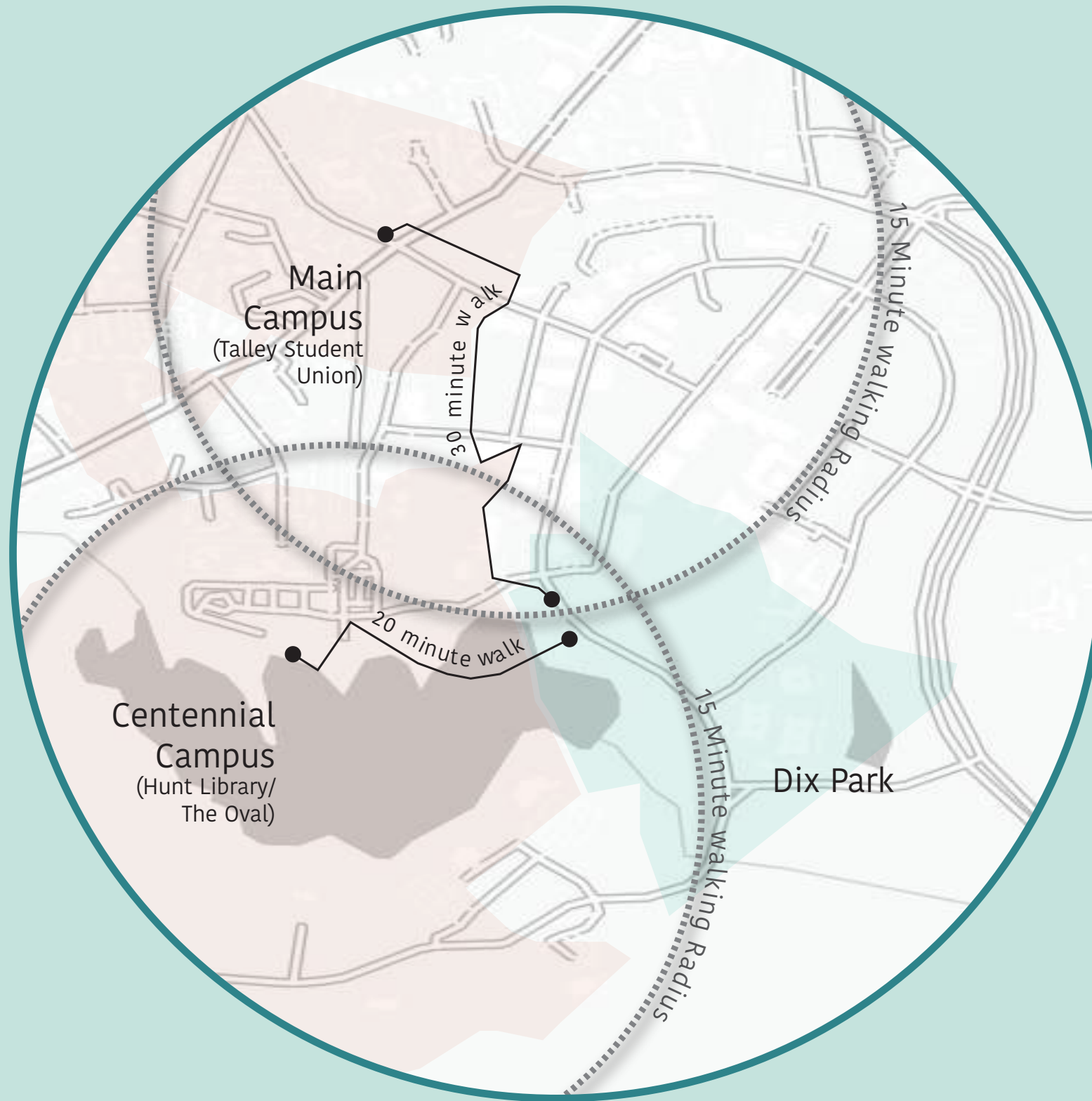


**Visibility to and
by Others**



**Choice and
Legibility**

Safer Greenways



Walking Distance



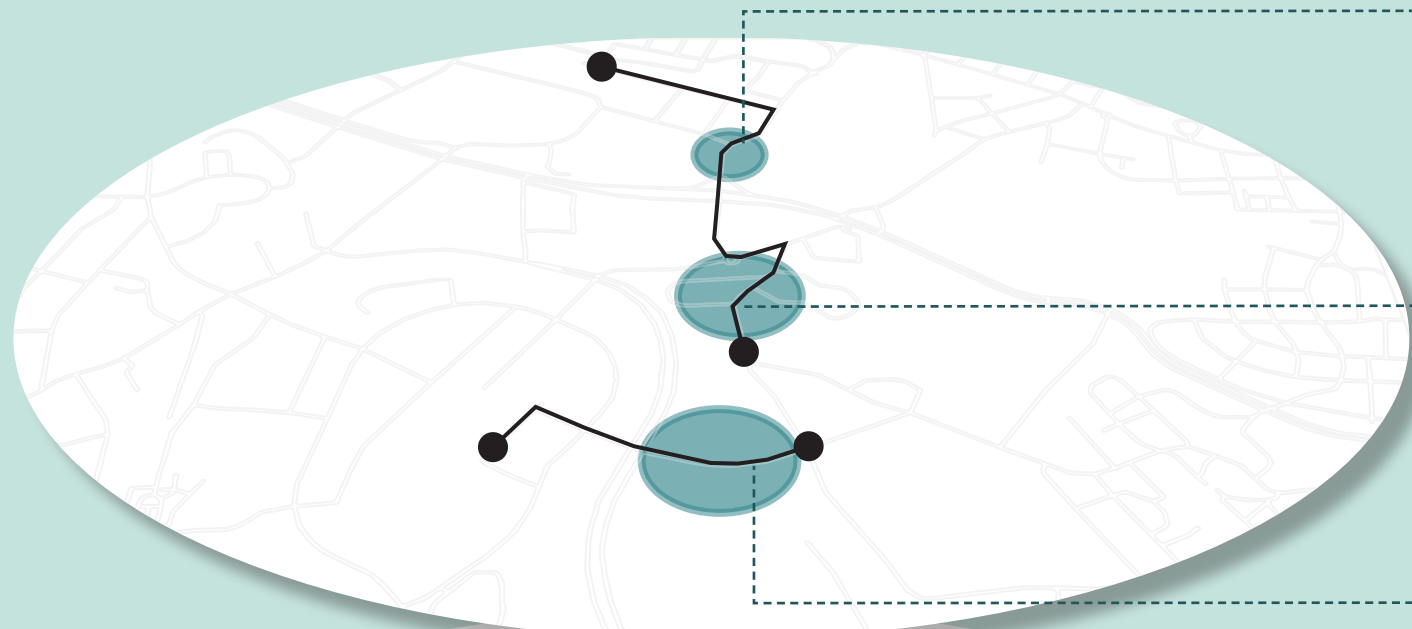
**Preferred Path
(50%)**



**Preferred Street
(64%)**

Walking Preferences

Path and Sidewalk Gaps



Bilyeu Rd.

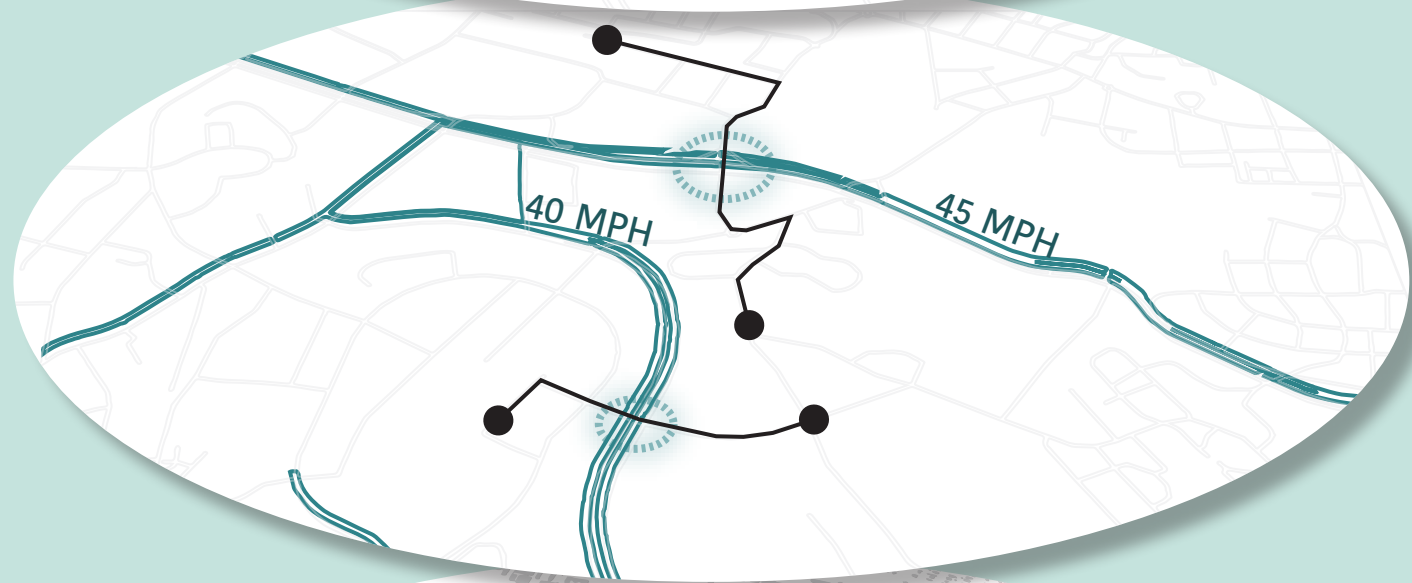


Pullen Road



Blair Drive

Road Speed and Crossings



40 MPH

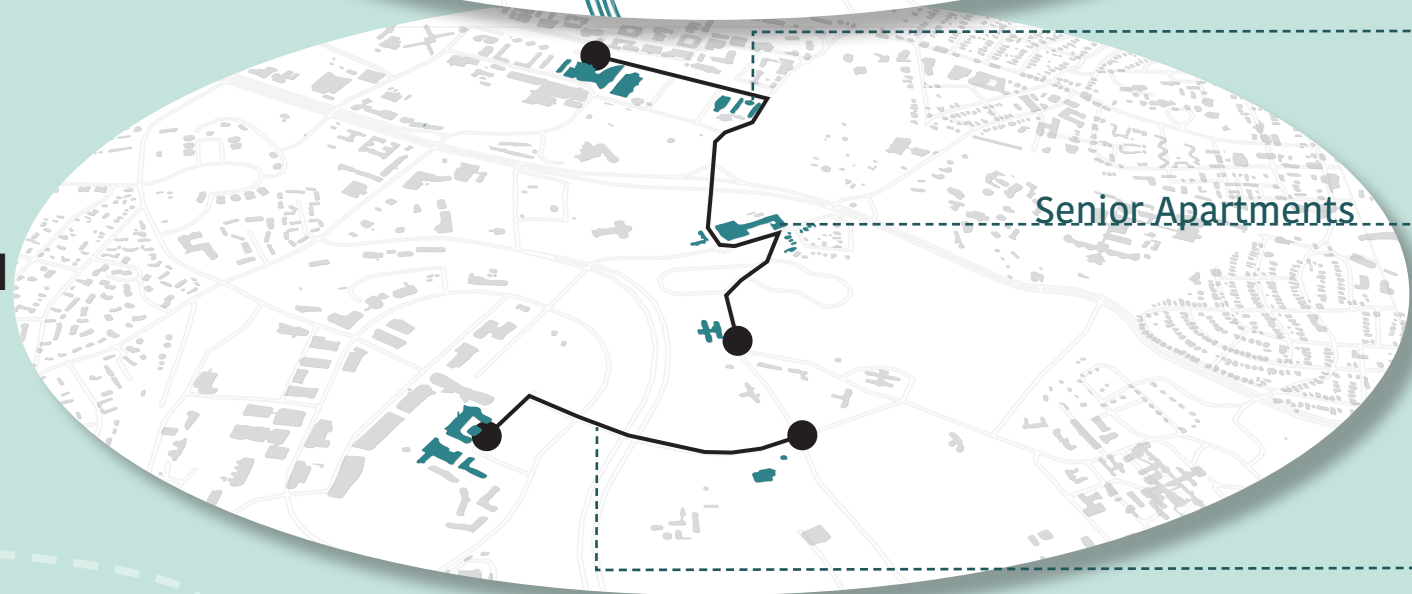


Death = 47%



Serious Injury = 79%

Variety and Interest



Senior Apartments



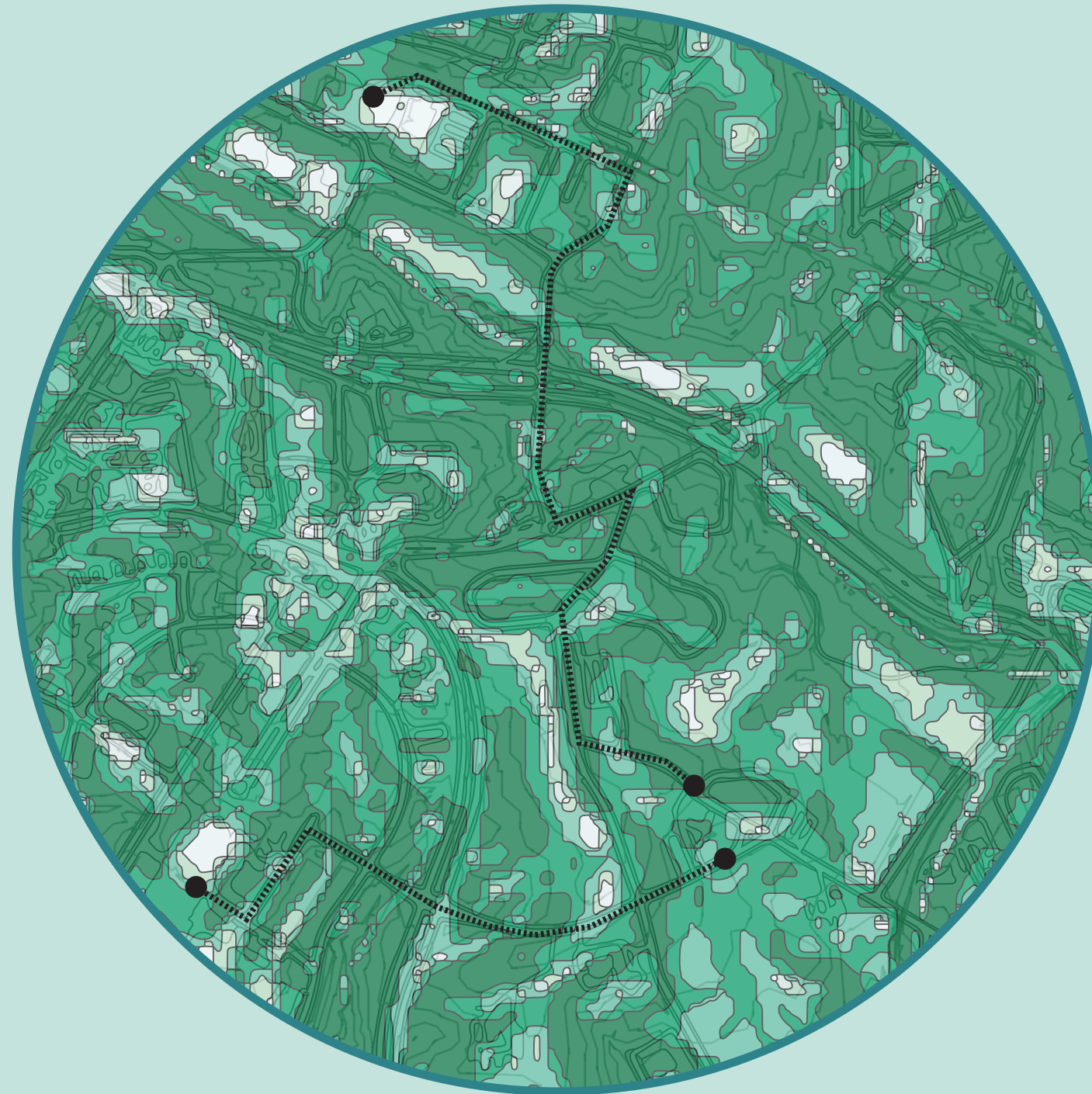
Blair Drive Parking Lot

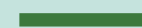
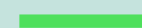
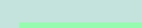



Student Dorms



Walking Experience

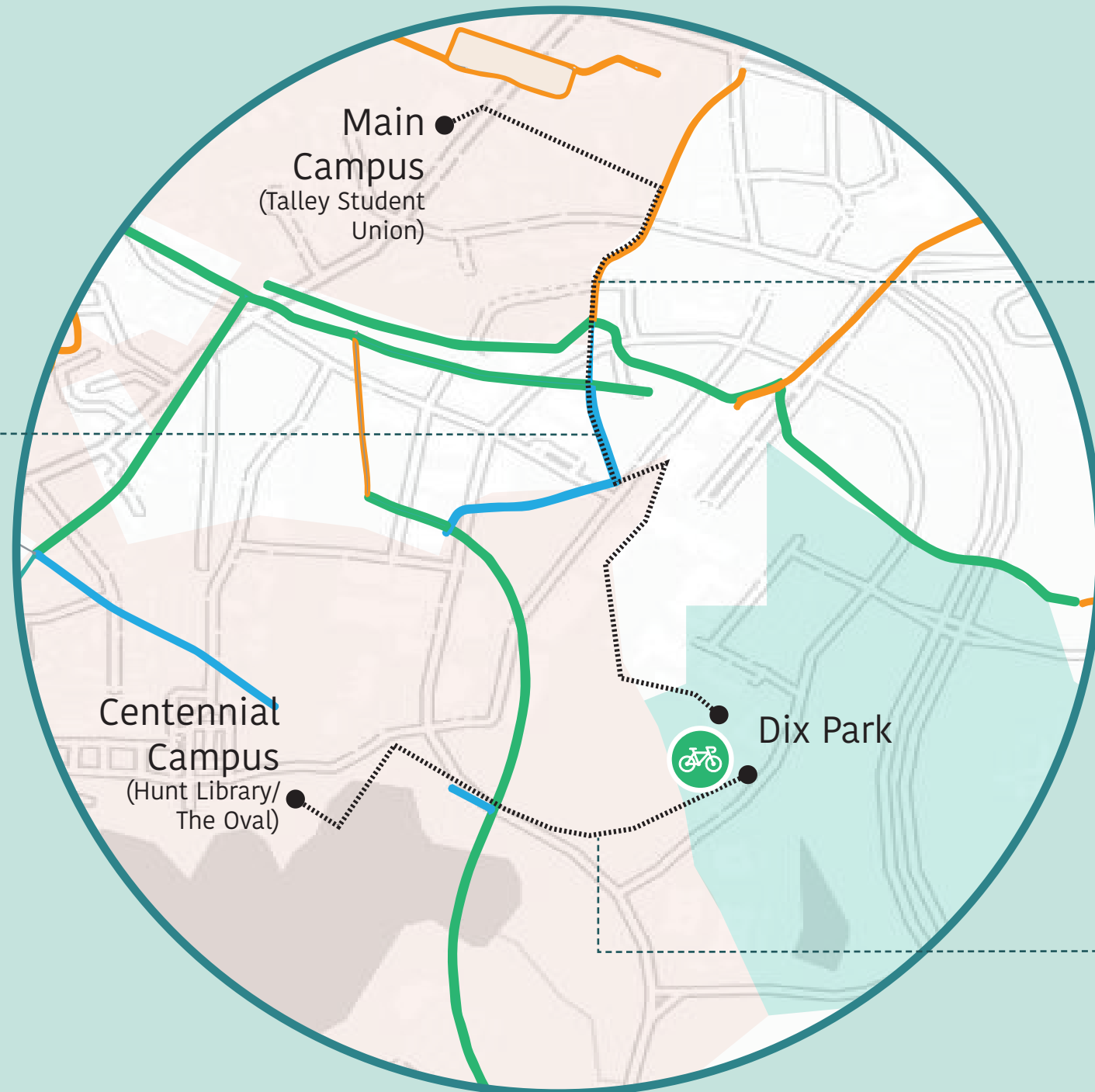


-  >20% Slope
-  10-20% Slope
-  5-9% Slope
-  >5% Slope

Biking: Slope + Terrain



Pullen Road
(separated lane)



Pullen Road
(sharrow)



Blair Drive
(no bike lane)

- Trail/Separated Bike Path
- Designated Bike Lane
- Sharrow
- Bike Share Facility

Bike Infrastructure



**Preferred Path
(71%)**

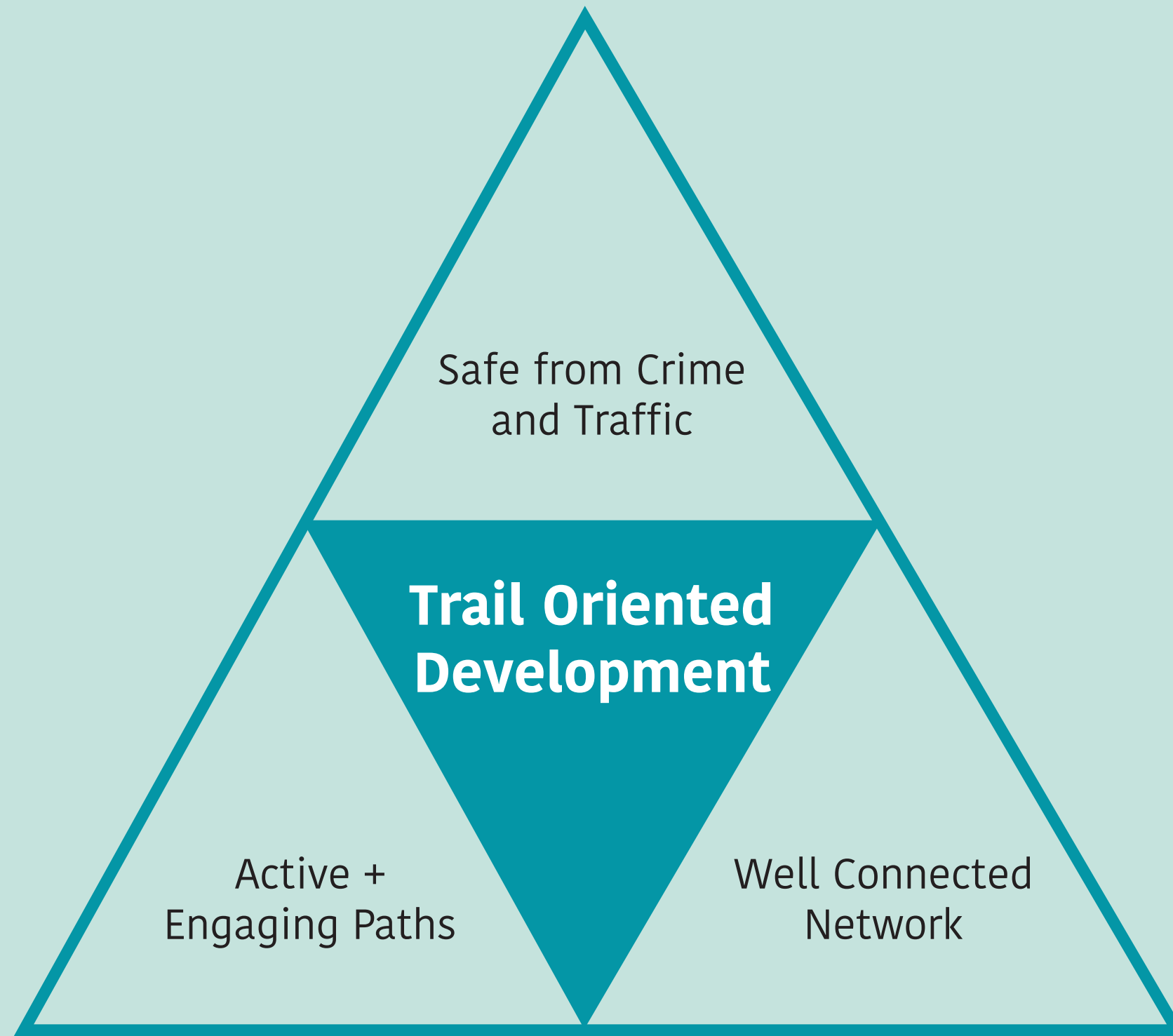


**Preferred Street
(36%)**



**Preferred Street
(36%)**

Biking Preferences



Conclusion

American College Health Association. American College Health Association-National College Health Assessment III: Reference Group Executive Summary Spring 2022. Silver Spring, MD: American College Health Association; 2022.

Luymes, D. T., & Tamminga, K. (1995). Integrating public safety and use into planning urban greenways. *Landscape and Urban Planning*, 33(1-3), 391-400. [https://doi.org/10.1016/0169-2046\(94\)02030-j](https://doi.org/10.1016/0169-2046(94)02030-j)

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Smithgroup. (2022). NC State Preliminary Plan. <https://smithgroup4.sharepoint.com/sites/Information/Shared%20Documents/Forms/AllItems.aspx?id=%2Fsites%2FInformation%2FShared%20Documents%2FProjects%2FNC%20State%2FPreliminary%20Plans%2FNORTH%20CENTRAL%20SOUTH%20WEST%20CENTENNIAL%2Epdf&parent=%2Fsites%2FInformation%2FShared%20Documents%2FProjects%2FNC%20State%2FPreliminary%20Plans&p=true&ga=1>

WHOQOL. (1996). WHOQOL-BREF: Introduction, Scoring, and Generic Version of the Assessment. World Health Organization. <https://apps.who.int/iris/bitstream/handle/10665/63529/WHOQOLBREF.pdf?sequence=1>



References

April Riehm

MLA & City and Regional Planning Candidate, Clemson University

Campus Playscapes:
Designing a Built Environment that Creates more Equity
and Inclusion for Students with ADHD and other Learning
Disabilities at Clemson University

**CAMPUS
PLAYSCAPES**

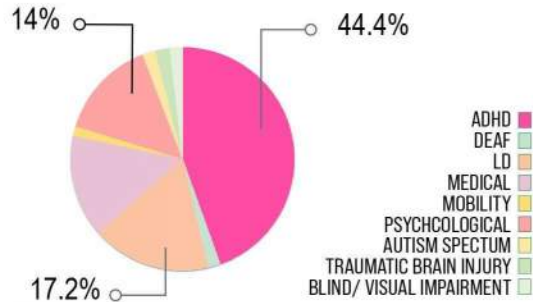
**DESIGNING A BUILT
ENVIRONMENT THAT
CREATES MORE EQUITY
AND INCLUSION FOR
STUDENTS WITH ADHD
AND OTHER LEARNING
DISABILITIES AT CLEMSON
UNIVERSITY**

LEE HALL



STUDENTS AT CLEMSON UNIVERSITY WITH ADHD

CLEMSON ACCESSIBILITY SERVICES STUDENT DATA



THE LARGEST GROUP OF STUDENTS RECEIVING ACCESSIBILITY SERVICES AT CLEMSON UNIVERSITY ARE ADHD.



COLLEGE OF ARCHITECTURE, ARTS AND HUMANITIES

CLEMSON UNIVERSITY

- 23,000 STUDENTS ENROLLED
- 1210 STUDENTS ARE REGISTERED FOR DISABILITY SERVICES
- 537 OF REGISTERED STUDENTS HAVE ADHD



CLEMSON UNIVERSITY

23,000 STUDENTS

GLOBALLY, 16% ALL COLLEGE STUDENTS HAVE ADHD**



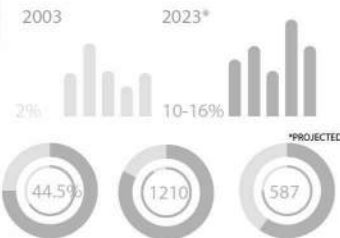
SOUTH CAROLINA 235K TOTAL STUDENTS

OF THE 20 MILLION STUDENTS IN THE UNITED STATES, 8-10% HAVE ADHD

IF 8-16% OF OF ALL COLLEGE STUDENTS ARE ADHD

AND ONLY 2%

OF THE CLEMSON STUDENT BODY REGISTERED FOR ADHD ACCESSIBILITY SERVICES, 1300-3100 STUDENTS WHO MAY HAVE QUALIFIED, WERE WITHOUT SCHOOL PROVIDED SUPPORTS.

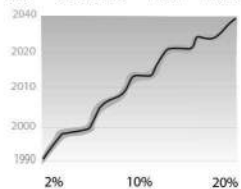


THE NUMBER OF ADHD DIAGNOSES IS GROWING

CO-MORBIDITIES



ESTIMATED PERCENTAGE OF US STUDENTS WITH ADHD



**ACCORDING TO A 2021 STUDY BY THE WORLD HEALTH ORGANIZATION, 16% OF COLLEGE STUDENTS HAVE ADHD GLOBALLY.

*CLEMSON DATA IS FROM 2016



BIOPHILIA:

AN INTRINSIC HUMAN INSTINCT TO BE CONNECTED TO NATURE



KINESTHESIA:

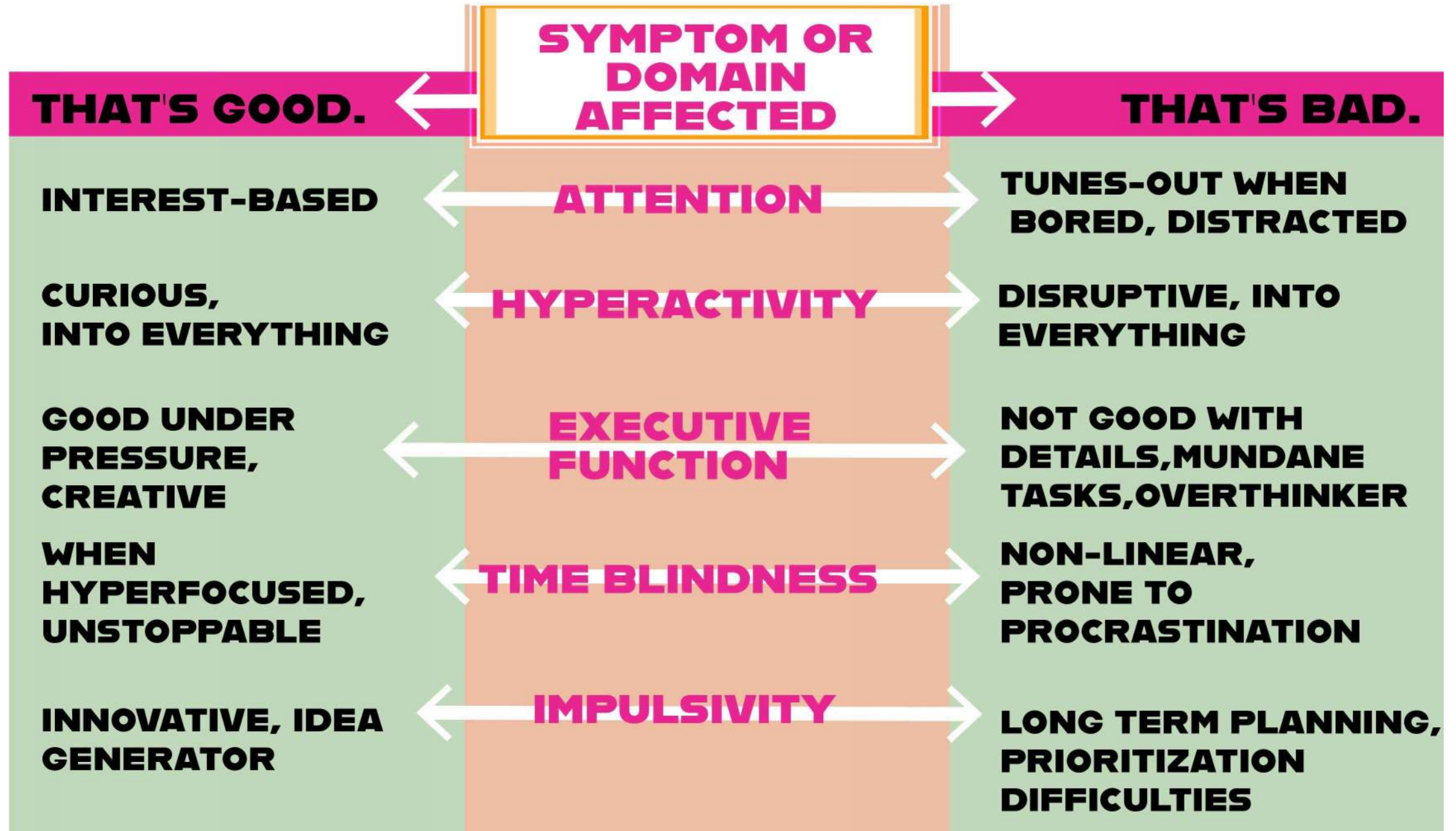
RELATES TO THE SENSE OF BODY AWARENESS AND MOVEMENT



OUTDOOR PLAY & RESTORATIVE NATURE:

A CHANCE TO REFOCUS WHEN LEARNING IS STUCK

ATTENTION DEFICIT HYPERACTIVE DISORDER



CHALLENGES IN THE BUILT ENVIRONMENT FOR ADHD LEARNERS



BRIGHT LIGHTS, CLUTTER, OFFENSIVE COLORS



NOISE, ESPECIALLY CERTAIN FREQUENCIES



STRONG ODORS, FOOD SMELLS



SITTING STILL FOR LONG PERIODS OF TIME



CLEMSON UNIVERSITY

STUDIO CLASSES: LANDSCAPE ARCHITECTURE ART, AND ARCHITECTURE

- BRIGHT
- NOISEY
- CONSTANT ACTIVITY



CAMPUS PLAYSCAPES

BIOPHILA FOR INTERIOR SPACES



UTILIZATION OF LOW MAINTENANCE PLANTS WITH LOW LIGHT REQUIREMENTS

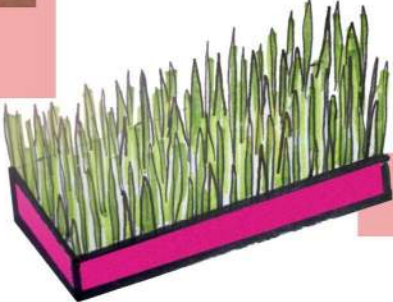
INTERIOR PLANTINGS:

- IMPROVE MENTAL HEALTH
- IMPROVE AIR QUALITY
- ARE NOISE DAMPENING
- CAN BE USED FOR WAYFINDING
- & BRING DELIGHT

BEFORE



GREEN WALLS WITH CLOSED LOOP IRRIGATION

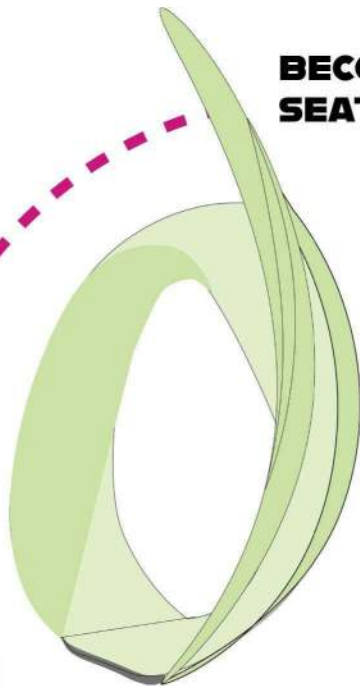


SEASONAL GRASSES CAN BE USED FOR A RAPID BUT TEMPORARY INFUSION OF GREEN

**CAMPUS
PLAYSCAPES**
KINESTHESIA
&
BIOPHILIA



**A SINGLE BLADE
OF GRASS**



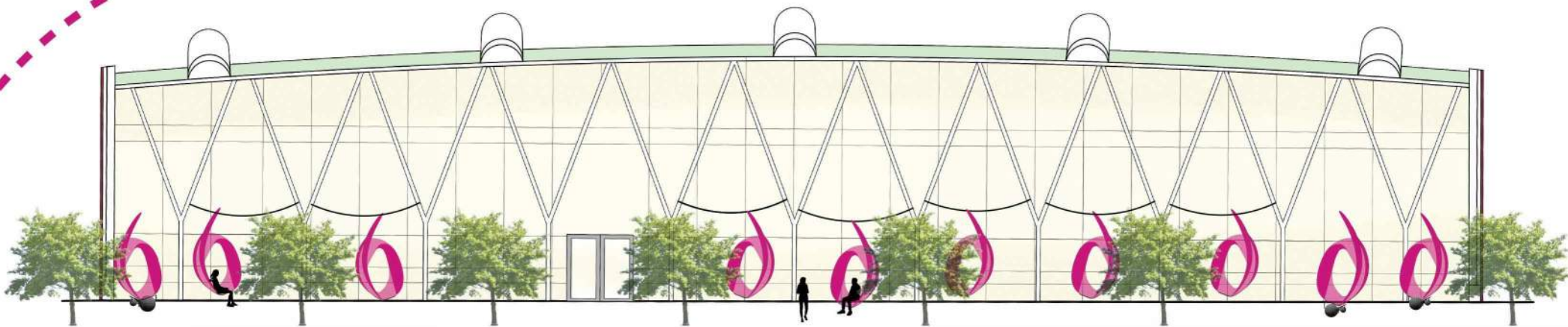
**BECOMES A
SEAT-**



**-THAT CAN ROLL,
BOUNCE, AND ROCK-**



- OR SWING.

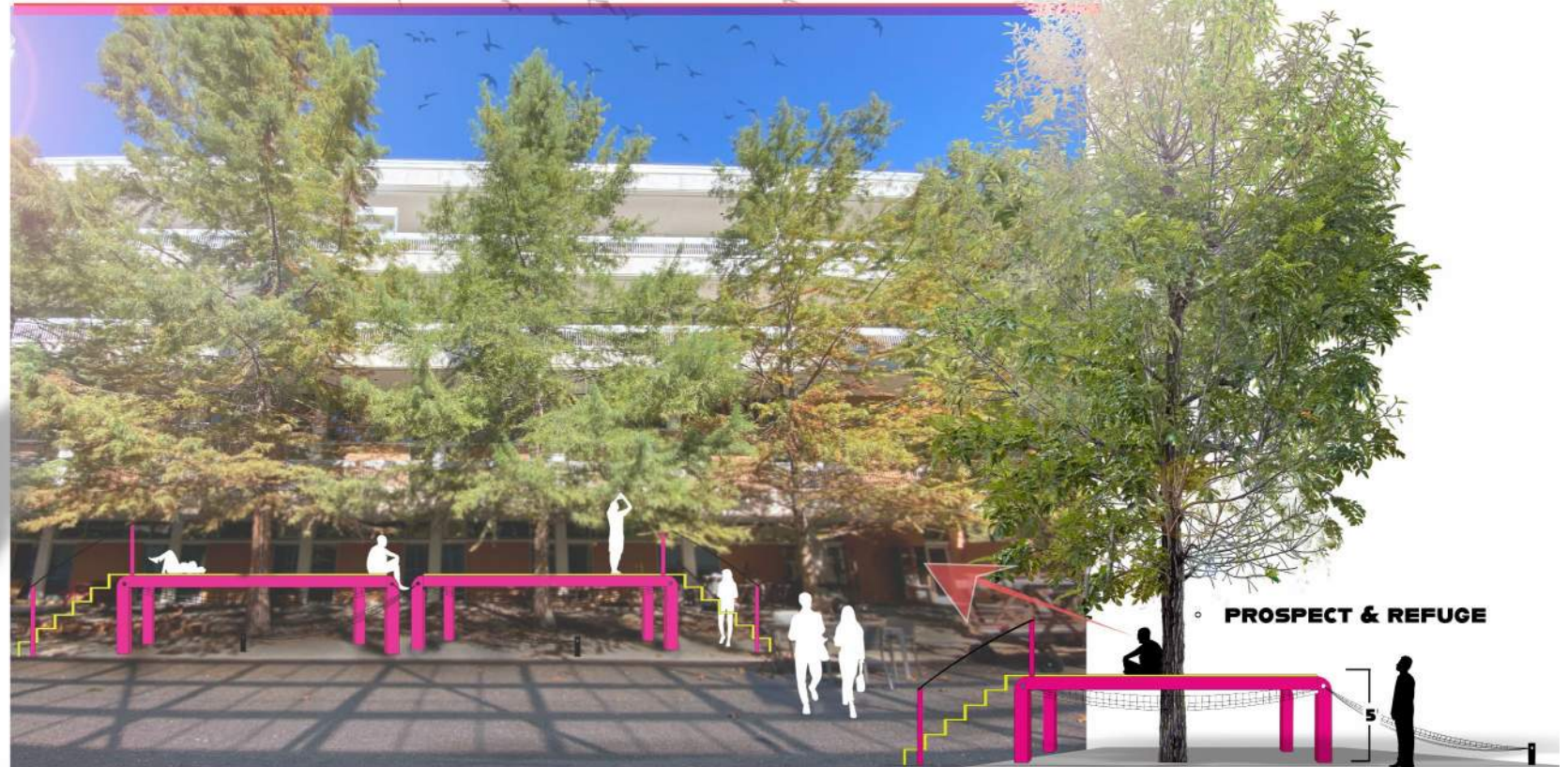
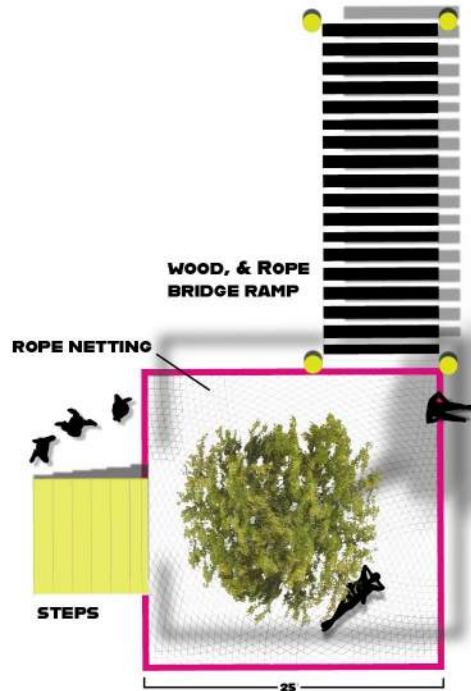




CLIMBING PERCHES

- FOR SOCIAL GATHERING
- OR SOLITARY RETREAT
- QUIET, CALMING
- RESTORATIVE NATURE

**LEARN,
PLAY,
LEARN.**



**CAMPUS
PLAYSCAPES**
FUN!

**A HILLSIDE
SLIDE IS A FUN
ALTERNATIVE
TO THE STAIRS**



**PERCHES TO HANG
OUT OR HANG ON,
ACTIVE OR
PASSIVE PLAY**



**DOUBLE PLATFORM
SWINGS DESIGNED
FOR SOCIALIZING
AND UNIVERSAL
ACCESSIBILITY**



**BIOPHILIC
FORMS, CALMING
OR STIMULATING**





**"WE DON'T STOP PLAYING BECAUSE WE GROW OLD;
WE GROW OLD BECAUSE WE STOP PLAYING."**

-GEORGE BERNARD SHAW

Discussion Questions

- 1. What is being considered at the beginning of your planning and design process to promote inclusivity in design of campus spaces? What examples can you share?*
 - 2. How can we as landscape architects create more welcoming and inclusive landscapes on campus?*
 - 3. Has your work around the design of welcoming landscapes changed the way you approach the design process?*
-