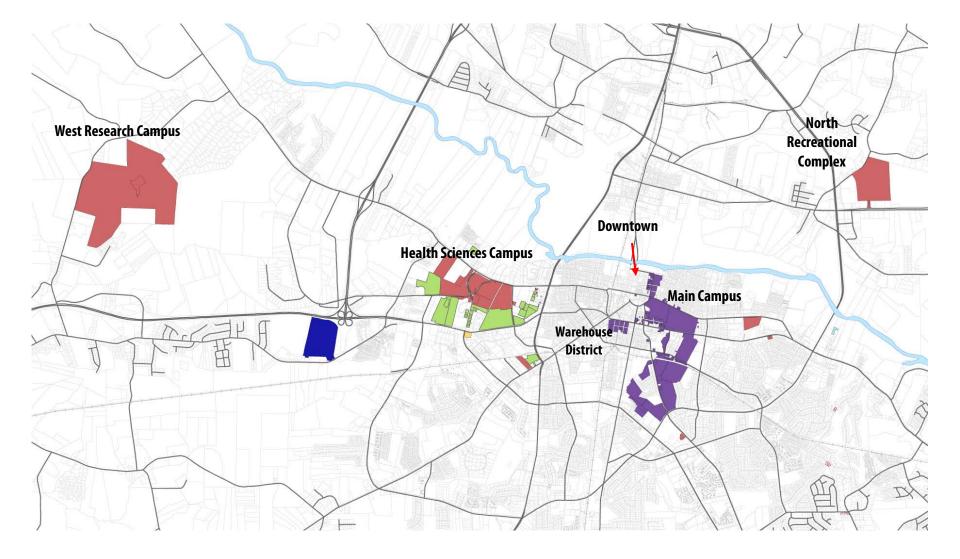
East Carolina University

21

Task 3: Site Inventory and Analysis

JJR



IJR

Regional Context

East Carolina University

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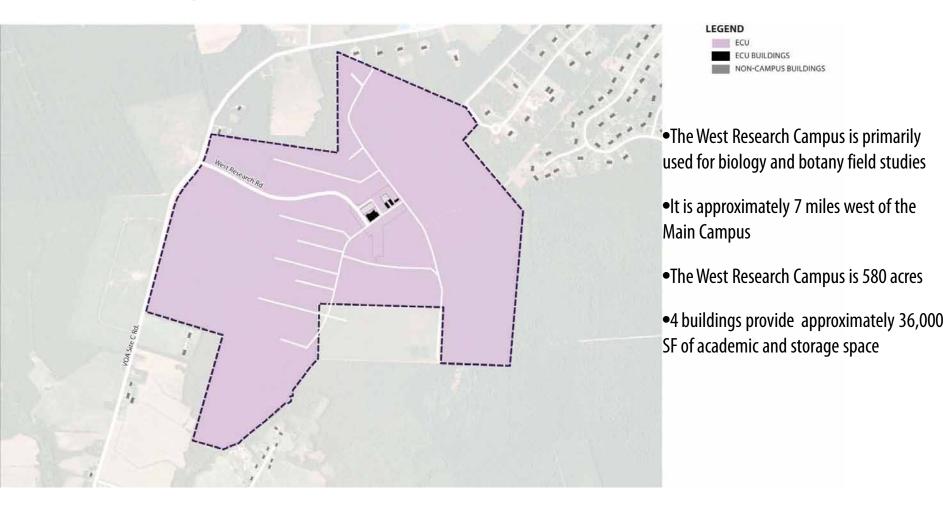
West Research Campus

JJR

East Carolina University \\ Comprehensive Facilities Master Plan

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SMITHGROUP III

Existing ECU Property



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Delineated Wetlands



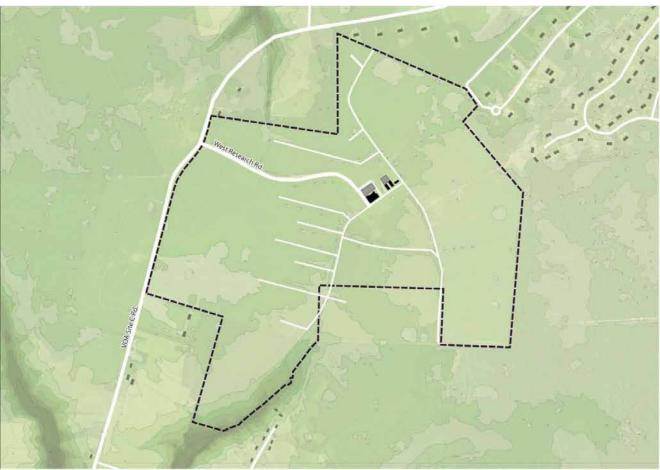


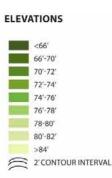
•Soils consist mostly of sandy loams

•Of these sandy loams, most are limiting

R

Soils





•The built areas of campus are fairly flat

•Campus elevations range from approximately 66 feet above sea level to 86 feet above sea level

R

Existing Topography



Existing Roads and Parking

East Carolina University

North Recreational Complex

JJR







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North Recreational Complex

East Carolina University

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East Carolina University \\ Comprehensive Facilities Master Plan

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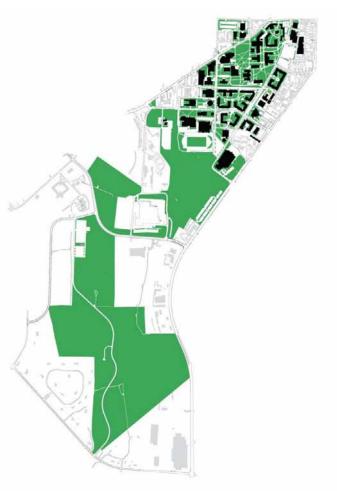
11

Main Campus

SMITHGROUP JJR



	ECU	IUofP
Campus Town Population	33,031	15,338
Total Campus Enrollment	27,677	14,638
Undergraduate	20,974	12,291
Graduate	6,417	2,347
Professional	286	n/a
Faculty	1,804	700
Staff	3,550	n/a
Campus Acreage	410	374
Number of Buildings	175	75
Gross Square Feet	4,807,026	3,549,450
Floor Area Ratio	0.27	0.22
Parking Spaces	11,844 *	3,780
Parking Ratio (persons/space)	2.33	3.87
Number of Beds	5,497	3,714
Living On-Campus n-campus, non-patient (HCS and	20% Main)	25%



Indiana University of Pennsylvania

IR

East Carolina University Main Campus

Campus Comparisons



	ECU	Cornell
Campus Population	33,031	32,295
Total Campus Enrollment	27,677	18,885
Undergraduate	20,974	13,510
Graduate	6,417	5,375
Professional	286	915
Faculty	1,804	2,906
Staff	3,550	11,504
Campus Acreage	410	2,300
Number of Buildings	175	692
Gross Square Feet	4,807,026	14,869,42
Floor Area Ratio	0.27	0.15
Parking Spaces	11,844 *	13,499
Parking Ratio (persons/space)	2.33	2.53
Number of Beds	5,497	4,729
Living On-Campus	20%	25%

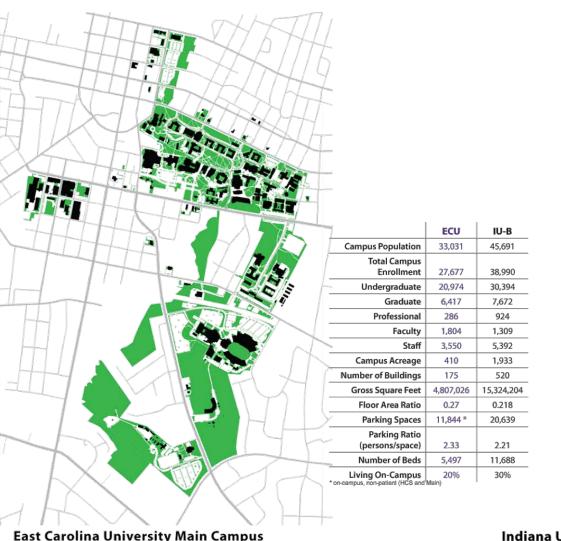


JR

East Carolina University Main Campus

Cornell University

Campus Comparisons

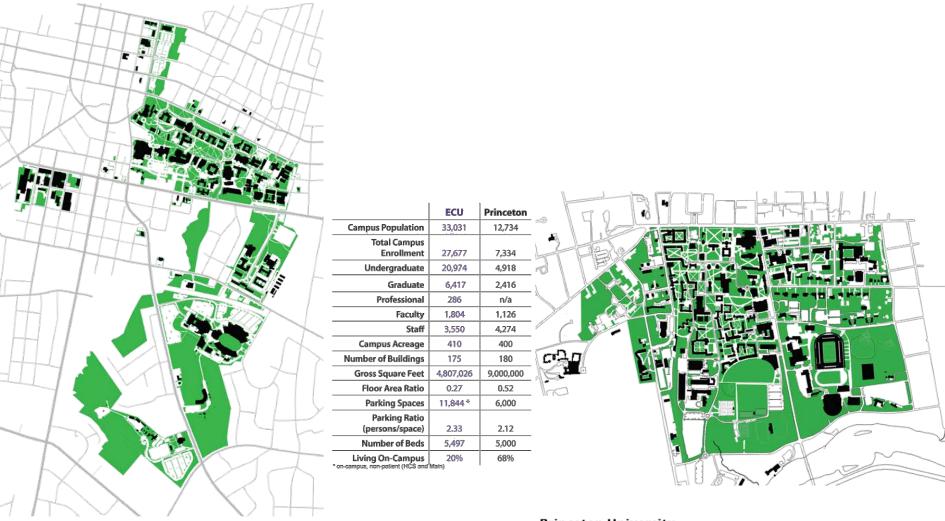




JR

Indiana University - Bloomington

Campus Comparisons



East Carolina University Main Campus

Princeton University

R

Campus Comparisons



	ECU	UNC-CH
Campus Population	33,031	39,669
Total Campus Enrollment	27,677	28,136
Undergraduate	20,974	17,628
Graduate	6,417	8,177
Professional	286	2,311
Faculty	1,804	3,295
Staff	3,550	8,238
Campus Acreage	410	729
Number of Buildings	175	337
Gross Square Feet	4,807,026	8,033,589
Floor Area Ratio	0.27	0.25
Parking Spaces	11,844 *	14,973
Parking Ratio (persons/space)	2.33	2.65
Number of Beds	5,497	8,564
Living On-Campus	20% Main)	30%



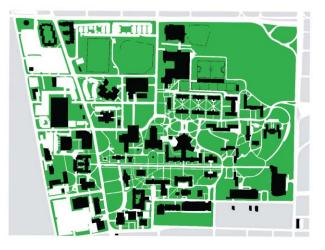
IR

University of North Carolina - Chapel Hill

Campus Comparisons



	ECU	UNC-G
Campus Population	33,031	17,138
Total Campus Enrollment	27,677	14,638
Undergraduate	20,974	12,291
Graduate	6,417	2,347
Professional	286	n/a
Faculty	1,804	700
Staff	3,550	1800
Campus Acreage	410	210
Number of Buildings	175	95
Gross Square Feet	4,807,026	5,200,000
Floor Area Ratio	0.27	0.56
Parking Spaces	11,844 *	6,580
Parking Ratio (persons/space)	2.33	3.53
Number of Beds	5,497	4,100
Living On-Campus n-campus, non-patient (HCS and	20% Main)	28%



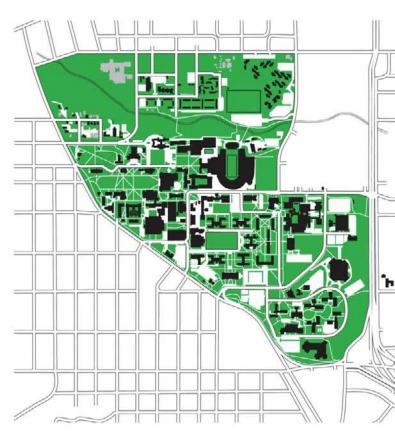
IR

University of North Carolina - Greensboro

Campus Comparisons



	ECU	UofC-B
Campus Population	33,031	35,971
Total Campus Enrollment	27,677	28,988
Undergraduate	20,974	24,473
Graduate	6,417	4,515
Professional	286	n/a
Faculty	1,804	3,715
Staff	3,550	3,268
Campus Acreage	410	786
Number of Buildings	175	334
Gross Square Feet	4,807,026	9,979,201
Floor Area Ratio	0.27	0.29
Parking Spaces	11,844 *	11,989
Parking Ratio (persons/space)	2.33	3.00
Number of Beds	5,497	7,075
Living On-Campus	20% Main)	24 %



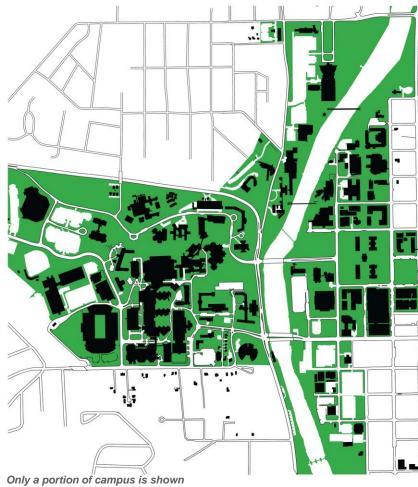
R

University of Colorado at Boulder

Campus Comparisons



	ECU	UofIA
Campus Population	33,031	45,403
Total Campus Enrollment	27,677	30,409
Undergraduate	20,974	20,907
Graduate	6,417	5,482
Professional	286	4,020
Faculty	1,804	2,156
Staff	3,550	12,838
Campus Acreage	410	1,700
Number of Buildings	175	265
Gross Square Feet	4,807,026	16,400,000
Floor Area Ratio	0.27	0.22
Parking Spaces	11,844 *	14,128
Parking Ratio (persons/space)	2.33	3.21
Number of Beds	5,497	5,578
Living On-Campus	20%	18%



JJR

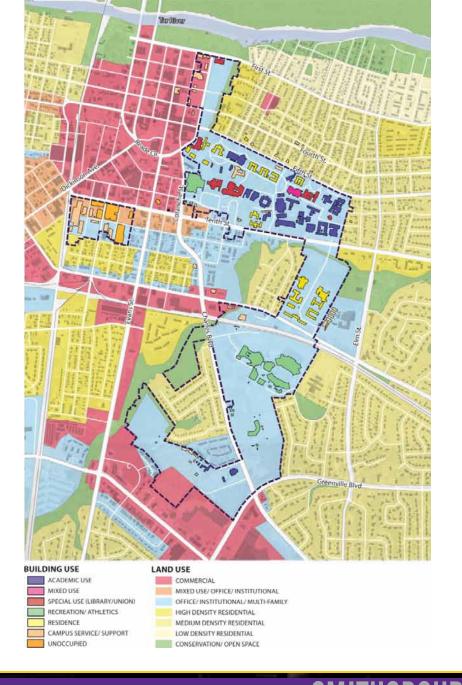
East Carolina University Main Campus

University of lowa

Campus Comparisons

Main Campus Land Use

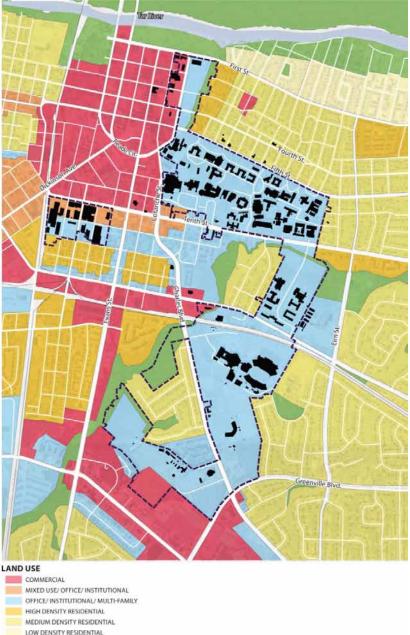
- •Academics focus to the east
- •Student life focus to the west
- •A central residential district is located between the Athletic Complex and the Academic district
- The Warehouse District is off of main campus south of 10th Street
- •Campus extends north to the east of the downtown area



Campus Land Use

Main Campus Land Use

•City of Greenville proposed future surrounding land uses are comparable to the existing land use map



R

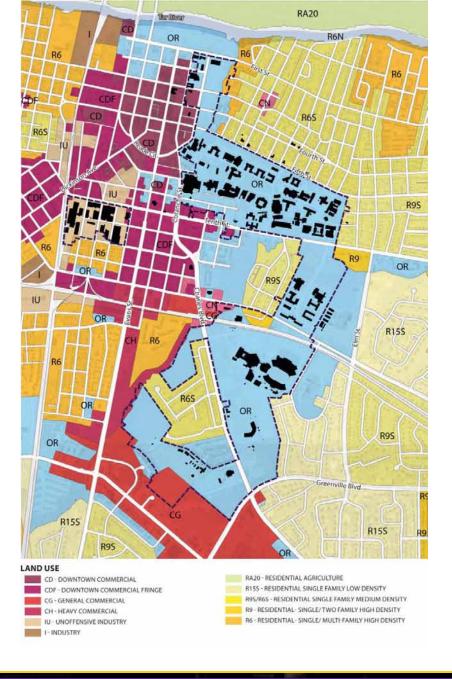
CONSERVATION/ OPEN SPACE

Future Land Use

Main Campus Land Use

•City of Greenville existing zoning mirrors closely to the future land use plan

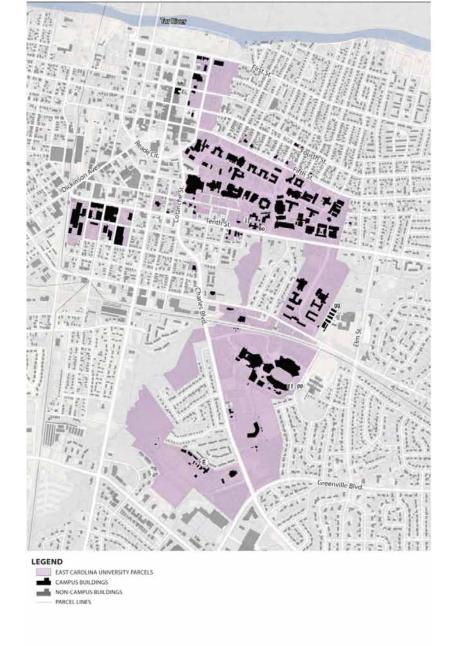
•Minor differences along 10th Street and the Tar River



Existing Zoning

Main Campus

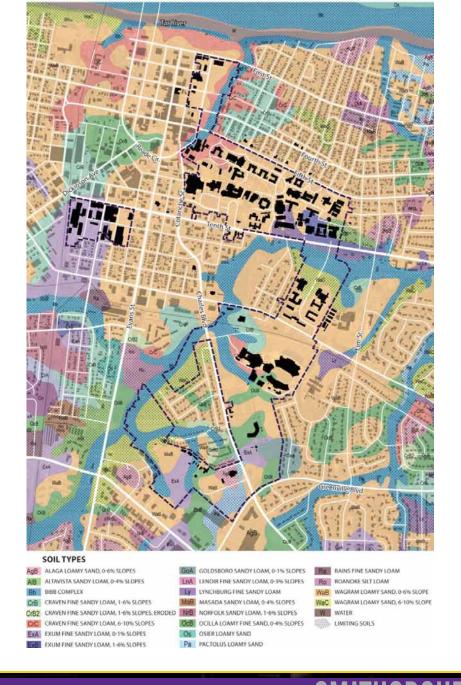
- •Main Campus maintains a north-south axis
- •Campus extends north through east end of downtown
- •Southern borders touch Greenville Blvd
- •Warehouse District is separated by 3 blocks to the west of Main Campus
- •Main campus is approximately 410 acres



Existing ECU Property

•Soils are mostly sandy loam in nature

•Hydric soils exist within the Green Mill Run watershed area, the wooded areas to the south west and other drainage areas south of the Tar River



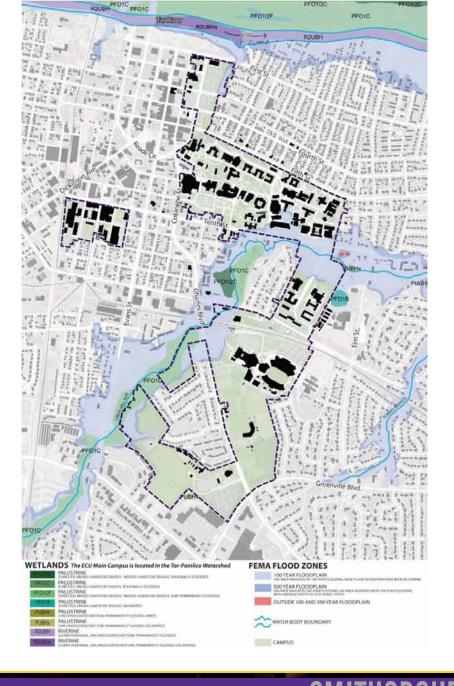
R

Soils

•The Main Campus is located in the Tar-Pamlico watershed

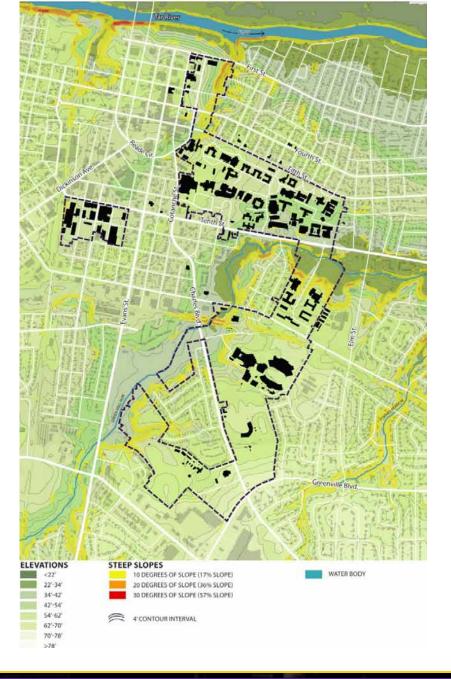
•The FEMA Flood Zone crosses 10th Street between the west academic and south residential areas and travels along the south west portion of campus

•Within this zone are mapped wetland areas



Hydrology

- •The built areas of campus are fairly flat
- •Campus elevations range from approximately 10 feet above sea level to 62 feet above sea level
- •Steep slopes exist along the Green Mill Run flood plan area and along the east edge of the downtown district



Topography

East Carolina University

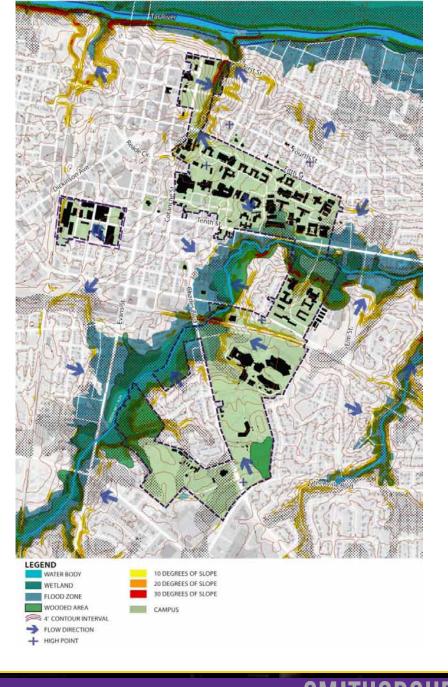
81

Natural Features Analysis

JJR

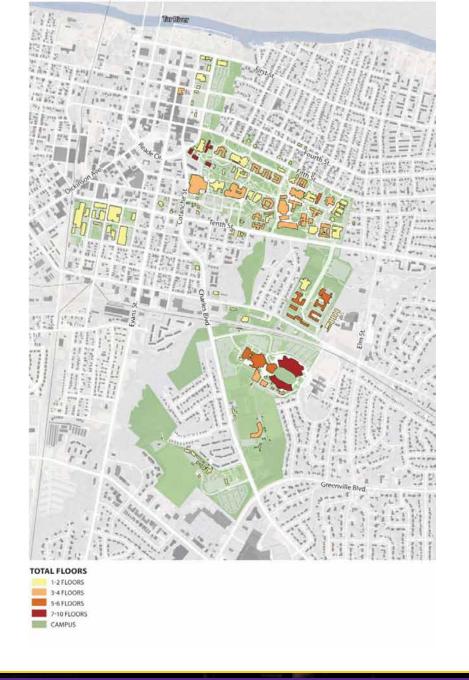
•A natural corridor consisting of woods, wetlands, and the flood zone run east from 10th Street to the south west portion of campus

- •Portions of the flood zone encroach on campus
- •Steep slopes also exist to the east of the Downtown District
- •Within this flood zone exist hydric soils and steeper slopes which may limit development



Natural Features Analysis

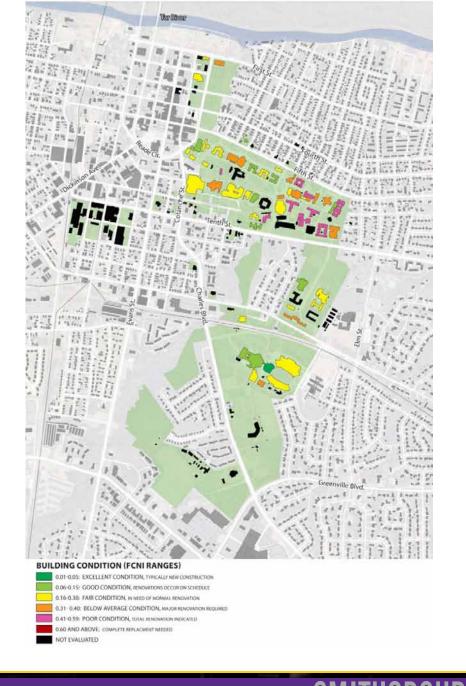
- •Building heights of up to 4 floors on the academic portion of campus
- •Most residential halls range from 5 to 10 floors



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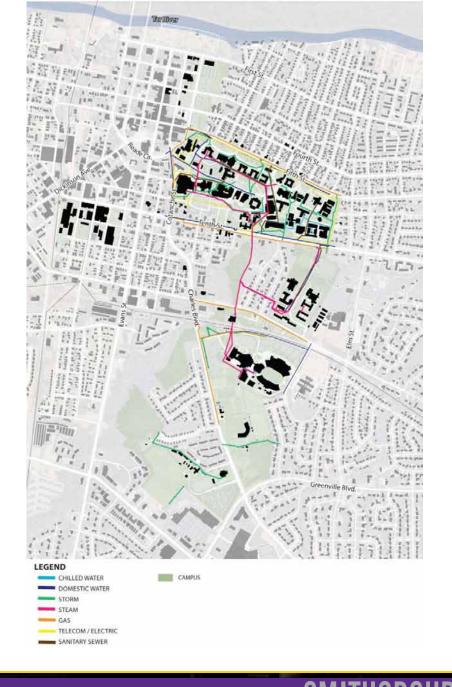
Building Heights

- •Graphic of the ISES Corporation summary of FCNI ranges
- •Lower numbers = better condition (less renovations)
- •Several buildings in the academic core scored closer to 0.60 (more renovations needed)



Building Condition

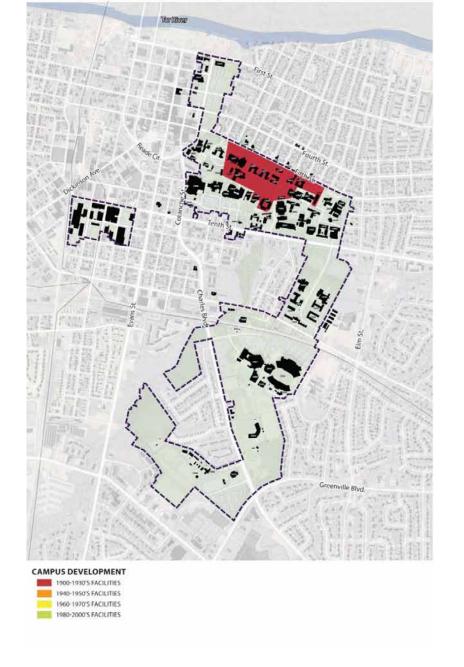
•Major utility corridors run east to west in the central portion of campus and around the perimeter streets



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Existing Utilities: Major Corridors

•1900-1930's facilities

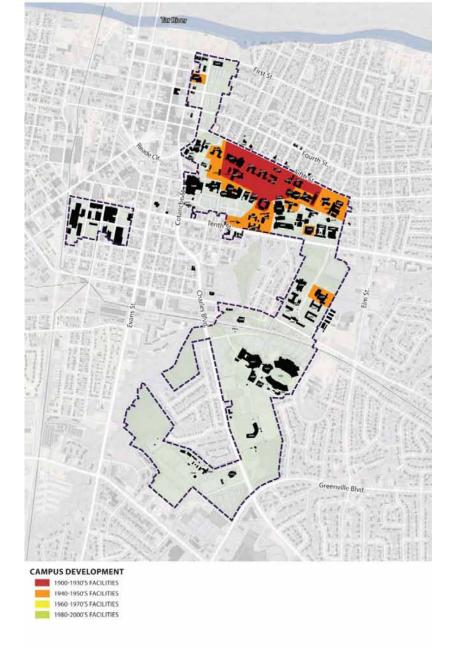


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Campus Growth

•1900-1930's facilities

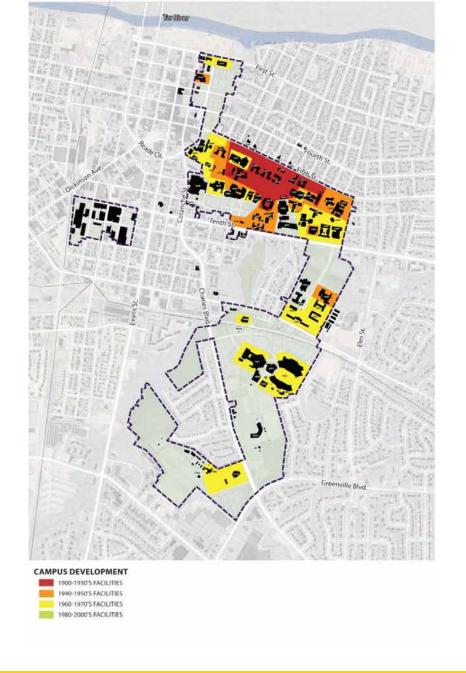
•1940-1950's facilities



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Campus Growth

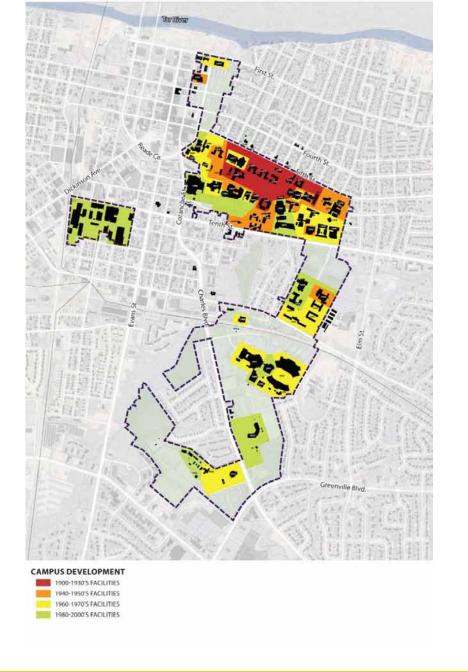
- •1900-1930's facilities
- •1940-1950's facilities
- •1960-1970's facilities



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Campus Growth

- •1900-1930's facilities
- •1940-1950's facilities
- •1960-1970's facilities
- •1980-2000's facilities



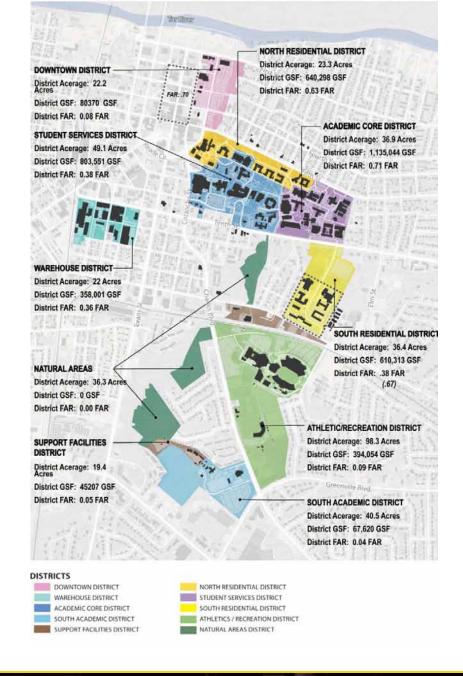
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Campus Growth

Main Campus Public Realm

•The Downtown District FAR is lower than a comparable sized neighbor (0.08 vs. 0.70)

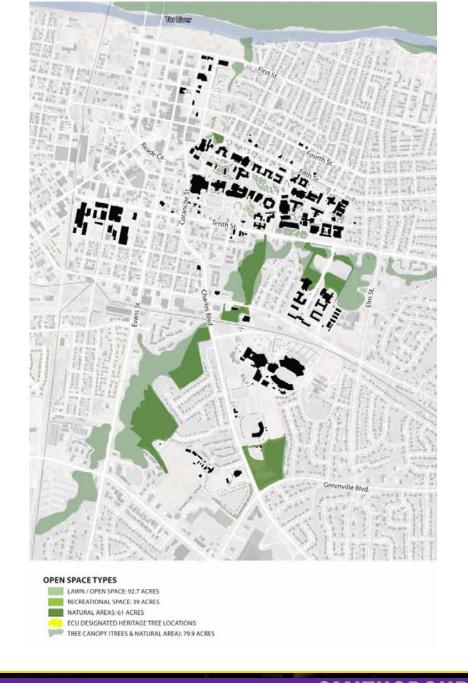
- •The Student Services District has a lower FAR compared to the academic core district (0.38 vs. 0.71)
- •The South Academic District has a relatively lower FAR (0.04) than Academic Core to the north (0.71)
- •The North Residential District and the South Residential District have comparable FAR's (0.63 vs. 0.67)



Campus Districts

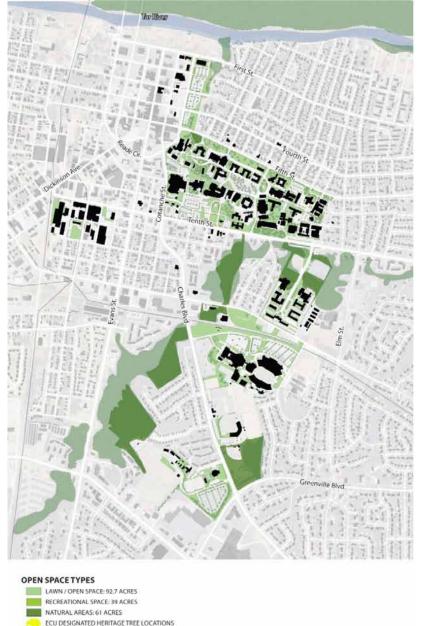
•Natural areas occupy approximately 61 acres

•Tree canopy covers about 80 acres (overlaps with other areas)



Campus Land Cover: Natural Areas/Tree Canopy

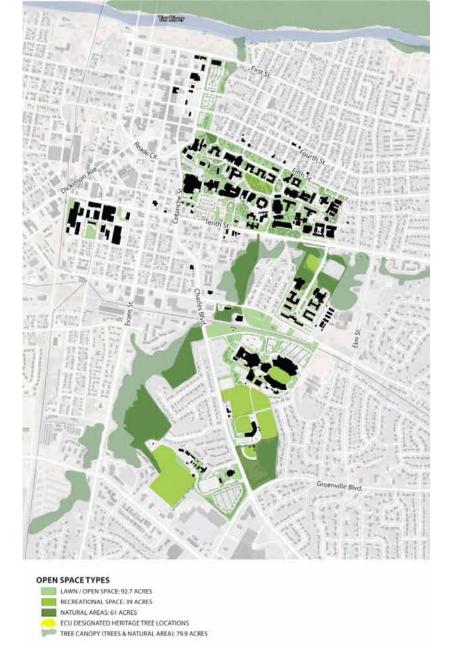
- •Natural areas occupy approximately 61 acres
- •Tree canopy covers about 80 acres (overlaps with other areas)
- •Lawn and general open space areas occupy approximately 93 acres



TREE CANOPY (TREES & NATURAL AREA): 79.9 ACRES

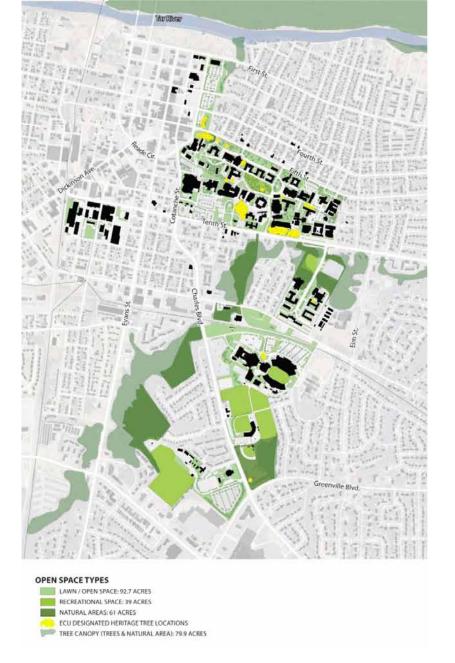
Campus Land Cover: Lawn Areas

- •Natural areas occupy approximately 61 acres
- •Tree canopy covers about 80 acres (overlaps with other areas)
- •Lawn and general open space areas occupy approximately 93 acres
- •Recreational spaces occupy approximately 40 acres



Campus Land Cover: Recreational Areas

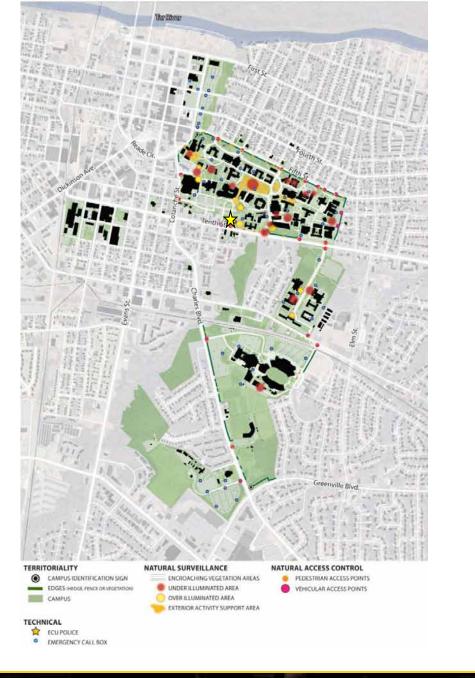
- •Natural areas occupy approximately 61 acres
- •Tree canopy covers about 80 acres (overlaps with other areas)
- •Lawn and general open space areas occupy approximately 93 acres
- •Recreational spaces occupy approximately 40 acres
- •ECU Heritage Tree locations are mainly located on the main portion of campus with several heritage trees located in the South Residential and Athletic Districts



Campus Land Cover: Heritage Trees

•Exterior space safety and security data was compiled from the Protection Engineering Group reports

- •Territoriality is maintained on 5th Street and Charles Street (hedge, fence, vegetation or signage). Lack of territoriality on 10th Street
- •Under illuminated areas are significant in the Academic Core District
- •Over illuminated areas exist at West End Dining, Student Recreation Center, and the police station
- •Exterior activity support areas are few



Safety and Security

East Carolina University

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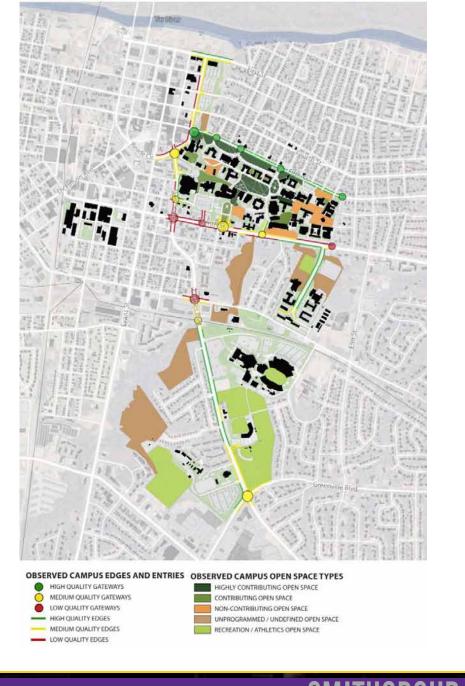
Public Realm Analysis

JJR

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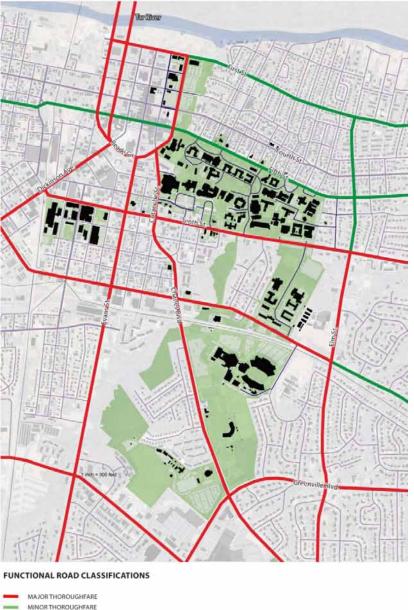
- •5th Street gateways and edges of high quality
- •Comparatively, 10th Street gateways and edges of a lower quality
- •Gateway at Charles and Greenville of a medium quality
- •5th Street setback and mall areas of a highly contributing open space
- •Some exterior spaces are undefined and not programmed



Public Realm Analysis

•Major thoroughfares exist on most campus perimeter streets

•5th Street is considered a minor thoroughfare



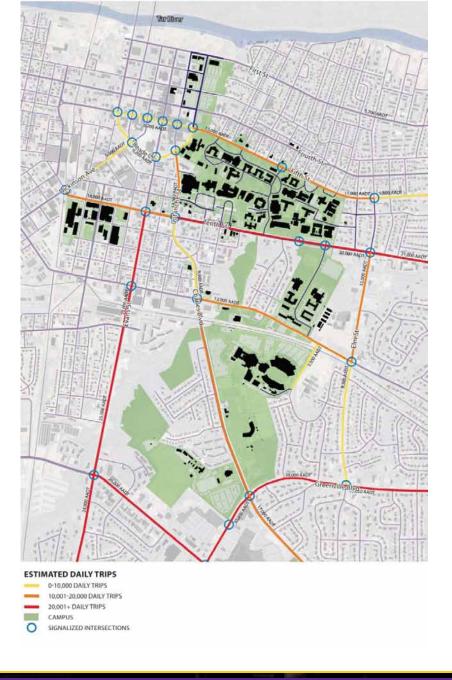
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CAMPUS

Vehicular: Road Classification

•5th Street, classified as a minor thoroughfare, has moderate traffic volumes

- •10th Street is a heavily traveled corridor
- •Few signaled intersections on 5th, 10th and Charles

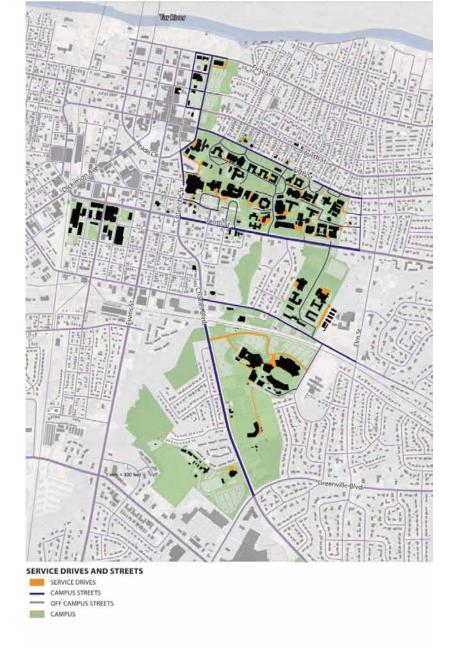


Vehicular: Daily Trips

- •10,147 parking spaces on Main Campus
- •This is approximately 70 acres of land area
- •Few interior campus streets
- •Founders Drive, connects 5th to 10th
- •A few loop roads exist on the northwest portion of campus
- •A drop off loop exists south of the library



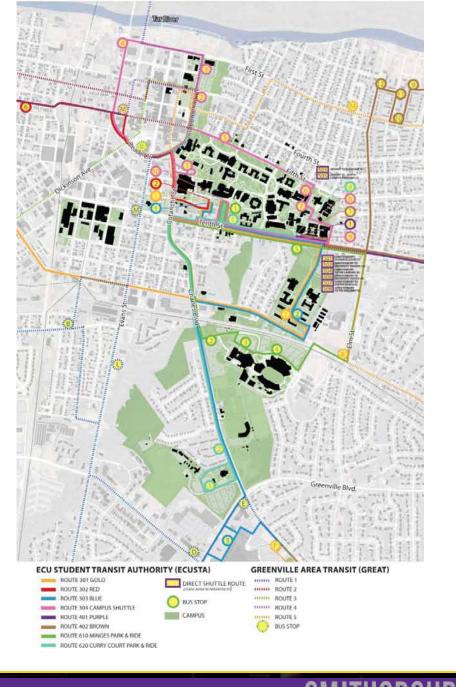
Vehicular: Parking and Campus Streets



IR

Vehicular: Service Drives and Streets

- •ECUSTA, student run transit serves Main and Health Sciences campuses
- •GREAT provides a few stops near campus
- •Individual ECUSTA shuttles run to apartment complexes
- •Christenbury and Mendenhall are ECUSTA bus hubs



Vehicular: Bus Routes

•Major pedestrian corridors run from the Christenbury bus stops through the central part of the Academic District and west to West End Dining

•Crosswalks occur on major streets, however...

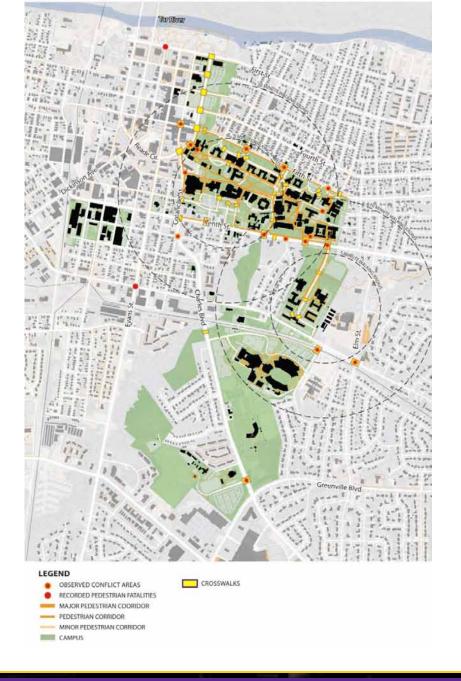
LEGEND CROSSWALKS **OBSERVED CONFLICT AREAS** ED PEDESTRIAN FATALITIES EDESTRIAN COORIDOR STRIAN CORRIDOR

Pedestrian Corridors: Crosswalks and Movement

•Major pedestrian corridors run from the Christenbury bus stops through the central part of the Academic District and west to West End Dining

•Crosswalks occur on major streets, however...

•Pedestrians jaywalk on most campus perimeter streets causing vehicular conflicts



Pedestrian Corridors: Conflicts

East Carolina University

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Circulation Analysis

JJR

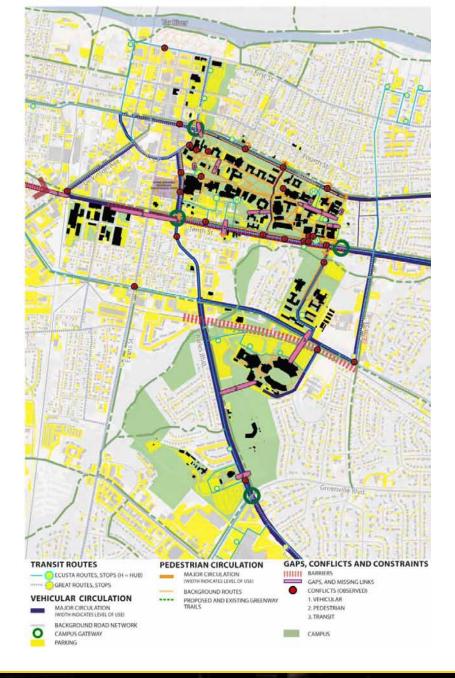
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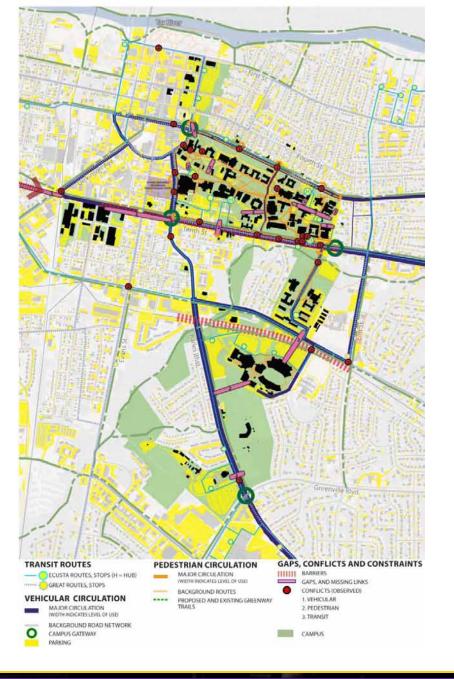
II III

- •Pedestrian conflicts along 5th, 10th and Cotanche
- •Barriers:
 - •10th Street
 - •Railroad tracks
- •Pedestrian gaps between:
 - •Campus to Downtown District
 - •Campus to Warehouse District
 - •South Residential District to Athletics
 - •Carol Belk Building crossing Charles
 - •Main Campus and Health Sciences Campus
 - •The Academic Core has several missing pedestrian links
- •A vehicular link is missing between Main Campus and Health Sciences campus



Circulation Analysis

- •Visitor lots located at 100% corner
- •Vehicular/Pedestrian conflicts:
 - •At Christenbury bus hub
 - •10th Street and College Hill Drive
 - •On Cotanche Street
 - •Crossing 5th Street
 - •Crossing 10th Street into residential neighborhoods

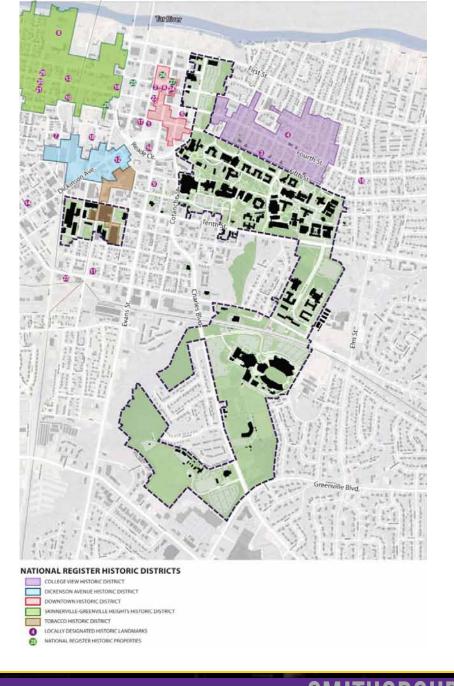


Circulation Analysis

Main Campus Community Context

•Several areas in Greenville are designated on the National Register of Historic Districts

- •The College View Historic District lies in a residential area to the north of campus
- •The Warehouse District occupies a portion of the Tobacco Historic District



Historical Districts

Main Campus Community Context



1909, Campus Rendering



Aerial View, East Carolina Teachers College, 1948 Historical Resources



Cotton Residence Hall, 1958



Main Campus Community Context



Greenville, Shore Drive Urban Renewal Area Plan, 1960

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Historical Resources

Campus Plan, date unknown

Main Campus Community Planning



JJR

GROUP

10th Street Connector

Main Campus Community Planning



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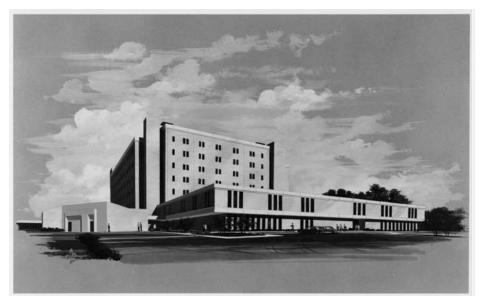
Greenville Intermodal Transportation Station

Main Campus Community Planning



South Tar River Greenway Plan, 2006

Health Science Campus Community Context



Brody School of Medicine, artist rendering, 1979

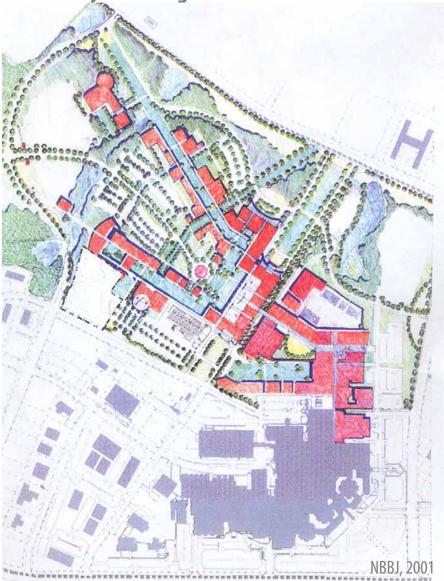


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1982, Brody School of Medicine

Historical Resources

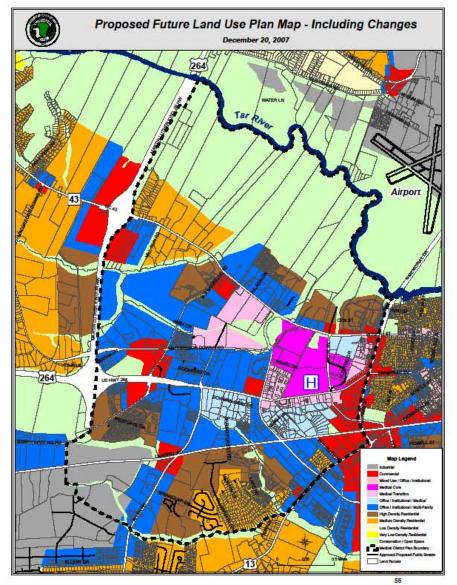
Health Science Campus Community Planning



JJR

The Learning Village, Health Sciences Plan, 2001

Health Science Campus Community Planning



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Medical District Land Use Plan Update, 2007

East Carolina University

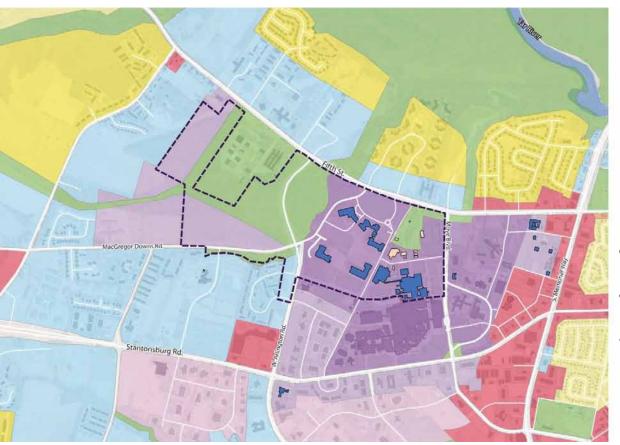
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Health Sciences Campus

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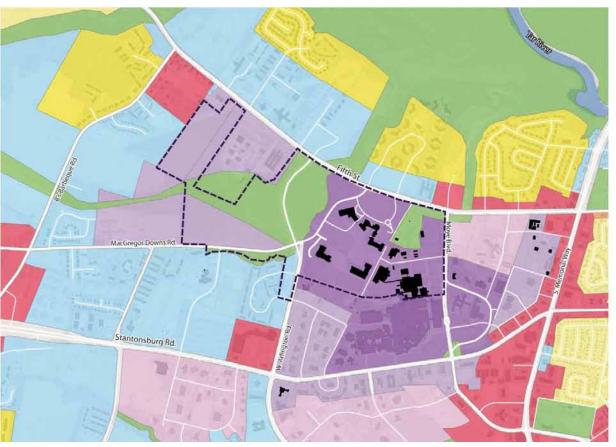




- •Student life programs do not exist on HSC
- •Residential areas to the north of 5th Street

•Brody School of Medicine is connected directly to Pitt County Memorial Hospital

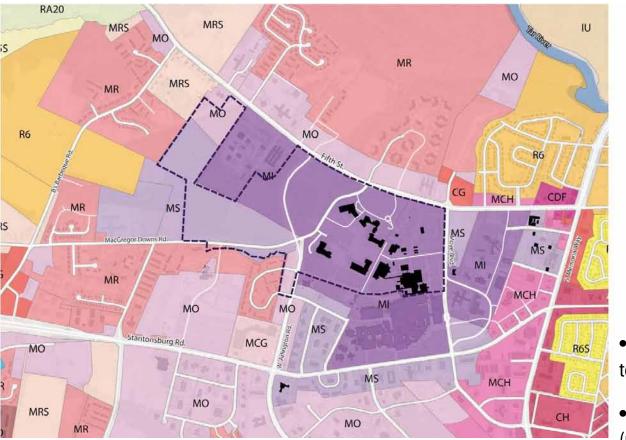
Campus Land Use





•City of Greenville proposed future surrounding land uses are comparable to the existing land use map

Future Land Use

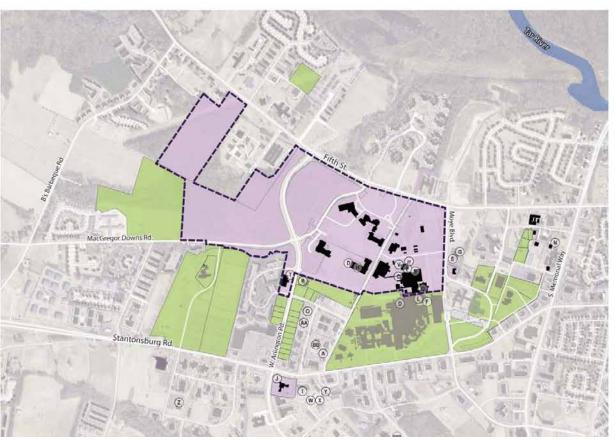




•City of Greenville existing zoning mirrors closely to the future land use plan

•It is more specific to types of medical zones (residential, office, support, commercial, etc.)

Existing Zoning





•Health Sciences campus extends from Pitt County Memorial Hospital to 5th Street

•Some medical office properties lie between Moye Blvd. and Memorial Way

•Health Sciences campus is approximately 200 acres

Existing ECU Property





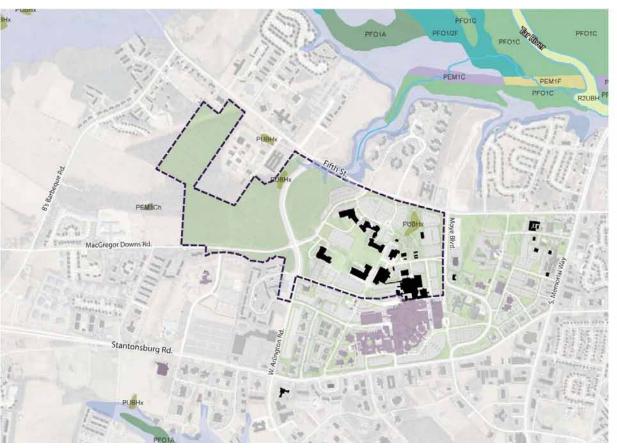
•Soils are mostly sandy loam in nature

•Hydric and limiting soils exist along some steep slope areas, mostly in the wooded area to the east of MacGregor Downs Rd.

Soils

East Carolina University \\ Comprehensive Facilities Master Plan

<u>SMITHGROUP JJR</u>



WETLANDS PALUSTRINE FORESTED MEDIC (CAVED EVERGREEN SATURATED, ACED PALUSTRINE PORESTED, BRUAD LEAVED OF DUDUS, TEMPORAMY PALUSTRINE PALUSTRINE FORTESTED, BROAD & NEEDLE-LEAVED DECIDINOUS. MIC PALUSTRINE REPORT PERSISTENT SEASONALLY FLOODED PALUSTRINE PHILODEDI PRISTENT SEASONALLY FLOODEDI PALUSTRINE IEMERGENT, PERS2 IMPOUNDED ENT REASONALLY FLOODED, DOOL PALUSTRINE IUNCONSCIDENTE BOTTOM, PERMANENTLY FLOODED. EXCANATED PEMIE PALUSTRINE R2UBH RIVERINE LOWER PERENMAL, UNCONSOLIDATED BOTTOM, PERMANENTLY FLOODFOL FEMA FLOOD ZONES 100-YEAR FLOODPLAIN 500-YEAR FLOODPLAIN 100 YEAR FLOODING OUTSIDE 100/500-YEAR FLOODPLAIN CAMPUS

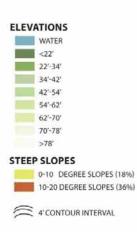
•The Health Sciences Campus is located in the Tar Pamlico watershed

•The FEMA Flood Zone crosses 5th Street, but does not impact the majority of HSC

•Few wetlands exist on HSC

Hydrology





- •HSC is relatively flat
- •Drainage occurs towards 5th Street
- •Few wetlands exist on HSC
- •Elevations range from approximately 30' above sea level to 66' above sea level

Topography

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Natural Features Analysis

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•A natural wooded corridor exists west of MacGregor Downs Road to the western border of the HSC

•Drainage naturally flows towards 5th Street

•Some soils are hydric, which can be limiting to building development. These soils occur along MacGregor Downs Road and the north border of 5th Street

•HSC has a retention pond that collects runoff from campus, this drainage corridor continues to the Tar River

Natural Features Analysis



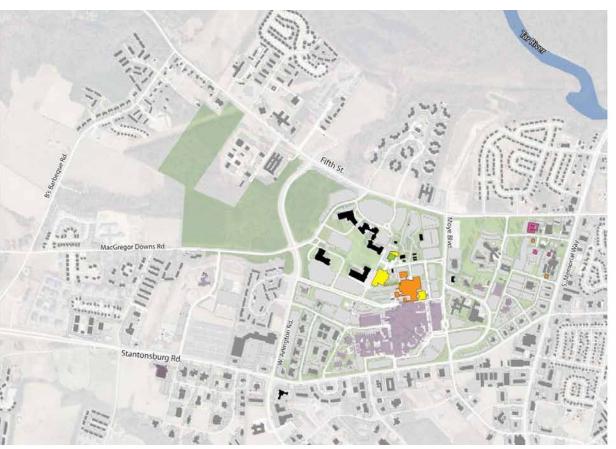


•The Brody School of Medicine is 9 stories tall

•Newer academic facilities are 4-5 stories tall

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Building Heights





- •Graphic of the ISES Corporation summary of FCNI ranges
- •Lower numbers = better condition (less renovations required)

•Brody School of Medicine is below average condition

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Building Condition

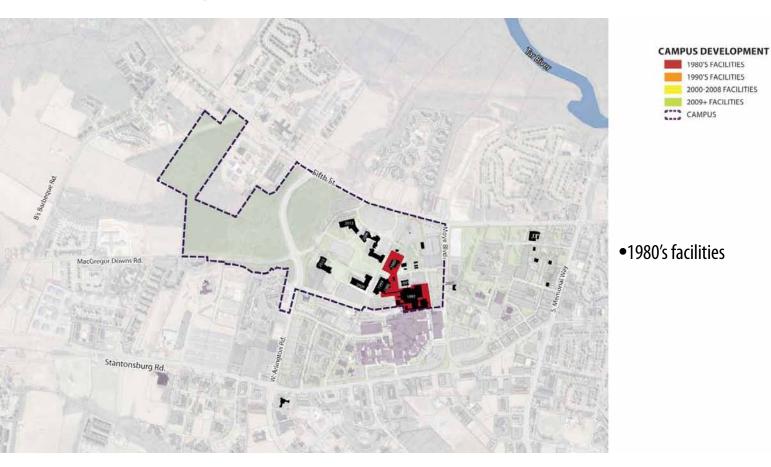




•Major utility corridors exist in the heart of the HSC

JR

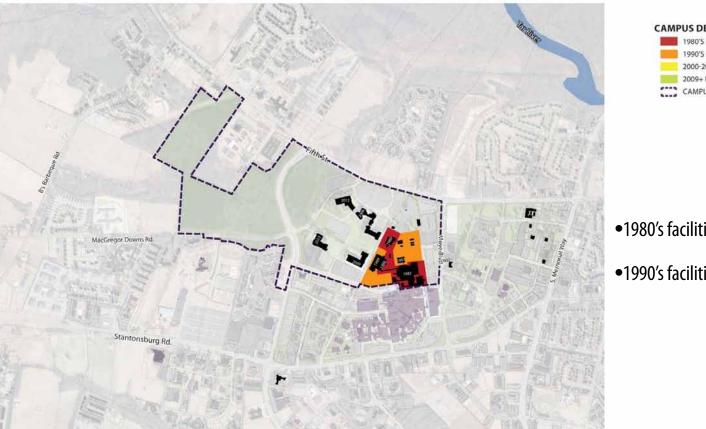
Existing Utilities: Major Corridors



Campus Growth

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SMITHGROUP JJR



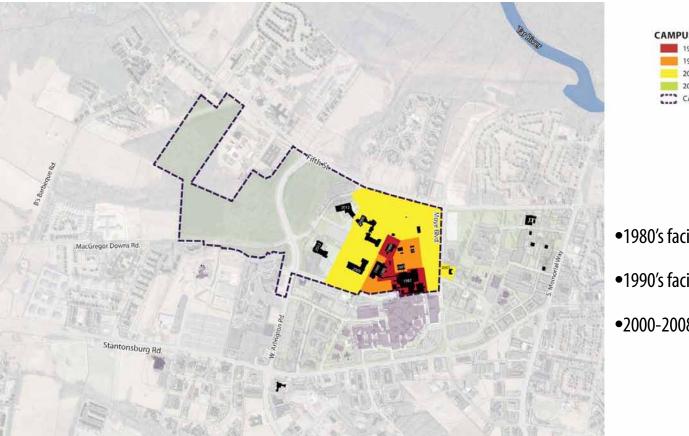
CAMPUS DEVELOPMENT 1980'S FACILITIES 1990'S FACILITIES 2000-2008 FACILITIES 2009+ FACILITIES CAMPUS

JJR

•1980's facilities

•1990's facilities

Campus Growth

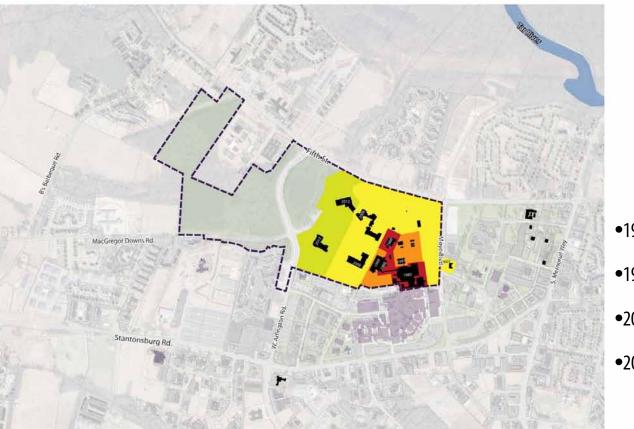


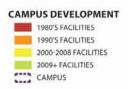


- •1980's facilities
- •1990's facilities
- •2000-2008 facilities

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Campus Growth





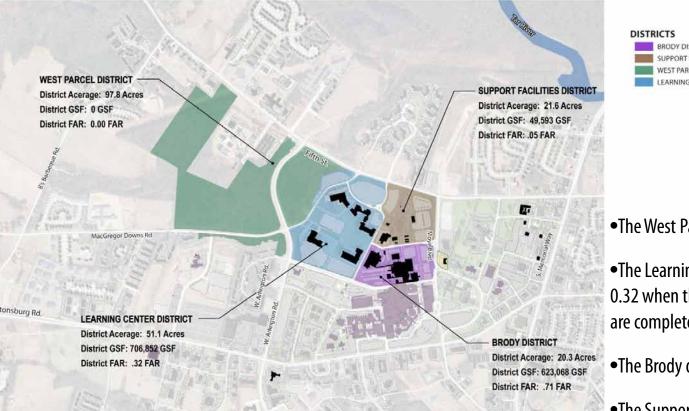
- •1980's facilities
- •1990's facilities
- •2000-2008 facilities

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•2009+ facilities

Campus Growth

Health Sciences Campus Public Realm





- •The West Parcel District remains undeveloped
- •The Learning Center District will have a FAR of 0.32 when the Dental School and Family Medicine are complete
- •The Brody district has a FAR of 0.71
- •The Support Facilities District has a relatively low FAR (0.05) due to the retention pond and quantity of parking

Campus Districts





•Natural areas occupy approximately 96 acres

•Tree canopy occupies approximately 100 acres (overlaps other land cover types)

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Campus Land Cover: Natural Areas/Tree Canopy





•Natural areas occupy approximately 96 acres

•Tree canopy occupies approximately 100 acres (overlaps other land cover types)

•Lawn and general open space areas occupy approximately 102 acres

Campus Land Cover: Lawn Areas





•Natural areas occupy approximately 96 acres

•Tree canopy occupies approximately 100 acres (overlaps other land cover types)

•Lawn and general open space areas occupy approximately 102 acres

•Open water is less than 2 acres

Campus Land Cover: Open Water





•Exterior safety and security data was compiled from Protection Engineering Group

•Territoriality is maintained on 5th Street , Moye Blvd. and MacGregor Downs. (hedge, fence, setback or vegetation)

•Acceptable light levels are maintain in the Allied Health and Family Medicine parking lots.

•Exterior activity support spaces do not exist

•Pedestrian adjacency/conflict issues exist around the Brody School of Medicine

Safety and Security

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Public Realm Analysis

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GHLY CONTRIBUTING OPEN SPACE NON-CONTRIBUTING OPEN SPACE PROGRAMMED / UNDEFINED OPEN SPACE RECREATION / ATHLETICS OPEN SPACE

•5th Street and northern portions of MacGregor Downs and Moye have high quality edges

•However, the gateways in these areas are of medium to lower quality

•Edges along Emergency Drive and the south boundary of PCMH, provide low to medium quality edges and gateways

Public Realm Analysis





MAJOR THOROUGHFARE MINOR THOROUGHFARE CAMPUS

•Major thoroughfares on 5th, Stantonsburg and Memorial Drive.

•Moye is a minor thoroughfare

Vehicular: Road Classification







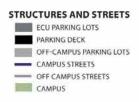
•High traffic volumes exist on Stantonsburg and W. Arlington

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•5th Street has moderate volumes

Vehicular: Daily Trips





•Parking on HSC lies mainly on the exterior of the campus

•Approximately 3,705 parking spaces (existing and future)

•Parking occupies 26 acres of land (existing and future)

Vehicular: Parking and Campus Streets

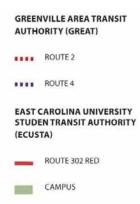




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Vehicular: Service Drives and Streets





•ECUSTA has one route to HSC, serving Brody and Allied Health

•GREAT also serves PCMH and Brody School of Medicine

IR

Vehicular: Bus Routes





•Pedestrian movement exists mainly from parking lots into buildings

•Not much observed movement between facilities

•No crosswalks exist along 5th Street

Pedestrian Corridors: Movement and Crosswalks





•Lack of crosswalks on 5th cause vehicular conflicts for students who live in apartments

•Many visitors enter the rear of Brody through the service entrance

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Pedestrian Corridors: Conflicts

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Circulation Analysis

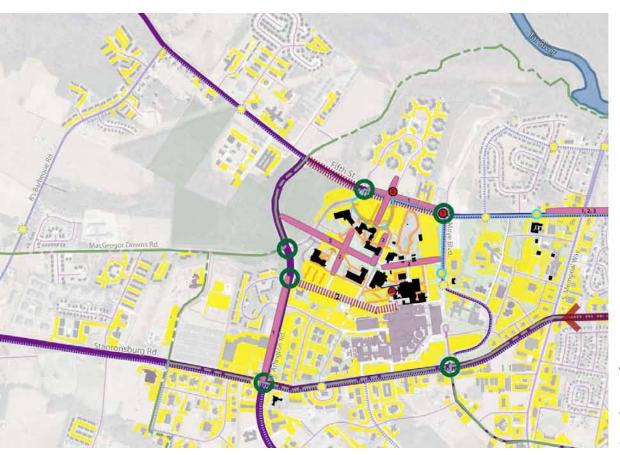
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II III





•Pedestrian/vehicular conflicts exist on 5th Street

•Gaps in pedestrian walkways between newer academic buildings

•Portions of campus streets do not have companion walks

•Pedestrian and vehicular connections to Main Campus are difficult

Circulation Analysis