Ivy Gardens Master Plan

UNIVERSITY OF VIRGINIA SPRING 2020



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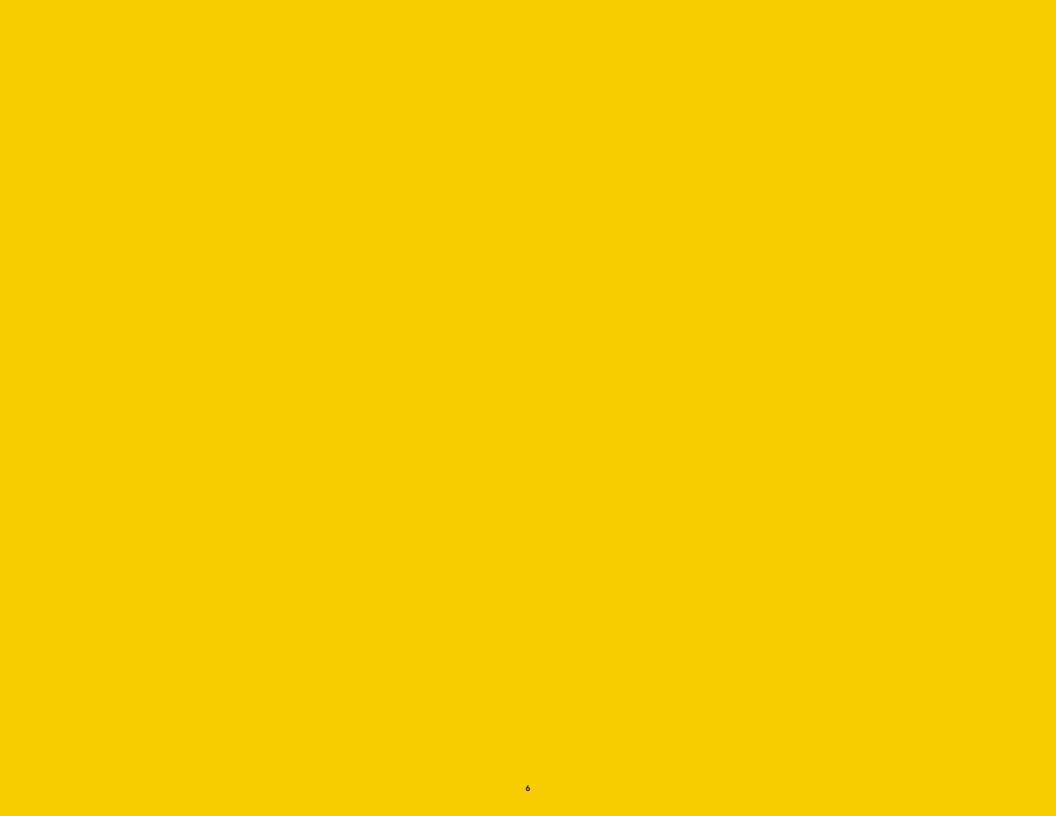
Appendix

- Development program scenarios
- Unit typologies



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Executive Summary



EXISTING CONDITIONS

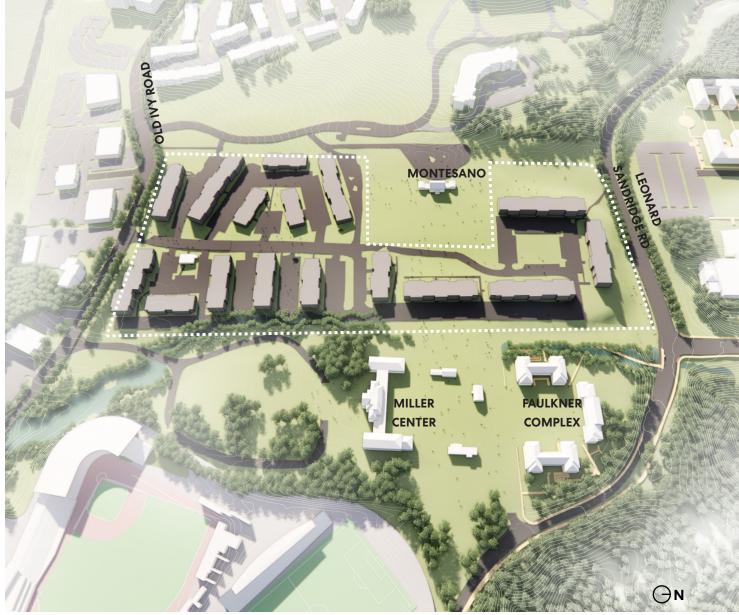


Ivy Gardens surrounding context aerial view

Executive Summary

Given its strategic location, the University has developed a master plan for this parcel to explore the redevelopment potential of increased density, and address University needs for proximate graduate housing, comprehensive pedestrian and vehicular connectivity, and future programmatic growth of Centers.

- Size 16.914 acre
- Strategic adjacencies to the Darden School of Business, Miller Center and the Center for Politics
- Primarily graduate student housing
- 16 Buildings with a mix of 440 Units
- Impervious Surface: 52%
- Tree Canopy Area: 5.4%



Ivy Gardens existing conditions

MASTER PLAN

Master Plan

- Propose a dynamic, economically viable redevelopment that supports the University's mission and provides significant open green spaces.
- Utilize the existing hydrology, while also establishing a rational grid of streets and development blocks, scaled appropriately, to create a diverse neighborhood and community.
- Create a mixed-use redevelopment with housing, residential amenities, innovation hub; retail and commercial.

Key Areas:

- **Student Community**
- Central Green
- Residential Community
- 4. Mixed-use and Town Square



Proposed master plan for Ivy Gardens

OPEN SPACE FRAMEWORK AND CONNECTIVITY

Master Plan

- The master plan builds on the recommendations outlined in the Landscape Framework Plan with the integration of natural and cultural systems as a broader framework of connectivity.
- The landscape reinforces a system of pedestrian corridors that connect natural resources, engaging spaces, hubs, and open spaces from North Grounds to Central Grounds.
- This Plan bolsters the University's ability to be less reliant on vehicles and promote multi-modal systems of mobility to improve connectivity between North, West and Central Grounds.



Open space framework and connectivity for Ivy Gardens

Context and Site

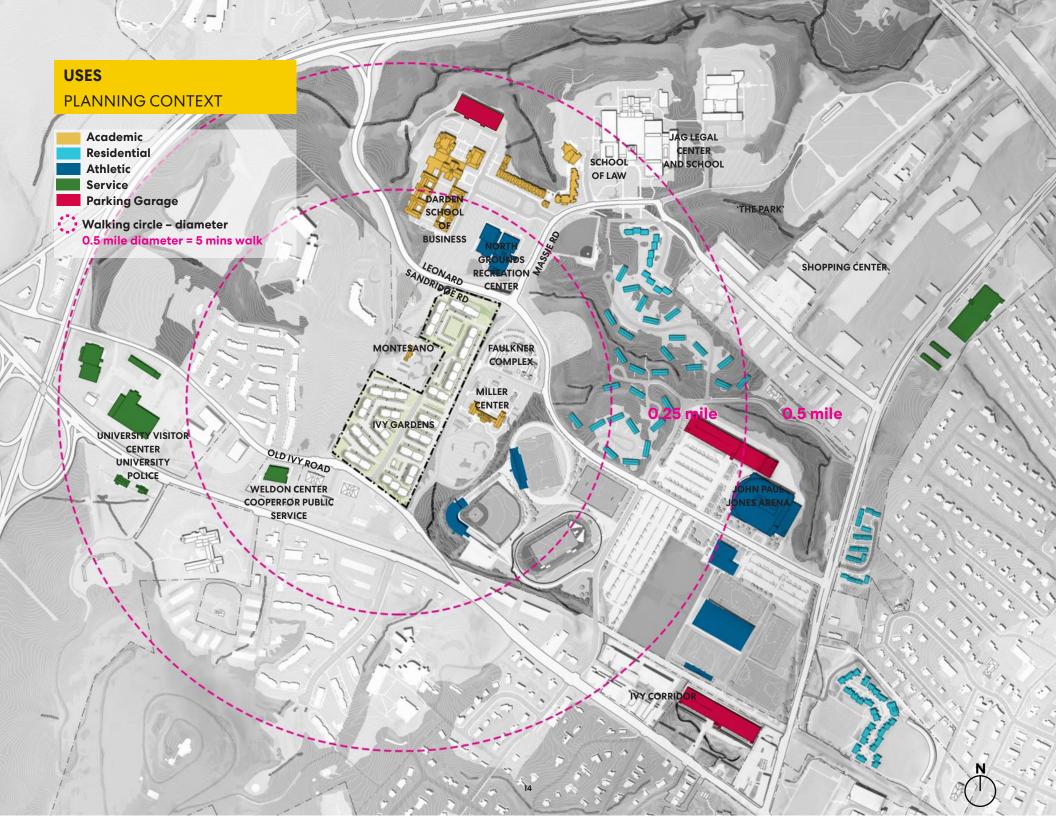
Planning Context

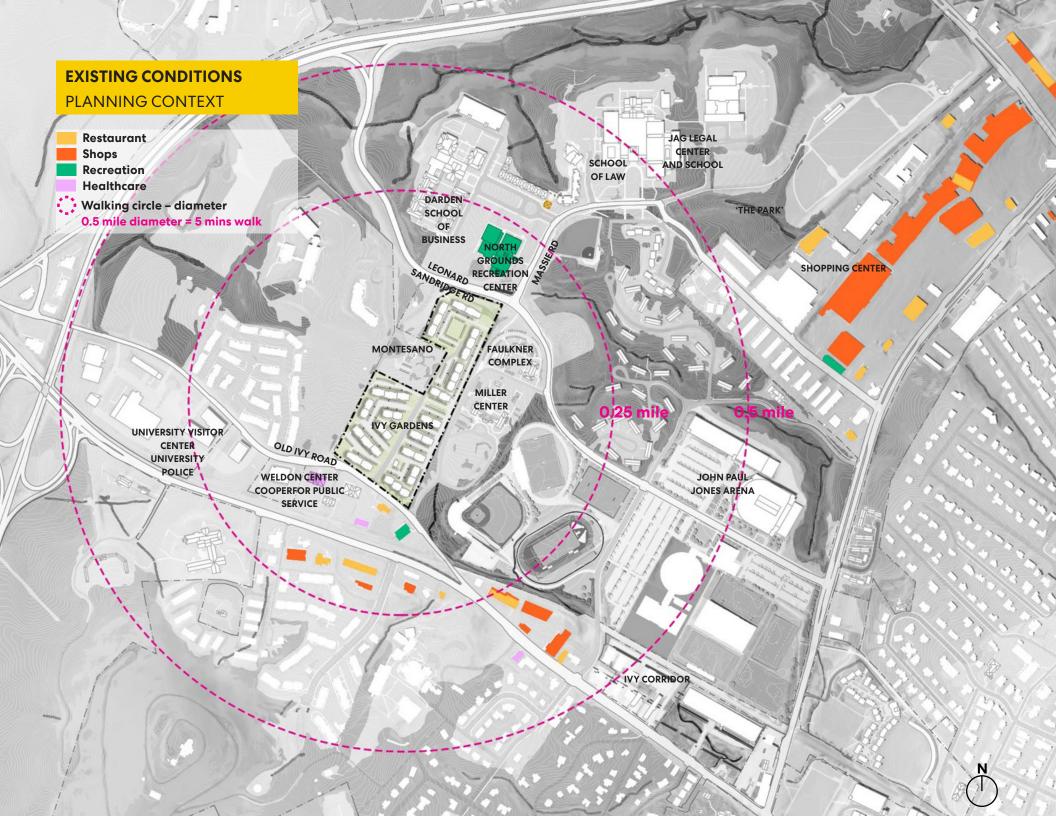
- Uses
- Amenities
- Housing Typologies

Analysis

- · Circulation Analysis
- Site Sections

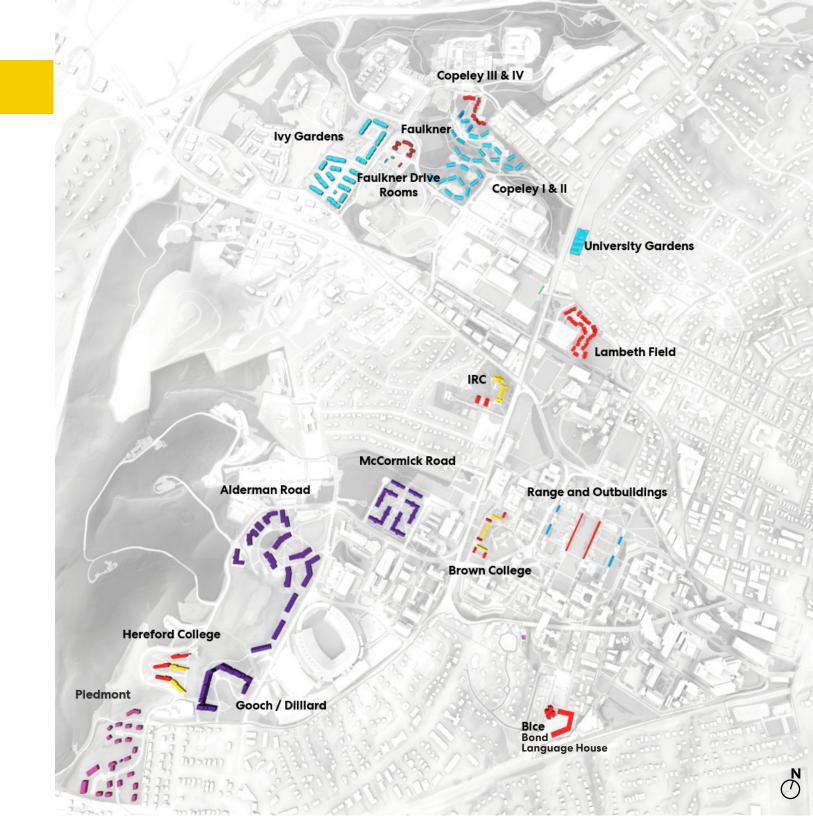






UNIVERSITY HOUSING

BY CLASS YEAR



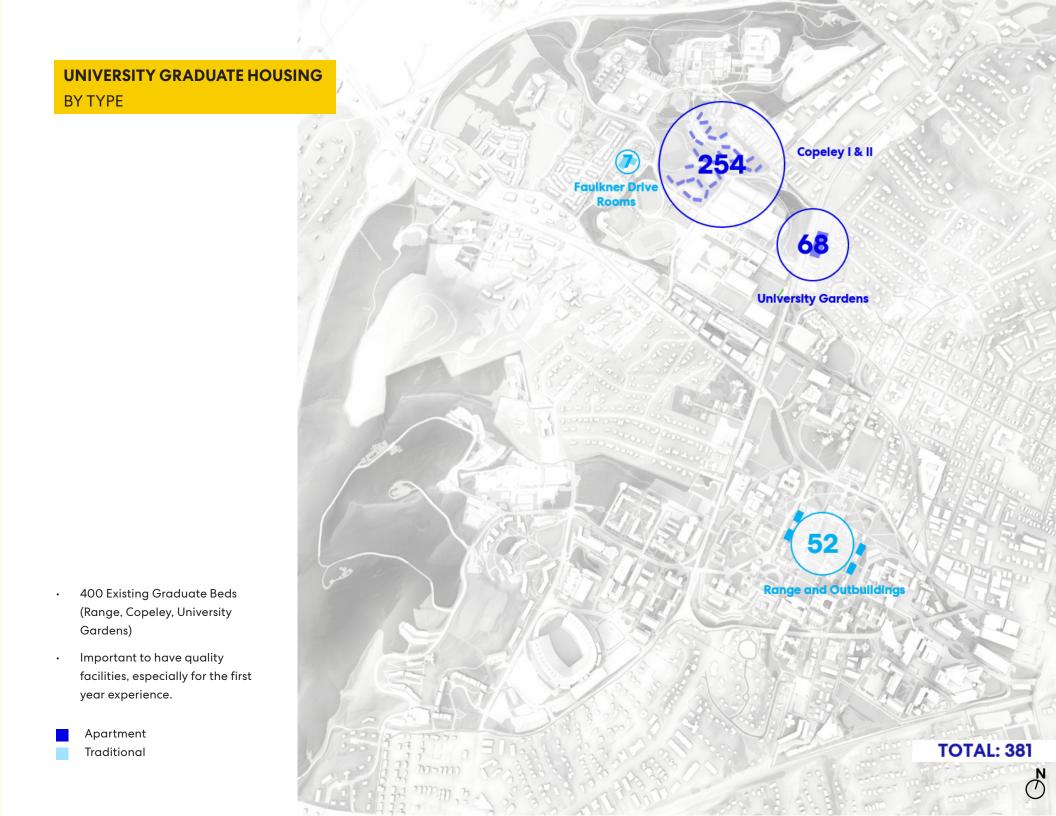
Faculty Housing
Family Housing

Graduate Housing

Upper Class

First Year/Upper Class

First Year



EXISTING CONDITIONS

ANALYSIS

Site Information:

Size 16.914 acre

• Impervious Surface: 52%

• Tree Canopy Area: 5.4%

Existing Beds Data:

4% nonstudent

96% student

Total Parking Spaces: 678

(1.5/unit, 1.03/bed)

• 653 Beds

Unit Types Break Down:

• 16 Building: 440 Units in total

1 Bedroom 1 Bath: 142 Units

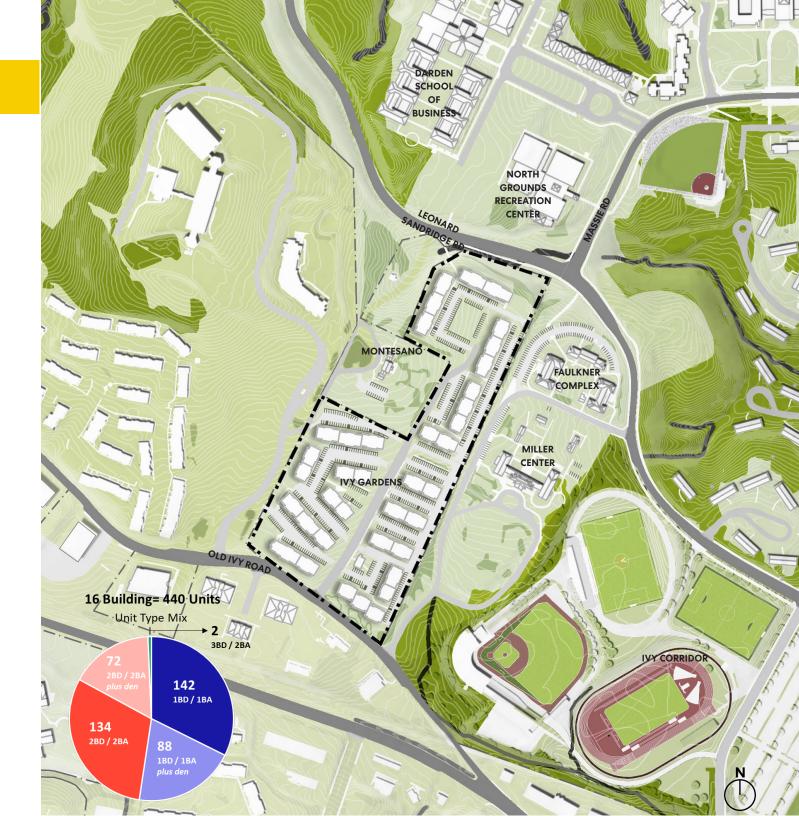
• 1 Bedroom 1 Bath with Dens: 88
Units

• 2 Bedroom 1 Bath: 1 Unit

2 Bedrooms 2 Bath: 134 Units

 2 Bedroom 2 Bath with Dens: 72 Units

· 3 Bedroom 2 Bath: 3 Units



CIRCULATION SYSTEMS

ANALYSIS



Vehicular Circulation

- · Single point of entry and exit to the site
- Lack of North South connection from Old Ivy Road to Leonard Sandridge Road
- Limited connectivity to the broader North Grounds and surrounding neighborhood



Bus Circulation

 No bus stop within Ivy Gardens site causing students to cut through site to access bus stops at Massie Road

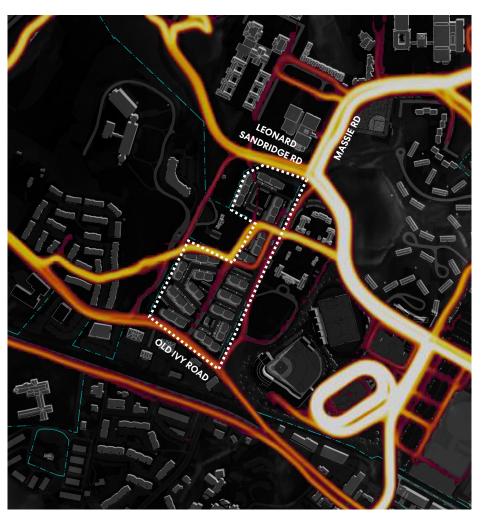
CIRCULATION SYSTEMS

ANALYSIS



Pedestrian Circulation

- Lack of accessible pedestrian connectivity from Ivy Gardens to Darden School of Business, Miller Center, Center for Politics, and professional schools
- The mid-block crossing west of the Leonard Sandridge and Massie Road intersection has pedestrian safety concerns despite the automatic flashing lights and pedestrian pavement marking.

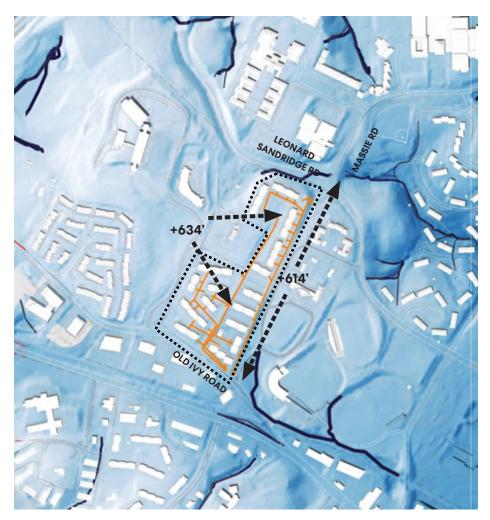


Pedestrian Circulation

 Strava maps to illustrate existing patterns of pedestrian circulation that highlight east-west desire lines

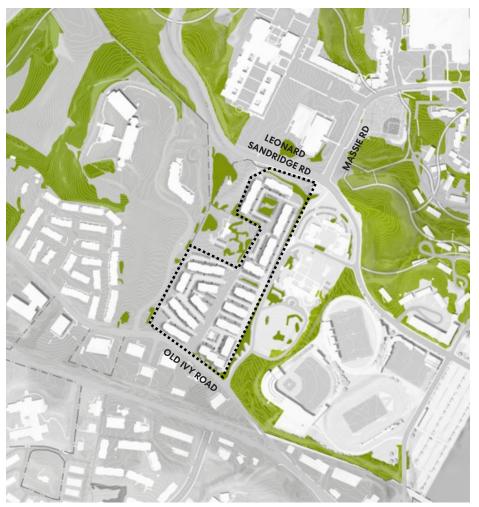
NATURAL SYSTEMS

ANALYSIS



Topography And Hydrology

- Significant grade elevation change across the site creates challenges for accessible pedestrian connectivity
- Stormwater management is currently managed by underground infrastructure that connects to city infrastructure
- All storm water run-off from impervious pavements and roofs is discharged directly to stormwater infrastructure



Ecology And Woodlands

- Sparse and limited tree canopy that does not provide shade for pedestrian areas and contribute to the overall heat island effect
- Surrounded by woodlands and natural resources, the site has limited connectivity to the ecology



SITE SECTION

EAST-WEST



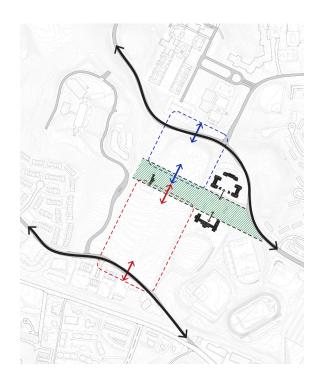
Master Plan

Guiding Principles and Framework

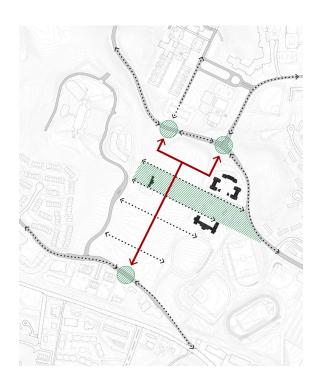
Master Plan

- Circulation system
- Massing Composition
- Site Section
- Program

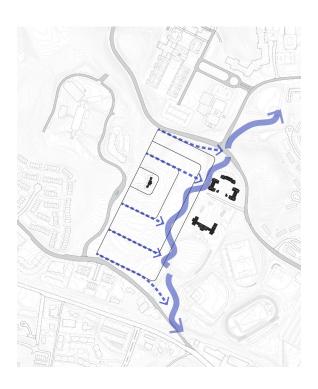
GUIDING PRINCIPLES AND FRAMEWORK



REINFORCE the Historic Core and establish visibility, adjacency and engagement to the North and South



Framework of **CONNECTIVITY** that promotes clarity and multi-modal mobility systems

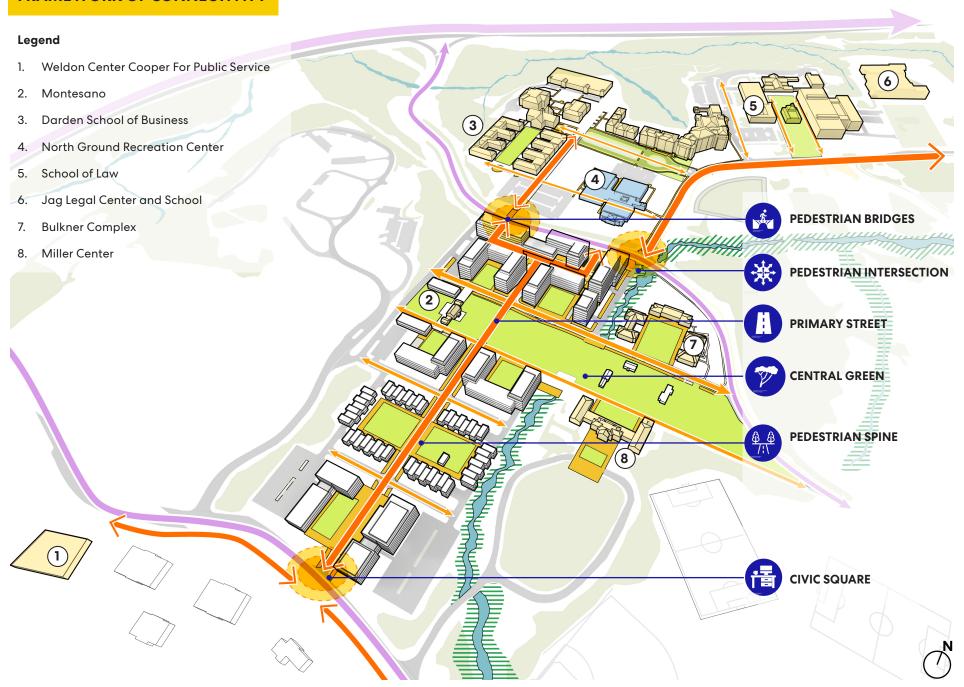


SUSTAINABILITY AND RESILIENT

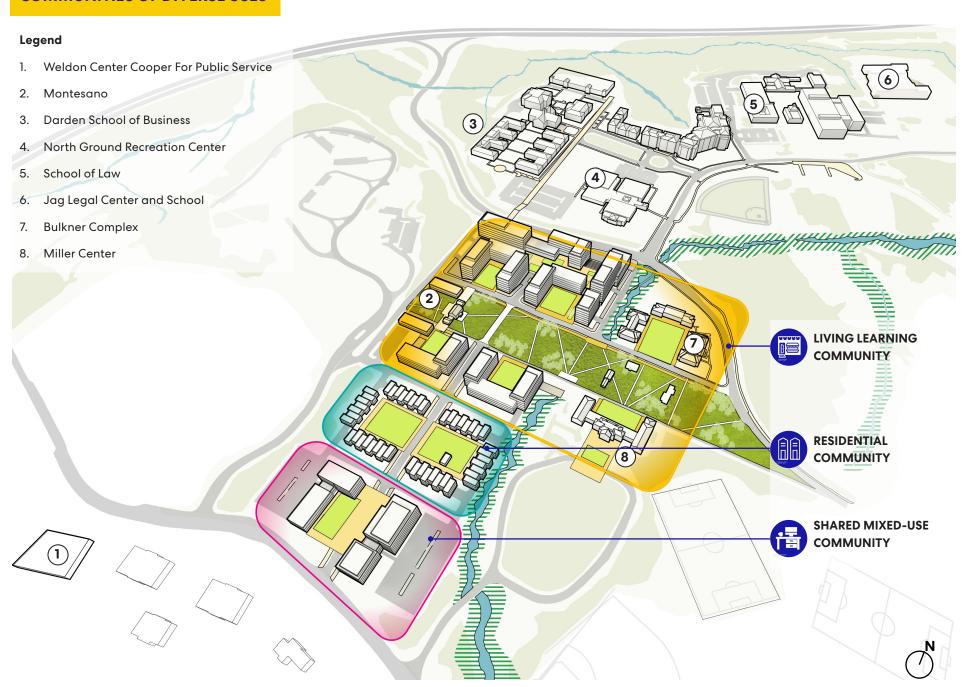
Enhance the natural systems of topography, ecology and hydrology



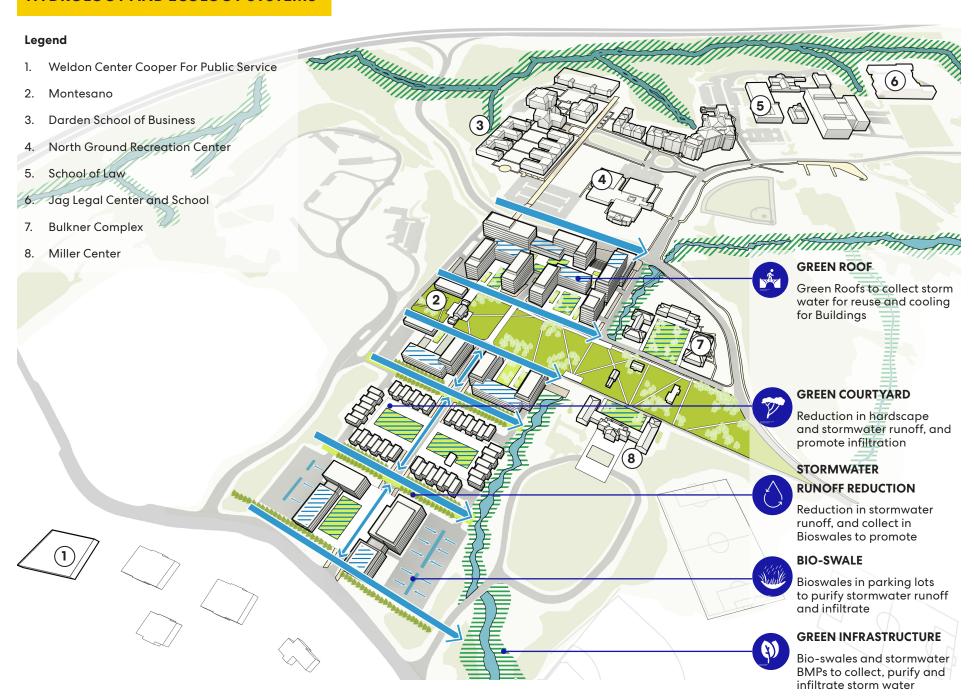
FRAMEWORK OF CONNECTIVITY



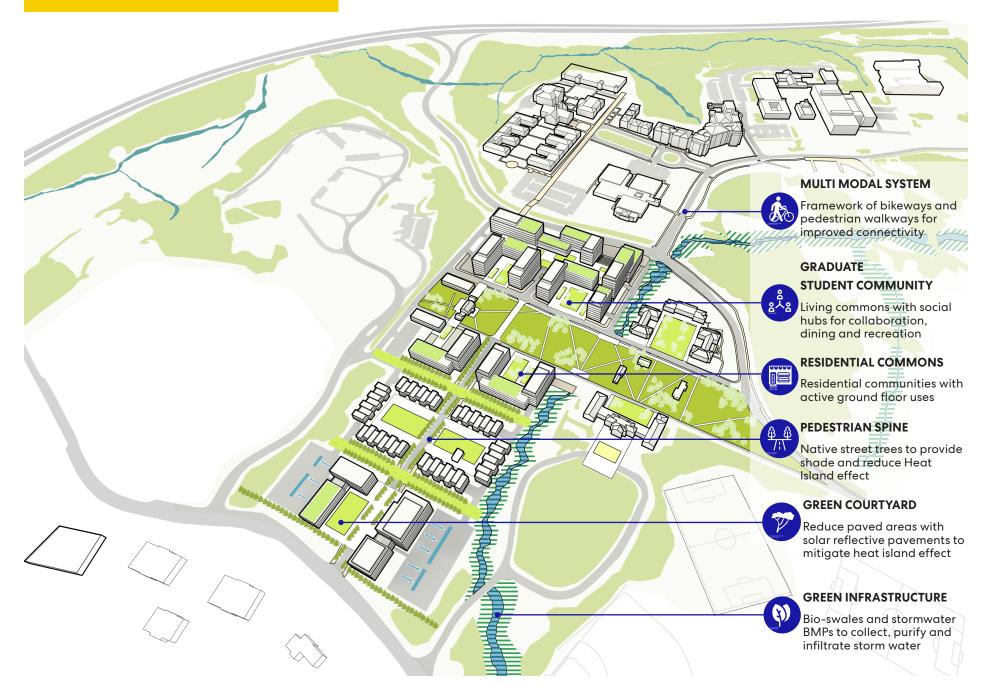
COMMUNITIES OF DIVERSE USES



HYDROLOGY AND ECOLOGY SYSTEMS



SUSTAINABILITY AND RESILIENCE



RESILIENCE AND CLIMATE CHANGE

REDUCTION IN URBAN HEAT ISLAND

- Reduction in pavements
- Increase in green areas with trees for shade

LIGHT COLORED PAVEMENTS

Reduction in solar radiation from dark pavements



ACTIVE PORTALS

Shaded portals through the building enhance movement and can be activated with study areas



MATERIAL HEALTH

- Healthy material selection
- · Reduction of excess finishes
- Use of natural materials
- · Durable material selection
- Low-emitting materials and adhesives
- Responsible waste management policy



OPERATIONAL RESILIENCE

- Quality of construction to reduce need for renovations and operational downtime
- Sustainable pro forma that considers cyclical reinvestments for upkeep



WATER

- Reduce water consumption with low flow fixtures, xero-scaping, and water reuse
- Stormwater management with porous pavements, rain gardens, bio-swales, green roofs and holistic approach to green infrastructure
- Reduce storm water and heat island effect by increasing landscape area and pervious surfaces

ENERGY



ENERGY CONSERVATION

Target low Energy Use Intensity (EUI) through systems strategies:

- Reduce Energy Demand with passive strategies
- Use efficient systems, appliances and equipment
- Incorporate renewables
- · Operate Optimally



ENERGY EFFICIENT FACADE

A well insulated façade system to block summer heat and cold winter temps while filtering in light



RENEWABLE ENERGY

For energy generation and passive heating of water

LIVABILITY, HEALTH AND WELLBEING



CONNECTIVITY

- Access to public transportation & UVA shuttle
- Pedestrian network
- Bicycle network & storage
- Reduced parking & access to charging stations



MEMORABLE EXPERIENCE

Gardens and terraces for respite and recharge Sense of Community though diverse amenity offering



COMMUNITY ENGAGEMENT

Indoor / outdoor café and retail spaces to provide opportunities for local vendors to have campus presence



FLEXIBLE LEARNING SPACE

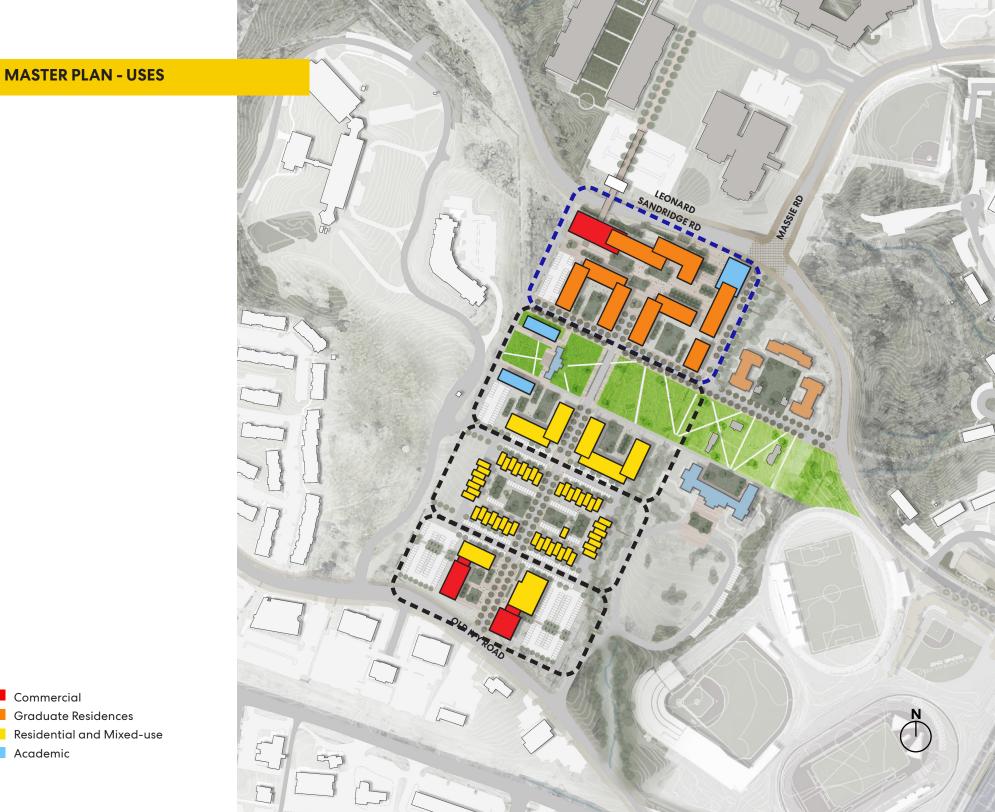
Multipurpose: Lectures, TED Talks, Workshops, Forums, Meetings, Lounge, Banquets, Theater



GREEN ROOFS

Gardens and terraces for respite and recharge Sense of Community though diverse amenity offering

PROPOSED REDEVELOPMENT PLAN PEDESTRIAN BRIDGES Pedestrian bridges provide connectivity to professional schools CENTRAL GREEN New Central Green defined by existing and proposed uses PEDESTRIAN SPINE Tree lined streets with robust bikeway and pedestrian walkways **RESIDENTIAL COMMONS** Residential community of diverse housing typologies and community spaces TOWN SQUARE Anchored with diverse mixed-uses of retail, office and residential



- Commercial
- Graduate Residences
- Residential and Mixed-use
- Academic

MASTER PLAN SANDRIDGE RD Legend Pedestrian bridge Pedestrianized street intersection Collaboration space 3. Outdoor spaces Central green space 5. Montesano entry court New street 7. Residential courtyards Green infrastructure and bio swales 10. Civic plaza 11. Miller Center entry court

Student Lobby and Amenity Community Student Amenities **GRADUATE COMMUNITY** Spaces **Proposed Student Residential** 440 Units (does not include Faulkner). 657 Beds 243 (1 Bedroom) 183 (2 Bedroom) 16 (3 Bedroom)

Amphitheater

Outdoor Courtyard

Programming for Events

Open Spaces,

Health and Wellness

Retail (

42,500 GSF Amenities

21,000 GSF Club House

iLab,

Cafe

Conference Rooms,

Collaboration Spaces,

STUDENT RESIDENTIAL UNITS













CENTRAL GREEN

Program

46,400 GSF New Academic Space (does not include Miller Center and Montesano)

- · Conference Rooms
- Lecture Halls
- Public Halls
- Recording Studios
- Collaboration
- Classrooms
- Media Production
- Meeting Rooms
- · Conference Rooms
- Cafe



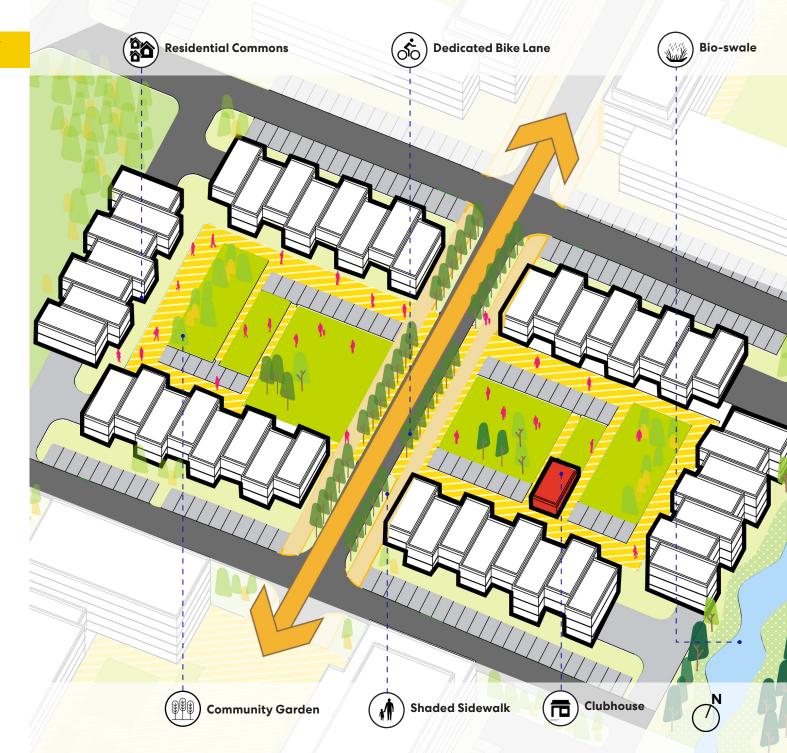
ACADEMICS











Program

Proposed Residential

- 191 Units
- · 309 Beds
- · 79 (1 Bedroom)
- 59 (2 Bedroom)
- 5 (3 Bedroom)
- 48 (Townhomes)

14,900 GSF of Amenities

RESIDENTIAL AMENITIES











Food Trucks

Flexible Outdoor Spaces

Ground Floor Activities

- Café
- Fitness Club

MIXED USES AMENITIES













OVERALL USES

Increase Density By 150%

Student Units = 440

Market Residential = 276

Total Units = 718

Total Beds = 1,091

Amenities = 54,700 GSF

Academic space= 46,400 GSF

Commercial = 69,500 GSF

Parking*

856 Parking Spaces

1.20 Space/Unit

0.80 Space/Bed

420 Structured Parking

436 Surface Spaces

* Parking need to be revisited and updated as required when development program is further defined.



Student Residential

Residential

Academic



STUDENT RESIDENTIAL COMMUNITY



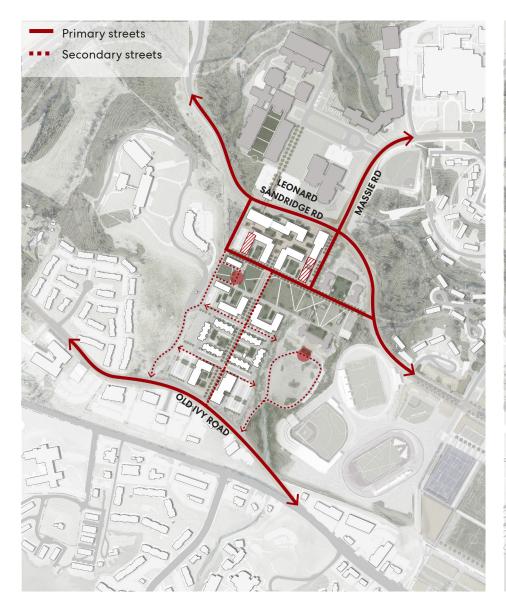


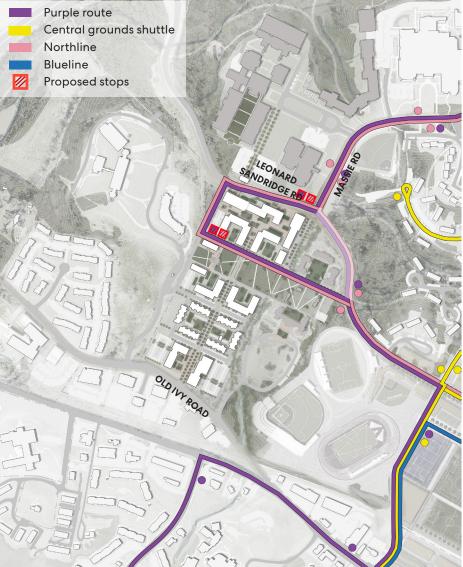




CIRCULATION SYSTEMS

VEHICULAR + TRANSIT



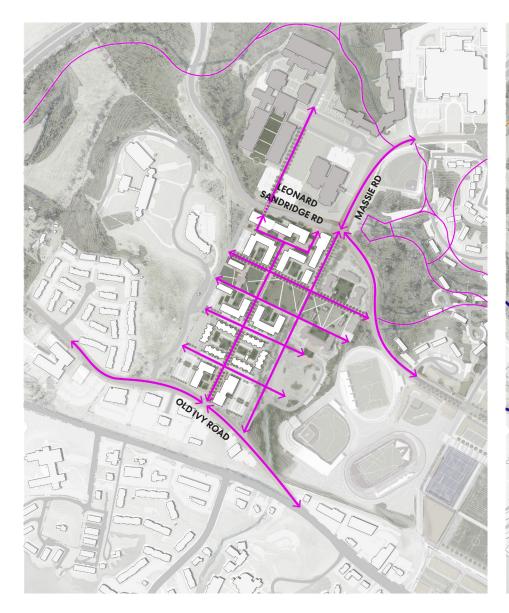


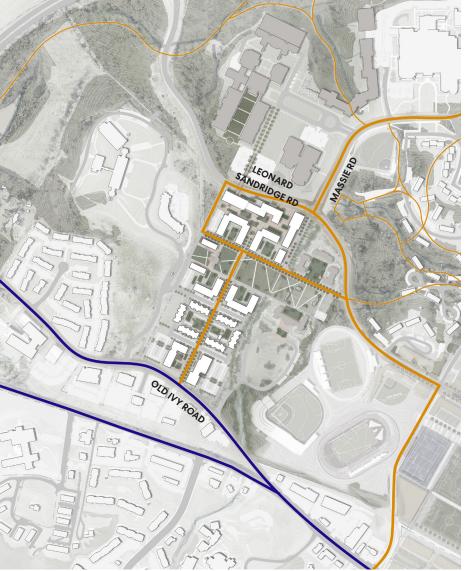
Proposed Vehicular Circulation

Proposed Bus Circulation

CIRCULATION SYSTEMS

PEDESTRIAN + BIKE

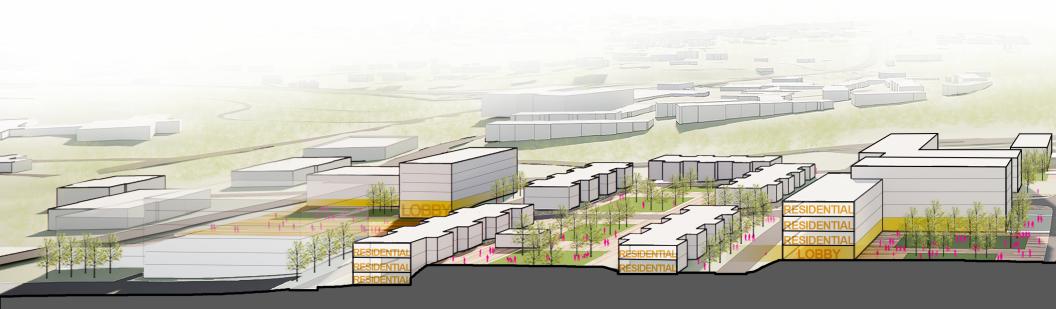




Proposed Pedestrian Circulation

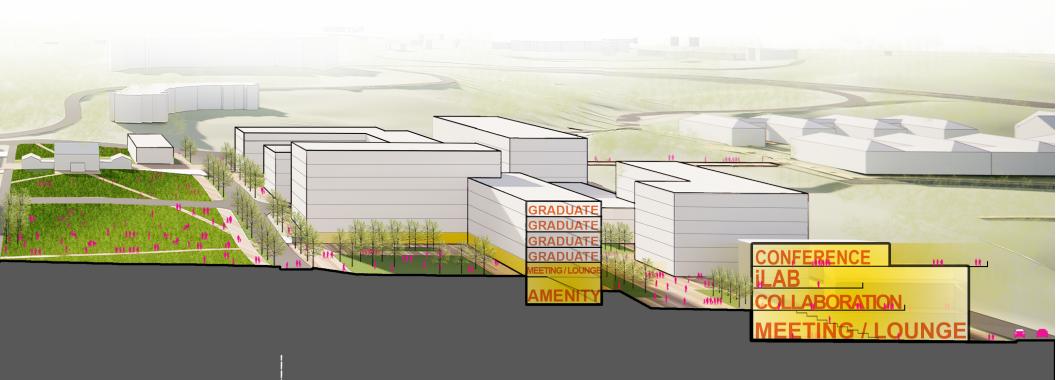
Proposed Bike Circulation

PROPOSED NORTH-SOUTH SECTION



SHARED MIXED USE COMMUNITY

RESIDENTIAL COMMUNITY



CENTRAL GREEN

GRADUATE COMMUNITY



Phasing

Near Term and Long Term North Grounds Strategic Plan

PHASE 0 - EXISTING CONDITIONS



PHASE 1 – STUDENT RESIDENTIAL AND CENTRAL GREEN



PHASE 2 – MIXED USE COMMUNITY



PHASE 3 – FULL BUILD OUT









OPEN SPACE FRAMEWORK AND CONNECTIVITY

Master Plan

- The master plan builds on the recommendations outlined in the Landscape Framework Plan with the integration of natural and cultural systems as a broader framework of connectivity.
- The landscape reinforces a system of pedestrian corridors that connect natural resources, engaging spaces, hubs, and open spaces from North Grounds to Central Grounds.
- This Plan bolsters the University's ability to be less reliant on vehicles and promote multi-modal systems of mobility to improve connectivity between North, West and Central Grounds.



Open space framework and connectivity for Ivy Gardens

Master Plan Comparison

OPEN SPACE COMPARISON

EXISTING VS PROPOSED





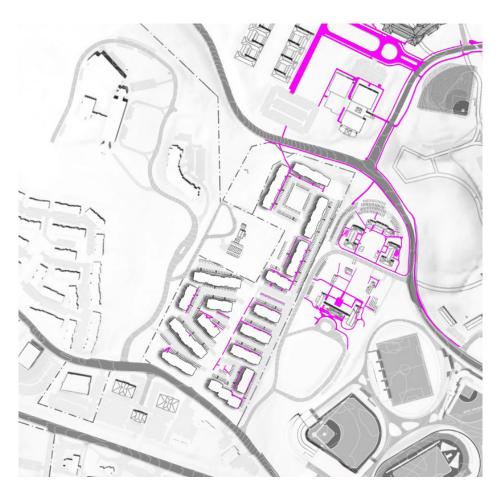
Existing Open Space = 367,357 SF

Proposed Open Space = 598,716 SF

+ 63% increase in Open Space

PEDESTRIAN CIRCULATION COMPARISON

EXISTING VS PROPOSED





Existing Pedestrian Circulation

Proposed Pedestrian Circulation

STORMWATER COMPARISON

EXISTING VS PROPOSED



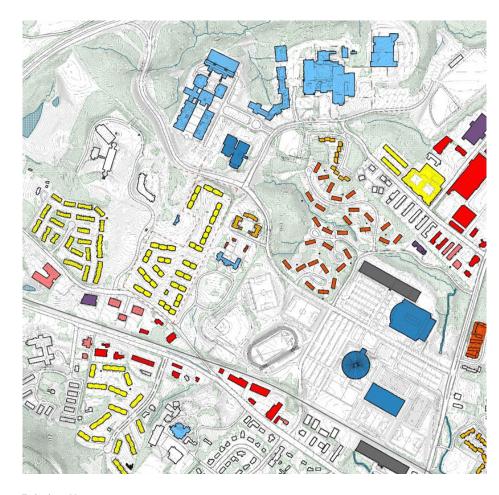


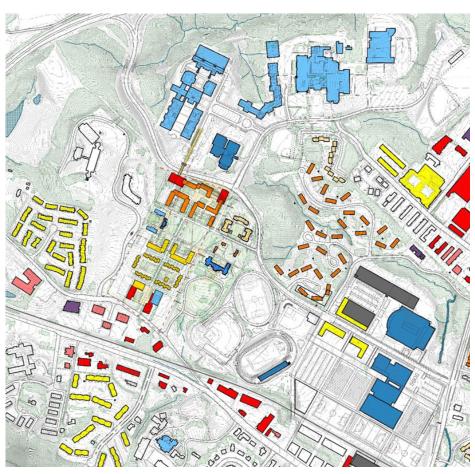
Existing Storm Water Management

Proposed Storm Water Management

USES COMPARISON

EXISTING VS PROPOSED





Existing Uses

Proposed Uses

ACKNOWLEDGEMENT

The Office of the Architect for the University of Virginia

Alice J. Raucher, AIA, LEED AP I Architect for the University

Julia Monteith, AICP, LEED AP I Manager of the Plan/Associate University Planner

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Xiaoyuan Zhang, LEED AP ND I Designer

Kelly-Anna Louloudis I Designer

Appendix

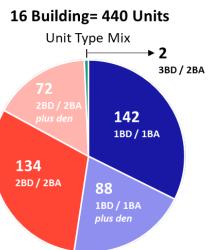
Development program scenarios

Unit typologies

EXISTING UNIT TYPES/BEDS



4% nonstudent
96% student
Total Parking Spaces = 678
(1.5/unit, 1.03/bed)
653 Beds



EXISTING UNIT TYPES & DISTRIBUTION

*Assumes upgrades

	Quantity	Percentage	Туре	Beds	SQFT	Description		Monthly Rent		Annual Revenue		
						Bedroom	Bath	Den	Patio		Monthly	Potential 2030
1	142	32	Apt No Patio	142	600	1	1			1,110	157620	
		0	Apt with Patio		600	1	1			1,145	0	
	88	20	Apt Plus Den	88	800	1	1	1		1,175	103400	
	134	30	Apt No Patio	268	950	2	2			1,380	184920	
2			Apt with Patio		950	2	2			1,410	0	
	72	16	Apt Plus Den	144	1100	2	2	1		1,460	105120	
	1	0	Apt	2	800	2	1			1,120	1120	
3	3	1	Apt	9	1100	3	2			1,445	4335	
Total	440	100		653							\$ 556,515	\$ 6,678,180

2020-2021 M	ARKI	ET RENTS				
				"SOUTH": ALL	"NORTH" BLDGS	
SIZE	SQFT	BED-ROOMS	BATH	ODDS & 102-122	124-148	UPGRADED
1BR NO PATIO "NP"	600	1	1	1,040	1,060	1,11
1BR	600	1	1	1,070	1,090	1,145
1 BR Den	800	1 PLUS DEN	1	1,095	1,120	1,175
2 BR NO PATIO "NP"	950	2	2	1,275	1,290	1,380
2 BR	950	2	2	1,300	1,320	1,410
2 BR Den	1100	2 PLUS DEN	2	1,350	1,370	1,460
2 BR/1BA: 106-10 only	800	2	1	1,120	N/A	N/A
3 BR/2BA South	1100	3	2	1,445	N/A	N/A

If Nothing Changes....

2020-2021 Yearly Revenue Potential

\$6.6+ M

2030 Yearly Revenue Potential

\$7.7+ M

EXISTING UNIT TYPES/BEDS

Scenarios with townhome & studios:

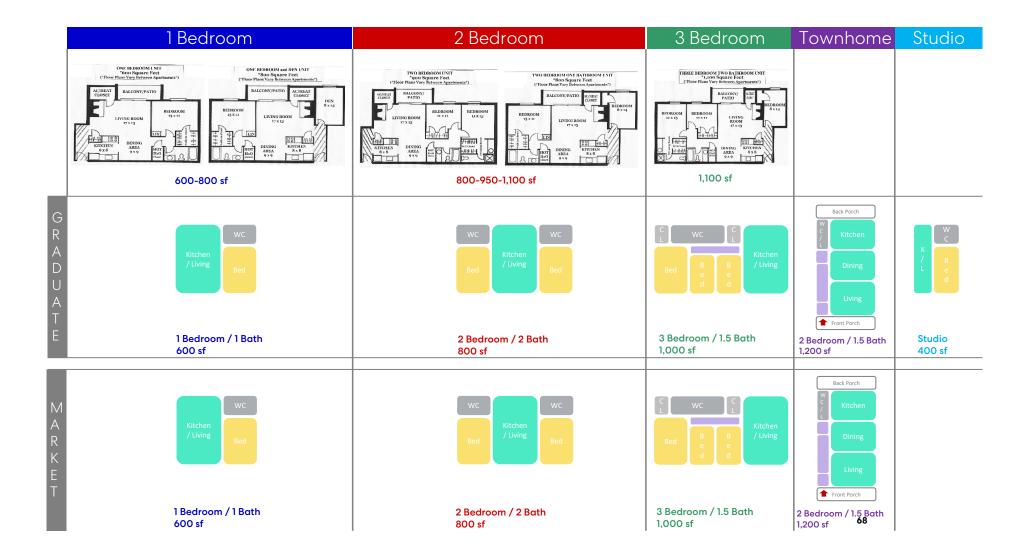
Percentage	Туре
50%	Apt
35%	Apt
	Apt
5%	Townhome
5%	Studio
100%	

2030 Yearly Revenue Potential
440 units/660 beds \$7.5+ M
660 units /990 beds \$11.2+ M
880 units /1,320 beds \$15+ M

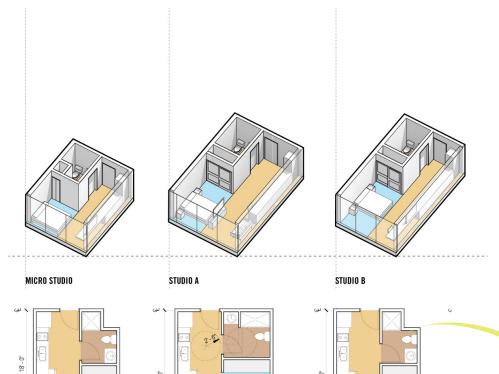
Scenarios with townhome only:

Percentage	Туре
55%	Apt
35%	Apt
	Apt
	Townhome
100%	

2030 Yearly Revenue Potential 440 units /660 beds \$7.5+ M 660 units /990 beds \$11.3+ M 880 units /1,320 beds \$15.1+ M



POTENTIAL UNIT TYPES: STUDIOS



K / B e d

Studio 292 nsf 345 nsf ADA

Micro Studio

225 nsf



Bedroom: 54 SF Living/Kitchen/Dining: 129 SF Washrooms: 42 SF Total: 225 SF

Bedroom: 120 SF Living/Kitchen/Dining: 166 SF Washrooms: 59 SF Total: 345 SF Bedroom: 85 SF Living/Kitchen/Dining: 165 SF Washrooms: 42 SF Total: 292 SF

STUDIO UNITS (MICROS) at 325 NSF

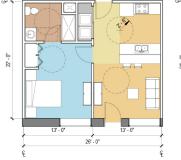
POTENTIAL UNIT TYPES: APARTMENTS



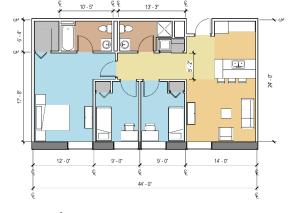
1 Bedroom / 1 Bath 425 nsf 531 nsf ADA



2 Bedroom / 2 Bath 761 nsf









3 Bedroom / 2 Bath 952 nsf

1BD/1BA APARTMENT

Bedroom: 165 SF/Each Living/Collaboration Space: 130 SF Kichen and Dining: 88 SF Washrooms: 63 SF Corridor: 56 SF Support: 29 SF Total: 531 SF

2 BD / 2 BA APARTMENT ADA

Bedroom: 164 SF/Each Living/Collaboration Space: 147 SF Kichen and Dining: 104 SF Washrooms: 121 SF Corridor: 45 SF Support: 16 SF Total: 761 SF

3 BD / 2 BA APARTMENT ADA

Bedroom: 225 SF/ 94 SF Living Space: 167 SF Kitchen and Dining: 93 SF Washrooms: 109 SF Support: 53 SF Corridor: 117 SF TOTAL: 952 SF

POTENTIAL UNIT TYPES: TOWNHOMES

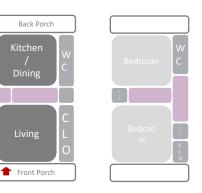


Level 1









Level 2

20' - 0" 10" - 11" 4' - 2"

Level 1

TOWNHOME A

Bedroom: 163 + 174 SF Living Space: 254 SF Kitchen and Dining: 306 SF Washrooms: 107 SF Support: 85 SF Corridor: 118 SF TOTAL : 1207 SF

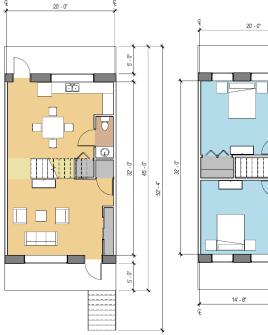
20" - 0"

Level 2

TOWNHOME A

Bedroom: 163 + 174 SF Living Space: 254 SF Kitchen and Dining: 306 SF Washrooms: 107 SF Support: 85 SF Corridor: 118 SF TOTAL: 1207 SF

Level 1



TOWNHOME B

Bedroom: 194 SF Each Living Space: 256 SF Kitchen and Dining: 246 SF Washrooms: 70 SF Support: 88 SF Corridor: 92 SF TOTAL: 1,140 SF

TOWNHOME B

5' - 4"

Level 2

Bedroom: 194 SF Each Living Space: 256 SF Kitchen and Dining: 246 SF Washrooms: 70 SF Support: 88 SF Corridor: 92 SF TOTAL: 1,140 SF

225 Franklin Street

Suite 1100

Boston, MA 02110