UNIVERSITY OF VIRGINIA
BOARD OF VISITORS

Meeting of the
Buildings and Grounds
Committee

March 5, 2020

BUILDINGS AND GROUNDS COMMITTEE

Thursday, March 5, 2020
3:30 – 4:30 p.m.
Board Room, The Rotunda

Committee Members:

Robert D. Hardie, Chair	Barbara J. Fried
Whittington W. Clement, Vice Chair	Louis S. Haddad
Robert M. Blue	C. Evans Poston Jr.
Mark T. Bowles	James V. Reyes
Elizabeth M. Cranwell	James B. Murray Jr., Ex-officio
Thomas A. DePasquale	Derrick Wang, Student Member

AGENDA

UNIVERSITY OF VIRGINIA
BOARD OF VISITORS AGENDA ITEM SUMMARY

BOARD MEETING: March 5, 2020

COMMITTEE: Buildings and Grounds

AGENDA ITEM: I. Remarks by the Chair

ACTION REQUIRED: None

BACKGROUND: The Committee Chair will provide introductory remarks.

UNIVERSITY OF VIRGINIA
BOARD OF VISITORS CONSENT AGENDA

II.A. Naming: Materials Science Building as Jesser Hall

University policy states that names for academic units, programmatic initiatives, and physical structures and spaces on the University of Virginia Grounds or property owned or leased by the University of Virginia or a University-Associated Organization, if used by the University, shall be forwarded to the Board of Visitors for final approval. The proposed name is recommended by the University's Committee on Names.

In recognition of philanthropic support from alumnus Greg Olsen, the School of Engineering and Applied Science and the Virginia Engineering Foundation request that the Materials Science Building at the School of Engineering be named "Jesser Hall." Mr. Olsen wishes to name the Materials Science Building in honor of William A. Jesser, who served as Chair of the Department of Materials Science and Engineering from 1992 to 2003. Mr. Jesser's most significant technical contributions are in the areas of epitaxial thin films, nanoparticles, semiconductor materials, and surface thermodynamics. With over 150 publications, two patents, and 74 invited lectures, Mr. Jesser continues to be one of the most outstanding academic researchers in the world in these areas and an avid researcher in the field of materials science. Mr. Olsen received his doctorate in materials science from the University in 1971. He remains a member of the advisory board for the Materials Science and Engineering Department and has served on the Engineering School's Board of Trustees. Mr. Olsen's recent gift of $25 million marks the largest-ever gift to the School of Engineering, and his generous investment will enable the School of Engineering to attract outstanding scholars and produce future engineering leaders for generations to come.

ACTION REQUIRED: Approval by the Buildings and Grounds Committee and by the Board of Visitors

NAMING: MATERIALS SCIENCE BUILDING AS JESSER HALL

WHEREAS, Greg Olsen took a doctorate in Materials Science from the University of Virginia in 1971; and

WHEREAS, Mr. Olsen has been an engaged alumnus and generous supporter of the University; and

WHEREAS, Mr. Olsen and the University wish to honor William A. Jesser, who served as Chair of the Department of Materials Science and Engineering from 1992 to 2003; and

WHEREAS, Mr. Jesser has made and continues to make outstanding contributions in the field of Materials Science;

RESOLVED, the Board of Visitors names the Materials Science Building "Jesser Hall."

II.B.1. Demolition of the Dynamics Building

The Dynamics Building, located at 2015 Ivy Road, is a 14,280 square foot office building that houses Information Technology Services and provides swing space to temporarily house various departments as needed. The University of Virginia Foundation (UVAF) purchased the building in 2004 and leased it to the University for use by University departments. Anticipating the redevelopment of the Ivy Corridor, the University purchased Dynamics from the UVAF in December 2018. The master plan for the Ivy Corridor calls for the redevelopment of the northside of Ivy Road from Emmet Street west to Copeley Road. Recent plans have sited the UVA Hotel and Conference Center adjacent to the western side of the Emmet-Ivy Parking Garage. The primary entrance to the Hotel will traverse the Dynamics Building site, necessitating its demolition.

ACTION REQUIRED: Approval by the Buildings and Grounds Committee and by the Board of Visitors

DEMOLITION OF THE DYNAMICS BUILDING

WHEREAS, in support of the redevelopment of the Ivy Corridor, including the construction of the UVA Hotel and Conference Center, it has been determined that the Dynamics Building, building structure # 3986, at 2015 Ivy Road should be demolished; and

WHEREAS, pursuant to the Management Agreement, dated November 15, 2005, by and between the Commonwealth of Virginia and The Rector and Visitors of the University of Virginia, subject to review by the Art and Architectural Review Board and the Department of Historic Resources and in compliance with such general laws as may be applicable, the Board of Visitors is authorized to approve the demolition of buildings;

RESOLVED, the demolition of the Dynamics Building, located at 2015 Ivy Road, is approved by the Board of Visitors, pending approval by the Art and Architectural Review Board and the Department of Historic Resources and in compliance with such general laws as may be applicable; and

RESOLVED FURTHER, the Executive Vice President and Chief Operating Officer is authorized, on behalf of the University, to approve and execute such documents and to take such other actions as deemed necessary and appropriate in connection with the demolition of these structures; and

RESOLVED FURTHER, all prior acts performed by the Executive Vice President and Chief Operating Officer, and other officers and agents of the University, in connection with this demolition, are in all respects approved, ratified, and confirmed.

II.B.2. Demolition of the Corn Crib and Greenhouse at Blandy Experimental Farm

Blandy Experimental Farm, consisting of 700 acres in Clarke County, is owned by the University and home to the State Arboretum of Virginia. The State Arboretum, also known as the Orland E. White Arboretum, occupies the central 172 acres of Blandy Experimental Farm. Gifted to the University in 1926 as a working farm, the property now hosts educational programs, field-based ecological research, and public outreach programs. The ca. 1890 corn crib, which is structurally compromised, and a ca. 1941 greenhouse, which has outlived its useful life, are proposed for demolition.

ACTION REQUIRED: Approval by the Buildings and Grounds Committee and by the Board of Visitors

DEMOLITION OF THE CORN CRIB AND GREENHOUSE AT BLANDY EXPERIMENTAL FARM

WHEREAS, it has been determined that a corn crib, a portion of building structure #8057, and a greenhouse, building structure #8064, at Blandy Experimental Farm have outlived their useful life and are in poor condition, and should be demolished; and

WHEREAS, pursuant to the Management Agreement, dated November 15, 2005, by and between the Commonwealth of Virginia and The Rector and Visitors of the University of Virginia, subject to review by the Art and Architectural Review Board and the Department of Historic Resources and in compliance with such general laws as may be applicable, the Board of Visitors is authorized to approve the demolition of buildings;

RESOLVED, the demolition of the corn crib and greenhouse is approved by the Board of Visitors, pending approval by the Art and Architectural Review Board and the Department of Historic Resources and in compliance with such general laws as may be applicable; and

RESOLVED FURTHER, the Executive Vice President and Chief Operating Officer is authorized, on behalf of the University, to approve and execute such documents and to take such other actions as deemed necessary and appropriate in connection with the demolition of these structures; and

RESOLVED FURTHER, all prior acts performed by the Executive Vice President and Chief Operating Officer, and other officers and agents of the University, in connection with this demolition, are in all respects approved, ratified, and confirmed.

II.C. Schematic Design Approval: Contemplative Sciences Center

The Contemplative Sciences Center will act as a bridge for learning and research across all schools at the University of Virginia. The building has been designed with the flexibility to support immersive learning and to promote well-being. The building and its landscape will form an integrated complex of adaptable interior and exterior spaces. An accessible bridge will run along the south side of the building providing entry to the third level; and a new, accessible bridge will connect the building to the Curry School and West Grounds and cross Emmet Street to Brown College and Central Grounds. A courtyard will provide respite from the street, frame a view of the Dell pond, and accommodate a range of activities. Unlike traditional classrooms on Grounds, the building's major learning spaces will be designed with the flexibility to accommodate collaborative, contemplative, and highly experiential modes of learning.

Since approval of the schematic design by the Board of Visitors in December 2017, the design team of Aidlin Darling Architects and VMDO Architects, in collaboration with the Architect for the University, representatives of the Contemplative Science Center, and other project advisors, developed a revised schematic design that reduces the project cost to $60.0M while preserving the original design intent and relationship of the building to its surroundings.

ACTION REQUIRED: Approval by the Buildings and Grounds Committee

SCHEMATIC DESIGN FOR THE CONTEMPLATIVE SCIENCES CENTER

RESOLVED, the revised schematic design for the Contemplative Sciences Center, prepared by Aidlin Darling Architects and VMDO Architects, in collaboration with the Architect for the University, representatives of the Contemplative Sciences Center, and other project advisors, is approved for further development and construction.

Previously-approved design: View from Dell looking south

Proposed design: View from Dell looking south

Previously-approved design: View of third-floor roof terrace looking west

Proposed design: View of third-floor roof terrace looking west

UNIVERSITY OF VIRGINIA
BOARD OF VISITORS AGENDA ITEM SUMMARY

BOARD MEETING: March 5, 2020

COMMITTEE: Buildings and Grounds

AGENDA ITEM: III.A. Schematic Design Approval: Brandon Avenue Upper-Class Residence Hall Phase II

PROJECT BUDGET: $114.0 million

BACKGROUND: Located in the heart of the Grounds and linking academics and research in the Health System, the College and Graduate School of Arts and Sciences, and the Academical Village, Brandon Avenue was identified in the 2008 Grounds Plan as a redevelopment zone. Approved by the Board in September 2016, the Brandon Avenue Master Plan was developed to ensure that planned projects provide maximum long-term benefit to the University. The redeveloped Brandon Avenue will provide a blend of residential, academic, and other University mixed-use buildings, as well as a Green Street that will incorporate green space amenities, circulation and parking, storm water features, and University utilities. The second phase of student housing on Brandon Avenue will provide approximately 350 beds for upper-class students, dining, informal gathering space, and approximately 100 parking spaces; and will support the continued future redevelopment of the Brandon Avenue district.

DISCUSSION: The Buildings and Grounds Committee reviewed the massing, design elevations, and site layout for the Brandon Upper-Class Student Housing Phase II at the December 2019 meeting. The design team, led by Elkus Manfredi Architects of Boston, MA in collaboration with representatives from the Office of the Architect for the University, Facilities Management, Student Affairs, Business Operations, and Housing and Residence Life, has developed the schematic design that Ms. Raucher will review with the Committee.

ACTION REQUIRED: Approval by the Buildings and Grounds Committee

SCHEMATIC DESIGN FOR THE BRANDON AVENUE UPPER-CLASS STUDENT HOUSING PHASE II

RESOLVED, the schematic design for the Brandon Avenue Upper-Class Residence Hall Phase II, prepared by Elkus Manfredi Architects of Boston, MA in collaboration with representatives from the Office of the Architect for the University, Facilities Management, Student Affairs, Business Operations, and Housing and Residence Life, is approved for further development and construction.

Brandon Avenue Green Street and Project Site

Aerial View Looking North

East Elevation

Artist's Rendering of East Elevation and the Lower Green Street

Artist's Rendering of East Elevation and the Upper Green Street

UNIVERSITY OF VIRGINIA
BOARD OF VISITORS AGENDA ITEM SUMMARY

BOARD MEETING: March 5, 2020

COMMITTEE: Buildings and Grounds

AGENDA ITEM: III.B. Concept, Site, and Design Guidelines: Low-Temperature Hot Water Conversion, Thermal Energy Storage Tank

BACKGROUND: The next phase of the Low-Temperature Hot Water Conversion project calls for the installation of a combined heating and cooling (CHC) system in the North Chiller Plant (NCP). The new CHC system will require a Thermal Energy Storage (TES) Tank, which will be outside the current footprint of the NCP. When operational, the CHC system will remove heat from the Health System buildings through the chilled water loop and transfer the recovered energy to the heating hot water loop that serves academic buildings on Grounds. The proposed CHC system is up to 7.5 times more efficient than the existing conventional heating and cooling systems, thereby saving energy, water, and associated utility costs estimated at approximately $910,000 annually.

In addition to these energy and utility savings, the CHC system will result in a net reduction in emissions of 11,800 metric tons of carbon dioxide equivalent (MTCDE) per year, which is equal to more than 2,500 gas-powered vehicles being taken off the road. The proposed TES Tank simplifies operations and maximizes the efficiency of the CHC system resulting in the savings noted above.

DISCUSSION: The Office of the Architect has prepared the concept, site, and design guidelines for the Low-Temperature Hot Water Conversion, Thermal Energy Storage Tank that Ms. Raucher will review with the Committee.

ACTION REQUIRED: Approval by the Buildings and Grounds Committee

CONCEPT, SITE, AND DESIGN GUIDELINES FOR THE LOW-TEMPERATURE HOT WATER CONVERSION, THERMAL ENERGY STORAGE TANK

RESOLVED, the concept, site, and design guidelines for the Low-Temperature Hot Water Conversion, Thermal Energy Storage Tank prepared by the Architect for the University, are approved.

Thermal Energy Storage Tank for Combined Heating and Cooling
Concept, Site and Design Guidelines

A) Proposed Project Concept

The next phase of the Low-Temperature Hot Water Conversion project calls for the installation of a combined heating and cooling (CHC) system in the North Chiller Plant (NCP). The new CHC system will require a Thermal Energy Storage (TES) Tank, which will be outside the current footprint of the NCP. When operational, the CHC system will remove heat from the Health System buildings through the chilled water loop and transfer the recovered energy to the heating hot water loop that serves academic buildings on Grounds. The proposed CHC system is up to 7.5 times more efficient than the existing conventional heating and cooling systems, thereby saving energy, water, and associated utility costs estimated at approximately $910,000 annually.

In addition to these energy and utility savings, the CHC system will result in a net reduction in emissions of 11,800 metric tons of carbon dioxide equivalent (MTCDE) per year, which is equal to more than 2,500 gas-powered vehicles being taken off the road. The proposed TES Tank simplifies operations and maximizes the efficiency of the CHC system resulting in the savings noted above.

B) Siting Criteria

The University of Virginia general siting criteria for all new facilities include the components listed below. Those bolded are the most pertinent in determining the siting recommendation for the TES tank.

- Conforms to overall land use plan and district/area plans.
- **Reinforces functional relationships with other components of the same department or program and is compatible with other neighboring uses.**
- **Satisfies access requirements – pedestrian, bicycle, vehicular, and service.**
- **Maximizes infill opportunities to utilize land resources and existing infrastructure.**
- **Minimizes site-development costs including extension of utilities, access, loss of parking, mass grading, etc.**
- Minimizes opportunity cost (i.e., value of this use and size versus other alternatives).
- **Provides a size that is adequate, but not excessive, for initial program, future expansion, and ancillary uses.**
- Allows for incorporating sustainability principles in terms of solar orientation, reuse of historic structures, storm water management, etc.
- **Avoids unnecessary environmental impacts including significant tree removal or filling of existing stream valleys.**
- Allows site visibility and aesthetic character as appropriate for the intended use and for the neighborhood.
- **Minimizes time for implementation of the project.**

C) Proposed Site

North Chiller Plant on Jefferson Park Avenue (JPA) and Lee Street

Location of North Chiller Plant on JPA and Lee Street

Proposed Tank Location

D) Design Guidelines

Site Planning

- The site will consider pedestrian and vehicular circulation, and service access to the new structure and surrounding buildings.

Storm Water

- The site is on an existing paved service parking area and will not impact the storm water system.

Circulation and Parking

- Maintains sufficient and safe pedestrian circulation from Jefferson Park Avenue to the multi-story parking and entrance.
- Develops a screened service area for the new structure and the adjacent heat plant.
- Provides a plan that will provide required parking for the facility.

Architecture

- Develops massing, fenestration, and architectural details to establish a compatible relationship with adjoining buildings and a visual and physical connection with the existing North Chiller Plant.
- Develops a screening element that is complementary and contextual with adjacent permanent structures.
- Utilizes materials and colors compatible with adjacent structures.
- Integrates basic tenets of sustainable design and attains LEED Silver Certification.

Landscape

- Provides a safe and attractive appearance for all building elevations.

Review and Compliance

- The Office of the Architect for the University is responsible for the review and approval of project compliance with these design guidelines.

UNIVERSITY OF VIRGINIA
BOARD OF VISITORS AGENDA ITEM SUMMARY

BOARD MEETING: March 5, 2020

COMMITTEE: Buildings and Grounds

AGENDA ITEM: IV.A. Schematic Design Review: Low-Temperature Hot Water Conversion, Thermal Energy Storage Tank

ACTION REQUIRED: None

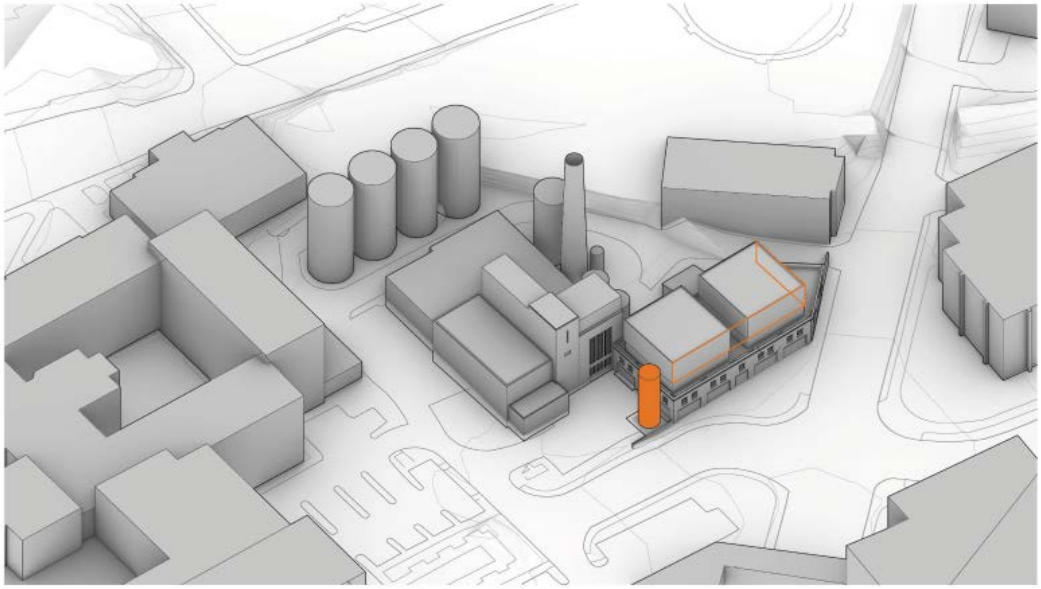
BUDGET: $35.0 million (total project cost for Low-Temperature Hot Water Conversion capital project)

BACKGROUND: The Low-Temperature Hot Water (LTHW) Conversion project implements heat recovery technology in buildings that are located west of Hospital Drive and connected to the UVA Main Heat Plant. In addition to converting buildings to use low-temperature heat, this project will replace two 1,200 ton chillers with a heat recovery chiller, install a Thermal Energy Storage (TES) Tank, and replace distribution piping. UVA test-fit the heat recovery technology in 2015 at the North Grounds Plant and reduced energy use by nearly one-half and water use by more than 10%. This project is the second phase of a multi-phase master plan to further reduce energy and water use, eliminate coal use, reduce greenhouse gas emissions (carbon) and other pollutants, and shift from fossil fuels to electrical energy backed by a greener grid and renewable energy projects in alignment with the University's 2030 Sustainability Plan.

As noted in the concept, site, and design guidelines, the new TES tank will be sited outside the current footprint of the North Chiller Plant. When operational, the system will remove heat from the Health System buildings through the chilled water loop and transfer the recovered energy to the heating hot water loop serving academic buildings on Grounds. It is anticipated that the new system will be up to 7.5 times more efficient than existing conventional heating and cooling systems, realizing significant savings in energy, water, and associated utility costs.

DISCUSSION: The design team, Affiliated Engineers (AEI), from Chapel Hill, NC with Zimmer Gunsul Frasca (ZGF) of Washington, D.C., in collaboration with representatives from the Office of the Architect for the University and Facilities Management, has developed a schematic design that Ms. Raucher will review with the Committee.

Location of North Chiller Plant on Jefferson Park Avenue and Lee Street



Proposed Massing of Storage Tank, Aerial View

Existing View of Plant from Lee Street

Proposed View from Lee Street with Tank Massing and Screen Wall

Existing View from the Multi-Story Clinic Building Entrance

Proposed View from the Multi-Story Entrance with Tank Massing and Screen Wall

UNIVERSITY OF VIRGINIA
BOARD OF VISITORS AGENDA ITEM SUMMARY

BOARD MEETING: March 5, 2020

COMMITTEE: Buildings and Grounds

AGENDA ITEM: IV.B. Schematic Design Review: Physics Building Renewal

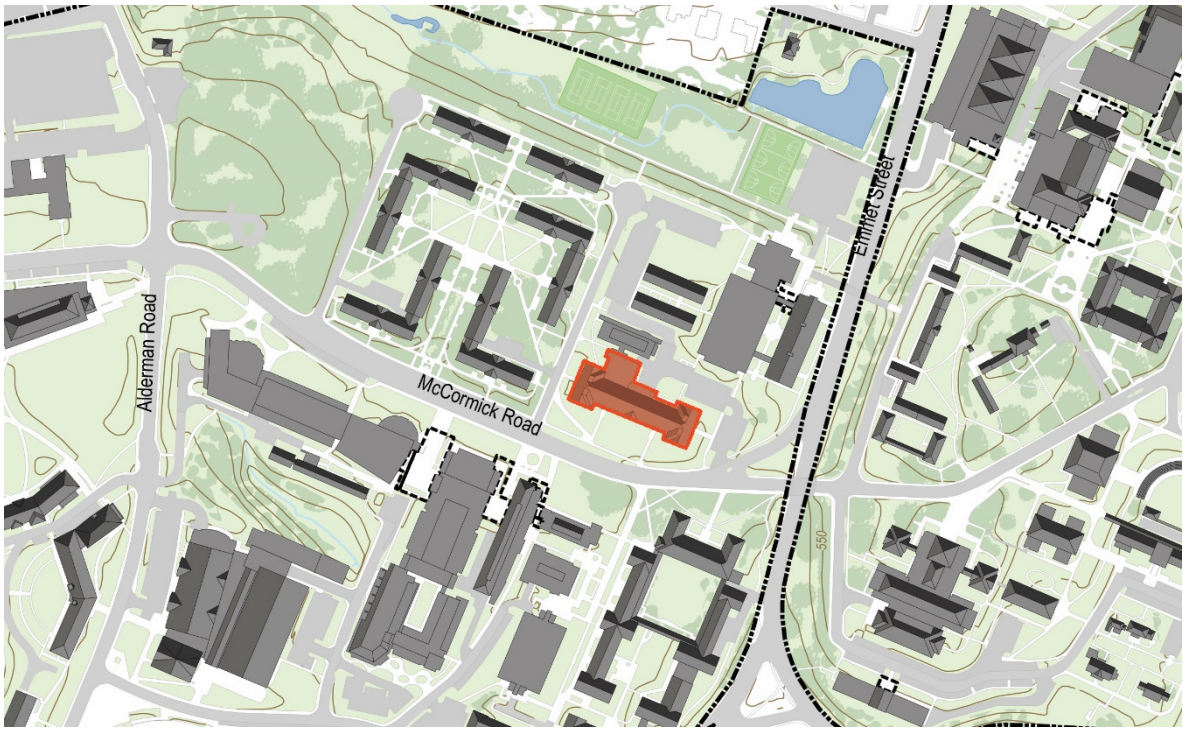
ACTION REQUIRED: None

BUDGET: $58.2 million

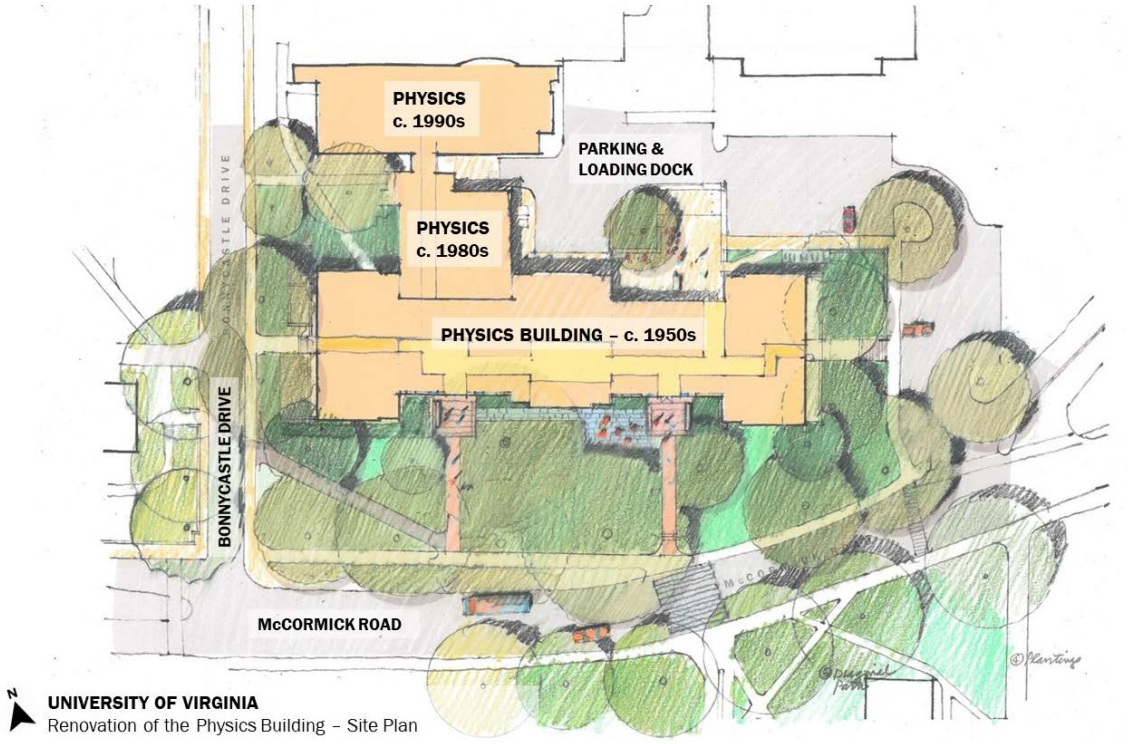
BACKGROUND: The Physics Building Renewal will comprehensively renovate the 1954 building and 1980 addition, replacing and supplementing existing mechanical, electrical, plumbing, and fire safety infrastructure and renewing the building's envelope and interiors to meet building code, life safety, and accessibility requirements. The renovated building will provide high-quality space to serve the demands of the University's current and future instructional and research programs. This project will correct longstanding deferred maintenance deficiencies and renovate outdated classrooms, teaching and research labs, fabrication shops, and student fabrication spaces to meet future experimental and theoretical research needs. Renovation is essential for the recruitment and retention of outstanding Physics and STEM students and faculty.

Key priorities include addressing the University's need for high-quality, flexible, STEM active-learning classrooms and teaching and research labs. A modest addition above the one-story 1980 addition will provide egress from lecture halls in the 1954 building, and add an approximately 100-seat active learning classroom. Renovations to the attic in the 1954 building will convert the space into new office and collaboration spaces, and provide essential swing space during the phased renovation. The renovation will also provide much-needed collaboration and study spaces.

DISCUSSION: The design team, led by Goody Clancy Architects of Boston, MA in collaboration with representatives from the Office of the Architect for the University, Facilities Management, and the College and Graduate School of Arts and Sciences, has developed a schematic design that Ms. Raucher will review with the Committee.



Aerial View of the Physics Building and the West Grounds Precinct



Site Plan

Proposed Alterations to the Existing Exterior Envelope – Aerial View

South Elevation with Proposed Ridge Skylights

East Elevation with Proposed Classroom Addition

West Elevation with Proposed Classroom Addition

UNIVERSITY OF VIRGINIA
BOARD OF VISITORS AGENDA ITEM SUMMARY

BOARD MEETING: March 5, 2020

COMMITTEE: Buildings and Grounds

AGENDA ITEM: V. Revisions to the Major Capital Plan

ACTION REQUIRED: None

BACKGROUND: The revised multi-year major capital plan is presented annually to the Board of Visitors for review in March and approval in June. The Buildings and Grounds Committee determines whether a project should be added to the Major Capital Plan, and the Finance Committee evaluates whether there is a sound financing plan to pay for the estimated project cost and additional operating costs expected once a project is complete.

In June 2019, the Board of Visitors approved the 2019 Major Capital Plan for the Academic Division, Health System, and College at Wise. In accordance with the University's capital planning process, the University updates the Capital Plan annually to add new projects, remove projects that are no longer a priority, and evaluate/prioritize projects based on the following criteria:

- Aligns with institutional priorities/strategy and supports the University's long-term mission;
- Responds to a legal, compliance, or regulatory mandate;
- Addresses a life-safety risk;
- Addresses more than one school, unit, or function;
- Provides value and benefit and minimizes potential risk to the University and the community;
- Improves current conditions;
- Presents a viable funding plan for both construction and ongoing expenses;
- Is flexible to adapt to changing needs and/or is able to be repurposed for other University needs; and
- Has considered a plan for engaging and communicating with stakeholders.

The proposed 2020 Multi-Year Major Capital Plan was vetted by the Space Leadership Committee (SLC) and executive leadership to ensure alignment with institutional priorities and the 2030 Strategic Plan.

DISCUSSION: The proposed 2020 Major Capital Plan, as shown on the following pages, revises the plan approved by the Board in June 2019 to include current cost estimates, add new projects, and remove projects no longer planned within the next six years.

Four projects are proposed to be added to the revised 2020 Plan:

- Chemistry Building Addition Fume Exhaust Renewal
- Safety and Security Facility
- Renovation of Smith Hall at Darden
- Parking and Transportation Replacement Facility

Three projects previously approved by the Board of Visitors are proposed to be removed from the 2020 Major Capital Plan:

- Drama Building Phase II South Addition
- Fiske Kimball Fine Arts Library Renewal
- Science & Engineering Plant Chemistry Chillers Replacement

In addition to projects proposed to be added to the 2020 Capital Program, the University is engaged currently in, or will be initiating, several strategic land-use planning and space needs studies that will inform future capital projects:

- Grounds Plan Update
- Ivy Gardens Redevelopment
- Utility/Infrastructure Studies
  - Main Heat Plant Fuel Mix
  - Massie Road Utility Plant Expansion
  - Chemistry Addition Chiller Plant

Ms. Sheehy will report on the major capital plan development process and review proposed revisions to the Major Capital Plan. Write-ups describing the three proposed additions to the Capital Program are included in the written reports beginning on page 32.

Proposed 2020 Multi-Year Major Capital Plan

Projects under construction

Project ($ in millions)	**Budget**	**State GF**	**Gifts**	**Debt**	**Cash**
Academic Division					
Alderman Library Renewal	$ 152.50	$ 132.50	$ 20.00		
Athletics Complex Phase I	$ 20.00			$ 18.00	$ 2.00
Gilmer Hall and Chemistry Building Renovation	$ 197.03	$ 146.70		$ 42.53	$ 7.80
Ivy Corridor Landscape and Infrastructure - Phase I	$ 37.34			$ 36.14	$ 1.20
John Paul Jones Arena Performance Center Renovation	$ 8.00			$ 8.00	
Low Temperature Hot Water Conversion	$ 35.00			$ 35.00	
McCormick Rd Residence Halls	$ 104.70			$ 86.50	$ 18.20
North Grounds Mechanical Plant & Infrastructure	$ 13.00			$ 13.00	
Student Health and Wellness Center	$ 100.00		$ 70.00	$ 30.00	
Thornton Hall Clean Room Systems Upgrades	$ 15.20			$ 6.15	$ 9.05
Academic Division Total	**$ 682.77**	**$ 279.20**	**$ 90.00**	**$ 275.32**	**$ 38.25**
Health System					
Comprehensive Breast Center	$ 12.00				$ 12.00
Ivy Mountain Musculoskeletal Center	$ 179.50				$ 179.50
Pinn Hall Building Envelope	$ 22.00				$ 22.00
Pinn Hall Renovation Phase I	$ 32.00				$ 32.00
University Hospital Expansion	$ 391.60			$ 376.04	$ 15.56
Health System Total	**$ 637.10**	**$ -**	**$ -**	**$ 376.04**	**$ 261.06**
Total under Construction	**$1,319.87**	**$ 279.20**	**$ 90.00**	**$ 651.36**	**$ 299.31**

Projects in planning/design

Project ($ in millions)	**Budget**	**State GF**	**Gifts**	**Debt**	**Cash**
Academic Division					
Athletics Complex Phase II	$ 160.00		$ 154.00	$ 6.00	
Brandon Avenue Upper-Class Residence Hall Phase II	$ 114.00			$ 96.00	$ 18.00
Contemplative Sciences Center	$ 60.00		$ 45.00		$ 15.00
Fontaine Research Park Infrastructure & Parking Garage	$ 87.00			$ 87.00	
Inn at Darden	$ 135.00		$ 30.00	$ 91.50	$ 13.50
McIntire Academic Facility	$ 97.10		$ 97.10		
Physics Building Renewal	$ 58.20	$ 58.20			
School of Data Science	$ 43.00		$ 43.00		
University Hotel & Conference Center	$ 100.00			$ 80.00	$ 20.00
Virginia Autonomous Systems Testing Facility (SEAS)	$ 10.00	$ 5.00	$ 4.00	$ 1.00	
West Grounds Chilled Water Capacity	$ 8.00			$ 8.00	
Academic Division Total	**$ 872.30**	**$ 63.20**	**$ 373.10**	**$ 369.50**	**$ 66.50**
Health System					
Cancer Center - MRI LINAC	$ 8.00				$ 8.00
Consumer Ambulatory Clinic (tenant fit-out)	$ 15.00				$ 15.00
Health System Total	**$ 23.00**	**$ -**	**$ -**	**$ -**	**$ 23.00**
College at Wise					
Wyllie Library Renovation and Conversion	$ 13.40	$ 13.40			
College at Wise Total	**$ 13.40**	**$ 13.40**	**$ -**	**$ -**	**$ -**
Total in Planning/Design	**$ 908.70**	**$ 76.60**	**$ 373.10**	**$ 369.50**	**$ 89.50**

Authorized but not yet initiated and proposed new projects (proposed new projects in red text)

Project ($ in millions)	**Budget**	**State GF**	**Gifts**	**Debt**	**Cash**
Academic Division					
Projects to be initiated in short-term (by FY2022)					
Athletics/North Grounds Parking Garage	$ 35.00			$ 35.00	
Campbell Hall Addition (planning)	$ 3.00		$ 3.00		
Environmental Health & Safety Facility	$ 28.00			$ 28.00	
Pavilion VIII Renovation	$ 4.75		$ 4.75		
Interdisciplinary Research Buildings - 2030 Strategic Plan (planning)	$ 1.00				$ 1.00
Upper-Class Student Housing - 2030 Strategic Plan	TBD				
Chemistry Building Addition Fume Exhaust Renewal	$ 8.50				$ 8.50
Smith Hall Renovation (Darden)	TBD				
Projects to be initiated in mid-term (by FY2024)					
Center for the Arts (planning)	$ 16.00		$ 16.00		
Batten Academic Building	$ 60.00		$ 60.00		
Old Cabell Hall Renewal	$ 60.00	$ 45.00	$ 15.00		
Parking & Transportation Replacement Facility	$ 32.00			$ 32.00	
Safety & Security Facility	$ 28.00			$ 28.00	
UVA Museum (planning)	$ 3.00		$ 3.00		
Projects to be initiated in long-term (FY2025 and beyond)					
Alderman Road Residence Hall - Building 7	$ 70.00			$ 62.00	$ 8.00
Center for Politics	$ 14.00		$ 14.00		
Darden Academic Building	$ 85.00		$ 85.00		
Fontaine Research Park Central Energy Plant & Utilities	$ 35.00			$ 35.00	
Student Activities Building	$ 17.00			$ 17.00	
Academic Division Total	**$ 500.25**	**$ 45.00**	**$ 200.75**	**$ 237.00**	**$ 17.50**
Authorized projects proposed to be removed from Capital Plan					
Drama Building Phase II South Addition	$ 17.86		$ 17.86		
Fiske Kimball Fine Arts Library Renewal	$ 18.71	$ 18.71			
Science & Engineering Plant: Replace Chillers	$ 23.06			$ 23.06	

Authorized but not yet initiated projects

Project ($ in millions)	**Budget**	**State GF**	**Gifts**	**Debt**	**Cash**
Health System					
Projects to be initiated in short-term (by FY2022)					
Eye Center	$ 60.00				$ 60.00
Focused Ultrasound Expansion	$ 16.50				$ 16.50
Pinn Hall Renovation Phase II	$ 38.00			$ 38.00	
Projects to be initiated in mid-term (by FY2024)					
Data Center	$ 23.00				$ 23.00
Multi-Disciplinary Ambulatory Clinic Building	$ 155.00			$ 77.50	$ 77.50
Pinn Hall Nobel Laureate Gallery	$ 12.00		$ 12.00		
Health System Total	**$ 304.50**	**$ -**	**$ 12.00**	**$ 115.50**	**$ 177.00**
College at Wise					
Projects to be initiated in mid-term (by FY2024)					
Darden Hall Renovation	$ 24.70	$ 24.70			
Sandridge Science Center Lab Wing Renovation	$ 39.10	$ 39.10			
Projects to be initiated in long-term (FY2025 and beyond) [dependent on state funding; listed in priority order]					
Bowers-Sturgill Hall Renovation	$ 5.90	$ 5.90			
Technology Classroom Building	$ 44.40	$ 44.40			
Zehmer Hall Renovation	$ 23.10	$ 23.10			
Music Education Center	$ 45.20	$ 45.20			
Campus Welcome Center/Public Safety Facility	$ 5.60	$ 5.60			
Athletic Building	$ 24.70		$ 24.70		
College at Wise Total	**$ 212.70**	**$ 188.00**	**$ 24.70**	**$ -**	**$ -**
Total Approved but not Initiated and Proposed New Projects	**$1,017.45**	**$ 233.00**	**$ 237.45**	**$ 352.50**	**$ 194.50**

WRITTEN REPORTS

Buildings and Grounds Committee
University of Virginia

March 5, 2020

WHERE DOES UVA'S WASTE GO?

A BREAKDOWN OF UVA'S WASTE

SUSTAINABILITY UVA
From the Grounds Up

RECYCLABLES

- GLASS
- METAL CANS
- CARDBOARD
- ALUMINUM
- MIXED & WHITE PAPER
- PLASTICS #1-7

Did you know?
UVA accepts all plastics 1-7, including plastic bags and plastic wrap.

HAND SORTED AT UVA RECYCLING

Did you know?
All recycling collected on Grounds is hand-sorted by type at UVA. Please be sure to rinse recyclables to ensure your materials are properly recycled.

SONOCO RECYCLING

Did you know?
UVA's contract requires all plastic to be recycled. Those plastics are sent to mills in the Raleigh, North Carolina region.

END PRODUCT

- tiles, sand, landfill cover, blast material
- car parts, building materials
- cardboard products
- aluminum cans
- paper, newspaper, napkins, other recycled paper products
- bottles, lumber, piping, plastic mold filling, packaging

E-CYCLABLES

- CELL PHONES
- CDs, DVDs, TAPES, JEWEL CASES
- INKJET & TONER CARTRIDGES
- RECHARGEABLE, LITHIUM, ALKALINE, & LAPTOP BATTERIES

HAND SORTED AT UVA RECYCLING

- ECYCLE SECURE
- GREENDISK
- ARCANE TECHNOLOGIES
- VEOLIA ENVIRONMENTAL SERVICES

END PRODUCT

- recycled for components or refurbished for reuse
- recycled for components
- recycled for components
- burned at waste-to-energy plant or recycled for components

COMPOSTABLES

- LANDSCAPE WASTE
- FOOD SCRAPS & ORGANIC MATERIAL

UVA LANDSCAPING

UVA RECYCLING

BLACK BEAR COMPOSTING

Did you know?
UVA composts in every dining hall, certain residential colleges & workplaces & offers zero waste event support.

Did you know?
Compost collected at UVA is processed at local composting facilities and sold to regional farms.

END PRODUCT

- compost & mulch for UVA
- compost

REUSABLES

- OFFICE FURNITURE, APPLIANCES, BUILDING MATERIALS
- UVA-OWNED ELECTRONICS: TVs COMPUTERS & PRINTERS
- OTHER UVA-OWNED GOODS
- BINDERS, FOLDERS, PENS, PENCILS, CLIPS, OFFICE MISC.
- HOOS REUSE - CLOTHING, FURNITURE, HOUSEHOLD MISC.

UVA REUSE STORE

HAND SORTED AT UVA RECYCLING

- ECYCLE SECURE
- GOVDEALS.COM
- UVA R.O.S.E. PROGRAM
- GOODWILL, SALVATION ARMY, DISABLED VETERANS & SMALL NON-PROFITS

END PRODUCT

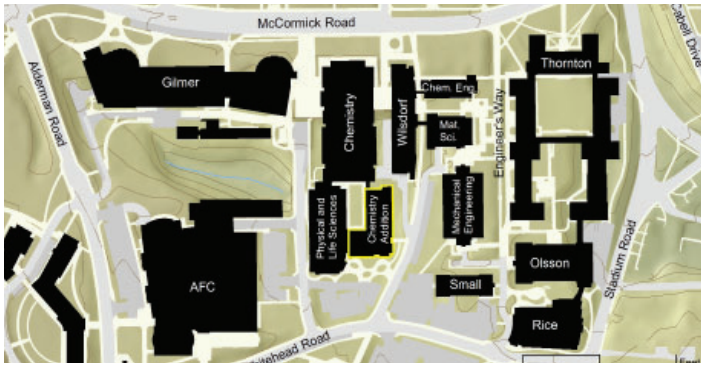
- available for use within the UVA community and also for sale to the public
- recycled for components or refurbished for reuse
- sold in online auction
- available to UVA students, employees, & local non-profits

Did you know?
You can get office & school supplies for FREE from the Reusable Office Supply Exchange program, located in UVA Recycling!

LANDFILL

AS A LAST RESORT, ITEMS THAT CAN NOT BE RECYCLED, COMPOSTED, OR REUSED ARE SENT TO LANDFILLS WITHIN 100 MILE RADIUS OF UVA. PLEASE HELP UVA DIVERT MATERIALS FROM LANDFILLS.

SUSTAINABILITY.VIRGINIA.EDU | SUSTAINABILITY@VIRGINIA.EDU



University of Virginia

CHEMISTRY BUILDING ADDITION FUME EXHAUST RENEWAL

Executive Summary

The fume hood exhaust system original to the 1993 construction of the Chemistry Addition requires replacement in order to enhance research in the building. Replacement will add exhaust fan redundancy and improve operational safety through improved exhaust plume height, elimination of positively pressurized duct in the penthouse, and improved maintenance infrastructure. This project will also reduce energy usage by replacing over 100 individual exhaust fans with a bank of four.

Project Background

The current exhaust system in the Chemistry Building Addition was not designed for redundancy, which means that when a fan needs repair or replacement, research is impacted until the work is completed. An air entrainment study conducted in 2018 for the Gilmer Hall capital renovation discovered the fume exhaust system does not meet plume height standards, which could allow re-entrainment of exhaust into the surrounding buildings.

Proposed Time Frames

Planning/Design: Summer 2020

Construction: Fall 2020

Financial Information

Estimated Project Cost: $7.5M - $8.5M

Funding Source(s): Cash

University of Virginia

PARKING AND TRANSPORTATION FACILITY

Executive Summary

Based on a 2019 study identifying operational and programmatic needs, industry best practices, and sustainability transportation best practices, it is clear that the current department of Parking and Transportation (P&T) facilities at Millmont are no longer capable of meeting growth demands. In addition, the existing facility is increasingly challenged to meet new environmental regulations and industry safety standards. Therefore, a replacement facility to better serve the administrative and operational needs of P&T is needed to maintain a high level of service, safe and compliant operations, and support the University's strategic plan.

Project Background

In 1985, P&T renovated and took occupancy of 40% of the interior and 90% of the exterior of the former Pepsi bottling plant located at 1101 Millmont Street. The Millmont facility supports P&T's transit bus operations, vehicle maintenance, transportation and parking operations, customer service, and administration. The Millmont facility also supports the Mail Services operation, and provides storage needs for various other university departments.

To meet the changing regulatory and operational needs, P&T has invested in the Millmont facility with overhead canopies, underground tank maintenance, storm water best management practices, and more. P&T is at a decision point regarding further investment in the Millmont facility prompted by a transit fleet too large for the current site and environmental impacts associated with fueling and maintenance. The geometric layout of the property (i.e. stacked transit parking and forced backing maneuvers for nearly every operational need on the lot) presents significant operational risk.

A new P&T facility generates opportunities for the University's strategic conversion of the Millmont property, the modernization of infrastructure supporting current environmental regulations, and risk reduction via a purpose-built facility to support protected transit maintenance and safer parking maneuvers.

The 2019 study has identified a facility need of 30-35K GSF inclusive of administrative and bus service functions. Discussions about co-locating P&T with Environmental Health & Safety are underway. Together they would require approximately 9.5 acres of land to house a shared administrative building, P&T bus maintenance facility, EH&S operations facility, and all associated bus, fleet, and personal vehicle parking.

Proposed Time Frames

Planning/Design: Summer 2021

Construction: Winter 2023

Project Occupancy: Winter 2025

Financial Information

Estimated Project Cost: $28-$32M

Funding Source(s): TBD

University of Virginia

DEPARTMENT OF SAFETY & SECURITY FACILITY

Executive Summary

The University's safety and security functions have expanded dramatically over the last 20 years. In 2017, the University engaged Margolis Healy to fully assess its public safety and security infrastructure. The firm determined that the disparate reporting structures and physical separation of the various safety and security functions were limiting their effectiveness, and the University would benefit from consolidating those functions into a single division. Therefore, in 2018 the University created the Department of Safety and Security (DSS). Having organized the reporting structure, the next step is to consolidate the new department in a facility purpose built to house the DSS functions.

Project Background

Currently, DSS embraces five units working in eight locations across Grounds. The greatest need for new space is in the University Police Department, which utilizes three remote spaces (2306 Ivy Road Lower Level, Cresap House, and Central Grounds Garage) in addition to the main station. Not only has the department outgrown the main station, but the station is also in poor condition and not capable of expansion.

The other areas of the Department of Safety and Security – including DSS leadership/administration, Emergency Management, Threat Assessment, Safety and Security Systems, and Clery Compliance and Youth Protection operate from different locations.

In spring 2019, DSS partnered with the Office of the Architect to complete a space study that evaluated the physical space needs of the new DSS department. Envisioned as a 32-35K gross square foot facility, this new building would accommodate future anticipated growth of the department.

A new facility would co-locate all DSS units and provide an efficient and effective facility with state of the art technology to better serve the University community. Furthermore, the facility will also create opportunities for DSS to interact with and serve the larger Charlottesville community, an ambition articulated in the University's 2030 Strategic Plan.

The 2019 Safety & Security Study considered two site scenarios including 1) a stand-alone building with surface parking and 2) a building integrated into a larger University-owned parking structure. Each of these options would include secure parking for officers, patrol cars, specialized vehicles and motorcycles as well as exterior space for accessory and training functions.

Proposed Time Frames

Planning/Design: Fall 2020

Construction: Winter 2021

Project Occupancy: Summer 2023

Financial Information

Estimated Project Cost: $24-$28M

Funding Source(s): TBD

University of Virginia

SMITH HALL RENOVATION PROJECT

Executive Summary

The Darden Inn Redevelopment Project consists of two distinct construction phases. The first is the partial demolition of the existing Sponsors Hall and the second is the erection of the new Inn at Darden. Upon completion of the partial demolition a new stand-alone structure will remain which is known as C. Ray Smith Hall. This facility consists of five pavilions and currently houses offices, meeting spaces, the Darden Bookstore, and approximately 50 hotel rooms as part of the existing Darden Inn. Simultaneous to the completion of the Darden Inn Redevelopment Project, the Smith Hall Renovation Project will repurpose this facility for academic, administrative, and programmatic spaces. Alumni outreach, online learning, and executive education are three critical ways for Darden to expand the school's global brand and influence. The creation of a stand-alone Smith Hall creates an opportunity to significantly enhance Darden's ability to engage alumni and provide life-long learning opportunities. These can be significant drivers for Darden's future success and help maintain the standing as one of the best business schools in the world.

Project Background

Smith Hall, otherwise known as part of Sponsors Hall West, was completed in 2001 as part of the overall Sponsors Hall and Darden Inn facility. The purpose of Smith Hall was to provide hospitality rooms, along with learning team spaces and a bookstore.

The construction of the new Inn at Darden removes the need for these hospitality spaces, and renovation will be required to convert the space into needed offices, administrative, and program spaces for the various units planning to move into the building. Darden will also use this renovation as an opportunity to improve the flow and functionality of existing office space in the building.

Following a program study led by Darden's Chief Strategy Officer, Darden proposes the enhancement and repurposing of Smith Hall to serve as a new Alumni and Lifelong Learning Center for the Darden community. The renovated center will provide greater flexibility of use to allow for the collocation of alumni engagement, advancement, marketing & communications, executive education staff, as well as others who currently reside in four different buildings on the Darden Grounds. The renovated Smith Hall will also provide an opportunity to create dynamic welcoming and support spaces for alumni, participants in executive education programs, and corporate sponsors. A world-class Alumni and Life-Long Learning Center will prove to be a valuable strategic asset for the Darden School of Business.

Proposed Time Frames

Planning/Design: TBD 2020

Construction: TBD 2020

Project Occupancy: TBD 2021

Financial Information

Estimated Project Cost: TBD

Funding Source(s): Gifts and TBD

UVA Grounds Plan:
A Framework for Campus Planning

It has been over ten years since the Board of Visitors adopted the 2008 Grounds Plan and in the ensuing time many changes have occurred at the University that necessitate an update to the Plan. The University has grown significantly in population and space, while administratively there have been a series of changes in both leadership and strategic direction. Sustainability, which framed the 2008 Plan, has been embraced at all levels by the University in the past decade and is largely incorporated into the University's operations and academics.

This project will update the University's 2008 Grounds Plan, which has served as the guiding document for campus planning and redevelopment at UVA since its adoption by the BOV. The 2008 Plan established a development plan that focused future projects within a series of redevelopment zones identified through a rigorous planning and demand analysis of infill opportunities on Grounds. The new Grounds Plan will re-assess the redevelopment zones and incorporate the recommendations of several recent plans and studies completed for the University. The plan will align with the University's 2030 Strategic Plan and its recommendations for a great and good University. Going further, the UVA Grounds Plan update will be an essential tool in realizing the vision of the strategic plan, and improving stewardship practices at the University.

Chemistry Chiller Replacement, Phase I Study

The aging chillers in the Chemistry Addition form part of the backbone of the chilled water generation and distribution system that serves the science and engineering precinct, including Athletics, Housing, Curry, and related facilities on McCormick Road. This project will (1) examine demand growth forecasts, reliability and redundancy requirements, capacity of adjacent chiller plants, and related factors; (2) develop alternatives for replacing the Chemistry Addition capacity including replacement in the same location, expansion of an adjacent plant such as the Newcomb Road Chiller Plant, and other options; and (3) develop concept/schematic design for the recommended option.

Main Heat Plant Fuel Mix, Phase I Study

The UVA Main Heat Plant uses natural gas as a primary fuel in all six of its boilers. Because natural gas is interruptible - and does get interrupted - three of the six boilers burn coal as a backup fuel and three of the six boilers burn distillate fuel oil as a backup fuel. This project will (1) evaluate fuel mix and infrastructure constraints, air permit issues, risks, technology innovations and alternatives, and related issues, and (2) develop a project scope, budget, schedule, and concept/schematic design for the recommended solution.

Massie Road Utility Plant Expansion, Phase I Study

Planned or anticipated new construction at Ivy Corridor (Hospitality and Data Science), the Athletics precinct (Football Operations Center and Olympic Sports Center), and adjacent areas is expected to increase demand for heating and chilled water generation at the Massie Road Utility Plant. This project will (1) examine demand growth forecasts, reliability and redundancy requirements, capacity of the existing plant, and related factors; (2) develop alternatives for increasing and optimizing capacity including heat recovery chillers, thermal storage, and other options; and (3) develop concept/schematic design for the recommended option.