



UNIVERSITY
of VIRGINIA

Board of Visitors Buildings & Grounds Committee

March 5, 2020

Agenda

Consent Agenda

- Naming: Materials Science Building as Jesser Hall
- Demolitions: (1) Dynamics Building; (2) Corn Crib and Greenhouse at Blandy Experimental Farm
- Schematic Design Approval: Contemplative Sciences Center

Action Items

- Schematic Design Approval: Brandon Avenue Upper-Class Residence Hall Phase II
- Concept, Site, and Design Guidelines: Low Temperature Hot Water Conversion, Thermal Energy Storage Tank

Schematic Design Reviews

- Low Temperature Hot Water Conversion, Thermal Energy Storage Tank
- Physics Building

Report by the Senior Vice President for Operations

- Revisions to the Major Capital Plan

Consent Agenda



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- Demolition of the Dynamics Building
- Demolition of the Corn Crib and Greenhouse at Blandy Experimental Farm
- Schematic Design Approval: Contemplative Sciences Center

Action Items



Schematic Design Approval: Brandon Avenue Residence Hall II





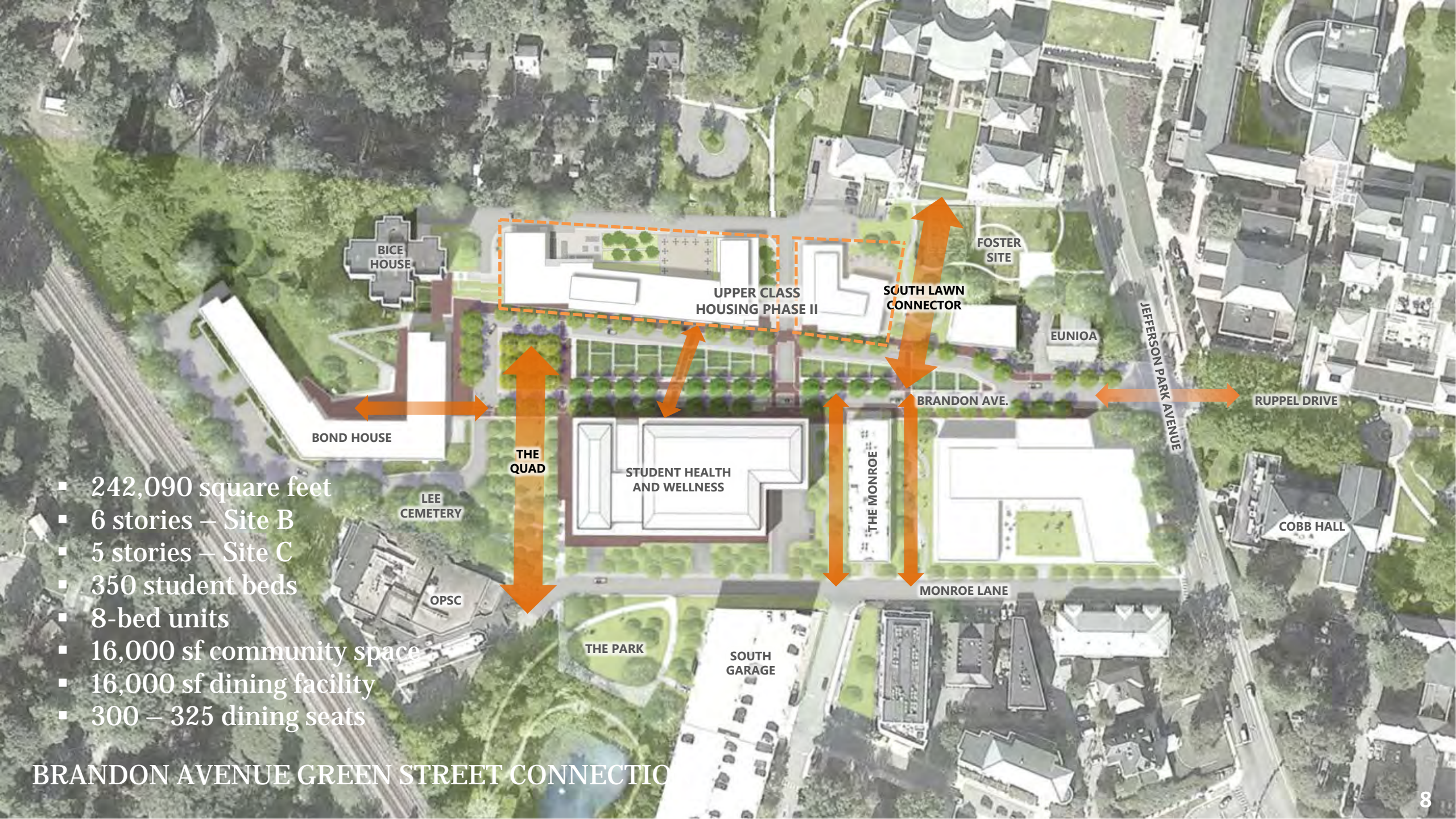
Bond House

Site C

SH+W

Site B

PROPOSED AERIAL VIEW LOOKING NORTHWEST



BICE HOUSE

UPPER CLASS HOUSING PHASE II

SOUTH LAWN CONNECTOR

FOSTER SITE

EUNIOA

BOND HOUSE

THE QUAD

STUDENT HEALTH AND WELLNESS

THE MONROE

BRANDON AVE.

JEFFERSON PARK AVENUE

RUPPEL DRIVE

LEE CEMETERY

COBB HALL

OPSC

THE PARK

SOUTH GARAGE

MONROE LANE

- 242,090 square feet
- 6 stories – Site B
- 5 stories – Site C
- 350 student beds
- 8-bed units
- 16,000 sf community space
- 16,000 sf dining facility
- 300 – 325 dining seats

BRANDON AVENUE GREEN STREET CONNECTIO



PROPOSED VIEW LOOKING SOUTHWEST

Contrasting Base

- Brick and Cast Stone



Bond House

Exterior Walls

- Brick



Student Health and Wellness

Windows and Glazing

- Vertical Orientation



South Lawn



Bice House

Upper-class Housing II

South Lawn

Exterior Materials

Glass

Painted Aluminum Window Mullions

Painted Aluminum Penthouse
and Curtain Wall Spandrel Panels

Zinc Coping and Canopies

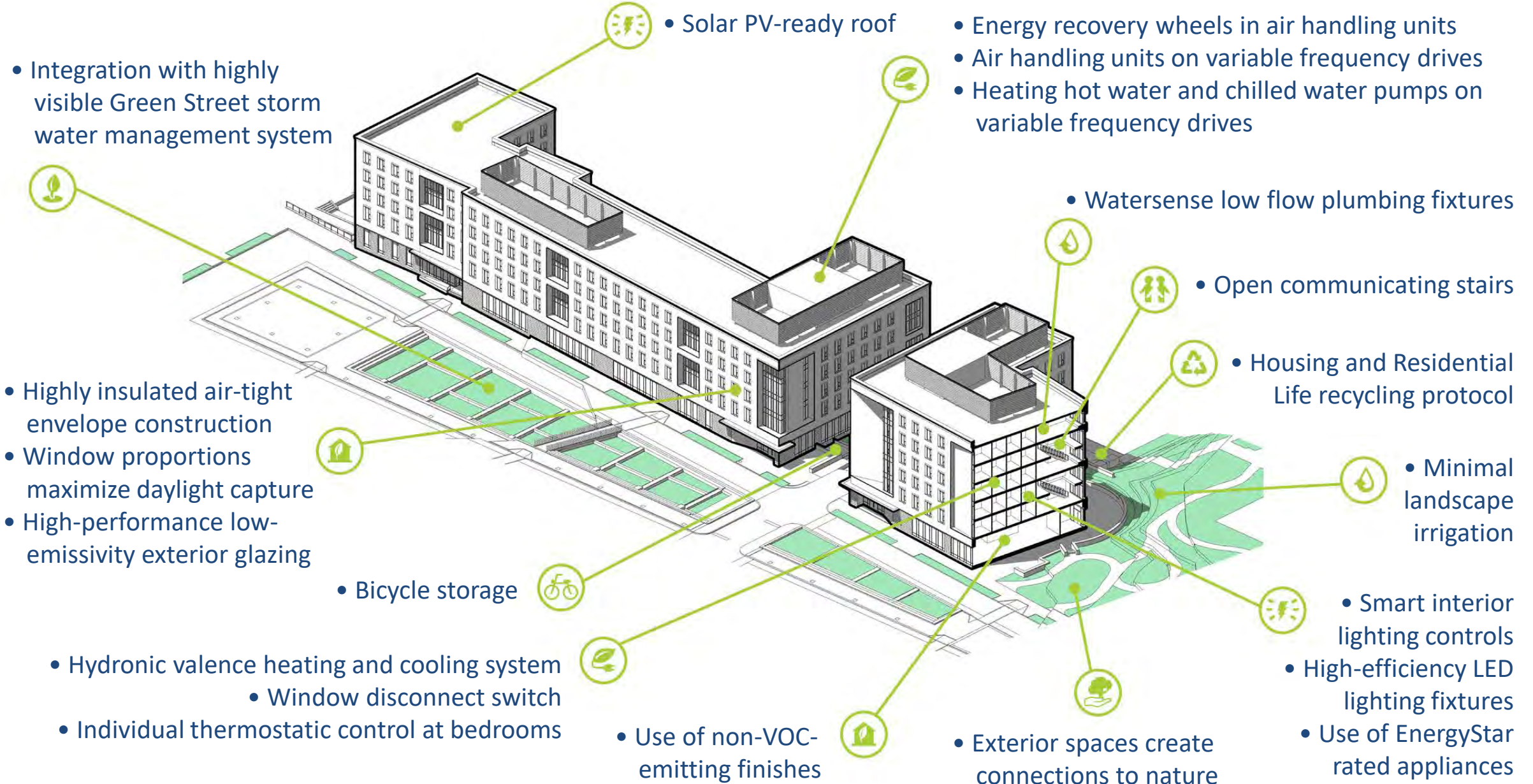
Primary Brick

Limestone Base

Alternative Brick Base



Sustainability Initiatives





PROPOSED VIEW LOOKING NORTHWEST



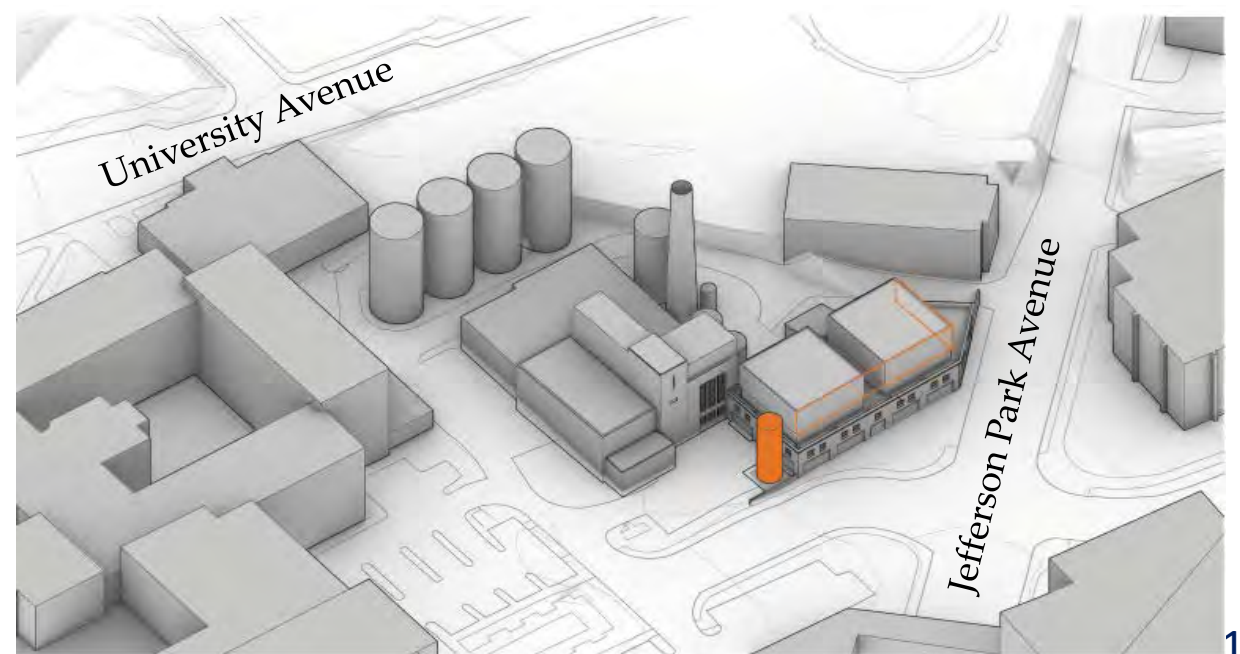
PROPOSED VIEW FROM VALLEY ROAD NEIGHBORHOOD



Concept, Site, and Design Guidelines: Thermal Energy Storage Tank



- 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.
- This system requires a Thermal Energy Storage (TES) Tank to be located outside of the current footprint of the Plant.
- The proposed 60,000-gallon TES tank, which measures 14 feet in diameter and 48 feet in height, maximizes the efficiency of the CHC system.



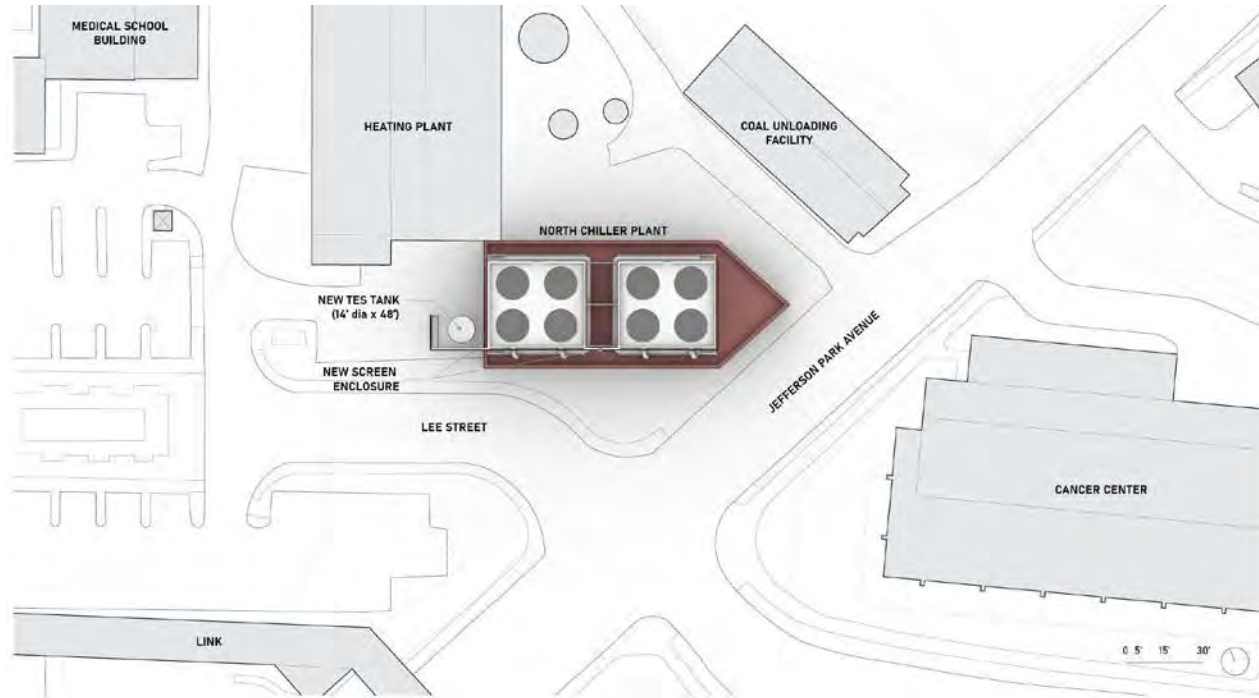
Schematic Design Review: Thermal Energy Storage Tank



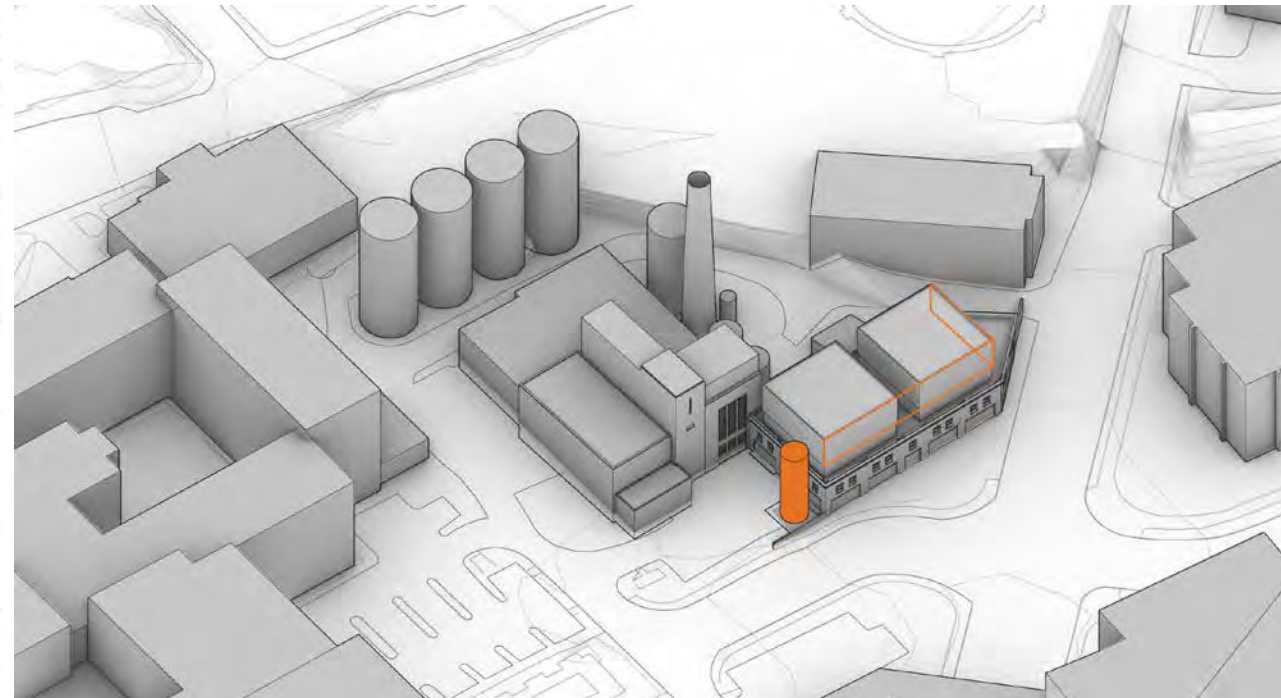
Cost and Energy Savings Data

- When in operation, the Combined Heating and Cooling (CHC) system removes heat from the Health System buildings through the chilled water loop and transfers this recovered energy to the heating hot water loop that serves the Academic Grounds buildings.
- 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
- Net Energy Cost Savings of \$910,000/year
- The CHC system will result in a net emissions reduction of 11,800 metric tons of carbon dioxide equivalent (MTCDE) per year. This amount of Carbon reduction is equal to taking 2,500 gasoline powered vehicles off the road.
- The Thermal Energy Storage (TES) tanks added in this phase account for nearly half of the total systems savings, approximately \$455,000 / year and 5,900 MTCDE

NORTH CHILLER PLANT - TANK PLACEMENT



Site Plan



Tank Placement & Chillers

View from Multistory Building - Current



View from Multistory Building - Proposed



Jefferson Park Ave / Lee Street – Current View



Jefferson Park Ave / Lee Street – Proposed View



NORTH CHILLER PLANT - TANK PLACEMENT

Screen Material



Stainless Steel Mesh

Schematic Design Review: Physics Building



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Renovation of the Physics Building – Aerial View



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Renovation of the Physics Building – Ridge Skylight Addition

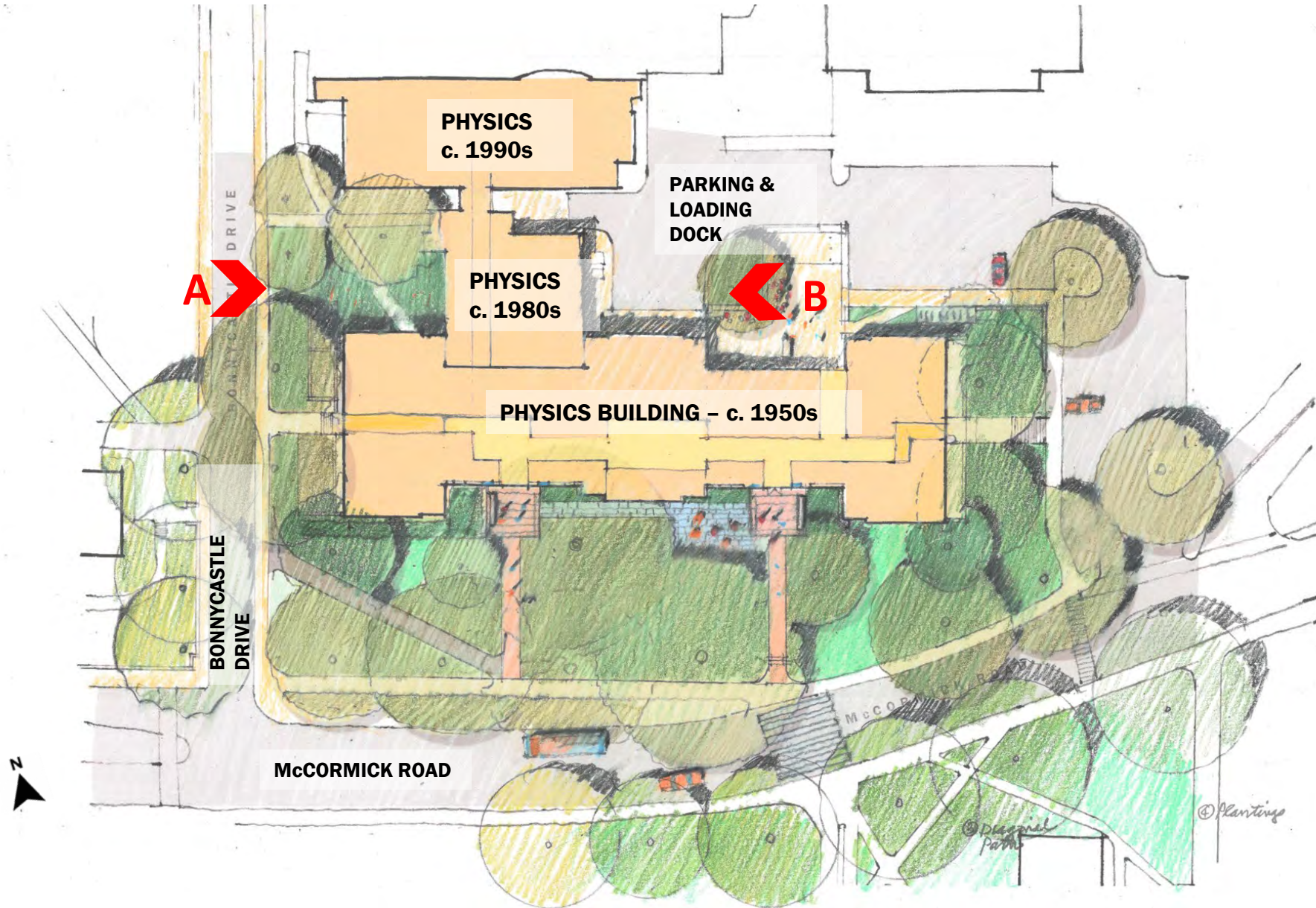
Proposed roof ridge skylights to allow for new offices on the top floor



View from McCormick Road

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Renovation of the Physics Building – Site Plan



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Renovation of the Physics Building – View A



Current view from Bonnycastle Drive

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Renovation of the Physics Building – View A

Proposed new offices
above the 1980s
addition



Proposed view from Bonnycastle Drive

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Renovation of the Physics Building – View B



Current view from parking area and loading dock

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Renovation of the Physics Building – View B

Proposed 99 seat
scale-up
classroom above
the 1980s addition



Proposed view from parking area and loading dock

Revisions to the Major Capital Plan



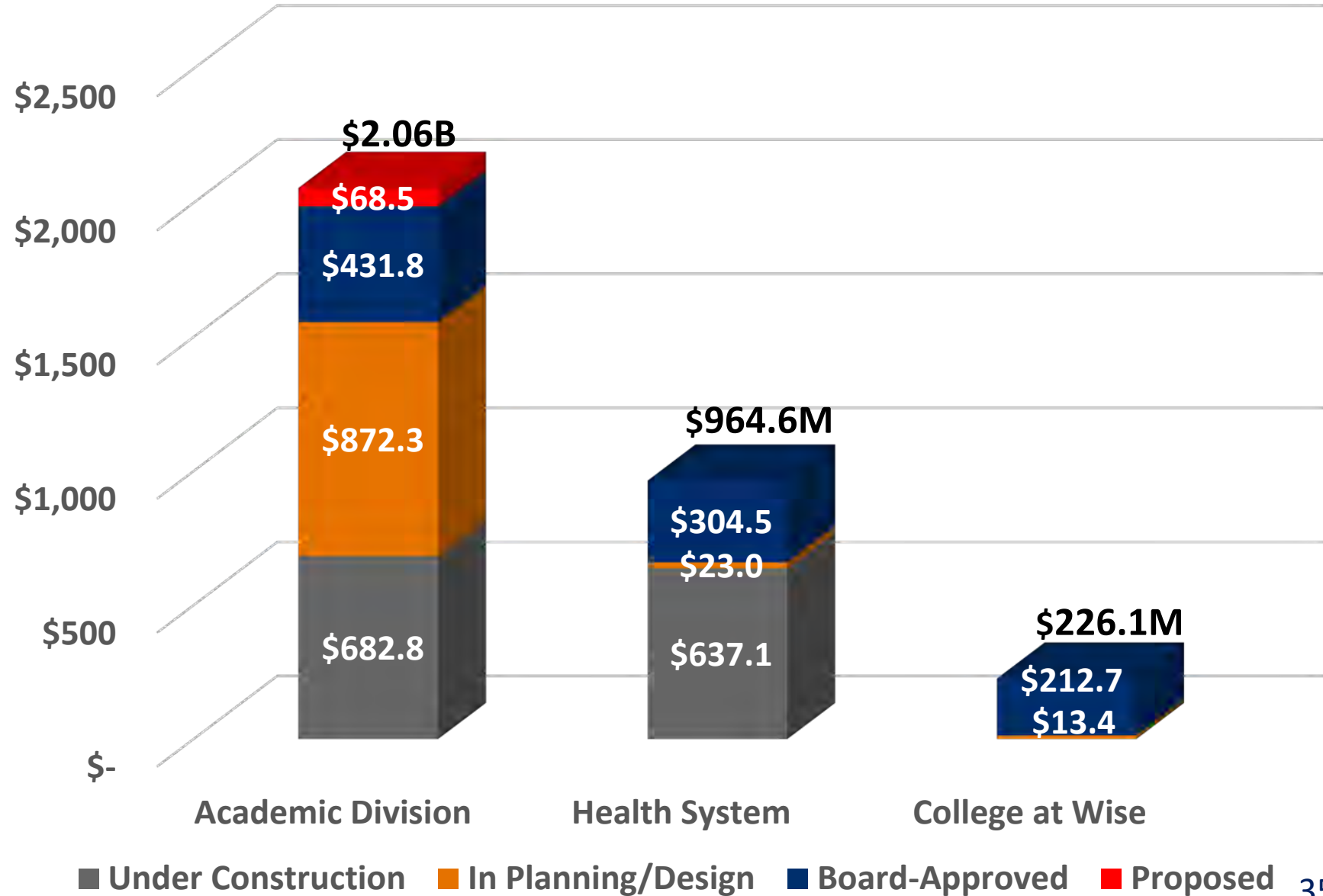
Annual Development of UVA's Major Capital Plan

Process launches each September and runs through June with the approval of the Major Capital Plan (MCP)



Proposed 2020 Multi-Year Major Capital Plan

**Total Proposed 2020
Major Capital Plan =
\$3.25B**



Proposed 2020 Multi-Year Major Capital Plan

Projects proposed to be added to the Capital Plan

Project	Budget
Chemistry Building Addition Fume Exhaust Renewal	\$8.5M
Safety and Security Facility	\$28.0M
Smith Hall Renovation (Darden)	TBD
Parking and Transportation Replacement Facility	\$32.0M

Projects recommended to be removed

Project	Budget
Drama Building Phase II South Addition	\$17.9M
Fiske Kimball Fine Arts Library Renewal	\$18.7M
Science & Engineering Plant (Replace Chemistry Chillers)	\$23.1M

Strategic Planning and Space Needs Studies

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

Remarks by the Senior Vice President for Operations



