

**UNIVERSITY OF ALABAMA SYSTEM
BOARD RULE 415
BOARD SUBMITTAL CHECKLIST CRITERIA**

**BOARD SUBMITTAL CHECKLIST NO. 3
CAPITAL PROJECT - STAGE III SUBMITTAL ¹
(Architectural Design)**

CAMPUS: The University of Alabama, Tuscaloosa, Alabama

PROJECT NAME: Campus Steam Decommissioning

MEETING DATE: November 2-3, 2023

- 1. Board Submittal Checklist No. 3
- 2. Transmittal Letter to Chancellor from Campus President requesting project be placed on the agendas for the forthcoming Physical Properties Committee and Board of Trustees (or Executive Committee) Meetings
- 3. Proposed Board Resolution requesting approval of Project Design (Architectural Design and authority to proceed with final construction documents) by the Board of Trustees
- 4. Executive Summary - Proposed Capital Project ²
- 5. Architectural rendering of project (Final design prior to the initiation of construction documents on the project)
- 6. Campus map(s) showing project site

Prepared by: Jeremy Wood

Approved by: 



¹ Reference Tab 3H - Board Rule 415 Instructional Guide

² Reference Tab 3E - Board Rule 415 Instructional Guide



Office of the
President

September 29, 2023

Chancellor Finis E. St. John IV
The University of Alabama System
500 University Boulevard East
Tuscaloosa, Alabama 35401

Dear Chancellor St. John:

I am pleased to send to you for approval under Board Rule 415 the attached documents for a Stage III submittal for the Campus Steam Decommissioning Project.

The resolution requests approval of the Architectural Design and a Revised Scope and Budget for the project.

The item has been thoroughly reviewed and has my endorsement. With your concurrence, I ask that it be added to the agenda for The Board of Trustees at their regular meeting on November 2-3, 2023.

Sincerely,

A handwritten signature in black ink, appearing to read "S. R. Bell".

Stuart R. Bell
President

Enclosure



THE UNIVERSITY OF ALABAMA

RESOLUTIONAPPROVAL OF THE REVISED PROJECT SCOPE AND BUDGET AND
PROPOSED ARCHITECTURAL DESIGN FOR CAMPUS STEAM
DECOMMISSIONING

WHEREAS, on November 4, 2022, in accordance with Board Rule 415, the Board of Trustees of The University of Alabama (“Board”) approved the Stage I submittal for the Campus Steam Decommissioning project (“Project”); and

WHEREAS, as part of the University’s master plan for thermal energy distribution, the University has previously completed the East Quad Energy Plant, the interconnection of the system with the Shelby Energy Plant and numerous building connections and the Campus Energy Delivery Optimization project; and

WHEREAS, this Project will allow for the remaining buildings on the steam system to be served by the addition of local boilers or the connection to the central thermal system as necessary to allow the decommissioning of the steam plant and distribution system; and

WHEREAS, the Project will include scope at multiple locations across the University campus including B.B. Comer Hall, Bureau of Mines #1, Bureau of Mines #2, Bureau of Mines #4, ten Hoor Hall, Foster Auditorium, Reese Phifer Hall, Hardaway Hall, Rowand-Johnson Hall and East Quad Energy Plant; and

WHEREAS, as part of the University’s master plan for thermal energy distribution, the University will decommission the B.B. Comer Hall Steam Plant at the completion of this Project as a separate project at that time; and

WHEREAS, the Project was previously separated into two (2) construction packages: Package A – Campus Steam Decommissioning 2023 (“Package A”); which removed B.B. Comer Hall, Bureau of Mines #1, Bureau of Mines #2, Bureau of Mines #4, and ten Hoor Hall from the campus steam system; and Package B – Campus Steam Decommissioning 2024 (“Package B”); which will remove Foster Auditorium, Reese Phifer Hall, Hardaway Hall, and Rowand-Johnson Hall from the campus steam system as well as add a new boiler to the East Quad Energy Plant; and an Owner Furnished Contractor Installed Equipment package to mitigate scheduling impacts of long-lead items; and

WHEREAS, on November 4, 2022, the Board approved a waiver of the Consultant Selection Process, the negotiated design fee and authorized the University to utilize the engineering design services of HHB for the Project; and

WHEREAS, the University negotiated a final design fee of 6.6% of Construction Package A and the OFCI Equipment Package, plus a 1.14 renovation factor, and 6.2% of Package B, plus a 1.14 renovation factor, plus \$37,050 in additional services and reimbursable expenses, and less a discount in the amount of \$20,000, representing a significant savings to the University of approximately 11% of the standard fee; and

WHEREAS, on February 28, 2023, pursuant to Title 39, Public Works provisions of the Code of Alabama, competitive bids were received for Construction Package A – Campus Steam Decommissioning 2023 and Bradley Plumbing and Heating, Inc. of Montgomery Alabama was declared the lowest responsible bidder with a base bid in the amount of \$1,364,000, as referenced on the certified bid tab; and

WHEREAS, on April 14, 2023, the Board approved the award of the construction contract for Construction Package A – Campus Steam Decommissioning 2023 to Bradley Plumbing and Heating, Inc., for a total contract amount of \$1,364,000; and

WHEREAS, on April 14, 2023, the Board approved a Budget Reallocation to reflect the Package A bid results and the owner purchase of additional equipment to mitigate the effects of continued supply chain challenges associated with long lead equipment; and

WHEREAS, the Farrah Hall Steam Conversion is included in the June 2023 Annual Consolidated Capital Projects and Facilities Report as a Tab 4 Campus Deferred Maintenance project; and

WHEREAS, it has been determined that the Farrah Hall Steam Conversion will impact the visual appearance of Campus as an addition to Farrah is necessary to accommodate the equipment, thereby requiring approval by the Board; and

WHEREAS, in order to further mitigate the schedule impact of increasingly volatile delivery times for long lead equipment and materials and to ensure the work is coordinated in a manner that creates the least disruption to campus, the University desires to add Construction Package C – Farrah Hall Steam Decommissioning (“Package C”); and Construction Package D – Farrah Hall Selective Demolition and Utility Relocation (“Package D”) which will allow Farrah Hall to be served by the addition of a mechanical room housing a local boiler and connections to the central thermal system as necessary to allow the decommissioning of the steam plant and distribution system; and

WHEREAS, the University negotiated a final design fee for Package C of 7.1%, plus a 1.07 renovation factor, and 7.8% of Package D, plus a 1.07 renovation factor, and \$3,400 for additional services; and

WHEREAS, the University is requesting approval of a Scope and Budget Revision, to reflect the addition of Construction Package C, and Construction Package D, and related revisions to soft costs; and

WHEREAS, responsible officials of the University have received renderings for the Stage III submittal and are recommending approval of said design, and

WHEREAS, the Project locations and program have been reviewed and are consistent with the University Campus Master Plan, University Design Standards, and the principles contained herein; and

WHEREAS, the Project will be funded from University Central Reserves in the amount of \$15,107,000, and will address campus deferred maintenance liabilities in the amount of \$82,000,000; and

WHEREAS, the revised budget for the Project is as stipulated below:

BUDGET:	REVISED
Construction – Package A- Campus Steam Decommissioning 2023	\$ 1,364,000
Construction – Package B-Campus Steam Decommissioning 2024	\$ 6,978,000
Construction – Package C-Farrah Hall Steam Decommissioning	\$ 1,445,000
Construction – Package D-Farrah Hall Selective Demolition and Utility Relocation	\$ 500,000
Landscaping	\$ 20,000
Owner Furnished Contractor Installed Equipment	\$ 1,758,000
Telecommunication/Data	\$ 50,000
Contingency* (10%)	\$ 1,206,500
UA Project Management Fee** (3%)	\$ 398,145
Architect/Engineer Fee*** (~7.4%)	\$ 901,061
Commissioning	\$ 50,000
Other****	\$ 437,294
TOTAL PROJECT COST	\$ 15,107,000

*Contingency is based on 10% of the costs of Construction Packages A-D, Landscaping, and Owner Furnished Contractor Installed Equipment.

**UA Project Management Fee is based on 3% of the costs of the Construction Packages A-D, Landscaping, Owner Furnished Contractor Installed Equipment, and Contingency.

***Architect/Engineer Fee is based on 6.6% of the costs of Construction - Package A and the OFCI Equipment, plus a 1.14 renovation factor, 6.2% of the

costs of Construction – Package B, plus a 1.14 renovation factor, 7.1% of the costs of Construction – Package C, plus a 1.07 renovation factor, 7.8% of the costs of Demolition Package D, plus a 1.07 renovation factor, plus \$40,450 of additional services and reimbursable expenses, and less a credit of \$20,000.

****Other expenses include Construction Materials Testing, Inspections, Advertising, Printing, and other associated project costs as applicable.

NOW, THEREFORE, BE IT RESOLVED by The Board of Trustees of The University of Alabama that:

1. The Stage III Architectural Design submittal for the Project is hereby approved.
2. The Revised Scope, Budget, and Funding for the Project are hereby approved as stipulated above.

**EXECUTIVE SUMMARY
PROPOSED CAPITAL PROJECT
BOARD OF TRUSTEES SUBMITTAL**

MEETING DATE: November 2-3, 2023

CAMPUS: The University of Alabama, Tuscaloosa, Alabama

PROJECT NAME: Campus Steam Decommissioning

PROJECT NUMBER: UTL-23-3022

PROJECT LOCATION: B.B. Comer Hall, Bureau of Mines #1, Bureau of Mines #2, Bureau of Mines #4, ten Hoor Hall, Foster Auditorium, Reese Phifer Hall, Hardaway Hall, Rowand-Johnson Hall, East Quad Energy Plant, and Farrah Hall

ARCHITECT: HHB Engineers, P.C.

THIS SUBMITTAL:	PREVIOUS APPROVALS:
<input type="checkbox"/> Stage I	November 4, 2022
<input type="checkbox"/> Stage II - CSPW	November 4, 2022
<input type="checkbox"/> Campus Master Plan Amendment	
<input checked="" type="checkbox"/> Stage III	
<input type="checkbox"/> Stage IV	April 14, 2023

PROJECT TYPE	SPACECATEGORIES	PERCENTAGE	GSF
<input type="checkbox"/> Building Construction			
<input checked="" type="checkbox"/> Building Addition	Campus Infrastructure &	N/A	1,063*
<input checked="" type="checkbox"/> Building Renovation	Utility & Mechanical	N/A	N/A
<input type="checkbox"/> Equipment			
	TOTAL	N/A	N/A

*Square footage represents the Farrah Hall mechanical room addition.

BUDGET	Current		Revised	
Construction – Package A – Campus Steam Decommissioning 2023	\$	1,364,000	\$	1,364,000
Construction – Package B – Campus Steam Decommissioning 2024	\$	6,978,000	\$	6,978,000
Construction – Package C – Farrah Hall Steam Decommissioning	\$	0	\$	1,445,000
Demolition – Package D – Farrah Hall Selective Demolition and Utility Relocation	\$	0	\$	500,000
Landscaping	\$	0	\$	20,000
Owner Furnished Contractor Installed Equipment	\$	1,758,000	\$	1,758,000
Telecommunication/Data	\$	50,000	\$	50,000
Contingency* (10%)	\$	1,010,000	\$	1,206,500
UA Project Management Fee** (3.0%)	\$	333,300	\$	398,145
Architect/Engineer Fee*** (~7.4%)	\$	745,154	\$	900,061
Commissioning	\$	50,000	\$	50,000
Other****	\$	321,546	\$	437,294
TOTAL PROJECT COST	\$	12,610,000	\$	15,107,000
Construction Cost per square: N/A				

*Contingency is based on 10% of the costs of Construction Packages A-D, Landscaping, and Owner Furnished Contractor Installed Equipment.

**UA Project Management Fee is based on 3% of the costs of Construction Packages A-D, Landscaping, Owner Furnished Contractor Installed Equipment, and Contingency.

***Architect/Engineer Fee is based on 6.6% of the costs of Construction - Package A and the OFCI Equipment, plus a 1.14 renovation factor, 6.2% of the costs of Construction – Package B, plus a 1.14 renovation factor, 7.1% of the costs of Construction – Package C, plus a 1.07 renovation factor, plus 7.8% of the costs of Construction – Package D, plus a 1.07 renovation factor, plus \$40,050 of additional services and reimbursable expenses, and less a credit of \$20,000.

****Other expenses include Construction Materials Testing, Inspections, Advertising, Printing, and other associated project costs, as applicable.

ESTIMATED ANNUAL OPERATING AND MAINTENANCE (O&M) COSTS:			
(Utilities, Housekeeping, Maintenance, Insurance, Other)			
			\$ N/A*
		Total Estimated Annual O&M Costs:	\$ N/A*

* Central utility O&M costs are not assigned at a facility level or by GSF.

FUNDING SOURCE:

University Central Reserves \$ 15,107,000

O&M Costs:

Operating Company Expense \$ N/A

NEW EQUIPMENT REQUIRED:

Rooftop DX Units

High Efficiency Condensing Boilers

Total Equipment Costs: \$ 1,758,000**PROJECT SCOPE:**

The Campus Steam Decommissioning Project (“Project”) will improve the teaching, learning, and working environments of campus constituents by providing reliable and efficient thermal energy to facilities by replacing systems which have reached the end of their functional service life. Scope will include the addition of local boilers and the connections of additional buildings in coordination with the support of new facilities prior to the retirement of the existing steam system.

The existing steam distribution system is approximately 60 years old and is at its optimal replacement age. As part of the University’s strategic energy plan, the steam system has been incrementally decommissioned as buildings were connected to the Central Thermal System. This project decommissions the balance of the buildings, which have not been connected to the system. Furthermore, the existing steam boiler efficiency is impacted by the current minimal load, therefore overall efficiency will be enhanced. Finally, the steam system operates on a limited basis and is challenging to start up and shut down. When the campus experiences warm periods during the heating season building comfort is compromised due to system start up challenges.

The Project has been separated into four (4) packages: Package A – Campus Steam Decommissioning 2023 (“Package A”) which includes the buildings being removed from the campus steam system in 2023 (B.B. Comer Hall, Bureau of Mines #1, Bureau of Mines #2, Bureau of Mines #4, and ten Hoor Hall); Package B – Campus Steam Decommissioning 2024 (“Package B”), which includes the buildings being removed from the campus steam system in 2024 (Foster Auditorium, Reese Phifer Hall, Hardaway Hall, and Rowand-Johnson Hall) as well as the addition of a new boiler to the East Quad Energy Plant; Package C – Farrah Hall Steam Decommissioning (“Package C”) which includes Farrah Hall Steam Decommissioning scope

included the construction of a new mechanical room to house a local boiler and connections to the central thermal system as necessary; Package D - Farrah Hall Selective Demolition and Utility Relocation which will consist of minimizing the impact to campus by performing site demolition activities and underground utility relocations during the 2023 Winter Break; and the Owner Furnished Contractor Installed Equipment package for the Rooftop DX units and High Efficiency Condensing Boilers.

Package A – 2023 Steam Decommissioning consisted of the Northwest Campus Boiler Station connection to B.B. Comer Hall, connecting Bureau of Mines #1 to the central thermal energy system, Bureau of Mines #2 and Bureau of Mines #4 will replace the HVAC systems utilizing electric and/or natural gas heating, and ten Hoor Hall will add a backup boiler. The steam system will still be in operation for the remaining Package B connected buildings.

Package B – 2024 Steam Decommissioning will consist of connecting Foster Auditorium, Hardaway Hall, and Reese Phifer Hall to the central thermal energy system, Rowand-Johnson Hall to the Northwest Campus Boiler Station, and adding a new boiler to the East Quad Energy Plant.

Package C – Farrah Hall Steam Decommissioning will consist of connecting Farrah Hall to the central thermal energy system and construction of a new mechanical room to house a local boiler and connections to the central thermal system as necessary to allow for the decommissioning of the steam plant and distribution system.

Package D – Farrah Hall Selective Demolition and Utility Relocation will consist of minimizing the impact to campus by performing site demolition activities and underground utility relocations during the 2023 Winter Break.

The Project will purchase long-lead time equipment ahead of the main packages to mitigate continued cost escalations and supply chain challenges.

PROJECT STATUS – Construction Package A – Campus Steam Decommissioning 2023

SCHEMATIC DESIGN:	Date Initiated	June 2022
	% Complete	100%
	Date Completed	October 2022
PRELIMINARY DESIGN:	Date Initiated	November 2022
	% Complete	100%
	Date Completed	December 2022
CONSTRUCTION DOCUMENTS:	Date Initiated	December 2022
	% Complete	100%
	Date Completed	February 2023
BID DATE: (Package A)		February 28, 2023

**N/A on Stage I Projects*

PROJECT STATUS – Construction Package B – Campus Steam Decommissioning 2024

SCHEMATIC DESIGN:	Date Initiated	April 2023
	% Complete	100%
	Date Completed	June 2023
PRELIMINARY DESIGN:	Date Initiated	June 2023
	% Complete	100%
	Date Completed	October 2023
CONSTRUCTION DOCUMENTS:	Date Initiated	October 2023
	% Complete	50%
	Date Completed	December 2023
SCHEDULED BID DATE: (Package B)		December 14, 2023

**N/A on Stage I Projects*

PROJECT STATUS – Construction Package C – Farrah Hall Steam Decommissioning

SCHEMATIC DESIGN:	Date Initiated	June 2023
	% Complete	100%
	Date Completed	August 2023
PRELIMINARY DESIGN:	Date Initiated	August 2023
	% Complete	80%
	Date Completed	November 2023
CONSTRUCTION DOCUMENTS:	Date Initiated	November 2023
	% Complete	0%
	Date Completed	January 2024
SCHEDULED BID DATE: (Package C)		February 15, 2024

**N/A on Stage I Projects*

PROJECT STATUS – Construction Package D – Farrah Hall Selective Demolition and Utility Relocation

SCHEMATIC DESIGN:	Date Initiated	June 2023
	% Complete	100%
	Date Completed	August 2023
PRELIMINARY DESIGN:	Date Initiated	August 2023
	% Complete	80%
	Date Completed	November 2023
CONSTRUCTION DOCUMENTS:	Date Initiated	November 2023
	% Complete	0%
	Date Completed	January 2024
SCHEDULED BID DATE: (Package D)		November 2, 2023

**N/A on Stage I Projects*

RELATIONSHIP AND ENHANCEMENT OF CAMPUS PROGRAMS:

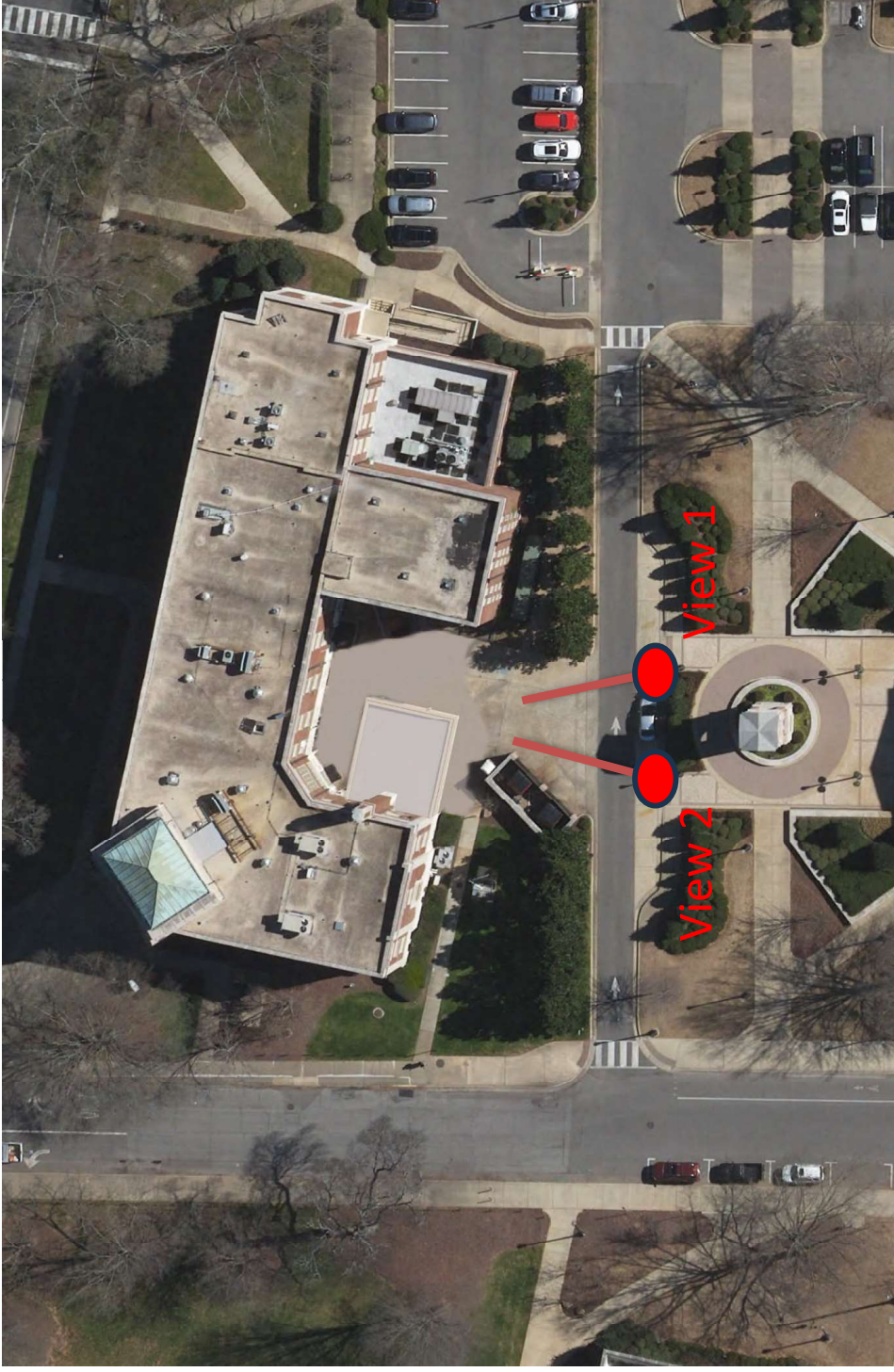
The Project will improve the teaching, learning, and working environments of campus constituents by providing reliable and efficient thermal energy, local boilers and a new boiler station to facilities by replacing systems that have reached the end of their functional service life. Furthermore, reducing the cost to provide heating to buildings will support The University of Alabama (“University”) in reducing annual operating costs.

As part of the University’s master plan for steam decommissioning, this proposed Project will address deferred maintenance issues and reduce deferred maintenance liabilities by approximately \$82,000,000 while improving system efficiency and reliability through utilization of the existing East Quad Energy Plant distribution systems and infrastructure.

The work is scheduled to happen over the late spring and summer so as to minimize the impact to building occupants when the heating load is minimal.

CAMPUS STEAM DECOMMISSIONING PACKAGE C - FARRAH HALL MECHANICAL ROOM ADDITION

VANTAGE POINTS



CAMPUS STEAM DECOMMISSIONING PACKAGE C – FARRAH HALL MECHANICAL ROOM ADDITION

**Existing Conditions - Looking
Northwest from Alley**



CAMPUS STEAM DECOMMISSIONING PACKAGE C – FARRAH HALL MECHANICAL ROOM ADDITION

**View 1 Looking Northwest from
Alley**



CAMPUS STEAM DECOMMISSIONING PACKAGE C – FARRAH HALL MECHANICAL ROOM ADDITION

**Existing Conditions - Looking
North from Alley**



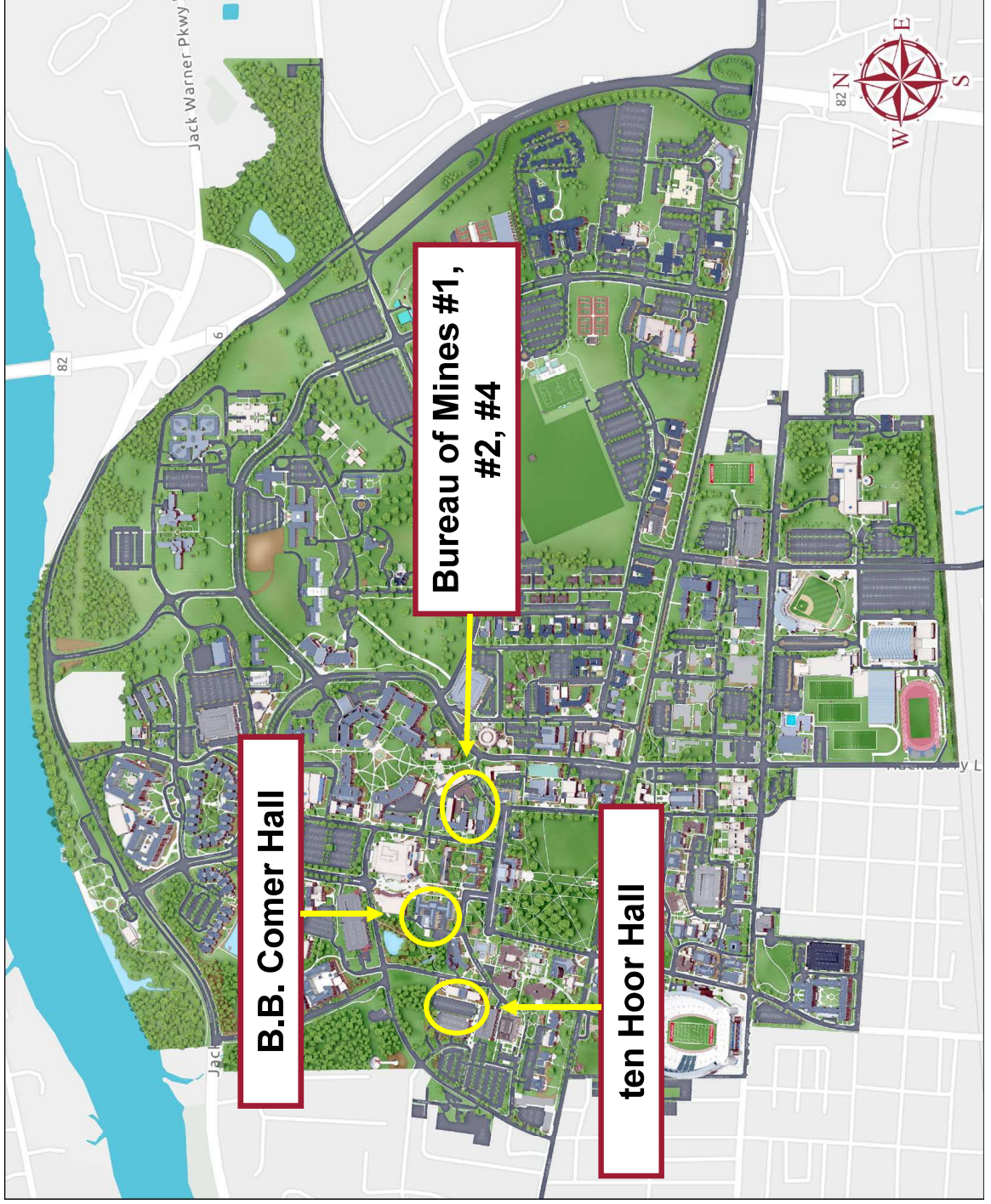
CAMPUS STEAM DECOMMISSIONING PACKAGE C – FARRAH HALL MECHANICAL ROOM ADDITION

**View 2 Looking North from
Alley**



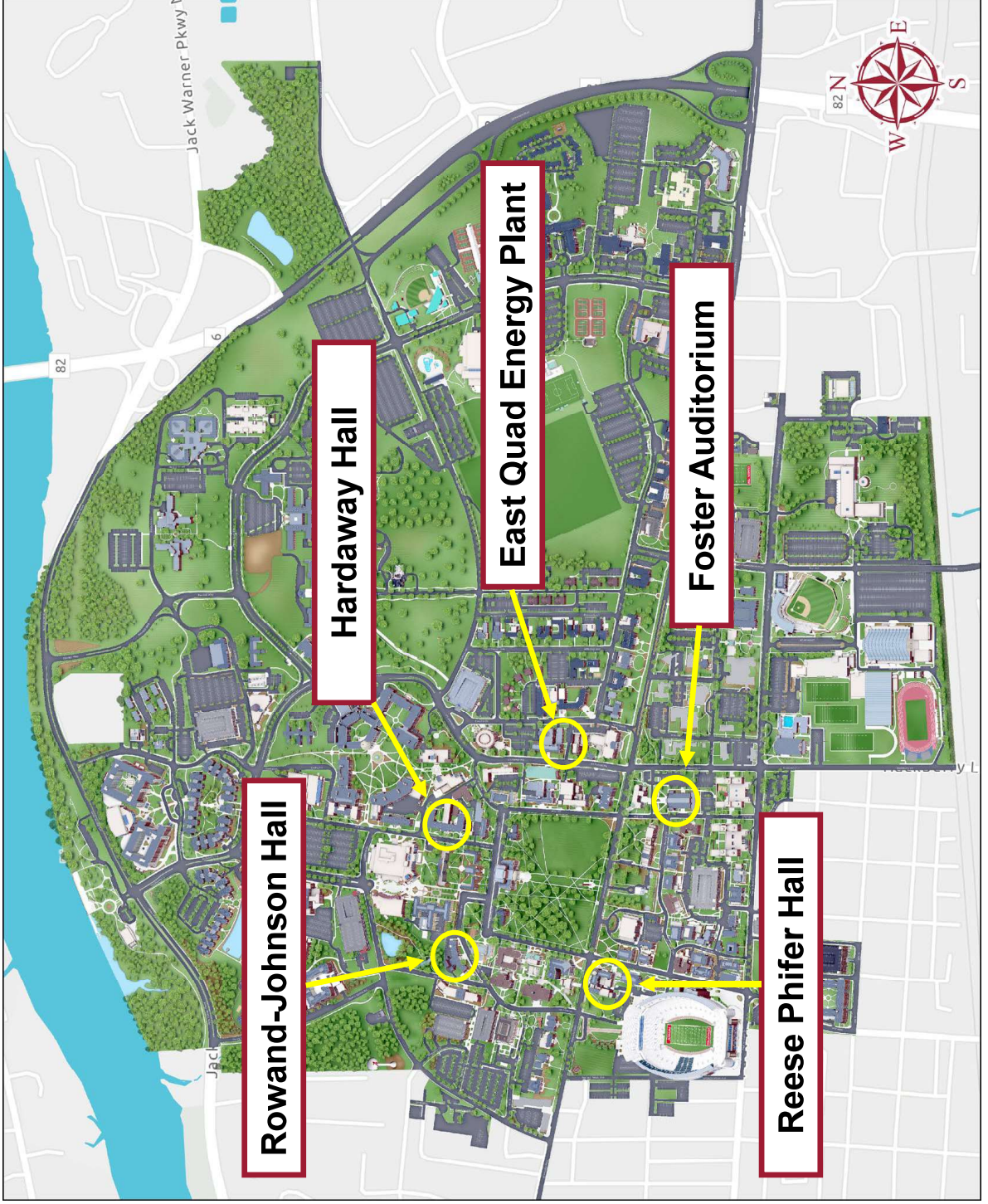
CAMPUS STEAM DECOMMISSIONING PACKAGE A - 2023

LOCATION MAP



CAMPUS STEAM DECOMMISSIONING PACKAGE B - 2024

LOCATION MAP



CAMPUS STEAM DECOMMISSIONING PACKAGE C – FARRAH

LOCATION MAP

