

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

**BOARD SUBMITTAL CHECKLIST NO. 1 & 2
CAPITAL PROJECT - STAGE I & II SUBMITTAL ^{/1}
(General information, Architect Ranking, Project Scope and Project Budget) ^{/8}**

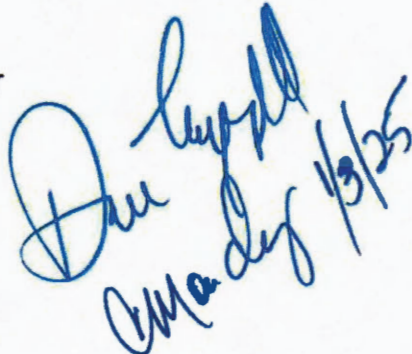
CAMPUS: The University of Alabama, Tuscaloosa, Alabama

PROJECT NAME: PProXE Shell Space Fit Out

MEETING DATE: February 6 - 7, 2025

- 1. Board Submittal Checklist No. 1 and 2
- 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 Stage I and II Submittal (General Information, Architect Ranking, Project Scope and Project Budget; authority to proceed with Owner/Architect contract negotiations) by the Board of Trustees
- 4. Executive Summary – Proposed Capital Project ^{/2}
- 5. Executive Summary – Architect, Engineer, Selection Process (include Interview Outline). ^{/3, /4, /5}
- 6. Supplemental Project Information Worksheet – Exhibit “K”, Board Rule 415
- 7. Campus letter requesting approval of the ranking of firms and authority to Submit to the Physical Properties Committee for approval – signed by Chair of the Physical Properties Committee and UA System Senior Vice Chancellor for Finance and Administration ^{/6}
- 8. Preliminary Business Plan (if applicable) ^{/7}
- 9. Campus map(s) showing project site

Prepared by: Signed by
Lane Weaver
Tim Leopard
C9409452A0B346A

Approved by: 

^{/1} Reference Tab 3H – Board Rule 415 Instructional Guide
^{/2} Reference Tab 3E – Board Rule 415 Instructional Guide
^{/3} Reference Tab 3K – Board Rule 415 Instructional Guide
^{/4} Reference Tab 3L – Board Rule 415 Instructional Guide
^{/5} Reference Tab 3M – Board Rule 415 Instructional Guide
^{/6} Reference Tab 3N – Board Rule 415 Instructional Guide
^{/7} Reference Tab 3V – Board Rule 415 Instructional Guide
^{/8} After Completion of negotiations on Owner/Architect Agreement, provide notification to Chair of Physical Properties Committee and Senior Vice Chancellor for Finance & Administration, Reference Tab 3-O-Board Rule 415, Instructional Guide



Office of the
President

January 6, 2025

Interim Chancellor Sid J. Trant
The University of Alabama System
500 University Boulevard East
Tuscaloosa, Alabama 35401

Dear Interim Chancellor Trant:

I am pleased to send to you for approval under Board Rule 415 the attached documents for a Stage I and a Stage II submittal for the PROXE Shell Space Fit Out project.

The resolution requests authorization to establish the preliminary project scope, budget, and funding, as stipulated, and to enter into an Owner Designer Agreement with CMH Architects, of Birmingham, Alabama, as the principal design firm for this 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 of The University of Alabama at their regular meeting on February 6-7, 2025.

Sincerely,

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

Stuart R. Bell
President

Enclosure



THE UNIVERSITY OF ALABAMA

Approving the preliminary project scope and budget; granting authorization to execute an Owner/Architect Agreement for the PROXE Shell Space Fit Out

RESOLUTION

WHEREAS, in accordance with Board Rule 415, The University of Alabama (“University”) is requesting approval of a Stage I submittal for the Proxy Shell Space Fit Out project (“Project”) to be located at 1445 Warrior Drive; and

WHEREAS, the proposed Project is comprised of a single construction package consisting of a build-out of approximately 6,050 gross square feet (“GSF”) of the GSA Warehouse Facility to allow for much-needed lab space for the Department of Geography and to service external requests for analysis of GSA core samples, which are required to be conducted at the GSA facility; and

WHEREAS, CMH Architects, Birmingham, Alabama (“CMH Architects”), has previously been engaged by the University as Architect of record for the GSA Warehouse project (completed Fall 2024) and to perform due diligence and programming services for this Project and has exclusive knowledge of the design and construction of the facility, as well as detailed information regarding as-installed infrastructure locations and configurations; and

WHEREAS, CMH Architects’ knowledge of preferred equipment, University Standards, design principles, and procedures greatly facilitates the design and administrative process, and CMH Architects is committed to completing the design to allow the Project to complete before the start of the Fall 2025 semester, the University is requesting approval to waive the Consultant Selection Process and to utilize CMH Architects for the Project; and

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

WHEREAS, the Project will be funded from the Office of Academic Affairs Reserves in the amount of \$750,000, the College of Arts and Sciences in the amount of \$450,000, and University Central Reserves in the amount of \$800,000; and

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

BUDGET:		PRELIMINARY
Construction	\$	1,580,000
Security/Access Control	\$	20,000
Telecommunication/Data	\$	20,000
Contingency ¹ (10%)	\$	158,000
UA Project Management Fee ² (4.5%)	\$	78,210
Architect/Engineer Fee ³ (7%)	\$	103,800
Other ⁴	\$	39,990
TOTAL PROJECT COST		2,000,000

¹Contingency is based on 10% of the cost of Construction.

²UA Project Management Fee is based on 4.5% of the costs of Construction and Contingency.

³Architect/Engineer Fee is based on 7% of the costs of Construction plus reimbursables of \$10,000, minus a credit for \$16,800.

⁴Other expenses include Transportation Services Fees, Geotech, 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 I submittal package for the Project is hereby approved.
2. The preliminary Project scope, budget, and funding, as stipulated above, are hereby approved.

BE IT FURTHER RESOLVED that Stuart R. Bell, President; Daniel T. Layzell, Vice President for Finance and Operations and Treasurer; or those officers named in the most recent Board resolutions granting signature authority for the University be, and each hereby are authorized to act for and on behalf of the Board of Trustees to execute an architectural agreement with CMH Architects, Birmingham, Alabama, for architectural design services in accordance with Board Rule 415 for this Project.

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

MEETING DATE: February 6 - 7, 2025

CAMPUS: The University of Alabama, Tuscaloosa, Alabama

PROJECT NAME: PRoXE Shell Space Fit Out

PROJECT NUMBER: 1047-25-3902

PROJECT LOCATION: 1445 Warrior Drive

ARCHITECT: CMH Architects, Inc. – Pending Approval

THIS SUBMITTAL:	PREVIOUS APPROVALS:
<input checked="" type="checkbox"/> Stage I	
<input checked="" type="checkbox"/> Stage II	
<input type="checkbox"/> Campus Master Plan Amendment	
<input type="checkbox"/> Stage III	
<input type="checkbox"/> Stage IV	

PROJECT TYPE	SPACE CATEGORIES	PERCENTAGE	GSF
<input checked="" type="checkbox"/> Building Construction			
<input type="checkbox"/> Building Addition	Laboratory Facilities	~ 46%	2,800
<input type="checkbox"/> Building Renovation	Office Facilities	~9%	570
<input type="checkbox"/> Equipment	Circulation Area	~17%	1,048
	Central Service/ Support	~7%	400
	Building Service Area	~ 2%	113
	Mechanical Area	~19%	1,119
	TOTAL	100%	6,050

BUDGET	PRELIMINARY
Construction	\$ 1,580,000
Security/Access Control	\$ 20,000
Telecommunication/Data	\$ 20,000
Contingency ¹ (10%)	\$ 158,000
UA Project Management Fee ² (4.5%)	\$ 78,210
Architect/Engineer Fee ³ (7%)	\$ 103,800
Other ⁴	\$ 39,990
TOTAL PROJECT COST	\$ 2,000,000
Total Construction Cost per square foot \$287	

¹Contingency is based on 10% of the costs of Construction.

²UA Project Management Fee is based on 4.5% of the costs of Construction and Contingency.

³Architect/Engineer Fee is based on 7% of the costs of Construction plus reimbursables of \$10,000, minus a credit for \$16,800.

⁴Other expenses include Transportation Services Fees, Geotech, 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)	
6,050 sf x ~\$9.95/sf	\$ 60,198
Total Estimated Annual O&M Costs:	\$ 60,198

FUNDING SOURCE:	
Office of Academic Affairs Reserves	\$ 750,000
Office of Research and Economic Development Reserves	\$ 450,000
University Central Reserves	\$ 800,000
O&M Costs:	University Annual Operating Funds \$ 60,198

NEW EQUIPMENT REQUIRED	
Total Equipment Costs:	N/A

PROJECT SCOPE:

The PRoXE (Paleoenvironmental Records of Extreme Events) lab will be co-located within the new state-of-the-art core repository facility being developed by the Geological Survey of Alabama (GSA) on the University Services Campus. This lab facility will be the premier analytical and archival research facility in the southeastern United States for the study of paleo records of hydroclimate variability and change. The lab includes ~5,000 ft² of wet labs, offices, collaboration spaces, and state-of-the-art research instrumentation, including Multi-Sensor Core Loggers, temperature-controlled sample repository (3,000 ft³) for archiving significant samples of biological archives (tree rings, corals, etc.), cave deposits (speleothems), and sedimentary records.

The PRoXE Shell Space Fit Out project (“Project”) involves the build-out of 6,050 gs of shell space on the second floor of the GSA Warehouse. This project will seamlessly integrate with the existing infrastructure provided in the previous GSA Warehouse project, utilizing the previously installed HVAC and power systems to support the new shell space.

The Project will also include providing vertical circulation including stairs, elevator and an overhead door on the mezzanine to facilitate equipment and sample access and restrooms.

PROJECT STATUS

SCHEMATIC DESIGN:	Date Initiated	
	% Complete	100%
	Date Completed	
PRELIMINARY DESIGN:	Date Initiated	
	% Complete	100%
	Date Completed	
CONSTRUCTION DOCUMENTS:	Date Initiated	
	% Complete	90%
	Date Completed	
SCHEDULED BID DATE:		February 2025

**N/A on Stage I Projects*

RELATIONSHIP AND ENHANCEMENT OF CAMPUS PROGRAMS

The proposed new facility will serve environmental researchers across the UA System and the nation to better understand changing environments and potential risks to people, infrastructure, economy, and the environment. It will catalyze ongoing and new environmental research and grow relationships with federal and state agencies located on the UA campus, such as the NOAA National Water Center, the Geological Survey of Alabama, and the USGS Hydrologic Instrumentation Facility.

This lab facility will serve not only PRoXE affiliated researchers from UA and the region, but also researchers working on GSA collections as well as potential government and private sector clientele who need the sophisticated analytical capabilities that will be provided by the instrumentation available in the lab.

This lab will be one of the top facilities in the world, providing research for exploring extreme events, critical minerals, carbon capture, and storage. It would also serve as a powerful recruiting tool for attracting the best and brightest faculty and students and elevating the research profile of The University of Alabama in terms of environmental research.

THE UNIVERSITY OF
ALABAMA®

Division of
Finance and Operations
Vice President

December 13, 2024

Dr. Dana S. Keith
Senior Vice Chancellor for Finance and Administration
Sid McDonald Hall
500 University Boulevard, East
Tuscaloosa, AL 35401

Trustee Evelyn VanSant Mauldin
Chair, Physical Properties Committee
Sid McDonald Hall
500 University Boulevard, East
Tuscaloosa, AL 35401

RE: Request for Waiver of Consultant Selection Process
PRoXE Shell Space Fit Out
UA Project No.: 1047-25-3902

Dear Dr. Keith and Trustee Mauldin:

The University of Alabama ("University") is requesting a Waiver of the Consultant Selection Process for the PRoXE Shell Space Fit Out project ("Project") located at 1445 Warrior Drive.

The University proposes to utilize CMH Architects, Birmingham, AL, as the principal design firm for this Project. The services of CMH Architects are proposed due to the firm having served as the Architect of Record for the Geological Survey of Alabama Core Warehouse and as a consultant for the programming for this Project. Their familiarity and innate knowledge of the structure, systems, and program will facilitate an efficient design process and ensure coordination with existing facilities. Accordingly, the University requests approval to utilize CMH Architects for this Project.

The University has negotiated a design fee of 7% of the construction cost with a 0% renovation factor, plus \$10,000 for additional services and reimbursable and less a discount credit of \$16,800 for CMH Architects' familiarity with the facility and recent programming with the end users. The negotiated fee reflects a 15.2% reduction of the standard fee for this type of project (Group III) and represents a financial benefit to the University.

Cost of the Work		Percentage Fee for Building Group III		Major Renovation Factor		Credits		Fee
\$1,580,000	x	7.0%	+	0%	-	\$0	=	\$110,600
\$1,580,000	x	7.0%		0%	-	\$16,800		\$93,800

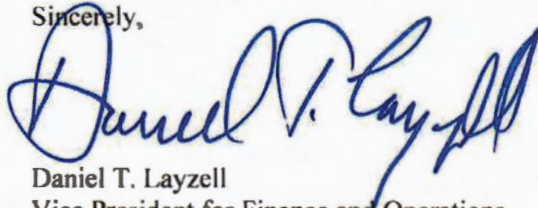
Fee savings is \$16,800 or approximately 15.2% of the value of the standard fee for the Project.

Approval is hereby requested for:

1. Waiver of the Consultant Selection process.
2. CMH Architects, Birmingham, Alabama, as the design service provider for the Project at a negotiated design fee based on 7% of the cost of construction plus a 0% renovation factor and \$10,000 for additional services and reimbursables, and less total credits in the amount of \$16,800.
3. Submittal to the Physical Properties Committee for review and approval.

For your convenience, a Project Summary has been attached. If you have any questions or concerns, please feel free to contact me.

Sincerely,



Daniel T. Layzell
 Vice President for Finance and Operations
 and Treasurer

DTL/mw

Attachment

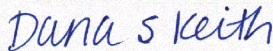
Pc w/atchmts: Michael Rodgers
 Tim Leopard

Matt Skinner
 Lane Weaver

Jessica Morris

Recommended for Approval

Not Recommended for Approval. Submit to Physical Properties Committee

DocuSigned by:

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Dr. Dana S. Keith, Senior Vice Chancellor for Finance and Administration

Recommended for Approval

Not Recommended for Approval. Submit to Physical Properties Committee

Signed by:

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Trustee Evelyn VanSant Mauldin, Chair for Physical Properties Committee

Attachment K to Board Rule 415

**Supplemental Project Information Worksheet
Annual Capital Development Plan**

FY: 2024 – 2025

Project Name: PProXE Shell Space Fit Out
Project Address/Location: 1445 Warrior Drive
 University Services Campus
Project Number: 1047-25-3902
Campus: The University of Alabama

1. Will this Project increase the current space inventory on campus or replace existing space?

- increase space inventory .03 % increase 6,050 GSF
- replace space inventory % replacement GSF
- renovation of existing space only GSF

The Geological Survey of Alabama Core Repository facility included shell space that GSA/OGB is willing to provide to the University for use for the PProXE project.

2. If this Project will replace existing space inventory, how will vacated space be utilized or assigned after this Project is completed?

Comments:

Currently, the Geology Department maintains lab space in Shelby Hall, which will be vacated and reallocated by the Provost.

3. Is the proposed Project location consistent with the Campus Master Plan and University Design Standards and the principles contained therein?

- Yes No, A Campus Master Plan Amendment Is Required

If a Campus Master Plan amendment is required, explain:

This Project will be located in an existing facility and will not impact the visual appearance of campus.

4. Provide information on classification of new space provided by this Project and latest utilization data on similar type space on campus.

Proposed New Space/Facilities				
Classification	Number (Spaces/Rooms)	Capacity (Persons)	Area (GSF)	Existing Space Utilization Data (See Notations)
100 Classroom Facilities				
200 Laboratory Facilities				
210 Class Laboratory				
215 Class Laboratory Service				
220 Open Laboratory				
225 Open Laboratory Service				
250 Research/Non-class Laboratory	5		2,800	
255 Research/Non-class Laboratory Service				
300 Office Facilities				
310 Office	2	2	570	
315 Office Service				
350 Conference Room				
355 Conference Room Service				
400 Study Facilities				
500 Special Use Facilities				
600 General Use Facilities				
700 Support Facilities				
710 Central Computer or Telecommunications				
715 Central Computer or Telecommunications Service				
720 Shop				
725 Shop Service				
730 Central Storage				
735 Central Storage Service				
740 Vehicle Storage				
745 Vehicle Storage Service				
750 Central Service				
755 Central Service Support				
760 Hazardous Materials Storage	1	Varies	383	
770 Hazardous Waste Storage				
775 Hazardous Waste Service				
780 Unit Storage				
Proposed New Space/Facilities				

Classification		Number (Spaces/Rooms)	Capacity (Persons)	Area (GSF)	Existing Space Utilization Data (See Notations)
800	Health Care Facilities				
900	Residential Facilities				
000	Unclassified Facilities				
WWW	Circulation Area				
	W01 Bridge Tunnel				
	W02 Elevator				
	W03 Escalator				
	W04 Loading Dock				
	W05 Lobby				
	W06 Public Corridor	1	7	1,048	
	W07 Stairway				
XXX	Building Service Area				
	X01 Custodial Supply Closet				
	X02 Janitor Room				
	X03 Public Rest Room	2	2	130	
	X04 Trash Room				
YYY	Mechanical Area				
	Y01 Central Utility Plant				
	Y02 Fuel Room				
	Y03 Shaft				
	Y04 Utility/Mechanical Space	1	4	1,119	

Data reported on the latest fiscal year data available.
 Utilization factor based on Scheduled Operating Hours at each Campus – outlined below in notations.

Comments/Notations:
 Build out of existing shell space.

5. How will this Project enhance existing/new programs and undergraduate/graduate enrollments?

Estimated new Funds from Tuition/Programs \$ NA Yr.

Comments:
 The proposed project will enhance several research programs, particularly in Geography, Geology, Civil and Construction Engineering, and Anthropology. It will improve graduate enrollments through increased external research support for graduate research assistants. It will enhance undergraduate experiences, particularly for those in STEM majors, who will be mentored and trained on instrumentation for independent research projects (also supported through the Undergraduate Research and Creative Activity Program). The PIs also plan to incorporate the laboratory facilities into curricula for significant courses.

6. Has a facility user group been established to provide input for planning, programming, and design purposes? Yes In-Progress

If yes, list key members of the user group:

- Lisa Davis (Geography)
- R. Totten (Geological Sciences)
- Matthew Therrell (Geography)
- Emily Elliott (New College)
- Glenn Tootle (Civil , Construction, and Environmental Engineering)
- Matt Gage (Office of Archaeological Research)
- Lane Weaver, University Project Manager
- Nick Tew, State Geologist, Geological Survey of Alabama

7. Source(s) of funding for Total Project Development Costs.

Source(s)	New Funds (FY _____)	Reserves	Status ^{7/}
Tuition			
Student Fees			
Investment Income			
Auxiliary Income			
• External			
• Internal			
Education Sales/Services			
• External			
• Internal			
Direct Grants			
Gifts			
Bonds			
Existing Net Assets			
Other – Office of Academic Affairs Reserves		\$750,000	Pending
Other – Office of Research and Economic Development Reserves		\$450,000	Pending
Other – University Central Reserves		\$800,000	Pending
Totals		\$2,000,000	Pending

^{7/} Approved, allocated, pending

Comments:

Funding from the Office of Academic Affairs Reserves, Office of Research and Economic Development and University Central Reserves in the amounts listed above.

8. Estimate of operations and maintenance (O&M) costs for the initial occupancy year and projections for the succeeding five (5) year period.

Operations and Maintenance (O&M) Annual Costs Projections			
Expense	FY Base Data /8	First Full /YR Occupancy FY 2025/2026	Successive Five (5) Year Projections /9
Maintenance			
Elevator Service			
Building Repairs			
Building Services			
Electric, Natural Gas, Steam			
Chilled Water			
Water and Sewer			
Insurance			
Safety Support			
Operations Staff Support Funding			
Other – Sub Lease	\$9.95/SF	\$9.95/SF	\$10.95/SF
Totals	\$60,198	\$60,198	\$331,086

/8 Latest Fiscal Year Data used as Base Year for Projections

/9 Combined Costs for next Five (5) Years of Occupancy

Comments:

The Core Repository Facility is a Ground Lease between the Geological Survey of Alabama/Oil and Gas Board of Alabama and The Board of Trustees of the University of Alabama. The University and GSA/OGB will execute a lease amendment for the University's responsible portion of the O&M as projected above.

9. Source of funds for projected ongoing operations and maintenance (O&M) costs for this project.

Source(s)	Occupancy Yr ^{/9} (FY _____)	Future Years ^{/10}	Status ^{/7}
Tuition			
Student Fees			
Investment Income			
Auxiliary Income			
• External			
• Internal			
Educational Sales & Services	\$60,109	\$331,086	Pending
• External			
• Internal			
Direct Grant(s)			
Reallocated Funds ^{/11}			
Gifts			
Other			
Total/YR	\$60,109	\$331,086	Pending

^{/9} Initial Full Yr of Occupancy
^{/10} Next Five (5) Yrs Occupancy
^{/11} Funds Reallocated from other sources
^{/7} Approved, allocated, pending

Comments:

The ongoing operations and maintenance (O&M) costs for the PRoXE Project will be funded through a combination of sources. These include research grants and contracts from federal and state agencies, and E & G funds. Revenue generated from collaborative projects will also contribute to covering O&M expenses, ensuring the lab's sustainability and continuous operation.

10. Are development expenditures for this Project being used to reduce the current deferred maintenance/facilities renewal liabilities for the Campus?

\$ N/A N/A % of Total Development Costs

Comments:

11. What other development alternatives were considered in the planning process for this Project? /13

/13 Renovation vs. new construction, adaptive reuse of underutilized buildings, etc.

Comments:

The benefits of co-location with the Geological Survey of Alabama (GSA) Core Repository are key to the success and sustainability of the proposed project. One of the primary functions of the PRoXE analytical facility is to service external requests for analysis of GSA core samples, which are required to be conducted at the GSA facility.

12. Explain how the project will promote the adequacy of campus facilities about the University's Mission and scope of programs and/or services:

Comments:

The PRoXE lab is currently in the design phase and will be co-located with a new state-of-the-art core repository facility being developed by the Geological Survey of Alabama (GSA) on the University Services Campus. This lab facility will be the premier analytical and archival research facility in the southeastern United States for the study of paleo (past) records of hydroclimate variability and change. The lab includes ~5,000 ft² of wet labs, offices, collaboration spaces, and state-of-the-art research instrumentation, including Multi-Sensor Core Loggers, a temperature-controlled sample repository (3,000 ft³) for archiving significant samples of biological archives (tree rings, corals, etc.), cave deposits (speleothems), and sedimentary records. This new facility will serve environmental researchers across the UA system and the nation to better operationalize the understanding of changing environments and potential risks to people, infrastructure, economy, and ecology. The facility housing shared instrumentation resources will enable a significant increase in external grant funding to support research that we cannot carry out otherwise. The proposed facility will further help collect critical preliminary data for new funding proposals. This capability will be particularly beneficial to early career researchers in our group and others on campus.

The proposed lab facility will serve PRoXE-affiliated researchers from UA and the region and researchers working on GSA collections, including government and private sector clientele who need the sophisticated analytical capabilities provided by the instrumentation available in the lab. Facilities include:

- 1) Core scanning laboratory housing equipment and instrumentation for core scanning including X-radiography. This lab has attached chilled active sample storage (100 ft²), for samples, principally but not limited to sediment cores, including racks and D-tubes for storage. Core scanning lab instruments include
 - a) Geotek MSCL-XYZ scanner <https://www.geotek.co.uk/products/mscl-xz/>
 - b) Geotek MULTI-SENSOR CORE LOGGER <https://www.geotek.co.uk/products/mscl-s/>
 - c) Geotek CT system <https://www.geotek.co.uk/x-ray-ct-system/geotek-rxct/>
 - d) Micro CT scanner <https://www.microphotonics.com/products/skyscan-1275/>
 - e) GIGAmacro Magnify2 Robotic Imaging Systems <https://gigamacro.com/gigapixel->

macro-imaging-system/

- 2) Sediment Prep Lab for core splitting (10 x10ft) with sink. Included equipment
 - a) GEOTEK core splitter [https://www.geotek.co.uk/products/core_splitter/ Standard](https://www.geotek.co.uk/products/core_splitter/Standard)
- 3) Tree Ring Prep lab (cutting and sanding) (10 x 10 ft, vented).
17” bandsaw, sanding table, vacuum system
- 4) Core description and sampling laboratory (300 ft²), with four (3x8 foot) tables for describing cores and two sinks with DI water and a sediment trap for sieving samples for analysis and making slides for microscopic analysis.
- 5) Analytical labs (2 @ 450 ft²) wet lab (two sinks), DI/nanopure water, fume hood, bench space and cabinetry. Included equipment
 - a. Battersizer S3 Plus laser-based particle size and shape analyzer, capable of measuring particle size from 0.01 - 3500 µm and shape from 2 - 3500 µm.
 - b. Muffle oven (2)
 - c. Gravity convection oven (2)
 - d. Sieves and shakers
 - e. coolers
- 6) Microscope lab, (200 ft²), with two petrographic and three reflected light microscopes for analyzing sediment and picking samples for radiocarbon analysis. Bench space and cabinetry. Active shell, microfossil, and tree ring cores storage, which require sample cabinets,
- 7) Gamma Room (10 X 10) equipment includes a Gamma detector for Lead 210 dating https://mirionprodstorage.blob.core.windows.net/prod-20220822/cms4_mirion/files/pdf/spec-sheets/c40114_model_747_spec_sheet.pdf?1585774500 and a microbalance
- 8) Offices and flex space for researchers and collaborators
- 9) Archival core storage (planned). ~3,200 ft³ refrigerated (3-5C°)

13. How does the project correlate to the University’s strategic goals?

Comments:

The proposed new facility will serve environmental researchers across the UA system

and the nation to better operationalize the understanding of changing environments and potential risks to people, infrastructure, economy, and the environment, and will not only catalyze ongoing and new environmental research but also grow relationships with federal and state agencies located on the UA campus, such as the NOAA National Water Center, the Geological Survey of Alabama, and the USGS Hydrologic Instrumentation Facility.

This lab will be one of the top facilities in the world, providing research for exploring extreme events, critical minerals, carbon capture, and storage, and would also serve as a powerful recruiting tool for attracting the best and brightest faculty and students and elevating the research profile of the University of Alabama in terms of environmental research. **These capabilities align strongly with UA's Strategic Plan goals 1, 2, and 4.**

14. Which of the six University of Alabama system Core Principles does this project support?

Comments:

This project supports all six Core Principles, particularly 2, 5, and 6. The capabilities provided by the PRoXE research lab will provide the greatest likelihood of success for us to grow our interdisciplinary research group of UA scientists, students, and external academic collaborators into a sustainable, internationally recognized research center, capable of:

- Maintaining the already-funded world-class, state-of-the-art analytical research lab and archival facility. These shared instrumentation resources will allow a significant increase in external grant funding to support research we were not previously capable of carrying out. We will also be able to generate preliminary data for new funding proposals. This capability will benefit early career researchers in our group and others on campus. A key facet of organizing as a center is the return of overhead, which will primarily support the significant annual instrument maintenance required.
- Continued and expanded training of new generations of interdisciplinary researchers who apply cutting-edge techniques to study climate variability and extreme events, generating research products that are directly beneficial to society. We will be able to train students in methods and technologies only available at a select few locations in the world. This will provide a strong recruitment capability for students and future faculty.
- Continued and expanded development of new analytical capabilities and techniques for the study of paleoenvironmental records of climate variability and extreme events. Our collaborative work has already yielded new analytical approaches based on our interdisciplinary focus, and both the shared instrumentation and organizational efficiency of our proposed center will provide even greater possibilities for these types of improvements. The shared instrumentation will give our group unique new analytical approaches, and many other researchers on campus will no doubt find unanticipated uses for the available instrumentation.

- Continued and expanded partnerships with government and private sector stakeholders (e.g., ALDOT, Bureau of Ocean Energy Management (BOEM), Geological Survey of Alabama, Tennessee Valley Authority (TVA), US Army Corps of Engineers, US Geological Survey), to support and enhance relevant analytical research. As a result of the collaboration through our research group, we have already vastly increased our partnerships with and funding from most of the groups listed above, and the PRoXE lab will allow us to significantly improve both the scope and number of government and industry partnerships we can support. In addition to our analytical capabilities focused on paleoenvironmental analysis, our shared instrumentation is extremely relevant to a wide range of governmental and industrial research needs, including marine and terrestrial biology, environmental and ecosystem health, geologic mapping, natural hazards, mineral exploration, paleontology, water science, and others. For example, BOEM already possesses extensive collections of offshore marine core samples that they will likely contract with our group to analyze and potentially archive once we are capable.

15. What would be the immediate impact on on-campus programs and enrollment if this project is not approved?

Comments:

The principal impact of not developing the proposed facility would be a disruption to the research programs in the Colleges of A&S and Engineering. Without these instruments and the facility, relevant, well-funded faculty researchers cannot continue expanding externally funded research programs. We cannot offer fee-for-service analysis to industry partners (e.g., critical minerals). Enrollment impacts include lost opportunities to increase graduate students from additional external grant support for research assistants.

PROXE Shell Space Fit Out

GSA Facility on
University Services Campus



PRoXE Shell Space Fit Out

LOCATION MAP

